



INVITATION FOR BID (IFB)

Rose Park Pool PVC Liner Replacement

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A. Summary of Invitation for Bid

This bid is for the purpose of entering into a contract for Rose Park Pool PVC Liner Replacement for the City of Billings. The successful bidder agrees to provide the City of Billings with an acceptable quality of equipment/service, performance and workmanship as determined by the City of Billings.

It is the purpose of this bid to obtain the best quality of equipment/service at the most favorable price to the City of Billings. Consideration will be given for the level of service offered and ability to meet stated specifications as outlined in the contract documents.

The lowest bid need not be accepted if it is documented that a specific supplier in the past has been a poor performer or has provided poor goods.

B. Instructions to Bidders

Sealed bids entitled Rose Park Pool PVC Liner Replacement for the City of Billings Parks and Recreation Department, Billings, Montana, will be received by the City Clerk up until 2:00 PM (MST) on Tuesday, December 7, 2021.

All bids may be submitted to the Billings City Clerk, via email at bids@billingsmt.gov or via mail or delivery at 210 N. 27th Street, Billings, MT 59101 (P. O. Box 1178, Billings, MT 59103). Bids will be publicly opened and read aloud via Facebook Live on the City's Facebook page: <https://www.facebook.com/Billings-MT-City-Government-74352842013/>. Bid tabulations will be posted for public viewing after the bids have been opened.

More specific additional information regarding this project may be obtained by contacting Kory Thomson, Recreation Superintendent, via telephone at 406-657-8376, or via email at thomsonk@billingsmt.gov.

Each bid must be accompanied by a Certified Check, Cashier's Check, or Bid Bond payable to the City of Billings, Montana, in the amount not less than ten percent (10%) of the total amount of the bid. The bid security will be retained by the City Clerk until the successful bidder enters into a contract with the City of Billings. If no contract is entered into, by the successful bidder, within sixty (60) days the security may be forfeited to the City of Billings.

Successful bidders shall also be required to furnish an approved Performance Bond and a Labor and Materials Bond both in the amount of one hundred percent (100%) of the contract amount.



No bids may be withdrawn after the scheduled time for the public opening of bids, which is 2:00 PM (MST) on Tuesday, December 7, 2021.

The right is reserved to reject any or all bids received, to waive irregularities, to postpone the award of the contract for a period of not to exceed sixty (60) days, and to accept that bid which is in the best interests of the City of Billings, Montana.

The City of Billings is an Equal Opportunity Employer. The Contractor and subcontractor shall abide by the requirements of 41 CFR 60-300.5(a) and 41 CFR 60-741.5(a), which prohibit discrimination against qualified protected veterans and/or qualified individuals on the basis of disability, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans and individuals with disabilities.

EXAMINATION OF DOCUMENTS

Before submitting a bid, the bidder shall:

- a. Carefully examine the Standards and Specifications as well as all other attached documents;
- b. Fully inform themselves of the existing conditions and limitations;
- c. Include with the bid sufficient information to cover all items required in the specifications.

BID COMPLIANCE

It shall be the responsibility of the bidder to see that all bids are submitted to the office of the City Clerk before 2:00 PM (MST) on Tuesday, December 7, 2021.

BID MODIFICATIONS

Bids shall be made on the forms provided herein; they shall not contain any recapitulation of the work to be done. Modifications, additions or changes to the terms and conditions of this Invitation for Bid may be cause for rejection of the bid. Bids submitted on other forms may be rejected.

INTERPRETATION PRIORITY

Should a bidder find discrepancies in, or omissions from, the specifications, or be in doubt as to their meaning, bidder shall notify Kory Thomson, Recreation Superintendent at 406-657-8376, who will send written instructions or addenda to all bidders. The City will not be responsible for oral interpretation. All addenda issued prior to bid opening shall be incorporated into and become a portion and part of the contract/agreement upon award. Questions received less than ninety-six (96) hours before the bid opening cannot be answered.



WITHDRAWAL OF BIDS

Bidders may withdraw their bid either personally or by written request at any time prior to the time set for bid opening. No bid may be withdrawn or modified after the time set for opening, unless and until the award of the contract is delayed for a period exceeding sixty (60) days.

BID PRICE VALID

Bidders must honor their bid price for sixty (60) days from the date of sealed bid opening.

CERTIFICATION

The bidder certifies that the bid has been arrived at by the bidder independently and has been submitted without any collusion designed to limit independent bidding or competition. The bidder further certifies that the materials, products, services and/or goods offered herein meet all requirements of the stated specifications and are equal in quality, value and performance with highest quality, nationally advertised brand and/or trade names.

Manufacturer's trade names, if used in specifications, are for the express purpose of establishing a standard of quality and coordination of design, not for the purpose of limiting competition.

INSURANCE

The bidder certifies that it/they shall maintain in good standing the insurance outlined below”

1. Workers' compensation and employer's liability coverage as required by Montana law.
2. Commercial general liability, including contractual and personal injury coverage's -- \$750,000 per claim and \$1,500,000 per occurrence.
3. Automobile liability -- \$1,500,000 per accident.

Each policy of insurance required by this Section shall provide for no less than 30 days' advance written notice to the CITY prior to cancellation.

The CITY shall be listed as an additional insured on all policies except Worker's Compensation Policies.

BIDDER shall comply with the applicable requirements of the Workers' Compensation Act, Title 39, Chapter 71, MCA, and the Occupational Disease Act



of Montana, Title 39, Chapter 71, MCA. Bidder shall maintain workers' compensation insurance coverage for all members and employees of Bidder's business, except for those members who are exempted as independent contractors under the provisions of §39-71-401, MCA.

The certificate will be provided to the City prior to contract execution.

ELIGIBILITY

The successful bidder will be required to provide copies of the following, or the ability to obtain the following within 15 days of notification of contract award:

- Completed and signed the new vendor forms, if necessary (to be eligible for payment): <http://mtbillings3.civicplus.com/DocumentCenter/View/26004>
- City of Billings Business License: <http://ci.billings.mt.us/981/Business-Licenses>
- Montana Contractor's License: <http://erd.dli.mt.gov/work-comp-regulations/montana-contractor/construction-contractor-registration>
- Certificate of Workman's Compensation or Certificate of Exemption from Workman's Compensation: <http://erd.dli.mt.gov/work-comp-regulations>

EVIDENCE OF QUALIFICATION

Upon request of the City of Billings, a bidder whose bid is under consideration for award may be required to manifest satisfactory evidence of his financial resources, experience, the organization and equipment as well as service provisions bidder has available or will make available. In determining the lowest responsible bidder, in addition to price, the following considerations may be addressed:

- a) The ability, capacity and skill of the bidder to perform the contract or provide the service required.
- b) The character, integrity, reputation, judgment, experience and efficiency of the bidder.
- c) Whether the bidder can perform the contract within time specified.
- d) The quality of performance of previous contracts, agreements and/or performance.
- e) Previous and/or existing compliance by the bidder with laws relating to the contract or services.
- f) Such other information which may be secured having a bearing on the decision to award the contract.



CONTRACTORS' GROSS RECEIPTS TAX AND PREVAILING WAGE RATES

The bidder understands that, if applicable, all contractors or subcontractors working on a publicly funded construction project are required to pay or have withheld from earnings one percent (1%) of the gross contract price if the gross contract price is Five Thousand Dollars (\$5,000) or more.

The bidder also understands that, if applicable and unless superseded by federal law, Montana law requires that contractors and subcontractors give preference to the employment of Montana residents for any public works contract in excess of \$25,000 for construction or nonconstruction services in accordance with sections 18-2-401 through 18-2-432, MCA, and all administrative rules adopted pursuant thereto. Unless superseded by federal law, each contractor shall ensure that at least 50% of the contractor's workers performing labor on a construction project are bona fide Montana residents. The Commissioner of the Montana Department of Labor and Industry has established the resident requirements in accordance with sections 18-2-403 and 18-2-409, MCA. Any and all questions concerning prevailing wage and Montana resident issues should be directed to the Montana Department of Labor and Industry.

C. Contract Requirements and Specifications

Please see:

- Attachment B for complete Scope of Work, Contract Specifications and Requirements.
- Attachment C for Special Provisions.
- Attachment D for Pool Drawings.



D. Pricing and Addendum

Please bid net prices at which you will agree to furnish required goods or services.

TOTAL BID PRICE - _____ dollars
and _____ (words)
cents (\$_____) (figures)

I/We acknowledge _____ addendum.
#

Company Name

Date

Contact Name (please print)

Title

Signature of Contact Position

By signing the above, I certify that I am authorized by the Company named above to respond to this request.



E. Standard Terms and Conditions

In case of default by the successful bidder or failure to deliver the goods or services within the time specified, the City Purchasing Agent, after written notice, may procure them from other sources and hold contractor responsible for excess costs occasioned thereby.

The specifications attached to the instructions to bidders establish a standard of quality desired by the City of Billings. Any bidder may submit quotations on any article which substantially complies with these specifications as to quality, workmanship and service. The City of Billings reserves the right to make its selections of materials or services purchased, based on its best judgment as to which articles substantially comply with the requirements of the specifications.

No alteration in any of the terms, conditions, delivery, quality, or specifications will be effective without prior written consent of the City of Billings.

No exception to delivery or service dates shall be allowed unless prior written approval is first obtained from the City of Billings.

The contractor warrants all articles supplied under this contract to conform to specifications, herein. The contractor will deliver a warranty stating that all articles supplied under the contract are fit and sufficient for the purpose manufactured, merchantable, and free from defects.

In the event the City is entitled to a prompt payment or cash discount, the period of computation shall commence on the date of delivery, or receipt of correctly completed invoices, whichever is later. If an adjustment of payment is necessary, the discount period shall commence on the date final approval for payment is authorized.

The contractor agrees not to discriminate against any client, employee or applicant for employment or for services, because of race, creed, color, national origin, sex or age with regard to, but not limited to, the following: employment upgrading; demotion or transfer; recruitment or recruitment advertising; layoffs and termination; rates of pay or other forms of compensation; selection for training; rendition of services. It is further understood that any contractor who is in violation of this shall be barred forthwith from receiving awards of any purchase order for the City unless a satisfactory showing is made that discriminatory practices have terminated and that a reoccurrence of such acts are unlikely.

The City reserves the right to cancel and terminate this contract forthwith upon giving 30 days written notice to the contractor. (This provision does not apply to



the purchase of materials and equipment. A purchase order for materials and equipment is a binding contract.)

Should either party employ an attorney or attorneys or utilize the services of in-house attorneys to enforce any of the provisions hereof or to protect its interest in any manner arising under this contract, the non-prevailing party in any action pursued in a court of competent jurisdiction agrees to pay to the prevailing party all reasonable costs, damages, expenses, and attorneys' fees, including fees for in-house attorneys, expended or incurred in connection therewith.

Where applicable, possible or required, bidder is required to submit descriptive literature, sample material, design sketches and detailed shop drawings. Failure to submit required items may result in rejection of the bid or termination of contract.

The successful bidder may not make any advertising or sale use of the fact that contract items are being used by purchaser and other approved agencies, under penalty of contract termination.

This Agreement shall be construed and enforced in accordance with the laws of the State of Montana. Venue for any suit between the parties arising out of this Agreement shall be the State of Montana Thirteenth Judicial District Court, Yellowstone County.

The contractor may not assign or subcontract the agreement, or the right to receive reasonable performance of any act called for by the contract, shall be deemed waived by a waiver by City of a breach thereof as to any particular transaction or occurrence.

Regardless of FOB point, contractor agrees to bear all risks of loss, injury, or destruction of goods and materials ordered herein and such loss, injury, or destruction shall not release contractor from any obligation hereunder.

All materials submitted in response to this IFB become public records under Article II, Section 9 of the Montana Constitution and §§ 2-6-102 and 7-1-4144, MCA and may be distributed by written request pursuant to Montana's Constitutional Right to Know or Public Records Acts.

Information provided in response to this IFB will be held in confidence and will not be revealed or discussed with competitors prior to award of Contract by Council. However, one copy of each bid submitted shall be retained for the official files of the Department and will become public record after award of the Contract.

Records and materials that are constitutionally protected from disclosure are not subject to the provisions of this section.



F. Conditions and Non-Collusion Agreement

To receive consideration, this form must be signed in full by a responsible, authorized agent, officer, employee or representative of your firm.

CONDITIONS AND NON-COLLUSION AGREEMENT

We have read and agree to the conditions and stipulations contained herein and to the Standard Terms and Conditions contained on the attached.

We further agree to furnish the product/services specified at the prices stated herein. We additionally agree to deliver the products/services to the location and by the date set forth herein, if applicable.

In signing this bid, you also certify that you have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition; that no attempt has been made to induce any other person or firm to submit or not to submit a bid; that this bid has been independently arrived at without collusion with any other bidder, competitor or potential competitor; that this bid has not been knowingly disclosed prior to the opening of bids to any other bidder or competitor; that the above statement is accurate under penalty of perjury.

Legal Name of Firm/Corporation

Authorized Signature

Address

Printed Name

City/State/Zip

Title

Date

Telephone Number



G. Intent to Respond Form

Email the following Intent to Respond form to Kory Thomson, Recreation Superintendent within two (2) days of the Bid Opening date of Tuesday, December 7, 2021, even if your company chooses NOT to participate.

To: City of Billings – Parks and Recreation Department
Attn: Kory Thomson, Recreation Superintendent
Phone: 406-657-8376
Email: thomsonk@billingsmt.gov

From: _____ Contact Name

_____ Company Name

_____ Company Address

_____ Email Address

_____ Phone Number

_____ Fax Number

Please indicate whether or not you intend to submit a bid on: **2021 Rose Park Pool PVC Liner Replacement** by checking Yes or No.

We intend to respond by the specified due date:

Yes _____ No _____

_____ Company Name

_____ Date

_____ Contact Name (please print)

_____ Title

_____ Signature of Contact Position

By signing the above, I certify that I am authorized by the Company named above to respond to this request.



H. Questions

Questions regarding this Invitation for Bids must be sent to the contact person listed in Section B no later than 5 business days prior to due date. The City will make every effort to provide a written response within 2 business days. Whenever responses to inquiries would constitute a modification or addition to the original IFB, the reply will be made in the form of an addendum to the IFB, a copy of which will be posted on the City's website and forwarded to all Suppliers who have submitted an "Intent to Respond" form (Section G).

Supplier must submit their questions via email using the "Master Q & A" form found below (Attachment A), and provide, at a minimum, the following:

- Supplier's name, requester, and appropriate contact information.
- The question clearly stated.
- Specific reference to the applicable IFB section(s).



ATTACHMENT A

MASTER Q & A FORM

IFB: Rose Park Pool PVC Liner Replacement

Master Q&A	Any questions regarding this IFB should be submitted according to the process outlined below. The City will make every effort to answer within two (2) days of receiving the questions.
Q&A Process	<ol style="list-style-type: none">1. Prepare questions or concerns on the template provided.2. Complete the table in full, providing a date for each question and a section of the IFB to reference (if applicable).3. Submit the completed form via email to thomsonk@billingsmt.gov. Attach associated documents as necessary. <p>Please contact Kory Thomson, Recreation Superintendent with any questions regarding this process.</p>

Questions from: _____ **Company:** _____

Email Address: _____

#	Date	Reference Section	Question or Comment	City Response
1				
2				
3				
4				



ATTACHMENT B

SCOPE OF WORK, CONTRACT SPECIFICATIONS AND REQUIREMENTS

REINFORCED PVC SWIMMING POOL MEMBRANE SYSTEM

A. SCOPE OF WORK

The scope of work of this project consists of the installation of a reinforced PVC membrane lining system specifically designed and formulated for use in swimming pools. This is to be installed after the existing PVC liner system has been removed and the pool tank surface cleaned and properly prepared. The Contractor shall furnish all labor, materials, equipment, appliances, service and perform the operations as detailed herein to complete the installation of the system in the Rose Park Pool. Since this is a remodel installation, it is the responsibility of the Contractor to locate termination, transition and splices to provide for an aesthetically pleasing and watertight project. Individual rolls of reinforced PVC membrane shall be custom fitted and welded together at the job site using hot air welding techniques. Upon completion, the system shall provide a waterproof, yet flexible membrane, complete with all necessary fittings, attachments, flange transitions and markings.

Actual work on the project shall commence on or after August 29, 2022, with completion expected no later than October 14, 2022.

This specification includes, but is not limited to, the following components:

1. Slip-resistant and regular reinforced flexible PVC membrane – “Renosys” PVC Pool Shell membrane as supplied by Aquatic Renovation Systems, Inc., Natatec Swimming Pool Membrane System as supplied by Natare Corporation, Sarnafil as manufactured by Sarnafil, Inc. or approved equivalent.
2. Separator fleece
3. PVC steel edging & sheets
4. Galvanized steel edging & sheets
5. Sanitizing agents
6. Transition flanges



7. Edge sealants
8. Adhesives
9. Wall and floor patching materials

The complete and functional reinforced PVC membrane system as specified herein and shown on the drawings is intended as the basis for receiving bids. All bids for this project must include the specified systems or approved equivalent as the overall performance of this project has been predicted upon the use of these systems. While it is not the intent of these specifications to, in any way, limit competition or restrict the bidder in the preparation of his bid, it is assumed that by responding to the bid that the bidder is offering products and materials meeting these specifications. Bidders are cautioned that offering products or systems failing to meet these specifications will not be considered.

The individual components and installation criteria described below consists of a complete polyester scrim reinforced PVC membrane liner to be installed in accordance with these specifications and submitted drawings. Material rolls of reinforced PVC membrane shall be custom fit and fuse welded together using hot-air hand welders and machine welders (or preapproved equal). Termination of the PVC system shall occur as shown on the project drawings. Upon completion, the pool lining system shall provide a waterproof lining of the existing pool over the poly felt (poly felt - as required) complete with all necessary hardware, fittings, attachments, flanges, gaskets and all appropriate inside pool markings, as required to meet applicable state pool codes.

NOTE: PRIOR APPROVAL OF A SPECIFIC PVC MATERIAL DOES NOT ALLOW THE INSTALLING CONTRACTOR TO DEVIATE IN ANY MANNER FROM THE SPECIFIED INSTALLATION METHODS AS OUTLINED IN THESE SPECIFICATIONS NOR DOES IT CONSTITUTE ACCEPTANCE OF ANY DEVIATION FROM THIS LEVEL OF QUALITY, OR WARRANTY REQUIREMENTS.

B. SUBMITTALS

1. Shop Drawings: Show fabrication and connection details for all connections to existing pool structure.
2. Provide standard catalogue sheets and installation instructions for each item specified.
3. Provide 2' x 2' samples of PVC Membrane for chemical and UV testing purposes, if required. Include 10.5 oz. felt-as required, PVC coated Stainless Steel, countersunk fastener to be employed at flanges, and



marking samples and a 1'x 1' sample of the adhesive attaching the PVC to the Felt under layer. Also, supply two - 2" x 2" PVC to felt samples for water testing of adhesive bond. Adhesive must hold felt to PVC to felt after a 24-hour water immersion test.

4. Provide written documentation of project foreman certification.
5. Contract Closeout Submittals:
 - a. Provide Care & Maintenance Guide.
 - b. Provide copy of the supplier's 10-year PVC material warranty. Warranty should completely cover the material against leakage, delaminating, bubbling, pitting, shearing, tearing, cracking or crazing or any material workmanship or defects. The warranty must include the above, and include a 10-year weld warranty on all PVC welding including targets, racing lanes and markings. In the event of failure of the lining system, the bidder shall repair and/or replace the damaged section.

C. SYSTEM DESCRIPTION

The system hereinafter specified consists of a complete reinforced PVC membrane lining, installed in accordance with the configuration as detailed on the drawing, including all necessary equipment within the specification.

Individual rolls of reinforced PVC membrane material shall be custom fitted and welded together at the job site using hot air welding techniques. Upon completion, the system shall provide a waterproof, yet flexible membrane, completed with all necessary fittings, attachments, flange transitions and markings. The performance characteristics and installation qualifications as established herein reflect the minimum requirements for any membrane system to be utilized on this project.

Systems not meeting the minimum requirements established for this project will not be considered.

D. SUBSTITUTE SYSTEMS

Any systems other than Renosys, Natatec and Sarnafil, must have prior approval before a bid can be submitted. The approval must be requested in writing 7 days before the bid opening.



E. QUALITY ASSURANCE

The flexible swimming pool membrane system shall be the product of a manufacturer having at least ten (10) years experience in the production of PVC membranes used in swimming pools and at least ten (10) installations of similar size currently in satisfactory operation for at least five (5) years. This is a minimum requirement. Systems not meeting this standard will not be considered.

The foreman provided by the installer shall be certified competent in installing PVC membrane materials by the membrane supplier and shall have a minimum of two years' experience welding PVC membranes for pool applications.

Pre-award material chlorine testing. A 2' x 2' sample of the actual material to be employed on the subject project shall be provided for the purpose of testing prior to project award. Sample shall be subjected to a 24-hour chemical resistance test simulating extreme exposure to 100% powdered tri-chlor chlorine. A small 3" x 3" sample of all products submitted in accordance with these bid instructions shall be placed in a shallow plastic container with water and a ½ teaspoon of 100% tri-chlor in powder form shall be applied to the surface of each material and left undisturbed for a period of 48 hours. Fading, the material condition and durability of the samples shall be evaluated by the owner and shall be used in final evaluation for award. A sample of actual materials employed on the project may also be tested to confirm the material quality of products actually employed.

F. DELIVERY, STORAGE AND HANDLING

All materials required for the completion of this project shall be delivered to the project site in a manner designed to prevent damage. No hooks or forks shall be used for unloading. The contractor shall perform or direct the unloading of all materials. Materials shall be stored in a flat, dry area in a manner that will not damage them. All materials provided are to be new and in unopened packaging.

G. PROJECT SITE CONDITIONS

Project site shall be prepared in accordance with the Manufacturer's technical bulletins. All surface preparation necessary to produce a reasonably smooth, firm, clean and dry surfaces shall be completed prior to the onset of installation. The surface must be free of angular materials, bubbles, voids and large cracks. These irregularities shall be filled with a suitable patching material covered with galvanized sheet. Tar, oil or petrochemical compounds must be removed or isolated. Surface preparation is part of this contract.



H. WARRANTY

The flexible reinforced PVC membrane system shall be guaranteed by the Manufacturer for workmanship, materials and performance for a period of ten (10) years. Additionally the installer shall warrant against delamination of all heat welds for a period of 10 years. This warranty shall cover all labor and material for replacement of any defective materials or work, but shall not include or cover abusive or improper treatment of the system by others during construction or when in use.

The manufacturer will provide a letter acknowledging the installer being used is approved for this project.

I. PRODUCTS

Manufacturers: The three systems specified, Natatec, Sarnafil and Renosys, or approved equivalent may have proprietary components for their systems. All aspects of the liner installation shall be held to the specific requirements of the selected liner system. Any coordination between the liner installation and other components of the project shall be up to the Contractor. No additional cost will be borne by the Owner for modification of any component to accept the selected liner system.

Materials: All individual components utilized to renovate the project pool shall be completely compatible with the pool environment and shall be supplied by one supplier as a system to assure compatibility and to assure a single source of responsibility. All PVC membrane components shall be from the same manufacturer to assure identical formulations, weld compatibility, and to ascertain identical product molecular weights. Material shall possess an embossed standard slip-resistance throughout the pool to provide slip-resistance to pool bathers or as required by the owner. An extra aggressive slip-resistant material on steps, gutters, ramps and zero depth entry areas up to water depth minimum of 24" deep.

Material Specifications shall be provided meeting or exceeding the following Physical Properties of the specified system.

Description: Polyester reinforced PVC membrane pool membrane system. Provide membrane with a ten (10) year warranty.

Compound: Maximal UV resistance, chlorine impervious PVC compounded for the pool environment. Product shall be compounded with permanent dyes, permanent plasticizers, UV inhibitors, and antifungal agents.



Reinforcement: Non-wicking Polyester scrim fabric 1000 Denier yarn 9X9 per inch count.

Chemical and Physical Properties

Property		Machine Direction Transverse Direction	Test Method	Result
Thickness			ASTM D-751	60 mil.
Break Strength	@ Yield (lbs in)	MD	ASTM D-751	220
	@ Yield (lbs in)	TD		161
	@ Break (lbs in)	MD		117
	@ Break (lbs in)	TD		85
	@ Yield (lbs in)	MD	ASTM D-751	418
	@ Yield (lbs in)	TD		328
	@ Break (lbs in)	MD		375
	@ Break (lbs in)	TD		345
Tear Resistance	(lbs)	MD	ASTM D-751	85.0
Fungal & Bacterial Resistance		TD	ASTM G-21	No growth or staining
Cold Flex Resistance	1/8" Mandrel		ASTM D-2136	Pass -40° C
Ply Adhesion	(lbs) Method type A		ASTM D-413	10
% Dim. Stability	(15 min. 212 Deg.)	MD	ASTM D1204	2.0%
Volatility	% weight loss, max.	TD	ASTM D-1203	< 1%
Specific Gravity			ASTM D-752	1.235
Water Resistance	% weight loss, max.		ASTM D-1239	+0.3%
Puncture Resistance	(lbs. min.)		ASTM D-4833	135
Delamination Resistance	(lbs. in)	MD		12.0
UV Resistance	(% retained after exposure)		ASTM D-4355	100

Testing Agency: ASTM - American Society for Testing and Materials

Test Method Definitions: MD - Machine Direction; TD - Transverse Direction

J. COMPONENTS

1. Pool lining membrane shall be rolls of flexible 81" wide, x 25 meters long x 60 mil thick 100% virgin PVC material fully UV and chlorine stabilized, reinforced with a wick proof scrim. Reinforcing scrim shall consist of a tightly woven polyester 9 x 9 thread spacing per inch, 1,000-denier thread for tear and puncture resistance. To prevent material delamination due to freezing conditions, this scrim shall be offset approximately ¼" from the edge and shall be fully machine edge encapsulated. The scrim shall be kept from contacting the pool water along the machine edge of the material to prevent moisture seeping between the layers. The material shall be applied with a slip-resistant/textured side "out" as required by the owner. The floor area, the gutter perimeter, ramps and step areas to provide with a slip-resistance. All welds shall be accomplished employing hot air welding. No solvent welding of PVC materials shall be allowed on this project. No double stick Mylar or other tapes are permitted under the liner on this project unless pre-approved. Seams shall be tacked, a continuous air entrapment weld shall be applied continuous on all welds,



and then a minimum 3/4" wide final weld shall be installed. No burning of the material shall be permitted.

2. Racing lanes, targets and marking strips shall be provided by the supplier and colored black on the textured side and light blue on the reverse side to prevent black bleeding along the weld zone. All markings shall be as per local pool state code requirements. The cost of providing and installing material for marking eight (8) lanes in the 50 meter dimension shall be included in the bid item
3. An anti-microbial product fully compatible with the PVC membrane shall be sprayed or rolled on under the felt (felt-as required) material to discourage microbial growth under the system.
4. Adhesives that are not weakened when exposed to water immersion and that are fully compatible and suitable for bonding to the PVC material and the felt layer shall be provided that are designed to chemically bond to the PVC material and to fully attach the Geotextile fabric to the pool walls (and floor where required).

NOTE: ALL WALLS AND DIVE HOPPER AND THREE FOOT OF PERIMETER SHALL BE ADHERED OVER POLY FELT – IF REQUIRED.

All poly felt is to be bonded to the pool. Additionally all PVC material employed on all pool walls and in dive hoppers shall be fully adhered as a condition of these specifications. Any adhesives that are water-soluble shall not be allowed under the scope of these bid documents to prevent the Geotextile fabric from shifting under the membrane. PVC adhesive shall be further designed to be resistant to Plasticizer migration. Adhesive on project shall be water impermeable only. No tacking of the PVC wall and floor sections to PVC metal strips is intended under this base bid specification. Alternate non-adhered systems may only be bid as an alternate to the base bid.

5. The interior surfaces of the swimming pool shall be covered with an engineered polyester fleece separator, a minimum of 150 mils in thickness, weighing at least 10.5 ounces per square yard. The fleece separator must be resistant to freeze thaw, moisture, soil-chemical abrasion, or ultraviolet deterioration and shall conform strictly with the following chemical and physical properties. All fleece separators shall be certified and guaranteed to be free of foreign materials, which could potentially be damaging to the liner.

Chemical and Physical Properties

Weight	10.5 oz/sq. yd.	(ASTM D-3776)
Thickness	150 mils	(ASTM D-1 777)



Grab strength	390/330 lbs.	(ASTM D-4632)
Grab elongation	75/85%	(ASTM D-4632)
Trapezoid tear strength	135/120 lbs.	(ASTM D-4533)
Puncture resistance	155 lbs.	(ASTM D-3787)
Mullen burst strength	550 psi	(ASTM D-3786)
Water flow rate	100 gpm/ft	
Permeability	0.52 cm/sec	

6. PVC coated Stainless Steel or aluminum metal shall be installed where detailed or as required to make for a satisfactory installation. Galvanized PVC coated steel shall not be acceptable for use on this project.
7. Trim away poly felt and compress liner around perimeter as detailed in the accompanying installation details.
8. Flanges at all penetrations shall be constructed of Type I Exterior grade Hard PVC Sheet and CNC custom fabricated, radius, and drilled as required for use at all membrane penetrations. Flanges will be custom fabricated to fit as close to existing pool fittings as is practical and possible based on substrate conditions around penetrations. All bolts used to fasten any compression bar shall be countersunk to allow for a flush installation. All metal fasteners employed shall be of 18-8 stainless steel.
9. 4" to 6" wide plastic or stainless steel 25-gauge plate shall be fastened on one side to the sub-straight over all active expansion joints and working cracks. Galvanized steel shall not be acceptable.
10. Caulking shall be installed where required by installation details, and shall be underwater grade caulk or prior approved equal. Caulking shall only be used at pool penetrations and terminations and shall not be employed for joining seams.
11. Membrane supplier shall provide complete care instructions, PVC underwater patch kit, warranty certificate and 100 square foot of liner material. Owner's agent is also to be trained in the proper method of repairing the membrane underwater as a part of this installation. The warranty shall be a dual warranty from the manufacturer for a 10-year material warranty and the supplies for a 10-year warranty. Both warranties shall completely cover the material against leakage, delamination, bubbling, pitting, shearing, tearing, cracking or grazing or any material workmanship or material defects.

K. EXECUTION

Examination: Installation crew shall inspect the pool surface at the beginning of the project and shall advise owner as soon as practicable of any existing conditions which might affect the satisfactory installation of the pool membrane.



lining product.

Preparation: The surface shall be reasonably smooth without oil or tar-based materials present. Deteriorized surfaces or voids shall be filled with cementitious patching compounds or covered with galvanized steel sheet and/or moisture proof composition board. Areas immediately surrounding fittings, lights and other transition or entrances to the pool, shall be sound and suitable for drilling of 1/2" diameter anchor holes for the installation of PVC or stainless steel compression flanges.

Installation and Application: Installation shall be performed by installers certified competent by the supplier whose experience is fully in compliance with the terms of these specifications. The PVC membrane installation shall be completely supported by the structural walls in all respects. The material shall be completely supported by structural walls at all corners and wall/floor junctures before the pool is filled. Due to the inordinate stress induced at seams and fittings by water pressure, in no case shall gaps, voids or spaces be allowed behind the membrane before water is added. Stretch fitting the PVC membrane material will not be allowed.

The installation procedures employed in the execution of this project are to be fully in accordance with the supplier recommendations and current Technical Data. If any terms or conditions of this contract contradict recommended procedures of the manufacturer or supplier, work will supersede those contradictions and will remain in accordance with the manufacturer and supplier requirements. However, should an alteration be required, then a written notice for any variances from these specifications must be provided to the project owner in advance of any such actual work being performed in the field.

The work to be performed as follows:

1. Prepare pool surface as per specifications and suppliers recommendations.
2. Span any cracks or voids with Stainless Steel sheet 25-gauge or 1/16th inch hard plastic plate and pinned into place with appropriate fasteners.
3. Apply sanitizing agent.
4. Apply adhesive to pool walls.
5. Apply felt to pool walls and floors with additional adhesive.

6. Install stainless steel termination flange, if necessary, around stainless steel perimeter recirculation system.
7. The flexible reinforced PVC membrane shall be securely welded to membrane strips or PVC coated steel, which has been attached to the pool surface with straddling rivets approximately 4" on center.
8. Install PVC coated steel or shaped galvanized sheet as necessary to form angles, edges, corners, or other transitions.
9. Weld the flexible reinforced PVC membrane in accordance with the procedures established by the manufacturer. The joints shall be hot air welded with a minimum of two (2) inches of overlap. The swell agent welding may be used to join seams or fix strips to areas with cannot be easily hot air welded. Probe all seams with a hand held lance or air lance to ensure complete welding. Completely close the seam edge using a PVC edge sealing compound color coordinated to match the membrane material.
10. All seams in the membrane shall be one-piece, single overlap seams. Patching and overlaying of multiple layers of the membrane material is not acceptable. All material sections are to be applied in full roll widths and lengths except where pool conditions dictate otherwise. No scrap or short-roll material is to be utilized in the membrane installation. To minimize visible seams, the membrane is to be applied to the pool walls in horizontally oriented sheets. Applying the membrane to the pool walls in vertically oriented sheets is not acceptable. Any areas of the membrane which are damaged during installation are to be completely removed and replaced with new material. There are to be no visible patches on the completed liner.
11. Apply special markings, targets, lines, etc., as indicated on the drawings or as specified. The owner's representative is to provide detailed instructions as to necessary markings.
12. After installation of the PVC membrane, caulk all transitions to flanges or other construction materials, utilizing silicone based caulking suitable for submerged application, and compatible in color and composition with the flexible reinforced PVC membrane. Thoroughly clean and prime all joints.
13. All inlets, outlets, drains, stanchion posts, and other required membrane penetrations shall be fitted with rigid PVC compression flanges securely anchored to the pool structure to ensure a



watertight seal. The “wrapping and clamping” of the membrane material around stanchion posts, ladder rails, and other protrusions though the membrane will not be considered acceptable. Only rigid compression flanges shall be utilized for every penetration.

14. The PVC membrane shall be continuous throughout recessed steps and any other recessed areas in the pool wall. Compression flanging around recessed steps will not be considered acceptable.

Field Quality Control: Limit access to project site to minimize possibility of damage to the membrane. Materials and equipment shall not be dragged across the surface of the liner or allowed to slide down slopes. All parties working on the liner shall wear soft-soled shoes. Immediately following installation, verify completion and testing of all seams. Retesting may be necessary to insure complete sealing.

Cleaning and Demonstration: After installation is complete, “Broom” clean all surfaces. Remove all scraps, debris or construction material. Instruct Owner in proper care and maintenance of system.

Operation and Maintenance Manuals: Upon acceptance by the Owner, the Contractor shall furnish 2 copies of bound operation and maintenance manuals which fully details the proper operation of maintenance techniques.



ATTACHMENT C

SPECIAL PROVISIONS

This section of the Contract Documents covers special conditions applicable to this project that are not covered by the General Notes on the plans. In case of conflict between the Special Provisions and the project plans, Special Provisions shall govern.

Work to be performed under the provisions of these specifications consists of furnishing all materials (except as noted in the Special Provisions), equipment, tools and labor; for performance of all necessary installation and the construction complete, including all work appurtenant thereto, as detailed and specified herein.

Any subsequent addenda issued after these documents have been prepared shall supplement and/or supersede any article of the specifications.

1. GENERAL DESCRIPTION OF THE WORK:

Renovations to the existing 50-meter T shaped pool PVC liner system by removing the existing lining system, fasteners and miscellaneous attachments; then installing a new PVC pool membrane and all miscellaneous and incidental items necessary thereto for a complete installation.

2. PROJECT SAFETY:

CONTRACTOR IS SOLELY RESPONSIBLE FOR PROJECT SAFETY AND ADHERENCE TO O.S.H.A. AND OTHER APPLICABLE SAFETY, HEALTH, AND SANITATION STANDARDS.

This requirement will apply 24 hours per day until acceptance of the work by Owner and shall not be limited to normal working hours.

3. STANDARD CONSTRUCTION SPECIFICATION:

Standard Construction Specifications referred to for this project shall be the "Montana Public Works Standard Specifications" (MPWSS), https://www.mdt.mt.gov/business/contracting/standard_specs.shtml including any Amendments, which are hereby incorporated into this contract by reference.



4. CONTRACT TIME:

The construction / demolition cannot start until the swimming pool is closed for the season; which is typically the end of August.

Contract time shown in the Agreement is based on a calendar date to complete the work and contract days will be determined from Notice to Proceed to the specified calendar date. No allowance has been made for holidays or Saturdays and Sundays and no work shall be done between the hours of 6:00 p.m. and 7:00 a.m. without written approval of the City. Time is measured in the number of days commencing with the date of delivery of the notice to proceed, given in accordance with the requirements of the contract documents.

In the event inclement weather or aftermath of inclement weather prevents Contractor from performing the sequence of operations that should be in progress at that time for a minimum of sixty (60) percent of the normal daily schedule being worked, he may make a written request for a credit for that day. No credit will be allowed for inclement weather on holidays, Saturdays, Sundays, or after the contract time has expired.

5. INSPECTION BY PUBLIC OFFICIALS:

Authorized representatives of the City of Billings, Yellowstone County Health Department, and the Department of Public Health and Human Services shall have access to the work whenever it is in progress. Contractor shall provide proper facilities, equipment, and safety measures for safe access and inspection by authorized representatives of these agencies.

6. ACCIDENTS:

Contractor shall provide at the site such equipment and medical facilities as are necessary to supply first aid service to anyone who may be injured in connection with the work.

Contractor must promptly report in writing to Owner all accidents arising out of, or in connection with, the performance of the work, whether on or adjacent to the site which caused death, personal injury, or property damages, giving full details and statements of witnesses. In addition, if death or serious injury or serious damages are caused, the accident shall be reported immediately by telephone or messenger to Owner.

If any claim is made by anyone against Contractor or any Subcontractor on account of any accident, Contractor shall promptly report the facts in writing to Owner, giving full details of the claim.



7. SURFACE DRAINAGE:

During the construction operations, Contractor shall be responsible for all diversions, routings, and handling of flows from existing surface drainage, which may affect the work.

This requirement will apply 24 hours per day until acceptance of the work by Owner and shall not be limited to normal working hours.

8. RESTORATION OF PROPERTY:

Contractor shall restore all property to the condition, or better, existing at the time he entered onto the property. Such restoration work shall include, but not be limited to, fences, mailboxes, buildings, driveways (graveled, concrete, or a/c pavement), sidewalks, and curbs. Restoration work will be done to the satisfaction of the City.

9. CLEANUP:

Contractor shall be responsible for removing all excavation debris during the project. Sidewalks shall be swept following completion of the project. Final payment will not be made until site is cleaned up and swept to the satisfaction of the City.

10. UTILITIES:

Contractor is solely responsible for locating all existing utility installations above and below ground, including service connections, in advance of the project by contacting their respective owners. Any delay, additional work, or extra cost to the Contractor caused by an existing utility installation shall not constitute a claim for extra work, additional payment, additional time, standby time, or damages. This includes crossing over or under and parallel to the utility.

Assume responsibility for all City water mains and services, sanitary sewer mains and services, and storm drains located within 50 feet of the project area that is or has been under construction. The period during which the Contractor assumes responsibility for these utilities begins when excavation commences and ends when the two year warranty expires.

11. DE-WATERING:

Suitable facilities shall be provided for proper de-watering, drainage, and disposal of all water removed from the de-watering process without damage to adjacent property. De-watering shall be considered as incidental to the work.



Cost for de-watering and permits will not be paid separately, but shall be merged with applicable bid items.

12. MINIMUM WAGE RATES:

State of Montana Prevailing Wage Rates for Heavy Construction included in the front-end documents are in effect for this contract.

13. SALVAGED MATERIALS:

All material will be the Contractor's to either properly dispose of or salvage for his use. No construction demolition debris or construction materials shall remain on the site.

14. PROTECTION OF TREES / SUBSOIL / TOPSOIL:

Contractor shall be responsible for the prevention of damage to trees located within or infringing on the public right of way and properties. Contractor shall avoid driving or working on the root zone area of trees to prevent excessive compaction of the soil. Nails, bolts, or other fastening materials shall not be imbedded into the trunk or limbs of a tree. Ropes, wires, or other hanging materials shall not be attached to a tree in such a manner that the bark may be damaged or cause undue stress to the plant structure.

Any overhanging branches or underlying roots which may be crushed, scarred, broken, or damaged in any way due to unavoidable construction activity shall be reported to the City Forester prior to construction so that preventive action may be taken to minimize tree damage. Any trees damaged shall be the responsibility of Contractor to repair or replace as determined by the City Forester and the valuation shall be determined by "Landscape Trees, Shrubs and Other Plants," published by International Society of Arboriculture.

15. SPRINKLER SYSTEMS:

Contractor shall become aware of any sprinkler systems. Contractor shall be responsible for the prevention of damage to sprinkler systems located outside the construction area. Any damage to the sprinkler system caused by the construction activity outside of the designated project area by the Contractor or damage to the work caused by the sprinkler systems shall be the remedial responsibility of Contractor.



16. MOBILIZATION:

The work shall consist of the mobilization of the Contractor's forces and equipment necessary for performing the work required under the contract.

It shall include the purchase of contract bonds; transportation of personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary facilities at the site, and other preparatory work at the site.

It shall not include mobilization for any specific item of work for which payment for mobilization is provided elsewhere in the contract.

The specification covers mobilization for work required by the contract at the time of award. If additional mobilization costs are incurred during performance of the contract as a result of changed or added items of work for which the Contractor is entitled to a price adjustment for the items of work changes or added.



ATTACHMENT D

POOL DRAWINGS

CONSTRUCTION PLANS FOR ROSE PARK POOL LINER REHABILITATION		DRAWN BY: ABB DESIGNED BY: ABB REVISION: 1 JOB NO.: 71-8-27 REVISIONS:																												
CITY OF BILLINGS BILLINGS, MONTANA MARCH 2011																														
BILLINGS PARKS, RECREATION & PUBLIC LANDS ADVISORY BOARD																														
<table><tbody><tr><td>TOM HANL</td><td>MAYOR</td></tr><tr><td>MARK MATTAKER</td><td>RECREATION, & PUBLIC LAND DIRECTOR</td></tr><tr><td>JON THOMPSON</td><td>PARK SUPERINTENDENT</td></tr><tr><td>JOE FEDIN</td><td>RECREATION SUPERINTENDENT</td></tr><tr><td>KORY THOMPSON</td><td>RECREATION SUPERVISOR</td></tr><tr><td>TOM IVERSON</td><td>CHAIRPERSON</td></tr><tr><td>RACHEL COX</td><td>VICE CHAIRPERSON</td></tr><tr><td>MARGY BONNER</td><td>BOARD MEMBER</td></tr><tr><td>RICK D'VORE</td><td>BOARD MEMBER</td></tr><tr><td>DAWNA DURGE</td><td>BOARD MEMBER</td></tr><tr><td>GARY GRAY</td><td>BOARD MEMBER</td></tr><tr><td>CATHERINE GROTT</td><td>BOARD MEMBER</td></tr><tr><td>TODD ROYALS</td><td>BOARD MEMBER</td></tr><tr><td>DAVE WILLIAMS</td><td>BOARD MEMBER</td></tr></tbody></table>			TOM HANL	MAYOR	MARK MATTAKER	RECREATION, & PUBLIC LAND DIRECTOR	JON THOMPSON	PARK SUPERINTENDENT	JOE FEDIN	RECREATION SUPERINTENDENT	KORY THOMPSON	RECREATION SUPERVISOR	TOM IVERSON	CHAIRPERSON	RACHEL COX	VICE CHAIRPERSON	MARGY BONNER	BOARD MEMBER	RICK D'VORE	BOARD MEMBER	DAWNA DURGE	BOARD MEMBER	GARY GRAY	BOARD MEMBER	CATHERINE GROTT	BOARD MEMBER	TODD ROYALS	BOARD MEMBER	DAVE WILLIAMS	BOARD MEMBER
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APPROVED:																														
BY: BRIAN R. MILNE, P.E. PROJECT ENGINEER																														
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INDEX OF SWIMMING POOL DRAWINGS																														
SEQUENCE NUMBER	SHEET NUMBER	COVER SHEET																												
1	2	EXISTING POOL & DEMOLITION PLAN																												
2	3	NEW POOL LAYOUT PLAN																												
3	4	POOL CROSS SECTIONS																												
4	5	DETAILS																												
Interstate Engineering Inc. 1100 19th Street, Suite 200 Billings, MT 59102 (406) 248-1000 (800) 338-1000 Fax: (406) 248-0518 www.interstateeng.com																														
1 SHEET NO.																														







