

Dear Colleagues,

The work and rhythms of the semester's end come too quickly, causing students and faculty alike to scramble to complete the academic tasks that bring us to universities and law schools in the first place. Teaching law is my primary job and as a result, I have been a little slow sending you an update on the Capitol Crossing Project. Despite my tardiness, the project continues at a quickening pace, meeting deadlines and accelerating some of the work before the winter frosts are upon us.

Since I last wrote, the historic synagogue has been moved to its temporary location where it now sits firmly on its crib. It will reside there for more than a year. If you were not able to watch the lift or the move, you can watch a time lapse video of the lift, a nearly imperceptible activity, at <https://vimeo.com/189938657> Look for the widening crack along the base of the building. You can watch a time-lapse video of the move at <https://vimeo.com/190151276>



Another lift action, not as public but in some ways quite as dramatic, took place two weeks ago. Using a hydraulic jack system, BBC workers lifted the 350-ton Massachusetts Avenue Bridge more than an inch to transfer the load to a transfer girder.

Concrete is now being poured on the eleventh floor of 200 Massachusetts Avenue. Heaters have been brought in to ward off the coming cold. Concrete pours on the twelfth floor will begin next week. The concrete reaches the upper levels of the building via a boom that extends from the pump truck to the floor where the concrete is needed. The concrete flows from the mixing truck to a pumping unit and then into the boom which sends it to the upper floor- and column-forms. 200 Massachusetts Avenue will rise to twelve floors when complete, about the same height as the Gewirz Student Residence Building. Topping off the building, that is, finishing the concrete pours at the building's ultimate height will occur just about the time students return in January. I will write more about that in a CONSTRUCTION NOTE closer to the

topping off ceremony. In the meantime, mechanical, electrical, and plumbing systems are being installed at levels one through six, and layouts for the dry wall installation are being set.

Several of you have asked about the slanted columns on the south side of the building. A slant column can be a function of a building's design or a function of the coordination of the loads on the columns above and below. The slant columns you notice on the 3<sup>rd</sup> floor are there to coordinate the loads on the caissons and the columns that support the building below grade with the design of the curtain wall – the building's skin -- on the floors above the slant



The Concrete Pump Truck Boom



Slanted Columns on the 3<sup>rd</sup> Floor

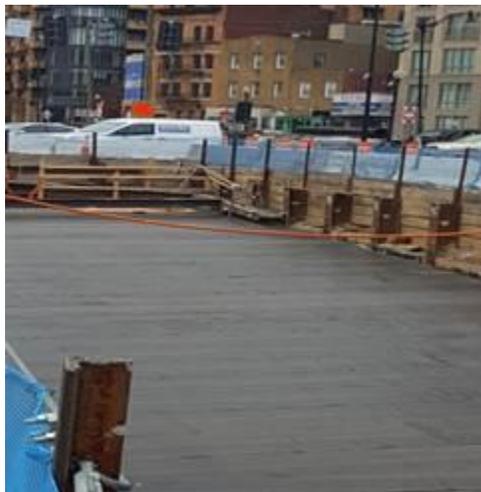
column. The American Concrete Institute Building Code Requirements permit columns to deviate from plumb to a maximum of  $L/6$  where  $L$  is the floor-to-floor height of a given story. For example, if the height between the second and third floors in a building is 12 feet, the top and bottom of the column could be offset by a maximum of 2 feet. If the slope exceeds  $L/6$ , a beam has to be added where the column stops sloping to resist the localized horizontal force that the sloping column imposes on the concrete slab. Even a slope of less than  $L/6$  creates an additional horizontal force. The force is resisted by adding extra reinforcing steel in the column to maintain the correct compression in the column and to support the loads above it while transferring support to the columns below. In the Capitol Crossing Project, the slope deviations are different for each column. The east column slopes approximately one foot-four inches to the east from the 3<sup>rd</sup> floor to the underside of the 4<sup>th</sup> floor. The west column slopes approximately two feet-one inch to the west over the same height.

Architects have long used columns, dramatically and subtly, to enhance the look of their buildings. The columns of the Parthenon for instance, slope gently inward to correct the

perspective when looking up at the temple. If they didn't slope, the columns would appear to be crooked, leaning outward. For the same reason, the corner columns on the Parthenon, unlike the other columns, are spaced farther apart from their neighbors and have a larger diameter. The architect designed this purposeful break in symmetry to create the paradoxical effect of making the building appear more symmetrical. There was no structural reason to make these subtle changes in the design and arrangement of the columns. Instead the architects sought to improve the aesthetic experience of order and symmetry, hallmarks of classical architecture.

The platform covering I-395 is now complete from E Street to Massachusetts Avenue and soon the topping slab will be poured over the surface. The roof over the eastern section of the Massachusetts Avenue portal entrance to the highway has been completed, and dirt is being backfilled on the top of the roof. Paving of the street above the portal entrance should begin sometime this week. Pile driving and shoring for the western section of the entrance portal will also begin next week. The excavation of the western section of the portal entrance should commence right after the New Year.

The roof above the East Concourse is nearly complete and the deep and squat OCTO Building where the District of Columbia once maintained its computer center is nearly demolished. The depth of the original building



Massachusetts Avenue Portal Roof



The OCTO Building and Garage Excavation

required an extensive amount of reinforcing steel to support its walls. Because steel and concrete waste must now be separated for disposal, a claw rather than a battering ram is being used to take down the walls and separate the materials. It will take three weeks to haul away the debris. As the OCTO building is being demolished, pile-driving, lagging, and excavation continue for the garage.

Cities are organic entities. Like humans, they begin small, evolve, and grow. They are buffeted by tragedies and enriched by celebrations, driven by scientific discoveries and devastated by immense natural cataclysms. Like humans, some cities thrive and some are left behind. Some create history while others are lost to it. Cities are the evolving stories of the

people and the land; and while we know best the stories of our own lives and the rhythms of land that surrounds us, we can only truly know a city if we know how the history of the land and the stories of the people came together to create what we see.

“Cities exist because they create possibilities and opportunities.” Ancient cities probably began to form with the emergence of trade and continue to be driven today by commerce. Early cities generally grew around natural points of commerce -- around ocean ports and rivers and lakes, or at the intersections of natural transit points. Science, most notably the coming of the railroads and the vast networks of high speed highways, enhanced or caused the abandonment of those natural centers of transport and commerce. But through all historical eras, cities thrived where the land and the people on it coalesced to nurture the creativity, spontaneity, and enduring excitement of urban life.

Individual ownership of land was virtually unknown when the immigrants from Europe first began to settle the North American continent. Land was held by the crown or by crown-chartered companies that employed laborers to work it. It was not until 1613 that Virginia Governor Sir Thomas Dale, sensing a rebellion among those working the land, began to grant three-acre parcels to colonists willing to stay after their seven-year indentures expired. Those who stayed could work for themselves on their private three-acre plots rather than serve the company by working full-time on its common land. By 1618, the Governor and Sir Edwin Sandys, Treasurer of the Virginia Company, agreed to grant 100 acres of land with clear title to each farmer. Soon thereafter, other colonial governors employed various methods to transfer land to groups and individuals for farming and for the development of towns.



Sir Thomas Dale, Governor of Virginia



Sir Edwin Sandys

At the time the colonies achieved independence, most of the land was still held by Federal and state governments. By the mid-1800s, however, the Free Soil Movement had taken

hold as the Federal government gave away nearly 300 million acres of public land and sold an almost equal amount to private owners. Of the current 2.3 billion acres of U.S. land, 80% has at one time been held in the public domain. This transfer of land, along with the creation of the fee simple ownership system and the ability to convey one's property rights, created a real estate market that permitted cities to grow. In some sense, the entire history of the United States is about the history of land development. Urban development in the United States between 1700 and the present has been driven by commerce and commerce has been driven by land development. According to Marc A. Weiss, author, educator, and currently the Chairman and CEO of Global Urban Development, "By the late 18<sup>th</sup> century, land speculation had already become a main preoccupation of U.S. citizens." The District of Columbia was not immune to this "mania for land gambling."

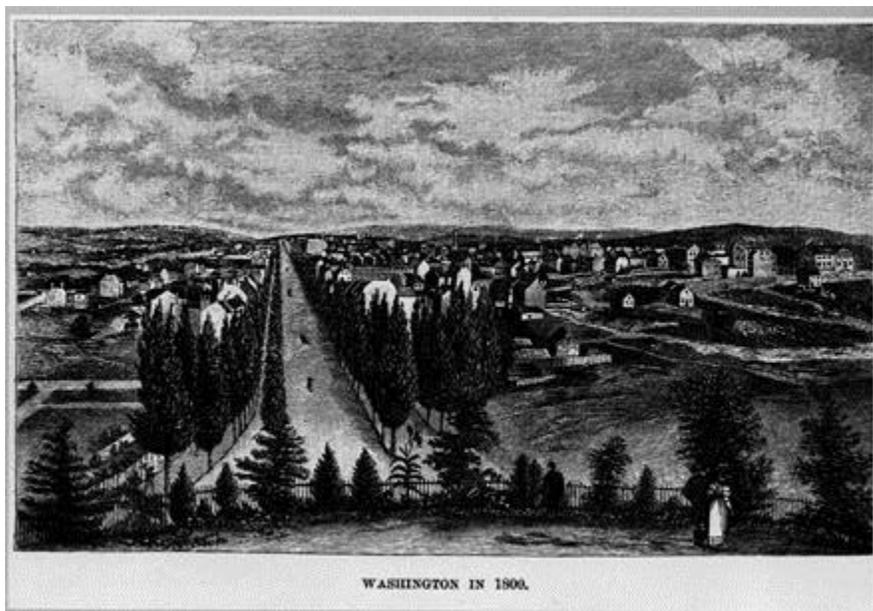
As our neighborhoods continue to transition from enclaves of crime and poverty to bastions of urban wealth, one has to acknowledge that the District of Columbia was born of land speculation and to concede that land speculation is and has always been an integral part of the fabric of the city. On March 29, 1791, George Washington dined in Georgetown with the principal owners of the land that was to become the Territory of Columbia. After dinner, the owners agreed to surrender one-half of their holdings to create the Capital. Washington then instructed Andrew Elliott to begin a survey of the land destined to be the city of Washington on the Eastern Branch of the Potomac River. The Eastern Branch is now called the Anacostia River. Washington ordered the survey started on the eastern boundary to create the impression that the city would be built far from the town of Georgetown, thus inducing Georgetown property holders to sell their land to the new government at a low price. Later in 1791, the government held its first public auction of lots in the new federal city. The money from this auction was supposed to pay for the public improvements that would turn Pierre L'Enfant's dream into a Nation's Capital equal to Paris and London. British speculators, using wealth attained from their efforts in the East India Company, built wharves on the



The L'Enfant Plan

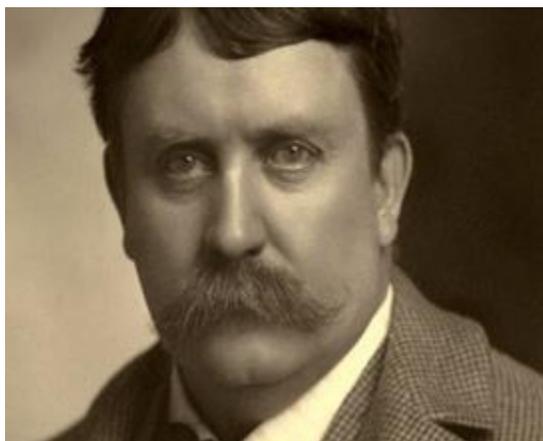
Eastern Branch expecting development to occur on Capitol Hill. Washington, Jefferson, and Madison all purchased lots and Thomas Law, husband of one of Washington's step-granddaughters, built ten houses on Capitol Hill. George Washington himself built several row houses in the same area. A stone and brass marker currently placed near the north end of the Capitol grounds indicates the location of Washington's lots. The auction however, was less than successful yielding the sale of only thirty-five lots. Philadelphian George Walker, Daniel Carroll of Duddington, and a few other land speculators tried to induce development but to little avail. Additional promotional efforts were soon made. The advertisements in the newspapers were described by French dignitary, the Duke de La Rochefoucauld, as "exaggerated praises of the new city; in a word, with all the artifices [that] trading people in every part of the world are accustomed to employ in the disposal of their wares." After the initial sale faltered, Robert Morris, the financier of the Revolutionary War and a land speculator in Pennsylvania and New York, bought 7,235 lots intending to create the Morristown project comprised of twenty two-story brick homes near the Capitol. Unfortunately, Morris bought his lots with credit and when he failed to make his payments, he defaulted and nothing was built. Morris and his partners landed in debtor's prison and land prices fell, delaying the completion of L'Enfant's plan for many years. In 1796, only 200 private buildings existed in the city.

President Washington's vision of real estate development, despite its early set back, established the pattern for the boom and bust quality of the D.C. real estate market. Over time, the city grew as Washington suspected it would. James Hoban designed the President's House. William Thornton designed the exterior of the Capitol while Stephen Hallett designed its interiors. Hoban was selected to supervise the construction of the Capitol and its corner stone was laid on September 18, 1793. By the time John and Abigail Adams moved into the unfinished President's House in 1800, the Senate wing and the foundations for the House wing of the Capitol were ready for the Congress.



Between 1800 and the Civil War, the city grew slowly but steadily. The President's House and Capitol were restored after the British burnt them in 1814. There is some discrepancy about the color of the original President's House. Some sources indicate that its gray sandstone was originally painted white. Other sources say it was painted white only after the British burned it in 1814. In any case, it officially became the "White House" in President Theodore Roosevelt's term. Other public buildings were erected between the government's relocation to the Territory of Columbia and the Civil War. Andrew Jackson ordered the construction of the Treasury Building in 1836. The first wing of the Patent Office was completed in 1840 and the Post Office was also designed in 1840. All of those buildings are still standing. Markets, churches, hotels, and other commercial properties were developed north of Pennsylvania Avenue and Mary Ann Hall was running a fashionable and expensive brothel on the land now occupied by the American Indian Museum. By 1865, the city's business directory listed 120 trades. In Georgetown, Washington, and Alexandria, the original cities in the Territory of Columbia, great wealth existed alongside abject poverty and the development market reflected that. This was the pattern in other U.S. cities as well. After the end of slavery, immigrants came to the cities for work and had to be housed by those building the city. The tenement houses of New York and Chicago and the alley dwellings of Washington D.C. attest to the suffering of those unable to succeed while the dazzling mansions of the Carnegies in Pittsburgh, the Astors and the Vanderbilts in New York, the McCormicks and the Palmers in Chicago, and the Corcorans and the Riggs of Washington stood with grandeur in close proximity, often less than a mile away. The downtown was Washington's most densely populated neighborhood for the first one hundred years of the city's existence; but the neighborhoods of Capitol Hill, Shaw, DuPont Circle, Foggy Bottom, Southwest, and Georgetown all grew during the 1800s. However, the Territory's third city, Alexandria, was retroceded back to Virginia in 1846. Beyond the original boundaries of Washington City, the Territory remained largely rural for most of the 19<sup>th</sup> Century.

It was in the late 19<sup>th</sup> century, the Gilded Age of America, that Washington became a national city. It was also the era wherein America's legendary architects, engineers, landscapers, and developers emerged. Nothing seemed beyond the reach of American ingenuity. Daniel Burnham, the great Chicago architect who designed the Columbian Exposition in Chicago in 1890 and Washington D.C.'s Union Station in the early 1900s, and whose name is



Daniel Burnham



The Midway Pleasance at the Columbian Expo

practically synonymous with the Beaux-Arts-City Beautiful Movement, captured the architectural audacity of the era when he spoke the words that drove urban development in the early 20<sup>th</sup> century and continue to drive development today. “Make no little plans; they have no magic to stir men's blood.” Although architectural styles change over time, those conceived with “no little plans” are the ones that most delight and continue to astound. As much as I try in these CONSTRUCTION NOTES, I cannot fully describe the complexity of the Capitol Crossing Project and the skills of the women and men who have come together to “Make no little plans.” The men and women driving the project are from a firm called Property Group Partners (PGP), formerly known as Louis Dreyfus Property Group. The construction team is Balfour Beatty U.S. I will be writing more about these organizations and about the development of our old East End neighborhood in a CONSTRUCTION NOTE in 2017.

The methods used by developers, architects, engineers, and construction companies today could hardly have been dreamed of in the Gilded Age. Indeed, the innovations that have been developed just since the completion of Georgetown's Hotung International Law Building and Ginsburg Sport and Fitness Center astound me. Nonetheless, certain principles remain the same. In our modern era, development has several stages. In the planning or feasibility phase, the developer conducts a needs analysis to determine whether there will be a demand for the proposed project if it is brought to fruition. Once the need is ascertained, the developer must choose a site and investigate the constraints that the site imposes on the project. In a normal project, the site is usually a parcel of land. In the Capitol Crossing Project, the site is the air rights above the I-395 highway. Site constraints might be zoning restrictions or transportation difficulties either for construction or for the ultimate occupancy and use by the tenants. Objections by the neighbors might prove too difficult to overcome. A major constraint in an air rights project is obvious. How do you build a platform over a main transportation artery? If there is a need and the site constraints can be overcome, budget estimates will be developed to determine whether the project, even if needed, can be built at a cost that will ultimately provide a profit for the developer. Some buildings may just carry too high a construction cost when compared to its final sales price or to the rental income that the project can provide. If that occurs, the project is redesigned or dies.

The last stage of the feasibility study is the environmental review process. The environmental review includes an analysis of the project's environmental impact on the neighborhood. The study is broad, determining whether endangered species will be displaced; whether land borings discover evidence of archeological significance; how to control erosion or maintain sediment control; and whether traffic patterns will be disruptive. A site might also contain hazardous materials that must be removed, often at great expense.

The pre-design phase begins either when the planning stage is complete or is conducted simultaneously with the other tasks. The pre-design phase includes a request for proposals from various architectural and engineering firms that seek to become the lead designers for the project. Once they are selected, the architects begin the schematic design phase where they develop the design criteria in accordance with the findings of planning phase. They determine the project's architectural goals, research the city codes applicable to the project, accommodate any special needs that the planning phase discovered, and create a document that ensures that the architect

has correctly interpreted functional relationships between the project's activities and has met the developer's goals. Once this phase has been completed, the design development phase begins wherein the architect and construction manager work together to further define and refine the schematic design, estimate costs, and consider constructability improvements. At the end, drawings are produced to define a site plan, floor plans, and exterior elevations. Describing these tasks is simple; but the construction drawings produced during the various design phases will be revised many times and thousands of decision points will emerge as the design and the constructability are coordinated during the construction of the building.

In the end, cities and their monuments and simple structures are what we make them and what we make of them. Poets usually write laments about cities, seeing them as destroyers of nature and humanity rather than the amalgam of the dreams and failures of humanity. But song writers seem to me to be more in tune (pardon the pun) with why people come to the city. Song writers sense the spark, the potentiality, and the desire to be part of something big whether it succeeds or fails. That is why there are so many songs about cities: *Autumn in New York*, *I Left My Heart in San Francisco*; *Abilene*; *Chicago, My Kind of Town*; *Meet Me in St. Louis*; even *Midnight in Missoula*. The list of songs is endless because cities are as much a state of mind as they are a place. They are what we make them, tangibly and in dreams. I am a lover of cities, the passions, the creativity, the social discourse. There is often darkness, but in a city we can always imagine more and better. There is always another story. As the announcer from the early classic television show "The Naked City" used to say in closing, "There are eight million stories in the naked city."

Today, D.C. is rapidly changing. What was once the city where the "North recedes and the South presumes" is now the center of the world stage. Fifty-nine projects totaling 6.4 million square feet will be delivered in D.C. this year. Eighty-four residential projects are under construction and will be delivered in the next three years, for a total of 11,241 units. Government jobs, long the backbone of the local economy have declined but private entrepreneurs develop new businesses every day. The district has added 13,800 jobs since September 2015, a 1.8 percent increase for a total of 780,000 jobs. In the Union Market/NoMa neighborhood alone, there are 15.6 million square feet of development under construction or in the pipeline, including approximately 11,400 residential units and 4.6 million square feet of office space. As of 2015, young professionals made up 36.9 percent of the city's population. This segment of the population has risen 19 percent since 2010. As a result, neighborhoods are more segregated by wealth than ever before. Like Manhattan, the city is becoming virtually unaffordable to all but those with very high incomes, and house prices are changing the demographics of the city. City leaders and pundits want more affordable housing, but given demographics and the nature of the new economy, locating such housing in the downtown cores becomes more difficult every year.

New people move in while others move out. These trends are not new. The inhabitants of cities change but the land remains constant. And where there is land, the boom-bust mentality of land speculation remains as well. The founders of this city had large plans and dreams for the city but would have been surprised at the look of Washington on the eve of the Civil War. Between 1870 and the Great Depression, Washington D.C. became unrecognizable to those who inhabited it before the Civil War. One need only look at James Goode's CAPITAL LOSSES to see how the sumptuous Gilded Age mansions along K Street, near DuPont Circle, and elsewhere

began to disappear, torn down in the 1950s and beyond. As land needs changed, the middle class fled to the suburbs and private wealth could no longer support homes that required full-time staffs. Between the late 1950s and early 1990s, Washington was a city in decline; today land prices soar and the cranes are everywhere. The land is finite, the people and their needs change; development remakes and repurposes the land to meet those changes, capturing the energy of the people who “make no little plans,” but leaving behind those less fortunate or those locked into an economic and cultural world that no longer exists.

Burnham’s famous twelve words are the ones most often quoted; but his entire statement is worthy as well.

Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will never die, but long after we are gone be a living thing, asserting itself with ever-growing insistency. Remember that our sons and our grandsons are going to do things that would stagger us. Let your watchword be order and your beacon beauty.

As our students, especially the first years, finish their semester’s final exams, I want to remind them of this: you are more than your Law Board scores and more than your law school grades. You will live richly embroidered and productive lives once you complete this rite of passage. To them and all of my other readers, I hope this holiday, the season of peace for believers and non-believers alike, brings you comfort and respite from this seeming chaotic epoch. And as Burnham reminded us and continues to remind us, our sons and our daughters and our grandsons and granddaughters are going to do things that will stagger us. Let our watchword be order and our beacon beauty; and please keep those less fortunate in our hearts and minds.

*Wally Mlyniec*

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