

Written Questions for Mr. Christopher B. Burnham from Senator Tom Coburn  
28 July 2005

1. *Please provide materials relating to the United Nations' award contract (PD/CO112/01) provided to the architecture-engineering firm, The Renato Sarno Group SRL. Information should include:*

- *A comprehensive description of the criteria used in determining the selection of The Renato Sarno Group*

The selection of the Renato Sarno Group (RSG) was based on the fact that they submitted the lowest cost proposal of all of the six technically acceptable proposals. The technical review and commercial assessment were conducted separately.

The criteria for technically acceptable proposals were:

- a. Successful experience with similar projects
  - Similarity of projects (size, operational facility, high-profile, renovation work)
  - Experience with historically significant buildings and buildings of the 1940's-1960's
  - Client satisfaction with design phase services: creativity, innovation, awareness of international best practices, accuracy of documents
  - Client satisfaction with construction phase services
  - Client satisfaction with administrative aspects (stability of personnel, responsiveness, adherence to schedule, initiative)
  - History of cost control
  - Quality of built project: practicality and maintainability of solutions, quality of work spaces, technological sophistication
- b. Depth of team
  - All technical specialties addressed
  - Relative expertise in each area
- c. Quality of preliminary sample
  - Relevance
  - Clarity of text, graphics and cost information
  - Creativity, flexibility, environmental awareness, practicality and maintainability of solutions, quality of work spaces, technological sophistication
- d. International character
  - International project experience
  - International mix of firms on team
- e. Experience of team working together on previous projects

- f. Quality of submittal
  - Completeness
  - Brevity
  - Clarity: in content and in appearance
  - Demonstrates understanding of client needs per the RFP
  
- g. Quality of narratives
  - Past experience with preliminary design and suggestions for this RFP
    - Brevity
    - Clarity
    - Relevance
    - Demonstrates creativity, flexibility, environmental awareness, concern for practicality and maintainability of solutions, concern for quality of work spaces, technological sophistication, awareness of international best practices

Those firms meeting the criteria for technically acceptable proposals were then invited to make a presentation. The criteria for acceptable presentations were:

- a. Appropriateness of presentation
    - Sufficient visual material, without overkill
    - Fit to UN audiences (clear, not excessive)
  
  - b. Suitability of project manager
    - Good communication skills: clear, uncomplicated presentation
    - Handles confusing or difficult questions well
    - Flexible response, can switch from presentation to Q&A
    - Experience managing large teams
    - Intangible: sense of urgency, initiative, optimism, commitment
  
  - c. Preparation
    - Following rules (i.e. number of people, time limits)
    - Familiarity with technical material
    - Knowledgeable and comfortable presenters
  
  - d. Interaction among team members
- Firms will be asked to briefly present two topics:
- A past project, its problems and successes
  - Suggestions for approaching this project

Those firms passing both the proposal review and the presentation review were then considered for selection, based on lowest cost proposal.

It may be helpful to know that 152 firms were invited to submit Expressions of Interest; 37 were received; 27 firms were invited to submit proposals; 15 firms submitted proposals; eight (8) proposals were technically acceptable per the criteria above, and those teams were invited to make presentations. Six (6) presentations were acceptable per the criteria above; of those six (6) teams, the lowest cost proposal was selected.

- *List of previous projects performed by The Renato Sarno Group of similar scope to the proposed UN renovation project*

Similarity of projects was a difficult issue in all of the proposals, since typically renovation of a multi-building complex is not undertaken by a single firm. The scope was not yet fixed, since the purpose of the Preliminary Phase was to develop alternatives, thus allowing the General Assembly to set the scope.

None of the proposers was expected to have all technical disciplines, or all forms of experience under one roof, so the assessment of proposals covered the cumulative experience of the team, as well as the experience of each part of the team. Disciplines covered in the proposal were:

- Asbestos and hazardous material abatement.
- Accessibility
- Acoustics
- Architectural preservation
- Building management/ automation/control systems
- Conference engineering
- Cost control
- Curtain wall maintenance
- Electrical and fire alarm engineering
- Electro magnetic fields
- Energy conservation and sustainability
- Estimating
- Fire protection engineering
- Functional location planning
- Host city, state and country building and related codes
- Landscape
- Logistics
- Mechanical engineering: heating, ventilating, air conditioning, plumbing
- Phasing
- Radio and TV studio design
- Scheduling
- Security and infrastructure vulnerability assessment
- Signage
- Space planning and office layout

- Structural and civil engineering
- Technology services (voice, data, video, simultaneous interpretation)
- Utility issues
- Vertical transportation
- Other specialties required to complete the professional services:
  - Concrete expert
  - Interior design
  - Architectural Historian
  - Existing condition survey
  - Lighting
  - Swing space leasing
  - Models and renderings

The main projects submitted that were relevant for the CMP are listed below.

**For RSG itself:**

Palazzo Della Regione  
Milan, Italy

1956 complex including a 33-story high-rise office building, three basement floors, a low-rise building, conference, exhibitions, open to visitors, similar materials, similar mechanical and electrical issues, asbestos, accessibility, safety issues.

This project was the most similar to the UNHQ complex in terms of age, mix of buildings and uses.

Financial Police Academy  
Bergamo, Italy

Four buildings, five different uses, public sector.

Progressive deterioration of the fixtures and fittings, complete renewal of the building and infrastructure of the complex, without interruption of activities.

New power stations, modifications for compliance with new fire rules, electromagnetism safety guidelines and environmental concerns.

Law Courts  
Milan, Italy

Main building and a nearby smaller one, public sector. Total area of mixed uses is 1,750,000 sq. ft., including offices, courtrooms and other facilities.

Modifications for modern standards relevant to fire protection, life safety, security, accessibility and energy conservation, main networks re-planned, building components renewed and changed, ten (10) different phases with different schedules in synchronization with the timing of the Courts' activities.

Juvenile Court  
Milan, Italy

Built in 1935 and enlarged in 1946. Smaller project, but public sector, renovation/preservation, mixed use, structural reinforcing, modernization of all systems (mechanical, electrical, audio-video, elevators, life safety) in order to conform to modern standards relevant to fire protection, safety, security, accessibility, energy conservation, building management.

Palazzo delle Stelline  
Milan, Italy

Also small project, but historical preservation issues, 20 conference rooms.

To complement their renovation expertise, RSG proposed a project manager with experience in large projects with IM Pei, a major architectural firm in New York, including:



Raffles City, Singapore

42-story office building and two hotels, 30 flexible conference rooms and two (2) ballrooms, accommodating over 5000 people, total of 4,003,000 sq. ft.

The Bank of China, Hong Kong

Complex engineering and architectural construction, total of 1,400,000 sq. ft.

Four Seasons Hotel, New York, New York

54-story building, 532,600 sq. ft., NYC construction parameters.

The Everson Museum Refurbishment and Expansion, Syracuse, New York

Small project, renovation, sensitive site, code compliance; improve life and property safety, maintain system reliability, reduce operational and energy cost; reduce deterioration; extend life expediency and improve operational efficiency.

Other members of the team submitted comparable projects in their respective areas of expertise.

- *The full scope of services included in the original contract agreement with an itemized breakdown of fees for each service*

An outline of the scope of services is provided below. The full potential scope of services was included as Annex A-2 to the Request for Proposal (RFPS-175). Our file copy of RFPS-175, excluding drawings, is attached herewith as **ATTACHMENT A**.

## **Scope of Services:**

### **General Services**

Quality control plan, quarterly performance review, meetings, minutes, coordination with others (UN projects, Visitors' Experience, ...)

### **Normal Services**

Preliminary Phase including:

- Coordinated final submittal including design, schedules, code and cost, annex all calculations, reference material
- Review of existing drawings, studies
- Design schedule
- Alternative approaches to problems identified in Study: set criteria, develop recommended viable alternatives into preliminary design, e.g.
  - Extent, degree of refurbishment
  - Duration
  - Sequence, phasing
  - Reduce impact of construction
  - UNITAR
  - Impact of office standards
  - Additional improvements
  - HVAC
  - Incoming electric service
  - Chiller plant
  - Energy conservation, greening
  - Utility strategy
  - Accessibility
  - Simultaneous interpretation: wireless
  - Technology, communications
  - Security
- Alternatives for temporary locations
- Alternatives for final locations of existing functions within UNHQ
- Construction schedules, phasing plans
- Building code analysis
- Cost analysis
- Assistance to UN in preparing proposal to Member States

The Scope of Services also describes full potential scope of services for other phases. The Contract limits services to the Preliminary Phase only, with extension at the UN's option.

- A list of any and all modifications made to the original contract agreement
- A full accounting of disbursement payments provided to The Renato Sarno Group

*funds for disbursements*  
*cost analysis*

	<i>Contract</i>	<i>Disbursement</i>
Preliminary phase	\$ 6,229,466	\$ 6,229,464
Modifications:		
Existing condition drawings	\$ 322,750	\$ 322,750
Printing – CMP	\$ 27,750	\$ 13,307
DHL Auditorium	\$ 93,000	\$ 93,000
Reimbursable for asbestos testing at DHL Auditorium		\$ 1,617
Blast analysis	\$ 33,000	\$ 33,000
Curtain wall probes	\$ 102,072	\$ 101,058
Strengthening Security Project (SSP)	\$ 1,632,356	\$ 1,479,716
Printing – SSP	\$ 80,000	\$ 69,031
<b>Subtotal (including SSP)</b>	<b>\$ 8,520,394</b>	<b>\$ 8,342,943</b>
UN complex model & 3D renderings*		\$ 135,000*
<b>Grand Total (including SSP)</b>	<b>\$ 8,520,394</b>	<b>\$ 8,477,943</b>

\* Settlement of claims by the Renato Sarno Group

2. A full analysis comparing costs between a plan to a) renovate headquarters with occupants remaining in building, versus a plan to b) renovate headquarters with occupants vacating and relocating to “swing space.”

- 2002 proposal:

<i>Costs (millions)</i>	<i>Vacate</i>	<i>Phased</i>
Renovation	\$991	\$1,094
Swing space	(UNDC5) \$96	\$66
Total	\$1,087	\$1,160

*Photos in plan  
main hall  
from 2002  
to 2004*

This was based on the following analysis:

At the completion of the Preliminary Phase, the Renato Sarno Group (RSG) submitted a 91-page report titled “Phasing and Sequence” (Volume 26 of 30 reports), dated 3 May 2002. The report detailed 20 phasing options for the seven (7) buildings of the UN Headquarters complex. Six (6) phasing options were developed and analyzed for the UN Headquarters complex, identifying swing space requirements, overall duration and sequencing of the project. Of the six (6) options, two (2) recommended options were

developed and budgeted, which further detailed security issues, material routing and storage, equipment and machinery requirements and waste material handling.

In June 2002, Hill International submitted a 77-page analysis of one of the RSG recommended options in a report dated 26 June 2002. Hill International provided a detailed estimate, and provided phasing, bidding and construction contract arrangement recommendations.

After the completion of the "Phasing and Sequence" report, the UN requested RSG to provide an additional phasing analysis for the newly developed UNDC5 option. The new RSG 132-page report, titled "Option V", dated September 2002, provided a detailed budget estimate for vacating the UN Headquarters.

- Summary update by Gardiner & Theobald:

Key Factors: phased approach results in risk of work stoppage, new infrastructure inserted into occupied spaces, longer construction period (+2 ½ years), reduced meeting room capacity, hazardous material removals in occupied buildings, greater overtime with phased approach.

Based on the decision taken in the GA resolution 57/292, the approach being designed by the design consultants is for a strategy where the UN maximizes the number of people being decanted out of the complex during the renovation works.

At present, it is anticipated that the following groups will remain in the existing complex:

- North Lawn printing facility
- Security control center
- Potential technology core
- Approximately 50,000 of basement space for facilities

To date, no further detailed study has been carried out to review phasing options. The main areas that would require further consideration should phasing be reconsidered are:

a. Steam

Incoming steam line/room to be reconstructed during CMP – an entire new room/service would need to be constructed and existing decommissioned to ensure continuity of service for heating, cooling and humidification.

b. Electrical service

Two (2) new 480/277V vaults to be constructed prior to any decommissioning of existing 208/120V vaults. Work would need to be completed prior to the first turn over of any phase. Coordination and approvals required with utility provider. Detailed

phasing and coordination with construction and occupied floors will require further review.

c. River water intake

Existing river water intake is primary source of heat rejection for central chiller plant. Assumed scope of work under CMP is to refurbish existing – in the situation of a phased construction, either a second river water intake would need to be constructed and commissioned prior to the decommissioning of the existing, or temporary cooling towers would need to be provided in order to maintain cooling during the construction period.

d. Cooling towers on the Secretariat roof

Risers through the Secretariat would require coordination with the Secretariat phasing. Furthermore, temporary cooling towers would be required for the tech center as redundancy. Structural reinforcement for the roof slab to be addressed and may include vacating the 38<sup>th</sup> floor as part of phase 1 Secretariat construction.

e. Domestic water & fire water

New pump rooms to be built out in advance of Secretariat building first phase.

f. Storm & sewer

No issues, assuming existing will be retained.

g. Information & communication infrastructure

Secondary Tech Center would need to be constructed on an accelerated schedule, 3-6 months in advance of the first Secretariat phase handover. Temporary cooling towers would need to be provided while river water intake is under construction as redundancy. Temporary generators would need to be provided until permanent generator and fuel storage is installed and commissioned.

Overall strategy to be developed for the migration of the tech center and distribution during both the pre-construction and construction phases.

h. Chilled water distribution

Prior to the commencement of Secretariat and Conference building construction, excavation and installation of a 5<sup>th</sup> steam chiller would need to take place. Temporary modifications to the existing chilled water piping would need to be made to create a common header between the low rise and high rise loop. New risers would need to be run, tying in to the common header and steam/electric chillers decommissioned and

replaced one at a time to ensure maximum redundancy. As new areas commence construction, the old loop is removed and the new one tied in.

i. Fire alarm system

Existing fire alarm system would need to be modified and remain in place during construction of all phases. New fire alarm system installed and commissioned per phase, however not activated until the end of the project.

j. Fire suppression systems

All tech center fire suppression systems to be in place prior to turn over. Sprinkler system to proceed per phase, upon completion of pump room.

k. Building management system (BMS)

BMS control room to be completed prior to first phase handover (co-located with tech center), with all new equipment tied into central system upon completion/ commissioning.

l. Building security

System installation per BMS. Existing/Temporary system to be maintained during the construction program. A security program will need to be developed to ensure a secure perimeter and safe entrance.

m. Back-up power systems

Temporary back-up generators to be provided for the tech center, with N+1 redundancy, replacement generators to be installed in service drive within first phase of construction, with temporary generators placed in alternate location while this occurs, tied into automatic transfer switches allowing for back up to newly renovated and existing areas alike. Requirement and split between 480V and 208V generators to be determined and adjusted and construction proceeds.

n. Elevators, escalators and dumbwaiters, mail conveyors

Cab refurbishment to occur on a phased schedule (as applicable), new shafts, shaft extensions, machine room construction to occur within the appropriate phase. During the construction of new and extension existing conference building elevators, there will be no elevator service available in the Conference building.

o. Curtain wall replacement

There are areas of curtain wall that require replacement throughout the complex. In the Secretariat tower, the whole east and west elevations are scheduled for

replacement. In a phased approach, the initial assumption would be to start from the top and work down. This solution would conflict with the new services distribution, which ideally will start from the bottom and work up. Whichever route is chosen, there will be a requirement to either carry out infrastructure work in presently occupied floors prior to the commencement of the full floor refurbishment or carry out removal and reinstatement works of existing infrastructure after the majority of renovation works are complete.

p. Basement construction

Use of library as swing space for basement operations would facilitate space issues. Temporary broadcast facilities may need to be considered while new studio is under construction.

q. Generic concerns during construction

- Removal of old risers following installation of new infrastructure
- Separation of staff and construction workers
- Removal of hazardous materials and obtaining clean air certification
- Maintaining toilets on floor above construction in Secretariat
- Maintaining two (2) means of egress from buildings during construction
- Structural support of curtain wall above area of construction (Secretariat)
- Maintaining watertight spaces
- Noise generated during construction (in particular the conference buildings) could render the adjacent spaces unusable for meeting facilities.
- Vertical transportation for construction staff – consider the use of an external hoist for workers/materials.

r. Overall costs

Based on an initial review, Gardiner & Theobald have looked at the potential costs for the phased approach for the construction as compared to the approach presently approved. The comparison is as follows: 7

*Handwritten notes:*  
 City  
 Minutes  
 4/10

<i>Costs (millions)</i>	<i>Base Scheme</i>	<i>Phased</i>
Construction	\$953	\$1,187
Swing Space	\$352	\$166
Total	\$1,305	\$1,353

The above costs are based on a number of assumptions and these would require to be fully reviewed with the design consultants and the UN during the study period. Any changes to these assumptions will change the project costs for the phased approach.

3. *A list for each year of total annual funds committed and disbursed for the maintenance of the UN headquarters for the past ten years.*

<i>Expenditure categories</i>	<i>1996-1997</i>	<i>1998-1999</i>	<i>2000-2001</i>	<i>2002-2003</i>	<i>2004-2005*</i>
Alterations and major maintenance	11,472,820	18,813,280	18,586,263	15,995,062	10,773,305
Regular maintenance	12,910,872	15,445,908	13,747,296	13,787,258	13,485,308
Utilities	20,741,401	19,296,531	28,007,520	26,157,452	30,052,206
<b>TOTAL</b>	<b>45,125,093</b>	<b>53,555,719</b>	<b>60,341,079</b>	<b>55,939,772</b>	<b>54,310,819</b>

*\* Obligations and disbursements for 19-month period (1 January 2004 -- 31 July 2005)*

4. *A full accounting of funding approved, committed, and disbursed by the United Nations for activities relating to the Capital Master Plan.*

Please see ATTACHMENT B.

5. *Provide the building needs assessment of the current UN headquarters prepared by Ove Arup & Partners USA, and indicate if the proposed UN renovation plan will include any of the building repair needs ranked as “low” priority status in the report.*

The study itself is voluminous, but the summary for each building, excluding drawings, is attached (see ATTACHMENT C).

Ove Arup also prepared a “Significant Recommendations and Findings” summary, which is also attached (see ATTACHMENT D).

*Are any low priority items included?*

Please note the definitions in the “Priority Legend” from the Ove Arup Appendix A:

“High: Items which have exceeded planned life expectancy or pose a safety risk.

Medium: Items which will reach design life by 2010 and are functional.

Low: Items which will reach design life after 2010, are functional and in good condition or posing a minor operational problem or risk. Note that some Low Priority items will be done at the same time as High or Medium Priority items to minimize disruption and construction phasing premiums.”

Yes, some low priority work is included in the scope, for three reasons:

- Certain low-priority work is required in order to accomplish high-priority work (e.g. ceilings come down in order to remove old piping, asbestos and install new sprinkler, but ceilings are not in themselves a high priority).

*When I note this!*

- Work, such as tightening a loose railing or correcting a narrow doorway, was labeled low priority but must be completed in order to reach reasonable standards of safety or accessibility.
- Basic maintenance items, which are a low priority in terms of operation or safety risk, such as repainting stained plaster, would be reasonably expected to be completed in the context of a renovation.

Note that after the presentation of the proposed scope to the General Assembly in 2000, the Secretariat was requested to develop a comprehensive design plan with all viable alternatives. That 2001-2002 effort involved developing more alternatives, so the scope has evolved since the Ove Arup report.