

October 3, 2019

Darci Mayer
Transportation Planner
Hollywood Community Redevelopment Agency
1948 Harrison Street
Hollywood, FL 33020

Re: Professional Consulting Services for the Young Circle Roadway Design Project: Project Development and Implementation Plan

Dear Ms. Mayer:

Marlin Engineering, Inc. (MARLIN) proposes to provide the services identified below pursuant to the Professional Services Agreement provided by the City of Hollywood Community Redevelopment Agency ("CRA") for Traffic Engineering Services dated February 13, 2018. Marlin will be supported by via planning inc. (via) assisting in public and stakeholder coordination, traffic engineering.

This effort is a second phase of project development for the Young Circle proposal where the first phase consisted of providing traffic engineering data collection services, stakeholder meetings, SimTraffic illustrative traffic simulation, and conceptual planning-level cost estimates for the Young Circle Roadway Design Project. Under the first phase, the Project Team was successful in:

- o Collecting substantial multi-modal data providing details on pedestrian/bicycle and vehicular traffic as well as the origins and destinations of traffic in and around the circle;
- o Continuing to build public support;
- o Developing support from public agencies including the Broward Metropolitan Planning Organization, Broward County Transit the City of Hollywood and FDOT;
- o Refining project concepts;
- o Providing dynamic technical analysis showing that the proposed concept of developing a two-way traffic circle with roundabout access/egress to Young Circle provides for better multi-modal opportunities at the same time as it significantly improves overall vehicular operations; and
- o Coordinating with FDOT on the approach for Stage 2.

This next effort will result in the development of a multi-modal analysis tool providing metrics and visualization insight in order to refine alternatives in preparation for the design and construction phases. In addition, this next phase of development will identify integrated parking, pedestrian and bicycle infrastructure, continued outreach to the public and public agencies; multi-modal analysis of build and no-build scenarios, conceptual design (10% design), an environmental screening. The attached scope of work and staff hour estimate outlines the effort required which will be in accordance with Florida Department of Transportation's (FDOT) Standards and Specifications.

Sincerely,

Jose Santiago, PE, Project Manager



ATTACHMENT A - SCOPE OF SERVICES

GENERAL

In 2017, the Hollywood Community Redevelopment Authority (CRA) engaged Toole Design Group, with Ian Lockwood as Project Manager, to work with the community to take a comprehensive look at Young Circle and develop concepts to revive the Circle as an iconic public space with calmed traffic and improved pedestrian, bicycles and transit facilities. A number of alternative concepts were reviewed at community workshops resulting in a unique proposal to design the Circle as a two-way roadway and to replace traffic signals with roundabouts and stop controlled intersections. The unique nature of the concept spurred the funding of Stage 1 of this project to show supporters, and skeptics alike, that the traffic could work under the proposed configuration. The results were significant – traffic delay was reduced from 75 hours for total PM peak hour traffic to 18 hours for total PM peak hour traffic and increased speed from 9 miles per hour (mph) to 18 mph. The SYNCHRO SimTraffic simulation tool was used to visualize operations and it showed that the concept created a more even flow of traffic, with gaps that operated much more smoothly than the existing condition where there was constant stopping and starting between signals.

A methodology meeting was held with FDOT on August 20, 2019. The discussion followed the Stage 2 Concept Report process and the following items were identified as the most critical in moving forward:

- The Team should perform conceptual design (10%) to better understand the right of way impacts of the proposal, most importantly the roundabouts.
- Operations analysis of the roundabouts and geometric configuration need to be analyzed and provided.
- There should be a two-tiered analysis including:
- Multimodal modeling that provides performance measures including travel time, delay and queuing. VISSIM was recommended.
- Operations of the roundabouts. Sidra was recommended.

Scope of Work

TASK 1.0: PROJECT MANAGEMENT AND COORDINATION

The Consultant shall perform all services necessary to properly coordinate the activities of all parties involved in completing the Project. These include maintaining complete and accurate records of all activities and events relating to the Project; properly documenting all significant Project changes; and interpreting specifications and contract provisions.

In addition to the specific services detailed below, the Consultant shall coordinate work with the CRA, the City and the Project team; monitor the Project schedule as it relates to the Scope contained herein; and provide timely invoicing and reporting of Project progress.

1.1 Consultant Team Coordination Meetings – The Consultant will hold bi-weekly conference calls via GoToMeeting (up to 24) with all key staff and key SubConsultant staff as required. The meetings are intended to share works in progress, resolve issues, track action items and schedules as the projects evolves.

1.2 Project Work Plan Monitoring

The Consultant will prepare a work breakdown structure and schedule for all tasks and deliverables necessary to complete the Project on time and within budget. The schedule and work plan will be updated on a regular basis.

1.2 Quality Assurance/Quality Control

The Consultant will execute a specific QA/QC plan for this project. The plan will be submitted to the CRA within 2 weeks of Notice to Proceed and include oversight by the Project Manager over planning efforts and the Senior Designer over design elements.

TASK 2.0: DATA COLLECTION

The Consultant shall collect available data and inventory physical features of the corridor in order to prepare the assessment of the circle's operations, issues, and concerns to support the planning. Note that the Phase One study collected a significant amount of the multi-modal operations data.

2.1 Approved/Committed Development

The Consultant shall coordinate with CRA/City staff to obtain all approved development documentation of land use mix, driveways access and traffic studies.

2.3 Parking Plans and Supply

The Consultant shall coordinate with City Parking Department to obtain an inventory and utilization data (if available) of the existing on-street parking and city garages within the study area. Information will be presented on a base map.

2.3 Bicycle/Pedestrian Facilities Inventory

Existing pedestrian and bicycle use data was collected in Phase One. Pedestrian and bicycle connections to/from the outer rim of the project will be inventoried.

TASK 3: PUBLIC INVOLVEMENT AND STAKEHOLDER OUTREACH/COORDINATION

The Consultant and SubConsultant One shall provide technical input, coordination and support for the CRA to facilitate/hold various meetings. These activities will include.

3.1 Kick-off Meeting

The Consultant and SubConsultant One will participate and facilitate a kick-off meeting with the CRA Project manager and other CRA and City staff will to review and vet the Project Scope and schedule, and identify potential dates and venues for stakeholder interviews and other meetings.

3.2 FDOT Stage 2 Interim Meeting

The FDOT process includes an interim meeting prior to submitting the Concept Report. At this meeting the Marlin team will present to FDOT staff the technical results of the Stage 2 analysis.

3.3 Stakeholder meetings with City of Hollywood Traffic, Broward County Transit (BCT), Broward County Traffic Engineering Division (BCTED) and Broward MPO

3.4 Additional Meetings (8 meetings with public and City Commission Meetings)

The Consultant shall attend additional meetings at the direction of the CRA Project Manager. Two meetings will be to present to the CRA Board. These meetings may also include briefings with elected officials, homeowner associations and other special interest groups.

TASK 4: CONCEPT DEVELOPMENT AND MULTIMODAL DESIGN ANALYSIS

4.1 Establishment of Right of Way Lines.

Obtain survey and Right of Way in CADD format from CRA and develop base map. Assure survey has been performed to meet FDOT standards.

4.2 Design Controls and Criteria

The Consultant will prepare design controls and criteria for one alternative and design initial geometrics according to FDOT standards.

4.3 Conceptual Typical Section Development

The Consultant will develop conceptual typical sections for one alternative which address transportation needs and context. Development of typical sections will consider Context Sensitive solutions and Complete Street approaches and the needs of all Project users. Typical sections will be revised per FDOT comments.

4.4 Geometric Design

Consultant will prepare a conceptual plan, profile, and typical sections to show existing features, proposed geometry, and location of any environmental and geometric design and Right of Way constraints.

4.5 Access Management

Consultant will review FDOT's State Highway System Access Management Classification System and Standards and evaluate their application to this project. Consultant will recommend the proper access classification and standard to be applied to this Project.

4.6 Multi-modal Accommodations

The Consultant will review, evaluate and document the location and condition of existing pedestrian, bicycle, and public transit accommodations in the study area including the review of existing plans, reports and studies that outline strategies or define projects associated with alternative modes of travel. Consultant will also consider parking management strategies consistent with the transportation context and needs of all users of Young Circle. Consultant will assist the City of Hollywood CRA and FDOT in with coordination with the BMPO and BCT as appropriate.

4.7 Exceptions and Variations

The Consultant shall identify exceptions and variations for one alternative.

4.8 Preliminary Utilities Coordination

The Consultant will notify the Utility Agency Owners (UAOs) within the project and request existing and planned utility information for major above ground and subsurface facilities within this project in order to identify Utilities present in the corridor.

4.9 Planning Level Cost Estimates (LRE)

Consultant will develop a construction cost estimate using the FDOT Long Range Estimate program.

4.10 Conceptual Plan Set

Consultant will prepare a conceptual plan set including refined typical sections based on the effort provided for in tasks 4.1 through 4.9. The conceptual plan set will also be based on information gathered in Phase 1 and Tasks 2 including the initial public involvement and stakeholder outreach/coordination effort. The conceptual design plans (including conceptual typical sections) will meet FDOT design standards for all transportation modes.

Deliverables: Conceptual typical sections and plans, LRE cost estimates.

TASK 5.0: TRANSPORTATION ANALYSIS

5.1 "Background" Traffic Development

The SubConsultant will start with the data completed in Phase One, examine the historical counts for growth trends, review approved developments and traffic impact studies and calculate the base, or "background" traffic. The "background" traffic will be developed with the assumption that no other infrastructure improvements would be in place except for those that are fully programmed, committed and/or funded. FY 2030 will be used for opening year "Background" traffic and the 2040 adopted model will be used for future year projections. Average weekday AM and PM peak hour traffic will be the basis for analysis.

Once the technical analysis of future conditions are complete, a diversion analysis of future conditions including an expanded study area and identify % volume change on the collector street network.

5.2 Diversion / Rerouting Analysis

The SubConsultant will examine the travel patterns and impacts of two-way design. The origin-destination pairs collected in Stage 1 will be reviewed and traffic reassigned in accordance with the new roadway configurations. It is expected that the traffic routing will be modified based on the resulting level of congestions along all the movements/approaches. Note that FDOT desires that a subarea model be developed for a final diversion analysis. We strongly believe that this will not be necessary as our preliminary results indicate reduce congestion and better traffic flow and is not included in the scope. All efforts will be made to ensure the reasonableness of the diversion assessment in coordination with FDOT.

5.3 Segment and Intersection Operational Analysis

The efforts performed in this task provide measures of the traffic operational performance of the proposed alternative. The operational performance for each mainline individual element and along the cross streets within the study area will be analyzed. The operations of the collector distributor roadway links, their intersections with the cross streets, and median openings within the study area will also be analyzed. Queuing characteristics associated with the alternatives will also be analyzed.

The CONSULTANT will complete a VISSIM analysis to show the benefits of the proposed project without deteriorating operations to the study area.

5.4.1 Existing Microsimulation Model Calibration/Validation

The CONSULTANT shall prepare an evaluation of the existing operating conditions. The CONSULTANT will complete a VISSIM analysis on existing intersections and arterials within the study area for the existing average AM and PM peak periods. The FHWA *Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software* and the 2014 FDOT *Traffic Analysis Handbook* will be used as the basis for development of the VISSIM models and Measures of Effectiveness (MOEs). This evaluation will be based on the most current traffic counts and traffic factors as agreed to by the CRA and FDOT.

A VISSIM model will be constructed for calibration proposed for the 2019 Existing Conditions. The purpose of calibration is to carry forward calibration parameters at acceptable thresholds to the future models. The calibration process, including the selected calibration criteria will be documented and involves modifying default parameters so that outputs reasonably replicate existing year (2019) conditions. The calibration process will involve examining both global parameters and link-specific local parameters within the model.

5.4.2 Future Model Evaluation

With the establishment of a calibrated base year micro-simulation model, the next step will be to develop No Build and Build models for 2030 and 2040 conditions. Calibration parameters from the existing conditions VISSIM models will be carried forward to the future condition's models. The future year models will provide the reviewing agencies with the ability to accurately assess the impacts of various alternatives. For consistency purposes, VISSIM will be used to analyze all alternatives.

Develop No Build and Build VISSIM models for the project study area using projected traffic numbers, optimized signal timings, and Origin & Destination (O&D) updates, where applicable.

MOEs that will be assessed from the VISSIM models include the following:

- o Intersection node evaluation: volume, delay, and maximum queue lengths for the study area intersections.
- o Link evaluation segments: volume, speed, and design information for access points within the study area, where applicable.
- o Network-wide output: total travel time, total delay time, vehicle-miles of travel, latent volume, and latent delay.
- o Multi-modal performance (pedestrian/bicycle/transit) Quality Level of Service and Level of Stress

The Consultant will document the operational analysis containing a summary of the operational analysis procedures and methodologies, the input data used in the analysis, and the results and

interpretation of the analysis. Figures, graphs and tables should be used, where appropriate, to explain the inputs and results of the analysis.

5.5 Intersection/Roundabout Analysis

Consultant will perform an intersection and roundabout evaluation utilizing Sidra software in accordance with the Florida Design Manual and the Florida Intersection Design Guide. Consultant will also develop intersection concepts/layout based on the results of traffic operational analysis. The layouts will include turn lanes, storage lengths and other geometric details. SIDRA is a macroscopic traffic modeling simulation software program and has the advantage of modeling traffic operations at roundabouts more precisely since it analyzes queue spillback and bunching. AutoTurn will be used for roadway design including intersections, roundabouts, bus terminals, loading bays, parking lots, etc. to analyze potential turning or clearance issues.

5.6 Safety Analysis

Stage 1 included a summary of the crash history within the study area. In Stage 2 the Consultant shall summarize the identified crash types and frequency, crash patterns, high crash locations (intersections / segments), and identify potential near-term and long-term safety improvement strategies. As applicable, Consultant will document any additional observations from field reviews or information from prior studies.

The crash analysis should include an evaluation of the potential increase or decrease in crashes for the Build scenario, using the Crash Modification Factors (CMFs) from the Highway Safety Manual, the Federal Highway Administration CMF website, or other appropriate methodologies.

5.7 Assessment of Transit Impacts

Using the data collected in Stage 1 an analysis to determine the impact on the transit services within the study area, will be made using the following performance measures, at a minimum:

Public transit routes/stop locations (including appropriateness of turn radii and lane widths and coordination with transit providers)

- o Bus bunching
- o Detours
- o Boarding and alighting by stop
- o Bus bays and length of bays
- o Any queueing caused by bus activity

5.8 Assessment of Parking Impacts

The Consultant shall perform an assessment of parking impacts within the study area. Parallel parking is proposed around the circle, which may result in a loss of parking. Currently, there are two parking garages, Van Buren Garage located at Van Buren Street and S 20th Avenue, and Radius Garage located at Polk Street and N 19th Avenue. Both are a few blocks from Hollywood Boulevard and Young Circle with extra capacity. Wayfinding and smart parking technology will be evaluated to determine their usefulness in guiding vehicles to these garages. In addition, other potential parking spaces will be evaluated in order to maintain available parking for patrons of the businesses in the area, while reducing the congestion currently experienced with the existing parking at the circle.

5.9 Assessment of Transportation Impacts

The Consultant shall perform an assessment of transportation impacts including pedestrian and bicycle facilities, trucks etc. Using the data collected, existing pedestrian and bicycle facilities shall be inventoried, reviewed, and summarized within the study area. Pedestrian and bicycle infrastructure (e.g. sidewalks, bicycle lanes, and multi-use paths and connectivity) will also be evaluated. The Consultant shall coordinate with the TPO for identifying future projects within the study area.

In addition, emergency access will be addressed, as well as truck delivery operations within the study area.

5.10 Mitigation Projects/Strategies

The Consultant will develop mitigation strategies through an iterative review of modeling results. As the proposed plan is tested it is anticipated that there will be adjustments made to the signalized intersections at Young Circle entry points, storage lengths for turn lanes, bus stop locations and other such adjustments to maximize the performance of conceptual design.

5.11 Documentation of Findings

The Consultant shall prepare a summary of the Transportation Analysis. Results will be compared and summarized based upon previously identified evaluation criteria. Utilizing these evaluation criteria, the Consultant will prepare a matrix comparing the Project opportunities and constraints. This will include a qualitative summary of anticipated impacts and costs associated with the various improvement strategies.

Deliverables: Transportation Impact Analysis Technical Memorandum

TASK 6.0: ENVIRONMENTAL SCREENING ANALYSIS

The Consultant shall conduct a due-diligence / evaluation of the improvement strategies and recommendations that involves environmental screening

6.1 Environmental Screening In order to comply with FDOT's Environmental Policy, the Consultant will gather all appropriate and available information to document the potential or imminent impact(s) to the environment or key community features. Information such as and not limited to, land use and historic landscape, sensitive environmental uses or features in the area, potential impacts to the historic district. Available and online GIS data will be part of the screening effort.

Deliverables: Environmental Impact Interim Assessment

TASK 7.0: PROJECT IMPLEMENTATION

The Consultant shall identify and describe the implementation and funding strategy for the Project. The plan shall identify if the desire is to coordinate the lane elimination Project with a programmed project or to advance this Project independently. This section shall highlight any opportunities to share costs of studies, design, and implementation among multiple stakeholders. Since this Project leads to implementation of a Complete Street and considers facilities for multimodal users along the corridor, the Consultant shall identify and seek out through coordination alternative funding opportunities and sources.

Deliverables: Project Implementation Plan Interim Technical Memorandum

TASK 8: MAJOR DELIVERABLES

CONCEPT REPORT

The Consultant shall prepare a concept report summarizing the data, analyses and results supporting this project for review and approval by FDOT District 4. This Concept Report will provide reference to the planning context summary and the corridor purpose and needs summary developed as part of Phase One. This Report will serve as the final report for this Planning Study, and will include a synopsis of the study process, the key issues and opportunities, and the stakeholder and public engagement activities. It will also outline the alternatives developed and a summary of the alternatives evaluation. The report will also identify the potential timing of strategies, potential funding sources, and necessary actions anticipated from the various planning partners to advance the preferred alternative. This document will also include an outline of Project priorities and a recommended plan for implementation with descriptions of the phases needed for each proposed project on the priority list, anticipated timelines, and responsible parties to help

guide the next step of the Project, whether the improvements are short-term or long-term improvements.

Deliverables: A draft concept report shall be prepared and submitted for comment. A final concept report should be prepared addressing CRA/FDOT comments.

The below listed Sub Consultants will assist in the performance of the Work.

Sub Consultant Name	Specialty or Expertise
via planning, inc.	Stakeholder Coordination and Traffic Engineering

Schedule of Work – Time of Performance

The anticipated length of service for all Tasks is 10 months, commencing after the Notice to Proceed.