



HEALTHY INTERIORS FOR EDUCATION

DESIGNING EDUCATION SPACES FOR A SUSTAINABLE FUTURE

DIRTT



CHERNOFF THOMPSON ARCHITECTS

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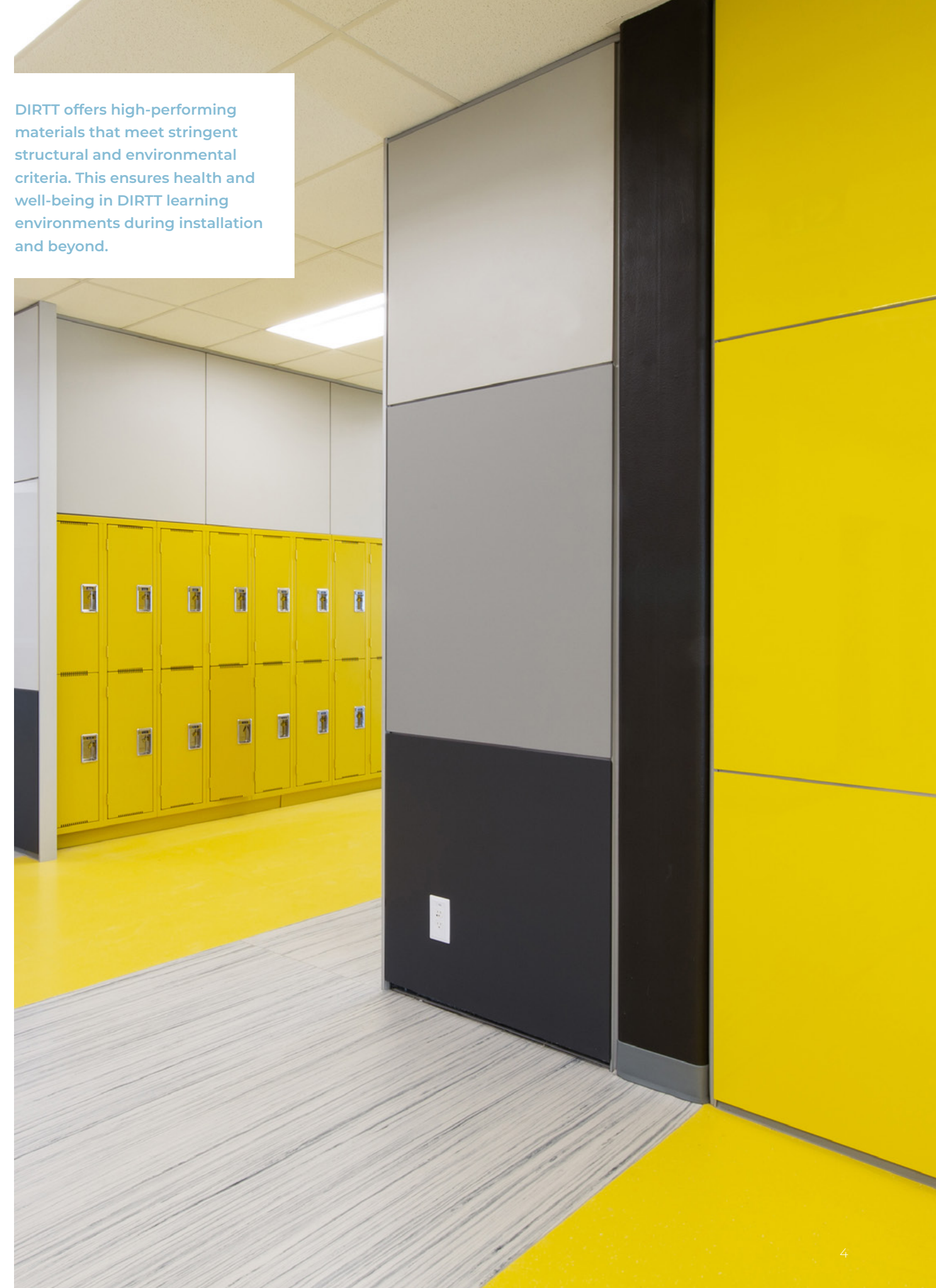
DIRTT's highly adaptive interiors allow school administrators to plan, design and build with the future in mind. Schools need construction that supports healthy and productive learning spaces. Spaces that evolve with teaching methods, and ever-changing technology. The COVID-19 pandemic has taught us that our learning environments must be flexible and healthy spaces that support students' success and well-being.

MATERIALS

Indoor air pollution is consistently ranked among the top five environmental risks to public health by the Environmental Protection Agency's Science Advisory Board.² Poor indoor air quality in a learning environment can adversely impact both students' health and academic performance.¹ Alternately, cleaner air in classroom environments has been shown to increase productivity by 11%, according to a study by the World Green Building Council.³ DIRTT offers solutions that meet stringent indoor air quality standards and Green Building Certification criteria. This all contributes to a healthy learning environment.

To help ensure our clients are working in healthy spaces, DIRTT always considers the sustainability of our materials. Medium-density fiberboard (MDF) used on our wall panels is made with no-added formaldehyde and 92% recycled content. DIRTT painted panels have a unique no-volatile-organic-compound (VOC) formula. This ensures there is no off-gassing in DIRTT facilities or on your site. Insulation used in DIRTT solid walls is made from cotton-denim, with 80% recycled content and 66% bio-based content. Eliminating fiberglass insulation helps reduce particulate matter that could result in respiratory issues. At DIRTT, we're always finding new materials to provide healthier and more environmentally friendly spaces.

DIRTT offers high-performing materials that meet stringent structural and environmental criteria. This ensures health and well-being in DIRTT learning environments during installation and beyond.



SPEED OF CONSTRUCTION

At DIRTT, we understand that the delivery date for a project is set to meet the institution's academic schedule. DIRTT is a specialty subcontractor that manages several trades under one umbrella. This allows for a compressed construction schedule. For example, our walls come with power and network infrastructure already inside. This allows the install work to go quickly. Wall panels arrive already painted, eliminating the time required to do that on-site, saving you time. And because we manufacture components offsite, the construction site is clean. There's less harmful dust and less construction waste. DIRTT's ability to save time and offer schedule certainty is one of the reasons campuses bring us back on multiple projects.





DESIGN FOR DISASSEMBLY DFD/FLEXIBILITY

DIRTT recognizes the importance of conserving resources. We strive to reduce the demand on raw materials. We do this with our solution designs, the types of materials we use, and our manufacturing process.

DIRTT solutions are Designed for Disassembly (DFD). This empowers our education clients to reconfigure, reuse and repurpose their solutions. It's especially important because the average school hosts four times as many occupants as an office building with the same square footage. With this kind of occupant density, educators need to be able to easily change the classroom configuration to accommodate varying class sizes, new technology and pedagogies.

With DIRTT, there's no need to settle for walls that just divide space and don't serve a useful purpose.

Our solutions are modular and efficient allowing for reconfiguration. That means DfD prevents waste and new material demand throughout the life of DIRTT solutions. DfD gives clients access to the inside of the wall without messy or noisy demolition. It makes individual component-based repairs or upgrades to security systems not just possible, but easy. A room that acts as a library office today can be reimaged at any time, as a board room or small student huddle space.

To aid the reconfiguration process, DIRTT has ICE®. Our proprietary software gives clients a user-friendly platform to experiment with layouts. It streamlines the process. And all DIRTT components are non-generational. This allows DIRTT solutions from 15 years ago to be integrated seamlessly with the ones you purchase today.



We chose DIRTT because we wanted to build an office that is functional, adaptable and attractive. DIRTT's construction embodied the sustainability values that our office required and provided a space that will be a point of pride for the university. The considerate materials utilized reinforce environmental stewardship by reducing waste and minimizing chemical use, and the healthy building materials support the wellness of the students spending time in the office.

-Kathryn Pohlman

*Chief Sustainability Officer,
University of North Carolina Wilmington*





LEED V4 CERTIFICATION

According to one study, "Participants in high-performing, green-certified buildings had 30% fewer sick building symptoms and 26.4% higher cognitive function scores."¹³ DIRTТ can be an important component of LEED-certified schools, primarily under the material and resources and indoor environmental quality categories. We can directly contribute to the following credits:

- **MR Building Product Disclosure Optimization**
Environmental Product Declarations. DIRTТ has 15 product-specific type III EPDs.
- **MR Building Product Disclosure Optimization**
Sourcing of Raw Materials. DIRTТ's materials contain recycled content, bio-based content, and MDF and veneer can be specified as Forest Stewardship Council®.
- **MR Building Product Disclosure Optimization**
Material Ingredients. DIRTТ has a health product declaration for glass, MDF and Xorel fabrics.
- **IEQ Low Emitting Materials**
Nearly all DIRTТ assemblies are certified through SCS Indoor Advantage Gold, meeting California Department of Public Health Standard Method V1.2-2017 testing.

Please note, there are additional credits, such as MR Construction and Demolition waste that DIRTТ Solutions can indirectly contribute to.

WELL

As we learn more about the connections between healthy learning environments, student performance, and their well-being, creating optimal learning environments becomes increasingly important. The [International WELL Building Institute](#) has created an outline of what a healthy school looks like. Having the design freedom to create custom learning spaces allows for the integration of nature, through design features such as graphics and Breathe® living walls. DIRTT's SCS Indoor Advantage Gold certified assemblies meet requirements for WELL's enhanced air quality credit. This is an important feature of healthy schools.

For more information on how DIRTT can contribute to WELL projects, please reach out to GreenTeam@DIRTT.com.





ENVIRONMENTAL STATISTICS

29,100 SQFT COLLEGE | VANCOUVER, BC



12,350 lbs+

Drywall waste prevented from entering the landfill.



10,170 lbs

Reduction of CO₂e when drywall decomposes in the landfill.



146 lbs

Paint-based VOCs prevented from off gassing.



58%

Recycled content in wall solutions.



1.2%

Bio-based content in wall solutions.



1,690

Recycled denim jeans in wall insulation.



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REFERENCES:

1. <https://iaqscience.lbl.gov/topics/iaq-schools>
2. <https://www.forbes.com/sites/alankohl/2019/01/24/how-your-office-space-impacts-employee-wellbeing/#236d612264f3>
3. <https://www.sciencedirect.com/science/article/pii/S0360132316304723>