

CITY COMMISSION AGENDA

City Commission Chambers
Monday, February 2, 2009 7:00 p.m.
MEETING #4745

CALL TO ORDER

ROLL CALL

INVOCATION: Reverend Wingett, First Baptist Church

PLEDGE OF ALLEGIANCE

PETITIONS & PROCLAMATIONS

National AMBUCS Month

VISITORS (Limit of five minutes per individual and fifteen minutes per topic. Final action may be deferred until the next City Commission meeting unless an emergency situation does exist).

CONSENT CALENDAR

1. Approval of City Commission Meeting minutes, January 20, 2009
2. Approval of Joint City/County Meeting minutes, January 26, 2009
3. Appropriation Ordinance No. 3, February 2, 2009
4. Approval of Sewer Service Contract for Ford County
5. Reject all Bids for Detective Vehicle Bid

ORDINANCES & RESOLUTIONS

UNFINISHED BUSINESS

NEW BUSINESS

1. Appointment to Boards and Commissions. Presented by Cherise Tieben, Assistant City Manager.

2. Contract for Phase II Levy Certificates. Presented by Joe Finley, Director of Engineering Services.
3. Consideration of a Motion to Rescind a Previous Motion Related to the Construction of an Events Center. Presented by Ken Strobel, City Manager.

OTHER BUSINESS

ADJOURNMENT

PROCLAMATION

WHEREAS: AMBUCS, American Business Clubs, Inc. is dedicated to creating independence for people with disabilities; and,

WHEREAS: the recognition of AMBUCS as an organization making an important difference in communities across the United States as a noteworthy event; and,

WHEREAS: The Dodge City AMBUCS is a chapter now celebrating 25 years of service; and,

WHEREAS: AMBUCS displays a proud record of providing scholarships for training young people as therapists for people with disabilities; and

WHEREAS: The Dodge City Chapter has various community projects in which they participate.

NOW, THEREFORE, BE IT RESOLVED that I, E. Kent Smoll, Mayor of the City of Dodge City, Kansas, do hereby proclaim the month of February, 2009 as:

NATIONAL AMBUCS MONTH

in Dodge City, Kansas and urge all citizens to become more aware of the altruistic service and the wholesome up building of communities they render.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the City of Dodge City to be affixed, this 2nd day of February, 2009.

E. Kent Smoll, Mayor

SEAL

Nannette Pogue, City Clerk

CITY COMMISSION MINUTES

City Commission Chambers
Tuesday, January 20, 2009 7:00 p.m.
MEETING #4742

CALL TO ORDER

ROLL CALL – Commissioners Monte Broeckelman, Jim Sherer, Brian Weber. Mayor Kent Smoll and Commissioner Rick Sowers were absent.

INVOCATION: Pastor Kirk Larson, Grace Community Church

PLEDGE OF ALLEGIANCE

VISITORS (Limit of five minutes per individual and fifteen minutes per topic. Final action may be deferred until the next City Commission meeting unless an emergency situation does exist).

Dodge City Public Library Quarterly Report, Cathy Reeves.

CONSENT CALENDAR

1. Approval of City Commission Meeting minutes, January 5, 2009
2. Appropriation Ordinance No. 2, January 19, 2009
3. Cereal Malt Beverage
 - a. Water Sports Campground & RV Park, LLC, 500 Cherry St, Dodge City

Commissioner Broeckelman moved to approve the Consent Calendar, Commissioner Weber seconded the motion. Motion carried on a vote of 3-0.

NEW BUSINESS

A contract with Layne Western for Well 24 rehabilitation and pump services in the amount of \$38,036 was approved on a motion by Commissioner Weber, seconded by Commissioner Broeckelman. Motion carried 3-0.

The OMI Contract Amendment for 2009 in the amount of \$1,066,290 was approved on a motion by Commissioner Broeckelman, seconded by Commissioner Weber. Motion carried 3-0.

An Installment Sales Agreement with Village Square Mall for the installation of a lift station pump in the amount of \$49,575.00 with installment payments of \$478.70 for 120 months was approved on a motion by Commissioner Broeckelman, seconded by Commissioner Weber. Motion carried 3-0.

OTHER BUSINESS

Cherise Tieben introduced Christa Roy, Public Information Officer. She reported on semi trucks parking on City owned parking lots over night, the Tournament of Champion's is next weekend and the SPIAA tournament will be the following week. West Wyatt Earp construction has started as of today. Casino plans are being reviewed. Joint City/County meeting will be held January 26th in the Rose Room at the Ford County Government Center. She also reported on other issues of interest.

Brian Weber reminded the public that January 29th is Kansas Day and encouraged all to join in.

Jim Sherer thanked the staff that held the Volunteer Reception that was held today at the Hoover Pavilion. He will be attending the LKM Board meeting next week.

The meeting was adjourned on a motion by Commissioner Broeckelman, seconded by Commissioner Weber. Motion carried 3-0.

E. Kent Smoll, Mayor

ATTEST:

Nannette Pogue, City Clerk

JOINT CITY/COUNTY COMMISSION MINUTES

Ford County Government Center-Rose Room

100 Gunsmoke

Monday, January 26, 2009 5:00 p.m.

MEETING #4743

CALL TO ORDER

ROLL CALL: Mayor Kent Smoll, Commissioners Rick Sowers, Monte Broeckelman, Jim Sherer, and Brian Weber.

County Commissioners: Kim Goodnight, John Swayze, and Terry Williams

County Commissioner Kim Goodnight opened the Public Hearing.

The **Public Hearing** concerning increased estimated costs of projects to be financed by special sales taxes approved June 10, 1997 was held. Citizens who spoke during this public hearing were:

- a. Vernon Bogart- Spoke about the status of the world financial system and asked the commission to harken into the winds and find out which way they are blowing.
- b. Jim Johnson-Asked how much the project will cost?
- c. Tom Taylor-Asked for clarification on costs.
- d. George Laughead-Asked about the motion made in 2001 regarding the cost of the Events Center.

Commissioner Sherer moved to close the Public Hearing, seconded by Commissioner Weber. Motion carried unanimously.

Resolution 2009-01: A Resolution authorizing proceeding with projects to be financed from the proceeds of special sales taxes approved at election held on June 10, 1997. Commissioner Sherer moved to adopt the resolution as presented, seconded by Commissioner Sowers. Motion carried unanimously.

NEW BUSINESS

1. Organizational Funding to Boot Hill Museum in the amount of \$133,000.00 was approved on a motion by Commissioner Sowers, seconded by Commissioner Sherer. Motion carried 4-1. Commissioner Broeckelman voted no.

County Vote: County Commissioner Williams moved, Commissioner Goodnight seconded. Motion carried on a vote of 3-0.

2. Approval of Project Management Services with ICC, a subsidiary of Global Entertainment Contract in the amount of \$1,560,000.00. Commissioner Sowers moved to approve contract, seconded by Commissioner Sherer. Motion carried unanimously.

County Vote: County Commissioner Goodnight moved to approved the contract, seconded by Commissioner Williams. Motion carried on a vote of 3-0

ADJOURNMENT: Commissioner Sowers moved to adjourn the Joint City/County meeting, seconded by Commissioner Sherer. Motion carried unanimously.

Memorandum

*To: City Commission
Ken Strobel, City Manager
Cherise Tieben, Assistant City Manager*

From: Mike Klein, Purchasing Agent

Date: Thursday, January 29, 2009

*Subject: Crack Sealant Quotes
2009 Budget funds and amount
Special Streets Fund, Street Maintenance
\$ 60,000*

Three quotes were received on January 27, 2009 for Road Crack Sealant. The sealant will be utilized by the Street Department for the annual road crack sealing program.

Quotes Received:

PMSI, Wichita, Kansas			
Crafco Road Crack Sealant	45,000 pounds	.43 / lbs	\$ 19,350.00
Carter Waters, Sandusky, Ohio			
Dura Fill 1190	45,000 pounds	.459 / lbs	\$ 20,655.00
Vance Brothers, Salt Lake City, Utah			
Nuvo II	45,000 pounds	.59 / lbs	\$ 26,550.00

Staff recommends accepting the quote from PMSI of Wichita, Kansas from a total price of \$ 19,350.00, price include all shipping charges. The Street Department has worked with Crafco in the past and are very please with the product.

If you have any questions, or need additional information please contact my office.

Memorandum

*To: City Commission
Ken Strobel, City Manager
Cherise Tieben, Assistant City Manager*

From: Mike Klein, Supt of Public Works

Date: Thursday, January 29, 2009

Subject: Rejection of Detective Vehicle Lease Proposal

The Dodge City Detective Bureau has utilized a vehicle lease program for the past five years for undercover operations for narcotics and gang enforcement. The purpose of the lease agreement would allow the rotation of two late model vehicles every six months. The lease of the vehicles is an effort to minimize the recognition of undercover units by the local criminal element. The current lease with Magouriks Chevrolet has expired.

Staff solicited local car dealers for proposals for a new vehicle lease program; only one proposal was received on December 30, 2008. The proposal from G&G Supercenter was for a four year term with restricted mileage of 4,000 miles within the six month rotation period. The Detective Bureau has determined that the 4,000 mile limit would restrict their undercover operations. Staff has developed new specification with a limit of 6,000 to 8,000 in the six month period that the Detective Bureau can work within these limits.

It is the recommendation of staff to reject the proposal from G&G Supercenter and to solicit for proposal for a vehicle lease program.

If you have any questions, or need additional information please contact my office.

Memorandum

To: Mayor Kent Smoll
CC: Ken Strobel, City Manager, Cherise Tieben, Assistant City Manager
From: Jane Longmeyer, Human Resource Officer
Date: 1/30/2009
Re: Board and Commission Appointments

The process of soliciting interested citizens to fill the expired/vacant positions on the city-appointed boards and commissions ended on January 27. The notice seeking applications was published in the Dodge City Daily Globe on two different occasions during January. If the person on this ballot is identified as new, an application is attached for your consideration; otherwise, the person is seeking reappointment.

HOUSING AUTHORITY BOARD (select 1)

Varae Norman

Duane Ross

LIBRARY BOARD (select 2)

Esther Abbey

Larry Burke

Debbie Eddy

AIRPORT ADVISORY BOARD (select four – 3 expiring and 1 vacant)

Richard Goodnough

Kerry Zimmerman

Dan Cammack

John Schffling

DODGE CITY ZONING BOARD (select 3 – 2 expiring, 1 vacant)

- Emily Schultz
- Steve Crane
- Susanne Martinez

BOARD OF ZONING APPEALS (select 1)

- Varae Norman
- Robert Durham

BUILDING BOARD OF APPEALS (select 3)

- John O’Neal
- Gordon Smith
- Varae Norman

HISTORIC LANDMARK COMMISSION (select 3)

- Emily Schultz
- Charles Meade
- Darleen Clifton-Smith
- Don Pearce

CONVENTION & VISITORS BUREAU

Hospitality (select 1)

- Austin Swift

At Large (select 1)

- Beth Rhoten
- Debbie Eddy
- Don Wiles
- Emily Schultz

SHADE TREE COMMISSION (select 3 – 2 expiring, 1 vacant)

_____ Gail Ferguson

_____ Jim Geis

_____ Marilyn Treto

PARKS & RECREATION ADVISORY BOARD (select 1)

_____ Barbara Lundin

_____ Jennifer Hiemstra

_____ Rollie Van Wyhe

GOLF ADVISORY BOARD (select 1)

_____ Rollie Van Whye

DODGE CITY FORD COUNTY DEVELOPMENT CORPORATION (2 City Commissioners)

_____ Monte Broeckelman

_____ Brian Weber

City of Dodge City

Memorandum

January 28, 2009

TO: Ken Strobel
City Manager

FROM: Joseph E. Finley, P.E. 
Director of Engineering Services

RE: Professional Services – Phase II Assessment
SD 0806

BACKGROUND: Several months ago, Wilson & Company was retained to perform a preliminary assessment (Discovery Phase) to collect data, review data and determine the need for additional data and analysis need to satisfy FEMA's Levee accreditation requirements. Wilson & Company completed this phase of the project. Phase II of the Project is now ready to be completed.

CONSIDERATION: To complete the assessment necessary to meet FEMA requirements, additional data collection and analysis is needed. Wilson is proposing to do the following work in order to meet the requirements for levee accreditation:

TASK 1 DATA COLLECTION

Complete aerial survey of an area within 400 feet of the levee system with sufficient accuracy to develop one-foot contours. Survey 15 outfall structures, provide sketches of all bridges sufficient to complete river hydraulics, and provide sub-meter coordinates for all boring locations.

TASK II FEMA DESIGN CRITERIA ASSESSMENT

Provide City with "AS IS" drawings
Profile and hydraulic analysis to support freeboard
Embankment protection design analysis
Embankment and foundation seepage and stability analysis
Settlement analysis
Sediment transport analysis
Operation and maintenance plan

TASK III ADDITIONAL ASSESSMENT REQUIREMENTS

Provide operation and maintenance criteria and manuals
Certified Levee As-Is Drawings

Provide city with any revisions to the certification process or potential funding sources.

In addition, Wilson has also suggested that the City contract the CORP to re-study the Arkansas River Hydrology to see if current conditions meet the original design. Wilson has provided a cost estimate for this work that is based on an hourly rate. The cost to complete this phase is estimated to be \$387,400.

RECOMMENDATIONS: To meet the requirements of the agreement that the commission entered into with FEMA, this work will need to be performed. Wilson and the subcontractors are performing this work for several communities throughout Kansas. The storm water consortium group that the city works with on issues such as this originally recommended Wilson to the member cities, As some of the cities do not have levees to certify and every levee and community will have different needs, the consortium decided to let each community work with finalizing a contract on their own. It is staff's recommendation to proceed with this work and award the contract to Wilson and Company in a not to exceed amount of \$387,400.

JF/mjr

SCOPE OF SERVICES
DODGE CITY LEVEE ASSESSMENT – PHASE II
January 07, 2009

ENGINEER – Wilson & Company, Inc., Engineers & Architects (WCI) (Prime Consultant) and AMEC (Sub-Consultant – Geotechnical and Engineering Support)

CITY – City of Dodge City, Kansas

This document defines the ENGINEER's scope of services. These scope items are based on requirements of the National Flood Insurance Program regulations as described in Title 44, Chapter 1, Section 65.10 of the Code of Federal Regulations (44 CFR Section 65.10).

The purpose of this project is to satisfy these regulations so that FEMA will acknowledge the Dodge City Levee System on the updated Flood Insurance Rate Maps, or document levee system improvements necessary to satisfy 44 CFR Section 65.10 requirements.

The levee assessment will be completed in two phases:

Phase I (Previously Completed) – Preliminary Levee Assessment (Discovery Phase):

This phase included data collection, data review, and determination of additional data collection and analyses required to satisfy 44 CFR 65.10. No analyses were included in this Phase I. A Phase I summary report has been presented to the CITY.

Phase II (Included Herein) – Final Levee Assessment:

This current phase includes completing the additional data collection and analyses identified in Phase I, as necessary to satisfy 44 CFR 65.10.

The levee system includes all embankments, flood walls, structures, interior drainage systems, operation and maintenance working together to modify the land area inundated by the Base Flood, as illustrated in Figure 1 of this Agreement.

ENGINEER shall complete this utilizing GIS and other file management processes (paper and electronic) to allow the data collected and created during this assessment to be easily accessed, referenced and maintained for future levee accreditations.

PHASE II - FINAL LEVEE ACCREDITATION ASSESSMENT

This Phase II work scope is the necessary scope to satisfy FEMA 44 CRF 65.10.

Task I. Data Collection

Task I.A. Base Survey Services:

Survey data shall be collected as necessary to complete analysis of: freeboard, river hydraulic modeling, closures, embankment stability, settlement, interior drainage and to develop As-Built plans (illustrating current conditions).

1. Aerial based photogrammetric mapping services shall be completed to create a digital model of the ground surface (grid or DTM) with sufficient accuracy to develop one-foot

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DODGE CITY LEVEE ASSESSMENT – PHASE II
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interval elevation contours (no planimetric data), for all areas within 400 feet of the levee system centerline, on both sides. Digital orthophotographs (3 inch pixels) shall be provided.

Potential Extra: A digital model of the ground surface (grid or DTM) with sufficient accuracy to develop two-foot interval elevation contours (no planimetric data), for areas within approximately one-half mile of the levee system centerline, on both sides. Digital orthophotographs shall be provided.

2. Field Survey services shall be completed to:

- a. Survey approximately 15 outfall structures (location, size, type, elevations, ground photo).
- b. Provide bridge opening sketches and photos of four bridges (14th Street – 2, 2nd Street and Rail Road), sufficient to complete river hydraulic model.
- c. Provide sub-meter accurate coordinates of geotechnical boring locations.

Potential Extra: Additional data needed may include inventory and elevations of building structures within the internal drainage inundation zones.

Utility crossings of the levee system will be located if the elevations are critical to the stability analysis of the levee.

Engineer shall coordinate schedule and access for survey services with CITY prior to survey services commencing. Engineer shall translate collected survey data into usable format for analysis.

Task II. FEMA Design Criteria Assessment

The following deliverables shall be produced as part of the Phase II submittal, per Section 65.10 of the NFIP regulations and on FEMA Form 3 "Riverine".

- Record drawings "As Is"
- Profile and hydraulic analysis to support freeboard
- Embankment protection design analysis
- Embankment and foundation seepage and stability analysis
- Settlement analysis
- Sediment transport analysis
- Operation and maintenance plan

II.A. Geotechnical Exploration

Subsurface exploration is required to evaluate the geotechnical aspects of the system. The subsurface exploration includes conventional soil borings extending through the levee crest to a terminal depth of three times the levee height. For cost estimating purposes, we have assumed the maximum depth of each boring will be 40 feet. We propose to execute the exploration in phases. Findings from each phase will be used to determine whether additional phase(s) are required to better characterize the geotechnical aspects of the levee system.

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The initial phase will include advancing up to 34 soil borings having an average spacing of 1700 feet. These borings will be located within the levee system, which includes the North and South levees, the three "drain" tie back levees intercepting the north levee and the various retaining and/or flood walls, including the RCB on the north levee acting as a retaining wall.

Should findings from the initial subsurface exploration and laboratory analyses indicate significantly variable subsurface conditions or reveal areas (such as landfills) that need additional exploration to better define anomalous reaches, we may need to execute additional subsurface exploration and laboratory analyses to better characterize the geotechnical aspects of the levee system such that an accreditation assessment can be made.

Given favorable working conditions, we expect the initial exploration will take up to 10 working days to complete. Given the alluvial setting of the project and the geologic nuances associated with such a setting, we plan to have a Senior Geologist present during the exploration to log the drilling efforts and make "real time" decisions regarding actual exploration depths and the type/quantity of samples collected during the daily activities associated with the exploration.

This task includes laboratory testing to determine in-situ moisture and density, grain size distribution, Atterberg limits, shear strength and hydraulic conductivity.

Engineer shall coordinate schedule and access for geotechnical services with CITY, prior to geotechnical boring commencing. Engineer shall ensure coordinates of all borings are documented and are included in the As-Is Plans.

Potential Extra: An estimated probable maximum number of boring is an additional 12 borings (and second mobilization) may be necessary to characterize the levee system. These additional borings are such that the average spacing between borings will be approximately 1000 feet.

II.B. Hydrologic Studies

Because the preliminary freeboard analysis determined sufficient freeboard is not provided for the current FEMA Base Flood Elevations for the Arkansas River, a hydrologic and hydraulic (H&H) analysis of the Arkansas River is proposed. The hydrology and hydraulic analysis will be performed compliant to FEMA Map Modernization guidelines and specifications such that the results can be utilized for FEMA map updates to the flood insurance study. The dry side ponding areas will be studied to determine ponding floodplain limits and impacts on upstream development.

II.B.1 River Hydrology

Because the United State Army Corps of Engineers (USACE) Tulsa District has completed several previous hydrologic studies on the Arkansas River in this region, it's proposed the City of Dodge City enter into a memorandum of agreement (MOA) with USACE Tulsa District to complete hydrologic analysis of the Arkansas River to provide inflow hydrographs for the 10-yr (10% chance), 50-yr (2% chance), 100-yr (1% chance), and 500-yr (0.2% chance) frequency flows. Inflow hydrographs are needed for peak flow information and timing information necessary for the geotechnical stability analysis.

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This agreement includes coordination with USACE Tulsa during the modeling process, and an independent review of the analysis at the completion of the hydraulic analysis.

II.B.2 Interior Drainage Hydrology

To complete analysis of the interior drainage, floodplains upstream of and created by the levee outfall structures shall be determined. There are 15 levee outfall structures throughout the Dodge City levee system.

The approach to analyzing the interior drainage hydrology will vary depending on site-specific conditions. Contributing drainage areas shall be determined utilizing the CITY's existing 2' contours and the ground surface data included in this agreement. Peak discharges flowing to each outfall structure shall be calculated using HEC-HMS or SWMMM. The interior drainage hydrologic analysis will provide peak discharges and flow hydrographs as necessary to predict ponding elevations.

Independent QA of Hydrologic Studies is included.

II.C. Hydraulic Studies

This scope is based on CITY providing necessary flow hydrographs for the Arkansas River, as discussed in paragraph II.B.1.

Hydraulic analysis of the Arkansas River shall be completed to provide updated base flood elevations to reflect the updated river hydrology completed by USACE Tulsa. The updated base flood elevations will be utilized to determine the levee system's ability to meet freeboard requirements on the river side of the levees.

Hydraulic analysis of the levee outfall structures shall be completed to analyze the functionality of interior drainage systems, on the dry side of the levees.

The freeboard assessment will be made based on the requirements of Section 65.10(b)(1) of the NFIP regulations. If it's determined the freeboard requirements of Section 65.10 are not met (for river or dry side), additional analyses may be completed in accordance with Section 65.10. Additional analyses could include an evaluation of the uncertainty in the estimated base flood elevation profile and include, but not necessarily be limited to an assessment of statistical confidence limits of the 100-yr discharge; changes in stage-discharge relationships; and the sources, potential, and magnitude of debris, sediment, and ice accumulation. In no case will FEMA accept a freeboard of less than two feet.

II.C.1. River Hydraulics

Hydraulic analysis for the Arkansas River shall be completed beginning sufficient distance upstream and ending a sufficient distance downstream of the levee system to provide updated water surface profiles throughout the entire levee system. Water surface profiles shall be developed for the 10-yr (10% chance), 50-yr (2% chance), 100-yr (1% chance), and 500-yr (0.2% chance) frequency flows, as necessary for FEMA compliance. A floodway will be generated and profiles and a floodway data table will be produced.

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Independent QA of River Hydraulics is included.

II.C.2. Freeboard Analysis

Following completion of river hydrology, river hydraulic analysis and surveying services, Engineer shall plot updated base flood elevation, top of levee profiles and river flowlines and determine if FEMA freeboard requirements are satisfied.

Independent QA of freeboard analysis is included.

II.C.3. Interior Drainage System Hydraulics

Hydraulic analysis for the levee outfall structures shall be completed to determine backwater (ponding) elevations and establish floodplains upstream of each levee outfall structure. This analysis will determine if the interior drainage systems are sufficient to avoid excessive interior flooding and document the floodplains created by backwater ponding created by the outfall structures.

The hydraulic analysis will be completed utilizing methods acceptable to FEMA and may include USACE coincidental frequency methods.

Independent QA of Interior Drainage System Hydraulics is included.

II.D. Embankment Protection Analysis Models

River scour analyses shall be completed where visual assessment or maintenance records indicate it is appropriate, or where engineering judgment warrants. This includes identifying and analyzing locations where scour potential is determined to be the greatest along the system. If the original design memorandums can be located and include scour computations, the cost of this analysis may be kept toward the lower end of the range provided.

Engineer shall verify need for existing jetties considering revised river hydrology and hydraulic analysis.

An independent review of Embankment Protection is included.

Potential Extra: If the original design memorandums can not be located from the USACE Albuquerque District, additional analysis will be required to adequately assess Embankment Protection.

II.E. Geotechnical Analysis (Stability, Seepage, Settlement and Seismic Analyses) for Embankments and Floodwalls

The geotechnical assessment will involve utilizing existing data and the data (if provided) and the data developed to evaluate the geotechnical slope and foundation stability of the subject system. Where sustained water flow levels indicate that embankment or foundation seepage could be problematic, seepage analysis will be performed using SEEP/W, a finite element software program that can perform both transient and steady-state seepage modeling.

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Slope stability of levee embankments will be performed utilizing SLOPE/W, a computer program that can perform a variety of limit equilibrium stability analysis methods (Bishops, Janbu, Morgenstern-Price, etc.) under both static and pseudo-static loading conditions. Slope stability will be evaluated in accordance with the methodology outlined in USACE Engineering Manual EM 1110-2-1913. Long-term settlement potential of levees will be evaluated by a method appropriate to the subsurface conditions including Standard Penetration Test (SPT) correlations as well as consolidation analysis. Seismic evaluation will be based upon parameters included in IBC 2003. Floodwalls will be evaluated to determine whether they are capable of providing protection against the design flood. A report documenting findings shall be included.

Typical sections will be analyzed for each of the following cases:

- Peak flood pool
- Steady state normal pool
- Rapid draw-down
- Earthquake at normal pool

Flood Wall Critical Sections: Perform sufficient analysis to determine factor of safety against the following failure modes:

- Overturning
- Sliding
- Foundation Bearing Capacity
- Global Stability
- Liquefaction

Earthen Levee Critical Sections: Perform sufficient analysis to determine factor of safety against the following failure modes:

- Global stability
- Liquefaction
- Foundation bearing capacity

Seepage Analysis for Flood Walls and Earthen Levees: Analyze each critical section relative to:

- Steady state/transient seepage at normal pool elevation
- Steady state/transient seepage at flood pool elevation

*Note: Transient analysis requires both flood height and duration by provided by H & H analyses.

An independent QA review of Geotechnical Analysis is included.

Report of Findings

A report of findings shall be provided. The report shall include a FEMA submittal letter, a summary and findings for each of the Phase II scope items, the levee forms (MT-2 FEMA Form 3 "Riverine Hydraulic Structures"), Phase I Summary of Findings (attached), and all supporting data necessary to satisfy FEMA 44 CFR 65.10 requirements.

If the levee system does not meet the requirements of FEMA 44 CFR 65.10, the report will provide a description of the deficiencies and recommended improvements to correct the deficiencies. If necessary, ENGINEER will work with CITYS and FEMA to develop a schedule

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of levee upgrades and improvements to meet FEMA requirements. The ENGINEER can also provide any necessary design services for levee system improvements.

Final Compliance Report

The format and included data will be a result of the continuous coordination with FEMA Region VII and USACE Tulsa District as the exact format of submittal is dynamic as the PAL Levee Certification process is evolving. The ENGINEER will provide required submittal data in the format required at the appropriate time.

Potential Extra: If it's determined additional boring are required due to irregularities in originally collected borings, additional analysis will be required.

Toe Drain Smoke Test

Engineer shall conduct a toe drain smoke test to search for deficiencies in existing toe drains. A test summary shall be provided. Engineer shall coordinate smoke test schedule and access with CITY prior to commencing.

Task III. Additional Assessment Requirements

III.A. Operation and Maintenance Criteria and Manuals

If necessary to satisfy requirements of FEMA 44 CFR 65.10, the existing operation and maintenance plan will be updated and develop a digital operation plan that can be easily maintained, distributed, and implemented. The plan will address such items as settlement, scour along the levee toe, erosion on the dry side, evidence of through seepage, traffic gap closures, control structures, etc.

The plan will be similar to those produced for other levee systems within FEMA Region VII and USACE Tulsa district. Several of these plans are being upgraded or developed and should be consistent. The plan will have a general operation section and then incremental levee system sections. For example: the general criteria applies to the overall system, but the specific section would apply to a particular area where maybe a closure structure needs to be installed. This organization of the plan provides easy training and implementation by providing specific instructions to the staff/employees that have specific responsibilities during an event.

III.B. Certified Levee As-Is Drawings

FEMA concedes that As-Built drawings are not applicable for aged levee systems, especially those that have experienced maintenance activities and significant changes near the toes, dry side pools, and tie-ins to roadway improvement projects. Instead, an "As Is" plans illustrating the existing conditions of the levee system will be developed to supplement the as-built plans required in FEMA 44 CFR 65.10. The "As Is" plans shall be completed in a manner that can be easily reviewed and updated for future levee assessments.

III.C. Certification Program Requirements

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ENGINEER will stay apprised if there are any revisions to the levee certification process or funding sources, and keep CITYYS current if any such revisions occur.

PROJECT SCHEDULE

The Project Schedule shall be as follows:

Phase II Draft Report Submittal Date:	December 31, 2009
Phase II Completion Date:	April 30, 2010
PAL Submittal Due Date:	May 19, 2010

MEETINGS AND COORDINATION

Throughout all phases of the project, ENGINEER shall conduct a sufficient amount of face to face and teleconference meetings to ensure proper coordination with CITYYS.

ENGINEER shall submit monthly progress reports to keep CITYYS current on progress.

SUBMITTALS

Paper and electronic data shall be submitted as necessary to provide sufficient documentation of levee assessment for CITY records and to satisfy FEMA PAL requirements.

ASSUMPTIONS

This scope is based on the following assumptions:

1. CITY will contract the USACE Tulsa District to complete a Hydrologic re-study of the Arkansas River and all necessary, as discussed in this scope, will be provided to Engineer.
2. Costs associated with design services required for rehabilitation of deficient areas are beyond the scope of these services.
3. CITY will provide video inspection documentation of levee outfall drainage structures, valves and toe drains.
4. CITY will provide access as necessary to complete all scope items.
5. CITY will provide all CITY records and information pertaining to the project if determined beneficial by Engineer.
6. No special permits are required for subsurface exploration. If required, CITY will provide permits at no cost to Engineer.

COST PLUS FEE SUMMARY					
Scope Item	Task Description	WCI Fee		Subconsultant	Total Cost Plus Fee Base
		Base	Fee		
I. Data Collection					
I.A.	1. Aerial Mapping (1" Contours) & Photos	37,050.00			\$37,050.00
	2. Field Survey Services	23,810.00			\$23,810.00
II. FEMA Design Criteria Assessment					
II.A.	Geotechnical Exploration (Base - 34 Borings, 40' deep)	2,300.00		95,750.00	\$98,050.00
II.B.	Hydrologic Studies				
	1. River Hydrology Coordination & Review (Owner - USACE MOA)	1,190.00		4,000.00	\$5,190.00
	2. Interior Drainage Hydrology	26,260.00		1,000.00	\$27,260.00
II.C.	Hydraulic Studies				
	1. Arkansas River Hydraulic Modeling	1,190.00		15,000.00	\$16,190.00
	2. Freeboard Analysis	4,560.00		500.00	\$5,060.00
	3. Interior Drainage Ponding Floodplain Delineation	22,430.00		1,000.00	\$23,430.00
II.D.	Embankment Protection Analysis Models				
	Alternative Analysis	500.00		10,000.00	\$10,500.00
		700.00		6,500.00	\$7,200.00
II.E.	Geotechnical Analysis (Embankments & Floodwalls)				
	1. Stability, Seepage and Seismic	3,000.00		24,790.00	\$27,790.00
	2. Settlement Analysis	2,000.00		9,540.00	\$11,540.00
	3. Toe Drain Smoke Testing	840.00		2,850.00	\$3,690.00
III. Additional Assessment Requirements					
III.A.	Operation and Maintenance Criteria and Manuals	18,520.00		1,000.00	\$19,520.00
III.B.	Certified As-Is Drawings	20,370.00		500.00	\$20,870.00
III.C.	Client Meetings (Preparation & Attendance) (3 PEs)	14,250.00		7,000.00	\$21,250.00
WCI AGREEMENT TOTAL ESTIMATED FEE		\$178,970.00		\$179,430.00	\$358,400.00
COST FOR CITY TO CONTRACT USACE TO RE-STUDY ARKANSAS RIVER HYDROLOGY					\$29,000.00
TOTAL ESTIMATED PROJECT COST					\$387,400.00