

# Southern Highway Mile 14 to Jalacte Junction Road Upgrading Project

## Progress Report

For the Period Ending December 2013

Project Owner and Employer: Government of Belize, Ministry of Works

Contract Supervision: Beca International Consulting Limited

Construction Contractor: Cisco Construction Limited

Current Expected Completion: June 2014

Funding: Kuwait Fund for Arab Economic Development

OPEC Fund for International Development

Central American Bank for Integration

Government of Belize

## Introduction

Wet site conditions during December continued to slow productivity. Bulk earthworks were ongoing with the focus on works between Ch 28300 & 29200m and borrow to fill works between Ch 28880 & 29080.

Nominal pavement construction work was undertaken, limited to topping up areas of established sub-base and base. No first or second coat seal was completed.

The production of aggregate continued at Pueblo Viejo quarry with two crushers in operation. The Contractor has been advised the rate of pavement aggregate production needs to increase significantly to meet pavement construction needs.

Progress continued with drainage works with a focus on the completion of headwalls for some of the culverts completed during November.

Bridge structures work continued. Jalacte 2 Bridge deck was cast. At Rio Blanco Bridge abutment foundations were completed and abutment walls were completed to bearing shelf level.

## 1.0 Package B- Progress for the month of December 2013.

Description	Benchmark Quality		Quality Complete	% Complete
Clearing	32800	Lm	31000	94.5%
Stripping	51000	m	47500	93.1%
Gross Cut (exclusive of Stripping)	489138	m3	460,000	94.0%
Gross Fill (inclusive of cut & borrow to fill)	599400	m3	507,000	84.6%
Waste	195000	m3	203,000	88.3%
Cross Road Culverts	114	No	95	83.3%
Kerb, Channel and Under Drain	7000	m	4750	67.9%
Catch Pits	56	No	37	66.1%
Subgrade Completion*	32800	Lm	23840	72.7%
Sub-base Layer Completion*	32800	Lm	2250	68.7%
Base Layers Completion*	32800	Lm	21320	66.5%
First Coat Seal Completion	32800	Lm	20680	63.0%
Second Coat Seal Completion	32800	Lm	16600	50.6%
Line marking	32800	Lm	9000	27.4%

### 1.1 Property Issues:

The Contractor is continuing to liaise with individual landowners and local village representatives with respect to obtaining access and permission to dump waste material.

The Ministry of Works (MoW) is in ongoing discussions with a number of landowners and Village representatives regarding:

- Location of farm roads
- Provision of temporary and permanent access ways
- Removal of crops and advice regarding risk associated with crop planting.
- Removal or relocation of structures.

## **1.2 Material:**

Summary of the origin of materials and the issues associated with incorporating them into the Works:

### **A) Borrow Materials**

- **Columbia Quarry** – Quarried limestone rock. Borrow material used for capping.
- **Ch12500m Slip Site** – Interbedded silt and sandstone (weathered). Bulk borrow material.
- **Ch20200m and 20460m Cutting** - Interbedded silt and sandstone(weathered). Bulk borrow material.
- **Ch22720m (cutting)**– Interbedded slit and sandstone (weathered). Bulk borrow material.
- **Ch32160m (cutting)**– Interbedded silt and sandstone(weathered). Bulk borrow material.

### **B) Cut to Fill:**

Earthworks are currently concentrated between Ch23000m - 25130m, 28300m- 29400m and Ch29900– 32350m.

### **C) Pavement Aggregates:**

Aggregate production was achieved in October at the pueblo Viejo Quarry. Development of Pueblo Viejo Quarry is ongoing:

### **1.3 Utilities:**

It was established early on that watermain relocation works was required in San Antonio and Santa Cruz Villages, as existing watermains were built from poor quality materials not constructed to best practice and conflicted with the road construction works.

- **San Antonio Village** -substantially complete.
- **Santa Cruz Village** – substantially complete.
- **Santa Elena Village** - Future proofing duct installations complete.
- **Pueblo Viejo Village** - has a piped watermain reticulation which is located far from the road. Currently only road crossings have been located by pot holing. Discuss have been held with Village Reps re providing some future proofing duct crossings.

### **1.4 Drainage:**

A review of the drainage design in all Villages other than Pueblo Viejo has been completed. All cross road culverts between Ch 0m -20660m and Ch21130 m - 24828m have been completed. A 13 of the culverts between 24828 and 32800m have also been completed.

### **1.5 Earthwork and Pavement Construction**

#### **A) Cut to Fill**

All cut sites between 60m and 22820 - 100% complete.

- Ch 28320m to 28460m is approximately 80% complete
- Ch 28680m to 28880m is approximately 80% complete.
- Ch 29960m to 30080m is approximately 70% complete.
- Ch 31140m to 31240m is approximately 80% complete.
- Ch 31400m to 31520m is approximately 80% complete.
- Ch32120 to 32200m is approximately 40% complete.

### **B) Subgrade Completion:**

Subgrade is substantially complete between:

- Ch 80m to 20200m.
- Ch 21000m to approx 23600m.

## **1.6 Pavement Construction:**

### **A) Subbase:**

Some sub-base construction was undertaken during the month. At the end of December sub-base construction progress was substantially complete between:

- Ch 100m to 10760m.
- Ch 21040m to 22660m

### **B) Base:**

The extent of base laid was not increased over the month. The following areas are substantially complete:

- Ch 80m to 10480m.
- Ch 21120m to 22120m.

### **C) First and Second Coat Seal:**

First coat chip seal was completed during the month. The following lengths of road have first coat chip surfacing completed:

- Ch 80m to 10333m.
- Ch 10900m to 20140m
- Ch 21680m to 22600m.

No second coat chip seal was completed during the month. The following lengths of road have second coat chip surfacing completed:

- Ch 80m to 10331m.

- Ch 12440m to 17320m.
- Ch 18190m to 19980m.

## **17 Environmental**

A copy of the EIA Mitigation Plan and the measures being undertaken by the project to meet the intent of this plan is appended in Appendix 5.

### **1.8 Structure:**

One culvert headwalls is completed during the month. Currently 93 cross road culverts structures have completed.

Bridge construction work is progressing as follows:

- San Antonio 3 – complete with exception of approach railing and riparian works. Work on approach railings begun in December.
- Santa Cruz – complete with exception of approach railings.
- Rio Blanco Bridge- Abutments complete to bearing shelf level. Plinths cast. Awaiting beams for placement.
- Santa Elena – complete with exception of approach railings and riparian works.
- Pueblo Viejo – Structure complete. Back filling on east side is complete. Back filling on west side, riparian works and approach barriers to be completed.
- Jalacte 1 – Settlement slabs cast. Awaiting backfill of approaches, installation of bridge and approach railings and completion of riparian works.
- Jalacte 2 – Deck cast. Settlement slabs, backfilling, riparian works and barriers to be completed.

## **1.9 Road Furniture:**

Guardrail installation was ongoing at two sites. No sets of rumble strips were installed. Sign manufacture and installation is ongoing. Approximately 9000m of road has edge line and centreline is complete. Line marking at the Southern Highway mile 14 intersection is complete.



**Photographs: Progress performed for Package B for the month of December 2013.**

Photo 1: Earthworks at Ch20800m - Rio Blanco realignment.



Photo 2: Earthworks at Ch 28500m.



Photo 3: Earthworks at Ch 28780m.



Photo 4: Kerb and channel and basecourse work completed in the centre of San Antonio Village. First coat seal recently completed.



Photo 5: Guardrail being installed at Ch 11400m (San Antonio Village).



Photo 6: -Rio Blanco Bridge - Abutments cast to bearing shelf level. Area backfilled awaiting arrival of bridge beams.

