



City of
Los Banos
At the Crossroads of California

**Bid Invitation
for
Procurement, Delivery and Unloading of Rubber
Gasketed Reinforced Concrete
Pipe & Bends - ASTM C361, C25 and
Rubber Gaskets - ASMT C1619**

January 2025

**Bid Proposals must be received no later than 2:15 p.m. February 20, 2025
City of Los Banos City Clerk
520 J Street
Los Banos, CA 93635**

City of Los Banos
Public Works Department

Table of Contents

Advertisement for Bids

Information for Bidders

Bid Form

Sample Agreement

Insurance Requirements

Special Provisions

Technical Specifications, Reinforced Concrete Low-Head Pressure Pipe

Unloading Area

Advertisement for Bids

CITY OF LOS BANOS

520 J Street

Los Banos, California 93635

Notice is hereby given that separate sealed bids for the award of contract for the **Procurement of Rubber Gasketed Reinforced Concrete Pipe** will be received by the City of Los Banos at the office of the City Clerk until **2:15 p.m. Pacific Standard Time, February 20, 2025** and then at said office publicly opened and read aloud.

The bid is for the supply and delivery of rubber gasketed reinforced concrete pipe (RGRCP) of varying lengths and diameters, RGRCP twenty-two and one-half degree bends, rubber gaskets and unloading of the RGRCP. All RGRCP pipe and bends shall meet **ASTM C361 C25** specifications. The pipe and appurtenant fittings shall be delivered and unloaded at the staging area in the city of Los Banos CA, as shown in the bid documents. The RGRCP pipe, bends and rubber gaskets shall be delivered and unloaded by the vendor no later than May 15, 2025.

The Contract Documents, in their entirety, can be viewed and/or obtained from the City of Los Banos website at www.losbanos.org or at the following locations:

Central California Builders Exchange (www.cencalbx.com)

Builders Exchange of Stockton (www.besonline.com)

Valley Builders Exchange, Inc. (www.valleybx.com)

Builders Exchange of Santa Clara County (www.bxscco.com)

Dodge Data & Analytics (www.construction.com/plans/)

Each bid shall be accompanied by cashier's or certified check or by a bidder's bond, made payable to the City of Los Banos and executed by a corporate surety licensed to issue surety bonds in the State of California, for an amount equal to at least ten percent (10%) of the amount of said bid and no bid shall be considered unless such cashier's or certified check or bidder's bond is enclosed therewith.

The successful bidder of this project shall have the following current and active California State Contractor's License at the time of the submission of the bid and throughout the duration of the contract: Class A.

There is no pre-bid meeting scheduled.

Bidders shall refer to the Contract Document's Information for Bidders for complete instructions.

Bidders are solely responsible for the cost of preparing their bids.

The City specifically reserves the right, in its sole discretion, to reject any or all bids, to re-bid, or to waive inconsequential defects, in bidding not involving time, or quality of the work. The City may reject any and all bids and waive any minor irregularities in the bids.

Information for Bidders

Sealed bids will be received by the City of Los Banos (herein called the "Owner"), at the office of the City Clerk until 2:15 p.m. Pacific Daylight Savings Time (PDST) or Pacific Standard Time (PST), on February 20, 2025, then at said office, publicly opened and read aloud. Owner shall reject all bids received after the specified time and will return such bids to bidder, unopened. Bidders must submit bids in accordance with these instructions. **No emailed or faxed bids will be accepted.**

Bidders attention is directed to the posted Notice To Bidders which include an error regarding the Class of the RCPP to be provided. The Class of the RCP to be provided is **C25**, not B25. The major work consists of suppling, delivering and unloading of rubber gasketed reinforced concrete pipe (RGRCP) of varying lengths and diameters, RGRCP twenty-two and one-half degree bends, rubber gaskets and unloading of the RGRCP. All RGRCP pipe and bends shall meet **ASTM C361 C25 specifications**. All RGRCP pipe gaskets shall meet **ASTM C1619 specifications**.

The pipe and appurtenant fittings shall be delivered and unloaded at the staging area in the city of Los Banos CA, as shown in the bid documents. The RGRCP pipe, bends and rubber gaskets shall be delivered and unloaded by the vendor at the designated staging area **no later than May 15, 2025**.

Each bid must be submitted in a sealed envelope and addressed to the City of Los Banos at 520 J Street, Los Banos, CA 93635. Each sealed envelope containing a bid must be plainly marked on the outside as **"RGRCP Pipe and Gasket Supply, Delivery and Unloading: Attention City Clerk"**, and the envelope shall also bear on the outside, the name of the bidder, and their address. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed to the City of Los Banos at 520 J Street, Los Banos, CA, 93635, and also clearly state, **"RGRCP Pipe and Gasket Supply, Delivery and Unloading: Attention City Clerk"**

A complete bid includes the Bid Form, Bid Schedule, Experience, Bid Bond with surety, and a copy of a current California State Contractor's License, and a copy of the City of Los Banos Business License. A signed Addendum, if issued, must also be submitted with the sealed bid. The Total Bid Amount must be filled in, in ink or typewritten, and the bid must be fully completed and executed when submitted. Only one set of original bid forms are required to be submitted. Mistakes must be corrected and the correction inserted; correction must be initialed in ink by person or persons signing the bid. No conditional bids will be accepted.

The bid shall be signed by a person or persons legally authorized to bind bidder to the contract. The individual or individuals signing each document shall warrant that they are authorized to bind the bidder.

The Owner may waive any informalities or minor defects or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 10 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the Owner and the bidder.

Each bid must be accompanied by a bid bond payable to the Owner for ten percent (10%) of the total amount of the bid. As soon as the bid amounts have been compared, the Owner will return the bid security of all except the three lowest responsive and responsible bidders. Once a bid has been awarded, and the payment bond and performance bond of the successful bidder has been received by the Owner, the bid security of the three remaining lowest responsive and responsible bidders will be returned.

All bonds must be acknowledged before a Notary Public by both the bidder and the surety. Attorneys-in-fact who sign bid bonds or payment bonds and performance bonds must file with each bond a certified and effective dated copy of their power of attorney.

Award and Execution of Contract

The party to whom the contract is awarded will be required to execute the Agreement, and obtain the performance bond and payment bond along with satisfactory evidence of insurance within ten (10) calendar days from the date when the Notice of Award is delivered to the successful bidder. The Notice of Award shall be accompanied by the necessary agreement and bond forms. In case of failure of the bidder to execute the Agreement, the Owner may, at his option, consider the bidder in default, in which case the bid bond accompanying the bid shall become the property of the Owner.

A performance bond and a payment bond, each in the amount of 100 percent of the Contract Price, with a corporate surety named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570, will be required for the faithful performance of the contract. The payment bond must be issued by an admitted surety insurer holding a certificate of authority to transact surety insurance in California issued by the Insurance Commissioner.

All bonds must be acknowledged before a Notary Public by both the bidder and the surety. Attorneys-in-fact who sign bid bonds or payment bonds and performance bonds must file with each bond a certified and effective dated copy of their power of attorney.

The Owner, within 15 days of receipt of the performance bond, payment bond and agreement signed by the party to whom the contract was awarded, shall sign the Agreement and return to such party an executed duplicate of the agreement. Should the Owner not execute the Agreement within such period, the bidder may, by written notice, withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the Owner.

The Notice to Proceed shall be issued within 5 days of the execution of the Agreement by the Owner provided the Contractor has submitted all the required bonds and insurance documents. Should there be reasons why the Notice to Proceed has not been issued within such period, the time may be extended by mutually agreed upon, and the bidder may terminate the Agreement without further liability on the part of either party.

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

Subcontractors

The subcontractors listed by bidder in the bid shall list therein the name and address of each subcontractor to whom the bidder proposes to subcontract portions of the work in an amount in excess of one-half of one percent of the total bid or \$10,000, whichever is greater, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code. The bidder's attention is invited to other provisions of the Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions.

Pre-Bid Meeting

No pre-bid meeting is scheduled. Bidder shall conduct his/her due diligence regarding the site conditions at the unloading area.

Bidders must satisfy themselves as to the accuracy of the estimated quantities in the Bid Schedule. After bids have been submitted, the bidder shall not assert that there was misunderstanding concerning the quantities of work or the nature of the work to be done. The failure or omission of any bidder to do any of the foregoing shall not relieve any bidder from any obligation with respect to his bid.

The Contract Documents containing the Special Provisions required for the fulfillment of the project. The Owner will not be responsible for, nor be bound by, any oral instructions, interpretations, or explanations issued by the Owner or its representatives.

Any request for clarifications or questions of the Contract Documents shall be made in writing or email and deliverable to:

City of Los Banos Public Works Department
Attn: Mike Kirn, P.E.
mike.kirn@losbanos.org
411 Madison Avenue
Los Banos, CA 93635

Requests for clarification or questions shall be delivered to the Owner before 5:00 p.m. PDST or PST on February 12, 2025. Any Owner response to a request for clarification, questions and answers will be posted to the City's website at www.losbanos.org no later than 5:00 p.m. PDST or PST on February 14, 2025 and if necessary, shall become a part of the bid as an addendum.

Proposed timeline of events associated with the awarding of bid:

Release of Advertisement for Bid		January 29, 2025
Pre-Bid Meeting –		None
Deadline to Submit Questions/Clarifications	5:00 p.m.	February 11, 2025
Addendum/Questions/Clarifications posted	5:00 p.m.	February 14, 2025
Bid Opening	2:15 p.m.	February 20, 2025
City Council Considers Bid (If applicable)		March 5, 2025 (tentative)
Issuance of a Notice to Proceed	On or before:	March 12, 2025 (tentative)
Commencement of Procurement	On or before:	March 14, 2025 (tentative)

Qualification of Bidder

The Owner may make such investigation as it deems necessary to determine the ability of the bidder to provide the services requested, and the bidder shall furnish to the Owner all information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid should the evidence submitted by, or investigation of the bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the bid, and to complete the requirements contemplated therein.

Governing Law and Venue

This bid, or any contract that may result from the award of this bid, shall be deemed to be made under, and shall be governed by and construed in accordance with, the laws of the State of California. Any action brought to enforce the terms, or provision of this bid or any contract that may result from the award of this bid, shall have venue in the County of Merced, State of California.

Cancellation of Contract

The Owner may terminate any contract derived from this bid as follows:

- WITHOUT CAUSE at any time by giving thirty (30) calendar days written notice to the successful bidder;
- WITH CAUSE (Default) at any time by giving ten (10) calendar days written notice to the successful bidder. Cancellation for cause shall be at the discretion of the Owner and shall be, but is not limited to, failure to supply the items, materials, equipment or services specified within the time allowed or within the terms, conditions or provisions of this bid. The successful bidder may not cancel any contract derived from this bid, without prior written consent of the Owner.

Bid Form

TO: City of Los Banos
520 J Street
Los Banos, CA 93635

In compliance with the Advertisement for Bids the undersigned, as bidder, hereby offers to provide to the Owner, in accordance with the terms and conditions in the provisions set forth in the Contract Documents, **including acknowledgement that the RCP to be provided is ASTM 361 C25**, the stated total bid amount quoted on this Bid Form for the work of

RGRCP Pipe and Rubber Gasket Supply, Delivery and Unloading:

Total Bid Amount: \$ _____

(Total Bid Amount in Written Form)

The undersigned certifies under penalty of perjury under the laws of the State of California and the United States of America, that the above quotation constitutes a bona-fide offer for the work, that undersigned is a duly authorized representative of the company listed, that the quotation is in no way sham or collusive, and that the executed Agreement between the bidder and Owner constitutes acceptance of bidder's total bid for the work stated in the Contract Documents. The undersigned has read the General Provisions, Special Provisions, and Technical Specifications in these Contract Documents. The undersigned further certifies, under penalty of perjury that the Non-Collusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106; and the Title 49 Code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

The undersigned acknowledges receipt of the following addenda: _____

Signature: _____ Date: _____

Print Name: _____ Title: _____

Name of Business: _____

Doing business as: (*Circle One*): An Individual A Partnership A Corporation

Business Address: _____

Telephone No.: _____ Fax No.: _____

E-Mail Address: _____

License Number: _____ Class & Expiration Date: _____

List of Subcontractors

As of March 1, 2015, Contractors (and sub-contractors) wishing to bid on public works contracts shall be registered with the State Division of Industrial Relations and certified to bid on Public Works contracts. Please register at: <https://www.dir.ca.gov/Public-Works/Contractor-Registration.html>

In accordance with Title 49, Section 26.11 of the Code of Federal Regulations, and Section 4104 of the Public Contract Code of the State of California, as amended, the following information is required for each sub-contractor who will perform work amounting to more than one half of one percent (0.5%) of the Total Base Bid of \$10,000 (whichever is greater). **Photocopy this form for additional firms.**

Project: **RGRCP Pipe and Rubber Gasket Supply, Delivery and Unloading**

The following work will be performed (or provided) by the following subcontractors, and coordinated by bidder:

Bid Item No.	Description of Work to be Performed	Percent of Total Contract	Subcontractor's License No.	DIR Registration No.	Subcontractor's Name and Address

Equal Employment Opportunity

Contractor hereby certifies that bidder and subcontractors

- ☐ Have
☐ Have Not

participated in a previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, or 11246, and that, where required, have filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Note: The above certification is part of the bid. Signing this bid on the signature portion thereof shall also constitute signature of these certifications.

Non-Collusion Affidavit
PUBLIC CONTRACT CODE 7106

In conformance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Debarment and Suspension Certification

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

The bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, and manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
- Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years;
- Does not have a proposed debarment pending; and
- Has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions to an additional sheet of paper and include with the bid.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate on an additional sheet of paper to whom it applies, initiating agency, and dates of action.

NPDES/MS4 Compliance Certification

All construction projects within the City limits must comply with the National Pollutant Discharge Elimination System (NPDES) storm water regulation adopted by the EPA and the Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit requirements, regardless of size.

The City is required under these permits to provide information to Contractors performing work within City limits about training opportunities to assist in managing potential pollutants from construction –related activities, selection, installation, implementation, and maintenance of Best Management Practices (BMPs), as well as overall program compliance. The City has provided such information and helpful links on their website at <http://www.losbanos.org/city-government/departments/public-works/>, under the Storm Water Management Plan tab.

The Bidder acknowledges that they are aware of the necessity to be in compliance with the NPDES and MS4 permits while working within City limits, and that information regarding such is available on the City's website.

Note: The above certifications are part of the bid. Signing this bid on the signature portion thereof shall also constitute signature of these certifications.

Experience

Bidder shall identify three (3) most recent supply projects similar to items to be supplied and delivered as described in these Contract Documents.

	1	2	3
Project Title			
Public Agency			
Address			
Telephone No.			
Engineer in Charge			
Project Value (\$)			
Date Accepted			
Claims Filed?*			

* If yes, please explain below:

Bid Schedule For

RGRCP Pipe Supply, Delivery and Unloading

Bidder agrees to perform all the work described in the Contract Documents for the following unit and lump sum prices, and **acknowledges the RCP to be provided is ASTM 361 C25**. The schedule shall be completed by the bidder with the unit and lump sum prices entered in numerals. The extensions shall be made by the bidder. In case of discrepancy between the unit prices and the extension thereof, the unit price shall be considered as correct when evaluating bids.

Item No.	Item Description	Unit	Quantity	Unit Price	Amount
1	Mobilization, Insurance, Transportation and Unloading at Location No. 1.	LS	1		
2	48" Diameter by Eight Foot (8') Long RGRCP Pipe with double spigot groves ASTM C361 – C25.	EA	52		
3	48" Diameter by Four Foot (4') Long RGRCP Pipe with double spigot groves ASTM C361 – C25.	EA	10		
4	48" Diameter RGRCP 22.5-Degree Bends with double spigot groves ASTM C361 – C25.	EA	20		
5	48" Diameter RGRCP Gaskets, ASTM C1619	EA	150		
6	15" Diameter by Eight Foot (8') Long RGRCP Pipe ASTM C361 – C25.	EA	12		
7	15" Diameter RGRCP Gaskets ASTM C1619	EA	14		
		TOTAL BID AMOUNT: ITEMS 1-7			
8	Additional Charge to Unload at Location No. 2	LS	1		

Note: The representations made herein are made under penalty of perjury. Any information contained in the bid which is proven false shall be considered nonresponsive and this bid shall be rejected.

Attach Bidder's Bid Bond

SAMPLE

Agreement

Agreement

SAMPLE

Note: Particulars left blank in this sample will be filled with project specific information as outlined in these bid documents.

THIS Agreement is dated as of the _____ day of _____ in the year 2025 by and between the **City of Los Banos, a California municipal corporation** ("Owner") and [ENTER NAME AND TYPE OF ENTITY] ("Contractor").

Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

1. WORK. Contractor shall complete the work indicated in Owner's Contract Documents entitled "[Procurement, Delivery and Unloading of Rubber Gasketed Reinforced Concrete Pipe, Bends and Gaskets]."

The work is generally described as follows:

- Supply, Delivery and Unloading of Rubber Gasketed Reinforced Concrete Pipe, Bends and Gaskets
- Contractor shall furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the work described herein.

2. CONTRACT TIME. Contractor shall commence the work required by the Contract Documents within 10 calendar days after the date of the Notice to Proceed and will complete the same within the time period set forth in the bid, May 15, 2025 unless the period for completion is extended otherwise by the Contract Documents.

3. LIQUIDATED DAMAGES. Owner and Contractor recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the work is not completed by May 15, 2025. The parties also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by Owner if the work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner Two Thousand Dollars (\$2,000) for each day that passes after the time specified in Paragraph 2 herein.

4. CONTRACT PRICE. Owner shall pay Contractor for completion of the work in accordance with the Contract Documents in current funds the amount set forth in the Bid Schedule(s). The Contractor agrees to perform all of the work described in the Contract Documents for the unit and lump sum prices set forth in the Bid Schedule(s).

5. PAYMENT PROCEDURES. Contractor shall submit applications for payment in accordance with Paragraph 24, Progress Estimates, of the General Provisions. Applications for payment will be processed by Owner as provided in the General Provisions.

6. CONTRACT DOCUMENTS. The Contract Documents which comprise the entire agreement between Owner and Contractor concerning the work consists of this Agreement and the following attachments to this Agreement:

- (A) Advertisement for Bids
- (B) Information for Bidders
- (C) Bid
- (D) Bid Bond
- (E) Agreement
- (F) Payment Bond
- (G) Performance Bond
- (H) Notice of Award
- (I) Notice to Proceed
- (J) Change Order
- (K) Special Provisions
- (L) Technical Specifications prepared by City of Los Banos entitled "Reinforced Concrete Low-Head Pressure Pipe, ASTM 361 C25".

There are no Contract Documents other than those listed in this Paragraph 6. The Contract Documents may only be amended by change order as provided in Paragraph 19, Changes in the Work, of the General Provisions.

7. MISCELLANEOUS.

A. Terms used in this Agreement which are defined in Paragraph 1 of the General Provisions will have the meanings indicated in the General Provisions.

B. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

C. Owner and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

D. The Laws of the State of California shall govern this Agreement. Venue is Merced County. The provisions of this paragraph shall survive expiration or other termination of this Agreement regardless of the cause of such termination.

E. All bids become property of the Owner. All bids, including the accepted bid and any subsequent contract become public records per the requirements of the California Government Code, Sections 6250-6270, "California Public Records Act". Proprietary material must be clearly marked as such. Pricing and service elements of the successful bid are not consider proprietary information. The Owner will treat all information submitted in a bid as available for public inspection once the Owner has selected a contractor. If you

believe that you have a legally justifiable basis under the California Public Records Act (Government Section 6250 et. seq.) for protecting the confidentiality of any information contained within your bid, you must identify any such information, together with the legal basis of your claim in your bid. In order for the Owner to assess confidentiality of any such information on your behalf, you must request, execute and submit an Owner-prepared written agreement to defend and indemnify the Owner for any liability, costs, and expenses incurred in asserting such confidentiality as part of your bid. The final determination as to whether the Owner will assert your claim of confidentiality on your behalf shall be sole discretion of the Owner.

F. This Agreement shall not be interpreted in favor of any Party by virtue of said Party not having prepared this Agreement.

G. If any time period provided for in this Agreement ends on the day other than a Business Day, the time period shall be extended to the next Business Day.

IN WITNESS WHEREOF, Owner and Contractor have caused this Agreement to be executed the day and year first above written.

Date

By: _____
Authorized Representative of Owner

Title: _____

ATTEST:

Lucille L. Mallonee
City Clerk

APPROVED AS TO FORM:

William A. Vaughn
City Attorney

Date

By: _____
Authorized Representative of Contractor

Title: _____

(Seal if Corporation) (Attach
Acknowledgement for
Authorized Representative of
Contractor)

Special Provisions

RGRCP Procurement

1. Requirements

It is required that there be constructed and completed in accordance with the Contract Documents for "Procurement of Rubber Gasketed Reinforced Concrete Pipe" for the City of Los Banos, all work as described in these Contract Documents.

2. Description of Work

The principal components of the work to be performed under these Contract Documents include the following:

Supply, delivery and unloading of various lengths and diameters of rubber gasketed reinforced concrete pipe, 22-1/2 degree pipe bends and rubber gaskets. All materials shall be delivered and unloaded not later than 5:00 PM May 15, 2025 at the designated location unless otherwise agreed to.

Any incidental work not described in the Contract Documents which is necessary to complete the Work shall be furnished and installed as part of this contract at no additional cost to the Owner. The work shall be complete and ready for service to the satisfaction of the Owner on or before May 15, 2025. The Contractor is responsible to inspect the site and observe actual working conditions prior to bidding the project.

3. Commencement, Prosecution and Completion of Work

The Contractor shall commence work and shall complete all of the work no later than 5:00 PM, May 15, 2025. The capacity of the Contractor's ability to supply the materials, method of operations, transportation, delivery and unloading of the materials and the forces employed shall at all times during the continuance of the contract shall be the sole responsibility of the Contractor to ensure the completion of the work within the time specified.

4. Hours of Work

Delivery and unloading shall be completed between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday using normal construction practices.

5. Permits and Business Licenses

The Contractor will need an Encroachment Permit from the Public Works Department prior to start of delivery and unloading. The encroachment permit will be issued at no cost to the Contractor. The Contractor and all subcontractors working within the city limits of Los Banos shall apply for and have issued a business license from the City of Los Banos (209-827-7000) prior to commencement of work.

6. Testing

No field testing is anticipated. Shop drawings showing RCP dimensions and gaskets are required.

7. Responsibility Regarding Existing Utilities and Private Property

The Contractor shall be held responsible for damage to and for maintenance and protection of existing pipelines, public utilities, drives, curbs and gutters, sidewalks, and fences. The Contractor shall adequately protect all adjoining property and structures from damage, whether within or without of the Owner furnished rights-of-way, and shall be fully responsible for any damage to adjoining property and structures which may result from work done under this contract. The Contractor shall use extreme care during loading, transportation and unloading of the RCP and fittings to prevent damage to adjacent property. The Contractor shall furnish all labor, equipment, materials and means required to control dust which is in any way a result of the Contractor's operations.

The Contractor shall be responsible for all damage or injury which may result to any property, outside of the construction right-of-way or within the right-of-way where so noted, from the Contractor's operations hereunder, or otherwise, from the performance of the Agreement by said Contractor or any of his subcontractors or employees.

Payment for all work specified above shall be included in the unit or lump sum prices bid in the schedule for the various items of work.

8. Obstructions

There are no obstructions or subsurface installations expected. Regional notification centers include but are not limited to the following:

NOTIFICATION CENTER	TELEPHONE
Underground Service Alert Northern California (USA) www.usanorth811.org	811 or 1-800-227-2600

9. Materials Furnished By Owner

No labor, material, or other facilities shall be provided by the Owner.

10. Materials Furnished By Contractor

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, unloading and other facilities necessary for the execution and completion of the work.

11. Schedule of Values, Material List and Substitutions

Within 3 days following the issuance of the Notice to Proceed the Contractor shall submit 2 copies of a Schedule of Values for all lump sum bid items in the Bid Schedule and a complete list of equipment to be used during transport and unloading and materials to be furnished. No substitutions are anticipated. Partial or incomplete material lists will not be considered. No substitutions will be considered thereafter.

12. Request for Extension of Time

No requests for time extension will be granted. Contractor shall furnish, deliver and unload all pipe, bends and gaskets not later than 5:00 PM, May 15, 2025.

13. Rights-of-Way

The Contractor shall not be entitled to extra compensation for hardships and increased cost caused by the work being adjacent to telephone-telegraph lines and guy wires, power lines and guy wires, buildings, fences, pipelines, ditches, roadways, and other obstacles which may physically restrict or limit the use of construction equipment. In some cases, such physical confinement may necessitate special methods of construction of the work. If the Contractor desires to utilize additional area, he shall obtain the necessary approvals from the landowner. No additional compensation shall be paid to the Contractor for the cost of obtaining additional right-of-way or for the inability to obtain such.

14. Coordination with Other Work

Any coordination by Contractor for unloading the pipe, bends and gaskets shall be the responsibility of the Contractor. The Contractor shall coordinate his work with that of others so that prosecution of all work will proceed smoothly.

15. Closure of Streets

No street closures are anticipated.

16. Construction Signs, Barricades, Lights and Flagmen

None expected. Payment for traffic control, transportation permits and other safety measures shall be included in the Traffic Control Plan lump sum price bid in the Bid Schedule, Bid item No. 1. The Owner reserves the right to install signs related to grant funding sources to the extent it will not interfere with Contractor's work activities.

17. Traffic Control Plan

It is the Contractor's sole responsibility to establish and implement a Traffic Control Plan as necessary.

Payment for the preparation and implementation of the Traffic Control Plan shall be deemed to be included in Bid Schedule, Bid Item No. 1.

18. Disposal of Waste Materials

None expected.

19. Noise Control

Conduct operations to cause least annoyance to residents in vicinity of work, and comply with applicable local ordinances. Equip compressors, hoists, and other apparatus with mechanical devices necessary to minimize noise and dust. Equip compressors with silencers on intake lines. Equip gasoline or oil-operated equipment with silencers or mufflers on intake and exhaust lines.

20. Water Supply

None expected to be needed at the unloading site and none provided by Owner. Water used for fabrication of the RCP and RCP bends will be the responsibility of the Contractor.

21. Notifications

The Owner will notify the Contractor in writing of any non-compliance with the foregoing provisions or of any environmentally objectionable acts and corrective action to be taken at the unloading site. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later determined that the Contractor was determined to be in compliance.

22. Work Not Listed in Proposal

It is the intent of the specifications and contract documents to provide for the supply, transportation and unloading of the RCP pipe, bends and appurtenant gaskets. No additional work is anticipated.

23. Submittals and Technical Specifications

The Contractor shall conduct all work activities in accordance with the Contract Documents, Special and Technical Provisions provided in Exhibit B.

Within 10 days after the effective date of the Agreement and before starting to perform any site preparation or work activities, the Contractor shall submit to the Owner for review and approval the submittal requirements in the Technical Provisions contained in 'Exhibit B'.

A work schedule indicating the times for starting and completing supply, and out-bound freight of the RGRCP pipe and bends. No progress payment shall be made to Contractor until an acceptable schedule has been submitted to the Engineer.

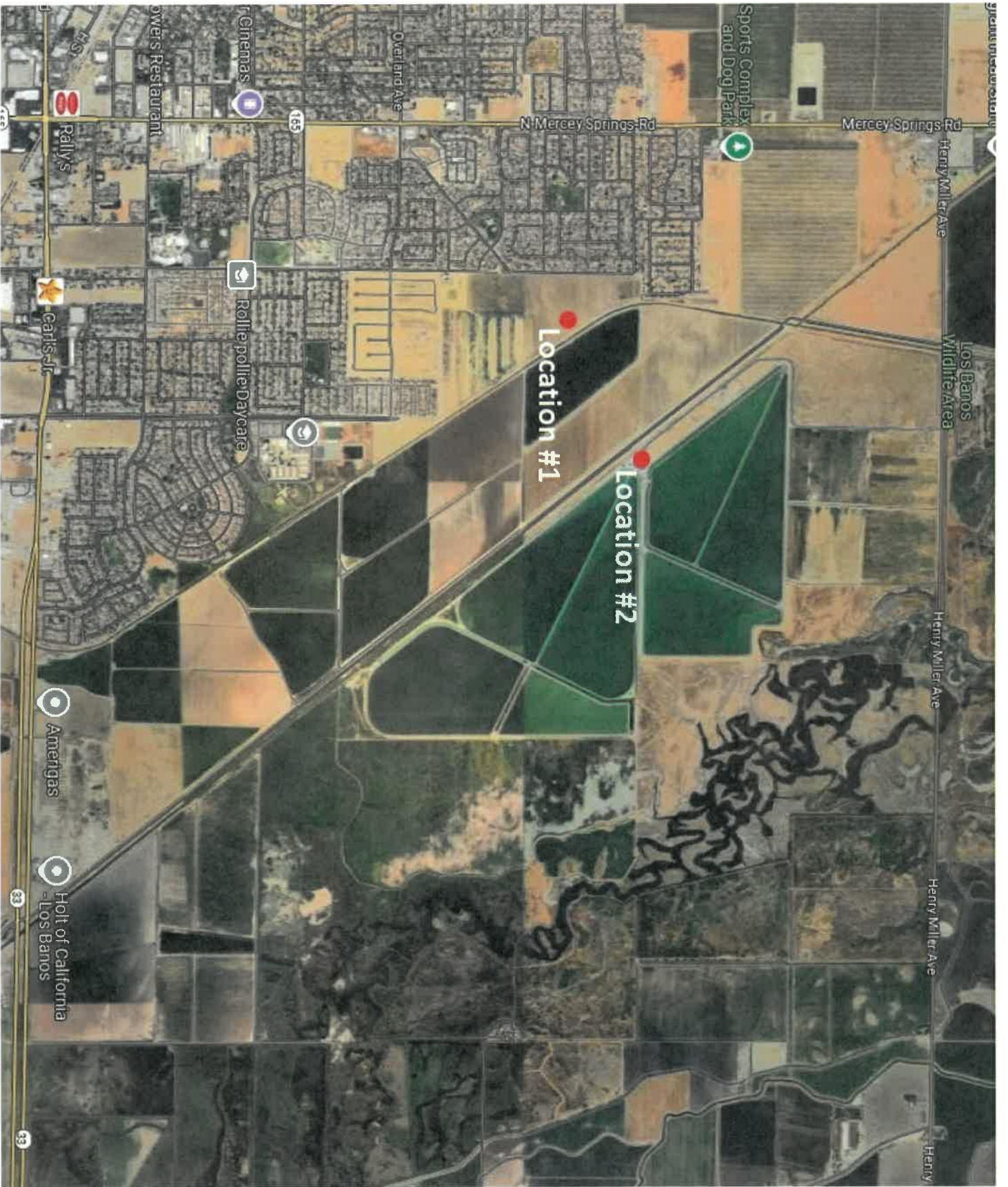
1. Delivery Date.
2. Completion Date for Unloading RGRCP, bends and gaskets. Must be before 5:00 PM, May 15, 2025.
3. A complete list of equipment and materials to be furnished, including ASTM shop tests, transportation routes certification.
4. City of Los Banos Business License for Contractor and all subcontractors

If more than TWO submittals for a single item are required because of incorrect or insufficient data, or the submittal is unacceptable, or because the Contractor wishes to change previously approved material, then all costs incurred by the Owner for the additional review shall be deducted from monies due the Contractor.

UNLOADING AREA

Location No. 1 is the Preferred location

Location No. 2 is the Alternate Location



Technical Specifications

TECHNICAL SPECIFICATIONS
REINFORCED CONCRETE LOW-HEAD PRESSURE PIPE
ASTM 361 C25

PART 1 GENERAL

1.1 WORK INCLUDED

- A. This section includes manufacture, fabrication, materials, and testing of reinforced concrete low-head pressure pipe (RCP) provided in accordance with ASTM C361 and this specification and subjected to internal hydrostatic heads not exceeding 125 feet. Size range is 12 through 144 inches in diameter.

1.2 RELATED WORK

- A. None

1.3 REFERENCES

- A. American Association of State Highway and Transportation Officials (AASHTO)
- B. American Society of Mechanical Engineers (ASME)
- C. American Society for Testing and Materials (ASTM)
- D. American Water Works Association (AWWA)

1.4 SUBMITTALS

- A. Submit shop drawings for RCP, RCP bends and gaskets.
- B. Submit manufacturer's affidavit of compliance with the cited standards, e.g., ASTM C361 C25 for RCP and ASTM 1619 for rubber gaskets.
- C. Submit test reports on shop testing performed per ASTM C361.
- D. Submit methods for lifting, handling, shipping, and storing pipe such that pipe will not be cracked or otherwise damaged during lifting, handling, shipping, and storing.
- E. Submit profile layout for unloading staging area
- F. Submit drawings and schedules showing details of the core, reinforcing steel size and spacing, and bonding bars. Provide details of elbows/bends.
- G. Submit manufacturer's joint design calculations and details. Include critical dimensions of the gasket-bearing surfaces including joint gap and joint tolerances. Indicate maximum allowable joint angular deflection. Submit complete joint design calculations indicating stresses at all design conditions.

Submit gasket calculations indicating maximum and minimum sealing pressures. Submit manufacturer's data sheet for gaskets supplied showing dimensions and chemical composition. Submit test reports on physical properties of rubber used in gaskets.

- H. Submit test reports on shop testing required herein and in referenced standards. Submit affidavit of compliance with these specifications and all specified standards.
- I. Submit certificate that cement complies with ASTM C150, designating type. Submit type and amount of concrete admixture, including natural pozzolans and fly ash, if used.
- J. Submit welder qualifications, welding procedure specifications, and welding procedure qualifications if required.
- K. Submit mill test certificates identifying chemical and physical properties of each heat of reinforcing steel. Submit test reports for reinforcing welds.
- L. Submit concrete mix designs. Include petrographic analysis of concrete.
- M. Submit test reports of concrete test cylinders at 28 days.
- N. Submit reports of radiographic tests on steel joint rings.
- O. Provide written certification that the joint lubricant conforms to all requirements of ASTM C361.

1.5 INSPECTION

- A. The manufacturer/supplier shall inspect materials and production of pipe, fittings, and special pieces and shall document such inspection to the satisfaction of the Engineer. Quality control inspection of as-manufactured bell and spigot dimensions shall be made using a pole-mounted micrometer "measuring stick" and not a "pi" tape. Measurement shall be made at no less than six positions of each bell and each spigot prior to shipment of pipe to ensure that joints fit properly and conform to manufacturer's design joint dimensions.

1.6 SPECIALS

- A. A special is defined as any piece of pipe other than a normal full-length straight section. This includes, but is not limited to, manhole sections, short pieces, adapter sections with special ends, sections with outlets, elbows, etc.

PART 2 PRODUCTS

2.1 DESIGN CRITERIA

- A. Obtain the following information from the bid documents:

- 1. Nominal internal diameter, ID.

2. Pipe class shall be C25.

B. The vertical live load shall be based on AASHTO HS-20 loading.

C. Design the pipe for the external loads in combination with the design internal pressure as outlined in ASTM C361, Appendix X2.

2.2 *FITTINGS AND SPECIALS*

A. Fittings and specials shall be constructed the same as the pipe.

B. Fabricated steel fittings shall comply with Section 40 05 00. Minimum cylinder thickness shall be $D/200$. Minimum mortar coating shall be 1.25 inches.

C. Reinforced concrete fittings with an angle of 30 degrees or less shall be two-piece. Fittings with an angle of greater than 30 degrees shall be three-piece. Minimum radius shall be 2.5 times the pipe diameter ($2.5D$) unless otherwise indicated.

2.3 *OUTLETS AND NOZZLES*

A. Not used.

2.4 *FLANGES*

A. Not used.

2.5 *BOLTS, NUTS, AND GASKETS FOR FLANGES*

A. Not used.

2.6 *GASKETS FOR BELL AND SPIGOT JOINTS*

A. Provide natural or synthetic rubber gaskets per ASTM C361 and ASTM 1619.

2.7 *STEEL FOR JOINTS, JOINT RINGS, AND BONDING BARS*

A. Bells and Bell Bands: ASTM A570, Grade 30 or 33; ASTM A283, Grade C or D.

B. Spigots: ASTM A675, Grade 50 or 60.

C. Filler Bars: ASTM A576, Grade 1012; ASTM A663, Grade 50.

D. Butt Straps: ASTM A283, Grade D.

2.8 *TYPE OF PIPE ENDS*

A. Design and manufacture pipe joints to be watertight under all service conditions and at the extremes of pipe manufacturer's tolerances. If pipe with beveled joint ends is to be supplied, only the spigot end shall be beveled. Rubber gaskets shall be

confined in such a manner that slight movement of the pipe or hydrostatic pressure cannot displace the gasket and so that when the joint is assembled, the gasket is compressed to form a watertight seal. Joints shall be designed so that the gasket will not be required to support the weight of the pipe. Do not use joints that utilize shoulders on the bell or spigot to confine the gasket.

- B. Pipe 48 inches and larger in diameter shall be furnished with double spigot grooves and gaskets. Two joint test tubes per spigot shall be provided between the spigot grooves to allow for testing of the joint following jointing.
- C. Bell reinforcement shall be adequate to support the adjacent pipe weight without cracking, assuming that the adjacent pipe is supported at the extreme end only. Bell reinforcement shall be adequate to resist maximum gasket forces at maximum spigot outside diameter and minimum bell outside diameter as established by the pipe manufacturer and documented in the submitted joint dimension input form. Bell and spigot shall have adequate strength to resist cracking under normally anticipated installation loads.
- D. Pipe joints shall be designed to allow a deflection no less than that equal to the joint open at one point on the inside 1.25 inches greater than the normal closure and the side opposite at the normal closure.

2.9 SHOP HYDROSTATIC TEST

- A. Test pipe and specials per ASTM C361.

2.10 PIPE AND JOINT LEAKAGE TESTS

- A. Not used.

2.11 PRODUCT MARKING

- A. Plainly mark each length of straight pipe and each special at the bell or spigot end to identify the design head and the date of manufacture.

2.12 SHOP-APPLIED ORGANIC ZINC PROTECTIVE COATING FOR STEEL JOINT RINGS

- A. Not used.

2.13 CEMENT SLURRY FOR CRACK REPAIR

- A. Not used.

PART 3 EXECUTION

3.1 FABRICATING BELL AND SPIGOT JOINTS

- A. General: Provide watertight joints under all conditions of service, including expansion, contraction, and ordinary earth settlement. Electrically bond steel joints to the reinforcing cages.
- B. Forming the Bell: Form the bell round and true.
- C. Forming the Spigot: Form the spigot round and true and to an outside diameter less than the inside diameter of the bell ring.
- D. Welding: Use flash welding to form a continuous bell-and-spigot ring in an automatic welding machine in accordance with the requirements of the ASME Boiler and Pressure Vessel Code, Section VIII, Pressure Vessels. Conduct a radiographic test of the flash weld of three bell and three spigot rings and report the result to the Owner. After welding, smooth the ring on its contact face by grinding the weld flush with the adjacent surfaces.
- E. Final Sizing: Check steel joint rings for size and shape on templates before incorporating in core.
- F. Hold the joint rings circular and center on the pipe axis during the fabrication of the pipe.
- G. Tolerances: Limit the annular space in rubber gasket joints between the outside of the spigot ring and the inside of the bell ring contact surface, measured radially, to the tolerances stated in the submitted USBR Joint Dimension Input Form.

3.2 MANHOLES AND OUTLET ASSEMBLIES

- A. Not used.

3.3 SHOP-APPLIED JOINT RING PROTECTIVE COATING

- A. Paint the exposed portion of steel joint rings with organic zinc coating per Section 09 90 00, System No. 18.

3.4 FORMS

- A. Pipe forms shall be steel made with butt joints throughout. The surfaces of the forms adjacent to the pipe walls shall be smooth and true. Forms shall be sufficiently tight with gaskets provided at all form joints to prevent leakage of wet concrete. The forms shall be braced and sufficiently stiff to withstand, without detrimental deformation, all operations incidental to the placement and compaction of concrete within the form. Construct the form and end rings so that the pipe, when manufactured, will have circular and cylindrical inner surfaces so that they may be stripped from the pipe without damage to the pipe or to its surfaces. Clean and apply release agent to forms before each filling. Discard or repair defective forms and end rings.

3.5 *METHOD OF MANUFACTURE*

- A. Manufacture the pipe using the vertically cast method. The transporting and placing of concrete shall be by methods that will prevent the separation of the concrete materials and the displacement of reinforcement steel in the forms. When placing the concrete in the forms, vibrate the concrete continuously with internal or external mechanical vibrators at the rate of not less than 6,500 vibrations per minute for wet cast pipe and 3,400 vibrations per minute for dry cast pipe.

3.6 *CURING*

- A. Cure pipe in accordance with ASTM C361.

3.7 *REINFORCEMENT*

- A. Fabricate reinforcement as two rigid cages of bars or wire. Do not use elliptical reinforcing. Fabricate transverse reinforcements either as complete hoops, welded or lapped, or as a continuous helix. If the transverse reinforcement is formed as a cylindrical helix, finish off both ends of the cage as a complete hoop.
- B. Splices shall be either welded or lapped and tightly wired. Either lap or butt welds may be used, but the weld shall develop the full strength of the bar, and when required by the Owner's Representative, the pipe manufacturer shall submit for testing samples of welds proposed for use. The lap of unwelded splices shall extend 30 diameters when bars or rods are being used for reinforcement and 40 diameters when wire is being used.
- C. Hold the cage of reinforcement in its circular shape and maintain the cage in place within the forms during the placing and consolidating of the concrete. Supports between the reinforcement and the forms that are to be exposed in the finished pipe shall be made of stainless steel. Where the pipe design is shown in the drawings, the type, extent, and positioning of the longitudinal steel indicated shall be considered a minimum requirement. Whether pipe details are shown in the drawings or not, the pipe manufacturer shall be responsible for providing enough longitudinal steel to provide a cage sufficiently rigid to retain its shape and position in the forms during the manufacturing process.
- D. Provide size and uniformly spaced longitudinal reinforcement such that it makes the cage rigid and supports the transverse reinforcement firmly in place in the forms during placing and consolidation of the concrete. In no case shall reinforcement be less in area than 0.2% of the gross cross-sectional area of the concrete. Manufacture the pipe with sufficient longitudinal reinforcement to allow the finished pipe to be handled without damage during installation in the construction of the pipeline. Where the pipe joint construction requires the use of a bell, continue the minimum specified number of bars into the bell. Where two cages are used, divide the longitudinal reinforcement approximately equally between the two cages.

- E. Place the reinforcing steel in the wall of the pipe in such a manner that the end hoops of the transverse reinforcement and the ends of the longitudinal reinforcement shall not be more than 1 inch $\pm 1/4$ inch from the extreme end concrete faces of the bell end of pipe.

3.8 SIZES AND DIMENSIONAL TOLERANCES

- A. Minimum pipe length shall be four feet. Maximum pipe length shall not exceed 8 feet.
- B. Pipe shall be round and true and shall have smooth and dense finished surfaces. The internal diameter of any portion of each piece of pipe shall not vary more than $\pm 1\%$ and shall not exceed $3/8$ inch from the nominal diameter shown on the manufacturer's joint data form. The wall thickness shall not be less than that determined in the design by more than 5% and shall not exceed a $3/16$ -inch deviation. A wall thickness more than that required in the design will not be cause for rejection, as long as the reinforcement is properly placed.
- C. Accurately place reinforcement steel in the concrete wall of the pipe. The placement of steel shall not vary from the position in the pipe wall shown in the joint dimension input form by more than $\pm 1/4$ inch. In no case shall the cover over any reinforcement be less than 1 inch. Variations in laying lengths of two opposite sides of pipe shall not be more than $3/8$ inch in any length of pipe except where beveled pipe is used. The under run in length of a section of pipe shall not be more than $1/2$ inch in any length of pipe.
- D. End Squareness: Pipe ends shall lie in planes perpendicular to the longitudinal centerline of the pipe, except for bevel-end pipe used for bends. Spigot ends shall be true to such plane within +0 inch, - $1/4$ inch, and bell ends within $\pm 1/4$ inch. Pipe ends of bevel-end pipe shall be true to the bevel plane within the above tolerances.
- E. Inside Offset: When laid and joined in trench, maximum offset on the inside at any joint shall not exceed 0.75% of the inside diameter of the pipe or $1/2$ inch, whichever is less.

3.9 BASIS OF ACCEPTANCE

- A. Basis of acceptance shall be in accordance with ASTM C361 and the following: "Freedom of defects" shall also include the ability of the pipe joints to be assembled in the field and pass the joint leakage tests.
- B. Joints shall be confirmed within tolerances stated in the submitted USBR Joint Dimension Input Form prior to delivery. Measure the outside diameter of each spigot at no less than six locations using a pole-mounted caliper with micrometer accurate to 0.001 inch and mark on the pipe the dimensions as measured. Measure the inside diameter of each bell at no less than six locations using a pole-mounted micrometer and shall mark on the pipe the measured dimensions.

3.10 CAUSES FOR REJECTION

- A. Pipe is rejected for any of the following reasons:
1. Transverse reinforcing steel found to be in excess of 1/4 inch out of specified position in any direction after the pipe is molded.
 2. A shattering or flaking of concrete at a crack.
 3. Bubble voids (bug holes) on the interior and exterior surfaces of the pipe exceeding 1/4 inch in depth unless pointed with mortar.
 4. Unauthorized application of any wash coat of cement or grout.
 5. A deficiency greater than 6% from the specified wall thickness. The deficiencies in wall thickness permitted herein do not apply to gasket contact surfaces. Tolerances of such contact surfaces shall be submitted for review.
 6. A variation of the pipe barrel from the specified internal diameter in excess of 1% or interior surfaces that have been reworked after placing of the concrete.
 7. A piece broken from the end projections of the pipe that has a circumferential length exceeding 60 degrees of the circle, extends into the body of the pipe, or extends into the gasket contact surfaces for a circumferential length in excess of six inches (measured at the midpoint of the gasket contact surface on the bell end and at the inner shoulder of the gasket groove at the spigot end). If two or more pieces are broken from an end projection, the total length of such broken pieces on any end shall not exceed 90 degrees of the circle, and there shall be a distance of at least nine inches of sound concrete between breaks. The total length of broken pieces that extend into the gasket contact surfaces of gasketed joint pipe shall not exceed a circumferential length of six inches. If less than six inches of sound concrete exists between two individual breaks, the two breaks shall be considered as one continuous break. Repair of such defects not exceeding the above limitations shall be made by Method III. Unsound portions of end projections shall be removed, and if the pieces removed do not exceed the above limits, the pipe may be similarly repaired.
 8. Defects that indicate imperfect molding of concrete or any surface defect indicating honeycomb or open texture (rock pockets) greater in size than an area equal to a square with a side dimension of two and one-half times the wall thickness or deeper than two times the maximum graded aggregate size or a local deficiency of cement resulting in loosely bonded concrete, the area of which exceeds in size the limits as provided in Paragraph 7 above. Sand rings occurring at the ends of the pipe may be repaired for the full circumference.

9. Any of the following cracks:
 - a. A crack having a width of 0.01 inch or more throughout a continuous length of 12.0 inches or more.
 - b. Any crack extending through the wall of the pipe and having a length in excess of the wall thickness.
 - c. Any crack showing two visible lines of separation for a continuous length of two feet or more or an interrupted length of three feet or more anywhere in evidence, both inside and outside, except where such cracks occur during the external loading test.
 - d. Any crack which extends through the bell of the pipe.
 - e. When required by the Owner's Representative, any crack 0.01 inch wide or wider that is not a cause for rejection shall be filled with neat cement grout composed of cement mixed with water to a fluid consistency.
10. Failure to meet the size and dimensional tolerances stated herein. Failure to meet the joint tolerances shown for the joint design on the manufacturer's joint data form.
11. Failure to meet the leakage test requirements.

3.11 REPAIR OF IMPERFECTIONS

- A. Method I, Repair by Pneumatically Applied Mortar: Do not use pneumatically applied mortar when the repair extends to a depth greater than the embedment of the reinforcing steel. Repair with nonshrink mortar. Unless other methods are approved in writing by the Owner's Representative, this is the only method of repair allowed.
 1. Preparation of Surface To Be Repaired: Prepare surfaces to which pneumatically applied mortar is to be applied in the same manner as described under Method II, except bevel the edges of the area from which unsound or imperfect concrete is removed so as not to entrap rebound.
 2. Placement of Mortar:
 - a. Do not include rebound in the repair. Turn the pipe so that the area being repaired is at the side of the pipe in a near vertical position to permit rebound to fall clear.
 - b. Before repairing grooved concrete spigots, replace the snap ring and retain in position until the repair has attained sufficient strength to assure no damage to the gasket groove by its removal.

- c. Build up areas repaired with pneumatically applied mortar in excess of the dimension required and then carefully trim to correspond with adjacent surfaces.
 3. Curing: Cure surfaces to which pneumatically applied mortar have been applied in the same manner as described under Method II.
- B. Method II, Repair by Hand-Placed Mortar:
 1. Preparation of Surfaces To Be Repaired:
 - a. Remove unsound or imperfect concrete by chipping. Edges where concrete has been chipped out shall be sharp and square with the surface, leaving no feathered edges. Wash the chipped area with water to remove all loose material and concrete dust.
 - b. Keep surfaces within the trimmed areas wet for several hours, preferably overnight, before the repair replacement is made. Surfaces in areas to be repaired shall be damp, but not wet, when the material is applied.
 2. Placement of the Mortar:
 - a. The mortar used for the repair shall contain the same proportions of cement and sand as the mix from which the pipe was made.
 - b. This mortar shall be preshrunk by mixing it to a plastic consistency as far in advance of its use as possible. Make and age trial mixes to determine the longest period the mortar's use can be delayed while retaining sufficient plasticity to permit good workmanship.
 - c. Immediately prior to the application of the mortar, thoroughly scrub the damp surface of the area to be repaired with a small quantity of neat cement grout, using a wire brush. Sweep away remaining loose sand particles immediately before application of the mortar.
 - d. Compact the mortar into the space to be filled, taking care to eliminate air pockets and to secure bond at the edges. Shape and finish the surfaces to correspond with the adjacent surfaces of the pipe.
- C. Method III, Bonding Mortar Repairs With Epoxy Resin Adhesives:
 1. Preparation of Surfaces To Be Repaired:
 - a. Remove unsound or imperfect concrete by chipping. If hand-placed mortar is to be used, leave the edges sharp and square with the surface. If pneumatically applied mortar is to be used, bevel the edges.
 - b. Keep the area to be repaired dry. Remove loose material and concrete dust remaining after the chipping operation by means of an air jet.

- c. Prime the prepared area with the epoxy resin compound, taking care to ensure intimate contact with the base material. Apply mortar before the epoxy resin compound sets. Apply mortar by either Method I or Method II as described above.

3.12 DELIVERY, UNLOADING AND STORAGE

- A. Transport to the jobsite and unload at the designated unloading area. Pipe and bends shall be placed in a manner to avoid damage to the bell and spigot ends. Pipe shall be supported per manufactures recommendations and industry standards.

3.13 INSTALLING PIPE SPOOLS IN CONCRETE

- A. Not used.

3.14 VERTICAL CURVES

- A. Not used.

3.15 INSTALLING BURIED PIPING

- A. Not used.

3.16 FIELD HYDROSTATIC TESTING

- A. Not used.

END SECTION