Southport Gate System Update

Dear Southport Residents,

I'm dropping a note to provide information on the mechanism and performance of our community gate system.

System Operation
The gate utilizes a mechanical actuator arm (screw drive mechanism) that opens and closes the gates based on multiple input signals:

- **RFID (Resident Access):** A vehicle-mounted device communicates with the antenna, which recognizes the authorized code and signals the actuator to open the gate.
- **QR Codes (Visitors and Vendors):** QR codes scanned at the gate reader transmit data via the internet to the Proptia software platform, which then activates the gate.
- **Guard Operation:** Security personnel monitor entry and exit via dedicated cameras (including license plate readers) and can open the gate via the internet when required, either by using the help button or based on their observations.
- **Access Codes (Delivery and Service Providers):** Including USPS and other carriers, use assigned keypad codes for entry.
- **Exit Sensors:** Trigger the gate to open from the inside of the community.

Proptia Software Platform
The Proptia software platform is functioning effectively in terms of access guard communication and camera integration. However, there are a few items currently being addressed:

- **Software Updates:** Permanent visitor access currently requires renewal every 30 days. A software alteration to move this to an annual renewal is underway.
- **QR Reader Performance:** I have tested 10 different printed QR codes multiple times to identify limitations. One potential issue is sun reflecting on the reader, which can cause distortion. I will continue to work on this; however, I suspect many of the problems are also user-related, and therefore the signage mentioned below may be helpful.
- **Bilingual Signage & Labeling:** I believe it would be advantageous to add bilingual signage to direct QR code users to the appropriate reader rather than the keypads used by carriers. Additionally, we will try to more clearly label the "Help" button for better visibility and ease of use.

Observed Conditions: Mechanical Device and Wear
All gate systems have inherent mechanical limitations, particularly with a 13-foot gate and a large

swing radius. This is a particularly large gate for a radius swing, and this configuration generates significant torque, especially under wind load (the "sail effect"), placing stress on the linkages and throw components. This, combined with continuous high-cycle usage and environmental exposure, leads to significant wear and tear on the system.

Wind-Related Movement

Wind conditions can cause the gate to exhibit a brief shimmy and bounce (approx. 6–8 inches) at the end of its opening cycle. This is a result of large swing gate mechanics, laxity of linkages, screw drive mechanics, and actuator dynamics. This condition does not result in the gate reversing into traffic.

Current Status

The gate system is operational across RFID, QR codes, keypad, and guard-controlled access. Usage levels regularly exceed 250 cycles per day, and are well in excess of this during the busy season. For perspective, consider the mechanical load if you were to open your car door, dishwasher door, or refrigerator door 250 times every single day. This illustrates the substantial mechanical strain placed on the system.

Recent Event & Ongoing Management

During high winds two weeks ago (approx. 50 mph), the actuator experienced a failure due to fractured through-bolts. These were replaced within hours, and the system has returned to normal operation. We continue to work closely with Access Dynamics for maintenance and evaluation of component replacements as required.

The vendors involved in making the gate work include Hotwire Communications, Access Dynamics, Proptia Software, and Security. All are working synchronously now so that we can continue to have the gate system functioning properly.

Best wishes,

Michael Fasching