

City of Elkhorn

**Driveway Regulations
and
New Sidewalk Installation**

City of Elkhorn

Construction Regulations for Sidewalks, Steps & Driveways

1.13.2 Standard Specifications for Sidewalks, Steps and Driveways.

- (a) Description. This work shall consist of constructing sidewalks, loading zones, ramps and steps of concrete masonry, with or without reinforcement as the case may be, placed on the prepared foundation or base in one course of the required dimensions and design. Unless so specifically provided by the contract, this work shall not include sidewalks or steps built integral with and as part of bridges or culverts.
- (b) Materials. The materials furnished and used in the work shall conform to the requirements for the class of material named. Specific reference is made to the following:
 - (1) Concrete Masonry, State of Wisconsin Standard Specifications for Road and Bridge Construction, current addition;
 - (2) Expansion Joint Filler, State of Wisconsin Standard Specification for Road and Bridge Construction, current addition;
 - (3) Reinforcement, State of Wisconsin Standard Specification for Road and Bridge Construction, current addition;
 - (4) Metal Conduit, State of Wisconsin Standard Specification for Road and Bridge Construction, current addition. Concrete used in the work shall be Grade AA.
- (a) Standard Sections. The construction of concrete sidewalks, steps and driveways shall comply with Section 602 of the "State Specifications".
- (b) Sidewalks. Standard sidewalks shall be 4 inches minimum thickness except at driveways where the sidewalk shall match the thickness of the adjacent concrete drive with a minimum thickness of 6 inches provided.
- (c) Driveways. Concrete driveways shall be reinforced with 6 x 6, 10-10WWF and shall be constructed to the following minimum thickness:
 - (1) Residential - 6 inches thick.
 - (2) Commercial - 7 inches thick.
- (d) Base Course. Concrete sidewalk, steps, and driveways shall be constructed on a minimum 3 inch thick compacted crushed stone base. The crushed stone base shall be crushed limestone base course conforming to Gradation No.3 of Subsection 304.2.6 of the "State Specifications".
- (e) Joints. Joints shall be placed and constructed in accordance with Subsection 602.3.1.5 of the "State Specifications" and these requirements.
- (f) Curb Ramps. Curb ramps shall be constructed at locations shown on the Plans in accordance with Standard Detail Drawing S.D.D. 8D 5-B (Type 2 Ramp) of the "State Specifications". The Contractor may use either a diamond or herringbone textured ramp surface.
- (g) Opening to Traffic. The pavement shall be opened to traffic in accordance with Subsection 415.5.15 of the "State Specifications". Pedestrian traffic shall not be allowed for a period of at least 3 days after placing concrete and vehicular traffic shall be excluded for a period of at least 7 days after placing or until after test cylinder show a compressive strength of 3000 psi or more.
- (h) Test Specimens. The Contractor shall take two representative concrete samples in accordance with ASTM C-31 for 7 day and 28 day compression test in a in accordance with ASTM C-39 from approximately every 25 cubic yards of concrete placed or as directed by the Engineer. Test cylinders shall be six inches (6") in diameter by twelve inches (12") in height. The Contractor shall field cure, care for and ship the test cylinders to the testing laboratory. All costs of preparing the cylinders, shipping and testing shall be borne by the contractor. Copies of test results shall be delivered to the City Engineer.

1.13.3 Construction Methods: Sidewalks.

- (a) Material. All sidewalks shall be constructed of concrete masonry.
- (b) Preparation of Foundation. The foundation shall be formed by trenching or filling to the required elevation of the bottom of the concrete or bottom of the sub-base if tamped or otherwise compacted to insure stability. In cuts the foundation shall be made sufficiently wide to permit placing and finishing; and on embankments the foundation shall be constructed to a width at least 2 feet wider than the proposed sidewalk and extending not less than one foot beyond each edge of the sidewalk.
- (c) Forms. Forms shall be of wood or metal and shall be straight and of sufficient strength to resist springing, tipping or other displacement during the process of depositing and consolidating the concrete. If of wood, forms shall be surfaced plank of at least 2-inch nominal thickness stock except for sharply curved sections, and if of metal, they shall be of approved section and shall have a flat surface on top. The forms shall have a depth at least equal to the depth of the sidewalk. They shall be securely staked, braced and held firmly to the required line and grade, and shall be sufficiently tight to prevent leakage of mortar. All forms shall be cleaned thoroughly and oiled before the concrete is placed against them.
- (d) Depth of Concrete. All sidewalks shall meet the requirements as stated in Section 1.13.2(d) above.
- (e) Placing and Finishing Concrete. Except as otherwise revised or amended herein, all the pertinent requirements of §501, State of Wisconsin Standard Specifications for Road and Bridge Construction, shall be applicable to the concrete masonry involved. The foundation and forms and reinforcement, when required, shall be checked and approved by the City Engineer, Director of Public Works or designee before the concrete is placed. The concrete shall be placed on a moist foundation, deposited to the required depth, and consolidated and spaded sufficiently to bring the mortar to the surface, after which it shall be struck off and floated with a wooden float. Before the mortar has set, the surface shall be steel troweled and brushed. Before the concrete is given the final surface finish, the surface of the walk shall be checked with a 10' straightedge, and any areas which show a variation or departure from the testing edge of more than 1/4" shall be corrected by adding or removing concrete as necessary.
- (f) Reinforcement. Where reinforcement is required it shall conform to and be placed in accordance with the details shown on the plans or as directed by the engineer.
- (a) Joints. For sidewalk of uniform width, transverse joints shall be constructed at right angles to the centerline of the sidewalk, and longitudinal joints shall be constructed parallel to the centerline of the walk, unless otherwise provided. For sidewalks of variable or tapering widths, the transverse and longitudinal joints shall be at right angles to each other insofar as feasible, and the joints shall be constructed as laid out in the field by the engineer. Whenever the entire area between the back of the curb and the right-of-way or lot line is to be covered with concrete sidewalk and when a permanent structure is located within such area or on the right-of-way or lot line, such sidewalk shall be constructed on alternate sections extending from the back of the curb to the permanent structure, and such sections shall not exceed 12 linear feet of sidewalk length. When the alternate sections placed in the first operation have been cured as specified, the intervening sections shall be placed to complete the walk.
 - (1) Sidewalk shall be divided into sections by means of contraction joints.
One-half-inch transverse expansion joint filler shall be placed through the sidewalk at uniform intervals of not more than 96'.
- (h) One-half-inch expansion joint filler shall be placed between the sidewalk and back of abutting parallel curb or gutter and one-inch between sidewalk and buildings or other rigid structures. One-inch expansion joint filler shall be placed between sidewalk approaches and the back of curb or gutter or edge of pavement.
- (i) No joint shall deviate more than 5 degrees from a position perpendicular to the surface of the finished sidewalk, nor shall the axis of any joint deviate more than 1/2" either way from a straight line or from the designated alignment at any point. If the joints are constructed in sections, there shall be no offsets or concrete struts between adjacent units.

- (j) When the sidewalk is constructed in partial width slabs, transverse joints in adjacent slabs shall be placed in line with like joints in the previously constructed slabs. In the case of widening existing sidewalks, transverse joints shall be placed in line with like joints in the existing sidewalk.
- (i) If feasible, sidewalks shall be divided into sections not less than 3' nor more than 12' in any dimension. The unit areas shall be produced by use of metal slab division forms extending to the full depth of the concrete, or, when so approved by the engineer, by contraction joints, as defined hereinafter.
- (j) A contraction joint in sidewalk shall consist of a slot or groove, at least one inch in depth and 1/4" in width, formed by inserting a metal parting strip in the concrete after it has been struck off and consolidated and while the concrete is still plastic. As soon as the concrete shall retain its shape, the parting strip shall be removed and the joint edge-finished. When approved by the City Engineer, contraction joints at least one inch in depth and approximately 1/8" in width, may be sawed in the concrete sidewalk. The sawing shall be done as soon as practicable after the concrete has set sufficiently to preclude releveling during the sawing and before any shrinkage cracking takes place in the concrete.
 - (1) Expansion joint filler shall extend to the full depth of the concrete and the top shall be slightly below the finished surface of the sidewalk.
 - (2) The concrete at the faces of all joints shall be thoroughly spaded and compacted to fill the voids, and the surface shall be finished smooth and true to grade in a manner as above provided. The edges of the sidewalk along forms, joints and metal slab division forms shall be rounded with an edger of 1/4" radius.
 - (3) Joints shall not be sealed.
- (m) Curing and Protection. Concrete sidewalks shall be cured by the Wet Fabric Method, the Impervious Coating Method or the Paper Method, conforming to the requirements set forth under, State of Wisconsin Standard Specifications for Road and Bridge Construction, current addition.
 - (1) Protection. Protection of sidewalks shall conform to the pertinent requirements specified for the protection of concrete pavement as set forth under, State of Wisconsin Standard Specification for Road and Bridge Construction, current addition, except that sidewalks may be opened to pedestrian traffic after expiration of the curing period.
- (n) Backfilling and Restoring the Site of the Work. Where the sidewalk does not abut curb, gutter, pavement or other structures and when the concrete in such sidewalk had been cured and the forms removed, the spaces along the sides shall be backfilled with satisfactory soil and thoroughly compacted. The backfill shall conform to the section shown on the plans. The contractor shall dispose of surplus excavation and shall restore the site of work to a neat and workmanlike condition.
- (o) Integral Curb and Sidewalk. Where integral curb and sidewalk is specified, such work shall consist of a sidewalk constructed as above specified, with a hanging concrete curb built integral with the same, all in accordance with the design and details shown on the plans.
- (p) Curb ramps shall be constructed at locations shown on the Plans in accordance with Standard Detail Drawing S.D.D. 8D 5-B (Type 2 Ramp) of the "State Specifications". The Contractor may use either a diamond or herringbone textured ramp surface.
- (q) Loading Zones. Raised loading zones in streets shall be built of concrete conforming to the requirements above set forth and shall be constructed at the locations and in accordance with the details and dimensions shown on the plans. When loading zones are to be constructed on bases to be covered with a wearing surface, the loading zone shall be tied to the pavement with not less than four 3/4" dowel or tie bars, 10" in length. The construction methods shall conform to the pertinent requirements set forth in §602.3.1, State of Wisconsin Standard Specifications for Road and Bridge Construction, current addition. Openings for traffic signals, if any, shall be provided as described.
- (r) Steps. When construction of steps is included they shall be built at the locations and in accordance with the design, dimensions and details shown on the plans. The work shall include reinforcement and necessary excavation, backfilling and disposal of excess material from excavation. Except as otherwise provided, the materials and construction methods shall conform

to the pertinent requirements hereinbefore set forth in §602.3.1, State of Wisconsin Standard Specifications for Road and Bridge Construction, current addition.

- (s) Sidewalks. All sidewalks built within the City shall not be less than four (4) feet in width, except on Wisconsin Street, from Court Street to East Geneva Street, sidewalks shall be not less than eight (8) feet in width, and on Walworth Street from Broad Street to Washington Street, sidewalks shall not be less than 10' in width, and upon Wisconsin Street from East Geneva to the tracks of the Milwaukee and Saint Paul Railway Company, sidewalks shall be not less than five (5) feet in width, and from Washington Street to Jackson Street on Walworth Street, sidewalks shall be five (5) feet in width. Council may require a higher minimum standard where required by walks serving schools, commercial areas, places of public assembly or other special cases. All sidewalks shall comply with Section 8 of the Code of Ordinances.

In addition to all other requirements stated herein, all sidewalks shall be constructed, maintained and repaired in compliance with Wisconsin Statutes 66.615.

Historical Landmarks.

- (1) This section shall in no way be construed to conflict with Section 11 of the Elkhorn Zoning Ordinance relating to historic landmarks. Council has determined that the following is specifically exempted from the requirements of this section as to sidewalk design and repair: That section of sidewalk lying at or near the corner of North Washington and East Jefferson Streets. The same being an original brick construction, with original masonry brick laid circa 1840.

1.13.4 Opening to Traffic.

The pavement shall be opened to traffic in accordance with Subsection 415.5.15 of the "State Specifications". Pedestrian traffic shall not be allowed for a period of at least 3 days after placing concrete and vehicular traffic shall be excluded for a period of at least 7 days after placing or until after test cylinder show a compressive strength of 3000 psi or more.

8.03.2 Driveway location, design, and construction requirements

(1) General Requirements. The location, design and construction of driveways shall adhere to the standards and details on file in the office of the Director of Public Works and in accordance with the following:

(a) General Design. Private driveways shall be of such width and so located that all of such driveways and their appurtenances are within the limits of the frontage abutting the street of the property being served. All driveway entrances and approaches shall be so constructed that they shall not interfere with the drainage of streets, side ditches, or roadside areas or with any existing structure on the right-of-way.

(b) Number. The number of driveways to serve an individual property fronting on a street shall be one, except where deemed necessary and feasible by the Director of Public Works for reasonable and adequate service to the property, considering the safety, convenience and classification designation of the street.

(c) Variances. Any of the requirements may be varied by the Director of Public Works in such instances where the peculiar nature of the property or the design of the street may make the rigid adherence to these requirements impossible or impractical.

(d) Island Areas. Islands between driveway openings shall be provided with a minimum of 6' between all driveways and 3' at all lot lines.

(e) Residential Driveway. Unless special permission is first received from the Common Council, a residential driveway shall be no greater than 24' wide at the curb line and 18' wide at the outer or street edge of the sidewalk.

(f) Angular Placement of Driveway. The centerline of the drive may be parallel to the property line of the lot where access is required or at right angles to the curb line.

(g) Commercial and Industrial Driveways. No part of a private driveway located within the dedicated area of a public street shall, except as hereinafter provided, have a width greater than 35 feet wide at the curb line and 30' wide at the property line.

(h) Angular Placement of Driveway. The angle between the centerline of the driveway and the curb line shall not be less than 60 degrees.

(2) Variances. Any of the above requirements may be varied by the Director of Public Works in such instances where the peculiar nature of the property or the design of the street may make the rigid adherence to the above requirements impossible or impractical.

(3) Prohibited Driveways.

(a) No person, firm or corporation shall place, construct, locate in, or cause to be placed, constructed or located in, any obstruction or structure within the limits of any public road, highway or street in the City of Elkhorn except as permitted by this section. As used herein the word "structure" includes private driveways, a portion of which extends into any public road, highway or street, and which is non-conformance with this section.

(b) No driveway shall be closer than 30' to the extended street line at an intersection.

(c) The grade of that portion of any private driveway or pedestrian path located within the limits of any public road, street or highway shall be such as shall meet the grade of the existing public roadway at its edge and not cause an obstruction to the maintenance or clearing of such public roadway.

(d) No driveway apron shall extend out into the street further than the facing of the curb and under no circumstances shall such driveway apron extend into any gutter area. All driveway entrances and approaches shall be constructed as not to interfere with the drainage of streets, side ditches or roadsides areas, or with any existing structure on the right-of-way.

(e) No portion of any curb, parapet or retaining wall, rising above the grade of the driveway, erected by the owner of the premises involved shall extend beyond the culvert spanning the water course located in such public way. (Ord. No. 02-05, § 1 (part), 2002.)

Sidewalk & Driveway Installation within the Public Right-of-Way

As of April 26, 2006

In order to construct a sidewalk or driveway the Director of Public Works, Terry Weter (262-723-2223), or the City Engineer, Gary Welsh (262-723-8110), must be contacted to discuss grades and construction information. An inspection must be done before excavating or pouring concrete.

Elkhorn Public Works

Terry Weter, Director

Monday - Friday, 8am-4:30pm

262-723-2223 office, fax 262-741-5135

Elkhorn City Engineer

Gary Welsh, P.E., Bonestroo

Monday - Friday, 8am-4:30pm

262-723-8110 office, 262-215-0260 cell