

ORLO VISTA FLOOD MITIGATION PROJECT UPDATE

November 13, 2024

❖ Hurricane Milton October 2024

The Orlo Vista neighborhood in Orange County demonstrated remarkable resilience during Hurricane Milton in October 2024, thanks to this major flood mitigation project. This success story is a welcome change from the severe flooding experienced during Hurricanes Irma in 2017 and Ian in 2022. Despite receiving a substantial 9.46 inches of rainfall over 34 hours, the Orlo Vista and Westside Manor areas remained largely unaffected. The newly implemented drainage improvements proved highly effective, with no significant flooding reported and homes staying dry. This outcome provided much-needed reassurance to local residents, validating the project's effectiveness and the county's efforts to protect the community from future flood events. The Orlo Vista Flood Mitigation Project, which was approximately 97% complete at the time of Hurricane Milton, played a crucial role in preventing flooding. The project involved expanding the capacity of three retention ponds by making them deeper, effectively tripling their water storage capability. Additionally, a well-coordinated pumping strategy and the deployment of four extra temporary pumps enhanced water control both prior to and during the storm. The team lowered water levels in the ponds before Hurricane Milton, effectively utilizing the increased flood storage capacity created by the excavation work.

This successful outcome not only demonstrates the effectiveness of the flood mitigation efforts but also provides a sense of security for Orlo Vista residents who have faced repeated flooding in the past. The project's ability to handle a 100-year storm event showcases the significant progress made in protecting this vulnerable area from future flooding events.



Orlo Vista, 2022



Orlo Vista, 2024

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❖ CONSTRUCTION PROGRESS

The Notice To Proceed for the Orlo Vista Flood Mitigation Construction project was issued on March 13, 2023. To date we have completed approximately 97.5% of the total project.

Orlo Vista Flood Mitigation Construction project is a large project that incorporates three ponds: West, North, and South ponds (see Figure 1). The project also encompasses four main items: excavation, geoweb installation (erosion control), pump station, and pipe installation. The table below shows the progress of the project for each of these items.

Table 1 - Project Summary Table

Item	Total	To Date	% Completed
Excavation	439,030 cy	525,978 cy	119%
Geoweb Installation	785,999 sf	751,721 sf	95%
48" RCP Installation	713 lf	682 lf	96%
48" HDPE Force Main Pipe	1074 lf	120 lf	11%
48" Steel Pipe	71 lf	35 lf	49%
Pump Station	1		95%

While significant progress has been made, we have experienced delays in procuring key Pump Station components, including the Electrical Building, Permanent Generator, Electrical Components, and Instrumentation Components. These delays are primarily due to ongoing nationwide supply chain challenges impacting large-scale construction projects.

- The overall project is expected to be completed by Spring 2025.
- The excavation of the North and South Ponds is fully completed.
- The work related to the excavation is complete and geoweb installation of the west pond is near completion.
- The valve components have been installed in the pump station.
- Backfilling of the pump station area is complete.
- The new pumps have been installed.
- The electrical building is expected to be delivered on 11/15/2024.
- Utilizing the additional storage provided by the recently excavated ponds as well as the four (4) temporary pumps, the surrounding neighborhood will be protected against a major storm event such as a hurricane (100-year / 24-hour design storm event) for the 2024 hurricane season.

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Figure 1 - Orlo Vista Ponds

Below is a detailed description of the construction progress to date.

North Pond:

- Excavation: Completed (95,700 cubic yards of material, 100% complete)).
- Geoweb Installation: Fully installed.
- Ground Stabilization: Hydroseed placed above Geoweb, with sod installation ongoing.
- Installed sod above Geoweb west side of North Pond

South Pond:

- Excavation: Completed (58,356 cubic yards of material, 100% complete).
- Geoweb Installation: Fully installed
- Ground Stabilization: Hydroseed placed above Geoweb, with sod installation ongoing.
- Installed sod above Geoweb west side of South Pond

West Pond:

- Excavation: Completed (371,922 cubic yards of material, 100% complete).
- Geoweb Installation: In progress (approximately 99% complete).
- Repairing damaged area of south side of West Pond from Hurricane Milton
- Progress on Drainage: Construction of headwall and 349 linear feet of 48-inch RCP is complete.
- Ground Stabilization: Sod placement ongoing.

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Pump Station:

Construction: Ongoing.

➤ Completed Work:

- All Pump station concrete has been poured as of 2/28/2024.
- Temporary steel for cofferdam has been removed.
- Valve Vault construction complete.
- Fill placement for Generator Pad complete.
- Formwork for slab on grade and placement of rebar ahead of concrete placement.
- Concrete slab on grade poured 8/14/24.
- Strip Formwork
- Grade around Concrete Pad
- Set Pumps
- Conduit from E-Building to intake structure
- Generator installation.
- Finish grading around intake structure
- Catwalk and handrail Installation

➤ Upcoming Work:

- Installation of 48" HDPE FM ongoing
- Tie into existing FM at existing pump station
- E-Building delivery and installation
- Installation of 48" RCP (31 LF) in West Pond
- Grading and tie in of geoweb for (2) locations of repaired concrete flumes West Pond
- Sodding ongoing.