

**PAGE CITY COUNCIL
WORK SESSION MEETING MINUTES
AUGUST 10, 2016**

A Work Session Meeting of the Page City Council was held at 5:30 p.m. on August 10, 2016, in the Council Chambers at City Hall in Page, Arizona. Mayor Bill Diak presided. Vice Mayor John Kocjan, Councilors Mike Bryan (arrived at 5:36), Levi Tappan, Corey Seyler, and Dennis Warner were present, and Councilor Sadler was excused.

Mayor Diak called the meeting to order.

Staff members present: City Manager, J. Crystal Dyches; City Attorney, Joshua Smith; Public Works Director, Cliff Linker; Community Development Director, Kim Johnson; IT Director, Kane Scott; Deputy City Clerk, Sue Kennedy; and City Clerk, Kim Larson.

National Park Service personnel present were Superintendent Billy Shott, Chris Cook, and Erin Janicki.

Discussion by the City Council pertaining to an update for Horseshoe Bend Planning

City Manager Crystal Dyches provided an update regarding the Horseshoe Bend planning and stated that she needed direction from City Council on what they would like to see for an interim solution to several items, as well as long-term visions.

She stated that over two years ago the City Council made it a priority to start a master plan for Horseshoe Bend. The City entered into an agreement with the National Park Service to move forward in creating a plan for Horseshoe Bend. Since the agreement, there have been several open houses held to solicit public input. Mayor Diak, Councilors Warner and Seyler, and staff from both the Park Service and City met for two days in June with the goal of planning "a sustainable, safe, accessible, world class experience at Glen Canyon's Horseshoe Bend."

Some of the long-term discussion points discussed were funding the project, ownership, and Highway 89 Access.

Currently the only services provided by the City are waste receptacles, trash removal, and a low cost maintenance parking lot.

See attached Memo dated August 10, 2016, Update – Horseshoe Bend Planning, and by this reference made a part of herein.

The estimate for the improvements included in the scope of work ranged from \$1.5-2.5 million dollars, and City Manager Crystal Dyches asked how this could be funded. Two of the questions to be answered were "Does the City wish to own and maintain a parking area, trail, and facilities for the National Park Service indefinitely?" and "How will the City fund the improvements and the

maintenance of the improvements in the future?" Some of the ways discussed were: working with a trust, selling a conservation easement, and conduct a land swap.

There was discussion that a capitalization plan would need to be established for the improvements and long term maintenance.

Mayor Diak went on the record stating "I do not necessarily want to give up an asset that the City might have for another asset that we do not know the value of. This is based on, not the potential of Horseshoe Bend, but of pure property alone. I have crunched some numbers and looked at that, and depending on how the Park Service might structure a revenue stream out there someday, if and when it is decided to collect fees, it might be as much as \$1.6 million dollars a year to as high as \$7 million, and that is based only on 240 days a year. That is just taking the season into effect, based on the traffic that is going out there. For me, everything is on the table, but I want to pursue more information on what a shared partnership might look like before I am willing to give up the farm. We may not be the best operators for this type of operation, but I still I think that there is potential there for the City."

There was discussion regarding a land swap or land trust.

Superintendent Billy Shopp answered questions regarding land trusts and stated that he did not know of any conservation groups at this time, but that he could look into it. He also discussed the details of how land swaps were done.

There was lengthy discussion pertaining to the area being a fee structure area or not, and how many of the visitors were commercial use versus private use.

City Manager Crystal Dyches needed direction from City Council pertaining to the restroom facilities and having a survey of potential archeological sites done.

There was discussion pertaining to the restrooms and what type of toilets to use, portable or vault toilets. With the visitation of approximately 300 people per hour, it was decided that vault toilets were needed to handle the traffic on a temporary basis.

The National Park Service said that they would provide the restrooms if the City maintained them. The estimated cost to maintain the restrooms (10 vault toilets, 5 restrooms) was approximately \$158,000.00 per year through the National Park Service.

City Manager Crystal Dyches summed up the meeting by stating that she understood that Council would like to keep their options open, continue to research fee sharing, land swap and land trust options.

The City has been providing waste removal at Horseshoe Bend and a request has been submitted to ARAMARK to consider placing a recycling unit out there. Unless she is directed otherwise, she will continue working with ARAMARK.

Safety concerns – The parking lot has already been expanded and the City is moving forward with signage and curb stops.

City Manager Crystal Dyches said that she would work out some more details for services for the restrooms and that she will move forward with the archeological study.

Superintendent Billy Shott stated that the Helium Grant may be available, and initially he did not think that the City would have had any luck with it, but since it is a new program with the Park Service, the City may have some luck. Moving forward the National Park Service may need a financial commitment from the City, sooner rather than later, and receive a financial commitment letter.

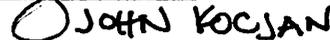
The meeting was adjourned at 6:28 p.m.



Kim Larson
City Clerk



~~William R. Diak~~
Vice Mayor



CERTIFICATION

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the City Council Work Session Meeting, held on the 10th day of August, 2016. I further certify that the meeting was duly called and held and that a quorum was present.

Dated this 31st day of August, 2016



Kim Larson, City Clerk

Updated: Crystal

Activity	Number	Hours per day	Rate Per/	Notes	Annual Cost	Total Cost
Upfront Costs						\$157,923.76
Purchase: 4wd Truck equipped with pump motor, tommy lift, tool box, stainless water tank, pressurized hoses	1				\$65,000.00	doesn't include initial truck purchase
Cleaning Toilets						
Custodial cleaning five vault toilets (high season)	2 seasonals (6 mths)	8	\$18/hr	High season - March through Oct. (8 mths). \$288 per day (cleaning 2-3 times per day and leaving to refill water truck once per day), seven days per wk, 240 days per yr. \$288 per day.	\$69,120.00	
Custodial cleaning five vault toilets (low season)	1 seasonal (6 mths)	6	\$18/hr	Low season - Nov. through Feb. (4 mths). \$108 per day, seven days per wk, 120 days per yr.	\$12,960.00	
Fully equipped truck - use per day (high season)	1 truck	8	\$2.40	High season - March through Oct. (8 mths). \$19.20 per day, seven days per wk, 240 days per yr. Four trips - drive to site, return to WW for water, drive back to site, back to WW for close of day.	\$4,608.00	
Fully equipped truck - use per day (low season)	1 truck	4	\$2.40	Low season - Nov. through Feb. (4 mths). \$9.60 per day, seven days per wk, 120 days per yr.	\$1,152.00	
Fuel for truck (high season use)	16 gallons/day	4 trips	\$3/gal	High season - March through Oct. (8 mths). Travel to site and return twice per day, seven days per wk, 240 days per yr. \$48 per day	\$11,520.00	
Fuel for truck (low season use)	8 gallons/day	2 trips	\$3/gal	Low season - Nov. through Feb. (4 mths). Travel to site once per day, seven days per wk, 120 days per yr. \$24 per day.	\$2,880.00	
						\$102,240.00
Pumping Vaults						
Labor for pumping vaults 2 times per month (high season) - One WG-9 with CDL	1 WG-9 w/CDL	8	\$29.60	High season - March through Oct. (8 mths). \$236.80 per day (pumping twice a month). \$473.60 per month x 8 mths = \$3,788.80. Labor hrs - filling up water tank - 1 1/2 hr; pumping vaults - 4 hrs; delivery to city lagoon - 1 1/2 hrs, drive time for 2 runs - 1 hour	\$3,788.80	
Labor for pumping vaults 2 times per month (high season) - One WG-5 to drive water truck and assist with pumping	1 WG-5	6 1/2	\$18.00	High season - March through Oct. (8 mths). \$117.00 per day (pumping twice a month). \$234.00 per month x 8 mths = \$1,872.00. Labor hrs - filling up water tank - 1 1/2 hr; pumping vaults - 4 hrs; drive time for 1 run - 1 hour	\$1,872.00	

Pumping Vaults once a month (low season)	1 WG-9 w/CDL	6	\$29.60	Low season - Nov. through Feb. (4 mths). \$177.60 per day (pumping once a month). Labor hrs - filling up water tank - 1 1/2 hr; pumping vaults - 4 hrs; delivery to city lagoon - 1 1/2 hrs, drive time for 2 runs - 1 hour	\$710.40
Pumping Vaults once a month (low season)	1 WG-7	4-1/2	\$18.00	Low season - Nov. through Feb. (4 mths). \$144.00 per day (pumping once a month). Labor hrs - filling up water tank - 1 1/2 hr; pumping vaults - 4 hrs; delivery to city lagoon - 1 1/2 hrs, drive time for 2 runs - 1 hour	\$432.00
Fuel for 6,000 gal transport (pumper currently owned by GLCA) (high and low seasons)	8 gallons/day		\$3/gal	\$24 per trip, twice per month = \$48. \$48 x 8 mths = \$384. \$24 per trip, once per month = \$24. \$24 x 4 months = \$96. \$96+ \$384 =	\$480.00
Fuel for water truck (currently owned by GLCA) (high and low seasons)	8 gallons/day		\$3/gal	\$24 per trip, twice per month = \$48. 48 x 8 mths = \$384. \$24 per trip, once per month = \$24. \$24 x 4 months = \$96	\$480.00
Pumper truck (6,000 gal transport)(pumper currently owned by GLCA)- use per day (high season - twice per month)	1 pumper truck	8	\$50/hr	High season - March through Oct. (8 mths). \$400.00 per day, twice per month = \$800 x 8 mths = \$6,400.00. Four trips - drive to site, return to WW for water, drive back to site, back to WW for close of day.	\$6,400.00
Water tender truck (currently owned by GLCA)- use per day (high season - twice per month)	1 water truck	6	\$14/hr	High season - March through Oct. (8 mths). \$84.00 per day x 2 days per month = \$168 x 8 mths = \$1344.00	\$1,344.00
Pumper truck (6,000 gal transport) - use per day (low season - once per month)	1 pumper truck	8	\$50/hr	Low season - Nov. through Feb. (4 mths). \$400.00 per day, once per month x 4 mths = \$1600.00 per mth. Four trips - drive to site, return to WW for water, drive back to site, back to WW for close of day.	\$1,600.00
Water truck - use per day (low season - once per month)	1 water truck	6	\$14/hr	Low season - Nov. through Feb. (4 mths). \$84 per day, once per month for 4 mths	\$336.00
					\$17,443.20
Cleaning Supplies					
toilet paper	120 rolls (\$78 per day)	per day		high season - 240 days per year. Six rolls of TP per stall = 60 rolls per day (\$.65 per roll)	\$18,720.00

gloves			5 pair per person (lunch and other breaks, tearing), per day for 240 days. 12 per day @ \$.50 = \$1440 (high season). 3 pair per person, once per day. 6 per day for 120 days) = \$360	\$1,800.00	
safety glasses	2 people		one pair per person per month. \$3 each.	\$48.00	
safety boots	6 people	\$200/per		\$12,000.00	
shop towels			four boxes per month @ \$12.51 per box	\$50.04	
cleaning supplies (clorox, disinfectant, scrubbers)			one gallon clorox - \$2.22 per week, one gallon all-purpose cleaner per week - \$2.09, one box scrubbers - \$35.20. Total for all per month - \$39.51	\$474.12	
hand sanitizer refills		\$34.65	One 200 oz per day for 10 stalls. per month. 10 refills x 12 months.	\$415.00	
trash bags		\$16.45	One box per month for 12 months	\$197.40	
				\$33,704.56	
Emergency Maintenance - damage, vandalism, graffiti, emergency repair					
Overtime for seasonal			One seasonal, once per week for 2 hours. Time and 1/2 = \$27.00 per hr x 4 wks. \$108 per month for 12 mths	\$1,296.00	
Overtime for WG-9 equip. operator			One WG-9 equip. oper, once per month for 6 hrs. Time and 1/2 = \$45/hr. 6 hrs = \$270 x 12 mths	\$3,240.00	
				\$4,536.00	
NOTE: If custodial staff is hired by park, GLCA could offset City's cost for current trash pulling by covering those duties. If dumpster's are added, this cost would have to be discussed.					

DATE: AUGUST 10, 2016
TO: MAYOR AND COUNCIL
FROM: CRYSTAL DYCHES, CITY MANAGER
SUBJECT: UPDATE – HORSESHOE BEND PLANNING

This work session is an opportunity for City and National Park Service (NPS) representatives to share information; discuss our long term vision for Horseshoe Bend; and provide staff direction on implementing immediate interim solutions to maintenance and safety concerns.

BACKGROUND: The 2015 City Council Priorities included the following objective: “Initiate a process to develop a master plan for Horseshoe Bend.” Over the past 18 months, representatives from both the National Park Service (NPS) and the City of Page have met to discuss a collaborative planning process; even submitting a plan to relocate the trail to improve accessibility to the National Park Service for consideration of Centennial Funds.

At the March 23, 2016 City Council Meeting, representatives from the NPS and the City Council agreed to explore potential improvements to the Horseshoe Bend overlook, including the identification of potential improvements to the design of parking, trails, safety and other facilities. The City Council authorized staff to work with Glen Canyon National Recreation Area staff to develop and Intergovernmental Agreement.

At the April 27, 2016 City Council Meeting, the City Council authorized the Mayor to execute the Intergovernmental Agreement between the NPS and the City to collaborate to develop a Request for Proposal for a mutually agreeable design plan for the Horseshoe Bend area.

Following two open houses were held in June to solicit public input (see attachment A), representatives met for a two-day workshop on June 28-29 with the goal of planning ... “a sustainable, safe, accessible, world class experience at Glen Canyon’s Horseshoe Bend that preserves its natural, scenic, cultural, and spiritual significance while managing growth and visitor needs” (see attachment B).

As a result of the workshops we agreed, that:

- Maschelle Zia, Pat Horning, Phil Clark, Councilmember Dugan Warner, and Community Development Director, Kim Johnson have met to define the scope of work to be included in the design RFP (see attachment C).
- Pat Horning would take the lead on a trail counter (see attachment D).
- Crystal Dyches would take the lead on a traffic counter (City will purchase an additional traffic counter for this location).
- Crystal Dyches, Mayor Diak and Bill Shott will take the lead on a capitalization plan.

DISCUSSION POINTS: INTERIM SOLUTIONS

Restroom Facilities: At the workshop we briefly discussed the lack of restroom facilities, and we originally agreed that the best interim solution we would be portable toilets. Staff pursued quotes for six toilets with daily service; the low quote \$3,708 a month with an annual cost of \$44,496. The vendor, 3 Peaks Glass required a one-year contract.

Last week staff met with NPS representatives, who suggested that as an interim solution, NPS purchase vault toilets at a cost of more than \$100,000. The five (5) vault toilets would be located on City property adjacent to the parking lot (see photo, Attachment E). The maintenance costs associated with the daily cleaning and pumping would be the City's obligation. I inquired if we could "contract with NPS for the maintenance and cleaning services?" I have been told that NPS staff is working on "getting a cost" for that service. The City does not currently have the equipment to pump the tanks or have staff available to maintain the restrooms at Horseshoe Bend. In addition, to locate the vault toilets on our property we would be required to prepare the site which would include grading, digging the required hole/ rock removal for the structures; and work with NPS to complete a survey of potential archeological sites.

Staff recommendation: Place vault toilets as an interim solution, if NPS is able to purchase and have them delivered; if the City is able to contract with NPS for the dumping and daily cleaning.

Survey of Potential Archeological Sites: NPS Cultural Resource Division staff are surveying the potential archeological sites at Horseshoe Bend in an effort to proactively include this information in the RFP for Design. NPS is willing to survey the entire area including city land. If there is any possibility of federal funding for improvements on city-owned property, or in the event a land swap or something similar occurs and the land transfers to the park in the future, this survey would be required. The survey would not require any ground disturbance and would be through visual identification of archeological features by traversing on foot and identifying features with GPS points. The survey would cover areas where we will be proposing development including a wide perimeter around the parking area should there be future expansion."

Staff recommendation: Request that NPS complete a survey of potential archeological sites on City-owned property identified in the RFP for Design.

Waste/Recycling: At the beginning of the season, staff located five waste receptacles near the trail entrance. City staff is currently visiting Horseshoe Bend multiple (2-3) times each day, seven days a week to remove trash. Aramark is considering our request to provide and maintain a recycling unit at the site. Staff estimates that 80% of the waste is recyclable materials.

Safety: There continues to be a dramatic increase in the popularity of Horseshoe Bend; between June 30 and July 6, the traffic counter revealed 6,599 vehicles entered the parking lot. City staff has completed the parking lot improvements, which included an expanded drive and parking area for buses/recreational and commercial vehicles. Next week staff expects to place the curb stops to assist with parking direction; signs will follow. While we believe the parking improvements will keep more vehicles from parking on Highway 89, safety is still a significant issue.

DISCUSSION POINTS: LONG TERM SOLUTIONS

Highway 89 Access: On September 4, 2015, a meeting was held with representatives from the City of Page, ADOT and National Park Service to discuss parking concerns on Highway 89 near Horseshoe Bend. One of the recommendations that resulted from the meeting was to redesign parking lot to improve flow, increase parking, and separate passenger/commercial vehicles. An additional recommendation included adding at City expense a left turn lane on northbound Highway 89 to improve safety. There have been subsequent conversations about improving the access drive and widening Highway 89 at this location. Through the Federal Lands Access Program (FLAP) funding program for such improvements may be available.

Funding/Ownership: Currently, the City is providing a low cost to maintain parking area for visitors to Horseshoe Bend. The addition of waste receptacle and trash removal has increased staff costs, but it is still minimal.

The improvements included in the scope of work will likely be in the multimillion dollar range; back-of-the-envelope estimates in the range of \$1.5 to \$2.5 million have been discussed. To my knowledge, the economic impact of Horseshoe Bend has not been quantified, but we have antidotal evidence that its increase in popularity has had a significant impact on sales tax revenue.

One of the questions that we need to answer is “does the City wish to own and maintain a parking area, trail, and facilities for the National Park Service’s asset indefinitely?” and if so, “how will the City fund the improvements and the maintenance of the improvements in the future?”

NPS and City staff are researching options for funding improvements. The City could use traditional methods, such as bonding or budgeting through the Capital Projects fund for the improvements. Another possibility we are researching is working with a Trust. It may be possible for the City to “sell” a conservation easement to a qualified organization of government agency and use the funds to make the improvements. A conservation easement is an excellent tool to permanently protecting land while retaining ownership.

NPS staff is researching “fee sharing” options; that could possibly assist/off-set the cost to the City of maintaining the parking infrastructure, restroom facilities, maintenance and the trail located on City property. NPS staff is looking at potential funding opportunities, however many federal funding sources cannot be used outside of federal lands (i.e. City property).

NPS restricts Glen Canyon National Recreation Area from expanding its footprint, a potential land swap with the NPS may be possible. If improvements are completed, that will increase the market value of the property, and according to NPS staff, land trades are based on values rather than the size of the property.

Please review the attachments. We look forward to hearing your thoughts and vision for Horseshoe Bend. Comments on the Scope of Work will be provided to the authors.

Summary of Public Scoping Comments for the Horseshoe Bend Trail Master Plan

Summary of Online Survey Responses *(Listed below are the responses which were shared by at least 15% of the respondents in each category)*

- What types of activities are appropriate at Horseshoe Bend?
 - Hiking/Walking
 - Photography
 - Sightseeing
- What type of tread surface should the trail have?
 - Natural
 - No Change/Leave As Is
 - Sand
- What features would you like to see along the trail (for example: rest stops, view points, educational information, shade structures, other, none)?
 - Shade Structures
 - Interpretive Displays/Information
 - View Points/Rest Stops
 - None/Nothing
 - Benches
- What features would you like to see at the overlook area (for example: benches, educational information, shade structures, viewing platform, none)?
 - None/Nothing
 - Benches
 - Interpretive Information
 - Viewing Platform
 - Shade
- How would you recommend safety be addressed at the rim?
 - None/Nothing/Leave As Is
 - Signs
 - Railing
- What type of features/services would you like to see at the parking area/trailhead?
 - Restrooms
 - Signs (Safety/Interpretive/Information)
 - Water Station
 - Improved Parking (to include paved parking)
- What are your thoughts regarding the use of a shuttle bus to help reduce the number of vehicles parked at Horseshoe Bend? *(each option was chosen by more than 15% of respondents, most selected answer listed)*
 - Good Idea to Explore
- Do you think the site plan for Horseshoe Bend should: *(each option was chosen by more than 15% of respondents, most selected answer listed)*

- Accommodate Growth
- What type of ranger services would you like to see at Horseshoe Bend (for example: information, ranger talks, guided hikes)?
 - None
 - Information
 - Talks
 - Hikes
- What kind of educational topics would be beneficial at Horseshoe Bend? What do visitors want to know about this location (for example: geology, history, wildlife and plants, safety)?
 - Geology
 - Wildlife
 - Safety
 - Plants
 - History

Summary of On Site Visitor Polling *(responses given by 15 or more persons, total # of persons polled unknown)*

- What features/aspects of Horseshoe Bend do you dislike and think should be changed?
 - Restrooms
 - Shade/Seats
 - Water Station
- What features/aspects of Horseshoe Bend do you like and think should be kept?
 - Keep It The Same
 - Amazing View

Summary of City and NPS Open House Public Comments *(responses given by 4 or more persons, out of 26 comments received)*

- 7 respondents stated that we should add signs and informative kiosks
- 6 respondents stated that we should add shade structures
- 4 respondents stated that we should add a connector trail to the city, add restrooms to the site, and that we should not build walls/fences/railing.

Attachment B

Horseshoe Bend Workshop

6/28-29/2016

8:00 a.m. to 4:30 p.m.

Attendees:

Maschelle Zia	NPS/FM-Project Mgr	Karen Dallett	NHA
Hugh Osborne	NPS Facilitator	Jeff Stein	Coconino County
Billy Shott	NPS GLCA Park Superintendent	Bill Diak	City of Page
Lance Mattson	NPS – V&RP	Kim Johnson	City of Page
Pat Horning	NPS – FM	Crystal Dyches	City of Page
Erin Janicki	NPS – P&C	Korey Seyler	City of Page
Cynthia Sequanna	NPS – I&E	Dugan Warner	City of Page
Steve Akins	NPS- FM	Gloria Tom	Navajo Nation (Phone)

Workshop Purpose	Plan a sustainable, safe, accessible, world class experience at Glen Canyon’s Horseshoe Bend that preserves its natural, scenic, cultural, and spiritual significance while managing growth and visitor needs.
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Key Items of Discussion	<ul style="list-style-type: none"> Elimination of old trail Feasibility of temp. closure during extren heat conditions >103° Water on site during peak season Secure UTV storage on site Immediate plan of action for over 100° Coordinated volunteer system needed Feasibility of fee based entry/parking Third party involvement. (vending, entry, water) Language barrier signage 	<ul style="list-style-type: none"> Trash scheduling Human waste Traffic flow, entry/exit congestion, ADOT involvement Controlled access. Gate/keycard/ swipe card(fee based) Accommodating growth Rim trail extension and how it ties into access Timeline for scope of work Regulating mini-tour vans
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Results of Discussion

A Route	<ul style="list-style-type: none"> Overall grade of 5% with limited areas not to exceed 8% Completely eliminate all traces of original trail Plant native species to create natural barrier Shortest possible route
B Surface	<ul style="list-style-type: none"> Blending with natural environment is essential, no matter what product is used Pre-colored lightly stamped concrete, low maintenance, durability, easy to repair Honeycomb / Geo cell feasibility Polymer stabilized aggregate feasibility

C Profile/Dimensions	<p>8' to 10' avg. width unless statistics collected demand wider</p> <p>6' min width at pinch points</p> <p>Incorporate wide viewpoints with sign and shade areas</p> <p>Social areas/rest areas with benches</p>
D Support Facilities	<p>Turnaround near rim for utility/emergency equipment (not within 200' of rim)</p> <p>Possible off-trail locked storage area for supplies, first aid</p> <p>Trail chairs made available</p>
E Signage	<p>NPS messaging</p> <p>Sustainable, and natural appearance</p> <p>Interpretive with Dam, Tribal, Canyon, Environmental and Safety messaging</p> <p>Spaced along trail roughly 800' apart, at shade stations, entrance, but NOT AT RIM.</p> <p>Three or four areas MAX along trail.</p>
F Restrooms	<p>Both male and female on each side of entrance</p> <p>Currently no services on site</p> <p>Explore waste disposal options</p>
G Viewing area	<p>MUST be natural appearing, completely integrated into existing landscape</p> <p>Accessible –flat, stable</p> <p>Locations for “iconic” photo</p> <p>“Selfie” site. Possible low and high viewing areas. Possibly similar to butte or the “diving board”</p> <p>Make use of natural features and boundaries</p> <p>User safety and structural stability</p>
H Parking/Traffic	<p>Design to direct use</p> <p>Area for drop-off, then park</p> <p>Expanded access to/from HWY 89</p> <p>Defined internal circulation for commercial/private/concierge tours</p> <p>Shuttle service area with loading/unloading and turnaround</p>
H Parking/Traffic (cont.)	<p>Parking - paving vs. aggregate with ORAR (Outdoor Recreation Access Route)</p> <p>No lighting to be installed. Maintain Dark Sky.</p>
I Entrance	<p>Must have a natural appearance</p> <p>Water station essential</p> <p>Shade and benches essential</p> <p>Restrooms essential</p> <p>Welcome sign/structure “GATEWAY” to create a “sense of arrival” experience</p> <p>Safety signage for heat and rim edge risk. Trail length/ travel time.</p> <p>Facility layout leads to new trail</p> <p>Structure layout to block old trail</p> <p>Locking storage area for facilities, and possible short term UTV storage</p> <p>Rim trail connection?</p> <p>Welcome plaza/Visitors Center/ Interpretive Area</p>

Limit entry to max trail capacity? At rim? At parking lot?

J Site Maintenance

Litter/trash collection area
Recycling container
Dog waste station
Sanitizing station

K Cost and Cost Recovery

Parking fees vs. user fees
After-hours debit terminal for entry
Avoid double charging with parking AND entrance fees
Fee for visitors, no charge for local residents
City commitment for capital improvement structure possibly dependent on fee collection
Sales tax revenue correlation to Horseshoe Bend traffic
Capital source from conservation easement buffer
Possible land swap with City of Page and GLCA
NPS purchase of development rights

Post Workshop Goal

Complete a development plan for the Horseshoe Bend parking to rim area.
Ready for design and blueprint stage
Establish Scope of Work
Decide on RFP or RFQ and review submissions
Organize final design mandatory criteria
Compile ongoing visitor use data at site (traffic and trail)
City to explore ways to estimate ROI, and revenue

Key Personnel for Leads

Scope of Work

Maschelle Zia, Pat Horning, Dugan Warner, Kim Johnson, Phil Clark

Trail Counter

Pat Horning

Traffic Counter

Crystal Dyches

Bullet Point Distribution

Hugh Osborne, Steve Akins

Capitalization Plan

Crystal Dyches, Bill Diak, Billy Shott (Karen Dallett-supporting)

NPS Economic Outlook Report (email)

Billy Shott

NEXT MEETING

July 14, 2016 1:00 – 4:00pm (Scope of Work group)

DRAFT – FOR REVIEW ONLY

SCOPE OF ARCHITECT AND ENGINEERING SERVICES

*City of Page, AZ and Glen Canyon National Recreation Area, AZ/UT
Survey and Design Services
Horseshoe Bend at Glen Canyon, Trail and Visitor Facilities*

8/1/2016

1 Introduction

1.1 Scope

In accordance with the terms and conditions of the Contract, the Architect/Engineer shall perform services and execute the work of this task order for the City of Page (City) and Glen Canyon National Recreation Area/National Park Service (NPS) and to perform survey and design services.

1.2 Project Summary

This proposal is to provide a survey and design, construction drawings, and construction cost estimate to construct a new trail, parking area and associated visitor facilities. The trail and associated facilities must comply with the Americans with Disabilities Act as it applies to outdoor facilities.

1.3 Confidentiality

The Information developed under this task order is the property of the U.S. Government and shall be kept in strict confidence.

1.4 Performance Period

The work of this task order shall be provided in accordance with the schedule shown elsewhere in this task order.

1.5 Project Identification

Project Title: Horseshoe Bend Improvements

Project Location: City of Page / Glen Canyon National Recreation Area, AZ/UT

Drawing Number: **

Points of Contact

DRAFT – FOR REVIEW ONLY

1.6 Points of Contact

Contractual –

Project Manager - Kimberly Johnson, AICP
Community Development Director
kjohnson@cityofpage.org
928.645.4261

1.7

In accordance with the FAR Sections 36.609-2(b) and 52.236-23 the Consultant is responsible for Quality Control, which includes ensuring the technical accuracy, completeness, and correctness of the work, including coordination of all sub-consultants with each other. The Consultant shall accomplish a Quality Control Review and shall make corrections prior to each submittal to the City and NPS.

2 Design Requirements

All Architect-Engineer Services performed under this task order shall be performed under the direct supervision of a professional architect, engineer or surveyor licensed in the State of Arizona. Survey services shall be performed by a Land Surveyor licensed in the state of Arizona.

2.1 Codes and Authorities

All work performed shall comply with applicable laws, regulations, City of Page and NPS policies and guidelines.

- City of Page Policies and Guidelines
- NPS Office of Policy: <http://home.nps.gov/applications/npspolicy/index.cfm>
- NPS Management Policies 2006: <http://www.nps.gov/policy/mp/policies.html>
- NPS Legislative and Congressional Affairs: <http://www.nps.gov/legal/>

All units, structures and components must be constructed based on the following codes and authorities, depending upon application of The Code of Federal Regulation, including:

- 29 CFR Parts 1910 and 1926 – Occupational Safety and Health Administration (OSHA)
- International Building Code (IBC) latest edition
- American Society for Testing Materials (ASTM) specifications as applicable
- American National Standards Institute (ANSI)
- Americans with Disabilities Act and Architectural Barriers Guidelines, 2004
- (ADA-ABA) Accessibility Guidelines, 2009
- Draft Final Guidelines for Outdoor Developed Areas, 2009
<http://www.access-board.gov/outdoor/draft-final.htm#text>

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- Trail Research: A Longitudinal Trail Research Program on Soil Stabilizers (1999)
<http://ncaonline.org/index.php?q=node/1294>
- American Concrete Institute publications, latest editions

3 Project Description and Technical Requirements

3.1 Park Location and Facilities

This project is located within the city limits of Page, Arizona, with the following directions:

US 89: Approximately 3.6 miles south of downtown Page, Arizona.

The nearest town offering lodging, gasoline, repair services and food is Page, Arizona

3.2 General Site Description

The land on which this project occurs is on City of Page and Glen Canyon NRA. The site varies in elevation and generally slopes towards the edge of the Colorado River canyon and end of trail.

The climate is high-desert with precipitation occurring throughout the year, including snow in the winter

<http://www.usclimatedata.com/climate/page/arizona/united-states/usaz0152>

Significant open space exists near the trail with native brush, plants and grasses. There are no trees.

This is a natural Park with a natural landscape and archeological features. Disturbance to the site is limited to the survey limits shown on the drawing.

The design should minimize disturbance to the existing landscape.

3.3 Existing Site Conditions

The new trail alignment is undeveloped. The ground surface is a generally either fine sand or solid sandstone with various native plants growing in the sandy areas. See attached drawing showing the proposed trail alignment.

The existing parking area is next to US 89.

There are no utilities at the site.

3.4 Project Goals

The goal of this project is for the consultant to develop a design for an accessible trail access, visitor restrooms/trailhead/orientation structure, site amenities, and parking improvements at the Horseshoe Bend at Glen Canyon.

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The purpose of this project is to plan a sustainable, safe, accessible world-class experience at Glen Canyon’s Horseshoe Bend that preserves the natural, scenic, cultural and spiritual significance while managing growth and visitor needs.

Primary features of the project shall include:

- Trailhead/Orientation structure
- New accessible trail access from parking area to rim view area.
- Visitor restrooms and support facility.
- Parking and traffic circulation.

Rim view area.

3.5 Project Description

The Consultant shall survey the proposed trail alignment and develop a design for the new trail and associated improvements to comply with the Americans with Disabilities Act and Outdoor Recreation guidelines. Using the survey, the consultant is to provide design documents for the proposed improvements.

Consultant shall prepare design drawings to construct a new trail that complies with the (ADA-ABA) Accessibility Guidelines - Final Accessibility Guidelines for Outdoor Developed Areas and *review* the results of the research on soil stabilizers (<http://www.ncaonline.org/resources/articles/trails-surfacestudy-finalreport.shtml>) *in designing the new trail surface for this project.*

The work may include crossing existing drainages along the trail, as identified by the survey. These drainage crossings need to assure positive site drainage across and/or away from the trail. All drainage issues must be resolved in the design phase of the new trail.

3.6 Project Design Criteria and Performance Requirements

ADA-ABA Accessibility Guidelines compliance

The new accessible trail and facilities shall meet all ADA-ABA Accessibility Guidelines for Outdoor Developed Areas. The consultant shall inform the Project Manager of any areas that cannot be designed to conform to the (ADA-ABA) Accessibility Guidelines based on the site survey results. The City and the consultant shall discuss possible solutions before completing the design. The consultant shall work with the existing slopes as much as possible to minimize cut and fill.

This contract includes survey and design of a new universally accessible trail, visitor facilities, site amenities and parking improvements including:

- **New accessible trail from parking area to rim view area:**
 - **Route**
 - Shortest possible accessible route.

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- Completely eliminate all traces of original trail.
- grades and cross slopes within accessibility requirements,
- **Surface:**
 - Blending with natural environment is essential, no matter what product is used.

The new surface options include (in no particular order):

 - Colored/stamped concrete
 - Crusher fines with Magnesium Chloride on aggregate base course
 - Geogrid (such as geocell by <http://www.geoproducts.org/>)
 - Other trail surfaces that result in a net cost/benefit, are low maintenance and do not detract from the landscape.
 - Combination of the above to provide a low maintenance accessible trail while also accommodating the existing drainage.
 - Culverts to span drainages
 - If trail is not concrete, the edge of the trail will need to be defined with materials such as colored concrete, cut sandstone or other appropriate/aesthetic materials (not including wood).
 - Headwalls for culverts to be made of sandstone, colored concrete or other appropriate/aesthetic materials, not including wood.
- Trail must have as much of a natural appearance as possible while keeping maintenance requirements to a minimum and meeting accessibility standards.
- **Profile/Dimensions/rest areas:**
 - Minimum of 8 feet wide, 8' to 10' average unless statistics collected demand wider. 6' minimum at pinch points based on topography or drainage concerns.
 - Incorporate up to four wide viewpoints with interpretive exhibits, shade areas, and benches dispersed along trail at logical intervals.
- **Visitor restrooms:**
 - Restrooms:

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- No utility services on site.
- Explore waste disposal options.
- Trailhead/Orientation Structure:
 - Must blend with natural environment
 - Potable drinking water station
 - Shade and benches
 - Welcome sign/structure “Gateway” to create a “sense of arrival” experience, including logos for City of Page and NPS
 - Visitor Information signage of heat and rim edge risk, trail length/travel time
 - Possible Fee collection station
 - Trash receptacles
- **Parking lot and traffic circulation:**
 - Defined internal circulation for commercial/private/concierge tours
 - Parking surface to meet ADA requirements, in slope, durability.
 - No lighting
 - Widen access to/from Hwy 89
 - Trailhead drop off area at parking lot
- **Rim viewing area:**
 - Must be natural appearing, completely integrated into existing landscape.
 - Develop safe viewing area that is accessible, flat, and stable for viewing and photography.
 - Make use of natural features and boundaries.
- **Signs**
 - Regulatory
 - Guide
 - Informative/Interpretive

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- Safety

3.7 Project Technical Requirements

The consultant shall develop the specifications, drawings and cost estimate for this project as described elsewhere in this scope of work.

4 Scope of Services

The project will include, but not be limited to, the following:

SURVEY SERVICES:

- Survey a total width of 50 (fifty) feet along the proposed trail alignment and to the survey limits shown on the drawings.
- Coordination with the NPS Project Manager/COR.

DESIGN SERVICES:

- Using the survey data obtained in the field provide design plan and profile of the new trail and associated improvements.
- Using the survey data obtained in the field provide design for the parking area, including but not limited to existing topography; new grading plan; new cross sections, location for new vault toilets
- Coordination with the Project Manager.

5 Deliverables and Submittals

5.1 Design Schedule

Upon award, the A/E shall determine and provide a schedule for completion of the survey and design. Upon acceptance of the Schedule by the Project Manager, the schedule will be used to evaluate the A/E's monthly applications for payment. The schedule shall be updated and transmitted to the Project Manager as necessary.

The schedule shall include the following milestones, and any others identified by the A/E (all durations are in calendar days):

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Milestone/Element	Maximum Duration	Anticipated/ No Later Than
Notice to Proceed		TBD
A/E Site Visit/Design meeting		Within one week of NTP
Survey time on site	7	
90% Submittal of notes and pre-final survey drawings	21	
Review	14	
100% Submittal of notes and final survey drawings	14	
Submittal of 30% Design (Drawings, Specifications, Cost Estimate)	45	
Review	14	
Submittal of 70% Design (Drawings, Specifications, Cost Estimate)	21	
Review	14	
Submittal of 100% Design (Drawings, Specifications, Cost Estimate)	21	
Review and Acceptance	7	

5.2 Documents

The required Document deliverables are listed in the table below. Electronic copies shall be sent to the CO, COR, and PM, at minimum. *Three* paper sets of each deliverable to be reviewed are required, delivered as shown in the table. One of the two copies delivered to the PM will be returned to the A/E with comments. A/E shall release intellectual property ownership of all data and deliverables to the National Park Service.

Design Documents	Electronic			Hard Copy
	CA D dwg	½ size PDF	Full PDF or Word	Paper unless indicated
90% Notes and pre-Final Survey Drawings				
Drawings	X	X		1 COR, 1 CO, 1 PM
Notes			X	1 COR, 1 CO, 1 PM
100% Notes and Final Survey Drawings				
Drawings	X	X		½ & full: 1 COR, 1 CO, 1 PM
Notes			X	1 COR, 1 CO, 1 PM
30% and 70% Design				
Drawings	X	X		½ & full: 1 COR, 1 CO, 1 PM

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Outline Specifications (Divisions 2 through 49)			X	1 COR, 1 CO, 1 PM
100% Design				
Drawings		X	X	½ & full: 1 COR, 1 CO, 1 PM
Draft Specifications (Divisions 2 through 49)			X	1 COR, 1 CO, 1 PM
Construction Cost Estimate				

Drawing Standards

All Construction Documents shall be prepared using the English System of Weights and Measurements, and in accordance with industry standards. Drawings shall be prepared in AutoCAD (DWG) format, and shall conform to NPS CAD & drafting standards:

<http://cadd.den.nps.gov/standards.html>.

The standard cover sheet will be provided from the NPS CAD and drafting website.

The standard second sheet borders are available by downloading and installing the NPS AutoCAD Tools: <http://cadd.den.nps.gov/standards.html#NPS%20AutoCAD%20Tools>; then using the IconMenu command. The .ctb file for plotting can be downloaded from this link:

<http://cadd.den.nps.gov/standards.html#Plotting>.

Drawings

Deliverables provided for NPS review shall include:

- Drawings showing the existing trail and the new trail, including elevations, plan/profile, and *sample* details to construct the improvements to the trail.
- Drawings showing trail shaded view/rest areas.
- Drawings showing Rim Viewing Area, including elevations, location and details of proposed viewing platform(s), safety mitigation and accessibility.
- Drawings showing existing area where proposed parking lot is located, including new parking area, traffic circulation, topography, and other improvements.
- Drawings showing proposed trail entrance/restrooms and related visitor amenities.

5.3 Outline Specifications and Submittals

The Consultant shall prepare and submit for review applicable technical specifications covering the work described in this document, due with Construction Drawings. Technical specifications shall be written in Microsoft Word and follow Construction Specifications Institute (CSI) MasterFormat (current version) numbering. Additional information may be found at www.csinet.org.

Specifications prepared by the consultant as part of this scope of work may include but not be limited to the following.

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Sec. 013500 Archeological Protection
Sec. 014300 Contractor Quality Control
Sec. 015600 Barriers – Safety barrier fence, temp walkway / boardwalk
Sec. 015710 Storm Water Pollution Prevention
Sec. 022200 Removal of Buildings, Pavements, and Structures (Site Demolition)
Sec 022320 Aggregate
Sec 024119 Selective Demolition
Sec 079200 Joint Sealants
Sec 311000 Site Clearing
Sec 312000 Earth Moving
Sec. 321313 Concrete Paving
Sec 321316 Decorative Concrete Paving
Sec 321373 Concrete Paving Joint Sealants
Sec 334600 Subdrainage

5.4 Cost Estimates

As part of the design, the consultant shall provide a construction cost estimate for the project to include all costs associated with a complete project.

6 Data and Materials to be provided by City of Page and NPS

The following information is provided as attachments to this Scope of Work.

- Drawing showing satellite image of existing trail, trailhead, and adjacent areas, with trail and nearby facilities, survey limits and other features drawn over the image.

7 Survey Scope of Work

7.1 Survey Introduction

All Consultant Services performed under this task order shall be performed in accordance with applicable codes, accepted industry standards and under the direct supervision of a Professional Land Surveyor (PLS) licensed in the State of Colorado.

7.2 Confidentiality

The information developed under this task order is the property of the City of Page and the U.S. Government and shall be kept in strict confidence.

7.3 Survey Requirements

This survey is defined under Contract Line Item No. 1 in [Section 8.1](#).

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Survey

This item consists of plan/profile and topographic survey and mapping of the existing trail and the topographic survey of the area shown on the attached drawing for the proposed handicap parking lot to the boundaries shown. The survey will be used to determine (ADA-ABA) Accessibility Guidelines for Outdoor Developed Areas and compliance and identify existing drainage issues that will need to be mitigated in the design of the new trail. Survey limits to extend no further than 20 (twenty) feet to either side of the centerline of existing trail and no further than 10 (ten) feet beyond the area shown as the proposed handicap parking area.

Quality Control

In accordance with the FAR Sections 36.609-2(b) and 52.236-23 the Consultant is responsible for Quality Control, which includes ensuring the technical accuracy, completeness, and correctness of the work, and all topographic surveying aspects and details, including coordination of all sub-consultants with each other. The Consultant shall accomplish a Quality Control Review and shall make corrections prior to each submittal to NPS.

7.4 Survey Deliverables and Submittals

Survey Drawing and notes Submittals

7.4.. 90% Survey Submittal

One draft set of Survey drawings on bond paper in accordance with the drafting standards established in the Director's Order 10A, with the following exceptions: the minimum letter/number/symbol height shall be 0.100 inch, the contour lines shall be solid, and the north arrow shall be a standard surveying north arrow. Drawing sheets shall be on standard survey sheets, 22 inch by 36 inch.

Should the consultant encounter any existing survey monuments, provide Monument Location submittal.

Monument location recommendations on preliminary topographic drawings. Drawings should indicate new and existing control. Find the NPS Survey Monument Record Sheet under "Design/Templates" at:

http://workflow.den.nps.gov/staging/10_PublicForms/public_forms.htm#Design

7.4.. Final 100% Survey Submittal

One set of original, final Survey drawings on Mylar, archival quality in accordance with the drafting standards established in the Director's Order 10A, with the following exceptions: the minimum letter/number/symbol height shall be 0.100 inch, the contour lines shall be solid, and the north arrow shall be a standard surveying north arrow. Drawing sheets shall be on standard survey sheets, 22 inch by 36 inch, 4-mil thick, double matte Mylar.

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Two CD-ROMs or DVD-ROMs in clear slim jewel cases, with the final AutoCAD 2010 drawing files, or later version, Autodesk Civil 3D files, electronic field data, digital photographs and PDF's of the following:

- A description of the survey
- Original field books
- GPS data
- Monumentation information and record sheets
- Notes
- Raw data or electronic field book
- Calculations
- Sketches
- Copy of the survey contract or task order with the original scope of work
- A README file that describes the project by park name; PMIS number; location and area of the project; drawing number; drawing sheet index; type of files; and any unusual or distinctive conditions of the project

The CD-ROMs or DVD-ROMs shall be formatted single session; finalized disk; Joliet or ISO 9660 Level 2 file system; and clearly labeled (electronically printed) with the following information:

- Park four-letter alpha code (GLCA)
- TOPOGRAPHIC SURVEY
- Drawing Number (608/**)
- Project name/title (Construct Horseshoe Bend Trail)
- Date submitted (e.g. July 19, 2016)
- Name of Prime Consultant
- Survey sub-consultant and telephone number

7.5 Survey Technical Requirements

Survey Control

Project control shall be referenced in State Plane Coordinates for the State in which the survey is performed.

- Set at least two Permanent survey monuments at locations which are not in the area of proposed construction or known future disturbance, at least 200 feet apart as approved by the park and/or the COR. Two monuments shall be set in Project area.
- Provide NPS Survey Monument Record Sheets for each monument set.
- Use existing monuments if available in addition to monuments set for the project.

Field Work

Take sufficient survey shots to adequately develop contours at one-foot intervals and develop the plan and profile information. For trail areas that are flat or do not drain properly, based on the

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collected siltation, ponding and when visually or topographically apparent, provide additional spot elevations to design and construct the trails for ADA-ABA compliance and to be well drained.

Take sufficient survey shots to adequately define the topography and plan and profile information of the design and construction area. Survey shots shall be gathered using electronic total stations and data collectors. Locate and identify the following, if in existence at the site:

- Building corners, corners, landings, railings, downspouts, window wells, porches, steps, and stoops.
- Existing signs except existing interpretive markers (4x4 posts with a number).
- Structures, bridges, slabs, walls, rails, ramps, steps, fences, guard rails, gates, posts, signs, rock boulders, and other existing conditions providing pertinent dimensions, materials, and elevations.
- Roads, road names, parking areas, trails, paths, and miscellaneous pavement edges, corners, intersections with other features. Identify pavement and other surface's materials, width of pavement. Identify island material, edging, and dimensions.
- Curbs and gutters with top and bottom elevations, widths, and materials.
- Rocks, rock outcroppings, rock ledges, and edges of rock in both the horizontal and vertical planes.
- Take survey shots to adequately define top and bottom of slopes, high points, low points, grade breaks, ground anomalies, pavement cross sections and crowns, direction of pitch on paved surfaces, and to accurately define curvilinear features.
- Take sufficient shots on opposite edges along lengths of walks, and at middle of walks where cross slopes are not consistent.
- Take sufficient shots for spot elevations on paving or other hard surfaces to the nearest 0.01 foot and to the nearest 0.10 foot on other surfaces.

7.6 New Survey Monuments

Survey monuments shall be aluminum posts, 2.5 inch diameter by 30 inch length. For setting in workable soil, set the survey monument 24 inches in the ground with 6 inches protruding (in heavy use areas or where it could be a hazard reduce the protruding height to 2 inches) with 6 inch by 6 inch or 6 inch diameter concrete collar that extends no more than 6 inches below ground surface to top edge of the cap. Before the concrete is placed for the collar, backfill lower 18 inches of pipe, tamp to compact well. Other types of monuments may be used as approved by the COR.

- Survey monuments shall be stamped with a center punch indicating the exact point on the monument associated with the coordinate for the monument. Provide the current year on the set monument and a letter or number combination in a series approved by the park and/or the COR.
- Provide a NPS Survey Monument Record Sheets for each monument set and/or found.

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- Provide recommended locations for setting monuments for Project Manager review and comment. Do not set monuments until approval is given by the Project Manager.

7.7 Photographs and Sketches

Take digital photographs of the overall site, noteworthy portions of existing trail, interiors of utility structures and other structures or conditions requiring better definition.

Take digital photographs of all set and found survey monuments, taken at approximately 12 to 18 inches from the survey monument face so that all monument information is clear and legible. The digital camera shall have a minimum capability of a 10 megapixels. Images shall have a minimum resolution of 4000 pixels wide and 3000 pixels high, JPG/JPEG format.

Draw sketches, as necessary, to illustrate existing structures and/or other conditions which may be unique or hard to describe in words.

7.8 Office Work

Drawing Standards

Spot elevations on paving or other hard surfaces shall be to the nearest 0.01 foot and to the nearest 0.10 foot on other surfaces.

Field survey work shall be compiled and mapped with the use of AutoCAD 3D software, with all information, data, (including the TIN surface), and electronic files provided.

Produce drawing sheets in AutoCAD 2010 .DWG files, or a later version. Each drawing shall be set up as an individual electronic file, with an additional NPS cover and index sheet. The drawings shall be titled **Topographic Survey for Horseshoe Bend Trail, *Glen Canyon National Recreation Area*** with **Drawing Number 608/****.

All existing and new monumentation and/or control information (northing, easting, elevations, descriptions, and locations) used for this project shall be placed in the left column of the standard survey sheet. Indicate horizontal and vertical datum used for this project in the appropriate box on the standard survey drawing sheet.

The drawings shall comply with the drafting standards established in the Guideline for Preparation of Design and Construction Drawings, Director's Order 10A, dated April 2003 or later, and DSC CADD Standards, dated January 2007 or later. Use <http://cadd.den.nps.gov> to access these Standards, and the standard survey sheet.

Archival Base Map

Produce a record archival base map with mapping information on individual layers within the electronic drawing files. This information shall be on unfrozen layers. These unfrozen layers shall include, but not be limited to the following:

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- Drawing sheet format
- North arrow, scale, symbol legend
- Contour lines at **1** foot intervals
- Index contour lines at **1** foot intervals
- Buildings
- Trees and vegetation
- Structures, fences, gates, walls, and steps
- Pavements
- Dirt and gravel trail, path, and road edges
- Drainage structures, ditches, swales, outfalls, etc.
- Walks, steps, ramps and rails
- Curbs and gutters
- Utilities (one layer for each type)
- Spot elevations (to include the minimum spot elevations which, in conjunction with the contours, are required to communicate critical elevations. The spot elevations on this layer should be limited to high points; low points; grade breaks; areas where spot elevations are required to indicate anomalies in the ground surface; and utility structures rim and invert elevations.

7.9 Drawing of Topographic Survey Limits

The survey area for the survey shall include the limits previously defined in this scope of work.

8 Standard Services and A/E's Price Proposal

Comply with standard services per the IDIQ contract, except as modified elsewhere in this task order.

Progress payments to the A/E shall be made on the basis of acceptable invoice submitted monthly for the actual percentage of services completed by the A/E.

8.1 Price Proposal

The A/E's price proposal for this task order shall be prepared and submitted in a format that matches the AE PD SD Task Order Price Proposal Template.

Provide pricing for each of the following items:

1. Survey, including all documentation of survey
2. Pre design, including alternative surface treatments

9 PHOTOGRAPHS OF EXISTING CONDITIONS

Key Features

- *Advanced Microelectronic Design*
- *Detects and Counts Trail Traffic*
- *High-Quality Infrared Scope*
- *Small and Easy to Hide — Reduces Vandalism Risk*
- *Quick to Install*
- *Long Battery Life (approx. 3 years)*
- *Large Memory Capacity (store > 400 million counts)*
- *Optional Locking Steel Box*
- *Field-Proven, Generation III Design (> 10 year history)*



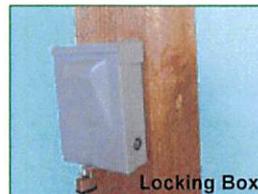
Compact, Unobtrusive Design

The TRAFx Infrared Trail Counter is designed to count general traffic on trails and paths — hikers, joggers, horseback riders, snowmobiles, cyclists, etc. Unlike other infrared trail counters, it does not require a receiving unit or reflector to operate. This results in a

very compact, easy-to-hide design, that reduces risk of vandalism. Using a small, high-quality infrared scope mounted on a tree or post and pointed towards the trail, the TRAFx Infrared Trail Counter detects and counts the infrared signature associated with people.

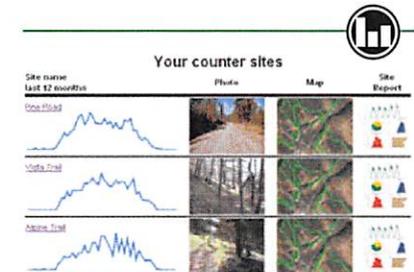
Easy Installation

A camouflage "skin" superbly hides the unit and blends it in with the forest environment. In busy, open areas (e.g., urban areas), a low-cost locking steel box can be used. The TRAFx Infrared Trail Counter also works well in winter conditions on hiking, ski, snowshoe, or snowmobile trails. It is quick and easy to install, and uses three small "AA size" alkaline batteries.

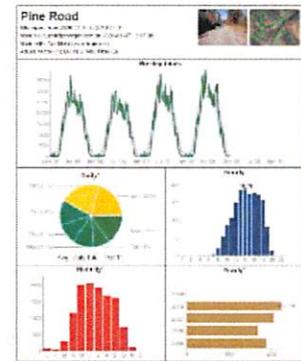


Connect the counter to a PC with the TRAFx Dock to configure it.

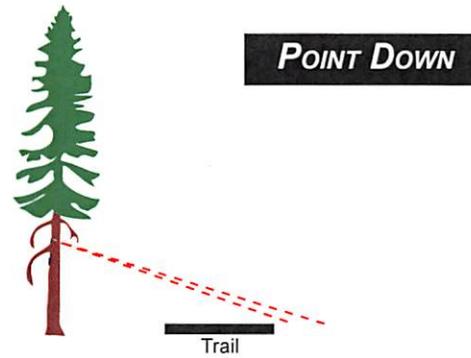
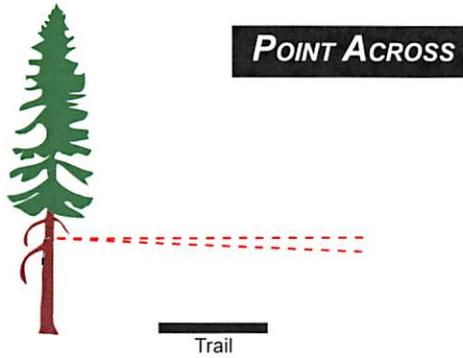
Or, use the Dock as a stand-alone "shuttle" to download data in the field.



Use TRAFx DataNet to view and manage your data and produce professional reports in seconds.

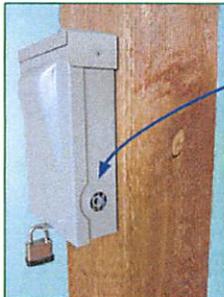


Try the free Demo at www.trafx.net



FEATURES

- Hourly or daily totals, or timestamps
 - 14 000 hourly or daily totals = > 400 million counts
 - 14 000 timestamps
- Flexible installation options (see above)
- User programmable modes/settings
 - Programmable settings include:
 - *Real-time clock *Start date/time
 - *Delay after event *Site/counter name
- Three colour-coded LEDs indicate status of operation
 - green light flashes upon detection
- Digital readout of battery voltage level (e.g., 4.2V)
- Automatic low battery warning
- User replaceable parts



In busy or open areas, use a locking box. We supply detailed instructions how to turn a low-cost electrical box into a locking box for the TRAFx counter.

SPECIFICATIONS

CASE: 11cm x 7cm x 3cm (4.3in x 2.8in x 1.2in); weatherproof
TOTAL WEIGHT: 170g (6oz) (without batteries)
CABLE: 1m (3.3ft)
POWER: Three "AA size" alkaline batteries (e.g., Energizer)
BATTERY LIFE: Approx. 3 years
DIGITAL MEMORY DESIGN: Data and settings are retained even when batteries are removed or die
TIME KEEPING: Quartz clock; 20ppm accuracy
OPERATING TEMPERATURE: -40C (-40F) to +50C (122F)
SENSOR TYPE: Thermal infrared microsensor
DETECTION RANGE: 6m (20ft)
COMMUNICATIONS: RS232 serial; 115,000 baud
DATA TYPE: ASCII; .TXT file type
OTHER: Gold-plated PCB; silicon conformal protected electronics; electrostatic discharge protection; short circuit protection; RoHS (lead-free)
WARRANTY: One year parts and labour. Learn more about the warranty at www.trafx.net/legal
EMI COMPLIANCE: FCC, IC, CE

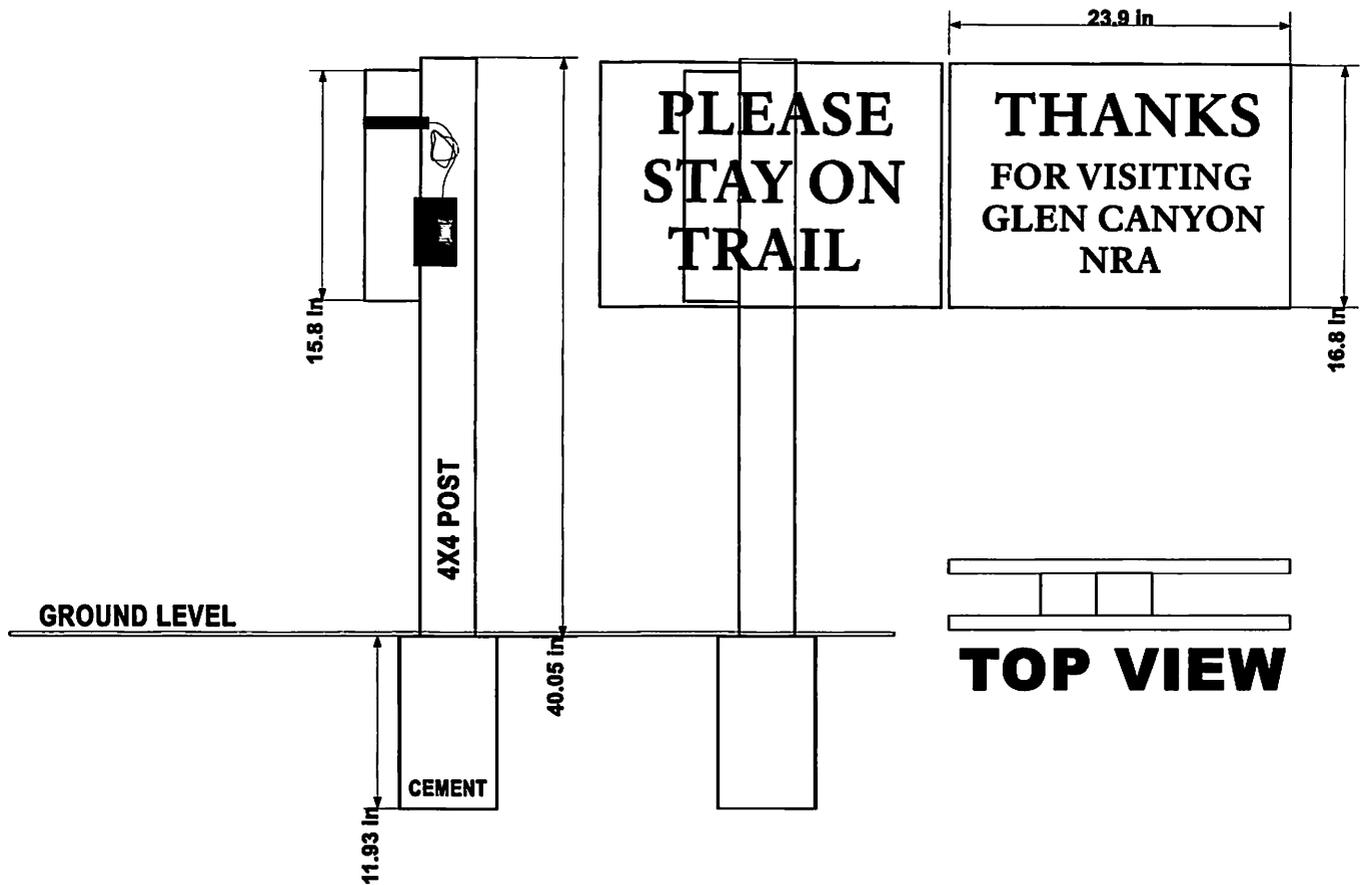
ACCESSORIES/OPTIONS

- LCD tally display
- Extended 5-year warranty

TRAFx Research Ltd.

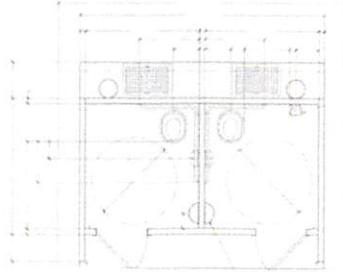
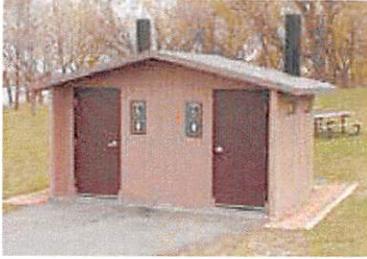
6A Riverstone Road, Canmore, Alberta, Canada T1W 1J5
T: (403) 678 1802 F: (403) 451-1561
E: info@trafx.net www.trafx.net





- The post is 4in x 4in lumber
 - 2in. x 14in x 3in will be drilled out for the counter
 - Another 4in x 4in x 16in lumber will be added to the post for the placing the counter in a stable position
- The signs are to camouflage the counter
 - NOTE: the verbiage is not final.
- The cement is to prevent people from taking the sign, and counter.





Tioga Special double vault. Standard features include two ABS lined concrete vaults, barnwood textured walls, cedar shake textured roof, off loaded and set up at site.

Base Price	Price per unit	Click to select	
Tioga Special	\$ 24,492.59		24,492.59
Added Cost Options:			
Installation	\$ 3,200.00	<input type="checkbox"/>	0.00
Chase Option	\$ 1,900.00	<input type="checkbox"/>	0.00
Optional Wall Texture - choose one <input type="checkbox"/> Split Face Block <input type="checkbox"/> Struck Trowel	\$ 2,200.00		0.00
Optional Roof Texture - choose one <input type="checkbox"/> Delta Rib	\$ 900.00		0.00
R-19 Roof Insulation	\$ 865.00	<input type="checkbox"/>	0.00
Room Wastebasket	\$ 120.00	<input type="checkbox"/>	0.00
Hand Sanitizer	\$ 70.00	<input type="checkbox"/>	0.00
Marine Package for Extra Corrosion Resistance	\$ 4,200.00	<input type="checkbox"/>	0.00
Solar Light Kit	\$ 1,340.00	<input type="checkbox"/>	0.00
Solar Fan Kit	\$ 1,290.00	<input type="checkbox"/>	0.00
Conduit Junction Box (chase only)	\$ 200.00	<input type="checkbox"/>	0.00
Electric Light Package (chase only)	\$ 5,650.00	<input type="checkbox"/>	0.00
Paint Touch-up Kit - Single Color	\$ 55.00	<input type="checkbox"/>	0.00
Paint Touch-up Kit - Two Tone Color	\$ 61.00	<input type="checkbox"/>	0.00
Total Cost of Selected Accessories from Accessories Price List:			\$ 0.00
Estimated One-way Transportation Costs to Site (quote):			\$ 9,000.00
Custom Options: 2RM35119 owl guard (stack screen) - \$34.50 per stack X 2 stacks per unit			\$ 69.00
Total Cost per Unit Placed at Job Site: <i>(excludes all taxes)</i>			\$ 33,561.59

No Cost Options:

Single Color: (select one)	Two-Tone Color: Walls Pueblo Gold <input type="checkbox"/> Roof Nuss Brown <input type="checkbox"/>	*Signage: <input type="checkbox"/> Men <input type="checkbox"/> Women <input checked="" type="checkbox"/> Unisex <input type="checkbox"/> Accessible	Wall Vent Location: (upon entering door) <input type="checkbox"/> Right Side <input checked="" type="checkbox"/> Rear <input type="checkbox"/> Left Side <input type="checkbox"/> Door
Deadbolt Lock: <input checked="" type="checkbox"/> CXT Supplied (Schlage) <input type="checkbox"/> Customer Supplied Lock	Door Opener: Privacy Latch ADA Handle <input type="checkbox"/>	Paper Holders: 3-Roll Stainless Steel <input type="checkbox"/>	

**Building includes restroom signs in Braille and roman lettering.*

This price quote is good for 60 days from date below, and is accurate and complete.

CXT Sales Representative

Date

I accept this quote. Please process this order.

Company Name

Customer

Date

CXT Concrete Buildings

Buildings **Textures** & Professional Site Maintenance & Replacement Park Products
Colors Services & Install Warranty Parts

Government
Purchasing

Sales Region
Information

WALL TEXTURES

Download printable versions

 Colors  Textures

Wall Textures Standard



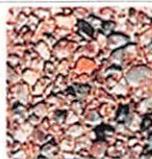
BARNWOOD



SPLIT FACE BLOCK

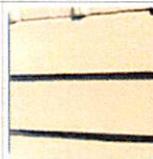


STUCCO

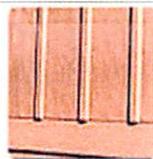


EXPOSED AGGREGATE

Optional



HORIZONTAL LAP
SIDING



BOARD & BAT



BRICK

Specialty



FIELD STONE

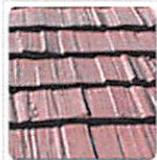


RIVER ROCK

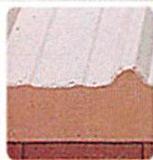


NAPA VALLEY

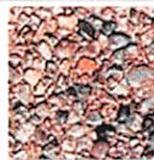
Roof Textures Standard



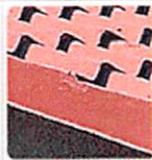
CEDAR SHAKE



DELTA



EXPOSED AGGREGATE



TILE

Optional

Specialty

Stone Color Options



MOUNTAIN BLEND



BASALT



NATURAL GREY



ROMANA

COLOR CHART



An **LB Foster**
Company

L.B. Foster Home | Rail Products | Piling Products | Threaded Products | Coated Products | CXT Concrete Ties | Fabricated Bridge Products

Attachment F: Possible New Trail Alignment





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Attachment G: Possible sites for Vault Toilets ~~_____~~ *Sites of interest for Vaults*