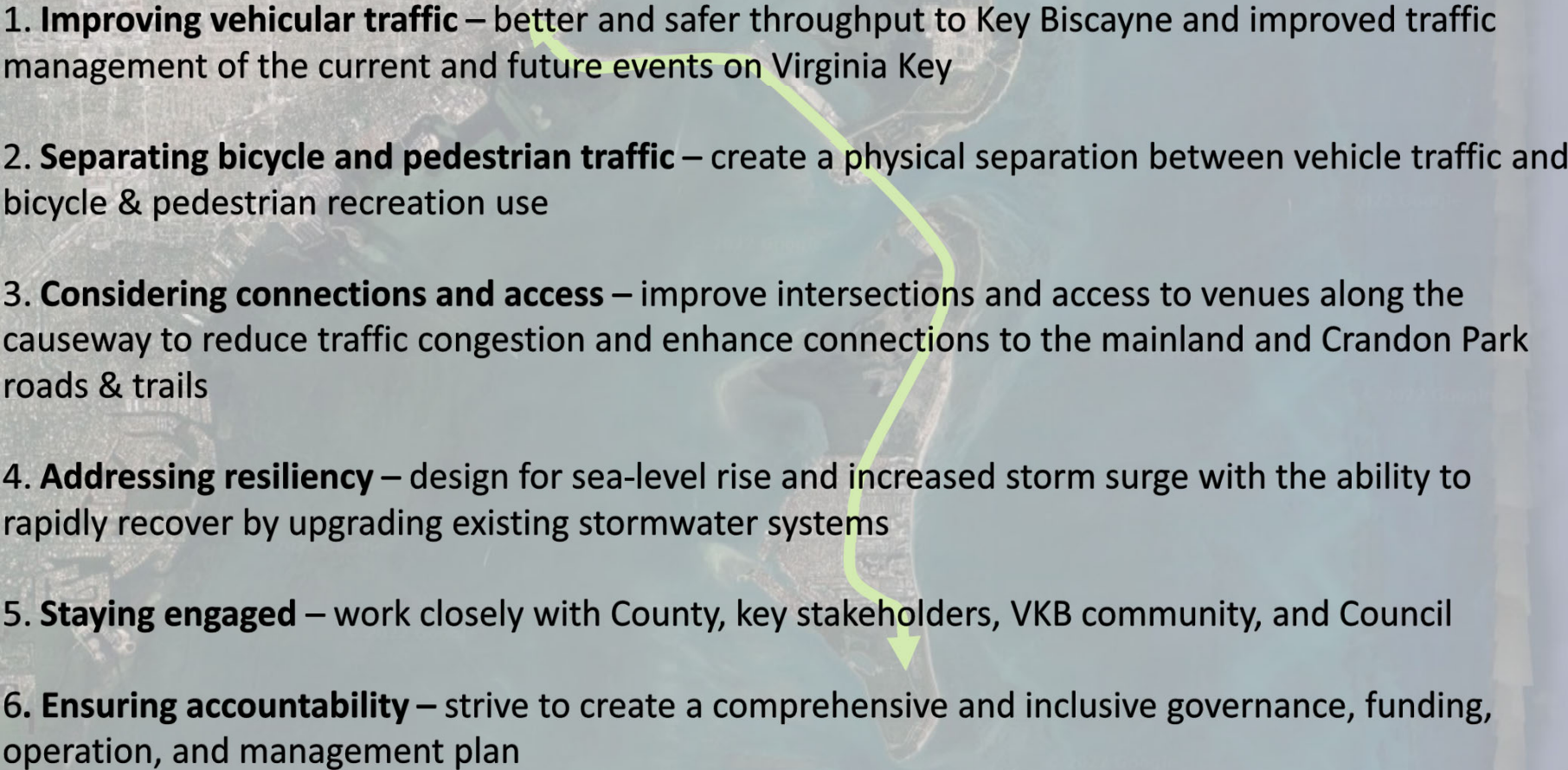


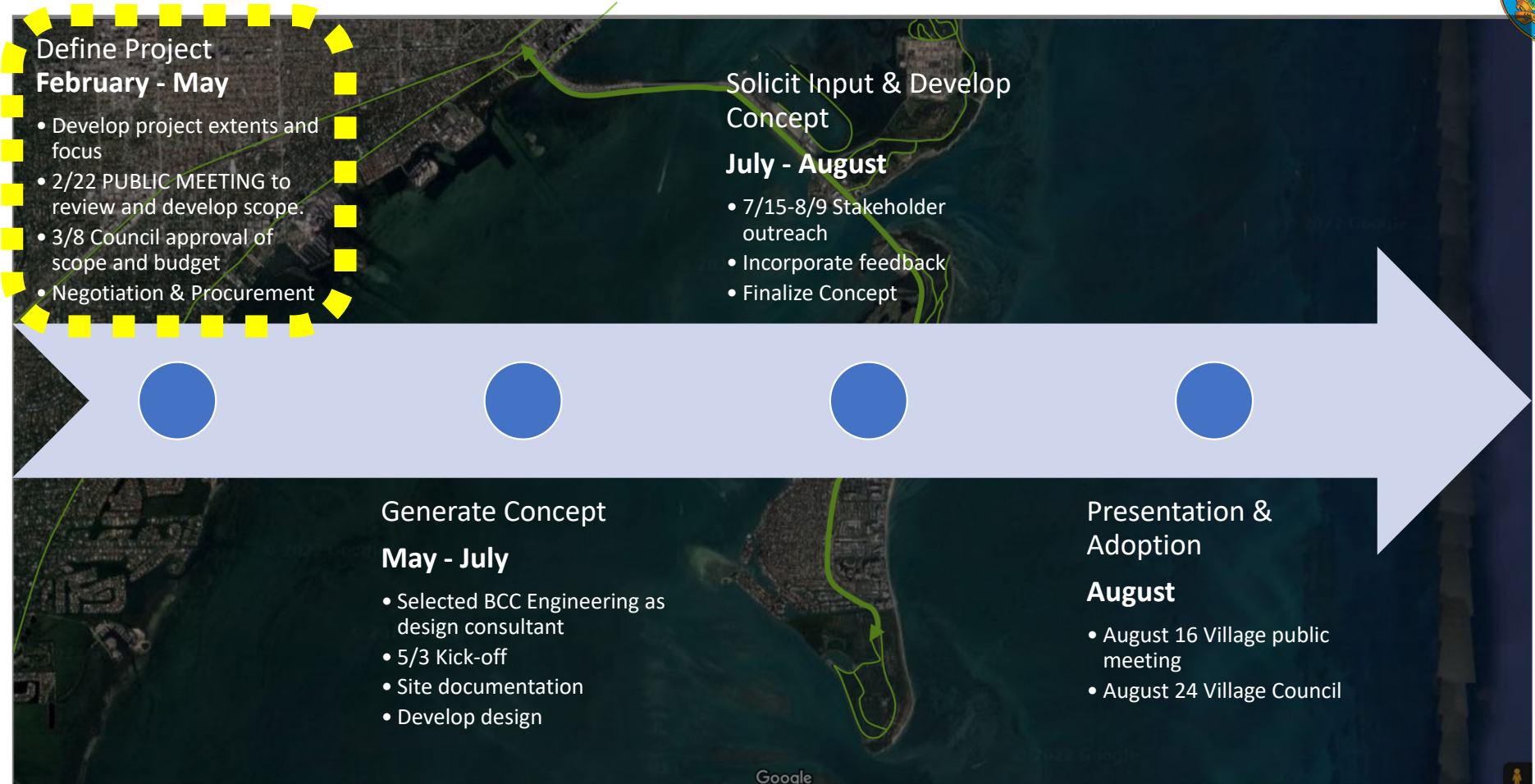


PURPOSE: TO PORTRAY THE VILLAGE OF KEY BISCAIYNE'S CONCEPT FOR RICKENBACKER CAUSEWAY TO INSPIRE REGIONAL COLLABORATION TO CREATE A MASTER PLAN FOR A MORE MOBILE, CONNECTED, SAFER AND RESILIENT ROADWAY.

- 
- 1. Improving vehicular traffic** – better and safer throughput to Key Biscayne and improved traffic management of the current and future events on Virginia Key
 - 2. Separating bicycle and pedestrian traffic** – create a physical separation between vehicle traffic and bicycle & pedestrian recreation use
 - 3. Considering connections and access** – improve intersections and access to venues along the causeway to reduce traffic congestion and enhance connections to the mainland and Crandon Park roads & trails
 - 4. Addressing resiliency** – design for sea-level rise and increased storm surge with the ability to rapidly recover by upgrading existing stormwater systems
 - 5. Staying engaged** – work closely with County, key stakeholders, VKB community, and Council
 - 6. Ensuring accountability** – strive to create a comprehensive and inclusive governance, funding, operation, and management plan

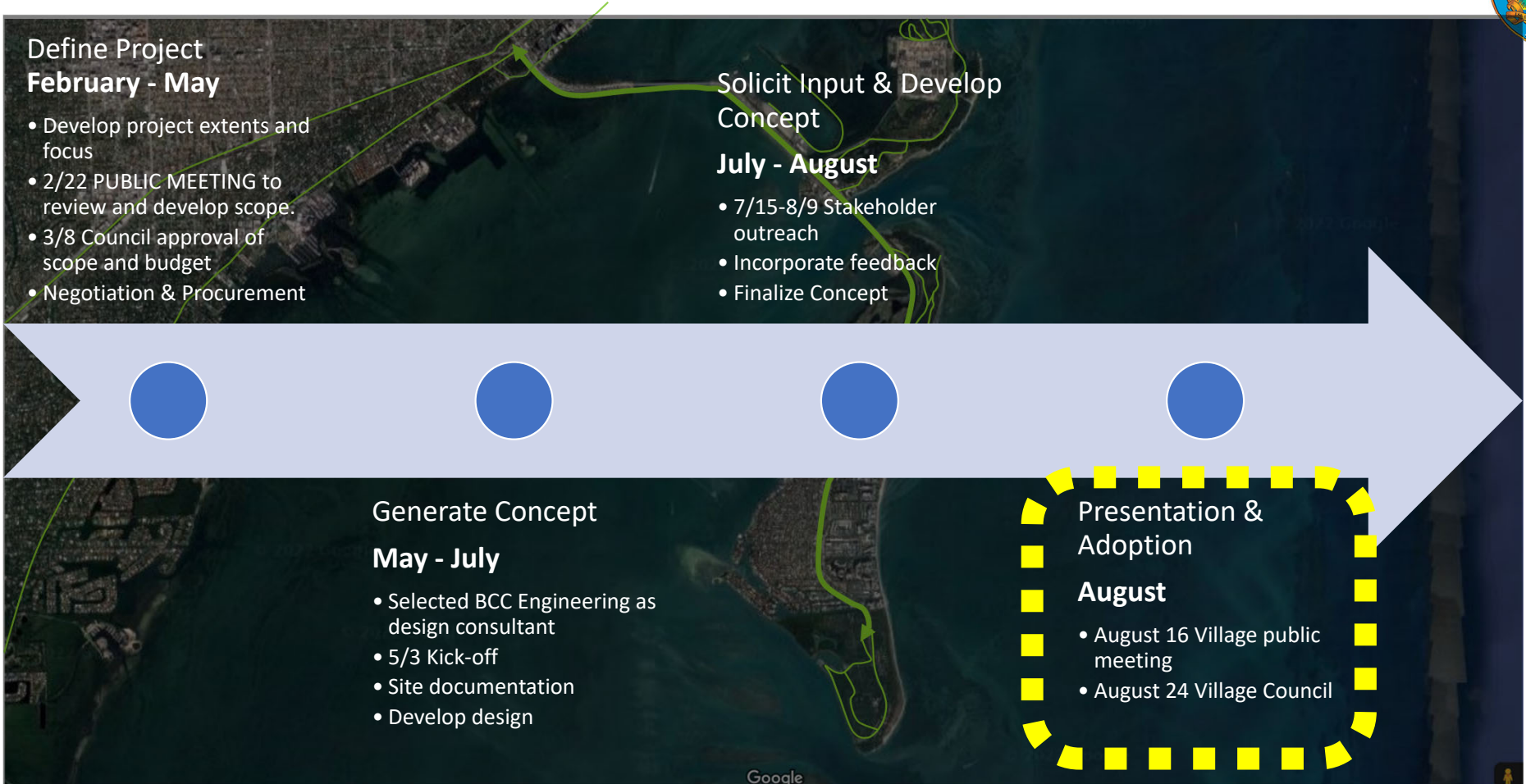


TIMELINE



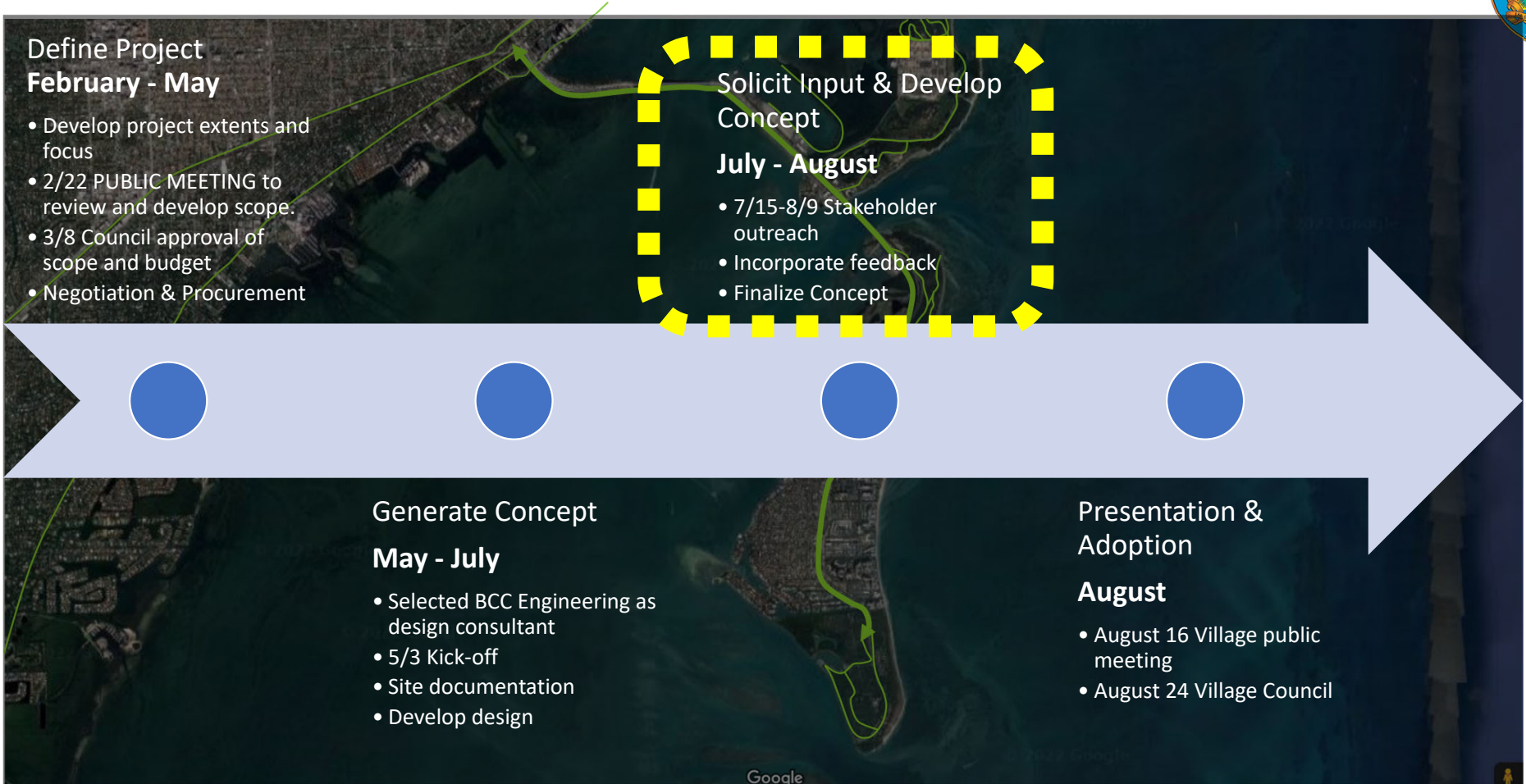


TIMELINE

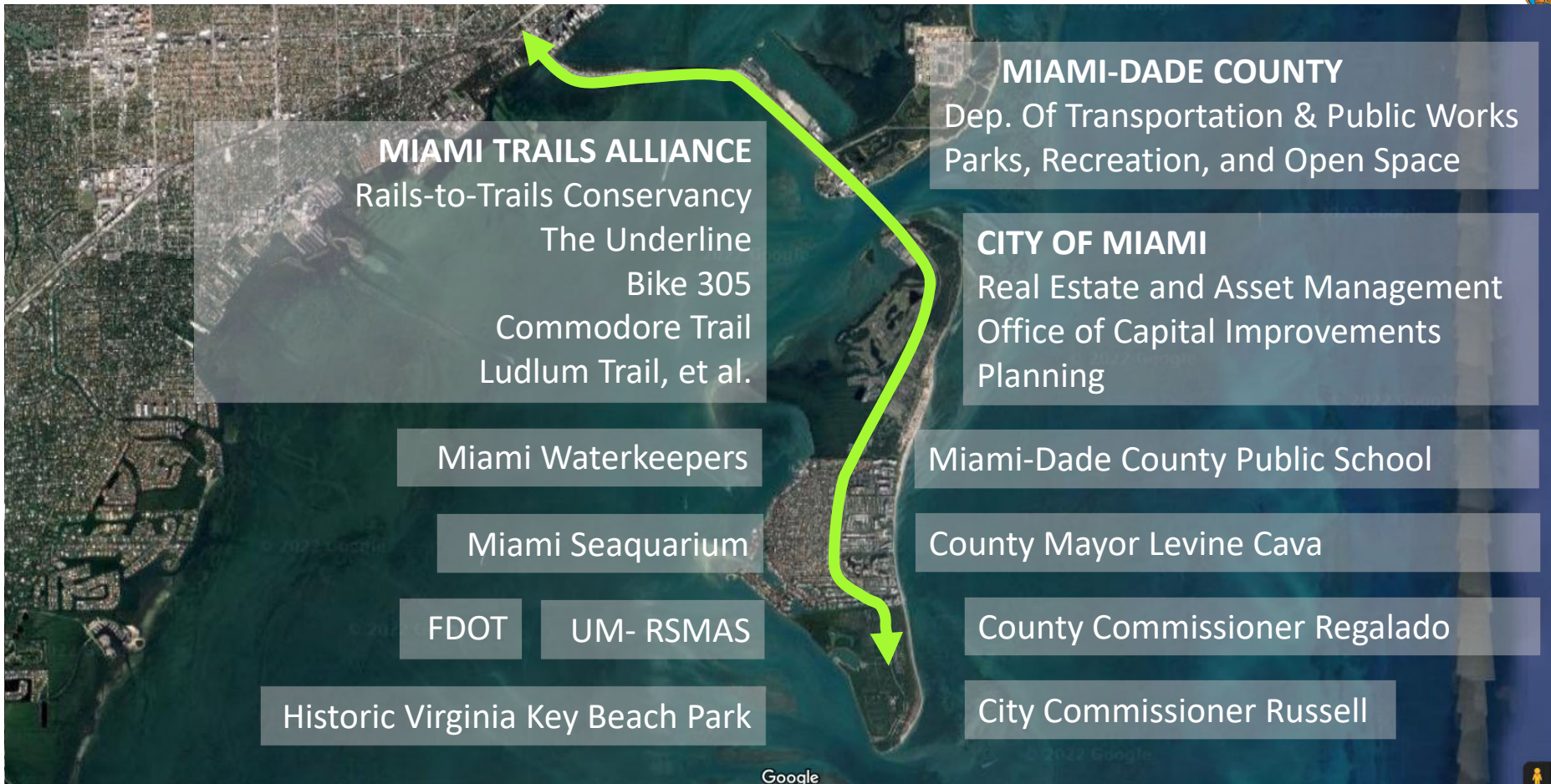




TIMELINE



STAKEHOLDER OUTREACH AND *INPUT*



STAKEHOLDER OUTREACH AND *INPUT*





TIMELINE



TIMELINE



Develop Joint Masterplan September-?

- Collaborate with Miami-Dade County to develop concept into a masterplan
- Bear Cut Bridge renovation, Planning, Development, and Environmental Study
- Continue to coordinate with County Public Works and MDPD regarding short-term fixes.

Google

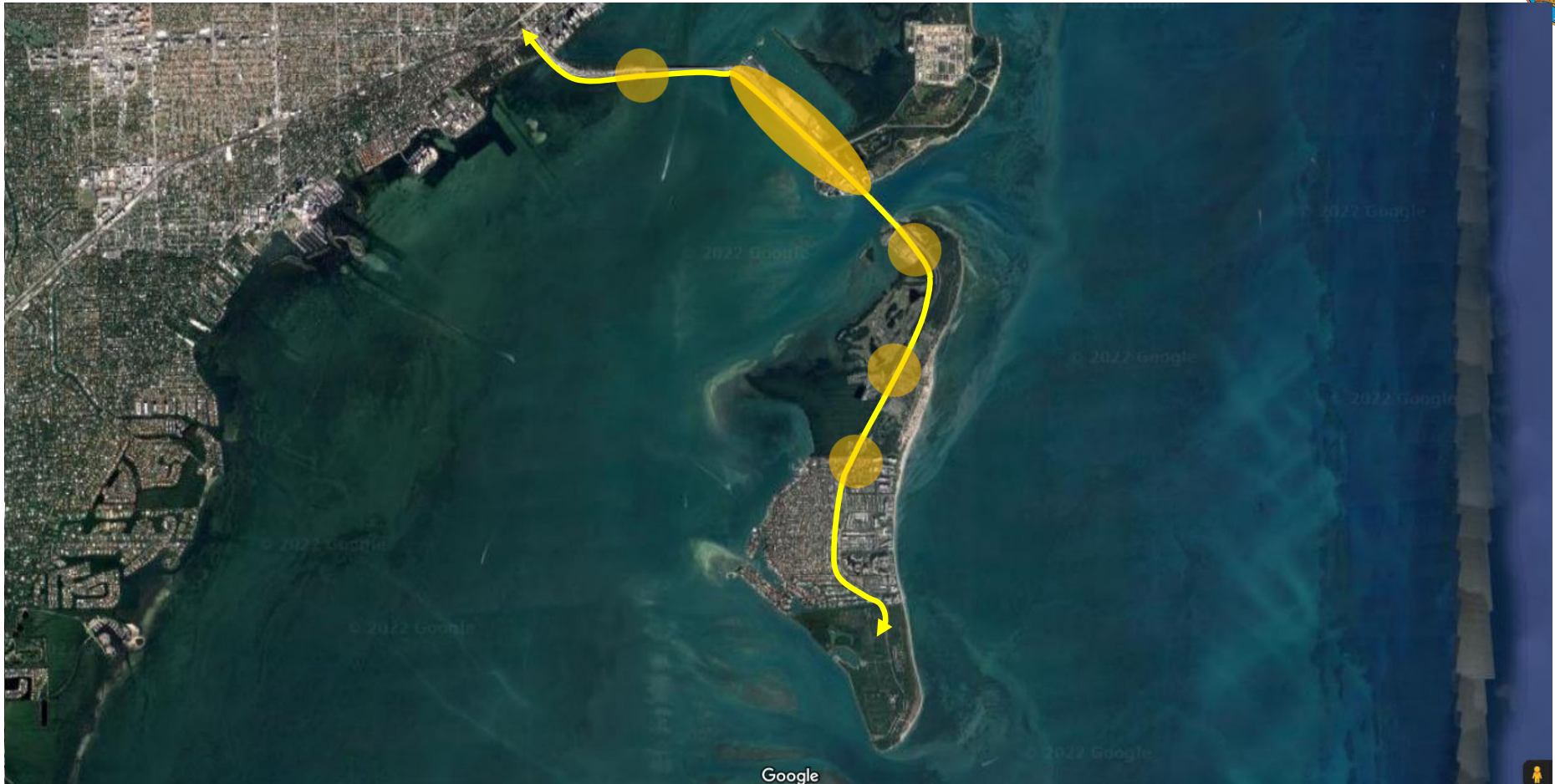


RICKENBACKER CAUSEWAY IMPROVEMENTS

1. INTRODUCTION
2. SCOPE AND FOCUS.
3. IMPROVING TRAFFIC.
4. SEPARATING BICYCLE TRAFFIC.
5. CONSIDERING CONNECTIONS
6. RESILIENCY

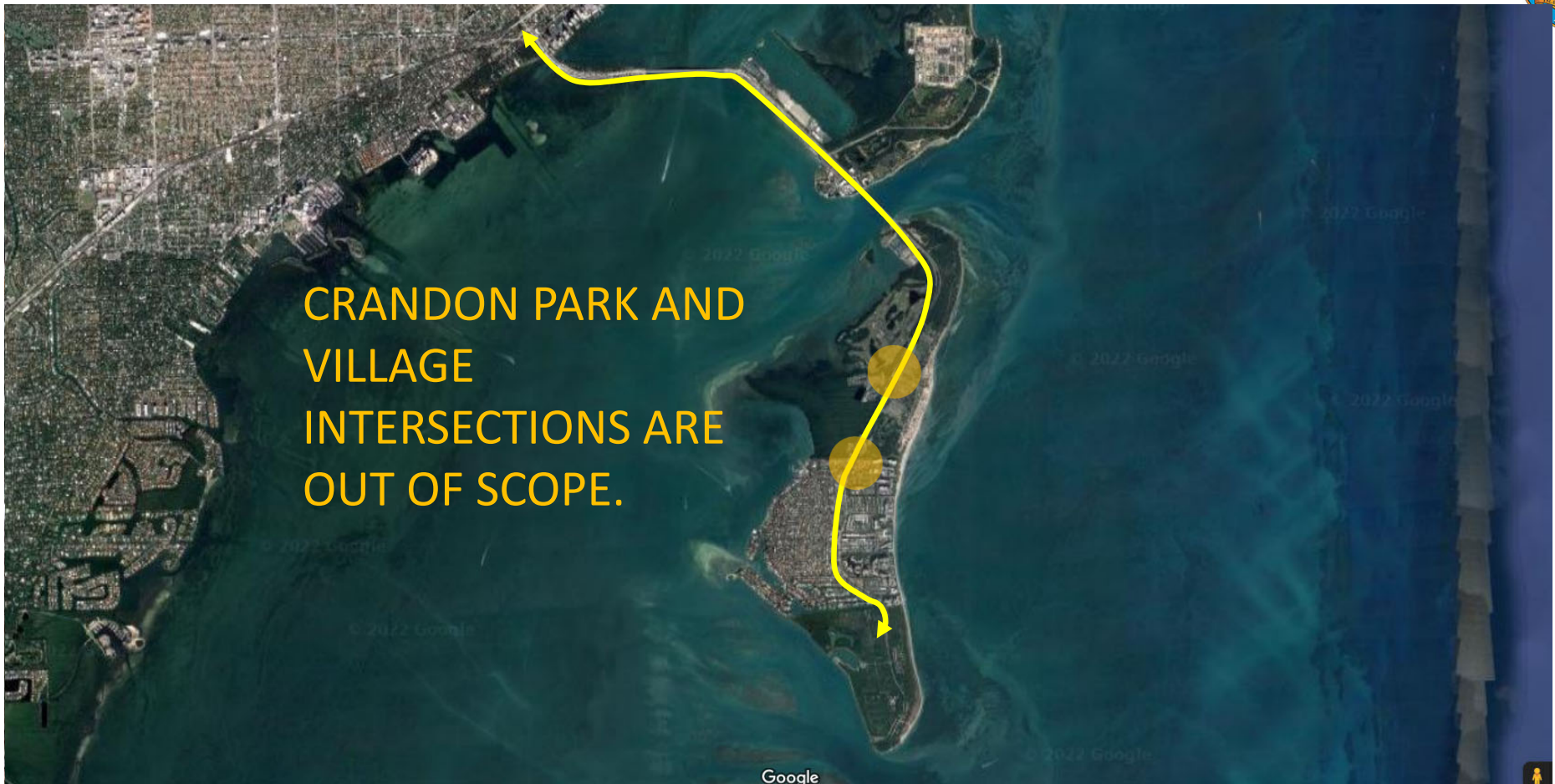


CURRENT AND POTENTIAL TRAFFIC CONFLICT POINTS ARE CONCENTRATED AT PARTICULAR LOCATIONS.





CURRENT AND POTENTIAL TRAFFIC CONFLICT POINTS IN CRANDON AND VKB ARE OUTSIDE SCOPE.





CURRENT AND POTENTIAL TRAFFIC CONFLICT POINTS ON VIRGINIA KEY AND CRANDON MARINA.





CURRENT AND POTENTIAL TRAFFIC CONFLICT POINTS AROUND BEAR CUT ARE CRITICAL.





**RICKENBACKER
CAUSEWAY
IMPROVEMENTS**

A SYSTEM OF SYSTEMS

1. INTRODUCTION
2. SCOPE AND FOCUS.
3. IMPROVING TRAFFIC.
4. SEPARATING BICYCLE TRAFFIC.
5. CONSIDERING CONNECTIONS
6. RESILIENCY

Google



RICKENBACKER CAUSEWAY IMPROVEMENTS

1. INTRODUCTION
2. SCOPE AND FOCUS.
3. IMPROVING TRAFFIC.
4. SEPARATING BICYCLE TRAFFIC.
5. CONSIDERING CONNECTIONS
6. RESILIENCY



CONCENTRATE ON MANAGING CONFLICT POINTS.





EXITS WITHOUT CROSSINGS HAVE MINIMAL IMPACT ON THROUGH VEHICULAR TRAFFIC





NEED TO CONCENTRATE ON ELIMINATING CONFLICTS AT VIRGINIA KEY INTERSECTIONS.





ELIMINATE CONFLICTS AT INTERSECTIONS ON VIRGINIA KEY, PARTICULARLY TRAFFIC LIGHTS.



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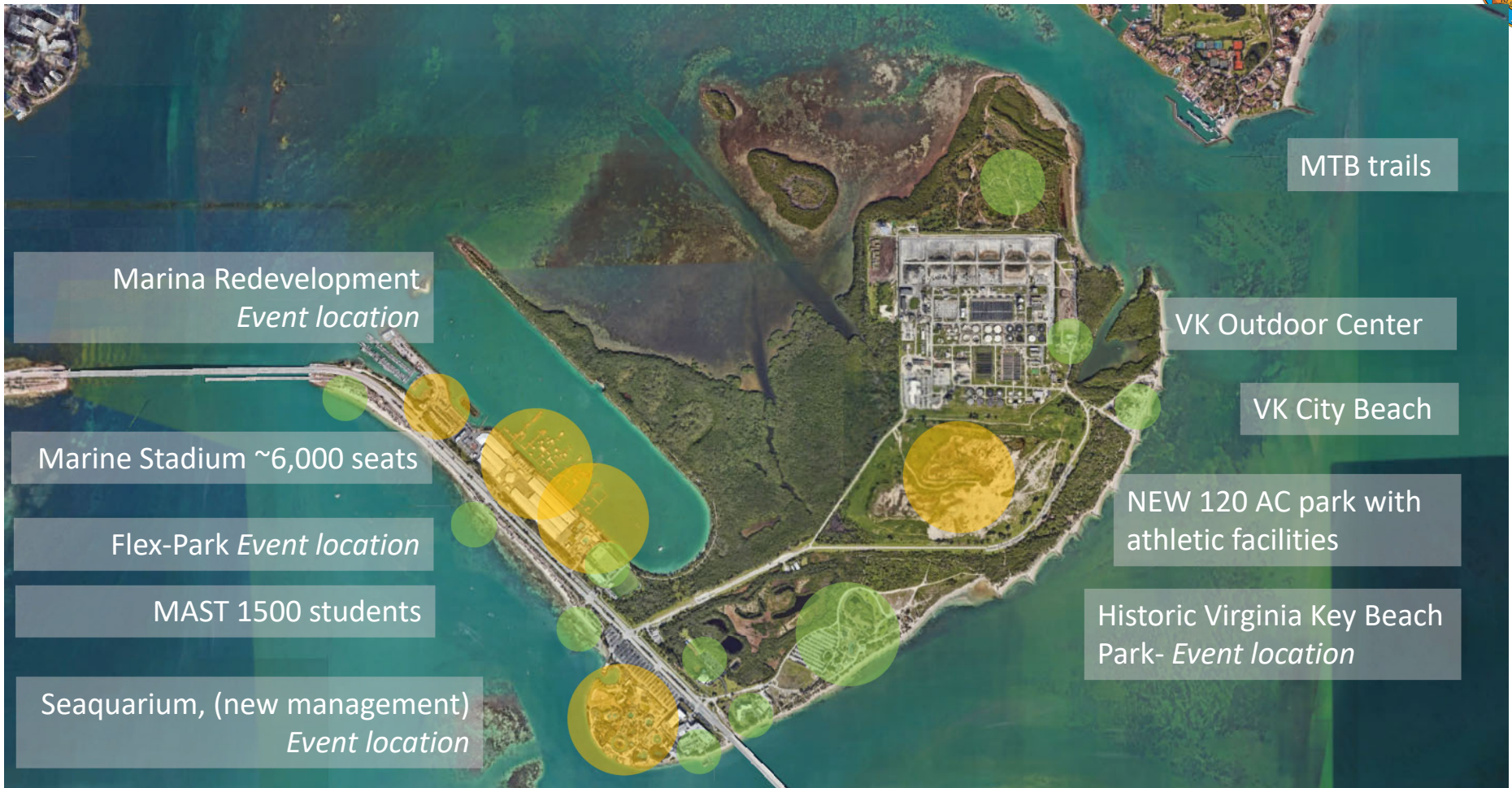
19

CONSIDER FUTURE SPECIAL EVENT TRAFFIC. MARINE STADIUM, FLEX-PARK, RENOVATED SEAQUARIUM, VIRGINIA KEY BEACH, AND SPORTS FIELDS, 400-800 CARS

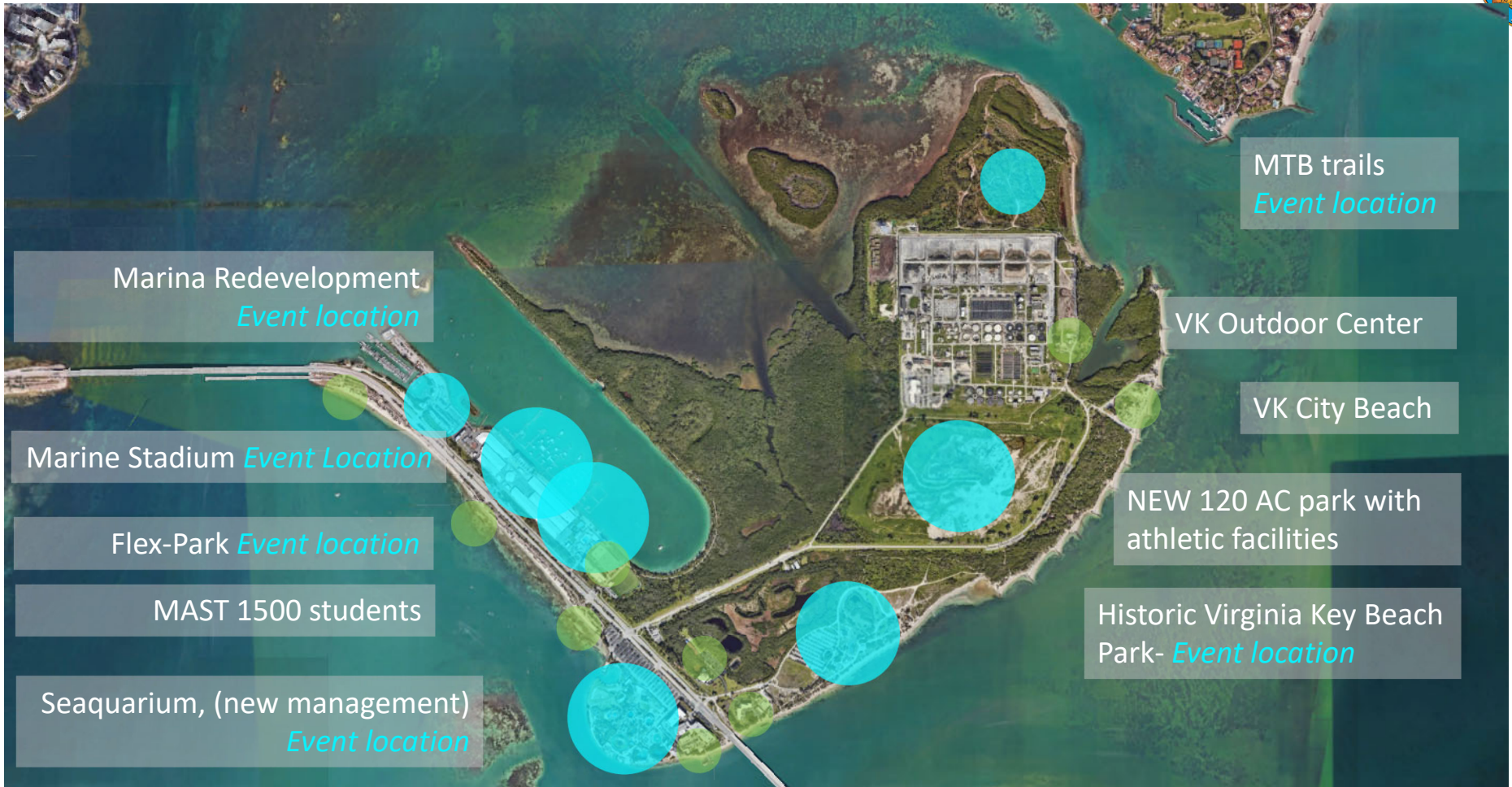




CONSIDER FUTURE SPECIAL EVENT TRAFFIC. MULTIPLE EXISTING AND PLANNED VENUES WILL ACCOMMODATE LARGE-SCALE SPECIAL EVENTS.



CONSIDER FUTURE SPECIAL EVENT TRAFFIC. MULTIPLE EXISTING AND PLANNED VENUES WILL ACCOMMODATE LARGE-SCALE SPECIAL EVENTS. TENS OF THOUSANDS OF PEOPLE MAY BE ON-ISLAND SIMULTANEOUSLY.





KEY BISCAIYNE DESIRES AN EXPRESS SERVICE THROUGH VIRGINIA KEY.



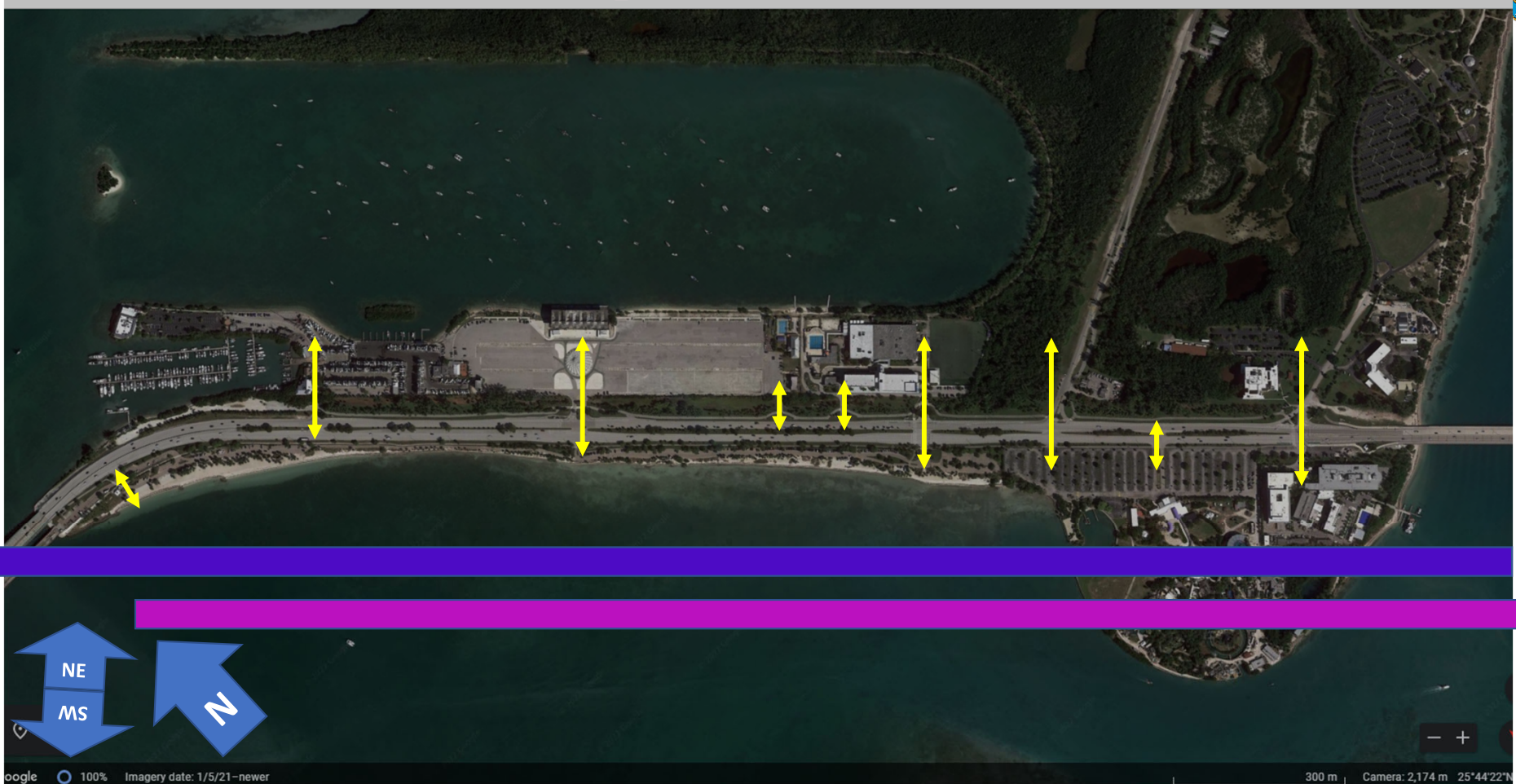
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NEED TO ACHIEVE IMPROVED SERVICE WHILE PROVIDING ACCESS TO USERS.



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CREATE "LOCAL TRAFFIC" LANES ON NE SIDE OF VIRGINIA KEY.

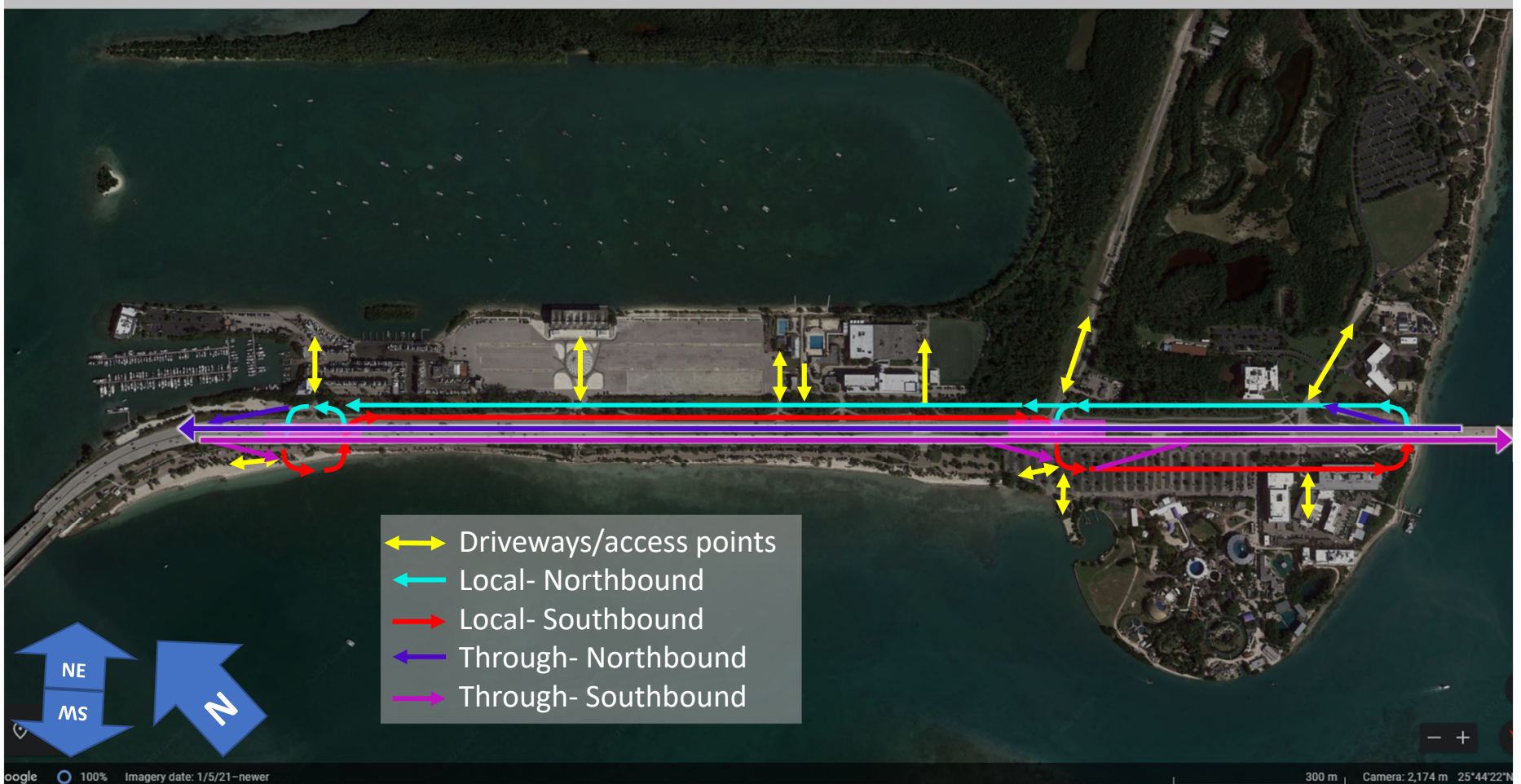




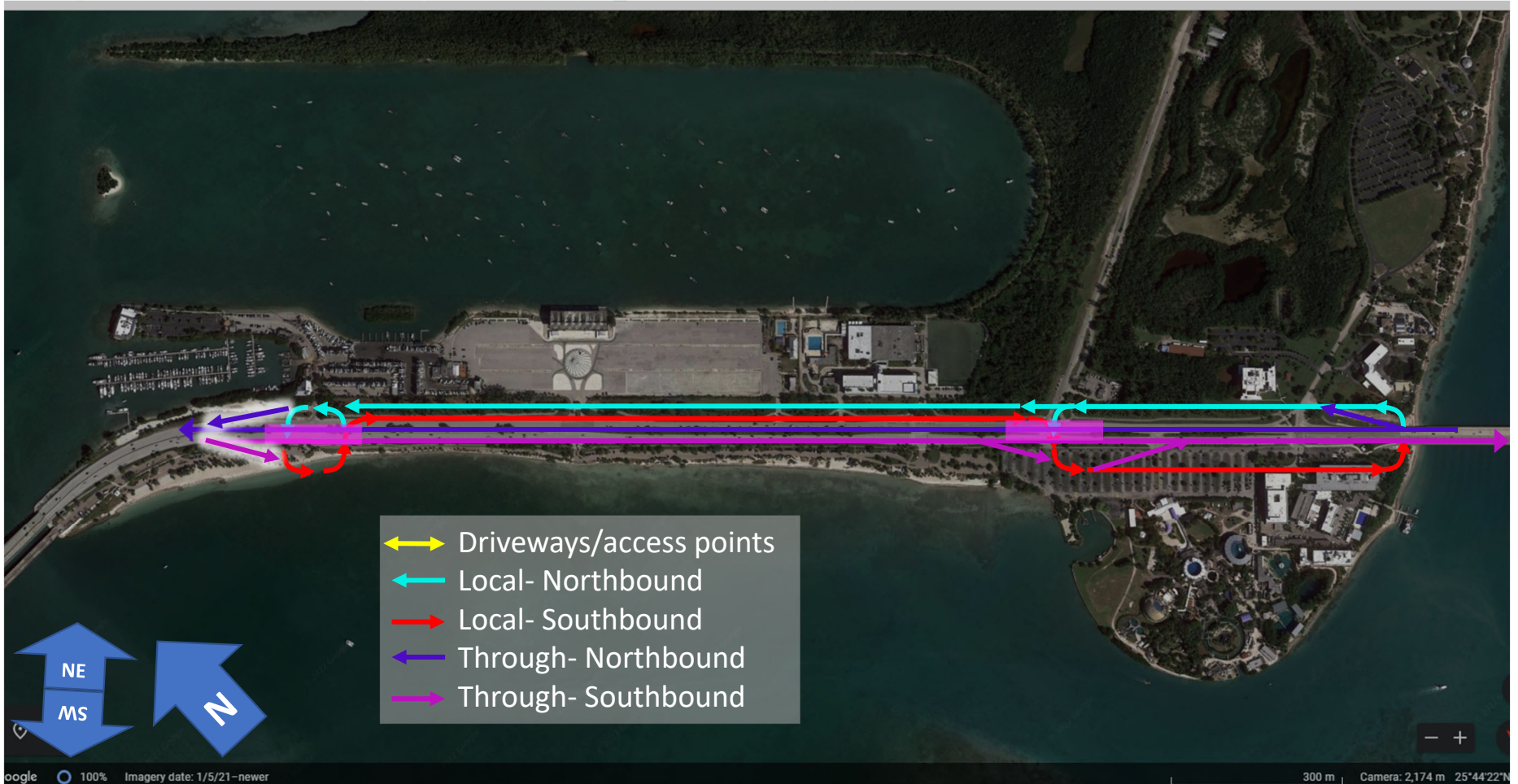
PROVIDE LOOP ROADS AT EITHER END OF ISLAND AS TURN AROUNDS AND TO SERVE SW ACCESS.



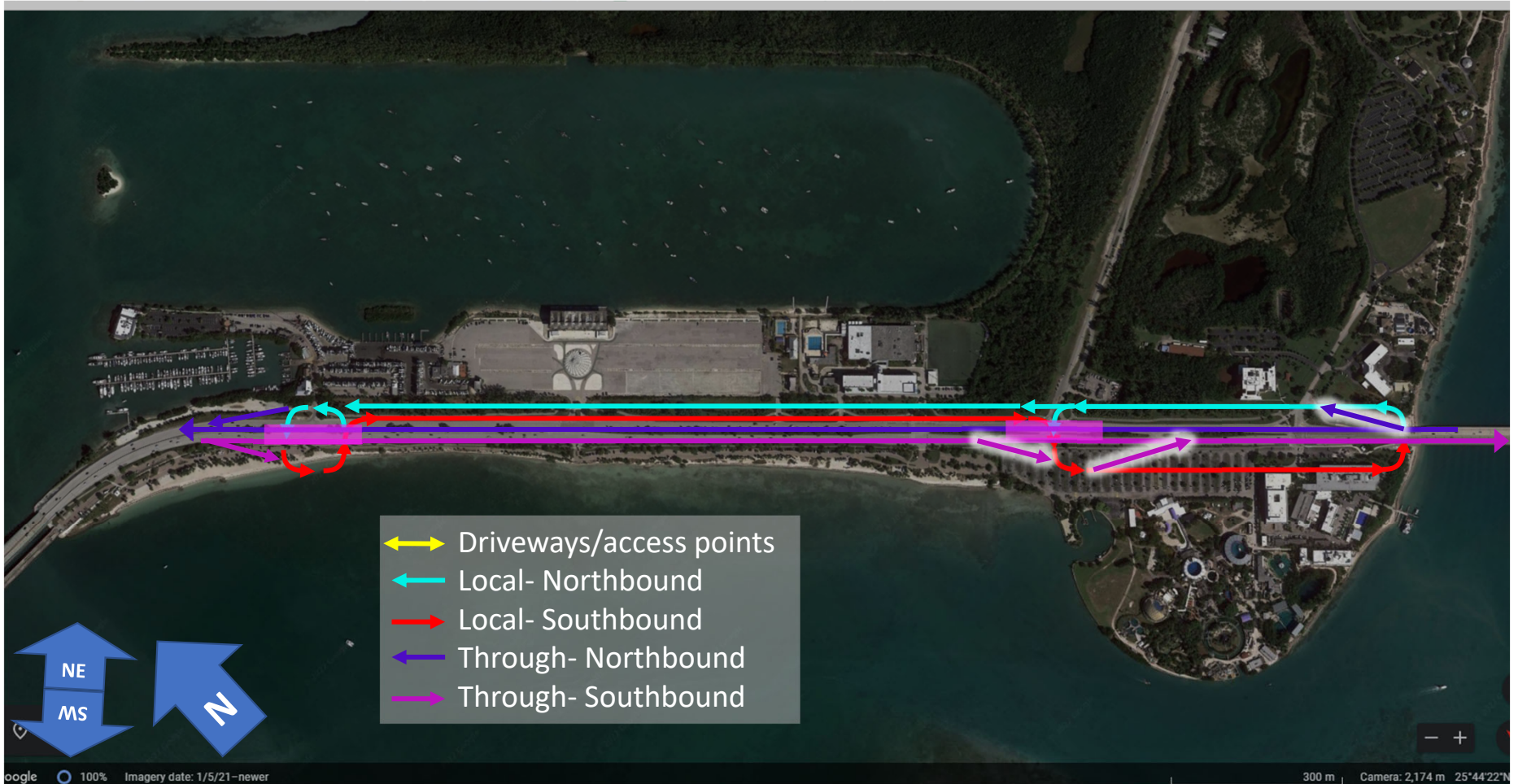
EXPRESS LANES WILL ALIGN TO THE SOUTHWEST OF THE LOCAL TRAFFIC IN LINE WITH THE CENTER LANES OF THE BRIDGES. EXPRESS TRAFFIC WILL TRAVEL OVER LOCAL TRAFFIC AT LOOPS.



LOOP ROADS WILL PROVIDE ON AND OFF RAMP ACCESS TO LOCAL TRAFFIC.



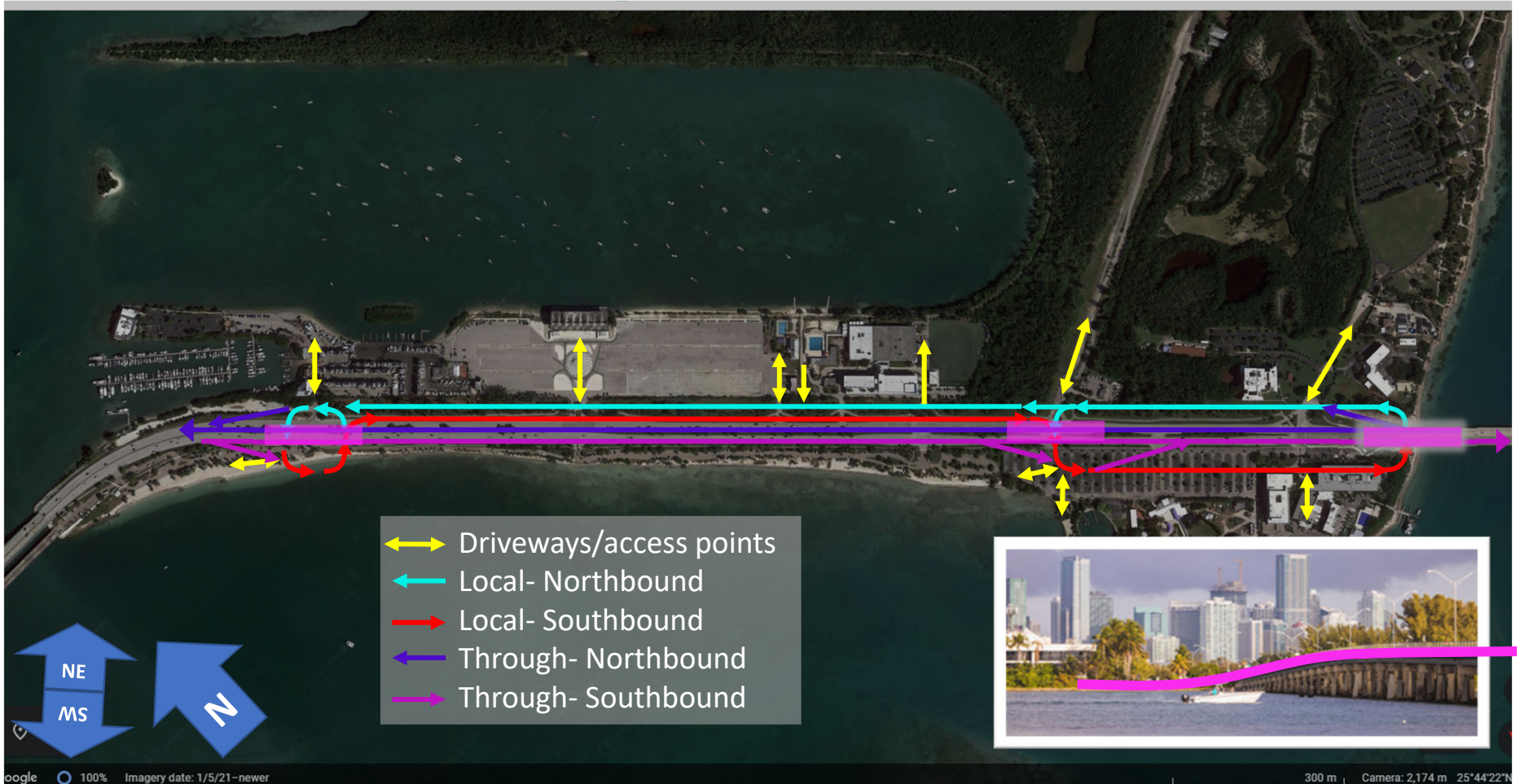
LOOP ROADS WILL PROVIDE ON AND OFF RAMP ACCESS TO LOCAL TRAFFIC.



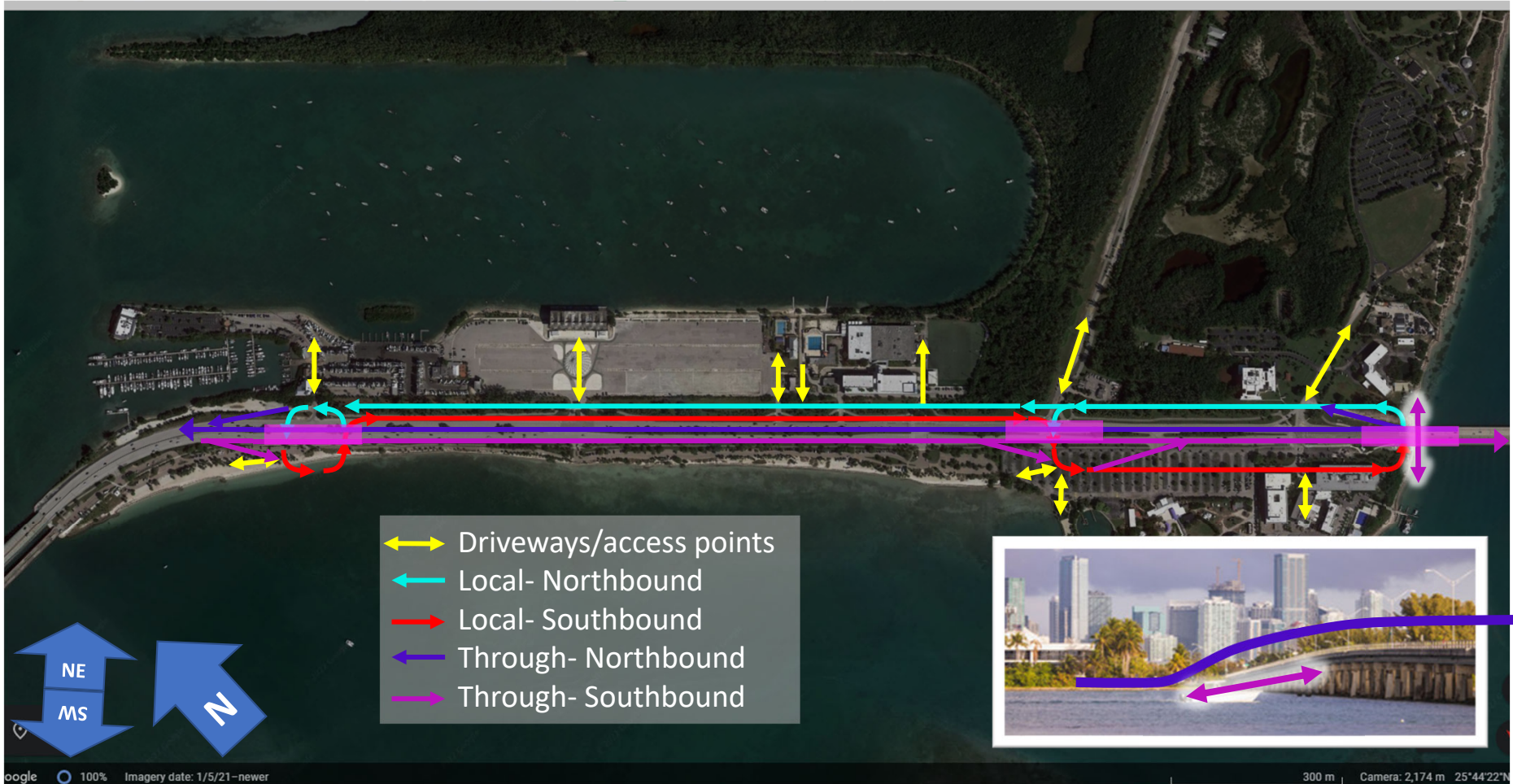
OVERPASSES WOULD BE REQUIRED ONLY OVER THE "LOOP ROAD" INTERSECTIONS.



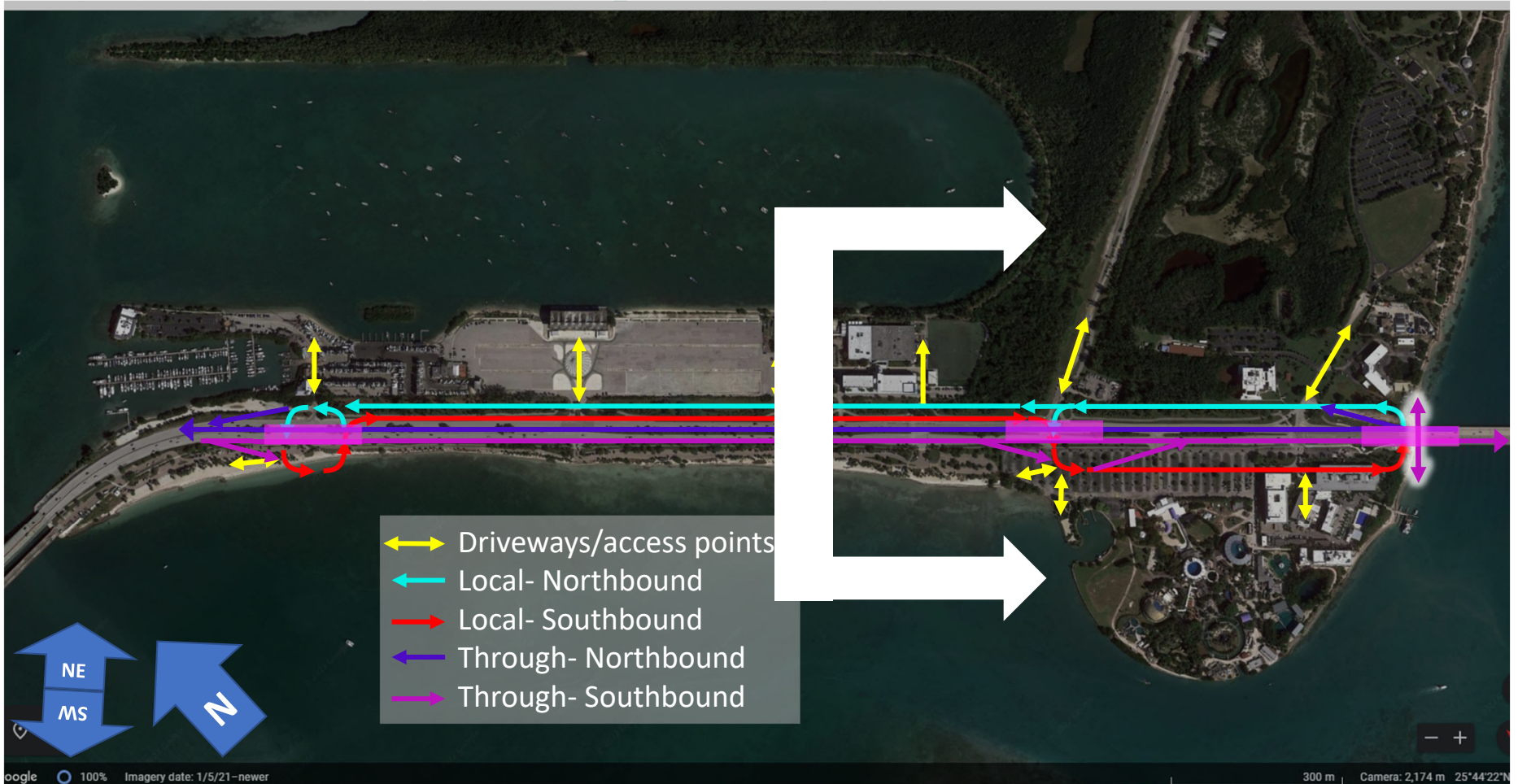
THE SOUTH LOOP WILL TRAVEL UNDER THE EMBANKMENT FOR THE UPDATED BEAR CUT BRIDGE.



OVERPASSES WOULD BE REQUIRED ONLY OVER THE "LOOP ROAD" INTERSECTIONS.



CROSS SECTION THROUGH THE ROAD DESCRIBES CIRCULATION



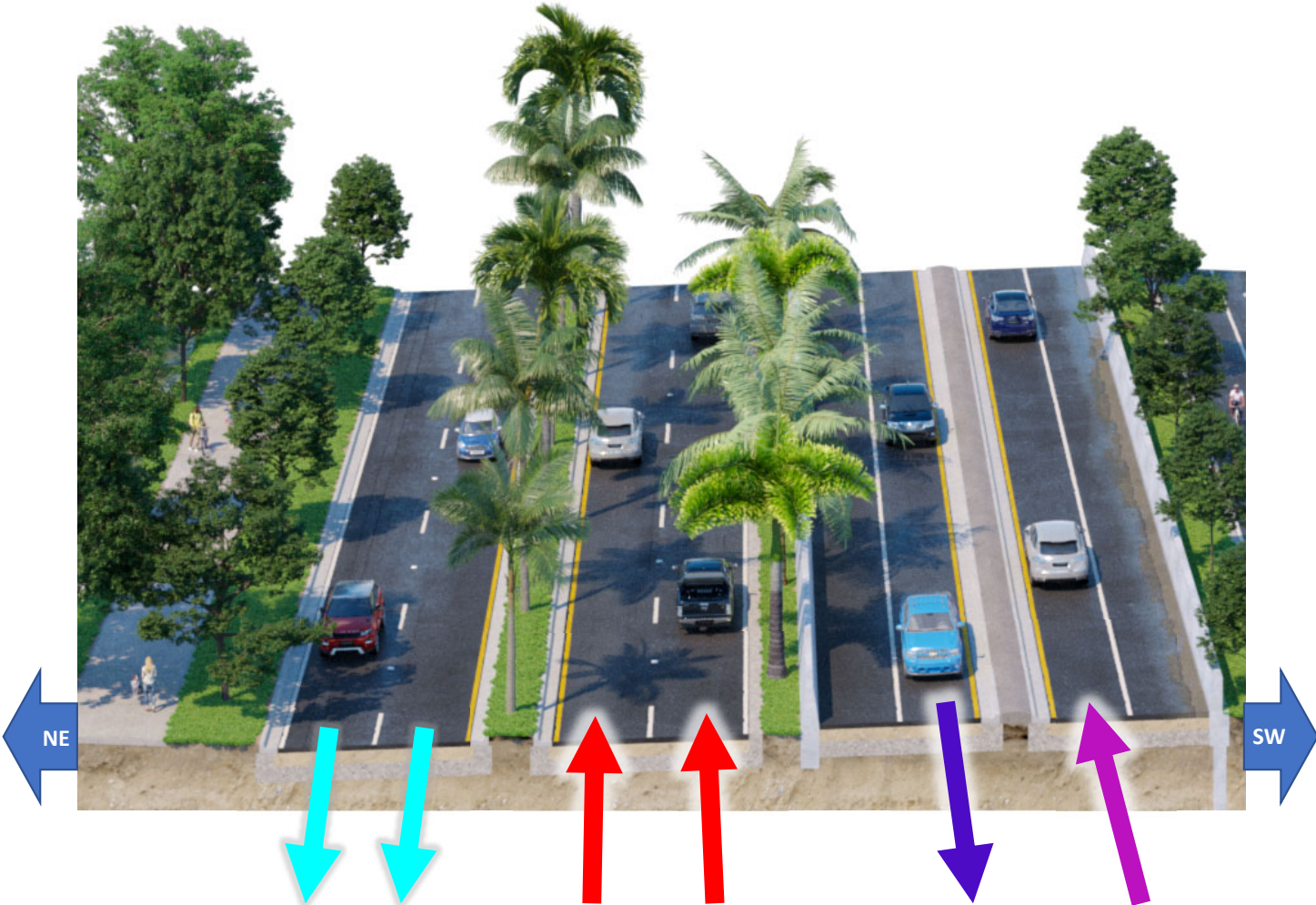
CROSS SECTION THROUGH THE ROAD DESCRIBES CIRCULATION



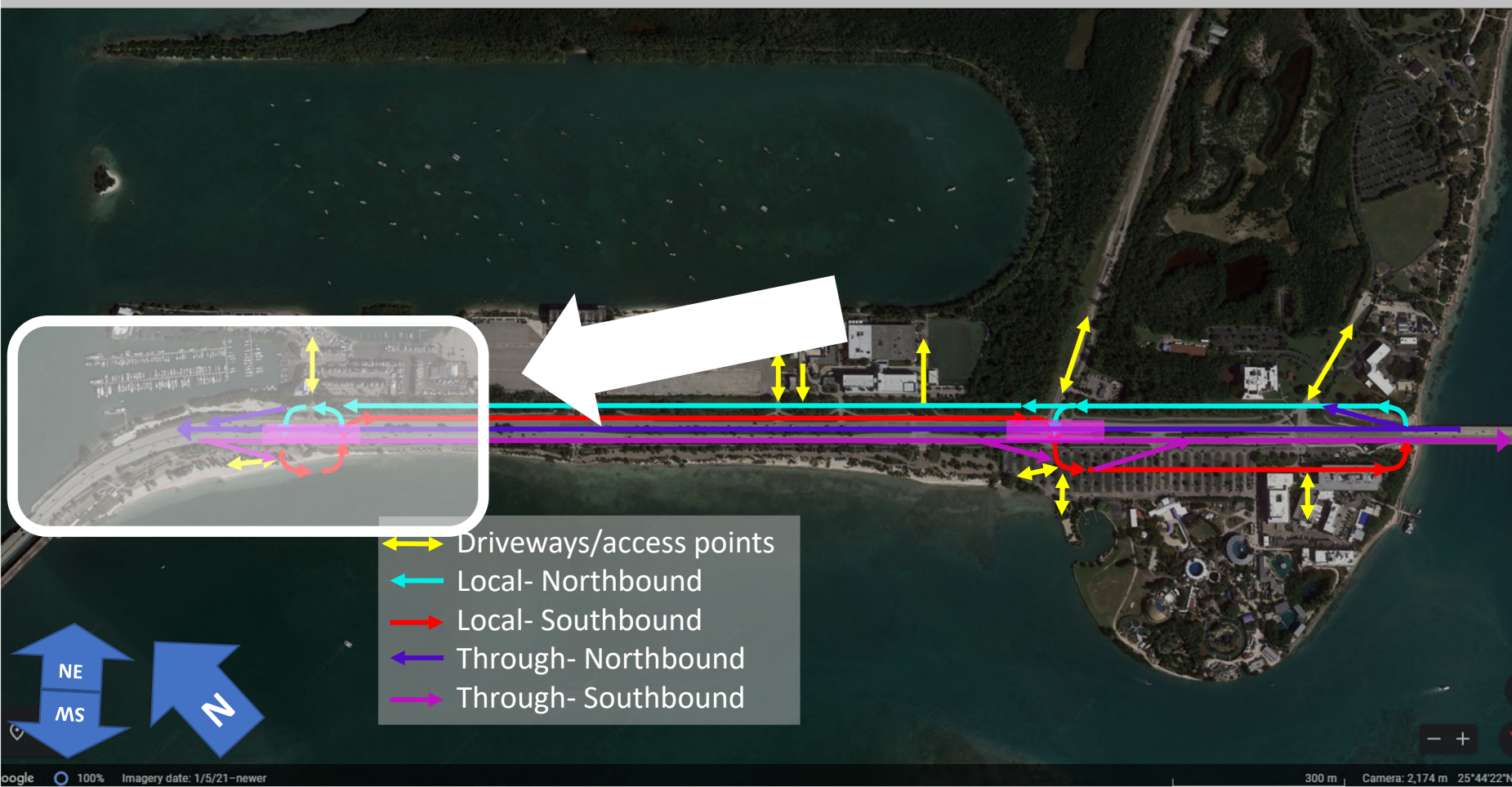
CROSS SECTION THROUGH THE ROAD DESCRIBES CIRCULATION, INCLUDING THROUGH LANES



CROSS SECTION THROUGH THE ROAD DESCRIBES CIRCULATION, INCLUDING THROUGH LANES AND LOCAL ACCESS LANES.



A VIEW LOOKING NORTH DESCRIBES HOW THE TRAFFIC FUNCTIONS WITH THE WILLIAM POWELL BRIDGE.



CIRCULATION WILL WORK WITH THE EXISTING TRAFFIC OF THE WILLIAM POWELL BRIDGE.



THROUGH LANES BECOME THE CENTER LANES OF THE WILLIAM POWELL BRIDGE.



THROUGH LANES BECOME THE CENTER LANES OF THE WILLIAM POWELL BRIDGE. OUTSIDE LANES BECOME THE LANES COMING TO AND FROM VIRGINIA KEY. JOINING TRAFFIC, BUT NOT MERGING.



VIEW FROM THE MARINA LOOKING NORTH.



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VIEW FROM THE MARINA LOOKING NORTH. NORTHBOUND THROUGH LANE INDICATED.



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VIEW FROM THE MARINA LOOKING NORTH. NORTH AND SOUTHBOUND THROUGH LANES INDICATED.



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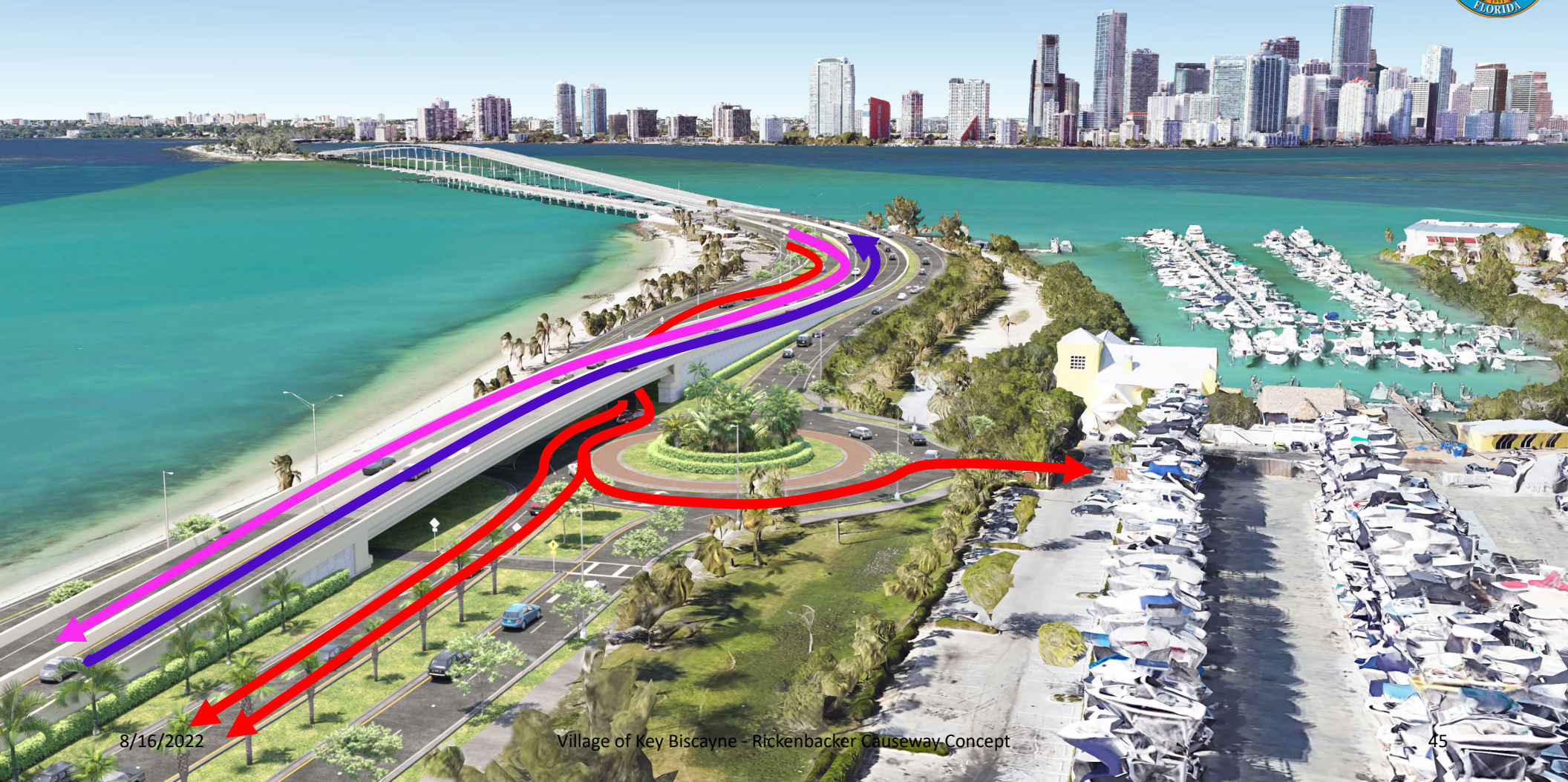
VIEW FROM THE MARINA LOOKING NORTH. NORTH AND SOUTHBOUND THROUGH LANES INDICATED. SOUTHBOUND LOCAL ACCESS IN RED.



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VIEW FROM THE MARINA LOOKING NORTH. NORTH AND SOUTHBOUND THROUGH LANES INDICATED. LOCAL ACCESS VIA THE TRAFFIC CIRCLE.

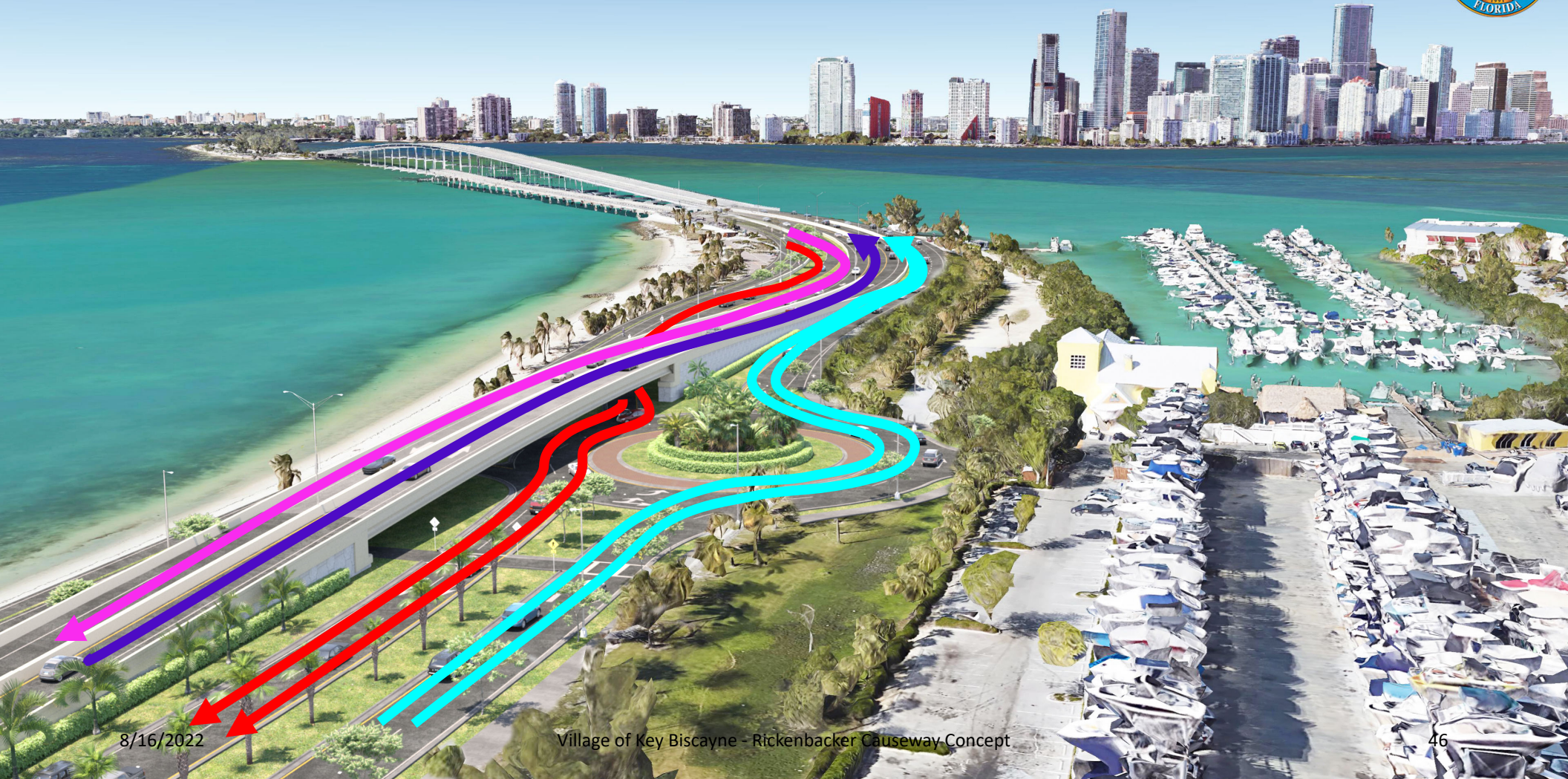


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VIEW FROM THE MARINA LOOKING NORTH. NORTH AND SOUTHBOUND THROUGH LANES INDICATED. LOCAL ACCESS TO AND FROM WILLIAM POWELL VIA THE TRAFFIC CIRCLE.



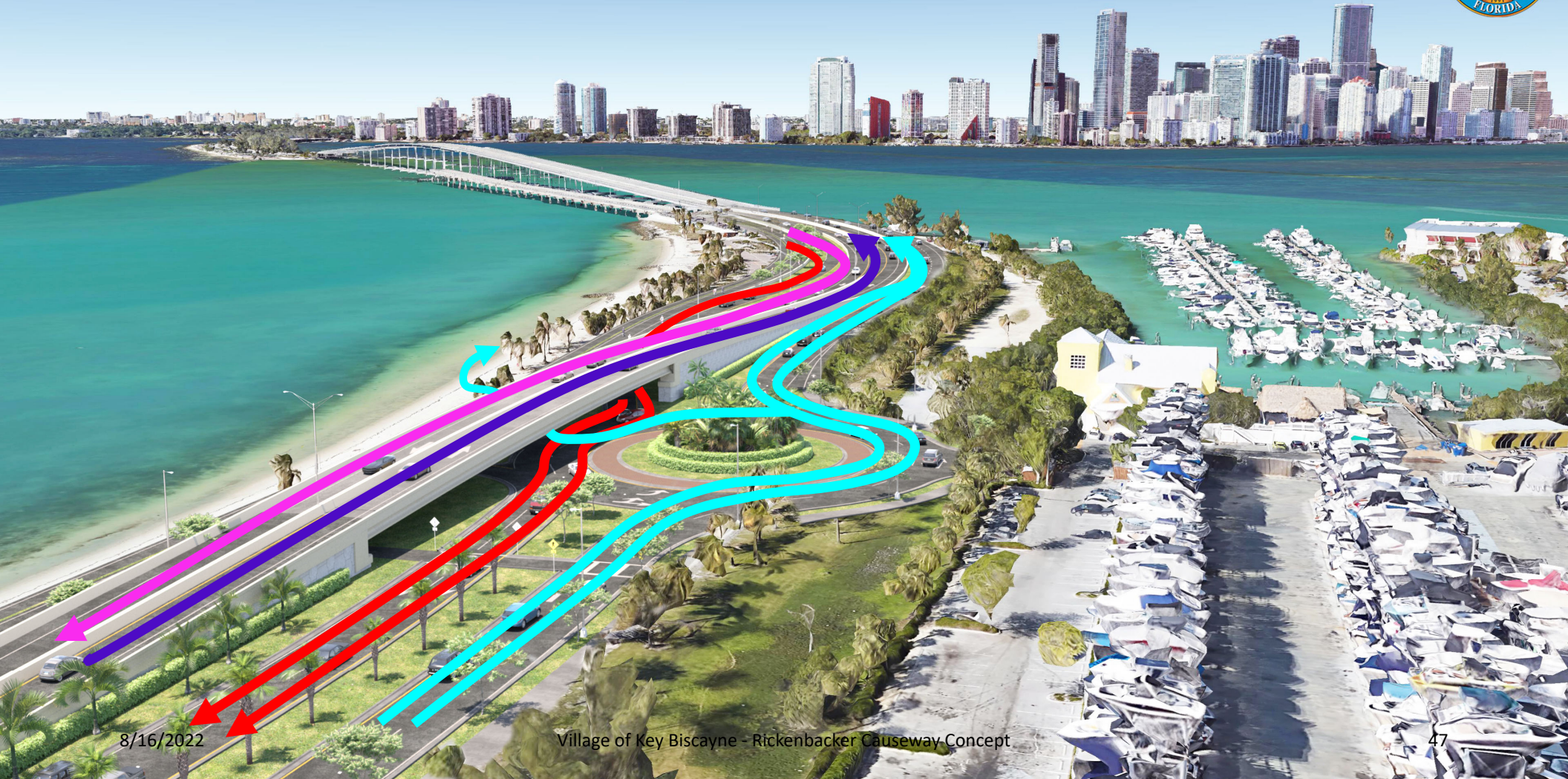
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VIEW FROM THE MARINA LOOKING NORTH. NORTH AND SOUTHBOUND THROUGH LANES INDICATED. LOCAL ACCESS TO AND FROM WILLIAM POWELL AND TO THE BEACH PARK VIA THE TRAFFIC CIRCLE.



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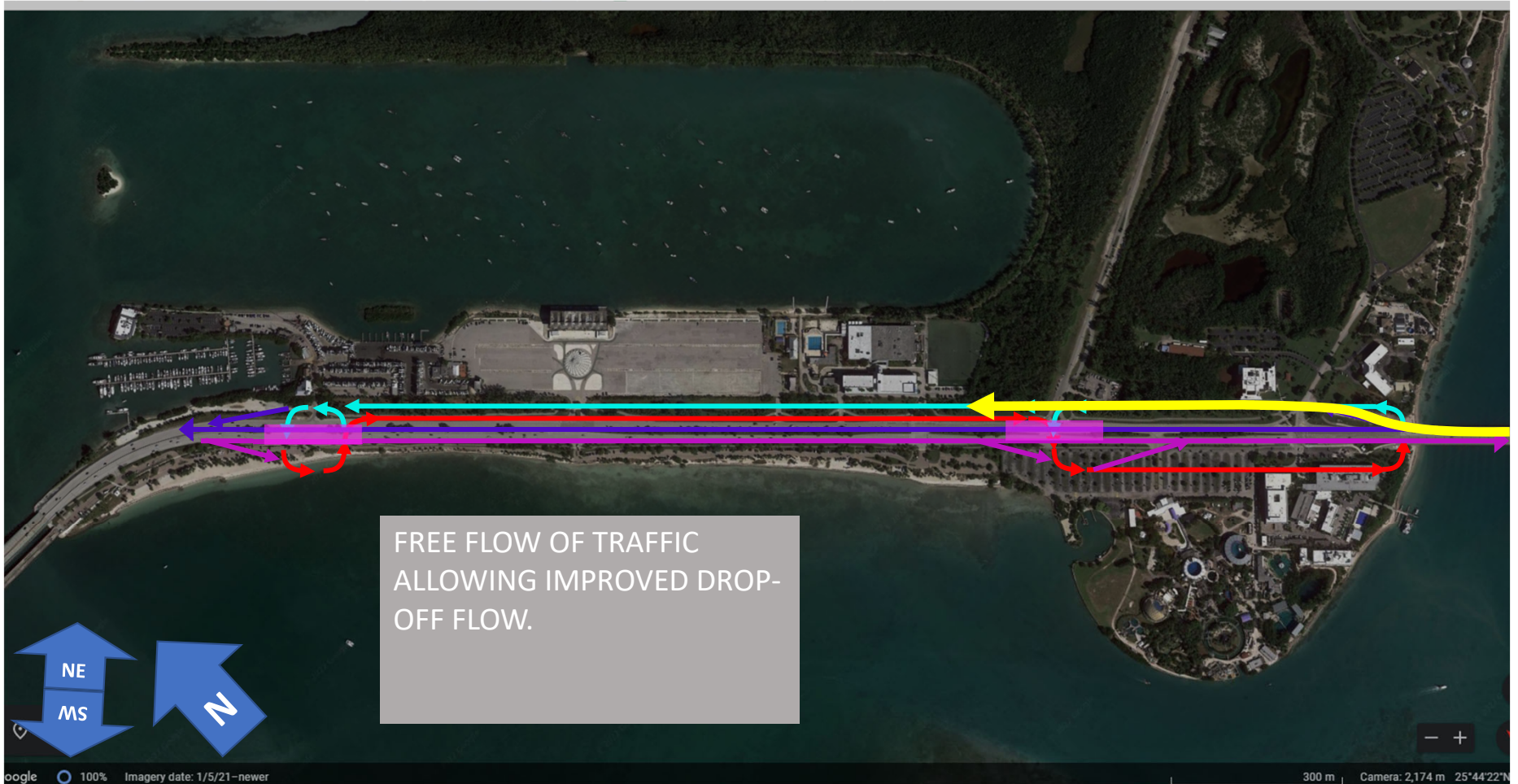
Village of Key Biscayne - Rickenbacker Causeway Concept



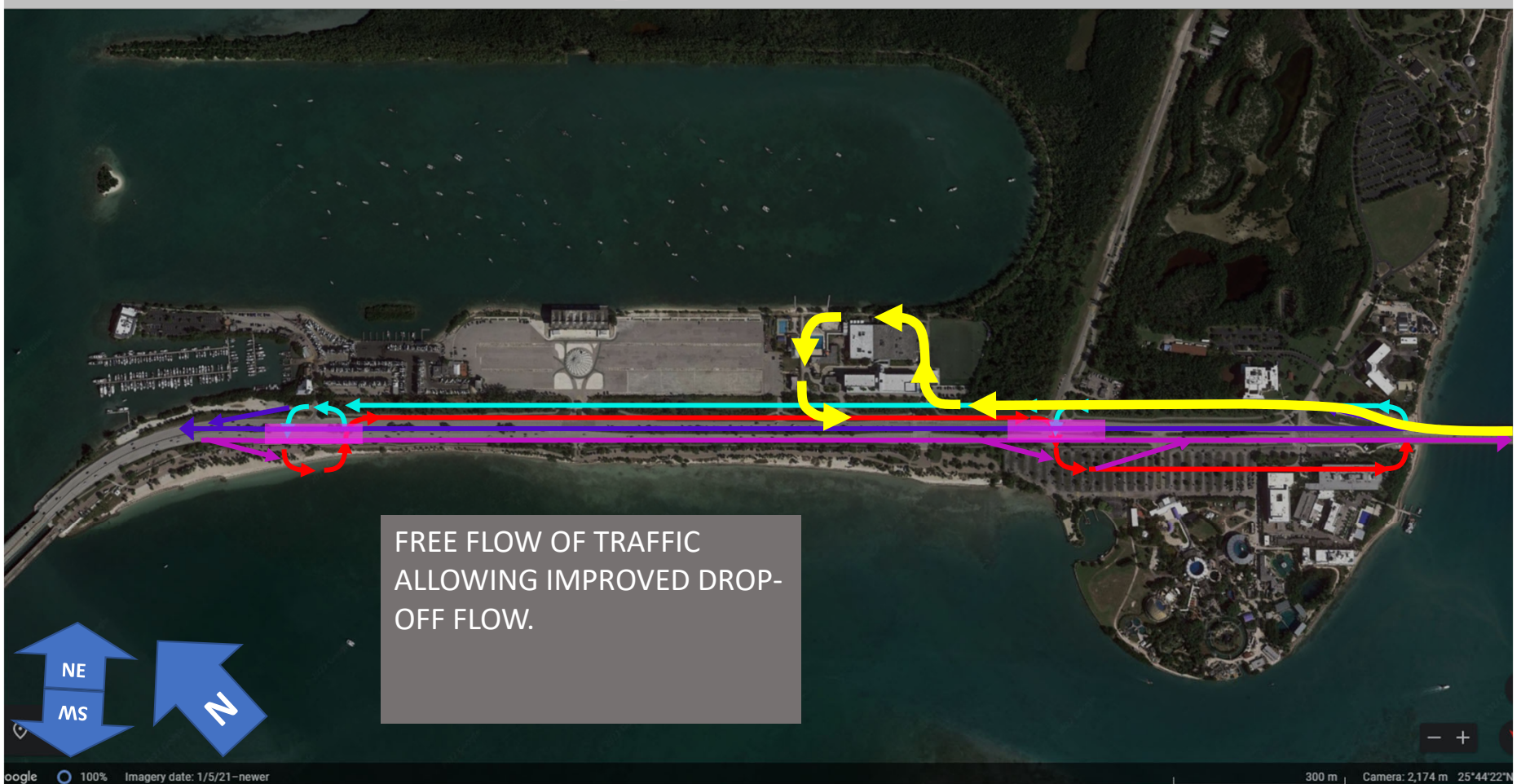
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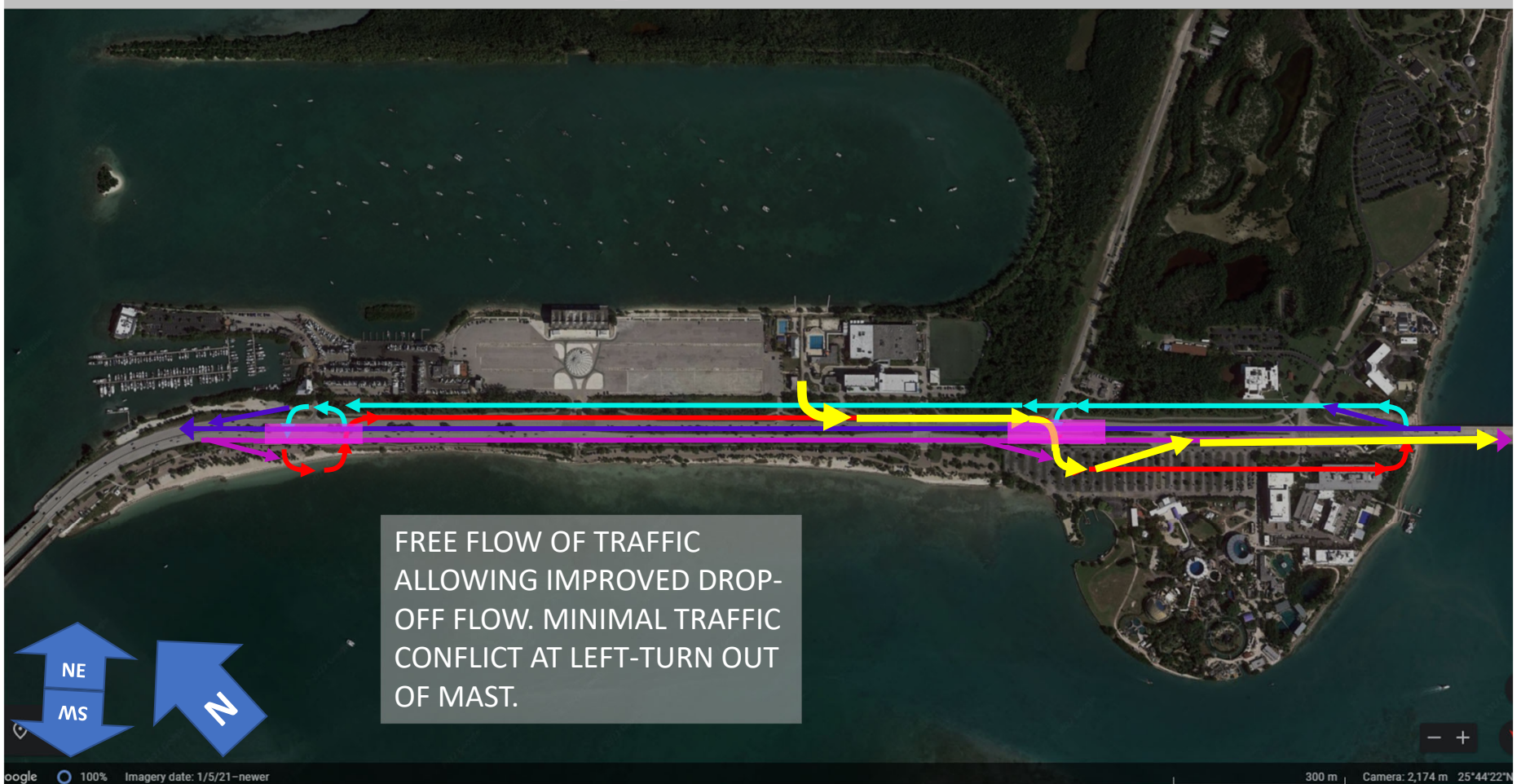
MAST ACADEMY TRAFFIC MANAGEMENT



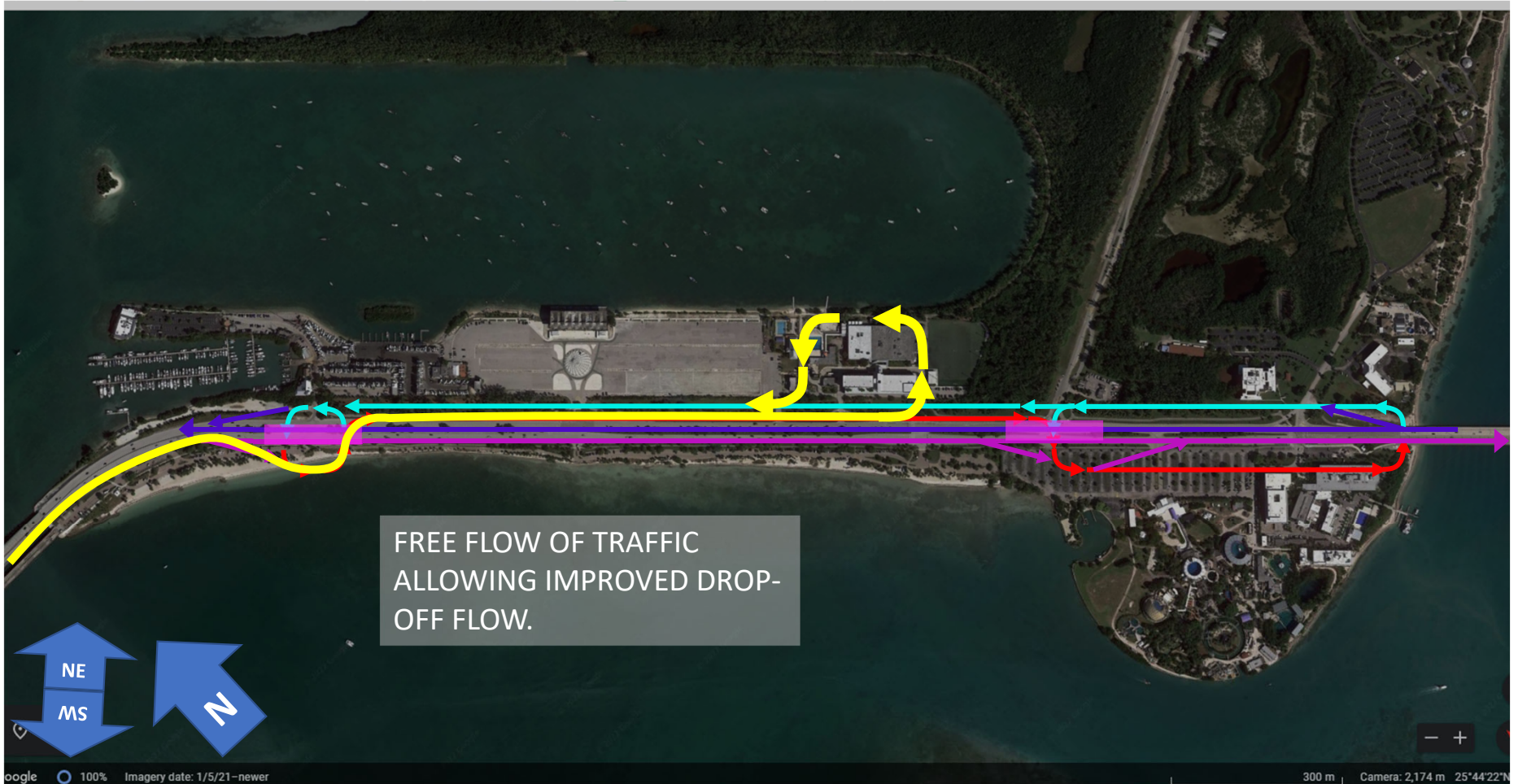
MAST ACADEMY TRAFFIC MANAGEMENT: FROM KEY BISCAIYNE TO DROP-OFF



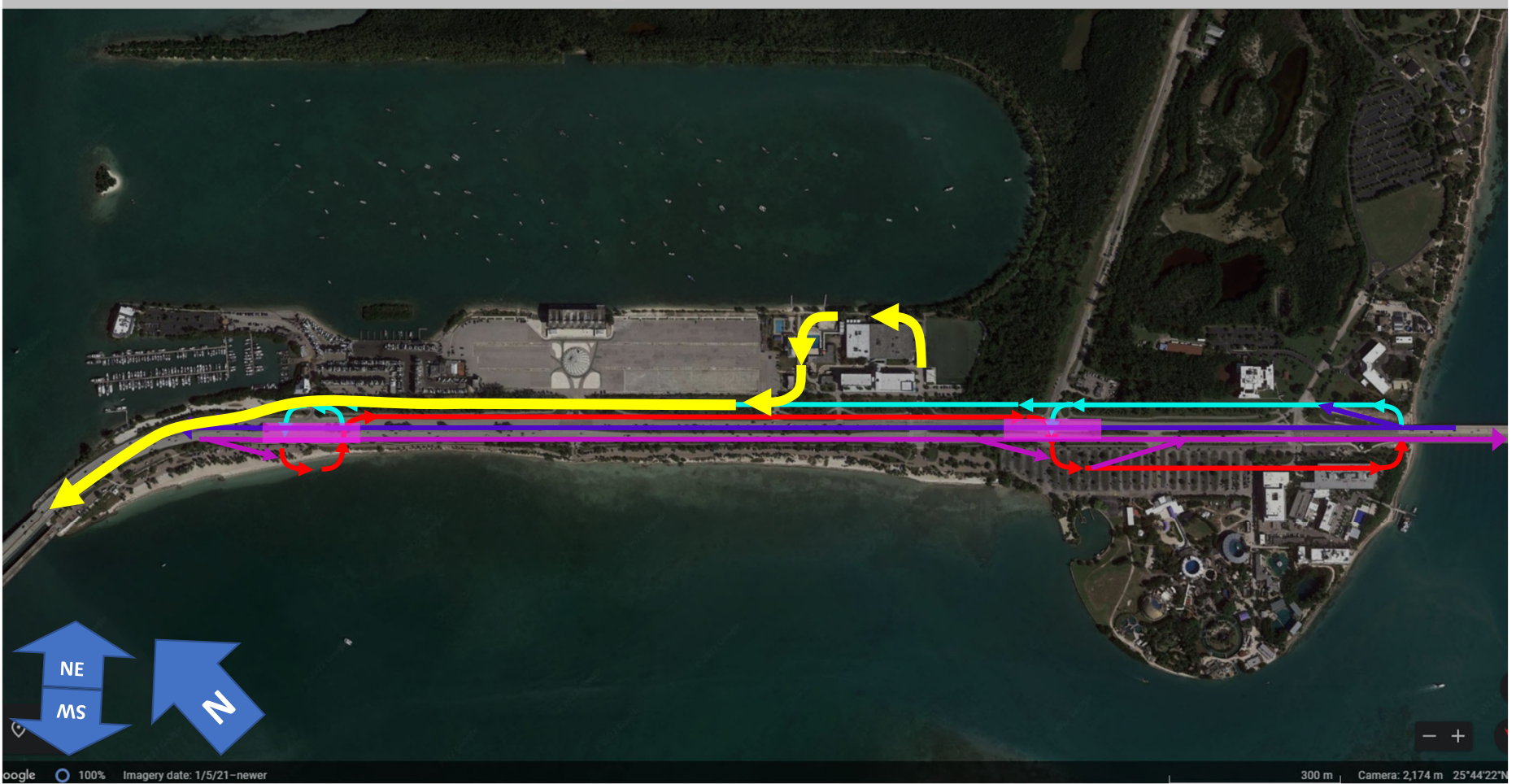
MAST ACADEMY TRAFFIC MANAGEMENT: FROM DROP-OFF TO KEY BISCAIYNE



MAST ACADEMY TRAFFIC MANAGEMENT: FROM MAINLAND TO DROP-OFF



MAST ACADEMY TRAFFIC MANAGEMENT: FROM DROP-OFF TO MAINLAND

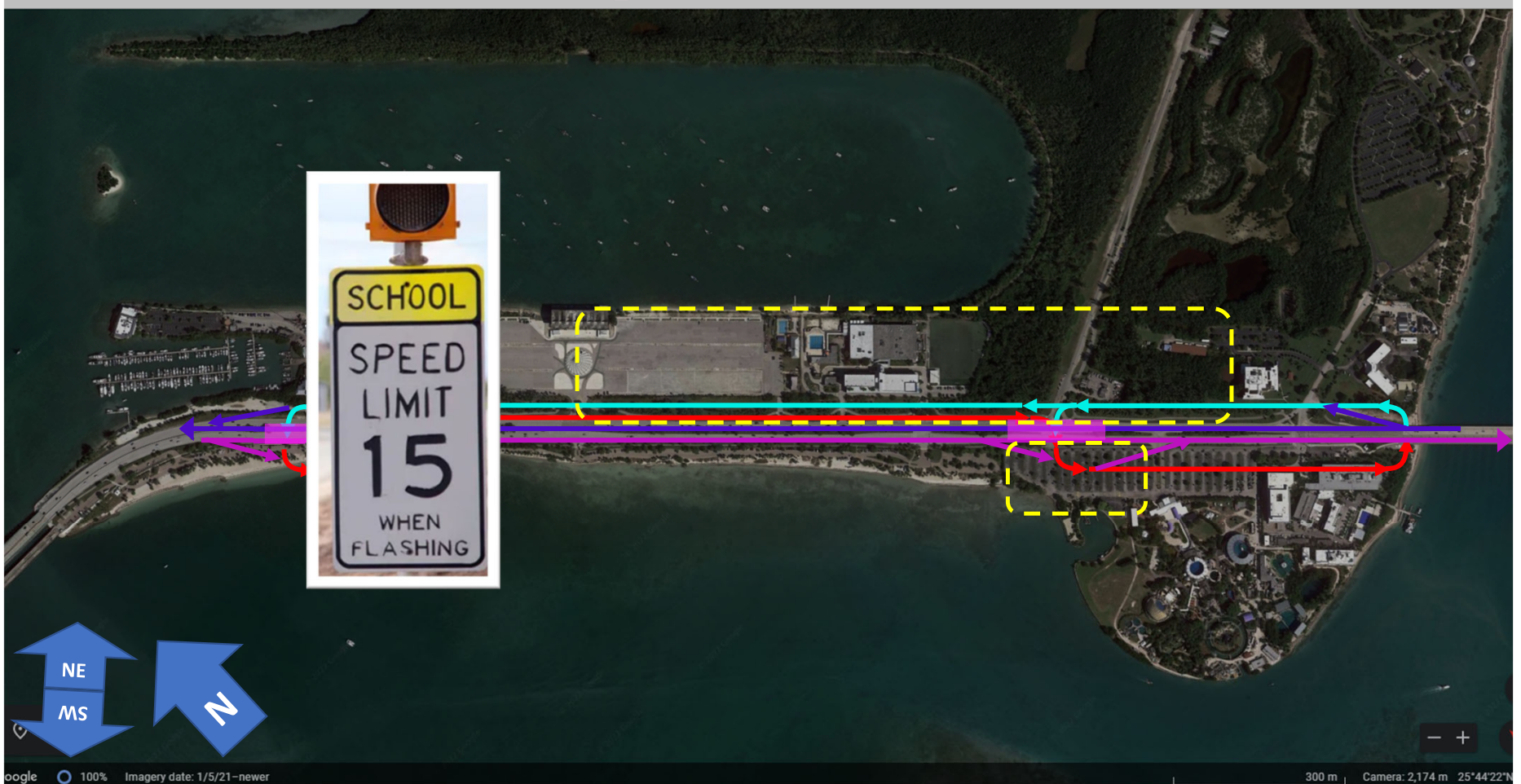


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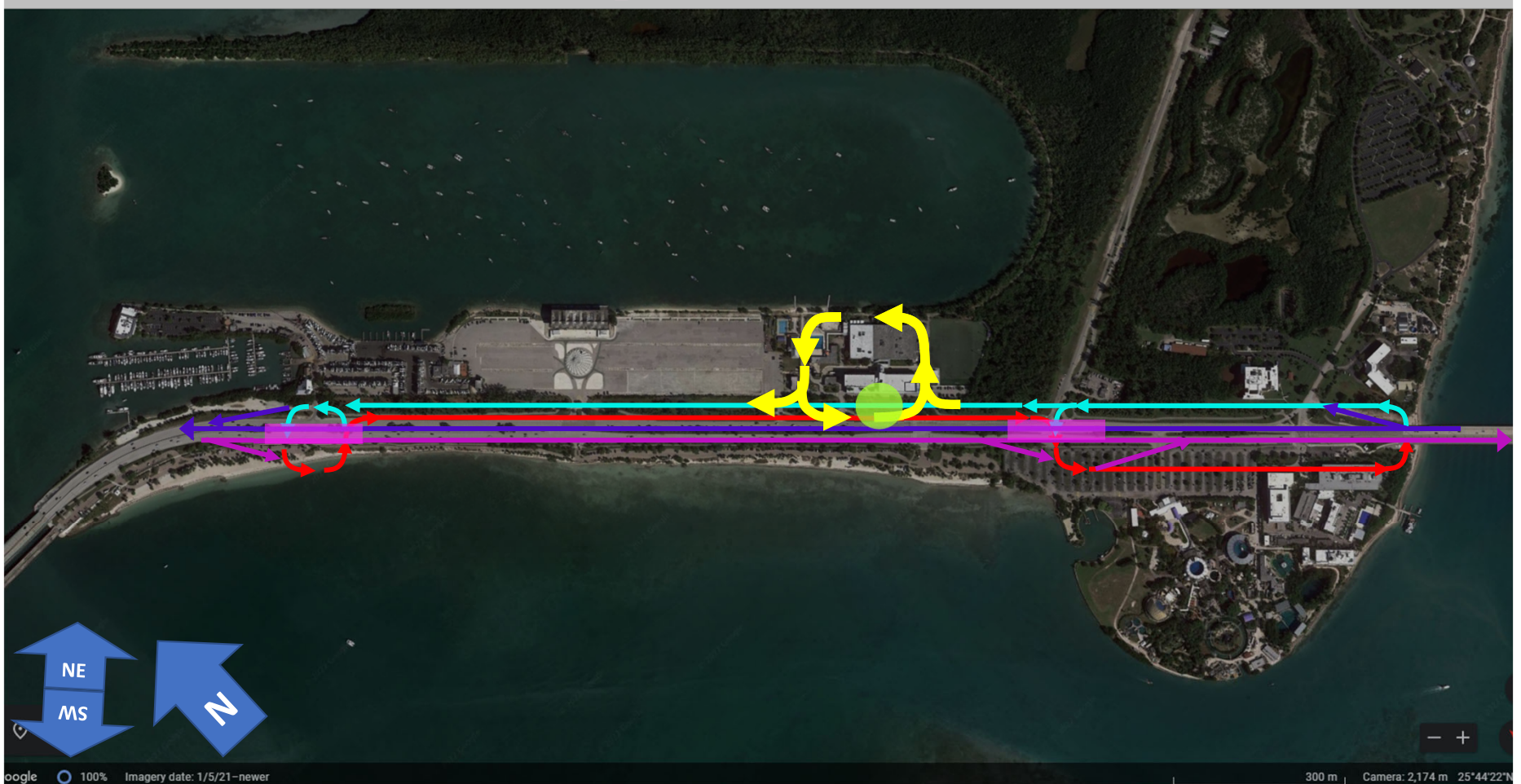
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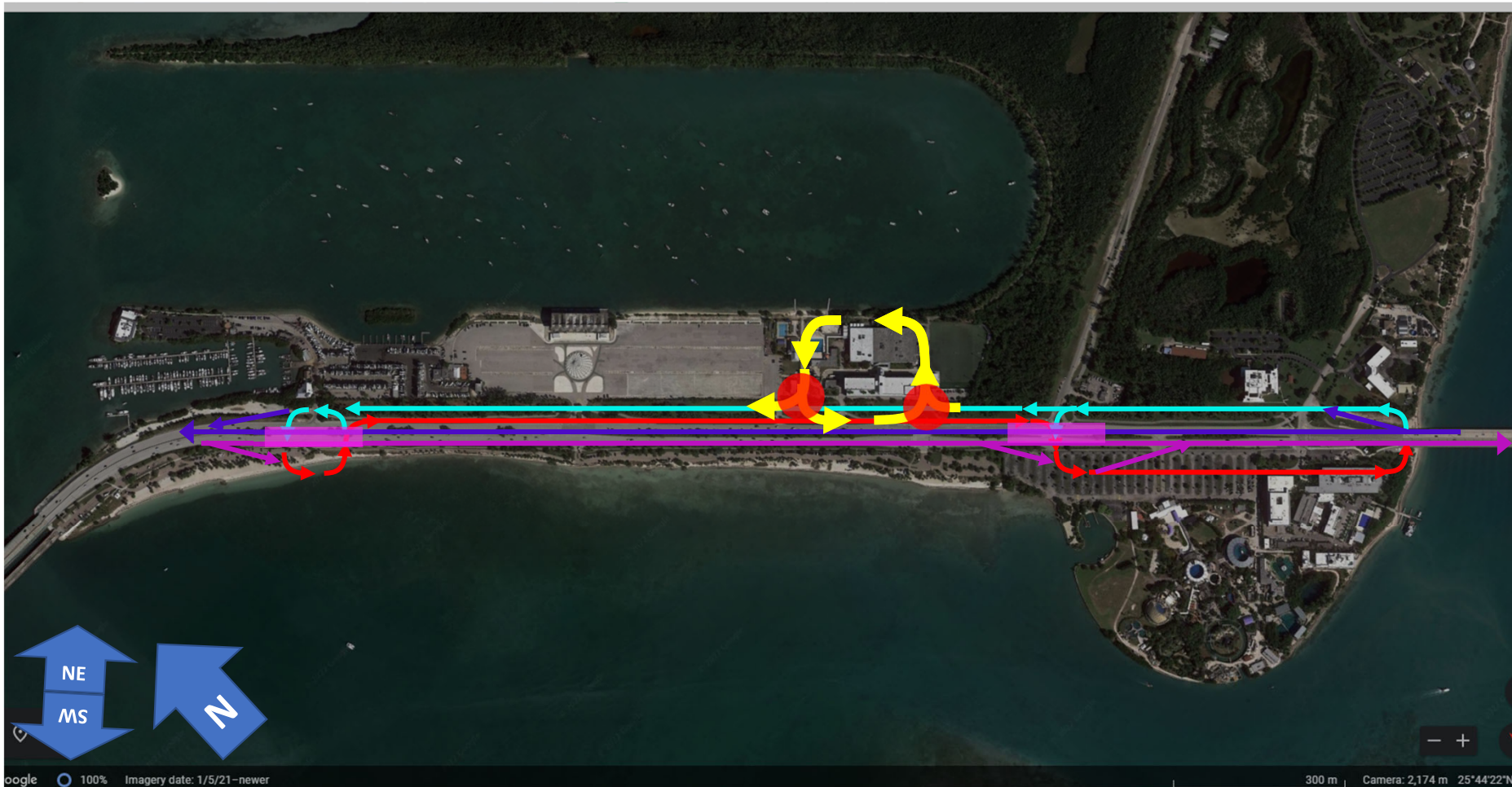
MAST ACADEMY TRAFFIC MANAGEMENT: CREATE A DESIGNATED SCHOOL ZONE ON LOCAL ROADS. THROUGH LANES WOULD NOT BE IMPACTED.



MAST ACADEMY TRAFFIC MANAGEMENT: MAY RETAIN EXISTING CONDITIONS AND EXISTING CONFLICT POINTS. THIS STILL CREATES A SAFER CONDITION FOR PEDESTRIAN AND BUS TRAFFIC.



MAST ACADEMY TRAFFIC MANAGEMENT: MAY RETAIN EXISTING CONDITIONS AND EXISTING CONFLICT POINTS..



MAST ACADEMY TRAFFIC MANAGEMENT: ALTERNATIVE ARRIVAL FOR MAINLAND ELIMINATES CONFLICT POINTS.



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MAST ACADEMY TRAFFIC MANAGEMENT: ALTERNATIVE ARRIVAL FOR MAINLAND ELIMINATES CONFLICT POINTS AT MAST INTERSECTIONS AND MOVES TRAFFIC TO A ONE-WAY FLOW.



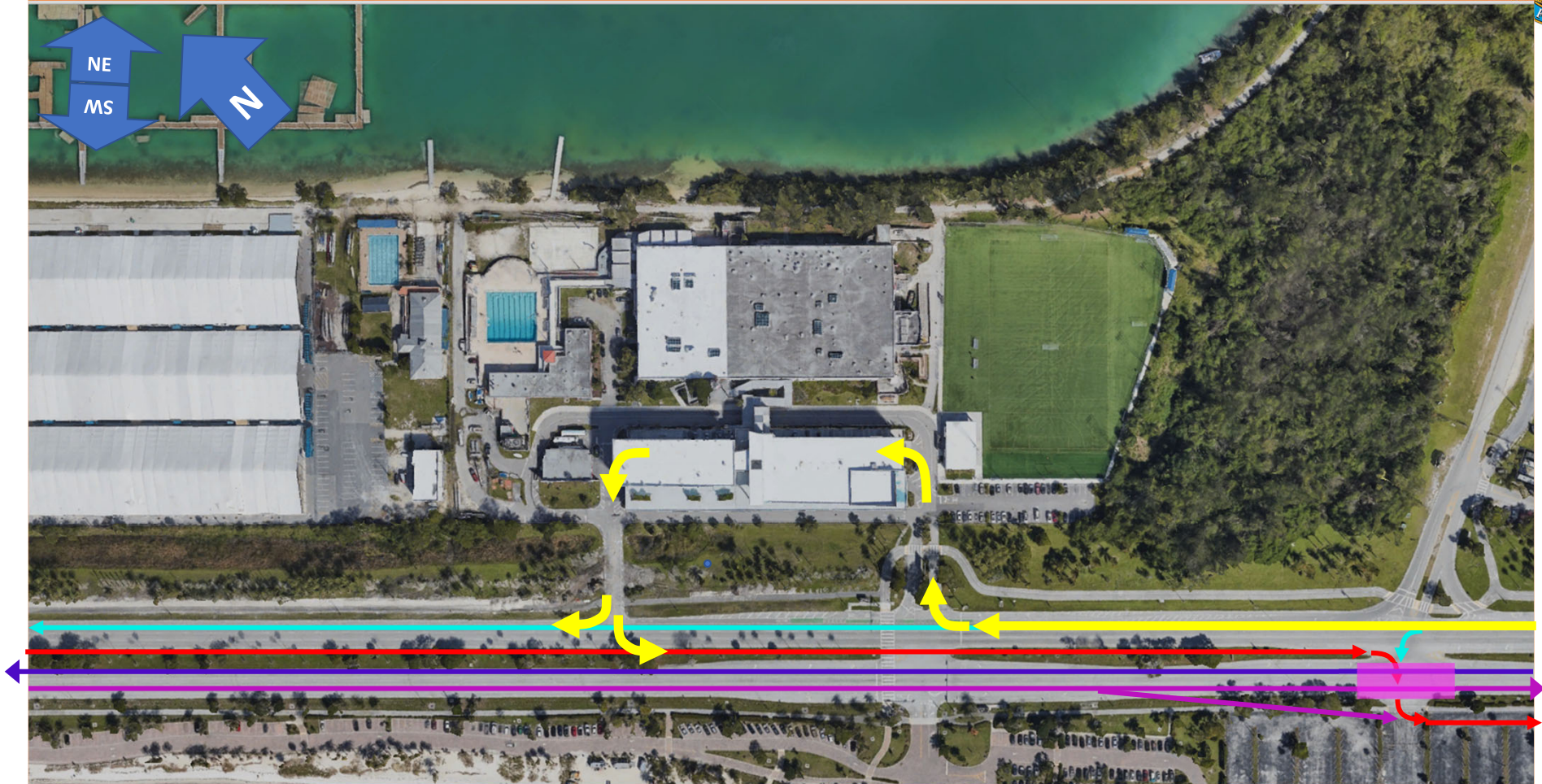
MAST ACADEMY TRAFFIC MANAGEMENT: CROSSING TRAFFIC IS REPLACED WITH MERGING TRAFFIC SEPARATE FROM PEDESTRIANS.



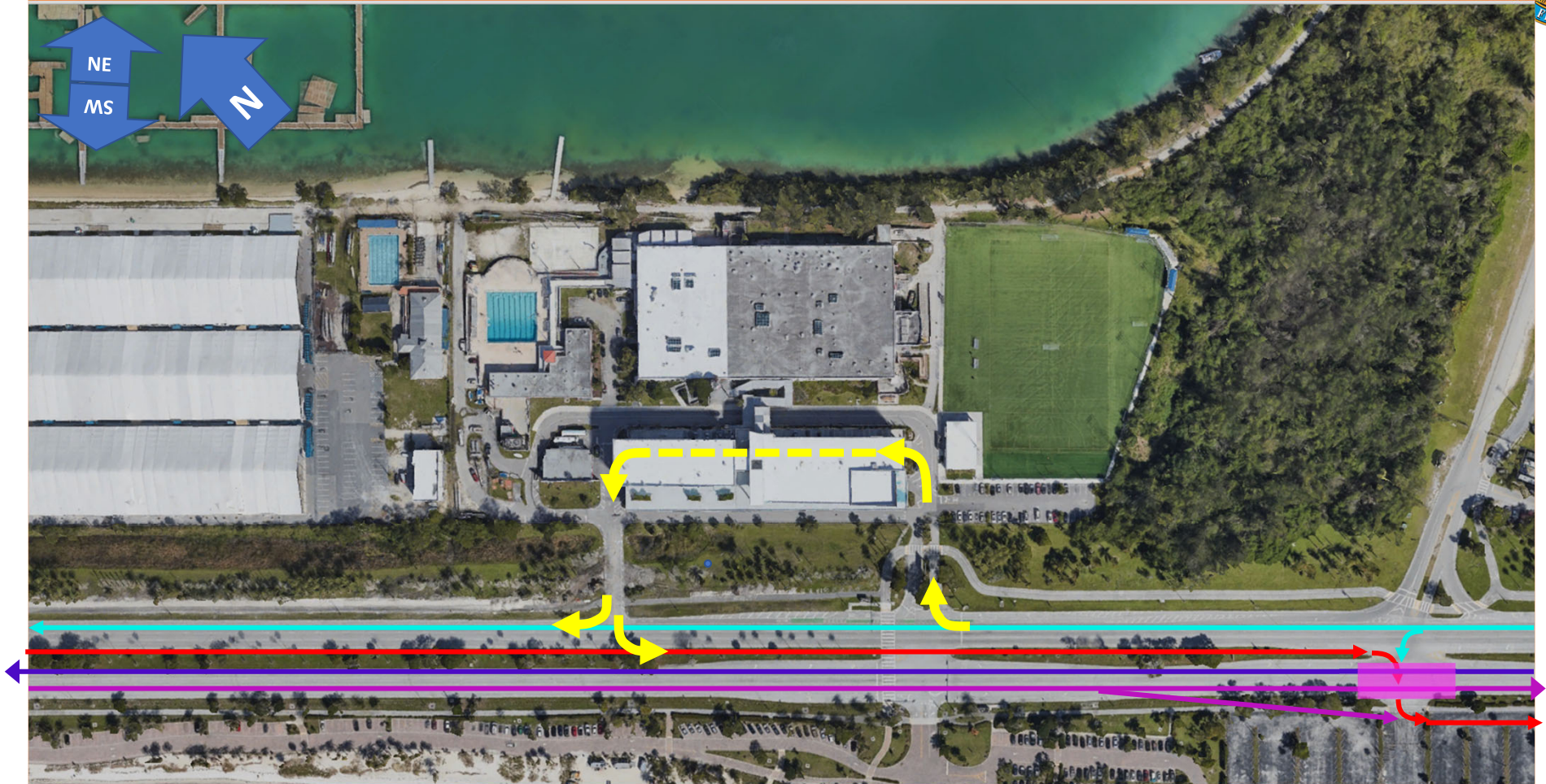
MAST ACADEMY TRAFFIC MANAGEMENT: CROSSING TRAFFIC IS REPLACED WITH MERGING TRAFFIC SEPARATE FROM PEDESTRIANS.



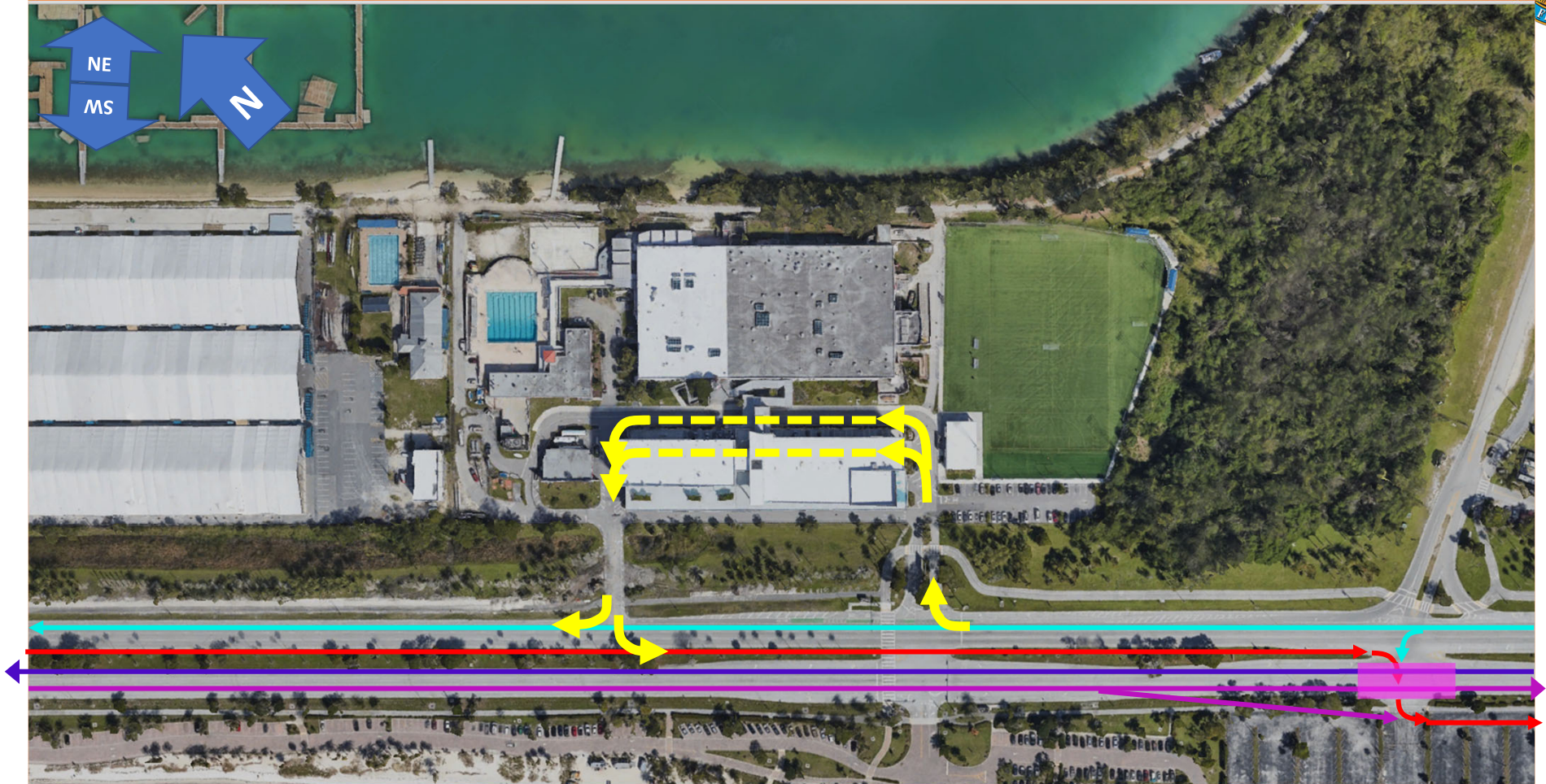
MAST ACADEMY TRAFFIC MANAGEMENT: ALTERNATIVE ARRIVAL FOR MAINLAND ELIMINATES CONFLICT POINTS AT MAST INTERSECTIONS.



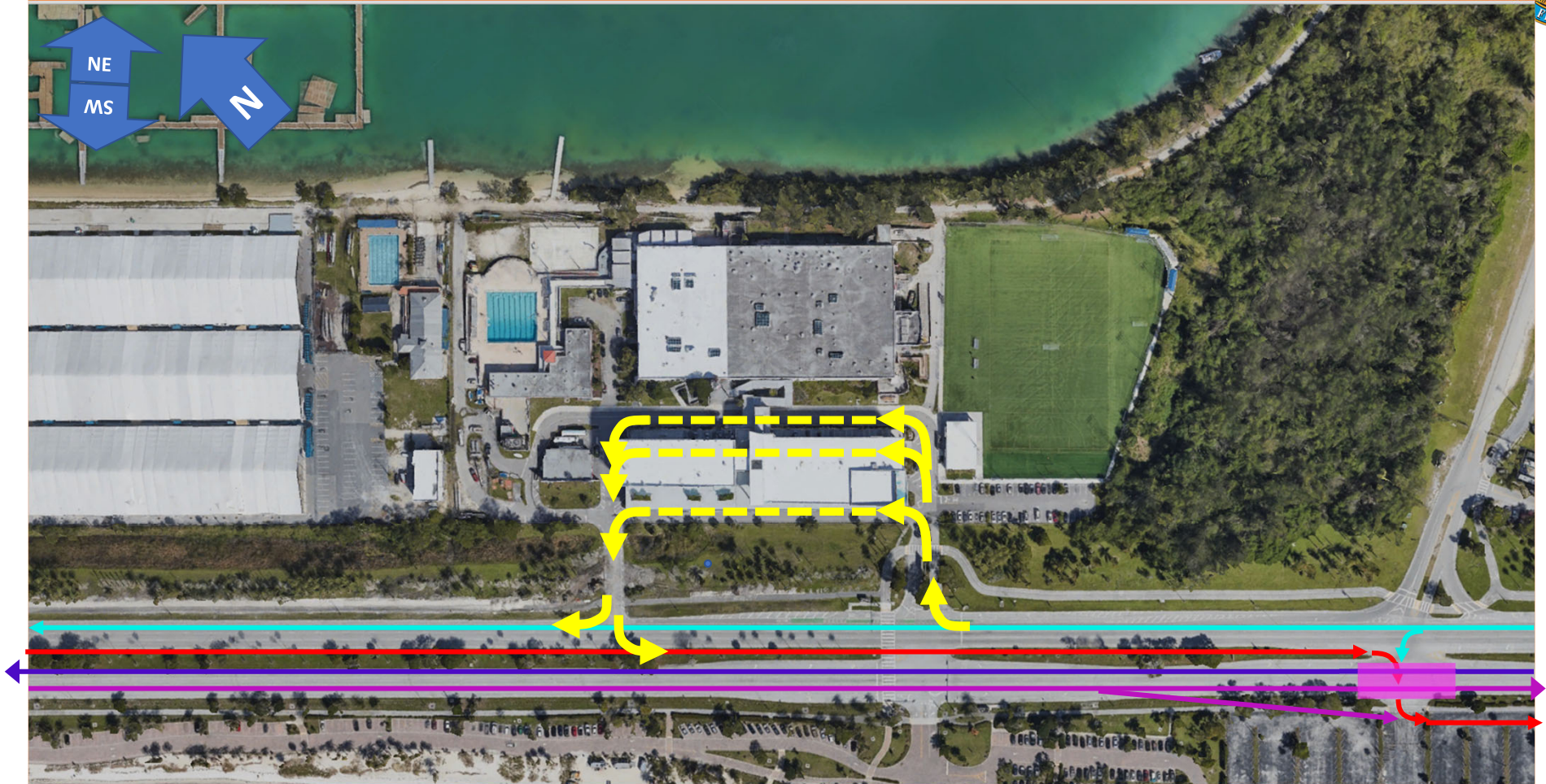
MAST ACADEMY TRAFFIC MANAGEMENT: ALTERNATIVE ARRIVAL ALLOWS POSSIBILITY OF ADDITIONAL DROP-OFF AND PICK UP ZONES WITH MORE PREDICTABLE TRAFFIC PATTERNS.



MAST ACADEMY TRAFFIC MANAGEMENT: ALTERNATIVE ARRIVAL ALLOWS POSSIBILITY OF ADDITIONAL DROP-OFF AND PICK UP ZONES WITH MORE PREDICTABLE TRAFFIC PATTERNS.



MAST ACADEMY TRAFFIC MANAGEMENT: ALTERNATIVE ARRIVAL ALLOWS POSSIBILITY OF ADDITIONAL DROP-OFF AND PICK UP ZONES WITH MORE PREDICTABLE TRAFFIC PATTERNS.



PLANNING FOR SPECIAL EVENTS:

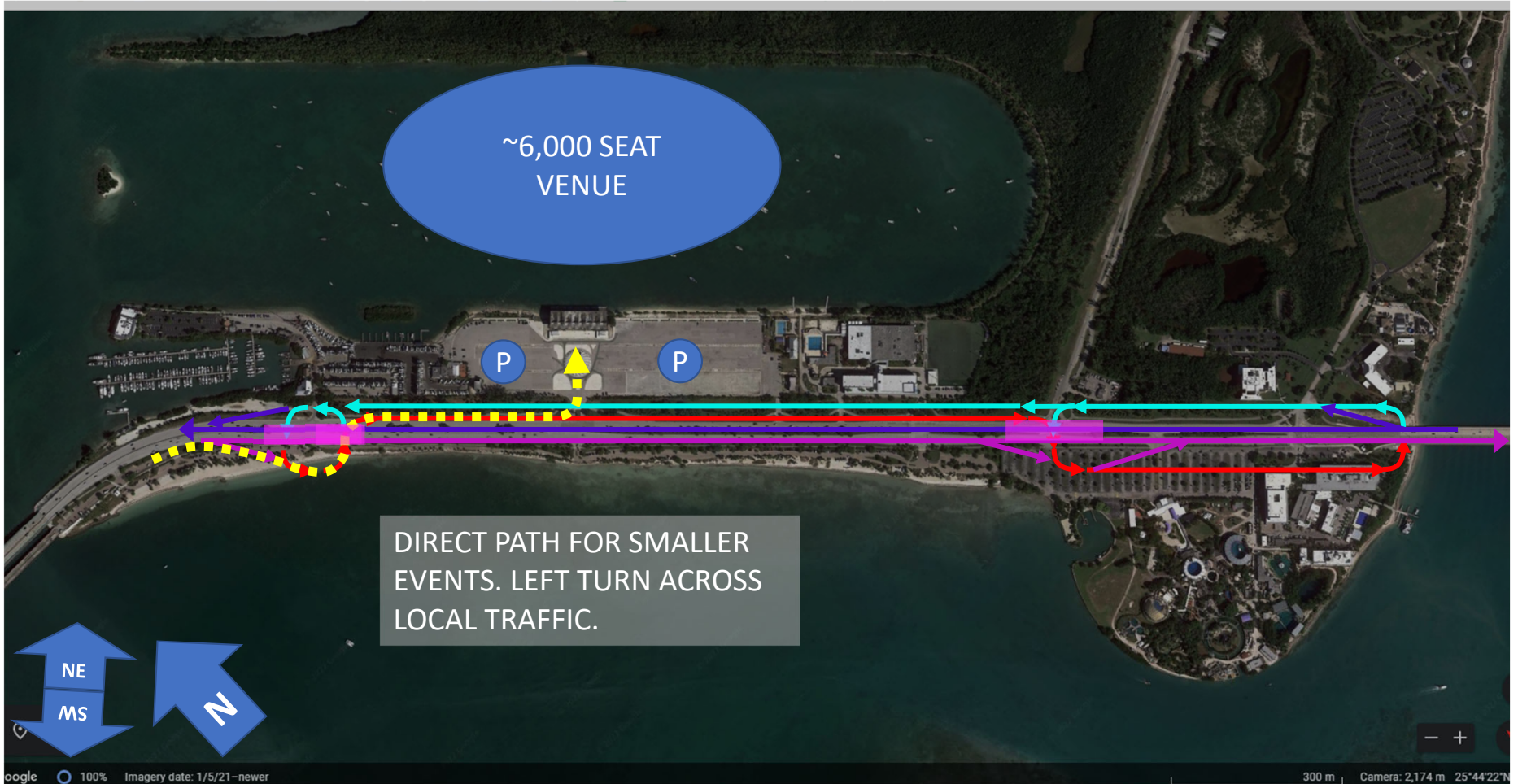


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PLANNING FOR SPECIAL EVENTS: TRAFFIC FLOW AND STACKING



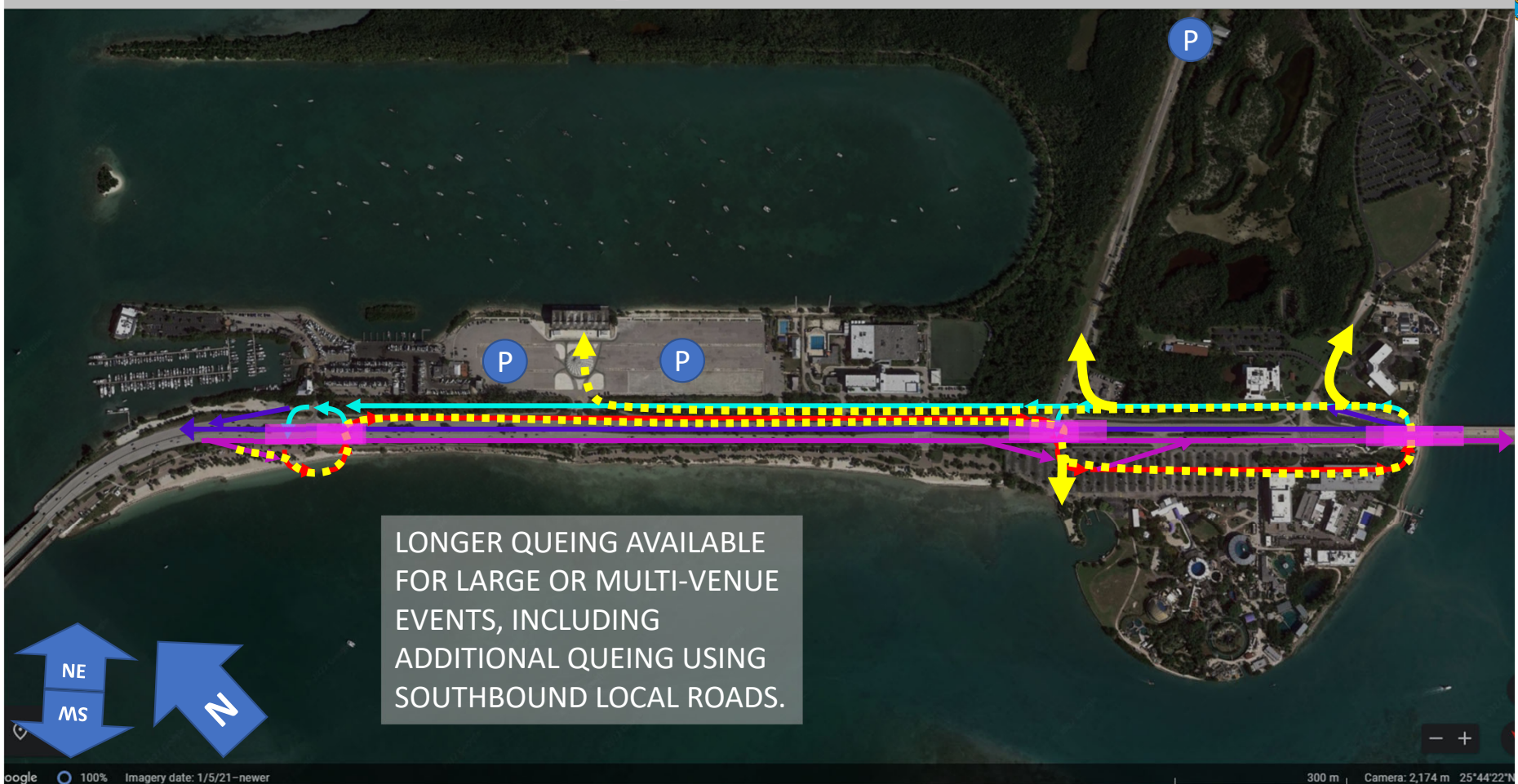
PLANNING FOR SPECIAL EVENTS:



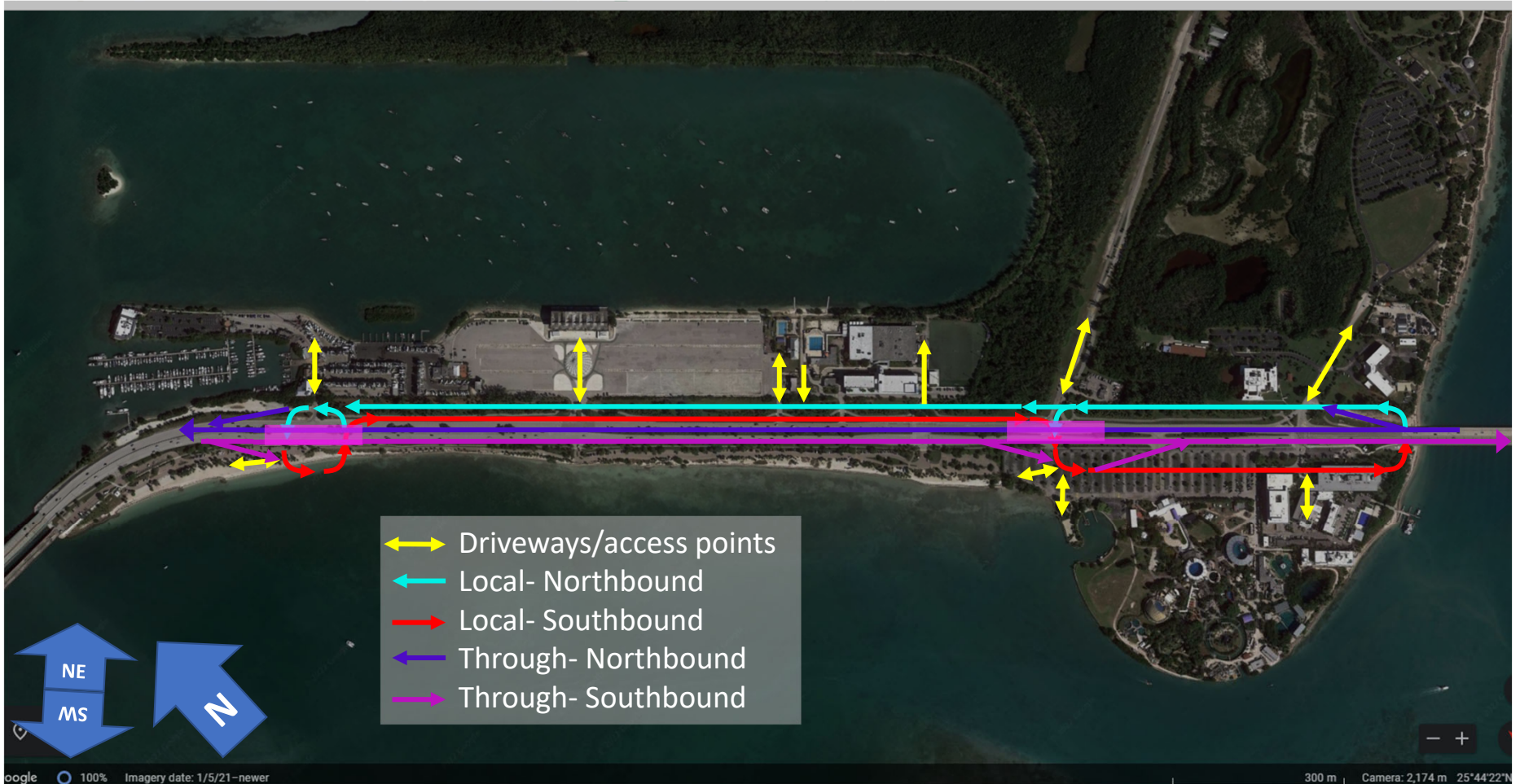
PLANNING FOR SPECIAL EVENTS:



PLANNING FOR SPECIAL EVENTS: OVER 2 MILES OF QUEING FOR MARINE STADIUM



THE OVERALL TRAFFIC CIRCULATION WILL IMPROVE CIRCULATION FOR LOCAL USERS ON TYPICAL DAYS AND DURING SPECIAL EVENTS AND PROVIDE IMPROVED ACCESS TO THE PARKS AND VILLAGE ON KEY BISCAIYNE.





CURRENT AND POTENTIAL TRAFFIC CONFLICT POINTS ON VIRGINIA KEY AND CRANDON MARINA.





CURRENT AND POTENTIAL TRAFFIC CONFLICT POINTS ON VIRGINIA KEY AND CRANDON MARINA.



CRANDON MARINA CREATES PERIODIC TRAFFIC ISSUES RELATED TO BOAT RAMP USE.



CRANDON MARINA CREATES PERIODIC TRAFFIC ISSUES RELATED TO BOAT RAMP USE.



CRANDON MARINA CREATES PERIODIC TRAFFIC ISSUES RELATED TO BOAT RAMP USE AND A CONFLICT POINT.





QUEUING AND STACKING NEEDS TO BE LENGTHY DUE TO THE SLOW NATURE OF BOAT LOADING.



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QUEUING AND STACKING NEEDS TO BE LENGTHY DUE TO THE SLOW NATURE OF BOAT LOADING.



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USE HIGHER BRIDGE TO REROUTE TRAFFIC.

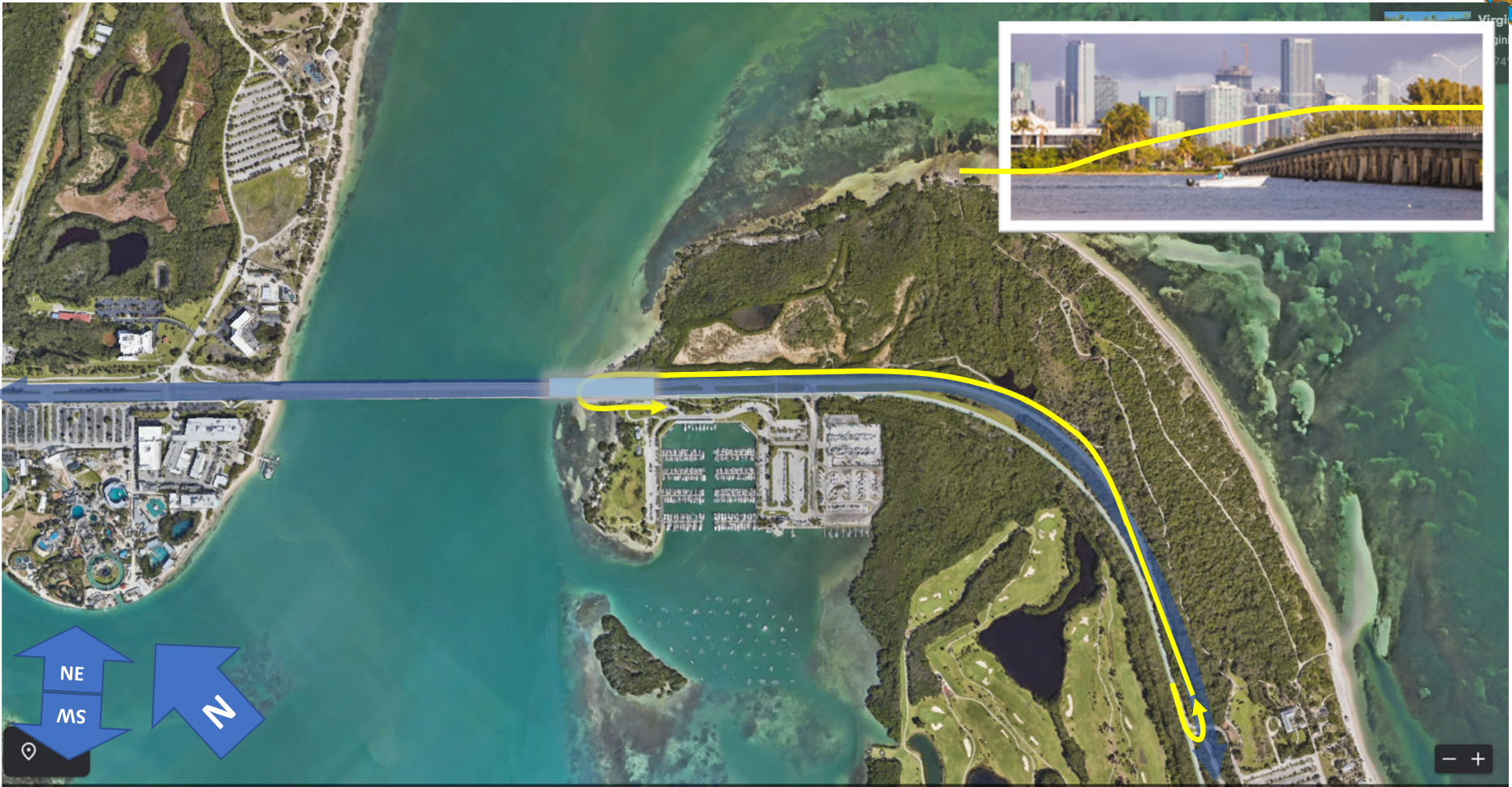


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RESOLVE BY LEFT-TURNING TRAFFIC PASSING BELOW THE BRIDGE ABUTMENT.



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USE SPACE WITHIN THE PROPERTY FOR QUEUING.

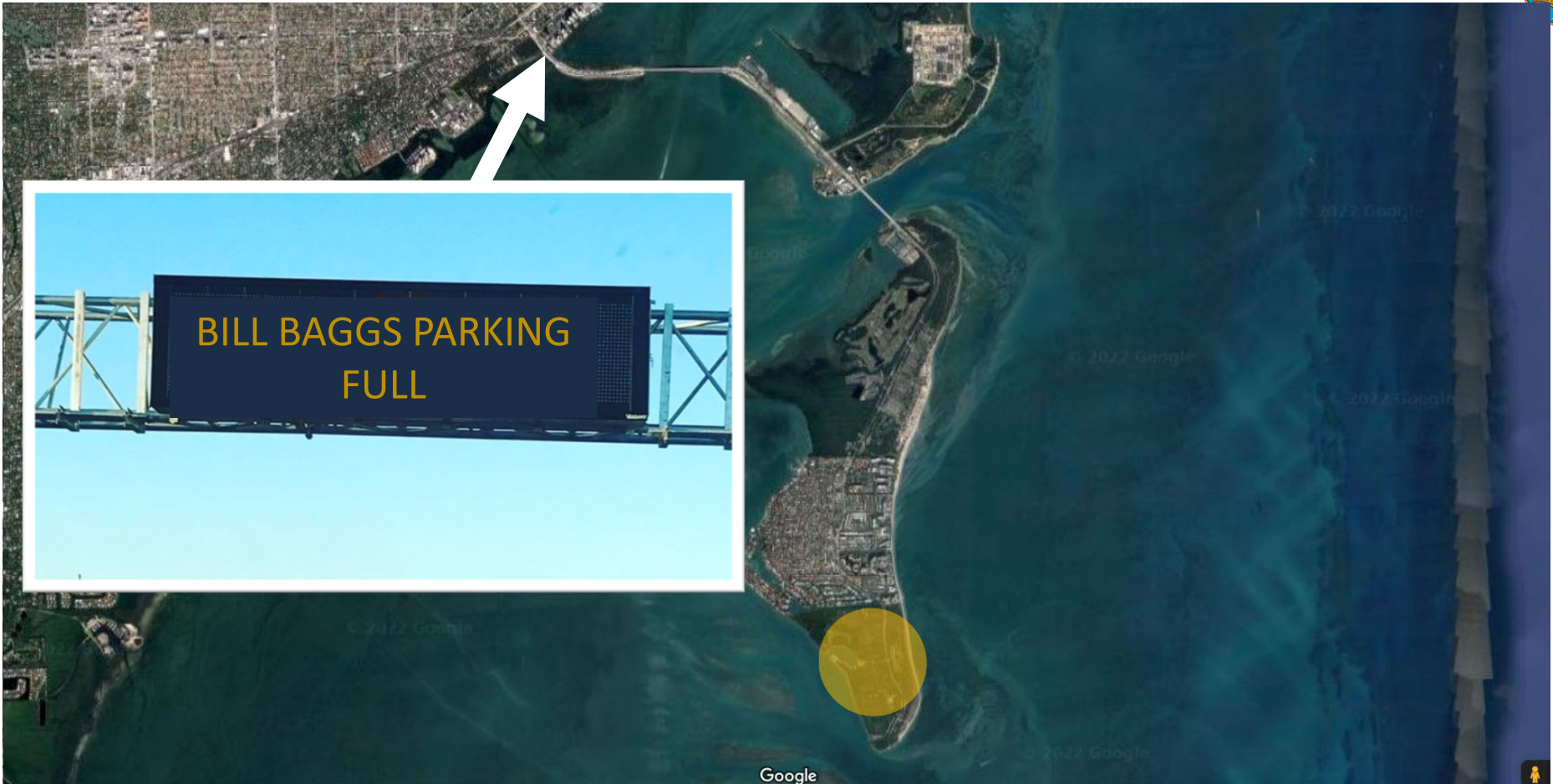


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CREATE INFORMATION SIGN FOR TRAFFIC MANAGEMENT.



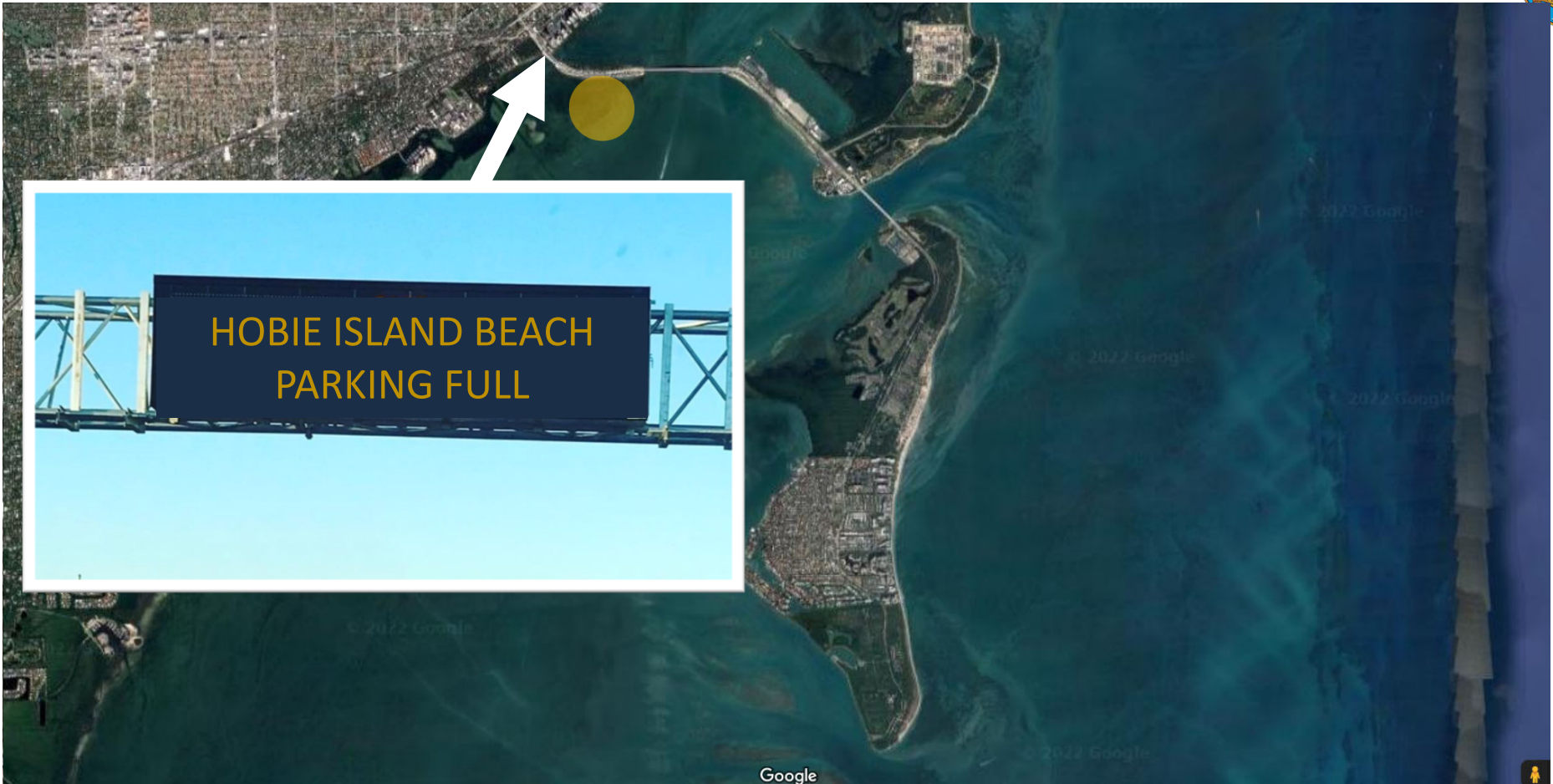
CREATE INFORMATION SIGN FOR TRAFFIC MANAGEMENT.



CREATE INFORMATION SIGN FOR TRAFFIC MANAGEMENT.



CREATE INFORMATION SIGN FOR TRAFFIC MANAGEMENT.





**RICKENBACKER
CAUSEWAY
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Google



THE BIG PICTURE: CONSOLIDATING AND **SEPARATING** BIKE TRAFFIC TO MINIMIZE CONFLICTS

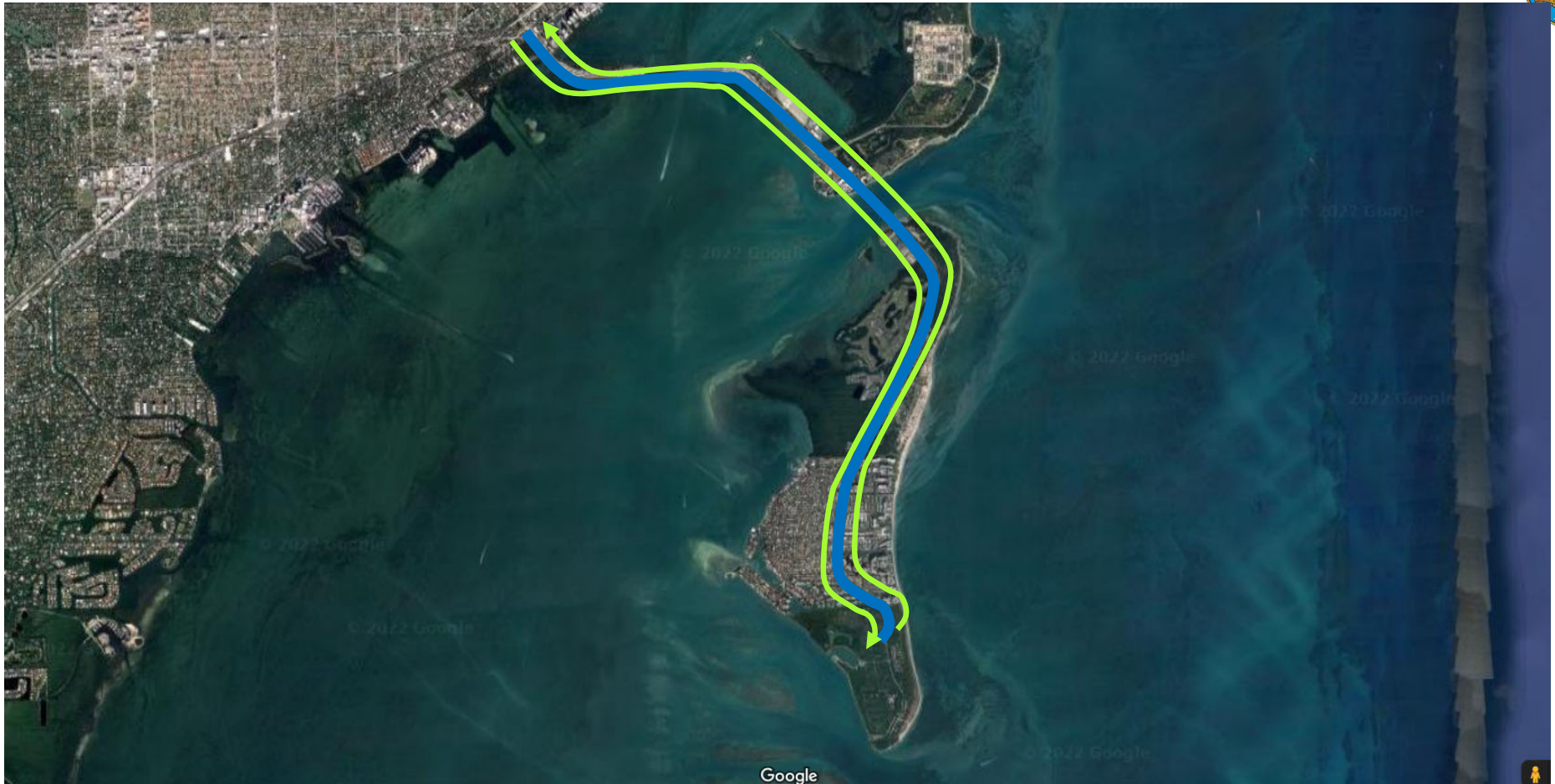




THE BIG PICTURE: CONSOLIDATING AND **SEPARATING** BIKE TRAFFIC TO MINIMIZE CONFLICTS



CURRENTLY, BIKE TRAFFIC IS OUTSIDE AND INTERSECTING ALL AUTOMOBILE TRAFFIC.

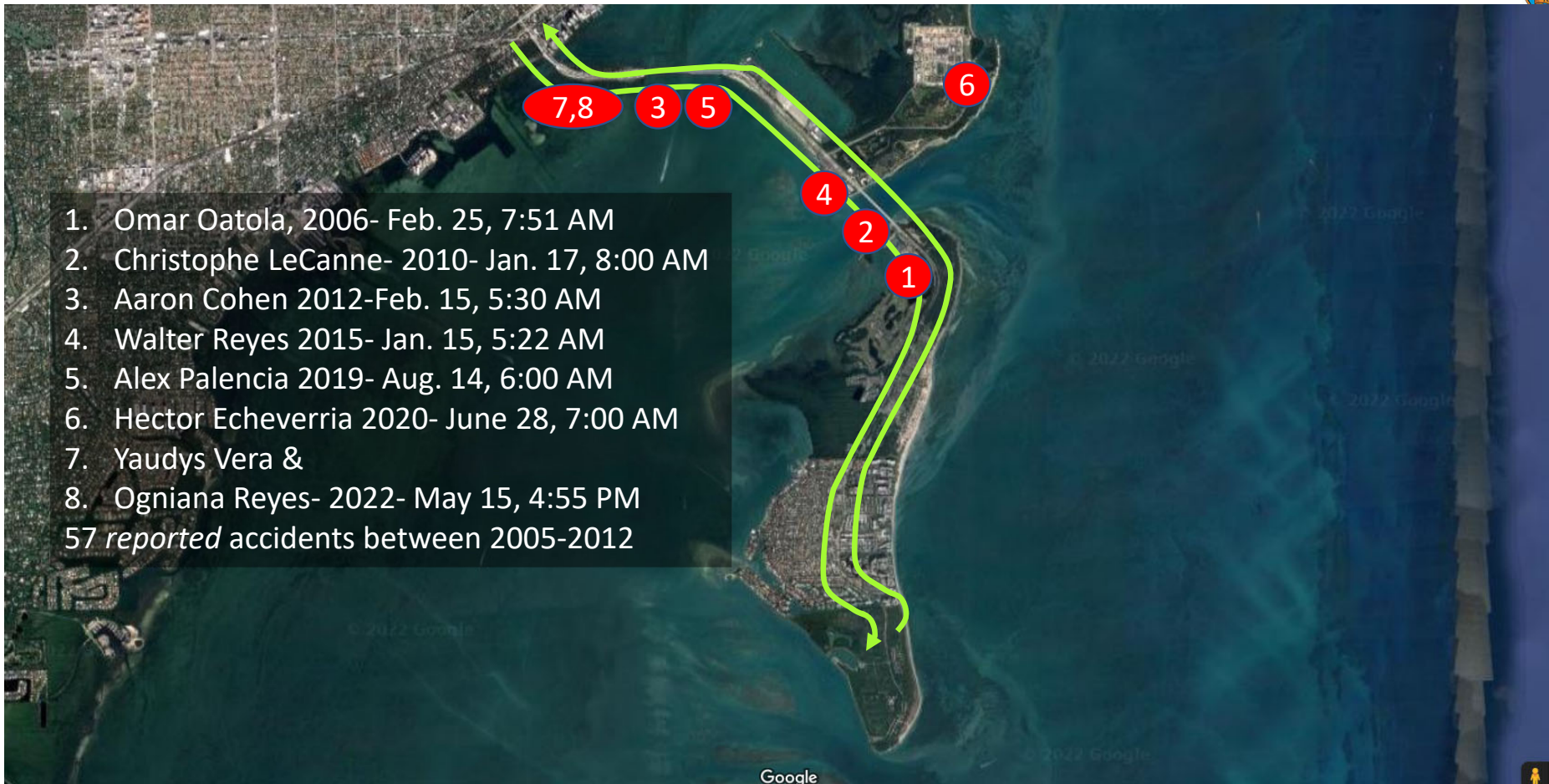


CURRENTLY, BIKE TRAFFIC IS OUTSIDE AND INTERSECTING ALL AUTOMOBILE TRAFFIC, INCLUDING INTERSECTIONS AND CONFLICT POINTS.



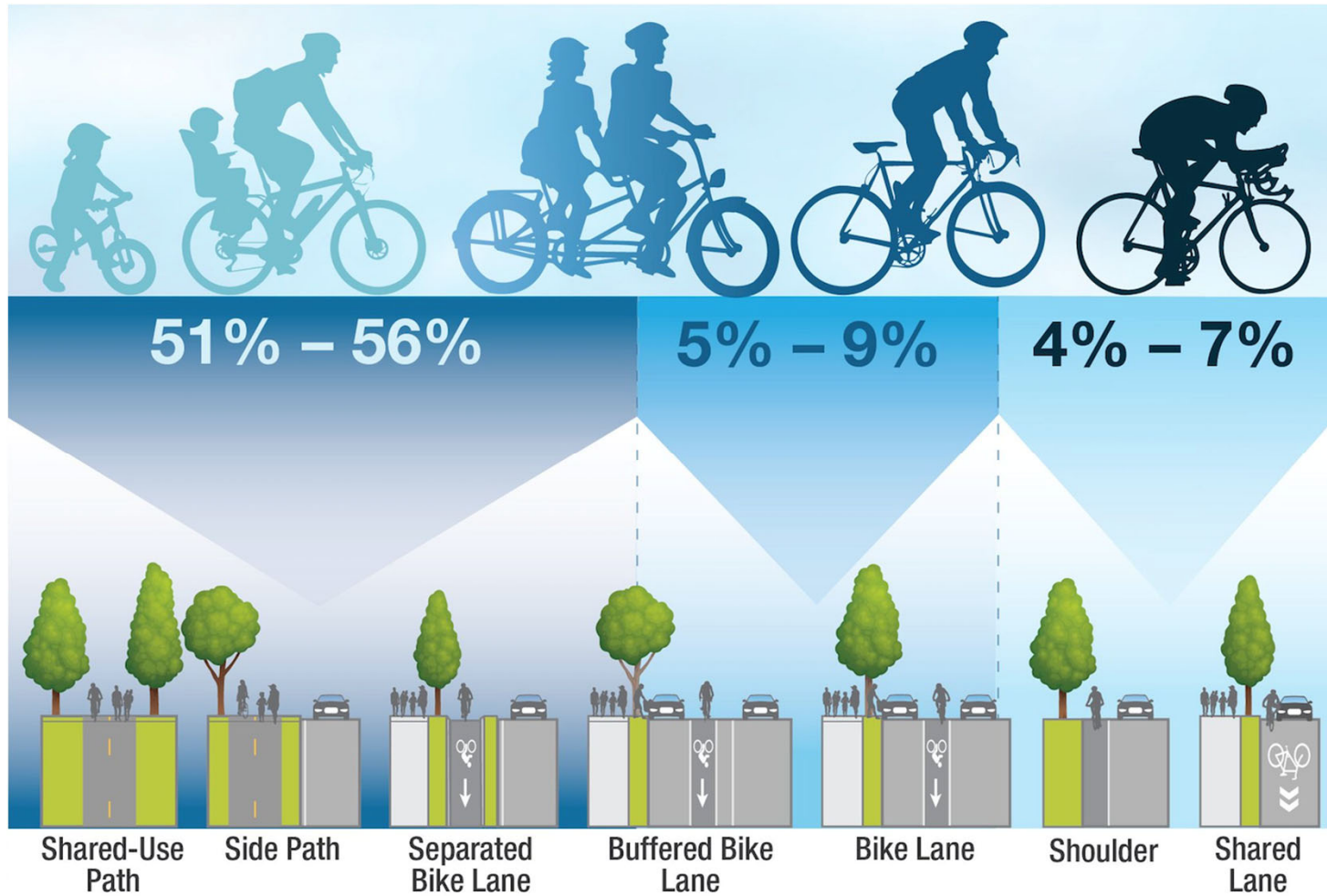


TRAFFIC CONFLICTS HAVE PREDICTABLE RESULTS.



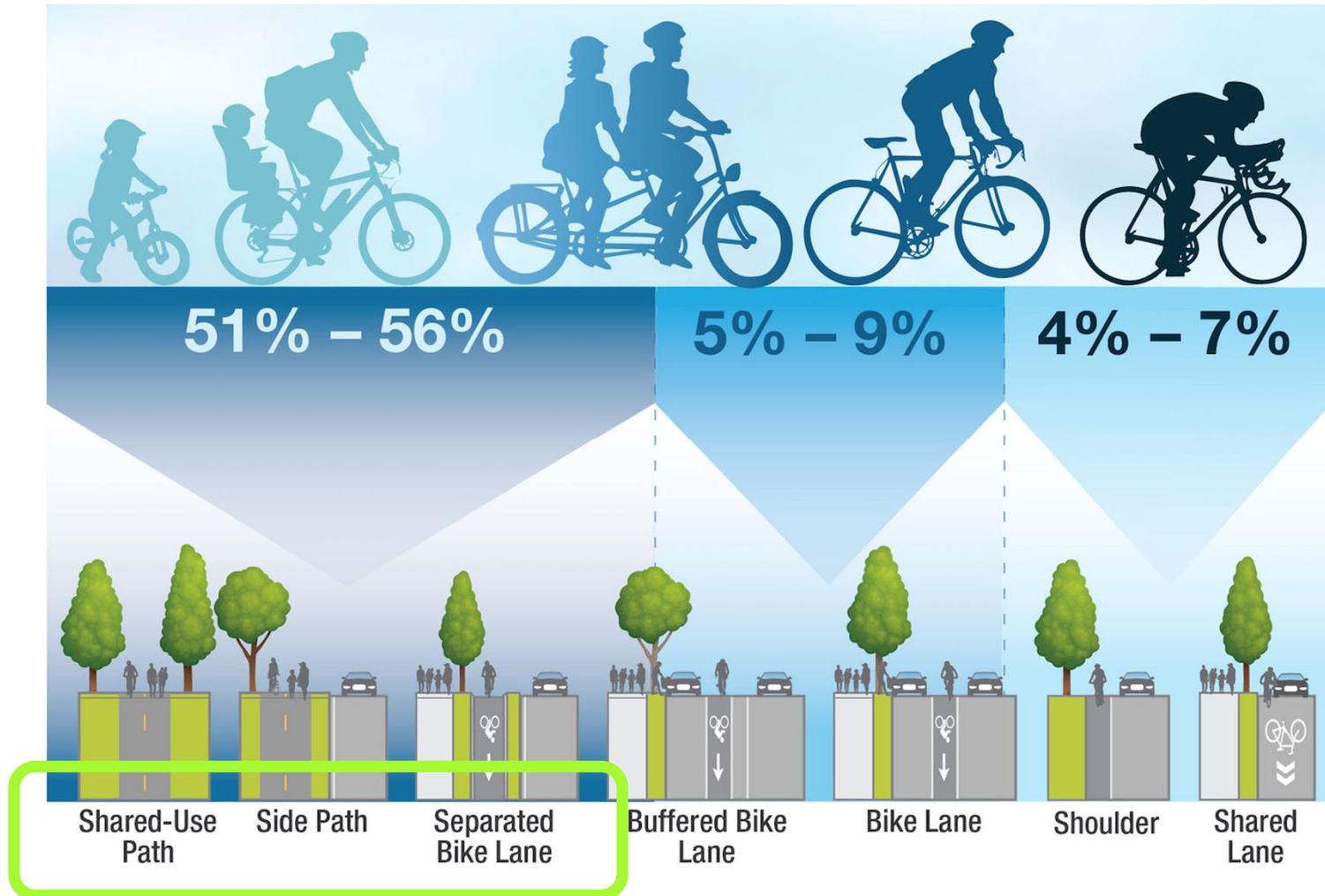


DESIGN CHALLENGES TO ACCOMMODATE MAXIMUM NUMBER OF RIDERS.



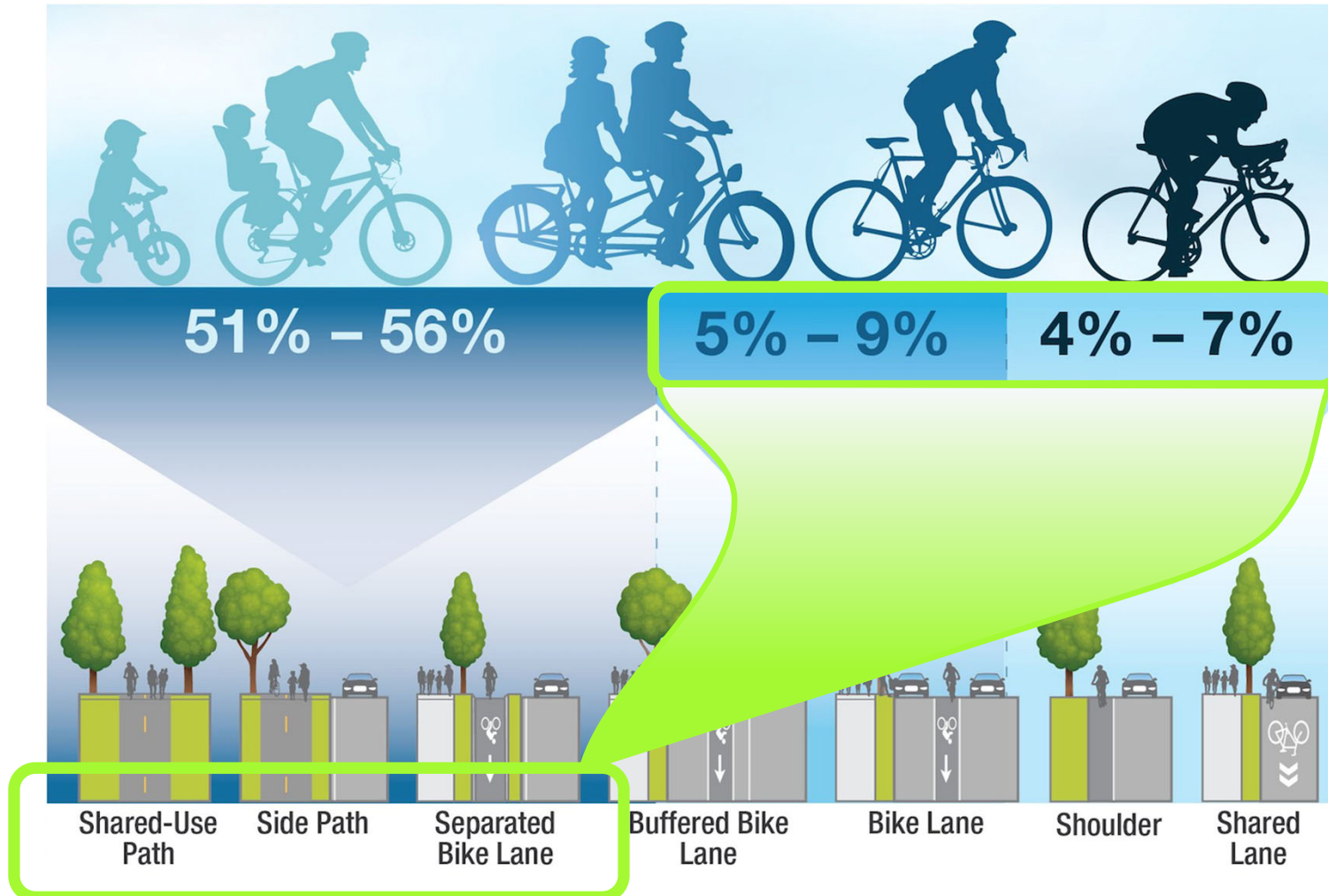


DESIGN CHALLENGES TO ACCOMMODATE MAXIMUM NUMBER OF RIDERS.





DESIGN CHALLENGES TO ACCOMMODATE MAXIMUM NUMBER OF RIDERS.



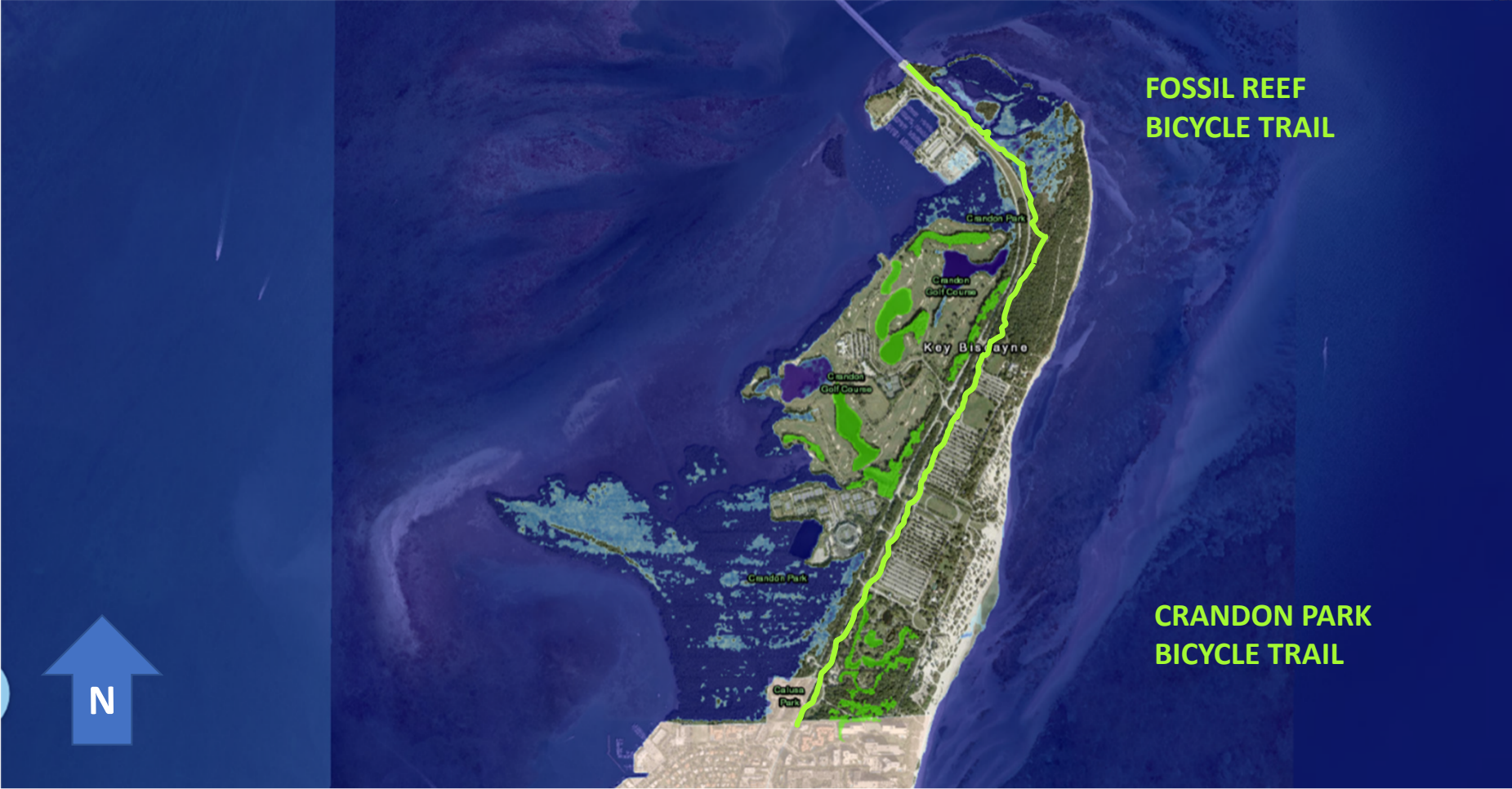
THE BIG PICTURE: CONSOLIDATING AND SEPARATING OFF-ROAD PATHS ON THE EAST OF KEY BISCAYNE AND SOUTHWEST OF VIRGINIA KEY TOWARD MAINLAND.



THE BIG PICTURE: CONSOLIDATING AND SEPARATING BIKE TRAFFIC- UTILIZE AND EXPAND EXISTING PATHS, AVOID WETLANDS, AND AVOID COMMERCIAL DRIVEWAYS BY CREATING AN EAST-SIDE PATH.



THE BIG PICTURE: USE AND EXPAND EXISTING BIKE FACILITIES IN CRANDON ON HIGHER GROUND. EXISTING WETLANDS ARE PRIMARILY LOCATED ON THE WEST SIDE OF THE ISLAND.





THE BIG PICTURE: USE AND EXPAND EXISTING BIKE FACILITIES IN CRANDON ON HIGHER GROUND



THE BIG PICTURE: USE AND EXPAND EXISTING BIKE FACILITIES IN CRANDON ON HIGHER GROUND WHERE MANY ENTRANCES ARE ALREADY BLOCKED.



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THE BIG PICTURE: USE AND EXPAND EXISTING BIKE FACILITIES IN CRANDON ON HIGHER GROUND WHERE MANY ENTRANCES ARE ALREADY BLOCKED.



THE BIG PICTURE: USE AND EXPAND EXISTING BIKE FACILITIES IN CRANDON ON HIGHER GROUND





THIS WILL REQUIRE ELIMINATING SHARP TURNS AND WIDENING PATHS



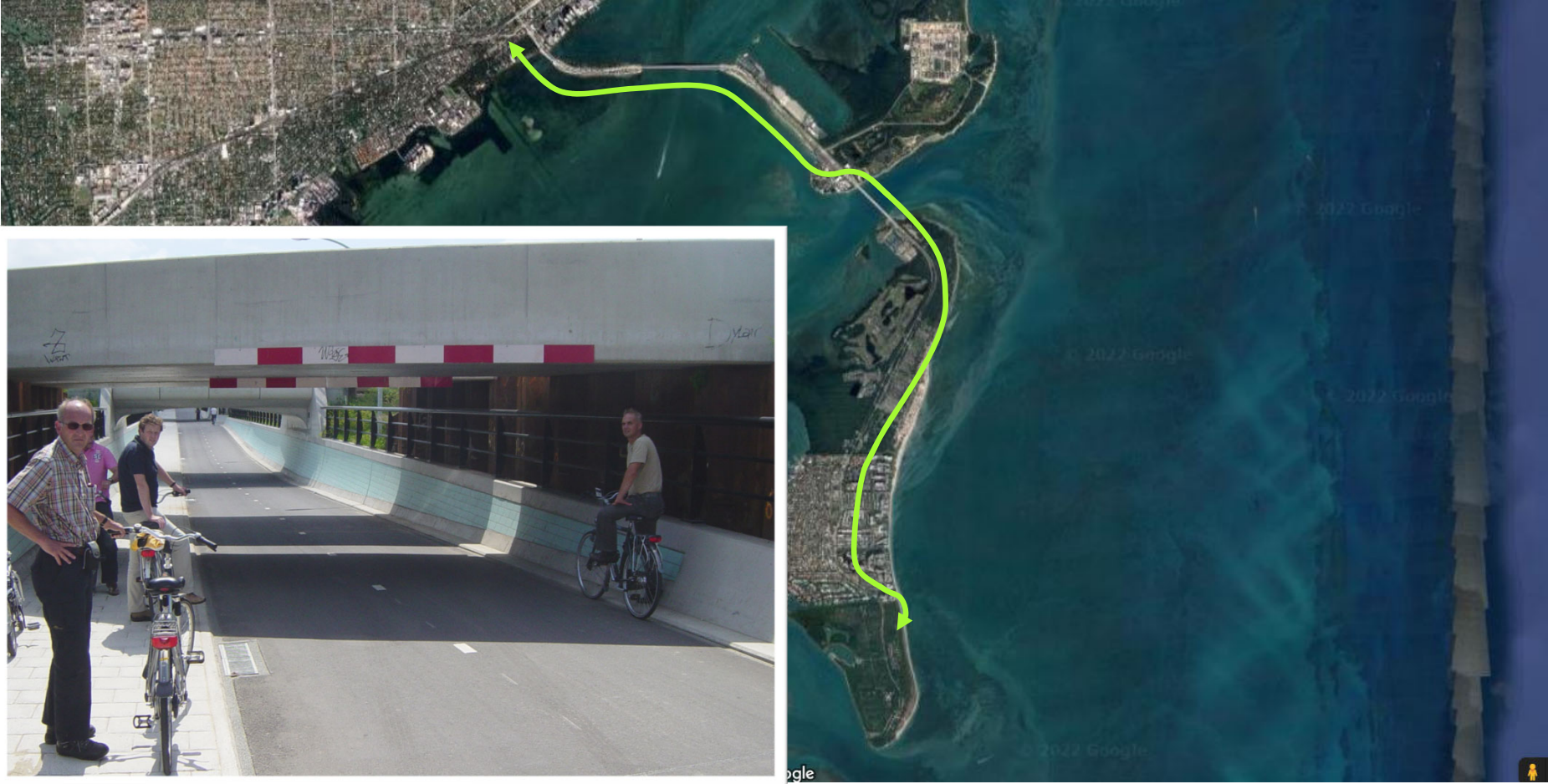


THE BIG PICTURE: USE AND EXPAND EXISTING BIKE FACILITIES IN CRANDON ON HIGHER GROUND





THE BIG PICTURE: CONSOLIDATING AND SEPARATING BIKE TRAFFIC- 2 SOLUTIONS, CONNECT VIA UNDERPASS





THE BIG PICTURE: CONSOLIDATING AND SEPARATING BIKE TRAFFIC

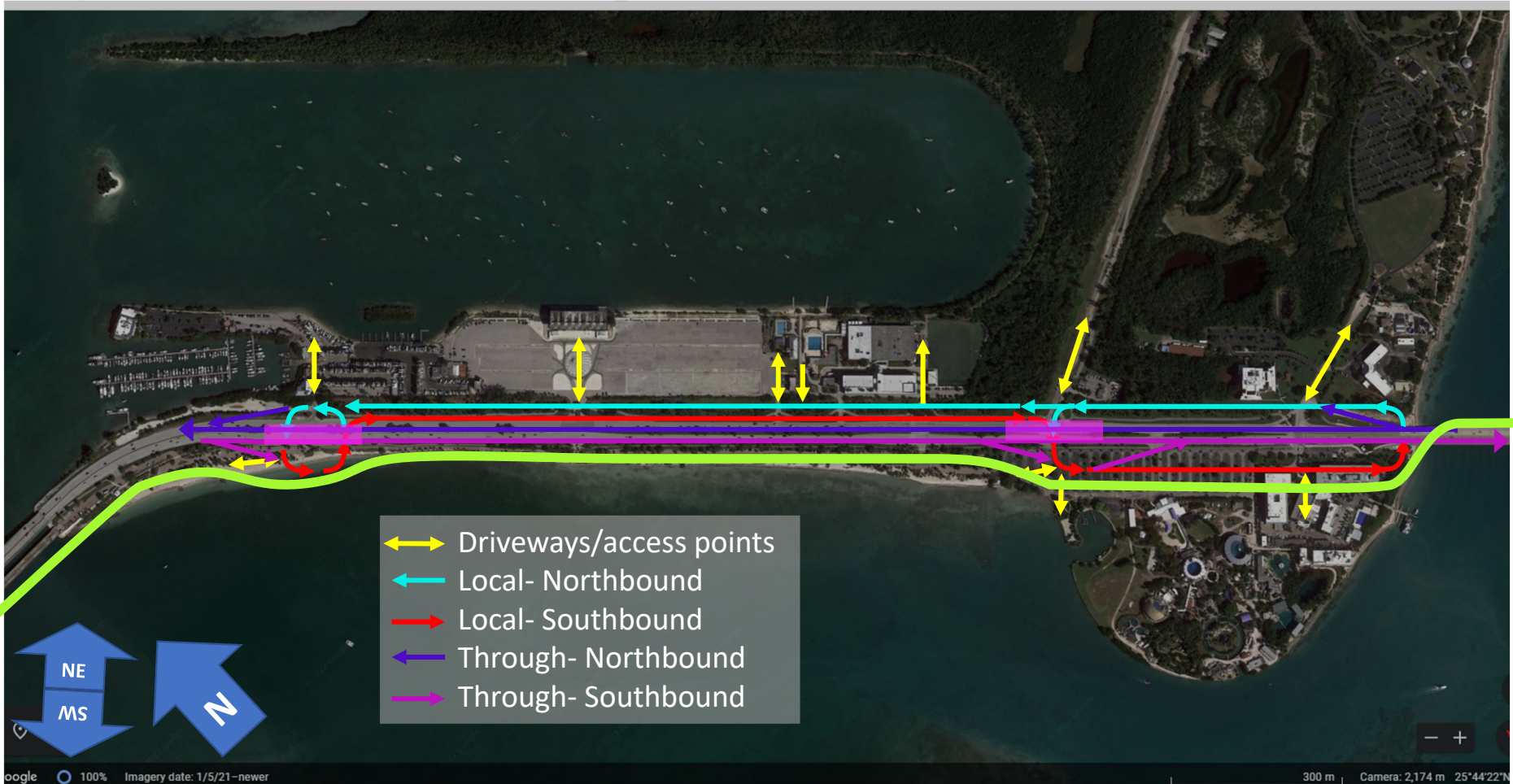




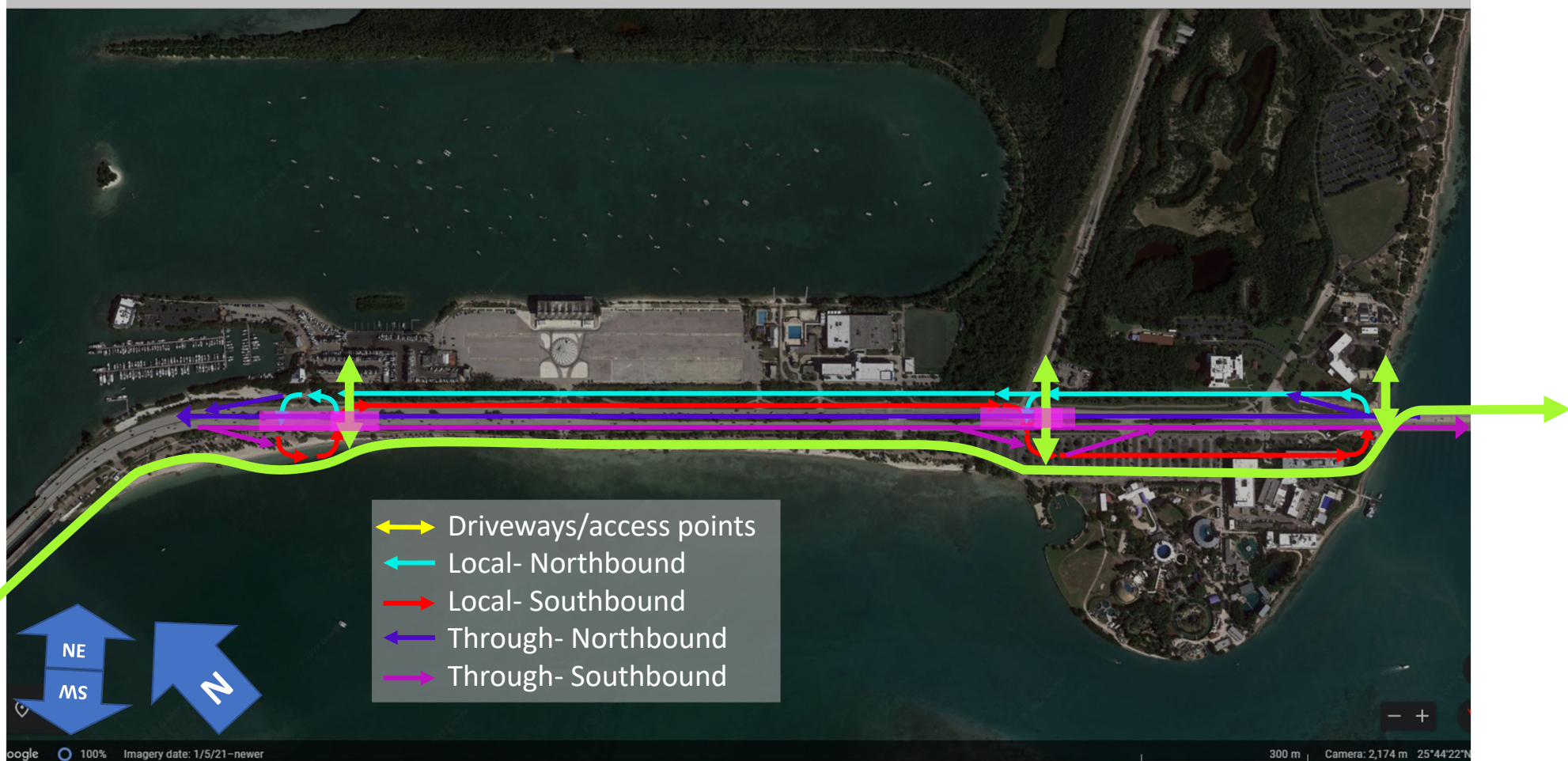
THE BIG PICTURE: CONSOLIDATING AND SEPARATING BIKE TRAFFIC



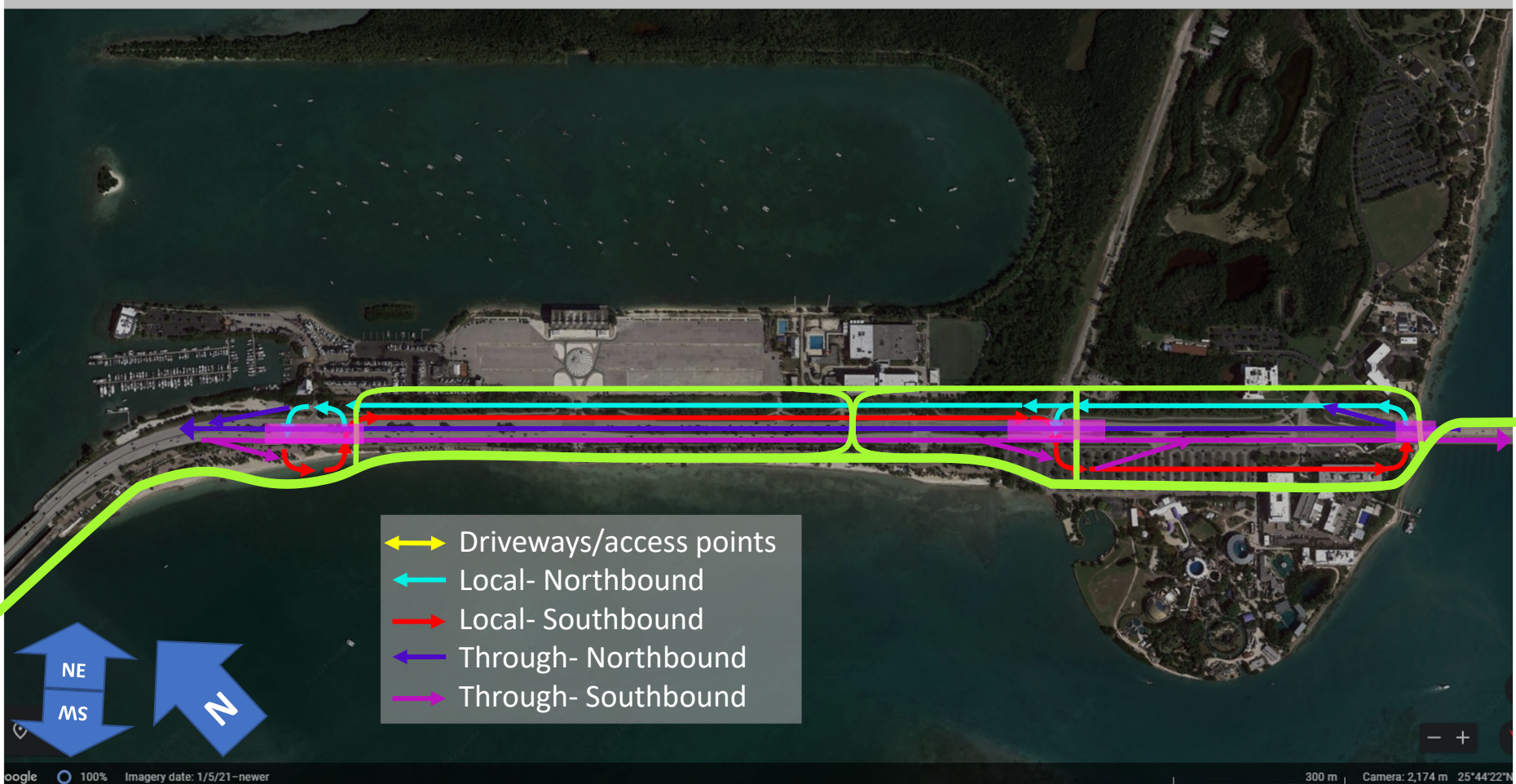
BIKE ROUTE HAS NO CONFLICTS WITH HIGH-SPEED VEHICLE TRAFFIC.



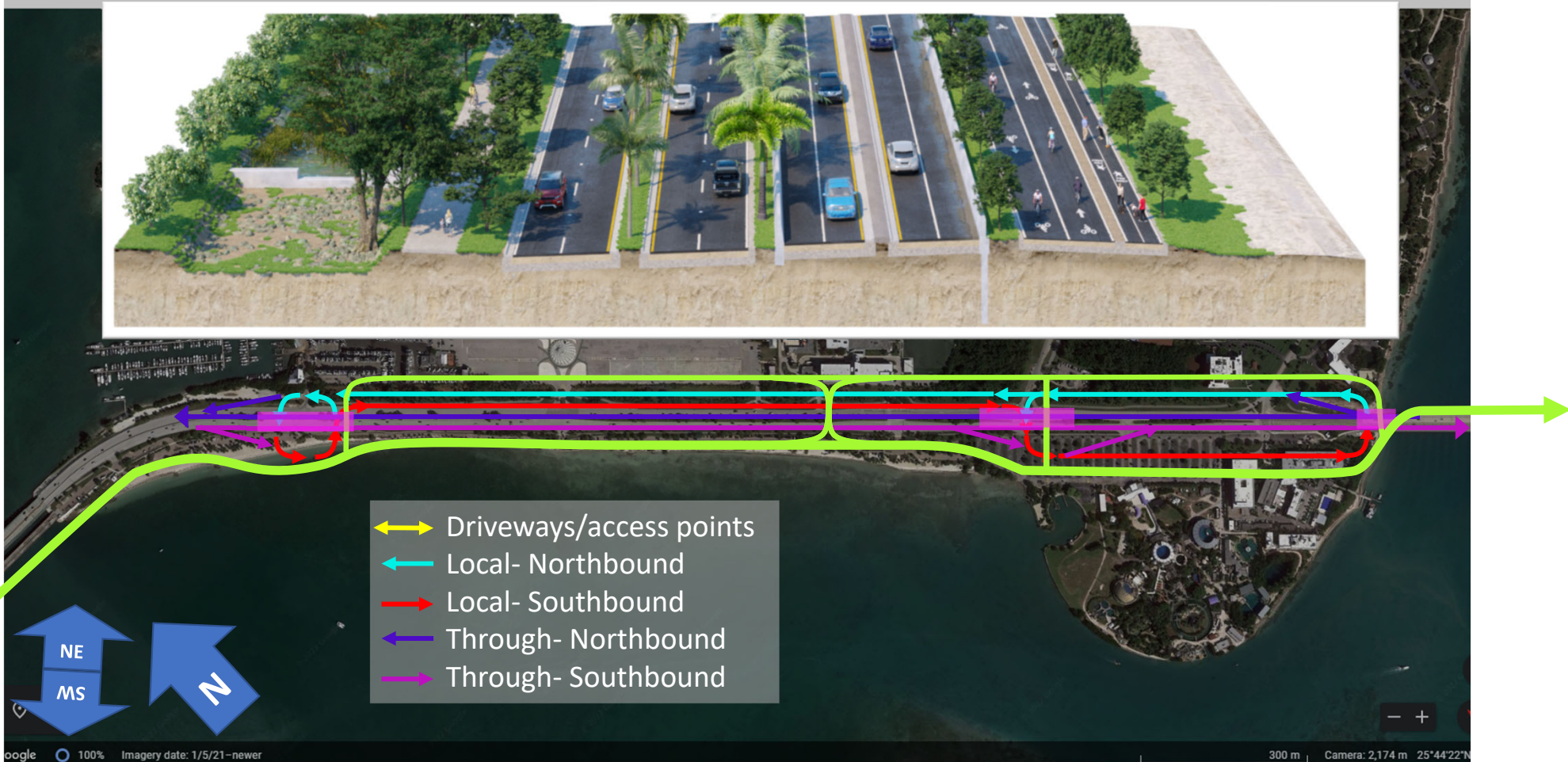
ALL BICYCLE ACCESS TO NE SIDE OF VIRGINIA KEY IS CLEAR OR ONLY CROSSING NARROW, LOW-SPEED INTERSECTIONS.



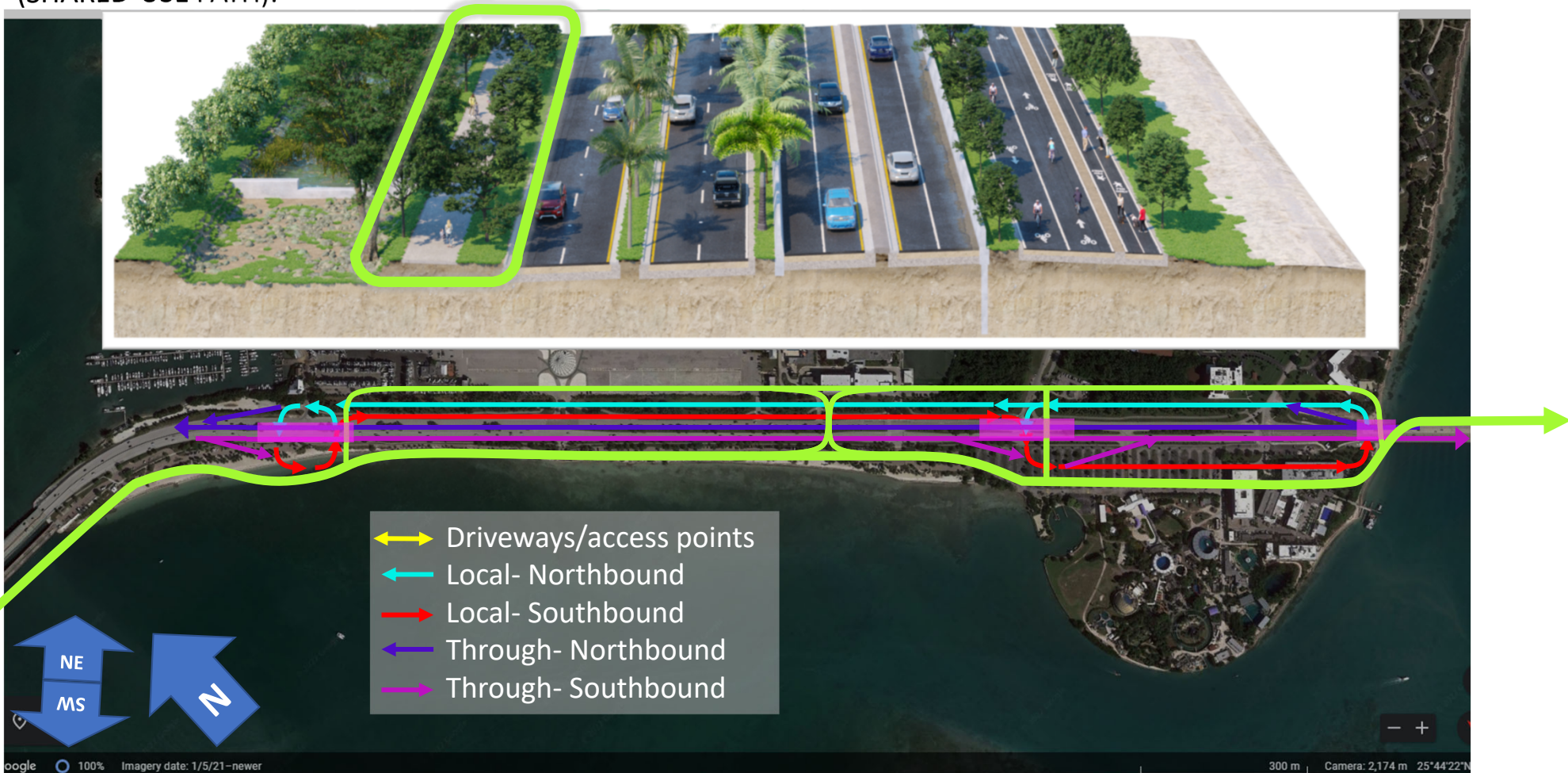
MAINTAIN A LOWER SPEED, LOCAL ACCESS PEDESTRIAN AND BIKE PATHS ON THE NE SIDE OF THE ISLAND, (SHARED-USE PATH).



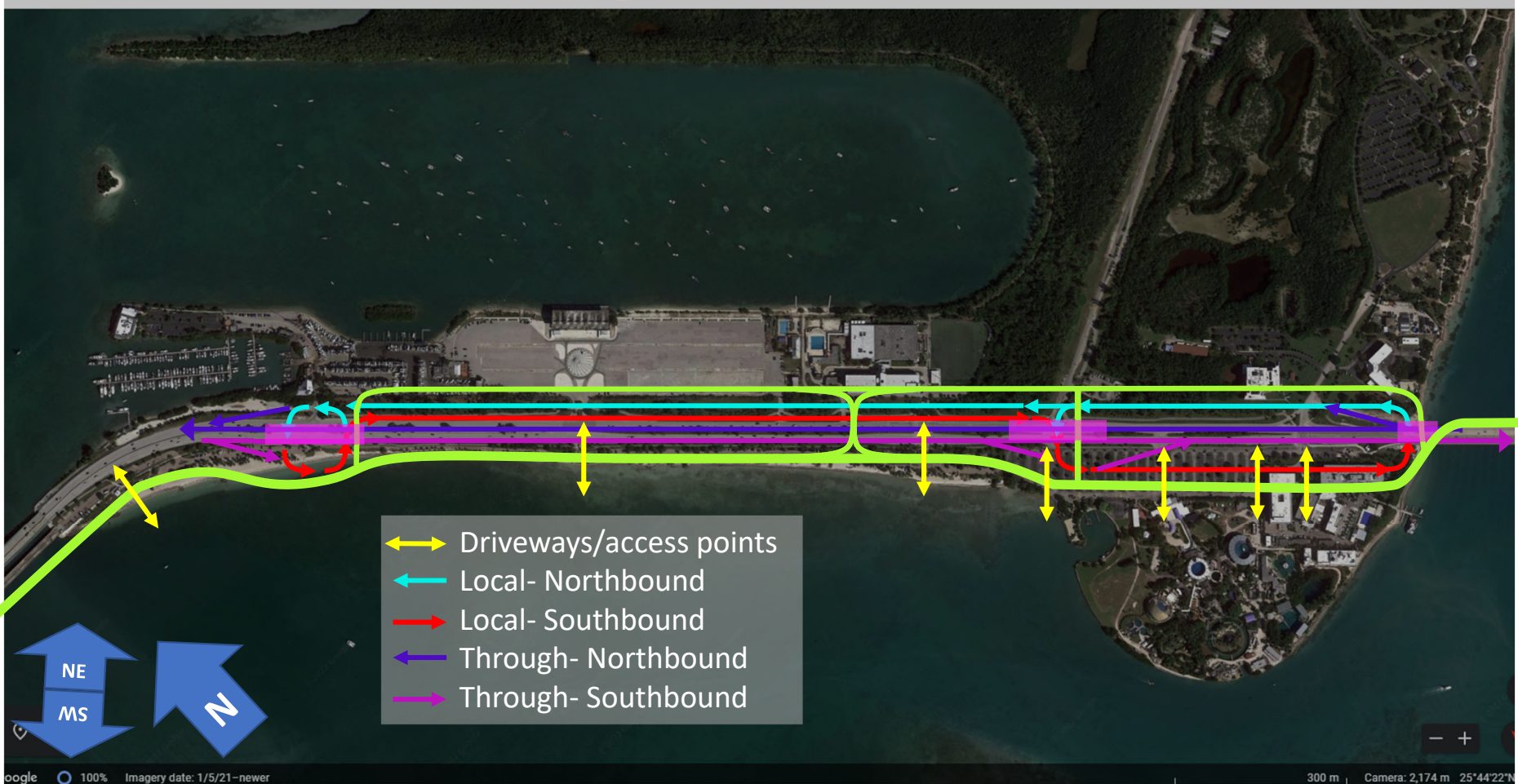
MAINTAIN A LOWER SPEED, LOCAL ACCESS PEDESTRIAN AND BIKE PATHS ON THE NE SIDE OF THE ISLAND, (SHARED-USE PATH).



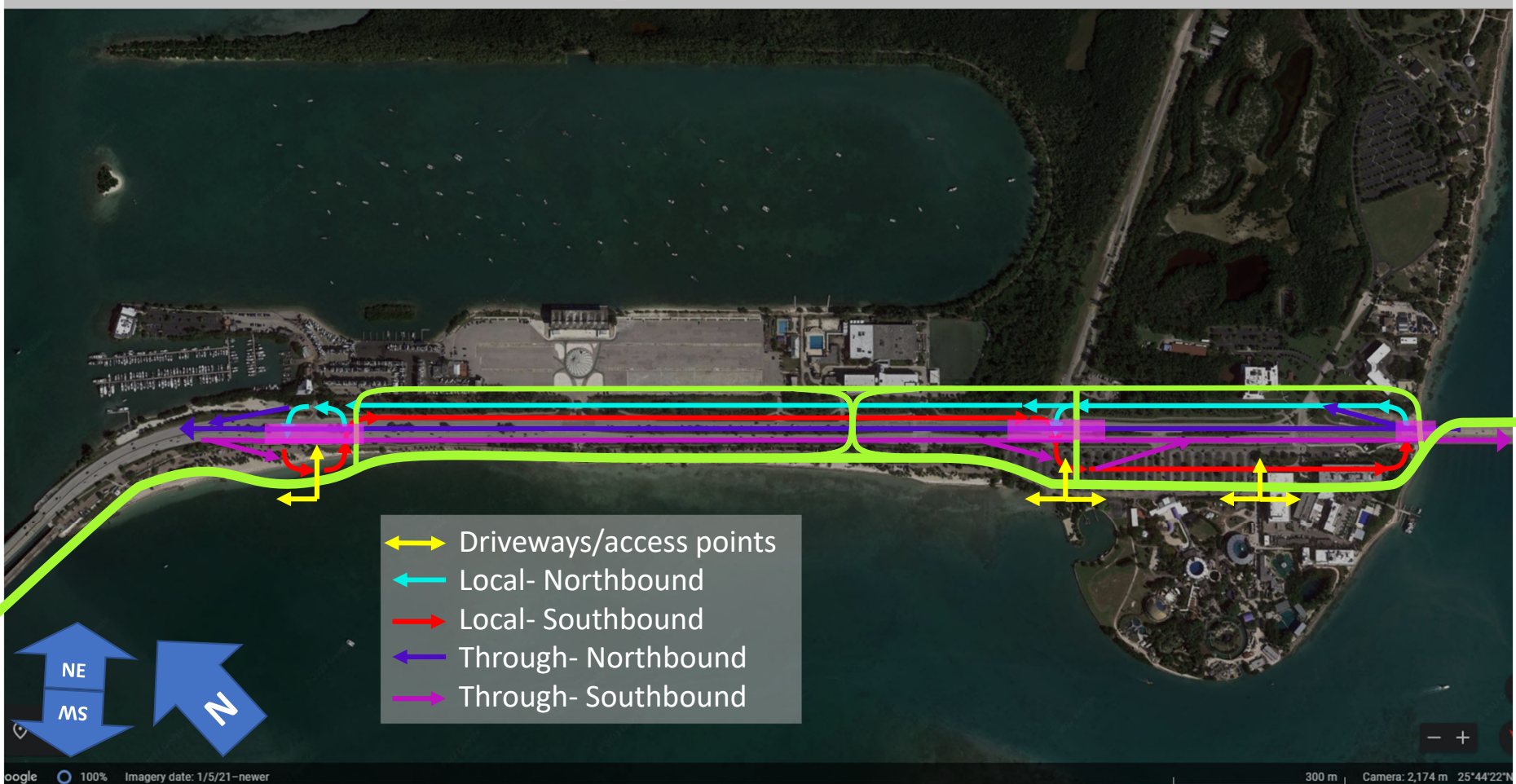
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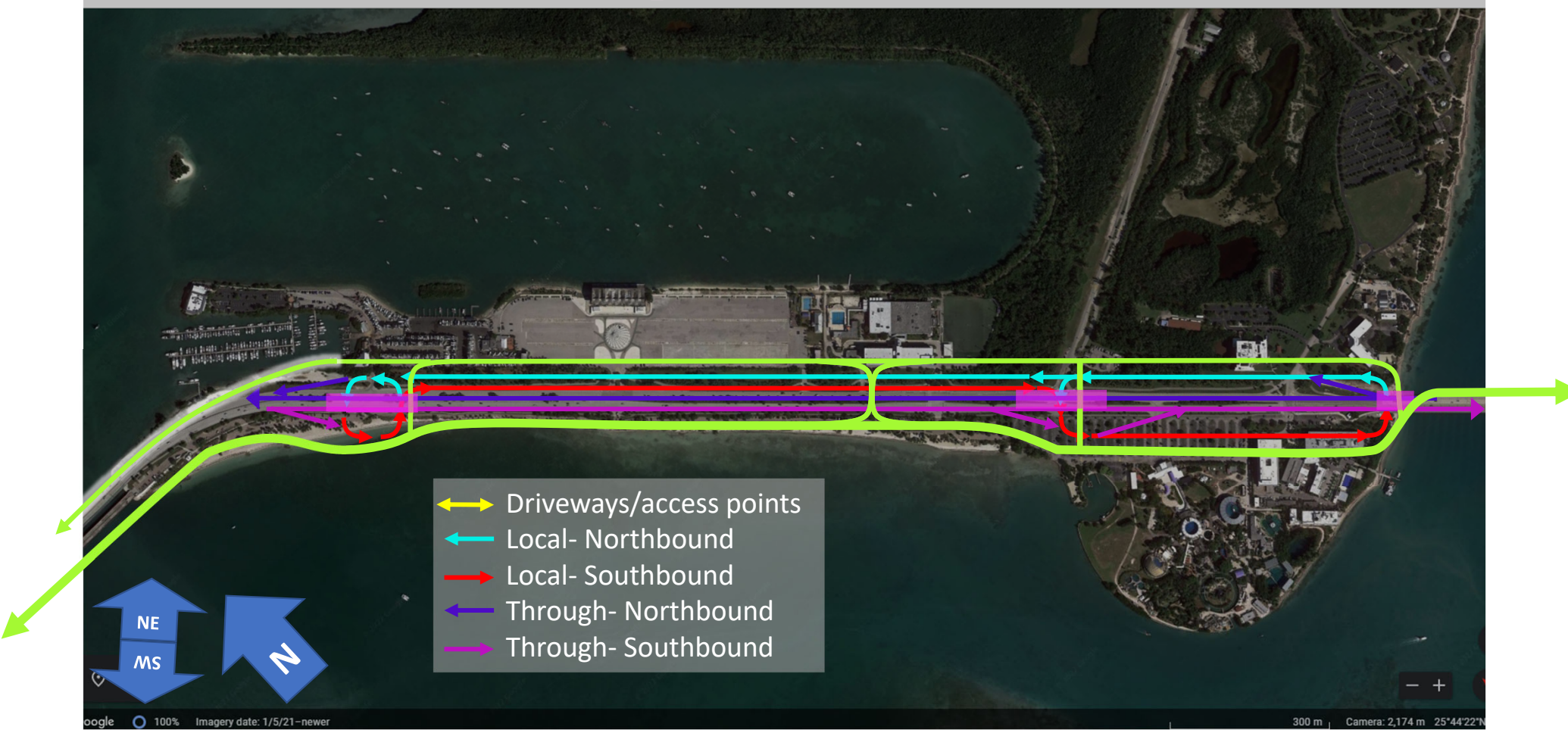
CONSOLIDATE ACCESS POINTS AS MUCH AS POSSIBLE TO LIMIT CONFLICTS. 7 EXISTING CONFLICT POINTS.



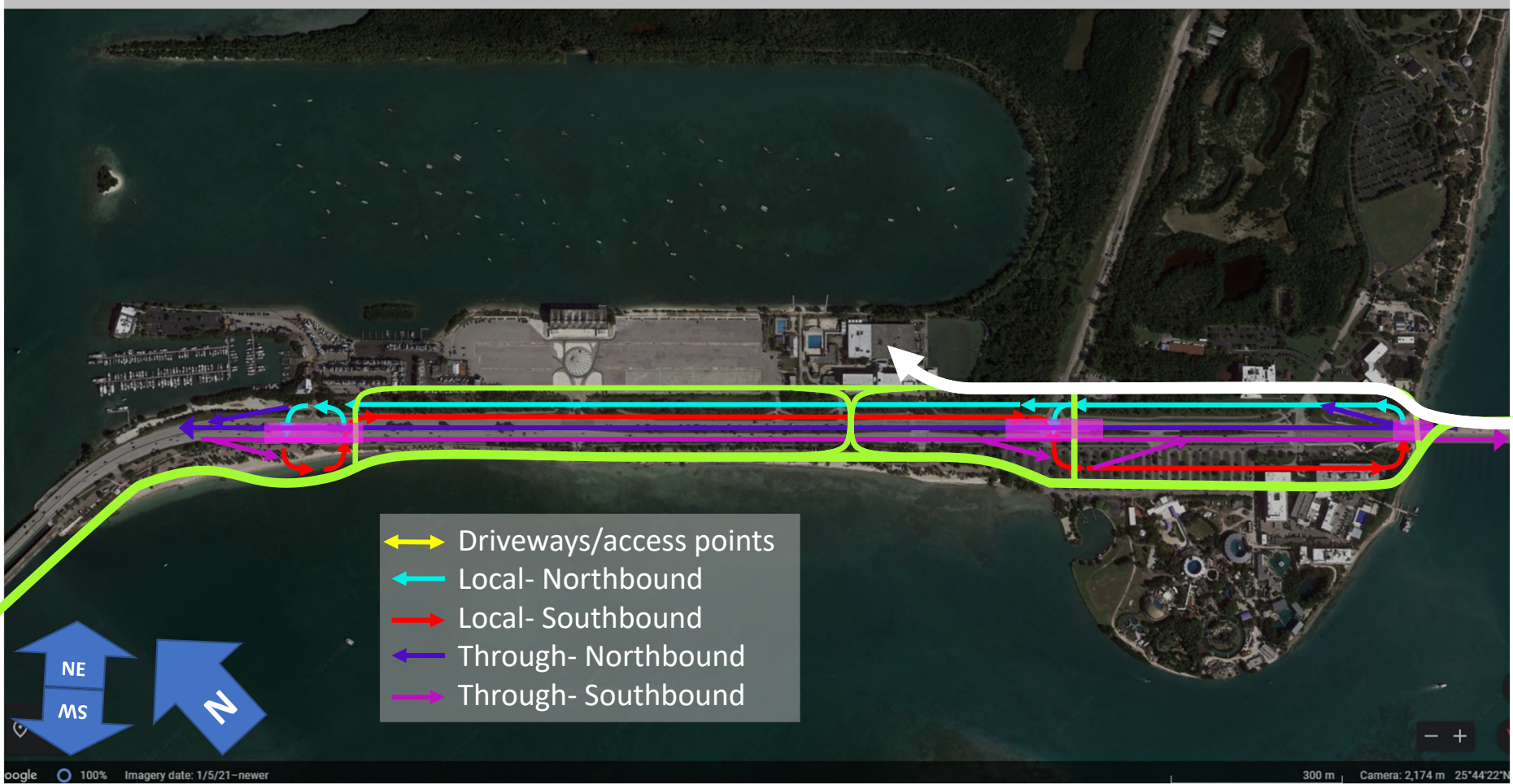
CONSOLIDATE ACCESS POINTS AS MUCH AS POSSIBLE TO LIMIT CONFLICTS. 3 PROPOSED CONFLICT POINTS.



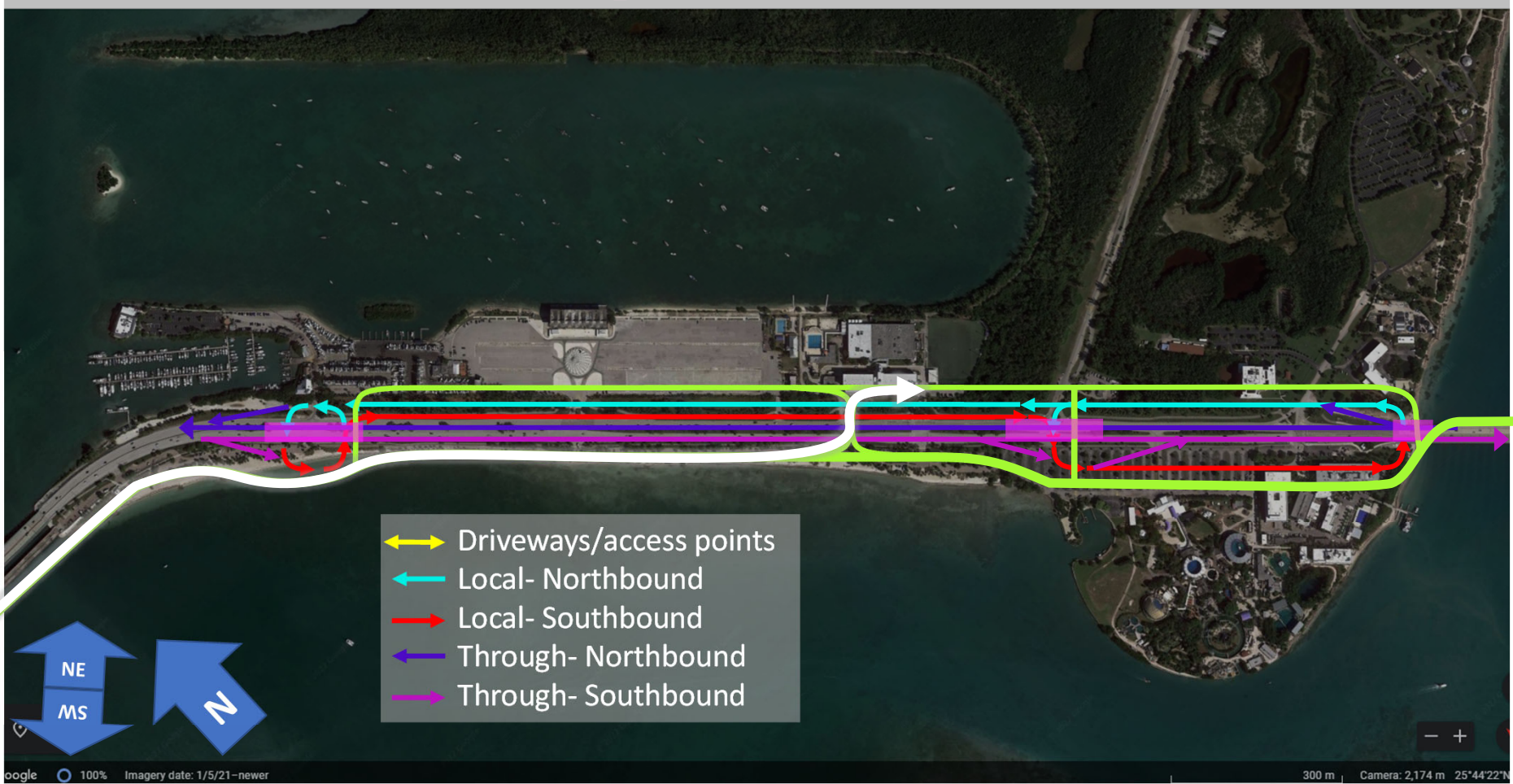
THIS NETWORK TIES INTO THE EXISTING WILLIAM POWELL BIKE LANES TO PROVIDE A POSSIBLE PHASED APPROACH TO IMPROVEMENTS.



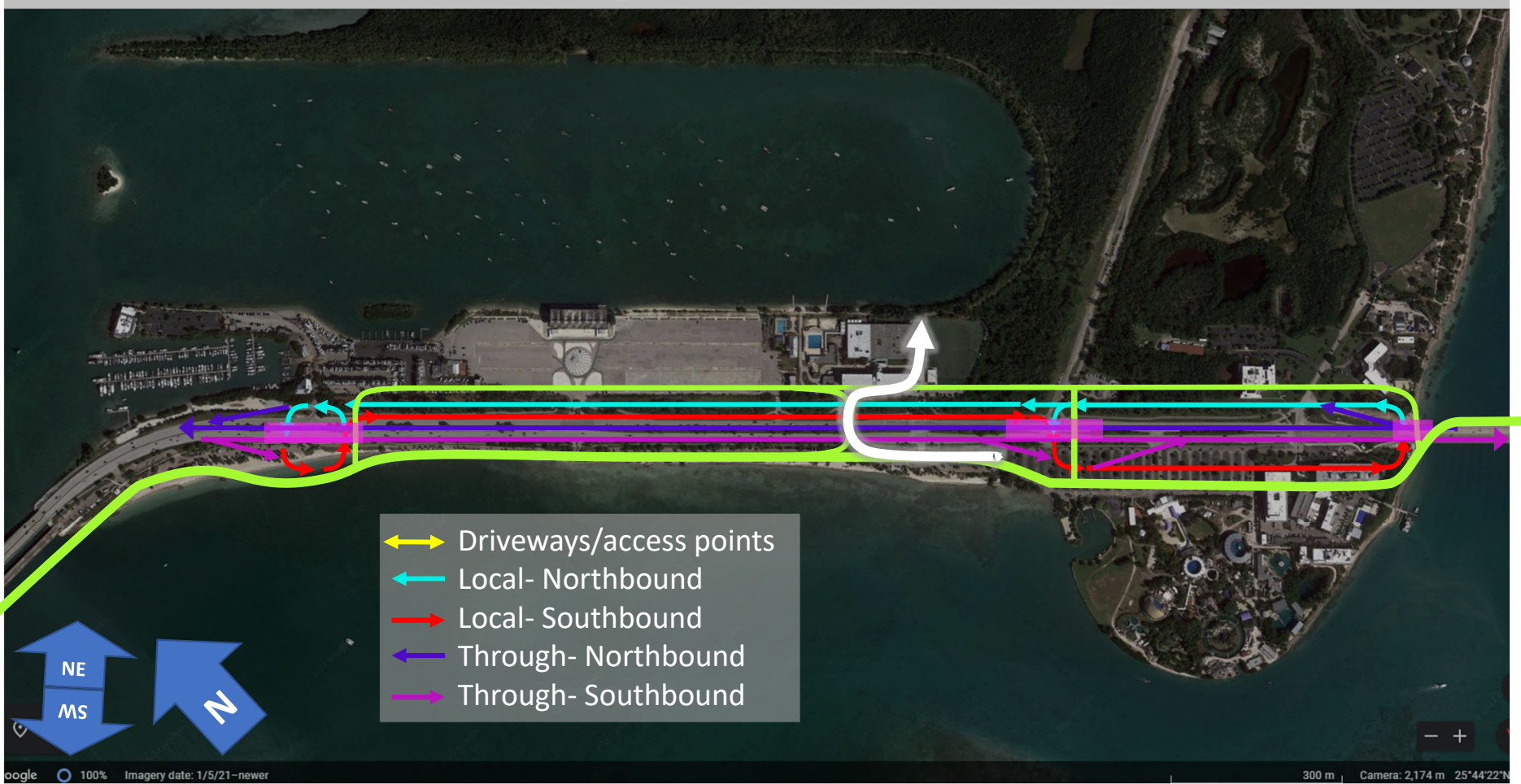
MAST ACCESS: FREE OF CONFLICT IN BOTH DIRECTIONS



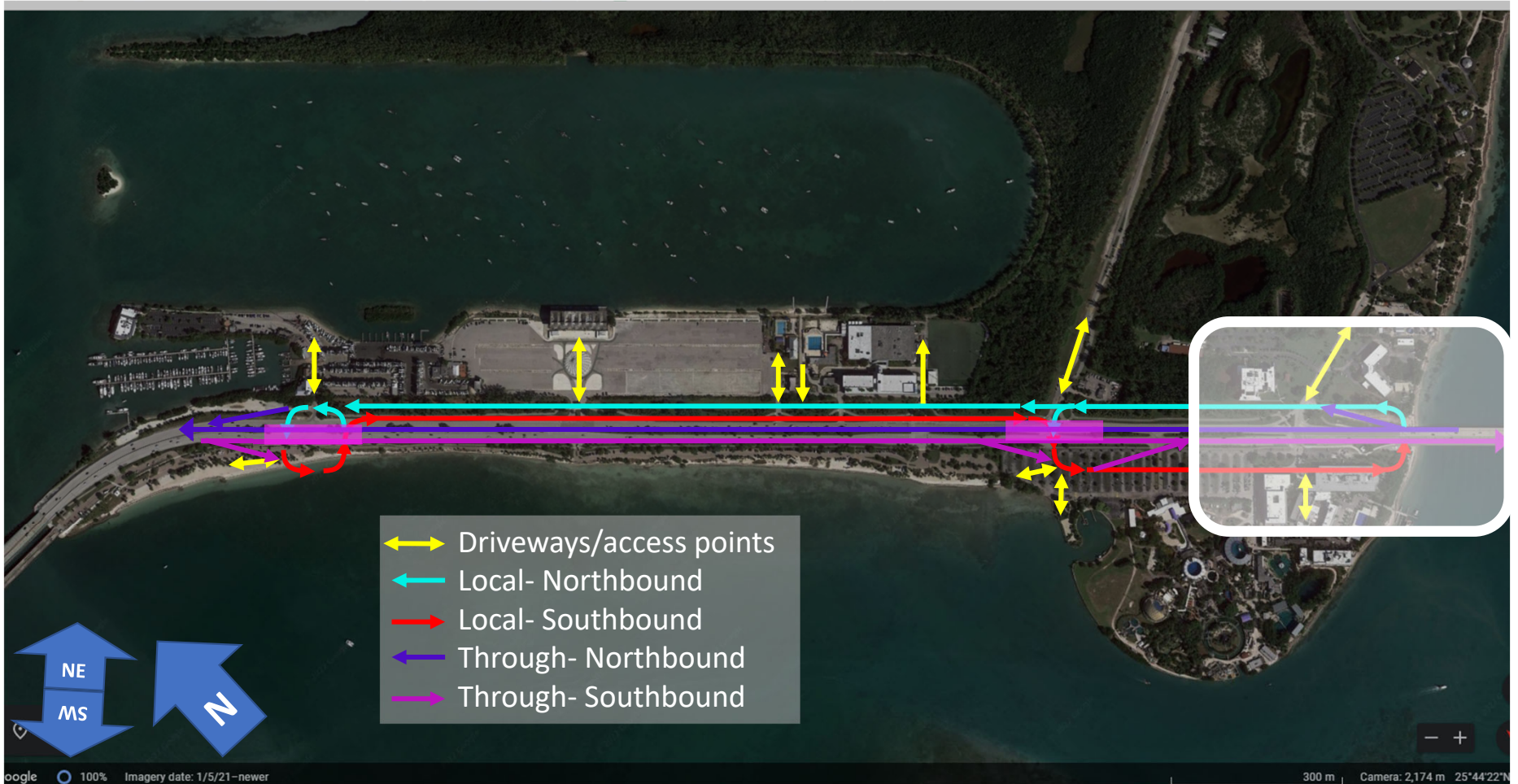
MAST ACCESS: FREE OF CONFLICT IN BOTH DIRECTIONS



MAST ACCESS: FREE OF CONFLICT IN BOTH DIRECTIONS AND FROM BEACH PARKING, (INFORMAL STUDENT PARKING).



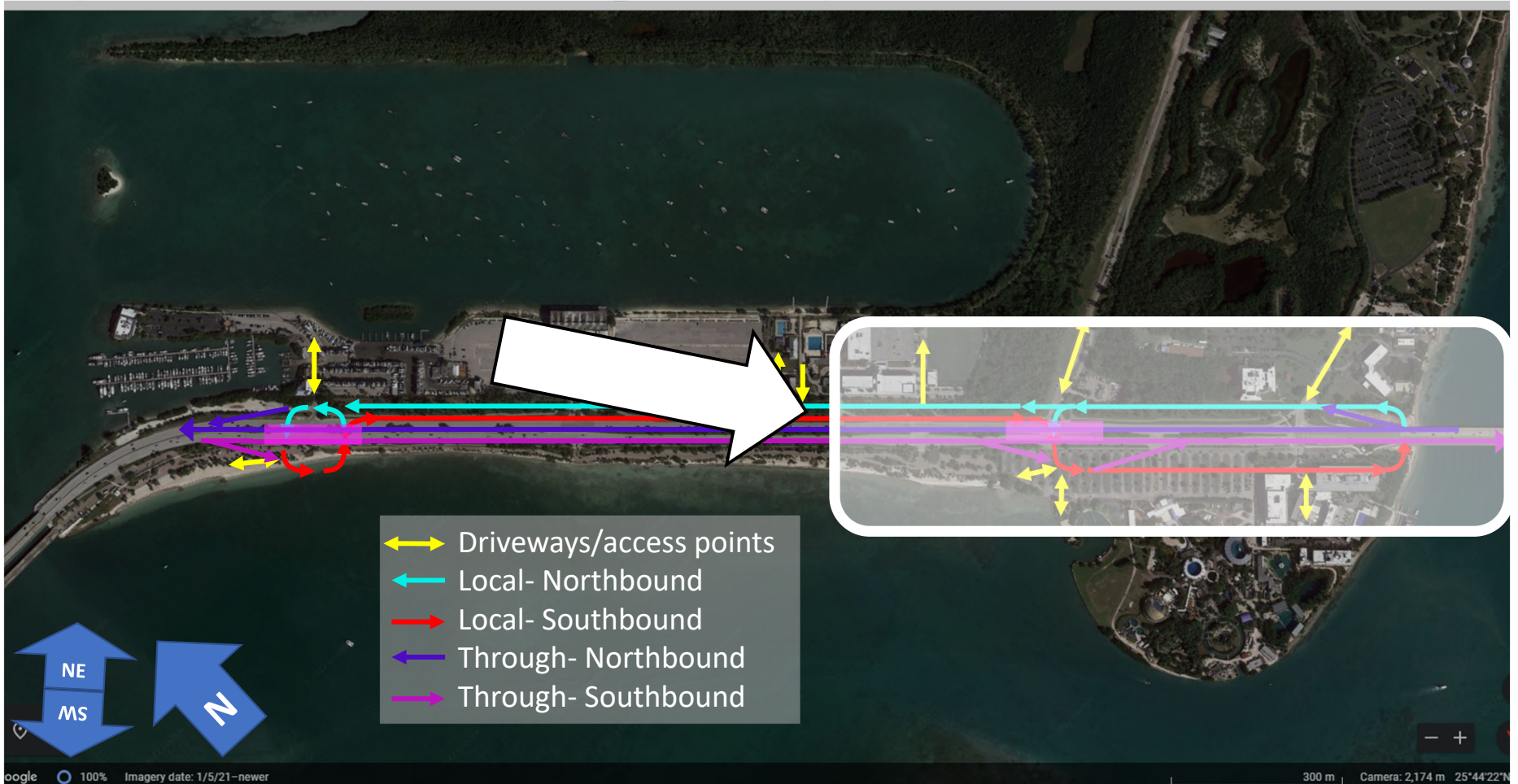
BEAR CUT BRIDGE LOOKING TOWARD THE NORTH.



BEAR CUT BRIDGE LOOKING TOWARD THE NORTH. CENTER LANES CONTINUE AS THROUGH LANES WITH OUTSIDE LANES PROVIDING ACCESS TO AND FROM VIRGINIA KEY.



THIS VIEW IS TAKEN FROM OVER MAST LOOKING TOWARD THE SOUTH.



LOOKING SOUTH FROM OVER MAST ACADEMY.



THE OVERALL TRAFFIC CIRCULATION WILL IMPROVE CIRCULATION FOR LOCAL USERS ON TYPICAL DAYS AND DURING SPECIAL EVENTS AND PROVIDE IMPROVED ACCESS TO THE PARKS AND VILLAGE ON KEY BISCAIYNE.



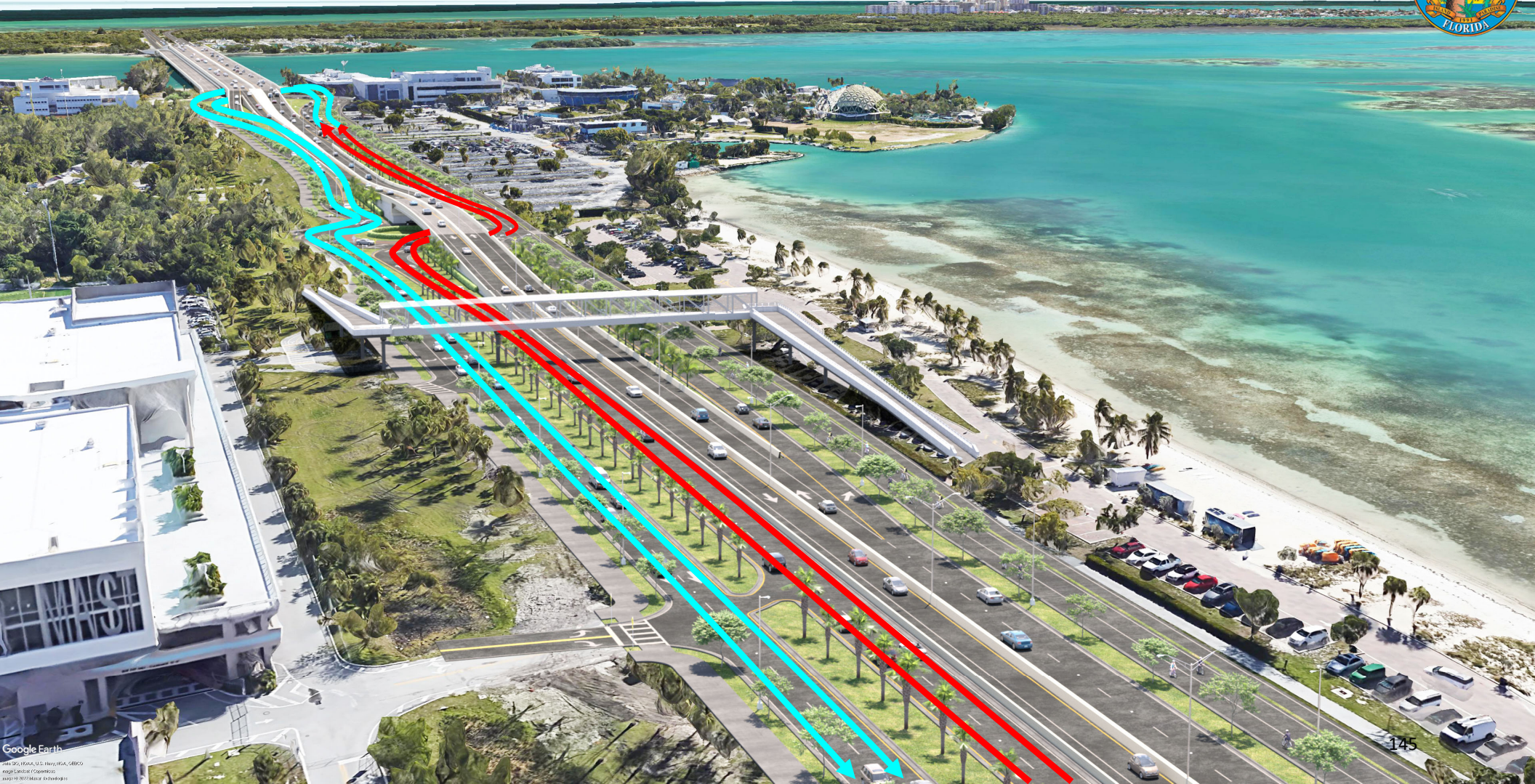
THE OVERALL TRAFFIC CIRCULATION WILL IMPROVE CIRCULATION FOR LOCAL USERS ON TYPICAL DAYS AND DURING SPECIAL EVENTS AND PROVIDE IMPROVED ACCESS TO THE PARKS AND VILLAGE ON KEY BISCAYNE.



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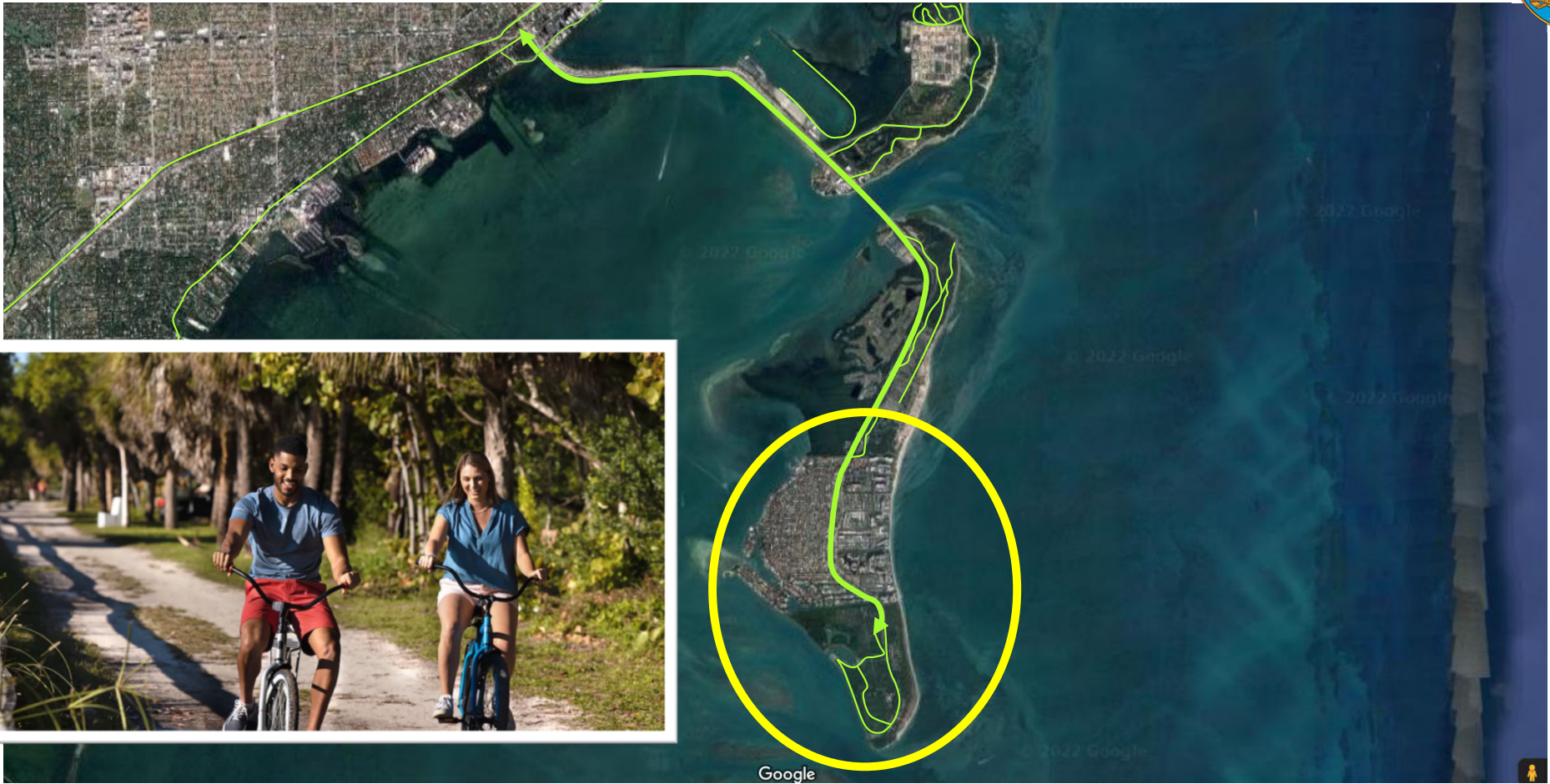


RICKENBACKER CAUSEWAY IMPROVEMENTS

1. INTRODUCTION
2. SCOPE AND FOCUS.
3. IMPROVING TRAFFIC.
4. SEPARATING BICYCLE TRAFFIC.
5. **CONSIDERING CONNECTIONS**
6. RESILIENCY



MOVING FROM SOUTH TO NORTH, BILL BAGGS HAS AN EXTENSIVE TRAIL NETWORK WITH A DEDICATED BIKE ENTRANCE.



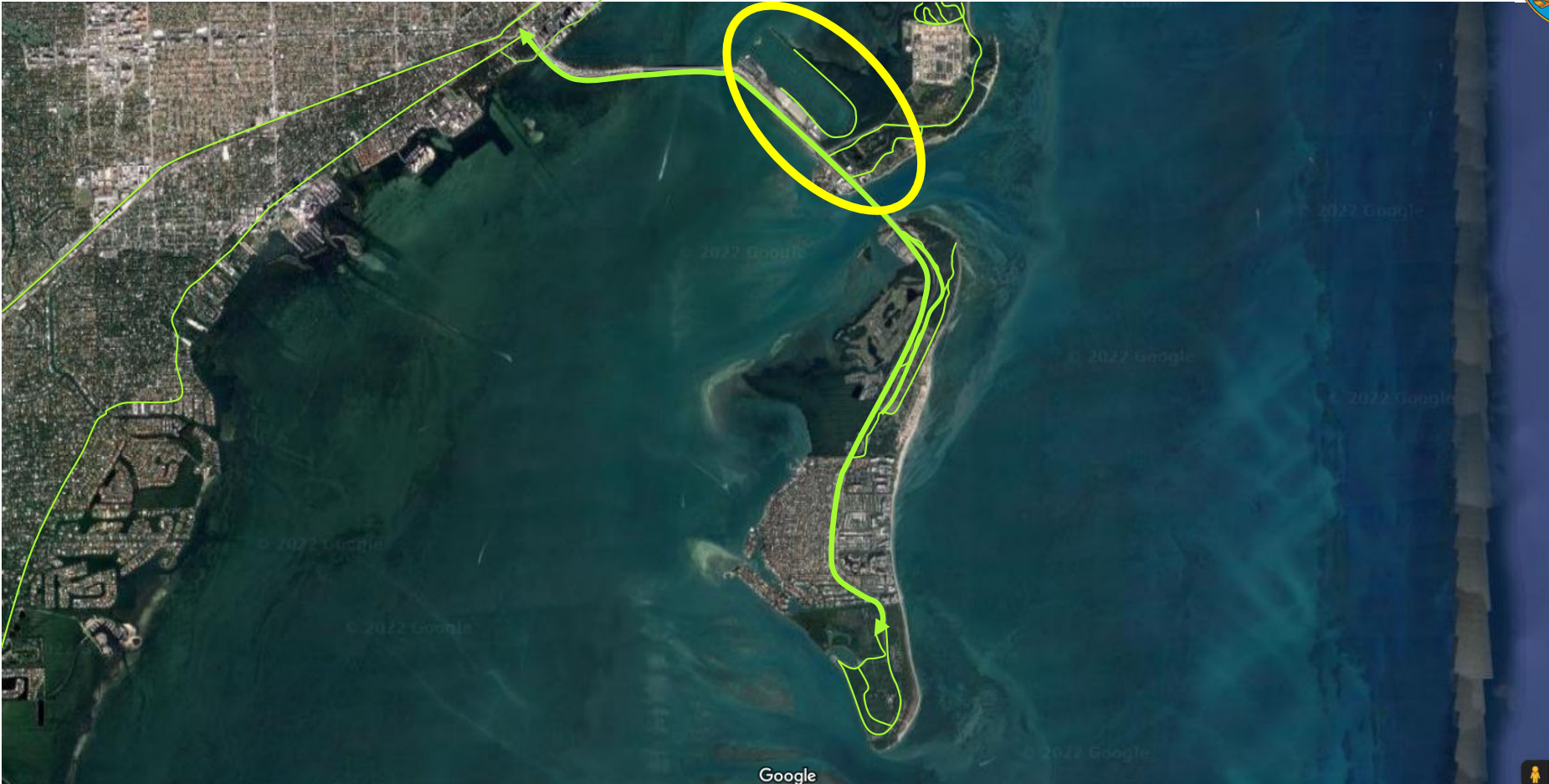
LANES ON THE EAST SIDE WOULD CONNECT TO CRANDON PARK. THIS WILL AVOID MOST CONFLICTS WITH DRIVEWAYS ON CRANDON BOULEVARD.



DEDICATED CYCLE PATH ON THE EAST SIDE OF CRANDON PARK TIES INTO AN EXTENSIVE TRAIL NETWORK AND BEACH ACCESS.

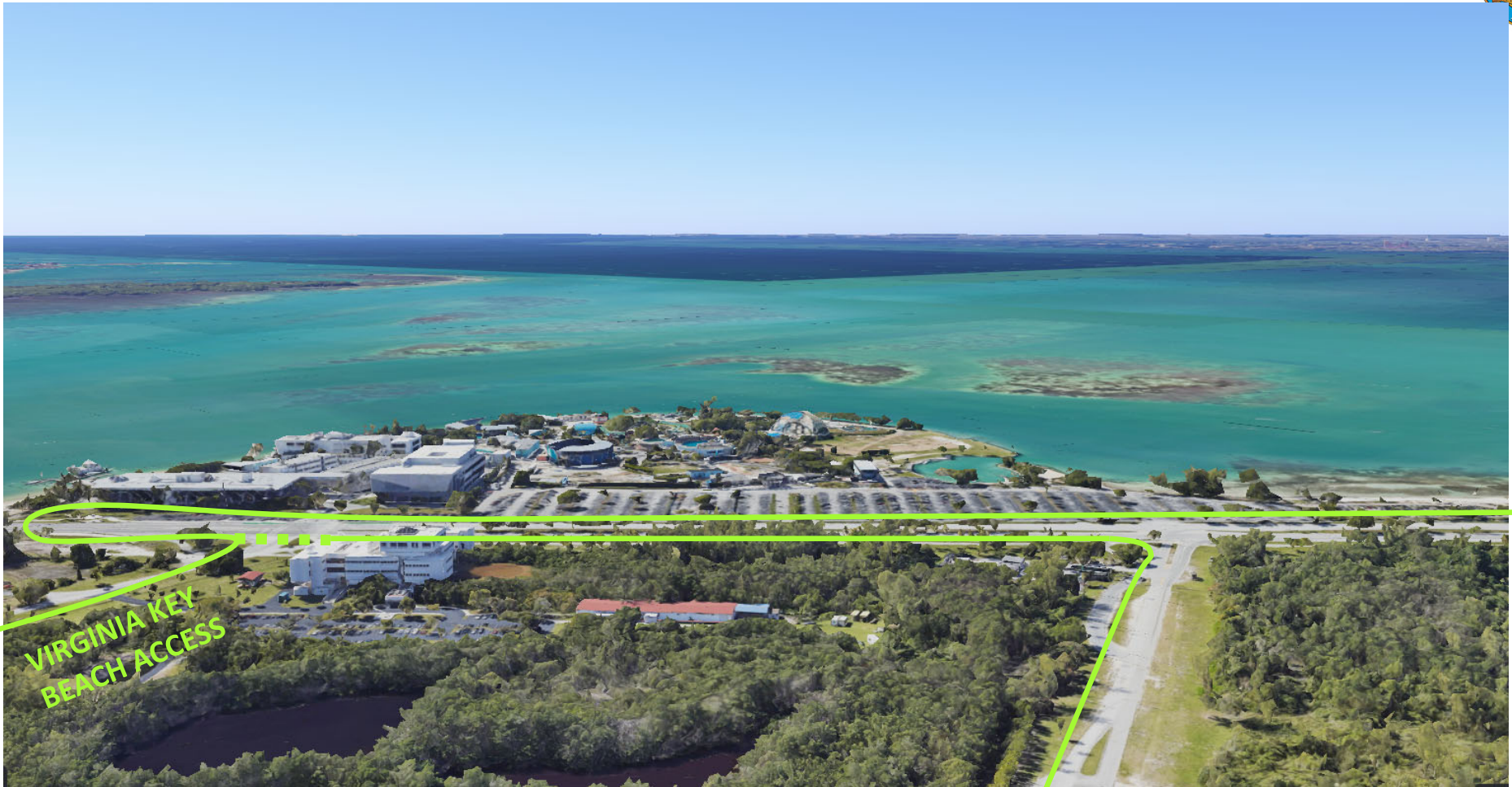


AS THE PATH SWITCHES TO THE SW SIDE OF VIRGINIA KEY, WE MUST PROVIDE ACCESS TO EXISTING AND PROPOSED TRAILS AN NORTH POINT, STADIUM BASIN, AND ARTHUR LAMB ROAD.





RETAIN A CONFLICT FREE PATH TO THE VIRGINIA KEY TRAILS.



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RETAIN A CONFLICT FREE PATH TO THE VIRGINIA KEY TRAILS. WORK TO CONNECT MISSING ELEMENTS.

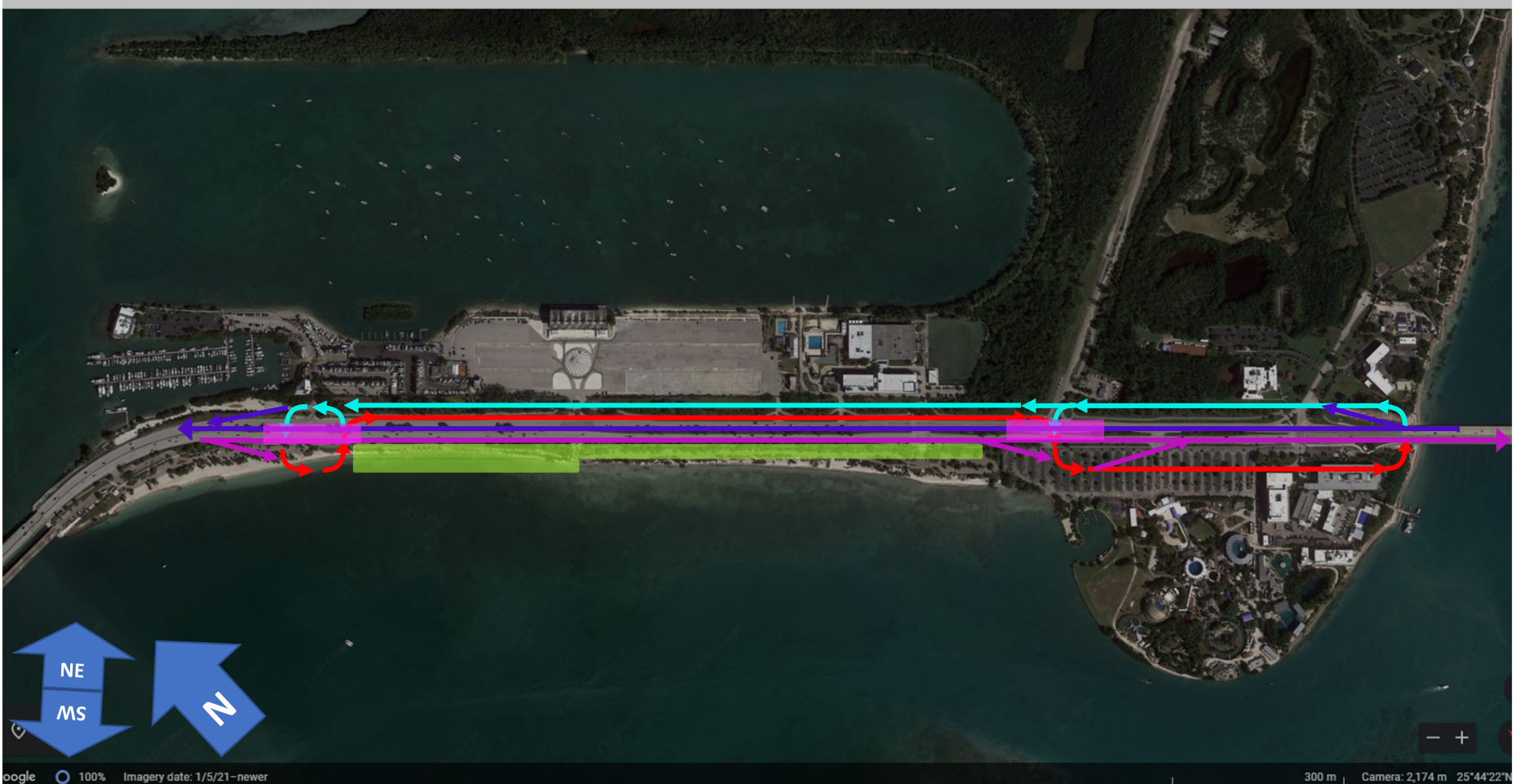




NEW SPACE FOR CAR-FREE RECREATION.



ELIMINATION OF ROADS IN PARK AND SHIFTING ROADS NE CREATES ~5 ACRES OF ADDITIONAL PARK SPACE.



IMPROVED RICKENBACKER TRAIL, COMMODORE TRAIL, UNDERLINE, AND BAYWALK WILL CREATE ONE OF THE MOST IMPORTANT TRAIL JUNCTIONS IN SOUTH FLORIDA.



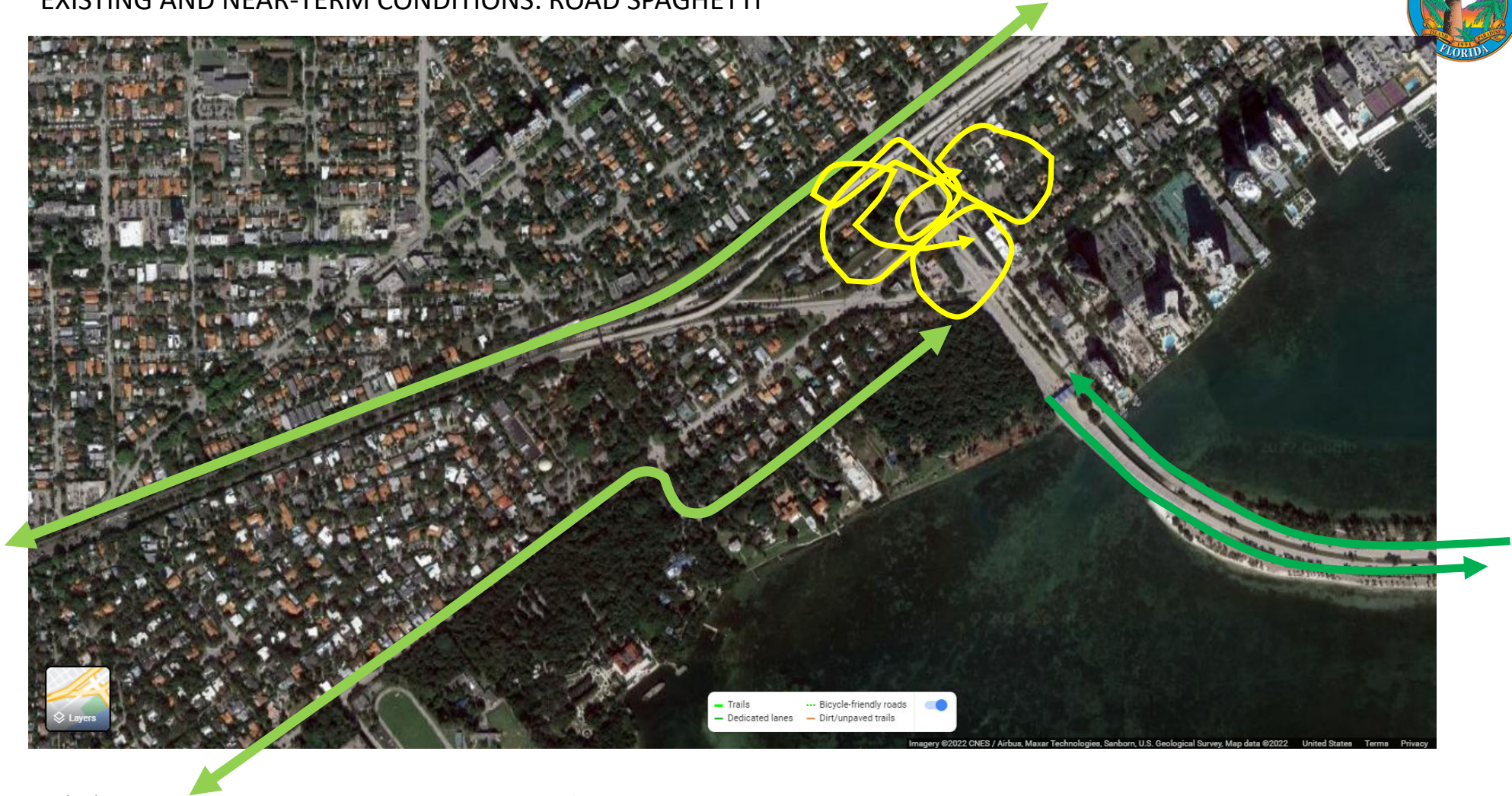


MAKE CONNECTIONS WITH BICYCLE TRAFFIC FROM 3 SOURCES.





EXISTING AND NEAR-TERM CONDITIONS: ROAD SPAGHETTI



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RICKENBACKER CAUSEWAY IMPROVEMENTS

1. INTRODUCTION
2. SCOPE AND FOCUS.
3. IMPROVING TRAFFIC.
4. SEPARATING BICYCLE TRAFFIC.
5. CONSIDERING CONNECTIONS
6. RESILIENCY



FUTURE BRIDGES WILL CONSIDER SEA-LEVEL RISE AND BETTER DRAINAGE.

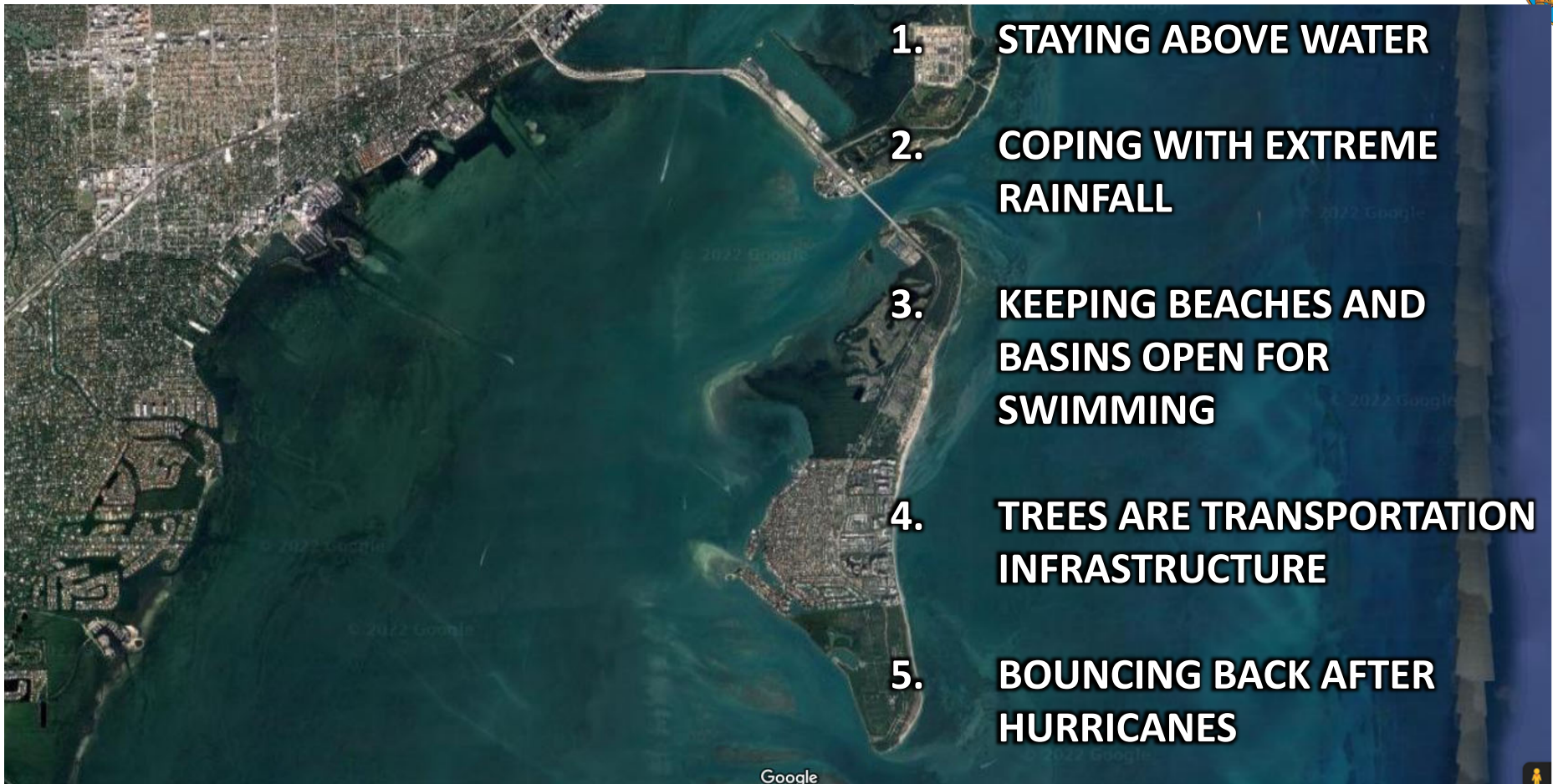




FUTURE BRIDGES WILL CONSIDER SEA-LEVEL RISE AND BETTER DRAINAGE. UNSOLICITED PROPOSAL INCLUDED ELEVATION OF BEAR-CUT BRIDGE.



FOCUS ON ROADWAY DESIGNS FOR A NUMBER OF RESILIENCY-RELATED ISSUES.



ELEVATE THE VIRGINIA KEY ROAD. USE CUT AND FILL TO IMPROVE DRAINAGE AND ELEVATE THE ROAD BY APPROXIMATELY 3 FEET CONSISTENT WITH UNSOLICITED PROPOSAL.

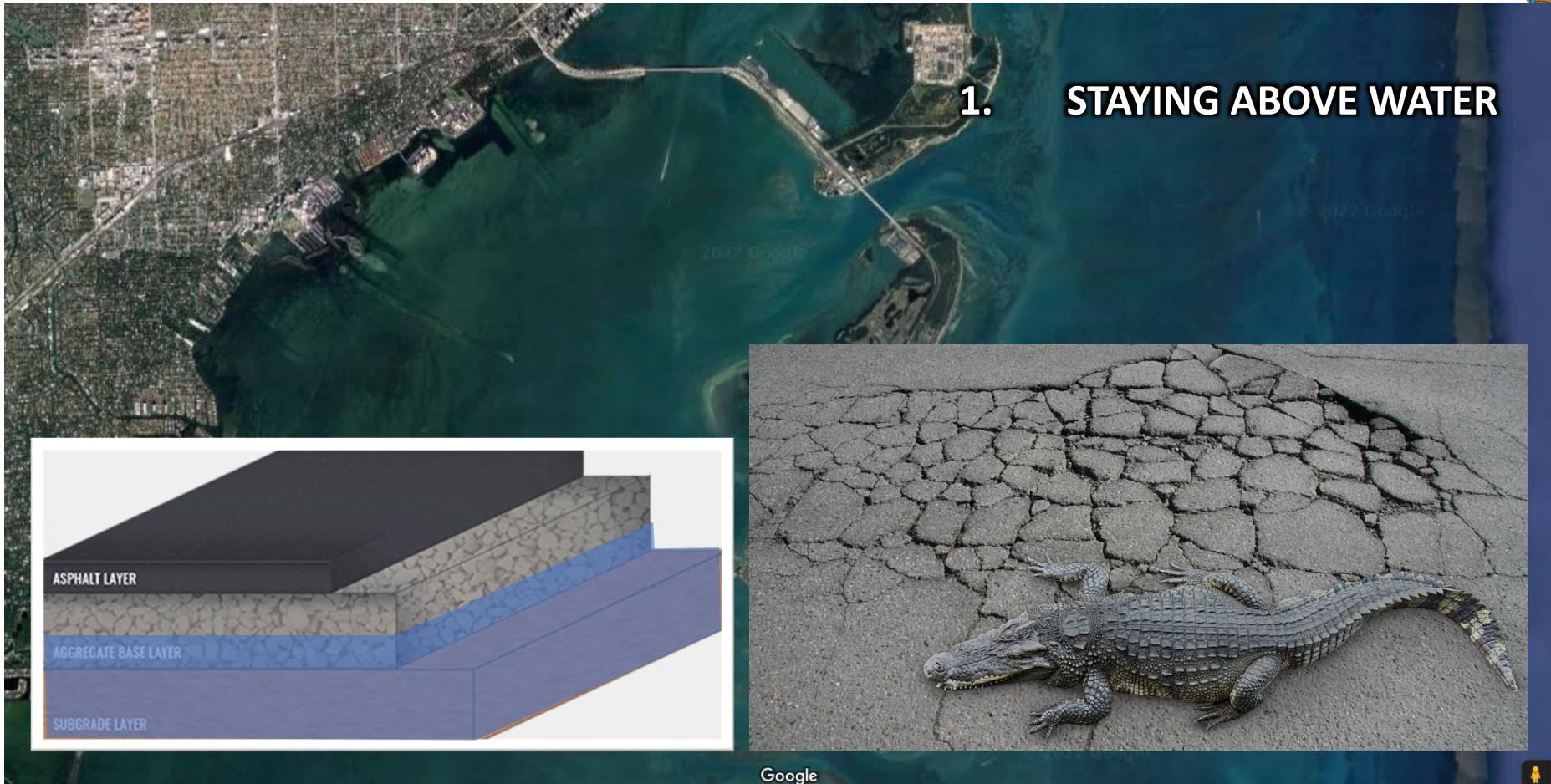


1. STAYING ABOVE WATER





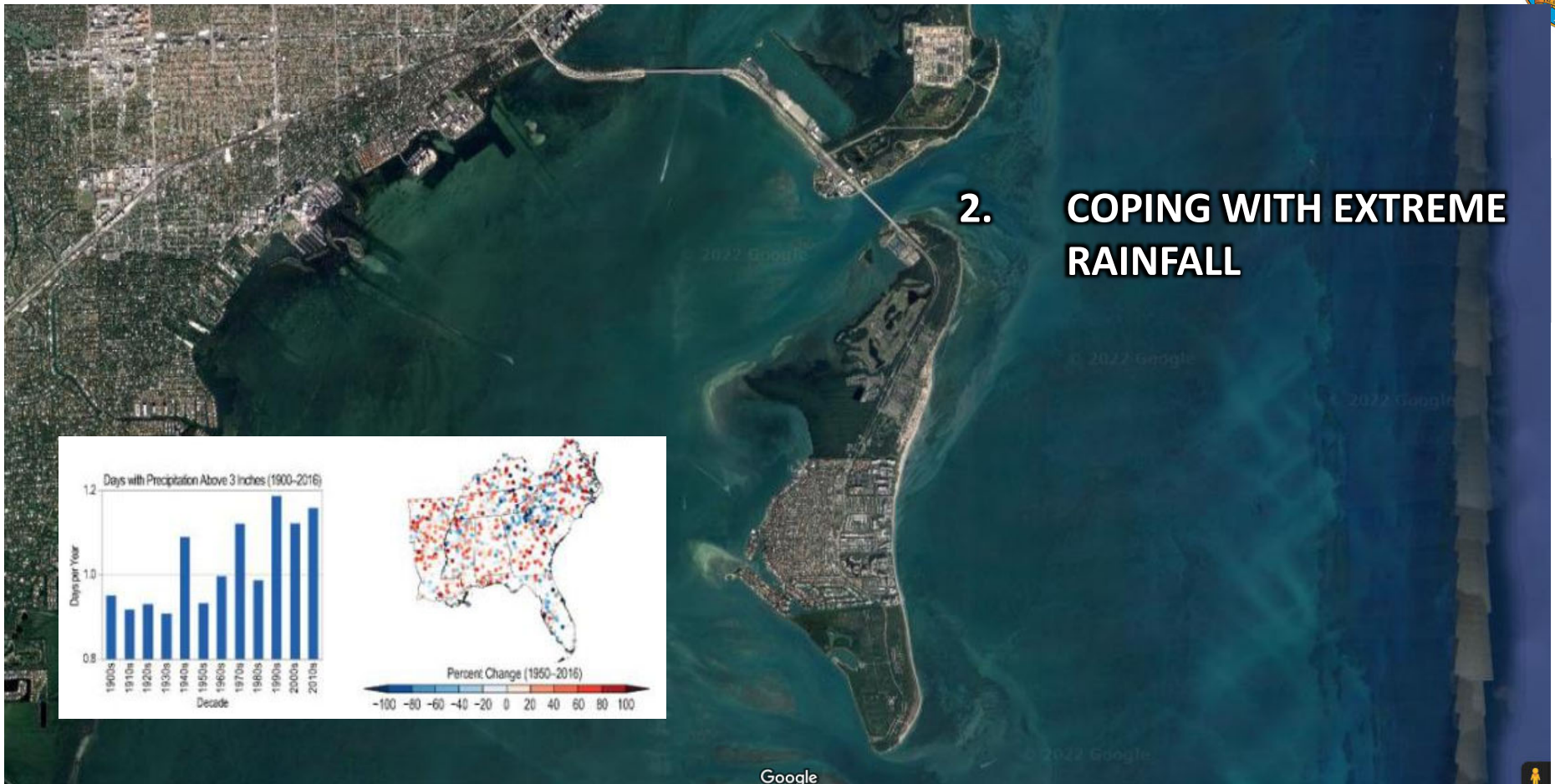
RAISING THE GRADE TO MAINTAIN *STRUCTURE*, NOT JUST TO AVOID FLOODING.
AN ELEVATED WATER TABLE UNDERMINES SUB-STRUCTURE AND CREATES 'ALIGATORING'.



INTENSE RAINFALL COMBINED WITH ELEVATED WATER TABLES LEAD TO ROAD AND TRAIL FLOODING.



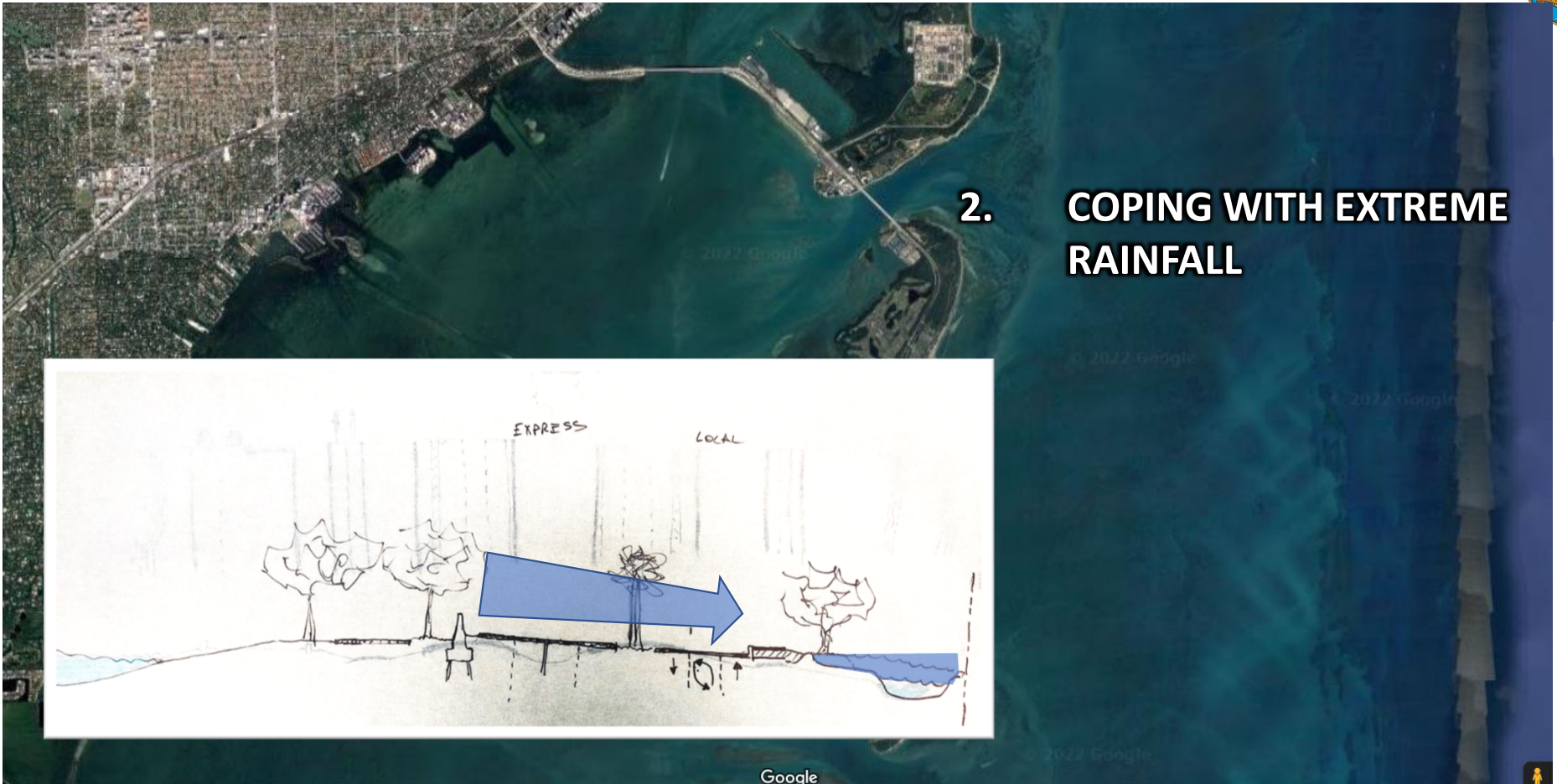
2. COPING WITH EXTREME RAINFALL



ROADWAYS CURRENTLY DRAIN TO AND ACCUMULATE IN ADJACENT WETLANDS.



2. COPING WITH EXTREME RAINFALL



THE EXISTING WETLAND SHOULD BE DOCUMENTED AND BETTER UTILIZED





THE EXISTING WETLAND SHOULD BE DOCUMENTED AND BETTER UTILIZED





THE EXISTING WETLAND CONTAINS MANGROVES AND OTHER TYPICAL SPECIES.





THE EXISTING WETLAND CONTAINS MANGROVES AND OTHER TYPICAL SPECIES.



Google 100% Imagery date: 1/5/21 - newer 300 m Camera: 2,174 m 25°44'22"N

THE EXISTING WETLAND SHOULD BE DOCUMENTED AND PROPERLY UTILIZED VIA ENGINEERED STRUCTURES.



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THE EXISTING WETLAND SHOULD BE DOCUMENTED AND PROPERLY UTILIZED VIA ENGINEERED STRUCTURES. THESE CAN BE DESIGNED TO DRAIN WITHIN SET TIMES TO REDUCE MOSQUITO BREEDING AREAS.





**3. KEEPING BEACHES AND
BASINS OPEN FOR
SWIMMING**

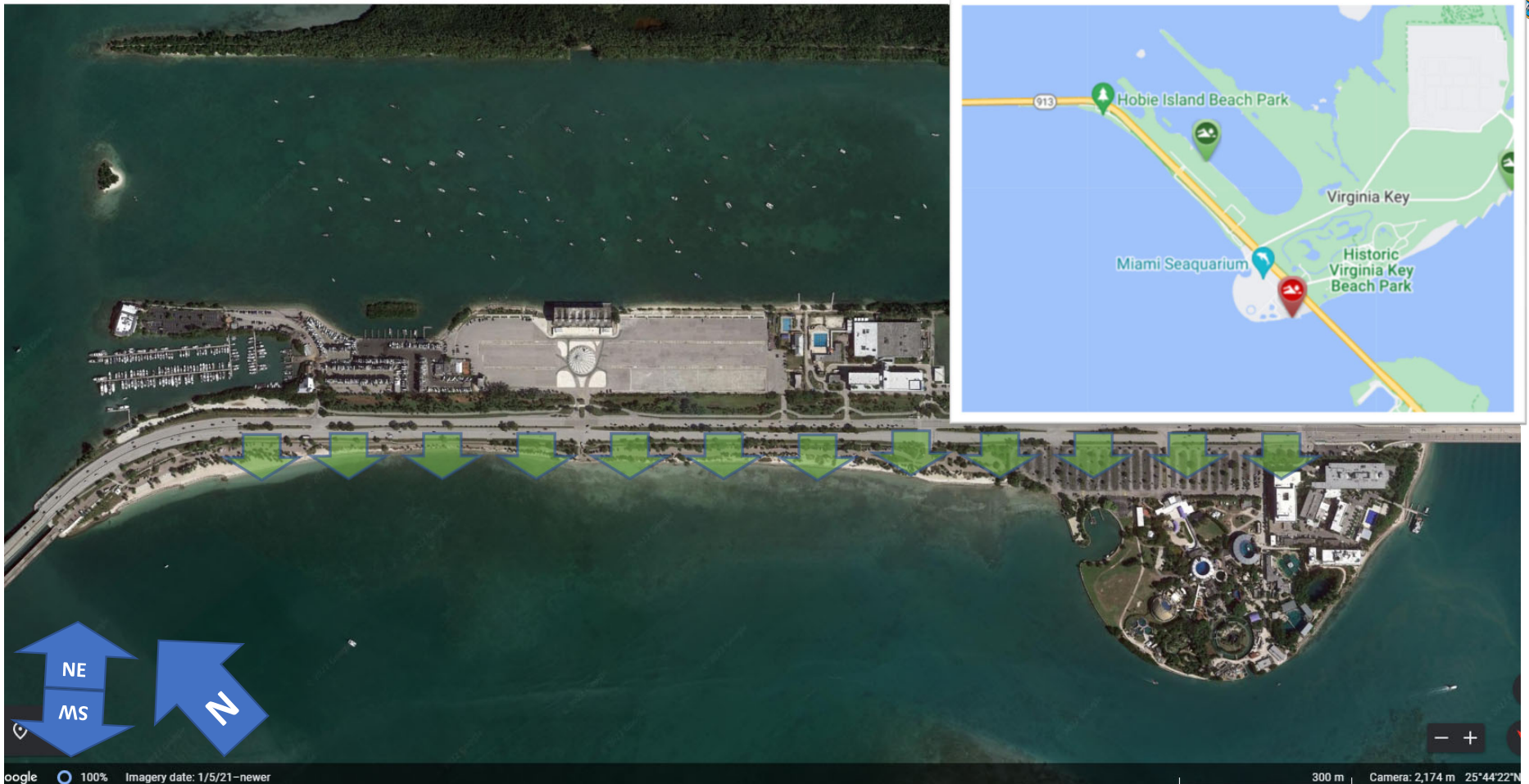
SEDIMENT, HEAVY METALS, OILS AND GREASE WASH OFF ROADWAYS TO WETLANDS AND BEACH.



SEDIMENT, HEAVY METALS, OILS AND GREASE WASH OFF ROADWAYS TO WETLANDS AND BEACH.
WATER IN NE WETLANDS STAGNATES AND DOES NOT DRAIN UNTIL IT OVERFLOWS, MINIMIZING FILTRATION.



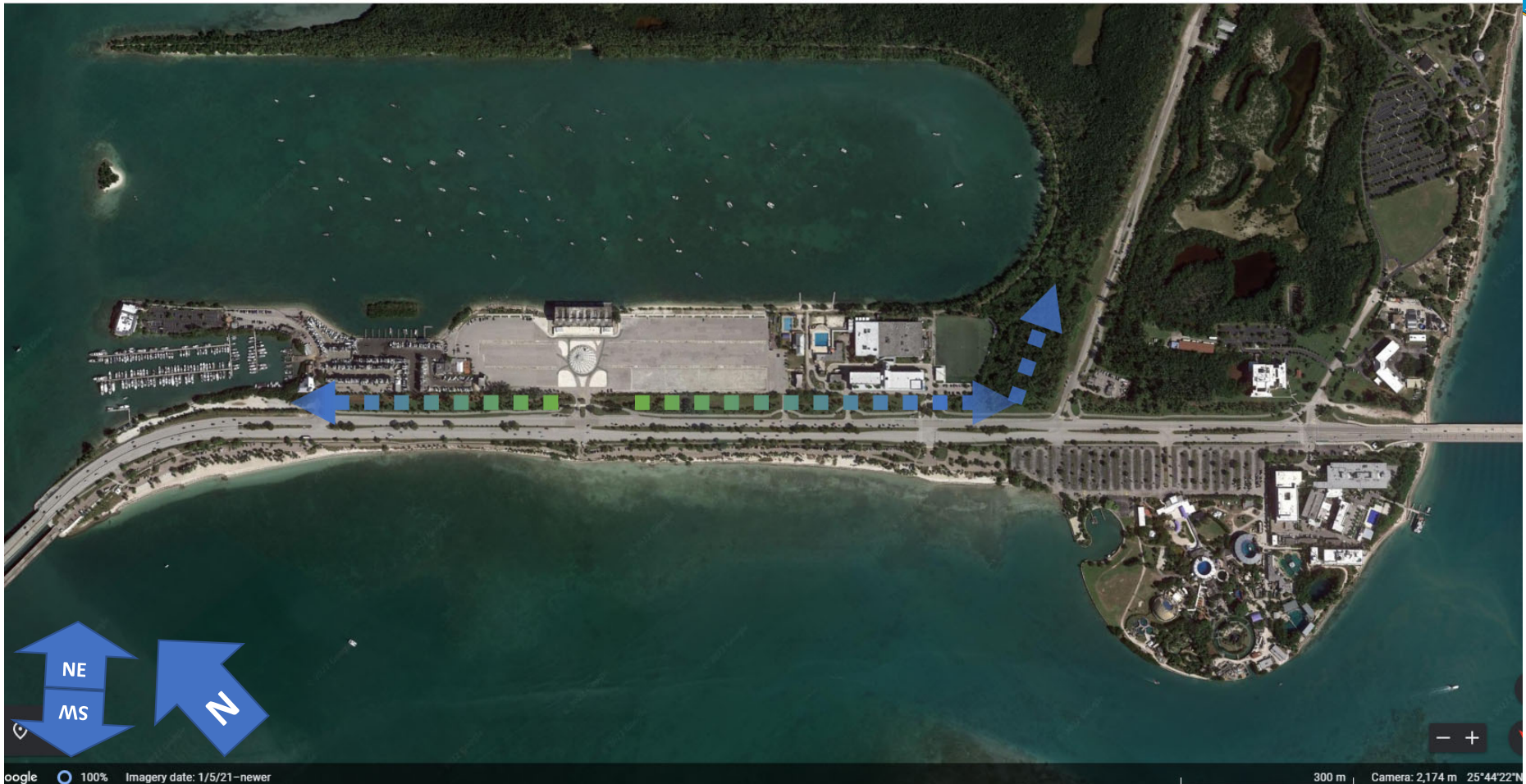
SANDY SOILS OFFER LITTLE FILTRATION SO RUNOFF CONTRIBUTES TO WATER QUALITY PROBLEMS.



PROPOSE REDIRECTING ALL ROADWAY RUNOFF TOWARD WETLANDS.

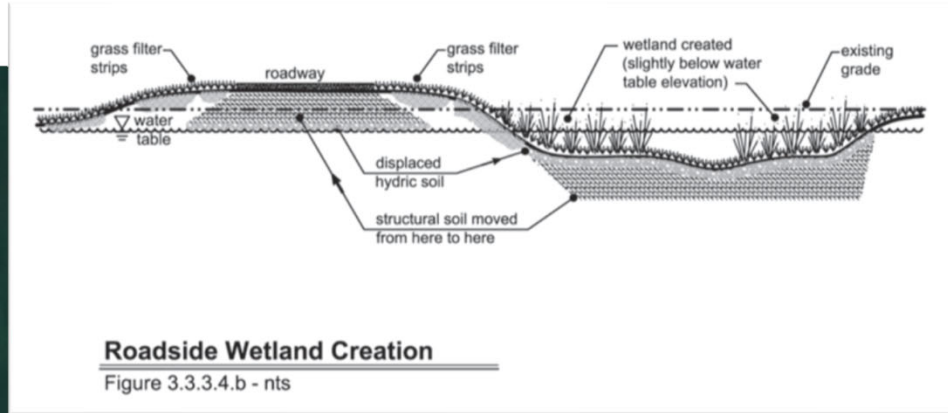


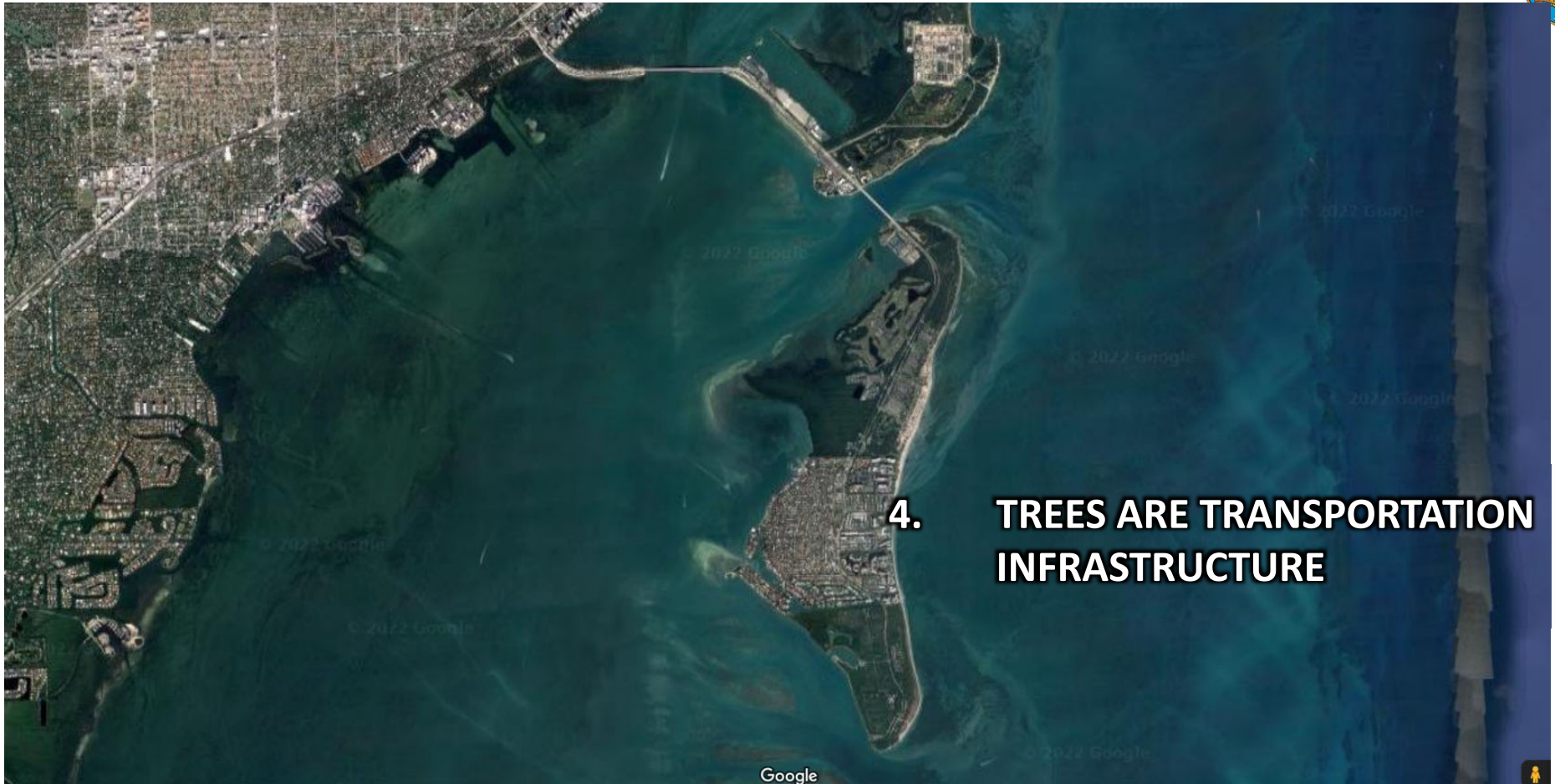
WETLANDS ARE EXTREMELY EFFECTIVE FILTRATION SYSTEMS WHEN WATER IS MOVING. ADDITIONAL FRESHWATER FLOW WILL INCREASE WATER QUALITY IN THE STADIUM BASIN.





WETLANDS CAN BE DESIGNED FOR SPECIFIC WATER VOLUMES AND FILTRATION RATES.





4. TREES ARE TRANSPORTATION INFRASTRUCTURE

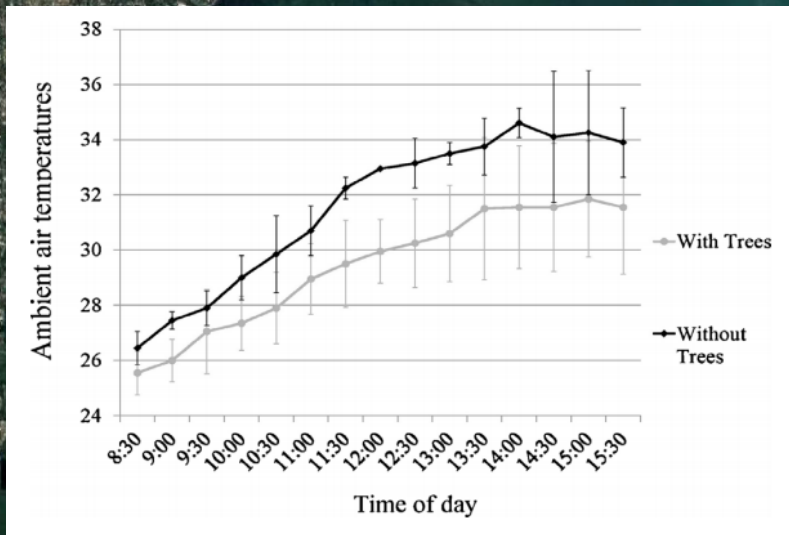
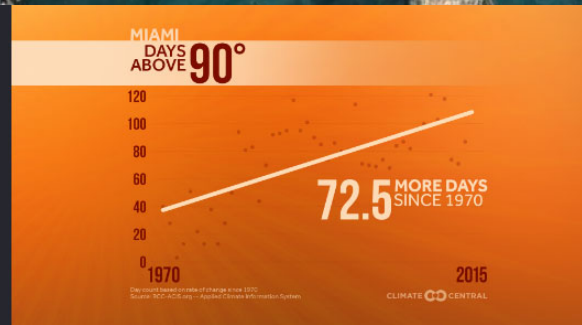
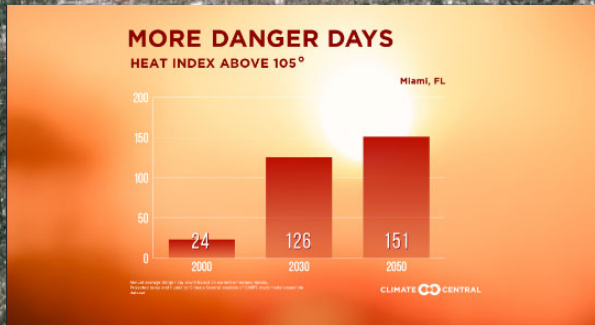


DAYS WITH DANGEROUS HEAT ARE INCREASING IN INTENSITY AND FREQUENCY





SHADE TREES ARE THE MOST COST-EFFECTIVE MEANS TO REDUCE IMPACT OF HIGH HEAT.



4. TREES ARE TRANSPORTATION INFRASTRUCTURE



TREES MAKE PEDESTRIAN AND CYCLING SAFE YEAR-ROUND.





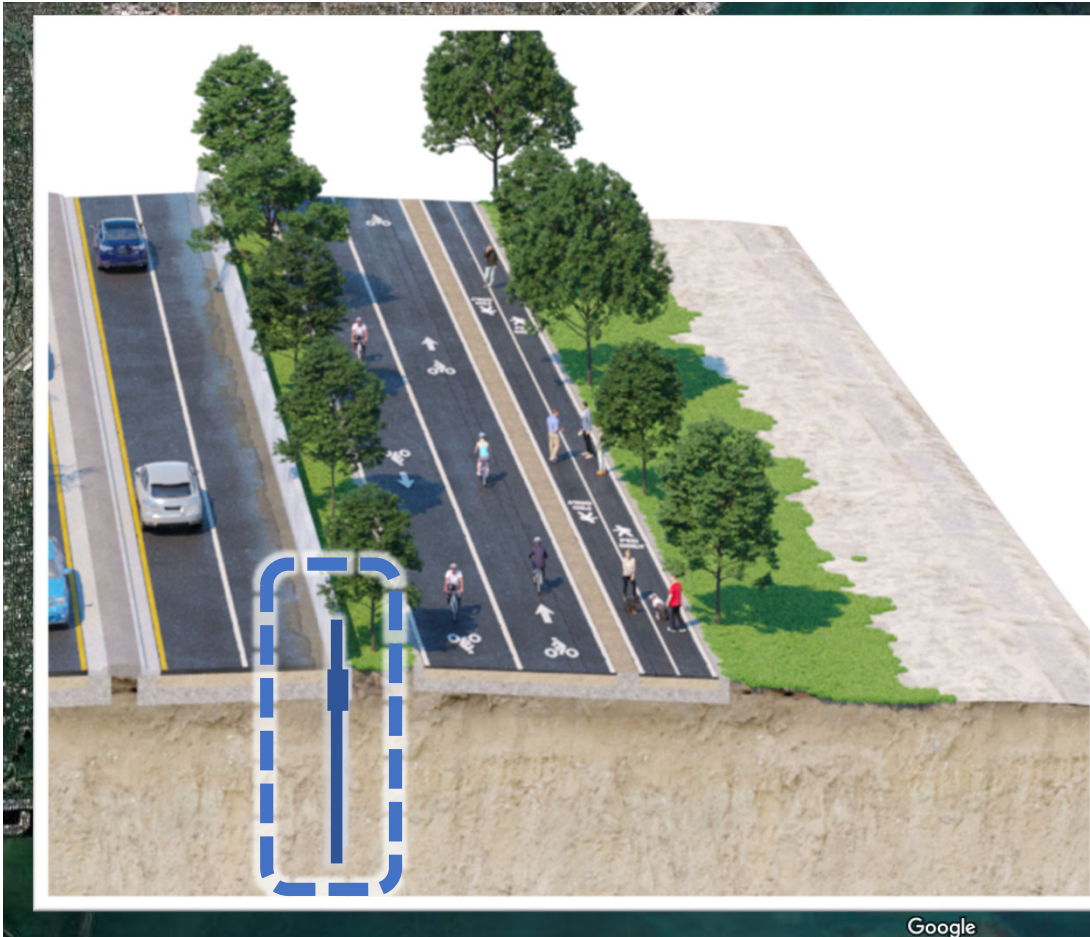
RAISING THE ROAD IS THE FIRST DEFENCE.



5. BOUNCING BACK AFTER HURRICANES



TRAFFIC / CRASH BARRIER WILL PERFORM MULTIPLE FUNCTIONS.



5. BOUNCING BACK AFTER HURRICANES



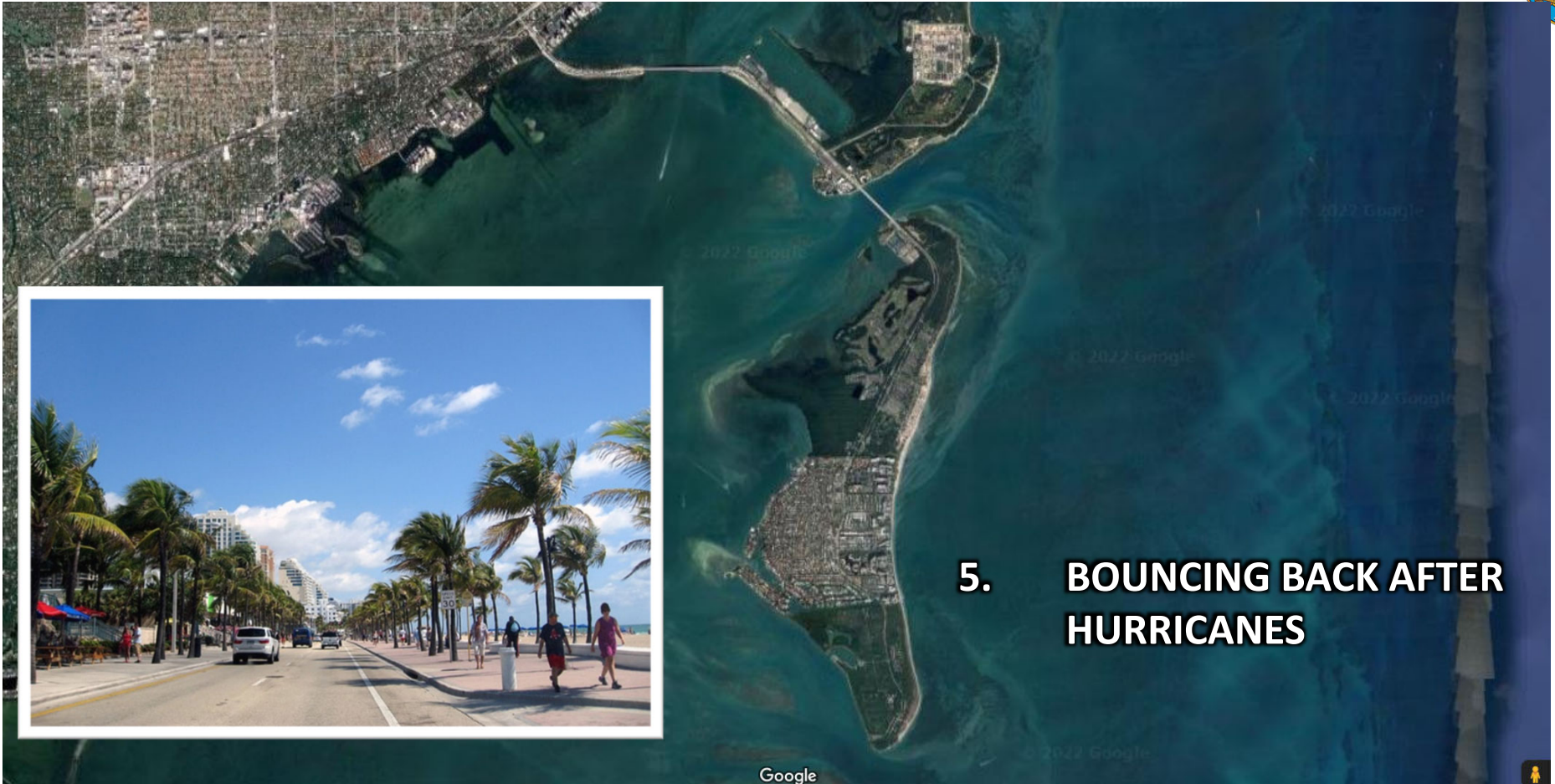
A NOISE AND CRASH BARRIER WALL WITH A FOUNDATION WILL ALSO PROTECT AGAINST WASHOUT.



5. BOUNCING BACK AFTER HURRICANES



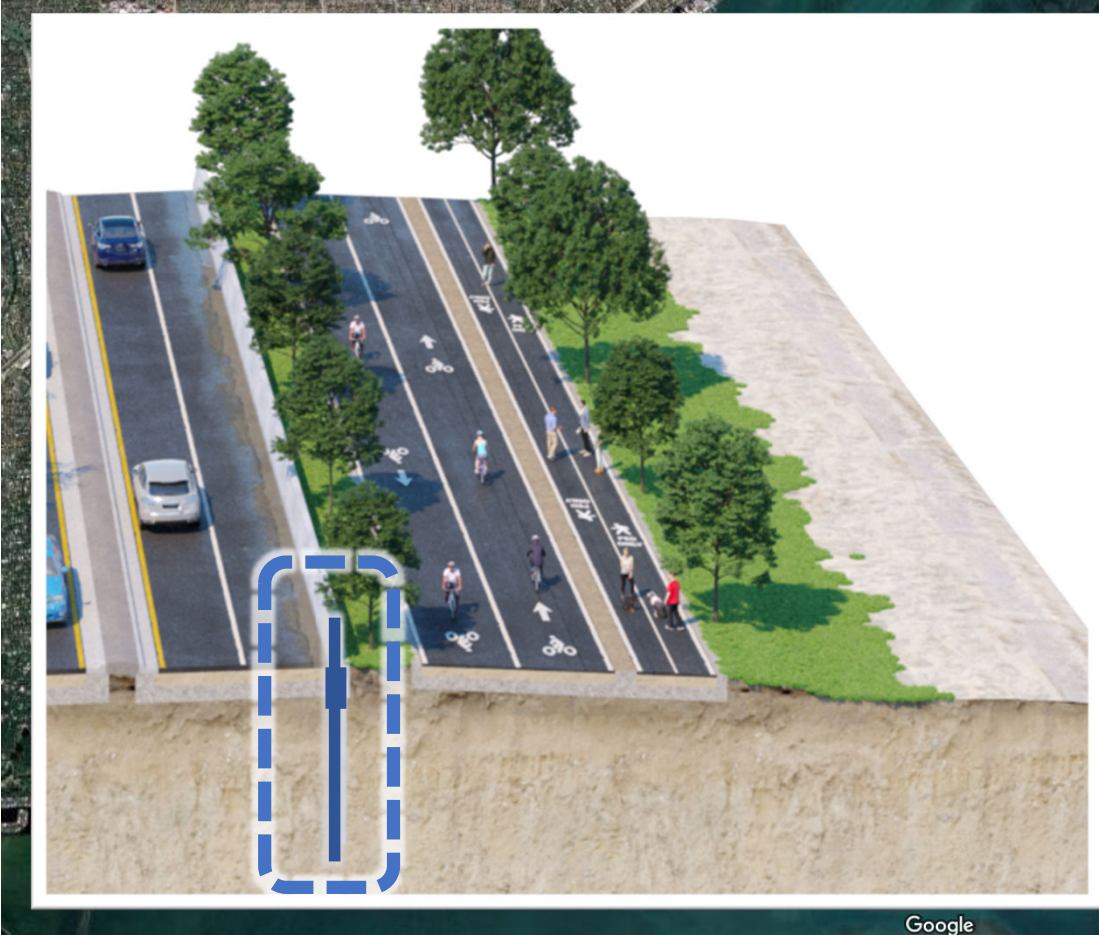
REDUCE RISK OF DEBRIS BLOCKING ROADWAY.



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TRAFFIC / CRASH BARRIER WILL PERFORM MULTIPLE FUNCTIONS.



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TRAFFIC / CRASH BARRIER WILL PERFORM MULTIPLE FUNCTIONS.



5. BOUNCING BACK AFTER HURRICANES



NEXT STEPS:

1. INCORPORATE YOUR FEEDBACK
2. COUNCIL PRESENTATION
3. BEAR CUT BRIDGE PARTICIPATION
4. CO-DEVELOP MASTERPLAN

ONGOING: SHORT-TERM SOLUTIONS



MASTERPLANNING STEPS:

1. CREATE A CONSENSUS VISION
2. STRATEGIZE ENACTMENT
3. IDENTIFY AND BUDGET INDIVIDUAL PROJECTS
4. IDENTIFY AND MATCH FUNDING SOURCES
5. MANAGE AND TRACK EXECUTION

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QUESTIONS & COMMENTS?



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