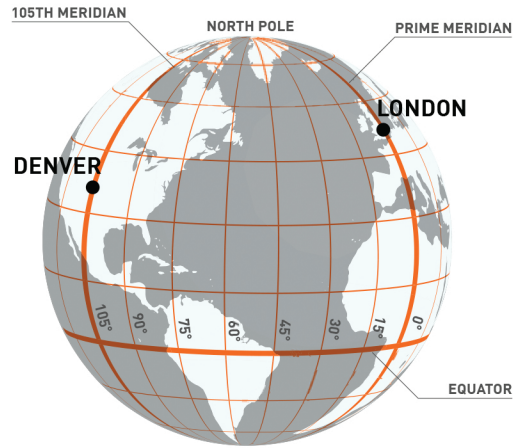


THE 105TH MERIDIAN

AT DENVER UNION STATION



The Prime Meridian is the 0° longitude line from which all other meridians, including the 105th Meridian West that runs through Denver, are measured.

WHAT IS A MERIDIAN?

Lines of longitude, or meridians, are imaginary lines that run vertically (north/south) around the Earth and converge at the North and South poles. Lines of latitude, or parallels, are imaginary lines that run horizontally (east/west) around the Earth and are parallel to the Equator. Together, longitude and latitude are used to determine the location coordinates for any point on the planet.

The Prime Meridian, which passes through the Royal Observatory Greenwich in London, England, serves as the 0° longitude line that divides the 360-degree Earth into two halves. The 180 degrees to the east of the Prime Meridian is the Eastern Hemisphere and the 180 degrees to the west is the Western Hemisphere. On the opposite side of the Earth from the Prime Meridian is the 180th Meridian, also known as the International Date Line.

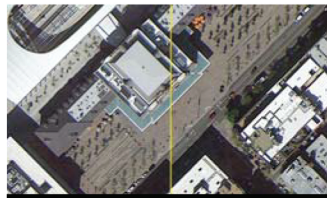
WHAT MAKES THE 105TH MERIDIAN NOTABLE?

The 105th Meridian West is one of the 24 meridians on which the time zones are based, and it runs right through Downtown Denver! Because 105 degrees of longitude is evenly divisible by the standard time zone width of 15 degrees, Denver is exactly 7 hours west (earlier than) the time along the Prime Meridian ($105 \div 15 = 7$). If it's 12:00 Noon in London, it's 5:00 AM in Denver.

The time zone based on the 105th Meridian West is the Mountain Time Zone and is designated as UTC -7. The antimeridian (the meridian on the opposite side of the Earth) to the 105th Meridian West is the 75th Meridian East (UTC +5), which runs through parts of Russia, Kazakhstan, and India.



The path of the 105th Meridian West (yellow line) across Downtown Denver. Aerial image source: Google Earth (October 2014)



The path of the 105th Meridian West (yellow line) across Wynkoop Plaza and Denver Union Station. Aerial image source: Google Earth (October 2014)

THE 105TH MERIDIAN RUNS DIRECTLY THROUGH UNION STATION!

You are standing just a few feet from the 105th Meridian, which cuts across Wynkoop Plaza and through Denver Union Station's Great Hall. Its path has been marked into the granite pavers in Wynkoop Plaza just outside the door to your left.

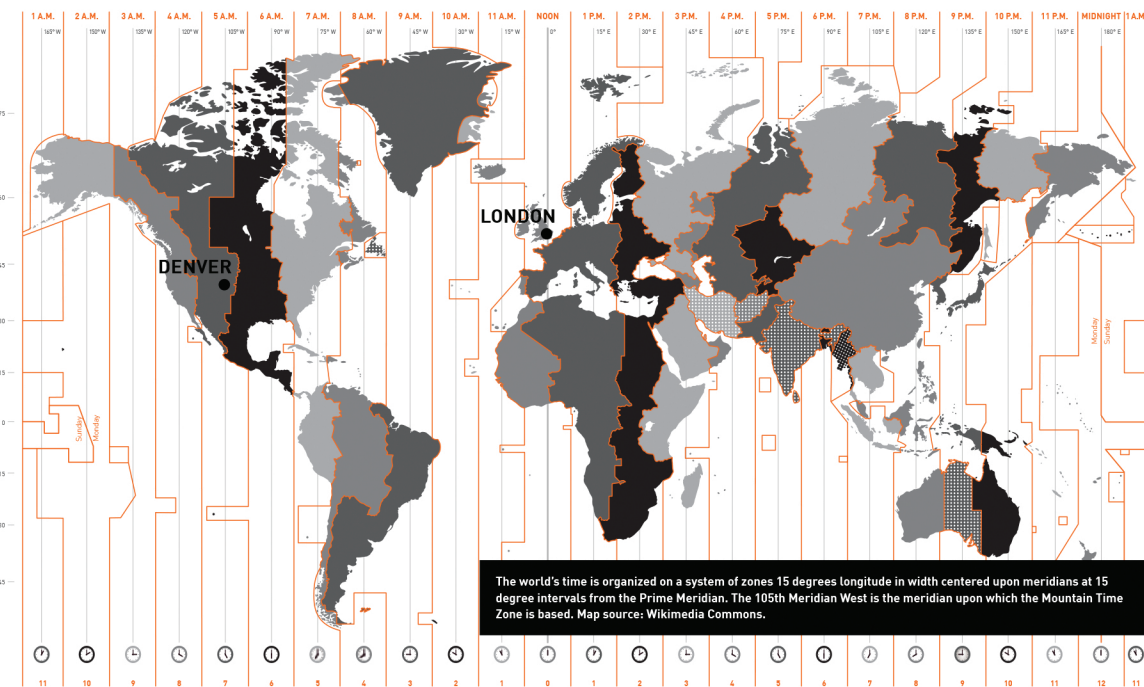
While it may have been unintended, the Mile High City's location on the 105th Meridian has proved beneficial. The Mountain Time Zone allows efficient communication with both coasts as well as Asia, Europe, and South America in the same business day, and Denver is the largest U.S. city to offer one-bounce satellite uplinks for real-time connections to six continents in one business day.

Given that Denver Union Station serves as Downtown Denver's gateway to the world via its rail connection to Denver International Airport, it seems fitting that Denver Union Station is situated on the 105th Meridian, an integral component in a worldwide system used to measure time and place.

MERIDIANS DEMARCATHE THE WORLD'S TIME ZONES

Because the Earth is divided into 360 degrees of longitude and there are 24 hours in a day, the Earth rotates at a rate of 15 degrees longitude each hour ($360 \div 24 = 15$). Therefore, the world's 24 standard time zones are 15 degrees of longitude in width each (with variations in many locations to accommodate political boundaries) and are centered upon meridians at 15-degree intervals (15°, 30°, 45°, etc.) east and west of the Prime Meridian.

Standard time within a time zone is expressed as the number of hours offset (plus or minus) from the time of day along the Prime Meridian, which is designated as Coordinated Universal Time or UTC for short. Add one hour later into the day for each successive time zone east of UTC, and subtract one hour earlier into the day for each successive time zone west of UTC.



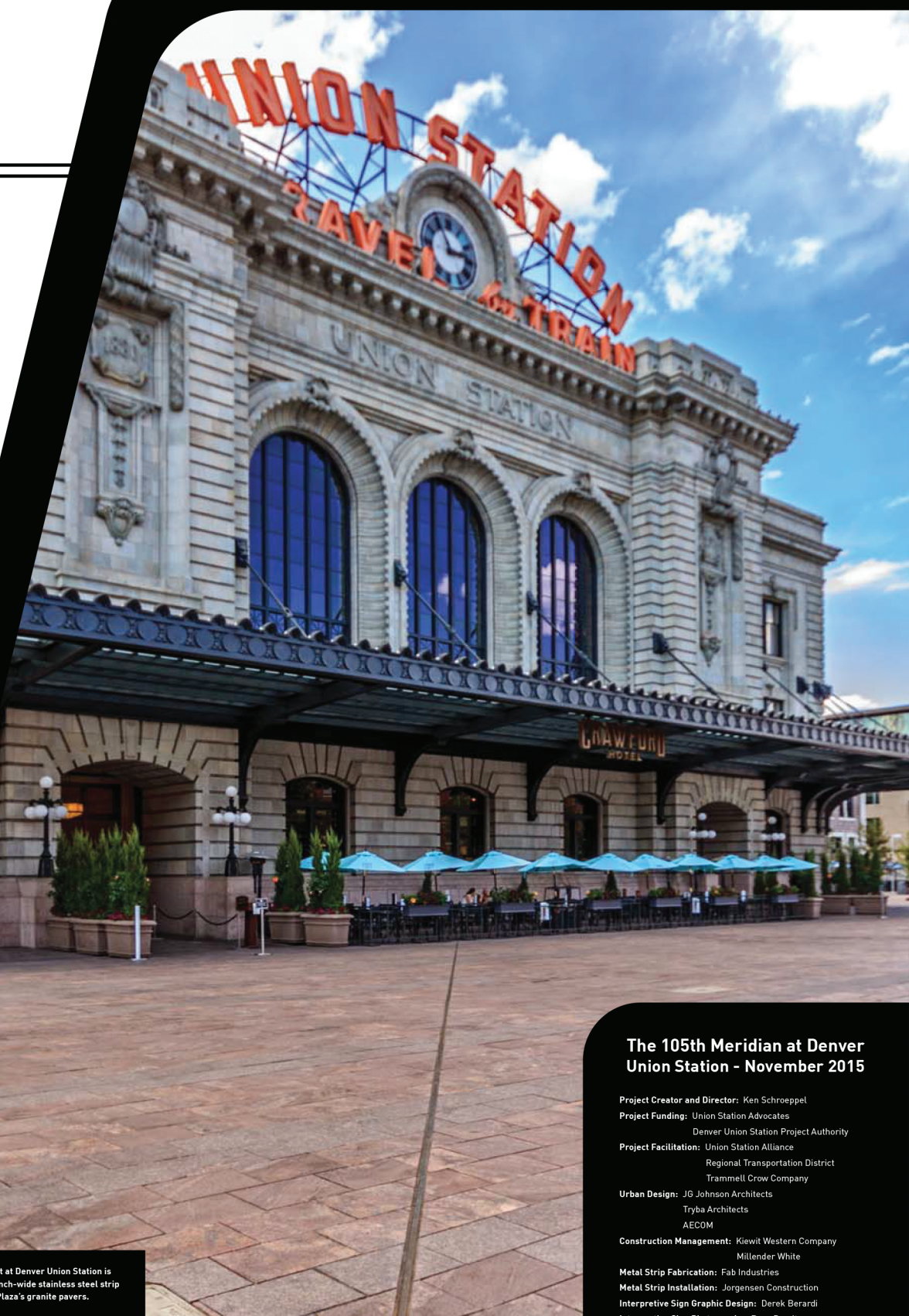
The world's time is organized on a system of zones 15 degrees longitude in width centered upon meridians at 15 degree intervals from the Prime Meridian. The 105th Meridian West is the meridian upon which the Mountain Time Zone is based. Map source: Wikimedia Commons.

IS DENVER'S LOCATION ON THE MERIDIAN A COINCIDENCE?

Denver's location on the 105th Meridian is a coincidence. The city was founded in 1858 due to the discovery of gold near the confluence of Cherry Creek and the South Platte River. While the amount of gold found in Denver proved disappointing, large amounts of gold were discovered soon thereafter in the nearby Rocky Mountains, allowing Denver to survive as a supply and distribution center.

Denver's original street grid (now Downtown Denver) was laid out with the streets paralleling Cherry Creek and the South Platte River, which happen to align at virtually a 45 degree angle to the four cardinal directions. Thus, the 105th Meridian, which runs due north and south, appears to cross Downtown Denver's streets and blocks on a diagonal path. Outside of Downtown, the 105th Meridian runs roughly along Kalamath Street.

The 105th Meridian West at Denver Union Station is commemorated by a 1-inch-wide stainless steel strip embedded in Wynkoop Plaza's granite pavers.



The 105th Meridian at Denver Union Station - November 2015

- Project Creator and Director: Ken Schroeppel
- Project Funding: Union Station Advocates
Denver Union Station Project Authority
- Project Facilitation: Union Station Alliance
Regional Transportation District
Trammell Crow Company
- Urban Design: JG Johnson Architects
Tryba Architects
AECOM
- Construction Management: Kiewit Western Company
Millender White
- Metal Strip Fabrication: Fab Industries
- Metal Strip Installation: Jorgensen Construction
- Interpretive Sign Graphic Design: Derek Berardi
- Interpretive Sign Photography: Ryan Dravitz
- Interpretive Sign Fabrication: NINE dot ARTS