

January 28, 2014

Mr. Rich Wells, PE  
Project Manager  
Lake Havasu City  
Operations Administration Division  
900 London Bridge Road  
Lake Havasu City, Arizona 86404

Re: Light Pole Foundation Investigation (Project Number TBD)  
Proposed Scope and Fee

Dear Mr. Wells:

Thank you for the opportunity to provide the City of Lake Havasu with a proposal for the Light Pole Foundation investigation project.

Attached, please find our scope of work and cost proposal. The proposal includes:

- Scope of Work
- Cost Proposal
- Labor-Hour Summary

The cost proposal is based on an Hourly Not to Exceed contract.

If you have any questions, I can be reached by telephone at (520) 584-3645 or by e-mail at [Jason.Carlaftes@hdrinc.com](mailto:Jason.Carlaftes@hdrinc.com). Again we appreciate the opportunity to submit a cost proposal for this project.

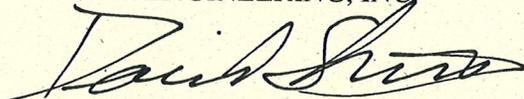
Sincerely,

HDR ENGINEERING, INC.



Jason Carlaftes, P.E.  
Structural Engineer  
Project Manager

HDR ENGINEERING, INC.



David Skinner, PE  
Vice President  
Project Principal

Enclosures

**Flag Pole Investigation**  
**Lake Havasu City Project No. XX XXX**

**Scope of Work**  
**January 28, 2013**

Lake Havasu City is seeking engineering services for an investigation into three flag pole foundations near the London Bridge. The flag poles were originally installed in the early 1970's. Concrete pedestals were added above the foundations in 1981. The concrete pedestals are currently exhibiting minor to severe random cracking that is observable above ground. It is unknown if the flag pole foundations exhibit similar cracking as they are below ground level. The City has requested an investigation into possible causes of the cracking, a recommendation on whether the concrete pedestals can be repaired or need to be reinstalled, and possible repair options if repairs can be made.

**Task 1: Project Administration**

This work includes coordination with the City in establishing and managing the project work plan and schedule; coordination between team members; project filing; and project invoicing. No meetings are anticipated for this project.

**Task 2: Site Visit**

This task includes a site visit to the flag poles being evaluated. The City has provided photographs of the cracking. The extent of the cracking or whether it is contained in the pedestals only or also extends to the foundation below grade is currently unknown. Investigation will include:

- Visual observation
- Localized sounding of the concrete using a hammer.
- Rebar location/detection in the pedestals using Non-Destructive testing (NDT)
- Measurement of the pole thickness using Ultrasonic Measurement (NDT)
- Isolated coring of the pedestals to verify corrosion at the top of pedestal/flag pole interface
- Optional coring for testing the strength of the concrete

Investigations will be limited to the flag poles and portions of the pedestal that are observable. Due to the existing concrete apron, no investigation into the condition of the existing pole foundations, pole base at the foundations, or anchor bolts will be made.

***Deliverables:***

- *Site Observation Report*

**Task 3: Condition Analysis**

This task includes an investigation into potential causes of the cracking, an opinion regarding the stability of the foundations in their in-situ condition, and a recommendation regarding potential repair options. At this time, no as-built plans for the pole foundations have been provided. The City will attempt to locate as-built plans for these poles and the pedestals and will provide them to HDR for review if located. If as-built plans cannot be located, HDR will research standard construction details for similar poles from a similar time period. The investigation into potential causes and the opinion regarding stability will be based on information gathered from the site visit and the as-built

plans or research conducted by HDR. Assumptions will be made regarding portions of the flag pole foundation that are not observable for this analysis.

It is anticipated that there will be two submittals to the City for review. The first will be a DRAFT memorandum. Two weeks are anticipated for review of the DRAFT submittal by the City. Upon receipt of comments, HDR Engineering will respond to comments and update documents as necessary and will prepare a FINAL memorandum for the City. The FINAL memorandum will be sealed prior to delivery for use by the City.

*Deliverables:*

- *DRAFT Condition Analysis (3 hardcopies & PDF)*
- *Sealed FINAL Condition Analysis (3 hardcopies & PDF)*

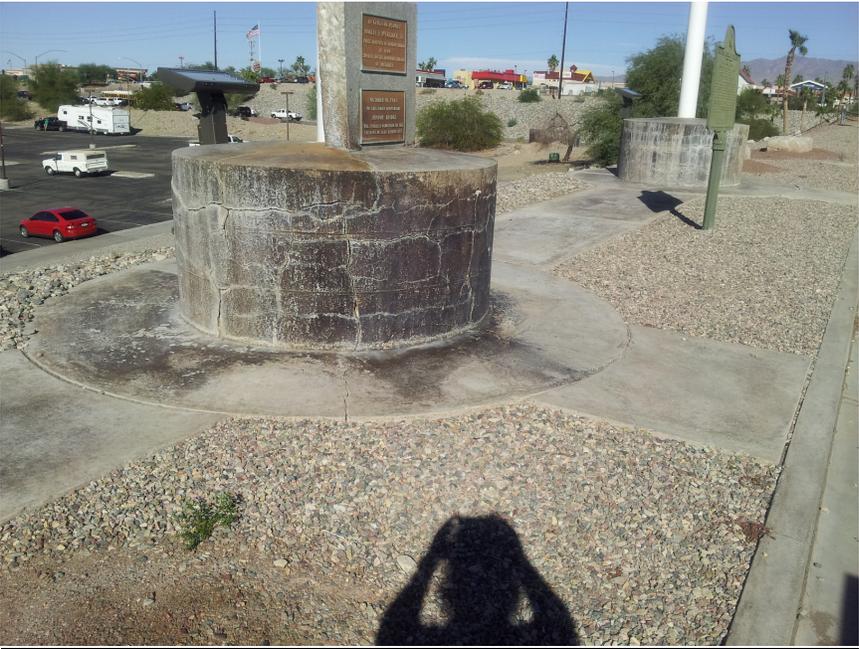
**WORK NOT INCLUDED IN THIS SCOPE**

- Removal of concrete or dirt to observe condition of pole foundations.
- NDT/inspection of the pole foundation

Additional design services for rehabilitation or replacement may be provided by HDR on an as-needed basis based on the hourly rates provided in the attached rate schedule. If the City requests additional work, a formal scope and fee will be prepared by HDR and submitted to the City for acceptance prior to commencement of additional work.

**FIELD PHOTGRAPHS PROVIDED BY LAKE HAVASU CITY**









HDR Engineering, Inc.  
HDR Project Number: TBD  
January 28, 2014

**CITY OF LAKE HAVASU  
LIGHT POLE INVESTIGATION  
LAKE HAVASU CITY PROJECT NO. XX XXX  
COST PROPOSAL**

**ESTIMATED DIRECT LABOR:**

<b>Staff Classification</b>	<b>Est. Hours</b>	<b>Billing Rate</b>	<b>Labor Cost</b>
Project Manager	22	\$136.00	\$2,924
Senior Engineer	4	\$211.00	\$844
Design Engineer	31	\$98.00	\$3,038
Administrative	4	\$115.00	\$460
Clerical	3	\$56.00	\$140
<b>Sub-Total (Direct Labor, Overhead and Fee)</b>	<b>63</b>		<b>\$7,406</b>

**ESTIMATED DIRECT EXPENSES:**

	<b>Units</b>	
Mileage @ \$0.75/mile	250	\$187.50
Reproduction Cost misc. (Memonrandum)	30	\$12.50
Postage, Fed-ex, UPS, etc.	2	\$50.00
Field Services	1	\$2,350.00
<b>Sub-Total Estimated Expenses</b>		<b>\$2,600.00</b>

**ESTIMATED OUTSIDE SERVICES AND CONSULTANTS**

<b>FIRM/SERVICE</b>	<b>Cost</b>
None Required	\$0
<b>Sub-Total Estimated Outside Services</b>	<b>\$0</b>

Total Estimated Outside Services	\$0
Total Estimated Cost to Consultant	\$10,006
<b>Total Not to Exceed Cost</b>	<b>\$10,006</b>

Additional services will be provided upon written approval from the City of Lake Havasu at the above noted Rates. Rates are valid through the end of 2014.

**ESTIMATED LABOR HOURS (HDR)**

	Project Manager	Senior Engineer	Design Engineer	Administrative	Clerical	TOTAL HOURS PER TASK	HDR COST OF TASK	SUB-CONSULTANT COST	TOTAL COST OF TASK
Fully Loaded Rates	136.00	211.00	98.00	115.00	56.00				
<b>TASKS</b>									
<b>Task 1.0 PROJECT ADMINISTRATION</b>									
General Administration	4			4	2	10			
<b>Subtotal Task 1.0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>10</b>	<b>\$ 1,116.00</b>		<b>\$ 1,116.00</b>
<b>TASK 2.0 Site Visit</b>									
Travel Time	6		6			12			
Site Observation	2		2			4			
Site Observation Report	1		2			3			
<b>Subtotal Task 2.0</b>	<b>9</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>\$ 2,204.00</b>		<b>\$ 2,204.00</b>
<b>TASK 3.0 Condition Analysis</b>									
Review Field Services Report	1		2		1	4			
Research	2		4			6			
Draft Report	4	2	12			18			
Final Report	2	2	4			8			
<b>Subtotal Task 3.0</b>	<b>8</b>	<b>4</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>\$ 3,892.00</b>		<b>\$ 3,892.00</b>
<b>TOTAL LABOR COSTS</b>	<b>22</b>	<b>4</b>	<b>31</b>	<b>4</b>	<b>3</b>	<b>63</b>	<b>\$ 7,406.00</b>	<b>\$ -</b>	<b>\$ 7,406.00</b>
<b>DIRECT EXPENSES</b>							<b>\$ 250.00</b>		<b>\$ 250.00</b>
<b>TOTAL PROJECT COSTS</b>							<b>\$ 7,656.00</b>	<b>\$ -</b>	<b>\$ 7,656.00</b>

HDR Engineering, Inc.HDR Project Number: TBD

January 28, 2014

**LAKE HAVASU CITY  
LIGHT POLE INVESTIGATION  
LAKE HAVASU CITY PROJECT NO. XX XXX**

Miscellaneous Copies

	Number	Unit	Unit Cost	Cost
3 sets (8.5x11) Draft Documents at 5 pages/set	15	each	\$0.03	\$ 0.45
3 sets (8.5x11) Final Documents at 5 pages/set	15	each	\$0.03	\$ 0.45
Miscellaneous				\$ 11.60
<b>Total Reproduction &amp; Plotting</b>			<b>Total:</b>	<b>\$ 12.50</b>

Mileage:

	Number	Unit	Unit Cost	Cost
Site Visit                      1 round trips at 250 miles	250	Miles	\$0.75	\$ 187.50
			<b>Total:</b>	<b>\$ 187.50</b>

Postage:

	Number	Unit	Unit Cost	Cost
Submittals	2	Each	\$25.00	\$ 50.00
			<b>Total:</b>	<b>\$ 50.00</b>

**TOTAL DIRECT EXPENSES: \$ 250.00**

Field Services

	Number	Unit	Unit Cost	Cost
Inland Engineering & Consulting	1	Each	\$2,350.00	\$ 2,350.00
			<b>Total:</b>	<b>\$ 2,350.00</b>

**TOTAL DIRECT EXPENSES: \$ 2,600.00**