

## **PERMITS**

- ROW Permit is required

## **GRADE/WIDTH**

- Cross Slope should not be greater than  $\frac{1}{4}$ " per foot
- Minimum width is 5' across

## **THICKNESS**

- Residential sidewalk is 4"
- Residential sidewalk pour directly against the curb is 6"
- Residential sidewalk through drive area is 6"
- Residential drive apron are 6"
- Commercial sidewalk is 6"
- Commercial sidewalk through a drive area is 8"
- Commercial drive apron is 8"

## **Forms**

- Forms will be made of steel and full depth of the concrete to be poured
- Wooden forms may be used around sharp curves
- Wooden forms may be used with preapproval of Engineering Services on small jobs that do not require a full length form

## **COURSES**

- The concrete must be deposited in a single layer.

## **SUBGRADE**

- Porous base is not required
- Subgrade maybe of existing material
- Must be uniformly compacted via mechanical tamper
- Subgrade must be protected from all weather, frozen or muddy ground must be removed and replaced with suitable unfrozen and dry material
- Subgrade shall be moistened thoroughly, immediately prior to placing concrete

## **JOINTS**

- Sidewalk must be cut into approximate squares
- Hand or saw cut joints must be a minimum of  $\frac{1}{8}$ "
- Hand or saw cut joints must be one-third the depth of the concrete (e.g. 4" thick = 1.33" deep)

- ½" expansion joints must be placed every 30' in the sidewalk, against any existing sidewalk or driveways, on both sides of the drive apron where the concrete thickness changes, along the curb where the sidewalk and drive apron touch, and around all object with in the walk (e.g. utility poles, fire hydrants, manholes)
- All expansion joints must be full depth of the concrete
- All objects with in the sidewalk must have a 6" minimum box out around them

### **MATERIALS**

- Concrete will be Class C meeting City of Akron specification (No. 57 Stone, 600 LBS of cement per cubic yard, and air entrained)
- No reinforcing steel of any kind will be permitted with in the ROW for sidewalk or driveapron.
- Concrete with fiber reinforcement will be used for ADA Wheel Chair Ramps.

### **PLACING & FINISHING**

- Concrete shall be tamped, spaded, or vibrated
- Concrete will be struck level with a hand pulled screed or power screed
- The surface will then be floated by hand and bull float
- The edges will be finished with a ¼" edging tool
- The surface shall have a uniform broom finish
- All castings (e.g. valve boxes, and manhole castings) shall be brought to flush grade with the sidewalk

### **COLD WEATHER PROTECTION**

- Concrete shall not be poured with out authorization of Engineering Services if the temperature falls below 40 F
- Concrete temperatures may not be allowed to fall below 50 F and above 80 F at the time of placing
- You may heat the aggregate, water, or both to keep concrete temperatures up
- Aggregate may be heated by steam or dry heat prior to being placed in mixer
- Water shall no exceed 175 F
- Concrete must be protected if the temperature may be expected to drop below 35 F
- Concrete must be protected by insulated curing blankets, plastic and straw or hay, or other preapproved material
- The material used to protect the concrete shall be spread over the concrete to a sufficient depth to prevent freezing
- Concrete must remained cover for a minimum of 5 days unless the temperatures rise and stay above 35 F
- Concrete injured by frost action will need to be removed and replaced at the contractor's expense

### **RAIN PROTECTION**

- The size and arrangement of concrete pouring shall be so to facilitate protection of the pour
- An adequate supply of waterproof covering must be available on site at all times
- Any marks made by the waterproof covering must be refinished
- The contractor must replace any concrete damaged by rain at their own expense