

Juneau/Greens Creek/Hoonah Intertie Project
Quarterly Progress Report
July 1, 2005 through September 30, 2005

ENGINEERING PROGRESS

Progress for the engineering and design portions of the JGCHI project continue to be moving along as planned. The site work that is noticeable during this quarter was the construction of the electrical facilities at both North Douglas and Young Bay. Other engineering included review of the submarine cable manufacturing process that was completed in late July. Submarine cable installation manuals were also submitted for review during this quarter. The B-Road transmission line engineering consisted of field changes in the design of the line.

The budget for engineering and design remains on target for all activities.

Below is a table of progress for the ongoing engineering and design functions required for the Juneau / Greens Creek / Hoonah Intertie Project. (Items in red text have been completed.):

Engineering Task	Performing Parties	Status
Power Flow Modeling and System Electrical Modeling	AELP / Power Engineers	100% Complete
North Douglas Submarine Cable Termination Yard Civil Design	AELP / R & M Engineering	100% Complete
North Douglas Submarine Cable Termination Yard Electrical Design	AELP / Tandem Systems	100% Complete
Young Bay & North Douglas Submarine Cable Termination Yard Civil Design	AELP / R & M Engineering	100% Complete
Young Bay & North Douglas Submarine Cable Termination Yard Electrical Design	AELP / Tandem Systems	100% Complete
Young Bay to Hawk Inlet (A-Road) Transmission and Fiber Optic Line Design	AELP / Power Engineers	100% Complete
Geotechnical Survey for Greens Creek A-Road	AELP / Power Engineers	100% Complete
Bid Specifications and Documents for Construction of the Young Bay to Hawk Inlet (A-Road) Transmission Line and Fiber Optic Line	AELP / Power Engineers	100% Complete
Road Surveys and Staking of the A-Road	AELP / Power Engineers	100% Complete
Routing Study/Marine Survey for North Douglas to Young Bay Submarine Cable	AELP / David Evans Assoc/Power Engineers/R & M Engineering	100% Complete
Bid Specifications and Documents for Installation of the Submarine Cable between N. Douglas and Young Bay	AELP / Power Engineers	100% Complete
Hawk Inlet to Greens Creek Mine (B-Road) Transmission and Fiber Optic Line Design	AELP / Power Engineers	100% Complete
B-Road Geotechnical Survey	AELP / R & M Engineering	100% Complete
B-Road Surveys and Staking	AELP / R & M Engineering	100% Complete
Bid Specifications and Documents for Construction of the Young Bay to Hawk Inlet (B-Road) Transmission Line and Fiber Optic Line	AELP / Power Engineers	100% Complete

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CONSTRUCTION PROGRESS

B-Road Transmission Line:

The bid opening was conducted on July 18, 2005. The contractor was selected and notice of award and notice to proceed was given on August 4, 2005. The contractor arrived at Admiralty Island on August 18, 2005 and began construction. Although there were some initial delays in receipt of some of the materials, construction during this quarter was quite productive. By the end of September, the contractor was nearly complete with the line construction and only had a small punch list of items to complete prior to project closeout. It is anticipated that the transmission line construction will be fully completed and the line tested by the end of October.

North Douglas Termination Yard:

Construction was in full swing this quarter for the construction of the yard. The more noticeable tasks that took place were the installation of the control building, placement of the two 44,500 lb. reactors, and installation of the line breakers and high voltage buss works. Preparations for the arrival and installation of the submarine cable included trench excavations and A-frame termination structure works.

Young Bay Termination Yard:

Construction was also in full swing this quarter for the construction of this yard. The more noticeable tasks that took place were the installation of the control cabinet and installation of the high voltage works. Preparations for the arrival and installation of the submarine cable included trench excavations and A-frame termination structure works. Being that this termination yard is much smaller in size than that at North Douglas activities were completed much more quickly on this side.

Submarine Cable Activities

As stated in the prior quarterly report, due to some delays in the manufacturing process, the schedule for installation of the cable across Stephens Passage had slipped about one month. This slippage however did not affect the overall outcome of the project and other activities taking place at North Douglas and Young Bay. The preparation of drawings and manuals for operations and maintenance remain on schedule with a majority of all submittals being taken by the end of August.

The submarine cable laying vessel, the M/V Sophia, arrived into Juneau on the 25th of September and the preliminary route survey and sea trials immediately took place upon it's arrival. On the 26th and 27th the M/V Westerly performed the pre-lay ROV survey of the submarine cable route. These 2 days confirmed excellent bottom conditions along the prior-planned submarine cable route. Upon completion of these activities, the submarine cable installation commenced on Wednesday the 28th with the submarine cable pull-in operations beginning at around 7am with an all hands safety meeting at the North Douglas end of the project. The pull-in operations concluded by 11am and the cable-laying vessel began the 9-1/2 mile laying operation across Stephens Passage to the Young Bay end of the project. The cable and vessel arrived into Young Bay at approximately 4am on Thursday the 29th. After a short break for the staff on board the ship, pull-in operations at Young Bay began at 9am and were completed by 9pm that evening. To recap, the total time that was required for the installation was approximately 38 hours. The cable-laying

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vessel then remained in port at Auke Bay in order to spool off the spare cable and turntable which was completed on Saturday the 1st of October. The vessel then departed Juneau on the 2nd back to Gibraltar, Spain to begin work on another project.

Once the submarine cable was installed at both locations, a thermal grout was pumped into the intertidal conduits at both terminal ends and the termination of the submarine cable began at North Douglas. The next quarter will entail the termination of the submarine cables to the A-frame structures at North Douglas and Young Bay. It is expected that these terminations will be completed by the 21st of October. The engineering staff has set October 24, 2005 as the target date for the testing of the submarine cable.

Submarine Cable Shore Works

Last quarter it was reported that work relating to the submarine cable shore works entailed taking advantage of warm weather and low tides in order to install 12" HDPE conduits on the intertidal approaches at both North Douglas and Young Bay. Just prior to the cable-laying vessel's arrival to Juneau, divers had removed the blank flanges that were placed on the conduits in the prior quarter. Then the divers installed a bell mouth assembly to the end of the conduit. This assembly offered a smooth opening for the submarine cable to pass through as it entered the conduit. Finally the divers, with help from a shore crew, pulled a 3/4-inch wire-rope through the conduits. This wire rope was used as the pull-in cable during the submarine cable installation.

Other shore works related to the submarine cable that were completed in this quarter were the land and sea anode installations. These anodes are used for cathodic protection of the submarine cable. Also completed was the grouting of the 12" conduits at both North Douglas and Young Bay. A thermal grout was pumped into these conduits to help dissipate heat from the cables and offer additional protection of the cables for corrosion-prevention purposes.

Photographs for all areas of construction are provided as individual attachments to this report.