

City of Fort Lauderdale**Soundscape and noise ordinance study****Revised Draft method**

July 21, 2022

Siebein Associates Inc., in partnership with the University of Florida and Florida Atlantic University, (Soundscape Team) proposes to conduct a soundscape study in response to RFP # 12655-225 for the City of Ft. Lauderdale. The Soundscape Team will analyze noise and sound in 2 entertainment districts and 4 regional activity centers and will propose strategies toward adopting standards for measuring sound and will offer strategies for detecting and enforcing violations of reasonable maximum permissible sound limits. The great diversity of urban and suburban communities within the City of Ft. Lauderdale suggests a strategic approach to identify a range of urban conditions that represents the larger City of Ft. Lauderdale, a prioritization of those areas to be determined, and a phased approach to the measurement, analysis, and subsequent noise control strategies. We propose, over the course of 3 to 6 months to work with city staff, and stakeholders selected by the City to identify critical areas, prioritize those areas for study, conduct a pilot study in two areas, deploy and assess the methodology of analysis, evaluate the results for refinement, and then initiate a broader set of studies in 1 additional entertainment district and 3 regional activity centers. These priority areas would be selected in collaboration with staff to represent the range of neighborhoods and urban contexts that exist throughout Ft. Lauderdale. This would allow the noise control strategies developed from the representative areas, to be appropriately applied to similar circumstances throughout the city.

The following sections outline how this strategic approach meets the requirements set forth in the RFP.

Advance Preparation – City of Ft. Lauderdale

1. City to appoint planning staff as point person to liaise with the Soundscape Team.
2. City to discuss the proposed scope of work with the existing noise control advisory committee and report comments to the Consultants.

Initial site visit, meeting and orientation (weeks 1-2)

1. Consultants to meet with planning staff and others selected by the City virtually to help define the specifics of the study

Identify the range of areas of concern and potential locations of focused study

Discuss the history of events and issues leading up to the RFP and the efficacy of strategies that have been utilized previously

Identify recent events of concern to each group

Brainstorm ideas for potential resolution

Tour city staff. Initial documentation of sound levels during soundwalks before and after these meetings.

Prioritize acoustical zones in Ft. Lauderdale that are of concern for the study. Architecture, urban design, occupancy, land use, sound levels, sound sources – inside, outside, types and levels.

Identify 1 entertainment zone and 1 regional activity center for a pilot acoustical study including measurement, analysis, and development of initial strategies for monitoring and enforcement.

Experience and document existing sonic conditions during several times –
Quiet time
Busy time
Time when events of concern occur

Identify future sonic conditions based on the existing comprehensive plan and any projected major projects or trends identified by City staff

Soundscape Team will report on the findings from this meeting and set the agenda for the next phase of the study.

Conduct the pilot study (weeks 2-5). Soundscape Team leaders and measurement team.

Measure and qualify baseline ambient sonic conditions during 1 weekend site visit.

Identify sounds of concern to stakeholders, time of concern, and their impressions of possible solutions.

Evaluate program activities associated with acoustical conflicts – uses, proximity, demographics, general construction types (relative to acoustical isolation), buffer spaces, and street activity.

Review findings with City and others as appropriate.

Reconsider and refine the priority areas for the next phase of study – range of areas with noise concerns.

The Soundscape Team will report on the findings from the pilot study and revise the methodology for studying the next group of priority areas.

Conduct the priority areas study (weeks 5-12). Soundscape Team leaders and measurement teams will conduct field studies during this phase.

Measure and qualify baseline ambient sonic conditions – with focus on key issues identified in the pilot study.

Document acoustical conditions in each selected zone – 2 special entertainment districts and 3 regional activity centers

Conduct sound walks with City officials and the Soundscape Team. This will occur during 1 weekend site visit.

Identify sounds of concern, time of concern, and impressions of possible solutions.

Review findings with City.

Soundscape Team to return to the office/studio for data analysis, scheming, and developing initial concepts and strategies for noise measurement, monitoring, and enforcement. Additionally sound reduction, buffering, mitigating and enhancing strategies will be evaluated. Several alternative possible solutions to reduce, buffer and mitigate unwanted sounds; preserve, enhance and contain desired sounds; and strategic insertion of new sounds and activities to enliven the fabric of the City, and provide new opportunities for an invigorating urban living experience for all citizens in a complex, vital, mixed-use urban fabric.

The team will consider the full palette of acoustical design and control strategies including reducing, buffering or mitigating sounds at or near their source; improving the building structures to contain sounds and to reduce sounds entering them through careful design and construction; operational controls such as the use of sound level monitoring at critical sound sources such as clubs and entertainment establishments and at critical receiving locations such as the nearest homes to lively areas; and operational controls including noise ordinance requirements, hours of operation, zoning requirements for buffering and construction and other features. This approach is essential so that no one strategy or use group bears the complete acoustical burden of controlling sounds in the city. The compatibility of seemingly disparate adjacencies and occupancies can be enhanced by spreading the acoustical responsibility for planning, design, construction, and operation of homes, businesses, and industries across all groups rather than staking out a dividing line between each group for defending in place. In this way the interdependency of the residents on the commercial and entertainment groups and vice versa can be explored. Sonic transitions between each zone or area can be developed so that the goals of each group can be positively addressed.

The Soundscape Team will report on the findings from these priority area studies toward initial noise abatement, monitoring, and enforcement strategies. In this phase, specific strategies will emerge targeted to be appropriate for the specific areas of study and that can be adapted to other similar circumstances throughout Ft. Lauderdale.

Recommendations for soundproofing (weeks 12-16).

Identify noise sources of concern that the soundproofing is needed to reduce from the soundwalks and noise measurements. These may be specific to single priority areas or may apply to multiple areas. The abatement strategies will be qualified as appropriate for each of the areas.

Where possible, these areas will be keyed to the municipal code adopted by the City of Ft. Lauderdale.

Provide recommendations for soundproofing to each category of building identified. This will likely be in the form of acoustical improvements for existing facilities to reduce unwanted sounds from propagating out of potential sound source occupancies; to reduce intrusion of exterior sounds entering buildings where this is not desired; and for the design of new buildings with either or both of these strategies to be able to fully function given the diverse uses and soundscapes within and near the buildings.

Review with City

Revise and submit final recommendations

Review of noise ordinance (weeks 12-16).

The current noise ordinance will provide base line information for our pilot and area studies as part of the ongoing research and evaluation. At this point in the process, findings from the studies will be evaluated against the existing ordinance to develop revisions, affirmations, and potential new criteria that would be vetted for inclusion in the ordinances.

Accounting for ambient sound levels in each zone or district

Acoustical metrics to be considered including dBA, dBC or more detailed octave band or time-weighted metrics.

Identify allowable sound levels for each zone or district based on current ambient conditions and future projections of sound types and levels. Similar methods have been employed by the team to recommend sound level limits in other emerging and reinvigorating urban areas.

Develop initial protocols for measurement evaluation at sensitive zonal boundaries.

Review with City

Provide recommendations to City Attorney for technical acoustical language to be adjusted or added to the noise ordinance to address the concerns identified in the study.

Review with City

The important point in this proposal is that the enforcement of provisions in a community noise ordinance is only one of the strategies to enhance sonic compatibility among the participants in the community soundscape. The holistically conceived and scientifically executed sonic planning, design, construction, and operation of residences, commercial, entertainment, and industrial operations will ease the need for stringent noise ordinance requirements since the ordinance is only one of the soundscape control strategies to be implemented in the city. The layering of sonic attributes in the planning, buffering, measuring, modeling, and simulating existing and new environments in the future will allow a multi-tiered approach to maintain sonic compatibility among diverse uses and occupancies. It is important to note that the diverse composition of uses and

occupancies in a complex urban environment is what makes the City of Fort Lauderdale so exciting and unique as a place to live, work, play, vacation, shop and enjoy.

Draft final report (weeks 16-26)

Review with City

Revise and submit final report

FORT LAUDERDALE SOUND STUDY

Fort Lauderdale, Florida

PERSON HOUR AND COST ESTIMATE

	Senior Principal	Associate Principal	Senior Consultant	Consultant	SUBTOTALS
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Items 1, 2 & 3 Project kick off, Initial Meetings, Orientation, Site Visit

Virtual kick off meetings
Travel, 1 Site visit and meetings, literature review

Subtotal hours per item	13	24	0	0	
Hourly rate	\$295	\$175	\$135	\$125	
Estimated cost for personnel	\$3,835	\$4,200	\$0	\$0	\$8,035
Reimbursables					\$1,338
Subtotal cost for phase					\$9,373

Item 4 TASK 2 Pilot Study - Site Visits, Meetings with Stakeholders, Select Area of Study, Soundscape Measurement, Mapping and Modeling

Measure and qualify baseline ambient sonic conditions
Identify areas of concern with City and Stakeholders, review findings with City
Refine priority areas for study and range of acoustic concerns - select pilot study area
Soundwalks and measurements in pilot study area
Soundscape evaluation of pilot study area, initial strategies for sonic intervention elements, initial strategies for standards, monitoring and enforcement in a complex environment

Subtotal hours per item	23	12	63	65	
Hourly rate	\$295	\$175	\$135	\$125	
Estimated cost for personnel	\$6,785	\$2,100	\$8,505	\$8,125	\$25,515
Reimbursables					\$3,069
Subtotal cost for phase					\$28,584

Item 5 Priority Area Studies Measurement, Soundscape Mapping, Modeling of Alternatives, Strategies for Sonic Interventions

Identify general types and acoustical properties of buildings using GIS database and field observations, sonic activities, base line ambient sound levels, acoustical issues in each Priority Area
Conduct soundwalks with City staff and stakeholders in each Priority Area, review findings with Team and stakeholders
Construct and analyze design models of each priority area
Analyze data, develop initial concepts for soundscape compatibility planning, design interventions, noise ordinance development and soundproofing where needed
Analyze potential approaches at the scale of individual buildings, near by buildings and plazas, etc., the neighborhood and possibly larger scale if needed
Examine potentials for control via monitoring, ordinance requirements, administrative and operational controls in addition to infrastructure controls
Review potential approaches and solutions with stakeholders and city
Prepare report of findings for each priority area and how the approaches and strategies developed in each can possibly be transferred to the larger city environment and other areas

Subtotal hours per item	37	28	93	111	
Hourly rate	\$295	\$175	\$135	\$125	
Estimated cost for personnel	\$10,915	\$4,900	\$12,555	\$13,875	\$42,245
Reimbursables					\$2,579
Subtotal cost for phase					\$44,824

	Senior Principal	Associate Principal	Senior Consultant	Consultant	SUBTOTALS
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Item 6 Analysis and Review of Noise Ordinance

Draft ordinance adjustments, Review with City and stakeholders, revise report, Present Final Draft

Subtotal hours per item	4	28	0	0	
Hourly rate	\$295	\$175	\$135	\$125	
Estimated cost for personnel	\$1,180	\$4,900	\$0	\$0	\$6,080
Reimbursables					\$0
Subtotal cost for phase					\$6,080

	Principal	Principal	Consultant	Consultant	SUBTOTALS
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Item 7 Analysis and Recommendations for Soundproofing and Noise Mitigation

Acoustical analysis of typical buildings with recommendations for soundscape compatibility planning, soundproofing and other noise mitigation strategies as needed

Subtotal hours per item	6	48	0	0	
Hourly rate	\$295	\$175	\$135	\$125	
Estimated cost for personnel	\$1,770	\$8,400	\$0	\$0	\$10,170
Reimbursables					\$0
Subtotal cost for phase					\$10,170

Item 8 Final Report

Draft report, Review with City and revise report, Public presentation via video call

Subtotal hours per item	8	8	3		
Hourly rate	\$295	\$175	\$135	\$125	
Estimated cost for personnel	\$2,360	\$1,400	\$0	\$375	\$4,135
Reimbursables					\$0
Subtotal cost for phase					\$4,135

UF and FAU faculty time and fringes \$14,754

UF and FAU expenses \$6,794

Visa expense - this can be deducted if payment is made by check of EFT and adjusted if actual cost is less \$3,299

Subtotal personnel costs \$110,934

Subtotal expenses \$17,079

TOTAL DESIGN FEES AND REIMBURSABLES \$128,013