

AGREEMENT TO PERFORM PROFESSIONAL SERVICES

This agreement for engineering services associated with the preparations of a citywide drainage master plan (“Agreement”) is made and entered in this 2nd day of July, 2013 (“Effective Date”), by and between the City of Redlands, a municipal corporation (“City”) and RBF Consulting (“Consultant”). City and Consultant are sometimes individually referred to herein as a “Party” and, together, as “Parties.” In consideration of the mutual promises contained herein, City and Consultant agree as follows:

ARTICLE 1 – ENGAGEMENT OF CONSULTANT

- 1.1 City hereby engages Consultant to provide engineering services associated with the preparation of a citywide drainage master plan for the entire city and tributaries impacting the City of Redlands (the “Services”).
- 1.2 The Services shall be performed by Consultant in a professional manner, and Consultant represents that it has the skill and the professional expertise necessary to provide the Services to City at a level of competency presently maintained by other practicing professional consultants in the industry providing like and similar types of Services.

ARTICLE 2 – SERVICES OF CONSULTANT

- 2.1 The Services that Consultant shall perform are more particularly described in Exhibit “A,” entitled “Scope of Services,” which is attached hereto and incorporated herein by reference.
- 2.2 Consultant shall comply with applicable federal, state and local laws and regulations in the performance of this agreement including, but not limited to, State prevailing wage laws.

ARTICLE 3 – RESPONSIBILITIES OF CITY

- 3.1 City shall make available to Consultant information in its possession that may assist Consultant in performing the Services.
- 3.2 City designates Chris Diggs, Deputy Municipal Utilities and Engineering Director, as City’s representative with respect to performance of the Services, and such person shall have the authority to transmit instructions, receive information, interpret and define City’s policies and decisions with respect to performance of the Services.

ARTICLE 4 – PERFORMANCE OF SERVICES

- 4.1 The term of this Agreement shall be for two hundred seventy (270) calendar days, commencing upon the Effective Date of this Agreement.

4.2 If Consultant’s Services include deliverable electronic visual presentation materials, such materials shall be delivered in a form, and made available to the City, consistent with City Council adopted policy for the same. It shall be the obligation of Consultant to obtain a copy of such policy from City Staff.

ARTICLE 5 – PAYMENTS TO CONSULTANT

5.1 The total compensation for Consultant’s performance of the Services shall not exceed the amount of Two Hundred Ninety Six Thousand Six Hundred Dollars (\$296,600.00) and shall be paid on a time and materials basis based upon the rates shown in Exhibit “B,” entitled “Project Cost,” which is attached hereto and incorporated herein by reference.

5.2 Consultant shall submit monthly invoices to City describing the Services performed during the preceding month. Consultant’s invoices shall include a brief description of the Services performed, the dates the Services were performed, and the number of hours spent and by whom. City shall pay Consultant no later than thirty (30) days after receipt and approval by City of Consultant’s invoice.

5.3 All notices shall be given in writing by personal delivery or by mail. Notices sent by mail should be addressed as follows:

City
Chris Diggs
City of Redlands
35 Cajon Street, Suite 15A
P.O. Box 3005 (mailing)
Redlands, CA 92373

Consultant
John McCarthy
Vice President
RBF Consulting
14725 Alton Parkway
Irvine, CA 92816

When so addressed, such notices shall be deemed given upon deposit in the United States Mail. Changes may be made in the names and addresses of the person to whom notices and payments are to be given by giving notice pursuant to this section 5.3.

ARTICLE 6 – INSURANCE AND INDEMNIFICATION

6.1 Insurance required by this Agreement shall be maintained by Consultant for the duration of its performance of the Services. Consultant shall not perform any Services unless and until the required insurance listed below is obtained by Consultant. Consultant shall provide City with certificates of insurance and endorsements evidencing such insurance prior to commencement of the Services. Insurance policies shall include a provision prohibiting cancellation or modification of the policy except upon thirty (30) days prior written notice to City.

6.2 Consultant shall secure and maintain Workers’ Compensation and Employer’s Liability insurance in accordance with the laws of the State of California, with an insurance carrier acceptable to City as described in Exhibit “C,” entitled “Workers’ Compensation

Insurance Certification,” which is attached hereto and incorporated herein by this reference.

- 6.3 Consultant shall secure and maintain comprehensive general liability insurance with carriers acceptable to City. Minimum coverage of One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate for public liability, property damage and personal injury is required. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self-insurance maintained by City.
- 6.4 Consultant shall secure and maintain professional liability insurance throughout the term of this Agreement in the amount of One Million Dollars (\$1,000,000) per claim made.
- 6.5 Consultant shall have business auto liability coverage, with minimum limits of One Million Dollars (\$1,000,000) per occurrence, combined single limit bodily injury liability and property damage liability. This coverage shall include all Consultant owned vehicles used in connection with Consultant’s provision of the Services, hired and non-owned vehicles, and employee non-ownership vehicles. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self insurance maintained by City.
- 6.6 Consultant shall defend, indemnify and hold harmless City and its elected officials, employees and agents from and against any and all claims, losses or liability, including attorneys’ fees, arising from injury or death to persons or damage to property occasioned by and negligent or intentionally wrongful act, omission or failure to act by Consultant, or its officers, employees and agents in performing the Services.

ARTICLE 7 – CONFLICTS OF INTEREST

- 7.1 Consultant covenants and represents that it does not have any investment or interest in any real property that may be the subject of this Agreement or any other source of income, interest in real property or investment that would be affected in any manner or degree by the performance of Consultant’s Services. Consultant further covenants and represents that in the performance of its duties hereunder, no person having any such interest shall perform any Services under this Agreement.
- 7.2 Consultant agrees it is not a designated employee within the meaning of the Political Reform Act because Consultant:
 - A. Does not make or participate in:
 - (i) the making or any City governmental decisions regarding approval of a rate, rule or regulation, or the adoption or enforcement of laws;
 - (ii) the issuance, denial, suspension or revocation of City permits, licenses, applications, certifications, approvals, orders or similar authorization or entitlements;

- (iii) authoring City to enter into, modify or renew a contract;
- (iv) granting City approval to a contract that requires City approval and to which City is a party, or to the specifications for such a contract;
- (v) granting City approval to a plan, design, report, study or similar item;
- (vi) adopting, or granting City approval of policies, standards or guidelines for City or for any subdivision thereof.

B. Does not serve in a staff capacity with City and in that capacity, participate in making a governmental decision or otherwise perform the same or substantially the same duties for City that would otherwise be performed by an individual holding a position specified in City's Conflict of interest Code under Government Code section 87302.

7.3 In the event City officially determines that Consultant must disclose its financial interests, Consultant shall complete and file a Fair Political Practices Commission Form 700, Statement of Economic Interests with the City Clerk's office pursuant to the written instructions provided by the City Clerk.

ARTICLE 8 – GENERAL CONSIDERATIONS

- 8.1 In the event any action is commenced to enforce or interpret any of the terms or conditions of this Agreement the prevailing Party shall, in addition to any costs and other relief, be entitled to the recovery of its reasonable attorneys' fees, including fees for the use of in-house counsel by a Party.
- 8.2 Consultant shall not assign any of the Services, except with the prior written approval of City and in strict compliance with the terms and conditions of this Agreement.
- 8.3 Project related documents, records, drawings, designs, cost estimates, electronic data files, databases and any other documents developed by Consultant in connection with its performance of the Services, and any copyright interest in such documents, shall become the property of City and shall be delivered to City upon completion of the Services, or upon the request of City. Any reuse of such documents, and any use of incomplete documents, shall be at City's sole risk.
- 8.4 Consultant is for all purposes under this Agreement an independent contractor and shall perform the Services as an independent contractor. Neither City nor any of its agents shall have control over the conduct of Consultant or Consultant's employees, except as herein set forth. Consultant shall supply all necessary tools and instrumentalities required to perform the Services. Assigned personnel employed by Consultant are for its account only, and in no event shall Consultant or personnel retained by it be deemed to have been employed by City or engaged by City for the account of, or on behalf of, City. Consultant shall have no authority, express by City for the account of, or on behalf of City. Consultant shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent, nor shall Consultant have any authority, express or implied, to bind City to any obligation.

- 8.5 Unless earlier terminated as provided for below, this Agreement shall terminate on March 28, 2014, provided, however this Agreement may be terminated by City, in its sole discretion, by providing ten (10) days prior written notice to Consultant (delivered by certified mail, return receipt requested) of City's intent to terminate. If this Agreement is terminated by City, an adjustment to Consultant's compensation shall be made, but (1) no amount shall be allowed for anticipated profit or unperformed Services, and (2) any payment due Consultant at the time of termination may be adjusted to the extent of any additional costs to City occasioned by any default by Consultant. Upon receipt of a termination notice, Consultant shall immediately discontinue its provision of the Services and, within five (5) days of the date of the termination notice, deliver or otherwise make available to City, copies (in both hard copy and electronic form, where applicable) of data, design calculations, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by Consultant in performing the Services. Consultant shall be compensated on a pro-rata basis for Services completed up to the date of termination.
- 8.6 Consultant shall maintain books, ledgers, invoices, accounts and other records and documents evidencing costs and expenses related to the Services for a period of three (3) years, or for any longer period required by law, from the date of final payment to Consultant pursuant to this Agreement. Such books shall be available at reasonable times for examination by City at the office of Consultant.
- 8.7 This Agreement, including the Exhibits incorporated herein by reference, represents the entire agreement and understanding between the Parties as to the matters contained herein, and any prior negotiations, written proposals or verbal agreements relating to such matters are superseded by this Agreement. Except as otherwise provided for herein, an amendment to this Agreement shall be in writing, approved by City and signed by City and Consultant.
- 8.8 This Agreement shall be governed by and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, duly authorized representatives of City and Consultant have signed in confirmation of this Agreement.

CITY OF REDLANDS

RBF CONSULTING

By: _____
Pete Aguilar, Mayor

By: _____
John McCarthy, Vice President

Attest:

Sam Irwin, City Clerk

“EXHIBIT "A"

Scope of Work

A. General Tasks

1. Project Management.

Consultant will preparing project schedules, budgets, reports, coordinating with City, and performing quality control by monitoring all project activities.

a. Project Meetings. Consultant shall schedule, attend and conduct meetings with City staff and other agencies to discuss issues relevant to the development of the Master Plan. Meetings may be scheduled for, but are not limited to:

- i. Project kickoff meeting;
- ii. Site visit meeting (s);
- iii. Periodic project update meetings;
- iv. Coordination meetings with other public agencies;
- v. Community outreach/public meeting(s);
- vi. Consultant team meetings.

b. Project Schedule. Prepare a project schedule (using Primavera P6 or an approved alternative) at a sufficient level of detail to show a clear understanding of the work required to meet the project goals, objectives and delivery timeline. The schedule will show the interdependencies among tasks and interim and final milestones for project completion and shall be updated monthly to show project progress.

c. Project Files. Consultant will assemble and maintain project files that include all documentation and data resulting from or related to the project, including but not limited to survey files, engineering computations, assumptions, working drawings, meeting minutes, all correspondence, digital image, and video library.

2. Reports.

Consultant will prepare the following reports:

- Field investigation reports, including all data collected during the reconnaissance process and all pictures (included in Section B);
- Monthly project status reports to communicate interim findings, and to convey discovery of any difficulties or special problems that need to be remedied;
- Technical memoranda, including analysis and evaluation for each facility and identified alternative improvements (included in Section B);
- Design recommendation reports(s), including design alternatives analysis (included in Section B).

Deliverables. Submit five hard copies and one MS Word electronic copy of a draft document that includes methods, findings, and recommendations generated as part of the tasks described herein. Upon City approval of the draft document, five spiral bound copies, and one MS Word

electronic copy of the “Final Master Plan” document shall be submitted to City. Deliverables shall be organized so that they are fully accessible and usable by City.

B. Master Plan Preparation

1. Background Information Research & Review.

Consultant will conduct a thorough review of existing drainage plans, video documents, planning documents, regulatory rules, programs and activities, and other materials important to the development of the Master Plan. A complete inventory of existing drainage data will be prepared for City. Consultant will compile and review all available references and consult with City and San Bernardino County Flood Control District (SBCFCD) staff to acquire background and knowledge required to develop drainage solutions. Reports to be reviewed will include:

- “Zone 3 Comprehensive Storm Drain Plan (CSDP)No. 4”, 1976, SBCFCD;
- “Final Hydrology, CSDP No. 4”, 2013, SBCFCD;
- “Field Investigation Report for City of Redlands”, 2009, SBCFCD;
- “Crafton and Opal Basin Detention Basins Feasibility Study”, 2009, SBCFCD; and
- County reports dealing with detention basin location feasibility;
- Drainage report for the proposed diversion of Mission Zanja (TKE).

2. Field Facility Inventory

- a. Facility Reconnaissance.** Consultant will perform an office review of existing asbuilts from the City GIS Database to identify storm drain facility dimensions, flowlines, material type, and connectivity to adjacent facilities. For the areas not covered with asbuilt information, Consultant will identify and create a list for the City to provide field reconnaissance information (i.e. manhole flowline, catch basin flowlines, inlet dimensions, and connecting pipe diameters and types). This inventory will include the facilities that have been listed in the SBCFCD CSDP and City GIS database.

3. Hydrology & Hydraulics

- a. Establish Engineering Design Criteria.** Consultant will provide preliminary engineering services to establish the design criteria for hydraulic and hydrologic design requirements prior to initiating the preliminary design process. The necessary planning criteria and standards will be established to ensure the required level of flood protection is provided to meet the various jurisdictional agency requirements, and are in conformance with City and guidelines. All elements of the Master Plan of Drainage will be prepared in accordance with the procedures established by the SBCFCD. This work item will include establishment of the following critical design features:

- Hydraulic controls
- Street inlet requirements
- Outlet requirements
- Local drainage system hydraulic modeling
- Review of master plan design assumptions

- Distribution of flows to the proposed storm drain and street section
- Critical design water surfaces (committed elevations)
- Allowable street flooding and storage
- Deficiency upgrade requirements
- Allowable design deviations (i.e., min. Flood protection levels)

A memo summarizing the recommended design criteria and guidelines will be prepared for City review. This document will serve as an initial reference framework for future decisions as work progresses and unique opportunities are encountered.

b. Watershed Hydrology

b.1 Delineate of Local Watershed Characteristics - Consultant will review and validate the local drainage areas identified in the CSDP No. 4 report based on field investigations and the Lidar topography provided by City. Boundaries for the drainage basin areas will be determined and the minimum critical hydrologic concentration points will be established to assist in the development of the watershed model and analysis requirements for the hydraulic design. A watershed map with the delineation of the City watershed drainage basins will be updated to document the mapping for the SBCFCD hydrologic modeling. The watershed map will determine the average characteristic parameters associated with the modified or updated watershed subareas necessary for the application of hydrologic analysis. Field verification of watershed boundaries will be performed for areas with conflicts or incomplete data. It is assumed that not many changes will be needed since the SBCFCD recently updated all hydrology in February 2013.

b.2 Rational Method Local Hydrology Analysis – Consultant will utilize the existing CSDP No. 4 update hydrology for all local facilities within the City. Consultant will review and update, if necessary, the County files with the most recent City’s “ultimate” land uses. Since the CSDP No 4 hydrology only calculated flows for the 100-year storm, Consultant will have to perform calculations for the 10-year and 25-year events, for the local watersheds only. The AES Software hydrology model will be used to develop a link-node model for the critical concentration points previously identified in the mapping phase. These locations will generally follow the existing rational method boundaries, but will need to be modified based on future drainage needs (i.e. future catchbasins, or drainage laterals). Flowrates developed will be limited in minimum tributary drainage area size to the master plan or primary backbone facility systems only (i.e. flowrates will not be calculated for each individual surface inlet, unless through separate addendum). Hydrology calculations will be completed in accordance with the San Bernardino County Hydrology Manual. All areas over 640 acres will be evaluated using the Unit Hydrograph method. It is assumed that most of the hydrology (characteristics, parameters) can be estimated from the SBCFCD CSDP #4 report 100-year storm event recently updated in February 2013.

b.3 Unit Hydrograph Hydrology Analyses (XPSWMM) – For the purpose of running the 1D/2D coupled model for the main regional backbone facility (Mission Zanja), hydrographs need to be identified and input into the XPSWMM model at each of the main junction locations along Mission Zanja. These models are dynamic, and thus do not evaluate peak

flows only, but rather, entire hydrographs. It is estimated that eight (8) local unit hydrographs will be needed to model Mission Zanja through downtown (from I-10 to Texas Street) developed using the AES Software model (Small Area Unit Hydrograph) module. These hydrographs can be input into the model at each respective junction. This procedure ensures that the hydrology is per the SBCFCD hydrology guidelines. It is assumed that the SBCFCD hydrology can be used upstream of the I-10/Mission Zanja tributary.

c. Drainage System Hydraulic Modeling

- c.1 Existing Local Storm Drain Analysis - Consultant will perform a hydraulic analysis of the conveyance “capacity” of the existing City backbone storm drain system including subsurface storm drains under 36-inches in diameter, and open minor open channels. The larger backbone drainage systems will be evaluated in WSPG or XPSWMM. The hydraulic analysis will be based upon evaluation of the hydraulic grade line, rather than “normal depth” calculations. Hydraulic grade line (HGL) calculations will be performed utilizing the Los Angeles County Water Surface and Pressure Gradient (WSPG) program. The hydraulic model developed as part of this task will provide the baseline model to identify system deficiencies and to test the modification alternatives of the recommended storm drain improvements. The storm drain water surface profile models will only be generated for the main storm drain lines, using downstream tailwater controls in the major systems from the results of the XPSWMM analyses. Private or local facilities outside of public right-of-way (not including easements) intercepting the lot/building surface drainage will not be analyzed. All storm drains that outlet to channels will be evaluated. The water surface data and hydraulic information will be summarized in tabular format for each reach or element of the facility to allow easy use and review.

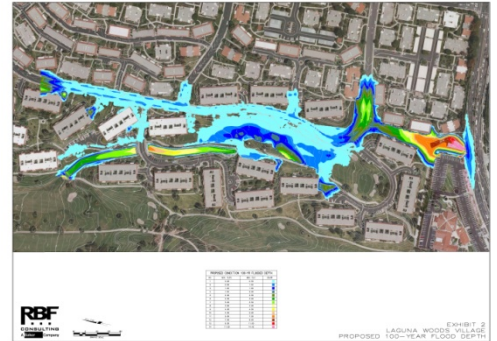
The hydraulic models generated for the “existing” mainline storm drain systems will be analyzed in a sensitivity analysis to determine the maximum hydraulic “capacity” of the system. The maximum allowable hydraulic capacity will be defined as the highest elevation of the hydraulic grade line below the street that allows the surface inlets to function. A sensitivity analysis will be performed by factoring the “design” discharges to a lower amount until the storm drain operates without causing flooding of surface inlets.

- c.2 Street Flooded Width Calculations - The results of the hydrology analysis will be used to perform street flooded width calculations at critical street locations to ensure conformance with SBCFCD drainage design criteria. The street flooded width analysis will be based on normal depth calculations and using City standard street sections. The street flooded width calculations will be used to identify locations that do not meet SBCFCD criteria and therefore, may require additional underground storm drain improvements.
- c.3 Deficiency Removal and Alternatives Formulation / Feasibility Analysis (XPSWMM) - Consultant will develop preliminary alternatives formulation for removal of hydraulic deficiencies within the existing “mainline” storm drain improvements focusing on Mission Zanja and Reservoir Canyon storm drains. The conceptual assessment will focus on either: (1) increasing the hydraulic capacity through enlarged drainage facilities or new parallel system adjacent to existing facilities, (2) constructing a diversion system, or (3) constructing

detention storage for flow reduction and water quality benefits. All “diversions” will be local, not regional. Potential concept alternatives will be proposed so as to not divert flows from one watershed to another, unless approved by the SBCFCD. The number of potential basin locations will be limited to (up to 3) for budget purposes.

Consultant will perform a system optimization study, focusing on a “watershed solution”, not just multiple local solutions. Consultant will review existing reports, and evaluate multiple options for reducing flooding, in addition to variances of multiple options to identify the most feasible alternatives.

XPSWMM will be used to evaluate the impacts of the alternatives on the main drainage backbone systems using the 1D/2D analyses. In particular, the Mission Zanja from the I-10 to Texas Street, will be modeled in 1D/2D.



Increasing the capacity of proposed storm drains will also be evaluated for impacts to regional facilities. Based on existing condition flows tributary to each regional facility (i.e. surface and subsurface), proposed condition hydrology and hydraulics will be calculated to ensure no negative impacts to existing regional facilities occur.

A technical memorandum will be prepared that summarizes the results of the alternatives analysis. The memorandum will serve to reference the methodology, design assumptions, guidelines, and criteria developed for the identification and evaluations of the drainage alternatives.

- c.4 Drainage Improvement Facility Sizing and Alignment - The proposed increased local pipe sizing will be based on the results of XPSWMM or WSPG for the new revised flowrates. Preliminary horizontal and vertical alignments will be developed for the recommended facilities. The lengths and elevation data will be used for detailed hydraulic analysis and cost estimating purposes. Recommended drainage improvements to remove hydraulic deficiencies of the municipal storm drain systems will be analyzed in FlowMaster, or in some cases WSPG, developed in the previous tasks to verify operation. The precise sizing of the modifications to the existing storm drain sizes will be adjusted using the water surface profile model to optimize the performance of the system. For the major systems, the proposed increased sizing will be based on the XPSWMM results.

Final drainage solution alternatives will be prepared for City review and acceptance. These alternatives will be identified based on priority. Areas of high susceptibility to flooding and/or priority water quality treatment will be ranked highest. Three levels of storm drain modification priority will be created in conjunction with City. A color coded map will be provided to the City identifying the priority ranked systems to be replaced.

4. Flood Control and Storm Water Drainage System Improvements

a. Concept Plan Preparations – Consultant will prepare concept plans (plan view only) of the proposed drainage improvements. These plan sheets will be displayed similar to the CSDP #4 plans (but without profile). Maps will show updated flows, dimensions, manning's roughness values, and lengths. The plan sheets will be created in 8.5"x11" format for inclusion into the Master Plan Report.

b. Preliminary Construction Quantity Estimates – Cost estimates will be performed for the identified most feasible drainage alternatives based on the recommendations in the above tasks and the City concurrence. A preliminary estimated cost of construction will be generated from the quantity estimate using approved unit costs from the City. Unit costs will be based upon the most current cost information for recent similar projects in the area compiled by Consultant and approved by the City. The total project costs for each alternative will then be estimated which include line items for project design, survey, geotechnical, administration and construction support. In addition, intangible costs for alternative systems will be investigated, such as environmental mitigation, if these are determined to be critical for a particular system. Major physical constraints will be included in the estimate such as (1) land acquisition, (2) street paving and traffic control, (3) utility relocation or protection, and (4) compliance with the current NPDES MS4 permit.

5. Master Plan document and Floodplain Maps.

Consultant will develop a Master Plan report that documents the system and the models, maps existing floodplains, provides concept plan drawings of each major conveyance components of the City's system (including locations of existing physical deficiencies and/or hydraulic constraints), and clearly lays out the recommended improvements.

Preparation of the floodplain maps shall conform to FEMA mapping standards. Consultant shall give presentations to the City on the development and use of hydrologic and hydraulic models and their results. Drainage areas and drainage structures, shall including both existing and future systems. Include total area and coefficient of runoff for each drainage area. Maps shall be properly scales and shall show the locations and types of existing storm water drainage facilities.

Submittals for the Master Plan document will consist of a Draft submittal and a Final submittal. For the Draft submittal, RBF will provide three (3) printed, and one (1) PDF copy of the submittal for City review.

Final Report submittal will consist of ten (10) copies of the Report, three (3) copies of the Appendix, and one CD containing all files, including the final Master Plan in MS Word format.

The final drainage exhibits associated with the master plan of drainage include the following:

- Updated Drainage Concept Maps (8.5"x11")
- Watershed Hydrology Map (Basins and Drainage Areas)
- Storm Drain Deficiency Exhibits
- Proposed Drainage Systems Map

The hydrology maps will be prepared on the developed base sheets, modifying the existing drainage and will include the hydrologic concentration points or nodes clearly identified and the associated design discharge. Facility maps will indicate the recommended sizes and lengths for the backbone infrastructure. The drainage index map will be prepared at 1"=600' scale. Maps will be created using the GIS shapefiles generated during the project and electronic copies of all maps will be provided in PDF format.

C. Scope of Services – Additional Tasks

- a. **FEMA Applications for Letter of Map Revision.** Prepare preliminary Conditional Letter of Map Revision (CLOMR) applications and Letter of Map Revision (LOMR) applications and supporting documentation for submittal to FEMA as directed by the City. This task will be budgeted as an on-call basis, as no project has been identified at this point. A budget amount of \$19,000 has been set for this Task.
- b. **Assist in conducting community outreach and public meetings.** When requested by City, Consultant shall participate in public information, community outreach, and/or public hearings and meetings related to individual projects. Consultant shall gather information from the community and local agencies regarding individual projects and assist City in answering questions related to proposed capital improvement projects. For budgeting purposes, Consultant will assume the following:
 - Strategy Meeting with City staff.
 - Development of one distinct promotional piece to be used for community distribution.
 - Four Stakeholder Interviews.
 - Facilitation of two (2) workshops that will be open to public.
- c. **Rights-of-Way.** The results of the regional flooding analysis may identify different solutions, other than the existing diversion alternative. If this is the case, Consultant will identify right-of-way needed based on available parcel data and the proposed drainage facility alignments. For budgeting purposes, 20 man-hours has been allotted.
- d. **XPSWMM 3-D result animation** – Consultant will prepare a 3D video of the dynamic analysis of the surface flow results of XPSWMM. Consultant will work with XP Software and FORUM8 to prepare a flyover technique of the downtown as the surface overflows flood the streets. This rendering will be provided for the existing and recommended proposed conditions (if flooded) for a portion of the City downtown (generally between the inlet at 9th Street of the existing culvert to the outlet near Texas Street). This task has been budgeted for up to two (2) video result files. The budget of \$11,600 includes a set number of hours to produce the motion pictures.
- e. **Drainage Impact Fees & Funding**
Consultant will provide support to the City and their Consultant for the development of the Drainage Impact Fees, and to identify opportunities for funding. The work effort could involve one or more of the following subtasks. A time and material budget of \$10,000 has been allocated to this Task.

- Review Existing Documentation
- Engineering Analysis and Technical Memo
- Development Impact Fee Determination
- Written Report and Draft Ordinance

f. Additional Detailed Survey &/or Data Processing for 2D Modeling

Consultant will provided additional survey support for areas along Mission Zanja that the City's topo does not cover. If the existing Lidar data was taken from aerial, the tree canopies along the creek will shadow the true topography below. These areas need to be surveyed and appended to the City's existing topographic map to perform a detailed hydraulic evaluation of the area. Other areas that may need additional survey include areas within the City downtown that also lie under tree canopies. A budget of \$10,000 has been set for this task. If needed, Consultant will provide additional survey services per separate addendum.

- g. City Staff Advanced Modeling Training** – Consultant will provided training for City staff for using, reviewing, and evaluating XPSWMM data. Consultant will provided staff handouts and hands-on training. XP Software will also be available for providing documentation and answering questions. Consultant will help the City upload the free reviewing XPSWMM software, which allows staff to open any XPSWMM result file (which has been coded) for review. This item has been budgeted for \$3,400.

Assumptions:

- 1) Facility Conditions Assessment not part of this scope.
- 2) Facility Reconnaissance only consists of 2 days in field by Consultant. Most of the field work will be provided by City.
- 3) City to pay for the FEMA CLOMR application fees.

Exhibit "B"

Project Cost

Work Item Description	Estimated Manhours									Fee Subtotals	Fee Hours	Task Fee	Task Hours
	Project Director	Project Manager (Task Manager)	Sr. Engineer	Project Engineer	Design Engineer	Intern	Field Survey	GIS Analyst	Graphic Artist				
MASTER PLAN OF DRAINAGE													
A. General Tasks												\$13,080	76
Task 1 - Project Management													
Task 1.a Project Meetings	16	20		24						\$10,200	60		
Task 1.b Project Schedule		8								\$1,440	8		
Task 1.c Project Files (Only Monthly Status Reports)		8								\$1,440	8		
B. Master Plan Preparation													
Task 1 Review and Compile Existing Watershed and Drainage Facility Data & Reports	1	4	8		40					\$7,010	53	\$7,010	53
Task 2 - Facility Inventory												\$6,960	62
Task 2.a Field Recon (City to aid if needed.)	0	1	8	16	14	15		8		\$6,960	62		
Task 2.b Conditions Assessment (City Consultant To Provide)	0	0	0		0			0		\$0	0		
Task 3 - Hydrology & Hydraulics												\$122,080	928
Task 3.a Establish Engineering Criteria	0	2	4	16	0					\$3,120	22		
Task 3.b Rational Method Hydrology Analysis									20			\$6,010	51
Task 3.b.1 Delineation Existing Watershed Characteristics		1	6	8	16							\$10,480	80
Task 3.b.2 Rational Method Hydrology Analysis (10yr & 25)	0	4	8	20	48					\$7,190	54		
Task 3.b.3 Unit Hydrograph Hydrology Analyses (XPSWMM local Areas)	0	2	8	20	24								
Task 3.c Drainage System Hydraulic Modeling													
Task 3.c.1 Existing Local Storm Drain Analysis (Capacity)	2	12	16	40	80					\$20,140	150		
Task 3.c.2 Street Flooded Width Calculations	0	1	12	20	40					\$9,560	73		
Task 3.c.3 Deficiency Removal and Alternatives Formulation/Feasibility Analysis (Optimization Regional)	4	16	40	80	100					\$32,720	240		
Task 3.c.4 Drainage Improvement Facility Sizing and Alignment (Local Facilities)	2	16	40	60	80				60	\$32,860	258		
Task 4 - Flood Control Storm Water Drainage System Improvments												\$40,290	333
Task 4.a Concept Plan Preparation (System Maps 8.5" X11")	0	4	8		80			40	80	\$24,080	212		
Task 4.b Preliminary Construction Quantity Estimates	1	8	32		80					\$16,210	121		
Task 5 - Drainage Master Plan Document & Floodplain Maps												\$34,000	250
Draft Report	2	20	12	30	36				14	\$15,590	114		
Final Report	2	12	16	16	24				6	\$10,640	76		
Final Drainage Exhibits/Maps		4	8	16	24				8	\$7,770	60		
C. Optional Tasks												\$67,180	214
Task a FEMA Applications for Letter of Map Revisions (T&M, not to exceed)										\$19,000	0		
Task b Assist in Community Outreach and Public Meetings									40	\$10,520	82		
Task c Right-of-way mapping (Budgeted 20 hrs)		2	2	16						\$2,820	20		
Task d XPSWMM 3D Result Animation (Up to 2 Animations)	0	8	20	16	32				10	\$11,450	86		
Task e Drainage Impact Fee & Funding Research (T&M, not to exceed)		24	48	100	160					\$10,000			
Task f Additional Detailed Survey &/or data processing for 2D Modeling (Budget item)										\$10,000	0		
Task g City Staff Advanced Modeling Training	0	0	8	12					6	\$3,390	26		
Reimbursable Printing and Deliverable Costs										\$6,000		\$6,000	
TOTAL	32	197	304	530	878	15	0	48	244			\$296,600	1916

RBF 2013 Rate Schedule

Position	Hourly Rate (\$)
Project Director	210
Project Manager (Task Manager)	180
Sr. Engineer	150
Project Engineer	135
Design Engineer	122
Intern	50
Field Survey (2 Man crew)	250
GIS Analyst	120
Graphic Artist	95

EXHIBIT "C"

WORKERS' COMPENSATION INSURANCE CERTIFICATION
FOR ENGINEERING SERVICES

Every employer, except the State, shall secure the payment of compensation in one or more of the following ways:

- (a) By being insured against liability to pay compensation in one or more insurer duly authorized to write compensation insurance in this State.
- (b) By securing from the Director of Industrial Relations, a certificate of consent to self-insure, either as an individual employer or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees.

I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Agreement. (Labor Code §1861).

RBF CONSULTING

By: _____

John McCarthy

Date: