

Memorandum

To: Programs, Projects and Operations Subcommittee

Re: Papillion Creek Watershed Partnership, Stage IV Study Contract with HDR Engineering

Date: April 30, 2007

From: Paul Woodward, Water Resources Engineer

In April of 2005, the Board approved a Stage III contract with HDR Engineering on behalf of the Papillion Creek Watershed Partnership (PCWP). HDR has completed the tasks outlined in Stage III which included facilitation of workgroups formed to make decisions concerning Stormwater Management Policies. The NRD Board and several other communities within the Partnership have approved these policies.

Recently, funding under Stage III has been exhausted and a new contract is needed to provide technical support and analysis of the Stormwater Management Policies in addition to ongoing NPDES Permit support. HDR and members of the Partnership worked together to prepare the enclosed scope of services, and below is a summary of each task and cost:

- Project management including attending Partnership meetings (\$45,767)
- Public Involvement Assistance (\$51,853)
- Hydrologic, Hydraulic and Water Quality Evaluations (\$186,864)
- Technical Materials and Watershed Plan Report (\$65,422)

Hydrologic, hydraulic and water quality evaluations will include the analysis of Low Impact Development strategies and/or regional detention within the watershed. Conservation Design Forum (CDF) will assist HDR in evaluating Low Impact Development scenarios. After initial modeling and input from a project advisory group, public forums will be held to gather input on conceptual watershed plan scenarios. HDR and CDF will then utilize public input to refine technical results and cost estimates for a preferred watershed plan prior to final public forums. During the course of the project, technical results will be summarized (visually if possible) and provided to IMS to aid in preparing public outreach materials.

In conclusion, the total cost of Stage IV services provided by HDR would be \$349,900 and the contract would be handled by P-MRNRD staff on behalf of the PCWP. Services would begin immediately and require a 1 year performance period. A copy of the proposed professional services contract with HDR, including a detailed scope, cost estimate, and schedule, is enclosed for your consideration.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute a professional services contract on behalf of the Papillion Creek Watershed Partnership with HDR Engineering, Inc. for the Papillion Creek Watershed Stage IV Study for a maximum fee of \$349,900, subject to changes deemed necessary by the General Manger and approved as to form by District Legal Council.

May 3, 2007

John Winkler
General Manager
Papio-Missouri River Natural Resources District
8901 S. 154th Street
Omaha, NE 68138-3621

RE: Stage IV Services – Development of Papillion Creek Watershed Plan
Agreement for Professional Services

Dear Mr. Winkler:

HDR Engineering, Inc. is pleased to submit the attached Agreement to provide professional services to the Papillion Creek Watershed Partnership for the further development of a Papillion Creek Watershed Plan.

Please sign and date both copies of the Agreement. Retain one copy for your records and return the other signed copy for our files. Our receipt of your signed acceptance will constitute our Notice to Proceed.

We look forward to working with you on this very important project. If you have any questions, please contact me at 399-1329 at your convenience.

Very truly yours,

HDR ENGINEERING, INC.



Lyle R. Christensen, PE
Project Manager

Enclosures

This document has important legal consequences; consultation with an attorney is encouraged with respect to its completion or modification. This document should be adapted to the particular circumstances of the Assignment and the Controlling Law.

**STANDARD FORM OF AGREEMENT
BETWEEN
OWNER AND ENGINEER
FOR
STUDY AND REPORT PHASE
PROFESSIONAL SERVICES**

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



**PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
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AMERICAN SOCIETY OF CIVIL ENGINEERS

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Strike Out/Double Underline Edits**

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**STANDARD FORM OF AGREEMENT
BETWEEN
OWNER AND ENGINEER
FOR
STUDY AND REPORT PHASE
PROFESSIONAL SERVICES**

This is an Agreement effective as of _____, 2007 ("Effective Date") between
Papio-Missouri River Natural Resources District ("OWNER") and HDR Engineering, Inc. ("ENGINEER").

OWNER retains ENGINEER to perform professional services, in connection development of a Papillion Creek
Watershed Plan (Stage IV Services) ("Assignment").

OWNER and ENGINEER, in consideration of their mutual covenants as set forth herein, agree as follows:

ARTICLE 1--ENGINEER'S SERVICES

1.01 Scope

A. ENGINEER shall provide the services set forth in Exhibit SR-A.

B. Upon this Agreement becoming effective, ENGINEER is authorized to begin services as set forth in Exhibit SR-A.

C. If authorized in writing by OWNER, and agreed to by ENGINEER, services beyond the scope of this Agreement will be performed by ENGINEER for additional compensation.

ARTICLE 2--OWNER'S RESPONSIBILITIES

2.01 General

A. OWNER shall have the responsibilities set forth herein and in Exhibit SR-A.

ARTICLE 3--TIMES FOR RENDERING SERVICES

3.01 ENGINEER's services will be performed within the time period or by the date stated in Exhibit SR-A.

3.02 If ENGINEER's services are delayed or suspended in whole or in part by OWNER, ENGINEER shall be entitled to equitable adjustment of the time for performance and rates and amounts of compensation provided for elsewhere in this Agreement to reflect reasonable costs incurred by ENGINEER in connection with, among other things, such delay or suspension and reactivation and the fact that the time for performance under this Agreement has been revised.

ARTICLE 4--PAYMENTS TO ENGINEER

4.01 Methods of Payment for Services of ENGINEER.

A. OWNER shall pay ENGINEER for services rendered under this Agreement as follows:

~~(Delete inapplicable language.)~~

~~1. A Lump Sum amount of \$_____.~~

~~2. Appropriate amounts are incorporated in the Lump Sum to account for labor, overhead, profit, Reimbursable Expenses, and ENGINEER's Consultants' charges, if any.~~

~~3. The portion of the Lump Sum amount billed for ENGINEER's services will be based upon ENGINEER's estimate of the proportion of the total services actually completed during the billing period to the Lump Sum.~~

~~[OR]~~

~~1. An amount equal to the cumulative hours charged to the Assignment by each class of ENGINEER's employees times Standard Hourly Rates for each applicable billing class for all services performed on the Assignment, plus Reimbursable Expenses, estimated to be \$ _____ and ENGINEER's Consultants' charges, if any, estimated to be \$ _____. The total compensation under paragraph 4.01.A.1 is estimated to be \$ _____.~~

~~2. ENGINEER's Reimbursable Expenses Schedule and Standard Hourly Rate Schedule are attached to this Agreement as Exhibits SR-C and SR-D, respectively.~~

~~3. The amounts billed for ENGINEER's services will be based on the cumulative hours charged to the Assignment during the billing period by each class of ENGINEER's employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and ENGINEER's Consultants' charges, if any, incurred during the billing period.~~

~~[OR]~~

1. An amount equal to ENGINEER's Direct Labor Costs times a Factor of 3.15 for the services of ENGINEER's employees engaged on the Assignment, plus Reimbursable Expenses, provided, however, the total due to ENGINEER for such services and for Reimbursable Expenses shall not exceed the amount of \$349,900, unless authorized in writing by OWNER. The fee proposal for this Agreement is included as Attachment "A", estimated to be \$ _____, and ENGINEER's Consultants' charges, if any, estimated to be \$ _____. The total compensation under paragraph 4.01.A.1 is estimated to be \$ _____.

2. ENGINEER's Reimbursable Expenses Schedule is attached to this Agreement as Exhibit SR-C.

3. The amounts billed for ENGINEER's services will be based on the applicable Direct Labor Costs charged to the Assignment by ENGINEER's employees during the billing period multiplied by the above-designated Factor, plus Reimbursable Expenses and ENGINEER's Consultants' charges, if any, incurred during the billing period.

4. Direct Labor Costs means salaries and wages paid to employees but does not include payroll related costs or benefits.

5. The Direct Labor Costs Factor includes the cost of customary and statutory benefits including, but not limited to, social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation, and holiday pay applicable thereto; the cost of general and administrative overhead, which includes salaries and wages of principals and employees engaged in business operations not directly chargeable to projects, plus indirect operating costs, including but not limited to, business taxes, legal expense, rent, utilities, office supplies, insurance, and other operating costs; plus operating margin or profit.

4.02 Other Provisions Concerning Payment

~~A. Estimated Compensation Amounts.~~

~~1. ENGINEER's estimate of the amounts that will become payable are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to ENGINEER under the Agreement.~~

~~2. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to ENGINEER that a compensation amount thus estimated will be exceeded, ENGINEER shall give OWNER written notice thereof. Promptly thereafter OWNER and ENGINEER shall review the matter of services remaining to be performed and compensation for such services. OWNER shall either agree to such compensation exceeding said estimated amount or OWNER and ENGINEER shall agree to a reduction in the remaining services to be rendered by~~

~~ENGINEER, so that total compensation for such services will not exceed said estimated amount when such services are completed.~~

A.B. *Adjustments*

ENGINEER's compensation is conditioned on time to complete the Assignment not exceeding the time identified in Exhibit SR-A. Should the time to complete the Assignment be extended beyond this period due to reasons not the fault of and beyond the control of ENGINEER, the total compensation to ENGINEER shall be appropriately adjusted.

~~2. If used, the Standard Hourly Rates Schedule, Reimbursable Expenses Schedule, Direct Labor Costs and the Factor applied to Direct Labor Costs will be adjusted annually (as of _____) to reflect equitable changes to the compensation payable to ENGINEER.~~

B.C. *Reimbursable Expenses.* Reimbursable Expenses means the actual expenses incurred by ENGINEER or ENGINEER's Consultants directly in connection with the Assignment, including the categories and items listed in Exhibit SR-C, plus 10% and if authorized in advance by OWNER, overtime work requiring higher than regular rates. Reimbursable Expenses will also include the amount of any sales tax, excise tax, value added tax, or gross receipts tax or similar tax that may be imposed on this agreement.

C.D. *For Additional Services.* OWNER shall pay ENGINEER for all services not included in the scope of this Agreement on the basis agreed to in writing by the parties at the time such services are authorized by OWNER.

ARTICLE 5--DESIGNATED REPRESENTATIVES

5.01 Contemporaneous with the execution

of this Agreement, ENGINEER and OWNER shall each designate specific individuals as ENGINEER's and OWNER's representatives with respect to the services to be performed or furnished by ENGINEER and responsibilities of OWNER under this Agreement. Such individuals shall have authority to transmit instructions, receive information, and render decisions relative to the Assignment on behalf of their respective party.

ARTICLE 6--CONTENT OF AGREEMENT

6.01 The following Exhibits are incorporated herein by reference:

A. Exhibit SR-A, "Further Description of Services, Responsibilities, Time, and Related Matters," consisting of 10 pages.

B. Exhibit SR-B, "Standard Terms and Conditions," consisting of 6 pages.

(Include one or both of the following if applicable.)

C. Exhibit SR-C, "Reimbursable Expenses Schedule," consisting of 1 page.

D. Attachment A -- Fee Estimate, Stage IV Services, consisting of 1 page.

E. Attachment B - Schedule, Stage IV Services, consisting of 1 page.

~~D. Exhibit SR-D, "Standard Hourly Rates," consisting of _____ pages.~~

6.02 Total Agreement

A. This Agreement (consisting of pages 1 to 4, inclusive, together with the Exhibits identified in paragraph 6.01) constitutes the entire agreement between OWNER and ENGINEER and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

OWNER:

**PAPIO-MISSOURI RIVER NATURAL
RESOURCES DISTRICT**

By: _____

Title: _____

Date Signed: _____

Address for giving notices:

8901 S. 154th Street

Omaha, NE 68138-3621

ENGINEER:

HDR ENGINEERING, INC.

By: _____

Title: _____

Date Signed: _____

Address for giving notices:

8404 Indian Hills Drive

Omaha, NE 68114

Designated Representative (Paragraph 5.01):

Name: John Winkler

Title: General Manager

Phone Number: (402) 444-6222

Facsimile Number: (402) 895-6543

E-Mail Address: jwinkler@papiord.org

Designated Representative (Paragraph 5.01):

Name: Timothy Crockett, P.E.

Title: Senior Vice President

Phone Number: (402) 399-1257

Facsimile Number: (402) 399-1111

E-Mail Address: Tim.Crockett@hdrinc.com

SUGGESTED FORMAT (for use with 1910-19, 1996 Edition)

This is EXHIBIT SR-A, consisting of 10 pages, referred to in and part of the Agreement between OWNER and ENGINEER for Study and Report Phase Professional Services dated _____, 2007.

Initial:

OWNER _____
ENGINEER _____

Further Description of Services, Responsibilities, Time, and Related Matters

Specific articles of the Agreement are amended and supplemented to include the following agreement of the parties:

A.1.01 ENGINEER's Services

~~_____ A. ENGINEER shall:~~

- ~~1. Consult with OWNER to define and clarify OWNER's requirements for the Assignment and available data.~~
- ~~2. Advise OWNER as to the necessity of OWNER providing data or services which are not part of ENGINEER's services, and assist OWNER in obtaining such data and services.~~
- ~~3. Identify, consult with, and analyze requirements of governmental authorities having jurisdiction relevant to the Assignment.~~
- ~~4. Identify and evaluate _____ alternate solutions available to OWNER and, after consultation with OWNER, recommend to OWNER those solutions which, in ENGINEER's judgment, meet OWNER's requirements.~~
- ~~5. Prepare a report (the "Report") which will, as appropriate, contain schematic layouts, sketches and conceptual design criteria with appropriate exhibits to indicate the agreed-to requirements, considerations involved, and those alternate solutions available to OWNER which ENGINEER recommends. This Report will be accompanied by ENGINEER's opinion of Total Project Costs for each solution which is so recommended with each component, including the following, separately itemized: opinion of probable Construction Cost, allowances for contingencies and for the estimated total costs of design, professional, and related services provided by ENGINEER and, on the basis of information furnished by OWNER, allowances for other items and services included within the definition of Total Project Costs.~~
- ~~6. Perform or provide the following additional tasks or deliverables:~~
- ~~7. Furnish _____ review copies of the Report to OWNER within _____ days of the Effective Dates of this Agreement and review it with OWNER.~~
- ~~8. Revise the Report in response to OWNER's and other parties' comments, as appropriate, and furnish _____ final copies of the revised Report to the OWNER within _____ days after completion of reviewing it with OWNER.~~

**For Development of a Watershed Plan
For Papillion Creek Watershed within Douglas and Sarpy Counties, NE**

ENGINEERING PROPOSAL – STAGE IV SERVICES

BACKGROUND AND BASIS OF PROPOSAL

The purpose of this Agreement is to provide on-going services for what is to be termed as Stage IV Services under the Papillion Creek Watershed Study. Stage IV efforts will provide further underpinning toward the overall long-range goal of preparing and implementing a Papillion Creek Watershed Plan (Project). Stage IV Services will start the implementation process for the stormwater management policies that were created during Stage III services. Stage IV Services are intended to:

- Provide technical information in support of the creation and facilitation of a public involvement program for stormwater management policy implementation of the 6 stormwater policies developed in Stage III: Policy Group 1 – Stormwater Management Financing; Policy Group 2 – Peak Flow Reduction; Policy Group 3 – Pollution Control; Policy Group 4 – Landscape Preservation, Restoration, and Conservation; Policy Group 5 – Erosion and Sediment Control and Other BMPs and Policy Group 6 – Floodplain Management. The Papillion Creek Watershed Partnership (PCWP) has independently secured the services of a professional Public Involvement (PI) Consultant: Issues Management Solutions, LLC.
- Provide a technical update to the Conceptual Drainage Plan that was derived during Stage III Services. This will involve:
 - Evaluation of various combinations of regional detention, water quality basins, and Low Impact Development (LID) strategies and their effects on the Watershed's hydrology, hydraulics, and water quality. HDR will retain the services of a subconsultant, Conservation Design Forum, Inc. (CDF) for assistance in the incorporation and evaluation of LID strategies into the technical study work.
 - Screen regional detention and LID strategies for their ability to meet performance-based objectives for flooding and water quality control versus planning level impact costs in current dollars. Flood damage costs will only be evaluated on a generalized basis from prior study efforts, based on gross acreage of inundation under different modeling scenarios.
- Prepare a draft and final report containing technical activities and findings.

SCOPE OF SERVICES – STAGE IV

Stage IV has been segmented into the following task series and includes:

- Task Series 100 Project Management
- Task Series 200 Public Involvement Assistance
- Task Series 300 Hydrologic/Hydraulic Modeling and Water Quality Evaluation
- Task Series 400 Technical Materials and Watershed Plan Report

It is anticipated that the following task series will be completed within a 12-month period.

TASK SERIES 100 – PROJECT MANAGEMENT

Task Objective: Confirm that Project elements are being completed as needed.

HDR Activities: **Task 110 Internal Project Management.** Includes scheduling, administration, coordination, and quality control activities within the HDR Project team. Internal HDR Project team meetings will be conducted as necessary to discuss tasks, provide Project updates, review deliverables, etc.

Task 120 PCWP Meetings. A maximum of two (2) HDR professionals will attend and provide input and general assistance for PCWP regular meetings and sub-committee meetings, including assistance in preparing an agenda prior to the meetings and reviewing draft meeting minutes prepared by the PCWP.

Task Deliverables:

- Provide monthly Project status reports (to be attached to HDR invoices).
- Assistance in preparing meeting agenda and presentation items related to the other Task Series below.
- Written review comments for meeting minutes provided by the P-MRNRD
- Miscellaneous meeting materials not otherwise specifically described by other Tasks herein.

Key Understandings: Assume HDR participation in a maximum of 12 regular PCWP or sub-committee meetings in combination.

TASK SERIES 200 – PUBLIC INVOLVEMENT ASSISTANCE

Task Objective: Provide technical information in support of the implementation of a Public Outreach Plan developed by the PI Consultant.

HDR Activities: **Task 210 Public Involvement Coordination.** HDR will work in parallel with the PI Consultant to provide technical information. Coordination meetings will be held to provide a historical overview of policy development input, technical findings to date, review public informational materials and prepare for public forums. A maximum of four (4) meetings with the PI Consultant are assumed.

Task 220 Advisory Group Meetings. HDR will participate in a technical advisory role at Advisory Group meetings facilitated by the PI Consultant. Assist in preparing for and attending a maximum of four (4) Advisory Group meetings with a maximum of two (2) HDR representatives. It is assumed that one (1) representative from HDR's subconsultant for LID strategies (Conservation Design Forum, Inc. [CDF]) will attend one (1) such Advisory Group meeting upon request. CDF will be available for telephone conferencing, as appropriate. Preparation of technical materials will be provided under Task Series 400.

Task 230 Individual Stakeholder Outreach and Public Forums. HDR will provide technical materials for but not attend individual stakeholder meetings. However, HDR will attend and participate in a technical advisory role at a maximum of twelve (12) public forums. All meetings are to be facilitated by the PI Consultant. The public forums are anticipated to be as follows:

- Mid-Stage Technical Findings:
 - Five (5) localized public information meetings.
 - One (1) public forum at the P-MRNRD.
- Final Summary Technical Findings:
 - Five (5) localized public information meetings.
 - One (1) public forum at the P-MRNRD.

Subtask 230.1 Individual Stakeholder Outreach. HDR will submit technical information package materials prepared under Task Series 400 to the P-MRNRD to be used by the PI Consultant as they conduct one-on-one interaction meetings with property owners, elected officials, and other stakeholders. HDR will not attend or have any other involvement with the individual stakeholder interaction meetings.

Subtask 230.2 Mid-Stage Public Forums. The anticipated technical study results for this set of public forums will include the Task Series 300 through Task 350 work as outlined below. That is, after Mid-Stage technical findings are complete, HDR will furnish one (1) set of technical information package materials from Task Series 400 to the PI Consultant via the P-MRNRD for combining with other presentation materials prepared by the PI Consultant. HDR will participate in a maximum of five (5) localized

public open house forums, plus one public open house forum to be held at the P-MRNRD as outlined above.

It is assumed that no general slideshow presentation or “question and answer” assembly will be given at any of the public forums; that is, only participation at information stations to discuss the technical aspects of the project with the public will be required. A maximum of two (2) HDR professionals will attend the localized public open house forums, and a maximum of (4) HDR professionals and one (1) representative from CDF will attend the P-MRNRD forum. HDR will provide the PI Consultant with a summary of its interaction with the public for subsequent compilation by the PI Consultant.

Subtask 230.3 Final Summary Public Forums. A final set of public forums will be held to summarize the outcome of the public outreach process and provide a summary of the technical study results. The anticipated technical study results for this set of public forum will include refinements to the earlier Task Series 300 work through Task 350, plus the remaining technical work as outlined below.

That is, after technical findings are complete and the Task Series 400 Conceptual Watershed Plan Report is written, HDR will prepare one (1) set of technical information package materials for combining with other presentation materials prepared by the PI Consultant for a maximum of five (5) localized public open house forums plus one public open house forum to be held at the P-MRNRD as outlined above and under Task Series 400.

Again similar to above, it is assumed that no general slideshow presentation or “question and answer” assembly will be given at any of the public forums; that is, only participation at information stations to discuss the technical aspects of the project with the public will be required. A maximum of two (2) HDR professionals will attend the localized public open house forums, and a maximum of (4) HDR professionals and one (1) representative from CDF will attend the P-MRNRD forum. The HDR team will assist at the information stations and discuss the technical aspects of the project with the public. HDR will provide the PI Consultant with a summary of its interaction with the public for subsequent compilation by the PI Consultant.

Task 240 Interlocal, Intergovernmental PCWP Planning Sessions. It is anticipated that selected members from PCWP governing boards and councils will be invited to PCWP planning session type meetings to receive briefings on the Stage IV project status and technical findings to date. P-MRNRD and other PCWP members will conduct these briefings at their regular or sub-committee meetings. For those planning session type meetings not occurring at PCWP meetings, one (1) representative from HDR will attend a maximum of three (3) such meetings. It is assumed that no additional technical materials will need to be prepared than that already prepared for the public forums.

Task Deliverables:

- Technical information package materials from Task Series 400 for inclusion in PI Consultant’s prepared materials.
- Review mark-ups of all new materials prepared by the PI Consultant that incorporate technical materials furnished by the HDR team.
- It is assumed that the same set of technical information package materials will suffice for all concurrent purposes; that is, the public forums, regular PCWP meetings, Advisory Group meetings, and interlocal, intergovernmental PCWP planning sessions.

Key Understandings:

- HDR Team will assist in the preparation for and attend all meetings to the extent outlined above.

- HDR Team will not attend individual stakeholder interaction meetings planned by the PI Consultant.
- PCWP to create and maintain public mailing lists.
- The PI Consultant will take the lead for and prepare non-technical materials required under this Task Series; whereas the HDR Team will be responsible for preparation of appropriate technical materials.
- It is assumed that the PI Consultant will create an Advisory Group member directory, compile the Project mailing list, and maintain the same throughout the duration of this Project.
- Technical comments will be solicited and documented for those meetings involving HDR Team participation.
- The PCWP will be responsible for printing, binding, and subsequent distribution of all project materials, including the display boards for the public open houses.

TASK SERIES 300 – HYDROLOGIC/HYDRAULIC MODELING AND WATER QUALITY EVALUATION

Task Background:

In the later portion of Stage III, a baseline hydrologic model was initiated in preparation for the subsequent Stage IV completion thereof and the evaluation of detention and Low Impact Development (LID) strategies. The calibrated model prepared during the Multi-Reservoir Analysis, the West Papillion Creek floodplain remapping, and the evaluation of Reservoir Sites 1 and 3C served as the basis for baseline hydrologic model development. An HEC-HMS model was created that subdivided the remaining portion of the Watershed not already segmented into 1 to 2 square mile subbasins. In addition, precipitation values and storm centerings were defined based on key locations in the Watershed. Finally, a single seamless HEC-HMS baseline hydrologic model for the entire Watershed was created from two earlier developed hydrologic models. The baseline land use condition for the Watershed was defined as year 2004, as this is the best available aerial data.

From Stages III and prior work there were 17 candidate regional detention facilities identified: 7 remaining reservoirs in Douglas and Sarpy counties identified in the Multi-Reservoir Analysis and 10 additional detention sites identified in the Conceptual Drainage Plan. Four (4) of the 10 additional detention sites have tentative pool areas already determined, thereby resulting in only 6 sites having no pool area defined.

A total of 12 water quality sites have been identified either from existing community-based plans or are located upstream of proposed regional detention structures. Four (4) water quality sites have been evaluated under separate studies, thereby resulting in only 8 sites requiring conceptual evaluation.

Within Policy Group 4, LID strategies are recommended for landscape preservation, restoration and conservation. Under this task series, LID practices will be evaluated for inclusion in the Watershed Plan.

Task Objectives:

Develop hydrologic and hydraulic (H&H) models for use in determining the combination of screened regional detention sites and general LID coverage areas according to land use categories (including subdivision-level detention) with respect to the objective within:

- Policy Group 2 for “maintaining or reducing” peak flows under 100-year storm conditions at full Watershed build-out in Douglas and Sarpy Counties and for land uses defined in the Washington County Comprehensive Plan.
- Qualitatively evaluate water quality impacts with respect to Policy Group 3 – Pollution Control and Policy Group 5 – Erosion and Sediment Control and Other BMPs.

Activities:

Task 310 Baseline and Full-Build Out Hydrologic Models. Complete baseline hydrologic model development initiated under Stage III services. Modify baseline hydrologic model created in Stage III by creating a HEC-HMS model reflecting full build-out land use conditions for the entire Watershed. Full build-out land use conditions will be based on the most current comprehensive plans.

Task 320 LID Evaluation. CDF, as a subconsultant to HDR, will evaluate LID strategies using selected LID practices on a representative sample subbasin located in a future development area. LID templates will be created for representative major land use categories, including:

- Single family and other low-density multi-family development (generally up to quad-plexes).
- High density multi-family residential development (generally six-plexes and above).
- Country estate type, large parcel residential development (Washington County only).
- Commercial/industrial/apartment development areas.

Translate the likely degree of change in hydrology that may apply to peripheral growth areas within the Watershed by the inclusion of assumed representative LID strategies throughout the Watershed according to land uses identified in PCWP and Washington County comprehensive plans.

Subtask 320.1 Review LID Evaluation Approach. Review the LID practices initially chosen in Stage III and modify as necessary. Develop standards for LID developments such as, design storms, pollutant removal, and allowable runoff rates and volumes.

Subtask 320.2 Develop LID Templates for Representative Subbasin. CDF will evaluate the effect of LID strategies on a representative subbasin. Develop conventional and LID templates for selected land uses as outlined above that meet LID standards. Provide illustrative plan and conceptual details of each template. Prepare site development costs for each template.

The PCWP shall furnish to HDR a copy of scalable drawings (preferably in digital format) for a representative, recent S&ID mixed use, primarily residential development for mark-up of potential LID zones relative to the total gross area and the net developable area within the S&ID. The S&ID information to be furnished to the HDR Team should include a calculated breakdown of total area of developable lots by zoning classification, the estimated total area of impervious surfaces (streets, sidewalks and driveways, parking lots, and roofs), and the total area of undeveloped outlots and pervious areas.

Subtask 320.3 Develop Model for LID Strategies for Representative Subbasin. Develop a hydrologic model that complements the existing HEC-HMS model. A maximum of 3 design storms are assumed. Prepare letter report documenting performance of LID and conventional templates.

Subtask 320.4 Create LID Model. Determine the percent net reduction in peak discharge and change in hydrograph timing attributed to using LID strategies. Determine how to modify the HEC-HMS runoff parameters from each subbasin to reflect the implementation of LID. Create a HEC-HMS model to modify the runoff parameters from each subbasin to reflect the implementation of LID.

Task 330 Detention Evaluation. Modify full build-out hydrologic model to evaluate the effectiveness of the regional detention facilities. Water quality basins will not be modeled in the hydrologic model, since they are for the sole purpose of sediment accumulation and water quality improvement and will be located upstream of a regional stormwater detention facility.

Subtask 330.1 Review Candidate Detention Structure Sites. Conduct desk-top assessment of candidate regional stormwater detention facilities and water quality basins identified in the Conceptual Drainage Plan developed in Stage III. Information on potential site constraints must be public domain information that is relatively easy to obtain or from cooperating quasi-private utility companies not to exceed the extent of labor and expenses budgeted for this subtask. No modeling will be conducted for this subtask. Site constraint criteria shall include to the extent possible:

- Topographic considerations (preliminary assessment of physical space availability for construction).
- Conflicts with existing or future planned major utility and public park areas.
- Environmental, cultural, and historical constraints.
- Transportation conflicts involving major roadway arterials and rail.
- Private or institutional buildings estimated to be within one foot above 500-year pool elevation.

Subtask 330.2 Field Visits to Confirm Detention Structure Viability. Conduct a 1-day field reconnaissance to confirm location and possible alignment of sites relative to the criteria in Subtask 330.1 that have not been previously visited (6 regional detention facilities and 8 water quality basins). After site visits have been completed, create a revised conceptual map showing candidate project locations for subsequent H&H analyses. In addition, create a map showing drainage areas controlled and not controlled by candidate regional detention facilities or existing reservoirs.

Subtask 330.3 Create Detention Model. Modify full-build out hydrologic model to incorporate the candidate regional detention structures by assuming a constant outflow. That is, runoff will not be routed through the regional detention flood pool, rather it will be defined as a constant outflow.

Task 340 Evaluate Detention and LID Strategies. Evaluate the hydrologic and hydraulic effects of the regional detention and LID strategies at key locations within the Watershed. Findings from “West Papillion Creek Flood Map Update” and the “Evaluation of Reservoir Sites 1 and 3C” will also be used to formulate modeling comparisons.

Subtask 340.1 Hydrologic Evaluation. Use appropriate storm centerings (maximum of 5 centerings) to obtain peak discharges and evaluate the hydrologic impact of a system of regional stormwater detention facilities and LID strategies. The following five (5) scenarios will be evaluated for a maximum of three (3) design storm events:

- Baseline (2004) land use conditions with no new flood management improvements
- Full build-out land use conditions with no new flood management improvements.
- Full build-out land use conditions with inclusion of LID strategies only.
- Full build-out land use conditions with inclusion of candidate new regional detention.
- Full build-out land use conditions with inclusion of LID strategies plus candidate new regional detention.

The hydrologic impacts will be defined at the following key locations:

- Individual impact:
 - Immediately downstream of each regional detention facility (17 locations).
 - Mouth of each tributary with a regional detention facility (13 locations; 4 site are located on main channels).
- Cumulative impacts:
 - 5 locations along the main channel of West Papillion Creek (confluence with North Branch West Papillion Creek; upstream of South Papillion Creek; downstream of South Papillion Creek; 84th Street, and at the mouth).

- 2 locations along the main channel of South Papillion Creek (NE Highway 50/144th St. and at the mouth).
- 2 locations along the main channel of Little Papillion Creek (confluence with Thomas Creek and at the mouth).
- 6 locations along the main channel of Big Papillion/Papillion Creek (State St., Interstate 680, upstream of Little Papillion Creek, downstream of Little Papillion Creek, downstream of West Papillion Creek, and at the mouth)

Subtask 340.2 Hydraulic Evaluation. For the evaluation of the regional detention facilities, prior HEC-RAS model will be used to define baseline conditions: the model prepared for the evaluation of Reservoir Sites 1 and 3C and defined from Big Papillion Creek from its confluence with the Little Papillion Creek to Nebraska Highway 36 and the model prepared for the West Papillion Creek floodplain remapping. These hydraulic models will be used for evaluating the effect of storage and LID strategies on the Big Papillion Creek and West Papillion Creek. These HEC-RAS models will not be extended upstream, downstream, or include any additional tributaries. Hydraulic evaluation will not include any water quality basins.

The following five (5) scenarios will be evaluated for the 10- and 100-year storm events:

- Baseline (2004) land use conditions with no new flood management improvements
- Full build-out land use conditions with no new flood management improvements.
- Full build-out land use conditions with inclusion of LID strategies only
- Full build-out land use conditions with inclusion of candidate new regional detention structures only.
- Full build-out land use conditions with inclusion of LID strategies plus candidate new regional detention structures.

Define estimated flooding boundaries on a color-coded GIS-based map for the 10 and 100-year events for those facilities located on tributaries where a HEC-RAS model that has been previously established for the hydraulic modeling scenarios listed above.

Subtask 340.3 Water Quality Evaluation. For the water quality evaluation of the regional detention facilities and LID strategies, qualitatively estimate performance-based indicators for key water quality parameters:

- **Erosion Potential.** Based on existing studies and literature values, the relative potential for sheet/rill erosion, streambank/gully erosion, and shoreline erosion will be estimated.
- **Sediment Yield.** Project sediment yield and storage requirements for a developing subbasin and a fully developed subbasin.
- **Bacterial Reduction.** Based on Stage I studies and literature values, estimate the relative percent reductions in bacterial counts in the receiving water bodies.
- **Nutrient Reduction.** Based on literature values, estimate the relative percent reductions in total nitrogen and phosphorus which may contribute to water quality degradation.

Task 350 Screen Detention and LID Strategies. Screen regional detention basins and LID strategies (eliminate sites that should not be considered further) based on H&H and water quality performance-based objectives, cost impacts, and other selected criteria. Costs developed in Stage III will be modified as appropriate to correct for current conditions. Any water quality basin located upstream of an eliminated regional detention basin will also be eliminated.

Subsequent to the screening process, revise LID assumption and standards, as appropriate and revise H&H models for the 10- and 100-year events incorporating candidate LID strategies and candidate regional detention structures in combination. Determine the hydrologic and hydraulic impacts of revisions to detention and LID

strategies. Prepare a Draft Watershed Plan and a brief technical memorandum summarizing the results of the analyses. The information up to and including this subtask will be used as the basis for the Mid-Stage public information meetings.

Task 360 Refine Watershed Plan. Based on the input from the public and elected officials, a Watershed Plan is to be developed which incorporates the preferred combination of regional detention and LID strategies.

Subtask 360.1 Refine Hydrologic Evaluation. Modify full-build out HEC-HMS hydrologic model to model the preferred regional detention and LID strategies. Stage-storage curves will be developed for both the preferred regional detention basins and accompanying water quality basins using the most recent (2004/2005) topographic data available. One tentative structural alignment will be defined for each site. Size principal and auxiliary spillways and evaluate reservoir operations for one (1) normal operating pool elevation at a selected alignment according to TR-60 criteria. The preliminary design intent for this effort will be to maximize the flood storage capacity while minimizing impacts to property and infrastructure.

Incorporate modifications to coverage areas and hydrologic parameters to reflect preferred refinements in LID strategies that may have evolved out of the public outreach process.

Subtask 360.2 Refine Hydraulic Evaluation. Modify the hydraulic model to reflect the preferred regional detention and LID strategies. Define estimated flooding boundaries on a color-coded GIS-based map for the 10 and 100-year events for those facilities located on tributaries where a HEC-RAS model that has been previously established for the hydraulic modeling scenarios listed above.

Subtask 360.3 Refine Water Quality Evaluation. Given the preferred combination of regional detention and LID strategies, update the estimated impacts to the key water quality indicators listed in Subtask 340.3 above.

Subtask 360.4 Update Costs. Update costs prepared in previous studies and prepare conceptual level costs for those detention structures that were interpolated in the Draft Watershed Plan. Segment costs into 3 categories: dam, infrastructure, and land acquisition. Land acquisition/right-of-way costs will be based on recommendations from the PCWP. For LID strategies, use literature and/or experience-based costs applied to coverage areas by land use category and performance-based objectives.

Task Deliverables:

- Field reconnaissance memorandum.
- Task Series 400 color-coded GIS-based maps and other technical materials used to depict findings from H&H modeling scenarios and alternatives screening process.

Key Understandings:

- Regional detention sites are assumed to be “wet” sites.
- Assumed one pool elevation for each site.
- The Big Papillion Creek hydraulic model study area is defined from Nebraska Highway 36 to the confluence of the Big Papillion Creek and Little Papillion Creek. The West Papillion Creek hydraulic model study area is defined along the West Papillion Creek main channel from its headwaters to the confluence with Big Papillion Creek.
- No new topographic or bridge data will be incorporated into HEC-RAS hydraulic model.
- Interim finding summaries to be furnished to P-MRNRD in electronic format only; P-MRNRD to do printing and distribution to other parties.

TASK SERIES 400 – TECHNICAL MATERIALS AND WATERSHED PLAN REPORT

Task Objective: Summarize pertinent feedback from Task 200 - Public Involvement and technical findings from Task Series 300 – Hydrologic/Hydraulic Modeling and Water Quality Evaluation to produce a Watershed Plan. Electronic version color-coded GIS-based maps, tabular summaries, and miscellaneous supporting information will be developed for both final reporting purposes and in support of the PI Consultant's efforts.

The Watershed Plan is intended to:

- Identify which regional detention sites should be brought forward to the PCWP for consideration of potential construction projects.
- Quantify the relative benefits of LID strategies (including subdivision level detention) and candidate coverage areas.
- Identify those subbasins and/or candidate detention site areas where it will be necessary to reduce future peak flows relative to baseline conditions (as defined in Policy Group 2); rather than just maintaining baseline peak flow conditions.
- Qualitatively address anticipated water quality benefits from selected stormwater management alternatives.
- Summarize planning level cost impacts in current dollars for implementation of the screened alternatives.
- Provide supporting conceptual maps and related graphics to facilitate stakeholder and general public understanding.

Activities:

Task 410 Prepare Technical Information Packages. All technical materials are to be prepared in electronic format only for hardcopy production by others as follows:

- Previously developed public education and outreach materials from prior Stage III study work, including slideshow images, other supporting graphical materials, and miscellaneous handout materials as needed by the PI Consultant.
- Summarize Stage IV technical study inputs and findings in technical information packages for Mid-Stage and Final Summary/Report purposes. The Mid-Stage technical information package will be limited to the extent of study work for candidate detention sites and LID strategies through Task 350; whereas the Final technical information package will deal with preferred alternatives as a result of the Mid-Stage public outreach process. In general, the technical information packages will include:
 - Color-coded GIS-based aerial maps that depict:
 - Candidate/preferred regional detention project locations from the alternatives screening and/or public outreach processes.
 - Candidate/preferred coverage areas for potential LID implementation for new development areas from the alternatives screening and/or public outreach processes.
 - Estimated 100-year flooding boundaries for the various modeling scenarios.
 - Qualitative water quality impacts from candidate/preferred alternatives.
 - For the final technical findings public forums only, and if applicable as a result of the public outreach process, additionally include a maximum of two (2) 3-D isometric view “still shot” graphical renderings of representative regional detention structures and their estimated pool areas overlain on aerial mapping backgrounds.
 - One (1) set of graphical examples of LID best management practices and LID modeling templates for various land use categories.
 - A condensed technical results summary (5 pages or less) suitable for inclusion with hand-out materials prepared by the PI Consultant.
 - Summary of estimated cost impacts and generalized flood damage avoidance in current dollars for Watershed Plan implementation.

- Potential parallel project interfacing needs with related local infrastructure projects and studies that have had prior or on-going HDR involvement, such as the most recent Sanitary Interceptor Sewer Master Plan Update.

Task 420 Prepare Watershed Plan Report. Prepare a draft and final report that includes all technical findings and incorporates review comments.

Task Deliverables:

- One (1) technical information package for the Mid-Stage Public Forums.
- One (1) technical information package for the Final Summary Public Forums.
- Draft and final Watershed Plan

Key Understandings:

All deliverables to be furnished in electronic format only to the P-MRNRD for printing, binding, and distribution. The P-MRNRD is expected to facilitate the selection of Stage III or prior technical materials to be brought forward for public information purposes. All new materials furnished by the HDR Team will be reviewed with the Advisory Group, the PCWP, and the PI Consultant prior to finalizing. Graphical images intended to be included on display boards prepared by the PI Consultant will be furnished in sufficient resolution for that purpose. The report is not intended to include the outcome of or deliverables from the PI Consultant's work.

A.2.01 OWNER's Responsibilities

A. OWNER shall do the following in a timely manner, so as not to delay the services of ENGINEER:

1. Provide all criteria and full information as to OWNER's requirements for the Assignment.

2. Furnish to ENGINEER all existing studies, reports and other available data pertinent to the Assignment, obtain or authorize ENGINEER to obtain or provide additional reports and data as required, and furnish to ENGINEER services of others as required for the performance of ENGINEER's services.

B. ENGINEER shall be entitled to use and rely upon all such information and services provided by OWNER or others in performing ENGINEER's services under this Agreement.

C. OWNER shall bear all costs incident to compliance with its responsibilities pursuant to this paragraph A.2.01.

A.3.01 Times for Rendering Services

A. The time period for the performance of ENGINEER's services shall be 12 months ~~with milestones as depicted on the schedule found in Attachment "B" established as follows:~~
{State milestones}

B. ENGINEER's services under this Agreement will be considered complete when all deliverables set forth in Exhibit SR-A are submitted to OWNER.

A.4.02 Other

E. OWNER has established the following budgets:

~~{Fill in budget amount for ENGINEER's services for the Assignment}~~

~~{Fill in any budgetary requirements or considerations of OWNER, such as cost of a contemplated facility to be constructed}~~

Project fee is not to exceed three hundred forty-nine thousand nine hundred dollars (\$349,900).

| ATTACHMENT "A" | | | | | | | | | | | | |
|--|-----------------|----------------------|----------------------|--------------|----------|-------------|------------------|-----------|----------|---------|---------|-----------------|
| Papio-Missouri River Natural Resources District Papillion Creek Watershed, Stage IV FEE ESTIMATE | | | | | | | | | | | | |
| TASKS | Project Manager | St. Engr./ Technical | Mid-Level Engr./Tech | Tech Support | Clerical | Total Hours | Total Labor Cost | Tech. Fee | Printing | Travel | Misc. | Est. Total Cost |
| TASK 100 - PROJECT MANAGEMENT | | | | | | | | | | | | |
| Task 110 Internal Project Management | 44 | 88 | 24 | | 48 | 204 | \$27,921 | \$755 | | | \$200 | \$28,896 |
| Task 120 PCWP Meetings | 48 | 48 | | | | 96 | \$15,960 | \$355 | | \$146 | \$360 | \$16,871 |
| Estimated Task Hours Subtotal | 92 | 136 | 24 | 0 | 48 | 300 | | | | | | |
| Estimated Task Cost Subtotal | | | | | | | \$43,881 | \$1,110 | \$0 | \$146 | \$560 | \$45,787 |
| TASK 200 - PUBLIC INVOLVEMENT ASSISTANCE | | | | | | | | | | | | |
| Task 210 Public Involvement Coordination | 16 | 16 | | | | 32 | \$5,320 | \$118 | | \$28 | | \$5,620 |
| Task 220 Advisory Group Meetings | 16 | 16 | | | | 32 | \$5,320 | \$118 | | \$58 | | \$5,502 |
| Task 230 Individual Stakeholder Outreach and Public Forums | | | | | | | | | | | | |
| Subtask 230.1 Individual Stakeholder Outreach | 1 | 2 | | | | 3 | \$494 | \$11 | | | | \$505 |
| Subtask 230.2 Mid-Stage Public Forums | 24 | 28 | 4 | | | 56 | \$3,105 | \$207 | | \$388 | | \$3,740 |
| Subtask 230.3 Final Summary Public Forums | 24 | 28 | 4 | | | 56 | \$3,105 | \$207 | | \$388 | | \$3,740 |
| Task 240 Interfacial, Intergovernmental PCWP Planning Sessions | 4 | 12 | | | | 16 | \$2,622 | \$59 | | \$58 | | \$2,745 |
| Estimated Task Hours Subtotal | 85 | 102 | 8 | 0 | 0 | 195 | | | | | | |
| Estimated Task Cost Subtotal | | | | | | | \$37,965 | \$722 | \$0 | \$924 | \$0 | \$39,611 |
| TASK 300 - HYDROLOGIC/HYDRAULIC MODELING AND WATER QUALITY EVALUATION | | | | | | | | | | | | |
| Task 310 Baseline and Full-Build Out Hydrologic Models | 2 | 8 | | | | 10 | | | | | | |
| Task 320 LID Evaluation | | | | | | | | | | | | |
| Subtask 320.1 Review LID Evaluation Approach | 16 | 24 | | | | 40 | \$7,570 | \$178 | | | | \$7,748 |
| Subtask 320.2 Develop LID Templates for Representative Subbasin | 4 | 8 | 12 | | | 24 | \$3,412 | \$89 | | | \$100 | \$3,601 |
| Subtask 320.3 Develop Model for LID Strategies for Representative Subbasin | 2 | 4 | | | | 6 | \$1,948 | \$52 | | | | \$2,000 |
| Subtask 320.4 Create LID Model | 4 | 8 | 40 | | | 52 | \$7,322 | \$222 | | | | \$7,544 |
| Task 330 Detention Evaluation | | | | | | | | | | | | |
| Subtask 330.1 Review Candidate Detention Structure Scales | 2 | 16 | 40 | | | 58 | \$8,828 | \$274 | | | | \$9,102 |
| Subtask 330.2 Field Visits to Confirm Detention Structure Viability | | 8 | 20 | | | 28 | \$4,522 | \$148 | | \$194 | \$50 | \$4,914 |
| Subtask 330.3 Create Detention Model | | | 24 | | | 24 | \$4,634 | \$163 | | | | \$4,797 |
| Task 340 Evaluate Detention and LID Strategies | | | | | | | | | | | | |
| Subtask 340.1 Hydrologic Evaluation | | 4 | 80 | | | 84 | \$11,337 | \$370 | | | | \$11,707 |
| Subtask 340.2 Hydraulic Evaluation | | 2 | 24 | | | 26 | \$3,984 | \$244 | | | | \$4,228 |
| Subtask 340.3 Water Quality Evaluation | 8 | 16 | 60 | | | 84 | \$12,528 | \$385 | | | | \$12,913 |
| Task 350 Screen Detention and LID Strategies | 8 | 20 | 84 | | | 112 | \$17,430 | \$552 | \$50 | | \$100 | \$18,132 |
| MID-STAGE PUBLIC FORUMS | | | | | | | | | | | | |
| Task 360 Refine Watershed Plan | | | | | | | | | | | | |
| Subtask 360.1 Refine Hydrologic Evaluation | 2 | 16 | 80 | | | 98 | \$15,290 | \$511 | | | | \$15,801 |
| Subtask 360.2 Refine Hydraulic Evaluation | 2 | 2 | 16 | | | 20 | \$3,974 | \$148 | | | | \$4,122 |
| Subtask 360.3 Refine Water Quality Evaluation | 8 | 8 | 20 | | | 36 | \$6,448 | \$207 | | | | \$6,655 |
| Subtask 360.4 Update Costs | 2 | 8 | 60 | | | 70 | \$11,504 | \$407 | | \$48 | | \$11,959 |
| Estimated Task Hours Subtotal | 60 | 156 | 224 | | | 440 | | | | | | |
| Estimated Task Cost Subtotal | | | | | | | \$37,324 | \$4,233 | \$150 | \$243 | \$230 | \$42,177 |
| TASK 400 - TECHNICAL MATERIALS AND WATERSHED PLAN REPORT | | | | | | | | | | | | |
| Task 410 Prepare Technical Information Packages | 20 | 60 | 144 | | | 224 | \$40,367 | \$1,362 | \$200 | | \$500 | \$42,367 |
| Task 420 Prepare Watershed Plan Report | 24 | 32 | 60 | | | 116 | \$21,456 | \$696 | \$200 | | \$500 | \$23,852 |
| Estimated Task Hours Subtotal | 44 | 92 | 204 | | | 440 | | | | | | |
| Estimated Task Cost Subtotal | | | | | | | \$61,825 | \$2,057 | \$400 | \$0 | \$1,000 | \$63,275 |
| STAGE IV TOTAL HOURS | 281 | 488 | 860 | | | 1,629 | | | | | | |
| STAGE IV TOTAL COST (ROUNDED) | \$46,051 | \$78,459 | \$102,942 | \$32,062 | \$7,452 | | \$265,996 | \$8,122 | \$550 | \$1,312 | \$1,810 | \$278,730 |
| Assume administrative fees for reimbursable expenses and subconsultant = 10% | | | | | | | | | | | | \$28,160 |
| | | | | | | | | | | | | \$309,890 |

| ATTACHMENT "A" | | | | | | | | | | | | |
|--|-----|-----|-----|-----|------|-----|-----|-----|--------|-----|-----|-----|
| Papio-Missouri River Natural Resources District | | | | | | | | | | | | |
| Papillion Creek Watershed, Stage IV | | | | | | | | | | | | |
| ESTIMATED SCHEDULE | | | | | | | | | | | | |
| TASKS | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan-08 | Feb | Mar | Apr |
| TASK 000: PROJECT MANAGEMENT | | | | | | | | | | | | |
| Task 110 Internal Project Management | | | | | | | | | | | | |
| Task 120 PCWP Meetings | | | | | | | | | | | | |
| TASK 200: PUBLIC INVOLVEMENT | | | | | | | | | | | | |
| Task 210 Public Involvement Coordination | | | | | | | | | | | | |
| Task 220 Advisory Group Meetings | | | | | | | | | | | | |
| Task 230 Individual Stakeholder Outreach | | | | | | | | | | | | |
| Task 240 Mid-Stage Public Forum | | | | | | | | | | | | |
| Task 250 Final Summary Public Forum | | | | | | | | | | | | |
| TASK 300: HYDROLOGIC/HYDRAULIC MODELING AND WATER QUALITY EVALUATION | | | | | | | | | | | | |
| Task 310 Interlocal, Intergovernmental PCWP Planning Sessions | | | | | | | | | | | | |
| Task 320 Baseline and Full-Build Out Hydrologic Models | | | | | | | | | | | | |
| Task 330 LID Evaluation | | | | | | | | | | | | |
| Subtask 330.1 Review LID Evaluation Approach | | | | | | | | | | | | |
| Subtask 330.2 Develop LID Templates for Representative Subbasin | | | | | | | | | | | | |
| Subtask 330.3 Develop Model for LID Strategies for Representative Subbasin | | | | | | | | | | | | |
| Subtask 330.4 Create LID Model | | | | | | | | | | | | |
| Task 340 Detention Evaluation | | | | | | | | | | | | |
| Subtask 340.1 Review Candidate Detention Structure Sites | | | | | | | | | | | | |
| Subtask 340.2 Field Visits to Confirm Detention Structure Viability | | | | | | | | | | | | |
| Subtask 340.3 Create Detention Model | | | | | | | | | | | | |
| Task 350 Evaluate Detention and LID Strategies | | | | | | | | | | | | |
| Subtask 350.1 Hydraulic Evaluation | | | | | | | | | | | | |
| Subtask 350.2 Hydraulic Evaluation | | | | | | | | | | | | |
| Subtask 350.3 Water Quality Evaluation | | | | | | | | | | | | |
| Task 360 Screen Detention and LID Strategies | | | | | | | | | | | | |
| Task 370 Refine Watershed Plan | | | | | | | | | | | | |
| Subtask 370.1 Refine Hydrologic Evaluation | | | | | | | | | | | | |
| Subtask 370.2 Refine Hydraulic Evaluation | | | | | | | | | | | | |
| Subtask 370.3 Refine Water Quality Evaluation | | | | | | | | | | | | |
| Subtask 370.4 Update Costs | | | | | | | | | | | | |
| TASK 400: TECHNICAL MATERIALS AND WATER-SHED PLAN REPORT | | | | | | | | | | | | |
| Task 410 Prepare Technical Information Packages | | | | | | | | | | | | |
| Task 420 Prepare Watershed Plan Report | | | | | | | | | | | | |

Legend

- Estimated time required for task.
- CM Denotes a coordination meeting with IMS, P-MRNRD, and HDR Project Team.
- PM Denotes a Partnership meeting attended by HDR Project Team.
- AM Denotes an Advisory Group Meeting
- PFL Denotes a Localized Public Forum (10 total meetings)
- PPF Denotes a Public Forum Held at P-MRNRD

SUGGESTED FORMAT

(for use with 1910-19, 1996 Edition)

This is EXHIBIT SR-B, consisting of 6 pages, referred to in and part of the Agreement between OWNER and ENGINEER for Study and Report Phase Professional Services dated _____, 2007.

Initial:

OWNER _____
ENGINEER _____

Standard Terms and Conditions

Article 6 of the Agreement is amended and supplemented to include the following agreement of the parties:

B.6.01.B Standard Terms and Conditions

1. **Standard of Care**
The standard of care for all professional services performed or furnished by ENGINEER under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER's services.
2. **Independent Contractor**
All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of OWNER and ENGINEER and not for the benefit of any other party. Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either OWNER or ENGINEER. ENGINEER's services under this Agreement are being performed solely for OWNER's benefit, and no other entity shall have any claim against ENGINEER because of this Agreement or the performance or nonperformance of services hereunder. OWNER agrees to include a provision in all contracts with contractors and other entities involved in this project to carry out the intent of this paragraph.
3. **Payments to ENGINEER**
Invoices will be prepared in accordance with ENGINEER's standard invoicing practices and will be submitted to OWNER by ENGINEER monthly, unless otherwise agreed. Invoices are due and payable within 30 days of receipt. If OWNER fails to make any payment due ENGINEER for services and expenses within 30 days after receipt of ENGINEER's invoice therefor, the amounts due ENGINEER will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day. In addition, ENGINEER may, after giving seven days written notice to OWNER, suspend services under this Agreement until ENGINEER has been paid in full all amounts due for services, expenses, and other related charges.
4. **Insurance**
~~ENGINEER will maintain insurance coverage for Workers' Compensation, General Liability, and Automobile Liability and will provide certificates of insurance to OWNER upon request.~~

The ENGINEER shall purchase and maintain until the expiration of two years after completion of the Project policies of insurance with the following minimum requirements:

- a) Workmens Compensation and Employers Liability
 - i) Workers' Compensation: statutory minimum
 - ii) Longshore and Harbor Workers' Compensation Act endorsement and Admiralty Law endorsements (required if the work involves maritime operations).

- iii) Employer's Liability: \$100,000.00 per accident.
- b) Professional malpractice
 - i) \$1,000,000.00 each claim
 - ii) \$2,000,000.00 aggregate
- c) Commercial General Liability – ISO Occurrence Form
 - i) \$1,000,000.00 each occurrence
 - ii) \$2,000,000.00 general aggregate
 - iii) \$2,000,000.00 products – completed operations aggregate
 - iv) \$1,000,000.00 personal & advertising injury
 - v) \$300,000.00 fire damage
 - vi) \$5,000.00 medical expense
- d) Business Auto Liability - Owned, Non-Owned & Hired vehicles \$1,000,000.00 combined single limit
- e) General Provisions:
 - i) All policies shall provide 30 days written notice to the OWNER prior to termination or material change by endorsement in the coverage provided.
 - ii) The OWNER reserves the right to approve the ENGINEER'S insurers.
 - iii) Workers Compensation and Commercial General Liability policies shall be endorsed to provide Waiver of Subrogation in favor of the OWNER.
 - iv) The Commercial General Liability policy shall be endorsed to include the OWNER as Additional Insured (form CG 20 10) and shall be endorsed to have any annual aggregate apply on a per-project basis.

Prior to commencement of the Project and from time to time thereafter at the OWNER's reasonable request, the ENGINEER shall submit certificates in form acceptable to the OWNER evidencing that all such insurance policies are in effect.

5. **Indemnification and Allocation of Risk**

a. To the fullest extent permitted by law, ENGINEER shall indemnify and hold harmless OWNER, OWNER's officers, directors, partners, and employees from and against costs, losses, and damages (including but not limited to reasonable fees and charges of engineers, architects, attorneys, and other professionals, and reasonable court or arbitration or other dispute resolution costs) caused solely by the negligent acts or omissions of ENGINEER or ENGINEER's officers, directors, partners, employees, and consultants in the performance of ENGINEER's services under this Agreement.

b. To the fullest extent permitted by law, OWNER shall indemnify and hold harmless ENGINEER, ENGINEER's officers, directors, partners, employees, and consultants from and against costs, losses, and damages (including but not limited to reasonable fees and charges of engineers, architects, attorneys, and other professionals, and reasonable court or arbitration or other dispute resolution costs) caused solely by the negligent acts or omissions of OWNER or OWNER's officers, directors, partners, employees, and consultants with respect to this Agreement.

c. To the fullest extent permitted by law, ENGINEER's total liability to OWNER and anyone claiming by, through, or under OWNER for any injuries, losses, damages and expenses caused in part by the negligence of ENGINEER and in part by the negligence of OWNER or any other negligent entity or individual, shall not

exceed the percentage share that ENGINEER's negligence bears to the total negligence of OWNER, ENGINEER, and all other negligent entities and individuals.

d. In addition to the indemnity provided under paragraph B.6.01.B.5.b. of this Exhibit, and to the fullest extent permitted by law, OWNER shall indemnify and hold harmless ENGINEER and ENGINEER's officers, directors, partners, employees, and consultants from and against injuries, losses, damages and expenses (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other disputes resolution costs) caused by, arising out of, or resulting from Hazardous Environmental Condition, provided that (i) any such injuries, losses, damages and expenses are attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom, and (ii) nothing in this paragraph B.6.01.B.5.d shall obligate OWNER to indemnify any individual or entity to the extent of that individual or entity's own negligence or willful misconduct.

e. ~~The indemnification provision of paragraph B.6.01.B.5.a. is subject to and limited by the provisions agreed to by OWNER and ENGINEER in paragraph B.6.01.B.6, "Limit of Liability," of this Agreement.~~

~~6. LIMIT OF LIABILITY~~

~~TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL LIABILITY, IN THE AGGREGATE, OF ENGINEER AND ENGINEER'S OFFICERS, DIRECTORS, PARTNERS, EMPLOYEES, AGENTS, AND CONSULTANTS, OR ANY OF THEM TO OWNER AND ANYONE CLAIMING BY, THROUGH, OR UNDER OWNER, FOR ANY AND ALL INJURIES, LOSSES, DAMAGES AND EXPENSES, WHATSOEVER ARISING OUT OF, RESULTING FROM, OR IN ANY WAY RELATED TO THIS AGREEMENT FROM ANY CAUSE OR CAUSES INCLUDING BUT NOT LIMITED TO THE NEGLIGENCE, PROFESSIONAL ERRORS OR OMISSIONS, STRICT LIABILITY OR BREACH OF CONTRACT OR WARRANTY, EXPRESS OR IMPLIED, OF ENGINEER OR ENGINEER'S OFFICERS, DIRECTORS, PARTNERS, EMPLOYEES, AGENTS, AND CONSULTANTS, OR ANY OF THEM, SHALL NOT EXCEED THE TOTAL AMOUNT OF \$_____.~~

67. Dispute Resolution

a. OWNER and ENGINEER agree that they shall first submit any and all unsettled claims, counterclaims, disputes, and other matters in question between them arising out of or relating to this Agreement or the breach thereof ("disputes") to mediation.

b. If a party alleges a dispute or controversy with the other party arising out of or relating to the performance of services under this Agreement, then either party shall have the right to request mediation within 20 days after the claiming party has provided the other party with written notice describing the dispute and the claiming party's position with reference to the resolution of the dispute.

c. Except as otherwise agreed, mediation will proceed pursuant to the Construction Industry Mediation Rules of the American Arbitration Association in effect on the Effective Date of the Agreement. A mediator will be appointed within 30 days of receipt of a written request. The mediator will endeavor to complete the mediation within 30 days thereafter.

d. No performance obligation under or related to this Agreement shall be interrupted or delayed during any mediation proceeding except upon written agreement of both parties.

e. The mediator shall not be a witness in any legal proceedings related to this Agreement.

78. Termination of Contract

Either party may at any time, upon seven days prior written notice to the other party, terminate this Agreement. Upon such termination, OWNER shall pay to ENGINEER all amounts owing to ENGINEER under this Agreement, for all work performed up to the effective date of termination, plus reasonable termination costs.

89. Access

OWNER shall arrange for safe access to and make all provisions for ENGINEER and ENGINEER's Consultants to enter upon public and private property as required for ENGINEER to perform services under this Agreement.

910. Hazardous Environmental Conditions

It is acknowledged by both parties that ENGINEER's scope of services does not include any services related to a "Hazardous Environmental Condition," i.e. the presence at the site of asbestos, PCBs, petroleum, hazardous waste, or radioactive materials in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Assignment. In the event ENGINEER or any other party encounters a Hazardous Environmental Condition, ENGINEER may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Assignment affected thereby until OWNER: (i) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Hazardous Environmental Condition; and (ii) warrants that the site is in full compliance with applicable laws and regulations. OWNER acknowledges that ENGINEER is performing professional services for OWNER and that ENGINEER is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA), which are or may be encountered at or near the site in connection with ENGINEER's activities under this Agreement.

1044. Patents

ENGINEER shall not conduct patent searches in connection with its services under this Agreement and assumes no responsibility for any patent or copyright infringement arising therefrom. Nothing in this Agreement shall be construed as a warranty or representation that anything made, used, or sold arising out of the services performed under this Agreement will be free from infringement of patents or copyrights.

1142. Ownership and Reuse of Documents

All documents prepared or furnished by ENGINEER pursuant to this Agreement are instruments of service, and ENGINEER shall retain an ownership and property interest therein. Reuse of any such documents by OWNER shall be at OWNER's sole risk; and OWNER agrees to indemnify, and hold ENGINEER harmless from all claims, damages, and expenses including attorney's fees arising out of such reuse of documents by OWNER or by others acting through OWNER.

1243. Use of Electronic Media

~~a. Copies of Documents that may be relied upon by OWNER are limited to the printed copies (also known as hard copies) that are signed or sealed by the ENGINEER. Files in electronic media format of text, data, graphics, or of other types that are furnished by ENGINEER to OWNER are only for convenience of OWNER. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk.~~

b. When transferring documents in electronic media format, ENGINEER makes no representations as to long-term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by ENGINEER at the beginning of this Assignment.

~~c. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.~~

d. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. ENGINEER shall not be responsible to maintain documents stored in electronic media format after acceptance by OWNER.

1314. Opinions of Probable Construction Cost

a. Construction Cost is the cost to OWNER to construct proposed facilities. Construction Cost does not include costs of services of ENGINEER or other design professionals and consultants, cost of land, rights-of-way, or compensation for damages to properties, or OWNER's costs for legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with OWNER's contemplated project, or the cost of other services to be provided by others to OWNER pursuant to of this Agreement. Construction Cost is one of the items comprising Total Project Costs.

b. ENGINEER's opinions of probable Construction Cost provided for herein are to be made on the basis of ENGINEER's experience and qualifications and represent ENGINEER's best judgment as an experienced and qualified professional generally familiar with the industry. However, since ENGINEER has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, ENGINEER cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by ENGINEER. If OWNER wishes greater assurance as to probable Construction Cost, OWNER shall employ an independent cost estimator.

1415. Opinions of Total Project Costs

a. Total Project Costs are the sum of the probable Construction Cost, allowances for contingencies, the estimated total costs of services of ENGINEER or other design professionals and consultants, cost of land, rights-of-way, or compensation for damages to properties, and OWNER's costs for legal, accounting, insurance counseling or auditing services, and interest and financing charges incurred in connection with a proposed project, and the cost of other services to be provided by others to OWNER pursuant to this Agreement.

b. ENGINEER assumes no responsibility for the accuracy of opinions of Total Project Costs.

1516. Force Majeure

ENGINEER shall not be liable for any loss or damage due to failure or delay in rendering any service called for under this Agreement resulting from any cause beyond ENGINEER's reasonable control.

1617. Assignment

Neither party shall assign its rights, interests or obligations under this Agreement without the express written consent of the other party.

1718. Binding Effect

This Agreement shall bind, and the benefits thereof shall inure to the respective parties hereto, their legal representatives, executors, administrators, successors, and assigns.

1819. Severability and Waiver of Provisions

Any provision or part of the Agreement held to be void or unenforceable under any laws or regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and ENGINEER, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision. Non-enforcement of any provision by either party shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

1920. Survival

All express representations, indemnifications, or limitations of liability included in this Agreement will survive its completion or termination for any reason.

2021. Headings

The headings used in this Agreement are for general reference only and do not have special significance.

2122 Controlling Law

This Agreement is to be governed by the law of the State of Nebraska in which the ENGINEER's principal office is located.

2223 Notices

Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, or by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

SUGGESTED FORMAT
(for use with 1910-19, 1996 Edition)

This is **EXHIBIT SR-C**, consisting of 1 page, referred to in and
part of the **Agreement between OWNER and ENGINEER**
for Study and Report Phase Professional Services dated
_____, 2007.

Initial:

OWNER _____
ENGINEER _____

Reimbursable Expenses Schedule

Reimbursable Expenses are subject to annual review and adjustment. Reimbursable expense rates in effect on the date of the Agreement are:

| | |
|---------------------------------------|--|
| 8-1/2"x11" Copies/black & white | <u>\$0.07/page</u> |
| 8-1/2"x11" Copies/color | <u>\$0.75/page</u> |
| 11"x17" Copies/color | <u>\$1.50/page</u> |
| CD's, labels, and jewel cases | <u>\$1.50 each</u> |
| Presentation Boards (plot and mount) | <u>\$150.00 each</u> |
| Report Binders with Custom Index Tabs | <u>\$15.00 each</u> |
| Mileage (auto) | <u>\$0.485/mile</u> |
| Technology Fee | <u>\$3.70/direct labor hour</u> |
| GPS Unit | <u>cost</u> |
| Film and film processing | <u>cost</u> |
| Facsimile | <u>_____ /page</u> |
| 8"x11" Copies/Impression | <u>_____ /page</u> |
| Blue Print Copies | <u>_____ /sq. ft.</u> |
| Reproducible Copies (Mylar) | <u>_____ /sq. ft.</u> |
| Reproducible Copies (Paper) | <u>_____ /sq. ft.</u> |
| Mileage (auto) | <u>_____ /mile</u> |
| Field Truck Daily Charge | <u>_____ /day</u> |
| Mileage (Field Truck) | <u>_____ /mile</u> |
| Field Survey Equipment | <u>_____ /day</u> |
| Computer CPU Charge | <u>_____ /hour</u> |
| Personal Computer Charge | <u>_____ /hour</u> |
| CAD Charge | <u>_____ /hour</u> |
| CAE Terminal Charge | <u>_____ /hour</u> |
| VCR and Monitor Charge | <u>_____ /day, \$/week, or \$ _____ /month</u> |
| Video Camcorder | <u>_____ /day, plus \$ _____ /tape</u> |
| Electrical Meters Charge | <u>_____ /week, or \$ _____ /month</u> |
| Flow Meter Charge | <u>_____ /week, or \$ _____ /month</u> |
| Rain Gauge | <u>_____ /week, or \$ _____ /month</u> |
| Sampler Charge | <u>_____ /week, or \$ _____ /month</u> |
| Dissolved Oxygen Tester Charge | <u>_____ /week</u> |
| Fluorometer | <u>_____ /week</u> |
| Laboratory Pilot Testing Charge | <u>_____ /week, or \$ _____ /month</u> |
| Soil Gas Kit | <u>_____ /day</u> |
| Submersible Pump | <u>_____ /day</u> |
| Water Level Meter | <u>_____ /day, or \$ _____ /month</u> |
| Soil Sampling | <u>_____ /sample</u> |
| Groundwater Sampling | <u>_____ /sample</u> |

| | | |
|---------------------------|-------|-------|
| Health and Safety Level D | _____ | /day |
| Health and Safety Level C | _____ | /day |
| Electronic Media Charge | _____ | /hour |
| Long Distance Phone Calls | cost | |
| Meals and Lodging | cost | |

SUGGESTED FORMAT
(for use with 1910-19, 1996 Edition)

This is ~~EXHIBIT SR-D~~, consisting of _____ pages, referred to in and part of the ~~Agreement between OWNER and ENGINEER for Study and Report Phase Professional Services~~ dated _____.

Initial:
OWNER _____
ENGINEER _____

Standard Hourly Rates Schedule

Standard Hourly Rates are subject to annual review and adjustment. Hourly rates for services in effect on the date of the Agreement are:

| | | |
|-----------------|------------------|---------------|
| Billing Class 9 | Senior Associate | \$ _____/hour |
| Billing Class 8 | Staff Manager | \$ _____/hour |
| Billing Class 7 | Professional VI | \$ _____/hour |
| Billing Class 6 | Professional V | \$ _____/hour |
| Billing Class 5 | Professional IV | \$ _____/hour |
| Billing Class 4 | Professional III | \$ _____/hour |
| Billing Class 3 | Professional II | \$ _____/hour |
| Billing Class 2 | Technician II | \$ _____/hour |
| Billing Class 1 | Technician I | \$ _____/hour |
| Principal | | \$ _____/hour |
| Support Staff | | \$ _____/hour |