

**BID FOR
NORTH TRUCKEE DRAIN REALIGNMENT-PHASE 3**

BID # 16/17-006

PWP # WA-2017-022

BIDS DUE NOT LATER THAN: 1:45 PM ON NOVEMBER 16, 2016

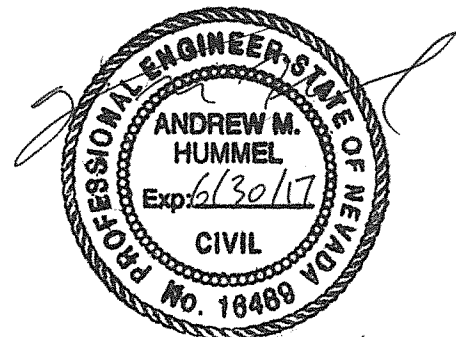
PUBLIC BID OPENING: 2:00 PM ON NOVEMBER 16, 2016

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



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

Company Name: _____



10-14-2016

**CITY OF SPARKS
NOTICE TO BIDDERS
NORTH TRUCKEE DRAIN REALIGNMENT-PHASE 3
BID #16/17-006 / PWP #WA-2017-022**

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 NOVEMBER 16, 2016**. Bids postmarked prior to, but not received until after this deadline will not be accepted. Vendor bid response submittals may not be sent to the City of Sparks via the Internet/e-mail and will not be entertained for award by the City of Sparks. The right is reserved to reject any Bid/Proposal or to accept the Bid/Proposal which is deemed by the City of Sparks to be in the best interest of the City of Sparks. The City of Sparks reserves the right to waive any irregularities and/or informalities in the bid process.

All Bids are to be marked clearly on the outside. Bids will be opened and publicly read at **2:00 PM ON NOVEMBER 16, 2016**, at Sparks City Hall, 431 Prater Way Sparks, NV 89431.

PROJECT DESCRIPTION: Installation of 2,540 feet of (2) 14'x10' parallel reinforced concrete box culverts with associated structures; installation of 740 feet of (2) 8'x8' parallel reinforced concrete box culverts with associated structures; installation of miscellaneous sized reinforced concrete box culverts with associated structures; installation of 3,261 feet of storm drain; select demolition and replacement of utility service lines and conduits; excavation, backfilling and grading the site; placement of asphaltic pavement and concrete flatwork; dewatering; traffic control; and other activities for a complete installation and site restoration.

PRE-BID MEETING: There will be a **NON-MANDATORY** pre-bid meeting held at 9:00AM on November 9, 2016. The meeting will take place at City of Sparks City Hall, 431 Prater Way, Sparks, NV 89431.

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

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

Bid documents and specifications may be obtained from the City of Sparks website. Please visit <http://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: October 19, 2016
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 Contractor wishes to potentially apply their preference.
7. _____ Bid Bond
8. _____ Signed Bid Addenda (if applicable)

**CITY OF SPARKS
 BID ITEM SCHEDULE**

BID # 16/17-006

PWP # WA-2017-022

BID TITLE: North Truckee Drain Realignment – Phase 3

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

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

BIDDER acknowledges receipt of _____ Addenda.

 Bidder Name

 (signature)

Item No.	Quantity	Unit	Description	Unit Price	Total Price
BASE BID ITEMS					
1	1	LS	Mobilization / Demobilization / Insurance / Bonds / Surveying & Staking	\$ _____ /LS	\$ _____
2	1	LS	Clear and Grubbing	\$ _____ /LS	\$ _____
3	1	LS	Traffic Control	\$ _____ /LS	\$ _____
4	1	LS	Dewatering	\$ _____ /LS	\$ _____
5	2,558	SY	Remove Plantmix Bituminous Surface	\$ _____ /SY	\$ _____
6	753	LF	Remove Electric Fencing	\$ _____ /LF	\$ _____
7	275	LF	Remove PCC Curb and Gutter – 36” Type 1, 24” Type 1	\$ _____ /LF	\$ _____
8	2,212	LF	Remove and Replace Chain Link Fence	\$ _____ /LF	\$ _____
9	11	EA	Remove Small Concrete Structures	\$ _____ /EA	\$ _____
10	874	LF	Remove Storm Drain Culvert (all sizes and materials)	\$ _____ /LF	\$ _____

Item No.	Quantity	Unit	Description	Unit Price	Total Price
11	1	LS	Remove Washoe County School District Box Beam Bridge	\$ _____ /LS	\$ _____
12	444	LF	Remove and Relocate/Replace Private Underground Electric	\$ _____ /LF	\$ _____
13	2724	SF	Remove Riprap	\$ _____ /SF	\$ _____
14	1	LS	Remove and Reset NOAA NGS Benchmark Monument	\$ _____ /LS	\$ _____
15	189	LF	Construct Reinforced Concrete Box Culvert and Transition Structure to NDOT RCBs (2-8'x8') – “E” Sta. 325+18.61 to “E” Sta. 327+28.19	\$ _____ /LF	\$ _____
16	137	LF	Construct Reinforced Concrete Box Culvert (6'x6') – “W” Sta. 218+70.36 to “W” Sta. 219+35.21 & “W” Sta. 219+42.43	\$ _____ /LF	\$ _____
17	16	LF	Construct Reinforced Concrete Box Culvert (1-10'x4')	\$ _____ /LF	\$ _____
18	739	LF	Construct Reinforced Concrete Box Culvert (2-8'x8')	\$ _____ /LF	\$ _____
19	2,540	LF	Construct Reinforced Concrete Box Culvert (2-14'x10')	\$ _____ /LF	\$ _____
20	2	EA	Construct Reinforced Concrete Confluence Structure	\$ _____ /EA	\$ _____
21	5	EA	Construct Reinforced Concrete Access Vault	\$ _____ /EA	\$ _____
22	2	EA	Construct Backflow Prevention Vault	\$ _____ /EA	\$ _____
23	19	EA	Construct Small Concrete Structure (Manhole, Drop Inlet, Trash Rack)	\$ _____ /EA	\$ _____
24	1	EA	Construct Sump Structure (“NTD” Sta. 41+50)	\$ _____ /EA	\$ _____
25	286	LF	Construct Small Diameter (<31”) Gravity Main for Storm Drain and Laterals	\$ _____ /LF	\$ _____

Item No.	Quantity	Unit	Description	Unit Price	Total Price
26	1,049	LF	Construct Large Diameter (>31") Gravity Main for Storm Drain	\$ _____ /LF	\$ _____
27	31	LF	Construct 3' PCC U-Flume Channel	\$ _____ /LF	\$ _____
28	275	LF	Construct PCC Curb and Gutter	\$ _____ /LF	\$ _____
29	792	SF	Construct Riprap Aprons	\$ _____ /SF	\$ _____
30	1	LS	Construct Rockery Retaining Wall ("NTD" Sta. 34+25)	\$ _____ /LS	\$ _____
31	2,676	SY	Construct Plantmix Bituminous Pavement (3" AC on 6" Aggregate Base)	\$ _____ /SY	\$ _____
32	521	CY	Construct Gravel Maintenance Road (15' wide x 6" thick)	\$ _____ /CY	\$ _____
33	1	LS	Hydroseeding, Landscape and Irrigation Repair/Restoration	\$ _____ /LS	\$ _____
34	32	LF	Remove existing chain link fencing and gate	\$ _____ /LF	\$ _____
35	1,400	CY	Pipe Stabilization	\$ _____ /CY	\$ _____
36	33,000	CY	Place Backfill	\$ _____ /CY	\$ _____
37	4,560	SY	Place 12-Inch Type II Class B aggregate base	\$ _____ /SY	\$ _____
38	960	SF	Construct PCC commercial driveway with aggregate base	\$ _____ /SF	\$ _____
39	4	EA	Construct 16-ft NDOT swing gate	\$ _____ /EA	\$ _____
40	1	LS	Perform dewatering operations including bypass to overflow structure and removal/emergency removal plans	\$ _____ /LS	\$ _____
41	7	EA	Install 48" Type IV Manhole w/36" Cir. SD Grate	\$ _____ /EA	\$ _____

Item No.	Quantity	Unit	Description	Unit Price	Total Price
42	1	LS	Install PVC SDR35 Pipe Riser w/24" Cir. SD Grate	\$ _____ /LS	\$ _____
43	1,760	LF	Install 60" Type IV RCP Storm Drain	\$ _____ /LF	\$ _____
44	70	LF	Install 24" Type IV RCP Storm Drain	\$ _____ /LF	\$ _____
45	45	LF	Install 18" Type IV RCP Storm Drain	\$ _____ /LF	\$ _____
46	1,200	CY	Place slurry backfill	\$ _____ /CY	\$ _____
47	1	LS	Construct 60" NDOT Type I Headwall with Wingwalls	\$ _____ /LS	\$ _____
48	1	LS	Tideflex 60" Checkmate Valve w/downstream clamp & freight	\$ _____ /LS	\$ _____
49	1,925	SF	Place Rip-Rap Grade 150	\$ _____ /SF	\$ _____
50	5,550	SF	Place Rip-Rap Grade 400	\$ _____ /SF	\$ _____
51	FA	FA	Force Account – General (CONTINGENT ITEM)	\$ <u>500,000</u>	\$ <u>500,000</u>
52	FA	FA	Force Account – Hazardous Materials and Unsuitable Soils (CONTINGENT ITEM)	\$ <u>50,000</u>	\$ <u>50,000</u>
Total Base Bid Price _____ dollars (written total base bid price including items 1 through 54)					\$ _____

The quantity of the above contingent item(s) of work, as set forth on the Bid Item Schedule represent no actual estimate, are nominal only and may be greatly increased or decreased or reduced to zero. The increase or reduction of these quantities as compared with that set forth on the Bid Item Schedule shall not constitute a basis for claim by the Contractor for extra payment or damages.

The above items of work are represented on two independent plan sets: North Truckee Drain Realignment Phase 3 (HDR, October 12, 2016) and North Truckee Drain Pipe Extension Improvements (Stantec, October 14, 2016). The table below illustrates which items are associated with which plan set.

Item No.	North Truckee Drain Realignment Phase 3 (HDR)	North Truckee Drain Pipe Extension Improvements (Stantec)
1-3	X	X
4-33	X	
34-51		X
52-53	X	X

Bidder Information

COMPANY INFORMATION:

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

COMPANY BACKGROUND

- 1) Has your company ever failed to complete any contracts awarded to it? No___ Yes___ (If yes, please provide details.)

- 2) Has your company filed any arbitration request or law suits on contracts awarded within the last five years? No___ Yes___ (If yes, please provide details.)

- 3) Does your company now have any legal suits or arbitration claims pending or outstanding against it or any officers relating to the performance of a public contract? No___ Yes___ (If yes, please provide details.)

- 4) Does your company now employ any officers or principals who were with another firm when that company failed to complete a contract within the last five years? No___ Yes___ (If yes, please provide details.)

- 5) Has your company had a contract partially or completely terminated for default (cause) within the past five years? No___ Yes___ (If yes, please provide details.)

- 6) Has your company been found non-responsible on a government bid within the last five years? No___ Yes___ (If yes, please provide details.)

Bidder Information

CONTRACTOR LICENSE INFORMATION:

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

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

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

Bidder Information

DISCLOSURE OF PRINCIPALS:

a) Individual and/or Partnership:

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

b) Corporation:

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

SUBCONTRACTOR DETAIL
SUBCONTRACTORS EXCEEDING FIVE PERCENT OF BID AMOUNT

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

Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value 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. The Bidder shall list the name of a Subcontractor for each portion of any of the Work the value of which exceeds one percent (1%) of the Bid Price.

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

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

Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description & Value 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 **NORTH TRUCKEE DRAIN REALIGNMENT-PHASE 3**, Bid # **16/17-006**, 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.

	Contractor/Bidder:
(Printed Name of Contractor/Bidder)	_____
	BY: _____
	Firm: _____
	Address: _____
	City: _____
	State / Zip Code: _____
	Telephone Number: _____
	Fax Number: _____
	E-mail Address: _____
(Signature of Principal)	Signature: _____
	DATED this _____ day of _____, 2016.

State of Nevada)
)
 County of _____) SS.
)

On this _____ day of _____, in the year 2016, 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 **NORTH TRUCKEE DRAIN REALIGNMENT-PHASE 3 (Bid #16/17-006)** 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 # **16/17-006**, PWP # **WA-2017-022**, for the **NORTH TRUCKEE DRAIN REALIGNMENT-PHASE 3**.

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 **NORTH TRUCKEE DRAIN REALIGNMENT-PHASE 3**, as per specifications herein.

The bidder agrees that:

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

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

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

1. Prices:

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

2. Firm Prices:

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

3. Items Offered:

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

4. Brand Names:

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

General Conditions



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

5. Samples:

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

6. Withdrawal of Bids:

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

7. Late Bids, Modifications, or Withdrawals:

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

8. Mistake in Bid:

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

9. Signature:

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

10. Exceptions:

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

11. Confidential Information:

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

12. Quality:

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



13. Litigation Warranty:

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

14. Royalties, Licenses and Patents:

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

15. Performance Standards:

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

16. Americans with Disabilities Act (ADA) Standards:

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

17. Warranties:

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

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

18. Addenda:

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

General Conditions



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

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

19. Specifications to Prevail:

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

20. Taxes:

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

21. Prevailing Wages:

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

Per NRS Sections 338.020 through 338.090, certain projects defined as "public works" require the payment of the prevailing wage as determined by the Labor Commissioner. Generally speaking, projects/contracts for construction of a public work valued at less than \$250,000 are exempt from the prevailing wage requirement (NRS 338.080). Bidder shall be fully aware of the prevailing wage requirements of the State of Nevada as detailed in NRS Chapter 338 and price their bid response accordingly. Further information concerning Prevailing Wage rates can be found at:
http://www.laborcommissioner.com/publicworks_prevailingwage.html

Federal "Davis Bacon" wages may be applicable if the funding for the project includes Federal funds. These requirements are detailed in the "Special Conditions – Federal Requirements" section that will be included in this bid document when such conditions apply.

22. Conflict of Interest:

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

- (a) Have a financial interest or other personal interest that is incompatible with the proper discharge of their official duties in the public interest or would tend to impair their independence, judgment or action in the performance of their official duties.

General Conditions



- (b) Are negotiating for or have an arrangement concerning prospective employment with bidder. The bidder warrants to the best of his knowledge that the submission of the bid will not create such conflict of interest. In the event such a conflict occurs, the bidder is to report it immediately to the Purchasing Manager. For breach or violation of this warranty, the City shall have the right to annul this contract without liability at its discretion, and bidder may be subject to damages and/or debarment or suspension.

23. Disqualification of Bidder:

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

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

24. Gratuities:

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

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

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

26. Performance and Payment Bonds:

Per NRS 339.025, before any contract, except one subject to the provisions of chapter 408 of NRS, exceeding \$100,000 for any project for the new construction, repair or reconstruction of any public building or other public work or public improvement of any contracting body is awarded to any contractor, he shall furnish to the contracting body the following bonds which become binding upon the award of the contract to the contractor

General Conditions



(All Bonding Companies must have an “A” rating or better with Moody’s or A.M. Best Company, and be included on the current list of “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bond and as Acceptable Reinsuring Companies” as published in circular 570 (as amended) by the audit staff, Bureau of Accounts, U.S. Treasury Department. (In other words, the company is T-listed.)):

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

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

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

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

27. Indemnification:

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

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

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

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

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

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

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

28. Insurance:

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

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

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

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

Applicable to this Contract	Insurance Type	Minimum Limit	Insurance Certificate	Additional Insured	Waiver of Subrogation
Yes	General Liability/Umbrella (Excess) Liability	\$2,000,000	✓	✓	✓
Yes	Automobile Liability	\$1,000,000	✓	✓	
Yes	Workers’ Compensation	Statutory	✓	N/A	✓
Yes	Employer’s Liability	\$1,000,000	✓	N/A	

General Conditions



Applicable to this Contract	Insurance Type	Minimum Limit	Insurance Certificate	Additional Insured	Waiver of Subrogation
No	Professional Liability	\$1,000,000	✓	N/A	N/A
No	Pollution Legal Liability	\$1,000,000	✓	N/A	N/A

Commercial General Liability

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

For contracts that are for the construction or improvement of public facilities, the Contractor shall obtain and maintain products and completed operations liability coverage through the statute of repose after completion of the project.

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

Minimum Limits of Insurance

- \$2,000,000** Each Occurrence Limit for bodily injury and property damage
- \$2,000,000** General Aggregate Limit
- \$2,000,000** Products and Completed Operations Aggregate Limit
- \$10,000** Medical Expense Limit

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

Coverage Form

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

Additional Insured

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

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

Primary and Non-Contributory

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

Separation of Insureds

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

Waiver of Subrogation

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

Endorsements

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

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

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

Business Automobile Liability

Minimum Limits of Insurance

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

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Coverage Form

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

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

Additional Insured

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

Endorsements

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

Workers’ Compensation and Employer’s Liability

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

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

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

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

- Sole proprietors (NRS 616B.627 and NRS 617.210)
- Unpaid officers of quasi-public, private or nonprofit corporations (NRS 616B.624 and NRS 617.207)
- Unpaid managers of limited liability companies (NRS 616B.624 and NRS 617.207)

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- An officer or manager of a corporation or limited liability company who owns the corporation or company (NRS 616B.624 and NRS617.207)

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

Minimum Limits of Insurance

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

Coverage Form

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

OTHER INSURANCE COVERAGES (IF APPLICABLE)

Professional Liability Insurance (if Applicable) \$1,000,000 per occurrence limits of liability or whatever limit is customarily carried by the Contractor, whichever is greater, for design, design-build or any type of professional services with a minimum of three (3) years reporting of claims following completion of the project.

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

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

ALL COVERAGES

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

OTHER INSURANCE PROVISIONS

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

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

ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a Best's rating of no less than A-VII and acceptable to the City.. City, with the approval of the Risk Manager, may accept coverage with carriers having lower Best's ratings

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upon review of financial information concerning Contractor and insurance carrier. City reserves the right to require that Contractor's insurer be a licensed and admitted insurer in the State of Nevada, or on the Insurance Commissioner's approved but not admitted list.

VERIFICATION OF COVERAGE

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

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

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

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

SUBCONTRACTORS

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

MISCELLANEOUS CONDITIONS

1. Contractor shall be responsible for and remedy all damage or loss to any property, including property of City, caused in whole or in part by Contractor, any Subcontractor, or anyone employed, directed, or supervised by Contractor.
2. Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payment of damages to persons or property resulting from its operations or the operations of any Subcontractors under it.
3. In addition to any other remedies City may have if Contractor fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, City may, at its sole option:

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- a. Purchase such insurance to cover any risk for which City may be liable through the operations of Contractor under this Agreement and deduct or retain the amount of the premiums for such insurance from any sums due under the Agreement;
- b. Order Contractor to stop work under this Agreement and/or withhold any payments which become due Contractor here under until Contractor demonstrates compliance with the requirements hereof; or,
- c. Terminate the Agreement.

29. Safety Program:

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

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

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

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

30. Award of Contract:

- (a) Bids/Proposals will be analyzed and award will be made to the lowest, responsive and responsible bidder whose bid conforms to the solicitation and whose bid is considered to be most advantageous to the City, price and other factors considered. Factors to be considered may include, but are not limited to: bidder's past performance, total unit cost, economic cost analysis, life cycle costs, warranty and quality, maintenance cost, durability, the operational requirements of the City and any other factors which will result in the optimum economic benefit to the City.
- (b) The City reserves the right to reject any item or items, to waive informalities, technical defects and minor irregularities in bids/proposals received; and to select the bid(s) or proposal(s) deemed most advantageous to the City. Should the City elect to waive a right it will not constitute an automatic waiver of that right in the future nor will it impact any other right or remedy. The City may consider bids/proposals submitted on an "all or nothing" basis if the bid/proposal is clearly designated as such.
- (c) The City reserves the right to award one or more contracts on the bids/proposals submitted, either by award of all items to one bidder or by award of separate items or groups of items to various bidders as the interests of the City may require, unless the bidder clearly specifies otherwise in his bid.
- (d) Upon acceptance by the City of Sparks, the solicitation, bid, proposal, or price quotation and issuance of a purchase order issued to the successful bidder shall be deemed to result in a binding contract incorporating

General Conditions



those terms and these General Conditions without further action required by either party. Items are to be furnished as described in the bid and in strict conformity with all instructions, conditions, specifications, and provisions in the complete contract, as defined by this clause or any related integrated agreement.

31. Request for Proposal (RFP) Submittals:

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

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

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

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

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

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

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

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

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

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338.

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

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

33. Tie Bids:

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

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

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

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

- (a) A notice of protest must include a written statement setting forth with specificity the reasons the person filing the notice believes the applicable provisions of law were violated.
- (b) A person filing a notice of protest may be required by the governing body or its authorized representative, at the time the notice of protest is filed, to post a bond with a good and solvent surety authorized to do business in this State or submit other security, in a form approved by the governing body or its authorized representative, to the governing body or its authorized representative who shall hold the bond or other security until a determination is made on the protest. A bond posted or other security submitted with a notice of protest must be in an amount equal to the lesser of:
 - (1) Twenty-five percent of the total value of the bid submitted by the person filing the notice of protest;
 - or
 - (2) Two hundred fifty thousand dollars (\$250,000).
- (c) A notice of protest filed in accordance with the provisions of this section operates as a stay of action in relation to the awarding of any contract until a determination is made by the governing body or its authorized representative on the protest.
- (d) A person who submits an unsuccessful bid may not seek any type of judicial intervention until the governing body or its authorized representative has made a determination on the protest and awarded the contract.

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- (e) A governing body or its authorized representative is not liable for any costs, expenses, attorney's fees, loss of income or other damages sustained by a person who submits a bid, whether or not the person files a notice of protest pursuant to this section.
- (f) If the protest is upheld, the bond posted or other security submitted with the notice of protest must be returned to the person who posted the bond or submitted the security. If the protest is rejected, a claim may be made against the bond or other security by the governing body or its authorized representative in an amount equal to the expenses incurred by the governing body or its authorized representative because of the unsuccessful protest. Any money remaining after the claim has been satisfied must be returned to the person who posted the bond or submitted the security.

35. Documentation:

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

36. Discounts:

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

37. Seller's Invoice:

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

38. Inspection and Acceptance:

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

39. Lost and Damaged Shipments:

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

40. Late Shipments:

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

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41. Document Ownership:

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

42. Advertisements, Product Endorsements:

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

43. Optional Cooperative Purchase Agreement

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

44. Vendor Workplace Policies

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

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

45. Business License Requirement:

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

46. City Provisions to Prevail:

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

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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
Bid Number 16/17-006, PWP# WA-2017-022
NORTH TRUCKEE DRAIN REALIGNMENT – PHASE 3

These Special Provisions supplement and modify the "Standard Specifications for Public Works Construction" Latest Edition, the Truckee Meadows Water Authority Engineering & Construction Standards, and are adopted by the City of Sparks, Nevada (hereafter "CITY", "Representative", "Project Manager", "Engineer"). All of the requirements and provisions of said Standard Specifications shall apply except where modified by the plans and these Special Provisions (all contained within this bid document).

PART 1 – GENERAL PROVISIONS

SECTION 1: SCOPE OF WORK

Workscope: The work performed under this contract consists of, but is not limited to: clearing and grubbing the work area, excavation and fill of specified areas, construction of new reinforced concrete boxes, construction of new roadways with asphalt and concrete, traffic control, relocation of utilities, dewatering, disposal of material excavated, as well as all appurtenant work necessary to complete the project as stated in the bid specifications. The locations of the work are generally bounded on the North side by Interstate 80, on the South and East sides by Greg Street and on the West side by Sparks Blvd. The project limits are within the City limits of the City of Sparks, Washoe County, Nevada, and is more specifically designated on the plans for this project.

SECTION 2: TECHNICAL SPECIFICATIONS / 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", latest edition.

SECTION 2b: COORDINATION OF TECHNICAL SPECIFICATIONS / SPECIAL PROVISIONS

The specifications, supplemental specifications, UPRR specifications, plans, special provisions, all supplementary documents and change orders (if any) are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, for areas outside of UPRR right of way, permits from other agencies as may be required by law take precedence over all; calculated dimensions will govern over scale dimensions; special provisions and technical specifications will govern over both standard specifications and plans; plans will govern over standard specifications.

Within UPRR right of way, the Special Provisions for Work Performed Within UPRR Right of Way will take precedence over all except for permits from agencies.

The Contractor shall take no advantage of any apparent error or omission in the plans or specifications. In the event the Contractor discovers such an error or omission, the Contractor shall immediately notify the Engineer. The Engineer will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the plans and specifications.

SECTION 3: STANDARD SPECIFICATIONS AND DETAILS

All materials furnished and work performed shall be done in accordance with the 2012 (or latest) edition of the Standard Specifications for Public Works Construction (hereinafter designated "Standard Specifications" or "Orange Book"), and any revisions thereto if not covered or amended by the Special

Technical Provisions; and the Standard Details for Public Works Construction (hereinafter designated "Standard Details"), except as modified by the drawings.

SECTION 4: NOTICE TO PROCEED

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 working days.

SECTION 5: WORKING DAYS

The work to be performed under this contract shall be commenced after all executed Contract Documents have been submitted, within five (5) calendar days of the commencement date set forth in the Notice to Proceed.

SECTION 5a: WORKING DAYS for ENTIRE PROJECT

The work, including any and all alternatives and options, shall be completed within 540 CALENDAR days after the commencement date set forth in the Notice to Proceed.

SECTION 6: LIQUIDATED DAMAGES

In case all work called for under the contract is not completed before or upon the expiration of the time limits set forth above, it is agreed by the parties to the contract that damage will be sustained by the CITY and that it will be impracticable to determine accurately the actual damage the CITY will sustain in the event of any such delay. Therefore, the CONTRACTOR shall pay to the CITY, the amounts specified below for each and every working day's delay in finishing the work in excess of the number of working days prescribed and the CITY shall further have the right to charge to the CONTRACTOR, his heirs, assigns or sureties and to deduct from the final payment for the work, all or any part as it may deem proper of the actual cost of which are directly chargeable to the contract and which accrue during the period of such extensions, except that the cost of the final surveys and preparation of final estimate shall not be included in such charges. The CITY may deduct this amount from any money due or that may become due the CONTRACTOR under the contract. This payment shall not be considered as a penalty, but as liquidated damages suffered by the CITY on account of the failure of the CONTRACTOR to complete the work within the time limit of the contract.

SECTION 6a: LIQUIDATED DAMAGES for ENTIRE PROJECT

The CONTRACTOR shall pay to the CITY, FIVE HUNDRED DOLLARS (\$500.00) for each and every working day's delay.

SECTION 6b: LIQUIDATED DAMAGES for UPRR Right of Way

Please refer to UPRR Special Provisions Section 01572 Part 1.1-B for cost incurred for delays.

SECTION 7: EXCUSABLE DELAYS

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

SECTION 8: 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 9: AUTHORITY OF THE PROJECT MANAGER AND INSPECTOR

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

The CITY shall provide an inspector who will represent the CITY and the Engineer 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 CITY.

SECTION 10: CHANGE ORDERS

The CITY 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".

SECTION 11: COOPERATION WITH OTHER CONTRACTORS

The CONTRACTOR shall cooperate with other CONTRACTORS who may be employed by the CITY, or other agencies, on construction of other work adjacent to or in the proximity of the location of the project.

SECTION 12: HAZARDOUS MATERIALS

If the handling, demolition and removal of hazardous materials, including, but not limited to Asbestos Cement Pipe, is required by contract plans and/or documents, an Asbestos Removal Permit shall be obtained from Washoe County Health District – Air Quality Management Division. All activities associated with asbestos shall adhere to local, state, federal, and OSHA laws, regulations, and guidelines, including 40 CFR Part 61, Subpart M including requirements regarding having a properly trained person to supervise removal and utilization of EPA approved worker protection practices.

If, in the course of construction activities, contaminated soils are discovered, all work in the area shall cease and the CITY shall be notified immediately.

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. The CONTRACTOR is referred to the Soil and Groundwater Management Plan (HDR, February 2013) for summary of contaminants and constituent levels likely to be encountered in the soils.

SECTION 14: LIMITS OF CONTRACTOR'S OPERATIONS

The CONTRACTOR will confine his operations within the limitations of construction easements or limits as shown on the drawings. 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.

The CONTRACTOR shall be required to place chain link fence panels on top of temporary reinforced concrete barricades – or comparable water filled barricades - along all easement lines within the project area when the CONTRACTOR is working in those areas. Any areas that contain a permanent fence along the easement line are not required to have the chain link fence. This fence shall be surveyed in and placed correctly before any work may begin. Orange construction fence will not be acceptable. This temporary fencing shall remain in good working condition for the duration that the CONTRACTOR is working in a specific area. The Construction Manager or CITY shall make timing for fence installation and subsequent removal. Fence panels/barricades must be repaired or replaced within 24 hours should damage occur. There will be no direct payment for the temporary fence panels. Cost shall be included as part of mobilization / demobilization. CONTRACTOR shall coordinate with individual landowners regarding schedule and when the fence panels are to be placed so landowners can remove any and all items in the easement area.

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.

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 Manager. The CONTRACTOR shall notify Underground Services Alert (USA Dig) at 1-800-227-2600, and NV Energy, Truckee Meadows Water Authority (TMWA), SBC, Verizon/MCI and other fiber optic companies, 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 take inventory of the exact location of all vaults, boxes, conduits, sanitary sewer laterals, cables, pipe systems, etc. and shall protect said utilities. The CONTRACTOR at his own expense shall repair any damage caused by operation of the CONTRACTOR. It shall be the CONTRACTOR's responsibility to contact the impacted utility for any replacement hardware.

The CONTRACTOR shall submit the utility inventory to the CITY and the utility companies upon the completion of utility lowering activities. The CONTRACTOR shall also keep a copy of the utility location inventory list on the project work site at all times for emergency shutoff purposes.

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 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 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. As described in Section 21, the CONTRACTOR shall submit the name and qualifications of the proposed traffic control superintendent prior to the preconstruction meeting.

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 CITY or Inspector. This combined crew shall record all measured quantities in field notebooks, in legible and understandable entries. The CONTRACTOR and the CITY 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 CITY or Inspector 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 CITY or Inspector.

SECTION 19: PRE/POST-CONSTRUCTION WALK-THRU

The CONTRACTOR, Inspector, and/or CITY shall conduct a pre and post construction walk-thru. The video shall clearly show the pre-construction condition of all roadways, concrete gutters, traffic signs, landscaping, staging areas and commercial business areas that will, or have the potential to, be disturbed by the CONTRACTOR'S operations.

The video shall clearly display the date and time the video was taken and shall be organized by street with verbal notes of location of video, such as address. This video will be in a DVD format or commonly recognized digital media format (*.WMF, *.MPEG, *.AVI, etc.) and a digital hard copy of the recording will be provided to the CITY. Areas near the property lines, back of sidewalk and driveways, landscaping, mow strips, fences and edging should be specifically filmed so to avoid any disputes or damage claims 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 CITY or inspector.

The CONTRACTOR shall not mobilize or start any construction activities until the CONTRACTOR receives a written approval of the contents of the DVD from the CITY.

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

The CONTRACTOR shall not perform any contract work on Sunday, legal Holidays and outside of the twelve (12) hours available (beginning at 7:00 A.M. Pacific Time) during a regular working day except as directed and/or approved by the CITY and as specified herein.

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

The CONTRACTOR shall anticipate night and weekend work for utility relocations and outages. Each utility shall be coordinated with in this regard.

Whenever night work approval is granted, work shall commence no earlier than 7:00 P.M. and must stop by 7:00 A.M unless written permission is granted otherwise by the CITY.

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

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

The CONTRACTOR's normal working hours shall be from 7:00 A.M. until 7:00 P.M., Monday through Saturday unless otherwise required by these specifications or approved in writing by the CITY when requested in writing by the CONTRACTOR, excluding but not limited to, the following legal Holidays, recognized by the City of Sparks:

January 1	New Year's Day
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 20a: WORK HOURS FOR WORK AROUND "E" Sta 326+00

Earthwork and installation efforts for the crossing of the UPRR mainline is not subject to the afore mentioned daily beginning starting and ending times and may, at the CONTRACTOR'S discretion and with coordination and permission from the UPRR, proceed uninterrupted until the crossing is complete. This allowance applies to "E" Station 325+18.62 until "E" Station 327+20.

SECTION 21: REINFORCED CONCRETE BOX MATERIAL

For this project, CONTRACTOR shall have the option to choose either Cast-In-Place Reinforced Concrete Box Culvert or Precast Reinforced Concrete Box Culvert (in tongue and groove sections).

Installation may entail all of either material, or (a) combination(s) thereof, provided that proper transition structures or materials adequately connect the different materials.

Regardless of the material chosen, the material and the installation shall adhere to the applicable sections found in the Standard Specifications for Public Works Construction.

SECTION 22: GENERAL AND MATERIAL SUBMITTALS

Refer to Specification Section 01340 for requirements for the mechanics and administration of the submittal process.

Submittals shall be provided in a timely manner as items not approved shall not be installed. Items 1-13 shall be submitted at the preconstruction conference.

The following items, (including but not limited to) are required submittals.

General

1. Construction Schedule (Include 4 additional copies for submittal to the railroad)
 - a. Overall Project
 - b. UPRR (including procedure for proposed sequence for bridge replacement)
 - i. "E" Alignment work
 - ii. "W" Alignment work
2. Railroad Coordination Plan
3. Storm Water Pollution Prevention Plan
4. Schedule of Values
5. Permits (Include 4 additional copies for submittal to the railroad)
6. Safety Program (Include 4 additional copies for submittal to the railroad)
7. Traffic Control Plan
8. Haul Routes (Include 4 additional copies for submittal to the railroad)
9. Hazardous Material Management Plan
10. Dewatering and By-pass Pumping Plan
11. Reinforced Concrete Box Construction / Installation Plan
12. Utility Inventory (per Section 14)
13. Soil Management Plan
14. Notices to Businesses
 - a. Traffic ingress and egress
 - b. Utility outages
15. Disposal Plan, Permits and Permissions (Include 4 additional copies for submittal to the railroad)
16. Concrete Patching Methods
17. Record Drawings
18. Certified Payroll Reports
19. Temporary structures/devices required to protect and support the existing UPRR bridge while construction and replacement efforts are being conducted. (See Sheet S-26 General Note B-9)
 - a. Note: this submittal must be signed and stamped by a Professional Engineer in the State of Nevada.

Materials

1. Aggregate Base Material (Include 4 additional copies for submittal to the railroad)

2. Asphalt Mix Designs (Include 4 additional copies for submittal to the railroad)
3. Concrete Mix Designs (Include 4 additional copies for submittal to the railroad)
4. Slurry Mix Designs (Include 4 additional copies for submittal to the railroad)
5. Mortar Mix Designs (Include 4 additional copies for submittal to the railroad)
6. Granular Backfill and Culvert Bedding Materials (Include 4 additional copies for submittal to the railroad)
7. Concrete Repair Materials
8. Concrete Curing Compound
9. Fencing
10. Frames and Covers
11. Manholes and Appurtenances
12. Mastic Material
13. Non-shrink Grout for Manholes
14. Geotextile Fabrics
15. Pipe Materials – RCP and PVC
16. Pipe Materials – CMP (Include 4 additional copies for submittal to the railroad)
17. Pipe Fittings and Appurtenances
18. Reinforced Concrete Box Design / Mix Designs for Boxes
19. Pipe Fittings and Appurtenances
20. Prime Coat
21. Rebar (Include 4 additional copies for submittal to the railroad)
22. Warning Tape
23. Permanent Signs
24. Product Data Sheets (PDS)
25. Paint

SECTION 22b: SUBMITTALS TO UNION PACIFIC RAIL ROAD (UPRR)

All submittals requiring UPRR review shall be first sent to the City of Sparks for review and approval. The UPRR will not accept plans or communications directly from the Contractor. The City will then submit the documents to the UPRR as well as receive the comments back.

See Section 01300 Submittals and Substitutions for numbers of copies to be submitted.

SECTION 23: ACCOMMODATION FOR PUBLIC TRAFFIC

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.

Per section **100.33.01 MAINTENANCE OF TRAFFIC** of the "Standard Specifications for Public Works Construction" Latest Edition, the CONTRACTOR shall maintain access to each business and or property owners on Kleppe Lane throughout the project duration, including access to loading docks and adequate ingress and egress of trucks and equipment so that shipments and deliveries can be conducted without interruption or interference. Additionally CONTRACTOR shall obtain permits and conduct necessary coordination with Nevada DOT regarding work adjacent to mainline I-80 Eastbound traffic as well as Sparks Blvd. onramp to Eastbound I-80. CONTRACTOR shall also obtain permits and conduct necessary coordination via the City for the Union Pacific Rail Road for work adjacent to and underneath the UPRR EB and WB mainline tracks.

In order to accomplish these requirements, CONTRACTOR shall anticipate the following: phasing of the work, building new or modifying existing driveways, flaggers to direct one way traffic, night and weekend work and any other means to accomplish this directive. CONTRACTOR shall coordinate specific access requirements with individual businesses so that size, type and timing of deliveries / exports can be properly accounted for without any disruption to normal business activities. See Section 19 for Working Hour requirements.

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") plan sheet. The CONTRACTOR shall submit two (2) copies of proposed traffic control plan to the CITY 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
- Detours
- Temporary lighting for night work and closures
- Accommodations for pedestrian, bicycle, and transit facilities
- Special events accommodations (namely but not limited to):
 - Hot August Nights (August)
 - Rib Cook Off (September)
 - Street Vibrations (September)

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 CITY 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 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.

During non-working hours, any hazardous section of the work shall be outlined with markers and flares. If deemed necessary by the CITY, 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 CITY, 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 CITY, 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.

Initial deployment of construction signs and traffic control devices on shoulders may not occur more than 24 hours in advance of work activities.

The CONTRACTOR shall verify with the CITY that necessary labor, equipment and materials for the planned work activities are on site prior to placing traffic control devices. Do not begin placing traffic control devices until necessary labor, equipment and materials are on-site to perform planned work activities.

Upon completion of a specific work activity or item as identified in the project schedule, remove traffic control devices from the project roadway and stockpile at an approved staging area if subsequent work is not scheduled in the same project phase, stage, or location within 5 working days (or 7 calendar days for calendar day or completion date projects). In addition, prior to holidays or special events, remove all traffic control devices which no longer apply to existing conditions, as directed. Traffic control devices must be removed from the roadway and stockpiled a minimum of 30 ft. from the pavement edge at an approved staging area.

Traffic lane(s) on Kleppe Lane shall be preserved at **11 ft. minimum, with at least one lane open, at all times.**

After presumptive completion of all pay items and at such time as contract time is suspended for final clean up, remove all traffic control devices daily from the roadway and stockpile a minimum of 30 ft. from the pavement edge at an approved staging area. All traffic control devices necessary for final clean up work shall be placed and removed from the project right-of-way on a daily basis.

The traffic control supervisor shall make at least three (3) inspections of all traffic control devices each day, with no longer than 12 hrs elapsing between inspections, as follows:

1. Before beginning work.
2. At mid-shift.
3. After the end of the shift.

Flaggers shall have completed an approved instructional course in flagger procedures and shall possess a valid flagger card attesting that they have satisfactorily completed said instructional course. Flaggers shall wear vests meeting Performance Class 3 requirements set forth in ANSI/ISEA 107-2004 “American National Standard for High-Visibility Safety Apparel and Headwear”.

Equip the flaggers at each end of work zones with two-way communication radios to allow them to be in contact with each other to control public traffic through the work zone, as conditions require.

Failure to comply with any of the requirements specified herein will be considered a traffic control deficiency and subject to the liquidated damages.

If two violations of the traffic control requirements specified herein are observed by the CITY, work may be suspended. If work is suspended, submit a written revised plan, which addresses the deficiencies. Upon written approval of the plan, the construction operations may resume. Working days, or calendar days, will continue to be assessed during the suspension period.

Should the CONTRACTOR appear to be negligent in furnishing or maintaining warning and protective measures, as described herein, the CITY may direct attention to the existence of the hazard, and the necessary measures shall be immediately furnished and installed by the CONTRACTOR. Failure to do so will be cause to suspend the work until the deficiency is corrected. If the deficiency is not corrected by the end of the work day and the CITY determines that public safety is endangered, then the CITY may in an emergency situation, with or without notice, or prior legal process to the CONTRACTOR, provide suitable protection. In a case where the CITY is forced to provide protection to the general public, a Change Order shall be issued unilaterally deducting from the payments due the CONTRACTOR, the costs of correcting such deficiencies. This cost may include but is not limited to Design Consultants fee, CITY staff time and wages, rental equipment costs, or possibly the use of an outside CONTRACTOR.

SECTION 23b: ACCOMODATION FOR UPRR TRAIN TRAFFIC

See Section 01572 – Working and Flagging near the Tracks for specific guidelines for work adjacent to UPRR facilities.

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 Washoe County Health Department – Air Quality Management Division standards, and a Dust Control Permit shall be obtained from said agency.

Excess excavated material from trenches, manholes, catch basins or similar structures in public streets shall be removed from the site immediately. All asphalt, concrete, soil and aggregate base will be hauled to, and stockpiled at, approved sites 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 CITY or inspector. 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. 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.

At no time will the CONTRACTOR be allowed to store debris or materials on surface streets overnight, nor is the CONTRACTOR allowed to screen/process excavated material in the street.

CONTRACTOR shall not temporarily stockpile soils more than 5' deep over top of the box.

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 Agency'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 the contract, may be imposed.

SECTION 25: FORCE ACCOUNTS

THIS ITEM SHALL BE IDENTIFIED AS A CONTINGENT ITEM. The use of this contingent item will be as directed by the CITY. 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 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 CITY 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 CITY.

SECTION 26: RECORD DOCUMENTS

The CONTRACTOR shall maintain, in a safe place at the job site, one record copy of the construction Drawings in good order and annotated to show all changes made during construction and all existing facilities exposed during construction. These record drawings shall be kept current and made available to the CITY and inspector for reference upon request. CONTRACTOR shall, at the completion of the project, return one completed copy of the Record Drawings to the CITY and TMWA. The CITY will not release CONTRACTOR's retention until the Record Drawings have been received and reviewed by the CITY.

Additionally, the CONTRACTOR is required to obtain the services of a Nevada licensed surveyor to complete an as-built survey of the project. This survey shall be completed during and at the end of the project (depending on features surveyed) and the CONTRACTOR is required to submit an AutoCAD drawing with a complete and useable surface that can be input into the CITY's files to record an exact as-built condition of the project.

Survey shall include, but is not limited to:

- Street centerlines
- Manhole rims and inverts
- Pipe diameters
- Rims and tops of nuts on valves
- Drop inlet flowlines
- Curb returns at driveways
- Inverts of RCB beginning and termination
- Locations of plantings
- Underground electric
- Centerline monuments
- New headwalls / tie-ins to existing storm drainage features

Additionally, the CONTRACTOR is required to obtain the services of a Certified Environmental Manager to implement the Soil and Groundwater Management Plan (HDR February 2013), and to prepare a Contaminant Management Report upon completion of the project. This report shall be submitted to the CITY.

SECTION 27: PROJECT SUPERVISION

The CONTRACTOR will provide a superintendent for this project that is available during working hours. The CONTRACTOR will also provide a foreman for supervision of crews that are currently working on site. A "Working foreman" will not be permitted to supervise daily activities subcontractors will be subject to this rule as well. Supervision of several crews by one foreman will be permitted; the superintendent can also act as the supervision of the crews however, the superintendent must remain on the job at all times during working hours.

SECTION 28: SURVEYING AND TESTING

The CITY will provide construction surveying for the project. Reference points with grades will be provided as well as cut sheets. The CONTRACTOR should exercise extreme care around stakes, PK nails and any reference points. Any re-staking that is needed due to damage by the CONTRACTOR will be the responsibility of the CONTRACTOR.

Compaction testing, asphalt and concrete testing will be provided by the CITY. Twenty four-hour notice must be given by the CONTRACTOR to the CITY or inspector prior to any testing. Three copies of aggregate base, concrete and asphalt submittals will be required for approval prior to any installation.

SECTION 29: DEWATERING / NUISANCE WATER

The CONTRACTOR shall provide the CITY with a dewatering plan at the preconstruction meeting. This dewatering plan shall address the methods which the CONTRACTOR plans on dealing with any water during construction of the box. The CONTRACTOR is referred to the Soil and Groundwater Management Plan (HDR, February 2013) for summary of contaminants and constituent levels likely to be encountered in the groundwater. The dewatering plan shall be approved by the CITY prior to work beginning.

SECTION 30: CONSTRUCTION SCHEDULE

The CONTRACTOR shall provide the CITY with a construction schedule at the preconstruction meeting. The schedule shall take into account all restrictions as set forth in the required permits as well as meet the requirements set forth in this section. Several specific items to note are described as follows:

- Dates of UPRR mainline vicinity work (“E” Sta 325+18.62 to “E” Sta 327+20)
- Dates of UPRR Right of Way work (“W” Sta 218+70.36 to “W” Sta 219+20 and “NTD” Sta 22+18)
- Dates for Removal of WCSB Bridge (“NTD” Sta 36+00)
- Dates for RCB construction East of “NTD” Sta 35+00
- Dates for RCB construction West of “NTD” Sta 35+00

SECTION 31: COORDINATION WITH CITY

The CONTRACTOR shall coordinate at least WEEKLY either in writing or in person with the CITY. Information communicated shall be (but is not limited to and may be added upon at the discretion of the CITY) as follows: 3 week work projection, work accomplished since previous meeting, dewatering and treatment efforts, excavation and handling/treatment of contaminated soils, concrete cylinder break strengths and proposed modifications to the design.

SECTION 32: COORDINATION WITH THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) NATIONAL GEODETIC SURVEY

Located on the North East corner of the UPRR mainline and access road bridge is National Oceanic and Atmospheric Administration (NOAA) bench-mark K 374. This benchmark is a first-order class-1 benchmark (best accuracy classification), and the elevation thereof shall be preserved. Contractor shall adhere to the National Geodetic Survey Benchmark Reset Procedures included at the end of these Special Provisions. Contractor shall coordinate removal and relocation of this benchmark with **William Stone, Southwest Region (NM, NV, UT, AZ) Geodetic Advisor, NOAA's National Geodetic Survey, 505-954-2074 / william.stone@noaa.gov / <http://geodesy.noaa.gov>; c/o Bureau of Land Management; 301 Dinosaur Trail, Santa Fe, NM 87508**

SECTION 33: APPLICABLE PUBLICATIONS

The publications listed form a part of these specifications to the extent referenced. The publications are referred to in the text by the basic designation only.

1. American Association of State Highway and Transportation Officials (AASHTO) Publications
2. The Standard Specifications for Public Works Construction (Orange Book), Latest Edition
3. Nevada Department of Transportation (NDOT) Standard Specifications for Road and Bridge Construction, Latest Edition
4. The International Building Code, Latest Edition
5. Truckee Meadows Water Authority (TMWA) Engineering & Construction Standards
6. NV Energy (Sierra Pacific Power Co. – SPPCo) Gas Engineering and Construction Standards Volume 15
7. American Concrete Pipe Association Concrete Design Manual, Latest Edition

SECTION 34: LIMITATIONS OF CONTRACTOR'S OPERATIONS AFFECTED BY RAILROAD AREA

Work shown and detailed on sheet C-6, "E" 325+18.61 to "E" 327+28.19 and "W" 218+70.36 to "W" 219+35.21, is conditional to the Union Pacific Railroad Permit, which is attached to this bid document. Coordination of this work will require extensive coordination with UPRR.

SECTION 35: FINAL GRADING FOR APN# 034-172-18 and APN# 034-172-19

Disturbed area within APN# 034-172-18 and APN# 034-172-19 should be completed at 6" below finished grade elevations. Final adjustment to the actual finished grade will be done by the private property owner.

BID ITEM CLARIFICATION
Bid Number 16/17-006, PWP# WA-2017-022
NORTH TRUCKEE DRAIN REALIGNMENT – PHASE 3

GENERAL INFORMATION

Unless indicated otherwise within the specific bid item as described in this section, the Engineer's estimated quantity as contained in the bid schedule shall be the final pay quantity. For bid items measured in lineal feet, the quantities are estimated by taking the horizontal projected lengths. For bid items measured in square feet, the quantities are estimated by taking the horizontal projected areas.

The Engineer's estimated quantity, as contained in the bid schedule, is based on the details and dimensions shown on the plans, and no guarantee is made that the quantity, which can be determined by field measurements and computations, will equal the estimated quantity.

In case of discrepancy between the quantity contained in the bid schedule and the quantity or summation for quantities for the same item shown on the plans, payment will be based on the quantity contained in the bid schedule

If City of Sparks, Nevada (CITY – herein also referred to as Engineer, Representative or Engineer Representative) intentionally increases or decreases the quantity of a particular item of work during construction, the final pay quantity of that item will be adjusted to reflect the change.

There shall be no additional payment for changes in the traffic control plan required as a result of changes in the Contractor's work method or schedule.

There shall be no basis for claim by the Contractor for extra payment or changed conditions if, for some unforeseen reason, the City of Sparks is unable to get the Union Pacific Railroad Permit in a reasonable timeframe that would allow the work associated with the railroad permit to be constructed.

Bid Item 1. – Mobilization / Demobilization / Insurance / Bonds

This item shall include providing all labor, materials, supplies, equipment, services and other incidentals necessary for mobilization, demobilization, temporary facilities, transport fees, obtaining all required insurance, bonds, permits (except for those required for Dewatering – which are accounted for under other Bid Items), site dust control through out the project duration, and project signs to perform the work as shown on the plans and in accordance with local, state and national requirements.

This item shall also include compilation and review of Soil Management Plan – wherein handling and treatment of contaminated soils will be detailed, among other activities. Work under this item shall also include any preparatory work and operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site before beginning construction, and include any other item of work for which other bid items have not been established in this bid schedule.

This item also includes all materials, labor, supplies, equipment (including job trailer(s), electricity, communication, sanitary services, potable services, etc.), and other incidentals for complete demobilization from the work site. All clean up work and punch list items shall be completed before final payment of this item shall be paid.

This item will include the mobilization/demobilization as outlined in the Stantec Consulting *North Truckee Drain Pipe Extension Improvements* plans.

Payment for mobilization will be **Lump Sum** with an initial amount of 50% when all preconstruction submittals have been submitted and approved by the CITY. Payment will then be completed using the following schedule based on completed linear centerline feet of box installed:

50% Project Completion – 25% Payment

100% Project Completion -25% Payment (Final Mobilization/Demobilization Payment will be made at the end of the project schedule following submittal of Record Survey and Contaminant Management Report and all areas have been cleaned and restored to working condition, and punch list is complete).

Bid Item 2. – Clearing and Grubbing

This item shall include providing all labor, materials, supplies, equipment, services and other incidentals necessary for clearing and grubbing.

This item will include the Clearing and Grubbing as outlined in the Stantec Consulting *North Truckee Drain Pipe Extension Improvements* plans.

Clearing and Grubbing shall be paid for per **Lump Sum**.

Depending on how the contractor plans to stage the work, Clearing and Grubbing may be prorated and paid as a percentage of the clearing and grubbing completed. The prorated percentage shall be discussed and agreed upon by the Engineer and the Contractor.

Bid Item 3. – Traffic Control

This item shall include providing all labor, materials, supplies, equipment, services, and other incidentals necessary to provide any notifications, coordination with City and Nevada DOT staff, signage, detours using existing streets and roads to permit traffic to pass through construction, and using flaggers, uniformed traffic control officers, traffic control supervisor, and pilot cars, or a combination of these methods, in addition to furnishing, maintaining, relocating, and removing temporary traffic control devices and services as necessary for the control and protection of public traffic through the project, in accordance with the plans and specifications.

This work also consists of renting necessary traffic control devices, designing traffic control plans, and furnishing and placing traffic control as required in the contract documents.

This work also consists of any driveway modification, or other related activities or accommodations to provide and preserve access to all businesses and loading docks and to restore said modifications to their pre-construction configuration as directed in the plans.

Traffic Control shall be paid for per **Lump Sum**.

This bid item shall be paid at the contract lump sum price and will be prorated as a percentage of work completed. The prorated percentage shall be discussed and agreed upon by the Engineer and the Contractor. The total payment will constitute full compensation for all labor, equipment, tools, and all other items necessary and incidental to the completion of the work.

City will pay for Track control by UPRR personnel for 60 working days which is the assumed duration of work to be conducted within UPRR right of way (60 days at \$1,300.00 per day = \$78,000.00). Contractor will be responsible for track control for working days beyond this number and will reimburse the CITY in the form of payment deductions.

Bid Item 4. – Dewatering

Work under this bid item shall consist of removal and treatment of site groundwater, creating a dry work area in the People's and North Truckee Drains, constructing and operating a by-pass system for People's and North Truckee Drain flows, and design and implementation of a site storm water pollution prevention plan (SWPPP).

This item will include the SWPPP as outlined in the Stantec Consulting *North Truckee Drain Pipe Extension Improvements* plans.

A Letter of Permission (LOP) has been obtained from the United States Army Corps of Engineers for the construction of the Project. All work shall be performed in accordance with the General Conditions of the LOP. The Nevada Division of Environmental Protection has issued a 401 Water Quality Certification (NV401-12-013) for the Project. All work shall be performed in accordance with the conditions of the 401 Certification.

Work shall also include, but is not limited to, complying with and obtaining all necessary permits, furnishing, installing, operating, and maintaining the necessary trenches, coffer dams, drains, sumps, pumps, well points, generators, piping, treatment facilities and/or equipment, and for all labor, equipment, tools, and all other items necessary and incidental to the completion of the work. Damage to installed temporary works from rainfall runoff or from the contractor's operations shall be repaired before proceeding with other work unless otherwise approved by the Engineer. A written plan for dewatering must be submitted to the Engineer before work shall commence. Work under this bid item shall conform to the requirements of Section 305 of the Standard Specifications except as modified in the Special Provisions.

This dewatering item shall include all dewatering and full treatment as necessary for any construction and permit compliance required on this project. All dewatering necessary for removals and demolition shall be considered incidental to the cost of those items.

Dewatering shall be paid for per **Lump Sum** with an initial amount of 30% when all preconstruction submittals and dewatering related permits have been submitted and approved. Payment will then be completed using the following schedule, in no particular order:

When reinforced concrete box installation is complete from Station 53+50.00 to Station 44+09.00 – 20% Payment

When reinforced concrete box installation is complete from Station 44+09.00 to Station 27+20.50 – 30% Payment

When reinforced concrete box installation is complete from Station 27+20.50 to Station 18+99.59 – 10% Payment

When the final dewatering and flow diverting efforts are complete, all associated equipment has been demobilized and flows are restored - 10% Payment.

Such payment will constitute full compensation for all labor, equipment, tools, and all other items necessary and incidental to the completion of the dewatering work.

Bid Item 5. – Remove Plantmix Bituminous Surface

The unit price bid for this item shall include all labor, materials, supplies, equipment, disposal, tipping fees, repair and protection of adjacent areas not indicated for removal, services, and other incidentals necessary to remove plantmix bituminous surface. Removal of bituminous surface shall also include any saw cutting as directed by the plans.

This item shall be measured once, regardless of the number of passes necessary to obtain the depth specified on the plans and as approved. Removal of bituminous surface shall include removal of base material and any subgrade required; therefore, removal shall constitute the entire required section. The area of removal shall coincide with the area of replacement as shown on the plan set.

The Contractor should be aware that the actual existing pavement and base 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.

Removal of Plantmix Bituminous Surface will be measured and paid for by the **Square Yard**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 6. – Remove Electric Fencing

The unit price bid for this item shall include all labor, materials, excavation, cutting, equipment, hauling, tipping fees, and incidentals necessary to remove ~12' tall electric fence posts, foundations, insulators and any remaining wire. Removal of PCC Curb and Gutter (sizes and

types as shown on plans) shall include cutting of concrete as well as jackhammering and the removal of base and subgrade material as directed or as required; therefore, removal shall constitute the entire required section.

Removal of Electric Fencing shall be measured and paid for by **Lineal Foot**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 7. - Remove PCC Curb and Gutter - 36" Type 1 & 24" Type 1

The unit price bid for this item shall include all labor, materials, excavation, cutting, equipment, hauling, tipping fees, and incidentals necessary to remove PCC Curb and Gutter (sizes and types as shown on plans) shall include cutting of concrete as well as jackhammering and the removal of base and subgrade material as directed or as required; therefore, removal shall constitute the entire required section.

Remove PCC Curb and Gutter shall be measured and paid for by **Lineal Foot**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 8. – Remove and Replace Chain Link Fence

The unit price bid for this item shall include all labor, materials, excavation, cutting, equipment, hauling, tipping fees, and incidentals necessary to remove chain link fence mesh and posts, multi-strand barbed wire fence topping as indicated on the plan set and in the specifications.

Incidental to remove and replace chain link fence shall be the removal and replacement of temporary fence panels and portable concrete barriers as required to perform the work as directed on the plans and specifications.

Removal and Replacement of Chain Link Fencing shall be measured and paid for by **Lineal Foot**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 9. – Remove Small Concrete Structures

The unit price bid for this item shall include all labor, materials, supplies, equipment, disposal, hauling, tipping fees, services, protection of adjacent areas not indicated for removal and other incidentals necessary to remove PCC items as directed on the plans and specifications.

This item shall include expenditures related to salvaging backflow “duckbill” valves as indicated on the plans.

This item shall include removal of storm water drainage structures (“NTD” Sta. 19+25 & 26+60), small metal structure with concrete pad (“NTD” Sta. 27+90), headwalls (“NTD” Sta. 28+80 and 29+20), concrete pad (“NTD” Sta. 45+20), miscellaneous storm drain man holes and drop inlets (Sta. 22+45, 25+10, 26+10, and 20+10) and RCB plugs (“NTD” Sta. 53+50).

Remove Small Concrete Structures will be measured and paid for by **Each**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 10. – Remove Storm Drain Culvert (All Materials and Sizes)

This item shall include the removal of Storm Drain Pipe including Reinforced Concrete Pipe (RCP), Corrugated Metal Pipe (CMP), Polyvinyl Chloride Pipe (PVC) and Reinforced Concrete Box (RCB) as shown on the plans and as necessary to complete the project. This item shall also include all labor, materials, equipment, tools, excavation, shoring, trenching, cutting, removing, hauling and disposing of materials, clean-up, and all incidentals necessary for a complete removal.

Removal of these items shall be measured and paid for by **Linear Foot**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 11. – Remove Washoe County School District Box Beam Bridge

The unit price bid for this item shall include all labor, excavation, demolition, materials, supplies, equipment, services and other incidentals necessary to remove the WCSD bridge in its entirety as indicated on the plan set, including abutments, deck, guardrail cables, etc. Removal shall include off-hauling and disposing materials including tipping fees.

Removal of WCSD Bridge shall be measured and paid for by **Lump Sum**.

Payment will be full compensation for the work prescribed in this Section.

Bid Item 12. – Remove and Relocate/Replace Private Underground Electric

This item shall include the removal and replacement or relocation of private underground electrical wiring as well as electrical poles with or without attached flood lights as shown on the plans. This item shall include all labor, materials, equipment, tools, excavation, conduit, foundations, shoring, trenching, cutting, removing, hauling and disposing of materials, clean-up, and all incidentals necessary for a complete removal and replacement of materials in-kind at the locations shown on the plans.

Removal and Relocation/Replacement of Private Underground Electric shall be measured and paid for by **Linear Foot**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 13. - Remove Riprap

This item shall include the removal of the existing riprap pad at Sta. 19+25. This item shall include all labor, equipment, tools, excavation, conduit, shoring, removing, hauling and disposing of materials, clean-up, and all incidentals necessary for a complete removal at the location shown on the plans.

Removal of Riprap shall be measured and paid for by **Square Foot**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 14. - Remove and Reset NOAA NGS Benchmark Monument K 374

This item shall include the removal and reestablishment of the National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS) brass cap monument (K 374) that is located on the north headwall of the UPRR bridge structure over the North Truckee Drain ("E" Sta. 325+80). The benchmark monumentation and field procedures are detailed in the NGS benchmark guidelines: www.ngs.noaa.gov/PUBS_LIB/Benchmark_4_1_2011.pdf.

The Contractor shall coordinate the reestablishment of the monument with:

William Stone

Southwest Region (NM, NV, UT, AZ) Geodetic Advisor

NOAA's National Geodetic Survey

505-954-2074 / william.stone@noaa.gov / http://geodesy.noaa.gov

c/o Bureau of Land Management

301 Dinosaur Trail

Santa Fe, NM 87508

Removal and reestablishment of NOAA NGS Benchmark Monument K 374 shall be measured and paid for by **Lump Sum**.

Payment will be full compensation for the work prescribed in this Section.

Bid Item 15. – Construct Reinforced Concrete Box Culvert: 2-8’x8’ – “E” Sta. 325+18.61 to “E” Sta. 327+28.19

The unit price bid for these items shall include all labor, excavation, backfill, materials, supplies, equipment, services, and other incidentals necessary to demolish and remove the existing railroad bridge and backwalls, construct, transport, and place reinforced concrete box, complete and in place in accordance with the plans and specifications. Any labor or material costs associated with repair of existing or proposed RCB sections or junction structures shall be at the contractor's expense.

RCB's may be cast-in-place or precast, or a combination there of so far as the plans and specifications allow. Precast and cast-in-place RCB's shall be paid for by the same unit price regardless of method used.

INCLUSIONS AND EXCLUSIONS

The unit price for precast RCB's **shall** include the following items:

- (a) Tremie seal concrete.
- (b) Compression joint seal, sealing bands and any other items used and necessary to maintain water tightness within the boxes.
- (c) Storage, transportation, handling and crane costs along with associated temporary haul roads.
- (d) All other items not specifically listed which are pertinent to and necessary for construction of precast concrete.

The unit price for this item **shall** include the following items as incidental costs:

- (a) Detailed coordination with the Union Pacific Railroad with assignments per Sheet R-5.
- (b) Removal and disposal of existing bridge and backwall materials.
- (c) The use of temporary or stay-in-place metal or wooden forms.
- (d) Effort and materials required to connect the proposed culverts to existing headwalls; including, but not limited to, preparation of headwall surfaces and drilling and epoxy of rebar dowels.
- (e) Construction of reinforced concrete transition structure at "E" Sta. 325+20.
- (f) Cutting and/or removal of concrete aprons adjacent to bridge abutments which the CONTRACTOR shall remove as necessary to construct the RCBs per the plans and specifications.
- (g) Construction of temporary ballast retainer.
- (h) Approved stabilizing equipment and/or materials to hold the remaining bridge components stable in place while backfill efforts are being conducted at the removed portion.
- (i) Placement and compaction of backfill, subballast and ballast.
- (j) City will pay for Track control by UPRR personnel for 60 working days which is the assumed duration of work to be conducted within UPRR right of way (60 days at \$1,300.00 per day=\$78,000.00). Contractor will be responsible for traffic control for working days beyond this number and will reimburse the CITY in the form of payment deductions.
- (k) All other items not specifically listed which are pertinent to and necessary for construction of reinforced concrete.

The unit price bid shall **not** include:

- (a) Dewatering.
- (b) Vehicular or railroad traffic control.
- (c) Clearing and grubbing.

This item shall be measured and paid for by **Lineal Foot**, as measured along the centerline of the alignment, segment lengths as shown on the profile views, where-in 1 lf of alignment actually includes 2 lf of RCB, as both barrels are included.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the pay items as measured in the field. Payment will be considered full compensation for the work prescribed in this Section.

The quantity indicated in the bid schedule may be decreased or reduced to zero. The reduction of this quantity, as compared with that contained in the bid schedule, shall not constitute a basis for claim by the Contractor for extra payment or changed conditions.

The following are components of the above bid item (installation of RCB) and are broken out for convenience:

GENERAL EXCAVATION for RCBs:

General excavation is defined as the excavation required for the installation of the RCBs along the alignment.

Plan limits of excavation are based upon the use of shoring.

No additional compensation shall be made to the Contractor for trucking, tipping fees, associated fees with protective systems required by OSHA regulations, off-hauling and disposing of materials that cannot be recycled, removal and disposal of material which may come into an excavation from outside the designated limits or from ground movements, or any other miscellaneous material or labor costs.

When changes are made during construction, they will be dealt with as described in the following:

- (a) Overbreak. All sideslope overbreak, will not be paid for.
- (b) Widening Cuts. If the Construction Inspection, Engineer, CITY or the Contractor deems it necessary to excavate beyond the limits of the typical cross section for safety reasons, easier constructability or any other reason, no additional payment shall be made. The Contractor shall proceed with work in a safe manner, of his choosing, but be responsible for additional work and additional quantities caused in such situations.
- (c) Slides and Slipouts. In the event of slides and slipouts, the Contractor is responsible for the integrity of the trench and shall be responsible for any cleanup.

The cost of pioneering work necessary to make slide or slipout areas accessible to normal excavation equipment and the cost of related clearing and grubbing shall be considered as incidental to RCB installation.

BACKFILL MATERIAL: CLASS A / CLASS C, CLASS E AND STRUCTURAL FILL

This component shall include all labor, materials, handling, compacting, hauling services and incidentals necessary to prepare, bed and backfill the RCBs per the plans and specifications.

This item also includes storing and processing (or blending) efforts and equipment should some quantity of native material be utilized as backfill.

Bid Item 16. – Construct Reinforced Concrete Box Culvert: 6’x6’ – “W” Sta. 218+70.36 to “W” Sta. 219+35.21 & “W” Sta. 219+42.43

The unit price bid for these items shall include all labor, excavation, backfill, materials, supplies, equipment, services, and other incidentals necessary to construct cast-in-place reinforced concrete box, complete and in place in accordance with the plans and specifications. Any labor or material costs associated with repair of existing or proposed RCB sections or junction structure shall be at the contractor’s expense.

INCLUSIONS AND EXCLUSIONS

The unit price for this item **shall** include the following items as incidental costs:

- (a) Detailed coordination with the Union Pacific Railroad.
- (b) Effort and materials required to connect the proposed culverts to existing headwalls; including, but not limited to, preparation of headwall surfaces and drilling and epoxy of rebar dowels.
- (c) Construction of reinforced concrete collars.
- (d) All other items not specifically listed which are pertinent to and necessary for construction of reinforced concrete.

The unit price bid shall **not** include:

- (d) Dewatering.
- (e) Vehicular or railroad traffic control.
- (f) Clearing and grubbing.

This item shall be measured and paid for by **Lineal Foot**, as measured along the centerline of each barrel, segment lengths as shown on the profile views.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the pay items as measured in the field. Payment will be considered full compensation for the work prescribed in this Section.

The quantity indicated in the bid schedule may be decreased or reduced to zero. The reduction of this quantity, as compared with that contained in the bid schedule, shall not constitute a basis for claim by the Contractor for extra payment or changed conditions.

The following are components of the above bid item (installation of RCB) and are broken out for convenience:

GENERAL EXCAVATION for RCBs:

General excavation is defined as the excavation required for the installation of the RCBs along the alignment.

No additional compensation shall be made to the Contractor for trucking, tipping fees, associated fees with protective systems required by OSHA regulations, off-hauling and disposing of materials that cannot be recycled, removal and disposal of material which may come into an excavation from outside the designated limits or from ground movements, or any other miscellaneous material or labor costs.

When changes are made during construction, they will be dealt with as described in the following:

(b) Overbreak. All sideslope overbreak, will not be paid for.

(b) Widening Cuts. If the Construction Inspection, Engineer, CITY or the Contractor deems it necessary to excavate beyond the limits of the typical cross section for safety reasons, easier constructability or any other reason, no additional payment shall be made. The Contractor shall proceed with work in a safe manner, of his choosing, but be responsible for additional work and additional quantities caused in such situations.

(c) Slides and Slipouts. In the event of slides and slipouts, the Contractor is responsible for the integrity of the trench and shall be responsible for any cleanup.

The cost of pioneering work necessary to make slide or slipout areas accessible to normal excavation equipment and the cost of related clearing and grubbing shall be considered as incidental to RCB installation.

BACKFILL MATERIAL: CLASS A / CLASS C, CLASS E AND STRUCTURAL FILL

This component shall include all labor, materials, handling, compacting, hauling services and incidentals necessary to prepare, bed and backfill the RCBs per the plans and specifications.

This item also includes storing and processing (or blending) efforts and equipment should some quantity of native material be utilized as backfill.

Bid Item 17., 18., and 19. – Construct RCB: 1-10'x4', Construct RCB: 2-8'x8', Construct RCB: 2-14'x10'

The unit price bid for these items shall include all labor, excavation, backfill, materials, supplies, equipment, services, and other incidentals necessary to construct, transport and place reinforced concrete box, complete and in place in accordance with the plans and specifications. Any labor or material costs associated with repair of pipe sections shall be at the contractor's expense.

RCB's may be cast-in-place or precast, or a combination there of so far as the plans allow. Precast and cast-in-place RCB's shall be paid for by the same unit price regardless of method used.

INCLUSIONS AND EXCLUSIONS

The unit price for this item **shall** include the following items as incidental costs:

- (a) The use of temporary or stay-in-place metal or wooden forms.
- (b) All other items not specifically listed which are pertinent to and necessary for construction of cast-in-place concrete.

The unit price for precast RCB's **shall** include the following items:

- (a) Tremie seal concrete.
- (b) Compression joint seal, sealing bands and any other items used and necessary to maintain water tightness within the boxes.
- (c) Storage, transportation, handling and crane costs along with associated temporary haul roads.
- (d) All other items not specifically listed which are pertinent to and necessary for construction of precast concrete.

The unit price bid shall **not** include:

- (a) Dewatering.
- (b) Costs related to the penetrations from other storm water facilities.
- (c) Clearing and grubbing.

The double barrel items shall be measured and paid for by **Lineal Foot**, as measured along the centerline of the alignment, segment lengths as shown on the profile views, where-in 1 lf of alignment actually includes 2 lf of RCB, as both barrels are included.

For the 10'x4'portion: this item shall be measured and paid for by **Lineal Foot**, as measured along the centerline of the barrel, segment lengths as shown on the profile views.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the pay items as measured in the field. Payment will be considered full compensation for the work prescribed in this Section.

The following are components of the above bid item (installation of RCB) and are broken out for convenience:

GENERAL EXCAVATION for RCBs:

General excavation is defined as the excavation required for the installation of the RCBs along the alignment.

Plan limits of excavation are based upon the use of shoring.

No additional compensation shall be made to the Contractor for trucking, tipping fees, associated fees with protective systems required by OSHA regulations, off-hauling and disposing of materials that cannot be recycled, removal and disposal of material which may come into an excavation from outside the designated limits or from ground movements, or any other miscellaneous material or labor costs.

When changes are made during construction, they will be dealt with as described in the following:

(c) Overbreak. All sideslope overbreak, will not be paid for.

(b) Widening Cuts. If the Construction Inspection, Engineer, CITY or the Contractor deems it necessary to excavate beyond the limits of the typical cross section for safety reasons, easier constructability or any other reason, no additional payment shall be made. The Contractor shall proceed with work in a safe manner, of his choosing, but be responsible for additional work and additional quantities caused in such situations.

(c) Slides and Slipouts. In the event of slides and slipouts, the Contractor is responsible for the integrity of the trench and shall be responsible for any cleanup.

The cost of pioneering work necessary to make slide or slipout areas accessible to normal excavation equipment and the cost of related clearing and grubbing shall be considered as incidental to RCB installation.

BACKFILL MATERIAL: CLASS A / CLASS C, CLASS E AND STRUCTURAL FILL

This component shall include all labor, materials, handling, compacting, hauling services and incidentals necessary to prepare, bed and backfill the RCBs per the plans and specifications.

This item also includes storing and processing (or blending) efforts and equipment should some quantity of native material be utilized as backfill.

Bid Item 20. and 21. and 22. and 23. and 24. Construct Reinforced Concrete Confluence Structure, Construct Reinforced Concrete Access Vaults, Construct Backflow Prevention Vault, Construct Small Concrete Structure (Manhole, Drop Inlet, Trash Rack), Construct Water Diversion Structure “NTD” Sta 41+48

The unit price bid for this item shall include all labor, materials, supplies, equipment, services, and other incidentals necessary to construct cast in place reinforced concrete structures in accordance with the plans and specifications, complete and in place.

Cast in Place or Precast items shall be paid for alike with no additional compensation given for particular type chosen.

Excavation, backfill, Portland Cement Concrete, reinforcing steel, structural steel, steel plates, gaskets, canal gates, check valves, grade rings, stem guides, water tight sealant materials, reinforced concrete collars, cleanouts, lockable lids or any other item necessary as per the details in the plans and used while constructing or reconstructing items will not be measured separately and will be paid as part of the overall item.

Each of these items shall be measured and paid for as **Each**. Where applicable, one (1) RCB manhole shall comprise of 2-24” diameter manholes as per the plans.

Considering measurement and payment, each of these items shall be considered to begin and end, and RCB's shall be considered to end and begin, at the outside face of concrete for the structures as shown on the profile view in the Plans.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the pay items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 25. and 26. Construct Small Diameter (<31") Gravity Mains for Storm Drains, Construct Large Diameter (>31") Gravity Mains for Storm Drains

The unit price bid for these items shall include all excavation, backfill, bedding, compaction, labor, materials, fittings, supplies, casing pipe, casing spacers, end seals, end sections, equipment, services, connections to associated systems/trunklines, and other incidentals necessary to construct, transport and install circular shaped reinforced concrete pipe (RCP) or corrugated metal pipe (CMP), complete and in place in accordance with the plans and specifications.

The unit price bid shall not include dewatering, finish grading or traffic control, as those items are accounted for elsewhere in these BICs.

Small Diameter (<31") Gravity Mains comprising of 12" RCP Storm Drain, 15" RCP Storm Drain, 18" RCP Storm Drain, 24" RCP Storm Drain and 30" CMP Storm Drain shall be measured and paid for by **Linear Foot**, as measured along the centerline of the pipe per the different sizes described in the plans.

Large Diameter (>31") Gravity Mains comprising of 42" RCP Storm Drain, 48" RCP Storm Drain, 54" RCP Storm Drain and 60" RCP Storm Drain, shall be measured and paid for by **Linear Foot**, as measured along the centerline of the pipe per the different sizes described in the plans.

The accepted quantities, measured as specified here-in, will be paid for at the contract price per unit of measurement for the pay items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

GENERAL EXCAVATION for Storm Drain Pipes:

General excavation is defined as the excavation required for the installation of all parallel storm drains, all RCB's and the shown concrete structures along the alignment. Plan limits of excavation are based upon the use of shoring.

No additional compensation shall be made to the CONTRACTOR for trucking, tipping fees, associated fees with protective systems required by OSHA regulations, off-hauling and disposing of materials that cannot be recycled, removal and disposal of material which may come into an excavation from outside the designated limits or from ground movements, or any other cost incidental to the excavation and removal of excavated material.

When changes are made during construction, they will be dealt with as described in the following:

- (a) Overbreak. All sideslope overbreak, will not be paid for.
- (b) Widening Cuts. If the Construction Inspection, Engineer, CITY or the Contractor deems it necessary to excavate beyond the limits of the typical cross section for safety reasons, easier constructability or any other reason, no additional payment shall be made. The Contractor shall proceed with work in a safe manner, of his choosing, but be responsible for additional work and additional quantities caused in such situations.
- (c) Selected Material. If material is encountered during excavation that can be recycled, the selected material can be stockpiled and if deemed suitable for use by the Engineer, the material may be used and paid for as described in the sections regarding fill materials.
- (d) Slides and Slipouts. In the event of slides and slipouts, the Contractor is responsible for the integrity of the trench and shall be responsible for any cleanup.

The cost of pioneering work necessary to make slide or slipout areas accessible to normal excavation equipment and the cost of related clearing and grubbing shall be considered as incidental to pipe installation.

Pipes cut to fit a structure or slope, will be measured by the linear foot of pipe to the inside face of the structure. The estimated quantities shown on the plans will be the quantity used for payment.

CMP and RCP bends, wyes, tees, reducers, end sections and other fittings, with associated excavation and backfill, will be considered incidental to the cost of this bid item.

Full compensation for furnishing pipe with end finish, including distortion if required, will be considered as included in the price paid per linear foot for the pipe involved.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the pay items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

REINFORCED CONCRETE AND CORRUGATED METAL (for storm drain pipes)

The unit price for parallel storm drain pipes shall include the following items:

- (a) Effort and materials required to connect proposed culverts to existing headwalls, manholes, culverts, and drop inlets; including, but not limited to, preparation of surfaces and concrete patching work.
- (b) All other items not specifically listed which are pertinent to and necessary for installation of parallel storm drain pipes.

BACKFILL MATERIAL: CLASS A / CLASS C, CLASS E AND STRUCTURAL FILL (for storm drain pipes)

The Contractor shall be responsible to import material as necessary should native material not meet requirements set forth in the plans and specifications.

Bid Item 27. and 28. – Construct 3' PCC (U Flume) Channel, Construct PCC Curb and Gutter

The unit price bid for these items shall include all labor, materials, supplies, equipment, services, and other incidentals necessary to construct curbs, gutters and concrete channels in accordance with the plans and specifications.

PCC channels will be measured and paid for by **Linear Foot** along the centerline of the channel.

Curb and gutter shall comprise of Portland Cement Concrete of the following types: 24" Type 1 and 36" Type 1, and shall be measured and paid for by **Linear Foot**, as measured along the base of the curb face. Such measurement will be continuous along such line extended across driveway and ramp openings.

All excavation, subgrade preparation and aggregate base course material and work required for the described items, as well as reinforcing fibers, shall be considered incidental to installation and no additional payment shall be made.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the pay items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 29. Construct Riprap Aprons

The unit price bid for this item shall include all excavation, hauling, labor, materials, supplies, equipment, services, and other incidentals necessary to construct riprap aprons in accordance with the plans and specifications.

Riprap aprons shall be measured and paid for by **Cubic Yard**, as measured in place.

This item shall not include costs associated with installation of the headwalls or dewatering, as those costs are accounted for elsewhere in these BICs.

All excavation, subgrade preparation, riprap bedding material, and geofabric, as well as the work required for the described items, shall be considered incidental to installation and no additional payment shall be made.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the pay items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 30. Construct Rockery Retaining Wall (“NTD” Sta. 34+25)

The unit price bid for this item shall include all excavation, hauling, labor, materials, supplies, equipment, services, and other incidentals necessary to construct a rockery wall in accordance with the plans and specifications.

Construct Rockery Retaining Wall shall be measured and paid for as a **Lump Sum**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the pay items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 31. – Construct Plantmix Bituminous Pavement (3” AC on 6” Aggregate Base)

The unit price bid for these items shall include all labor, materials, supplies, equipment, services, and other incidentals necessary to construct one or more courses of bituminous pavement including plantmix bituminous aggregate, bituminous material, mineral filler, and sand blotter on a prepared aggregate base; to place plantmix bituminous open-graded surface including plantmix bituminous open-graded surface aggregate, asphalt cement, and mineral filler; to apply an emulsified asphalt tack coat; to apply a bituminous material prime coat and sand blotter as required; and to apply a bituminous material seal coat and sand blotter as required, in accordance with the plans and specifications.

Plantmix bituminous surface will be per measured and paid for by **Square Yard**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

All base aggregate materials and preparation shall be considered incidental to the cost of the Plantmix Bituminous Pavement. Properties of aggregates shall be per Section 200.02.03, and per Section 200.01.03 for the base material. Both shall be placed and compacted as specified in the plan set and constructed as per the Standard Specifications.

Bid Item 32. – Construct Gravel Maintenance Road (15’ wide x 6” thick)

The unit price bid for these items shall include all labor, materials, supplies, equipment, services, and other incidentals necessary to construct a gravel maintenance road, in accordance with the plans and specifications.

Properties of aggregates shall be per Section 200.01.03 for the base material, and shall be placed and compacted as specified in the plan set and constructed as per the Standard Specifications.

Gravel Maintenance Road will be measured and paid for by **Cubic Yard**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 33. – Hydroseeding, Landscape and Irrigation Repair/Restoration

This item shall include all labor, materials, supplies, equipment, shipping, services, arborist services, hydroseeding and other incidentals necessary for complete and in-place installation and restoration of landscaping areas and irrigation systems. All irrigation systems shall be restored in-kind to pre-construction configuration and functionality; all types of vegetation and shrubbery shall be restored or replaced to the pre-construction configuration, size and species.

This item will include the revegetation work as outlined in the Stantec Consulting *North Truckee Drain Pipe Extension Improvements* plans.

Any concrete, pavement or any other existing item related to the landscaping of a private or public property that is altered during construction shall be repaired or replaced.

Landscape and Irrigation Repair/Restoration will be measured and paid for as a **Lump Sum**.

Landscape and Irrigation will be prorated and paid as a percentage of the work completed. The prorated percentage shall be discussed and agreed upon by the Engineer and the Contractor.

Payment will be full compensation for the work prescribed in this Section.

Bid Item 34. – Remove existing chain link fencing and gate

The unit price bid for this item shall include all labor, materials, excavation, cutting, equipment, hauling, tipping fees, and incidentals necessary to remove ~6' tall fence posts, foundations, backfill of foundation and postholes, gates and fencing material to the limits of any new fencing improvements.

Removal of Existing Chain Link Fencing and Gate shall be measured and paid for by **Lineal Foot**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 35. – Pipe Stabilization

These items are the removal and replacement of unsuitable materials below the pipe bedding zone. The work comprising the unit prices bid for these items shall include all labor, equipment, materials and incidentals necessary to remove and replace unsuitable materials, including, but not limited to, removing unsuitable material and disposing at an approved offsite location; preparing and compacting material below the removal area; furnishing and placing a geotextile, as needed; and furnishing and placing replacement material as specified in the Geotechnical Report.

Pipe Stabilization shall be measured and paid for by **Cubic Yard**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 36. – Place Backfill

The unit price bid for these items shall include all labor, materials, supplies, equipment, services, and other incidentals necessary to place backfill to finished grade, including, but not limited to, preparation of subgrade, placement of backfill material to finished grade or access road subgrade as shown on plans, furnishing and placing a geotextile, as needed, in accordance with the plans and specifications.

This item shall **not** include pipe bedding or backfill within existing roadway culvert locations.

Place Backfill shall be measured and paid for by **Cubic Yard**.

Payment will be full compensation for the work prescribed in this Section.

Bid Item 37. – Place 12-inch Type II Class B Aggregate Base

The unit price bid for this item shall include all labor, equipment, materials and all incidentals necessary to construct the aggregate base course access road structural section. Work shall include, but not be limited to import of materials, placement, preparation, compaction and incidentals necessary for a complete installation.

Place 12-inch Type II Class B Aggregate Base shall be measured and paid for by **Square Yard**.

Payment will be full compensation for the work prescribed in this Section.

Bid Item 38. – Construct PCC commercial Driveway with Aggregate Base

The unit price bid for this item shall include all labor, equipment, materials and all incidentals necessary to construct PCC commercial driveways at the locations indicated on the drawings. Work shall include but not limited to, the curb and gutter along the driveway, the sidewalk across the driveway including sidewalk transitions, install new aggregate base material with a compacted thickness of 8-inches, reinforcement for the commercial driveway, placement of the concrete commercial driveway, and incidentals necessary for a complete installation. Adjustment of existing utility/meter boxes and valves (within driveway limits) shall be included in this item at no additional charge to the Agency, in accordance with the plans and specifications.

Construct PCC commercial Driveway with Aggregate Base shall be measured and paid for by **Square Foot**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 39. – Construct 16-foot NDOT Swing Gate

The unit price for fence for the size and type indicated on the construction drawings shall include all labor, equipment, materials and all incidentals necessary to install the gates at the locations indicated on the plans. Work shall include, but not be limited to, excavation, concrete foundation, posts, chain link, additional fencing to connect gate to existing fencing, and incidentals necessary for a complete installation, in accordance with the plans and specifications.

Construct 16-foot NDOT Swing Gate shall be measured and paid for by **Each**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 40. – Perform Dewatering Operations Including Bypass to Overflow Structure and Removal/Emergency Removal Plans

Work under this bid item shall consist of removal and treatment of site groundwater, creating a dry work area in the North Truckee Drain, constructing and operating a by-pass system for North Truckee Drain flows, and design and implementation of a site storm water pollution prevention plan (SWPPP).

Work shall also include, but is not limited to, complying with and obtaining all necessary permits, furnishing, installing, operating, and maintaining the necessary trenches, coffer dams, drains, sumps, pumps, well points, generators, piping, treatment facilities and/or equipment, and for all labor, equipment, tools, and all other items necessary and incidental to the completion of the work. Damage to installed temporary works from rainfall runoff or from the contractor's operations shall be repaired before proceeding with other work unless otherwise approved by the Engineer. A written plan for dewatering must be submitted to the Engineer before work shall commence. Work under this bid item shall conform to the requirements of Section 305 of the Standard Specifications except as modified in the Special Provisions.

This dewatering item shall include all dewatering and full treatment as necessary for any construction and permit compliance required on this project. All dewatering necessary for removals and demolition shall be considered incidental to the cost of those items.

Perform Dewatering Operations Including Bypass to Overflow Structure and Removal/Emergency Removal Plans shall be paid for per **Lump Sum** with an initial amount of 30% when all preconstruction submittals and dewatering related permits have been submitted and approved. Payment will then be completed using the following schedule, in no particular order:

When reinforced concrete pipe installation is complete on plans provided by Stantec Consulting – 60% Payment.

When the final dewatering and flow diverting efforts are complete, all associated equipment has been demobilized and flows are restored - 10% Payment.

Such payment will constitute full compensation for all labor, equipment, tools, and all other items necessary and incidental to the completion of the dewatering work.

Bid Item 41. – Install 48-inch Type IV Manhole with 36-inch Circular Storm Drain Grate

The unit price bid for manhole for the type and size specified on the construction drawings shall include all labor, equipment, materials and all incidentals necessary to install the manhole at the locations indicated on the plans. Work shall include, but not be limited to, excavation, perpetuation of storm drainage flows including pumping, bedding, construction of manhole, construction of collars and grates, connection to storm drain system, backfill to subgrade in paved areas or to finished graded in non-paved areas, setting of manhole to finish grade, erosion control, perpetuation of irrigation and replacement of landscaping and incidentals necessary for a complete installation.

Install 48-inch Type IV Manhole with 36-inch Circular Storm Drain Grate shall be measured and paid for by **Each**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 42. – Install PVC SDR 35 Pipe Riser with 24” Circular Storm Drain Grate

The unit price bid for manhole for the type and size specified on the construction drawings shall include all labor, equipment, materials and all incidentals necessary to install the manhole at the locations indicated on the plans. Work shall include, but not be limited to, construction of pipe riser, construction of collars and grates, connection to storm drain system, backfill to subgrade in paved areas or to finished graded in non-paved areas, setting of riser to finish grade, erosion control, perpetuation of irrigation and replacement of landscaping and incidentals necessary for a complete installation.

Install PVC SDR 35 Pipe Riser with 24” Circular Storm Drain Grate shall be measured and paid for by **Each**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 43. – Install 60” Type IV RCP Storm Drain

Bid Item 44. – Install 24” Type IV RCP Storm Drain

Bid Item 45. – Install 18” Type IV RCP Storm Drain

The unit price bid to install storm drain pipe for the type, gauge, class, and size specified on the construction drawings shall include all labor, equipment, materials and all incidentals necessary to install the pipe at the locations indicated on the drawings. Work shall include, but not be limited to, pipe material, excavation, perpetuation of flows including pumping, bedding, placement of the pipe, connection to storm drain systems including storm drain lateral connection, backfill to subgrade in paved areas or to finished grade in non-paved areas, and incidentals necessary for a complete installation.

Install 60” Type IV RCP Storm Drain, Install 24” Type IV RCP Storm Drain, and Install 18” Type IV RCP Storm Drain shall be measured and paid for by **Linear Foot**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 46. – Place Slurry Backfill

The unit price bid for slurry backfill shall include all labor and materials necessary, but not limited to, placement of the Lean Concrete Slurry Mix in accordance with the details shown on the construction drawing and all miscellaneous items of work for a complete installation, in place. Refer to the Geotechnical report for Slurry Backfill requirements.

Place Slurry Backfill shall be measured and paid for by **Cubic Yard**.

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 47. – Construct 60-inch NDOT Type I Headwall with Wingwalls

The unit price bid to construct the culvert headwalls and wingwalls for the type and size indicated on the drawings shall include all labor, equipment, materials and all incidentals necessary to construct the headwalls and wingwalls at the locations indicated on the drawings. Work shall include, but not be limited to, excavation, subgrade preparation, perpetuation of storm drainage flows, construction of the headwalls, wing walls, footings, reinforcement, backfill, structural backfill and incidentals necessary for a complete installation.

Construct 60-inch NDOT Type I Headwall with Wingwalls shall be measured and paid for by **Lump Sum**.

Payment will be full compensation for the work prescribed in this Section.

Bid Item 48. – Tideflex 60-inch Checkmate Valve with Downstream Clamp & Freight

The unit price bid to install Tideflex valves as specified on the construction drawings shall include all labor, equipment, materials and all incidentals necessary to install the at the locations indicated on the drawings. Work shall include procuring Tideflex Checkmate Valve and appurtenances, placement of the valves, connection to headwalls and incidentals necessary for a complete installation.

Tideflex 60-inch Checkmate Valve with Downstream Clamp & Freight shall be measured and paid for by **Lump Sum**.

Payment will be full compensation for the work prescribed in this Section.

Bid Item 49. – Place Rip-Rap Grade 150

Bid Item 50. – Place Rip Rap Grade 400

The unit price bid for rip rap, size and class as specified on the construction drawings, shall include all labor, equipment, materials and all incidentals necessary to install rip rap at the locations indicated on the plans. Work shall include, but not be limited to, excavation, placement of rip rap bedding, geotextiles, and rip rap and incidentals necessary for a complete installation.

Place Rip-Rap Grade 150 and Place Rip-Rap Grade 400 shall be measured and paid for by **Square Foot.**

The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the items as measured in the field. Payment will be full compensation for the work prescribed in this Section.

Bid Item 51. – Force Account – General - contingent item

A force account of \$500,000 has been established for this project

The lump sum unit price bid amount set forth in the bid schedule shall be the same for all bidders. This bid amount shall cover furnishing of materials, equipment, and labor and all incidentals for any work not included in the plans and specifications that may be directed by the CITY. Provisions of sections 100.24 CHANGE ORDERS and 100.25 EXTRA WORK of the Standard Specifications for Public Works Construction (SSPWC) apply to work covered by this specification. This bid item has been established to compensate for any costs allowed as a result of unforeseen interferences, changes to the work, or other items in connection with constructing the improvements, which require work or material by the Contractor in addition to those items included in the Contract. The amount to be included in the Contract for such work shall be as set forth in the bid schedule must be included by the Bidder.

There is no direct payment for this item. Payment will be made only for additional authorized work performed. Depending upon the amount of additional work authorized and completed at the close of the Contract, the amount bid may be used entirely, partially, or not at all.

Bid Item 52. – Force Account – Hazardous Materials (Soils) - contingent item

A force account of \$50,000.00 has been established for this item.

The lump sum unit price bid amount set forth in the bid schedule shall be the same for all bidders. This bid amount shall cover all labor, equipment, materials and all incidentals necessary to control and/or treat, at the direction of the CITY and in accordance with Standard Specifications (Provisions of sections 100.24 CHANGE ORDERS and 100.25 EXTRA WORK of the Standard Specifications for Public Works Construction (SSPWC)) contaminated water or soil which may be encountered. Work shall include, but not be limited to, removal and offsite disposal of contaminated material, pumping and piping equipment, material handling and hauling, all environmental permits, and conforming with any and all rules, regulations as determined by the Nevada Department of Environmental Protection, the City of Sparks or any other governing agency regarding contaminated or polluted ground or surface water.

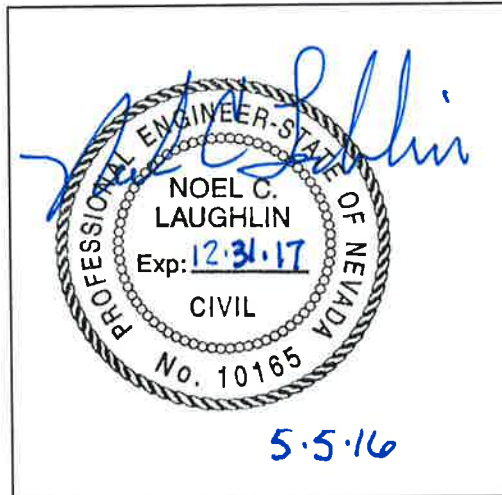
There is no direct payment for this item. Payment will be made only for additional authorized work performed. Depending upon the amount of additional work authorized and completed at the close of the Contract, the amount bid may be used entirely, partially, or not at all. The CITY and the Contractor shall agree upon the quantities (if any) on a daily basis for each day when hazardous materials are encountered at which time it shall be recorded and initialed by both the Contractor and the CITY in the daily field report.

TECHNICAL SPECIFICATIONS
Bid Number 16/17-006, PWP# WA-2017-022
NORTH TRUCKEE DRAIN REALIGNMENT – PHASE 3

All work shall be performed in accordance with the Project Plans and following Standard Specifications;

1. Standard Specifications for Public Works Construction, SSPWC (Orange Book), latest edition.
2. Standard Details for Public Works Construction, SDPWC (Orange Book), latest edition.
3. North Truckee Drain Realignment -Phase 3 Technical Specifications

CONTRIBUTING AUTHOR FOR SPECIFICATIONS



Noel C. Laughlin, P.E., Project Manager - responsible for the following portions of the Specifications:

- Technical Washoe County "Orange Book" Format Specifications
 - Part 2 - Construction Materials (all)
 - Part 3 – Construction Methods (all)
- Construction within the Union Pacific Right of Way in CSI format
 - Division 01000 (all)
 - Division 01300 (all)
 - Division 01400 (all)
 - Division 01500 (all)
 - Division 01600 (all)
 - Division 01700 (all)
 - Division 02000 (all)
 - Division 02100 (all)
 - Division 02200 (all)
 - Division 02400 (all)
 - Division 02800 (all)
 - Division 03100 (all)

TECHNICAL SPECIFICATIONS
Bid Number 16/17-006, PWP# WA-2017-022
NORTH TRUCKEE DRAIN REALIGNMENT – PHASE 3

PART 2 – CONSTRUCTION MATERIALS

200.01 AGGREGATES FOR BASE COURSES

Add the following section:

200.01.09 – Structural Fill – Add the following: Base aggregates shall conform to the following additional requirements:

The 1 inch sieve size shall replace the 4 inch sieve size in Table 200.01.02-I. The material shall have 100% passing the 1 inch Sieve Size and the rest of the gradation shall remain the same.

200.03 AGGREGATES FOR BEDDING AND BACKFILL

Add the following section: Before placing backfill material (imported, blended or native) sieve, plasticity index and proctor compaction dry density analysis must be completed to ensure conformance to specifications. At a minimum, one (1) bulk sample per soil type shall be obtained for testing.

Add the following section:

200.03.04.01 – Class C Material used for Base Course, Leveling Courses and Gravel Surfacing – Add the following: Base aggregates shall conform to the following additional requirements:

Project Control Tests	Test Method	Requirements
Abrasion	AASHTO T96	35 percent maximum wear.
CBR Value	ASTM D1883	100 percent, minimum
Soundness	ASTM C88	12 percent, maximum
Flat and Elongated Particles	ASTM D4791	8 percent, maximum.

Add the following section:

200.03.04.02 – Class C Material used for Base Course, Leveling Courses and Gravel Surfacing – Add the following: Bedding material as shown in the Standard Details within the plan set is required should the CONTRACTOR choose to use either Pre-Cast or Cast-In-Place Reinforced Concrete Boxes.

201.01 BITUMINOUS MATERIALS

Bituminous Plantmix shall conform to the requirements of Section 320 - “Plantmix Bituminous Pavement” of the Standard Specifications, except as modified herein.

The CONTRACTOR shall submit in writing for approval a job mix formula conforming to the requirements of Subsection 320.02.01 – “Composition of Mixtures” of the Standard Specifications. Type 2 aggregate conforming to the requirements of Subsection 200.02. – “Aggregates for Bituminous Courses” shall be used unless otherwise specified.

Unless otherwise approved by the CITY, Asphalt Cement shall be PG64-28NV. Asphalt binders shall conform to the requirements of Section 201 - “Bituminous Material” of the Standard Specifications with the following exceptions:

Test	Test Method	Requirements	Limit with Tolerance	Rejection Limit
Tests on Original Asphalt Cement				
Average Mass Change (percent)	AASHTO T240	1.00 Maximum	1.00 Maximum	1.01 Maximum

COMPOSITION OF MIXTURES

Subsection 320.02.01 - “Job Control Grading Band” of the Standard Specifications, is herewith amended as follows:

1. Amend the gradation and asphalt cement content table as follows:

	Maximum Tolerance
Aggregate passing No. 4 and larger sieves	±7 percent
Aggregate passing No. 8 to 100 sieves	±4 percent
Aggregate passing No. 200 sieve	±2 percent
Asphalt content	-0.2% to +0.7% of total weight of mix

2. Delete the third paragraph of Subsection 337.04.01 – “Composition of Mixtures” of the Standard Specifications and replace as follows:

The optimum asphalt cement content shall be determined to 0.1 percent, by total weight of mix and dry weight of aggregate, in accordance with the Asphalt Institute’s Manual Series No. 2 (MS-2) with a target value of 3% Air Voids for light traffic conditions (design Equivalent Single Axle Load (ESAL) < 10⁴) and 4% Air Voids for medium and heavy traffic conditions (design ESAL > 10⁴). The CONTRACTOR shall use a 75-blow Marshall Mix design for all streets on this project. The mix design and project control samples shall conform to MS-2 Table 5.2 - Marshall Mix Design Criteria.

Modified MS-2 Table 5.2 - Marshall Mix Design Criteria

	Light Traffic² Surface & Base		Medium Traffic² Surface & Base		Heavy Traffic² Surface & Base	
Marshall Method Mix Criteria ¹						
Compaction, Number of Blows, Each End of Specimen	50*		50		75	
Stability (pounds)	1,200 Min.*		1,200 Min.		1,800 Min.	
Flow (0.01 inches)	8 Min.	16 Max.*	8 Min.	16 Max. ⁽⁸⁾	8 Min.	14 Max. ⁽⁸⁾
Air Voids (percent)	2 Min.*	4 Max.*	3 Min.	5 Max.	3 Min.	5 Max.
Voids in Mineral Aggregate (percent)	See STS Table 1.14A-2 : MS-2 Table 5.3					
Voids Filled With Asphalt (percent)	70	80	65	78	65	75

Notes:

1. All criteria, not just stability value alone, must be considered in designing an asphalt paving mix. Hot mix asphalt bases that do not meet these criteria when tested at 140 °F are satisfactory if they meet the criteria when tested at 100 °F and are placed 4 inches or more below the surface.
 2. Traffic classifications
 Light Traffic conditions resulting in a Design ESAL < 10⁴
 Medium Traffic conditions resulting in a Design ESAL between 10⁴ and 10⁶
 Heavy Traffic conditions resulting in a Design ESAL > 10⁶
 3. Laboratory compaction efforts should closely approach the maximum density obtained in the pavement under traffic.
 4. The Flow value refers to the point where the load begins to decrease.
 5. The portion of asphalt cement lost by absorption into the aggregate particles must be allowed for when calculating percent air voids.
 6. Percent air voids are calculated at the target value.
 7. Percent voids in the mineral aggregate are to be calculated on the basis of the ASTM bulk specific gravity for the aggregate.
 8. Upon approval of CITY, flow may exceed the maximum value when polymer modified binders are used.
- * Indicates modified value from MS-2 Table 5.2.

Minimum Percent Voids in Mineral Aggregate (VMA)

Nominal Maximum Particle Size (inches) ^{1, 2}	Voids Filled in Mineral Aggregate (percent), Min.		
	Design Air Voids (percent) ³		
	3.0	4.0	5.0
No. 16	21.5	22.5	23.5
No. 8	19.0	20.0	21.0
No. 4	16.0	17.0	18.0
3/8	14.0	15.0	16.0
1/2	13.0	14.0	15.0
3/4	12.0	13.0	14.0
1	11.0	12.0	13.0
1-1/2	10.0	11.0	12.0
2	9.5	10.5	11.5
2-1/2	9.0	10.0	11.0

Notes:

1. Standard Specifications for Wire Cloth Sieves for Testing Purposes.
2. The nominal maximum particle size is one size larger than the first sieve to retain more than 10 percent.
3. Interpolate minimum voids in the mineral aggregate (VMA) for design air void values between those listed.

PRIME COATS

Table 315.03.04-I shall be replaced with the following table: Allow prime coats to cure for a minimum of 48 hours prior to paving, unless otherwise approved.

Grade of Asphalt Emulsion	Distributor Spraying Temperature °F		Pugmill Mixing Temperature °F of Emulsion and Aggregates	
	Minimum	Maximum	Minimum	Maximum
RS-1	70	140	(Not used for Mixing)	
RS-2, CRS-2, CRS-2nv	125	185	(Not used for Mixing)	
CRS-1, CRS-1nv	125	185	(Not used for Mixing)	
CQS-1nv	70	160	(Not used for Mixing)	
SS-1, CSS-1	70	160	50	160
SS-1h, CSS-1h	70	160	50	160
CMS-2, CMS-2h, CMS-2s	70	160	50	160
LMRS-2, LMRS-2h	125	185	(Not used for Mixing)	
LMCRS-2, LMCRS-2h	125	185	(Not used for Mixing)	
PMPS, PMPS-h, PMPS QB	110	185	(Not used for Mixing)	
PMPS Recycle	110	185	60	140

*The maximum spraying temperature may be used if the aggregate is not heated.

TACK COAT

Emulsified Asphalt, Type CQS-1nv (Diluted) may be substituted for the tack coat.

Emulsified asphalt for the seal coat shall be Emulsified Asphalt, Type SS-1h (Diluted); however, Emulsified Asphalt, Type SS-1 (Diluted), Emulsified Asphalt, Type CSS-1 (Diluted) or Emulsified Asphalt, Type CSS-1h (Diluted) may be substituted. Prepare the surface and apply the emulsified asphalt according to the Standard Specifications in the area where it is to be used as a seal coat.

202.01 PORTLAND CEMENT CONCRETE AND SLURRY BACKFILL

Add the following to the end of Section 202.01.01

Portland Cement Concrete shall conform to the requirements of Subsection 337.10 – “General Structural Use Concrete” of the Standard Specifications. The CONTRACTOR shall submit in writing for approval a mix design conforming to the requirements of Subsection 337.10 - “General” of Section 337 – “Composition of Mixtures” of the Standard Specifications. All Portland Cement Concrete, unless otherwise indicated, shall have a coarse aggregate gradation conforming to Size No. 67 in Subsection 200.05.03 - “Coarse Aggregates” of the Standard Specifications. Cement shall be Type II.

If the CONTRACTOR submits a written request to use Size No. 57 in lieu of Size No. 67, and if the CITY approves this request, then air entrainment shall be adjusted to conform to ACI requirements for severe conditions.

Concrete used for curbs, gutters, sidewalks, pedestrian ramps, and driveway aprons shall conform to the requirements of Subsection 337.10.01.01 – “Portland Cement Concrete Exposed to Freeze-Thaw Cycles” of the Standard Specifications and shall be reinforced with collated, fibrillated polypropylene fibers conforming to the requirements of Subsection 202.02.02.04 – “Polypropylene Fibers” of the Standard Specifications, at 1.5 pounds per cubic yard of concrete.

Subsection are herewith amended as follows:

Class AA concrete shall be required where the option of Class A or Class AA concrete is indicated in the plans or the Standard Specifications. Class DA may be substituted for Class AA concrete.

Type of Use	Minimum Cement Content	Minimum Compressive Strength , psi	Slump Inches	Maximum Water Cement Ratio (By Weight)	Air Content
Sidewalks, curbs, gutters, valve and manhole collars, valley gutters, pedestrian ramps and driveway approaches	6 sacks per cubic yard	4,000	1 to 4	0.45	6% ±1.5%
Thrust and Anchor Blocks	564 lbs./cubic-yard	3,000	3 to 4	0.50	No Requirement
Excavatable Slurry Bedding and Backfill	Submit Mix Design	300	6 to 9	Submit Mix Design	5%-min.
* Mix designs shall have a target air content of 6 percent, unless stipulated otherwise. Field air content shall be 6 percent ± 1½ percent.					

202 CEMENT AND RELATED MATERIALS

Add the following sections:

202.01.08 Pozzolan. Use Type V cement with a minimum of 20% Type F pozzolan by mass in all concrete. In lieu of this requirement, Type II cement with a minimum of 20% Type F pozzolan by mass or Type IP (MS) cement may be substituted therefore. The combined mass of cement and pozzolan will be considered as the mass of the cement when determining compliance with the cement range and maximum water requirements as specified in the Standard Specifications.

202.01.09 Concrete Mixing and Placement. Concrete shall be delivered to the site by transit mixers. The rate of delivery, haul time, mixing time and hopper capacity shall be such that all mixed concrete delivered shall be placed in the forms within one hour from the time of introduction of cement and water to the mixer. All concrete shall be kept continuously agitated until discharged in the hopper at the job site.

202.01.10 Ready-Mixed Concrete. Ready-mixed concrete shall be batched, mixed, and transported in accordance with ASTM C94 and Chapter 7 of ACI 301. Plant equipment and facilities shall conform to the "Check List for Certification of Ready Mixed Concrete Production Facilities" of the National Ready Mixed Concrete Association.

Add the following to the beginning of Section 202.02.02 Base Materials

202.02.02 Base Materials. Provide necessary means to obtain an aggregate sample from the batch plant conveyor belt. Construct the sampling device so representative samples may be taken as required. Deliver the samples by mechanical means to a point on the ground or other satisfactory safe and accessible location.

If two consecutive sieve analysis results are out of specification, reprocess failing stockpile or stockpiles. If three consecutive sieve analysis results are out of specification, stockpile or stockpiles will be rejected. Once rejected material has been replaced, provide informational results indicating the new material is within specification.

Add the following to the beginning of Section 202.01.05 Admixtures
202.01.05 Admixtures.

When a High Range Water Reducer is used, the slump requirements are hereby waived and the slump of the concrete after the admixture is added shall not exceed 200 mm (8 in.).

As an option, in order to adjust the admixture dosage and change mixture properties, submit two mix designs and trial batches for minimum and maximum values of admixture to be used. Select an admixture dosage within the approved range. If electing to adjust the admixture dosage, give written notification prior to batching concrete.

202.01.08.01 Concrete Mix Design. The following shall be added:

The submitted and approved mix design strength will serve as the specified 28-day compressive strength. The mix design strength will be the basis of acceptance even when contract documents specify lower compressive strengths.

Proportion water to maintain batching consistency with regard to stockpile moisture contents and varying absorption values for both coarse and fine aggregates. If requested, submit a new mix design if either the coarse or fine aggregate absorption values vary from the approved mix design by more than 1%.

When the entire plant is running, the scale reading and cutoff weights shall not vary from the mix design by more than 1% for cement, flyash, and silica fume, 1.5% for any individual size aggregate, and 1% for the total combined aggregate in any batch. The total water shall not exceed the maximum water specified in the mix design.

Condition the stockpiles to a homogeneous moisture content. Begin conditioning stockpiles a minimum of 15 hours prior to batching, or as directed.

Curing compound not used within 6 months of the date of manufacture will require certification from the manufacturer that the curing compound still conforms to ASTM C309. Curing compound more than one year old or without a manufacture date on the container will not be allowed for use.

202.01.12 Freeze Thaw Environments. Add the following to the first paragraph of this Subsection of the Standard Specifications:

Provide detailed plan for cold weather curing and protection of concrete placed and cured in weather below 40 degrees F. Provide detailed plan for hot weather placements including curing and protection for concrete placed in ambient temperatures over 80 degrees F.

204.00 MANHOLES AND CATCH BASINS

204.02.03 Cast Iron Frame and Cover. Add the following to the first paragraph of this Subsection:

Manhole covers shall be watertight and lockable Pamrex or East Jordan Iron Works hinged manhole frames and covers shall be provided and installed by the CONTRACTOR. Lids shall have the words “Storm Drain” cast into covers.

205.04 Construction Water Supply

(a) General. CONTRACTOR is responsible to obtain and utilize an adequate and appropriate water supply for all construction activities and adherence to permitting requirements. Owners of supply shall be negotiated with and an agreement signed with each before the water is removed. CONTRACTOR shall furnish copies of any such agreements to the CITY. All royalties occurring under such agreements shall be paid and any necessary rights of way obtained.

(b) Water Wells and Well Points for Dewatering. Be aware that water usage may be limited in the project area. Monitoring the usage and effects on adjacent wells may also be required by the Department of Conservation and Natural Resources, Division of Water Resources. Contact the Office of the State Engineer for possible restrictions at (775) 684-2800. If electing to obtain water from an existing well or to drill a well for highway construction purposes, request a waiver be issued in accordance with Nevada Revised Statutes and the Nevada Administrative Code.

File all requests for waiver to the Engineer on the form from the Division of Water Resources website (<http://water.nv.gov/>). Ensure the request package includes the following information:

1. The location of the proposed water well by public survey, county assessor’s parcel number and plot map.
2. The project and contract number.
3. The total amount of water that will be consumed each day.
4. The name, address, and telephone number of the person responsible for plugging the well. Also include the name, address, and telephone number of the owner of the land where the well is located if not the same as the person responsible for plugging the well.
5. A notarized affidavit signed by the person responsible for plugging the well which states that they will be responsible for plugging the well if it is abandoned.
6. The name, address, and telephone number of a person who will be available to answer questions concerning the contract.
7. The date the contract is scheduled to be completed.

Maintain a copy of the approved waiver onsite at all times during drilling operations.

206.00 REINFORCING STEEL

Add the following section:

206.04 Coating of Reinforcing Steel

Coating of reinforcing steel shall conform to AASHTO M284 (ASTM A775). Fabrication and handling of coated reinforcing steel shall conform to AASHTO M317 (ASTM D3963) except as provided herein.

Patching or repair material shall conform to AASHTO M284 (ASTM A775) and shall be obtained from the coating manufacturer utilized to coat the initial reinforcement.

Repair all damage, visible to the unaided eye, caused during shipment, storage, or placement of coated bars at the job-site with patching material conforming to Standard Specifications for Public Works.

211.00 CULVERT MARKERS AND GUIDE POSTS

Add the following section:

211.04 Materials – Add the following to this section:

The use of metal posts is mandatory for this contract.

214.00 PAINT

Add the following section:

214.04 Submittals

For each product and material used on the project, furnish four (4) copies of the following: Product Data Sheet (PDS), the manufacturer's technical data sheets, and paint colors available (where applicable).

For each paint system, furnish a Paint System Data Sheet (PSDS). Furnish copies of paint system submittals to coating applicator.

Indiscriminate submittal of manufacturer's literature is not acceptable.

Submit detailed chemical and gradation analysis for each proposed abrasive material.

PART 3 – CONSTRUCTION METHODS

300.00 – CLEARING AND GRUBBING

Add the following Section(s)

300.03.01 – Disposal of Materials

Disposal work shall also meet the following requirements:

- (a) Woody debris may be chipped. Chips may be sold to CONTRACTOR's benefit or used for landscaping onsite as mulch or uniformly mixed with topsoil. Dispose chips that are unsaleable or unsuitable for landscaping or other uses.
- (b) Limit offsite disposal of clearing and grubbing debris to locations that are approved by federal, state, and local authorities, and that will not be visible from Project.
- (c) Dispose strippings unsuitable for topsoil or that exceed quantity required for topsoil offsite.
- (d) Stockpile topsoil in sufficient quantity to meet Project needs.

Do not remove topsoil until after scalping is completed. Strip areas within limits to minimum depths shown or specified. Do not remove subsoil with topsoil. Stockpile strippings for topsoil, separately from other excavated material.

Perform clearing and grubbing only after adequate erosion and sediment controls are in place.

300.03.02 – Handling and Temporary Storage of Contaminated Materials Prior to Disposal

Both at the work site as well as at any temporary storage facilities, all excavated earthen soils or demolition rubble that, by examination, indicate contaminants from petrochemical absorption of diesel fuel, lube oils, etc., in excess of EPA guidelines, shall be placed on protective plastic, covered for protection and enclosed by a temporary berm. All such materials shall be disposed of in an approved manner as dictated by Federal, State, and Local laws.

For the CONTRACTOR'S information, Horsemans Park, located at 2200 Loop Road off Vista Blvd, has space available for temporary stockpiling and treatment of contaminated soils. All such related efforts shall be coordinated through the CITY and no materials may be stockpiled until written permission to this effect is received and in place. This agreement shall in no way remove CONTRACTOR'S responsibility to treat and clean up contaminated soils. Horsemans Park shall not be utilized for stockpiling of granular import or non-contaminated export.

302.00 SUBGRADE PREPARATION

302.02 Preparation of Subgrade

Modify the first paragraph as follows:

Scarifying and cultivating will be required for all soils. Unsuitable material found below the processing depth or subgrade specified herein shall be treated in accordance with Subsection 302.05 – "Unsuitable Material."

303.00 UNCLASSIFIED EXCAVATION

Add the following section:

303.01.01 General

Submit excavation plan for CITY's review. Excavation plan shall include the following:

- (a) Methods and sequencing of excavation.
- (b) Proposed locations of stockpiled excavated material.
- (c) Proposed onsite and offsite spoil disposal sites.
- (d) Numbers, types, and sizes of equipment proposed to perform excavations.
- (e) Anticipated difficulties and proposed resolutions.
- (f) Reclamation of onsite spoil disposal areas.

Add the following section:

303.02.10 General

Provide adequate survey control to avoid unauthorized overexcavation.

Prior to excavating, complete the following:

- (a) Demolition work according to Section 02 41 00.
- (b) Clearing and Grubbing work according to Section 201.
- (c) Dewatering and Water Control During Construction according to Section 31 23 19.01.
- (d) Excavation support as necessary to support sides of excavations and prevent detrimental settlement and lateral movement of existing facilities, adjacent property, and completed Work.

Minimize stockpiling excavated material suitable for use as fill or backfill until material is needed. Post signs indicating proposed use of material stockpiled. Post signs that are readable from all directions of approach to each stockpile. Signs should be clearly worded and readable by equipment operators from their normal seated position. Confine stockpiles to within easements, rights-of-way, and approved work areas.

Do not obstruct roads or streets. Do not stockpile excavated material adjacent to trenches and other excavations, unless excavation side slopes and excavation support systems are designed, constructed, and maintained for stockpile loads. Do not stockpile excavated materials near or over existing facilities, adjacent property, or completed Work, if weight of stockpiled material could induce excessive settlement.

Dispose of excavated materials, which are unsuitable or exceed quantity needed for fill or backfill, offsite. Dispose debris resulting from removal of underground facilities according to Section 202. Dispose debris resulting from removal of organic matter, trash, refuse, and junk according to Section 201.

304.00 – UNCLASSIFIED FILL

304.07 Structure Backfill

Add the following to the first paragraph:

Concrete shall develop a minimum strength of 2,600 pounds per square inch (psi) before backfill may be placed along the sides of the RCB.

Concrete shall develop a minimum strength of 3,200 psi before backfill may be placed over top of the RCB.

Refer to Section 311.11 Removal of Falsework Forms for minimum concrete strengths to be reached before forms are removed.

305.00 – TRENCH EXCAVATION AND BACKFILL

Add the following section

305.01.01 General –

Notify CITY when:

- (a) Structure is ready for backfilling, and whenever backfilling operations are resumed after a period of inactivity.
- (b) Soft or loose subgrade materials are encountered wherever embankment or site fill is to be placed.
- (c) Fill material appears to be deviating from Specifications.

Keep placement surfaces free of water, debris, and foreign material during placement and compaction of fill and backfill materials. Place and spread fill and backfill materials in horizontal lifts of uniform thickness, in a manner that avoids segregation, and compact each lift to specified densities prior to placing succeeding lifts. Slope lifts only where necessary to conform to final grades or as necessary to keep placement surfaces drained of water.

During filling and backfilling, keep level of fill and backfill around each structure even. Do not place fill or backfill, if fill or backfill material is frozen, or if surface upon which fill or backfill is to be placed is frozen.

Backfill material and excavated area shall be free of trash, wood, large rocks, or other deleterious materials.

Correct and repair any subsequent damage to structures, pavements, curbs, slabs, piping, and other facilities, caused by settlement of fill or backfill material.

Correct overexcavation by transitioning between overcut areas and designed slope adjoining areas, provided such cutting does not extend offsite or outside easements and right-of-ways, or adversely impacts existing facilities, adjacent property, or completed Work. Replace excavation carried below grade lines as follows:

- (a) Concrete fill beneath footings according to Section 304.
- (b) Granular fill beneath Slabs-On-Grade.

305.08 Bedding – Add the following to the end of the section.

Bedding and leveling courses shall use Class C material as defined in the Standard Specifications and altered in the Special Conditions. Bedding and Leveling Material is required for use underneath Precast Reinforced Concrete Boxes. Material is not required under Cast-In-Place box sections as mentioned in the Geotechnical Investigation Report Proposed North Truckee Drain Realignment, Sparks, Nevada (Kleinfelder, 2009).

Furnish imported bedding material where, in the opinion of CITY, excavated material is unsuitable for bedding or insufficient in quantity. Place over the full width of the prepared trench bottom in two equal lifts when the required depth exceeds 8 inches. Hand grade and compact each lift to provide a firm, unyielding surface.

Install to form continuous and uniform support except at bell holes, if applicable, or minor disturbances resulting from removal of lifting tackle. For bell or coupling holes, excavate in bedding at each joint to permit proper assembly and inspection of joint and to provide uniform bearing along barrel of pipe or conduit.

305.09 Backfill and Densification – Remove and replace last paragraph with the following:

Process excavated material shall meet specified gradation requirements. Adjust moisture content as necessary to obtain specified compaction.

Do not allow backfill to free fall into the trench or allow heavy, sharp pieces of material to be placed as backfill until at least 2 feet of backfill has been provided over the top of pipe.

Backfill to grade with proper allowances for topsoil, crushed rock surfacing, and pavement thicknesses, wherever applicable. Backfill around structures with same class backfill as specified for adjacent trench unless otherwise shown or specified.

After each section of trench is backfilled, maintain the surface of the backfilled trench even with the adjacent ground surface until final surface restoration is completed.

Add gravel surfacing rock where applicable and as necessary to keep the surface of the backfilled trench even with the adjacent ground surface, and grade and compact as necessary to keep the surface of backfilled trenches smooth, free from ruts and potholes, and suitable for normal traffic flow.

Add topsoil/excavated material where applicable and as necessary to maintain the surface of the backfilled trench level with the adjacent ground surface.

306.00 – STORM DRAIN, CULVERTS, AND SANITARY SEWER CONSTRUCTION

306.04.01 General – The following shall be added to the section:

Pipe laying shall proceed upgrade with spigot ends pointing in direction of flow. Pipe invert may deviate from line or grade up to 1/2 inch for line and 1/4 inch for grade, provided that finished pipeline will present a uniform bore, and such variation does not result in a level or reverse sloping invert, or less than minimum slope shown.

- Lay with open joints.

- Only use concrete closure collars where shown or authorized by CITY.
- Prevent entry of foreign material into gasketed joints. Plug or close off pipes that are stubbed off for manhole, concrete structure, or for connection by others, with temporary watertight plugs.
- Service connections shall have minimum slope of 1/4 inch per foot.
- For square-end underdrains, cover top and sides of the joints with a strip of asphalt-saturated 30-pound roofing felt.
- Bell holes shall be excavated in the bedding or foundation, or both, when installing pipe with expanded bells so that the pipe is supported uniformly by the barrel and not by the bells.

Add the following sections to 306.07 Reinforced Concrete Boxes

Reinforced concrete boxes shall be installed as set forth in the plans. All boxes shall be constructed at the lines grades indicated on the plans. The CONTRACTOR shall have the option of using either Precast or Cast-In-Place boxes throughout the project. Regardless of material choice, CONTRACTOR shall adhere to performance specifications dictated.

If precast concrete boxes are chosen, CONTRACTOR shall utilize external sealing bands per ASTM C877-08 (latest edition) on box sections and manhole risers to ensure final product will be water tight at all locations and components.

If cast-in-place is chosen, non-swelling preformed joint sealant waterstops shall be used continuously along all joints to ensure watertightness, such as Henry Synco-Flex or approved equivalent.

308.00 AGGREGATE BASE COURSES

Remove and replace 308.02 – Materials with the following:

The quality, gradation and size of all granular materials shall conform to the requirements of Subsection 200.01 – “Base Aggregates” and to the drawings and notes as shown on the Plans.

308.03.03 Subgrade Preparation. Subgrade preparation shall also be according Section 302. Obtain CITY’s acceptance of subgrade before placing base course or surfacing material. Do not place base course or surfacing materials in snow or on soft, muddy, or frozen subgrade.

308.03.04 Untreated Aggregate Base. Maximum Completed Lift Thickness shall be 6 inches.

Spread lift on preceding course to required cross-section. Lightly blade and roll surface until thoroughly compacted. Blade or broom surface to maintain true line, grade, and cross-section.

Add keystone to achieve compaction and as required when aggregate does not compact readily due to lack of fines or natural cementing properties, as follows:

- (a) Use leveling course or surfacing material as keystone.
- (b) Spread evenly on top of base course, using spreader boxes or chip spreaders.
- (c) Roll surface until keystone is worked into interstices of base course without excessive displacement.

(d) Continue operation until course has become thoroughly keyed, compacted, and will not creep or move under roller.

308.03.05 Leveling Course. Maximum Completed Lift Thickness shall be 4 inches.

Spread on roadway or preceding course to depth, grade, and cross-section shown. Lightly blade surface and roll until thoroughly compacted to line and grade shown. Maintain moisture levels to prevent loss of fines during processing.

308.03.06 Gravel Surfacing. Maximum Completed Lift Thickness shall be 6 inches.

Spread on preceding course in accordance with cross-section shown. Blade lightly and roll surface until material is thoroughly compacted.

308.03.07 Driveway Surfacing. Replace gravel surfacing on driveways that were gravel surfaced prior to construction. Provide compacted gravel surfacing to depth equal to original, but not less than 4 inches. Leave each driveway in as good or better condition as it was before start of construction.

308.03.08 Delivery and Compaction. Do not haul over surfacing in process of construction. Loads shall be of uniform capacity. Maintain consistent gradation of material delivered; loads of widely varying gradations will be cause for rejection.

Compaction equipment shall be adequate in design and number to provide compaction and to obtain specified density for each layer.

311.00 CONCRETE STRUCTURES AND MASONRY CONSTRUCTION

Add the following section to 311.04 Forms. Add section following the first paragraph found on page 311.00-5.

Fabricate metal forms to remain in place for concrete deck slabs from steel conforming to ASTM A653, Grade 275 (40) minimum, having a coating designation of Z500 (G165). Thickness and grade of form sheets and form supports shall be as designated on the shop drawings. Minimum thickness for form sheets shall be 0.80 mm (22 gage) and for form supports shall be 1.60 mm (16 gage).

Add the following sections to 311.10.01 Handling and Placing Concrete

Reinforcement supported from the ground shall rest on 3 inch high precast concrete blocks not less than 4 inches square, and having a compressive strength equal to the specified compressive strength of the concrete being placed.

The precast blocks shall have been cured as specified for concrete and shall contain soft steel wires imbedded therein for fastening to the reinforcing.

Add the following section to 311.10.07 Construction Joints. Add section following the third paragraph found on page 311.00-14.

Make horizontal construction joints in reinforced concrete walls by performing the following

steps:

- (a) Thoroughly clean and saturate surface of joint with water.
- (b) Limit slurry concrete placement to 2-inch maximum thickness, 1-inch minimum thickness.
- (c) Use positive measuring device such as bucket or other device that will contain only enough slurry concrete for depositing in visually measurable area of wall to ensure that portion of form receives appropriate amount of slurry concrete to satisfy placement thickness requirements.
- (d) Do not deposit slurry concrete from pump hoses or large concrete buckets, unless specified placement thickness can be maintained and verified through inspection windows close to joint.
- (e) Limit concrete placed immediately on top of slurry concrete to 12 inches thick. Thoroughly vibrate to mix concrete and slurry concrete together.

For bonding to existing concrete, thoroughly clean and mechanically roughen existing concrete surfaces to roughness profile of 1/4 inch and saturate surface with water for 24 hours prior to placing new concrete.

Add the following section to 311.13 Patching. Add section following the second paragraph found on page 311.00-21.

Provide detailed plan for cold weather curing and protection of concrete mortar placed and cured in weather below 40 degrees F. Provide detailed plan for hot weather placements including curing and protection for concrete mortar placed in ambient temperatures over 80 degrees F.

Provide informational submittals for concrete repair and patching methods and materials.

Repair material shall contain no chlorides or other chemicals causing steel corrosion. Repair mortar specifically mixed and then tested at Job Site shall be evaluated for appearance compatibility prior to use in exposed areas.

Use low-pressure spray or hand applied silica fume mortar for vertical and overhead repair.

For tie holes, fill with nonshrink grout, and match color of adjacent concrete and demonstrate on mockup panels first. Compact grout using steel hammer and steel tool to drive grout to high density. Cure grout with water.

For alternate form ties, mechanically roughen entire interior surface of through hole. Epoxy coat roughened surface and drive elastic vinyl plug to half depth. Dry pack entire hole from both sides of plug with nonshrink grout. Use only enough water to dry pack grout. Dry pack while epoxy is still tacky. If epoxy has dried, remove epoxy by mechanical means and reapply new epoxy. Compact grout using steel hammer and steel tool to drive grout to high density. Cure grout with water.

Exposed metal objects not intended to be exposed in as-built condition of structure including wire, nails, and bolts, shall be removed by chipping back concrete to depth of 1 inch and then cutting or removing metal object. Repair area of chipped-out concrete.

Add the following to 311.14.03 Bonded Grout Finish. Add as the first paragraph.

Deliver the coating to the job site in sealed containers bearing the manufacturer's original labels. The brand, color, and type shall be clearly marked on each container. Furnish a copy of the manufacturer's printed instructions.

A minimum of 30 days prior to applying concrete coating, provide a fully cured 4 foot by 8 foot concrete test panel that is of the same type of concrete that will be coated. Prepare the surface to receive concrete coating according to the manufacturer's recommendations and as specified herein. The color shall be as shown on the plans. Apply the concrete coating to the test panel according to the manufacturer's recommendations. Several test panels with different shades of color or variance of shades on the same test panel may be required to make a final color selection. Do not apply concrete coatings to structures designated for coating until the color is approved in writing. Once a color has been selected, do not deviate from the color specific to the manufacturer's product or the application rate used on the test panel.

Finish surfaces to receive coating to a smooth even surface of uniform texture and appearance, free of unsightly bulges, depressions, and other imperfections. Sand areas which do not exhibit the required smooth even surface of uniform texture and appearance with power sanders or other approved abrasive means. The use power carborundum stones or disks may be required to remove bulges and other imperfections.

Add the following to 311.14.03 Bonded Grout Finish. Add as the last paragraph.

Prepare the surface to receive concrete coating according to the manufacturer's recommendations and as specified herein. Apply the concrete coating according to the manufacturer's recommendations and with manufacturer certified personnel.

Do not apply coating when winds are 5 mph or greater or when there are dusty conditions. Do not apply coating during fog, mist, when the relative humidity exceeds 85%, at temperatures less than 5 degrees above the dew point, or when precipitation is imminent.

Provide drop cloths or other forms of protection for surrounding surfaces from overspray and splashing. Protect traffic and pedestrians from overspray. Satisfactorily clean, restore, or replace surfaces which may have been contaminated with concrete coatings.

Achieve a dry film thickness of 15 to 17 mils. The average thickness of the completed finish coating shall not exceed 1/8 of an inch.

The texture of the completed finish coat shall be tightly bonded to the surface and present a uniform fine textured surface.

Remove and replace concrete coating exhibiting poor performance such as peeling, chipping, flaking, or does not produce the required surface appearance.

Add the following to 311.18 Precast Concrete Box Culverts. Modify paragraph 2 as follows:

Square or rectangular precast reinforced concrete boxes shall conform to the specifications of AASHTO Designation M259 or M273, or ASTM C1433, as controlled by the...

320.00 PLANTMIX BITUMINOUS SURFACE

Delete the following section:

320.04.03.01 – Addition of Lime

Keep the following section:

320.04.03.01.01 – Lime Marination

323.00 ADJUSTMENT OF NEW AND EXISTING MANHOLES, CATCH BASINS, VAULTS, WATER AND GAS VALVES, AND MONUMENTS TO FINAL GRADES

Add the following section:

323.08 – Concrete Collars

Replace existing collars with concrete collars of the same size or replace the roadway structural section, matching the existing thicknesses, prior to placement of a minimum size collar. Use materials meeting the requirements of Section 204 as specified in the Standard Specifications for Public Works. Do not use aggregate to extend fast-setting concrete.

324.00 – PAINTING, PAVEMENT STRIPING, AND MARKING

Add the following paragraph to the first paragraph of 324.03.02 Workmanship. Make it the last sentence.

Applicator must have minimum of 5 years of practical experience in application of specified products.

Add the following paragraph to the second paragraph of 324.03.03 Surface Preparation of Steel Surfaces. Make it the last sentence.

Do not perform abrasive blast cleaning whenever relative humidity exceeds 85 percent, or whenever surface temperature is less than 5 degrees F above dewpoint of ambient air.

326.00 – REINFORCING AND STRUCTURAL STEEL

Add the following paragraph to 326.02.04 Bending Requirements

Before placing plan reinforcing steel, furnish two (2) sets of reinforcing steel bending and cutting diagrams. Furnishing the bending and cutting diagrams shall not be construed to mean that the bending and cutting diagrams will be reviewed for accuracy. Be solely responsible for the accuracy of the diagrams.

Submit 3 sets of proposed changes to plan reinforcing steel, separate from the bending and cutting diagrams. Allow 30 days for review and approval of such proposed changes. Additional contract time will not be given for proposed changes requiring corrections and re-submittal. Do not place reinforcing steel affected by proposed changes until given approval.

326.03.08 Bolts and Bolted Connections

The table on 326.00-7 is hereby deleted and the following substituted:

**TABLE 1
Minimum Bolt Tension¹**

Nominal Bolt Diameter² mm (in.)	AASHTO M164 Bolts kN (lb)	AASHTO M253 Bolts kN (lb)
---	--------------------------------------	--------------------------------------

13 (1/2)	54 (12,050)	66 (14,900)
16 (5/8)	85 (19,000)	107 (24,000)
19 (3/4)	125 (28,000)	156 (35,000)
22 (7/8)	173 (39,000)	218 (49,000)
25 (1)	227 (51,000)	285 (64,000)
29 (1 1/8)	249 (56,000)	356 (80,000)
32 (1 1/4)	316 (71,000)	454 (102,000)
35 (1 3/8)	378 (85,000)	538 (121,000)
38 (1 1/2)	458 (103,000)	658 (148,000)

¹Equal to 70% of specified minimum tensile strength of bolts.

²Metric diameters are nominal sizes based on English bolt sizes.

333.00 – LANDSCAPING

Add the following to end of Section 333.01 Description

The CONTRACTOR shall be required to repair or replace in kind any landscaping removed, damaged or otherwise changed during construction. In areas of mature landscaping where replacement of large diameter tree truck size is not possible, the CONTRACTOR shall replace trees with 4” diameter trucks.

338.00 – FIRE PROTECTION

Add the following Section

Only work procedures which minimize fire hazards to the extent practicable shall be used. Contractor shall be aware of all “red flag warnings” issued by the National Weather Service – Reno, and shall adjust work activities as necessary during those times. Combustible debris and waste materials shall be collected and removed from the site each day. Fuels, solvents and other volatile or flammable materials shall be stored in separate areas in well- marked, safe containers. Good housekeeping is essential to fire prevention and shall be practiced by the Contractor throughout the construction period. Charged and operational fire extinguishers shall be carried in a readily accessible location on all equipment at all times.

339.00 – BENCHMARK K374 REMOVAL AND RELOCATION

Add the following Section

Benchmark K374, a brass disk located on the NE corner of the UPRR bridge near “E” Sta. 325+80 is a NOAA National Geodetic Survey first order, Class-I benchmark (best accuracy). Contractor shall coordinate all disturbance, removal and relocation activities with William Stone – Southwest Region Geodetic Advisor – NOAA’s National Geodetic Survey – 505-954-2074 – BLM Santa Fe, NM. A replacement benchmark shall be constructed in accordance with NOAA National Geodetic Survey Benchmark Reset Procedures guidelines.

340.00 – USGS STREAM GAUGE STATION

Add the following Section

Demolition activities associated with the USGS Streamflow Gauge Station, located near “NTD” Sta. 27+80 shall be coordinated with Steven N. Berris and/or Marsha Gipson – Hydrologist – 775-887-7693 or 775-720-0460 – USGS Carson City, NV. Contractor shall notify said individuals four (4) weeks before planned demolition so that salvageable equipment may be removed from the site. Replacement of gauge station is not required.

NORTH TRUCKEE DRAIN REALIGNMENT – PHASE 3
SPECIAL PROVISIONS for WORK PERFORMED WITHIN UPRR RIGHT-of-WAY

Bid Number 16/17-006, PWP# WA-2017-022

Work within the UPRR Right-of-Way is to be constructed in accordance to these Special Provisions. **Generally, the applicable areas are from: “E” Sta. 325+31 to “E” Sta. 327+02, “W” Sta. 218+70 to “W” Sta. 219+10, and around “NTD” Sta. 22+18. The area from “E” Sta. 325+18 to “E” Sta. 325+31 is on NDOT Right-of-Way but the work performed shall adhere to these Special Provisions.** Contract specific notes are on drawings R-1 through R-10, C1-C16, D1-D3, XS-1 through XS-2 and RS1-RS12.

INDEX OF SPECIAL PROVISIONS FOR WORK PERFORMED ON UPRR RIGHT-OF-WAY

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APPENDIX

- A Agreement between City of Sparks, Nevada and Union Pacific Railroad Corporation
- B Minimum Safety Requirements for UPRR Contractors

**DIVISION 1 – GENERAL CONDITIONS for WORK PERFORMED ON
UPRR RIGHT-of-WAY**

SECTION 01000

GENERAL CONDITIONS FOR WORK PERFORMED ON UPRR RIGHT-OF-WAY

PART 1 - GENERAL

1.1 SUMMARY OF WORK

A. This Section describes standard Special Provisions which are broad in scope and apply on work performed within UPRR Right-of-Way.

B. DEFINITION OF TERMS:

1. Whenever in these Special Provisions the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:
 - a. Railroad - Shall mean Union Pacific Railroad Company, Southern Pacific Transportation Company and their respective affiliates and subsidiary Companies and/or Corporations.
 - b. Agreement - The written Agreement and any written supplements or amendments thereto covering the performance of the Work and the furnishing of all superintendence, labor, tools, equipment, material, supplies and all other things required to properly complete the Work.
 - c. Contractor - The person or persons, firm, partnership, corporation, or combination thereof, who have entered into the Agreement with the Railroad.
 - d. Drawings - The official project plans, profiles, typical cross sections, general cross sections, working drawings and supplemental drawings, or reproductions thereof, approved by the Engineer, which show the location character, dimensions and details of the Work to be performed.
 - e. Engineer - An employee of the City of Sparks, Nevada or the City's authorized representative.
 - f. Railroad - The railway or railroad company whose tracks are crossed or whose property is adjacent to the work or upon whose property the work is performed. In this case, Railroad shall be understood to mean the Union Pacific Railroad Company.
 - g. Railroad Engineer - The Vice President Engineering of the Railroad or authorized representative.
 - h. Special Provisions - The directions, provisions and requirements contained herein. Any special conditions shall override these specifications.
 - i. Standard Specifications for Public Works Construction (SSPWC) - Distributed by Washoe County Regional Transportation Commission - latest revision.
 - j. Project - is the total construction of which the Work performed under the Contract Document may be the whole or a part and which may include construction by the Railroad or by separate contractors.
 - k. UPRR Right of Way - Land which the Railroad owns or owns an interest in sufficient to permit performance of the Work.
 - l. Work - The carrying out of responsibilities and duties imposed by the Agreement, whether completed or partially completed, and includes all labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.
 - m. Work is to be completed in accordance with any and all local, state, and federal codes which have jurisdiction; these special provisions are for work within UPRR Right-of-way and the City of Sparks Specifications.

C. SITE CONDITIONS:

1. The Contractor shall be aware that the Railroad may cause all project related efforts be immediately halted if personnel or equipment are found in unsafe situations, or if construction activities are causing (or imminently will cause) damage or harm to Railroad facilities.

GENERAL CONDITIONS FOR WORK PERFORMED ON UPRR RIGHT OF WAY
SECTION 01000

2. The Contractor shall keep himself fully apprised throughout the performance of the Agreement of existing conditions at the site, including the status and progress of other work, which may affect the performance of this Agreement. The Contractor shall verify all necessary measurements and elevations in the field.
3. The Contractor shall promptly notify the City's Engineer of:
 - a. Any condition at the site which differs from that indicated in the Contract Documents or information furnished by the Railroad, or would be apparent under the mandatory pre-bid visit to the site to become familiar with existing conditions,
 - b. Any previously unknown physical conditions at the site of an unusual nature not revealed by previous investigations and differing from those ordinarily encountered at the site of the Work,
 - c. The presence of any hazardous substance not shown on the plans and specifications or archaeological remains.

D. SITE SUPERVISION:

1. The Contractor shall maintain on the site at all times during Work at the site a competent resident general superintendent and any necessary assistants, all satisfactory to the City of Sparks and the Railroad. The resident general superintendent shall represent the Contractor and all directions given to him shall be binding as if given to the Contractor.

E. MATERIAL AND EQUIPMENT BY THE CONTRACTOR:

1. Unless otherwise specified, all materials furnished by the Contractor, for installation as part of the work on Railroad's right-of-way, shall be new.
2. No material or equipment which is deemed by the City of Sparks or the Railroad to be experimental will be accepted as complying with the requirements of the Contract Documents. Equipment or material which is provided, but fails to comply with the requirements of said documents, shall be corrected or removed and replaced with complying equipment or material at the Contractor's sole expense provided, however, if the progress of the Work is such as to make such removal impractical, the City with Railroad's concurrence shall have the right to accept it and reduce the Agreement price by an amount equivalent to the difference in its value and the value of complying equipment or material. The City or the Railroad may perform such factory or field tests as are deemed necessary to verify that equipment or material meets the performance standards recited in the Contractor's proposal. The Contractor shall be permitted to witness such tests.
3. Should equipment or material fail to meet such standards, the Contractor shall, at his own expense, modify, adjust, repair or replace same, as necessary, to assure compliance therewith and with the other applicable requirements of the Contract Documents.
4. Material Safety Data sheets for all hazardous substances must be submitted to the City and Railroad prior to bringing hazardous substances onto the property. This is in compliance with 29 CFR 1910.1200, the Federal Hazard Communication Standard. The Contractor shall dispose of hazardous substances in accordance with all Federal, State and local regulations.
5. Upon completion of the work upon Railroad's property, promptly remove all tools, equipment and other materials, whether brought upon said property, and cause said property to be left in a clean and presentable condition.

F. PATENTS, OTHER INTELLECTUAL PROPERTY RIGHTS AND ROYALTIES:

1. If any of the Work or equipment proposed to be furnished by the Contractor is covered by claims or patents of any nature, the Contractor will be required to pay all royalties thereon.
2. The Contractor agrees to indemnify and hold harmless the City and the Railroad from any claim of any third party that any equipment furnished under this Agreement infringes any patent of the United States. If the City notifies the Contractor promptly upon receipt of any claim that the equipment infringes a United States patent and gives the Contractor information, assistance and exclusive authority to settle and defend the claim, the Contractor shall at its own expense and option, either:

GENERAL CONDITIONS FOR WORK PERFORMED ON UPRR RIGHT OF WAY
SECTION 01000

- a. Settle or defend the claim or any suit or proceeding and pay all damages and costs awarded in it against the City;
 - b. Procure for the City and the Railroad the right to continue using the equipment;
 - c. Modify the equipment so it becomes non-infringing;
 - d. Replace the equipment or portions thereof so it becomes non-infringing.
3. If, in any suit arising from such claim the continued use of the equipment for the purpose intended is forbidden by any court of competent jurisdiction, the Contractor shall, at its option, take one or more of the actions under 2, 3 and 4 above without affecting the quality, performance or guarantees per the Contract Documents. The foregoing states the entire liability of the Contractor for patent infringement of any equipment.

G. INSPECTIONS:

1. The City and the Railroad reserves the right to conduct inspections as it sees fit and hereby requires inspectors shall have the right to inspect all Work as it progresses at the site and shall have access to Contractor's and subcontractor's data relevant to the performance of this Agreement.
2. The City's inspectors or the Railroad upon notification to the City inspectors shall have the right to reject Work which is faulty, or defective, or does not conform to the requirements of the Contract Documents. Inspection shall not relieve the Contractor from any obligations to perform the Work strictly in accordance with the requirements of the Agreement.

H. OCCUPATIONAL SAFETY AND HEALTH:

1. At all times during the performance of the Work, the Contractor shall exercise precaution for the protection of persons and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery and equipment and other hazards shall be guarded in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent such provisions are not inconsistent with applicable law or regulations.

I. CLIMATIC CONDITIONS:

1. The Contractor shall take all reasonably necessary precautions to protect the Work against adverse climatic conditions.

J. REMOVAL OF DEBRIS:

1. All trash, debris, and waste materials shall be removed from the site and disposed of by the Contractor, on a regular basis.
2. If the Contractor does not maintain the cleanliness standards previously mentioned, the City, upon notification of the Railroad, holds the right to perform these duties or the Railroad may perform these duties upon notice to the City and City's Contractor and failure by the Contractor with five (5) calendar days to commence corrective action and take other appropriate action. In such case, the costs will be accumulated become the responsibility of the contractor. All costs associated with such corrective actions shall be the Contractor's responsibility at no cost to the Project.

K. SUCCESSFUL OPERATION:

1. Successful operation is defined as demonstration of meeting performance guarantees by performance testing and completion of all Work including punchlist items, all in accordance with the Contract Documents.

GENERAL CONDITIONS FOR WORK PERFORMED ON UPRR RIGHT OF WAY
SECTION 01000

L. FIRE PROTECTION:

1. Only work procedures which minimize fire hazards to the extent practicable shall be used. Combustible debris and waste materials shall be collected and removed from the site each day. Fuels, solvents and other volatile or flammable materials shall be stored in separate areas in well-marked, safe containers. Good housekeeping is essential to fire prevention and shall be practiced by the Contractor throughout the construction period. The Contractor shall follow the requirements for fire prevention contained in rules as referenced in Section 01572, Working and Flagging near the tracks, and as required by the Project General Specifications.

M. WORK OR OPERATIONS PERFORMED BY RAILROAD:

1. Per the plans, the Railroad will be responsible to perform certain work or operations required to accomplish the project. Contractor shall clearly and timely coordinate with Railroad in order to expedite the work and to avoid interference with the operation of Railroad equipment.

N. SAFETY:

1. TRAINING

- a. Contractor and Contractor's subcontractor employees working on UPRR property shall be trained in and comply with UPRR Contractor Safety Requirements. Contractor is directed to www.contractororientation.com (or www.railroadcourses.com) for such training, and will, upon request, be prepared to provide records of the completed safety training for all such workers.

2. WORK

- a. Contractor shall perform work in such manner and at such times as shall not endanger or interfere with the safe operation of the tracks and property of Railroad and the traffic moving on such tracks, as well as wires, signals and other property of Railroad, its tenants or licensees, at or in the vicinity of the work.

O. CONTRACTOR SECURITY:

1. The Contractor shall be responsible for all materials and equipment in its custody or placed in construction by it. Security methods shall be employed as required to ensure the protection of all materials, equipment and construction work from theft, vandalism, fire, and all other damage and loss. The Contractor must abide by all of the provisions of the Minimum Contractor Safety Requirements contained in UPRR Safety Rules while performing work within UPRR Right-of-Way. This includes demobilizing equipment left unattended on the right of way, placing crane booms on the ground when left unattended, and no cell phone use while operating equipment on the right of way.
2. INSURANCE
 - a. Policy shall name the Railroad Company as an additional insured and the policy form shall be AAR-AASHTO with broad form coverage for "Physical Damage to Property" (ISO Form GL 00 30) or as revised ISO-RIMA (Form CG 00 35) and include pollution arising out of fuels and lubricants brought to the job site (ISO Form CG 31 or equivalent). In some cases this insurance may be available for purchase through the Railroad Company as agreed upon between the City of Sparks and Railroad. The Agreement is contained in Appendix A of these Special Provisions.
 - b. Railroad Protective Liability Insurance shall be a combined single limit of \$2,000,000 per occurrence with a \$6,000,000 aggregate for bodily injury and property damage.
 - c. Contractor's General Liability Insurance shall be \$5,000,000 per occurrence with \$10,000,000 aggregate.
 - d. Such insurance shall be approved by the Railroad before any work is performed on or adjacent to Railroad property and shall be carried until all work required to be performed on or adjacent to the Railroad's property under the terms of the contract is satisfactorily completed as determined by the Engineer, and thereafter until all tools, equipment and materials have been removed from Railroad's property and such property is left in a clean and presentable condition.

P. INDEMNIFICATION

1. Contractor hereby waives, releases, indemnifies, defends and holds harmless Union Pacific Railroad, UPRR, and the owner for all judgments, awards, claims, demands, and expenses (including attorneys' fees), for injury or death to all persons, including UPRR's and Contractor's officers and employees, and for loss and damage to property belonging to any person, arising in any manner from Contractor's or any of Contractor's subcontractors' acts or omissions or any work performed on or about UPRR's property or right-of-way. **This obligation shall not include such claims, costs, damages, or expenses which may be caused by the sole negligence of UPRR or its contractors, agents or employees; Provided, that if the claims or damages are caused by or result from the concurrent negligence or other acts or omissions of (a) UPRR, its contractors, agents or employees and (b) Contractor, its subcontractors, agents or employees, this provision shall be valid and enforceable only to the extent of the negligence of the Contractor, its subcontractors, agents or employees.**
2. **It is mutually negotiated between the parties that the indemnification obligation shall include all claims brought by Contractor's employees against UPRR, its agents, servants, employees or otherwise, and Contractor expressly waives its immunity under the industrial insurance act (RCW Title 51) and assumes potential liability for all actions brought by its employees.**
3. **THE INDEMNIFICATION OBLIGATION ASSUMED BY CONTRACTOR INCLUDES ANY CLAIMS, SUITS OR JUDGMENTS BROUGHT AGAINST UPRR UNDER THE FEDERAL EMPLOYEE'S LIABILITY ACT, INCLUDING CLAIMS FOR STRICT LIABILITY UNDER THE SAFETY APPLIANCE ACT OR THE LOCOMOTIVE INSPECTION ACT, WHENEVER SO CLAIMED.**
4. Contractor further agrees, at its expense, in the name and on behalf of UPRR, that it will adjust and settle all claims made against UPRR, and will, at UPRR's discretion, appear and defend any suits or actions of law or in equity brought against UPRR on any claim or cause of action arising or growing out of or in any manner connected with any liability assumed by Contractor under this Agreement for which UPRR is liable or is alleged to be liable. UPRR will give notice to Contractor, in writing, of the receipt or dependency of such claims and thereupon Contractor must proceed to adjust and handle to a conclusion such claims, and in the event of a suit being brought against UPRR, UPRR may forward summons and complaint or other process in connection therewith to Contractor, and Contractor, at UPRR's discretion, must defend, adjust, or settle such suits and protect, indemnify, and save harmless UPRR from and against all damages, judgments, decrees, attorney's fees, costs, and expenses growing out of or resulting from or incident to any such claims or suits.
5. In addition to any other provision of this Agreement, in the event that all or any portion of this Article shall be deemed to be inapplicable for any reason, including without limitation as a result of a decision of an applicable court, legislative enactment or regulatory order, the parties agree that this Article shall be interpreted as requiring Contractor to indemnify Railroad to the fullest extent permitted by applicable law.
6. It is mutually understood and agreed that the assumption of liabilities and indemnification provided for in this Agreement survive any termination of this Agreement.

END OF SECTION

SECTION 01010
SUMMARY OF WORK

PART 1 - GENERAL

1.1 GENERAL DESCRIPTION

- A. The Contractor shall furnish engineering, design, labor, material, tools, equipment, and construction services necessary to provide total PROJECT SCOPE OF WORK TO BE PERFORMED WITHIN RAILROAD RIGHT-OF-WAY AS HEREIN DESCRIBED.

WORK TO BE PERFORMED SHALL BE THE FOLLOWING BUT NOT LIMITED TO:

- Establishing SWPPP and temporary erosion control measures
- Clearing and Grubbing
- Demolition of Structures
- Grading
- Construction of cast-in-place concrete reinforced concrete box culverts and associated appurtenances
- Extension of existing CMP culvert and placement of storm drains
- Reconstruction and construction of an Access Road
- Coordination with Utilities
- Coordination with Railroad and railroad work forces
- Temporary and Permanent Fencing
- Permanent erosion control including top soil and seeding

As shown in the drawings D1-D3, C1-C16, R1-R10, XS1-XS2 and RS1-RS12, and as described in these Special Provisions.

1.2 OCCUPANCY

- A. The Contractor, upon agreement between the City and Railroad shall allow the Railroad to take possession of and use any completed or partially completed portion of the facility during the progress of the Work as is possible without interfering with the progress of the Contractor. Possession and use of the facility shall not in any way evidence the completion of the Work or signify the City's or Railroad's acceptance of the Work or any part of it.

1.3 NUMBER OF SPECIFIED ITEMS REQUIRED

- A. Wherever in these Specifications an article, device or piece of equipment is referred to in the singular number, such reference shall apply to as many such articles as are shown on the Drawings or required to complete the Work.

END OF SECTION

SECTION 01011

CONTRACTS

PART 1 - GENERAL

1.1 RESPONSIBILITIES AND DUTIES - DOCUMENTS, SPECIFICATIONS AND DRAWINGS

A. CONTRACT DOCUMENTS:

1. The Agreement, applicable Addenda, Exhibits, Schedule of Billable Service Items, Statement of Equipment, Contractor's Statement of Business and Legal Relationships, Agreement between the City of Sparks and Railroad, Railroad Safety Requirements for Contractor while working on Railroad Right-of-Way, Drawings and the Project Specifications and these Special Provisions (hereinafter the Contract Documents) all set forth numerous responsibilities and duties of the Contractor. The Contractor should be thoroughly familiar with all of the above Contract Documents in order to fully understand all of his responsibilities and duties.

B. ACCESS TO THE SPECIFICATIONS AND DRAWINGS:

1. The Contractor shall keep a copy of the Specifications and Drawings at the job site, and shall at all times give the City and Railroad's Engineer access thereto.

1.2 INCONSISTENCIES IN SPECIFICATIONS AND CORRECTIONS

A. See Special Provisions Section 2b – Coordination of Technical Specifications / Special Provisions

B. In the event of conflicting requirements, the most restrictive provision shall apply:

- C. The Contractor shall immediately report, and fully describe in writing, to the City's Engineer any and/or all inconsistencies, discrepancies, and/or ambiguities, which the Contractor finds between the Contract Documents. The City's Engineer, upon agreement with the Railroad, will promptly, in writing, correct such inconsistencies, discrepancies, and/or ambiguities in writing. Any such work done by the Contractor after his discovery of these inconsistencies, discrepancies, and/or ambiguities shall be done at the Contractor's risk.

END OF SECTION

SECTION 01041
PROJECT COORDINATION

PART 1 - GENERAL

1.1 GENERAL

- A. Contractor shall give notification in writing, at least 25 days but not more than 40 days in advance of the starting date of installing temporary work with less than permanent clearance at each structure site. Do not proceed with work across Railroad tracks unless this requirement has been met. No extension of time or extra compensation will be allowed in the event work is delayed because of failure to comply with requirements here-in.
- B. Furnish Submittals specified in Section 01300 to the City (UPRR) at least 90 days in advance of the time of beginning such work and do not begin such work until notified by the City (UPRR) that such plans have been approved. The Engineer's approval of the plans does not relieve the Contractor from the responsibility for results obtained by use of said plans.
- C. Notifications shall be given per the time schedule specified in Section 1572.
- D. The Work involves construction and operations on the Railroad's Right-of-Way in accordance with the Agreement between the City of Sparks and Railroad contained in Appendix A, and the Contractor will be required to coordinate his activities with the activities of the Railroad, The City of Sparks as well as others not party to the Agreement. Any questions arising about coordination of work between the Contractor and the Railroad or between the Contractor and others shall be taken up with the City's Engineer and a method of coordination agreed upon with City and Railroad before Work is commenced.
- E. The safe operation of the Railroad shall take precedence over all Work, and nothing shall be done or suffered to be done by the Contractor which will endanger Railroad employees or operation. The Contractor shall become familiar with and comply with the Railroad's rules and regulations concerning protection of persons and property and shall consult with the Engineer concerning the Railroad's rules and regulations.
- F. Contractor shall be aware that drawings which show location for temporary-at-grade railroad crossing(s) to facilitate Contractor's movements may not represent actual crossing location. Actual location and/or use of said crossing is dependent upon Railroad Agreement with the City of Sparks and also dependent upon Contractor's coordination with the Railroad.

END OF SECTION

SECTION 01300

SUBMITTALS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 GENERAL

- A. Special brands of material or devices mentioned in Specifications, these Special Provisions, or on Drawings are for the purpose of establishing a standard or criterion of quality and character desired:
1. For products specified by naming several products or manufacturers, select any product and manufacturer named.
 2. For products specified by naming one of more products, but indicating the option of selecting equivalent products by stating "or equal" after specified product, Contractor must submit request to the City and Railroad for substitution for any product not specifically named.
 3. For products specified by naming one or more products, but indicating the option of selecting equivalent products by stating "or approved equal" after specified product, Contractor must submit information to City and Railroad for approval of any product not specifically named.
 4. For products specified by naming only one product and manufacturer, there is no option, and no substitution will be allowed.
 5. Where specific make or kind of apparatus is called for and furnished by the Contractor, the furnishing of the apparatus does not relieve the Contractor of liability until he shall make such apparatus or appliance operate so it will successfully perform the function for which it is intended.
 6. Five copies of the submittals for substitutions shall be provided the City for City's and Railroad's review. Include in submittals complete data substantiating compliance of proposed substitution, including product identification, manufacturer's literature, performance and necessary test data.
 7. In making request for substitutions, Contractor represents he will coordinate installation of accepted substitution into work, making such changes as may be required for work to be complete in all respects.
- B. Design drawings, design information, and other data for all construction work furnished by the Contractor shall be submitted to the City and Railroad. The Contractor shall submit all design drawings and data sufficiently in advance of construction requirements to allow ample time for checking, resubmitting and rechecking and to avoid any delay in progress of Work. The Railroad may take up to four weeks for review of submittals.
- C. Drawings, instructions and manuals supplied with equipment and fabricated items furnished by others, but installed under the Agreement, shall be carefully preserved and turned over to the Railroad.
- D. All materials to be placed under this Contract will first be approved by the City and Railroad Engineer. Contractor shall submit to the City who shall submit to the Railroad, for review and exception, if any, such work, drawings, shop drawings, laying schedules, test reports, data on material and equipment and material samples, as are required for the proper control of the work. Contractor shall not begin any work covered by a submittal until the submittal is returned to him by the City's Engineer with Railroad's acceptance of such submittal. Where exceptions are taken by the City or Railroad Engineer, the Contractor shall make the necessary revisions and re-submit the information to the City for subsequent review by City and Railroad's Engineer. Submittals will be required for, but not limited to, the following items: Dewatering plan, erosion control plan, subballast, and seeding, fabricated material shop drawings, concrete mix design, construction phasing and process plan.
- E. The following items, (including but not limited to) are required submittals:
1. General
 - a. Construction Schedule (Include 4 additional copies for submittal to the railroad).

SUBMITTALS AND SUBSTITUTIONS
SECTION 01300

- b. Schedule of Values.
 - c. Permits (Include 4 additional copies for submittal to the railroad).
 - d. Safety Program (Include 4 additional copies for submittal to the railroad).
 - e. Construction procedure for RCB extensions and proposed sequence for Bridge replacement
 - f. Notices to Businesses.
 - g. Railroad Coordination Plan
 - h. Traffic Control Plans.
 - i. Haul Routes (Include 4 additional copies for submittal to the railroad).
 - j. Certified Payroll Reports (to City of Sparks).
 - k. Disposal Plan, Permits and Permissions (Include 4 additional copies for submittal to the railroad).
 - l. Record Drawings.
 - m. Utility Inventory (per Section 14).
 - n. Dewatering Plan.
 - o. Falsework Plan (Include 4 additional copies for submittal to the railroad).
2. Materials.
- a. Aggregate Base Material (Include 4 additional copies for submittal to the railroad).
 - b. Asphalt and Concrete Mix Designs (Include 4 additional copies for submittal to the railroad).
 - c. Backfill Materials (Include 4 additional copies for submittal to the railroad).
 - d. Concrete, Slurry and Mortar Mix Designs (Include 4 additional copies for submittal to the railroad).
 - e. Fencing.
 - f. Frames and Covers.
 - g. Geotextile Fabrics (Include 4 additional copies for submittal to the railroad).
 - h. Manholes and Appurtenances (Include 4 additional copies for submittal to the railroad).
 - i. Mastic Material.
 - j. Non-shrink Grout for Manholes (Include 4 additional copies for submittal to the railroad).
 - k. Pipe / RCB Bedding Material (Include 4 additional copies for submittal to the railroad).
 - l. Pipe Materials (Include 4 additional copies for submittal to the railroad).
 - m. Mix Designs for Cast-in-Place Concrete (Include 4 additional copies for submittal to the railroad)/Aggregate quality tests.
 - n. Pipe Fittings and Appurtenances.
 - o. Rebar (Include 4 additional copies for submittal to the Railroad).
 - p. Warning Tape.
 - q. Permanent Signs.
 - r. Paint.

SUBMITTALS AND SUBSTITUTIONS
SECTION 01300

- s. Corrugated Metal Pipe (CSP/CMP) and associated hardware (Include 4 additional copies for submittal to the Railroad).

END OF SECTION

SECTION 01340
SHOP DRAWINGS

PART 1 - GENERAL

1.1 GENERAL

- A. Drawings shall clearly indicate proposed items, capacities, characteristics and details in conformance with the Drawings or schedules. Capacities, dimensions and special features required shall be certified by the manufacturer.
- B. Shop Drawings shall indicate manufacturer's delivery time for the item after receipt of approval by the City and Railroad.
- C. Shop Drawings for all items requiring same or called for shall be prepared immediately upon award of Agreement and six copies submitted to the City for the City's and Railroad review. No materials shown thereon shall be ordered until shop Drawings and setting diagrams are reviewed and approved as detailed below. After the review process, Contractor shall then furnish three (3) complete sets of approved Drawings for the City's and Railroad's use on the job, and two (2) sets of ".PDF" electronic files for the City's and Railroad's file.
- D. Except for submittals for record, information or similar purposes, where action and return is required or requested, the City and Railroad will review each submittal, mark to indicate action taken, and return promptly. Contractor is notified that each submittal review by the Railroad may take four weeks including re-submittals.
- E. Compliance with specified characteristics is the Contractor's responsibility.
- F. Action Stamp: The City's and Railroad's Engineer will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:
 - 1. Final Unrestricted Release: Where submittals are marked "Approved," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
 - 2. Final-But-Restricted Release: When submittals are marked "Approved as Noted," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
 - 3. Returned for Resubmittal: When submittal is marked "Not Approved, Revise and Resubmit," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark. Do not permit submittals marked "Not Approved, Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.
 - 4. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required".
- G. The checking and review of shop Drawings by the City and Railroad will not release the Contractor from any errors thereon. The Contractor is to be responsible for verifying all material and workmanship in shop work or other trades assuming all responsibility for any conflict between the various trades during construction.

END OF SECTION

SECTION 01410
TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Materials testing and inspecting to be performed by a firm chosen by, and contracted with, the City.
- B. Cooperation is required from the Contractor and others responsible for testing and inspecting the Work.
 - 1. Related Work:
 - 2. Documents affecting work of this Section include, but are not necessarily limited to:
 - a. General Conditions
 - b. Sections in Division 1 of these Special Provisions.
 - 3. Requirements for testing may be described in various Sections of these Special Provisions.
 - 4. Where no testing requirements are described, but the Railroad decides testing is needed, the Railroad may require testing to be performed under pertinent standards for testing.
 - 5. Employment and payment of a concrete testing laboratory is the Contractor's responsibility. See Section on Concrete for testing requirements.
- C. QUALITY ASSURANCE:
 - 1. The testing laboratory will be qualified to the Railroad's approval in accordance with ASTM E-329.
 - 2. Testing will be in accordance with all pertinent codes and regulations, and with selected standards of the American Society for Testing and Materials.
- D. DELIVERY, STORAGE AND HANDLING:
 - 1. Comply with pertinent provisions of Specifications Sections.
 - 2. Promptly process and distribute required copies of test reports and related instructions to assure necessary retesting and replacement of failed materials with the least possible delay in progress of the Work.
 - 3. The City will furnish to the Railroad's Engineer the original copies of test reports. In cases of test failure, the Engineer will be notified in the most expedient manner possible and written reports will follow. If the Engineer cannot be located immediately the City will be notified of the failure and the failure shall be rectified.
- E. INITIAL SERVICES OF A TESTING LABORATORY SERVICE:
 - 1. INITIAL SERVICE REQUESTED BY THE RAILROAD:

The City will pay for all testing services requested by the Railroad, including, but not necessarily limited to, observing performance of work in connection with excavating and embankment, trenching, backfilling, grading and installation of asphalt.
 - 2. CODE COMPLIANCE TESTING:

Inspections and tests required by codes or ordinances or by a plan approval authority, and which are made by a legally constituted authority, shall be the responsibility of, and be paid for by the City, unless otherwise provided in the Contract Documents.
 - 3. CONTRACTOR'S TESTING:

Inspecting and testing performed exclusively for the convenience of the Contractor shall be the Contractor's sole responsibility.
 - 4. COOPERATION WITH TESTING LABORATORY:

TESTING LABORATORY SERVICES
SECTION 01410

Representatives of the testing laboratory shall have access to the Work at all times and at all locations where the Work is in progress. The Contractor shall provide facilities for such access to enable the laboratory to perform its functions properly.

5. TAKING SPECIMENS:

All specimens and samples for testing, unless otherwise provided in the Contract Documents, shall be taken by the testing personnel. All sampling equipment and personnel will be provided by the testing laboratory. All deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

F. SCHEDULES FOR TESTING:

1. Establishing Schedule:
 - a. Testing shall be performed in accordance of the schedule as noted in Division 2, Sections 02250 and 03100.
 - b. Provide all required time within the construction schedule.
2. Revising schedule: When changes of construction schedule are necessary during construction, coordination of all such changes with the testing laboratory is required.
3. Adherence to schedule: When the testing laboratory is ready to test according to the established schedule, but is prevented from testing or taking specimens due to incompleteness of the Work, all extra charges for testing attributable to the delay shall be back charged to the Contractor and shall not be borne by the Railroad.

END OF SECTION

SECTION 01510

UTILITY LINES

PART 1 - GENERAL

1.1 GENERAL:

Relocation of public or private utilities requiring relocation on the Railroad's Right-of-Way, in the area of the Work, shall be arranged by the Railroad per Agreement with the City at no expense to the Contractor, unless required in the Scope of Work and/or the Schedule of Billable Service Items.

A. It is the Contractor's responsibility to locate and protect all utilities within the limits of construction. If damaged during grading operations, the contractor shall repair or replace at no additional cost to City or Railroad.

B. If active utility lines are encountered that are not shown on the drawings or otherwise made known to the contractor, the contractor shall promptly take necessary steps to assure that service is not interrupted. If service is interrupted, immediately restore service by repairing the damaged utility.

C. If existing utilities are found to interfere with the permanent facilities being constructed under this section, immediately notify the City's Engineer and secure written instructions.

1.2 FIBER OPTICS:

Fiber optic cable systems are buried on Union Pacific Railroad property within the limits of this project. The Contractor shall notify the UPRR CBUD (call before you dig) at 1-800-336-9193 (a 24 hour number) to arrange for a cable locator prior to commencing work.

1.3 OTHER PUBLIC OR PRIVATE UTILITIES:

Contractor shall notify all other utility locations services and have utilities located within Railroad Right-of-Way as required by these Special Provisions, General Conditions and Project Specifications. This shall not relieve the Contractor of the requirements of Section 1.1 and 1.2 of this Special Provision.

END OF SECTION

SECTION 01531

TEMPORARY FENCING AND BARRICADES

PART 1 - GENERAL

1.1 SUMMARY:

- A. The Contractor shall provide erect and maintain adequate temporary fences and barricades to prevent injury, damage and/or trespassing upon the Right-of-Way, damage of adjoining property, and reasons of safety
- B. Placement of barricades and temporary fences shall meet Railroad clearance and safety requirements allowing access along the tracks for railroad workers and trainmen.

END OF SECTION

SECTION 01551
ACCESS ROADS AND CROSSINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. The contractor shall ensure all roads, whether pavement or gravel, used during construction are maintained and left in pre-construction condition when project is complete. The contractor is responsible for all bonds required by local or state agencies to ensure public roads are maintained or repaired. Any temporary barricades or traffic control, if not included as a bid item, are the responsibility of the contractor and shall be incidental.
- B. Temporary Access Roads and Parking Areas:
1. The location of access roads and parking areas which the Contractor needs to construct on the Railroad's Right-of-Way or property, which the Railroad has easement or interest in, shall be approved by the Engineer before such roads or parking areas are built. All access roads and parking areas constructed by the Contractor which the Engineer deems unsuitable for future Railroad use shall be removed upon completion of the Work and at the Contractor's expense, and shall be stabilized with gravel or put back to pre-existing conditions where required.
- C. Agreements:
1. Any agreements made between the Contractor and private landowners shall be furnished to the Engineer.

PART 2 - CONSTRUCTION TRAFFIC CONTROL

2.1 SUMMARY

- A. When work is being performed on or near a public or private roadway, the Contractor shall use temporary traffic control measures to warn and guide the traveling public. The temporary traffic control measures and devices shall be provided and placed in accordance with the Manual on Uniform Traffic Control Devices and the respective State, County or City traffic control requirements, whichever is more stringent.
- B. Traffic control devices, and installations shall be checked by the Contractor daily. Broken, damaged, or displaced devices shall be replaced immediately.
- C. The Contractor shall, at the preconstruction conference, provide the Engineer with the names and telephone numbers of personnel who will be available on a 24-hour-per-day, 7-days-per-week basis. These people shall be responsible for repair, correction, replacement, and maintenance of the traffic control devices. The Contractor shall also conspicuously post at the site a contact number for the Contractor's staff person responsible for maintaining traffic control measures and devices, and for public safety agencies.
- D. As required or necessary, it shall be the responsibility of the Contractor to furnish flagger(s) to direct traffic when construction activity occurs on or adjacent to a surface being used by the traveling public. The flagger(s) shall be properly attired with vest and head gear. They shall be provided properly installed advance warning signs, and they shall be otherwise equipped in accordance with the requirements of the plans and specifications. Flaggers shall position themselves appropriately and according to accepted flagging procedures.
- E. All traffic control materials and devices shall meet the respective State Department of Transportation's Approved Products List.

PART 3 - PERMANENT TRAFFIC CONTROL

3.1 SUMMARY

- A. Permanent traffic control measures and devices shall be provided and placed in accordance with the Plans, the Manual on Uniform Traffic Control Devices and the City traffic control requirements, whichever is more stringent.
- B. All traffic control materials and devices shall meet the City's Approved Products List.

END OF SECTION

SECTION 01562
DUST CONTROL

PART 1 - GENERAL

1.1 SUMMARY:

- A. Spillage of earth, dusty materials, boulders and mud on roads located on the Railroad's property will not be permitted. If spillage cannot be prevented, the Contractor shall provide an hourly patrol, or more frequently if needed, to police and sweep such areas throughout the Work day, and at the conclusion of each work day, any paved roads located on the Railroad's property which have been used by the Contractor shall be broom cleaned and left to the satisfaction of the Engineer. Any expense incurred in the use of Railroad access roads shall be borne by the Contractor.
- B. The Contractor shall provide dust control for construction equipment on and off project site in accordance with Section 02270 and the Special Provisions (Section 24 – Cleanup and Dust Control). Dust control will be considered an incidental cost. Twenty-four hour dust control may be required. Non-paved haul roads shall be periodically watered to keep dust down.

END OF SECTION

SECTION 01572

WORKING AND FLAGGING NEAR THE TRACKS

PART 1 - GENERAL

1.1 SUMMARY

- A. Except as authorized by the Agreement and the Engineer, the Contractor will not work within 25 FT of the centerline of any track in service, and will locate all equipment, devices and materials at a sufficient distance from any track to ensure that no apparatus or part of any piece of equipment, device or material, such as the boom of a crane or a dragline, could under any circumstances reach closer than 25 FT to the centerline of any track.
1. When the Contractor is required to work within 25 FT of the centerline of any track in service, a flagman will be required in accordance with these specifications, the Right of Entry Agreement obtained by the Contractor from the Railroad and the Agreement between the Railroad and the City of Sparks contained in this Contract.
 2. For any excavation below elevation of track subgrade if, in the opinion of Railroad's representative, track or other Railroad facilities may be subject to settlement or movement, a flagman will be required.
- B. The Contractor has an allowance of 45 working days at 8 hrs. per day for 1 flagman and associated equipment, paid for by the City, for all work conducted within 25 FT of the centerline of any track in service (including mainline track crossings for staging of equipment or materials). Should flagging be required beyond the allocated number of days, Contractor shall reimburse the City for fees associated with such effort (approximately \$1,300.00 per day).**
1. Contractor shall be responsible for making effective and prudent use of and documenting actual time that railroad's personnel are flagging and inspecting to aid the City in payments to the railroad and for auditing purposes.
- C. When flagging is required, the Contractor shall comply with the railroads' requirements for advance notice as stated in the Right of Entry Agreements. The Union Pacific Railroad requires the Contractor to provide 30 calendar days advance notice to the Manager of Track Maintenance with additional specific notice to meet union rules requiring a minimum of 7 calendar days advance notice to begin railroad flagging and 7 calendar days advance notice to terminate railroad flagging. The Contractor shall be responsible to appropriately notify the railroads regarding flagging start and end dates.
1. **The Contractor is hereby notified that the railroad may not be able to provide railroad flaggers on dates or during the times requested. Contractor shall not receive additional compensation or be allowed changes to the project time frame as a result of railroad flagging availability.**
- D. Railroad flagmen are for the protection of train movements only. The Contractor is responsible for all equipment movements across public and private road crossings. The Contractor's equipment shall be equipped with two-way radios for better communications with railroad flagmen and the railroad engineer. All other flagging charges not involving the safety of Railroad operations will be at the Contractor's expense.

1.2 CONTRACTOR SAFETY

- A. The Contractor shall abide by the rules set forth in the "Minimum Safety Requirements" for UPRR Contractors (separate document).
- B. General Contractor and all Subcontractors shall attend all safety meetings. Contractor shall adequately maintain their company "Safety Plan" throughout the duration of the project. Contractor will conduct FRA required "On Track Safety Training" for all contractor and subcontractor workers.
- C. Emergency phone numbers shall be posted in a conspicuous place in all field offices or on the project property.
- D. Cell phone use is not allowed while operating equipment or walking on Railroad property.

WORKING AND FLAGGING NEAR THE TRACKS
SECTION 01572

- E. The Contractor shall comply with directions given by railroad flaggers. Railroad flaggers and inspectors shall have the right to direct the Contractor to stop Work on or over the Railroad's property if Railroad in its sole discretion determines that the Work being performed is hazardous to Railroad's property and/or operations. The Railroad has committed to give immediate notice of any work stoppage to the City. The Contractor, working with the City's representative, shall work with Railroad to determine how to resolve the problems. The Contractor shall accommodate any and all requests made by the Railroad that serve the purpose of avoiding hazards to Railroad property and/or operations. Neither the Railroad nor the City will have any liability to the Contractor for costs or delays associated with such work stoppage or requirements associated with avoidance of hazardous situations.
- F. Railroad reserves the right, in accordance with the Agreement with the City of Sparks, to cause the Contractor to immediately cease some or all of its operations on Railroad Right-of-Way if unsafe practices or procedures are observed while performing work on Railroad Right-of-Way. Contractor costs and any schedule delays associated with such a cessation of activities shall not be reimbursed by the City or the Railroad and are not considered as part of the Project. Contractor may resume operations on Railroad Right-of-Way upon notice from the City as approved by they Railroad.

END OF SECTION

SECTION 01575

HAUL ROADS

PART 1 - GENERAL

1.1 GENERAL

A. CONSTRUCTION OF ROADS AND PARKING AREAS ON RAILROAD RIGHT OF WAY

1. The location of haul roads and parking areas which the Contractor needs to construct, on the Railroad's Right-of-Way or property, and which the Railroad has an easement or an interest in shall be approved by the Engineer before such roads or parking areas are built. All haul roads and parking areas constructed by the Contractor which the Engineer deems unsuitable for future Railroad use shall be removed upon completion of the Work, at the Contractor's expense, and shall be stabilized with gravel or put back to pre-existing conditions where required.

B. USE OF RAILROAD ROADS - EXISTING AND PROTECTION

a. **HEAVY EQUIPMENT:**

The Contractor shall not operate heavy equipment on paved roads located on the Railroad's property without the Engineer's prior approval.

b. **TEMPORARY PROTECTION AND REMOVAL:**

The Contractor, if he needs to have heavy equipment on the right of way, shall provide a temporary protective surface, approved by the Engineer, over such paved roads. Upon completion of the Work, the Contractor shall remove any such temporary protective surfacing from the Railroad's paved roads and property.

c. **FLAGMEN:**

When necessary for the Contractor's equipment to operate on or across roads, not railroad tracks or crossings, located on the Railroad's property, the Contractor shall furnish flagmen, lights and other necessary safeguards as directed by the Engineer to safely control the flow of traffic. The Contractor shall also provide flagmen to control and direct traffic where hauling equipment enters or crosses roads located on the Railroad's property. The Contractor shall conduct the work in such a manner which will obstruct and inconvenience traffic as little as possible.

C. PAVED ROADS:

1. If the Contractor must cross any paved road, on Railroad property, with cleated or crawler type equipment, then the pavement shall be protected with a temporary surfacing approved by the Engineer.

D. RAILROAD CROSSINGS:

1. **CROSSINGS** - Except as authorized by the Engineer, the Contractor will not construct crossings over any track at any location. Where crossings are needed or desired, the Contractor shall make arrangements directly with the Engineer. If a crossing or crossings are required to complete the Work as set forth in the Request for Bids, the Proposal and Bid, the Specifications, the Drawings and the Agreement, such crossings may be constructed by the Railroad unless the Railroad specifically authorizes the Contractor to construct such crossings. If the Contractor must cross tracks with cleated or crawler type equipment, the track shall be protected with a temporary surfacing approved by the Engineer.
2. **FLAGGING - RAILROAD TRACK:**

See Section 1572.

END OF SECTION

SECTION 01620
STORAGE AND PROTECTION

PART 1 - GENERAL

1.1 GENERAL

A. SUMMARY

1. Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.
2. Related Work:
 - a. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 1 of these Special Provisions.
 - b. Additional procedures also may be prescribed in other Sections of these Special Provisions.

B. QUALITY ASSURANCE:

1. Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.

C. MANUFACTURERS' RECOMMENDATIONS:

1. Deliver products to the job site in manufacturer's original container, with labels intact and legible.
 - a. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - b. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the City.
2. The Engineer may reject as non-complying such material and products not bearing identification satisfactory to the Engineer as to manufacturer, grade, quality, and other pertinent information.

D. PROTECTION:

1. Protect finished surfaces, including jambs and soffits of openings used as passageways, through which equipment and materials are handled.
2. Provide protection for finished floor surfaces in traffic areas prior to allowing equipment or materials to be moved over such surfaces.
3. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the City and Railroad.

E. REPAIRS AND REPLACEMENTS:

1. In event of damage, promptly make replacements and repairs to the approval of the Engineer and at no additional cost to the City.
2. Additional time required to secure replacements and to make repairs will not be considered by the Engineer to justify an extension in the Agreement Time of Completion.

END OF SECTION

SECTION 01710

PROJECT CLOSEOUT AND CLEANING

PART 1 - GENERAL

1.1 GENERAL

A. CLEANING UP:

1. See SSPWC Section 335.
2. Upon completion of the Work involved, the Contractor shall clean the location of the Work and all ground occupied by him in connection with the Work and shall remove all rubbish, excess materials, falsework, temporary structures, and equipment, leaving the location of the Work cleaned to the satisfaction of the City's and Railroad's Engineer.

B. MATERIAL DELIVERY:

1. The Contractor shall pick up and deliver to a site or sites designated by the Engineer all excess and useable materials furnished by the Railroad in connection with the Work.

END OF SECTION

SECTION 01720
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY:

- A. See Section 26 of the (Project) Special Provisions.
- B. The Contractor shall provide one electronic file copy, in both CAD format and pdf format, of "as-constructed" Drawings to the Engineer upon completion of the Work. The Drawings shall reflect all modifications made during construction and note the exact location of all utilities and equipment. Each sheet shall be stamped "As-Built," signed and dated. Drawings must be received by the Engineer before final payment shall be made to the Contractor.

END OF SECTION

SECTION 01750
GUARANTEES, WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 SUMMARY:

- A. The Contractor shall guarantee all Work under this Agreement for a period of one year from the date of acceptance by the Railroad, unless otherwise indicated in the Agreement. Contractor shall leave the Work in perfect order at completion, and the final certificate of payment shall not relieve him of the responsibility for negligence, faulty materials, or workmanship; upon written notice, he shall remedy any defects or workmanship that may appear during the time hereinbefore mentioned and pay all expenses due therefrom to the entire satisfaction of the Engineer.

END OF SECTION

DIVISION 2 – SITE WORK SPECIFICATIONS

SECTION 02060
STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. The extent of demolition work is shown on the drawings.
- B. Demolition requires removal and disposal, off site, in a proper and legal manner, of the following:
 - 1. Drainage structures.
 - 2. Foundations.
 - 3. Footings.
 - 4. Existing fence.
 - 5. Above and below grade improvements.
- C. Storage or sale of items on the right of way site will not be permitted.
- D. Traffic:
 - 1. Conduct demolition operations and removal of debris to ensure minimum interference with railroad service, roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways, if required, by the governing regulations.
- E. Explosives:
 - 1. Use of explosives will not be permitted.

1.2 PROTECTIONS

- A. Ensure safety of persons around area of demolition.
- B. Provide safety fencing or railing in accordance with Railroad requirements to protect railroad workers from area of demolition that do not impact train operations.

PART 2 - PRODUCTS – N/A

PART 3 - EXECUTION

3.1 DUST AND WIND EROSION CONTROL

- A. Excavations and embankments section on dust control is in Section 02270.
- B. Approved temporary methods of dust control, including sprinkling, chemical treatment, light bituminous treatment or similar methods may be approved. Sprinkling must be repeated at such intervals as to keep all potential sources of dust wet at all times, and the Contractor shall provide sufficient sprinkling equipment to comply with this requirement.

3.2 DISPOSAL OF DEMOLISHED MATERIALS

- A. General:
 - 1. Remove from site debris, rubbish, and other materials resulting from demolition operations.
 - 2. Burning of removed materials from demolished structures will not be permitted on site.
 - 3. Transport materials removed from demolished structures and dispose of legally off site.

PART 4 - GENERAL CONDITIONS

4.1 GENERAL CONDITIONS

The Contractor shall be responsible for any damage to existing and remaining buildings or to equipment and furnishings housed therein which are due directly or indirectly to the demolition operations. Use every precaution to prevent injuries to curbs, drives and sidewalks adjacent to the site of the work and replace at no expense to the Railroad any such destroyed. Unless specified otherwise by the Railroad's Engineering Environmental Department or their representative all necessary wrecking or demolition together with the removal and disposal of items shall be performed to the following requirements.

A. DISPOSAL of MATERIALS:

1. Contractor to be responsible for segregation of all scrap, trash, structural materials, concrete, contaminates, etc., that may be required before disposal. Contractor to indemnify the Railroad of any costs or liabilities arising from his transport and disposal of said materials arising from demolition or excavation. Contractor to provide the Railroad the required documentation verifying compliance with Federal, State and Local laws, codes and regulations governing the disposal and transportation of the demolition materials.
2. All excavated earthen soils that, by examination, indicate contamination from petrochemical absorption of diesel fuel, lube oils, etc., shall be placed on protective plastic, covered for protection and enclosed by a temporary berm. Any materials identified as having surface contaminates in excess of EPA guidelines shall be disposed of in an approved manner as dictated by Federal, State, and Local laws, codes and regulations.
3. Excavated concrete or mortar products indicating contamination shall be segregated from soils and handled/disposed of in a like manner to that required for contaminated soils.
 - a. See Technical Specifications Section 300.03.02 for additional instructions.
 - b. Per the Bid Schedule and the Bid Item Clarifications, Contingent funds have been identified to cover handling and disposal costs associated with contaminated soils. Please refer to these documents for additional information and instructions.

B. EXCAVATIONS and GRADING:

1. Excavations arising from demolition to remove equipment, foundations, piping, etc., shall be restored to general grade with clean earthen fill and compacted to reduce settlement and graded to provide adequate drainage.

4.2 SCOPE OF DEMOLITION

A. UTILITIES:

1. Natural Gas Lines.
 - a. Municipal services shall be cut off and capped at street, property easement or meter, whichever is applicable to property, i.e., partial or total facility demolition.
 - b. Intra facility or building gas lines to be flushed with water, plugged and abandoned in place. Connections to be cut at 12 IN below grade level.
2. Water Lines.
 - a. Abandoned lines shall be drained, cut off and plugged at 24 IN below finished grade.
3. Sanitary and Storm Sewers.

- a. Abandon in place with ends cut and capped 24 IN below finished grade. All drains and any other associated influent openings also removed to 24 IN below grade and plugged. (See Manholes Section A.7).
4. Industrial Sewers, Fuel Lines & Waste Water Systems.
 - a. Industrial piping to be drained and water flushed to waste water treatment plant. After flushing, abandon in place with connections severed and plugged 24 IN below finished grade.
 - b. Waste Water Treatment Plants involve piping, hardware, storage tanks and in some cases, settling ponds. Each situation requires special instructions and methodologies to remediate or remove. Refer to Engineer for requirements and/or instructions.
 - c. All fuel meters and ancillary controls, pump skids, (circa 1985 or newer), and specialized valves to be property of the Railroad unless pre-designated as scrap by the Railroad.
 - d. The Railroad shall salvage those items it deems necessary. The responsibility for removal by either the Contractor or another party to be dictated by the Railroad at the time of bidding.
 - e. All existing EPA monitoring wells or inspection points are to be preserved and marked in a method to prevent damage from equipment or personnel during the term of the demolition contract.
 5. Electrical.
 - a. Contact Municipal Power Company for disconnect and relocation needs.
 - b. All transformers to be salvaged for storage and reuse by Railroad. Panel boxes, disconnects, controllers, conduit, etc., shall be considered property of Contractor unless specified by contractual agreement.
 - c. All electrical inventories or components stored as new or reusable within buildings or premises shall be property of the Railroad unless specified by contract agreement.
 - d. Transformers deemed by Railroad to be obsolete or defective to be marked by Railroad as scrap together with latest date tested (PCBs) If no test date available, units shall be considered possible hazardous waste.
 6. Communications.
 - a. Any Railroad antennas, transmitters, computer equipment, or communication devices shall be salvaged as property of the Railroad unless previously designated as scrap. Contact the Railroad Communications Department for disposition if questionable.
 - b. All communication wiring and coaxial cables overhead and internal to buildings to be considered as scrap. If fiber optical cabling systems are encountered, notify Communications Department for instructions.
 - c. All locations of underground fiber optics shall be located, marked and protected from excavation.

END OF SECTION

SECTION 02110
CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. These specifications shall govern the removal and disposal of all trees, stumps, undergrowth, brush, trash, grass, weeds, roots, concrete, debris, or other objectionable materials within the limits of the excavation, embankment, borrow, and other areas as shown on the plans and Contract Documents.

1.2 PRESERVATION

- A. The designated areas shall be cleared except certain areas as directed by the Engineer for preservation. Areas designated for preservation shall be carefully protected from abuse, marring or damage during construction operations.

1.3 TOPSOIL

- A. Topsoil shall be stockpiled as necessary for capping of slopes and ditch bottoms. See Section 02270.1

1.4 DISPOSAL

- A. All cleared and grubbed material shall be disposed of off property unless otherwise directed by Engineer, and shall comply with Federal, State and Local regulations. Pieces of rail, broken ties, and rubble within the grading limits are to be removed off of railroad property in a legal proper manner. This shall be incidental to the clearing and grubbing bid item.
- B. Material being disposed of shall not be burned on Railroad property.
- C. No material will be disposed of in the grading footprint.
- D. Large trees and shrubs may be shredded into mulch and used for capping slopes and ditch bottoms, as approved and directed by the Engineer.
- E. Unless otherwise stated in the special provisions, all merchantable timber will be the property of the Contractor.

PART 2 - PRODUCTS – N/A

PART 3 - EXECUTION

3.1 GENERAL

- A. All holes remaining after clearing and grubbing shall be backfilled and compacted as directed by the Engineer and the entire area bladed to provide drainage, except, in areas to be immediately excavated, the Engineer may direct that the holes not be backfilled.

3.2 EXCAVATIONS:

- A. Areas that are to be excavated and hauled into embankments shall be cleared and grubbed of all objectionable material to the full depth and width of the completed excavation. Areas that are to be excavated and wasted shall not be cleared unless specifically requested by the Engineer. Roots or other vegetation existing below the finished surface of excavated sections shall be removed to a depth of 2 FT below the finished surface. There will be no allowance for any grubbing required below such finished surface. All such grubbing below the finished surface shall be considered incidental to clearing and grubbing, and shall be included in the bid item cost for clearing and grubbing.

3.3 BORROW PITS:

- 1. Areas required for borrow sites and material sources must be cleared and grubbed, except for designated trees and shrubs, to prevent such objectionable material being used in construction.

CLEARING AND GRUBBING
SECTION 02110

3.4 EMBANKMENTS:

- A. All areas that will be beneath embankments shall be free from all vegetation and roots to a minimum depth of 2 FT below the ground surface.
- B. All rubbish shall be removed in embankment areas.

3.5 OTHER DESIGNATED AREAS (SUCH AS STAGING AND STORAGE AREAS):

- A. Designated portions of the right-of-way other than excavations, borrow areas, and embankments shall be cleared off level with ground surface by cutting and removal of all trees (standing or fallen), stumps, undergrowth, brush, vines, roots, and other vegetation, trash, or objectionable materials so that no obstruction will interfere with close machine or hand mowing of cleared areas. Cleared areas shall be left smooth and free of obstructions that will impound water.

3.6 LIMITS OF WORK:

- A. Trees or other growth outside the limits for clearing and grubbing shall be preserved and protected from damage during construction operations. If rare or endangered plants or artifacts are encountered during construction, work shall stop in the vicinity of the find, and the Contractor shall notify the Engineer of said find.

END OF SECTION

SECTION 02230

EXCAVATION, EMBANKMENTS AND OTHER FILLS (COMMON SPECIFICATION)

PART 1 - GENERAL

1.1 SUMMARY

- A. These specifications shall govern the removal of excavation, the placement of embankment and other fills, and the classification of soils to meet the requirements of construction shown on the drawings, described in the contract documents, and stated in the Specifications. The work shall be conducted so that the terrain outside the grading limits will not be disturbed except where approved by the Engineer.

1.2 QUALITY ASSURANCE:

1. Requirements:
 - a. Comply with government agencies having jurisdiction.
 - b. Comply with the directions of the City's Engineer, Geotechnical Engineer, and independent testing laboratory.

1.3 DEFINITIONS AND TERMS:

- A. The following terms shall be interpreted as follows:

1. Borrow Area:

The source, other than required roadbed excavation, where material(s) has been dug for use as fill for embankment and construction at other locations on the project.
2. Embankment (Fill):

A raised structure of soil, soil aggregate, sand, gravel, or rock; or any mixture thereof that is to be (1) used as the subgrade or foundation materials for track or other roadbeds, building(s), or other facilities; and (2) constructed to perform safely and satisfactorily under proposed train, vehicle, embankment, building and/or other proposed loading conditions.
3. Excavation (Cut):

Soil or material to be removed and used as fill for construction of a roadbed embankment or foundation for other structures or facilities; or to be disposed of properly.
4. Subexcavation:

Excavation required below finished subgrade level as part of correcting unsuitable subsurface conditions.
5. Grading Area:

The limits (surface) within a designated set of boundaries which includes where both excavations (cuts), embankments (fills), and fills for facilities other than track will be performed.
6. Lift:

A layer (or course) of uncompacted embankment material placed on top of suitable natural subgrade or previously prepared embankment fill.
7. Nominal Maximum Size:

The maximum U.S. sieve size upon which material is retained.
8. Roadbed:

The bed or foundation that supports road surfacing or a track section (i.e., subballast, ballast, ties and rails).
9. Subgrade:

EXCAVATION, EMBANKMENT AND OTHER FILLS (COMMON SPECIFICATION)
SECTION 02230

The upper roadbed materials that underlie and support subballast; ballast; track structure (i.e., ties and rails); road surfacing (i.e., aggregate or pavement) materials, and the floor within the lowest level of a structure.

10. Unsuitable Material:

Earthen and rock subgrade, foundation, borrow, or manufactured materials that do not possess the required strength, stability, and/or consolidation properties to safely and satisfactorily support proposed train or other facility loading conditions.

PART 2 - PRODUCTS

2.1 EXCAVATED MATERIALS

A. Excavatability:

1. The ease or difficulty, and means of excavating materials that are to be obtained from cut sections or borrow areas for a project will not be established for the Contractor. The Contractor shall be responsible for determining the methods necessary for excavation and handling of materials based on his interpretation of site conditions, geotechnical reports (if available), or other information sources.

B. Unsuitable soil materials:

1. The contractor shall remove and dispose of unsuitable and/or contaminated materials at a defined location on the property, at other locations shown on the plans, or as directed by the Engineer.
2. When project site restrictions mandate, the Contractor shall dispose of excess waste materials off the project site. These waste materials shall be legally disposed of at acceptable waste sites. Contaminated waste materials shall be disposed of at landfills approved to handle and store such materials without causing harm to the environment.
3. Topsoil shall be excavated during the performance of the clearing and grubbing operations for the project. The excavated topsoil materials shall either be stockpiled for later use as top dressing in grassed areas, wasted at locations directed by the Engineer, or used as part of the construction of the outer portions of embankments outside the track, road or other facilities load-bearing area(s). See section 2270.1 for Topsoil – Stockpile and Placing.

C. Suitable materials:

1. Suitable materials shall be used for embankment or other fill construction.
2. Excess suitable materials, not used for embankment construction, are to be disposed of in a legal manner as follows: (1) at a designated location(s) within the project limits, (2) at other locations shown on the plans, (3) at a location(s) approved by the Engineer, or (4) at an approved landfill location(s).

D. Rock materials:

1. Rock is considered to be material requiring blasting or the use of heavy construction breakage equipment (such as a D-8 or larger bulldozer and/or 6,000 ft.-lb. or greater breakage equipment) as part of excavation. Rock shall include all materials in ledges, bedded deposits, and cemented and conglomerated deposits exhibiting the physical characteristics and difficulty of removal that requires removal using systematic drilling and blasting or as determined by the project engineer or geotechnical engineer. The fact that blasting may be resorted to by the Contractor shall not, of itself, entitle the material to be classified as “rock”. Material that the Contractor encounters during excavation shall be uncovered and the Engineer notified so that the Engineer can classify the material. Materials from rock excavation which are to be used for embankment and fill construction shall be processed so as to produce a well-graded material which has a nominal maximum size as defined by the project Engineer or Geotechnical Engineer.

2.2 EMBANKMENT AND FILL MATERIALS:

- A. Embankment material (fill) is suitable earthen and/or rock that are excavated from on-site and/or off-site borrow areas, and considered suitable for use during construction based on their strength and consolidation properties, and approval by the Railroad's Engineer, Geotechnical Engineer, and/or an independent soils testing laboratory.
- B. Embankment material shall be relatively free of organic materials, and not contain environmentally harmful or noxious substances.
- C. Import fill or off site borrow material supplied by the Contractor shall meet specifications for: 1) granular fill, 2) random fill, 3) an inorganic lean clay having a maximum liquid limit of 45 and a maximum plasticity index of 15, 4) a clayey sand, or 5) pit run sand.
- D. Embankment and fill materials shall be identified and "classified" as follows:

FINE GRAINED MATERIALS:

1. Clayey Soils:

Clay soils shall consist of soils having 50% or more by dry weight passing the No. 200 U.S. Standard sieve, that can be made to exhibit plasticity (cohesive/putty-like properties) within a range of water contents, and that exhibit considerable strength when air dry. For classification purposes, a clay is the fine-grained portion of a soil which exhibits a plasticity index equal to or greater than 4, and for which a plot of plasticity index versus liquid limit for the soil falls on or above the "A" line on the Unified Soil Classification chart. Clays with Liquid Limits above 50 are considered suitable for use as embankment materials when approved for selective placement by the Geotechnical Engineer and/or when chemically treated to reduce undesirable plasticity characteristics and associated soil properties.

2. Silty Soils:

Silty soils shall consist of soils having 50% or more by dry weight passing the No. 200 U.S. Standard sieve, that can not be made to exhibit plasticity (cohesive/putty-like properties) within a range of water contents – and that are nonplastic or very slightly plastic and exhibits little or no strength when air dry. For classification purposes, a silt is the fine-grained portion of a soil which exhibits a plasticity index less than 4, and for which a plot of plasticity index versus liquid limit for the soil falls below the "A" line of the Unified Soil Classification chart. Silty soils can become unstable when saturated. As a result, silty soils are only considered suitable for use as embankment and general compacted fill construction when approved for selective placement by the Geotechnical Engineer. Silty materials are predominantly extremely fine sand particles that are best compacted using vibratory construction equipment.

COARSE GRAINED MATERIALS:

1. Sands:

Sandy materials consist of granular materials having 50% or more by dry weight retained between the No. 200 and No. 4 U.S. Standard sieves. Sandy materials are generally visible to the human eye.

2. Granular Materials:

Coarse grained soil material with more than 50% dry weight retained on the No.200 U.S. Standard sieve, and which exhibit no characteristics of cohesiveness or plasticity.

3. Gravels:

Gravelly materials consist of granular materials having 50% or more by dry weight retained between the No. 4 and 3-IN U.S. Standard sieve.

4. Cobbles:

Cobbles consist of rock materials having 50% or more by dry unit weight retained between the 3-IN and 10-IN U.S. Standard sieves.

EXCAVATION, EMBANKMENT AND OTHER FILLS (COMMON SPECIFICATION)
SECTION 02230

5. Boulders:

Boulders consist of rock materials having 50% or more by dry unit weight having a diameter greater than 10 IN.

6. Cinders:

Cinders consist of a porous by product that routinely is the residual of partially burnt coal. Cinders have the potential for degradation (reduction in volume) when subject to freeze- thaw action and heavy loadings.

B-STONE

1. Material:

“B” Stone shall comprise of naturally occurring limestone, dolomite, quartzite, or granite. Stone must be hard, durable, angular in shape, resistant to weathering and shall be free of cracks, seams, expansive materials or other defects that would cause accumulated deterioration from exposure to climatic conditions.

2. The material shall meet, in addition to the Specifications, the following quality requirements:

- a. The approval of some “B” Stone from a particular source shall not be construed as constituting the approval of all riprap taken from that source.
- b. The Engineer shall be the sole judge of “B” Stone quality and sources of material.
- c. “B” Stone may be rejected on the basis of visual examination, regardless of laboratory tests and/or service records.
- d. Tests to which the materials may be subjected include specific gravity, abrasion, absorption, soundness, freezing and thawing and such other tests as may be considered necessary.

TEST	REQUIREMENT
(a) Specific Gravity (ASTM C127)	2.65 Min.
(b) Absorption (ASTM C127)	2.0% Min. – 8.0% Max.
(c) Soundness, 5 cycles Mg S04 (ASTM C88)	2.0% Min. – 15.0% Max.
(d) Abrasion (AASHTO)	50% Max

3. GRADATION:

All “B” Stone to be loaded and quarried shall conform to the following gradation unless otherwise specified or as shown on the plans:

- a. Nominal 8 IN size:
- b. 100% passing the 10 IN screen 100% retained on the 6 IN screen

Gradation compliance is determined by visual inspection, monitored by the Engineer. The Engineer may designate the material as too fine or too coarse.

ROCK:

Rock shall include all material in ledges, bedding deposits, cemented and conglomerate deposits which exhibit physical characteristics and difficulty of removal without systematic drilling and blasting, or as determined by the Engineer. The fact that blasting may be resorted to by the Contractor shall not, in itself, entitle the material to be classified as rock.

E. “Types” of embankment (fill) materials shall be identified as follows:

EXCAVATION, EMBANKMENT AND OTHER FILLS (COMMON SPECIFICATION)
SECTION 02230

1. Select Fill Material – Select materials shall be limited to sand and gravel materials that possess minimal expansive properties and that meet the following criteria:

Maximum Allowable Percent

Liquid Limit Passing the No. 200 Sieve (Test Method ASTM D 4318)	(Test Method ASTM D 1140)
Greater than 50	30%
Between 30 and 50	40%
Less than 30	50%

The plasticity index of select fill material (as determined in accordance with ASTM D 4318) shall not exceed 15.

2. Random Fill Materials:
 - a. Random fill materials are defined as those non-organic cohesive soils, cohesionless soils, combined cohesive and cohesionless soils, and rock materials that possess the minimal required physical strength, consolidation and other characteristics, after placement and compaction, that are required to provide a stable and safe embankment and foundation for the project. Depending upon the physical properties required to provide a stable embankment and fill, routine materials consisting of, but not limited to, clayey silts (CL-ML), lean clays (CL), sandy lean clays (CL), clayey sands (SC), silty sands (SM), sands and gravelly sands (SP & SW), sandy gravels and gravels (GP and GW), rock, and combinations of these materials may prove satisfactory embankment materials. Highly plastic clayey (CH) soils may possess the physical properties required to perform satisfactorily as part of embankment and foundation construction but are routinely either buried within the fill or chemically stabilized prior to placement and compaction to reduce undesirable physical characteristics associated with encountering water. Random fill materials shall be defined by the Railroad and/or Geotechnical Engineers for the project.
3. Rock fill:
 - a. Rock fill shall consist only of sound, durable rock from solid rock excavation containing not more than twenty (20) percent by weight which passes through a one half (1/2) IN sieve. Mixtures of boulders and silt will not be considered as rock fill. The maximum nominal size of rock shall be twenty four (24) IN and a maximum lift thickness of thirty (30) IN, or as specified by the Engineer or Geotechnical Engineer for the project.
4. Cinder Fills:
 - a. Cinder are subject to degradation when subject to forces such as frost action, heavy loading, etc. Such degradation can result in a reduction in the mass of the material resulting in settlement of the overlying fill and facilities. Cinder fills shall not be constructed within the load bearing zone under tracks and other structural facilities. Materials containing more than 25% cinders should be either wasted or uniformly blended with cohesive soil such that the blended material contains no more than 25% cinders. The soil/cinder blended material can be used to construct those portions of either the embankment or fill sections located within either the track or structure loading areas when approved by the Railroad and/or Geotechnical Engineers on the project.

F. SOURCES OF EMBANKMENT:

1. If the quantity of materials required for construction of Embankments and fills exceeds the quantity of materials removed from excavation necessary to complete the project, additional Embankment material will first be obtained by widening cuts. If widening cuts does not provide the necessary embankment, then borrow areas, either on- site or off-site, will be used.

EXCAVATION, EMBANKMENT AND OTHER FILLS (COMMON SPECIFICATION)
SECTION 02230

a. WIDENING CUTS:

The Contractor shall widen cuts in the Grading Area or widen cuts in the vicinity of the project. The Contractor shall consult with the Engineer to determine the location of cuts in the vicinity of Grading Area and to determine the volume of such cuts which are to be widened. Cuts shall be widened in such a manner as to be at least as stable as the original cut, provide adequate drainage for the Roadbed, and retain the same slope lines as the original cut.

b. BORROW AREAS:

Borrow Areas within the Right-of-Way, if available, or from Borrow Areas outside of the Right-of-Way, provided by the Contractor, shall be required to complete the embankment. All borrow areas shall be cleared and grubbed (see section 02210). Materials must be tested by an independent testing laboratory and/or approved by the Engineer prior to placement.

PART 3 - CONDITIONS

- 3.1 The contractor shall examine the areas and conditions under which work of this section will be performed, and correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.
- 3.2 **Access:** the contractor shall maintain access to adjacent areas and facilities at all times, unless approved or directed by the engineer.
- 3.3 **Drainage:** all grading shall be performed in a manner and sequence that will provide proper drainage at all times.
- 3.4 **Signs:** all signs, with the exception of safety related signs (whistle posts, stop signs, etc.) Located in the construction area shall be removed, protected, and replaced in the proper locations, as directed by the engineer. Safety related signs shall be maintained in their original location until such time they are to be relocated as directed by the engineer. This shall be incidental to the grading.
- 3.5 **Signal foundations, or other concrete:** will be removed to an elevation of 2' below finished subgrade. Signal foundations will not be removed until new signals have been turned over to operations.
- 3.6 **Haul:** transporting excavated or embankment material, whether on-site or off-site, shall be considered incidental to the grading work. Vehicles and equipment used for hauling shall be sufficient in number and capacity to meet the project schedule. The contractor shall route the hauling equipment over the grade in such a manner as to maintain uniform compaction across the grade and minimize damage to completed work.

PART 4 - EXECUTION

4.1 GENERAL

A. Before grading begins, the area shall be cleared and grubbed. See section 02110 Clearing and Grubbing. The Contractor shall perform all grading as shown on the Drawings, as specified herein, or as otherwise staked in the field. This Work shall consist of excavating the material from roadbed areas or the Borrow Areas, and placing the material as embankment, shaping and sloping as necessary for the construction, preparation and completion of roadbeds, facilities, and other earthwork.

4.2 EXCAVATION:

1. Perform excavation of every type of material encountered within the limits of the work to the lines, grades, and elevations indicated on the plans and specified herein.

B. EXCAVATION AS EMBANKMENT:

1. The Contractor shall excavate all materials, including rock and common materials, which must be removed to accomplish the excavation as shown on the Drawings. All excavated materials will be used in the formation of Embankments, Roadbeds, and other earthwork so long as such excavation material is satisfactory for such use.

C. DISPOSITION OF EXCAVATED MATERIALS:

EXCAVATION, EMBANKMENT AND OTHER FILLS (COMMON SPECIFICATION)
SECTION 02230

1. The Contractor shall utilize all satisfactory excavated materials in the formation of embankment. Where excess excavation materials or unsatisfactory material exists, such materials will be disposed of in areas on the right of way approved by the Engineer or off the right of way in a legal and proper manner. If the contractor disposes material off of the right of way, it shall be at the Contractor's expense and liability.

D. SCARIFYING SUBGRADE:

1. In cut sections, the Contractor shall scarify the top six (6) IN of material below the Subgrade, adjust the moisture content, and recompact such scarified material.

E. PROOFROLLING:

1. After the site has been stripped, and/or excavated to the rough subgrade elevation, the exposed subgrade should be proof-rolled prior to placement of any structural fill to identify any soft, disturbed, or unstable areas. Unstable or otherwise unsuitable soils, which are revealed by proof-rolling and which cannot be adequately densified in-place, should be remediated under the direction of the Engineer. If required, the methods of stabilization typically include over-excavation and replacement, a lift of crushed stone materials, a geosynthetic over the soft soils, or chemical stabilization with lime. Appropriate remediation methods shall be determined in consultation with the Engineer.

F. EXCAVATION IN SOLID ROCK AREAS:

1. In cut sections where the material to be excavated is solid rock, the Contractor shall excavate twelve (12) IN below finished track subgrade elevations as shown on the Drawings and shall replace such excavated twelve (12) IN of solid rock with embankment material approved by the Engineer.

G. BLASTING:

1. No blasting will be allowed without sufficient advanced notice given to the Engineer. This time will permit the safe and continuous operation of the Railroad. See section 02120 Blasting.

H. DITCHES AND SLOPES:

1. The Contractor shall construct intercepting "V" ditches on the uphill side of cut slopes as directed by the Engineer. The ditches are to be 2 FT deep with 3:1 side slope.

I. OVER EXCAVATION:

1. The Contractor shall not excavate below the design finished grade elevation without the Engineer's prior approval. Materials that are excavated below design finished grade elevation, prior to obtaining prior approval of the Engineer, shall be reconstructed to design grade with materials designated by the Engineer and at the Contractor's expense.

J. SUBEXCAVATION:

1. The Contractor shall inform the Engineer when unsuitable subgrade and foundation materials are encountered. Unsuitable subgrade and foundation materials shall be removed and replaced with compacted fill placed in accordance with recommendations provided by the Soils Engineer. Subexcavation that is unplanned should be quantified and the information provided to the Engineer. Subexcavation shall include suitable material for backfill, unless otherwise specified. Other considerations in lieu of subexcavation may include surcharging, or the use of geosynthetic fabric and/or geogrid in combination with granular materials, both of which must be specified and approved by the project Engineer and/or Geotechnical Engineer prior to their installation. Geotextile/filter fabric shall be extra heavy nonwoven geotextile meeting the requirements found in Table 1- 10-2 of the AREMA Manual. Geogrid shall be Tensar BX 1100 or an approved equivalent. Quantities are estimated to establish a unit price. Payment will be for square yards as installed and approved.

K. SOIL TREATMENT OR MODIFICATION:

1. The treatment of soils using lime, fly ash, or other additives may be used when specified, or as directed by the project Engineer and/or Soils Engineer. See section 02241 Lime Stabilization.

EXCAVATION, EMBANKMENT AND OTHER FILLS (COMMON SPECIFICATION)
SECTION 02230

L. BORROW AREAS:

1. Except as otherwise permitted, borrow pits and other excavation areas shall be excavated in such a manner as will afford adequate drainage. After borrowing operations are completed, areas shall be left in a neat, orderly condition with uniformly shaped slopes not steeper than two (2) FT horizontal on one (1) FT vertical.
2. Borrow areas of fine grained material subject to wind erosion and blowing shall be stabilized or seeded. The Contractor shall ensure that the excavation of material from any source results in minimum detrimental effects on natural environmental conditions.

4.3 EMBANKMENT AND FILL CONSTRUCTION:

A. EARTH FILL:

1. Embankments and fills shall be constructed and compacted as shown on the plans, in these specifications, in the special provisions, or as directed by the Engineer. Embankments shall be constructed in lifts containing only that amount of material that can be compacted uniformly throughout its entire depth when utilizing the compaction construction equipment available on the project. Compaction shall be accomplished by sheep's foot rollers, pneumatic- tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment. Earth fills shall be uniformly compacted to the densities specified by the project Engineer or Soils Engineer for the project using methods and equipment best suited for the materials.
2. Each successive lift or layer shall be carefully leveled and completely and uniformly compacted over the full width of the embankment before a succeeding layer is placed. Embankments built of soil material or material consisting of gravel or small pieces of rock 6 IN or less in maximum dimension shall be placed and compacted until the required degree of compaction is obtained thoroughly and uniformly throughout the layer. No stones larger than 3 IN in diameter will be permitted within the top 12 IN of the finished grade elevation.

B. ROCK FILL:

1. Embankments built of materials comprised predominantly of rock larger than 6 IN in maximum nominal size dimension shall be constructed by placing the material in layers not exceeding the maximum size of the rock present, but in no case shall the thickness of layers exceed 24 IN, unless approved by the Engineer. The maximum size of any individual rock shall not exceed 24 IN in any one dimension, or as approved by the Engineer.
2. Rock fill shall be placed using procedures that form a dense, well-graded mass of stone with a minimum of voids. The rock fill lifts shall extend the full width of the roadbed or fill area. When directed by the project Engineer or Geotechnical Engineer (1) the bottom, sides and top of the rock fill shall be covered with geosynthetic fabric or (2) the voids shall be in filled with finer cohesive or coarse grained materials to prevent migration of finer materials located around the rock fill into the voids, thereby avoiding settlement and/or loss of the finished subgrade profile.

C. PREPARATION OF FOUNDATIONS FOR EMBANKMENTS:

1. GENERAL: Following required clearing and grubbing, the foundation and subgrade for the proposed embankments and fills shall be prepared by scarifying the top six (6) IN layer of existing ground, adjusting the moisture content of the scarified material and compacting the scarified soils in accordance with the project specifications.
2. BENCHING OF FILL INTO EXISTING SLOPES: Slopes that are steeper than four horizontal to one vertical (4.0H:1.0V) and to receive embankment and fill materials shall be benched (stepped) to tie the existing and constructed materials. The base of each step shall be cut as nearly horizontal as possible and the face of each step cut no steeper than 1.0H:1.0V to allow fill placed adjacent to the vertical cut to be compacted in its entirety to the degree specified for the project. Benching operations should be performed so as to avoid undermining of any adjacent existing tracks or structures. Steps cut into the slope shall not be allowed to remain unsupported overnight.

EXCAVATION, EMBANKMENT AND OTHER FILLS (COMMON SPECIFICATION)
SECTION 02230

- D. GRADING DURING FREEZING CONDITIONS: With the approval of the Engineer, the Contractor may construct embankment and fill materials during freezing weather. The Contractor shall not place any embankment or fill materials on frozen ground, or use frozen materials for embankment or fill construction fill materials that are placed must be completely compacted before freezing. The placing of fill shall stop if the materials freeze before the required compaction is obtained. Frozen materials must be removed at the Contractor's expense before filling operations resume.
- E. TOPSOIL: Topsoil placed shall be compacted with at least two complete coverages over the area with a multiple wheel, pneumatic-tired roller designed for use in the compaction of earth fills.

END OF SECTION

SECTION 02250

COMPACTION CONTROL AND TESTING

PART 1 - GENERAL

1.1 SUMMARY

- A. Materials testing and inspecting to be performed by a firm chosen by, and contracted with, the City.
- B. Describes how compacted fill shall be constructed and tested for determination of degree of compaction and moisture content. This shall include but is not limited to subgrade, subballast, and concrete. Cast-in-Place Reinforced Concrete testing requirements are contained in Section 03100

PART 2 - PRODUCTS – N/A

PART 3 - EXECUTION

3.1 PLACEMENT AND COMPACTION OF EMBANKMENT

A. LIFT THICKNESS:

- 1. The Contractor shall provide sufficient compaction equipment to properly place and compact the material being used to construct the Embankment. Equipment used for towing shall not be considered as compaction equipment. The material used to construct the Embankment shall be placed in successive horizontal lifts. Each lift shall extend the full width of the Embankment before another lift is started. Each layer shall be adjusted for moisture content, if required, and shall be thoroughly mixed by disking or other means approved by the Engineer. Each lift shall be leveled before compacting and shall be compacted by distributing the travel of the compaction equipment uniformly over the entire length and width of the Embankment.

B. COMPACTION EQUIPMENT:

- 1. Only equipment that is appropriate for the material being constructed shall be used for compaction. During Embankment construction, continuous use of approved compaction equipment is mandatory. If at any time, the Contractor has not furnished sufficient compaction equipment to compact the materials being used to construct the Embankment, then placement of such Embankment materials shall be reduced accordingly. Since the number of pieces of equipment required for compaction depends on the type and quantity of embankment material being placed, the Contractor shall carefully estimate the rate at which embankment material is placed for the construction equipment available to achieve uniform fill compaction.

C. FROZEN MATERIALS:

- 1. Embankment material requiring water for density control shall be placed only when temperature is above freezing. No frozen material shall be placed in Embankments. Sustained periods of freezing that induce frost into the previously placed embankment material or embankment material being placed shall be cause for the suspension of construction of the Embankment.

D. OPERATING HEAVY EQUIPMENT OVER EMBANKMENT:

- 1. When moving over previously compacted Embankments, the Contractor's heavy earth moving equipment shall be operated over the entire area of such Embankment in order to avoid uneven compaction of such Embankment.

E. DEFINITIONS AND TERMS:

- 1. Compaction - The process of mechanically stabilizing a material by increasing its density within a range of acceptable moisture contents. "Degree of Compaction" is expressed as a percent of maximum density obtained by the test procedure described in ASTM D 1557, Test Method for Determining Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 Kn-m/m³)).

COMPACTION CONTROL AND TESTING
SECTION 02250

2. Density in place. Field testing to determine the density and degree of compaction of fill in place shall be determined in accordance with ASTM D-2922, Density of Soils and Soil- Aggregate in Place by Nuclear Methods; or other methods approved by the Engineer and/or Soils Engineer.

3.2 DENSITY REQUIREMENTS

A. EXCAVATION

1. SCARIFYING SUBGRADE: In cut sections, the Contractor shall scarify the top six (6) IN of material below the top of existing ground, after cut has been completed, adjust moisture content, and compact such scarified material to not less than ninety-five (95) percent of maximum density.
2. EXCAVATION IN ROCK CUT AREAS: In cut sections where the material to be excavated is in rock or solid rock the Contractor shall excavate twelve (12) IN below the finished subgrade elevation as shown on the Drawings and shall replace such excavation with embankment material approved by the Engineer. Finished subgrade level is defined as the bottom-of-subballast level. This twelve (12) IN shall be compacted to not less than ninety- five (95) percent of the maximum dry density (ASTM D-1557).

B. EMBANKMENT

1. SCARIFYING, ADJUSTING MOISTURE CONTENT AND COMPACTION:
 - a. After the required clearing, the resultant subgrade for embankments shall be prepared by scarifying the top six (6) IN layer of existing ground, adjusting the moisture content of the scarified materials if required to comply with the project moisture content specifications, and compacting the scarified materials to not less than ninety-five (95) percent of maximum density (ASTM D-1557).
 - b. LESS THAN THREE FOOT OF FILL: The embankments which are to be three (3) FT or less in height shall be compacted for their full depth to a density not less than that equal to ninety-five (95) percent of the soils maximum dry density.
 - c. MORE THAN THREE FEET OF FILL: Fills having heights greater than 3 FT shall have the upper 3 FT compacted as stated immediately above with the fill constructed at depths more than 3 FT below finished grade uniformly compacted to a density equal to not less than ninety (90) percent of the soils maximum dry density, or as otherwise specified by the Engineer or Soils Engineer for the project.
 - d. Soil compaction and moisture content shall be “determined” with a nuclear density meter in accordance with ASTM D 2992, or other method approved by the Soils Engineer. Soil compaction shall be computed using ASTM D-1557, or another method approved by the Soils Engineer.

C. BRIDGES AND CULVERTS:

1. When back-filling at the culverts, the Contractor shall be required to attain 100% of maximum density, by modified proctor (ASTM D-1557), within 20 FT of the culvert.
2. When back-filling at bridges, the Contractor shall be required to attain 100% of maximum density, by modified proctor (ASTM D-1557), within 100 FT of the bridge abutment.

3.3 MOISTURE AND DENSITY CONTROL:

- A. Unless otherwise shown on the Drawings, or designated by the Engineer, embankment and those portions of cut sections which are not in rock or solid rock shall be constructed with moisture and density control. Unless otherwise directed by the Engineer, the moisture content of the soil at the time of compaction shall be at the optimum moisture content or within zero and six (6) percentage points above the soils optimum moisture content as determined by ASTM D-1557. Locations and the frequency of tests will be determined by the Engineer. Moisture content for sand and gravel materials should be near the optimum moisture content to facilitate compaction of these cohesionless materials.
- B. The application of water to embankment or borrow materials shall be done with sprinkling equipment consisting of tank trucks, pressure distributors, or other equipment designed to apply water uniformly

COMPACTION CONTROL AND TESTING
SECTION 02250

and in controlled quantities and at variable widths. Mobile sprinkling equipment shall have adequate tractive power and shall be equipped with controls operated from the driver's seat to control the rate of water flow. The Contractor shall be required to furnish sufficient water equipment to ensure proper moisture content of all materials. Watering of embankments shall be done in such a manner that pools of water will not develop. Watering and fill placement operations shall be performed in such a manner that the compacted materials have a uniform moisture content that complies with the Engineer and Soils Engineers moisture requirements for the project.

3.4 MINIMUM FREQUENCY OF TESTING:

- A. For density control of embankment, culvert and bridge backfill, subballast, road base, and hot mix asphalt pavements, a sufficient number of tests should be taken to ensure that the specified results are obtained. The frequency of testing will vary with the project, the placement operation, and the material being used. For a project where compaction is relatively easy to obtain, the material is reasonably uniform and the compacting methods are consistent, a minimum number of tests are needed for acceptance. The minimum frequency of test needed under the relatively ideal conditions follow. Most operations will require more tests for proper control. Each lift must meet compaction requirement prior to placing a succeeding lift of material.

Material	Test Type	Frequency
Embankment	Moisture and Density	1 test per 2000 SY on each lift but no greater than 500' spacing on each lift for narrow grading operations
Culvert, Bridge and Other Structural Backfill	Moisture and Density	1 test per 200 CY of material with a <u>minimum</u> of 2 tests per culvert (1 test in pipe bedding material and 1 test in backfill material)
Subballast	Moisture and Density	1 test per 1000 SY on each lift but no greater than 500' spacing on each lift for narrow grading operations
Road Base	Moisture and Density	1 test per 1000 SY on each lift but no greater than 500' spacing on each lift for narrow grading operations
Hot Mix Asphalt Pavements	Density	1 test per 2000 SY on each lift but no greater than 1000' spacing on each lift for narrow grading operations

END OF SECTION

SECTION 02260
FINISH GRADING

PART 1 - GENERAL

1.1 SUMMARY

- A. Surveying and staking to be performed by a firm chosen by, and contracted with, the City.
- B. The Roadbed shall be finished to the lines and grades shown on the Drawings and as staked. Finished Roadbeds shall be protected from damage from all causes by the Contractor until accepted by the Railroad.

1.2 ALIGNMENT AND GRADE:

- A. The finished Grading and Borrow Areas shall conform to the alignment and grade set forth in the Drawings. The Engineer shall furnish control for line and grade and sufficient information for the Contractor to set the required construction stakes.

1.3 SLOPE STAKES:

- A. Slope stakes will be set in accordance with the typical sections and cross sections on the Drawings. The Engineer shall use his judgment or soil tests to determine the stability of the materials encountered, and if the character of the materials encountered necessitates changing the slopes after an excavation has been completed, the Engineer may require the surveying contractor to reset the slope stakes and to steepen, flatten, or bench the slopes. The reasonable costs of re-setting stakes in this case shall be borne by the Railroad and will be covered in the City's agreement with the Railroad. The Contractor shall maintain and preserve all stakes and other marks established until authorized by the Engineer to remove them. If the Contractor removes or destroys such stakes or marks before receiving authorization from the Engineer the replacing of such stakes or marks shall be the Contractor's responsibility.

END OF SECTION

SECTION 02270

SLOPE PROTECTION AND EROSION CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. General information required in connection with slopes and dust control while working on Railroad Right-of-Way. Contractor to also meet requirements of Project Specifications, whichever is more stringent.

PART 2 - PRODUCTS – N/A

PART 3 - EXECUTION

3.1 SLOPES AND PROTECTION OF FINISHED WORK

A. CONSTRUCTION AND PROTECTION

1. The Contractor shall be responsible for developing, implementing and maintaining a Storm Water Pollution Prevention Plan. If permits are included, the Contractor must adhere to all of the conditions set forth in the permit, and the Contractor must keep a copy of the permit and SWPPP onsite at all times. UPRR has provided silt fence and stabilized construction exit details. The Contractor shall use best management practices to ensure that a proper plan is developed and followed. The Contractor shall submit a SWPPP to the Engineer for review and approval 14 days prior to the start of activities impacted by the plan. This plan shall be approved and implemented prior to the start of any grading, and cost shall be incidental to grading unless there are separate bid items. The Contractor shall submit the Notice of Intent for the NPDES permit, as well as the Notice of Termination, unless it is provided by the Railroad. If the permit is provided by the Railroad, a Transfer of Ownership form, if available, shall be completed by the Contractor and the permit shall be transferred to the Contractor. The Contractor shall be responsible for maintaining the SWPPP for the duration of the project. This shall include, but not limited to, re-staking loose hay bales, adjusting and re-staking silt fence, mucking out accumulated silt and other items as necessary to maintain the system.
2. Silt fence is normally the first item constructed, especially on import fill projects. Silt fence may be offset from toe of slopes as directed by the Engineer.
3. All reasonable precautions shall be taken to preserve the character of the material outside of the theoretical slope lines. The slope shall be finished to the lines and grades furnished by the Engineer. All loose materials shall be removed from the slopes and all materials, whether solid or loose, projecting more than one FT outside of the theoretical slope line as staked, shall be removed by the Contractor.
4. The Contractor shall not widen cuts or benches without the prior approval of the Engineer. Widened cut slopes or benches, if approved, must be constructed as follows:
 - a. In such a manner as to be at least as stable as the original cut slopes or benches.
 - b. To provide adequate drainage for the Roadbed.
 - c. In accordance with these Specifications and in the same manner as if such widened cut slopes or benches had been originally contemplated by these Specifications and the Drawings.
5. Care shall be taken to ensure drainage is diverted along or away from the toe of the slope during construction to eliminate water pockets and toe saturation. All operations shall be conducted such that proper drainage shall be provided at all times, especially at the close of work shift or before anticipated rain.

3.2 DUST AND WIND EROSION CONTROL:

- A. As the Work progresses, all finished grades and finished slopes both in excavation and Embankments must be protected from damage by application of water as necessary until the Work has been completed. The Contractor will be required to maintain all excavations, embankments, stockpiles of material sources, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work areas inside or outside of the physical boundaries of the work, free from dust or other materials which would violate federal, state or local air pollution standards or which would cause a hazard or nuisance to people in the vicinity of the Work. Approved temporary methods of dust control, including sprinkling, chemical treatment, light bituminous treatment or similar methods will be permitted. Sprinkling must be repeated at such intervals as to keep all potential sources of dust wet at all times, and the Contractor must provide sufficient sprinkling equipment to comply with this requirement at no expense to the Railroad.
- B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape, and compact to the required density prior to further construction.

END OF SECTION

SECTION 02270.1

TOPSOIL - STOCKPILE AND PLACING

PART 1 - GENERAL

1.1 SUMMARY

- A. Topsoil is the removing from the excavation areas, the hauling and stockpiling, the protecting of the stockpile from the elements, and the hauling and placing of the topsoil, with compaction as required in section 02230, and the redressing of slopes and areas involved.
- B. Roadbed slopes, both in excavation and embankment sections, and any disturbed soils that will not support plant life and/or will cause or allow soil erosion shall be covered with six (6) IN of top soil at the completion of the grading operation or the project.
- C. Areas which have soils which are suitable for use as topsoil, at the completion of the project, shall be cleared of all vegetation, brush, rocks that are larger than 2 (two) IN, and any other debris on the surface, which is part of the Clearing and Grubbing section 02110.
- D. Related work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Special Conditions, Clearing and Grubbing, Earthwork, Seeding and Soil erosion.
 - 2. Testing and quality control requirements will be as indicated in the Earthwork, testing and laboratory services sections.

PART 2 - PRODUCT

2.1 MATERIAL

A. TOPSOIL

- 1. Topsoil consisting of friable, fertile soil of loamy character, containing an amount of organic matter normal to the region, capable of sustaining healthy plant life, and reasonably free from subsoil, roots, heavy or stiff clay, stones larger than 2IN in greatest dimension, noxious weeds, sticks, brush, litter and other deleterious matter.
- 2. Obtain topsoil from sources within the project limits, or provide imported topsoil obtained from sources outside the project limits, or both so.

PART 3 - EXECUTION

3.1 REMOVAL AND STOCKPILING OF TOPSOIL

- A. The top six (6) IN of suitable topsoil, or the soil that complies with the requirements for topsoil to any depth within the template for the excavation area will be removed and stockpiled during construction.
- B. Stockpiles shall be shaped or graded to maintain drainage and protect the topsoil material from being over wetted which will require time to disk, roll and dry back to moisture requirements for compaction of embankment.
- C. After construction, the topsoil will be placed on slopes, trouble areas and ditches as specified by the Engineer.
- D. See Section 02270.75 or the Schedule of rates and prices for seeding, should it be required.
- E. Care shall be taken not to damage any area in the process of moving the topsoil from the stockpile to the final location.
- F. The stockpile shall be wetted to control dust.
- G. The Contractor shall check with the Engineer, the drawing, and the Specifications for the origin, the stockpile location, and the areas which will require topsoil.

END OF SECTION

SECTION 02270.70

SILT FENCE AND STRAW BALES FOR EROSION CONTROL

PART 1 - GENERAL

This work shall consist of installing silt fence and ditch checks for controlling stormwater erosion during construction as shown on the plans or designated by the Engineer.

1.1 SUMMARY

A. DESCRIPTION:

1. This work shall consist of furnishing, placing, and removal of silt fence and ditch checks in accordance with these Specifications at locations shown in the plans or designated by the Engineer.

1.2 MATERIAL REQUIREMENTS:

- A. All filter fabric shall be a pervious sheet of polypropylene, nylon, polyester, or polyethylene yarn in a continuous roll to avoid joints conforming to the requirements below:

Physical Property	Requirements
Filtering Efficiency	75% - 85% (minimum)
Tensile Strength at 20% (maximum) Elongation	Standard Strength - 30 lb/linear IN (minimum) Extra Strength - 50 lb/linear IN (minimum)
Slurry Flow Rate	0.3 gal/sq. ft./min (minimum)

Filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0[^] to 120[^] F. Burlap of 10 ounces per square yard of fabric can also be used. Wire fencing shall be used as backing for reinforcing standard strength filter fabric. The wire fence shall be 14 gauge minimum, 22-48 IN wide, and have a maximum mesh spacing of 6 IN.

- B. Posts for filter fabric shall be 1.00 to 1.33 lb/linear ft. steel and have projections for fastening wire and fabric.
- C. Straw bales for ditch checks shall be either straw or hay tied firmly with a wire or plastic tie and shall be approximately 14 IN - 16 IN (height) x 18 IN x 36 IN in size.
- D. Hold down stakes for straw bales shall be wood approximately 1-1/2 IN x 1-1/2 IN x 36 IN in size. Hold down stakes in shale shall be re-bars of appropriate length. The two re-bars shall be wired together to prevent the bale from floating off stakes.

PART 2 - PRODUCTS – N/A

- A. Only products on the respective State Department of Transportation's Approved Products List will be allowed for use on this project, unless specified elsewhere in these specifications or on the Plans.

PART 3 - EXECUTION

3.1 FILTER FABRIC

- A. Height of silt fence shall not exceed 36 IN.
- B. Posts shall be spaced a maximum of 10 FT apart when using standard strength filter fabric with wire fence backing and spaced a maximum of 6 FT apart when using extra strength filter fabric. Posts shall be driven a minimum of 12 IN into the ground.

SILT FENCE AND STRAW BALES FOR EROSION CONTROL
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- C. A trench shall be excavated approximately 4 IN deep x 4 IN wide along the line of posts and upslope from the barrier.
- D. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1 IN long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2 IN and shall not extend more than 36 IN above the original ground surface.
- E. The standard strength filter fabric shall be stapled or wired to the fence and 8 IN of the fabric shall be extended into the trench. The fabric shall not extend more than 36 IN above the original ground surface.
- F. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric shall be stapled or wired directly to the posts and 8 IN of the fabric shall be extended into the trench. The fabric shall not extend more than 36 IN above the original ground surface.
- G. The trench shall be backfilled and the soil compacted over the filter fabric.
- H. Inspection shall be frequent and repair or replacement shall be made promptly as needed or as directed by Engineer. Silt fences shall be replaced every 6 months and removed when the seeding has been established or as directed by the Engineer.
- I. Sediment deposits shall be removed periodically as directed by Engineer or when depth reaches 1/3 height of silt fence.

3.2 STRAW BALE DITCH CHECKS

- A. Bales shall be placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bales tightly abutting one another.
- B. All bales shall be either wire-bound or plastic tied. Bales shall be installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales.
- C. The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 IN. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill side and shall be built up to 4 IN against the uphill side of the barrier.
- D. Each bale shall be securely anchored by at least two stakes or rebars driven through the bale. The first stake in each bale shall be driven toward the previously laid bale to force the bales together. Stakes or rebars shall be driven deep enough into the ground to securely anchor the bales.
- E. The gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between the bales.
- F. The barrier shall be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment-laden runoff will flow either through or over the barrier but not around it.
- G. Sediment deposits shall be removed after each storm event or when depth reaches 1/3 height of bales to prevent sediments from reaching further downstream via a channel.
- H. Inspection shall be frequent and repair or replacement shall be made promptly as needed or as directed by Engineer. Bales should be replaced every 3 months and removed when the seeding has been established or as directed by the Engineer.

END OF SECTION

SECTION 02270.75

SEEDING

PART 1 - GENERAL

This work shall consist of the preparing and seeding of disturbed areas of roadbed slopes, ditch bottoms, and areas designated by the Engineer. The areas involved will be comprised of cut and fill slopes and other areas disturbed by the construction, exclusive of rock slopes.

1.1 SUMMARY

A. DESCRIPTION:

1. This work shall consist of furnishing and placing seed, fertilizer and mulch in accordance with these Specifications at locations shown in the plans or designated by the Engineer.
2. Rates of application and seed mixtures shall be as determined by the state D.O.T., area of construction, and approval of the Engineer.

1.2 MATERIAL REQUIREMENTS:

- A. Hydro seeding, fertilizing and mulching shall be in accordance with the City specifications. The Contractor shall coordinate with the City Engineer as to when seeding shall be done. The Contractor shall guarantee seeding for one year and remove silt fence when seeding is established.
- B. Contractor shall be responsible for reseeding to obtain satisfactory germination and growth, even if failure is due to weather. Hydro seeding shall be paid for as a **lump sum** inclusive of tilling, seeding, fertilizing, herbicide application, mulching and erosion protection, and initial watering.

PART 2 - PRODUCTS

2.1 EQUIPMENT – GENERAL

- A. The Contractor shall furnish equipment in satisfactory working condition, and in sufficient quantity to perform the work as specified. The equipment shall be on the project site and approved by the Engineer before work on the corresponding item begins.

PART 3 - EXECUTION

3.1 CONSTRUCTION METHODS

A. NOTICE:

1. The Contractor shall notify the engineer at least 48 HRS in advance of the time he intends to begin work and shall not proceed with such work until permission to do so has been granted by the engineer.

B. WEATHER:

1. Seeding operations shall be performed only during the periods of favorable weather. Seeding shall not be done before or during hot, dry weather except by express permission of the engineer. No work shall be performed during excessively windy weather or when the ground is frozen, excessively wet or untillable.

C. BED PREPARATION:

1. Not more than 5 days prior to the sowing of the seed, the seedbed shall be prepared by loosening the soil to a depth of not less than two IN by disking, harrowing, raking or by other approved means. Repeated disking, harrowing or similar means may be required to provide a satisfactory seedbed. Disking, harrowing and raking shall be longitudinal on all slopes. If needed, the seedbed shall be compacted.

SEEDING
SECTION 02270.75

D. WEEDING:

1. Existing weed stubble and small weeds shall be cut and partially incorporated into the soil during the seedbed preparation work. All other growth of vegetation that interface with seeding operations shall be removed.

E. PRESERVING PLANTS:

1. Extreme care shall be exercised to avoid injury to trees and shrubs that have been designated by the Engineer to be preserved.

F. FERTILIZER:

1. Shall be uniformly applied to all areas requiring seeding.

3.2 PLANTING METHODS

A. GENERAL:

1. All seed shall be sown at the specified rate. When several species are specified and cannot be combined due to different characters such as size, weight, hulled, the seed shall be planted separately to obtain the specified seeding rates. Equipment shall not be operated on areas where rutting or slippage would mar the soil surface.

B. METHODS

1. GRASS DRILL SEEDING METHOD:

The seed shall be planted with a grass seed drill conforming to section 2.1.a. All drilling shall conform to the counter of area.

2. HAND BROADCASTING METHOD:

Hand broadcasting shall not be used except in areas that are too small or inaccessible to accommodate the specified equipment.

3. CORRUGATED ROLLER SEEDER METHOD:

The seed shall be distributed to conform to section 2.1.c. which has been adjusted to accurately apply the proper amount.

4. HYDRAULIC AND HYDRO-SEEDER METHODS:

The seeding shall consist of mixing and applying seed, commercial fertilizer and stabilizing emulsion, or any combination thereof, with fiber and water. The materials and quantities thereof to be mixed with water will be specified in the special provisions. The quantity of water shall be as needed for the application. Except that when stabilizing emulsion is specified, the ratio of total water to total stabilizing emulsion in the mixture shall be as recommended by the manufacturer of the emulsion, but shall not exceed 6 gallons of water for each 5 pounds of stabilizing emulsion solids specified. Tanks shall be of a size that is appropriate to the size of the seeding area.

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3.3 METHODS OF MULCHING:

- A. The Contractor shall apply the protective mulch within 48 HRS after sowing the seed, unless otherwise directed by the engineer. The mulch shall be applied with mulch blowing machine or other approved methods.
- B. Immediately following the spreading of the mulch on the seeding areas, the material shall be anchored to the soil by "Cat Walking" with a bulldozer, a V-type wheel land packer, a soil erosion mulch tiller, or other suitable equipment which will secure the mulch firmly to form a soil binding mulch, or by the use of a chemical tackifier.

PART 4 - METHODS

4.1 METHOD:

- 1. The method of applying seed, emulsion, tackifier, water, equipment, and all things required in seeding shall be considered as included in the price for seeding. If the method of seeding is not stated in the bid item, it should be stated in your return bid item

END OF SECTION.

SEEDING
SECTION 02270.75

SECTION 02434

CULVERTS

CORRUGATED ALUMINUM ALLOY PIPE (CAAP), CORRUGATED STEEL/METAL PIPE (CSP/CMP) AND CORRUGATED STRUCTURAL PLATE PIPE (CPP).

PART 5 - GENERAL

5.1 SUMMARY

A. DESCRIPTION:

1. These Pipe Culvert Specifications cover the assembly and installation of (a) corrugated steel/metal pipes, (CSP/CMP), (b) corrugated structural plate pipe (CPP), and (c) corrugated aluminum alloy pipe (CAAP), or the extension of such pipes each hereinafter referred to as "pipe culverts." Pipe culverts shall be assembled and installed in accordance with these Specifications and Chapter 1, Part 4 of the current AREMA Specifications for Culvert installation and these Special Provisions. The most restrictive provisions shall govern when there are differences in the requirements.

B. RELATED WORK:

1. Documents affecting work of this section include, but are not necessarily limited to, the General Requirements, Section 01000 - Division I, General and the Special Conditions.

PART 6 - PRODUCTS

6.1 PIPE CULVERT MATERIAL

- A. All pipe culverts will be furnished with annular corrugations. The exposed ends of all corrugated pipes shall be square. Pipe culvert material, if any, furnished by the Contractor, must meet the standards for Class 1 pipe culverts set forth in Chapter 1, Part 4 of the current AREMA Specifications or as required and approved by the Engineer. 3-IN x 1-IN annular corrugations shall be used for all CSP/CMP pipes with 36IN diameters and larger, 2-2/3-IN x 1/2-IN or 3-IN x 1-IN annular corrugations shall be used for 30-IN diameter CSP/CMP pipes. 3-IN x 1-IN annular corrugations shall be used for all CAAP pipes. 6-IN x 2-IN annular corrugations and a Minimum of 4 bolts per FT for all SPP pipes. Bolts and nuts shall be per the current AREMA Specifications, Chapter 1, Part 4. Minimum gage requirements are specified in UPRR Engineering Culvert Pipe Standards or as shown in the plans. All CSP/CMP culverts subject to railroad loading shall be Aluminized Type II coated and double-riveted. Any deviations of these Specifications are to be submitted to the Engineer for approval prior to starting construction.
- B. All flared end sections furnished by the Contractor must meet the standards for pipe culverts set forth in Chapter 1, Part 4 of the current AREMA Specifications. Flared end sections shall match the annular corrugations and gage of the adjacent pipe culvert. Any deviations of these Specifications are to be submitted to the Engineer for approval prior to starting construction.

PART 7 - EXECUTION

7.1 HANDLING OF PIPE CULVERT MATERIAL

- A. The Contractor shall handle pipe culverts and the pipe culvert material carefully in order to prevent damage, including, but not limited to, distortion of the pipes, and injury to bituminous and other pipe culvert coatings. Pipe culverts shall never be dragged over the ground, but shall be handled with skids, rolling slings, or cranes. The Contractor shall promptly repair, to the satisfaction of the Engineer, any damage to the pipe culvert or pipe culvert material. In the event such damaged pipe culverts or pipe culvert material cannot be repaired to the satisfaction of the Engineer, replacement pipe culverts or pipe culvert material must be provided by the Contractor at his expense.

7.2 EXCAVATION AND LOCATION

- A. Preparation for the culvert bedding shall be included in the culvert installation or extension cost and shall include all necessary clearing and grading necessary to place the bedding material, as well as placement and compaction of aggregate base bedding. The Contractor may use cement-stabilized sand, with a mix ratio of 1-1/2 sacks per Cubic Yard, for the culvert bedding. Any ditching required, unless there is a bid item for ditching, shall be incidental to the culvert installation. Culvert bedding preparation is included in the cost per FT and will not be classified as subexcavation.
- B. If any shoring is required for culvert work, it shall be incidental to the service item. Shoring plans must conform to the General Shoring Requirements (dwg.# 710000), and must be stamped by a P.E. in the state where the work is to be performed. The shoring plan is to be submitted to the City with additional copies for UPRR Bridge and Structures Dept. for review and approval.
- C. Pipe culverts shall be placed at the location, elevation and alignment shown on the Drawings.
- D. Contractor shall verify the condition of existing culverts to be extended prior to ordering the culvert extension. Ordering of additional culvert and removal of damaged portion of existing culvert shall be as directed by the Engineer and agreed upon by the Railroad in advance.
- E. **CULVERT PIPE EXCAVATION AND EMBANKMENT** - The Contractor shall perform all pipe culvert excavation. Prior to pipe culvert excavation, embankment must be constructed to a height no less than two (2) feet above the top of the proposed pipe culvert. When embankment is placed, alternate methods may be used if approved by the Engineer. Pipe culvert excavations shall be wide enough to permit thorough compaction of the backfill under and around the pipe culvert as required by paragraph "laying of culvert pipe" page 4. The base width of the pipe culvert excavation shall not exceed the external width of the pipe culvert plus:
1. 12 IN on each side for pipes less than 48 IN in diameter.
 2. 18 IN on each side for pipes 54-78 IN in diameter.
 3. 24 IN on each side for pipes 84 IN in diameter or larger.
- F. **PROTECTION OF FOUNDATION AND BEDDING.** Unless soft soil is encountered in which case "Soft Soil Condition" Page 3 shall govern. Pipe culvert excavation shall be deep enough to permit compliance with the foundation and bedding requirements for pipe culverts. Care shall be taken to insure drainage is diverted away from the pipe bed during preparation. Any damage to or deterioration of pipe bedding prior to installation shall be repaired by the Contractor at no expense to the Railroad.
- G. The Contractor shall comply with all current and applicable Federal, State, local rules, and regulations governing the safety of men and materials during pipe culvert excavation, installation and backfilling operations including Railroad safety requirements. The Contractor shall observe requirements of the Occupational Safety and Health Administration relating to excavations, trenching and shoring as set forth in Title 29, Part 1926, Subpart Paragraph P, Sections 1926.650 through 1926.653, Code of Federal Regulations, and any subsequent revisions.

7.3 FOUNDATION, BEDDING, AND COMPACTION

- A. Pipe culverts shall be placed at the flowline grade and elevation established by the Engineer on a uniform bed of stable earth or granular material such as gravel or sand, and such bedding shall be compacted to not less than ninety five (95) percent of maximum density determined by ASTM D 1557 with moisture content adjusted. The compacted bed shall contain the camber required by the Engineer or as covered by these Specifications, Para. 3.4 Camber. The compacted bed shall also be shaped to fit the bottom one-third (1/3) of round pipe culvert or shaped to fit the entire bottom of pipe arch culvert. Where the granular material is used for bedding, the ends of the pipe culvert in embankment shall be sealed to prevent leaking and infiltration of water along the pipe culvert. Such sealing can often be accomplished by blanketing the ends of the pipe culvert embankment with well tamped clay. In all cases, ends of pipe culverts shall be protected by riprap as outlined in the UPRR Engineering Culvert Pipe Standards.
- B. **SOFT SOIL CONDITIONS.** Where the flowline grade crosses soft areas of soil which will not provide a suitable uniform foundation for the pipe culvert bed, the Contractor shall excavate eighteen (18) IN below the flowline grade for a width equal twice the outside width of the pipe culvert. Prior to backfilling, the Engineer shall inspect the excavation and the Contractor shall perform any additional excavation beneath eighteen

C. Eighteen (18) IN of the flowline grade which may be required by the Engineer; provided, however, that the expense of any such additional excavation beneath eighteen (18) IN of the flowline grade shall be considered extra work. Upon completion of the excavation, the Contractor will backfill such excavation with granular material which shall be compacted and formed as described above.

D. ROCK:

1. When the flowline grade passes over rock, the Contractor shall excavate such rock to a depth which is at least (12) IN below the flowline grade. Excavations in rock shall maintain sufficient area so that the pipe culvert will not rest on rock at any point. The Contractor will backfill excavation in rock with granular material which shall be formed as described above.

7.4 CAMBER

A. Camber shall be placed in all culverts where it is anticipated that the culvert will settle as the result of high embankment construction or compressible foundation soils below the culvert bedding. Unless otherwise specified by the Engineer, all culverts shall be cambered in accordance with the following:

1. In no case shall the culvert be cambered so high in the center that water will be pocketed at the inlet end of the pipe.
2. Culverts resting on rock foundation need not be Cambered. Refer to Paragraph 3.3 C ROCK.
3. Embankments up to 8 feet high (measured base of rail to flowline) require a 1-1/2 IN camber:
 - a. Embankments 8 feet to 12 feet high require a 2 - 1/2 IN camber.
 - b. Embankments 12 feet to 24 feet high require a 4-IN camber.
 - c. Embankments 24 feet to 36 feet high require a 6-in. camber.

B. The above camber standards, based on the height of embankments, may be adjusted in the field, where at the discretion of the Engineer a greater or lesser amount of camber should be built into pipe to adjust for soil conditions encountered at the site. For fills higher than 36 FT, the Chief Engineer will provide the camber requirements.

7.5 RIPRAP PROTECTION

A. Both the inlet and outlet ends of all culverts shall be protected by riprap, packaged riprap, concrete headwall, or as shown on the Drawings. The bottom and sides of channel in front of 48 IN and smaller pipes shall have riprap no less than 12 IN thick extending 48 IN from the end of the pipe. For culverts larger than 48 IN in diameter, the riprap shall be at least 18 IN thick on the bottom of the channel and shall extend one pipe diameter from the end of the pipe. The embankment face shall also have a layer of riprap 12 IN thick. This layer shall extend above the pipe diameter and two diameters on each side of the pipe. Packaged riprap shall be installed per detail on E.S. Drawing 104461, or as shown on the Plan.

7.6 INSTALLATION

A. ASSEMBLY OF CULVERT PIPE:

1. Pipe culverts will generally be joined using two (2) FT wide corrugated metal connecting bands. The inside of corrugated connecting bands and the outside of pipe culverts to be joined by corrugated connecting bands shall be kept clean and free of all dirt or gravel to ensure that the corrugations on the connecting bands and the pipe culvert fit snugly as the connecting bands are tightened. They should be tapped with a mallet or hard rubber hammer to ensure a tight joint. Connecting bands for 48 IN or less coated culvert pipe shall be two (2) FT wide, two pieced type, connecting bands and the outside surface of the culvert pipe under the connecting band often need be lubricated with fuel oil or similar solvent to allow the connecting bands to be drawn firmly into place.
2. Corrugated structural plate pipe shall be assembled in accordance with the manufacturer's detailed assembly instructions. Bolts shall be tightened progressively uniformly, starting at one end of the corrugated structural plate pipe after all plates are in place. Tightening shall be repeated to ensure all bolts are tight.

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3. When a power wrench is used for tightening bolts, the Contractor shall check the tightening of the bolts with one handled structural or socket type torque wrench. Bolts shall be torqued uniformly to a minimum of 100 FT. lb. and a maximum of 300 FT. lb. or as specified in the manufacturer's detailed assembly instructions.
4. Where field cutting of culvert pipes is required, the Contractor shall make saw cuts. Torch burning will not be permitted.
5. Extensions of existing pipe culvert shall use a concrete extension collar at the joint between the existing culvert and proposed culvert extension as shown in the plans.

B. LAYING CULVERT PIPE:

1. Each pipe culvert shall be laid true to the flowline grade. The minimum gradient for any pipe culvert shall be 0.5 percent unless indicated otherwise on the Plans, or as directed by the Engineer. If two or more pipe culverts are to be laid parallel to each other, such parallel pipe culverts shall be spaced to permit thorough compaction of the backfill as required by Para. 3.7. Parallel culverts shall be spaced to permit thorough compaction of the backfill as required by Para. 3.7. Parallel culverts shall be separate by a distance of at least one-half (1/2) of the nominal diameter of the pipe culverts or one-third (1/3) the span width of pipe arch culverts but not less than twelve (12) IN, nor does it in any case need to exceed 48 IN. Riveted corrugated metal pipe culverts must be placed with the inside circumferential laps pointing downstream. The Contractor shall cover exposed metal on the surface of any bituminous coated pipe culvert before backfilling is commenced. Such exposed metal must be covered with material which is approved by the Engineer and which includes:
 - a. Fiber Bonded Bituminous (composite) coating ASTM A-825 (steel only)
 - b. Polymeric Coating - ASTM A762 or AASHTO M245 (steel only)
 - c. Galvanized - AASHTOM218 or Aluminum (Type 2) - AASHTO M274 (steel only)
 - d. Asphaltic Coating - AASHTO M190 (steel and aluminum) (only 3 and 4 for structural plate pipe)
2. Such material shall be applied to a thickness of approximately one sixteenth (1/16) of an IN.

C. SPECIAL INSTALLATION CONDITIONS:

1. **STRUTTING:**
 - a. All pipe culverts with a nominal diameter of 48 IN or greater shall be provided with a five (5) percent vertical elongation. Field strutting shall be required only on very large structural steel pipes (10 FT or greater). In all cases, strutting may be required if specifically stated in the Request for Bids

7.7 BACKFILLING AND COMPACTION.

- A. Backfill materials shall be placed simultaneously on both sides of the pipe culvert in uniform layers not to exceed six (6) IN in thickness. For multiple pipes, the backfill shall be placed simultaneously in uniform 6 IN layers between and outside of pipes. Each successive layer shall be compacted, in accordance with the Railroad's Specifications 02230 through 02270, and to not less than one hundred (100) percent of maximum density as determined by ASTM D 1557 with moisture content adjusted if necessary, and each (6) IN layer shall be properly compacted before the next layer is placed.
- B. Backfilling shall be started and completed as quickly as possible after the pipe culvert has been assembled and placed on its bed.

- C. Special care must be taken to obtain adequate compaction under the pipe culvert haunches; however, care must be exercised to avoid lifting of the pipe culvert as the result of tamping to compact material under the haunch. Where pipe culvert is placed in a confined area, making it difficult to obtain adequate compaction under the pipe culvert haunches though tamping, special backfill material consisting of fine dry sand shall be used and compacted by vibrating. Vibrating may be accomplished by rodding the special backfill material with a power vibrator or by vibrating from the inside of the pipe culvert with a power vibrator placed in contact with the pipe culvert at intervals along its length on each side. Care must be taken to protect the pipe surface and coating. The special backfill material shall be placed to a depth equal to three-fourths (3/4) of the nominal diameter of the pipe culvert.
- D. All backfilling material placed around and adjacent to pipe culverts to a point at least one FT above the top of the pipe culvert shall consist of sand-gravel material containing less than 15% material passing the No. 200 sieve.
- E. Where granular material is used for backfill, the ends of the pipe culvert embankment shall be sealed with well tamped clay to prevent leaking and infiltration of water along the pipe culvert.
- F. Where compaction may be difficult to obtain due to space constraints or other factors, the Contractor may, with the approval of the Engineer, utilize Controlled Low-Strength Concrete Fill Material (CLSM), commonly called flowable fill, as backfill material to a point one FT above the top of the culvert. Unless specified or shown elsewhere in the plans the CLSM shall meet the requirements for flowable fill contained in the Project Specifications.
- G. PIPE PROTECTION. Materials used to complete the embankment over the pipe culvert should be essentially the same as the material used for the pipe culvert backfill and should be placed and compacted in the same manner as pipe culvert backfill materials are placed. Such material must be used to complete the embankment at least to a height over the top of the pipe culvert equal to the nominal diameter of the pipe culvert, or if the height of the completed embankment over the top of the pipe culvert is less than the nominal diameter of the pipe culvert then such material must be used to complete the embankment. The pipe culvert must be protected from damage during the entire construction period, especially if heavy compaction equipment is used. Heavy construction equipment shall not be operated over the pipe culvert until it has been covered with compacted backfill material to a depth of twenty-four (24) IN.

7.8 RETIGHTENING OF BOLTS

- A. As soon as possible after completion of the embankment over corrugated structural plate pipes, all bolts in the corrugated structural pipe must be retightened to the standards set forth in Para.3.6. Such retightening must be started at one end of the pipe culvert and all bolts must be tightened progressively through the length of the pipe culvert.

7.9 PREPARATION OF EXISTING PIPE CULVERTS

- A. The Contractor shall remove existing headwalls and the ends of damaged culverts that are to be extended. The Contractor shall also verify the culvert size prior to ordering material for the culvert extension. If the existing culvert is damaged, upon approval by the City with concurrence of the Railroad, Contractor to remove and replace damaged portion of the culvert. Additional culvert length, as a result, will be compensated for at the unit price bid. All culverts in the project limits are to be cleaned by the Contractor unless they are to be removed or plugged and filled.
- B. The Contractor shall use Controlled Low-Strength Concrete Fill Material (CLSM), with an unconfined compressive strength of between 50 and 300 PSI, for filling culverts that are to be plugged and filled.
- C. Culverts that are to be removed become the property of the Contractor and must be removed from Railroad property, unless otherwise noted.

END OF SECTION

SECTION 02438
REINFORCED CONCRETE BOX CULVERTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Specifications covers the furnishing of material, construction and curing of, and/or extension of reinforced concrete box culverts, hereinafter referred to as "concrete boxes". Concrete boxes shall be constructed in accordance with this Project Special Provision and the Contract Documents and Chapter 29 Part 3, Damp proofing, of the current American Railway Engineering and Maintenance of Way Association (AREMA) Specifications.

B. RELATED WORK:

Documents affecting the work of this Section include, but are not necessarily limited to Division I, General conditions of these Specifications.

1.2 HANDLING OF CONCRETE BOX MATERIALS:

A. All material used in the construction of concrete boxes shall be handled carefully in a workmanlike manner to avoid damage and/or contamination. Reinforcing steel reduced in section or with bends or kinks not shown on the plans shall not be used.

B. In the event materials are damaged and/or contaminated and cannot be repaired to the satisfaction of the engineer, replacement of such material must be provided by the Contractor at his expense.

PART 2 - PRODUCTS

2.1 MATERIALS

A. CONCRETE BOX MATERIAL:

1. Per Technical Specifications 306.07, Contractor shall have the option of using either precast or cast-in-place reinforced concrete boxes. However, the design intent per the plans, performance and material requirements specified shall be met.
2. Concrete box material shall meet the standards set forth in Chapter 8 Part 16 of the current AREMA Specifications and these Special Provisions. Reinforcing steel shall conform to ASTM A-615, Grade 60. The minimum 28 day compressive strength of concrete shall be 4,000 pounds per square inch (psi). Cast-in-Place Concrete shall meet the requirements of Section 03100 of these Special Provisions.
3. Reinforcing steel, fabricated to shapes and dimensions shown, shall be placed where indicated on the Drawings or where required to carry out the intent of the Plans.
4. Damp-proofing materials shall meet the standards set forth in Chapter 29, Part 3 of the current AREMA MANUAL.
5. Refer to Technical Specifications 204.02.03 and 306.07 for requirements regarding locking manhole lids and water tightness requirements of manhole risers.

PART 3 - EXECUTION

3.1 EXCAVATION AND LOCATION

A. Concrete box culverts and appurtenances shall be placed at the location, elevation and alignment as shown on the Drawings. The Contractor shall preserve all stakes established until authorized by the Engineer to remove them. Additional layout required will be the responsibility of the Contractor and he alone shall be responsible for restoring any points destroyed.

B. The Contractor shall perform all concrete box embankment and excavation. Excavations shall be made wide enough to permit thorough compaction of backfill around the concrete box culverts. Care shall be taken to ensure that methods used in excavation will not reduce the stability of the material adjacent to the excavation.

REINFORCED CONCRETE BOX CULVERTS
SECTION 02438

- C. If soft soil conditions are encountered, Sub-Section 3.2 shall govern. Excavation shall be deep enough to permit compliance with the foundation requirements set forth in Sub- Section 3.3.

3.2 SOFT SOIL CONDITIONS:

- A. For concrete boxes, where the soil encountered will not provide a suitable uniform foundation, the Contractor shall excavate eighteen (18) IN below the foundation grade and at least one (1) FT beyond the horizontal limits of the structure on all sides. The Engineer shall inspect the excavation and the Contractor shall perform any additional excavation required to obtain a stable foundation. The Contractor will backfill these areas with granular material formed as required in 3.6.
- B. PROTECTION OF FOUNDATIONS AND BEDDING: Unless soft soil conditions are encountered, in which case sub-section 3.2 shall govern, concrete box excavation shall be deep enough to permit compliance with the foundation and bedding requirements for the concrete boxes. Care shall be taken to ensure drainage is diverted away from the concrete box bedding during preparation. Any damage or deterioration shall be repaired by the Contractor at no expense to the Railroad.
- C. TRENCHING: The Contractor shall comply with all current applicable Federal, State and local rules and regulations governing the safety of men and materials, during concrete box excavation, installation, and backfilling operations. The Contractor shall comply with all requirements of the Occupational Safety and Health Administration relating to excavations, trenching and shoring as set forth in Title 29, Part 1926, Subpart Sections 1926.650 through 1926.653, Code of Federal Regulations, and any subsequent revisions. The contractor shall also comply with the Railroad's Chief Engineer's instruction bulletin CE 88-005-G Trenching Safety Rules and Shoring Standards. Where there is a conflict between the two standards, the more restrictive will apply.

3.3 FOUNDATION, BEDDING, AND COMPACTION:

- A. Concrete boxes shall be placed at the flowline, with grade and elevation established by the Engineer. The concrete box culverts shall be placed on a uniform bed of stable earth or granular material such as sand or gravel, and such bedding shall be compacted to not less than ninety-five (95) percent of maximum density, and with moisture content at the optimum moisture content or within minus four (4) percentage points of optimum moisture content as determined by ASTM D- 1557 and field density in place test D 1556. The compacted bed shall contain the camber required by the drawings, by the Engineer, or as covered by these Specifications, Sub-Section 3.8-D. The compacted bed shall be shaped to fit the bottom of the box and shall conform to the entire bottom of the box. Where granular material is used for bedding, ends of the concrete box excavation shall be sealed to prevent leaking and infiltration of water along the concrete box. Such sealing can often be accomplished by blanketing the ends of the concrete box embankment with well tamped clay.
- B. Contractor, when removing the concrete footing extension on the bridge, shall backfill and compact bedding material as the concrete is removed to maintain adequate support of the bridge. Contractor shall monitor the bridge for movement as work is performed. Upon any signs of movement, work shall be stopped, the City and Railroad Engineer immediately notified and steps taken to protect the bridge structure from further movement as directed by the City and Railroad's Engineer.

3.4 ROCK:

- A. When the concrete box foundation is resting entirely on rock or other hard foundation material, the foundation shall be freed from all loose material, cleaned and cut to a firm surface. Excavation in rock or other hard material shall be made as near as practicable to the size required to properly construct the concrete box.

3.5 COMPRESSIBLE AND INCOMPRESSIBLE:

- A. Where the material encountered at the foundation grade is found to be partially rock or incompressible material and partially a soil or material that is compressible but otherwise satisfactory for the foundation the incompressible material shall be removed for a depth of six (6) IN below the foundation grade and backfilled with a material similar to the compressible foundation used for the rest of the concrete box.

REINFORCED CONCRETE BOX CULVERTS
SECTION 02438

3.6 CONSTRUCTION:

- A. All work shall be constructed on a reasonably dry foundation material. The Contractor shall, at its expense, perform all bailing, pumping, and draining to protect the area and provide this condition. Should the Contractor's operation damage the foundation, the Contractor shall restore the foundation to its previous condition at the Contractor's expense. All cleanup and removal of temporary facilities shall be the Contractor's responsibility.
- B. Each concrete box shall be constructed true to the following grade. The minimum gradient for any concrete box shall be 0.2 percent, unless shown otherwise on the plans, or as directed by the Engineer. If two or more concrete boxes are to be constructed parallel to each other, such parallel concrete boxes shall be spaced to permit thorough compaction of the backfill as required by sub-section 3.7. Parallel box culverts shall be separated by a distance of at least one-half of the nominal height of the concrete boxes but not less than 48 IN.
- C. Installation including, but not limited to forms, construction joints, curing, manholes and all that is required or incidental to the proper construction of the concrete box culvert shall be done in accordance with Chapter 8 of the AREMA Specifications and City of Sparks Standards as appropriate.

3.7 BACKFILLING AND COMPACTION:

- A. Backfill shall not be placed until the top slab has been in place for at least four (4) days or the concrete has attained at least 85% of its required strength.
- B. Backfill materials shall be placed simultaneously on both sides of the concrete box in uniform layers not exceeding six (6) IN in thickness. For multiple boxes, the backfill shall be placed simultaneously in uniform layers between and outside of the boxes. Each successive layer shall be compacted to not less than ninety-five (95) percent of maximum density as determined by ASTM D1557, with moisture content adjusted, if necessary. Each six (6) IN layer shall be properly compacted before the next layer is placed.
- C. Special care must be taken to obtain adequate compaction along the side walls of the concrete box; however. Where the concrete box is placed in a confined area, making it difficult to obtain adequate compaction along the sides of the concrete box through tamping, special backfill material consisting of fine dry sand shall be used and shall be compacted by vibrating. Compaction shall be accomplished by rodding the special back fill material with a power vibrator. The special backfill material shall be compacted by vibrating the material until compaction can be obtained in a conventional manner.
- D. All backfilling material placed around and adjacent to culverts to a point at least one FT above the top of the pipe culvert shall consist of sand-gravel material containing less than 15% material passing the No. 200 sieve.
- E. Where sand-gravel material is used for backfill, the ends of the concrete box embankment shall be sealed with well tamped clay to prevent leaking and infiltration of water along the concrete box.
- F. Where compaction may be difficult to obtain due to space constraints or other factors, the Contractor may, with the approval of the Engineer, utilize Controlled Low-Strength Concrete Fill Material (CLSM), commonly called flowable fill, as backfill material to a point one FT above the top of the culvert. Unless specified or shown elsewhere in the plans the CLSM shall meet the requirements for flowable fill of the respective Department of Transportation.
- G. **BOX CULVERT PROTECTION:** Materials used to complete the embankment over the concrete box should be essentially the same as the materials used for the concrete box backfill and should be placed and compacted in the same manner as concrete box backfill materials are placed. The concrete box must be protected from damage during the entire construction period, especially if heavy compaction and/or construction equipment is used. Heavy equipment shall not be operated over the concrete box until it has been covered with compacted backfill material to a depth of at least twenty-four (24) IN.

3.8 REMOVAL OF EXISTING HEADWALLS OR CULVERTS IN PREPARATION FOR EXTENSION OF EXISTING CONCRETE BOXES:

- A. The Contractor shall remove that portion of the existing apron, curtain, toe, head or wingwalls, and/or culverts or arches that interferes in whole or in part as shown on the Drawings, or stated in the Specifications, and shall perform all work that is required to extend, adapt, or reconstruct the existing concrete boxes, including required excavation and backfilling. Except as otherwise provided for in this Specification, the Contractor will determine the method of extending existing concrete box structures by consulting with the Engineer.

REINFORCED CONCRETE BOX CULVERTS
SECTION 02438

- B. When extending a structure, dowel bars are to be placed as shown on the drawings for the box or into holes drilled into the face of the existing box at locations to match the horizontal steel of the new concrete box extension. Dowels shall be 18 IN long and set with an epoxy adhesive. A sufficient amount of epoxy should be used to ensure a strong bond between the dowels and dowel holes. Dowel holes shall be drilled and cleaned.
- C. Care shall be taken to prevent uneven settlement at the joint between the existing and the extension. The face of the existing box shall be prepared to ensure a tight bond at the connection.

END OF SECTION

SECTION 02851

SUBBALLAST

PART 1 - GENERAL

1.1 SUMMARY

A. "Subballast": This item shall consist of a foundation course for asphalt surface course or railroad ballast and shall be composed of crushed stone from an approved source, materials and shall be constructed as herein specified in one or more courses in conformity with the typical sections shown on plans and to the lines provided by the Engineer.

PART 2 - PRODUCTS

2.1 MATERIALS

A. REQUIREMENTS:

Materials shall be 100% crushed stone produced from oversize quarried aggregate, sized by crushing and produced from a naturally occurring single source. Aggregate shall have a percentage of wear, by the Los Angeles abrasion test, of not more than 50. A higher or lower percentage of wear may be specified by the Engineer, depending on the material available. 10% max loss freeze/thaw test.

B. GRADATIONS:

It is the intent of this specification, that unless otherwise indicated on the plans, the subballast shall consist of gradations as set forth in the following table:

SIEVE SIZE	2 IN	1 IN	3/8 IN	No. 10	N0. 40	No. 200
% passing (opt.)	100	95	67	38	21	3
% passing (perm.)	100	90-100	50-84	26-50	12-30	0-8

2.2 DESIGN REQUIREMENTS:

A. 12-inches of subballast depth shall be provided as shown in the Contract Documents.

PART 3 - EXECUTION

3.1 CONSTRUCTION METHODS

- A. Preparation of Subgrade. The road bed shall be shaped in conformity with the typical sections shown on plans and to the line and grades provided by the Engineer. All unstable or otherwise objectionable material shall be removed from the subgrade and replaced with approved material. All holes, ruts and depressions shall be filled with approved material and if required, the subgrade shall be properly wetted with water and reshaped and rolled to the extent directed in order to place the subgrade in an acceptable condition to receive the subballast material. Sufficient subgrade shall be prepared in advance to insure satisfactory progression of the work.
- B. If the required compacted depth of the subballast exceeds 6 IN, the subballast shall be constructed in two or more layers of approximate equal thickness. The maximum compacted thickness of any one layer shall not exceed 6 IN and shall be compacted to a density of not less than 95% modified proctor compaction.
- C. If the material is laid and compacted in more than one layer, the Contractor shall plan and coordinate this work in such a manner that the previously placed and compacted layers be allowed ample time for curing and development of sufficient stability before vehicles hauling materials for the succeeding layers, or other heavy equipment are permitted on the subballast. Prior to placing the succeeding layers of material, the top of the under layer shall be sufficiently moist to insure a strong bond between the layers. The edges and/or edge slopes of the subballast shall be bladed or otherwise dressed to conform to the lines and dimensions shown on the plans and present straight, neat, and workmanlike lines and/or slopes as free of loose material as practicable.

END OF SECTION

DIVISION 3 – CONCRETE

SECTION 03100
REINFORCED CONCRETE

PART 1 - GENERAL

1.1 SCOPE

A. This item of work consists of installation of reinforced concrete, in accordance with these Specifications, and in close conformity with the lines, grades and dimensions as shown on the drawings or established by the Engineer.

PART 2 - PRODUCTS

2.1 PRODUCTS

A. Reinforcing Steel.

1. The Contractor shall furnish all reinforcing steel bars fabricated to shapes and dimensions shown on drawings. Contractor shall unload and place reinforcing steel where indicated on drawings or where required to carry out the intent of the drawings or specifications. Before being placed, reinforcing steel shall be thoroughly cleaned of loose or flaky rust, mill scale or coating, including ice, or any other substance that would reduce or destroy the bond.
2. Reinforcing steel reduced in section shall not be used. It shall not be bent or straightened in a manner injurious to the steel. Bars with kinks or bends not shown on plans shall not be placed. The use of heat to bend or straighten reinforcing steel will be permitted only if the entire operation is approved by the Engineer.
3. Splicing of reinforcing steel, if required, will be made of lap splices of a minimum length of 24 bar diameters, not less than twelve (12) IN or as shown in the plans, whichever is greater.
4. All reinforcing steel shall meet the requirements of ASTM Designation A615 for Grade 60 deformed billet steel bars for concrete reinforcement.

2.2 CONCRETE:

- A. Contractor shall furnish and place concrete in accordance with these Specifications and in close conformity with the lines, grades and dimensions as shown on the drawings or established by Engineer.
- B. Concrete material, mixing, transportation, placing and curing shall conform to AREMA Specifications for Concrete and Reinforced Concrete Railroad Bridges and Other Structures.
- a. Compressive strength - 4000 psi at 28 days.
 - b. Water -cement ratio (by weight) does not exceed 0.45.
- C. Concrete must contain 6 sacks of cement per cubic yard of concrete.
- D. Cement shall be Type I or Type III Portland Cement.
1. Pozzolan shall not be allowed except as agreed upon in writing by the Railroad.
- E. Course aggregate shall be size #67.
- F. Fine aggregate shall be natural sand.
- G. Air content shall be between 5% and 7% (by volume).
- H. Admixtures shall not be used without approval by the City's Engineer and Railroad. Admixtures shall not contain chloride ions.
- I. Slump: 2-IN to 3-IN for heavy mass construction and pavements. 2-IN to 5-IN for reinforced foundation walls and footings. 3-IN to 5-IN for reinforced structural members - slabs, columns, beams and walls or as shown in the plans.
- J. Curing: Membrane curing shall be used following recommendations and procedures of AREMA Specifications Chapter 8, Part 1, Sec. P, Art. 4.

PART 3 - EXECUTION

3.1 EXECUTION

- A. Construct forms accurately to dimensions and elevations required and to be strong and unyielding. Construct forms with tight joints to prevent the escape of mortar and to avoid the formation of fins. Brace as required to prevent distortion during concrete placement.
- B. Concrete shall be placed within 1-½ HRS after the cement has been added to the mix. A delivery ticket shall be furnished to the Engineer with the following information: name of concrete firm, serial number of ticket, date, truck number, specific class of concrete, amount of concrete, time loaded, water added and time unloaded, number of drum rotations when mixing began and drum rotations when unloading begins.
- C. Prior to placing concrete, remove water, all debris and foreign material from forms. Check the reinforcing steel for proper placement and correct any discrepancies. Place concrete as soon as possible after leaving mixer, without segregation or loss of ingredients, without splashing forms or steel above, and in layers not over two (2) FT deep.
- D. The vertical drop to final placement shall not exceed four (4) FT. Placement shall conform to the requirements of the before mentioned. Do not place concrete when the ambient temperature is below (40) DegF and falling, without special protection as approved by the Engineer. Any concrete damaged by freezing shall be removed and replaced at no additional cost to the Railroad.
- E. After the initial water has been absorbed, float with wood float and trowel with steel trowel to a smooth finish free from trowel marks. Concrete abutments shall not vary from level or true plane more than 1/8 IN in 10 FT when measured with a straightedge.
- F. Construction joints shall be placed as indicated on the plans or as directed by the Engineer and shall be formed so as not to impair the strength and appearance of the structure.
- G. In joining fresh concrete to concrete that has already set, the work already in place shall have its surface sand or water blasted until well bonded aggregate is exposed. This surface shall be washed and scrubbed with wire brooms and thoroughly drenched with water until saturated. It shall remain saturated until the new concrete is placed. Immediately prior to the placing of the new concrete, all forms shall be drawn tight against the concrete already in place and the old surface shall be thoroughly coated with a water cement paste, scrubbed into the existing concrete surface.
- H. Remove form after concrete has set sufficiently to carry the dead load and construction load it has a sustain and when approved by the Engineer. Remove forms with care to prevent scarring and damaging the surface. As soon as forms are removed, remove fins or projections from surface of exposed areas and rub surface with wood float or burlap sack to provide a uniform surface texture.
- I. Cure formed surfaces with an approved curing compound applied in conformance with the manufacturer's directions as soon as the forms are removed and finishing completed.
- J. The quantity of concrete for which payment will be made shall be computed from the dimensions shown in the plans, or ordered by the Engineer. No deductions shall be made for the volume of concrete displaced by steel reinforcement, floor drains or expansion joint material.

3.2 SAMPLING AND TESTING CONCRETE

- A. Concrete samples shall be obtained in accordance with the requirements of ASTM C 172. Air content, slump, and unit weight shall be checked at least twice during each shift that concrete is placed. Air content shall be determined in accordance with ASTM C 231. Slump shall be measured in accordance with ASTM C 143. Unit weight shall be checked in accordance with ASTM C 138.
- B. Samples for strength testing of each concrete mix shall be taken not less than once each day, nor less than once for each 30 cubic yards of concrete or as shown in Paragraph C. A minimum of three cylinders shall be made from each sample, two shall be tested at 28 days and one shall be tested at 7 days. Compression test specimens shall be made and cured in accordance with ASTM C 31 and tested in accordance with ASTM C 39.

REINFORCED CONCRETE
SECTION 03100

C. For compressive strength control of structural concrete, drilled shafts and pier caps, a sufficient number of tests should be taken to ensure that the specified results are obtained. The minimum frequency of test needed under the relatively ideal conditions follow.

Material	Test Type	Frequency
Structural Concrete	Compressive Strength	1 test per 30.0 CY of material or structural

Five cylinders will be cast at the beginning of concrete placement for each daily concrete pour or for each portion of the structure (connection collar, floor, walls top slab). Compressive strength testing on the cylinders will be as follows:

1. 1 cylinder for a 3-day break.
2. 1 cylinder for a 7-day break.
3. 2 cylinders for a 28-day break.
4. 1 extra cylinder.

D. Any concrete represented by a test which indicates a strength which is less than the specified 28- day strength by more than 500 psi will be subject to rejection and shall be removed and replaced with acceptable concrete as directed by the City's Engineer upon approval by the Railroad at no additional cost to the City. Contractor will repair or replace reinforcing steel damaged by such removal at no additional cost to the City.

END OF SECTION

REINFORCED CONCRETE
SECTION 03100

Appendix A – Agreement between City of Sparks, Nevada and Union Pacific Railroad Corporation

Specific areas of work are conditional to the Union Pacific Railroad Permit that follows this page. Please refer to Special Conditions Section 34: Limitations of Contractor's Operations Affected By Railroad Area for more specific information.

PIPELINE CROSSING AGREEMENT

Mile Post: 246.24, Roseville Subdivision/Branch
Location: Sparks, Washoe County, Nevada

THIS AGREEMENT (“Agreement”) is made and entered into as of August 15, 2016, (“Effective Date”) by and between **UNION PACIFIC RAILROAD COMPANY**, a Delaware corporation, (“Licensor”) and **CITY OF SPARKS**, a Nevada municipal corporation to be addressed at 431 Prater Way, Sparks, Nevada 89431 (“Licensee”).

IT IS MUTUALLY AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

Article 1. LICENSOR GRANTS RIGHT.

In consideration of the license fee to be paid by the Licensee and in further consideration of the covenants and agreements herein contained to be by the Licensee kept, observed and performed, the Licensor hereby grants to the Licensee the right to construct and thereafter, during the term hereof, to maintain and operate

one DBL eight foot wide by eight foot long (8’W x 8’L) Box Culvert pipeline for transporting and conveying storm water only

across Licensor's track(s) and property (the “Pipeline”) in the location shown and in conformity with the dimensions and specifications indicated on the print dated August 12, 2016 and marked **Exhibit A**, attached hereto and hereby made a part hereof, as more particularly described on the Engineering Plans dated April 6, 2016, submitted by Licensee to Licensor. Under no circumstances shall Licensee modify the use of the Pipeline for a purpose other than transporting and conveying storm water, and the Pipeline shall not be used to convey any other substance, any fiber optic cable, or for any other use, whether such use is currently technologically possible, or whether such use may come into existence during the life of this Agreement.

For the purposes of Exhibit A, Licensee acknowledges that if it or its contractor provides to Railroad digital imagery depicting the Pipeline crossing, Licensee authorizes Railroad to use the Digital Imagery in preparing the print attached as an exhibit hereto. Licensee represents and warrants that through a license or otherwise, it has the right to use the Digital Imagery and to permit Railroad to use the Digital Imagery in said manner.

Article 2. LICENSE FEE.

Upon execution of this Agreement, the Licensee shall pay to the Licensor a one-time License Fee of **Seventeen Thousand Eight Hundred Dollars (\$17,800.00)**.

Article 3. CONSTRUCTION, MAINTENANCE AND OPERATION.

The grant of right herein made to the Licensee is subject to each and all of the terms, provisions, conditions, limitations and covenants set forth herein and in **Exhibit B**, attached hereto and hereby made a part hereof.

Article 4. DEFINITION OF LICENSEE.

For purposes of this Agreement, all references in this Agreement to the Licensee shall include the Licensee's contractors, subcontractors, officers, agents and employees, and others acting under its or their authority. If a contractor is hired by the Licensee for any work performed on the Pipeline (including initial construction and subsequent relocation or maintenance and repair work), then the Licensee shall provide a copy of this Agreement to its contractor and require its contractor to comply with all the terms and provisions hereof relating to the work to be performed. Any contractor or subcontractor shall be deemed an agent of Licensee for the purpose of this Agreement, and Licensee shall require such contractor or subcontractor to release, defend and indemnify Licensor to the same extent and under the same terms and conditions as Licensee is required to release, defend and indemnify Licensor herein.

Article 5. INSURANCE.

A. During the life of the License, Licensee shall fully comply with the insurance requirements described in **Exhibit C**.

B. Failure to maintain insurance as required shall entitle, but not require, Licensor to terminate this License immediately.

C. If the Licensee is subject to statute(s) limiting its insurance liability and/or limiting its ability to obtain insurance in compliance with **Exhibit C** of this license, those statutes shall apply.

D. Licensee hereby acknowledges that it has reviewed the requirements of **Exhibit C**, including without limitation the requirement for Railroad Protective Liability Insurance during construction, maintenance, installation, repair or removal of the pipeline which is the subject of this Agreement.

Article 6. TERM.

This Agreement shall take effect as of the Effective Date first herein written and shall continue in full force and effect until terminated as herein provided.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first herein written.

UNION PACIFIC RAILROAD COMPANY

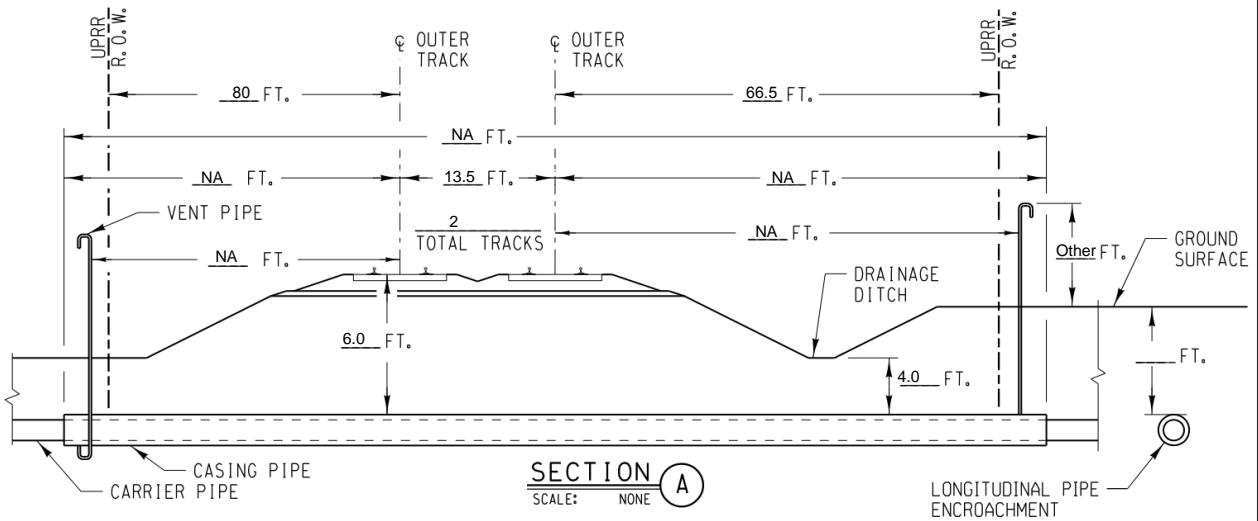
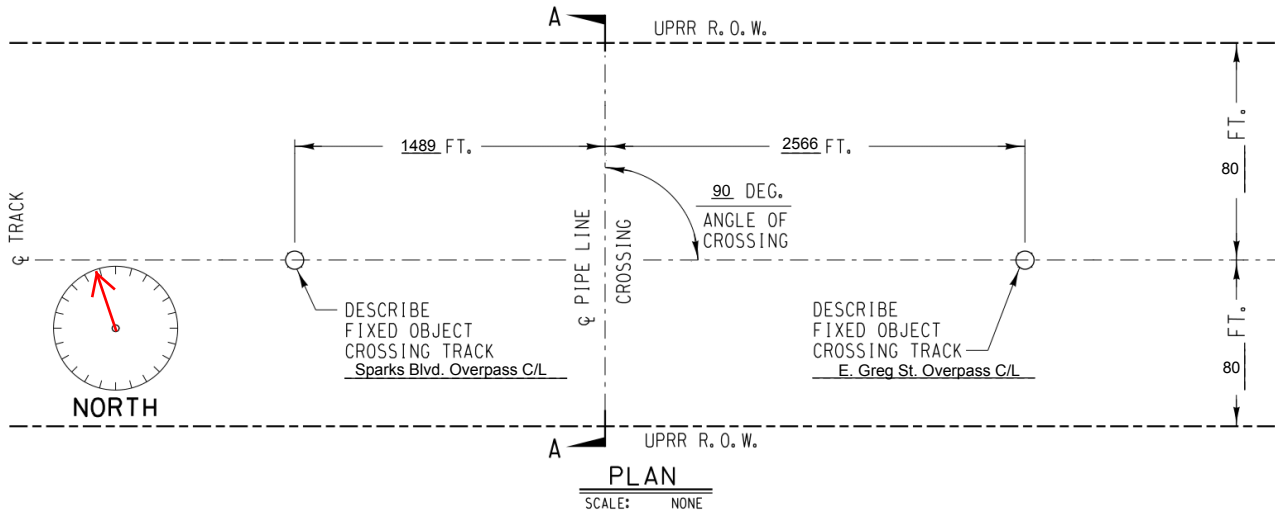
CITY OF SPARKS

By: _____
Sarah J. Brower
Real Estate
Asst. Manager

By: _____
Name Printed: _____
Title: _____

NON-FLAMMABLE LIQUID PIPELINE

- CROSSING
- ENCROACHMENT
- BOTH



- NOTES:
 1) ALL DIMENSIONS MEASURED PERPENDICULAR TO THE CENTERLINE OF TRACK
 2) REFER TO AREMA VOLUME 1. CHAPTER 1. PART 5. SECTION 5.1

- A) METHOD OF INSTALLATION Other
- B) DIST. FROM CENTERLINE OF TRACK TO PIPE ENCROACHMENT _____
- C) SIGNS PROVIDED? At minimum signs will be provided as stated above
- D) CARRIER MATERIAL DBL 8' x 8' Box Culvert. IF RCP, CLASS V? NA.
 COMMODITY TO BE CONVEYED Storm water.
 OPERATIONAL PRESSURE 5.0 PSI. MAOP 5.0 PSI.
 WALL THICKNESS (INCH)/ SCHEDULE 15.0. DIAMETER 216.0 IN.
 CATHODIC/COATING PROTECTION No
- E) CASING MATERIAL NA. IF RCP, CLASS V? NA.
 TOTAL LENGTH CASING PIPE: NA FT.
 WALL THICKNESS NA IN. DIAMETER NA IN.
 CATHODIC/COATING PROTECTION NA
 CASING PIPE IS NA AT THE ENDS.
- F) DISTANCE FROM CENTERLINE OF TRACK TO NEAR FACE OF BORING AND JACKING PITS WHEN MEASURED AT RIGHT ANGLES NA AND NA.



BUILDING AMERICA®

EXHIBIT "A"

SUBDIVISION: <u>Roseville Sub.</u>	
TRACK TYPE: <u>Mainline Track</u>	
M.P.: <u>246.24</u>	LAT.: <u>39.527087790955</u>
E.S.M.: <u>225+75.75</u>	LONG.: <u>-119.7097805142</u>
NEAREST CITY: <u>SPARKS</u>	COUNTY: <u>Washoe</u> STATE: <u>NV</u>
APPLICANT: <u>CITY OF SPARKS</u>	
FILE NO.: <u>0296763</u>	DATE: <u>8/12/2016</u>

EXHIBIT B

Section 1. LIMITATION AND SUBORDINATION OF RIGHTS GRANTED.

- A. The foregoing grant of right is subject and subordinate to the prior and continuing right and obligation of the Licensor to use and maintain its entire property including the right and power of the Licensor to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, signal, communication, fiber optics, or other wirelines, pipelines and other facilities upon, along or across any or all parts of its property, all or any of which may be freely done at any time or times by the Licensor without liability to the Licensee or to any other party for compensation or damages.
- B. The foregoing grant is also subject to all outstanding superior rights (including those in favor of licensees and lessees of the Licensor's property, and others) and the right of the Licensor to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

Section 2. CONSTRUCTION, MAINTENANCE AND OPERATION.

- A. The Pipeline shall be designed, constructed, operated, maintained, repaired, renewed, modified and/or reconstructed by the Licensee in strict conformity with (i) Licensor's current standards and specifications ("UP Specifications"), except for variances approved in advance in writing by the Licensor's Assistant Vice President Engineering – Design, or his authorized representative; (ii) such other additional safety standards as the Licensor, in its sole discretion, elects to require, including, without limitation, American Railway Engineering and Maintenance-of-Way Association ("AREMA") standards and guidelines (collectively, "UP Additional Requirements"), and (iii) all applicable laws, rules and regulations ("Laws"). If there is any conflict between the requirements of any Law and the UP Specifications or the UP Additional Requirements, the most restrictive will apply.
- B. All work performed on property of the Licensor in connection with the design, construction, maintenance, repair, renewal, modification or reconstruction of the Pipeline shall be done to the satisfaction of the Licensor.
- C. Prior to the commencement of any work in connection with the design, construction, maintenance, repair, renewal, modification, relocation, reconstruction or removal of the Pipeline from Licensor's property, the Licensee shall submit to the Licensor plans setting out the method and manner of handling the work, including the shoring and cribbing, if any, required to protect the Licensor's operations, and shall not proceed with the work until such plans have been approved by the Licensor's Assistant Vice President Engineering Design, or his authorized representative, and then the work shall be done to the satisfaction of the Licensor's Assistant Vice President Engineering Design or his authorized representative. The Licensor shall have the right, if it so elects, to provide such support as it may deem necessary for the safety of its track or tracks during the time of construction, maintenance, repair, renewal, modification, relocation, reconstruction or removal of the Pipeline, and, in the event the Licensor provides such support,

the Licensee shall pay to the Licensor, within fifteen (15) days after bills shall have been rendered therefore, all expenses incurred by the Licensor in connection therewith, which expenses shall include all assignable costs.

- D. The Licensee shall keep and maintain the soil over the Pipeline thoroughly compacted and the grade even with the adjacent surface of the ground.
- E. In the prosecution of any work covered by this Agreement, Licensee shall secure any and all necessary permits and shall comply with all applicable federal, state and local laws, regulations and enactments affecting the work including, without limitation, all applicable Federal Railroad Administration regulations.

Section 3. NOTICE OF COMMENCEMENT OF WORK / LICENSOR REPRESENTATIVE / SUPERVISION / FLAGGING / SAFETY.

- A. If an emergency should arise requiring immediate attention, the Licensee shall provide as much notice as practicable to Licensor before commencing any work. In all other situations, the Licensee shall notify the Licensor at least ten (10) days (or such other time as the Licensor may allow) in advance of the commencement of any work upon property of the Licensor in connection with the construction, maintenance, repair, renewal, modification, reconstruction, relocation or removal of the Pipeline. All such work shall be prosecuted diligently to completion. The Licensee will coordinate its initial, and any subsequent work with the following employee of Licensor or his or her duly authorized representative (hereinafter "Licensor Representative" or "Railroad Representative"):

ADAM K. WAGNER
MGR TRACK MNTCE
1 SOUTH PYRAMID WAY
SPARKS, NV 89431
Work Phone: 318 308-2215
Cell Phone: 318 308-2215

SHANNON G. KELLY
MGR SIGNAL MNTCE
1 SOUTH PYRAMID WAY
SPARKS, NV 89431
Work Phone: 775 356-2652
Cell Phone: 509 851-2957
sgkelly@up.com

- B. Licensee, at its own expense, shall adequately police and supervise all work to be performed. The responsibility of Licensee for safe conduct and adequate policing and supervision of work shall not be lessened or otherwise affected by Licensor's approval of plans and specifications involving the work, or by Licensor's collaboration in performance of any work, or by the presence at the work site of a Licensor Representative, or by compliance by Licensee with any requests or recommendations made by the Licensor Representative.
- C. At the request of Licensor, Licensee shall remove from Licensor's property any employee who fails to conform to the instructions of the Licensor Representative in connection with the work on Licensor's property. Licensee shall indemnify Licensor against any claims arising from the removal of any such employee from Licensor's property.
- D. Licensee shall notify the Licensor Representative at least ten (10) working days in advance of proposed performance of any work in which any person or equipment will be within twenty-five (25) feet of any track, or will be near enough to any track that any equipment extension (such as,

but not limited to, a crane boom) will reach to within twenty-five (25) feet of any track. No work of any kind shall be performed, and no person, equipment, machinery, tool(s), material(s), vehicle(s), or thing(s) shall be located, operated, placed, or stored within twenty-five (25) feet of any of Licensor's track(s) at any time, for any reason, unless and until a railroad flagman is provided to watch for trains. Upon receipt of such ten (10) day notice, the Licensor Representative will determine and inform Licensee whether a flagman need be present and whether any special protective or safety measures need to be implemented. If flagging or other special protective or safety measures are performed by Licensor, Licensor will bill Licensee for such expenses incurred by Licensor, unless Licensor and a federal, state or local governmental entity have agreed that Licensor is to bill such expenses to the federal, state or local governmental entity. If Licensor will be sending the bills to Licensee, Licensee shall pay such bills within thirty (30) days of receipt of billing. If Licensor performs any flagging, or other special protective or safety measures are performed by Licensor, Licensee agrees that Licensee is not relieved of any of responsibilities or liabilities set forth in this Agreement.

- E. The rate of pay per hour for each flagman will be the prevailing hourly rate in effect for an eight-hour day for the class of flagmen used during regularly assigned hours and overtime in accordance with Labor Agreements and Schedules in effect at the time the work is performed. In addition to the cost of such labor, a composite charge for vacation, holiday, health and welfare, supplemental sickness, Railroad Retirement and unemployment compensation, supplemental pension, Employees Liability and Property Damage and Administration will be included, computed on actual payroll. The composite charge will be the prevailing composite charge in effect at the time the work is performed. One and one-half times the current hourly rate is paid for overtime, Saturdays and Sundays, and two and one-half times current hourly rate for holidays. Wage rates are subject to change, at any time, by law or by agreement between Licensor and its employees, and may be retroactive as a result of negotiations or a ruling of an authorized governmental agency. Additional charges on labor are also subject to change. If the wage rate or additional charges are changed, Licensee (or the governmental entity, as applicable) shall pay on the basis of the new rates and charges.
- F. Reimbursement to Licensor will be required covering the full eight-hour day during which any flagman is furnished, unless the flagman can be assigned to other railroad work during a portion of such day, in which event reimbursement will not be required for the portion of the day during which the flagman is engaged in other railroad work. Reimbursement will also be required for any day not actually worked by the flagman following the flagman's assignment to work on the project for which Licensor is required to pay the flagman and which could not reasonably be avoided by Licensor by assignment of such flagman to other work, even though Licensee may not be working during such time. When it becomes necessary for Licensor to bulletin and assign an employee to a flagging position in compliance with union collective bargaining agreements, Licensee must provide Licensor a minimum of five (5) days notice prior to the cessation of the need for a flagman. If five (5) days notice of cessation is not given, Licensee will still be required to pay flagging charges for the five (5) day notice period required by union agreement to be given to the employee, even though flagging is not required for that period. An additional ten (10) days notice must then be given to Licensor if flagging services are needed again after such five day cessation notice has been given to Licensor.
- G. Safety of personnel, property, rail operations and the public is of paramount importance in the prosecution of the work performed by Licensee or its contractor. Licensee shall be responsible for initiating, maintaining and supervising all safety, operations and programs in connection with the work. Licensee and its contractor shall at a minimum comply with Licensor's safety standards listed in **Exhibit D**, hereto attached, to ensure uniformity with the safety standards followed by

Licensors own forces. As a part of Licensee's safety responsibilities, Licensee shall notify Licensor if it determines that any of Licensor's safety standards are contrary to good safety practices. Licensee and its contractor shall furnish copies of **Exhibit D** to each of its employees before they enter the job site.

- H. Without limitation of the provisions of paragraph G above, Licensee shall keep the job site free from safety and health hazards and ensure that their employees are competent and adequately trained in all safety and health aspects of the job.
- I. Licensee shall have proper first aid supplies available on the job site so that prompt first aid services may be provided to any person injured on the job site. Prompt notification shall be given to Licensor of any U.S. Occupational Safety and Health Administration reportable injuries. Licensee shall have a non-delegable duty to control its employees while they are on the job site or any other property of Licensor, and to be certain they do not use, be under the influence of, or have in their possession any alcoholic beverage, drug or other substance that may inhibit the safe performance of any work.
- J. If and when requested by Licensor, Licensee shall deliver to Licensor a copy of its safety plan for conducting the work (the "Safety Plan"). Licensor shall have the right, but not the obligation, to require Licensee to correct any deficiencies in the Safety Plan. The terms of this Agreement shall control if there are any inconsistencies between this Agreement and the Safety Plan.

Section 4. LICENSEE TO BEAR ENTIRE EXPENSE.

The Licensee shall bear the entire cost and expense incurred in connection with the design, construction, maintenance, repair and renewal and any and all modification, revision, relocation, removal or reconstruction of the Pipeline, including any and all expense which may be incurred by the Licensor in connection therewith for supervision, inspection, flagging, or otherwise.

Section 5. REINFORCEMENT, RELOCATION OR REMOVAL OF PIPELINE.

- A. The license herein granted is subject to the needs and requirements of the Licensor in the safe and efficient operation of its railroad and in the improvement and use of its property. The Licensee shall, at the sole expense of the Licensee, reinforce or otherwise modify the Pipeline, or move all or any portion of the Pipeline to such new location, or remove the Pipeline from the Licensor's property, as the Licensor may designate, whenever, in the furtherance of its needs and requirements, the Licensor, at its sole election, finds such action necessary or desirable.
- B. All the terms, conditions and stipulations herein expressed with reference to the Pipeline on property of the Licensor in the location hereinbefore described shall, so far as the Pipeline remains on the property, apply to the Pipeline as modified, changed or relocated within the contemplation of this section.

Section 6. NO INTERFERENCE WITH LICENSOR'S OPERATION.

- A. The Pipeline and all parts thereof within and outside of the limits of the property of the Licensor shall be designed, constructed and, at all times, maintained, repaired, renewed and operated in such manner as to cause no interference whatsoever with the constant, continuous and uninterrupted use of the tracks, property and facilities of the Licensor and nothing shall be done or suffered to be done by the Licensee at any time that would in any manner impair the safety thereof.

- B. Explosives or other highly flammable substances shall not be stored on Licensor's property without the prior written approval of Licensor.
- C. No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Licensor's trackage shall be installed or used by Licensee or its contractors without the prior written permission of Licensor.
- D. When not in use, any machinery and materials of Licensee or its contractors shall be kept at least fifty (50) feet from the centerline of Licensor's nearest track.
- E. Operations of Licensor and work performed by Licensor's personnel may cause delays in the work to be performed by Licensee. Licensee accepts this risk and agrees that Licensor shall have no liability to Licensee or any other person or entity for any such delays. Licensee shall coordinate its activities with those of Licensor and third parties so as to avoid interference with railroad operations. The safe operation of Licensor's train movements and other activities by Licensor take precedence over any work to be performed by Licensee.

Section 7. PROTECTION OF FIBER OPTIC CABLE SYSTEMS.

- A. Fiber optic cable systems may be buried on the Licensor's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Licensee shall telephone the Licensor during normal business hours (7:00 a.m. to 9:00 p.m. Central Time, Monday through Friday, except for holidays) at 1-800-336-9193 (also a 24-hour, 7-day number for emergency calls) to determine if fiber optic cable is buried anywhere on the Licensor's premises to be used by the Licensee. If it is, Licensee will telephone the telecommunications company(ies) involved, arrange for a cable locator, make arrangements for relocation or other protection of the fiber optic cable, all at Licensee's expense, and will commence no work on the Licensor's property until all such protection or relocation has been accomplished. Licensee shall indemnify and hold the Licensor harmless from and against all costs, liability and expense whatsoever (including, without limitation, attorneys' fees, court costs and expenses) arising out of or caused in any way by Licensee's failure to comply with the provisions of this paragraph.
- B. IN ADDITION TO OTHER INDEMNITY PROVISIONS IN THIS AGREEMENT, THE LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD THE LICENSOR HARMLESS FROM AND AGAINST ALL COSTS, LIABILITY AND EXPENSE WHATSOEVER (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS AND EXPENSES) CAUSED BY THE NEGLIGENCE OF THE LICENSEE, ITS CONTRACTORS, AGENTS AND/OR EMPLOYEES, RESULTING IN (1) ANY DAMAGE TO OR DESTRUCTION OF ANY TELECOMMUNICATIONS SYSTEM ON LICENSOR'S PROPERTY, AND/OR (2) ANY INJURY TO OR DEATH OF ANY PERSON EMPLOYED BY OR ON BEHALF OF ANY TELECOMMUNICATIONS COMPANY, AND/OR ITS CONTRACTOR, AGENTS AND/OR EMPLOYEES, ON LICENSOR'S PROPERTY, EXCEPT IF SUCH COSTS, LIABILITY OR EXPENSES ARE CAUSED SOLELY BY THE DIRECT ACTIVE NEGLIGENCE OF THE LICENSOR. LICENSEE FURTHER AGREES THAT IT SHALL NOT HAVE OR SEEK RECOURSE AGAINST LICENSOR FOR ANY CLAIM OR CAUSE OF ACTION FOR ALLEGED LOSS OF PROFITS OR REVENUE OR LOSS OF SERVICE OR OTHER CONSEQUENTIAL DAMAGE TO A TELECOMMUNICATION COMPANY USING LICENSOR'S PROPERTY OR A**

CUSTOMER OR USER OF SERVICES OF THE FIBER OPTIC CABLE ON LICENSOR'S PROPERTY.

Section 8. CLAIMS AND LIENS FOR LABOR AND MATERIAL; TAXES.

- A. The Licensee shall fully pay for all materials joined or affixed to and labor performed upon property of the Licensor in connection with the construction, maintenance, repair, renewal, modification or reconstruction of the Pipeline, and shall not permit or suffer any mechanic's or materialman's lien of any kind or nature to be enforced against the property for any work done or materials furnished thereon at the instance or request or on behalf of the Licensee. The Licensee shall indemnify and hold harmless the Licensor against and from any and all liens, claims, demands, costs and expenses of whatsoever nature in any way connected with or growing out of such work done, labor performed, or materials furnished.
- B. The Licensee shall promptly pay or discharge all taxes, charges and assessments levied upon, in respect to, or on account of the Pipeline, to prevent the same from becoming a charge or lien upon property of the Licensor, and so that the taxes, charges and assessments levied upon or in respect to such property shall not be increased because of the location, construction or maintenance of the Pipeline or any improvement, appliance or fixture connected therewith placed upon such property, or on account of the Licensee's interest therein. Where such tax, charge or assessment may not be separately made or assessed to the Licensee but shall be included in the assessment of the property of the Licensor, then the Licensee shall pay to the Licensor an equitable proportion of such taxes determined by the value of the Licensee's property upon property of the Licensor as compared with the entire value of such property.

Section 9. RESTORATION OF LICENSOR'S PROPERTY.

In the event the Licensee in any manner moves or disturbs any of the property of the Licensor in connection with the construction, maintenance, repair, renewal, modification, reconstruction, relocation or removal of the Pipeline, then in that event the Licensee shall, as soon as possible and at Licensee's sole expense, restore such property to the same condition as the same were before such property was moved or disturbed, and the Licensee shall indemnify and hold harmless the Licensor, its officers, agents and employees, against and from any and all liability, loss, damages, claims, demands, costs and expenses of whatsoever nature, including court costs and attorneys' fees, which may result from injury to or death of persons whomsoever, or damage to or loss or destruction of property whatsoever, when such injury, death, damage, loss or destruction grows out of or arises from the moving or disturbance of any other property of the Licensor.

Section 10. INDEMNITY.

- A. As used in this Section, "Licensor" includes other railroad companies using the Licensor's property at or near the location of the Licensee's installation and their officers, agents, and employees; "Loss" includes loss, damage, claims, demands, actions, causes of action, penalties, costs, and expenses of whatsoever nature, including court costs and attorneys' fees, which may result from: (a) injury to or death of persons whomsoever (including the Licensor's officers, agents, and employees, the Licensee's officers, agents, and employees, as well as any other person); and/or (b) damage to or loss or destruction of property whatsoever (including Licensee's property, damage to the roadbed, tracks, equipment, or other property of the Licensor, or property in its care or custody).

B. AS A MAJOR INDUCEMENT AND IN CONSIDERATION OF THE LICENSE AND PERMISSION HEREIN GRANTED, TO THE FULLEST EXTENT PERMITTED BY LAW, THE LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS THE LICENSOR FROM ANY LOSS OF ANY KIND, NATURE OR DESCRIPTION ARISING OUT OF, RESULTING FROM OR RELATED TO (IN WHOLE OR IN PART):

1. THE PROSECUTION OF ANY WORK CONTEMPLATED BY THIS AGREEMENT INCLUDING THE INSTALLATION, CONSTRUCTION, MAINTENANCE, REPAIR, RENEWAL, MODIFICATION, RECONSTRUCTION, RELOCATION, OR REMOVAL OF THE PIPELINE OR ANY PART THEREOF;

2. ANY RIGHTS OR INTERESTS GRANTED PURSUANT TO THIS LICENSE;

3. THE PRESENCE, OPERATION, OR USE OF THE PIPELINE OR CONTENTS ESCAPING THEREFROM;

4. THE ENVIRONMENTAL STATUS OF THE PROPERTY CAUSED BY OR CONTRIBUTED TO BY LICENSEE;

5. ANY ACT OR OMISSION OF LICENSEE OR LICENSEE'S OFFICERS, AGENTS, INVITEES, EMPLOYEES, OR CONTRACTORS OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM, OR ANYONE THEY CONTROL OR EXERCISE CONTROL OVER; OR

6. LICENSEE'S BREACH OF THIS AGREEMENT,

EXCEPT WHERE THE LOSS IS CAUSED BY THE SOLE DIRECT AND ACTIVE NEGLIGENCE OF THE LICENSOR, AS DETERMINED IN A FINAL JUDGMENT BY A COURT OF COMPETENT JURISDICTION, IT BEING THE INTENTION OF THE PARTIES THAT THE ABOVE INDEMNITY WILL OTHERWISE APPLY TO LOSSES CAUSED BY OR ARISING FROM, IN WHOLE OR IN PART, LICENSOR'S NEGLIGENCE.

C. Upon written notice from Licensor, Licensee agrees to assume the defense of any lawsuit of proceeding brought against any indemnitee by any entity, relating to any matter covered by this License for which Licensee has an obligation to assume liability for and/or save and hold harmless any indemnitee. Licensee shall pay all costs incident to such defense, including, but not limited to, reasonable attorney's fees, investigators' fees, litigation and appeal expenses, settlement payments and amounts paid in satisfaction of judgments.

Section 11. REMOVAL OF PIPELINE UPON TERMINATION OF AGREEMENT.

Prior to the termination of this Agreement howsoever, the Licensee shall, at Licensee's sole expense, remove the Pipeline from those portions of the property not occupied by the roadbed and track or tracks of the Licensor and shall restore, to the satisfaction of the Licensor, such portions of such property to as good a condition as they were in at the time of the construction of the Pipeline. If the Licensee fails to do the foregoing, the Licensor may, but is not obligated, to perform such work of removal and restoration at the cost and expense of the Licensee. In the event of the removal by the Licensor of the property of the Licensee and of the restoration of the roadbed and property as herein provided, the Licensor shall in no manner be liable to the Licensee for any damage sustained by the

Licensee for or on account thereof, and such removal and restoration shall in no manner prejudice or impair any right of action for damages, or otherwise, that the Licensor may have against the Licensee.

Section 12. WAIVER OF BREACH.

The waiver by the Licensor of the breach of any condition, covenant or agreement herein contained to be kept, observed and performed by the Licensee shall in no way impair the right of the Licensor to avail itself of any remedy for any subsequent breach thereof.

Section 13. TERMINATION.

- A. If the Licensee does not use the right herein granted or the Pipeline for one (1) year, or if the Licensee continues in default in the performance of any covenant or agreement herein contained for a period of thirty (30) days after written notice from the Licensor to the Licensee specifying such default, the Licensor may, at its option, forthwith immediately terminate this Agreement by written notice.
- B. In addition to the provisions of subparagraph (a) above, this Agreement may be terminated by written notice given by either party hereto to the other on any date in such notice stated, not less, however, than thirty (30) days subsequent to the date upon which such notice shall be given.
- C. Notice of default and notice of termination may be served personally upon the Licensee or by mailing to the last known address of the Licensee. Termination of this Agreement for any reason shall not affect any of the rights or obligations of the parties hereto which may have accrued, or liabilities, accrued or otherwise, which may have arisen prior thereto.

Section 14. AGREEMENT NOT TO BE ASSIGNED.

The Licensee shall not assign this Agreement, in whole or in part, or any rights herein granted, without the written consent of the Licensor, and it is agreed that any transfer or assignment or attempted transfer or assignment of this Agreement or any of the rights herein granted, whether voluntary, by operation of law, or otherwise, without such consent in writing, shall be absolutely void and, at the option of the Licensor, shall terminate this Agreement.

Section 15. SUCCESSORS AND ASSIGNS.

Subject to the provisions of Section 14 hereof, this Agreement shall be binding upon and inure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

Section 16. SEVERABILITY.

Any provision of this Agreement which is determined by a court of competent jurisdiction to be invalid or unenforceable shall be invalid or unenforceable only to the extent of such determination, which shall not invalidate or otherwise render ineffective any other provision of this Agreement.

EXHIBIT C
Union Pacific Railroad Company
Contract Insurance Requirements

Licensee shall, at its sole cost and expense, procure and maintain during the life of this Agreement (except as otherwise provided in this Agreement) the following insurance coverage:

A. Commercial General Liability insurance. Commercial general liability (CGL) with a limit of not less than \$2,000,000 each occurrence and an aggregate limit of not less than \$4,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage).

The policy must also contain the following endorsement, WHICH MUST BE STATED ON THE CERTIFICATE OF INSURANCE: “Contractual Liability Railroads” ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing “Union Pacific Railroad Company Property” as the Designated Job Site.

B. Business Automobile Coverage insurance. Business auto coverage written on ISO form CA 00 01 10 01 (or a substitute form providing equivalent liability coverage) with a limit of not less \$2,000,000 for each accident, and coverage must include liability arising out of any auto (including owned, hired, and non-owned autos).

The policy must contain the following endorsements, WHICH MUST BE STATED ON THE CERTIFICATE OF INSURANCE: “Coverage For Certain Operations In Connection With Railroads” ISO form CA 20 70 10 01 (or a substitute form providing equivalent coverage) showing “Union Pacific Property” as the Designated Job Site.

C. Workers Compensation and Employers Liability insurance. Coverage must include but not be limited to:

Licensee’s statutory liability under the workers' compensation laws of the state(s) affected by this Agreement.

Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 disease policy limit \$500,000 each employee.

If Licensee is self-insured, evidence of state approval and excess workers compensation coverage must be provided. Coverage must include liability arising out of the U. S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable.

D. Railroad Protective Liability insurance. Licensee must maintain “Railroad Protective Liability” insurance written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of Railroad only as named insured, with a limit of not less than \$2,000,000 per occurrence and an aggregate of \$6,000,000.

The definition of “JOB LOCATION” and “WORK” on the declaration page of the policy shall refer to this Agreement and shall describe all WORK or OPERATIONS performed under this agreement

E. Umbrella or Excess insurance. If Licensee utilizes umbrella or excess policies, and these policies must “follow form” and afford no less coverage than the primary policy.

Other Requirements

F. All policy(ies) required above (except worker’s compensation and employers liability) must include Railroad as “Additional Insured” using ISO Additional Insured Endorsements CG 20 26, and CA 20 48 (or substitute forms providing equivalent coverage). The coverage provided to Railroad as additional insured shall, to the extent provided under ISO Additional Insured Endorsement CG 20 26, and CA 20 48 provide coverage for Railroad’s negligence whether sole or partial, active or passive, and shall not be limited by Licensee’s liability under the indemnity provisions of this Agreement.

G. Punitive damages exclusion, if any, must be deleted (and the deletion indicated on the certificate of insurance), unless (a) insurance coverage may not lawfully be obtained for any punitive damages that may arise under this agreement, or (b) all punitive damages are prohibited by all states in which this agreement will be performed.

H. Licensee waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against Railroad and its agents, officers, directors and employees for damages covered by the workers compensation and employers liability or commercial umbrella or excess liability obtained by Licensee required in this agreement, where permitted by law This waiver must be stated on the certificate of insurance.

I. All insurance policies must be written by a reputable insurance company acceptable to Railroad or with a current Best's Insurance Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the work is to be performed.

J. The fact that insurance is obtained by Licensee or by Railroad on behalf of Licensee will not be deemed to release or diminish the liability of Licensee, including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad from Licensee or any third party will not be limited by the amount of the required insurance coverage.

EXHIBIT D
SAFETY STANDARDS

MINIMUM SAFETY REQUIREMENTS

The term "employees" as used herein refer to all employees of Licensee or its contractors, subcontractors, or agents, as well as any subcontractor or agent of any Licensee.

I. Clothing

- A. All employees of Licensee will be suitably dressed to perform their duties safely and in a manner that will not interfere with their vision, hearing, or free use of their hands or feet.

Specifically, Licensee's employees must wear:

- (i) Waist-length shirts with sleeves.
 - (ii) Trousers that cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching.
 - (iii) Footwear that covers their ankles and has a defined heel. Employees working on bridges are required to wear safety-toed footwear that conforms to the American National Standards Institute (ANSI) and FRA footwear requirements.
- B. Employees shall not wear boots (other than work boots), sandals, canvas-type shoes, or other shoes that have thin soles or heels that are higher than normal.
- C. Employees must not wear loose or ragged clothing, neckties, finger rings, or other loose jewelry while operating or working on machinery.

II. Personal Protective Equipment

Licensee shall require its employee to wear personal protective equipment as specified by Railroad rules, regulations, or recommended or requested by the Railroad Representative.

- (i) Hard hat that meets the American National Standard (ANSI) Z89.1 – latest revision. Hard hats should be affixed with Licensee's company logo or name.
- (ii) Eye protection that meets American National Standard (ANSI) for occupational and educational eye and face protection, Z87.1 – latest revision. Additional eye protection must be provided to meet specific job situations such as welding, grinding, etc.
- (iii) Hearing protection, which affords enough attenuation to give protection from noise levels that will be occurring on the job site. Hearing protection, in the form of plugs or muffs, must be worn when employees are within:
 - 100 feet of a locomotive or roadway/work equipment
 - 15 feet of power operated tools
 - 150 feet of jet blowers or pile drivers

- 150 feet of retarders in use (when within 10 feet, employees must wear dual ear protection – plugs and muffs)
- (iv) Other types of personal protective equipment, such as respirators, fall protection equipment, and face shields, must be worn as recommended or requested by the Railroad Representative.

III. On Track Safety

Licensee and its contractor are responsible for compliance with the Federal Railroad Administration's Roadway Worker Protection regulations – 49CFR214, Subpart C and Railroad's On-Track Safety rules. Under 49CFR214, Subpart C, railroad contractors are responsible for the training of their employees on such regulations. In addition to the instructions contained in Roadway Worker Protection regulations, all employees must:

- (i) Maintain a minimum distance of at least twenty-five (25) feet to any track unless the Railroad Representative is present to authorize movements.
- (ii) Wear an orange, reflectorized work wear approved by the Railroad Representative.
- (iii) Participate in a job briefing that will specify the type of On-Track Safety for the type of work being performed. Licensee must take special note of limits of track authority, which tracks may or may not be fouled, and clearing the track. Licensee will also receive special instructions relating to the work zone around machines and minimum distances between machines while working or traveling.

IV. Equipment

- A. It is the responsibility of Licensee to ensure that all equipment is in a safe condition to operate. If, in the opinion of the Railroad Representative, any of Licensee's equipment is unsafe for use, Licensee shall remove such equipment from Railroad's property. In addition, Licensee must ensure that the operators of all equipment are properly trained and competent in the safe operation of the equipment. In addition, operators must be:
 - Familiar and comply with Railroad's rules on lockout/tagout of equipment.
 - Trained in and comply with the applicable operating rules if operating any hy-rail equipment on-track.
 - Trained in and comply with the applicable air brake rules if operating any equipment that moves rail cars or any other rail bound equipment.
- B. All self-propelled equipment must be equipped with a first-aid kit, fire extinguisher, and audible back-up warning device.
- C. Unless otherwise authorized by the Railroad Representative, all equipment must be parked a minimum of twenty-five (25) feet from any track. Before leaving any equipment unattended, the operator must stop the engine and properly secure the equipment against movement.
- D. Cranes must be equipped with three orange cones that will be used to mark the working area of the crane and the minimum clearances to overhead powerlines.

V. General Safety Requirements

- A. Licensee shall ensure that all waste is properly disposed of in accordance with applicable federal and state regulations.
- B. Licensee shall ensure that all employees participate in and comply with a job briefing conducted by the Railroad Representative, if applicable. During this briefing, the Railroad Representative will specify safe work procedures, (including On-Track Safety) and the potential hazards of the job. If any employee has any questions or concerns about the work, the employee must voice them during the job briefing. Additional job briefings will be conducted during the work as conditions, work procedures, or personnel change.
- C. All track work performed by Licensee meets the minimum safety requirements established by the Federal Railroad Administration's Track Safety Standards 49CFR213.
- D. All employees comply with the following safety procedures when working around any railroad track:
 - (i) Always be on the alert for moving equipment. Employees must always expect movement on any track, at any time, in either direction.
 - (ii) Do not step or walk on the top of the rail, frog, switches, guard rails, or other track components.
 - (iii) In passing around the ends of standing cars, engines, roadway machines or work equipment, leave at least 20 feet between yourself and the end of the equipment. Do not go between pieces of equipment of the opening is less than one car length (50 feet).
 - (iv) Avoid walking or standing on a track unless so authorized by the employee in charge.
 - (v) Before stepping over or crossing tracks, look in both directions first.
 - (vi) Do not sit on, lie under, or cross between cars except as required in the performance of your duties and only when track and equipment have been protected against movement.
- E. All employees must comply with all federal and state regulations concerning workplace safety.

**Appendix B –
Minimum Safety Requirements for UPRR
Contractors**

Minimum Safety Requirements for UPRR Contractors

Engineering Addendum

Union Pacific Railroad

Revised 10/26/15

Engineering Safety Requirements

The Union Pacific Railroad is committed to providing the safest workplace possible for, not only our own employees, but also the Contractor personnel. Adherence to these minimum safety requirements, plus additional instructions at the job site, will help to ensure an injury-free project. The railroad employee in charge is authorized to take any actions necessary to prevent injuries to any person, damage to railroad property, disruption of railroad operation, and the safety of the public.

On Track and Off Track Work Equipment

It is the responsibility of the Contractor-In-Charge to ensure that all on track and/or off track work equipment is in a safe condition to operate. There must be a written inspection process regarding daily, weekly and other periodic inspections for work equipment operated on Union Pacific property, including inspections mandated by FRA, AAR, OSHA and/or other government agencies. In addition to the inspection process there must be a written maintenance process that includes timelines regarding resolution of safety sensitive defects. If, in the opinion of the Railroad Representative, any of the Contractor equipment is unsafe for use, the Contractor shall remove such equipment from the railroads property. The Contractor-In-Charge must ensure that there is a written training and qualification process for operators and support personnel regarding operation of such equipment. Written documentation of training and qualification must be carried by Contractor personnel. In addition:

- The operators of all work equipment must be properly trained and competent in the safe operation of the equipment. Operators must be:
 - Familiar and comply with OSHA regulations on lockout/tagout of work equipment.
 - Familiar and comply with FRA Regulation Title 49CFR214 Subpart D dealing with Roadway Maintenance Machine Safety.
 - Trained in and comply with the applicable operating rules if operating any hy-rail equipment on-track.
 - Trained in and comply with the applicable air brake rules if operating any equipment that moves rail cars or any other rail-bound equipment.
- The operators manual, which includes instructions for safe operation, must be kept with each machine.
- All self-propelled equipment is equipped with fire extinguisher and audible back-up warning device.
- Unless otherwise authorized by the Railroad Representative, all unattended equipment is parked a minimum of 25 feet from any track and minimum of 250 feet from any road crossing. Before leaving any equipment unattended, the operator must stop the engine and properly secure the equipment against movement.

- Cranes are equipped with three orange cones that will be used to mark the working area of the boom and load and the minimum clearances to overhead power lines. All overhead lines are considered to be high voltage.
- All moves are well communicated by the Contractor-In-Charge and coordinated with other Contractor workers and the Railroad Representative at the job site. Emergency signals to stop movements may be given by anyone.
- No equipment is moved or coupled into while under any color signal protection of workmen.
- No handbrakes are released on rolling equipment unless authorized by Railroad Representative.
- No derails are applied or removed without Railroad Representative permission.
- The Contractor shall provide its own Hazardous Energy Control (Lock-out/Tag-out) procedures and devices to prevent injury to Railroad and Contractor workers from unexpected energization, start-up, or release of stored power in machines with which they are working.
- The Contractor shall comply with all requirements of the U.S. Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.147 on controlling hazardous energy

Working Around Live Tracks (Red Zones)

Prior to beginning work on live track the Contractor-In-Charge must notify a Railroad representative and a job briefing must be conducted with the Railroad representative. Engineering Department Contractors are governed by FRA Roadway Worker Protection regulations, referenced in 49CFR214, Subpart C, which requires some form of On-Track Safety prior to fouling any track.

Red Zones are defined as that area within an arms length of the track, or any physical position, which places the worker in a life-threatening situation. Any questions that arise related to working in the Red Zone should be directed to the Railroad Representative.

On-Track Safety

The Contractor is responsible for compliance with the Federal Railroad Administrations Roadway Worker Protection regulations (49CFR214, Subpart C) and UPRRs On-Track Safety rules. Under 49CFR214, Subpart C, railroad contractors are responsible for the training and qualifications of their workers on these regulations. Contractor workers must have documentation of their training and qualifications while on the work site. At a minimum, each contractor worker must be trained as a Roadway Worker. Additional training and qualification requirements for the positions of Machine Operator, Lookout or Lone Worker must be met for those contractor workers performing those functions.

In addition to the instructions contained in FRAs Roadway Worker Protection regulations, all contractor workers must:

- Maintain a distance of at least 25 feet to any track unless the railroads EIC is present to authorize movements.

- Wear an orange, reflectorized vest or similar orange, reflectorized workwear approved by the railroad's EIC. (High visibility safety apparel must be worn when working adjacent to a Federal highway.)
- Participate in a job briefing that will specify the type of On-Track Safety for the type of work being performed. Contractors must take special note of limits of track authority, which tracks may or may not be fouled, and clearing the track. They will also receive special instructions relating to the work zone around machines and minimum distances between machines while working and traveling.

Lockout / Tagout Procedures on Maintenance of Way (MoW) Equipment

The Contractor-in-Charge must be aware of and Contractor workers must adhere to applicable State, Federal and Railroad rules and regulations on lockout/tagout.

A. Lockout/Tagout Procedures During Work.

Follow these steps when servicing, maintaining, adjusting, or repairing equipment during the course of work when On-Track Safety has been established:

1. Notify the person in charge and the equipment operators on both sides of your equipment that a lockout/tagout is in progress. Let them know where you are located and in which direction you are working, so they will know whether you are behind them or in front of them.
2. Place 1 orange cone in the center of the track at least 15 feet from each end of your equipment.
Note: Other equipment operators are required to stop when approaching an orange cone and may not proceed until it is removed.
3. Tagout the equipment according to the procedures in Section D.
4. After completing the maintenance or repair, promptly notify the person in charge and all affected personnel that you are discontinuing the lockout/tagout process.
5. Remove the cones and tags.

B. Lockout/Tagout Procedures When Equipment Is Tied Up.

When equipment is tied up on a track, follow these steps to service, maintain, adjust, or repair equipment:

1. Ensure that switches leading to the equipment have been lined against the track the equipment is on.
 - Ensure that switches are spiked, clamped, tagged, and locked to prevent movements onto that track.

- If the switches cannot be locked, or if it is necessary to use part of the track for train or track car movements, you may protect equipment with a derail that is locked in the derailing position 150 feet or as conditions warrant in advance of the equipment.
- 2. Apply your scissors lock, personal padlock, and tag to these switches or derails. Note: The scissors lock allows others working on equipment to place their personal padlocks and tags to ensure their own lockout/tagout protection.
EXCEPTION: When equipment is tied up under the direct supervision of a person in charge:
 - The person in charge may provide protection as long as he or she can prevent any movements onto that track.
 - Before beginning work, the operator or mechanic must inform the person in charge of the operator or mechanic's presence and request permission to work on the equipment.
 - The person in charge must not release the limits or allow movements onto the track until he or she communicates with all affected personnel to make sure they are in the clear.
- 3. Place 1 orange cone on each side of your equipment.
EXCEPTION: If other equipment is within 15 feet, place the orange cones as far in advance of your equipment as possible.
- 4. Tagout the equipment according to the procedures in Section D. Note: If other people are present, conduct a job briefing to discuss the lockout/tagout process being used.
- 5. After completing the maintenance or repair, promptly notify the person in charge and all affected personnel that you are discontinuing the lockout/tagout process.
- 6. Remove the cones, tags, and locks.
- 7. When the last lock is removed, remove the scissors lock.

C. Tagout Procedures Inside Shops

When performing service, maintenance, adjustments, or repair inside a shop, place the MW roadway machine and work equipment in a safe area and secure it according to the general tagout procedures described in Section D.

D. General Tagout Procedures.

Follow these steps to tagout equipment:

1. Apply the equipment's parking brake.
2. Test the brake to make sure it holds the equipment in position. If the brake does not hold, or

if you are not sure it will hold, block the equipment to prevent any unexpected movement.

3. Lower all hydraulic components to the ground or secure them with their locking devices.
4. Mechanically secure all equipment components in a safe condition.
Note: Components must be mechanically locked or blocked to prevent any movement of the equipment or component, which could endanger workers in the area.
5. Shut down the equipment at the operator's controls.
6. Attach a railroad approved "Do Not Operate" tag at the operator's controls for each worker.
7. Remove the key from the ignition switch of engine powered equipment such as welders, light plants, small compressors, etc. If the ignition key does not remove all electrical control sources, or if the equipment does not have an ignition key switch, place the main battery switch in the OPEN position and secure the battery box. Attach a "Do Not Operate" tag. If the equipment does not have a battery disconnect switch, disconnect the battery leads and attach a "Do Not Operate" tag to the battery lead. Place as many tags as necessary to ensure that the equipment will not be started or energized unexpectedly.
8. Remove any sources of stored energy, including:
 - Electrical
 - Mechanical
 - Hydraulic
 - Pneumatic
 - Chemical
 - Thermal
 - Any other sources that may activate a component
9. Follow any special manufacturer procedures to ensure that the equipment is safe for performing maintenance or service.
10. Test the security of the tagout. If the equipment cannot be started and the components cannot be energized, you can start maintenance or service safely.

E. Unsafe Equipment

Place a red tag marked "Unsafe" on equipment that is removed from service and unsafe to use. Sign and date the tag. Only the person who places this tag should remove it.

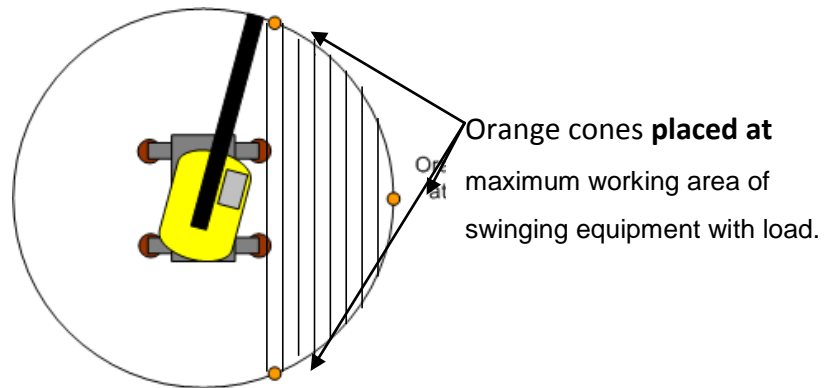
EXCEPTION: If the person who placed the tag cannot be located, the person in charge may remove the tag, but only after a mechanic thoroughly inspects the equipment to ensure it is safe to operate.

Orange Cone Policy

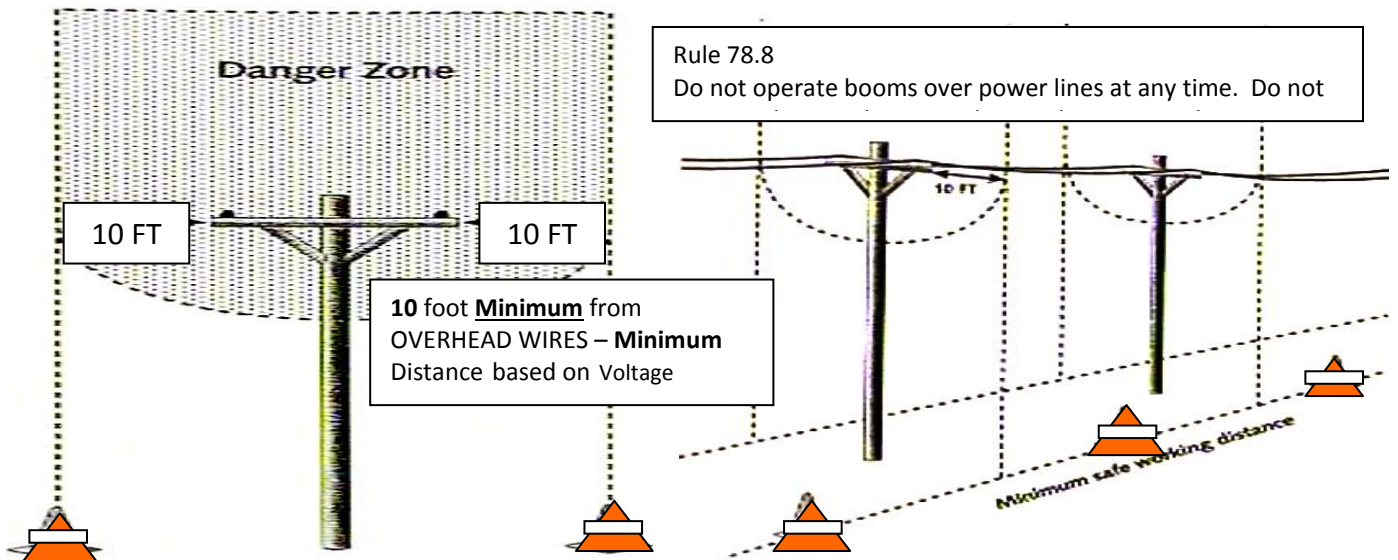
There are five required uses of orange cones in the Engineering Department:

1. **To mark the maximum working area of swinging equipment and its load at a stationary worksite.**

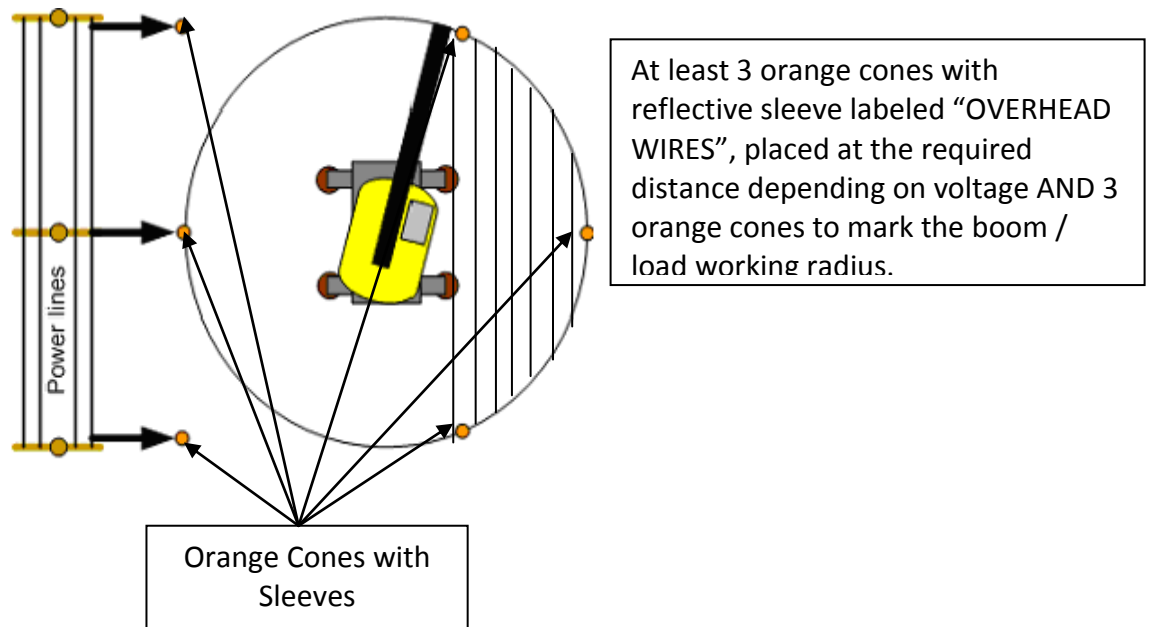
This would include but is not limited to cranes, backhoes, trackhoes and trucks with knuckle, articulated or telescopic booms. The purpose of marking this working area is to remind personnel from inadvertently fouling the working area where material and equipment is being handled. In addition, the cones will also serve as a visual reminder of the working area for the operator. Unless absolutely necessary (e.g. guiding load with a non-conducting tagline) and a job briefing with the operator has been conducted, workers are prohibited from entering this working area while the equipment is in operation. **(Note: This prohibition also applies to non-stationary worksites where cones are not required - i.e. a pick and carry situation or when a piece of equipment works while moving down a track.)**



2. **To mark overhead power lines at stationary worksites and where equipment with the capability to reach within 10 feet of them will be traveling / moving.** Cones used for this purpose must be equipped with a reflective sleeve (PB-21957 "Overhead Wires") that slips over the cones. If these sleeves are unavailable a flagman must be stationed by the cones to warn the operator when the boom approaches the danger zone. Additionally, per rule 78.8, do not operate booms over power lines at any time.



IRES – **Minimum Distance Based**



3. **Isolating a piece of equipment that is being worked on from other M/W equipment.** Chief Engineers Instruction Bulletin 135.3.2 (Lockout/Tagout of M/W Equipment) directs:

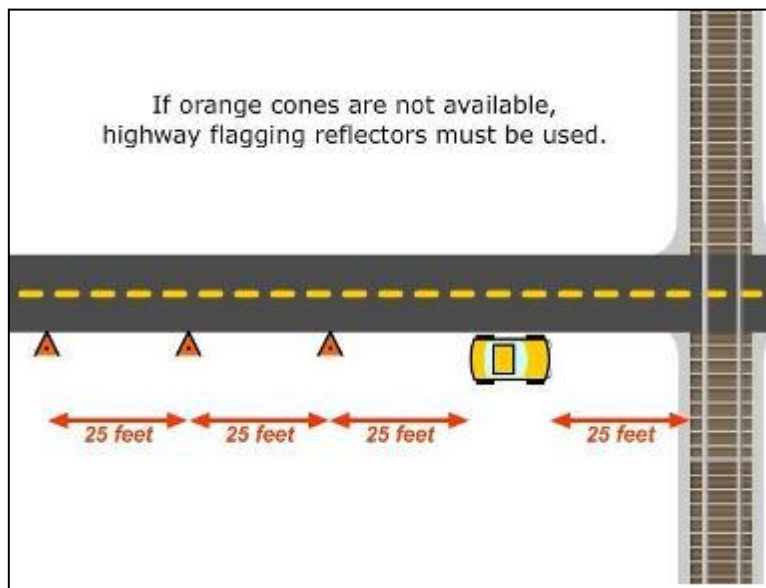
A.2 - Place one orange cone in the center of the track at least 15 feet from each end of the equipment.

Note: Other equipment operators are required to stop when approaching an orange cone and may not proceed until it is removed.



4. **Protecting someone who is responding to an emergency call at a highway road crossing or who is parked foul of the traveled portion of any public road.** Chief Engineers Instruction Bulletin 137.3.3.B.8.C (Emergency Work Zone Traffic Control) states:

Place 3 orange emergency cones (if available) at approximately 25 foot increments behind the parked vehicle below to warn oncoming traffic. If cones are not available, use highway flagging reflectors.



NOTE: In some cases, (because of State or Local requirements) workers may be required to carry and use 7 cones with reflective collars for flagging protection.

Chief Engineers Instruction Bulletin 137.2.3.C.4 & 137.2.3.C.5. *Reminder to remove a track shunt*

4. The EIC places the track shunt and documents the shunt location on the track authority form to serve as an additional reminder to remove the shunt before releasing the protection. In all cases, **place an orange cone alongside the track shunt** as a reminder to remove the track shunt when the work is completed.
5. When the work in the approach is completed, the person in charge removes the track shunt and the orange cone.

Vehicles that must be equipped with orange cones

All Engineering Department vehicles, except passenger sedans, must be equipped with 3 orange cones at all times and used as described in this policy. **NOTE:** Equipment with booms will require 6 cones when working within 10 feet of power lines. Passenger sedans must carry a highway flagging kit to protect workers and vehicle at road crossings and when parked foul of a public road.

For trucks less than 15,000 lbs. GVW and equipment without booms:

Item 380-0675 Cone, Safety, full skirt design, flexible, high visibility fluorescent orange, 18" high with a 6" reflective collar

For trucks greater than 15,000 lbs. GVW and all equipment with booms:

- | | |
|---------------|---|
| Item 380-0652 | Cone, Safety, full skirt design, flexible, high visibility fluorescent orange, 36" high |
| | OR |
| Item 380-0654 | Cone, Traffic Safety 28", with 4" and 6" reflective collars |
| Item PB-21957 | Reflective sleeve that fits over cones and labeled " OVERHEAD WIRES " |

If you have any questions about this policy, please ask your manager, director, or manager of safety.

NOTE: UP Engineering has specific requirements in these following areas, many of which apply to contractors. Ask the UP Contract Manager for the most current copy of these rules. Additional UP rules may also apply to contractor operations with Engineering.

Chief Engineer Bulletins

121.0: Protection For Gangs From Trains On Adjacent Tracks

122.0: Bridge Worker Safety

124.0: Trenching Safety Rules And Shoring Standards

125.0: Outfit Car Protection And Policy

126.0: Protection Of Employees At Road Crossings

128.0: Loading And Unloading Of Prefabricated Panel Turnouts

130.0: Operation Of Ultrasonic Rail Flaw Detectors And Track Evaluation Vehicles

133.0: Requirements For Work On Elevated Surfaces And Structures

135.0: Lockout/Tagout Process For M/W Roadway Machines And Work Equipment

136.0: On-Track Safety

137.0: Working At Or Around Grade Crossings

138.0: Crane Safety

NOTE: The following UP Safety Rules and Chief Engineer Bulletins are attached for reference.

71.2.3, 71.2.4, 71.2.5, 71.2.6, 71.2.7 Hearing Protection (excerpts):

Hearing protection is required within 150 feet of operating roadway or work equipment, jet blowers, or pile drivers.

Hearing protection is required when operating or within 15 feet of any of the following equipment or tools in operation:

-
- Welding or cutting equipment (oxy-fuel, gas, or electric).
 - Abrasive wheel grinder or sander (pedestal, bench, or portable).
 - Air lance or nozzle (for blowing compressed air).
 - Chain saw.
 - Nail gun (air or powder-actuated).
 - Power saw, planer, router, or joiner.
 - Equipment or tools powered by: Air, Combustion engine, Electricity, Hydraulic, Pneumatic, or Steam
-

Hearing protection is required within 150 feet of master or group retarders during humping and trimming operations. Dual hearing protection (ear plugs and muffs) is required within 10 feet of these operations.

77.5: Groundman

The groundman is responsible for directing and safe-guarding all machine movements.

Before signaling boom or machine movement, the groundman must ensure the load, cab or boom will not come in contact with nearby wires, structures or other objects and persons.

A groundman required to move cars or on-track equipment must be qualified on the use of their braking systems.

78.8: Operating Booms Near Power Lines

Do not operate booms over power lines at any time. Do not operate booms under power lines unless proper clearance is maintained.

At stationary worksites, crane operators must place at least three (3) orange cones evenly spaced along the minimum clearance line to mark the minimum safe working distance to overhead power lines.

A. Operation Near Energized Lines

If booms must be operated near energized lines, maintain the minimum clearances listed in the table listed below. **If proper clearance cannot be maintained, shut off the power and ground power lines before performing work.**

Voltage (nominal, kV, alternating current)	Minimum clearance distance (feet)
up to 50	10
over 50 to 200	15
over 200 to 350	20
over 350 to 500	25
over 500 to 750	35
over 750 to 1,000	45
over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

Note: The value that follows "to" is up to and includes that value. For example, over 50 to 200 means up to and including 200kV

A groundman must be designated to observe equipment clearance and give timely warning for all operations when it is difficult for the operator to observe clearance.

B. In Transit

B. When in transit with no load and boom lowered, use the table below.

MINIMUM CLEARANCE DISTANCES WHILE TRAVELING WITH NO LOAD

Voltage (nominal, kV, alternating current)	While traveling—minimum clearance distance (feet)
up to 0.75	4
over .75 to 50	6
50 to 345	10
over 345 to 750	16
over 750 to 1,000	20
over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

138.3.11: Rigging Loads

A qualified worker must follow these requirements when rigging a load:

1. Make sure that slings, chains, wire rope, and other lifting devices conform to UPRR Rules 77.14.1 through 77.17.7. Contractors must comply with these rules and:
 - OSHA 1910.180 and 1926.550
 - ANSI B30.5-1968 and B30.5-1992
2. Determine the load angle factors, the number of slings to handle the load, and the rigging to be used.
3. Use tag lines according to UPRR Rule 45.1. **Note: It is particularly important to use tag lines when handling bridge girders, bridge substructure components, etc.**
4. Safely handle wire rope, wire rope slings, and chains according to the manufacturer's recommendations and UPRR rules.

Minimum Safety Requirements for UPRR Contractors



Union Pacific Railroad

Premium Operations Addendum

Revised 10/26/2015

Premium Operations Addendum

It is the policy of the Union Pacific Railroad that operations be conducted in a safe manner. Union Pacific Railroad believes:

- All injuries can be prevented.
- Employees and contractors at all levels are responsible for maintaining safe working conditions and preventing personal injuries.
- Carrying out work functions in a safe manner is more important than meeting deadlines, production schedules, and other non-safety criteria.

The term "Contractor" as used in this document or other reference materials applies to all individuals at the work site including contract personnel, third party vendors, subcontractors and others within Premium Operations work areas including both automotive and intermodal facilities.

These safety and operational requirements are in addition to the requirements outlined in the Minimum Safety Requirements for UPRR Contractors and are the minimum safety standards required by Union Pacific Premium Operations. All contractors, third party vendors and subcontractor operations are required at minimum to meet these standards and are to mandate additional safety requirements as needed.

Any questions regarding this information should be directed to the UPRR manager in charge of the work location or to the Director Intermodal Safety at company line 402-544-6714.

Security and access to Union Pacific Intermodal Facilities:

Good physical security goes to the welfare and safety of all at the work location. Follow these guidelines:

- Contractors are only to be on Union Pacific property as a part of their assigned duty for the company they work for.
- Facilities of Union Pacific are not to be used for any personal needs such as maintenance of vehicles, storage etc.
- All Contractors are to maintain a current eRailSafe ID card or copy of application paperwork that was issued within the past 30 days. Individual Contractor spot checks for proper eRailSafe ID should be performed by contract companies at least weekly.
- Contract managers of Contractors are required to notify the UP manager in charge of the work site of any Contractor who no longer requires access to Union Pacific property within 2 weeks of termination, transfer or resignation.

- Business related visitors on Intermodal ramps are to report to the inbound gate, sign a release of liability form and obtain a visitors pass. All visitors must be escorted by a UPRR manager or a manager for the company they are visiting.
- Business related visitors at automotive ramps are to report to the contract manager in charge of that location.
- No personal visitors are allowed on Union Pacific property without the permission of the Director Intermodal Operations or Director Automotive for the region in which the facility is located.
- Anyone loitering or trespassing is to be reported to Union Pacific RMCC at 800-877-7267. Avoid altercations with trespassers and others, get a complete description and ensure responding law enforcement officers have all details of activities and request removal from UP property.
- No one may remove any property not specifically belonging to them including dunnage etc. Trash must be disposed of in approved containers at the facility.
- All Union Pacific owned property and work equipment must be used only for intended purposes and may not be removed from Union Pacific property without the consent of the Union Pacific manager for the facility it is at.

Safety:

All contract, third party and vendor personnel should review, be familiar with and comply with all safety rules contained in the Union Pacific Safety Rules. In addition, all rules contained in the General Code of Operating Practices must be complied with for all rail involved operations. All automotive and intermodal policies, work directives, standard work and processes that affect work being performed must be complied with and any unusual circumstances that require any type of deviation must be approved by the UPRR site manager.

- Copies of the current UPRR Safety Rules, General Code of Operating Practices, standard work, site specific directives and automotive or intermodal policies can be obtained from the UPRR manager in charge of each work location. Any questions or concerns should be addressed to the UPRR manager in charge of each work location.

Intermodal dray personnel are to follow all instructions contained within the IANA Intermodal Terminal Drayman Rules Pocketbook which can be obtained at the Intermodal facility gate house.

All contractors working within Premium Operations work areas shall maintain an accident prevention program (Safety Plan) and designate a safety representative. This plan will be shared with the UPRR site manager on a semi-annual basis and is to be posted at the work site. Updated or revised plans will be shared with the UPRR site manager.

- The safety representative will ensure that the safety program is in place and that job site safety requirements are met. This should be accomplished at minimum through job safety meetings and routine audits on work performed.
- The safety representative will routinely survey the work site to ensure all safety concerns are met and that appropriate risk mitigation measures are taken to reduce the likelihood of a workplace injury. In addition, routine checks of operating equipment, tools and facilities will be completed to ensure compliance with all applicable safety and health regulations.

Contractors are to ensure that all safety related training and certification for all contract workers is complete and current and maintain documentation for review by UPRR management as requested.

Horseplay, practical jokes or other pranks are not allowed on Union Pacific property.

Safety cones used for protection personnel, equipment and work areas shall meet the following minimum requirements:

- Be a minimum of 28" tall
- Have at least one retro-reflective collar 4" or more in width
- Be stenciled with the name or initials of the company name
- Be maintained in good order, clean and bright

The following rules are defined as "critical rules" for all individuals performing work at any Premium Operation work site. Special attention should be given to these rules and they should routinely be reviewed and discussed with all personnel performing work at Premium Operations work locations. The rules and updates may be obtained from the UPRR manager in charge of the work site. They include:

- **1.13 – Failure to Follow Instruction**
- **2.21 – Electronic Devices**
- **5.13 – Blue Signal Protection**
- **7.6, 32.1.1, 32.1.2, 32.1.3, 32.1.4, 32.2.1 – Securing Cars, Engines, Trains**
- **74.3 – Cell Phone / Electronic Device use**
- **74.5 – Seat Belts**
- **74.12 – Off Road Vehicles**
- **81.23 – Lockout Protection Required**
- **83.1.6 - Adjustment of Containers**
- **83.1.9 – Intermodal Equipment Maintenance Repair Lockout / Tagout Procedures**
- **83.2.1 – Speed Limits on Ramp**
- **83.2.2 – Observing Stop Signs / Stop Lines**

- **83.3.2 – Overhead Lifting**
- **83.3.4 – Staying Clear of a Suspended Load**
- **83.3.5 – Getting On and Off Intermodal Cars**
- **83.3.8 – Crossing Platforms**
- **83.4.2 – King Pin (Inspect to Ensure Locked)**
- **83.4.3 – Loading Container on Flat Car – COFC**
- **83.4.5 – Hitches**
- **83.5.4 – Securing Containers**

Stopping Work

Any individual at a Premium Operations work site has the authority to and is expected to stop work if they believe that a serious safety condition exists, or a violation of a critical safety rule has taken place.

- If work is stopped, a contract supervisor or UP manager shall be immediately notified and informed of the work stoppage and the reason the work was stopped.

Personal Protective Equipment (PPE)

Personal protective equipment outlined in the safety rules must be worn by all individuals as required in the work location.

- Hard hats must be worn at all locations on an intermodal ramp with the exception of administrative areas.
- Safety glasses must be worn any time actual work is being completed unless in an enclosed cab of a vehicle or piece of machinery with windows closed.
- OSHA Standard 1910.136 and ANSI Z41.1, standard class #75 lace up safety toe footwear at least 6" in height must be worn by all personnel working intermodal ramps.
- Hearing protection must be worn any time an individual is within 50' of energized equipment.
- All safety equipment and PPE must meet minimum OSHA safety standards.
- ANSI class II or greater lime colored vests are required by all contract, sub contract and other vendor Contractors and visitors.
- Proper gloves are to be available and must be worn whenever working in and around equipment, doing hot work etc.

Environmental Hazards

All environmental hazards caused by or observed by the contractor should be reported to RMCC and the local UPRR manager responsible for the facility as soon as practical.

Audits

All contractors, third party vendors and subcontractor operations are subject to safety audits of activities including audits of training records at any time by Union Pacific management and supervisors.

Equipment and tool maintenance

All tools, equipment and materials that are supplied by a contractor, third party contractor or vendor must be properly maintained and kept in good order. Any tool or piece of equipment that presents a safety hazard should be immediately removed from service. Use of the proper tools in the performance of work is required. All vehicles that are operated within Union Pacific facilities should be in proper working order and meet all DOT requirements.

Minimum Safety Requirements for UPRR Contractors



Union Pacific Railroad

Fueling Operations Safety Addendum

Revised 10/26/2015

Fueling Operations Safety Addendum

All fuel truck drivers are subject to random safety audits to ensure compliance with all UPRR Fueling rules and regulations.

Any vendor that scores a less than desirable fuel audit will provide UPRR Fuel Management a written Corrective Action Plan within 3 business days. (70% for SDTL vendors and 60% on all others).

All corrective action plans will be reviewed and randomly re-audited for compliance.

Driving – Drivers to perform DOT pre-trip vehicle inspection to ensure vehicle free of defects and all equipment works as intended. All headlights, strobes and emergency flashers will be illuminated while on UPRR property. (4way flashers and amber rotating/strobe beacon while in intermodal yards)

- Vehicle must have a working back up alarm
- All signal indicators in proper working order
- Truck equipped with working fire extinguisher and first aid kit
- Appropriate sequence in connecting fuel hose, open/close valves when unloading and disconnecting

Drivers must ensure they maintain awareness of their surroundings, remain diligent, expect movement on any track at any time from any direction, ensure the vehicle is staged in the clear when fueling and not to foul the any track , stay clear of the red zone (the area within an arms length of track), observe and maintain all posted speed limits.

Any negligent driving that results in damage to UP equipment or personnel to include speeding or failure to stop at a RR crossing are grounds for banishment from UPRR fueling operations.

Drivers current on E-Rail safe (within 30 days of hire date), and company photo ID readily shown.

Fueling operations- Driver must apply all proper PPE prior to exiting vehicle.

Driver must maintain 3-point contact when exiting vehicle. Footing conditions must be observed for poor underfoot conditions SNA (Scan Notice Adjust) when necessary. Place all red flags according to the UPRR red flag policy prior to fueling. Properly place spill pool and bucket to ensure environmental compliance. Inspect conditions on both sides of the locomotive for the fuel adapter and cap, fuel sight glass, fuel gauge and ensure locomotive fuel tank vent is not clogged.

During fueling operations driver must remain on the ground near shut off to prevent overfilling or accidental release. Upon completion of fueling event driver will remove all equipment, material and red flags.

Safety

- Locomotive properly red flagged per red flag policy (DTL)
- Proper PPE – Waist length shirts with sleeves, trousers that cover the entire leg, hard hat, safety glasses, or non vented goggles, face shield, gloves and steel toe boots, hearing protection, highly reflective vest

Environmental

- Appropriate equipment used to collect fuel drips while connecting/disconnecting fuel hose
- Proper disposal of dripped/collected fuel
- Inspection of truck piping, valves and couplings prior to fuel transfer
- Inspection of UPRR equipment prior to and during fueling events or transfers
- Ensure sufficient room in tanks to eliminate risk of overfill
- Ensure spill kit available on truck and at pump skids
- Driver trained on proper communication process for reporting incidents to include having a communication device and know who to call

Compliance

- Truck engine off while fueling/ unless used for pump operation
- Parking brake applied, have working brake interlock, and wheels chocked to prevent from moving during fuel transfer (Wheels Chocked DTS only)
- Proper CDL endorsements
- No smoking to include e-cigs
- Driver equipped with defective locomotive report and EFI (Emergency Fueling Information) form

Quality Assurance

- Trucks equipped with working fuel meter, ticket printer and air eliminator
- Meter tickets legible and filled out properly
- Truck meter calibrated in last 12 months and seals in place
- Printed BOL indicating gross and net gallons (DTS)

Minimum Safety Requirements for UPRR Contractors



Union Pacific Railroad

Telecom Addendum

Revised 10/26/2015

Telcom Safety Requirements

The Union Pacific Railroad is committed to providing the safest workplace possible for, not only our own employees, but also the Contractor personnel. Adherence to these minimum safety requirements, plus additional instructions at the job site, will help to ensure an injury-free project. The railroad employee in charge is authorized to take any actions necessary to prevent injuries to any person, damage to railroad property, disruption of railroad operation, and the safety of the public.

Safety Requirements for Tower Work

It is the responsibility of the contractor to have a written safety program and must conduct regular safety audits of its job sites by a competent person. Contractor will provide documentation of audits to UPRR.

The contractor must provide a sit-specific safety plan that includes rigging for construction for new tower and deconstruction of old tower that complies with ANSI TAI-1019-A, structural and RF safety procedures and fall protection requirements each specific job. Contractor is to provide documentation to UPRR.

The contractor must have a competent and qualified person at the project site who will conduct daily safety audits.

The contractor requires pre-employment physical agility or physical fitness tests to determine ability to perform job tasks. The contractor must provide drug screening of workers for unlawful use of controlled substances.

The contractor must ensure that their tower climbers have been properly trained and understand OSHA regulations in the areas of fall protection and rescue. The contractor also must conduct a hazard assessment to determine the requirements for personal protective equipment, including fall protection. The contractor must maintain written documentation of all training as required and provide that to UPRR.

The contractor must maintain good housekeeping at the job site.

On Track and Off Track Work Equipment

It is the responsibility of the Contractor-In-Charge to ensure that all on track and/or off track work equipment is in a safe condition to operate. There must be a written inspection process regarding daily, weekly and other periodic inspections for work equipment operated on Union Pacific property, including inspections mandated by FRA, AAR, OSHA and/or other government agencies. In addition to the inspection process there must be a written maintenance process that includes timelines regarding resolution of safety sensitive defects. If, in the opinion of the Railroad Representative, any of the Contractor equipment is unsafe for use, the Contractor shall remove such equipment from the railroads property. The Contractor-In-Charge must ensure that there is a written training and qualification process for operators and support personnel regarding operation of such equipment. Written documentation of training and qualification must be carried by Contractor personnel.

In addition:

- The operators of all work equipment must be properly trained and competent in the safe operation of the equipment. Operators must be:
 - Familiar and comply with OSHA regulations on lockout/tagout of work equipment.
 - Trained in and comply with the applicable operating rules if operating any hy-rail equipment on-track.
- The operators manual, which includes instructions for safe operation, must be kept with each machine.
- Unless otherwise authorized by the Railroad Representative, all unattended equipment is parked a minimum of 25 feet from any track and minimum of 250 feet from any road crossing. Before leaving any equipment unattended, the operator must stop the engine and properly secure the equipment against movement.
- Cranes are equipped with three orange cones that will be used to mark the working area of the boom and load and the minimum clearances to overhead power lines. All overhead lines are considered to be high voltage.

Working Around Live Tracks (Red Zones)

Prior to beginning work on live track the Contractor-In-Charge must notify a Railroad representative and a job briefing must be conducted with the Railroad representative. Engineering Department Contractors are governed by FRA Roadway Worker Protection regulations, referenced in 49CFR214, Subpart C, which requires some form of On-Track Safety prior to fouling any track.

Red Zones are defined as that area within an arms length of the track, or any physical position, which places the person in a life-threatening situation. Any questions that arise related to working in the Red Zone should be directed to the Railroad Representative.

On-Track Safety

The Contractor is responsible for compliance with the Federal Railroad Administrations Roadway Worker Protection regulations (49CFR214, Subpart C) and UPRRs On-Track Safety rules. Under 49CFR214, Subpart C, railroad contractors are responsible for the training and qualifications of their workers on these regulations. Contractor workers must have documentation of their training and qualifications while on the work site. At a minimum, each contractor worker must be trained as a Roadway Worker. Additional training and qualification requirements for the positions of Machine Operator, Lookout or Lone Worker must be met for those contractor workers performing those functions.

In addition to the instructions contained in FRAs Roadway Worker Protection regulations, all contractor workers must:

- Maintain a distance of at least 25 feet to any track unless the railroad's EIC is present to authorize movements.
- Wear an orange, reflectorized vest or similar orange, reflectorized workwear approved by the railroad's EIC. (High visibility safety apparel must be worn when working adjacent to a Federal highway.)
- Participate in a job briefing that will specify the type of On-Track Safety for the type of work being performed. Contractors must take special note of limits of track authority, which tracks may or may not be fouled, and clearing the track.

77.5: Groundman

The groundman is responsible for directing and safe-guarding all machine movements.

Before signaling boom or machine movement, the groundman must ensure the load, cab or boom will not come in contact with nearby wires, structures or other objects and persons.

78.8: Operating Booms Near Power Lines

Do not operate booms over power lines at any time. Do not operate booms under power lines unless proper clearance is maintained.

At stationary worksites, crane operators must place at least three (3) orange cones evenly spaced along the minimum clearance line to mark the minimum safe working distance to overhead power lines.

A. Operation Near Energized Lines

If booms must be operated near energized lines, maintain the minimum clearances listed in the table listed below. **If proper clearance cannot be maintained, shut off the power and ground power lines before performing work.**

Voltage (nominal, kV, alternating current)	Minimum clearance distance (feet)
up to 50	10
over 50 to 200	15
over 200 to 350	20
over 350 to 500	25
over 500 to 750	35
over 750 to 1,000	45
over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

Note: The value that follows "to" is up to and includes that value. For example, over 50 to 200 means up to and including 200kV

A groundman must be designated to observe equipment clearance and give timely warning for all operations when it is difficult for the operator to observe clearance.

B. In Transit

B. When in transit with no load and boom lowered, use the table below.

MINIMUM CLEARANCE DISTANCES WHILE TRAVELING WITH NO LOAD

Voltage (nominal, kV, alternating current)	While traveling—minimum clearance distance (feet)
up to 0.75	4
over .75 to 50	6
50 to 345	10
over 345 to 750	16
over 750 to 1,000	20
over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

138.3.11: Rigging Loads

A qualified worker must follow these requirements when rigging a load:

1. Make sure that slings, chains, wire rope, and other lifting devices conform to UPRR Rules 77.14.1 through 77.17.7. Contractors must comply with these rules and:
 - OSHA 1910.180 and 1926.550
 - ANSI B30.5-1968 and B30.5-1992
2. Determine the load angle factors, the number of slings to handle the load, and the rigging to be used.
3. Use tag lines according to UPRR Rule 45.1.
4. Safely handle wire rope, wire rope slings, and chains according to the manufacturer's recommendations and UPRR rules.

Forms

(to be used following award of bid)

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



PROJECT TITLE

BID #

PWP#

THIS CONTRACT made and entered into on this ____ day of MONTH, 20____, by and between the City of Sparks, Nevada, a municipal corporation, existing under and by virtue of the laws of the State of Nevada, hereinafter called "City", and **CONTRACTOR**, a qualified Contractor in the class of work required, hereinafter called "Contractor".

W I T N E S E T H

WHEREAS, the City has awarded a contract to Contractor for providing material and/or performing the work hereinafter mentioned in accordance with the proposal of said Contractor;

WHEREAS, the Contractor will provide the material and/or perform the work for the compensation stated in said proposal, an amount which has been arrived at between the parties;

WHEREAS, each party is willing to and does assume joint liability for the contents of this Contract, and each party accordingly agrees that it shall not be construed against any party as a drafting party;

NOW, THEREFORE, IT IS AGREED as follows:

1. Scope of Work:

The scope of work for this contract is generally defined as **TITLE**. The City's Contract Documents and Contractor's Entire Proposal are on file with the City of Sparks. All terms, conditions and requirements contained within these Documents, including any and all bid documents, addenda and specifications issued by the City, are hereby incorporated by reference into this Contract.

The Contractor shall perform within the time stipulated, the Contract as herein defined and shall provide and furnish any and all of the labor, materials, methods or processes, equipment implements, tools, machinery and equipment, and all utility, transportation and other services required to construct, install and put in complete order for use in a good and workmanlike manner all of the work covered by the Contract in connection with strict accordance with the plans and specifications therein, which were approved by said City and are on file with the City, including any and all addenda issued by the City, and with the other contract documents hereinafter enumerated.

2. Payment for Project Services

As full consideration for the Services to be performed by Contractor, City agrees to pay Contractor as set forth in accordance with the bid and not to exceed fee of **COST** for the project.

A monthly progress payment in the amount of ninety-five percent (95%) of the value of the work completed may be made every thirty (30) days upon application by the Contractor and certification by the Project Manager that such work has been completed.



Partial payments will be made once each month as the work satisfactorily progresses and after acceptance by the authorized City representative. The progress estimates shall be based upon materials in place, or on the job site and invoiced, and labor expended thereon. From the total of the amount ascertained will be deducted an amount equivalent to five percent (5%) of the whole, which five percent (5%) will be retained by the City until after completion of the entire Contract in an acceptable manner. Any time after fifty percent (50%) of the value of the work has been completed, the City will make any of the remaining partial payments in full.

No such estimates or payments shall be required to be made, when, in the judgment of the City Project Manager, the work is not proceeding in accordance with the provision of the Contract, or when in his judgment the total value of the work done since last estimate amounts to less than Five Hundred Dollars (\$500.00).

The cost of materials conforming to the plans and specifications (materials being those which are required to be contained and incorporated in a finished contract bid item) delivered to the project and not at the time incorporated in the work, may also be included in the estimate for payment. No such estimate or payment shall be construed to be an acceptance of any defective work or improper material. The Contractor shall be responsible for, and shall not remove from the project any material that has been included in the estimate for payment.

Final payment shall be made upon the Project Manager certifying that the Contractor has satisfactorily completed the work in conformity with the Contract Documents.

3. Time for Completion:

The Contractor shall deliver the material and/or services called for in the specifications/proposal and within the delivery time specified and in accordance with the terms of the contract. Work shall be completed within _____ days from the Notice to Proceed issued by the City of Sparks Purchasing Division. The Contractor shall not alter or vary any terms or conditions contained or incorporated herein, including but not limited to, the quantity, price, delivery date or date designated as After Receipt of Order (ARO) or date for commencement or completion of services as mutually agreed upon, unless such alteration or variation is consented to in writing by a duly authorized representative of the City.

The City reserves the right to cancel resultant Contract upon ten days written notice in the event the type and quality of the product or work performance is unsatisfactory or in default, subject to Contractor's right to cure as outlined in termination clause.

This is a non-exclusive Contract and the City reserves the right to acquire the material and/or services at its discretion, from other sources during the term of this Contract.

4. No Unlawful Discrimination:

In connection with the performance of work under this Agreement, Contractor agrees not to discriminate against any employee or applicant because of race, creed, color, national origin, disability, sex, sexual orientation or age. Such agreement shall include, but not be limited to, the following: recruitment or recruitment advertising, rates or pay or other forms of compensation, and selection. Any violation of these provisions by Contractor shall constitute a material breach of contract.



In all cases where persons are employed in the construction of public works, preference must be given when the qualifications of the applicants are equal:

- A) First: To honorably discharged soldiers, sailors and marines of the United States who are citizens of the State of Nevada.
- B) Second: To other citizens of the State of Nevada

If the provisions of this section are not complied with by the contractor engaged on the public work, the contract is void, and any failure or refusal to comply with any of the provisions of this section renders any such contract void and subject to the exceptions contained in this section, no money may be paid out of the State Treasury or out of the treasury of any political subdivision of the State to any person employed on any work mentioned in this section unless there has been compliance with the provisions of this section. Any contractor engaged on a public work or any other person who violates any of the provisions of this section is guilty of a misdemeanor. The penalties provided for in this section do not apply where violations thereof are due to misrepresentations made by the employee or employees.

5. No Illegal Harassment:

Violation of the City's harassment policy, which is incorporated by reference and available from the Human Resource Division, by the Contractor, its officers, employees, agents, vendors, consultants, subcontractors and anyone from whom it is legally liable, while performing or failing to perform Contractor's duties under this Contract shall be considered a material breach of contract.

6. Lawful Performance:

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

7. Preferences (This Section IS IS NOT Applicable to this contract):

To the extent Contractor has sought and qualified for a bidding preference and this project has a value of over \$250,000 pursuant to Nevada Revised Statutes Chapter 338, Contractor acknowledges and agrees that the following requirements will be adhered to, documented and attained for the duration of the Project:

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

Contractor recognizes and accepts that failure to comply with any requirements herein shall be a material breach of the contract and entitle the City of Sparks to liquidated damages in the amount set by statute. In addition, the Contractor recognizes and accepts that failure to comply with any



requirements herein may lose its certification for a preference in bidding and/or its ability to bid on any contracts for public works pursuant to NRS Chapter 338.

To the extent Contractor has sought and qualified for a bidding preference and this project has a value of over \$250,000 pursuant to Nevada Revised Statutes Chapter 338, each contract between the contractor, applicant or design-build team and a subcontractor must provide for the apportionment of liquidated damages assessed pursuant to this section if a person other than the Contractor was responsible for the breach of a contract for a public work caused by a failure to comply with a requirement of Items 1-5 within this section. The apportionment of liquidated damages must be in proportion to the responsibility of each party for the breach.

8. Prevailing Wages:

The Contractor and subcontractors shall be bound by and comply with all federal, state and local laws with regard to minimum wages, overtime work, hiring and discrimination, including Chapter 338 of the NRS, which is entitled, "Public Works Projects."

The Contractor shall ensure that all employees on the work site are paid in accordance with the **CURRENT PREVAILING WAGE RATES AS APPROVED BY THE STATE LABOR COMMISSIONER**, whenever the actual value of the Contract totals Two Hundred Fifty Thousand Dollars (\$250,000) or more, or when required by the Supplementary Conditions. If a Change Order causes a Contract to exceed Two Hundred Fifty Thousand Dollars (\$250,000), the State Labor Commissioner may audit the entire Contract period.

Questions involving the Prevailing Wage Rates for the City of Sparks should be referred to the Labor Commissioner, State of Nevada, at (775) 687-4850.

When federal money is associated with the project making the Contract subject to both state and federal wage rates, the Contractor shall not pay less than the higher rate when the two rates differ for similar kinds of labor.

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

- A. Posting of Minimum Wage Rates - In accordance with NRS, Chapter 338, Section 338.020, the Contractor shall post the hourly and daily rate of wages to be paid to each of the classes of mechanics and workers on the site of Work of this Contract in a place generally visible to the workers.
- B. Pursuant to NRS 338.060 and 338.070, the Contractor hereby agrees to forfeit, as a penalty to the City of Sparks, not less than Twenty Dollars (\$20) nor more than Fifty Dollars (\$50) for each calendar day or portion thereof that each worker employed on the Contract is paid less than the designated rate for any work done under the Contract, by the Contractor or any subcontractor under him, or is not reported to the City of Sparks as required by NRS 338.070.
- C. The contractor and each subcontractor shall keep or cause to be kept an accurate record showing, for each worker employed by the contractor or subcontractor:



-
- (1) The name of the worker;
 - (2) The occupation of the worker;
 - (3) If the worker has a driver's license or identification card, an indication of the state or other jurisdiction that issued the license or card; and
 - (4) The actual per diem, wages and benefits paid to the worker.

In addition, the contractor and each subcontractor shall keep or cause to be kept an accurate record showing, for each worker employed by the contractor or subcontractor who has a driver's license or identification card:

- (1) The name of the worker;
- (2) The driver's license number or identification card number of the worker; and
- (3) The state or other jurisdiction that issued the license or card.

D. The records in Section C above must be open at all reasonable hours to the inspection of the City of Sparks, and its officers and agents. A copy of the each record for each calendar Month for the General Contractor and all Sub-Contractors must be submitted to the City of Sparks no later than 15 days after the end of each month for the previous months' wages.

9. Acceptance by the City:

It is expressly understood and agreed that all materials provided and/or work done by the Contractor shall be subject to inspection and acceptance by the City at its discretion, and that any progress inspections and approval by the City of any item or work shall not forfeit the right of the City to require the correction of faulty workmanship or material at any time during the course of the work, although previously approved by oversight. Nothing herein contained shall relieve the Contractor of the responsibility for proper construction and maintenance of the work, materials and equipment required under the terms of this Contract until all work has been completed and accepted by the City.

10. Waiver:

No waiver of any term, provision or condition of this Contract, whether by conduct or otherwise, in any one or more instances, shall be deemed to be nor shall it be construed as a further or continuing waiver of any such term, provision or condition of this Contract. No waiver shall be effective unless it is in writing and signed by the party making it.

11. Notices:

All notices required to be given in writing by this Contract shall be deemed to be received (i) upon delivery if personally delivered, or (ii) when receipt is signed for if mailed by certified or registered mail, postage prepaid, or by express delivery service or courier, when addressed as follows (or sent to such other address as a Party may specify in a notice to the others):

PURCHASING MANAGER
CITY OF SPARKS
431 PRATER WAY
PO BOX 857
SPARKS, NV 89432-0857

CONTRACTOR:



12. Arbitration:

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

13. Jurisdiction and Venue:

In the event the arbitration award is challenged, any action or proceeding seeking to do so must be brought in the courts of the State of Nevada, County of Washoe, or if the party can acquire subject-matter jurisdiction, in the United States District Court for the District of Nevada in the City of Reno. Each of the parties consents to the personal jurisdiction of such courts (and of the appropriate appellate courts) in any such action or proceeding and waives any objection to venue laid therein. Process in any action or proceeding referred to in the preceding sentence may be served on either party by sending it certified mail to the respective addresses designated for notice.

14. Indemnification:

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

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

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

If City’s personnel are involved in defending such actions, Contractor shall reimburse City for the time



and costs spent by such personnel at the rate charged City for such services by private professionals.

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

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

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

15. Licenses and Permits:

The Contractor shall procure at his own expense all necessary licenses and permits and shall adhere to all the laws, regulations and ordinances applicable to the performance of this Contract.

All Contractors, Sub-Contractors and Suppliers doing business within the City of Sparks are required to obtain a current business license from the City of Sparks prior to commencement of this contract. Per Sparks Municipal Code Section 5.08.020A: "It is unlawful for any person to transact business in the City without first having obtained a license from the City to do so and without complying with all applicable provisions of this title and paying the fee therefore."

16. Insurance:

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

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

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



at Contractor's expense.

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

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

Commercial General Liability

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

For contracts that are for the construction or improvement of public facilities, the Contractor shall obtain and maintain products and completed operations liability coverage through the statute of repose after completion of the project.

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

Minimum Limits of Insurance

- \$2,000,000** Each Occurrence Limit for bodily injury and property damage
- \$2,000,000** General Aggregate Limit
- \$2,000,000** Products and Completed Operations Aggregate Limit
- \$10,000** Medical Expense Limit

If Commercial General Liability Insurance or other form with a general aggregate limit is used, it shall be



revised to apply separately to this PROJECT or LOCATION.

Coverage Form

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

Additional Insured

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

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

Primary and Non-Contributory

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

Separation of Insureds

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

Waiver of Subrogation

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

Endorsements

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



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

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

Business Automobile Liability

Minimum Limits of Insurance

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

Coverage Form

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

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

Additional Insured

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

Endorsements

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

Workers’ Compensation and Employer’s Liability

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



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

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

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

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

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

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

Minimum Limits of Insurance

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

Coverage Form

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

OTHER INSURANCE COVERAGES (IF APPLICABLE)

Professional Liability Insurance (if Applicable) \$1,000,000 per occurrence limits of liability or whatever limit is customarily carried by the Contractor, whichever is greater, for design, design-build



or any type of professional services with a minimum of three (3) years reporting of claims following completion of the project.

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

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

ALL COVERAGES

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

OTHER INSURANCE PROVISIONS

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

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

ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a Best's rating of no less than A-VII and acceptable to the City. City, with the approval of the Risk Manager, may accept coverage with carriers having lower Best's ratings upon review of financial information concerning Contractor and insurance carrier. City reserves the right to require that Contractor's insurer be a licensed and admitted insurer in the State of Nevada, or on the Insurance Commissioner's approved but not admitted list.

VERIFICATION OF COVERAGE

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

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

- A. Certificate of Insurance.** Contractor must provide a Certificate of Insurance form to the City of Sparks to evidence the insurance policies and coverage required of Contractor.



B. Additional Insured Endorsements. An original Additional Insured Endorsement, signed by an authorized insurance company representative, must be submitted to the City of Sparks, by attachment to the Certificate of Insurance, to evidence the endorsement of the City of Sparks as additional insured.

C. Policy Cancellation Endorsement. Except for ten (10) days' notice for non-payment of premium, each insurance policy shall be endorsed to specify that without thirty (30) days prior written notice to the City of Sparks, the policy shall not be suspended, voided, cancelled or non-renewed, and shall provide that notices required by this paragraph shall be sent by certified mailed to the address specified above. A copy of this signed endorsement must be attached to the Certificate of Insurance.

D. Bonds (as Applicable). Bonds as required and/or defined in the original bid documents.

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

SUBCONTRACTORS

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

MISCELLANEOUS CONDITIONS

1. Contractor shall be responsible for and remedy all damage or loss to any property, including property of City, caused in whole or in part by Contractor, any Subcontractor, or anyone employed, directed, or supervised by Contractor.
2. Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payment of damages to persons or property resulting from its operations or the operations of any Subcontractors under it.
3. In addition to any other remedies City may have if Contractor fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, City may, at its sole option:
 - a. Purchase such insurance to cover any risk for which City may be liable through the operations of Contractor under this Agreement and deduct or retain the amount of the premiums for such insurance from any sums due under the Agreement;
 - b. Order Contractor to stop work under this Agreement and/or withhold any payments which become due Contractor here under until Contractor demonstrates compliance with the requirements hereof; or,
 - c. Terminate the Agreement.

17. Liquidated Damages:

If the Product is not delivered/Project is not completed within the time stipulated in the bid, the Contractor shall pay to the City of Sparks as fixed, agreed and liquidated damages for delay and not as a penalty (it



being impossible to determine the actual damages occasioned by the delay) \$_____ for each _____ day of delay until delivery is completed; the Contractor shall be liable to the City of Sparks for the amount herein. This amount may be deducted from money due or to become due to the Contractor as compensation under this proposal in the event the Contractor fails to meet delivery schedules or product specifications.

18. Material Breach of Contract:

In the event Contractor fails to deliver the product and services as contracted for herein, to the satisfaction of the City of Sparks or otherwise fails to perform any provisions of this Contract, the City, after providing five (5) days written notice and Contractor's failure to cure such breach within the time specified in the notice, may without waiving any other remedy, make good the deficiencies and deduct the actual cost of providing alternative products and/or services from payment due the Contractor. Non-performance after the first notice of non-performance shall be considered a material breach of contract.

19. Force Majeure:

Neither party to the Contract shall be held responsible for delay or default caused by fire, riot, acts of God, and/or war which is beyond that party's reasonable control. City may terminate the Contract upon written notice after determining such delay or default will reasonably prevent successful performance of the Contract.

20. Termination:

The City may terminate the Contract for material breach of contract upon ten (10) days written notice and recover all damages, deducting any amount still due the Contractor from damages owed to the City, or seek other remedy including action against all bonds. The Contractor may terminate the Contract for material breach of contract upon thirty (30) days written notice to the City.

21. Assignment:

All of the terms, conditions and provisions of this Contract, and any amendments thereto, shall inure to the benefit of and be binding upon the parties hereto, and their respective successors and assigns. The Contractor shall not assign this Contract without the written consent of the City which will not be unreasonably withheld.

22. Entire Contract:

This Contract constitutes the entire agreement of the parties and shall supersede all prior offers, negotiations, agreements and contracts whether written or oral. Any modifications to the terms and conditions of this Contract must be in writing and signed by both parties.

23. Severability:

If any part of this Contract is found to be void it will not affect the validity of the remaining terms of this Contract which will remain in full force and effect.

24. Headings:

Paragraph titles or captions contained in this Contract are inserted only as a matter of convenience and for reference only, and in no way define, limit, extend, or describe the scope of this Contract or the intent of any provision herein.



25. Singular Includes the Plural; Gender; Title Reference:

Whenever the singular number is used in this Contract and when required by the context, the same shall include the plural, and the use of any gender, be it masculine, feminine or neuter, shall include all of the genders, and the word “person” or “entity” shall include corporation, firm, partnership, or any other combination or association.

The use of the title “Bidder”, “Vendor”, “Contractor” or “Consultant” within this contract or associated bid documents shall be deemed interchangeable and shall refer to the person or entity with whom the City of Sparks is contracting for the service or product referenced within this contract.

26. Execution:

The parties agree to execute such additional documents and to take such additional actions as are reasonably necessary or desirable to carry out the purposes hereof. They also agree, acknowledge and represent that all corporate authorizations have been obtained for the execution of this Contract and for the compliance with each and every term hereof. Each undersigned officer, representative or employee represents that he or she has the authority to execute this Contract on behalf of the party for whom he or she is signing.

IN WITNESS WHEREOF, the City of Sparks has caused this Contract to be executed by its officers thereunto duly authorized and the Consultant has subscribed same, all on the day and year first above written.

(Vendor)

CITY OF SPARKS, NEVADA
A Municipal Corporation

By: _____

By: _____
Geno R. Martini, Mayor

(Title)

APPROVED AS TO FORM

ATTEST:

City Attorney

Teresa Gardner, City Clerk

CITY OF SPARKS, NEVADA - BOND OF FAITHFUL PERFORMANCE

Bid #: _____

Bond #: _____

Surety Rating: _____

NV License #: _____

Appt. Agent Countersigning - List below with address

KNOW ALL MEN BY THESE PRESENTS: That WHEREAS, the City of Sparks in the State of Nevada has awarded to **(CONTRACTOR NAME)** hereinafter designated as the "Principal" a contract for Bid # **BID NUMBER**, PWP # **PWP NUMBER**, for the **PROJECT TITLE** and

WHEREAS, said Principal is required under the terms of said contract to furnish a bond for the faithful and proper performance of the Contract and the Bonding Company has an "A" or better rating with Moody's or A.M. Best and T-Listed with the U.S. Treasury Department;

NOW, THEREFORE, we the Principal and _____ as Surety, are held and firmly bound unto the City of Sparks in the State of Nevada, in the penal sum of **(WRITTEN COST)** dollars (\$_____), lawful money of the United States, being not less than one hundred percent (100%) of the estimated contract cost of the work, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the above bound Principal, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and faithfully perform the covenants, conditions and agreements in the said contract and any alterations made as therein provided on his or their part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City of Sparks in the State of Nevada, its officers and agents as therein stipulated, then this obligation shall become null and void; otherwise, it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the said contract, the above obligation shall hold good for a period of one (1) year after the completion and acceptance of the said work, during which time, if the above bounden principal, his or its heirs, executors, administrators, successors or assigns shall fail to make full, complete and satisfactory repair and replacements or totally protect the said City of Sparks in the State of Nevada from loss or damage made evident during said period of one (1) year from the date of acceptance of said works, and resulting from or caused by defective materials or faulty workmanship in the prosecution of the work done, the obligation in the said sum of **(WRITTEN COST)** dollars (\$_____) shall remain in full force and virtue; otherwise the above obligation shall be void.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in anyway effect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract, to the work or to the specifications.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their seals this ____ day of _____, 20____, the name and corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal

By _____

Surety

By _____

CITY OF SPARKS, NEVADA – Payment Bond – Labor & Materials

Bid #: _____

Bond #: _____

Surety Rating: _____

NV License #: _____

Appt. Agent Countersigning - List below with address

KNOW ALL MEN BY THESE PRESENTS: That WHEREAS, the City of Sparks in the State of Nevada, has awarded to **CONTRACTOR**, hereinafter designated as the “Principal” a Contract for Bid # **BID NUMBER**, PWP # **PWP NUMBER**, for the **PROJECT TITLE** and

WHEREAS, said Principal is required under the terms of said contract to furnish a Bond for the faithful and proper performance of the Contract and the Bonding Company has an “A” or better rating with Moody’s or A.M. Best and T-Listed with the U.S. Treasury Department;

NOW, THEREFORE, we, the Principal, and _____ as Surety, are held and firmly bound unto the City of Sparks in the State of Nevada, in the penal sum of **WRITTEN AMOUNT** dollars (\$_____), lawful money of the United States, being not less than one hundred percent (100%) of the estimated contract cost of the work for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally firmly by these presents.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if the above bounden principal, his or its heirs, executors, administrators, successors, or assigns, shall fail to pay for any materials, provisions, provender or other supplies, implements, or machinery used in, upon, for, or about the performance of the work contracted to be done or for any work or labor thereon of any kind, or for amounts due under the Unemployment Compensation Law with respect to such work or labor as required by the provisions of NRS 612, and provided that the claimant shall have complied with the provisions of said law, the Surety hereon will pay for the same within thirty (30) calendar days an amount not exceeding the sum specified in this bond, then the above obligation shall be null and void; otherwise to remain in full force and account. In case suit is brought upon this bond, the said Surety agrees to pay a reasonable attorney’s fees to be fixed by the Court.

The Bond shall insure to the benefit of any and all persons, companies and corporations entitled to file claims under NRS 339 as to give a right of action to them or their assigns in any suit brought upon this Bond.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their seals this ____ day of _____, 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal

By _____

Surety

By _____