

**CITY OF RIVIERA BEACH CITY COUNCIL  
AGENDA ITEM SUMMARY**

**Meeting Date:** 9/1/2021

**Agenda Category:** PRESENTATIONS

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**Subject:** 13TH STREET TRAFFIC CALMING UPDATE

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**Recommendation/Motion:**

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<b>Originating Dept</b>	Public Works	<b>Costs</b>
<b>User Dept.</b>		<b>Funding Source</b>
<b>Advertised</b>	No	<b>Budget Account Number</b>
<b>Date</b>		
<b>Paper</b>		
<b>Affected Parties</b>	Not Required	

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**Background/Summary:**

In 2018, residents of Federal Gardens expressed concern with large trucks utilizing 13<sup>th</sup> street west of Avenue R as a bypass to Congress Avenue. This area west of Avenue R is a residential community with senior citizens and children at play. The UPS trucks became a specific point of concern as they move through the community very early in the morning and late into the evening. Staff commissioned a study to determine traffic calming alternatives to address the resident concerns. In September 2019, Chen Moore and Associates published the technical memorandum on 13<sup>th</sup> street. The memorandum was provided and presented to City Council in 2020 and staff was directed to take the options to the residents so they may choose which alternative they prefer.

At the end of 2020, UPS made a site plan submittal for the addition of 51,883 square feet (SP-21-06) of warehouse at the Avenue P and Blue Heron facility. During the site plan process, the management team of UPS was made aware of the community concerns on the use of 13<sup>th</sup> street in the residential area west of Avenue R and their management committed to eliminate the use of 13<sup>th</sup> street west of Avenue R in their service routes. During the review and approval process, UPS committed to contribute \$35,000 towards traffic calming improvements on 13th street. The site plan was approved on January 6<sup>th</sup>, 2021 via Resolution 04-21. On May 6, 2021 Chen Moore, the Merchant Group, and Councilwoman Lanier hosted a community meeting on 13<sup>th</sup> street to allow residents to vote on one of the three traffic calming options.

Following the community vote, staff reached out to Chen Moore for a proposal to conduct the full design of a traffic circle as voted upon by the residents. Chen Moore was issued a purchase order on July 6<sup>th</sup>, 2021 to begin the full design of a traffic circle at 13<sup>th</sup> street and Avenue R. On June 24<sup>th</sup>, 2021 City staff provided a preliminary schedule for activities to deliver the completed construction of the traffic circle. The memorandum was updated on July 27<sup>th</sup>, 2021 to ensure the project would be completed by the end of 2021.

As shown on the enclosed updated memorandum, the next project benchmark will occur on September 1<sup>st</sup>, 2021 with the final construction plans submitted to City staff. The plans will be quickly provided to the purchasing department for following the procurement process and move to issuing the purchase order to a contractor to begin construction in November of this year.

**Fiscal Years**  
**Capital Expenditures**  
**Operating Costs**  
**External Revenues**  
**Program Income (city)**  
**In-kind Match (city)**  
**Net Fiscal Impact**  
**NO. Additional FTE Positions**  
**(cumulative)**

**III. Review Comments**

A. Finance Department Comments:

B. Purchasing/Intergovernmental Relations/Grants Comments:

C. Department Director Review:

Contract Start Date  
 Contract End Date  
 Renewal Start Date  
 Renewal End Date  
 Number of 12 month terms this renewal  
 Dollar Amount  
 Contractor Company Name  
 Contractor Contact  
 Contractor Address  
 Contractor Phone Number  
 Contractor Email  
 Type of Contract  
 Describe

ATTACHMENTS:

File Name	Description	Upload Date	Type
<a href="#">Memo - 13th Street Traffic Calming.pdf</a>	Cover Memo	8/26/2021	Cover Memo
<a href="#">RES 04-21 - UPS Site Plan Expansion.pdf</a>	Resolution 04-21	8/25/2021	Resolution
<a href="#">190918 -13th St Traffic Calming Analysis Technical Memorandum - DRAFT.PDF</a>	Technical Memorandum	8/25/2021	Backup Material
<a href="#">210512-13th Street Traffic Calming Voting Board.jpg</a>	Community Vote Graphic	8/25/2021	Backup Material
<a href="#">Memo to City Manager - 13th st improvements 6-24-21 7-27-21 update.pdf</a>	Manager Memo	8/25/2021	Backup Material

REVIEWERS:

Department	Reviewer	Action	Date
Public Works	Bailey, Terrance	Approved	8/25/2021 - 4:49 PM
Purchasing	Williams, Glendora	Approved	8/25/2021 - 5:19 PM
Finance	sherman, randy	Approved	8/25/2021 - 5:35 PM
Attorney	Wynn, Dawn	Approved	8/25/2021 - 6:06 PM
City Clerk	Robinson, Claudene	Approved	8/25/2021 - 7:02 PM
City Manager	Jacobs, Deirdre	Approved	8/26/2021 - 7:50 PM



"The Best Waterfront City in Which to Live, Work and Play."

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**CITY OF RIVIERA BEACH – MEMORANDUM**

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**TO:** HON. MAYOR, CHAIRPERSON AND CITY COUNCIL

**THROUGH:** JONATHAN EVANS, CITY MANAGER, MPA, MBA, ICMA-CM

**FROM:** TERRENCE N. BAILEY, P.E., CITY ENGINEER

**SUBJECT:** 13<sup>TH</sup> STREET TRAFFIC CALMING PROJECT

**DATE:** SEPTEMBER 1, 2021

**CC:** GENERAL PUBLIC

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**Background:**

In 2018, residents of Federal Gardens community expressed concern with large trucks utilizing 13<sup>th</sup> Street west of Avenue “R” as a bypass to Congress Avenue. This area west of Avenue “R” is a residential community with senior citizens and children at play. The UPS trucks became a specific point of concern as travel through the community very early in the morning and late into the evening.

As such, staff commissioned a study to determine traffic calming alternatives to address the resident concerns. Accordingly, in September 2019, Chen Moore and Associates published the technical memorandum on 13<sup>th</sup> Street. The memorandum was provided and presented to City Council in 2020 and staff was directed to take the options to the residents so that they could select the alternative preferred.

At the end of 2020, UPS made a site plan submittal for the addition of 51,883 square feet (SP-21-06) of warehouse at the Avenue “P” and Blue Heron facility. During the site plan process, the management team of UPS was made aware of the community concerns on the use of 13<sup>th</sup> Street in the residential area west of Avenue “R” and their management committed to eliminate the use of 13<sup>th</sup> Street west of Avenue “R” in their service routes.

During the review and approval process, UPS committed to contribute \$35,000 towards traffic calming improvements on 13th Street. The site plan was approved on January 6<sup>th</sup>, 2021 via Resolution 04-21. On May 6, 2021 Chen Moore, the Merchant Group, and Councilwoman Lamer



hosted a community meeting on 13<sup>th</sup> Street to allow residents to vote on one of the three traffic calming options. The results of the voting are below:

Alternative No.	Alternative Name	Number of 1st Place Votes	Number of 2nd Place Votes
1	Chicanes	3	16
2	Traffic Circle	21	4
3	Partial Road Closure	1	1

Following the community vote, staff reached out to Chen Moore for a proposal to conduct the full design of a traffic circle as voted upon by the residents. Chen Moore was issued a purchase order on July 6<sup>th</sup>, 2021 to begin the full design of a traffic circle at 13<sup>th</sup> Street and Avenue “R”.

On June 24<sup>th</sup>, 2021 City staff provided a preliminary schedule for activities to deliver the completed construction of the traffic circle. The memorandum was updated on July 27<sup>th</sup>, 2021 to ensure the project would be completed by the end of 2021. As shown on the enclosed updated memorandum, the next project benchmark will occur on September 1<sup>st</sup>, 2021 with the final construction plans submitted to City staff. The plans will be quickly provided to the Procurement Department for its further handling in order for a contractor to begin construction in November of this year.

**Citywide Goal:**

This Item facilitates Goals #1 and 2

Goal #1 Achieve a Prosperous, Resilient, and Sustainable Economy

Goal #2. Create aesthetic improvements with focus on most vulnerable communities

**Budget/Fiscal Impact:**

The fiscal impact of this work order is funded inside the existing operational budget.

**Recommendation(s):**

**Attachments:**

13<sup>th</sup> Street Traffic Calming Technical Memorandum

Resolution 04-21 UPS Site Plan

Traffic Calming Selection Board

"The Best Waterfront City in Which to Live, Work And Play."



**RESOLUTION NUMBER 04-21**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RIVIERA BEACH, PALM BEACH COUNTY, FLORIDA, APPROVING SITE PLAN APPLICATION (SP-20-06) FROM UNITED PARCEL SERVICES, INC. TO ADD APPROXIMATELY 51,883 SQUARE FEET IN BUILDING AREA TO AN EXISTING WAREHOUSE DISTRIBUTION BUILDING, CURRENTLY 188,857 SQUARE FEET IN BUILDING AREA, FOR A TOTAL OF 240,740 SQUARE FEET IN BUILDING AREA, ON APPROXIMATELY 29.12-ACRE PARCEL OF LAND, LOCATED AT 2001 AVENUE P, IMMEDIATELY SOUTH OF W. BLUE HERON BOULEVARD, WEST OF AVENUE P, EAST OF AVENUE R AND NORTH OF W. 15<sup>TH</sup> STREET, IDENTIFIED BY PARCEL CONTROL NUMBER 56-43-42-29-55-001-0030, HAVING A COMMERCIAL / INDUSTRIAL FUTURE LAND USE DESIGNATION AND A GENERAL COMMERCIAL (CG) / GENERAL INDUSTRIAL (IG) ZONING DESIGNATION; PROVIDING FOR CONDITIONS OF APPROVAL; AND PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS**, the City received an application for site plan approval (SP-20-06) associated with 2001 Avenue P, identified by parcel control number 56-43-42-29-55-0010030; and

**WHEREAS**, the subject property has a Commercial and Industrial Future Land Use designation, as well as, a General Commercial (CG) and General Industrial (IG) Zoning designation; and

**WHEREAS**, the Applicant desires to add approximately 51,883 square feet (SF) in building area to an existing distribution and warehouse building. Currently at 188,857 square feet in building area, this addition would result in a total of 240,740 square feet in building area, for their existing warehouse distribution use, which requires a site plan approval within the DG Zoning District; and

**WHEREAS**, the Planning and Zoning Board reviewed the subject site plan application (SP-20-06) along with corresponding documents and City staff report, on November 17, 2020, and recommended approval to the City Council; and

**RESOLUTION NUMBER 04-21**

**Page 2 of 4**

**WHEREAS**, City staff and the City Council finds that the proposed site plan is consistent with the City's Comprehensive Plan and the City's Code of Ordinances; and

**WHEREAS**, the City Council of the City of Riviera Beach desires to approve this site plan application (SP-20-06).

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF RIVIERA BEACH, PALM BEACH COUNTY, FLORIDA, as follows:**

**SECTION 1.** The City Council finds that the site plan application (SP-20-06) along with corresponding documents and City staff report, associated with 2001 Avenue P, identified by Parcel Control Number 56-43-42-29-55-001-0030, is consistent with the City's Comprehensive Plan and the City's Code of Ordinances.

**SECTION 2.** The City Council approves the site plan application (SP-20-06) with the following conditions of approval:

1. A two-year landscaping performance bond for 110% of the value of landscaping and irrigation shall be required before a Certificate of Occupancy or Certificate of Completion is issued for the Addition.
2. Construction and landscaping improvements must be initiated within 18 months of the effective date of this Resolution in accordance with Section 31-60(b), of the City Code of Ordinances. Demolition, site preparation and/or land clearing shall not be considered construction. Building permit application and associated plans and documents shall be submitted in its entirety and shall not be accepted by City staff in a partial or incomplete manner.
3. City council authorizes City staff to approve future amendments to this site plan administratively so long as the site plan does not deviate greater than 5% from the originally approved site plan.
4. This development must receive final Certificate of Occupancy from the City for all buildings approved within five years of the approval of the adopting resolution or the adopting resolution shall be considered null and void, requiring the applicant to resubmit application for site plan and special exception approval and re-initiate the site plan approval process.
5. All future advertising must state that the development is located in the City of Riviera Beach. Fees and penalties in accordance with City Code Sec.

**RESOLUTION NUMBER 04-21**

**Page 3 of 4**

31-554 will be levied against the property owner and/or business for violation of this condition.

6. Once approved, this resolution shall supersede any previous site plan approval resolutions associated with this property, causing previous site plan approval resolutions to be null and void.
7. Prior to the City's issuance of a Certificate of Occupancy, plat application (PA-2003) to re-plat the existing property of record into one lot, eliminating the railroad ROW (P) parcel, associated with parcel control number 56-43-42-29-55-000-0010, must be completed, recorded with the County Clerk of Courts records and submitted to the City's Planning and Zoning Division.
8. PUBLIC WORKS CONDITION OF APPROVAL: No truck trips will utilize W. 13<sup>th</sup> Street west of Avenue R.
9. UPS will work with the City of Riviera Beach to make a contribution to street improvements on 13th St. to help mitigate UPS related traffic. This amount shall not exceed \$35k and would be paid to the City within 120 days of approval to this resolution.
10. UPS will work with contractors and vendors to promote the hiring of residents from the City of Riviera Beach for construction. Furthermore, UPS will also work to hire residents of Riviera Beach once the building expansion as described in this resolution becomes operational.


**SECTION 3.** The associated Site Plan, Landscape Plan, and Building Elevation Plan are attached hereto and made a part of this resolution as Exhibit 'A', Exhibit 'B', and Exhibit 'C'.

**SECTION 4.** Should any one or more of the provisions or elements of this resolution be held invalid, such provision or element shall be null and void, and shall be deemed separate from the remaining provisions or elements and shall in no way affect the validity of any of the remaining provisions or elements of this Resolution.

**SECTION 5.** This Resolution shall take effect immediately upon approval.


**PASSED and APPROVED** this 20<sup>th</sup> day of January, 2021.


APPROVED:

  
\_\_\_\_\_  
RONNIE L. FELDER  
MAYOR

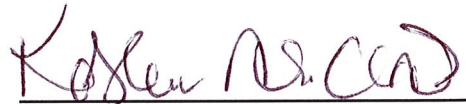
  
\_\_\_\_\_  
JULIA A. BOTEL, Ed.D  
CHAIRPERSON


ATTEST:

  
\_\_\_\_\_  
CLAUDENE L. ANTHONY,  
CERTIFIED MUNICIPAL CLERK  
CITY CLERK

  
\_\_\_\_\_  
DOUGLAS A. LAWSON  
CHAIR PRO TEM

\_\_\_\_\_  
TRADRICK MCCOY  
COUNCILPERSON

  
\_\_\_\_\_  
KASHAMBA MILLER-ANDERSON  
COUNCILPERSON

  
\_\_\_\_\_  
SHIRLEY D. LANIER  
COUNCILPERSON

MOTIONED BY: D. LAWSON

SECONDED BY: T. MCCOY

T. MCCOY: AYE

K. MILLER-ANDERSON: AYE

S. LANIER: AYE

J. BOTEL: AYE

D. LAWSON: AYE

REVIEWED AS TO LEGAL SUFFICIENCY

  
\_\_\_\_\_  
DAWN S. WYNN, CITY ATTORNEY

DATE: January 6, 2021



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# 13<sup>th</sup> Street Traffic Calming Analysis

## Draft Technical Memorandum

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### *City of Riviera Beach Public Works Department*



1481 15th Street  
Riviera Beach, Florida 33404

Prepared By:



500 Australian Avenue South, Suite 850  
West Palm Beach, Florida 33401  
State of Florida Engineering Business  
License No.4593  
September 18, 2019

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## Tables

Table 4.8.1: Cost Estimates for Design Alternatives

Table 4.9.1: Traffic Calming Alternative Analysis

## Exhibits

Exhibit 1: Project Location Map

Exhibit 2.1 through 2.8: Conceptual Designs

## 1 Introduction

West 13<sup>th</sup> Street between Avenue U and Avenue R runs through a residential neighborhood known as Federal Gardens (neighborhood). The residents of the City have brought up concerns that the trucks traveling on West 13<sup>th</sup> Street are presenting a safety hazard. The purpose of this memorandum is to present traffic calming alternatives that may reduce the speed of vehicles in the project area or discourage through truck traffic. For this memorandum the Project Area is defined as West 13<sup>th</sup> Street from Avenue U to Avenue R.

## 2 Background

The Federal Gardens neighborhood is bounded on the west by Avenue U, on the north by West 14<sup>th</sup> Street, on the east by Avenue R and on the south by West 11<sup>th</sup> Street. The neighboring properties consist of residential, municipal, educational and industrial uses. West 13<sup>th</sup> Street bisects the neighborhood and connects on the west end to Congress Avenue, a Palm Beach County thoroughfare road. On the east side of the neighborhood West 13<sup>th</sup> Street connects to various City streets for residential and industrial uses before intersecting with Australian Avenue, another Palm Beach County thoroughfare road. See Exhibit 1 for project location, land use and roadway network.

The roadway section for West 13<sup>th</sup> Street consists of two lanes, each 12-feet wide, curb and gutter, grass strip and sidewalk. The roadway cross section from the West 13<sup>th</sup> Street design plans, prepared by Jordan, Jones & Goulding, is shown below in Figure 2.a.

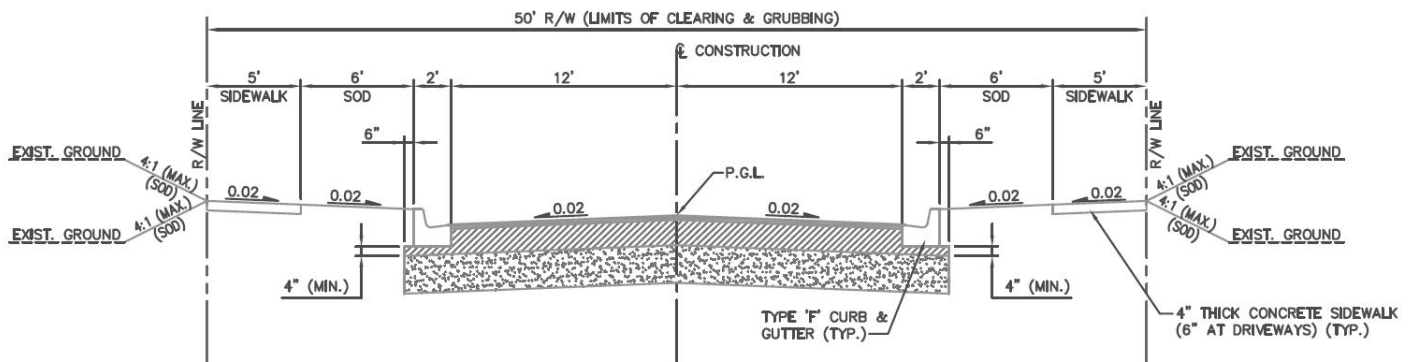
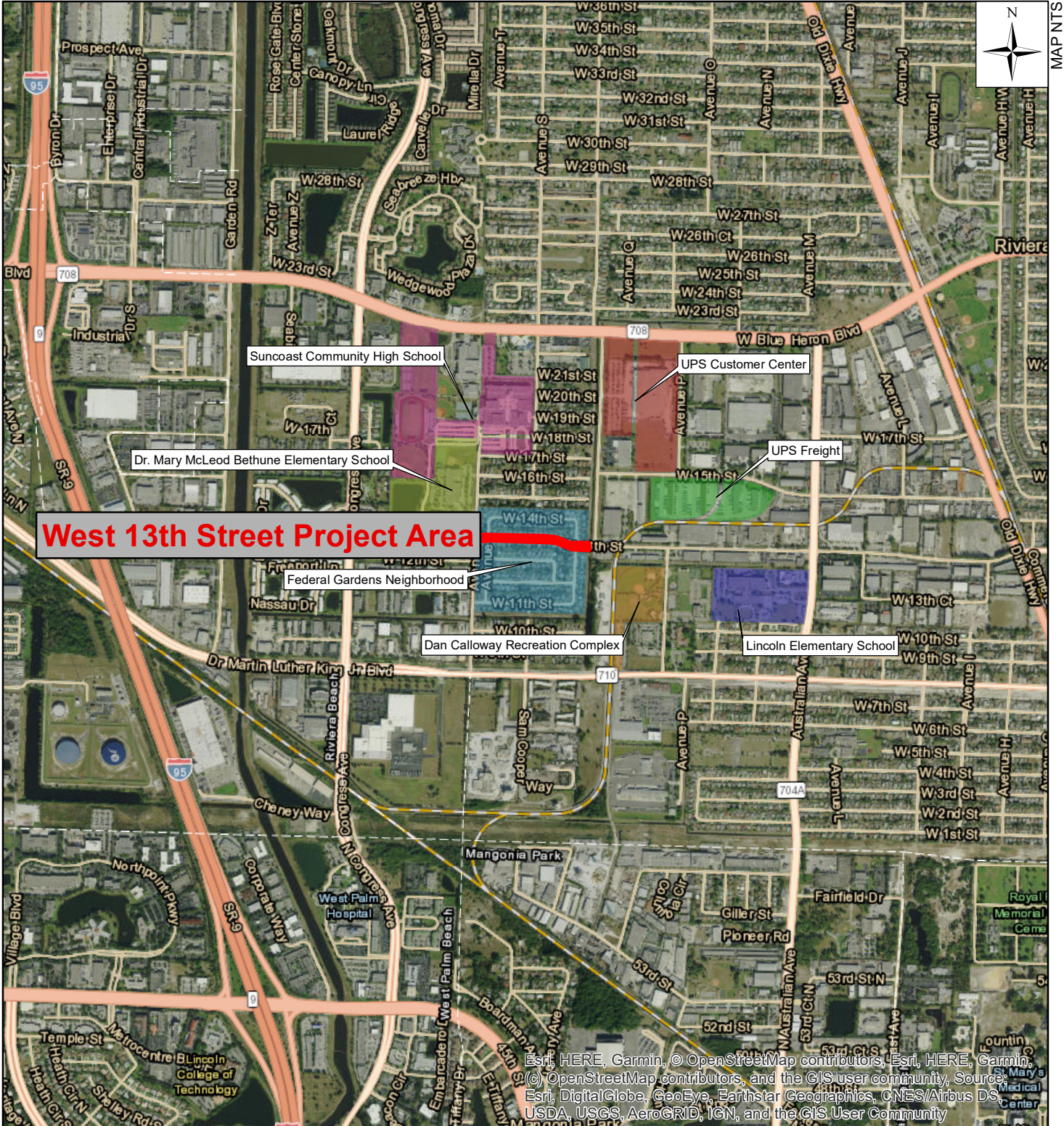


Figure 2.a: West 13<sup>th</sup> Street Typical Section

Some existing features in the current roadway that are recognized for their potential to slow traffic are speed humps and neighborhood entryway signage. The speed humps require the vehicle to slow down to prevent damage and the neighborhood entryway signs signify to the motorist that they are entering a neighborhood that has different traffic behavior than the surrounding areas. The existing neighborhood currently has two (2) speed humps and two (2) entry sign features. These devices are currently not providing the level of traffic calming for resident’s satisfaction.

# CITY OF RIVIERA BEACH

## West 13th Street Traffic Calming Analysis



**West 13th Street Project Area**

- Legend**
- Project Area
  - Federal Gardens Neighborhood
  - Dan Calloway Recreation Complex
  - Dr. Mary McLeod Bethune Elementary School
  - Lincoln Elementary School
  - Suncoast Community High School
  - UPS Customer Center
  - UPS Freight

**Exhibit 1: Project Location Map**



Esri, HERE, Garmin, © OpenStreetMap contributors, Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

### 3 Coordination Efforts

Traffic calming measures have the greatest chance of success when the stakeholders are involved to discuss their issues and expectations. The traffic calming measures presented in this memorandum should be coordinated with the following stakeholders at a minimum prior to implementation:

- Residents of Federal Gardens about traffic concerns and convenience for neighborhood entry and exit;
- Surrounding business owners for business traffic entry and exit;
- Palm Beach County School Board regarding impacts to the school routes for both buses, passenger vehicles and pedestrians;
- Palm Tran for bus route impacts;
- Riviera Beach Fire Department and Police Department for possible effects to emergency response time

### 4 Traffic Calming Alternatives

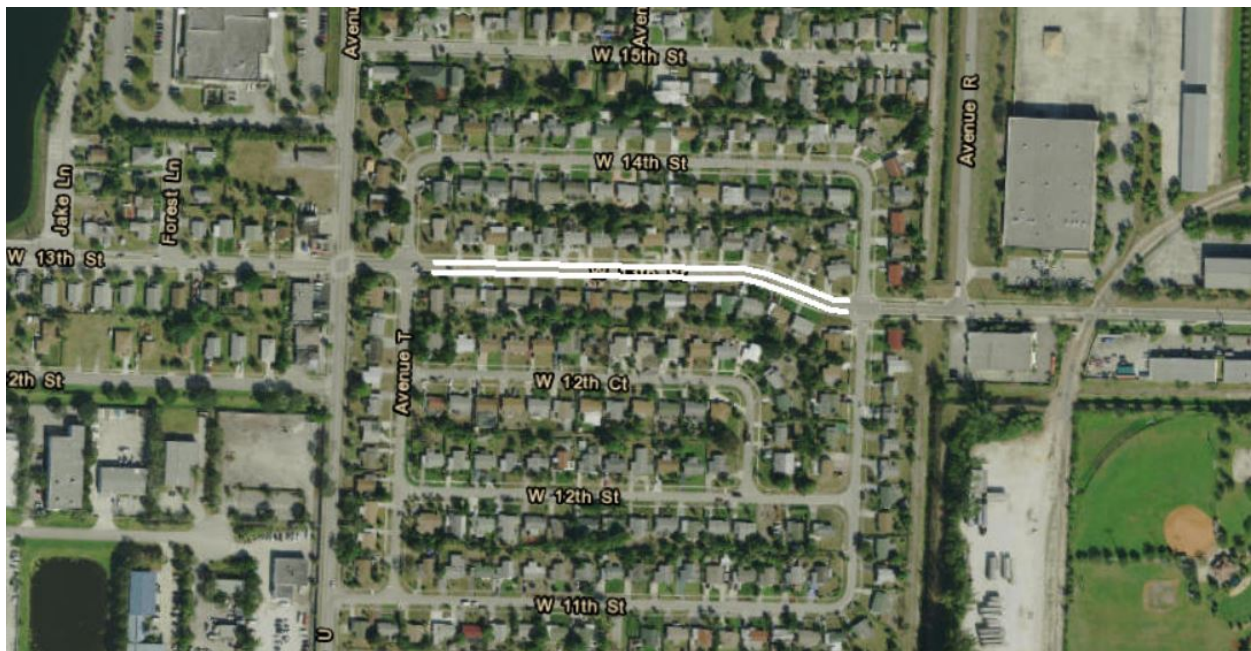
The Institute of Transportation Engineers defines traffic calming as “the combination of measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users. Traffic calming consists of physical design and other measures put in place on existing roads to reduce vehicle speeds and improve safety for pedestrians and cyclists.” Sections 4.1 through 4.7 describe traffic calming measures that may be applicable for the Project Area. The traffic calming measures included in these sections have been studied for effectiveness by the Federal Highway Administration (FHWA). Also included in this section are conceptual designs for each alternative. Section 4.8 provides budget level costs for implementation and Section 4.9 provides a comparison for the various alternatives.

### 4.1 Alternative 1: Narrowed Travelway

Narrowing of travel lanes reduces speeds and makes drivers more aware of their surrounding areas, including other users of the right-of-way. This lane narrowing can be achieved through the use of pavement markings in various configurations. For this Project Area, it is recommended that the lanes be narrowed to a 10-foot width. Figure 4.1.a shows examples of pavement markings for narrowing lanes including solid stripe and cross striping. Figure 4.1.b shows the location of proposed pavement markings in the Project Area.



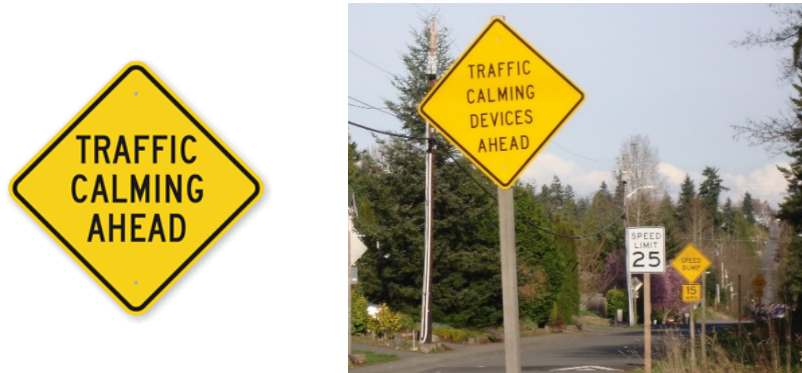
*Figure 4.1.a: Narrowing Lanes Striping Examples*



*Figure 4.1.b: Proposed Design Alternative 1: Narrowing Lanes*

## 4.2 Alternate 2: Traffic Calming Signage

Announcing signage to indicate an area has traffic calming devices will make drivers slow their speed in anticipation of the traffic calming devices. An example of traffic calming signage is shown in Figure 4.2.a below. These devices would be placed on either side of the Neighborhood entrance, at the intersections of West 13<sup>th</sup> Street with Avenue T and Avenue R, as shown in Figure 4.2.b.



*Figure 4.2.a: Traffic Calming Signage Example*



*Figure 4.2.b: Proposed Design Alternative 2: Traffic Calming Signage*

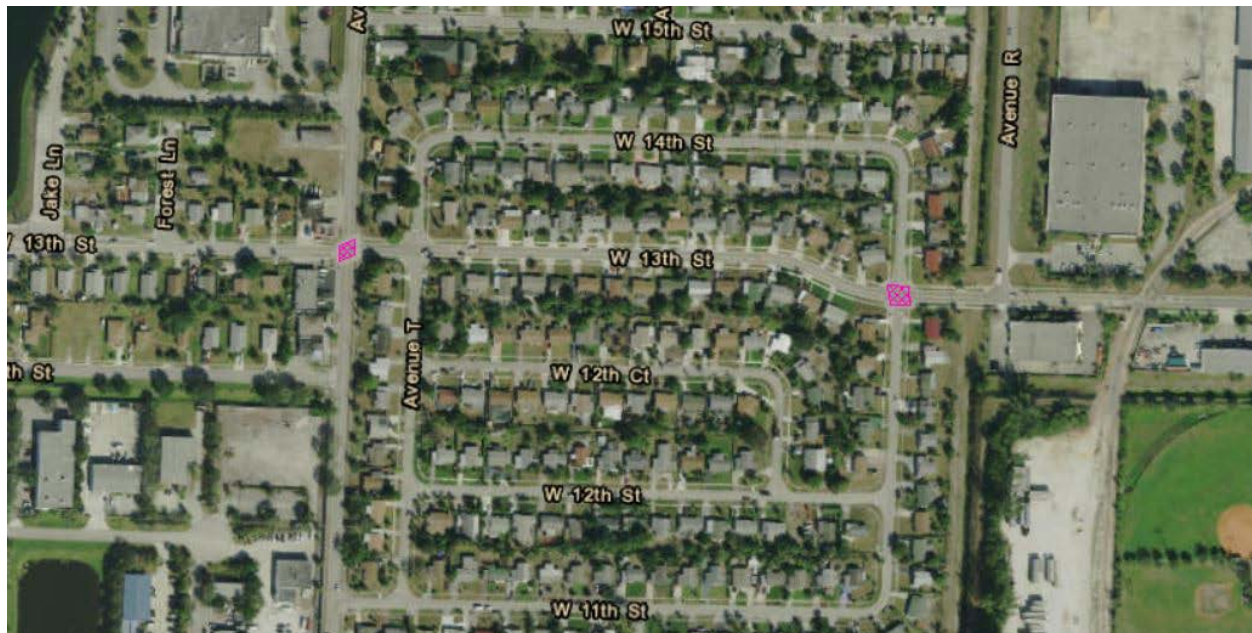


### 4.3 Alternate 3: Raised Intersection

Raised intersections are a form of speed tables for an entire intersection, that incorporate the raised profile of a speed hump with a more gradual transition. The average reduction in speed for raised intersections is approximately 7 – 9 mph. Raised intersection also provide an opportunity for specialty pavement materials which can provide neighborhood beautification and unique character. An example of a raised intersection with specialty pavement is shown in Figure 4.3.a. The raised intersections would be proposed at the intersections of West 13<sup>th</sup> Street with Avenue U and Avenue R as shown in Figure 4.3.b.



*Figure 4.3.a: Raised Intersection Example*



*Figure 4.3.b: Proposed Design Alternative 3: Raised Intersection*

#### 4.4 Alternate 4: Raised Crosswalks

Raised crosswalks provide the same general speed reduction and beautification benefits as the raised intersection. An example of a raised crosswalk and signage is shown in Figure 4.4.a. The raised crosswalks would be proposed at the intersections of West 13<sup>th</sup> Street with Avenue U and Avenue R, for the pathway going across West 13<sup>th</sup> Street as shown in Figure 4.4.b.



*Figure 4.4.a: Raised Crosswalk Example*



*Figure 4.4.b: Proposed Design Alternate 4: Raised Crosswalk*

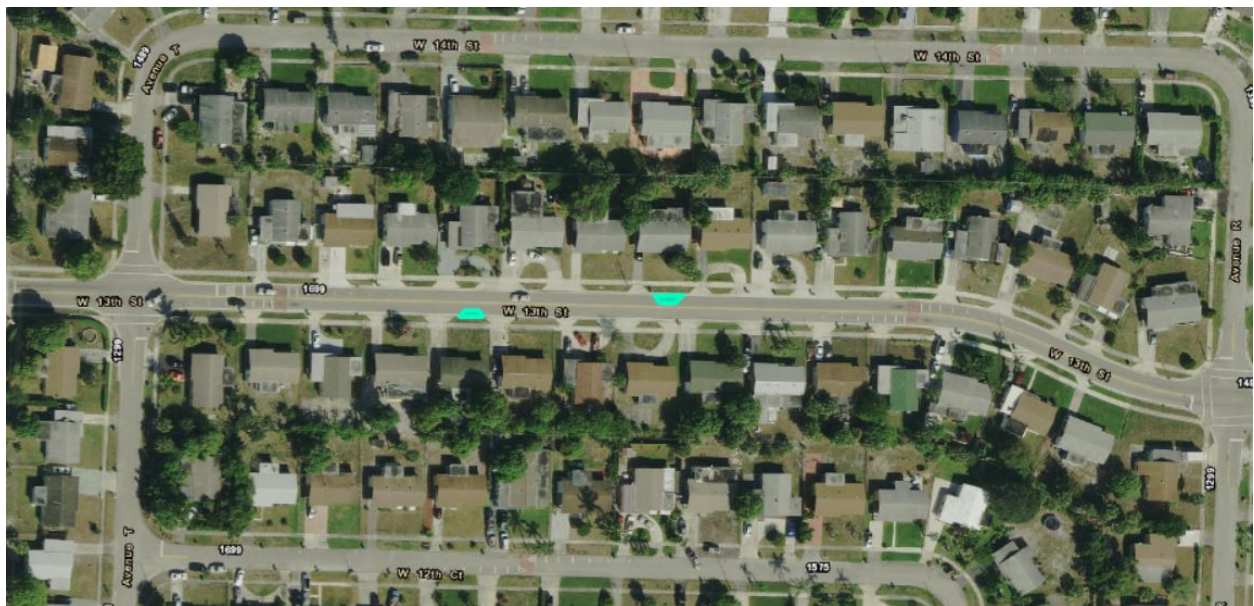
## 4.5 Alternate 5: Chicanes

Chicanes are curbed bulb outs set adjacent to the curb on alternating sides of the street that cause vehicles to travel in an “S” pattern and therefore reduce speed. Chicanes can be made of concrete, sod, specialty pavement materials, or landscape features. Examples of chicanes area shown below in Figure 4.5.a.



*Figure 4.5.a: Chicanes Example*

Chicanes should be spaced at intervals that slow traffic but still allow vehicles to pass safely. Also, they shall not interfere with driveways. Proposed locations for the chicanes are shown in Figure 4.5.b.



*Figure 4.5.b: Proposed Design Alternative 5: Chicanes*

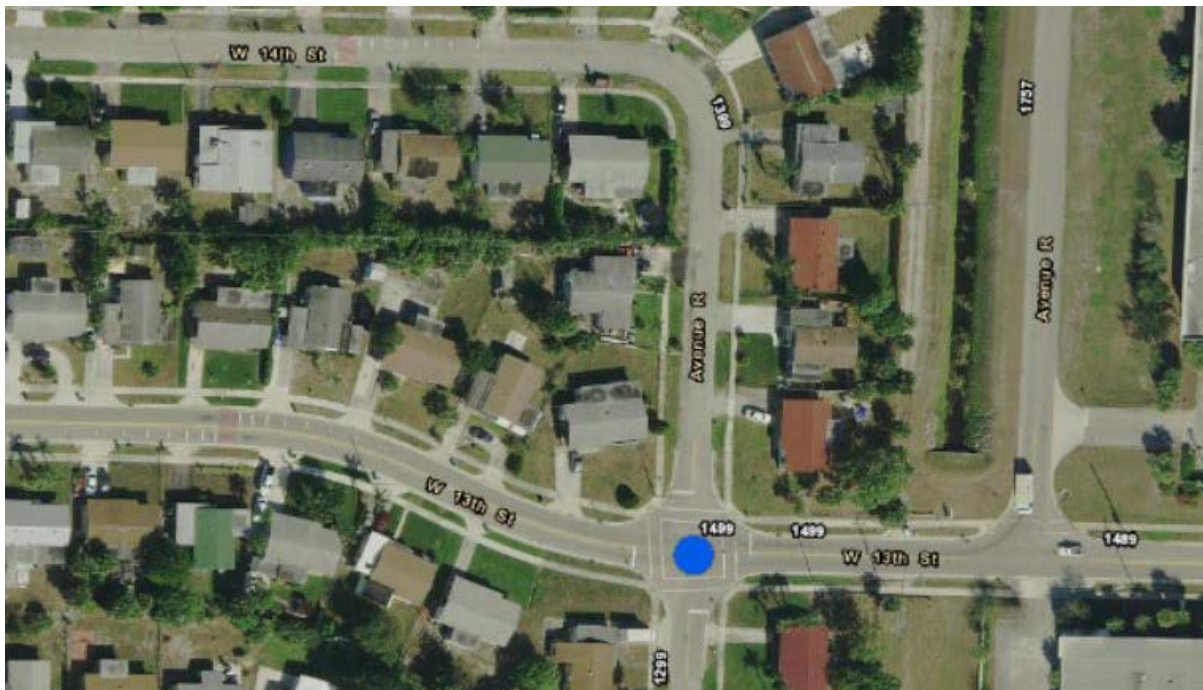
#### 4.6 Alternate 6: Traffic Circle

Traffic circles are channelizing devices that direct traffic clockwise around an intersection. They are typically raised with landscape or signage in the center to increase visibility. These traffic circles are designed such that emergency vehicles can navigate through them, however large trucks would need to drastically slow down in speed through the intersection. Figure 4.6.a shows examples of traffic circles.



*Figure 4.6.a: Traffic Circles Example*

The proposed location for the traffic circle is shown in Figure 4.6.b.



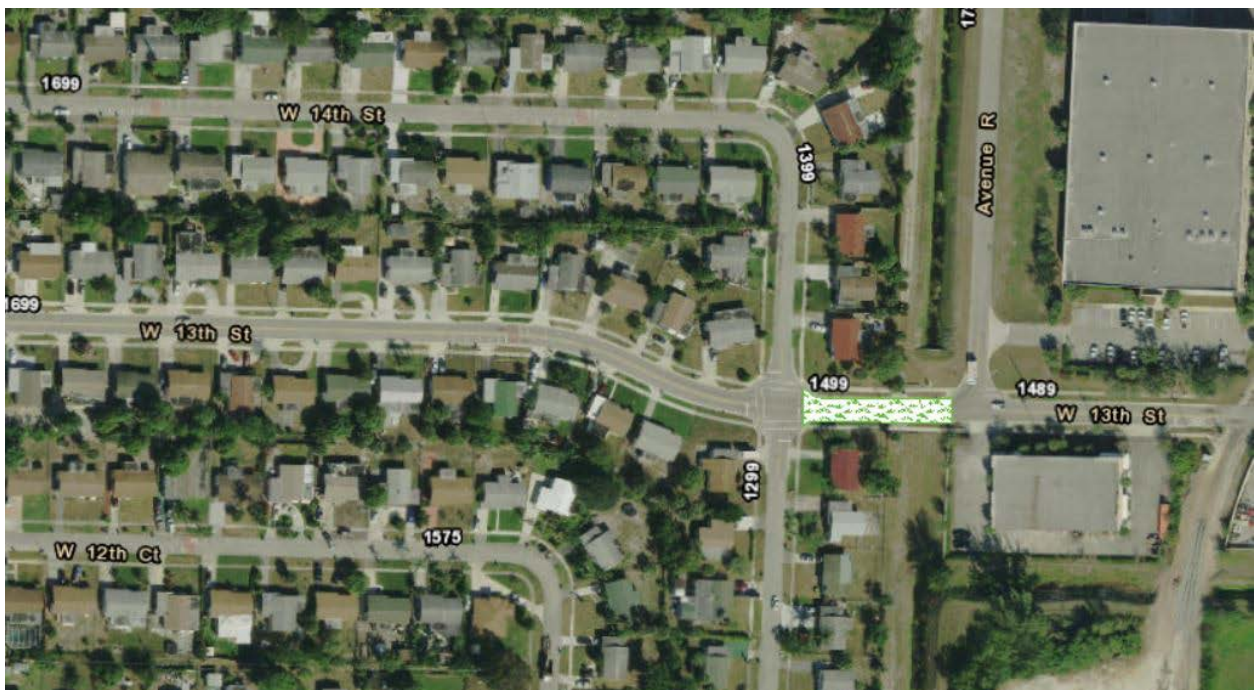
*Figure 4.6.b: Proposed Design Alternative 6: Traffic Circle*

## 4.7 Alternate 7: Permanent Road Closure

A permanent road closure terminates one leg of an intersection. An example of a permanent road closure is shown in Figure 4.7.a. The road would be eliminated on West 13<sup>th</sup> Street from Avenue R, west of the City canal, to Avenue R, east of the City canal. This road closure would eliminate any through traffic on West 13<sup>th</sup> Street from Avenue T to Avenue R as shown in Figure 4.7.b. All traffic within the Project Area would be related to the residential properties of the Neighborhood.



*Figure 4.7.a: Permanent Road Closure Example*



*Figure 4.7.b: Design Alternative 7: Permanent Road Closure*

## 4.8 Cost Estimates

A cost estimate has been prepared and shown in Table 4.8.1 for each design alternative for the City's consideration when choosing which traffic calming measures to implement. The proposed costs included in this memorandum are based on industry standard pricing and conditions of the project area. Costs are preliminary and may change when detailed design is performed.

*Table 4.8.1: Cost Estimates for Design Alternatives*

Alternative			
No.	Alternative Description	Cost	Assumptions
1a	Narrowed Travelway - Single White Stripe	\$19,200	2,400 LF of 6" solid white striping at \$8/LF
1b	Narrowed Travelway - Cross Hatch Stripes	\$26,400	2,400 LF of 6" solid solid white striping at \$8/LF, plus 720 LF of 12" white striping at \$10/LF.
2	Traffic Calming Signage	\$1,500	Includes two (2) signs.
3	Raised Intersection	\$30,375	Stamped asphalt for center of intersection, 45'x45', \$135/SY
4	Raised Crosswalk	\$27,000	Stamped asphalt for center of crosswalk, 50 SY each crosswalk, \$135/SY, 4 total crosswalks
5	Chicanes	\$20,000	No drainage improvements are required for installation; sod (no trees); 4 chicanes at \$10,000/EA
6	Traffic Circle	\$20,000	Stamped concrete in center, standard signage; 35 SY raised traffic circle
7	Permanent Road Closure	\$10,000	Pavement will be replaced with asphalt, 500 SY at \$20/SY

## 4.9 Comparison of Alternatives

Many factors should be considered before implementing the traffic calming measures proposed in this memorandum. Table 4.9.1 below outlines costs, speed reduction and beautification possibilities for comparison purposes. The effectiveness for each alternative can be measured in terms of the anticipated speed reduction. The speed reduction in turn has an effect on the reduction of volume of traffic, as motorists will choose other routes without traffic calming.

*Table 4.9.1: Traffic Calming Alternative Analysis*

Alternative No.	Alternative Description	Cost	Speed Reduction <sup>(1)</sup>	Considered a Beautification?
1a	Narrowed Travelway - Single White Stripe	\$19,200	0.5 mph	No
1b	Narrowed Travelway - Cross Hatch Stripes	\$26,400	0.5 mph	No
2	Traffic Calming Signage	\$1,500	3 mph <sup>(2)</sup>	No
3	Raised Intersection	\$30,375	0.3 - 1 mph	Yes
4	Raised Crosswalk	\$27,000	7 - 9 mph	Yes
5	Chicanes	\$40,000	3 - 9 mph	Yes
6	Traffic Circle	\$20,000	5 mph <sup>(3)</sup>	Yes
7	Permanent Road Closure	\$10,000	N/A	Yes

(1) Per FHWA “Traffic Calming ePrimer” [https://safety.fhwa.dot.gov/speedmgt/traffic\\_calm.cfm](https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm).

(2) Results will vary based on fines and enforcement

(3) Based on posted road speed limit of 25 mph and traffic circle recommended speed of 20 mph

## 5 Conclusion

This technical memorandum presents alternatives for the purpose of evaluating traffic calming, including speed and volume reduction, on West 13<sup>th</sup> Street within the Federal Gardens neighborhood. These alternatives can be used individually or combined to achieve the desired results. It is recommended that the alternatives be brought to the public and surrounding business owners for input and feedback. Also, certain alternatives, such as the permanent road closure, may need to be further analyzed by a traffic engineer to confirm that the re-routing of vehicles will not adversely impact adjacent roadways. Coordination for access within and through West 13<sup>th</sup> Street with these traffic calming measures should be discussed with the Palm Beach County School Board, Palm Tran, Riviera Beach Police Department and Riviera Beach Fire Department to further understand the impacts to each stakeholder.

## 6 References

FHWA “Traffic Calming ePrimer” [https://safety.fhwa.dot.gov/speedmgt/traffic\\_calm.cfm](https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm).

Institute of Transportation Engineers (ITE) “Speed Control in Residential Areas”

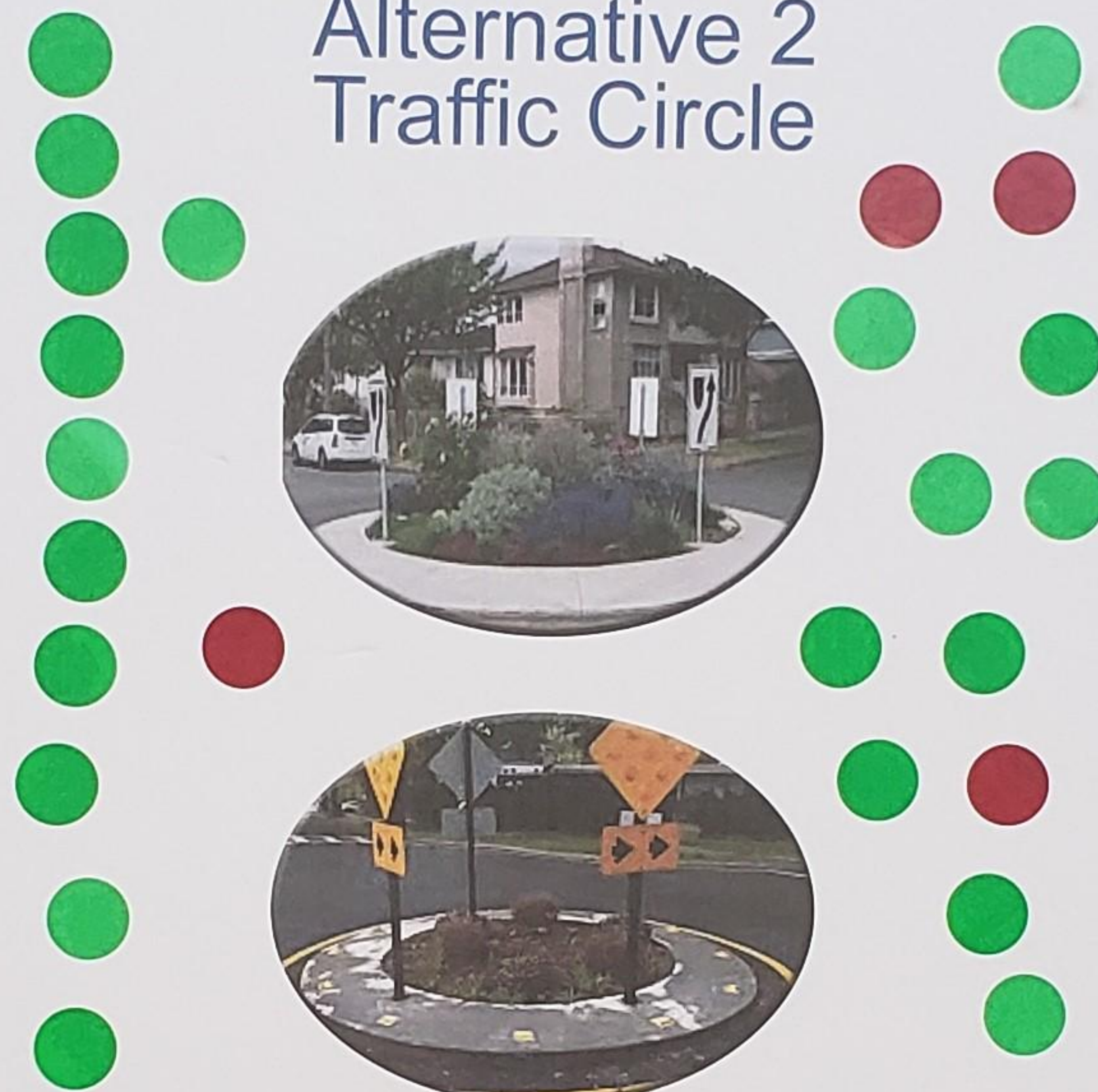


# District 3 Traffic Calming Alternatives

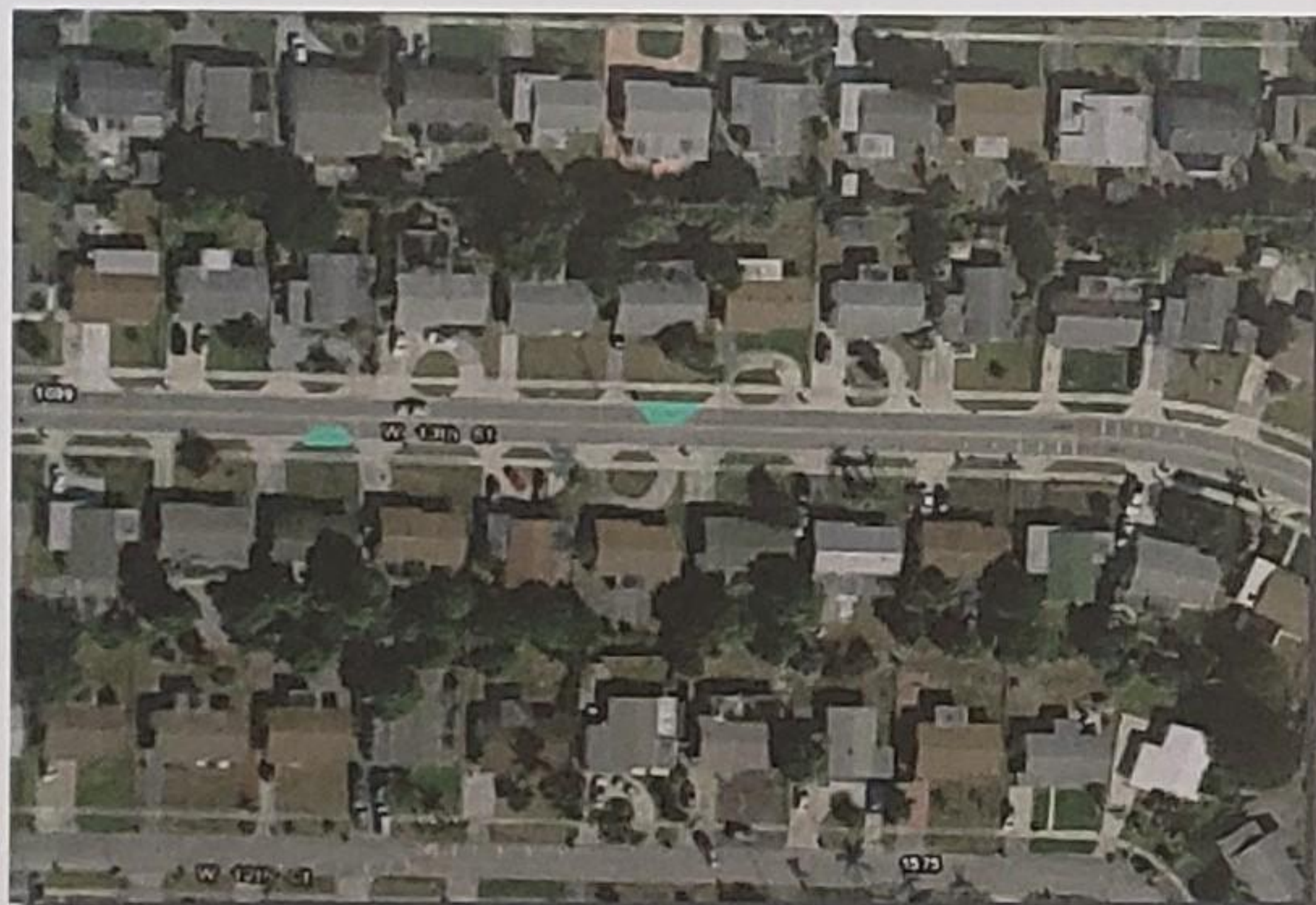
Alternative 1  
Chicanes



Alternative 2  
Traffic Circle



Alternative 3  
Partial Road Closure  
(Eastbound Traffic Only)



TO: Jonathan Evans, City Manager  
Deidra Jacobs, Assistant City Manager

FROM: Sedrick Clark, Interim Public Works Director  
Clarence Sirmons, Development Services Director  
Terrence Bailey, City Engineer

DATE: 6/24/2021 Updated 7-27-21

RE: Federal Gardens 13<sup>th</sup> Street Improvement Project

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Below please find a tentative schedule for the above referenced 13<sup>th</sup> street improvement project:

- Scope Development - June 28, 2021
- Purchase Order Issued – July 6, 2021
- Final Engineering Plan Design (100%) September 1, 2021
- Procurement Advertising September 13, 2021
- Bids Received October 13, 2021
- Purchase Order Issued October 20, 2021
- Construction Commencement November 1, 2021
- Construction Completion December 31, 2021