

Appendix A: Specifications for Paving of Off-Street Parking and Loading or Unloading Areas

All new off-street parking facilities must be paved with asphalt or Portland cement concrete and designed and constructed in accordance with the standards and procedures herein established.

A. Asphalt Concrete Pavement

1. General Design Requirements

- (a) Asphalt concrete pavement must consist of a specified thickness of asphalt concrete surface course and a base course, or courses, all constructed on prepared subgrade. Pavement thickness required will be determined from Appendix A, Table A-1 of the appropriate subgrade soil and traffic use.
- (b) Paved areas must be so designed and constructed that water will quickly drain from the surface and be conducted away from the area through approved systems. Transverse or longitudinal slopes of not less than 5/8 inch in 10 feet must be provided. For large paved areas, approved catch basins and storm drainage systems must be provided.
- (c) When the pavement includes a granular base, and the pavement is not constructed over granular subgrade, perimeter subsurface drainage must be provided to prevent lateral flow of water into the base course and to provide for the removal of seepage water that may enter the base.
- (d) Successive layers of the pavement must be offset from the edge of the underlying layer a distance equal to the course thickness of the lower level except when abutting existing construction. When the asphalt layers of the pavement abut a building foundation, barrier curb or similar vertical surface, the abutting surface must be heavily painted with asphalt prior to the construction of the asphalt course. The surface course must be finished ¼ inch above adjacent flush construction to permit proper compaction.

2. Construction Materials and Procedures

(a) Base Course

Base course must consist of the following materials. Construction procedures must conform to the requirements applicable to the base course selected.

(1) Asphalt Concrete Base Course

Materials and construction must conform to the current requirements of the Kentucky Transportation Cabinet Department of Highways, Specifications for Asphalt Concrete Base Course, Division 400, except as noted herein.

(2) Crushed Stone Base Course

Crushed stone base course must conform to all the current requirements of the Kentucky Transportation Cabinet, Department of Highways, for Dense Graded Aggregate Base Course (Division 300).

(b) Asphalt Concrete Surface Course

Materials and construction must conform to the current requirements of the Kentucky Transportation Cabinet, Department of Highways, for Asphalt Concrete Surface, (Division 400).

(c) Asphalt Prime and Tack Coat

(1) Asphalt prime must conform to the Kentucky Transportation Cabinet, Department of Highways requirements for Cutback Asphalt Emulsion Primer Type L, as per Division 400. Prime must be applied to the surface of granular base course at a rate of 0.25 to 0.50 gallons per square yard, as directed by the legislative body's engineer or inspector.

(2) Tack coat (SS-1h) must meet the current requirements of the Kentucky Transportation Cabinet, Department of Highways, as per Division 400. It must be diluted with equal parts of water, when directed by the inspector. Tack coat must be

applied, on direction of the legislative body's engineer, to the surface of asphalt courses that have become dusty or dry at a rate of 0.10 gallons per square yard of the diluted SS-1h before the subsequent course is constructed.

B. Concrete Paving for Parking and Access Drive Areas

1. General Requirements

Thickness of concrete parking and access drives must be:

- (a) A minimum of 4 inches for driveways and parking areas serving single- and two-family dwellings;
- (b) A minimum of 5 inches for passenger cars and panel or pickup trucks serving industrial, commercial, and multi-family areas;
- (c) A minimum of 6 inches for light trucks serving industrial, commercial and multi-family residential areas;
- (d) A minimum of 7 inches for heavier commercial or industrial needs.

2. General Requirements; Concrete Paving

- (a) Minimum cement content, 564 pounds per cubic yard of concrete (6 U.S. bags);
- (b) Maximum size of aggregate, 1¼ inches;
- (c) Maximum water content, 0.49 pounds per one pound of cement (5.5 gallons per bag);
- (d) Maximum slump, 5 inches when using hand-finishing techniques; 3 inches when using a mechanical finishing machine;
- (e) Strength of concrete. The concrete must attain a minimum expected strength of concrete at 28 days of 3,500 pounds per square inch compressive strength or 550 pounds per square inch flexural strength modulus of rupture.
- (f) Air entrainment:

Maximum Size Aggregate (Inches)	Entrained Air (Percent)
1¼	5 ± 1
¾, 1	6 ± 1

Maximum Size Aggregate (Inches)	Entrained Air (Percent)
3/8, 1/2	7 1/2 ± 1

3. Construction Procedures

- (a) All soft and yielding material and other portions of the subgrade which will not compact readily when rolled or tamped must be removed and replaced with suitable material placed and compacted. The subgrade must be thoroughly compacted with suitable equipment so as to have uniform density at moisture contents of not less than standard optimum. (AASHO-T98)
- (b) Longitudinal joint spacing may not exceed 15 feet and be designed in accordance with the joint details in Appendix A, Table A-2.
- (c) Transverse joint spacings must be at regular intervals of 20 feet.
- (d) All transverse construction joints must be designed in accordance with the joint details in Appendix A, Table A-2.
- (e) Form offsets at radius points must be at least 2 feet.
- (f) Pavement joints must be continuous through the curbs.
- (g) Where curbs are required, they must be cast integrally.
- (h) The pavement must be struck-off, consolidated, and finished to the grades shown on the plans. All catch basins and manhole castings must be boxed out and separated from the pavement with expansion joint material. All except premolded or sawed joints must be edged with a tool having a maximum radius of 1/8-inch. Sawed and formed joints must be cleaned and sealed before opening to traffic. Final surface texture must be that obtained with a burlap drag. Curing must be that obtained with a uniform coverage of white membrane curing compound or by 7-day coverage of white polyethylene or waterproof paper. The completed pavement must be closed to traffic for at least 14 days or by the time it has attained a compressive strength of 3,500 pounds per square inch or 550 pounds per square inch flexural strength. This traffic restriction must apply

to the contractor's construction equipment and vehicles, as well as general traffic.

Table A-1
Thickness Requirements of Surface and Base Courses
For Automobile and Truck Parking Facility Pavements

Vehicle type	Full-Depth Asphalt Concrete		Asphalt Concrete with Granular Subbase			Asphalt Concrete with Granular Base	
	Surface KYTC (1) (Division 400) Type B (inch)	Base KYTC (1) (Division 400) (inch)	Surface KYTC (1) (Division 400) Type B (inch)	Base KYTC (1) (Division 400) (inch)	Granular Subbase KYTC (1) (Division 300) (inch)	Surface KYTC (1) (Division 400) Type B (inch)	Granular Base KYTC (1) (Division 300) (inch)
Auto parking facilities	1½	4	1¼	2	6	2	9
Truck parking facilities	1½	6½	1½	2½	10	N.A.	N.A.

(1)Refers to the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction (2004 Edition or as amended).

TABLE A-2
Joint Details
As per Appendix A

