

LOGISTICS MEMORANDUM

07-10

May 24, 2007

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

FROM: A.J. Krieger, City Manager
Kurt Kowar, Logistics Center Manager
Amy Ward, Civil Engineer II



SUBJECT: CR-51-Wastewater Treatment Plant (WWTP) Expansion Design Professional Services Agreement, Amendment #7, Bull Reservoir Embankment Pipelines and Extended Construction Duration

RECOMMENDATION:

Attached to this memorandum is a Resolution which, if approved, would authorize the Mayor to execute Amendment #7 to the Professional Services Agreement between City of Northglenn and Integra Engineering (Integra) for additional design services for the Bull Reservoir embankment pipelines and extended construction duration. Staff recommends approval of the proposed Resolution.

BACKGROUND:

On June 4, 2003, the City Council approved Staff Report No. 03-21 that executed a Professional Services Agreement between the City and Integra Engineering to design a new wastewater treatment plant. During the design, City staff made a request to Integra to modify some of the pipelines in the existing treatment plant. The pipelines included the effluent pipeline to Bull Reservoir, the influent pipelines to the lagoons, and the primary and secondary sludge pipelines. During construction, work required coordination with the State Engineer for their approval, which was not addressed in the original scope of the Construction Management Amendment.

Since the approval of the original agreement, there have been six amendments to the contract. The previously approved amendments are listed in chronological order below:

- Amendment 1 – Staff Report 04-18, May 13, 2004, Wastewater Treatment Plant Improvements and Construction Management Services
- Amendment 2 – Staff Report 06-02, January 9, 2006, Effluent Pipeline Design Services
- Amendment 3 – Staff Report 06-03, January 9, 2006, Construction Management for the New Effluent Pipeline
- Amendment 4 – Staff Report 06-05, January 9, 2006, Design Services for the Service Building/Laboratory Remodel
- Amendment 5 – Staff Report 06-19, March 23, 2006, Construction Management Services for the Service Building Laboratory Expansion
- Amendment 6 – Logistics Memorandum 07-09, (subject on Council Approval), Easement and Pipeline Realignment

Additional design services and unforeseen circumstances extended the contract longer than was originally intended in this amendment. The original date for final completion date was March 15, 2006. A probationary acceptance for substantial completion of the plant was issued by the City on January 4, 2006. The extended time required additional unforeseen resources from Integra Engineering.

POTENTIAL OBJECTION:

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

BUDGET/TIME IMPLICATIONS:

The cost of Amendment #7 for Bull Reservoir Embankment Pipelines and Extended Construction Duration as proposed is \$63,214.00. Adequate funding for this amendment is available in the project contingency in the amount of \$10,635.97, the existing Wastewater Treatment Plant Expansion Supplemental Appropriation CB 1550 in the amount of \$28,433.00 and in an unencumbered Water and Wastewater account # 510.69272.000.3999.828 in the amount of \$24,145.03.

STAFF REFERENCE:

Please contact Kurt Kowar, Logistics Center Manager at kkowar@northglenn.org, or (303) 349-3772.

SPONSORED BY: COUNCIL MEMBER MONROE

COUNCILMAN'S RESOLUTION

RESOLUTION NO.

No. CR-51
Series of 2007

Series of 2007

A RESOLUTION APPROVING AN ADDENDUM NO. 7 TO THE AGREEMENT FOR PROFESSIONAL SERVICES BETWEEN THE CITY OF NORTHGLENN AND INTEGRA ENGINEERING

WHEREAS, the City of Northglenn entered into an Agreement for Professional Services dated June 12, 2003 with Integra Engineering for civil engineering services for the design of a wastewater treatment plant; and

WHEREAS, the parties desire to supplement the Agreement with an Addendum No. 7 to allow for additional design services for Bull Reservoir embankment pipelines and costs incurred for the extended construction period of the project.

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

Addendum No. 7 to the Professional Services Agreement between the City of Northglenn and Integra Engineering is hereby approved and the Mayor is authorized to execute same on behalf of the City of Northglenn.

DATED, at Northglenn, Colorado, this _____ day of _____, 2007.

KATHLEEN M. NOVAK
Mayor

ATTEST:

DIANA L. LENTZ, CMC
City Clerk

APPROVED AS TO FORM:

COREY Y. HOFFMANN
City Attorney

ADDENDUM #7 TO AGREEMENT FOR PROFESSIONAL SERVICES

THIS FIRST ADDENDUM TO AGREEMENT FOR PROFESSIONAL SERVICES is made and entered into this _____ day of _____, 2007, by and between the CITY OF NORTHGLENN, State of Colorado (hereinafter referred to as the "City") and INTEGRA ENGINEERING (hereinafter referred to as "Consultant").

RECITALS:

A. On June 12, 2003, the City and Consultant entered into an Agreement for Professional Services for civil engineering services (the "Agreement").

B. The parties desire to supplement the Agreement with this Addendum #7 to allow for an additional scope of services for the design services for:

Exhibit A, Bull Reservoir Embankment Pipelines and the Extended Construction Duration

AGREEMENT

NOW, THEREFORE, it is hereby agreed that for the consideration hereinafter set forth, that Consultant shall provide to the City, professional engineering services as needed in the manner provided in the Agreement.

1. The Scope of Services in the Agreement is hereby supplemented to include the scope of services for the design services attached hereto as **Exhibit A**, and incorporated herein by this reference (the "Additional Scope of Services"). Consultant shall commence work on the Additional Scope of Services within ten (10) days of the issuance of a Notice to Proceed.

2. Subparagraph A. of Article IV entitled "Compensation" is hereby amended to provide as follows:

A. Compensation shall not exceed \$63,214.00 for the work described in **Exhibit A** to this Addendum #7.

3. The original Agreement is in full force and effect and is hereby ratified by the City and the Consultant. The original Agreement and this Addendum constitute all of the agreements between the City and the Consultant.

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

CITY OF NORTHGLENN, COLORADO

By: _____

Kathleen M. Novak

Title: Mayor

ATTEST:

Diana L. Lentz, City Clerk

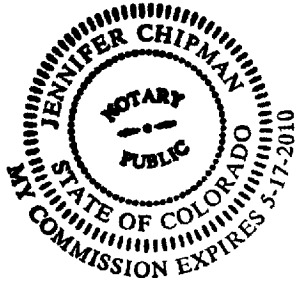
APPROVED AS TO FORM:

Corey Y. Hoffmann, City Attorney

CONSULTANT

By: Michael P. Lutz

17 May 2007
Title _____ Date



ATTEST:

Jennifer Chipman

Notary Title 5/17/2007 Date



Integra Engineering

Since 1995

1095 South Monaco Parkway ♦ Denver, CO 80224
Main 303 825 1802 ♦ Fax 303 825 2322

May 10, 2007

Mr. Arthur J. Krieger, City Manager
City of Northglenn
PO Box 330061
11701 Community Center Drive
Northglenn, Colorado 80233-8061

Northglenn Wastewater Treatment Plant Engineering Agreement, Amendment 7

Dear Mr. Krieger:

Thank you for meeting with us on April 23, 2007 to discuss the proposed Amendment 7 to the engineering work for the Northglenn Wastewater Treatment Plant. As requested, this letter summarizes proposed Amendment 7 and the reasons for the requested increase in our compensation.

Executive Summary

The City executed change orders in February and March 2006 to add the effluent pipeline and the Service Building and Laboratory modifications to the construction contract. Completion of these components was delayed by 5 months until January 4, 2007. Integra Engineering incurred actual costs of \$79,868 for the extended construction period. We offered to bear half (\$39,934) of the cost and asked the City to pay half (\$39,934) of the costs incurred during the extended construction period. We request that the City accept Amendment 7 as originally proposed for a total increase of \$63,214 (consisting of \$23,280 previously accepted by the City for Bull Reservoir modifications plus \$39,934 the extended construction period).

Original Project Scope, Schedule, and Budget

The original Construction project consisted of a Base Bid and eight Bid Alternates (shown in appended Table A1). To meet budget objectives, the City awarded the low Base Bid of \$11,149,000 to Glacier Construction Company but did not award any of the Bid Alternates. The project was awarded in April 2004 with a construction completion date of March 15, 2006.

The Base Bid consisted of a biological nutrient removal (BNR) process required to comply with discharge permit limits. The Bid Alternates included several necessary facilities that could be deferred until a future phase to meet the City's budget objectives.

Substantial Completion of Construction and Facility Startup

Substantial Completion of the facility was achieved on December 29, 2005. Substantial Completion of the facility consisted of all components necessary to safely operate the entire

treatment system and comply with new discharge limits. Effluent discharge to Bull Reservoir began on January 25, 2006.

Extension of Construction Time

As the original construction completion date approached, the Contractor requested a time extension of six weeks. The City executed change order 34 extending the final completion date to April 26, 2006 for the original project.

Major Additions to the Construction Work

The City executed change orders in February and March 2006 to add the effluent pipeline (Change Order 18) and the Service Building and Laboratory modifications (Change Order 28) to the construction contract. The Service Building and Laboratory modifications consisted of a portion of Bid Alternate 2 and the effluent pipeline was Bid Alternate 7 modified for a larger capacity pipe. These components added \$1.5 million of construction, increasing the original contract amount by 13.5 percent. Final completion of the original project by April 26, 2006 remained unchanged. All of the additional construction work was to be completed by August 1, 2006 (within 120 days).

Table 1 Summary of Construction Change Orders for Effluent Pipeline and Service Building

Change Order	Description	Date Executed	Contract End dates	Actual End dates	Amount, dollars
18	Effluent Pipeline construction	2-15-06	5-22-06	1-3-07	1,215,000
28	Service Building & Lab construction	3-30-06	8-1-06	1-3-07	299,875
Total					1,514,875

Construction of Service Building & Laboratory modifications was based on 4 month (120 day) duration. Notice to proceed given February 22, 2006 for construction of BDC effluent pipeline. Final completion date for construction of effluent pipeline was June 22, 2006 based on 3 month (90 day) duration.

Duration of Engineering Services

Construction management services for the project were added to the original Engineering Services Agreement by Amendment 1 in May 2004 (as summarized in appended Table A2). Construction management services were expected to conclude by the specified construction completion date on March 15, 2006. The 3 months of startup services included in Amendment 1 were expected to be completed by the June 1, 2006, the date stipulated in the plant discharge permit for compliance with new effluent ammonia limits.

Service Building and Laboratory Schedule

The change order for the Service Building and Laboratory modifications represented a cost increase of 2.7 percent of the original construction cost. The short completion time (120 day duration) proposed by the Contractor appeared to be adequate because the work represented a small percentage of the total project and consisted of remodeling an existing building.

Equipment Procurement and Delivery

The work in the Service Building and Laboratory required new equipment including casework, HVAC supply air unit, and other specialty or custom made materials. Some of this equipment had been included in the original Bid Alternates for the project. However, the equipment suppliers were unable to fabricate and deliver this equipment within the 120 day schedule. For example, laboratory casework was not received at the site until September 1 (one month after the specified completion date for the laboratory), installed by September 20, and countertops were installed in October 2006. Equipment procurement and delivery delayed construction significantly.

Impact of Unknown Conditions

In May 2006, the electrical subcontractor working on the project filed for bankruptcy. The Contractor made alternate arrangements to complete the electrical work, but the bankruptcy of a key subcontractor was beyond the Contractor's control and delayed completion of the work significantly.

Other Additions Requested by the City

The City requested several other relatively small additions or modifications throughout 2006. As summarized in Table 2, several of these change requests occurred from May through August 2006 and were executed as late as November 2006. The cumulative effect of these modifications contributed to delay in completing the project.

Although most of the City requested change orders did not explicitly extend the contract time, a reasonable amount of time was necessary to complete these items. For example, Change Order 57 was sent to the Contractor for pricing on July 13, 2006, about two weeks prior to the specified completion date for the Service Building and Laboratory modifications. Change Order 57 was executed on October 17, 2006, about 6 weeks after the specified completion date. Execution of this change order by the City was understood to grant a reasonable amount of additional time to complete the requested work.

Table 2 Summary of Other Change Orders Requested by the City

Change Order	Sent to Contractor	Description	Amount, \$	Date Signed by City
35	3-27-06	Slide Gate on effluent pipe, extend to 6/22/06	8,557	5-17-06
38	5-9-06	Marker posts on effluent pipe	0	5-17-06
39	5-9-06	Recycled concrete paving addition	10,110	5-17-06
44	4-3-06	Thompson Ditch rip rap	9,852	6-29-06
45	6-15-06	Aeration basin handrail changes	2,142	6-29-06
50	3-16-06	Non-potable pump modifications	8,694	7-17-06
56	2-27-06	Handrail return	1,138	8-29-06
57	7-13-06	Lab electrical, cup sink, hatch, telephone	30,818	10-17-06
59	8-16-06	Jacobucci property drainage culvert	4,095	11-14-06

Note: Change Order 57 included modifications requested by the City and for existing unknown electrical conditions.

Potential Impact of Schedule Delays

During June and July 2006, Integra Engineering and City staff realized that the Contractor would probably not meet the original completion date for the Service Building and Laboratory. During July through October, the Contractor verbally requested at least three extensions of the completion date for this component of the work. The City verbally consented to these time extension requests at project meetings with the Contractor.

A meeting with City staff was held on September 1, 2006 to discuss the Service Building and Laboratory schedule and costs. Integra Engineering stated that delays in the construction schedule and potential change orders due to unknown conditions could cause construction costs to exceed budgeted funds. Integra indicated that additional engineering costs were over \$50,000 to date. Integra Engineering suggested that the City terminate construction of the laboratory and complete this component as part of a subsequent Headworks project. The City preferred to complete the work and stated that the City would pay the costs of change orders if needed to complete the work.

Notification to City of Engineering Cost Increase

As construction continued into 2006, the Contractor had indicated a delayed completion date on several occasions. The delays were caused by the several factors discussed previously, some of which were beyond the Contractor's control. After June 2006, City staff requested information on additional engineering costs as soon as possible.

At a project meeting on September 1, 2006, we informed City staff that additional engineering costs had exceeded \$50,000. However, uncertainty regarding the construction completion date precluded an accurate estimate of additional engineering costs until early November 2006. We provided additional notification to the City by E-mail on November 10, 2006 that costs for extended engineering services were projected to be \$109,134 through the end of 2006. The projected engineering costs presented in the E-mail are summarized in Table 3.

Table 3 Projected Additional Engineering Costs Sent to City of Northglenn on November 10, 2006

Item	Cost, dollars
Engineering costs accumulated May 15 through October 31, 2006	94,395.44
Unbilled contract balance remaining	(9,261.00)
Estimated costs October 31 through December 28, 2006	24,000.00
Total estimated costs over contract amount through December 28, 2006	109,134.44

Source: E-mail sent November 10, 2006 from Integra Engineering to City of Northglenn.

Proposed Amendment 7

We submitted proposed Amendment 7 on January 4, 2007, the day of completion of construction. On April 7, 2007, we received a letter from the City approving a portion of Amendment 7 for work on Bull Reservoir pipelines, but refusing payment for engineering costs incurred during the extended construction period. During the four months we waited for a response from the City, we continued work to resolve construction warranty items for the City and to optimize operation of the facility. Had we stopped work when we reached the cost ceiling, the City would have endured much longer delays and much higher costs. We continued

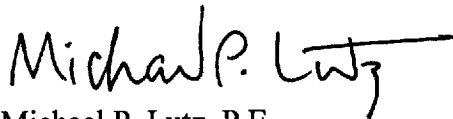
to perform these services with the full knowledge of City staff and we notified City staff of expected engineering costs as soon as we were able to provide a reasonable estimate.

Integra Engineering offered to bear half (\$39,934) of the total cost and asked the City to pay half (\$39,934) of the costs incurred during the extended construction period. We sincerely believe that this offer was more than fair to the City.

Integra Engineering incurred actual costs of \$79,868 for the extended construction period. We believe that all of our costs associated with the extended duration of the project are justified. To ensure an equitable resolution for all parties, we offered to bear half (\$39,934) of the cost and asked the City to pay half (\$39,934) of the costs incurred during the extended construction period. We proposed a total cost for Amendment 7 of \$63,214 including \$23,280 for Bull Reservoir embankments previously accepted by the City and \$39,934 the extended construction period. We request that the City accept Amendment 7 as originally proposed for a total increase of \$63,214.

Thank you for your assistance in resolving this matter. If you have any questions or concerns, please call me.

Sincerely,
Integra Engineering



Michael P. Lutz, P.E.
Principal

Table A1 Northglenn WWTP Improvements Bid Summary

Item	Bid Amount, dollars		
	Description	Glacier Construction	Engineer's Estimate
Base Bid	BNR process to meet discharge limits	11,149,000	12,253,000
Alternates			
1	Aerated lagoon floating aerators	218,000	206,000
2	Modify Service Building - Ground Level	958,000	799,000
3	Modify Service Building - Second Level	1,510,000	1,182,000
4	Secondary Clarifier 3	451,000	498,000
5	Primary Clarifier System	1,920,000	1,698,000
6	Headworks Building	1,980,000	1,849,000
7	Effluent pipeline	660,000	1,060,000
8	Combination of Bid Alternates 5 and 6	3,800,000	3,547,000
Total		17,788,000	19,059,000

Total includes Base Bid and Bid Alternates 1, 3, 4, 7, and 8.

Table A2 Summary of Original Agreement and Amendments for Engineering Services

Contract Item	Description	Date Executed	Contract End dates	Actual End dates	Amount, dollars
Original	Design Services	6-12-03		4-5-04	1,295,900
Amendment					
1	Construction Engineering Services	5-13-04	3-14-06	1-3-07	1,078,267
2	Effluent Pipeline upsizing design	1-11-06	4-21-06	1-11-06	15,417
3	Effluent Pipeline CM	1-11-06	6-10-06	1-3-07	65,821
4	Service Building & Lab modifications	1-11-06	4-21-06	2-1-06	25,760
5	Service Building & Lab CM	3-23-06	8-20-06	1-3-07	16,690
6	Effluent Pipe realign & easements	pending	As req'd	9-1-06	8,500
7a	Reservoir pipelines state approval	pending	As req'd	5-1-05	23,280
7b	Extended construction duration	pending	As req'd	1-3-07	39,934
Total					2,569,569

Contract duration for Amendment 1 based on 19 months (579 days) for construction plus 3 months (91 days) for startup services; total time of 21 months (670 days). Amendments 2 and 4 had contract duration of 100 days; Amendments 3 and 5 had contract duration of 150 days. Amendment 4 actual completion is the delivery date of final electrical drawings for Service Building & Laboratory modifications.