The quick way to estimate a 20×20 (400 sq ft) concrete slab is to multiply local cost per square foot by the area, then adjust for thickness, reinforcement, access, and finish. In Kansas City, most residential exterior slabs (patios, small garages, sheds) land in a range influenced by concrete prices, crew time, and site prep. But a number on a phone call hides the real drivers: **base preparation**, **thickness**, **steel and dowels**, **joint plan**, **finishing**, and **curing**. This guide breaks down the cost components and shows how scope choices affect both upfront price and long-term value.

What Exactly Is “20×20”?

Nominal dimensions are 20 feet by 20 feet. At 4 inches thick, that’s about **2.47 cubic yards** of concrete (400 ft² × 0.333 ft / 27). At 5 inches, it’s ~3.09 yd³; at 6 inches, ~3.70 yd³. Driveway-grade slabs often step up to 5–6 inches for durability and may include thickened edges or beam strips where turning loads Check out here stress margins. These thickness decisions significantly affect both material cost and performance.

Cost Components (Line-Item View)

ComponentWhat It CoversImpact on Cost Mobilization & accessTravel, staging, site protectionHigher with tight sites or long wheelbarrow runs; pumps add cost but speed Excavation & baseDig to grade; haul spoils; install & compact 3/4" minus baseVaries with soil, depth, and drainage fixes FormsLumber, stakes, layout laborHigher for curves or steps; simple squares are efficient ConcreteReady-mix by yard; admixtures; delivery feesDepends on thickness and mix design ReinforcementRebar grid, chairs, ties; dowels at transitionsModest increase; big ROI in edge durability Placement & finishingCrew time; equipment; bull float, edging, broom/stampDecorative finishes add labor and materials JointsSawing, layout, early-entry bladesLow cost; high value for crack control CuringMembrane cure; blankets in coldLow cost; essential for surface durability Cleanup & haul-offDebris removal; site restorationMinor but real

Thickness and Use Case

- **Patio/walk (4"):** Works for pedestrian loads with sound base and tight joints; choose air-entrained mix and diligent curing.
- **Light driveway/shed (5–6"):** Recommended for wheel loads; include rebar grid and **dowels** at thresholds to prevent edge chipping.
- **Heavy use/RV pads:** Consider 6"+ thickness, tighter joints, thicker edges or beam strips, and engineered reinforcement.

Spec Choices That Move the Needle

1. **Base thickness:** 4–6" for patios/walks; 6–8" for driveways. A dense base cuts joint pumping and edge failures.
2. **Reinforcement:** #3 or #4 rebar at 18–24" each way, on chairs; welded wire mesh often settles and underperforms if unchaired.
3. **Joint spacing:** About 24–36× slab thickness (in inches); early-entry saws reduce random cracks.
4. **Curing:** Immediate membrane cure or wet cure; in winter add blankets and accelerators.
5. **Finish type:** Broom finish is most durable and economical; stamps, colors, and exposed aggregate add time and materials.

Illustrative Scope Scenarios

ScenarioThicknessReinforcementFinishNotes Budget Patio4"Fibers (no rebar)BroomWorks for pedestrians if base and jointing are dialed Patio+ (Recommended)4"Rebar gridBroomBetter crack control; stronger edges Driveway Grade5–6"Rebar grid + dowelsBroomHandles turning loads; protects thresholds Decorative Patio4"Rebar + fibersStamped/ColoredMore labor; tight timing and curing required

Access and Logistics

Ready-mix trucks need safe access to the forms; otherwise, crews wheelbarrow or pump. Pumping adds cost but can save the slab by maintaining a steady placement rate, which prevents cold joints and rushed finishing. Tight urban sites, backyard paths, and slopes increase time and labor. These aren't "extras"—they're the difference between a clean, uniform surface and one with torn paste or random cold-joint cracks.

Hot- and Cold-Weather Adjustments

- **Summer:** Sunrise pour; water reducer; light retarder; shade/wind control; early-entry saws; immediate curing.
- **Winter:** Non-chloride accelerator; warmed mix water; insulated blankets; windbreaks; cure and cover quickly; avoid deicers first season.

How to Compare Bids (Apples-to-Apples)

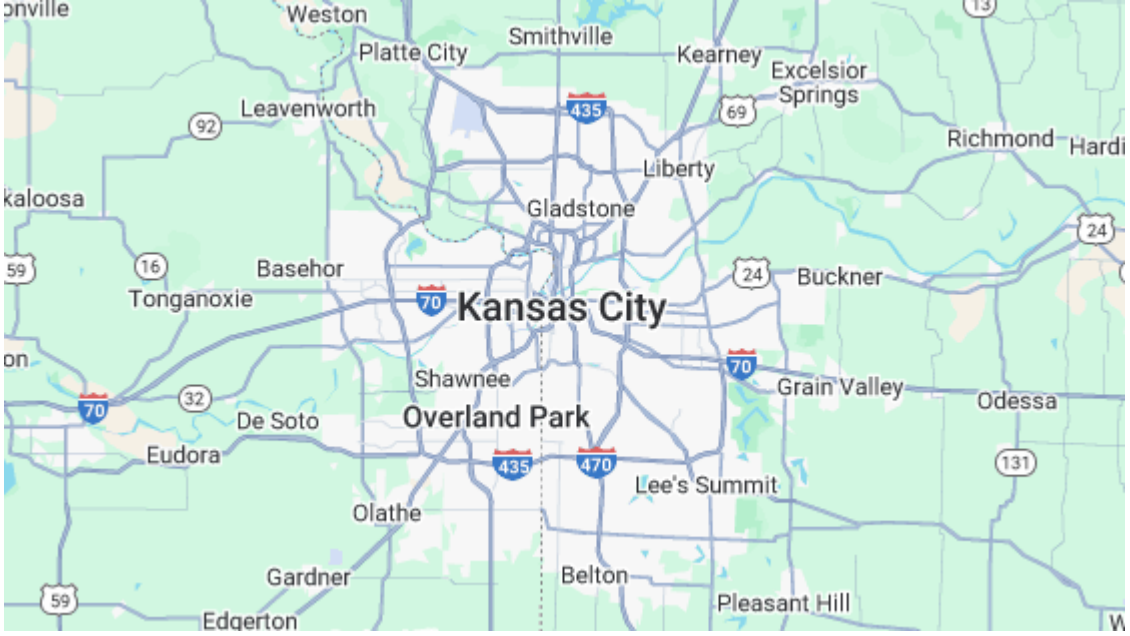
- Concrete strength (PSI) and **air-entrainment** for exterior slabs.
- Base material and thickness; compaction in lifts.
- Slab thickness, **rebar size/spacing**, and **dowels** at thresholds.
- Joint layout and cutting method/timing.
- Curing method and aftercare instructions.
- Weather plan: hot/cold tactics written into scope.

Lifetime Value: Why "Cheaper" Can Cost More

A *concrete contractor* low bid that skips rebar, dowels, proper base, and curing may look appealing but often leads to early edge spalls, random cracks, and surface scaling—especially under deicers and freeze–thaw cycles. Over five to ten years, patching, grinding, and partial replacements easily exceed the savings. A slightly higher bid that includes steel, base, joint planning, and curing is usually the true bargain.

Case Example: Two Identical 20×20 Patios, Two Very Different Outcomes

Patio A used a 4" slab with fibers, no rebar, minimal base, and joints sawed the next day. The surface tore in hot wind, and a diagonal crack appeared that first summer. Patio B used the same dimensions but added a rebar grid on chairs, compacted 4–6" of dense base, cut joints with early-entry saws the same day, and applied curing compound immediately. Two years later, Patio B shows only crisp joint lines; Patio A needed patching and resealing.



FAQ

- **Is 4" thick enough for a 20×20 slab?** For patios and walks with good base and jointing, yes. For driveways or sheds with vehicles, step up to 5–6".
- **Do I really need rebar?** Rebar doesn't stop cracks; it keeps them tight. It's inexpensive insurance against edge and threshold failures.
- **Can I save by hand-mixing?** For very small volumes, maybe, but cold-joint and surface risks rise fast beyond ~1 yard. Ready-mix consistency usually wins.

Authority Reference

For slab-on-ground design, reinforcement, and jointing fundamentals, see the American Concrete Institute.

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