

March 4, 2013

Mrs. Lisa Hinton
 Judicial Council of California - Administrative Office of the Courts
 2860 Gateway Oaks Drive, Suite 400
 Sacramento, California 95833

**Re: Proposal for Flood Protection Validation and Conceptual Design Study
 Fairfield Justice Facilities
 Southeast Portion of Downtown Fairfield Solano County Campus**

Dear Lisa:

Lionakis is pleased to submit the following revised fee proposal for the Flood Protection Validation and Conceptual Design Study for the Fairfield Justice Facilities located at the Southeast Portion of Downtown Fairfield Solano County Campus. The project is located in Fairfield, California and is bounded by Texas Street to the north, Clay Street to the east, Clay Street to the south (including the County owned co-generation facilities located on Delaware Street) and Union Avenue to the west.

DESCRIPTION OF PROJECT

In 1995, 1999, and again in 2005, the Fairfield Hall of Justice (HOJ) proper was subjected to extensive flooding. This flooding specifically occurred at the south portion of the HOJ. The AOC has reported that the repairs resulting from the 2005 flood alone cost \$1.7 million dollars. In addition, the AOC spends approximately \$70,000 a year in flood prevention measures.

In response to the 1995, 1999, and 2005 floods, the City of Fairfield, in conjunction with Solano County, and the AOC commissioned separate studies to research the cause(s) of the flooding and suggest solutions. The first report was commissioned by the City of Fairfield and the County of Solano and was authored by Winzler & Kelly (W&K) in May of 2009. The second report was commissioned by the AOC and authored by Jacobs in July of 2011 and focused on the Fairfield Hall of Justice.

The W&K report recommended four basin-wide storm drainage system alternatives that would protect against a 15-year storm event:

- Alternative 1 – New Detention Ponds and New Washington Street Pump Station
- Alternative 2 – New Detention Ponds and County Pump Station Upgrade
- Alternative 3 – Storm Drain Boxes Upgrade and New Washington Street Pump Station
- Alternative 4 – Storm Drain Boxes Upgrade and County Pump Station Upgrade

Due to the considerable costs estimated for these alternatives *and* the complexities of coordinating design and construction with multiple agencies having jurisdiction within the basin-wide storm drainage system, W&K developed four on-site alternatives that would protect the HOJ from a 15-year storm:

- Alternative A - Rigid Transportable Flood Barriers (Aquafence)
- Alternative B - Inflatable Water Barriers (Flexidam)
- Alternative C - Entrance Ways and Windows Flood Barriers (DoorDam)
- Alternative D - Permanent Berms and Flood Walls

Alternative D was determined to be the most appropriate solution because, "It does not require deployment before a major storm event, so it minimizes the long term operation and maintenance cost." The level of flood protection recommended by W&K is 11.5' above mean sea level.

The Jacobs report essentially took the information from the W&K report, reassessed applicable conditions and presumptions, and validated that Alternative D was the most appropriate solution. However it recommended that the level of flood protection be set at 13.5' above mean sea level.

SERVICES

Because of the differing levels of flood protection recommended by the W&K and Jacobs studies, Lionakis proposes a two step approach to this project. First, the appropriate level of flood protection will be determined to provide the basis for the development of conceptual designs for flood protection improvements. This work will constitute Step 1 – Pre-Design. Pre-Design will be followed by Step 2 - Preparation of Contract Documents for Design-Bid-Build procurement of construction bids and construction administration. This proposal covers services for Step 1 - Pre-Design, which consists of two phases:

Phase 1 – Flood Protection Validation

Lionakis and its consultants will conduct a Flood Protection Validation study. It is assumed that the Pre-Design phase will last approximately 5 months. The schedule will be further defined and developed at the outset of the Pre-Design phase. Flood Protection Validation will consist of the following services:

1. Geotechnical soils investigation and report.
2. Obtain the services of a surveyor to prepare a topographic and boundary survey in AutoCAD format for the project site area adequate for flood protection validation, civil design and structural engineering. This service excludes detailed survey of existing buildings such as floor elevations above the first floor, location of interior walls, structural grids, windows, and window sills. See attached diagram for extents of the topographic and boundary survey.
3. The Surveyor will obtain the services of an Underground Utility Locator company to determine approximate horizontal location of conventionally traceable water, sewer, storm drainage, electrical and natural gas facilities serving the site by field investigation, contacting applicable utility providers, and researching record documents. Task excludes pothole services. Although a reasonable effort will be made to locate existing utilities, only actual excavation will reveal the true types, extent, size and depths of existing underground utilities.
4. Hydrologist to review existing reports and hydraulic models from W&K and Jacobs to gain an understanding of the flooding source, flood magnitude, and previous recommendations to reduce or eliminate flooding.
5. Hydrologist to visit the HOJ to gain an understanding of the existing topographic pattern and physical constraints associated with the site. During the site visit Court and County staff will be interviewed to obtain firsthand history of the inundation problem and a clear definition of expectations for the project. The hydrologist will also contact and interview City representatives to obtain information not available in the W&K and Jacobs reports.
6. Throughout Phase 1 the hydrologist will be communicating directly with the AOC and the County as they are developing their recommendations. Once the Phase 1 analysis is complete the hydrologist will recommend the frequency interval for which flood protection should be provided for the HOJ. This level of protection will be based on a review of the previous studies and consider cost, value, and civic sensibilities. Final acceptance of the recommended frequency interval shall reside with the AOC and the County.

Phase 2 – Conceptual Design

The Conceptual Design work will build upon the Flood Protection Validation study and will provide the AOC and the County with two options for consideration. Conceptual Design will consist of the following services:

1. Meet and coordinate with the AOC and the County, eight times in person and ten times over the phone, to present and discuss conceptual design options based on the previous studies and expectations of the project.
2. Provide two conceptual designs based on the recommended level of flood protection established by the Flood Protection Validation study. These conceptual design options will consider previous recommendations and be based on site constraints and desired project outcomes that will be formally documented at the outset of pre-design and will be the defining principles for the project.
3. If required and agreed upon by the AOC and the County, develop a local hydraulic model for the HOJ property and adjacent streets. The model will include adjacent properties to prevent model boundary conditions from influencing the analysis. The model will be developed with HEC-RAS and/or FLO-2D software.

The model will use existing topography for the HOJ property and surrounding streets, and existing hydrology from the previous Winzler & Kelly analysis. The buildings will be modeled as blocked obstructions to determine the water surface elevations in the parking area for the current conditions. The proposed floodwall will then be added to the model to determine if the additional obstructed area from the floodwall boundary causes the water surface to increase. If the floodwall causes the water surface to increase, the volume of storage required will be computed to mitigate for the increase.

- a. Design of a storage system for the displaced water to avoid a net increased flood level on the neighboring facilities is excluded from this scope of work. Mitigation measures for potential increased flood levels at adjacent facilities can be studied as an adjunct to this project.
 - i. The hydrologist will provide a general list of short term and long term mitigation measures that could be implemented to offset any net increase flood levels outside of the floodwall.

The hydrologic model will be configured and executed for the hydrologic frequency interval for which flood protection will be provided.

4. Develop 3D graphic models of the conceptual designs using SketchUp. Models will be used to convey conceptual design options.
5. Provide engineering input for each conceptual design. Input shall focus on sequencing, constructability and cost.
6. Develop an Opinion of Probable Cost (OPC) for each conceptual design.

DELIVERABLES (INCLUSIVE OF ALL CONSULTANTS)

1. A conceptual design package consisting of the following documents:
 - a. A memorandum, distributed to the project team, formally documenting the desired project outcomes.
 - b. A technical memorandum documenting the Flood Protection Validation analysis and findings and the recommended level of flood protection and basis/rationale for recommendation.
 - c. Architectural renderings from the 3D graphic models for two conceptual designs using SketchUp. Digital PDF's and presentation drawings for review by the AOC and the County.
 - d. Single-sheet Site Plan to illustrate general grading, drainage and civil utility design concepts for two conceptual designs.
 - e. Single-sheet Conceptual Landscape plan which will illustrate general planting and hardscape design concepts for the areas immediately adjacent to the proposed flood protection improvements for two conceptual designs.
 - f. One OPC for each conceptual design scheme.
 - g. If required and agreed upon by the AOC and the County, a detailed hydraulic analysis and findings in a technical memorandum.
 - h. Meeting minutes will be produced for each conference call and for each in person meeting.
 - i. A team directory.

CLARIFICATIONS

Lionakis, as the single point of contact and responsibility for consulting services, will use its professional knowledge and controls to manage the project budget, schedule, work of their consultants, in coordination with project stakeholders, to successfully complete the tasks and deliverables described in this Scope of Work.

The activities listed in this Scope of Work are anticipated to be required to successfully complete the work effort. Lionakis and its consultant's services shall be limited to those expressly set forth above. If scope of work or deliverables is not specifically listed above they are not considered part of this agreement unless such services are reasonably inferable to complete the work. Lionakis and its consultants shall have no other obligations, responsibility or deliverables for the project except as agreed to in writing or as provided in the Owner-Architect Agreement.

SCHEDULE

Attached to this proposal is a preliminary Pre-Design schedule detailed consistent with the scope of services. This schedule will be further defined at the outset of Phase 1, Flood Protection Validation and will include appropriate review time by the AOC, the County and the City.

COMPENSATION

For the flood protection validation and conceptual design services we propose a fixed fee of **\$319,759** including direct expenses for reprographics and mileage. All services will be provided by Lionakis, Cunningham Engineering Corporation, David Ford Consulting Engineers, Inc., Wallace Kuhl & Associates and Cumming.

Pre-Design Services	
Consultant	Fee
Lionakis - Architectural	124,888
Lionakis - Structural	12,000
David Ford Consulting Engineers- Flood	35,232
Cunningham - Civil	20,400
Cunningham - Landscape	8,600
Cumming - Cost Estimating	12,056
Subtotal	213,176
Topographic Survey	35,100
Wallace Kuhl & Associates - Geotechnical Report	9,300
Subtotal	257,576
Direct Expenses	3,500
Subtotal	261,076
Contingent Services (if required)	
Develop and Document a Local Hydraulic Model (Phase 2 - Task 3)	58,683
Subtotal	58,683
Total	\$319,759

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We appreciate the opportunity to provide this proposal and are looking forward to working with you on this project. Please do not hesitate to contact me or Nick Docous if you require any more information.

Sincerely,



Mike Davey, AIA

Senior Associate

Encl.: Preliminary Pre-Design Schedule
Extents of Flood Protection and Topographic & Boundary Survey Diagram
Consultant Proposals & Fee Schedules

Memo

To: Lisa Hinton
 From: Mike Davey
 Re: Proposal for Architectural Services for the Fairfield Hall of Justice Flood Protection Project
 Date: February 28, 2013

Lisa:

In conjunction with our proposal for the Fairfield Hall of Justice (HOJ) Flood Protection Project, the following fee breakdown is provided for the Architectural Services required for the work. As has been previously discussed, the project will be undertaken in two steps:

Step 1 – Pre-Design

Step 2 - Preparation of Contract Documents for Design-Bid-Build Construction

The fee breakdown is for Step 1 only, which will be completed in two phases as described below. A proposal for Step 2 will be provided at a later date once a final solution is approved.

Lionakis Architectural Fee Breakdown	
Phase 1 - Flood Protection Validation	
1 Geotechnical Investigation	1,000
2 Topographic and Boundary Survey	1,250
3 Underground Utility Investigation	1,250
4 Review Existing Reports	2,250
5 Site Visit to the Fairfield HOJ	3,000
6 Clean-up Hydraulic Model	700
7 Frequency Interval Recommendation	<u>2,500</u>
Subtotal	11,950
Phase 2 - Conceptual Design	
1 Meet with the AOC and the County	30,438
2 Provide 2 Conceptual Designs	32,000
3 Develop a Local Hydraulic Model	2,500
4 3D Models of Each Conceptual Design	39,750
5 Structural Input for Each Conceptual Design	3,850
6 Development of Opinion of Probable Costs	<u>4,400</u>
Subtotal	<u>112,938</u>
Total	\$124,888
Note: Cost of Pre-Design deliverables is built into the fees noted above.	

January 10, 2013

Mike Davey
 Lionakis

**Re: Proposal for Structural Engineering Services
 Solano County Superior Court – Fairfield Hall of Justice
 Flood Protection Preliminary Design**

Dear Mike:

The structural department of Lionakis is pleased to submit the following fee proposal.

DESCRIPTION OF PROJECT

Our understanding of the project and schedule is based upon our conversation we had on October 16, 2012 and the supporting document prepared for the Solano County Superior Court Fairfield Hall of Justice identified as *Retaining Wall – Berm Project*.

The project consists of the preliminary design for a new proposed flood protection system that will surround the Solano County Facilities bound by Texas Street to the north, Clay Street to the east, Clay Street to the south (including the cogeneration buildings) and Union Avenue to the west. A diagram has been provided within the master proposal that clarifies the flood protection project boundary. Further investigation and validation will be performed during Phase 1, Flood Protection Validation phase that may slightly adjust the boundaries of the proposed flood protection project. The extent of the investigation is bound by Texas Street to the north, Clay Street to the east, Clay Street to the south (including the cogeneration buildings) and Union Avenue to the west within the city of Fairfield, CA. This flood protection preliminary design may consist of concrete retaining walls, sheet piles, and earth constructed berms. The height of this new flood protection system is estimated to be between 11.5' and 13.5' above Mean Sea Level, approximately 3'-6" to 5'-6" above the current grade level. We will work with the Architect and their Hydrologist to evaluate and develop two design options. Egress over the flood protection may include accessible stairs and ramps that will accommodate the height of the flood protection.

Based on the above project description, we propose a scope of Services and Deliverables as follows:

SERVICES

Preliminary Design

1. Attend (2 total) meetings (4 hours total) during this phase.
2. Preliminary sketches for two (2) design options consisting of four (4) different retaining wall designs that will be used to develop preliminary cost estimates.
3. Assist the Architect in preparing a preliminary flood protection plan.
4. Assist the Cost Estimator in preparing the preliminary cost estimate.

CLARIFICATIONS

1. Geotechnical Report and Geohazard Report to be provided by others and made available at the start of design.
2. Hydrologist to provide their recommendations prior to our preliminary wall design. Their recommendations will be provided during Phase 1, Flood Protection Validation.

3. Significant structural revisions after the initial Hydrologist recommendation and substantial design progress are not included in this proposal.
4. This proposal does not include structural modifications and recommendations to the existing buildings.
5. Egress detailing (Stairs and Ramps) over the flood protection system will be developed latter in the Design development phase and is not included within this proposal.
6. Hazardous materials identification or mitigation is not included in this proposal.
7. Any services not defined above will be considered Additional Services.

DELIVERABLES

Preliminary Design Services

1. Preliminary sketches of (4) different retaining wall designs.

COMPENSATION

1. We propose to provide these services and deliverables in conjunction with the information and scope of work described above for a phased fixed fee of Twelve Thousand Dollars (**\$12,000.00**), broken down as follows:

Total Preliminary Design Contract Amount:	\$12,000.00
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2. Additional Services required will be performed after a mutually agreed upon scope, schedule adjustment and compensation value has been determined.
3. Time and Materials services required will be billed utilizing the most current Lionakis fee schedule in effect at the time of performing the required services.
4. Invoices for services will be billed monthly by phase based upon percentage of completion of the project.
5. Reimbursable Expenses are in addition to compensation for Basic and Additional Services and will be billed at a multiple of 1.10 times the expenses incurred. These charges include, but are not limited to, expenses incurred which are directly related to the Project, such as reproductions, plans and plots for owner, agency or contractor's use, standard form documents, postage, handling and delivery of Instruments of Service, and mileage. Reimbursable expenses are not expected to exceed \$1000.00.
6. Proposed fees are valid only for the assumptions presented in this proposal.
7. This proposal is valid for a period of sixty (60) days from the document date.

Thank you for this opportunity and we look forward to working with you on this project. Please do not hesitate to contact me or Darron Huntingdale, should you have any questions.

Sincerely,



Kerry J. Volker, SE 3737, SECB, LEED AP
Associate Principal




David Ford Consulting Engineers, Inc.

2015 J Street, Suite 200
Sacramento, CA 95811

Ph. 916.447.8779
Fx. 916.447.8780

MEMORANDUM

To: Nicholas Docous, AIA, LEED AP
Lionakis Beaumont Design Group, Inc.

From: David Ford, P.E., Ph.D., and Brian Brown, P.E., CFM 

Date: January 23, 2013

Subject: Cost proposal flood protection around the Hall of Justice (HOJ) owned by Solano County with the Administrative Offices of the Courts (AOC) as the major tenant

Summary

David Ford Consulting Engineers, Inc. (Ford Engineers) proposes to provide labor and materials to review previous flood protection studies and provide a conceptual flood protection alternative to provide flood protection around the HOJ for a cost not to exceed \$93,915.

We have provided a breakdown of costs by separate tasks.

Tasks and schedule

This proposal is based upon our understanding of the Scope of Work (SOW), which is described below and listed in Table 1. All work will be completed within 120 days of notice to proceed (NTP). This presumes that all material furnished by Lionakis Beaumont Design Group, Inc. (Lionakis) will be made available at receipt of NTP and that all reviews of submittals will be completed in a timely manner. Any delays will result in corresponding delays in completion.

The cost breakdown for this work by staff category is provided in Table 1 below.

Clarification and statement of understanding

The HOJ has experienced recurring flooding during frequent storm events. Previous studies recommend projects that reduced the frequency and magnitude of flooding in the project area. The proposed recommendations in the previous studies were too expensive or do not provide a practical solution to reduce flooding at the HOJ. The AOC would like the previous studies reviewed and a practical solution proposed to reduce flooding at the HOJ.

Lionakis is working on the design development phase for flood protection around the HOJ owned by Solano County. This phase will lead into construction documents for the project. We will review the previous studies and propose a conceptual design to reduce flooding at the HOJ.

Our understanding of the SOW is as follows:

1. Review existing reports and hydraulic models from Winzler & Kelly and Jacobs to gain an understanding of the flooding source, flood magnitude, and previous recommendations to reduce or eliminate flooding.
2. Recommend the frequency interval for which flood protection will be provided for the HOJ. This level of protection will be based on our review of the previous studies and consider cost, value, and civic sensibilities.
3. Visit the HOJ to gain an understanding of the existing topographic pattern and physical constraints associated with the site. During the site visit we will interview Court and County staff to get firsthand history of the inundation problem and a clear definition of their expectations for the project.
4. Meet and coordinate with Lionakis once in person and over the phone as needed to present and discuss the conceptual design based on the previous studies and expectations of the project.
5. Provide a conceptual design based on the agreed upon level of protection for the HOJ. This conceptual design will consider the previous recommendations and be based on the flooding source, project expectations, desired level of protection, and site constraints.
6. Prepare technical memorandum documenting the analysis and our findings.

Optional Task

To define in detail the potential flooding impacts of the proposed floodwall, a detailed hydraulic analysis is necessary. To quantify those impacts, we will:

7. Develop a local hydraulic model for the HOJ property and adjacent streets. The model will include adjacent properties to prevent model boundary conditions from influencing the analysis. The model will be developed with HEC-RAS and/or FLO-2D software.

The model will use existing topography for the HOJ property and surrounding streets, and existing hydrology from the previous Winzler & Kelly analysis. We will model the buildings as blocked obstructions to determine the water surface elevations in the parking area for the current conditions. We will then add the proposed floodwall to the model to determine if the additional obstructed area from the wall boundary causes the water surface to increase. If the wall causes the water surface to increase, we will compute the volume of storage required to mitigate for the increase.

We will execute the model for the hydrologic frequency interval for which flood protection will be provided.

8. Document the detailed hydraulic analysis and our findings in a technical memorandum.

Requirements and limitations

This cost proposal is based on the following requirements and limitations:

1. The extent of flood protection is shown on Figure 1 (the thick red line) provided by Lionakis.
2. The previous studies and any associated hydraulic models will be provided for our review by Lionakis.
3. City and County staff will make themselves available for interviews in a timely manner.
4. For the optional task, all necessary topographic information will be provided. We will not acquire any new topographic information for this task. If it is determined that additional topographic information is necessary, we will advise Lionakis and the AOC of this.
5. For the optional task, the hydrology will come from the previous Winzler & Kelly analysis. We will not develop new hydrologic models or new hydrologic input for our analysis.

Any delay in receiving data from Lionakis will cause a subsequent delay in project deliverables.

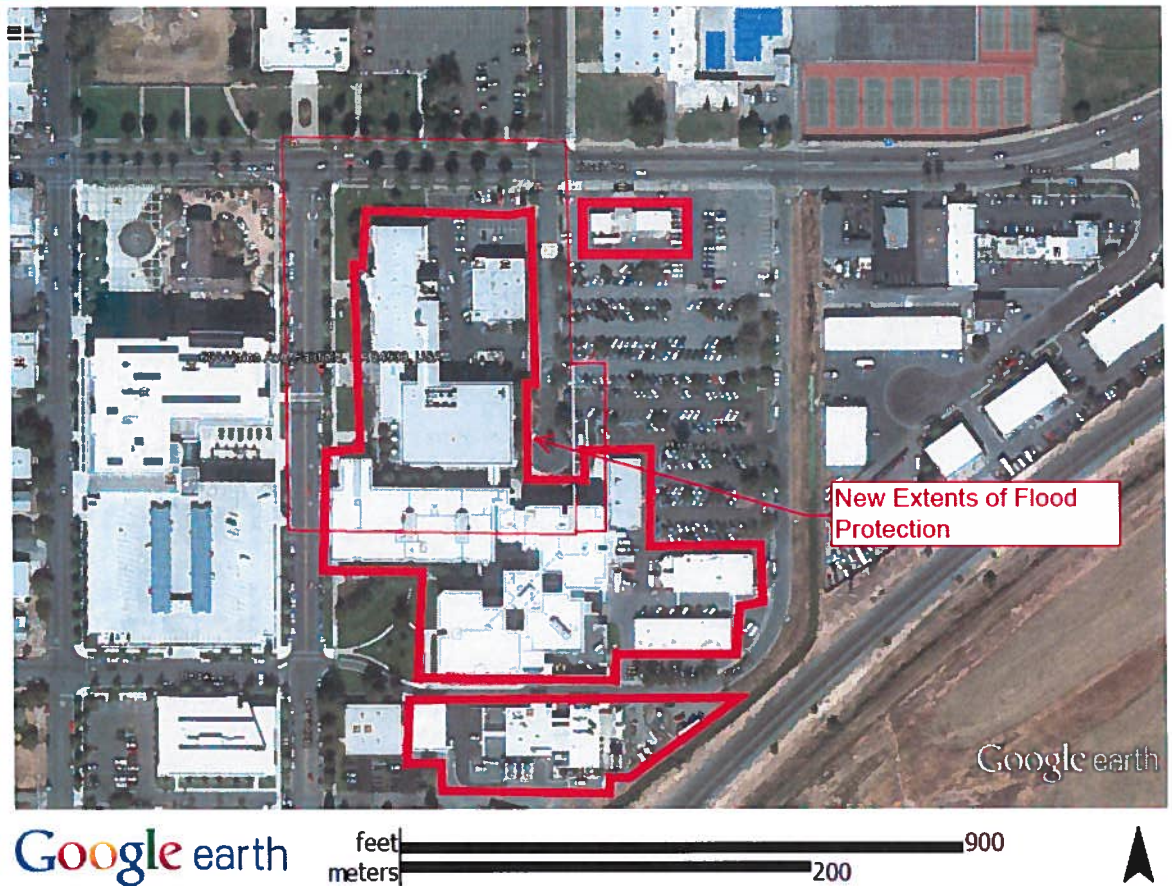


Figure 1. Extents of flood protection for HOJ (thick red line) provided by Lionakis

Table 1. Task and work breakdown for flood protection around the HOJ

Labor Task	Labor hours					Task cost
	Principal	Sr. hydro. engr.	Hydro. engr.	Tech editor	Proj coord	
1 Review existing reports and models	1	8	20	97.11	1	4749.31
2 Recommend initial level of protection	1	2	10			2076.60
3 Site visit preparation, visit, and interview Court staff		12	12		2	4236.06
4 Meet and coordinate with Lionakis	1	12	10			4064.00
5 Conceptual design of flood protection	4	34	52			15137.68
6 Prepare technical memo	2	6	16	8	1	4866.45
Optional Task						
7 Develop hydraulic model	10	90	160		2	43185.14
8 Document hydraulic model	5	32	40	20	2	15497.92
	24	196	320	28	8	93813.16
Labor subtotal for all tasks						
Subcontracts						
Other	0	hr @	\$0.00/hr			0.00
Subcontract subtotal						0.00
Direct cost						
Reproduction 8-1/2 X 11	100	copies @	\$0.06/page			6.00
Reproduction 11 X17	0	copies @	\$0.12/page			0.00
Reproduction color 8-1/2 X 11	0	copies @	\$0.88/page			0.00
Reproduction color 11 X 17	0	copies @	\$1.75/page			0.00
Long distance telephone	0	min @	\$0.16/min			0.00
CADD computer	0	hr @	\$0.00/hr			0.00
Mileage	173	mi @	\$0.555/mi			96.02
Per diem	0	days @	\$0.00/day			0.00
Airfare	0	trips @	\$0.00/trip			0.00
Other costs						0.00
Direct cost subtotal						102.02
Total cost						
Labor and subcontracts (includes all indirect cost, profit)						93813.16
Direct cost						102.02
Total						93915.18

EXHIBIT A
SCOPE OF SERVICES
CIVIL ENGINEERING & LANDSCAPE ARCHITECTURAL SERVICES
SOLANO COUNTY SUPERIOR COURT
HALL OF JUSTICE FLOOD PROTECTION PROJECT
For
Lionakis

Cunningham Engineering Corporation (CEC) (Consultant) will perform the tasks listed below (Tasks to be performed by Consultant), related to the Solano County Superior Court Hall of Justice flood protection project located at 600 Union Avenue in Fairfield, CA (site).

The Hall of Justice consists of two buildings; a northwing which served as a high school until renovated into the County Courthouse in 1969, and a southwing building addition constructed in 1973. The project site is owned by Solano County and leased by the AOC. This scope and fee assumes agency review and approvals will be performed solely by Solano County; other regulatory agency coordination, such as the City of Fairfield, are excluded.

Although the current FEMA FIRM identifies the site in a Zone X, it is located within an area of Fairfield with a history of flooding. Past flooding events for this area were recorded in 1995, 1999 and 2005 causing property damage to the surrounding businesses and homes. When constructed, the southwing was built with a finish floor elevation lower than the surrounding grades increasing the risk for flooding and associated damage to the southwing Courthouse.

In May 2009, the City of Fairfield and Solano County jointly commissioned Winzler & Kelly to prepare the Fairfield Drainage Analytical Study (FDAS) for the purpose of addressing recurring flooding of the area in and around downtown Fairfield. The goal of the FDAS was to identify preferred alternative project(s) that when implemented will reduce or eliminate the frequency and magnitude of flooding in the study area. In addition to the basin-wide flood protection improvement evaluation, the FDAS evaluated four flood proofing alternatives specifically to help protect the Hall of Justice (HOJ) facilities from a 15-year storm event.

At this time there are no current or future plans by the City of Fairfield or Solano County to allocate funding for implementation of the preferred alternative project(s) identified in the FDAS. Therefore, in 2011 the AOC commissioned Jacobs to evaluate various on-site conceptual flood protection alternatives and to propose improvements for flood protection for the HOJ. The Jacobs report recommended the construction of a continuous permanent barrier around the HOJ consisting of grass berms and flood walls.

Although the FDAS and Jacobs report both include the construction of a continuous barrier around the HOJ to provide adequate flood protection, the reports differ on the recommend height of the barrier. The Jacobs report recommended a barrier height of approximately 5.5 feet above existing grade to protect the HOJ from a 25 year – 50 year storm event while the FDAS recommends constructing a barrier height of approximately 3 feet above existing grade to protect from a 15 year event. Client shall acquire the services of David Ford Consulting Engineers, Inc. to review the two reports and provide final recommendations on barrier heights. In addition to



providing recommendation on the barrier heights, David Ford will analyze effects of constructing a flood barrier around the HOJ will have on the surrounding area. Client shall present the final recommendations provided by David Ford to the AOC and County. Using this information, the AOC and County shall determine the final barrier height and confirm the final project program.

This scope of services is limited to the Step 1 Flood Protection Validation and the Development of Conceptual Design Phase. Our design will be based on the final determined barrier height as directed by the AOC and County. This scope of services is based on preliminary review of the FDAS, Jacobs Report and the September 21, 2012 AOC/County Site meeting. The limits of our scope of work are based on the diagram provided by Client via email 08 January 2013. Our Client for this project shall be Lionakis. A separate scope and fee will be prepared for the subsequent Step 2 Design Development/Construction Document, Bidding and Construction Phase Services.

TASKS TO BE PERFORMED BY CLIENT

In order for Cunningham Engineering to effectively perform necessary services for this project, there are a number of coordination and performance issues that need to be overseen by the Client. Client will provide, or direct others to provide, the following information and services, and Consultant shall be able to rely on such information during the course of its work under this Scope of Services:

- Full architectural plans, including final, dimensioned site layout in AutoCAD format.
- Project programming information, including, any landscape concept preferences or other site specific development requirements of the end user and of the property owner.
- Current title report (dated within the last 6 months).
- Copies of as-built site improvement plans.
- Soils report including pavement section recommendations.
- Delineate accessible route through the site including the location and configuration of access ramps and the number of accessible public entrances.

TASKS TO BE PERFORMED BY CONSULTANT

A. PHASE I - FLOOD PROTECTION VALIDATION

1. Topographic and Boundary Survey: Obtain the services of Morrow Surveying (Sub-consultant) to prepare a topographic and boundary survey in AutoCAD format for the project site area adequate for civil design. Contours will be produced from field data at $\frac{1}{2}$ foot intervals. Task also includes spot elevations of *up to 15 street* cross-sections needed to *define the conveyance area in the adjacent City streets*. Task does not include detailed survey of existing buildings, and survey will be limited to those areas required to perform civil improvements outlined in this scope of services. Task excludes a supplemental survey after the completion of this initial survey, but may be provided as an additional service, if required.



2. Underground Utility Investigation: Survey sub-consultant will obtain the services of an Underground Utility Locator company to determine approximate horizontal location of conventionally traceable water, sewer, storm drainage, electrical and natural gas facilities serving the site by field investigation, contacting applicable utility providers, and researching record documents. Task excludes pothole services. Although a reasonable effort will be made to locate existing utilities, only actual excavation will reveal the true types, extent, size and depths of existing underground utilities.
3. Expanded Aerial Survey: *If required for hydraulic model prepared by others, provide additional aerial survey with limits expanding approximately 1000 feet beyond those limits indicated in attached diagram.*

B. PHASE II - CONCEPTUAL DESIGN

1. Data Collection & Utility Investigation: Collect and review topographic and boundary information, existing record drawings and other available materials and advise Client of any apparent constraints to site development.
2. Civil Conceptual Plan: Prepare a single sheet plan to illustrate general grading, drainage and civil utility design concepts to AOC and County representatives. Task includes the preparation of up to two (2) conceptual plans based on final wall height determined in Phase I.
3. Landscape Conceptual Plan (color): Prepare up to (2) single sheet landscape plans, based on two (2) conceptual designs, which will illustrate general planting and hardscape design concepts for the areas immediately adjacent to the proposed wall and landscape areas being affected by the construction of the wall. Task includes colored versions of the two (2) conceptual landscape plans to illustrate the two (2) conceptual designs.
4. Cost Estimate: Prepare Engineers Opinion of Probable Construction Cost for civil and landscape improvements. Assumes Client will perform estimates for flood wall and related components.
5. Client Coordination and Meetings: Coordinate with the Design team and attend up to three (3) meetings in aggregate, with design team members in the Sacramento area to develop the plans for this phase of the design.
6. County/AOC Design Charrette: Attend two (2) design charrette meetings in aggregate, with the County/AOC to discuss the project requirements and present conceptual design. Fees based on meetings occurring at HOJ and includes meeting already performed on September 21, 2012.

EXCLUSIONS

The following list of services is not included in this Scope of Services, although we can assist with some tasks as needed and upon request, as an additional work task.



1. Agency fees (to be paid by Owner).
2. Revisions of completed or partially completed designs that incur cost to Consultant and which are the result of action by Client, Owner, AOC, County or otherwise necessitated by factors beyond the Consultant's control. If required, this additional work shall be paid for in accordance with the Consultant's then current Schedule of Fees.
3. Preparation or attendance at public meetings.
4. Services related to existing underground storage tanks and/or sites of potential contamination. Services related to potential soil or water contamination or unsuitable soils.
5. Coordinate with gas, electrical, telephone and cable utility companies, except as noted.
6. Preparation of easement, right-of-way or land dedication documents.
7. Area-wide (offsite) drainage studies.
8. Off-site utility capacity studies (points of connections to be determined by Client or Others).
9. Design of booster pumps or lift stations, except as noted above.
10. Negotiations or meetings with adjoining property owners.
11. Design of frontage improvements or off-site improvements, except as noted.
12. Design of post-construction stormwater interceptors, vegetative swales, sand filters, except as specifically called out in the tasks above.
13. Payment of prevailing labor rates for office work.
14. Environmental Review / CEQA documentation / processing.

COMPENSATION

Task A: Phase I – Flood Protection Validation:

Consultant shall be paid a lump sum fee of \$35,100 for Task A.1 and A.2, above, distributed as follows:

Topographic & Boundary Survey	\$18,500
Underground Utility Investigation	\$16,600

Consultant shall be paid a lump sum fee of \$5,750 for Task A.3, above.

Task B: Phase II – Conceptual Design

Consultant shall be paid a total lump sum fee of \$29,000 for Tasks B above, distributed as follows:

Civil Engineering	\$20,400
Landscape Architecture	\$8,600

CONTRACT TERMS

Reimbursables: Printing of plans, postage/deliveries and project travel expenses are included in the above fees. Additional reimbursable expenses such as additional plots and/or prints will be billed in addition to the above fees when requested by Client.



Additional Services: Services requested by Client beyond those specifically listed above shall be considered Additional Services of the Consultant, and will be billed in accordance with Consultant's then current Schedule of Fees, a current copy of which is attached as Exhibit B.

Form of Agreement: Fees are based on execution of Client's standard AIA subconsultant agreement.

Insurance Premium: If additional insurance coverage is required above Consultant's current limits, Consultant shall be fully compensated by Client for the actual cost of the insurance premium, based on a mutually agreed upon schedule of payment.

We assume that this project will be designed in one (1) phase.

This proposal is firm for sixty (60) days from date noted below. Should our work on this project be delayed or put on hold for a period of ninety (90) days or more, we reserve the option to negotiate a start-up fee.

Client shall pay the costs of all fees, permits, applicable taxes on professional services, similar fees or taxes imposed on services provided herein by any public agency.

All professional civil engineering and landscape architecture services provided by this firm will be performed using the standard of care and skill ordinarily used by members of the civil engineering and landscape architecture profession practicing under similar circumstances at the same time and in the same locality. The firm makes no warranties, express or implied, or otherwise, in connection with the assignment. Civil engineers and landscape architects are licensed by the State of California. All professional landscape architecture services provided by this firm will be under the supervision of Cheryl Sullivan RCLA 3954, at 2940 Spafford Street, Suite 200, Davis, CA 95618.

SCHEDULE

Based on our current understanding of the project objectives, we would anticipate the following schedule:

Phase I – Flood Protection Validation	2 months
Phase II - Conceptual Design	3 months

Prepared 08 October 2012, *Revised 05 February 2013.*

S:\Projects\1200\1279 Solano County Courthouse-Flood Protection\Scopes, Contracts, Fee Budgets\Back-up\Fairfield HOJ Flood Protection_scope_rev2013-02-05.docx



EXHIBIT B
SCHEDULE OF FEES
CUNNINGHAM ENGINEERING CORPORATION
January 2013

<u>Classification</u>	<u>Hourly Rate</u>
Principal Engineer	\$ 210.00
Project Manager II	\$ 186.00
Project Manager I	\$ 174.00
Senior Engineer	\$ 174.00
Project Engineer III	\$ 145.00
Project Engineer II	\$ 133.00
Project Engineer I	\$ 124.00
Staff Engineer II	\$ 113.00
Staff Engineer I	\$ 99.00
Sr. Landscape Architect/Project Manager	\$138.00
Sr. Landscape Architect/Planner	\$ 128.00
Landscape Architect	\$ 116.00
Landscape Designer II	\$ 96.00
Landscape Designer I	\$ 85.00
Planning & Sustainability Analyst	\$ 90.00
Project Coordinator II	\$ 96.00
Project Coordinator I	\$ 71.00
Senior Technician	\$ 118.00
Technician/Drafter IV	\$ 116.00
Technician/Drafter III	\$ 113.00
Technician/Drafter II	\$ 96.00
Technician/Drafter I	\$ 70.00
Operations Manager	\$ 89.00
Clerical	\$ 67.00
Reimbursable Expenses/Outside Services	Cost + 15%
Fees subject to change.	





January 11th, 2013

Mike Davey, AIA, LEED AP
Associate
Lionakis
1919 Nineteenth Street
Sacramento, CA, 95811

**Judicial Council of California – Administration Office of the Courts
Fairfield Hall of Justice – Flood Protection Project
Proposal No: 7577 – R4
Cost Management Fee Proposal**

Dear Mike,

Thank you for giving Cumming the opportunity to work with you on the above project. It is our understanding that this project involves the construction of approximately 5,000 LF of retaining wall and 2,500 LF of earthen berms as well as vehicle barrier construction etc, to combat flooding at the Hall of Justice complex in Fairfield, CA. Our scope of services includes cost management services for 2 conceptual design options all centered around the retaining wall, berm and vehicular barrier ‘scheme’ mentioned above. In addition to our conceptual level cost management deliverables, we have included time for an on –site meeting (in Fairfield) as well as team meetings at Lionakis’ Sacramento office, as needed.

Our cost management services proposal can be itemized in the following table.

Cost Management Services:	Total
Base Services	
Conceptual Level Cost Estimate (Option 1)	\$5,002
Conceptual Level Cost Estimate (Option 2)	\$5,002
Project Meetings	\$2,052
Total Cost Management Services (Lump Sum)	\$12,056

Proposed Approach

Our cost budgets will be “built to suit” the unique challenges and characteristics of the project and presented in the clients desired format to best communicate all aspects of cost. Our cost models will contain all required direct and indirect construction costs as well as project cost factors and allowances for contingencies and escalation.

Included within our cost management services are the following tasks:

- Estimating for all trades, direct and indirect costs
- Review / evaluation of proposed conceptual design schemes
- Market forecasting / analysis
- Project meetings and site visit.

Our fees assume any required design information (including drawings, specifications, and reports) required for the performance of our work will be provided in hard copy form and / or electronically at no cost to Cumming. PDF is the preferred electronic format.

Fees are valid for 90 days from the date of this proposal. Should any of the above tasks be deleted from our scope of services, we reserve the right to adjust the remaining fees to reflect possible resultant changes to the scope of the remaining service.

We look forward to working with you on this project. We trust the above will be to your satisfaction. We are available to discuss any questions you may have regarding this fee proposal. Please indicate your acceptance by signing below and returning a copy of this document to our office.

Very truly yours,

CUMMING



Brooks Rehkopf
Senior Cost Manager

We will be periodically billing for the above mentioned services. Your acceptance of the proposal as indicated below will be binding on both parties.

Accepted by:

Lionakis

Authorized Signatory

Date



**COST MANAGEMENT HOURLY RATES
2012**

SENIOR VICE PRESIDENT / REGIONAL VICE PRESIDENT	\$180.00 per hour
DIRECTOR OF COST MANAGEMENT	\$165.00 per hour
SENIOR COST MANAGER	\$165.00 per hour
SENIOR COST MANAGER - MEP	\$165.00 per hour
COST MANAGER	\$150.00 per hour
COST MANAGEMENT / TECHNICIAN / COORDINATOR	\$105.00 per hour

Project: Fairfield Hall of Justice
Items: Flood Protection Project

Prepared by: Brooks Rehkopf
 Scope of Work: Conceptual Statement of Probable Cost - Option 1
 Date/Time: 1/11/13 2:02 PM

FEE PROPOSAL

ITEM		LEVEL OF EFFORT					COST		
REF #	DESCRIPTION	TAKE OFF	PRICING	DATA ENTRY & REPORT	MGT	MTGS	TOTAL	HOURLY RATE	TOTAL COST
		HR	HR	HR	HR	HR	HR	\$/HR	\$
1	Kick Off Meeting				1		1	\$ 171.00	\$ 171
2	Conceptual Estimate Sitework	18	2	2			22	\$ 165.00	\$ 3,630
3	Mgt / QA/QC / Internal Meetings				4		4	\$ 171.50	\$ 686
4	Follow Up / Revisions					3	3	\$ 171.50	\$ 515
TOTAL BASE ESTIMATE		18	2	2	5	3	30		\$ 5,002

Project: Fairfield Hall of Justice
Items: Flood Protection Project

Prepared by: Brooks Rehkopf
 Scope of Work: Conceptual Statement of Probable Cost - Option 2
 Date/Time: 1/11/13 2:02 PM

FEE PROPOSAL

ITEM		LEVEL OF EFFORT					COST		
REF #	DESCRIPTION	TAKE OFF	PRICING	DATA ENTRY & REPORT	MGT	MTGS	TOTAL	HOURLY RATE	TOTAL COST
		HR	HR	HR	HR	HR	HR	\$/HR	\$
1	Kick Off Meeting				1		1	\$ 171.00	\$ 171
2	Conceptual Estimate Sitework	18	2	2			22	\$ 165.00	\$ 3,630
3	Mgt / QA/QC / Internal Meetings				4		4	\$ 171.50	\$ 686
4	Follow Up / Revisions					3	3	\$ 171.50	\$ 515
TOTAL BASE ESTIMATE		18	2	2	5	3	30		\$ 5,002

Project: Fairfield Hall of Justice
Items: Flood Protection Project

Prepared by: Brooks Rehkopf
 Scope of Work: Conceptual Statement of Probable Cost - Meetings
 Date/Time: 1/11/13 2:02 PM

FEE PROPOSAL

ITEM		LEVEL OF EFFORT					COST		
REF #	DESCRIPTION	TAKE OFF	PRICING	DATA ENTRY & REPORT	MGT	MTGS	TOTAL	HOURLY RATE	TOTAL COST
		HR	HR	HR	HR	HR	HR	\$/HR	\$
1	Site Visit (1) and Client Meetings					12	12	\$ 171.00	\$ 2,052
TOTAL BASE ESTIMATE						12	12		<u>\$ 2,052</u>

January 10, 2013

Mr. Mike Davey, AIA
Lionakis
1919 19th Street
Sacramento, California 95811

Proposal for Geotechnical Engineering Consultation Services
SOLANO HALL OF JUSTICE – RETAINING WALL BERM PROJECT
Southeast of Texas Street and Union Avenue
Fairfield, California
WKA Proposal No. 2PR12182

As requested, we have prepared this proposal to prepare a limited geotechnical engineering investigation and report for the planned design and construction of flood protection structures to protect the existing Solano Hall of Justice facility in Fairfield, California. We understand the flood control measures will include a combination of soil berms and retaining walls to surround the existing structure.

To assist us in the preparation of this proposal, we have discussed the project with you and Mr. Darron Huntingdale, and we have reviewed the following data available for the project:

- July 29, 2011, Jacobs/VFMC, “Flood Protection Improvements, Solano Hall of Justice, Building 48-A1, 600 Union Avenue, Fairfield, CA 94533.”
- May 2009, Winzler & Kelly, “Fairfield Drainage Analytical Study.”

We also reviewed an aerial photograph provided in an email of January 8, 2013 showing the location of the areas to be protected from flooding.

The preliminary plans indicate soil berms, concrete or steel flood walls, and flood gates, are being considered to protect the structures bounded by Texas Street to the north; Union Avenue to the west; and Clay Street to the south and east. The cogeneration facility located south of Clay Street is also to be protected. Stairs and ramps are being planned to provide pedestrian access across the berms.

Scope

We propose to explore the soil conditions in the vicinity of the berms and retaining walls at 11 locations by drilling and sampling borings to a depth of at least 10 to 14 feet below existing grades. The exploration would be performed using a small truck-mounted drill rig and/or using hand augering and sampling equipment, depending on site access.

Soil samples would be recovered from the borings and tested to determine the engineering properties necessary to prepare recommendations for design and construction of retaining walls, including foundation bearing capacity, foundation lateral resistance, and appropriate soil loads to be resisted by the retaining walls. Foundations being considered include L and T type spread foundations, drilled piers, and driven H piles.

Exclusions

As we discussed, our scope would not include any assessment of geologic hazards, including investigation and analysis of liquefaction potential. The State of California, Department of General Services, Division of the State Architect (DSA) issued an Interpretation of Regulations Document IR A-4 dated October 11, 2011 explaining the conditions where a geologic hazards report is not required for existing facilities that are state owned or state leased essential services buildings. IR A-4 states in section 3.1.1 that geologic hazards reports are not required for:

“Site work, non-building structures, or structures not intended for human occupancy, unless such construction is essential to the operation of the facility. Non-building structures may include light poles, flag poles, signs, scoreboards, ball walls, fences, retaining walls, etc.”

We have assumed that the project is exempt from the completion of a geologic hazards report as explained in DSA IR A-4.

The evaluation of liquefaction potential generally includes investigation of soil and ground water conditions to a depth of at least 50 feet below the ground surface, analyzing subsurface materials to determine the potential for liquefaction during strong earthquake ground motions, and determining any detrimental effects such as lateral spreading or soil settlement that would adversely affect the performance of the structure. The subsurface investigation is both costly and disruptive.

Our review of geotechnical work by others on or near the site indicates the presence of cohesive soils and dense granular soils that others (Matriscope, KC Engineering) concluded are not subject to liquefaction.

Our scope of services does not include review of project plans and specifications or inspection work during construction. We can provide estimates for these services at the appropriate time.



Report

At the conclusion of our work we would prepare a report of our findings, conclusions and recommendations including:

Retaining Walls

- Appropriate foundation systems
- Allowable foundation bearing capacity
- Lateral resistance of foundations
- Active and At-Rest soil pressures to be used in wall design
- Wall drainage

Berms

- Site clearing and original ground preparation
- Engineered fill placement
- Slab-on-grade support

The report would contain an appendix with the logs of borings and a summary of laboratory test results.

Fee Estimate and Agreement

We estimate that we can perform the investigation and complete the report described above for a not-to-exceed fee of \$9300. This fee assumes reasonable access to the site during normal business hours and that no permits are required for the planned subsurface exploration. We estimate we can complete our work within four weeks of receipt of written authorization to proceed in the form of a mutually executed contract.

If this proposal is acceptable, please prepare a Lionakis subconsultant's agreement referencing this letter.

We appreciate this opportunity to submit this proposal. Please contact me if you have any questions regarding our scope of work or fee estimate.

Wallace-Kuhl & Associates



David R. Gius, Jr.
Principal Engineer/President

Attachment: Fee Schedules



SCHEDULE OF FEES AP

FIELD EXPLORATION

2012

Test borings with undisturbed sampling, test probings or other exploration using drill rig or backhoe and operators	Cost + 20%
Geophysical Exploration: Crew Equipment	Price Quote \$ 345.00/day \$ 245.00/half day
Slope Inclinometer	\$ 315.00/half day \$ 630.00/day
Field Soil Resistivity Tests: Crew Equipment	Price Quote \$ 345.00/day \$ 245.00/half day
OVA Analyzer	\$ 245.00/day \$ 140.00/half day
Tools and equipment expended on job	Cost + 20%
Rental Equipment and labor, Outside Services	Cost + 20%
Wallace-Kuhl & Associates Drill Rig (includes rig & crew)	\$ 225.00/hour
Vehicle Charge <i>(Subject to periodic adjustment due to fuel cost)</i>	\$ 0.75/mile



SCHEDULE OF FEES BP

GEOTECHNICAL LABORATORY TESTING 2012

Atterberg Limits (LL/PI)	ASTM D4318	\$ 145.00 each
California Bearing Ratio	ASTM D1883	\$ 840.00 each
CDF/Soil Cement compression test	ASTM D4832 CT 373	\$ 50.00 each
Compaction Characteristics: Laboratory moisture/density relationship	ASTM D698 Methods A	\$ 190.00 each
	Methods B, C & D	\$ 200.00 each
	ASTM D1557 Method A	\$ 230.00 each
	Method B, C & D	\$ 240.00 each
	CT 216	\$ 240.00 each
Consolidation Test (with rate data)	ASTM D2435	\$ 515.00 each
Direct Shear Test	ASTM D3080 Undisturbed/unconsolidated	\$ 100.00 each
	Undisturbed/saturated and consolidated	\$ 140.00 each
	Remolded and consolidated (one only)	\$ 155.00 each
	Remolded and consolidated (set of three)	\$ 405.00 each
	CT 229	\$ 155.00 each
Durability (coarse or fine) (sample preparation extra)		
Expansion Index	ASTM D4829	\$ 170.00 each
Grain Size Analysis	Dry Sieve (Coarse)	ASTM C136 \$ 100.00 each
	Wet Sieve (Coarse or Fine)	CT 202 \$ 100.00 each
	Passing No. 200 soils	ASTM D1140 \$ 90.00 each
	Hydrometer	ASTM D422 \$ 160.00 each
Moisture Content	ASTM D2216, D4643	\$ 25.00 each



SCHEDULE OF FEES BP
 GEOTECHNICAL LABORATORY TESTING
 2012

Permeability, falling or constant head	ASTM D2434, D5084	\$ 400.00 each
Resistance "R" Value	CT 301, ASTM D2844	
Untreated Samples		\$ 235.00 each
Laboratory-Mixed Cement or Lime Stabilized		\$ 290.00 each
Lime-Treated Unconfined Compression	CT 373	\$ 655.00 each
Determination of Free Lime	CT 414	\$ 145.00 each
Sand Equivalent (average of 3)	CT 217	\$ 125.00 each
Specific Gravity of Soils	ASTM C127, C128, D854	\$ 125.00 each
Triaxial Shear Test (3 points, quick)	ASTM D2850	
Undisturbed samples		\$ 295.00 each
Remolded samples		\$ 370.00 each
Unconfined Compression Test, including Moisture Content and Unit Weight	ASTM D2166	\$ 110.00 each
Unit Weight/Moisture Content (Sample Tubes)	ASTM D2937, D4643	\$ 35.00 each



SCHEDULE OF FEES CP

GEOTECHNICAL AND TESTING SERVICES

2012

Administrative Assistant	\$ 65.00/hr.
Soil Tester	\$ 90.00/hr.
Draftsperson/GIS Technician	\$ 85.00/hr.
GIS Analyst	\$ 95.00/hr.
Project Manager	\$ 115.00/hr.
Staff Engineer or Geologist	\$ 115.00/hr.
Senior Staff Engineer or Geologist	\$ 120.00/hr.
Project Engineer or Geologist	\$ 130.00/hr.
Senior Project Engineer or Geologist	\$ 145.00/hr.
Senior Engineer or Geologist	\$ 155.00/hr.
Principal Engineer or Geologist	\$ 185.00/hr.
Litigation	
Data Review	per above rates
Consultation	\$ 225.00/hr.
Depositions/Expert Witness Testimony	\$ 320.00/hr.
Vehicle Charge <i>(Subject to periodic adjustment due to fuel cost)</i>	\$ 0.75/mile
Subsistence	\$ 55.00/day
Lodging	Cost
Premium charges	
Overtime (Saturdays and over 8 hours in one day)	add \$ 44.00/hr.
Sunday and Holidays	add \$ 60.00/hr.
Equipment rental, freight, special materials	Cost + 20%
Outside services	Cost + 20%

NOTES:

- 1) A two hour minimum charge will apply to field technician services with the following exceptions:
 - a) Single trip pickup and delivery services, where a one hour minimum will apply.
 - b) Saturday, Sunday and holidays, where a four hour minimum charge will apply.
- 2) A \$20.00 per hour shift differential surcharge will be added to the hourly rate of personnel involved in scheduled testing work between the hours of 6 P.M. and 5 A.M., as well as a four hour minimum.
- 3) Work performed after 3 pm may be subject to overtime rates regardless of the number of hours spent on the job.



ID	Task Mode	Task Name	Duration	Start	Finish	Mar '13	Apr '13	May '13	Jun '13	Jul '13	Aug '13	Sep '13	O																
						10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18
1		Fairfield HOJ Flood Protection Project - Pre-Design	115 days	Mon 4/1/13	Mon 9/9/13																								
2		Phase 1 - Flood Protection Validation	40 days	Mon 4/1/13	Fri 5/24/13																								
3		Geotechnical Soils Investigation	1 mon	Mon 4/1/13	Fri 4/26/13																								
4		Surveying	20 days	Mon 4/1/13	Fri 4/26/13																								
5		Topographic and Boundary Survey	1 mon	Mon 4/1/13	Fri 4/26/13																								
6		Expanded Arial Survey	1 mon	Mon 4/1/13	Fri 4/26/13																								
7		Underground Utility Survey	1 mon	Mon 4/1/13	Fri 4/26/13																								
8		Hydrologist to Review Existing Reports	1 mon	Mon 4/1/13	Fri 4/26/13																								
9		Communication with W&K	1 mon	Mon 4/1/13	Fri 4/26/13																								
10		Hydrologist to Evaluate Site	1 mon	Mon 4/15/13	Fri 5/10/13																								
11		Clean-up W&K Hydraulic Model	1 wk	Mon 4/1/13	Fri 4/5/13																								
12		Frequency Interval Recommendation	1 mon	Mon 4/29/13	Fri 5/24/13																								
13		Phase 2 - Conceptual Design	100 days	Mon 4/1/13	Fri 8/16/13																								
14		Meet and Coordinate with the AOC and County	4 mons	Mon 4/1/13	Fri 7/19/13																								
15		Development of Two Conceptual Designs	3.5 mons	Mon 4/15/13	Fri 7/19/13																								
16		Local Hydraulic Model	35 days	Mon 7/1/13	Fri 8/16/13																								
17		Develop Model	1.5 mons	Mon 7/1/13	Fri 8/9/13																								
18		Short Term and Long Term Mitigation Recommendations	1 wk	Mon 8/12/13	Fri 8/16/13																								
19		Develop 3D Graphic Models	3.5 mons	Mon 4/15/13	Fri 7/19/13																								
20		Conceptual Design Engineering Input	3.5 mons	Mon 4/15/13	Fri 7/19/13																								
21		Opinion of Probable Cost	4 wks	Mon 7/22/13	Fri 8/16/13																								
22		Submission of Pre-Design Report	15 days	Mon 8/19/13	Mon 9/9/13																								
23		A/E Submission	0 days	Mon 8/19/13	Mon 8/19/13																								
24		AOC/County Review	1 wk	Mon 8/19/13	Fri 8/23/13																								
25		A/E Modify Report	1 wk	Mon 8/26/13	Fri 8/30/13																								
26		AOC/County Approval of Package	1 wk	Mon 9/2/13	Fri 9/6/13																								
27		AOC/County Determine Concept to be Developed in Schematic Design	0 days	Mon 9/9/13	Mon 9/9/13																								

Project: Schedule 130207 Pre-des Date: Thu 2/7/13	Task		External Milestone		Manual Summary Rollup	
	Split		Inactive Task		Manual Summary	
	Milestone		Inactive Milestone		Start-only	
	Summary		Inactive Summary		Finish-only	
	Project Summary		Manual Task		Deadline	
	External Tasks		Duration-only		Progress	