



Kanner Site Proposal Evaluation And Community Feedback July 16, 2021

CREWS has been retained to provide professional expert testimony regarding the proposed Costco project on the Kanner Site in Stuart, Florida. A summary of the expert credentials is provided at the end of this analysis.

Community Vision:

The residents that have commissioned this study have identified a strong community vision for the City of Stuart that is consistent with Stuart's own stated goals, objectives and policies. This is not a typical NIMBY opposition. This is a QuIMBY vision: Quality In Our Back Yard that serves the community today and for generations to come. These residents see Stuart as an old-Florida fishing community with a rural character and a small town feel. It's roots are as a place of refuge for those who work and love the sea. The roadways and properties around the Kanner site have an open feel, typical of rural Florida, with wide arterial roadways surrounded by heavily buffered residential uses, wetlands, and agricultural uses. This is not an appropriate area for a big box/strip center, vehicularly oriented development and there are plenty of sites throughout Stuart and Martin County that could be reused to serve their needs.

The following are applicable goals, objectives, and policies from Stuart's Comprehensive Plan along with *commentary* that relates the proposed project to those goals.

Stuart Comprehensive Plan Land Use Element (FLUE)

1. Goal 1: "Maintain and enhance Stuart's quality of life, natural beauty and small-town waterfront character, its stable residential neighborhoods, and its status as the commercial/institutional hub for greater Martin County."

The proposed project is inconsistent with Goal 1 in that it is a regional scale use that is to be placed within the heart of rurally buffered, clustered-style neighborhoods.

- a. Objective 1A1: Suitable topographic and soil characteristics shall be a basis for the establishment of future land uses.
 - i. Policy 1.A.1.1: The location and distribution of topographic and soil conditions as well as all other land use factors specified in this Plan shall be used to establish appropriate land uses.

The current Kanner site plan is suburban in nature, proposing the clear-cutting of nearly all natural vegetation, and complete reconstruction of the existing natural features and wetlands. The proposed PUD is inconsistent with Policy 1.A.1.1. in that it disregards the topographic, soil conditions, and wetland land features, with the intention of removing the characteristics that have been honored and appropriately addressed by the adjacent properties at great expense and with great care.

- ii. Policy 1A2.1: City development regulations to implement this objective shall continue to contain provisions which allow cluster development, planned unit developments, mixed uses, limitations on impervious surfaces, density allowances and other innovative land development techniques. Such techniques shall be



designed to maintain existing open space for recreation, groundwater recharge, and waterfront views.

Although the project is proposed as a PUD (one of the strategies listed in the policy), the surrounding land uses have clearly implemented cluster strategies to minimize their impacts to the natural resources in the corridor while maintaining the area's rural character. The Kanner site plan shows no similar attempt to protect these resources or limit the social and cultural impacts on the rural character of the area. Although the attempt at mixed use development is laudable, the regional scale of the retail use obliterates the primary goal for mixing land use, which is to provide complementary uses at a walkable scale in order to minimize transportation and social impacts. The purpose of a PUD is to provide the community with resources that would not be possible within the traditional limits of a plan in exchange for flexibility in terms of the form or density of the proposal. The additional connectivity through the site is positive, but comes at the expense of the most valuable assets within the property and area. Furthermore, the site plan indicates a high proportion of impervious surface and no attempt to maintain existing open space or groundwater recharge.

1. Policy 1.A3.3: The City shall designate and protect environmentally sensitive lands including viable and functioning wetlands as determined by the SFWMD and native vegetative communities that provide wildlife habitat for listed species. Protection measures will include performance standards regulating land use, public access, marina siting and activities, wetlands, shoreland alteration and seawalls, treatment of stormwater runoff, mangrove protection and provisions for developers to preserve environmentally sensitive land, including transfer of development rights and density bonuses.
2. Policy 1.A3.4. The City shall protect and conserve natural resources through conservation easements, transfer of development rights, cluster development, and buffer zones.

The proposed site plan provides no protection for the wetland that will be removed and no attempt at clustering to protect this wetland, or the wildlife species contained within it.

- b. Objective 1.A.3: Environmentally sensitive natural resources shall be protected and conserved. These resources include wetlands, floodplains, potable groundwater, shorelines, estuarine systems, rivers, bays, lakes, soils, native vegetative communities, listed wildlife species and associated habitat, and air quality. The City shall conserve and protect natural resources through a comprehensive planning process which considers the types, values, functions, sizes, conditions and locations of natural resources. Development shall be compatible with and suitable for the use, conservation and protection of natural resources. Incompatible development shall be directed away from natural resources to minimize any adverse impacts. Future land use designations shall be



established to protect environmentally sensitive natural resources in conjunction with other goals, objectives and policies in the Comprehensive Plan. If incompatible land uses are designated in association with natural resources in order to achieve other goals, objectives and policies of this Plan, policies shall be implemented to minimize or compensate for impacts. Policies for the conservation and protection of natural resources include the following policies plus policies in the Conservation Element of this Plan.

The proposed plan is incompatible with the rural nature of the area and the clustered patterns of development surrounding the site.

- c. Objective 1.A5: Residential Development. Ensure land use compatibility by grouping complementary land use activities, including mixed-use land use developments in appropriate areas of the City. Work with the developers to integrate vehicular and pedestrian circulation systems, bike paths, parking, building location, and architectural design into a cohesive development.

The proposed development is not complementary to the rural residential character of the area. The residents are not opposed to a retail mixed use project on the site that is consistent with the small-town, rural nature of the area. However, current retail trends and the shift to e-commerce makes the viability of regional scale retail questionable at best. A big-box store, like Costco, lacks the flexibility that will be needed to navigate the changing nature of retail in the coming decades. A cluster of smaller stores that serve a local clientele for everyday uses has the ability to support local businesses, change as needed, and serve as a walkable, human-scale gathering place within the rural environment. Even Costco, as a company, is shifting much of its operations to online ordering, with door to door delivery for a vast array of their goods. In the near future, they are not likely to need as large a footprint because their operations are likely to (and should) shift to displaying samples of goods that require in-person evaluation and immediate needs. As this shift is currently in progress, the project, as proposed, will be obsolete nearly as quickly as it is constructed and is therefore likely to be abandoned even more quickly than the typical 20 year lifespan that has been common for big box stores in the past. This is, in essence, a temporary land use with long term environmental and social consequences. This makes the purported jobs to be created equally temporary. They certainly do not reflect the investment of local capital into long term businesses that can be passed down from generation to generation.

1. Policy 1.A5.1. The Future Land Use Element of the City's adopted Comprehensive Plan shall provide land for future residential use to promote a more compact development pattern. This shall include sufficient land suitable for the public utility facilities needed to support the projected level and pattern of development.
2. Policy 1.A5.2. Development on all vacant, un-platted areas designated as residential should be compatible with any surrounding existing homes.



The proposed project is not compact. The vast majority of the site is consumed by parking lots, rather than compact development. It will unnecessarily expend city resources in terms of transportation and utilities. The typical trip lengths for a big-box or membership store are typically very long, often in excess of 6 miles, in comparison to a typical grocery store, which is in the range of 2 miles, and decreasing. This is a sprawling project with large uninterrupted parking lots creating heat island effects, noise, and nuisance traffic impacts attracted from long distances with minimal local benefit. The project is incompatible with the adjacent residential, school, and agricultural land uses.

- d. Objective 1.A6. - Neighborhood stability. Established residential neighborhoods shall be protected from the intrusion of competing intense uses through adherence to the Future Land Use Map, densities and intensities established in the Future Land Use Element, implementation of the City's Land Development Regulations, and control of traffic and access for the protection of the established residential uses.
 - i. Policy 1.A6.3. Future neighborhood commercial development that reduces vehicular trips shall:
 - a. Be clustered with other neighborhood commercial uses in a single location;
 - b. Be compatible in size, style, architecture, and materials to surrounding residential buildings;
 - c. Provide buffering from noise, light, and pollution;
 - d. Mixed use development will be encouraged.
 - ii. Policy 1.A6.4. All non-residential uses shall provide adequate buffering and screening through the use of landscaping and other materials to minimize any adverse noise, light, and pollution impacts on surrounding residential neighborhoods. However, buffers between residential uses exceeding six (6) dwelling units per acre and
 - A. Neighborhood and community parks;
 - B. Golf courses;
 - C. Open space areas;
 - D. Public schools; and
 - E. Day care centers;shall maximize the opportunities for passages to facilitate pedestrian or vehicular traffic between the adjacent developments in order to reduce off site vehicular impacts. Additionally, buffers between residential uses exceeding 12 units per acre and,
 - A. Offices, including private and governmental;
 - B. Hospitals;
 - C. Nursing homes; and
 - D. Retail commercial;



shall maximize the opportunities for passages to facilitate pedestrian or vehicular traffic between the adjacent developments in order to reduce off site vehicular impacts.

- iii. Policy 1.A6.5. The City shall promote energy efficiency through mixed-use developments that increases multi-modal accessibility and reduces automobile travel. The characteristics of mixed use may include but not limited to the following:
 - Provide housing and commercial services near employment centers.
 - Contain the mix of uses allowed within the underlying land use designation.
 - Accessibility to existing or planned transportation system.
 - Provide transit stops in new developments.
- e. Objective 1.A7. - Future land use categories.
 - i. Neighborhood/Special District: Mixed-use category allowing residential, commercial, and recreation land uses such that a functional vertical or horizontal mix of uses is achieved. Developments shall include a mix of residential and commercial or office. Uses may be mixed within a single building and on a single site provided that impacts from differing uses are mitigated through urban design techniques.

The proposed project does not provide any appreciable clustering, and certainly none that supports protection of ecological resources or rural character. It is not compatible in size, style, architecture or materials. Although it meets the definition for mixed use, it does not meet the intention of mixed use in that it draws regional traffic rather than providing an urban fabric that supports the interaction of local people at a walkable or bikeable scale. The land use mix is not internally complementary nor complementary to the surrounding land uses.

- ii. Policy 1.A7.3. The term "mixed use project" means one which allows for a mix of residential, non-residential and recreational land uses such that a functional vertical or horizontal mix of uses is achieved. These uses may be mixed within a single building or on a single site, providing that any impacts are mitigated through urban design techniques.

There is no functional mix of uses because the function of the retail is regional rather than local and the residential is not likely to use the Costco any more frequently than any other Costco customer. The point of mixed land use is to reduce or eliminate regional roadway trips by replacing them with locally supportive uses in close proximity to residential areas. Placing a regional use in a residential area is in direct conflict with the purpose of mixed use planning.

2. Goal B: Minimize costs to current residents of growth, new development, and redevelopment, and encourage future land uses that maintain or enhance economical and efficient delivery of government utilities and services.



- a. Objective 1.B3. - Desirable pattern of land uses. Promote and enhance a pattern of land uses that are compatible; that are convenient to City residents, businesses, and visitors; that avoid inappropriate or wasteful use of land; and that encourage efficient use of land, resources and facilities. Future land uses shall be designated to support the existing or planned community character, thereby prohibiting the development or expansion of uses which are inconsistent with the community's character. Reduce blighted areas through redevelopment. Land development and use regulations shall include provisions to ensure consistency with this Comprehensive Plan.
 - i. Policy 1.B3.10. All commercial buildings shall be designed to maintain and enhance the attractiveness of the streetscape and promote the architectural heritage of the City. Buildings shall include architectural features and patterns that provide visual interest from the perspective of the pedestrian, reduce building massing and recognize local character. Facades shall be designed to reduce the mass or scale and uniform monolithic appearance of large unadorned walls while providing visual interest that will be consistent with the community's identity and character through the use of detail and scale. The building's mass shall be varied in height and width so that it appears to be divided into distinct massing elements and details that can be perceived at the scale of the pedestrian. Corner lots at an intersection of two or more arterial or collector roads shall be designed with additional architectural embellishments, such as corner towers or other design features, to emphasize their location as gateways and transition points within the community.

The proposed site plan is a waste of undeveloped land because it places a regional land use in a local, rural part of the community without adding value to the local area. There are more than enough regionally accessible properties that have been developed in a traditional suburban pattern. Using up a greenfield site for this type of project fails to honor the existing architectural heritage or create a vibrant streetscape. It is dominated by parking lots rather than productive, flexible uses that can change incrementally over time. It is business as usual for the 20th century rather than best practices that shift us from the unproductive, resource intensive practices of the past. It is the least economical or efficient pattern of development that could be proposed and generates far less tax revenue per acre than a more distributed town center type of mixed use development would provide.

3. Goal F: Economic Development is a comprehensive goal for the City.
 - a. Objective 1.E1. - Economic development. The City shall research major land use issues which impact economic development and may potentially generate City revenues.

In terms of economic conditions, the city should be aware of how the national trends will impact the economic development of the area. Retail projects are struggling with many centers shutting down or down-sizing. Adaptive reuse of large retail centers is a trend nationally as land owners struggle to find viable commercial enterprises for these large unoccupied spaces. Retail is



shifting to local scale with a goal of serving immediate needs with smaller footprints rather than large stores warehousing specialty goods. Large stores are particularly difficult to retrofit into other uses when they fail. The current trend is to convert grey-fields (large parking lot centered shopping) into gold-fields—small scale retail neighborhoods with walkable environments, recreational amenities, and individual storefronts. Building a brand new greyfield is foolish in light of the national trends. Multifamily projects are also shifting to lower profile, with one and two story complexes clustered around natural amenities, similar to the project south of the proposed development.

Another concern is the potential economic consequences when this project fails to thrive. Whether this is in the short term, due to global retail trends, or over a longer time horizon due to the typical 15 year obsolescence timeframe, a big-box site is quite difficult to adaptively reuse and becomes a blight on the community, as is obvious from the fate of other large retail centers. A complex of smaller retail stores or a combination of retail and service storefronts provide greater physical accessibility between any required parking lots and their doorways, which better accommodates an aging population, and can create a third-space where the community gathers to interact socially.

It is easy to think in terms of the tax value that each project brings to the community, but tax value alone does not take into consideration the costs that the government will be required to bear from the project. These costs are often directly related to the amount of non-conservation land that the property consumes. Therefore, when you analyze a community in terms of the value per acre, it essentially gives you the net benefit that a community gains from a project. Figure 1 graphically shows the value per acre for Stuart based on information from the Martin County property appraiser.

The tall section to the north reflects the downtown area, where property values are as high as 9 million per acre. The hospital property has a value of around \$1.7 million per acre, while the downtown Publix has a value of around \$616,000 per acre. The WalMart project on Prospect has a value of \$46,000 per acre, which is about what can be expected from the Costco portion of the project. Using the value of the units in the apartment complex to the south of the proposed project (which are typically larger than would be in a single-building, 4-story complex) yields a value of roughly \$765,000 per acre in the multifamily portion of the project, which is similar to the project to the south with is roughly \$440,000 per acre. The large, cohesive conservation areas in the project to the south were not included in this analysis but reflect an additional value to the community that the proposed project lacks.

What creates the high value per acre in the downtown core, the office complexes across Willoughby and the waterfront is the flexibility and accessibility of the space. When a store or office suite fails within a complex of many users, it can be replaced by other locally based retailers without it blighting the whole. Similarly, a complex of lower-rise multifamily units with dispersed parking has a level of accessibility, redundancy, and community cohesion that is difficult to achieve in a high-rise surrounded by parking. Long term tenants or condo-owners create relationships and connections that assure that the property is well maintained and welcoming.



Creative
Resources
Enhancing
Workable
Sustainability

Kanner Site Proposal Evaluation, Stuart, FL
m: 407.758.0137

PatriciaTice@CREWSLLC.com
www.CREWSLLC.com

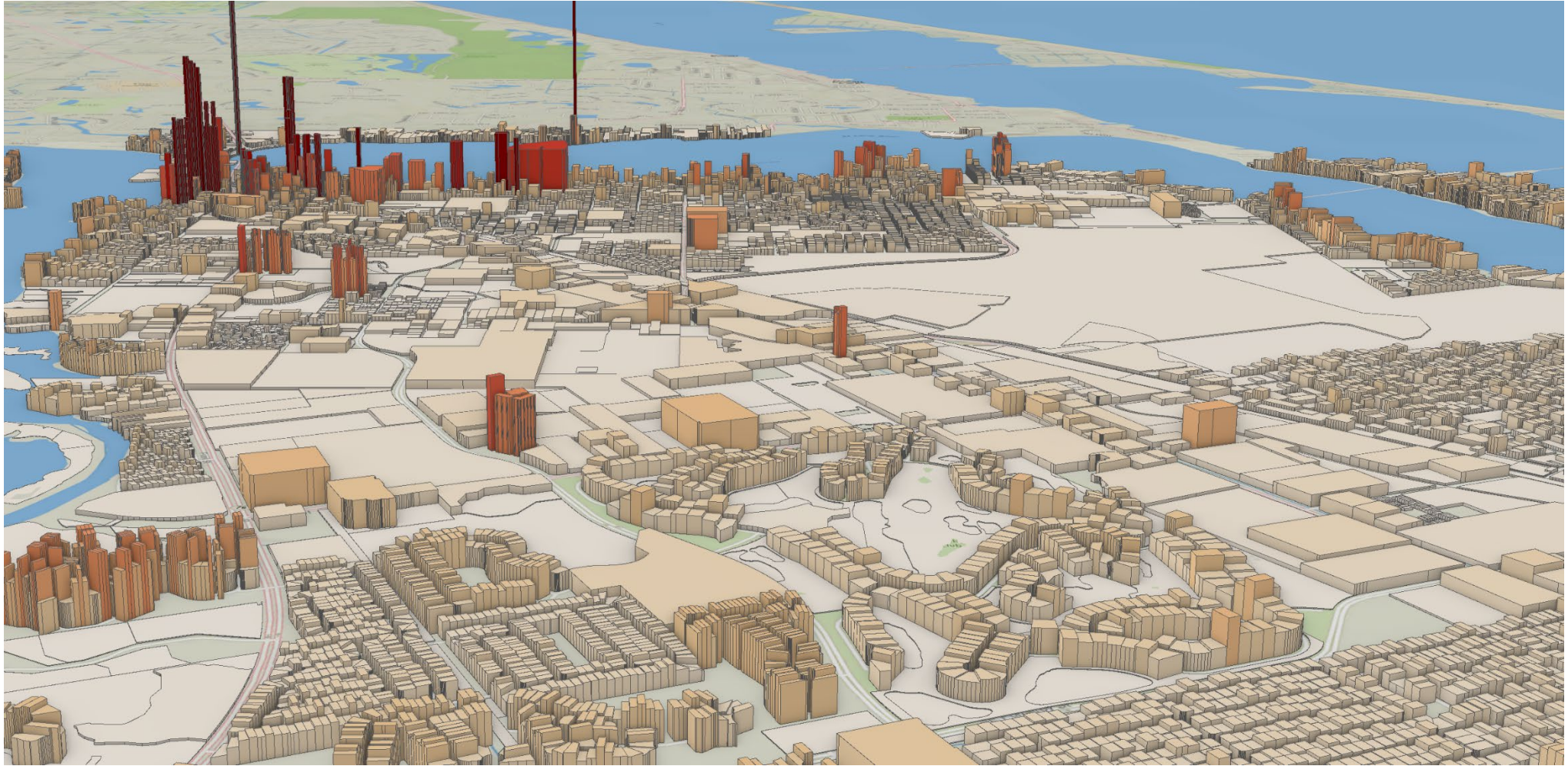


Figure 1: Value per Acre, Stuart, FL

606 Courtlea Cove Avenue, Winter Garden, Florida, 34787



4. Goal F: The future land use goal for the Neighborhood/Special District category is to promote infill and redevelopment efforts; allow for the creation of traditional neighborhood developments (TNDs); lessen the need for vehicular trips; deter urban sprawl; and encourage the development of mixed-use developments.
 - a. Objective 1.F1. Development Standards for Neighborhood/Special District land use category. The City shall allow mixed-use and traditional neighborhood development, pedestrian accessibility, and innovative planning and land use techniques that strengthen the small-town character of Stuart through the application of the Neighborhood/Special District land use category.
 - i. Policy 1.F1.2. Mixed-use development within the Neighborhood/Special District category shall integrate distinct uses together in order to create a functioning, multifaceted type of development. Integration is defined as the combination of distinct uses on a single site where impacts from differing uses are mitigated through urban design techniques and where differing uses are expected to benefit from the close immediate proximity of complementary uses. This may include horizontal and vertical integration.

The proposed development does not meet the criteria of a functioning, multifaceted type of development. The impacts of the two uses cannot be (and are not) mitigated through urban design techniques—few, if any are applied—and there is only minimal benefit to the two land uses that come from the immediate proximity of these (non)complementary uses. The economic profile of Costco’s customer base and multifamily housing are not a match, making the interaction less likely than in a typical locally serving neighborhood commercial project.

- ii. Policy 1.F1.3. To promote pedestrian friendly and neighborhood-scale development, blocks within a mixed-use development should not exceed an average block perimeter of more than 1,600 linear feet, or a five-minute walk, unless the block perimeter has pedestrian access points at intervals not exceeding 550 feet. No block frontage along a single street should exceed 550 feet.
- iii. Policy 1.F1.4. Large expanses of parking area discourage neighborhood scale and pedestrian friendliness. Therefore, where possible, development shall include smaller scattered parking lots of "nodes" that are approximately located such that the massing or "bunching" of parking into large expanses of parking area is prevented.

The site plan for this project completely fails to meet either of these criteria. Blocks, as such, are not a component of the plan and the entire project is completely overwhelmed by vast parking areas. The retention pond in the center of the site is a barrier to pedestrian interaction and provides no value to the site.



Wetland Mitigation and Conservation

It has been noted that the parcel was annexed into the city and it is believed that part of the reason for the annexation is the comparatively lax regulations with regard to wetland mitigation. Martin County's comprehensive plan and land development code prohibit the development of wetlands or their mitigation except for public uses or parcel access. Stuart's comprehensive plan and land development code are more lenient, although their intent is to limit wetland encroachment and damage.

Policy 5.A5.5 indicates the desire to “encourage activities not dependent upon a wetland location be located at upland sites” and “to allow wetland losses only where all practicable measures have been applied.” The policy goes on to indicate: “Land use planning and site design shall support development patterns that avoid or minimize the impact of development on wetlands.”

Unfortunately, the site plan presented by the applicant intends to mitigate (eliminate or relocate) all 5 acres of natural wetlands and all but 0.6 acres of non-wetland waters. The majority of this mitigation will include the reconfiguring of the existing FDOT pond and addition of another onsite basin, but additional mitigation will be required via purchasing credits within a mitigation bank. The onsite mitigation form will include clear cutting all existing vegetation and dredging to generate a new pond within the existing wetland. This provides no preservation of existing species onsite and no real benefit to the development or the community in terms of useful open space or amenities. Contrast this with the adjacent site to the south, which has provided 12.24 acres of conserved wetlands (roughly 30% of their site), which forms a series of amenitized ponds around which the community is constructed. The city's stated purpose for allowing wetland mitigation is to “promote compact urban development and discourage urban sprawl.” As mentioned earlier, the proposed project is not compact and reflects nearly the textbook definition of sprawl.

The stormwater analysis was performed for a 25 year, 72 hour storm. Although this meets SFWMD requirements, there are indications that climate change may generate impacts that are substantially higher than these in either direction, either flooding or drying out the adjacent nursery that depends on its ponds for irrigation.

Conclusion:

It is my professional opinion that this project, as proposed, is in complete opposition to the spirit and letter of the city's comprehensive plan goals, objectives and policies, and is likely to become a blighted property within 15 years.

Dr. Patricia C. Tice, PE, AICP, LEED AP
CREWS, LLC



Creative
Resources
Enhancing
Workable
Sustainability

Kanner Site Proposal Evaluation, Stuart, FL
m: 407.758.0137
PatriciaTice@CREWSLLC.com
www.CREWSLLC.com

Dr. Patricia Tice has been practicing in Transportation Engineering, land use planning, and urban evaluation for 25 years. Her practice focuses on providing elegant, nuanced solutions to difficult problems at the intersection of transportation, land use, community building, economics, and the psychology of urban spaces. Her doctoral dissertation at UCF was prepared on the topic of the psychology of driving in urban spaces.

DR. PATRICIA C. TICE, PHD, PE, AICP, LEED AP

Phone: (407) 758-0137
PatriciaTice@CREWSLLC.com

606 Courtlea Cove Avenue
Winter Garden, FL 34787

EDUCATION

- PhD University of Central Florida, Civil Engineering July 2021**
Dissertation: "Identifying the Links Between Mental Frameworks, Context Features, and Driver Attention in Complete Streets Environments"
Committee: Dr. Naveen Eluru (chair), Dr. Mohammed Aty, Dr. Peter Hancock, Dr. Hatem Abou-Senna, Dr. Luis Santiago
- MS West Virginia University, Civil Engineering December 1995**
Thesis: "A re-evaluation of the structural system for the West Virginia Independence Hall, 1859"
Advisor: Dr. Emory Kemp
- BS University of Florida, Civil Engineering May 1993**
Graduated Magna Cum Laude
Senior project: Comparison of Wind Load Codes

PROFESSIONAL EXPERIENCE

- Creative Resources Enhancing Workable Sustainability 2011 to Present**
President and Chief Creative Officer
- Multimodal Corridor Plan, Code Recommendations, Orange County, FL
 - Rio Grande Avenue Safety Analysis, Orange County, FL
- Glatting Jackson Kercher Anglin/AECOM 2007 to 2011**
Associate, Transportation Engineering
- Haines City Comprehensive Plan Transportation Element
 - Multiple complete streets and community design projects
- Traffic Planning and Design 1997 to 2007**
Transportation Planning Engineer
- Hundreds of Transportation Impact Analyses
 - Project manager for all atypical projects
- Lindemann Bentzon Engineering 2006**
EIT
- Created the format for all Lennar Homes Structural Analyses

HONORS AND AWARDS

Professional of the Year Florida Section ITE	2016
Best Paper of the Year: Proposed Mobility Strategy Florida Section ITE	2010
Eno Transportation Leadership Fellow	1995

RESEARCH EXPERIENCE

UCF, Transportation Modeling Group Co-PI: Identifying Mental Schema within Complete Streets Contexts <ul style="list-style-type: none">• Pursued and acquired a 2-year FDOT grant, supporting 2 grad students + faculty• Phase I: Use NDS to identify context variables that impact driver behavior• Phase II: Identify expert and driver preference and mindset contextual cues• Phase III: Identify how design guidance aligns with driver behavioral cues• Phase IV: Communicate design recommendations to FDOT staff	2019-Present
UCF, CATS Lab, Orlando, FL Research Assistant <ul style="list-style-type: none">• Driving simulator analysis, post-marked lane delineators	2019
University of Florida, UFTI, Gainesville, FL Graduate Researcher <ul style="list-style-type: none">• Identifying Multimodal Performance Measures	2012 to 2013

TEACHING EXPERIENCE

University of Central Florida, Orlando, Florida Primary Teaching Assistant, Statics <ul style="list-style-type: none">• Supervised nearly 150 students• Assisted with quiz and exam development• Required office hour attendance for remedial credit• Prepared and graded remedial exam	Fall 2018
Micromobility Walk Audit <ul style="list-style-type: none">• Full day training for planners regarding shared micromobility• Built environment evaluation of design features• In-class summary of micromobility permits, safety outcomes, and legal issues	

CLASS WRITTEN

Urban Design for Engineers

- Capstone Design Class
- Includes AASHTO and FDM Design Instruction
- Mirrors Urban Design courses from Landscape Architecture and Urban Planning
- Multidisciplinary, discussion and design based course focusing on complete streets and urban form best practices

PUBLICATIONS

Reports

Abou-Senna, H, et al. (2019). Human Factors Study on the Use of Colors for Express Lane Delineators. University of Central Florida. FDOT Transportation Research Report: BDV24-977-26. Tallahassee, FL.

MITE, B. F. (2013). School Site Planning, Design, and Transportation. Institute of Transportation Engineers. ITE Journal, 83(6), 16, pp. 52-54.

Elefteriadou, L., et al. (2012). Expanded Transportation Performance Measures to Supplement Level of Service (LOS) for Growth Management and Transportation Impact Analysis. University of Florida. FDOT Transportation Research Report: BDK77 977-14. Tallahassee, FL.

Steiner, R., Elefteriadou, L., Srinivasan, S., Tice, P., & Lim, K. K. Identification and Assessment of Transportation Performance Measures for Growth Management and Transportation Impact Assessment Applications.

Journal Publications

Tice, P. C., Mouloua, M., & Abou-Senna, H. (2020). Aging drivers and post delineated express lanes: threading the needle at 70 miles per hour. Transportation research part F: traffic psychology and behavior, 74, 396-407.

Tice, P. C. (2019). "The World We Always Wanted." Institute of Transportation Engineers. ITE Journal 89(7): 28-31.

Elban, W. L., Borst, M.A., Roubachewsky, N.M., Kemp, E.L., Tice, P.C. (1996). Metallographic examination and Vickers microindentation hardness testing of historic wrought iron from the Wheeling Custom House. Microstructural Science. Understanding Microstructure: Key to Advances in Materials. Proceedings of the Twenty-Ninth Annual Technical Meeting of the International Metallographic Society.

Elban, W. L., Borst, M. A., Roubachewsky, N. M., Kemp, E. L., Tice, P. C., (1998). "Metallurgical assessment of historic wrought iron: US custom house, Wheeling, West Virginia." APT bulletin 29(1): 27-34.

Journal Papers Accepted

Journal Papers in Review

Tice, P., et al. (2021). "The Conditioned Anticipation of People (CAP) Model of Driving in Urban Spaces." Submitted February 2021 to Transportation Research, Part F.

Tice, P. and N. Eluru (2021). "Eye See You: Attention, Human Presence, and Crash History in Complete Streets." *Accid Anal Prev*.

Tice, P., et al. (2021). "Out of Sight, Out of Mind: Anticipated Human Presence and Driver Attention in Complete Streets." *Transportation Research Record: Journal of the Transportation Research Board*.

Conference Papers

(Peer-Reviewed)

Tice, P. C. (2019, November). "Micromobility and the Built Environment. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*" (Vol. 63, No. 1, pp. 929-932). Sage CA: Los Angeles, CA: SAGE Publications.

Tice, P.C. (2020, January) "A Review of Current Scooter Share Permits" TRB 2020 Lectern Session: "Cross Cutting Issues in Shared Mobility"

Tice, P., Dey Tirtha, S, Eluru, N. (2021, October) "Driver Attention and The Built Environment, Initial Findings from an NDS Study." HFES Annual Meeting.

(Abstract-Reviewed)

Tice, P. (Anticipated: 2021, July). "How the built environments shapes driver behavior: An NDS study." ITE International Meeting

Conference Papers in Review

Conference Sessions Moderated

Tice, P (Moderator), Vacca, K., Howard, A., Kierenfield, L., and Duncan, J. "Innovations in the Public Realm, a discussion of Open Streets, Slow streets, and Streateries." ITE Virtual Technical Conference, March 24, 2021.

Other Professional Publications

FLITE Magazine (Florida State ITE Journal)

Teenage Transect, Spring, 2016
Thinking Multimodal I and II, Spring and Fall 2014
Complete Communities, Spring 2011
Proposed Mobility Strategy, 2010
FAPA Planning Magazine
How History Can Help Your Plan, 2018

PRESENTATIONS AND INVITED LECTURES

A Review of Current Scooter Share Permits: Commonalities and Best Practices,
Transportation Research Board, January 2020.

Traffic Calming 201 - Concepts from Art and Psychology. ITE Virtual Drop-In Session,
April 2020

Transportation Camp DC, January 2020,
Overnight Bike Network
What's up with Transportation Engineers?

Micromobility Walk Audit Workshop, FAPA 2019

Micromobility for Transportation Engineers, I3/FSITE Summer Meeting, 2019

Lessons Forgotten, FSITE, 2014

Telecommuting as a TDM strategy, FSITE, 2011

LEED ND for Florida, FSITE, 2009

PROFESSIONAL TRAINING/CERTIFICATION

CFRPM 7 Travel Demand Modeling
FDOT District V

Professional Engineer, Florida
Member, **American Institute of Certified Planners**
LEED Associated Professional

PROFESSIONAL AFFILIATIONS AND SERVICE

Institute of Transportation Engineers	1997-Present
Lay Editor, ITE Planning Newsletter,	Summer 2011
Director, FLPlan	2012-2014
Planning Committee: Multimodal TIA Case Study Project Leader	2021
Developing Trends Report Subcommittee	2021

American Planning Association 2007-Present
FAPA Legislative Affairs Committee, 2020-present
Conference Committee, Speakers and Sessions 2020

Human Factors and Ergonomics Society, 2018-Present
Congress for the New Urbanism, 2020-Present
Urban Land Institute, 2020-Present
Member, Florida Model Task Force Data Committee and Micromobility Subcommittee

ITS World Congress
Volunteer Director 2011

Peer-Reviewed Articles for:

- Transportation Research Part F-Traffic Psychology and Behavior
- Transportation Research Board Annual Meeting

COMMUNITY SERVICE

Down Syndrome Association of Central Florida
Member/Volunteer, 2002-present

Down Syndrome Foundation of Florida
Member/Volunteer, Founding-present

OTHER

Disability advocate
Calligraphy

REFERENCES

Dr. Naveen Eluru,

Department of Civil, Environmental, and Construction Engineering
University of Central Florida
12800 Pegasus Drive, Suite 211
Orlando, Florida 32816-2450
Phone: 407-823-4815
Email: Naveen.Eluru@ucf.edu

Dr. Manoj Chopra

Interim Associate Dean for Academic Affairs
College of Engineering and Computer Science
12800 Pegasus Drive, Suite 211
Orlando, Florida 32816-2450
Phone: 407-823-5037
Email: Manoj.Chopra@ucf.edu

Dr. Hatem Abou-Senna

Department of Civil, Environmental, and Construction Engineering
University of Central Florida
12800 Pegasus Drive, Suite 211
Orlando, Florida 32816-2450
Phone: 407-823-0808
Email: habousenna@ucf.edu

Dr. Ruth Steiner

Director, Center for Health and the Built Environment
University of Florida Department of Urban and Regional Planning
Architecture Building,
1480 Inner Road, Gainesville, FL 32611
Phone: (352) 392-4836
Email: rsteiner@dcp.ufl.edu