INSTRUCTOR

Edward H. Marchant, Adjunct Lecturer in Public Policy
Belfer L-2C
617-739-2543
edward_marchant@hks.harvard.edu
Office Hours: By Appointment

Faculty Assistant
Michael Weinbeck
Littauer 133
617-496-4485
michael_weinbeck@hks.harvard.edu

Course Assistant
TBA

MEETING PLACE AND CLASS TIME

Harvard Kennedy School
Littauer Building, Room 230
Monday and Wednesday, 4:15-5:30 p.m. (except as noted below)

- Second Class: Friday, September 2 at 4:15 p.m.
- Field Visit: Saturday, October 29 from 8 a.m. to Noon

SHOPPING DAY CLASS

Monday, August 29 (first session: 4:15 – 4:45 p.m. / second session: 5:00 – 5:30 p.m.)

TARGETED AUDIENCE

The course is designed to be useful for students with any of the following interests: private, public, or institutional real estate development, permitting, design, finance, construction, marketing and property management; mixed-income/affordable housing; large scale urban development; neighborhood revitalization; disaster recovery and the built environment; economic development; real estate financial analysis and investment; public-private partnerships; real property public policy; and/or real estate law. The real estate principles discussed should be relevant to both domestic and international students.
PREREQUISITES

There are no course prerequisites. No prior real estate finance or development experience is either assumed or required.

Students who are interested in learning how real estate value is created and who possess a healthy curiosity about the varied components of the real estate development process should be good candidates for this course. Basic algebra skills will be sufficient for any required quantitative course work.

COURSE OBJECTIVES

The course will provide a practical understanding of fundamental real estate finance and development principles and practices by:

- Introducing students to methods for estimating, calculating, and analyzing basic real estate measures of return;
- Having students understand the relative importance of these measures of return and the underlying reasons for their importance;
- Enabling students to recognize the varied financial and non-financial objectives of the key private and public sector participants in the real estate development process;
- Familiarizing students with the key components of the real estate development process and the sequencing, relative importance, and interrelationships among these elements; and
- Establishing an analytical framework to evaluate the risks and rewards of existing and proposed real estate projects from both a quantitative and qualitative perspective to determine a project’s value.

COURSE DESCRIPTION

This course is designed for students interested in understanding the fundamentals of real estate finance and development. Although SUP-665/SES-05492 is not a “policy” course, its practical real estate and business content has been designed to help inform future housing, urban development, and economic development policy makers as well as real estate practitioners. A variety of real estate asset types (e.g., conventional and mixed-income housing, office, retail, hospitality, mixed-use, and land) will be used as vehicles to illustrate basic real estate finance and development principles and practices.

Students will learn how to identify, understand, and calculate the three basic financial rewards generated by successful income-producing real estate projects: cash flow, tax benefits, and future benefits. Students will also be exposed to the financial risks associated with real estate development and investment and the methods commonly used to mitigate perceived risks. Based upon this understanding of basic risk and reward components, students will proceed to construct simple “After-Tax Cash Flow” income statements incorporating a project’s revenue stream, operating expenses, replacement reserves, debt service requirements, amortization and depreciation schedules, and federal tax requirements.
As the course progresses, students will prepare discounted cash flow analyses for the projected holding periods utilizing Net Present Value and Internal Rate of Return methodologies. Both of these methodologies incorporate all three of the primary financial benefits of real estate investment and the timing of all cash outflows and inflows so that the “time value of money” can be factored into the respective return measures.

On the capital side, students will prepare "Sources and Uses of Funds Statements" for real estate development or investment projects using realistic real estate industry debt and equity financing alternatives to define the capital stack that can be supported by a project's net operating income.

The classroom experience will be synthesized through a final exercise in which student teams will use an analytical framework developed during the course to design, structure and evaluate a potential real estate development by applying the general concepts learned in the course to a specific real estate opportunity within the Boston market area.

FORMAT

The course will be a mix of case discussions, classroom exercises, lectures, guest lectures, field visits, and student presentations. SUP-665/SES-05492 is a highly interactive course. Active classroom participation by all students, including students for whom English is a secondary language, is expected and encouraged throughout the course. Attendance at all classes is expected and will be assumed. 20% of a student's grade will be based upon the quality of a student's classroom participation.

READING AND CASE ASSIGNMENTS

Reading and case assignments are detailed in the attached syllabus. Reading and case materials include:

   (Available for purchase on the Web at www.amazon.com and other sellers.)
   Other books recommended but not required:

2. Selected Harvard Business School cases and industry notes (HBS Coursepack)
   Available for purchase directly from Harvard Business School Publishing: 
   http://cb.hbsp.harvard.edu/cbmp/access/52572643
   You will need to register at this site to purchase the Coursepack.

3. Other handouts to be distributed in class throughout the course or made available on the Canvas Course Website (Canvas): https://Canvas.harvard.edu/courses/18909
The University's most comprehensive collections of real estate reference materials are at Baker Library at Harvard Business School and at Gund Library at the Graduate School of Design. The recently published Harvard Business School note "A Note on Real Estate Research" is included in the Coursepack and provides a detailed listing of information resources for the real estate industry. This note should be particularly useful as students work on the Soldiers Field Development/Investment/

The Web can be an invaluable resource for real estate information. ULI-the Urban Land Institute (ULI), a nonprofit educational and research organization association, has one of the better sites at "www.uli.org". Students should review at the beginning of the course the ULI site and its links. ULI publishes a wide variety of materials useful to private and public sector participants in the real estate development process. Its publications catalogue is available at its Web site.

Use of computer-based spreadsheets is commonplace in the real estate industry. Students are encouraged to create their own spreadsheet programs, as appropriate, in completing course assignments. It is very important, however, that students understand the underlying concepts and methods associated with completing basic real estate calculations (calculating net operating income, debt service constants and payments, before tax cash flow, amortization and depreciation schedules, taxable income, after tax cash flow, and net cash from sale) as well as standard industry measures of return (Return on Total Asset Cost, Cash-on-Cash Return, Equity Multiple, Net Present Value, and Internal Rate of Return) before becoming dependent upon the software to perform these calculations or proceeding to utilize more sophisticated proprietary real estate software programs such as Argus.

Students should have available at each class a financial calculator that can be used to execute basic real estate financial calculations. The Hewlett Packard HP-12C, HP-10BII, or HP-17BII, the Texas Instrument BA-II Plus or BA-35 and the Sharp EL-733A or EL-1071S financial calculators are all acceptable. The instructor is most familiar with the HP-12C and will use that model for class demonstrations and explanations.

FIELD VISIT/BUS TOUR

A field visit/bus tour of representative Boston and Cambridge real estate projects will be held, rain or shine, on Saturday, October 29 from 8:00 a.m. to Noon. Although some students may have unavoidable conflicts, students should make every effort to reserve this date.

WRITTEN ASSIGNMENTS AND QUIZ

Course requirements include three written assignments, a midterm quiz, and a final team report/presentation. Late assignments will not be accepted without prior permission from the instructor. This course does not have a Final Exam.

1. Three written assignments are due at the beginning of class on the following dates:

   September 19: Feasibility Study Exercise, Part I
   October 5: Angus Cartwright IV Financial Calculations
   October 12: Angus Cartwright IV Investment Recommendations and Next Steps Memos

Students should note that the calculations required for the Angus Cartwright IV assignment due October 5 will require a significant amount of preparation time. Students may find it helpful to begin working through the financial calculations as the respective quantitative items dealt with in the case are covered in earlier classes.
2. There will be a quiz on October 24.

3. Team Written Final Reports for the Soldiers Field Development Exercise will be due from all teams on November 14. Team Class Presentations for this exercise will be on November 14, November 21, and November 28. Students are required to attend all presentations.

4. **Students are always encouraged to work together in reviewing and discussing any written assignment. However, with the exception of the Angus Cartwright IV financial calculations assignment due October 5 and the Soldiers Field Development/Investment/Negotiation Exercise due November 14, students must individually write and submit all other written assignments.**

5. As previously mentioned, students are expected to attend all classes. Classroom participation is an important component in grading. If for some reason you are not prepared for class, **never** skip the class—just speak with the instructor before class.

6. Mobile phones must be off and stored away for each class. If there is a legitimate need to have your phone available, speak with the instructor before class.

7. Laptops are to be used only for note taking and other relevant course purposes. Checking emails during class is not a relevant use.

8. Students are expected to be in class for the full seventy-five minute period. If you expect to arrive late or leave early, please inform the instructor. There will not be any breaks during the class: please plan accordingly.

**GRADING**

Grades will generally conform to the Dean’s recommended grading distribution policy and will be determined based upon the following inputs:

- Classroom Participation Quality 20%
- Written Assignments 25%
- Quiz 15%
- Soldiers Field Site Exercise Presentation and Report (including Peer Evaluations of Each Team Member’s Contribution to this Final Project) 40%
**AUGUST 29 (MONDAY)**

**SHOPPING DAY CLASS**

Shopping Day sessions will be held at HKS in Littauer 280 as follows:

- **First Session**: 4:15 to 4:45 p.m.
- **Second Session**: 5:00 to 5:30 p.m.

The case assignment to be prepared for the first course class on Wednesday, September 2 will be distributed at this Shopping Day class and will also be available from Faculty Assistant Michael Weinbeck (Littauer, Room 133) and on the Canvas Course Website: [https://Canvas.harvard.edu/courses/18909](https://canvas.harvard.edu/courses/18909)

**AUGUST 31 (WEDNESDAY)**

**COURSE INTRODUCTION/COURSE REQUIREMENTS**

**ESTABLISHING INVESTMENT OBJECTIVES**

**UNDERSTANDING HOW REAL ESTATE VALUE IS CREATED**

**Reading**

A. Marchant, “Somerville Commons, Financial Analysis for Acquisition of a Multifamily Rental Project from a Bank’s Real Estate Owned (REO) Portfolio” (Canvas)

B. “Financial Analysis of Real Property Investments” (HBS technical note written by William J. Poorvu), pp.1-9 and beyond if you have time

**Preparation**

A. The Somerville Commons case will form the basis for discussion for this class. Each student should prepare his/her estimate of the project’s value and a maximum offer price to the bank based upon the case information. Be prepared to discuss the Questions for Discussion listed at the end of the case. In particular, be prepared to explain how you valued this property and how you defined your financial investment objectives. What would your maximum bid be? Come to class prepared to bid in the auction that will be conducted at the beginning of class.

The Somerville Commons case will be available at the Shopping Day Class, from Faculty Assistant Michael Weinbeck at Littauer, Room 133 and on the Canvas Course Website: [https://canvas.harvard.edu/courses/18909](https://canvas.harvard.edu/courses/18909)
SEPTEMBER 2 (FRIDAY)

UNDERSTANDING HOW REAL ESTATE VALUE IS CREATED: NET OPERATING INCOME (NOI), ADJUSTED NOI, WEIGHTED AVERAGE COST OF CAPITAL (WACC), RETURN ON TOTAL ASSET COST (ROTAC), CASH-ON-CASH RETURN, AND CAPITALIZATION RATES (PURCHASE, OPERATING AND EXIT CAP RATES)

Preparation

A. "Somerville Commons Weighted Average Cost of Capital (WACC) and Cap Rate Exercise" distributed at prior class and also available on the CANVAS.

Be prepared to discuss the strengths and weaknesses of Somerville Commons from an investor’s perspective.

Reading


B. Long, pp. 29-38 (basics of real estate finance)

C. Familiarize yourself with the Real Capital Analytics (RCA) http://www.rcanalytics.com (RCA is a leading provider of global real estate investment data and provides free Academic Subscriptions to students.)

In addition, review more carefully the Somerville Commons case and the explanation of the Somerville Commons calculations distributed and/or posted following the prior class. Based upon your post-bid reflection, would you make any changes in your bidding strategy and pricing?

SEPTEMBER 5 (MONDAY)

NO CLASS / UNIVERSITY HOLIDAY / LABOR DAY

Assignment in Lieu of Class Meeting

A. Continue reviewing the Harvard Business School technical note, "Financial Analysis of Real Property Investments" You should continue to review this technical note throughout the course. Your understanding of this note should increase with each reading as you develop a better understanding of real estate finance fundamentals)
SEPTEMBER 7 (WEDNESDAY)

DEBT FINANCING FUNDAMENTALS, MORTGAGE UNDERWRITING BASICS, POSITIVE FINANCIAL LEVERAGE, PERMANENT FINANCING, CONSTRUCTION FINANCING, BEFORE TAX CASH FLOW (BTCF)

Preparation

A. Marchant, "Debt Service Calculation Exercise" (Programmed learning exercise for use in this course) (Canvas)

B. Marchant, "Using Your Financial Calculator to Calculate an Annual Constant" (Programmed learning exercise prepared for use in this course.) (Canvas)

C. Marchant, "Debt Financing Underwriting Exercise" (Programmed learning exercise for use in this course.) (Canvas)

D. Marchant, Debt Service Schedule Spreadsheet. Review the formulas that were used to create this spreadsheet. (Canvas)

Reading

A. Long, pp.187-197 (how developers get capital)

B. Continue reviewing the Harvard Business School technical note, "Financial Analysis of Real Property Investments"
SEPTEMBER 12 (MONDAY)

UNDERSTANDING THE BASIC FEDERAL INCOME TAX POLICIES THAT CREATE REAL ESTATE INVESTMENT TAX BENEFITS (TAX SHELTER AND TAX CREDITS), SELECTING THE APPROPRIATE OWNERSHIP ENTITY, CALCULATING TAXABLE INCOME AND AFTER TAX CASH FLOW (ATCF)

Note: You are not expected to become real estate tax experts. You are expected to understand and be able to calculate basic depreciation schedules, amortization schedules, taxable income, income taxes due or tax shelter benefits created, and ATCF. Therefore, your reading should focus on general tax policy, depreciation guidelines and methods, respective tax rates, and capital gains tax treatment. Understanding how individuals, limited partnerships, limited liability companies, real estate investment trusts, corporations, and community development corporations structure investments to maximize tax benefits by minimizing tax liabilities is particularly important.

Preparation

A. "Somerville Commons ATCF Exercise (Canvas)

B. Marchant, "Depreciation Exercise" (Programmed learning exercise for use in this course) (Canvas)

Note: International students should be prepared to discuss real estate tax policies in their respective countries.

Reading

A. “Financial Analysis of Real Property Investments” (HBS technical note written by William J. Poorvu), pp. 10-12 (review again) (HBS Coursepack)

B. Long, pp. 131-134 (real estate entities and respective tax treatments); pp. 4-5 (tax shelter); pp. 109, 180-182, 184 (tax credits)

Note: For more detailed and timely income tax-related information, students may want to review the following IRS publications that are available at www.IRS.gov

Publication 527, Residential Rental Property
Publication 544, Sales and Other Dispositions of Assets
Publication 946, How to Depreciate Property

Information on tax rates for individuals and corporations is also available at the IRS site.
SEPTEMBER 14 (WEDNESDAY)

FUTURE BENEFITS OF REAL PROPERTY (NET CASH FROM SALE)

DETERMINANTS OF FUTURE VALUE

UNDERSTANDING CAP RATES (AT PURCHASE, DURING OPERATIONS, AND AT EXIT)

EXPLANATION OF FINAL PROJECT ASSIGNMENT AND REQUIREMENTS

Preparation

A. Marchant, "Net Cash from Sale Exercise" (Canvas).

In addition, be prepared to discuss what your Net Cash from Sale ("Futures") financial objectives would be as an investor and how important this Futures component of return would be compared to the respective Before Tax Cash Flow and Tax Benefits components of return. What economic, political, environmental, technology, market or other factors are likely to influence the "Futures" component of return? What metrics should you use to establish your "Futures" financial objectives?

Reading

A. "Financial Analysis of Real Property Investments" (HBS technical note written by William J. Poorvu), pp. 18-21 (review again) (HBS Coursepack)

B. Long, pp.35-38 (capitalization rates)

C. Marchant, "Soldiers Field Site Development/Investment/Negotiation Exercise" Revised Fall 2016. (Exercise prepared for use in this course) and other materials re: Final Project Assignment and Requirements (Canvas)
**SEPTEMBER 19 (MONDAY)**

FEASIBILITY STUDY EXERCISE, PART I / PROPOSED MULTI-FAMILY HOUSING DEVELOPMENT IN RALEIGH, NORTH CAROLINA (ESTABLISHMENT OF FINANCIAL OBJECTIVES, REAL ESTATE DEVELOPMENT PROCESS, SOURCES AND USES OF FUNDS STATEMENTS, AFTER TAX CASH FLOW PROJECTIONS, STANDARD INDUSTRY MEASURES OF RETURN)

**Written Assignment Due (LATE ASSIGNMENTS WILL NOT BE ACCEPTED)**

Submit at the beginning of today's class answers to the questions listed at the end of the "Feasibility Study Exercise". Be sure to complete and submit Exhibit A. Retain a copy of your submission for use during the class discussions. This exercise presents an excellent opportunity to use your spreadsheet design and analysis skills. To simplify grading, please “highlight” any answers that are submitted in a spreadsheet format.

Feel free to discuss and work on this exercise with your classmates. However, each student must submit his/her own assignment. This exercise can take several hours to complete. Please budget sufficient time to complete the entire exercise, including Exhibit A.

**Reading**

A. Marchant, "Feasibility Study Exercise" (Exercise prepared for use in this course) (Canvas)

B. Long, pp.38-57 (measuring project return); pp. 77-91 (task management and budgeting); pp. 187-191 (how developers get capital)

**SEPTEMBER 21 (WEDNESDAY)**

FEASIBILITY STUDY EXERCISE, PART II / PROPOSED MULTI-FAMILY HOUSING DEVELOPMENT IN RALEIGH, NORTH CAROLINA (NET CASH FROM SALE, DISCOUNTED CASH FLOW ANALYSIS, HURDLE RATE, NET PRESENT VALUE (NPV), INTERNAL RATE OF RETURN (IRR), FIXED AND VARIABLE COSTS, SENSITIVITY ANALYSES)

**Preparation**

A. The assignment for this class will be distributed at the conclusion of the Feasibility Study Exercise, Part I class.

   Be sure to review carefully the notes explaining how Net Present Value (NPV) and Internal Rate of Return (IRR) return measures are calculated before you complete the assignment for this class. These notes are included at the end of the assignment.

**Reading**

A. Long, pp. 38-39, 52-53, 60 (cash flow spread sheet including Internal Rate of Return calculation)
**SEPTEMBER 26 (MONDAY)**

**DETAILED DEVELOPMENT AND INVESTMENT ANALYSIS (REVERE STREET)**

**Reading**

A. Harvard Business School case, "Revere Street" (HBS Coursepack)

**Preparation**

Be prepared to discuss the following twelve questions:

1. What are Edward Alexander’s financial and non-financial objectives?

2. What is the total asset cost? (Uses of Funds)

3. What debt and equity funds are available to purchase and rehabilitate the property? (Sources of Funds)

4. Prepare a simple Sources and Uses of Funds Statement.

5. What is the Year 1 Return on Total Asset Cost (ROTAC)?
   (ROTAC equals Net Operating Income divided by Total Asset Cost)

6. What Before Tax Cash Flow (BTCF) could the Revere Street asset generate in Year 1? What would the Alexanders’ Cash-on-Cash Return be?
   (Cash-on-Cash Return equals BTCF divided by Equity)

7. What After Tax Cash Flow (ATCF) could be generated by Revere Street for the Alexanders in Year 1? Use the assumptions listed below.

8. If the Alexanders expect to sell the property after owning it for five years after the rehab work is completed, how should they estimate its future value? Using the assumptions that follow, what do you think the sales price might be after five years of operation? After deducting the costs of sale, any capital gains tax due, and the outstanding mortgage balance, what would be the Alexanders’ Net Cash from Sale?

9. What is the Net Present Value (NPV) of this investment assuming a sale at the end of year five and a discount rate of 12%? Explain your assumptions and show your ATCF calculations for years 1-5 as well as your Net Cash from Sale calculations assuming a sale at the end of year five. Do the NPV calculation "by hand" and then check your answer by using your calculator and/or computer software. Remember to use Year 6 NOI to project your estimated Gross Sales Price.

10. What is the Internal Rate of Return (IRR) for the Alexanders on this investment, assuming a sale of the property at the end of year five? Do the IRR calculation "by hand" and then check your answer by using your calculator and/or computer software.

11. What risks/rewards might there be in this investment? Should the Alexanders purchase this property? Will they achieve their defined objectives? Will the Alexanders live "rent free"?

**ASSIGNMENT CONTINUED ON NEXT PAGE**
12. Is there any additional information you would want to have before making an investment decision on this property?

Use the following assumptions to answer the questions listed above:

a. Assume a land value of $20,000 per unit.

b. Use a 27.5-year straight-line depreciation method (residential property).

c. Assume a 39.6% tax rate for ordinary income and a capital gains tax rate of 25% on that portion of capital gain attributable to accumulated depreciation and a capital gains tax rate of 20% on the balance of the capital gain.

d. Assume that Net Operating Income (NOI) will increase by 2% annually

e. Assume an Exit Cap Rate of 8%

f. Assume that the Costs of Sale are 3% of the Gross Sales Price

g. Assume for academic purposes only that the Alexanders have passive income from other real estate investments and could utilize any tax shelter that may be generated by this investment, if in fact this investment generates negative taxable income.
SEPTEMBER 28 (WEDNESDAY)

SITE SELECTION, SITE PLANNING, SITE CAPACITY, BUILDING DESIGN AND PERMITTING/ENTITLEMENT EXERCISE FOR A SUBURBAN OFFICE BUILDING

ROLES OF THE PUBLIC SECTOR (FEDERAL/STATE/LOCAL) IN THE REAL ESTATE DEVELOPMENT PROCESS

Reading and Preparation

A. Marchant, "Suburban Office Building Development Exercise: (Canvas)

B. Long, pp. 66-75 (land valuation for acquisition); pp. 151-161 (managing the entitlement process for financial viability)


In addition, conduct a Web search to find and review the Zoning Bylaws for an office building use district for any suburban Greater Boston community of your choice (or for your hometown). Be prepared to discuss the zoning requirements for the municipality that you researched. International students should be prepared to discuss how the zoning and entitlement process works in their respective countries.

OCTOBER 3 (MONDAY)

WHAT IS LAND WORTH? UNDERSTANDING AND ESTIMATING LAND VALUE USING A RESIDUAL LAND VALUE METHODOLOGY

SITE CONTROL FUNDAMENTALS: OPTION, PURCHASE & SALE AGREEMENT, DEED OR LEASE?

ADDITIONAL DISCUSSION OF FINAL PROJECT ASSIGNMENT

Reading

A. Long, pp. 59-75 (residual land value)

B. Other readings TBA (Canvas)
OCTOBER 5 (WEDNESDAY)

STANDARD INDUSTRY MEASURES OF REAL ESTATE VALUE AND RETURN
(ANGUS CARTWRIGHT IV / CLASS I)

Reading

A. Harvard Business School case, "Angus Cartwright IV" (HBS Coursepack)

Written Assignment Due

LATE ASSIGNMENTS WILL NOT BE ACCEPTED
ASSIGNMENT MUST BE SUBMITTED AT BEGINNING OF CLASS

Complete and submit "Angus Cartwright IV" Exhibits 1-10 for all properties. Note: This is a long assignment. Be sure to budget adequate time for its preparation. You are encouraged to work together with one or two classmates on this assignment. If you do work with classmates, submit only one complete assignment for the group. Keep a copy to use during class and to prepare your investment recommendations for the following class.

Note: To simplify the preparation of this assignment, the instructor will post to Canvas a spreadsheet template (without formulas) in advance of this assignment.

OCTOBER 10 (MONDAY)

NO CLASS / UNIVERSITY HOLIDAY / COLUMBUS DAY

Assignment in Lieu of Class Meeting

Students should be working on the Angus Cartwright IV investment memos due on October 12.
OCTOBER 12 (WEDNESDAY)

INVESTMENT RECOMMENDATIONS MEMO AND NEXT STEPS MEMO
(ANGUS CARTWRIGHT IV / CLASS II)

Reading

A. Harvard Business School case, "Angus Cartwright IV" (HBS Coursepack)
B. Long, pp. 121-129 (obtaining financing for development)

Written Assignment Due

LATE ASSIGNMENTS WILL NOT BE ACCEPTED
ASSIGNMENT MUST BE SUBMITTED AT BEGINNING OF CLASS

Assuming that you are the investment advisor Angus Cartwright IV, prepare a realistic memorandum to either Judy DeRight or John DeRight explaining which property (or properties) you feel would be the best investment opportunity for her/him. Be sure to substantiate your recommendations based upon each individual's personal investment objectives and the financial characteristics of your recommended property or properties.

Your memo must be submitted at the beginning of class and must not exceed two double-spaced typed pages except for any relevant exhibits.

Although you are being asked to submit written investment recommendations for only one of the investors, remember that you represent both of them and that both are important clients. Therefore, at the end of the memo for your selected investor, list the property (or properties) that you would recommend for her/his cousin. During the class discussion you will be asked to explain your investment recommendations for each of your clients.

In addition to your investment recommendation, prepare a one-page memo that outlines and explains the "Next Steps" that should to be taken to further investigate the recommended project(s) and consummate the acquisition(s).

From both learning and grading perspectives, your investment recommendations are the most important component of the Angus Cartwright exercise. Sound and carefully argued investment recommendations will demonstrate that you not only understand the arithmetic but also can interpret the results and distinguish which information is most meaningful.

Note: This component of the Angus Cartwright exercise is not a team assignment. Each student must individually prepare and submit an “Investment Recommendation” and “Next Steps” memo. Discussion with classmates prior to the actual writing of your recommendations is always encouraged.

Retain a copy of your memos for use during the class discussion.
REAL ESTATE DEVELOPMENT PROCESS: DEVELOPING AN INNER CITY SUPERMARKET

UNDERSTANDING THE POTENTIAL COMMUNITY AND ECONOMIC DEVELOPMENT BENEFITS OF INNER CITY SUPERMARKETS

Preparation

Complete the ranking list included in “Critical Real Estate Development Process Components for Developing an Inner City Supermarket” and be prepared to discuss your conclusions. The class will begin with a general discussion of the advantages and disadvantages of supermarkets as vehicles for neighborhood revitalization and economic development. Be prepared to SHARE any experiences you may have had with inner city retail assets.

Reading

A. Marchant, "Critical Real Estate Development Process Components for Developing an Inner City Supermarket" (Canvas)

B. Long, pp. 3-27

C. www.icic.org (This site provides a wide variety of useful information and resources on inner city economic development. The Initiative for a Competitive Inner City (ICIC) is a leading source of business data and economic analysis demonstrating the market potential in America’s inner cities.)

D. www.socialcompact.org (Social Compact is a non-profit coalition of business leaders from across the country who are promoting successful business investment in lower-income communities for the benefit of current residents. Skim one of the Social Compact market studies, known as “DrillDown Reports,” for a geographic area that is of interest to you. Social Compact’s objective is to “uncover overlooked economic indicators and provide detailed analyses that translate into new tools to support community development.”)

E. “Grocery Store Attraction Strategies, A Resource Guide for Activists and Local Governments” (Although focused somewhat on the Bay Area in California, this publication is a very useful, hands-on resource prepared by PolicyLink and Local Initiatives Support Corporation, Second Edition 2008.) Available at: http://community-wealth.org/content/grocery-store-attraction-strategies-resource-guide-community-activists-and-local-governments-0
OCTOBER 19 (WEDNESDAY)

UNDERSTANDING REAL ESTATE DEVELOPMENT JOINT VENTURES FROM BOTH THE DEVELOPER’S AND FINANCIAL PARTNER’S PERSPECTIVE

SIMPLE WATERFALL STRUCTURE FOR A REAL ESTATE JOINT VENTURE

Reading

A. Marchant, “Structuring Successful Real Estate Development Joint Ventures” (Canvas)

B. Sample Waterfall Structure Spreadsheet (Canvas)


OCTOBER 24 (MONDAY)

QUIZ (REAL ESTATE FINANCE FUNDAMENTALS)

Preparation

TBA (Canvas)

Although the quiz will be designed to be completed by well-prepared students within the normal class period, students needing additional time may have until 6:30 p.m. to complete the quiz. Please plan your schedule accordingly.
OCTOBER 26 (WEDNESDAY)

UNDERSTANDING REAL ESTATE INVESTMENT TRUSTS (REITs): AVALONBAY COMMUNITIES, INC.

DEVELOPMENT OF URBAN AND SUBURBAN MULTIFAMILY RENTAL HOUSING IN SUPPLY-RESTRICTED MARKETS

Reading

A.  www.avalonbay.com (Focus on the “Our Company” and “Investors” sections)

B.  Long, pp. 107-108 (real estate investment trusts)

Note: William M. McLaughlin, Executive Vice President-Development at AvalonBay Communities, Inc. (AvalonBay) has been invited to be the Guest Speaker for this class. Mr. McLaughlin has worked at AvalonBay) or its predecessor Avalon Properties, Inc. since 1994. He is responsible for all of AvalonBay’s development activity in the Northeast including New England, New York and New Jersey. He is also a member of AvalonBay’s Management Investment Committee. Before joining AvalonBay, Mr. McLaughlin was with Lincoln Property Company for seven years, where he was responsible for multifamily development and acquisitions in eastern New England. He was the 2008 Chairman of the Greater Boston Real Estate Board (GBREB), was also the Chairman of GBREB’s Political Action Committee (PAC) and is a two-time past President of its Rental Housing Association (RHA) division. Bill also serves on the Board of Directors at Caritas Communities, is on the Board of Managers of the industrial real estate holdings company JWF, LLC, the Board of Overseers at Newton Wellesley Hospital, the National Association of Home Builders’ (NAHB) Multifamily Leadership Board, and is a Director of National Association of Industrial and Office Properties (NAIOP) in Massachusetts. Mr. McLaughlin is a graduate of Harvard College. (Information from AvalonBay website)

AvalonBay Communities, Inc. is in the business of developing, redeveloping, acquiring and managing high-quality apartment communities in the high barrier-to-entry markets of the United States. These markets are located in the Northeast, Mid-Atlantic, Midwest, Pacific Northwest and Northern and Southern California regions of the country. The Company owns, or holds interests in, hundreds of apartment communities with over 50,000 housing units in these markets. In addition, at any given time, the Company has a number of communities under construction and reconstruction, as well as holding future development rights for other communities. AvalonBay Communities, Inc.'s common stock trades on the New York Stock Exchange and under the ticker symbol "AVB." (Information from AvalonBay website)
OCTOBER 29 (SATURDAY)

FIELD VISIT/BUS TOUR OF REPRESENTATIVE BOSTON AND CAMBRIDGE REAL ESTATE PROJECTS

The bus will leave from the front of Taubman at 8:00 a.m. promptly and return promptly at Noon. Reminder: The bus tour will be held “rain or shine.” Dress appropriately and assume that we will be doing some walking at several of the visited sites. Bring a copy of the itinerary that will be posted on Canvas. You may want to bring a camera. Please check with the instructor to see if there will be room for guests. When appropriate, sites visited during this tour will be referenced in future classes to illustrate certain real estate principles relevant to our class discussions.

OCTOBER 31 (MONDAY)

DEVELOPING MIXED-INCOME HOUSING IN AN AFFLUENT SUBURBAN COMMUNITY

Reading

A. Marchant, “YIMBY-Developing Mixed-Income Housing in an Affluent Suburban Community”, Revised 2016 (Canvas)

Questions for Discussion

1. Should Kelly proceed with this development? What risks might there be? Do you think the rewards are worth the risks? Are there any non-financial risks and rewards that should be taken into consideration?

2. How would the risks and rewards of a seven lot, detached single-family home subdivision development at this site compare with those of the proposed 40B development?

3. Do you think that Kelly’s “back-of-the-envelope” pro forma is adequate to make a go/no-go decision? What other questions/issues might you want to investigate before making a go/no-go decision?

4. If you were a member of the Zoning Board of Appeals and Kelly proceeded with this Comprehensive Permit application for 150 three bedroom townhouse units including 38 affordable units and 112 market units, what changes, if any, might you try to negotiate to lessen any perceived or real adverse impacts on the town? What conditions might you place on your approval of the project, if you were generally in favor of the project?

5. If you owned a house adjacent to the subject site and were an opponent to the proposed development, what arguments might you use to delay, downsize, or defeat the proposed 150-unit Chapter 40B development? How should Kelly counter these likely arguments?

6. Could/should a program similar to the Massachusetts Comprehensive Permit program be enacted in your home state? Do you feel that Chapter 40B is an effective tool to create affordable housing? What families are served by the Chapter 40B program? Would you recommend any changes to the structure of the Chapter 40B program?
NOVEMBER 2 (MONDAY)

STRUCTURING PUBLIC PRIVATE PARTNERSHIPS (PPP)

PROGRESS REPORT SUMMARY FORM FOR FINAL PROJECT DUE TODAY FROM EACH TEAM

Written Assignment Due

Each Final Project team must submit a completed Progress Report Summary Form (Canvas)

Reading

A. Selected readings on Public Private Partnerships (Canvas)
B. Long, pp.163-185 (public/private partnerships)

NOVEMBER 7 (MONDAY)

PERSONALITY, SKILL, AND STYLE CHARACTERISTICS OFTEN SHARED BY SUCCESSFUL REAL ESTATE DEVELOPERS AND REAL ESTATE DEVELOPMENT PROJECT MANAGERS

Preparation

A. Marchant, “Characteristics of Successful Real Estate Developers and Real Estate Development Project Managers Exercise (Canvas)

NOVEMBER 9 (WEDNESDAY)

CLASS TOPIC AND READING TBA
NOVEMBER 14 (WEDNESDAY)

SOLDIERS FIELD DEVELOPMENT/INVESTMENT/NEGOTIATIONS EXERCISE TEAM PRESENTATIONS

Presentation times will be assigned once class enrollment is finalized and teams are formed. Final Report and Class Presentation guidelines will also be posted in advance on the CANVAS.

FINAL WRITTEN REPORTS MUST BE SUBMITTED BY ALL TEAMS ON NOVEMBER 14 EVEN IF YOU ARE PRESENTING AT LATER CLASSES.

Class time may be extended to 6:00 PM if necessary.

NOVEMBER 16 (WEDNESDAY)

NO CLASS MEETING (IN CONSIDERATION OF FIELD VISIT CONDUCTED ON OCTOBER 29)

NOVEMBER 21 (MONDAY)

SOLDIERS FIELD DEVELOPMENT/INVESTMENT/NEGOTIATIONS EXERCISE TEAM PRESENTATIONS

Class time may be extended to 6:00 PM if necessary.

NOVEMBER 23 (WEDNESDAY)

NO CLASS / UNIVERSITY THANKSGIVING RECESS

NOVEMBER 28 (MONDAY)

SOLDIERS FIELD DEVELOPMENT/INVESTMENT/NEGOTIATIONS EXERCISE TEAM PRESENTATIONS

Class time may be extended to 6:00 PM if necessary.
NOVEMBER 30 (WEDNESDAY) (FINAL CLASS)

COURSE EVALUATION

DISCUSSION OF SOLDIERS FIELD DEVELOPMENT/INVESTMENT/NEGOTIATIONS
EXERCISE REPORTS AND PRESENTATIONS

COURSE SUMMARY
COURSE OUTLINE (FALL 2016)

<table>
<thead>
<tr>
<th>CLASS</th>
<th>DATE (DAY)</th>
<th>TOPIC</th>
</tr>
</thead>
</table>
|       |            | Shopping Day  
Note: Shopping Day class will be held in the regular classroom, Littauer 230 at HKS, from 4:15-5:30 p.m.  
First Shopping Day Session: 4:15-4:45 p.m.  
Second Shopping Day Session: 5:00-5:30 p.m. |
| 1     | 8/31       | Course Introduction / Course Requirements  
Establishing Investment Objectives /  
Understanding How Real Estate Value is Created  
Somerville Commons (Case)  
Note: The case to be prepared for this class will be distributed at the Shopping Day class. The case will also be available on Canvas and from Faculty Assistant Michael Weinbeck in Littauer 133. |
| 2     | 9/2        | Understanding How Real Estate Value is Created /  
Net Operating Income (NOI) / Adjusted NOI/  
Weighted Average Cost of Capital (WACC) /  
Return on Total Asset Cost (ROTAC) /  
Cash-on-Cash Return /  
Cap Rates (Purchase, Operating and Exit) |
<table>
<thead>
<tr>
<th>CLASS</th>
<th>DATE (DAY)</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9/5 Monday</td>
<td>No Class / University Holiday (Labor Day)</td>
</tr>
<tr>
<td>3</td>
<td>9/7 Wednesday</td>
<td>Debt Financing Fundamentals / Mortgage Underwriting Basics / Positive Financial Leverage / Permanent Financing / Construction Financing Before Tax Cash Flow (BTCF)</td>
</tr>
<tr>
<td>5</td>
<td>9/14 Wednesday</td>
<td>Future Benefits (Net Cash from Sale) / Determinants of Future Value/ Understanding Exit Cap Rates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Explanation of Final Project Assignment and Requirements</td>
</tr>
<tr>
<td>6</td>
<td>9/19 Monday</td>
<td>Feasibility Study Exercise, Part I <em>(Written Assignment Due)</em></td>
</tr>
<tr>
<td>7</td>
<td>9/21 Wednesday</td>
<td>Feasibility Study Exercise, Part II / Discounted Cash Flow Analysis / Hurdle Rate / Net Present Value (NPV) / Internal Rate of Return (IRR) / Fixed and Variable Costs / Sensitivity Analyses</td>
</tr>
<tr>
<td>8</td>
<td>9/26 Monday</td>
<td>Detailed Development and Investment Analysis: Revere Street (HBS Case)</td>
</tr>
<tr>
<td>9</td>
<td>9/28 Wednesday</td>
<td>Site Selection, Site Planning, Building Design and Permitting/Entitlement Exercise Roles of the Public Sector (Federal/State/Local) In the Real Estate Development Process</td>
</tr>
<tr>
<td>CLASS</td>
<td>DATE (DAY)</td>
<td>TOPIC</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td>-------</td>
</tr>
<tr>
<td>10</td>
<td>10/3 Monday</td>
<td>Understanding and Estimating Land Value (Residual Land Value Methodology) Site Control Alternatives</td>
</tr>
<tr>
<td></td>
<td>10/5 Wednesday</td>
<td>Angus Cartwright IV (Class I) (Case) <em>(Written Assignment Due)</em> Standard Industry Measures of Returns</td>
</tr>
<tr>
<td></td>
<td>10/10 Monday</td>
<td>No Class / University Holiday (Columbus Day)</td>
</tr>
<tr>
<td>11</td>
<td>10/12 Wednesday</td>
<td>Angus Cartwright IV (Class II) (Case) <em>(Written Assignment Due)</em> Investment Recommendations Next Steps Strategy</td>
</tr>
<tr>
<td>12</td>
<td>10/17 Monday</td>
<td>Real Estate Development Process Exercise: Developing an Inner City Supermarket Understanding the Potential Community and Economic Development Benefits of Inner City Supermarkets</td>
</tr>
<tr>
<td>13</td>
<td>10/19 Wednesday</td>
<td>Understanding Real Estate Joint Ventures from both the Developer’s and Financial Partner’s Perspective Simple Waterfall Structure for a Real Estate Joint Venture</td>
</tr>
<tr>
<td>14</td>
<td>10/24 Monday</td>
<td>Quiz <em>(Real Estate Finance Fundamentals)</em></td>
</tr>
<tr>
<td>15</td>
<td>10/26 Wednesday</td>
<td>Understanding Real Estate Investment Trusts (REITs) Development of Urban and Suburban Multifamily Rental Housing In Supply-Restricted Markets Guest Speaker: William McLaughlin (Confirmed) <strong>Executive Vice President-Development</strong> <strong>AvalonBay Communities, Inc.</strong></td>
</tr>
<tr>
<td>CLASS</td>
<td>DATE (DAY)</td>
<td>TOPIC</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td>-------</td>
</tr>
</tbody>
</table>
| 17/18 | 10/29 Saturday | Field Visit (Representative Real Estate Projects in Cambridge and Boston)  
(Saturday Morning / 8:00 a.m. - Noon) |
| 19 | 10/31 Monday | Developing Mixed-Income Housing in an Affluent Suburban Community (Case) |
| 20 | 11/2 Wednesday | Structuring Public Private Partnerships (PPP)  
**Progress Report for Final Project Due Today** |
| 21 | 11/7 Monday | Personality, Skill, and Style Characteristics Often Shared by Successful Real Estate Developers and Real Estate Development Project Managers |
| 22 | 11/9 Wednesday | Class Topic and Reading TBA |
| 23 | 11/14 Wednesday | Soldiers Field Development/Investment/Negotiation Exercise:  
Soldiers Field Final Project: Team Presentations  
**(Final Report Due from All Teams)** |
| 24 | 11/21 Monday | Soldiers Field Development/Investment /Negotiation Exercise (Class II)  
Soldiers Field Final Project: Team Presentations |
<p>| | 11/23 Wednesday | No Class / University Thanksgiving Recess |</p>
<table>
<thead>
<tr>
<th>CLASS</th>
<th>DATE (DAY)</th>
<th>TOPIC</th>
</tr>
</thead>
</table>
| 25    | 11/28 (Mon)| Soldiers Field Development/Investment /Negotiation Exercise (Class III)  
|       |            | Soldiers Field Final Project: Team Presentations |
|       | 11/30 (Wed)| Course Evaluation  
|       |           | Discussion of Final Project Presentations  
|       |           | Course Summary |