



**I-DRIVE
DISTRICT**
— INTERNATIONAL DRIVE —
ORLANDO, FLORIDA

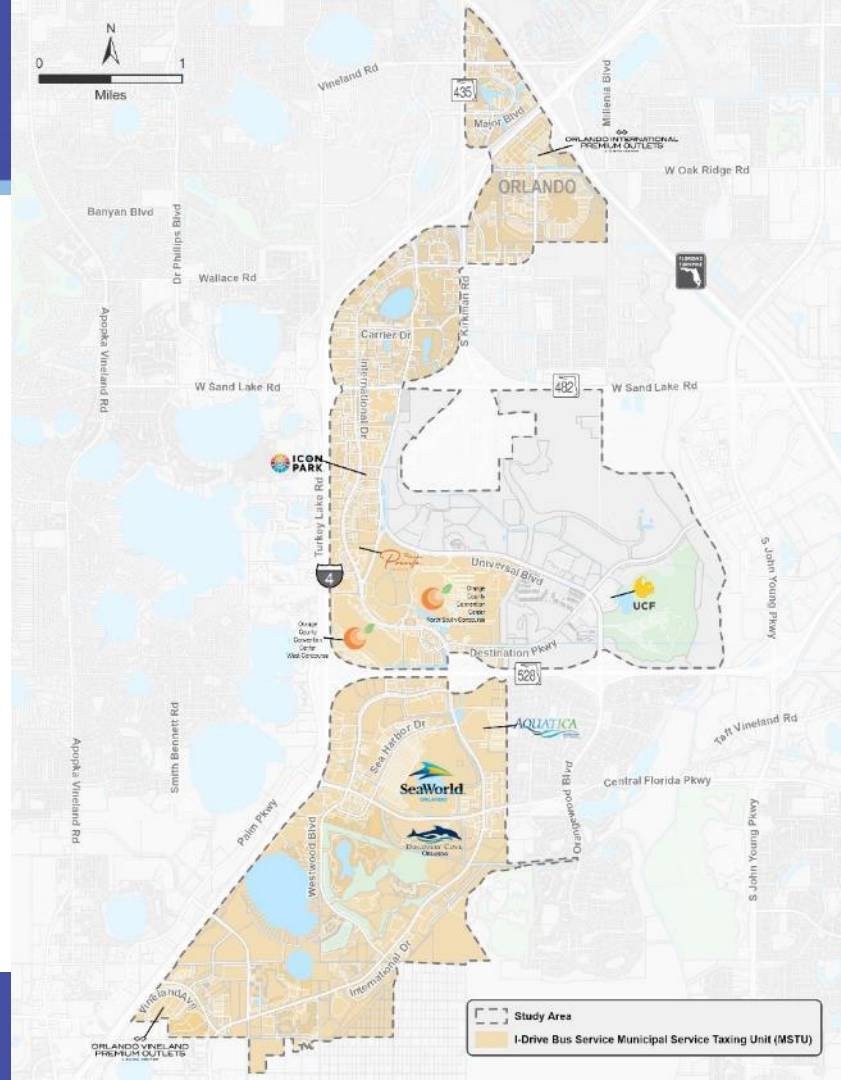
I-Drive District Transportation Strategic Plan

March 22, 2023

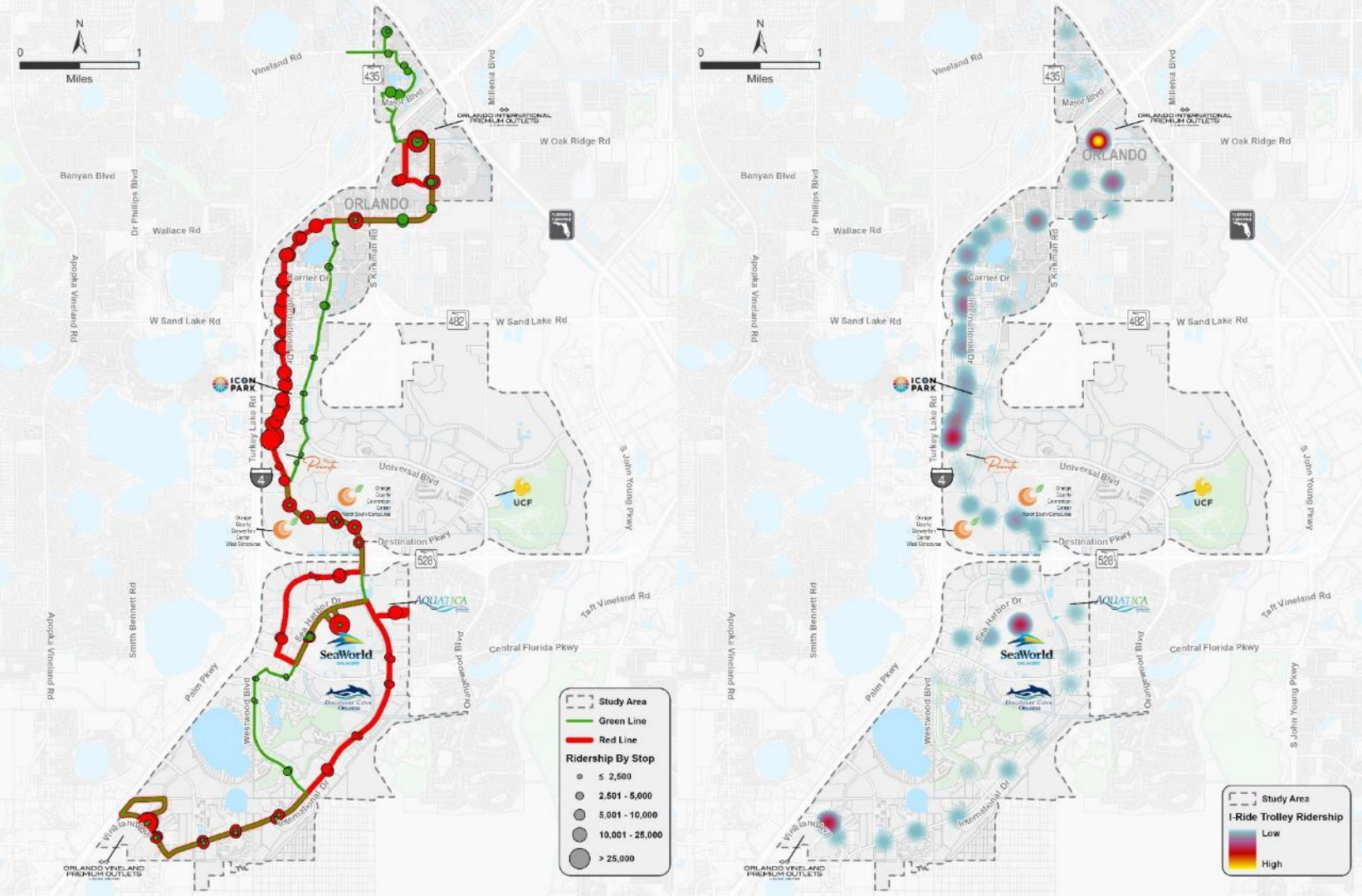


Purpose of the Plan

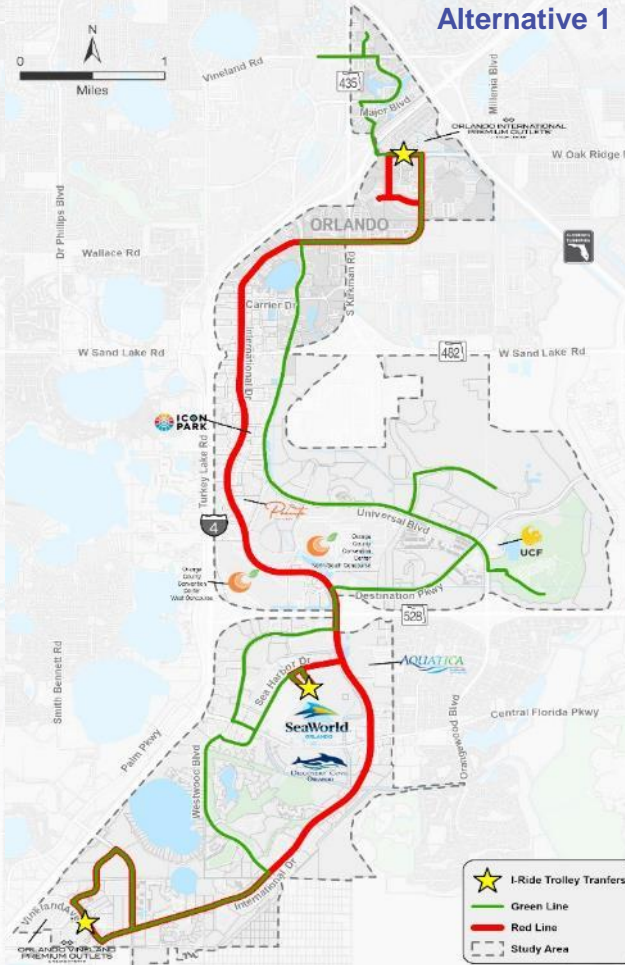
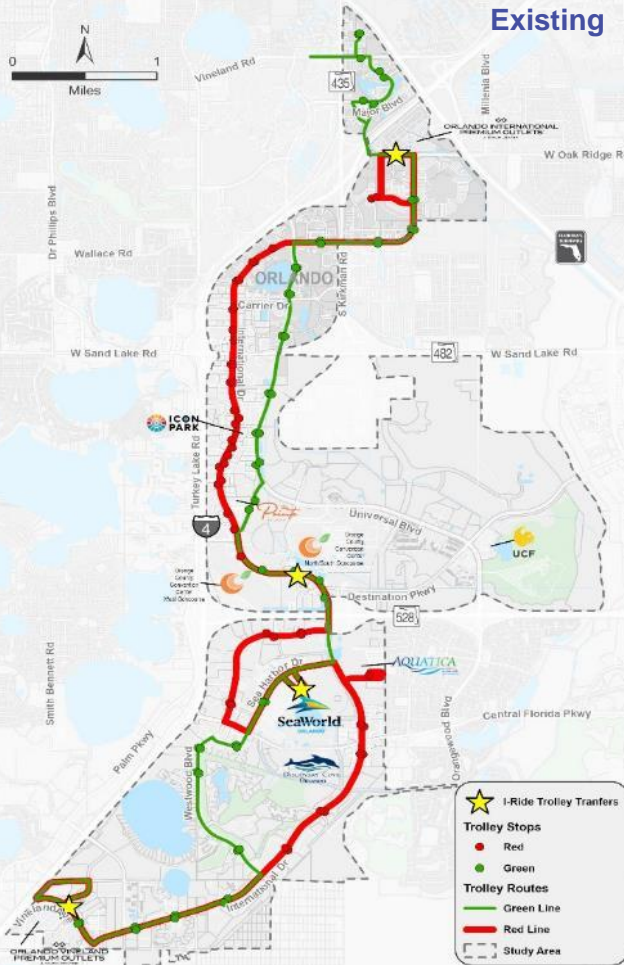
- Develop an integrated set of potential solutions that improve mobility to and within the District.
- Special focus on potential recommendations for Trolley Service and Electric Vehicle Transition



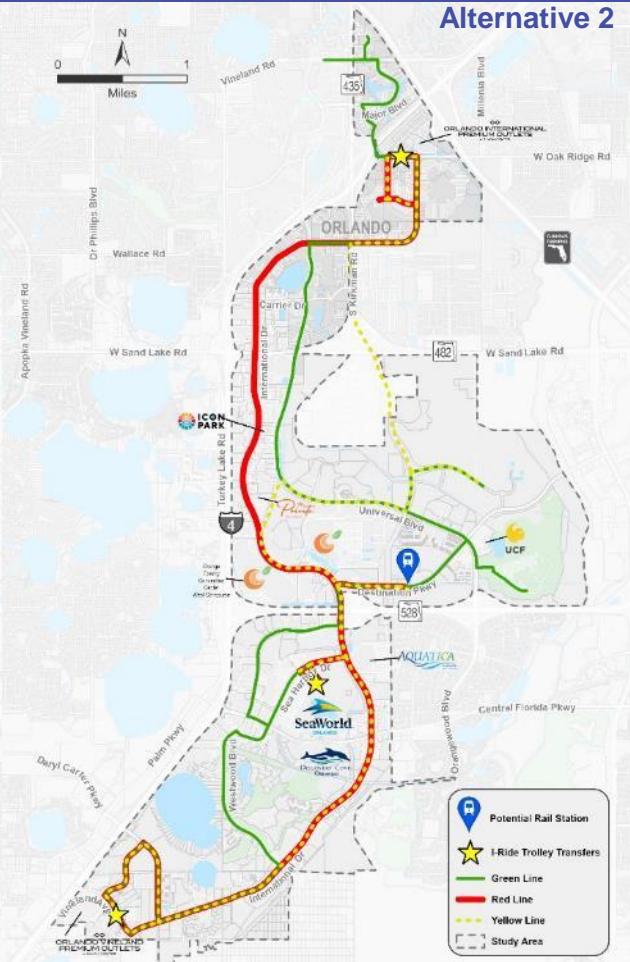
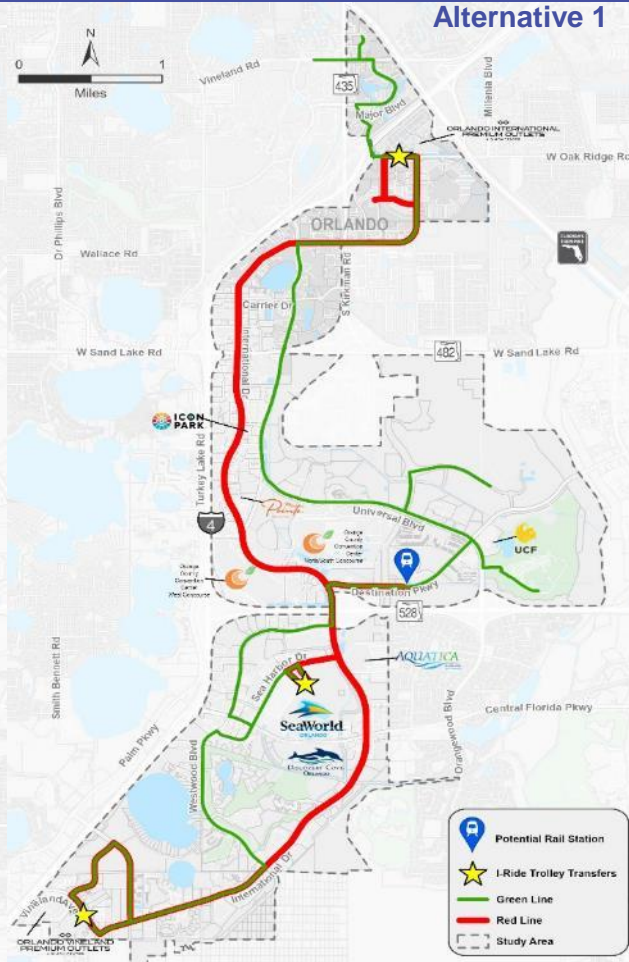
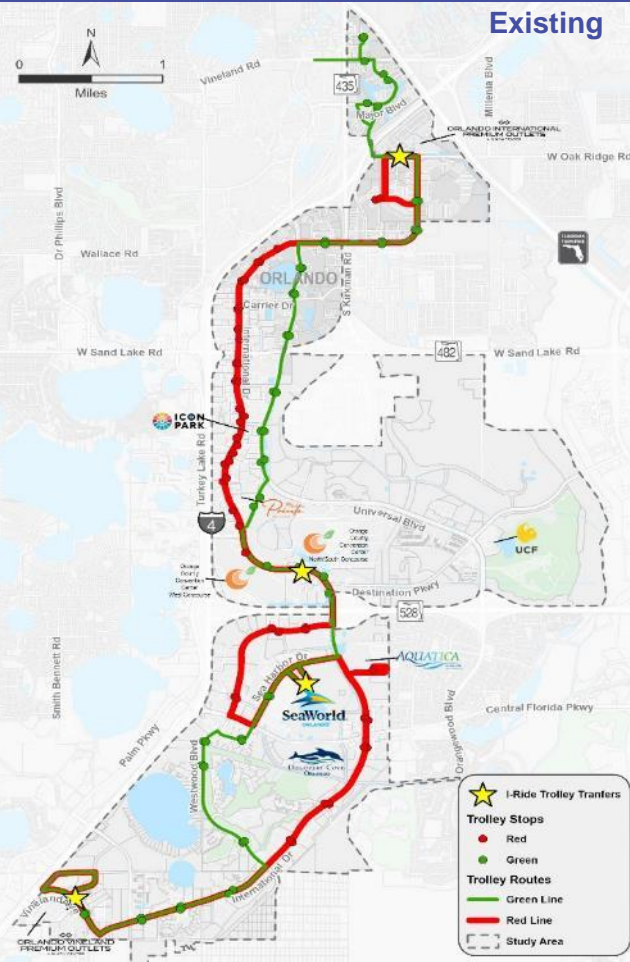
Existing I-Ride Trolley Ridership



Improvement Alternatives – Phase 1



Improvement Alternatives – Phase 2



I-Ride Trolley Service Ph. 1 Alternative Comparison

Frequency (minutes)



| Route | Existing | Alt 1 | Alt 2 |
|--------|----------|-------|-------|
| Red | 20 | 10 | 15 |
| Green | 30 | 30 | 30 |
| Yellow | - | - | 30 |

Typ. Travel Time Outlet to Outlet (minutes)



| Route | Existing | Alt 1 | Alt 2 |
|--------|----------|-------|-------|
| Red | 109 | 94 | 94 |
| Green | 94 | 125 | 125 |
| Yellow | - | - | 88 |

Number of Vehicles






| Route | Existing | Alt 1 | Alt 2 |
|--------|----------|-------|-------|
| Red | 10 | 18 | 12 |
| Green | 6 | 8 | 8 |
| Yellow | - | - | 6 |
| Total | 16 | 26 | 26 |

Existing Daily Ridership






| Route | Riders |
|-------|--------|
| Red | 1,241 |
| Green | 316 |

System Fleet Electrification Vehicle Examples

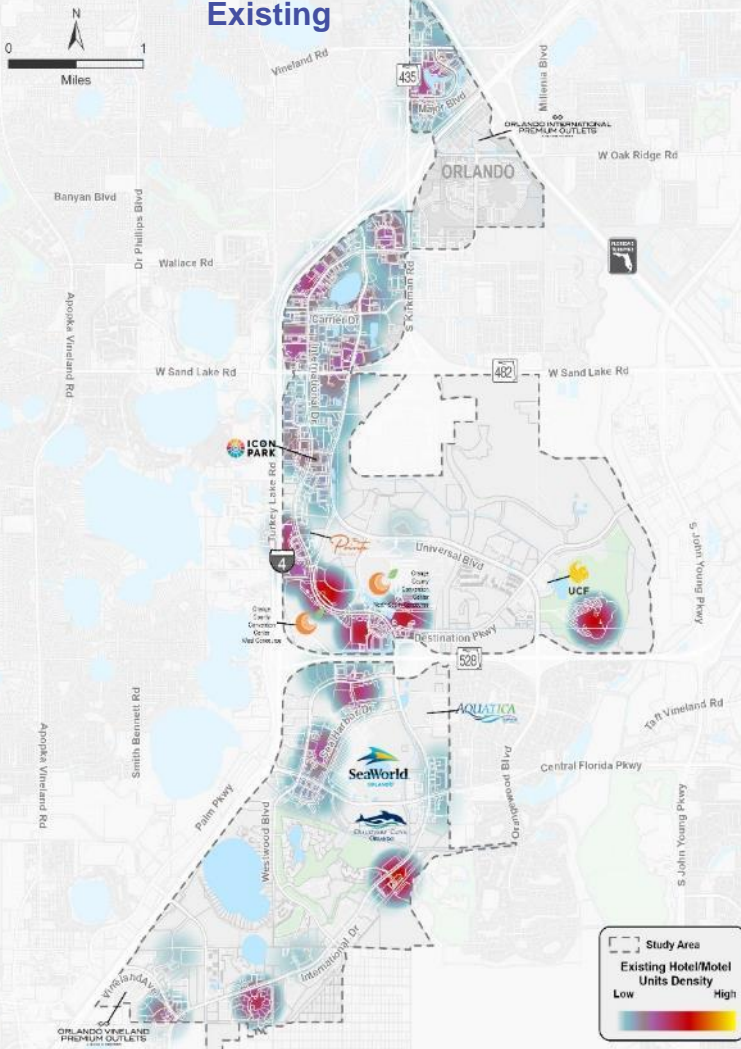
| Vehicle | Size(s) available | Battery Pack (kWh) | Est. Range | Speed of Charge | Budgetary Cost (excluding charger) | Lead Time | Type |
|-----------------------------------|-------------------------|--------------------|------------|-----------------|------------------------------------|---------------|---|
| Hometown Trolley Villager | 24.5 to 30ft | 226 | 150-170mi | 2-8 hours | \$450,000 | 11 months |  |
| Hometown Trolley Streetcar (2025) | 30, 35, 40 ft estimated | 320 | 140-200mi | 2-8 hours | \$850,000 | Not available |  |
| Gillig | 35ft and 40ft | 490, 588, or 686 | 150-200mi | 1.5-4.5 hours | \$900,000 | Not available |  |

System Fleet Electrification Charging Scenarios

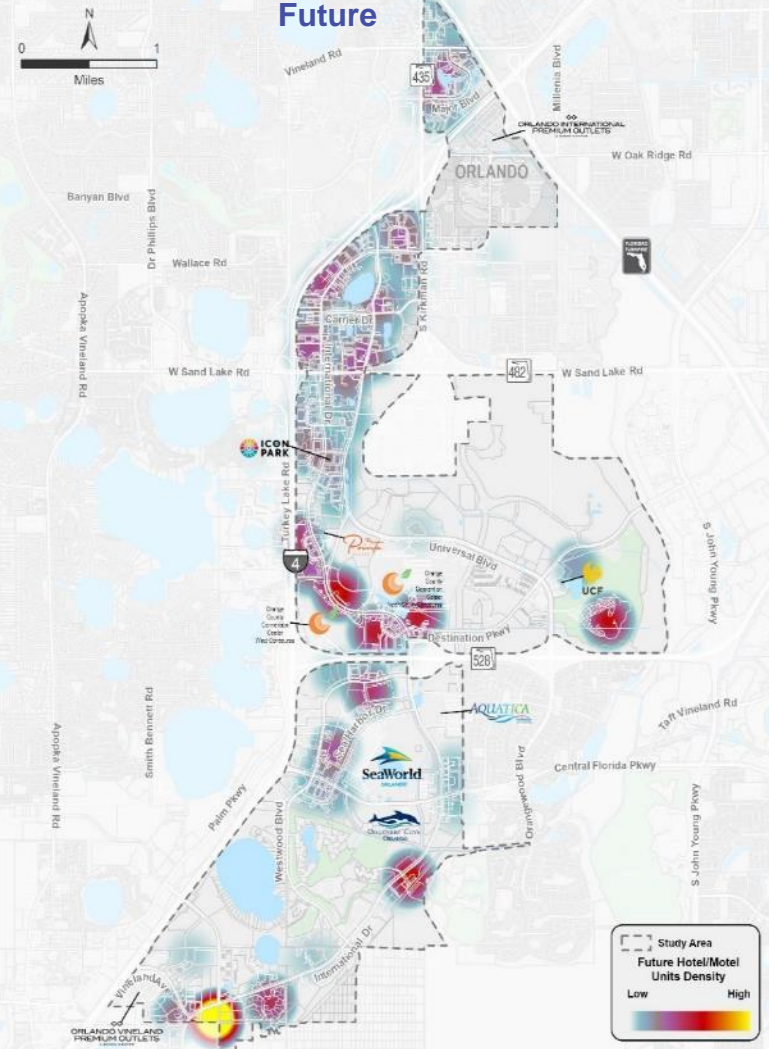
| Charging Scenario | Pros | Cons |
|---|--|--|
| Depot-only charging with 320kW BEBs  | <ul style="list-style-type: none"> • Lowest cost option • Lower construction costs for depot chargers compared to on-route • Uses vehicle that meets the I-Drive aesthetic and size preferences | <ul style="list-style-type: none"> • Additional analysis needed to confirm feasibility • Most operational risk <ul style="list-style-type: none"> • Lowest state of charge (SOC) at end of day |
| Depot-only charging with 440kW BEBs  | <ul style="list-style-type: none"> • Lower construction costs for depot chargers • High confidence that vehicles will have adequate range for useful life | <ul style="list-style-type: none"> • Most expensive vehicle • Vehicle has fewer trolley aesthetic features |
| On-route + depot charging  | <ul style="list-style-type: none"> • Uses vehicle that meets the I-Drive aesthetic and size preferences • Reduce energy needed and construction at Mears Facility | <ul style="list-style-type: none"> • Higher construction costs for on-route chargers • Likely need inductive charger, which is more expensive • Most infrastructure required: depot and on-route chargers |

Analysis Background

Existing

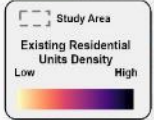
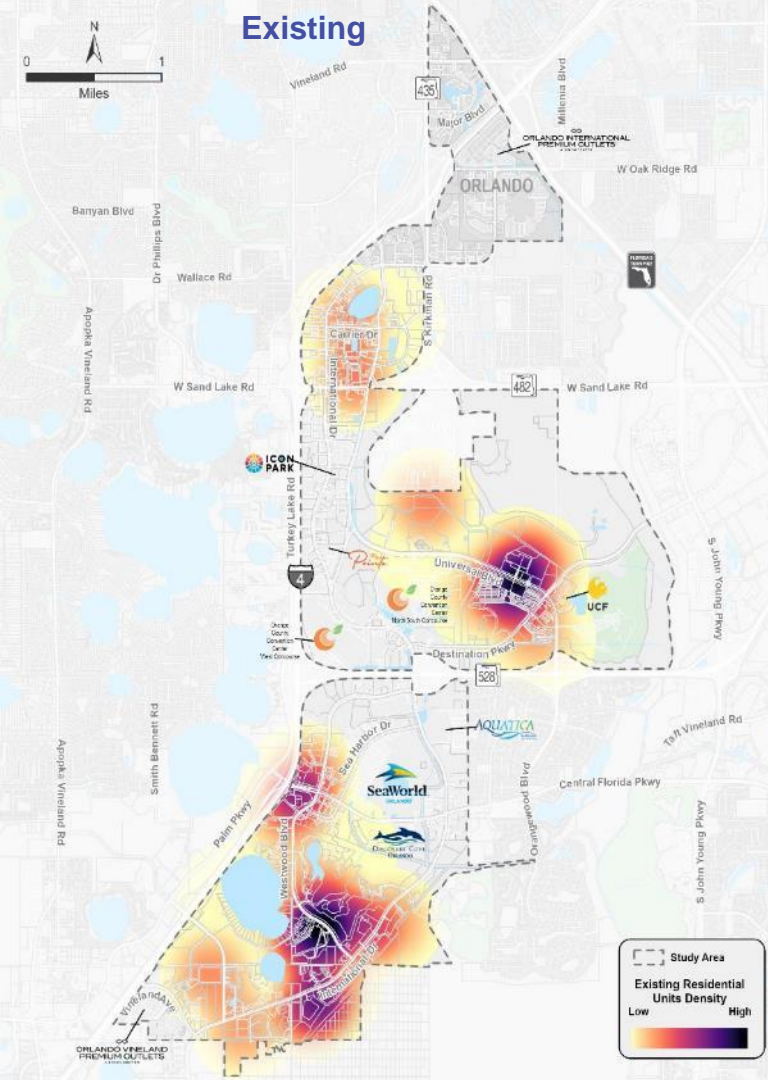


Future

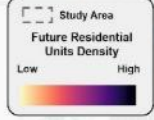
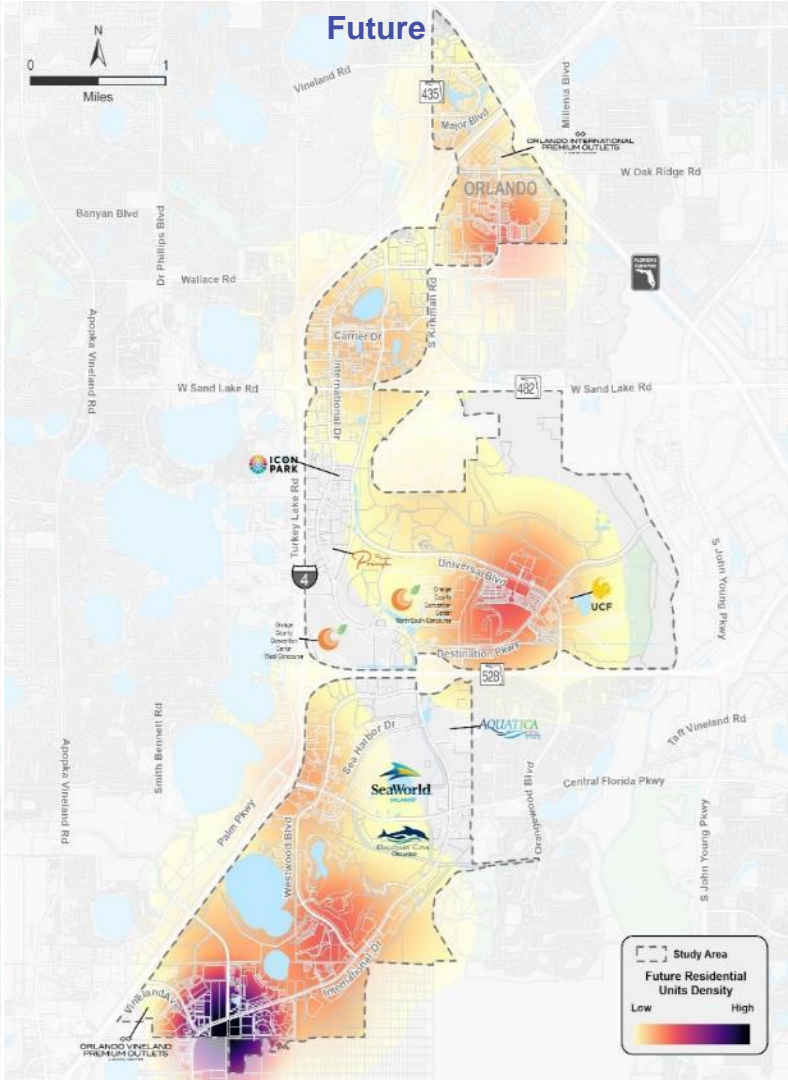


Hotel/ Motel Unit Density

Existing



Future



Residential Unit Density

Existing and Planned Transit Infrastructure

Business Access & Transit (BAT) Lanes

Existing

- I-Drive
Oak Ridge Road to Universal Boulevard

Planned

- I-Drive
Destination Parkway to Sand Lake Road
- Universal Boulevard
Via Mercado and Sand Lake Road

Exclusive Transit Lanes

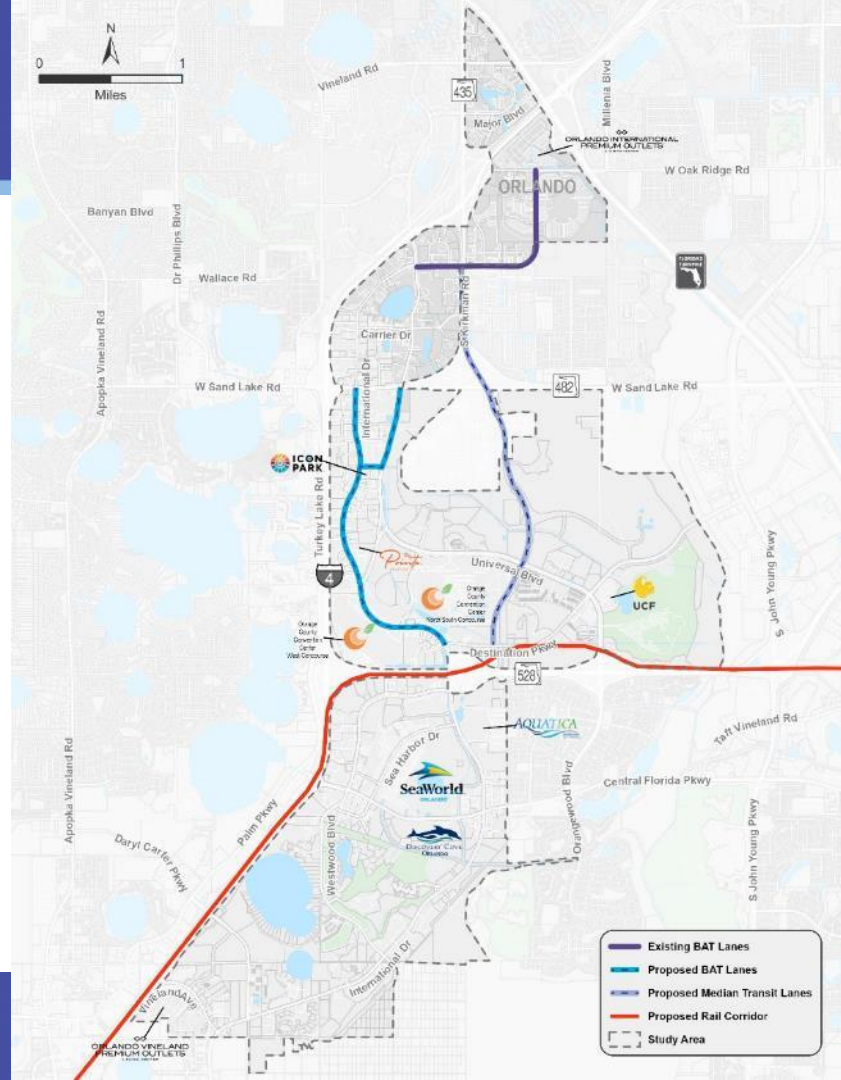
Under Construction

- Kirkman Road extension
- Tradeshow Boulevard

Sunshine Corridor

Planned

- SunRail
- Brightline



Orange County's Planned I-Drive Bus Rapid Transit

Sand Lake Road to Sea World



Runs on I-Drive Transit Lanes with LYNX and I-Ride Trolley



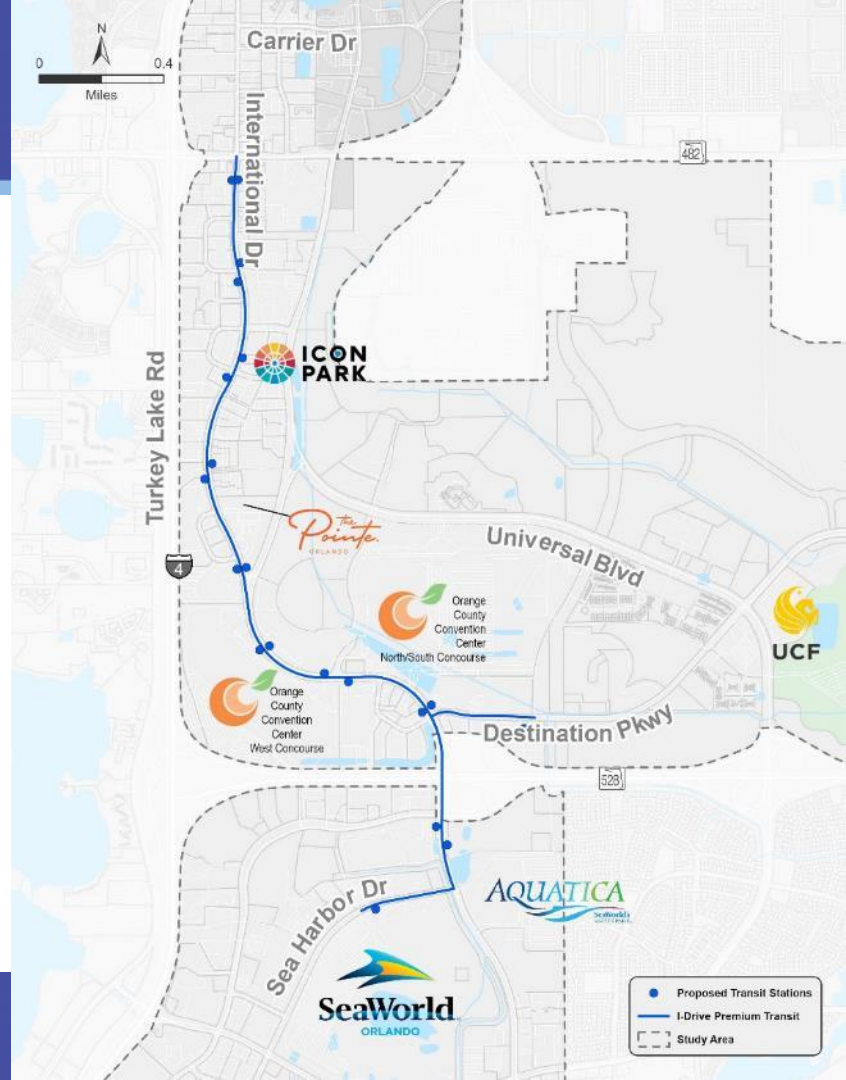
Runs every 10 minutes



11 stations at key destinations



6am to 1am
7 days / week



Future Analysis and Decisions

- Route changes and service levels
- Modifications to fare structure
- Additional technology
- Integration with other transit services
 - Brightline and SunRail
 - Orange County BRT
 - LYNX
- OCCC autonomous shuttle
- Micromobility and Pedicab
- Consideration of partnerships with TNCs (Uber & Lyft)
- Approach to balancing pedestrian and bicycle space
- EV approach