

January 3, 2025

City of Cathedral City
68-700 Avenida Lalo Guerrero
Cathedral City, CA 92234

ATTN: Andrew Lee, Assistant Civil Engineer

SUBJECT: Proposal for Professional Engineering Services to Prepare PS&E for New Traffic Signal at Cathedral Canyon Drive at Canyon Shores

Mr. Lee,

ADVANTEC Consulting Engineers, Inc. (ADVANTEC), is pleased to present our proposal and fee to provide professional engineering services to prepare plans, specifications, and estimates (PS&E) for a New Traffic Signal at the intersection of Cathedral Canyon Drive at Canyon Shores.

ADVANTEC appreciates the opportunity to submit this letter proposal and looks forward to continuing working with the City. Our scope of services and schedule are provided in **Exhibit A**, and fees are provided in **Exhibit B**. If you have questions, please feel free to contact me on my cell at (714) 904-0067 or jdorado@advantec-usa.com.

Sincerely,
ADVANTEC Consulting Engineers, Inc.



John Dorado, PE
Project Manager

EXHIBIT A
SCOPE OF SERVICES for
City of Cathedral City
New Traffic Signal at Cathedral Canyon Drive at Canyon Shores

The scope of services is based on the request from City staff for ADVANTEC to provide professional engineering services to prepare plans, specifications, and estimates (PS&E) for the installation of a new traffic signal at the intersection of Cathedral Canyon Drive at Canyon Shores. The project improvements include, but are not limited to, traffic signal installation and signing/striping.

As an option, we included traffic signal timing sheets and providing construction support throughout both the bidding and construction processes.

The following scope of services provides project scope and fees.

SCOPE OF SERVICES

Task 1 Project Management, Coordination, and Meetings

ADVANTEC will provide project management and coordination activities to manage the work and tasks identified in this scope of work. This includes coordination with project team and the City including bi-weekly conference calls with the City's Project Manager in order to provide up-to-date project status, discuss any concerns or issues, and follow-ups on any requests or action items.

ADVANTEC will conduct up to three in-person/virtual meetings with City staff. The first meeting will be conducted for the project kick-off, the second will be conducted to discuss our results of the analysis/conceptual plans, and the third meeting will be held after the 90% submittal for response to comments. ADVANTEC will prepare meeting agendas, meeting minutes, and action items list for distribution after each meeting.

SCE Coordination – Since we are proposing a new traffic signal, this will require coordination with SCE to obtain service (i.e., power) for the traffic signal and safety lighting improvements. ADVANTEC will coordinate with SCE to determine the service point location and feed to new traffic signal service enclosure. This typically requires filling out a SCE customer service request form and coordinating design requirements including potential design from SCE (conductors, conduit, pull boxes, etc. from the service point to the new service enclosure). Our coordination efforts under this task will minimize delays during construction.

Deliverables:

- ✓ Project management and coordination; bi-weekly conference calls and conduct up to three meetings with City staff virtually or at City Hall.
- ✓ SCE coordination.

Task 2 Data Collection and Field Review

ADVANTEC will coordinate with City staff and collect and review available data for use and reference associated with the traffic signal, signing/striping, and roadway improvements. ADVANTEC will conduct a thorough field review at the project intersection. Our field review will consist of but not be limited to collecting the following:

- ✓ All roadway features including curb lines, property lines, edges of pavement, edges of paved sidewalks, curb returns, curb ramps, driveways, and bus pads
- ✓ Signing and striping
- ✓ Nearby at-grade utilities, catch basins, manholes, cabinets, sub-structures, vaults; and nearby aboveground utilities, power poles/overhead lines, street lights, etc.
- ✓ Other field conditions that might affect a design decision
- ✓ ADA compliance and constraints

Upon completion of the above items, ADVANTEC will identify potential constraints that may be encountered in relation to the proposed improvements. This information will be used to prepare base mapping and proposed improvements at the project intersection.

Deliverables:

- ✓ Data collection inventory matrix, project survey, field review notes, and photos.

Task 3 Utility Coordination

Utility notification and coordination will be required to ensure quality design and help eliminate utility conflicts during construction. Utility notifications will be provided to the various utility owners within the sphere of the project; the notifications will be prepared using the City's letterhead. ADVANTEC will request locations for existing and proposed underground and overhead utilities, including high risk utilities. The utility information provided by the agencies will be delineated on the plans based on their record drawings and our field review. The location of our proposed improvements will take into consideration of the existing utilities. In the event of any utility conflicts, ADVANTEC will coordinate the relocation of all utilities affected by the project. Our goal is to relocate their facilities prior to the start of construction of the project improvements. ADVANTEC will compile all utility coordination and information in a matrix format to include dates of notification, persons/utility notified and responses from the utility company. Letters will be sent to the utility companies requesting their review and verification of their facilities during the preliminary and final plan submittals to obtain their concurrence with the information shown on the plans. Copies of this information will be updated upon receipt and provided to Cathedral City at the scheduled project meetings and/or as the information has been received. ADVANTEC will conduct utility coordination throughout the preliminary and final design phases of the project. *Please note: ADVANTEC's fees do not include fees or costs associated with the processing and collection of as-built plans or documentation from the utility companies. Typically, fees are waived when submitting utility requests using the City's letterhead.*

Deliverables:

- ✓ Utility notification and coordination, utility letters, utility plans and utility coordination matrix.

Task 4 Traffic Signal Warrant Analysis

ADVANTEC will prepare an updated traffic signal warrant analysis at the intersection of Cathedral Canyon Drive and Canyon Shores. We will update the traffic signal warrant analysis that ADVANTEC prepared previously and include projected CV Link pedestrian, bicycle, and golf cart counts as part of our analysis. ADVANTEC will follow California Manual on Uniform Traffic Control Devices (CA MUTCD) criteria for the warrant analyses for warrants 1 through 9.

Deliverables:

- ✓ Traffic Signal Warrant Analyses for the intersection of Cathedral Canyon Drive and Canyon Shores

Task 5 Surveying and Topographic Mapping

With the assistance from our subconsultant, **CL Surveying and Mapping**, the ADVANTEC Team will provide surveying and topographic mapping within the project limits. The surveys will be performed in order to develop base mapping for the final design improvements. The cross-section and topographic base maps will be produced by ground survey methods. The surveying and topographic mapping will consist of the following elements:

Site Control: The ADVANTEC Team will establish a site-wide network of horizontal/vertical control to serve as the basis for any subsequent boundary, topographic, or construction staking surveys that may be required throughout the course of the project. CL Surveying and Mapping will reference an assumed horizontally, and available local agency vertical datum, unless specifically requested otherwise.

Centerline/Right-of-Way Establishment/Mapping: The ADVANTEC Team will conduct the field measurements necessary to re-trace the centerlines and rights-of-ways within the project limits. This effort does not constitute a full and complete boundary survey of the adjacent land parcels. Survey monuments located and indicated on the survey shall be limited to existing, centerline monuments found to be present along the streets and all associated ties as indicated.

Topography and Street Cross Sections: The ADVANTEC Team will perform a field topographic survey of existing ramps at the intersection of Cathedral Canyon Drive and Canyon Shores. Substantial visible improvements will be located within the street right of way, including utilities, manholes, valve covers, utility vaults and covers, sign posts, signs, trees, utility poles, traffic signal poles, cross gutters, local depressions, catch basins, driveway openings, sidewalks, corner access ramps, fire hydrants, parkway drains, etc. Visible indications of surface utilities lying within the project limits will be located, as will accurate lid/rim elevations for drainage structures present. The survey will extend 25' beyond the BCR/ECR's and 10' beyond right-of-way.

Deliverables:

- ✓ Surveying and Topographic Mapping for base mapping for one project intersection. This includes AutoCAD Files along with the ASCII point file of the survey points collected in the field.

Task 6 Engineering Design and Plans

ADVANTEC will prepare PS&E for the installation of the new traffic signal at the intersection of Cathedral Canyon Drive at Canyon Shores. Our submittals will be at 65%, 90%, and 100%. The project improvement

plans will conform to the City's requirements and will be prepared in AutoCAD on 24"x36" City of Cathedral City title block. The PS&E will also be in conformance with the corresponding latest editions of Caltrans Standard Specifications and Standard Plans; Standard Specifications for Public Works Construction (Greenbook); California Manual on Uniform Traffic Control Devices (CA MUTCD) and applicable design standards. All plans will be prepared by a registered Civil Engineer in the State of California. Based on our assessment of the proposed improvements and associated details, we have determined this project will require approximately **five (5) plan sheets**. The following table provides a breakdown of the number of sheets, the types of plans, scale per plan, and work or information associated with each plan.

Sheet Description	Plan Scale	No. of Sheets
Title Sheet	N/A	1
Roadway Improvement Plan/ADA Compliant Pedestrian Ramps	1"=40'	1
Traffic Signal Plan	1"=20'	1
Signing and Striping Plan	1"=40'	1
Detail Sheet: Video Detection and Controller Cabinet	N/A	1
TOTAL		5

The following summarizes the layout for each plan type and details associated with each sheet:

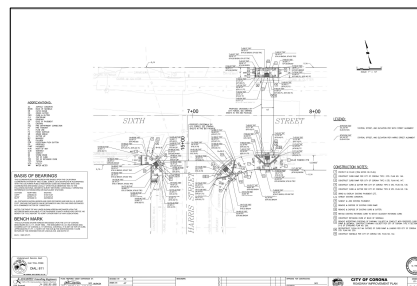
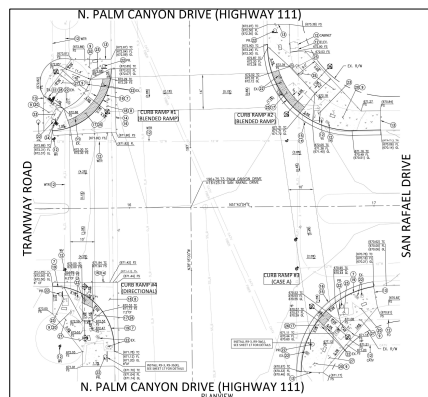
Title Sheet, Construction Notes and Legend

ADVANTEC will prepare a project title sheet. The project Title Sheet will include project title, vicinity map, general notes, benchmark with basis of coordinates, dig alert information, list of utility companies with contact name and telephone number, sheet index, and legend of symbols.

Roadway Improvement Plan/ADA Compliant Pedestrian Ramps

ADVANTEC will prepare a street improvement plan that shows updated ADA compliant pedestrian ramps per the CV Link crossing standards. This typically requires a wider landing; an example is shown to the right. This was for the City of Palm Springs HSIP project, the crossing is located on the north side of the N. Palm Canyon Drive/Tramway Road intersection.

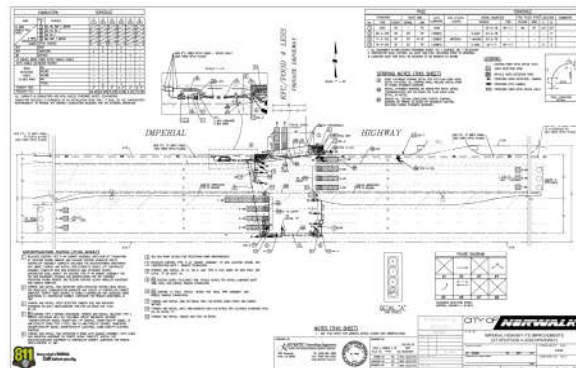
The Street Improvement Plan will show all existing improvements, as shown on the base sheets and all existing underground utilities (sewer, water, gas mains and associated laterals, storm drains, catch basins and laterals, storm drains, manhole and valve covers, meter boxes etc.) and above ground utilities. Proposed work will indicate limits of removals and construction of pedestrian ramps and sidewalk access within the curb return, gutter, spandrel, and/or cross-gutter, which



includes the sphere of work only. Plans will indicate removal/replacement of curbs, gutters, sidewalks, access ramps, sidewalk, and protection of existing facilities. ADVANTEC will consider and determine with City Staff the need and location for the preservation of existing control monuments and the placement of new control monuments. At a minimum, each detail shall contain a north arrow, scale, centerline stationing, right-of-way and sheet reference, plan with elevations, grades, and construction notes for all improvements on the sheet.

Traffic Signal Plan

ADVANTEC will prepare a traffic signal plan at the intersection of Cathedral Canyon Drive at Canyon Shores. The traffic signal plan will include all base mapping, as-built information and utilities, proposed roadway improvements, and all proposed traffic signal poles and equipment, pole schedules, conductor schedules, construction notes, and any details necessary to facilitate the installation and construction of the project improvements.

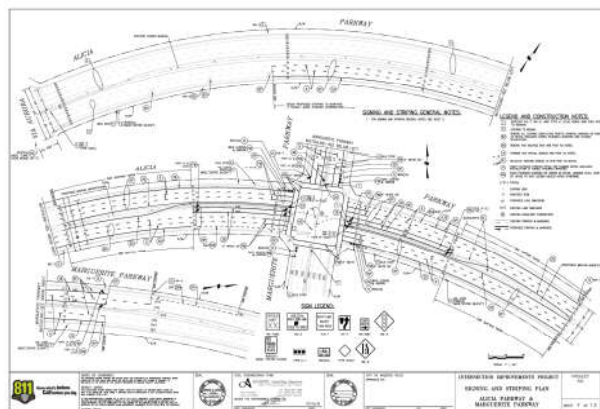


We will also provide a wireless communications schematic and details for communications to the traffic signal network. This will include the installation of wireless radios to be installed at Cathedral Canyon Drive/Canyon Shores and Cathedral Canyon Drive/Perez Road.

The traffic signal plan will be prepared at 1" = 20' scale in AutoCAD in accordance with the latest State, County, and City Standards.

Signing and Striping Plan

ADVANTEC will prepare a signing and striping plan for the related improvements at the intersection of Cathedral Canyon Drive at Canyon Shores. The signing and striping plans will show existing features to remain, existing features to be removed or relocated, and the installation of new features. The plans will include the specified border, title block, signature block, legend; general and construction notes; and any construction details necessary to facilitate installation of the signing and striping design.



The signing and striping plans will be prepared at 1" = 40' scale in AutoCAD in accordance with the latest State, County, and City Standards.

Detail Sheet: Video Detection Camera Mounting Details and Controller Cabinet Details

ADVANTEC will prepare details sheets for the work related to the installation of the new traffic signal. This includes, but is not limited to, Video Detection Camera Mounting details, and controller cabinet details. Construction notes and other details will be provided to facilitate the project improvements.

SUMMARY OF ENGINEERING AND DESIGN PLAN DELIVERABLES:

- ✓ Plans set (5 Sheets) at 65%, 90%, and 100% submittals. One full size (24"x36") bond copy of the plan set and PDF per submittal. One full size set of final signed mylars with one bond copy, PDF, and AutoCAD file for final submittal.

Task 7 Technical Specifications

ADVANTEC will prepare the project Technical Specifications and Bid Documents for the proposed project and the associated improvements based on Cathedral City's requirements and the latest Caltrans Standard Specifications and Plans; California Manual on Uniform Traffic Control Devices (CA MUTCD), and the Greenbook. The technical specifications will include a project description, preparation of bid schedules, bid item descriptions, payment methods, special provisions, technical specifications, and any specification detail sheets or standard plans.

Deliverables:

- ✓ Technical Specifications. Submittals will be provided at 65%, 90% and 100%. The Technical Specifications will be prepared using Microsoft Word and provided to the City in Word and PDF formats for each submittal.

Task 8 Engineering Estimates

ADVANTEC will prepare construction quantity take-offs and construction cost estimates for the proposed project. The unit costs will be based on current cost data and historical cost data associated with the identified bid items. Preliminary and final quantities and construction cost estimates will be provided to the City.

Deliverables:

- ✓ Construction Quantity Take-offs and Construction Cost Estimates. Submittals will be provided at 65%, 90%, and 100%. The cost estimate will be prepared in a spreadsheet format using Microsoft Excel and provided to the City in Excel and PDF formats for each submittal.

Task 9 Bidding Assistance and Construction Support

ADVANTEC will provide bidding assistance and construction support services for the construction plans and specification interpretation and consultation during the bidding and construction phases of the project, including the following:

- ✓ Attend pre-bid meeting
- ✓ Respond to bidders' questions
- ✓ Assist the City with preparation of Addenda regarding omissions or conflicts in the design, as necessary

- ✓ Attend pre-construction meeting, if necessary
- ✓ Review and respond to shop drawing submittal for conformity with the plans and specifications.
- ✓ Review and respond to Request for Information (RFI) or Change Request (CR) from the City or Contractor
- ✓ As-built drawings will be prepared based upon completion of the project and the Contractors red lined plans.

Deliverables:

- ✓ Construction Support Services and preparation of as-built plans. As-built plans will be provided electronically (PDF and AutoCAD) and one full-size (24"x36") bond copy.

Task 10 Traffic Signal Timing Sheet

ADVANTEC will provide a new traffic signal timing sheet that meets the most recent CA MUTCD standards, City, and CVAG guidelines. The following timing parameters will be developed:

Yellow Clearance Time

Yellow clearance times will be evaluated for each movement at all project intersections using the latest CA MUTCD. Yellow times for through movements are derived from Table 4D-102 of the 2014 CA MUTCD. All yellow clearance time calculations will be provided to the City in Microsoft Excel format.

Minimum Bicycle Green Time

The calculation to determine the minimum Green time for bicycle crossing comes from the 2014 CA MUTCD. If the calculation results in a value less than that of the minimum Green time for vehicles, then the vehicle Green time is used. All bicycle timing calculations will be provided in Microsoft Excel format.

Pedestrian Clearance Time

The calculation to determine the pedestrian clearance time uses a pedestrian walking speed of 3.5 feet per second per the 2014 CA MUTCD. All pedestrian clearance measurements and calculations will be provided to the City in Microsoft Excel format.

Advance Extension Time

Extension time is an important part of signal timing and is a function of the approach speed and the location of the advanced detection per second per the 2014 CA MUTCD. The distances of the advanced detection will be measured from the stop bar to the back of the detection zone. All advance detection measurements and extension times will be provided to the City in Microsoft Excel format.

New Timing Sheet

ADVANTEC will provide timing sheets to reflect new timing parameters developed.

Deliverables:

- ✓ MS Excel spreadsheet showing field measurements and other input data, and calculated values for Yellow Clearance Time, Minimum Bicycle Green Time, Pedestrian Clearance Time, and Advance Extension Time.
- ✓ New Timing Sheet.

EXCLUSIONS

Consulting services relating to any of the following tasks may be completed by ADVANTEC if negotiated under a separate contract for an additional fee; but are presently excluded from this Agreement:

- Additional meetings
- Traffic signal interconnect plans
- Traffic control plans
- Utility relocation design

PROJECT SCHEDULE

Following our notice to proceed, ADVANTEC will begin services within one to two weeks. We anticipate project completion within 3 to 4 months.

EXHIBIT B

SCOPE OF SERVICES

Compensation for our personnel directly engaged for the work outlined in **Exhibit A** will be billed per the fee schedule provided below.

Task/ Subtask	Description	Rate	Project Manager VIII John Dorado \$260	Project Engineer IV \$170	Assistant Engineer \$115	Sub- consultant: CL Survey	Other Direct Costs	Total Hours	Total Cost
1	Project Management, Coordination, and Meetings		6	2			\$220	8	\$2,120
	SCE Coordination		2	8				10	\$1,880
2	Data Collection and Field Review			1	8		\$80	9	\$1,170
3	Utility Coordination			1	8			9	\$1,090
4	Traffic Signal Warrant Analysis		2	4	20			26	\$3,500
5	Surveying and Topographic Mapping			2		\$6,500		2	\$6,840
6	Engineering Design and PS&E						\$120	8	\$120
	Title Sheet (1 Sheets)		1	2	8			11	\$1,520
	Roadway Improvement Plan/ADA Compliant Pedestrian Ramps (1 Sheet)		4	12	44			60	\$8,140
	Traffic Signal Plan (1 Sheet)		4	8	44			56	\$7,460
	Signing and Striping Plan (1 Sheet)		1	2	16			19	\$2,440
	Detail Sheet: Video Detection and Controller Cabinet (1 Sheet)			2	8			10	\$1,260
7	Technical Specifications		4	24				28	\$5,120
8	Engineering Estimates		1	2	8			11	\$1,520
9	Bidding Assistance and Construction Support		8	8	2		\$200	18	\$3,870
10	Traffic Signal Timing Sheet		1	2	9		\$120	132	\$1,755
Total Hours			34	80	175			289	
Total Cost			\$ 8,840	\$ 13,600	\$ 20,125	\$ 6,500	\$ 740		\$49,805
<i>Note: Other Direct Costs includes mileage and printing fees per task, as shown.</i>									
TOTAL FEE (Not-To-Exceed)								\$49,805	

As shown, compensation for our personnel directly engaged for the work outlined in **Exhibit A** will be for **\$49,805**. We will not exceed the budgeted amount without your written authorization.