

inform

Architecture
in the Midwest

2012: number one

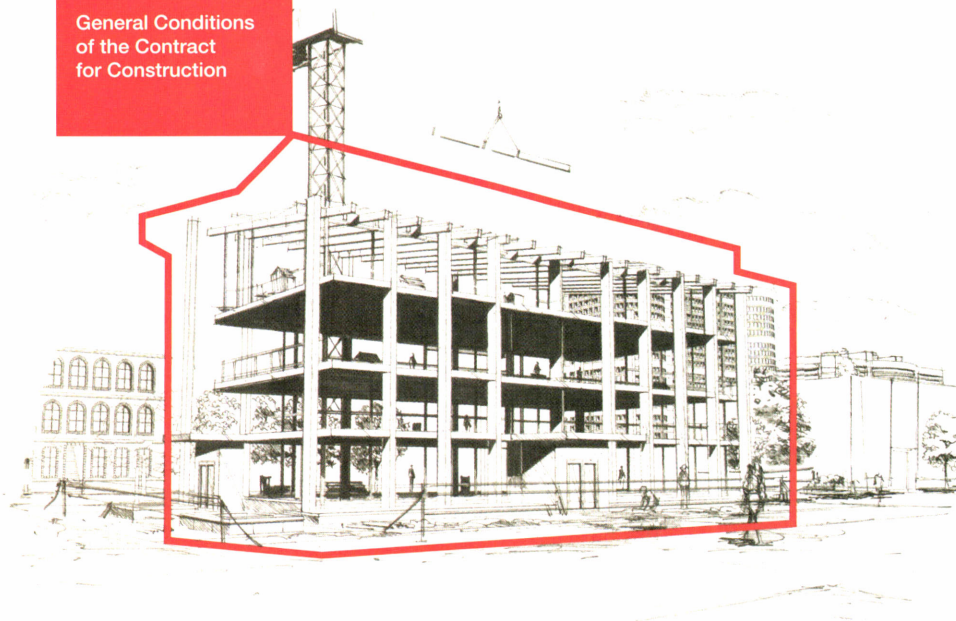


S31 P2

*****CR LOT 0510D**C011

A201™-2007

General Conditions
of the Contract
for Construction



Build with an added layer of protection.

PLUS download the all-new **Guide for Sustainable Projects**, FREE at aia.org/sustainableprojectsguide

Take peace of mind to the next level with AIA Contract Documents. We are pleased to announce the new D503™-2011, **Guide for Sustainable Projects**, including Agreement Amendments and Supplementary Conditions. This guide provides users with a valuable reference tool when using key AIA standard contracts like A201-2007, the most widely used Owner/Contractor agreement in the industry, to help address the unique concerns of sustainable construction. This includes information on certification systems, codes and legislation affecting sustainable design and construction projects. It also includes model language to assist all project participants in appropriately allocating risks and responsibilities. AIA Contract Documents are easy-to-use, widely accepted, and fair and balanced for all parties involved.

Download the new **Guide for Sustainable Projects** and learn more about our full library of Contract Documents at aia.org/contractdocs or call 800-242-3837.

AIA Contract Documents®
THE INDUSTRY STANDARD.

For Documents Orders Call the Virginia Society AIA • 804-644-3041 Ext. 100



TileLetter

Award Winner 2011
Commercial Grand Prize

David H. Murdock Core Laboratory Kannapolis, NC
Architect: Narmour Wright Creech Architecture, Charlotte, NC

"The attention to intricate detailing was critical to the project's success. Coordination and cooperation between the David Allen team, Italian suppliers, and the local designers was superb. Your team approaches each challenge as a true partner." *James J. Gaughan, Project Executive Turner Construction Company, Kannapolis, NC*

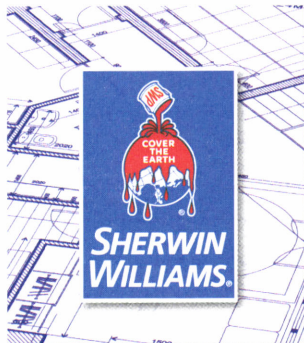
Let David Allen Company assist you with budget prices, technical information and specifications.



For more information, call:
Raleigh, NC (919) 821-7100
Washington, DC (703) 690-4422
Columbia, SC (803) 926-1040
Miami, FL (888) 433-1920

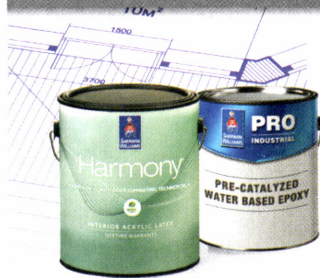


WWW.DAVIDALLEN.COM



We Make It Easy to Specify the Right Paint

WALLS - FLOORS - ROOFS - EXTERIORS - STEEL - CONCRETE - DRYWALL



We provide a full range of solutions to protect and beautify every area of your project — from wall paints and high performance coatings to resinous floor systems and epoxy terrazzo flooring. Sherwin-Williams can help meet your requirements for aesthetics and durability. Plus, we have the most comprehensive lineup of coatings that meet the environmental regulations set forth by a variety of guidelines including LEED, MPI, GEI, CHPS, CARB and more.

Architectural Account Executive:

Bill Rains, CSI, CDT
bill.rains@sherwin.com
301-902-3229 Office
301-351-4257 Cell

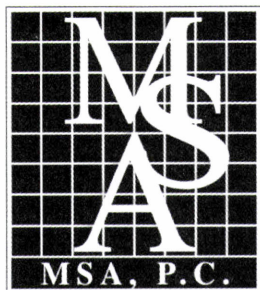
Online Support:

www.swspecs.com
www.swgreenspecs.com
(LEED complying paints)
www.swcolor.com

Richmond District Office

Attn: Catherine Bell
6564 W Broad St.
Richmond, VA 23230-2014

Serving Architects Throughout Virginia



**Civil & Environmental Engineering
Surveying
Landscape Architecture
Planning
Environmental Sciences**

Virginia Beach, VA
757.490.9264
www.msaonline.com

Veteran-Owned Small Business

inform

**Article Reprints
Article PDF's
Extra Magazine Copies**

**Contact: Cathy Guske
804-644-3041, ext. 301
cguske@aiava.org**

Editor

Douglas E. Gordon, Hon. AIA

Director of Sales

Judy S. Cheadle

Sales Administrator

Cathy Guske

Editorial Assistant

Jim Walker

Graphic Design

Steven Longstaff

Distribution

Shanelle Calvin

Webmaster

Andy Liguori

Accounting

Kenna R. Payne, CPA

Public Relations

Rhea George

Publisher

John W. Braymer, Hon. AIA

Editorial Advisory Board

Stephen C. Weisensale, AIA, Chairman

Carlton S. Abbott, FAIA

Edward J. Gillikin, Jr., AIA

Robert M. Gurney, FAIA

Michael S. Hedgepeth, AIA

David A. Keith, AIA

Robert L. Paxton, AIA

Donna M. Phaneuf, AIA

Willard M. Scribner, FAIA

Inform (ISSN 1047-8353) is published six times a year by the Virginia Society of the American Institute of Architects.

Subscription rate: \$22 for one year, \$6 for single copies of quarterly issues. POSTMASTER: Please send address changes to **Inform**, The Virginia Center for Architecture, 2501 Monument Ave., Richmond, VA 23220. Telephone: 804-644-3041. Note to subscribers: When changing address, please send address label from a recent issue and your new address. Periodicals postage paid at Richmond, Virginia, and additional mailing offices. Editorial offices: 2501 Monument Ave., Richmond, VA 23220. Phone: 804-644-3041. Copyright 2012 by **Inform**.

Inform encourages open discussion of architecture and design. Opinions expressed in the magazine are those of the author and not necessarily of the Virginia Society of the American Institute of Architects.

FROM THE EDITOR

A Revelation for a Coming Year

An interesting finding came out of last November's Architecture Exchange East conference. We asked some simple questions about ReadInform.com, the Web site of *Inform* magazine. If you haven't heard of it, don't feel alone. Of the respondents, 53 percent were entirely unaware that ReadInform.com exists.

That was a real eye-opener, since I thought I was cheating by asking slightly more of the younger audience to respond. Hearteningly, the result among the Emerging Leaders in Architecture group, which had a booth directly across from mine, was about 80 percent. Partly out of gratitude, but more importantly because of the great work the ELA group does, *Inform* will be exploring their most recent accomplishments in the upcoming print issue.

So, one might ask, what does ReadInform.com do that the print edition does not? Moreover, what does ReadInform.com do that AIAVA.org does not? Well, the Web version of the magazine features both more involved and also more timely stories. It also carries full-text articles that we want to carry in print but are lacking in space. And, by carrying the print feature stories online, readers can more readily share them with colleagues, family, and friends. AIAVA.org, for its part, is the immediate avenue for your state component to communicate information of pressing professional interest, although we will be working together more closely in future to remind you through the VSAIA News email, for instance, of things in ReadInform.com that you might want to know about and to link a more public audience to information in AIAVA.org that lets the general public and related professionals know what Mid-Atlantic architects are contributing to the public health, safety, and welfare.

Architects want to share their insight

Another interesting revelation from the ArchEX survey was that an astounding 87 percent of respondents say they think it's a good idea to be able to comment on articles posted in ReadInform.com. And 65 percent say they would like to receive news emails highlighting the latest postings on ReadInform.com. We'll see how that latter point works out, because more email isn't on the top of most people's wish list. But let's go back to that first item. Nearly 9 out of 10 people say they want to be able to comment. Point of fact: Anyone who goes to any article posted on ReadInform.com has that opportunity. Yet no one does. Well, virtually no one. You'd actually have to go and visit www.readinform.com to see how many goose eggs reside under the Comments footer for each article.

Perhaps you noticed that by the end of this sentence, I will have mentioned ReadInform.com 10 times in 5 paragraphs. Enough of that, but I hope the point is clear.

Transportation-oriented development

Another thing I'm trying with this issue is to involve thoughtful, well-recognized professionals in the kickoff essay for the issue theme. In this case, it is VCU Professor Emeritus Morton Gulak. I would be remiss if I did not also thank Linda McMinimy of the Virginia First Cities Coalition for helping shape this issue and put contributors in touch with the many professionals throughout the region who are looking down the road (or tracks, as it were) 20 to 40 years to carefully planned development that will put architects at the forefront of creating better communities everywhere.

—Douglas Gordon, Hon. AIA



Contributors to **Inform**

Issue 1, 2012

Morton Gulak, PhD, is professor emeritus in urban and regional planning with Virginia Commonwealth University.

Nicholas E. Vlattas, AIA, is the COO/CFO for Hanbury Evans Wright Vlattas + Company.

Deborah Marquardt does public relations for Hanbury Evans Wright Vlattas + Company. Her writing appears in magazines nationally.

Tony P. Wrenn, Hon. AIA, is co-author of *America's Forgotten Architecture*. Cemeteries and railroad stations are among his favorite topics.

Deborah Dietsch, Hon. AIA, is a freelance writer based in Washington, D.C. Her latest book is *Live/Work: Working at Home, Living at the Office*.

Jennifer Pullinger is a freelance writer, editor, book and film publicist, and social-media campaign builder living in Richmond.

Jonathan Moore is a public affairs consulting in Alexandria, Va., who also writes for *Focus* and *Texas Architect*.

inform

Article Reprints

Article PDF's

Extra Magazine Copies

Contact: Cathy Guske
804-644-3041, ext. 301
cguske@aiava.org

Featured

virginia center for architecture

jan. 19–mar. 25

ellows

the art & architecture of carlton abbott faia

inform

volume twenty-three number one

6 Where Our Roads Have Taken Us

We weren't sure where we were going, and we're not there yet.

By Morton Gulak, PhD

12 All Roads and Rails Will Lead to Main Street

Richmond gains a multimodal downtown hub.

By Jennifer Pullinger

18 Design Opportunities Ride on Metrorail Dulles Extension

Up not out is the vision for the newest westward corridor.

By Jonathan Moore

24 D.C. Celebrates a Half Century of Spiraling Beltway Growth

By Deborah K. Dietsch, Hon. AIA

28 The Tide Comes Rolling In

Norfolk takes to Virginia's first light rail.

8 NetWorks

Cloud computing

10 Bookmark

Railroad stations

Big roads

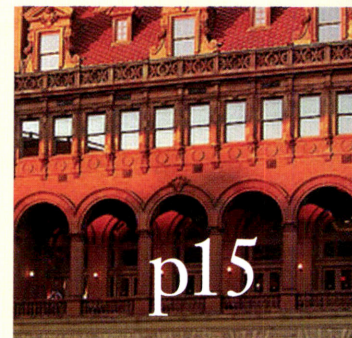
33 On the Boards

36 inProducts

On the cover:

The Silver Line crosses the Capital Beltway.

Photo by Chuck Samuelson.



p15

p19

p22

Next issue:

Green
Products
Directory



Where Our Roads Have Taken Us

By Morton Gulak, PhD

Bold ideas have always shaped cities. These usually emerge when problems seem at their worst and current methods of solving them don't appear to be working. Transportation, one of the most important elements of urban form, has always been a problem to be solved and a topic that has elicited a variety of innovative proposals.

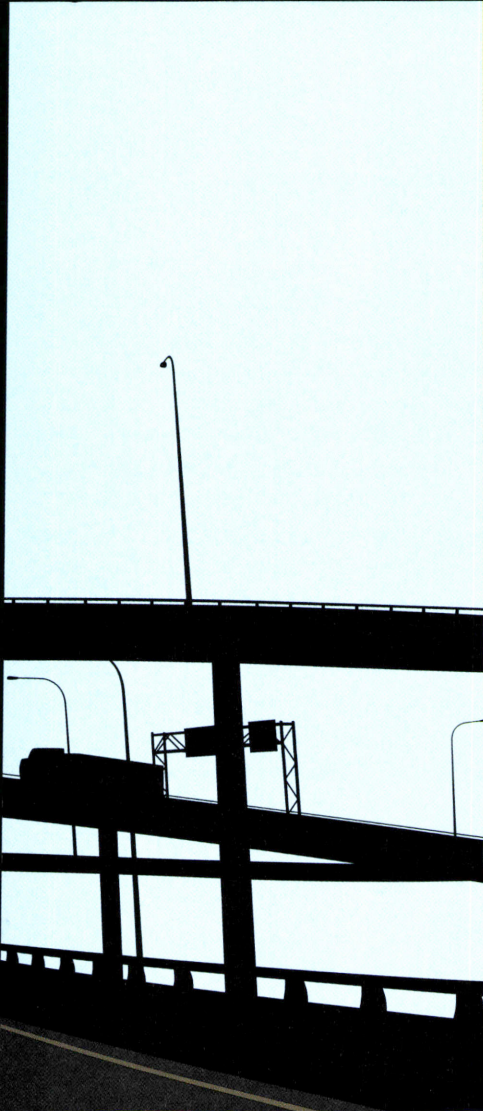
This issue of *Inform* focuses on four city-changing projects. Each is related to a specific time in history and each has or will have a strong impact on development patterns. Interestingly, each project was a response to larger problems and influences of their time but in each, the approach taken focused on a singular solution—move more cars and people faster and efficiently. History has taught us that urban problems need comprehensive solutions involving residential, economic,

social, and transportation components. Positive change takes place when these are synchronized. When the components need time to catch-up to one another, the results may be disastrous. A few of the broad societal influences that have shaped transportation and urban development are discussed below.

The car was the king of travel in the 1950s and '60s. Its impact on cities and lifestyle was immense. For the first time, people had a choice over crowded transit systems with limited schedules. People could travel long distances comfortably and inexpensively within urban areas and between cities. The automobile allowed personal freedom to travel where and whenever one wanted to go. New highways, freeways, and arterials provided easy access through local areas and across the country. This new freedom was possible, in large

part, due to the Federal Aid Highway Act signed into law by President Dwight D. Eisenhower in 1956. The bill allocated \$25 billion for the construction of 41,000 miles of interstate highways over a 20-year period. Local governments linked roads to the federal system to bring business to existing downtowns and allow development to take place in formerly inaccessible locations outside central areas.

The centrally focused form of cities changed with the new freedom of movement, an increasing population, and new development needs. Space for new housing was hard to find in crowded cities, leading developers to assemble large tracts on green land outside. These developments were not of much consequence in the '50s, '60s, and even the early '70s. Governments, eager to have development, planned roads to each of these new communities with



connections to the major road systems and to each other. The resulting “organic” road layout, in general, provided access to the majority of jobs in the downtown and to smaller commercial and retail locations in the suburbs. Missing in most cities was mass transit to relieve the increasing number of cars for the relatively short commute to downtown or for the potential of the suburbs to grow in an orderly manner.

In the suburbs, developers also ignored the fact that most families had only one car. If dad took the car to work every day, mom and the kids were trapped in their house without a means of travel. This isolation soon led to sociological studies showing a loss of community and sense of place in the suburbs as compared to the lively lifestyle and access to most goods, services, and recreation in the city.

Things began to change. A number of events in the '60s and '70s increased the number and use of automobiles. More women entered the workplace and needed transportation, a wealthier middle class

emerged who could afford more than one car, and development had begun its spread outside the city, requiring longer times for travel to work, shopping, entertainment, and services. Population had increased over this time, as well, and according to the 1970 U.S. Census, more people were living in suburbs and rural locations than in cities. Development patterns changed from a central city focus to providing goods and services closer to where people lived—in the suburbs. These changes placed tremendous pressure on transportation planners to move cars efficiently among the downtown, new suburban workplaces, and other needed services within the rapidly changing environment.

Until about the 1990s, the way to deal with increasing traffic was to build more and larger roads. Highways, beltways, and freeways were thought to be the answer to reducing congestion for the increasing number of cars. These led to directing traffic around congested areas like the downtown and dense urban neighborhoods. The new roads briefly solved this problem but also provided easy access to land for development even further away from the city center.

During the '90s, as congestion increased and older methods of planning didn't seem to be working, ideas began to emerge that took a more comprehensive view than simply building more roads to solve traffic problems. Traffic, land use, and development needed to be looked at together. The idea of *Smart Growth* directed new growth to areas of existing infrastructure. New development was planned to share existing roads, schools, and fire and police services, thereby reducing the cost of development to local government and, importantly, reducing the length and number of daily automobile trips needed.

Sustainable Communities was another idea. It proposed mixed uses within a community and a design that reduced the impact of development on the environment. Sustainable Communities contained space for work, play, and living in close proximity, which resulted in decreasing the need for automobile use.

New Urbanism is probably the most well-known contemporary approach. New urban communities were planned on principles that recall older urban building patterns. Design principles included walkability, connectivity, mixed-use and diversity, quality architecture and

urban design, traditional neighborhood structure, increased density (over usual lower suburban density requirements), green transportation, sustainability, and quality of life.

New Urbanism, Sustainable Communities, and Smart Growth all share a common thread. Each of these ideas or approaches was intent on reducing the number of automobile trips needed for each daily activity and establishing a greater sense of community through their designs. A problem exists with these self-contained communities. When people each day leave for work or for services that are spread throughout the region, a large number of cars exit to the main thoroughfares, and congestion is not reduced on a regional basis.

Commuter Transit has emerged as another way of reducing automobile traffic and moving large numbers of people to work and essential services. The new transit approach connects significant centers, i.e., employment, shopping, and other significant centers in the region, to residential population clusters. Commuter transit has worked well in dense urban areas like San Francisco; Portland, Ore.; Atlanta; D.C.; and Chicago but will require land use changes in most suburbs to form residential and commercial clusters that have the density to make these systems work.

The above approaches are evident in today's planning and development proposals in Virginia and across the country. They are beginning to make a difference in balancing the need for transportation and development. Some “extreme” proposals have been promoted throughout history. Examples are very tall buildings with bridge connections in the air, personal transit vehicles on light rails within dense urban areas, cars that both drive and fly, and helicopters proposed by Frank Lloyd Wright for his Broadacre City in 1930. Although some may seem far out or bold, they may become useful. We need these bold ideas that take advantage of what we've learned, what technology can provide, and a comprehensive approach to problem solving for our cities and communities for the future. Resulting solutions should differ very much from the car-is-king type of response of yesteryear.

Morton Gulak, PhD, is professor emeritus in urban and regional planning with Virginia Commonwealth University.

Extended Forecast—Partly Cloudy

By Nicholas Vlattas, AIA, and Deborah Marquardt

Having our head in the clouds used to imply we were dreamers. Not anymore. As we saw in the last issue of *Inform*, IT in the cloud means resource management that is firmly grounded.

Just a few years ago, Hanbury Evans made a strategic decision to invest in building information modeling without fully appreciating how the file size of Revit® models would explode. With our work spread over three offices and several remote users, and a professional staff that travels extensively, things got ever-more complicated. Then the recession hit.

Soon we faced another decision: Should we keep investing in ever-more-expensive workstations or virtualize? We gazed skyward. The motivation of being able to access a Revit model anywhere in the world was powerful.

The desire to be more flexible, accessible, portable, and collaborative has driven change, and there are still many options. Some firms may choose to continue working in a traditional manner with distributed IT (every office has its own). Others might adopt a hybrid approach, i.e., parcel some functions like email to a public cloud (like Amazon or Google) and keep the rest in-house, host a private cloud in-house (IT consolidation into one data center), or pay a service for private space in a multi-tenant cloud.

Cloud resource efficiency

Chris France, formerly with Charlotte-based Little Diversified Architectural Consulting, took that firm to a private cloud before moving to Advance2000, which hosts private clouds. In a 2010 *AECbytes* article, France writes that by switching to the cloud, “Little is on track to reduce workstation and laptop hardware expense by 67 percent or \$2 million over the next 10 years.”

In his new role at Advance2000, France authored a follow-up *AECbytes* article in January. He encouraged every firm to calculate the percentage of net revenue used for “IT spend,” (IT staff, hardware, software, telecom, and buildings—what it takes to physically house that data center), and decide whether that spend is within their means. By going to the cloud, France continues, one 300-person firm spending 5 percent of net revenue on IT was able to reduce its IT spend by 24 percent.

The decision to “rent” space in a multi-tenant cloud can reduce IT spend even further, France notes. It is not so different from deciding to own or rent office space. What if you didn’t have to invest in physical space to hold IT? What if IT staff could maintain local assets, but someone else’s 24-hour staff could manage all the critical data that designers need 24/7?

At a recent AIA/CFO roundtable in Charleston, S.C., France presented data for a 100-person firm with two offices that chose the multi-tenant cloud model. IT spend dropped from \$3 million to \$1 million over three years.

Cloud security

A recent *Wall Street Journal* article, “Seeking Safety in the Cloud,” suggests security concerns decline on the cloud. “Basic security tasks that often don’t get done at a small enterprise ... are usually part of the plain-vanilla package in the cloud,” wrote John Bussey. “The more you pay, the more you get: firewalls around your data, high-end encryption, ‘private clouds’ that let you isolate critical information and still access extra processing muscle when you need it, hacker-attack notification and mitigation and 24-hour tech support.”

Less outlay, more billable hours

Matt Lindner with Charlotte’s Moore Lindner Engineering conducted a methodical analysis before gravitating to the cloud. “We’re engineers, after all,” he says. Even then, Lindner asked for a two-month trial before locking the contract. As a firm with fewer than 10 employees, one engineer was wearing a second hat as IT chief. Driving the decision was a desire to maintain a flexible laptop force, yet be able to work as efficiently from anywhere as if working from an office desk. Although the firm had to install switches and routers to communicate with the cloud service and upgrade its bandwidth, “all of our servers are handled offsite with better equipment than we could buy,” Lindner says. “Moreover, although we had an IT back-up plan, it probably was not sufficient in the case of a hardware failure.” The company now purchases laptops that cost \$1,000-\$1,500, rather than \$3,000-\$5,000, and the engineer/IT chief is back on billable work.

Lindner says the next test will be engaging teams from Chicago, Seattle, and Vancouver in real-time collaboration for a national retailer project. “This is the only way to do real time collaboration.”

The best news

Hanbury Evans employs a hybrid cloud architecture, using both public and private cloud environments. We began virtualizing network servers and data storage in 2006. In 2010, we began to virtualize the desktop and currently have 40 virtual desktops, with a goal of 80. The break-even point for our “virtual desktop infrastructure” was just under seven months. Our strategy is to phase the work, using smaller servers that host fewer users. By 2013, the transition will be complete, with all data centrally stored in our Norfolk headquarters, and will reflect an anticipated savings of \$500,000 over five years, not including additional savings from reduced electricity, heating and cooling, and consolidation of branch office servers.

The best news? No time lost for slow-loading software, and a more productive and efficient staff.

We would be interested in hearing about your cloud experiences. Visit the Networks page on ReadInform.com to comment.

Allied Membership



Gain the competitive edge by improving your visibility and credibility with architects. Build a truly integrated partnership with the **Virginia Society of the American Institute of Architects' Allied membership program.**

Here are just a few of the benefits Allied members enjoy:

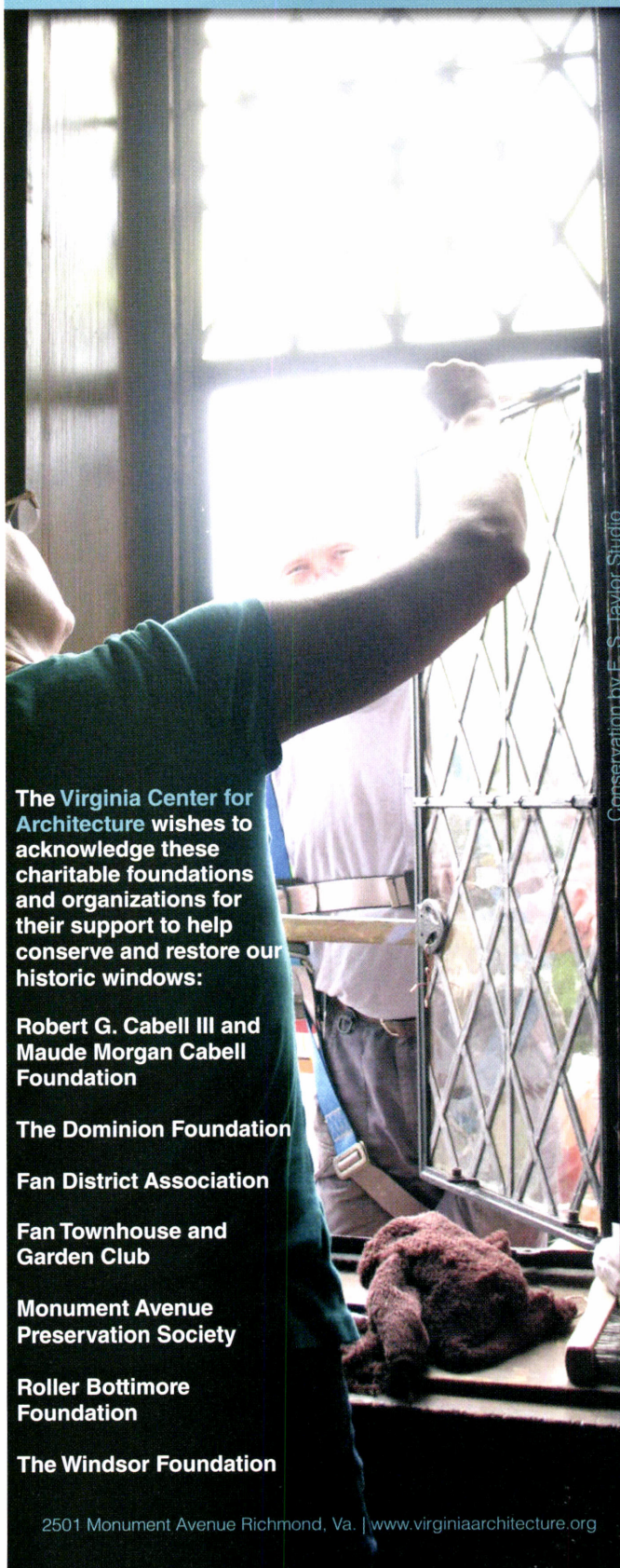
- Invitations to special events and programs
- Receive (and appear in) the VSAIA Annual Member Directory
- Special discounts on advertising
- Savings on ArchEx registration, code books, and AIA contract documents

**Contact Shanelle Calvin at
(804) 237-1772 or scalvin@aiava.org.**

Virginia Society **AIA**
www.aiava.org



VIRGINIA CENTER FOR ARCHITECTURE



The Virginia Center for Architecture wishes to acknowledge these charitable foundations and organizations for their support to help conserve and restore our historic windows:

**Robert G. Cabell III and
Maude Morgan Cabell
Foundation**

The Dominion Foundation

Fan District Association

**Fan Townhouse and
Garden Club**

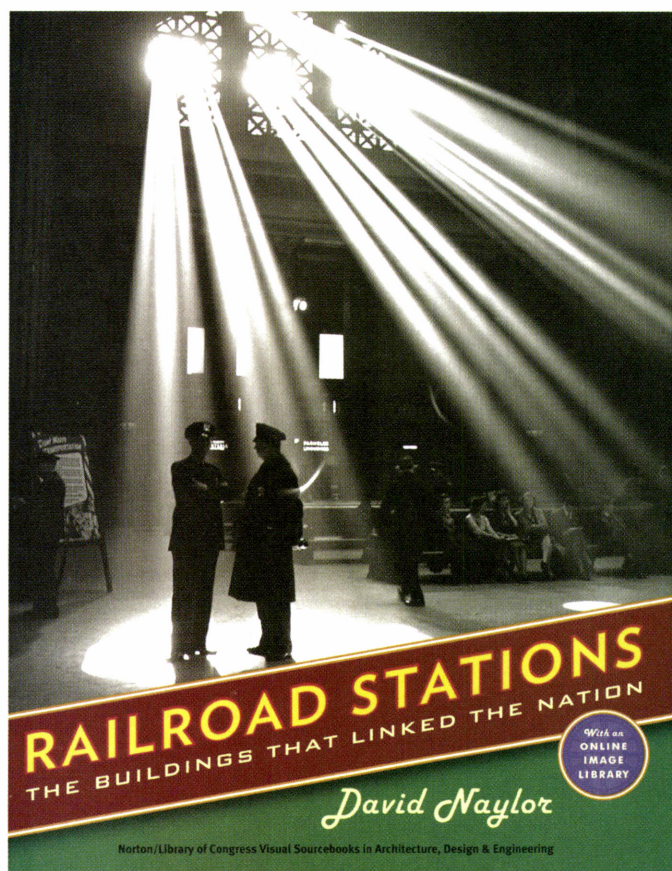
**Monument Avenue
Preservation Society**

**Roller Bottimore
Foundation**

The Windsor Foundation

2501 Monument Avenue Richmond, Va. | www.virginiaarchitecture.org

Conservation by E. S. Taylor Studio



10

Railroad Stations—The Buildings That Linked the Nation

By David Naylor

New York City, N.Y. Norton and Company; Washington, D.C., the Library of Congress
2012, 336 pages, \$75

When one thinks about linking this nation, the first thoughts are about the very nature of transportation as it has developed here in tandem with European incursion. The first transportation routes for early settlers in the U.S. were waterways. Native tracks and animal trails provided initial access beyond waterways into the interior, where nature herself often offered carved natural passages to breach travel barriers. Roads were built and sometimes maintained. But it was with the coming of the steam engine that we were able to enjoy new, speedier, and more reliable travel; first over water, then, shortly thereafter, steam locomotives made their way onto land.

Although this book purports to be about the buildings that became most readily identified with this advancement of train travel, unfortunately it largely neglects the people who conceived of the railroad stations. Instead, the heavily illustrated and lightly explained contents mostly show us the manner in which photographers have looked at railroad station architecture. This is not so much a criticism as an explanation of what one will find within, which includes the work of photographers such as Jack E. Boucher, William Edmund Barrett, and Walter Smalling Jr., who know well how to record the work of architects and designers. Unfortunately, the captions and limited text most often fail to mention the architects.

Tracking the railroad's history

From the earliest history of the rail lines in the U.S., the Mid-Atlantic has provided a locus. One early railroad, the Wilmington and Raleigh in North Carolina, chartered in 1825, reached Weldon in 1840 when, with 161.5 miles of track, the Wilmington and Weldon Railroad was the longest in the world. The Baltimore and Ohio, Atlantic Coast Line, Seaboard Air Line, and Southern all moved outward from roots in Maryland, West Virginia, Virginia, and North Carolina. They, and scores of smaller lines, provided the equipment and staff to lay the tracks and build the bridges, tunnels, and stations that connected the Eastern states and linked them to the rest of the nation.

In this book, star treatment falls to a handful of stations, including Pennsylvania and Grand Central in New York; Union Station in Washington, D.C.; and the 1933 Art Deco Cincinnati Union Terminal by Alfred Fellheimer and Steward Wagner, with Raymond Lowey, which alone has 29 photographs, every one deserving the space.

Lowey's handsome 1945-47 modernistic updating of Roanoke's 1905 Virginia and Western Railroad Station is also included. Lowey, with Fellheimer and Wagner, also designed two stations in North Carolina, which is represented in this work with but two images, one of a demolished station, the other of a building that has been moved and no longer serves as a station. The Fellheimer and Wagner stations in North Carolina—one from 1925-'26 in Winston Salem and one from 1927 in Greensboro—are handsomely restored Neoclassical buildings that still serve as railroad stations. North Carolina's Spanish Mission Style Salisbury station of 1908, by Frank P. Milburn, is also restored and still active, as is a long list of others that might have been included. Nonetheless, North Carolina is somewhat shortchanged in this treatment. D.C., Maryland, West Virginia, and Virginia have relatively good coverage, but there are still missing treasures.

Some unfortunate omissions

No Mid-Atlantic examples are shown of perhaps thousands of small stations—mostly wooden and turn-of-the-century, which smaller railroads seemed to drop off at any point where a dairy needed transport of milk to market or a town seemed likely to develop—though they are one of the great joys of hunting railroad stations. The book does show examples in other parts of the country. The Carson City, Nev., station is an example, as is the Vestal, N.Y., station, although scores of other manifestations could have been included.

There are other significant omissions as well, such as the Danville, Va., Station of 1899, by Frank P. Milburn, who, in 1900, is said to have had the largest architectural practice south of the Mason-Dixon Line. Stretching along the crest of a slight incline, the 1-1/2-story station, still in service, commands a collection of well maintained rail-related buildings with cobblestone approaches, parking, and freight handling.

Also not pictured is John Russell Pope's great domed Neoclassical Broad Street Station in Richmond, built in 1917 for the Richmond, Fredericksburg and Potomac Railroad. It is just a short distance from the Pope-designed Branch House, where this magazine is published, and though no longer in use as a station, worth a look.

While this book may not trumpet the designers of the stations it shows, it does whet one's appetite for getting to know more about them, and their effect on the cities, towns, and countryside they not only served, but decorated so handsomely.

—Tony Wrenn, Hon. AIA

The Big Roads: The Untold Story of the Engineers, Visionaries, and Trailblazers Who Created the American Superhighways

By Earl Swift

Boston, New York City, Houghton Mifflin Harcourt

2011, 375 pages, \$27

Earl Swift is a masterful storyteller. One must be to hold the reader's attention through so much detail on a topic that, on the face of it, seems so matter-of-factly stultifying. From page one, though, the text lays out a narrative that (depending on your age and memory) is satisfyingly reminiscent and as endlessly informative and interesting as a long trip on an interstate highway is monotonous and mundane.

Who knew that the interstate highway system concept predated the automobile or that President Eisenhower paid so little attention to the system that bears his name that he was outraged at construction delays during a trip from D.C. to Camp David and demanded to know why the interstate system was going through urban areas? Apparently Swift knew, because he tells it all.

Even if you stick to driving the back roads, you've experienced the planning that highway engineers put into paving the nation's cow paths. The green signs indicating towns as well as the red octagonal ones that tell you to stop are the results of significant trial and error. The width, banking, underlayment, and pavement have been meticulously tested and improved upon as well.

The research applies, of course, to the interstates themselves. There are areas, Swift writes, that have intentional curves and swoops meant to keep one awake along extensive straightaways that otherwise would induce highway hypnosis.

Most people are aware that the road numbering system is based on even numbers for roads that course in a prevailing east/west direction and odd numbers for those that go north/south. But can you imagine a limited-access road system where the exits had only names rather than numbers designating the exits? It almost happened.

Many people have also heard that the interstate highway was built for defense purposes in a way that military airplanes of the day would be able to land on them in time of emergency. This was only partially true, and certainly not true at all today.

Here also is a story of towns that were made and destroyed—as well as planned but never came to be—amid political deal making (as well as a good bit of swindling) as state and federal officials tangled over the future paths of the roads most of us now take for granted. In fact, a good bit of the book details the wrangling of visionaries, such as Lewis Mumford (who first supported and then decried the notion of urban-centric interstates); Thomas MacDonald, the true founder of the highway system as we know it today; and Frank Turner, MacDonald's successor, who quietly, almost inconceivably rose to the top of the highway bureaucracy.

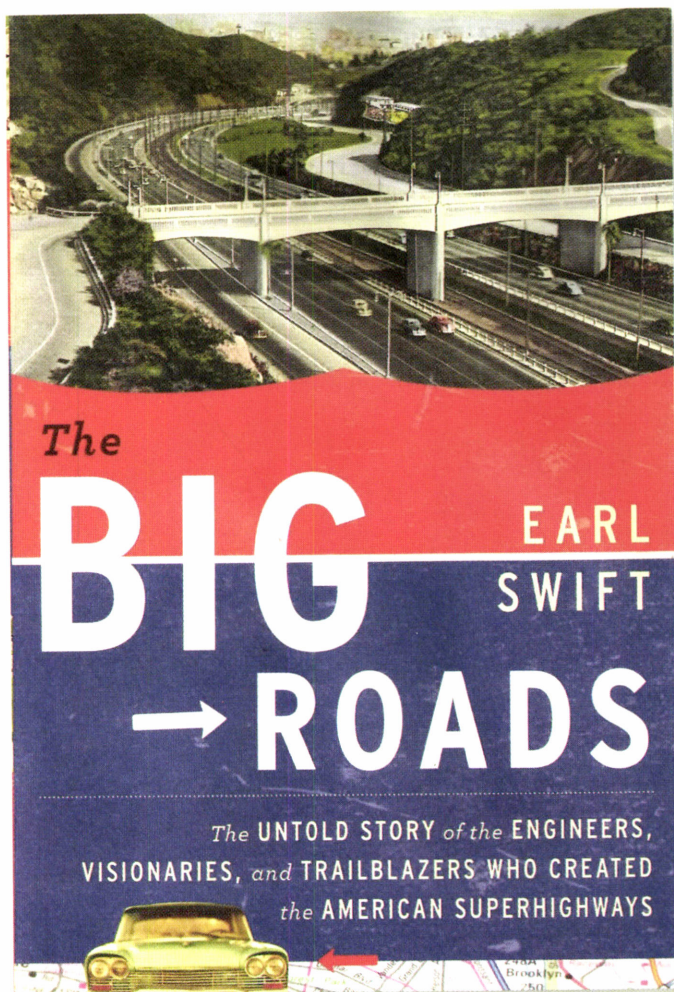
It wasn't until the interstate system was nearly completed that some of the realities began to sink in about this almost unimaginably huge infrastructure project. Highways that cut through cities (with circumferential highways providing bypasses) weren't conducive to city vitality. In fact, they typically bifurcated cities in ways that strangled them and separated people from waterfronts and basic amenities. The planned paths of many of our cities highways were racially imbalanced, effectively destroying innumerable healthy African American communities, as Swift details in the story of the drastic push of I-83 and I-70 through the heart of Baltimore. From

community activist Joe Wiles to SOM principal Nathaniel Owings, Swift provides a microscopic analysis of how that city hashed out what at the time seemed manifest destiny and only now is beginning to be unraveled. (In San Francisco, it took the 6.9 magnitude Loma Prieta earthquake to close the Embarcadero Freeway and reconnect that section of the city to its bay.)

In fact, if there is any criticism of this book, it would be Swift's attention to the biographical minutiae he lavishes on people who are unremarkable despite their remarkable achievements. Perhaps his lesson is that in any endeavor, one's background has less to do with success than one's backbone. Or, just as likely, in an achievement that is so monumentally enormous, there is no one overlord, despite the name ascribed to the Dwight D. Eisenhower National System of Interstate and Defense Highways.

The book also starts much stronger than it ends (with some strange story about a formula to turn water into a fuel more effective than gasoline). But Swift does leave us with fuel for thought: Perhaps it was the post-WWII hubris of the nation and availability of so many freshly out-of-service, able-bodied workers that allowed the U.S. to create the great road system that we have today. But it is the callous carelessness with which we take that system for granted that could spell its demise. There is much good and much not-so-good to be said about the interstate highway system, but it's impossible to imagine what we would do without it. So—major lesson learned—keeping it in working order is a task we cannot continue to put off till tomorrow.

—DEG





All Roads and Rails Will Lead to **Main Street**

Richmond's Main Street Station
Evolves into Modern Multimodal
Transportation Hub

By Jennifer Pullinger

13

It's hard to believe there was a time when Main Street Station, the historic train depot in downtown Richmond, was being considered for demolition. "It's so iconic architecturally. It's one of those landmarks that anyone would fight not to tear down," says Jeannie Welliver, City of Richmond project development manager. It's one of the oldest examples of French Renaissance architecture left in the country—and it's hard to miss. Motorists by the thousands on elevated I-95 get an intimate view of the ornate clock tower and terra cotta roof daily as they zoom by within a few yards at eye level.

Main Street Station, designed by Wilson, Harris, and Richards of Philadelphia, opened in 1901, and for the next 50 years served millions as a bustling and vibrant regional rail center. In the intervening decades, however, this National Historic Landmark survived its share of challenges: fires and floods, deterioration and obsolescence, and, ultimately, declining passenger traffic and the loss of Amtrak service to the less physically impressive Staples Mill Road Station in Henrico County.

Main Street Station no longer serves as the transit hub it was in its heyday, but that will change as plans for transforming



Photo courtesy of the Greater Richmond Transit Company.

A sleek TDX train speeds out of Main Street Station.



the complex into a modern Multimodal Transportation Center roll forward to capitalize on its strategic location in the heart of Virginia. Two architecture firms currently working on the revitalization are SMBW Architects of Richmond and Beyer Blinder Belle of D.C.

Momentum for these changes came in 1991, when Richmond officials secured federal funding from the Intermodal Surface Transportation Efficiency Act (ISTEA) to help reinvigorate Main Street Station as a Multimodal Transportation Center—

one that reconnects the capital to the national network of intercity high-speed passenger rail and other modes of travel. "Obviously high-speed rail is a huge economic game changer for this region if it's delivered," Welliver says.

Main Street Station is serviced by Amtrak's Northeast Corridor—the only high-speed rail corridor in the U.S., but not by the Southeast Corridor, the fastest growing corridor in the country. Passengers have to hop aboard Southeast-bound trains at the Staples Mill Road Station. Ideally, planners want to



Photo courtesy of the Greater Richmond Transit Company.

Instead of whizzing by, people in cars and trains will be more engaged with the multi-modal station.



The front façade of the historic Second Renaissance Revival station.



Jennifer Pullinger (left, right)

Downtown Richmond from the station roof.

have Main Street Station serve as the connection point of those two corridors, but expensive track improvements are needed.

Meanwhile, planning for alternate modes of getting around is making headway. In addition to de-clogging congested highways and improving regional air quality, ISTEA funding is designed to help projects like Main Street Station make not only rail, but also buses, taxis, shuttles, bikes, even segways and pedestrian travel more accessible to the public.

A concept known as Bus Rapid Transit—the “rubber-

wheel” version of light rail—will be part of that plan. The GRTC Transit System is in the midst of reviewing the feasibility of establishing express bus service through the high-capacity Broad Street Corridor now, with Main Street Station as one of its stops.

The Plaza at Main Street Station, which debuted in 2007 and is located directly under I-95, is an intermodal site unto itself, with public parking spaces for vans, cars, bikes, and limousines and connections to the Canal Walk and Capital Bike



Trail. Four bus bays are also available to serve the motor coach industry, including Megabus, a low-cost intercity bus service first introduced to Richmond in late 2010, now serving 7,500 people a month. Back across the street, a bike transit, rental, and storage station; electric vehicle charging stations; and Zipcar accommodations will soon be added to the variety of options for getting around the city.

Main Street Station will eventually serve as a welcome and travel center for the greater Richmond area and for the 45 million travelers that motor by annually on I-95, Broad Street, and other nearby arterial roads. "We are going to have a visitor's

center that showcases all of the best that Richmond has to offer, and now that we own the train shed, we've got the architecture and the space to deliver a travel and welcome center at a larger scale," Welliver says.

Restoring the 100,000-sf train shed, which has one of the last riveted steel roof truss systems in the country, is one of the most exciting aspects of the revitalization of Main Street Station. In the mid-80s, the original open-air train shed was enclosed and became a corrugated metal discount shopping mall. Plans call for reopening the shed and installing glass plate in the walls, similar to the Virginia Museum of Fine Arts' new



Jennifer Pullinger (left), Photo courtesy of the Greater Richmond Transit Company.



The station already features welcoming amenities for visitors.

glazing structure.

“So you’ll have a platform on the interior perimeter of the train shed on both sides and then we are going to return the underside of the roof to a heavy timbered roof, replace the roof structure, and allow this to be read as an open shed structure,” Welliver says.

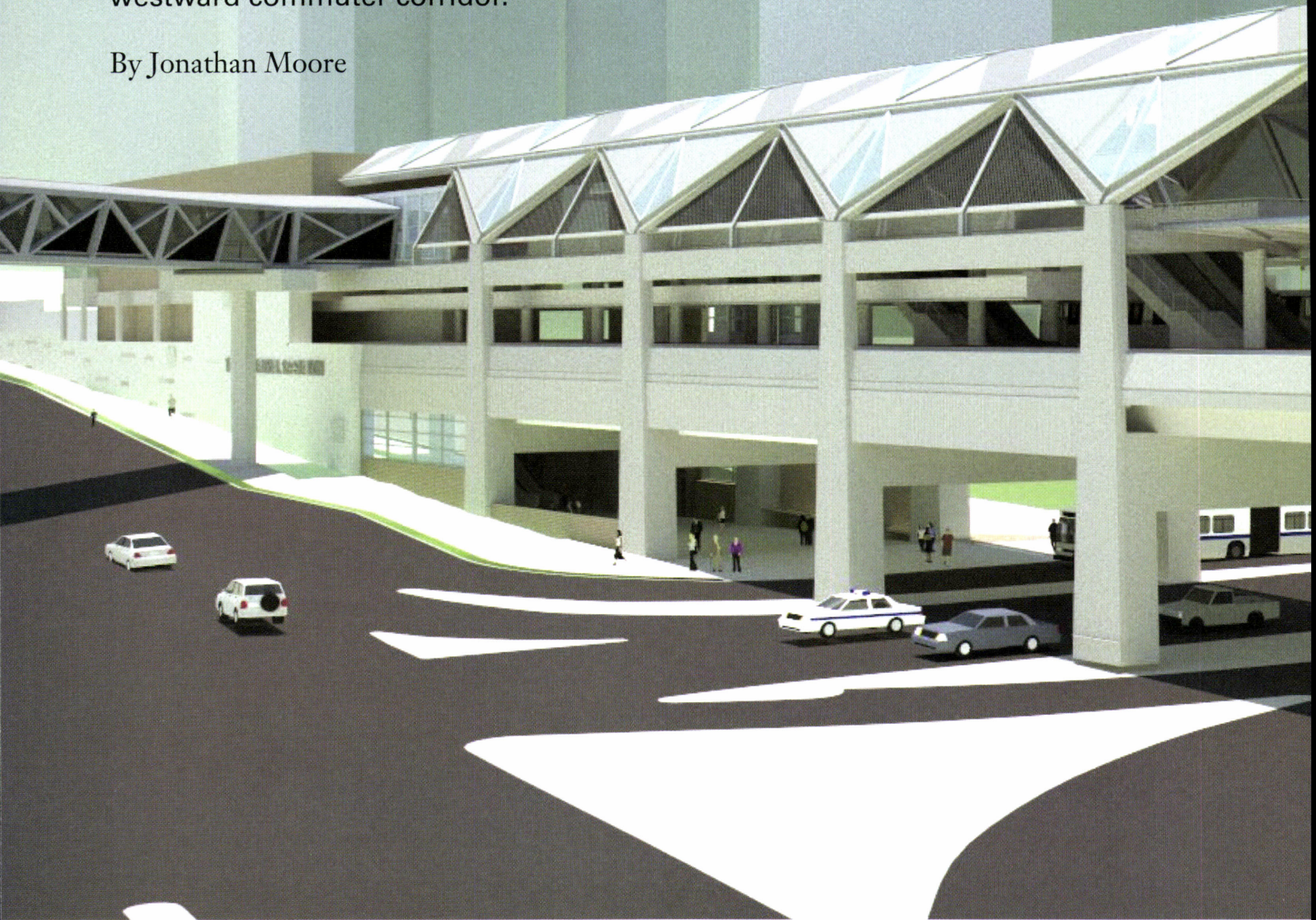
By making Richmond more accessible—by rail, car, bus, bike, or foot—officials hope to accommodate local commuters and further position the city, region, and state as a tourist destination. If Main Street Station truly goes multimodal, residents, businesses, visitors, and travelers alike will become more closely engaged with a capital city that has much to offer.

The grand opening of Richmond’s high-speed Trans-Dominion Express (TDX) rail service.

Design Opportunities Ride on Metrorail Dulles Extension

Up, not out, is the vision for development along Northern Virginia's westward commuter corridor.

By Jonathan Moore

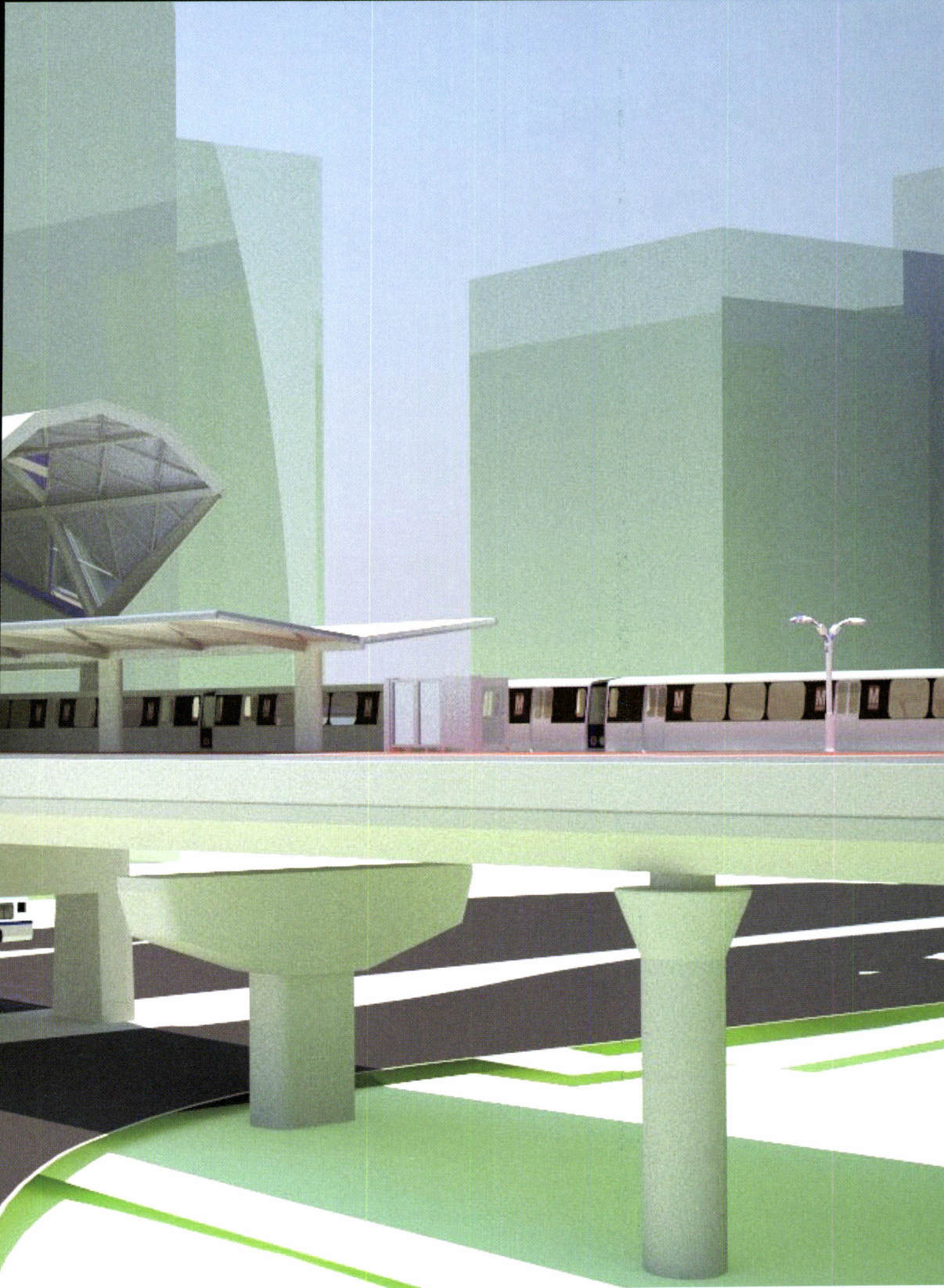


Planning is on track with construction of the new Dulles Corridor Metrorail Project. This 23-mile \$6.2 billion project will extend the Washington, D.C., Metrorail system from East Falls Church to Dulles International Airport and beyond to Ashburn. It's a high-profile opportunity for architects and planners to implement smart growth concepts along a narrow strip of land in one of metro D.C.'s fastest-growing economically diverse regions.

Hard to imagine Dulles Airport standing virtually alone amidst verdant countryside when architect Eero Saarinen

designed this iconic terminal 50 years ago. Dedicated in 1962, the airport stood in stark contrast to pastoral farmland and crossroads communities—its soaring catenary roof and angular columns a futuristic monument to the emerging jet age. Far removed from Washington's suburbs, the site was chosen as a buffer between residential communities and noise from high-volume aviation traffic. Yet Dulles' relative isolation was part of its charm, a structural anomaly in an area steeped in historic tradition.

Though Saarinen's "curtain raising" visual approach to



**Rendering of
Tysons Central
123 Station, which
will accommodate
the above-ground
configuration.**

19

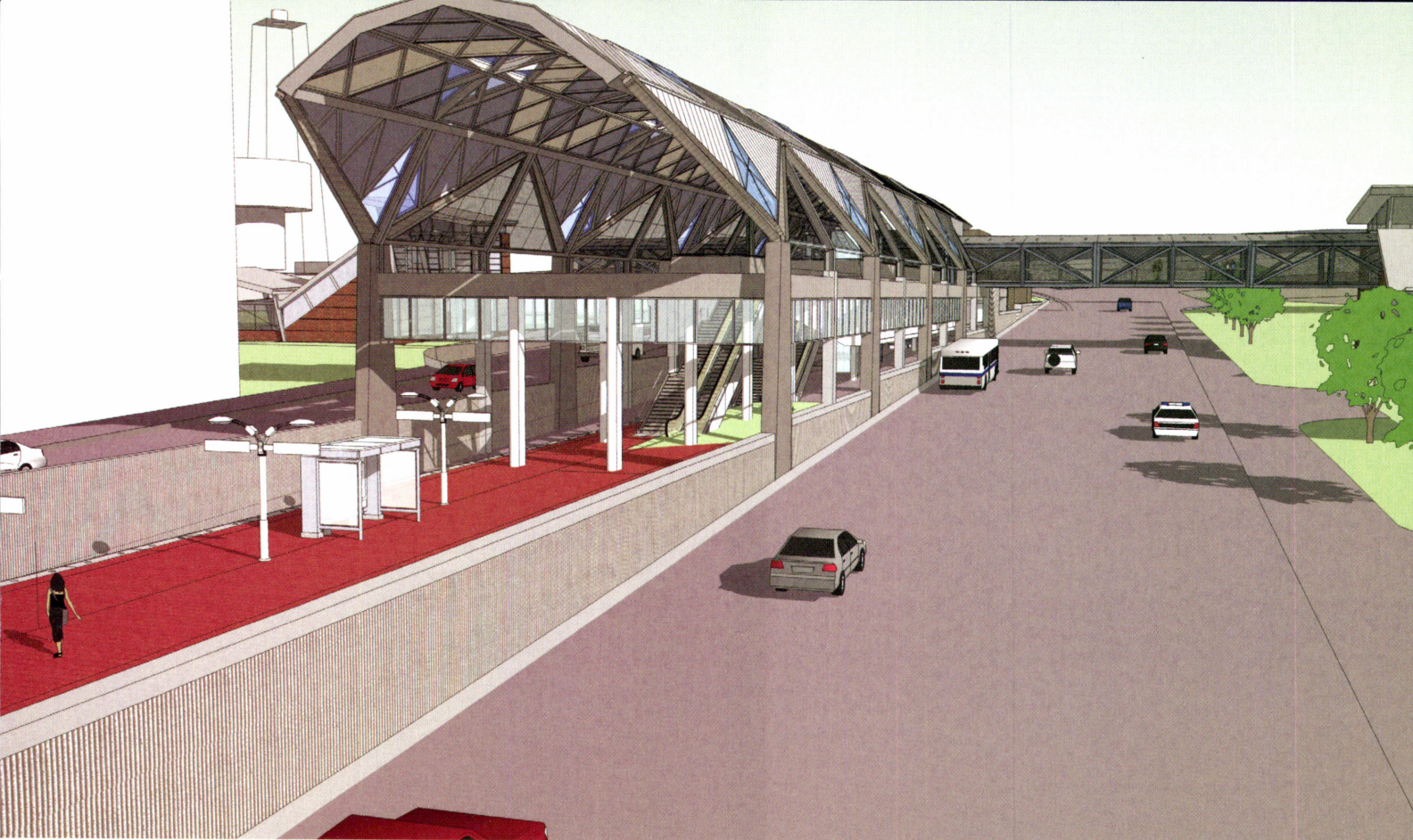
Courtesy of the Dulles Corridor Metrorail Project

the terminal was facilitated by an exclusive access road, he probably envisioned the airport becoming a fulcrum for future development. This economic growth became reality in the 1980s as technology, aerospace, and defense companies took advantage of locating between a major airport and the nation's capital. The new Dulles Corridor Metrorail Project, running alongside this access road, is the latest in a long-anticipated series of steps to provide additional connections.

Over the years, the growth catalyst has been and remains the airport and related services. Close proximity to a major

international gateway has long been a drawing card for such communities as Reston, Herndon, and points west toward the Shenandoah foothills. Yet these communities immediately west of the Capital Beltway and beyond felt a certain disconnect from metro Washington. Rail transit will dramatically change that perception.

Architects and planners view this emerging corridor as a quest for connectivity. Built and managed by the Metropolitan Washington Airports Authority ("Airports' Authority"), which took possession of the entire corridor—including the Dulles



Rendering of Tysons Central 7 Station (above) and the Tysons West Station (right). These will service both commuters and the torrents of Tysons shoppers.

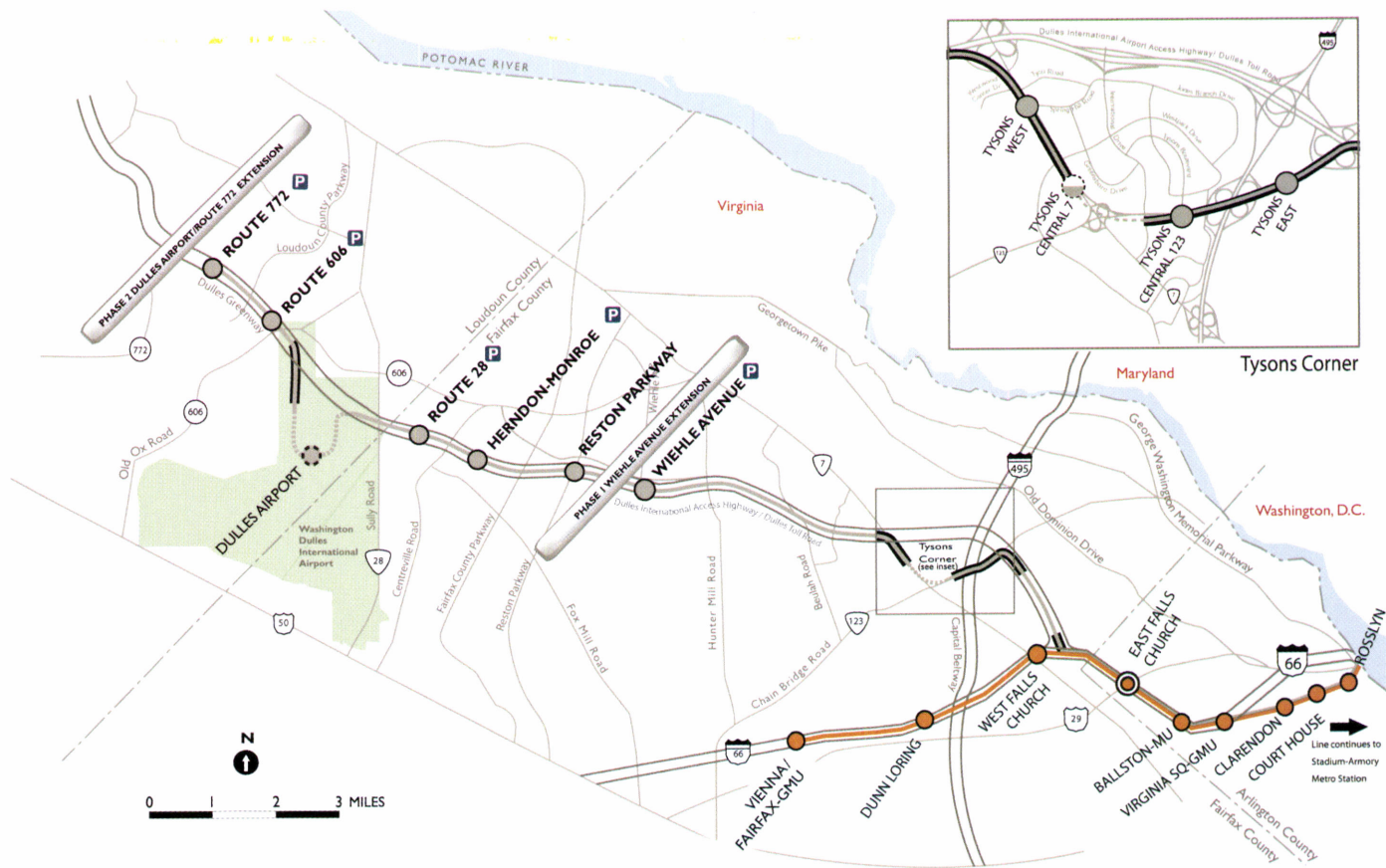
Access and Toll Roads—from the Commonwealth of Virginia in 2007, 11 new rail stations constructed in two phases will be established. More than 80 percent of total project costs will be supported from toll-road revenues and other local funds. On completion, ownership and management of these stations will pass from the Airports' Authority to Washington's Metrorail subway system. Phase One will include a spur line from East Falls Church to the eastern side of Reston at Wiehle Avenue. Five stations in Phase One are exclusively designated for Tysons Corner. Phase Two starts near Reston Parkway, running between the east and west lanes of the Dulles Access Road, with stations serving Reston Town Center, Herndon, Va.-Route 28, Dulles Airport, Va.-Route 606 (Old Ox Rd.), and Va.-Route 772 in Ashburn. Not only will a major population center be better connected to other areas in Virginia, Maryland, and the District, but Dulles—formally accessible only by car or bus—will enjoy point-to-terminal rail service currently available at the District's other major airport, Reagan National.

"This rail corridor extension will provide impetus for dramatic change," says Marcia McAllister, communications manager for the Dulles Corridor Metrorail Project. "Fairfax County hopes to see this entire area of Tysons Corner transformed from suburban sprawl into more mixed-use transit-oriented development." Community site lines and new zoning areas will be established as architects and planners change the visual scope of these corridor communities. Fairfax County has established new comprehensive land-use plans to guide architects and planners as they change the visual scope of

Reston and Tysons. Loudoun County also has development plans for the Route 772 end-of-line station in Ashburn. This transformative experience will be especially important for Tysons Corner, which McAllister says is the largest employment sector in Virginia.

Comprehensive mixed-use development is inherent with Reston's planning ethos—harkening back to high density and economic diversity concepts promoted by its founder, Robert E. Simon (the "RES" in Reston). "Reston set the benchmark for responsible development," says Phil Tobey, FAIA, senior vice president with the SmithGroup D.C. office. "Good design cannot exist in a vacuum, and that's where planning comes in," he says. "It's all about scale and capturing people's positive perceptions of urban architecture." A new Metrorail link planned for Reston Town Center will provide residents and visitors easier access to other areas of D.C., fulfilling one of Simon's concepts of a tight-knit community both apart from but readily connected to a major urban center.

With open space preservation a key objective, architects and planners are focusing on development between rail stations and existing commercial/residential areas, with planning tracts going no further than one-eighth to one-half mile on either side of the Silver Line, Metro's color-coded designation for this new spur. Designs focusing on city-style environments will transition toward more public transportation options, thus greatly reducing the need for autos as a sole means of transport. Pedestrian walkways and bike lanes will also be added where they do not conflict with major traffic arteries.



The current route map for the Metro Silver Line.

- Existing Metrorail Orange Line and Station
- Transfer Station
- Parking
- New Station
- Partially Below Surface Station
- Underground Station
- Surface Track
- Elevated Track
- Underground Track



Structural aesthetics will be directed up rather than out, with designs favoring multi-purpose buildings combining office, retail, and residential space. These design themes for the Dulles Rail Corridor trend along lines of other local mixed-use areas served by Metrorail, such as Ballston, Clarendon, and Pentagon City in Arlington County, and Alexandria's King and Duke Street corridors.

For Doug Carter, AIA, CEO of DCS Design in McLean, Dulles Access Road's connectivity potential has been apparent for decades. Possessing expertise in both architectural and planning fields, Carter believes sustainable development with

light rail will transform "edge communities" such as Tysons, Reston, and Herndon into municipal models based on quality of life, accessible linkages, and energy savings. Reducing traffic congestion abates fuel consumption and longer commutes while preserving open space and enhancing air quality. "We must think beyond existing planning modes for creating and preserving livable communities," he says. "Environmentally responsible mixed-use options must form the nucleus of any new development scheme, especially in Northern Virginia's high-density environment."

Carter says green planning concepts must prevail with this



and other mixed-use projects. New zoning ordinances must bring community services closer together instead of disbursing them over several miles. Commercial, cultural, and life-safety services should be within walking or rail-ride distance wherever possible. "Today's investment in sustainable planning pays positive dividends well into the future," Carter adds. He views the Dulles Corridor Project as a chance for Northern Virginia to begin anew with innovative planning and design techniques.

Fortunately, Metropolitan Washington has successful mixed-use development models close by. Smart-growth planning in Virginia's highly dense and culturally diverse Arlington County was essential for managing phenomenal growth in recent years. County Board Chairman Chris Zimmerman points to successful mixed-use development along the Rosslyn-Ballston-Clarendon corridor. With five Metro stations and 10 percent of the county's population, this corridor generates a third of the county's total tax revenue. For Zimmerman, mixed-use is all about combining form and function that best serve communities. "Structures must be functional, yet aesthetically unique to their environment," he says, adding that signature structures help seal a sense of identity for local residents and visitors. Zimmerman reinforces close-in density planning as essential for successful rail corridor development. "We've seen tremendous growth between Rosslyn and Ballston in recent years," he adds, "yet those neighborhoods have maintained a sense of identity without measurable traffic increases."

Fundamentally, architects and planners believe mixed-use approaches must come at the earliest planning stages. That is especially true with development along rail lines where space and zoning are limited. One of the most heavily congested areas in the country, Northern Virginia cannot afford deleterious influences taking hold as this once-remote part of the metro area continues to grow as a technology, residential, and commercial hub of the mid-Atlantic region. Phil Tobey, FAIA, points to light rail as a primary environmentally friendly transportation option. "The key is creating viable communities growing near to, rather than away from, transit hubs." It's a goal architects and planners will establish early as rail line construction proceeds toward completion dates of 2013 (Phase One), and 2017 (Phase Two).

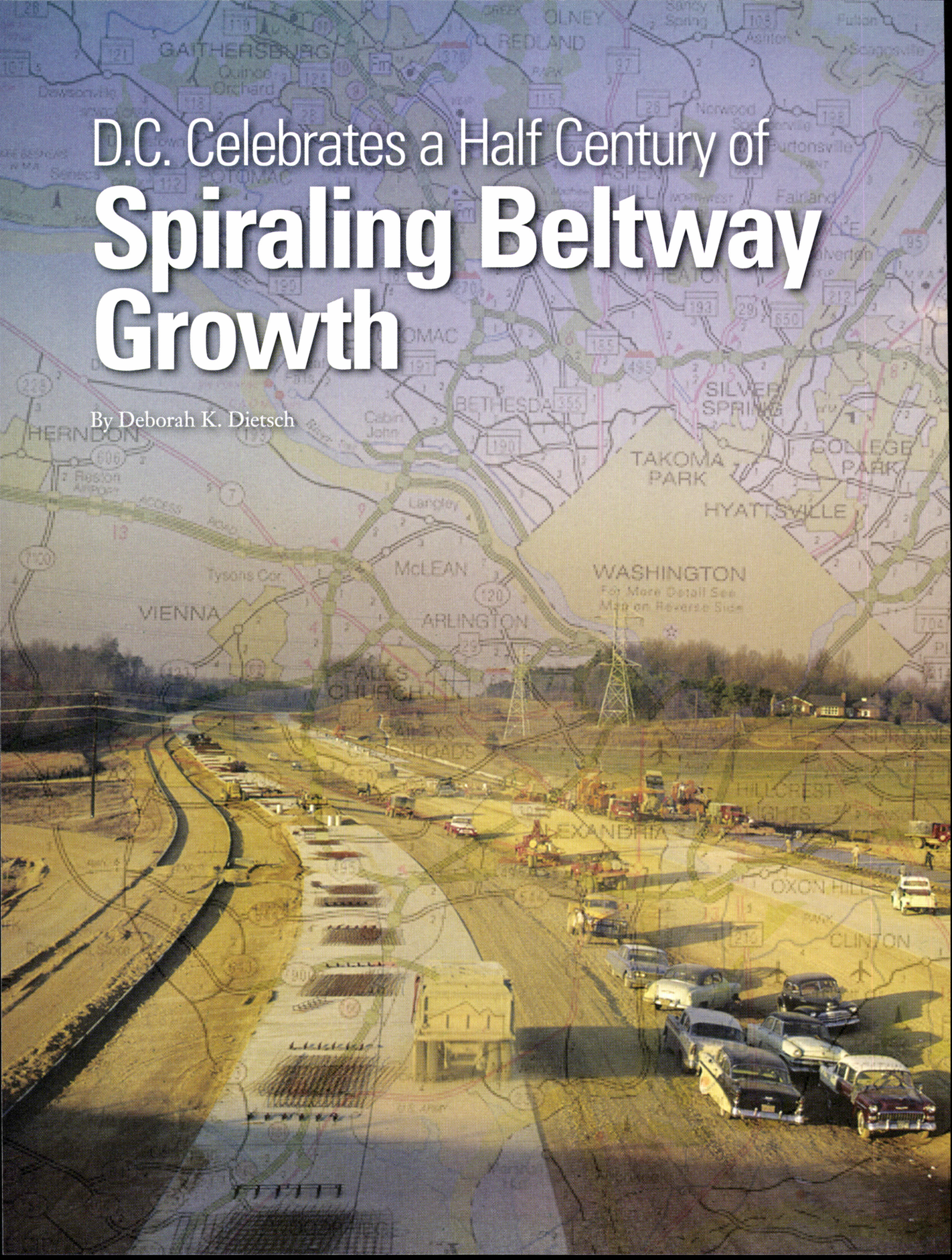
"Quality transit infrastructure could alter people's daily transportation priorities for the better," says Linda McMinimy, executive director of the Virginia Transit Association in Richmond. "An effective rail system placed in or near local communities spurs economic development while preserving future growth options."

Construction along Route 7. Construction headaches will eventually go away and subway ridership will prevail.

Photos: Chuck Samuelson

D.C. Celebrates a Half Century of **Spiraling Beltway** Growth

By Deborah K. Dietsch





The Capital Beltway crosses only a short distance into Washington, D.C., but is considered the ultimate symbol of our nation's seat of power. "Inside the Beltway" and "Beltway Bandits" are instantly recognized as phrases synonymous with the insular world of American politics and government and the private companies serving them.

"The Beltway is certainly a definer of the Washington ego and attitude," says AIA Resident Fellow James Scheeler, FAIA, who has lived in Reston, Va., since 1971. About his commute on the seven-year-old highway to reach the Dulles toll road near his home he recalls: "We used to pass through countryside. Now it's solidly built up. The Beltway has left an indelible mark on land development in the region."

Today, the "vicious circle" that drivers love to hate can be considered as historic as any listed landmark. This year marks the 50th anniversary of the first segments of the Beltway to be operational. Opened in December 1961 were the Virginia routes extending between Shirley Highway and Arlington Boulevard, and across the Wilson Bridge to Indian Head Highway. (A stretch in Maryland completed in 1957 was quickly closed for widening.)

"They united the metro area in ways easily overlooked today," says Jeremy Korr, a social sciences professor at Brandman University in Irvine, Calif., who wrote his PhD dissertation on the Capital Beltway. "Before the Beltway, driving between Maryland and Virginia meant long trips through Washington on clogged surface streets. After the Beltway, it meant a few minutes across a bridge."

In the decades since its completion in 1964, the Beltway has exerted an enormous influence on the Washington metropolitan area in helping to reshape its social and economic patterns and spur widespread growth and development. "It enabled more businesses to succeed by improving access to them and enabled residents to live farther from their places of employment," says Korr. "It created visible boundaries for a metropolitan area that previously had been amorphous and disconnected."

Designing the "wedding ring"

The iconic stature of the Beltway belies its prosaic beginnings as the "Washington Circumferential Highway" to direct traffic around the outskirts of the city. The National Capital Park and Planning Commission started thinking about such a bypass in 1950 and six years later, the freeway became part of the Federal Aid Highway Act signed into law by President Dwight D. Eisenhower. The bill authorized the construction of a 41,000-mile system of interstate highways that would link urban and rural areas and change the face of the nation.

"The Beltway wasn't the first circumferential freeway—others were built in Boston and Baltimore," says Bob Cullen of the American Association of State Highway and Transportation Officials. "But it was innovative in requiring the efforts of two states to build an entire ring around a city."

Despite its regional impact, the Beltway was planned independently by Maryland and Virginia highway agencies, except for coordinating two crossings over the Potomac River—

When construction of the Capital Beltway pushed through the Virginia countryside in 1960, there was no there there. Now this area has become so congested through mostly uncontrolled development in Virginia and Maryland that the D.C. area ranks at the top of worst-traffic areas in the country.



Almost from the time the Beltway opened, there was a demand for more lanes, which brought more traffic.

the Wilson Bridge in Alexandria, Va., and American Legion Memorial Bridge near Cabin John, Md. Even then, some of the lanes in these areas were mismatched and took decades to improve, according to Korr.

Both states were challenged to chart a new course since few suburban routes existed in the 1950s that could be incorporated into the new loop. Experienced engineering firms were consulted to navigate older suburbs and farmland with durable roadbeds of asphalt concrete. “There was a good foundation for the Beltway in terms of geology and topography, but construction in the vicinity of Alexandria was challenging because of its marshlands,” says Cullen.

Unstable soil conditions in this locale led HNTB, the New York engineering firm responsible for the Beltway’s Virginia segments, to apply the same methods used earlier by its engineers to build the New Jersey Turnpike through the Meadowlands.

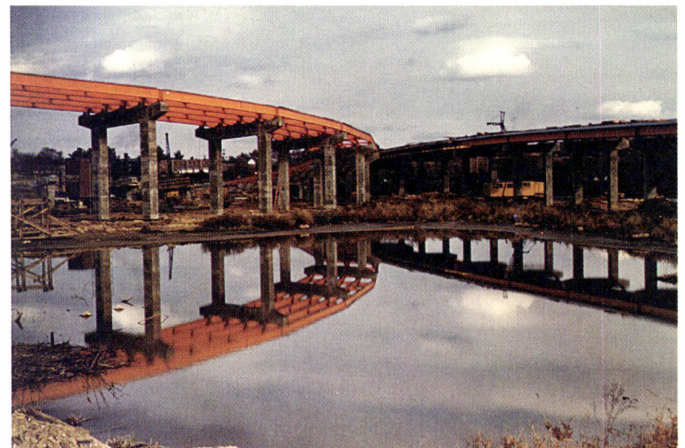
Maryland’s engineering contractor, the Michael Baker Corporation, faced a more difficult situation in designing sections of the Beltway that passed through Montgomery County. The Pennsylvania firm, which would later engineer the Trans-Alaska pipeline, had to overcome resistance to the Beltway from homeowners in established suburban communities.

A segment from Wisconsin Avenue past the Kensington/Connecticut Avenue exit was extended through Rock Creek Park—no environmental regulations were in place to halt its construction—so that hundreds of homes could be preserved. Its serpentine shape followed the contours of the landscape to create a swerving stretch of road nicknamed the “roller coaster.”

In August 1964, the officially named Capital Beltway was

fully completed with a dedication ceremony held near the New Hampshire Avenue interchange. “A huge wedding ring for the metropolitan area, meeting all of its suburbs,” noted Federal Highway Administrator Rex Whitton of the \$189 million infrastructure project.

Engineers had designed the road’s 42-mile Maryland portion to carry 55,000 vehicles per day and Virginia’s 22-mile section to carry 49,000. “Their estimates were exceeded in the first year of operation,” says Korr. “The planners’ predictions turned out to be so wildly inaccurate that it is hard to imagine later generations being able to compensate for their errors.”



The Alexandria interchange along Cameron Run involved extensive wetlands management at a time when marshes were not considered vital wildlife resources.



Build it and they will come

In physically uniting once unrelated communities, the 64-mile Beltway turned suburban tracts into highly desirable real estate. “Build it and they will come,” the memorable line from *Field of Dreams*, best describes its effect on development as subdivisions and shopping centers grew by leaps and bounds. “The Beltway has helped places like Tysons Corner become a vibrant edge city with a regional, multi-state draw,” notes Scheeler. “At one point, Tysons had more commercial space than St. Louis.”

From the start, the capacity of the Beltway couldn’t keep up with this unexpected growth. Planners had predicted that the percentage of the population living in Washington’s suburbs would rise from 40 percent to 50 percent by 1980. But by the 1970s, suburbanites already accounted for 74 percent of area residents. “These faulty predictions made traffic solutions difficult,” notes Korr.

Steadily increasing numbers of drivers on the Beltway led to road-widening projects between 1972 and 1992 that increased six lanes to eight (four in each direction). The extra lanes didn’t make much of a difference as the ring road continued to lure

more vehicles, contributing to the second worst traffic congestion in the nation.

Currently, the Beltway carries more than 225,000 vehicles in average daily traffic, according to the Northern Virginia Transportation Alliance. By 2020, the group predicts the volume of traffic will exceed 400,000 vehicles per day in some sections of the highway. However, based on his research, Korr says current traffic has already passed that estimate. “If you were to count every individual vehicle that entered and exited the Beltway in a 24-hour period on any given day, you’d reach 1 million.”

Still, the fight to improve mobility on the Beltway continues. Virginia recently partnered with the consortium Fluor-Transurban, Inc. to develop new High Occupancy Toll (HOT) lanes on a 14-mile segment of the Beltway from Springfield to just beyond the Dulles toll road. The toll lanes are scheduled to be operational in 2013, the same year that the first phase of Metrorail’s Silver Line to Dulles Airport is due to open. The new transit line will incorporate a section of track elevated over the Beltway to reach Tysons Corner.

Maryland is exploring similar lane management systems for its 42-mile stretch of the Beltway and the idea of partnering with the private sector. Meanwhile, some jurisdictions in both states are adjusting their land-use programs to reduce the need to drive by drawing homes, offices, and shopping closer together and near to public transit, as Fairfax County is attempting at Tysons Corner.

“The Beltway will have additional changes in the years ahead,” predicts Korr, pointing to studies of mass transit connections and double-decking portions of the freeway. “But all such interventions will only make a bad traffic environment a little bit less bad.”



The Tide Comes Rolling In

When Norfolk first considered a light-rail line in November 1999, the city council rejected it outright. The city acquiesced slowly, and eventually approved \$232 million, approved in 2007, for a 7.4-mile stretch to be completed by 2010. Projections changed and malfeasance was charged, though, and for the next two years the light-rail system didn't sit well at all with the general public. Budget overruns followed missed deadlines, and, eventually, the project estimate hit \$338 million, according to Tom Holden, public affairs director for Hampton Roads Transit.

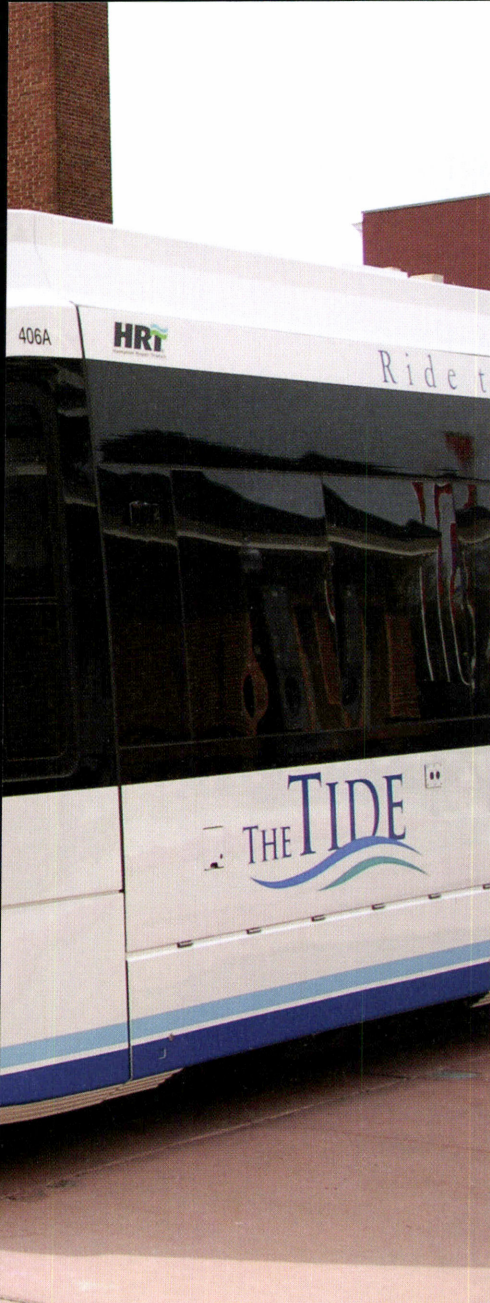
Then the line opened in August 2011, and the latest news is generally good and three-fold:

- 1) The project came in under the revised estimate at \$318.5 million
- 2) Design and safety for the system that opened in August 2011 is far superior to the original design, Holden says
- 3) Ridership is almost double that predicted so far, and public acceptance is spreading into neighboring Virginia Beach, which so far has repeated the loop with the city council initially rejecting an extension into its downtown outright. (Virginia

Beach Mayor William Sessoms Jr. and the city council are already showing signs of accepting the concept of an extension into their jurisdiction, though.)

The system is still heavily subsidized, point out critics, such as Tidewater Libertarian Party leader Robert Dean. In October, fares covered only a fifth of the cost of the system, which Dean likens to someone enjoying a meal for which the taxpayer shoulders 80 cents on the dollar.

Still, a November poll of 800 Norfolk and Virginia Beach residents by the Christopher Newport University



The Tide on Monticello. The building under construction in the background is now complete.

Photos courtesy of Hampton Roads Transit.

Wason Center for Public Policy indicates that 84 percent of Norfolk residents and 76 percent of Virginia Beach residents would like to see the rail expand. The most commonly mentioned desired destinations were the Oceanfront, Navy base, and Town Center.

There's no point in waiting

"As I tell my clients, you're never going to build more economically than today," notes Michel C. Ashe, FAIA, of H&A Architects & Engineers in Virginia Beach. "If you wait till tomorrow, it's going to be more expensive." Ashe was on the inaugural Tide run on August 19 and reports that Mayor Sessoms and other city council members who shared that ride seemed wholly in favor of extending the light rail system into Virginia Beach.

"It creates opportunities for economic development that aren't otherwise there," Ashe says. "In our area we can't build our way out of this choking congestion with highways." The city has already purchased a right-of-way for a rail line, and its master plan creates a series of areas that would be perfect for a destination-oriented Tide extension, he says: "If the economy continues to pick up over the next few years, I think development activity here would occur immediately as people move to get ahead of the curve."

"I think extended light rail—which certainly carries more people than automobiles or even buses—is a great idea," agrees Sheldon Leavitt, AIA, of Leavitt Associates in Norfolk. "The existing section has demonstrated that people will ride it. Even though it doesn't go many places at this point, those people who can use it do use it."

Leavitt also commends the area hospital and Old Dominion University for buying passes for their employees and students, which, he points out, shows institutional support in Norfolk for the Tide. He appreciates the development that has already come into the area, which may have been a result of developers anticipating that the rail would be successful, he says. What he doesn't like is the rail station design, and he pulls no punches.

"As an architect, I must say the design of the stations is absolutely anachronistic and functionally inappropriate," Leavitt opines. "A proper station would have a higher roof that gives people shelter as they walk from the station to the train. There are so many things that could have been done to coordinate with the very good looking trains themselves."

—DEG


**The Tide's in at York Street (above).
The Tide entering MacArthur Square in August 2011.**



Done Right, Awards Submissions Will **Get You Noticed**

One sign of pent-up client demand for new or refurbished facilities is the continuing growth reported by the AIA Architectural Billings Index in inquiries (even though, frustratingly, billings continue to languish). So, looking ahead to a potentially stronger construction market for 2012, one of the most cost-effective New Year's resolutions firm principals can make is to re-establish their credentials in design excellence.

With that in mind, *Inform* turns to three firms that have long, well-demonstrated track records in winning awards and, as an offshoot, getting published.



A photographer can be the architect's best resource in putting together a submission. Multiple award-winning 2000 Tower Oaks Blvd. by KGD.

Think like your jury's peers

KGD Architecture, based in Arlington, certainly has an imposing record of prevailing in awards competitions. Marketing Director Kate Robertson explains that they focus strongly on the audience that the awards will engage. For them, it is the commercial real estate development association, NAIOP, whose membership is rich in potential clients. "The first thing I focus on is organization," Robertson says. "We have a detailed system for saving photographs, so I know exactly where to go. But, still, it's important to begin by hoping for the best and expecting the worst. For instance, the angles of the before and after photographs are extremely important. You have to expect that the presentation is going to be the first time the jury is going to have seen the project, so the visuals and narrative have to tell a compelling and consistent story. A lot of project success is relationship-based. When the owners are happy, we have a way to show that the project is successful by their standards.

"When putting together a submission, I think of the visuals the same as I would an introductory paragraph for the project summary text. I start off with an image that makes you want to know more about that amazing piece of design work. And for this I can't emphasize enough how important the photographer is. I recently worked with Ron Blunt, who is amazing. We were able to tell him the background on the project—the Transurban headquarters in Springfield, Va. He understood the lighting and angles that would show the complexity of essentially re-using a printing shop and warehouse facility and creating a high-tech office building.

"Once the awards submission is assembled, we depend extensively on peer review," she concludes, as an effective way to pre-jury the project description.

Lighting is critical

Randy Creaser, AIA, president of Creaser/O'Brien Architects, Washington, D.C., announced in October that his firm's design for their Indigo Model received the Great American Living Awards (GALA) in conjunction with the Miller and Smith Homes' Brambleton Community in Northern Virginia. "These homes live very differently

Photo by Ron Blunt

and meet an underserved homebuyer's market," Creaser notes proudly. "Average sales are three to four homes per month."

Especially over the past 15 years, Creaser has also served regularly on homebuilder association juries for custom homes, townhouses, and condos, with site visits in all seasons and times of the day and night. "Site visits are not always essential to a particular awards sponsor's process," he says. "But, personally, I think it is essential to walk through to see and experience how a house lives. Naturally, you're almost always going to start with a good design. But when I'm walking through it, it is often apparent that the house has been furnished and staged as a model rather than a living thing."

"You want to see how furniture works in a space. So when I draw plans, I put furniture in them. A bedroom has to have a bed wall, a dresser, a chair, and so on. Have the windows been placed thoughtfully? Does the furniture work? Is there room to walk around?"

Creaser also appreciates photographs that don't look sterile: "Sometimes I see photographs where there isn't one magazine on the coffee table and no pictures on the walls. I want to see some mail on the countertop and some signs of cooking in the kitchen, such as pasta or chopped onions and peppers, so it looks as if somebody just walked away. I don't mind having someone sitting in a chair reading a book, a dog sleeping on the floor, boots by the back door, or a coat hanging on a hook. Those things give scale as well as context."

"But if there is one element I would put in capital letters it would be **LIGHTING IS EVERYTHING**. So many houses I go into don't have any lights on. In design, lighting lends an inviting mood, especially around dusk but even during the day. That's why I like to have daytime and after-dark photographs. And exterior lighting doesn't have to be floodlights. Uplighting or even a line of MR16s along the garage soffit can dramatically enhance the face of the house."

Courtesy Miller and Smith Homes



When it looks like the occupants just stepped away, a house looks like a home. And lighting is everything. GALA-winning house by Creaser/O'Brien Architects.

particular competition," she says. "That might entail crafting a new lead, taking out some pieces, or putting others in. We also tend to hire a very high caliber photographer, and one way to control costs there is to partner with other people involved in the project. We also often see these well-known photographers getting their work published independently, which is marketing our design work as well."

Marquardt re-emphasizes the importance of managing project graphics: "We have photos from the team as we go, as well, so we have before and after photos as well as vignettes that happen during the project. You invariably have your key images for a project, but these other photos and sketches can also be very important to telling the story behind a work of architecture. This can mean some very large data-storage requirements. We recently implemented a digital asset management within the firm, and it is a very useful tool."

—DEG

31

Identify your message, repeat it

Deborah Marquardt, an associate with Hanbury Evans Wright Vlattas + Company, Norfolk, has a background in magazines and streamlines her process by designing awards submissions as if they were spreads for publication. "People's time is valuable, so we organize our project documentation carefully," she says. "We make sure that people keep the sketches, for instance, because that is the DNA of a project. When we are ready to prepare an award presentation, we have all the pieces, although we will sometimes rework drawings so they are of a suitable level of quality."

"Although there is always a statement about the project, we can never be sure how many of the jurors will be reading those blocks of text," she continues. "So there are certain elements important for a particular project that we try to repeat and layer in captions and callouts throughout. The designers review a submission, since the initial draft had come from conversations about the key issues they faced with that project. And once we have established the key story layout, we can take that and re-craft it for other venues."

First, do good work, then let well-selected awards audiences know about it, Marquardt believes. "When looking at award opportunities, we review the rules very carefully and look for the key aspect for a

Robert Benson Photography



Design a submission like a spread. Layer and repeat your most important messages in photos and text. VSAIA Interiors Award-winning Forbes Center for the Performing Arts, James Madison University, by HEWV, included a pedestrian-safety walkway that enhanced interactivity.

The 21st annual

inform AWARDS

2012

A program to recognize and encourage outstanding:

Landscape Architecture | Interior Design | Object Design



Dovetail Offices (Interior Design Honor Award) Photo: Lee Brauer



Carnegie Hill House (Landscape Architecture Merit Award)
Photo: Eric Plasecki



Riverside Barbeque Pavilion at Yellowstone Bend Ranch (Objects Honor Award)
Photo: Lynn Donaldson

CALL FOR ENTRIES

The program is open to anyone in *Inform* magazine's primary circulation area—architects, interior designers, landscape architects, furniture designers, industrial designers, students, and faculty. Your business address must be located in Virginia, Maryland, West Virginia, Washington, D.C., or North Carolina.

All work submitted must have been completed after January 1, 2007.

Awards

Award winners in both the Honor and Merit categories will be featured in a special section of *Inform* magazine and announced to the public.

2012 Schedule

December 1, 2011: Registration opens

March 2, 2012: Registration closes

March 16, 2012: Project submissions due

April 20, 2012: Winners will be announced

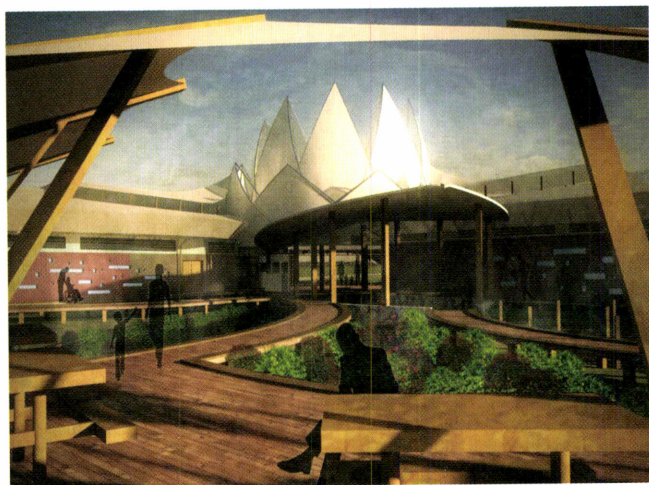
May 7, 2012: Winners appear in a special section of *Inform* magazine.

2012 Fees

\$135.00 per project
Members of the Virginia Society AIA

\$175.00 per project
Non-Members

Fees are non-refundable and non-transferable



Architect: Clark Nexsen Architecture & Engineering, Norfolk
Project: 2011 Africa HPLC International Design Competition, South Africa

The Farrow Partnership, Clark Nexsen, and Ngonyama Okpanum & Associates teamed to win an international design competition for a health-promoting lifestyle center in South Africa. Tel: 757.455.5800 / www.clarknexsen.com



Architect: Dewberry Architects Inc.
Project: Route 66 "Xperience" Museum, Tulsa, Oklahoma

Overlooking the original Route 66 bridge across the Arkansas River, the three-story "Xperience" will feature high-tech interactive exhibits of the historic "Mother Road." Fairfax, Va., Headquarters Office: 703.698.9050 / www.dewberry.com



Architect: HKS Architects
Project: The John Dempsey Hospital at University of Connecticut Health Center, Farmington, Conn.

The 315,000-sf, 169-bed addition weaves together the canons of academics, research, and patient care, both programmatically and through thoughtful play of massing and materials. Tel: 804.644.8400 / www.hksinc.com



Architect: ODELL, Charlotte, N.C.
Project: Cabarrus Health Alliance Medical Office Building, Kannapolis, N.C.

A 59,000-sf medical office building for Cabarrus Health Alliance. Tel: 804.287.8200 / www.odell.com

THANK YOU

A Special Thank You and
Congratulations to Our 2011:

Sponsors
Exhibitors
Speakers
and
Attendees

Join us for our 25th Anniversary
Conference & Expo
Nov. 7–9, 2012

Greater Richmond Convention Center



Index to Advertisers


AAACM Green Warrior	www.aaacm.net	back cover
David Allen Co.	www.davidallen.com	p.1
Eric Taylor Photography	www.ericaylorphoto.com	p.35
MSA, PC	www.msaonline.com	p.2
Sherwin Williams	www.swspecs.com	p.2

Market Place

Products and Services

**Eric Taylor
Photography**

I bring an architect's perspective
to architectural photography



703.851.7102
www.EricTaylorPhoto.com

35

Understanding Change

2009 I-Codes and Green Building Seminar
Jan. 20, 2012
Charlottesville, Va.

Earn 6 AIA/CES continuing education hours (HSW, SD)

Discover how to:

- Describe how the six strategic areas of sustainability are achieved in building design and construction
- Explain similarities and differences of current sustainability programs and initiatives
- Utilize the International Codes to increase and support sustainability programs and goals
- Evaluate building components for code compliance and sustainability features

Register at www.aiava.org

Questions? Call (804) 237-1777

Virginia Society AIA



How do I get my
firm's project featured
in On The Boards
in *Inform* magazine?



Contact: Cathy Guske
804-644-3041, ext. 301
cguske@aiava.org
or visit www.aiava.org/inform



Fluid-form Flooring ▲

As Burt Hill illustrates at the Tidewater Community College in Portsmouth, creativity and craftwork make epoxy terrazzo a sculpturally innovative material. This precast staircase descends to a poured-in-place stair-landing/seating element with precision-ground surfaces and edges. Terrazzo's long life and ease of maintenance make it the economical option over 40 years. Photo © Jeffrey Totaro.

www.DavidAllen.com

Graffiti-defying Coatings ►

This water-soluble coating is available in a wide range of colors in both gloss and satin finishes. Durable and colorfast, the coating allows graffiti to be readily cleaned with soap and water. Applications include everything from buildings to bridges. It is especially practical for schools and other institutional uses.

<http://www.sherwin-williams.com>



Custom Solar Shades ▲

This custom-designed shading system for the Jones Rooftop Pool in Kansas City, designed by Williams, Spurgeon, Kuhl, Freshnock, incorporates the Solar Shade USA line, one of a number of manufacturer options available from as far afield as Australia. Even in a rooftop application, these shades provide both cool and beauty. Photo courtesy AAACM.

www.aaacm.net



Pneumatic Residential Lifts ▲

With a minimal footprint and a three-month installation time, and without the need for sub-floor mechanical conveyance equipment, this transparent and affordable elevator depends on differential air pressure mechanisms to drive the lift and provide user safety and comfort. The custom-designed system is especially useful in retrofit accessibility applications. Photo by Daytona Elevator.

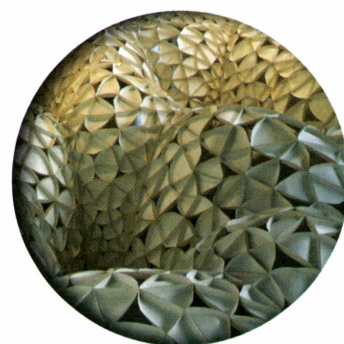
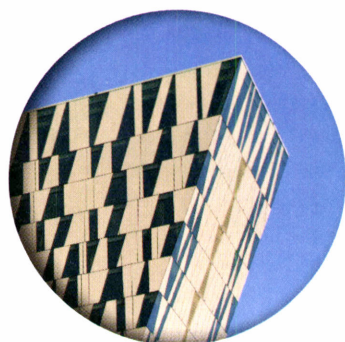
www.daytonaelevator.com

SKINS

Virginia Design Forum X

Charlottesville

March 16-17, 2012



Kim Herforth Nielsen, MAA RIBA, 3XN, Copenhagen

Lorcan O'Herlihy, FAIA, Lorcan O'Herlihy Architects, Los Angeles

Lisa Iwamoto, IwamotoScott Architecture, San Francisco

Marc Simmons, Front, New York

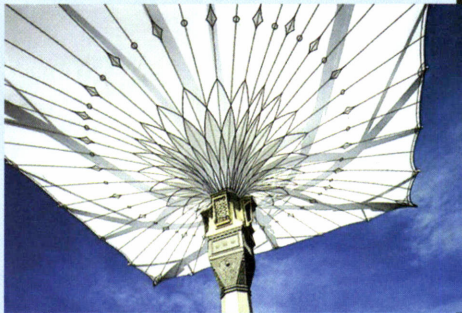
Moderated by Sarah Amelar

AAACM **GREENWARRIOR**



Professional Services Shade and Renewable Energy Solutions

Imagination is our only Design Limitation



For more information, please
call: 703-865-5991 or
email: aaacmgw@hotmail.com

www.aaacm.net