High Performance & Sustainable

Developer and Multi-Tenant Leased Buildings

SustainAbility to the Power of Tate®

SustainAbility to the Power of Tate

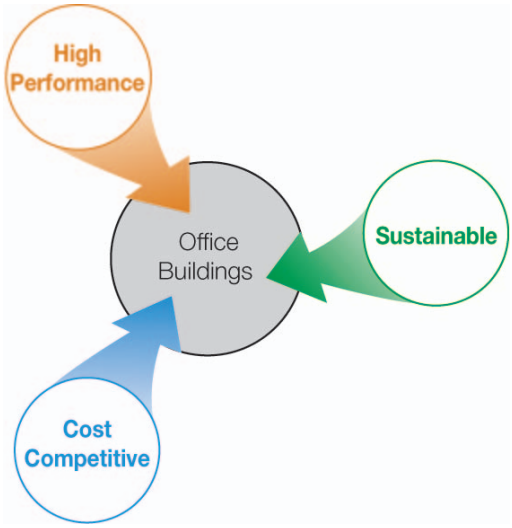
Social and environmental responsibility have long been key corporate objectives within Tate. Through continuous improvements and focus our ***Ability*** to ***Sustain*** our environment, customer, community and company is stronger today than it has ever been. To learn more about Tate's ***SustainAbility*** visit us online at **www.tateaccessfloors.com/sustainability.aspx**

- EPA Climate Leaders Partner
- ISO 14001:2004 Certified
- Ethical Procurement Policy
- Graduate Recruitment Program
- Products Made of Recycled Materials
- Manufacturing Waste & Water Recycling

SUSTAIN ABILITY

The Business Case for High Performance & Sustainable Multi-Tenant Spaces

The growing concern over the environmental impacts associated with green house gas emissions and rising energy costs have lead to greater interest in leasing facilities with a competitive edge. Buildings which incorporate strategies to conserve resources, operate efficiently and improve the overall work environment for occupants are demanded by many tenants today.



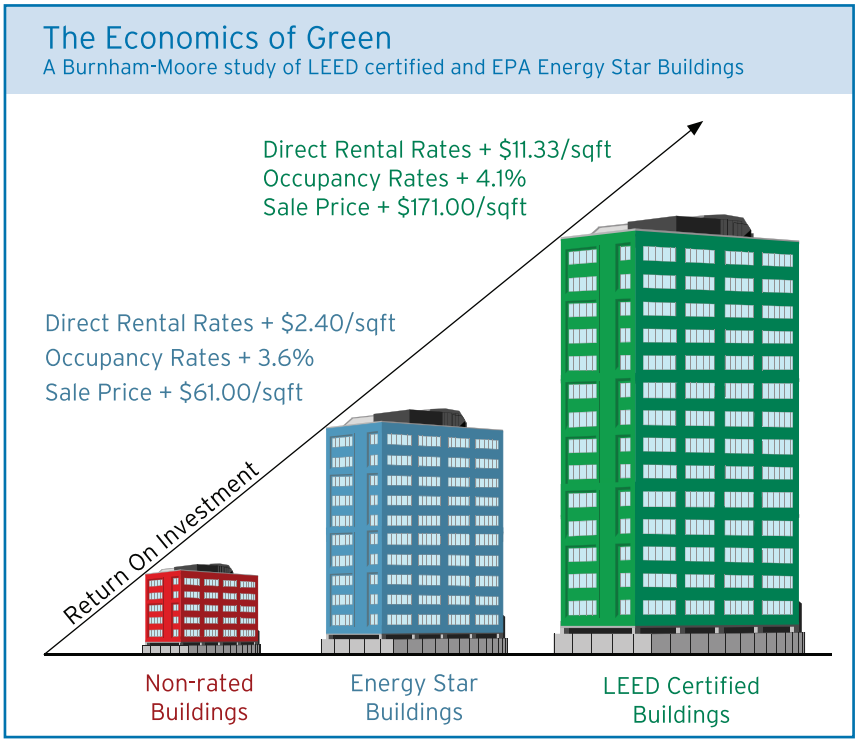
The popularity of these strategies is evident in the surge of high performance and sustainable buildings being constructed. For instance, every business day $464 million worth of construction registers for the USGBC's Leadership in Energy and Environmental Design (LEED) certification. During 2008 the number of EPA Energy Star buildings grew by 30%. This growth is expected to continue with McGraw-Hill projecting the value of green building construction to increase to $60 billion by 2010.

Meeting Public Demand

There are three key characteristics that should be standard in any well-designed building; they should be high performance, sustainable and relatively cost neutral. High performance features create a more flexible workspace while improving the indoor environmental quality for the occupant. Sustainable features reduce a buildings impact on the environment during construction, operation, and maintenance. Lastly, the building needs to be competitive in both first- and life-cycle costs compared to traditional buildings.

The Cost and Return on Investment

A recent study of LEED & Energy Star buildings conducted by the Burnham-Moores Center for Real Estate at San Diego University and The CoStar Group found significant advantages to using these strategies. This study of multi-tenant buildings shows an increase in rental & occupancy rates and sale price compared to Non-rated buildings.



Multi-Tenant Low-Rise Solutions:
Bowie Corporate Center
Bowie, MD

When Buchanan Partners broke ground for its 132,000-square-foot Class A office building in Bowie, Maryland, in 2005, the commercial real estate developer set its sights on a LEED Silver certification. Eighteen months later, the completed Bowie Corporate Center earned a LEED Gold certification and became one of the first buildings in the United States to achieve Gold certification within the USGBC's Core and Shell program, designed specifically for new and speculative commercial building construction.

According to Buchanan Partners Project Manager Wendy Weiss, the building's underfloor air distribution system figured prominently in the quest for LEED certification. "Underfloor air was one of our primary focuses for the building. The energy savings and the efficiency an underfloor air distribution system offers really drove the building design and made a significant contribution to the LEED certification," she said.

Tate Underfloor Service Distribution System:
Today, Tate's Building Technology Platform® delivers conditioned air throughout the five-story office building. "We liked a lot of things about Tate, including the construction of the floor tiles, the sturdiness of the pedestal system and the fact that Tate seemed to have a good handle on controlling air leakage." In fact, results of an air leakage test at Bowie Corporate Center exceeded expectations, with a leakage rate of 3.9 percent when compared to design airflow.

Attaining such a favorable performance rating on these tests required careful planning and forethought. "We included detailed notes and drawings in the documentation to address every area of plenum penetration," said Vigen A. Yedigarian, president of EPIC Consulting, the engineering firm for the Bowie project.

Setting the Standard for Building Design

There are many high performance & sustainable strategies available to create an attractive leased space however, very few deliver both, and do it cost effectively. A strategy such as thermal glazing offers both sustainable and high performance benefits because it helps to improve the indoor environment by adding daylighting and access to views while reducing power lighting requirements. Other common strategies such as waterless urinals, improved building shells and green roofs offer sustainable advantages, but provide little performance benefit to the occupants. High performance features such as company gyms or full service cafeterias have little sustainable benefits and add cost. Once strategies that cost effectively provide both benefits are identified they should become standard building practices.

The Standard for High Performance & Sustainable

Tate Access Floors with underfloor power, cable and air distribution should be considered a standard feature in all buildings. Underfloor service distribution provide numerous sustainable and high performance benefits in a cost competitive system.

Comparing High Performance & Sustainable Strategies

The chart below compares some of the top strategies used in high performance and sustainable buildings. The strategies are evaluated based on the benefits they provide over the life of the building. As you can see Underfloor Service Distribution (UFSD) provides benefits in many areas that make up a high performance and sustainable building.

Strategies	Daylighting	IAQ	Flexibility	Energy	Water	Material	Life-Cycle Cost	Total
Slab-to-Slab Thermal Glazing	✔			✔			✔	3
Lighting System Controls	✔			✔			✔	3
Modular Walls & Furniture			✔			✔	✔	3
Green Roofs				✔			✔	2
Rainwater Collection/Reuse					✔		✔	2
Underfloor Service Distribution	✔	✔	✔	✔		✔	✔	**6**

Creating Effective Multi-Tenant Environments

Tate offers the perfect solution for multi-tenant facility to offer high performance and sustainable advantages. These advantages include maintaining high-quality clean air, improving personal comfort control, attenuating noise, responding to organizational and technology changes quickly and easily, reducing material and energy usage and supporting the overall aesthetic value of the facility – all while being cost-effective in both construction and operation. With Tate's underfloor service distribution system, you'll be able to address all of the factors required to enhance the marketability of you building and create the perfect environment that reflects the goals and image of your potential tenant.

High Performance Advantages

- Enhanced indoor environmental quality through superior IAQ, improved acoustics, and increased daylighting opportunities.
- Maximum occupant comfort control at design inception and throughout the life of the building using underfloor air with modular 'plug & play' VAV or passive diffusers.
- Easily adapts to technological and organizational changes over the building's life-cycle at low cost.
- Point-of-use services wherever you need them with complete flexibility, accessibility, and unlimited capacity.

Sustainable Advantages

- Reduce materials required to deliver key services to the occupants
- Energy efficiency through greater economizer operation, and less fan energy.
- Reduce waste during reconfiguration by reusing wires, cables, diffusers and PosiTile carpet.
- Products are made of over 30% recycled content.

Cost Competitiveness

- Reduced first cost and construction time due to significant reduction in HVAC ductwork and use of underfloor pre-fabricated 'plug & play' wire/cable services.
- Reduced operating costs and lower facility and maintenance costs through accessible, flexible, and adaptable services.

Tate PVD Servicenters™ provide point of use power, voice and data services anywhere on the floor plate

No overhead HVAC system ductwork increases slab-to-slab height

Tate ConCore® access floor system – welded steel floor panel, filled internally with lightweight cement for the ultimate in strength and acoustic performance

'Plug & play' modular power wiring system saving valuable construction time and facilitating quick and easy reconfiguration

Enhanced ceiling design freedom with services underfloor

Non-powered workstations providing simplified relocation and significant cost savings compared to powered furniture

Tate PosiTile® carpet providing one-to-one indexable fit to panel – significantly reduces waste

Underfloor VAV perimeter solutions provide both heating and cooling capability

Modular and relocatable VAV or passive diffusers provide increased personal comfort control

Tate PosiLock™ understructure – positive positioning and lateral retention of floor panels with a wide range of finished floor heights

Underfloor service pathway accommodates any type of voice and data system approach, from homerun to passive or active zone cabling

Multi-Tenant Hi-Rise Solutions:
RBC Tower
Toronto, ON, CN

The RBC Centre is the first commercial tower to be built in Toronto in more than a decade and also Canada's first major triple-A office building designed to target LEED® Gold New Construction (NC) certification. The installation of raised floors with underfloor air distribution throughout 1.2 million square feet of office space significantly contributes to the structures LEED certification.

The RBC Centre will achieve estimated energy savings of 50 percent relative to buildings built to the Canadian National Energy Code. "These savings are significant to building tenants" said Wayne Barwise, senior vice president, office development with Cadillac Fairview Corporation Limited, owner of the property. "The LEED features in the building, including the raised access floors, provide a more comfortable work environment for all building occupants, offering more personal comfort control, with the potential to reduce employee absenteeism and improve employee attraction and retention."

Tate Underfloor Service Distribution System:
According to Barwise, "The raised floor system represents a new, better technology that offers greater flexibility in terms of HVAC distribution and the location of data and telecommunications cabling. "In addition, studies show that the cost of reconfiguring interior space in a building that uses a raised floor system is more economical than in a building that uses a conventional dropped lay-in tile acoustic ceiling. Finally, because the raised floor system places diffusers in the floor to distribute conditioned air throughout the building, the system provides greater personal control over comfort." By working with Tate Access Floors' Canadian division, Tate ASP, Cadillac-Fairview was able to leverage the supplier's many turnkey solutions as manufacturer, construction manager, and contractor.

Construction of the $420 million project is expected to be completed in June 2009. RBC and RBC Dexia are the lead tenants and together will lease approximately half of the building.

High Performance Leasable Space for Years of Low-cost Service

The Tate underfloor service distribution system has been designed to provide optimum value, flexibility, and indoor environmental quality. The high performance modular design allows you to adapt to change easily and at a low cost. With Tate adapting to ever-changing technologies, tenant churn, architectural changes and improvements, and new environmental regulations will no longer demand expensive facility investment.

Tate provides significant advantages in improving indoor environmental quality and control of a facilities environment. Air quality, access to sunlight and views, correct thermal and humidity conditioning, and proper acoustics all work together to create a comfortably maintained environment. Properly managed environments have been proven* to significantly impact employee health, comfort, and performance.

** According to the U.S. Environmental Protection Agency (EPA)*

Spaces are reconfigured at a rate of 40% per year. To meet this demand for change, Tate's underfloor service distribution system is designed to afford interior design freedom and quick 'plug & play' access to all services.

keys to creating a high performance office space

- Use flexible and accessible service distribution to allow you to plan your space around functional requirements and quickly reconfigure to meet future needs.
- Have the ability to make service changes with minimal down-time and disruption to the occupants.
- Ensure occupants have greater personal comfort control
- Improve indoor air and environmental quality, daylighting opportunities, and acoustics.

> "The additional cost for underfloor air distribution was offset by requiring less mechanical equipment for air distribution and modular electrical distribution."

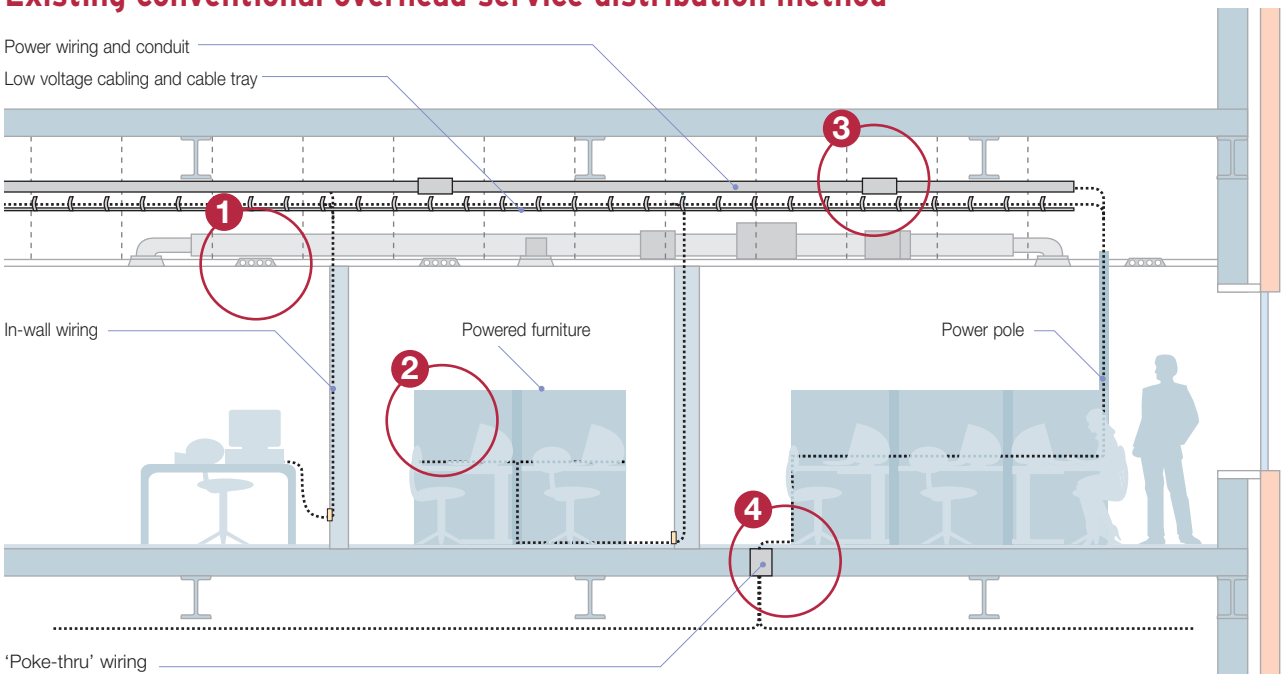
Gary Christensen, The Christensen Corporation
Excerpt from Building Design & Construction, March 2008

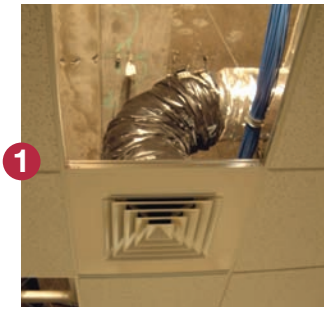
Tate®

Tate's High Performance Building Solution

Avoid the trap of using inflexible and expensive systems in your building. With Tate's underfloor service distribution system, consisting of a Tate access floors with modular 'plug & play' power wiring, zone cabling solutions and underfloor air distribution you can be assured your building will provide ultimate flexibility that allows you to respond to organizational and technology changes quickly, easily, and cost effectively. And improves productivity and comfort with a more enjoyable indoor environment.

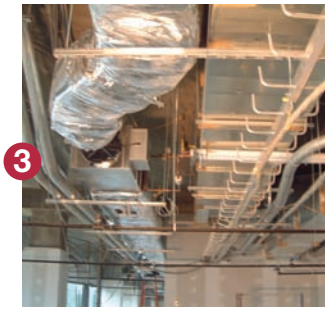
Existing conventional overhead service distribution method





Lack of individual control

Hot/cold complaints consistently rank top of the list of issues raised by building occupants. Conventional systems are difficult to access and expensive to change. Therefore, they rarely are changed.



Expensive and inflexible

Rigid, fixed ductwork makes changes expensive and disruptive. Extensive amounts of ductwork and labor intensive installation slows down construction and drives cost up.

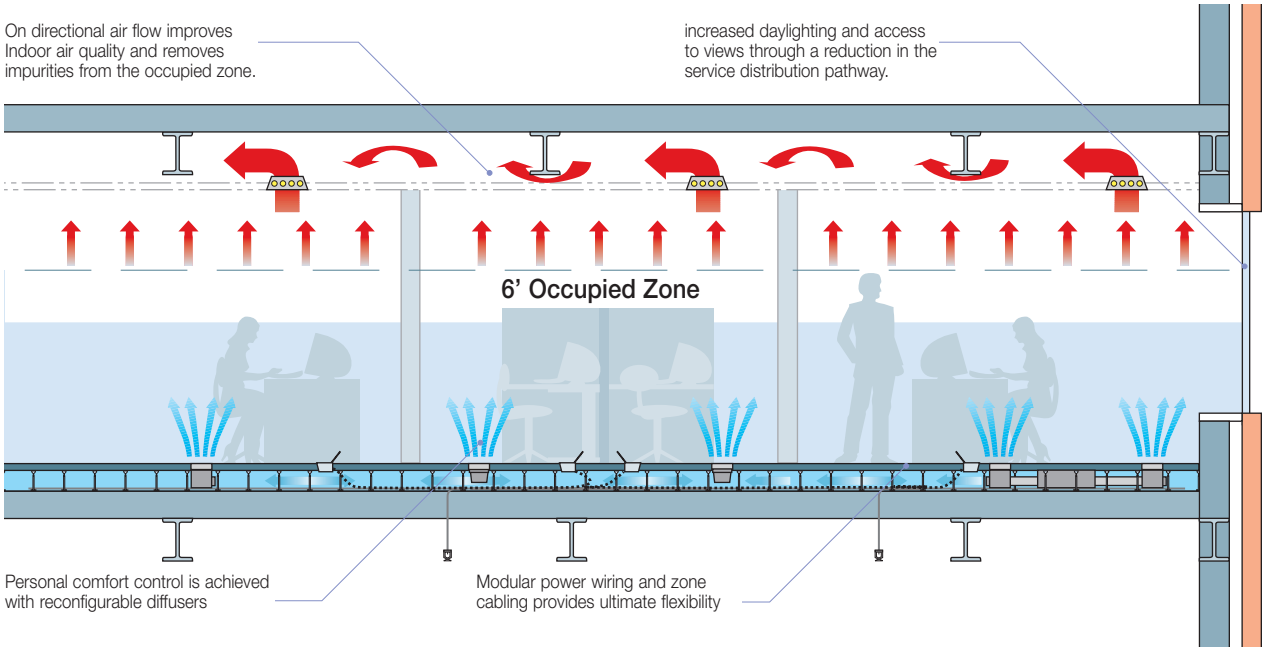
Expensive and inflexible

Running wiring and cabling in highly reconfigurable furniture is expensive, limits capacity, and severely compromises its reconfigurability.

Disruptive

Fixed 'poke-thru' devices for wire and cable delivery cause disruption and security issues with occupants both above and below.

Tate's High Performance underfloor service distribution system



Improved indoor environment quality

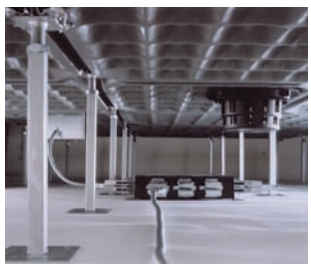
- Better ventilation effectiveness - superior IAQ
- Quieter operation - improved acoustics
- Reduced ceiling void - increased daylighting opportunities

Point of use services wherever you need them

PVD Servicenters™ with modular 'plug & play' connections provide point of use termination of power, voice, and data at any location on the floor plate for any type of workstation and application

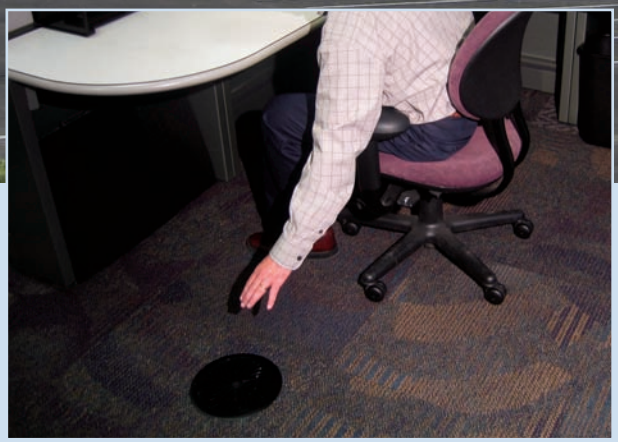
Improved personal comfort control

With options available for individual volume and air direction control, underfloor air delivers the ultimate in personal comfort control.



Unrivaled flexibility

With the entire space under the access floor used as an air distribution pathway, you can plug modular VAV or passive diffusers in anywhere, and when you make changes in your space, simply adjust air direction or unplug and relocate in minutes!



Multi-Tenant Low-Rise Solutions: Arundel Mills Corporate Park, Hanover, MD

Developer Linden Associates, Inc. closed in December 2004 on the sale of 20.2 acres of land directly across from the 1.3 million ft^2 Arundel Mills in Hanover, Maryland. The site, known as the Arundel Mills Corporate Park, is a 500,000 ft^2 mixed-use project that will include two five-story office buildings with ground floor retail, as well as a hotel and daycare center. Linden Associates' vision of creating two 150,000-square-foot environment-friendly office buildings was based upon green standards developed by the U.S. Green Building Council's Leadership in Energy and Environmental Design Program (LEED) and included several key goals: efficient use of recycled building materials, increased daylighting, energy efficiency, a healthy environment for employees, and higher productivity.

Tate Underfloor Service Distribution System:

Tate Access Floors' underfloor service distribution contributes to three of the five LEED categories which greatly supports Linden Associates' objective of a green building. By supplying 110,000 ft^2 of raised flooring with an underfloor air system, Arundel Mills Corporate Park's first building will feature an energy-efficient environment with cleaner air and more natural lighting. In buildings with these advantages, worker productivity has been proven to increase as much as 15%, according to case studies done by the Rocky Mountain Institute and the U.S. Department of Energy. The recycled material used in the production of Tate floor panels only adds to the "green" effect! By integrating Tate's underfloor service distribution system in their building design, the Arundel Mills Corporate Park is well on its way to becoming a green and sustainable LEED certified building!

A Sustainable Multi-Tenant Space

Tate access floors provide significant sustainable advantages for the construction and operation of a building. Tate's underfloor service distribution system can significantly reduce construction materials through the elimination of ducts, wire and cable drop-down lengths, and building shell materials through a reduction in slab-to-slab height.

The underfloor air system requires much lower pressure and warmer supply temperature than a traditional ducted overhead system. These features help improve energy efficiency through the downsizing of mechanical equipment and longer economizer hours. Reusing service supply materials such as wires, cables, outlets and diffusers during reconfiguration further improves the life-time sustainability of any tenant space.

Keys to creating a more sustainable multi-tenant facility

- Deliver air from the floor at low pressure to utilize natural convection and maximize energy efficiency.
- Deliver air closer to the occupants so that warmer temperatures can be used expanding economizer opportunities.
- Power, voice, data, and heating and cooling services can all be reconfigured reusing the existing materials.
- Reduce construction materials thereby eliminating the harmful emissions required to produce and ship those materials.
- Include low VOC products made of recycled materials.

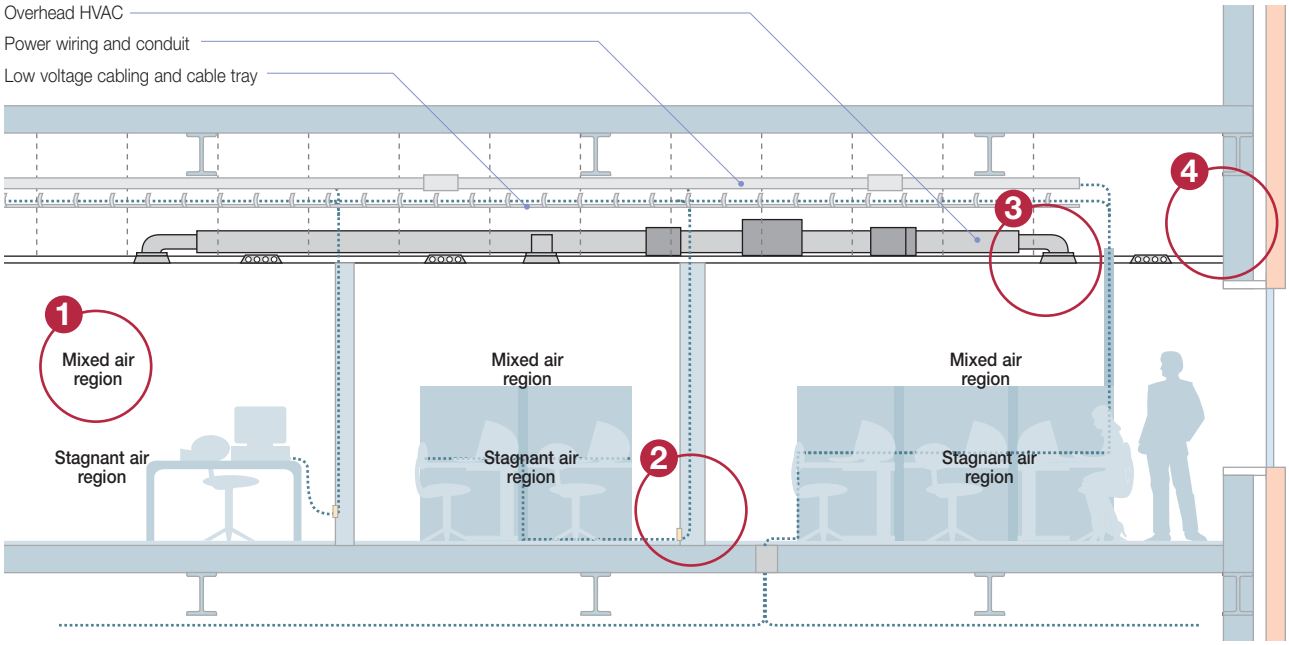
> "The full underfloor HVAC system uses fresh filtered air, which is distributed under the office floor. This allows occupants to control the air temperature of their workspace."

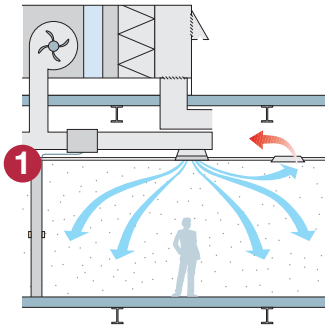
Fernando Quintero, Chong Partners Architecture, Tenant Foundry Square

Tate's Sustainable Service Distribution Solution

Conventional overhead service distribution systems do not provide optimum efficiency or extensive sustainable benefits. With Tate's underfloor service distribution system, consisting of modular 'plug & play' HVAC system with floor mounted diffusers and modular wire & cable, reduction of material, energy efficiency, and continued reuse can be assured..

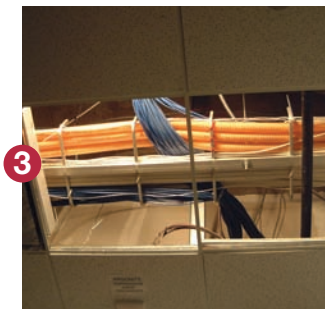
Conventional overhead service distribution method





Wastes energy

Hot air rises, yet conventional HVAC distribution is designed to force cool clean air from the ceiling at high pressure and mix it with the hottest, most pollutant-filled air before getting to the occupants.

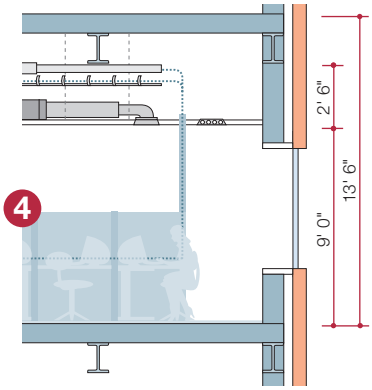


Poor integration and wasteful

Ceiling pathway for wiring and cabling increases vertical run lengths, labor, and suspension material and as a result costs by adding unnecessary materials to the initial construction.

Rigid and non-adaptive

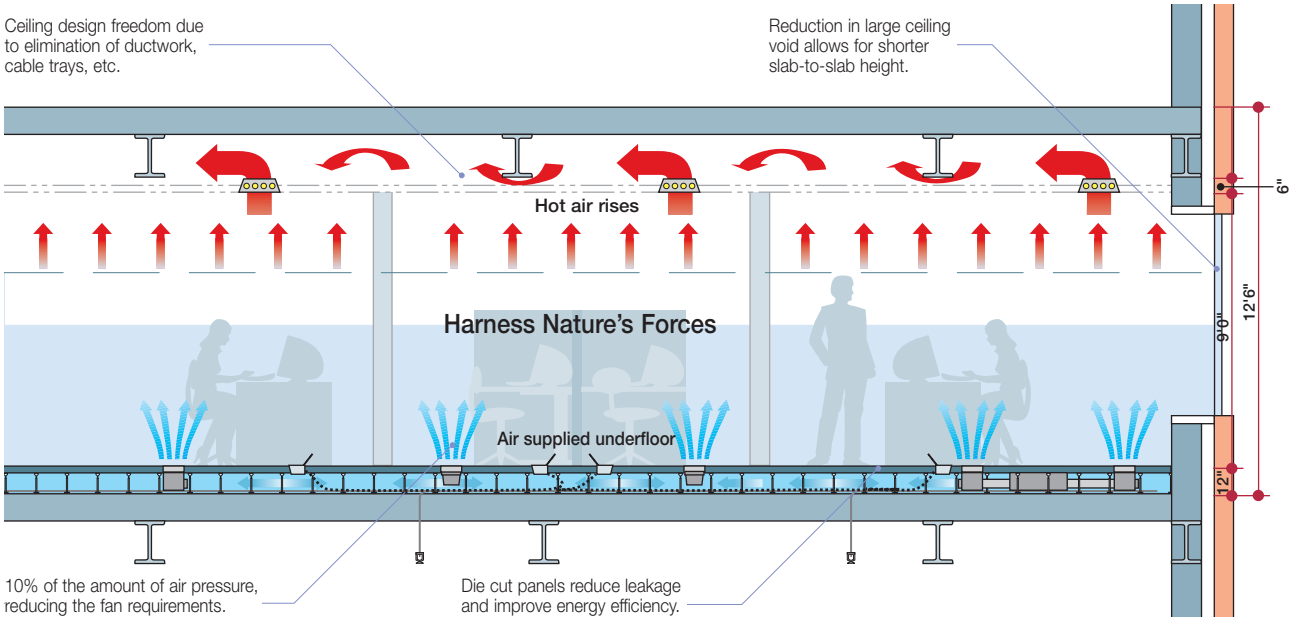
Wiring and cabling embedded in walls and columns is fundamentally inflexible, making moves/adds/changes during office reconfiguration wasteful due to abandonment of existing supply sources.



Poor space utilization

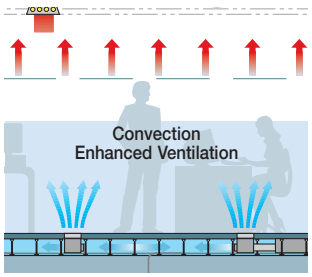
A large ceiling void space is required due to poor integration of fixed service pathways which results in an increased slab-to-slab height and additional shell materials.

Tate's sustainable underfloor service distribution system



The Right Panel

Tate's steel welded panels are die stamped to exact tolerances reducing air leakage and energy waste. Our panels are also made of over 32% recycled content in our ISO 9001:2000 & ISO 14001:2004 certified facilities.



Improved energy efficiency

Save 20% or more on your HVAC energy costs by using underfloor air. How? Significant fan energy savings, more hours of economizer operation, and reduced outside air option due to better ventilation effectiveness.

Reduced impact on base building

Access floors eliminate the need to embed wires, cables and ducts within rigid structures and above drop ceilings, thereby allowing buildings to reduce materials through the reduction of ceiling tiles, ductwork, wire and cable run lengths, and drywall.

Completely flexible and reusable

An access floor with modular 'plug & play' power wiring and cabling components provides complete flexibility while promoting the reuse of materials. Underfloor service distribution eliminates the need to run new materials and abandon old during reconfiguration.

First-Cost Competitive

Lower installation costs are just the beginning of the cost savings and efficiencies that the Tate underfloor service distribution system has to offer your facility. This system is equipped with a service distribution solution that creates maximum value and flexibility.

You'll realize immediate time and expense benefits with this system. Projects using Tate's advanced service distribution solution have reduced installation costs by up to 10% and achieve 15% faster build and completion times. Offering tenants the ability to easily and cost-effectively perform initial fit-out and reconfigure to meet future needs helps to control TI costs, improves tenant satisfaction and gives your building a competitive edge.

- Design flexibility - adapts easily to existing or new architectural features.
- Voice/Data cabling - Reduce cable run lengths, eliminate cable trays, and lower labor costs at installation.
- Power wiring - 'Plug & play' technology significantly reduces installation costs.
- Furniture - Eliminate dependency on costly powered furniture and improve space planning options.
- Air distribution - Significantly reduce trunk, branch, and discharge ductwork and downsized mechanical equipment.
- Ceiling - Reduce or eliminate suspended ceiling requirements.
- Time to occupancy - Underfloor services install quickly, allowing for earlier occupation.
- Structure – improved integration of underfloor services provide slab to slab height savings opportunities.

Operational Cost Savings

Tate's underfloor service distribution system offers operational cost saving features with the ability to quickly accommodate tenant churn without extensive demolition or disruption. Tate's access floors are not only easy and cost efficient to install; they significantly reduce construction time for faster occupancy. The underfloor design keeps reconfiguration costs low with full floor access to all infrastructure services.

Tate allows you to address the service distribution needs of any tenant. Densely populated floor plans and advanced technology requirements are easily accommodated with easy access to power, communications, and other services. Utilizing an underfloor air delivery system provides comfortable environmental control and improved air quality. With full life-cycle energy-efficiency and long-term flexibility, this high performance space will continue to provide sustainable operation well beyond a successful move-in.

- Energy – Lower fan power, extended use of economizer, and reduced outside air due to better ventilation effectiveness.
- Space churn – Reduce costs by at least 50%. With flexible and accessible wire/cable infrastructure and floor mounted plug & play components, changes are easily accommodated using in-house personnel.
- HVAC – Floor diffusers are not ducted to the air supply allowing for better comfort control, more flexible zoning strategies, and improved productivity.
- Tax - Raised floors and underfloor service distribution materials are considered personal property and qualify for accelerated depreciation

Tate's Integrated Cost Modeling Software

Tate provides an interactive cost modeling tool designed to evaluate the cost differences between traditional overhead service distribution and Tate's UFSD utilizing access floors and underfloor 'plug & play' wiring, zone cabling, and air.
It has built-in flexibility, allowing the user to define many of the design parameters providing an extensive array of cost comparison options.

The following cost analysis is for an 11 story, 250,000 ft² building in Baltimore, MD, comparing conventional service distribution with powered furniture and overhead air to access flooring for wire, cable, and HVAC distribution.

For an evaluation of the cost saving opportunities for your specific project using Tate's integrated cost model visit:

www.tateaccessfloors.com
or call us at: **1-800-231-7788**

First-Cost Competitive

First Cost Comparison	Traditional ($/ft²)	UFSD ($/ft²)	Difference ($/ft²)
Facade and main structure	$20.48	$19.81	**$0.67**
Raised core	$0.00	$0.19	**($0.19)**
Access floor	$0.00	$5.25	**($5.25)**
HVAC distribution	$6.61	$5.12	**$1.49**
Cable management voice/data	$2.38	$1.77	**$0.61**
Electrical - horizontal feeds	$2.11	$1.16	**$0.95**
Workstation electrification	$2.53	$0.81	**$1.72**
Earlier owner occupancy savings	$0.00	$0.25	**$0.25**
Ceiling finish	$1.41	$1.10	**$0.30**
Total	**$13.34**	**$13.21**	**$0.80**
First cost savings for UFSD			**$200,000**

Operational Savings

life-cycle costs	Cumulative cost savings by year ($/ft²)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Workstation churn	$1.16	$2.36	$3.59	$4.86	$6.16
HVAC churn	$0.33	$0.66	$1.01	$1.37	$1.73
Energy reduction	$0.25	$0.50	$0.77	$1.04	$1.32
Total	**$1.73**	**$3.53**	**$5.36**	**$7.26**	**$9.21**
Operational savings 1st year					**$432,504**

Improved Productivity

Staff productivity savings	Cumulative cost savings by year ($/ft²)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Absenteeism	$1.30	$2.64	$4.02	$5.43	$6.90
Productivity	$1.62	$3.30	$5.02	$6.79	$8.62
Total	**$2.92**	**$5.93**	**$9.03**	**$12.23**	**$15.52**
Staff productivity savings 1st year					**$730,710**

Rethinking Construction - The Savings Add Up!

	First Cost Savings ($/ft²)	Cumulative cost savings by year ($/ft²)				
		Year 1	Year 2	Year 3	Year 4	Year 5
First Cost Competitive	$0.80	-	-	-	-	
Operational Savings	-	$2.38	$5.26	$7.71	$9.94	$12.23
Improved Productivity	-	$2.92	$5.93	$9.03	$12.23	$15.52
Total	**$0.80**	**$6.10**	**$11.99**	**$17.54**	**$22.97**	**$28.55**

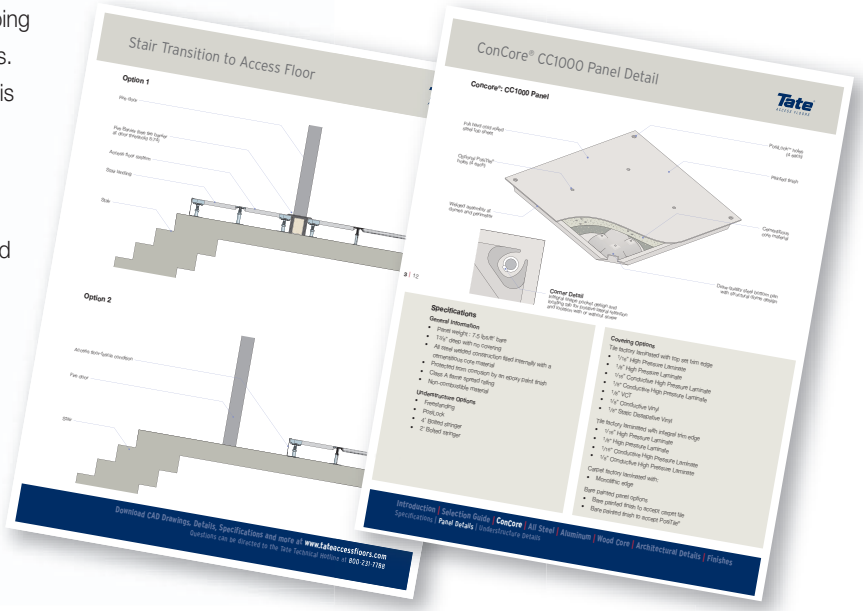
Integration

Incorporating Access Flooring into Your Buildings

Incorporating access floors throughout a building is not difficult or costly if this need is considered early in the building's design phase. A holistic process that includes the entire design team helps to minimize transitional steps, ramping and difficult interfaces with other architectural elements. When proper integration measures are taken during this critical stage, maximum value is achieved.

Maintaining maximum flexibility and accessibility throughout the building requires access floors to be placed in areas such as corridors, elevator lobbies, and mechanical, electrical and telecom rooms to provide service pathways to the main office environment.

Tate has developed a complete set of architectural details, specifications, and design and construction guidelines for access floors which consider the requirements for successful integration and operation of underfloor wire , cable and air within a building.



Please call the **Tate Technical Hotline 1-800-231-7788** or visit **www.tateaccessfloors.com** for further information.

Multi-Tenant Mid-Rise Solutions:
Foundry Square
San Francisco, California

This multi-block, mid-rise urban complex in downtown San Francisco is a landmark project for sustainable design in commercial office developments. Dominating the busy intersection of 1st and Howard Streets in San Francisco, this 1.5 million square foot complex sets a new standard for state-of-the-art office buildings. Incorporating office, retail, public plazas and underground parking areas in this massive undertaking, the project developer wanted efficient, high-quality, and environmentally conscious building systems that would help attract and retain a sophisticated and reliable tenant base, as well as steer the project toward LEED accreditation. With this in mind, Foundry Square was the perfect project for Tate Access Floors.

Tate Underfloor Service Distribution System:
The building features floor-to-floor heights of 10', increased natural lighting and raised floor distribution systems where mechanical, electrical and data delivery systems are efficiently contained in the sub floor areas providing 'plug & play' flexibility and reducing energy as much as 15%. Offering a cost effective way to improve the building's market attractiveness and gain a competitive edge, Tate's underfloor service distribution is not only flexible and adaptable, but also improves indoor environment quality, provides personal comfort control, and reduces tenant initial fit-out and operating costs while at the same time increasing the buildings value and reducing the cost to build and operate the building.

Corporate Headquarters:
7510 Montevideo Road, Jessup, MD 20794
Tate Hotline: 1-800-231-7788
Tel: 410-799-4200 Fax: 410-799-4207

Production Facilities:
7510 Montevideo Road, Jessup, MD 20794
52 Springvale Road, Red Lion, PA 17356

tateaccessfloors.com
kingspan.com

Tate Access Floors, Inc. components are proudly made in the U.S.A.

International Sales & Support Office:
169 Jalan Jurong Kechil
#7-011, Sherwood
Singapore 598669
Tel: 65-6468-1332 Fax: 65-6468-6681

tateglobal.com
kingspan.com

Canadian Office & Production Facilities:
880 Equestrian Court, Oakville, ON L6L 6L7 Canada
Tate Hotline: 1-800-231-7788
Tel: 905+847-0138 Fax: 905+847-0141

tateasp.com
kingspan.com

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