

CONSTRUCTION COST SURVEY

2015

Prepared for:

ALASKA HOUSING FINANCE CORPORATION

BRYAN BUTCHER, Chief Executive Officer/Executive Director

Prepared by:

**ALASKA DEPARTMENT OF LABOR
AND WORKFORCE DEVELOPMENT**

Research and Analysis Section

ROB KREIGER, Economist

KARINNE WIEBOLD, Economist

NICOLE DUSENBERRY, Research Analyst

SARA WHITNEY, Editor

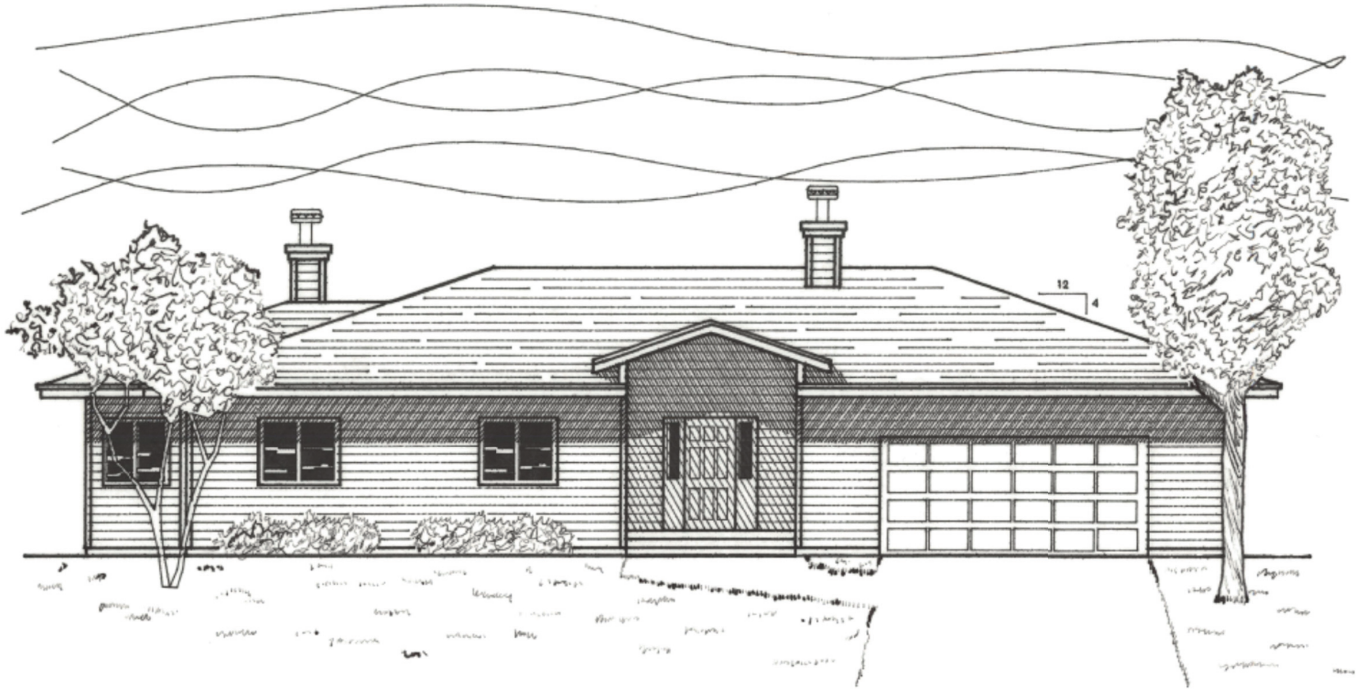
Introduction

In January, the Alaska Department of Labor and Workforce Development's Research and Analysis Section conducted the 23rd annual Construction Cost Survey on behalf of the Alaska Housing Finance Corporation. We conduct this survey of building supply, concrete, and shipping companies to determine the cost of construction materials in communities throughout Alaska. The survey collects contractor pricing for a market basket of materials determined by the design of a model home. This market basket represents approximately 30 percent of the materials used in the model home; however, it does not represent 30 percent of the total cost to build it. The artist renderings on page 3 show the floor plan of the model this survey uses.

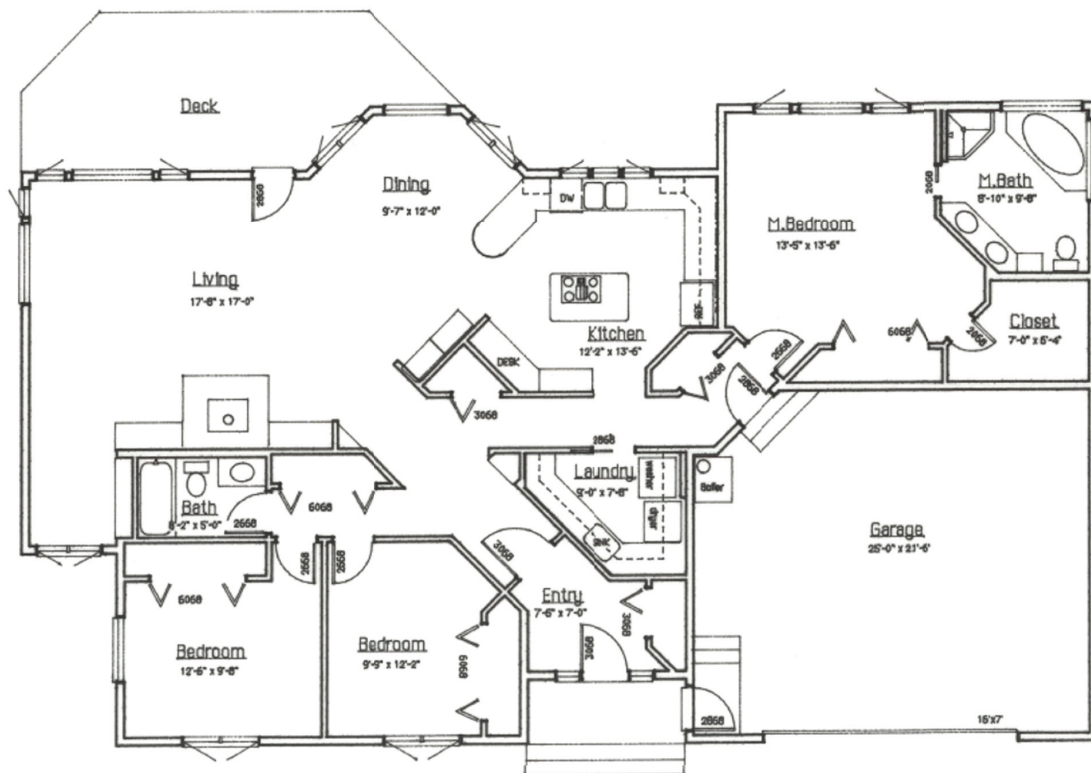
The market basket allows us to compare costs among the urban communities of Anchorage, Fairbanks, Juneau, Kenai, Ketchikan, Kodiak, Sitka, and Wasilla as well as the rural communities of Barrow, Bethel, and Nome. In addition to the market basket materials, suppliers report the cost of doors and windows for the model home and shipping companies provide the cost of transporting the materials from Seattle to each community. A complete list of the market basket items and their specifications is included in the tables that begin on page 12.

Construction techniques, building requirements, and styles vary greatly from region to region. Metal roofing, which is more common in rural areas, is substituted for asphalt shingles in Barrow, Bethel, and Nome's market baskets. Costs for the three rural areas surveyed exclude concrete and rebar, as pilings support houses above permafrost in these locations instead of slab foundations. Unless otherwise specified, the market basket prices quoted exclude concrete, rebar, doors, and windows.

Model Home



FRONT ELEVATION



Floor Plan
1923 SQ. FT.

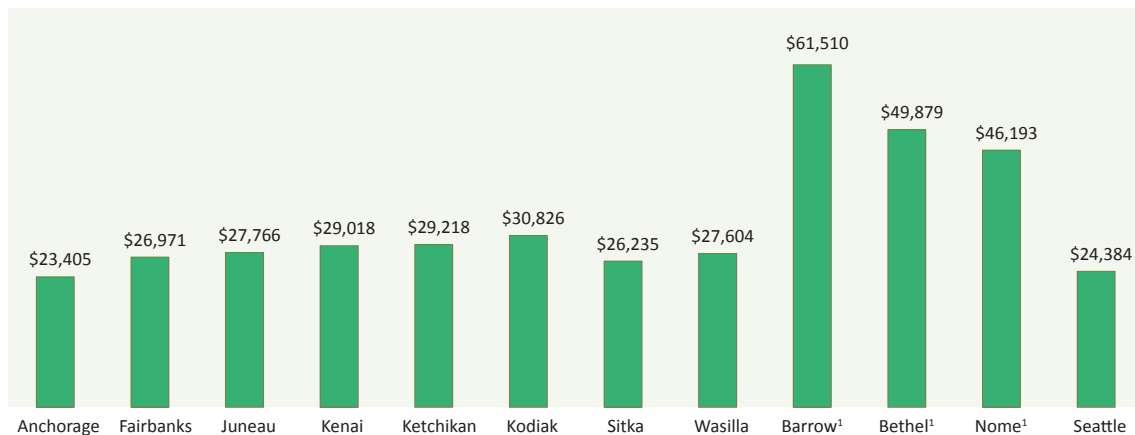
Note: Seattle prices include asphalt shingles. Rural areas include metal roofing instead of asphalt shingles.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2015

Comparing 2015 to 2014

Average Cost of Market Basket, 2015

Urban and Rural Residential Construction (without concrete, rebar, doors, or windows), Alaska and Seattle Suppliers



¹Rural areas include metal roofing instead of asphalt shingles.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2015

Alaska Market Baskets

- The market basket cost of construction materials in Alaska increased 7 percent overall, compared to 4 percent last year.
- The overall market basket cost increased in eight of the 11 surveyed locations. Increases ranged from 1 percent in Fairbanks to 26 percent in Bethel. Costs fell by 2 percent in Anchorage, 1 percent in Juneau, and 3 percent in Kodiak.

Seattle Market Basket

- Twelve of 15 items increased in price this year, and Seattle's overall total increased 8 percent to \$24,384.
- The five most expensive items in Seattle increased this year by a combined \$1,241, more than in 2014 (\$859), but less than in 2013 (\$1,517).
- The three items that decreased in price fell a combined \$22 overall, whereas the price increases on the other 12 items equaled an additional \$1,930.

Concrete

- In 2015, the price of concrete rose in each area except for Sitka, where the price remained the same as the year before. Increases ranged from less than 1 percent (Anchorage) to 9 percent (Kenai and Kodiak).
- Wasilla and Fairbanks continue to have the least expensive concrete this year, at \$3,563 and \$3,613 respectively. Kodiak topped the list again at \$7,620, with Sitka and Juneau next in line at \$6,210 and \$5,700 respectively.

Rebar

- The price of rebar went down in five of the eight urban locations. Prices fell by between 3 percent in Sitka to 31 percent in Fairbanks, although Fairbanks' price drop is at least partly due to a supplier substitution in 2014 that drove up the price. Anchorage and Wasilla prices also decreased, by 17 and 15 percent respectively. Price increases ranged from 4 percent in Kodiak to 5 percent in both Kenai and Ketchikan.
- Sitka (\$931) and Kenai (\$840) had the most expensive rebar in 2015, with Sitka's price down 3 percent and Kenai's up 5 percent from last year. In 2013, two locations' costs topped \$1,000, but for the two most recent years the price has stayed below that threshold.
- Anchorage had the least expensive rebar at \$549, a 17 percent drop. Anchorage's price was 41 percent lower than the most expensive location, Sitka.
- The price of rebar in Seattle increased by \$23, or 3 percent, to \$757. Anchorage, Fairbanks, and Juneau were less expensive. In 2014, only Juneau's price was lower than Seattle's.

Doors and Windows

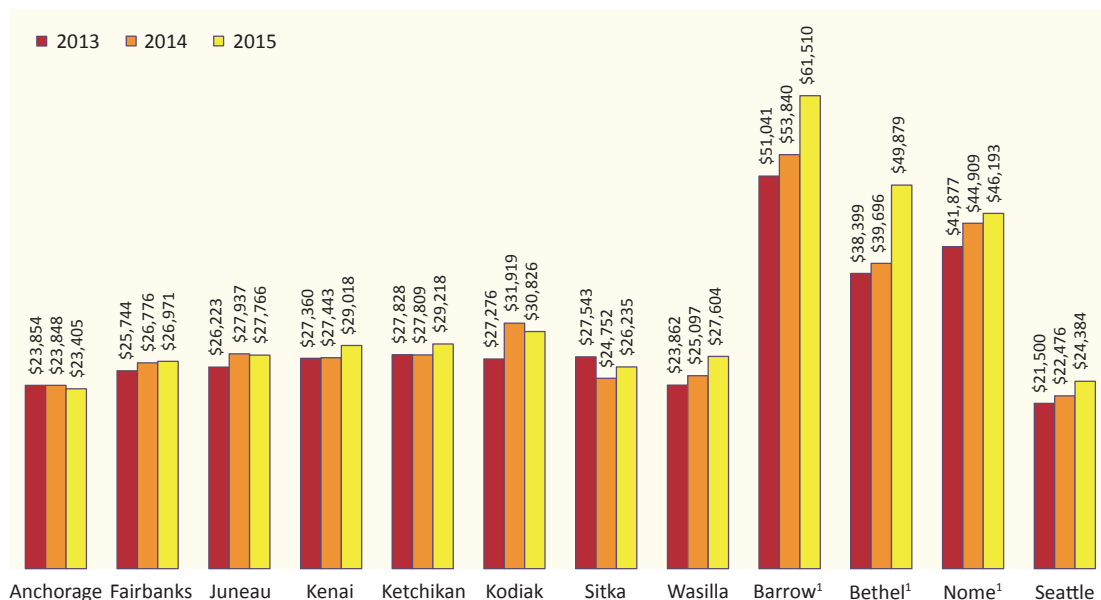
- The total cost of doors and windows decreased in seven of 11 locations in 2015. The decrease ranged from 1 percent in Nome to 30 percent in Barrow.
- Bethel continued to be the most expensive surveyed location for doors and windows, at \$6,012. Doors and windows cost more than \$5,000 in Bethel, Kodiak, and Sitka.
- Kenai had the lowest reported price for doors and windows at \$3,320, a 15 percent drop from last year and slightly below 2013's cost of \$3,412. Barrow was the next least expensive location at \$3,631. Barrow's price dropped 30 percent and may be a result of the town's sole supplier closing and the parent company filling orders from a different location.
- The price of doors and windows increased the most in Anchorage, with a 34 percent jump to \$4,227. Last year, Anchorage had the lowest price for doors and windows, at \$3,152.

Shipping Costs from Seattle

- In 2015, transportation costs decreased in seven areas. The decreases ranged from less than 1 percent in Wasilla to 5 percent in Ketchikan, Juneau, and Sitka, and 4 percent in Kenai, Bethel, and Nome.
- Transportation costs increased in four areas, ranging from 1 percent in Barrow to 17 percent in Kodiak. The increase in Kodiak's average price is due to changes in the survey sample.
- Shipping overall (to all locations combined) increased by \$914, substantially less than in 2014 when overall shipping costs increased by \$14,325 and more similar in scale to 2013, when overall shipping costs decreased by a combined \$1,432.
- Oil prices, a significant component of shipping costs, have fallen from last year and have likely driven the transportation cost declines in seven areas. In the first half of 2014, oil prices stayed near \$100 a barrel, but fell below \$50 in early 2015.

Average Cost of Market Basket, 2013 to 2015

Urban and Rural Residential Construction (without concrete, rebar, doors, or windows), Alaska and Seattle Suppliers



¹Rural areas include metal roofing instead of asphalt shingles.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2015

Construction Costs Around the State

Building materials cost more in rural areas than urban areas, and more in Northern Alaska than in Southcentral and Southeast. The main reason for this disparity is the added expense of transportation; generally, the costs of a community's building materials increase the farther it is from Seattle.

- Statewide, the market basket cost ranged from a low of \$23,405 in Anchorage to a high of \$61,510 in Barrow.
- Kodiak remained in its usual position as the most expensive urban location, with a market basket cost of \$30,826.
- Prices increased in all three rural locations (Barrow, Bethel, and Nome). The greatest increase was in Bethel, where higher prices for 10 out of 15 items resulted in a 26 percent increase (\$10,183) in the market basket cost. Five elements went up by more than \$1,000.
- The disparity between the most expensive urban location (Kodiak) and the least expensive rural location (Nome) nearly doubled, from \$7,777 to \$15,367.
- The price dropped for 11 out of 15 market basket items in Kodiak, resulting in a 3 percent drop in its market basket cost this year.

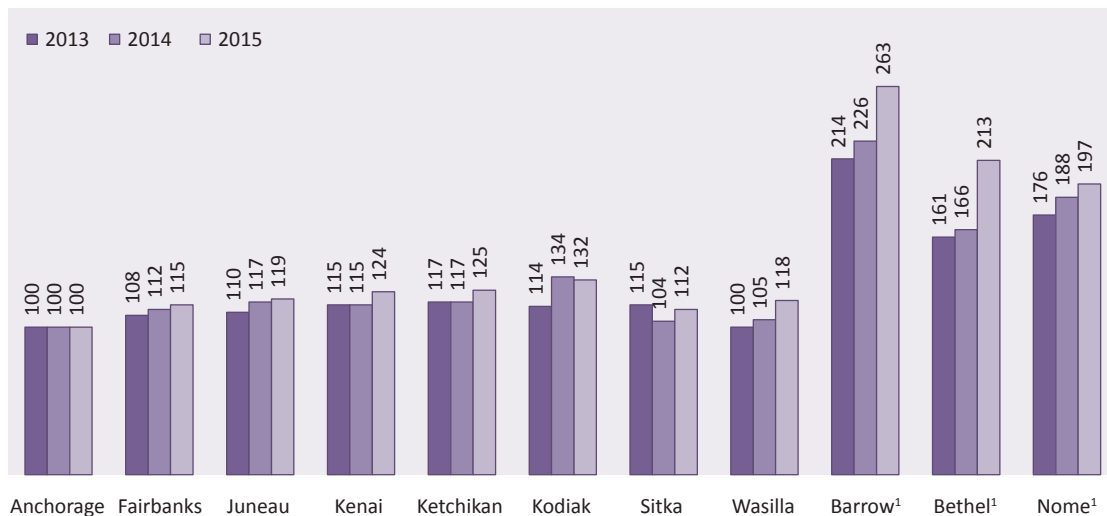
Alaska Suppliers Comparison Index

The Alaska Suppliers Comparison Index compares each community's market basket cost to Anchorage, the largest city, as a benchmark. To create this index, Anchorage's market basket cost is set at an index value of 100. Dividing the average cost for a survey area by the Anchorage price (\$23,405) produces the index value for that community.

- The Anchorage market basket cost fell 2 percent, a drop of \$443. Index values rose in areas with price changes of less than a 2 percent loss or a price increase.
- Bethel had the most significant index value change with a 26 percent rise in market basket prices in 2015. Bethel's index gained 47 points, rising from 166 in 2014 to 213 in 2015.
- All surveyed locations' index values exceeded Anchorage, with urban locations ranging from 112 (Sitka) to 132 (Kodiak) and rural locations ranging from 197 in Nome to 263 in Barrow. Bethel and Barrow had the largest index increases, adding 47 and 37 points respectively.
- Kodiak's index increased the most in 2014, but in 2015 it was the only place where the index value fell, from 134 to 132 points. In particular, Kodiak's prices dropped for studs, insulation, sheetrock, and shingles.

Alaska Suppliers Comparison Index, 2013 to 2015

Urban and Rural Residential Construction (without concrete, rebar, doors, or windows), Index by Community with Anchorage as Baseline



¹Rural areas include metal roofing instead of asphalt shingles.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2015

Construction Costs in Alaska vs. Seattle

We include suppliers from Seattle and the surrounding metropolitan area in the Alaska Construction Cost Survey, as some contractors acquire their materials from outside Alaska. For Alaska suppliers, the market basket price already includes the cost of shipping goods to the work site in their community. We add transportation costs to Seattle's market basket total to estimate what local contractors would pay if they bought directly from Seattle suppliers and shipped their materials north. Seattle prices can't be accurately compared to prices in the three rural areas because the Seattle market basket and the total calculated shipping costs include asphalt shingles rather than metal roofing. For this reason, the following points pertain only to the seven participating urban communities.

- The Seattle market basket increased 8 percent, to \$24,384. Ketchikan was the only urban community where builders would save by purchasing the market basket items in Seattle and having them shipped rather than buying locally.
- Ketchikan builders would have paid \$1,716 more to purchase locally. The savings for all other locations purchasing locally ranged from \$1,637 (Juneau) to \$10,028 (Anchorage).
- All of Alaska's urban locations, except Kenai and Wasilla, saved more when buying local in 2015 than in 2014.

Costs to Buy Local vs. Ship From Seattle, 2015

Alaska and Seattle Suppliers (without concrete, rebar, doors, or windows)



Note: Seattle prices include asphalt shingles for all locations.

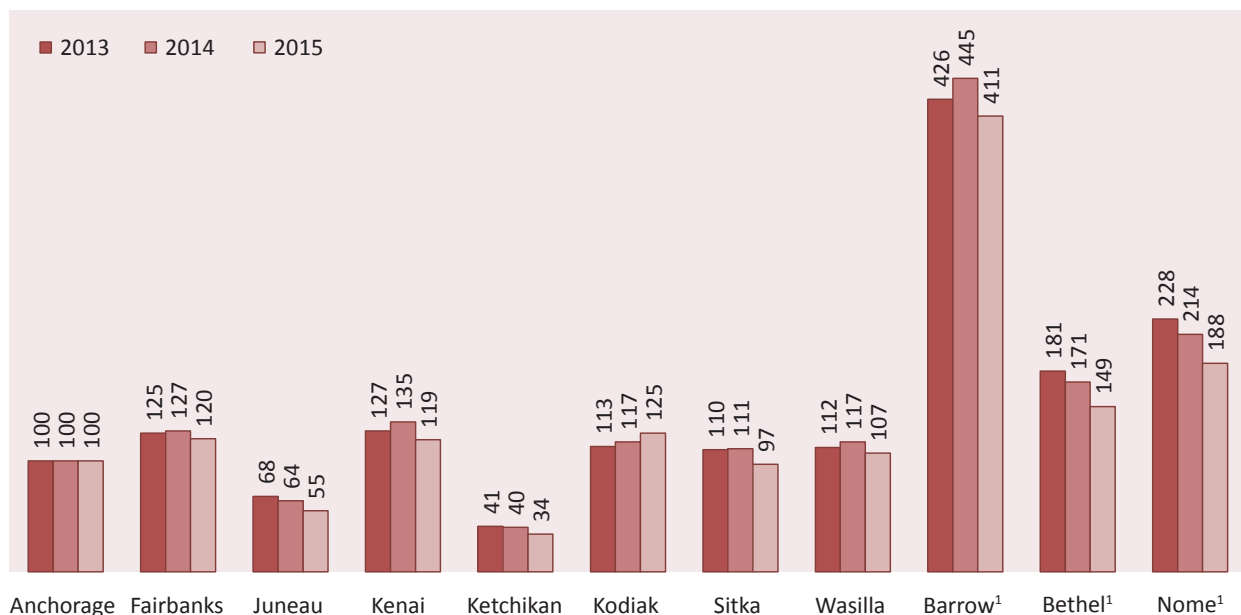
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2015

Transportation Index for Market Basket from Seattle

Transportation is one of the primary influences on building costs in Alaska. The cost of transporting materials from Seattle directly relates to the distance between Seattle and the surveyed communities. The Transportation Index compares the cost to ship the basic market basket to each community with the cost to ship to Anchorage. Shipping costs to rural areas may be overstated, as metal roofing is less expensive to ship because it's lighter and can be transported inside or outside of a container.

- Like the Alaska Suppliers Comparison Index, the Transportation Index assigns Anchorage an index value of 100. Dividing the average value for a survey area by the Anchorage shipping cost (\$9,049) produces the index value for that community.
- Shipping costs to Anchorage increased \$804, or 10 percent, in 2015. Areas with cost increases of less than 10 percent had lower index values in 2015 than in 2014. Areas where transportation costs increased more than 10 percent had higher index values this year.
- While transportation costs increased in four communities in 2015, the index value only went up in Kodiak, where costs increased 17 percent.

Transportation Index for Market Basket from Seattle, 2013 to 2015 Index by Community with Anchorage as Baseline



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2015

- Transportation costs went down in seven communities this year, from a drop of just \$10 in Wasilla to \$684 in Nome. Costs in Ketchikan, Juneau, and Sitka fell 5 percent and costs in Kenai, Bethel, and Nome decreased 4 percent. Wasilla's decrease was less than 1 percent.
- Sitka (97) joined Juneau (55) and Ketchikan (34) as the only communities with transportation index values of less than 100.
- Kodiak and Anchorage had the largest percent increases in shipping costs this year, at \$1,643 more in Kodiak (17 percent) and \$804 more in Anchorage (10 percent) than the year before.
- Ketchikan, the closest city to Seattle, had the lowest shipping costs. This year's shipping costs of \$3,118 and corresponding index value of 34 were nearly a third of Anchorage's. On the opposite end of the scale, the cost to ship to Barrow, the farthest location from Seattle, was \$37,213. That's more than four times the cost of shipping to Anchorage and 12 times the cost of shipping to Ketchikan.

Methodology

Twenty-seven suppliers in Alaska and 10 in Washington participated in this year's survey. Alaska participants represented 11 different firms, as some companies have stores in multiple locations. Washington participants represented four separate firms. In addition, 15 concrete suppliers and eight shipping companies participated.

We ask building suppliers what discounts, if any, they provide to contractors for a "package" of building materials sufficient to build a single-family home. If they give a discount, we factor it into the market basket prices the supplier reports. The same is true for concrete suppliers.

To determine the cost of transportation, carriers are given the weight (approximately 49,000 pounds) and the volume (about 2,000 cubic feet) of the materials. These measurements generally require a 20-foot platform and a 20-foot container for all the materials. We also assume the reported shipping costs includes all fees for required services, which include loading and unloading, protection and fastening of goods, and delivery to the building site. The shippers' market basket includes asphalt shingles rather than metal roofing.

To reflect the vendors' respective market shares, we weight respondents' values by the size of the respective firms. For Alaska businesses, size is based on the reported number of employees from the Alaska Department of Labor and Workforce Development's employment security tax wage database for the second quarter of 2014. America's Labor Market Information System provided 2015 employee counts for Seattle suppliers.

Over time, changes to the makeup of the market basket have been necessary to remain current with building standards. In 2001, we replaced cedar bevel siding with T1-11 siding. In 2003, we substituted metal roofing for asphalt shingles in the three rural areas.

Average Price for Construction Materials

Alaska Suppliers, 2015

Market Basket Items	Quantity	Units	Size	Length	Urban					Rural *					
					Anchorage	Fairbanks	Juneau	Kenai	Ketchikan	Kodiak	Sitka	Wasilla	Barrow	Bethel	Nome
BCI 60 Series	768	ft	14"		\$2,417	\$3,674	\$3,546	\$3,295	\$3,242	\$4,193	\$2,053	\$3,288	\$5,281	\$5,545	\$5,806
2-4-1 T&G FF Underlay 4' x 8'	62	pcs	1 1/8"		\$2,781	\$2,914	\$3,171	\$3,365	\$3,214	\$3,705	\$3,347	\$3,153	\$8,213	\$5,752	\$4,860
T-111 8" Center Groove 4' x 10' Siding	60	pcs	5/8"		\$3,267	\$3,383	\$3,966	\$3,314	\$4,164	\$4,402	\$3,846	\$3,710	\$7,700	\$6,260	\$5,344
CDX 4' x 8' #53	106	pcs	5/8"		\$2,405	\$2,915	\$2,661	\$2,922	\$2,746	\$3,052	\$2,766	\$2,614	\$7,849	\$5,568	\$4,604
Studs #2 & btr Klin-dried	164	pcs	2" x 4"	92 5/8"	\$433	\$493	\$566	\$544	\$613	\$630	\$632	\$500	\$1,779	\$1,158	\$930
Studs #2 & btr #14 Klin-dried	263	pcs	2" x 6"	92 5/8"	\$1,031	\$1,174	\$1,372	\$1,309	\$1,486	\$1,578	\$1,508	\$1,268	\$3,049	\$2,756	\$2,343
4' x 12' Plain Sheetrock #84	95	pcs	1/2"		\$2,110	\$2,289	\$2,228	\$2,254	\$1,966	\$1,805	\$1,581	\$2,272	\$4,956	\$5,125	\$3,502
4' x 12' Type X Sheetrock #109	68	pcs	5/8"		\$1,695	\$1,863	\$1,805	\$1,893	\$1,713	\$1,768	\$1,379	\$1,881	\$7,944	\$4,283	\$3,057
Fiberglass Bat Insulation (2,560 sq ft)	40	bags	R-38" x 24"	64 sq ft	\$2,396	\$2,714	\$2,714	\$3,189	\$3,071	\$2,800	\$2,844	\$3,281	\$4,587	\$4,046	\$4,685
Fiberglass Bat Insulation (2,034 sq ft)	30	bags	R-21" x 15"	68 sq ft	\$1,502	\$1,752	\$1,695	\$2,126	\$2,179	\$1,800	\$1,998	\$1,783	\$3,284	\$2,900	\$2,217
NMB Electric Wire	3	boxes		250'	\$205	\$225	\$209	\$246	\$262	\$285	\$312	\$239	\$317	\$448	\$348
Single Breaker	15	pcs	15 Amp		\$72	\$89	\$87	\$88	\$81	\$123	\$91	\$105	\$83	\$177	\$128
Copper Pipe Type 'M'	150	ft	3/4"		\$277	\$273	\$313	\$321	\$512	\$323	\$386	\$318	\$366	\$401	\$608
ABS Pipe	100	ft	3"		\$176	\$233	\$205	\$232	\$224	\$260	\$371	\$170	\$205	\$308	\$428
3 Tab Shingles Brown	102	bundles			\$2,638	\$2,980	\$3,228	\$3,920	\$3,745	\$4,102	\$3,121	\$3,022	N/A	N/A	N/A
Metal Roofing	3,215	sq ft	3' x 20'		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$5,897	\$5,152	\$7,333
Total (Without Concrete and Rebar)					\$23,405	\$26,971	\$27,766	\$29,018	\$29,218	\$30,826	\$26,235	\$27,604	\$61,510	\$49,879	\$46,193
Concrete	30	yds			\$3,782	\$3,613	\$5,700	\$4,320	\$5,310	\$7,620	\$6,210	\$3,563			
#4 Rebar	93	pcs	1/2"	20'	\$549	\$684	\$687	\$840	\$778	\$791	\$931	\$763			
Total (With Concrete and Rebar)					\$27,736	\$31,268	\$34,153	\$34,178	\$35,306	\$39,237	\$33,376	\$31,930		*Rural areas exclude concrete and rebar	

*Rural areas exclude concrete and rebar

Respondents' values are weighted by the size of the respective firms. See the methodology for more details.

Totals may not sum due to rounding.

N/A = Not Applicable

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2015

Average Price for Doors and Windows

Alaska Suppliers, 2015

Market Basket Items	Quantity	Units	Size	Urban										Rural		
				Anchorage	Fairbanks	Juneau	Kenai	Ketchikan	Kodiak	Sitka	Wasilla	Barrow	Bethel	Nome		
R7 Metal Insulated Doors with 6" Jamb	2	pcs	3'	\$387	\$494	\$512	\$478	\$486	\$690	\$594	\$482	\$718	\$951	\$844		
Low E Argon Windows with R > 2.8 Vinyl Casements	3	pcs	2.6' x 3'	\$725	\$834	\$776	\$508	\$801	\$900	\$932	\$834	\$690	\$1,091	\$886		
Low E Argon Windows with R > 2.8 Vinyl Casements, 5.7 E-Gress	6	pcs	2.6' x 4'	\$1,602	\$1,843	\$1,734	\$1,185	\$1,761	\$1,950	\$2,294	\$1,891	\$1,082	\$2,716	\$1,794		
Low E Argon Windows with R > 2.8 Vinyl Casements, 5.7 E-Gress	2	pcs	8.0' x 4'	\$1,513	\$1,314	\$1,741	\$1,149	\$957	\$2,200	\$1,510	\$1,490	\$1,141	\$1,254	\$963		
Total Cost of Doors and Windows				\$4,227	\$4,485	\$4,763	\$3,320	\$4,005	\$5,740	\$5,330	\$4,697	\$3,631	\$6,012	\$4,487		

Respondents' values are weighted by the size of the respective firms. See the methodology for more details.

Totals may not sum due to rounding.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2015

Average Price for Construction Materials

Seattle Suppliers (without concrete, doors, and windows), 2015

Market Basket Items	Quantity	Units	Size	Length	Seattle Area
BCI 60 Series	768	ft	14"		\$3,293
2-4-1 T&G FF Underlay 4' x 8'	62	pcs	1 1/8"		\$3,341
T-111 8" Center Groove 4' x 10' Siding	60	pcs	5/8"		\$3,452
CDX 4' x 8' #53	106	pcs	5/8"		\$2,461
Studs #2 & btr Kiln-dried	164	pcs	2" x 4"	92 5/8"	\$499
Studs #2 & btr #14 Kiln-dried	263	pcs	2" x 6"	92 5/8"	\$1,217
4' x 12' Plain Sheetrock #84	95	pcs	1/2"		\$1,519
4' x 12' Type X Sheetrock #109	68	pcs	5/8"		\$1,331
3 Tab Shingles Brown	102	bundles			\$2,480
Fiberglass Bat Insulation (2,560 sq ft)	40	bags	R-38" x 24"	64 sq ft	\$2,584
Fiberglass Bat Insulation (2,034 sq ft)	30	bags	R-21" x 15"	68 sq ft	\$1,518
NMB Electric Wire	3	boxes		250'	\$191
Single Breaker	15	pcs	15 Amp		\$101
Copper Pipe Type 'M'	150	ft	3/4"		\$240
ABS Pipe	100	ft	3"		\$157
Total (Without Rebar)					\$24,384
#4 Rebar	93	pcs	1/2"	20'	\$757
Total (With Rebar)					\$25,141

Respondents' values are weighted by the size of the respective firms. See the methodology for more details.

Totals may not sum due to rounding.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2015

Transportation Cost of Market Basket

Shipping and Handling (Without concrete, rebar, doors, and windows), 2015

Destination	Seattle	Transportation Index
Ketchikan	\$3,118	34
Juneau	\$5,019	55
Sitka	\$8,741	97
Anchorage	\$9,049	100
Wasilla	\$9,663	107
Kenai	\$10,740	119
Fairbanks	\$10,842	120
Kodiak	\$11,275	125
Bethel	\$13,524	149
Nome	\$16,991	188
Barrow	\$37,213	411

Respondents' values are weighted by the size of the respective firms.

See the methodology for more details.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey, 2015