

RETURN WITH BID



Illinois Department of Transportation

Local Public Agency  
Formal Contract Proposal

PROPOSAL SUBMITTED BY		
Contractor's Name		
Street	P.O. Box	
City	State	Zip Code

STATE OF ILLINOIS

COUNTY OF LAKE

(Name of City, Village, Town or Road District)

FOR THE IMPROVEMENT OF

STREET NAME OR ROUTE NO. Robert McClory Bike Path Abutment Repairs

SECTION NO. 16-00173-14-BR

TYPES OF FUNDS CB

SPECIFICATIONS (required)

PLANS (required)

**For Municipal Projects**

Submitted/Approved/Passed

**Not Applicable**

Mayor  President of Board of Trustees  Municipal Official

Date

**Department of Transportation**

Released for bid based on limited review

**Not Applicable**

Regional Engineer

County Engineer on behalf of IDOT pursuant to  
Agreement of Understanding dated January 18, 2013

Date

**For County and Road District Projects**

Submitted/Approved

**Not Applicable**

Highway Commissioner

Date

Submitted/Approved

*[Signature]*  
County Engineer/Superintendent of Highways

*6/23/16*  
Date

**Note:** All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed.

RETURN WITH BID

BLR 12200 (01/08/14)

RETURN WITH BID

NOTICE TO BIDDERS

County LAKE
Local Public Agency LCDOT
Section Number 16-00173-14-BR
Route McClory Bike Path Bridges

Sealed proposals for the improvement described below will be received at the office of The County Engineer of Lake County, 600 West Winchester Road, Libertyville, IL 60048 until 10:00 A.M. on July 19, 2016

Sealed proposals will be opened and read publicly at the office of The County Engineer of Lake County 600 West Winchester Road, Libertyville, IL 60048 at 10:00 A.M. on July 19, 2016

DESCRIPTION OF WORK

Name Robert McClory Bike Path Abutment Repairs Length: n/a feet ( 0.00 miles)
Location Robert McClory Bike Path over Russell Road and IL 173
Proposed Improvement Structural repair of existing concrete bike path bridge abutments with architectural finish, construction of embankment cone with topsoil and seeding, some guardrail work and tree removal, and related items.

1. Plans and proposal forms will be available online at http://www.lakecountyl.gov/648/Bids---Roadwork or at the office of the Lake County Division of Transportation, 600 West Winchester Road, Libertyville, IL 60048

2. [X] Prequalification
If checked, each bidder shall include a completed "Affidavit of Availability" (Form BC 57), in their proposal, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work.

3. The Awarding Authority reserves the right to waive technicalities and to reject any or all proposals as provided in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals.

- 4. The following Forms shall be returned by the bidder to the Awarding Authority (not required if crossed out):
a. BLR 12200: Local Public Agency Formal Contract Proposal (includes BLR 12200a Schedule of Prices)
b. BC 57: Affidavit of Availability
c. BC 261: Substance Abuse Prevention Program Certification
d. BLR 12230: Proposal Bid Bond
e. BLR 12325: Apprenticeship or Training Program Certification
f. BLR 12326: Affidavit of Illinois Business Office
g. LCDOT - CBID Printout

5. The quantities appearing in the bid schedule are approximate and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided.

6. Submission of a bid shall be conclusive assurance and warranty the bidder has examined the plans and understands all requirements for the performance of work. The bidder will be responsible for all errors in the proposal resulting from failure or neglect to conduct an in depth examination. The Awarding Authority will, in no case be responsible for any costs, expenses, losses or changes in anticipated profits resulting from such failure or neglect of the bidder.

7. The bidder shall take no advantage of any error or omission in the proposal and advertised contract.

8. If a special envelope is supplied by the Awarding Authority, each proposal should be submitted in that envelope furnished by the Awarding Agency and the blank spaces on the envelope shall be filled in correctly to clearly indicate its contents. When an envelope other than the special one furnished by the Awarding Authority is used, it shall be marked to clearly indicate its contents. When sent by mail, the sealed proposal shall be addressed to the Awarding Authority at the address and in care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the Notice to Bidders. Proposals received after the time specified will be returned to the bidder unopened.

9. Permission will be given to a bidder to withdraw a proposal if the bidder makes the request in writing or in person before the time for opening proposals.

RETURN WITH BID

PROPOSAL

County LAKE
Local Public Agency LCDOT
Section Number 16-00173-14-BR
Route McClory Bike Path Bridges

1. Proposal of
for the improvement of the above section by the construction of structural repair of existing concrete bike path bridge abutments with architectural finish, construction of embankment cone with topsoil and seeding, some guardrail work and tree removal, and related items. Traffic control and protection is required.

a total distance of n/a feet, of which a distance of n/a feet, ( 0.00 miles) are to be improved.

2. The plans for the proposed work are those prepared by Amec Foster Wheeler Environment & Infrastructure, Inc. and approved by the Department of Transportation\* on June 23, 2016

\* County Engineer on behalf of IDOT pursuant to Agreement of Understanding dated January 18, 2013.

3. The specifications referred to herein are those prepared by the Department of Transportation and designated as "Standard Specifications for Road and Bridge Construction" and the "Supplemental Specifications and Recurring Special Provisions" thereto, adopted and in effect on the date of invitation for bids.

4. The undersigned agrees to accept, as part of the contract, the applicable Special Provisions indicated on the "Check Sheet for Recurring Special Provisions" contained in this proposal.

5. The undersigned agrees to complete the work within 30 working days or by XXXXXXXXXXXXXXXXXXXX unless additional time is granted in accordance with the specifications.

6. A proposal guaranty in the proper amount, as specified in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals, will be required. Bid Bonds will be allowed as a proposal guaranty. Accompanying this proposal is either a bid bond if allowed, on Department form BLR 12230 or a proposal guaranty check, complying with the specifications, made payable to:

Treasurer of LAKE COUNTY

The amount of the check is the same as the amount of the BID BOND ( ).

7. In the event that one proposal guaranty check is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guaranties, which would be required for each individual proposal. If the proposal guaranty check is placed in another proposal, it will be found in the proposal for: Section Number.

8. The successful bidder at the time of execution of the contract will be required to deposit a contract bond for the full amount of the award. When a contract bond is not required, the proposal guaranty check will be held in lieu thereof. If this proposal is accepted and the undersigned fails to execute a contract and contract bond as required, it is hereby agreed that the Bid Bond or check shall be forfeited to the Awarding Authority.

9. Each pay item should have a unit price and a total price. If no total price is shown or if there is a discrepancy between the product of the unit price multiplied by the quantity, the unit price shall govern. If a unit price is omitted, the total price will be divided by the quantity in order to establish a unit price.

10. A bid will be declared unacceptable if neither a unit price nor a total price is shown.

11. The undersigned submits herewith the schedule of prices on BLR-12200a the LCDOT CBID printout covering the work to be performed under this contract.

12. The undersigned further agrees that if awarded the contract for the sections contained in the combinations on BLR-12200a the LCDOT CBID printout, the work shall be in accordance with the requirements of each individual proposal for the multiple bid specified in the Schedule for Multiple Bids below.



RETURN WITH BID

CONTRACTOR CERTIFICATIONS

County	<u>LAKE</u>
Local Public Agency	<u>LCDOT</u>
Section Number	<u>16-00173-14-BR</u>
Route	<u>McClory Bike Path Bridges</u>

The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder.

1. **Debt Delinquency.** The bidder or contractor or subcontractor, respectively, certifies that it is not delinquent in the payment of any tax administered by the Department of Revenue unless the individual or other entity is contesting, in accordance with the procedures established by the appropriate revenue Act, its liability for the tax or the amount of tax. Making a false statement voids the contract and allows the Department to recover all amounts paid to the individual or entity under the contract in a civil action.

2. **Bid-Rigging or Bid Rotating.** The bidder or contractor or subcontractor, respectively, certifies that it is not barred from contracting with the Department by reason of a violation of either 720 ILCS 5/33E-3 or 720 ILCS 5/33E-4.

A violation of Section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

3. **Bribery.** The bidder or contractor or subcontractor, respectively, certifies that it has not 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 the firm made an admission of guilt of such conduct which is a matter of record, nor has an official, agent, or employee of the firm committed bribery or attempted bribery on behalf of the firm and pursuant to the direction or authorization of a responsible official of the firm.

4. **Interim Suspension or Suspension.** The bidder or contractor or subcontractor, respectively, certifies that it is not currently under a suspension as defined in Subpart I of Title 44 Subtitle A Chapter III Part 6 of the Illinois Administrative Code. Furthermore, if suspended prior to completion of this work, the contract or contracts executed for the completion of this work may be cancelled.

**RETURN WITH BID**

**SIGNATURES**

County LAKE  
Local Public Agency LCDOT  
Section Number 16-00173-14-BR  
Route McClory Bike Path Bridges

(If an individual)

Signature of Bidder \_\_\_\_\_

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

(If a partnership)

Firm Name \_\_\_\_\_

Signed By \_\_\_\_\_

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

Inset Names and Addressed of All Partners



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(If a corporation)

Corporate Name \_\_\_\_\_

Signed By \_\_\_\_\_

President

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

Inset Names of Officers



President \_\_\_\_\_

Secretary \_\_\_\_\_

Treasurer \_\_\_\_\_

Attest: \_\_\_\_\_  
Secretary



# Illinois Department of Transportation

Bureau of Construction  
2300 South Dirksen Parkway/Room 322  
Springfield, Illinois 62764

## Affidavit of Availability For the Letting of July 19, 2016

**Instructions:** Complete this form by either typing or using black ink. "Authorization to Bid" will not be issued unless both sides of this form are completed in detail. Use additional forms as needed to list all work.

### Part I. Work Under Contract

List below all work you have under contract as either a prime contractor or a subcontractor. It is required to include all pending low bids not yet awarded or rejected. In a joint venture, list only that portion of the work which is the responsibility of your company. The uncompleted dollar value is to be based upon the most recent engineer's or owners estimate, and must include work subcontracted to others. If no work is contracted, show **NONE**.

	1	2	3	4	Awards Pending	
Contract Number						
Contract With						
Estimated Completion Date						
Total Contract Price						Accumulated Totals
Uncompleted Dollar Value if Firm is the Prime Contractor						
Uncompleted Dollar Value if Firm is the Subcontractor						
<b>Total Value of All Work</b>						

### Part II. Awards Pending and Uncompleted Work to be done with your own forces.

List below the uncompleted dollar value of work for each contract and awards pending to be completed with your own forces. All work subcontracted to others will be listed on the reverse of this form. In a joint venture, list only that portion of the work to be done by your company. If no work is contracted, show **NONE**.

						Accumulated Totals
Earthwork						
Portland Cement Concrete Paving						
HMA Plant Mix						
HMA Paving						
Clean & Seal Cracks/Joints						
Aggregate Bases & Surfaces						
Highway, R.R. and Waterway Structures						
Drainage						
Electrical						
Cover and Seal Coats						
Concrete Construction						
Landscaping						
Fencing						
Guardrail						
Painting						
Signing						
Cold Milling, Planning & Rotomilling						
Demolition						
Pavement Markings (Paint)						
Other Construction (List)						
<b>Totals</b>						

Disclosure of this information is **REQUIRED** to accomplish the statutory purpose as outlined in the "Illinois Procurement Code." Failure to comply will result in non-issuance of an "Authorization To Bid." This form has been approved by the State Forms Management Center.

**Part III. Work Subcontracted to Others.**

For each contract described in Part I, list all the work you have subcontracted to others.

	1	2	3	4	Awards Pending
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Total Uncompleted					

I, being duly sworn, do hereby declare that this affidavit is a true and correct statement relating to ALL uncompleted contracts of the undersigned for Federal, State, County, City and private work, including ALL subcontract work, ALL pending low bids not yet awarded or rejected and ALL estimated completion dates.

Subscribed and sworn to before me  
 this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ Type or Print Name \_\_\_\_\_  
 Officer or Director \_\_\_\_\_ Title \_\_\_\_\_

Signed \_\_\_\_\_

Notary Public

My commission expires \_\_\_\_\_

(Notary Seal)

Company \_\_\_\_\_

Address \_\_\_\_\_



**Substance Abuse Prevention Program Certification**

Letting Date: July 19, 2016 Item No.: \_\_\_\_\_  
Contract No.: \_\_\_\_\_  
Route: McClory Bike Path Bridges  
Section: 16-00173-14-BR  
Job No.: \_\_\_\_\_  
County: LAKE

The Substance Abuse Prevention on Public Works Act, Public Act 95-0635, prohibits the use of drugs and alcohol, as defined in the Act, by employees of the Contractor and by employees of all approved Subcontractors while performing work on a public works project. The Contractor/Subcontractor herewith certifies that it has a superseding collective bargaining agreement or makes the public filing of its written substance abuse prevention program for the prevention of substance abuse among its employees who are not covered by a collective bargaining agreement dealing with the subject as mandated by the Act.

A. The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has signed collective bargaining agreements that are in effect for all of its employees, and that deal with the subject matter of Public Act 95-0635.

\_\_\_\_\_  
Contractor/Subcontractor  
  
\_\_\_\_\_  
Name of Authorized Representative (type or print)  
  
\_\_\_\_\_  
Title of Authorized Representative (type or print)  
  
\_\_\_\_\_  
Signature of Authorized Representative  
  
\_\_\_\_\_  
Date

B. The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has in place for all of its employees not covered by a collective bargaining agreement that deals with the subject of the Act, the attached substance abuse prevention program that meets or exceeds the requirements of Public Act 95-0635.

\_\_\_\_\_  
Contractor/Subcontractor  
  
\_\_\_\_\_  
Name of Authorized Representative (type or print)  
  
\_\_\_\_\_  
Title of Authorized Representative (type or print)  
  
\_\_\_\_\_  
Signature of Authorized Representative  
  
\_\_\_\_\_  
Date



Local Agency Proposal Bid Bond

Route McClory Bike Path Bridges
County LAKE
Local Agency LCDOT
Section 16-00173-14-BR

RETURN WITH BID

PAPER BID BOND

WE \_\_\_\_\_ as PRINCIPAL,
and \_\_\_\_\_ as SURETY,
are held jointly, severally and firmly bound unto the above Local Agency (hereafter referred to as "LA") in the penal sum of 5% of the total bid price, or for the amount specified in the proposal documents in effect on the date of invitation for bids whichever is the lesser sum. We bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly pay to the LA this sum under the conditions of this instrument.

WHEREAS THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that, the said PRINCIPAL is submitting a written proposal to the LA acting through its awarding authority for the construction of the work designated as the above section.

THEREFORE if the proposal is accepted and a contract awarded to the PRINCIPAL by the LA for the above designated section and the PRINCIPAL shall within fifteen (15) days after award enter into a formal contract, furnish surety guaranteeing the faithful performance of the work, and furnish evidence of the required insurance coverage, all as provided in the "Standard Specifications for Road and Bridge Construction" and applicable Supplemental Specifications, then this obligation shall become void; otherwise it shall remain in full force and effect.

IN THE EVENT the LA determines the PRINCIPAL has failed to enter into a formal contract in compliance with any requirements set forth in the preceding paragraph, then the LA acting through its awarding authority shall immediately be entitled to recover the full penal sum set out above, together with all court costs, all attorney fees, and any other expense of recovery.

IN TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this \_\_\_\_\_ day of \_\_\_\_\_

Principal

By: \_\_\_\_\_ (Company Name)
By: \_\_\_\_\_ (Company Name)
(Signature and Title) (Signature and Title)

(If PRINCIPLE is a joint venture of two or more contractors, the company names, and authorized signatures of each contractor must be affixed.)

Surety

By: \_\_\_\_\_ (Name of Surety)
(Signature of Attorney-in-Fact)

STATE OF ILLINOIS,
COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_, a Notary Public in and for said county, do hereby certify that \_\_\_\_\_

( Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instruments as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this \_\_\_\_\_ day of \_\_\_\_\_

My commission expires \_\_\_\_\_ (Notary Public)

ELECTRONIC BID BOND

[ ] Electronic bid bond is allowed (box must be checked by LA if electronic bid bond is allowed)
The Principal may submit an electronic bid bond, in lieu of completing the above section of the Proposal Bid Bond Form. By providing an electronic bid bond ID code and signing below, the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the LA under the conditions of the bid bond as shown above. (If PRINCIPAL is a joint venture of two or more contractors, an electronic bid bond ID code, company/Bidder name title and date must be affixed for each contractor in the venture.)

Electronic Bid Bond ID Code

\_\_\_\_\_  
(Company/Bidder Name)
\_\_\_\_\_  
(Signature and Title)
\_\_\_\_\_  
Date

**CONTRACTOR**

**PLEASE REPLACE  
WITH YOUR  
COMPLETED  
LCDOT CBID  
PRINTOUT**

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**INTENTIONALLY**

**BLANK**

## STATE OF ILLINOIS SPECIAL PROVISIONS

The following Special Provisions supplement the specifications listed in the table below, which apply to and govern the proposed improvement designated as Lake County Section **16-00173-14-BR**, and in case of conflict with any part or parts of said specifications, the said Special Provisions shall take precedence and govern.

SPECIFICATION	ADOPTED/DATED
<b>Standard Specifications for Road and Bridge Construction</b>	April 1, 2016
<b>Manual on Uniform Traffic Control Devices for Streets and Highways</b> Illinois Supplement	2009 Edition June 2014 Revision
<b>Supplemental Specifications and Recurring Special Provisions</b> (indicated on the Check Sheet included herein)	April 1, 2016
<b>Standard Specifications for Water and Sewer Construction in Illinois</b>	7 <sup>th</sup> Edition, 2014

**This Project Does Include a Separate Set of Plans.**

### LOCATION OF IMPROVEMENT

The project is located in the townships of Benton and Zion in Sections 5 and 17, Township 46 North, and Range 12 East in the Village of Winthrop Harbor and the City of Zion. The project is located at two different sites on the Robert McClory Bike Path:

The Robert McClory Bike Path over Russell Road is approximately 1.2 miles west of Sheridan Road and straddles the Illinois-Wisconsin border in Winthrop Harbor.

The Robert McClory Bike Path over IL-173 is immediately west of the intersection of IL-173 and Galilee Avenue in Zion.

### DESCRIPTION OF IMPROVEMENT

The work consists of concrete structural repair of the abutments, constructing an embankment cone at the south abutment of IL-173 and incidental and collateral work necessary to complete the project as shown on the plans and described herein. Traffic control and protection is required for this project.

## DIVISION 100. GENERAL REQUIREMENTS AND COVENANTS

### SECTION 102 ADVERTISEMENT, BIDDING, AWARD AND CONTRACT EXECUTION (LCDOT)

Effective: January 1, 2007  
Revised: March 20, 2015

Award and execution of contract shall be in accordance with Section 102 of the "Standard Specifications" and the following:

*Insurance certificates shall be received within five (5) days after the contract has been mailed to the bidder. Contract performance and payment bond shall be received within ten (10) days after the contract has been mailed to the bidder. The contract shall be executed by the successful bidder and returned within fifteen (15) days after the contract has been mailed to the bidder.*

*CONTRACTORS and SUBCONTRACTORS holding a 5 – HMA Paving IDOT prequalification shall be limited to paving on contracts with 1200 total tons or less. The 1200 ton limit does not include HMA sidewalk, driveways, medians, paved shoulder behind curb, and/or patching.*

In order to limit bid proposal math errors, all bids for this project **shall** be submitted using the CBID spreadsheet. The Contractor shall include in their bid proposal a hardcopy CBID printout. Proposals submitted without a hardcopy CBID printout will be rejected as nonresponsive and returned to the Contractor unread. Proposals submitted with a handwritten schedule of items will be rejected as nonresponsive and returned to the Contractor unread. A maximum of five pay items may have legible pen and ink entries/revisions to the unit and extended prices on the CBID printout to accommodate last minute supplier and subcontractor quotes. A legible pen and ink entry/revision to the project total bid will also be allowed.

To decrease LCDOT bid processing time, for projects with 25 or more pay items the Contractor shall include in their sealed bid envelope a CD with a copy of the completed CBID. The hardcopy CBID printout will serve as the bid submission, while the CD is only provided to aid in tabulating the bids. In the event that there is a difference between the hardcopy CBID printout and the electronic copy provided on the CD, the hardcopy CBID printout shall take precedence and be used to complete the bid tabulation.

If the Contractor is bidding on more than one project for which the CD copy of the CBID is required, the Contractor may include all the CBIDs on a single CD. The CD shall be clearly labeled with the Contractor's name and the project CBIDs included. The single CD shall be submitted in the sealed bid envelope of one of the projects the Contractor is bidding on.

**Shared Services:** Under the authority of 30 ILCS 525, the Governmental Joint Purchasing Act the unit prices included in the proposal may be offered to other governmental units according to the following:

*The purchase of goods and services pursuant to the terms of this Contract shall also be offered for purchases to be made by other governmental units, as authorized by the Governmental Joint Purchasing Act, 30 ILCS 525/0.01, et seq. (the "Act"). All purchases and payments made under the Act shall be made directly by and between each governmental unit and the successful bidder. The bidder agrees that Lake County shall not be responsible in any way for purchase orders or payments made by the other governmental units. The bidder further agrees that all terms and conditions of this Contract shall continue in full force and effect as to the other governmental units during extended terms. The credit or liability of each governmental unit shall remain separate and distinct. Disputes between bidders and governmental units shall be resolved between the immediate parties.*

*The bidder and the other governmental units may negotiate such other and further terms and conditions to this Contract ("Other Terms") as individual projects may require. To be effective, Other Terms shall be reduced to writing and signed by a duly authorized representative of both the successful bidder and the other governmental unit.*

*The bidder shall provide the other governmental units with all required documentation set forth in the solicitation including but not limited to: performance and payment bonds, Certificates of Insurance naming the respective governmental unit as an additional insured and certified payrolls to the other governmental unit as required.*

## **ARTICLE 105.03(e) ENVIRONMENTAL PERMITTING AGENCIES**

Effective: December 22, 2014

Revised: February 26, 2016

Add the following paragraph to Article 105.03 of the “Standard Specifications”

- (e) Permitting Agency Deduction: Any monetary payment required from a permitting agency related to improper erosion and sediment control may be passed along to the Contractor as a deduction from future pay estimates. Monetary payments will include fees and violations attributable to the Contractor’s actions or inaction resulting in improper erosion and sediment control. The deduction will be applied to monies due or that might become due to the Contractor. Permitting agencies include the Lake County Stormwater Management Commission, the Illinois Environmental Protection Agency, the Army Corps of Engineers, and other regulatory agencies.

## **ARTICLE 105.09 SURVEY CONTROL POINTS (LCDOT)**

Effective: January 1, 2007

Revised: June 6, 2014

The Contractor shall furnish the Engineer with the materials required to establish survey control points according to Article 105.09 of the “Standard Specifications” and the following:

**Paint:** *The Contractor shall furnish, at their expense, white, pink or purple pavement marking paint in aerosol cans, for use by the Engineer. The quality of the marking paint shall be as manufactured by Aervoe-Pacific Co. (distributed by Municipal Marking Distributors, Inc., Dundee, IL) or approved equal.*

*The Contractor and subcontractors shall only use white, pink or purple colors for their own markings. At no time will the Contractor use any of the J.U.L.I.E. utility colors listed in Article 107.31 of the “Standard Specifications”.*

**Hubs:** *The Contractor shall furnish, at their expense, hubs for use by the Engineer according to the following:*

- 1. Shall be 1 3/8” x 7/8” x 18” (actual dimension).*
- 2. Shall be furnished in securely banded (on each end) bundles of 25 pieces.*
- 3. The material shall be kiln dried Douglas fir, oak or maple and surfaced on the 2 larger sides and without splits, pitch pockets, wane, knots or decayed wood.*
- 4. The tapered end on each hub shall be pencil point tapered.*

**Lath:** *The Contractor shall furnish, at their expense, lath for use by the Engineer according to the following:*

1. *Shall be 1 1/8" x 1/2" x 48" (actual dimension).*
2. *Shall be furnished in securely banded (on each end) bundles of 50 pieces.*
3. *The material shall be kiln dried Douglas fir, oak or maple and surfaced on the 2 larger sides and without splits, pitch pockets, wane, knots or decayed wood.*
4. *The tapered end may be saw-cut tapered or pencil tapered.*

## **PROTECTION OF EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION (LCDOT)**

Effective: May 19, 2014

All existing drainage structures shall be kept free of debris resulting from construction operations. All work and material necessary to prevent accumulation of debris in the drainage structures will be considered as included in the unit bid prices of the inlet protection, inlet filters and other temporary erosion control measures. Any debris in the drainage structures resulting from construction operations shall be removed at the Contractor's own expense, and no extra compensation will be allowed.

Should reconstruction or adjustment of a drainage structure be required by the Engineer in the field, the necessary work and payment shall be done according to Section 602 and Article 104.02 respectively of the "Standard Specifications".

During construction, if the Contractor's forces encounter or otherwise becomes aware of any sewers, underdrains or field drains within the right-of-way other than those shown on the plans, they shall inform the Engineer. The Engineer shall direct the work necessary to maintain or replace the facilities in service, and to protect them from damage during construction if maintained. Existing facilities to be maintained that are damaged because of non-compliance with this provision shall be replaced at the Contractor's own expense. Should the Engineer direct the replacement of a facility, the necessary work and payment shall be done in accordance with Section 550, Section 601 and Article 104.02 respectively of the "Standard Specifications".

**ARTICLE 107.09 PUBLIC CONVENIENCE AND SAFETY (LCDOT)**

Effective: January 1, 2007

Revised: March 20, 2015

The Contractor shall limit public inconveniences and safety conflicts according to Article 107.09 of the "Standard Specifications" and the following:

**Keeping Roads Open to Traffic:**

*For this project the Contractor shall maintain traffic according to the Maintenance of Traffic Plan shown on the plans. The Contractor shall limit flagging operations affecting the open lanes i.e. flagging for vehicles entering or leaving the construction site etc..., to the following times:*

<i>Monday - Friday</i>	<i>8:00 am</i>	<i>to</i>	<i>4:00 pm</i>
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*At all other times, including periods of no construction activity, the Contractor shall maintain the available traffic lanes.*

*If local and/or area conditions warrant the above times may be adjusted (i.e. lengthened or shortened) by the Engineer. To request a change the Contractor shall submit to the Engineer a plan including the revised start and end time a minimum of 48 hours prior to the proposed revision. The Engineer will notify the Contractor 24 hours in advance with an approval or disapproval.*

*If the Contractor fails to provide a plan and/or the Contractor disregards the decision by of the Engineer the Traffic Control Deficiency Charge will be applied as stated in the Special Provisions for Traffic Control and Protection.*

**Safety and Convenience:** *The Contractor shall maintain entrances along the proposed improvement. Interference with traffic movements and inconvenience to owners of abutting property and the public shall be kept to a minimum. Any delays or inconveniences caused by the Contractor, by complying with these requirements shall be considered as included in the unit bid prices of the contract and no additional compensation will be allowed.*

*Contractors shall plan their work so that there will be no open holes in the pavement and that all barricades will be removed from the roadway during non-working hours, except where required for public safety.*

*Steel road plates may be used as temporary cover over excavations. Anytime steel road plates are in the roadway these requirements apply:*

- The steel road plate shall sit flat on the pavement and be free of defects and warping*
- It shall be shimmed with a non-asphaltic material to prevent vertical movement*
- If the steel road plate is not under constant surveillance, it shall be pinned to prevent horizontal movement by a minimum of 6 pins; 4 pins predrilled into the corners of the*

*plates and 1 pin predrilled into each side parallel to the trench. Pins shall be drilled 3 inches into the pavement and not protrude above the pavement surface*

- *The steel road plate shall be at least 1 inch thick and large enough to allow a minimum of 1 foot of bearing on each side of the trench*
- *A one foot wide HMA surface course ramp shall be placed around the perimeter of the plate*
- *Multiple steel road plates shall be tack welded together to prevent separation if they are not under constant surveillance*
- *Appropriate advanced warning signs (W8-24 “STEEL PLATE AHEAD” and W8-1 “BUMP”) are required*

*Steel road plates may be left in place overnight, in emergency situations and with the concurrence of the Engineer. Steel road plates left in place overnight shall be attached to the roadway by a minimum of 6 pins; 4 pins predrilled into the corners of the plates and 1 pin predrilled into each side parallel to the trench. Pins shall be drilled 3 inches into the pavement and not protrude above the pavement surface.*

*Steel road plates left in-place for more than 72 hours, shall also be:*

- *Recessed into the street surface the thickness of the steel road plate with no difference in elevation with the existing surface*
- *Secured in-place to prevent horizontal movement with HMA surface course between the existing pavement vertical edge and the steel road plate*

*Road plates shall not be used from November 15<sup>th</sup> to April 15<sup>th</sup> without approval from the Engineer.*

## **ARTICLE 107.20 PROTECTION AND RESTORATION OF PROPERTY (LCDOT)**

Effective: January 1, 2007

Revised: May 19, 2014

The Contractor shall protect and restore property according to Article 107.20 of the “Standard Specifications” and the following:

**Trees and Shrubs:** *Extra care shall be exercised when operating equipment around trees or shrubs. Injured branches or roots shall be pruned in a manner satisfactory to the Engineer and shall be painted where the cut was made. Roots exposed during excavating operations shall be neatly pruned and covered with topsoil. This work shall be done as soon as possible and shall be considered as included in the unit bid price(s) of the various excavation (e.g. Earth Excavation, Excavating and Grading Existing Shoulder, Structure Excavation, Furnished Excavation etc...) and excavation related (e.g. Storm Sewers, Grading and Shaping Ditches, Concrete Foundations, etc...) work items shown in the Summary of Quantities. No additional compensation will be allowed this work.*

**ARTICLE 107.23 PROTECTION OF STREAMS, LAKES, RESERVOIRS, NATURAL AREAS, WETLANDS, PRAIRIE AREAS, SAVANNAHS, AND ENDANGERED AND THREATENED SPECIES (LCDOT)**

Effective: April 1, 2008  
Revised: May 19, 2014

**CONCRETE WASHOUT FACILITY**

**Description:** The Contractor shall take sufficient precautions to prevent pollution of streams, lakes, reservoirs, and wetlands with fuels, oils, bitumens, calcium chloride, or other harmful materials according to Article 107.23 of the “Standard Specifications”.

**General:** *To prevent pollution by residual concrete and/or the by product of washing out the concrete trucks, concrete washout facilities shall be constructed and maintained on any project which includes cast-in-place concrete items. The concrete washout shall be constructed, maintained, and removed according to this special provision and LCDOT standard LC4202 included in these plans. Concrete washout facilities shall be required on all projects regardless of the need for NPDES permitting. On projects requiring NPDES permitting, concrete washout facilities shall also be addressed in the Storm Water Pollution Prevention Plan.*

*The concrete washout facility shall be constructed on the job site according to LC4202. The Contractor may elect to use a pre-fabricated portable concrete washout structure. The Contractor shall submit a plan for the concrete washout facility, to the Engineer for approval, a minimum of 10 calendar days before the first concrete pour. The working concrete washout facility shall be in place before any delivery of concrete to the site. The Contractor shall ensure that all concrete washout activities are limited to the designated area.*

*The concrete washout facility shall be located no closer than 50 feet from any environmentally sensitive areas, such as water bodies, wetlands, and/or other areas indicated on the plans. Adequate signage shall be placed at the washout facility and elsewhere as necessary to clearly indicate the location of the concrete washout facility to the operators of concrete trucks.*

*The concrete washout facility shall be adequately sized to fully contain the concrete washout needs of the project. The contents of the concrete washout facility shall not exceed 75% of the facility capacity. Once the 75% capacity is reached, concrete placement shall be discontinued until the facility is cleaned out. Hardened concrete shall be removed and properly disposed of outside the right-of-way. Slurry shall be allowed to evaporate, or shall be removed and properly disposed of outside the right-of-way. The Contractor shall immediately replace damaged basin liners or other washout facility components to prevent leakage of concrete waste from the washout facility. Concrete washout facilities shall be inspected by the Contractor after each use. Any and all spills shall be reported to the Engineer and cleaned up immediately. The Contractor shall remove the concrete washout facility when it is no longer needed.*

**Basis of Payment:** This work will not be paid for separately, but shall be included in unit bid prices of the various concrete work items (e.g. portland cement concrete pavement; portland cement concrete sidewalk, and combination concrete curb and gutter etc...), shown in the Summary of Quantities.

**ARTICLE 107.25 PROTECTION AND RESTORATION OF TRAFFIC SIGNS (LCDOT)**

Effective: January 1, 2007  
Revised: May 19, 2014

The Contractor shall protect and restore traffic signs within the limits of the project according to Article 107.25 of the "Standard Specifications" and the following:

- 1. All signs removed shall be reinstalled 16 feet to 18 feet off the edge of pavement where possible. In curb sections this will vary and will be determined by the Lake County Division of Transportation.*
- 2. All single sign installations shall be installed with the bottom of the sign 5 feet above edge of pavement in rural districts, and 7 feet above the edge of pavement in business, commercial or residential districts. On installations having two or more signs, the bottom of the lowest sign shall be 4 feet above edge of pavement.*
- 3. All signs replaced will be erected using new "Telespar" system metal bases cut 42" long from 2 1/4" square material. They are to be driven into solid ground using a pneumatic driver. This work will not be paid for separately but shall be included in the lump sum cost of TRAFFIC CONTROL AND PROTECTION (SPECIAL).*

**ARTICLE 107.27 INSURANCE (LCDOT)**

Effective: January 1, 2007

Revised: May 19, 2014

The Contractor shall obtain and thereafter keep in force insurance according to Article 107.27 of the "Standard Specifications" and the following:

The minimum Employers Liability limits listed in paragraph 107.27(a)(2) shall be increased to the following limits:

- (2) Employers Liability
  - a. Each Accident \$1,000,000
  - b. Disease-policy limit \$1,000,000
  - c. Disease-each employee \$1,000,000

The minimum Commercial General Liability limits listed in paragraph 107.27(b) shall be increased to the following limits along with the addition of a Personal and Advertising Injury Limit:

- (1) General Aggregate Limit \$4,000,000
- (2) Products-Completed Operations Aggregate Limit \$4,000,000
- (3) Personal and Advertising Injury Limit \$1,000,000
- (4) Each Occurrence Limit \$2,000,000

The minimum Commercial Automobile Liability limit listed in paragraph 107.27(c) shall remain at:

Bodily Injury & Property Damage  
Liability Limit Each Occurrence \$1,000,000

In addition to the Department, its officers, and employees, coverage shall be provided for Lake County, its agents, officers and employees, named as additional insured under ISO (Insurance Services Office) additional insured endorsement CG 20 26, edition date 07/04 or its equivalent. Coverage shall be provided for Lake County, its officers, agents and employees, all members of Boards, Commissions, Committees, Trustees and Organizations of the County, all volunteers and members of volunteer organizations and other non-paid personnel, including college and high school interns, while acting on behalf of the County. The Contractor's insurance shall be primary and non-contributory.

The contractual liability insurance coverage shall be broad enough to respond to the liability assumed by the Contractor in the following Hold Harmless Clause:

**Hold Harmless Clause**

*The Provider agrees to indemnify, save harmless and defend the County of Lake, its agents, servants, and employees and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses and expenses, including court costs and attorney's fees, for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of or in connection with the work covered by this contract. The foregoing indemnity shall apply except if such injury, death or damage is caused directly by the willful and wanton conduct of the County of Lake, its agents, servants, or employees or any other person indemnified hereunder.*

In the event the Contractor fails to obtain or maintain any insurance coverage required under this agreement, Lake County may purchase such insurance coverage and charge the expense thereof to the Contractor.

**ARTICLE 107.29 OPENING OF SECTION OF HIGHWAY TO TRAFFIC (LCDOT)**

Effective: January 1, 2007

Revised: May 19, 2014

Work under construction shall be opened to traffic according to Article 107.29 of the "Standard Specifications" and the following:

*The Contractor shall work expeditiously to open traffic lanes closed due to roadwork. The Engineer shall be the sole judge of when a lane is ready to be opened to traffic. The opening of a lane to traffic shall be in accordance to Section 107.29 of the "Standard Specifications".*

*Roadwork requiring a closure of a lane, which has been opened previously to traffic, will be allowed at the discretion of the Engineer and under the following conditions:*

- 1. The lane closure shall only be in effect while workers are present in or near the closed lane.*
- 2. The closed lane will be reopened to traffic at the end of the workday.*
- 3. All traffic control devices pertaining to the lane closure shall be removed from the roadway at the end of the workday.*

## **SECTION 108 PROSECUTION AND PROGRESS (LCDOT)**

Effective January 1, 2007

Revised: May 19, 2014

*It is the intent of the County that this project be constructed in an orderly and timely manner. Toward this end, the Contractor shall take special note of the provisions of Article 105.06, Article 108.01 paragraph 2, and Article 108.02 of the "Standard Specifications" which shall be adhered to.*

*The Contractor shall coordinate all work between their forces and subcontractors to enable completion within the allotted working days.*

## **ARTICLE 108.06 LABOR, METHODS, AND EQUIPMENT**

Effective: May 29, 2015

The Contractor and each subcontractor shall meet the requirements of LRS12, Special Provision for Wages of Employees on Public Works except as follows:

*The certified payroll(s) submitted by the Contractor and each subcontractor shall be submitted electronically in a PDF format. The accompanying statement signed by the Contractor or subcontractor may be scanned or contain an electronic signature. The documents shall be submitted via e-mailed to the Engineer.*

## DIVISION 200. EARTHWORK, LANDSCAPING, AND EROSION CONTROL

### DIVISION 200 PHOSPHORUS FERTILIZER NUTRIENT BAN (LCDOT)

Effective: January 1, 2009  
Revised: May 19, 2014

Phosphorus Fertilizer Nutrient **shall not** be used on Lake County Highways.

### 20100XXX TREE REMOVAL (XX) (LCDOT)

Effective: January 1, 2007  
Revised: May 19, 2014

**Description:** This work shall consist of cutting, grubbing, removing and disposing of trees and stumps.

**General:** The work shall be performed according to Article 201.04 of the "Standard Specifications" and the following:

*Cut trees and limbs shall be disposed of within five working days. The cut trees and limbs shall be disposed of according to Article 202.03 of the "Standard Specifications".*

**Method of Measurement:** Tree Removal will be measured for payment according to Article 201.10(b) of the "Standard Specifications".

**Basis of Payment:** This work will be paid for at the contract unit price per unit diameter for TREE REMOVAL of the size range specified. *The unit price shall include all equipment, materials and labor required to remove and dispose of designated trees and stumps.*

**ARTICLE 202.03 REMOVAL AND DISPOSAL OF SURPLUS, UNSTABLE, AND UNSUITABLE MATERIALS AND ORGANIC WASTE (LCDOT)**

Effective: February 18, 2013

Revised: May 19, 2014

**Description:** This work shall consist of the off-site disposal of excess soil generated by Lake County Division of Transportation (LCDOT) contract construction projects.

**Definitions:**

**Clean construction or demolition debris (CCDD):** CCDD is uncontaminated broken concrete without protruding metal bars, bricks, rock, stone, or reclaimed asphalt pavement generated from construction or demolition activities. CCDD material may include small incidental quantities of soil that are comingled as part of the removal process. When uncontaminated soil is mixed with any of these materials, the uncontaminated soil is also considered CCDD. Uncontaminated soil that is not mixed with other CCDD materials is not CCDD.

**Uncontaminated Soil:** What constitutes "uncontaminated soil" for purposes of CCDD and uncontaminated soil fill operations is defined in 35 Ill. Adm. Code 1100. Uncontaminated soil means soil that does not contain contaminants in concentrations that pose a threat to human health and safety and the environment.

**General:** Removed pavement and/or aggregate with minimal incidental soil are considered to be CCDD and may be taken to a CCDD site for disposal. IEPA forms 662 and/or 663 are not required for this construction material.

Excess soil from the installation of drainage structures, storm sewers, culverts, traffic signals, light poles etc., shall be kept separate from all CCDD. A limited amount of excess soil is expected to be generated by this project. No pH tests or tests for contamination have been conducted by LCDOT for this project site. Excess soil shall be disposed of as follows:

- a) The excess soil shall be disposed of at a licensed landfill.
- b) The Contractor may elect to use a CCDD facility. The Contractor shall perform all necessary field and laboratory analysis and to obtain the licensed professional engineer's certification required as per Public Act 96-1416 to use the CCDD Facility. Any and all costs associated with CCDD disposal i.e. testing, transport, tipping fees, rejected loads, etc., shall be the responsibility of the Contractor. No additional compensation will allowed or provided. Additionally the Contractor

shall be responsible for all costs associated with the proper disposal of all rejected loads.

- c) With the consent of the Engineer, the excess soil may be transported and used as fill, within the LCDOT right-of-way, on other LCDOT construction projects. The Contractor shall be responsible for making all arrangements, including coordinating with Engineer for both projects, as well as with the Contractor for the other project. The Contractor shall coordinate the transportation and placing of the excess soil on the other project. No additional compensation will allowed or provided for this option.
- d) With the consent of the Engineer the Contractor may dispose of the excess material on the job site. If the soil is used for fill locations within the right-of-way but outside the project construction limits, the Contractor shall specify to the Engineer, in writing, how the landscape restoration of the fill area(s) will be accomplished. The excess soil placement shall not result in any flood plain or wetland impacts. The excess soil placement shall not reduce sight distance for vehicles on the roadway or adjoining entrances or side roads. The material shall be graded to blend in with the surrounding ground to the Engineer's satisfaction.

**Method of Measurement:** This work will not be measured for payment.

**Basis for Payment:** The off-site disposal of excess excavated material, including transportation, facility disposal fees and all other work necessary, will not be paid for separately, but shall be included in the contract unit price of the work item from which the excess soil was generated.

**21101600 TOPSOIL FURNISH AND PLACE, VARIABLE DEPTH (LCDOT)**

Effective: April 19, 2010

Revised: June 20, 2016

**Description:** This work shall consist of furnishing and placing topsoil in a variable width and depth wedge adjacent to an existing concrete abutment.

**Materials:** Topsoil (furnished from outside the right-of-way) shall meet the requirements of Article 1081.05(a) of the "Standard Specifications".

**General:** The work shall be performed according to Section 211 of the "Standard Specifications" and the following:

This work shall also comply with the "Illinois State Agency Historic Resources Preservation Act" (Public Act 86-707, effective January 1, 1990). Under this Act:

1. *The Contractor shall complete a Cultural and Natural Resources Review of Borrow Areas form for Borrow/Waste/Use Areas (BDE form 2289 3/14/16 included herein), along with all required attachments, and submit them to the Engineer at the earliest possible date.*
2. *The Engineer shall submit the Cultural and Natural Resources Review of Borrow Areas form to IDOT for review and approval. Any and all costs incurred, associated with said review and approval will be borne by the Contractor.*
3. *The Contractor shall not begin work on any Borrow/Use areas until the Cultural and Natural Resources Review of Borrow Areas form has been approved.*

A variable width and depth wedge of topsoil shall be placed at the edge of the proposed aggregate shoulder, as shown on the plans. The Contractor shall place the topsoil in such a manner as to prevent it from spilling into the ditches and/or wetland areas.

**Method of Measurement:** The length and width of the work will be measured in place and the area calculated in square yards.

**Basis of Payment:** This work will be paid for at the contract unit price per square yard for TOPSOIL FURNISH AND PLACE VARIABLE DEPTH. *The unit price shall include all equipment, materials and labor required to furnish and place the topsoil wedge.*

**21101615 TOPSOIL FURNISH AND PLACE, 4" (LCDOT)**

Effective: January 1, 2007

Revised: June 20, 2016

**Description:** This work shall consist of furnishing, excavating, transporting and placing topsoil.

**Materials:** Topsoil (furnished from outside the right-of-way) shall meet the requirements of Article 1081.05(a) of the "Standard Specifications".

**General:** The work shall be performed according to Section 211 of the "Standard Specifications" and the following:

The work shall also comply with the "Illinois State Agency Historic Resources Preservation Act" (Public Act 86-707, effective January 1, 1990). Under this Act:

- 1. The Contractor shall complete a Cultural and Natural Resources Review of Borrow Areas form for Borrow/Waste/Use Areas (BDE form 2289 3/14/16 included herein), along with all required attachments, and submit them to the Engineer at the earliest possible date.*
- 2. The Engineer shall submit the Cultural and Natural Resources Review of Borrow Areas form to IDOT for review and approval. Any and all costs incurred, associated with said review and approval will be borne by the Contractor.*
- 3. The Contractor shall not begin work on any Borrow/Use areas until the Cultural and Natural Resources Review of Borrow Areas form has been approved.*

The Contractor shall collect one representative soil sample from the proposed growing surface which shall be analyzed by an agricultural laboratory approved by the Engineer. The Contractor shall submit the proposed laboratory name and address to the Engineer at the pre-construction conference. The soils analysis shall include (but is not limited to) the recommended application rates of nitrogen and potassium fertilizer nutrients.

Plan quantities reflect a 4" thick topsoil placement in all disturbed areas.

**Method of Measurement:** Topsoil Furnish and Place will be measured for payment in square yards according to Article 211.07 of the "Standard Specifications".

**Basis of Payment:** This work will be paid for at the contract unit price per square yard for TOPSOIL FURNISH AND PLACE, 4". *The cost of the soil analysis will not be paid for separately, but will be included in the cost of TOPSOIL FURNISH AND PLACE, 4". The unit price shall include all equipment, materials and labor required to furnish and place the topsoil. No additional compensation will be allowed for topsoil furnished from locations outside the ROW.*

**28200200 FILTER FABRIC (LCDOT)**

Effective: January 1, 2007

Revised: May 20, 2014

**Description:** This work shall consist of furnishing and installing geotechnical filter fabric in conjunction with construction of an embankment cone as indicated in the plans. The work shall also include all work necessary to prepare the subgrade beneath the fabric.

**Materials:** The material shall meet the requirements of Article 1080.03 of the “Standard Specifications” and the following:

The filter fabric material shall consist of non-woven filaments formed from plastic yarn of a long – chain synthetic polymer composed of at least 85 percent by weight polyolefins, or polyesters, and shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistant to deterioration due to ultra violet light and heat exposure. After forming, the fabric shall be processed so that the filaments retain their relative positions with respect to each other. The fabric shall be free of defects or flaws which significantly affect its physical and/or filtering properties.

The texture of the fabric shall be such that the porous granular embankment and topsoil will remain in an equilibrium state and not slip or slide. The filter fabric shall be rot proof, mildew proof, insect resistant and have a high dimensional stability when wet. The fabric shall also have good soil filtration characteristics, high resistance to tear propagation in all directions, and meet the following minimum conditions and ASTM tests:

<i>Weight of Fabric (oz/sq yd) ASTM D 3776 (Mod.)</i>	<i>6.0</i>
<i>Burst strength (psi) ASTM D 3786 (Note 1)</i>	<i>280 MARV</i>
<i>Trapezoidal Tear Strength (lbs) ASTM D 1117 (Note 2)</i>	<i>60 MARV</i>
<i>Grab tensile Strength (lbs) ASTM D 4632 (Note 2)</i>	<i>160 MARV</i>
<i>Grab tensile Elongation (%) ASTM D 4632 (Note 2)</i>	<i>50 MARV</i>
<i>Apparent Opening size ASTM D 4751 (US Sieve)</i>	<i>70 MARV</i>
<i>Permeability (cm/sec) ASTM D 4491</i>	<i>0.24 MARV</i>

*Note 1: Manufacturer's certificate of fabric to meet requirements.*

*Note 2: Test sample shall be tested wet.*

**General:** The areas indicated on the plans shall be lined with filter fabric. The work shall be constructed according to Section 282 of the “Standard Specifications”

**Method of Measurement:** The filter fabric will be measured in place and the area computed in square yards. The buried edges of the fabric will not be measured for payment and the overlap joints and seams will be measured as a single layer of material.

**Basis of Payment:** This work shall be paid for at the contract unit price per square yard of FILTER FABRIC. *The unit price shall include all equipment, materials and labor required to furnish and install the filter fabric.*

## LAKE COUNTY PAY ITEMS

### LC200501 MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS (LCDOT)

Effective: July 21, 2008

Revised: May 20, 2014

**Description:** This work shall consist of maintaining the temporary erosion control systems installed by the Contractor on the project. The maintenance shall be performed as directed by the Engineer, to control siltation at all times during the duration of the project.

**General:** The work shall be performed according to Section 280 of the “Standard Specifications” and the following:

The Maintenance of Temporary Erosion Control Systems shall include:

- Any repairs to the various temporary erosion control systems.
- The removal of entrapped sediment.
- Cleaning of any silt filter fabric.

When a temporary erosion control system is in need of maintenance, the Engineer will give the Contractor written notice. If the Contractor fails to maintain the temporary erosion control systems within 48 hours of receiving the written notice, the Engineer may proceed to maintain the systems as deemed necessary. The cost of this maintenance will be deducted from any compensation due, or which may become due the Contractor under this contract.

The sediment basin(s) shall be cleaned out (accumulated silt removed) any time the basin(s) become 75% filled. Any additional materials and work required by the Engineer will be measured and paid for as specified.

Removed sediment and other materials shall be disposed of according to Article 202.03 of the “Standard Specifications”.

**Method of Measurement:** Work performed under this pay item shall be submitted by the Contractor to the Engineer on a force account basis according to Article 109.04(b) of the “Standard Specifications”. The Engineer may use any, all or none of this pay item.

**Basis of Payment:** The quantity for this item is established by the Lake County Division of Transportation, based on the Engineer’s Estimate and the following formula.

<b><u>Contract Pay Item</u></b>	<b><u>Percent of Engineer’s Estimate for Pay Item</u></b>
<i>Temporary Ditch Checks</i>	20%
<i>Perimeter Erosion Barrier</i>	100%
<i>Inlet Protection (Special)</i>	60%
<i>Inlet Filters</i>	60%
<i>Seeding Sodding, Seeding (complete) Sodding (complete) *</i>	20%

*\* if more than one of these items is included in the pay items then the sum is used. Temporary erosion control seeding is not included in the maintenance calculation.*

*The quantity for MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS for this contract is **3,014.00 units**.*

*The unit price for MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS will be \$1.00. Therefore one unit will equal \$1.00 of force account work performed according to Article 109.04 (b) of the “Standard Specifications”.*

### **LC600103 TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (RADIAL)**

**Description:** This work shall consist of furnishing and erecting traffic barrier terminals, type 1 special (radial).

**Materials:** The materials shall meet the requirements of Article 631.02 of the “Standard Specifications”.

**General:** The work shall be performed according to Section 631 of the “Standard Specifications” and the following:

*The terminal markers will be supplied and installed by the County.*

**Method of Measurement:** The Traffic Barrier Terminal, Type 1 Special (Radial) will be measured for payment, complete in place, in units of each, according to Article 631.12 of the “Standard Specifications”.

**Basis of Payment:** This work will be paid for at the contract unit price per each for TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (RADIAL). *The unit price shall include all equipment, materials and labor required to furnish and erect the traffic barrier terminal.*

### **LC782000 GUARDRAIL REFLECTORS (LCDOT)**

Effective: August 1, 2011

Revised: May 20, 2014

**Description:** This work shall consist of furnishing and installing guard rail reflectors on guard rail.

**Materials:** *The reflectors shall be a “# 567 GUARDRAIL DELINEATOR”, as manufactured by AKT Corporation, Wauwatosa, Wisconsin, or an approved equal.*

*The bracket shall have a minimum thickness of 12 gauge and shall have **both sides** faced with white, high intensity reflective sheeting.*

**General:** *The reflectors shall be spaced 25 feet on center and/or as directed by the Engineer.*

**Basis of Payment:** This work will be paid for at the contract unit price per each for GUARDRAIL REFLECTORS. *The unit price shall include all equipment, labor and materials necessary to install the reflectors.*

## IDOT DESIGN TEMPORARY PAY ITEMS

### X0321865 ANTI-GRAFFITI PROTECTION SYSTEM

Effective: June 7, 2011

Revised: March 3, 2016

**Description:** This work shall consist of furnishing, and applying an anti-graffiti coating on all exposed faces of concrete structures. The anti-graffiti coating shall be applied to the following exposed concrete surfaces:

The Robert McClory Bike Path Bridge over Russel Road north and south abutment walls including wingwalls. The Robert McClory Bike Path Bridge over IL 173 north abutment wall including wingwalls. All walls applied with the anti-graffiti protection system are facing the traffic and the areas are designated on the plans respectively.

**Materials:** The anti-graffiti protection materials may be obtained from the following suppliers:

Rainguard International 1079 Culpepper Drive Conyers, GA 30094 Phone: (866) 989-5159 <a href="https://www.rainguard.com">https://www.rainguard.com</a>	Surtec, Inc. 1880 N MacArthur Drive Tracy, CA 95376 Phone: (209) 820-3700 <a href="http://www.surtecsystem.com">http://www.surtecsystem.com</a>	United Coatings 1465 Pipefitter Street Charleston, SC 29405 Phone: (855) 817-3082 <a href="http://www.guest-cp.com/trusted-brands/unitedcoatings">http://www.guest-cp.com/trusted-brands/unitedcoatings</a>
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**General:** The anti-graffiti protection system shall consist of a permanent, color stable, UV, stain, chemical and abrasion resistant coating. The coating shall be applied according to the Manufacturer's specifications:

### PART 1 GENERAL

**SECTION INCLUDES:** Clear anti-graffiti coating for exterior surfaces.

#### SYSTEM DESCRIPTION:

- A. To provide a tough and durable Anti-Graffiti Coating finish. A cross-linking co-polymer material coating that dries clear, non-yellowing with low-luster sheen.
- B. All products VOC – Used materials shall contain no more than 95 grams per liter VOC.

**SUBMITTALS:**

- A. Product Data: Manufacturer's current technical data sheets for materials, and schedule indicating:
  - 1. Recommended waterproof coating serving as base layer of system
  - 2. Number of coats required for subsequent coating types
- B. Manufacturer's field reports: Indicate installation procedures, coverage, quantities, progress, unacceptable conditions and methods of resolution.
- C. Maintenance Data: Provide Manufacturer's recommended maintenance procedures, including instructions for graffiti removal, recommended procedures for re-application of intermediate coatings and periodic maintenance of coating.

**QUALITY ASSURANCE:**

- A. Test Section(s): Before full-scale application, the product shall be applied to a test section.
  - 1. Review Manufacturer's product data sheets to determine suitability of each product for each surface.
  - 2. Apply products using Manufacturer-approved application methods, determining actual requirements for surface preparation, coverage rate, number of coats, and application procedures.
  - 3. After 48 hours, review effectiveness of protection, compatibility with substrates, and ability to achieve desired results.
  - 4. Obtain the approval of the Engineer of workmanship, color, and texture before proceeding with work.
  - 5. Test Section(s): Inconspicuous sections of actual construction.
    - a. Location and number: As selected by Engineer
    - b. Size: Approximately two square feet
    - c. Repair unacceptable work to the satisfaction of the Engineer
- B. Pre-Installation Meetings:
  - 1. Before Application: The Contractor and the Manufacturer's representative shall inspect surfaces to be treated, noting in writing to the Engineer deficiencies or flaws in the substrate construction which would affect the performance or appearance of the coating.
  - 2. Beginning of Application: The Manufacturer's representative shall assure utilization of proper equipment verify material quantities, and supervise material application techniques.

- C. The Contractor shall comply with recommendations and instructions set forth by Manufacturer as part of Manufacturer's service in addition to complying with the terms of the warranty.
- D. Installer Qualifications: Minimum 5 years of experience regularly engaged and specializing in the application of specialty surface treatments to exterior wall substrates.
- E. Do not proceed with material application until all deficiencies noted in pre-application inspection report have been corrected.
- F. Notify the Manufacturer at least 72 hours before starting application.

**DELIVERY, STORAGE, AND HANDLING:**

- A. Deliver materials in original sealed containers clearly marked with Manufacturer's name, type of material, and batch number.
- B. Inspect the materials upon delivery to assure that specified products have been received.
- C. Store materials where temperatures are not less than 45 degree F.
- D. Use all means necessary to protect material before, during, and after installation, and to protect work of other trades.

**ENVIRONMENTAL REQUIREMENTS:**

All materials shall comply with current Federal and State environmental requirements. Used materials shall contain no more than 95 grams per liter VOC.

**WARRANTY:**

- A. Manufacturer shall provide a written warranty for 5 years to include materials only, when said materials are applied in accordance with manufacturer's guidelines. Please refer to manufacturer for warranty policy.
- B. Before final application for payment will be approved, final closeout submittals shall include the written manufacturer's warranty.

## **PART 2 PRODUCTS**

**MATERIALS:** Please refer to manufacturer's published data bulletins for applications and installation recommendations.

VandlGuard Non-sacrificial

5 Year material only warranty

## **PART 3 EXECUTION**

### **EXAMINATION:**

- A. Verify that surfaces to be coated are in proper condition.
  - 1. New substrates: Cured 30 days before application.
  - 2. Cured substrates: Allowed to dry three to seven days following rainfall before application.
  - 3. Substrate moisture content no higher than 15 percent as registered on an electronic moisture meter.
- B. Do not apply to surfaces below 45 degrees F or above 90 degrees F. Do not apply in the direct sun.
- C. Where freezing conditions have existed before application, allow adequate time for building to thaw.
- D. Do not begin until the test section(s) has been approved by Engineer.

### **PREPARATION:**

- A. Remove dirt, dust, oil, grease, and other contaminants that would interfere with penetration or performance of products; where cleaners are required, use products recommended by Manufacturer; rinse thoroughly and allow surface to dry completely.
- B. Surfaces shall be structurally sound, dry, clean and free of dust, dirt, grime, oil, scale, rust, silicones, curing compounds, alkali, add residues, etc...
- C. Prevent overspray, wind drift and splash onto surfaces not to be treated.
- D. Protect windows and work of other trades against damage by coatings, whether to be coated or not.
- E. Protect plant life against damage from coatings.

**APPLICATION:**

- A. Apply materials according to the Manufacturer's recommendations and when substrate surface temperature is above 45 degrees F. Follow instructions in Manufacturer's current technical data sheet for general information and coverage rates.
- B. Mix materials according to the Manufacturer's instructions; do not dilute unless permitted by Manufacturer.
- C. Spray apply water repellent using high-volume, low-pressure spray equipment. Pressure not to exceed 60 psi. A Hudson or garden-type sprayer can be used for small applications.
- D. Clean all drips, runs, and overspray residue while still wet.
- E. Allow coating to dry and become clear before applying subsequent coats. Achieve a uniform pinhole free, continuous film.
- F. During process of work, remove discarded coating materials, rubbish, cans, and rags at end of each workday.

**FIELD QUALITY CONTROL:**

Request the Manufacturer's authorized field representative to verify that installed products comply with Manufacturer's requirements and with the standards established by the test section(s) approved by the Engineer.

**ADJUSTING, CLEANING AND PROTECTION:**

- A. Upon completion of work, remove protective coverings.
- B. If surfaces that should have been protected from damage by this work have been damaged; clean, repair or replace to the satisfaction of the Engineer.
- C. Repair or replace damaged treated surfaces.
- D. Protect completed work from damage during construction.

**Method of Measurement:** This work will be measured for payment in place and the area covered by the anti-graffiti protection system shall be calculated in square feet.

**Basis of Payment:** This work will be paid for at the contract unit price per square foot of ANTI-GRAFFITI PROTECTION SYSTEM. *The unit price shall include all labor, equipment and materials required to furnish and apply the anti-graffiti coating to the designated surfaces. The unit price shall also include supplying the Manufacture's technical representative and preparing the warranty application.*

**X2070304 POROUS GRANULAR EMBANKMENT, SPECIAL (LCDOT)**

Effective: January 1, 2007

Revised: January 22, 2015

**Description:** This work shall consist of furnishing and placing porous granular embankment.

**Materials:** The aggregate shall meet the requirements of Article 1004.05 of the “Standard Specifications” except as follows:

1. *Crushed Stone, Crushed Blast Furnace Slag, or Crushed Concrete meeting the requirements of the following table will be permitted.*

<b>Sieve Size</b>	<b>Percent Passing</b>
8”	100
6”	97 +/- 3
4”	90+/- 10
2”	45 +/- 25
#4	20+/-20
#200	5 +/- 5

2. *Crushed Gravel meeting the requirements of the following table will be permitted.*

<b>Sieve Size</b>	<b>Percent Passing</b>
8”	100
6”	97 +/- 3
4”	90+/- 10
2”	55 +/- 25
#4	30 +/- 20
#200	5 +/- 5

3. *Crushed RAP, from either full depth or single lift removal, may be mechanically blended with the above aggregate materials but shall not exceed 40 percent of the total product. The RAP shall have a top size of 4” and be well graded.*

*Steel slag and other expansive materials will not be permitted.*

*Crushed Gravel shall be defined as meeting a target of 97% with +/-3% variance for one-face or more crushed according to Crushed Particle Content: ASTM D 5821 (Illinois Modified).*

**Equipment:** A vibratory roller meeting the requirements of Article 1101.01(g) of the “Standard Specifications” shall be used to roll each lift of material.

**General:** The work shall be performed according to Section 207 of the “Standard Specifications” and the following:

*A vibratory roller shall be used to roll each lift of material to obtain the desired keying or interlock and necessary compaction. The Engineer will verify that adequate keying has been obtained.*

*Porous Granular Embankment, Special shall be used in all widening and pavement reconstruction areas as shown on the plans. Undercut and PGE placement in addition to the plan thickness will be done as field conditions warrant. No adjustment in unit price will be allowed for an increase or decrease in quantities from the estimated quantities shown in the plans.*

**Method of Measurement:** Porous Granular Embankment, Special will be measured for payment in cubic yards according to Article 311.08(b) of the “Standard Specifications”.

**Basis of Payment:** This work will be paid for at the contract unit price per cubic yard for POROUS GRANULAR EMBANKMENT, SPECIAL. *The unit price shall include all equipment and labor required to furnish and place the porous granular embankment.*

#### **X2511630 EROSION CONTROL BLANKET (SPECIAL) (LCDOT)**

Effective: January 1, 2007

Revised: May 19, 2014

**Description:** This work shall consist of furnishing and placing erosion control blanket over seeded areas on slopes 2:1 or steeper.

**Materials:** The erosion control blanket shall meet the requirements of Article 1081.10 of the “Standard Specifications”, except that:

*The blanket material shall be limited to 100% biodegradable coconut fiber erosion control blanket with natural fiber netting.*

**General:** The work shall be performed according to Article 251.04 of the “Standard Specifications”.

**Method of Measurement:** This work will be measured for payment in place in square yards of actual area covered.

**Basis of Payment:** This work will be paid for at the contract unit price per square yard for EROSION CONTROL BLANKET (SPECIAL). *The unit price shall include all equipment, materials and labor required to furnish and place the erosion control blanket.*

**X2800500 INLET PROTECTION, SPECIAL (LCDOT)**

Effective: January 1, 2007

Revised: June 6, 2014

**Description:** This work shall consist of furnishing, constructing, removing, and disposing of inlet protection as part of the project's temporary erosion control system.

**General:** The work shall be performed according to Section 280 of the "Standard Specifications", and the following:

*The inlet protection shall consist of silt filter fence placed around the perimeter of the inlet. The silt filter fence shall be supported by 1" x 2" wooden stakes with a minimum length of three feet. The stakes shall be spaced no more than three feet apart, and shall be driven into the ground a minimum of 8".*

*The filter fabric shall be installed in a backfilled trench 6" deep and securely attached to the posts by a method approved by the Engineer. The rim elevation of the casting shall be temporarily set a minimum of 6" above the adjacent grade. This elevation may vary to avoid flooding conditions as determined by the Engineer.*

**Method of Measurement:** This work will be measured for payment as individual items and the unit of measurement will be each regardless of the size or type of inlet being protected.

**Basis of Payment:** This work will be paid for at the contract unit price per each for INLET PROTECTION, SPECIAL. *The unit price shall include all work and materials necessary to properly install the inlet protection and to remove and dispose of the used materials at the completion of the project. Maintenance requirements shall be included and paid for under the special provision for MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS.*

## IDOT LOCAL ROADS TEMPORARY PAY ITEMS

### XX006337 ARCHITECTURAL FINISH FOR CONCRETE SURFACES

**Description:** This work shall consist of cleaning and preparing the concrete surface, applying a bond coat, applying a minimum ¼” stamped concrete surface, and sealing the stamped concrete surfaces with a clear sealer.

This special provision has been adapted from a manufacturer. Any reference to color staining, antiquing, or crack repair do not apply to this project.

**Materials:** *All materials shall be those listed and described in this specifications or an approved equal. Materials and installation services are available from the following:*

*Manufacturer: Concrete Solutions  
3904 Riley Street  
San Diego, CA 92110  
Phone: (800) 232-8311  
Fax: (619)297-3333*

*Supplier/: Mannina Construction  
Installer Mike Mannina  
P.O. Box 368  
Antioch, IL 60002  
Phone: (847) 356-6368*

*Website: <http://www.concretesolutions.com>  
E-mail: [sales@concretesolutions.com](mailto:sales@concretesolutions.com)*

*Website: <http://mannina.com>  
E-mail: [info@mannina.com](mailto:info@mannina.com)*

*The concrete stamp pattern to be used shall be “**Small English Fieldstone**” as provided by Concrete Solutions, or an approved equal.*

**General:** *Architectural Finish for Concrete Surfaces shall be applied as detailed and dimensioned on the plans to the Robert McClory Bike Path Bridge over Russel Road north and south abutment walls, including wingwalls, and Robert McClory Bike Path Bridge over IL 173 north abutment wall, including wingwalls.*

*The Architectural Finish shall be applied below the bottom of the horizontal sill on both north and south abutment wall and wingwalls of Russell Road.*

*The Architectural Finish shall be applied to the top of the horizontal sill including the north abutment wall and wingwalls on IL 173.*

*The Architectural Finish shall be applied after the items of Structural Repair of Concrete and Epoxy Crack Injection have been completed. The Architectural Finish shall not block or cover up any existing drainage outlets on the abutments.*

*All preparatory work and installation of the Architectural Finish shall be according to the instructions provided within this special provision or an approved equal. The Engineer is the sole judge of what is an equivalent substitution.*

**Method of Measurement:** ARCHITECTURAL FINISH FOR CONCRETE SURFACES will be measured for payment in square feet acceptably completed.

**Basis of Payment:** This work will be paid for at the contract unit price per square foot for ARCHITECTURAL FINISH FOR CONCRETE SURFACES which shall include cleaning and preparing the concrete surface, patching/leveling the low spots, applying a bond coat, applying a ¼” stamped concrete surface, and sealing the stamped concrete surfaces of the existing abutment walls and wingwalls.

# ULTRA SURFACE ACRYLIC URETHANE Technical Data Sheet [11/04]

Concrete Solutions - 3904 Riley St. - San Diego, CA 92110 - Ph. (800) 232-8311 - Fax (619) 297-3333

**DESCRIPTION:** Ultra Surface Acrylic Urethane is a two component, high performance sealer used for a variety of applications. It has excellent U.V. resistance and gloss retention for exterior applications and provides a durable, easy to clean, chemical and stain resistant finish. It does not require a primer as with most urethanes but can be used directly as the first coat and topcoat sealer over regular and polymer modified concrete, porous tile, brick and exposed aggregate. It is also compatible to apply over Ultra Surface WB Epoxy. Do not apply Acrylic Urethane over Ultra Surface Stamped Concrete Sealer or Sealcoat 1000. For stamped concrete applications the Acrylic Urethane can be used in place of the Stamped Concrete Sealer where a more durable, high gloss finish is desired. For this application the 1<sup>st</sup> coat should be thinned 50% with acetone (where local laws permit). The second coat can be applied straight.

**TYPICAL USES:** Ultra Surface Acrylic Urethane is most commonly used as a clear topcoat protective sealer in exterior coating applications where extra U.V. Resistance, durability and stain resistance is desired compared to single component materials. It is excellent over acid stained surfaces that have been properly cleaned and neutralized, stamped concrete, colored concrete and exposed aggregate surfaces. For stamped concrete applications thin the first coat of Ultra Surface Acrylic Urethane with 50% acetone (where local laws permit).

**SURFACE PREPARATION:** The surface must be clean and sound, free from oil, dirt, waxes and any other contaminants that may interfere with bonding. One method includes scrubbing with detergent, acid washing, neutralizing and pressure washing to clean and rinse.

**MIXING INSTRUCTIONS:** Mix by volume **2 parts A [resin] to 1 part B [hardener]** using a slow speed drill and mixing paddle. Mix only the amount of material that can be used in a 60 minute period (1/2 hour in hotter temperatures above 85 degrees). In hotter temperatures mix smaller batches of 1-3 gallons at a time. If thinning is required, up to 10% acetone can be added for easier workability or when using an airless sprayer. For Stamped Concrete applications it is recommended to thin the first coat 50% with acetone (where local laws permit). Available in clear only.

**APPLICATION INSTRUCTIONS:** Apply by brush, roller or airless sprayer at a coverage rate of 300-400 sq. ft. per gallon. When using a roller, spray the Acrylic Urethane out of a pump-up sprayer and back roll to achieve the best coverage rate. Use a good quality 3/8" nap roller cover that will not leave roller hairs or rinse and let dry prior to use. On some surfaces tiny air bubbles may appear while rolling or spraying. If this happens use an electric air blower (do not use a gas blower) immediately behind the sprayer or roller to remove them or immediately spray a light fog of acetone over the bubbled areas to pop them. **Warning: Turn off all pilot lights and any sources of open flames before application.**

## ULTRA SURFACE ACRYLIC URETHANE

### Technical Information

#### Physical Properties

Mixing Ratio	2 parts A to 1 part B
Coverage Rate	300-400 sq. ft./gallon
Solids Content, Clear	38% [by weight]
Application Temperature	50 degrees or above
Pot life [77 degrees]	60 minutes
Dry to Touch (77 degrees)	2-4 hours
Recoat Time	2-4 hours
Light Traffic	8 hours
Vehicle Traffic	2 days
Full Cure	7 days
Gloss [60 degrees]	90
Hardness [Konig]	127
Flexibility [ASTM D-222]	passes 1/8 inch
Impact Resistance [ASTM D-2794]	passes 38 in./lbs. direct
V.O.C. Clear	250 grams/liter.
Shelf Life	2 years
[When stored in temperatures between 50-80 degrees in unopened containers.]	

#### Chemical Composition

Acrylic oligomer crosslinked with aliphatic isocyanate. Modified with U.V. absorbers and hindered amine light stabilizers.

#### Colors

Available in clear only. For colors use Ultra Surface SB or HP Urethane.

**RE-COATING INSTRUCTIONS:** Ultra Surface Acrylic Urethane can be applied over itself when dry to touch (approx. 2-4 hrs.). It can also be applied over itself after 24 hours without sanding unlike most urethanes. The only requirement for re-coating is that the surface must be clean. Scrub with detergent and pressure wash or rinse to remove any dirt, oil or other contaminants that may interfere with bonding.

**CHEMICAL RESISTANCE (ASTM D-1308 24 HOUR IMMERSION)**

Motor Oil .....	no effect
Gasoline .....	no effect
Brake Fluid .....	no effect
Transmission Fluid .....	no effect
Whiskey .....	no effect
Coffee .....	no effect
Urine .....	no effect
Xylene .....	film softened/recovered
MEK .....	film destroyed
Mineral Spirits .....	no effect
Skydrol .....	no effect
Whiskey .....	no effect
10% Hydrochloric Acid .....	no effect
10% Sulphuric Acid .....	no effect
10% Acetic Acid .....	no effect

**SLIP/FALL PRECAUTIONS:** Concrete Solutions recommends using slip resistant granules in all outdoor applications where the Acrylic Urethane will be used and on indoor applications that may be exposed to water, oil or other spills that may cause a slippery environment. Aluminum oxide granules #80 grit or courser may be broadcast into the prime coat to achieve the amount of slip resistance desired. It is the end users responsibility to determine the suitability of a coating for their particular application. Concrete Solutions or its sales people will not be responsible for injury incurred in a slip/fall accident.

**MOISTURE VAPOR TESTING:** All concrete floors not poured over a proper moisture barrier, are subject to possible moisture vapor transmission or hydrostatic pressure problems which can cause a coating system to blister or fail. Before applying a coating system over a concrete floor which is on-grade or below grade, the customer should be informed of this potential problem and given the option to have a qualified moisture testing company perform calcium chloride test to give the proper recommendations.

**WARNING:** Material is combustible. Extinguish all flames, pilot lights and electric motors until all vapors are gone and the coating is hard. The vapor is harmful. Use only with adequate ventilation/or appropriate cartridge-type respirator. Avoid contact with skin; wear protective gloves. Read Material Safety Data Sheet before using.

**WARRANTY INFORMATION:** Concrete Solutions guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. Concrete Solutions makes no other warranty, expressed or implied, and all warranties of merchantability and fitness for a particular purpose are hereby disclaimed. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product.

**DESCRIPTION:** Ultra Surface Elastomeric Basecoat is a unique waterbased waterproofing membrane formulated with a non-ionic, carboxylated, styrene butadiene copolymer latex. It dries to a durable, tough film with high water resistance. It is flexible and elastic and bonds exceptionally well to concrete and wood surfaces.

**TYPICAL USES:** Ultra Surface Elastomeric Basecoat is used in the Ultra Surface Crack Repair System to secure the 4" Reinforcement Fabric over the Epoxy 500 in the cracks. It is also used to waterproof concrete and wood decks and balconies prior to applying an Ultra Surface Polymer Concrete Overlay System. It is used in combination with Ultra Surface Reinforcement Fabric to provide a reinforced water tight seal. It can be used as a basecoat on masonry walls such as concrete, brick, stucco and block to help bridge cracks and provide complete waterproofing. It is used as a waterproofing underlayment for tile and other flooring and wall materials and as a below grade waterproofing membrane for foundation, basement, and planter walls.

**SURFACE PREPARATION:** The surface must be clean and free of dust, loose material, and any contaminants that may interfere with bonding. Clean concrete surfaces by shot blasting or power scrubbing with detergent, acid washing, neutralizing and pressure washing. Wood surfaces can be cleaned by power sanding.

**MOST COMMON APPLICATIONS:**  
**Crack Repair** - Elastomeric Basecoat is used in the Ultra Surface Crack Repair System to lay the 4" Reinforcement Fabric over cracks filled with Ultra Surface Epoxy 500. See the Ultra Surface Crack Repair Instruction Booklet with step by step pictures for detailed application instructions.

**Waterproofing Plywood Decks**  
 To waterproof a plywood deck that is properly constructed according to local building codes and already has flashing properly installed around the walls and edges of the deck follow the procedure below.  
**Prepare Surface** - Lay 15lb. roofing paper over the wood deck (available at Home Depot). Lay the paper in straight rows staying 1" away from all the edges. Start from the low side of the deck and work towards the high side with each row overlapping a few inches onto the previous row. Lay the paper so if it rained the water would run off the paper and not under the paper onto the wood.

**Install Galvanized Metal Lath** - Lay galvanized metal lath (available at most Home Depots) over the 15 lb. roofing paper and the entire deck. Be careful that the edges of the lath do not line up over the seams of the plywood. Butt the metal lath edges together. Staple the metal lath every 4 inches along seams and edges and every 4 - 6 inches every where else. Use 3/4" galvanized staples. Keep the metal lath 1" back from all the perimeter edges. Do not allow metal to metal contact of dissimilar metals such as copper to avoid deterioration and corrosion by electrolysis.

**Apply Ultra Surface Polymer Concrete** - Patch over the metal lath using an Ultra Surface Polymer Concrete Patching Mix, approximately 3/16" thick, to completely embed the lath. Use the 1/4" Stamping Mixing formula.

<u>Ultra Surface Elastomeric Basecoat</u>		
<u>Testing Information</u>		
<u>Test Methods</u>	<u>Specificaton</u>	<u>Results</u>
<b>ANSI 118.10</b>		
<u>Shear Strength</u>		
7-Day	>50 psi	200 psi
7-Day Water Immersion	>50 psi	150 psi
4-Week	>50 psi	355 psi
12-Week	>50 psi	389 psi
100-Day Water Immersion	>50 psi	194 psi
<u>Fungus &amp; Micro-organism Resistance</u>		
Membrane shall not support mold growth		Passes
<u>Seam Strength</u>	8 lb./in. width min.	10.2 lb./in. width
<u>Breaking Strength</u>	Minimum 170 psi	Max. 401 psi.
<u>Dimensional Stability</u>	Max. 0.70% length Change	0.70%
<u>Damp-Proofness</u>		
No visible water penetration after 48 hours		Passes
<u>Adhesion 7-Day Dry / 7-Day Wet</u>		
Cementitious Board	156 psi	Cohesive substrate failure
Exterior Plywood	89 psi	Cohesive substrate failure
Polystyrene	48 psi	Cohesive substrate failure
Thinset to Membrane	395 psi	Tile to thinset / tile failure
<u>Elongation</u>	Percent	ASTM D-638
7-Day Dry	580 %	
7-Day Dry / 21- Day Wet	657 %	
<u>Permeability</u>	0.013	ASTM E-96
<u>Tensile</u> ASTM D-638		
7-Day Dry	335 psi	
7-Day Dry / 21- Day Wet	562 psi	
<u>Water Vapor Transmission</u>	0.085	ASTM E-96
<u>Low Temp. Flex &amp; Crack Bridging-ASTM C 836 sec. 5.7</u>		
No cracks at 77 degrees F. or 0 degrees F.		
<u>Hydrostatic Resistance</u> ASTM D-751 Procedure B Passes		

Apply The Ultra Surface Elastomeric Basecoat - After the Ultra Surface Polymer Concrete Patching Mix dries for at least 12-24 hours, begin rolling the Ultra Surface Elastomeric Basecoat at one corner of the deck approximately 3 ½ feet wide by 5 feet in length. Roll the Elastomeric Basecoat at a coverage rate of 100 sq. ft. per gallon using a ¾" nap paint roller.

Lay The Ultra Surface Reinforcement Fabric Into The Wet Elastomeric Basecoat - Lay the 40" roll of Reinforcement Fabric into the wet Elastomeric Basecoat so it is lined up next to both edges or walls at the starting corner. It should be overlapping the flashing and as close to the edge or wall as possible. Once the fabric is lined up and ready to roll, begin rolling the Elastomeric Basecoat ahead of the fabric a few feet at a time. Immediately roll the fabric over the Elastomeric Basecoat while it is still wet. As the fabric is being rolled be sure to keep it lined up straight with the starting edge or wall of the deck. After rolling several feet of fabric, roll another coat of Elastomeric Basecoat at approx. 100 sq. ft. per gallon on top of the fabric so it is completely saturated and secured in place. While the topcoat of Elastomeric Basecoat is still wet, lightly broadcast some #60 silica sand over it to provide a fine sandpaper finish when dry. The sand texture will provide an extra mechanical bond for the Polymer Concrete Squeegee/Bond Coat to bond to.

Note: The person laying the fabric should wear baseball cleats or golf shoes to be able to walk on the fabric and the Elastomeric Basecoat without picking it up on their feet. If any wrinkles appear in the fabric as it is being rolled out, use a wall paper brush to rub them flat. Start in the middle of the fabric and work the wrinkles out to the edges. If the fabric gets out of alignment during the application, immediately pick it up by the ends of the roll, lift it as far back as needed and lay it back down lined up next to the starting edge, then roll over it again with the Elastomeric Basecoat.

Lay More Rows Of Fabric Overlapping The First Row - Once the first row of fabric is finished being laid down to the opposite end of the deck or at a designated stopping point, cut the fabric using some scissors or a knife and continue rolling the Elastomeric Basecoat and laying more rows of fabric next to the first row. Overlap each row of fabric 2-3 inches on top of the previous row. Continue laying rows of fabric over the Elastomeric Basecoat and rolling Elastomeric Basecoat on top of the fabric until the entire deck is covered. Remember to lightly broadcast #60 silica sand into the topcoat of Elastomeric Basecoat, then allow it to dry 8-12 hours or until thoroughly dry.



Apply Elastomeric Basecoat ahead of the Fabric at 100 square feet per gallon.



Roll The Fabric into the wet Elastomeric Basecoat a few feet at a time.



Apply Elastomeric Basecoat on top of the Fabric at 100 square feet per gallon after rolling it several feet and lightly broadcast some #60 silica sand.



When you reach the end of the deck cut the fabric with a knife or scissors and start laying the next row.



Lay the next row of fabric so it overlaps the edge of the previous row 2 ½ - 3 inches. Continue laying rows of fabric until the whole surface is covered.



If applying a thin coating system over the fabric it will be necessary to first patch the seams with Ultra Surface Polymer Concrete using a trowel or metal squeegee and then to apply a Squeegee/Bond Coat over the whole surface.

Apply An Ultra Surface Polymer Concrete Texture Coat or ¼" Stamping Application - Once the Elastomeric Basecoat has cured properly for at least 8-12 hours, the next step is to apply an Ultra Surface Polymer Concrete Squeegee/Bond Coat over the fabric using a metal squeegee. For thin texture coat applications it will be necessary to first patch the seams of the fabric. Mix 1 part Polymer, 1 part Water, 2 parts cement and 4 parts #60 silica sand. Use a hand trowel or the metal squeegee to make a two foot wide patch over all the seams. When dry in 1-2 hours apply a Squeegee/Bond Coat over the entire surface to cover the patches and to provide a smooth finish prior to applying a Texture Coat or ¼" Stamping Application of the Ultra Surface Polymer Concrete. [Patching the fabric seams is not needed when stamping.]

**DESCRIPTION:** Ultra Surface Epoxy 500 is a 100% solids, two component, epoxy formulation consisting of a high performance Bisphenol A epoxy resin blend combined with a Cycloaliphatic curing agent. With the latest in epoxy technology this product is formulated for priming, sealing and crack repair applications. It has attractive properties as low viscosity, no VOC's [solvent free], low odor, moisture insensitivity, and excellent bonding on a variety of surfaces. It is packaged in 1 ½, 3 gallon and 15 gallon kits for convenient use in a 2:1 mixing ratio [2 parts A to 1 part B]. It is a versatile, high grade epoxy material for a variety of job applications.

**TYPICAL USES:** Ultra Surface Epoxy 500 is designed as a crack repair material, an economical epoxy sealer for warehouse floors or a primer coat for broadcasting Color Quartz or other aggregates such as the Ultra Surface Tuff-Grit granules. It can also be used as a primer on a step or curb edge prior to patching with the Ultra Surface Polymer Concrete patching mix. For this application the polymer concrete patching mix should be applied over the Epoxy 500 epoxy within 15-30 minutes while it is still tacky.

**APPLICATION CONDITIONS:** Apply to a properly prepared substrate, in good weather conditions.

**APPLICATION TEMPERATURE:** Can be applied above 35 degrees Fahrenheit. For best results, apply above 45 degrees Fahrenheit. [Cures faster in warmer temperatures].

**SURFACE PREPARATION:** The surface to be sealed or coated should be thoroughly clean; free of any contaminants such as oil, grease or incompatible coating materials. Shotblasting or power scrubbing with detergent, acid washing, neutralizing and pressure washing are common surface preparation methods. It is recommended to apply Epoxy 500 over a dry surface.

**MIXING INSTRUCTIONS:** The mixing ratio for Epoxy 500 is 2 parts A to 1 part B. Mix thoroughly for 3-5 minutes using a drill motor and mixing paddle or for small quantities a stir stick can be used. Scrape the sides and bottom of the container while mixing. Mix up no more material than can be used in a 15 minute time period.

For crack repair and minor patching of holes, silica sand (#30-60) can be added to Epoxy 500 to make a patching mix. After mixing part A and B together add the silica sand to achieve the consistency desired. Generally 1 part Epoxy 500 to 1 to 2 parts sand.

**CURING:** Epoxy 500 is generally tack free in about 5 hours at approximately 70 degrees Fahrenheit; cooler temperatures result in longer drying times; while in warmer temperatures the drying time is accelerated.

### Ultra Surface Epoxy 500

#### Advantages as an epoxy material:

1. 100% Solids, Zero VOC
2. Low Viscosity.
3. Fast Setting.
4. Excellent Adhesion. Bonds well to concrete and other substrates.
5. Adheres to damp concrete.
6. Wide variety of uses; crack repair material, economical sealer, prime coat for Ultra Surface Polymer Concrete.
7. Self Leveling
8. Resistant to Amine Blush, Resistant to Exudation.
9. Will not crystallize, even in cold environments.
10. Insensitive to moisture.
11. Not regulated by the DOT.

## APPLICATION INSTRUCTIONS:

**As a crack repair material with and without sand:** Use Epoxy 500 without sand to fill fine cracks or to coat the crack edges prior to the repair. For cracks which are wider than 1/16th of an inch, prime the clean, sound edges of the cracks with Epoxy 500 using a paintbrush or catsup bottle. Next, immediately fill the cracks with a mixture of Epoxy 500 epoxy and #60 silica sand using a stiff 5" wide putty knife. Mix 1 part Epoxy 500 epoxy with 1 to 2 parts sand using a stir stick to achieve the consistency desired. Press the Epoxy 500 sand mix into the cracks using a stiff putty knife to fill the cracks as deep as possible. Scrape the excess material off the surface and allow to dry.

**Crack repair prior to an Ultra Surface Color Flake Application:** Once the cracks have been filled smooth with the surrounding surface, proceed with the Color Flake application. For this application Epoxy 500 and sand is all that is needed in the cracks. See Color Flake instruction Booklet for step by step instructions with pictures.

**Crack repair prior to an Ultra Surface Polymer Concrete Application:** Once the cracks have been filled with the Epoxy

500 sand mix and scraped smooth with the surrounding surface, the next step is to cover the crack repairs with Elastomeric Basecoat and crack repair reinforcement fabric. Brush the Elastomeric Basecoat over the Epoxy 500 approximately five inches wide a few feet at a time. Immediately lay the 4" reinforcement fabric into the wet Elastomeric Basecoat and brush another thin coat of Elastomeric Basecoat over the fabric. Continue this process until all the cracks have been repaired. When dry to touch apply the desired Ultra Surface Polymer Concrete Application. See the Crack Repair Instruction Booklet for step by step instructions with pictures.

**As a Sealer or Basecoat for Color Quartz or Tuff-Grit Granules:** Epoxy 500 makes an excellent sealer over warehouse floors etc. to provide a durable, chemical resistant finish. Because of its self leveling properties it provides a high build, smooth, glossy finish with excellent resistance to heavy foot traffic and fork lift traffic. Apply by 1/4-3/8" nap roller to the thickness desired. It can also be spread by a regular or notched squeegee and then immediately back rolled to provide an even finish. If desired aggregate such as Color Quartz or Tuff-Grit granules (available through Concrete Solutions) can be broadcast into the Epoxy 500 to provide a more durable, slip resistant finish. Broadcast the granules to achieve a light, medium or heavy saturation. When dry, remove any loose granules and apply a topcoat seal of Ultra Epoxy 600 and/or HP or SB Urethane.

**As a Basecoat for Ultra Surface Polymer Concrete:** Epoxy 500 can be used as a basecoat before applying an Ultra Surface Polymer Concrete patching mix to provide extra bond strength when needed. Recommended when patching the vertical corners and edges of curbs, steps, joints, etc. First, brush a thin coat of Epoxy 500 without sand over the area to be repaired. Within 30 minutes while the Epoxy 500 is still wet or tacky patch over it with the polymer concrete patching mix. The polymer concrete and Epoxy 500 will cure together and achieve a superior bond to the substrate. Do not apply polymer concrete over dry Epoxy 500.

**POT LIFE AND WORKING TIME:** At 70 degrees F., approximately 15 minutes [less in warmer temperatures].

**METHODS OF APPLICATION:** Putty Knife, Trowel, Brush, Roller [1/4-3/8 nap] or Notched Squeegee.

**COVERAGE RATE:** As a crack repair material for cracks 1/8 x 1/4" = approximately 400 ln. ft. per gallon.  
As a sealer or prime coat - Approximately 75 - 150 sq. ft. per gallon.

**DRYING TIME:** Generally tack free in approximately 5 hours at 70 degrees F.

**RECOAT TIME:** Generally after 6 hours and within 24 hours of the previous application to achieve a chemical bond. When applying additional coats after 24 hours of curing time it will be necessary to sand the Epoxy 500 with a 80-100 grit sandpaper using a floor polisher machine to slightly scratch, dull and abraid the surface. This will ensure a proper physical bond between coats.

**RETURN TO TRAFFIC:** 12-24 hours.

**SOLIDS BY VOLUME:** 100%

**WEIGHT PER GALLON:** 9 pounds

**FLASH POINT:** Resin = 400 F., Hardener = 210 F.

### CURED PROPERTIES:

Shore D Hardness: 82  
Compressive Strength: 10,000 psi min.  
Flexural Strength: 11,900 psi  
Tensile Strength: 7,500 psi  
Elongation: 4%  
Bond Strength 300 psi min. [to concrete]

**SHELF LIFE:** Minimum of one year in unopened containers.

**Chemical Resistance:** Excellent resistance to the following reagents: Xylene, 1,1,1, 5% Detergent Solution, 50% Sodium Hydroxide, 70% Sulfuric Acid, 10% Hydrochloric Acid, Skydrol, Synthetic Gasohol, Mogas, Diesel [No. 2 and 3] oils, JP-4, 5,7,8, Diethylene Glycol, Monomethyl Ether; Good resistance to Toluene, MEK, EB, 10% Acetic Acid, Ethyl Alcohol, Methyl Alcohol. When chemical resistance is a factor, it is recommended to do a test to determine suitability.

## WARRANTY AND LIABILITY:

The applicator is responsible to make his or her own assessment of the products suitability for a particular purpose. Our liability is limited to the purchase price of any product proven to be defective. No other warranties are made concerning the product, whether expressed or implied, or statutory, such as warranties of merchantability or fitness for a particular purpose. In no way is Concrete Solutions or its agents liable for any consequential or incidental damages. It is the responsibility of each buyer or applicator to determine that the product or application is suitable for his or her particular purpose.

**DESCRIPTION:** Ultra Surface Liquid Release Agent is a special formulation used to spray over Ultra Surface Polymer Concrete 1/4" Stamping applications and regular stamped concrete, to prevent the Ultra Surface patterned stamps and/or texture skins from sticking to the surface. It can also be mixed with Ultra Surface Antiquing Color Powders in various colors to antique stamped concrete applications during or after the stamping process.

**APPLICATION INSTRUCTIONS:** Once the Ultra Surface 1/4" Stamping Mix or regular concrete is cured to the point where it is ready to stamp, start by spraying a section of the surface [approx. 50 sq. ft. at a time] with the Ultra Surface Liquid Release Agent where you wish to begin stamping. Spray the Liquid Release Agent at a coverage rate of approx. 200-300 sq. ft. per gallon to completely cover the surface in a thin, even coat using a pump-up sprayer.

After spraying a section of the surface spray the textured side of the stamps one time with the Liquid Release Agent before laying them on the surface. Immediately place the first stamp over the Liquid Release Agent and square with the starting edge or corner. Use the handles on the stamp to carefully set it in place. While standing on the first stamp lay the second stamp next to it and so on until all of the stamps are fit tightly together over the stamping material and Liquid Release Agent.

Once the stamps are in place, use your feet and/or the stamp pounder to walk or pound on the stamps to leave the desired impression. If the stamping material is soft you may not need the pounder, simply walk on the stamps with your feet. Before moving a stamp stand on one end while lifting the other end halfway off the surface to check for any bald areas. If necessary lay the stamp back down and pound again using your feet or the pounder where needed.

After achieving the desired impression, lift each stamp straight up off the surface and move to the next area. Continue spraying the liquid release agent ahead of the stamps a section at a time and moving stamps until the entire surface is completed.

**Warning:** Remember to turn off all pilot lights of gas stoves, furnaces or water heaters etc. and not to apply the Stamped Concrete Sealer or any solvent-based sealers near an open flame as they are very flammable. Use the appropriate breathing respirators in areas with poor ventilation.

## U.S. LIQUID RELEASE AGENT

### Advantages Over Powder Release Agent

Powder release agents are messy to work with and get all over the person throwing them and all over the job site.

The Ultra Surface Liquid Release Agent is very clean to work with and can be used indoors or outdoors without leaving a mess. When the liquid release agent is mixed with the powder release agents for antiquing, there is no loose powder to blow in the wind or sweep up the next day. When the surface is rinsed prior to sealing, very little color rinses off so the rinse water remains practically clear.

When stamping with the powder release agent it is easier to leave bald spots since you cannot see what you are stamping. The liquid release allows you to see the impression each stamp is making so any touch-ups can be made before it is too late.

### WARNING!

The Liquid Release has a bubble gum smell but is combustible and should be kept away from open flames. Turn out all pilot lights when working indoors. Wear the proper breathing mask and use with adequate ventilation. For professional use only!

**DESCRIPTION:** Ultra Surface Concrete Polymer is a special formulation of water-based resins specifically designed to be mixed with water, cement and sand mixtures. When added to Portland cement, sand and water in specified proportions it creates a new flexible, adhesive cementitious compound which can be used to repair and protect a variety of surfaces. Ultra Surface Polymer Concrete is designed to combat the shortcomings of regular concrete; particularly its low flexural strength and thin section fragility. It promotes a rapid cure in thin set applications. Cement mortar or concrete modified with Ultra Surface Concrete Polymer exhibits increased physical strength: tensile strength, shear bond strength, flexural strength and compressive strength. It increases resistance to water, abrasion, freeze thaw and chemical attack. It bonds tenaciously to concrete and various types of foam and can also be applied over asphalt, wood, metal, tile and linoleum after doing the proper surface preparation and applying the proper prime coat application if required. [See Application Procedures below for more details]. Cementitious formulations modified with Ultra Surface Concrete Polymer exhibit exceptional toughness and durability in interior or exterior applications.

**TYPICAL USES:** Ultra Surface Polymer Concrete is ideal for thin section patching, leveling, re-pitching and resurfacing applications from zero up to two inches thick. It is used for 1/4 -1/2" thick Stamped Concrete applications over existing surfaces to provide decorative patterns and textures. It can be applied less than 1/16th of an inch by a special metal edge squeegee or hand trowel to provide a smooth finish or by a broom or hopper gun sprayer to provide textured finishes from 1/16 - 1/8th of an inch thick. It is most commonly used on driveways, patios, pool decks, garage floors, sidewalks, parking garages, warehouse floors, steps, walls, interior floors of hotels, casinos, stores, restaurants and other businesses. It can also be used as an underlayment to level uneven floors for tile and other types of flooring.

**APPLICATION PROCEDURES:**

After mixing Ultra Surface Concrete Polymer with cement, sand and water in the proper ratios according to the finish desired, it can be applied over a variety of surfaces that have been properly cleaned and prepared.

**Concrete** - U.S. Polymer Concrete can be applied directly over properly cured, cleaned concrete.

**Wood** - First apply Metal Lath, then U.S. Polymer Concrete followed by Elastomeric Basecoat and 40" Fabric, followed by a Squeegee/Bond Coat then the finished texture or system desired. See the Elastomeric Basecoat TDS for more information.

**Tile and Brick** - Shotblast or grind the surface, apply a Squeegee/Bond Coat of Ultra Surface Polymer Concrete to fill in grout lines smooth with the surface. Allow to dry, then apply U.S. Elastomeric Basecoat and 40" Fabric over the surface before applying the final Ultra Surface Polymer Concrete application.

**Asphalt** - Must be in good, solid condition. Scrub with detergent and pressure wash or shotblast the surface. Apply WB Epoxy clear or Elastomeric Basecoat using a 1/2 - 3/4" nap roller. Broadcast #30 silica sand lightly into wet material. Allow to dry overnight before applying the U.S. Polymer Concrete Squeegee/Bond Coat and Finish Coat application.

**Linoleum** - Clean and strip any waxes, sand with 80 grit sandpaper and apply a Squeegee/Bond Coat of Polymer Concrete. Next apply 1/4" Stamping or the finish coat desired.

Ultra Surface Concrete Polymer

Advantages:

1. It Sticks [or bonds well].
2. It Wears [It's very durable].
3. It can be applied in a variety of textures, colors and patterns.
4. It improves performance properties of mortar mixes such as adhesion, compressive and flexural strength, freeze-thaw and weathering resistance.
5. Cement mixes applied with the addition of Ultra Surface Concrete Polymer do not require a curing agent.

Typical Properties

Appearance	Light gray liquid
Weight per gallon	8.8
Solids Content	46-48%
Specific Gravity	1.059
pH	9.5 to 10.0

**MOISTURE VAPOR TESTING:** All concrete floors not poured over a proper moisture barrier, are subject to possible moisture vapor transmission or hydrostatic pressure problems which can cause a coating system to blister or fail. Before applying a coating system over a concrete floor which is on-grade or below grade, the customer should be informed of this potential problem and given the option to have a qualified moisture testing company perform a calcium chloride test to give the proper recommendations.

**APPLICATION CONDITIONS:** Ultra Surface Polymer Concrete can be applied to a sound properly prepared and cured surface in good weather conditions. Ideal temperature application range = 45 to 85 degrees F.

**METHODS OF APPLICATION:** Ultra Surface Polymer Concrete can be applied by trowel, rubber or metal squeegee, broom, brush, screed rod, hopper gun sprayer or gauge rake and fresno for 1/4" Stamping applications.

**MIXING INSTRUCTIONS:** See Ultra Surface Concrete Polymer Mixing and Coverage Charts for detailed mixing instructions and coverage rates. See also Ultra Surface Products Manual.

**APPLICATION INSTRUCTIONS:** For step by step application instructions with pictures see the Ultra Surface Products Manual given out at our training classes in Las Vegas, Nevada. See below for brief instructions.

**1. Surface Preparation** - The surface must be thoroughly cleaned of oil, dirt, grease, any loose material or other foreign matter. Use whatever method is required to leave the surface clean and acceptable for the coating application. Depending upon the condition of the substrate, options include: power scrubbing w/ detergent and acid washing, then neutralizing and pressure washing to clean and rinse or shotblasting, sandblasting or grinding may be used.

**2. Patching, leveling and/or Re-pitching** [If required] - Patch any holes, low spots, or uneven areas with an Ultra Surface Polymer Concrete Patching Mix. See the Ultra Surface Patching Mix Technical Data Sheet for information on our "just add water" patching mix and how to mix your own mixes using local cement and sand.

**3. Squeegee/Bond Coat** - This is often referred to as a smoothing or bond coat. Where the surface is in good condition and after the proper surface preparation you may skip the repair application and proceed directly with the Squeegee/Bond Coat. The Squeegee/Bond Coat is applied thin less than 1/16th of an inch using a special metal edge squeegee (available from Concrete Solutions) or a hand trowel. It can be used to provide a smooth finish or as a prime coat and smoothing coat prior to applying an Ultra Surface Polymer Concrete Texture Coat or 1/4" Stamping application. The Squeegee/Bond Coat mixing formula is 1 part Polymer, 1 part Water, 2 parts Portland Cement Type I/II and 2-4 parts Silica Sand #60 or #90. Pre-mixed bag mixes are also available called Ultra Surface Resurfacer.

**4. Texturing and 1/4" Stamping Applications** - The Texture Coat or 1/4" Stamping application provides a decorative finished look and wearing surface. Refer to the Ultra Surface Products Manual for instructions with step by step pictures on how to apply a Fine Broom Finish, a Swirl Pattern Texture, a Trowel Knockdown Texture, Stencil Patterns or Taped designs or a 1/4" Stamping Application. To learn how to apply these applications we recommend attending our monthly training class in Las Vegas, Nevada before doing a job. Ultra Surface Resurfacer and our 1/4" Stamping bag mix can be used for all the applications mentioned above.

**5. Sealcoating** - Once the finish coat of Ultra Surface Polymer Concrete has been applied, the next step is to apply a clear sealer to protect the surface and achieve the look desired. It is recommended to apply a clear sealcoat application to provide extra protection from wear and abrasion as well as stain and chemical resistance. Popular Ultra Surface sealers include Ultra Surface Stamped Concrete Sealer, Sealcoat 1000, Acrylic Urethane, WB Epoxy, WB Urethane, SB Urethane, HP Urethane or Epoxy 600. For extra slip resistance it will necessary to broadcast #80 or coarser aluminum oxide granules into the first coat of wet sealer. Concrete Solutions will not be responsible for slip/fall accidents. [See Technical Data Sheets on each sealer for more information.]

**6. Joints** - Never fill moving expansion joints w/ the U.S. Polymer Concrete. They should be left open or re-sawcut open.

**WARRANTY INFORMATION** - The data provided herein is based on our knowledge and others. Our only warranty with respect to the products we sell is to replace or give credit for any of our product proven to be defective. It is up to each applicator to test and evaluate the product to make sure it is suitable for his or her own particular purpose. See Concrete Solutions standard warranty and disclaimer for full warranty details.

# ULTRA SURFACE 1/4" STAMPING SYSTEM

(Updated 2/05)

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# ULTRA SURFACE 1/4" STAMPING SYSTEM

## DESCRIPTION

Ultra Surface Polymer Concrete can be applied 1/4 inch thick over an existing concrete surface and then stamped in a variety of textures, patterns and designs, using custom made stamps available from Concrete Solutions. Ultra Surface Polymer Concrete makes it possible to achieve the same beauty, elegance and natural appearance of traditional stamped concrete without the need for removal and replacement of an existing concrete surface.

## TYPICAL USES

Ultra Surface 1/4 inch thick Stamped Concrete is typically used on driveways, pool decks, patios, walkways, residential interior floors, commercial interior floors, restaurants, retail stores, shopping centers, vehicle and pedestrian exits and entrances, courtyards, showroom floors, theme parks or wherever an innovative alternative to conventional flooring methods is desired.

## Summary Of Products And Tools Needed For Application

Description Of Application	Product Name	Coverage Rate/ Gallon	Tools For Application
Apply Squeegee/Bond Coat	U.S. Concrete Polymer [Mix w/ water, cement & sand or pre-mixed 50 lb. bag mix.]	250 sq. ft. per gal. of Polymer	Metal Squeegee, Mixing Buckets, Mixing Drill.
Spread 1/4" Stamping Mix  Add Integral Color to the mix or use Precolored Bag Mix.	U.S. Concrete Polymer [Mix w/ water, cement, & sand or 1/4" Stamping Bag Mix.] U.S. Integral Color Pigment	45 sq. ft. per gal. of Polymer 20 sq. ft. per 50 lb. bag mix  [See Price List for ratios.]	Gauge Rake, Fresno, Spiked Shoes, Funny Trowel, Hand Trowel, Edger, Pump-up Sprayer [For Water], Mixer.
Spray Liquid Release  [If desired add Antique Color to the Liquid Release or use it clear.]	U.S. Liquid Release Agent  U.S. Antique Powder [Optional]	250-300 sq. ft.  Mix 1-4 oz. per gallon of Liquid Release Agent.	Pump-up Sprayers  1 oz. Measuring Cups 1 Gallon Mixing Buckets
Stamp Pattern or Texture  [See stamp brochure for available patterns and textures.]	U.S. Patterned Stamps and/or Texture Skins	See Price List For Number Of Stamps Recommended.	Regular Stamps, Floppy Stamp, Texture Skins, Pounder, Margin Trowel, Chisels, Jointers, Touch-up Rollers.
Apply first coat of Stamped Concrete Sealer (clear)	U. S. Stamped Concrete Sealer	300-400 sq. ft. [Per gallon of Stamped Concrete Sealer and Acetone. Two gallons total.]	Pump-up Sprayers  [A good quality pump-up sprayer w/ solvent resistant seals and hoses or an electric sprayer.]  1 oz. Measuring Cups 1 Gallon Mixing Buckets Stir Sticks
Apply Stamped Concrete Sealer to achieve the look desired.	U.S. Stamped Concrete Sealer When spraying over liquid release antiquing, apply diluted 1 to 1 w/ acetone for the first coat.	200-300 sq. ft.	Pump-up Sprayer or Airless

Note: Read the following pages for step by step instructions with pictures on how to apply an Ultra Surface 1/4" Stamping Application. Also read the Technical Data Sheet on each product listed above to better understand the proper mixing and application instructions prior to use.

# SURFACE PREPARATION

## STEP ONE: SURFACE PREPARATION

Outdoor Jobs - Clean the existing concrete surface to be overlaid by power scrubbing with detergent, acid washing, neutralizing and pressure washing at 3000 psi or more using a 15 degree or spinner tip. The surface must be clean of dirt, oil and any other contaminants that may interfere with bonding. Sandblasting or shotblasting are other popular methods.

Indoor Jobs - For most indoor jobs shotblasting is used to prepare the surface. If shotblasting is unavailable scrub with detergent, acid wash, neutralize, rinse and vacuum. [See the Ultra Surface Products Manual under Surface Preparation for more detailed instructions.]

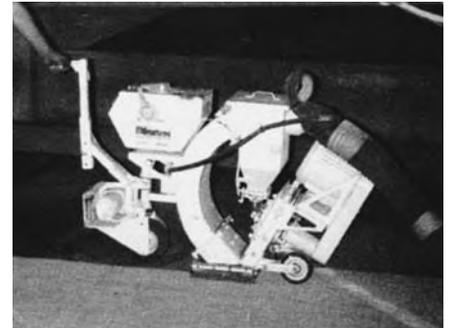
Moisture Vapor Testing - All Concrete floors are subject to possible moisture vapor transmission problems which can cause coatings to blister or delaminate. Prior to coating over a concrete surface, moisture vapor emission testing is recommended using the calcium chloride test method. Contact a moisture testing company in your area who can perform the test and give the proper recommendations.



Scrub w/Detergent And Acid Wash.



Pressure Wash To Clean And Rinse.



Shotblast For Commercial Jobs.

# WHAT TO DO WITH EXPANSION JOINTS

## STEP TWO: JOINT REPAIR

**Outdoor Joints** - All moving expansion joints that will be overlaid with the 1/4" Stamping System should be repaired with the Ultra Surface Crack Repair System as outlined in step two. Joints that are not moving such as control joints do not need to be repaired if they are not cracked or if you don't think they will crack later on. They can simply be patched or filled with the Ultra Surface Polymer Concrete Squeegee Bond Coat Mix and allowed to dry before spreading the stamping mix. Joints where you plan to end the stamping should be left open [see instructions on how to end at a joint below]. Make sure all the moving joints that will be re-sawcut open are marked before covering them with the stamping mix by pushing something like a pencil in the dirt at each end of the joint or by using a mark a lot to mark on a taped off wall where the joint meets the wall. Some joints may have to be measured from a wall or edge and a map drawn so you can measure where to cut them back later.

After applying the 1/4" Stamping System over the joints, they should be re-sawcut with in 24 hours 1½ inches deep or all the way through the 1/4" of Polymer Concrete, Indurol, Fabric and Epoxy 500 Epoxy in the joints. Snap a line over the center of the joints using the marks you made or a map then use a skil-saw, diamond blade attachment and a straight edge or hire a concrete saw-cutting company to cut the joints open. This will allow the joints to move without any of the overlay or repair materials touching in-between, which will help prevent cracking or delamination next to the joints. Control Joints not moving can be resawcut open for appearance, or left uncut if you don't think they will move in the future.

**Indoor Joints** - Indoor expansion joints should be treated the same as outdoor joints except it is not always necessary to re-sawcut them open if a seamless floor is desired. There is not as much movement indoors which increases the chances the repaired indoor joints will not crack through the 1/4" Stamping System. Since their are no guarantees however, it is always best to recut joints open whenever possible.

**Fill Deep Joints w/Backerod Or Sand** - If a joint is deeper than 1", fill the base of the joint with backerod or silica sand to prevent the Epoxy 500 from filling the joint more than 1" deep. This way you will only have to saw-cut 1 ½ inches deep to be sure you're cutting completely through the 1" of Epoxy 500 in the joint and the 1/4" Stamping layer above the joint. A small grinder with a 4" diamond blade attachment can be used in tight areas and next to walls where the skil-saw cannot reach.

**How to end a 1/4" Stamping Application At A Joint** - First, lay some duct tape into and next to the joint to prevent material from getting on the opposite edge not being stamped. Lay the 1/4" x 1 ½" thick form strips on top of the duct tape, next to the inside joint edge where you plan to stop stamping. Secure the form strips to the duct tape using some double sided carpet tape spaced one foot apart on the bottom of the form strip. Next, tape on top of the form strip with some more duct tape so half of the tape is on the form strip and the other half is on the concrete helping to secure the form strip in place. Also lay some plastic sheeting a few feet wide next to the form strips to keep the area not being stamped clean and to give you an area to step onto when you finish stamping. The stamping mix will be spread to the edge of the form strips and feathered down to a rounded 1/8" thick edge, using a 1/4" concrete edger, to prevent a trip hazard from the edge sticking up too high.



Fill Moving Joints w/ S-500 Epoxy.



Cover Joints w/Elastomeric Basecoat & Fabric.



The next day after stamping, snap lines over the center of all the covered expansion joints.



Saw-cut joints back open.

# PATCHING, RESURFACING, TAPING WALLS

## STEP THREE: PATCHING, LEVELING, REPITCHING

Once the cracks and joints have been repaired the next step is to patch any holes or spalled areas if needed or do any leveling or repitching that may be required. Before applying the 1/4" stamping application the surface must be fairly smooth and even so that you will be able to spread the stamping mix at an even thickness with the gauge rake. Patch any spalled or deteriorated areas of the surface with the Ultra Surface Polymer Concrete Patching Mix, which is the same mix as the 1/4" Stamping Mix or refer to Section Four of the Ultra Surface Products Manual under Polymer Concrete Patching and Leveling for more detailed information. If the surface has high spots or raised areas they should be ground down until they are level with the surrounding surface.

## STEP FOUR: RESURFACING

When stamping over concrete surfaces that are pitted or rougher than usual, such as a rock salt, exposed aggregate or a spalled concrete surface, it is recommended to first apply a Squeegee/Bond Coat of the Ultra Surface Polymer Concrete to smooth out the surface before applying the 1/4" Stamping Application. Apply the Squeegee/Bond Coat in a thin, even coat using a metal edge squeegee [available from Concrete Solutions] to fill in the voids between the aggregate or to fill in the holes from the rock salt. The Squeegee/Bond Coat helps to smooth out the surface so the stamping mix will go on more evenly and dry more uniformly. It also helps to prevent excess air bubbles while troweling the 1/4" Stamping Mix. Allow the Squeegee/Bond Coat to dry to touch one to two hours before applying the normal Squeegee/Bond Coat and 1/4" Stamping mix together at the same time. It is always necessary to apply a wet Squeegee/Bond Coat directly in front of the 1/4" Stamping Mix, even if a Squeegee/Bond Coat was already applied as a resurfacing or smoothing coat. Surfaces which are smooth or in good shape do not need to be resurfaced with a Squeegee/Bond Coat prior to applying the regular Squeegee/Bond Coat ahead of the Stamping Mix Application.

[For the best results it is recommended to apply a prime coat of Ultra Surface MRB (Moisture Resistant Barrier) Primer before applying the Squeegee/Bond Coat or 1/4" Stamping application. It provides extra consistency in the drying time and extra protection against moisture related problems from below a concrete slab.]

## STEP FIVE: PROTECT SURROUNDING AREAS

Once the surface is cleaned, the cracks and joints have been repaired and the surface is patched if required and resurfaced to a smooth condition, use duct tape and/or painter's tape and plastic sheeting to tape off any edges or walls around the area to be stamped, to keep those areas clean and protected from spills. Tape walls at least four feet high. Lay down a blue tarp approx. 12' x 16' underneath and around the mixer and a 4' path of 4-6 mil plastic sheeting from the mixer to the area to be stamped to keep from creating a mess on the areas not being stamped. If you have to walk over grass to get to an area use particle board or plywood to lay down as a path on the grass instead of plastic to prevent from killing the grass, especially on hot days.

## STEP SIX: 1/4" STAMPING APPLICATION

Now that you have completed all of the above steps you are ready to begin the Ultra Surface Polymer Concrete 1/4" Stamping Application. The following pages will guide you through the mixing and application instructions as well as instructions on antiquing and sealcoating.

[Note: Before doing a stamping job, we recommend taking our two day training class in Las Vegas. If you have not taken the class, practice on your own property or a friend's or relative's to perfect your skills before doing a job.]



Patch holes, spalls, level or re-pitch.



Resurface with Squeegee/Bond Coat.



Protect surrounding areas.

# 1/4" STAMPING MIXING INSTRUCTIONS

## WHAT YOU WILL NEED

Equipment	Tools	Supplies	Materials
Mortar Mixer [Full Sack]	Shovel	Water hose/Trigger Nozzle	U.S. Polymer/Water
1/2" Drill/Mixing Paddle	Broom	1 Gallon Buckets [2-4]	Portland Cement I/II or White
Electric Cord	Margin Trowel	5 Gallon Buckets [2-4]	Silica Sand 20,30, 60
		1 oz. Measuring Cups	Integral Color Pigment
		Plastic Sheeting/Tarps	50 lb. 1/4" Stamping Bag Mixes can be used in place of cement and sand above. Available in 25 colors.
			Accelerator or Retarder

## 1/4" STAMPED CONCRETE MIXING FORMULA

[Note: For a faster curing time in cooler temperatures or indoors use the Polymer Concrete Accelerator. See page 15.]

### 5 Gallon Bucket Mixing Formula: [1/4" Mix]

[Coverage Rate = approx. 20 sq. ft.]

1/2 Gallon Ultra Surface Concrete Polymer  
1 Gallons Water [Clean]

1 1/2 Gallons Cement [Portland I/II Reg. or White]  
4 1/2 Gallons Silica Sand #20, 30 and 60  
(Mix equal amounts of each size sand)

Mixing Instructions: Start by mixing the ingredients above in a five gallon pail. If the mix seems too dry add up to 1 cup more of polymer and water at a 1 part polymer to 2 part water ratio. If the mix seems too wet, add a little more cement and sand at a 1 part cement to 2 part sand ratio to thicken the mix.

### Mortar Mixer Mixing Formula: [1/4" Mix]

[Coverage Rate = approx. 135 sq. ft.]

3 Gals. Ultra Surface Concrete Polymer  
6 Gals. Water [Clean]

94 Lbs. Cement [Portland I/II and/or White]  
300 Lbs. Silica Sand #20, 30 and 60  
(Mix 100 Lbs. of each size sand)

Mixing Instructions: Start by mixing the ingredients above in a mortar mixer. If the mix seems too dry add up to 1 gal. more of polymer and water at a 1 part polymer to 2 part water ratio. If the mix seems too wet, add a little more cement and sand at a 1 part cement to 2 part sand ratio to thicken the mix.

## BAG MIX FORMULA

Premixed 50 pound bag mixes are available with the cement and sand already blended in the proper proportions for easier mixing and convenience. They are available in white or 25 standard colors. For smaller orders it is best to use the white bag mix and to use our Integral Color Paks which are pre-measured to mix with one bag of 1/4" Stamping Bag Mix.

Five Gallon Bucket Mixing Formula - Mix 1 3/4 quarts of Ultra Surface Concrete Polymer, 3 1/2 quarts of Water and one fifty pound bag of Ultra Surface 1/4" Stamping Bag Mix.

Mortar Mixer Mixing Formula - (1/4" Mix) = 3 gallons of U.S. Polymer, 6 gallons of Water and 8 bags of Ultra Surface 1/4" Stamping Mix. If the mix seems to dry, add a little more polymer and water at a 2 parts water to 1 part polymer ratio to adjust the consistency.

# 1/4" STAMPING MIXING INSTRUCTIONS

For small jobs or mock up samples under 100 sq. ft. the 1/4" Stamping Mix can be made in five gallon buckets. For jobs over 100 sq. ft. it is best to use the mortar mixer mix which will produce approx. 30 gallons of mix and cover approx. 135 sq. ft. at 1/4" thick. For your first job it is recommended to make one mortar mixer mix at a time and then to spread it out and wait until it is one third done being stamped before starting to spread the next mix. This will give you time to practice without having too much material spread and prevent it from getting too hard before you can stamp it. Once you learn the drying time of the stamping mix in different temperature conditions and you have a trained crew you will be able to safely spread two or more mixes at a time before starting the stamping process.

## 1. Mix The Ultra Surface Concrete Polymer And Water

Using a 1/2" Mixing Drill and a Five Gallon Bucket or a Mortar Mixer, start by mixing the Ultra Surface Concrete Polymer and Water. Use a one quart, one gallon bucket and/or five gallon bucket to measure the proper amount of polymer and water given in the mixing formulas.

## 2. Add The Cement [Or Bag Mix]

Next add the cement using a one quart or one gallon bucket for the five gallon bucket mix or for the mortar mixer size mix, a five gallon bucket can be used to measure 10 gallons of cement. One 94 lb. bag of cement is usually equal to approx. 10 gallons. If using the Ultra Surface 1/4" Stamping Bag Mix, simply add the number of bags given in the bag mix formulas. (When using pre-mixed bag mixes skip step 3 below.)

## 3. Add The Sand

After the Polymer, Water and Cement have been mixed together for approximately one minute or more, slowly add the sand using a one quart or one gallon measuring bucket for the five gallon bucket mix or use a five gallon bucket to measure 25 - 30 gallons of sand for the mortar mixer size mix. Start by adding 10 gallons of #20 sand and 10 gallons of #30 sand (approx. one 100 lb. bag of each). Then add 5-10 gallons of #60 silica sand. Normally 5 gallons of #60 will be sufficient except on colder days where sometimes 10 gallons will be needed to prevent the mix from being too wet.

## 4. Add The Integral Color Pigment [optional]

When not using the pre-colored 1/4" Stamping Bag Mixes or Integral Color Paks, follow these instructions. Using a one ounce cup (available at restaurant supply stores), slowly add the desired integral color pigment to the mix one ounce at a time, until the color in the mixing container matches as closely as possible the color on the color chart being used. Add one ounce of pigment at a time and then write down how many ounces were required to achieve the desired color for the first mix. Once you determine how many ounces were required for the first mix you can add the same amount of pigment to the mixes to follow using a measuring cup.

A gram or ounce scale may also be used to weigh each batch of pigment if desired for greater accuracy. After adding the integral color pigment allow the material to mix for at least 10-15 minutes before spreading the stamping mix. While waiting for the stamping mix to be ready, mix a five gallon bucket of Squeegee/Bond Coat Mix which will be applied directly in front of the stamping mix. [See instructions for making a Squeegee/Bond Coat Mix on the next page.]



Mix Ultra Surface Concrete Polymer and water in a mortar mixer. Measure w/ five gallon buckets.



Mix cement, sand and integral color pigment in the mixer or use the pre-mixed color bag mixes.

# SQUEEGEE/BOND COAT MIXING INSTRUCTIONS

## 1/4" STAMPING MIXING INSTRUCTIONS CONTINUED

### Important information On Concrete Solutions Integral Color Pigments

Integral Color Pigments can be purchased from Concrete Solutions or other manufacturers of integral color pigments made for coloring regular concrete. Concrete Solutions integral colors are blended to match popular color hardener colors and are designed to be mixed with white cement only. They are made for our Ultra Surface 1/4" Stamping Bag Mixes which are blended with white cement. Most regular concrete pigments are designed to be mixed with regular gray cement. When using our pigments be sure to use white cement to achieve the color selected off the color chart. For a color chart call Concrete Solutions at 1-800-232-8311.

### SQUEEGEE/BOND COAT MIXING INSTRUCTIONS

While the 1/4" Stamping Mix is mixing in the mortar mixer, the next step is to make a Squeegee/Bond Coat, which is a thinner wetter mix that is applied as a bond coat ahead of the stamping mix. The Squeegee/Bond Coat is applied as thin as possible using a Metal Edge Squeegee available from Concrete Solutions. The Squeegee/Bond Coat is normally mixed in a five gallon bucket using a 1/2" drill motor and a mixing paddle. Four gallons of mix will usually cover approximately 250 - 400 sq. ft. depending on the porosity of the surface. Use the mixing formula below to make a four gallon mix in a five gallon bucket.

#### Squeegee/Bond Coat Mixing Formula : [Mix By Volume]

1	Gallon	Ultra Surface Concrete Polymer	
1	Gallon	Water	[Clean]
2	Gallons	Cement	[Portland Type I/II Regular or White]
2	Gallons	Silica Sand	[#60 or 90]

Note: A Squeegee/Bond Coat pre-mixed 50 lb. bag mix called Resurfacer is available for your convenience or you can make your own mix using the formula above. To use the bag mix add 1 gallon of Ultra Surface Concrete Polymer, 1 gallon of water and 1 50 lb. bag of bag mix. Add up to 1/2 gallon more of 1 to 1 pre-mixed polymer and water if needed.

### TO MAKE A FOUR GALLON MIX

1. Pour one gallon of Ultra Surface Concrete Polymer and one gallon of Water into a 5 gallon bucket.
2. Add two gallons of Cement and mix for 30 seconds using a 1/2" drill and mixing paddle.
3. Add two gallons of #60 or 90 Silica Sand and mix for 3 -5 minutes to achieve a no lump consistency.



Mix Squeegee /Bond Coat in a five gallon bucket with a 1/2" drill and mixing paddle.

# 1/4" STAMPING APPLICATION INSTRUCTIONS

Once the Stamping Mix and the Squeegee/Bond Coat Mix have been made, you are ready to begin the application process. To apply the Ultra Surface Polymer Concrete Stamping Mix, you will need the following equipment, tools, supplies and materials to have a smooth running application.

Equipment	Tools	Supplies	Materials
Wheel Barrow	Metal Edge Squeegees	1/2" Spiked Shoes	Squeegee/Bond Coat Mix
Pump-up Sprayers [4]	Concrete Fresno	Duct Tape/Masking Tape	1/4" Stamping Mix
Blower	Funny Trowel/Margin Trl	1/4" Form Strips	U.S. Liquid Release Agent
U.S. Texture Stamps	Finishing Trowels/Edgers	Plastic Sheeting [1-4 mil]	Antique Powder
One Floppy Stamp	Gauge Rakes	Snap line w/ blue chalk	Ice Water (for drinking)
2 Texture Skins	Pounder/Jointer tools	Measuring Tape	
Worm Drive Skill Saw	Broom/Scraper	Mark A Lot (to mark off joints)	
4" Hand Grinder	Square [for 90 degree angles]	Wood dowels (to mark joints)	
	Diamond Blades [4"&7"]		

Note: All of the items listed above will be needed for most jobs. The quantity and particular items needed for each job will depend on the job requirements and square footage. Read below to see how each of the items above will be used.

## ULTRA SURFACE 1/4" STAMPED CONCRETE APPLICATION INSTRUCTIONS

At this point the surface should be cleaned and etched, all structural moving cracks and joints that will be covered with the stamping mix should be repaired with the Ultra Surface Crack Repair System, any holes, spalls or areas in need of leveling or re-pitching should be patched smooth with the Ultra Surface Polymer Concrete Patching and Leveling Mix and areas in need of protection should be covered with tape and plastic sheeting. If all of these steps have been done you are ready to spread the Squeegee/Bond Coat followed immediately behind with the Ultra Surface Polymer Concrete 1/4" Stamping Mix.

Note: Before spreading the stamping mix accelerator can be added to the mix in colder temperatures, shaded areas or for indoor jobs to help speed up the drying time of the mix. In hotter temperatures retarder can be added to slow the drying time. Refer to the price list under 1/4" Stamping Products for more information and mixing instructions. Also, applying MRB Primer helps to protect the stamping application from possible moisture vapor transmission problems. It also helps the stamping mix to set up more evenly especially in warmer temperatures. Allow the MRB Primer 2-4 hours to dry to touch.

## SPREADING THE ULTRA SURFACE 1/4" STAMPING MIX

**1. Fog The Surface With Water** - If it has been several hours or more since the surface was cleaned, quickly use a blower to remove any loose dirt or debris. Next, choose a starting point and lightly spray approximately 200 sq. ft. of area with water where you plan to start, no puddles.

**2. Apply The Squeegee/Bond Coat Mix** - Spread the Squeegee Bond/Coat Mix as thin as possible over the dampened surface using a Metal Edge Squeegee (available from Concrete Solutions). Only spread 50 - 100 sq. ft. at a time. The 1/4" Stamping Mix should be applied over the Squeegee/Bond Coat Mix before it begins to dry.

**3. Dump The Stamping Mix Over The Wet Bond Coat** - While one person is spreading the Bond Coat, another person should have a wheel barrow full of Stamping Mix from the mortar mixer, ready to immediately dump over the wet Bond Coat. Dump the wheel barrow in a couple of piles next to the starting edge.

# 1/4" STAMPING APPLICATION INSTRUCTIONS



1. Fog the surface w/ water.



2. Spread the Squeegee/Bond Coat.



3. Dump Stamping Mix over Bond Coat.

## SPREADING THE STAMPING MIX CONTINUED

### 4. Spread The Stamping Mix With A Gauge Rake

Using the gauge rake quickly spread the Stamping Mix 3/8" thick over the wet Squeegee/Bond Coat. The person using the gauge rake should wear spiked shoes (available from Concrete Solutions) to be able to walk in the wet bond coat and stamping mix while spreading. By spreading the material at 3/8 of an inch thick, it will end up approximately 1/4 of an inch thick by the time it is troweled smooth and stamped.

When working next to edges, keep the end of the gauge rake 1" away from the edge and allow the stamping material to flow out of the end of the gauge rake to cover the edge. This will prevent the end of the gauge rake from slipping off the edge and leaving the stamping material too thin. It is important to have at least 1/4" of thickness over the whole surface and not to leave any thin spots or they will dry before the rest of the material is ready to stamp.

### 5. Smooth Out The Stamping Mix With A Concrete Fresno

While one person is spreading the Bond Coat with the metal squeegee and one person is spreading the stamping mix with the gauge rake, another person should be smoothing out the stamping material using a 36" Concrete Fresno. Apply just enough pressure to the fresno, as you work it back and forth over the stamping material, to smooth out the stamping mix and the groove lines left by the gauge rake. The sooner you fresno the stamping material after it is gauge raked the easier it will be.

The person using the fresno should work closely behind the person spreading the material with the gauge rake. If you wait too long it may become too sticky and hard to finish. If this happens, lightly spray the surface with water and it will become workable again. During this stage it is normal to have some trowel marks and ridges after using the fresno, you do not have to achieve a perfectly smooth finish. Your main goal is to fill in the gauge rake lines and to level and smooth out the surface as much as possible, to get it ready for the funny trowel application.

Try not to fresno over each section more than two or three times before moving on to the next section. If after a couple of passes some low spots still appear, it may be necessary to scoop some extra material onto one end of the fresno and then to reach it out with the handle and dump it over the low spots. Next, fresno over those sections again to fill in the low spots and to blend in the extra material with the surrounding surface.



4. Spread Stamp Mix w/ Gauge Rake.



5. Fresno behind the Gauge Rake.



Fresno to fill in Gauge Rake lines.

# 1/4" STAMPING APPLICATION INSTRUCTIONS

## SPREADING THE STAMPING MIX CONTINUED

### 6. The Finishing Touches Prior To Stamping

Just like with regular concrete the Ultra Surface Polymer Concrete 1/4" Stamping Mix is finished in stages. Using the fresno to fill in the lines from the gauge rake and to get the surface as smooth as possible is the first stage. The second stage involves using some water, a Concrete Finishing Trowel, an Edging Trowel and a Funny Trowel.

After using the fresno the stamping material will remain wet and too soft to stamp for 30 minutes up to 2 hours or more depending on the temperature. The hotter the temperature the faster the stamping material will set up. It is important to keep checking the material by touching it with your finger, in several different places around the edges, at least every 15 minutes to monitor how fast it is drying. As soon as the surface of the material begins to dull out and feels slightly firm but still soft, it is ready to begin the second stage of finishing. On a hot day in the direct sunlight this stage can begin immediately behind the fresno or within 15-30 minutes. On a cold day, in shady areas or indoors it may take 1 to 2 hours to reach this stage.

Note: In cold, shady or indoor conditions it is best to use the accelerator to speed up the drying time.

### Using A Concrete Finishing Trowel

While waiting for the stamping material to set up enough to be troweled smooth, one or two people can be touching up edges and easy to reach areas using a hand trowel and a water spray bottle. It will be necessary to spray a light fog coat of water over the stamping material before troweling it to achieve a smooth finish. Use as little water as possible to achieve the finish desired. For hard to reach areas it is okay to walk in the stamping material with the spike shoes as long as you trowel out the holes left by the spiked shoes as you go, before the material gets too firm. The hand trowel or a margin trowel can also be used to scrape clean any drips that run down the sides of the original concrete before the stamping mix dries too hard.

### Using An Edging Trowel

A 1/4" Edging Trowel can be used to round the outside edges of the area being stamped to leave a nice finished looking edge. It is also used to feather outside edges to 1/8" thick where the stamping mix ends in a walkway to avoid a trip hazard. Edges that are next to landscaping or not a trip hazard can be left 1/4" thick. Trim the sides of all exposed edges with a margin trowel.

### Using The Funny Trowel (Optional)

A Funny Trowel is like a hand trowel with a handle on it and is used at a later stage just prior to stamping to smooth out the trowel marks and rough finish left by the fresno. The funny trowel works best when the stamping mix is slightly firm but not too wet or too dry. Depending on the weather conditions and whether or not accelerator was used in the mix, it can take between 15 minutes to 2 hours after the fresno application before the funny trowel is ready to be used. Using a funny trowel takes practice and can be difficult for a beginner. It is possible to stamp without using the funny trowel as long as you stamp early enough before the stamping mix gets too firm. The sandy texture and trowel marks left by the fresno can be stamped out if stamped at an early stage. If stamped too late, the sandy texture and trowel marks may show through unless funny troweled first.



Spray a light coat of water over the surface before troweling for easier workability and to achieve a smoother finish.



Use a hand trowel to touch-up edges and areas where it is difficult to use a fresno or funny trowel.



Detail edges using a hand trowel, edger and/or margin trowel while waiting for the funny trowel stage.

# 1/4" STAMPING APPLICATION INSTRUCTIONS

## FUNNY TROWEL INSTRUCTIONS

### Using The Funny Trowel Continued

Before using the funny trowel it is necessary to lightly wet the surface of the stamping mix with water so the funny trowel can glide over the surface without sticking. Use a pump-up sprayer or a water hose with a trigger gun spray nozzle, that will adjust to a fine spray, to lightly wet the surface with a thin even coat of water, no puddles. A backpack pump-up sprayer works the best to keep your hands free in areas where you have to walk out on the material. If you have to walk on the stamping mix use the spiked shoes or 2 texture skins to use as stepping stones. The spiked shoes will leave small holes that are easily filled in with the funny trowel [if the material is not set up too much], as you back your way out of each section.

Begin using the funny trowel by wetting the surface in 100 to 200 square foot sections at a time. Finish one section smooth with the funny trowel before wetting the next section. Use the funny trowel like a hand trowel with a handle on it and work it from side to side to cover as much area as possible.

Trowel the stamping material slower and less aggressively than you would regular concrete and work each section as little as possible after spraying the water, to achieve a smooth finish. Once the water gets worked into the surface it becomes more difficult to achieve a smooth finish. If necessary spray another light coat of water where needed. If you are using the funny trowel properly you should not have to trowel each pass more than two or three times. If you have never used a funny trowel you may have difficulty achieving a smooth finish on your first attempt. If necessary you can use the fresno again and some water to achieve a smoother finish than the first stage with the fresno.

It is not necessary to achieve a perfectly smooth finish to have a nice looking stamp job, as long as you begin stamping at an early stage before the stamping material gets too hard.

Note: Sometimes small blisters will appear on the surface from air getting trapped in the holes left by the spiked shoes or from air escaping from the concrete surface below the stamping mix. These small blisters are normal and should disappear during the stamping process. Blisters larger than a quarter should be cut with the corner of a margin trowel to release the air so they will lay flat. The margin trowel can then be used to gently smooth the surface where the cut in the blister was made. Blisters can also be touched up during the stamping process while standing on the stamps.

## 7. Prepare To Stamp

After finishing the surface as smooth as possible with the Funny Trowel, Finishing Trowel and Edging Trowel, the next step is to wait for the Ultra Surface Polymer Concrete Stamping Mix to set up to the stage where it is ready to be stamped. Normally after funny troweling you can begin stamping right away or within 15 minutes. While waiting, set up the tools and supplies that will be needed for the stamping process near the starting point. You will need 6-9 regular Texture Stamps depending on the pattern being used and the size of the job, one Floppy Stamp for stamping next to walls and vertical surfaces, to touch-up Texture Skins for stamping around the edges and next to walls, a Stamp Pounder, a Pump-up Sprayer filled with Ultra Surface Liquid Release Agent and mixed with the color of antiquing desired, a margin trowel and some touch-up tools for the grout lines.



Lightly spray the surface with water prior to using the funny trowel.



Trowel over the stamping mix with the funny trowel to achieve a smooth finish.



While wearing spiked shoes funny trowel the surface a section at a time. Lightly spray more water if needed to achieve a smooth finish.

# 1/4" STAMPING APPLICATION INSTRUCTIONS

The stamping process involves using the Ultra Surface Liquid Release Agent, Patterned Stamps, a Floppy Stamp and at least two Texture Skins. The stamping process can begin as soon as the material is firm enough to support a person standing on a stamp without the stamp sliding around or the material squishing up around the stamp. Keep checking the material at least every 15 minutes by touching it with your finger. The best stage for stamping is when you can easily push a dent into the surface without a lot of material sticking to your finger. The surface should be soft yet firm not wet and mushy. As long as the stamp is leaving a good impression and can support your weight you can stamp as early as possible after the spreading and finishing process. Remember it is always better to start stamping the material too early than to wait until it is too hard.

## Spraying The Liquid Release Agent

The first step before stamping is to spray the surface ahead of the stamps with the Ultra Surface Liquid Release Agent to prevent them from sticking to the surface. The liquid release agent can be applied clear as it comes or mixed with the Ultra Surface Antiquing Color Powders (for interior jobs use clear liquid release only. See page 14 for interior antiquing instructions). To use the liquid release agent for antiquing mix 2-4 ounces of antique powder per gallon of liquid release agent in the color desired.

Whether you're using clear or colored liquid release agent, start by spraying a section of the surface at a time where you wish to begin stamping. Spray the liquid release agent using a pump-up sprayer to completely cover the surface in a thin coat. Spray the textured side of the stamps one time only before laying them on the surface.

One gallon of clear liquid release should cover approximately 200-300 square feet. One gallon of colored liquid release should cover approximately 150 sq. ft. per gallon. When using colored liquid release it will be necessary to spray more over the textured surface after removing each stamp to achieve a the antique look desired. [See antiquing instructions on page 14.]

## Using The 2' x 2' Texture Skins

For each of the Ultra Surface Stamp Patterns there is a 2' x 2' texture skin available which has the same texture as the patterned stamp it goes with, except with know grout lines. They are used for touch-up and to apply texture only around edges and next to walls and other areas the regular stamps or floppy stamps cannot reach.

One person using two texture skins should start stamping texture only around the edges as early as possible ahead of the stamping crew. Edges that are easily accessible from the sides can be sprayed with the liquid release agent and stamped at a earlier stage with the texture skins by patting on them w/ your hands. When the stamping material is firm enough to support someone standing on the texture skins, one person can use them like stepping stones to walk around, stamping texture next to walls and edges that cannot be reached from the sides. The person on the texture skins should also carry a margin trowel or hand trowel with them to do any necessary touch-ups next to the walls and edges that did not get detailed during the finishing process.

When stamping next to walls and edges, first spray some liquid release agent, next lay the touch-up skins next to the edge or wall and stamp them using your feet, hands or the stamp pounder to leave the desired impression. As you move along the edge overlap each texture skin a few inches and rotate each skin a quarter turn each time you move them. Detailing the edges with the texture skins ahead of the



Spray Liquid Release agent before stamping with texture skins next to walls.



Use texture skins to imprint texture to all the edges & next to walls before stamping.



If the stamp mix is firm enough, walk on the texture skins like stepping stones to move around walls imprinting texture.

## STAMPING THE ULTRA SURFACE 1/4" STAMPING MIX

### Placing The Regular Stamps On The Surface

Once the edges where you wish to begin stamping have been imprinted with the texture skins, you are ready to begin stamping with the regular stamps. Spray the liquid release agent where you wish to begin stamping and carefully place the first stamp over the semi-firm stamping material. Use the handles on the stamps to carefully lay them straight down over the stamping mix.

Most stamp patterns have straight grout lines that need to be lined up properly with the walls and edges to look good when the job is finished. If the wall or edge next to where you are stamping is not square, it may be necessary to use a carpenter's square and string line, w/ no chalk, to snap a square guide line to start from. A few stamp patterns such as random stone and the large 4' x 4' texture skins do not need a square edge to start from.

After laying the first stamp in place, carefully stand on it to see if the stamping material is firm enough to support your weight without squishing up around the sides of the stamp or sliding around too much. If it supports your weight you are ready to begin stamping.

### Imprinting The Stamp Pattern Or Texture

Using the pounder or your feet, begin by walking or softly pounding on the edges of the stamp to press it into the stamping material, locking it into place. If the material is a little soft you will not have to use the pounder, simply walking on the stamps with your feet will be sufficient to leave an impression. If the stamping material seems firm, you will have to use the pounder to hit the stamps harder in order to leave the desired texture. You can gauge how hard to hit the stamps by watching around the edges as you use the pounder. If the stamping material around the edges pops out or begins to curl up around the edges of the stamp, pound softer so the edges will remain flat. If the edges squish up or pop out in some places you can use a trowel or margin trowel to smooth the edges around the stamp flat before laying the next stamp.

### Placing More Stamps Next To The First One

Once you have placed the first stamp on the surface, pounded the edges and determined the material is ready for stamping, the next step is to place more stamps around the first one. Make sure that before placing a stamp on the surface it has been sprayed with liquid release agent. To place a stamp next to another stamp lay one end down next to the stamp already in place and then carefully lower the other end down. All the stamps should fit tightly together like a puzzle. It is important to always keep the stamps tight up against each other or the pattern will be hard to keep lined up. The number of stamps needed for each job will depend on the size of the job and the pattern being used. Refer to the price list for a recommended number for each stamp pattern or texture.

### Using The Pounder

After all the stamps have been laid down and fitted tightly together, use the pounder or your feet to imprint the texture of the stamps into the stamping material. First pound the edges of the stamps, then the middle.



Place the stamps straight down on the stamping material and square w/ the walls or edges.



Use the pounder or your feet to imprint the texture from the stamp into the stamping material.



Place more stamps next the first one so they fit tightly together.

## STAMPING THE ULTRA SURFACE 1/4" STAMPING MIX

### Antiquing With The Liquid Release Agent (not required)

While one person pounds on the stamps, another person should be spraying more liquid release agent on the next section and moving the stamps for the person pounding. To antique with the liquid release agent mix 2-4 oz. of antique powder in the color desired to 1 gallon of liquid release agent. Start by spraying a thin even coat ahead of the stamps. After stamping and moving a few stamps, spray more colored liquid release agent and allow it to puddle in the low areas of the texture to achieve the antique look desired. Mixing the antique powder colors with the liquid release agent makes a transparent colored liquid that when allowed to puddle in the low areas of the texture, creating a natural looking, contrasting color effect. It is important for the color antiquing to look even and natural as you are stamping, since how it looks while you are stamping is how it will look sealed.

Before spraying the colored liquid release agent always shake the sprayer to be sure the color is evenly mixed. Adjust the spray tip to a fan spray and start by spraying it into a bucket to be sure the color is coming out uniformly and not too dark before spraying the surface. If you get too much antiquing on the surface use a rag to gently clean it off while it is still wet or spray some clear liquid release over it to move it around and lighten the color. Always practice on a sample board to perfect the look you want before doing a job.

**Interior Stamping Antiquing Instructions:** For interior stamping jobs it is best to use clear liquid release only during the stamping process to achieve the best bond against dragging furniture etc... The antiquing can be done the next day using the following method: First seal the surface using Ultra Surface Stamped Concrete Sealer mixed 1 to 1 with acetone. When dry, spray colored liquid release agent over the sealer to achieve the look desired. When dry, apply another coat of 1 to 1 Stamped Concrete Sealer over the dry antique powder to bond it in-between both coats of sealer. Apply a final full strength coat of Stamped Concrete Sealer and Ultra Surface Floor Finish. **Important:** Turn off all pilot lights or open flames, provide adequate ventilation and wear proper breathing mask when using solvent-based sealers.

### Using The Floppy Stamp Next To Walls

When stamping next to walls, pillars or vertical surfaces a Floppy Stamp is the easiest to use. A floppy stamp looks the same as a regular stamp except it is made out of a more flexible material. Floppy stamps are easy to bend making it possible to stamp within inches away from a wall.

First, texture next to the walls with the texture skins, then lay the regular stamps over the surface until you come up next to a wall or vertical surface. Where the regular stamps cannot be laid flat because of a wall or other vertical object, fit the floppy stamp next to the regular stamps and bend it up against the wall to get as close to the edge of the wall as possible. You may have to stand on the regular stamps to keep them from moving while you pound on the floppy using your foot or the stamp pounder. After pounding, remove the floppy stamp and have someone touch-up the grout lines and texture where the floppy stamp could not reach all the way to the wall.

Note: Only use the floppy stamps next to walls & vertical surfaces. Do not use them in the middle with the regular stamps. Sometimes they can expand to be up to 1/4" larger than the regular stamps causing your grout lines to get off line.

### Using Touch-up Tools For The Grout lines

While stamping, one person should check the grout lines and the surface after lifting each stamp, to see if any touch-ups will be needed. Touch-up tools such as grouting wheels, jointers or chisels can be used to clean-up excess material in the grout lines if needed. Next to walls and vertical surfaces grout tools can be used to create some grout lines where the stamps could not reach. A margin trowel is also handy for touching up surface blemishes or damaged areas caused during the stamping application. Any imperfections in the stamping should be troweled smooth with a margin trowel and re-textured with the texture skin if needed.



After stamping spray more liquid release w/color added to create antique look.



Use the floppy stamp when stamping next to walls or vertical surfaces.



Use the floppy stamp when stamping next to walls or vertical surfaces.

## STAMPING THE ULTRA SURFACE 1/4" STAMPING MIX



Use touch-up tools to fix grout lines.



Make your own grout lines next to walls.



Touch-up blemishes w/ a margin trowel.

### How Much Area Can Be Safely Spread Before Stamping

A mortar mixer full of material will cover approximately 150 sq. ft. of area. On a hot day or if you have never stamped concrete before, it is best to only spread one or two mixes at a time or 150-300 sq. ft. After spreading the stamping mix on a hot day it is normally ready to stamp in 30 minutes to 1 hour. On a cold day or indoors you may be able to spread up to 1000 sq. ft. or more ahead of the stamping crew, depending on the experience of the crew. Indoors you will normally have 2-3 hours before the stamping mix will be ready to stamp. Whenever possible plan to begin spreading the stamping mix in the early morning hours when the temperature is cooler and conditions are more favorable and predictable. Note: Do not apply the stamping mix in extreme windy conditions or small surface cracks may appear from drying too fast.

Using Accelerator In The Stamping Mix - Using the Ultra Surface Polymer Concrete Accelerator you can speed up the drying time of the stamping mix in cooler temperatures, indoors or in shady areas. You can accelerate the mix so the spreading crew and the stamping crew can work closer together within 200 - 300 sq. ft. of each other. This way you do not have to worry about having too much unstamped material spread ahead of the stamping crew. The accelerator is mixed at 1 to 2 percent of the cement ratio, 1 to 2 pounds or 16 to 32 oz. per 94 lb. bag of cement.

### How To Blend Two Mixes Or Sections Together

When joining two or more mixes or sections together it is important not to leave a seam line. To avoid this, try to finish each section with as straight a line as possible so it will be easier to blend the next section from where you left off.

To join two sections without leaving a seam, first spread the squeegee/bond coat and dump the fresh stamping mix next to the edge where you left off spreading the last mix. Use the gauge rake to push the fresh material about one foot into the edge where you left off. If the material of the last section is not too hard, you should be able to gauge rake into it and begin using the fresno from where you left off. If the edge where your trying to join two sections seems too dry, it may be necessary to feather the two sections together by using a water spray bottle and a hand trowel. To use a hand trowel, wear spiked shoes so you can walk in the fresh material next to the edge. By lightly wetting the dry edge with water, you can trowel the fresh mix into the semi-dry edge and feather the two sections together. Spray the water where needed and use the edge of the trowel to press the fresh mix into the dryer mix until there is no seam showing. Try not to trowel outside of where you sprayed the water. If done properly you should not be able to tell where the two sections meet. If the edge seems too hard refer to the instructions to follow.



Blend sections together using the Gauge Rake and the Fresno.



Use a hand trowel and some water to blend two batches together without leaving a seam line.

## STAMPING THE ULTRA SURFACE 1/4" STAMPING MIX

### How To Stop Stamping And Continue Later From Where You Left Off

For your first few jobs it is recommended that you only spread and stamp 150 square foot sections at a time, until you are use to the drying time of the Ultra Surface 1/4" Stamping Mix in different temperature conditions. There are two methods to spread small sections of the stamping mix and to stop and start again from where you left off.

#### Method One: Cut Around Stamps/Remove Excess Stamping Mix

The best way to stop and start stamping, when using stamps with grout lines, is to first mix up one mortar mixer full of stamping mix to cover approximately 150 sq. ft. Spread the stamping mix as far as it will go over the wet squeegee/bond coat using the gauge rake and fresco. Where the mix ends, finish spreading it in as straight a line as possible. After the mix sets up to where it is a little more firm and not too wet, finish troweling it smooth by spraying the surface with a light amount of water and then using the funny trowel and/or hand trowels where needed to achieve the desired finish.

When the stamping mix is ready to be stamped, start stamping from where you started spreading the mix and continue stamping to where you finished spreading the mix until you run out of material to stamp. When you get to where there is not enough material for a whole stamp to fit, stop stamping and cut around each stamp using a margin trowel. Use a hand trowel or stiff scraper to scrape up the excess un-stamped material left over on the surface being careful not to damage the finished stamped edge. Next, remove the stamps and finish antiquing with the colored liquid release agent where needed.

When you are ready to begin stamping again, mix up another mix and start spreading from where you left off stamping. Wear spiked shoes and use a hand trowel to carefully trowel the fresh mix next to the finished stamped edge. Trowel the fresh mix a foot out from the edge to give the person gauge raking room to begin spreading the next section. When your ready to begin stamping the next section start by fitting the stamps next to the finished stamped edge where you left off. If done properly you won't be able to tell where you stopped and started each section. This technique can also be used if an edge where your blending two mixes together gets too hard.



To stop stamping and start again later, cut out around the stamps where you wish to stop stamping.



Scrape up the leftover material without damaging the finished stamped edge.



Spread the next mix from where you left off stamping the last section.



When ready to stamp, fit the stamps over the fresh material next to the finished stamped edge and begin stamping from where you left off.



Use a grouting tool to touch-up the grout lines between the two sections so you can't tell where you stopped and started.

## STAMPING THE ULTRA SURFACE 1/4" STAMPING MIX

### Method Two: Stopping Next To A Joint Or Where A Sawcut Will Be Made

Another way to stop stamping and continue on later is to plan to stop at a joint or where a sawcut or decorative cut will be made after the stamping is completed. If stopping next to a joint that you will be continuing on from later it should be crack repaired first with the Ultra Surface Epoxy 500 Epoxy and Elastomeric Basecoat and Fabric System.

After the joint has been repaired with the crack repair system, snap a line down the center of the joint and lay down a straight edge of 1/4" x 1 1/2" x 8' boards next to the chalk line using double sided carpet tape (re-usable plastic strips can also be made in the same size to achieve a straighter edge).

Spread the stamping mix to the top edge of the 1/4" form strips. Stamp over the form strips and then carefully remove the wood or plastic by first cutting it free from the stamping mix using a margin trowel before it dries too hard.

After removing the forms you should have a 1/4" thick straight edge, centered over the joint. When you wish to begin stamping from where you left off, tape on top of the finished edge and spread the next mix feathered on top of the tape so the two sections are tightly joined together. Begin stamping by lining up the stamps halfway into the dry pattern of the last section where you left off.

When you finish stamping you will see a straight seam line where the two sections were joined together. Snap a line down the straight seam and saw cut the joint to remove the seam line and to leave a natural looking saw cut joint. This is the best method to use when stamping with the 4' x 4' texture only stamps with no grout lines to match into.



Method Two: Snap a line over the center of a repaired joint or where a saw-cut will be made.



Lay down some 1/4" x 1 1/2" x 8' form strips made out of wood or plastic next to the chalk line using some double sided carpet tape.



Spread the stamping mix up to the forms and trowel it smooth to the top edge of the form.



Stamp up to the forms then cut between the forms and the stamp mix using a margin trowel and remove the forms leaving a straight 1/4" thick edge..



When ready spread a fresh mix next to the 1/4" thick edge where you left off and begin stamping from where you left off.



Remove tape next to seam to do any touch ups needed before it dries, then when dry snap a line over the seam and saw-cut.

## DETAILING THE 1/4" STAMPING APPLICATION

After completing the Ultra Surface Polymer Concrete 1/4" Stamping Application, check around all the edges and remove any excess material that may be hanging over the edge or dripping down the sides. Also check the grout lines to touch up any double lines or places where the stamping mix may have squished up between the stamps. Texture skins can be used to walk around on the stamped surface to do any touch up that is needed. When finished with all the touch-ups allow the stamping application to cure overnight. Touch-ups that were missed can be done the next day.



Scrape and detail around all the edges.



Touch up grout lines where the stamping mix squished up between the stamps.



Use the texture skins to walk around on the stamped surface to do touch up.

### The Next Day After Stamping

The next day after stamping first check for anymore touch-ups that need to be done. To touch-up grout lines that are now hardened, use a margin trowel or a small grinder. You can also use a copper pipe approximately 3/4" x 5' in length to quickly clean out grout lines. Use a hammer to smash the ends of the pipe to the width of the grout lines you are touching up, then you can walk around scraping out excess material between the grout lines. To touch-up minor surface blemishes or small shrinkage cracks use #80-100 grit sandpaper.

### Sawcut Outdoor Moving Joints Back Open

After touching up the stamping application, all outdoor moving expansion joints should be sawcut back open so they can be free to move again. For indoor jobs where a seamless floor is desired it is not necessary to re-cut the joints as long as they were crack repaired properly. It is still possible to get a fine crack over indoor joints not cut back open but it is rare. For outdoor jobs start by snapping lines over the center of all the moving expansion joints that were filled with the crack repair system and covered up with the 1/4" stamping application. Do not use red chalk when snapping lines since it can be hard to remove. Use blue chalk or antique powder instead.

Sawcut through the 1/4" Stamping Material, the Elastomeric Basecoat, 4" Fabric and the Epoxy 500 Epoxy in the joints using a skilsaw and a diamond blade or a sawcutting machine. The joints must be free to move again without any materials touching in-between or you may experience cracking or delamination next to the joints later on. When using a skilsaw an aluminum 3/4" x 4" x 10' straight edge can be used to keep the sawcut lines straight. Set a heavy bag or bucket on one or both ends of the straight edge to keep it from moving as you make your cuts. After all the saw-cuts have been made the next step is to clean the surface to remove all the dust from the saw-cutting.



Touch up minor surface blemishes or small surface cracks using #80-100 grit sandpaper.



Snap lines and sawcut joints back open.

## SEALING THE 1/4" STAMPING APPLICATION

### Sealing Over Spray-Top (FYI only – no color to be applied to these locations)

Step one - Apply Ultra Surface Stamped Concrete Sealer or Acrylic Urethane thinned 1 to 1 with acetone (where local laws permit) as the first coat of sealer over the Spray-Top. Apply the Sealer using an airless or HVLP sprayer or the Spray-Top Sprayer can be used (where local laws permit). When using the Spray-Top sprayer to apply sealers, it will be necessary to tighten the bottom knob at the back of the gun to achieve a finer spray. A pump-up sprayer and paint roller can also work over some stamping applications. Do a test area to determine the best results.

Step two - When the first coat of Sealer is dry to touch, usually within 30 minutes - 2 hours, the antiquing color can be applied over the sealer using Ultra Surface Liquid Release Agent and Ultra Surface Antiquing Color Powder. Mix 1-4 ounces of Antique Powder to one gallon of Liquid Release to achieve the amount of antiquing desired. Spray the liquid release, colored with antique powder, using a pump-up sprayer and allow it to puddle in the low areas of the texture. If the color is too light, add more antique powder (up to 4 ounces total). If the color is too dark, add more liquid release until you achieve the look desired. The way it looks wet, is close to how it will look when sealed. When the antiquing dries, it will look lighter in color than when it was wet. After the sealer is applied, the color should darken back to the way it looked wet. Always do a sample and have it approved by the customer before doing the job. For indoor jobs, the liquid release will take longer to dry than outdoors. After a couple of hours of drying, lay a rag over any puddles to soak up the excess release agent and/or set up a fan to blow over the floor to help dry the remaining wet areas.

Step three - Once the liquid release antiquing dries, apply a second coat of Sealer (same one as the first coat) thinned 1 to 1 with acetone (where local laws permit). The second coat of sealer will make the first coat tacky again allowing the antique powder to bond in-between both coats. When dry, apply one or two more coats of sealer thinned 5-10% to achieve the finish desired. Always do a sample in a small area and have it approved before doing the whole job.

Apply Topcoat Sealer - Once the color of the 1/4" Stamping application and the antiquing looks good, apply a final topcoat of Stamped Concrete Sealer or Acrylic Urethane diluted 5-10% depending on which one was used as the first and second coat. Do not apply them over each other.



Spray the Stamped Concrete Sealer to even out the color of the stamping application.



Use the Liquid Release to apply more antiquing, if needed, over the Stamped Concrete Sealer.



For extra slip resistance broadcast #80 white aluminum oxide into the Stamped Concrete Sealer.

**Warning:** Remember to turn off all pilot lights of gas stoves, furnaces or water heaters etc. and do not apply the Stamped Concrete Sealer, Acrylic Urethane or any solvent sealers near an open flame as they are very flammable. Also use the appropriate breathing respirators in areas with poor ventilation.

**Slip Resistance:** Ultra Surface Stamped Concrete Sealer can become slippery when wet. It is up to the end user to determine the suitability of the Stamped Concrete Sealer for their particular application. Slip resistant granules such as #80 or coarser white aluminum oxide granules can be broadcast into the wet Stamped Concrete Sealer to provide whatever degree of slip resistance is necessary. Concrete Solutions or its sales agents will not be responsible for injuries incurred in a slip fall situation.

**Health Hazards** - Use with adequate ventilation, wear gloves to avoid contact with skin, use the proper cartridge type respirator in confined areas. Read Technical Data and Material Safety Data Sheets prior to use.

# How To Apply A 1/4" Stamping Application To Steps

## Applying A 1/4" Stamping Application To Steps

To apply a 1/4" Stamping Application to steps involves more time, patience and detail than doing a regular surface. The procedure is basically the same as stamping a regular surface except different tools are used to spread and finish the material, and a slightly thicker mix is used. Start by mixing a Squeegee/Bond Coat Mix and a regular 1/4" Stamping Mix as shown on page five. The regular stamping mix will normally be too wet for a vertical surface and will need to be thickened up by adding more cement and sand. Before adding more cement and sand trowel a small amount of the regular mix 1/4" thick on one of the vertical risers of the steps. If it stays without sagging or running down you can use it the way it is. If it seems too wet and sags you can thicken it by adding one part cement and two parts #30 or #60 silica sand. To a five gallon bucket of mix add 1 cup of cement and two cups of sand at a time until the mix is just thick enough that it will not sag but not too thick that it is difficult to trowel and work with. If the mix gets too thick it can be made wetter by adding a little more polymer and water at a 1 part polymer to 2 parts water ratio. Once the mix is thick enough follow the step by step pictures below for information on one method for doing steps.



1. Steps before.



2. Spread the Squeegee/Bond Coat over the steps using a trowel and/or wallpaper brush.



3. Trowel the Stamping Mix over the wet Squeegee/Bond Coat Mix 1/4" thick.



4. Trowel the mix on the top of the steps then up the vertical risers and over the corners.



5. Shape and trowel the stamping mix 1/4" thick over the steps as smooth as possible.



6. Let the mix set up a little more firm then lightly spray some water and trowel it again.



7. After spraying a light fog of water use some step trowels to shape the step corners.



8. Carefully smooth and shape the corners to prepare for the stamping process.



9. After doing the corners use a hand trowel where needed for touch up.

# How To Apply A 1/4" Stamping Application To Steps

## Making A Small Gauge Rake

To make it easier to spread the stamping mix 1/4" thick over the steps, a small gauge rake can be made out of a 10-12 inch tape knife or a piece of wood and some nails. To make a gauge rake out of a tape knife, epoxy two finishing nails to the tape knife using some fast setting epoxy available from most hardware stores or use Epoxy 500. To make a gauge rake out of wood use a piece approximately 1/4" x 1 1/2" x 10" and pound one nail into each end of the 1/4" side of the wood so they stick out 1/4" or use the epoxy to bond the nails to the wood.

Spread the stamping mix over the steps with a hand trowel then use the gauge rake to remove any excess. Follow behind the gauge rake with a hand trowel or a tape knife without gauges to smooth out the lines from the gauge rake. Allow the material to set up until firm then fog the stamping mix with a light coat of water and finish troweling it to a smooth finish, as shown in the pictures on page 21.



Use a hand made gauge rake to leave the material 1/4" thick over the steps.



Trowel behind the gauge rake using a trowel or tape knife to cover up the gauge rake lines.



10. When the stamping mix is firm enough spray liquid release agent clear or colored over the steps.



11. Stamp the tops of the steps first by using a texture skin and patting it with your hands to leave the desired impression. Be careful not to pound on the stamps too hard next to the corners so the stamping mix doesn't lose its bond and fall off the vertical riser.



12. Next stamp the vertical risers of the steps being careful next to the corners. Leave the steps textured only for the best results or use the regular stamps to leave grout lines.



13. Use a chisel and a hammer if needed to gently pound a groove in the inside corner of the steps to leave a finished looking seam line. Use them also to make grout lines if desired.



14. Allow the steps to dry then rinse and apply more antiquing using the Antiquing Sealer if needed before applying the Stamped Concrete Sealer.

# 1/4" STAMPING PRODUCTS COVERAGE CHART

## COVERAGE CHART

PRODUCT NAME	DESCRIPTION	COVERAGE RATE
Ultra Surface Concrete Polymer	Squeegee/Bond Coat Mix	250 sq. ft. per gallon of polymer
Ultra Surface Concrete Polymer	1/4" Stamping Mix	45 sq. ft. per gallon of polymer
[To figure approx. how many gallons of polymer will be needed divide the square footage of the job by the square feet per gallon of polymer.]		
- Cement [Portland Type I/II]	Squeegee/Bond Coat Mix	1250 sq. ft. per 94 lb. bag of cement
[Regular or White Cement]	1/4" Stamping Mix	135 sq. ft. per 94 lb. bag of cement
[To figure approx. how many bags of cement will be needed divide the square footage of the job by the square feet per 94 lb. bag of cement.]		
Silica Sand [#60-90]	Squeegee/Bond Coat Mix	1250 sq. ft. per 100 lb. bag of sand
Silica Sand [#20,30 & 60]	1/4" Stamping Mix	45 sq. ft. per 100 lb. bag of sand
[To figure approx. how many bags of sand will be needed divide the square footage of the job by the square feet per 100 lb. bag of sand.]		
Resurfacer Bag Mix	50 lb. bag of premixed cement and sand	250 sq. ft. per 50 lb. bag at 1/32"
1/4" Stamping Bag Mix	50 lb. bag of premixed cement and sand	18-20 sq. ft. per 50 lb. bag at 3/8"
Liquid Release Agent	Prevents stamps from sticking / For Antiquing	150-300 sq. ft. per gallon
Stamped Concrete Sealer	Solvent based sealer with a gloss finish	200-300 sq. ft. per gallon
Acrylic Urethane	Extra durable solvent based sealer (satin or gloss)	200- 300 sq. ft. per gallon

Note: Other products needed for stamping applications include Integral Color Pigments, Antiquing Color Powders, Accelerator and Retarder. The amount of each of these products needed will depend on the color being used and the job conditions. See the Ultra Surface Products Price List for more information and coverage rates on these and other products.

**XX006729 PERIMETER EROSION BARRIER, ROLLED EXCELSIOR (LCDOT)**

Effective: May 5, 2015

Revised: June 2, 2015

**Description:** This work shall consist of constructing, removing and disposing of a rolled excelsior perimeter erosion barrier as part of the project's temporary erosion control system.

**General:** The work shall be performed according to Section 280 of the "Standard Specifications" and the following:

The perimeter erosion barrier shall be limited to rolled excelsior. The purpose is to prevent the eroded soil from being transported off the construction site by water runoff.

All removed materials shall be disposed of outside the right-of-way according to Article 202.03 of the "Standard Specifications".

**Materials:** The rolled excelsior shall consist of a polypropylene multi-filament woven netting sealed with metal clips or knotted at the ends. The filler material shall be 70% bark-free hardwood mulch ground at 1.5" and 30% bark-free hardwood mulch ground fine. The density shall be a minimum of 3.3 pounds per cubic foot based on a moisture content of 18% at manufacturing. The netting material shall retain 89% of its strength after 500 hours of exposure to sunlight. The maximum opening in the netting shall not exceed 1x1 mm in a tubular knit design.

**Construction:** The rolled excelsior logs shall be installed according to the manufacturer's specifications.

**Maintenance:** The Contractor shall inspect all rolled excelsior logs immediately after each rainfall and at least daily during prolonged rainfall. The Contractor shall immediately correct any deficiencies.

The Contractor shall also make a daily review of the location of rolled excelsior logs in areas where construction activities have altered the natural contour and drainage runoff to ensure that the rolled excelsior logs are properly located for effectiveness. Where deficiencies exist as determined by the Engineer, additional rolled excelsior logs shall be installed as directed by the Engineer.

Damaged or otherwise ineffective rolled excelsior logs shall be repaired or replaced promptly.

Sediment deposits shall either be removed when the deposit reaches half the height of the rolled excelsior log or a second rolled excelsior log shall be installed as directed by the Engineer.

The rolled excelsior log shall remain in place until the Engineer directs it to be removed. After the rolled excelsior log removal, the Contractor shall remove and dispose of any excess sediment accumulations, dress the area to give it a pleasing appearance, and cover with vegetation all bare areas according to the contract requirements.

The removed rolled excelsior logs may be used at other locations provided the netting and other material requirements continue to be met to the satisfaction of the Engineer.

**Method of Measurement:** This work will be measured for payment in place in feet.

**Basis of Payment:** This work will be paid for at the contract unit price per foot for PERIMETER EROSION BARRIER, ROLLED EXCELSIOR. *The unit price shall include all work and materials necessary to properly install the barrier and to remove and dispose of the used materials at the completion of the project. Maintenance requirements shall be included and paid for under the special provision for MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS.*

## SPECIAL PAY ITEMS FOR ROAD AND BRIDGE DESIGN

### Z001275X STRUCTURAL REPAIR OF CONCRETE

**Description:** This work shall consist of structurally repairing concrete.

**General:** This work shall be performed in accordance with the locations and descriptions shown in the plans. Finishing the concrete to the original surface depth shall be performed at the south abutment of the Russell Road Bridge and at all three abutment repair locations above the horizontal sill.

Below the horizontal sill at the north abutment of the Russell Road Bridge and from the top of the horizontal sill at the north abutment of the Illinois Route 173 Bridge, regardless of the depth of removal the concrete shall only be finished to a varying thickness to provide a uniform smooth surface finish. The surface shall not be finished back to the original face of abutment at these locations. This is in preparation of the architectural finish where variations in the surface profile cannot exceed ¼". See plans for details and additional notes.

**Materials:** Materials shall be according to the following.

Item	Article/Section
(a) Portland Cement Concrete (Note 1) .....	1020
(b) R1 or R2 Concrete (Note 2)	
(c) Normal Weight Concrete (Notes 3 and 4)	
(d) Shotcrete (High Performance) (Notes 5 and 6)	
(e) Reinforcement Bars .....	1006.10
(f) Anchor Bolts .....	1006.09
(g) Water .....	1002
(h) Curing Compound .....	1022.01
(i) Cotton Mats .....	1022.02
(j) Protective Coat .....	1023.01
(k) Epoxy (Note 7) .....	1025
(l) Mechanical Bar Splicers .....	508.06(c)

Note 1. The concrete shall be Class SI, except the cement factor shall be a minimum 6.65 cwt/cu yd (395 kg/cu m), the coarse aggregate shall be a CA 16, and the strength shall be a minimum 4000 psi (27,500 kPa) compressive or 675 psi (4650 kPa) flexural at 14 days. A high range water-reducing admixture shall be used to obtain a 5-7 in. (125-175 mm) slump, but a cement factor reduction according to Article 1020.05(b)(8) is prohibited. A self-consolidating concrete mixture is also acceptable per Article 1020.04, except the mix design requirements of this note regarding the cement factor, coarse aggregate, strength, and cement factor reduction shall apply.

- Note 2. The R1 or R2 concrete shall be from the Department's approved list of Packaged, Dry, Rapid Hardening, Cementitious Materials for Concrete Repairs. The R1 or R2 concrete shall comply with the air content and strength requirements for Class SI concrete as indicated in Note 1. Mixing shall be per the manufacturer's recommendations, except the water/cement ratio shall not exceed the value specified for Class SI concrete as indicated in Note 1. A high range water-reducing admixture shall be used to obtain a 5-7 in. (125-175 mm) slump, and a retarder may be required to allow time to perform the required field tests. The admixtures shall be per the manufacturer's recommendation, and the Department's approved list of Concrete Admixtures shall not apply.
- Note 3. The "high slump" packaged concrete mixture shall be from the Department's approved list of Packaged, Dry, Formed, Concrete Repair Mixtures. The materials and preparation of aggregate shall be according to ASTM C 387. The cement factor shall be 6.65 cwt/cu yd (395 kg/cu m) minimum to 7.05 cwt/cu yd (418 kg/cu m) maximum. Cement replacement with fly ash or ground granulated blast-furnace slag shall be according to Section 1020. The "high slump" packaged concrete mixture shall have a water soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the "high slump" packaged concrete mixture shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every two years, and the test results shall be provided to the Department. The coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). The packaged concrete mixture shall comply with the air content and strength requirements for Class SI concrete as indicated in Note 1. Mixing shall be per the manufacturer's recommendations, except the water/cement ratio shall not exceed the value specified for Class SI concrete as indicated in Note 1. A high range water-reducing admixture shall be used to obtain a 5-7 in. (125-175 mm) slump. The admixture shall be per the manufacturer's recommendation, and the Department's approved list of Concrete Admixtures shall not apply. A maximum slump of 10 in. (250 mm) may be permitted if no segregation is observed by the Engineer in a laboratory or field evaluation.
- Note 4. The "self-consolidating concrete" packaged concrete mixture shall be from the Department's approved list of Packaged, Dry, Formed, Concrete Repair Mixtures. The materials and preparation of aggregate shall be according to ASTM C 387. The cement factor shall be 6.65 cwt/cu yd (395 kg/cu m) minimum to 7.05 cwt/cu yd (418 kg/cu m) maximum. Cement replacement with fly ash or ground granulated blast-furnace slag shall be according to Section 1020. The "self-consolidating concrete" packaged concrete mixture shall have a water soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the "self-

consolidating concrete” packaged concrete mixture shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every two years, and the test results shall be provided to the Department. The concrete mixture should be uniformly graded, and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used. The packaged concrete mixture shall comply with the air content and strength requirements for Class SI concrete as indicated in Note 1. Mixing shall be per the manufacturer’s recommendations, except the water/cement ratio shall not exceed the value specified for Class SI concrete as indicated in Note 1. The admixtures used to produce self-consolidating concrete shall be per the manufacturer’s recommendation, and the Department’s approved list of Concrete Admixtures shall not apply. The packaged concrete mixture shall meet the self-consolidating requirements of Article 1020.04.

- Note 5. Packaged shotcrete that includes aggregate shall be from the Department’s approved list of Packaged High Performance Shotcrete, and independent laboratory test results showing the product meets Department specifications will be required. The product shall be a packaged, pre-blended, and dry combination of materials, for the wet-mix shotcrete method according to ASTM C 1480. A non-chloride accelerator may be used according to the shotcrete manufacturer’s recommendations. The shotcrete shall be Type FA or CA, Grade FR, and Class I. The fibers shall be Type III synthetic according to ASTM C 1116.

The packaged shotcrete shall have a water soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the hardened shotcrete shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every two years, and the test results shall be provided to the Department.

Each individual aggregate used in the packaged shotcrete shall have either a maximum ASTM C 1260 expansion of 0.16 percent or a maximum ASTM C 1293 expansion of 0.040 percent. However, the ASTM C 1260 value may be increased to 0.27 percent for each individual aggregate if the cement total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) does not exceed 0.60 percent. As an alternative to these requirements, ASTM C 1567 testing which shows the packaged shotcrete has a maximum expansion of 0.16 percent may be submitted. The ASTM C 1260, C 1293, or C 1567 test shall be performed a minimum of once every two years.

The 7 and 28 day compressive strength requirements in ASTM C 1480 shall not apply. Instead the shotcrete shall obtain a minimum compressive strength of 4000 psi (27,500 kPa) at 14 days.

The packaged shotcrete shall be limited to the following proportions:

The portland cement and finely divided minerals shall be 6.05 cwt/cu yd (360 kg/cu m) to 8.50 cwt/cu yd (505 kg/cu m) for Type FA and 6.05 cwt/cu yd (360 kg/cu. m) to 7.50 cwt/cu yd (445 kg/cu m) for Type CA. The portland cement shall not be below 4.70 cwt/cu yd (279 kg/cu m) for Type FA or CA.

The finely divided mineral(s) shall constitute a maximum of 35 percent of the total cement plus finely divided mineral(s).

Class F fly ash is optional and the maximum shall be 20 percent by weight (mass) of cement.

Class C fly ash is optional and the maximum shall be 25 percent by weight (mass) of cement.

Ground granulated blast-furnace slag is optional and the maximum shall be 30 percent by weight (mass) of cement.

Microsilica is required and shall be a minimum of 5 percent by weight (mass) of cement, and a maximum of 10 percent. As an alternative to microsilica, high- reactivity metakaolin may be used at a minimum of 5 percent by weight (mass) of cement, and a maximum of 10 percent.

Fly ash shall not be used in combination with ground granulated blast-furnace slag. Class F fly ash shall not be used in combination with Class C fly ash. Microsilica shall not be used in combination with high-reactivity metakaolin. A finely divided mineral shall not be used in combination with a blended hydraulic cement, except for microsilica or high-reactivity metakaolin.

The water/cement ratio as defined in Article 1020.06 shall be a maximum of 0.42.

The air content as shot shall be 4.0 – 8.0 percent.

Note 6. Packaged shotcrete that does not include pre-blended aggregate shall be from the Department's approved list of Packaged High Performance Shotcrete, and independent laboratory test results showing the product meets Department specifications will be required. The shotcrete shall be according to Note 5, except the added aggregate shall be according to Articles 1003.02 and 1004.02 in addition to each individual aggregate meeting the maximum expansion requirements of Note 5. The

aggregate gradation shall be according to the manufacturer. The shotcrete shall be batched and mixed with added aggregate according to the manufacturer.

Note 7. In addition ASTM C 881, Type IV, Grade 2 or 3, Class A, B, or C may be used.

**Equipment:** Equipment shall be according to Article 503.03 and the following.

Chipping Hammer – The chipping hammer for removing concrete shall be a light-duty pneumatic or electric tool with a 15 lb. (7 kg) maximum class or less.

Blast Cleaning Equipment – Blast cleaning equipment for concrete surface preparation shall be the abrasive type, and the equipment shall have oil traps.

Hydrodemolition Equipment – Hydrodemolition equipment for removing concrete shall be calibrated, and shall use water according to Section 1002.

High Performance Shotcrete Equipment – The batching, mixing, pumping, hose, nozzle, and auxiliary equipment shall be for the wet-mix shotcrete method, and shall meet the requirements of ACI 506R.

#### Construction Requirements

**General:** The repair methods shall be either formed concrete repair or shotcrete. The repair method shall be selected by the Contractor with the following rules.

- (a) Rule 1. For formed concrete repair, a subsequent patch to repair the placement point after initial concrete placement will not be allowed. As an example, this may occur in a vertical location located at the top of the repair.
- (b) Rule 2. Formed concrete repair shall not be used for overhead applications.
- (c) Rule 3. If formed concrete repair is used for locations that have reinforcement with less than 0.75 in. (19 mm) of concrete cover, the concrete mixture shall contain fly ash or ground granulated blast-furnace slag at the maximum cement replacement allowed.
- (d) Rule 4. Shotcrete shall not be used for any repair greater than 6 in. (150 mm) in depth, except in horizontal applications, where the shotcrete may be placed from above in one lift.
- (e) Rule 5. Shotcrete shall not be used for column repairs greater than 4 in. (100 mm) in depth, unless the shotcrete mixture contains 3/8 in. (9.5 mm) aggregate.

**Temporary Shoring or Cribbing:** When a temporary shoring or cribbing support system is required, the Contractor shall provide details and computations, prepared and sealed by an Illinois licensed Structural Engineer, to the Department for review and approval. When ever possible the support system shall be installed prior to

starting the associated concrete removal. If no system is specified, but during the course of removal the need for temporary shoring or cribbing becomes apparent or is directed by the Engineer due to a structural concern, the Contractor shall not proceed with any further removal work until an appropriate and approved support system is installed.

**Concrete Removal:** The Contractor shall provide ladders or other appropriate equipment for the Engineer to mark the removal areas. Repair configurations will be kept simple, and squared corners will be preferred. The repair perimeter shall be sawed a depth of 1/2 in. (13 mm) or less, as required to avoid cutting the reinforcement. Any cut reinforcement shall be repaired or replaced at the expense of the Contractor. If the concrete is broken or removed beyond the limits of the initial saw cut, the new repair perimeter shall be recut. The areas to be repaired shall have all loose, unsound concrete removed completely by the use of chipping hammers, hydrodemolition equipment, or other methods approved by the Engineer. The concrete removal shall extend along the reinforcement bar until the reinforcement is free of bond inhibiting corrosion. Reinforcement bar with 50 percent or more exposed shall be undercut to a depth of 3/4 in. (19 mm) or the diameter of the reinforcement bar, whichever is greater.

If sound concrete is encountered before existing reinforcement bars are exposed, further removal of concrete shall not be performed unless the minimum repair depth is not met.

The repair depth shall be a minimum of 1 in. (25 mm). The substrate profile shall be  $\pm 1/16$  in. ( $\pm 1.5$  mm). The perimeter of the repair area shall have a vertical face.

If a repair is located at the ground line, any excavation required below the ground line to complete the repair shall be included in this work.

The Contractor shall have a maximum of 14 calendar days to complete each repair location with concrete or shotcrete, once concrete removal has started for the repair. The Engineer shall be notified of concrete removal that exceeds 6 in. (150 mm) in depth, one fourth the cross section of a structural member, more than half the vertical column reinforcement is exposed in a cross section, more than 6 consecutive reinforcement bars are exposed in any direction, within 1.5 in. (38 mm) of a bearing area, or other structural concern. Excessive deterioration or removal may require further evaluation of the structure or installation of temporary shoring and cribbing support system.

**Surface Preparation:** Prior to placing the concrete or shotcrete, the Contractor shall prepare the repair area and exposed reinforcement by blast cleaning. The blast cleaning shall provide a surface that is free of oil, dirt, and loose material.

If a succeeding layer of shotcrete is to be applied, the initial shotcrete surface and remaining exposed reinforcement shall be free of curing compound, oil, dirt, loose material, rebound (i.e. shotcrete material leaner than the original mixture which

ricochets off the receiving surface), and overspray. Preparation may be by lightly brushing or blast cleaning if the previous shotcrete surface is less than 36 hours old. If more than 36 hours old, the surface shall be prepared by blast cleaning.

The repair area and perimeter vertical face shall have a rough surface. Care shall be taken to ensure the sawcut face is roughened by blast cleaning. Just prior to concrete or shotcrete placement, saturate the repair area with water to a saturated surface-dry condition. Any standing water shall be removed.

Concrete or shotcrete placement shall be done within 3 calendar days of the surface preparation or the repair area shall be prepared again.

**Reinforcement:** Exposed reinforcement bars shall be cleaned of concrete and corrosion by blast cleaning. After cleaning, all exposed reinforcement shall be carefully evaluated to determine if replacement or additional reinforcement bars are required. Reinforcing bars that have been cut or have lost 25 percent or more of their original cross sectional area shall be supplemented by new in kind reinforcement bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. A mechanical bar splicer shall be used when it is not feasible to provide the minimum bar lap. No welding of bars shall be performed.

Intersecting reinforcement bars shall be tightly secured to each other using 0.006 in. (1.6 mm) or heavier gauge tie wire, and shall be adequately supported to minimize movement during concrete placement or application of shotcrete.

For reinforcement bar locations with less than 0.75 in. (19 mm) of cover, protective coat shall be applied to the completed repair. The application of the protective coat shall be according to Article 503.19, 2nd paragraph, except blast cleaning shall be performed to remove curing compound.

The Contractor shall anchor the new concrete to the existing concrete with 3/4 in. (19 mm) diameter hook bolts for all repair areas where the depth of concrete removal is greater than 8 in. (205 mm) and there is no existing reinforcement extending into the repair area. The hook bolts shall be spaced at 15 in. (380 mm) maximum centers both vertically and horizontally, and shall be a minimum of 12 in. (305 mm) away from the perimeter of the repair. The hook bolts shall be installed according to Section 584.

**Repair Methods:** All repair areas shall be inspected and approved by the Engineer prior to placement of the concrete or application of the shotcrete.

- (a) Formed Concrete Repair. Falsework shall be according to Article 503.05. Forms shall be according to Article 503.06. Formwork shall provide a smooth and uniform concrete finish, and shall approximately match the existing concrete structure. Formwork shall be mortar tight and closely fitted where they adjoin the existing concrete surface to prevent leakage. Air vents may be provided to reduce voids and improve surface appearance.

The Contractor may use exterior mechanical vibration, as approved by the Engineer, to release air pockets that may be entrapped.

The concrete for formed concrete repair shall be a Class SI Concrete, or a packaged R1 or R2 Concrete with coarse aggregate added, or a packaged Normal Weight Concrete at the Contractor's option. The concrete shall be placed and consolidated according to Article 503.07. The concrete shall not be placed when frost is present on the surface of the repair area, or the surface temperature of the repair area is less than 40 °F (4 °C). All repaired members shall be restored as close as practicable to their original dimensions.

Curing shall be done according to Article 1020.13.

If temperatures below 45°F (7°C) are forecast during the curing period, protection methods shall be used. Protection Method I according to Article 1020.13(d)(1), or Protection Method II according to Article 1020.13(d)(2) shall be used during the curing period.

The surfaces of the completed repair shall be finished according to Article 503.15 except where Architectural Finish is to be used.

- (b) Shotcrete. Shotcrete shall be tested by the Engineer for air content according to Illinois Modified AASHTO T 152. The sample shall be obtained from the discharge end of the nozzle by shooting a pile large enough to scoop a representative amount for filling the air meter measuring bowl. Shotcrete shall not be shot directly into the measuring bowl for testing.

For compressive strength of shotcrete, a 18 x 18 x 3.5 in. (457 x 457 x 89 mm) test panel shall be shot by the Contractor for testing by the Engineer. A steel form test panel shall have a minimum thickness of 3/16 in. (5 mm) for the bottom and sides. A wood form test panel shall have a minimum 3/4 in. (19 mm) thick bottom, and a minimum 1.5 in. (38 mm) thickness for the sides. The test panel shall be cured according to Article 1020.13 (a) (3) or (5) while stored at the jobsite and during delivery to the laboratory. After delivery to the laboratory for testing, curing and testing shall be according to ASTM C 1140.

The method of alignment control (i.e. ground wires, guide strips, depth gages, depth probes, and formwork) to ensure the specified shotcrete thickness and reinforcing bar cover is obtained shall be according to ACI 506R. Ground wires shall be removed after completion of cutting operations. Guide strips and formwork shall be of dimensions and a configuration that do not prevent proper application of shotcrete. Metal depth gauges shall be cut 1/4 in. (6 mm) below the finished surface. All repaired members shall be restored as close as practicable to their original dimensions except where Architectural Finish is to be used.

For air temperature limits when applying shotcrete in cold weather, the first paragraph of Article 1020.14(b) shall apply. For hot weather, shotcrete shall not be applied when the air temperature is greater than 90°F (32°C). The applied shotcrete shall have a minimum temperature of 50°F (10°C) and a maximum temperature of 90°F (32°C). The shotcrete shall not be applied during periods of rain unless protective covers or enclosures are installed. The shotcrete shall not be applied when frost is present on the surface of the repair area, or the surface temperature of the repair area is less than 40°F (4°C). If necessary, lighting shall be provided to provide a clear view of the shooting area.

The shotcrete shall be applied according to ACI 506R, and shall be done in a manner that does not result in cold joints, laminations, sandy areas, voids, sags, or separations. In addition, the shotcrete shall be applied in a manner that results in maximum densification of the shotcrete. Shotcrete which is identified as being unacceptable while still plastic shall be removed and re-applied.

The nozzle shall normally be at a distance of 2 to 5 ft. (0.6 to 1.5 m) from the receiving surface, and shall be oriented at right angles to the receiving surface. Exceptions to this requirement will be permitted to fill corners, encase large diameter reinforcing bars, or as approved by the Engineer. For any exception, the nozzle shall never be oriented more than 45 degrees from the surface. Care shall be taken to keep the front face of the reinforcement bar clean during shooting operations. Shotcrete shall be built up from behind the reinforcement bar. Accumulations of rebound and overspray shall be continuously removed prior to application of new shotcrete. Rebound material shall not be incorporated in the work.

Whenever possible, shotcrete shall be applied to the full thickness in a single layer. The maximum thickness shall be according to Rules 4 and 5 under Construction Requirements, General. When two or more layers are required, the minimum number shall be used and shall be done in a manner without sagging or separation. A flash coat (i.e. a thin layer of up to 1/4 in. (6 mm) applied shotcrete) may be used as the final lift for overhead applications.

Prior to application of a succeeding layer of shotcrete, the initial layer of shotcrete shall be prepared according to the surface preparation and reinforcement bar cleaning requirements. Upon completion of the surface preparation and reinforcement bar treatment, water shall be applied according to the surface preparation requirements unless the surface is moist. The second layer of shotcrete shall then be applied within 30 minutes.

Shotcrete shall be cut back to line and grade using trowels, cutting rods, screeds or other suitable devices. The shotcrete shall be allowed to stiffen sufficiently before cutting. Cutting shall not cause cracks or

delaminations in the shotcrete. For depressions, cut material may be used for small areas. Rebound material shall not be incorporated in the work. For the final finish, a wood float shall be used to approximately match the existing concrete texture. A manufacturer approved finishing aid may be used. Water shall not be used as a finishing aid. All repaired members shall be restored as close as practicable to their original dimensions.

Contractor operations for curing shall be continuous with shotcrete placement and finishing operations. Curing shall be accomplished using wetted cotton mats, membrane curing, or a combination of both. Cotton mats shall be applied according to Article 1020.13(a)(5) except the exposed layer of shotcrete shall be covered within 10 minutes after finishing, and wet curing shall begin immediately. Curing compound shall be applied according to Article 1020.13(a)(4), except the curing compound shall be applied as soon as the shotcrete has hardened sufficiently to prevent marring the surface, and each of the two separate applications shall be applied in opposite directions to ensure coverage. The curing compound shall be according to Article 1022.01. Note 5 of the Index Table in Article 1020.13 shall apply to the membrane curing method.

When a shotcrete layer is to be covered by a succeeding shotcrete layer within 36 hours, the repair area shall be protected with intermittent hand fogging, or wet curing with either burlap or cotton mats shall begin within 10 minutes. Intermittent hand fogging may be used only for the first hour. Thereafter, wet curing with burlap or cotton mats shall be used until the succeeding shotcrete layer is applied. Intermittent hand fogging may be extended to the first hour and a half if the succeeding shotcrete layer is applied by the end of this time.

The curing period shall be for 7 days, except when there is a succeeding layer of shotcrete. In this instance, the initial shotcrete layer shall be cured until the surface preparation and reinforcement bar treatment is started.

If temperatures below 45°F (7°C) are forecast during the curing period, protection methods shall be used. Protection Method I according to Article 1020.13(d)(1), or Protection Method II according to Article 1020.13(d)(2) shall be used during the curing period

**Inspection of Completed Work:** The Contractor shall provide ladders or other appropriate equipment for the Engineer to inspect the repaired areas. After curing but no sooner than 28 days after placement of concrete or shooting of shotcrete, the repair shall be examined for conformance with original dimensions, cracks, voids, and delaminations. Sounding for delaminations will be done with a hammer or by other methods determined by the Engineer. The acceptable tolerance for conformance of a repaired area shall be within 1/4 in. (6 mm) of the original dimensions. A repaired area not in dimensional conformance or with delaminations shall be removed and replaced.

A repaired area with cracks or voids shall be considered as nonconforming. Exceeding one or more of the following crack and void criteria shall be cause for removal and replacement of a repaired area.

1. The presence of a single surface crack greater than 0.01 in. (0.25 mm) in width and greater than 12 in. (300 mm) in length.
2. The presence of two or more surface cracks greater than 0.01 in. (0.25 mm) in width that total greater than 24 in. (600 mm) in length.
3. The presence of map cracking in one or more regions totaling 15 percent or more of the gross surface area of the repair.
4. The presence of two or more surface voids with least dimension 3/4 in. (19 mm) each.

A repaired area with cracks or voids that do not exceed any of the above criteria may remain in place, as determined by the Engineer.

If a nonconforming repair is allowed to remain in place, cracks greater than 0.007 in. (0.2 mm) in width shall be repaired with epoxy according to Section 590. For cracks less than or equal to 0.007 in. (0.2 mm) in width, the epoxy may be applied to the surface of the crack. Voids shall be repaired according to Article 503.15.

**Publications and Personnel Requirements:** The Contractor shall provide a current copy of ACI 506R to the Engineer a minimum of one week prior to start of construction.

The shotcrete personnel who perform the work shall have current American Concrete Institute (ACI) nozzle men certification for vertical wet and overhead wet applications, except one individual may be in training. This individual shall be adequately supervised by a certified ACI nozzle men as determined by the Engineer. A copy of the nozzle men certificate(s) shall be given to the Engineer.

**Method of Measurement:** This work will be measured for payment in place and the area computed in square feet (square meters). For a repair at a corner, both sides will be measured.

**Basis of Payment:** This work will be paid for at the contract unit price per square foot (square meter) for STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN.) (125 MM), STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.) (125 MM).

When not specified to be paid for elsewhere, the work to design, install, and remove the temporary shoring and cribbing will be paid for according to Article 109.04.

Hook bolts shall not be paid for separately, but shall be included in the square foot price for STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN.) (125 MM).

**Traffic Control Plan (L.C.-T- Section 700)**

Effective 06/01/2012

Traffic Control shall be performed according to the applicable sections of the “Standard Specifications”, the “Supplemental Specifications”, the “Illinois Manual on Uniform Traffic Control Devices for Streets and Highways”, the “Quality Standard for Work Zone Traffic Control Devices”, any special details and Highway Standards as shown on the plans and the special provisions contained herein.

Special attention is called to Articles 105.03(b), 105.05, and 107.09, and to Sections 701, 704, and 782 of the “Standard Specifications”, and to the following Highway Standards, Details, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

The Contractor shall contact the Engineer at least 72 hours in advance of beginning work.

**STANDARDS**

701001-02                      701006-05                      701501-06                      701901-03

**DETAILS**

LC7004                      LC7200

**RECURRING SPECIAL PROVISIONS**

LRS3 Special Provision for Work Zone Traffic Control Surveillance  
LRS4 Flaggers in Work Zones

**DETOURS**

Detours and road closures on county maintained roads within Lake County, Illinois shall be according to the applicable Articles and Sections of the “Standard Specifications”, the “Supplemental Specifications”, the “Illinois Manual on Uniform Traffic Control Devices for Streets and Highways”, the Lake County Division of Transportation’s Detour Procedures and Guidelines, any special details and Highway Standards as shown on the Detour Plan and the Special Provisions contained herein. The LCDOT Detour Procedures and Guidelines are available from the LCDOT, Traffic Engineering Section upon request.

**Traffic Control and Protection (Special) (L.C.-T- Section 700)**

Effective 06/01/2012

The Traffic Control and Protection (Special) shall meet the requirements of Division 700. Work Zone Traffic Control and Protection, Signing, and Pavement Marking of the “Standard Specifications” except as follows:

**Article 701.01 Description** shall be replaced with the following:

**701.01 Description.** This item of work shall consist of furnishing, installing, maintaining, replacing, relocating and removing all traffic control devices used for the purpose of regulating, warning or directing traffic during the construction or maintenance of this improvement.

**Article 701.02 Materials** shall be modified by adding the following paragraph:

Traffic control devices include signs and their supports, signals, pavement markings, barricades and their approved weights, channeling devices, warning lights, arrow boards, flaggers, or any other device used for the purpose of regulating, detouring, warning or guiding traffic through or around the construction zone.

**Article 701.04 General** shall be modified by adding the following as the first paragraph:

Traffic Control and Protection (Special) shall be provided as shown on the plans and applicable Highway Standards; as required in these special provisions and the applicable sections of the “Standard Specifications”; and/or as directed by the Engineer.

**Article 701.04 General** shall be modified by adding the following to the fourth paragraph:

The Contractor shall dispatch men, materials, and equipment to correct any such deficiencies. The Contractor shall respond to any call from LCDOT concerning any request for improving or correcting traffic control devices and begin making the requested repairs within two hours from the time of notification.

**Article 701.10 Surveillance** shall be replaced with the following:

The Contractor is required to conduct routine inspections of the work site at a frequency that will allow for the timely replacement of any traffic control device that has become displaced, worn or damaged to the extent that it no longer conforms to the shape, dimensions, color and operational requirements of the MUTCD, the Traffic Control Standards, the IDOT Quality Standard For Work Zone Traffic Control Devices, or will no longer present a neat appearance to motorists. A sufficient quantity of replacement devices, based on vulnerability to damage, shall be readily available to meet this requirement.

The Contractor shall ensure that all the traffic control devices he/she installs are operational, functional and effective 24 hours a day, seven days a week, including holidays.

**Article 701.13 Flaggers (a)** shall be modified by revising the second paragraph of subparagraph (a) by adding the following:

The Engineer will determine when a side road or entrance shall be closed to traffic. The flagger shall be positioned as shown on the plans or as directed by the Engineer.

**Article 701.14 Signs (a)** Road Construction Ahead Signs shall be modified by changing the following in the paragraph:

“ROAD WORK AHEAD” signs shall be required in lieu of “ROAD CONSTRUCTION AHEAD” SIGNS

**Article 701.14 Signs (b)** Work Zone Speed Limit Signs shall be revised to read:

- (b) Work Zone Speed Limit Signs. The Lake County Division of Transportation will specify whether a project meets the criteria for a Work Zone Speed Limit. When specified, the work zone speed limit signs shall be installed as shown on the LCDOT Work Zone Speed Limit Signing Diagram, LC7203, at a maximum of 20 feet lateral distance of the locations shown on the plans. Failure to install and maintain the required amount of signs at the proper sign spacing shall result in an immediate traffic control deficiency.

All permanent “SPEED LIMIT” signs located within the work zone shall be removed or covered. If the speed limit sign is to be covered, it shall be done in a manner that no part of the legend shall be visible in any lighting condition. This work shall be completed by the Contractor after the method of covering the speed limit signs has been approved by the Engineer.

The work zone speed limit signs and the end work zone speed limit signs in advance of and at the end of the lane closure(s) shall be used for the duration of the closure(s).

The work zone speed limit signs will be removed when roadway conditions return to normal or when the construction project is suspended for more than 30 days.

**Article 701.14 Signs** shall be modified by adding the following section (c),

- (c) Temporary Construction Information Signs. When indicated in the traffic control plan or as directed by the Engineer the Contractor shall furnish, install, maintain, relocate, and remove for various stages of construction Temporary Construction Information Signs.

Temporary Construction Information Signs may include:

Driveway	White Legend on Green Background
Caution – New Lanes Open	Black Legend on Orange Background

The signs, as shown on Lake County Detail LC7201, shall be installed according to the traffic control plan and/or as directed by the Engineer.

**Article 701.15 Traffic Control Devices** (b) Type I, II and III Barricades shall be deleted and replaced with the following:

Type II barricades shall be used at all locations that call for Type I, or Type II barricades.

Type II barricades are used to channelize traffic; to delineate unattended obstacles, patches, excavations, drop-offs, and other hazards; and as check barricades

Any drop off greater than three inches, but less than six inches, located within eight feet of the pavement edge shall be protected by Type II barricades equipped with mono-directional steady burn lights. The barricades shall be placed at a spacing of 100 feet center to center. For any drop off within eight feet of the pavement edge that exceeds six inches, the Type II barricades equipped with mono-directional steady burn lights shall be placed at a spacing of 50 feet center to center. Barricades that must be placed in excavated areas shall have leg extensions installed so that the top of the barricade is in compliance with the height requirements of IDOT Standard 701901.

Check barricades shall be placed in work areas perpendicular to traffic every 1,000 feet, at one per lane and one per shoulder, to prevent motorists from using work areas as a traveled way. Two additional check barricades shall be placed in advance of each patch excavation or any other hazard in the work area. The first will be placed at the edge of the open traffic lane and the second centered on the closed lane. Check barricades shall be Type II and equipped with flashing amber light.

Type III barricades are used to close traffic lanes and to close roads.

**Article 701.15 Traffic Control Devices (e)** Direction Indicator Barricades shall be modified by adding the following paragraph.

The direction indicator barricades shall meet the requirements for Type II barricades as stated in this special provision. The top panel, which faces traffic, shall be as shown in IDOT Highway Standard 701901. The top panel, facing away from traffic shall have a 12 inch x 24 inch orange and white diagonal panel. The bottom panels shall be eight inches x 24 inches with orange and white diagonal sheeting, as shown in LCDOT's Special Detail LC7200.

**Article 701.15 Traffic Control Devices (j)** Portable Changeable Message Signs shall be modified by adding the following paragraphs:

The PCMS shall be compatible and fully functional with the LCDOT's Transportation Management Center PASSAGE PCMS Control Software. A list of approved PCMS's manufacturers and traffic control vendors is available upon request from the LCDOT. The PCMS shall be tested and approved by the LCDOT and can be sufficiently controlled by the LCDOT NTCIP compliant software. If the PCMS has not been tested or approved by either the Illinois State Toll Highway Authority or the LCDOT then the PCMS will need to be tested and certified by the Delcan Corporation at the Contractor's expense.

Lake County Division of Transportation (PASSAGE)  
Software Developer:  
Delcan  
650 East Algonquin Road, Suite 101  
Schaumburg, IL 60173

In case of a Traffic Incident Management (TIM) event or other County/State declared Emergency Management event, the use of the PCMS may be pre-empted from the Contractor's use by the Lake County Transportation Management Center for the duration of the incident. If the PCMS must be moved from the limits of the work site to an offsite location to better facilitate

the use of the PCMS during the incident, the Contractor will be compensated for the labor and equipment to move the PCMS to the designated location and back, according to Article 109.04 (b) of the "Standard Specifications". In order to facilitate the movement of the PCMS in a timely manner, the LCDOT may use County Forces to move the PCMS to the designated location and/or back, at no additional cost to the Contractor.

When the sign(s) are displaying messages, they shall be considered a traffic control device. At all other times when no message is displayed, they shall be considered equipment.

**Basis of Payment.** Changeable message signs will be paid for at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN, as stated in Article 701.20 of this special provision.

**Article 701.17 Specific Construction Operations (c) Surface Courses and Pavement (1)** Prime Coat shall be replaced by the following:

- (1) Prime Coat. "FRESH OIL" signs (W21-2) shall be used when the prime coat is applied to pavement that is open to traffic. The signs shall remain in place until tracking of the prime ceases. These signs shall be erected a minimum of 500 feet preceding the start of the prime and on all side roads within the posted area. The signs on the side roads shall be posted a minimum of 200 feet from the mainline pavement. These signs are excluded from the time requirements of Article 701.04 of the "Standard Specifications" as modified by this special provision (above). Non-compliance with the provisions of this section, by the Contractor, shall result in an immediate traffic control deficiency deduction. All signs shall have an amber flashing light attached.

**Article 701.17 Specific Procedures (c) Surface Courses and Pavement (2) Cold Milling** shall be replaced by the following:

- (2) Cold Milling. "ROUGH GROOVED SURFACE" signs (W8-I107) shall be used when the road has been cold milled and is open to traffic. The signs shall remain in place until the milled surface condition no longer exists. These signs shall be erected a minimum of 500 feet preceding the start of the milled pavement and on all side roads within the posted area. The signs on the side roads shall be posted a minimum of 200 feet from the mainline pavement. Non-compliance with the provisions of this section, by the Contractor, shall result in an immediate traffic control deficiency deduction. All signs shall have an amber flashing light attached.

**Article 701.17 Specific Procedures** (c) Surface Course and Pavement shall be modified by adding the following paragraph:

- (6) Area Reflective Crack Control Treatment Fabric. "SLIPPERY WHEN WET" signs (W8-5) shall be used when crack control fabric is applied to pavement that is open to traffic. These signs shall remain in place until the binder course is laid. The signs shall be erected a minimum of 500 feet preceding the start of the crack control treatment and on all side roads within the posted area. The signs on the side roads shall be posted a minimum of 200 feet from the mainline pavement. These signs are excluded from the time requirements of Article 701.04 of the "Standard Specifications" as modified by this special provision (above). Non-compliance with the provisions of this section, by the Contractor, shall result in an immediate traffic control deficiency deduction. All signs shall have an amber flashing light attached.

**Article 701.18 Highway Standards Application** (b) Standard 701316 and 701321 (2) g. Detector Loops, shall be replaced with the following:

- g. Detection. Microwave Vehicle Sensors shall be installed as directed by the Engineer. The LCDOT shall approve the proposed microwave vehicle sensor before the Contractor may furnish or install it. The Contractor shall install, wire and adjust the alignment of the sensor according to the manufacturer's recommendations and requirements. The Engineer shall approve the installation. An alternate method of detection may be used if it has been demonstrated and approved by the Department.

The microwave vehicle sensor shall meet the following requirements:

- Detection Range: Adjustable to 60 feet
- Detection Angle: Adjustable, horizontal and vertical
- Detection Pattern: 16 degree beam width minimum [at 50 feet the pattern shall be approximately 15.5 feet wide]
- Mounting: Heavy-duty bracket, predrilled and slotted for pole mounting
- LED Indicator Light: For detection verification

**Article 701.18 Highway Standards Application** (j) Urban Traffic Control, Standards 701501, 701502, 701601, 701602, 701606, 701701, and 701801 (1) General, shall be modified by adding the following paragraphs:

Whenever a lane is closed to traffic using IDOT standard 701601, 701606, or 701701, the pavement width transition sign (W4-2R or W4-2L) shall be used in lieu of the "WORKERS" sign (W21-1 or W21-1a)

Whenever any vehicle, equipment, workers or their activities infringe on the shoulder or within 15 feet of the traveled way, and the traveled way remains unobstructed, then the applicable Traffic Control Standard shall be 701006, 701011, 701101, or 701701. The "SHOULDER WORK AHEAD" sign (W21-5(0)-48) shall be used in lieu of the "WORKERS" sign (W21-1 or W-21-1a).

**Article 701.18 Highway Standards Application** shall be modified by adding the following section (l):

- (l) IDOT standard 701331. When IDOT standard 701331 is specified on two-lane, two-way roadways, a "LANE SHIFT AHEAD" sign shall be added 500 feet in advance of W1-3 or W1-4 sign. The Road Work sign (W20-1) shall be extended to a total of 1500' from the start of the lane shift.

**Article 701.19 Method of Measurement** shall be replaced completely with the following:

**701.19 Method of Measurement.**

These items of work will be measured on a lump sum basis for furnishing installing, maintaining, replacing, relocating and removing the traffic control devices required in the plans and these special provisions.

**Article 701.20 Basis of Payment** shall be replaced completely with the following:

**701.20 Basis of Payment**

This work will be paid for at the contract unit price per lump sum for TRAFFIC CONTROL AND PROTECTION (SPECIAL). The payment will be in full for all labor, materials, transportation, and incidentals necessary to furnish, install, maintain, replace, relocate and remove all traffic control devices indicated in the plans and specifications, except for the following items, which will be paid for separately.

- 1) Temporary Bridge Traffic Signals
- 2) Temporary Rumble Strips [where each is defined as 25 feet]
  
- 3) Temporary Raised Pavement Markers
- 4) Sand module impact attenuators
- 5) Portable Changeable Message Signs
- 6) Temporary Concrete Barrier
- 7) Temporary Pavement Marking-Letters and Symbols
- 8) Temporary Pavement Marking-Line at width specified

The salvage value of the materials removed shall be reflected in the bid price for this item.

Any delays or inconveniences incurred by the Contractor while complying with these requirements shall be considered as part of TRAFFIC CONTROL AND PROTECTION (SPECIAL) and no additional compensation will be allowed.

Any traffic control devices required by the Engineer to implement the Traffic Control Plan as shown in the plans and specifications of the contract shall be considered included in the pay item TRAFFIC CONTROL AND PROTECTION (SPECIAL).

If the Engineer requires additional work involving a substantial change of location and/or work which differs in design and/or work requiring a change in the type of construction, as stated in Article 104.02(d) of the "Standard Specifications", the standards and/or the designs, other than those required in the plans, will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for any additional traffic control required for the reasons listed above will be in accordance with Article 109.04 of the "Standard Specifications".

Revisions in the phasing of construction or maintenance operations, requested by the Contractor, may require traffic control to be installed according to standards and/or designs other than those included in the plans. The Contractor shall submit revisions or modifications to the traffic control plan shown in the contract to the Engineer for approval. No additional payment will be made for a Contractor requested modification.

In the event the sum total of all work items for which traffic control and protection is required is increased or decreased by more than ten percent, the contract bid price for TRAFFIC CONTROL AND PROTECTION will be adjusted as follows:

$$\text{Adjusted Contract Price} = 0.25P + 0.75P [1 \pm (X - 0.1)]$$

P = the contract price for TRAFFIC CONTROL AND PROTECTION (SPECIAL)

$$X = \frac{\text{Difference between original and final value of work for which traffic control and protection is required.}}{\text{Original value of work for which traffic control and protection is required.}}$$

The value of the work items used in calculating the increase and decrease will include only items that have been added to or deducted from the contract under Article 104.02 of the "Standard Specifications" and only items that require the use of TRAFFIC CONTROL AND PROTECTION (SPECIAL).

In the event LCDOT cancels or alters any portion of the contract that result in the elimination or incompleteness of any portion of the work, payment for partially completed work will be made according to Article 104.02 of the "Standard Specifications".



The following Special Provisions and Supplemental Specifications approved by the State of Illinois Department of Transportation are applicable for this work and are on file in the office of the Lake County Engineer. Copies are available to prospective bidders upon request.

- Fair Employment Practices, Form LRS11, amended to conform to the latest “Equal Employment Opportunity Clause” required by the Illinois Fair Employment Practices Commission as a material form of all public contracts.
- Prevailing Wage Rates for the County of Lake

State of Illinois  
Department of Transportation  
Bureau of Local Roads and Streets

SPECIAL PROVISION  
FOR  
EMPLOYMENT PRACTICES

Effective: January 1, 1999

In addition to all other labor requirements set forth in this proposal and in the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation, during the performance of this contract, the Contractor for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

**Selection of Labor.** The Contractor shall comply with all Illinois statutes pertaining to the selection of labor.

**Equal Employment Opportunity.** During the performance of this contract, the Contractor agrees as follows:

- (a) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, ancestry, age, marital status, physical or mental handicap or unfavorable discharge from military service, and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
- (b) That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
- (c) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, national origin, ancestry, age, martial status, physical or mental handicap or unfavorable discharge from military service.

That it will send to each labor organization or representative of workers with which it has or is bound by collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with so such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

## CHECK SHEET #LRS11

- (e) That it will submit reports as required by the Department of Human Rights Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.
- (f) That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.
- (g) That it will include verbatim or by reference the provisions of this clause in every subcontract so that such provisions will be binding upon every such subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by all its subcontractors; and further it will promptly notify the contracting agency and the Illinois Department of Human Rights in the event any subcontractor fails or refuses to comply therewith. In addition, the Contractor will not utilize any subcontractor declared by the subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

## Lake County Prevailing Wage for July 2015

(See explanation of column headings at bottom of wages)

Trade Name	RG	TYP	C	Base	FRMAN	M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
=====	==	===	=	=====	=====	=====	===	===	=====	=====	=====	=====
ASBESTOS ABT-GEN		ALL		39.400	39.950	1.5	1.5	2.0	13.98	10.72	0.000	0.500
ASBESTOS ABT-MEC		BLD		36.340	38.840	1.5	1.5	2.0	11.47	10.96	0.000	0.720
BOILERMAKER		BLD		47.070	51.300	2.0	2.0	2.0	6.970	18.13	0.000	0.400
BRICK MASON		BLD		43.780	48.160	1.5	1.5	2.0	10.05	14.43	0.000	1.030
CARPENTER		ALL		44.350	46.350	1.5	1.5	2.0	11.79	16.39	0.000	0.630
CEMENT MASON		ALL		42.050	44.050	2.0	1.5	2.0	10.00	19.24	0.000	0.500
CERAMIC TILE FNSHER		BLD		36.810	0.000	1.5	1.5	2.0	10.55	9.230	0.000	0.770
COMMUNICATION TECH		BLD		35.130	37.230	1.5	1.5	2.0	11.07	11.77	0.000	0.530
ELECTRIC PWR EQMT OP		ALL		0.000	0.000	0.0	0.0	0.0	0.000	0.000	0.000	0.000
ELECTRIC PWR EQMT OP		HWY		39.220	53.290	1.5	1.5	2.0	5.000	12.17	0.000	0.390
ELECTRIC PWR GRNDMAN		ALL		30.330	53.290	1.5	1.5	2.0	5.000	9.400	0.000	0.300
ELECTRIC PWR GRNDMAN		HWY		30.330	53.290	1.5	1.5	2.0	5.000	9.400	0.000	0.300
ELECTRIC PWR LINEMAN		ALL		45.360	51.480	1.5	1.5	2.0	5.000	14.06	0.000	0.450
ELECTRIC PWR LINEMAN		HWY		46.950	53.290	1.5	1.5	2.0	5.000	14.56	0.000	0.470
ELECTRIC PWR TRK DRV		ALL		30.340	51.480	1.5	1.5	2.0	5.000	9.400	0.000	0.300
ELECTRIC PWR TRK DRV		HWY		31.400	53.290	1.5	1.5	2.0	5.000	9.730	0.000	0.310
ELECTRICIAN		BLD		39.400	43.340	1.5	1.5	2.0	13.59	15.71	0.000	0.640
ELEVATOR CONSTRUCTOR		BLD		50.800	57.150	2.0	2.0	2.0	13.57	14.21	4.060	0.600
FENCE ERECTOR		ALL		37.340	39.340	1.5	1.5	2.0	13.05	12.06	0.000	0.300
GLAZIER		BLD		40.500	42.000	1.5	2.0	2.0	13.14	16.99	0.000	0.940
HT/FROST INSULATOR		BLD		48.450	50.950	1.5	1.5	2.0	11.47	12.16	0.000	0.720
IRON WORKER		ALL		44.200	46.200	2.0	2.0	2.0	13.65	21.14	0.000	0.350
LABORER		ALL		39.200	39.950	1.5	1.5	2.0	13.98	10.72	0.000	0.500
LATHER		ALL		44.350	46.350	1.5	1.5	2.0	11.79	16.39	0.000	0.630
MACHINIST		BLD		45.350	47.850	1.5	1.5	2.0	7.260	8.950	1.850	0.000
MARBLE FINISHERS		ALL		32.400	34.320	1.5	1.5	2.0	10.05	13.75	0.000	0.620
MARBLE MASON		BLD		43.030	47.330	1.5	1.5	2.0	10.05	14.10	0.000	0.780
MATERIAL TESTER I		ALL		29.200	0.000	1.5	1.5	2.0	13.98	10.72	0.000	0.500
MATERIALS TESTER II		ALL		34.200	0.000	1.5	1.5	2.0	13.98	10.72	0.000	0.500
MILLWRIGHT		ALL		44.350	46.350	1.5	1.5	2.0	11.79	16.39	0.000	0.630
OPERATING ENGINEER		BLD	1	48.100	52.100	2.0	2.0	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		BLD	2	46.800	52.100	2.0	2.0	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		BLD	3	44.250	52.100	2.0	2.0	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		BLD	4	42.500	52.100	2.0	2.0	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		BLD	5	51.850	52.100	2.0	2.0	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		BLD	6	49.100	52.100	2.0	2.0	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		BLD	7	51.100	52.100	2.0	2.0	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		FLT	1	53.600	53.600	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		FLT	2	52.100	53.600	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		FLT	3	46.400	53.600	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		FLT	4	38.550	53.600	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		FLT	5	55.100	53.600	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		FLT	6	35.000	35.000	1.5	1.5	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		HWY	1	46.300	50.300	1.5	1.5	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		HWY	2	45.750	50.300	1.5	1.5	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		HWY	3	43.700	50.300	1.5	1.5	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		HWY	4	42.300	50.300	1.5	1.5	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		HWY	5	41.100	50.300	1.5	1.5	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		HWY	6	49.300	50.300	1.5	1.5	2.0	17.55	12.65	1.900	1.250
OPERATING ENGINEER		HWY	7	47.300	50.300	1.5	1.5	2.0	17.55	12.65	1.900	1.250
ORNAMNTL IRON WORKER		ALL		45.000	47.500	2.0	2.0	2.0	13.55	17.94	0.000	0.650
PAINTER		ALL		41.750	46.500	1.5	1.5	1.5	11.50	11.10	0.000	0.770
PAINTER SIGNS		BLD		33.920	38.090	1.5	1.5	1.5	2.600	2.710	0.000	0.000
PILEDRIVER		ALL		44.350	46.350	1.5	1.5	2.0	11.79	16.39	0.000	0.630
PIPEFITTER		BLD		46.000	49.000	1.5	1.5	2.0	9.000	15.85	0.000	1.780
PLASTERER		BLD		43.430	46.040	1.5	1.5	2.0	13.05	14.43	0.000	1.020
PLUMBER		BLD		46.650	48.650	1.5	1.5	2.0	13.18	11.46	0.000	0.880
ROOFER		BLD		41.000	44.000	1.5	1.5	2.0	8.280	10.54	0.000	0.530
SHEETMETAL WORKER		BLD		42.230	45.610	1.5	1.5	2.0	10.53	20.68	0.000	0.720
SIGN HANGER		BLD		31.310	33.810	1.5	1.5	2.0	4.850	3.280	0.000	0.000
SPRINKLER FITTER		BLD		49.200	51.200	1.5	1.5	2.0	11.75	9.650	0.000	0.550
STEEL ERECTOR		ALL		42.070	44.070	2.0	2.0	2.0	13.45	19.59	0.000	0.350
STONE MASON		BLD		43.780	48.160	1.5	1.5	2.0	10.05	14.43	0.000	1.030
<del>SURVEY WORKER</del>												
				-->NOT IN EFFECT	ALL		37.000	37.750	1.5	1.5	2.0	12.97 9.930 0.000 0.500

TERRAZZO FINISHER	BLD	38.040	0.000	1.5	1.5	2.0	10.55	11.22	0.000	0.720
TERRAZZO MASON	BLD	41.880	44.880	1.5	1.5	2.0	10.55	12.51	0.000	0.940
TILE MASON	BLD	43.840	47.840	1.5	1.5	2.0	10.55	11.40	0.000	0.990
TRAFFIC SAFETY WRKR	HWY	32.750	34.350	1.5	1.5	2.0	6.550	6.450	0.000	0.500
TRUCK DRIVER	ALL 1	36.560	36.760	1.5	1.5	2.0	9.070	7.050	0.000	0.000
TRUCK DRIVER	ALL 2	36.000	36.400	1.5	1.5	2.0	7.200	6.000	0.000	0.150
TRUCK DRIVER	ALL 3	36.200	36.400	1.5	1.5	2.0	7.200	6.000	0.000	0.150
TRUCK DRIVER	ALL 4	36.400	36.400	1.5	1.5	2.0	7.200	6.000	0.000	0.150
TUCKPOINTER	BLD	43.800	44.800	1.5	1.5	2.0	8.280	13.49	0.000	0.670

**Legend:** RG (Region)  
 TYP (Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers)  
 C (Class)  
 Base (Base Wage Rate)  
 FRMAN (Foreman Rate)  
 M-F>8 (OT required for any hour greater than 8 worked each day, Mon through Fri.  
 OSA (Overtime (OT) is required for every hour worked on Saturday)  
 OSH (Overtime is required for every hour worked on Sunday and Holidays)  
 H/W (Health & Welfare Insurance)  
 Pensn (Pension)  
 Vac (Vacation)  
 Trng (Training)

**Explanations**

**LAKE COUNTY**

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

**EXPLANATION OF CLASSES**

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

**CERAMIC TILE FINISHER**

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scariying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

**COMMUNICATION TECHNICIAN**

Low voltage construction, installation, maintenance and removal of

telecommunication facilities (voice, sound, data and video) including outside plant, telephone, security systems and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area network), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

#### MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

#### OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

#### OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types; Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

#### OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Master Mechanic; Diver/Wet Tender; Engineer; Engineer (Hydraulic Dredge).

Class 2. Crane/Backhoe Operator; Boat Operator with towing endorsement; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender.

Class 3. Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more); Tug/Launch Operator; Loader/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock, or Scow, Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks; Deck Hand, Tug Engineer, Crane Maintenance (50 Ton Capacity and Under) or Backhoe Weighing (115,000 pounds or less); Assistant Tug Operator.

Class 5. Friction or Lattice Boom Cranes.

Class 6. ROV Pilot, ROV Tender

SURVEY WORKER - Operated survey equipment including data collectors, G.P.S. and robotic instruments, as well as conventional levels and transits.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

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CHECK SHEET  
FOR  
RECURRING SPECIAL PROVISIONS

Adopted April 1, 2016

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

<u>CHECK SHEET #</u>	<u>RECURRING SPECIAL PROVISIONS</u>	<u>PAGE NO.</u>
1	<input type="checkbox"/> Additional State Requirements for Federal-Aid Construction Contracts	1
2	<input type="checkbox"/> Subletting of Contracts (Federal-Aid Contracts)	4
3	<input type="checkbox"/> EEO	5
4	<input type="checkbox"/> Specific EEO Responsibilities Non Federal-Aid Contracts	15
5	<input type="checkbox"/> Required Provisions - State Contracts	20
6	<input type="checkbox"/> Asbestos Bearing Pad Removal	26
7	<input type="checkbox"/> Asbestos Waterproofing Membrane and Asbestos Hot-Mix Asphalt Surface Removal	27
8	<input type="checkbox"/> Temporary Stream Crossings and In-Stream Work Pads	28
9	<input type="checkbox"/> Construction Layout Stakes Except for Bridges	29
10	<input type="checkbox"/> Construction Layout Stakes	32
11	<input type="checkbox"/> Use of Geotextile Fabric for Railroad Crossing	35
12	<input type="checkbox"/> Subsealing of Concrete Pavements	37
13	<input type="checkbox"/> Hot-Mix Asphalt Surface Correction	41
14	<input type="checkbox"/> Pavement and Shoulder Resurfacing	43
15	<input type="checkbox"/> Patching with Hot-Mix Asphalt Overlay Removal	44
16	<input type="checkbox"/> Polymer Concrete	45
17	<input type="checkbox"/> PVC Pipeliner	47
18	<input type="checkbox"/> Bicycle Racks	48
19	<input type="checkbox"/> Temporary Portable Bridge Traffic Signals	50
20	<input type="checkbox"/> Work Zone Public Information Signs	52
21	<input type="checkbox"/> Nighttime Inspection of Roadway Lighting	53
22	<input type="checkbox"/> English Substitution of Metric Bolts	54
23	<input type="checkbox"/> Calcium Chloride Accelerator for Portland Cement Concrete	55
24	<input type="checkbox"/> Quality Control of Concrete Mixtures at the Plant	56
25	<input checked="" type="checkbox"/> Quality Control/Quality Assurance of Concrete Mixtures	64
26	<input type="checkbox"/> Digital Terrain Modeling for Earthwork Calculations	80
27	<input type="checkbox"/> Pavement Marking Removal	82
28	<input type="checkbox"/> Preventive Maintenance – Bituminous Surface Treatment	83
29	<input type="checkbox"/> Preventive Maintenance – Cape Seal	89
30	<input type="checkbox"/> Preventive Maintenance – Micro-Surfacing	104
31	<input type="checkbox"/> Preventive Maintenance – Slurry Seal	115
32	<input type="checkbox"/> Temporary Raised Pavement Markers	125
33	<input type="checkbox"/> Restoring Bridge Approach Pavements Using High-Density Foam	126

CHECK SHEET  
FOR  
LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

Adopted April 1, 2016

The following LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

<u>CHECK SHEET #</u>		<u>PAGE NO.</u>
LRS 1	<b>Reserved</b> .....	130
LRS 2	<input type="checkbox"/> Furnished Excavation .....	131
LRS 3	<input checked="" type="checkbox"/> Work Zone Traffic Control Surveillance .....	132
LRS 4	<input checked="" type="checkbox"/> Flaggers in Work Zones .....	133
LRS 5	<input checked="" type="checkbox"/> Contract Claims .....	134
LRS 6	<input checked="" type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals .....	135
LRS 7	<input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals .....	141
LRS 8	<b>Reserved</b> .....	147
LRS 9	<input type="checkbox"/> Bituminous Surface Treatments .....	148
LRS 10	<b>Reserved</b> .....	149
LRS 11	<input checked="" type="checkbox"/> Employment Practices .....	150
LRS 12	<input checked="" type="checkbox"/> Wages of Employees on Public Works .....	152
LRS 13	<input checked="" type="checkbox"/> Selection of Labor .....	154
LRS 14	<input type="checkbox"/> Paving Brick and Concrete Paver Pavements and Sidewalks .....	155
LRS 15	<input checked="" type="checkbox"/> Partial Payments .....	158
LRS 16	<input checked="" type="checkbox"/> Protests on Local Lettings .....	159
LRS 17	<input checked="" type="checkbox"/> Substance Abuse Prevention Program .....	160
LRS 18	<input type="checkbox"/> Multigrade Cold Mix Asphalt .....	161

**WORKING DAYS (BDE)**

Effective: January 1, 2002

The Contractor shall complete the work within 30 working days.

80071

## ERRATA FOR THE 2016 STANDARD SPECIFICATIONS (BDE)

Effective: April 1, 2016

- Page 84 Article 204.02. In the seventh line of the first paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.
- Page 90 Article 205.06. In the first sentence of the third paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.
- Page 91 Article 205.06. In the first sentence of the fourth paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”, and in the second sentence change “AASHTO T 224” to “Illinois Modified AASHTO T 99 (Annex A1)”.
- Page 91 Article 205.06. In the second line of the fifth paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”.
- Page 91 Article 205.06. In the sixth line of the eighth paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.
- Page 148 Article 302.09. In the second sentence of the fifth paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”, and in the third sentence change “AASHTO T 99” to “Illinois Modified AASHTO T 99”.
- Page 152 Article 310.09. In the second sentence of the second paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”, and in the third sentence change “AASHTO T 99” to “Illinois Modified AASHTO T 99”.
- Page 155 Article 311.05(a). In the first sentence of the fifth paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”, and in the second sentence change “AASHTO T 224” to “Illinois Modified AASHTO T 99 (Annex A1)”.
- Page 155 Article 311.05(a). In the second line of the sixth paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”.
- Page 163 Article 351.05(a). In the second sentence of the fifth paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”, and in the third sentence change “AASHTO T 224” to “Illinois Modified AASHTO T 99 (Annex A1)”.
- Page 163 Article 351.05(a). In the second line of the sixth paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”.
- Page 169 Article 352.11. In the second sentence of the fourth paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”, and in the third sentence change “AASHTO T 134 (Method B)” to “Illinois Modified AASHTO T 134 (Method B)”.

Page 169 Article 352.12. In the first sentence of the first paragraph change “AASHTO T 22” to “Illinois Modified AASHTO T 22”, and in the second sentence change “AASHTO T 134 (Method B)” to “Illinois Modified AASHTO T 134 (Method B)”.

Page 196 Article 406.07(a). After the footnotes in Table 1 - Minimum Roller Requirements for HMA add the following:

“EQUIPMENT DEFINITION

V<sub>s</sub> - Vibratory roller, static mode, minimum 125 lb/in. (2.2 kg/mm) of roller width. Maximum speed = 3 mph (5 km/h) or 264 ft/min (80 m/min). If the vibratory roller does not eliminate roller marks, its use shall be discontinued and a tandem roller, adequately ballasted to remove roller marks, shall be used.

V<sub>D</sub> - Vibratory roller, dynamic mode, operated at a speed to produce not less than 10 impacts/ft (30 impacts/m).

P - Pneumatic-tired roller, max. speed 3 1/2 mph (5.5 km/h) or 308 ft/min (92 m/min). The pneumatic-tired roller shall have a minimum tire pressure of 80 psi (550 kPa) and shall be equipped with heat retention shields. The self-propelled pneumatic-tired roller shall develop a compression of not less than 300 lb (53 N) nor more than 500 lb (88 N) per in. (mm) of width of the tire tread in contact with the HMA surface.

T<sub>B</sub> - Tandem roller for breakdown rolling, 8 to 12 tons (7 to 11 metric tons), 250 to 400 lb/in. (44 to 70 N/mm) of roller width, max. speed = 3 1/2 mph (5.5 km/h) or 308 ft/min (92 m/min).

T<sub>F</sub> - Tandem roller for final rolling, 200 to 400 lb/in. (35 to 70 N/mm) of roller width with minimum roller width of 50 in. (1.25 m). Ballast shall be increased if roller marks are not eliminated. Ballast shall be decreased if the mat shoves or distorts.

3W - Three wheel roller, max. speed = 3 mph (5 km/h) or 264 ft/min (80 m/min), 300 to 400 lb/in. (53 to 70 N/mm) of roller width. The three-wheel roller shall weigh 10 to 12 tons (9 to 11 metric tons).”

Page 331 Article 505.04(p). Under Range of Clearance in the first table change “in. x 10<sup>-6</sup>” to “in. x 10<sup>-3</sup>”.

Page 444 Article 542.03. In the Notes in Table IIIB add “CPP Corrugated Polypropylene (CPP) pipe with smooth interior”.

- Page 445 Article 542.03. In the fourth column in Table IIIB (metric) change the heading for Type 5 pipe from “CPE” to “CPP”.
- Page 445 Article 542.03. In the Notes in Table IIIB (metric) change “PE Polyethylene (PE) pipe with a smooth interior” to “CPP Corrugated Polypropylene (CPP) pipe with smooth interior”.
- Page 449 Article 542.04(f)(2). In the third line of the second paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.
- Page 544 Article 639.03. In the first sentence of the first paragraph change “AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, Traffic Signals,” to “AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals,””.
- Page 546 Article 640.03. In the first sentence of the first paragraph change “AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals” to “AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals””.
- Page 548 Article 641.03. In the first sentence of the first paragraph change “AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaire and Traffic Signals,” to “AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals,””.
- Page 621 Article 727.03. In the first sentence of the third paragraph change “AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals” to “AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals””.
- Page 629 Article 734.03(a). In the fourth line of the second paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.
- Page 649 Article 801.02. In the first sentence of the first paragraph change “AASHTO’s Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals” to “AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals””.
- Page 742 Article 1003.04(c). Under Gradation in the table change “(see Article 1003.02(c))” to “(see Article 1003.01(c))”.
- Page 755 Article 1004.03(b). Revise the third sentence of the first paragraph to read “For Class A (seal or cover coat), and other binder courses, the coarse aggregate shall be Class C quality or better.”.

- Page 809 Article 1020.04(e). In the third line of the first paragraph change “ITP SCC-3” to “ITP SCC-4”.
- Page 945 Article 1069.05. In the first sentence of the tenth paragraph change ““Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”” to “AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals””.
- Page 961 Article 1070.04(b)(1). In the third sentence of the first paragraph change ““Standard Specifications of Structural Supports for Highway Signs, Luminaires and Traffic Signals” published by AASHTO” to “AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals””.
- Page 989 Article 1077.01. In the second sentence of the first paragraph change “Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, as published by AASHTO” to “AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals””.
- Page 1121 Article 1103.13(a). In the first line of the first paragraph change “Bridge Deck Approach Slabs.” to “Bridge Deck and Approach Slabs.”.

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Print Form

Reset Form

A. Submittal Date  Requesting Agency DOH DOA Local Other  Addendum #   
 Previous survey request(s) submitted for this  Yes  No Date(s) of prior submittal(s)

B. Route  Marked  County(ies)  District   
 McClory Bike Path  Lake   
 Section  Project Number  Job Number  Contract Number   
 16-00173-14-BR  P-  C-

C. Borrow Location (Legal Description - indicate section, sub-section, township, range, and street address, if available.)   
 Limits staked in field:  Yes  No Specify if:  Staked Corners  Approximate Center  
 Latitude  Longitude  County(ies)

D.  yds<sup>3</sup> ( m<sup>3</sup>) borrow from this area Borrow Area Size:  acres ( ha)  
 Current Land Use (Check each which applies):  Timber  Row Crops  Pasture  Other (Describe)   
 Tree Removal  Yes  No Number  Acres

E. Name of Contractor  Contact Person  Phone   
 Address   
 Name of District Local Resident Engineer  Phone  E-mail

F. Has the site been cleared by IDOT for cultural resources within the past 5 years?  
 Yes  No  Unknown

G. The request is number  of  requests for this project.

- ATTACHMENTS REQUIRED:**
1. Ground Level Color Photos
  2. U.S.G.S. 7.5' Topo. Quad. Map
  3. Aerial Photo
  4. Landowner Agreement (See page 2)
  5. Sketched Map with Landmarks

**LEAVE THIS SPACE BLANK**



# Landowner Agreement For BDE 2289



Print Form

Reset Form

To whom it may concern:

I (we), said property owner(s),

\_\_\_\_\_  
(Name and Address of the Property Owner)

do hereby grant to the Illinois State Archeological Survey (ISAS), or their agents acting on behalf of Illinois Department of Transportation, permission to survey and/or test excavate said property, located:

\_\_\_\_\_  
(Indicate location of property by county, section, sub-section, township, range)

\_\_\_\_\_  
(Signature of Property Owner)

\_\_\_\_\_  
(Name of Property Owner)

\_\_\_\_\_  
(Address of Property Owner)

I (we),

\_\_\_\_\_  
(Name)

owner(s) of said property, do hereby grant permission for ISAS, or their agents, acting on behalf of the Illinois Department of Transportation, to remove artifacts and scientific samples from said property and agree that all artifacts and samples shall remain in public ownership, in the custody of ISAS at the University of Illinois, Urbana-Champaign.

\_\_\_\_\_  
(Signature of Property Owner)

\_\_\_\_\_  
(Name of Property Owner)

\_\_\_\_\_  
(Address of Property Owner)

\_\_\_\_\_  
(Phone Number of Owner)



Print Form

Reset Form

A. Submittal Date  Requesting Agency  DOH  DOA  Local  Other  Addendum #   
 Previous survey request(s) submitted for this  Yes  No Date(s) of prior submittal(s)

B. Route  Marked  County(ies)  District   
 McClory Bike Path  Lake   
 Section  Project Number  Job Number  Contract Number   
 16-00173-14-BR  P-  C-

C. Will the use area require excavation more than 6 inches in depth?  Yes  No  N/A  
 If yes, a written approval from the BDE Cultural Resources Unit is required.

D.  Waste /  Use Area (Legal Description - indicate section, subsection, township, range, and street address, if available.)   
 Latitude  Longitude  County(ies)

E. Waste/Use Area Size:  acres (  ha)  
 Current Land Use (Check each which applies):  Timber  Row Crops  Pasture  Other (Describe)   
 Tree Removal  Yes  No Number  Acres

F. Name of Contractor  Contact Person  Phone   
 Address  Name of District/Local Resident Engineer  Phone

G. Has the site been cleared by IDOT for cultural resources within the past 5 years?  
 Yes  No  Unknown

H. The request is number  of  requests for this project.

- ATTACHMENTS REQUIRED:**
1. Ground Level Color Photos
  2. U.S.G.S. 7.5' Topo. Quad. Map
  3. Aerial Photo
  4. Landowner Agreement (See page 2)
  5. Sketched Map with Landmarks

**LEAVE THIS SPACE BLANK**

**Landowner Agreement  
For BDE 2290**



Print Form

Reset Form

To whom it may concern:

I (we), said property owner(s),

---

(Name and Address of the Property Owner)

do hereby grant to the contractors

---

(Name and Address of the Contractor)

Permission to deposit said materials from the construction project (Contract # \_\_\_\_\_) on my property as shown on the attached sketch and documentation.

---

(Indicate location of property by county, section, sub-section, township, range)

---

(Signature of Property Owner)

---

(Name of Property Owner)

---

(Address of Property Owner)

## BORROW/WASTE/USE AREAS

### Instructions

NOTE: PLEASE FILL OUT THE ENTIRE FORM. INCOMPLETE FORMS OR ATTACHMENTS WILL BE RETURNED FOR ADDITIONAL INFORMATION. If additional space is needed, incorporate necessary information in the transmittal memorandum. A TRANSMITTAL MEMORANDUM MUST BE SUBMITTED WITH EACH REQUEST FORM.

- Submit survey request at earliest possible date to ensure that construction schedules will be met.
- Complete and submit individual forms and attachments for each borrow area, haul road, plant site, staging/storage area, waste area, etc. to be surveyed.
- In order to avoid repeated trips to the same project site, indicate the number of requests being submitted for this project as the last entry on this form.

---

**A. Requesting Agency:** DOH – Division of Highways project  
DOA – Division of Aeronautic project  
DOWR – Division of Water Resources project  
Local – County or Municipality project

---

**B. Route:  
Marked:** FAP, FAI, FAU, CH, TR, etc.  
Illinois State route designations, U.S. route designations, etc.

---

**C. Borrow/Use Area  
Location:** Describe the location of borrow area(s), haul roads, plant sites, staging/storage area, waste area, etc. Include location map\* and plan sketch.

---

#### Submittals/Attachments:

- Transmittal Memorandum
- 1 original and 2 copies of this form, each with a location map\*, plan sketch and signed “Landowner Release Form”
- 3 set of plan view layouts with approximate ROW/easement limits
- 1 copy of **ground level photos is required.**

\* Copies from recent plat books are also very useful.

#### SUBMIT TO APPROPRIATE DISTRICT OFFICE FOR FORWARDING TO:

Bureau of Design & Environment  
Illinois Department of Transportation  
2300 South Dirksen Parkway, Room 330  
Springfield, IL 62764

Attn: Peter J. Frantz

For additional information, call 217/782-4770.

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SPECIAL PROVISION  
FOR  
CONSTRUCTION DEBRIS

Effective October 18, 1999

Add the following to the third paragraph of Article 202.03 of the Standard Specifications:

“The Contractor shall not conduct any generation, transportation, or recycling of construction or demolition debris, clean or general or uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads that is not commingled with any waste, without the maintenance of documentation identifying the hauler, generator, place of origin of the debris or soil, the weight or volume of the debris or soil, and the location, owner, and operator of the facility where the debris or soil was transferred , disposed, recycled or treated. This documentation must be maintained by the Contractor for 3 years.”

CONSTRUCTION DEBRIS MANIFEST

Ticket No. \_\_\_\_\_

Contract No. \_\_\_\_\_

Generator \_\_\_\_\_

Hauler \_\_\_\_\_

Truck No. \_\_\_\_\_

Description of Material

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Approximate Weight of Material \_\_\_\_\_

Approximate Volume of Material \_\_\_\_\_

Disposition of Material:

Location: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Owner: \_\_\_\_\_

Operator: \_\_\_\_\_

## **WORK IN IDOT RIGHT-OF-WAY PERMIT REQUIREMENTS**

The contractor shall be aware that a Highway Permit from the Illinois Department of Transportation will be required prior to the start of construction within their jurisdiction. LCDOT has applied for the permit and all comments received as of the date of the project advertising have been incorporated into the plans. The Contractor shall be required to complete the forms OPER 1045 (as witness), OPER 1046, and BSE 725 for submittal to IDOT. No work within the State Right-of-Way shall commence until the approved permit has been received.

The Contractor shall obtain the required permit bond – estimated to be \$20,000. All costs for bonds as specified herein will be considered as included in the cost of the contract.

**INTENTIONALLY**

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District Serial No. \_\_\_\_\_

Whereas, I (We) Lake County Division of Transportati . 600 W Winchester Road  
(Name of Applicant) (Mailing Address)

Libertyville IL hereinafter termed the Applicant,  
(City) (State)

request permission and authority to do certain work herein described on the right-of-way of the State Highway known as \_\_\_\_\_ Route IL 173 , Section 16-00173-14-BR , from Station 12+00 to Station 15+00 In Lake \_\_\_\_\_ County. The work is described in detail on the attached plan or sketch and/or as follows:

Perform repairs to the bridge abutments for Robert McClory Bike Path over IL 173. The repairs will consist of formed concrete repair and epoxy crack injection to the north bridge abutment, replacing the guardrail attached to the north bridge abutment, and the creation of an embankment cone for the south bridge abutment. Topsoil and seeding will be placed on top of the embankment cone. A decorative finish will be applied to the repaired north bridge abutment. Topsoil and seeding will be placed at the base of the north abutment.

All work authorized by this permit shall be completed \_\_\_\_\_ after the date this permit is approved, otherwise the permit becomes null and void.

**This permit is subject to the conditions and restrictions printed on the reverse side of this sheet.**

This permit is hereby accepted and its provisions agreed to this \_\_\_\_\_ day of \_\_\_\_\_ , \_\_\_\_\_

Witness \_\_\_\_\_  
\_\_\_\_\_  
Mailing Address  
\_\_\_\_\_  
City State

Signed \_\_\_\_\_  
Applicant  
600 W Winchester Road  
Mailing Address  
Libertyville IL  
City State

SIGN AND RETURN TO: Regional Engineer \_\_\_\_\_

Approved this \_\_\_\_\_ day of \_\_\_\_\_ , \_\_\_\_\_

Department of Transportation

BY: \_\_\_\_\_  
Regional Engineer

**First:** The Applicant represents and warrants that he/she is the party in interest respecting this Permit and that he/she is the agent in fact with authority to bind all parties in interest to the obligations and undertakings agreed to in this Permit. The Applicant represents and warrants that the property lines shown on the attached plan sheet(s) or sketch are true and correct, and that all proposed work is accurately depicted thereon.

**Second:** The proposed work shall be located and constructed to the satisfaction of the Regional Engineer or his/her duly authorized representative. No revisions or additions shall be made to the proposed work on the right-of-way without the written permission of the Regional Engineer. The Applicant agrees to complete all work to the standards and specifications identified by the Regional Engineer or his/her authorized representative as a condition of granting this Permit. The Applicant agrees to furnish all labor, equipment and material, and do all work and pay all costs associated with the work authorized by this Permit. The Applicant agrees to restore any and all damaged portions of the highway right-of-way to the condition satisfactory to the Regional Engineer or his/her authorized representative including, but not limited to, all landscape restoration. The Applicant shall not trim, cut or in any way disturb any trees or shrubbery along the highway without the approval of the Regional Engineer or his/her duly authorized representative. Any and all documents, writings and notes reflecting or identifying the standards, specifications, understandings and conditions applicable to the performance of the permitted work required by the Regional Engineer or his/her authorized representative are hereby incorporated into this Permit by reference as though fully set forth herein.

**Third:** The Applicant shall at all times conduct the work in such a manner as to minimize hazards to vehicular and pedestrian traffic. Traffic controls and work site protection shall be in accordance with the applicable requirements of Part 6 (Temporary Traffic Control) of the Illinois Manual on Uniform Traffic Control Devices and with the traffic control plan if one is required elsewhere in the permit. All signs, barricades, flaggers, etc., required for traffic control shall be furnished by the Applicant. The work may be done on any day except Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. Work shall be done only during daylight hours.

**Fourth:** The work performed by the Applicant is for the bona fide purpose expressed and not for the purpose of, nor will it result in, the parking or servicing of vehicles on the highway right-of-way. Signs located on or overhanging the right-of-way shall be prohibited.

**Fifth:** The Applicant shall engage in only the proposed work approved herein, and subject to the hazards incident to such activities, assumes all risks associated therewith. The Applicant assumes full and strict liability for the actions of itself, all parties in interest, its agents and employees, contractors, subcontractors and consultants. The Applicant and all parties in interest shall save, defend, hold harmless and indemnify the State of Illinois and each of its officers, agents, employees, invitees and others associated with it from and against any and all suits, claims, actions, losses, injuries, damages, judgments and expenses that are based on, or that arise or are alleged to have arisen out of the performance of the work approved herein, including, but not limited to, any act, willful or intended, or negligence of the Applicant and any party in interest, its agents and employees, contractors, subcontractors and consultants whether at law, in equity or common law. In the event the Applicant or any party in interest fails, neglects, or refuses to comply with any provision of this indemnity, the State of Illinois may take any action necessary to protect itself from liability, including any action to pay, settle, compromise and procure the discharge thereof, in which case the Applicant or any party in interest, jointly and severally, shall be liable and bound unto the State of Illinois for any and all expenses related thereto, including attorney's fees.

**Sixth:** The State reserves the right to make such changes, additions, repairs and relocations within its statutory limits to the facilities constructed under this permit or their appurtenances on the right-of-way as may at any time be considered necessary to permit the relocation, reconstruction, widening or maintaining of the highway and/or provide proper protection to life and property on or adjacent to the State right-of-way. However, in the event this permit is granted to construct, locate, operate and maintain utility facilities on the State right-of-way, the Applicant, upon written request by the Regional Engineer, shall perform such alterations or change of location of the facilities, without expense to the State, and should the Applicant fail to make satisfactory arrangements to comply with this request within a reasonable time, the State reserves the right to make such alterations or change of location or remove the work, and the Applicant agrees to pay for the cost incurred.

**Seventh:** This permit is effective only insofar as the Department has jurisdiction and does not presume to release the Applicant from compliance with the provisions of any existing statutes or local regulations relating to the construction of such work.

**Eighth:** The Construction of access driveways is subject to the regulations listed in the "Policy on Permits for Access Driveways to State Highways." If, in the future, the land use of property served by an access driveway described and constructed in accordance with this permit changes so as to require a higher driveway type as defined in that policy, the owner shall apply for a new permit and bear the costs for such revisions as may be required to conform to the regulations listed in the policy. Utility installations shall be subject to the "Policy on the Accommodation of Utilities on Right-of-Way of the Illinois State Highway System."

**Ninth:** If the work covered by this permit includes construction of additional lanes, turn lanes, median cross-overs or traffic signals on, along or adjacent to a highway under Department jurisdiction, the permittee shall use only contractor(s) approved by the Department of Transportation for the performance of said work on the State highway. A contractor currently prequalified by the Department in the work rating governing the said work shall be approved. Prior to the commencement of the said work on the State highway, the applicant shall furnish the Regional Engineer a copy of the contractor's current Certificate of Eligibility, or, if the permittee proposes to use a contractor not currently prequalified by the Department, information satisfactory to the Department evidencing the contractor's qualification and ability to perform the said work. No work on the State highway shall be performed until the Department issues an approval of the proposed contractor.



**Illinois Department of Transportation**

**Individual Highway Permit Bond**

Address \_\_\_\_\_ District \_\_\_\_\_

City / State \_\_\_\_\_ Bond No. \_\_\_\_\_

KNOWN ALL MEN BY THE PRESENTS, That I (We) \_\_\_\_\_ ,  
(Name of Applicant)

\_\_\_\_\_ ,  
(Mailing Address)  
as Principal, and \_\_\_\_\_ ,  
(Surety Company)

a corporation organized and existing under the laws of the State of Illinois  
and licensed to do business in the State of Illinois, are held firmly bound unto the people of the State of Illinois in the penal  
sum of twenty thousand Dollars

( \$ 20,000 ) lawful money of the United States well and truly to be paid unto said people of the State  
of Illinois, for payment of which we bind ourselves, our successors and assigns, jointly, severally, and firmly by these  
presents.

WHEREAS, Highway Permit No. \_\_\_\_\_ Issued by the Department of Transportation

of the State of Illinois grants to Lake County Division of Transportation permission and  
authority to construct, locate, operate, and maintain the work described in said Permit, upon or adjacent to  
Route IL 173 in Lake County as more fully  
described in said Permit and Sketch, which by this reference are made a part hereof as if written herein at length, in and by  
which Permit and Sketch the said Principal has promised and agreed to perform said described operation and related activities  
in accordance with the terms and conditions of and description in said Permit and Sketch.

NOW, THEREFORE, if the said Principal shall well and truly perform said operations in accordance with the terms and  
conditions of and description in said Permit and Sketch to the satisfaction of said Department, and shall perform no other  
work or construction at said location without first applying for and receiving another permit from said Department, then no  
claim or demand will be made against the above obligation. Otherwise, this bond or so much thereof as may be necessary  
shall insure to the said Department as cost and expense to change and correct, during a period of five years from the date of  
approval of this bond by the Department, said construction to conform to the terms and conditions of and description in said  
Permit and Sketch.

IN WITNESS WHEREOF, WE HAVE DULY EXECUTED THE FOREGOING

This \_\_\_\_\_ Day of \_\_\_\_\_ , \_\_\_\_\_ Principal \_\_\_\_\_

Surety \_\_\_\_\_ Address \_\_\_\_\_

Address \_\_\_\_\_ City / State \_\_\_\_\_

City / State \_\_\_\_\_ Telephone ( ) \_\_\_\_\_

By \_\_\_\_\_ By \_\_\_\_\_

Attorney in Fact

( Seal )

( Seal )

Agent for Surety \_\_\_\_\_ Department of Transportation

Address \_\_\_\_\_ By \_\_\_\_\_

Regional Engineer

City / State \_\_\_\_\_

By \_\_\_\_\_

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District 1

Project R. McClory Bike Path

Marked Route IL 173

Location Robert McClory Bike Path over IL 173

County Lake

Contract Number \_\_\_\_\_

Section 16-00173-14-BR

Inclusive Dates of Work \_\_\_\_\_ to \_\_\_\_\_ Work Hours 08:00  AM  PM to 04:00  AM  PM

Work Type  Maintenance  Construction  Traffic  Other

Describe Work Perform concrete repairs to the north bridge abutment for Robert McClory Bike Path over IL 173. Remove and replace the guardrail attached to the north bridge abutment. Crete an embankment cone for the south bridge abutment. A decorative finish will be aplied to the north bridge abutment.

Contractor or Agency Performing Work \_\_\_\_\_

**Responsible Engineer:** (Construction Foreman/Superintendent, Maintenance/Traffic Field Engineer)

Name \_\_\_\_\_ Telephone No. ( ) ( )  
Office Home

(If traffic control is to be employed between 5:00 p.m. and 8:30 a.m. or on Saturday, Sunday or holidays give additional names and numbers)

Name \_\_\_\_\_ Telephone No. ( ) ( )

Name \_\_\_\_\_ Telephone No. ( ) ( )

Name \_\_\_\_\_ Telephone No. ( ) ( )

**Controls:** (Describe specific controls to be used, including reference to appropriate Highway Standards or sections of manuals, and set forth any special controls proposed).

701006-05; 701501-06; 701901-03

LC7004; LC7200

**Distribution:**  
District Operations/Traffic Engineer  
Project Implementation Engineer  
Field Engineer  
Resident Engineer  
ISP District

Submitted by: \_\_\_\_\_

Approved by: \_\_\_\_\_  
(District Operations/Traffic Engineer)

**INTENTIONALLY**

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# Illinois Department of Transportation

Division of Highways/District 1  
201 West Center Court/Schaumburg, Illinois 60196-1096

## MUNICIPALITY REVIEW Q&E

### PERMIT APPLICATION

To assure that municipality officials are aware of State highway permit work requested within their municipality limits, we require acknowledgement of State Highway Permit Applications by a municipal official. The following statement must be completed and returned to the address above before a State Highway Permit will be issued.

The undersigned acknowledges that the municipality is aware that a State Highway Permit has been requested by

\_\_\_\_\_ Amec Foster Wheeler \_\_\_\_\_

(company or individual)

for construction at Robert McClory Bike Path over IL 173

(address of permit work)

in the municipality of Zion

Signed \_\_\_\_\_

(Municipality Representative)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Date)

s:\wp\penn ts\misc\fonns\munlcrev.doc