

New Residential Construction

Data Relationships between Permits, Starts, and Completions

Background - How the Surveys Work

New residential construction data are collected in two surveys:

The **Building Permits Survey** (BPS) produces estimates of the numbers of housing units authorized by permits each month. This is done through a survey of permit offices. Permit offices not in the monthly survey report annual numbers at the end of each year.

The **Survey of Construction** (SOC) produces monthly estimates of new housing units started and completed. Census Bureau field representatives sample individual permits within a sample of permit offices. Then the builders or owners who took out the sampled permits are interviewed to obtain start and completion dates, along with sale dates and characteristics such as size and number of bedrooms. In addition, within a sample of land areas where building permits are not required, field representatives drive all roads looking for new residential construction activity.

Factors Affecting the Permit/Start/Completion Relationships

1. Starts and completions in non-permit areas

Housing starts and completions estimates cover the entire United States, not just areas requiring building permits. A very small percentage of new housing units are built in these areas. Nearly all are single-family houses. (Note that the number of jurisdictions requiring building permits has increased over time as non-permit places began issuing permits. Beginning in January 2023, the Building Permits Survey universe methodology changed to an annually updated universe where jurisdictions are added and deleted from the target universe each year.)

2. Changes after the issuance of permits

Many times, changes to the status of buildings occur after the permit has been issued, affecting the permit to start/completion relationship. When these changes occur after the start of construction, this also affects the start to completion relationship.

Reclassification:

Townhouses are classified as single-family houses according to Census definitions; however, permit offices frequently classify them as multifamily structures. If these permits are sampled for SOC, they are reclassified as single-family. This reclassification results in significantly more single-family starts and completions (and less multifamily) than are shown in the permit data.

Abandons:

Construction is sometimes abandoned after permits are issued but before construction is started, affecting the permit to start relationship, or after construction is started, affecting the start to completion relationship. Abandon rates can fluctuate over time due to conditions in the economy.

Design Changes:

Builders may also make design changes after the issuance of the original permits. This is more common with the construction of multifamily buildings where the final number of housing units may be more or less than originally planned.

Misclassification:

Permit offices sometimes incorrectly classify permits as new residential construction when the permits are actually for improvements to existing structures, placement of manufactured homes, or the construction of nonresidential buildings. If sampled for SOC, Census field representatives will subsequently classify these permits as out of scope for the survey and they will not be included in the estimates of starts or completions.

Estimation methodology:

SOC estimates are adjusted to account for units started prior to permit authorization and for late reports. These adjustments are based on historical patterns of pre-permit starts and late data. The adjustments that are made when estimating starts may be slightly different than those applied when the same cases are included in the estimates of completions.

3. Permit revisions not applied to starts and completions

The estimation of housing starts and completions involves a procedure where estimates of monthly permit authorizations based on SOC sample cases are ratio-adjusted to the more complete estimates of permits based on the monthly BPS. However, monthly permit estimates from the BPS are subsequently revised at the end of each year when results of the annual survey are incorporated. Under current procedures, the final revised permit numbers are not used in the calculation of starts and completions, because this would delay the release of SOC annual data products. Over the past few years, final permit estimates have been slightly higher than the permit estimates used to develop the starts and completions data.

4. Change in inventories between time periods

In comparing the numbers of permits, starts, and completions over time, changes in the level of two inventory figures must be considered. The number of units authorized but not yet started affects the relationship between permits and starts, and the number of housing units still under construction affects the relationship between starts and completions.

Summary of Differences for the Most Recent Year

See below for a summary of the magnitude of the differences due to the factors described above for the year 2022.

(Figures presented in the tables below are derived from rounded estimates. Detail may not add to totals because of rounding.)

Starts versus Permits

Total housing starts were 6.8% less than total permits:

| | |
|---|-------|
| Housing starts in non-permit areas | 0.6% |
| Changes after the issuance of permits | -3.4% |
| Permit revisions not applied to starts | -2.3% |
| Change in inventory of units authorized but not started | -1.6% |

Single-family housing starts were 3.0% more than total permits:

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|---|-------|
| Housing starts in non-permit areas | 1.0% |
| Changes after the issuance of permits | 2.9% |
| Permit revisions not applied to starts | -1.4% |
| Change in inventory of units authorized but not started | 0.5% |

Multifamily housing starts were 20.6% less than total permits:

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|---|--------|
| Housing starts in non-permit areas | 0.0% |
| Changes after the issuance of permits | -12.4% |
| Permit revisions not applied to starts | -3.7% |
| Change in inventory of units authorized but not started | -4.5% |

Completions versus Starts

Total housing completions were 10.5% less than total starts:

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|---|--------|
| Changes between start and completion | 0.3% |
| Change in inventory of units under construction | -10.7% |

Single-family housing completions were 1.7% more than total starts:

| | |
|---|------|
| Changes between start and completion | 0.2% |
| Change in inventory of units under construction | 1.5% |

Multifamily housing completions were 32.7% less than total starts:

| | |
|---|--------|
| Changes between start and completion | 0.4% |
| Change in inventory of units under construction | -33.1% |