



## HOUSTON 4Q16 INDUSTRIAL MARKET

### HOUSTON INDUSTRIAL – BEYOND OIL AND GAS

The Houston industrial real estate market remained active through the fourth quarter of 2016, which marked over five straight years of overall vacancy at or below the current rate of 5.6%, as almost 1.4 million square feet was absorbed during the quarter.

The unemployment rate in Houston, not adjusted for seasonal variations, was 4.9% in November, up from 4.8% a year ago.

The Houston metro area added 5,700 jobs in November, bringing total nonfarm employment to 3,031,500, not seasonally adjusted, according to the Texas Workforce Commission. The reported job growth is well below the 25-year average of 11,600 net new jobs for November, a sign the job market remains vulnerable following the downturn in the oil and gas industry.

In Texas, job growth has risen after a two-year slump, as the energy industry has begun to recover. The Texas Workforce Commission reported that mining and logging, the sector that includes energy from oil and gas extraction services, added 3,200 jobs across the state last month. However, the sector has lost more than 29,000 jobs year-over-year.

In Houston, oil and gas employment showed signs of continued improvement. The mining and logging sector posted a year-over-year loss of 7,900 jobs last month, compared with losses of 8,400 jobs in October and 10,200 in September.

#### Vacancy

Houston's industrial vacancy rate increased by 10 basis points quarter-over-quarter, from 5.5% to 5.6%. By the end of the fourth quarter, Houston had 29.9 million square feet of vacant industrial space. Among the major property types, manufacturing closed the quarter at 3.6% vacancy, and warehouse and distribution ended at 6.0%. The North submarket continued to have the highest overall vacancy at 9.1%. The higher vacancy is due in part to an ongoing large supply of institutional warehouse and distribution space at 9.7%. Manufacturing space was at 4.8%, up slightly from 4.7% last quarter. Move-outs affecting net absorption in the North submarket included Gator Fabrications vacating 72,000 square feet at 101 East Avenue M in Conroe and Display Works moving out of 63,762 square feet at Beltway Crossing Center, Building 6. The Northeast submarket had the tightest overall vacancy at 2.6%, with warehouse and distribution at 2.6% and manufacturing at 2.7%.

The oil downturn has reduced demand for crane-served manufacturing buildings. The total amount of manufacturing space being marketed for lease, regardless of whether space is vacant, occupied, subleased or available at a future date, is at 8.1 million square feet with an availability rate of 9.1%. About 1.3 million square feet of that space is sublet.

#### Current Conditions

- Vacancy overall has been at or below the current rate of 5.6% for 21 consecutive quarters.
- 55 projects representing 5.5 million SF of construction underway.
- 2.1 million SF in 23 buildings came online fourth quarter 2016.

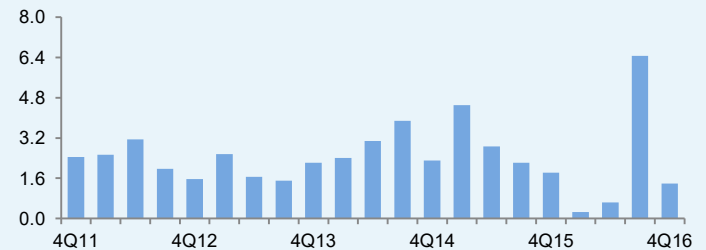
#### Market Analysis

##### Asking Rent and Vacancy



##### Net Absorption

Square Feet, Millions



#### Market Summary

	Current Quarter	Prior Quarter	Year Ago Period	12 Month Forecast
Total Inventory (SF)	534.6 M	532.2 M	521.0 M	↑
Vacancy Rate	5.6%	5.5%	4.8%	↑
Qtrly Net Absorption (SF)	1,391,083	6,463,291	1,815,328	↓
NNN Avg Asking Rent	\$7.16	\$6.97	\$7.02	↑
Under Construction (SF)	5,541,209	7,451,886	12,807,845	↓
Deliveries (SF)	2,165,077	6,506,241	3,298,862	↓



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**Construction and Deliveries**

In response to higher vacancy, construction activity has shifted from the North submarket to the Southeast side of Houston, which includes the spec project at Bayport North Industrial Park in Pasadena. Four buildings are currently under construction, and there are five planned buildings totaling 397,775 square feet. The project involves two single-tenant and two multi-tenant buildings, ranging from 24,250 to 231,983 square feet. The developer intends to add a 275,000-square-foot cross-dock facility and other buildings of different sizes in the park. The locations are 10322 New Decade Drive, 10344 New Decade Drive, 4033 Malone Drive and 4111 Malone Drive.

There is currently 5.5 million square feet under construction in the Houston industrial market, with approximately 2.0 million square feet available, or 36.3%. Only 15,300 square feet is manufacturing space in Breen Road Business Park, Building 8 near Tomball Parkway. Construction finished during the fourth quarter at the Crystal Geyser Alpine Spring Water facility. The 130,000 square feet of manufacturing space is located in Pasadena. The multimillion-dollar bottling plant is geared up to produce \$41.9 million in annual economic influence for Pasadena, according to a study overseen by Houston-based CenterPoint Energy.

**Absorption**

Houston's industrial market has posted 8.7 million square feet of net absorption as of year-end 2016. The Northwest submarket contributed the largest share with 5.2 million square feet, including the 3.9 million-square-foot build-to-suit Daikin Texas Technology Park, followed by the Southeast submarket with 2.8 million square feet of net absorption during 2016. Two submarkets posted negative absorption year-to-date: the Central Business District (CBD), with negative 890,666 square feet; and the South submarket, with negative 136,497 square feet. Sublease availability currently totals over 5.6 million square feet and is expected to grow in 2017, as the energy industry continues to downsize. In the CBD,

tenants are vacating old warehouse and distribution space and moving into less space in more recently built buildings. The Southeast submarket remains in high demand, especially for rail-served distribution space near the Port of Houston.

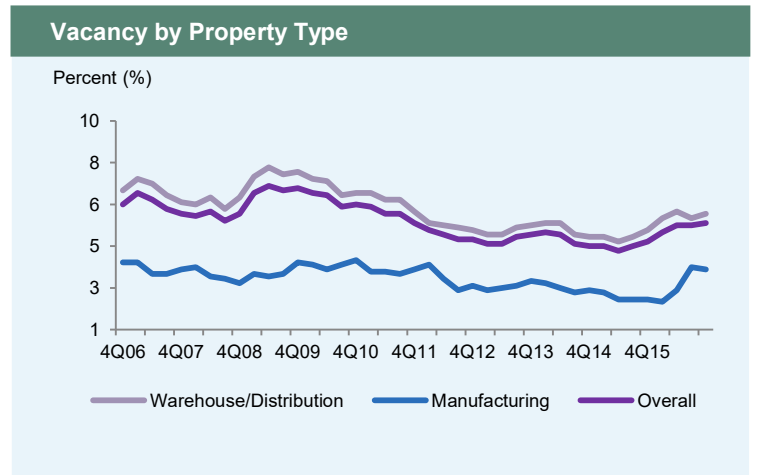
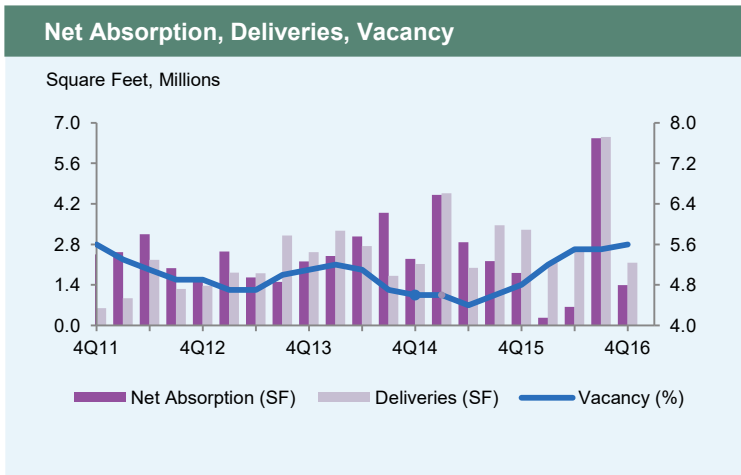
**Leasing Activity**

With a less-than-positive perception of the current Houston economy, tenants have the upper hand in lease negotiations, including free rent and tenant improvement dollars. Leasing activity was at 2.6 million square feet during fourth-quarter 2016, down from 5.3 million square feet quarter-over-quarter and 9.0 million square feet year-over-year. The average square feet leased per quarter over the last 10 years is approximately 244,000 square feet. Several major tenant move-ins contributed to net absorption gains in the fourth quarter, including Wald Relocation Services, with 96,000 square feet in Jersey Village Corporate Center; and TSC Apparel, with 89,060 square feet in Apex Distribution Center II. Both of these tenants are located in the Northwest submarket.

**Industrial Real Estate Investment Trusts**

The average occupancy rates for commercial mortgage-backed security loans financed by industrial properties have increased annually over the past five years, according to Trepp Analytics. These rates range from 91.9% in 2011 to 95.7% for 2016. This trend continued in November, as the industrial sector held the highest average occupancy rate among major property types at 95.8%.

The industrial sector owes its success to ecommerce, which may be restraining brick-and-mortar properties but is creating demand for spaces such as warehouses and distribution centers. Changing trends in consumption methods are driving demand, and competition is pushing companies to deliver goods in hours rather than days. This type of demand has industrial development opportunities at all-time highs.





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### The Next Generation of Technology

One of the world's leading plastics, chemical and refining companies, LyondellBasell has designated its La Porte, Texas, manufacturing complex as the location for a new high-density polyethylene (HDPE) plant. Plans were announced to build the new, \$700.0 million plant as part of a \$4.0 billion expansion in Texas. It will be the first commercial plant to use LyondellBasell's new Hyperzone PE technology. The projected annual capacity is 1.1 billion pounds, or 500,000 metric tons. The plant is expected to create up to 1,000 jobs at the peak of construction and as many as 75 full-time positions. Construction is slated to begin in early 2017, with startup planned for 2019.

### Port of Houston Authority Rebrands as Port Houston

The Port of Houston Authority has rebranded itself as Port Houston and adopted a new logo in an effort to further expand its business base and to improve awareness of port activities. Port Houston ranks first in the nation for foreign waterborne tonnage and second for overall tonnage. It backs the creation of nearly 1.2 million jobs in Texas and 2.7 million jobs nationwide. The port's economic activity totals almost \$265 billion in Texas, which represents 16.0% of the state's total gross domestic product, in addition to more than \$617 billion in economic impact across the U.S.

### Oil and Gas

OPEC and some non-OPEC members agreed to cut oil production by 1.2 million and 558,000 barrels a day, respectively. These production cuts, which are set to take place by January, could accelerate the time it takes for the oil market to regain equilibrium. Currently, the global supply and demand imbalance stands at 1.2 million barrels a day. However, the consensus forecast suggests the global oil market will reach equilibrium in the second half of 2017. Downside risks to this thesis include the actual results and duration of the production cuts, how quickly shale producers can come back online, a stronger U.S. dollar and to a lesser extent whether there is a pullback in global demand due to an economic recession. Despite these and other concerns, the price of oil shot up, and West Texas Intermediate stood at \$52 a barrel at the time of this writing.

### Houston Purchasing Managers Index

The Houston Purchasing Managers Index has moved upward in the past two months, reaching 51.1 in October. The results of a survey of supply chain managers indicates that Houston's economy is on track to continue to improve with an above-neutral reading of 50, after 21 months of contraction. October is the first reading above 50 since the oil bust began. If the current oil prices stay above \$50 per barrel, Houston should be in a relatively good position for growth going into 2017.

### Lease/User Transactions

Tenant	Building/Address	Submarket	Type	Square Feet
Adams Warehouse & Delivery	McCarty Business Park	Northeast	Direct/Renewal	75,540
MIQ Logistic	8575 Volta Dr.	North	Direct/New	56,404
Gateway Supply	620 N Houston Ave.	Northeast	Direct/New	52,145
Debusk	1005 W 8 <sup>th</sup> St.	Southeast	Direct/New	49,178
Diesel Core	Mason Creek Business Park	Northwest	Direct/New	42,550

### Select Sales Transactions

Building	Submarket	Price	Price/SF	Square Feet
Corporate Park Northwest	Northwest	\$8,327,243	\$45	185,418
Westchase Corporate Park	Southwest	N/A	N/A	176,977
Corporate Park West	Northwest	\$7,685,436	\$44	175,665
I-10 Warehouse Park	Northwest	\$6,680,661	\$44	152,699
Century Plaza Distribution Center	North	N/A	N/A	149,760



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### Submarket Statistics

	Total Inventory (SF)	Total Vacant (SF)	Total Vacancy Rate	Qtr Absorption (SF)	YTD Absorption (SF)	Under Construction (SF)	Qtr Deliveries (SF)	Total NNN Asking Rent (Price/SF)
<b>Houston Market Total</b>	<b>534,675,311</b>	<b>29,937,294</b>	<b>5.6%</b>	<b>1,391,083</b>	<b>8,758,181</b>	<b>5,541,209</b>	<b>2,165,077</b>	<b>\$7.16</b>
Warehouse & Distribution	445,222,607	26,698,558	6.0%	1,172,564	5,289,753	5,525,909	2,035,077	\$7.25
Manufacturing	89,452,704	3,239,986	3.6%	217,269	3,467,178	15,300	130,000	\$6.76
<b>CBD Total</b>	<b>54,987,698</b>	<b>2,970,250</b>	<b>5.4%</b>	<b>-255,088</b>	<b>-890,666</b>	<b>0</b>	<b>0</b>	<b>\$5.50</b>
Warehouse & Distribution	44,816,419	2,669,868	6.0%	-257,588	-742,292	0	0	\$5.48
Manufacturing	10,171,279	300,382	3.0%	2,500	-148,374	0	0	\$5.59
<b>North Total</b>	<b>91,880,954</b>	<b>8,324,859</b>	<b>9.1%</b>	<b>-103,644</b>	<b>524,026</b>	<b>324,450</b>	<b>99,250</b>	<b>\$7.60</b>
Warehouse & Distribution	79,167,055	7,713,346	9.7%	-89,283	417,039	324,450	99,250	\$7.77
Manufacturing	12,713,899	611,513	4.8%	-14,361	106,987	0	0	\$6.66
<b>Northeast Total</b>	<b>34,092,118</b>	<b>903,113</b>	<b>2.6%</b>	<b>-83,472</b>	<b>148,265</b>	<b>20,222</b>	<b>0</b>	<b>\$5.48</b>
Warehouse & Distribution	27,412,665	724,149	2.6%	-42,027	186,529	20,222	0	\$5.56
Manufacturing	6,679,453	178,964	2.7%	-41,445	-38,264	0	0	\$5.05
<b>Northwest Total</b>	<b>151,830,805</b>	<b>7,921,925</b>	<b>5.2%</b>	<b>825,285</b>	<b>5,236,363</b>	<b>1,386,100</b>	<b>72,840</b>	<b>\$7.68</b>
Warehouse & Distribution	127,203,341	7,066,392	5.6%	760,731	1,654,316	1,370,800	72,840	\$8.02
Manufacturing	24,627,464	855,533	3.5%	64,554	3,582,047	15,300	0	\$6.24
<b>Southeast Total</b>	<b>88,012,538</b>	<b>4,566,081</b>	<b>5.2%</b>	<b>1,042,792</b>	<b>2,855,726</b>	<b>2,511,770</b>	<b>1,595,687</b>	<b>\$7.26</b>
Warehouse & Distribution	70,744,177	3,936,427	5.6%	852,304	2,828,236	2,511,770	1,465,687	\$7.00
Manufacturing	17,268,361	629,654	3.6%	190,488	27,490	0	130,000	\$8.85
<b>South Total</b>	<b>45,674,084</b>	<b>1,627,883</b>	<b>3.6%</b>	<b>-128,004</b>	<b>-126,497</b>	<b>304,800</b>	<b>108,000</b>	<b>\$5.41</b>
Warehouse & Distribution	36,321,149	1,465,271	4.0%	-128,004	-49,007	304,800	108,000	\$5.96
Manufacturing	9,352,935	162,612	1.7%	0	-87,490	0	0	\$4.29
<b>Southwest Total</b>	<b>68,197,114</b>	<b>3,623,183</b>	<b>5.3%</b>	<b>93,214</b>	<b>1,020,964</b>	<b>993,867</b>	<b>289,300</b>	<b>\$8.21</b>
Warehouse & Distribution	59,557,801	3,129,855	5.3%	69,681	988,182	993,867	289,300	\$7.76
Manufacturing	8,639,313	501,328	5.8%	15,533	24,782	0	0	\$9.67



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**Texas Vacancy By Submarket**

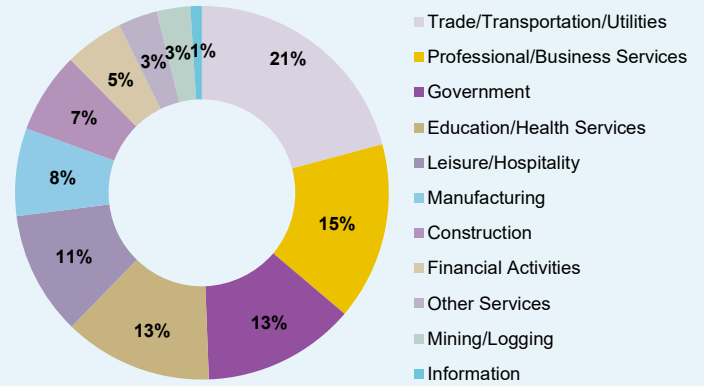
Top 10 Submarkets by Lowest Vacancy Rate

Rank	Submarket	Total Vacancy Rate
1	South Austin	2.1%
2	Northeast Houston	2.6%
3	Northwest/Cedar Park Austin	2.7%
4	Southwest Austin	3.2%
5	South Houston	3.6%
6	South Fort Worth	3.7%
7	Central Austin	4.2%
8	Northwest Houston	5.2%
9	Southeast Houston	5.2%
10	Southwest Houston	5.3%

Source: NGKF Research 3Q16

**Employment By Industry**

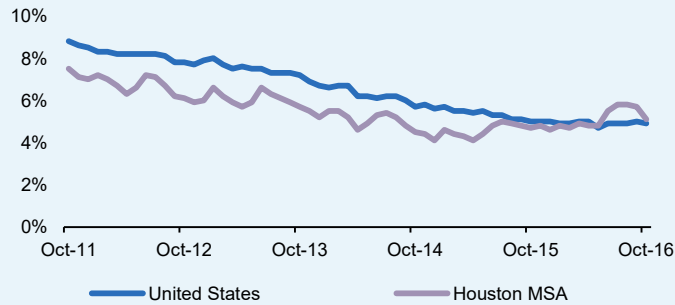
Houston, November 2016



Source: U. S. Bureau of Labor Statistics

**Unemployment Rate**

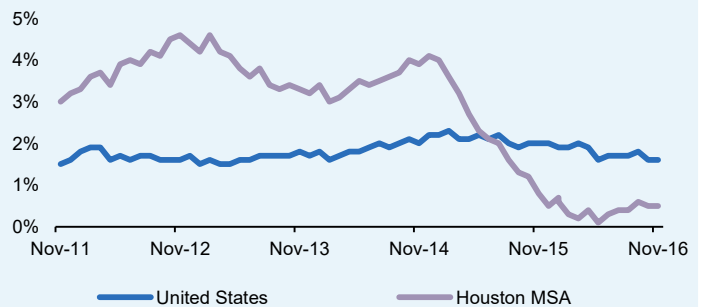
Not Seasonally Adjusted



Source: U.S. Bureau of Labor Statistics,

**Payroll Employment**

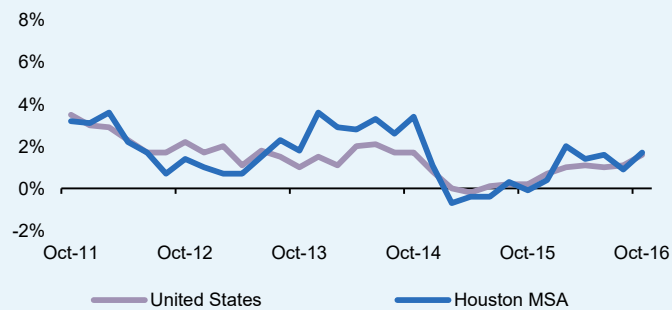
Total Nonfarm, Not Seasonally Adjusted, 12-Month % Change



Source: U.S. Bureau of Labor Statistics,

**Consumer Price Index (CPI)**

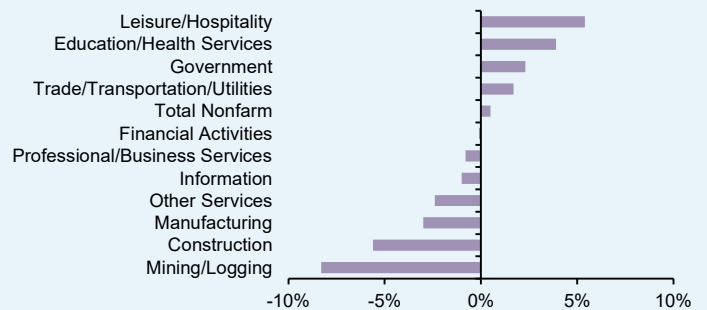
All Items, 12-Month % Change, Not Seasonally Adjusted, 1982-84=100



Source: U.S. Bureau of Labor Statistics

**Employment Growth by Industry**

Houston, November 2016, 12-Month % Change, Not Seasonally Adjusted



Source: U.S. Bureau of Labor Statistics



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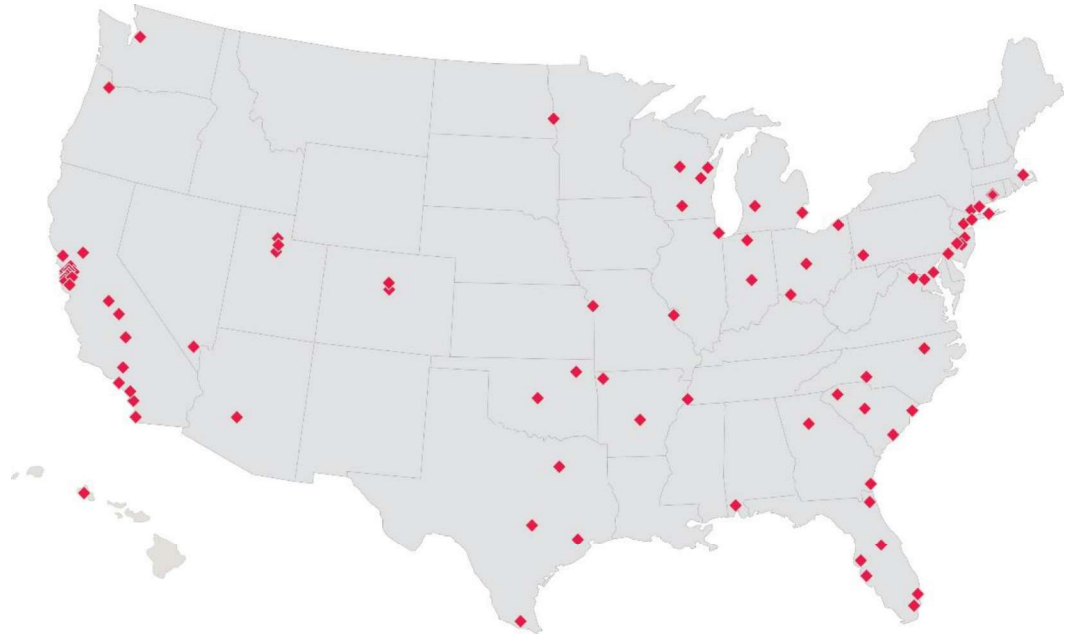
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