

AN ORDINANCE PROVIDING SPECIFICATIONS FOR CONSTRUCTION & REPAIR, OF CONCRETE SIDEWALKS, DRIVEWAYS AND CURBS IN THE CITY OF HILLSBORO, OREGON, AND REPEALING ORDINANCE NO. 1010 AND ALL OTHER ORDINANCES IN CONFLICT HEREWITH.

The City of Hillsboro Does Ordain as Follows:

Section 1. That all sidewalks constructed or repaired in the city of Hillsboro, Oregon, shall be of Portland Cement concrete, placed on elevations in conformity with grades referred to the official bench mark as established by Ordinance No. 361 of said City.

Section 2. That the width of sidewalks in the business district of Hillsboro shall extend from the property line to the curb, unless otherwise ordered by City Council. In the residential districts the width shall be five (5) feet, with the outer edge, next the property line, placed (1) one foot therefrom. All sidewalks shall have a slope from the property line to the curb of one quarter (1/4) inch to the foot, except as otherwise provided herein or ordered by the City Council.

Section 3. That trees conflicting with the standard construction of sidewalks as herein set forth may be preserved under the direction of the City Engineer, by

- (a) Placing the sidewalk on the property line for the entire block.
- (b) Allowing a tree to extend into either edge of a sidewalk one foot, provided the trees are not less than 15 feet apart.
- (c) Avoiding a tree extending into a sidewalk over one foot by constructing a full width curved walk around said tree.
- (d) Raising the grade of the sidewalk at said tree not to exceed one foot and returning to the true grade of walk at a point not less than 20 feet on either side of the tree.
- (e) A combination of (two or more of the following:) (a), (b), (c), or (d) above.

Section 4. Concrete - Concrete shall be composed of cement, fine aggregate, coarse aggregate and water so proportioned and mixed as to produce a plastic, workable mixture in accordance with all requirements of this section and suitable to the specific conditions of placement.

Materials - The following grades of materials shall be strictly adhered to, and no substitutes will be permitted. (A.S.T.M. refers to the American Society of Testing Materials.)

- a. PORTLAND CEMENT - Type 1, conforming to A.S.T.M. C150-49 specifications, (delivered to job in sacks bearing the brand name when on the job mixing is done). Same brand shall be used throughout all slab work to insure uniformity of color.
- b. CONCRETE AGGREGATES - Shall consist of uncoated, durable natural sands, gravels or crushed rock. Aggregates containing soft, friable, thin, flaky, elongated, or laminated particles totaling more than 3 per cent, or containing shale in excess of 1-1/2 per cent, or silt and crusher dust finer than the No. 100 standard sieve in excess of 2 per cent shall not be used. These percentages shall be based on the weight of the combined aggregate as used in the concrete. When all three groups of these deleterious materials are present in the aggregates, the combined amounts shall not exceed 5% by weight of the combined aggregate.

Fine aggregates shall be graded from coarse to fine within the following limits:

Passing a sieve with 3/8 inch holes.	100%
Retained on No.4 sieve, not more than.	5%
Retained on No.28 sieve.	60 to 65%
Retained on No.48 sieve.	70 to 95%
Retained on No.100 sieve, not less than	95%

Coarse aggregate shall be uniformly graded from 1/4 in. to 1-1/2 in. maximum size to provide the minimum of voids.

- c. WATER. Shall be clean enough to drink, and free from acids, alkalies, salts or organic compounds.

SECTION 5 - Forms -

- a. Materials - Forms may be made of wood or metal

b. Construction - Forms shall be built true to line and grades and shall be mortar-tight and sufficiently rigid to prevent displacement or sagging between supports.

Responsibility for their adequacy shall rest with the contractor. Form surfaces shall be smooth and free from irregularities; dents, sags, or holes, when used for permanently exposed surfaces.

- c. Removal of forms - The removal of forms shall be carried out in such a manner to insure the complete safety of the exposed surfaces.

SECTION 6 - Expansion Joint - Expansion Joint Filler shall be pre-moulded strips of bituminous filled fibre or mineral aggregate, not less than 1/4 inch in thickness, and shall extend through the full thickness of the concrete at intervals not to exceed 25 feet, and between sidewalk and back of curb at cross walks or where sidewalk extends from curb to building.

SECTION 7 - Subgrade shall be compacted to a firm and unyielding surface true to line and grade and with a uniform bearing strength.

SECTION 8 - Mixing, Placing & Finishing

- a. Proportion - Unreinforced mass concrete shall yield not less than 2,000 pounds per square inch compressive strength in 28 days.

b. Mixer. - A batch type mixer with a capacity of 1/4 yard or more and equipped with a water measuring device may be used. Neither the speed nor the volume capacity of the mixer shall exceed those recommended by the manufacturer. The concrete shall be mixed until there is a uniform distribution of the materials and the mass is uniform in color and homogeneous. Minimum mixing time after all ingredients are in the mixer shall be one minute.

- c. Batch or Transit Mix. - Whenever available a batch or transit type mix may be used, when the control of the mixing is such that the strength above specified can be guaranteed and certified to. Certificates on each truck batch to be available to the Engineer on demand.

d. Tests - The Contractor shall furnish the materials to the Engineer who will make standard compression test cylinders in pairs for testing one at seven (7) days and one at twenty-eight (28) days. Test cylinders shall be made on each 200 cubic yards of concrete poured and at any intermediate time as the Engineer shall deem advisable.

- e. Consistency - Concrete is to be of a consistency which will place well under the various conditions. Slump tests may be made by the Engineer from time to time wherever there is reasonable doubt that the uniformity of the mix is being maintained.
- f. Placing of Concrete - All concrete shall be deposited in the forms within ten minutes after leaving the mixer or mixing truck. Transit mixed concrete shall be placed within one hour after leaving the plant. No concrete that has partially hardened or been contaminated by foreign material shall be deposited on the work, nor shall re-tempered concrete be used. Care shall be taken to prevent segregation of materials in pouring operation.
- g. Construction Joints - When concreting is once started, it shall be carried on as a continuous operation until the placing of the section or panel is completed. Construction joints shall be made only as indicated on the drawings, or as directed by the Engineer.
- h. Faulty Concrete - Any concrete brought to the job or placed in the forms and not complying with the specifications or through faulty workmanship is not satisfactory and acceptable to the Engineer, such concrete shall be removed and replaced at the sole expense of the Contractor.
- i. Slab Concrete - All slabs or walks shall be poured monolithic, to the thickness and grades shown on the plans or as otherwise herein specified.

Slab concrete shall not be started during or be exposed to rain, and shall not be continued during such weather after having been started under suitable conditions except long enough to come to a suitable cut-off point. Concrete placed during rain shall have the cement content increased in the amount of one sack of cement per cubic yard of concrete. All excess surface water shall be drained off in such a manner as not to injure the work.

- j. Placing and Finishing - Concrete shall be placed immediately after mixing. It shall be tamped, struck off with a template, and tamping continued until sufficient mortar is brought to the surface, after which it shall be floated with a wood, or other approved float or finishing tool, until the surface contour is true to line and grade. Gravel pockets or a deficiency of mortar shall be corrected by spreading over the surface a dry mixture of 1 part cement and 2 parts screened sand, and tamping or floating the same into the surface to form a homogeneous mixture with placed concrete.

Unless otherwise directed by the Engineer, sidewalk slabs shall be broom finish to provide a non-skid surface.

- k. Marking - Unless otherwise directed by the Engineer, the walk shall be marked on the surface in rectangular slabs not greater than 5 feet on the side. Surface edge of walk and slab shall be rounded to a radius of 1/4".
- l. Curing - All concrete work and cement finishes shall be protected as necessary against injury from the elements and defacements of any nature during construction operations.

Exposed surfaces of concrete shall be kept moist for a period of at least seven (7) days after being deposited. In hot weather, exposed concrete shall be thoroughly wetted twice daily during the first week. Approved water-saturated coverings may be used.

Prepared curing agents sprayed on the exposed surface may be used if approved by the City Engineer.

- m. Sidewalk Dimensions - All sidewalks shall be constructed four (4) inches in thickness, provided that where a section of sidewalk is used in connection with a driveway, the thickness shall be increased to six (6) inches.

SECTION 9 - Driveways

Driveways slabs shall not be less than six (6) inches in thickness, rolled edge type, and shall otherwise conform to the provisions of Ordinance No. 1052 regarding size, location, etc.

SECTION 10 - Curbs

Concrete Curbs - Unless otherwise indicated on the plans or authorized by the Engineer, concrete curbs shall be of the following dimensions; six (6) inch top, sixteen (16) inch depth with a batter on the street face of one (1) inch in six (6) inches. Batter to be carried to base of curb. Top of curb on the street face to be rounded with edging tool to a radius not exceeding one inch.

Passed by the City Council this 7th day of September 1954.

Approved by the Mayor on this 7th day of September 1954.

Reslie Kelter
Mayor

ATTEST:

Emmanuel
Recorder