September 30, 1977

Introduced by: DAVE MOONEY

77-142

ORDINANCE NO. 3463

AN ORDINANCE relating to the Building Code, adding a new chapter to the Uniform Building Code imposing a thermal performance (insulation) standard on roof/ceiling assemblies for new construction in King County; and adding a new section to KCC 16.08.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

NEW SECTION. SECTION 1. Thermal Performance (insulation). There is added to the Uniform Building Code a new Chapter 53 to read as follows:

CHAPTER 53. THERMAL PERFORMANCE

SECTION 5301 - PURPOSE

SECTION 5302 - APPLICATION AND SCOPE

SECTION 5303 - DEFINITIONS

SECTION 5304 - DESIGN REQUIREMENTS

SECTION 5305 - GENERAL CONSTRUCTION REQUIREMENTS

SECTION 5301 - PURPOSE. The purpose of this chapter is to provide design requirements and criteria that will result in a more efficient utilization of energy by providing thermal design and insulation standards for building construction.

SECTION 5302 - APPLICATION AND SCOPE. (a) General. The requirements of this chapter shall apply to all new buildings and structures which are heated and/or mechanically cooled and afford facilities or shelter for assembly, business (excluding unheated factories and storage), education, institutional, mercantile, and residential occupancies as defined in Part III of this Code, as well as those portions of factory and industrial occupancies enclosed for office space.

(b) Alternate Materials, Methods of Construction, Design or Insulating System. The provisions of this chapter are not intended to prevent the use of any material, method of construction design or insulating system not specifically prescribed herein, provided that any such variance from these

standards has been approved by the building official.

SECTION 5303 - DEFINITIONS. (a) Insulation, Thermal. A material or combination of materials which, when applied, will retard the flow of heat energy by conductive, convective, and/or radiation transfer modes.

(b) Roof/Ceiling Assembly Area. The gross area of the total interior surface of all components of the roof/ceiling assembly, including skylights and openings, and enclosing heated and/or mechanically cooled space exposed to outdoor air. Where supply or return-air ceiling plenums are employed, the roof/ceiling assembly shall not include the ceiling proper nor the plenum space as part of the assembly.

(c) Thermal Resistance (R Value). The measure of the resistance of a material or building component to the passage of heat. R. Values shall be as approved by the building official.

(d) Thermal Resistance (U Value). The average heat flow, in BTU/Sq. Ft./Hr./°F, of the roof/ceiling assembly gross area.

SECTION 5304 - DESIGN REQUIREMENTS. (a) Thermal Insulation Standards for Roof/Ceiling Assemblies. Roof/ceiling insulation assemblies must have an overall "R" factor of R-19.

(b) Exceptions.

1. Roof/ceiling assemblies consisting of two inches (nominal) T & G wood decking, an approved vapor barrier, two inches of rigid insulation and roofing material shall be accepted as meeting the intent of the thermal design standards for roof/ceiling assemblies.

2. Skylights need not be included in the thermal design standards for roof/ceiling assemblies.

SECTION 5305 - GENERAL CONSTRUCTION REQUIREMENTS.

(a) General. This section shall apply to all buildings and structures required to be constructed under the provisions of this chapter.

(b) Loose Fill. Blown or poured loose fill insulation may be used in attic spaces where the slope of the roof is not less than 2 1/2 feet in 12 feet and there is at least 30 inches of clear distance from the top of the bottom of the

truss or top of the ceiling joist to the underside of the roof sheathing at the roof ridge. When eave vents are installed, adequate baffling of the vent openings must be provided so as to deflect the incoming air above the surface of the insulation.

(c) Piping and Duct Insulation. All steam and steam condensate return piping and all continuously circulating heating or cooling water piping located in unconditioned spaces shall be insulated to conform with the Mechanical Code.

SECTION 2. Severability. If any provision of this ordinance or its application to any person or circumstance is held invalid, the remainder of this ordinance, or the application of the provision to other persons or circumstances shall not be affected.

INTRODUCED AND READ for the first time this 22nd day of February, 1977.

PASSED at a regular meeting of the King County Council this 24th day of October, 1977.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

Mike Lowry
Chairman

ATTEST:

John Hammond
Clerk of the Council

APPROVED this 25th day of October, 1977.

John D. Spellman
King County Executive