

**LEASE OF RUBBER DAM BODIES FOR TEMPE TOWN LAKE**

This Lease is entered into as of April 22, 2009 (the "Effective Date") between **BRIDGESTONE INDUSTRIAL PRODUCTS AMERICA, INC.**, a Delaware corporation ("BIP") with its principal place of business at 402 BNA Drive, Suite 212, Nashville TN 37217, and the **CITY OF TEMPE**, a political subdivision of the State of Arizona ("City").

**BACKGROUND:**

A. Tempe Town Lake (the "Lake") is located in the riverbed of the Salt River in Tempe, Arizona. The water forming the Lake is contained by four cylindrical, inflatable rubber dam bodies ("RDB's"), on the downstream side and four cylindrical RDB's on the upstream side, all of which were sold by BIP to the City.

B. The ten-year manufacturer's warranty for the existing RDB's will expire June 1, 2009.

C. The City intends to replace the four downstream RDB's with a dam system of different design, but the time required to design, acquire, and install the new dam system exceeds the warranty period of the downstream RDB's.

D. BIP is discontinuing its business of selling RDB's as BIP's supplier decided to withdraw from rubber dam business. Nevertheless, for the purpose of supplying replacements for the downstream RDB's required by the City, BIP's supplier is willing to temporarily keep its manufacturing facility open, manufacture four replacements for the downstream RDB's (the "Replacement RDB's"), and lease to the City the four Replacement RDB's for a five-year period on the express condition that the Replacement RDB's be retired and removed by the City by the end of that five-year period regardless of whether the new dam system for the Lake has been constructed by that date.

**THEREFORE**, in consideration of the foregoing and the terms and conditions of this Lease, BIP and the City agree as follows:

1. **Incorporation of Recitals.** The recitals contained in the "Background" section above are incorporated by this reference and both BIP and the City acknowledge that they are correct.

2. **Manufacture and Delivery of Replacement RDB's.**

(a) BIP shall have the Replacement RDB's manufactured and shall use commercially reasonable efforts to cause them to be delivered to Tempe, at a location adjacent to Tempe Town Lake as designated by the City, in accordance with the delivery schedule attached as Schedule A. The Replacement RDB's will be shipped DDP Tempe, so BIP shall bear all shipping costs and customs duties. Upon request from time to time, BIP shall provide updated information of scheduled dates of delivery.

(b) Except as otherwise specifically provided in this Agreement, the Replacement RDB's shall conform to the specifications attached as Schedule B (the "Specifications"). The Replacement RDB's will not contain embedded ceramic chips. The

designed height of the Replacement RDB's with standard internal pressure under the Specifications is approximately eleven inches lower than that of the corresponding existing downstream RDB's. The maximum internal pressure of the Replacement RDB's shall be 85% of the upstream water head, similar to the current pressure of the existing downstream RDB's.

### 3. Installation of Replacement RDB's.

(a) Except as otherwise provided in Section 3(c), City shall be solely responsible for causing the removal of the existing downstream RDB's and the installation of the Replacement RDB's. Without limiting the foregoing, the City, at the City's sole cost and expense except as otherwise provided in Section 3(c):

(i) shall obtain any permits or approvals necessary for the work, including any permits or approval required by the Clean Water Act or other federal law;

(ii) shall cause any design work necessary for the removal and replacement to be performed;

(iii) shall engage a qualified, licensed general contractor to perform the removal and replacement;

(iv) shall manage the water in the Lake, including without limitation installation of cofferdams to isolate the work area for each RDB replacement; and

(v) shall cause the planned pedestrian bridge and its construction not to interfere with the removal and replacement.

(b) BIP shall cause the Replacement RDB's to be manufactured and delivered in the order to be later agreed by City and BIP. BIP shall not be deemed a general contractor or subcontractor with respect to the replacement of the RDB's.

(c) BIP shall contribute up to \$3,000,000 to the cost of removal of the existing downstream RDB's and installation of Replacement RDB's (the "**Installation Allowance**"). Within sixty days after receipt of reasonable supporting documentation for the amounts spent by the City for removal of the existing downstream RDB's and installation of the Replacement RDB's, BIP shall pay to City the lesser of the Installation Allowance or the actual costs of such removal and installation.

4. **Manufacturer's Technical Support.** During the installation of the Replacement RDB's, upon request by the City, BIP shall provide a representative to be available to confer with the general contractor and provide technical support and information related to the RDB's as may be reasonably required. BIP shall not thereby assume any responsibility whatsoever for any aspect of the removal and disposal of the existing RDB's or the installation of the Replacement RDB's, all of which responsibility shall be borne solely by the general contractor or the City. Subject to Section 3(c), the City shall pay to BIP the reasonable out-of-pocket cost, including travel expenses, of the technical support provided pursuant to this Section plus a daily rate of \$1,000 per day for any BIP personnel involved in the technical support at the site.

5. **Lease of Replacement RDB's.**

(a) BIP hereby leases to the City, and the City hereby leases from BIP, the four Replacement RDB's to be supplied pursuant to this Lease for a term (the "Term") commencing on the Effective Date and expiring five years and sixty days after the delivery of the fourth and final Replacement RDB in accordance with this Agreement (the "Expiration Date"), subject to the provisions of Sections 10 and 11.

(b) The Replacement RDB's are personal property, and title to the Replacement RDB's shall remain in BIP, regardless of the manner in which the RDB's are attached to the dam structure and the underlying real property, until they have been removed and altered or destroyed pursuant to Section 10(a), at which time title shall pass to the City.

6. **Rent.**

(a) Beginning sixty days after the date of delivery of the fourth and final Replacement RDB in accordance with this Agreement (the "Rent Commencement Date"), City shall pay to BIP, without notice or demand, in monthly installments, in advance, on or before the first day of each calendar month, monthly rent for the Replacement RDB's (the "Rent") in the amount of \$1. The Rent shall not otherwise abate under any circumstances. At City's option, Rent for the entire Term may be paid in advance. Promptly following the delivery of the fourth and final Replacement RDB, BIP and the City shall execute a written memorandum confirming the Rent Commencement Date and the date of expiration of the Term.

(b) If any sales, use, rental, transaction privilege, or other excise tax is levied or imposed upon, or measured by, any amount payable by the City under this Lease, City shall reimburse BIP for such tax at the same time as payment is made of the amount to which the tax relates.

(c) If any personal property or other tax is levied or imposed against the Replacement RDB's, City shall reimburse BIP for all such taxes within sixty days after receipt of an invoice and reasonable supporting documentation.

(d) This is intended to be a "net lease". Except for the specific obligations undertaken by BIP pursuant to Sections 3(c), 7, 8(a), and 8(d), all costs and expenses associated with the Replacement RDB's shall be borne entirely by the City.

7. **Warranty Against Defects.** BIP warrants only that during the Term the Replacement RDB's will be free from manufacturing defects. BIP's obligation pursuant to the foregoing warranty shall be limited to the repair or replacement of the defective Replacement RDB, or reimbursement of the cost, at BIP's discretion. BIP's reimbursement liability, however, shall under no circumstances exceed \$500,000. Subject to the foregoing express warranty, the Replacement RDB's are leased "as is" and neither BIP nor the manufacturer of the Replacement RDB's makes any warranty, express or implied, with respect to the Replacement RDB's, including without limitation any warranty of merchantability or fitness for a particular purpose.

**8. Maintenance.**

(a) During the Term, City shall be solely responsible for maintenance and repair of the RDB's, including both existing RDB's and the Replacement RDB's. BIP shall provide to the City recommendations with respect to maintenance. The City shall make no repairs without notifying BIP, and BIP may assist, but shall be under no obligation to assist, the City with all repairs to an RDB. City shall pay to BIP the reasonable out-of-pocket cost to BIP of any repairs made pursuant to this Section plus a daily rate of \$1,000 per day for any BIP personnel involved in the repair.

(b) City acknowledges and agrees that because the manufacturer of the Replacement RDB's will no longer be in the business of manufacturing or servicing RDB's, soon after commencement of the Term BIP and such manufacturer may no longer have the personnel or expertise necessary to repair RDB's or to advise or assist the City with respect to any required repair or RDB maintenance. Any such failure to continue to possess such personnel or expertise or to provide assistance in connection with any repair shall not be a breach of this Lease by BIP.

(c) The City shall regularly inspect the existing RDB's and the Replacement RDB's in accordance with the operating manual.

(d) Without limiting the City's obligations under Section 8(a), the City, at City's sole expense, shall cause to be maintained, operated and replaced as necessary a permanent sprinkler system that will continuously until the end of the Term keep all exposed surfaces of the existing RDB's and of the Replacement RDB's wet for the purpose of substantially reducing the temperature of the RDB's, thereby slowing the degradation of the rubber material from heat and solar radiation. BIP, at BIP's sole expense, shall design and install the sprinkler system for the existing RDB's with a target date of May 1, 2009, and the City shall cooperate with such installation. The sprinkler system for the Replacement RDB's shall be installed (or components of the sprinkler system for the existing RDB's shall be removed and reinstalled, as the case may be) by the City as part of the installation of the Replacement RDB's pursuant to Section 3.

(e) BIP shall have the right from time to time to inspect, test, and take samples from the existing or Replacement RDB's for research purposes and in order to monitor their condition. BIP shall not damage the RDB's in the course of such inspections, testing, or sampling.

**9. Operation and Control.**

(a) The RDB's and the Lake shall at all times be under the sole operation and control of the City. The existing downstream RDB's and the Replacement RDB's shall be operated with an internal air pressure not greater than that provided in Section 2(b).

(b) BIP strongly recommends that the City conduct a study to evaluate the adequacy of safety measures utilized in and around the Lake to prevent injury and reduce the risk of loss of life in the event of rapid deflation in one or more of the RDB's, including an evaluation of the advisability of placing one or more buoy lines, safety nets, increased signage, or other

enhancement of the alarm systems around the Lake or other measures that may be advisable for the safety of users on the Lake. Further, BIP recommends that the City not reduce the size of the safety exclusion zone located upstream from the existing and Replacement RDB's, which presently is approximately 1,300 feet from the downstream RDB's.

**10. Removal by End of Term or on Earlier Termination of This Lease.**

(a) City covenants that the Replacement RDB's shall be decommissioned and removed by the City not later than the end of the Term, or upon any earlier termination of this Lease as provided herein, regardless of whether the new dam system for the Lake has been constructed and completed. Decommissioning and removal shall be performed at the City's sole expense. Any salvage value of the Replacement RDB's shall belong to the City; provided, however, once the RDB's are removed they must be physically altered, subject to BIP's confirmation so that they could never be used again as an RDB.

(b) The project schedule for design and construction of the new dam system, including all steps necessary to the contract procurement process, is attached as Schedule C (the "Dam Replacement Schedule").

(c) If the City fails to abide by the Dam Replacement Schedule and BIP reasonably concludes that such failure will result in the new dam system not being constructed and completed and the Replacement RDB's not being decommissioned and removed by the City by the end of the Term, then:

(i) BIP shall be entitled, at City's expense, to apply for and prosecute the issuance of all federal, state and local permits and approvals that will be necessary for BIP to lawfully exercise the self-help rights described in Section 10(d)(i), including without limitation fees of engineers, consultants and attorneys, filing fees, and costs of preparing any required applications, studies, or reports;

(ii) City shall reimburse BIP for all such costs within sixty days after receipt of an invoice and reasonable supporting documentation;

(iii) City shall extend its full cooperation with BIP's efforts to obtain such permits and approvals.

(d) If the Replacement RDB's have not been removed by the end of the Term or upon any earlier termination of this Lease, then:

(i) BIP shall be entitled, but shall not be obligated, to remove and dispose of the Replacement RDB's at City's expense and to perform such other work and take such other actions as may be necessary to perform or facilitate such removal, including, without limitation, obtaining any necessary permits or approvals, draining the Lake, establishing and enclosing a reasonable staging area for such work adjacent to the Lake or riverbed, and using such reasonable means of construction access as may be required;

(ii) City shall reimburse BIP for all such costs within sixty days after receipt of an invoice and reasonable supporting documentation; and

(iii) Until such time as either the City or BIP has completed decommissioning and removal of the Replacement RDB's, the City shall continue to pay monthly Rent, but the amount of the monthly Rent for the period following the Expiration Date shall be increased to \$300,000.

11. **Damage to RDB's**

(a) All risk of loss to the RDB's and related structures shall be borne solely by the City. If any of the Replacement RDB's is lost or is damaged beyond reasonable repair by any cause whatsoever, including without limitation flood, fire, earthquake other natural casualty, vandalism, or terrorist act, under no circumstances will BIP or BIP's supplier be obligated to provide to the City a Replacement RDB, once the Replacement RDB's have been manufactured and delivered. In such case:

(i) the City shall proceed promptly to remove and dispose of all of the Replacement RDB's with all due diligence and in accordance with applicable law, and if the City fails to do so, BIP shall have the remedies set forth in Section 10(d);

(ii) the City shall continue to pay the Rent until the date (the "**Removal and Disposal Date**") that the removal and disposal are completed;

(iii) upon completion of such removal and disposal, and payment of all accrued Rent, this Lease shall terminate and both parties shall be released from all further liability and obligation hereunder.

12. **Claims by Third Parties.**

(a) At the City's option:

(i) The City shall cause BIP to be included with the protection afforded insureds under the City's liability risk management program against claims by third parties for death, bodily injury, personal injury, or property damage arising from the operation of or failure of the Replacement RDB's; or

(ii) The City shall procure and maintain a commercial general liability insurance policy insuring BIP as the named insured, with policy limits not less than \$25,000,000 per occurrence and \$50,000,000, annual aggregate; or

(iii) BIP shall procure the insurance coverage described in Section 12(a)(ii) and the City shall reimburse BIP for all premium costs within sixty days after receipt of an invoice and reasonable supporting documentation.

(b) If the City fails to give notice of which option it has selected, it will be deemed to have elected to provide protection against third-party claims pursuant to Subsection 12(a)(i). The City may change its election at any time upon not less than thirty days prior written notice to BIP. Upon request from time to time, the City shall provide written confirmation, in the form of an insurance certificate or otherwise, that insurance coverage for BIP in the form elected by the City as provided above is in force.

13. **Property Insurance.** The City, in the City's sole discretion, may elect to procure and maintain property insurance insuring the Replacement RDB's against loss or damage. The cost of any such insurance shall be borne by the City and any proceeds of any such insurance shall be paid to and controlled by the City. BIP hereby assigns to the City any interest that BIP may have in any such insurance proceeds.

14. **Financing Statement.** BIP and the City shall execute and file a UCC-1 financing statement for the purpose of providing public notice of BIP's interest in the Replacement RDB's.

15. **Alterations.** Prior to their removal at the end of the Term, the City shall make no alterations to the Replacement RDB's without BIP's consent.

16. **Default by BIP and the City's Remedies.**

(a) In the event BIP fails to deliver any Replacement RDB's as provided in Schedule A, BIP shall not be liable for damages; provided, however, if the final Replacement RDB has not been delivered within nine months after the scheduled delivery date under Schedule A, then the City may exercise any available remedies at law or in equity.

(b) In the event of any other breach of this Lease by BIP that continues for more than thirty days following written notice from the City, the City shall be entitled to exercise all of its remedies at law or in equity, excluding, however, any right to terminate this Lease.

17. **Default by the City and BIP's Remedies.**

(a) In the event of a default by the City with respect to any of its obligations under Section 8 that continues for more than thirty days following written notice from BIP, BIP shall be entitled (but shall not be obligated) to perform the obligation on the City's behalf and at the City's expense, and the City shall reimburse BIP for all amounts reasonably expended for the cure within sixty days after receipt of an invoice and reasonable supporting documentation.

(b) In the event the City fails to remove the Replacement RDB's as provided in Sections 10 or 11, then BIP shall have the remedies provided therein.

(c) In the event of any other breach of this Lease by the City that continues for more than thirty days following written notice from BIP, BIP shall be entitled to exercise all of its remedies at law or in equity, excluding, however, any right to terminate this Lease.

18. **Eminent Domain.** The Parties agree upon the importance of the Lease terminating as set forth herein and recognize that BIP would not be willing to manufacture or provide the Replacement RDB's without agreements needed to protect against the potential use of the Replacement RDB's beyond the scheduled expiration of the Term. Accordingly, the parties agree upon the following:

(a) The City has indicated it will have both the time and funding necessary to complete the installation of an alternative dam system on or before the end of the Term and the City agrees to do so, so that there will be no need or use for the Replacement RDB's at the end of the Term. Further, any failure by the City to install an operable alternative dam system within five years and as a result to attempt to take the Replacement RDB's to extend their service lives

beyond the agreed Term would be unreasonable within the meaning of *City of Phoenix v. Mangum*, 185 Ariz. 31, 912 P.2d 35 (App. 1996) and would entitle BIP to damages thereunder in excess of the value of BIP's interest in the Replacement RDB's.

(b) Furthermore, if the City or any other entity shall take any preliminary step or action toward exercising the power of eminent domain with respect to all or any part of the Replacement RDB's, including, but not limited to, delivery of any 20-day notice pursuant to A.R.S. § 12-1116(A), or setting any Council agenda to discuss, consider or enact any measure, rule or ordinance in any manner preliminary to or part of any act of condemnation or eminent domain involving the Replacement RDB's, or the filing of any complaint for condemnation, such step or action shall constitute a breach of this Lease, and notwithstanding anything to the contrary in Section 17(c), BIP shall immediately have the right to terminate the Lease without notice and, in the event of such termination, shall have the right to remove the Replacement RDB's pursuant to Section 10(d) or alternatively to disable and render unusable the Replacement RDB's in whole or in part, even though such removal or disablement will result in the discharge or loss of water in Tempe Town Lake. The City agrees to cooperate and assist BIP in the exercise of such remedies, agrees not to seek any form of injunctive relief to prevent BIP's exercise of such rights, and agrees that any such injunction would be inequitable under the circumstances.

(c) In the event of any condemnation or eminent domain action involving the Replacement RDB's, BIP and the City agree that the character of the Replacement RDB's precludes an ascertainment of fair market value and that damages to BIP as the owner of the Replacement RDB's may be calculated by other means. Specifically, the Parties agree and stipulate that at all times the value of BIP's interest in the Replacement RDB's will not be less than \$8,000,000 in Constant Dollars. Any value attributable to the leasehold interest and any award attributable thereto are hereby assigned to BIP. **In Constant Dollars** means that the \$8,000,000 amount shall be multiplied by a fraction, the numerator of which is the Consumer Price Index, All Urban Consumers, U.S. Cities Average, published by the United States Department of Labor, Bureau of Labor Statistics (1982-84=100) the ("CPI") for the month in which the date of the taking occurs, and the denominator of which is the CPI for the month in which the Effective Date occurs.

19. **Release.** Excluding only those obligations specifically undertaken by BIP pursuant to this Lease, and as a material part of the consideration to BIP for entering into this Lease and agreeing to the nominal amount of the Rent, City hereby releases and forever discharges BIP and the manufacturer of the existing RDB's against all claims, liabilities, damages, actions, and causes of action of action whatsoever, known or unknown, that are related in any way to the existing RDB's, the condition thereof, and any express or implied warranties or representations made or alleged to have been made in connection therewith. City acknowledges that but for the broad release given hereunder, BIP would be unwilling to enter into this Lease.

20. **Authorization by BIP.** BIP warrants that this Lease has been properly authorized in accordance with BIP's by-laws, and that BIP has taken such official action as may be required to make this Lease enforceable against BIP.

21. **Authorization by City.** The City warrants that this Lease has been entered into in compliance with all applicable laws, including those related to public notice and contract

procurement and that the City has taken such official action as may be required to make this Lease enforceable against the City.

22. **Severability.** If any term, covenant or condition of this Lease, or the application thereof, is to any extent held or rendered invalid, it shall be and is hereby deemed to be independent of the remainder of the Lease and to be severable and divisible therefrom, and its invalidity, unenforceability or illegality shall not affect, impair or invalidate the remainder of this Lease or any part thereof.

23. **No Waiver.** The waiver by either party of any breach of any term, covenant or condition contained in this Lease shall not be deemed to be a waiver of such term, covenant or condition or of any subsequent breach of the same or of any other term, covenant or condition contained in this Lease. No term, covenant or condition of this Lease shall be deemed to have been waived unless such waiver is in writing.

24. **Unavoidable Delay.** If either party is delayed or hindered in or prevented from the performance of any term, covenant or act required hereunder by reasons of strikes, labor troubles, inability to procure materials or services, power failure, restrictive governmental laws or regulations, riots, insurrection, sabotage, rebellion, war, act of God, acts or omissions of the other party, or other reason whether of a like nature or not that is beyond the control of the party affected, financial inability excepted, then the performance of that term, covenant or act is excused for the period of the delay and the party delayed shall be entitled to perform such term, covenant or act within the appropriate time period after the expiration of the period of such delay.

25. **Non-Discrimination.** BIP will not discriminate against any person on the basis of race, color, or national origin in the performance of this Agreement, and shall comply with the terms and intent of Title VI of the Civil Rights Act of 1964, P.L. 88-354.

26. **Warranty Against Payment of Consideration.** BIP warrants that it has not paid or given, and will not pay or give, any third person any money or other consideration for obtaining this Lease, other than normal costs of conducting business and costs of professional services such as architects, consultants, engineers and attorneys.

27. **Compliance with Federal Laws.** BIP understands and acknowledges the applicability of the Immigration Reform and Control Act of 1986, the Drug Free Workplace Act of 1989 and the Americans with Disabilities Act to it. BIP agrees to comply with the all such laws in performing all activities undertaken under this Lease and agrees to permit the City to inspect its personnel records to verify such compliance.

28. **Time of Essence.** Time is of the essence of this Lease and in the performance of every term, condition and covenant hereof.

29. **Non-liability of City Officials and Employees.** No member, official or employee of the City will be personally liable to BIP, or any successor in interest, in the event of any default or breach by the City or for any amount which may become due to BIP, or any successor, or on any obligation under the terms of this Lease.

30. **No Agency Created.** Nothing contained in this Lease creates any partnership, joint venture or agency relationship between BIP and the City. No term or provision of this Lease is intended to be for the benefit of any person, firm, organization or corporation not a party hereto, and no other person, firm, organization or corporation may have any right or cause of action hereunder.

31. **Not a Contractor.** BIP is solely the supplier and lessor of the Replacement RDB's and shall not be deemed to be a construction contractor for any purpose.

32. **Conflict of Interest.** This Lease is subject to the provisions of Arizona Revised Statute § 38-511 and Arizona Revised Statute § 15-1635.01. The City may, within three years after execution of this Lease, cancel it without penalty or further obligation by written notice to the parties if any person substantially involved in obtaining, drafting, or procuring this Lease for and on behalf of the City becomes an employee or consultant in any capacity to the company securing this Lease unless all requirements stipulated in Arizona Revised Statute § 15-1635.01 have been met.

33. **Attorneys' Fees.** In the event of litigation arising out of this Lease, the prevailing party shall be entitled to recover its reasonable attorneys' fees, expert witness fees, court costs, and other expenses of litigation.

34. **Successors.** All rights and liabilities under this Lease extend to and bind the permitted successors and assigns of the City and BIP.

35. **Integration.** This Lease and the exhibits hereto attached set forth all the covenants, promises, agreements, conditions and understandings between the City and BIP concerning the subject matter of this Lease; provided, however, nothing in this Lease shall supersede any other agreement entered into between BIP and the City contemporaneously herewith. No alteration, amendment or addition to this Lease shall be binding upon the City or BIP unless in writing and signed by the City and BIP.

36. **Governing Law.** This Lease shall be construed in accordance with and governed by the laws of the State of Arizona.

37. **Counterparts.** This Lease may be executed in counterparts, which together shall constitute a single instrument.

The parties have caused this instrument to be duly executed as of the Effective Date.

CITY:

CITY OF TEMPE, a municipal corporation and political subdivision of the State of Arizona

By: [Signature]  
Name: Hugh Hallman  
Title: Mayor

ATTEST:  
[Signature]  
City Clerk

APPROVED AS TO FORM:  
[Signature]  
City Attorney

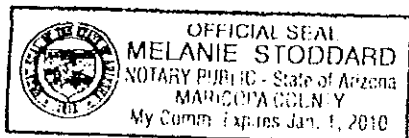
STATE OF ARIZONA     )  
                                  )     ss.  
County of Maricopa     )

On this, the 21 day of April, 2009, before me, the undersigned Notary Public, personally appeared Hugh Hallman who acknowledged himself/herself to be the Mayor of the City of Tempe, a municipal corporation of the State of Arizona, and that he/she as such officer, being authorized so to do, executed the foregoing instrument for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

[Signature]  
Notary Public

My Commission Expires:  
January 1, 2010





## SCHEDULE A

### Schedule for Production and Delivery of Replacement RDBs

	<u>Cargo Ready At Plant In Japan (From Effective Date)</u>
First Replacement Dam	7 Months
Second Replacement Dam	10 Months
Third Replacement Dam	13 Months
Fourth Replacement Dam	16 Months

**Note:** Estimated delivery date to Tempe site is 60 days after the cargo ready date.  
Bridgestone has no control over the actual shipping time.

**SCHEDULE B**

**OUTLINE OF SPECIFICATIONS**

[TO BE PREPARED BY BRIDGESTONE AND ATTACHED PRIOR TO EXECUTION]

SPEC NO.RDSP0901-01R0

**RUBBER BODY TECHNICAL PROPOSAL**

**ON**

**BRIDGESTONE RUBBER DAM**

**FOR**

**CITY OF TEMPE, ARIZONA**

**Tempe Town Lake Project**

**(Downstream Rubber dam)**

**February 3, 2009**

**BRIDGESTONE**

I. RECOMMENDED SYSTEM FOR RUBBER DAM

1 Size of Rubber Dam

- |                                           |                                                                                                    |
|-------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1) Height x Length (along foundation)     | : 15.05 ft x 180.0 ft x 2 spans (#1 and #4 span)<br>15.05 ft x 201.0 ft x 2 spans (#2 and #3 span) |
| 2) Medium of Inflation                    | : Air                                                                                              |
| 3) Batter of Side Slope (V:H) (LEFT SIDE) | : 1:0.5 (#1, #2 and #3 span)<br>1:1.5 (#4 span)                                                    |
| (RIGHT SIDE)                              | : 1:1.5 (#1 span)<br>1:0.5 (#2 #3 and #4 span)                                                     |

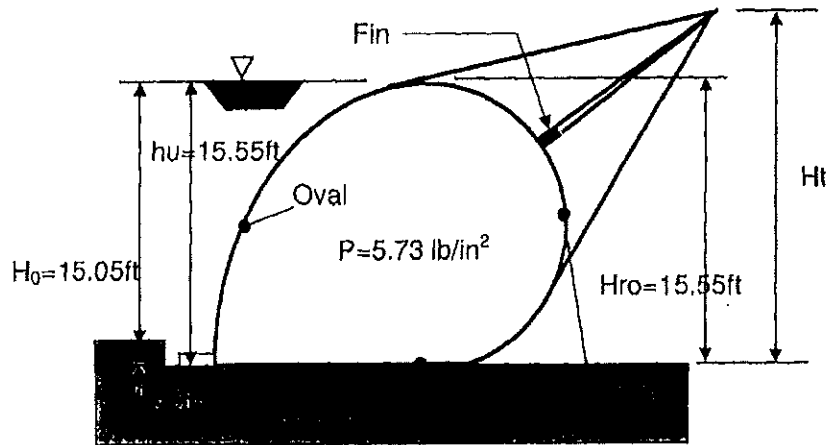
2 Rubber Body

- |                                            |                                                                                                                                                            |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) Rubber Sheet Size (Width:Length)        | : 29.17 ft x 236.942 ft #1 and #4 span<br>29.17 ft x 246.424 ft #1 and #4 span<br>(8890mm x 72220mm: #1 and #4 span)<br>(8890mm x 75110mm: #2 and #3 span) |
| 2) Thickness of Rubber Body                | : 0.82 in (20.8 mm) per layer                                                                                                                              |
| 3) Weight of Rubber Body per length        | : 298.2 lb/ft (444 kg/m)                                                                                                                                   |
| 4) Reinforcement                           | : 6 Layers of nylon canvas                                                                                                                                 |
| 5) Tensile Strength                        |                                                                                                                                                            |
| (in watercourse direction per width)       | : 8642 lb/in (1568 kN/m) or more                                                                                                                           |
| (in longitudinal direction per width)      | : 6482 lb/in (1176 kN/m) or more                                                                                                                           |
| 6) Protective Outer Rubber Compound        | : EPDM (Ethylene Propylene Diene Monomer) compounded<br>(No ceramic chips)                                                                                 |
| 7) Thickness of Outer Cover of Main Body   | : 0.21 in ( 5.3mm )                                                                                                                                        |
| 8) Physical Properties of Rubber Materials |                                                                                                                                                            |
| a. Initial Strength                        |                                                                                                                                                            |
| Tensile Breaking Point (TB)                | : more than 1700 lb/in <sup>2</sup> (120 kgf/cm <sup>2</sup> )                                                                                             |
| Elongation at Breaking (EB)                | : more than 400%                                                                                                                                           |
| b. Heat Aging Test                         | (212 °F (100 °C) for 4 days)                                                                                                                               |
| Tensile Breaking Point                     | : more than 1420 lb/in <sup>2</sup> (100 kgf/cm <sup>2</sup> )                                                                                             |
| (EB)                                       | : more than 300%                                                                                                                                           |
| c. Ozone Test                              | (100 pphm, 104 °F (40 °C), 96 hrs, under<br>50% elongation)                                                                                                |
| Observation                                | : No cracking                                                                                                                                              |
| d. Hot Water-Resistance Test               | (158 °F (70 °C) for 4 days)                                                                                                                                |
| Tensile Breaking Point                     | : more than 1420 lb/in <sup>2</sup> (100 kgf/cm <sup>2</sup> )                                                                                             |
| (EB)                                       | : more than 350%                                                                                                                                           |
| e. Abrasion-Resistance Test                | (Abrasion test (Disc H18) with load<br>weight 1000 g -1,000 rotations)                                                                                     |
| Abraded Volume                             | : 0.5 ml or less                                                                                                                                           |

## II. SHAPE OF RUBBER DAM

### 1 Rubber Bodies: Inflated

With a full head of water, the Rubber Dam takes the shape shown below as a standard design condition. A fin, located on the downstream side, minimizes oscillation.



## III. CALCULATION OF STRENGTH OF RUBBER DAM BODIES

### 1 Maximum Internal Pressure

Design maximum internal pressure under maximum upstream water head is calculated as 6.81 lbf/in<sup>2</sup> (55.3kPa):

$$\begin{aligned} P_{\max} &= \alpha \times \omega \times h_u \\ &= 0.85 \times 0.0361 \times 222 \\ &= 6.81 \text{ lbf/in}^2 \end{aligned}$$

where

$\alpha$  : Internal pressure coefficient ( $\alpha = 0.85$ )

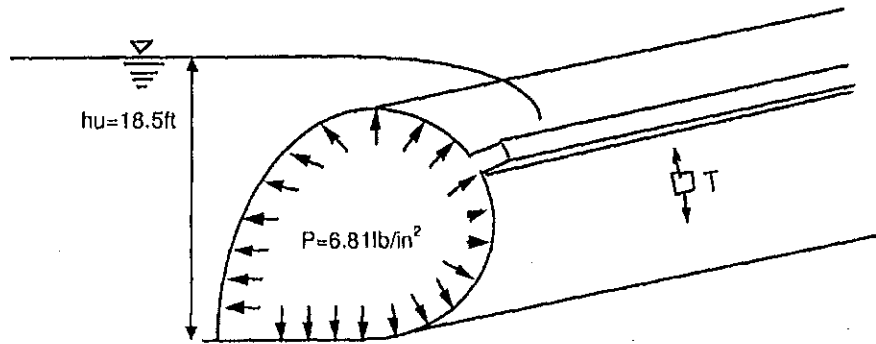
The internal pressure setting will be approximately 85% of upstream water head.

$\omega$  : Specific gravity of water ( $\omega = 0.0361 \text{ lbf/in}^3$ )

$h_u$  : Maximum upstream water level : 18.5 ft = 222.0 in = 216.0 + 6.0

2 Tension on Rubber Dam Bodies

The maximum working tension is generated at the maximum overflow condition with maximum internal pressure. The tension on the dam body is applied only in the direction of water flow.



Tension ( $T$ ) per unit width is obtained with numerical analysis by computer calculation

$$T = 549 \text{ lbf/in (96.1kN/m)}$$

3 Safety Factor (Sf)

$$\begin{aligned} Sf &= T_s / T \\ &= 8954 / 549 \\ &= 16.3 > 8.0 \text{ (Required Safety Factor for the Dam)} \end{aligned}$$

where,  $T_s$  = Tensile strength of Rubber Dam body min. 8954 lbf/in (min. 1568 kN/m)

## SCHEDULE C

### SCHEDULE FOR DESIGN, PERMITTING, CONTRACTING, CONSTRUCTION AND INSTALLATION OF NEW DAM

Research new dam concept and technology	April 2009-Dec. 2009
Validate concept & select dam technology	Dec. 2009-June 2010
Select design consultant/procurement process	June 2010-Nov. 2010
Negotiate & execute design contract	Nov. 2010-Feb. 2011
Design new dam system	Feb. 2011-Feb. 2012
Acquire permits	Feb. 2012-Feb. 2013
Bid construction contract	Feb. 2013-July 2013
Award & execute construction contract	July 2013-Oct. 2013
Notice to Proceed	Oct. 2013-Oct. 2013
Fabricate new dam	Oct. 2013-Nov. 2014
Remove all Replacement RDBs & install new dam	Nov. 2014-Nov. 2015

**The Tempe Town Lake was built in the riverbed of the Salt River. Water that is released infrequently from upstream reservoirs flows through the Lake, temporarily prohibiting construction in the Lake. The schedule above assumes that the river is not flowing during construction/installation periods. The schedule may be adjusted to accommodate river flows if they occur during in-lake construction.**





# Safety Boat Extraction from the Tempe Town Lake Marina Waiver

ORGANIZATIONS NAME \_\_\_\_\_ NUMBER of BOATS \_\_\_\_\_

STREET ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ ZIP CODE \_\_\_\_\_

PHONE \_\_\_\_\_

By signing below I hereby give permission for the City of Tempe to remove our clubs' safety boat(s) and any boats belonging to our members, from the Town Lake Marina using Tempe Crane as the removal company. I understand and acknowledge that the removal of the safety boats involves risks that include but are not limited to, property damage and bodily injury; and agree to hold harmless The City of Tempe, its agents, officers and employees from all liability, and resulting damages and injuries, during this removal project. The City of Tempe will use its reasonably best efforts to conduct all operations with safety and care of the safety boats. In addition, I also agree to have members from our boating organization present during this entire extraction process to help and assist in any way necessary for the extraction of our safety boat(s). I hereby agree to take responsibility for the actions of our club members, club officers, agents or assigns, and will be responsible for any and all direction given to the City of Tempe or Tempe Crane on behalf of our club, during the boat extraction process.

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\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

**Club Representative Signature** / **Printed Name** / **Date**

\_\_\_\_\_

**Position with the Club**