Bolingbrook
a place to grow

Pavement Standards

Sheet 3

Street Standards

General Specifications
It is intended that all streets shall be constructed in accordance with the most recently adopted edition of the I.D.O.T. "Standard Specifications for Road & Bridge Construction." In particular, temperature restrictions and the use of superpave standards, for paving shall conform to this article.

It shall be the contractor's responsibility to provide proper barricading, warning devices and safe management of traffic within the area of construction. All such devices and their installation shall conform to the "Illinois Manual of Uniform Traffic Control Devices for Streets and Highways," latest edition and in accordance with the "Village of Bolingbrook Development Code."

All streets are to be kept clean and free of construction debris and mud at all times and, if necessary, will be swept away.

The full width of public right-of-way shall be graded, including the subgrade of the areas to be paved. All stumps, trees that can not be saved, boulders and similar items shall be removed.

Subgrade & Base Materials
Prior to the construction of the curb & gutter and placement of the base material, the streets shall be fine graded to within one tenth foot ($\frac{1}{10}$) of the final subgrade elevation, to a point two feet (2') beyond the back of the curb.

Streets shall be constructed on a subgrade material having an Illinois Bearing Radio (IBR) of not less than 4. If a lesser subgrade material exists, it shall be removed and replaced with suitable material or treated in a manner as specified by a competent soils engineer who will be retained by the Village of Bolingbrook, but whose fee will be paid by the applicant.

Final Pavement & Final Grades
The pavement materials shall be as detailed on the engineering plans. Thickness specified shall be considered to be considered to be the minimum compacted thickness.

Striping will be thermoplastic or a high quality yellow or white paint. The Village Engineer will make the decision on which will be used.

Combination Curb & Gutter (30-408 (e))

General Specifications
Curb & gutters shall be constructed along the outside pavement lines of all streets. A three (3") inch stone bedding (CA-6) is required under all curbs.

Concrete curb & gutter shall be reinforced with two (2) #5 rebars.

The minimum thickness of the gutter flag for all curb & gutter types shall be 8".

Expansion Joints
Expansion joints for combination curbs & gutters shall be three fourths ($\frac{3}{4}$") inches thick impregnated asphalt and shall extend the entire depth of the curb & gutter. The expansion joints shall be placed at fifty (50') foot intervals for hand pours and at one hundred (100') foot intervals for slip or monolithic pours. There shall also expansion joints at the P.C. & P.T. of any curb curvature and five (5') feet from each side of all in-curb inlets or catch basins. Each expansion joint shall have two (2) one (1") inch dowel bars approximately eighteen (18") inches long and properly greased.

Contraction Joints
Contraction joints for combination curb & gutters shall be formatted by steel templates or by sawcutting. The contraction joints shall be formed, or cut, at twelve and one half ($12\frac{1}{2}$') foot intervals, to a thickness one eighth ($\frac{1}{8}$") inch, to a length equal to the width of the curb & gutter and to a depth of two (2") inches below the surface. If the joints are formed with steel templates, the templates shall be left in place until the concrete has sufficiently set in place to hold its shape, but shall be removed while the forms are still in place. If the joints are sawcut, the joints shall be cut within twenty-four (24 hrs) hours of the pour. All contraction joints shall be filled with I.D.O.T. approved sealant.

Curing Compound
When the ambient temperature is forty (40°) degrees and on the rise, all concrete curb & gutter shall be protected with curing compound on all exposed surfaces. If forms are used in construction, curing compound shall be applied on the sides of the curb & gutter immediately following removal of the forms. The compound shall be an ASTM 309-89, Type I, translucent membrane - forming, curing compound with a fugitive dye. When the ambient temperature is forty (40°) degrees and on the decrease, the concrete curb & gutter shall be protected with an insulating cover that adequately prevents hydration heat loss and water loss, in lieu of curing compound.

Sidewalks (30-414)

Material & Construction
Sidewalks shall be constructed of Portland Cement (class SI) to a thickness of five (5") inches. Concrete for such sidewalks shall have a minimum twenty-eight (28) day compressive strength of four thousand (4000 lbs) pounds, and shall contain not less than three (3%) percent or more than six (6%) percent entrained air. Slump shall not be less than two (2") inches and not more than four (4") inches. Three (3), five-eighths ($\frac{5}{8}$") reinforcing bar, ten (10') feet in length shall be placed in all crossovers. All concrete walks shall have a boll ring finish prior to applying a broom finish and shall be true to grades as approved by the Village Engineer. Mesh with six (6") inch spacing will be required at all driveway locations. The sub-base should consist of I.D.O.T. specified CA-7 material, which has been mechanically compacted.

Curing Compound
When the ambient temperature is forty (40°) degrees and on the rise, all concrete curb & gutter shall be protected with curing compound on all exposed surfaces. If forms are used in construction, curing compound shall be applied on the sides of the curb & gutter immediately following removal of the forms. The compound shall be an ASTM 309-89, Type I, translucent membrane - forming, curing compound with a fugitive dye. When the ambient temperature is forty (40°) degrees and on the decrease, the concrete curb & gutter shall be protected with an insulating cover that adequately prevents hydration heat loss and water loss, in lieu of curing compound.

Expansion & Contraction Joints
Expansion joints three-fourths ($\frac{3}{4}$") inch thick and full depth of the walk shall be placed at one hundred (100') foot intervals. Material shall be asphalt impregnated joint material manufactured for that use. Contraction joints shall be placed at intervals equal to the width of the concrete walk.

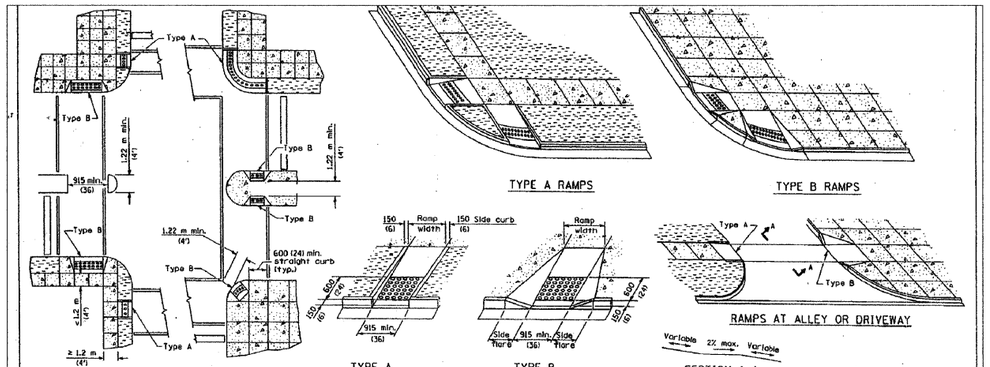
All sidewalks will be backfilled within a tree (3) day time period following pouring.

Curb Ramps for Sidewalks (ISP 04-30)
This work shall consist of construction sidewalk curb ramps with detectable warnings in compliance with the Americans with Disabilities Act, Accessibility Guidelines (ADAAG). Work shall be according to Section 424 of the Standard Specifications except as modified herein.

The detectable warnings shall consist of an area of truncated domes that provide both visual and tactile cues to pedestrians who are about to enter into traffic. The warning area shall begin 6 in. from the back of the curb and continue 2 ft. in the direction of pedestrians travel for the entire width of the walking surface.

The detectable warnings shall also present a contrast in color from the adjacent sidewalk. This shall be accomplished by constructing the warning area, plus the 6 in. area between the warning area and the back of the curb, out of concrete that is integrally colored red. However if the sidewalk is brick or of the same dark color, the contrast requirement shall be achieved with normal (grey), Class SI concrete.

The concrete shall be placed and finished according to Article 424.06 except the area to be stamped shall not be brushed. When the bleed water has been absorbed, stamping shall begin. The entire width of the curb ramp shall be stamped at the same time. A single stamp or a combination of stamps may be used. The base elevation of the domes shall be even with the adjacent sidewalk surface; the stamp shall not be forced down into the concrete. Upon completion of curing, or after cold weather protection if required, the protruding mortar tip on the top of each dome shall be removed and the dome rubbed or ground smooth.



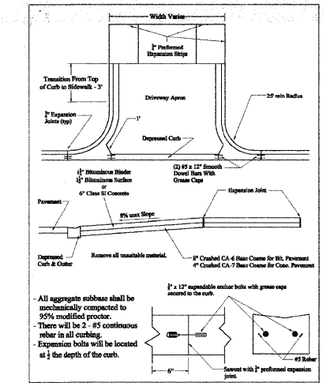
DATE	REVISIONS
1-1-04	Added detectable warnings and changed title.
1-1-00	Revised Standard title.

CURB RAMPS FOR SIDEWALKS
(Sheet 1 of 2)
STANDARD 424001-03

GENERAL NOTES
The maximum slope of the side flare for type B ramps shall be 1:10; however, if the width of the landing area between the top of the ramp and an obstruction is less than 1.2 m (4'-0") then the maximum slope shall be 1:12.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (run).

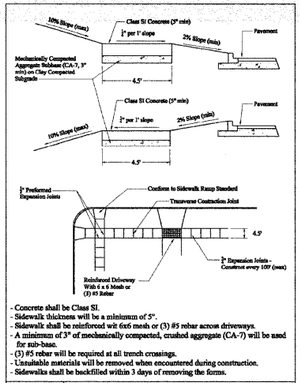
All dimensions are in millimeters (inches) unless otherwise shown.



- All aggregate subbase shall be mechanically compacted to 95% modified proctor.
- There will be 2 - #5 continuous rebar in all curbing.
- Expansion bolts will be located at ½ the depth of the curb.

Revisions
1-05-98 PD
10-20-04 LC

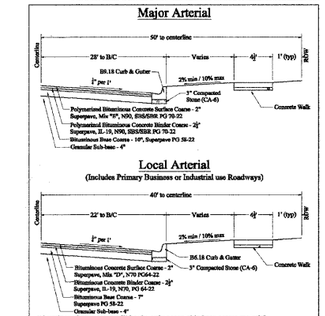
Typical Commercial Driveway



- Concrete shall be Class SI.
- Sidewalk thickness will be a minimum of 5".
- Sidewalk shall be reinforced wit 6x6 mesh or (3) #5 rebar across driveways.
- A minimum of 3" of mechanically compacted, crushed aggregate (CA-7) will be used for sub-base.
- (3) #5 rebar will be required at all trench crossings.
- Unstable materials will be removed when encountered during construction.
- Sidewalks shall be backfilled within 3 days of removing the forms.

Revisions
1-05-98 PD

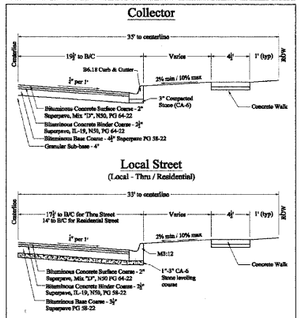
Sidewalk Section & Layout



- Bituminous base course will be the only acceptable base coarse material.
- 3" stone will be used as fill for undercuts in the sub-base.
- All cut & fill areas require 95% compaction for the sub-base. (Modified Proctor)
- Major arterials shall have (4) 12' lanes and a sixteen (16') foot raised median.
- Local arterials shall have (3) 12' lanes and a two (2') foot painted median.
- All striping will be thermoplastic.

Revisions
1-06-98 PD
03-13-03 LC
10-20-04 LC

Typical Flexible Pavement #1

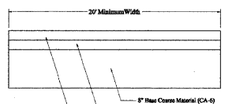


- Bituminous base coarse will be the only acceptable base coarse material.
- 3" stone will be used as fill for undercuts in the sub-base.
- All cut & fill areas require 95% compaction for the sub-base. (Modified Proctor)
- All striping will be thermoplastic.

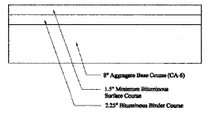
Revisions
1-06-98 PD
03-13-03 LC
03-07-06 LC

Typical Flexible Pavement #2

Parking Lot Cross-Section @ Fire Lanes
(See Note #2)



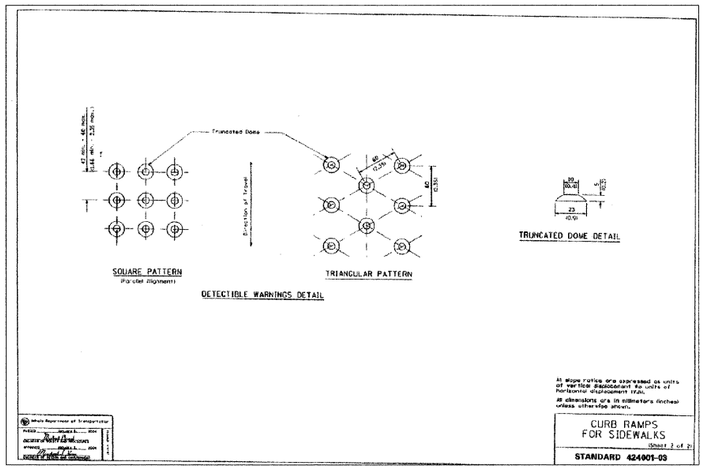
Parking Lot Cross Section



- All asphalt shall be at least superpave N50 or higher grade.
- All aggregate Subbase shall be mechanically compacted to 95% Modified Proctor.
- For fire lanes, other pavement alternatives may be substituted if the pavement's structural number is at least 2.5.

Revisions
1-07-98 PD
03-13-03 LC
10-20-04 LC
09-14-07 LC

Typical Parking Lot Pavement



- ¾" preformed expansion strips shall be placed using 2 - 1" smooth dowel bars with grease caps every 100', 5' on either side of drainage structures, P.C.s, radius points and back of cul-de-sacs.
- Contraction joints shall be 2" deep and at 12.5' intervals.
- Sawcuts shall be made within 24 hours and sealed with an IDOT approved joint sealant.
- Concrete shall be IDOT class SI.
- All curbs & gutters shall conform to IDOT specifications, except as shown.
- Curing compound is to be used on all curbs & gutters and shall conform to IDOT specifications.
- Temperature protection is required during cold weather per IDOT specifications.
- A 3" stone bedding of crushed stone (CA-6) is required under curb, unless the sub-base is time stabilized or is composed of natural sand gravel soils.
- Gutter flag shall have a minimum thickness of 8".
- Concrete curb & gutter shall be reinforced with two (2) #5 rebars, except at expansion joints.

Revisions
1-06-98 PD
7-18-01 PD
03-13-03 LC
10-20-04 LC

Typical Curb & Gutter #1

Depressed Curb

- ¾" preformed expansion strips shall be placed using 2 - 1" smooth dowel bars with grease caps every 100', 5' on either side of drainage structures, P.C.s, radius points and back of cul-de-sacs.
- Contraction joints shall be 2" deep and at 12.5' intervals.
- Sawcuts shall be made within 24 hours and sealed with an IDOT approved joint sealant.
- Concrete shall be IDOT class SI.
- All curbs & gutters shall conform to IDOT specifications, except as shown.
- Curing compound is to be used on all curbs & gutters and shall conform to IDOT specifications.
- Temperature protection is required during cold weather per IDOT specifications.
- A 3" stone bedding of crushed stone (CA-6) is required under curb, unless the sub-base is time stabilized or is composed of natural sand gravel soils.
- Gutter flag shall have a minimum thickness of 8".
- Concrete curb & gutter shall be reinforced with two (2) #5 rebars, except at expansion joints.

Revisions
1-06-98 PD
7-18-01 PD
3-13-03 LC
10-20-04 LC

Typical Curb & Gutter #2

FILE NAME = ⊕FILE⊕	USER NAME = ⊕USER⊕	DESIGNED - WTS	REVISED -
		DRAWN - DLB	REVISED -
	PLOT SCALE = ⊕SCALE⊕	CHECKED - DJ	REVISED -
	PLOT DATE = ⊕DATE⊕	DATE - 8/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BOLINGBROOK CONSTRUCTION STANDARDS
REMINGTON BLVD & SCHMIDT ROAD
SCALE: 1"=20' | SHEET NO. 10 OF 10 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00052-00-TL	WILL	10	10
		CONTRACT NO. 63312		
		ILLINOIS FED. AID PROJECT		