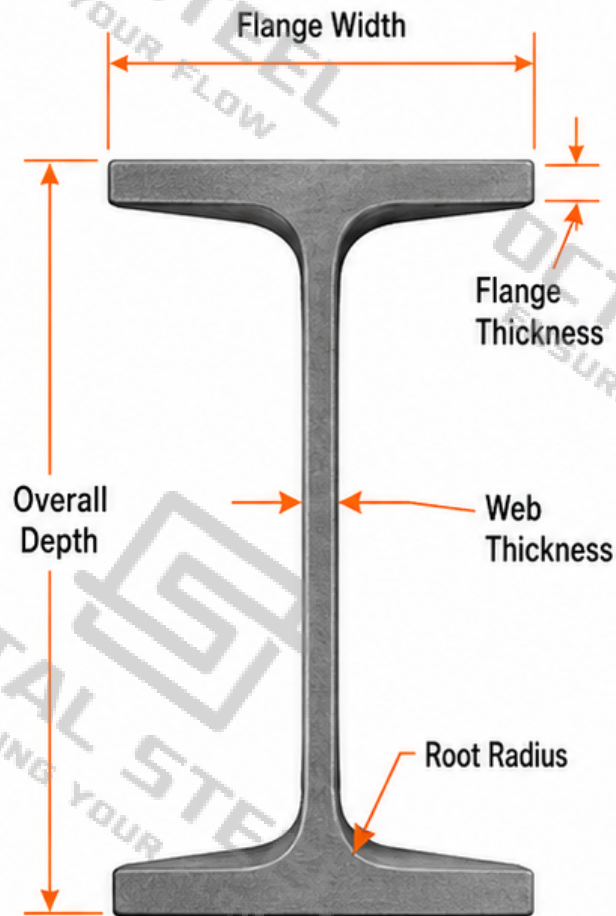
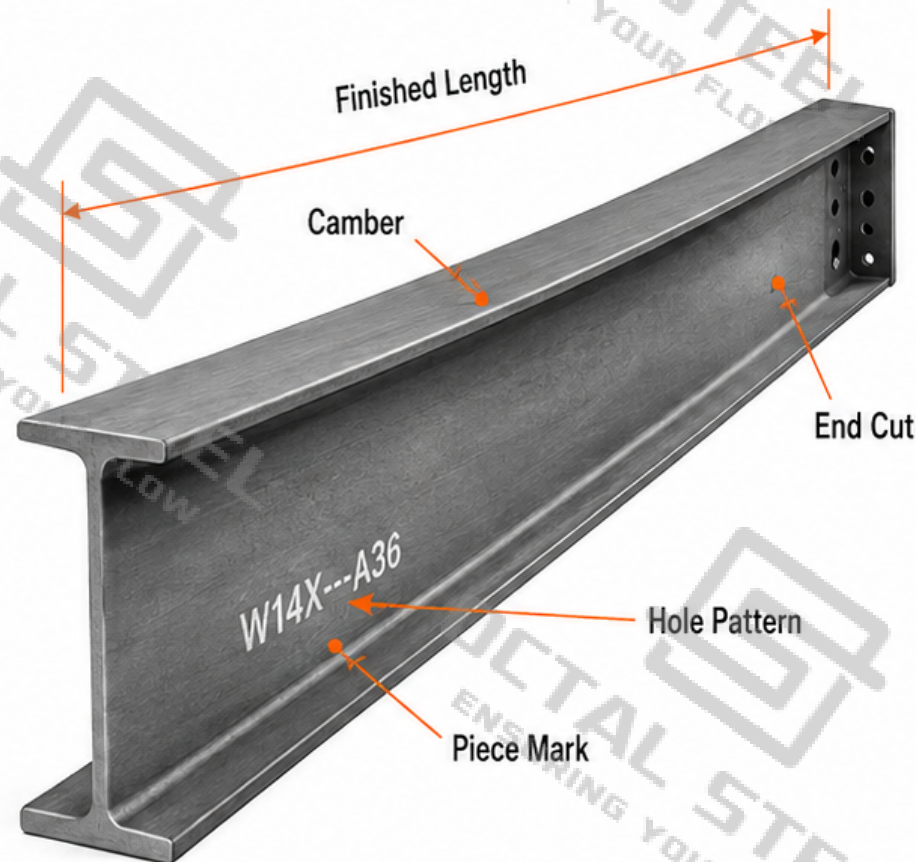


# Structural Steel Beam Dimensions and Designations

## ANNOTATED CROSS-SECTION



## THREE-DIMENSIONAL MEMBER



## SECTION INFORMATION

### 1. Mass per Unit Length

Identification, weight calculation and logistics

### 2. Cross-Sectional Area

Strength and member-weight calculations

### 3. Moment of Inertia

Resistance to flexural deformation

### 4. Section Modulus

Section geometry related to bending

### 5. Complete Designation

Standard, section family, size and material grade



Nominal depth alone does not define flange width, web thickness, unit weight or section properties.



# Structural Steel Beam Material Grades



## ASTM A992

Rolled structural shapes commonly specified for building framing.

## ASTM A572

High-strength low-alloy structural shapes and plates in specified grades.

## ASTM A36

General carbon structural steel sections and plates.

## ASTM A588

High-strength low-alloy structural steel with enhanced atmospheric corrosion resistance.

## ASTM A709

Structural steel products specified for bridge applications.

### IDENTIFICATION MARKS

- Piece mark links the member to drawings, schedules, inspection records and packing lists.
- Heat or batch identification links the material to mill certification and material reports.



Piece Mark  
(Traceability)



Heat / Batch  
Identification



Section  
Identification

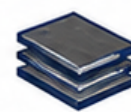


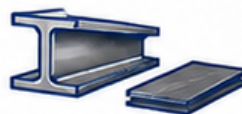
Plate  
Identification



DESIGN DRAWING



MATERIAL  
SPECIFICATION



PRODUCT FORM



WELDING  
REQUIREMENTS



INSPECTION AND  
DOCUMENTS



**WARNING:** ASTM A992, A572, A36, A588 and A709 are not automatic substitutes for one another.



For welded beams, web plates, flange plates, stiffeners and connection plates must meet the approved project specification and welding requirements.