

## WAITAKERE CENTRAL – PROCUREMENT OPTIONS

### 1.0 INTRODUCTION

This paper looks to consider the options available for procurement of the construction of the works associated with Waitakere Central.

The works defined as forming Waitakere Central comprise:

- Bus Interchange/ Drop Off Facilities/ Taxi Facilities
- Park and Ride Facilities
- Pedestrian/ Cycle Amenities
- Link bridge
- Escalators/stairs to Railside Avenue
- Escalators/ stairs Station Platform
- Further pedestrian access to the southern end of the Station Platform (if required and funded by ARC)
- Temporary pedestrian access if required
- Toilets
- Lifts

There are other projects directly related to Waitakere Central which will be procured and carried out by others:

- Railway Station and associated amenities
- Platform
- Double tracking
- Civic Centre

### 2.0 BACKGROUND

In consideration of a suitable procurement method, there are a number of factors that require consideration, such as:

- Logistics
- Construction Costs
- Resources
- Other Projects

#### **Logistics**

There are two major projects that will influence the completion of sections of the Waitakere Central project, these being the Railway Station/ Platform project (carried out by NZRC) and the Civic Centre (carried out by WCC).

The construction of the Civic Centre forms an integral part of the link bridge and therefore the design of the link bridge is directly affected by the Civic Centre. There is also a co-ordination issue of the project with the foundations of the link bridge impacting on the platform design and construction.

These two projects have differing completion dates, with the Railway Station/ Platform due for completion (at this stage) in December 2005, and the Civic Centre due for completion in May 2006.

There will be an obligation on WCC to ensure that the Railway Station is accessible for the public, and this may be achievable from Railside Avenue. Access from Henderson Valley Road is accomplished through the new Civic Centre and this will not be complete until May 2006. This may require the works to be staged to suit completion of the Railway Station and the Civic Centre development.

WCC Project Manager for the Civic Centre was approached about the possibility of ensuring that access through the Civic Centre was achieved for December 2005, but we were advised that this could not be achieved.

### **Construction Costs**

The current construction market is over heated and this is leading to abnormal tendering costs. This in itself will require careful consideration and management to minimise any impact on the project costs.

The conditions attached to the Infrastructure Auckland funding award requires that at least two tenderers are required.

However, market conditions are suggesting that negotiation with one contractor rather than tendering to several is actually producing lower costs.

### **Resources**

The overheated market has created a shortage of suitably qualified construction management staff and placed significant pressure on back-up head office management as well.

In view of this, it is important that more than price is considered in the selection of a contractor, and that some weight is given to key personnel from the contractor.

This is of particular relevance to a project involved in working above an operating rail environment, and around other construction projects.

### **Other Projects**

Access to the site is already severally restricted due to:

- Existing operating railway beneath the link bridge
- Extent of the siteworks associated with the Civic Centre (on the Henderson Valley Road side)
- Restricted laydown area on Railside Avenue
- Heavy traffic on Railside Avenue (7 days a week) associated with the retail facilities
- Construction of both the Civic Centre and the Railway Station being undertaken during 2005

With the Civic Centre construction ongoing during 2005/06 and the Railway Station/ Platform work during 2005, these works are likely to be carried out by separate contractors with differing objectives.

Therefore it would in the interests of WCC to negotiate with one or both of the contractors (on the Civic Centre and the Railway Station) to perform the works to construct Waitakere Central.

In addition to the two major projects identified above, there will be other projects which may impact on construction of Waitakere Central, such as,

- Relocation of the existing Henderson heritage station building
- Car park building next to Civic Centre
- Possible link bridge extension to the eastern side of Railside Avenue
- Improvements to amenities surrounding the interchange area
- Waitakere Properties Ltd residential/commercial development
- Traffic intersections at Henderson Valley Road
- Road Connection between Hickory/ Dora/ Stevie's Lane
- Taxi Office
- Walkway and Tramway from Waitakere Central to Corban Estate

### 3.0 ALTERNATIVE FORMS OF PROCUREMENT

There are a number of methods of procurement around which most forms of procurement will revolve, such as:

- Traditional Lump Sum
- Design and Construct
- Guaranteed Maximum Price
- Cost Plus Contracts
- Construction Management

There are a number of variations to these main forms as well.

#### Traditional Lump Sum

Methodology: the consultants are engaged directly by the Client and are retained throughout the duration of the project. The design is fully documented and a schedule of quantities prepared for the calling of competitive tenders.

Advantages	Disadvantages
- tried and tested	- stages are largely sequential with few short-cuts available
- relationships between the parties is well established	- time period
- extent of work is fully defined and reflected in the competitiveness of the tender	- Contractor's expertise is not available during design
- quality control is maintained through the consultants	- substantial fee exposure prior to knowing financial commitment
- maintain control and management of the design	

#### Appropriate Uses

This form of procurement is suitable when,

- time is not critical
- the functional design is complex
- technical design is complex
- accountability is important

### Design and Construct

Methodology: the contractor not only constructs the project but also is responsible for the design as well. The Client can either partially design the project and then 'novate' the design consultants to the contractor, or ask for submissions based on brief outline information.

Contractors are invited to tender for the design and construction of the project, with the consultants novated to the successful tenderer.

Advantages	Disadvantages
- shorter overall project duration through integrated design, procurement and construction	- tendency for design work to be incomplete particularly where the client does not fully understand what they want or the design is complex
- lower costs via shorter project durations and cost efficiencies achieved through integrating design, procurement and construction	- not all construction companies are truly familiar with this form of project delivery and the skills and discipline that it requires together with the associated inherent risks
- contractor actively encourages to seek savings	- lack of control over definitive design
- client retains an element of control over the design	- difficulty in defining the cost of variations
- still manage to retain the contractor's input into the design and therefore improve the constructability of the project	- reduced control and management of quality
- one single point of responsibility and therefore lower risk exposure	- resistance of the design consultants to be novated to certain contractors which may influence design fees and harmony
- less scope change as contractor has responsibility for both design and construction	- real or perceived conflict of interest with the contractor also being the designer
- less cost for administering less contracts and co-ordinating fewer parties	- lack of experience within the client organisation to administer and manage this form of delivery whilst maintaining a fast-track perspective

### Guaranteed Maximum Price (GMP)

Methodology: the contractors prepare their tenders based upon sketch plans and outline specification, the quantity surveyors cost estimate quantities indicating the extent of the works and the tender and contract documentation.

The contractor offers a GMP price for the project despite the design being at an early stage. This GMP is the maximum price that the Client will pay together with any authorised changes in scope that arise during the project.

As the design progresses, so the sub-contract work packages are tendered and these are administered against the contractor's GMP tender, i.e. if the sub-contract lowest tender is below the GMP price then this can be to the advantage of the Client. If the price is in excess of the GMP tender then this is at the contractor's cost.

In GMP contracts it is usual to find a clause which acts as an incentive to both parties to achieve savings.

??? see also D & B ????

Advantages	Disadvantages
- only one point of responsibility for design and construction	- lack of control and management during the design phase
- on site commencement at an early stage before design is complete	- lack of control and management on the quality of the design information
- less opportunity for surprises since the cost is established in advance of commencing detailed design	
- benefit of contractor's expertise into the design	- risk of deception and indirect gain by the contractor
- encourages the contractor to be pro-active as part of the design team	
- selection of mutually acceptable sub-contractors	
- maximum price is known before the contract is awarded	
- contractor accepts the majority of the risk	

#### Cost Plus Contracts

Methodology: the contractor receives payment for the actual cost of the work together with an agreed amount to cover overheads and profit. This agreed amount can take the form of either a percentage or a fixed fee. The consultants' employment is retained by the Client.

Advantages	Disadvantages
- allows prompt commencement	- no incentive to control costs
- retain management and control of the design	- costs are unknown for some time
	- can be difficult to obtain the true cost of variations

#### Construction Management

Methodology: this involves the letting of separate trade packages to individual sub-contractors employed directly by the Client through a Construction Manager. The Construction Manager is responsible for the programming, sequencing and direct management of the site.

Advantages	Disadvantages
- early commencement on site	- no single point of responsibility for the construction
- retain control of design	- client pays for all over-runs
- reduced contractor margin since the risk is reduced	- risk of indirect gain by the construction management
	- little incentive for the construction manager to refute claims by individual sub-contractors

#### 4.0 RECOMMENDATIONS

There are a number of significant issues that require careful consideration relating specifically to the Waitakere Central project. These can be identified as,

- lack of suitable access to the site
- integration with the other projects, particularly the Civic Centre
- overheated tender and construction market

These factors are particularly influential in requiring that the design is completed before construction commences to ensure that the co-ordination risk is minimised between Waitakere Central, the Civic Centre and the platform works.

In terms of the overheated market, sub-contractors are basically refusing to price tenders that do not include a fully documented schedule of quantities.

In recognition of this factors, the recommendation from us is to fully design and document the project and then to have this scheduled by the quantity surveyor.

This recommended method basically recognises the Traditional method of procurement, although with some modifications which we detail below.

In view of the absence of tendering between main contractors that currently exists due to the overheated market, the recommendation would be to negotiate with one contractor. This would relate to only the preliminaries and general and margin aspect of the project and still allow the remaining sub-trades works to be tendered. This would allow around 80 – 85% of the overall construction costs still to be tendered.

Since access to the site will be dictated by the construction of both the Civic Centre project and the double track/ platform works, the recommendation would be to negotiate with one of these contractors. Consideration of which contractor would tend to lean to the main contractor for the construction of the Civic Centre, this based on,

- extensive resources already involved in the construction of the Civic Centre
- the finishes in the link bridge will match those of the public areas in the Civic Centre
- the same design consultants are being employed on both the Civic Centre and the Waitakere Central project
- if managed correctly, WCC gain access to the competitive rates that would exist for a contract the size of the Civic Centre
- an opportunity to utilise the craneage that serves the Civic Centre thus reducing costs
- access to lay down areas at the Civic Centre site
- potential for WCC Project Management to manage the project from February 05 onwards

Again in consideration of the overheated market, the main contractor tender costs should not be the only criteria considered. The quality, experience and ability of the key personnel responsible for the project should also be weighted in the overall assessment.

If the main contractor for the Civic Centre proves too expensive or has unsuitable site management, then WCC have the option of negotiating with either the main contractor for the trackworks/platform works, or, the main contractor currently working on the new library project.

One final recommendation is to negotiate for the procurement of the project at the earliest opportunity. Which ever main contractor is selected, if the procurement process is initiated at the earliest then there is the opportunity, that whilst the design will be completed prior to commencement of construction, that the main contractor can provide significant input into the design of the project. In addition, the main contractor can effectively programme the Waitakere Central project into the overall project at the earliest opportunity.

Work in Progress