



- NJDEP Stream Encroachment Permit.
- NJDEP Wetlands General Permit #17.
- DBC permit.
- Army Corps of Engineers permit.
- Soil Conservation District waiver.
- Threatened and Endangered Species review.
- Attendance at project meetings.
- Purchasing agent responsibilities.
- Project administration.

The project went to construction immediately after all permits and approvals were granted. During construction, Conklin Associates was retained to provide the following professional services:

- Construction survey support.
- Inspection and acceptance of material.
- Construction supervision and inspection.
- Assistance in project administration to Mr. Powers.
- Cable saddle shop drawings.
- Certification of finished bridge.

The author found the bridge construction to be most enjoyable.

Long-Term Maintenance

The routine maintenance of the bridge consists of treating the CCA lumber with Thompsons Wood Preservative on an annual basis. Another important maintenance task is the annual lubrication of the main catenary cables and suspenders with Prelube 19 HV. This is a high viscosity preservative, wire rope lubricant, and protector. An important characteristic is that it is environmentally sensitive. It is biodegradable, nonhazardous, and nontoxic. Appalachian Trail Committee policy on large bridges is that they should be periodically inspected by the landowning agency partner, Appalachian Trail Committee, or their designees. In this particular case the NJDEP Division of Parks and Forestry is responsible to have the bridge inspected by a P.E. with expertise in suspension bridges. With proper maintenance and inspections, the bridge will serve its 25-year design life.

Project Value Accounting

A detailed breakdown of peoplepower, material, and equipment, as well as summaries of the same, are provided. The purpose of this is two-fold. The first is to document the final cost and secondly from where the peoplepower and funding came. This accounting is valuable information for future projects because it provides an indicator as to the resources that must be dedicated to a suspension bridge of this style and span.



Material

1. Material purchased by the State of NJ via cash transaction	\$22,323	
2. Material purchased via Forest Service WIT Grant	\$10,000	
3. Material value donated by GPU Energy and others	\$3,513	
	\$35,836	(36.4% of total cost)

Machine Time

4. Heavy machinery & tool value donated by GPU Energy	\$ 7,402	
5. Trucking provided by the State of NJ	\$1,005	
6. Hand tools purchased by the State of NJ	\$992	
7. Tools provided by Trail Conference	\$1,345	
	\$10,744	(10.9% of total cost)

Work-Hours

8. 1,309 State employee work-hours (25%)	\$19,635	
9. 1,150 N.J. Corrections work detail (22%)	\$1,100	
10. 2,780 Volunteer work-hours (53%)	\$31,074	
5,239 Total Work-Hours	\$51,809	(52.7% of total cost)
Direct Cash Cost = Above Items: 1 + 2 + 6 + 8 =	\$52,969	(54% of total cost)
Donation Value = Above Items: 3 + 4 + 5 + 7 + 9 =	\$45,420	(46% of total cost)
Project "Construction Cost"	\$98,389	

The volunteer-driven, public-private partnership provided a bridge that was estimated to cost \$208,000 by the DBC 1985 pre-design study. Adjusting to 1995 dollars and incorporating expenses not envisioned by the pre-design study, it can be stated without reservation that the **true project value is \$300,000 or more**. This \$300,000 value was built by purchasing \$32,323 in material, utilizing donated material, enlisting the aid of resources from the NJ Division of Parks & Forestry, the field know-how and equipment of GPU Energy, and most significantly, the labor and interest of the NY-NJ Trail Conference.

Summary of Construction Costs

	<u>Purchase</u>	<u>Donation</u>
Heavy Equipment		\$7,657
Foundation	\$8,030	2,202
Towers	775	2,192
Walkway, Rails, Stairs	13,563	
Suspension	9,184	560
Tools	1,168	2,095
Misc.	<u>771</u>	<u>6,590</u>
Total	\$33,491	\$21,296