

Unity Park

ROAD TO REVITALIZATION



“Green building is not about the buildings- it is about the people.”
-Sandy Wiggins

Goals

Downtown Redevelopment

Create a welcoming space



Showcase the natural features of the City



Facilitate business development



Challenges

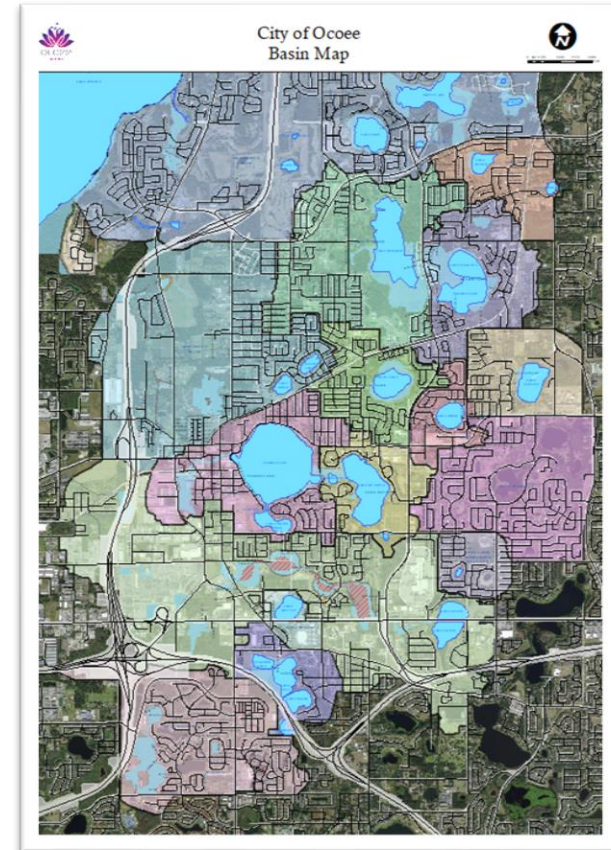
- ▶ Aging infrastructure
- ▶ Limited Space
- ▶ Sensitive Environment
- ▶ Low Appeal



Considerations

A Place to Begin

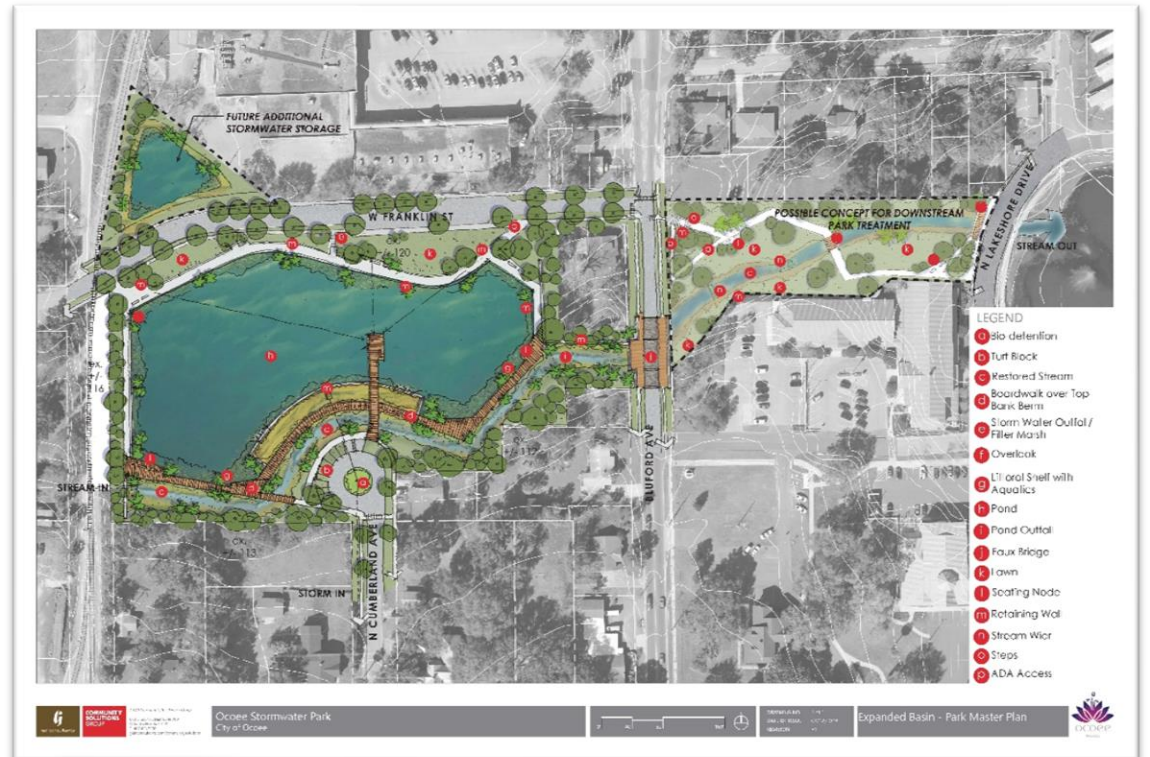
- ▶ Utilities
- ▶ Stormwater
 - ▶ Closed basins
 - ▶ Elevated stormwater requirements
 - ▶ Limited Space



Solution

The Concept

- ▶ Artificial wetland that will
 - ▶ Integrate nature into the urban environment
 - ▶ Provide storage for stormwater
 - ▶ Free precious area for other uses
 - ▶ Protect Starke Lake by treating stormwater prior to discharge
 - ▶ Create an inviting green space
 - ▶ Encourage pedestrian traffic



Unity Park

- Unity Park is the first of its kind here in Ocoee acting not only as a beautiful and scenic park to visit and enjoy, but also a means to naturally treat and store stormwater runoff.



Unity Park

Design

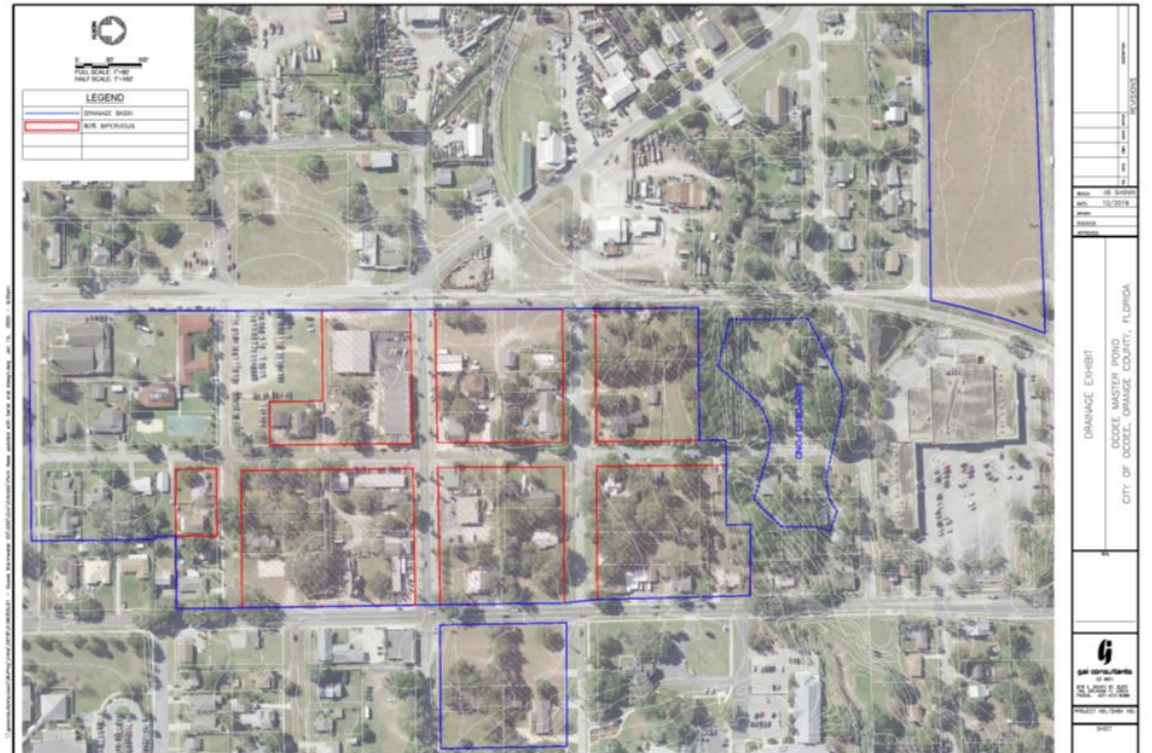
- ▶ Partnered with GAI
- ▶ Used ICPR
- ▶ Post-Development Discharge is less than 25-year, 24-hour storm event
- ▶ Inside Wekiva basin, SJRWMD requires first 3" of runoff from difference between pre/post-development



Unity Park

Size

- ▶ 5-Acre
- ▶ Serves 41.7-AC of Ocoee's downtown
- ▶ Assumed 80% impervious future development of specified parcels
- ▶ Stores 12.6-AC-FT, or 4.1 million gallons, of stormwater



Unity Park

Features



Meandering Stream

Three notched weirs to promote staging, ponding, and sedimentation. Vegetated banks provide erosion control and nutrient removal



Artificial Wetland

Vegetated area provides nutrient removal and storage



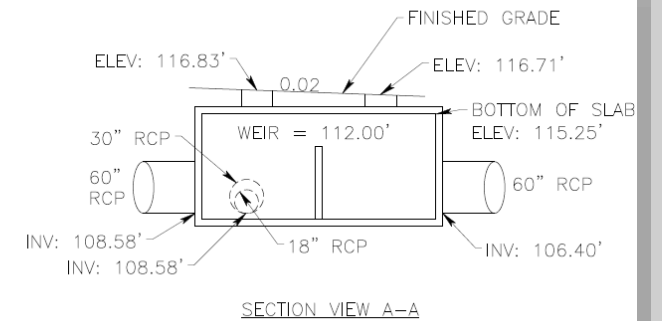
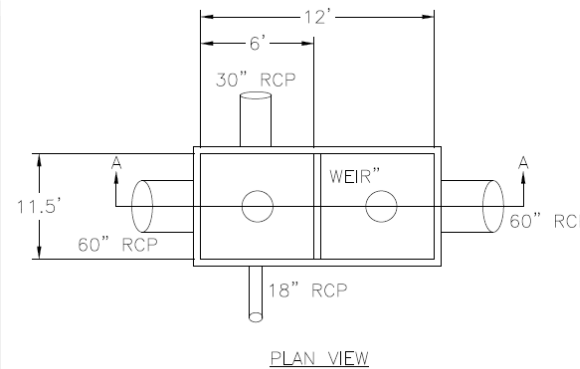
Wet Pond

Deep basin provides storage and sedimentation. Vegetated fringe provides nutrient removal

Unity Park

Upstream Control Devices

- ▶ Baffle Box pretreatment
- ▶ Splitter Box
 - ▶ First flush is captured and diverted to artificial wetland via 30" RCP
 - ▶ Overflow from wetland (el. 113') and splitter box (el. 112') via 60" RCP, discharge to wet pond



SPLITTER BOX DETAIL

Unity Park

Overflow

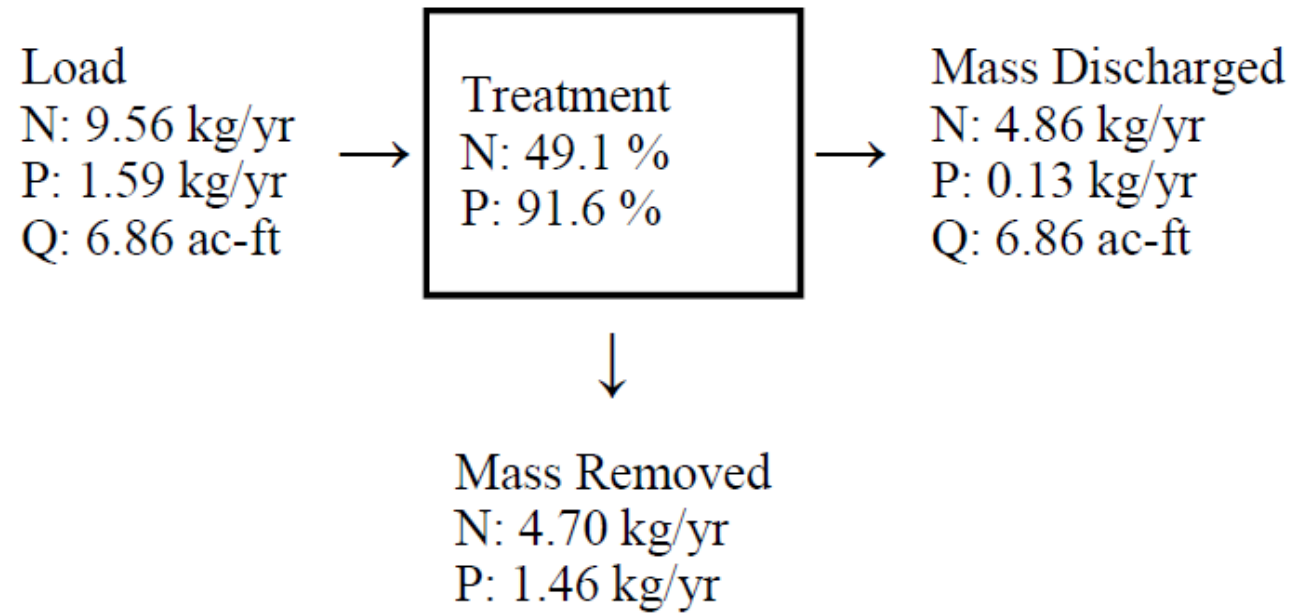
- ▶ Wet pond discharges to stream (el. 112.5') during storm events greater than a 25-year, 24- hour event



Unity Park

Treatment

- ▶ Floatable removal, TBD
- ▶ Particulate removal, TBD
- ▶ 4.7-kg/year Nitrogen removal, Anticipated
- ▶ 1.4-kg/year Phosphorus removal, Anticipated



Unity Park

Data Analysis

- ▶ The City of Ocoee works with WSP as part of the City's NPDES Outfall Monitoring Program
- ▶ Compare water quality from major outfall into Starke Lake
 - ▶ Data from 2019-2020, pre-Unity Park
 - ▶ Data 2023-future, post-Unity Park

Unity Park

Additional Benefits



Walking Path

Quarter mile circular lap



Pergola

Shaded area for rest or gatherings



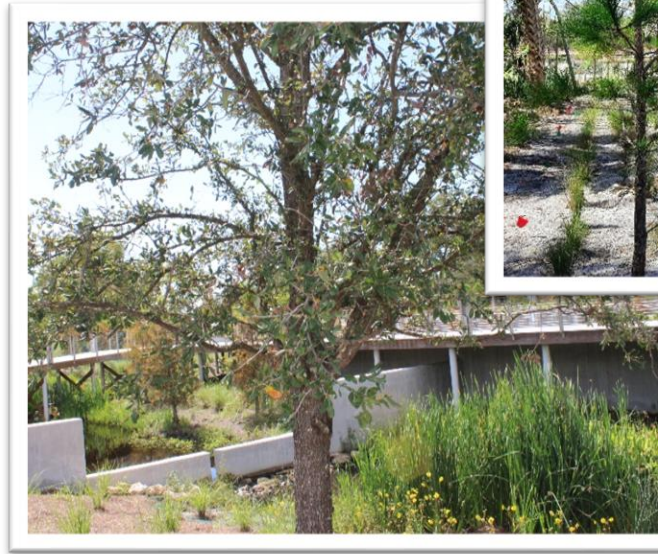
Grass Areas

Flat and sloped grass areas

Unity Park

Florida Friendly Flora

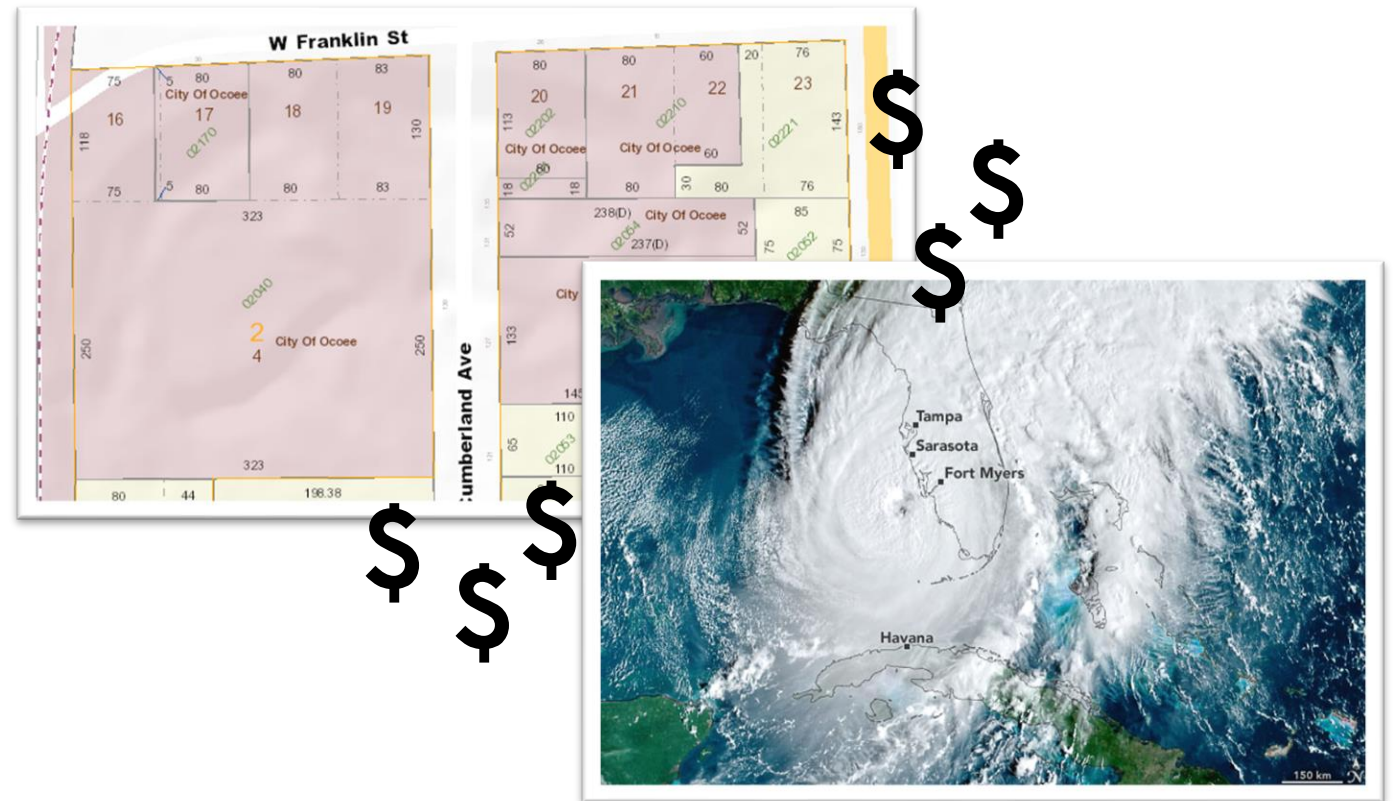
- ▶ 100% Native
- ▶ Adapted to regional climate
- ▶ Minimize irrigation
- ▶ Minimize fertilization
- ▶ Provide retreat for local and migratory wildlife



Unity Park

Obstacles

- ▶ Land acquisition
- ▶ COVID
- ▶ Escalating Costs
- ▶ Material Procurement
- ▶ Hurricane Ian



Unity Park

Future

- ▶ Event Location
- ▶ Maintenance
- ▶ Continued water quality monitoring



Questions

