



City of Lakewood  
Division of Streets and  
Forestry

(216) 529-6810  
streets@lakewoodoh.gov

## Requirements for Public Sidewalks, Curbs and Driveway Aprons

**Call Public Works 216-529-6810 for a pre/post pour inspection**

### PART 1 – GENERAL

The “sidewalk” is the portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for the use of pedestrians. Sidewalks and driveway aprons are located on public property but per L.C.O. 903, their repair is the responsibility of the adjacent property owner. These specifications are intended to have all sidewalks constructed according to common standards for the entire city. All common concrete constructions practices as recommended by the American Concrete Institute (ACI) shall be followed. Any alterations or deviations from these specifications must be done through the City Engineer or Public Works Director.

#### 1.1 PERMIT

Before installing a new driveway apron or public sidewalk, a permit must first be obtained from the in the Building Department at City Hall **AT LEAST TWO WORKING DAYS PRIOR TO THE START OF THE PROJECT**. This two-day period starts the next working day after the application form is completed. The permit charge is \$25 per address being work on, as established by ordinance. All contractors shall be registered with the Building Department.

#### 1.2 QUALITY CONTROL AND INSPECTION

Quality control is the responsibility of the permit holder.

Inspections – Two: Forms and a final.

##### INSPECTION

All concrete work shall be inspected both before and after the concrete is cast. The Streets Division shall be called **216-529-6810** after the forms are in place and **before** the concrete is cast. The Inspector shall also be called after the work is complete for the final inspection. A minimum of four (4) hours advanced notice is required for inspections. If the work also includes a residential driveway, the inspection will be performed by the Building Department inspector with the driveway work. The inspector will be examining the dimensions of the pour, compliance with the specifications contained herein, quality of the finish and conformance with surrounding grades and backfilling of the form excavation. The permit holder shall correct all deficiencies so noted at his or her expense. **All uninspected concrete work is subject to removal at the permit holder's expense.**



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## **PART 2 – MATERIALS**

### **2.1 CONCRETE**

Requirements of ODOT items 499, 608 and 609 shall apply except as modified herein. The Contractor is responsible for products that comply with the specifications.

### **2.2 CONCRETE MIX PROPORTIONING/PERFORMANCE/PRODUCTS**

**A. Properties Normal strength concrete to be used for sidewalks, driveway and aprons shall be ODOT Class “QC1” concrete or better with a minimum 28-day compressive strength of 4000 PSI. The mix shall contain a minimum of 6% air entrainment and be placed with a maximum slump of 4”. The slump can be increased to a maximum of 8” with the use of chemical admixtures only, not with water.**

B. Accelerators: Accelerating admixtures shall be chloride-free (contribute no more than 0.005% chloride content by weight of cement). An accelerator may be necessary to meet performance requirements based on the mix design and/or lower ambient soil and concrete temperatures.

### **2.3 REINFORCEMENT**

Concrete for residential and commercial driveway aprons and sidewalk blocks behind the apron shall have fibrillated polypropylene fiber. Use 1-1/2 lbs./CY (residential) 3 lbs./CY (commercial) of fibrillated polypropylene fiber meeting the requirement of ASTM C-1116, Type III, Section 4.13 in lieu of steel reinforcing. Concrete load tickets shall contain documentation for the type of fiber reinforcement used.



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## **2.4 CURING**

Membrane curing material used shall exceed the moisture retention requirements of ASTM C 309 and have a minimum 25% solids content and will not yellow when exposed to sunlight.

## **PART 3 – EXECUTION**

### **3.1 SIDEWALKS**

Every street has a sidewalk width specified in the Codified Ordinances of Lakewood. New sidewalks shall match this width and shall accurately align with existing adjacent walks, unless approved by the Public Works Director, City Engineer or City Architect.

Sidewalks shall be 4" thick and slope toward the curb at 1/4" to 3/8" per foot of width.

Preparation for concrete pours shall consist of grading, leveling and compacting the soil surface, followed by placing a minimum compacted 2" of approved stone base such as limestone screenings, No.8 stone, or ODOT Item No.304 stone. City funded projects shall use natural sand and aggregates only.

If tree roots are encountered during the excavation or base preparation, the Forestry Department will be contacted at 216-529-6810. There will be no removing of any significant root structure of trees, public or private, without contacting Forestry to determine the effects to the tree.

Tooled control joints shall be spaced at the same distance apart as the sidewalk is wide and shall be spaced evenly. If an unsymmetrical end block is created due to an odd dimension, the joint spacing shall be adjusted by pro-rating so that even spacing over the entire width of the work results. The maximum block length is the width of the walk. Sidewalks shall be edged with a 1/4" radius edging tool. All fins and spatter shall be removed.

A tooled control joint shall be placed in such a way as to define a 6 inch wide curb parallel to the pavement edge at locations where the curb and sidewalk are integral.

Expansion joints shall be placed at a minimum of 50' intervals and at each end of the work and shall have tooled edges, unless otherwise approved by the inspector. Expansion joint shall separate all private property from the public right-of-way.

A broom finish shall be applied perpendicular to the direction of foot traffic prior to tooling joints. A "swirl" finish is also acceptable. This includes the blocks between the apron and the private drive. All joints and edges shall be retooled after texturing to produce a "picture frame" pattern and shall be no greater in width than one and one-half inches (1 1/2"). Stamped or colored concrete is not permitted within the City right-of-way.



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### **3.1.1 CURB RAMPS**

Curb ramps shall be installed at all cross walk locations. The installation shall conform to Ohio Department of Transportation (ODOT) Standard Construction Drawing BP-7.1, latest revision. Base of ramp shall be flush with the top of pavement and 12" thick at the street. The alignment of the ramp and detectable warning panel shall be approved by the inspector prior to pour.

Detectable warning plates shall be cast iron. Only EJIW 7005 or Neenah R-4984 shall be used.

All other sidewalk requirements pertain.

### **3.2 CURBS**

All existing curb (sandstone, granite and concrete) to be removed shall be completely removed to 12" below pavement grade. Existing curb to remain shall be saw cut full depth.

All curb designs shall conform to ODOT Standard Construction Drawing BP-5.1 (Type 6), unless approved otherwise by the Public Works Director or City Engineer. Standard 1'-6" x 6" curb installation requires base at 1'-0" below pavement grade with a reveal of 6" or matching to the adjacent curb, whichever is less. Contact the inspector for the curb type to use. Curb top elevation shall not be higher than the sidewalk.

Control joints shall be saw cut every 10 feet.

Any existing underdrains disturbed or removed as part of the work shall be restored with matching diameter perforated Schedule 40 PVC or ADS N-12 corrugated polyethylene smooth lined underdrain pipe (without sock) securely joined with fernco couplings to adjacent underdrain pipe to remain and/or cored into a catch basin with using non-shrink grout at both ends of the protrusions. All such connections shall be inspected by the Lakewood Division of Water and Wastewater Collection prior to bedding, 216-529-5692.

Underdrain bedding and cover shall consist of natural washed No.8 stone or gravel placed to within 3 inches of the finished grade.



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### **3.3 DRIVE APRONS**

The requirements for driveway aprons include the sidewalk blocks between the apron and the private driveway.

Residential driveway aprons shall be a minimum of 6" thick with a minimum of 4" of ODOT Item No. 304 natural limestone.

Commercial driveway aprons shall be a minimum of 8" thick with a minimum of 6" of ODOT Item No. 304 natural limestone.

The subgrade soil shall be stable and rolled and compacted prior to placing subbase stone.

Existing curbing shall be completely removed and replaced with a concrete curb 6 inches wide by 1'-0" below street surface and integral with the apron concrete. Joints with existing curb to remain shall be saw cut full depth neat and true. Curb cut shall be 1-1/2" above gutter grade and slope toward street.

The apron shall flair 1'-6" to 2'-0", or as approved by the inspector.

Where drive apron and curb are cast separately, the curb portion shall extend a minimum 12" below pavement grade. Approved expansion joint material shall be installed between apron and curb.

Control joints shall be tooled or sawed to a minimum of 1 1/2" and placed along the apron / drive centerline and at 4 to 6 foot spacing away and as dictated by aesthetic considerations.

### **3.4 UTILITY FIXTURES:**

It is the responsibility of the Contractor to contact the owners of all utility fixtures that exist within the work area as well as the Ohio Utilities Protection Service (O.U.P.S.) at 1-800-362-2764 prior to any work.

The Division of Water shall approve all construction pertaining to curb or valve boxes, meter vaults, mains and hydrants in the public right-of-way. If the castings are not proper before the project



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begins, the Division of Water will schedule repairs to be done. If the owner or contractor desires, they may make the corrections themselves under the direction of the Division of Water.

The Contractor is required to ensure that curb stop valves are accessible following construction and shall be required to correct such valve installations if they are not accessible. When finished, the curb box must be flush with grade, in a vertical position, the lid easily removable and the stop accessible. The meter vault lid must be flush with grade and easily removable, and the vault ring and walls must be in sound condition (debris must not enter the vault). All tops of castings and lids shall be free of concrete when the work is complete.

### **3.5 BARRICADES FOR WORK SITE SECURITY AND PROTECTION**

The general public and vehicles shall be excluded from access to the construction site by the use of suitable fences and barricades. These shall be maintained throughout the period of construction and including a sufficient amount of curing time to prevent damage and then removed for safe passage. The contractor is responsible for any damage to freshly poured concrete and its repair and/or replacement to the satisfaction of the property owner and the inspector.

The Contractor is responsible for the installation and maintenance of all barricades, warning signs and traffic control for the duration of the project. All items shall conform to the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) or as approved by the inspector.

### **3.6 BACKFILL AND PLANTINGS**

All excavated areas shall be backfilled and compacted within 10 days of completion of concrete work. The permit holder is responsible for repairing any settlement for a year following completion of the project. The top 2 inches of the backfill shall consist of a soil suitable for vigorous plant growth.



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### **3.7 HOUSEKEEPING**

The tree lawn areas shall be kept free of all construction materials, excavation spoil and equipment for the duration of the project and shall be kept free of trip hazards to allow pedestrians to pass around the work safely, unless other arrangements are made with the inspector.

All areas disturbed by construction shall be restored to its original character by proper grading and topsoil and grass seed installation. All surplus soil, forms, equipment and concrete debris shall be completely removed from public and private property.

### **3.8 CONCRETE WASHOUT STATION REQUIRED**

Use Vinyl-Con concrete bag for washout (or approved equal). The Contractor will be required to demonstrate that the concrete station is ready for use at the pre-pour inspection. The Contractor is responsible to install and maintain the concrete washout station during and after each pour. The Contractor is responsible to direct concrete truck drivers to use the concrete washout station during pours. The Contractor shall properly dispose of the washout station upon completion of the project. Absolutely no concrete trucks will washout into the street. Any catch basin or sewer cleaning needed to remove washout material will be billed to the contractor.

### **Contact numbers**

Sidewalk Inspection: 216-529-6810

Division of Forestry: 216-529-6810

Public Works Director and City Engineer: 216-529-6692

Division of Water and Sewer: 216-529-5692

Building Department: 216-529-6270