

**Zeitschrift:** IABSE structures = Constructions AIPC = IVBH Bauwerke  
**Band:** 4 (1980)  
**Heft:** C-13: Sports halls and stadia  
  
**Artikel:** Harry S. Truman Sports Complex, Kansas City, MO (USA)  
**Autor:** HNTB  
**DOI:** <https://doi.org/10.5169/seals-16541>

### **Nutzungsbedingungen**

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

### **Conditions d'utilisation**

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

### **Terms of use**

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

**Download PDF:** 20.08.2025

**ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>**

## 9. Harry S. Truman Sports Complex, Kansas City, MO (USA)

*Owner: Jackson County, Missouri*

*Project Architect: Kivett & Myers, Division of Howard Needles Tammen & Bergendoff, Kansas City, Missouri, with Charles Deaton, Design Associate*

*Structural Engineer: Bob D. Campbell and Company, Kansas City, Missouri*

*General Contractor: Sharp Kidde Webb (a Joint Venture), Kansas City, Missouri*

*Complex Completed: April 1973*

*Dimensions and Arrangements:*

*Seating Capacity:*

*Football, 78,000 permanent arm chair seats*

*Baseball, 42,000 permanent arm chair seats*

*Stadium Heights:*

*Football, 44.2 m (includes 13.7 m below grade)*

*Baseball, 39.0 m (includes 10.1 m below grade)*

*Playing Fields:*

*Football, 8,825.8 m<sup>2</sup>*

*Baseball, 13,470.5 m<sup>2</sup>*

*Lighting:*

*Football, 350 foot candles*

*Baseball, 350 infield and 250 outfield*

*Facilities:*

*Stadium clubs; business suites; home and visiting team locker rooms; training facilities; central maintenance and storage (below grade); parking for 20,000 automobiles and 200 buses; and team administrative offices*

*Material Used:*

*Excavation: 3,975,707 m<sup>3</sup> (both stadiums)*

*Concrete: 80,279 m<sup>3</sup> (both stadiums)*

### Design Solution

The top priority in the design of new stadium facilities for Kansas City, MO, was the provision of unobstructed spectator viewing in both proximity and orientation to the playing field. A second design consideration was the incompatibility of field sizes and contours required by the two sports. Because a multipurpose stadium could not resolve these conflicts, a twin-stadia concept was selected as the design solution.

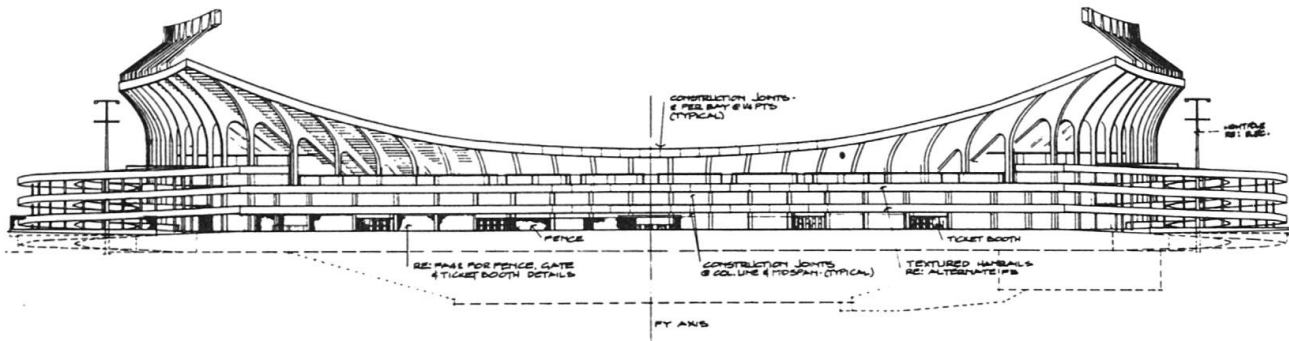
### Architectural Forms

Architectural forms in the design of both three-level stadia make a definite curvilinear sculptural statement, establishing a bowl effect with one high point at each corner of the football facility and two end points on the baseball stadium. The curved sculptural forms of the total design necessitated the use of a plastic structural material. Therefore, reinforced concrete was chosen.

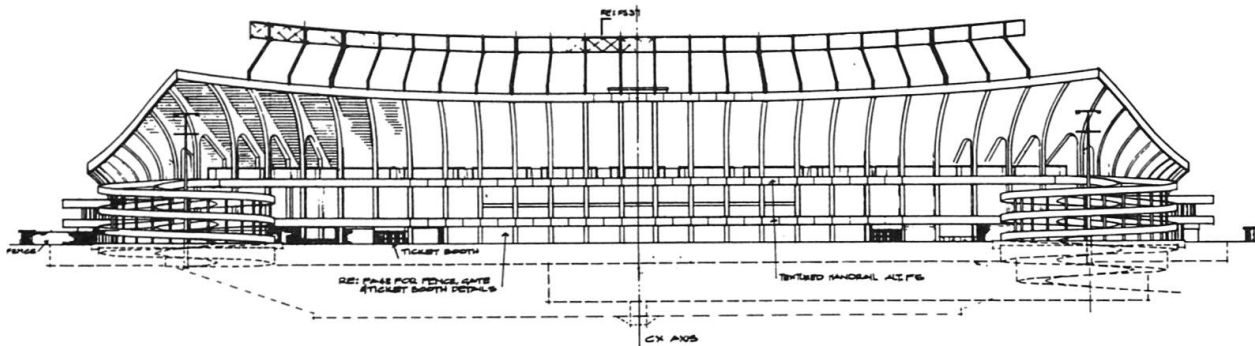
### Special Design Challenge

A special design challenge involved the spacing and geometry of structural bents (main supports) of the upper structures. As a solution, regular modular spacing was developed because of the equal span it afforded the precast concrete units used for the upper structure seating. With the architectural design providing cantilevers at both front (to eliminate column obstruction in the seating) and rear, the result was a structural bent supported on two columns, cantilevered approximately 10 m front and back and spanning approximately 15 m between columns. These are horizontal dimensions. Exact lengths, however, are somewhat longer.

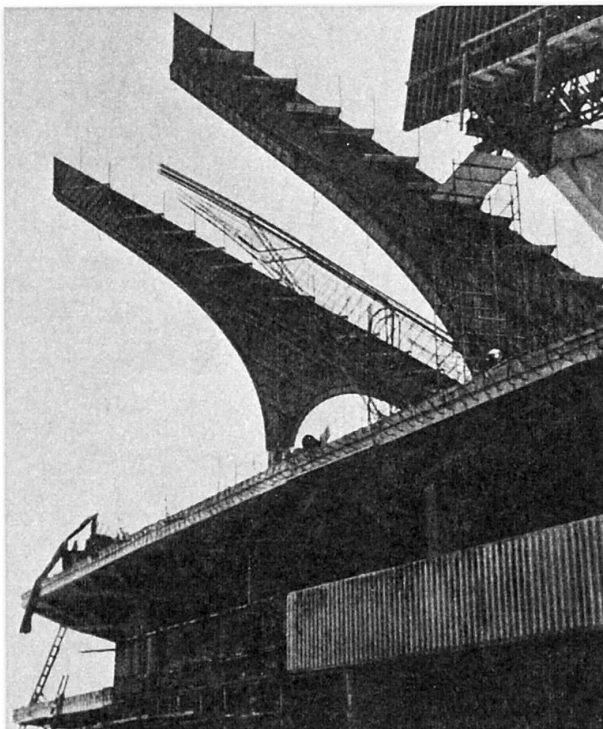




NORTHWEST ELEVATION



SOUTHWEST ELEVATION



### Structural Bent Design

The basic design — sculptural, curved lines — was also applied to the bents. These lines and curves had to be set to computable shapes for the structure to be accurately designed and detailed, and for forms to be constructed and reinforcing steel (60 grade) to be manufactured. Thus, the front curves from the columns are circle radii, while the back curves are parabolas. An additional curve is the cross section of seating. All levels have an elliptical cross section, creating smaller risers at the front than at the back. This provides every spectator with a sight line to the same point.

In designing the bents, careful attention was given to the construction methodology. To avoid the expense of numerous different-sized bent forms, designers attempted to standardize as much as possible. A way was devised to vary the actual dimensions of the bent while reusing existing forms. Each stadium is symmetrical about one or two axes, which aided in standardizing the bents. The football stadium is symmetrical about two axes; therefore, the design is worked about one quadrant and the bents then repeated three times. The baseball stadium is symmetrical about one axis with the design set on one-half and repeated for the other.

(HNTB)