FLORIDA REDEVELOPMENT ASSOCIATION
REQUEST FOR PROPOSALS

Request for Proposals (RFP) For Creation of Training Materials for a Professional Certification Courses on Infrastructure - Above Ground Streetscapes and Infrastructure – Underground Utilities

The Florida Redevelopment Association (FRA) is seeking Proposal from individuals, firms, or consortiums interested in developing a training modules for the FRA professional certification program. The contract for services shall be for a period ending December 30, 2018. The RFP guideline package can also be obtained at www.redevelopment.net, or by email from Carol Westmoreland at cwestmoreland@flcities.com. Responses to the RFP are due on or before 3:00 pm on January 22, 2018, and must be mailed or delivered to:

Carol Westmoreland, Executive Director
Florida Redevelopment Association
301 S. Bronough Street, Suite 300
Tallahassee, FL 32302-1757

The FRA reserves the right to accept or reject any and all responses, to waive irregularities, and to re-advertise as may be determined to be in the best interest of the FRA. The FRA accepts no responsibility for any response not reaching the prescribed delivery point within the time period stipulated.

FLORIDA REDEVELOPMENT ASSOCIATION
REQUEST FOR PROPOSALS

Guidelines for Submitting Proposals for Development of Training Materials and Teaching Professional Certification Courses on Infrastructure – Above Ground / Streetscapes and Infrastructure – Underground Utilities

1. INTRODUCTION:

The Florida Redevelopment Association (the FRA) is seeking the services of individuals or firms (the Responder) interested in providing professional services for the creation of training modules for the association's professional certification program. It is anticipated that one Responder will be selected for a contract period to end on December 30, 2018. During this period, the FRA shall reserve the right to seek proposals and/or responses from other firms or individuals for other training modules as deemed to be in the best interest of the FRA. This RFP seeks assistance in developing training modules on (1) Infrastructure – Above Ground / Streetscape and (2) Infrastructure – Underground Utilities. The FRA has developed initial outlines for the modules which are included as Attachment C. However, the FRA desires input from the selected Responder on the scope of the training and the outline provided in Attachment C should only be considered a starting place.

The FRA selection committee may short-list as many as three individuals or firms, and may conduct personal phone interviews prior to final selection from among the Responders.

2. SCOPE OF WORK:

a) Develop an understanding of the scope and scale of the training material required by the FRA.
b) Work with the FRA Certification Committee to develop the modules. The Certification Committee meets on the fourth Friday of every other month in Winter Park, Florida. On alternate months, the Committee meets telephonically. The selected Responder would be expected to attend some meetings during the initial development stage, though attending telephonically would be acceptable at later stages of the development of the module. The first formal training session(s) will be at the 2018 FRA Annual Conference.
c) Develop the training modules for two one-day, 6-8 hour presentation and testing to be done in classroom format. This includes the production of a PowerPoint presentation, a Study Guide to be provided on CD to attendees three weeks prior to the formal training, an instructor's teaching guide no later than a month prior to the formal training, and 100 test questions, of which 50 are to be administered by the Responder at the end of the formal training. **The Responder is expected to teach and test the modules one time as part of the development of the module. It is anticipated that the test teaching will be done in June or July of 2018 in Winter Park.**
d) The training modules should be developed in logical segments so that they could be broken down into "mini-teachings" that could be presented through webinars or other such teaching venues.
e) The successful Responder would be required to teach the modules to a "test" group upon

completion and make adjustments as necessary before the first formal training based on the results of that "test" teaching. **The "test" teaching is not the one formal training session referenced in Section 2(c).**

f) If requested by the Board, the selected responder should be prepared to attend at least one FRA Board Meeting, date and location yet to be determined.

g) Proposed outlines of the modules are attached to this RFP. The FRA Certification Committee is interested in evaluating any suggestions that the successful Responder wishes to make related to changes or additions to these outlines.

h) The developed training materials must be delivered or transmitted to the FRA in a paper copy and in a digital format acceptable to the FRA that can be modified and updated without the acquisition of proprietary or other software.

i) **If the Responder does not desire to teach the modules periodically, this should be indicated clearly as a part of the Response. Otherwise, the cost for development of the curriculum and the cost for teaching of each module (after the first teaching required in Section 2 above), should be detailed separately.**

3. INFORMATION REQUESTS

For information pertaining to this Request for Proposals (RFP), contact the Executive Director of the FRA in writing as shown in Section 14. Such requests for information shall be in writing and for clarification purposes only. Material changes, if any, to the scope of services or response procedures will be transmitted only by an email addendum.

4. ANTICIPATED RFP TIMETABLE

If you are planning upon submitting a response to the RFP, please notify Carol Westmoreland at cwestmoreland@flcities.com so you will be provided with any addendums to the RFP,

a)	Release of RFP	December 15, 2017
b)	Deadline for Written Questions	January 5, 2018
c)	Response Due Date at 3:00 pm	January 22, 2018
d)	Evaluation of Responses and Short Listings Completed by	January 29, 2018
e)	Potential Presentations from Short-listed Responders	February 5, 2018
e)	Approval of Selection by the FRA Board	February 15, 2018
f)	Contract Executed with selected Proposer	February 21, 2018

All dates are tentative. The FRA reserves the right to change scheduled dates.

5. FORM OF THE RESPONSE

All Responders shall submit one (1) original and four (4) **bound** copies of their Proposal in a sealed envelope or package. The response shall be on letter size paper. All Responders shall include Responders Certification Form, and copy of IRS Form W-9. One copy shall also be provided digitally on a CD or DVD in PDF and Microsoft Word format

The response must be divided into six (6) sections as referenced below, organized by section number.

The six (6) sections are:

1) Required Submittals - See Section 6 Below
2) Qualifications and Experience – See Section 7 Below
3) Approach to the Work – See Section 8 Below
4) Knowledge of Florida redevelopment statutes and program design and program implementation – See Section 9
5) Hourly Rate or Fee Schedule – See Section 10 Below
6) Other pertinent documents the Responder wishes to provide

6. REQUIRED DOCUMENTS TO BE SUBMITTED:

Letter of Transmittal: The cover letter shall be addressed to Carol Westmoreland, Executive Director of the FRA at the address in Section 13, and shall include at a minimum the following:

a) Name of responding individual, partnership, company, or corporation.
b) Statement that all terms and conditions of the RFP are understood and acknowledged by the undersigned.
c) Location(s) of office(s) that will provide services to the FRA and the service area covered by the office.
d) Signature(s) or representative(s) legally authorized to bind the Responder.

Responder Documents:

a) Copy of any licenses or certifications that the Responder believes are pertinent.
b) Resume(s) of key personnel who would be working with the Certification Committee and the FRA.
c) **Pertinent** business references.

Corporate Information: If a Responder is a corporation, it must be registered with the Florida Secretary of State and be a corporation in good standing.

Responder's Certifications: See Attachment A included in this package.

Taxpayer Identification Number (W-9 Form): See Attachment B included in this package.

7. QUALIFICATIONS AND EXPERIENCE

a) The Responder or key personnel who have been detailed to this contract must have been in business at least three (3) years and must provide documentation of work experience through references or products, related to the focus of this RFP.
b) The Responder must provide details of qualifications of the specific individuals who will be providing the services, including certifications, resumes, and contact information.
c) Please identify the role(s) that assigned individuals shall assume in the proposed contract with the FRA.

d) Discuss the Responder's ability and capacity to perform the necessary project activities in a timely manner.
e) Discuss the Responder's experience in teaching and training redevelopment professionals in Florida. If evaluations of prior teaching experience are available, please include them.

8. APPROACH TO THE WORK

a) The Responder shall provide an approach to the requested services based on the Scope of Work.
b) It is desirable for the Responder to, when applicable; include any innovative approaches, cost savings ideas and methods, and any other information considered by the Responder to be advantageous to demonstrate an understanding of the required services.

9. KNOWLEDGE OF FLORIDA REDEVELOPMENT STATUTES AND AGENCY PLANNING PROCESSES

a) Provide a list of redevelopment planning projects in Florida in which the Responder has been involved within the past five years.
b) Provide a description of the Responder's knowledge and involvement in planning, organizing, and implementing redevelopment programs in Florida.

10. EXPERIENCE IN INFRASTRUCTURE DESIGN, CONSTRUCTION AND OPERATION

a) Provide a description of experience in Florida in which the Responder has been involved within the past five years.

11. HOURLY RATE OR FEE SCHEDULE

Provide the Responder's hourly rates, fees, and/or commissions for each category of services you propose to provide. FRA expects to enter into a fixed price contract so a total cost must also be provided. If the cost of services varies by staff member or job position, provide cost by staff name or position name. **If a Responder desires to teach the modules to FRA members on an on-going basis, provide those costs separately.**

12. EVALUATION PROCESS

The FRA will appoint a selection committee to evaluate responses and to rank the Responders. The FRA shall be the sole judge of its own best interests, the responses, and the resulting agreement. A ranked short list may be presented to the FRA Executive Board for approval or the selection committee may choose to recommend one or more respondents. Award(s) will be made to the Responder(s) who presents the best value to the FRA based on the entire evaluation process and all the information gathered. Evaluation factors are based on the abilities of the Responder to efficiently perform the Scope of Work, and the information obtained from the responses to this Request for Proposal.

A selected group of Responders ***may*** be required to make an oral presentation to the selection committee. Such presentation will provide an opportunity for each short listed Responder to clarify the information provided in their RFP. Oral presentations, if any, will be considered in conjunction with submitted data by the Selection Committee. The Selection Committee will present its recommendation to the FRA Board, which has the authority to make the final determination and award contracts.

Responses will be evaluated on a total score basis, with a maximum score of one hundred (100) points. If a member of the FRA and a non-member of the FRA are tied in the evaluation, the FRA member will be given preference.

13. EVALUATION METHODOLOGY

a) Qualifications of the Firm / Individual(s) (0 to 30 points)

- Certifications and resumes of assigned individuals and their duties in the development of the materials.
- List of qualifications, experience, and relevant redevelopment planning and infrastructure design, construction, and operation in which the Responder has been involved within the past five (5) years.
- References and contact information

b) Approach to Work (0 to 20 points)

Review of the Responder's proposed approach to the development of the training module as outlined in the Scope of Work, the Responder's understanding of the Scope of Work, and any unique concepts or cost saving suggestions. Also the Responder's staffing quality and availability. Evaluate the Responder's communication ability, commitment to satisfying the FRA's needs, and the Responder's past performance on similar projects.

c) Knowledge of the Florida Redevelopment Statutes and Planning Processes (0 to 10 points)

Review of the documentation relating to the Responders offices and staff. Consideration of the number and types of local projects and redevelopment planning services provided or conducted by the Responder in the past five years. Particular emphasis will be placed on key personnel's involvement and experience with local CRA's programs.

d) Ability and Experience in Training Members of Professional Organizations (0 to 25 points)

Review Responder's experience in creating and providing training material for professional organizations, trade groups, at conferences, colleges or universities or to its own staff. Educational institutions should discuss their work in creating training programs for other organizations. If the Responder is proposing to teach as well as create the module, emphasis on experience in providing training should be included here.

e) Hourly Rate Fee Schedule (0 to 15 points)

Review of the proposed Hourly Rate / Fee Schedule for the duration of this agreement.

Responders may include any documentation that they believe will enhance the reviewer's understanding of the Responder's qualifications and experience to fulfill the Scope of Services. It is the FRA's desire to secure the most qualified entity available and any documentation that provides the reviewers with a better insight into the Responder is welcome.

The responses will be evaluated on

a) Strengths: Those areas in which the response exceeds the FRA's minimum requirements.
b) Weaknesses: Those areas where the response lack soundness or understanding of the Scope of Work.
c) Deficiencies: Those areas where the response fails to meet the RFP requirements.

14. SUBMISSION OF DOCUMENTATION

One original, four (4) copies of the bound documents, and one digital copy in Microsoft Word and PDF format on a CD or DVD must be delivered on or before 3:00 pm on January 22, 2018, to:

Carol Westmoreland, Executive Director
Florida Redevelopment Association
301 S. Bronough Street, Suite 300
Tallahassee, FL 32302-1757

All documents must be delivered to or received in the mail by the due date and time. Any documents received after this date and time will not be considered and will be returned to sender unopened.

15. QUESTIONS

All questions shall be submitted in writing and must be received before January 5, 2018. Questions may be submitted by email. Any such questions shall be submitted to:

Carol Westmoreland, Executive Director
Florida Redevelopment Association
Post Office Box 1757
301 S. Bronough Street, Suite 300
Tallahassee, FL 32302-1757
(850) 701-3608 cwestmoreland@flcities.com

16. LIABILITY

The FRA assumes no responsibility to any Responder for the cost of preparing this RFP or activities associated with the response. The FRA reserves the right to accept or reject any and all responses, to waive information, or to re-advertise as may be in the best interest of the FRA. The FRA will not accept any mail or delivery service that is late, and will return all late responses unopened. The Responder

understands that this RFP does not constitute an agreement or a contract with the Responder. Neither the FRA nor its representatives shall be liable for any expenses incurred in connection with preparation of a response to this RFP. Responders should prepare their responses simply and economically, providing a straightforward and concise description of the Responder's ability to meet the requirements of the RFP.

17. AWARD

All responses will be evaluated by FRA in accordance with the criteria set forth in the RFP documents. The FRA may conduct interviews/presentations as part of the evaluation process from any short-listed firms. The FRA anticipates award to the Responder or Responders judged by the FRA to be the most advantageous and offers the best value to the FRA. The FRA reserves the right to accept or reject any or all responses and to make the award to those Responders, who in the opinion of the FRA, will be in the best interest of and/or the most advantageous to the FRA. The FRA also reserves the right to reject the response of any Responder who has previously failed in the proper performance of an award or to deliver on time contracts of a similar nature or who, in the FRA's opinion, is not in a position to perform properly under this award. The FRA reserves the right to inspect all facilities of Responders in order to make a determination as to the foregoing. The FRA reserves the right to waive any irregularities, informalities, and technicalities and may at its discretion, conduct a re-procurement.

18. ACCURACY OF RESPONSE INFORMATION

Any Responder whose response to the FRA contains any information which is determined to be substantially or materially inaccurate, misleading, or exaggerated shall be disqualified.

19. MISTAKES IN RESPONSE

Responders are expected to examine the terms and conditions, specifications, delivery schedule, costs or fees, extensions and all instructions pertaining to supplies and services. Failure to do so will be at Responder's risk. In the event of extension error(s), the unit price will prevail and the Responder's total offer will be corrected accordingly. Written amounts shall take precedence over numerical amounts. In the event of addition errors(s), the unit price, and extension thereof, will prevail and the Responder's total offer will be corrected accordingly. Responses having erasures or corrections must be initialed in ink by the Responder.

ATTACHMENT A

RESPONDER'S CERTIFICATION

I have carefully examined the Request for Proposal, Instructions to Responders, General Conditions, Specifications, and any other documents accompanying or made a part of this Request for Proposal.

I hereby propose to furnish the services specified in the Request for Proposal at the prices, rates or discounts quoted in my response. I agree that my response will remain firm for a period of up to one hundred fifty (150) days in order to allow the FRA adequate time to evaluate the responses.

I agree to abide by all conditions of this response and understand that a background investigation may be conducted by the FRA prior to award.

I certify that all information contained in this response is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this response on behalf of the Responder and that the Responder is ready, willing and able to perform if awarded the contract.

_____
Responder

_____
Authorized Signature

_____
Officer Title

_____
Date

THIS FORM MUST BE COMPLETED AND RETURNED WITH THE RESPONSE

ATTACHMENT B

Request for Taxpayer Identification Number and Certification
(W-9 Form)

THIS FORM MUST BE COMPLETED AND RETURNED WITH THE RESPONSE

Form available at Internal Revenue Website

http://www.irs.gov/pub/irs-pdf/fw9.pdf?portlet=3

ATTACHMENT C

ABOVE GROUND – STREETSCAPE

CHAPTER 1 – STREETS & SIDEWALKS

I. Three types of projects
   A. Downtown streetscape project
      1. Walkability & pedestrian safety highest priority
   B. Corridor
      1. Complete streets approach, multi-modal
   C. Neighborhood
      1. Connectivity – integrate into surrounding areas

II. Stages of project
   A. Design / Development Review (DRC)
   B. Bidding Process
   C. Construction

III. Design Process
   A. Assemble Design team
      1. Public works, engineering, design consultants
   B. Prepare Public Involvement Plan for review at all design stages
      1. Development Review Committee – Planning, zoning, engineering, public works, public safety, MPO
      2. Stakeholder meetings before design starts and consistently throughout entire process until construction complete
      3. Timing of project in business area – during off-season, typically summer in downtowns
   C. Conceptual Design
      1. Update survey first
      2. Establish Project Objectives
      3. Develop design objectives & guidelines for project design elements
      4. Identify project constraints
         a. Right-of-way width
         b. Buildings on or close to R/W line
         c. OH Lines
         d. Utility (sewer, water, drainage) conflicts
         e. Corridor projects – utility easements
         f. Stormwater Management
      5. MOT Plan

6. ADA Compliance

D. Preliminary Plans
    1. Construction drawings can be confusing to general public – create alternative easy to read plans
    2. Enhanced photos showing visual of proposed completed project

E. Construction Plans
    1. Maintenance of Business Plan – Outreach & Support to Business During Construction
        a. Maintain access to businesses at all times
        b. City project manager / merchant liaison – single point of contact
        c. Signage for businesses, parking maps
        d. Site appearance – clean and safe as possible
        e. Website updated daily, email updates
        f. Assist with advertising & marketing
        g. Business representatives at weekly construction meeting
        h. Business property improvement grants
        i. Delivery trucks

IV. Project Elements & Objectives
- A. Driving lanes – move vehicular traffic efficiently
- B. Parking – adequate amount of parking spaces
- C. Lighting – intersections & sidewalks
- D. Sidewalk – proper width for context
- E. Trees & Landscape – must consider aesthetics & functionality
    1. trees must fit area; not all plants suitable for streetscape
        a. placement – do not block storefront access, intersection visibility triangle
        b. visibility of architectural of building is important also
    2. consider maintenance during design
- F. Signage / Wayfinding
- G. Crosswalks – functional & aesthetic considerations
- H. Bump outs - functional & aesthetic considerations
- I. Bike lanes – corridor project
- J. Event features [for downtown] – electric & water hook-ups, bollards for street closures
- K. Complete street considerations
- L. Festival street considerations
- M. Connections to adjoining public areas
- N. Stormwater Management Plan
- O. Access Management on corridor projects

V. Right-of-Way Widths
- A. R/W width can limit / constrain project scope, especially in Downtowns

B. Develop cross section alternatives
C. Downtowns
    1. 50’ – 70’ in most older downtowns
    2. 90’ - 120’ for through roads – State Routes
    3. Reducing standard widths for elements to fit your R/W

VI. Sidewalks - Downtown
    A. How wide do you need
        1. sidewalk does not result in 12’ of clear walking area
    B. Many components / features in sidewalk area
        1. Walking area [clear & unobstructed area]
        2. Trees
        3. Light posts
        4. Benches, trash cans / sandwich board sings / wayfinding signs, kiosks
        5. Water & gas meters, irrigation, electrical panels – standard design & materials need to be adjusted to fit streetscape design character
        6. Spacing of these items to allow car doors to open for parallel parking & avoiding building awnings & canopies makes it difficult to be symmetrical
        7. R/W Utilization permits
            a. Sidewalk cafes
        8. Concrete and paver design patterns

VII. Funding Options for Road & Sidewalk Projects
    A. Public Works
    B. Utility Enterprise Funds – Electric → lighting
    C. CRA
    D. Special Assessment
    E. BID
    F. MPO / FDOT
    G. Public Private Partnership

VIII. Working with FDOT
    A. Transportation Enhancements
        1. Landscaping
        2. Traffic signal mast arms
        3. Signage
        4. Resurfacing

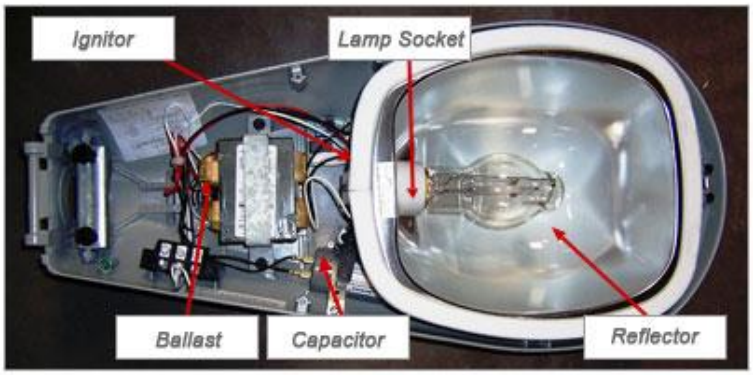
CHAPTER 2 – LIGHTING 101

I. Why is lighting important?
    A. Safety
    B. Focal points
    C. Area character/style
II. What are the ways to use lighting?
    A. Landscaping
    B. Entrances
    C. Edges
III. How much lighting is enough?
    A. Useable/unusable light
        1. Ecological issues?
            a. Light pollution
            b. Flora/fauna
            c. Night sky considerations
IV. How far apart should lights be spaced?
    A. Distance
    B. Arrangements
        1. Staggered
        2. Opposite
V. Are there other situational variables to consider?
    A. Decorative street lights
    B. Useful life/repairs
    C. Street light standards
        1. Light poles
        2. Banners
        3. Coordination with other projects
VI. Are there secondary functions for light poles?
    A. Street banners
    B. Planters
    C. Installation of other equipment
        1. CCTV
        2. Wifi
        3. Parking counters
        4. Receivers
VII. Vocabulary
    A. Lumens
    B. Cobra head
    C. Acorn
    D. Bulb vs. LED
VIII. Lighting for different types of users

A. Pedestrians/Bicyclists
B. Motorists/Buses
C. Static (Buildings)
    1. Cafes vs. Restaurants

IX. Lighting for different types of roads
A. Freeway
B. Arterial
C. Collector
D. Local
    1. Residential
    2. Commercial
    3. Industrial

X. Street light anatomy
A. Mercury-based light
B. High Pressure Sodium (HPS) lights
C. LED lighting



XI. Costs
A. Upfront vs. O&M

XII. Technology
A. Smart lighting

XIII. Regulatory issues
A. Federal
B. DOT/State
C. Local

CHAPTER 3 – WAYFINDING

I. Wayfinding defined:

Wayfinding encompasses all the ways that people orient themselves in a physical space and navigate from location to location. It includes the elements of orientation, route decision, route monitoring, and destination recognition.

II. Wayfinding basics
- A. Inform people of their current surroundings
- B. Provide information at strategic points to guide people in the right direction
- C. Provide assurance when the destination is attained.
- D. Vehicle verses pedestrian wayfinding

III. Human characteristics are considered
- A. Does not require high level of contemplation or decision making
- B. Visual communication system is clear, concise, and comprehensive.
- C. Displays only what is relevant to space, location, and navigation path

IV. How wayfinding works
- A. Uses landmarks to create a legible and recognizable environment
- B. Orientation of wayfinding systems must provide recognition of where you are and the route to get you to your destination
- C. Navigation is the guidance system along the route between your current location and your destination

V. Wayfinding design principles
- A. Create an identity at each location that is different from all others
- B. Use existing landmarks to provide orientation cues and memorable locations
- C. Create well-structured routes
- D. Don't give too many complicated choices
- E. Provide maps or street vistas as part of wayfinding
- F. Provide clear and concise signage at decision points.
- G. Use sight lines when possible to show what is ahead
- H. Use multiple signs rather than one over-burdened sign
- I. Design based on audience

VI. Graphic sign design
- A. Four types of wayfinding signage
  1. Information signs
  2. Directional signs
  3. Identification signs

4. Warning signs

B. Signage typeface
   1. Use one readily recognizable font per sign – sans-serif is good
   2. Use colors that complement each other for contrast
   3. Do not make signs too "busy"
   4, Walking speed signage can contain more verbiage than driving speed signage

C. Signage Design
   1. Consistent height, icons, color schemes, and material (BRANDING OPPORTUNITY)
   2. Place sign where it will be visible to the audience you are trying to reach
   3. Check samples of the sign in the environment in which they will exist to avoid conflicts
   4. ADA Compliant

VIII. Wayfinding in the electronic age
   A. Interactive kiosks and maps
   B. Maps and other apps for mobile devices
   C. Using mobile devices for person guide
   D. Audible wayfinding

IX. Public Input
   A. Naming the unnamed locations
   B. Inclusion of all stakeholders

CHAPTER 4 - PARKING

I. General Descriptors:
   A. Parking 'Drives' the dollar to private sector merchants
   B. Parking is an economic development incentive and should be negotiated as such
   C. Parking as a proponent of sprawl
   D. How perception influences parking and human behavior
      1. Average walking distance for visitor vs. average walking distance by local/repeat customer
      2. One-stop destination parking vs. multiple errands
      3. "nobody goes there because it's too busy"

II. Characteristics
   A. On street, off street and garages (parallel, angled, and pull-in parking)
   B. Cost, availability of space, and maintenance should all be considered
   C. Urban Design principles should be considered for integration into the (sub)urban landscape where appropriate.

III. Parking Should Consider…
   A. The context of Car Storage (longer time) vs. Car Parking (shorter time). Type, size, and costs of parking should be evaluated against who the parking is being prepared for (guests, locals, employees).
   B. Planning Code
      1. Differences in suburban vs. urban settings
      2. Parking code requirements
         a. ITE Parking Manuals (generally where codes are taken from)
            i. Ex: # of spaces per 1000 sq. feet
         b. Variances
         c. Impervious space/FAR/Open space relationship
            i. Stormwater management

IV. Ways to Manage Public Parking
   A. Do nothing
      1. Promotes existing behavior, limits development to areas that can handle parking requirements, newer demands will be pushed to other community/regional areas
   B. Pay for Parking
      1. Valet
      2. Meters
   C. Enforcement
      1. Balance between too heavy and too light
      2. Fee structures for multiple tickets
   D. Modernize Policy

1. Shared parking code
    a. Cross access agreements
2. Flexible Time limits for peak/off-peak hours

E. Wayfinding/Technology
1. Effective signage
    a. universal symbols
2. Parking as a brand
3. Smart city metering
4. Phone applications

F. Adding Capacity
1. Should serve to:
    a. Support demand
    b. Incentivize additional growth
    c. Support event parking
2. Public private partnerships
    a. Evaluate initial, ongoing costs
    b. Number of spaces for public vs. private use
    c. Developer agreements

V. Evaluating Alternatives
A. Bike/car share
B. Automated vehicles
C. Uber/Lyft
D. Valet
E. Electric Vehicles
F. Motorcycles
G. Trolley, light rapid transit, bus

VI. Future Use
A. A completed parking garage will be in existence for a long period of time which can be contradictory to changing demands and trends.
B. Review options for flexibility:
1. Adaptive Reuse
    a. Impacting the movement of goods and services
    b. Act as multimodal transit hubs
    c. "future proofing" projects:
        i. Raised second level to allow for alternative uses on the ground floor;
        ii. Design removal or flexible facades, because "you may not want a building that looks like a garage in the future; and
        iii. Build in phases, which will allow for adjustments in later phases, based on demand, and create an opportunity to

redevelop one phase when demand slows, without eliminating the entire parking structure.

CHAPTER 5 – LANDSCAPING

The effect of redevelopment on urban trees, at the scale of the individual property, is important to understand in order to limit tree loss during construction, determine that design is geared for sustainable landscape and maintenance and thus, ensure sustained ecosystem services.

Community Redevelopment Benefits

The preservation or installation of additional trees, landscape and other natural features, within new and existing developments provide immediate enhancement and an element of instant impact and visual maturity to a site and its surroundings, raising the overall quality of a new development scheme and is likely to improve property prices and marketability.

I. Why are Trees and Landscape important?
    a. Uses:
        i. Open Space
        ii. Enhance sense of place
            1. Parks
            2. Public Areas
            3. Streetscapes
            4. Plazas / Squares
    b. Environmental (Urban Forestry / Tree Biology)
        i. Air Quality (sequesters carbon / creates oxygen)
        ii. Filter water impurities
        iii. Absorb, delay, treat Rainwater
        iv. Mitigates flooding and pollution downstream
        v. Reduce ambient temperatures in summer
        vi. Reduce wind chill in winter
        vii. Lower heating and cooling energy costs
        viii. Reduce noise
        ix. Create wildlife habitat
    c. Wayfinding
        i. place-making and identity
    d. Health benefits
        i. Improve mental health and well-being
    e. Increase property value

II. What are ways to use Trees & Landscape?
    a. Shading
    b. Screening
    c. Frame views
    d. Directional cues
    e. Enhance curb appeal /destination /seating areas
    f. Streetscape
    g. Parks
    h. Open Space

III. Tree Selection (Number, sizes, species, budget)
    a. Context Sensitive Solutions

i. Location (Medians, Streets, Parking, Parks, Bioswales)
ii. Visibility vs. Screening
iii. Pedestrian / Auto access and intensity

b. Ground area available for pedestrians (Surface root / Tree grate)
c. Height & Spread (Conflicts with other Infrastructure)
    i. Overhead Powerlines
    ii. Spacing for "Unobstructed" street lighting
    iii. Root system not in conflict with underground infrastructure
d. Florida Natives - drought & heat tolerant
e. Diversity of species to avoid mono-cultures
f. Evergreen or Deciduous

IV. Installation specifications
    a. Quality control of nursery stock
    b. Root compaction mitigation
V. Soils
    a. assessments of existing soil
    b. address permeability
    c. Loam soil volume minimums for street trees
VI. Irrigation
    a. Establishment period for new planting
    b. Know the type of soil
    c. Know the flow rate / absorption rate of soil to infiltrate without run-off
    d. Timing of running system (off-peak hours)
    e. Consideration of seasonal changes and weather

VII. Drainage / Stormwater retention
    a. Green Infrastructure:
        i. Green roofs:
        ii. Permeable pavements:
        iii. Infiltration trenches, Bioretention and Bioswales:
        iv. Green Streets, Alleys, and Parking Lots:
        v. Downspout disconnection
        vi. Rain Harvesting / Rain barrels
        vii. Rain Gardens
        viii. Urban Forestry
    b. Gray Infrastructure
        i. pipes
        ii. pumps
        iii. ditches
        iv. detention ponds
    c. Combined Systems
        i. Combined Sewer Overflow (CSO)
        ii. Applicability, impact, affordability and political feasibility of each action.

d. Best Management Practices

VII. Maintenance
- a. Establish monitoring program and actionable plan
- b. Established funding mechanism
- c. Professional pruning standards written into municipal code
- d. Pest Control
- e. Fertilization
- f. Trunk protection
- g. Mortality rate / replacement requirements
- h. Preservation Plan
- i. Plant Maintenance / Warranty
- j. Disaster Resilience
    1. Stand up trees soon after event
    2. Required to replace damaged trees
- k. Code Enforcement
    1. Trees required as part of permit approval
    2. Replacement of damaged or lost trees from storm
    3. Maintenance plan for plants

VIII. Florida Community Redevelopment Area's Using Landscape Infrastructure (CASE STUDIES)

IX. Recommended Goals and Policies

CHAPTER 6 – TRAILS & BIKEWAYS

Multi-modal - Continuous networks of sidewalks, bicycle facilities, and trails are essential components of a multimodal transportation system. Linkage is a central goal of trails and bikeways —to parks, schools, transit stops, shopping, neighborhoods, cultural attractions, and to other trails and bikeways.

Community Redevelopment Benefits - The benefits of trails and bikeways include: making our communities more liveable; improving the economy through tourism and civic improvement; preserving and restoring open space; and providing opportunities for physical activity to improve fitness and mental health.

I. Trails
   - A. Trail Classification System
     1. Classification Overview
     2. Multipurpose Trail Specifications
     3. Improved Dirt Trail Specifications
     4. Open Space Trail Specifications
     5. Connector Trail Specifications
   - B. Trail Design
     1. Trailhead Amenities
     2. Neighborhood & Pedestrian Connections
     3. Trail crossings at roadways, intersections and midblock
     4. Trail Signage
     5. Trail Accessibility
     6. Challenging Trails
     7. Safety treatments
     8. CPTED Standards

II. Bikeways / Cycling infrastructure
   - A. Design Guides:
     1. The American Association of State Highway and Transportation Officials (AASHTO) Guide to Bikeway Facilities,
     2. The Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD)
     3. The US National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide.
   - B. Bikeway selection
     1. Jurisdictions have guidelines around the selection of the right bikeway treatments in order make routes more comfortable and safer for cycling.
     2. Standard is generally 4’ for bike lanes, but can vary. Any less than 4 feet can be identified as bike-share routes.

III. Bikeway types
   - A. Separated in-roadway bikeway
     1. Bike lanes
     2. Buffered bike lanes
     3. Contraflow bike lanes (These should be last option)
   - B. Physically separated in-roadway bikeway
     1. Cycle tracks / separated bike lanes / protected bike lanes

C. Bike paths
D. Greenways
E. Shared-use path
    1. Need proper signage
F. Shared in-roadway bikeways
    1. Bicycle boulevards
    2. Shared lane markings
    3. Advisory bike lane
    4. Roadways with legal access for cycling
        a. All roadways are legal except interstates and some state roads
    5. Road shoulder
G. Bicycle superhighways (Denmark and the Netherlands)

IV. Traffic Reduction
A. Traffic Calming
B. One-way streets
C. Two-way cycling on one-way streets

V. Intersection/Junction design
A. Protected intersection
B. Bike box
C. Roundabouts

VI. Traffic signals/Traffic control systems
A. Signposting
B. Widening outside lanes
C. Shared space
D. Shared bus and cycle lanes
E. Road surface

VII. Trip-end facilities
A. Bicycle parking/storage arrangements
    1. Land Development Codes generally dictates
B. Other trip end facilities
    1. cycle lockers,
    2. changing rooms
    3. shower facilities

VIII. Challenges
A. Lack of connectivity
    1.Major thoroughfares and interstates
    2.Streets and sidewalks
B. Industrialized areas
C. Trees
D. Utilities
E. Safety
    1.Crosswalk Design
        a. Audible crosswalks
    2.ADA Requirements

a. Truncated domes / tactile surfaces
b. Proper curb cuts

IX. Integration with public transit
- A. Bike Parking at bus stop locations
- B. Theft reduction measures
  1. Bicycle registration to enable recovery if stolen
  2. Antitheft devices and their effective use
  3. Secure bicycle parking: guarded bicycle parking (manned or with camera surveillance) or bicycle lockers
  4. Promote tracking devices
  5. Targeting cycle thieves
  6. Using folding bicycles for safe stored

X. Bikesharing systems

XI. Trail and Bikeway Development
- A. Planning
- B. Acquisition and Development
- C. Maintenance
- D. Estimated Bikeway Improvement Costs

XII. Partnerships
- A. Agency and Non-Profit Partners
- B. Adopt-A-Trail Programs

XIII. Funding for Trails & Bikeways
- A. Funding Sources
  1. US Dept of Housing & Urban Development Community Development Block Grants (CDBGs)
  2. US Dept of Agriculture Community Programs
  3. Land and Water Conservation Fund (LWCF)
  4. North American Wetlands Conservation Act Small Grants Program
  5. Transportation Equity Act for the 21st Century (TEA-21)
  6. Surface Transportation Program and Transportation Enhancements Program
  7. Transportation and Community and System Preservation Pilot Program (TCSP)
  8. National Park Service
  9. Rails-to-Trails Conservancy
  10. National Trails Training Partnership
  11. People for Bikes Community Grant Program

XIV. Florida Community Redevelopment Area's Using Bikeway and Trails (CASE STUDIES)

XV. Recommended Goals and Policies

UNDERGROUND UTILITIES

CHAPTER 1 – SANITARY SEWER

I. Brief history of sanitary sewer systems in US

II. Definitions

III. Septic System
- A. Description of septic system
- B. Regulatory Agency – Health Departments
- C. Tanks, drain fields, maintenance
- D. Cost of sceptic system

IV. Disadvantages of Septic System
- A. More land
- B. Health hazards
- C. Environmental issues
- D. Effect on ground water, lakes and lagoons
- E. Effects on storm water
- F. Maintenance issues
- G. Seepage in ground water

V. State law regarding abandonment of septic system

VI. Advantages of Septic System
- A. Low cost of water
- B. Life of a septic system

VII. Types of sanitary systems
- A. Gravity (Combined or Separate) Combined is rare in Florida because of flooding
- B. Pressurized Sanitary System
- C. Vacuum system
- D. Combination

VIII. Gravity System (Combined and Separate)
- A. Suitability
- B. Working Principles
- C. Diagram
- D. Sewer pipes
- E. Sewer gravity
- F. Manholes
- G. Pump station

H. Waste water treatment plant

IX. Advantages of Gravity System
- A. Cleaner
- B. Friendlier on the environment
- C. Public control
- D. Reliability

X. Disadvantages of Gravity System
- A. High Construction Cost
- B. Issues with Right of way in urban areas
- C. Impact on existing right of way
- D. Conflict with other utilities
- E. Maintenance cost
- F. Hookup fees
- G. Water usage cost
- H. Installation of pipes to maintain gravity

XI. Pressurized System
- A. Suitability
- B. Working Principles
- C. Needs or multiple pumps

XII. Advantages of Pressurized System
- A. Capital cost can be less
- B. Shallower trenches
- C. Minimize Excavation cost
- D. Needs less water for transportation
- E. Suitable for all topography

XIII. Disadvantages of Pressurized System
- A. Needs permanent energy source for grinder and pumps

XIV. Vacuum System
- A. Principle how it works
- B. Design
- C. Construction Plan
- D. Pump Station
- E. Sewer pipes
- F. Collection Tanks
- G. Valves

XV. Advantages of Vacuum System

A. Cost, may be lower than gravity
B. Suitable for urban environment
C. Less use of water
D. Decreases clogging
E. Sewer and water mains can be located in same trench

XVI. Disadvantages
A. Energy cost for pumping station can be high
B. Fewer firms provide maintenance services
C. Highly skilled operators needed

XVII. Other Issues to Consider
A. Location of waste water plant
B. Acquisition of right of way
C. Water tables
D. Dewatering
E. Construction Impact on Residents
F. Hookup fees
G. Cost to residents
H. Special Assessments

XVIII. Retrofitting Older System

CHAPTER 2 – DRAINAGE / STORMWATER

I. Drainage Defined

Drainage is the movement of water from Point A to Point B either on the surface or underground. Unless redirected by a man-made force, water always flows downhill or stands in place if there is no outlet.

A. Purpose of Drainage – move it or hold it
B. Function of Drainage System
C. Estimating Runoff based on size, topography and soil conditions

II. History of Drainage Legislation/Regulation in US and Florida

III. Natural drainage systems vs. man-made drainage systems

Natural systems are rivers, streams, lakes, or other "trenches" caused by nature over time through erosion or other natural forces. Includes sheet flow. These are called positive outfalls

Man-made systems are such things as dams, ditches, swales, catch basins, French drains, canals, and underground water conveyance systems.

A. Capacity problems for water channels
B. Problems of excessive sediment transport
C. Drainage must have a minimum of 5% fall

IV. Public Drainage

Systems built by government or a developer whose purpose is to protect the public at large from stormwater

V. Private Drainage

Systems built by non-public entities for self-protection or the protection of others in close proximity

VI. Underground Storage and Pumping Facilities

VII. Use of Master Stormwater pond or other compensatory storage areas versus paying fees to local government for forgiveness of drainage requirements with fee revenue used to create drainage elsewhere. Great for downtown or historic areas.

VIII. Right of Way/Easement issues and conflict with other utilities

IX Weighing cost of swales vs ditches vs culverts vs canals

X. Transmission of stormwater off site vs percolation on site

XI. Retaining water for landscaping vs transmission to holding/percolation areas

XII. Construction and Permitting Issues

XIII. Maintenance and Repair Issues

XIV. Drainage Exempt Areas

XV. Stormwater Credits

XVI. Take away items:
- A. I have to have drainage for my project because…..
- B. The bigger the drainage facility, the longer permitting will take.
- C. Just because you want to build an underground culver (or other facility) does not mean the Water and Sewer Department want to move their lines.
- D. Drainage is important to my CRA because:
  1. Lack of drainage reduces area available for redevelopment
  2. Developer provided drainage can increase development costs
  3. Aesthetically, drainage facility may be incorporated as a water-feature/amenity
  4. Creation of drainage by CRA could be an incentive for redevelopment in area.

CHAPTER 3 – POTABLE WATER

I. Definition of Potable Water - Potable water, also known as drinking water or improved drinking water, is water that is safe to drink or to use for food preparation, without risk of health problems. In developed countries, tap water is usually potable. Potable can also be used to mean any drinkable liquid. The word comes from the Latin potare, meaning "to drink." Examples of potable water would be tap water from treated municipal water systems, or that has been UV filtered, water distilled, or purified by reverse osmosis. Non-potable water is generally all raw water that is untreated, such as from lakes, rivers, ground water, natural springs and ground well. There are over 151,000 public water systems in the United States. EPA classifies these water systems according to the number of people they serve, the source of their water, and whether they serve the same customers year-round or on an occasional basis.

II. Brief history of potable water systems in US

III. Components of a Potable Water System
- A. Source of raw water
- B. Transmission infrastructure for raw water to treatment plant
- C. Water treatment Plant
- D. Water tower
- E. Distribution system in rights of way
- F. Distribution system from rights of way to users
- G. Use measurement systems
- H. Billing systems
- I. Inspection process
- J. Repair and replacement capacity
- K. Training and certification of water plant operators

IV. Requirements of Good Distribution System

A. Water quality should not get deteriorated in the distribution pipes.

B. It should be capable of supplying water at all the intended places with sufficient pressure head.

C. It should be capable of supplying the requisite amount of water during firefighting.

D. The layout should be such that no consumer would be without water supply, during the repair of any section of the system.

E. All the distribution pipes should be situated the required distance away from or above the sewer lines.

F. It should be fairly water-tight as to keep losses due to leakage to the minimum.

V. Other Issues to Consider
- A. Location of water treatment plant(s) and water towers
- B. Acquisition of right of way
- C. Construction Impact on residents and businesses

D. Hookup fees
E. Cost to residents through rate evaluation studies
F. Special Assessments

VI. Usual CRA involvement with potable water systems
A. Extending new water mains to new businesses or residential areas
B. Repairing water mains while undertaking associated construction projects
C. Installing fire hydrants
D. Upgrading infrastructure to enhance fire flow protection
E. Water system accouterments as incentives for tax base growth
F. Upgrading water systems in public facilities such as parks and playgrounds

VII. Issues and potential problems when constructing or repairing water lines
A. Underground unknowns
B. Temporary out of service issues with customers
C. Maintaining access to customers, particularly businesses
D. Maintaining communications with customer and elected officials, particularly on construction that takes a long time to complete
E. Time construction period chosen should be least disruptive

The underground module should include a couple of inseparable items that are above ground. Potable Water should include water treatment plants and water towers and Sanitary Sewer should include sewage treatments plants and related infrastructure.

PROJECTS FOR CASE STUDIES

The teaching of each module will include practical exercises / case studies.

- Streetscape Downtown – Build your cross-section [various apps available]
- Industrial / Business Park
- Recreational Park