



## ADVERTISEMENT FOR BID

### **Project Name: 2024 ADA Concrete & Resurfacing – Various Parks**

Notice is hereby given to potential Bidders that the Arlington Heights Park District (the “District,” “Park District” or “Owner”) will receive sealed bids for the above referenced Project until **1:00 PM on Thursday, June 27, 2024**, at the Arlington Heights Park District, 410 N. Arlington Heights Road, Arlington Heights, Illinois 60004 at which time the bid proposals will be publicly opened and read aloud. Scope of work includes: Demolition of existing concrete and site furniture; installation of site furniture, flatwork, and ADA ramps. Also, Ardex resurfacing.

Each bid must be placed in a sealed opaque envelope and shall be clearly marked "**Concrete Bid**" and addressed and delivered to the Arlington Heights Park District, Attention: **BID Dept.**, 410 N. Arlington Heights Road, Arlington Heights, Illinois 60004. Bid Documents may be obtained from the Arlington Heights Park District website: [www.ahpd.org](http://www.ahpd.org). For more information, contact **Susan Rohner, Park Planner** at [srohner@ahpd.org](mailto:srohner@ahpd.org).

An optional pre-bid meeting will be held at the amphitheater area of North School Park, 307 N. Evergreen Ave., Arlington Heights, IL 60004., **on Thursday, June 20<sup>th</sup> at 10:00 AM**. This meeting will be used to review the Specifications and give any Bidders the opportunity to discuss any concerns with the Owner. **After June 21**, no more questions will be taken. Any addenda will be issued the following week, to allow all Bidders enough time to complete their proposals.

The District reserves the right to waive all technicalities, to accept or reject any or all bids, or to accept only portions of a bid and reject the remainder without disclosure for any reason. Failure to make such a disclosure will not result in accrual of any right, claim or cause of action by any Bidder against the District. Owner will award the Contract to the lowest most responsible and responsive Bidder, as determined by Owner. In considering the Bidder’s responsibility, the Owner may evaluate, among other factors, the ability of the Bidder to provide experienced labor sufficient in numbers to timely and properly complete the Work, the financial capability of the Bidder, and the performance of the Bidder on other projects.

Bids shall not include federal excise tax or state sales tax for materials to be incorporated in, or totally consumed in the prosecution of the Work. A tax exemption certificate will be furnished by the Park District at the request of the Bidder. The Park District’s tax exemption number shall only be used by the successful Bidder for the Work of this Project only. After the bid opening, no bid may be withdrawn or canceled for a period of (60) calendar days.

The Work of this Project is subject to the Illinois *Prevailing Wage Act*, 820 ILCS 130/0.01 *et seq.* A prevailing wage determination has been made by the Park District, which is the same as that determined by the Illinois Department of Labor for public works projects in Cook County. The Contract entered into for the Work will be drawn in compliance with said law and proposals should be prepared accordingly and provide for payment of all laborers, workmen, and mechanics needed to perform the Work at no less than the prevailing rate of wages (including the prevailing rate for legal holiday and overtime work as applicable) for each craft, type of worker, or mechanic.

All bids must be accompanied by cashier’s check, certified check, or bid bond payable to the order of the Arlington Heights Park District for ten percent (10%) of the amount of the bid as provided in the Instructions to Bidders. No proposals or bids will be considered unless accompanied by such bond or check.

The Contractor(s) selected will also be required to comply with all applicable federal, state and local laws, rules, regulations and executive orders, including but not limited to those pertaining to equal employment opportunity.

By Order Of:  
Board of Park Commissioners  
Arlington Heights Park District  
**6/13/24**



## **INSTRUCTIONS TO BIDDERS**

**DATE: June 13, 2024**

**BID REQUEST: 2024 ADA Concrete & Resurfacing**

Sealed bids will be accepted until **Thursday, January 27 at 1:00 PM** and immediately thereafter publicly opened and read aloud at the Arlington Heights Park District Administration Office, 410 N. Arlington Heights Road, Arlington Heights, Illinois 60004. Bids arriving after this time will be rejected and will be returned unopened, including mailed bids regardless of when post marked. All Bidders are welcome to attend the bid opening. After bid opening, bids will be submitted for approval to the Arlington Heights Park District Board of Park Commissioners at a regularly scheduled meeting. This project is anticipated to begin: **July 15, 2024 with substantial completion by October 1, 2024.**

A pre-bid meeting will be held on **Thursday, June 20<sup>th</sup> at 10:00AM at North School Park Amphitheatre**, located at 307 N. Evergreen Ave., Arlington Heights, 60004. This meeting will be used to review the Specifications and give any Bidders the opportunity to discuss any questions or concerns with the Owner. **After Friday, June 21**, no more questions will be taken. Any addenda will be issued the following week to allow all Bidders enough time to complete their proposals.

### **1. Preparation and Submission of Bid Proposal**

It is the sole responsibility of the Bidder to see that their bid is received in proper time. **No faxed or e-mail bid or modification of a bid will be considered.** The Park District is not responsible for the premature opening of bids not marked as required. Any bid opened prematurely due to the failure of the Bidder to mark the envelope in accordance with these Bid Documents will be considered non-responsive. Bidders' prices are to include the delivery of all materials; including; equipment, supplies, tools, scaffolding, transportation, insurances, bonds, warranties, and all other items and facilities, and the performance of all labor and services, necessary for the proper completion of the Work except as may be otherwise expressly provided in the Contract Documents. Bids shall not include federal excise tax or state sales tax for materials to be incorporated in, or totally consumed in the prosecution of, the Work. An exemption certificate will be furnished by the Park District upon request of the Bidder.

Bidder must acknowledge all Addenda received in the spaces provided on the Contractor Bid Form. By submitting a bid, Bidder indicates that all considerations issued by Addendum are incorporated in the bid.

Bidders shall return all Bid Documents, including Drawings and Specifications with the bid, and **no sheets shall be detached from any part of the Bid Documents.**

Attached to the Bid Form will be one or more certifications regarding the Bidder's compliance with applicable laws. **Failure of a Bidder to complete/submit a required certification shall be the basis for immediate rejection of that Bidder's bid.** The certification of the successful Bidder shall become a part of the Contract with the Park District.

The Bidder shall submit its prices on the attached Bid Proposal Form. The Bid Proposal Form shall be executed properly and all writing, including all signatures, shall be with black ink. Failure to use the Bid Proposal Form provided could result in rejection of the bid. Do not detach any portion of this document; invalidation of the bid could result.

The Bidder shall specify in figures, in the places provided, a price for each of the separate items called for in the Bid Form.

## **2. Requirement of Bidders**

Bidders must be able to demonstrate that they: 1) have experience in performing and have successfully performed and are still actively engaged in performing work similar in kind and scope to the Services; and 2) are able to show that they have adequate laborers and materials to successfully complete the Services as indicated in the Bid Documents and within the time required by the Bid Documents. The Contractor shall not have been debarred or determined ineligible for public contracts by any governmental agency.

**The following information must be attached to the bid proposal. Failure to do so may result in disqualification of the Bidder.**

On a separate sheet, list at least five (5) service contracts your organization has completed in the past two (2) years, which are comparable in scope, giving the name of the client, client contact and telephone number, and length of contract.

On a separate sheet, list all administrative proceedings and litigation filed by or against Bidder in the past five (5) years, including the name and case number, name/jurisdiction of the court or administrative agency, and a summary of each claim/case, including current status and if no longer pending, the disposition. The foregoing includes but is not limited to information regarding any proceedings and actions taken by any governmental agency to debar or disqualify the Bidder from bidding on public contracts, including the name of the agency initiating the proceeding/action, the nature of the proceeding/action, the claimed basis for the proceeding/action and the current status or disposition of the proceeding/action.

**Initial here if there is nothing to disclose:** \_\_\_\_\_

On a separate sheet, indicate all instances in which Bidder has been rejected for not being a responsible bidder, giving the name of the client, client contact and telephone number, and an explanation of the circumstances surrounding the rejection.

**Initial here if there is nothing to disclose:** \_\_\_\_\_

On a separate sheet, provide a list of all contracts to which you were a party and with respect to which you were declared to be in breach of one or more provisions, giving the type of contract, the project location where applicable, the names and addresses of the parties to the contract, the name of the party declaring the breach, the nature of the claimed breach and current status or resolution of the claim.

**Initial here if there is nothing to disclose:** \_\_\_\_\_

Other required submittals include: Bid Proposal; Contractor's Compliance and Certifications. **Failure of a Bidder to complete/submit these documents shall be the basis for immediate rejection of that Bidder's bid.**

### **3. Examination of Site, Drawings, Specifications**

Each Bidder shall visit the site(s) of the proposed Work and fully acquaint themselves with conditions, as they exist, and shall undertake such additional inquiry and investigation as they shall deem necessary so that they may fully understand the requirements, facilities, possible difficulties and restrictions attending the execution of the Work under the Contract. Bidder shall thoroughly examine and be familiar with all of the Bid Documents including but not limited to the Drawings and the written Specifications. Any conflicts or discrepancies found between or among Bid Documents, including but not limited to the Drawings and written Specifications, and the site conditions, or any errors, omissions or ambiguities in the Drawings or written Specifications shall be immediately reported to the Park District and written clarification requested prior to submission of a bid.

The failure or omission of any Bidder to obtain, receive or examine any form, instrument, or information or to visit the Project site(s), and become knowledgeable with respect to conditions there existing, or to seek needed clarification shall in no way relieve any Bidder from any obligations with respect to their bid. By submitting a bid, the Bidder agrees, represents and warrants that they have undertaken such investigation as they deemed necessary, has examined the site(s) and the Bid Documents, has obtained all needed clarifications and where the Bid Documents indicate in any part of the Work, that a given result be produced, that the Bid Documents are adequate and the required result can be produced as indicated in the Specifications and Drawing(s). Once the award has been made, failure to have undertaken and completed the foregoing tasks shall not be cause to alter the original Contract or to request additional compensation.

#### **4. Acceptance or Rejection of Bids**

The Park District may accept the bid of, and award the Contract for the Work to, the lowest responsive and responsible Bidder as determined by and in the sole discretion of the Park District.

The Owner reserves the right to (1) reject all bids; (2) reject only certain bids which are non-conforming or non-responsive to the bid requirements; (3) accept only a portion, part or specific items of Work of all and reject others, as the Owner shall in its sole discretion determine to be in its best interest; and/or (4) award the Contract to the responsible Bidder submitting the lowest bid responsive to the bidding requirements. No bid will be accepted from or Contract awarded to any person, firm or corporation that is in arrears or is in default to the Park District upon any debt or contract, or that is a defaulter, as surety or otherwise, upon any obligation to said Park District or that has failed to perform faithfully any previous contract with the Park District.

In the event of a rejection of a portion, part, or certain items of Work of all bids, the bid of each Bidder shall automatically be deemed reduced by the amount of such rejected part or item at the unit price or other cost designated therefore by that Bidder on its submitted Contractor Bid Proposal Form. The successful Bidder so selected may not refuse to enter into a Contract with the Owner on the basis that the Owner awarded a Contract for less than all portions or items of the Work specified in the Bid Documents. The Arlington Heights Park District Board of Park Commissioners reserves the right to waive any technicalities or irregularities, and to disregard any informality on the bids and bidding, when in its opinion the best interest of the Park District will be served by such actions and in accordance with applicable law.

#### **5. Surety**

All bids must be accompanied by a bid bond or bank cashier's check or certified check payable to the Arlington Heights Park District for ten percent (10 %) of the amount of the bid and drawn on a responsive and responsible bank doing business in the United States. All bids not accompanied by a bid security, when required, will be rejected.

The bid security of all except the three (3) lowest responsive and responsible Bidders will be returned after the decision to accept or reject bids by the Arlington Heights Park District Board of Park Commissioners. The bid security of the successful Bidder will be returned after acceptance by the Park District of an acceptable Performance Bond, Labor and Materials/Payment Bond and a certificate of insurance naming the Arlington Heights Park District as the certificate holder and as additional insured, and the successful Bidder has executed and returned to the Park District the Contract for the Work presented by the Park District.

Prior to beginning Work, the successful Bidder shall furnish a Performance Bond, and Labor and Materials/Payment Bond in the amount of 110% of the Contract Sum, using a form similar to the AIA-A312-2010 form, or its current equivalent, or one acceptable to Owner,

cosigned by a surety company licensed to conduct business in the State of Illinois and with at least an “A” rating and a financial rating of at least “X” in the latest edition of the Best Insurance Guide. Said bond shall guarantee the faithful performance of the Work in accordance with the Contract, the payment of all indebtedness incurred for labor and materials, and guarantee correction of Work. The cost of each bond shall be included in the Contract Sum. The Bidder and all Subcontractors shall name the Park District as an obligee on all bonds. Said bonds shall meet the requirements of the Illinois Public Construction Bond Act, 30 ILCS 550/0.01 *et seq.* and any further amendments thereto. Bidder shall include in its Performance Bond and Labor and Material Payment Bond such language as shall guarantee the faithful performance of the Prevailing Wage Act as required in these Bid Documents.

The Performance Bond and Labor and Material Payment Bond will become a part of the Contract. The failure of the successful Bidder to enter into the Contract and supply the required bonds and evidence of insurance within ten (10) days after the Contract is presented for signature, or within such extended period as the Park District may grant, shall constitute a default, and the Park District may either award the Contract to the next responsible Bidder, or re-advertise for bids. In the event of a default, the Owner need not return the defaulting Bidder’s bid surety and may charge against the defaulting Bidder for the full difference between the amount for the bid and the amount for which a Contract for the Work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the defaulting Bidder’s bid surety.

## **6. Withdrawal of Bid**

Bidders may withdraw or cancel their bids at any time prior to the advertised bid opening time by signing and submitting a request for said withdrawal. After the bid opening time, no bid shall be withdrawn or canceled for a period of sixty (60) calendar days.

## **7. Award, Acceptance and Contract**

Owner will award the Contract to the lowest most responsible and responsive Bidder, as determined by Owner. In considering the Bidder’s responsibility, the Owner may evaluate, among other factors, the ability of the Bidder to provide experienced labor sufficient in numbers to timely and properly complete the services, conformity with the Specifications, serviceability, quality, and the financial capability of the Bidder, and the performance of the Bidder on other projects.

The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bid Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

Bids will be awarded to one Bidder for the entire Project or to any series of Bidders for an appropriate proportion of the Project. If specified in the Bid Form, awards will be based upon the submitted unit prices.

The acceptance of a bid will be by a Notice of Award, signed by a duly authorized representative of the Park District; no other act by the Park District shall constitute the acceptance of a bid. The acceptance of a bid by the Park District shall bind the successful Bidder to execute and perform the Work of the Contract. The successful Bidder to whom the Contract is awarded by the Park District shall sign and deliver to the Park District for execution by the Park District all required copies of the Contract, along with all required insurance and surety documents within ten (10) days after presentation to them of the Contract for signature. In case the Bidder shall fail or neglect to do so, they will be considered as having abandoned the Contract, and as being in default to the Owner. The Owner may thereupon re-advertise or otherwise award said Contract and forfeits the Bid Security.

The Invitation to Bid, Instructions to Bidders, General Conditions, Supplementary and/or Special Conditions, if any, Drawings, Specifications, Contractor Bid Proposal Form, Addenda, if any, Contractors Compliance and Certifications Attachment, and Substance Abuse Certification and the Prevailing Wage Determination and Supersedes Notice comprise the Bid Documents. The Bid Documents, together with the Standard /Form of Agreement between Owner and Contractor AIA Document A101-2017, as modified by the Park District (or such other form of agreement or contract selected by Owner), and the Performance Bond and Labor Material Payment Bond and proof of insurance comprise the Contract Documents.

## **8. Interpretation of the Contract Documents**

The Park District shall in all cases determine the amount or quantity of the several kinds of Work which are to be paid for under this Contract, and shall decide all questions which may arise relative to the execution of the Contract on the part of the Contractor, and all estimates and decisions shall be final and conclusive. The Park District shall have the right to make alterations in the lines, grades, plans, forms, or dimensions of the Work herein contemplated either before or after the commencement of the Work. If such alterations diminish the quantity of the Work to be done, they shall not constitute a claim for damage or for anticipated profits on the work dispensed with, or if they increase the amount of Work, such increase shall be paid according to the quantity actually done and at the price or prices stipulated for such Work in the Contract. The Park District reserves the right to approve, an equal to or superior to product or equipment required under the Specifications, or to reject as not being and equal to or superior to the product or equipment required under the Specifications. If the Bidder is in doubt as to the interpretation of any part of the Bid Documents, or finds errors, discrepancies or omissions from any part of the Contract Documents, they must submit a written request for interpretation thereof not later than three (4) days prior to opening of bids to the Park

District. Address all communications to [srohner@ahpd.org](mailto:srohner@ahpd.org) at the Park District. If an error or omission is discovered in the Bid Documents after the bid opening, the Park District reserves the right: i) to determine whether to require the submission of new bids; or ii) if the error or omission is of such a nature that it was reasonably discoverable upon a careful review of the Bid Documents, to award the Contract to the lowest responsive and responsible Bidder as determined by the Park District and to require that Contractor to perform the Work in accordance with an issued correction by the Park District and/or Architect and for the amount bid by the Contractor. Such decisions are final and not subject to recourse. Errors and omissions made by the Bidder cannot be corrected after the bid opening.

## **9. Addenda**

Any interpretation, correction to, or addition to the Bid Documents will be made by written Addendum and will be delivered by mail or fax to each prime Bidder of record. The written Addenda constitute the only interpretations of the Bid Documents; the Park District accepts no responsibility for any other claimed interpretations or communications.

It is the responsibility of each Bidder to verify that they have received all Addenda prior to submitting a bid. It is also the responsibility of each Bidder to verify that all subcontractors and material suppliers whose prices are incorporated in the Bidder's bid are familiar with the Bid Documents in their entirety, including all Addenda issued up to the time of bid opening.

In the event a conflict or omission is discovered in the Bid Documents after the issuing of the last Addendum such that an interpretation cannot be issued by the Park District prior to bidding, the Bidder is directed to estimate on and provide the quantity and quality of material and labor consistent with the overall represented and indicated Work so as to provide all materials, equipment, labor, and services necessary for the completion of the Work in accordance with the Bid Documents.

## **10. Substitutions during Bidding**

Unless otherwise indicated, the use of brand names in the Specifications is used for the purpose of establishing a grade or quality. Bidders proposing to use an alternate that is equal to or superior to in every respect to that required by the Specifications must request approval in writing to the Park District at least seven (7) business days prior to the bid opening and mark the item as 'or approved equal'.

Additionally, Bidders requesting approval for use of an alternate must provide certification by the manufacturer that the substitute proposed is equal to or superior in every respect to that required by the Contract Documents, and that its in-place performance will be equal to or superior to the product or equipment specified in the



application indicated. The Bidder, in submitting the request for substitution, waives the right to additional payment or an extension of Contract Time because of the failure of the substitute to perform as represented in the request for substitution.

The Park District may request additional information or documentation necessary for evaluation of the request for substitution. The Park District will notify all Bidders of acceptance of the proposed substitute by means of an Addendum to the Bid Documents. Park District's approval of a substitute during bidding does not relieve the Contractor of the responsibility to submit required shop drawings and to comply with all other requirements of the Contract Documents, including but not limited to proper performance of all components of the Work and suitability for the uses specified.

Bids proposing alternates not previously approved by the Park District will be considered non-responsive and rejected. The Park District reserves the right to determine whether a substituted selection, in its judgment, is equal to or better quality and therefore an acceptable alternate. Such decisions are final and not subject to recourse.

## GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

The American Institute of Architects "AIA Document A201-2017 General Conditions of the Contract for Construction," 2007 Edition, as modified by Owner, and included in this Project Manual are the General Conditions.

### SUPPLEMENTAL CONDITIONS

The "General Conditions of the Contract, AIA Document A201, 2017 Edition" (the "General Conditions"), as modified by Owner, are hereby amended to include the following:

I. Insurance and Indemnity Requirements

Contractor shall procure and maintain for the duration of the contract, insurance against claims for death, injuries to persons, or damages to property which may arise from or in connection with the performance of work hereunder by the Contractor, their agents, representatives, employees or subcontractors of the types and in the amounts listed below.

- A. Commercial General and Umbrella Liability Insurance.** Contractor shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella insurance with a limit of not less than **\$3,000,000 each occurrence**. If such CGL insurance contains a general aggregate limit, it shall apply separately to this project/location. CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01, or a substitute form providing equivalent coverage, and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract). Owner, its elected and appointed officials, officers, employees and agents shall be included as an insured under the CGL, **using ISO additional insured endorsement CG 20 10** or a substitute providing equivalent coverage, and under the commercial umbrella, if any. This insurance shall apply as primary insurance with respect to any other insurance or self-insurance afforded to Owner. There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from pollution, explosion, collapse, or underground property damage.
- B. Continuing Completed Operations Liability Insurance.** Contractor shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella liability insurance with a limit of not less than \$3,000,000 each occurrence for at least three years following substantial completion of the work. Continuing CGL insurance shall be written on ISO occurrence form CG 00 01, or substitute form providing equivalent coverage, and shall, at minimum, cover liability arising from products-completed operations and liability assumed under an insured contract. Continuing CGL insurance shall have a products-completed operations aggregate of at least two times its each occurrence limit. Continuing commercial umbrella coverage, if any, shall include liability coverage for

damage to the insured's completed work equivalent to that provided under ISO form CG 00 01.

- C. Business Auto and Umbrella Liability Insurance.** Contractor shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit of not less than \$1,000,000 each accident. Such insurance shall cover liability arising out of any auto including owned, hired and non-owned autos. Business auto insurance shall be written on Insurance Services Office (ISO) form CA 00 0 1, CA 00 05, CA 00 12, or a substitute form providing equivalent liability coverage equivalent to that provided in the 1990 and later editions of CA 00 01.
- D. Workers Compensation Insurance.** Contractor shall maintain workers compensation as required by statute and employers liability insurance. The commercial umbrella and/or employers liability limits shall not be less than \$1,000,000 each accident for bodily injury by accident or \$1,000,000 each employee for bodily injury by disease. If Owner has not been included as an insured under the CGL using ISO additional insured endorsement CG 20 10 under the Commercial General and Umbrella Liability Insurance required in this Contract, the Contractor waives all rights against Owner and its officers, officials, employees, volunteers and agents for recovery of damages arising out of or incident to the Contractors work.
- E. General Insurance Provisions.**
- 1. Evidence of Insurance.** Prior to beginning Work, Contractor shall furnish Owner with a certificate of insurance and applicable policy endorsements, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth above. All certificates shall provide for 30 days written notice to Owner prior to the cancellation or material change of insurance referred to therein. Written notice to Owner shall be by certified mail, return receipt requested. Failure of Owner to demand such certificate, endorsement or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance. Owner shall have the right, but not the obligation, of prohibiting Contractor or any subcontractor from entering the Project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by Owner. Failure to maintain the required insurance may result in termination of this Contract at Owner's option. With respect to insurance maintained after final payment in compliance with a requirement above, an additional certificate shall provide certified copies all insurance policies required above within 10 days of Owner's written request for said copies.
  - 2. Acceptability of Insurers.** For insurance companies which obtain a rating from A.M. Best, that rating should be no less than A VII using the most recent edition of the A.M. Bests Key Rating Guide. If the Bests rating is less than A VII or a Best's rating is not

obtained, the Owner has the right to reject insurance written by an insurer it deems unacceptable.

**3. Cross-Liability Coverage.** If Contractor's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

**4. Deductibles and Self-Insured Retentions.** Any deductibles or self-insured retentions must be declared to the Owner. At the option of the Owner, the Contractor may be asked to eliminate such deductibles or self-insured retentions as respects the Owner, its officers, officials, employees, volunteers and agents or required to procure a bond guaranteeing payment of losses and other related costs including but not limited to investigations, claim administration and defense expenses.

**5. Subcontractors.** Contractor shall cause each subcontractor employed by Contractor to purchase and maintain insurance of the type specified above. When requested by the Owner, Contractor shall furnish copies of certificates of insurance evidencing coverage for each subcontractor.

**F. Indemnification**

To the fullest extent permitted by law, the Contractor shall waive all right of contribution and shall indemnify and hold harmless the Owner and its officers, officials, employees, volunteers and agents from and against all claims, damages, losses and expenses, including but not limited to legal fees (attorney's and paralegals fees and court costs), arising out of or resulting from the performance of the Contractor's work, provided that any such claim, damage, loss or expense (i) is attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property, other than the work itself, including the loss of use resulting therefrom and (ii) is caused in whole or in part by any wrongful or negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph. Contractor shall similarly protect, indemnify and hold and save harmless the Owner, its officers, officials, employees, volunteers and agents against and from any and all claims, costs, causes, actions and expenses including but not limited to legal fees, incurred by reason of Contractor's breach of any of its obligations under, or Contractor's default of, any provision of the Contract.

BID PROPOSAL

Bidder is:

An Individual:

By: \_\_\_\_\_ (SEAL)  
(Individual's Name)

Doing business as \_\_\_\_\_

Business Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

A Partnership:

By: \_\_\_\_\_ (SEAL)  
(Firm Name)

\_\_\_\_\_  
(General Partner)

Business Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

A Corporation:

By: \_\_\_\_\_ (SEAL)  
(Corporation Name)

\_\_\_\_\_  
(State of Incorporation)

By: \_\_\_\_\_  
(Name of Person Authorized to Sign)

Title: \_\_\_\_\_ Attest \_\_\_\_\_  
(Secretary)

(CORPORATE SEAL)

Business Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

By submission of its bid, the Bidder acknowledges, agrees, represents, declares and warrants:

1. That it has visited and examined the site, and is fully familiar with and has satisfied itself as to the site and the local and other conditions under which the Work is to be performed, including without limitation, (i) surface conditions of the site and subsurface conditions readily observable or ascertainable upon the exercise of reasonable diligence and all structures and obstructions thereon and thereunder, both natural and manmade; (ii) the nature, location, and character of the general area in which the Project is located, including without limitation, its climatic conditions, available labor supply and labor costs, and available equipment supply and equipment costs; and (iii) the quality and quantity of all materials, supplies, tools, equipment, labor, and professional services necessary to complete the Work in the manner and within the cost and time frame indicated by the Contract Documents; and has correlated the Bidder's personal observations with the requirements of and matters indicated in or by the proposed Contract Documents;
2. To hold the bid open for sixty (60) days subsequent to the date of the bid opening;
3. To enter into and execute a Contract with the Owner within ten (10) days after the date of the Notice of Award, if awarded on the basis of this bid, and in connection therewith to:
  - (a) Furnish all bonds and insurance required by the Contract Documents;
  - (b) Accomplish the Work in accordance with the Contract Documents; and
  - (c) Complete the Work within the time requirements as set forth in the Contract Documents;
4. That the Bidder has carefully examined the Instructions to Bidders, the Drawings and Specifications, and the Project Manual in its entirety, in order to determine how these affect the bid proposal, the forms of the Contract, the required Contract bonds, and duration thereof, and that the Bidder has inspected in detail the site of the proposed Work, and been familiarized with all of the requirements of construction, and of the governing municipalities under whose jurisdiction the Project falls (its codes, ordinances and construction requirements therein), and understands that in making this proposal, the Bidder waives all rights to plead any misunderstanding regarding the same;
5. That if this proposal is accepted, the Bidder is to provide all of the necessary equipment, tools, apparatus, labor, and other means of construction, and to do all of the Work and to furnish all of the materials specified in the Contract Documents in the manner and at the time therein prescribed, and in accordance with the requirements set forth;
6. To furnish a Bid Bond in accordance with the Instructions to Bidders;

7. For projects \$50,000 and over, prior to beginning work, will submit Performance/Labor and Material Payment Bond in accordance with the Instructions to Bidders;

8. To commence Work as specified in the Instructions to Bidders, and to prosecute the Work in such a manner, and with sufficient materials, equipment and labor as will ensure its completion within reasonable time, it being understood and agreed that the completion within such reasonable time is an essential part of this Contract;

9. That they have checked carefully the bid figures and understands that they shall be responsible for any errors or omissions based on these Specifications and alternates as submitted on the Bid Proposal Form;

10. That it is understood and agreed that the Arlington Heights Park District reserves the right to: a) accept or reject any or all bids; b) waive any technicalities; c) award to one Bidder the entire Project or to any series of Bidder for an appropriate proportion of the Project; and d) accept Alternates in any order or combination and to determine low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

Submitted this \_\_\_\_\_ day of \_\_\_\_\_, 2023

Name: \_\_\_\_\_

By: \_\_\_\_\_

Signature \_\_\_\_\_

Title: \_\_\_\_\_

SUBSCRIBED AND SWORN TO before me

this \_\_\_\_\_ day of \_\_\_\_\_ 2023

\_\_\_\_\_  
Notary Public

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

## CONTRACTOR COMPLIANCE AND CERTIFICATIONS ATTACHMENT

**Note: The following certifications form an integral part of the Agreement between the Owner and Contractor. Breach by Contractor of any of the certifications may result in immediate termination of the Contractor's services by Owner.**

THE UNDERSIGNED CONTRACTOR HEREBY ACKNOWLEDGES, CERTIFIES, AFFIRMS AND AGREES AS FOLLOWS:

- A. Contractor has carefully read and understands the contents, purpose and legal effect of this document as stated above and hereafter in this document. The certifications contained herein are true, complete and correct in all respects.
  
- B. Contractor shall abide by and comply with, and in contracts which it has with all persons providing any of the services or Work on this Project on its behalf shall require compliance with, all applicable Federal, State and local laws and rules and regulations including without limitation those relating to 1) fair employment practices, affirmative action and prohibiting discrimination in employment; 2) workers' compensation; 3) workplace safety; 4) wages and claims of laborers, mechanics and other workers, agents, or servants in any manner employed in connection with contracts involving public funds or the development or construction of public works, buildings or facilities; and 5) steel products procurement.
  
- C. All contracts for this Project are subject to the provisions of the Illinois Prevailing Wage Act (820 ILCS 130/0.01 *et seq.*), providing for the payment of the prevailing rate of wage to all laborers, workmen and mechanics engaged in the Work. Contractor shall pay prevailing rates of wages in accordance with the wage determination included with the Contract Documents and any subsequent determinations issued by the Illinois Department of Labor which shall supersede the determination included in the Contract Documents, all in accordance with applicable law. Contractor is responsible for determining the applicable prevailing wage rates at the time of bid submission and at the time of performance of the Work. Failure of Contractor to make such determination shall not relieve it of its obligations in accordance with the Contract Documents. Contractor shall also comply with all other requirements of the Act including without limitation those pertaining to inclusion of required language in subcontracts, job site posting, maintenance and submission of certified payroll records and inspection of records. Contractor is not barred from entering into public contracts under Section 11a of the Illinois Prevailing Wage Act due to its having been found to have disregarded its obligations under the Act.
  
- D. To the best of Contractor's knowledge, no officer or employee of Contractor has been convicted of bribery or attempting to bribe an officer or employee of the State of Illinois, or any unit of local government, nor has any officer or employee made an admission of guilt of such conduct which is a matter of record.



- E. Contractor is not barred from bidding on or entering into public contracts due to having been convicted of bid-rigging or bid rotating under paragraphs 33E-3 or 33E-4 of the Illinois Criminal Code. Contractor also certifies that no officers or employees of the Contractor have been so convicted and that Contractor is not the successor company or a new company created by the officers or owners of one so convicted. Contractor further certifies that any such conviction occurring after the date of this certification will be reported to the Owner, immediately in writing, if it occurs during the bidding process, or otherwise prior to entering into the Contract therewith.
- F. Pursuant to the Illinois Human Rights Act (775 ILCS 5/2-105), Contractor has a written sexual harassment policy that includes, at a minimum, the following information: (i) a statement on the illegality of sexual harassment; (ii) the definition of sexual harassment under State law; (iii) a description of sexual harassment utilizing examples; (iv) the Contractor's internal complaint process including penalties; (v) the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission and directions on how to contact both; and (vi) protection against retaliation as provided by Section 6-101 of the Illinois Human Rights Act. Contractor further certifies that such policy shall remain in full force and effect. A copy of the policy shall be provided to the Illinois Department of Human Rights upon request.
- G. Contractor shall abide by the "Employment of Illinois Workers on Public Works Act" (30 ILCS 570/0.01 *et seq.*) which stipulates that whenever there is a period of excessive unemployment in Illinois, defined as any month immediately following two (2) consecutive calendar months during which the level of unemployment in Illinois exceeds five percent (5%) as measured by the U.S. Bureau of Labor Statistics in its monthly publication of employment and unemployment figures, the Contractor shall employ not less than ninety percent (90%) Illinois laborers unless otherwise exempted as so stated in the Act. ("Illinois laborer" means any person who has resided in Illinois for at least 30 days and intends to become or remain an Illinois resident). Other laborers may be used if Illinois laborers are not available or are incapable of performing the particular type of work involved if so certified by the Contractor and approved by the Owner.
- H. (i) Contractor's bid proposal was made without any connection or common interest in the profits anticipated to be derived from the Contract by Contractor with any other persons submitting any bid or proposal for the Contract; (ii) the Contract terms are in all respects fair and the Contract will be entered into by Contractor without collusion or fraud; (iii) no official, officer or employee of the Owner has any direct or indirect financial interest in Contractor's bid proposal or in Contractor, (iv) the Contractor has not directly or indirectly provided, and shall not directly or indirectly provide, funds or other consideration to any person or entity (including, but not limited to, the Owner and the Owner's employees and agents), to procure improperly special or unusual treatment with respect to this

Agreement or for the purpose of otherwise improperly influencing the relationship between the Owner and the Contractor. Additionally, the Contractor shall cause all of its officers, directors, employees, (as the case may be) to comply with the restrictions contained in the preceding sentence.

- I. Contractor knows and understands the Equal Employment Opportunity Clause administrated by the Illinois Department of Human Rights, which is incorporated herein by this reference, and agrees to comply with the provisions thereof. Contractor further certifies that Contractor is an "equal opportunity employer" as defined by Section 2000 (e) of Chapter 21, Title 42 of the United States Code Annotated and Executive Orders #11246 and #11375 as amended, which are incorporated herein by this reference.
- J. Neither Contractor nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act.
- K. Contractor is not barred from contracting with the Owner because of any delinquency in the payment of any tax administrated by the Illinois Department of Revenue, unless it is being contested. Contractor further certifies that it understands that making a false statement regarding delinquency in taxes is a Class A misdemeanor and, in addition, voids the Contract and allows the Owner, a municipal entity, to recover in a civil action all amounts paid to the Contractor.
- L. If Contractor has 25 or more employees at the time of letting of the Contract, Contractor knows, understands and acknowledges its obligations under the Illinois Drug Free Workplace Act (30 ILCS 580/1 *et seq.*) and certifies that it will provide a drug-free workplace by taking the actions required under, and otherwise implementing on a continuing basis, Section 3 of the Drug Free Workplace Act. Contractor further certifies that it has not been debarred and is not ineligible for award of this Contract as the result of a violation of the Illinois Drug Free Workplace Act.
- M. Contractor knows, understands and acknowledges its obligations under the Substance Abuse Prevention on Public Works Act, 820 ILCS 265/1 *et seq.* A true and complete copy of Contractor's Substance Abuse Prevention Program Certification is attached to and made a part of this Contractor Compliance and Certification Attachment.
- N. The Contractor shall comply with the requirements and provisions of the Freedom of Information Act (5 ILCS 140/1 *et. seq.*) and, upon request of the Arlington Heights Park District's designated Freedom of Information Act Officer (FOIA Officer), Contractor shall within two (2) business days of said request, turn over to the FOIA Officer any record in the possession of the Contractor that is deemed a public record under FOIA.

\_\_\_\_\_  
CONTRACTOR

By: \_\_\_\_\_  
Its: \_\_\_\_\_

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

I, the undersigned, a notary public in and for the State and County, aforesaid, hereby certify that \_\_\_\_\_ appeared before me this day and, being first duly sworn on oath, acknowledged that he executed the foregoing instrument as his/her free act and deed and as the act and deed of the Contractor.

Dated: \_\_\_\_\_  
\_\_\_\_\_  
(Notary Public)  
(SEAL)

SUBSTANCE ABUSE PREVENTION PROGRAM CERTIFICATION

The Substance Abuse Prevention on Public Works Projects Act, 820 ILCS 265/1 et seq., (“Act”) prohibits any employee of the Contractor or any Subcontractor on a public works project to use, possess or be under the influence of a drug or alcohol, as those terms are defined in the Act, while performing work on the project. The Contractor/Subcontractor **[circle one]**, by its undersigned representative, hereby certifies and represents to the Arlington Heights Park District that **[Contractor/Subcontractor must complete either Part A or Part B below]:**

A. The Contractor/Subcontractor **[circle one]** has in place for all of its employees not covered by a collective bargaining agreement that deals with the subject of the Act a written substance abuse prevention program, a true and correct copy of which is attached to this certification, which meets or exceeds the requirements of the Substance Abuse Prevention on Public Works Act, 820 ILCS 265/1 et seq. **[Contractor/Subcontractor must attach a copy of its substance abuse prevention program to this Certification.]**

\_\_\_\_\_  
Name of Contractor/Subcontractor (print or type)

\_\_\_\_\_  
Name and Title of Authorized Representative (print or type)

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_ Dated: \_\_\_\_\_

B. The Contractor/Subcontractor **[circle one]** has one or more collective bargaining agreements in effect for all of its employees that deal with the subject matter of the Substance Abuse Prevention on Public Works Projects Act, 820 ILCS 265/1 et seq.

\_\_\_\_\_  
Name of Contractor/Subcontractor (print or type)

\_\_\_\_\_  
Name and Title of Authorized Representative (print or type)

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_ Dated: \_\_\_\_\_

## **IMPORTANT NOTICE OF RESPONSIBILITY FOR PERIODIC REVISIONS TO PREVAILING WAGE RATES**

Revisions of the following Prevailing Wage Rates are made periodically by the Illinois Department of Labor. These may be accessed by computer at <https://www.illinois.gov/idol/Laws-Rules/CONMED/Rates/2015/july/COUNTY.HTM>. As required by the Prevailing Wage Act, any and all such revisions supersede the Department of Labor's June determination. Bidders and Contractors performing work on this Project are responsible for determining the applicable prevailing wage rates at the time of bid submission and performance of the Work. Failure of a Bidder/Contractor to make such determination shall not relieve it of its obligations in accordance with the Contract Documents. In consideration for the award to it of the Contract for this Project, the Contractor agrees that the foregoing notice satisfies any obligation of the public body in charge of this Project to notify the Contractor of periodic changes in the prevailing wage rates and the Contractor agrees to assume and be solely responsible for, as a material obligation of the Contractor under the Contract, the obligation to determine periodic revisions of the prevailing wage rates, to notify its subcontractors of such revisions, to post such revisions as required for the posting of wage rates under the Act, and to pay and require its subcontractors to pay wages in accordance with such revised rates.

## **2024 ADA CONCRETE & RESURFACING - SCOPE OF WORK**

### **Concrete**

- 1) General Conditions and requirements: Administration, Portable Toilets, if necessary, safety measures, protective measures including existing tree protection, all construction fencing, silt run-off prevention, following local codes and ordinances, pedestrian and traffic control, notification to the park district and any other relevant government authorities, and all concrete, paver and landscape debris removal and disposal.
- 2) Preparing forms, base gravel and reinforcement for flatwork, ramps, and site furniture pads next to concrete as shown on the plans. Preparing the amphitheater and stairs for patching and topcoat using Ardex products as specified.
- 3) Providing a concrete mix that meets the strength of 4000 psi at 28 days.
- 4) Concrete shall be finished as specified to be prevent slips and allow positive drainage.
- 5) Ensuring that all concrete meet the requirements for the Americans with Disability Act. Walks and pads should not exceed a cross slope of 2% or a 2% slope at the path of travel. Curb cuts, if any, shall be smooth and flush at grade.
- 6) Additional spaces shall be left for wheel chairs next to benches as shown on the plans. Paths of accessible travel shall be 5' wide at minimum or as shown on the plans.
- 7) Assemble and install site furniture, including picnic tables, waste cans and benches. All benches to have three arm rests.
- 8) Clean up debris and backfill the soil to match existing grades.

### **Installation & Landscape**

- 9) Contractor to assemble and install surface-mount DuMor site furniture on newly formed concrete as shown. Locations noted on the plans for your reference.
- 10) Restore all grass around new concrete pad areas with seed as shown on plans. These areas are a guide and any additional grass damage from this project is to be repaired by Contractor.
- 11) Prices are to include the delivery of all materials; equipment, supplies, tools, scaffolding, transportation, insurances, bonds, warranties, and all other facilities, and the performance of all labor and services necessary for the proper completion of the work except as may be otherwise expressly provided in the Contract Documents.
- 12) Locations and Details (The Park District will select as many locations as possible to fit within budget allotment, please bid accordingly as if any individual and/or all locations may be selected):

#### **Base Bid locations:**

- a. North School Park, 307 N. Evergreen Ave, Arlington Hts. 60004 ([North School Park - Google Maps](#))

#### **Alternate Bid locations:**

- b. Legacy Park, 660 N. Ridge Ave., Arlington Hts. 60004 ([Legacy Park - Google Maps](#))
- c. Prairie Park, East Council Trail, Arlington Hts. 60005 ([Prairie Park - Google Maps](#))
- d. Happiness Park, 2208 N. Verde Dr., Arlington Hts. 60004 (<https://maps.app.goo.gl/DiVtneLeC9RwfnuU6>)
- e. Recreation Park, 500 E. Miner St., Arlington Hts. 60004 (<https://maps.app.goo.gl/7KzvjAd59KWU7mwJ6>)

**BASE BID LINE-ITEM FORM 1 of 1**

**NORTH SCHOOL PARK BENCH PAD IMPROVEMENTS**

<b>Item / Description</b>	<b>Appx. Quant.</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Subtotal</b>
Furnish, install, & maintain temporary 4' construction fencing to secure site during demolition/ construction and to protect trees as shown.	1419	Linear Foot	\$	\$
Furnish, install and maintain silt fencing as shown on plans & specs.	115	Linear Foot	\$	\$
Traffic Control and Barriers	1	Lump Sum	\$	\$
Extra labor expenses to cart concrete to inside park plus protect existing trees & park features from damage.	1	Lump Sum	n/a	\$
Demolition and removal of existing benches, waste cans, concrete pavers and border concrete curbs as shown.	1	Lump Sum	n/a	\$
Furnish and install 5" concrete bench pads w/rebar grid & California finish as per the plans and specifications.	913	SF	\$	\$
Furnish and install an additional 5" concrete pad for picnicking with rebar grid & California finish as per the plans and specs.	454	SF	\$	\$
Fill in two areas where benches were placed on opposite side with topsoil.	3.9	CY	\$	\$
Restore grass with topsoil fill and grass seed as shown on the plans & specs.	545	SF	\$	\$
Install 3 DuMor Picnic Tables (surface mount) as shown on the plans & specs.	3	Picnic Tables	\$	\$
Install 12 DuMor Benches (surface mount) as shown on the plans & specs.	12	Benches	\$	\$
Install 8 DuMor Waste Cans (surface mount) as shown on the plans & specs.	8	Waste Cans	\$	\$
Power wash, patch, prep and topcoat amphitheater seating surfaces. Furnish and install ¼" ARDEX coating on damaged concrete. Add Sealer– ARDEX CG Clear. Excludes pavers, cheek walls and curbs.	741	SF	\$	\$

**Subtotal – NORTH SCHOOL PARK BENCH PAD IMPROVEMENTS \$ \_\_\_\_\_**

**ALTERNATE BID LINE-ITEM FORM 1 of 4**

**ALTERNATE 1: LEGACY PARK IMPROVEMENTS**

<b>Item / Description</b>	<b>Appx. Quant.</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Subtotal</b>
Furnish, install, and maintain temporary 4' construction fencing to secure site during demolition/construction and to protect trees as shown.	350	Linear Foot	\$	\$
Traffic control & barriers.	1	Lump Sum	n/a	\$
Demolition and removal of existing 2 benches, concrete pads, concrete flatwork and stone as shown at the ARC Entry (99SF) & Safety Town (1411SF).	1	Lump Sum	n/a	\$
Safety Town- Excavate and provide stone for new 5" concrete site furniture pads as shown and noted on plans & specifications	1512	SF	\$	\$
Safety Town- Furnish and install 5" concrete pads and flatwork with rebar grid and California finish as per the plans and specifications.	1512	SF	\$	\$
ARC Entry- Excavate for and provide stone for new 5" concrete site furniture pads as shown and noted on plans & specifications	180	SF	\$	\$
ARC Entry - Furnish and install 5" concrete pads and flatwork with rebar grid and California finish as per the plans and specifications.	180	SF	\$	\$
ARC Entry- Install 1 new DuMor Bench and re-install existing waste can (removed during demo) per plans and specs.	2	Site furnishings.	\$	\$
Install mulch and topsoil in place of original bench and pad removed near the flagpole.	4	CY	\$	\$
Restore grass with topsoil fill and grass seed as shown on the plans and specifications.	315	SF	\$	\$

**Subtotal – ALTERNATE 1 - LEGACY PARK IMPROVEMENTS**

\$ \_\_\_\_\_



**ALTERNATES BID LINE-ITEMS FORM 2 OF 4**

**ALTERNATE 2: PRAIRIE PARK IMPROVEMENTS**

<b>Item / Description</b>	<b>Appx. Quant.</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Subtotal</b>
Furnish, install, and maintain temporary 4' construction fencing to secure site during demolition/construction and to protect trees as shown.	286	Linear Foot	\$	\$
Demolition and removal of existing benches, waste cans and concrete pads as shown.	1	Lump Sum	n/a	\$
Demolition and removal of existing sand / sand play area with concrete curb as shown.	1	Lump Sum	n/a	\$
Excavate for new 5" concrete site furniture pads and ramp areas as shown and noted on plans & specifications.	436	SF	\$	\$
Furnish and install 5" concrete pads with #4 rebar grid and California finish as per the plans and specifications.	199	SF	\$	\$
Furnish and install 5" concrete ramp areas with California finish and/or a textured warning finish, connecting dowls and #4 rebar grid.	164	SF	\$	\$
Assemble & Install DuMor waste can and three benches (surface mount) per plans and specs.	4	Site Furnishings	\$	\$
Restore grass with topsoil fill and grass seed as shown on the plans and specifications.	118	SF	\$	\$

**Subtotal – ALTERNATE 2 – PRAIRIE PARK IMPROVEMENTS**

\$ \_\_\_\_\_

**ALTERNATE BID LINE-ITEM FORM 3 of 4**

**ALTERNATE 3: HAPPINESS PARK IMPROVEMENTS**

<b>Item / Description</b>	<b>Appx. Quant.</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Subtotal</b>
Furnish, install, and maintain temporary 4' construction fencing to secure site during demolition/construction to protect trees as shown.	98	Linear Foot	\$	\$
Excavate for new 5" concrete site furniture pad as shown and noted on plans & Specs.	2.7	CY	\$	\$
Furnish and install 5" concrete pads and flatwork with rebar grid and California finish as per the plans and specifications.	25	SF	\$	\$
Assemble and install 1 new DuMor Bike Rack and 1 waste can (surface mount) as shown.	2	Site furnishings	\$	\$
Restore grass with topsoil fill and grass seed as shown on the plans and specifications.	17	SF	\$	\$

**Subtotal – ALTERNATE 3 – HAPPINESS PARK IMPROVEMENTS** \$ \_\_\_\_\_

ALTERNATE BID LINE-ITEM FORM 4 of 4

RECREATION PARK STAIR PATCHING

Item / Description	Appx. Quant.	Unit	Unit Price	Subtotal
Power wash, remove debris, patch, prep and topcoat full stairs and landings to patch damage and refresh all old concrete surfaces leading to the entry. Furnish and install ¼" ARDEX coating on damaged concrete. Add Sealer– ARDEX CG Clear. Excludes masonry and cheek walls.	336	SF	\$	\$

**Subtotal – ALTERNATE 4 – REC PARK STAIR PATCH** \$ \_\_\_\_\_

**Bid Form- 2024 ADA Concrete & Resurfacing – Various Parks**

**Contractor:** \_\_\_\_\_

**Contact:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

Bid Due Date: Thursday, June 27, 2024 @ 1:00 PM; 410 N Arlington Heights Rd; Arlington Heights, IL 60004; Location: Multiple, see documents; Optional Pre-Bid Meeting: Thursday, June 20, 2024 @ 10:00 AM; 307 N. Evergreen Ave.; Arlington Heights  
Project Schedule: July 15 through October 1, 2024.

**BID PRICE**

- Cost at North School Park: \$ \_\_\_\_\_

**BASE BID PRICE Total** (As spelled out in Unit price tables) \$ \_\_\_\_\_

**ALTERNATES PRICES**

**Alternate #1:** Legacy Park (Safety Town & ARC Entry)

**Add \$** \_\_\_\_\_

**Alternate #2:** Prairie Park

**Add \$** \_\_\_\_\_

**Alternate #3:** Happiness Park

**Add \$** \_\_\_\_\_

**Alternate #4:** Recreation Park

**Add \$** \_\_\_\_\_

**Voluntary Alternates:**

Description of Alternate Proposed (state any change in time or additional qualifications):

**Add/Deduct/No Change \$** \_\_\_\_\_

**Unit Prices:**

6" Concrete Curb	\$ _____	/LF
Concrete Curb- 12" wide	\$ _____	/LF
Concrete flatwork/pads- 5" depth	\$ _____	/SF
Excavate and haul away soil	\$ _____	/Cy
Install 6" CA-6 Gravel	\$ _____	/cy

Contractor acknowledges receipt of the following Addenda, which are a part of the Contract Documents: Addenda Numbers: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Contractor hereby agrees to start work within ten (10) days after receipt of "Notice to Proceed" from the Owner and to substantially complete the project as specified in the Proposal Packet.

# **SPECIFICATIONS**

## **SECTION 01560-PROTECTION OF ENVIRONMENT**

### **SECTION 1 - GENERAL**

#### **1.01 Description**

- A. CONTRACTOR, in executing work, shall maintain work areas on- and off-site free from environmental pollution that would be in violation of any federal, state or local regulations.

#### **1.02 Protection of Sewers**

- A. Take adequate measures to prevent impairment of operation of existing sewer system. Prevent construction material, pavement, concrete, earth, or other debris from entering sewer or sewer structure.
- B. Divert sewage flow interfering with construction to sewers leading to wastewater treatment plant. Prior to commencing excavation and construction, submit for review, detailed plans, including routing and connections, required to handle and dispose of sanitary wastes. By reviewing plan, OWNER neither accepts responsibility for adequacy thereof nor for damages to public or private property resulting therefrom, such responsibilities remain with CONTRACTOR.

#### **1.03 Protection of Waterways**

- A. Observe rules and regulations of State of Illinois and agencies of U.S. government prohibiting pollution of any lake, stream, river or wetland by dumping of refuse, rubbish, dredge material or debris therein.
- B. Provide holding ponds or approved method which will handle, carry through, or divert around work flows, including storm flows and flows created by construction activity, so as to prevent excessive silting of waterways or flooding damage to property.
- C. Comply with procedures outlined in U.S. EPA manuals entitled, "Guidelines for Erosion and Sedimentation Control Planning and Implementation," Manual EPA-72-015 and "Processes, Procedures, and Methods to Control Pollution Resulting from All Construction Activity," Manual EPA 43019-73-007.

#### **1.04 Disposal of Excess Excavated and Other Waste Materials**

- A. Dispose of excess excavated material not required or suitable for backfill and other waste material in a lawful manner.

#### **1.05 Protection of Air Quality**

- A. Minimize air pollution by wetting down bare soils during windy periods, requiring use of properly operating combustion emission control devices on construction vehicles and equipment used by CONTRACTORS, and encouraging shutdown of motorized equipment not actually in use.

- B. Trash burning will not be permitted on construction site.
- C. If temporary heating devices are necessary for protection of work, such devices shall be of type that will not cause air pollution.

**1.06 Use of Chemicals**

- A. Chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of either U.S. EPA or U.S. Department of Agriculture or any other applicable regulatory agency.
- B. Use of such chemicals and disposal of residues shall be in conformance with manufacturer's instructions.

**1.07 Noise and Dust Control**

- A. Conduct operations to cause least annoyance to residents in vicinity of work, and comply with applicable local ordinances.
- B. Equip compressors, hoists, and other apparatus with such mechanical devices as may be necessary to minimize noise and dust. Equip compressors with silencers on intake lines.
- C. Equip gasoline or oil operated equipment with silencers or mufflers on intake and exhaust lines.
- D. Line storage bins and hoppers with material that will deaden sounds.
- E. Conduct operation of dumping rock and of carrying rock away in trucks so as to cause minimum of noise and dust.
- F. Provide unpaved streets, roads, detours, or haul roads used in the construction area with an application of water to minimize dust. The ENGINEER shall direct the CONTRACTOR as to when and where the water is required and to the rate of application. Keep paved areas clean and free of materials contributing to dust. Applicable environmental regulations for dust prevention will be strictly enforced.

All watering described herein shall be done with a spray application. An open-end hose will not be acceptable. The method of watering shall meet the approval of the ENGINEER.

**END OF SECTION – 01560**

# SECTION 02231-TREE AND PLANT PROTECTION

## Section 1 – SITE WORK

### 1.01 Description

This item shall consist of protecting specific, individual, existing trees, shrubs, and plant material not designated for removal which are to remain from construction damage. Such trees, shrubs, and plant materials shall be left in place and protected from damage or injury by the Contractor during construction using full and adequate methods of protection. The trees to remain or individual trees to be protected shall be identified on the drawings or in the field by the Owner.

### 1.02 Procedures

#### A. Individual trees to be protected:

1. These trees shall be identified with surveyor's flagging tape placed around the trunks at eye level.
2. A 4' high snow fence shall be provided, erected and maintained at the drip line of each tree so identified.
3. These protection fences shall be removed after final project acceptance or as required by the Owner
4. Water shall not be permitted to pond within the fenced areas at the base of the tree, except as currently occurs.
5. No tree shall be used as an anchorage.

#### B. Trees to remain:

Trees to remain identified either with surveyor's flagging tape or shown in the drawings shall have the following protection procedures apply:

1. Work within tree drip lines: where excavating, fill or grading or soil preparation is required within the branch spread (drip line of trees the work shall be performed with care to prevent abrasion or other damage from equipment to tree trunks, limbs, and root systems. Parking or storage of equipment or materials will not be allowed within tree drip lines. Movement of vehicles within tree drip lines shall be limited to that required in the performance of specific work.
2. Excavation within tree drip lines: Where excavation is required within tree root zones, the tree roots shall not be severed by the excavation equipment. Rather, the tree roots within a construction area greater than 1/4" in diameter shall be cut clean with a pruning clipper, shear or saw. All crushed, torn, frayed or otherwise injured roots shall have these injured portions removed by clean cutting.
3. All digging within the drip line shall be done by hand, except for pavement and curb excavation. For pavement and curb excavation, the Contractor shall dig to within 18" laterally of the desired limit of excavation. The remaining lateral 18" shall be dug by hand.

4. No equipment or vehicles exceeding 1000 lbs. will be allowed within the drip line of any tree for the duration of this contract. Steel planking, or timber planking made of 4" thick material, each plank covering a min. of 8 square feet, shall be used to support backhoe and other equipment stabilizers when set within the drip-line of a tree or sodded planting strip.

## **2. CONSTRUCTION TECHNIQUES**

Prior to any site disturbance, it shall be the responsibility of the contractor to install tree protection measures in accordance with plans and specifications prepared by a qualified professional. It is the contractor's responsibility to safeguard the trees designated to be preserved. Throughout planning and construction, the contractor should monitor the effect of the proposed activities on the vegetation to be preserved and maintained.

### **A. Concerns**

The following must not occur within the tree protection areas:

1. Stockpiling of soils
2. Operating or storing construction equipment
3. Regrading causing runoff, flooding, or change of elevation
4. Parking vehicles and storing supplies
5. Spilling of toxic materials
6. Spraying of herbicides in close proximity to protected areas

## **3. REPAIR, REPLACEMENT AND PAYMENT FOR DAMAGE**

Trees or other plant material not designated to be removed but that are destroyed or irreparable damaged by Contractor operations as determined by the Owner, shall be repaired or replaced by the Contractor in accordance with the Owner representative's recommendations.

1. Replacements shall be of the same species and as nearly as possible of the same size as the trees to be replaced.
2. The Contractor shall allow one (1) Working Day advance notice for inspection of nursery stock replacements by the Owner.

- A. **Payment:** In addition to the Contractor's restoration approved by the Owner, the Contractor will be assessed damages for the difference in the dollar value of the damaged tree, shrub, or other plant material, and the dollar value of the replacement. The dollar value will be determined by the Landscape Architect from the "Guide for Establishing Values of Trees and Other Plants," prepared by the Council of Tree and Landscape Appraisers, current edition. Damages assessed will be deducted from monies due or that may become due to the Contractor.



- B. Planting of replacement stock shall be done in accordance with the requirements of the Contract Documents during the first fall or spring planting period, whichever comes first.

**4. TREE PRUNING**

Pruning shall conform to ANSI A300, Tree, Shrub and Other Woody Plant Maintenance Standard practices (Pruning). Pruning prescriptions should be developed by a person familiar with tree species for the specific geographic area. Maintenance pruning shall consist of crown cleaning to remove all dead, damaged and weak branches. The removal of selected conflicting branches shall be included. Under no circumstances shall the interior of trees be stripped. Interior branches shall be selectively pruned to reduce conflict or where branches are damaged. Hazard reduction pruning shall consist of the removal of any dead branches and the correction of any other problems related to safety. Items not correctable by pruning shall be brought to the owner's attention in writing.

**END SECTION – 02231**

## **SECTION 02721 - AGGREGATE BASE COURSE**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Aggregate Base Course

**1.02 RELATED REQUIREMENTS**

- A. Section 02500 – Site Concrete

**1.03 REFERENCE STANDARDS**

- A. ASTM D 698 - Standard Test Methods for Laboratory Compaction Characteristics of soil using standard effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>));2007.
- B. ASTM D 1556 – Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2007.
- C. SSRBC – Standard Specifications for Road and Bridge Construction, adopted by the Illinois Department of Transportation on January 1, 2002, including applicable current Supplemental Specifications and Special Provisions.

**1.04 SUBMITTALS**

- A. Compaction Density Test Reports

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. When necessary, store materials on site in advance of need.
- B. When aggregate materials need to be stored on site, locate stockpiles where indicated.
  - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
  - 2. Prevent Contamination
  - 3. Protect stockpiles from erosion and deterioration of materials.

**1.06 SEQUENCING AND SCHEDULING**

- C. Construct aggregate base only after all of the following have been completed.
  - 1. Subgrade has been corrected for instability problems and successfully passed a rolling test, performed by the contractor and witnessed by the owner.
  - 2. Subgrade has been checked for conformance to line and grade tolerances (Stringline).

**1.07 GUARANTEE**

- A. Guarantee all work within this section for one year following final acceptance and in accordance with General and Supplementary Conditions.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Sub-Base Granular Material: SSRBC Section 311
- B. Aggregate for Base Course: SSRBC Section 351, Type B.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that survey bench marks and intended elevations for the work are as indicated.
- B. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

**3.02 PREPARATION**

- A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping and re-compacting.
- B. Do not place aggregate on soft, muddy, or frozen surfaces.

**3.03 INSTALLATION**

- A. Place aggregate in maximum 8-inch layers and roller compact to specified density.
- B. Level and contour surfaces to elevations and gradients indicated.
- C. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.
- D. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- E. Use Mechanical tamping equipment in areas inaccessible to compaction equipment.

**3.04 TOLERANCES**

- A. Flatness: Maximum variation of ¼ inch measured with 10-foot straight edge.
- B. Scheduled Compacted Thickness: within ¼ inch.

C. Variation from Design Elevation: within ½ inch.

**3.05 FIELD QUALITY CONTROL**

- A. The contractor shall have an independent testing laboratory sample the aggregate base materials, determine the moisture/density relationships, and gradation and perform field moisture/density tests.
- B. Compaction density testing will be performed on compacted aggregate base course in accordance with ASTM D1556.
- C. Results will be evaluated in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D698 ('Standard Proctor').

**3.06 CLEANING**

- A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

**END OF SECTION – 02721**

**SECTION 02500-SITE CONCRETE**

**1. General Description**

**1.01 Description of Work**

- A. This work will consist of pouring new footings for all fence posts and the bench posts per plans and specifications using Portland Cement.
- B. This work shall consist of all work shown on the Construction Plans and Construction Documents.

**1.02 Standards**

- A. All work required under this section shall conform to the current edition of the "ILLINOIS DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

**1.03 Weather and Environmental Conditions**

- A. No concrete shall be poured when the air temperature is below 45 degrees.

- B. No concrete shall be poured when rain or similar weather has been forecast or is occurring near the project site.

**1.04 Submittals**

- A. Submit shop drawings for all rebar reinforcement.

**1.05 Concrete Protection**

- A. Concrete shall be maintained in a continually moist condition for a minimum of seven (7) days after pouring.
- B. The air and ground temperature around the concrete shall be maintained at 45 degrees or higher.
- C. All concrete surfaces must be protected from weather conditions, including rain, snow, frost, hail, etc.
- D. All concrete surfaces must be secured and protected from graffiti, vandalism or similar damage. The Contractor will be responsible for the protection of each concrete pour until the concrete has had sufficient time to harden. Any concrete that is vandalized or receives graffiti must be removed and replaced by the Contractor at no additional expense to the Owner.

**1.06 Concrete Testing**

- A. The Contractor must provide test cylinders for any concrete work completed as part of this work. A total of one (1) test cylinder shall be filled from each truck load of concrete delivered to the site. Each cylinder shall be clearly marked with the date of delivery, location of pour, name of concrete supplier and load or delivery ticket number.
- B. Testing services will be arranged and paid for by the Owner. The Contractor will be responsible for the disposal of all un-tested cylinders.

**2. Products and Materials**

- A. Must be Mix #1 as shown below in concrete mixture matrix.
  - B. Must have a compressive strength of 4,000 pounds per square inch at 28 Days.
  - C. Must slump between two (2) to four (4) inches.
- A. Must be delivered to the job site and discharged from the truck within one (1) hour after mixing at the mixing plant.

## Concrete Mixture Matrix

Design Mix #		Mix 1
<b>Strength</b>	PSI	4000
<b>Slump Range</b>	Inches	2 to 4
<b>Air Content</b>	%	5 to 8

Material	Unit	Specification & Description	Mix 1
<b>Cement</b>	LB	ASTM-C150, Type 1	575
<b>Fly Ash</b>	LB	ASTM C618	
<b>GGBF Slag</b>	LB	ASTM C989	
<b>Fine Aggregate</b>	LB	ASTM C33, Natural Sand	1263
<b>Course Aggregate</b>	LB	ASTM C33, #57 Aggregate	1800
<b>Course Aggregate</b>	LB	ASTM C33, #8P-Grvl Aggregate	
<b>Water</b>	LB	ASTM C94, Potable	244
<b>Water Reducing Agent</b>	OZ	ASTM C494, Type A/D Mid-Range	
<b>Air Entraining Agent</b>	OZ	ASTM C260	*
<b>Water Reducing Agent</b>	OZ	ASTM C494, Type A/D	20.1
<b>Calcium Chloride</b>	OZ	ASTM C494, Type C	
<b>*As Needed to Insure Proper A/E</b>			

### 2. Equipment

- A. All equipment used to perform this work must conform to the relevant section of the IDOT Specifications.

### 3. Inspections

- A. Prior to the pouring of concrete, all formwork, steel reinforcing and base course preparation shall be inspected and approved by the Owner's Representative or by the Landscape Architect.
- B. The Contractor must provide a minimum of 48 hours' notice to the Owner's Representative or the Landscape Architect to schedule inspections.

#### 3.01 Preparation

- A. The Contractor must excavate and remove all topsoil or unsuitable soils to obtain a clean compacted clay subgrade elevation for concrete installation.
- B. Any soils encountered, which prohibit the construction of concrete on structural clay, shall be removed. Compacted aggregate base material must then be added to compensate for removal of unsuitable or organic soils.
- C. A four (4) inch minimum compacted thickness of aggregate base material, or as otherwise shown on the details, must be installed over the prepared and compacted subgrade.

### 3.02 Installation

- A. All formwork must be constructed to the horizontal and vertical lines and grades shown on the plans. Forms must be sufficiently staked and braced to eliminate any movement after concrete has been poured. Any deflection in formwork will result in the removal and replacement of the affected area or concrete, subject to the review by the Owner. Formwork must remain in place for a minimum of twenty-four (24) hours or until the concrete has had sufficient time to set up.
- B. Install reinforcing #4 steel rebar grids in locations and sized as shown on the plans and details instead of wire mesh. Rebar to be set on top of two by four wood blocks in a grid of 2' x 2'. During the pouring of concrete, wood blocks are taken out. This reinforcement applies per below:

5" Reinforced Concrete: 2' x 2' Grid as noted above.

6" Reinforced Concrete: 2' x 2' Grid as noted above

Concrete Curbs, Stairs and Walls: Not applicable

- C. Expansion joints must be installed against existing concrete and stationary objects and where indicated on plan. Expansion joints must be made of a water-resistant asphalt fiber material and sized as follows:

Concrete Walks & Slabs: ½" Wide

Concrete Curbs: ¾" Wide

Expansion joints must be located as follows or where indicated on plan:

Concrete Walks: 30.0' On Center

Concrete Curbs: 25.0' On Center

The top of the expansion joint material must be installed a minimum of 1/4 below the finish grade of the concrete surface.

- D. Concrete Finishing

- 1. Walks must be finished by floating, steel troweling, tooled scoring, and edging, and medium broom finishing perpendicular to the path of pedestrian travel. Install 1" Deep by 3/16" Wide tooled scoring joints at five (5) feet on center or as indicated on plan. Other finishes, including California Finish shall be executed if shown on the plan and details.
- 2. Curbs, stairs and walls must be finished by vibrating, floating, steel troweling, tooled scoring, edging, chamfering, and medium broom finishing, unless otherwise indicated on the plans and details.
- 3. A deeper, scored finish is required as shown on the plans for ADA ramps.

- E. Clean-Up

- 1. All concrete must be clean and free of any debris, mortar, or dirt, etc. Acceptable methods of cleaning include power washing or sweeping.
- 2. All fence posts, bench legs, table, legs, litter receptacle legs or sign posts, etc., which come into contact with poured concrete must be clean and free of any concrete debris.

**END SECTION – 02500**

## SECTION 02930 - SOD AND SEED TURF ESTABLISHMENT

### Part I - Scope

1.01 The work includes furnishing and placing black earth (topsoil), fertilizer, seed and/or sod as stated in the project specifications, and performing all operations in connection with seeding and sodding, all complete and subject to the terms and conditions of the contract.

### Part II - Materials

1.01 Black Earth (topsoil) if required by project specification, shall be fertile, friable, natural surface soil to be capable of producing satisfactory agricultural crops. See section 02200 Earthwork.

1.02 Commercial Fertilizer shall be delivered to the site in unopened, original containers, each bearing name and address of the manufacturer, name brand or trademark and manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable for use, will not be accepted. The fertilizer formula shall contain a minimum basis percentage by weight of the following:

Nitrogen	33%	insoluble in water 24%
Phosphoric Acid	4%	
Potash	8%	

1.03 The balance of the fertilizer shall be made up of materials usually present in such a product, and shall contain IBDU (Isobutylidene Diurea).

1.04 Fertilizer shall be of the inorganic type in composition, dry and free flowing, equal to "PAREX" IBDU. Not more than 2% shall be retained on a 14-mesh sieve and not more than 25% shall pass through a 65-mesh sieve. It shall be free from dust, sticks, sand, stone and other debris.

1.05 Grass Seed shall be re-cleaned seed of seed crop from the year stipulated in the project specification. All seed shall meet the requirements established by the State and Federal Seed and Weed Control Laws, covering law on "AGRICULTURAL SEED." Seeds shall meet the following requirements in respect to purity and germination, for areas as noted on the plans:

TURF GRASS AREA:

VARIETY	PERCENT OF MINIMUM PURITY	PERCENT OF MINIMUM GERMINATION
Kentucky Blue Grass	85	75
Red Top	92	85
Red Fescue	98	90
Domestic Rye	98	87

1.06 The percentage of hard seed included as a part of the germination percentage of any lot of seed, shall not exceed twenty. Kentucky Blue Grass seed shall weigh a minimum of 21 pounds to the measured bushel and for all seeding shall be of the crop year indicated in the project specifications.

A. Packing and Marking: All seeds shall be delivered in sacks unmixed. Seeds shall be packed for delivery in suitable bags in accordance with standard commercial practice. Each bag shall be tagged or labeled as required by the law of the STATE OF ILLINOIS. The vendor's name shall show on or be attached to each bag, together with a statement signed by the vendor, showing: (a) the kind of seed contained; (b) the percentage of purity and germination; (c) the percentage of hard seed, if any; (d)

a statement conforming to the laws of the STATE OF ILLINOIS herein before mentioned, showing percentage of weed seeds if any.

Mixing of Seed: The seed shall be mixed thoroughly in the following proportions:

TURF GRASS AREA:

Kentucky Blue Grass	70%
Red Top	5%
Creeping Red Fescue	15%
Domestic Rye	10%

- B. Blue Grass Sod shall be NURSERY grown of the type and variety specified, containing no bent grass, quack grass or other noxious weed growth. It shall be free from fungus and other diseases and be a minimum of two years growth. It shall be of firm, tough texture, having a compact growth of grass and good root development. The sod root zone shall be of good, fertile, natural field soil and free from stones and debris and the sod shall contain sufficient moisture to maintain its vitality during transportation.
1. Mowing: Before being cut and lifted, the sod shall have been mowed at least twice with a lawn mower, with the final mowing not more than seven days before the sod is cut. Sod cut for more than 48 hours shall not be used without the approval of the landscape architect.
  2. Cutting: The sod shall be carefully cut into uniform strips or rolls of one inch thick. Strips less than 12-inches in width will not be accepted. Each strip shall be rolled as compactly as is possible without breaking the turf.
  3. Inspection: The sod will be inspected at the source, by the landscape architect or his authorized representative, hereinafter called the landscape architect, before cutting; and areas that fail to meet with his approval shall not be cut for the purpose of supplying material under the contract. The landscape architect shall be permitted to take such samples as he may select. All sod shall be fresh and green when placed. Any sod that is dried out, burned, inferior in quality to said samples, or in any way failing to meet the requirements of these specifications will be rejected and the contractor shall immediately remove such rejected material from the premises of the owner and supply suitable material in its place.

### Part III - Site Preparation

- 3.01 Spreading and Rough Grading of Black Earth (if required): The contractor shall spread and rough grade the areas to an elevation approximately 0.2-feet plus or minus below the finish grade as directed by the landscape architect. All equipment used for spreading and rough grading work shall be as approved by the landscape architect.
- A. Filling: All areas to be seeded or sodded shall be thoroughly prepared to the required depth of approximately three inches, by disking, harrowing or by other approved means. Limited areas shown on the drawings, which are too small to make these operations practicable shall receive special scarification prior to final tilling. Tilling shall continue until the condition of the soil is acceptable to the landscape architect as suitable for the specified type of seeding or sodding. When conditions are such, by reason of drought, excessive moisture or other factors, that satisfactory results are not likely to be obtained, the work will be stopped by the landscape architect and shall be resumed only when directed. Undulations or irregularities in the surface, that would interfere with further contractor's operations or maintenance, shall be leveled before the next specified operation.
  - B. Cleanup: After completion of tilling operations, the surface shall be cleared of all stones, stumps or other objects larger than 1-inch in thickness of diameter and of roots, brush, wire, grade stakes and other objects that may be a hindrance to maintenance operations. Adjacent paved areas shall be kept clean and soil or other dirt that may be brought upon the surface shall be removed promptly.



- C. Fine Grading: Final grades on the areas to be seeded or sodded are shown on the drawings by contour lines. The surfaces shall be left at the indicated grades in an even and properly compacted condition which insofar as practicable, will not provide dips and pockets where water may stand. Upon completion of tilling operations and immediately prior to sowing seed or placing sod, the area shall be finish graded as needed to correct surface irregularities produced by the preceding operations or by other cause and to restore design grades.

#### **Part IV - Spreading Fertilizer**

Fertilizer shall be distributed uniformly at a rate of 300 pounds per acre, over the areas indicated to be seeded or sodded, and shall be incorporated into the soil to a depth of at least 2-inches by disking, harrowing or other acceptable methods. The incorporation of fertilizer may be a part of the tillage operation specified above.

#### **Part V - Seeding**

- 5.01 Time Limits: All sowing of seed shall be done during the months as stated in the CONTRACT under COMPLETION TIME. Sowing delayed beyond the specified dates, by circumstances beyond the contractor's control may be continued upon written approval of the landscape architect.
- 5.02 Seeding: No seeds shall be sown during high winds. Method of sowing and equipment shall be approved by the landscape architect. Seed shall be applied at the rate of 3 pounds per 1,000 square feet or as recommended by Seed provider. Seed shall be broadcast either by hand or sowing equipment. Half the seed shall be sown with the sower moving in one direction and the remainder shall be sown with the sower moving at right angles to the first sowing. The seeded area shall be lightly raked, being careful not to rake seed from one area to another thus causing an uneven seeding. The seed shall be covered to a depth from 1/8-inch to 1/4-inch. Seeding shall be done by laborers experienced in this type of work. No seeding shall be done on an area compacted by rain until the soil is brought back to a friable condition.
- 5.03 Straw mulching and Hydro-mulching shall be done immediately after seeding: Straw mulch shall consist of straw free from weed seeds and foreign materials spread uniformly over the seeded areas at a rate of one bale per 1,000 square feet. Hydro-mulch may be used throughout, and must be used on areas with slopes of 4:1 or greater. Hydro-mulch must be composed of wood cellulose fiber and must not contain any chemicals that prohibit grass seed growth. Hydro-mulch must also include a tacifier and may be pigmented green to permit the verification of application. When applied, the hydro-mulch must form a cover that reduces erosion, absorbs water and permits percolation of water into the soil. No non-biodegradable materials may be used for this purpose. After the grass has germinated and is 1/2-inch high, the majority of the straw mulch shall be removed using a flexible wire broom.
- 5.04 Temporary Cutting and Maintenance of Grass: All seeded areas shall be watered daily with a fine spray until germination. The seed bed shall be kept moist but not wet during the period of seed germination. Care must be taken that the seed bed does not dry out in spots. During germination, the water shall penetrate to a depth of 1-inch into the seed bed. After germination, as the grass roots go deeper into the soil, the quantity of water shall be increased so that the depth of penetration is a minimum of 3-inches. Maintenance, including watering and cutting of grass, shall continue until all seeding work under this contract has been completed and accepted by the owner. The contractor shall cut grass starting when the grass becomes 3-inches high, and once a week thereafter. Included in the cutting of grass shall be the cutting and trimming required around trees, baseball backstops, drainage structures, curbs and all areas that grass abuts, as required or directed by the landscape architect. The contractor shall maintain a height of not less than 2-inches. The contractor shall be responsible for at least three cuttings prior to final inspection.

- 5.05 The lawn areas to be acceptable shall be in a green and healthy condition, void of bare spots. Water will be supplied by the owner for watering purposes where available. If water is not available from the owner, the contractor shall supply water from his own source. The contractor shall furnish the hose and proper equipment for watering purposes.
- A. Protection: The contractor is responsible for the proper care of the seeded areas during the period when the vegetation is being established. The area shall be protected against traffic or other use, by placing "NEWLY SEEDED" or other appropriate approved warning placards until all work under the contract is completed and accepted.
  - B. Repair: If at any time before completion and acceptance of the entire work covered by this contract, any portion of the surface becomes gullied or otherwise damaged following seeding, or has been winter-killed or otherwise destroyed, the affected portion shall be repaired to re-establish the condition and grade of the soil prior to seeding and shall then be reseeded as specified herein before by the contractor, at no additional cost to the owner.

## **Part VI - Sodding**

- 6.01 The surface on which sod is to be laid shall be firm and free from footprints or other depressions. Sod shall be laid in such a manner that joints between courses do not coincide. Sod shall be tightly fitted and tamped lightly to ensure contact with the surface of the soil at all points.
- 6.02 All laid sod shall be protected from usage by workmen or equipment, so as not to disturb joints or cause depressions through footprints or vehicle ruts. Any disturbed areas shall be redone to conform to grade. Sod shall be thoroughly watered after laying.
- 6.03 On slopes steeper than 3 to 1 and elsewhere where so directed. The Sod shall be fastened in place with suitable wooden pins or by other approved methods. The sod shall be given one watering as soon as excessive drying is evident. Sufficient water shall be applied to wet the sod bed at least 2-inches deep. Watering shall be done in a manner that will avoid erosion due to the application of excessive quantities and the water equipment shall be of a type that will prevent damage to the finished surface.
- A. Temporary Cutting and Maintaining of Grass: Maintenance including watering and cutting of grass shall continue until all sodding work under this contract has been completed and accepted by the owner. The contractor shall cut grass starting when the grass becomes 3-inches high and once a week thereafter.
  - B. Included in the cutting of grass shall be the cutting and trimming required around trees, baseball backstops, drainage structures curbs, and all areas that grass abuts, as required or directed by the landscape architect. The contractor shall maintain a height of not less than 2-inches. The contractor shall be responsible for at least three cuttings prior to final inspection.
  - C. The lawn areas, to be acceptable, shall be in a green and healthy condition, void of bare spots. Water will be supplied by the owner for watering purposes where available. If water is not available from the owner, the contractor shall supply water from his own source. The contractor shall furnish the hose and proper equipment for watering purposes.

**End of Section – 02930**

## **ARDEX GUIDE SPECIFICATION**

### **ARDEX Exterior Concrete Repair & Resurfacing**

Polymer-Modified, Cement-Based, Patch & Horizontal Overlay Materials

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## **SECTION 03 92 50 REPAIR MORTARS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings, general provisions of the Contract, and other related construction documents such as Division 01 specifications apply to this Section

#### **1.2 SUMMARY**

- A. This Section includes trowel-grade repair mortar for exterior patch and repair of existing substrate and trowel applied horizontal overlay.

- 1. ARDEX CD™ Concrete Dressing and ARDEX CD FINE™ Concrete Dressing
- 2. ARDEX CP™ Concrete Patch
- 3. ARDEX CG™ Concrete Guard™ High Performance, High Solids concrete Sealer

- B. Related Sections include the following:

- 1. Section 03 30 00, Cast-In-Place Concrete

#### **1.3 REFERENCES**

- A. ASTM C 109, Compressive Strength
- B. ASTM C C1028, Static Coefficient of Friction
- C. ICRI Technical Guideline No. 03732 Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays

#### **1.4 SUBMITTALS**

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Material Safety Data Sheets.
- B. Qualification Data: For Installer

## 1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: The manufacturer shall be a company with at least five years experience and regularly engaged in the manufacture and marketing of products specified herein.
- B. Installation of the ARDEX product must be completed by a factory-trained, certified applicator, such as an ARDEX LevelMaster® Elite or Choice Contractor, using mixing equipment and tools approved by the manufacturer. Please Contact ARDEX Engineered Cements (724) 203-5000 for a list of recommended installers.; Local representative James Zimmerman, 248-202-6176, james.zimmerman@ardexamericas.com
- C. Manufacturer's certification that the product has an inorganic binder content containing portland cement when tested per ASTM C150.

## 1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number and shelf life.
- B. Store products in a dry area with temperature maintained between 50° and 85° F (10° and 29° and Protect from direct sunlight.
- C. Handle products in accordance with manufacturer's printed recommendations.

## 1.7 PROJECT CONDITIONS

- A. Do not install material below 50° F (10° C) surface and air temperatures. These temperatures must also be maintained during and for 48 hours after the installation of products included in this section. Install quickly if substrate is warm and follow warm weather instructions available from the ARDEX Technical Service Department

## **PART 2 – PRODUCTS**

### 2.1 CONCRETE OVERLAY

- A. Cement-based, polymer-modified concrete resurfacing material.
  - 1. Acceptable Products:
    - a. ARDEX CD™ Concrete Dressing or ARDEX CD FINE™ Concrete Dressing
      - i. Primer: ARDEX CG™ Concrete Guard™ Clear (Diluted 1:1). Allow primer to dry thoroughly, a minimum of 3 hours. Required for overlay only.
      - ii. Sealer: ARDEX CG™ Concrete Guard™ High-performance, high solids, water-borne acrylic concrete sealer

2. Performance Requirements:
  - a. Thickness of Application: 1/16" to 1/8" or 1/2" thick in small areas
  - b. Compressive Strength: 4000 psi after 28 days (ASTM C 109/mod air cure only)
  - c. Dry Time: 2 hours prior to sealing
  - d. Application: trowel, broom, squeegee, or hopper gun
  - e. S.C.O.F.: When sealed, minimum 0.60 (ASTM C1028)

2.2 WATER: Water shall be clean, potable, and sufficiently cool (not warmer than 70°F).

### **PART 3 – EXECUTION**

#### **3.1 PREPARATION**

- A. General: Prepare substrate in accordance with manufacturer's instructions. Prior to proceeding with any repair, please refer to the International Concrete Repair Institute's ICRI 03732 Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays; and the American Concrete Institute's ACI 546R-04 Concrete Repair Guide for general guidelines for concrete repair.
  1. All concrete and masonry substrates must be sound, solid, dry, and completely free of all oil, grease, dirt, curing compounds and any substance that might act as a bond breaker. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods such as scarifying, scabbling or similar in accordance with ICRI 03732. before priming. Acid etching and the use of sweeping compounds and solvents are not acceptable.
  3. For areas requiring repair install ARDEX CP™ Concrete Patch, the repair area must be saw cut in a basic rectangular shape. Cuts should be made at 90° angle, and should be slightly keyed. Chip out the concrete inside the cuts to a minimum depth of 1/4" (6 mm) until the area is squared or box shape and mechanically prepare surface to obtain an exposed aggregate surface with a minimum surface profile of approximately 1/16" (1.5 mm).
  4. For areas requiring pre-fill or ramping install ARDEX CP™ in accordance with manufacturer recommendations.
  5. All cracks and spalls must be repaired prior to installing the horizontal overlay.
- B. Joint Preparation
  1. Moving Joints – honor all expansion and isolation joints up through the patch and overlay. A flexible sealing compound may be installed.
  2. Saw Cuts and Control Joints – fill all non-moving joints with ARDEX ARDIFIX™ Joint Filler.

### 3.2 APPLICATION OF ARDEX CD™ CONCRETE DRESSING

#### A. Mixing:

1. Add 2.5 quarts (2.4 L) of clean potable water per 20-pound (9 kg) bag.
2. Mix using a ½" (12 mm, 650 rpm) low speed heavy-duty mixing drill with an ARDEX T-2 ring mixing paddle. Mix to a uniform, lump-free consistency. Do not overwater.

#### B. Application:

1. To avoid pinholes, dilute ARDEX CG™ Concrete Guard with water in a 1:1 ratio. Apply with a short nap pain roller.
2. ARDEX CD™ and ARDEX CD FINE™ shall be installed using traditional concrete repair techniques, to include the use of a steel trowel and/or broom to achieve the desired finish. ARDEX CD™ and ARDEX CD FINE™ may also be applied using a squeegee or hopper gun.
2. Use the least amount of material possible to obtain complete coverage over the concrete surface. For maximum coverage, use the flat trowel application technique and then broom-finish. Work in areas small enough so that you can reach the newly applied surface easily to apply the broom finish without walking on it. Broom finish as you go but certainly before the dressing takes a firm set (usually 10-15 minutes depending upon jobsite conditions). Maintaining a "wet edge" as you work will help to minimize natural color variations that can occur between sections.
3. On vertical surfaces such as stair faces, trowel, brush or spray the dressing using a hopper gun directly onto the prepared area. Smooth or brush the material to the desired finish.
4. The surface of the dressing can be broom finished as work proceeds.
5. As is the case with all concrete surfaces in general, ARDEX CD™ and ARDEX CD FINE™ should be sealed with a waterborne, breathable concrete sealer such as ARDEX CG™ Concrete Guard™ to resist damage from standing water, salt, oil as well as staining and marking. Sealing of the ARDEX CD™ or ARDEX CD FINE™ can proceed as soon as the surface of the dressing has hardened sufficiently to resist damage from the sealing installation.

### 3.3 SEALING WITH ARDEX CG™ CONCRETE GUARD™

- #### A. Mixing:
- The contents of the ARDEX CG™ container must be thoroughly stirred just prior to use to ensure a uniform consistency. For best results, mix with a mechanical mixing paddle and low speed drill.

#### D. Installation:

1. ARDEX Concrete Guard should be applied in two thin coats, allowing 2-4 hours between coats, depending upon atmospheric conditions. (Back-rolling is recommended when spraying to prevent puddling.)

2. When outdoors, do not apply if rain, fog, or extremely high humidity is expected within 6-8 hours or if freezing temperatures could occur within 24 hours of application. Do not apply on surfaces under 50°F or over 90°F.
  3. Allow ARDEX Concrete Guard to cure a minimum of 24 hours before normal traffic, and a minimum of 72 hours before heavy traffic.
- E. Maintenance: In order to attain maximum life from the dressing, it is essential that the surface be properly sealed and protected. Reseal as required depending upon traffic volume and conditions.

**END OF SECTION**

## **ARDEX GUIDE SPECIFICATION**

### **ARDEX B 20™**

Overhead & Vertical Repair Mortar with Corrosion Inhibitor

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## **SECTION 03 30 00 CAST-IN-PLACE CONCRETE**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

- A. Drawings, general provisions of the Contract, and other related construction documents such as Division 01 specifications apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes Portland cement-based, polymer modified structural repair mortar with integral corrosion inhibitor.

- 1. ARDEX B 20™ Overhead & Vertical Repair Mortar with Corrosion Inhibitor
- 2. ARDEX P 71™ Primer
- 3. ARDEX BACATM Bonding & Anti-Corrosion Agent

- B. Related Sections include the following:

- 1. Section 03 30 00, Cast-In-Place Concrete

#### 1.3 REFERENCES

- A. ASTM C109, Compressive Strength of Hydraulic Cement Mortars
- B. ASTM C78, Flexural Strength of Concrete
- C. ASTM C469, Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression
- D. ASTM C157, Length Change of Hardened Hydraulic-Cement Mortar and Concrete
- E. ICRI Technical Guideline No. 03732 Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays
- F. ICRI Technical Guideline No. 03730 Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion



#### 1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Safety Data Sheets.
- B. Qualification Data: For Installer

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: The manufacturer shall be a company with at least five years experience and regularly engaged in the manufacture and marketing of products specified herein.
- B. Installation of the ARDEX product must be completed by a factory-trained, certified applicator, such as an ARDEX LevelMaster<sup>®</sup> Elite or Choice Contractor, using mixing equipment and tools approved by the manufacturer. Please Contact ARDEX Engineered Cements (724)203-5000 for a list of recommended installers.

#### 1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number and shelf life.
- B. Store products in a dry area with temperature maintained between 50° and 85°F (10° and 29°C) and Protect from direct sunlight.
- C. Handle products in accordance with manufacturer's printed recommendations.

#### 1.7 PROJECT CONDITIONS

- A. Do not install material below 50°F (10°C) surface and air temperatures. These temperatures must also be maintained during and for 48 hours after the installation of products included in this section. Install quickly if substrate is warm and follow warm weather instructions available from the ARDEX Technical Service Department.

## **PART 2 - PRODUCTS**

### **2.1 CAST-IN-PLACE CONCRETE**

A. Portland cement-based polymer modified structural repair mortar, with integral corrosion inhibitors suitable for vertical and overhead concrete.

1. Acceptable Products:

a. ARDEX B 20TM; Manufactured by ARDEX Engineered Cements: 400 Ardex Park Drive, Aliquippa, Pa 15001 USA 724-203-5000

2. Performance and Physical Properties: Meet or exceed the following values for material cured at 73° F (23° C) and 50 percent relative humidity:

a. Application: Trowel

b. Working Time: 15 - 20 minutes

c. Compressive Strength: 3,000 psi at 7 days, 6,300 psi at 28 days, ASTM C109

d. Flexural Strength: 1,100 psi at 7 days, 1,500 psi at 28 days, ASTM C293

e. Modulus of Elasticity in Compression:  $2.26 \times 10^6$  psi at 28 days, ASTM C496

f. Color: Gray

## **PART 3 – EXECUTION**

### **3.1 PREPARATION**

A. General: Prepare substrate in accordance with manufacturer's instructions. Prior to proceeding with any repair, please refer to the International Concrete Repair Institute's ICRI 03730 Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion; ICRI 03732 Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays; and the American Concrete Institute's ACI 546R-04 Concrete Repair Guide for general guidelines for concrete repair.

1. All substrates must be sound, solid, dry, and completely free of all oil, grease, dirt, curing compounds and any substance that might act as a bond breaker. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods such as scarifying, scabbling or similar in accordance with ICRI 03732 before priming. Acid etching and the use of sweeping compounds and solvents are not acceptable.

2. The repair area must be saw cut in a basic rectangular shape at least  $\frac{1}{4}$ " (6 mm) in depth. The cuts should be made at 90° angle, and should be slightly keyed. Chip out the concrete inside the cuts to a minimum depth of  $\frac{1}{4}$ " (6 mm) until the area is squared or box shape.

0. Mechanically prepare surface to obtain an exposed aggregate surface with a minimum surface profile of approximately 1/16" (1.5 mm) / ICIR concrete surface profile of 5 (CSP #5).
1. For cases with exposed reinforcing steel, prepare the concrete such that a minimum 3/4" (19 mm) is achieved around the steel to ensure sufficient placement of the corrosion inhibitor. Mechanically clean the steel to remove all rust and any other contaminants in accordance with ICRI 03730. Prime the steel with ARDEX Bonding & Anti-Corrosion Agent™ prior to proceeding with repair. For further details, please refer to the ARDEX Technical data sheet.

**B. Joint Preparation**

1. Moving Joints and Moving Cracks – honor all expansion and isolation joints up through the ARDEX B 20™. A flexible sealing compound suitable for the application may be installed. ARDEX ARDISEAL™ RAPID PLUS may be installed.
2. Control Joints and dormant cracks greater than 1/16" (1.5 mm) – fill with ARDEX ARDIFIX™ Joint Filler. Please note that the repair material must be sand broadcast to refusal to create a bonding surface for the ARDEX B 20. The filling of dormant cracks and dormant joints as described is recommended to help prevent telegraphing. However, should movement occur, cracks and joints will reappear.

**3.2 APPLICATION OF ARDEX B 20™:**

- A. Examine substrates and conditions under which materials will be installed. Do not proceed with installation until unsatisfactory conditions are corrected.
- B. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas and landscaping from contact due to mixing and handling of materials.
- C. Prime (as needed), mix, apply and allow to cure in accordance with the manufacturer's printed instructions.
  1. When mixing sanded materials, ARDEX recommends using the ARDEX DUSTFREE™ or a standard "gutter hook" vacuum attachment in combination with a wet/dry (Shop-Vac® style) vacuum and HEPA dust extraction vacuum system. Additionally, each bag should be handled with care and emptied slowly to avoid creating a plume of dust. Contact the ARDEX Technical Service Department for more details on ARDEX products and air quality management.

**END OF SECTION**



All Sites - Exp of concrete finish



ADA Warning Exp.-Alert texture in pavement, Prairie Park



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# **ARDEX B 20™**

## **Overhead & Vertical Repair Mortar with Corrosion Inhibitor**

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**Portland cement-based, polymer modified structural repair mortar with integral corrosion inhibitor**

**Glass microspheres add body, reduce weight**

**Mixes with water only**

**Easy to apply - non-sag and can be sculpted**

**Installs from 1/4" to 2" in one lift, up to a total of 8" in multiple lifts for deeper applications**

**Freeze-thaw resistant**

**Suitable for overhead and vertical repairs on commercial, institutional and multi-unit residential applications**

**Use for exterior or interior concrete overlays**

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[www.ardexamericas.com](http://www.ardexamericas.com)

# ARDEX B 20™

## Overhead & Vertical Repair Mortar with Corrosion Inhibitor

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### Description and Usage

ARDEX B 20 is a trowel-grade, Portland cement-based, polymer modified, structural repair mortar for vertical and overhead concrete. It is used at depths ranging from 1/4" to 2" (6 mm to 5 cm) in a single lift, and can be installed in multiple lifts up to 8" (20 cm) for deeper repairs of deteriorated exterior or interior concrete. ARDEX B 20 has a corrosion inhibitor built-in to protect reinforcing steel, is easy to apply and readily bonds to concrete. The resulting patch has low shrinkage and resists delamination, producing a surface suitable for commercial, institutional and multi-unit residential applications, including parking garages, overhead walkway and columns - virtually any vertical or overhead concrete surface that needs to be repaired.

### Substrate Preparation

Prior to proceeding with any repair, please refer to the International Concrete Repair Institute's ICRI Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion; ICRI Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays, and the American Concrete Institute's ACI 546R-04 Concrete Repair Guide for general guidelines for concrete repair.

The repair area must be saw cut in a basic rectangular shape to at least 1/4" (6 mm) in depth. The cuts should be made at approximately a 90° angle, and should be slightly keyed. Chip out the concrete inside the cuts to a minimum depth of 1/4" (6 mm) until the area is squared or boxed in shape.

All substrates must be solid, thoroughly clean and free of oil, wax, grease, asphalt, existing patching materials, curing and sealing compounds, and any contaminant that might act as a bond breaker. Over watered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods such as needle scaling or similar in accordance with ICRI to create an exposed aggregate surface with a minimum surface profile of approximately 1/16" (1.5 mm). Acid etching, solvents, sweeping compounds and sanding are not acceptable means of preparing the substrate.

For cases with exposed reinforcing steel, mechanically clean the steel to remove all rust and any other contaminants in accordance ICRI. Prime the steel with ARDEX BACA™ Bonding & Anti-Corrosion Agent prior to proceeding with the repair. For further details, please refer to the ARDEX Technical Brochure.

### Cracks and Joints

Saw cuts and dormant cracks greater than 1/16" (1.5 mm) should be filled with ARDEX ARDIFIX™ joint filler or similar in strict accordance with the installation instructions provided by the epoxy manufacturer. The filling of dormant cracks and joints as described is recommended to help prevent telegraphing. However, should movement occur, cracks and joints will reappear.

In no case should expansion joints, isolation joints, construction joints or moving cracks be filled with this epoxy. All moving joints and cracks must be carried up through the ARDEX B 20 by installing a flexible sealing compound specifically designed for use over moving joints, such as ARDEX ARDISEAL™ RAPID PLUS joint filler or similar.

### Recommended Tools

A 1/2" to 3/4" (12 to 19 mm) low speed heavy-duty mixing drill, heavy gauge square box (butterfly) mixing paddle, mixing buckets, measuring container, margin trowel, wood or magnesium float and a steel trowel. Also suitable for mixing in forced action mortar mixers.

### Priming

If ARDEX BACA™ is specified as a primer, follow the application instructions in the ARDEX Technical Brochure.

If this primer is not used, dampen the concrete to be repaired until it is thoroughly saturated. Do not leave any bare spots. Brush or vacuum off puddles and excess liquid. The goal is to saturate the pores of the concrete while leaving the surface free of water (SSD, Saturated Surface Dry). Alternatively, ARDEX P 71™ PRIMER can be used in accordance with the ARDEX Technical Brochure. Do not allow the concrete or ARDEX P 71 to dry before installing the ARDEX B 20. Installing the mortar over a surface that is too dry can result in cracking and bond failure.

### Mixing and Application

Pre-dampen the inside of a 5 gallon pail and remove any excess water. Pour in 6 1/2 to 7 pints (3.07 to 3.31 L) of clean water, and then slowly add one-third of a 55 lb (25 kg) bag of ARDEX B 20. Once this is blended in, add the next third and so on until all of the material is added. Mix with a slow speed drill and mixing paddle for approximately 3 minutes to a uniform, lump-free consistency. If additional water is required, you may add up to 8 oz (0.24 L) of additional mix water per bag.

**Do not overwater.**

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ARDEX B 20 is easily applied to any prepared concrete surface using standard concrete practices. Once mixed, the pot life and working time are 15 to 30 minutes, depending on surface and ambient temperatures. All mixed material must be placed within this time. Once placed, allow the material to take an initial set before finishing. Cool ambient and surface temperatures will slow the setting time, while high temperatures will accelerate it.

Work a scrub coat of the mixed material into the primed or SSD concrete substrate, applying enough pressure to ensure good mortar-to-concrete contact. Apply the repair mortar while the scrub coat is still wet. If the scrub coat is allowed to dry, it must be mechanically removed and reapplied before applying the mortar. Once the mortar is applied, consolidate to remove any air pockets.

Steel trowel the mortar to the desired finish once it takes its initial set. Applications when temperatures are above 85°F (29°C) should follow the appropriate Warm Weather Installation Guidelines available from the ARDEX Technical Service Department.

### Thickness of Installation

ARDEX B 20 can be installed from a minimum of 1/4" up to 2" (6 mm to 5 cm). For application depths greater than 2" (5 cm), mechanically roughen the first lift, and then allow it to set until hardened enough to accept the next lift (approx. 30 minutes). Repeat in 2" (5 cm) lifts until the full depth is filled, to a maximum of 8" (20 cm). Trowel the final lift to the desired finish.

### Curing

Direct sunlight or wind may cause unwanted rapid surface drying. Keep the surface of the installation damp for 48 hours. Do not use solvent-borne curing compounds.

**Note:** if the surface is to receive a topcoat or other type of finish, use moist curing methods only.

### Surface Finish and Sealing

Once the repair has cured for a minimum of 3 to 7 days it can be coated, topped or sealed as specified. To view the toppings, dressing and sealers available from ARDEX, please visit [www.ardexamericas.com](http://www.ardexamericas.com).

### Notes

The working time and pot life of ARDEX B 20 are approximately 15 to 30 minutes at 70°F (21°C). Pot life and working time will vary with ambient temperatures.

ARDEX B 20 is intended for repairing and resurfacing vertical or overhead exterior or interior concrete in institutional, commercial and multi-unit residential areas.

Always install an adequate number of properly located test areas, including the finishes, to determine the suitability of the products for the intended use. As finishes vary, always contact and rely upon the finish manufacturer for specific directives such as maximum allowable moisture content, sealer selection and intended end use of the product.

Never mix with cement or additives. Observe the basic rules of concrete work. Do not install below 50°F (10°C) surface and air temperatures. These temperatures must also be maintained during and for 48 hours after the installation of ARDEX B 20. Install quickly if substrate is warm, and follow warm weather instructions available from the ARDEX Technical Service Department.

### Precautions

ARDEX B 20 contains Portland cement and silica. Avoid eye and skin contact. Mix in a well-ventilated area and avoid breathing powder or dust. KEEP OUT OF REACH OF CHILDREN. Carefully read and follow all cautions and warnings on the product label. For complete safety information, please refer to the Material Safety Data Sheet or visit our website at [www.ardexamericas.com](http://www.ardexamericas.com).



## Technical Data According to ARDEX Quality Standards

All data based on recommended mix ratios at 70°F (21°C).  
Physical properties are typical values and not specifications.

<b>Mixing Ratio:</b>	6 1/2 to 7 pints (3.07 to 3.31 L) of water per 55 lb (25 kg) bag	
<b>Yield:</b>	0.42 cu. ft. per 55 lb bag (0.0119 m <sup>3</sup> per 25 kg bag) 20 sq. ft. per 55 lb bag at 1/4" (1.86 m <sup>2</sup> per 25 kg bag at 6 mm)	
<b>Compressive Strength (psi) ASTM C109:</b>	1 day	3000
	7 days	5000
	28 days	6300
<b>Flexural Strength (psi) ASTM C293:</b>	7 days	1100
	28 days	1500
<b>Splitting Tensile Strength (psi) ASTM 496:</b>	7 days	485
	28 days	565
<b>Modulus of Elasticity (psi) ASTM 469:</b>	28 days	2.26 X 10 <sup>6</sup>
<b>Direct Tensile Bond (psi) ASTM D 4541:</b>	28 days	500 (failure in substrate)
<b>Length Change % ASTM C157:</b>	7 days	<0.1
	28 days	<0.1
<b>ASTM C157 (wet cure):</b>	28 days	<0.03
<b>Pot Life/ Working Time:</b>	Approx. 15 to 20 minutes	
<b>Color:</b>	Gray	
<b>Coat or Seal:</b>	3 to 7 days	
<b>Packaging:</b>	55 lb (25 kg) net weight bags	
<b>Storage:</b>	Store in a cool dry area. Do not leave bags exposed to direct sunlight. Keep from freezing.	
<b>Shelf Life:</b>	1 year if unopened	
<b>Warranty:</b>	ARDEX Engineered Cements Standard Limited Warranty Applies.	

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ATX400 (01/16)

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# **ARDEX BONDING & ANTI-CORROSION AGENT™**

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**Portland cement/epoxy-based coating**

**Two component system for easy field batching**

**Exceptional bond strength for concrete repairs**

**Protects reinforcing steel against rust and corrosion**

**Long open time**

**Allows concrete to breathe, can be applied above, on or below grade**

**Clean up with water only**

**Low VOC's, non-flammable**

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# ARDEX BONDING & ANTI-CORROSION AGENT

## Description and Usage

ARDEX BONDING & ANTI-CORROSION AGENT™ is a two-component, brush or spray applied coating used as an anti-corrosion agent for reinforcing steel, as well as a bonding agent for fresh concrete or mortar to existing concrete surfaces that have been prepared for repair.

Use ARDEX BONDING & ANTI-CORROSION AGENT as a bonding slurry on properly prepared concrete patches or apply it directly to reinforcing steel in concrete to protect against corrosion and rust once embedded. Used in all types of horizontal or vertical concrete repairs and shotcrete installations, ARDEX BONDING & ANTI-CORROSION AGENT is recommended for all types of applications.

## Substrate Preparation

**Bonding Agent:** Prior to proceeding with any repair, please refer to the International Concrete Repair Institute's ICRI 03730 Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion; ICRI 03732 Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays; and the American Concrete Institute's ACI 546R-04 Concrete Repair Guide for general guidelines for concrete repair. Please also refer to the mortar or repair manufacturer's specific recommendations for substrate preparation.

All substrates must be solid, thoroughly clean and free of oil, wax, grease, asphalt, existing patching materials, curing and sealing compounds, and any contaminant that might act as a bond breaker. Over watered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods such as scarifying or similar in accordance with ICRI 03732 to create an exposed aggregate surface with a minimum surface profile of approximately 1/16" (1.6 mm). Acid etching, solvents, sweeping compounds and sanding are not acceptable means of preparing the substrate.

**Anti-Corrosion Agent:** When reinforcing steel is exposed for protection, prepare the concrete such that a minimum 3/4" (19 mm) clearance is achieved under the reinforcement to ensure sufficient placement of

anti-corrosion agent when brushed under steel. Remove all rust or active corrosion agents using sandblasting or mechanical wire brushing to produce a white metal finish. Make sure surfaces are clean, dry and free of all contaminants. Apply immediately to clean metal to avoid new corrosion.

## Recommended Tools

A 1/2" to 3/4" (12 to 19 mm) low speed heavy-duty mixing drill, heavy gauge square box (butterfly) mixing paddle, mixing buckets, stiff bristle brush, hopper gun and margin trowel

## Mixing

Thoroughly shake the 1 gallon (3.78 L) container of the liquid component "A" and pour into a clean mixing container. Slowly add one-third of the 28 lb (12.7 kg) bag of component "B" powder while mixing at low speed with a drill and mixing paddle. Once this is blended in, add the next third and so on until all of the material is added. Once this is done, continue to mix for approximately 3 minutes to a uniform, lump-free consistency.

## Application as a Bonding Agent

As a bonding agent, a single 20 mil (500 micron) coat is required. Dampen the concrete to be repaired so that the pores are filled with water. Remove excess water on the surface (SSD - Saturated Surface Dry). Apply one 20 mil (50 micron) thick coat of mixed bonding agent with hopper gun or with a stiff bristle brush. Once applied, ARDEX BONDING & ANTI-CORROSION AGENT has an open time of 24 hours. Place the mortar or concrete while the bonding agent is still wet, or within 24 hours. If the mortar or concrete is not placed within 24 hours, apply an additional coat before placement.

## Application as an Anti-Corrosion Agent

As an anti-corrosion agent, two 10 mil (250 micron) coats are required. Brush on a 10 mil (250 micron) thick coat of the prepared slurry and allow it to dry for 30 to 45 minutes, then apply a second coat also 10 mils (250 microns) thick. The total thickness of the anti-corrosion agent must be at least 20 mils (500 microns). Allow the coating to dry to the touch before installing the freshly prepared repair mortar.

# CORROSION AGENT™

Once applied, ARDEX BONDING & ANTI-CORROSION AGENT has an open time of 24 hours. If the mortar or concrete is not placed within 24 hours, apply an additional coat and allow it to dry to the touch before placement.

## Curing

No special curing is required.

## Notes

The working time and pot life of ARDEX BONDING & ANTI-CORROSION AGENT are approximately 90 minutes at 70°F (21°C). Pot life and working time will vary with ambient temperatures.

ARDEX BONDING & ANTI-CORROSION AGENT is intended for use in all applications as recommended or required.

Always install an adequate number of properly located test areas, including the repair mortar, to determine the suitability of the products for the intended use.

Never mix with cement or additives other than ARDEX approved products. Observe the basic rules of concrete work. Do not install below 50°F (10°C) surface and air temperatures. These temperatures must also be maintained during and for 48 hours after the installation of ARDEX BONDING & ANTI-CORROSION AGENT.

## Precautions

ARDEX BONDING & ANTI-CORROSION AGENT contains Portland cement and silica. Avoid eye and skin contact. Mix in a well-ventilated area and avoid breathing powder or dust. KEEP OUT OF REACH OF CHILDREN. Carefully read and follow all cautions and warnings on the product label. For complete safety information, please refer to the Material Safety Data Sheet or visit our website at [www.ardex.com](http://www.ardex.com).

## Technical Data According to ARDEX Quality Standards

Physical properties are typical values and not specifications. All data based on recommended mix ratios at 70°F (21°C)

<b>Mixing Ratio:</b>	1 gallon of Component "A" with 1 bag of powder. For smaller quantities, mix 1:1 by volume	
<b>Yield:</b>	70 to 80 sq. ft. per gallon 175 to 200 sq. ft. per unit	
<b>Bond Strength:</b>	2 hours	1800
<b>ASTM C882</b>	24 hours	2100
<b>Tensile Strength (psi)</b>	28 days	800
<b>ASTM C190</b>		
<b>Flexural Strength (psi):</b>	28 days	2000
<b>ASTM C78</b>		
<b>Rapid Chloride:</b>	28 days	< 150
<b>Permeability (Coulombs)</b>		
<b>AASHTO T277</b>		
<b>ASTM C1202</b>		
<b>VOC (g/L):</b>	<50 g/L, SCAQMD 1113 (US EPA 40 CFR 59)	
<b>Pot Life / :</b>	90 minutes	
<b>Working Time</b>		
<b>Open Time:</b>	Up to 24 hours	
<b>Packaging:</b>	1 gallon (3.78 L) of liquid and 28 lb (12.7 kg) net weight bag	
<b>Storage:</b>	Store in a cool dry area. Do not leave bags exposed to sun. Protect liquid from freezing.	
<b>Shelf Life:</b>	One year if unopened	
<b>Warranty:</b>	ARDEX Engineered Cements Standard Limited Warranty Applies	

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# **ARDEX CD™**

## **Concrete Dressing**

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**Resurface worn and spalled concrete to provide a “new concrete” finish**

**Easy to apply**

**Hardens quickly**

**Freeze-thaw resistant**

**Suitable for foot and rubber tire traffic on commercial and residential applications**

**Use for interior and exterior floors and walls**

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# ARDEX CD™

## Concrete Dressing

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### Description and Usage

ARDEX CD™ is a concrete resurfacing compound modified with high-performance polymers for exceptional bond strength. Formulated from a blend of Portland cement and other hydraulic cements, ARDEX CD can be used over the surface of existing concrete to produce a new wear layer as well as to fill in small surface defects, such as spalls and gouges. Ideal for sidewalks, patios, plazas, courtyards, walkways, driveways, parking garages, pool decks and most vertical concrete surfaces. When mixed with water, the result is a creamy, smooth, slurry consistency that can be applied by trowel, squeegee or hopper gun. Once applied, ARDEX CD can be broom textured before it sets for a reduced-slip surface.

### Substrate Preparation

All concrete substrates must be structurally sound, solid, thoroughly clean and free of any form release, sealers or paints, patching compounds, dust, dirt, oils and any other contaminant that could act as a bond breaker. If necessary, mechanically clean the floor down to sound, solid concrete by shot blasting, grinding or similar. High-pressure (5000 psi) power washing may also be used to remove dust, dirt and debris, though the concrete must then be allowed to dry thoroughly before proceeding. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods. Acid etching, adhesive removers, solvents and sweeping compounds are not acceptable means of cleaning the substrate. The use of sanding equipment is not an effective method to remove curing and sealing compounds. Clean debris out of expansion joints and tape or mask the joints off to prevent ARDEX CD from filling the joint. Use a lawn edger to clean around the walk or driveway, as well as around planter boxes and landscaped areas. Substrates must be dry for a successful installation.

The concrete substrate must be absorbent to receive ARDEX CD. Any additional preparation required to achieve this must likewise be mechanical.

Substrate and ambient temperatures must be a minimum of 50°F (10°C) for the installation of ARDEX products.

Please note that when removing existing flooring, any asbestos-containing materials should be handled and disposed of in accordance with applicable federal, state and local regulations.

For more detailed information on substrate preparation, please refer to the ARDEX Substrate Preparation Brochure at [www.ardexamericas.com](http://www.ardexamericas.com).

### Recommended Tools

Mixing buckets, margin trowel, steel trowel, fine or medium-bristle finishing broom, 3" paintbrush (for edging), squeegee, hopper gun (where required), ARDEX T-2 Ring Mixing Paddle, a 1/2" (12 mm) heavy-duty drill (min. 650 rpm).

### Joints and Moving Cracks

Under no circumstances should ARDEX CD be installed over any joints or any moving cracks. All existing expansion joints, isolation joints, construction joints and control joints (saw-cuts), as well as any moving cracks, must be honored up through the topping by installing a flexible sealing compound specifically designed for use in moving joints, such as ARDEX ArdiSeal™ Rapid Plus. Failure to do so may result in cracking and/or disbonding of the topping. Even the slightest amount of movement in a control joint will cause the ARDEX CD to show a hairline crack in a pattern reflective of the joint.

ARDEX cannot be responsible for problems that arise from joints, existing cracks or new cracks that may develop after the system has been installed.

### Dormant Cracks

Before proceeding with the installation, all dormant cracks must be prefilled with a fully rigid, high-modulus, 100% solids material, such as ARDEX ArdiFix™. Please note that the repair material must be sand broadcast to refusal while still fresh and allowed to cure fully prior to removing all excess sand.

The filling of dormant cracks as described above is recommended to help prevent the cracks from showing through the dressing. However, should movement occur, cracks will reappear.

### Priming

No priming is required over standard absorbent concrete. However, to minimize the potential for pinholes forming in ARDEX CD installed over highly absorbent concrete, as well as to increase the working time of the ARDEX CD, the concrete can first be primed with ARDEX CG™ Concrete Guard™ diluted 1:1 with water. Allow the primer coat to dry thoroughly (min. 3 hours depending upon jobsite conditions) and proceed with the installation of ARDEX CD using the normal installation practices outlined below.

### Mixing and Application

For one 40 lb. (18 kg) bag of ARDEX CD, use 5 quarts (4.75 liters) of clean water. Pour the water in the mixing container first, and then add the ARDEX CD. To mix smaller quantities by hand, use 2.75 parts powder to 1 part of water by volume. **Do not overwater!** Use a margin trowel and mix vigorously for 2 to 3 minutes. For best results,

mix with an ARDEX T-2 Ring Mixing Paddle and 1/2" (12 mm) heavy-duty drill (min. 650 rpm). Mix thoroughly to obtain a lump-free consistency.

The pot life of ARDEX CD is approximately 30 minutes at 70°F (21°C). If the product begins to set in the bucket within this time, remix before using. **Do not add more water!** In warm weather, use cold water to extend the working time.

Pour the mix onto an area of concrete and flat trowel, squeegee or broom it onto the surface while applying enough pressure to ensure good dressing-to-concrete contact. Maintain a "wet edge" during installation to help minimize natural color variations that can occur between sections. Immediately apply a light broom-finish to achieve the desired texture, working in areas small enough to permit finishing without walking on the freshly installed dressing. ARDEX CD has a working time of approximately 10 to 15 minutes, depending on jobsite conditions.

On vertical surfaces such as walls or stair faces, trowel, brush or spray the dressing using a hopper gun directly onto the prepared area. Smooth or brush the material to the desired finish.

For minor patching, filling small holes, gouges or spalls (up to 1" [25 mm] diameter and 1/2" [12 mm] deep), mix 4 parts powder to 1 part water by volume and apply to the prepared surface with a flat steel trowel or putty knife. Repair areas should be allowed to set firmly (30 to 45 min. at 70°F/21°C) before applying the finish coat of the dressing. Cool ambient and surface temperatures will slow setting time. For larger or deeper repairs, use ARDEX CP™ Concrete Patch.

### Thickness of Application

ARDEX CD is to be installed in as thin a layer as can be placed while getting full coverage. Typical installation thickness ranges from 1/16" up to 1/8" (1.5 to 3 mm), and ARDEX CD can be applied at a thickness of up to 1/2" (12 mm) in small, well-defined areas (see above). Please note that thicker areas will take longer to set than a dress coat, and will reduce the overall coverage.

### Color

ARDEX CD is formulated from Portland cement and other hydraulic cements and is available in gray. As concrete color and jobsite conditions vary widely, it is not intended that this will match the color of the concrete being resurfaced or an adjacent concrete pad. Jobsite conditions such as direct sunlight and wind, as well as the surface of the dressing being exposed to moisture before it often completely sets, can lead to color variations in the appearance of the dressing. Should this occur, it often can be corrected completely by pre-wetting the surface of the discolored dressing and misting it with a vinegar solution diluted with 3 parts water. Allow the vinegar to stand on

the surface for a minimum of 10 minutes without allowing it to dry. Rinse clean and allow to dry thoroughly. Should the condition persist, a pigmented sealer such as ARDEX CG Gray can be used. Consult the ARDEX Technical Service Department for additional information.

### Curing

Although ARDEX CD requires no special curing procedures, avoid applying this product if rain is expected within 6 to 8 hours or freezing temperatures could occur within 24 hours of application. As with any cementitious material, these conditions can alter the appearance and performance of the dressing.

### Wear Surfaces

As is the case with all concrete surfaces, ARDEX CD should be sealed with a waterborne, breathable concrete sealer to prevent dusting and to help resist damage from standing water, salt and oil, as well as staining and marking. ARDEX CD can be sealed as soon as the dressing hardens sufficiently to work on without damaging the surface. ARDEX recommends the use of ARDEX CG.

### Reflective Cracking

ARDEX CD is formulated as a highly durable, nonstructural wear surface. As such, it is important to note that no one can predict with 100% accuracy the appearance of cracking in a non-structural topping. While there can be several causes for cracking, it must first be understood that the installation of thin layers of non-structural toppings are not capable of restraining movement in the structural slab, which could lead to reflective cracking. Areas most likely to telegraph include those with deflection of a concrete slab, vibration of a concrete slab in metropolitan areas due to truck traffic and subways, high rise buildings that sway or "rack" in the wind, existing cracks in the floor, control joints or saw-cuts, expansion joints and small cracks off of the corners of metal inserts such as electrical boxes or vents in the floor. We know of no method to prevent this telegraphing from occurring.

### Notes

FOR PROFESSIONAL USE ONLY.

The pot life of ARDEX CD is approximately 30 minutes at 70°F (21°C), while the working time is approximately 10 to 15 minutes. Pot life and working time will vary with ambient temperatures.

Always install an adequate number of properly located test areas, including the sealer and any desired colorants, to determine the suitability and aesthetic value of the products for the intended use. As sealers vary, always contact and rely upon the sealer manufacturer for specific directives regarding intended end use of the product.

ARDEX CD is intended for resurfacing interior and exterior concrete in residential and commercial applications subject



to foot and rubber-wheeled traffic. ARDEX CD is not intended for industrial uses such as heavy manufacturing or areas with heavy truck traffic. Do not use in fountains, inside swimming pools or in any areas that will be permanently submerged.

Do not mix cement or additives. Observe the basic rules of concrete work. Do not install below 50°F (10°C) surface and air temperatures. Install quickly if substrate is warm and follow warm weather instructions available from the ARDEX Technical Service Department.

## Precautions

Carefully read and follow all precautions and warnings on the product label. For complete safety information, please refer to the Material Safety Data Sheet available at [www.ardexamericas.com](http://www.ardexamericas.com).

## Technical Data According To ARDEX Quality Standards

All data based on a mixing ratio of 2.75 parts powder to 1 part water by volume at 70°F (21°C). Physical properties are typical values and not specifications.

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<b>Mixing Ratio:</b>	5 quarts (4.75 L) of water per one 40 lb. (18 kg) bag; for smaller batches, mix 2.75 parts powder to 1 part water by volume.
<b>Approximate Coverage:</b>	Up to 120 sq. ft. per bag at 1/16" (11.1 sq. m at 1.6 mm) Up to 60 sq. ft. per bag at 1/8" (5.5 sq. m at 3.2 mm) Application methods and the texture of the concrete being coated will affect these rates.
<b>Compressive Strength (ASTM C109/mod – Air cure only):</b>	4000 psi (27.6 N/mm <sup>2</sup> ) at 28 days
<b>Pot Life:</b>	30 minutes
<b>Working Time:</b>	Approx. 10-15 minutes
<b>Walkable:</b>	Approx. 2 hours
<b>Install Waterborne Coating:</b>	When hard (approx. 2 hours)
<b>Cure Time to Receive Traffic:</b>	Consult sealer manufacturer
<b>Color:</b>	Gray
<b>VOC:</b>	0
<b>Packaging:</b>	40 lb./ 18 kg net weight bag
<b>Storage:</b>	Store in a cool, dry area. Do not leave bags exposed to sun.
<b>Shelf Life:</b>	1 year, if unopened
<b>Warranty:</b>	ARDEX Engineered Cements Standard Limited Warranty applies.

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For easy-to-use ARDEX Product Calculators and Product Information On the Go, download the ARDEX App at the iTunes Store or the Android Marketplace.



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# **ARDEX CG Concrete Guard™**

## **High-Performance, Waterborne Acrylic Concrete Sealer**

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**High-performance, waterborne acrylic concrete sealer**

**Seals and protects uncoated, absorbent concrete and masonry surfaces**

**Easy to apply and quick drying**

**Nonflammable and UV stable**

**USDA/FDA compliant**

**Exceeds ADA requirements**

**Durable and abrasion resistant**

**For exterior or interior use**

**Available in Clear or Gray**

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# ARDEX CG Concrete Guard™

## High-Performance, Waterborne Acrylic Concrete Sealer

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### Description and Usage

ARDEX CG Concrete Guard™ is a high-performance, high solids concrete sealer that is easy to apply, quick drying, nonflammable and UV stable. Applied at a minimum of two coats, ARDEX CG is designed to protect all interior and exterior absorbent concrete and masonry surfaces on residential and commercial applications, including driveways, sidewalks, patios, courtyards, walkways, pool decks and most vertical concrete surfaces. It is especially suited to seal ARDEX toppings, and the gray version can be used to create a uniform appearance over both a repaired area and the adjacent concrete or masonry surfaces.

ARDEX CG is durable and abrasion resistant. When applied properly, ARDEX CG creates a non-porous coating approved for incidental food contact that will perform well under a daily regimen of thorough cleaning as well as under cyclical temperature changes and wet conditions.

### Substrate Preparation

All substrates must be structurally sound and solid. In order for the ARDEX CG to obtain a solid bond, the concrete or masonry surface must be clean and absorbent. Mechanically remove any form release, sealers or paints, dust, dirt, oils or any other contaminant that could act as a bond breaker by shot blasting or similar. All patching and leveling compounds, except for those approved by ARDEX, must be removed by mechanical means. High-pressure (5000 psi) power washing may also be used to remove dust, dirt and debris, though the concrete must then be allowed to dry thoroughly before proceeding. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods. Acid etching, adhesive removers, solvents and sweeping compounds are not acceptable means of cleaning the substrate. The use of sanding equipment is not an effective method to remove curing and sealing compounds.

Please note that when removing existing flooring, any asbestos-containing materials should be handled and disposed of in accordance with applicable federal, state and local regulations.

For more detailed information on substrate preparation, please refer to the ARDEX Substrate Preparation Brochure at [www.ardexamericas.com](http://www.ardexamericas.com).

### Recommended Tools

Nylon brush, 3/8" nap paint roller, or airless, HVLP or conventional spray equipment, mechanical mixing paddle and a low speed drill.

### Mixing and Application

Due to the high percentage of solids, settling will occur during storage. For this reason, the contents of the container must be mixed thoroughly just prior to use to ensure a uniform consistency. For best results, mix with a mechanical mixing paddle and low speed drill.

Once the concrete surface is prepared as outlined above, thoroughly broom-sweep and vacuum the area to be sealed to remove any fine dust or dirt. Make sure the concrete is completely dry to avoid the possibility of performance issues and discoloration. Tape or otherwise mask off areas that are not to be sealed. A minimum of two coats should be applied, allowing 2 to 4 hours drying time (depending on ambient atmospheric conditions) before placing the second coat.

Pour the ARDEX CG into a paint tray, and apply the sealer to the surface with a 3/8" nap paint roller. Do not pour the sealer directly onto the concrete surface. When spraying ARDEX CG, back rolling is recommended to prevent puddles. Use appropriate personal protection measures when applying by airless, HVLP or other spray equipment. ARDEX CG can also be applied with a nylon paintbrush for hard to reach areas, such as along joints and in corners. Allow the first coat to dry for a minimum of 2 hours at 70°F (21°C) surface and air temperatures before applying the second coat. Allow ARDEX CG to dry 24 hours for foot traffic and 72 hours for heavy foot (malls, amusement parks, etc.) and rubber-wheeled traffic.

When applying ARDEX CG outdoors, do not proceed if rain, dew, fog or extremely high humidity is expected within 6 to 8 hours of application, or if freezing temperatures could occur within 24 hours. Do not apply ARDEX CG if surface and air temperatures are under 50°F (10°C) or over 90°F (32°C). Cool ambient and surface temperatures will slow drying time. Install quickly if the substrate is warm, and follow warm weather instructions available from the ARDEX Technical Service Department.

For interior applications of ARDEX CG where aesthetic qualities are critical, concrete substrate moisture levels must not exceed 75% RH. Due to the potential for high moisture vapor to cause the ARDEX CG to appear cloudy, substrates with a higher RH must be moisture mitigated using the appropriate ARDEX MC™ Moisture Control System.

### Care and Maintenance of ARDEX CG Concrete Guard™ Sealer

**Note:** By routinely cleaning your floor properly, you will maximize its performance, appearance, and slip resistance.

Please note that this maintenance guide is for the use of ARDEX CG over interior ARDEX toppings. For the maintenance of other ARDEX finishes, please visit [www.ardexamericas.com](http://www.ardexamericas.com).

Please visit [www.ardexamericas.com](http://www.ardexamericas.com) for technical data sheets, technical updates, specifications and SDS sheets.

**Sacrificial Wax:** For interior applications, especially those that must retain a certain aesthetic value, it is recommended that several layers of a sacrificial floor wax be used over the ARDEX CG Concrete Guard™ High-Performance, Waterborne Acrylic Concrete Sealer to minimize the effects of staining and wear. Follow the wax manufacturer's installation, usage and maintenance instructions.

Where mark removers, cleaners and degreasers will be used, they must be installed and used in accordance with the manufacturer's instructions.

Please note that the recommendation below is detailed for an ARDEX CG installation where a sacrificial wax has not been used.

On-site test areas should be done to assure compatibility and selected aesthetic appearances prior to proceeding.

### Recommended Cleaning Tools

**Mechanical Scrubbers (floor machines):** Self-contained mechanical scrubbers are the most efficient and cost-effective method. Pay particular attention to the type of cleaning pad being used. The abrasive pad should not mark the surface of the floor. A high-quality, functioning mechanical scrubber with a viable vacuum extraction system should be employed. All residual, standing water must be completely removed.

**Spray Cleaning/Power Washers:** In most cases, power washing is combined with chemical cleaning. Hot water under pressure may be insufficient to emulsify oils and grease. Consideration should be given to power washing and scrubbing with a suitable chemical. Always follow the chemical manufacturer's instructions for the use of any chemical.

**Brooms, Squeegees and Mops:** For routine floor maintenance, the use of a broom, squeegee or damp mop with water, only, will provide effective cleaning of superficial contaminants. Remove all residual, standing water from the surface of the floor.

### Maintenance

**When to Clean Your Floors:** How often you need to clean your floor depends on the type of contaminants to which the floor is exposed. Frequent cleaning is recommended for optimum performance.

The more harsh the environment, the more frequently you should clean your floors. Dust and dirt will dull and wear the finish if not removed on a regular basis.

Chemical spills such as battery acids, phosphoric acids, dyes, iodine, etc., in many cases, may stain or damage the floor. We recommend cleaning chemical spills immediately.

### Daily Cleaning and Maintenance Procedure

A. Once the system is fully cured, routinely **sweep, dry mop and wash** with neutral pH cleaners and water. Spot clean and dry areas of concentrated traffic as needed. The use of dry, microfiber dust mops is recommended because they attract dust and dirt and remove these abrading elements up and away from the floor. For optimal performance, use one, continuous motion with overlapping strokes. Frequently shake the mop to remove dust and dirt.

B. The **use of abrasive brushes or pads is not recommended** as part of a daily maintenance program. The use of mechanical cleaning devices such as auto scrubbers and swing buffers should be employed as needed. All mechanical cleaning devices must have the ability to remove all residual ponding water and cleaning agents.

C. **DO NOT USE cleaners that are acidic**, have citrus (de-limonene) or butyl compounds. The application of highly acidic cleaners may etch or stain the surface and reduce the ability of the floor to resist absorption. On-site test areas of the selected cleaner should be done to assure compatibility.

**Reapplication:** For applications where a sacrificial wax layer has not been applied / maintained, it will be necessary to evaluate the ARDEX CG periodically to assess its ability to repel staining agents. Reapply ARDEX CG as necessary and in accordance with the technical data sheet for optimum performance.

### Notes

- Due to varying traffic frequency, timetables for the above procedures must be adjusted to fit the needs of the space.
- Localized traffic patterns may require more frequent application of the above recommendations.

### General Guidelines:

#### Protecting the Floor from Construction Trades and Move-In

Please note that the installation of an ARDEX surface should be the last step in the construction process. Other trades should not be working in or around an ARDEX installation without proper protection of the ARDEX surface. Once the floor has fully cured, the newly-installed ARDEX surface should be protected from spills, dirt and debris with a temporary, breathable floor protection such as roll-out fiber board.

Additionally, if the floor will receive excess traffic during a move-in, protection from rolling carts, dollies, racks, gondolas, register wraps, etc. must be planned and implemented. Protection might include placing temporary "roving plywood" on top of the temporary, breathable floor protection such as roll-out fiber board to prevent gouging and indentation of the completed floor installation. Where "roving plywood" is used, it should be removed daily.

**Tape:** Do not use tape (duct, masking, painters, blue, etc.) in direct contact with ARDEX floors as it can damage the sealed surface upon removal. Spot taping overlapped breathable floor protection such as roll-out fiber board to itself is suitable for this temporary application.

**Chair Pads:** To avoid marring of the ARDEX wear surface, use felt pads on all areas of chairs and furniture that will come into contact with the floor.

**Walk-off Mats:** Mats outside doorways and inside entryways will control most of the dirt and debris that would otherwise be tracked inside. Walk-off mats should have sufficient texture to remove dirt from shoes. Non-rubber backed or open-back style mats will allow the floor to breathe.

**Moving Furniture and Equipment:** Do not drag or slide equipment or furniture over the surface. Where furniture or equipment cannot be lifted and carried or where felt furniture sliders or pads will not be used, a temporary, breathable floor protection such as roll-out fiber board may be placed over the floor. Rubber-wheeled carts or dollies may also be used.

**Miscellaneous:** Use a plate or other moisture-catching foundation beneath potted plants. Use a breathable pad underneath the plate to prevent trapped moisture from damaging the finish.

Use smooth-sided plastic mats below office chairs or other recurring, wheeled traffic. The constant abrasion of the wheels will scrape and damage the surface over time.

Please note that hot tire pickup may damage the floor. Allow heated tires to cool prior to parking them on the ARDEX CG surface. Tires should not be permitted on the installation until it has fully cured for 72 hours.

## Notes

FOR PROFESSIONAL USE ONLY.

ARDEX CG is intended for sealing and protecting interior and exterior concrete subject to foot and rubber-wheeled traffic. ARDEX CG is not intended for uses such as heavy manufacturing or areas with heavy truck traffic. Do not use in fountains, swimming pools or any areas that will be permanently submerged. Do not mix with cement or additives. Observe the basic rules of concrete work.

Always install an adequate number of properly located test areas to determine the suitability and aesthetic value of the products for the intended use.

When not in use, keep the container tightly sealed. Open, remix and reseal as necessary. Store the container at room temperature (50°F to 90°F/10°C to 32°C). Protect from freezing and extreme heat. If the container is exposed to freezing temperatures and appears congealed or stringy, do not use. Contact the ARDEX Technical Service Department for more information.

## Precautions

Carefully read and follow all precautions and warnings on the product label. For complete safety information, please refer to the Safety Data Sheet (SDS) available at [www.ardexamericas.com](http://www.ardexamericas.com).

## Stain Resistance

REAGENT	NON-ABRADED ARDEX CG	ABRADED ARDEX CG
Ammonia Solution (5%)	2	2
Chlorine Solution (10%)	2	2
Diesel Fuel	2	2
Gasoline	2	2
Heavy-Duty Detergent Solution	1	1
Hydraulic Fluids	3	3
Kerosene	2	2
Lubricating Oil	1	1
Muratic Acid (10%)	1	1
Paint Thinner	1	1
Prestone® Antifreeze Coolant	2	2
Salt Solution (20%)	1	1
Soap Solution (1%)	1	1
Sulfuric Acid (3%)	2	3
Sulfuric Acid (Concentrated)	2	3
Toluene	1	2
Transformer Oil	1	1
Turpentine	1	2

1= Unaffected

2= Superficial Effect

3= Considerable Effect

\*Effects are evaluated after 24 hours of exposure.

## Technical Data According To ARDEX Quality Standards

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Physical properties are typical values and not specifications.

**VOC Content:** Max. 249 g/L – Calculated and Reported SCAQMD 1113

**Solids Content:** 40%

**S.C.O.F (ASTM C1028)** Smooth surface profile: 0.60 - 0.70  
Medium-to-coarse surface profile: 0.88 - 0.90

**Cleanup:** Clean up with water when wet.

**USDA/FDA FSIS Directive 1000.4, Revision 1:**

Approved

**Drying Time (minimum at 70°F/21°C):** To touch: 1 hour

**Apply second coat:** 2 to 4 hours

**Receive normal traffic:** 24 hours

**Colors:** Gray and Clear

**Coverage for Gray:**  
**Over broom finish:** 150-200 sq. ft. (14-18.5 sq. m) per gallon  
**Over smooth finish:** 200-400 sq. ft. (18.5-37 sq. m) per gallon

**Coverage for Clear:**  
**Over broom finish:** 200-300 sq. ft. (19-28 sq. m) per gallon  
**Over smooth finish:** 400-600 sq. ft. (37-56 sq. m) gallon

**Packaging:** 1 Gallon / 3.79 L Container

**Storage:** Store in a cool dry area. Do not expose container to sun. Keep from heat. Protect from freezing. Keep container closed when not in use.

**Shelf Life:** 1 year, if unopened

**Warranty:** ARDEX Engineered Cements Standard Limited Warranty applies.

Made in the USA

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Updated 5-22-2017. Supersedes all previous versions. Check [www.ardexamericas.com](http://www.ardexamericas.com) for updates.

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