MIAMIBEACH

INTELLIGENT TRANSPORTATION SYSTEM AND SMART PARKING SYSTEM PROJECT UPDATE

December 14, 2018

City of Miami Beach

- 2016 City of Miami Beach Community Satisfaction Survey pointed at traffic congestion and degraded traffic flow as the number one problem on resident's minds

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Prior City Commission Action

- June 10, 2016: NCAC endorsed the project

- July 13, 2016: City Commission accepted the recommendation of the NCAC and directed the Administration to issue a Request for Proposal for Design, Build, Operation, and Maintenance DBOM Services and authorized City Manager and City Clerk to execute a contract with the selected firm

Given the new members of the City Commission the project is being introduced again and funding strategies for future years are being presented to the FCWPC.

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Current Traffic Management

- Existing Traffic Monitoring and Management Effort

Equipment

- 25 Cameras
- 32 Travel Time Detectors
- 9 Construction Dynamic Message Signs (DMS)

Process

- Incident or congestion observed on the cameras or travel time
- Reported via email to Traffic Management Distribution List
- Coordination with Transportation Department, PSCD, Police Department , and Communications Department
- Text Alert Issued
- In the case of lane closures: DMS are programmed remotely
- No travel time or parking capacity information is provided because of fluctuation in that information

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Intelligent Transportation Systems (ITS)

- Cameras

- Travel Time Detection (Bluetooth)

- Vehicle Detection

- Dynamic Message Signs (DMS)

Traffic Management Center (TMC)

- Co-Location at FDOT District 6 SunGuide TMC
- Video Wall
- Management Software

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Smart Parking System (SPS)

- Capacity in lots: All lots over 35 spaces

- Available Parking Monitoring

- Displayed on DMS outside garages

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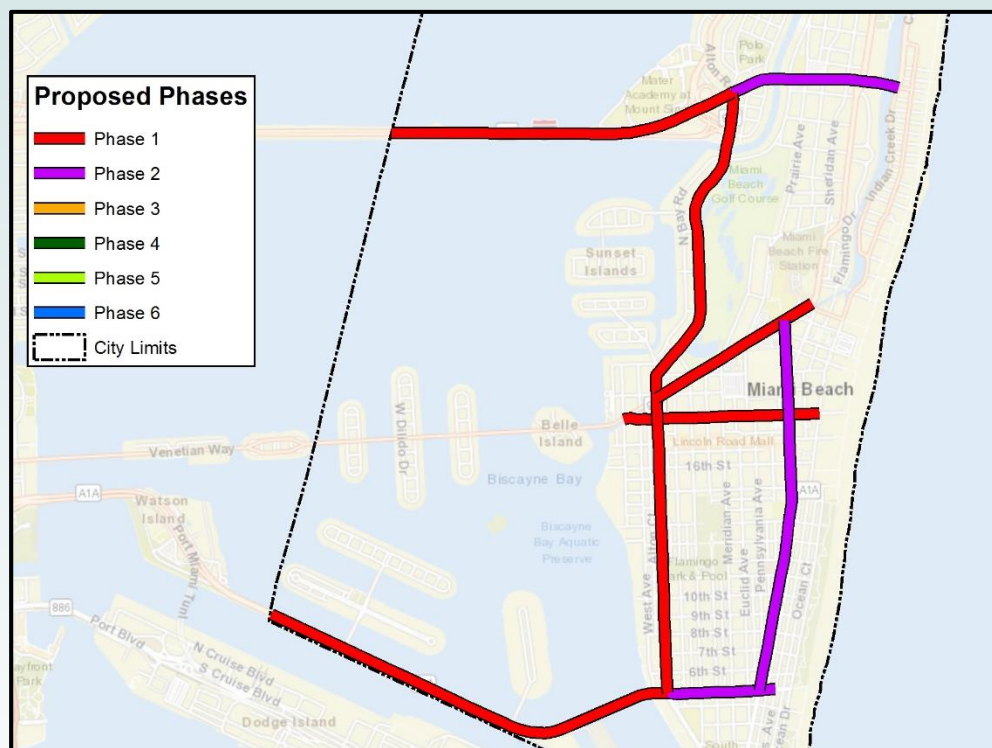
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Project Phasing

Corridor Phasing – Phases 1 and 2

- 17th Street from Collins Avenue to Dade Boulevard

- Dade Boulevard from Alton Road to 23rd Street

- Alton Road from Julia Tuttle Causeway to 17th Street

- Alton Road from 5th Street to 17th Street

- Julia Tuttle Causeway from City Limits to Alton Road

- MacArthur Causeway from City Limits to 5th Street/Alton Road

- W 41st Street From Alton Road to Indian Creek Road

- 5th Street from Alton Road to Collins Avenue

- Washington Avenue from 5th Street to Dade Boulevard

Proposed Phases

▬	Phase 1
▬	Phase 2
▬	Phase 3
▬	Phase 4
▬	Phase 5
▬	Phase 6
▬ · ▬	City Limits

Corridor Phasing – Phases 3 - 6

- Collins Avenue from North City Limit to 5th Street

- Indian Creek Drive from Collins Avenue to 71st Street

- Alton Road from Indian Creek Drive to Julia Tuttle Causeway

- Abbott Ave from City Limits to Collins Avenue

- Normandy Drive/ 71st Street from Western City Limits to 5th Street/Alton Road

- West Avenue from 17th Street to 5th Street

- Meridian Avenue from 17th Street to 5th Street

Proposed Phases
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Phase 5
- Phase 6
- City Limits

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ITS/SPS Project Details

- Additional Corridors
  - Meridian Avenue
  - West Avenue
  - Harding Avenue/Abbott Avenue
  - Collins Avenue – 63rd Street to City Limits
  - 71st Street/Normandy Drive – Indian Creek Drive to City Limits

- Improvements to Existing Corridors
  - 27 Additional Traffic Monitoring Cameras (High-Definition)
  - Additional Travel Time Detector Devices and Volume Data Collection Devices
  - 27 Aesthetic High Definition Arterial Digital Message Signs
  - 2 Causeway Full-Color Causeway DMS
  - DMS at Parking Garages and 35 Parking Lots to show Parking Capacity
  - Traffic Management Center Co-Located with FDOT SunGuide Center

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Funding- Design and Construction

- Approved Funds
  - All Phases Funded (Phases 1 through 6)
  - Funding Sources: County's Half-Cent Surtax, Concurrency Mitigation Fund, Parking Operation Fund

- Preliminary Timeline by Phase
  - Phase 1 & 2: 15-18 months
  - Schedule for Subsequent Phases – Pending Negotiations

Funding- Operations and Maintenance

- Approved Funds
  - $600,000 per Year Adopted in Transportation Funds
- Funding Strategy Based on 5-Year Projection of Transportation Budget (Total Per Year)

Fiscal Year	Funding Required Per Year
Fiscal Year 2019-2020	$130,000.00
Fiscal Year 2010-2021	$1,037,000.00
Fiscal Year 2021-2022	$1,072,000.00
Fiscal Year 2022-2023	$1,106,000.00
Fiscal Year 2023-2024	$1,139,000.00

Note: Table does not include the cost for Operations and Maintenance for SPS (approximately $30,640-$37,860 per year) as this cost was already being covered by the Parking Department.

Kimley»Horn

Performance Based Contract

- Hours of Operation/Staffing

- Incident Response/Validation

- Equipment Accuracy (e.g. parking occupancy validation)

- Equipment Availability/Spare Parts

- Subsystem Availability (i.e. uptime)

- Others
  - Standard Operating Guidelines (SOG) Development/Updates
  - Meetings/Training (i.e. SunGuide® Training)
  - Preventative Maintenance

Parking Funds

- ## FY2018-2019

  - ### $3M Set Aside for Renewal and Replacement
  - ### $1.52M Transfer to Transportation Budget
  - ### $1.17M Transfer to General Fund

	FY14	FY15	FY16	FY17	FY18 (OBPI estimated as of Y/E)	FY19 Adopted
Operating Revenues	40,534,422	42,850,715	52,253,637	47,489,549	48,583,000	50,696,000
Operating Expenditures*	32,603,266	33,208,823	41,248,202	43,270,595	44,170,000	44,653,800
Net Annual Operating Surplus	7,931,156	9,641,892	11,005,435	4,218,954	4,413,000	**6,042,200**

Assuming that the Plan to eliminate the General Fund contribution is followed, this would leave $1.519 million in annual surplus available for other uses including ITS.

Recommendations

- FY2018-2019 : City budgeted a partial year of funding.

- Funding for each year is subject to budget appropriation

- Administration is seeking endorsement for on Funding Strategy for future years before entering the contract

- Administration recommends that the Trolley Advertising pilot be extended, and that some or all of the $500,000 in projected advertising revenues be used for Transportation

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Questions?