

**CIP DESIGN AND ENGINEERING MEMORANDUM**  
**# 08-09**

April 24, 2008

**TO:** Honorable Mayor Kathleen M. Novak and City Council Members

**FROM:** A.J. Krieger, City Manager *AK*  
David Allen, Director of Public Works/Utilities *DA*  
Kurt Kowar, CIP Design and Engineering Manager *KK*  
Amy Ward, Civil Engineer II *AW*

**SUBJECT:** CR-65 Water Treatment Plant Master Plan Update

**RECOMMENDATION:**

Attached to this memorandum is a Resolution which, if approved would authorize the Mayor to execute a contract between the City of Northglenn and HDR Engineering, Inc. for the Water Treatment Master Plan Update Project in the amount of \$39,976.00. Staff recommends approval of the proposed Resolution.

**BACKGROUND:**

Staff is requesting approval of the attached contract to update the City's Water Treatment Plant Master Plan which was completed in 1995. Over the course of the last thirteen years there have been notable changes in drinking water regulations, modifications to the City's existing treatment processes, and increases in the drinking water demand. Several studies which directly relate to the Water Treatment Plant have also been completed since the 1995 Water Treatment Plant Master Plan was prepared.

In order for the master plan to function as an effective planning tool for the City and ensure future regulatory compliance, the master plan must be a comprehensive document which incorporates all the current information which directly impacts the treatment system. As such an update is necessary, given that the 1995 master plan does not take into account recent improvements, modifications and changes in both current and future regulations.

On March 10, 2008, the City accepted five (5) proposals for the Water Treatment Plant Master Plan Update. HDR Engineering, Inc. (HDR) was the firm selected based on the Request for Proposal. HDR is most qualified to address the impacts of future regulations, and has extensive planning and design experience with a broad range of treatment systems.

HDR is nationally recognized for their expertise in the water treatment field. The proposed team of personnel from HDR has considerable knowledge in evaluating water treatment plants, maximizing treatment capacity in existing facilities, and optimizing treatment processes. The project manager has extensive experience in regulatory compliance and development, and the project team is known for developing innovative solutions to meet technical and budgetary requirements.

During the past 30 years of operation, the City's plant has provided safe drinking water to the citizens of Northglenn in compliance with State and Federal drinking water regulations. The Water Treatment Plant is a critical component of the drinking water system and a master plan update will assist the City in maintaining continuous operations.

**POTENTIAL OBJECTION:**

City Staff is not aware of any specific opposition to the proposed Resolution.

**BUDGET/TIME IMPLICATIONS:**

The budget, as proposed, for the contract is \$39,976.00. Sufficient funds are available in the 2008 Capital Improvements Fund No. 516.69264.000.3999.729.

**STAFF REFERENCE:**

Please contact Kurt Kowar, CIP Design and Engineering Manager at [kkowar@northglenn.org](mailto:kkowar@northglenn.org), or (303) 349-3772.

SPONSORED BY: COUNCIL MEMBER MONROE

COUNCILMAN'S RESOLUTION

RESOLUTION NO.

No. CR-65  
Series of 2008

\_\_\_\_\_  
Series of 2008

A RESOLUTION APPROVING THE AGREEMENT FOR PROFESSIONAL SERVICES BETWEEN THE CITY OF NORTHGLENN AND HDR ENGINEERING, INC.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO, THAT:

Section 1. The Agreement for Professional Services between the City of Northglenn and HDR Engineering, Inc., attached hereto, for the Water Treatment Plant Master Plan Update project is hereby approved and the Mayor is authorized to execute same on behalf of the City.

DATED at Northglenn, Colorado, this \_\_\_\_ day of \_\_\_\_\_, 2008.

\_\_\_\_\_  
KATHLEEN M. NOVAK  
Mayor

ATTEST:

\_\_\_\_\_  
JOHANNA SMALL, CMC  
Acting City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
COREY Y. HOFFMANN  
City Attorney

## AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_\_, by and between the City of Northglenn, State of Colorado (hereinafter referred to as the "City") and HDR Engineering, Inc. (hereinafter referred to as "Consultant").

### RECITALS:

A. The City requires professional services.

B. Consultant has held itself out to the City as having the requisite expertise and experience to perform the required work for the Project.

NOW, THEREFORE, it is hereby agreed for the consideration hereinafter set forth, that Consultant shall provide to the City, professional consulting services for the Project.

### I. SCOPE OF SERVICES

Consultant shall furnish all labor and materials to perform the work and services required for the complete and prompt execution and performance of all duties, obligations, and responsibilities for the Project which are described or reasonably implied from **Exhibit A** which is attached hereto and incorporated herein by this reference.

### II. THE CITY'S OBLIGATIONS/CONFIDENTIALITY

The City shall provide Consultant with reports and such other data as may be available to the City and reasonably required by Consultant to perform hereunder. No project information shall be disclosed by Consultant to third parties without prior written consent of the City or pursuant to a lawful court order directing such disclosure. All documents provided by the City to Consultant shall be returned to the City. Consultant is authorized by the City to retain copies of such data and materials at Consultant's expense.

### III. OWNERSHIP OF WORK PRODUCT

The City acknowledges that the Consultant's work product is an instrument of professional service. Nevertheless, the products prepared under this Agreement shall become the property of the City upon completion of the work.

### IV. COMPENSATION

A. In consideration for the completion of the services specified herein by Consultant, the City shall pay Consultant an amount not to exceed thirty-nine thousand nine hundred seventy-six dollars (\$39,976.00). Payment shall be made in accordance with the schedule of charges in **Exhibit B** which is attached hereto and incorporated herein by this reference. Invoices will be itemized and include hourly breakdown for all personnel and other charges. The maximum fee specified herein shall include all fees and expenses incurred by Consultant in performing all services hereunder.

B. Consultant may submit monthly or periodic statements requesting payment. Such request shall be based upon the amount and value of the work and services performed by Consultant under this Agreement except as otherwise supplemented or accompanied by such supporting data as may be required by the City.

1. All invoices, including Consultant's verified payment request, shall be submitted by Consultant to the City no later than the twenty-fourth (24th) day of each month for payment pursuant to the terms of this Agreement. In the event Consultant fails to submit any invoice on or before the twenty-fourth (24th) day of any given month, Consultant defers its right to payment pursuant to said late invoice until the twenty-fourth (24th) day of the following month.

2. Progress payments may be claimed on a monthly basis for reimbursable costs actually incurred to date as supported by detailed statements, including hourly breakdowns for all personnel and other charges. The amounts of all such monthly payments shall be paid within thirty (30) days after the timely receipt of invoice as provided by this Agreement.

C. The City has the right to ask for clarification on any Consultant invoice after receipt of the invoice by the City.

D. In the event payment for services rendered has not been made within forty-five (45) days from the receipt of the invoice for any uncontested billing, interest will accrue at the legal rate of interest. In the event payment has not been made within ninety (90) days from the receipt of the invoice for any uncontested billing, Consultant may, after giving seven (7) days written notice and without penalty or liability of any nature, suspend all work on all authorized services specified herein. In the event payment in full is not received within thirty (30) days of giving the seven (7) days written notice, Consultant may terminate this Agreement. Upon receipt of payment in full for services rendered, Consultant will continue with all authorized services.

E. Final payment shall be made within sixty (60) calendar days after all data and reports (which are suitable for reproduction and distribution by the City) required by this Agreement have been turned over to and approved by the City and upon receipt by the City of Consultant's certification that services required herein by Consultant have been fully completed in accordance with this Agreement and all data and reports for the Project.

## **V. COMMENCEMENT AND COMPLETION OF WORK**

Within seven (7) days of receipt from the City of a Notice to Proceed, Consultant shall commence work on all its obligations as set forth in the Scope of Services or that portion of such obligations as is specified in said Notice. Except as may be changed in writing by the City, the Project shall be complete and Consultant shall furnish the City the specified deliverables as provided in Exhibit A.

## **VI. CHANGES IN SCOPE OF SERVICES**

A change in the Scope of Services shall constitute any material change or amendment of services or work which is different from or additional to the Scope of Services specified in Section I of this Agreement. No such change, including any additional compensation, shall be effective, or

paid unless authorized by written amendment executed by the City. If Consultant proceeds without such written authorization, then Consultant shall be deemed to have waived any claim for additional compensation, including a claim based on the theory of unjust enrichment, quantum merit or implied contract. Except as expressly provided herein, no agent, employee, or representative of the City shall have the authority to enter into any changes or modifications, either directly or implied by a course of action, relating to the terms and scope of this Agreement.

## **VII. PROFESSIONAL RESPONSIBILITY**

A. Consultant hereby represents that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing, required by law.

B. The work performed by Consultant shall be in accordance with generally accepted professional practices and the level of competency presently maintained by other practicing professional firms in the same or similar type of work in the applicable community.

C. Consultant shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports, and other services furnished by Consultant under this Agreement. Consultant shall, without additional compensation, correct or resolve any errors or deficiencies in his designs, drawings, specifications, reports, and other services, which fall below the standard of professional practice, and reimburse the City for non-value added construction costs caused by errors and omissions which fall below the standard of professional practice.

D. Approval by the City of drawings, designs, specifications, reports, and incidental work or materials furnished hereunder shall not in any way relieve Consultant of responsibility for technical adequacy of the work. Neither the City's review, approval or acceptance of, nor payment for, any of the services shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement, and Consultant shall be and remain liable in accordance with applicable performance of any of the services furnished under this Agreement.

E. The rights and remedies of the City provided for under this Agreement are in addition to any other rights and remedies provided by law.

## **VIII. ILLEGAL ALIENS**

A. Certification. By entering into this Agreement, Consultant hereby certifies that, at the time of this certification, it does not knowingly employ or contract with an illegal alien and that Consultant has participated or attempted to participate in the basic pilot program administered by the U.S. Department of Homeland Security in order to confirm the employment eligibility of all employees who are newly hired for employment in the United States.

B. Prohibited Acts. Consultant shall not:

(1) Knowingly employ or contract with an illegal alien to perform work under this Agreement; or

(2) Enter into a contract with a subcontractor that fails to certify to Consultant that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

C. Verification.

(1) Consultant has confirmed or attempted to confirm the employment eligibility of all employees who are newly hired for employment in the United States through participation in the basic pilot program administered by the U.S. Department of Homeland Security and, if Consultant is not accepted into the basic pilot program prior to entering into this Agreement, Consultant shall apply to participate in the basic pilot program every three (3) months until Consultant is accepted or this Agreement has been completed, whichever is earlier.

(2) Consultant shall not use basic pilot program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

(3) If Consultant obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Consultant shall:

a. Notify the subcontractor and the City within three (3) days that Consultant has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

b. Terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to subparagraph (a) hereof, the subcontractor does not stop employing or contracting with the illegal alien; except that Consultant shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

D. Duty to Comply with Investigations. Consultant shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation conducted pursuant to C.R.S. § 8-17.5-102(5)(a) to ensure that Consultant is complying with the terms of this Agreement.

E. If Consultant does not currently employ any employees, Consultant shall sign the Affidavit attached hereto.

**IX. INDEMNIFICATION**

Consultant agrees to indemnify and hold harmless the City, its officers, employees, and insurers, from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, to the extent such injury, loss, or damage caused, or to the extent is claimed to be caused by, the negligent act, omission, error, professional error, mistake, negligence, or other fault of Consultant, any subcontractor of Consultant, or any officer, employee, representative, or agent of Consultant or of any subcontractor of Consultant, or which arise out of any workmen's compensation claim of any employee of Consultant or of any employee of any

subcontractor of Consultant. Consultant agrees to investigate, handle, respond to, and to provide defense for and defend against any such liability, claims or demands at the sole expense of Consultant, or at the option of the City, agrees to pay the City or reimburse the City for the defense costs incurred by the City in connection with, any such liability, claims, or demands. Consultant also agrees to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims, or demands alleged are groundless, false, or fraudulent. If it is determined by the final judgment of a court of any competent jurisdiction that such injury, loss, or damage was caused in whole or in part by the act, omission, or other fault of the City, its officers, or its employees, the City shall reimburse Consultant for the portion of the judgment attributable to such act, omission, or other fault of the City, its officers, or employees.

## **X. INSURANCE**

A. Consultant agrees to procure and maintain, at its own cost, a policy or policies of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by Consultant pursuant to Section IX, above. Such insurance shall be in addition to any other insurance requirements imposed by this Agreement or by law. Consultant shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to Section IX, above, by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

B. Consultant shall procure and maintain, and shall cause any subcontractor of Consultant to procure and maintain, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by Consultant pursuant to Section IX, above. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Workmen's compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this Agreement, and Employer's Liability insurance with minimum limits of five hundred thousand dollars (\$500,000) each accident, one million dollars (\$1,000,000) disease - policy limit, and one million dollars (\$1,000,000) disease - each employee. Evidence of qualified self-insured status may be substituted for the workmen's compensation requirements of this paragraph.

2. Commercial general liability insurance with minimum combined single limits of six hundred thousand (\$600,000) each occurrence and one million dollars (\$1,000,000) general aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall contain a severability of interests provision.

3. Professional liability insurance with minimum limits of six hundred thousand dollars (\$600,000) each claim and one million dollars (\$1,000,000) general aggregate.

C. The policy required by paragraph 2. above shall be endorsed to include the City and the City's officers, employees, and consultants as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the City, its officers, its employees, or its consultants shall be excess and not contributory insurance to that provided by Consultant. No additional insured endorsement to the policy required by paragraph 1. above shall contain any exclusion for bodily injury or property damage arising from completed operations. Consultant shall be solely responsible for any deductible losses under any policy required above.

D. The certificate of insurance provided for the City shall be completed by Consultant's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by the City prior to commencement of the Agreement. No other form of certificate shall be used. If the City is named as an additional insured on any policy which does not allow for the automatic addition of additional insureds, the Consultant's insurance agent shall also provide a copy of all accompanying endorsements recognizing the City as an additional insured. The certificate shall identify this Agreement and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least thirty (30) days prior written notice has been given to the City. The completed certificate of insurance shall be sent to:

City of Northglenn  
Attn: Eve Craven  
11701 Community Center Drive  
Northglenn, Colorado 80233-8061

E. Failure on the part of Consultant to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of agreement upon which the City may immediately terminate this Agreement, or at its discretion, the City may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by Consultant to the City upon demand, or the City may offset the cost of the premiums against any monies due to Consultant from the City.

F. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

G. The parties hereto understand and agree that the City, its officers, and its employees, are relying on, and do not waive or intend to waive by any provision of this Agreement, the monetary limitations (presently one hundred fifty thousand dollars (\$150,000) per person and six hundred thousand dollars (\$600,000) per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, Colo. Rev. Stat. §24-10-101 et seq., Colo. Rev. Stat., as from time to time amended, or otherwise available to the City, its officers, or its employees.

## **XI. NON-ASSIGNABILITY**

Neither this Agreement, nor any of the rights or obligations of the parties hereto, shall be assigned by either party without the written consent of the other.



## **XII. TERMINATION**

This Agreement shall terminate at such time as the work in Section I is completed and the requirements of this Agreement are satisfied, or upon the City's providing Consultant with seven (7) days advance written notice, whichever occurs first. In the event the Agreement is terminated by the City's issuance of said written notice of intent to terminate, the City shall pay Consultant for all work previously authorized and completed prior to the date of termination. If, however, Consultant has substantially or materially breached the standards and terms of this Agreement, the City shall have any remedy or right of set-off available at law and equity. If the Agreement is terminated for any reason other than cause prior to completion of the Project, any use of documents by the City thereafter shall be at the City's sole risk, unless otherwise consented to by Consultant.

## **XIII. CONFLICT OF INTEREST**

The Consultant shall disclose any personal or private interest related to property or business within the City. Upon disclosure of any such personal or private interest, the City shall determine if the interest constitutes a conflict of interest. If the City determines that a conflict of interest exists, the City may treat such conflict of interest as a default and terminate this Agreement.

## **XIV. VENUE**

This Agreement shall be governed by the laws of the State of Colorado, and any legal action concerning the provisions hereof shall be brought in the County of Adams, State of Colorado.

## **XV. INDEPENDENT CONTRACTOR**

Consultant is an independent contractor. Notwithstanding any provision appearing in this Agreement, all personnel assigned by Consultant to perform work under the terms of this Agreement shall be, and remain at all times, employees or agents of Consultant for all purposes. Consultant shall make no representation that it is the employee of the City for any purposes.

## **XVI. NO WAIVER**

Delays in enforcement or the waiver of any one or more defaults or breaches of this Agreement by the City shall not constitute a waiver of any of the other terms or obligation of this Agreement.

## **XVII. ENTIRE AGREEMENT**

This Agreement and the attached Exhibits A and B is the entire Agreement between Consultant and the City, superseding all prior oral or written communications. None of the provisions of this Agreement may be amended, modified, or changed, except as specified herein.

**XVIII. NOTICE**

Any notice or communication between Consultant and the City which may be required, or which may be given, under the terms of this Agreement shall be in writing, and shall be deemed to have been sufficiently given when directly presented or sent pre-paid, first class United States Mail, addressed as follows:

The City: City of Northglenn  
11701 Community Center Drive  
Northglenn, Colorado 80233-8061

Consultant: HDR Engineering  
303 E. 17th Ave, Suite 700  
Denver CO 80203

IN WITNESS WHEREOF, the parties hereto each herewith subscribe the same in duplicate.

**CITY OF NORTHGLENN, COLORADO**

By: \_\_\_\_\_  
Kathleen M. Novak, Mayor

ATTEST:

\_\_\_\_\_  
Diana L. Lentz, CMC, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Corey Y. Hoffmann, City Attorney

**CONSULTANT:**

By: R. Bradley Markon  
R. Bradley Markon  
Print Name  
Vice President 4-14-08  
Title Date

ATTEST:

By: 

KENNETH J. LOWREY JR

Print Name

Vice President

Title

4/11/08

Date

CITY'S CONTRACT # \_\_\_\_\_

Amy Ward

Print Name of City's Project Manager

Attached is **EXHIBIT A “SCOPE OF SERVICES”** and **EXHIBIT B “AMOUNT OF COMPENSATION”**

## **Scope of Work**

### **Task 1: Project Initiation and Management**

**Task Objective:** Bring the HDR team and the City management and staff together, at the start of the project, to ensure that both parties have a mutual understanding of the goals, objectives, issues and concerns related to the study.

- 1.1. Collect and review data. HDR will obtain water quality data for the plant raw and finished water, process control data for individual plant processes, previous reports of interest such as the Long Term Water Resource Plan, hydraulic information for the plant, plant drawings, and other pertinent information. The project team will review and organize this information for use in subsequent tasks.
- 1.2. HDR will conduct a project kickoff meeting with plant operations and City staff. HDR will meet with staff to obtain operational information and staff input regarding major concerns to be addressed in the Master Plan Update. During the meeting, the objectives and goals of the City will be identified. An organizational framework for the project will be established. One major outcome of the meeting will be a team understanding of the City's project goals and of the NWTP treatment goals.
- 1.3. Prepare meeting agendas. HDR will prepare agendas for each of the project meetings and workshops (3 total). HDR will also prepare a list of action items arising from the meetings.
- 1.4. Invoicing and cost control. HDR will prepare monthly invoices. The project schedule and budget will also be internally reviewed monthly and HDR will notify Northglenn if either of these items deviates from the projected values. Our anticipated project schedule is four months.

### **Task 2: Hydraulic Evaluation**

**Task Objective:** Determine the hydraulic capacity of the plant and identify hydraulic restrictions in the existing plant facilities.

- 2.1 Develop hydraulic model for the plant using Virtual Hydraulics program.
- 2.2 Define the hydraulic gradeline (HGL) through the plant.
- 2.3 Establish the current hydraulic capacity of the plant and identify the constrictions. Detail improvements necessary to eliminate hydraulic restrictions and increase total plant capacity to 20 mgd. Summarized hydraulic concerns and constraints will be included in the Master Plan Report.

### **Task 3: Regulatory Summary and Evaluation**

**Task Objective:** Understanding the drinking water regulatory requirements as they apply to Northglenn and the impacts to treatment and operations due to regulatory compliance.

- 3.1 Summarize drinking water regulations. Particular attention will be devoted to rules promulgated since 1995 and future regulatory actions that will impact Northglenn.

- 3.2 Evaluate raw and finished water quality data and monitoring plan. Water quality data will be compiled and reviewed with respect to regulatory compliance. Monitoring plan will be reviewed for regulatory sampling compliance and to ensure that all regulatory sampling programs are included.
- 3.3 Evaluate regulatory impacts to Northglenn. Determine the aspects of the regulations which will be difficult for the City to meet. Review and discuss the regulatory requirements and compliance alternatives for Northglenn. Process changes necessary for meeting future regulations will be identified and included in the Master Plan Report.

#### **Task 4: Plant Evaluation**

**Task Objective:** Determine the performance and condition of the existing treatment train and its components and develop a list of opportunities for making improvements.

- 4.1 Update process descriptions for processes that have changed since the last master plan. Determine new process additions and modifications since 1995 and develop descriptions of those changes. Develop updated schematic representations of the treatment train. Review and update process design criteria (e.g., dimensions, overflow rates, filtration rate).
- 4.2 Evaluate treatment performance of existing treatment train.
  - 4.2.1 Evaluate detention times, overflow rates, and other design parameters for the unit processes in the plant.
  - 4.2.2 Review internal plant process control data to evaluate removal of particles, total organic carbon, manganese and other parameters of concern within processes.
  - 4.2.3 Compare the current performance of each process in terms of industry best practices (for example: Partnership for Safe Water goals) with respect to efficiency and optimization.
  - 4.2.4 Evaluate removal of manganese and review finished water quality for DBP formation potential. Provide advice to the City regarding manganese and DO sampling frequency and location to better understand the manganese events.
- 4.3 Evaluate existing waste disposal at the plant. Determine typical and peak flows of wastewater. Evaluate amount of water wasted to sewer annually. Develop mass balance of wastewater flows at the plant.
- 4.4 Evaluate chemical feed facilities. Determine areas with code concerns. Determine which existing equipment has been abandoned in place and is no longer used. Identify conditions that require improvement.
- 4.5 Summarize electrical, instrumentation, and control issues of concern to the plant.

#### **Task 5: Develop Alternatives**

**Task Objective:** Prepare project alternatives that can be considered for inclusion in the capital improvement plan.

- 5.1 Develop and evaluate a maximum of three integrated options for improvements that address concerns across the plant. Areas where the plant evaluation results

demonstrate that modifications are warranted will be included in the improvement options. Define the options in terms of projects that can be initiated and completed in phases.

- 5.2 Develop a budget level cost estimate for each project alternative. A budget estimate in this case applies to the owner's budget, and not to the budget as a project-control document. A budget estimate is prepared with the use of spreadsheets, layouts, and equipment details. It is normally expected that an estimate of this type would be accurate within +30% or -15%.
- 5.3 Hold workshop with City staff for input and prioritization of projects. Review budget cost of each project and discuss pros and cons of implementing each one alone or in conjunction with other proposed projects. Recommendations from existing Master Plan will be evaluated along with new project proposals.
- 5.4 Develop CIP for preferred alternatives. Each preferred alternative will be described in detail and the budget cost estimate will be updated. Where project alternatives are dependent or must be coordinated with one another, those relationships will be detailed.
- 5.5 Develop schedule for CIP implementation. Preferred projects will be scheduled in time and in logical order for completion to obtain appropriate treatment results and necessary capacity increases, and to minimize disruption to treatment plant operations. Cost impacts will be considered in developing schedule based on direction from City staff about funds available.

## **Task 6: Prepare Master Plan Report**

**Task Objective:** Produce Updated Master Plan Report.

- 6.1 Develop report text and graphics.
- 6.2 Submit draft for City review. City staff will be requested to review the draft report and submit a single set of comments for inclusion in the final report.
- 6.3 Meet with City to review comments.
- 6.4 Submit final report.

## **Assumptions**

The following assumptions were made in development of the Scope of Work:

- HDR will meet three times with City staff during the project.
- Deliverables include a draft and final Master Plan Report (6 copies of each). One set of City comments will be solicited for the draft report prior to incorporation into the final report. The final Master Plan Report will also be provided on CD.
- For existing facilities, where there have been no changes since the previous master plan, design criteria in the 1995 Master Plan will be assumed to be correct.
- For existing facilities that have not been changed since the previous master plan, process descriptions will not be provided.

- City will provide information regarding the phasing of build-out demand for the system.
- Water quality data will be provided by the City in Excel format that can be easily manipulated and graphed.
- Water quality sampling and laboratory testing will be the responsibility of the City.
- City is responsible for providing all as-built construction information including that not shown on drawings.
- Wastewater flows from all plant processes will be provided by the City.



## Rate Sheet for HDR Engineering, Inc.

Labor Category	2008 Billing Rate
<b>Management</b>	
Project Manager	\$176.40 - \$228.48
QA/QC	\$226.80
<b>Technical Staff</b>	
Senior Engineer	\$157.08 - \$228.48
Project Engineer	\$120.12 - \$127.68
Staff Engineer	\$83.20 - \$91.56
Project Controller	\$90.72
CADD Technician	\$84.84 - \$131.04
Administrative Staff	\$65.50 - \$70.53

\*Note that rates apply only to 2008.

## Direct Costs

Item	2008 Cost
<b>Equipment*</b>	
Auto (car mileage per mile)	\$0.505**
Pickups and 4x4s (mileage expense per mile)	\$0.545**
<b>Other Direct Project Costs*</b>	
Computer charge (per labor hour)	\$3.70
Air travel	actual cost
Per diem – short term (per day)	actual cost
Per diem – long term (per day)	\$70.00
Printing – purchased printing services	actual cost

\*Please note that these costs apply only for 2008.

**PROSPECTIVE CONSULTANT'S CERTIFICATE REGARDING EMPLOYING OR CONTRACTING WITH AN ILLEGAL ALIEN**

FROM: HDR Engineering  
(Prospective Consultant)

TO: City of Northglenn  
PO Box 330061  
11701 Community Center Drive  
Northglenn, CO 80233

Project Name WTP Master Plan Update

Bid Number \_\_\_\_\_

Project No. \_\_\_\_\_

As a prospective Consultant for the above-identified bid, I (we) do hereby certify that, as of the date of this certification, I (we) do not knowingly employ or contract with an illegal alien and that I (we) have confirmed or attempted to confirm the employment eligibility of all employees who are newly hired for employment in the United States through participation in the basic pilot program administered by the United States Department of Homeland Security.

Executed this 14 day of March, 2008.

Prospective Consultant HDR Engineering

By: R. Bradley Marko

Title: Vice President

<b>Finance Dept Use Only</b>	
Initials	_____
Date	_____
PO #	_____



**CITY OF NORTHGLENN  
FORMAL BID SUMMARY**

**BID NUMBER: RFP 2008-09**

**PAGE 1 OF 1**

**BID NAME: WATER TREATMENT PLANT MASTER PLAN UPDATE**

**DEPARTMENT: Logistics**

	Industrial Facilities Engineering, Inc.	HDR Engineering, Inc.	JVA, Inc.	Integra Engineering	The Engineering company
<b>DATE DUE: 03/10/08</b>	<b>BID RECEIVED:</b>	<b>BID RECEIVED:</b>	<b>BID RECEIVED:</b>	<b>BID RECEIVED:</b>	<b>BID RECEIVED:</b>
	<b>DATE: 3/10/08</b>	<b>DATE: 3/17/08</b>	<b>DATE: 3/10/08</b>	<b>DATE: 3/10/08</b>	<b>DATE: 3/10/08</b>
<b>TIME: 2:00 P.M.</b>	<b>TIME: 12:10pm</b>	<b>TIME: 4:23pm</b>	<b>TIME: 10:25am</b>	<b>TIME: 1:20pm</b>	<b>TIME: 11:19am</b>

*Kathleen Krasnicka* 3/10/08  
Buyer

*Crystal Messick*  
City Clerk, Deputy

3/10/08  
Date

### Reference Check

Project: WTP Master Plan Update  
Consultant/Contractor: HDR  
Date: 4/8/08  
Page 1

<b>Project Name:</b>	<b>Contact for Reference:</b>	<b>Contact Phone Number:</b>	<b>Reference:</b>
Estes Park 2006 Facility Plan	Bob Goehring	970-577-3580	They had a short time period to complete the work and they did an excellent job.
Durango WTP Expansion	Jack Rogers	970-375-4809	We have worked with them for the last 7-8 years and they do good work.
Avon Drinking Water Facility Evaluation and Design Services	Todd Fessenden	970-949-5887	HDR has done several projects since this one and we continue to use them.