

# Economy at a Glance

Prepared by Alex Carrick, ConstructConnect® Chief Economist

## U.S. construction material cost shock escalates (Part I)



Alex Carrick

### Input cost increases migrate beyond lumber

At the same time as the depth of the nonresidential construction marketplace in the U.S. has become shallower — i.e., there are fewer projects out for bidding due to cutbacks in capital spending plans forced by the coronavirus contagion, — material input costs have been escalating.

Table 1 shows the extent of the cost shock. The table pulls its information from the monthly Producer Price Index (PPI) series published by the Bureau of Labor Statistics (BLS).

Bolstered by renovation projects undertaken by stay-at-home workers and by strength in one of the few corners of the construction marketplace that has remained bullish, single-family housing activity, lumber and related product prices have been soaring.

In February, the softwood lumber PPI was +79.7% year over year and +38.0% during the latest three months; plywood, +44.1% y/y and +8.1% over latest three months; and particle board and oriented strand board, +62.5% y/y, although only +1.9% in the past three months.

While forestry products started the wave, sizable price advances have recently migrated to many other material categories as well.

From Table 1, steel bar, plate and structural shape prices are +15.2% y/y after climbing +16.2% in the latest three months. They've been driven higher by iron and steel scrap prices, +45.7% y/y and +36.1% over the latest three months.

Copper wire and cable prices are +18.2% y/y and +10.7% in the latest three months.

Diesel fuel is +36.5% y/y and +31.4% versus three months earlier.

Adding to the upward trajectory of material costs, as recorded in the latest three months, are aluminum mill shapes, +7.5%; asphalt, +34.0%; and regular unleaded gasoline, +39.1%.

The price increases for fossil fuel-derived products results from the climb in the world price of oil, back to around \$60 USD per barrel. (There was a brief moment in 2020 when crude slipped below zero dollars per barrel.)

### Five charts covering 20 construction material inputs

The next five charts (each with a cluster of four graphs) show the monthly histories of key PPI material price indices since January 2000.

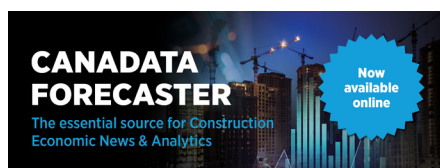
Chart 1 mainly focuses on lumber products, with gypsum (as an interior wall covering) included as well.

Chart 2 deals with steel, plus prefabricated metal buildings which weren't mentioned in section one, but which have notched noteworthy price increases of late (+18.4% y/y and +9.6% in the latest three months).

Chart 3 keys on cement and concrete. You'll notice the price increases for these products move in a steadier, less volatile, fashion than for most of the other series.

To be continued in *Economy at a Glance*, Vol. 17, Issue 49.

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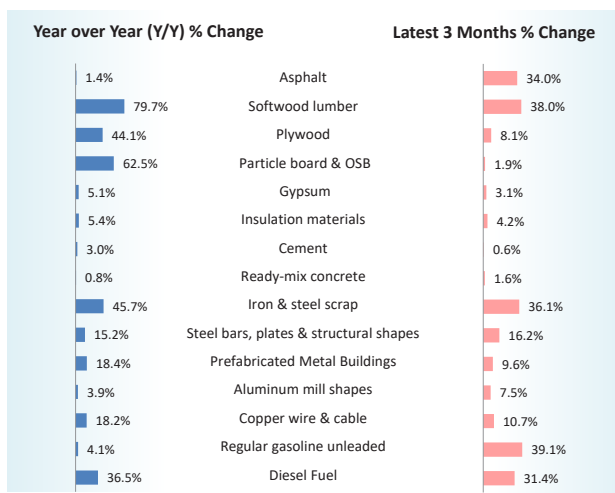


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The last data points are for February, 2021.

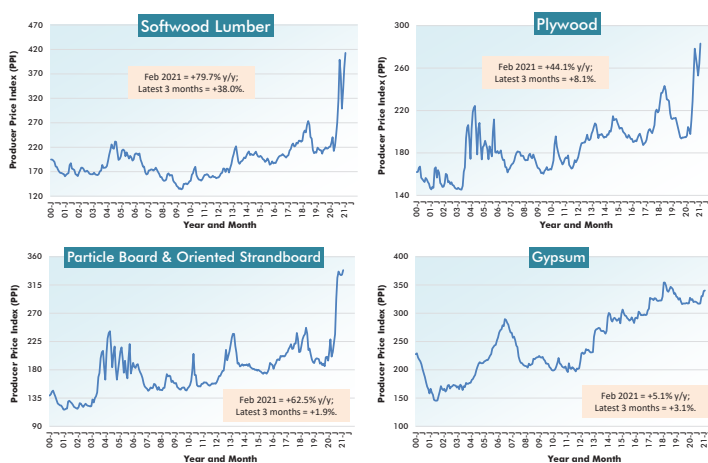
Data source: U.S. Bureau of Labor Statistics (BLS), Producer Price Index (PPI) series, not seasonally adjusted (NSA) / Charts: ConstructConnect — CanaData.

### Table 1: U.S. Construction Material Cost Changes From Producer Price Index (PPI) Series – February 2021

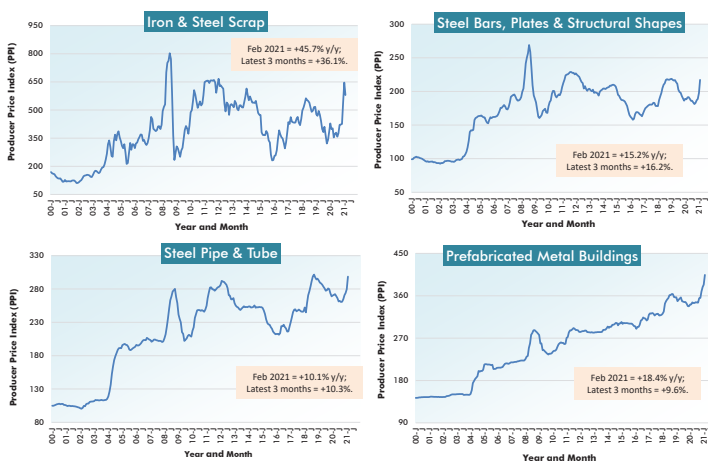


Data source: Bureau of Labor Statistics (BLS) / Chart: ConstructConnect — CanaData.

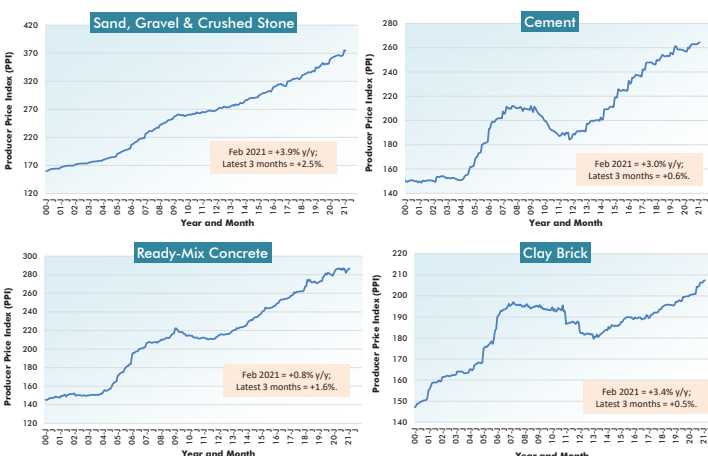
### Graph 1: U.S. Construction Material Costs (1) – From Producer Price Index (PPI) Series



### Graph 2: U.S. Construction Material Costs (2) – From Producer Price Index (PPI) Series



### Graph 3: U.S. Construction Material Costs (3) – From Producer Price Index (PPI) Series



# Economy at a Glance

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## U.S. construction material cost shock escalates (Part 2)



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Continued from *Economy at a Glance*, Vol. 17, Issue 48.

Chart 4 looks at base materials: iron ore, coal, aluminum and copper. Coal is the only commodity covered in this story with a year-over-year decline (albeit miniscule) in price, -0.1%.

Chart 5 is about fossil fuel derivatives that are either incorporated into construction projects or are consumed in the

building of structures.

### Nevertheless, bid price index stays muted

Table 1 at the beginning of this article is a condensed version of Table 2 below. Table 2 sets out the cost changes for a much longer list of construction material inputs (i.e., 35 such products and a service or two), over five different time frames.

There's a PPI 'final demand' index in the top line of Table 2. It reflects what owners see when they review bid prices. The 'final demand construction' index includes more than just material costs, adding labor, all other expenses and margins (profits) to the mix as well.

The final demand index is just +1.0% year over year. That's in stark contrast to the 'inputs to new construction' indices at the bottom of Table 2, which fluctuate around +10.0% y/y. For the moment, at least, it would appear contractors are prepared to absorb higher costs in order to win contracts.

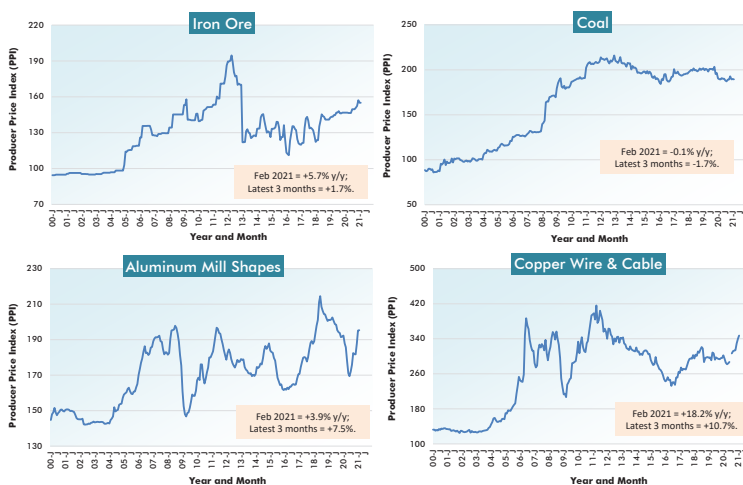
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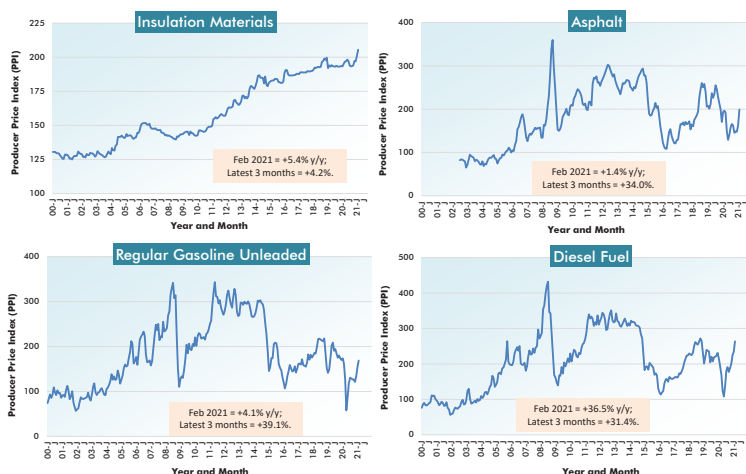
The last data points are for February, 2021.

Data source: U.S. Bureau of Labor Statistics (BLS), Producer Price Index (PPI) series, not seasonally adjusted (NSA). Charts: ConstructConnect — CanaData.

### Graph 4: U.S. Construction Material Costs (4) – From Producer Price Index (PPI) Series



### Graph 5: U.S. Construction Material Costs (5) – From Producer Price Index (PPI) Series



### Table 2: U.S. Producer Price Index (PPI) Results % Change in the February 2021 Index from:

	3 Years Ago	1 Year Ago	6 months Ago	3 months Ago	1 month Ago
<b>Final Demand/Service/Commodity/Energy/Input:</b>					
Final Demand Construction	10.1%	1.0%	0.4%	0.5%	0.3%
New warehouse building construction	7.7%	-0.6%	0.2%	-0.1%	-0.2%
New school building construction	11.0%	0.9%	-0.2%	0.2%	0.3%
New office building construction	10.9%	1.7%	1.3%	1.0%	0.5%
New industrial building construction	12.2%	1.8%	0.1%	0.6%	0.1%
New health care building construction	8.7%	0.3%	-0.5%	0.2%	0.3%
Architectural & engineering services	5.0%	1.4%	2.5%	2.3%	0.7%
Construction machinery & equipment	9.8%	1.3%	1.3%	1.2%	0.1%
Asphalt	13.6%	1.4%	20.2%	34.0%	22.4%
Plastic construction products	10.7%	8.0%	6.5%	2.1%	1.1%
Softwood lumber	65.6%	79.7%	30.3%	38.0%	7.9%
Hardwood lumber	3.2%	16.9%	16.2%	8.4%	2.5%
Millwork	16.0%	11.0%	6.8%	3.7%	0.3%
Plywood	24.2%	44.1%	11.3%	8.1%	7.2%
Particle board & oriented strandboard (OSB)	55.4%	62.5%	15.5%	1.9%	2.2%
Gypsum	-4.0%	5.1%	7.3%	3.1%	0.3%
Insulation materials	6.8%	5.4%	6.3%	4.2%	2.2%
Construction sand, gravel & crushed stone	13.1%	3.9%	2.2%	2.5%	-0.1%
Cement	6.0%	3.0%	0.6%	0.6%	0.2%
Ready-mix concrete	7.1%	0.8%	0.6%	1.6%	0.3%
Precast concrete products	13.8%	4.1%	3.5%	2.4%	1.0%
Prestressed concrete products	6.5%	0.0%	0.7%	0.7%	-0.1%
Brick (clay)	6.3%	3.4%	1.5%	0.5%	0.1%
Coal	-4.6%	-0.1%	1.2%	-1.7%	-0.2%
Iron ore	25.3%	5.7%	3.6%	1.7%	0.0%
Iron & steel scrap	13.1%	45.7%	54.4%	36.1%	-10.3%
Steel bars, plates & structural shapes	16.0%	15.2%	18.2%	16.2%	9.9%
Steel pipe & tube	21.9%	10.1%	14.6%	10.3%	6.8%
Fabricated structural metal products	13.2%	6.2%	6.0%	5.9%	3.3%
Prefabricated Metal Buildings	23.9%	18.4%	17.1%	9.6%	5.4%
Aluminum mill shapes	0.8%	3.9%	11.1%	7.5%	0.1%
Flat glass	4.9%	1.9%	2.1%	1.9%	-0.1%
Paints, architectural coatings	13.7%	2.4%	0.0%	0.0%	-0.1%
Lighting fixtures	9.6%	1.3%	0.9%	0.3%	0.2%
Plumbing fixtures & fittings	7.9%	1.3%	1.5%	0.3%	0.4%
Elevators & escalators	8.5%	1.5%	1.6%	1.3%	1.5%
Heating equipment	11.9%	2.5%	1.7%	1.9%	1.7%
Air conditioning equipment	11.7%	4.6%	2.8%	2.0%	1.1%
Copper wire & cable	14.4%	18.2%	13.4%	10.7%	2.2%
Regular gasoline unleaded	-9.2%	4.1%	30.7%	39.1%	9.2%
Diesel Fuel	16.5%	36.5%	38.2%	31.4%	12.7%
<b>Inputs to new construction</b>					
Inputs to new residential construction	14.1%	10.0%	7.3%	5.5%	2.5%
Inputs to new non-res construction	13.3%	8.6%	7.5%	6.2%	1.9%
Inputs to commercial construction	12.9%	7.9%	7.2%	5.8%	1.6%
Inputs to healthcare structures	13.4%	8.7%	7.0%	5.6%	1.6%
Inputs to industrial structures	13.5%	7.4%	7.0%	5.5%	1.5%
Inputs to highways & streets	10.8%	6.0%	6.8%	6.2%	1.7%
Inputs to power & communication structures	11.5%	8.0%	7.6%	6.4%	2.0%
Inputs to educational & vocational structures	14.4%	9.5%	7.2%	5.6%	1.7%
Construction materials (PPI 'Special Index')	15.3%	12.4%	9.4%	7.9%	3.5%

The 'final demand' indices (at top) reflect the prices paid by owners for the construction of projects. They include material, labor & markups. The 'service', 'commodity' and 'energy' indices (in the middle section of the table) are based on 'factory-gate' sales prices. The 'input' indices (at bottom) reflect costs faced by contractors. They exclude capital investment (i.e., machinery & equipment), labor & imports. The 'input' indices are built up from the 'service' (design, legal, transport & warehousing, etc.) 'commodity' and 'energy' indices.

Data source: Producer Price Index (PPI) series from Bureau of Labor Statistics (BLS) / Table: ConstructConnect — CanaData.