



COVID-19 IMPACT: MATERIAL SUPPLY UPDATE



HVAC SYSTEM MATERIALS

Parts such as fans, compressors, control boards, control panels, and condensers are largely manufactured in China and South Korea. Also, all VRF systems are produced in China.



ELEVATOR COMPONENTS

Subcontractors are anticipating delays on high rise elevators manufactured by all vendors. Motors for several of the larger elevator manufacturers are produced in China.



PLUMBING MATERIALS

Compression fittings are manufactured in Germany, and materials such as drains, carriers and plumbing fixture components are manufactured in China.



FLOORING MATERIALS

35-40% of porcelain tile, and custom glass tile products are manufactured in Italy and China. Natural stone also is sourced largely from Italy. LVT and rolled rubber materials products that are widely used also come from China.



DIVISION 10 ITEMS

Items such as cubicles, vents, corner guards, flooring, lockers, shelving should expect extended lead times of 2-3 weeks minimum. Window treatments items are looking like they will slip out to 20 weeks after approvals.



HARDWARE MATERIALS

Hardware for lab casework and millwork is delaying supply of these products. Much of this is manufactured and supplied by China.



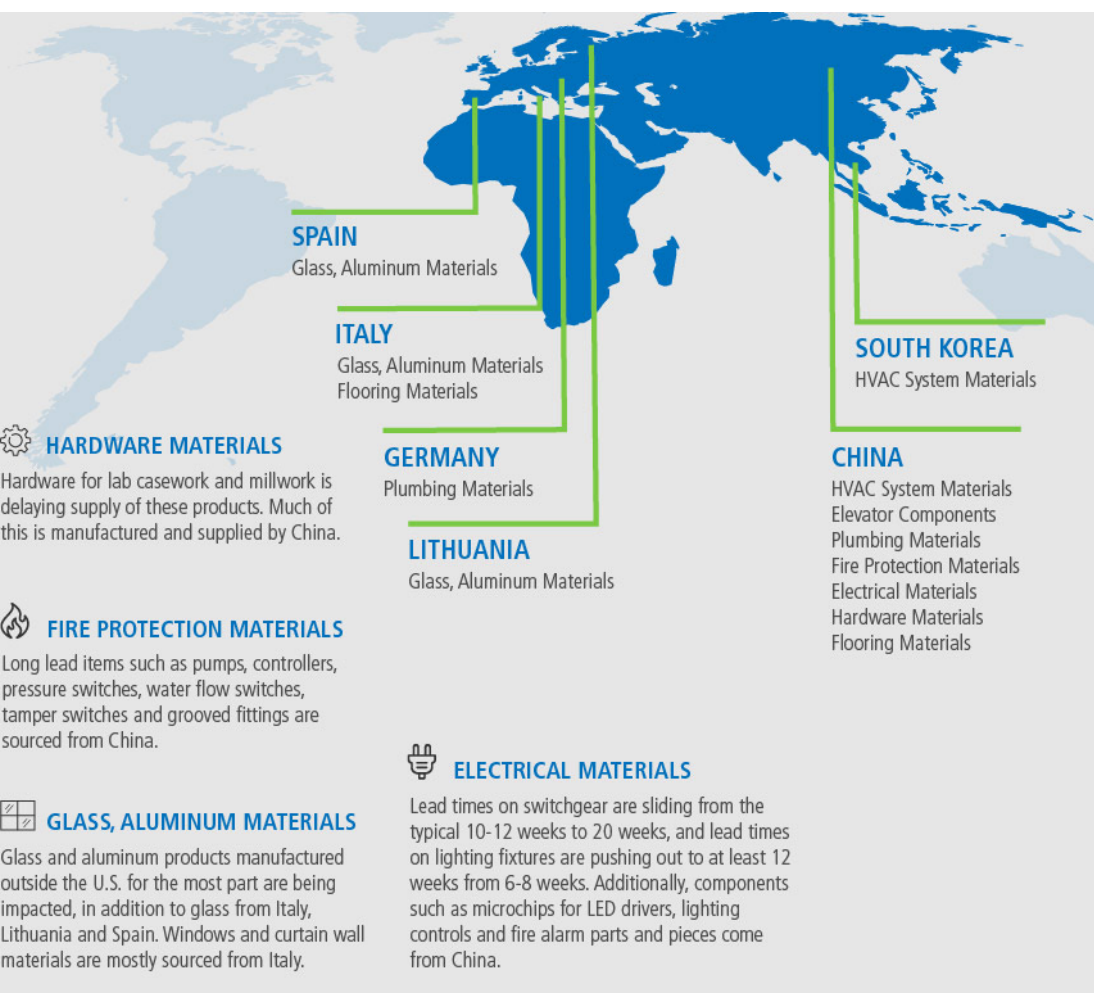
FIRE PROTECTION MATERIALS

Long lead items such as pumps, controllers, pressure switches, water flow switches, tamper switches and grooved fittings are sourced from China.



GLASS, ALUMINUM MATERIALS

Glass and aluminum products manufactured outside the U.S. for the most part are being impacted, in addition to glass from Italy, Lithuania and Spain. Windows and curtain wall materials are mostly sourced from Italy.



SPAIN

Glass, Aluminum Materials

ITALY

Glass, Aluminum Materials
Flooring Materials

GERMANY

Plumbing Materials

LITHUANIA

Glass, Aluminum Materials

SOUTH KOREA

HVAC System Materials

CHINA

HVAC System Materials
Elevator Components
Plumbing Materials
Fire Protection Materials
Electrical Materials
Hardware Materials
Flooring Materials



ELECTRICAL MATERIALS

Lead times on switchgear are sliding from the typical 10-12 weeks to 20 weeks, and lead times on lighting fixtures are pushing out to at least 12 weeks from 6-8 weeks. Additionally, components such as microchips for LED drivers, lighting controls and fire alarm parts and pieces come from China.

OVERVIEW

While COVID-19 has created uncertainty around the world, one thing that remains constant is the health and wellness of our employees, clients, suppliers, subcontractors and partners. We are also paying close attention to how COVID-19 affects our business more broadly and how it impacts our vendors and subcontractor partners. On an ongoing basis, we continue to work closely with all our supply chain partners to better understand any current or potential impacts from COVID-19 on materials used in our projects.

We have already seen some early signs of potential impacts to our supply chain but truthfully, it is too early to tell the broader extent of

these impacts. The hardest hit countries that supply materials for our industry are: China, Italy, South Korea, Germany, Spain and France. So far, we've found that select components used in electrical fixtures and equipment, mechanical equipment and elevator equipment are of the largest concern due to a mix of manufacturing shutdowns and port of call export restrictions.

Consigli felt it was judicious to offer insight as to how the virus has already impacted, and may continue to impact, the supply chain of materials. Consigli's Director of Purchasing Peter Capone offers some current thoughts as to what we're seeing in the marketplace now, and we'll continue to monitor the situation.

SCALE OF IMPACT

GLOBAL

Over the past few weeks (and likely weeks to come), global shipping has been one of the biggest casualties. More tonnage of container ships is idled around the world now than during the global financial crisis, according to Alphaliner, a shipping data service. China's manufacturing sector has been hampered by efforts to contain the spread of the illness, and earlier this month, the Italian prime minister instituted a nationwide lockdown. Already, some lighting fixture components sourced from China that were ordered prior to the outbreak are back-ordered. There are also longer lead times on finishing materials like glass office fronts and stone coming from Italy.

NATIONAL

About 30% of building materials imported to the U.S. come from China, making the country the biggest single supplier, according to Dodge Data. U.S. contractors are already seeing the impacts of the coronavirus on supply chains for building material—from shipping delays to a need to re-source products domestically. And the country is faced with uncertainties over how long countries will be on lockdown, how crews will be impacted and whether project deadlines will have to be pushed out.

The American Association of Port Authorities also announced earlier this month that first quarter cargo volumes at U.S. ports could drop 20% or more from 2019 levels because of supply chain disruptions caused by the coronavirus.

REGIONAL

Supply of materials in the Northeast mirror what we're seeing nationally with the exception of imports from Canada; however, supply of materials sourced from Canada (such as structural steel and HVAC equipment) are also starting to become concerning. Newly implemented travel restrictions have not blocked the import of materials, but Canada is ramping up its precautionary measures daily which will eventually affect manufacturing output.

POTENTIAL DELAYS

1. Manufacturing Shutdowns

While factories in China are continuing to come back online as the spread of the virus subsides and materials will begin to flow again, there are still issues affecting cargo movement and back up delays.

2. Port of Call Export Restrictions

COVID-19 is expected to create "a longer and larger impact" on imports flowing into major U.S. container ports than previously believed due to factory shutdowns and travel restrictions in China that continue to affect production, according to the National Retail Federation (NRF). There is still a lot of uncertainty as to the long-term impact on the supply chain.

PRECAUTIONARY MEASURES

Within the last several weeks, all of our project teams have, and will continue to, take the following precautions:

- ▶ Identify project specific "long lead time/high-risk" materials sourced abroad;
- ▶ Communicate daily with subcontractors to track these materials as they move through the process;
- ▶ Discuss contingency plans for sourcing "alternate" manufacturers, when prudent;
- ▶ Work with design teams, during design development, to avoid sourcing materials from high-risk manufacturers;
- ▶ Collect and share information daily through a centralized tracking portal;
- ▶ Expedite remaining buyout to avoid domestic material demand issues.

LOOKING AHEAD

To continue moving projects along both on time and safely, Consigli recommends teams evaluate their contracts and communicate with all project teams, subcontractors and vendors. Consigli is also now looking at sourcing materials earlier than it normally would and possibly looking to rely more heavily on domestic suppliers.

More positively, we are seeing that Chinese manufacturers are back online and slowly returning to full capacity. We anticipate a portion of these potential supply delays will resolve in the coming weeks, and we will maintain open communication in the coming weeks as supply logistics play out and circumstances evolve. Stay safe and healthy, and rest assured we are all in this together.