

U280A / Environmental Design Studio
Lectures: T 7-9:45 pm (SEI 315) / Studio W 7-9:45 pm (SEI 101/315)
Course Email Address: 51454-W07@classes.uci.edu

Raul Lejano (lejano@uci.edu), Instructor *
[*Lejano's Office Hours: 2-4 pm Tuesdays, Room 218G*]
Hong Joo Kim (hjkim@rbf.com), Lecturer *
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Schedule Lectures, Tuesday 7-8:45 p.m. (Room 315)
 Workshops, Wednesday 7-8:45 p.m. (Room 315 or Computer Lab).

Abstract Design is an ecological pursuit, conducted among multiple publics. In this class, we take up the collaborative design of an innovative treatment wetlands being planned by the Irvine Ranch Water District (IRWD). The first quarter of the two-quarter sequence involves skills building. Combining lectures with hands-on workshops, students will engage in the techniques and practices of site planning, environmental design, and applied landscape ecology. The spring quarter will involve site design and interface with both IRWD and others. The course involves taking on skill sets, and foremost among these are professional practices and modes of project delivery. In addition, fundamental skills in environmental and landscape design will be covered. The two course sequence ends with a presentation of the final site design to the IRWD. In course of the project, we will also study the progression of design as integrative, multiplex, and contextual logic. The objective of the course is not only the experience of designing an actual land use, but that of uncovering grounded theories of design.

Deliverables for the winter will include: two alternative design concepts (including drawings --plan and section, concept narrative, and park layout) and workshop design ledger. Several meetings/presentations will be scheduled with IRWD management.

* HONG JOO KIM is a landscape architect and urban designer with RBF Consulting, Inc. Previous projects include Orange County Great Park Design Competition, the Xochimilco Ecological Park in Mexico City and the Houston Downtown Great Park. He has two graduate degrees in Landscape Architecture, most recently from the Harvard Graduate School of Design.

AL ZELINKA is a principal and senior associate with RBF Consulting's Urban Design Studio and the co-author of *Placemaking on a Budget* (APA, 2005) and *SafeScape* (APA, 2001). He was the AICP President's Award recipient in 2006. He was a student in the PhD program.

NORRIS BRANDT is a principal with IRWD and project manager for IRWD's Treatment Wetlands Program. His master's degree is in environmental engineering.

KELLIE WELCH is a water resources policy expert with IRWD.

AMANDA MERCHANT is an architect, by profession and presently a PhD student at PPD.

RAUL LEJANO is an environmental planner. He formerly taught the Sustainable Cities Studio, after which this studio course is fashioned, for some years at the MIT Dept. of Urban Studies and Planning.

Course Requirements	Participation	15%
	Professional Conduct	15%
	Workshop Exercises	25%
	Design Concept	30%
	Workshop Ledger	15%

Notes: Participation Students are required to attend the lectures and workshops. Regarding the latter, all students will be required to commit to 2.5 hours a week of workshop time outside the lectures. The workshop schedule be adhered to every week beginning in Week 3. The professor can give a failing grade to any student failing to meet any of the above requirements. Absence from any class or workshop will be arranged with the professor prior to such absence --if absent for emergency reasons, absentee will document it and provide letter (if applicable) from physician. In general, missing a class or workshop in order to attend to off-campus work or internship is not an acceptable reason. Students will be asked, beginning in Week 3, to form two groups. Each student is expected to contribute equally to group work. The students in each group are both individually and collectively responsible for the professional delivery and quality of all project deliverables (as described in the course outline, below). Professional conduct, whether in school or in the field, is expected, as is timely project delivery. This requires constant communication with group members, the instructors, and the IRWD contact(s). In particular, email or other communication from contact(s), will be responded to by students within two days. Any requests for information from IRWD, requests to visit the site, or other matter involving IRWD will be sent to both Messrs. Brandt and Lejano. It is understood that students enrolling in U280A with Prof. Lejano will also enroll in U280B in the spring with the same instructor.

Fieldwork Each student will be required to visit the project site (at the IRWD Operations Center in Irvine) at least once during the winter quarter, and at least twice during the spring quarter. While site visits will only be done in groups, and under the supervision of our IRWD contact(s), students are responsible for their own safety during these visits. Students who, for some reason or another (e.g., medical reasons), feel they should not visit the site, will arrange with the instructor for an equivalent instructional experience indoors at the IRWD Operations Center.

Professional Obligations Note that the class does have an obligation, though not a contractual one, vis-à-vis the timeliness, professional quality, and integrity of the deliverables (most of all, the final site design) which will be presented to the IRWD. Presentations to the IRWD Directors may not be scheduled so as to allow every student to attend --in this case, we will apportion the work accordingly so that those who cannot attend contribute to the presentation beforehand, and those whose schedules permit will present --the same will be true for any presentations made in the School.

Workshop Ledger At each of the Thursday workshops, two group members will be assigned to take detailed notes on the course of the discussion. These notes, along with photocopies of sketches and other material produced during the workshop, will be added to a group ledger. The ledger will be turned over to the professor by the end of Week 10. The ledger will be one of the deliverables for the quarter. Note that the ledger exercise will be carried through to the Spring Quarter, at the end of which a group analysis will be prepared on the Logic of Design.

Design Concept The other deliverable will be a design concept for the treatment wetlands and site. The class will be divided into two groups, and two alternative design concepts will be produced by the end of Finals week. The deliverable will include a design narrative, environmental performance calculations, charette material, and site layout. During the spring quarter, the class will utilize these two design concepts to produce one, final design concept prior to preparing detailed design and drawings for the site.

Texts (to be used for both winter and spring quarters)

Note that students should come to the lecturer already having read the assigned readings for that week. For example, read the assigned articles from the Course Reader (by Lynch et al.) prior to the lecture on Tuesday of Week 4. For the first meeting, the required readings ("Professional Life", Course Syllabus, and Course Plan) can be found on the course website.

1. Textbook (available at the UCI Bookstore)
 - Dramstad, Olson, and Forman (1996), Landscape Ecology Principles.
 - Wates (2000), Community Planning Handbook, Monarch.
2. Online Textbook (pdf files will be provided on course website)
 - i. Professional Life.
 - ii. US EPA (2000), Constructed Wetlands Treatment of Municipal Wastewaters, EPA 625/R-99/010, September, 2000, Cincinnati, Ohio.
 - iii. Santa Ana RWQCB, MS4 NPDES Permit for Orange County.
 - iv. Architectural Drawing
 - iv. IRWD (2005), NTS Master Plan and DEIR for Constructed Wetlands Program.
 - v. Logic of Design
3. Course Reader
Purchased from University Course Readers.

Students order online at <http://www.universityreaders.com/students> and follow these exact steps:

1. Click the "Create New Account" button (or enter your existing login information and skip to step 6)
2. Select your State from the dropdown menu.
3. Select your University from the resulting dropdown menu.
4. Enter the fields on the page such as a "login/password" you'd like to use and applicable "address" info.
5. Click "Save" button to create your account, and you'll automatically be taken to your university page.
6. At your university page, click the "Add to Cart" button to right of course pack to purchase.
7. Click on the "Checkout" button on the next page.
8. Review your address info and click on the "Continue" button on the next page.
9. Review service agreement page, click "I Agree – Continue Checkout" button on next page.
10. Select shipping and payment preferences from the dropdown menus. Click "Continue".
11. Enter payment details and click the "Place Order" button to finalize your order. The authorization will take about 5-10 seconds. You'll be prompted with an Invoice screen once your order has been authorized and completed. You will also receive confirmation via email regarding your order. Please direct all ordering questions to webmaster@universityreaders.com or call 800.200.3908.

Other Material

24" or 36" wide tracing paper, engineering scale, 36" long straight edge ruler (or T square), 45/60 degree triangle, HB pencils or mechanical pencil with HB lead, pencil sharpener, eraser, permanent marker (fine, medium, big). Note that two students can share one roll of tracing paper. These can be purchased at any office supply store.

Pretext

The proposed artificial wetlands site is part of a larger master plan authored by the IRWD. It is referred to as Site 62, the SAMS 1 site, on pg. 46 of the NTS Master Plan (IRWD, 2005) –this report is found on the course website. Some expected treatment benefits of the SAMS 1 site are described in pages 65 and 67 of the Master Plan. Early in 2006, Prof. Lejano met with the IRWD to plan for the studio, which is envisioned as a both a chance to freely explore design concepts within a collaborative framework. While the studio participants have free rein over working up designs, there is also a formal obligation to deliver a design, with all the expectations regarding quality of work and professional standards attached –the final product will be formally delivered at the end of spring quarter. This is a professional obligation, though not a contractual one.

Preview of Spring Quarter:

While the winter quarter has, as its goal, the creation of two alternative design concepts for the project site, the spring quarter involves construction of a single design for the site, utilizing input from the public and IRWD. The spring quarter consists of intensive studio work on a site design for the study site. Early in the quarter, the class will compile specs for the project deliverable (parts of what in practice is called a pre-design report). If possible, a design workshop will be conducted in the first two weeks off the quarter in order to combine elements from the two design concepts into one final design. These designs will include concept narratives, site plans, sections, and 3D model. Other elements are possible and up to the discretion of the two groups. The final designs (due the end of Spring quarter) will also include a project concept narrative, reports on public access, rest area design, environmental compliance, design specs (e.g., embankments, paths), and pipeline layout report. Design will involve collaboration with IRWD, as well as other publics. A design charette will be conducted early in the quarter with IRWD and members of the public. There will be an emphasis on professional project delivery and fulfillment of the scope of work (which will be drawn up at the beginning of the quarter).

Course Outline

Week 1: Introduction / Project Scoping

The initial meeting, on Tuesday, will host Paul Jones, IRWD General Manager, who will speak about the mission and culture of IRWD and the vision for this unique collaboration. Prof. Lejano will walk the class through the theory and deliverables for the course. Students should come to this meeting already having read the article, "Professional Life" and the syllabus, which will both be posted on the course website.

There will be no Wednesday studio workshop this first week.

Readings: The Logic of Design (course website)
A Professional Life (course website).

Week 2: Regulatory Background

On Tuesday, Norris Brandt of the IRWD, will discuss the regulatory context in which treatment wetlands is situated, as well as the imperative for such BMPs in the OC watershed. There is a history to water quality politics in Southern California that date back to the initial Basin Plans. Students will familiarize themselves with the county nonpoint source management initiative and the structure of the TMDL program.

Instead of a Wednesday studio workshop, the class will meet at the IRWD site from 10-12 a.m. on Saturday, Jan. 20. Maps to the IRWD "Duck Club" parking lot will be provided. Be prepared to do fieldwork (we will be preparing a topo map of the site; work to be done in groups).

Reading: Chapters 1 and 2, plus pages 46 and 65 from IRWD (2005), NTS Master Plan and DEIR for Constructed Wetlands Program (online reader on course website).

Week 3: Treatment Process Design

The lecture will cover the fundamentals of environmental quality design, specifically process reactor hydraulics and configurations. There is no required training in hydraulics or environmental engineering, but students will need to come to class already having read the design manual (EPA, 2000), which is posted on the course website, plus other readings. Emphasis will be placed on options for basin configuration and dimension. During this week, students will form two groups that will each work on a design concept for the IRWD site. Local design specs will be introduced (e.g., design floods).

The class will meet at the regular studio workshop time on Wednesday and will work in groups of two on developing alternative configurations for a pond reactor assuming, alternatively, completely mixed conditions and plug-flow dynamics. Please bring a calculator.

Reading: Chapters 4 and 6 in US EPA (1999) (online reader on course website).

Week 4: Graphic Representation Techniques

At the lecture on Tuesday, Hong Joo Kim will cover the fundamentals of graphic representation, including preparation of plan, section/elevation, and isometric views (e.g., two point perspectives). All work will be done to scale. Contours, cut & fill, and other elements will be discussed. Interface with CAD and 3D computer modeling software will also be discussed.

At the Wednesday studio workshop, students will work in groups of two and will choose a suitable site on the UCI campus and prepare: plan, section, and two point perspective views of a proposed modular structure and adjacent fishpond.

Reading:

Reid, W. Grant, 2002, Landscape Graphics, New York, Watson-Guption

Harris, W. Charles and Dines, T. Nicholas, 1997, Time-Saver Standards for Landscape Architecture, McGraw-Hill.

Week 5: Site Analysis

On Tuesday, Hong Joo will discuss the concept and practice of site analysis, including identification of opportunities and constraints, modes of representation, and mapping as a mode of knowledge integration. Examples of professional work will be presented.

At the Wednesday workshop, students will form two groups and prepare a map montage. Two base maps, one at a regional scale level and another on a neighborhood scale, will be prepared.

Readings:

Simonds, O. John, 1997, Landscape Architecture, McGraw-Hill

Collins, F. John, 1988, Livable Landscape Design

Week 6: Site Planning

On Tuesday, Hong Joo will talk about the art and science of site planning. Followed by the practice of site analysis and identification of site opportunities and constraints, act of site planning will harmonize the essential science of nature and human needs into the spatial form.

At the Wednesday workshop, the class will meet at the SE I computer lab, and Scott Smith will walk the class through the use of ArcGIS for preparation of plan and section of a hypothetical pond on the site. Students will form teams of two and prepare two "alternatives": first, of a contour-driven pond and, second, a user-specified geometric design. Each group will submit a plan view and section of each design.

Readings:

Lynch, Kevin and Hack, Gary, 2000, Site Planning, The MIT Press

France, L. Robert, 2003, Wetland Design: principles and practices for landscape architects and land-use planners, New York, Norton

Week 7: Applied Landscape Ecology Theory

On Tuesday, Hong Joo will discuss the fundamentals of landscape ecology from a design perspective. This includes a consideration of concepts such as patches, corridors, edges, and mosaics. Particular attention will be paid to the intersection of aesthetic considerations, human usage, and wildlife habitat requirements.

On Wednesday, students will work in groups of two and choose one medium scale and one micro scale area from the IRWD site and analyze its ecology and relationship to the surrounding landscape.

In addition, during this week, students will arrange with Norris Brandt to set up a time when students can visit the site and do some field research consisting of observation, phenomenological reflection, photography, and others. These notes will form part of the Workshop Ledger. The idea is for context to become more and more integrally related to design.

Readings:

Thompson, H. Ian, 2000, Ecology community and delight, New York

Grimm, B. Nancy, Grove, Morgan, Pickett, Steward, and Redman, Charles, Integrated approaches to long-term studies of urban ecological systems

Thompson, George and Steiner, Frederick, 1997, Ecological design and planning, John Wiley and Sons, Inc.

Week 8: Design Charettes

On Tuesday, Al Zelinka will give a lecture on the concept, design, and implementation of design charettes. Their place in a larger project and professional context will be important, as are the actual rudiments of running a charette. Some case studies will be taken up in class. Deliverables will be discussed.

On Wednesday, the two groups will each conduct a design charette among them and use this as a forum to brainstorm different design ideas and pool them on a charette. This is a way to further refine a design concept for the site. The groups will carefully record the conduct of the charette and prepare a summary design process write-up of this.

Readings:

Wates, The Community Planning Handbook (2000), pp. 1-21, 50-51 (textbook).

Community Participation Methods in Design and Planing (Sanoff)

Week 9: Public Access

On Tuesday, we will discuss public access requirements, dealing with fire safety, recreation, and park ordinances. Some discussion will also be devoted to potential water reclamation uses, though this is not formally a consideration for the site. We will also discuss paths, rest areas, and parking requirements.

On Wednesday, the two groups will work on finalizing design concepts for the site. This involves pond layout and design narrative, all the while integrating environmental and habitat elements. The groups will, at this time, begin preparing a 3D cardboard model of their design (Kim and Smith will assist in this process).

Week 10: Project Delivery

On Tuesday, we will have a short discussion of project delivery considerations. Other specifications pertinent to the pre-design stage will be discussed. The rest of the period, as well as the Wednesday workshop, will be devoted to finalizing the two design concepts.

Week 11: Presentation of Design Concepts

On Tuesday, the two groups will present their respective designs to a panel of reviewers. Groups will carefully note suggestions and critiques for possible incorporation into the final design concept. There will be no Wednesday workshop. There will be a presentation made, of these alternative designs, to the IRWD board (second and fourth Mondays of each month, either March 26 or April 9).

Course Plan: Winter Quarter

Week 1 Introduction/Project Scoping

Focus of Lecture (T, 1/9)	Introduction to studio and IRWD project (Paul Jones, IRWD Gen. Mgr.). Project scope and professional practices.
Readings for this Week: "The Logic of Design" and "Professional Life" from course website. Course Syllabus and Course Plan from course website.	
Topics	Introduction to studio format and design project. Operational plan and professional practices. Communication plan and workshop schedule. Group assignments (Note: the class will be divided into two groups, both of which will produce independent design concepts by end of quarter.) Schedule of deliverables.
Workshop (W, 1/10)	
	No workshop this week.

Week 2 Regulatory Context

Focus of Lecture (T, 1/16)	Regulatory/organizational context and requirements (Norris Brandt, IRWD).
Readings for this Week: Chapters 1 and 2, plus pages 46 and 65 from IRWD (2005), NTS Master Plan and DEIR for Constructed Wetlands Program (on course website).	
Topics	Mission of the IRWD. Motivation behind treatment wetlands program. Stormwater regulations. Water reclamation regulations, Title 22.
Workshop (Saturday, 1/20)	
	Instead of meeting on Thursday this week, class will visit the site on Saturday, 1/20, meeting at IRWD "Duck Club" at 10-12 am.

Week 3 Treatment Process Design

Focus of Lecture (T, 1/23)	Environmental performance of constructed wetlands. Treatment process design.
Readings for this Week: US EPA (1999) from Course Website, Chapters 4 and 6.	
Topics	Calculating pollutant removals for target pollutants from wetlands. Sizing and geometric design of treatment ponds. Calculating alternative removals efficiencies of CSTR versus plug-flow reactors.
Workshop (W, 1/24)	Workshops will be held in Room 315 every Thursday evening from this week onwards (though some sessions will be at the SE I Computer Lab). This week, each group will divide up into two sub-groups. Sub-group 1 will calculate size requirements for a CSTR reactor (both one stage and two-stage). Approximately draw dimensions and slopes. Sub-group 2 will calculate size requirements for a plug-flow reactor (channel-design). Approximately draw dimensions and slopes. Each design will be accompanied by estimates of pollutant removals and predicted effluent concentrations. Site area constrains pond dimensions.

Week 4 Graphic Representation Techniques

Focus of Lecture (T)	Provide an overview of graphic representation techniques
<p>Readings for this week:</p> <ul style="list-style-type: none"> ▪ Selections from <u>Landscape Graphics</u> (Reid Grant) 	
Topics	<p>At students' choice of either computer or hand graphic practicing following graphic methods;</p> <p>Plan</p> <ul style="list-style-type: none"> How to use scale Set up base map Draw object in scale Vegetation, building, road, and others Lines and hierarchy of lines <p>Section</p> <ul style="list-style-type: none"> Cutting sections of objects Drawing a plan out of sections <p>Axonometric</p> <ul style="list-style-type: none"> Setting up sheets Applying scale and z value <p>Perspectives</p> <ul style="list-style-type: none"> 2 vanishing point perspective <p>Understanding and creating contours</p> <ul style="list-style-type: none"> Understanding contours Cutting sections of contours Drawing a plan from contour sections
Resources	<p>Show students examples of graphics that I have done in the past:</p> <ul style="list-style-type: none"> ▪ Plan rendering, hand and computer ▪ Sections ▪ Perspectives ▪ Axons ▪ 3D computer modeling ▪ Physical modeling ▪ Great park competition board ▪ Construction document (CAD drawing)
Workshop (Th)	<p>a) Preparing Base Map</p> <ul style="list-style-type: none"> ▪ Using series of scaled sections as a frame, choose a site from the campus small enough to show the detail of contour, building, sidewalk/path, vegetation detail enough to communicate with others <p>b) Supportive drawings:</p> <ul style="list-style-type: none"> ▪ One plan, (2) two sections, and one artistic perspective rendering at your choice of either computer or hand graphic <p>c) Reading:</p> <ul style="list-style-type: none"> ▪ Selections from <u>Landscape Graphics</u> (Reid Grant) <p>d) Collecting GIS data for SAMS 1 site and other research on site</p>

Week 5 Design Skill I: Site analysis (Mapping)

Focus of Lecture (T)	Site analysis and site planning
<p>Readings for this week:</p> <ul style="list-style-type: none"> • Selections from <u>Landscape Architecture</u> (Simonds, O. John) • Selection from <u>Livable Landscape Design</u> (Collins, John) 	
Topics	<p>Presentation of team and individual Workshop (Th) from Week 4</p> <p>Typical site analysis (site opportunities and constraints) and representations</p> <p>Raw data gathering and mapping</p> <ul style="list-style-type: none"> ▪ Gathering raw data information (using GIS and other research) – team work and presentation <ul style="list-style-type: none"> ○ Temperature, geographical and geological information, precipitation, geotechnical information, water resources, local and regional economy, cultural and historical phenomenon, permanent and temporal event, political aspect, and so forth.
Resources	<ul style="list-style-type: none"> ▪ Show students examples of Site Analysis
Workshop (Th)	<p>Completion of Site Analysis including Opportunities and Constraints.</p> <p>Base map preparation:</p> <ul style="list-style-type: none"> ▪ Select (1) one regional scale of aerial map (team work; two teams) of your choice and (1) neighborhood scale of aerial map

Week 6 Design Skill II: Site planning

Focus of Lecture (T)	Principles of site planning
<p>Readings for this week:</p> <ul style="list-style-type: none"> • Selections from <u>Site Planning</u> (Lynch, Kevin and Hack, Gary) • Selection from Time-Saver Standards for Landscape Architecture (Harris, W. Charles and Dines, T. Nicholas) • Selections from <u>Wetland Design: principles and practices for landscape architects and land-use planners</u> (France, L. Robert) 	
Topics	<p>Continuation/application of Site Analysis to the site</p> <p>Schematic Design</p> <p>Design Development</p> <p>Construction Document</p> <p>Programming</p> <ul style="list-style-type: none"> ▪ <i>Active</i> ▪ <i>Passive</i> ▪ <i>Overlapping</i> <p>Designing using diagrams to scale</p> <ul style="list-style-type: none"> ▪ <i>Circulations and Corridors</i> ▪ <i>Spaces</i> ▪ <i>Edges</i> ▪ <i>Entry</i> <p>Site Planning as preliminary design tool</p> <ul style="list-style-type: none"> ▪ <i>Soft Landscape</i> ▪ <i>Hard Landscape</i> ▪ <i>Trees, Hedges, usable surface, paving types</i> ▪ <i>Design by regulations</i>
Resources	<ul style="list-style-type: none"> ▪ Show students examples of Site Planning
Workshop (Th)	<p>GIS Lab: (C. Scott Smith)</p> <p>Accessing digital elevation map on ArcGIS.</p> <p>Drawing contour-following pond layouts.</p> <p>Drawing user-specified pond layouts.</p> <p>Obtaining elevation plans / cross-sections.</p> <p>a) Individual work; chose medium scale/micro scale site out of team site by team discussion. Explain why such a site is important for biodiversity and ecosystem, design/suggest patch, corridor, edge, and mosaic to accomplish healthy ecosystem and why?</p>

Week 7 Design Skill III: Applied landscape ecology theory

Focus of Lecture (T)	Principles of landscape ecology theory
<p>Readings for this week: Thompson, H. Ian, 2000, Ecology community and delight, New York Grimm, B. Nancy, Grove, Morgan, Pickett, Steward, and Redman, Charles, Integrated approaches to long-term studies of urban ecological systems Thompson, George and Steiner, Frederick, 1997, Ecological design and planning, John Wiley and Sons, Inc.</p>	
Topics	<p>Importance of biodiversity and history of landscape ecology</p> <p>Influence of biodiversity to natural, cultural, economical, and others</p> <p>Elements of Landscape</p> <ul style="list-style-type: none"> ▪ <i>Patch</i> ▪ <i>Corridor</i> ▪ <i>Edge</i> ▪ <i>Mosaic</i> <p>Team work; site analysis and application of landscape ecology of regional/neighborhood scale (Los Angeles and Orange County), suggestion of patch, corridor, edge, and mosaic</p>
Resources	<ul style="list-style-type: none"> ▪ Show students examples of precedents
Workshop (Th)	<ul style="list-style-type: none"> a) Site Analysis a) Getting a design concept and Programming b) Diagrams d) Scaled Plan including planting, parking, entrance, programmed spaces, path, and so forth

Week 8 Design Skill IV: Charrettes

Focus of Lecture (T)	Purpose, design, and implementation of design charrettes (Al Zelinka)
Readings for this week: Wates, The Community Planning Handbook (2000), pp. 1-21, 50-51 (textbook). Community Participation Methods in Design and Planing (Sanoff)	
Topics	Introduction to the principles of community planning Theory of collaborative planning Planning and design of charrettes Case studies.
Resources	<ul style="list-style-type: none"> ▪ Show students examples of precedents
Workshop (Th)	The two groups are to meet separately and use the workshop time to conduct a design charette among themselves. We will set up two “easels” for each group to use. This will be a chance to learn the method of design charrettes while using the same forum to pool together ideas for each group’s design. The process is to be videotaped and recorded in detail in the group workshop journal.

Week 9 Public Access

Focus of Lecture (T, 3/6)	Public access and fire code regulations. Options for recreational use of site.
Readings for this Week: Fire safety ordinance from Course Website.	
Topics	Public access requirements, routing public access. Setback and fire code requirements. Standards for recreational use (rest areas, other uses). Case studies. Interface of site with other activities on IRWD property.
Workshop (W, 3/7)	(a) Groups to meet at regular time to continue site concept formulation. (b) Each of the two groups will begin, at this time, creation of a cardboard topographic model of the site, along with plan and sections of the design on GIS.

Week 10 Project Delivery

Focus of Lecture (T, 3/13)	Project delivery, preparation of deliverable.
Readings for this Week: None.	
Topics	The two groups will each take 30 minutes to present their site concepts. The review panel will comment and make suggestions on the concepts. Groups will take notes of suggestions and concepts evolving out of the discussion.
Workshop (W, 3/14)	
	Groups to meet at regular time to finalize site concept preparation. Continue work on final deliverable (narrative, layout, treatment calcs). Each group will also "spec" out the final deliverable, due at the end of the Spring Quarter (e.g., how many drawings, format, required narratives, etc.).

Week 11 Presentation of Design Concepts

Focus of Lecture (T, 3/20)	Presentation of design concepts and panel review.
Readings for this Week: None	
Topics	The two groups will each take 30 minutes to present their site concepts. The review panel will comment and make suggestions on the concepts. Groups will take notes of suggestions and concepts evolving out of the discussion.
Workshop	
	No workshop this week (note: presentation of alternative design concepts to IRWD board either on Monday, 3/26 or Monday, 4/9).