

## OVERVIEW

The Florida Department of Transportation (FDOT) performed thorough testing and has measures in place to insure that construction and operation of the Port of Miami Tunnel Project will not produce noise levels that affect the residential and commercial developments near the project site.

In February 2006, testing was conducted to measure existing noise levels from receptors placed on five (5) key locations on both Watson and Dodge Islands. The 5 locations are shown to the right. These locations were selected due to their close proximity to the proposed project's alignment and to their potential sensitivity to noise of their intended land-uses. The receptors gathered data that included long-term temporal and short-term spectral noise levels that were sampled during three different times of the day: **daytime** (7 am to 6 pm), **evening** (6 pm to 10 pm) and **nighttime** (10 pm to 7 am). This data provided the average amount of noise at each of the 5 locations during these times. Using the sound level exceeded 10% of the time, FDOT calculated acceptable noise criteria the construction team must adhere to. Additionally, equipment used on site must be tested and certified that it does not exceed established maximum noise limits set for the specific type of equipment.

Miami Access Tunnel (MAT), the project's concessionaire, is required to follow the contract's **Reference Documents (Section 01565)** which details the construction noise control procedures, as well as the **Design and Construction Criteria (Section 3.2.1.5.2)** which defines their requirements as concessionaire in relation to noise mitigation.

These procedures and responsibilities include, but are not limited to, the following:

- *The hiring of a full-time Acoustical Engineer*
- *Submission of a Noise Control Plan*
- *Submission of Noise Measurement Reports*
- *Submission of working drawings, computations, data and other descriptions for abatement measures during construction.*

## Acoustical Engineer

The Engineer oversees all FDOT requirements regarding construction noise control. This includes the preparation of Noise Control Plans, preparation of Equipment Noise Certifications, and construction and complaint response noise monitoring.

## Noise Control Plan

The Plan predicts the noise levels associated with the work and equipment that will be used within a subsequent 6-month period. A Plan was submitted prior to beginning construction and is updated and resubmitted every 6 months. The Plan also evaluates anticipated compliance with noise criteria limits and describes the mitigation measures that will be implemented to reduce any excessive noise levels.

(Watson Island)

MIAMI CHILDREN'S MUSEUM



JUNGLE ISLAND



ICHIMURA MIAMI-JAPAN GARDEN



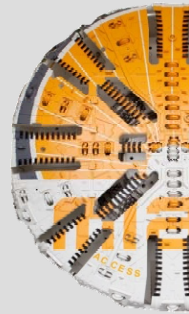
(Dodge Island)

MIAMI WORLD TRADE CENTER



STELLA MARIS SEAMAN'S CENTER





## Noise Measurement Reports

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Measurement reports are submitted weekly during the construction phase of the project and include all noise level measurements taken during the previous week, including construction compliance monitoring and any required complaint response investigations. The noise levels are measured at weekly throughout the daytime, evening and nighttime hours at the nearest sensitive receptor to ongoing construction activities.

## Noise Mitigation Measures

The Concessionaire is required by FDOT to implement any reasonable method of noise reduction to minimize noise levels during construction. These methods include:

- *Noise Barriers and Curtain Systems*
- *Configuring the construction site to avoid noise-sensitive locations*
- *Installation of noise-deadening material and intake/exhaust mufflers to hoppers or chutes*
- *Use techniques to reduce the duration of impact or vibratory pile driving*
- *Limit the use of PA systems and air/gasoline-driven hand tools*

## Complaints and Penalties to Concessionaire

FDOT has provided the concessionaire a complaint procedure to guarantee that public and agency complaints are addressed and resolved quickly and consistently. Upon receipt of complaints, the concessionaire shall perform noise measurements at the location in the complaint; these measurements are then forwarded to FDOT. If the measured noise levels exceed allowable limits specified in the reference documents, the concessionaire will implement any additional noise reduction materials and methods as described above to reduce the noise to within acceptable limits.

In the event that the concessionaire does not comply with all FDOT regulations stipulated in the Reference Documents, penalties shall be applied at the discretion of FDOT. The scale used to penalize non-compliance is as follows:

| Violation       | Action   |
|-----------------|--|
| 1 <sup>st</sup> | Written warning to MAT identifying violation   |
| 2 <sup>nd</sup> | Written Deficiency Report requiring MAT to demonstrate an understanding and commitment to FDOT noise regulations stipulated in the Reference Documents |
| 3 <sup>rd</sup> | Issuance of a Stop Work Order  |
| 4 <sup>th</sup> | Issuance of a Stop Work Order & Penalty of \$5,000   |
| 5 <sup>th</sup> | Issuance of a Stop Work Order & Penalty of \$10,000  |
| 6 <sup>th</sup> | Issuance of a Stop Work Order & Penalty of \$25,000  |

In order to comply with the proposed 55-month design/construction contract, the concessionaire must reach certain construction-based incentives within a particular time frame to receive “milestone payments” from FDOT. Therefore, any stoppage of work results in a larger monetary loss than the penalties specified above.

The concessionaire must meet all noise limitations set by FDOT during construction, in addition to the **City of Miami Noise Ordinance 11483, Section 36.6**. In the vent that FDOT requirements differ from the City of Miami Ordinance, the Concessionaire must follow the more stringent of the two.