

Driveway and Other Concrete Repair and Replacement Policy

Purpose:

To define, as clearly as possible the normal routine repair and maintenance responsibilities of the Association and of all other parties as listed in the Whispering Meadows Covenants, By-laws and Board Policy 505-1109; to establish clear communications among all parties concerning these responsibilities in order to protect the safety, property value, integrity, peace of mind and harmony of the entire community; and to establish a fair and equitable process of funding.

Explanation:

Whispering Meadows Board Policy entitled “Association/Homeowner Responsibilities Policy” (No. 505-608) under the responsibilities of the General Maintenance of Common Area Committee states that “concrete driveway repairs or replacement, if determined to be causing a hazardous condition or if deferred maintenance could cause a hazardous condition” are the responsibility of the Association. This policy further states under the “Areas and Items that are the Responsibility of Homeowner” that, “concrete driveway, entranceway or patio sealing with water repellent or other approved coating” and “Repair or replacement of entryway, porch or patio” fall under the homeowner’s responsibilities. It has become quite apparent that the quality of concrete and concrete work at some of the homes and street sidewalks are less than desirable; therefore, the following policy is put in place:

Policy:

Curbs and street sidewalks:

The Association shall bear the entire cost of these repairs/replacements.

Driveways:

The General Maintenance of Common Area Committee (MCAC) shall determine and make a recommendation to the Board if and when repairs or replacement are necessary. An inspection shall be conducted by the MCAC to establish need and priority of repair/replacement.

The Board shall determine through the Finance Committee whether funding shall be a regular budgeted item for the entire Association and/or if a special assessment to the Owner of the Lot associated with the driveway (the Owner) is involved.

Due to the expense of driveway replacement each Owner will be requested to share in the cost of driveway repair/replacement with the Association in an equal amount, with fifty percent of the funding coming from the Association’s budget and fifty percent coming directly from the Owner upon completion of said repair or replacement.

The Owner will be informed as to the Committee’s decisions and provided with an estimated cost. The Owner shall write a formal request, using the Association’s current “Request Form” and deliver it to the MCAC before any work is initiated.

If the Owner refuses to participate or enter into the Association agreement in accordance with this policy, any repair or replacement will not occur until either the Owner agrees to participate, or the MCAC deems the condition of the concrete to have become hazardous, at which time the Association will be responsible for the cost of repair or replacement.

Priority may be waived if the Owner makes a request for replacement and is willing bear the entire cost. In these cases, the Association shall contract and oversee the project for the Owner. Owners shall not contract repairs/replacement on their own.

All driveways repaired shall have gutter downspouts modified or moved where necessary and practical, to redirect drain water away from the driveway to reduce concrete erosion and staining. The cost of this modification shall be at the Owner's expense and made at the time or before driveway repairs are started.

Concrete design mix: The concrete design mix shall conform to the latest revision of the Kansas City Metro Materials Board (KCMMB) concrete material specification or a design mix commonly referred to as "Johnson County Mix" with granite aggregate. (See below.)

Both mixes shall be tested by the contractor with copies of lab documents furnished to the Association's representatives listing compliance with the design mix required and including, but not limited to a minimum PSI of 4,000 pounds to 5,000 PSI and a slump of not more than 4 inches. Concrete placement shall be over a proper rock, compacted base and finished with the normally approved textured surface. Concrete shall be saw cut as to control cracking.

Consideration to be used in prioritizing these repairs/replacement are as follows, but are not limited to:

Limited funding

Degree of hazard to the public

The different lengths and widths of the driveways in question

Whether the entire driveway is in need of repair or replacement

Whether the Owner is willing to share in the replacement costs

Wishes of the Owner to extend the project to include additional areas or extension of the project for aesthetic or other legitimate reasons at Owner's sole expense

Condition of the curb and gutter in front of the driveway

All state-of-the-art sealing and coating materials may be applied by the Owner with the approval of the MCAC as stated in Policy 505-608.

Entryway, porch or patio:

Since these items are the Owner's responsibility the KCMMB design mix will be recommended, but not required.

Concrete Design mixes:

Johnson County mix is known by that name and is available at any concrete batch plant and all good contractors are familiar with this mix. The aggregate is granite.

Approved by the Board of Directors November 16, 2009

Copied below are the latest changes to the KCMMB Specifications:

Kansas City Metro Materials Board

- [KCMMB Member Login](#)
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[KDOT Special Provision 90M-7105
2006 Specifications](#)

2006 2007 KCMMB Concrete Material Specification

(Notice: Changes from 2006 Specification are shown in RED)

1. The 28 day compressive strength for concrete shall be 5,000 psi and designated as "KCMMB 5K", or shall be 4,000 psi and designated as "KCMMB 4K". Mixes for High Early Strength Concrete shall meet the same requirements as stated below for standard 4K and 5K mixes (designated as "KCMMB HE"), and any additional requirements noted below specific to High Early Strength Concrete. Compressive strength shall be determined in accordance with ACI 318. All mix designs submitted to the Kansas City Metro Materials Board shall have a unique number designated by the concrete supplier. This unique name must match the name on the concrete delivery ticket or the concrete will be rejected. Mix designs for Flowable Fill shall be submitted to individual cities for approval.
2. The KCMMB shall approve each coarse aggregate source. Coarse aggregate shall be entirely granite, calcite cemented sandstone, quartzite, basalt, diabase, rhyolite, or trap rock. All coarse aggregate shall come from a large, accessible, uniform geological formation and be easily field identifiable in concrete. All coarse aggregate test results shall not exceed the following percentages by weight:

AASHTO T103 Soundness by Freeze/Thaw 50 cycles	Max. Allowable %
3/4 - 3/8	1.0%
3/8 - #4	2.0%
ASTM C127	
Absorption %	0.5%
ASTM C123 Lightweight Pieces	
% Light Weight Pieces	0.5%
ASTM C142 Clay Lumps and Friable	
% Deleterious	0.3%
Coal and Lignite	
% Coal and Lignite	0.05%
ATM C117 Material Finer than #200 by washing	
% Passing	0.5%
Sum of all deleterious	
% Total deleterious	1.0%
ASTM C88 Sulfate Soundness (MgSO4) Weighted % loss	
3/4 - 3/8	0.5%

[Printer Friendly 2007 Spec](#)

3/8 - #4	4.0%
ASTM C131 LA Abrasion	
% Loss	28.0%

- 3.
4. Coarse aggregates shall meet the gradation requirements of the current ASTM C33. The acceptable gradation sizes shall be number 1 through 7, 56, 67, 357 or 467. Mix designs shall specify the gradation designation.
5. Fine aggregate shall meet the requirements set forth in the current ASTM C33. The percentage by weight of clay lumps and friable particles shall not exceed 0.25%. The percentage by weight of material passing the no. 200 sieve shall not exceed 2%. The percentage by weight of coal and lignite shall not exceed 0.25%. Soundness shall be determined using magnesium sulfate.
6. Aggregates in mixes must be proportioned to have a minimum of 55% coarse aggregate by weight. An optimized gradation will also be acceptable if it meets KDOT or MoDOT specifications.
7. Cementitious materials shall meet the current physical requirements of ASTM C595 Type IP (IPM) or IS (ISM) Blended Hydraulic Cements. Mortar Bar Expansion shall meet the current requirements of ASTM C1567.
 - A. ASTM C595 includes blending of ASTM C150 Portland Cement and pozzolanic materials or granulated blast-furnace slag. Cementitious materials may be blended at the ready mix plant (field mixed). Type III Cements used for high early strength concrete mixes will be approved with 25% Class F fly ash or slag in lieu of testing.
 - B. Manufactured ASTM C595 Blended Hydraulic Cements Type (ISM) and Type IP (IPM) must comply with all ASTM C595 standard requirements with the following limitations:
 1. Type (ISM) – The slag constituent shall be less than 25% of the mass of the combined Portland cement and slag.
 2. Type IP (IPM) – The pozzolan constituent shall be less than 30% of the mass of the combined Portland cement and pozzolan.
 - C. Ready mix plant (field mixed) cementitious materials shall comply with the current physical requirements of ASTM C595 Type IS (ISM) or Type IP (IPM) Blended Hydraulic cements with the following limitations:
 3. Maximum limit (by mass) of GGBFS in (field mixed) Type IS cements shall be 25%. Type (ISM) shall be less than 25%.
 4. Maximum combination of GGBFS and pozzolans in (field mixed) cements shall not exceed 25% (by mass) of cementitious materials.
 5. Maximum limit (by mass) of pozzolanic content in (field mixed) portland-pozzolan Type IP cements shall be between 15 and 25%. Type (IPM) shall be less than 15%.
 - D. **Mortar Bar Expansion Tests are not required if using 25% Slag or Class F fly ash as discussed above in mix design submittals. If a mix design with less than 25% Slag or Class F fly ash is submitted, all test results shall meet the**

~~current requirements of ASTM C 1567. Mortar Bar Expansion shall meet the current requirements of ASTM C1567.~~ The C1567 test shall be performed on all cementitious combinations submitted ~~as noted above~~ and include aggregate combinations from one of the three following options:

6. Test each coarse aggregate and percentage submitted with Missouri River sand obtained from the Holliday Sand Riverside Dredge. (For each cementitious combination tested, this option only allows this specific coarse aggregate source and percentage to meet the Mortar Bar Expansion test.)
7. Test with 55% Pink Quartzite from the Dell Rapids Pit, Dell Rapids, South Dakota and 45% Missouri River sand obtained from the Holliday Sand Riverside Dredge. (For each cementitious combination tested, this option allows any approved coarse aggregate at 55% to meet the Mortar Bar Expansion test.)
8. Test using 100% Missouri River sand obtained from the Holliday Sand Riverside Dredge. (For each cementitious combination tested, this option allows any aggregate combination to meet the Mortar Bar Expansion test.)

Regardless of which option above is used, all aggregate combinations must meet the rest of the KCMMB Specification. The Mortar Bar Expansion shall be a maximum of 0.10% at 16 days. ~~The C1567 test results shall be reported for all submittals as required, but are not grounds for rejection if using 25% Slag or Class F fly ash. If less than 25% Slag or Class F fly ash is submitted, all test results shall meet the C1567 expansion requirements.~~

- E. Ground granulated blast furnace slag (GGBFS) shall meet the requirements of ASTM C989 and shall be grade 100 or 120.
- F. All fly ash used shall meet the requirements of ASTM C618 Class F with the following exceptions:
 9. Available Alkali is limited to a maximum of 1.5%.
 10. Loss on ignition is limited to a maximum of 3.0%.
- G. The total mass of Portland Cement shall be a minimum of 450 pounds per cubic yard of concrete.
- H. The total mass of cementitious materials shall be a minimum of 600 pounds per cubic yard of concrete.
8. Water cement ratio shall not exceed 0.44. Only potable water shall be used. The minimum water cement ratio shall be 0.25.
9. Air Entrainment shall meet the requirements set forth in the current ASTM C260. The percentage of air content by volume shall be 6.5% plus/minus 1.5%. For precast manufacturing facilities that utilize dry cast concrete, air contents will be determined by taking three separate cores at random intervals throughout a 12 month period. If submitting for the first time, drycast suppliers can receive conditional approval by submitting a mix design that meets all the KCMMB specifications except for air content. They will be conditionally approved until receiving results from the first air content test. The core locations will be specified by the participating KCMMB member after the project has been constructed. The cores shall be 4" diameter partial depth through walls of finished concrete

products. Provide a Linear-Traversal Test (ASTM C457), Procedure A, on each core using the proposed mix design. Provided, for each mix design submitted, the average of the three tests is above 5% total air content, with no single sample being less than 4%, the facility will be approved to dry cast concrete structures using that mix for a 12 month period. Test results for each ASTM C457 test should include the total air content and the corresponding specific surface in square inches per cubic inch, the spacing factor in inches, and a recalculation of the air content, specific surface and spacing factor using bubbles with a size of 0.04" and less. If submitting the same mix design for the following year, the last three air test can be submitted for conditional air content approval.

10. All materials proposed for use in concrete and all concrete mix designs shall be approved by the Kansas City Metro Materials Board prior to use. Such materials include coarse and fine aggregates, cementitious materials, admixtures and water.

Concrete mix design submittals shall include:

- Mix designation.
- [A completed checklist as provided on this Website.](#)
- 28 day compressive strength.
- Design slump and allowable range after addition of all admixtures.
- Proportions / weights of all mix materials.
- Source of all mix materials.
- Design water to cement ratio. Mix designs shall be submitted for each combination of materials, differing material proportions or differing water to cement ratios.
- Design unit weight at the design air content.
- Proportion of admixtures (Admixtures for water reduction, set acceleration or set retardation may be shown as optional provided they are Kansas Department of Transportation approved and the mix design shows the allowable application rates or dosages for each optional admixture).
- Gradation designation for the coarse aggregate.
- Test results, performed by a qualified laboratory, that meet current KCMMB coarse aggregate specifications.
- Test results, performed by a qualified laboratory, for coarse and fine aggregate gradations.
- Test results, performed by a qualified laboratory, that meet current KCMMB specifications listed above for fine aggregate.
- An ASTM C595 certification from the cement supplier, if using a pre-manufactured Type IP (IPM) or (ISM) cement.
- A letter from the ready mix supplier, if cementitious materials are blended at the ready mix plant. The letter shall state that blended cementitious materials meet the current physical requirements of ASTM C595 specification, determined by individual material certifications and selected testing as follows: The ready mix supplier shall provide an ASTM C150 certification, ASTM C989 certification (slag) or ASTM C618 certification (fly ash), and testing results for: **ASTM C 1567 Mortar Bar Expansion if required. Mortar expansion test ASTM C1567.** Expansion shall be a maximum of 0.10% at 16 days. ~~The C1567 test results shall be reported for all submittals as required, but are not grounds for rejection if using 25% slag. If less than 25% slag is submitted, all test results shall meet the C1567 expansion requirements.~~

- A certification that admixtures are approved by the Kansas Department of Transportation.
- Test results performed by a qualified laboratory for a minimum of three concrete compression tests that meet requirements of chapter 5 of ACI 318 for the strength required. Compressive tests are required for each mix design submitted. However, if mix designs differ only in water to cement ratios, one set of three compressive tests shall be required for only the highest water to cement ratio. (Note: One compressive test equals the average strength of two cylinders made from the same sample of concrete and tested at 28 days). **Each concrete compression test must be sampled from separate batches.**

11. All concrete delivery tickets shall include the plant name, design w/c ratio, batch weights per cubic yard, total batched weight of all materials for quantity delivered, time batched, design slump, water withheld (2 gal/yd maximum), allowable slump range, moisture correction for aggregates, and dosages of all approved admixtures. Pre-cast concrete manufactures shall keep concrete delivery tickets on file for one year. Certifications for the pre-cast concrete shall be provided when the product is delivered to the job site.
12. Limestone found in concrete mixes, delivered from centrally batched concrete plants shall not exceed 3% by weight of the coarse aggregate fraction. Limestone found in all other concrete mixes shall not exceed 2% by weight.
13. In addition to the mix design, a Maturity Curve shall be submitted for any high early strength concrete mixes. The curve will be posted on the KCMMB web site (Private Side). The curve shall be developed in accordance with ASTM C1074: "Practice for Estimating Concrete Strength by the Maturity Method". The submittal for the Maturity Curve shall include the following:
 - Test results from all tests required by ASTM C1074.
 - Table of times, cylinder breaks at the times stated, temperature of the concrete at the times stated, and the Time Temperature Factor for the times stated.
 - A graph showing the Compressive Strength of the concrete in psi on the vertical axis and the log of the Time Temperature Factor on the horizontal axis, with the data plotted on the graph and a best fit line drawn through the data points.

Revised Date: 10-31-2006