

*Pittsburgh*

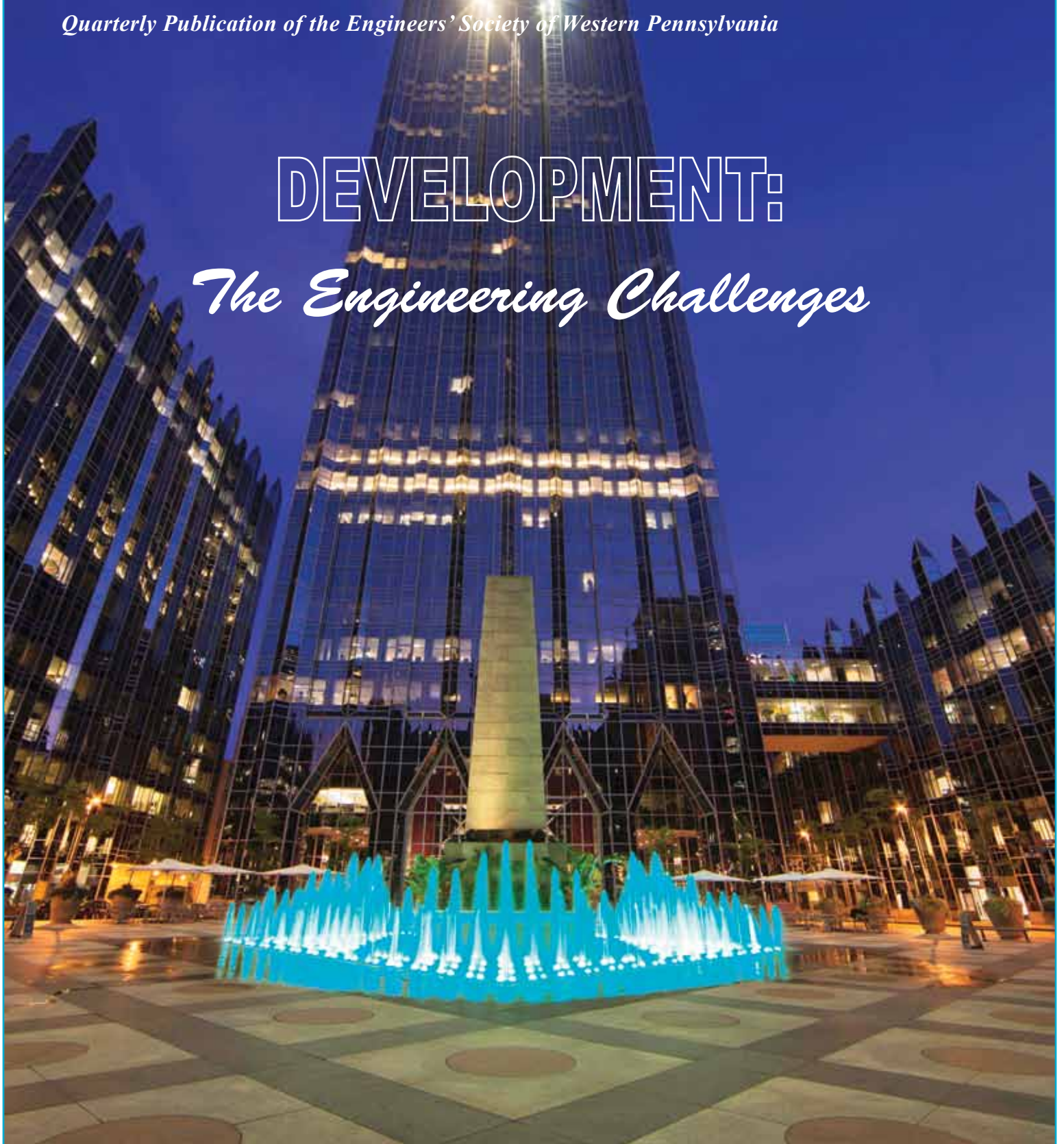
WINTER 2011

# ENGINEER

*Quarterly Publication of the Engineers' Society of Western Pennsylvania*

DEVELOPMENT:

*The Engineering Challenges*



## *Creating Value ...*

**Sustainability.** To a city, it's the perpetuation of its vibrancy—to a city's people, it's the innovative approach to designing, building, and managing critical infrastructure in an environmentally responsible manner. **That's what we do.**



## *... Delivering Solutions*

Planning • Architecture • Engineering • Environmental • Geospatial Technologies • Water Resources  
Construction Management • Program Management • Facilities Management • Land Development

*Creating value by delivering  
innovative and sustainable solutions  
for infrastructure and the environment.*

**Baker**

To learn more about Baker's comprehensive services, visit [www.mbakercorp.com](http://www.mbakercorp.com) or call 1.800.553.1153.  
To see Baker's current *Corporate Sustainability Report*, visit <http://ebook.mbakercorp.com/CSR/>.



**Pittsburgh**

# ENGINEER

Quarterly Publication of the Engineers' Society of Western Pennsylvania

**WINTER 2011**

*In this issue...*

Guest Editor..... 4  
**By Lynn DeLorenzo**

Pittsburgh: A Model of Growth ..... 6  
**By Bill Hunt**

The Energy Economy – An Abundance  
of Opportunities ..... 7  
**By Gregory P. Quatchak, P.E**

Forecast for Financing the Commercial  
Real Estate Market..... 9  
**By Daniel P. Puntl**

Pittsburgh Remains a Popular  
Headquarters Hub ..... 11  
**By Jim Futrell and De Peart**

Green Building Technologies & Practice:  
a Developer's Prespective ..... 13  
**By Jim Scalo and Mike Embrescia**

Recent Demographic Shifts Refute  
Long Held Regional Perceptions..... 18  
**By Jim Futrell and De Peart**

BRT: Bus Rapid Transit ..... 20  
**By Lynn Heckman**

Valuation Trends of Pittsburgh's  
Commercial Real Estate ..... 24  
**By Paul Griffith**

The Importance of Transportation  
Infrastructure for Economic  
Development..... 26  
**By Dick Donley**

Pittsburgh Interntional Airport  
Fast Facts..... 29  
**By Wm. Randell Forrister**



**ENGINEERS' SOCIETY OF WESTERN  
PENNSYLVANIA**

Pittsburgh Engineers' Building  
337 Fourth Avenue  
Pittsburgh, PA 15222

P: 412-261-0710 • F: 412-261-1606 • W: eswp.com

*Pittsburgh ENGINEER* is the quarterly publication of the Engineers' Society of Western Pennsylvania (ESWP). The ideas and opinions expressed within *Pittsburgh ENGINEER* are those of the writers and not necessarily the members, officers or directors of ESWP. *Pittsburgh ENGINEER* is provided free to ESWP members and members of our subscribing affiliated technical societies. Regular subscriptions are available for \$10 per year.

## **2011 ESWP OFFICERS**

President

**Deborah A. Lange, Ph.D., P.E.**, Carnegie Mellon University,  
Steinbrenner Institute

1st Vice President

**Thomas E. Donatelli, P.E.**, Michael Baker Corporation

2nd Vice President

**Charles R. Toran, Jr.**, Sci-Tek Consultants, Inc..

Treasurer

**Dominick J. DeSalvo**, DeSalvo Enterprises, Inc.

Secretary

**Michael G. Bock, P.E., Esq.**, Schnader Harrison Segal & Lewis

Past President

**Anthony M. DiGioia Jr., Ph.D., P.E.**, DiGioia, Gray & Associates

## **2011 ESWP DIRECTORS**

**David W. Borneman, P.E.** ALCOSAN

**Eric Cartwright, P.E.**, UPMC

**H. Daniel Cessna, P.E.**, PENNDOT District 11

**Michael P. Crall**, HDR, Inc.

**Jerome N. Dettore, P.E.**, Michael Baker Corporation

**Michael A. Fedorenko**, U. S. Steel Corporation

**Thomas F. Ferrence**, R.T. Patterson Company, Inc.

**Tammi A. Halapin, P.E.**, Collective Efforts, LLC

**John W. Kovacs, P.E., PMP, D. GE**, Gannett Fleming, Inc.

**John T. Lucey, Jr., P.E.**, Heckman Water Resources, IWC Chair

**James R. McMaster**, Westinghouse Electric Company

**Roy L. Patterson**, R.T. Patterson Company, Inc.

**Damon P. Rhodes, P.E.**, Wilbur Smith Associates

**Manoj Sharma**, Aquatech International Corp.

**Mark R. Urbassik, P.E.**, KU Resources, Inc., BoB Chair

**Matthew P. McTish, P.E.**, McTish, Kunkle & Associates, Inc., IBC Chair

**Jason R. Venier, P.E.**, CDM

**Robert J. Ward, P.E.**, Astorino

## **Publications Committee**

The ESWP produces a range of publications as a service to our members and affiliated technical societies. ESWP Publications are supported by an all-volunteer Publications Committee.

Guest Editor: **Lynn R. DeLorenzo**, DeLorenzo & Co. LLC

Editor-in-Chief: **David A. Teorsky**, ESWP

Committee Chair: **Jerome N. Dettore, P.E.**, Consultant

**Sandie Egley**, Michael Baker Corporation

**Patrick Hassett**, City of Pittsburgh Department of Public Works

**Lynn Heckman**, Allegheny County Economic Development

**Mark A. Miller**, Michael Baker Corporation

**Donald Olmstead, P.E., P.Eng.**, Venture Engineering & Construction

**Chriss Swaney**, Carnegie Mellon University

**Daniel J. Tis**, Consultant

**Robert J. Ward, P.E.**, ASTORINO

Cover photo courtesy of **Highwoods Prooerties**

# Guest Editor

## Pittsburgh...an Optimistic Future

**W**hat a good time to be living, working and investing in the Pittsburgh region.

While the past few years have presented great challenges to the commercial real estate industry, Pittsburgh has fared better than many other areas of the country. In fact, through the hard work and dedication of many of our past and present corporate leaders, we are poised to experience a growth period in our region. NAIOP Pittsburgh, the local chapter of the national Commercial Real Estate Association, is honored that Bill Hunt of The Elmhurst Group has been selected the 2012 NAIOP national chair and will lead the organization of over 15,000 members. He will be the ideal ambassador for our region as he visits chapters in many states throughout the year. See Bill's message about Pittsburgh on page 6.

While development all but halted in many areas of the US, we continued to see a few cranes – the indicator of building. Much of the demand is a result of the New Energy Economy which Greg Quatchak, Founding Principal at Civil & Environmental Consultants, addresses in his overview on the natural gas industry and the supply chain impact. This new and emerging industry has been a driver of development from Cranberry Township and surrounding Butler County south to Washington County and the Southpointe/Canonsburg areas considered by many as the epicenter of the natural gas industry. National companies have made the acquisition of smaller companies in order to gain a stake in the industry and have become tenants and owners of multiple buildings and facilities over the past couple of years.

The natural gas industry has also been responsible for new job formation. According to Dan Deiseroth, P.E. of The Gateway Engineers, "The region's burgeoning energy market has created widespread opportunities for many A/E/C firms. For several companies, the industry has added a new layer of diversification to their existing operations and has allowed them to grow organically."



*Range Resources will occupy this 180,000 square foot regional headquarters developed by Horizon Properties.*



**Lynn R. DeLorenzo**

Mike Swisher, Principal at Horizon Properties, offered the following regarding growth along the I-79 corridor to the south. "We have experienced tremendous job growth in Washington County over the past three years due primarily to Marcellus related business activity. Southpointe has become the center of operations for many of the key players in this emerging shale gas industry due to Consol Energy making Southpointe home for their new corporate headquarters in 2008 followed by Range Resources." This all has translated into virtually zero percent office vacancy and a backlog of strong demand that Horizon will fill with two additional office buildings in the final planning stages slated for construction starts next spring."

In addition to the natural gas industry, the Cranberry market's growth has been fueled by the supply chain factor from Westinghouse's nuclear energy headquarters. The Westinghouse campus boasts nearly 1,000,000 square feet in the Cranberry Woods Office Park with other divisions nearby and in Monroeville. Many companies have located in the nearly RIDC Innovation Ridge area and Thorn Hill Industrial Park in order to take advantage of the close proximity to this nuclear energy giant.

A few "game-changers" will have a dramatic and positive impact on the downtown Central Business District (CBD).

First, the May 2011 announcement that PNC will construct the \$400 million, 800,000 square



*Westinghouse Electric Company LLC*

foot Tower at PNC Plaza will further enhance the CBD and become the world's most environmentally friendly skyscraper. The latter part of 2011 brought Highwoods Properties to our market through its investment of \$180 million to acquire the PPG complex with intentions of spending many millions more in improvements (cover photo). This will no doubt lead to other Real Estate Investment Trusts (REITs) and investors taking a new look at Pittsburgh.

Last, a "rental renaissance" is occurring throughout the city as several buildings are retrofitted into luxury apartments by local and national developers who were able to secure funding through the FHA 221(d)4 and other programs. At the gateway to the city, Millcraft Industries is renovating the former Commonwealth of PA office building into 218 upscale

apartment units called RiverVue that will offer great views of the city and surrounding rivers. The highly successful Cork Factory will add additional units in the Strip District and further lead to more redevelopment and living opportunities along the Allegheny River. Proof that the rental market is underserved in the Pittsburgh region is evidenced by the continued demand for more product.

De Peart and Jim Futrell of the Pittsburgh Regional Alliance share their data and research on why Pittsburgh remains a popular headquarters hub. Many people are not fully aware of the number of Fortune 500 companies in the greater Pittsburgh market nor the many global, regional headquarter and operation centers based here. In the



Rivervue Apartments by Millcraft Industries

*"All of us at Highwoods Properties are genuinely excited about our entry into the vibrant Pittsburgh market. The City's phenomenal economic transformation and strong and diverse economy, combined with its citizens' highly regarded work ethic and engaging and welcoming culture are extremely attractive to us...and to enter the market by acquiring PPG Place, the City's "crown jewel," makes this investment a solid bull's eye!"* Ed Fritsch, President and CEO, Highwoods Properties

last five years, American Eagle, Dick's Sporting Goods and Consol Energy have built new headquarters employing thousands of people and helping to retain our younger talent. Jim Futrell also tackles the 2010 population census which, for the first time in years, showed a net

While the region is moving in a positive direction in 2012 and we begin to see more demand for development on the horizon, there is a major challenge ahead of us that will most certainly have an impact on the future of development. The unresolved funding issue at the state level for transportation will lead to less monies available to repair roads and bridges and little for future transit and infrastructure improvements. Transportation, the ability to move people and goods, is the driver of economic development. Lynn Heckman of the Allegheny County Economic Development office provides us with a closer look at the proposed Bus Rapid Transit plan to better connect the downtown CBD and the Oakland area. As these areas continue on a path of growth, the ability to connect people to jobs and educational facilities in both areas is critical. Dick Donley of Chaska Properties stresses the importance of staying competitive and how NAIOP Pittsburgh has focused its resources on advocating for a solution to this ongoing problem. NAIOP's headquarters in Washington, DC has also made the federal Reauthorization of the Transportation Bill a priority in its efforts to improve national transportation infrastructure for all modes.

extremely thorough in their review of future projects and that more equity will become the new norm with increased upfront cash necessary in loan-to-value ratios.

The region also continues to be ranked nationally for green and sustainable buildings. Jim Scalo and his team at Burns & Scalo Real Estate Services have embarked on creative adaptations of green building in his A Developer's Perspective on building technologies and practices.

*"Our region has one of the best residential rental markets in the country and one of the strongest office markets as well. Class A occupancies are at their highest levels in years."* Chip Desmone, Desmone & Associates, Architects

increase for the region. Washington and Butler counties fared particularly well as a growth pattern also continues near the major suburban employment centers. We are finally on a long awaited path to becoming a younger population as demographic shifts become evident.

Challenges to development continue to remain in the number of financing vehicles available to small and large scale projects although Dan Puntill of Grandbridge Real Estate Capital believes that commercial real estate lending will be back on track in 2012. Make no mistake that lenders, however, will be

*"Concord Hospitality and Oxford Development have entered into a joint venture to build a 136 room Hyatt House located next to the Hofbrauhaus at the Southside Works as an all suite facility with unprecedented views of the Monongahela River and City of Pittsburgh."*

Grant Mason, Oxford Development Company

Last, it's impossible to talk about development in the region without mentioning the airport and the positive impact of this asset on the region. Randy Forister, Senior Director of Development at PIT Airport has provided us with some facts that put the overall size and ongoing activity in perspective. **PE**

Lynn DeLorenzo is Senior Vice President for PWC Property Solutions, LLC and the 2012 president of NAIOP Pittsburgh. She can be reached at [ldelorenzo@pwcpropertiesolutions.com](mailto:ldelorenzo@pwcpropertiesolutions.com).



# Pittsburgh:

## *A Model of Growth*

*By Bill Hunt*



1 moved to Pittsburgh in the mid-1980s, coinciding with Pittsburgh enduring one of the lowest real estate markets in the country. But good things may actually come to those who wait, as during the last three years, we have seen more positives in this region than during the entire previous two decades. Right now Pittsburgh is at or near the top of many real estate rankings, and each time I travel as Chair of NAIOP, I am asked the same question: How has Pittsburgh done it? My answer is to reference these five trends:

### *Universities.*

2 Pittsburgh has one of the highest per capita percentages of student population in the country. More specifically, the University of Pittsburgh and Carnegie Mellon each have international “brands” in medicine, robotics and software engineering. There are many other great programs (as well as other great universities), but it is these “top of mind” specialties that put Pittsburgh on the map.

### *Corporate Commitment to Downtown.*

3 Unlike what we experienced in the 1990s, corporations are now committed to this region. PNC Bank is a compelling example as it is breaking ground on their second office building in five years. Our corporations have also funded community developments downtown such as Market Square and the Cultural District. These commitments are not just philanthropic, but “good business” as they help recruiting and retention of key employees.

### *Post-Industrial Resurgence.*

4 Over the years, many of the local manufacturers have re-engineered their processes. One obvious example is Westinghouse, which has refocused on a new generation of nuclear power plants. Another example is Calgon, one of Elmhurst’s

tenants. One of their primary businesses was treating water in industrial plants, but have now transformed into the global market with U.V. water filtration processes throughout the world. These two are not isolated occurrences and thus communities should never give up on their older industrial companies.

### *Culture and the Arts.*

5 Regions need to take advantage of their existing cultural institutions. Pittsburgh has exceptional performing and visual arts, as well as wonderful historic architecture, including nearby Fallingwater. Newer cities, such as Phoenix and Atlanta, will never be able to replicate our 150 years of securing cultural assets.

### *Right Sized*

Finally, Pittsburgh has begun to embrace being a smaller market. One of the primary reasons another of Elmhurst’s tenants, RAND Corporation, located to Pittsburgh is that a portion of their talented employee base did not want to locate to RAND’s other two offices in Washington, D.C. and Los Angeles, CA. I suspect the same was true for Google when they committed to become a major presence here.

After all these years of Pittsburghers studying the successes of other regions, it is nice to now witness competitors finally looking to Pittsburgh as a model for growth. **Pe**

*Bill Hunt is the President  
& CEO of Elmhurst  
Group and 2012 National  
Chair of NAIOP*



# THE ENERGY ECONOMY —

## *An Abundance of Opportunities*

**By Gregory P. Quatchak, P.E.**

Pennsylvania contains some of the largest reserves of unconventional shale gas in the world. The Marcellus and Utica Shale are two of the more prominent formations, which are currently being developed and producing even greater than anticipated volumes of natural gas. The development of this energy resource is producing dramatic benefits across numerous sectors of the Pennsylvania economy.

The professional services firms of western Pennsylvania have greatly benefitted from the Marcellus and Utica Shale natural gas plays. For example, exploration and production activities require land acquisition and development design, as well as comprehensive regulatory permitting and monitoring services. Midstream services include the collection and gathering lines from the well pads and gas compression. Finally, transmission facilities transport the gas to the markets. All of these components of the natural gas market require professional engineering, ecological, finance, legal, and real estate services. Our firm, Civil & Environmental Consultants, Inc., has been actively engaged in the unconventional shale gas plays since 2008. We provide a diverse scope of consulting engineering services to support the exploration and production, midstream and distribution sectors. As a result, CEC has experienced significant and sustained growth in this energy

market. In 2011, CEC hired over 60 professional and support staff, and opened an office in Sayre in north central Pennsylvania, and this office currently employs almost 20 people.

Another economic driver of the shale gas play is the natural gas byproducts. The Marcellus and Utica Shale gas deposits in western Pennsylvania, northern West Virginia, and eastern Ohio are often “wet gas.” Wet gas contains other chemicals such

as propane, ethylene and butane which have beneficial uses to the chemical industries. Processing plants are needed to extract and process these chemicals from the wet gas and several major processing facilities are proposed for our region. The design, permitting and construction of these

facilities will require extensive design and construction services resulting in a positive impact to our regional economy.

One of the most exciting opportunities for our region is the expanding supply chain associated with the shale gas plays. This supply chain includes

the establishment of regional and corporate headquarters, materials manufacturing facilities, operations and distribution centers, research and development, professional services and residential housing. Western Pennsylvania is emerging as an energy center as a result of this growing supply chain. Across our region there are countless examples of the positive impacts of this supply chain. The



*Royal Dutch Shell Offices (formerly East Resources Building), RIDC Thorn Hill Industrial Park*



*Talisman Energy headquarters RIDC Thorn Hill Industrial Park*

Southpointe and Cranberry Township areas have been the focal points for real estate development fueled by this expanding supply chain. Projects across our region have resulted in major economic benefits from real estate development and job creation.

Just a few examples include:

- Royal Dutch Shell (former East Resources) headquarters building in RIDC Thorn Hill Industrial Park
- Range Resources headquarters in Southpointe
- Talisman Energy headquarters in RIDC Thorn Hill Industrial Park
- MarkWest Liberty Midstream & Resources Compressor and Processing Facility in Washington County

In addition, there have been countless numbers of office and industrial space leases executed throughout our region by energy, engineering, legal, and other supply chain support companies establishing a presence in western Pennsylvania.

The energy economy in western Pennsylvania extends beyond the unconventional shale natural gas plays. The resurgence of nuclear energy continues to positively benefit our region. The Westinghouse nuclear division corporate headquarters in Cranberry Township includes over 1 million square feet of state-of-the-art office and research and development space, which incorporated sustainable design and construction methods and materials. The same supply chain rationale described above for the growth of the natural gas industry applies to the nuclear energy industry in western Pennsylvania. The demand for office, research and development, warehouse, residential housing, and other support services continues to produce positive economic impacts to our region.

In addition to natural gas and nuclear, wind and solar power are also part of our region's energy economy. FLABEG's new \$20 million parabolic solar mirror manufacturing plant in the Clinton Commerce Park is an example of an international

company's investment in our energy economy. Our region's advanced manufacturing capabilities and abundant water resources, combined with the presence of world renowned universities and a skill

labor force reinforce western Pennsylvania's position as a global energy center. Our region is fortunate to have the corporate and political leadership necessary to promote and advance our energy economy. An example of

this leadership is the Pittsburgh Regional Alliance (PRA), an affiliate of the Allegheny Conference on Community Development. The PRA has developed and implemented initiatives for business attraction, workforce recruitment and training, and supply chain development for seven energy sectors. These efforts are producing tangible and very positive benefits for our regional economy.

In summary, the western Pennsylvania region has weathered the economic downturn in far better condition than the remainder of the country. The major reason for this was our emergence as a global energy center. We are poised for continued and expanded growth in the energy markets, which will result in an abundance of opportunities across a diverse range of business sectors. It is imperative that we work together with business, political and regulatory leaders to realize and advance these opportunities in prudent and sustainable ways. This will ensure economic development, job creation and an improvement in the quality of life that will retain and attract our young people, which is essential for our region to move forward. **PE**

*This article was prepared by  
Gregory P. Quatchak, P.E.,  
Founding Principal and  
Strategic Business Director  
of Civil & Environmental  
Consultants, Inc. and a past  
President and current Board of  
Director of NAIOP Pittsburgh.  
Greg may be contacted at  
gquatchak@cecinc.com*



**Pittsburgh ENGINEER**  
is available on-line for  
your enjoyment! Scan  
this QR code with your  
smart phone to view past  
issues!





# Forecast for Financing the Commercial Real Estate Market

*By Daniel P. Puntil*

**C**ommercial real estate continues to recover from the market downturn that occurred in 2007-2008. Many economists are predicting continued slow and steady growth in 2012. But while the real estate markets continue to recover, the commercial real estate lending sector is, in a word, robust.

2011 has proved to indicate that commercial lending is back, healthy and with an increased appetite. The lending has been fueled by historic or near historic lows in rates that have been driven down by a precipitous drop in the U.S. Treasuries, the standard benchmark for commercial real estate loans. This together with increased competition, increased allocations and an overall improvement in all sectors of commercial real estate has made 2011 the coming out party for commercial real estate lending.

The commercial real estate lending community which includes Banks, Life Insurance Companies, Government Sponsored Entities (GSEs, i.e. Fannie Mae, Freddie Mac) and Commercial Mortgage Backed Securities (CMBS lenders) have all returned to the market and have created a similar playing field that existed prior to the lights going out in 2007. Generally speaking, each of the lenders has doubled their lending output in 2011 over 2010 and still have room for more loans to finish out the year. This increased competition has created a fertile environment for owners of commercial real estate to capitalize on these advantageous conditions.

Financing for new construction is typically provided by local banks. The Pittsburgh region has

faired much better than other U.S. markets for access to capital. Many local and regional banks that had also exited the market have returned and are actively seeking construction and mini-perm loans. Underwriting standards at the bank level have tightened due to higher levels of scrutiny by oversight by bank regulators. The buzzword in today's bank lending is Global Cash Flow. Global Cash Flow is a review of a borrower's real estate owned (REO) schedule to determine on both an individual property level as well as an overall portfolio level if



*Park Place at Chapel Harbor, O'Hara Township PA.*

the borrower has sufficient cash flow from their real estate holdings to support additional debt. Also financial liquidity of the borrower and

the creditworthiness of the tenant have become increasingly important.

Speculative construction remains virtually nonexistent and significant pre-leasing requirements have made it more challenging for developers to kick off new development. Typically the bank is going to want to see pre-leasing in excess of 50% of the property's net leasable area but also will like to see that the in-place income will cover the debt service payments on an interest only basis. This could result in preleasing approaching 60% - 70% of the project's net rentable area. Banks will typically lend up to 80% - 85% of the total construction costs. The terms are generally floating rate, interest only debt benchmarked over LIBOR or Prime Rates. Once the property achieves stabilization, the loan typically reverts to a mini-perm



*Imperial Business Park, Building 150, Imperial, PA*

loan with a fixed-rate of 5 to 10 years with rates in the 4.50% – 5.50% range respectively on a 20 year amortization schedule.

The challenge for today's borrowers seeking to refinance existing debt lies in the valuation of their properties. The significant deleveraging that occurred in 2007-2008 has impacted property values that have yet to return to their pre-crash levels. Lenders have tightened underwriting standards across the board. This has made it difficult to arrive at values that would support new debt in a refinance. Many borrowers seeking to refinance maturing loans have found it difficult to replace existing debt with newer, less expensive debt because the value is just not there. While we have seen a compression in capitalization rates, which are used to arrive at value, the current cap rates have yet to return to the low cap rates that were used in go-go days of the early to mid-2000s.

However, for properties that can support loans in today's underwriting environment; the market is very receptive and the result is a high level of interest from lenders in quality lower leverage loans.

For the most part, loans are being written at up to 75% loan-to-value and up to 80% loan-to-value on multifamily. Also, the days of big "cash out" refinance are gone and most lenders will only provide debt to refinance outstanding loan balances and cover customary loan closing costs.

The most aggressive lending has been in the multifamily sector, the shining star of commercial real estate, where strong rent growth, high occupancies and increased values have lenders clamoring to gain market share. For the past several years Fannie Mae and Freddie Mac have reigned supreme in multifamily lending. In 2009, according to Real Capital Analytics, the GSEs accounted for 75% to 80% of all multifamily loan originations. In 2011 it is

*"For properties that can support loans in today's underwriting environment; the market is very receptive and the result is a high level of interest from lenders"*

*"Industrial properties have fared the best during the downturn, followed by office and finally retail"*

anticipated that the GSEs will originate closer to 60% of the total multifamily debt. The reduction in originations is resulting from the banks and life insurance companies

becoming more competitive with the GSEs. Banks and Life Companies are seeking to balance their CRE portfolios with multifamily loans as they have

become heavily weighted with office, industrial and retail properties due to the GSEs' dominance over the past few years. Current all-in rates for 10 year fixed-rate terms with 25 to 30 year amortization schedules are in the 4.00% - 4.50% range. For lower leverage loans of 60% LTV or less, rates have dipped below 4.00%.

Since Fannie Mae and Freddie Mac only lend in the multifamily sector the balance of commercial real estate, that being industrial, office and retail, in order of preference, is where life insurance companies and banks have had a much greater impact. Generally, multi-tenant properties

are more preferred and long term, staggered leases are most preferential.

Industrial properties have fared the best during the downturn, followed by office and finally retail. As stated, each property type has seen fundamental improvement in the past two years, primarily the result of the lack of new construction. Absorption is up and vacancies are down, but continued improvement is still needed in the office and retail sector. Financing terms in this space are typically 10 year fixed-rate terms on 20 to 25 year amortization with rates in the 5.00% to 5.50% range.

Commercial real estate is clearly on the mend. The real estate market in Pittsburgh has certainly fared better than most markets due to a more conservative environment and lack of over building. There has been a misconception that commercial real estate lending has not returned. To the contrary, commercial real estate lending has recovered and is vibrant. My advice is to take advantage of today's historically low rates and get as much as you can and lock it up for as long as you can. **Pe**

*Daniel P. Puntil is Senior Vice President and Office Manager of the Pittsburgh office of Grandbridge Real Estate Capital, LLC., one of the nation's largest full-service commercial real estate finance firms. Dan may be reached at [dpuntil@gbrecap.com](mailto:dpuntil@gbrecap.com)*



Aviation and Transportation  
Design-Build-Operate  
Drinking Water  
Environmental Management  
Facilities and Geotechnical Engineering  
Information Management  
Wastewater  
Water Resources



**listen. think. deliver:**

**CDM**  
www.cdm.com  
2740 Smallman Street, Suite 100  
Pittsburgh, Pennsylvania 15222  
tel: 412 201-5500 fax: 412 201-5522

consulting • engineering • construction • operations

# Pittsburgh Remains a Popular Headquarters Hub

By Jim Futrell and De Peart

Today, the Pittsburgh region has eight companies on the Fortune 500, a number that has remained relatively constant for almost two decades, although its composition has changed slightly. Long time Fortune 500 anchors such as US Steel, PPG Industries and H.J. Heinz, were joined by PNC Financial when the list was expanded to include service firms in 1995. Westinghouse spin off WESCO International joined in 1999 and home grown newcomers CONSOL Energy, Mylan and Dick's Sporting Goods, were added in the past three years.

But just as the economy of Southwestern Pennsylvania has changed, so too has the make up of its headquarters sector. Business service firms such as K&L Gates and Reed Smith now operate global scale corporations from Pittsburgh, while non profits such as Highmark and UPMC which would rank 176 and 316 on the Fortune 500, maintain a major headquarters presence in the region. Foreign companies such as Bayer, LANXESS and Mitsubishi Electric make the region the center of their North American operations, while companies such as Bechtel, Eaton and FedEx all base major divisions in the region.

The story is much more than the region's ranking on the Fortune 500 or the companies that are based in the area. There are very real numbers that tell the story of a vibrant growing headquarters center.

## Counting Them Up

While it is difficult to directly count the number of people working in the region's headquarters operations, the Bureau of Labor Statistics tracks employment in "Management of Companies and Enterprises" which includes many of the people working in the region's headquarters and corporate support facilities.

In 2010, 34,600 people worked in this sector in the Pittsburgh MSA. While it represents just 3% of the region's total non-farm employment, this industry has been the fastest growing in the region, increasing by 55% since 2005, nearly ten times the national rate of 5.9%. By comparison, total employment in the region fell slightly over the same period.

The 55% increase in employment trailed only Dallas-Ft. Worth-Arlington among the nation's 50 largest metropolitan areas. Even more important, regional employment has

shown itself to be resilient during the recession, increasing 16% since 2007, trailing only Austin and Houston in growth during this period.

*Management of Companies Employment Growth, 2005 to 2010 – Top MSAs*



Source: US Bureau of Labor Statistics

The 34,600 people in the region working in Management of Companies and Enterprises ranks 13th in the nation, more than in Charlotte, Cleveland, Dallas-Ft. Worth, Denver, Houston and Seattle.

In fact, the concentration of people working in Management of Companies in the Pittsburgh MSA in 2010 was 215% of the national average, the fifth highest among the 50 largest metropolitan areas.

*Management of Companies Employment Concentration – Top 10 Metropolitan Areas*



Source: US Bureau of Labor Statistics

Just five years ago, the region's employment concentration in the sector was 150% of the national average. No other major metropolitan area increased their employment concentration in the Management of Companies and Enterprises sector this significantly.



*Dick's Sporting Goods Corporate Headquarters*



## Concrete Growth

This vibrant headquarters sector is not just demonstrated in employment data but in the very real investments the region's companies are making.

Recently, PNC Financial made headlines with their announcement that they will change the skyline of Pittsburgh with a 33 story \$400 million LEED-certified building that will serve as their new headquarters when it is completed in 2015.

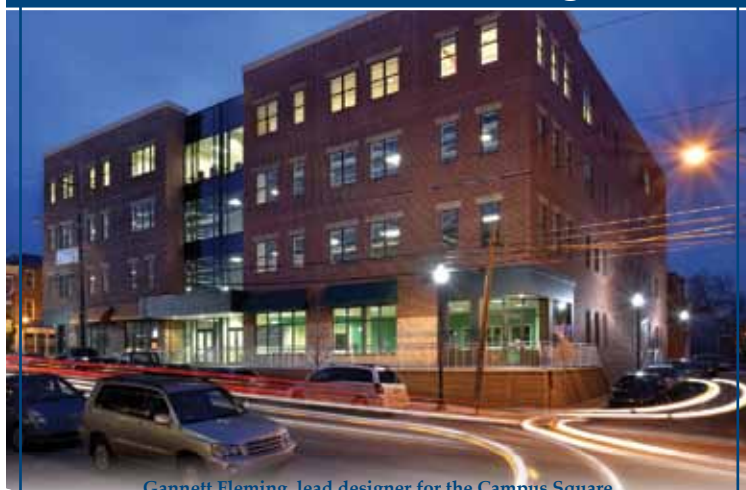
The announcement is just the latest in a series of headquarters expansions in the region since 2005 that have resulted in a combined investment exceeding \$1.1 billion to develop and renovate 5.7 million square feet of office space. The expansions encompass not only Fortune 500 companies such as CONSOL Energy and Dick's Sporting Goods, but global service firms like K&L Gates and Reed Smith, non-profits such as UPMC, emerging companies like rue 21 and foreign owned firms such as Mitsubishi Electric Power Products and Westinghouse.

Among the largest of these projects are the following:

Company	Industry	Investment in \$ Million	Sq. Ft.
American Eagle Outfitters, Inc.	Retail	\$45.0	336,000
Bechtel Plant Machinery, Inc.	Energy	\$27.2	180,000
CONSOL Energy, Inc.	Energy	\$50.0	310,000
Dick's Sporting Goods	Retail	\$150.0	735,000
Eaton Electrical	Advanced Manufacturing	\$24.5	120,000
EQT Corporation	Energy	\$61.0	257,000
K&L Gates, LLP	Legal Services	--	200,000
Mitsubishi Electric Power Products, Inc.	Advanced Manufacturing	\$14.0	100,000
PNC Financial	Financial Services	\$400.0	800,000
Range Resources	Energy	\$30.0	180,000
Reed Smith, LLP	Legal Services	--	180,000
Thermo Fisher Scientific, Inc.	Advanced Manufacturing	\$37.0	189,000
Westinghouse Electric Company, LLC	Energy	\$216.0	915,000

Source: Pittsburgh Regional Alliance

## Sustainable Urban Design



Gannett Fleming, lead designer for the Campus Square green building in Harrisburg, Pa.



**Gannett Fleming**

Excellence Delivered **As Promised**

Urban Design • Energy • Facilities  
Transportation • Civil Engineering • Geotechnical • Environmental

Pittsburgh, PA  
412.922.5575

Mercer, PA  
724.662.2402

Morgantown, WV  
304.296.6492

John Kovacs, P.E. [jkovacs@gfnet.com](mailto:jkovacs@gfnet.com)  
[www.gannettfleming.com](http://www.gannettfleming.com) Offices Worldwide

ISO 9001:2008  
CERTIFIED

As one can see, the Pittsburgh region's success as a headquarters hub cannot be measured by one set of numbers. Today, the story is one as diverse as the region's economy. **PE**

*Jim Futrell is Vice President of Market Research and Analysis for the Pittsburgh Regional Alliance, an affiliate of the Allegheny Conference on Community Development.*

*Jim can be reached at [jfutrell@alleghenyconference.org](mailto:jfutrell@alleghenyconference.org)*



*De Peart is Executive Vice President for Economic Development, Allegheny Conference on Community Development and President of the Pittsburgh Regional Alliance. De can be reached at [dpeart@alleghenyconference.org](mailto:dpeart@alleghenyconference.org).*

# Green Building Technologies & Practice:

## ...a Developer's Perspective

By Jim Scalo and Mike Embrescia

**A**s an owner and developer of commercial real estate, we live by the ethos of achieving extraordinary results that also meet our allotted time and budget. This simple concept is essential to any successful business, and it has served our firm well for nearly 57 years. However, this mantra does not reflect another reality in our business. We have a civic responsibility to both our employees and stakeholders to develop and promote sustainable best-practices, sometimes referred to as “green” building.

“Green” building is real, although sometimes the term is overused and in many ways exhausting. Many of these “green” building principles have been in existence for centuries, yet we have seen a rebranding of sorts these last 20 years, and the concept has slowly crept into the mainstream. The early trailblazers were instrumental in igniting the national conversation, specifically ASHRAE and the USGBC’s LEED program. Today, our marketplace is bustling with programs that assist businesses throughout their quest to become more sustainable; such as Energy Star and Class-G.org.

Scott Caplan, Director of Development & Construction at Burns & Scalo Real Estate is very clear on his expectations. “We constantly challenge our professional service vendors to adhere, innovate & select ‘green’ materials that are both cost neutral and cutting edge. Therefore, we want our project teams to not resort to the simple catalog purchase, but to truly think outside the box.” The end result should always be a sustainable building and environment that is good for both the consumer and the employee.

“You don’t need LEED to deliver ‘green,’” says Caplan. I want my architects to design to the highest standards, I want my engineers to design to the highest standards, and I know that they will do so

without having the handcuffs of any arduous green building certifications.”

Jamie White, Principal LLI Engineering states “Ten years ago, if we were to approach a client about using geothermal wells, variable flow refrigerant technologies, integrated window wall ventilation, automated shadings, light harvesting, storm water harvesting, and photovoltaic technologies...they would have looked at you as if you had a third eyeball. Now we are seeing RFPs where the owner wants to see your experience with these technologies.” LLI Engineering is a 100+ year old firm that has always tried to remain on the cutting edge of new technology. In the early 1900s they were the first firm to use ‘rebar’ in concrete.

*“The result was a significant savings in material and labor as well as a significant improvement in the structural systems”*

White continues “Though I wasn’t there, at the time it was considered a radical change. But the result was a significant savings in material and labor as well as a significant improvement in the structural systems. That first building we designed is still standing. Though the windows, roof, HVAC, and electric have all been changed multiple times, the structural system has remained.” White has also seen resurgence in recent years with acceptance to new technologies. He is the first engineer in Pennsylvania to pass the ASHRAE exam for certification as a High Performance Building Design Professional. He describes the certification as similar to LEED Accreditation plus Professional Engineer with a little bit of steroids.

But that doesn’t mean the majority of the market has fully embraced the sustainable building technologies. “The market is still dominated by those who are skeptical about the new technologies. This

is driven in large part by some of the early adopters who did not employ the right design and/or construction team when implementing the technology. Some of those who were first to market the technologies made outlandish performance claims that never came to fruition.”

One of the greatest impacts of the Sustainable Building movement is the industry wide change regarding the acceptance of trying new technologies and methods.

### **Goodwill – Robinson Township**

In the summer of 2011, Goodwill of Southwestern Pennsylvania broke ground on newest retail outlet in Robinson Township, prominently located across the street from COSTCO. Burns & Scalo Real Estate was selected as their Owner Construction Representative, after having recently constructed their brand new 105,000 square foot headquarters in Lawrenceville.

This new concept store is the first of many new stores Goodwill hopes to build in the next few years. Goodwill is a sustainably run organization, both in their social outreach and their business. Burns & Scalo’s Scott Caplan leads the Owner’s Development group, and is proud to incorporate sustainable technologies into their new building.

The new Goodwill property in Robinson has rain gardens incorporated into the storm water runoff. The excess water will dissipate into the ground, and the leftover overflow will travel to the necessary locations. This delayed surcharge to the surrounding storm collection ponds reduces the impact of the arterial waterways.

The building envelope system was designed and constructed to carry more load, thus reducing the tons of structural steel needed and exceeding the required building code requirements for load capacity.

Says Caplan, “By implementing best-practices through our project and construction management, we reduced the construction schedule down to 115 days, from ground-breaking to occupancy certification.”



*First solar-powered Goodwill Building, Robinson Township, PA*

This efficient turn-around time is a remarkable feat! We eliminated weeks of potential off-gassing and increased carbon foot printing; sometimes a result of diesel idling and multiple other emissions from construction vehicles and equipment.

“Class-G certification will provide the new tenants with an innovative sustainable measurement and cost

effective result. The Class-G program is simple, achievable & affordable. In this current economic climate, most owners and developers prioritize exceptional design and construction, as well the positive impact to their stakeholder community.

The impetus was in our pre-construction effort, which vetted out all the inefficiencies that were hindrances on the delivery of schedule and budget, and in turn benefitted our sustainable efforts.

### **A Solar Roof: “Wasted Space” to “Green Space”**

When it comes to sustainable technologies, roofs are sometimes overlooked and identified as wasted space. Historically, roofs were only required to be water tight. In recent years, with the help of technological advancements in sustainable rooftop products, buildings can receive upgrades to their roofs that help increase the insulation characteristics to the building envelope, and even more recently be fitted with solar technology to generate energy for the building.

The roof at Goodwill Robinson will be the first of its stores to be powered by the sun. The store’s roof will be fitted with an advanced photovoltaic solar array. The array will generate electricity year-round and reduce the store’s CO2 emissions, as well as decrease its utility costs.

### **Making a Measurable Difference**

The solar array installed at the Goodwill Robinson will significantly reduce the store’s carbon footprint. The electricity produced by the system during its lifespan will reduce the amount of CO2 by 800 metric tons. This amount of carbon is equivalent to: 157 passenger cars, 89,000 gallons of gasoline, 100 homes, or 1,858 barrels of oil.

### **Behind the Technology**





*Early Construction Phase at Goodwill Building, Robinson Township, PA*

The panels used for the array contain a series of glass tube modules that are lined on the inside with a photovoltaic material. The unique cylindrical design allows the panels to collect light from all directions. Because of this attribute, the solar panels rely on the roof to maximize energy production. The roof, which is made from a white reflective material, works to reflect additional light from its surface back to the solar modules. It is estimated that 10%-15% of the energy produced is from this indirect capture of light.

### **The Right Foundation for Solar**

When installing an array on a building, it is important to ensure the solar technology and racking is compatible with the roof and will not damage the integrity of the roof. The solar technology at Goodwill's Robinson store is very roof and structure friendly. It is weights less than 3 lbs. per sq. ft. and is self-ballasted. Having a self-ballasted system eliminates the need to fasten the system to the roof deck. Self-ballasted systems limit the number of roof penetrations. This is critical to maintaining water tight integrity, which is especially important when a roof will have solar, because the panels make it difficult to gain access to make repairs to the membrane.

### **Grid-Tied and Net Metered**

The solar array, which was designed and installed by Pittsburgh solar developer, Scalo Solar Solutions, will be tied into the existing power grid by a process called "net metering." Net metering eliminates the need to store the energy produced by the array in a battery system. Instead, the electricity that is generated by the system during the day will be used by the store, and any surplus energy that is produced will be pushed back into the electric grid, spinning the electric meter backwards. At night or any other time the store is using more energy than the solar array is producing, they will be able to

draw power from the conventional utility grid.

### **Class-G.org**

Mike Embrescia, Director of Class-G.org is also proud of Goodwill's and Burns & Scalo's commitment to sustainability. "Class-G® is a building certification that measures our commitment to sustainable practices. The program enables them to benchmark they are

today, and provides the framework to increase and improve their sustainable management practices for years to come. In many ways, this is green beyond the building."

### **What it means to be Class-G?**

Being Class-G® is yet another demonstration of our leadership in sustainability. We try our best to manage sustainably, because it's the right thing to do and we believe the market also prefers it. This commitment extends beyond our facilities, and is demonstrated daily among our communities and our stakeholders.

White is also a fan of looking at different Sustainable Design and Construction tools. As a longtime member of the Green Building Alliance and known for promoting green technologies through NAIOP he has a great deal of first-hand experience with LEED. Currently he is looking at "Class-G.org" as a tool to help ensure LLI's new office space follows a sustainable path. "We are excited to both design and construct our new offices along the north shore. Using "Class-G.org" is proving to be a simple and efficient way to help us stay on track." **PE**

*Jim Scalo is the President of Burns & Scalo Real Estate. Jim may be reached at [jscal@burnsscalo.com](mailto:jscal@burnsscalo.com)*



*Mike Embrescia, LEED AP is the Director of Class-G.org. Mike may be reached at [Mike@Class-g.org](mailto:Mike@Class-g.org)*

# ESWP Member News

More than 75 firms are currently represented in the Engineers' Society of Western Pennsylvania (ESWP) Corporate Member program. Corporate Memberships are available at 3 levels: Gold, Silver and Bronze. Gold members are entitled to 14 individual memberships; Silver, 9; and Bronze, 5 — annual dues are \$2400, \$1700, and \$1000 respectively. In addition, ESWP Corporate Member Firms may add 2 additional individuals in our Under-35 age category at no additional cost. More information can be found at [eswp.com](http://eswp.com). Please contact the ESWP Office (412-261-0710) for additional details.

**NEW! For Government Agencies, Corporate and Individual Memberships are available at a 50% discount!**

Membership in ESWP comes with a long list of benefits! From our continuing education opportunities earning you Professional Development Hours (PDHs), to the business networking events in our fine dining city club, there is something for everyone in your organization. Also, ESWP is helping the next generation of engineers with student outreach programs, giving you the opportunity to participate in many rewarding programs.

## ESWP Gold Corporate Member Firms



Orbital Engineering, Inc.

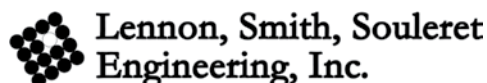


## ESWP Silver Corporate Member Firms



Civil & Environmental  
Consultants, Inc.

KU Resources, Inc.



Uhde Corporation

# ESWP Bronze Corporate Member Firms



**DIGIOIA GRAY**  
& ASSOCIATES





# RECENT DEMOGRAPHIC SHIFTS REFUTE LONG HELD REGIONAL PERCEPTIONS

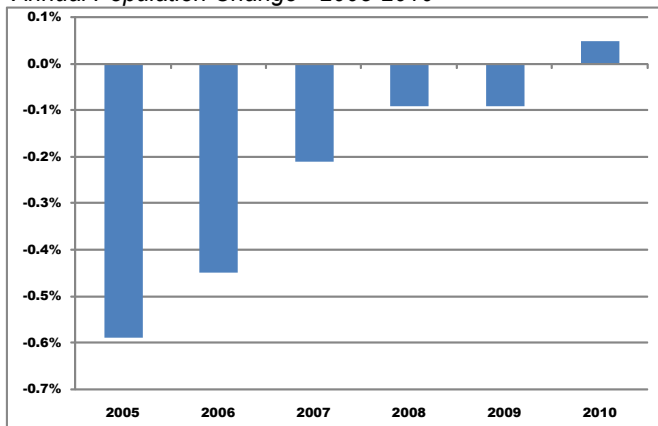
*By Jim Futrell and De Peart*

For years, the Pittsburgh Region has battled discouraging demographic trends. The legacy of the large scale dislocation that took place in the 1980s in the wake of the collapse of the steel industry has shaped the region for decades. As a result, perceptions of the region have proven difficult to shake. But the recent release of 2010 Census data is revealing that many of those perceptions are no longer valid. A new Pittsburgh is dawning, one that is growing, younger, more diverse and more affluent.

## *Growth is Coming*

The shrinking population of the region has long been a concern. Over the past decade, however, the primary reason for the shrinkage shifted from people leaving to a natural decline (deaths outnumbering births). As seen in the following chart, the shrinkage in the region has slowed dramatically over the past few years and even moved into positive territory in 2010. A key reason was the region's stronger economic performance during the recession which not only kept people in the region, but attracted people into the area.

*Annual Population Change - 2005-2010*



*Source: US Census Bureau Annual Population Estimates*

## *The Region is Getting Younger*

As the "natural shrinkage" slows, the region will find itself getting younger. While the region's median age still leads the nation 41.5 years to 37.2 years, the percentage

of residents aged 65 and over fell between 2000 and 2010 from 17.6% of the region to 17.2% while the national percentage increased. Furthermore, the region saw the percentage of people aged 20 to 24 increase from 5.7% in 2000 to 6.5% in 2010, a jump of eight tenths of a percentage point. Meanwhile, the nation saw the percentage of 20 to 24 year olds grow by just three tenths of a percentage point to 7.0%.

In terms of absolute population growth, Southwest Pennsylvania went against national trends to lose 5% of its population in the 65 and over age group, while the cohort grew by 15% nationally. The 35 to 44 group showed the largest percentage decrease in the region, but was also the only age group to shrink nationally. The regional growth rate in the 20 to 24 age group ranked second to 55 to 64 year olds as the baby boomers moved into that cohort over the past decade. It is important to note that Southwest Pennsylvania is not showing the same level of growth in the key baby boomer cohorts (45 to 54 and 55 to 64) which indicate that the growth of the older population will continue to lag in coming decades, further contributing to the region's falling median age.

All of these trends indicate that the region will be getting younger in the coming decades, as indicated by the fact that the median age in the city of Pittsburgh actually fell between 2000 and 2010 from 35.5 to 33.2. The city's drop was a key factor in the median age in Allegheny County increasing 1.7 years to 41.3 while the nation saw an increase of 1.9 years to 37.2. It is interesting to note that while Allegheny County was older than the ten county region in 2000 (median age of 39.6 vs. 38.9), it is now younger than the region as a whole (41.3 vs. 41.5).

## *Brain Drain is in the Past*

The regional angst about the area's "best and brightest" leaving for opportunities elsewhere is well known. However, growth trends over the past decade indicate that this trend has reversed itself. As seen in the following chart, over the past decade, population loss in the region has been

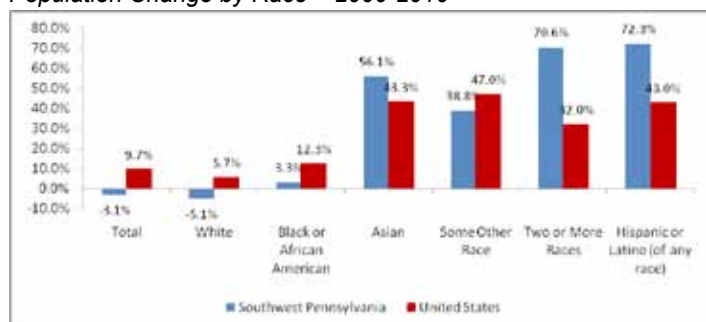
concentrated among the less educated segments of the population. College educated segments increased, albeit at a slower pace than the national average.

This is even more pronounced among 18 to 34 year olds in the region. Within this group, all of the regional population growth has occurred among those with four year degrees. In fact, the population of 18 to 34 year olds with graduate degrees increased faster than the nation as a whole.

### *The Pittsburgh Region is Getting Diverse*

The Pittsburgh Region missed out on the most recent wave of immigration and as a result is much less diverse than the nation as a whole. However, trends indicate that while the region currently lags the nation, it is starting to catch up. While the region's minority population is significantly smaller than the nation as a whole (11.6% vs. 27.6%), between 2000 and 2010, the region experienced population growth among all minority groups. With Asian, Multi-Race and Hispanic population showing particularly strong increases.

*Population Change by Race – 2000-2010*



Source: US Census Bureau 2010 Census

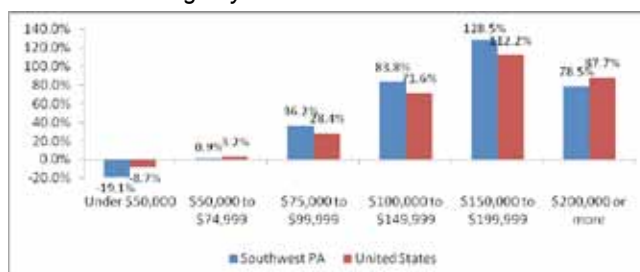
### *Foreign Born*

Another area that the region continues to lag is foreign born population. In 2010, 3.2% of the population in the seven county Pittsburgh MSA (data is not available for the ten county region) was foreign born, a quarter of the percentage nationally (12.7%). However, the composition of the foreign born population in Pittsburgh makes it stand out. While over half of the foreign born population nationally is from Latin America, Pittsburgh's foreign born population is predominantly from Asia. The proportion from Europe is also well above the national average.

Although foreign born population increased by 18.5% in the region between 2000 and 2010, it lagged the 26.5% growth recorded nationwide. Much of this was driven by a larger drop in the European born population than the US as a whole. Among major global regions, the Pittsburgh MSA outpaced the nation in growth among people born in Asia, Latin America and elsewhere in North America.

The 54.3% increase in the region's Asian born population has resulted in a shift in the primary origin of the region's foreign born population. In 2000, Italy accounted for the largest number of foreign born residents – 7,191 or 12.7% of the total. By 2010, Italy had fallen to third place, trailing India (10,915 or 10.2%) and China (7,897 or 7.1%).

*Household Change by Income – 2000-2010*



Source: US Census Bureau, American Community Survey, 2000 Census

### *The Region is Becoming More Affluent*

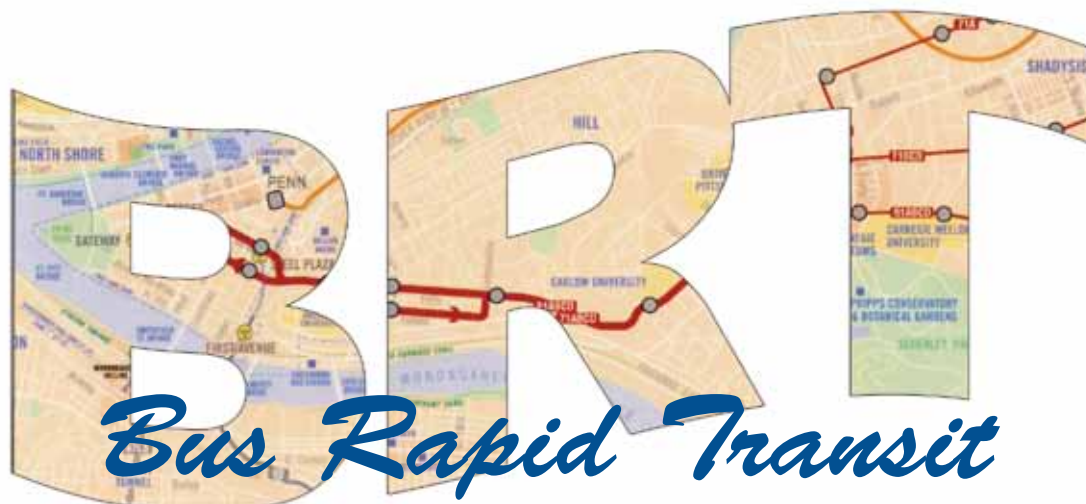
Southwest Pennsylvania has long had a reputation as a solid blue collar area dominated by middle income jobs. But as the region's economy has evolved, incomes have increased. During the past decade, average household income in Southwest Pennsylvania increased by 28.8% to \$63,348. Nationwide average household income increased by 23.8% to \$70,116.

During that period, the number of households with incomes less than \$50,000 fell by 19.1%, more than twice the national rate. Meanwhile, the region exceeded the national growth rate in households with incomes between \$75,000 and \$200,000. **PE**

*Jim Futrell is Vice President of Market Research and Analysis for the Pittsburgh Regional Alliance, an affiliate of the Allegheny Conference on Community Development. Jim can be reached at [jfutrell@alleghenyconference.org](mailto:jfutrell@alleghenyconference.org)*



*De Peart is Executive Vice President for Economic Development, Allegheny Conference on Community Development and President of the Pittsburgh Regional Alliance. De can be reached at [dpeart@alleghenyconference.org](mailto:dpeart@alleghenyconference.org).*



## Downtown Pittsburgh-to-Oakland

By Lynn Heckman

The Port Authority Allegheny County has proposed a nearly four mile long transit corridor for the first on-street Bus Rapid Transit (BRT) facility in the county. BRT is a high quality bus based transit system that provides better service cost effectively. The corridor begins in Downtown Pittsburgh: it continues past the Consol Energy Center Arena, Duquesne University and UPMC Mercy Hospital; moves on to the Uptown and Bluff redevelopment investment areas; services the Oakland Gateway and proceeds through Oakland and it's universities, cultural institutions and medical center areas, including the University of Pittsburgh, The Carnegie, UPMC and Carnegie-Mellon University.

*"Importantly, the BRT will connect the second and third largest employment centers in Pennsylvania. Oakland is the innovation driver for the entire Pittsburgh region. Downtown is the region's legal, finance and corporate center. BRT will improve transit service and will be a catalyst for transit oriented development in our region's most critical job-generating corridor. Additionally, this entire corridor boasts valuable mixed-use neighborhoods with premier educational and cultural institutions and sports venues."*

*Dennis Davin, Director, Allegheny County Economic Development*

### Elements of a Complete BRT System

BRT is an effective, efficient and better transit service. It is characterized by a predictable and dependable timetable. BRT services places where many riders want to go; and it does so frequently. BRT needs to be appealing; if it looks excellent, it will attract new riders. BRT is the affordable alternative

to light rail vehicles (LRT). When compared to LRT, it has a relatively low-cost capital investment and a quick implementation timeframe. BRT can be improved, or upgraded, incrementally. Basic BRT service could be operational in a year, with enhancements to follow. For passengers, the complete BRT vehicle experience is comparable to riding LRT. Marketing the BRT brand and image is essential to create success. A high quality BRT requires: distinct and appealing vehicles; corridor improvements; service upgrades; enhanced bus stations not stops; station area amenities and smart technology applications. With these types of elements as a framework, BRT has been proven to be a spur for transit oriented development (TOD) in many places around the nation and the globe. TOD generally refers to higher density development, with a focus on pedestrian facilities, encouraging walking to nearby major public transit stations. TOD increases transit ridership and creates interesting, attractive places.

### BRT Vehicles and Operations

The BRT vehicle exterior should project a distinct, easily identifiable brand with a sleek, clean image. The interior of a BRT is similar to an LRT. Key operational drivers for BRT service are: multi-door, floor-height boarding; train style precision-docking; and smartcard fares paid off-board on the platform. These improvements help to achieve seamless, speedier service. Intelligent Transportation System (ITS) technologies such as GPS communication for traffic signal prioritization and real-time information for BRT arrival, are critical components of BRT. Smart technology can provide efficient intermodal transfers and collects valuable operations data for the Port Authority. Sustainable amenities include options for hybrid engines using



clean fuels. BRT appeal is achieved by being clean, dependable, fast, comfortable and safe. Ideally, the Downtown Pittsburgh-to-Oakland BRT will be part of a multi-modal “complete street” system to accommodate all modes and provide excellent intermodal connectivity.

### *BRT Stations*

BRT has distinct, safe and comfortable stations with amenities. The stations attract TOD activity. They spur investment and job creation on nearby mixed-use development sites where people can live, work, learn, invest and play. A prime advantage and opportunity along the Downtown Pittsburgh-to-Oakland BRT corridor is that station areas can accommodate pent-up real estate demand associated with the research and development activities of universities, hospitals and related “spin-off” businesses.



*Precision Docking*



*Smart Card*



*“Bus Only” Signal with Automatic Activation*

Images courtesy of Lynn Heckman

encourage quality transit-related development. Naming rights sales can generate revenue to support the BRT system. A BRT program for landscape standards and maintenance, with annual plantings at station areas, also creates attraction. Along with public art at key locations, selections for integrated art installations such as pavement treatments, lighting, benches and street furniture can assist in making the BRT experience seamless. Streetscapes are effective when coordinated with historic architecture and urban context. Traffic calming, coupled with larger sidewalk width for outdoor café zones, are examples of the type features that create exciting

outdoor spaces and help achieve place-making.

### *TOD Potential is High Density, Mixed-Use Neighborhoods with Station Area Amenities*

The goal is to have a BRT corridor system on “complete streets” with multi-modal accommodation for vehicles, transit, pedestrians and commuter bicycles. This can all be achieved on one street or by utilizing a parallel two-street pair. Ideally, the BRT corridor will include an improved, efficient, easy to understand and ride BRT service, resulting in long-term economic and community development, and a better quality of life, along a mixed-use corridor. BRT and station amenities are key elements for success and require excellent design, marketing and product development to project a strong brand and image. Stations emphasize safety, comfort and convenience features such as: lighting, security cameras, emergency call boxes, protection from weather and adjacent traffic, crosswalks, system maps, real-time information, a simple fare system, and transit authority security patrols. Above all, the facilities must be very clean and well-maintained.

Economic development energizers result from the creation of a multimodal “complete street” corridor, or street pair, which accommodates transit,

### *Allegheny County Executive’s Transportation Action Partnership (TAP)*

The Allegheny County Executive’s Transportation Action Partnership (TAP) was formed in 2008. TAP Co-chairs are: Dennis Davin of Allegheny County, Yarone Zober of the City of Pittsburgh and Dennis Yablonsky of the Allegheny Conference. Other TAP stakeholders include foundations, the Port Authority, PennDOT, universities, medical, research, development, innovation and investment entities, community organizations, labor, business, cultural and other representatives.

In 2010, TAP released a prospectus to the “International Transportation Finance Industry” to gauge interest and help TAP prioritize transit initiatives. The prospectus result, based on analysis of industry input, recommended that TAP’s highest priority project should be BRT Downtown Pittsburgh-to-Oakland. The highlight of the industry response includes five recommendations: a single-purpose owner structure entity should be defined and established; interagency agreements should be defined, and in place, to encourage development; stakeholders should reach consensus on

a general public statement of intent; Pennsylvania private public partnership (P-3) enabling legislation is needed to provide a clear framework for developers and it is very effective to secure major stakeholder/user commitments to develop a defined quantity of real estate over a specific time period.

*“In an era of funding uncertainty, Allegheny County, the Port Authority and their partners must meet the challenge to create more transit capacity in a very cost-effective manner. Our research led TAP to proactively support Bus Rapid Transit. Packaged with potential development and job creation, BRT service is a very attractive option.”*

*Dennis Davin, Director, Allegheny County Economic Development*

BRT has the potential to transform the urban landscape along the Downtown Pittsburgh-to-Oakland corridor. TAP is currently working with the Port Authority, and many other stakeholders, to advance the BRT. Appropriately implemented, BRT does more than attract new riders. It assists in place-making; improves connections; creates more attractive, safer streets; is more convenient and provides connectivity for all modes of transport, including pedestrians and bicyclists. All of these factors work together to create safe, vibrant, multi-use places with people out-on-the-street.

Importantly, in the Oakland area, the BRT corridor boasts medical and high tech initiatives which average over a billion dollars in research and development funding annually. Oakland is generally considered to be “built-out”, but the research dollars create a huge unmet demand for nearby Class “A” office and R+D facilities. Further development is also constrained by traffic congestion and severely limited parking. A BRT upgrade along this corridor will reduce automobile dependency and create new opportunities to accommodate pent-up real estate demand.

In 2010, then Allegheny County Executive, Dan Onorato, asked TAP stakeholders to travel to Cleveland to experience the Euclid Corridor HealthLine BRT. HealthLine was built cost-effectively and operates successfully. HealthLine has stimulated \$5 billion worth of development (TOD) at stations along a 6-mile corridor. Like our Downtown Pittsburgh-to-Oakland corridor, it connects the city, a redevelopment area and the region’s universities/medical/research/cultural

complex. Participants in the site visit included: Caren Glotfelty of The Heinz Endowments; Dan Cessna of PennDOT; Dennis Davin of Allegheny County; Rich Fitzgerald, President, Allegheny County Council in 2010 and currently Allegheny County Executive; Dennis Yablonsky of the Allegheny Conference and Steve Bland of Port Authority Allegheny County.



*Pictured above clockwise from top left; Steve Bland; Caren Glotfelty; Dan Cessna, Dennis Davin and Rich Fitzgerald; Dennis Yablonsky*

*Images courtesy of Lynn Heckman*

*“In 2010, I took a day trip to Cleveland with TAP to experience the Euclid Corridor HealthLine BRT. I had heard about multi-billions of dollars in investment achieved along the BRT corridor, and wanted to see it for myself. During our tour we heard directly from some of the corridor developers about how BRT spurred their investments. From redevelopment in the downtown core, to new housing options and mixed-use commercial development, and very impressive new facilities by The Cleveland Clinic, Cleveland State and Case Western Reserve Universities, the Euclid corridor is experiencing a very high level of investment. Now we have the potential to replicate that success here.”*

*Rich Fitzgerald, Allegheny County Executive*

The BRT will advance the recommendations of several recent long-range planning studies including: “Going Places” the TAP action plan; “2020 Transit Development Plan” the Port Authority strategic plan; “AlleghenyPlaces” the County comprehensive plan and “ActiveAllegheny” the County commuter bike, pedestrian and complete streets plan.



Photo courtesy of Jerome Masek, Greater Cleveland Regional Transit Authority

Greater Cleveland BRT Vehicle

## Alternatives and National Environmental Policy Act (NEPA) Analyses

In August 2011, the Port Authority and consultant Parsons Brinckerhoff, began an 18-month effort to



Photo courtesy of Parsons Brinckerhoff

An example of a type of BRT line accommodation on a local street

develop a Downtown Pittsburgh-to-Oakland BRT plan. The study includes enhanced prospects for economic development and community revitalization. The goal of the Alternatives Analysis (AA) and National Environmental Policy Act (NEPA) analysis for the BRT linking Downtown Pittsburgh-to-Oakland is to define a locally preferred alternative and position the project for Federal Transit Administration funding program eligibility.

The study is investigating potential for better, more reliable, and more evenly scheduled trips in this heavily-served transit corridor. A program of operational and physical improvements such as stop consolidation, bus lanes and traffic signal priority at key intersections and other high quality elements will be analyzed.




Photo courtesy of David Wohlwill

BRT can spur dense development and vibrant streets

*"For many years Pittsburghers have been riding on BRT systems on Port Authority busways. The busway facilities are physically separated from the neighborhoods they serve. Now there is an opportunity to have an on-street upgraded BRT that will integrate high quality transit directly into the core of the community and feature better connectivity between BRT and other transportation modes."*

Steve Bland, CEO, Port Authority

Future corridor extension concepts for BRT will be considered. The effort is community-driven in collaboration with TAP partners, including the Port Authority, Allegheny County Economic Development, City of Pittsburgh Planning and URA, NAIOP, the Allegheny Conference, Sustainable Pittsburgh, over 30 other community organizations and the public. Parsons Brinckerhoff is exploring alternative routes, technologies and alignments. All the stakeholders are especially energized to be involved in coordination for related land use and development, such as TOD at stations, branding, development partnerships, and creative finance vehicles and programs.

ESWP members can visit the plan's community website: [www.GetTherePgh.org](http://www.GetTherePgh.org) 

Lynn Heckman is the Assistant Director-Transportation Initiatives for Allegheny County Economic Development, Allegheny County, PA For more information about the BRT, please contact Lynn at [Lynn.Heckman@AlleghenyCounty.US](mailto:Lynn.Heckman@AlleghenyCounty.US)





# Valuation Trends of Pittsburgh's Commercial Real Estate

By Paul Griffith

Stability has historically been the watch word for commercial real estate in the market region. Flat employment and declining population trends translate into limited rent growth and capitalization rates above national averages. Consequently Pittsburgh never participated in the run-up in real estate values that occurred in the last decade. Pittsburgh not joining the national party is nothing new; the CRE market lagged the nation in the overbuilding of the late 1980s that lead to the S&L crisis of the early 1990s and the Tech Bubble of the late 1990s. Three parties in the last three decades that Pittsburgh did not attend would lead you to conclude that instead of a hangover, the region would have a strong base from which the commercial real estate market could grow because it didn't have the baggage many other areas of the country were carrying.

Historically at the end of each down cycle and at the beginning of next growth phase, the Pittsburgh region has often been the leader in many measures of commercial real estate; particularly occupancy rates and rent growth. While many areas of the United States were absorbing the overhang of space and dealing with downward pressure on rental rates, the issues were less severe in the Pittsburgh region. With a solid foundation to move markets forward, it would be reasonable to expect that the CRE market in the region would enjoy growth during the recovery stage like other areas of the country. Instead, Pittsburgh's regional population continued to decline and employment growth remained anemic while significant growth occurred in other areas of the nation. In the end, as the next growth phase came to an end, the CRE market in Pittsburgh remained relatively flat.

Is this cycle different? Since the collapse of economies world wide in 2008, economic recoveries have been slow at best and commercial real estate markets have been lethargic. The Pittsburgh region, in the recovery phase, has again found itself being a leader in employment growth and providing indications that the decades long decline in population loss is over. Additionally the regional CRE market is currently perceived to be one of the best in the nation for multi-family investment and attracting an unusually high level of interest.

The test of Pittsburgh's relative strength, both as a regional economy and from the CRE perspective is not its position today, but where it will be five years from now. Will the region have made the turn into a period of sustainable

growth, with ongoing population and employment increases? If so, the commercial real estate market will also be positively impacted, with all types of property development occurring. More significant is the feasibility equation, which has not been favorable for so many property types, will change in a positive direction if employment growth is sustainable. A positive change will reduce the amount of non-market financing needed to create feasible developments.

While the dynamics of the marketplace are influenced now more than ever by the world economy, much of how real estate is viewed is still local. Time will tell if Pittsburgh can enjoy long-term sustainable growth in the commercial real estate market.

For Class A properties in the Pittsburgh region, Integra is forecasting the following real estate capitalization trends.

<i>Pittsburgh Commercial Real Estate Cap Rates</i>		
<i>Property Type</i>	<i>2012 Class A Cap Rate Forecast</i>	<i>Change from 2011</i>
<b>Retail</b>	<b>7.50 – 8.50%</b>	<b>Stable</b>
<b>Office</b>	<b>8.00 – 8.50%</b>	<b>Stable</b>
<b>Multi-Family</b>	<b>6.75 – 7.25%</b>	<b>Stable</b>

These rates apply to multi-tenant properties that are considered Class A because of location and age and condition. Two significant indicators of the cap rate are the mortgage interest rate and loan terms, and net income growth. Although loan terms are less than favorable with historically low loan-to-value ratios in place, mortgage rates are very reasonable. Overall financing for stabilized, Class A properties is considered favorable, but no significant change in terms or rates is likely in the next 12 months. Rental rates should improve in the office and multi-family markets in select locations in the region. This should have a downward impact on cap rates, but at this time sophisticated investors are not likely to pursue cap rates at lower levels until they are satisfied that employment is growing at or above historical national levels on a sustainable basis. **PE**

*Paul Griffith is the Managing Director of Integra Realty Resources. He may be reached at [pgriffith@irr.com](mailto:pgriffith@irr.com)*



PPG Place, Pittsburgh, PA

Photo courtesy of Highwoods Properties



# The Importance of Transportation Infrastructure for Economic Development

By Dick Donley

**M**obility and access are the key drivers for the economic development of our region, and infrastructure is the lifeblood of our economy's prosperity. To be competitive on the national or global arenas, the maintenance and continual upgrading of our roads, bridges, locks, dams and transit systems are predictive of our success. It is critical that our infrastructure becomes a major priority for government and business leaders, and along with that, a consistent, predictable funding source for these projects is essential.

Over the past years, NAIOP Pittsburgh has made the improvement of our region's infrastructure its main priority, and has devoted significant resources to this effort. We have successfully

worked for both the completion of the missing ramps on I-79, and the I-376 designation. The coming years will bring a renewed vigor to NAIOP Pittsburgh's dedication to advocate for specific projects vital to the region and for funding that is both sufficient and sustainable.

Our public sectors commitment to completion of the "missing ramps on I-79, as well as the providing other highway improvements have been an important element of our regions' success in retaining and growing firms such as Westinghouse. This connectivity between our airport, the Pittsburgh CBD and major suburban areas has helped support the growth of our region.

John Trant, Jr, Chief Strategy Officer for Cranberry Township, has seen first hand the importance of transportation funding to the economy, saying that "The link between infrastructure and jobs is often overlooked, but is critically important to a healthy economy. The projects aren't always glamorous, but investment in roads, sewers, and waterlines

attracts businesses to communities." Cranberry's elected officials made tough decisions years ago to make infrastructure investments for the long haul. They built roads and utilities, as well as creating parks and community amenities that attract a strong workforce, which attracts businesses. Trant added, "That investment pays off when companies like Westinghouse and MSA decide to locate here and grow

here. But the importance of infrastructure investment doesn't end when these companies open their doors. It is a continuous process to provide the necessary infrastructure that allows these businesses to grow as well as accommodate new businesses that are attracted to that growth."

Understanding our region's infrastruc-

ture needs and also its possibilities is extremely important. Given its limited resources, NAIOP Pittsburgh, through it's Economic Development and Transportation Committees, has identified and prioritized the three following projects as potentially game-changing initiatives that are keys to our future growth:

1. Bus Rapid Transit (BRT) for the Downtown Pittsburgh to Oakland corridor
2. Improvement of the region's Rt. 228 Corridor
3. Completion of our region's outer belt-Mon-Fayette Expressway/Southern Beltway

## *Bus Rapid Transit from Downtown Pittsburgh to Oakland*

BRT is a proposed along the transit corridor connecting the Pittsburgh central business district (CBD) with Oakland. Those economic centers are, respectively, the second and





Settlers Ridge Lifestyle Center | Allegheny County, PA | Site Development Services

## How do you transform ideas into reality?

Backed by over 50 years of experience, GAI's land development professionals solve real estate challenges, rebuild neighborhoods, and create livable, sustainable communities.

Work with a trusted partner.  
gaiconsultants.com/development

Civil Engineering | Landscape Architecture | Survey | Planning | Brownfields | Environmental

third largest employment centers in Pennsylvania. The route will effectively join the CBD, Uptown, the Bluff and the Hill District to Oakland. Among the benefits of this initiative are its shorter time to delivery than other modes of transit, and its ability to provide convenient and affordable connectivity for a relatively large percentage of the region's population.

When asked about the importance of the BRT, Bill Hunt President and CEO of the Pittsburgh-based Elmhurst Group, and also this year's National Chairman of NAIOP, said, "Our region needs regularly scheduled and dedicated bus or light rail transportation between Pennsylvania's second and third largest concentration of office workers. Furthermore, it will open the Uptown, the Bluff and the Hill District to redevelopment opportunities in a neighborhood ripe for growth." Lynn Heckman of Allegheny County's Economic Development is involved in plans for the BRT, saying "Allegheny County, the Port Authority and their partners must work to create better transit service in a cost-effective manner. Research has led us to Bus Rapid Transit which includes associated opportunity for additional development and employment."

The BRT initiative would undoubtedly be a catalyst for many types of transit-oriented development; commercial, retail and residential, and be a significant generator

of growth within the city. Privately funded high-density urban development would be very viable on this corridor with a long-term, high-quality and predictable form of transit.

### *228 Corridor Improvements:*

The 228 Corridor along northern Allegheny and southern Butler Counties has become a priority due to its stature as a major east-west regional connector. There were many projects planned to help handle the increased traffic resulting from Westinghouse's northern relocation and other growth in the region. Due to funding restrictions, we have strayed from the initial comprehensive plan for improvement of the corridor to a more piecemeal approach. Planned improvements have been delayed, and the resultant traffic issues could slow the area's momentum.

According to John Skorupan, Chairman of the Cranberry Township Board of Supervisors, "The Route 228 corridor is a vital economic development opportunity for Northern Allegheny County, Cranberry Township and Eastern Beaver County. For the continued successful growth of this area, local and state government and private developers must work together to find resources and innovative means to fund the infrastructure that will create short term construction jobs for new highways and office buildings and long term jobs in the private sector."

It is critical that the region anticipate the needs of businesses within our region. Strong planning of infrastructure is an essential tool needed to accomplish this. Were it not for the availability of excellent shovel-ready sites with easy access to many communities within the region, CBD and our airport, Westinghouse and many other companies could have easily made the decision to relocate away from our region. The private sector has committed hundreds of millions of dollars taking the risk to have sites ready and construct buildings. The public sector needs to continue to do its part by providing up-to-date infrastructure to connect the dots for businesses in order to generate growth.

### *The Mon-Fayette Expressway*

The city of Pittsburgh is ringed with great municipalities, but the connectivity of these outlying communities is challenged by the lack of infrastructure linking them with the central business district and other transportation hubs such as the airport. We have the distinction of being one of the few larger cities lacking a true beltway system, which has impeded our economic development for decades. This is also a major factor in the uneven concentration of development throughout the region, and is a contributing factor in businesses' decisions to move from our region.

For an example of the impact that well planned highways have on long-term economic growth, we don't have to



**REGISTER NOW!**

**The Water Opportunity Show™**  
Residential • Commercial • Industrial

**WQA**  
**AQUATECH**  
**USA**

08 MAR - 11 MAR | 2011

SAN ANTONIO • TX

**Trade show,  
Education,  
Networking**

**Industrial Water  
Forum/Networking  
Event**

**Workshops,  
Case Studies,  
User Group  
Sessions**

**REGISTER  
TODAY!**

Organized by



wqa.org



aquatechtrade.com

Premier Sponsors



routratec.com



pentairaqua.com

**wqa-aquatech.com**  
or phone 630 505 0160

look any further than the success of the corridor created by the completion of I-279 in 1989. The connectivity that it has created with I-79, the airport and the PA Turnpike has driven the growth of our region's northern corridor, and has in effect created the beginning of an "outer belt".

Other benefits that would come the completion of this major transportation link would be to reduce congestion on the Parkway East through the Squirrel Hill Tunnel and Route 51, as well as promoting privately funded redevelopment of 47 communities and nine major brownfield sites.

Lou Oliva, Sr. Vice-President of Grubb & Ellis in Pittsburgh has been involved with many public/private partnership initiatives projects in the region. Mr. Oliva has seen that "The key is to make strategic investments in infrastructure that meet the needs of the market. The primary examples of strategic infrastructure investment are in the Airport corridor, which is leveraging public investments with private capital to provide much needed pad ready development sites. The completion of the missing ramps at the I-79/I-376 intersection made development within the airport corridor feasible."

These key infrastructure investment have spurred subsequent investments in water/sewer installation at major industrial development sites. The Findlay Industrial Park at Westport and the Clinton Commerce Park have seen over 1,000,000

SF of new construction since 2008 despite challenging economic conditions. Oliva went on to underscore the importance of finding ways to fund infrastructure improvement, "The Tax Increment Financing (TIF) model utilized to fund water/sewer installation at Westport has already been covered by Phase I of that project and should be used as a model for additional infrastructure investment. Public/Private investment is being utilized for Phase II of the project and will provide an additional 225 acres of pad ready sites for industrial development in 2012."

In some sense, transportation funding has become a victim of its own success. We have succeeded in raising the average national gas mileage steadily over the past years. This has, however, resulted in a reduction of funds available for transportation generated through its main funding source, the gasoline tax, to below that needed to maintain our existing infrastructure. Therefore, a method to increase funding for maintenance and improvements through additional, more stable forms of funding is needed. Here in Pennsylvania, the governors committee on transportation has recently recommended a specific plan to fund the maintenance and improvement needed to our transportation system. This is a monumental task, and needs our support, as it has been slow to gain the sponsorship necessary to move through the legislature.

Another part of the solution to the problem of transportation funding are initiatives such as P3, which involves public/private partnership legislation needed to streamline our states procedures and make public/private partnerships for infrastructure more easily accomplished.

Western Pennsylvania has weathered the recent economic downturn far better than many areas of the country. In order to maintain our momentum, it is imperative that we continually identify key infrastructure projects and secure predictable sources to fund them. The maintenance and improvement of our regions infrastructure to meet the needs of the market is the key to our mobility and continued economic success. **PE**

*Dick Donley is the President of Chaska Properties. Mr. Donley may be reached at [rdonley@chaskapa.com](mailto:rdonley@chaskapa.com)*



## The ESWP Annual Engineering Awards Banquet

Wednesday, February 22, 2012  
David L. Lawrence Convention Center,  
Pittsburgh, PA

Hosted by  
**Thomas E. Donatelli, P.E., ESWP President**

Master of Ceremonies  
**Rick Sebak, WQED MultiMedia**

Honoring 2012 William Metcalf Award Recipient  
**Bernie Fedak**

and featuring Guest Speaker  
**Catherine Coleman, NASA Astronaut**

Visit [www.eswp.com/eswp/annual\\_banquet.htm](http://www.eswp.com/eswp/annual_banquet.htm)

## event rentals at CARNEGIE SCIENCE CENTER

Located on the North Shore, we've got a perfect view of the Point, awesome spaces, and cool ideas for original events that are out of this world.

- Corporate events
- Wedding receptions
- Birthday bashes
- Banquets and meetings
- Milestone anniversaries
- Parties and celebrations

Call 412.237.3403 to begin planning your special event.

**Have a group and want to explore the Science Center?**

Call **Erica Tamorria**, Group Sales Manager,  
at 412.237.3434 to plan your outing for 15+ people today!



**CARNEGIE SCIENCE CENTER**  
One of the four Carnegie Museums of Pittsburgh

# PITTSBURGH International

## AIRPORT *Fast Facts:*

*By Wm. Randell Forrister*

Pittsburgh International Airport (PIT) is acclaimed by aviation experts as one of the most efficient airports in the world. PIT is not constrained by air congestion or the airfield restrictions of most major east coast airports. PIT boasts four major runways and is halfway between New York and Chicago and London and Los Angeles

- PIT has 8,800 acres of real estate, with 3,800 acres available for development.
- Over 2 million square feet of new real estate has been developed on airport, with potential for development of over 30 million more square feet.
- PIT has 5,352 acres designated as Foreign Trade Zone #33
- PIT has 24/7 customs availability
- Cargo arrives at its' final destination five days faster through PIT vs New York's JFK airport.
- Air cargo at PIT support 587 full time jobs earning \$21 million per year.
- Over 50% of the US and Canadian population can be reached by over-night truck from PIT
- PIT is home to three military bases: the 911th Air Force Reserve, the 171st Pa National Guard Refueling Wing and the 316th Army Reserve Unit; with an annual economic impact of \$150 million.



- PIT can handle more operations per hour in any weather conditions than Miami, Los Angeles, New York or Philadelphia.

- PIT Supports 71,160 jobs and a total payroll of \$2.1 billion annually, coupled with another \$5.7 billion in economic activity.

*Wm. Randell (Randy) Forrister is the Senior Director of Development for Pittsburgh International Airport*

*Photos courtesy of Pittsburgh International Airport*



# NAIOP

COMMERCIAL REAL ESTATE  
DEVELOPMENT ASSOCIATION

PITTSBURGH CHAPTER

## 19<sup>th</sup> ANNUAL BANQUET 2012

DAVID L. LAWRENCE CONVENTION CENTER

THURSDAY, MARCH 1, 2012

5:15 PM RECEPTION

6:30 PM AWARDS & DINNER

9:00 PM NETWORKING AFTER PARTY

# CONNECT

REGISTER BY CALLING 412-928-8303  
OR VISITING [www.naioppittsburgh.com](http://www.naioppittsburgh.com)

*Don't miss the year's best networking event in the  
commercial real estate industry!*

Photo © iStockphoto.com

## International Water Conference®

Sponsored by the Engineers' Society of Western Pennsylvania

*-Our 73<sup>rd</sup> Annual-*

## CALL FOR PAPERS

The IWC Executive Committee is seeking quality and relevant technical papers from all segments of the industrial water treatment industry. If you would like an opportunity to present to a worldwide audience of water treatment professionals, the IWC is the place. Abstracts may be submitted on-line - it's easy to do! Visit: [http://www.eswp.com/water/call\\_for\\_papers.htm](http://www.eswp.com/water/call_for_papers.htm)

**November 4-8, 2012**

**Crowne Plaza Riverwalk Hotel**

**San Antonio, Texas USA**

For more about the 2012 IWC, go to [www.eswp.com/water](http://www.eswp.com/water)





*The sky is the limit at the...*

# International Bridge Conference®

**Mark your calendar, and save the date for IBC 2012**

**Plan now to attend  
the 29<sup>th</sup> Annual International Bridge Conference®  
JUNE 10-13, 2012  
David Lawrence Convention Center  
Pittsburgh, PA USA**

The 2012 IBC includes 3 days of events and activities including...

◆ **More than 20 Technical Sessions, including:**

- Design-Build
- Rehabilitation
- Construction
- Bridge Monitoring

◆ **Training Workshops on:**

- Using FRP Composites
- Bridge Life Cycle Cost Analysis
- Load Rating of Short Span Bridges
- Preservation of Bridge Decks
- Introduction to TOMIE

◆ **Keynote Deliveries from Industry Leading Professionals**

◆ **Special Seminars on:**

- Integral Abutment Design
- Recent Changes to AASHTO Seismic Design
- Fracture Critical Bridge Inspection

◆ **Local Bridge Tours**

◆ **More than 175 Exhibit Booths**

◆ **Professional Development Hours... earn up to 24 PDH's to satisfy continuing education requirements for the P.E.**



**Learn more about the 2012 IBC at [www.eswp.com/ibc](http://www.eswp.com/ibc)**



**June 10-13, 2012 Pittsburgh, PA USA**





# The ESWP Annual Engineering Awards Banquet

*Our 128<sup>th</sup> Annual*

**Wednesday, February 22, 2012**

**David L. Lawrence Convention Center, Pittsburgh, PA**

Hosted by

**Thomas E. Donatelli, P.E., ESWP President**

Master of Ceremonies

**Rick Sebak, WQED MultiMedia**

Honoring 2012 William Metcalf Award Recipient

**Bernie Fedak**

and featuring Guest Speaker

**Catherine Coleman, NASA Astronaut**



*Tom Donatelli*



*Bernie Fedak*



*Rick Sebak*



*Cadi Coleman*

The Engineers' Society of Western Pennsylvania (ESWP) Annual Banquet is the premier networking event for the technical community in this region. Our 128th banquet, scheduled for February 22, 2012 at Pittsburgh's David L. Lawrence Convention Center, is poised to uphold the highly valued networking, and advance ESWP's primary mission: engineering education. Please mark the date now on your calendar and plan to join us for a very special evening.

For the latest updates on the ESWP Annual Banquet including Engineer and project of the Year Nomination Forms, please visit our web site at: [www.eswp.com/eswp/annual\\_banquet.htm](http://www.eswp.com/eswp/annual_banquet.htm)

NON-PROFIT  
ORG  
US POSTAGE  
PAID  
PITTSBURGH PA  
PERMIT 2249

The Engineers' Society of Western PA  
Pittsburgh Engineers' Building  
337 Fourth Avenue  
Pittsburgh, PA 15222