

**VILLAGE OF DOWNERS GROVE
REPORT FOR THE VILLAGE COUNCIL MEETING
JULY 2, 2013 AGENDA**

SUBJECT:	TYPE:	SUBMITTED BY:
2013 Resurfacing (B) Project (CIP Project ST-004 B)	Resolution Ordinance ✓ Motion Discussion Only	Nan Newlon, P.E. Director of Public Works

SYNOPSIS

A motion is requested to award a contract for the 2013 Resurfacing (B) Project to Central Blacktop Company, Inc. of LaGrange, Illinois in the amount of \$2,217,888.20.

STRATEGIC PLAN ALIGNMENT

The goals for 2011 to 2018 identified *Top Quality Infrastructure*.

FISCAL IMPACT

The FY13 budget includes \$2,250,000 for this project (\$1,500,000 in Motor Fuel Tax and \$750,000 from the Capital Improvement Fund).

RECOMMENDATION

Approval on the July 9, 2013 consent agenda.

BACKGROUND

This contract is for the resurfacing of 12 lane miles of Village streets. The scope of work for this contract includes resurfacing the streets included on the attached list with a new layer of asphalt along with the repair of defective sections of pavement and concrete curb and gutter. The streets included in this contract have been prioritized based on a number of factors, including condition, proximity to each other, and the ability to coordinate with other projects to minimize disruption to the affected neighborhoods.

This contract is a component of the 2013 Roadway Maintenance Program (CIP Project ST-004) and represents a portion of this year's budgeted roadway maintenance work. Other components of this year's program previously approved by Council include 2013 Resurfacing (A) and 2013 Preventive Seal program. The 2013 Fall Roadway Patching Contract will be bid at a later date.

A Call for Bids (CFB) was issued and published in accordance with the Village's Purchasing Policy and four bids were received. A synopsis of the bids is as follows:

<u>Contractor</u>	<u>Base Bid</u>	
Central Blacktop Company	\$2,217,888.20	Low Bid
K-Five Construction Corp	\$2,326,260.15	
James D. Fiala Paving Co	\$2,466,420.16	
R W Duntelman Co	\$2,534,363.89	

Central Blacktop Company has satisfactorily completed the Village's 2006 Resurfacing Project, 2007 Resurfacing Project and 2012 Resurfacing (A) Project. They were also previously awarded the 2013 Resurfacing (A) Project.

ATTACHMENTS

Contract Documents

Signature Page

Campaign Disclosure

Contractor Evaluation Form

Capital Project Sheets ST-004

List of Streets



Illinois Department
of Transportation

Proposal / Contract Cover

PROPOSAL SUBMITTED BY		
Central Blacktop Co., Inc.		
Contractor's Name		
6160 S. East Ave., P.O. Box 2080		
Street	P.O. Box	
LaGrange, IL 60525		
City	State	Zip Code

STATE OF ILLINOIS

COUNTY OF DuPage

Village of Downers Grove

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

- ☒ ESTIMATE OF COST
- ☒ SPECIFICATIONS
- ☒ PLANS
- ☐ MATERIAL PROPOSAL
- ☐ DELIVER AND INSTALL PROPOSAL
- ☒ CONTRACT PROPOSAL
- ☐ CONTRACT
- ☐ CONTRACT BOND

FOR THE IMPROVEMENT OF

STREET NAME OR ROUTE NO. Various Locations

SECTION NO. 13-00000-01-GM

TYPES OF FUNDS MFT & Corporate

ANDREW J. SIKICH
EXP 11/13

For Municipal Projects

Submitted
Approved/Passed

5.21.13

Date

☒ Mayor ☐ President of Board of Trustees ☐ Municipal Official

For County and Road District Projects

Submitted/Approved

Date

☐ Highway Commissioner

Submitted/Approved

Date

☐ County Engineer/Superintendent of Highways

Department of Transportation

☒ Released for bid based on limited review

Date

06/05/13

Regional Engineer

☐ Concurrence in approval of award

Date

Regional Engineer



Illinois Department of Transportation

Notice to Bidders

RETURN WITH BID

Route	Various
County	DuPage
Local Agency	Downers Grove
Section	13-00000-01-GM

Time and Place of Opening of Bids

Sealed proposals for the improvement described below will be received at the office of Public Works Department
5101 Walnut Avenue, Downers Grove, Illinois 60515
(address)
until 10:00 o'clock A M., June 17, 2013 (date) Proposals will be opened and read publicly
at 10:00 o'clock A M., June 17, 2013 (date) at the office of Public Works Department
5101 Walnut Avenue, Downers Grove, Illinois 60515
(address)

Description of Work

Name 2013 Resurfacing (B) Length 31699.00 feet (6.00 miles)
Location Various Streets
Proposed Improvement Pavement removal and replacement, level binder, hot-mix asphalt surface course,
curb and gutter removal and replacement, and all related work

Bidders Instructions

- Plans and proposal forms will be available in the office of Public Works Department, 5101 Walnut Avenue
Downers Grove, Illinois 60515, Scott Barr (630) 434-5488, Proposal Fee \$0
- If prequalification is required, the 2 low bidders must file within 24 hours after the letting an "Affidavit of Availability" (Form BC 57), in triplicate, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work. One copy shall be filed with the Awarding Authority and 2 copies with the IDOT District Office.
- All proposals must be accompanied by a proposal guaranty as provided in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals.
- 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.
- Bidders need not return the entire contract proposal when bids are submitted unless otherwise required. Portions of the proposal that must be returned include the following:
 - BLR 12210 - Contract Cover
 - BLR 12220 - Notice to Bidders
 - BLR 12221 - Contract Proposal
 - BLR 12222 - Contract Schedule of Prices
 - BLR 12223 - Signatures
 - BLR 12230 - Proposal Bid Bond (if applicable)
 - BLR 12325 - Apprenticeship or Training Program Certification (**do not use for federally funded projects**)
- 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.

7. 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.
8. The bidder shall take no advantage of any error or omission in the proposal and advertised contract.
9. 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.
10. 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.

By Order of

Village of Downers Grove

(Awarding Authority)

April Holden

County Engineer/County Superintendent of Highways/Municipal Clerk

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

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2013

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS, and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-12) (Revised 1-1-13)

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CHECK SHEET
FOR
RECURRING SPECIAL PROVISIONS

Adopted January 1, 2013

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

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27	☐	English Substitution of Metric Reinforcement Bars (Eff. 4-1-96) (Rev. 1-1-03)	97
28	☐	Calcium Chloride Accelerator for Portland Cement Concrete (Eff. 1-1-13)	98
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FOR
LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

Adopted January 1, 2013

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The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", Adopted January 1, 2012, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", and the "Manual of Test Procedures of Materials" in effect on the date of invitation of bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included here in which apply to and govern the construction of Section 13-00000-01-GM, and in case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

Maintenance of Roadways

Effective: September 30, 1985

Revised: November 1, 1996

Beginning on the date that work begins on this project, the Contractor shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Engineer, but shall not include snow removal operations. Traffic control and protection for maintenance of roadways will be provided by the Contractor as required by the Engineer.

If items of work have not been provided in the contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the Engineer, will be paid for in accordance with Article 109.04 of the Standard Specifications.

TRAFFIC CONTROL PLAN

Traffic Control shall be according to the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plans, and the Special Provisions contained herein.

Special attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

~~The Contractor shall contact the District One Bureau of Traffic at least 72 hours in advance of beginning work.~~

STANDARDS:

701301-04
701501-06
701801-05
701901-02

DETAILS: TC-10, TC-13

SPECIAL PROVISIONS: See SP #30 in Special Provisions

Basis of Payment: This work shall be included in the Lump Sum cost for TRAFFIC CONTROL, MAINTENANCE OF TRAFFIC.

STATUS OF UTILITIES TO BE ADJUSTED

Effective: January 30, 1987

Revised: January 24, 2013

Utilities companies involved in this project have provided the following estimated durations:

<i>Name of Utility</i>	<i>Type</i>	<i>Location</i>	<i>Estimated Duration of Time for the Completion of Relocation or Adjustments</i>
ComEd 1910 S Briggs Street Joliet, IL 60433 Attn: Tim Coslet (815)724-5010	Electric	Entire Job	None Anticipated
Comcast 688 Industrial Drive Elmhurst, IL 60126 Attn: Bob Schuler (630) 600-6347	Cable	Entire Job	None Anticipated
Downers Sanitary Dist. 2710 Curtiss Street Downers Grove, IL 60515 Attn: Ted Cherwak (630) 969-0664	Sanitary	Entire Job	None Anticipated
AT & T 4513 Western Avenue Lisle, IL 60532 Attn: Terry Wasik (630) 573 6481	Telephone	Entire Job	None Anticipated
Nicor Gas 1784 Ferry Road Naperville, IL 60563 Attn: Constance Lane (630) 388-3830	Gas	Entire Job	None Anticipated

The above represents the best information available to the Department and is included for the convenience of the bidder. The applicable portions of Articles 105.07 and 107.31 of the Standard Specifications shall apply.

In accordance with 605 ILCS 5/9-113 of the Illinois Compiled Statutes, utility companies have 90 days to complete the relocation of their facilities after receipt of written notice from the Department. The 90-day written notice will be sent to the utility companies after the following occurs:

- 1) Proposed right of way is clear for contract award.
- 2) Final plans have been sent to and received by the utility company.
- 3) Utility permit is received by the Department and the Department is ready to issue said permit.
- 4) If a permit has not been submitted, a 15 day letter is sent to the utility company notifying them they have 15 days to provide their permit application. After allowing 15 days for submission of the permit the 90 day notice is sent to the utility company.
- 5) Any time within the 90 day relocation period the utility company may request a waiver for additional time to complete their relocation. The Department has 10 days to review and respond to a waiver request.

IV. SPECIAL PROVISIONS

The following Special Provisions shall modify, supercede, or supplement the Standard Specifications referred to in Section III - General Provisions.

Where any section, subsection, paragraph, or subparagraph of the Standard Specifications is *supplemented* by any of the following paragraphs, the provisions of such section, subsection, paragraph, or subparagraph shall remain in effect. The Special Provisions shall govern in addition to the particular Standard Specification so supplemented, and not in lieu thereof.

Where any section, subsection, paragraph, or subparagraph of the Standard Specifications is *amended, voided, or superceded* by any of the following paragraphs, any provision of such section, subsection, paragraph, or subparagraph standing unaffected, shall remain in effect. The Special Provisions shall govern in lieu of any particular provision of the Standard Specification so amended, voided, or superceded, and not in addition to the portion changed.

1 GENERAL CONSTRUCTION REQUIREMENTS

The following general requirements are intended to govern the overall priority for the performance of the work described in this contract. As general requirements, they are not intended to dictate to the Contractor the precise method by which these tasks shall be performed.

Special consideration to hours and location of work near schools shall be made to allow for full and safe access during normal student arrival and departure schedules.

The Contractor shall maintain traffic flow on All Streets during the day in accordance with the applicable special provision. Adequate signing and flagging is of particular importance for safe travel of all residents.

The Contractor shall conduct his operations to interfere as little as possible with Village employees or the public on or near the Work. All construction work specified under this contract shall be so engaged as to not impede normal traffic and pedestrian ways. Any barricading to detour traffic must receive prior written approval from the Engineer.

Unless otherwise allowed by the Village, non-poured and/or non-finished concrete shall not be allowed to extend over a Saturday and Sunday period. All construction work shall be done such that continuous access to schools or businesses is maintained, although it may be restricted to one lane with proper barricading.

All voids and open excavation remaining adjacent to newly constructed curb and gutter, sidewalks, driveways, etc., must be addressed in a timely manner. For that period prior to full parkway restoration or turf placement, the Contractor shall backfill and grade all disturbed areas in the parkway so as to insure the safety of the general public. Parkway shall be left in a safe, clean and usable condition conducive to foot traffic and to the satisfaction of the Village. The Contractor shall also work to keep disturbed areas in the parkway weed free.

All street openings made prior to November 15th shall be fully restored according to the applicable special provisions, and the street reopened to regular traffic upon the availability of hot-mix bituminous concrete. The Contractor shall assume the risk of restoration over those reaches of pipe installed but not yet pressure-

tested for pipe integrity.

If the project requires the phasing of construction, the contractor is to follow the phasing shown in the plan set. Any variations in the phasing plan shown on the plan set must be approved in writing by the Engineer before construction begins. The contractor will not be allowed to proceed to another phase without the approval of the Engineer. **The contractor will receive no additional compensation for constructing the project in phases.**

No more than three hundred linear feet (300 LF) of pavement may be open-cut and closed to use by the motoring public, and access to all individual drives within the current work zone must be restored at the end of each workday, unless a Village-approved phasing plan shows otherwise.

2 QUALIFICATIONS OF BIDDER

This space intentionally left blank.

3 ACCESS AND WATER SHUT OFF NOTIFICATION

If access to a driveway will be blocked, or water will be turned off, the Contractor shall give that resident or business proper written notification at least 24 hours in advance. The Contractor must provide them the opportunity to remove their cars from the drive or make other arrangements, and prepare for any shutdown of the water system. Samples of written notices shall be submitted to the Engineer for approval.

In addition, the Contractor shall be responsible for notifying the resident or business verbally on the morning of any driveway closure, to ensure awareness of the lack of access.

Basis of Payment: This work shall be considered **INCIDENTAL** to the project.

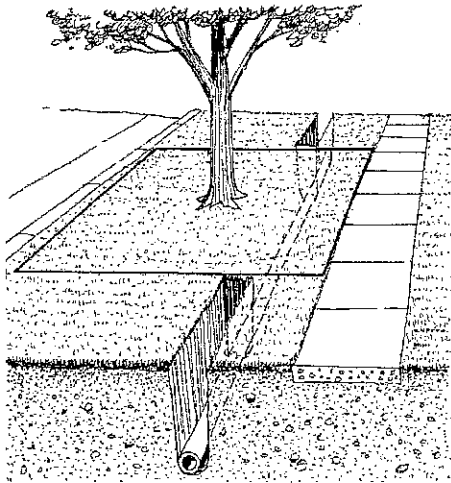
4 TREE PROTECTION

Municipal Codes regarding trees, including tree protection requirements for public parkway trees, are located in Chapter 24 of the Downers Grove Municipal Code. Specifically, Municipal Codes 24-7 and 24-8 detail the public parkway tree protection sizes and fines for violations. The Village Forester shall approve all tree protection measures and any deviations. All tree protection measures and any deviations shall be noted in the contract specifications and on approved project plan sheets and permits using the guidelines listed below. Tree protection shall include avoiding damage to the above ground tree branches and trunk, and the below ground root system and surrounding soil. Tree crowns and trunks shall not suffer any branch or bark loss. Roots shall be protected from compaction, storage of materials, severing, regrading of the parkway or excavation unless specifically noted on the project plan sheets.

The Critical Root Zone, or CRZ, is the area immediately surrounding a tree that must be protected from damage. In a municipal parkway setting with utilities and paved or concrete surfaces, the size of the CRZ has been adjusted to form a rectangle around the parkway tree trunk with minimum dimensions listed in the following table. The depth of the CRZ extends to 4 feet below the natural ground surface level.

Village of Downers Grove – 2013 Resurfacing (B)

Parkway <u>Tree diameter at 4.5'</u>	Width street to property <u>(min. curb to sidewalk)</u>	Length along street <u>street(minimum)</u>	<u>Depth</u>
0 – 12.0 inches	10.0 feet	10 feet	4 feet
12.1 – 24.0 inches	10.0 feet	20 feet	4 feet
24.1 or more inches	10.0 feet	30 feet	4 feet



For projects that involve excavations of less than one (1) foot in depth in the parkway or street and are replacing structures in the same location, fencing of the public parkway trees shall not be required. Example projects include, but are not limited to, street pavement resurfacing, curb removal/replacement, driveway removal/replacement, or sidewalk removal/repairs or new sidewalk installations. Contractors shall be mindful of the CRZ dimensions and potential for fines if any parkway trees suffer any unauthorized damage as determined by the Village Forester.

For projects that involve excavations of one (1) or more feet in depth in the parkway or street or both, fencing of the public parkway trees shall be required. Example projects include, but are not limited to, watermain replacements with new roundway keystops and domestic service box installations, sanitary line replacements and new service connections, new or replacement natural gas services, new or replacement phone or fiber optic lines, or new or replacement storm sewers, or projects that widen roads which in turn decreases the parkway soil volume around public parkway trees.

Projects that require fencing (listed above) shall fence the public parkway trees with six (6) foot high chain link construction fence secured to metal posts driven in the ground which are spaced no further than ten (10) feet apart. The dimensions of the fence shall depend on the tree diameter size and shall follow the table listed for the CRZ above, or as large as practical dependent on driveways and other field conditions. The fenced rectangle shall have three (3) sides with the opening facing the adjacent residences for easy access for mowing or tree care. Under no circumstances shall any items be stored within the fence. All fencing shall be maintained daily in an upright good condition. The size and location of all fencing shall be shown on the project plan sheets.

To avoid damage to the CRZ, utilities must be augered underneath the public parkway trees. Excavation pits for augering equipment are to be outside the fenced area and are to be shown on the project plan sheets. Excavation pits for roundway keystops and domestic service boxes are to be as small as practical with excavation occurring in a direction away from the adjacent public parkway tree.

In cases when severing of roots within a portion of the CRZ may be unavoidable (ex. sidewalk installation, curb replacement, water or sanitary service replacement), subject to the approval of the Village Forester, sharp clean cuts shall be made on root ends to promote wound closure and root regeneration. Root pruning and excavation activities shall occur such that the smallest volume of soil and roots is disturbed, and the locations shall be shown on the project plan sheets.

In addition to fines and citations that may be assessed for violations of any Chapter 24 of the Municipal Code (such as not maintaining fencing around the CRZ or unauthorized removal of protected trees), the contractor may be subject to the following provisions:

- issuance of an invoice for the value or partial value of the tree lost due to damage to either the above ground or below ground portions of the parkway tree, or unauthorized tree removal.
- costs of repairs, such as pruning or cabling, or costs for removal of the damaged parkway tree along with the stump if the tree cannot remain in the right-of-way.
- fines of \$500 for the 1st offense; \$1,000 for the 2nd offense; \$2,500 for the 3rd and subsequent offenses.
- each day during which a violation continues shall be construed as a separate and distinct offense.

The value or partial value of the tree lost shall be determined by the Village Forester using the most current edition of the Guide for Plant Appraisal (prepared by the Council of Tree & Landscape Appraisers and the International Society of Arboriculture) and the most current edition of the Species Ratings & Appraisal Factors for Illinois (prepared by the Illinois Arborist Association). The total cost determined for the damage shall be deducted from the payments made to the Contractor for the project. Should the Village hire another Contractor or tree service to complete pruning work, these costs shall also be deducted from the payments made to the Contractor.

Method of Measurement: This work will be measured for payment at the contract unit price per linear foot of fencing as specified. **Only those trees meeting the guidelines and are properly fenced per the specifications shall be counted for payment.** All other work as specified herein shall be considered incidental and will not be paid for separately.

Basis of Payment: All work as specified herein shall not be paid for separately and shall be considered incidental to the contract.

5 CLEANING UP

The Contractor shall, at all times, keep the premises free from an accumulation of waste material or rubbish caused by his employees or work. At the end of the day, he shall remove all his rubbish from and about the streets and sidewalks. All his tools, form boards, and surplus materials shall be removed and relocated to any temporary on-site storage location assigned by the Village or its Engineer, and shall leave his work "broom clean" or its equivalent, unless more precisely defined. Upon completion of the work called for by the contract, and upon final inspection and acceptance, the Contractor shall remove any of his remaining rubbish, tools, form boards, and surplus materials completely from the work site.

In case of dispute, the Village may remove the rubbish or other materials and charge the cost to the Contractor.

6 EXISTING UTILITIES

Existing Public Utilities, such as watermains, sewers, gas lines, streetlights, telephone lines, electric power lines, etc., shall be protected against damage during the construction of this project. The Contractor shall contact the Owners of all public utilities and obtain locations of all utilities within the limits of the proposed construction and make arrangements, if necessary, to adjust or move any existing utility at the utility company's expense. Any expense incurred by the contractor in connection with making arrangements shall be borne by the Contractor and considered incidental to the contract. It shall be this Contractor's responsibility to determine the actual location of all such facilities in the field.

The adjustment of all facilities of Nicor, SBC, the Commonwealth Edison Co., DuPage Water Commission, etc. shall be done by the respective utility company, and if known, are indicated on the plans as to be done "By Others". All other utility adjustments to sewer, water, and local facilities shall be performed under this contract, under the supervision of the Owner of the utility, and will be paid for under the respective items in the contract unless otherwise indicated on the plans or directed by the Engineer.

Any existing facilities, residential or commercial sprinkler systems, etc. disturbed shall be returned to their original condition and any damage to said facilities shall be repaired immediately. The cost of repairs of any damaged utility shall be by agreement between the Contractor and the facility owner or utility company, and at no cost to the Village.

Whenever the locations of existing utilities are known, the approximate location of said utility is indicated on the plans. This information is given only for the convenience of the Bidder and the Village assumes no responsibility as to accuracy of the information provided. The Contractor shall consider in his bid the location of all permanent and temporary utility appurtenances to their present or relocated positions, whether shown on the plans or not, and no additional compensation will be allowed for delays, inconvenience, or special construction methods required due to the existence of said appurtenances.

Whenever obstructions are encountered during the progress of the work and interfere to such an extent that an alteration in the plan is required, the Engineer shall order a deviation in the plan as required, the Engineer shall order a deviation in the line and/or grade to resolve the conflict, or relocation of the obstruction. The Contractor will be compensated for any additional pipe material, fittings, granular backfill, or structures required at the respective contract prices, and measured as specified in the Contract. No additional

compensation will be allowed for delays or inconveniences, additional excavation, or any special construction methods required in prosecuting the work due to the existence of said obstruction.

7 CLASS D PATCHES, 4"

Description: This work shall consist of pavement patching by methods and with materials in accordance with Sec. 442 of the Standard Specifications, except as amended herein.

The Contractor shall not use equipment of excessive size or weight that causes damage to existing pavement or appurtenances. Any damage done to the existing pavement or appurtenances that are to remain in place shall be repaired or removed and replaced by the contractor at his/her own expense, as directed by the Engineer.

Pavement patching shall include the saw cutting of existing pavement to a depth not less than four inches (4") where marked in the field by the Engineer. Pavement patches shall vary in area but minimum width shall be measured at six feet (6'). Pavement patching shall be to a depth not less than four inches (4"), and shall be a minimum of 4" below milled surface when Hot-Mix Asphalt Surface Removal is called for.

Where applicable the existing subbase shall be leveled and compacted. Where remaining base is existing HMA, PCC or brick, the bottom of each prepared hole shall be free of all loose material and a bituminous prime shall be applied to the bottom prior to replacement of HMA patches.

The use of surface removal equipment that complies with Art. 440.04 of the SSRBC will be permitted. The edges of the patch shall be smooth and free of loose material to a depth of not less than four inches.

The hot-mix asphalt material shall conform to the requirements for Hot-Mix Asphalt Binder Course, IL-19.0, N70.

Method of Measurement: Pavement removal and replacement will be measured for payment in place, and the area computed in square yards. Patches determined to be 25 square yards or greater in area shall be classified as Type IV, 4". Patches determined to be less than 25 square yards in area shall be classified as 4" Special.

Basis of Payment: This work shall be paid for at the contract unit price per Square Yard for CLASS D PATCHES, TYPE IV, 4" or CLASS D PATCHES, 4" SPECIAL which price shall be payment in full for the work as specified herein.

8 PAVEMENT REMOVAL & HMA REPLACEMENT, 8" SPECIAL

Description: This work shall consist of pavement patching by methods and with materials in accordance with the applicable parts of Sec. 442 of the Standard Specifications, except as amended herein.

The Contractor shall not use equipment of excessive size or weight that causes damage to existing pavement or appurtenances. Any damage done to the existing pavement or appurtenances that are to remain in place shall be repaired or removed and replaced by the contractor at his/her own expense, as directed by the Engineer.

Pavement patching shall include the full depth saw cutting of the existing pavement as marked by the Engineer. The existing sub-base shall be leveled and compacted. The edges will be smooth and free of loose material to the specified depth of patch.

The hot-mix asphalt material shall conform to the requirements for Hot-Mix Asphalt Binder Course, IL-19.0, N70, and will be placed in compacted lifts not to exceed four inches.

Method of Measurement: Pavement removal and replacement will be measured for payment in place, and the area computed in square yards.

Basis of Payment: This work shall be paid for at the contract unit price per Square Yard for PAVEMENT REMOVAL AND HOT-MIX ASPHALT REPLACEMENT, 8" SPECIAL.

9 PAVEMENT REMOVAL & PCC REPLACEMENT, 8" SPECIAL

Description: This work shall consist of pavement patching by methods and with materials in accordance with the applicable parts of Sec. 442 of the Standard Specifications, regarding Class B patching, except as amended herein.

Patches shall be tied to existing adjacent concrete pavement on all sides with 3/4" x 24" epoxy coated deformed tie bars embedded to a depth of 9" +/- 1/2" on 24" centers. Unless otherwise directed by the Engineer, patch shall also be tied to adjacent curb and gutter

Patch shall also be reinforced by the placement of reinforcement fabric meeting the requirements of Article 1006.10 of the Standard Specifications, at 1/2 patch depth. Support chairs to be used as necessary to maintain proper height of reinforcement fabric.

Basis of Payment: This work will be paid for at the contract unit price per Square Yard for PAVEMENT REMOVAL AND PORTLAND CEMENT CONCRETE REPLACEMENT, 8" SPECIAL which price shall be payment in full for the work as specified herein.

10 COMBINATION CONCRETE CURB AND GUTTER REMOVAL

Description: This work shall consist of the removal of existing P.C.C. Curb and Gutter of the type and size at the locations noted in Schedule of Quantities. This work shall be performed in accordance with Section 440 of the Standard Specifications, except as amended herein.

This work shall include a full depth, perpendicular, straight joint sawn at the ends and all edges, including along the edge of pavement, of portions to be removed, unless otherwise directed by the engineer.

At those locations where curb removal operations fall within the Critical Root Zone (CRZ) the Contractor will be required to trench with a "chain" driven trencher immediately back of curb prior to curb removal. This procedure will proceed uninterrupted through the CRZ and insure general tree root pruning. The width of the CRZ shall be determined as noted in the general provision for TREE PROTECTION elsewhere in these documents. If it is determined that proposed removal methods do not cause undo harm to adjacent roots, the Village Forester may waive the need to perform trenching.

During removal operations Contractor shall take special care not to damage or extend sawed joint into adjacent appurtenances such as driveways and sidewalks which are to remain in place. During machine sawing operations Contractor shall also take special care to remove, clean, or otherwise account for any residue / slurry produced by the sawing so material will not be tracked by either vehicular or foot traffic onto adjacent appurtenances which are to remain in place.

Basis of Payment: This work will be paid for at the contract unit price per Linear Foot for COMBINATION CONCRETE CURB AND GUTTER REMOVAL which price shall be payment in full for all work specified herein.

11 COMBINATION CONCRETE CURB AND GUTTER OF TYPE SPECIFIED

Description: This work shall consist of the replacement of existing PCC Curb and Gutter in accordance with the applicable parts of Sec. 606 of the Standard Specifications, except as amended herein.

Replacement of curb and gutter shall include the placement of three-quarter inch (3/4") premolded expansion joint filler along the back of curb, for the full depth of the curb and gutter, where abutting existing concrete.

Transverse expansion joints with 3/4" joint filler shall be constructed at five feet (5') either side of utility structures, and at no more than ninety foot (90') intervals. All expansion joints shall include the placement of two (2) three-quarter inch (3/4") dowel bars with pinched stop caps as specified on detail sheet. Two (2) three quarter inch (3/4") dowel bars shall also be placed at all construction joints as specified on detail sheet and shall be drilled into existing curb and gutter a minimum of six inches (6").

New curb and gutter shall be backfilled with existing excavated earth.

Transverse contraction joints shall be constructed at no more than fifteen foot (15') intervals.

When new curb and gutter is placed adjacent to concrete pavement or base, it shall be tied along the longitudinal construction joint with No. 6 (3/4") bars at 24" centers in accordance with the applicable portions of Article 420.05 of the Standard Specifications.

Placement of curb and gutter as noted on Schedule of Quantities to be reinforced shall also include the placement of two (2) No. 4 (1/2") epoxy coated deformed reinforcement bars meeting the applicable portions of Section 508 of the Standard Specifications. Bars shall be placed at one-half depth of the body of the gutter running the entire length of newly placed sections. Curb and gutter placed as described in this paragraph will be paid for as COMBINATION CONCRETE CURB AND GUTTER (TYPE SPECIFIED), REINFORCED. Including placement of reinforcement bars, placement of curb and gutter as noted on Schedule of Quantities to be reinforced, high early shall be placed with concrete materials meeting the applicable portions of Section 442 of the Standard Specifications. A calcium chloride accelerator will not be permitted. Curb and gutter placed as described in this paragraph shall be paid for as COMBINATION CONCRETE CURB AND GUTTER (TYPE SPECIFIED), REINFORCED, HIGH EARLY.

All voids existing between newly placed curb and gutter and the adjacent roadway pavement shall be filled with Class SI concrete, prior to bituminous surface placement, to a point 1-1/2 inches below finish grade. This work shall be considered incidental.

Placement of curb and gutter shall include the application of membrane curing compound, Type III, in accordance with Articles 1020.13 and 1022.01 of the Standard Specifications unless otherwise directed by the Engineer.

If placement of curb and gutter takes place prior to April 15, or after October 15, the curb and gutter shall be properly cured and that followed by the application of protective coat in accordance with Article 420.18 of the Standard Specifications.

Basis of Payment: This work shall be paid for at the contract unit price per Linear Foot for COMBINATION CONCRETE CURB AND GUTTER (TYPE SPECIFIED) or COMBINATION CONCRETE CURB AND GUTTER (TYPE SPECIFIED), REINFORCED which price shall be payment in full for the work as specified herein.

12 POROUS GRANULAR EMBANKMENT, SPECIAL

Description: This work shall consist of removing and disposing of unsuitable sub-grade, furnishing, placing and compacting porous granular material to the lines and grades shown on the plans or as directed by the Engineer in accordance with the applicable portions of Sections 202 and 207 of the Standard Specifications. The material shall be used as a bridging layer over soft, pumpy, loose soil areas and for placement under water. The material shall conform with Article 1003.04 and 1004.05 of the Standard Specifications except the gradation shall be as follows:

1. Crushed Stone, Crushed Blast Furnace Slag and Crushed Concrete

<u>Sieve Size</u>	<u>Percent Passing</u>
*6"	97±3
*4"	90±10
2"	45±25
#200	5±5

2. Gravel, Crushed Gravel and Pit Run Gravel

<u>Sieve Size</u>	<u>Percent Passing</u>
*6"	97±3
*4"	90±10
2"	55±25
#4	30±20
#200	5±5

*For undercuts less than 18" the percent passing the 6" sieve may be 90±10 and the 4" sieve requirement eliminated.

The porous granular material shall be placed in one lift when the total thickness to be placed is two (2) feet thick or less or as directed by the Engineer. Rolling each lift of the porous granular material with a vibratory roller meeting the requirements of Article 1101.1 of the Standard Specifications should be sufficient to obtain the desired keying or interlock and necessary compaction. The Engineer shall verify that adequate keying has been obtained.

A three- (3) inch nominal thickness top lift of capping aggregate having a gradation of CA-6 will be required. The use of on-site bituminous grindings resulting from bituminous surface removal, substantially meeting the gradation of CA-6, shall also be permitted. The granular cap shall be compacted to the satisfaction of the Engineer. It shall be the Contractor's responsibility that all proposed bituminous replacement regarding patching and paving operations in these areas will meet the specified performance criteria of their respective pay items.

Construction equipment not necessary for the completion of the replacement material will not be allowed on the undercut areas until completion of the recommended thickness of the porous granular embankment, special.

This work will be measured for payment in accordance with Article 207.04 of the Standard Specifications. When specified on the contract, the theoretical elevation of the bottom of the aggregate subgrade shall be used to determine the upper limit of Porous Granular Embankment, Special. The volume will be computed by the method of average end areas.

Basis of Payment: This work shall be paid for at the contract unit price per Cubic Yard price for: POROUS GRANULAR EMBANKMENT, SPECIAL, which price shall include the capping aggregate, as required.

The Porous Granular Embankment, Special shall be used as field conditions warrant at the time of construction. No adjustment in unit price will be allowed for an increase or decrease in quantities from the estimated quantities shown on the plans.

13 MANHOLES OR INLETS, TO BE ADJUSTED OR RECONSTRUCTED

Description: This item shall be done in accordance with Sec. 602 of the Standard Specifications for Road and Bridge Construction and the following provisions.

All excavation for structure adjustment shall be replaced with Class SI concrete and in accordance with the attached details. For excavation required for reconstructed items, backfill materials shall be mechanically compacted SELECTED GRANULAR BACKFILL placed per the special provision elsewhere in these documents.

Castings shall be set in mortar or bituminous mastic beds. The adjustment of the casting to the required final grade shall be made with precast concrete adjusting rings. Brick, concrete block, or wooden shims will not be permitted.

When adjustments include new frame and grate or new frame and lid, all replacement frames, grates and lids shall be heavy duty. Depending on the type of frame, care shall be taken to properly align the new frame with the curb and gutter, and maintain the proper size opening into the structure.

Although the cost of adjusting structures per this specification will be paid for under this contract, the Contractor shall be aware that many of the structures are not the property of the Village of Downers Grove, and that such work may require inspections and/or permits from other governmental agencies.

For those structures noted on the Schedule of Quantities or as designated by the Engineer as MANHOLE TO BE ADJUSTED, SPECIAL, for that period after Hot-Mix Asphalt Surface Removal operations and prior to adjustment to finished pavement elevation, frames and lids or grates shall be removed from the structure and stored in a safe manner until reused. The resulting void over the structure shall be covered with a steel plate and temporary pavement, or other approved method, capable of carrying the anticipated daily traffic in a safe manner. The Contractor shall also make note of structure location so it may be reestablished after initial bituminous paving operations have been completed.

Basis of Payment: This item shall be paid for at the contract unit price Each for MANHOLE TO BE ADJUSTED or MANHOLE TO BE ADJUSTED, SPECIAL or MANHOLE TO BE ADJUSTED WITH NEW FRAME AND LID (TYPE SPECIFIED) or MANHOLE TO BE RECONSTRUCTED.

This item shall also be paid for at the contract unit price Each for INLET TO BE ADJUSTED or INLET TO BE ADJUSTED WITH NEW FRAME AND GRATE (TYPE SPECIFIED) or INLET TO BE RECONSTRUCTED WITH NEW FRAME AND GRATE (TYPE SPECIFIED) which price shall be payment in full for all labor and materials specified herein including backfill with Selected Granular Backfill.

14 TREE ROOT PRUNING

Description: All trees, public or private, affected by new sidewalk installation within its root protection zone, shall be root pruned prior to any excavation taking place. Root pruning shall be performed in accordance with the applicable portions of Section 201 of the Standard Specifications as well as the Tree Protection Zone detail of the Plans. Root pruning shall be done only to the depth of the excavation necessary for installing the new walk. Root pruning shall start and proceed uninterrupted for the length of travel through the root protection zone. Root pruning shall be made no more than 10 inches from the tree-side edge of the proposed walk. Approval by the Village Forester of the equipment to be used for root pruning, as well as the proposed path of the root pruning work, is required prior to the work being performed. The Engineer or his representative shall permit no excavation until written approval is obtained by the Contractor from the Village Forester. Additionally, no materials or equipment may be stored or kept in the Tree Protection Zone. Tree damage, as determined by the Village Forester, shall be assessed to the Contractor using the most recent edition of the Guide for Plant Appraisal, published by the International Society of Arboriculture.

Basis of Payment: This work shall be paid for at the contract unit price per Each for TREE ROOT PRUNING.

15 PORTLAND CEMENT CONCRETE SIDEWALK

Description: This work shall consist of the removal and replacement of P.C.C. Sidewalk in accordance with the SSRBC, except as amended herein.

Removal of sidewalk shall include the saw cutting of existing concrete as directed by the Engineer. Removal of sidewalks shall also include any necessary pruning and removal of tree roots, bituminous paved sidewalks and/or bituminous overlayment of existing sidewalks, or excavation necessary to place the proposed sidewalk.

Replacement of sidewalk shall be of the width and thickness as noted on the Schedule of Quantities and as directed by the Engineer. Thickness of the proposed sidewalk shall generally be (5") five inch for standard or courtesy walks, (6") six inch for full width across residential drives, and (8") eight inch for full width across commercial drives.

Placement of P.C.C. sidewalk shall include the excavation for and placement of four inches (4") of Type B, CA-6, compacted aggregate base, the (3/4") three-quarter inch scoring of contraction joints (5') five feet on center, the placing of (1/2") one-half inch premolded expansion joints where new concrete abuts existing concrete and/or at (50') fifty feet on center and/or at the end of a pour. This work shall also include the adjustment to proper grade of all water valve or private utility boxes encountered.

Replacement of sidewalk shall include the application of membrane curing compound, Type III, in accordance with Articles 1020.13 and 1022.01 of the Standard Specifications unless otherwise directed by the Engineer.

At those locations where existing street configuration does not contain curb and gutter, it is necessary to end construction of new sidewalk with a minimum of two (2) feet separation from the existing or proposed edge of pavement. At these locations, a HMA transition sidewalk shall be constructed between the concrete sidewalk and the edge of pavement.

Construction of the transition sidewalk shall include excavation as necessary for the full width of the concrete sidewalk, placement and compaction of the four inches (4") of Type B, CA-6 aggregate base, and the placement and compaction of 5 inches (5") of Hot-Mix Asphalt Surface, Mixture D, N50 (IL 9.5) per the applicable portions of Sec. 442 of the Standard Specifications. Asphalt to be placed in compacted layers not to exceed four inches (4").

Hot-Mix Asphalt Binder Course, IL-19.0, N50 may be utilized for the bottom courses, but in all cases the top course shall be a minimum 1 ½ inch lift of the HMA Surface noted above.

For those locations as noted on the Schedule of Quantities or as designated by the Engineer for Detectable Warnings, work shall be completed in accordance with Section 424 of the SSRBC and the Standards included in the details regarding curb ramps with detectable warnings and as amended herein.

Detectable Warnings will NOT include any placement of full depth red dyed concrete or other on-site fabrication such as stamping or molding the fresh concrete with coloring added to the surface of the concrete.

Detectable Warnings shall be limited to inserts meeting the requirements of the ADAAG and subject to approval by the Village.

Color of detectable warnings shall be brick red. The area of red detectable warning shall be protected from overspray during the application of Type III membrane curing compound.

If replacement of sidewalk takes place prior to April 15, or after October 15, all sidewalk shall be properly cured and that followed by the application of protective coat in accordance with Article 420.18 of the Standard Specifications.

Basis of Payment: This work shall be paid for at the contract unit price per Square Foot for PORTLAND CEMENT CONCRETE SIDEWALK REMOVAL and for PORTLAND CEMENT CONCRETE SIDEWALK, 5" or PORTLAND CEMENT CONCRETE SIDEWALK, 6" or PORTLAND CEMENT CONCRETE SIDEWALK, 8" which price shall be payment in full for the work as specified herein.

Detectable warnings shall be paid for at the contract unit price per Square Foot for DETECTABLE WARNINGS which price shall be in addition to the cost for placement of the 5" sidewalk at the curb ramp.

16 AGGREGATE SHOULDERS, TYPE B

Description: This item shall be done in accordance with Sec. 481 of the SSRBC and shall consist of the construction of approximately two (2) foot wide, four (4) inch deep shoulders or as directed by the Engineer in the area designated by the Engineer.

Unless otherwise directed by the Engineer, existing shoulders with elevations that are too high to accept the proposed aggregate shoulder shall be scraped or excavated as necessary prior to placement of new aggregate. This provision shall also apply to existing shoulders that contain too much vegetation or topsoil. Unnecessary damage or debris outside the designated shoulder area shall be removed and repaired and will not be paid for separately but shall be considered incidental to the cost of Aggregate Shoulders, Type B.

Basis of Payment: This work shall be paid for at the contract unit price per Ton for AGGREGATE SHOULDERS, TYPE B which price shall be payment in full for all labor and materials.

17 PARKWAY RESTORATION

Description: This item shall be done in accordance with the applicable portions of Sec. 252 of the Standard Specifications and the following provisions.

As contract work progresses through the Village, parkway restoration work shall commence in a timely manner in areas where permanent placement of new curb and gutter, driveways, sidewalks, etc., has been completed. Under no circumstances shall the Contractor prolong final grading, shaping and sod placement so that the entire project can be permanently restored at the same time.

This work shall consist of the excavation, topsoiling and sodding from a minimum of one and one-half (1-1/2) feet to a maximum of three (3) feet behind or adjacent to all curbs, sidewalks and driveways removed and replaced during the course of construction or as directed by the Engineer. Restoration will also be performed on areas disturbed by storm sewer or culvert construction.

All topsoil to be used for parkway restoration shall be obtained from outside the limits of this improvement, transported to the site and placed at required locations to a minimum depth of 4". All materials shall meet the requirements of Art. 1081.05 of the Standard Specifications. All placement of topsoil shall meet the requirements of Sec. 211 of the Standard Specifications.

All sod shall be an approved grass that is native to the locality of work meeting the requirements of Art. 1081.03 of the Standard Specifications. All placement of sod shall meet the requirements of Sec. 252 of the Standard Specifications.

For that period prior to full parkway restoration, the Contractor shall backfill and grade all disturbed areas so as to insure the safety of the general public. Parkways shall be left in a safe, clean and usable condition conducive to foot traffic and to the satisfaction of the Village. The Contractor shall protect these unfinished areas against erosion and work to keep them weed free.

Basis of Payment: This work shall be paid for at the contract unit price per Square Yard for PARKWAY RESTORATION which price shall be payment in full for any excavation and grading necessary, the furnishing, transporting and placement of all topsoil and sod and the full watering of sod. Unless otherwise directed by the Engineer restoration of disturbed parkways more than three (3) feet behind the back of curb or more than three (3) feet adjacent to newly constructed driveway or sidewalk or more than six (6) feet either side of the newly placed storm sewer or pipe culvert will not be paid for separately but shall be considered incidental to the contract.

18 HOT-MIX ASPHALT DRIVEWAY

Description: This work shall consist of the removal and replacement of asphalt driveways at locations indicated on the plans and/or as required by the Engineer.

The replacement of the driveways shall consist of preparing a subgrade at all required locations, shaping of slopes adjacent to the driveways, the placement and compacting of six inches of CA-6 Aggregate Base, and the placement and compacting of three inches (3") of Hot-Mix Asphalt Surface, Mixture D, N50 (IL 9.5).

At locations noted on Schedule of Quantities, asphalt driveways shall be replaced with the six inches of CA-6 aggregate base along with eight inches (8") of Hot-Mix Asphalt comprised of six inches (6") of Hot-Mix Asphalt Binder, IL-19.0, N50 and finished with a minimum of two inches (2") of Hot-Mix Asphalt Surface, Mixture D, N50 (IL 9.5). Asphalt to be placed in compacted layers not to exceed four inches (4").

This work shall also include the adjustment to proper grade of all water valve or private utility boxes encountered.

The locations at which this work will be measured for payment will consist of only those areas bounded by combination concrete curb and gutter. Those areas where the surface course of the pavement flares into existing driveways beyond the limits of the fully improved areas will not be included for payment.

Basis of Payment: This work will be paid for at the contract unit price per Square Yard for HOT-MIX ASPHALT DRIVEWAY REMOVAL and for HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 3" or for HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 8" which price shall be payment in full for all work as specified herein.

19 PORTLAND CEMENT CONCRETE DRIVEWAY

Description: This work shall consist of the removal and replacement of concrete driveways in accordance with the applicable parts of Sec. 423 of the SSRBC except as amended herein.

This work shall include the placement of ¾" premolded expansion joints where new concrete abuts existing concrete or as directed by the Engineer.

This work shall also include the adjustment to proper grade of all water valve or private utility boxes encountered.

Replacement of the driveways shall include the application of membrane curing compound, Type III, in accordance with Articles 1020.13 and 1022.01 of the SSRBC, unless otherwise directed by the Engineer. If replacement of the driveways takes place prior to April 15, or after October 15, the driveway shall be properly cured and that followed by the application of protective coat in accordance with Article 420.18 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per Square Yard for PORTLAND CEMENT CONCRETE DRIVEWAY REMOVAL and for PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6" which price will be payment in full for all work as specified herein.

20 TEMPORARY RAMP, HMA

Description: This work shall consist of construction and maintenance of hot-mix asphalt ramps for temporary access to all abutting side streets and properties per the applicable portions of Article 406.08 of the SSRBC except as amended herein.

At those locations noted on the plans or as directed by the Engineer, the Contractor shall have sufficient bituminous material at the worksite prior to beginning hot-mix asphalt surface removal operations. After hot-mix asphalt surface removal operations and prior to placement of the permanent pavement, temporary ramps shall be constructed to supply access to all abutting streets and properties where traffic is to be maintained. Unless otherwise directed by the Engineer, construction of temporary bituminous ramps for access to abutting private properties will generally be limited to where surface removal operations are over 2 1/2" inches or more in depth.

Basis of Payment: This work will be paid for at the contract unit price per Square Yard for TEMPORARY RAMP, HOT-MIX ASPHALT, which price shall include all costs of furnishing, placing and maintaining the ramps. Removal of the temporary ramps prior to the placement of permanent pavement shall also be included in this item.

21 DECORATIVE PAVER DRIVEWAY OR SIDEWALK REMOVAL & REPLACEMENT

Description: This work shall consist of removal and replacement of existing decorative concrete or brick paver driveways or sidewalks per the applicable portions of Check Sheet LRS 14 of the SSRBC except as amended herein.

At those locations noted on the plans or as directed by the Engineer, the Contractor shall remove existing decorative pavers in such a manner so that no damage occurs to the pavers and with full intent to reuse said paver blocks. Any decorative paver block damaged to an extent that it may not be reused as part of the final pavement, sidewalk or driveway shall be replaced in kind by the Contractor at no additional cost to the Village.

Extent of existing paver removal shall be at the direction of the Engineer. This removal will only be that amount necessary to construct the new curb and gutter or other appurtenance, and replace the decorative pavers to an acceptable grade and appearance.

At those locations where it is determined that an existing bituminous base warrants removal and replacement or repair, this portion of the work would be performed and measured for payment per the special provision for CLASS D PATCHING, of the necessary thickness.

Basis of Payment: This work will be paid for at the contract unit price per Square Yard for DECORATIVE PAVER DRIVEWAY REMOVAL AND REPLACEMENT, which price shall be payment in full for all materials and work as specified herein.

22 CONSTRUCTION STAKING

Description: The Contractor shall furnish and place all construction layout stakes for this project. This work shall be conducted by competent personnel with suitable equipment and supervised by a licensed Illinois Land Surveyor. The Contractor shall be responsible for layout for all curb, sidewalk, pipe culvert, driveway and pavement removal and replacement, such that all finished work shall conform substantially to the lines, grades, elevations and dimensions shown on the plans.

The Contractor shall provide adequate control points to construct the individual Project elements, and shall provide the Engineer with adequate control in close proximity to check the compliance of the elements constructed.

Basis of Payment: This work will be paid for at the contract Lump Sum price for CONSTRUCTION STAKING.

23 MANHOLE AND INLET CONSTRUCTION

Description: This work shall consist of the construction of precast concrete drainage structures of the size and type shown on the plans or specified by the Engineer. Included in the contract unit price shall be all excavation, bedding, backfilling and reconnection of all existing inlet and outlet pipe. For all new structures backfill materials shall be mechanically compacted SELECTED GRANULAR BACKFILL placed per the special provision elsewhere in these documents.

All structures in excess of four feet in depth shall be equipped with cast iron steps meeting the standards of ASTM A48. Precast sections shall conform to ASTM C 478 and shall be substantially free from fractures, large or deep cracks and surface roughness. Joints between precast sections shall be designed for rubber gaskets or bituminous mastic material.

Adequate foundation for all structures shall be obtained by removal and replacement of unsuitable materials with well graded granular material; or by tightening with coarse ballast rock, or by such other means as provided for foundation preparation of the connected sewers.

Precast base sections, risers and bottoms, shall be one piece and shall be placed on a well graded granular bedding of not less than two (2) inches in thickness. The bedding course shall be firmly tamped and made smooth and level to assure uniform contact and support of the precast element.

All lift holes shall be completely filled with mortar to ensure water tightness.

Castings shall be set in mortar or bituminous mastic beds. The adjustment of the casting to the required final grade shall be made with precast concrete adjusting rings. Maximum adjustment with rings shall be twelve

(12) inches. Brick, concrete block, or wooden shims will not be permitted. Precast concrete adjusting rings shall be set in mortar or bituminous mastic beds.

In pavements, frames and grates or lids shall be heavy duty.

Basis of Payment: This work shall be paid for at the contract unit price Each for INLET, TYPE A, 24" WITH NEW FRAME AND GRATE (TYPE SPECIFIED) which price shall be payment in full for all labor and materials specified herein including SELECTED GRANULAR BACKFILL.

24 PIPE UNDERDRAIN, 4"

Description: This work shall consist of construction of pipe underdrains at locations noted on the Schedule of Quantities, or as directed by the Engineer, per the applicable portions of Section 601 of the SSRBC, check sheet #19 of the Supplemental Specifications, and the details.

Unless otherwise allowed by the Engineer, this work shall take place after Bituminous Surface Removal operations and prior to placement of proposed HMA binder course. The contractor shall be responsible for the protection of the placed underdrain such that no damage occurs prior to final surface course paving and acceptance..

The CA-16 aggregate for trench backfill, as specified on Check Sheet #19 of the Supplemental Specifications, shall be limited to 100% crushed material.

Basis of Payment: This work will be paid for at the contract unit price per Linear Foot for PIPE UNDERDRAIN, 4" which price shall include all work as specified herein

25 SELECTED GRANULAR BACKFILL

Description: All trenches and excavations beneath pavements and driveways, as shown on the plans or as directed by the Engineer in the field, will require SELECTED GRANULAR BACKFILL.

Such material shall meet the applicable requirements of Section 1004 of the SSRBC, except as amended herein. Except for the capping aggregate, the material will meet the gradation for CA-7, CA-11 or the gradation commonly known as ¾" chip.

Backfill shall be placed in maximum 12" lifts and compacted by vibrating plate or other mechanical compacting device in a manner consistent with the Standard Specifications, to ensure that no future settlement occurs.

All backfilling shall be done in accordance with Section 20-2.21 of the Standard Specifications for Water and Sewer Main Construction in Illinois. Specifically, all trenches and excavations other than those shown on the plans or designated by the Engineer to receive SELECTED GRANULAR BACKFILL shall be backfilled by any acceptable method which will not dislodge or damage the pipe, or cause bridging action in the trench. After SELECTED GRANULAR BACKFILL is placed as haunching to one-half pipe outside diameter, spoil material may be used as backfill in turf areas.

All backfilling, including granular bedding and backfill of approved excavated material, and placement and compaction of SELECTED GRANULAR BACKFILL around new or reconstructed storm sewer or structures shall be considered incidental to the contract.

When Select Backfill is placed to the existing surface elevation and used as a temporary driving or walking surface, this item shall also include the maintenance of trench surface in a safe and usable condition, satisfactory to the engineer, until the permanent proposed pavement or walkway is completed.

This item also includes the disposal of the surplus excavated material that is replaced by selected granular backfill. Any material meeting the aforementioned gradation that has been excavated from the trenches may be used for backfilling the trenches. However, no compensation will be allowed as selected granular backfill for the portion of the trench backfilled with excavated material.

Basis of Payment: All work to backfill around new and reconstructed storm sewer or structures with SELECTED GRANULAR BACKFILL shall be considered Incidental to each respective pay item and will not be paid for separately.

26 PREPARATION OF AGGREGATE BASE

Description: This work shall consist of repair and preparation of existing aggregate bases remaining after bituminous surface removal operations and performed in accordance with the applicable portions of Section 358 of the SSRBC, except as amended herein.

This work shall include the removal and disposal of any undesirable material remaining after the bituminous surface removal operations. Undesirable material is generally referring to remaining chunks of asphalt, pavement, vegetation, dirt, etc., existing in or on the aggregate base which cannot be incorporated back into the work as aggregate base.

Removal of any unsuitable soils from the subgrade beneath the aggregate base shall be per the provision for Porous Granular Embankment, Special.

After repair of base, the existing aggregate and any aggregate placed as part of the repair shall be graded to a minimum 2% cross slope to obtain a proper crown in the roadway to the satisfaction of the Engineer.

Additional aggregate required for the repair of the base shall be limited to crushed aggregate meeting the gradation of CA-6. The use of additional rollers per Section 1101 of the Standard Specifications will be allowed.

Basis of Payment: All work in connection with the repair and preparation of aggregate bases, except necessary additional aggregate, shall be paid for at the contract unit price per Square Yard for PREPARATION OF AGGREGATE BASE.

Additional aggregate required for the repair of the aggregate base or to achieve proper crown shall be paid for at the contract unit price per Ton for AGGREGATE BASE REPAIR.

27 **AGGREGATE FOR TEMPORARY ACCESS**

Description: This work shall consist of construction and maintenance of an aggregate surface ramp for temporary access to side streets and abutting properties as part of construction operations, per the applicable portions of Article 107.09 of the Standard Specifications except as amended herein.

Materials: The aggregate shall be limited to crushed aggregate meeting the gradation CA-6 and shall meet the requirements of Article 1004.04 of the Standard Specifications.

This item is limited to those locations where bituminous surface removal operations of 2 ½" (two and one half) inches or more expose the aggregate base and access is to be maintained to or across adjacent streets and curb and gutter.

Construction Requirements: After bituminous surface removal operations and prior to placement of the permanent pavement, temporary aggregate shall be placed and maintained as ramping between the existing aggregate base and all side streets, abutting properties and crosswalks where vehicle and pedestrian traffic is to be maintained. Temporary material shall be placed for the full width of the abutting property driveways or side streets.

Immediately ahead of base course paving, the temporary aggregate ramps shall be removed and may be utilized in the permanent construction or otherwise disposed of. Removal of the temporary aggregate shall be considered incidental to this item.

Method of Measurement: This work will be measured in place in tons.

Basis of Payment: This work shall be paid for at the contract unit price per Ton for AGGREGATE FOR TEMPORARY ACCESS, which price shall include all costs of furnishing, placing, maintaining and removing aggregate.

28 **HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH**

Description: This work shall be done in accordance with Section 440 of the SSRBC except as amended herein.

At those locations designated for HMA Surface Removal, Variable Depth, existing HMA material over existing concrete or brick bases varies in thickness. Unless otherwise directed by the engineer, it is intended that existing HMA surface is to be removed exposing the underlying concrete or brick base.

Basis of Payment: This work shall be paid for at the contract unit price per Square Yard for HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH, 2.0" TO 4.0"

29 EROSION, SEDIMENTATION AND DUST CONTROL

Description: Throughout each and every phase of the project, all downstream ditches and storm sewers shall be protected from the run-off of roadway surfaces, excavations, and other construction activities generating the movement of dirt, mud, dust and debris. This work shall consist of constructing temporary erosion and sedimentation control systems as shown on the plans or as directed by the Engineer. The work shall be placed by methods and with materials in accordance with Sections 280, 1080 and 1081 of the SSRBC, except as amended herein.

All roadway surfaces shall be kept free of dirt, mud, dust and debris of any kind at all times through all phases of the project. All downstream ditches shall be protected from erosion and sedimentation by the installation of silt fence ditch checks; straw bales shall not be used. Piles of excavated material and/or trench backfill material, allowed to be in place in excess of three days, shall be protected against erosion and sedimentation runoff by use of silt fence. Storm sewer inlet structures or manholes shall be protected by temporary placement of geotextile fabric, filter baskets, or solid lids, as authorized in the field by the Engineer.

Dirt, mud, dust and debris of any kind shall be removed from the roadway surface to the satisfaction of the Engineer by any one or combination of the following: approved mechanical sweeping equipment, manual labor, or other approved techniques.

Erosion and sedimentation control measures as indicated in the Erosion Control Plan, or as directed by the Engineer shall be installed on the project site prior to beginning any construction activities which will potentially create conditions subject to erosion. Erosion control devices shall be in place and approved by the Engineer as to proper placement and installation prior to beginning other work. Erosion control protection for Contractor equipment storage sites, plant sites, and other sites shall be installed by the Contractor and approved by the Engineer prior to beginning construction activities at each site.

On those streets designated for Aggregate Base Repair and Preparation of Aggregate Base, dust control shall include the application of water to the existing aggregate base, as conditions warrant, by water truck or other approved method. Unless otherwise directed by the Engineer, during dry periods between rains, a minimum of two applications per day will be necessary.

Silt Fence Placement, maintenance, and removal of silt fence at areas designated by the Engineer. The work shall be placed by methods and materials in accordance with Sections 280 and 1080 of the SSRBC, except as amended herein.

DEFICIENCY CHARGE:

The Village reserves the right to apply deficiency deductions per the applicable portions of Article 105.03 of the SSRBC.

Basis of Payment: This work shall be paid for at the contract Lump Sum price for: EROSION, SEDIMENTATION AND DUST CONTROL except for INLET FILTERS.

This work shall also be paid for at the contract unit price per Each for INLET FILTERS or INLET FILTERS CLEANING

30 TRAFFIC CONTROL, MAINTENANCE OF TRAFFIC

Description: This item shall include the furnishing, installing, maintaining, relocating and removing of all traffic control devices and personnel used for the purpose of regulating, warning, or directing traffic during the construction of this project. Placement and maintenance of all traffic control devices shall be in accordance with the applicable parts of Article 107.14 and Section 701 of the Standard Specifications and included Highway Standards. All traffic control devices used on this project shall conform to the Standard Specifications for Traffic Control Devices and the Illinois Manual on Uniform Traffic Control Devices.

No waiving of these requirements will be allowed without prior written approval of the Engineer.

The Contractor shall protect all workers engaged in the project, and shall provide for safe and convenient public travel by providing adequate traffic control under all circumstances. Such circumstances may include, but not be limited to work performed along the route under construction, road closures for construction operations of any type, or when any section of the road is opened to traffic prior to completion of all work. The Contractor shall ensure that work zone in question is properly signed, barricaded and otherwise marked.

The contractor will be responsible for the proper location, installation, and arrangement of all traffic control devices during the period of construction. All open excavations shall be protected by Type I barricades equipped with working bi-directional flashing lights at each end of the excavation, as well as at 50-foot intervals between ends for excavations greater than 50 feet in length and weighted down by **one sandbag per each barricade**. All street closures shall be protected by Type III barricades equipped with working bi-directional flashing lights and weighted down by **eight sandbags per each barricade**.

The Contractor shall plan his work so that there will be no open excavations during non-working hours and that all barricades not necessary have been removed from the pavement during non-working hours.

In the event that one direction of vehicular travel must be closed, the Contractor has the option of setting up a detour route or using flaggers (minimum of two) to direct traffic around the work area. The Engineer shall approve proper signing and barricading of the detour route and lane closures, and shall issue written authorization prior to closure.

In the event that both directions of vehicular travel must be closed, the Contractor shall set up a detour route to direct traffic around the work area. The Engineer shall approve proper signing and barricading of the detour route and shall issue written authorization prior to closure.

The Contractor shall maintain his operations in a manner such that traffic flow shall not be substantially impeded during the construction of the proposed improvements. Where traffic must cross open trenches during a given work day, the Contractor shall provide steel plates at street intersections and driveways. Prior to the end of a given work day, the pavement surface shall be temporarily restored.

No open excavation may be left overnight or on the weekend without the express written permission of the Engineer.

No street closure shall be permitted without the express written permission of the Engineer. No street closure may exceed 800 linear feet, nor be in effect from Friday night at 4:30PM to Monday morning at 9:00AM. Where it is necessary to establish a temporary detour, all the requirements of the Standard Specifications and MUTCD shall be met.

As the condition and location of the work changes, the Contractor shall maintain all traffic control devices and personnel engaged in traffic control, in a manner that will accommodate the changing particulars of the work at any given time. Advance warnings, detour and directional information and other controls or directions necessary for safe passage of traffic around the work site shall be reviewed and changed, if necessary, to meet the needs of the situation. Signage erected, but not necessary or proper for the situation ahead shall be covered or taken down. Barricading and signage shall be monitored by the Contractor on a daily basis to ensure that it meets the requirements for work zone safety for the conditions of the particular work being performed.

The Contractor shall provide a name and phone number of a responsible party capable of providing emergency service, 24 hours per day, for the duration of the Project.

DEFICIENCY CHARGE:

The primary concern of the Village is to maintain a safe travel way for the public and a safe environment for the work in the construction zone. The Contractor is expected to comply with the Standard Specifications, contract plans, the Special Provisions and directions from the Engineer concerning traffic control and protection. The Contractor shall provide a telephone number where a responsible individual can be contacted on a 24-hour-a-day basis to receive notification of any deficiencies regarding traffic control and protection. The Contractor shall immediately respond correcting traffic control deficiencies by dispatching workers, materials and equipment to correct such deficiencies.

Failure to comply with directions from the Engineer for corrections or modifications to the traffic control and protection will result in a deduction of either \$1,000 or 0.05 percent of the awarded contract value, whichever is greater, in accordance with Article 105.03. This charge is separate from the cost of any corrective work ordered. The Contractor shall not be relieved of any contractual responsibilities by the Village's actions.

Basis of Payment: This work shall be paid for at the contract Lump Sum price for TRAFFIC CONTROL, MAINTENANCE OF TRAFFIC which price shall be payment in full for the installation and maintenance of proper traffic control to protect the work and public for the duration of the Project.

31 HOT-MIX ASPHALT BINDER AND SURFACE COURSE

This item shall be done in accordance with all applicable parts of Sections 406 and 1030 of the SSRBC, the included BDE Specifications, and included mix table.

All preparation of the existing base shall be considered incidental to its respective pay item. This shall include but not be limited to cleaning cracks with an air compressor or other approved method prior to placement of mixture for cracks, joints and flangeways.

Basis of Payment: Prime Coat shall be paid for at the contract unit price per Gallon for BITUMINOUS MATERIALS (PRIME COAT), and at the contract unit price per Ton for AGGREGATE (PRIME COAT).

The HMA surfacing shall be paid for at the contract unit price per Ton for MIXTURE FOR CRACKS, JOINTS AND FLANGWAYS, and HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, and LEVELING BINDER (MACHINE METHOD), N50, and HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50.

IEPA CLEAN CONSTRUCTION AND DEMOLITION DEBRIS

Description: If construction activities will result in removal and disposal of excavation spoils, per Illinois Public Act 96-1416 and the Illinois Environmental Protection Agency, soil sampling and analysis, along with certification from a licensed professional engineer (PE) or licensed professional geologist (PG) that the soil is uncontaminated, will be required prior to clean construction and demolition debris (CCDD) facility acceptance. However, if the subject property has never been used for industrial or commercial purposes, and is not adjacent to Potentially Impacted Properties (PIPs), then the site owner or operator may certify that the soil is uncontaminated by use of IEPA form LPC-662.

To facilitate meeting the above requirements for this project, the Village will supply a signed Source Site Certification by Owner or Operator form LPC-662, or a signed LPC-663 form if warranted by a PIP investigation. Neither the form LPC-662, nor the LPC-663 shall be considered a guarantee that excavated material shall meet the requirements of Illinois Public Act 96-1416, and the Contractor shall be responsible for satisfactory removal and disposal of all material as specified herein. No additional environmental testing of the existing on-site material may be performed without prior written permission from the Engineer. In the event that Contractor performs any additional testing without the written permission of the Engineer, Contractor will be required to properly and legally dispose of all material from the project site, regardless of its suitability for disposal in a CCDD facility, at his own expense, without any additional payment for testing, hauling and disposal as specified below.

The Village anticipates that one or more of the following CCDD facilities will accept material from this project:

- Reliable Lyons CCDD, 4226 Lawndale Ave, Lyons, IL 60534
- Hanson Material Service, 125 N Independence Blvd Romeoville, IL 60446
- Bluff City Materials, 1245 Gifford Rd, Elgin, IL 60120
- EF Heil, 12152 South Naper Plainfield Road, Plainfield, IL 60585

Contractor shall consult with these facilities prior to submitting a bid for this project. Contractor shall base his bid on hauling all CCDD generated by this project to these facilities. No additional compensation will be allowed for hauling to any other facilities, for any reason, unless none of the above listed facilities will accept the material. If an alternate facility was approved by the Village prior to bid submittal, and that facility will no longer accept the material, the facilities listed above shall be used by the Contractor at no additional cost to the Village, unless none of the above facilities will accept the material. In the case where neither any of the above listed facilities, nor a pre-approved alternate facility, will accept the material, the Village and Contractor shall attempt to locate an alternate facility, unless the material is classified as unsuitable for disposal in a CCDD facility, in which case it shall be hauled to a landfill and paid for as specified below. Should the Contractor wish to haul material to an alternate facility, the name, location and contact information for the proposed facility shall be submitted to the Village for evaluation, a minimum of five (5) calendar days prior to submission of a bid. Any costs associated with additional sampling, analysis, and/or reporting to meet the acceptance requirements of the alternate facility shall be borne by the bidding Contractor and included within the Contractor's bid. By submitting a bid, Contractor agrees that at least one (1) of the above listed facilities, or an alternate facility approved by the Village in writing prior to the submission of the bid, will accept the material and shall be used for disposal of all CCDD from this project, unless otherwise determined to be non-hazardous special waste as specified below. In the event that the Contractor needs to alter the CCDD facility used for placement of excavated material, the Contractor shall notify the Engineer no later than three (3) days in advance of the planned alteration. In no event shall material be hauled to an alternate facility without the written permission of the Engineer.

Construction Requirements: The Contractor shall be responsible for satisfactory removal and disposal of all waste material, asphalt, concrete, stone, dirt, and debris generated or discovered in the course of the work. Removal and disposal of excavation items being disposed of at a clean construction and demolition debris (CCDD) facility shall meet the requirements of Public Act 96-1416. This work shall be incidental and shall not be paid for separately, with the exception of the **ADDITIONAL HAULING SURCHARGE, NON-HAZARDOUS SPECIAL WASTE** as specified below.

The temporary storing of excavated materials within the public right-of-way or project limits shall not be allowed unless approved by the Engineer. It shall be the Contractor's responsibility to find an approved dumpsite for debris and any excavated materials. The Village will not provide one.

The Contractor shall employ a licensed testing firm, as approved by Engineer, to screen each truck-load of material on-site, using a PID or FID field screen or other acceptable method. The PID shall be calibrated on a daily basis. The Contractor or Contractor's testing consultant shall enter all truck-loads leaving the site into an on-site screening log including, but not limited to, project name, date, time, weather conditions, name of screener, hauling company, truck number, screening method, background PID reading, calibrated PID reading, truck/bucket PID reading, and description of materials screened. Each day prior to the first truck leaving the site, Engineer and Contractor's testing consultant shall agree on the allowable PID reading in accordance with the receiving CCDD facility procedures (typically 0.0 or daily background levels). The receiving CCDD facility may be consulted daily, or periodically, as needed to verify that the appropriate value is being used. If said screen indicates levels that will be unacceptable for disposal at the CCDD facility, the material shall be quarantined on-site for further evaluation. If material is rejected at the CCDD facility, it shall be returned to the project site and quarantined for further evaluation. No additional compensation shall be allowed for returning a rejected load back to the project site. Should it be determined by the Village or Village's agent that the material is not suitable for disposal in a CCDD facility, the Contractor shall be responsible for properly disposing of the material at an acceptable landfill, and providing the Village with all of the proper paperwork to document the material disposal with the IEPA. This work shall be paid for as specified below. If a truck-load is rejected by a CCDD facility after leaving the project site, and said truck-load is not identified in the on-site screening log, the Contractor shall still be required to properly dispose of the material and provide the Village with the necessary documentation, but shall not be additionally compensated as specified below.

All additional work to satisfy these requirements shall be the responsibility of the Contractor. All costs associated with meeting these requirements shall be paid for as specified herein. These costs shall include but are not limited to all required testing, lab analysis, and certification by a licensed professional engineer (PE) or licensed professional geologist (PG), if required, in addition to the cost of additional hauling, dump fees, etc. Payment for this work shall be in addition to payment for EARTH EXCAVATION per the contract unit price. No adjustment to the contract unit price will be allowed due to changes to quantities based on actual field conditions.

Basis of Payment: This work shall be paid for at the contract unit price per **LOAD** for:

ADDITIONAL HAULING SURCHARGE, NON-HAZARDOUS SPECIAL WASTE,

which price shall be payment in full for the work as specified herein.

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.”

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ADJUSTMENTS AND RECONSTRUCTIONS

Effective: March 15, 2011

Revise the first paragraph of Article 602.04 to read:

"602.04 Concrete. Cast-in-place concrete for structures shall be constructed of Class SI concrete according to the applicable portions of Section 503. Cast-in-place concrete for pavement patching around adjustments and reconstructions shall be constructed of Class PP-1 concrete, unless otherwise noted in the plans, according to the applicable portions of Section 1020."

Revise the third, fourth and fifth sentences of the second paragraph of Article 602.11(c) to read:

"Castings shall be set to the finished pavement elevation so that no subsequent adjustment will be necessary, and the space around the casting shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b."

Revise Article 603.05 to read:

"603.05 Replacement of Existing Flexible Pavement. After the castings have been adjusted, the surrounding space shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b."

Revise Article 603.06 to read:

"603.06 Replacement of Existing Rigid Pavement. After the castings have been adjusted, the pavement and HMA that was removed, shall be replaced with Class PP-1 concrete, unless otherwise noted in the plans, not less than 9 in. (225 mm) thick. The pavement may be opened to traffic according to Article 701.17(e)(3)b.

The surface of the Class PP concrete shall be constructed flush with the adjacent surface."

Revise the first sentence of Article 603.07 to read:

"603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b."

DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (DISTRICT 1)

Effective: April 1, 2011

Revised: April 2, 2011

Add the following to Article 603.02 of the Standard Specifications:

- “(i) Temporary Hot-Mix Asphalt (HMA) Ramp (Note 1)1030
- “(j) Temporary Rubber Ramps (Note 2)

Note 1. The HMA shall have maximum aggregate size of 3/8 in. (95 mm).

Note 2. The rubber material shall be according to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	75 ±15
Tensile Strength, psi (kPa)	ASTM D 412	300 (2000) min
Elongation, percent	ASTM D 412	90 min
Specific Gravity	ASTM D 792	1.0 - 1.3
Brittleness, °F (°C)	ASTM D 746	-40 (-40)°

Revise Article 603.07 of the Standard Specifications to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.

When castings are under traffic before the final surfacing operation has been started, properly sized temporary ramps shall be placed around the drainage and/or utility castings according to the following methods.

- (a) Temporary Asphalt Ramps. Temporary hot-mix asphalt ramps shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 2 ft (600 mm) around the entire surface of the casting.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 40 mph or less and when the height of the casting to be protected meets the proper sizing requirements for the rubber ramps as shown below.

Dimension	Requirement
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Inside Opening	Outside dimensions of casting + 1 in. (25 mm)
Thickness at inside edge	Height of casting $\pm$ 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer's specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03."

FINE AGGREGATE FOR HOT- MIX ASPHALT (HMA) (D-1)

Effective: May 1, 2007

Revised: January 1, 2012

Revise Article 1003.03 (c) of the Standard Specifications to read:

- "(c) Gradation. The fine aggregate gradation for all HMA shall be FA1, FA 2, FA 20, FA 21 or FA 22. When Reclaimed Asphalt Pavement (RAP) is incorporated in the HMA design, the use of FA 21 Gradation will not be permitted.

FRICTION SURFACE AGGREGATE (D1)

Effective: January 1, 2011

Revised: February 26, 2013

Revise Article 1004.01(a)(4) of the Standard Specifications to read:

“(4) Crushed Stone. Crushed stone shall be the angular fragments resulting from crushing undisturbed, consolidated deposits of rock by mechanical means. Crushed stone shall be divided into the following, when specified.

- a. Carbonate Crushed Stone. Carbonate crushed stone shall be either dolomite or limestone. Dolomite shall contain 11.0 percent or more magnesium oxide (MgO). Limestone shall contain less than 11.0 percent magnesium oxide (MgO).
- b. Crystalline Crushed Stone. Crystalline crushed stone shall be either metamorphic or igneous stone, including but is not limited to, quartzite, granite, rhyolite and diabase.”

Revise Article 1004.03(a) of the Standard Specifications to read:

“**1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA).** The aggregate shall be according to Article 1004.01 and the following revisions.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	<u>Allowed Alone or in Combination:</u> Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete

Use	Mixture	Aggregates Allowed	
HMA All Other	Shoulders	<u>Allowed Alone or in Combination:</u> Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{1/} Crushed Steel Slag ^{1/} Crushed Concrete	
HMA High ESAL Low ESAL	C Surface IL-12.5, IL-9.5, or IL-9.5L	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{1/} Crushed Steel Slag ^{1/} Crushed Concrete	
HMA High ESAL	D Surface IL-12.5 or IL-9.5	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone (other than Limestone) Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{1/} Crushed Steel Slag ^{1/} Crushed Concrete	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		25% Limestone	Dolomite
		50% Limestone	Any Mixture D aggregate other than Dolomite

Use	Mixture	Aggregates Allowed	
		75% Limestone	Crushed Slag (ACBF) ^{1/} or Crushed Sandstone
HMA High ESAL	F Surface IL-12.5 or IL-9.5	<u>Allowed Alone or in Combination:</u>	
		Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{1/} Crushed Steel Slag ^{1/}	
		No Limestone or no Crushed Gravel alone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Crushed Gravel, or Dolomite	Crushed Sandstone, Crushed Slag (ACBF) ^{1/} , Crushed Steel Slag ^{1/} , or Crystalline Crushed Stone
HMA High ESAL	SMA Ndesign 80 Surface	Crystalline Crushed Stone Crushed Sandstone Crushed Steel Slag	

1/ When either slag is used, the blend percentages listed shall be by volume.

Add to Article 1004.03 (b) of the Standard Specifications to read:

" When using Crushed Concrete, the quality shall be determined as follows. The Contractor shall obtain a representative sample from the stockpile, witnessed by the Engineer, at a frequency of 2500 tons (2300 metric tons). The sample shall be a minimum of 50 lb (25 kg). The Contractor shall submit the sample to the District Office. The District will forward the sample to

the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent by weight will be applied for acceptance. The stockpile shall be sealed until test results are complete and found to meet the specifications above."

HMA MIXTURE DESIGN REQUIREMENTS (D-1)

Effective: January 1, 2013.

Revised: January 16, 2013

1) Design Composition and Volumetric Requirements

Revise Article 1030.04(a)(1) of the Standard Specifications to read.

“(1)High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

High ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/}										
Sieve Size	IL-25.0 mm		IL-19.0 mm		IL-12.5 mm		IL-9.5 mm		IL-4.75 mm	
	min	max	min	max	min	max	min	max	min	max
1 1/2 in. (37.5 mm)		100								
1 in. (25 mm)	90	100		100						
3/4 in. (19 mm)		90	82	100		100				
1/2 in. (12.5 mm)	45	75	50	85	90	100		100		100
3/8 in. (9.5 mm)						89	90	100		100
#4 (4.75 mm)	24	42 ^{2/}	24	50 ^{2/}	28	65	28	65	90	100
#8 (2.36 mm)	16	31	20	36	28	48 ^{3/}	32	52 ^{3/}	70	90
#16 (1.18 mm)	10	22	10	25	10	32	10	32	50	65
#50 (300 µm)	4	12	4	12	4	15	4	15	15	30
#100 (150 µm)	3	9	3	9	3	10	3	10	10	18
#200 (75 µm)	3	6	3	6	4	6	4	6	7	9
Ratio Dust/Asphalt Binder		1.0		1.0		1.0		1.0		1.0 ^{4/}

1/ Based on percent of total aggregate weight.

2/ The mixture composition shall not exceed 40 percent passing the #4 (4.75 mm) sieve for binder courses with Ndesign ≥ 90.

3/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign ≥ 90.

4/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.”

Delete Article 1030.04(a)(4) of the Standard Specifications.

Revise Article 1030.04(b)(1) of the Standard Specifications to read.

- "(1) High ESAL Mixtures. The target value for the air voids of the HMA shall be 4.0 percent and for IL-4.75 it shall be 3.5 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix, and shall conform to the following requirements.

VOLUMETRIC REQUIREMENTS High ESAL						
	Voids in the Mineral Aggregate (VMA), % minimum					Voids Filled with Asphalt Binder (VFA), %
Ndesign	IL-25.0	IL-19.0	IL-12.5	IL-9.5	IL-4.75 ^{1/}	
50	12.0	13.0	14.0	15	18.5	65 – 78 ^{2/}
70						65 - 75
90						
105						

1/ Maximum Draindown for IL-4.75 shall be 0.3%

2/ VFA for IL-4.75 shall be 72-85%"

Delete Article 1030.04(b)(4) of the Standard Specifications.

Revise the Control Limits Table in Article 1030.05(d)(4) of the Standard Specifications to read.

"CONTROL LIMITS					
Parameter	High ESAL Low ESAL	High ESAL Low ESAL	All Other	IL-4.75	IL-4.75
	Individual Test	Moving Avg. of 4	Individual Test	Individual Test	Moving Avg. of 4
% Passing: ^{1/}					
1/2 in. (12.5 mm)	± 6 %	± 4 %	± 15 %		
No. 4 (4.75 mm)	± 5 %	± 4 %	± 10 %		
No. 8 (2.36 mm)	± 5 %	± 3 %			
No. 16 (1.18 mm)				± 4 %	± 3 %
No. 30 (600 µm)	± 4 %	± 2.5 %			
Total Dust Content No. 200 (75 µm)	± 1.5 %	± 1.0 %	± 2.5 %	± 1.5 %	± 1.0 %
Asphalt Binder Content	± 0.3 %	± 0.2 %	± 0.5 %	± 0.3 %	± 0.2 %
Voids	± 1.2 %	± 1.0 %	± 1.2 %	± 1.2 %	± 1.0 %
VMA	-0.7 % ^{2/}	-0.5 % ^{2/}		-0.7 % ^{2/}	-0.5 % ^{2/}

1/ Based on washed ignition oven

2/ Allowable limit below minimum design VMA requirement"

2) Design Verification and Production

Description. The following states the requirements for Hamburg Wheel and Tensile Strength testing for High ESAL, IL-4.75, and SMA hot mix asphalt (HMA) mixes during mix design verification and production.

When the options of Warm Mix Asphalt, Reclaimed Asphalt Shingles, or Reclaimed Asphalt Pavement are used by the Contractor, the Hamburg Wheel and tensile strength requirements in this special provision will be superseded by the special provisions for Warm Mix Asphalt, Reclaimed Asphalt Shingles, or Reclaimed Asphalt Pavement as applicable.

Mix Design Testing. Add the following to Article 1030.04 of the Standard Specifications:

- “(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (IL mod AASHTO T-324) and the Tensile Strength Test (IL mod AASHTO T-283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department's verification test, the Contractor shall make the necessary changes to the mix and resubmit compacted specimens to the Department for verification. If the mix fails again, the mix design will be rejected.

All new and renewal mix designs will be required to be tested, prior to submittal for Department verification meeting the following requirements:

- (1)Hamburg Wheel Test criteria.

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG 70 -XX (or higher)	20,000	12.5
PG 64 -XX (or lower)	10,000	12.5

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions. For IL 4.75mm Designs (N-50) the maximum rut depth is 9.0mm at 15,000 repetitions.

- (2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 415 kPa (60 psi) for non-polymer modified performance graded (PG) asphalt binder and 550 kPa (80 psi) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 1380 kPa (200 psi).”

Production Testing. Add the following to Article 1030.06 of the Standard Specifications:

- “(c) Hamburg Wheel Test. All HMA mixtures shall be sampled within the first 500 tons (450 metric tons) on the first day of production or during start up with a split reserved for

the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day's production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture demonstrates conformance prior to start of mix production for a contract.

The Department may conduct additional Hamburg Wheel Tests on production material as determined by the Engineer. If the mixture fails to meet the Hamburg Wheel criteria, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria"

Basis of Payment. Revise the seventh paragraph of Article 406.14 of the Standard Specifications to read:

"For all mixes designed and verified under the Hamburg Wheel criteria, the cost of furnishing and introducing anti-stripping additives in the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

No additional compensation will be awarded to the Contractor because of reduced production rates associated with the addition of the anti-stripping additive."

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1)

Effective: November 1, 2012

Revise: January 2, 2013

Revise Section 1031 of the Standard Specifications to read:

"SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

1031.01 Description. Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material resulting by cold milling or crushing an existing hot-mix asphalt (HMA) pavement. RAP will be considered processed FRAP after completion of both crushing and screening to size. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.
- (b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Bureau of Materials and Physical Research Policy Memorandum "Reclaimed Asphalt Shingle (RAS) Sources", by weight of RAS. All RAS used shall come from a Bureau of Materials and Physical Research approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve. RAS shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
 - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
 - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

1031.02 Stockpiles. RAP and RAS stockpiles shall be according to the following.

- (a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including unprocessed RAP and Processed FRAP) shall be identified by signs indicating the type as listed below (i.e. "Non- Quality, FRAP #4 or Type 2 RAS", etc...).

- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. All FRAP shall be processed prior to testing sized into fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mix the RAP will be used in.
- (2) Restricted FRAP (B quality) stockpiles shall consist of RAP from Class I, Superpave (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 inch single combined pass of surface/binder milling will be classified as B quality. All millings from this application will be processed into FRAP as described previously.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed (FRAP) prior to testing. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (4) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from HMA shoulders, bituminous stabilized subbases or Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, plant cleanout etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

- (b) RAS Stockpiles. The Contractor shall construct individual, sealed RAS stockpiles meeting one of the following definitions. No additional RAS shall be added to the pile after the pile has been sealed. Type 1 and Type 2 RAS shall be stockpiled separately and shall be sufficiently separated to prevent intermingling at the base. Each stockpile shall be signed indicating what type of RAS is present.

However, a RAS source may submit a written request to the Department for approval to blend mechanically a specified ratio of type 1 RAS with type 2 RAS. The source will not be permitted to change the ratio of the blend without the Department prior written approval. The Engineer's written approval will be required, to mechanically blend RAS with any fine aggregate produced under the AGCS, up to an equal weight of RAS, to improve workability. The fine aggregate shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The fine aggregate shall be one that is approved for use in the HMA mixture and accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type and lot number shall be maintained by project contract number and kept for a minimum of three years.

1031.03 Testing. RAP/FRAP and RAS testing shall be according to the following.

(a) RAP/FRAP Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during processing or after stockpiling.

(1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

(2) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample whether RAP or FRAP, shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

(b) RAS Testing. RAS shall be sampled and tested either during or after stockpiling.

During stockpiling, washed extraction, and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 1000 tons (900 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤ 1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS shall be stockpiled in a separate working pile as designated in the Quality Control plan and only added to the

sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

1031.04 Evaluation of Tests. Evaluation of tests results shall be according to the following.

- (a) Evaluation of RAP/FRAP Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable (for slag) G_{mm} . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAP or FRAP	Conglomerate "D" Quality RAP
1 in. (25 mm)		$\pm 5 \%$
1/2 in. (12.5 mm)	$\pm 8 \%$	$\pm 15 \%$
No. 4 (4.75 mm)	$\pm 6 \%$	$\pm 13 \%$
No. 8 (2.36 mm)	$\pm 5 \%$	
No. 16 (1.18 mm)		$\pm 15 \%$
No. 30 (600 μm)	$\pm 5 \%$	
No. 200 (75 μm)	$\pm 2.0 \%$	$\pm 4.0 \%$
Asphalt Binder	$\pm 0.4 \%$ ^{1/}	$\pm 0.5 \%$
G_{mm}	± 0.03 ^{2/}	

1/ The tolerance for FRAP shall be $\pm 0.3 \%$.

2/ For slag and steel slag

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

- (b) Evaluation of RAS Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and

gradation. Individual test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 µm)	± 4 %
No. 200 (75 µm)	± 2.0 %
Asphalt Binder Content	± 1.5 %

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, the RAS shall not be used in Department projects unless the RAS, RAP or FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

1031.05 Quality Designation of Aggregate in RAP/FRAP.

(a) RAP. The aggregate quality of the RAP for homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

- (1) RAP from Class I, Superpave (High ESAL)/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
- (2) RAP from Superpave (High ESAL)/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
- (3) RAP from Class I, Superpave (High ESAL)/HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
- (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

(b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Fractionated RAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample

to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications. The fine aggregate portion of the fractionated RAP shall not be used in any HMA mixtures that require a minimum of "B" quality aggregate or better, until the coarse aggregate fraction has been determined to be acceptable thru a MicroDeval Testing.

1031.06 Use of RAS, RAP or FRAP in HMA. The use of RAS, RAP or FRAP shall be a Contractor's option when constructing HMA in all contracts.

(a) RAP/FRAP. The use of RAP/FRAP in HMA shall be as follows.

- (1) Coarse Aggregate Size (after extraction). The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (2) Steel Slag Stockpiles. RAP/FRAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) mixtures regardless of lift or mix type.
- (3) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall have coarse aggregate that is Class B quality or better. RAP/FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 inch.
- (4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP in which the coarse aggregate is Class C quality or better.
- (5) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be RAP, Restricted FRAP, conglomerate, or conglomerate DQ.

(b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.

(c) RAP/FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with RAP or FRAP in HMA mixtures up to a maximum of 5.0% by weight of the total mix.

When the Contractor chooses the RAP option, the percentage of the percentage of virgin asphalt binder replaced by the asphalt binder from the RAP shall not exceed the percentages indicated in the table below for a given N Design:

Max Asphalt Binder Replacement RAP Only

Table 1

HMA Mixtures ^{1/, 2/}	Maximum % Asphalt Binder replacement (ABR)		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified
30L	25	15	10
50	25	15	10
70	15	10	10
90	10	10	10
105	10	10	10
4.75 mm N-50			15
SMA N-80			10

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the percent asphalt binder replacement shall not exceed 50% of the total asphalt binder in the mixture.
- 2/ When the asphalt binder replacement exceeds 15 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent binder replacement would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). When constructing full depth HMA and the ABR is less than 15 percent, the required virgin asphalt binder grade shall be PG64-28.

When the Contractor chooses either the RAS or FRAP option, the percent binder replacement shall not exceed the amounts indicated in the tables below for a given N Design.

Max Asphalt Binder Replacement RAS or FRAP

Table 2

HMA Mixtures ^{1/, 2/}	Maximum % ABR		
Ndesign	Binder/Leveling Binder	Surface	Polymer ^{3/, 4/} Modified
30L	35	30	15
50	30	25	15
70	30	20	15
90	20	15	15
105	20	15	15
4.75 mm N-50			25
SMA N-80			15

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the percent asphalt binder replacement shall not exceed 50% of the total asphalt binder in the mixture.

2/ When the asphalt binder replacement exceeds 15 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent binder replacement will require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). When constructing full depth HMA and the ABR is less than 15 percent, the required virgin asphalt binder grade shall be PG64-28.

3/ When the ABR for SMA is 15 percent or less, the required virgin asphalt binder grade shall be SBS PG76-22.

4/ When the ABR for IL-4.75 mix is 15 percent or less, the required virgin asphalt binder grade shall be SBS PG76-22. When the ABR for the IL-4.75 mix exceeds 15 percent, the virgin asphalt binder grade shall be SBS PG70-28.

When the Contractor chooses the RAS with FRAP combination, the percent asphalt binder replacement shall split equally between the RAS and the FRAP, and the total replacement shall not exceed the amounts indicated in the tables below for a given N Design.

Max Asphalt Binder Replacement RAS and FRAP Combination
Table 3

HMA Mixtures ^{1/, 2/}	Maximum % ABR		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified ^{3/, 4/}
30L	50	40	30
50	40	35	30
70	40	30	30
90	40	30	30
105	40	30	30
4.75 mm N-50			40
SMA N-80			30

1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the percent asphalt binder replacement shall not exceed 50% of the total asphalt binder in the mixture.

2/ When the binder replacement exceeds 15 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent binder replacement will require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

3/ When the ABR for SMA is 15 percent or less, the required virgin asphalt binder shall be SBS PG76-22. When the ABR for SMA exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28.

4/ When the ABR for IL-4.75 mix is 15 percent or less, the required virgin asphalt binder grade shall be SBS PG76-22. When the ABR for the IL-4.75 mix exceeds 15 percent, the virgin asphalt binder grade shall be SBS PG70-28.

1031.07 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the above detailed requirements.

All HMA mixtures will be required to be tested, prior to submittal for Department verification, according to Illinois Modified AASHTO T324 (Hamburg Wheel) and shall meet the following requirements:

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG76-XX	20,000	12.5
PG70-XX	20,000	12.5
PG64-XX	10,000	12.5
PG58-XX	10,000	12.5
PG52-XX	10,000	12.5
PG46-XX	10,000	12.5

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions.
For IL 4.75 mm Designs (N-50) the maximum rut depth is 9.0 mm at 15,000 repetitions.

1031.08 HMA Production. All HMA mixtures shall be sampled within the first 500 tons (450 metric tons) on the first day of production or during start up with a split reserved for the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day's production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture demonstrates conformance prior to start of mix production for a contract.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAS, RAP and FRAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAS, RAP and FRAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAS, RAP or FRAP and either switch to the virgin aggregate design or submit a new RAS, RAP or FRAP design.

- (a) RAP/FRAP. The coarse aggregate in all RAP/FRAP used shall be equal to or less than the maximum size requirement for the HMA mixture being produced.

- (b) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.
- (c) RAS, RAP and FRAP. HMA plants utilizing RAS, RAP and FRAP shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- d. Accumulated dry weight of RAS, RAP and FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- g. Residual asphalt binder in the RAS, RAP and FRAP material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate RAS, RAP and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS, RAP and FRAP are printed in wet condition.)
- i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.
- j. Accumulated mixture tonnage.
- k. Dust Removed (accumulated to the nearest 0.1 ton)

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.

- b. HMA mix number assigned by the Department.
- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- f. RAS, RAP and FRAP weight to the nearest pound (kilogram).
- g. Virgin asphalt binder weight to the nearest pound (kilogram).
- h. Residual asphalt binder in the RAS, RAP and FRAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.09 RAP in Aggregate Surface Course and Aggregate Shoulders. The use of RAP or FRAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded, FRAP, or single sized will not be accepted for use as Aggregate Surface Course and Aggregate Shoulders."

GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1)

Effective: June 26, 2006

Revised: January 1, 2013

Add the following to the end of article 1032.05 of the Standard Specifications:

"(c) Ground Tire Rubber (GTR) Modified Asphalt Binder. A quantity of 10.0 to 14.0 percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-28 to make a GTR 70-28 or a PG 58-28 to make a GTR 64-28. The base PG 64-28 and PG 58-28 asphalt binders shall meet the requirements of Article 1032.05(a). Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

Test	Asphalt Grade GTR 70-28	Asphalt Grade GTR 64-28
Flash Point (C.O.C.), AASHTO T 48, °F (°C), min.	450 (232)	450 (232)
Rotational Viscosity, AASHTO T 316 @ 275 °F (135 °C), Poises, Pa-s, max.	30 (3)	30 (3)
Softening Point, AASHTO T 53, °F (°C), min.	135 (57)	130 (54)
Elastic Recovery, ASTM D 6084, Procedure A (sieve waived) @ 77 °F, (25 °C), aged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	65

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois modified AASHTO T 27, a 50 g sample of the GTR shall conform to the following gradation requirements:

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 µm)	95 ± 5
No. 50 (300 µm)	> 20

Add the following to the end of Note 1. of article 1030.03 of the Standard Specifications:

"A dedicated storage tank for the Ground Tire Rubber (GTR) modified asphalt binder shall be provided. This tank must be capable of providing continuous mechanical mixing throughout by continuous agitation and recirculation of the asphalt binder to provide a

uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ± 0.40 percent.”

Revise 1030.02(c) of the Standard Specifications to read:

“(c) RAP Materials (Note 3)1031”

Add the following note to 1030.02 of the Standard Specifications:

Note 3. When using reclaimed asphalt pavement and/or reclaimed asphalt shingles, the maximum asphalt binder replacement percentage shall be according to the most recent special provision for recycled materials.

BDE SPECIAL PROVISIONS
For the April 26 and June 14, 2013 Lettings

The following special provisions indicated by an "x" are applicable to this contract and will be included by the Project Development and Implementation Section of the BD&E. An * indicates a new or revised special provision for the letting.

<u>File Name</u>	<u>#</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80240	1	Above Grade Inlet Protection	July 1, 2009	Jan. 1, 2012
80099	2	Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
80274	3	Aggregate Subgrade Improvement	April 1, 2012	Jan. 1, 2013
80309	4	Anchor Bolts	Jan. 1, 2013	
80192	5	Automated Flagger Assistance Device	Jan. 1, 2008	
80173	6	Bituminous Materials Cost Adjustments	Nov. 2, 2006	Jan. 1, 2012
80241	7	Bridge Demolition Debris	July 1, 2009	
80276	8	Bridge Relief Joint Sealer	Jan. 1, 2012	Aug. 1, 2012
50261	9	Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481	10	Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491	11	Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531	12	Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
* 80292	13	Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	April 1, 2013
80310	14	Coated Galvanized Steel Conduit	Jan. 1, 2013	
80198	15	Completion Date (via calendar days)	April 1, 2008	
80199	16	Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293	17	Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	
80294	18	Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet	April 1, 2012	
80311	19	Concrete End Sections for Pipe Culverts	Jan. 1, 2013	
80277	20	Concrete Mix Design – Department Provided	Jan. 1, 2012	
80261	21	Construction Air Quality – Diesel Retrofit	June 1, 2010	
80029	22	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
80312	23	Drain Pipe, Tile, Drainage Mat, and Wall Drain	Jan. 1, 2013	
80313	24	Fabric Bearing Pads	Jan. 1, 2013	
80265	25	Friction Aggregate	Jan. 1, 2011	
80229	26	Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80303	27	Granular Materials	Nov. 1, 2012	
80304	28	Grooving for Recessed Pavement Markings	Nov. 1, 2012	Jan. 1, 2013
80169	29	High Tension Cable Median Barrier	Jan. 1, 2007	Jan. 1, 2013
80246	30	✓ Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
80315	31	Insertion Lining of Culverts	Jan. 1, 2013	
* 80320	32	✓ Liquidated Damages	April 1, 2013	
80045	33	Material Transfer Device	June 15, 1999	Jan. 1, 2009
80297	34	Modified Urethane Pavement Marking	April 1, 2012	
80165	35	Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80253	36	Movable Traffic Barrier	Jan. 1, 2010	Jan. 1, 2013
80231	37	Pavement Marking Removal	April 1, 2009	
80298	38	Pavement Marking Tape Type IV	April 1, 2012	
80254	39	✓ Pavement Patching	Jan. 1, 2010	
* 80321	40	Pavement Removal	April 1, 2013	
80022	41	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
80316	42	✓ Placing and Consolidating Concrete	Jan. 1, 2013	
80278	43	Planting Woody Plants	Jan. 1, 2012	Aug. 1, 2012
80305	44	Polyurea Pavement Markings	Nov. 1, 2012	Jan. 1, 2013
80279	45	✓ Portland Cement Concrete	Jan. 1, 2012	Jan. 1, 2013

<u>File Name</u>	<u>#</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80300	46	Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	
80218	47	Preventive Maintenance – Bituminous Surface Treatment	Jan. 1, 2009	April 1, 2012
80219	48	Preventive Maintenance – Cape Seal	Jan. 1, 2009	April 1, 2012
80220	49	Preventive Maintenance – Micro-Surfacing	Jan. 1, 2009	April 1, 2012
80221	50	Preventive Maintenance – Slurry Seal	Jan. 1, 2009	April 1, 2012
80281	51	✓ Quality Control/Quality Assurance of Concrete Mixtures	Jan. 1, 2012	Jan. 1, 2013
34261	52	Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	53	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
80306	54	Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 1, 2013
* 80283	55	Removal and Disposal of Regulated Substances	Jan. 1, 2012	Nov. 2, 2012
* 80319	56	Removal and Disposal of Surplus Materials	Nov. 2, 2012	
80224	57	Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	Jan. 1, 2012
80271	58	Safety Edge	April 1, 2011	
80307	59	Seeding	Nov. 1, 2012	
80127	60	Steel Cost Adjustment	April 2, 2004	April 1, 2009
80255	61	Stone Matrix Asphalt	Jan. 1, 2010	Jan. 1, 2012
80143	62	Subcontractor Mobilization Payments	April 2, 2005	April 1, 2011
80317	63	Surface Testing of Hot-Mix Asphalt Overlays (NOTE: This special provision was previously named "Surface Testing of Pavements".)	Jan. 1, 2013	
80308	64	Synthetic Fibers in Concrete Gutter, Curb, Median and Paved Ditch	Nov. 1, 2012	
80286	65	Temporary Erosion and Sediment Control	Jan. 1, 2012	
80225	66	Temporary Raised Pavement Marker	Jan. 1, 2009	
80256	67	Temporary Water Filled Barrier	Jan. 1, 2010	Jan. 1, 2013
80301	68	Tracking the Use of Pesticides	Aug. 1, 2012	
80273	69	✓ Traffic Control Deficiency Deduction	Aug. 1, 2011	
20338	70	Training Special Provisions	Oct. 15, 1975	
* 80318	71	Traversable Pipe Grate	Jan. 1, 2013	April 1, 2013
80270	72	Utility Coordination and Conflicts	April 1, 2011	Jan. 1, 2012
80288	73	Warm Mix Asphalt	Jan. 1, 2012	Nov. 1, 2012
80302	74	Weekly DBE Trucking Reports	June 2, 2012	
80289	75	Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
80071	76	Working Days	Jan. 1, 2002	

The following special provisions are either in the 2013 Standard Specifications, the 2013 Recurring Special Provisions, or the special provisions Portland Cement Concrete, QC/QA of Concrete Mixtures, or Placing and Consolidating Concrete:

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80275	Agreement to Plan Quantity	Article 202.07	Jan. 1, 2012	
80291	Calcium Chloride Accelerator for Class PP-2 Concrete	Recurring CS #28	April 1, 2012	
80237	Construction Air Quality – Diesel Vehicle Emissions Control	Articles 105.03 and 107.41	April 1, 2009	Jan. 2, 2012
80239	Construction Air Quality – Idling Restrictions	Articles 105.03 and 107.41	April 1, 2009	
80177	Digital Terrain Modeling for Earthwork Calculations	Recurring CS #32	April 1, 2007	
80272	Drainage and Inlet Protection Under Traffic	Articles 603.02 and 603.07	April 1, 2011	Jan. 1, 2012
80228	Flagger at Side Roads and Entrances	Articles 701.13 and 701.20	April 1, 2009	
80109	Impact Attenuators	Section 643	Nov. 1, 2003	Jan. 1, 2012
80110	Impact Attenuators, Temporary	Section 706	Nov. 1, 2003	Jan. 1, 2012
80203	Metal Hardware Cast into Concrete	Articles 503.02, 504.02, and 1006.13	April 1, 2008	Jan. 1, 2012
80290	Payrolls and Payroll Records	Recurring CS #5	Jan. 2, 2012	
80299	Portland Cement Concrete Inlay or Overlay	Recurring CS #29	April 1, 2012	
80280	Portland Cement Concrete Sidewalk	Article 424.07	Jan. 1, 2012	

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80152	Self-Consolidating Concrete for Cast-In-Place Construction	The following special provisions: Portland Cement Concrete, QC/QA of Concrete Mixtures and Placing and Consolidating Concrete	Nov. 1, 2005	April 1, 2012
80132	Self-Consolidating Concrete for Precast and Precast Prestressed Products	The following special provisions: Portland Cement Concrete, QC/QA of Concrete Mixtures and Placing and Consolidating Concrete	July 1, 2004	April 1, 2012
80284	Shoulder Rumble Strips	Article 642.05	Jan. 1, 2012	
80285	Sidewalk, Corner or Crosswalk Closure	Articles 701.03, 701.15, and 1106.02	Jan. 1, 2012	
80075	Surface Testing of Pavements (Section 406 overlay portion will remain a special provision and will now be called "Surface Testing of HMA Overlays".)	Articles 407.09, 407.12, 420.10, 420.20, and 1101.10	April 1, 2002	Jan. 1, 2007
80287	Type G Inlet Box	Article 610.09	Jan. 1, 2012	

The following special provisions require additional information from the designer. The additional information needs to be included in a separate document attached to this check sheet. The Project Development and Implementation section will then include the information in the applicable special provision. The Special Provisions are:

- Bridge Demolition Debris
- Building Removal-Case I
- Building Removal-Case II
- Building Removal-Case III
- Building Removal-Case IV
- Completion Date
- Completion Date Plus Working Days
- DBE Participation
- Material Transfer Device
- Railroad Protective Liability Insurance
- Training Special Provisions
- Working Days

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010

Revised: April 1, 2012

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

"Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced ten feet apart longitudinally along the unconfined pavement edge and centered at the random density test location."

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

"Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-4.75	Ndesign = 50	93.0 – 97.4%	91.0%
IL-9.5, IL-12.5	Ndesign ≥ 90	92.0 – 96.0%	90.0%
IL-9.5, IL-9.5L, IL-12.5	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0, IL-25.0	Ndesign ≥ 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L, IL-25.0	Ndesign < 90	93.0 – 97.4%	90.0%

SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%
All Other	Ndesign = 30	93.0 - 97.4%	90.0%”

80246

LIQUIDATED DAMAGES (BDE)

Effective: April 1, 2013

Revise the table in Article 108.09 of the Standard Specifications to read:

"Schedule of Deductions for Each Day of Overrun in Contract Time			
Original Contract Amount		Daily Charges	
From More Than	To and Including	Calendar Day	Work Day
\$ 0	\$ 100,000	\$ 475	\$ 675
100,000	500,000	750	1,050
500,000	1,000,000	1,025	1,425
1,000,000	3,000,000	1,275	1,725
3,000,000	6,000,000	1,425	2,000
6,000,000	12,000,000	2,300	3,450
12,000,000	And over	6,775	9,525"

80320

PAVEMENT PATCHING (BDE)

Effective: January 1, 2010

Revise the first sentence of the second paragraph of Article 701.17(e)(1) of the Standard Specifications to read:

“In addition to the traffic control and protection shown elsewhere in the contract for pavement, two devices shall be placed immediately in front of each open patch, open hole, and broken pavement where temporary concrete barriers are not used to separate traffic from the work area.”

80254

PLACING AND CONSOLIDATING CONCRETE (BDE)

Effective: January 1, 2013

Revise the first paragraph of Article 503.06 of the Standard Specifications to read:

"503.06 Forms. Forms shall be set and maintained to the lines and grades shown on the plans, and shall be tight to prevent concrete leakage."

Revise Article 503.07 of the Standard Specifications to read:

"503.07 Placing and Consolidating. No concrete shall be placed on ice, snow, or frozen foundation material.

The method and manner of placing concrete shall be such as to avoid segregation or separation of the aggregates or the displacement of the reinforcement. The external surface of all concrete shall be thoroughly worked during the operations of placing in such a manner as to work the mortar against the forms to produce a smooth finish free of honeycomb and with a minimum of water and air pockets.

Open troughs and chutes shall extend as nearly as practicable to the point of deposit. Dropping the concrete a distance of more than 5 ft (1.5 m) or depositing a large quantity at any point and running or working it along the forms will not be permitted. The concrete for walls with an average thickness of 12 in. (300 mm) or less shall be placed with tubes so that the drop is not greater than 5 ft (1.5 m).

For self-consolidating concrete, the maximum distance of horizontal flow from the point of deposit shall be 15 ft (4.6 m). The distance may be increased if the dynamic segregation index (DSI) at the maximum flow distance is 10.0 percent or less according to Illinois Test Procedure SCC-8 (Option C). The maximum distance using the DSI shall be 25 ft (7.6 m). In addition, this specified horizontal flow distance shall apply to precast products. In the case of precast prestressed concrete products, refer to the Department's "Manual of Fabrication for Precast Prestressed Concrete Products" for the specified horizontal flow distance requirements.

When the form height for placing the self-consolidating concrete is greater than 10 ft (3.0 m), direct monitoring of form pressure shall be performed by the Contractor according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

When concrete is pumped, the equipment shall be suitable in kind and adequate in capacity for the work and arranged so that vibrations will not damage freshly placed concrete. Aluminum

pipe or conduit will not be permitted in pumping or placing concrete. Mixed concrete shall be supplied to maintain continuous operation of the pumping equipment.

When air entrained concrete is pumped, an accessory or accessories shall be incorporated in the discharge components to minimize air loss. The maximum allowable air loss caused by the pumping operation shall be 3.0 percent with the minimum air content at the point of discharge meeting the requirements of Article 1020.04.

Placing of concrete shall be regulated so that the pressures caused by the wet concrete will not exceed those used in the design of the forms. Special care shall be taken to fill each part of the forms by depositing the concrete as near its final position as possible, to work the coarser aggregates back from the face, and to force the concrete under and around the reinforcement bars without displacing them. Leakage through forms onto beams or girders shall not be allowed to harden and shall be removed while in a plastic state.

The concrete shall be consolidated by internal vibration unless self-consolidating concrete is used. Self-consolidating concrete may be used for inaccessible locations where consolidation by internal vibration is not practicable. The self consolidating concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator may only be permitted if it can be used in a manner that does not cause segregation as determined by the Engineer. Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

The Contractor shall provide and use a sufficient number of vibrators to ensure that consolidation can be started immediately after the concrete has been deposited in the forms.

The vibrators shall be inserted into the concrete immediately after it is deposited and shall be moved throughout the mass so as to thoroughly work the concrete around the reinforcement, embedded fixtures, and into the corners and angles of the forms. Vibrators shall not be attached to the forms, reinforcement bars, or the surface of the concrete.

Application of vibrators shall be at points uniformly spaced and not farther apart than twice the radius over which the vibration is visibly effective. The duration of the vibration at the points of insertion shall be sufficient to thoroughly consolidate the concrete into place but shall not be continued so as to cause segregation. When consolidating concrete in bridge decks, the vibrator shall be vertically inserted into the concrete for 3 - 5 seconds or for a period of time determined by the Engineer. Vibration shall be supplemented by spading when required by the Engineer. In addition to the internal vibration required herein, formed surfaces which will be exposed to view after completion of the work shall be spaded with a spading tool approved by the Engineer.

Concrete shall be placed in continuous horizontal layers. When it is necessary by reason of an emergency to place less than a complete horizontal layer in one operation, such layer shall terminate in a vertical bulkhead. Separate batches shall follow each other closely and in no case shall the interval of time between the placing of successive batches be greater than 20 minutes.

If mix foaming or detrimental material is observed during placement or at the completion of a pour, the material shall be removed while the concrete is still plastic

After the concrete has taken its initial set, care shall be exercised to avoid jarring the forms or placing any strain on the ends of projecting reinforcement."

Revise Article 516.12(a) of the Standard Specifications to read:

"(a) Free Fall Placement. The free fall placement shall only be permitted in shafts that can be dewatered to ensure less than 3 in. (75 mm) of standing water exist at the time of placement without causing side wall instability. The height of free fall placement shall be a maximum of 60 ft (18.3 m) as measured from the discharge end, but it shall be reduced to a maximum of 30 ft (9.1 m) when self-consolidating concrete is used. The Contractor shall obtain approval from the Engineer to place self-consolidating concrete by free fall.

Concrete placed by free fall shall fall directly to the base without contacting either the rebar cage or shaft sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Drop chutes used to direct placement of free fall concrete shall consist of a smooth tube of either one continuous section or multiple pieces that can be added and removed. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. The drop chute shall be supported so that free fall does not exceed the specified maximum 60 ft (18.3 m) or 30 ft (9.1 m) at all times from the discharge end, and to ensure the concrete does not strike the rebar cage. If placement cannot be satisfactorily accomplished by free fall in the opinion of the Engineer, either a tremie or pump shall be used to accomplish the pour."

PORTLAND CEMENT CONCRETE (BDE)

Effective: January 1, 2012

Revised: January 1, 2013

Revise Notes 1 and 2 of Article 312.24 of the Standard Specifications to read:

"Note 1. Coarse aggregate shall be gradation CA 6, CA 7, CA 9, CA 10, or CA 11, Class D quality or better. Article 1020.05(d) shall apply.

Note 2. Fine aggregate shall be FA 1 or FA 2. Article 1020.05(d) shall apply."

Revise the first paragraph of Article 312.26 of the Standard Specifications to read:

"312.26 Proportioning and Mix Design. At least 60 days prior to start of placing CAM II, the Contractor shall submit samples of materials for proportioning and testing. The mixture shall contain a minimum of 200 lb (90 kg) of cement per cubic yard (cubic meter). Portland cement may be replaced with fly ash according to Article 1020.05(c)(1), however the minimum portland cement content in the mixture shall be 170 lbs/cu yd (101 kg/cu m). Blends of coarse and fine aggregates will be permitted, provided the volume of fine aggregate does not exceed the volume of coarse aggregate. The Engineer will determine the proportions of materials for the mixture. However, the Contractor may substitute their own mix design. Article 1020.05(a) shall apply and a Level III PCC Technician shall develop the mix design."

Revise the second paragraph of Article 503.22 of the Standard Specifications to read:

Other cast-in-place concrete for structures will be paid for at the contract unit price per cubic yard (cubic meter) for CONCRETE HANDRAIL, CONCRETE ENCASEMENT, and SEAL COAT CONCRETE."

Add the following to Article 1003.02 of the Standard Specifications:

(e) Alkali Reaction.

- (1) ASTM C 1260. Each fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.03 percent will be assigned to limestone or dolomite fine

aggregates (manufactured stone sand). However, the Department reserves the right to perform the ASTM C 1260 test.

- (2) ASTM C 1293 by Department. In some instances, such as chert natural sand or other fine aggregates, testing according to ASTM C 1260 may not provide accurate test results. In this case, the Department may only test according to ASTM C 1293.
- (3) ASTM C 1293 by Contractor. If an individual aggregate has an ASTM C 1260 expansion value that is unacceptable to the Contractor, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The laboratory performing the ASTM C 1293 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Alkali-Silica Reactivity (ASR) Testing".

The ASTM C 1293 test shall be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container, wick of absorbent material, or amount of coverage inside the container with blotting paper, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly. If the aggregate is manufactured into multiple gradation numbers, and the other gradation numbers have the same or lower ASTM C 1260 value, the ASTM C 1293 test result may apply to multiple gradation numbers.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 test result. When the Contractor performs the test, a split sample shall be provided to the Engineer. The Engineer may also independently obtain a sample at any time. The aggregate will be considered reactive if the Contractor or Engineer obtains an expansion value of 0.040 percent or greater.

Revise the first paragraph of Article 1004.01(e)(5) of the Standard Specifications to read:

"Crushed concrete, crushed slag, or lightweight aggregate for portland cement concrete shall be stockpiled in a moist condition (saturated surface dry or greater) and the moisture content shall be maintained uniformly throughout the stockpile by periodic sprinkling."

Revise Article 1004.02(d) of the Standard Specifications to read:

"(d)Combining Sizes. Each size shall be stored separately and care shall be taken to prevent them from being mixed until they are ready to be proportioned. Separate compartments shall be provided to proportion each size.

- (1) When Class BS concrete is to be pumped, the coarse aggregate gradation shall have a minimum of 45 percent passing the 1/2 in. (12.5 mm) sieve. The Contractor may combine two or more coarse aggregate sizes, consisting of CA 7, CA 11, CA 13, CA 14, and CA 16, provided a CA 7 or CA 11 is included in the blend.
- (2) If the coarse aggregate is furnished in separate sizes, they shall be combined in proportions to provide a uniformly graded coarse aggregate grading within the following limits.

Class of Concrete ^{1/}	Combined Sizes	Sieve Size and Percent Passing						
		2 1/2 in.	2 in.	1 3/4 in.	1 1/2 in.	1 in.	1/2 in.	No. 4
PV ^{2/}	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3
SI and SC ^{2/}	CA 3 & CA 7	100	95±5	---	---	55±25	20±10	3±3
	CA 3 & CA 11	100	95±5	---	---	55±25	20±10	3±3
	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3

Class of Concrete ^{1/}	Combined Sizes	Sieve Size (metric) and Percent Passing						
		63 mm	50 mm	45 mm	37.5 mm	25 mm	12.5 mm	4.75 mm
PV ^{2/}	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3
SI and SC ^{2/}	CA 3 & CA 7	100	95±5	---	---	55±25	20±10	3±3
	CA 3 & CA 11	100	95±5	---	---	55±25	20±10	3±3
	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3

1/ See Table 1 of Article 1020.04.

2/ Any of the listed combination of sizes may be used."

Add the following to Article 1004.02 of the Standard Specifications:

(g) Alkali Reaction.

- (1) ASTM C 1260. Each coarse aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates. However, the Department reserves the right to perform the ASTM C 1260 test.
- (2) ASTM C 1293 by Department. In some instances testing a coarse aggregate according to ASTM C 1260 may not provide accurate test results. In this case, the Department may only test according to ASTM C 1293.
- (3) ASTM C 1293 by Contractor. If an individual aggregate has an ASTM C 1260 expansion value that is unacceptable to the Contractor, an ASTM C 1293 test may be performed by the Contractor according to Article 1003.02(e)(3).

Revise the first paragraph of Article 1019.06 of the Standard Specifications to read:

"1019.06 Contractor Mix Design. A Contractor may submit their own mix design and may propose alternate fine aggregate materials, fine aggregate gradations, or material proportions. Article 1020.05(a) shall apply and a Level III PCC Technician shall develop the mix design."

Revise Section 1020 of the Standard Specifications to read:

"SECTION 1020. PORTLAND CEMENT CONCRETE

1020.01 Description. This item shall consist of the materials, mix design, production, testing, curing, low air temperature protection, and temperature control of concrete.

1020.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fine Aggregate	1003
(d) Coarse Aggregate	1004

(e) Concrete Admixtures	1021
(f) Finely Divided Minerals	1010
(g) Concrete Curing Materials	1022
(h) Straw	1081.06(a)(1)
(i) Calcium Chloride	1013.01

1020.03 Equipment. Equipment shall be according to the following.

Item	Article/Section
(a) Concrete Mixers and Trucks	1103.01
(b) Batching and Weighing Equipment	1103.02
(c) Automatic and Semi-Automatic Batching Equipment	1103.03
(d) Water Supply Equipment	1103.11
(e) Membrane Curing Equipment	1101.09
(f) Mobile Portland Cement Concrete Plants	1103.04

1020.04 Concrete Classes and General Mix Design Criteria. The classes of concrete shown in Table 1 identify the various mixtures by the general uses and mix design criteria. If the class of concrete for a specific item of construction is not specified, Class SI concrete shall be used.

For the minimum cement factor in Table 1, it shall apply to portland cement, portland-pozzolan cement, and portland blast-furnace slag except when a particular cement is specified in the Table.

The Contractor shall not assume that the minimum cement factor indicated in Table 1 will produce a mixture that will meet the specified strength. In addition, the Contractor shall not assume that the maximum finely divided mineral allowed in a mix design according to Article 1020.05(c) will produce a mixture that will meet the specified strength. The Contractor shall select a cement factor within the allowable range that will obtain the specified strength. The Contractor shall take into consideration materials selected, seasonal temperatures, and other factors which may require the Contractor to submit multiple mix designs.

For a portland-pozzolan cement, portland blast-furnace slag cement, or when replacing portland cement with finely divided minerals per Articles 1020.05(c) and 1020.05(d), the portland cement content in the mixture shall be a minimum of 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). When calculating the portland cement portion in the portland-pozzolan or portland blast-furnace slag cement, the AASHTO M 240 tolerance may be ignored.

Special classifications may be made for the purpose of including the concrete for a particular use or location as a separate pay item in the contract. The concrete used in such cases shall conform to this section.

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA											
Class of Conc.	Use	Specification Section Reference	Cement Factor cwt/cu yd (3)		Water / Cement Ratio lb/lb	Sump in. (4)	Mix Design Compressive Strength (Flexural Strength) psi, minimum			Air Content %	Coarse Aggregate Gradations (14)
			Min.	Max			Days				
							3	14	28		
PV	Pavement Base Course	420 or 421									
	Base Course Widening	353									
	Driveway Pavement	354									
	Shoulders	423	5.65 (1)	7.05	0.32 - 0.42	2 - 4 (5)	Ty III 3500 (650)			5.0 - 8.0 (5)	CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, or CA 14
	Shoulder Curb	483	6.05 (2)				3500 (650)				
PP	Pavement Patching							3200 (600)			
	Bridge Deck Patching (10)	442						Article 701.17(e)(3)b.			
	PP-1		6.50 6.20 (Ty III)	7.50 7.20 (Ty III)	0.32 - 0.44	2 - 4		at 48 hours		4.0 - 7.0	CA 7, CA 11, CA 13, CA 14, or CA 16
	PP-2		7.35	8.20	0.32 - 0.38	2 - 6		at 24 hours		4.0 - 6.0	
	PP-3		7.35 (Ty III) (6)	7.35 (Ty III) (8)	0.32 - 0.35	2 - 4		at 16 hours		4.0 - 6.0	
	PP-4		6.00 (9)	6.25 (9)	0.32 - 0.50	2 - 6		at 8 hours		4.0 - 6.0	
	PP-5		6.75 (9)	6.75 (9)	0.32 - 0.40	2 - 8		at 4 hours		4.0 - 6.0	
RR	Railroad Crossing	422	6.50 6.20 (Ty III)	7.50 7.20 (Ty III)	0.32 - 0.44	2 - 4		3500 (650) at 48 hours		4.0 - 7.0 or CA 14	CA 7, CA 11, or CA 14
	Bridge Superstructure Bridge Approach Slab	503	6.05	7.05	0.32 - 0.44	2 - 4 (5)		4000 (675)		5.0 - 8.0 (5)	CA 7, CA 11, or CA 14 (7)
PC	Various Precast Concrete Items										
	Wet Cast Dry Cast	1042	5.65 5.65 (Ty III)	7.05 7.05 (Ty III)	0.32 - 0.44 0.25 - 0.40	1 - 4 0 - 1	See Section 1042			5.0 - 8.0 N/A	CA 7, CA 11, CA 13, CA 14, CA 16, or CA 7 & CA 16
PS	Precast Prestressed Members	504		7.05	0.32 - 0.44	1 - 4				5.0 - 8.0	CA 11 (11), CA 13, CA 14 (11), or CA 16
	Precast Prestressed Piles and Extensions	512	5.65 5.65 (Ty III)	7.05 7.05 (Ty III)				Plans 5000			
	Precast Prestressed Sight Screen	639									

Notes:

(1) Central-mixed.

(2) Truck-mixed or shrink-mixed.

(3) For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the cement factor shall be increased by ten percent.

(4) The maximum slump may be increased to 7 in. when a high range water-reducing admixture is used for all classes of concrete, except Class PV, SC, and PP. For Class SC, the maximum slump may be increased to 8 in. For Class PP-1, the maximum slump may be increased to 6 in. For Class PS, the 7 in. maximum slump may be increased to 8 1/2 in. if the high range water-reducing admixture is the polycarboxylate type.

(5) The slump range for slipform construction shall be 1/2 to 2 1/2 in. and the air content range shall be 5.5 to 8.0 percent.

(6) If concrete is placed to displace drilling fluid, or against temporary casing, the slump shall be 8 - 10 in. at the point of placement. If a water-reducing admixture is used in lieu of a high range water-reducing admixture according to Article 1020.05(b)(7), the slump shall be 2 - 4 in.

(7) For Class BS concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching.

(8) In addition to the Type III portland cement, 100 lb/cu yd of ground granulated blast-furnace slag and 50 lb/cu yd of microsilica (silica fume) shall be used. For an air temperature greater than 85 °F, the Type III portland cement may be replaced with Type I or II portland cement.

(9) The cement shall be a rapid hardening cement from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs" for PP-4 and calcium aluminate cement for PP-5.

(10) For Class PP concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching. In addition, the mix design shall have 72 hours to obtain a 4,000 psi compressive or 675 psi flexural strength for all PP mix designs.

(11) The nominal maximum size permitted is 3/4 in. Nominal maximum size is defined as the largest sieve which retains any of the aggregate sample particles.

(12) The concrete mix shall be designed to remain fluid throughout the anticipated duration of the pour plus one hour. At the Engineer's discretion, the Contractor may be required to conduct a minimum 2 cu yd trial batch to verify the mix design.

(13) CA 3 or CA 5 may be used when the nominal maximum size does not exceed two-thirds the clear distance between parallel reinforcement bars, or between the reinforcement bar and the form. Nominal maximum size is defined in Note 11.

(14) Alternate combinations of gradation sizes may be used with the approval of the Engineer. Refer also to Article 1004.02(d) for additional information on combining sizes.

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA (metric)

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA (metric)											
Class of Conc.	Use	Specification Section Reference	Cement Factor kg/cu m (3)		Water / Cement Ratio kg/kg	Sump mm (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum			Air Content %	Coarse Aggregate Gradations (14)
			Min.	Max.			Days				
							3	14	28		
DS	Drilled Shaft (12) Metal Shell Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	516 512 734 837	395	418	0.32 - 0.44	150 - 200 (6)		27,500 (4550)		5.0 - 8.0	CA 13, CA 14, CA 16, or a blend of these gradations.
SC	Seal Coat	503	335 (1) 360 (2)	418	0.32 - 0.44	75 - 125		24,000 (4500)		Optional 6.0 max.	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 5 & CA 11, CA 7, or CA 11
SI	Structures (except Superstructure) Sidewalk Slope Wall Encasement Box Culverts End Section and Collar Curb, Gutter, Curb & Gutter, Median, and Paved Ditch Concrete Barrier Sign Structures Spread Footing Concrete Foundation Pole Foundation (12) Traffic Signal Foundation Drilled Shaft (12) Square or Rectangular	503 424 511 512 540 542 606 637 734 836 878	335 (1) 360 (2)	418	0.32 - 0.44	50 - 100 (5)		24,000 (4500)		5.0 - 8.0 (5)	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, CA 13, CA 14, or CA 16 (13)

- Notes:
- (1) Central-mixed.
 - (2) Truck-mixed or shrink-mixed.
 - (3) For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the cement factor shall be increased by ten percent.
 - (4) The maximum slump may be increased to 175 mm when a high range water-reducing admixture is used for all classes of concrete except Class PV, SC, and PP. For Class SC, the maximum slump may be increased to 200 mm. For Class PP-1, the maximum slump may be increased to 150 mm. For Class PS, the 175 mm maximum slump may be increased to 215 mm if the high range water-reducing admixture is the polycarboxylate type.
 - (5) The slump range for slipform construction shall be 13 to 64 mm and the air content range shall be 5.5 to 8.0 percent.
 - (6) If concrete is placed to displace drilling fluid, or against temporary casing, the slump shall be 200 - 250 mm at the point of placement. If a water-reducing admixture is used in lieu of a high range water-reducing admixture according to Article 1020.05(b)(7), the slump shall be 50 - 100 mm.
 - (7) For Class BS concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching.
 - (8) In addition to the Type III portland cement, 60 kg/cu m of ground granulated blast-furnace slag and 30 kg/cu m of microsilica (silica fume) shall be used. For an air temperature greater than 30 °C, the Type III portland cement may be replaced with Type I or II portland cement.
 - (9) The cement shall be a rapid hardening cement from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs" for PP-4 and calcium aluminate cement for PP-5.
 - (10) For Class PP concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching. In addition, the mix design shall have 72 hours to obtain a 27,500 kPa compressive or 4,650 kPa flexural.
 - (11) The nominal maximum size permitted is 19 mm. Nominal maximum size is defined as the largest sieve which retains any of the aggregate sample particles.
 - (12) The concrete mix shall be designed to remain fluid throughout the anticipated duration of the pour plus one hour. At the Engineer's discretion, the Contractor may be required to conduct a minimum 1.5 cu m trial batch to verify the mix design.
 - (13) CA 3 or CA 5 may be used when the nominal maximum size does not exceed two-thirds the clear distance between parallel reinforcement bars, or between the reinforcement bar and the form. Nominal maximum size is defined in Note 11.
 - (14) Alternate combinations of gradation sizes may be used with the approval of the Engineer. Refer also to Article 1004.02(d) for additional information on combining sizes.

Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation. Self-consolidating concrete mix designs may be developed for Class BS, PC, PS, DS, and SI concrete. Self-consolidating concrete mix designs may also be developed for precast concrete products that are not subjected to Class PC concrete requirements according to Section 1042. The mix design criteria for the concrete mixture shall be according to Article 1020.04 with the following exceptions.

- (a) The slump requirements shall not apply.
- (b) The concrete mixture should be uniformly graded, and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" may be used to develop the uniformly graded mix design. The coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. However, the final gradation when using a single coarse aggregate or combination of coarse aggregates shall have 100 percent pass the 1 in. (25 mm) sieve, and minimum 95 percent pass the 3/4 in. (19 mm) sieve. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (c) The slump flow range shall be 22 in. (560 mm) minimum to 28 in. (710 mm) maximum and tested according to Illinois Test Procedure SCC-2.
- (d) The visual stability index shall be a maximum of 1 and tested according to Illinois Test Procedure SCC-2.
- (e) The J-Ring value shall be a maximum of 2 in. (50 mm) and tested according to Illinois Test Procedure SCC-3. The L-Box blocking ratio shall be a minimum of 80 percent and tested according to Illinois Test Procedure SCC-3. The Contractor has the option to select either test.
- (f) The hardened visual stability index shall be a maximum of 1 and tested according to Illinois Test Procedure SCC-6.
- (g) If Class PC concrete requirements do not apply to the precast concrete product according to Section 1042, the maximum cement factor shall be 7.05 cwt/cu yd (418 kg/cu m) and the maximum allowable water/cement ratio shall be 0.44.
- (h) If the measured slump flow, visual stability index, J-Ring value, or L-Box blocking ratio fall outside the limits specified, a check test will be made. In the event of a second failure, the Engineer may refuse to permit the use of the batch of concrete represented.

The Contractor may use water or self-consolidating admixtures at the jobsite to obtain the specified slump flow, visual stability index, J-ring value, or L-box blocking ratio. The maximum design water/cement ratio shall not be exceeded.

1020.05 Other Concrete Criteria. The concrete shall be according to the following.

- (a) Proportioning and Mix Design. For all Classes of concrete, it shall be the Contractor's responsibility to determine mix design material proportions and to proportion each batch of concrete. A Level III PCC Technician shall develop the mix design for all Classes of concrete, except Classes PC and PS. The mix design, submittal information, trial batch, and Engineer verification shall be according to the "Portland Cement Concrete Level III Technician" course material.

The Contractor shall provide the mix designs a minimum of 45 calendar days prior to production. More than one mix design may be submitted for each class of concrete.

The Engineer will verify the mix design submitted by the Contractor. Verification of a mix design shall in no manner be construed as acceptance of any mixture produced. Once a mix design has been verified, the Engineer shall be notified of any proposed changes.

Tests performed at the jobsite will determine if a mix design can meet specifications. If the tests indicate it cannot, the Contractor shall make adjustments to a mix design, or submit a new mix design if necessary, to comply with the specifications.

- (b) Admixtures. The Contractor shall be responsible for using admixtures and determining dosages for all Classes of concrete, cement aggregate mixture II, and controlled low-strength material that will produce a mixture with suitable workability, consistency, and plasticity. In addition, admixture dosages shall result in the mixture meeting the specified plastic and hardened properties. The Contractor shall obtain approval from the Engineer to use an accelerator when the concrete temperature is greater than 60 °F (16 °C). However, this accelerator approval by the Engineer will not be required for Class PP, RR, PC, and PS concrete. The accelerator shall be the non-chloride type unless otherwise specified in the contract plans.

The Department will maintain an Approved List of Corrosion Inhibitors. Corrosion inhibitor dosage rates shall be according to Article 1020.05(b)(10). For information on approved controlled low-strength material air-entraining admixtures, refer to Article 1019.02. The Department will also maintain an Approved List of Concrete Admixtures, and an admixture technical representative shall be consulted by the Contractor prior to the pour when determining an admixture dosage from this list or when making minor admixture dosage adjustments at the jobsite. The dosage shall be within the range indicated on the approved list unless the influence by other admixtures, jobsite conditions (such as a very short haul time), or other circumstances warrant a dosage outside the range. The Engineer shall be notified when a dosage is proposed outside the range. To determine an admixture dosage, air temperature, concrete temperature, cement source and quantity, finely divided mineral sources and quantity, influence of other admixtures, haul time, placement conditions, and other factors as appropriate shall be considered. The Engineer may request the Contractor to have a batch of concrete mixed in the lab or field to verify the admixture dosage is correct. An admixture dosage or combination of admixture dosages shall not delay the initial set of concrete by more than one hour. When a retarding admixture is required or appropriate for a bridge deck or bridge deck overlay pour, the initial set time shall be delayed until the deflections due

to the concrete dead load are no longer a concern for inducing cracks in the completed work. However, a retarding admixture shall not be used to further extend the pour time and justify the alteration of a bridge deck pour sequence.

When determining water in admixtures for water/cement ratio, the Contractor shall calculate 70 percent of the admixture dosage as water, except a value of 50 percent shall be used for a latex admixture used in bridge deck latex concrete overlays.

The sequence, method, and equipment for adding the admixtures shall be approved by the Engineer. Admixtures shall be added to the concrete separately. An accelerator shall always be added prior to a high range water-reducing admixture, if both are used.

Admixture use shall be according to the following.

- (1) When the atmosphere or concrete temperature is 65 °F (18 °C) or higher, a retarding admixture shall be used in the Class BS concrete and concrete bridge deck overlays. The proportions of the ingredients of the concrete shall be the same as without the retarding admixture, except that the amount of mixing water shall be reduced, as may be necessary, in order to maintain the consistency of the concrete as required. In addition, a high range water-reducing admixture shall be used in bridge deck concrete. At the option of the Contractor, a water-reducing admixture may be used with the high range water-reducing admixture in Class BS concrete.
- (2) At the Contractor's option, admixtures in addition to an air-entraining admixture may be used for Class PP-1 or RR concrete. When the air temperature is less than 55 °F (13 °C) and an accelerator is used, the non-chloride accelerator shall be calcium nitrite.
- (3) When Class C fly ash or ground granulated blast-furnace slag is used in Class PP-1 or RR concrete, a water-reducing or high range water-reducing admixture shall be used.
- (4) For Class PP-2 or PP-3 concrete, a non-chloride accelerator followed by a high range water-reducing admixture shall be used, in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture with the high range water-reducing admixture. For Class PP-3 concrete, the non-chloride accelerator shall be calcium nitrite. For Class PP-2 concrete, the non-chloride accelerator shall be calcium nitrite when the air temperature is less than 55 °F (13 °C).
- (5) For Class PP-4 concrete, a high range water-reducing admixture shall be used in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture with the high range water-reducing admixture. An accelerator shall not be used. For stationary or truck-mixed concrete, a retarding admixture shall be used to allow for haul time. The Contractor has the option to use

a mobile portland cement concrete plant, but a retarding admixture shall not be used unless approved by the Engineer.

For PP-5 concrete, a non-chloride accelerator, high range water-reducing admixture, and air-entraining admixture shall be used. The accelerator, high range water-reducing admixture, and air-entraining admixture shall be per the Contractor's recommendation and dosage. The approved list of concrete admixtures shall not apply. A mobile portland cement concrete plant shall be used to produce the patching mixture.

- (6) When a calcium chloride accelerator is specified in the contract, the maximum chloride dosage shall be 1.0 quart (1.0 L) of solution per 100 lb (45 kg) of cement. The dosage may be increased to a maximum 2.0 quarts (2.0 L) per 100 lb (45 kg) of cement if approved by the Engineer. When a calcium chloride accelerator for Class PP-2 concrete is specified in the contract, the maximum chloride dosage shall be 1.3 quarts (1.3 L) of solution per 100 lb (45 kg) of cement. The dosage may be increased to a maximum 2.6 quarts (2.6 L) per 100 lb (45 kg) of cement if approved by the Engineer.
- (7) For Class DS concrete a retarding admixture and a high range water-reducing admixture shall be used. For dry excavations that are 10 ft (3 m) or less, the high range water-reducing admixture may be replaced with a water-reducing admixture if the concrete is vibrated. The use of admixtures shall take into consideration the slump loss limits specified in Article 516.12 and the fluidity requirement in Article 1020.04 (Note 12).
- (8) At the Contractor's option, when a water-reducing admixture or a high range water-reducing admixture is used for Class PV, PP-1, RR, SC, and SI concrete, the cement factor may be reduced a maximum 0.30 hundredweight/cu yd (18 kg/cu m). However, a cement factor reduction will not be allowed for concrete placed underwater.
- (9) When Type F or Type G high range water-reducing admixtures are used, the initial slump shall be a minimum of 1 1/2 in. (40 mm) prior to addition of the Type F or Type G admixture, except as approved by the Engineer.
- (10) When specified, a corrosion inhibitor shall be added to the concrete mixture utilized in the manufacture of precast, prestressed concrete members and/or other applications. It shall be added, at the same rate, to all grout around post-tensioning steel when specified.

When calcium nitrite is used, it shall be added at the rate of 4 gal/cu yd (20 L/cu m), and shall be added to the mix immediately after all compatible admixtures have been introduced to the batch.

When Rheocrete 222+ is used, it shall be added at the rate of 1.0 gal/cu yd (5.0 L/cu m), and the batching sequence shall be according to the manufacturer's instructions.

(c) Finely Divided Minerals. Use of finely divided minerals shall be according to the following.

(1) Fly Ash. At the Contractor's option, fly ash from approved sources may partially replace portland cement in cement aggregate mixture II, Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete.

The use of fly ash shall be according to the following.

- a. Measurements of fly ash and portland cement shall be rounded up to the nearest 5 lb (2.5 kg).
- b. When Class F fly ash is used in cement aggregate mixture II, Class PV, BS, PC, PS, DS, SC, and SI concrete, the amount of portland cement replaced shall not exceed 25 percent by weight (mass).
- c. When Class C fly ash is used in cement aggregate mixture II, Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete, the amount of portland cement replaced shall not exceed 30 percent by weight (mass).
- d. Fly ash may be used in concrete mixtures when the air temperature is below 40 °F (4 °C), but the Engineer may request a trial batch of the concrete mixture to show the mix design strength requirement will be met.

(2) Ground Granulated Blast-Furnace (GGBF) Slag. At the Contractor's option, GGBF slag may partially replace portland cement in Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete. For Class PP-3 concrete, GGBF slag shall be used according to Article 1020.04.

The use of GGBF slag shall be according to the following.

- a. Measurements of GGBF slag and portland cement shall be rounded up to the nearest 5 lb (2.5 kg).
- b. When GGBF slag is used in Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC and SI concrete, the amount of portland cement replaced shall not exceed 35 percent by weight (mass).
- c. GGBF slag may be used in concrete mixtures when the air temperature is below 40 °F (4 °C), but the Engineer may request a trial batch of the concrete mixture to show the mix design strength requirement will be met.

- (3) Microsilica. At the Contractor's option, microsilica may be added at a maximum of 5.0 percent by weight (mass) of the cement and finely divided minerals summed together.

Microsilica shall be used in Class PP-3 concrete according to Article 1020.04.

- (4) High Reactivity Metakaolin (HRM). At the Contractor's option, HRM may be added at a maximum of 5.0 percent by weight (mass) of the cement and finely divided minerals summed together.

- (5) Mixtures with Multiple Finely Divided Minerals. Except as specified for Class PP-3 concrete, the Contractor has the option to use more than one finely divided mineral in Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete as follows.

- a. The mixture shall contain a maximum of two finely divided minerals. The finely divided mineral in portland-pozzolan cement or portland blast-furnace slag cement shall count toward the total number of finely divided minerals allowed. The finely divided minerals shall constitute a maximum of 35.0 percent of the total cement plus finely divided minerals. The fly ash portion shall not exceed 30.0 percent for Class C fly ash or 25.0 percent for Class F fly ash. The Class C and F fly ash combination shall not exceed 30.0 percent. The ground granulated blast-furnace slag portion shall not exceed 35.0 percent. The microsilica or high-reactivity metakaolin portion used together or separately shall not exceed ten percent. The finely divided mineral in the portland-pozzolan cement or portland blast-furnace slag blended cement shall apply to the maximum 35.0 percent.
- b. Central Mixed. For Class PV, SC, and SI concrete, the mixture shall contain a minimum of 565 lbs/cu yd (335 kg/cu m) of cement and finely divided minerals summed together. If a water-reducing or high-range water-reducing admixture is used, the Contractor has the option to use a minimum of 535 lbs/cu yd (320 kg/cu m).
- c. Truck-Mixed or Shrink-Mixed. For Class PV, SC, and SI concrete, the mixture shall contain a minimum of 605 lbs/cu yd (360 kg/cu m) of cement and finely divided minerals summed together. If a water-reducing or high-range water-reducing admixture is used, the Contractor has the option to use a minimum of 575 lbs/cu yd (345 kg/cu m).
- d. Central-Mixed, Truck-Mixed or Shrink-Mixed. For Class PP-1 and RR concrete, the mixture shall contain a minimum of 650 lbs/cu yd (385 kg/cu m) of cement and finely divided minerals summed together. For Class PP-1 and RR concrete using Type III portland cement, the mixture shall contain a minimum of 620 lbs/cu yd (365 kg/cu m).

For Class PP-2 concrete, the mixture shall contain a minimum of 735 lbs/cu yd (435 kg/cu m) of cement and finely divided minerals summed together. For Class BS concrete, the mixture shall contain a minimum of 605 lbs/cu yd (360 kg/cu m). For Class DS concrete, the mixture shall contain a minimum of 665 lbs/cu yd (395 kg/cu m).

If a water-reducing or high range water-reducing admixture is used in Class PP-1 and RR concrete, the Contractor has the option to use a minimum of 620 lbs/cu yd (365 kg/cu m) of cement and finely divided minerals summed together. If a water-reducing or high-range water-reducing admixture is used with Type III portland cement in Class PP-1 and RR concrete, the Contractor has the option to use a minimum of 590 lbs/cu yd (350 kg/cu m).

- e. Central-Mixed or Truck-Mixed. For Class PC and PS concrete, the mixture shall contain a minimum of 565 lbs/cu yd (335 kg/cu m) of cement and finely divided minerals summed together.
 - f. The mixture shall contain a maximum of 705 lbs/cu yd (418 kg/cu m) of cement and finely divided mineral(s) summed together for Class PV, BS, PC, PS, DS, SC, and SI concrete. For Class PP-1 and RR concrete, the mixture shall contain a maximum of 750 lbs/cu yd (445 kg/cu m). For Class PP-1 and RR concrete using Type III portland cement, the mixture shall contain a maximum of 720 lbs/cu yd (425 kg/cu m). For Class PP-2 concrete, the mixture shall contain a maximum of 820 lbs/cu yd (485 kg/cu m).
 - g. For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the allowable cement and finely divided minerals summed together shall be increased by ten percent.
 - h. The combination of cement and finely divided minerals shall comply with Article 1020.05(d).
- (d) Alkali-Silica Reaction. For cast-in-place (includes cement aggregate mixture II and latex mixtures), precast, and precast prestressed concrete, one of the mixture options provided in Article 1020.05(d)(2) shall be used to reduce the risk of a deleterious alkali-silica reaction in concrete exposed to humid or wet conditions. The mixture options are not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate, or sodium formate. The mixture options will not be required for the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy.

The mixture options shall not apply to concrete revetment mats, insertion lining of pipe culverts, portland cement mortar fairing course, controlled low-strength material, miscellaneous grouts that are not prepackaged, Class PP-3 concrete, Class PP-4 concrete, and Class PP-5 concrete.

- (1) Aggregate Groups. Each combination of aggregates used in a mixture will be assigned to an aggregate group. The point at which the coarse aggregate and fine aggregate expansion values intersect in the following table will determine the group.

Aggregate Groups			
Coarse Aggregate or Coarse Aggregate Blend ASTM C 1260 Expansion	Fine Aggregate Or Fine Aggregate Blend ASTM C 1260 Expansion		
	$\leq 0.16\%$	$> 0.16\% - 0.27\%$	$> 0.27\%$
	$\leq 0.16\%$	$> 0.16\% - 0.27\%$	$> 0.27\%$
$\leq 0.16\%$	Group I	Group II	Group III
$> 0.16\% - 0.27\%$	Group II	Group II	Group III
$> 0.27\%$	Group III	Group III	Group IV

- (2) Mixture Options. Based upon the aggregate group, the following mixture options shall be used. However, the Department may prohibit a mixture option if field performance shows a deleterious alkali-silica reaction or Department testing indicates the mixture may experience a deleterious alkali-silica reaction.

Reduction of Risk for Deleterious Alkali-Silica Reaction					
Aggregate Groups	Mixture Options				
	Option 1	Option 2	Option 3	Option 4	Option 5
Group I	Mixture options are not applicable. Use any cement or finely divided mineral.				
Group II	X	X	X	X	X
Group III	X	Combine Option 2 with Option 3	Combine Option 2 with Option 3	X	X
Group IV	X	Combine Option 2 with Option 4	Invalid Option	Combine Option 2 with Option 4	X

"X" denotes valid mixture option for aggregate group.

- a. Mixture Option 1. The coarse or fine aggregates shall be blended to place the material in a group that will allow the selected cement or finely divided mineral to be used. Coarse aggregate may only be blended with another coarse aggregate. Fine aggregate may only be blended with another fine aggregate. Blending of

coarse with fine aggregate to place the material in another group will not be permitted.

When a coarse or fine aggregate is blended, the weighted expansion value shall be calculated separately for the coarse and fine aggregate as follows:

$$\text{Weighted Expansion Value} = (a/100 \times A) + (b/100 \times B) + (c/100 \times C) + \dots$$

Where: $a, b, c, \dots$ = percentage of aggregate in the blend;
 $A, B, C, \dots$ = expansion value for that aggregate.

- b. Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow. In addition, a blended cement with a finely divided mineral may be added to a separate finely divided mineral to meet the following requirements, provided the finely divided minerals are the same material. However, adding together two different finely divided minerals to obtain the specified minimum percentage of one material will not be permitted for 1), 2), 3), and 4). Refer to Mixture Option 5 to address this situation.

1. Class F Fly Ash. For cement aggregate mixture II, Class PV, BS, PC, PS, MS, DS, SC and SI concrete, the Class F fly ash shall be a minimum 25.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent for the Class F fly ash, it may be used only if it complies with Mixture Option 5.

2. Class C Fly Ash. For cement aggregate mixture II, Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete, Class C fly ash shall be a minimum of 25.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent or the calcium oxide exceeds 26.50 percent for the Class C fly ash, it may be used only per Mixture Option 5.

3. Ground Granulated Blast-Furnace Slag. For Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete, ground granulated blast-furnace slag shall be a minimum of 25.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 1.00 percent for the ground granulated blast-furnace slag, it may be used only per Mixture Option 5.

4. Microsilica or High Reactivity Metakaolin, Microsilica solids or high reactivity metakaolin shall be a minimum 5.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 1.00 percent for the Microsilica or High Reactivity Metakaolin, it may be used only if it complies with Mixture Option 5.

- c. Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.60 percent. When aggregate in Group II is involved and the Contractor desires to use a finely divided mineral, any finely divided mineral may be used with the cement unless the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent for the fly ash; or 1.00 percent for the ground granulated blast-furnace slag, microsilica or high reactivity metakaolin. If the alkali content is exceeded, the finely divided mineral may be used only per Mixture Option 5.
- d. Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.45 percent. When aggregate in Group II or III is involved and the Contractor desires to use a finely divided mineral, any finely divided mineral may be used with the cement unless the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent for the fly ash; or 1.00 percent for the ground granulated blast-furnace slag, microsilica, or high reactivity metakaolin. If the alkali content is exceeded, the finely divided mineral may be used only per Mixture Option 5.
- e. Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is ≤ 0.16 percent when performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The laboratory performing the ASTM C 1567 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Alkali-Silica Reactivity (ASR) Testing". The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly.

For latex concrete, the ASTM C 1567 test shall be performed without the latex.

The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

If during the two year time period the Contractor needs to replace the cement, and the replacement cement has an equal or lower total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$), a new ASTM C 1567 test will not be required.

The Engineer reserved the right to verify a Contractor's ASTM C 1567 test result. When the Contractor performs the test, a split sample may be requested by the Engineer. The Engineer may also independently obtain a sample at any time.

The proposed cement or finely divided mineral will not be allowed for use if the Contractor or Engineer obtains an expansion value greater than 0.16 percent.

1020.06 Water/Cement Ratio. The water/cement ratio shall be determined on a weight (mass) basis. When a maximum water/cement ratio is specified, the water shall include mixing water, water in admixtures, free moisture on the aggregates, and water added at the jobsite. The quantity of water may be adjusted within the limit specified to meet slump requirements.

When fly ash, ground granulated blast-furnace slag, high-reactivity metakaolin, or microsilica (silica fume) are used in a concrete mix, the water/cement ratio will be based on the total cement and finely divided minerals contained in the mixture.

1020.07 Slump. The slump shall be determined according to Illinois Modified AASHTO T 119.

If the measured slump falls outside the limits specified, a check test will be made. In the event of a second failure, the Engineer may refuse to permit the use of the batch of concrete represented.

If the Contractor is unable to add water to prepare concrete of the specified slump without exceeding the maximum design water/cement ratio, a water-reducing admixture shall be added.

1020.08 Air Content. The air content shall be determined according to Illinois Modified AASHTO T 152 or Illinois Modified AASHTO T 196. The air-entrainment shall be obtained by the use of cement with an approved air-entraining admixture added during the mixing of the concrete or the use of air-entraining cement.

If the air-entraining cement furnished is found to produce concrete having air content outside the limits specified, its use shall be discontinued immediately and the Contractor shall provide other air-entraining cement which will produce air contents within the specified limits.

If the air content obtained is above the specified maximum limit at the jobsite, the Contractor may have the concrete further mixed, within the limits of time and revolutions specified, to reduce the air content. If the air content obtained is below the specified minimum limit, the Contractor may add to the concrete a sufficient quantity of an approved air-entraining admixture at the jobsite to bring the air content within the specified limits.

1020.09 Strength Tests. The specimens shall be molded and cured according to Illinois Modified AASHTO T 23. Specimens shall be field cured with the construction item as specified in Illinois Modified AASHTO T 23. The compressive strength shall be determined according to Illinois Modified AASHTO T 22. The flexural strength shall be determined according to Illinois Modified AASHTO T 177.

Except for Class PC and PS concrete, the Contractor shall transport the strength specimens from the site of the work to the field laboratory or other location as instructed by the Engineer. During transportation in a suitable light truck, the specimens shall be embedded in straw,

burlap, or other acceptable material in a manner meeting with the approval of the Engineer to protect them from damage; care shall be taken to avoid impacts during hauling and handling. For strength specimens, the Contractor shall provide a field curing box for initial curing and a water storage tank for final curing. The field curing box will be required when an air temperature below 60 °F (16 °C) is expected during the initial curing period. The device shall maintain the initial curing temperature range specified in Illinois Modified AASHTO T 23, and may be insulated or power operated as appropriate.

1020.10 Handling, Measuring, and Batching Materials. Aggregates shall be handled in a manner to prevent mixing with soil and other foreign material.

Aggregates shall be handled in a manner which produces a uniform gradation, before placement in the plant bins. Aggregates delivered to the plant in a nonuniform gradation condition shall be stockpiled. The stockpiled aggregate shall be mixed uniformly before placement in the plant bins.

Aggregates shall have a uniform moisture content before placement in the plant bins. This may require aggregates to be stockpiled for 12 hours or more to allow drainage, or water added to the stockpile, or other methods approved by the Engineer. Moisture content requirements for crushed concrete, crushed slag or lightweight aggregate shall be according to Article 1004.01(e)(5).

Aggregates, cement, and finely divided minerals shall be measured by weight (mass). Water and admixtures shall be measured by volume or weight (mass).

The Engineer may permit aggregates, cement, and finely divided minerals to be measured by volume for small isolated structures and for miscellaneous items. Aggregates, cement, and finely divided minerals shall be measured individually. The volume shall be based upon dry, loose materials.

1020.11 Mixing Portland Cement Concrete. The mixing of concrete shall be according to the following.

- (a) Ready-Mixed Concrete. Ready-mixed concrete is central-mixed, truck-mixed, or shrink-mixed concrete transported and delivered in a plastic state ready for placement in the work and shall be according to the following.
 - (1) Central-Mixed Concrete. Central-mixed concrete is concrete which has been completely mixed in a stationary mixer and delivered in a truck agitator, a truck mixer operating at agitating speed, or a nonagitator truck.

The stationary mixer shall operate at the drum speed for which it was designed. The batch shall be charged into the drum so that some of the water shall enter in advance of the cement, finely divided minerals, and aggregates. The flow of the water shall be uniform and all water shall be in the drum by the end of the first 15 seconds of the mixing period. Water shall begin to enter the drum from zero to

two seconds in advance of solid material and shall stop flowing within two seconds of the beginning of mixing time.

Some coarse aggregate shall enter in advance of other solid materials. For the balance of the charging time for solid materials, the aggregates, finely divided minerals, and cement (to assure thorough blending) shall each flow at acceptably uniform rates, as determined by visual observation. Coarse aggregate shall enter two seconds in advance of other solid materials and a uniform rate of flow shall continue to within two seconds of the completion of charging time.

The entire contents of the drum, or of each single compartment of a multiple-drum mixer, shall be discharged before the succeeding batch is introduced.

The volume of concrete mixed per batch shall not exceed the mixer's rated capacity as shown on the standard rating plate on the mixer by more than ten percent.

The minimum mixing time shall be 75 seconds for a stationary mixer having a capacity greater than 2 cu yd (1.5 cu m). For a mixer with a capacity equal to or less than 2 cu yd (1.5 cu m) the mixing time shall be 60 seconds. Transfer time in multiple drum mixers is included in the mixing time. Mixing time shall begin when all materials are in the mixing compartment and shall end when the discharge of any part of the batch is started. The required mixing times will be established by the Engineer for all types of stationary mixers.

When central-mixed concrete is to be transported in a truck agitator or a truck mixer, the stationary-mixed batch shall be transferred to the agitating unit without delay and without loss of any portion of the batch. Agitating shall start immediately thereafter and shall continue without interruption until the batch is discharged from the agitator. The ingredients of the batch shall be completely discharged from the agitator before the succeeding batch is introduced. Drums and auxiliary parts of the equipment shall be kept free from accumulations of materials.

The vehicles used for transporting the mixed concrete shall be of such capacity, or the batches shall be so proportioned, that the entire contents of the mixer drum can be discharged into each vehicle load.

- (2) **Truck-Mixed Concrete.** Truck-mixed concrete is completely mixed and delivered in a truck mixer. When the mixer is charged with fine and coarse aggregates simultaneously, not less than 60 nor more than 100 revolutions of the drum or blades at mixing speed shall be required, after all of the ingredients including water are in the drum. When fine and coarse aggregates are charged separately, not less than 70 revolutions will be required. For self-consolidating concrete, a minimum of 100 revolutions is required in all cases. Additional mixing beyond 100 revolutions shall be at agitating speed unless additions of water, admixtures, or other materials are made at the jobsite. The mixing operation shall begin immediately after the cement and water, or the cement and wet aggregates, come in contact. The

ingredients of the batch shall be completely discharged from the drum before the succeeding batch is introduced. The drum and auxiliary parts of the equipment shall be kept free from accumulations of materials. If additional water or an admixture is added at the jobsite, the concrete batch shall be mixed a minimum of 40 additional revolutions after each addition.

- (3) Shrink-Mixed Concrete. Shrink-mixed concrete is mixed partially in a stationary mixer and completed in a truck mixer for delivery. The mixing time of the stationary mixer may be reduced to a minimum of 30 seconds to intermingle the ingredients, before transferring to the truck mixer. All ingredients for the batch shall be in the stationary mixer and partially mixed before any of the mixture is discharged into the truck mixer. The partially mixed batch shall be transferred to the truck mixer without delay and without loss of any portion of the batch, and mixing in the truck mixer shall start immediately. The mixing time in the truck mixer shall be not less than 50 nor more than 100 revolutions of the drum or blades at mixing speed. For self-consolidating concrete, a minimum of 100 revolutions is required in the truck mixer. Additional mixing beyond 100 revolutions shall be at agitating speed, unless additions of water, admixtures, or other materials are made at the jobsite. Units designed as agitators shall not be used for shrink mixing. The ingredients of the batch shall be completely discharged from the drum before the succeeding batch is introduced. The drum and auxiliary parts of the equipment shall be kept free from accumulations of materials. If additional water or an admixture is added at the jobsite, the concrete batch shall be mixed a minimum of 40 additional revolutions after each addition.
- (4) Mixing Water. Wash water shall be completely discharged from the drum or container before a batch is introduced. All mixing water shall be added at the plant and any adjustment of water at the jobsite by the Contractor shall not exceed the specified maximum water/cement ratio or slump. If strength specimens have been made for a batch of concrete, and subsequently during discharge there is more water added, additional strength specimens shall be made for the batch of concrete. No additional water may be added at the jobsite to central-mixed concrete if the mix design has less than 565 lbs/cu yd (335 kg/cu m) of cement and finely divided minerals summed together.
- (5) Mixing and Agitating Speeds. The mixing or agitating speeds used for truck mixers or truck agitators shall be per the manufacturer's rating plate.
- (6) Capacities. The volume of plastic concrete in a given batch will be determined according to AASHTO T 121, based on the total weight (mass) of the batch, determined either from the weight (masses) of all materials, including water, entering the batch or directly from the net weight (mass) of the concrete in the batch as delivered.

The volume of mixed concrete in truck mixers or truck agitators shall in no case be greater than the rated capacity determined according to the Truck Mixer, Agitator,

and Front Discharge Concrete Carrier Standards of the Truck Mixer Manufacturer's Bureau, as shown by the rating plate attached to the truck. If the truck mixer does not have a rating plate, the volume of mixed concrete shall not exceed 63 percent of the gross volume of the drum or container, disregarding the blades. For truck agitators, the value is 80 percent.

- (7) Time of Haul. Haul time shall begin when the delivery ticket is stamped. The delivery ticket shall be stamped no later than five minutes after the addition of the mixing water to the cement, or after the addition of the cement to the aggregate when the combined aggregates contain free moisture in excess of two percent by weight (mass). If more than one batch is required for charging a truck using a stationary mixer, the time of haul shall start with mixing of the first batch. Haul time shall end when the truck is emptied for incorporation of the concrete into the work.

The time elapsing from when water is added to the mix until it is deposited in place at the site of the work shall not exceed 30 minutes when the concrete is transported in nonagitating trucks.

The maximum haul time for concrete transported in truck mixers or truck agitators shall be according to the following.

Concrete Temperature at Point of Discharge °F (°C)	Haul Time	
	Hours	Minutes
50-64 (10-17.5)	1	30
>64 (>17.5) - without retarder	1	0
>64 (>17.5) - with retarder	1	30

To encourage start-up testing for mix adjustments at the plant, the first two trucks will be allowed an additional 15 minutes haul time whenever such testing is performed.

For a mixture which is not mixed on the jobsite, a delivery ticket shall be required for each load. The following information shall be recorded on each delivery ticket: (1) ticket number; (2) name of producer and plant location; (3) contract number; (4) name of Contractor; (5) stamped date and time batched; (6) truck number; (7) quantity batched; (8) amount of admixture(s) in the batch; (9) amount of water in the batch; and (10) Department mix design number.

For concrete mixed in jobsite stationary mixers, the above delivery ticket may be waived, but a method of verifying the haul time shall be established to the satisfaction of the Engineer.

- (8) Production and Delivery. The production of ready-mixed concrete shall be such that the operations of placing and finishing will be continuous insofar as the job operations require. The Contractor shall be responsible for producing concrete that will have the required workability, consistency, and plasticity when delivered to the work. Concrete which is unsuitable for placement as delivered will be rejected. The

Contractor shall minimize the need to adjust the mixture at the jobsite, such as adding water and admixtures prior to discharging.

- (9) Use of Multiple Plants in the Same Construction Item. The Contractor may simultaneously use central-mixed, truck-mixed, and shrink-mixed concrete from more than one plant, for the same construction item, on the same day, and in the same pour. However, the following criteria shall be met.
- a. Each plant shall use the same cement, finely divided minerals, aggregates, admixtures, and fibers.
 - b. Each plant shall use the same mix design. However, material proportions may be altered slightly in the field to meet slump and air content criteria. Field water adjustments shall not result in a difference that exceeds 0.02 between plants for water/cement ratio. The required cement factor for central-mixed concrete shall be increased to match truck-mixed or shrink-mixed concrete, if the latter two types of mixed concrete are used in the same pour.
 - c. The maximum slump difference between deliveries of concrete shall be 3/4 in. (19 mm) when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the slump difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for slump by the Contractor. Thereafter, when a specified test frequency for slump is to be performed, it shall be conducted for each plant at the same time.
 - d. The maximum air content difference between deliveries of concrete shall be 1.5 percent when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the air content difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for air content by the Contractor. Thereafter, when a specified test frequency for air content is to be performed, it shall be conducted for each plant at the same time.
 - e. Strength tests shall be performed and taken at the jobsite for each plant. When a specified strength test is to be performed, it shall be conducted for each plant at the same time. The difference between plants for strength shall not exceed 900 psi (6200 kPa) compressive and 90 psi (620 kPa) flexural. If the strength difference requirements are exceeded, the Contractor shall take corrective action.
 - f. The maximum haul time difference between deliveries of concrete shall be 15 minutes. If the difference is exceeded, but haul time is within specification

limits, the concrete may be used. The Contractor shall take immediate corrective action and check subsequent deliveries of concrete.

(b) Class PC Concrete. The concrete shall be central-mixed or truck-mixed. Variations in plastic concrete properties shall be minimized between batches.

(c) Class PV Concrete. The concrete shall be central-mixed, truck-mixed, or shrink-mixed.

The required mixing time for stationary mixers with a capacity greater than 2 cu yd (1.5 cu m) may be less than 75 seconds upon satisfactory completion of a mixer performance test. Mixer performance tests may be requested by the Contractor when the quantity of concrete to be placed exceeds 50,000 sq yd (42,000 sq m). The testing shall be conducted according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Field Test Procedures for Mixer Performance and Concrete Uniformity Tests".

The Contractor will be allowed to test two mixing times within a range of 50 to 75 seconds. If satisfactory results are not obtained from the required tests, the mixing time shall continue to be 75 seconds for the remainder of the contract. If satisfactory results are obtained, the mixing time may be reduced. In no event will mixing time be less than 50 seconds.

The Contractor shall furnish the labor, equipment, and material required to perform the testing according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Field Test Procedures for Mixer Performance and Concrete Uniformity Tests".

A contract which has 12 ft (3.6 m) wide pavement or base course, and a continuous length of 1/2 mile (0.8 km) or more, shall have the following additional requirements.

(1) The plant and truck delivery operation shall be able to provide a minimum of 50 cu yd (38 cu m) of concrete per hour.

(2) The plant shall have automatic or semi-automatic batching equipment.

(d) All Other Classes of Concrete. The concrete shall be central-mixed, truck-mixed, or shrink-mixed concrete.

1020.12 Mobile Portland Cement Concrete Plants. The use of a mobile portland cement concrete plant may be approved under the provisions of Article 1020.10 for volumetric proportioning in small isolated structures, thin overlays, and for miscellaneous and incidental concrete items.

The first 1 cu ft (0.03 cu m) of concrete produced may not contain sufficient mortar and shall not be incorporated in the work. The side plate on the cement feeder shall be removed

periodically (normally the first time the mixer is used each day) to see if cement is building up on the feed drum.

Sufficient mixing capacity of mixers shall be provided to enable continuous placing and finishing insofar as the job operations and the specifications require.

Slump and air tests made immediately after discharge of the mix may be misleading, since the aggregates may absorb a significant amount of water for four or five minutes after mixing.

1020.13 Curing and Protection. The method of curing, curing period, and method of protection for each type of concrete construction is included in the following Index Table.

INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Cast-in-Place Concrete ^{11/}			
Pavement			
Shoulder	1020.13(a)(1)(2)(3)(4)(5) ^{3/ 5/}	3	1020.13(c)
Base Course			
Base Course Widening	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3	1020.13(c)
Driveway			
Median			
Barrier			
Curb			
Gutter	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 5/}	3	1020.13(c) ^{16/}
Curb & Gutter			
Sidewalk			
Slope Wall			
Paved Ditch			
Catch Basin			
Manhole	1020.13(a)(1)(2)(3)(4)(5) ^{4/}	3	1020.13(c)
Inlet			
Valve Vault			
Pavement Patching	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3 ^{12/}	1020.13(c)
Bridge Deck Patching	1020.13(a)(3)(5)	3 or 7 ^{12/}	1020.13(c)
Railroad Crossing	1020.13(a)(3)(5)	1	1020.13(c)
Piles and Drilled Shafts	1020.13(a)(3)(5)	7	1020.13(d)(1)(2)(3)
Foundations & Footings			
Seal Coat	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 6/}	7	1020.13(d)(1)(2)(3)
Substructure	1020.13(a)(1)(2)(3)(4)(5) ^{1/ 7/}	7	1020.13(d)(1)(2)(3)
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5) ^{8/}	7	1020.13(d)(1)(2)
Deck			
Bridge Approach Slab	1020.13(a)(5)	7	1020.13(d)(1)(2) ^{17/}
Retaining Walls	1020.13(a)(1)(2)(3)(4)(5) ^{1/ 7/}	7	1020.13(d)(1)(2)
Pump Houses	1020.13(a)(1)(2)(3)(4)(5) ^{1/}	7	1020.13(d)(1)(2)
Culverts	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 6/}	7	1020.13(d)(1)(2) ^{18/}
Other Incidental Concrete	1020.13(a)(1)(2)(3)(5)	3	1020.13(c)
Precast Concrete ^{11/}			
Bridge Slabs			
Piles and Pile Caps	1020.13(a)(3)(5) ^{9/ 10/}	As ^{13/}	9/
Other Structural Members		Required	
All Other Precast Items	1020.13(a)(3)(4)(5) ^{2/ 9/ 10/}	As ^{14/}	9/
		Required	
Precast, Prestressed Concrete ^{11/}			
All Items	1020(a)(3)(5) ^{9/ 10/}	Until Strand Tensioning is Released ^{15/}	9/

Notes-General:

- 1/ Type I, membrane curing only
- 2/ Type II, membrane curing only
- 3/ Type III, membrane curing only

- 4/ Type I, II and III membrane curing
- 5/ Membrane Curing will not be permitted between November 1 and April 15.
- 6/ The use of water to inundate foundations and footings, seal coats or the bottom slab of culverts is permissible when approved by the Engineer, provided the water temperature can be maintained at 45 °F (7 °C) or higher.
- 7/ Asphalt emulsion for waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18.
- 8/ On non-traffic surfaces which receive protective coat according to Article 503.19, a linseed oil emulsion curing compound may be used as a substitute for protective coat and other curing methods. The linseed oil emulsion curing compound will be permitted between April 16 and October 31 of the same year, provided it is applied with a mechanical sprayer according to Article 1101.09(b).
- 9/ Steam, supplemental heat, or insulated blankets (with or without steam/supplemental heat) are acceptable and shall be according to the Bureau of Materials and Physical Research's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products" and the "Manual for Fabrication of Precast, Prestressed Concrete Products".
- 10/ A moist room according to AASHTO M 201 is acceptable for curing.
- 11/ If curing is required and interrupted because of form removal for cast-in-place concrete items, precast concrete products, or precast prestressed concrete products, the curing shall be resumed within two hours from the start of the form removal.
- 12/ Curing maintained only until opening strength is attained for pavement patching, with a maximum curing period of three days. For bridge deck patching the curing period shall be three days if Class PP concrete is used and 7 days if Class BS concrete is used.
- 13/ The curing period shall end when the concrete has attained the mix design strength. The producer has the option to discontinue curing when the concrete has attained 80 percent of the mix design strength or after seven days. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.
- 14/ The producer shall determine the curing period or may elect to not cure the product. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.

15/ The producer has the option to continue curing after strand release.

16/ When structural steel or structural concrete is in place above slope wall, Article 1020.13(c) shall not apply. The protection method shall be according to Article 1020.13(d)(1).

17/ When Article 1020.13(d)(2) is used to protect the deck, the housing may enclose only the bottom and sides. The top surface shall be protected according to Article 1020.13(d)(1).

18/ For culverts having a waterway opening of 10 sq ft (1 sq m) or less, the culverts may be protected according to Article 1020.13(d)(3).

(a) Methods of Curing. Except as provided for in the Index Table of Curing and Protection of Concrete Construction, curing shall be accomplished by one of the following described methods. When water is required to wet the surface, it shall be applied as a fine spray so that it will not mar or pond on the surface. Except where otherwise specified, the curing period shall be at least 72 hours.

(1) Waterproof Paper Method. The surface of the concrete shall be covered with waterproof paper as soon as the concrete has hardened sufficiently to prevent marring the surface. The surface of the concrete shall be wetted immediately before the paper is placed. The blankets shall be lapped at least 12 in. (300 mm) end to end, and these laps shall be securely weighted with a windrow of earth, or other approved method, to form a closed joint. The same requirements shall apply to the longitudinal laps where separate strips are used for curing edges, except the lap shall be at least 9 in. (225 mm). The edges of the blanket shall be weighted securely with a continuous windrow of earth or any other means satisfactory to the Engineer to provide an air-tight cover. Any torn places or holes in the paper shall be repaired immediately by patches cemented over the openings, using a bituminous cement having a melting point of not less than 180 °F (82 °C). The blankets may be reused, provided they are air-tight and kept serviceable by proper repairs.

A longitudinal pleat shall be provided in the blanket to permit shrinkage where the width of the blanket is sufficient to cover the entire surface. The pleat will not be required where separate strips are used for the edges. Joints in the blanket shall be sewn or cemented together in such a manner that they will not separate during use.

(2) Polyethylene Sheeting Method. The surface of the concrete shall be covered with white polyethylene sheeting as soon as the concrete has hardened sufficiently to prevent marring the surface. The surface of the concrete shall be wetted immediately before the sheeting is placed. The edges of the sheeting shall be weighted securely with a continuous windrow of earth or any other means satisfactory to the Engineer to provide an air-tight cover. Adjoining sheets shall overlap not less than 12 in. (300 mm) and the laps shall be securely weighted with earth, or any other means satisfactory to the Engineer, to provide an air tight cover.

For surface and base course concrete, the polyethylene sheets shall be not less than 100 ft (30 m) in length nor longer than can be conveniently handled, and shall be of such width that, when in place, they will cover the full width of the surface, including the edges, except that separate strips may be used to cover the edges. Any tears or holes in the sheeting shall be repaired. When sheets are no longer serviceable as a single unit, the Contractor may select from such sheets and reuse those which will serve for further applications, provided two sheets are used as a single unit; however, the double sheet units will be rejected when the Engineer deems that they no longer provide an air tight cover.

- (3) Wetted Burlap Method. The surface of the concrete shall be covered with wetted burlap blankets as soon as the concrete has hardened sufficiently to prevent marring the surface. The blankets shall overlap 6 in. (150 mm). At least two layers of wetted burlap shall be placed on the finished surface. The burlap shall be kept saturated by means of a mechanically operated sprinkling system. In place of the sprinkling system, at the Contractor's option, two layers of burlap covered with impermeable covering shall be used. The burlap shall be kept saturated with water. Plastic coated burlap may be substituted for one layer of burlap and impermeable covering.

The blankets shall be placed so that they are in contact with the edges of the concrete, and that portion of the material in contact with the edges shall be kept saturated with water.

- (4) Membrane Curing Method. Membrane curing will not be permitted where a protective coat, concrete sealer, or waterproofing is to be applied, or at areas where rubbing or a normal finish is required, or at construction joints other than those necessary in pavement or base course. Concrete at these locations shall be cured by another method specified in Article 1020.13(a).

After all finishing work to the concrete surface has been completed, it shall be sealed with membrane curing compound of the type specified within ten minutes. The seal shall be maintained for the specified curing period. The edges of the concrete shall, likewise, be sealed within ten minutes after the forms are removed. Two separate applications, applied at least one minute apart, each at the rate of not less than 1 gal/250 sq ft (0.16 L/sq m) will be required upon the surfaces and edges of the concrete. These applications shall be made with the mechanical equipment specified. Type III compound shall be agitated immediately before and during the application.

At locations where the coating is discontinuous or where pin holes show or where the coating is damaged due to any cause and on areas adjacent to sawed joints, immediately after sawing is completed, an additional coating of membrane curing compound shall be applied at the above specified rate. The equipment used may be of the same type as that used for coating variable widths of pavement. Before the additional coating is applied adjacent to sawed joints, the cut faces of the joint shall be protected by inserting a suitable flexible material in the joint, or placing an

adhesive width of impermeable material over the joint, or by placing the permanent sealing compound in the joint. Material, other than the permanent sealing compound, used to protect cut faces of the joint, shall remain in place for the duration of the curing period. In lieu of applying the additional coating, the area of the sawed joint may be cured according to any other method permitted.

When rain occurs before an application of membrane curing compound has dried, and the coating is damaged, the Engineer may require another application be made in the same manner and at the same rate as the original coat. The Engineer may order curing by another method specified, if unsatisfactory results are obtained with membrane curing compound.

- (5) **Wetted Cotton Mat Method.** After the surface of concrete has been textured or finished, it shall be covered immediately with dry or damp cotton mats. The cotton mats shall be placed in a manner which will not mar the concrete surface. A texture resulting from the cotton mat material is acceptable. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. For bridge decks, a foot bridge shall be used to place and wet the cotton mats.

The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without marring the concrete surface. The soaker hoses shall be placed on top of the cotton mats at a maximum 4 ft (1.2 m) spacing. The cotton mats shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets.

For construction items other than bridge decks, soaker hoses or a continuous wetting system will not be required if the alternative method keeps the cotton mats wet. Periodic wetting of the cotton mats is acceptable.

For areas inaccessible to the cotton mats on bridge decks, curing shall be according to Article 1020.13(a)(3).

- (b) **Removing and Replacing Curing Covering.** When curing methods specified above in Article 1020.13(a), (1), (2), or (3) are used for concrete pavement, the curing covering for each day's paving shall be removed to permit testing of the pavement surface with a profilograph or straightedge, as directed by the Engineer.

Immediately after testing, the surface of the pavement shall be wetted thoroughly and the curing coverings replaced. The top surface and the edges of the concrete shall not be left unprotected for a period of more than 1/2 hour.

- (c) Protection of Concrete, Other Than Structures, From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low of 32 °F (0 °C), or lower, or if the actual temperature drops to 32 °F (0 °C), or lower, concrete less than 72 hours old shall be provided at least the following protection.

Minimum Temperature	Protection
25 – 32 °F (-4 – 0 °C)	Two layers of polyethylene sheeting, one layer of polyethylene and one layer of burlap, or two layers of waterproof paper.
Below 25 °F (-4 °C)	6 in. (150 mm) of straw covered with one layer of polyethylene sheeting or waterproof paper.

These protective covers shall remain in place until the concrete is at least 96 hours old. When straw is required on pavement cured with membrane curing compound, the compound shall be covered with a layer of burlap, polyethylene sheeting or waterproof paper before the straw is applied.

After September 15, there shall be available to the work within four hours, sufficient clean, dry straw to cover at least two days production. Additional straw shall be provided as needed to afford the protection required. Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (d) Protection of Concrete Structures From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low below 45 °F (7 °C), or if the actual temperature drops below 45 °F (7 °C), concrete less than 72 hours old shall be provided protection. Concrete shall also be provided protection when placed during the winter period of December 1 through March 15. Concrete shall not be placed until the materials, facilities, and equipment for protection are approved by the Engineer.

When directed by the Engineer, the Contractor may be required to place concrete during the winter period. When winter construction is specified, the Contractor shall proceed with the construction, including excavation, pile driving, concrete, steel erection, and all appurtenant work required for the complete construction of the item, except at times when weather conditions make such operations impracticable.

Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (1) Protection Method I. The concrete shall be completely covered with insulating material such as fiberglass, rock wool, or other approved commercial insulating material having the minimum thermal resistance R, as defined in ASTM C 168, for

the corresponding minimum dimension of the concrete unit being protected as shown in the following table.

Minimum Pour Dimension		Thermal Resistance R
in.	(mm)	
6 or less	(150 or less)	R=16
> 6 to 12	(> 150 to 300)	R=10
> 12 to 18	(> 300 to 450)	R=6
> 18	(> 450)	R=4

The insulating material manufacturer shall clearly mark the insulating material with the thermal resistance R value.

The insulating material shall be completely enclosed on sides and edges with an approved waterproof liner and shall be maintained in a serviceable condition. Any tears in the liner shall be repaired in a manner approved by the Engineer. The Contractor shall provide means for checking the temperature of the surface of the concrete during the protection period.

On formed surfaces, the insulating material shall be attached to the outside of the forms with wood cleats or other suitable means to prevent any circulation of air under the insulation and shall be in place before the concrete is placed. The blanket insulation shall be applied tightly against the forms. The edges and ends shall be attached so as to exclude air and moisture. If the blankets are provided with nailing flanges, the flanges shall be attached to the studs with cleats. Where tie rods or reinforcement bars protrude, the areas adjacent to the rods or bars shall be adequately protected in a manner satisfactory to the Engineer. Where practicable, the insulation shall overlap any previously placed concrete by at least 1 ft (300 mm). Insulation on the underside of floors on steel members shall cover the top flanges of supporting members. On horizontal surfaces, the insulating material shall be placed as soon as the concrete has set, so that the surface will not be marred and shall be covered with canvas or other waterproof covering. The insulating material shall remain in place for a period of seven days after the concrete is placed.

The Contractor may remove the forms, providing the temperature is 35 °F (2 °C) and rising and the Contractor is able to wrap the particular section within two hours from the time of the start of the form removal. The insulation shall remain in place for the remainder of the seven days curing period.

- (2) Protection Method II. The concrete shall be enclosed in adequate housing and the air surrounding the concrete kept at a temperature of not less than 50 °F (10 °C) nor more than 80 °F (27 °C) for a period of seven days after the concrete is placed. The Contractor shall provide means for checking the temperature of the surface of the concrete or air temperature within the housing during the protection period. All exposed surfaces within the housing shall be cured according to the Index Table.

The Contractor shall provide adequate fire protection where heating is in progress and such protection shall be accessible at all times. The Contractor shall maintain labor to keep the heating equipment in continuous operation.

At the close of the heating period, the temperature shall be decreased to the approximate temperature of the outside air at a rate not to exceed 15 °F (8 °C) per 12 hour period, after which the housing maybe removed. The surface of the concrete shall be permitted to dry during the cooling period.

- (3) Protection Method III. As soon as the surface is sufficiently set to prevent marring, the concrete shall be covered with 12 in. (300 mm) of loose, dry straw followed by a layer of impermeable covering. The edges of the covering shall be sealed to prevent circulation of air and prevent the cover from flapping or blowing. The protection shall remain in place until the concrete is seven days old. If construction operations require removal, the protection removed shall be replaced immediately after completion or suspension of such operations.

1020.14 Temperature Control for Placement. Temperature control for concrete placement shall be according to the following.

- (a) Concrete other than Structures. Concrete may be placed when the air temperature is above 35 °F (2 °C) and rising, and concrete placement shall stop when the falling temperature reaches 40 °F (4 °C) or below, unless otherwise approved by the Engineer.

The temperature of concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). If concrete is pumped, the temperature of the concrete at point of placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). A maximum concrete temperature shall not apply to Class PP concrete.

- (b) Concrete in Structures. Concrete may be placed when the air temperature is above 40 °F (4 °C) and rising, and concrete placement shall stop when the falling temperature reaches 45 °F (7 °C) or below, unless otherwise approved by the Engineer.

The temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). If concrete is pumped, the temperature of the concrete at point of placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C).

When insulated forms are used according to Article 1020.13(d)(1), the maximum temperature of the concrete mixture immediately before placement shall be 80 °F (25 °C).

When concrete is placed in contact with previously placed concrete, the temperature of the freshly mixed concrete may be increased to 80 °F (25 °C) by the Contractor to offset anticipated heat loss.

- (c) All Classes of Concrete. Aggregates and water shall be heated or cooled uniformly and as necessary to produce concrete within the specified temperature limits. No frozen aggregates shall be used in the concrete.
- (d) Temperature. The concrete temperature shall be determined according to Illinois Modified AASHTO T 309.

1020.15 Heat of Hydration Control for Concrete Structures. The Contractor shall control the heat of hydration for concrete structures when the least dimension for a drilled shaft, foundation, footing, substructure, or superstructure concrete pour exceeds 5.0 ft (1.5 m). The work shall be according to the following.

- (a) Temperature Restrictions. The maximum temperature of the concrete after placement shall not exceed 150 °F (66 °C). The maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface shall not exceed 35 °F (19 °C). The Contractor shall perform temperature monitoring to ensure compliance with the temperature restrictions.
- (b) Thermal Control Plan. The Contractor shall provide a thermal control plan a minimum of 28 calendar days prior to concrete placement for review by the Engineer. Acceptance of the thermal control plan by the Engineer shall not preclude the Contractor from specification compliance, and from preventing cracks in the concrete. At a minimum, the thermal control plan shall provide detailed information on the following requested items and shall comply with the specific specifications indicated for each item.
 - (1) Concrete mix design(s) to be used. Grout mix design if post-cooling with embedded pipe.

The mix design requirements in Articles 1020.04 and 1020.05 shall be revised to include the following additional requirements to control the heat of hydration.

- a. The concrete mixture should be uniformly graded and preference for larger size aggregate should be used in the mix design. Article 1004.02(d)(2) shall apply and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" may be used to develop the uniformly graded mixture.
- b. The following shall apply to all concrete except Class DS concrete or when self-consolidating concrete is desired. For central-mixed concrete, the Contractor shall have the option to develop a mixture with a minimum of 520 lbs/cu yd (309 kg/cu m) of cement and finely divided minerals summed together. For truck-mixed or shrink-mixed concrete, the Contractor shall have the option to develop a mixture with a minimum of 550 lbs/cu yd (326 kg/cu m) of cement and finely divided minerals summed together. A water-reducing or high range water-reducing admixture shall be used in the central mixed, truck-mixed or shrink-

mixed concrete mixture. For any mixture to be placed underwater, the minimum cement and finely divided minerals shall be 550 lbs/cu yd (326 kg/cu m) for central-mixed concrete, and 580 lbs/cu yd (344 kg/cu m) for truck-mixed or shrink-mixed concrete.

For Class DS concrete, CA 11 may be used. If CA 11 is used, the Contractor shall have the option to develop a mixture with a minimum cement and finely divided minerals of 605 lbs/cu yd (360 kg/cu m) summed together. If CA 11 is used and either Class DS concrete is placed underwater or a self-consolidating concrete mixture is desired, the Contractor shall have the option to develop a mixture with a minimum cement and finely divided minerals of 635 lbs/cu yd (378 kg/cu m) summed together.

- c. The minimum portland cement content in the mixture shall be 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone addition exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). For a drilled shaft, foundation, footing, or substructure, the minimum portland cement may be reduced to as low as 330 lbs/cu yd (196 kg/cu m) if the concrete has adequate freeze/thaw durability. The Contractor shall provide freeze/thaw test results according to AASHTO T 161 Procedure A or B, and the relative dynamic modulus of elasticity of the mix design shall be a minimum of 80 percent. Freeze/thaw testing will not be required for concrete that will not be exposed to freezing and thawing conditions as determined by the Engineer.
- d. The maximum cement replacement with fly ash shall be 40.0 percent. The maximum cement replacement with ground granulated blast-furnace slag shall be 65.0 percent. When cement replacement with ground granulated blast-furnace slag exceeds 35.0 percent, only Grade 100 shall be used.
- e. The mixture may contain a maximum of two finely divided minerals. The finely divided mineral in portland-pozzolan cement or portland blast-furnace slag cement shall count toward the total number of finely divided minerals allowed. The finely divided minerals shall constitute a maximum of 65.0 percent of the total cement plus finely divided minerals. The fly ash portion shall not exceed 40.0 percent. The ground granulated blast-furnace slag portion shall not exceed 65.0 percent. The microsilica or high-reactivity metakaolin portion used together or separately shall not exceed 5.0 percent.
- f. The time to obtain the specified strength may be increased to a maximum 56 days, provided the curing period specified in Article 1020.13 is increased to a minimum of 14 days.

The minimum grout strength for filling embedded pipe shall be as specified for the concrete, and testing shall be according to AASHTO T 106.

- (2) The selected mathematical method for evaluating heat of hydration thermal effects, which shall include the calculated adiabatic temperature rise, calculated maximum concrete temperature, and calculated maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface. The time when the maximum concrete temperature and maximum temperature differential will occur is required.

Acceptable mathematical methods include ACI 207.2R "Report on Thermal and Volume Change Effects on Cracking of Mass Concrete" as well as other proprietary methods. The Contractor shall perform heat of hydration testing on the cement and finely divided minerals to be used in the concrete mixture. The test shall be according to ASTM C 186 or other applicable test methods, and the result for heat shall be used in the equation to calculate adiabatic temperature rise. Other required test parameters for the mathematical model may be assumed if appropriate.

The Contractor has the option to propose a higher maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface, but the proposed value shall not exceed 50 °F (28 °C). In addition, based on strength gain of the concrete, multiple maximum temperature differentials at different times may be proposed. The proposed value shall be justified through a mathematical method.

- (3) Proposed maximum concrete temperature or temperature range prior to placement.

Article 1020.14 shall apply except a minimum 40 °F (4 °C) concrete temperature will be permitted.

- (4) Pre-cooling, post-cooling, and surface insulation methods that will be used to ensure the concrete will comply with the specified maximum temperature and specified or proposed temperature differential. For reinforcement that extends beyond the limits of the pour, the Contractor shall indicate if the reinforcement is required to be covered with insulation.

Refer to ACI 207.4R "Cooling and Insulating Systems for Mass Concrete" for acceptable methods that will be permitted. If embedded pipe is used for post-cooling, the material shall be polyvinyl chloride or polyethylene. The embedded pipe system shall be properly supported, and the Contractor shall subsequently inspect glued joints to ensure they are able to withstand free falling concrete. The embedded pipe system shall be leak tested after inspection of the glued joints, and prior to the concrete placement. The leak test shall be performed at maximum service pressure or higher for a minimum of 15 minutes. All leaks shall be repaired. The embedded pipe cooling water may be from natural sources such as streams and rivers, but shall be filtered to prevent system stoppages. When the embedded pipe is no longer needed, the surface connections to the pipe shall be removed to a depth of 4 in. (100 mm) below the surface of the concrete. The remaining pipe shall be

completely filled with grout. The 4 in. (100 mm) deep concrete hole shall be filled with nonshrink grout. Form and insulation removal shall be done in a manner to prevent cracking and ensure the maximum temperature differential is maintained. Insulation shall be in good condition as determined by the Engineer and properly attached.

- (5) Dimensions of each concrete pour, location of construction joints, placement operations, pour pattern, lift heights, and time delays between lifts.

Refer to ACI 207.1R "Guide to Mass Concrete" for acceptable placement operations that will be permitted.

- (6) Type of temperature monitoring system, the number of temperature sensors, and location of sensors.

A minimum of two independent temperature monitoring systems and corresponding sensors shall be used.

The temperature monitoring system shall have a minimum temperature range of 32 °F (0 °C) to 212 °F (100 °C), an accuracy of ± 2 °F (± 1 °C), and be able to automatically record temperatures without external power. Temperature monitoring shall begin once the sensor is encased in concrete, and with a maximum interval of one hour. Temperature monitoring may be discontinued after the maximum concrete temperature has been reached, post-cooling is no longer required, and the maximum temperature differential between the internal concrete core and the ambient air temperature does not exceed 35 °F (19 °C). The Contractor has the option to select a higher maximum temperature differential, but the proposed value shall not exceed 50 °F (28 °C). The proposed value shall be justified through a mathematical method.

At a minimum, a temperature sensor shall be located at the theoretical hottest portion of the concrete, normally the geometric center, and at the exterior face that will provide the maximum temperature differential. At the exterior face, the sensor shall be located 2 to 3 in. (50 to 75 mm) from the surface of the concrete. Sensors shall also be located a minimum of 1 in. (25 mm) away from reinforcement, and equidistant between cooling pipes if either applies. A sensor will also be required to measure ambient air temperature. The entrant/exit cooling water temperature for embedded pipe shall also be monitored.

Temperature monitoring results shall be provided to the Engineer a minimum of once each day and whenever requested by the Engineer. The report may be electronic or hard copy. The report shall indicate the location of each sensor, the temperature recorded, and the time recorded. The report shall be for all sensors and shall include ambient air temperature and entrant/exit cooling water temperatures. The temperature data in the report may be provided in tabular or graphical format, and the report shall indicate any corrective actions during the monitoring period. At the

completion of the monitoring period, the Contractor shall provide the Engineer a final report that includes all temperature data and corrective actions.

(7) Indicate contingency operations to be used if the maximum temperature or temperature differential of the concrete is reached after placement.

(c) Temperature Restriction Violations. If the maximum temperature of the concrete after placement exceeds 150 °F (66 °C), but is equal to or less than 158 °F (70 °C), the concrete will be accepted if no cracking or other unacceptable defects are identified. If cracking or unacceptable defects are identified, Article 105.03 shall apply. If the concrete temperature exceeds 158 °F (70 °C), Article 105.03 shall apply.

If a temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface exceeds the specified or proposed maximum value allowed, the concrete will be accepted if no cracking or other unacceptable defects are identified. If unacceptable defects are identified, Article 105.03 shall apply.

When the maximum 150 °F (66 °C) concrete temperature or the maximum allowed temperature differential is violated, the Contractor shall implement corrective action prior to the next pour. In addition, the Engineer reserves the right to request a new thermal control plan for acceptance before the Contractor is allowed to pour again.

(d) Inspection and Repair of Cracks. The Engineer will inspect the concrete for cracks after the temperature monitoring is discontinued, and the Contractor shall provide access for the Engineer to do the inspection. A crack may require repair by the Contractor as determined by the Engineer. The Contractor shall be responsible for the repair of all cracks. Protective coat or a concrete sealer shall be applied to a crack less than 0.007 in. (0.18 mm) in width. A crack that is 0.007 in. (0.18 mm) or greater shall be pressure injected with epoxy according to Section 590.

QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE)

Effective: January 1, 2012

Revised: January 1, 2013

Add the following to Section 1020 of the Standard Specifications:

"1020.16 Quality Control/Quality Assurance of Concrete Mixtures. This Article specifies the quality control responsibilities of the Contractor for concrete mixtures (except Class PC and PS concrete), cement aggregate mixture II, and controlled low-strength material incorporated in the project, and defines the quality assurance and acceptance responsibilities of the Engineer.

A list of quality control/quality assurance (QC/QA) documents is provided in Article 1020.16(g), Schedule D.

A Level I Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete testing.

A Level II Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete proportioning.

A Level III Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete mix design.

A Concrete Tester shall be defined as an individual who has successfully completed the Department's training to assist with concrete testing and is monitored on a daily basis.

Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving aggregate production and mixtures.

Mixture Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving mixtures.

Gradation Technician shall be defined as an individual who has successfully completed the Department's training to assist with gradation testing and is monitored on a daily basis.

- (a) Equipment/Laboratory. The Contractor shall provide a laboratory and test equipment to perform their quality control testing.

The laboratory shall be of sufficient size and be furnished with the necessary equipment, supplies, and current published test methods for adequately and safely performing all required tests. The laboratory will be approved by the Engineer according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Private Laboratory Requirements for Construction Materials Testing or Mix Design". Production of a mixture shall not begin until the Engineer provides written approval of the laboratory.

The Contractor shall refer to the Department's "Required Sampling and Testing Equipment for Concrete" for equipment requirements.

Test equipment shall be maintained and calibrated as required by the appropriate test method, and when required by the Engineer. This information shall be documented on the Department's "Calibration of Concrete Testing Equipment" form.

Test equipment used to determine compressive or flexural strength shall be calibrated each 12 month period by an independent agency, using calibration equipment traceable to the National Institute of Standards and Technology (NIST). The Contractor shall have the calibration documentation available at the test equipment location.

The Engineer will have unrestricted access to the plant and laboratory at any time to inspect measuring and testing equipment, and will notify the Contractor of any deficiencies. Defective equipment shall be immediately repaired or replaced by the Contractor.

- (b) Quality Control Plan. The Contractor shall submit, in writing, a proposed Quality Control (QC) Plan to the Engineer. The QC Plan shall be submitted a minimum of 45 calendar days prior to the production of a mixture. The QC Plan shall address the quality control of the concrete, cement aggregate mixture II, and controlled low-strength material incorporated in the project. The Contractor shall refer to the Department's "Model Quality Control Plan for Concrete Production" to prepare a QC Plan. The Engineer will respond in writing to the Contractor's proposed QC Plan within 15 calendar days of receipt.

Production of a mixture shall not begin until the Engineer provides written approval of the QC Plan. The approved QC Plan shall become a part of the contract between the Department and the Contractor, but shall not be construed as acceptance of any mixture produced.

The QC Plan may be amended during the progress of the work, by either party, subject to mutual agreement. The Engineer will respond in writing to a Contractor's proposed QC Plan amendment within 15 calendar days of receipt. The response will indicate the approval or denial of the Contractor's proposed QC Plan amendment.

- (c) Quality Control by Contractor. The Contractor shall perform quality control inspection, sampling, testing, and documentation to meet contract requirements. Quality control includes the recognition of obvious defects and their immediate correction. Quality control also includes appropriate action when passing test results are near specification limits, or to resolve test result differences with the Engineer. Quality control may require increased testing, communication of test results to the plant or the jobsite, modification of operations, suspension of mixture production, rejection of material, or other actions as appropriate. The Engineer shall be immediately notified of any failing tests and subsequent remedial action. Passing tests shall be reported no later than the start of the next work day.

When a mixture does not comply with specifications, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work, according to Article 105.03.

- (1) Personnel Requirements. The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for quality control. The jobsite and plant personnel shall be able to contact the QC Manager by cellular phone, two-way radio or other methods approved by the Engineer.

The QC Manager shall visit the jobsite a minimum of once a week. A visit shall be performed the day of a bridge deck pour, the day a non-routine mixture is placed as determined by the Engineer, or the day a plant is anticipated to produce more than 1000 cu yd (765 cu m). Any of the three required visits may be used to meet the once per week minimum requirement.

The Contractor shall provide personnel to perform the required inspections, sampling, testing and documentation in a timely manner. The Contractor shall refer to the Department's "Qualifications and Duties of Concrete Quality Control Personnel" document.

A Level I PCC Technician shall be provided at the jobsite during mixture production and placement, and may supervise concurrent pours on the project. For concurrent pours, a minimum of one Concrete Tester shall be required at each pour location. If the Level I PCC Technician is at one of the pour locations, a Concrete Tester is still required at the same location. Each Concrete Tester shall be able to contact the Level I PCC Technician by cellular phone, two-way radio or other methods approved by the Engineer. A single Level I PCC Technician shall not supervise concurrent pours for multiple contracts.

A Level II PCC Technician shall be provided at the plant, or shall be available, during mixture production and placement. A Level II PCC Technician may supervise a maximum of three plants. Whenever the Level II PCC Technician is not at the plant during mixture production and placement, a Concrete Tester or Level I PCC Technician shall be present at the plant to perform any necessary concrete tests. The Concrete Tester, Level I PCC Technician, or other individual shall also be trained to perform any necessary aggregate moisture tests, if the Level II PCC Technician is not at the plant during mixture production and placement. The Concrete Tester, Level I PCC Technician, plant personnel, and jobsite personnel shall have the ability to contact the Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

For a mixture which is produced and placed with a mobile portland cement concrete plant as defined in Article 1103.04, a Level II PCC Technician shall be provided. The Level II PCC Technician shall be present at all times during mixture production and placement. However, the Level II PCC Technician may request to be available if

operations are satisfactory. Approval shall be obtained from the Engineer, and jobsite personnel shall have the ability to contact the Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

A Concrete Tester, Mixture Aggregate Technician, and Aggregate Technician may provide assistance with sampling and testing. A Gradation Technician may provide assistance with testing. A Concrete Tester shall be supervised by a Level I or Level II PCC Technician. A Gradation Technician shall be supervised by a Level II PCC Technician, Mixture Aggregate Technician, or Aggregate Technician.

(2) Required Plant Tests. Sampling and testing shall be performed at the plant, or at a location approved by the Engineer, to control the production of a mixture. The required minimum Contractor plant sampling and testing is indicated in Article 1020.16(g) Schedule A.

(3) Required Field Tests. Sampling and testing shall be performed at the jobsite to control the production of a mixture, and to comply with specifications for placement. For standard curing, after initial curing, and for strength testing; the location shall be approved by the Engineer. The required minimum Contractor jobsite sampling and testing is indicated in Article 1020.16(g), Schedule B.

(d) Quality Assurance by Engineer. The Engineer will perform quality assurance tests on independent samples and split samples. An independent sample is a field sample obtained and tested by only one party. A split sample is one of two equal portions of a field sample, where two parties each receive one portion for testing. The Engineer may request the Contractor to obtain a split sample. Aggregate split samples and any failing strength specimen shall be retained until permission is given by the Engineer for disposal. The results of all quality assurance tests by the Engineer will be made available to the Contractor. However, Contractor split sample test results shall be provided to the Engineer before Department test results are revealed. The Engineer's quality assurance independent sample and split sample testing is indicated in Article 1020.16(g), Schedule C.

(1) Strength Testing. For strength testing, Article 1020.09 shall apply, except the Contractor and Engineer strength specimens may be placed in the same field curing box for initial curing and may be cured in the same water storage tank for final curing.

(2) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will be considered reasonable if within the following limits:

Test Parameter	Acceptable Limits of Precision
Slump	0.75 in. (20 mm)
Air Content	0.9%
Compressive Strength	900 psi (6200 kPa)

Flexural Strength	90 psi (620 kPa)
Slump Flow (Self-Consolidating Concrete (SCC))	1.5 in. (40 mm)
Visual Stability Index (SCC)	Not Applicable
J-Ring (SCC)	1.5 in. (40 mm)
L-Box (SCC)	10 %
Hardened Visual Stability Index (SCC)	Not Applicable
Dynamic Segregation Index (SCC)	1.0 %
Flow (Controlled Low-Strength Material (CLSM))	1.5 in. (40 mm)
Strength (Controlled Low-Strength Material (CLSM))	40 psi (275 kPa)
Aggregate Gradation	See "Guideline for Sample Comparison" in Appendix "A" of the Manual of Test Procedures for Materials.

When acceptable limits of precision have been met, but only one party is within specification limits, the failing test shall be resolved before the material may be considered for acceptance.

(3) Test Results and Specification Limits.

- a. Split Sample Testing. If either the Engineer's or the Contractor's split sample test result is not within specification limits, and the other party is within specification limits; immediate retests on a split sample shall be performed for slump, air content, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), or aggregate gradation. A passing retest result by each party will require no further action. If either the Engineer's or Contractor's slump, air content, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength or hardened visual stability index test result is a failure, and the other party is within specification limits; the following actions shall be initiated to investigate the test failure:

1. The Engineer and the Contractor shall investigate the sampling method, test procedure, equipment condition, equipment calibration, and other factors.
2. The Engineer or the Contractor shall replace test equipment, as determined by the Engineer.
3. The Engineer and the Contractor shall perform additional testing on split samples, as determined by the Engineer.

For aggregate gradation, jobsite slump, jobsite air content, jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, and jobsite flow (CLSM); if the failing split sample test result is not resolved according to 1., 2., or 3., and the mixture has not been placed, the Contractor shall reject the material; unless the Engineer accepts the material for

incorporation in the work according to Article 105.03. If the mixture has already been placed, or if a failing strength or hardened visual stability index test result is not resolved according to 1., 2., or 3., the material will be considered unacceptable.

If a continued trend of difference exists between the Engineer's and the Contractor's split sample test results, or if split sample test results exceed the acceptable limits of precision, the Engineer and the Contractor shall investigate according to items 1., 2., and 3.

- b. Independent Sample Testing. For aggregate gradation, jobsite slump, jobsite air content jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, jobsite flow (CLSM); if the result of a quality assurance test on a sample independently obtained by the Engineer is not within specification limits, and the mixture has not been placed, the Contractor shall reject the material, unless the Engineer accepts the material for incorporation in the work according to Article 105.03. If the mixture has already been placed or the Engineer obtains a failing strength or hardened visual stability index test result, the material will be considered unacceptable.
- (e) Acceptance by the Engineer. Final acceptance will be based on the Standard Specifications and the following:
- (1) The Contractor's compliance with all contract documents for quality control.
 - (2) Validation of Contractor quality control test results by comparison with the Engineer's quality assurance test results using split samples. Any quality control or quality assurance test determined to be flawed may be declared invalid only when reviewed and approved by the Engineer. The Engineer will declare a test result invalid only if it is proven that improper sampling or testing occurred. The test result is to be recorded and the reason for declaring the test invalid will be provided by the Engineer.
 - (3) Comparison of the Engineer's quality assurance test results with specification limits using samples independently obtained by the Engineer.

The Engineer may suspend mixture production, reject materials, or take other appropriate action if the Contractor does not control the quality of concrete, cement aggregate mixture II, or controlled low-strength material for acceptance. The decision will be determined according to (1), (2), or (3).

(f) Documentation.

- (1) Records. The Contractor shall be responsible for documenting all observations, inspections, adjustments to the mix design, test results, retest results, and corrective actions in a bound hardback field book, bound hardback diary, or appropriate

Department form, which shall become the property of the Department. The documentation shall include a method to compare the Engineer's test results with the Contractor's results. The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the consultants, the subcontractors, or the producer of the mixture. The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

The Department's form MI 504M, form BMPR MI654, and form BMPR MI655 shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed form MI 504M, form BMPR MI654, and form BMPR MI655 are required to authorize payment by the Engineer, for applicable pay items.

- (2) Delivery Truck Ticket. The following information shall be recorded on each delivery ticket or in a bound hardback field book: initial revolution counter reading (final reading optional) at the jobsite, if the mixture is truck-mixed; time discharged at the jobsite; total amount of each admixture added at the jobsite; and total amount of water added at the jobsite.
- (g) Basis of Payment and Schedules. Quality Control/Quality Assurance of portland cement concrete mixtures will not be paid for separately, but shall be considered as included in the cost of the various concrete contract items.

SCHEDULE A

CONTRACTOR PLANT SAMPLING AND TESTING			
Item	Test	Frequency	IL Modified AASHTO or Department Test Method ^{1/}
Aggregates (Arriving at Plant)	Gradation ^{2/}	As needed to check source for each gradation number	2, 11, 27, and 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation ^{2/}	2,500 cu yd (1,900 cu m) for each gradation number ^{3/}	2, 11, 27, and 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Moisture ^{4/} : Fine Aggregate	Once per week for moisture sensor, otherwise daily for each gradation number	Flask, Dunagan, Pycnometer Jar, or 255
	Moisture ^{4/} : Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pycnometer Jar, or 255
Mixture ^{5/}	Slump Air Content Unit Weight / Yield Slump Flow (SCC) Visual Stability Index (SCC) J-Ring (SCC) ^{6/} L-Box (SCC) ^{6/} Temperature	As needed to control production	T 141 and T 119 T 141 and T 152 or T 196 T 141 and T 121 SCC-1 and SCC-2 SCC-1* and SCC-2 SCC-1 and SCC-3 SCC-1 and SCC-4 T 141 and T 309
Mixture (CLSM) ^{7/}	Flow Air Content Temperature	As needed to control production	Illinois Test Procedure 307

1/ Refer to the Department's "Manual of Test Procedures for Materials".

2/ All gradation tests shall be washed. Testing shall be completed no later than 24 hours after the aggregate has been sampled.

3/ One per week (Sunday through Saturday) minimum unless the stockpile has not received additional aggregate material since the previous test.

One per day minimum for a bridge deck pour unless the stockpile has not received additional aggregate material since the previous test. The sample shall be taken and testing completed prior to the pour. The bridge deck aggregate sample may be taken the day before the pour or as approved by the Engineer.

4/ If the moisture test and moisture sensor disagree by more than 0.5 percent, retest. If the difference remains, adjust the moisture sensor to an average of two or more moisture tests. The Department's "Water/Cement Ratio Worksheet" form shall be completed when applicable.

- 5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO T 141, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318.

The Contractor may also perform other available self-consolidating concrete (SCC) tests at the plant to control mixture production.

- 6/ The Contractor shall select the J-Ring or L-Box test for plant sampling and testing.
- 7/ The Contractor may also perform strength testing according to Illinois Test Procedure 307.

SCHEDULE B

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Item	Measured Property	Random Sample Testing Frequency per Mix Design and per Plant ^{2/}	IL Modified AASHTO Test Method
Pavement, Shoulder, Base Course, Widening, Driveway Pavement, Railroad Crossing, Cement Aggregate Mixture II	Slump ^{3/ 4/}	1 per 500 cu yd (400 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 and T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 1250 cu yd (1000 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23
Bridge Approach Slab ^{9/} , Bridge Deck ^{9/} , Bridge Deck Overlay ^{9/} , Superstructure ^{9/} , Substructure, Culvert, Miscellaneous Drainage Structures, Retaining Wall, Building Wall, Drilled Shaft Pile & Encasement Footing, Foundation, Pavement Patching, Structural Repairs	Slump ^{3/ 4/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23
Seal Coat	Slump ^{3/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 250 cu yd (200 cu m) or minimum 1/day when air is entrained	T 141 and T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Curb, Gutter, Median, Barrier, Sidewalk, Slope Wall, Paved Ditch, Fabric Formed Concrete Revetment Mat ^{10/} , Miscellaneous Items, Incidental Items	Slump ^{3/ 4/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 400 cu yd (300 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23
The Item will use a Self-Consolidating Concrete Mixture	Slump Flow ^{3/} VSI ^{3/} J-Ring ^{3/ 11/} L-Box ^{3/ 11/}	Perform at same frequency that is specified for the Item's slump	SCC-1 & SCC-2 SCC-1 & SCC-2 SCC-1 & SCC-3 SCC-1 & SCC-4
The Item will use a Self-Consolidating Concrete Mixture	HVSI ^{12/}	Minimum 1/day at start of production for that day	SCC-1 and SCC-6
The Item will use a Self-Consolidating Concrete Mixture	Dynamic Segregation Index (DSI)	Minimum 1/week at start of production for that week	SCC-1 and SCC-8 (Option C)
The Item will use a Self-Consolidating Concrete Mixture	Air Content ^{3/ 5/ 6/}	Perform at same frequency that is specified for the Item's air content	SCC-1 and T 152 or T 196
The Item will use a Self-Consolidating Concrete Mixture	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	Perform at same frequency that is specified for the Item's strength	SCC-1, T 22 and T 23 or SCC-1, T 177 and T 23
All	Temperature ^{3/}	As needed to control production	T 141 and T 309
Controlled Low-Strength Material (CLSM)	Flow, Air Content, Compressive Strength (28-day) ^{13/} , and Temperature	First truck load delivered and as needed to control production thereafter	Illinois Test Procedure 307

- 1/ Sampling and testing of small quantities of curb, gutter, median, barrier, sidewalk, slope wall, paved ditch, miscellaneous items, and incidental items may be waived by the Engineer if requested by the Contractor. However, quality control personnel are still required according to Article 1020.16(c)(1). The Contractor shall also provide recent evidence that similar material has been found to be satisfactory under normal sampling and testing procedures. The total quantity that may be waived for testing shall not exceed 100 cu yd (76 cu m) per contract.

If the Contractor's or Engineer's test result for any jobsite mixture test is not within the specification limits, all subsequent truck loads delivered shall be tested by the Contractor until the problem is corrected.

- 2/ If one mix design is being used for several construction items during a day's production, one testing frequency may be selected to include all items. The construction items shall have the same slump, air content, and water/cement ratio specifications. For self-consolidating concrete, the construction items shall have the same slump flow, visual stability index, J-Ring, L-Box, air content, and water/cement ratio specifications. The frequency selected shall equal or exceed the testing required for the construction item.

One sufficiently sized sample shall be taken to perform the required test(s). Random numbers shall be determined according to the Department's "Method for Obtaining Random Samples for Concrete". The Engineer will provide random sample locations.

- 3/ The temperature, slump, and air content tests shall be performed on the first truck load delivered, for each pour. For self consolidating concrete, the temperature, slump flow, visual stability index, J-Ring or L-Box, and air content tests shall be performed on the first truck load delivered, for each pour. Unless a random sample is required for the first truck load, testing the first truck load does not satisfy random sampling requirements.
- 4/ The slump random sample testing frequency shall be a minimum 1/day for a construction item which is slipformed.
- 5/ If a pump or conveyor is used for placement, a correction factor shall be established to allow for a loss of air content during transport. The first three truck loads delivered shall be tested, before and after transport by the pump or conveyor, to establish the correction factor. Once the correction is determined, it shall be re-checked after an additional 50 cu yd (40 cu m) is pumped, or an additional 100 cu yd (80 cu m) is conveyored. This shall continue throughout the pour. If the re-check indicates the correction factor has changed, a minimum of two truckloads is required to re-establish the correction factor. The correction factor shall also be re-established when significant changes in temperature, distance, pump or conveyor arrangement, and other factors have occurred. If the correction factor is >3.0 percent, the Contractor shall take corrective action to reduce the loss of air content during transport by the pump or conveyor. The Contractor shall record all air content test results, correction factors and corrected air contents. The corrected air content shall be reported on form BMPR MI654.
- 6/ If the Contractor's or Engineer's air content test result is within the specification limits, and 0.2 percent or closer to either limit, the next truck load delivered shall be tested by the Contractor. For example, if the specified air content range is 5.0 to 8.0 percent and the test result is 5.0, 5.1, 5.2, 7.8, 7.9 or 8.0 percent, the next truck shall be tested by the Contractor.
- 7/ The test of record for strength shall be the day indicated in Article 1020.04. For cement aggregate mixture II, a strength requirement is not specified and testing is not required. Additional strength testing to determine early falsework and form removal, early pavement or bridge opening to traffic, or to monitor strengths is at the discretion of the Contractor. Strength shall be defined as the average of at least two cylinder or two beam breaks for field tests.

- 8/ In addition to the strength test, a slump test, air content test, and temperature test shall be performed on the same sample. For self-consolidating concrete, a slump flow test, visual stability index test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample as the strength test. For mixtures pumped or conveyed, the Contractor shall sample according to Illinois Modified AASHTO T 141.
- 9/ The air content test will be required for each delivered truck load.
- 10/ For fabric formed concrete revetment mat, the slump test is not required and the flexural strength test is not applicable.
- 11/ The Contractor shall select the J-Ring or L-Box test for jobsite sampling and testing.
- 12/ In addition to the hardened visual stability index (HVSI) test, a slump flow test, visual stability index (VSI) test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample. The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.
- 13/ The test of record for strength shall be the day indicated in Article 1019.04. In addition to the strength test, a flow test, air content test, and temperature test shall be performed on the same sample. The strength test may be waived by the Engineer if future removal of the material is not a concern.

SCHEDULE C

ENGINEER QUALITY ASSURANCE INDEPENDENT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins, Slump and Air Content	As determined by the Engineer.
Jobsite	Slump, Air Content, Slump Flow, Visual Stability Index, J-Ring, L-Box, Hardened Visual Stability Index, Dynamic Segregation Index and Strength	As determined by the Engineer.
	Flow, Air Content, Strength (28-day), and Dynamic Cone Penetration for Controlled Low-Strength Material (CLSM)	As determined by the Engineer

ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per aggregate gradation number and per plant.
	Slump and Air Content	As determined by the Engineer.
Jobsite	Slump ^{2/} , Air Content ^{2/ 3/} , Slump Flow ^{2/} , Visual Stability Index ^{2/} , J-Ring ^{2/} and L-box ^{2/}	At the beginning of the project, the first three tests performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Hardened Visual Stability Index ^{2/}	As determined by the Engineer.
	Dynamic Segregation Index ^{2/}	As determined by the Engineer.
	Strength ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Flow, Air Content, and Strength (28-day) for Controlled Low-Strength Material (CLSM)	As determined by the Engineer.

- 1/ The Engineer will perform the testing throughout the period of quality control testing by the Contractor.
- 2/ The Engineer will witness and take immediate possession of or otherwise secure the Department's split sample obtained by the Contractor.
- 3/ Before transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant. After transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant.

SCHEDULE D

CONCRETE QUALITY CONTROL AND QUALITY ASSURANCE DOCUMENTS

- (a) Model Quality Control Plan for Concrete Production (*)
- (b) Qualifications and Duties of Concrete Quality Control Personnel (*)
- (c) Development of Gradation Bands on Incoming Aggregate at Mix Plants (*)
- (d) Required Sampling and Testing Equipment for Concrete (*)
- (e) Method for Obtaining Random Samples for Concrete (*)
- (f) Calibration of Concrete Testing Equipment (BMPR PCCQ01 through BMPR PCCQ09) (*)
- (g) Water/Cement Ratio Worksheet (BMPR PCCW01) (*)
- (h) Field/Lab Gradations (MI 504M) (*)
- (i) Concrete Air, Slump and Quantity (BMPR MI654) (*)
- (j) P.C. Concrete Strengths (BMPR MI655) (*)
- (k) Aggregate Technician Course or Mixture Aggregate Technician Course (*)
- (l) Portland Cement Concrete Tester Course (*)
- (m) Portland Cement Concrete Level I Technician Course - Manual of Instructions for Concrete Testing (*)
- (n) Portland Cement Concrete Level II Technician Course - Manual of Instructions for Concrete Proportioning (*)
- (o) Portland Cement Concrete Level III Technician Course - Manual of Instructions for Design of Concrete Mixtures (*)
- (p) Manual of Test Procedures for Materials

* Refer to Appendix C of the Manual of Test Procedures for Materials for more information."

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: August 1, 2011

Revise the third sentence of the third paragraph of Article 105.03(b) of the Standard Specifications to read:

“The daily monetary deduction will be \$2,500.”

80273

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

SPECIAL PROVISION
FOR
COOPERATION WITH UTILITIES

Effective: January 1, 1999
Revised: January 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

Replace Article 105.07 of the Standard Specifications with the following:

"105.07 Cooperation with Utilities. The adjustment of utilities consists of the relocation, removal, replacement, rearrangements, reconstruction, improvement, disconnection, connection, shifting, new installation or altering of an existing utility facility in any manner.

When the plans or special provisions include information pertaining to the location of underground utility facilities, such information represents only the opinion of the Department as to the location of such utilities and is only included for the convenience of the bidder. The Department assumes no responsibility in respect to the sufficiency or the accuracy of the information shown on the plans relative to the location of the underground utility facilities.

Utilities which are to be adjusted shall be adjusted by the utility owner or the owner's representative or by the Contractor as a contract item. Generally, arrangements for adjusting existing utilities will be made by the Department prior to project construction; however, utilities will not necessarily be adjusted in advance of project construction and, in some cases, utilities will not be removed from the proposed construction limits. When utility adjustments must be performed in conjunction with construction, the utility adjustment work will be shown on the plans and/or covered by Special Provisions.

When the Contractor discovers a utility has not been adjusted by the owner or the owner's representative as indicated in the contract documents, or the utility is not shown on the plans or described in the Special Provisions as to be adjusted in conjunction with construction, the Contractor shall not interfere with said utility, and shall take proper precautions to prevent damage or interruption of the utility and shall promptly notify the Engineer of the nature and location of said utility.

All necessary adjustments, as determined by the Engineer, of utilities not shown on the plans or not identified by markers, will be made at no cost to the Contractor except traffic structures, light poles, etc., that are normally located within the proposed construction limits as hereinafter defined will not be adjusted unless required by the proposed improvement.

(a) Limits of Proposed Construction for Utilities Paralleling the Roadway. For the purpose of this Article, limits of proposed construction for utilities extending in the same longitudinal direction as the roadway, shall be defined as follows:

- (1) The horizontal limits shall be a vertical plane, outside of, parallel to, and 600 mm (2 ft) distant at right angles from the plan or revised slope limits.

In cases where the limits of excavation for structures are not shown on the plans, the horizontal limits shall be a vertical plane 1.2 m (4 ft) outside the edges of structure footings or the structure where no footings are required.

- (2) The upper vertical limits shall be the regulations governing the roadbed clearance for the specific utility involved.

- (3) The lower vertical limits shall be the top of the utility at the depth below the proposed grade as prescribed by the governing agency or the limits of excavation, whichever is less.

(b) Limits of Proposed Construction for Utilities Crossing the Roadway. For the purpose of this Article, limits of proposed construction for utilities crossing the roadway in a generally transverse direction shall be defined as follows:

- (1) Utilities crossing excavations for structures that are normally made by trenching such as sewers, underdrains, etc. and all minor structures such as manholes, inlets, foundations for signs, foundations for traffic signals, etc., the limits shall be the space to be occupied by the proposed permanent construction unless otherwise required by the regulations governing the specific utility involved.
- (2) For utilities crossing the proposed site of major structures such as bridges, sign trusses, etc., the limits shall be as defined above for utilities extending in the same general direction as the roadway.

The Contractor may make arrangements for adjustment of utilities outside of the limits of proposed construction provided the Contractor furnishes the Department with a signed agreement with the utility owner covering the adjustments to be made. The cost of any adjustments made outside the limits of proposed construction shall be the responsibility of the Contractor unless otherwise provided.

The Contractor shall request all utility owners to field locate their facilities according to Article 107.31. The Engineer may make the request for location from the utility after receipt of notice from the Contractor. On request, the Engineer will make an inspection to verify that the utility company has field located its facilities, but will not assume responsibility for the accuracy of such work. The Contractor shall be responsible for maintaining the excavations or markers provided by the utility owners. This field location procedure may be waived if the utility owner has stated in writing to the Department it is satisfied the construction plans are sufficiently accurate. If the utility owner does not submit such statement to the Department, and they do not field locate their facilities in both horizontal and vertical alignment, the Engineer will authorize the Contractor in writing to proceed to locate the facilities in the most economical and reasonable manner, subject to the approval of the Engineer, and be paid according to Article 109.04.

The Contractor shall coordinate with any planned utility adjustment or new installation and the Contractor shall take all precautions to prevent disturbance or damage to utility facilities. Any failure on the part of the utility owner, or their representative, to proceed with any planned utility adjustment or new installation shall be reported promptly by the Contractor to the Engineer orally and in writing.

The Contractor shall take all necessary precautions for the protection of the utility facilities. The Contractor shall be responsible for any damage or destruction of utility facilities resulting from neglect, misconduct, or omission in the Contractor's manner or method of execution or nonexecution of the work, or caused by defective work or the use of unsatisfactory materials. Whenever any damage or destruction of a utility facility occurs as a result of work performed by the Contractor, the utility company will be immediately notified. The utility company will make arrangements to restore such facility to a condition equal to that existing before any such damage or destruction was done.

It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utilities in their present and/or adjusted positions.

No additional compensation will be allowed for any delays, inconvenience, or damage sustained by the Contractor due to any interference from the said utility facilities or the operation of relocating the said utility facilities.

State of Illinois
DEPARTMENT OF TRANSPORTATION
Bureau of Local Roads & Streets

SPECIAL PROVISION
FOR
WAGES OF EMPLOYEES ON PUBLIC WORKS

Effective: January 1, 1999
Revised: January 2, 2013

1. **Prevailing Wages.** All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Illinois Department of Labor publishes the prevailing wage rates on its website at www.state.il.us/agency/idol/rates/rates.htm. If the Illinois Department of Labor revises the prevailing wage rates, the revised prevailing wage rates on the Illinois Department of Labor's website shall apply to this contract and the Contractor will not be allowed additional compensation on account of said revisions. The Contractor shall review the wage rates applicable to the work of the contract at regular intervals in order to ensure the timely payment of current wage rates. The Contractor agrees that no additional notice is required. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto.
2. **Payroll Records.** The Contractor and each subcontractor shall make and keep, for a period of not less than three years from the date of the last payment on a contract or subcontract, records of all laborers, mechanics, and other workers employed by them on the project; the records shall include each worker's name, address, telephone number when available, social security number, classification or classifications, the hourly wages paid in each pay period, the number of hours worked each day, and the starting and ending times of work each day. Upon seven business days' notice, the Contractor and each subcontractor shall make available for inspection and copying at a location within this State during reasonable hours, the payroll records to the public body in charge of the project, its officers and agents, the Director of Labor and his deputies and agents, and to federal, State, or local law enforcement agencies and prosecutors.
3. **Submission of Payroll Records.** The Contractor and each subcontractor shall, no later than the tenth day of each calendar month, file a certified payroll for the immediately preceding month with the public body in charge of the project, except that the full social security number and home address shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). The certified payroll shall consist of a complete copy of the payroll records except starting and ending times of work each day may be omitted.

The certified payroll shall be accompanied by a statement signed by the Contractor or subcontractor or an officer, employee, or agent of the contractor or subcontractor which avers that: (i) he or she has examined the certified payroll records required to be submitted by the Act and such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required; and (iii) the Contractor or subcontractor is aware that filing a certified payroll that he or she knows to be false is a Class A misdemeanor.
4. **Employees Interviews.** The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor.

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

SPECIAL PROVISION
FOR
EQUIPMENT RENTAL RATES

Effective: January 1, 2012

All references to Sections or Articles in this specification shall be construed to mean a specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

Replace Article 109.04(b)(4) with the following:

- "(4) Equipment. For any machinery or special equipment (other than small tools) the use of which has been authorized by the Engineer, the Contractor will be paid according to the latest revision of "SCHEDULE OF AVERAGE ANNUAL EQUIPMENT OWNERSHIP EXPENSE" and latest index factor as issued by the Illinois Department of Transportation. The equipment should be of a type and size reasonably required to complete the extra work."

All Prevailing Wage Rates

Du Page County Prevailing Wage for June 2013

(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		36.200	36.700	1.5	1.5	2.0	12.78	9.020	0.000	0.500
ASBESTOS ABT-MEC		BLD		34.160	36.660	1.5	1.5	2.0	10.82	10.66	0.000	0.720
BOILERMAKER		BLD		43.450	47.360	2.0	2.0	2.0	6.970	14.66	0.000	0.350
BRICK MASON		BLD		40.680	44.750	1.5	1.5	2.0	9.550	12.00	0.000	0.970
CARPENTER		ALL		42.520	44.520	1.5	1.5	2.0	13.29	12.75	0.000	0.630
CEMENT MASON		ALL		38.000	40.000	2.0	1.5	2.0	8.950	16.35	0.000	0.380
CERAMIC TILE FNSHER		BLD		34.440	0.000	2.0	1.5	2.0	9.700	6.930	0.000	0.610
COMMUNICATION TECH		BLD		32.650	34.750	1.5	1.5	2.0	9.250	14.46	0.400	0.610
ELECTRIC PWR EQMT OP		ALL		36.610	49.750	1.5	1.5	2.0	5.000	11.35	0.000	0.270
ELECTRIC PWR GRNDMAN		ALL		28.310	49.750	1.5	1.5	2.0	5.000	8.780	0.000	0.210
ELECTRIC PWR LINEMAN		ALL		43.830	49.750	1.5	1.5	2.0	5.000	13.58	0.000	0.330
ELECTRIC PWR TRK DRV		ALL		29.310	49.750	1.5	1.5	2.0	5.000	9.090	0.000	0.220
ELECTRICIAN		BLD		36.200	39.820	1.5	1.5	2.0	9.250	16.27	4.380	0.680
ELEVATOR CONSTRUCTOR		BLD		49.080	55.215	2.0	2.0	2.0	11.88	12.71	3.930	0.600
FENCE ERECTOR	NE	ALL		34.840	36.840	1.5	1.5	2.0	12.86	10.67	0.000	0.300
FENCE ERECTOR	W	ALL		44.950	47.200	2.0	2.0	2.0	8.890	17.69	0.000	0.400
GLAZIER		BLD		39.500	41.000	1.5	2.0	2.0	11.99	14.30	0.000	0.840
HT/FROST INSULATOR		BLD		45.550	48.050	1.5	1.5	2.0	10.82	11.86	0.000	0.720
IRON WORKER	E	ALL		40.750	42.750	2.0	2.0	2.0	13.20	19.09	0.000	0.350
IRON WORKER	W	ALL		44.950	47.200	2.0	2.0	2.0	8.890	17.69	0.000	0.400
LABORER		ALL		37.000	37.750	1.5	1.5	2.0	13.38	9.520	0.000	0.500
LATHER		ALL		42.520	44.520	1.5	1.5	2.0	13.29	12.75	0.000	0.630
MACHINIST		BLD		43.550	46.050	1.5	1.5	2.0	6.130	8.950	1.850	0.000
MARBLE FINISHERS		ALL		29.700	0.000	1.5	1.5	2.0	9.550	11.75	0.000	0.620
MARBLE MASON		BLD		39.880	43.870	1.5	1.5	2.0	9.550	11.75	0.000	0.730
MATERIAL TESTER I		ALL		27.000	0.000	1.5	1.5	2.0	13.38	9.520	0.000	0.500
MATERIALS TESTER II		ALL		32.000	0.000	1.5	1.5	2.0	13.38	9.520	0.000	0.500
MILLWRIGHT		ALL		42.520	44.520	1.5	1.5	2.0	13.29	12.75	0.000	0.630
OPERATING ENGINEER		BLD 1		46.100	50.100	2.0	2.0	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		BLD 2		44.800	50.100	2.0	2.0	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		BLD 3		42.250	50.100	2.0	2.0	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		BLD 4		40.500	50.100	2.0	2.0	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		BLD 5		49.850	50.100	2.0	2.0	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		BLD 6		47.100	50.100	2.0	2.0	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		BLD 7		49.100	50.100	2.0	2.0	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		HWY 1		44.300	48.300	1.5	1.5	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		HWY 2		43.750	48.300	1.5	1.5	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		HWY 3		41.700	48.300	1.5	1.5	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		HWY 4		40.300	48.300	1.5	1.5	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		HWY 5		39.100	48.300	1.5	1.5	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		HWY 6		47.300	48.300	1.5	1.5	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		HWY 7		45.300	48.300	1.5	1.5	2.0	16.60	11.05	1.900	1.250
ORNAMNTL IRON WORKER E		ALL		42.900	45.400	2.0	2.0	2.0	13.11	16.40	0.000	0.600
ORNAMNTL IRON WORKER W		ALL		44.950	47.200	2.0	2.0	2.0	8.890	17.69	0.000	0.400
PAINTER		ALL		40.880	42.880	1.5	1.5	1.5	9.650	8.200	0.000	1.250
PAINTER SIGNS		BLD		33.920	38.090	1.5	1.5	1.5	2.600	2.710	0.000	0.000
PILEDRIIVER		ALL		42.520	44.520	1.5	1.5	2.0	13.29	12.75	0.000	0.630
PIPEFITTER		BLD		41.200	43.200	1.5	1.5	2.0	9.750	17.09	0.000	1.710
PLASTERER		BLD		40.080	42.480	1.5	1.5	2.0	9.550	12.30	0.000	0.990
PLUMBER		BLD		41.200	43.200	1.5	1.5	2.0	9.750	17.09	0.000	1.710
ROOFER		BLD		38.350	41.350	1.5	1.5	2.0	8.280	8.770	0.000	0.430
SHEETMETAL WORKER		BLD		42.510	44.510	1.5	1.5	2.0	10.04	12.01	0.000	0.780
SPRINKLER FITTER		BLD		49.200	51.200	1.5	1.5	2.0	10.25	8.350	0.000	0.450
STEEL ERECTOR	E	ALL		40.750	42.750	2.0	2.0	2.0	13.20	19.09	0.000	0.350

All Prevailing Wage Rates

STEEL ERECTOR	W	ALL	44.950	47.200	2.0	2.0	2.0	8.890	17.69	0.000	0.400
STONE MASON		BLD	40.680	44.750	1.5	1.5	2.0	9.550	12.00	0.000	0.970
TERRAZZO FINISHER		BLD	35.510	0.000	1.5	1.5	2.0	9.700	9.320	0.000	0.400
TERRAZZO MASON		BLD	39.370	42.370	1.5	1.5	2.0	9.700	10.66	0.000	0.550
TILE MASON		BLD	41.430	45.430	2.0	1.5	2.0	9.700	8.640	0.000	0.710
TRAFFIC SAFETY WRKR		HWY	28.250	29.850	1.5	1.5	2.0	4.896	4.175	0.000	0.000
TRUCK DRIVER		ALL 1	32.550	33.100	1.5	1.5	2.0	6.500	4.350	0.000	0.150
TRUCK DRIVER		ALL 2	32.700	33.100	1.5	1.5	2.0	6.500	4.350	0.000	0.150
TRUCK DRIVER		ALL 3	32.900	33.100	1.5	1.5	2.0	6.500	4.350	0.000	0.150
TRUCK DRIVER		ALL 4	33.100	33.100	1.5	1.5	2.0	6.500	4.350	0.000	0.150
TUCKPOINTER		BLD	40.950	41.950	1.5	1.5	2.0	8.180	10.82	0.000	0.940

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**DUPAGE COUNTY**

IRON WORKERS AND FENCE ERECTOR (WEST) - West of Route 53.

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.

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.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed

All Prevailing Wage Rates

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 scarifying 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.

COMMUNICATIONS TECHNICIAN

Low voltage installation, maintenance and removal of telecommunication facilities (voice, sound, data and video) including telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), 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.

All Prevailing Wage Rates

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

All Prevailing Wage Rates

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;

All Prevailing Wage Rates

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.

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:

All Prevailing Wage Rates

unskilled pumpman; 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.

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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.

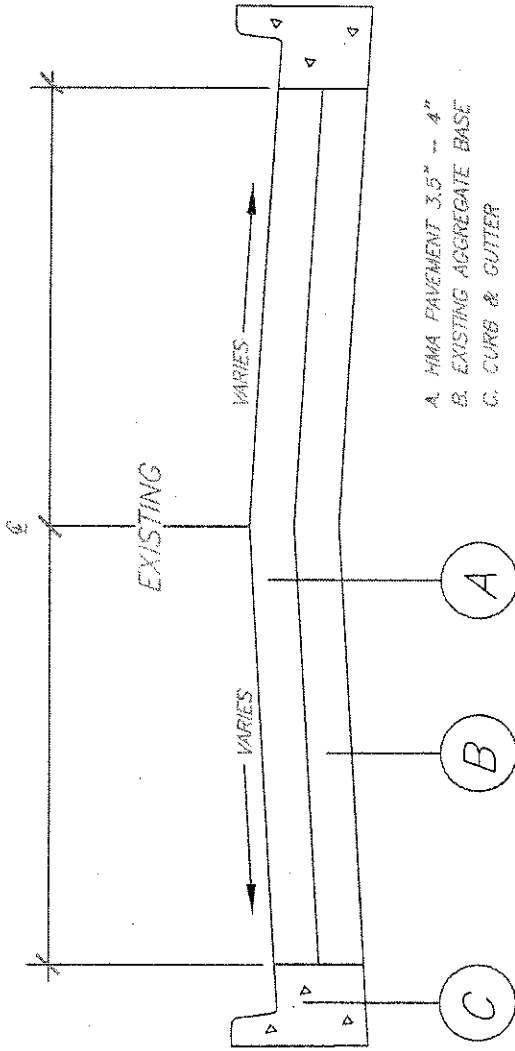
LANDSCAPING

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.

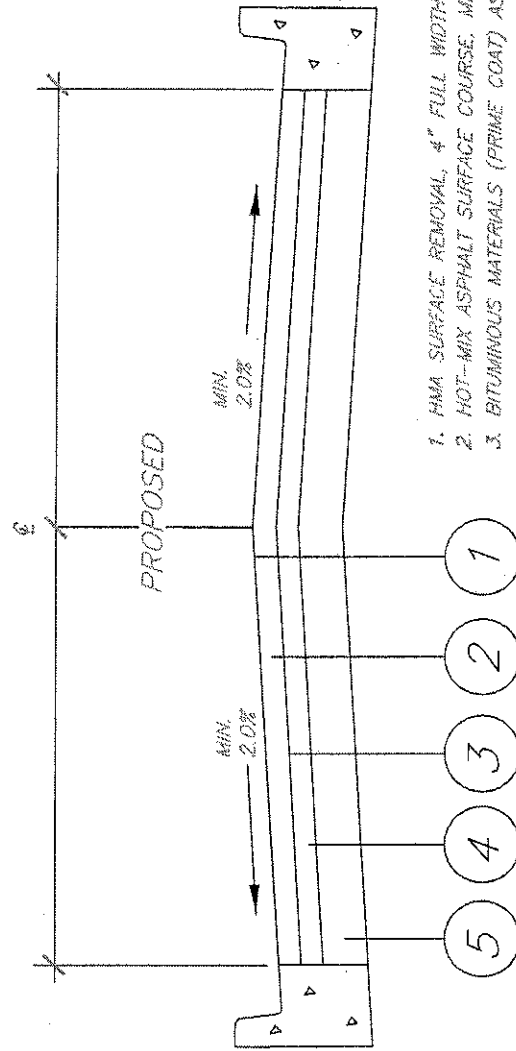
HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
	MIXTURE TYPE	AIR VOIDS
PAVEMENT RESURFACING		
	Hot-Mix Asphalt Binder Course, IL-19.0, N50	4% @ 50 Gyr.
	Leveling Binder (Machine Method), N50 (IL-9.5 mm)	4% @ 50 Gyr.
	Hot-Mix Asphalt Surface Course, Mix "D", N50 (IL-9.5 mm)	4% @ 50 Gyr.
PATCHING		
	Class D Patches (HMA Binder IL-19 mm)	4% @ 70 Gyr.
	Pavement Removal & HMA Replacement (HMA Binder IL-19 mm)	4% @ 70 Gyr.
DRIVEWAYS		
	Hot-Mix Asphalt Surface Course, Mix "D", N50 (IL-9.5 mm), 2" and 3"	4% @ 50 Gyr.
	Hot-Mix Asphalt Base Course (HMA Binder IL-19 mm), 6"	4% @ 50 Gyr.

The unit weight used to calculate all Hot-Mix Asphalt Surface Mixture Quantities is 112 Lbs/SqYd/In.

The "AC Type" for polymerized HMA mixes shall be SBS/SBR PG 76-22 and for non-polymerized HMA the "AC Type" shall be "PG 64-22" unless modified by district one special provisions.
For use of recycled materials see special provisions.



- A. HMA PAVEMENT 3.5" -- 4"
- B. EXISTING AGGREGATE BASE
- C. CURB & GUTTER

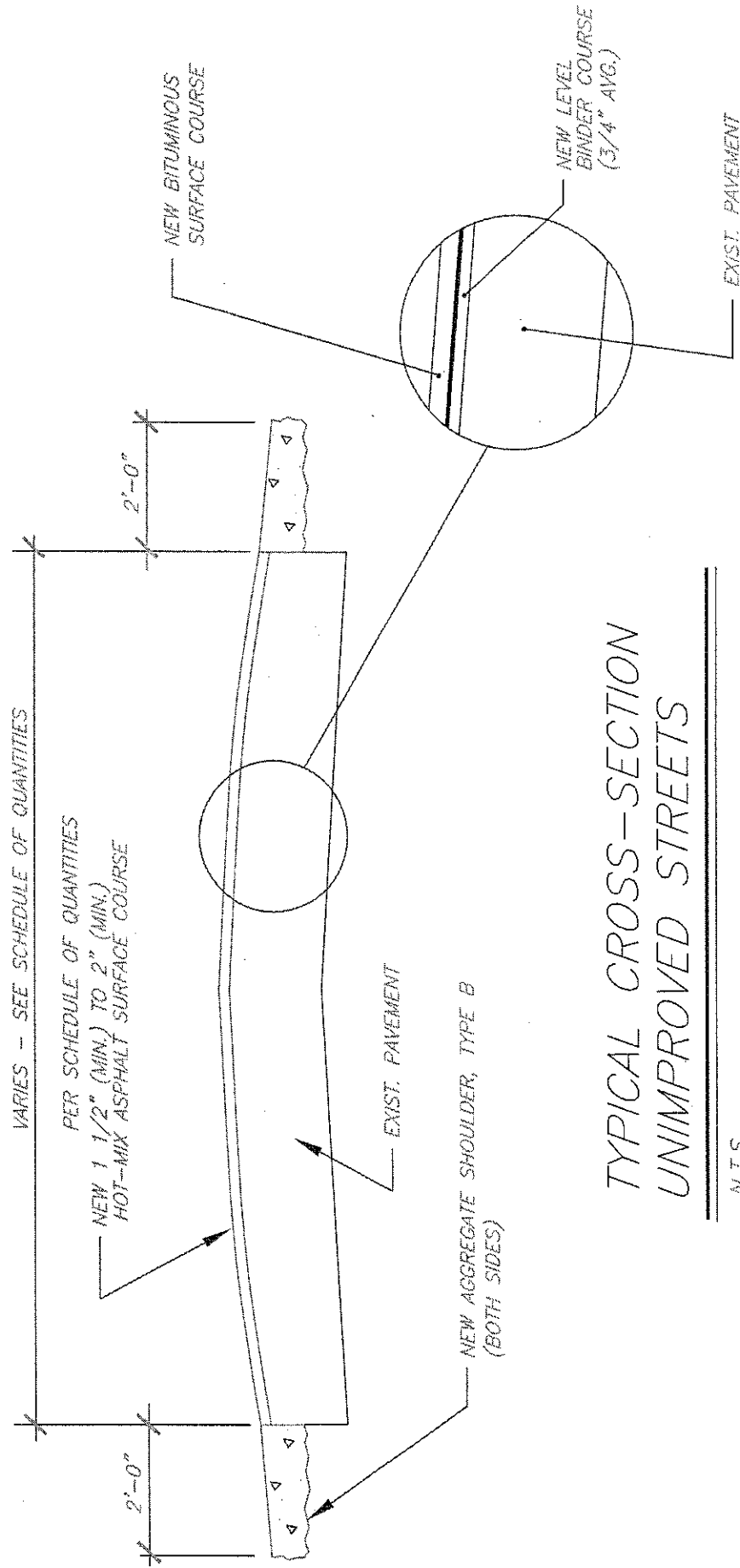


- 1. HMA SURFACE REMOVAL, 4" FULL WIDTH
- 2. HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50, 1.50"
- 3. BITUMINOUS MATERIALS (PRIME COAT) AS NECESSARY
- 4. HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 2.5"
- 5. REPAIR AND PREPARATION OF AGGREGATE BASE

FULL STREET HMA PAVEMENT REMOVAL & REPLACEMENT

N.T.S.

NOTE: DEPTH OF EXISTING SURFACE
REMOVAL PER SCHEDULE
OF QUANTITIES



TYPICAL CROSS-SECTION UNIMPROVED STREETS

N.T.S.



PER SCHEDULE OF QUANTITIES
 NEW 1 1/2" (MIN.) 1 3/4" (MIN.) OR 2" (MIN.)
 HOT-MIX ASPHALT SURFACE COURSE

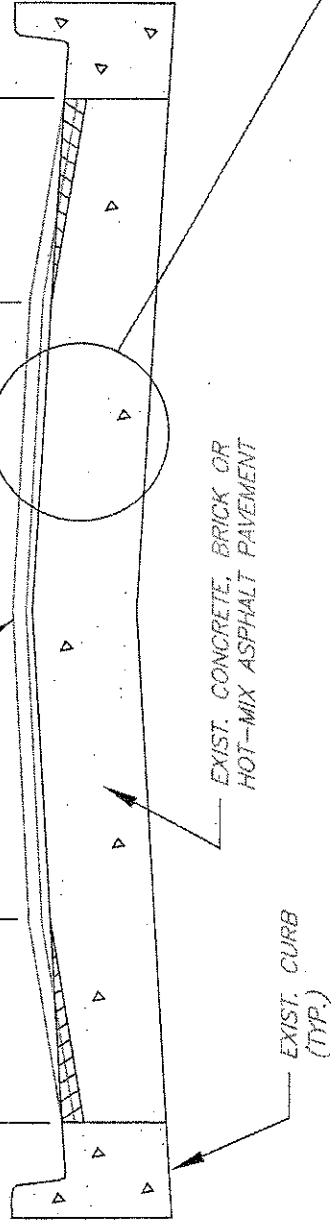
VARIES - SEE SCHEDULE OF QUANTITIES

HOT-MIX ASPHALT SURFACE
 REMOVAL - 6' WIDE
 UNLESS FULL WIDTH SPECIFIED

HOT-MIX ASPHALT SURFACE
 REMOVAL - 6' WIDE
 UNLESS FULL WIDTH SPECIFIED

NOTE: DEPTH OF EXISTING SURFACE
 REMOVAL PER SCHEDULE
 OF QUANTITIES

NEW HOT-MIX ASPHALT
 SURFACE COURSE



EXIST. CONCRETE, BRICK OR
 HOT-MIX ASPHALT PAVEMENT

EXIST. CURB
 (TYP.)

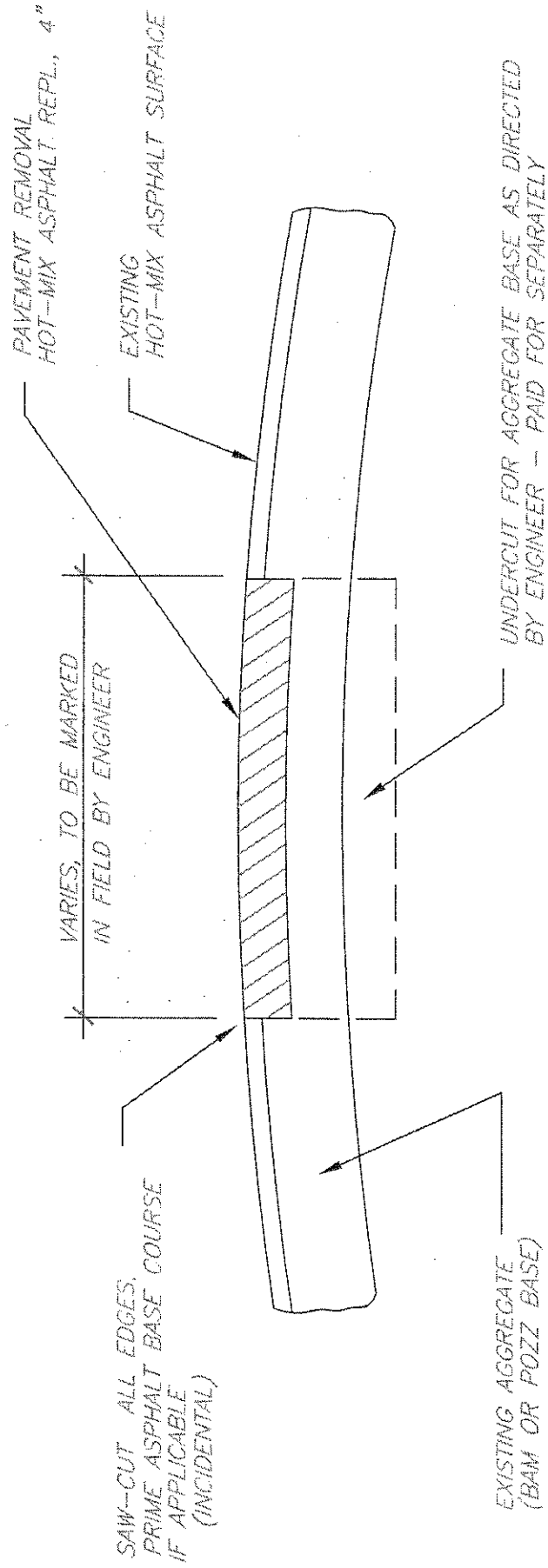
NEW LEVEL BINDER COURSE
 3/4" TO 1 1/2" AVG.
 PER SCHEDULE OF QUANTITIES

EXIST. PAVEMENT

TYPICAL CROSS-SECTION CURBED ROADWAYS

N.T.S.





CLASS D PATCH, 4"

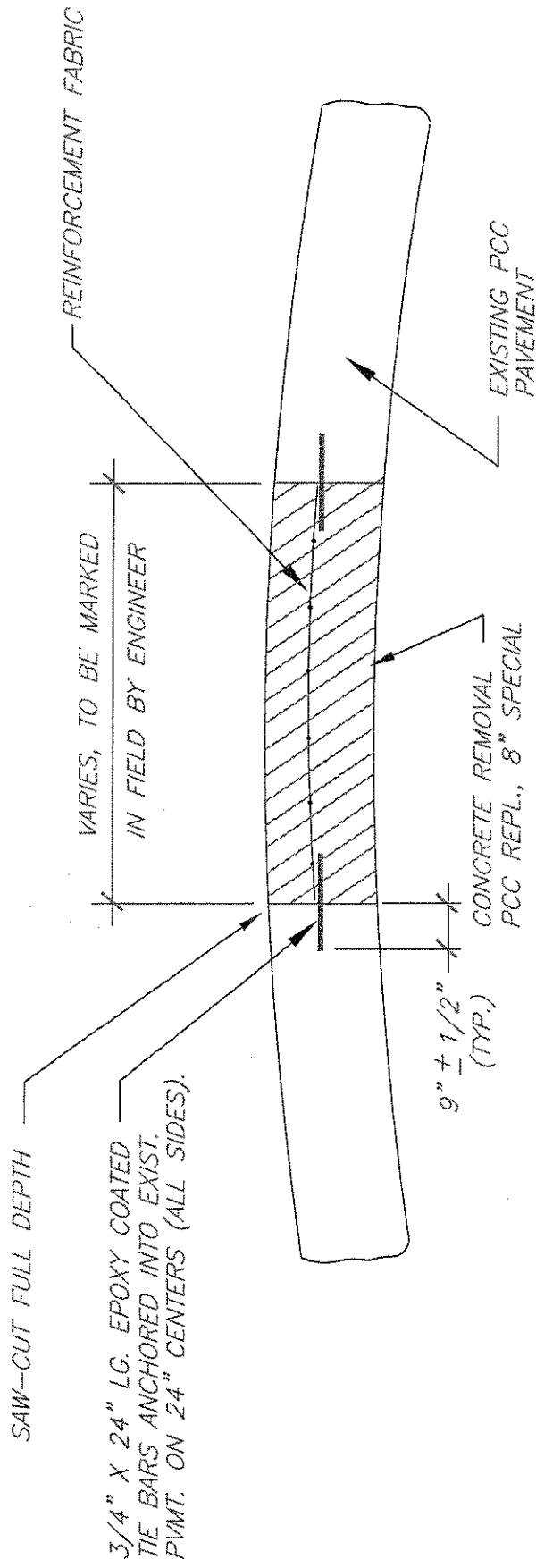
N.T.S.



R.W.B

06/08/05

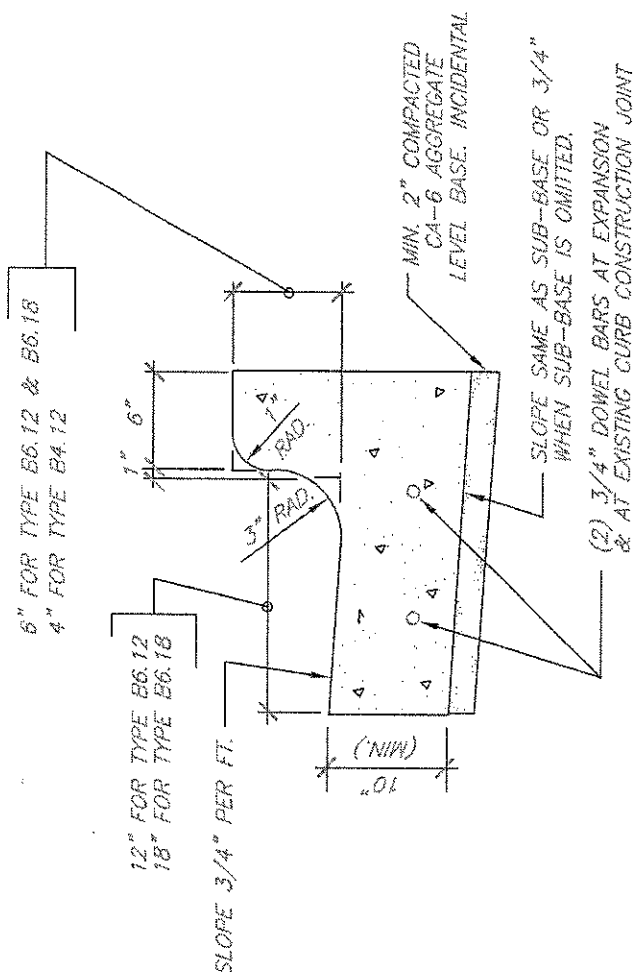
C:\CADFILES\RESURFACING\DETAILS



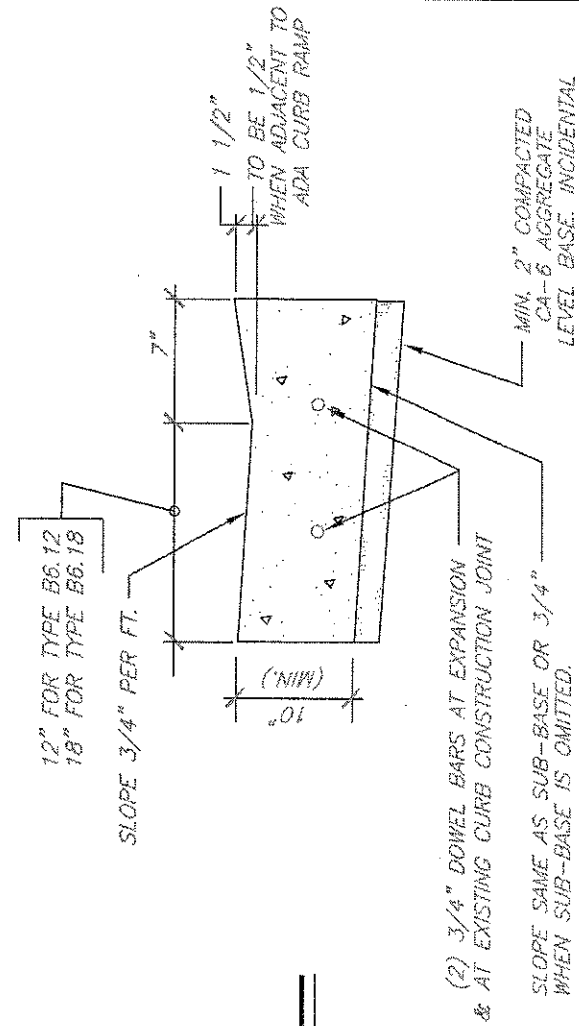
PAVEMENT REMOVAL, PCC REPLACEMENT, 8" SPECIAL

N.T.S.





BARRIER CURB



DEPRESSED CURB

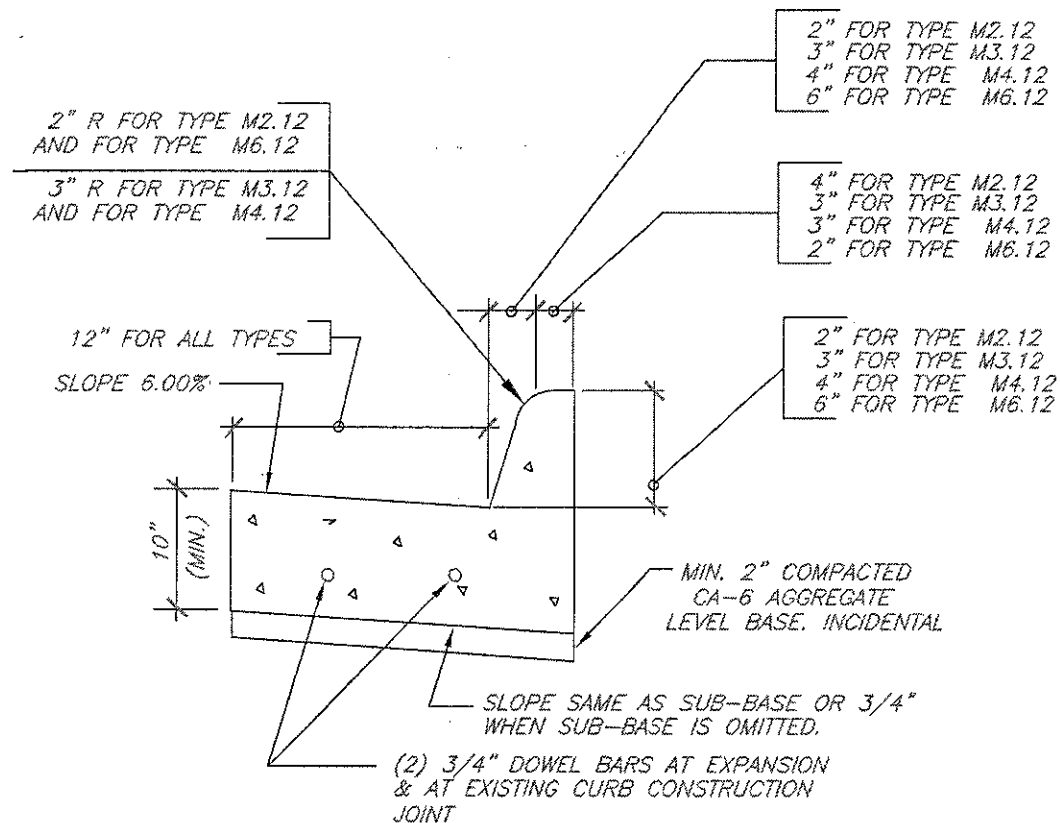
COMBINATION CONCRETE CURB AND GUTTER - BARRIER

N.T.S.

JOINT SPACING ON CENTERS:
15' FOR CONTRACTIONS
90' FOR EXPANSION

WHERE APPLICABLE NEW CURB SHALL BE TIED TO ADJACENT
CONCRETE PAVEMENT OR BASE WITH NO. 6 (3/4") BARS
AT 24" CENTERS IN ACCORDANCE WITH DETAILS FOR
LONGITUDINAL CONSTRUCTION JOINT SHOWN ON STANDARD 420001





MOUNTABLE CURB

JOINT SPACING ON CENTERS:

15' FOR CONTRACTIONS
90' FOR EXPANSION

COMBINATION CONCRETE CURB & GUTTER-MOUNTABLE

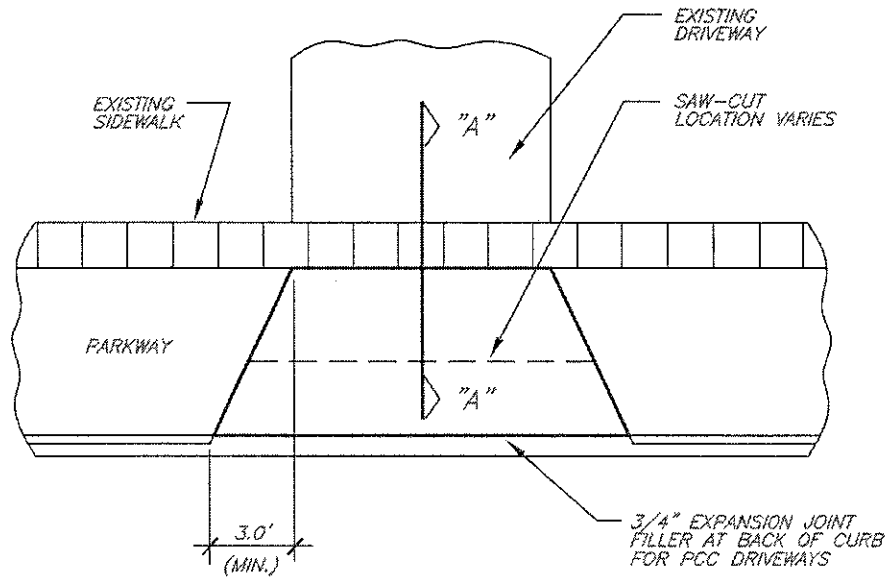
N.T.S.

STANDARD DESIGN

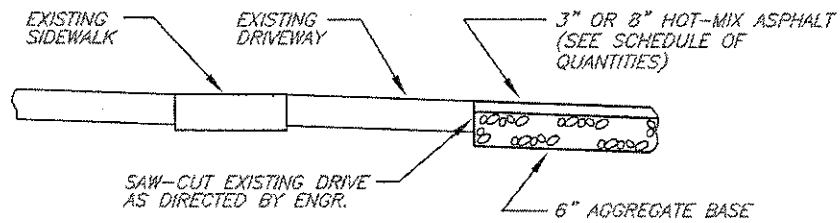
WHERE APPLICABLE NEW CURB SHALL BE TIED TO ADJACENT
CONCRETE PAVEMENT OR BASE WITH NO. 6 (3/4") BARS
AT 24" CENTERS IN ACCORDANCE WITH DETAILS FOR
LONGITUDINAL CONSTRUCTION JOINT SHOWN ON STANDARD 420001

R.W.B
06/08/05
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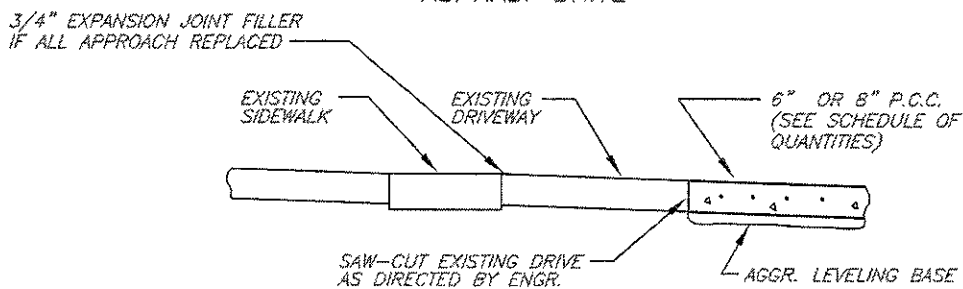


P L A N



S E C T I O N "A - A"

ASPHALT DRIVE



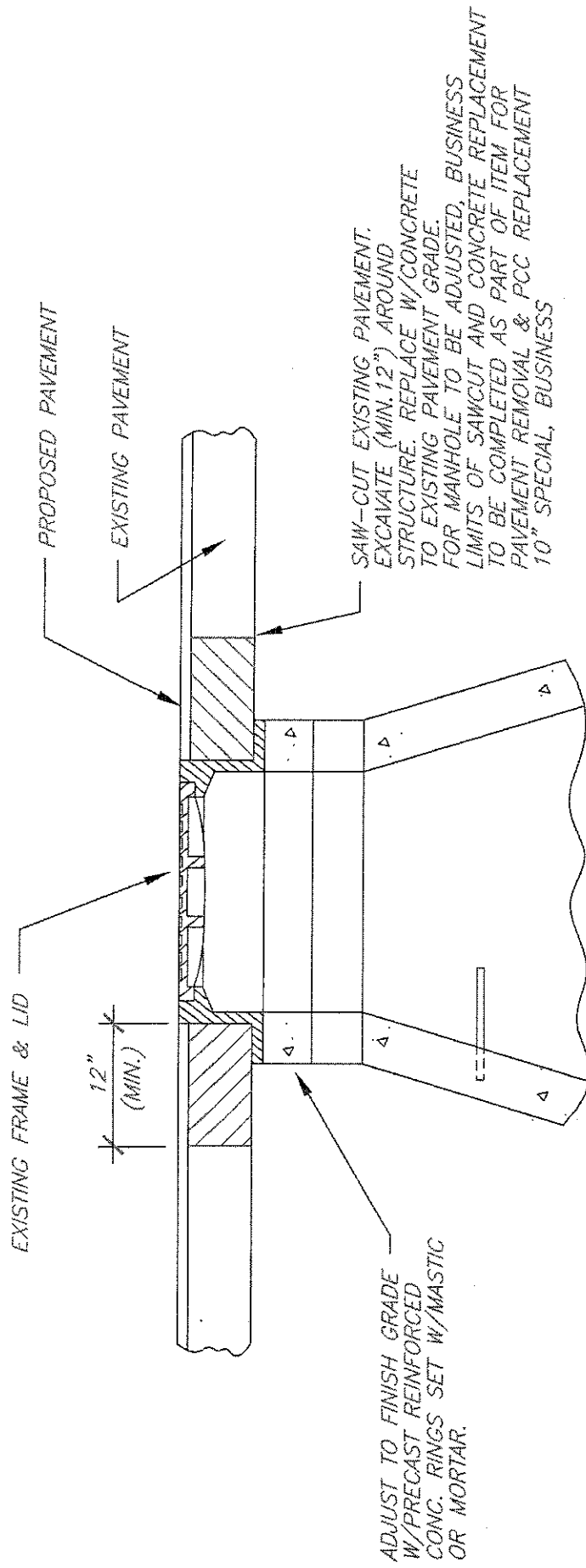
S E C T I O N "A - A"

CONCRETE DRIVE

DRIVEWAY REMOVAL & REPLACEMENT

N.T.S.





NOTES:

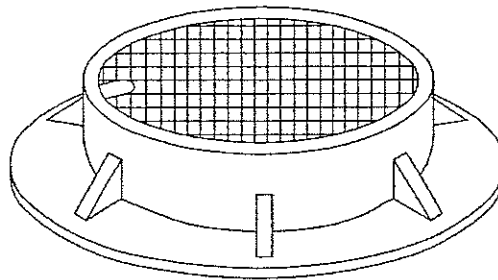
1. AFTER MANHOLE HAS BEEN ADJUSTED AND IF STREET IS OPEN TO TRAFFIC, A TYPE 1 BARRICADE W/FLASHER SHALL BE PLACED AT EACH MANHOLE.
2. SANITARY MANHOLE AND MANHOLE TO BE ADJUSTED, BUSINESS TO BE SET W/MASTIC

MANHOLE ADJUSTMENT DETAIL

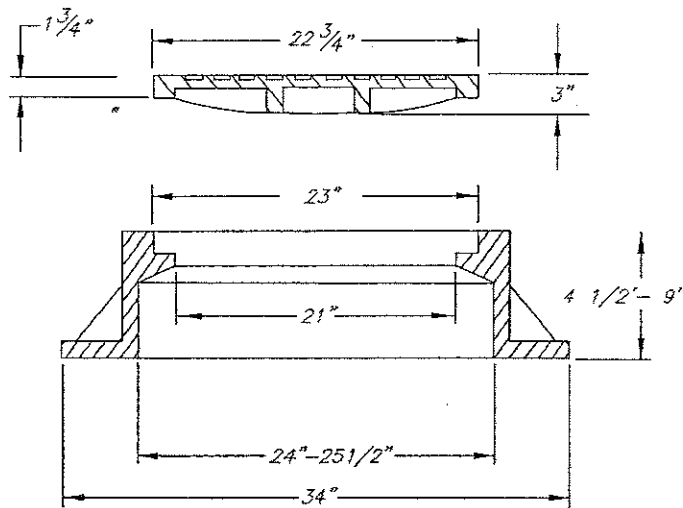
N.T.S.



CLOSED LIDS TO HAVE
"WATER" OR "STORM" STAMPED
IN CENTER, AS APPROPRIATE.



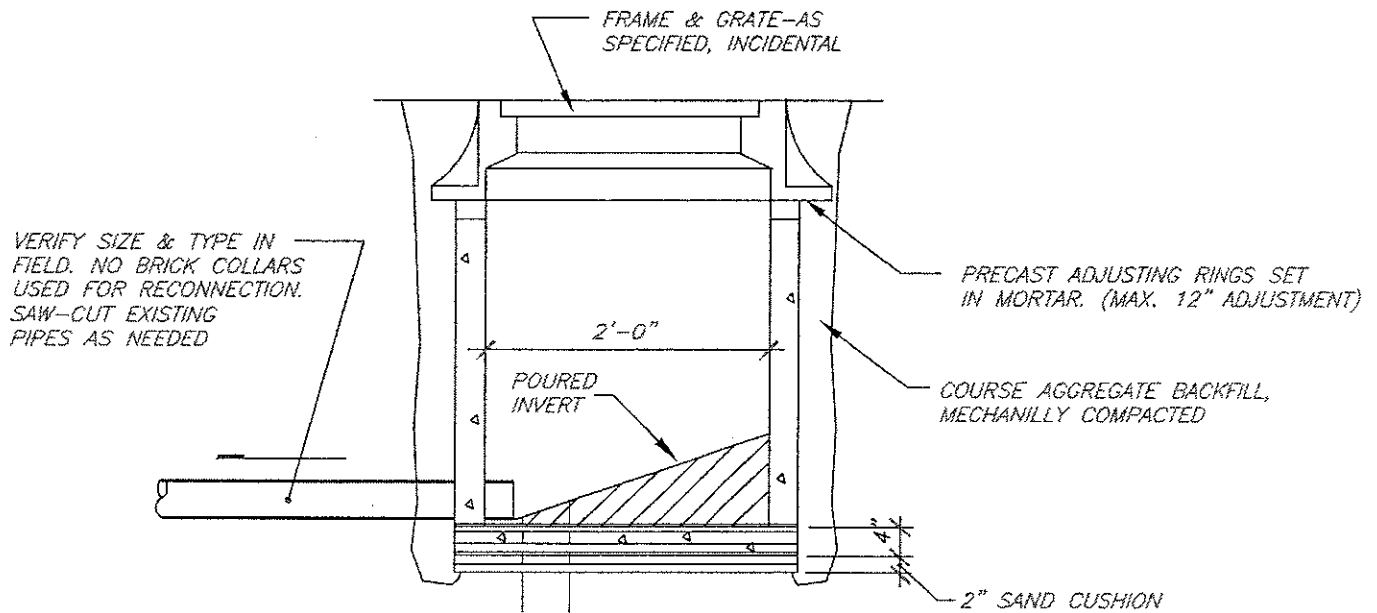
WT. 540 LBS



CLOSED LIDS TO BE NEENAH TY B OR EQUAL
OPEN LID TO BE NEENAH TY D OR EQUAL

TYPE 1 HEAVY DUTY FRAMES & LIDS

N.T.S.



NOTE: INSIDE WALL OF INLET TO BE
FLUSH WITH FACE OF CURB FOR TYPE I FRAME
OR BACK OF CURB FOR TYPE 3 & TYPE II FRAME

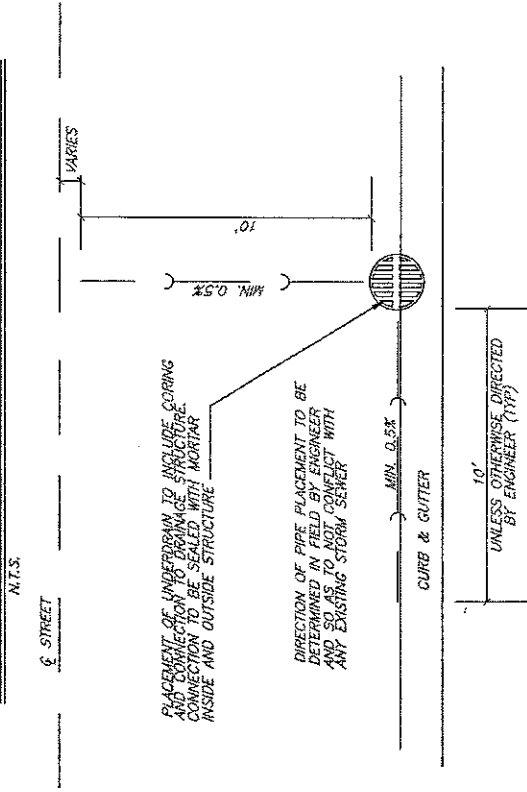
TYPE "A" INLET NEW/REPLACEMENT

N.T.S.

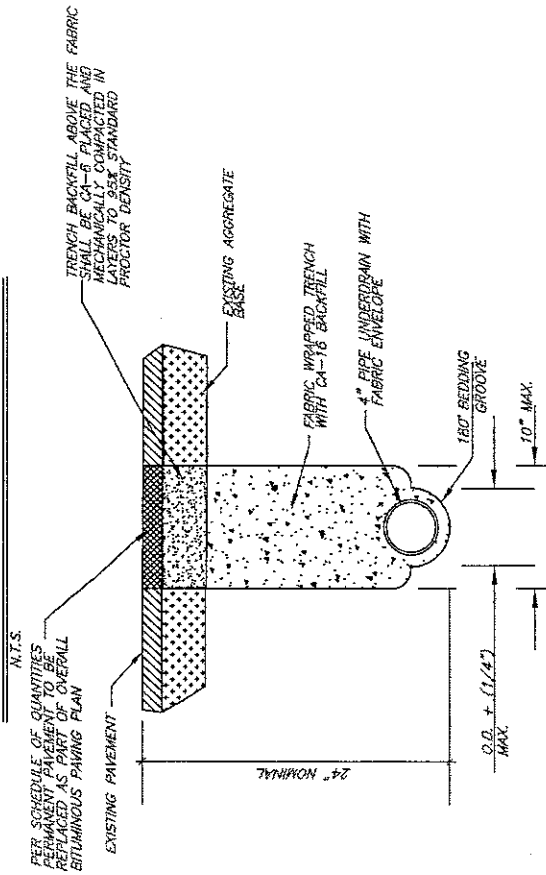
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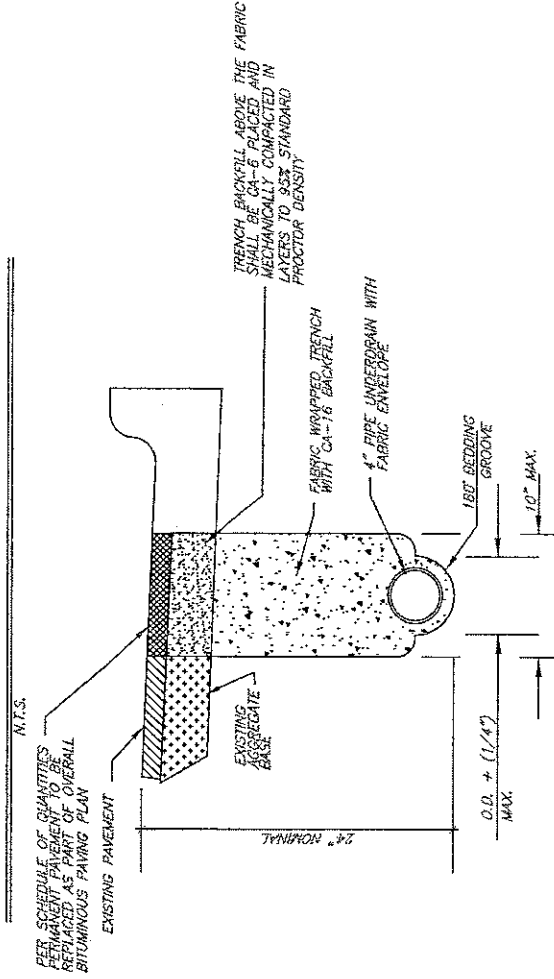
PLAN VIEW OF UNDERDRAIN PLACEMENT OPTIONS



PIPE UNDERDRAIN PERPENDICULAR TO EDGE OF PAVEMENT

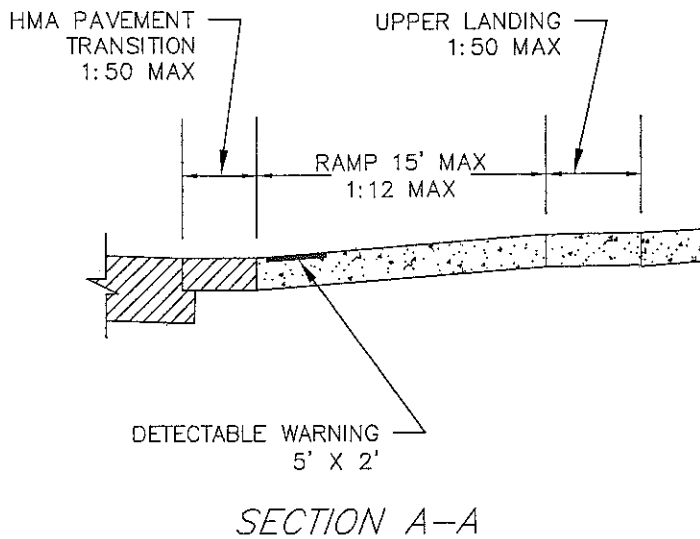
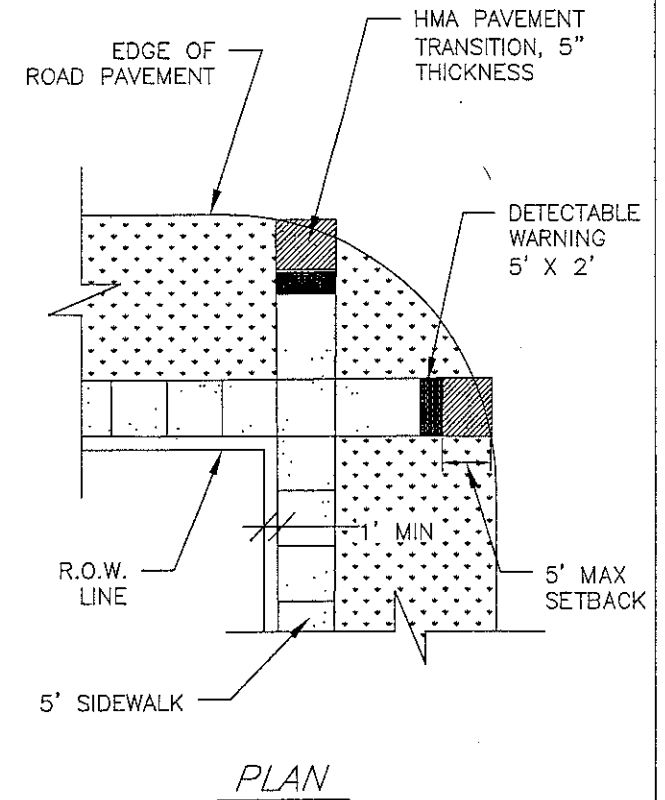
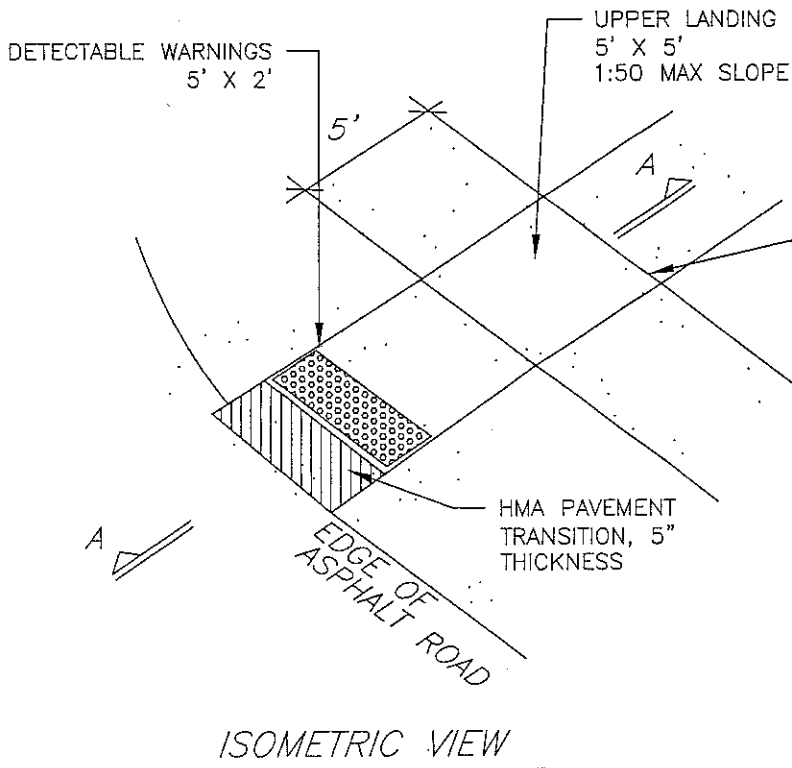


PIPE UNDERDRAIN PARALLEL TO CURB



PIPE UNDERDRAIN 4"





INSERT ADA DETECTABLE WARNING
SURFACE TILE AS SPECIFIED
DYED CONCRETE NOT ALLOWED

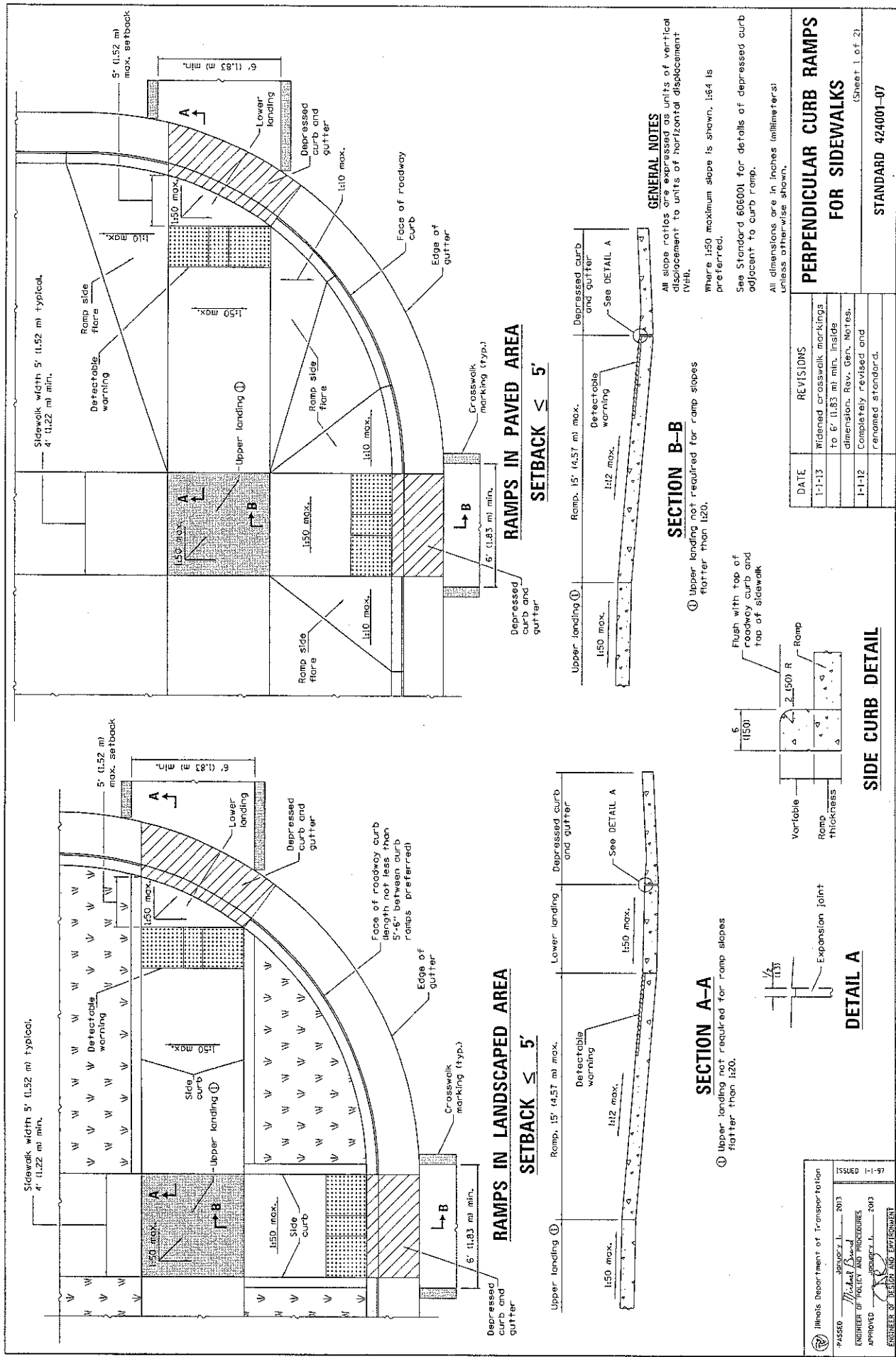


DRAWING NO. SWK-03

I:\LIBRARY\DETAILS\SIDEWALK\SWK-03

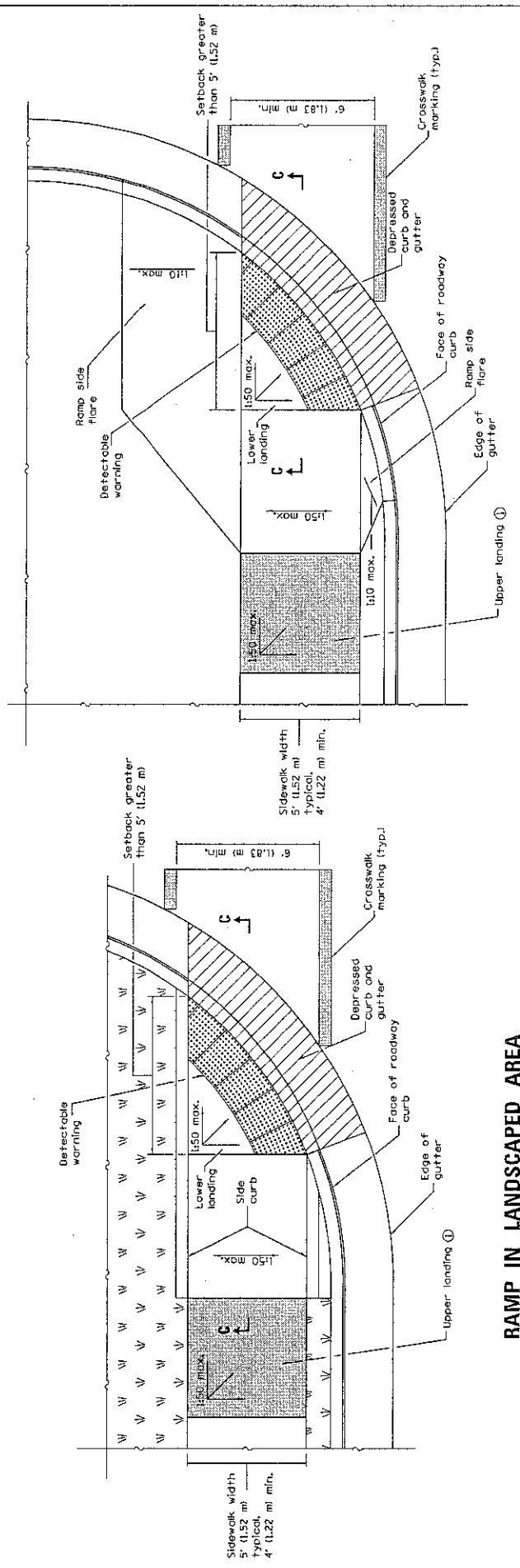
A.D.A RAMPS ON
NON-CURBED
STREETS

N.T.S.	DATE	REVISIONS	DRAWN BY	APPVD BY	STANDARD DETAIL
	04/12/07		D.J.G.		A.D.A RAMPS ON NON-CURBED STREETS
	03/25/11		S.A.V.	A.J.S.	
	03/26/12		T.J.T.		



	ISSUED	1-1-97
	APPROVED	2013
	APPROVED	2013
	APPROVED	2013

DATE	REVISIONS
1-1-13	Widened crosswalk markings to 6' (1.83 m) min. inside dimensions. Rev. Gen. Notes.
1-1-12	Completely revised and renamed standard.

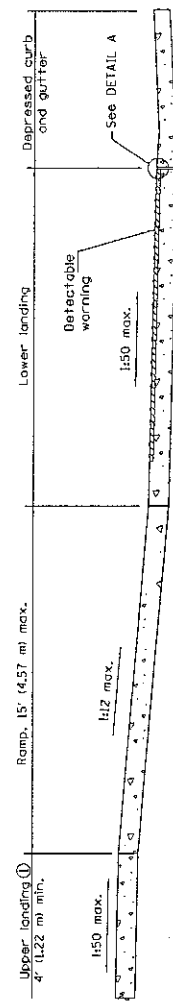


RAMP IN LANDSCAPED AREA

SETBACK > 5'

RAMP IN PAVED AREA

SETBACK > 5'

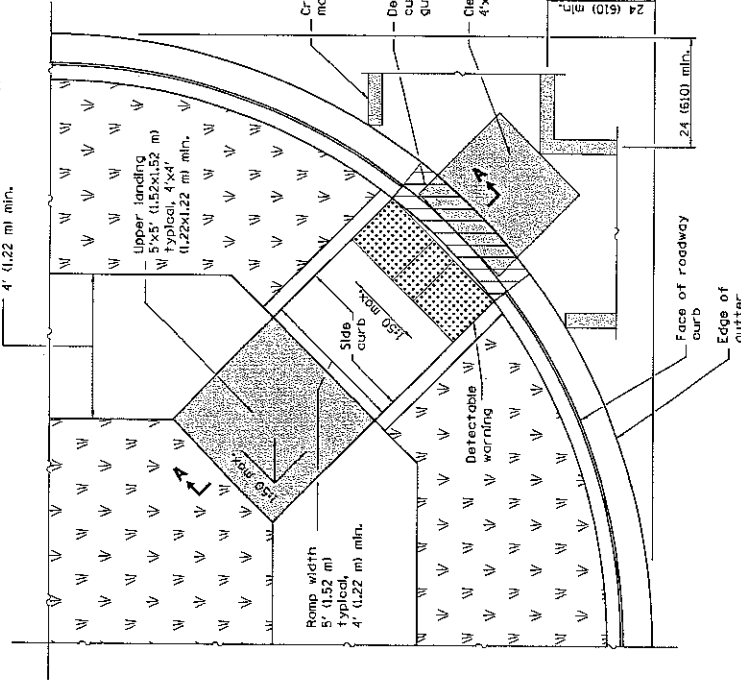


SECTION C-C

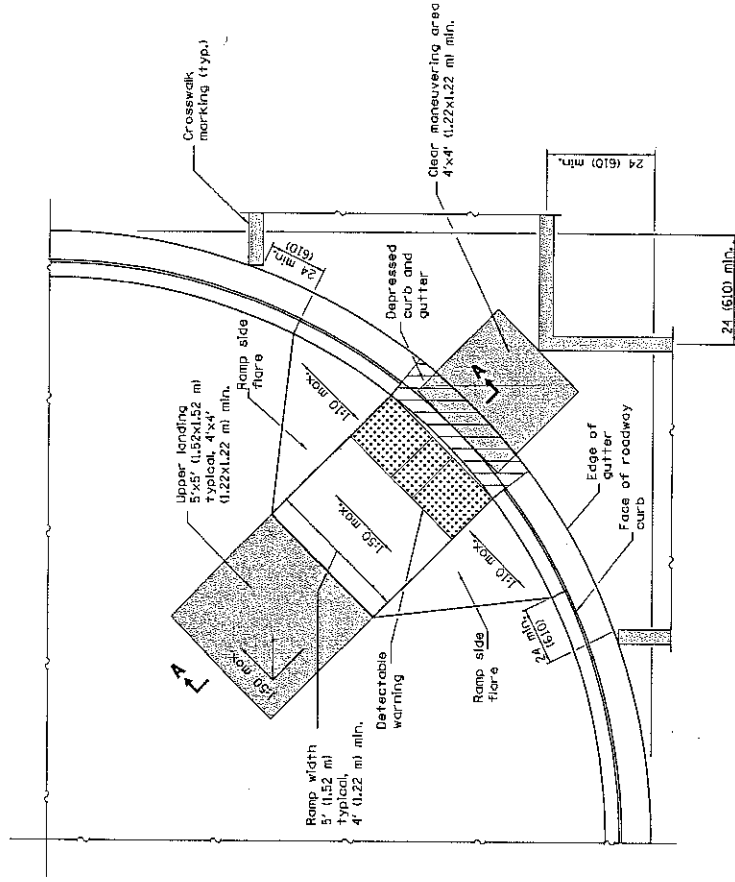
① Upper landing not required for ramp slopes flatter than 1:20.

Illinois Department of Transportation	
PASSED	APPROVED
Michael Brand	2013
ENGINEER OF POLICY AND PROCEDURES	
APPROVED	2013
ENGINEER OF DESIGN AND ENVIRONMENT	

Sidewalk width 5' (1.52 m) typical,
4' (1.22 m) min.



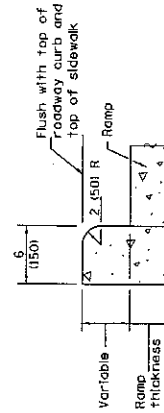
RAMP IN LANDSCAPED AREA



RAMP IN PAVED AREA



SECTION A-A



SIDE CURB DETAIL

DETAIL A

Depressed curb and gutter

Ramp, 15' (4.57 m) max.

Upper landing

Flush with top of roadway curb and top of sidewalk

Ramp

Variable

Ramp thickness

2' (610 mm)

See DETAIL A

GENERAL NOTES

This Standard shall only be used for curb radii of 20 ft. (6.1 m) or greater.
Where 1:50 maximum slope is shown, 1:64 is preferred.
All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).
See Standard 606.001 for details of depressed curb adjacent to curb ramp.
All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS

DATE: 1-1-13
Revised General Notes.

1-1-12
New standard.

1-1-12
New standard.

1-1-12
New standard.

1-1-12
New standard.

1-1-12
New standard.

1-1-12
New standard.

1-1-12
New standard.

1-1-12
New standard.

1-1-12
New standard.

DIAGONAL CURB RAMPS FOR SIDEWALKS

STANDARD 426006-01

Illinois Department of Transportation

ISSUED 1-1-12

APPROVED

ENGINEER OF DESIGN AND ENVIRONMENT



Upper landing ① 4' (1.22 m) min.	Ramp, 15' (4.57 m) max.	Lower landing	Ramp, 15' (4.57 m) max.	Upper landing ② 4' (1.22 m) min.
1150 max.	1142 max.		1142 max.	1150 max.

① Upper landing(s) not required for ramp slopes flatter than 1:20.



STANDARD 424011-01

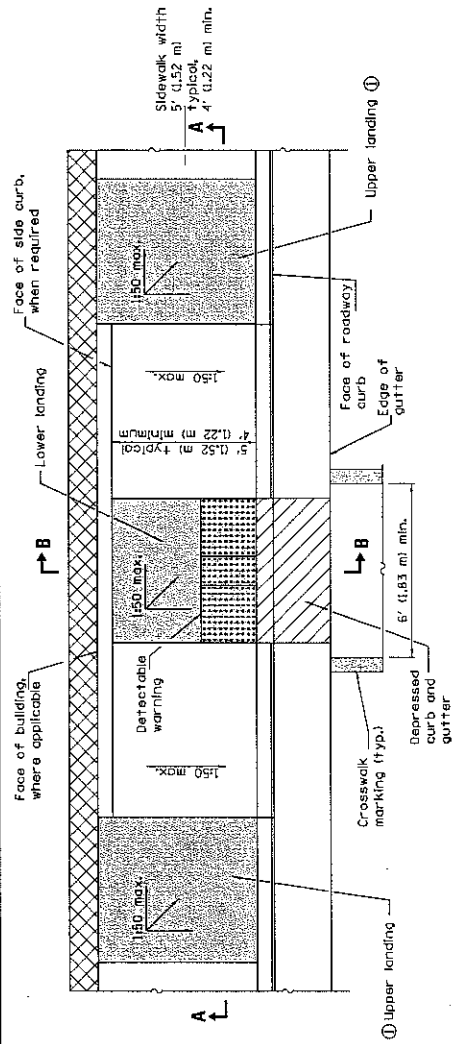
DATE	REVISIONS
1-1-13	Revised General Notes.
1-1-12	New standard.

GENERAL NOTES

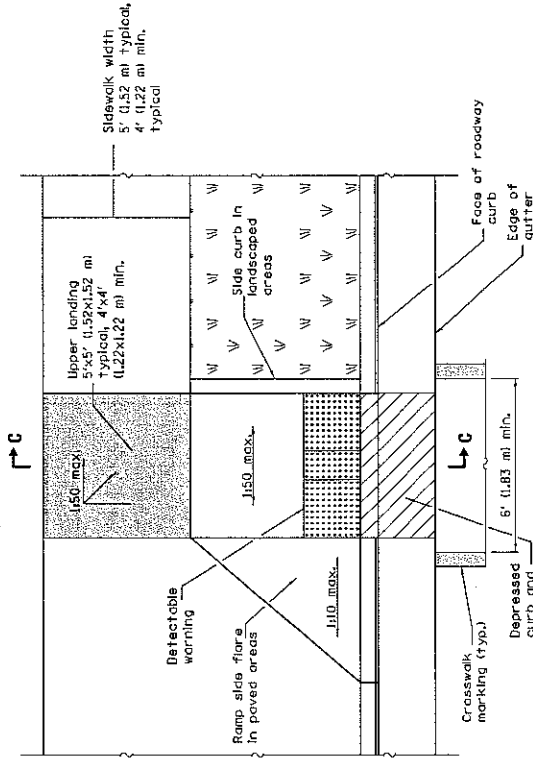
All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

See Standard 606001 for details of depressed curb adjacent to curb ramp.

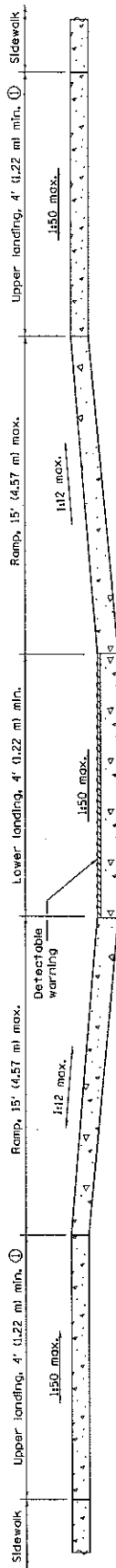
All dimensions are in inches (millimeters) unless otherwise shown.



PARALLEL MID-BLOCK CURB RAMP

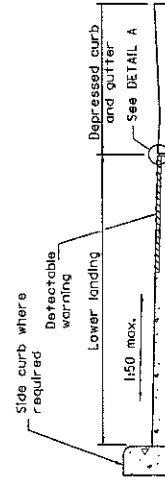


PERPENDICULAR MID-BLOCK CURB RAMP

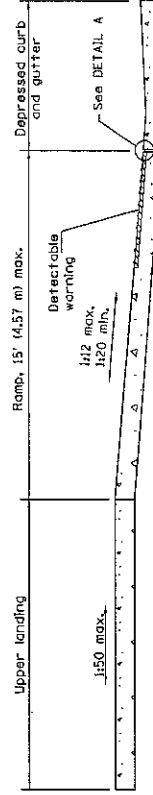


SECTION A-A

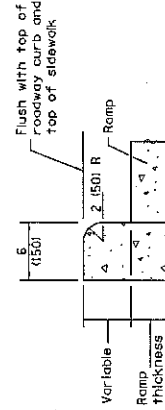
① Upper landing(s) not required for ramp slopes flatter than 1:20.



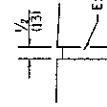
SECTION B-B



SECTION C-C



SIDE CURB DETAIL



DETAIL A

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:50 maximum slope is shown, 1:64 is preferred.

See Standard 60601 for details of depressed curb adjacent to curb ramp.

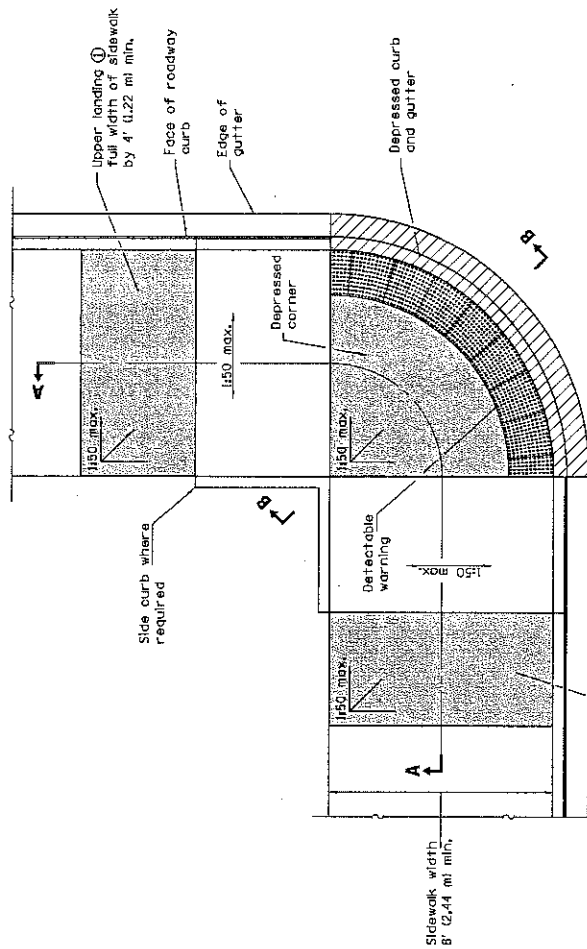
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation	
PASSED January 1, 2013	ISSUED 1-1-12
APPROVED [Signature]	ENGINEER OF POLICY
APPROVED [Signature]	ENGINEER OF DESIGN AND ENVIRONMENT

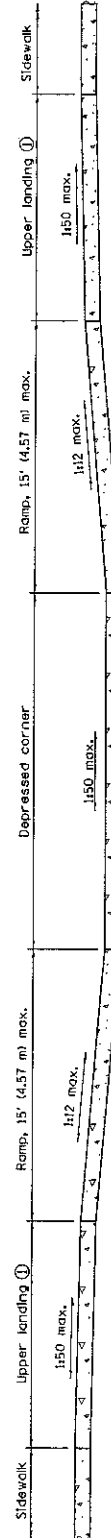
DATE	REVISIONS
1-1-13	Widened crosswalk markings to 6' (1.83 m) min. inside dimension, Rev. Gen. Notes.
1-1-12	New standard.

MID-BLOCK CURB RAMPS FOR SIDEWALKS

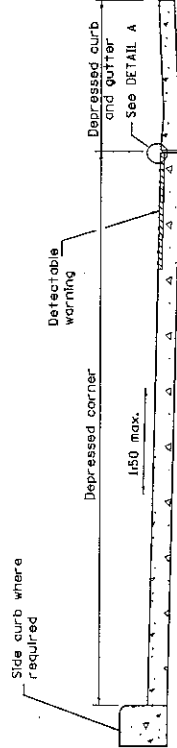
STANDARD 424016-01



DEPRESSED CORNER

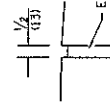


SECTION B-B

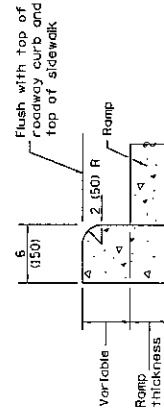


SECTION A-A

① Upper landing is not required for ramp slopes flatter than 1:12.



DETAIL A



SIDE CURB DETAIL

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:50 maximum slope is shown, 1:64 is preferred.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

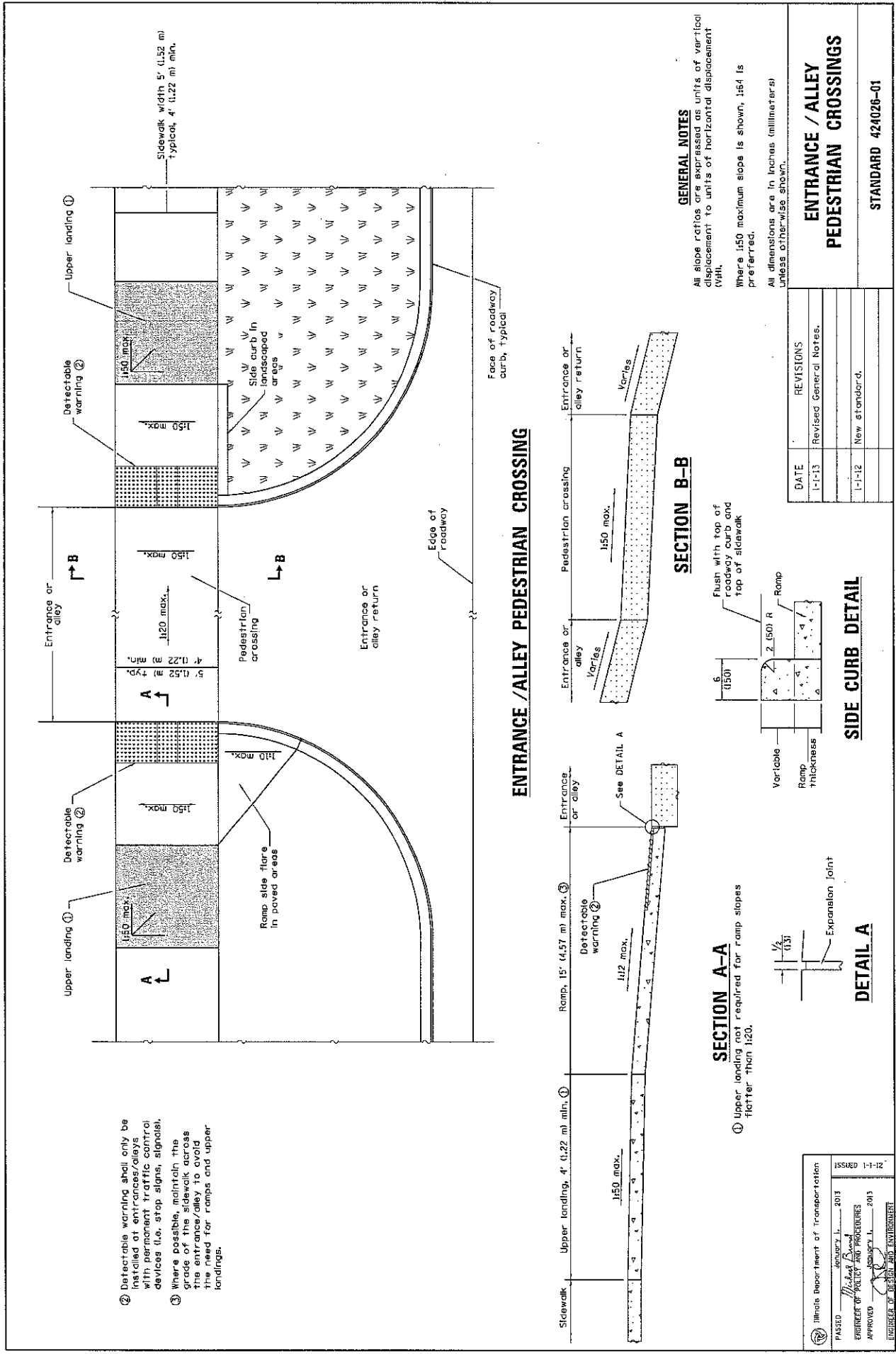
All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-13	Revised General Notes.
1-1-12	New standard.

DEPRESSED CORNER FOR SIDEWALKS

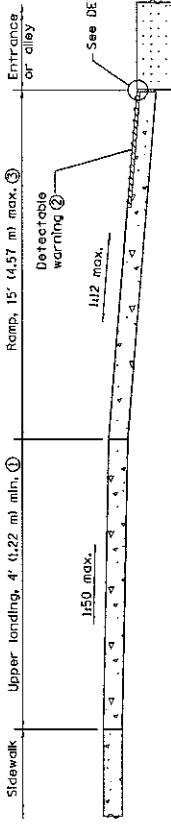
STANDARD 424021-01

Illinois Department of Transportation	ISSUED 1-1-12
PASSED January 1, 2013	
Michael Bond	
ENGINEER OF POLICY AND PROCEDURES	
APPROVED January 1, 2013	
ENGINEER OF DESIGN AND ENVIRONMENT	



- ② Detectable warning shall only be installed at entrances/alleys with permanent traffic control devices (i.e., stop signs, signals).
- ③ Where possible, maintain the grade of the sidewalk across the entrance/alley to avoid the need for ramps and upper landings.

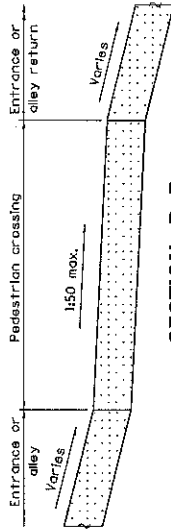
ENTRANCE /ALLEY PEDESTRIAN CROSSING



SECTION A-A

① Upper landing not required for ramp slopes flatter than 1:20.

SECTION B-B



GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).
Where 1:50 maximum slope is shown, 1:64 is preferred.

All dimensions are in inches (millimeters) unless otherwise shown.



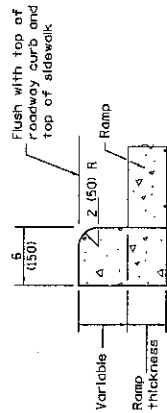
SIDE CURB DETAIL

Illinois Department of Transportation PASSED: <i>Michael Bond</i> JANUARY 1, 2013 ENGINEER OF POLICY AND PROCEDURES APPROVED: <i>[Signature]</i> JANUARY 1, 2013 ENGINEER OF DESIGN AND ENVIRONMENT		ISSUED: 1-1-12
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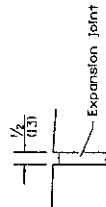
DATE	REVISIONS
1-1-13	Revised General Notes.
1-1-12	New standard.

ENTRANCE /ALLEY PEDESTRIAN CROSSINGS

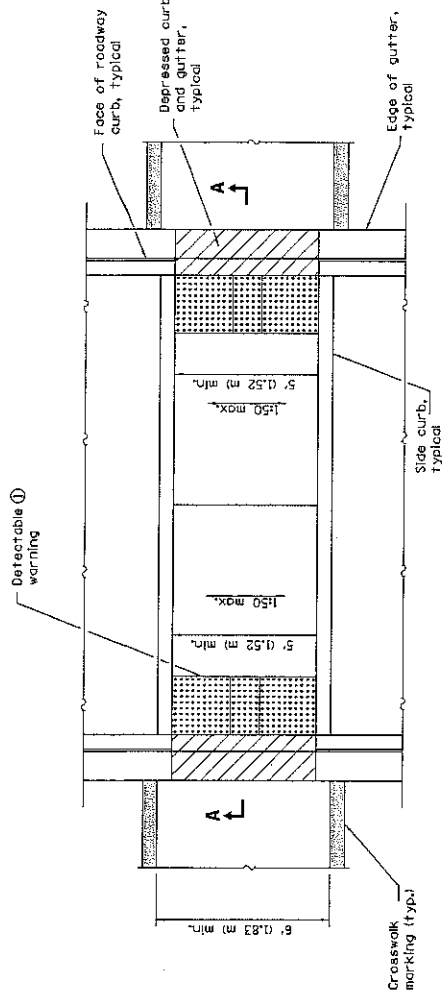
STANDARD 424026-01



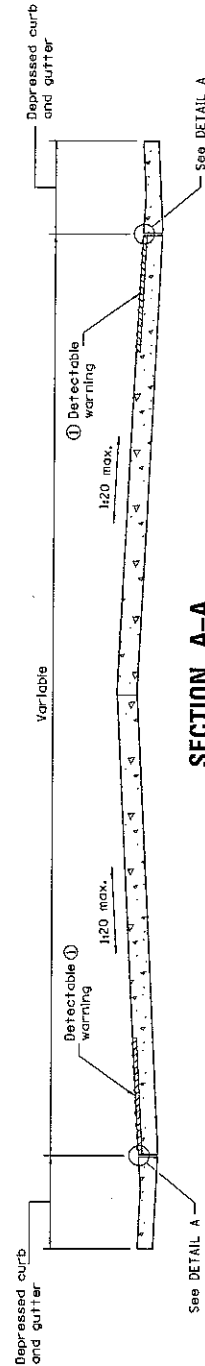
SIDE CURB DETAIL



DETAIL A



MEDIAN PEDESTRIAN CROSSING



SECTION A-A

① Only detectable warnings when distance between back of curbs is less than 6' (1.83 m).

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:50 maximum slope is shown, 1:64 is preferred.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

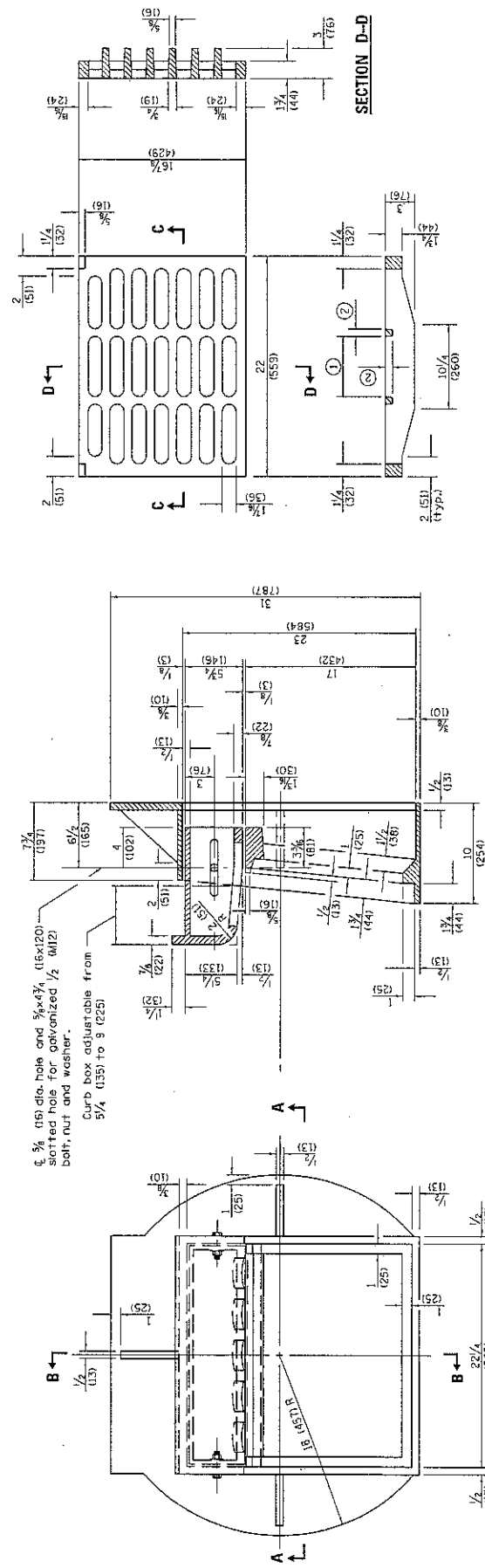
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation	
ISSUED	1-1-12
DESIGNED BY	Michael Bond
ENGINEER OF POLICY AND PROCEDURES	
APPROVED	January 1, 2013
ENGINEER OF DESIGN AND ENVIRONMENT	

DATE	REVISIONS
1-1-12	Widened crosswalk to 6'
	1:64 min. inside dimension.
	Revised General Notes.
1-1-12	New standard.

MEDIAN PEDESTRIAN CROSSINGS

STANDARD 424031-01

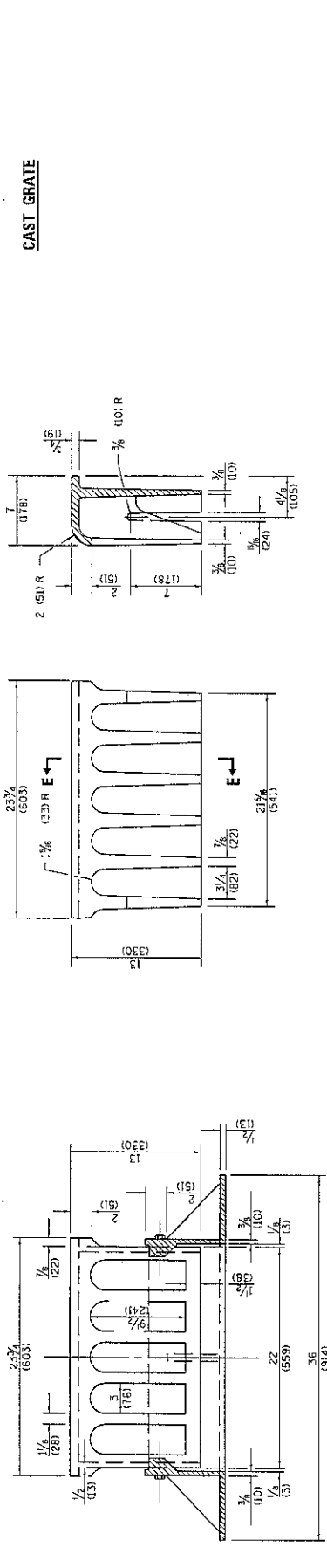


SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D



SECTION A-A

SECTION B-B

SECTION C-C

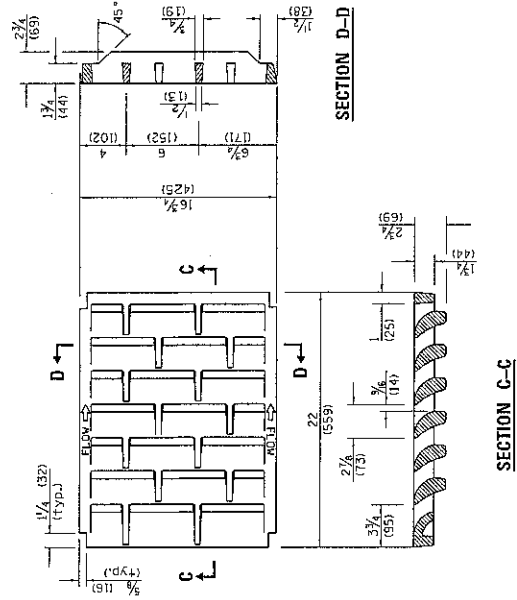
SECTION D-D

Illinois Department of Transportation ISSUED 1-1-97	
PASSED January 1, 2009 ENGINEER OF PUBLIC WORKS APPROVED January 1, 2009 ENGINEER OF DESIGN AND ENVIRONMENT	ISSUED 1-1-97

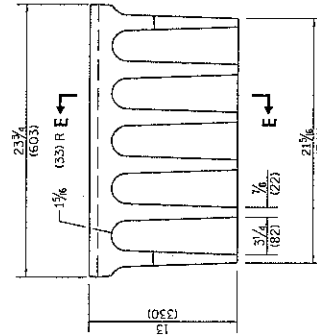
DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-08	Added alternate curb box.

FRAME AND GRATE
TYPE 3
STANDARD 604006-04

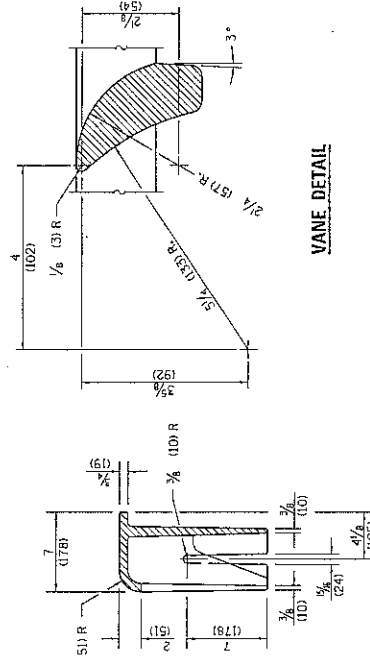
All dimensions are in inches (millimeters) unless otherwise shown.



SECTION B-B



ALTERNATE CURB BOX



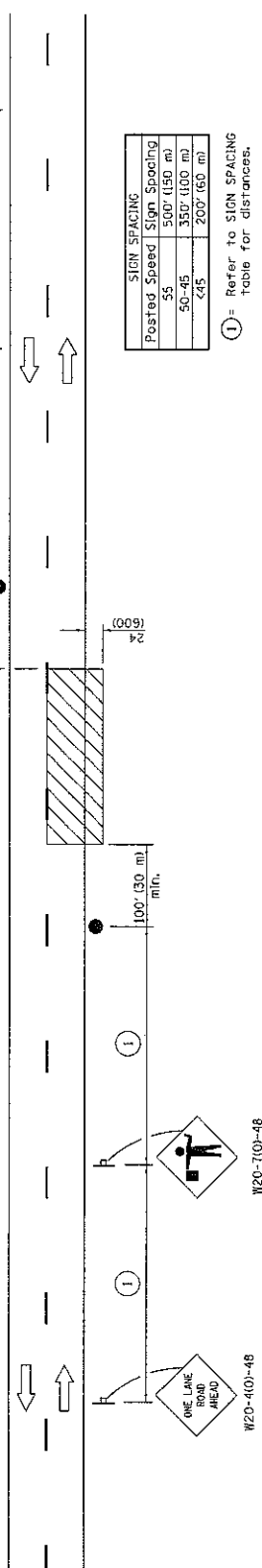
VANE DETAIL


 Illinois Department of Transportation
 ISSUED 1-1-97
 PASSED JANUARY 1, 2009
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED JANUARY 1, 2009
 ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-08	Added alternate curb box.

**FRAME AND GRATE
TYPE 3V**

STANDARD 604011-04



SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
45	200' (60 m)

① = Refer to SIGN SPACING table for distances.

All dimensions are in inches (millimeters) unless otherwise shown.

**LANE CLOSURE, 2L, 2W,
SHORT TIME OPERATIONS**

STANDARD 701301--04

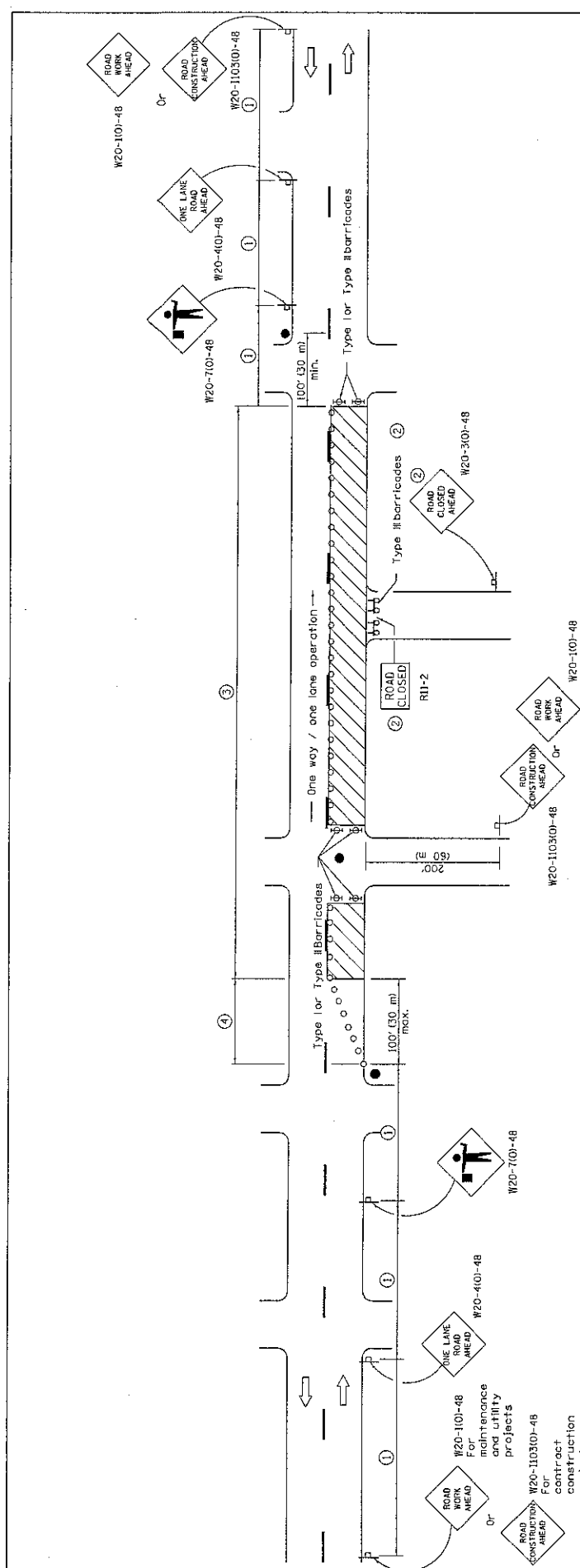
SYMBOLS

	Work area
	Sign on portable or permanent support
	Flagger with traffic control sign

TYPICAL APPLICATIONS

- Marking patches**
Field survey
String line
Utility operations
Cleaning up debris on pavement

 Illinois Department of Transportation	APPROVED _____ _____ JUNE 11 2011 _____ ENGINEER OF SAFETY ENGINEERING	ISSUED 1-1-97
	APPROVED _____ _____ JUNE 11 2011 _____ _____	



SYMBOLS

Work area

- Cone, drum or barricade (not required for moving operations)
- ▬ Sign on portable or permanent support
- Flagger with traffic control sign
- ⦿ Barricade or drum with flashing light
- ⦿ Type III barricade with flashing lights

SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

- ① Refer to SIGN SPACING TABLE for distances.
- ② For approved roadside closures.
- ③ Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.
- ④ Cones, drums or barricades at 20' (6 m) centers.

GENERAL NOTES

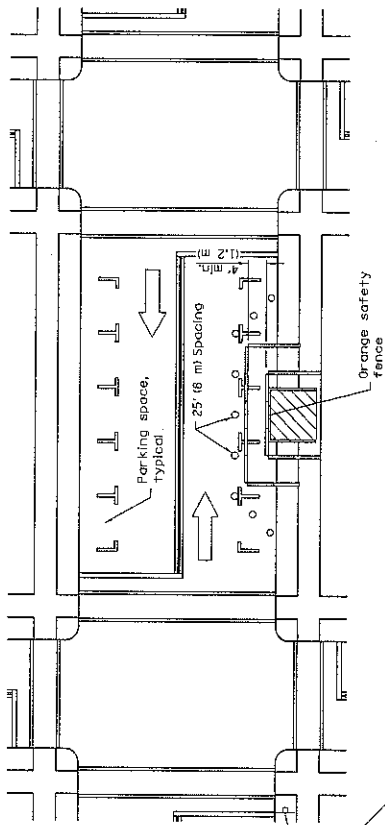
This Standard is used where, at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an urban area.

All dimensions are in inches (millimeters) unless otherwise shown.

URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED	
DATE	REVISIONS
1-1-11	Revised flagger sign.
1-1-09	Switched units to English metric.
	Corrected sign No.'s.

STANDARD 701501-06

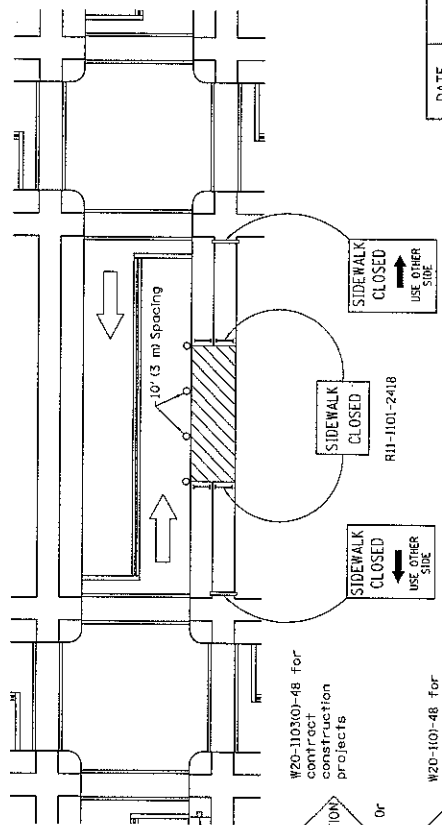
Michigan Department of Transportation	
APPROVED	2011
ENGINEER OF SAFETY ENGINEERING	
APPROVED	2011
ENGINEER OF DESIGN AND ENVIRONMENT	



W20-103(0)-48 for
construction
projects

or
W20-101-48 for
maintenance
and utility
projects

SIDEWALK DIVERSION



W20-103(0)-48 for
construction
projects

or
W20-101-48 for
maintenance
and utility
projects

SIDEWALK CLOSURE

SYMBOLS

- Work area
- Sign on portable or permanent support
- Barricade or drum
- Cone, drum or barricade
- Type III barricade
- Deflectable pedestrian channelizing barricade

Illinois Department of Transportation

APPROVED: [Signature] 2012

ENGINEER OF SAFETY ENGINEERING

APPROVED: [Signature] 2012

ENGINEER OF DESIGN AND SURVEILLANCE

ISSUED: 1-1-97

GENERAL NOTES

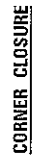
- This Standard is used where, at any time, pedestrian traffic must be rerouted due to work being performed.
- This Standard must be used in conjunction with other Traffic Control & Protection Standards when roadway traffic is affected.
- Temporary facilities shall be detectable and accessible.
- The temporary pedestrian facilities shall be provided on the same side of the closed facilities whenever possible.
- The SIDEWALK CLOSED / USE OTHER SIDE sign shall be placed at each end of the closure. Where the closure occurs at a corner, the signs shall be erected on the corners across the street from the closure. The SIDEWALK CLOSED signs shall be used at the ends of the actual closures.
- Type III barricades and R11-2-4830 signs shall be positioned as shown in "ROAD CLOSED TO ALL TRAFFIC" derivation Standard 701901.
- All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-12	Added SIDEWALK DIVERSION.
1-1-09	Modified appearance of plan views. Renamed Std.
1-1-09	Switched units to English metric.
702001 to 701901.	

SIDEWALK, CORNER OR CROSSWALK CLOSURE

STANDARD 701801-05

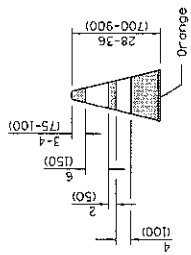
(Sheet 1 of 2)



(Sheet 2 of 2)

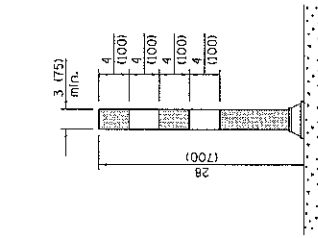
STANDARD 701801-05


 APPROVED _____ January 1, 2012
James O'Brien
 ENGINEER OF SAFETY ENGINEERING
 APPROVED _____ January 1, 2012
Jeffrey
 ENGINEER OF DESIGN AND ENVIRONMENT

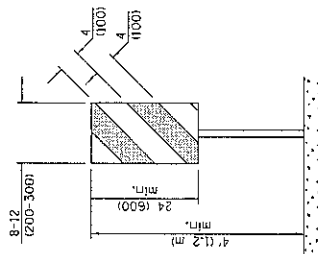


CONE

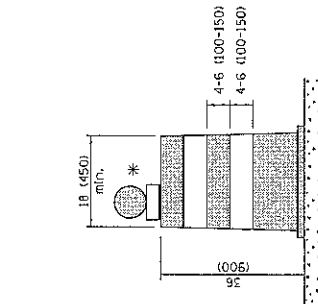
REFLECTORIZED CONE



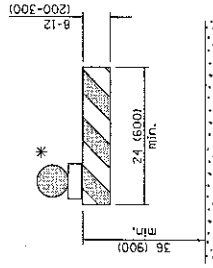
FLEXIBLE DELINEATOR



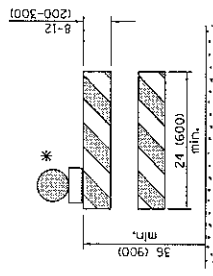
**VERTICAL PANEL
POST MOUNTED**



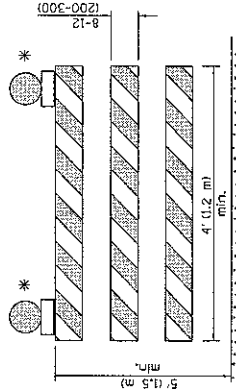
DRUM



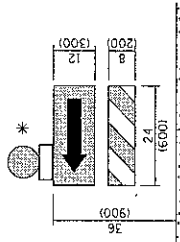
TYPE I BARRICADE



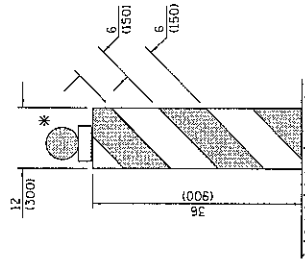
TYPE II BARRICADE



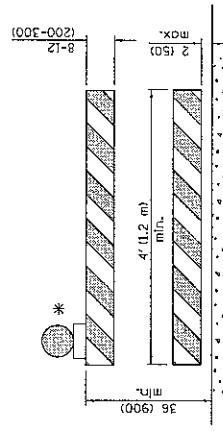
TYPE III BARRICADE



**DIRECTION INDICATOR
BARRICADE**



VERTICAL BARRICADE



**DETECTABLE PEDESTRIAN
CHANNELIZING BARRICADE**

GENERAL NOTES
All heights shown shall be measured above the pavement surface.
All dimensions are in inches (millimeters) unless otherwise shown.

TRAFFIC CONTROL DEVICES		STANDARD 701901-02	
REVISIONS		(Sheet 1 of 3)	
DATE	REVISIONS		
1-1-12	Added DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE.		
1-1-09	Switched units to English metric. Omitted light on vertical panel.		

Illinois Department of Transportation

APPROVED: JANUARY 11, 2012

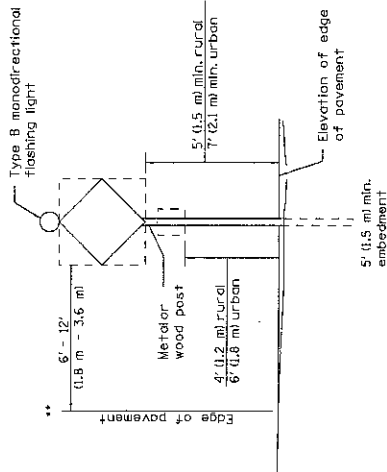
ENGINEER: OPERATIONS

APPROVED: JANUARY 11, 2012

ENGINEER: DESIGN AND ENVIRONMENT

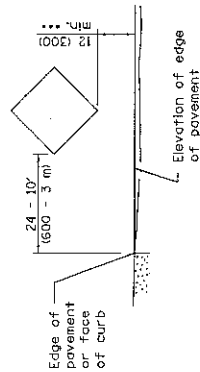
ISSUED: 1-1-97

* Warning lights (if required)



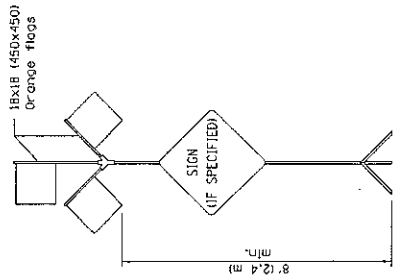
POST MOUNTED SIGNS

- When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6 (15) to the outside edge of the paved shoulder.



SIGNS ON TEMPORARY SUPPORTS

- When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen by motorists.



HIGH LEVEL WARNING DEVICE

ROAD CONSTRUCTION NEXT X MILES
620-100-6036

END CONSTRUCTION
620-200-6024

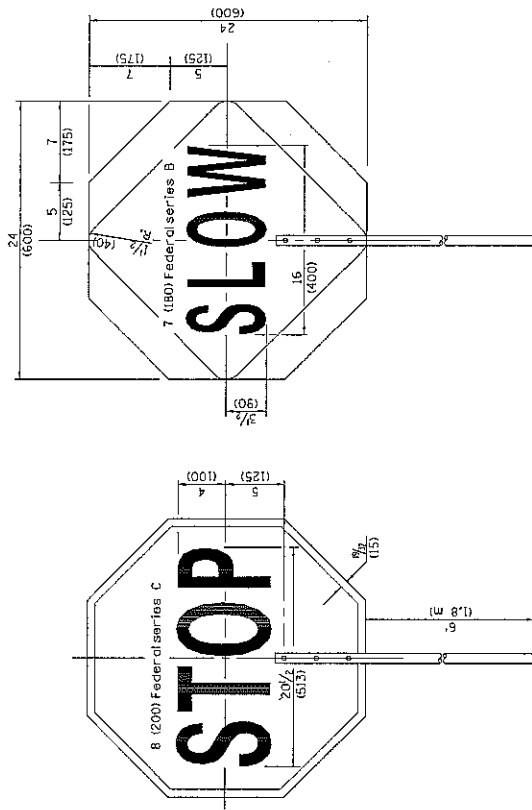
This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

WORK LIMIT SIGNING



REVERSE SIDE

FRONT SIDE

All dimensions are in inches (millimeters) unless otherwise shown.

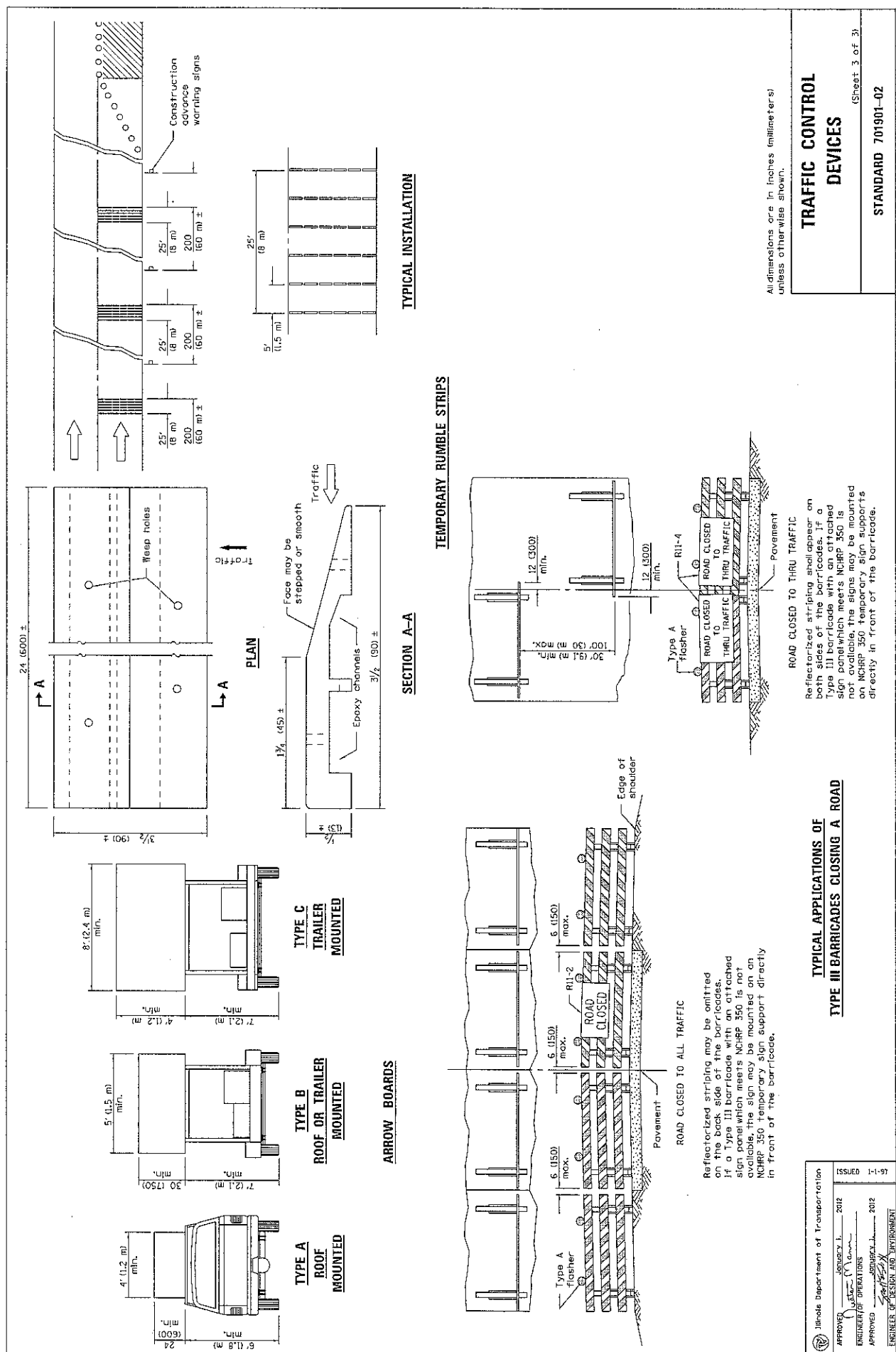
TRAFFIC CONTROL DEVICES

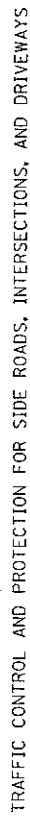
(Sheet 2 of 3)

STANDARD 701901-02

FLAGGER TRAFFIC CONTROL SIGN

Illinois Department of Transportation	
APPROVED	2012
ISSUED	
APPROVED	2012
ISSUED	
ENGINEER OF DESIGN AND ENVIRONMENT	

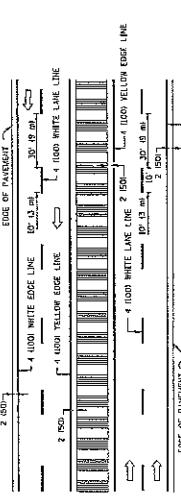
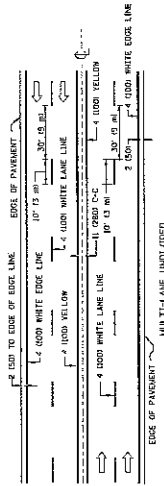
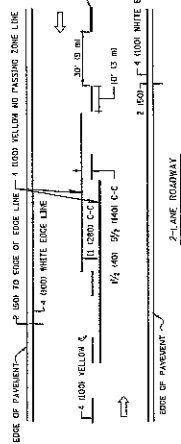




SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

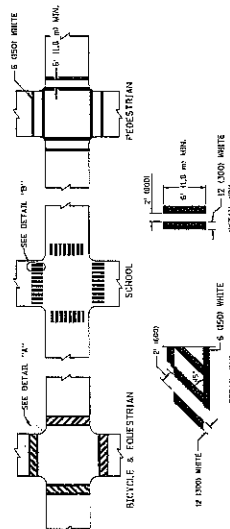
D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

USER used - <u>gphlambert</u> DRAWN - <u>gphlambert</u> PLANT SCALE - <u>3/8"=1'-0"</u> PLOT DATE - <u>11-17-2009</u>		REVISIONS - <u>LMA</u> REVISION - <u>A. ORBIELE 05-18-05</u> REVISION - <u>A. POLCHEN 03-05-96</u> REVISION - <u>A. POLCHEN 10-15-96</u> REVISION - <u>T. RAMAACHEN 05-06-00</u>		SCALE: NONE SHEET NO. 1 OF 1 SHEETS 51A		COUNTY SECTION TWP. 19-10 R. 10 PVD. ROAD DIST. TO PROJECT CONTRACT NO.	
FILED NAME - WORKSHEET NO. 22-51A-10078-01		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		TRAFFIC CONTROL AND PROTECTION FOR STATE ROADS, INTERSECTIONS, AND DRIVEWAYS		TOTAL SHEETS SHEET NO.	

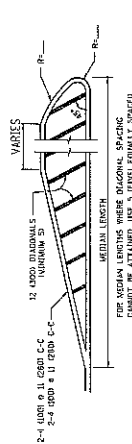
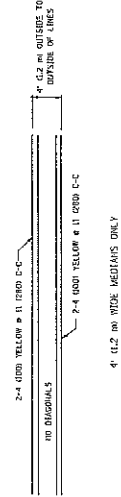


NOTE: MEDIAN WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

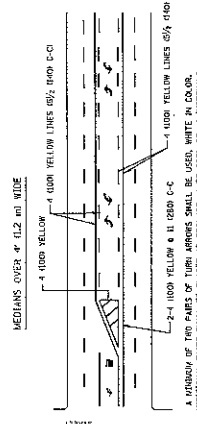
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



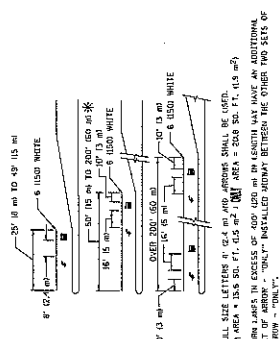
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING IS REQUIRED, USE 1/2\"/>



A VIGNETTE OF TWO PARS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR, ADDITIONAL PARS SHALL BE PLACED AT 200' 0\"/>

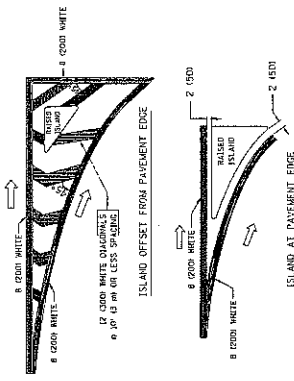


TYPICAL PAINTED MEDIAN MARKING



FOR FURTHER DETAILS OF PAINTED MARKING REFER TO DISTRICT ONE STANDARD SPECIFICATIONS FOR CONSTRUCTION AND STATE STANDARD SPECIFICATIONS

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTRELINE ON 2 LANE PAVEMENT	4' 0" 0" 0"	SKIP-DASH	YELLOW	10' 0" 0" 0" LINE WITH 20' 0" 0" IN SPACE
CENTRELINE ON MULTI-LANE UNDIVIDED HIGHWAY	2' 0" 0			

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE TYPICAL PAVEMENT MARKINGS

FILE NAME	DESIGNED	BY	DATE
PROJECT NO.	REVIEWED	BY	DATE
CHECKED	DATE		
APPROVED	DATE		

SHEET NO.	SHEET TOTAL
1	1

2013 RESURFACING (B)
SCHEDULE OF QUANTITIES

STREET	FROM	TO	LENGTH (FT)	WIDTH (FT)	TOT. IMP. AREA (SY)	HMA SURF. CSE. MIX D (TON)	MIN. THICKNESS (IN)	LEVEL BIND (TON)	AVG. THICKNESS (IN)
40TH ST	ELM ST	FAIRVIEW AVE	1778	17-20	4140	348	1.50	174	0.75
41ST ST	W. OF EARLSTON RD	FAIRVIEW AVE	2541	15-22	5906	496	1.50	248	0.75
65TH ST	FAIRMOUNT AVE	DAVANE LN	1389	28	4413	370	1.50	145	0.75
66TH ST	BRIARGATE DR	FAIRVIEW AVE	1489	28	4746	399	1.50	239	0.90
BERRYWOOD LN	65TH ST	66TH ST	638	28	2042	172	1.50		
BLODGETT CT	65TH ST	N. END	853	28	3275	275	1.50	183	1.00
CRESCENT DR	CUL DE SAC	FAIRMOUNT AVE	350	28	1481	124	1.50	62	0.75
CUMNOR RD	55TH ST	THIRD ST	1976	18	4540	445	1.75	318	1.25
DAVANE CT / LN	66TH ST	N. END	1773	28	5759	484	1.50	91	0.75
EARLSTON RD	OGDEN AVE	39TH ST	2636	20-23	6619	556	1.50	278	0.75
EIGHTH ST	CUMNOR RD	WILLIAMS ST	1076	21	2748	231	1.50	115	0.75
FLORENCE AVE	FIFTH ST	SECOND ST	971	24.6	2704	227	1.50	189	1.25
FOURTH ST	FAIRVIEW AVE	WILLIAMS ST	2552	18-20	5859	536	1.50-1.75	335	0.75-1.25
GLENDENNING RD	OGDEN AVE	39TH ST	2617	19-20	5895	495	1.50	248	0.75
ST JAMES CT	S. END	66TH ST	547	28	2041	171	1.50	86	0.75
SEVENTH ST	CUMNOR RD	WILLIAMS ST	1084	21	2771	233	1.50	116	0.75
SIXTH ST	CUMNOR RD	WILLIAMS ST	1078	22	2819	237	1.50	118	0.75
STERLING RD	OGDEN AVE	39TH ST	2598	17-23	5564	467	1.50	234	0.75
THIRD ST	FAIRVIEW AVE	CUMNOR RD	1475	24	4036	339	1.50	283	1.25
VICTOR ST	55TH ST	SECOND ST	2278	20.5	5488	461	1.50	230	0.75
Totals>			31699		82846	7066		3692	

Miles>
6.00

SCHEDULE OF QUANTITIES

2013 RESURFACING (B)
SCHEDULE OF QUANTITIES

STREET	HMA BINDER (TON)	MIN. THICKNESS (IN)	BIT. PRIME (GAL)	AGG. PRIME (TON)	CL D, Ty 4 4" (SY)	CL D, Special 4" (SY)	PAVE REM & HMA REPL 8" (SY)	PAVE REM & PCC REPL 8" (SY)	PGE SPECIAL (CY)
40TH ST			621	8	1676	44			20
41ST ST			886	12	1612	87			
65TH ST	134	2.50	662	9	364				
66TH ST			712	9	1432	38			
BERRYWOOD LN	286	2.50	306	4					20
BLODGETT CT			491	7	1375	150			21
CRESCENT DR			222	3	151	20			
CUMNOR RD			681	9			277	71	26
DAVANE CT / LN	502	2.50	863	11	406				36
EARLSTON RD			993	13	2397	133			20
EIGHTH ST			412	5	1224				10
FLORENCE AVE			406	5				165	
FOURTH ST			879	11	340	70	204	41	16
GLENDENNING RD			884	12	2346	51			92
ST JAMES CT			306	4	326				
SEVENTH ST			416	6	1230				
SIXTH ST			423	6	1244				10
STERLING RD			835	11	1292	16			10
THIRD ST			605	8				247	15
VICTOR ST			823	11	2366				61
	922		12426	164	19781	609	481	524	357

SCHEDULE OF QUANTITIES

2013 RESURFACING (B)
SCHEDULE OF QUANTITIES

STREET	HAUL SPECIAL WASTE (LOAD)	CURB REM. (LF)	C & G TY M-6.12 (LF)	C & G TY B-6.12 (LF)	REINFORCE(LF)	C & G TY M-2.18 (LF)	C & G TY B-4.18 (LF)	C & G TY B-6.18 (LF)	M.H. ADJ.
40TH ST									3
41ST ST		74						74	6
65TH ST		861	189	630				42	5
66TH ST	1	714		651				63	4
BERRYWOOD LN		305		305					1
BLODGETT CT	1	443		401				42	3
CRESCENT DR		253	232					21	1
CUMNOR RD	2	105						105	11
DAVANE CT / LN		1121		264				857	
EARLSTON RD	2	261		198	63				6
EIGHTH ST									3
FLORENCE AVE	2	871						871	5
FOURTH ST	2	1075		55		860		160	6
GLEDENNING RD	2								6
ST JAMES CT		213		192				21	2
SEVENTH ST									5
SIXTH ST									4
STERLING RD	2								2
THIRD ST	1	1405					215	1190	5
VICTOR ST	2	13						13	3
	17	7714	421	2696	63	860	215	3459	81

SCHEDULE OF QUANTITIES

2013 RESURFACING (B)
SCHEDULE OF QUANTITIES

STREET	M.H. ADJ. SPECIAL (EA)	M.H. ADJ. W/ NEW TY 1 FR (EA)	M.H. RECON (EA)	IN. ADJ. (EA)	IN. ADJ. IN. ADJ W/ NEW TY 3 FR (EA)	INLET RECON W/ NEW TY 3 FR (EA)	NEW 2' IN. W/ TY 3 FR (EA)	NEW 2' IN. W/ TY 3 V FR (EA)	UNDERDRAIN 4 IN (LF)
40TH ST	3								
41ST ST	6								
65TH ST	5				2	1	1		20
66TH ST	1			7	3	1			
BERRYWOOD LN				3					40
BLODGETT CT				1	3				
CRESCENT DR					1			1	
CUMNOR RD	3	1							
DAVANE CT / LN				3	3	1			60
EARLSTON RD	3								
EIGHTH ST	3								
FLORENCE AVE	3			2	1				
FOURTH ST	7			6					
GLENDENNING RD	6								
ST JAMES CT				2	2				
SEVENTH ST	3								
SIXTH ST	3								
STERLING RD	6						1		
THIRD ST			1	4	6				
VICTOR ST	3								
	55	1	1	28	21	3	2	1	120

SCHEDULE OF QUANTITIES

2013 RESURFACING (B)
SCHEDULE OF QUANTITIES

STREET	INLET FILTERS (EA)	INLET FILTERS CLEANING (EA)	HMA SURF.REM. 1.5" (SY)	HMA SURF.REM. 1.75" (SY)	HMA SURF.REM. 2.5" (SY)	HMA SURF.REM. 4" (SY)	HMA SURF.REM. VARI 2"-4"(SY)	PREP OF AGG BASE (SY)
40TH ST	2	2		2292	1848			
41ST ST				5906				
65TH ST				3457		956		956
66TH ST				4746				
BERRYWOOD LN						2042		2042
BLODGETT CT			3275					
CRESCENT DR				1481				
CUMNOR RD	3	3					4540	
DAVANE CT / LN	4	4	2176			3583		3583
EARLSTON RD				4582	2037			
EIGHTH ST				1940	808			
FLORENCE AVE							2704	
FOURTH ST	2	2		2540			3319	
GLENDENNING RD	3	3		3537	2358			
ST JAMES CT				2041				
SEVENTH ST				2396	375			
SIXTH ST				2819				
STERLING RD	5	5		4832	732			
THIRD ST							4528	
VICTOR ST				5488				
	19	19	5451	48057	8158	6581	15091	6581

SCHEDULE OF QUANTITIES

2013 RESURFACING (B)
SCHEDULE OF QUANTITIES

STREET	AGG BASE REPAIR (TON)	AGG FOR TEMP ACCESS (TON)	CR.JT.&FLAN (TON)	SIDEWALK REMOVE (SF)	SIDEWALK 5" (SF)	SIDEWALK 6" (SF)	SIDEWALK 8" (SF)	DETECTABLE WARNINGS (SF)	DÉCOR PAVER DRIVE (SY)	AGG. SHOULD (TON)
40TH ST				1854	1854			170		126
41ST ST				824	824			110	2	180
65TH ST	25	4		1360	1236			120		
66TH ST				1787	1674			110	8	
BERRYWOOD LN	90	10		793	670			60		
BLODGETT CT										
CRESCENT DR				912	670	180		40		
CUMNOR RD			14	824	824			100		140
DAVANE CT / LN	123	22								
EARLSTON RD				489	335		155	20		187
EIGHTH ST				541	541			60		76
FLORENCE AVE			9	1349	1288			60		
FOURTH ST			11	3270	2678	592		160	15	181
GLENDENNING RD				180	180			20		185
ST JAMES CT				721	721			40	1	
SEVENTH ST				361	361			30		77
SIXTH ST				206	206			20		76
STERLING RD				644	644			50	28	184
THIRD ST			14	4532	3013	1442		120	4	
VICTOR ST				52	52			10		161
	238	36	48	20699	17771	2214	155	1300	58	1573

SCHEDULE OF QUANTITIES

2013 RESURFACING (B)
SCHEDULE OF QUANTITIES

STREET	PKWY REST (SY)	TEMP HMA RAMP (SY)	ROOT PRUNE (EA)	HMA DRIVE REMOVE (SY)	HMA DRIVE 3", (SY)	HMA DRIVE 8", (SY)	PCC DRIVE REMOVE (SY)	PCC DRIVE 6", (SY)	WH. PAVT. MARK. LINE 6" (LF)	WH. PAVT. MARK. LINE 24" (LF)
40TH ST	168									14
41ST ST	98						28	28		34
65TH ST	446			21	21		32	32		
66TH ST	452								84	15
BERRYWOOD LN	195			7	7					
BLODGETT CT	211			19	19		71	71		
CRESCENT DR	201						88	88		
CUMNOR RD	122	10								
DAVANE CT / LN	145			3	3		47	47		
EARLSTON RD	143			58		58				28
EIGHTH ST	49									
FLORENCE AVE	202	5	1							
FOURTH ST	791	8	1	236	236		49	49	52	10
GLENDENNING RD	82									28
ST JAMES CT	160			21	21		26	26		
SEVENTH ST	41									
SIXTH ST	28									
STERLING RD	74									51
THIRD ST	1802	10		434	434		467	467	66	14
VICTOR ST	28						4	4		
	5438	33	2	799	741	58	812	812	202	194

SCHEDULE OF QUANTITIES



RETURN WITH BID

Route Various
County DuPage
Local Agency Village of Downers Grove
Section 13-00000-01-GM

1. Proposal of Central Blacktop Co., Inc.

for the improvement of the above section by the construction of Pavement removal and replacement, level binder
hot-mix asphalt surface course, curb and gutter removal and replacement and all related work.

a total distance of 31699.00 feet, of which a
distance of 31699.00 feet, (6.004 miles) are to be improved.

2. The plans for the proposed work are those prepared by Village of Downers Grove
and approved by the Department of Transportation on _____
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 _____ working days or by 11/15/2013
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 ☐ will not be allowed as proposal
guaranties. 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: Village Treasurer of
Downers Grove
the amount of the check is Bid Bond (5 %)
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. 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 firm certifies that it has not been convicted of bribery or attempting to bribe an officer or employee of
the State of Illinois, 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. The undersigned firm further certifies that it is not barred
from contracting with any unit of State or local government as a result of a violation of State laws prohibiting bid-rigging
or bid-rotating.
12. The undersigned submits herewith the schedule of prices on BLR 12222 covering the work to be performed under this
contract.



Illinois Department of Transportation

Schedule of Prices

Route
County
Local Agency
Section

Various
DuPage
Village of Downers Grove
13-00000-01-GM

RETURN WITH BID

(For complete information covering these items, see plans and specifications)

Item No.	Items	Unit	Quantity	Unit Price	Total
1	Hot-Mix Asphalt Surface Course, Mix D, N50	Ton	7066	67.00	473,422.00
2	Leveling Binder (Machine Method), N50	Ton	3692	71.00	262,132.00
3	Hot-Mix Asphalt Binder Course, IL-19.0, N50	Ton	922	60.00	55,320.00
4	Bituminous Materials (Prime Coat)	Gal.	12426	0.01	124.26
5	Aggregate (Prime Coat)	Ton	164	0.01	1.64
6	Class D Patches, Type IV, 4"	S.Y.	19781	24.00	474,744.00
7	Class D Patches, 4" Special	S.Y.	609	28.00	17,052.00
8	Pavement Removal and Hot-Mix Asphalt Replacement, 8" Special	S.Y.	481	54.00	25,974.00
9	Pavement Removal and Portland Cement Concrete Replacement, 8" Special	S.Y.	524	63.00	33,012.00
10	Porous Granular Embankment, Special	C.Y.	357	25.00	8,925.00
11	Additional Hauling Surcharge, Non-Hazardous Special Waste	Load	17	500.00	8,500.00
12	Combination Concrete Curb and Gutter Removal	L.F.	7714	3.75	28,927.50
13	Combination Concrete Curb and Gutter, Type M-6.12	L.F.	421	18.00	7,578.00
14	Combination Concrete Curb and Gutter, Type B-6.12	L.F.	2696	15.00	40,440.00
15	Combination Concrete Curb and Gutter, Type B-6.12, Reinforced	L.F.	63	17.00	1,071.00
16	Combination Concrete Curb and Gutter, Type M-2.18	L.F.	860	19.00	16,340.00
17	Combination Concrete Curb and Gutter, Type B-4.18	L.F.	215	20.00	4,300.00
18	Combination Concrete Curb and Gutter, Type B-6.18	L.F.	3459	22.00	76,098.00
19	Manhole to be Adjusted	Ea.	81	450.00	36,450.00
20	Manhole to be Adjusted, Special	Ea.	55	600.00	33,000.00
21	Manhole to be Adjusted With New Type 1 Frame and Closed Lid	Ea.	1	780.00	780.00
Page Total (To be carried forward to Page 2)					



Illinois Department of Transportation

Schedule of Prices

Route
County
Local Agency
Section

Various
DuPage
Village of Downers Grove
13-00000-01-GM

RETURN WITH BID

(For complete information covering these items, see plans and specifications)

Item No.	Items	Unit	Quantity	Unit Price	Total
22	Manhole to be Reconstructed	Ea.	1	1,600.00	1,600.00
23	Inlet to be Adjusted	Ea.	28	320.00	8,960.00
24	Inlet to be Adjusted With New Type 3 Frame and Grate	Ea.	21	570.00	11,970.00
25	Inlet to be Reconstructed With New Type 3 Frame and Grate	Ea.	3	1,600.00	4,800.00
26	Inlet, Type A, 24" With Type 3 Frame and Grate	Ea.	2	1,800.00	3,600.00
27	Inlet, Type A, 24" With Type 3 V Frame and Grate	Ea.	1	1,800.00	1,800.00
28	Pipe Underdrain, 4"	L.F.	120	36.00	4,320.00
29	Inlet Filters	Ea.	19	140.00	2,660.00
30	Inlet Filters Cleaning	Ea.	19	60.00	1,140.00
31	Hot-Mix Asphalt Surface Removal, 1.5"	S.Y.	5451	1.75	9,539.25
32	Hot-Mix Asphalt Surface Removal, 1.75"	S.Y.	48057	1.80	86,502.60
33	Hot-Mix Asphalt Surface Removal, 2.5"	S.Y.	8158	2.40	19,579.20
34	Hot-Mix Asphalt Surface Removal, 4"	S.Y.	6581	3.00	19,743.00
35	Hot-Mix Asphalt Surface Removal, Variable Depth, 2.0' to 4.0"	S.Y.	15091	2.50	37,727.50
36	Preparation of Aggregate Base	S.Y.	6581	1.00	6,581.00
37	Aggregate Base Repair	Ton	238	12.00	2,856.00
38	Aggregate for Temporary Access	Ton	36	25.00	900.00
39	Mixture For Cracks, Joints and Flangeways	Ton	48	300.00	14,400.00
40	Portland Cement Concrete Sidewalk Removal	S.F.	20699	1.00	20,699.00
41	Portland Cement Concrete Sidewalk, 5"	S.F.	17771	4.25	75,526.75
42	Portland Cement Concrete Sidewalk, 6"	S.F.	2214	5.00	11,070.00
Carried forward from page 1					
Page Total (To be carried forward to Page 3)					



Various
DuPage
Village of Downers Grove
13-00000-01-GM

Route
County
Local Agency
Section

(For complete information covering these items, see plans and specifications)

[illegible]



Various
DuPage
Village of Downers Grove
13-00000-01-GM

Route
County
Local Agency
Section

(For complete information covering these items, see plans and specifications)

13. The undersigned further agrees that if awarded the contract for the sections contained in the following combinations, he will perform the work in accordance with the requirements of each individual proposal for the multiple bid specified in the schedule below.

Combination letter	Sections included in Combination	Total



Illinois Department
of Transportation

Signatures

RETURN WITH BID

Route	Various
County	DuPage
Local Agency	Village of Downers Grove
Section	13-00000-01-GM

(If an individual)

Signature of Bidder _____

Business Address _____

(If a partnership)

Firm Name _____

Signed By _____

Business Address _____

Insert
Names and
Addresses of
All Partners

(If a corporation)

Corporate Name Central Blacktop Co., Inc.

Signed By _____

Business Address 8160 S. East Ave., P.O. Box 2080

LaGrange, IL 60525

President

Insert
Names of
Officers

President James H. Loukota

Secretary Joseph E. Benson

Treasurer _____

Attest: Joseph E. Benson
Secretary



Illinois Department of Transportation

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

Affidavit of Availability For the Letting of 6/14/2013

(Letting date)

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.

	211-024 71st St	212-019 Pasquiere Dr	212-023 Harlem Ave	212-024 Joliet Rd	
Contract Number	63556	63579	60T14	60T48	
Contract With	Lorig Const	Alliance Contrs	IDOT	IDOT	
Estimated Completion Date	June 2013	Nov 2013	June 2013	June 2013	
Total Contract Price	351,000.00	157,997.00	217,527.00	133,016.00	Accumulated Totals
Uncompleted Dollar Value if Firm is the Prime Contractor			217,527.00	133,016.00	350,543.00
Uncompleted Dollar Value if Firm is the Subcontractor	351,000.00	157,997.00			508,997.00
Total Value of All Work					859,540.00

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			20,000.00	11,800.00		31,800.00
Portland Cement Concrete Paving						0.00
HMA Plant Mix		75,000.00	10,000.00			85,000.00
HMA Paving	339,000.00	82,997.00	124,745.00	37,506.00		584,248.00
Clean & Seal Cracks/Joints						0.00
Aggregate Bases & Surfaces				4,050.00		4,050.00
Highway, R.R. and Waterway Structures						0.00
Drainage				11,229.00		11,229.00
Electrical						0.00
Cover and Seal Coats						0.00
Concrete Construction						0.00
Landscaping						0.00
Fencing						0.00
Guardrail						0.00
Painting						0.00
Signing						0.00
Cold Milling, Planning & Rotomilling						0.00
Demolition						0.00
Pavement Markings (Paint)						0.00
Other Construction (List)						0.00
Grinding	12,000.00		25,000.00	5,400.00		42,400.00
						0.00
Totals	351,000.00	157,997.00	179,745.00	69,985.00	0.00	758,727.00

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	5
Subcontractor	No Subs	No Subs	Carrera Conc	DNB Constr.	
Type of Work			Concrete	Concrete	
Subcontract Price			9,044.00	14,918.00	
Amount Uncompleted			9,044.00	14,918.00	
Subcontractor			Hawk Elec	DNB Constr.	
Type of Work			Det Loops	Drainage	
Subcontract Price			5,760.00	3,608.00	
Amount Uncompleted			5,760.00	3,608.00	
Subcontractor			Hwy Safety	Work Zone Safety	
Type of Work			Traffic Control	Traffic Control	
Subcontract Price			5,917.00	8,661.00	
Amount Uncompleted			5,917.00	8,661.00	
Subcontractor			Mark-It Corp	Nat. Power Rod	
Type of Work			Striping	Sewer Cleaning	
Subcontract Price			7,961.00	35,844.00	
Amount Uncompleted			7,961.00	35,844.00	
Subcontractor			Rula's Ent		
Type of Work			Drainage		
Subcontract Price			9,100.00		
Amount Uncompleted			9,100.00		
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Total Uncompleted	0.00	0.00	37,782.00	63,031.00	0.00

I, being duly sworn, do hereby declare 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

Notary Public
My commission expires: _____
(Notary Seal)

Type or Print Name

Officer or Director

Title

Signed

Company

Address



Illinois Department of Transportation

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

Affidavit of Availability
For the Letting of 6/14/2013
(Letting date)

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.

	213-001 East Ave	213-002	213-003	213-004 Haven	Awards Pending	
Contract Number	63736			63773		
Contract With	IDOT	City of Darien	Vil of Downers Grove	IDOT		
Estimated Completion Date	Aug 2013	Aug 2013	Aug 2013	July 2013		
Total Contract Price	1,042,205.00	1,053,209.00	1,918,509.00	1,231,965.00		Accumulated Totals
Uncompleted Dollar Value if Firm is the Prime Contractor	1,042,205.00	1,053,209.00	1,918,509.00	1,231,965.00		5,596,431.00
Uncompleted Dollar Value if Firm is the Subcontractor						508,997.00
Total Value of All Work						6,105,428.00

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		35,000.00	200,000.00	50,000.00		316,800.00
Portland Cement Concrete Paving						0.00
HMA Plant Mix		35,000.00	300,000.00			420,000.00
HMA Paving	574,239.00	713,699.00	563,257.00	475,625.00		2,911,068.00
Clean & Seal Cracks/Joints						0.00
Aggregate Bases & Surfaces			75,000.00	100,000.00		179,050.00
Highway, R.R. and Waterway Structures						0.00
Drainage						11,229.00
Electrical						0.00
Cover and Seal Coats						0.00
Concrete Construction	30,000.00					30,000.00
Landscaping						0.00
Fencing						0.00
Guardrail						0.00
Painting						0.00
Signing						0.00
Cold Milling, Planning & Rotomilling						0.00
Demolition						0.00
Pavement Markings (Paint)						0.00
Other Construction (List)						0.00
Grinding	30,000.00	150,000.00	150,000.00			372,400.00
						0.00
Totals	634,239.00	933,699.00	1,288,257.00	625,625.00	0.00	4,240,547.00

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	Azteca Power	Geomat	Schroeder & Schroeder	Dinatale	No Subs
Type of Work	Conc&Sewer	Petromat	Concrete	Concrete	
Subcontract Price	350,557.00	111,010.00	483,364.00	253,269.00	
Amount Uncompleted	350,557.00	111,010.00	483,364.00	253,269.00	
Subcontractor	Hawk Elec	DNB	Hawk Elec	Hawk Elec	
Type of Work	Detector Loops	Structure Adj	Detec Loops	Electrical	
Subcontract Price	10,194.00	8,500.00	3,990.00	28,800.00	
Amount Uncompleted	10,194.00	8,500.00	3,990.00	28,800.00	
Subcontractor	Precision Pavt Marking		American Topsoil	Del Toro Landscaping	
Type of Work	Striping		Landscape	Landscape	
Subcontract Price	26,895.00		60,802.00	82,107.00	
Amount Uncompleted	26,895.00		60,802.00	82,107.00	
Subcontractor	Hwy Safety		Ray Edwards	Ray Edwards	
Type of Work	Traffic Control		Sewer	Sewer	
Subcontract Price	20,320.00		59,491.00	170,708.00	
Amount Uncompleted	20,320.00		59,491.00	170,708.00	
Subcontractor			Superior Road Striping	Precision Pavt Marking	
Type of Work			Striping	Striping	
Subcontract Price			8,305.00	5,895.00	
Amount Uncompleted			8,305.00	5,895.00	
Subcontractor			Traffic Control & Prot Inc.	Hwy Safety	
Type of Work			Traffic Control	Traffic Control	
Subcontract Price			14,300.00	33,971.00	
Amount Uncompleted			14,300.00	33,971.00	
Subcontractor				Visu-Sewer	
Type of Work				Insertion Pipe	
Subcontract Price				31,590.00	
Amount Uncompleted				31,590.00	
Total Uncompleted	407,966.00	119,510.00	630,252.00	606,340.00	0.00

I, being duly sworn, do hereby declare 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

Type or Print Name

Officer or Director

Title

Notary Public

Signed

My commission expires: _____

Company

Address

(Notary Seal)



Illinois Department of Transportation

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

Affidavit of Availability
For the Letting of 6/14/2013
(Letting date)

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**.

	213-005	213-006	213-007 Central Ave.	213-008	Awards Pending	
Contract Number			63790			
Contract With	Vil of Westchester	Vil of Westchester	IDOT	Lyons Township		
Estimated Completion Date	July 2013	Nov 2013	Aug 2013	July 2013		
Total Contract Price	1,112,410.00	1,043,453.00	212,159.00	231,426.00		Accumulated Totals
Uncompleted Dollar Value if Firm is the Prime Contractor	1,112,410.00	1,043,453.00	212,159.00	231,426.00		8,195,879.00
Uncompleted Dollar Value if Firm is the Subcontractor						508,997.00
Total Value of All Work						8,704,876.00

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	100,000.00	250,000.00	20,000.00	50,000.00		736,800.00
Portland Cement Concrete Paving						0.00
HMA Plant Mix		320,000.00	15,000.00	25,000.00		780,000.00
HMA Paving	308,009.00	278,215.00	84,871.00	86,795.00		3,668,958.00
Clean & Seal Cracks/Joints						0.00
Aggregate Bases & Surfaces	180,000.00	150,000.00		10,000.00		519,050.00
Highway, R.R. and Waterway Structures						0.00
Drainage						11,229.00
Electrical						0.00
Cover and Seal Coats						0.00
Concrete Construction						30,000.00
Landscaping						0.00
Fencing						0.00
Guardrail						0.00
Painting						0.00
Signing						0.00
Cold Milling, Planning & Rotomilling						0.00
Demolition						0.00
Pavement Markings (Paint)						0.00
Other Construction (List)						0.00
Grinding			15,000.00	5,000.00		392,400.00
						0.00
Totals	588,009.00	998,215.00	134,871.00	176,795.00	0.00	6,138,437.00

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	American Topsoil	Nafisco	Hawk	American Topsoil	
Type of Work	Landscape	Traffic Control	Detector Loops	Landscaping	
Subcontract Price	30,400.00	8,798.00	4,032.00	26,248.00	
Amount Uncompleted	30,400.00	8,798.00	4,032.00	26,248.00	
Subcontractor	DiNatale Const	Norridge Sewer	Rula's	Davis Conc	
Type of Work	Concrete	Sewer	Sewer	Concrete	
Subcontract Price	138,218.00	34,100.00	22,000.00	7,260.00	
Amount Uncompleted	138,218.00	34,100.00	22,000.00	7,260.00	
Subcontractor	Nafisco	Pavt Systems	Precision Pvt Mking	Pavt Systems	
Type of Work	Traffic Control	Striping	Striping	Striping	
Subcontract Price	4,663.00	2,340.00	3,766.00	1,750.00	
Amount Uncompleted	4,663.00	2,340.00	3,766.00	1,750.00	
Subcontractor	Neri Brothers		Work Zone Safety	Road Fabrics	
Type of Work	Sewer		Traffic Control	Petromat	
Subcontract Price	327,537.00		2,800.00	17,535.00	
Amount Uncompleted	327,537.00		2,800.00	17,535.00	
Subcontractor	Precision Pavt Mking		DiNatale Const	Nafisco	
Type of Work	Striping		Concrete	Traffic Control	
Subcontract Price	2,520.00		36,245.00	1,838.00	
Amount Uncompleted	2,520.00		36,245.00	1,838.00	
Subcontractor	Sinnott Tree Service		Road Fabrics		
Type of Work	Tree Root Pruning		Petromat		
Subcontract Price	13,568.00		8,445.00		
Amount Uncompleted	13,568.00		8,445.00		
Subcontractor	Stettner & Assoc				
Type of Work	Survey				
Subcontract Price	7,495.00				
Amount Uncompleted	7,495.00				
Total Uncompleted	524,401.00	45,238.00	77,288.00	54,631.00	0.00

I, being duly sworn, do hereby declare 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 17th day of June 2013

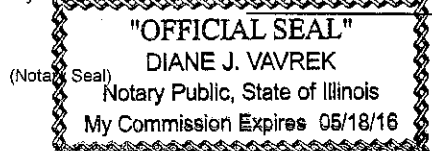
Diane J. Vavrek
Notary Public

Type or Print Name **James H. Loukota, President**
Officer or Director

Title

Signed

My commission expires:



Company **Central Blacktop Co., Inc.**

Address **6160 S. East Ave., P.O. Box 2010**

LaGrange, IL 6055



RETURN WITH BID

Route	Various
County	DuPage
Local Agency	Village of Downers Grove
Section	13-00000-01-GM

WE _____ as PRINCIPAL,
and _____ as SURETY,



Apprenticeship or Training Program Certification

Return with Bid

Route Various
County DuPage
Local Agency Downers Grove
Section 13-00000-01-GM

All contractors are required to complete the following certification:

☒ For this contract proposal or for all groups in this deliver and install proposal.

☐ For the following deliver and install groups in this material proposal:

Illinois Department of Transportation policy, adopted in accordance with the provisions of the Illinois Highway Code, requires this contract to be awarded to the lowest responsive and responsible bidder. The award decision is subject to approval by the Department. In addition to all other responsibility factors, this contract or deliver and install proposal requires all bidders and all bidders' subcontractors to disclose participation in apprenticeship or training programs that are (1) approved by and registered with the United States Department of Labor's Bureau of Apprenticeship and Training, and (2) applicable to the work of the above indicated proposals or groups. Therefore, all bidders are required to complete the following certification:

- I. Except as provided in paragraph IV below, the undersigned bidder certifies that it is a participant, either as an individual or as part of a group program, in an approved apprenticeship or training program applicable to each type of work or craft that the bidder will perform with its own employees.
- II. The undersigned bidder further certifies for work to be performed by subcontract that each of its subcontractors submitted for approval either (A) is, at the time of such bid, participating in an approved, applicable apprenticeship or training program; or (B) will, prior to commencement of performance of work pursuant to this contract, establish participation in an approved apprenticeship or training program applicable to the work of the subcontract.
- III. The undersigned bidder, by inclusion in the list in the space below, certifies the official name of each program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's employees. Types of work or craft that will be subcontracted shall be included and listed as subcontract work. The list shall also indicate any type of work or craft job category for which there is no applicable apprenticeship or training program available.

Chicagoland Laborers Training & Apprenticeship Program

International Brotherhood of Teamsters Training Fund

Operating Engineers Apprenticeship and Training Program

Continued...

Continued...

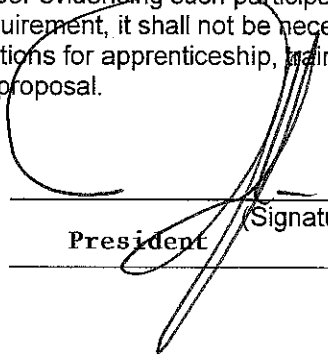
Sewer work to be subcontracted
Concrete work to be subcontracted
Landscaping work to be subcontracted
Traffic control work to be subcontracted

Striping work to be subcontracted
Tree pruning work to be subcontracted

- IV. Except for any work identified above, any bidder or subcontractor that shall perform all or part of the work of the contract or deliver and install proposal solely by individual owners, partners or members and not by employees to whom the payment of prevailing rates of wages would be required, check the following box, and identify the owner/operator workforce and positions of ownership. ☐

The requirements of this certification and disclosure are a material part of the contract, and the contractor shall require this certification provision to be included in all approved subcontracts. The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project is accounted for and listed. The Department at any time before or after award may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and any or all of its subcontractors. In order to fulfill the participation requirement, it shall not be necessary that any applicable program sponsor be currently taking or that it will take applications for apprenticeship, training or employment during the performance of the work of this contract or deliver and install proposal.

Bidder: Central Blacktop Co., Inc.
Address: 6160 S. East Ave., P.O. Box 2080
LaGrange, IL 60525

By: 
Title: President (Signature)



Illinois Department of Transportation

Local Agency Proposal Bid Bond

RETURN WITH BID

Route Various
County DuPage
Local Agency Village of Downers Grove
Section 13-00000-01-GM

PAPER BID BOND

WE Central Blacktop Co., Inc.

as PRINCIPAL,

and Continental Casualty Company

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 17th day of June, 2013

Principal

Central Blacktop Co., Inc.

(Company Name)

By:

James H. Loukota (Signature and Title) President

(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:

Esther C. Jimenez (Signature of Attorney-in-Fact)

Continental Casualty Company

(Name of Surety)

STATE OF ILLINOIS,

COUNTY OF WILL

I, Kimberly R. Holmes, a Notary Public in and for said county, do hereby certify that James H. Loukota and Esther C. Jimenez

(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 17th day of June, 2013

My commission expires February 11, 2014

(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

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company (herein called "the CNA Companies"), are duly organized and existing insurance companies having their principal offices in the City of Chicago, and State of Illinois, and that they do by virtue of the signatures and seals herein affixed hereby make, constitute and appoint

Karen A Ryan, William P Weible, Deborah A Campbell, Kimberly R Holmes, Esther C Jimenez, Kimberly Sawicki, Leigh Ann Francis, Mary Anne Sylos, William Cahill, Melissa Newman, Individually

of Lisle, IL, their true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on their behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of their insurance companies and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Boards of Directors of the insurance companies.

In Witness Whereof, the CNA Companies have caused these presents to be signed by their Vice President and their corporate seals to be hereto affixed on this 28th day of May, 2013.

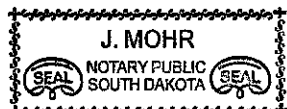


Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Paul T. Bruflat Vice President

State of South Dakota, County of Minnehaha, ss:

On this 28th day of May, 2013, before me personally came Paul T. Bruflat to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company described in and which executed the above instrument; that he knows the seals of said insurance companies; that the seals affixed to the said instrument are such corporate seals; that they were so affixed pursuant to authority given by the Boards of Directors of said insurance companies and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance companies.



My Commission Expires June 23, 2015

J. Mohr Notary Public

CERTIFICATE

I, D. Bult, Assistant Secretary of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the insurance companies printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance companies this 17th day of June, 2013.



Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

D. Bult Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF CONTINENTAL CASUALTY COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 12, 1995:

“RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.”

This Power of Attorney is signed by Paul T. Bruflat, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of Continental Casualty Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012:

“Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the “Authorized Officers”) to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, “Electronic Signatures”); Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company.”

ADOPTED BY THE BOARD OF DIRECTORS OF NATIONAL FIRE INSURANCE COMPANY OF HARTFORD:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company by unanimous written consent dated May 10, 1995:

“RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.”

This Power of Attorney is signed by Paul T. Bruflat, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of National fire Insurance Company of Hartford.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012:

“Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the “Authorized Officers”) to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, “Electronic Signatures”); Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company.”

ADOPTED BY THE BOARD OF DIRECTORS OF AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company by unanimous written consent dated May 10, 1995:

“RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.”

This Power of Attorney is signed by Paul T. Bruflat, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of American Casualty Company of Reading, Pennsylvania.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012:

“Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the “Authorized Officers”) to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, “Electronic Signatures”); Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company.”



Illinois Department
of Transportation

Signatures

RETURN WITH BID

Route	Various
County	DuPage
Local Agency	Village of Downers Grove
Section	13-00000-01-GM

(If an individual)

Signature of Bidder _____

Business Address _____

(If a partnership)

Firm Name _____

Signed By _____

Business Address _____

Insert
Names and
Addresses of
All Partners

(If a corporation)

Corporate Name Central Blacktop Co., Inc.

Signed By _____

Business Address 6160 S. East Ave., P.O. Box 2080

LaGrange, IL 60525

President

Insert
Names of
Officers

President James H. Loukota

Secretary Joseph E. Benson

Treasurer _____

Attest:

Joseph E. Benson
Secretary

CAMPAIGN DISCLOSURE CERTIFICATE

Any contractor, proposer, bidder or vendor who responds by submitting a bid or proposal to the Village of Downers Grove shall be required to submit with its bid submission, an executed Campaign Disclosure Certificate.

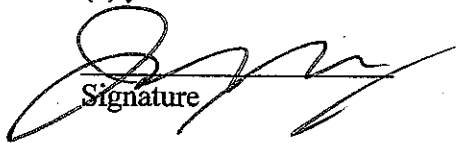
The Campaign Disclosure Certificate is required pursuant to the Village of Downers Grove Council Policy on Ethical Standards and is applicable to those campaign contributions made to any member of the Village Council.

Said Campaign Disclosure Certificate requires any individual or entity bidding to disclose campaign contributions, as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4), made to current members of the Village Council within the five (5) year period preceding the date of the bid or proposal release.

By signing the bid documents, contractor/proposer/bidder/vendor agrees to refrain from making any campaign contributions as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4) to any Village Council member and any challengers seeking to serve as a member of the Downers Grove Village Council.

Under penalty of perjury, I declare:

☒ Bidder/vendor has not contributed to any elected Village position within the last five (5) years.


Signature

John R. Goeing

Print Name

☐ Bidder/vendor has contributed a campaign contribution to a current member of the Village Council within the last five (5) years.

Print the following information:

Name of Contributor: _____
(company or individual)

To whom contribution was made: _____

Year contribution made: _____ Amount: \$ _____

Signature

Print Name



Village of Downers Grove Contractor Evaluation

Contractor: Central Blacktop Company, Inc.

Project: 2012 Resurfacing (A)

Primary Contact: Charles Johns Phone: (630) 215-6711

Time Period: May 2012 – October 2012

On Schedule (allowing for uncontrollable circumstances) ☒ yes ☐ no

Provide details if early or late completion: Time extension to be granted due to separate underground project delaying street contractor's work.

Change Orders (attach information if needed): CO will be processed for time extension noted above and for final quantity balancing.

Difficulties / Positives: Good ongoing communication and cooperation with field and office personnel. Generally conscientious regarding specs / workmanship.

Interaction with public:

☐ excellent ☒ good ☐ average ☐ poor

(Attach information on any complaints or compliments)

General Level of Satisfaction with work:

☒ Well Satisfied ☐ Satisfied ☐ Not Satisfied

Should the Village contract with this vendor in the future? ☒ Yes ☐ No

Reviewers: Scott Barr

Date: 1/11/13

2013-2017 Capital Project Sheet

Project # **ST-004**

Project Description **Roadway Maintenance Program**

Project summary, justification and alignment to Strategic Plan

Capital and Motor Fuel Tax funds for on-going annual maintenance of the Village's 160 miles of streets. Projects to utilize various processes such as crack seals, pavement seals, and resurfacing with new asphalt. The funding listed as 'Other/Miscellaneous' is for asphalt purchased and rental of equipment, such as a grinder to be used by Public Works Streets Division for various patching operations during the year.

Cost Summary	New	Maintenance	Replacement	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Years	TOTAL
Professional Services				75,000	75,000	80,000	85,000	90,000		405,000
Land Acquisition										-
Infrastructure		X		4,620,000	4,505,000	4,585,000	5,170,000	5,800,000		24,680,000
Building										-
Machinery/Equipment										-
Other/Miscellaneous		X		116,500	115,000	146,500	145,000	176,500		699,500
TOTAL COST				4,811,500	4,695,000	4,811,500	5,400,000	6,066,500	-	25,784,500

Funding Source(s)

220-Capital Improvements Fund	▼	3,311,500	3,545,000	3,661,500	4,250,000	4,916,500		19,684,500
102-MFT	▼	1,500,000	1,150,000	1,150,000	1,150,000	1,150,000		6,100,000
	▼							-
	▼							-
TOTAL FUNDING SOURCES		4,811,500	4,695,000	4,811,500	5,400,000	6,066,500	-	25,784,500

Project status and completed work

Annual Program.

Grants (funded or applied for) related to the project.

Motor Fuel Tax (MFT) funding also utilized.

Impact-annual operating expenses	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	TOTAL
Projected Operating Expense Impact:							-

The maintenance scheduled will increase the life of the pavement. Deferral of work will significantly increase future maintenance costs.

Map/Pictures of Project



Priority Score

A

Project Manager:

Scott Barr

Program:

342

Department:

Public Works

2013 ROADWAY MAINTENANCE PROGRAM
STREETS ESTIMATED TO BE RESURFACED
STREET RESURFACING PHASE II

STREET	FROM	TO
40TH ST	ELM ST	STERLING RD
40TH ST	W. OF FAIRVIEW	FAIRVIEW AVE
41ST ST	W. OF EARLSTON RD	FAIRVIEW AVE
65TH ST	FAIRMOUNT AVE	DAVANE LN
66TH ST	BRIARGATE DR	FAIRVIEW AVE
BERRYWOOD LN	65TH ST	66TH ST
BLODGETT CT	65TH ST	N END
CRESCENT DR	CUL DE SAC	FAIRMOUNT AVE
CUMNOR RD	55TH ST	THIRD ST
DAVANE CT	65TH ST	N. END
DAVANE LN	66TH ST	65TH ST
EARLSTON RD	OGDEN AVE	39TH ST
EIGHTH ST	CUMNOR RD	WILLIAMS ST
FLORENCE AVE	FIFTH ST	SECOND ST
FOURTH ST	FAIRVIEW AVE	WILLIAMS ST
GLENDENNING RD	OGDEN AVE	39TH ST
SEVENTH ST	CUMNOR RD	WILLIAMS ST
SIXTH ST	CUMNOR RD	WILLIAMS ST
ST JAMES CT	S. END	66TH ST
STERLING RD	OGDEN AVE	39TH ST
THIRD ST	FAIRVIEW AVE	CUMNOR RD
VICTOR ST	55TH ST	SECOND ST