

48-729: SUSTAINABILITY, HEALTH AND PRODUCTIVITY TO ACCELERATE A QUALITY BUILT ENVIRONMENT

Current Unit System: US/Imperial System											
BIDS Tool EVA [®] Matrix™	First Cost	O & M, Energy	Organizational Churn	Technological Churn	Individual Productivity	Organizational Productivity	Health	Attraction / Retention	Taxes, Litigation Codes, Insurance	Salvage and Waste	Case Study Selection
Air	<> 10/38				V						Fitzner 1985 / EPA 1989 Improved indoor air quality
Temperature Control	<> 2/17				V						West Bend / Kroner et al 1992 Plenum floor vs. conv. clg.
Lighting Control	<> 17/34	V									Vattenfall Bld/Hedenström 01 Upgraded Lighting System
Network Access	<> 1/5	V		V							York 1993 Raised floor vs. poke through
Privacy and Interaction	<> 8/22				V						Banbury and Berry 1998a Acoustic Privacy / Quiet
Ergonomics	<> 7/20				V		V				OSHA 1999c (14) Silverstein et al 2000 Ergo chairs + keyboards
Access to Nat'l Environment	<> 3/36				V						Heschong et al 2002b / Schools 1 Daylighting in Schools - A
Whole Building	<> 1/57	V			V						VeriFone Inc. / Pape 98 Whole Building
Daylighting = Individual Productivity											
Heschong et al 2002b / Schools 1 - Daylighting in Schools - A In a 2002 multiple building study, Heschong et al identify 7% to 26% higher test scores for school children in highly daylight classrooms than for children in classrooms with no to very little daylighting. The average 15% improvement in test scores represents a significant measure of individual productivity. more information ...											<input type="button" value="Edit Case Parameters"/> <input type="button" value="New Scenario"/> <input type="button" value="Quit"/>

48-729 – Sustainability, Health and Productivity to Accelerate a Quality Built Environment

This course explores the relationship of quality buildings, building systems, infrastructures and land-use to productivity, health, well-being and a sustainable environment. The course begins with lectures on high performance enclosure, mechanical, lighting, interior and networked building design decisions and extends to sustainable communities and infrastructures. The course then engages students in exploring the research literature that relates these building design decisions to multiple performance impacts including: energy, carbon, facilities management, organizational change, technological change, attraction/retention (quality of life) of employees, individual productivity, organizational productivity, salvage and waste (the circular economy), tax/ insurance/ litigation, and human health.