

# Southern Highway Mile 14 to Jalacte Junction Road Upgrading Project

## Progress Report

For the Period Ending March 2014

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

Better weather and drying site conditions should have seen a significant increase in productivity on site during the month; however plant reliability issues, encountering rock at some of the cut sites and a shortage of base resulted in progress falling short of expectations.

Bulk earthworks were ongoing with the focus on cut and fill works between Ch 28100 & 30300m and borrow to fill works between Ch 24900 to 25500. Encountering rock at several cut sites and the breakdown of key excavation equipment and both rock breakers slowed progress.

Construction of sub-base, base 1<sup>st</sup> coat seal and 2<sup>nd</sup> coat seal was undertaken. The extent of base work was curtailed as the base material stockpile was exhausted. Issues with the bitumen sprayer stalled progress with 1<sup>st</sup> and 2<sup>nd</sup> coat sealing works.

The production of aggregate continued at Pueblo Viejo quarry with two crushers in operation. Bridges structure work continued at Rio Blanco with the deck being cast and the backfill of approaches.

## 1.0 Package B- Progress for the month of March 2014.

Description	Benchmark Quality		Quality Complete	% Complete
Clearing	32800	Lm	32800	100.0%
Stripping	51000	m	48750	93.8%
Gross Cut (exclusive of Stripping)	489138	m3	460,000	94.0%
Gross Fill (inclusive of cut & borrow to fill)	599400	m3	512,336	85.5%
Waste	195000	m3	209,380	88.9%
Cross Road Culverts	114	No	104	91.2%
Kerb, Channel and Under Drain	7000	m	4750	67.9%
Catch Pits	56	No	37	66.1%
Subgrade Completion*	32800	Lm	24970	76.1%
Sub-base Layer Completion*	32800	Lm	24020	73.2%
Base Layers Completion*	32800	Lm	23800	71.1%
First Coat Seal Completion	32800	Lm	21060	64.2%
Second Coat Seal Completion	32800	Lm	18619	56.8%
Line marking	32800	Lm	12200	37.2%

### 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) liaises with landowners and Village representatives when required regarding:

- Location of farm roads
- Provision of temporary and permanent access ways
- Removal of crops and advice regarding risk associated with crop plantings in the vicinity of the works.
- 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). Bulks borrow material.
- **Ch22720m (cutting)** – Interbedded slit and sandstone (weathered). Bulk borrow material.
- **Ch27600m-** Borrow pit on the access road to Peblo Viejo Quarry. Siltry gravel. Bulk borrow material
- **Ch32160m (cutting)** – Interbedded silt and sandstone (weathered). Bulk borrow material.

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

Earthworks are currently concentrated between Ch24000m - 27000m, 28300m- 29400m and Ch29900– 32350m.

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

Aggregate production was ongoing during March at the pueblo Viejo Quarry.

### **1.3 Utilities:**

It was established early on that watermain relocation works were 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** Placing of existing watermain road crossing in liner ducts and installation of future proofing yet to be completed.

### **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 -24828m and Ch21130 m - 24828m have been completed and 17 of the 28 culverts between 24828m and 32800m have been completed.

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

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

All cut sites between 60m and 24800 - 100% complete.

- Ch 28320m to 28460m is approximately 80% complete
- Ch 28680m to 28880m is approximately 100% complete.
- Ch29080m to 29200m is approximately 40% complete.
- Ch 29960m to 30080m is approximately 80% 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.
- Ch28500m to 28700m.
- Ch28920m to 29070m.

### **1.6 Pavement Construction:**

#### **A) Subbase:**

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

- Ch 100m to 20180m.
- Ch 21040m to 23560m
- Ch 28500m to 28600m

#### **B) Base:**

Base was laid over the month. The following areas are substantially complete:

- Ch 80m to 20160m.
- Ch 21120m to 22840m.

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

First coat chip seal (425 lineal meters) was completed during the month. The following lengths of road have first coat chip surfacing completed:

- Ch 80m to 20140m.
- Ch 21425m to 22770m.

Second coat chip seal was completed during the month (1670 lineal meters). The following lengths of road have second coat chip surfacing completed:

- Ch 80m to 12160m.
- 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:**

Five cross road culverts were completed during the month- 104 completed. One headwalls was completed during the month- 97 completed. Three Access culverts were completed- 84 completed.

Bridge construction work is progressing as follows:

- Santa Cruz –approach railings completed, 84 complete.
- Rio Blanco Bridge- Deck and footpaths cast. End Walls formed.
- Santa Elena – complete with exception of approach railings and riparian works.
- Pueblo Viejo – Structure complete. Back filling on east side is complete. Riparian works and approach barriers to be completed.
- Jalacte 1 – Bridge railing installed. Awaiting backfill of approaches, installation of approach railings and completion of riparian works.
- Jalacte 2 – Settlement slabs, backfilling, riparian works and barriers to be completed.

## **1.9 Road Furniture:**

Guardrail railing works were completed at Santa Cruz Bridge. Rumble strip were install west of Santa Elena- Ch 22130m No speed humps were completed. One Pedestrian ramp was installed. Sign fabrication is ongoing. No signs were installed. Additional edge line marking was complete between 13700m and 16500m (approx).



**Photographs: Progress performed for Package B for the month of March 2014.**

Photo 1: Cut site 28320m – 38400m. Excavator and rock breaker working.



Photo 2: Cut to fill operation occurring just beyond the Rio Blanco Bridge, associated with the Rio Blanco realignment- Ch 20900m.



Photo 3: Sub- base being compacted- Ch 25100m



Photo 4: Rip placed for embankment toe protection- Ch 24700m.





Photo 5: Culvert installation at Ch 28960m.



Photo 6: - Rio Blanco Bridge cast and end walls being formed.

