



Bering Strait Conference Marked 'Major Phase Shift'

Hal Cooper, PhD, a Seattle-based transportation consultant, is a longtime advocate for an intercontinental railroad connection across the Bering Strait, and for development corridors—rail, utilities including electric transmission, natural gas, and water, and highways—on key routes in the Americas, and worldwide. He has frequently attended scientific conferences in Russia and other countries on great infrastructure projects. See last week's EIR for a report on the breakthrough Moscow conference on the Bering Strait tunnel project.

Cooper was interviewed by EIR's Richard Freeman on May 1.

EIR: Several hundred people gathered in Moscow on April 24, at a conference called "Megaprojects of East Russia—A Transcontinental Eurasia-America Transport Link via the Bering Strait." This was sponsored by a number of agencies, but participating were the Russian Academy of Sciences' Council for the Study of Productive Forces, in conjunction with the Russian Ministry of Economic Development and Trade, the Russian Ministry of Transport, and so on, and a number of papers were delivered.

You wrote a paper that appeared in the Sept. 16, 1994 *EIR*, titled "Bering Strait Tunnel and Railway Project Will Boost Pacific Development." So, you've been involved in this thing for a very long time, and in a certain sense, you've been on the ground floor. Tell us how you look at the developments right now, with this conference, in light of the progress that's been made over the two decades that you've been working on this.

Cooper: I think what has happened in Moscow is the indicator of a major phase shift in the world. The old-time forces that have been in control in this country and this world for so long, are beginning to be removed, and no small amount of the credit for that happening belongs, of course, to the Lyndon LaRouche organization, in which you and I have both played a part.

And I think that in Russia, they have basically decided to adopt the LaRouche infrastructure development policy, with emphasis on nuclear energy, the emphasis on railroads, the emphasis on economic development and employment creation, which are so contrary to so much of the thinking in the United States today. I think the people in Russia and many of the countries of the world do not have this obsession with

political correctness that we have developed in this country, that has prevented us from being responsive to the need for economic development, and for our own national self-interest throughout the world.

EIR: This railroad will go through the Bering Strait. Tell us something about the physical aspects, both from the Russian side, and the American side, and what's involved with building this, both the tunnel and the railroads?

Cooper: You're going to have to actually build about 5,000 to 6,000 miles of railroad to connect everything. And you would be connecting, on the east side of the Lena River, near the city of Yakutsk, in the Sakha Republic. You don't actually have to go into Yakutsk, but it would be helpful to do that, because it's the largest city in that region. I was there in 1996.

You would come out through the Magadan region, and through the Koryak region, into the Chukotka region in Russia, and then a place called Egvekinot, which is a gold-mining place. It would be a junction for a future connection of lines going to the west, to Vorkuta, far in the west of Russia, 1,100 miles northeast of Moscow, which was originally laid out under the direction of Josef Stalin, prior to World War II, as well as the line going to the southwest, to Yakutsk, which ultimately would go to China over a 3,000-mile route.

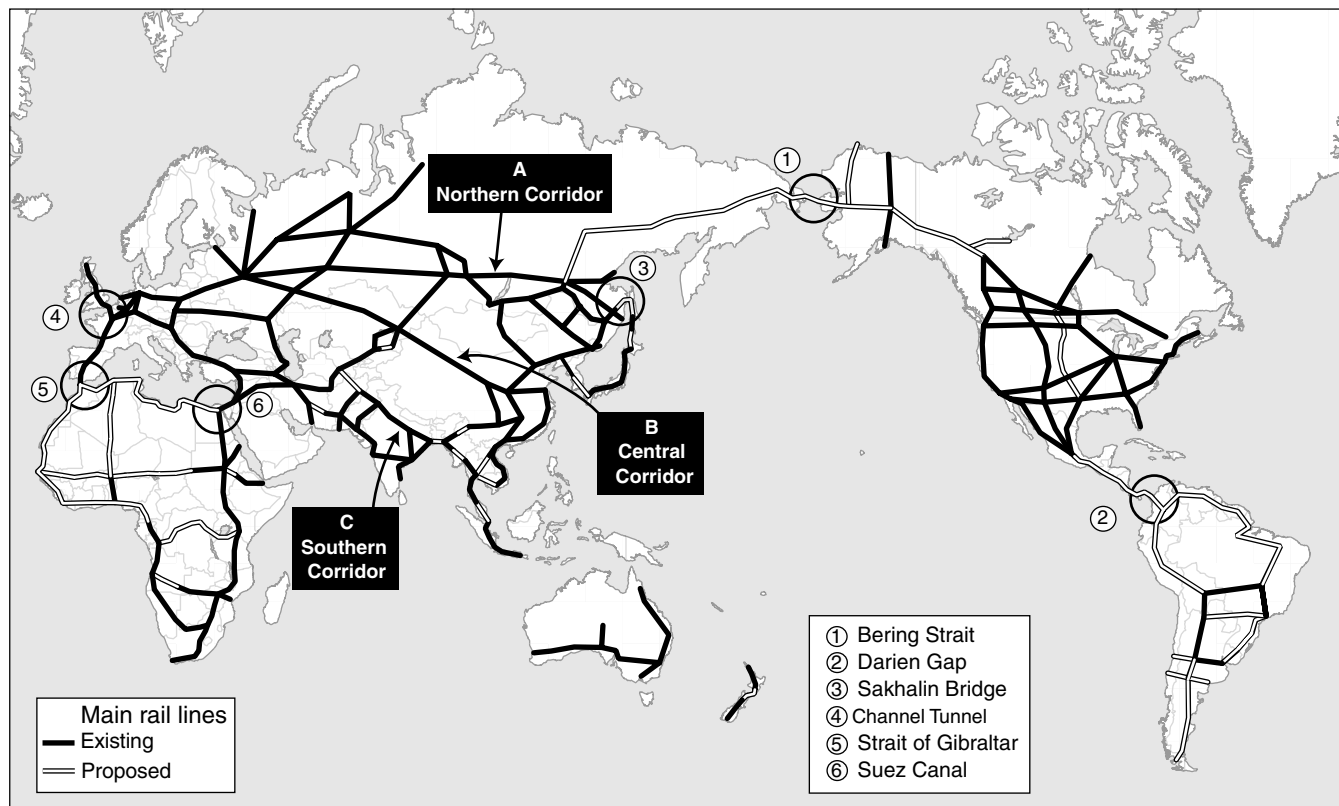
The railroad would then go through the Tenkanyi Mountains in the eastern part of the Chukotka Peninsula, and then go into a tunnel which would be about 65 miles long, west of the town which is called Uelen, right at the edge of the Bering Strait, on the Chukotka side. And then it would go through a tunnel.

EIR: Is this the tunnel that's going to cross the Bering Strait?

Cooper: Yes, it would go under the Bering Strait. Actually the water there is 180-200 feet deep; it's relatively stable limestone chalk, there are no major rock fissures or earthquake faults, or anything like that. There are two islands in the middle: There's Big Diomed Island, which is about two miles by four miles wide (that's in Russia), and then there's Little Diomed Island on the U.S. side, which is about three miles away; its about one mile by two miles. It is an inhabited island, there are some native people who live there; whereas on the Russian side, I believe there is only a weather station, military facilities.

FIGURE 1

Proposed World Land-Bridge



EIRNS

Each of the islands is about 20 miles away from the shore. On the U.S. side, you would come to Wales, and then to the edge of the Brooks Mountains, and then through, ultimately, a place called Galena, and you would parallel the north side of the Yukon River, and ultimately cross the Yukon River, and go into Fairbanks.

EIR: In building this, you said you would be excavating the tunnel through limestone. What type of machinery would be used?

Cooper: Just conventional tunnel-boring machines would be used. Actually, the biggest physical problems associated with building the Bering Strait tunnel are not in the tunnel. They are on the east and west sides, because of the mountains, and particularly on the Russian side, because of the steep grade of the mountains. The way to get around this is to build on the north of the Tenkanyi Mountains, near the Arctic coast.

I know an engineer named Ben Angel at the University of Alaska Fairbanks. He did an extensive set of studies on the right-of-way analysis on both sides of the Bering Strait, as part of his master's thesis. It was quite an interesting study, and in fact I make extensive reference to his work in my feasibility study. He went so far as to do an analysis of how

much soil would have to be moved, and how many bridges would need to be made, and how many additional tunnels. And actually the single biggest physical problem with the Bering Strait tunnel is the Tenkanyi Mountains on the west side, because if you try to go right straight through them, you're going to have to build another long tunnel through harder rock, or go around to the north, which sounds like the most reasonable approach—it just makes the line about 20 miles longer. And eventually, you end up at a place called Egvekinot, where you're up on a cliff above a nice bay—I was there in 1997. It's a gold-mining place, and there's a harbor there.

Egvekinot would become a major world trade center if the Bering Strait tunnel were built, and especially if the lines went to the southwest, as well as to the west, which I think, in the future, they will ultimately need to do to both Yakutsk and to Vorkuta.

EIR: Southwest of Russia?

Cooper: Yes, it is what is called in Russia the Near Polar Magistral, or NPM route, and it goes from Vorkuta, which is way, way, far in the west of Russia, in the Komi Republic, about 1,100 miles northeast of Moscow, and then it comes

straight across on the south shore of the Arctic Ocean. And actually in 1997, when I went to Chipoka, I flew in an Aeroflot plane, and it was a beautiful sunny day, and I was able to inspect almost the entire coast, because it was clear. We were flying over the water, so you could see all the land features, and we flew all the way along where the route of this Near Polar Magistral would go.

EIR: I assume the Russians have done significant studies on this?

Cooper: Actually, those studies go back to 1937, 1938, 1939, and 1940. Stalin directed that all those studies be done. They were not necessarily done under the best of conditions, and in fact, one of the original intentions of building those railroads, was to connect all the concentration camps together into the transportation networks.

But, you know, as the efforts came along towards the war, this became part of the planning process, and of course, when Harry Hopkins was sent to Moscow right after Pearl Harbor to meet with [Russian Foreign Minister] V.A. Molotov and other people with Stalin. One of the issues that came up was to determine if it was reasonable to supply Russia from the United States by railroad through the Bering Strait.

EIR: Now, you've mentioned, in a paper that you wrote in 2004, that there is a whole story here, in terms of the Seattle district of the Army Corps of Engineers. Can you tell us about that?

Cooper: I'll discuss the U.S. route later, but first, on the Russian side, Stalin ordered a series of feasibility studies of railroads to be built, including the tunnel to Sakhalin Island, and so forth—a great deal of work was done. And what is being talked about now in these great infrastructure projects that are being proposed, is only a reincarnation of what Stalin had originally proposed back in the 1930s for economic development of the Soviet Union.

Whatever horrible things Stalin did, he was dedicated to upgrading the conditions of the infrastructure and the economy of Russia. You cannot fault him for that.

His way of going about it wasn't right, although his objective, what he was trying to get to, was right. He most certainly did not conduct things in ways that a democratic society would work, or even as Russia does today. You do not hear the Putin Administration or other people touting what Stalin did; but actually those original plans were laid out during Stalin's time.

Now let's go over to the U.S. side.

There had been several attempts, early in the 20th Century, to build a railroad up to Alaska. None of this got terribly far. One came relatively close in 1906, but it didn't actually happen.

But, in early 1942, at the start of the war, there was a need to consider getting to Alaska. And one of the proposals was to build a road—and the traffic would come from Great Falls,

Montana, to Fairbanks. And then it was to go to Nome, and it was to supply Russia.

It really came about because of these meetings between Harry Hopkins, with Molotov and Stalin, and the other people in Moscow during the early to mid part of December 1941.

They came back, and they said: "Yes, we've got to get things moving." So they decided to build what was called the Alcan Highway. It started in Dawson Creek, British Columbia, and it ended up in Fairbanks. There was actually a road from Fairbanks to Delta Junction. There wasn't much after that, but there was a road—basically a dirt road.

That was actually to tie in airfields. And those airfields were built as ferrying points for the planes that were carrying supplies to Russia. The runways were built, originally, to help Britain, but it was ultimately used to serve Russia as well.

The planes would fly with supplies from Great Falls, Montana, and they would go either to Fairbanks or Nome, and Russian pilots would come over—they would be trained in these planes with U.S. people—and then they would fly the planes back with all the supplies, and then they would keep both the supplies and the planes. Then they would come back to get another one. And there were always these shuttles going back and forth between Alaska and Chukotka.

EIR: And this was '41-'42?

Cooper: 1941. And that continued until the end of the war. That was one of the ways in which Russia was supplied from the United States, and it's interesting, that Franklin Roosevelt overruled Winston Churchill to make this happen, because Churchill was adamant that we *not* supply Russia, either through Alaska or anywhere else.

And Roosevelt said, "No, we're going to help Russia. They are our allies, and we're going to help them."

The planes at that time didn't have a very long range—they only flew short distances at relatively low speeds. So it wasn't a real high-speed air service at that time, but it was the best that there was.

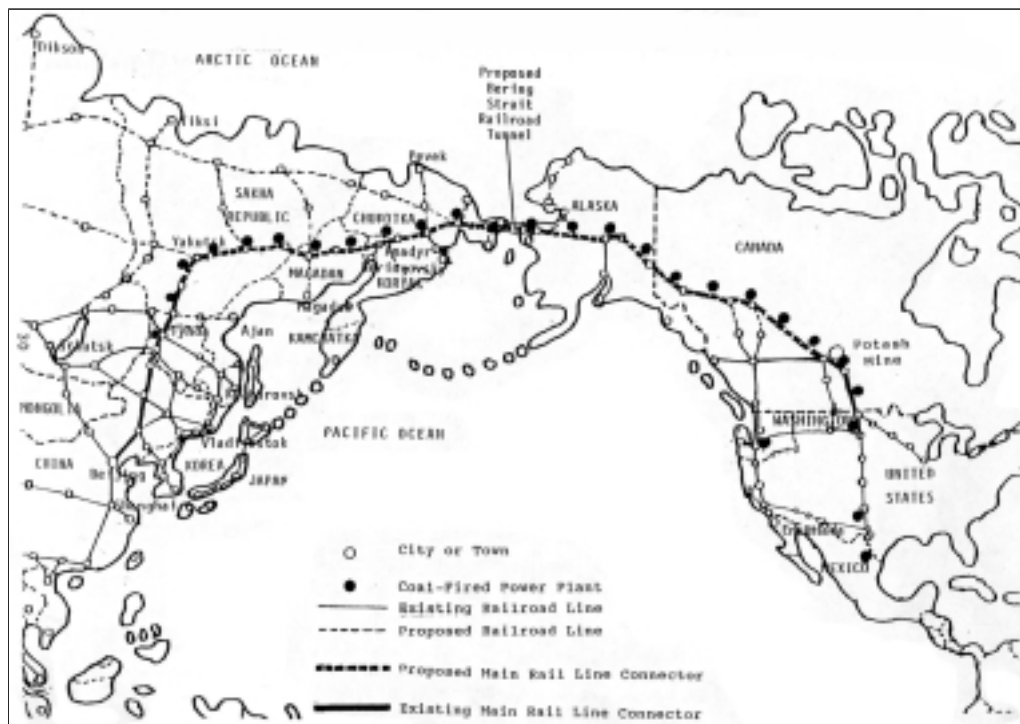
Now, in late 1941, after Harry Hopkins returned from his trip to Moscow, although they had discussed a railroad to Russia, its logistics just weren't going to work for a military purpose, because they needed to do too much too quickly—it would take away from other things.

But what Frederic Delano—Franklin Roosevelt's uncle, who was real wealthy, and I believe he had been an executive of the New York Central Railroad, at one time in his life—went to Franklin, and he said, "Franklin, look, we really need to consider building a railroad up to Alaska." And he said, "We have to be prepared for the possibility of a Japanese attack, and we have to be able to supply Russia." And he said, "That's the best way to get the troops and materials up there. So you need to study it." Franklin said: "All right, Frederic, We'll do it."

And he commissioned a study, and it was done by the U.S. Army Corps of Engineers' Seattle office. And they just

FIGURE 2

Proposed Route for the Intercontinental Railroad Line Corridor Between Asia and North America Across the Bering Strait, Employing Power Plants and Transmission Lines



This sketch map was included in a paper by Hal B.H. Cooper, Jr. (Cooper Consulting Co.) and J. David Broadbent, president of the Canadian Arctic Railway Co. (British Columbia), for presentation to the 70th Anniversary Conference on "Railroad Transportation Developments in Siberia," held at the Siberian State Transport University at Novosibirsk, Nov. 20-28, 2002. The series of coal plant sites are shown to indicate the importance of power for both electrified rail, and regional economic activity along the corridor, which could be powered by nuclear energy for the most advanced development.

marched up into Canada, and got started. They didn't ask for permission; they just showed up. And from January to June of 1942, they did the study. It's a 130-page study—it's actually quite interesting. When you look at the cost numbers then, as compared to today, you'll be astounded. They were looking at \$50,000 a mile, or something like that, to build it. And of course, early in World War II, that was realistic, from the end of the Depression, in terms of construction costs at that time.

They were very concerned about the possibility of a Japanese invasion of Alaska. Well, it happened, actually. The Japanese occupied the Aleutian Islands of Attu and Kiska in mid-1943. That's several hundred miles south of the Bering Strait, where the earthquake fault is, and the volcanos are. It's stable up at the Bering Strait, from a geological standpoint, in contrast to the Aleutian Islands.

Well, Admiral Halsey—this was at the time after Pearl Harbor—was very concerned about the West Coast of the United States and Hawaii, since most of our ships had been sunk. Fortunately the *Enterprise* and the *Yorktown* aircraft carriers weren't, but they were very concerned about another Japanese attack. They had intelligence that it was going to happen. Were the Japanese going to attack Alaska, or were they going to attack Hawaii?

So Halsey took the calculated risk that the Japanese were going to send a small number of ships with troops to the

Aleutian Islands, but their main force was going to get ready to attack Hawaii.

That led to the Battle of Midway, after which there was less interest in the railroad to Alaska.

In the meantime, this proposed railroad actually went by a route from Vancouver to Prince George, through the Rocky Mountain Trench, which is now Williston Lake and a large part of northern British Columbia, so it wouldn't be available for a railroad today—it was then—through the Tintina Trench, and then along part of the route of the Alaska Highway. Actually, there was an oil pipeline over part of that route, that went from Fort Simpson in what is now the Northwest Territories. It went to Skagway, and then up towards Fairbanks, and they could supply oil. This oil was used to supply some of these airfields.

EIR: Coming from Alaska, let's say we cross the Bering Strait through a tunnel, which has been bored—how many tunnels will we have, by the way?

Cooper: At the Bering Strait, only one. It's just one long one with two or three tubes. There are islands in the middle, so you have places to enter it. It's only one tunnel. There are no tunnels to the east of Fairbanks.

There are several tunnels that will be needed east of Nome, Alaska, west of Galena, through the mountains. And that is

probably the most difficult single stretch on the North American continent to build that railroad.

That's because of the terrain: There is a lot of permafrost land, and steep grades for the rail. It's not easy terrain to build in. It's much more difficult than it would be east of Fairbanks, where most of it is relatively flat, except near Dease Lake and east of Watson Lake.

EIR: I understand that you've been looking at how, if you come through Fairbanks, and start heading southeast, there are actually two branches: One would go through Fort Nelson, and all the way to Chicago, and another—

Cooper: That's correct. Let me explain. When you leave Fairbanks, you go down to near the Alaska border to a place called Tok Junction, about 20 miles northwest of Alcan, at the border. And that's right across from Beaver Creek. It's a town of about 800 people. Beaver Creek is in Yukon Territory; Alcan is in Alaska.

The Tanana River runs south of that, and matches the railroad, basically parallel to the Tanana River, which ultimately runs into the Yukon River, which ultimately goes into the Pacific Ocean. And you would parallel the Yukon River for 250 miles, west of Fairbanks, on the north bank of the river. But as you come into Tok Junction, there are two possible routes. One goes right along the Alaska Highway through Beaver Creek, just exactly the way the Alaska Highway goes. The other goes north of the White and Ladue river canyons, and ends up in a place called Carmacks, north of Whitehorse in the Yukon Territory. The Yukon River starts there, flows north, and then comes back south and west again; it is a pretty big river, even as far away as Whitehorse, which is a beautiful place.

But then it would split, and you have one line that can go through the Tintina Trench, through Carmacks, so that it would rejoin that at Watson Lake. The other line would come south along the Alaska Highway, and it could go to Fort Nelson, and then down to Dawson Creek, and east to Edmonton in Alberta.

The other line would go from Whitehorse to a place called Jake's Corner, about 30 miles east of Whitehorse, or southeast, and then it would head southeast through British Columbia, and then ultimately end up just right near Prince George. It would come down at Takla Lake, Chipmunk and Minaret, via Dease Lake, and a lot of these little settlements, and it's mostly forest there.

The extension would come from Dawson Creek, to near Grand Prairie, Alberta, and then come down to a place called Whitecourt, Alberta. I think it's called the Sandy River there—you need a big bridge there, believe it or not, about a mile long. Then you would come down and ultimately you end up at St. Albert, and you're right there in Edmonton, the capital of Alberta.

There's a Canadian National Railroad branch line that actually would just follow along Highway 16 and Highway

11 to Vermillion, and Lloydminster, and Saskatoon, and eventually end up down in Regina. And then you would follow the Canadian Pacific Railroad right into the United States at Portal, North Dakota.

EIR: So basically you've got a rail line in northern British Columbia, but you've got something that's missing between there and Fairbanks?

Cooper: There's a 800-mile-long gap, where there is no railroad; that has to be built, to fill in the missing section, at a minimum.

EIR: A lot of that is in the Yukon Territory, and I know that the Canadian government blows hot and cold on this issue. What do you think is the status right now? Because that rail line covering the gap would have to be built, for this Bering Strait tunnel and rail linkage to work, right?

Cooper: It would be essential, yes.

EIR: What is your estimate now of both sides agreeing—the Alaska legislature on the one hand, and say the Yukon Territory legislature (but they would have to talk to people in Ottawa to make this work? Is that right?

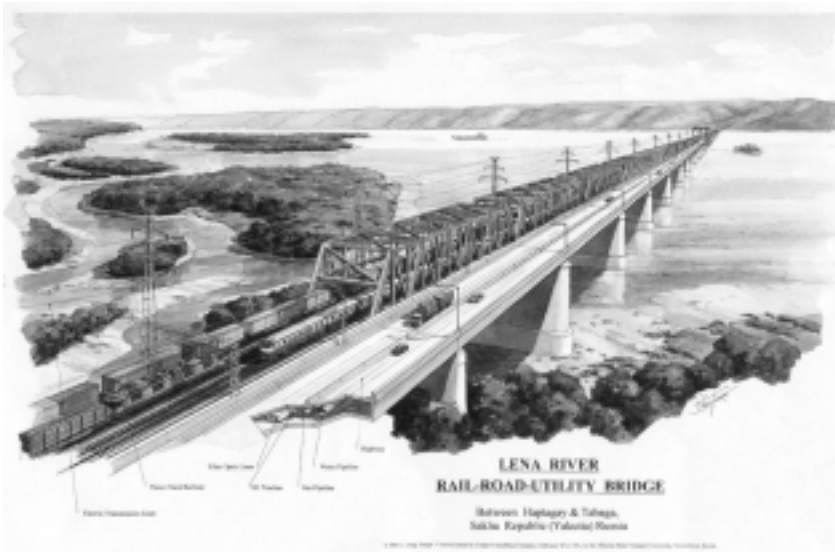
Cooper: Well, they would be likely to give permission. But as you know, I'm working with a private company, the Canadian Arctic Railway. I've actually done a feasibility study for them, and they're looking to finance it.

Private financing is probably the primary vehicle by which this project, at least east of Fairbanks, would be done. It's going to require some government help, whether it's loan guarantees or whatever, but the real big participation of the government is going to have to be west of Fairbanks, because of the difficulty of the terrain, the fact that you're going to have to deal with the native populations.

But there is something that you need to consider—and you know it affects China. You asked about traffic: I'll get into that now: What are you going to haul? Oil, coal, potash, containers, machinery, oil and gas development equipment, all kinds of consumer goods, and passengers. And I think there's going to be a great opportunity, not only for people to travel along there because they had work, but for tourism purposes. You know the Alaska Railroad makes money on its tourism. It has a huge business with that, and now it's going to expand. We could have as many as 3,000 to 5,000 passengers a day, on the railroad.

EIR: Do you have a sense of how many rail cars may be travelling during the course of a year, to bring goods and so forth?

Cooper: You probably wouldn't build it until you had 100 millions tons a year of cargo. But you would get that. How many carloads is that? Well, figure each one is 100 tons—100 million tons would be 10 million carloads. Or 5 to 10 million, probably. A lot of cargo would be hauled.



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The proposed bridge would cross the Lena River near the city of Yakutsk, in Russia's Sakha Republic, creating a rail link that would sweep east to Alaska, and south to China. See Figure 2.

Now you have a gauge problem you've got to deal with, because the Russian gauge is different from the U.S. gauge. China is on the U.S. gauge. I did a lot of studies in containerization as part of this feasibility study, and I would look at bringing traffic from China to the United States by rail, as compared to by ship.

By railroad, the distance is so much shorter with the great circle—it's about 8,500 to 9,000 miles, say, from Xian [in China] to Chicago. By a combination of land and sea transport, the comparable distance is something like 13,000 miles. And then you have land-side harbor problems, both in China and on the West Coast of the United States.

EIR: You've estimated that it would be cheaper to go by rail?

Cooper: Cheaper, than if you go by the conventional land-ship-land containerization. Say if you had the Panama Canal built, and you were going to go to New York, the cost of moving by rail would be a little bit—maybe 1%, 2%, or 3%—more than going by ship. But it would be in 12 days rather than 30. Well, is time worth money in international shipping? You're darn right.

Personally, my feeling is, when the international shipping companies of the world decide that the Bering Strait tunnel needs to get built, it's going to get built. And if you want my opinion, I have the feeling somehow, that this is the background of what is going on in Russia today. I can't prove that, but I believe it. And of course, the most important of these companies is the APMøller Maersk company, from Copenhagen, Denmark, because they're the biggest shipping company. But all the others have a role. You know, if they put containers on the trains in the United States, they could cer-

tainly do it between Russia and the United States, or China and the United States.

EIR: If you went from Xian to the United States, how many days are you looking at, by rail, and how many days are you looking at by ship?

Cooper: Ten versus 30. Actually, if you are going by ship-rail, it's about 20. It's 10 by rail, it's 30 by all water, all shipping. The only thing that's shorter, of course, than going on the all-rail route, is putting the container in a plane, and flying it to the United States, which takes all of one day. But, boy, is the cost up—six or seven times!

EIR: Dmitri Mendeleyev, who of course was a railway builder, and also a great scientist, said that a railroad is like yeast: There is great fermentation, and uplifting of the population. How do you look at that?

Cooper: I think he is 100% correct. You

know, this country was much more tied together when we had railroads. And when people travelled they could see everything on the ground, and they understood. Well, let's look what we do today. We fly from one urban area to another urban area. Do we know what's going on in the areas in between? No. We have no idea. Urban America doesn't have a clue what Rural America is about, does it?

You know, when we had railroads as our predominant transport, back prior to 1920, all these little towns were quite active. Many of them have died off, or are greatly reduced from what they used to be. Of course the railroad companies in this country operate on the point A to point B mentality. We forget everything in between. And if this country returns to a predominantly rail transportation system—which I think in the next ten years it's going to, because of the rise of the price of oil—we're going to have to put an end to point A to point B mentality in the railroad industry. Which means we're probably going to have to go back to a regulated industry, just as the LaRouche movement has been saying.

EIR: One of the things that LaRouche has often stressed, is: When you build rail, you build something in between: you build towns, you build development corridors. When you go by ship, you're not building anything of that sort. And in that context, I know that this rail line, if it were built, would go into Russia, and eventually hook up with the Trans-Siberian Railroad. Would it also go to, say, South Korea, to China? How would that work?

Cooper: Well, let's take China first, because actually, when you come to the Sakha Republic, near Yakutsk (which is where the Russian announcement of where this starting point

would be), it is a huge region of northeastern Russia. It used to be called Yakutia. Yakutsk is the capital—it's almost double the size of Alaska. It's an enormous region. It's the largest political subdivision in Russia. It has a population of 1.1 million. You would just go straight down into the northern part of China. You cross the border at a place called Dzhalinda, and then on the south side of the Amur River is a place called Lianyin. And then you have about a 60-mile gap in China that is not completed—there's no rail line there. And it comes to a place called Zhangling, and then it would join the Chinese rail network.

Some of the studies that I've seen, done in Russia, ignore the fact that you have an enormous traffic potential going from the Sakha Republic to China. But you've got to deal with this gauge question.

EIR: Now you are also familiar with some of the rail-building that the Russians have done in North Korea. How would this work, connecting us to the Koreas?

Cooper: I was very much pleased to see that the LaRouche movement has really been promoting the development of rail. The fastest way for things to change in North Korea, is to get some rail road lines built across it. And to illustrate to me the total idiocy of the Bush Administration's foreign policy, here they are trying to stop rail roads from getting built across the Koreas—that would be the fastest way you'd make things change.

EIR: Let's take the broad sweep. We're now building a rail line that's going to go from the United States, through Canada, through the territories like the Yukon territory, to Alaska, then into Russia. You've got vast expanses of undeveloped parts of this world. And of course, taking these rail lines across the land-bridge, you're going to go into areas like Afghanistan eventually, and sweep all the way into Iran on the southern route, and into Europe. What would this do for the development of those territories?

Cooper: They would just explode. You would put so much additional traffic, and business, and economic activity, it would just far, far exceed anything that exists now. And you would allow many of the resources to be developed, and of course you'd have a much greater level of integration of trade, transport, and commerce, among the different countries.

I've been on the Eurasian Land-Bridge in China to see that. It's a very heavily travelled railroad line, lots and lots of trains. Until two years ago, they were still running steam locomotives. I was over there in 2000, and they were running steam locomotives, in some areas, not in all.

They are beginning to electrify in some routes, and of course, they're doing maglev and high-speed rail, so they are certainly ahead of the United States in what they are doing, as compared to what they're talking about. And it would have an enormous impact on that entire region.

In China, they've been building this to Urumqi in western

China, through the capital of Kazakstan, and then through Tashkent, and down through Ashgabat, and finally across the border into Iran, I guess at a place called Mashhad. But then you've got another gauge problem, because it runs on standard gauge. India, interestingly enough, has five railroad gauges.

EIR: What would you do to standardize gauges?

Cooper: I think you should put everything on the U.S./European standard gauge—just do it. Russia would, of course, be the one that would be the last that would want to do that. You would have to stop everything for a period of time, and move the rails 3.5 inches, which is what the difference in gauges is. When we're building this system, we probably ought to build a standard track and a Russian track, and then figure that eventually we'll convert the Russian track to the standard track.

EIR: How much of this rail would we electrify?

Cooper: All of it. It would need to be, because you're going to have so much traffic on it.

You would start out with diesel, and of course the tunnel would have to be electric to start, anyway. The Russians would make it electric from day one. They've already electrified the trans-Siberian railroad, they're in the process of electrifying more. They don't have this obsession with perpetuating the oil and gas lobby in power, like we do. Even though they are a big oil producer, they want to ship it to other countries rather than use it themselves, so they electrify their railroads instead.

EIR: You say they've electrified the trans-Siberian Railroad. How much. . . .?

Cooper: 6,300 miles. It's all electric, I think, as of three years ago. And of course that's where nuclear power comes in, because it supplies the power. And of course, Russia is now making a major commitment to expansion of nuclear energy, and electrification of their economy, including of their railroads.

EIR: You know, Putin said, the other day, that 30 nuclear power units were built during the entire Soviet period. And then he said, in the next 12 years we need to build 26 nuclear power plants, using the most advanced technology. And of course, that's just for Russia—he plans many for around the world. He has said that he plans to have Russia increase its electrical output by two thirds by the year 2020. How does that sound to you?

Cooper: I think it's what he needs to do, and it's going to happen.

EIR: Now you also did some studies on what it would take to electrify American rail, and as I remember, you began with 26,000 miles and then on to 42,000 miles. Can you say what

the context of that is?

Cooper: The United States, thanks to the control of these financial interests, and the oil and gas companies, and the highway lobby, and all these groups who want to perpetuate the status quo, no matter how much harm it does to the country, in my opinion, they have done everything that they possibly can to make sure that the American public doesn't even think about the fact that we need to electrify railroads. And that mentality has been in place for a long time, but it's been terminally in place since 1980. Carter tried, but he didn't get very far. And that was the last time there was any significant effort at the government level to do anything about it to electrify the railroads.

But the plain, simple fact is, oil is getting too expensive. Our entire transport and energy infrastructure in this country was built around the fact that we had cheap oil. Well, it's no longer cheap. It's not ever going to be cheap again. And we have to make a change. And I think it gets to electrifying the economy, far more beyond what we have now. And of course the missing link is transportation. That has to happen. It needs to happen soon. We have to eliminate our petroleum dependency.

EIR: And that would mean a tremendous amount of nuclear power?

Cooper: Well, it would mean 100,000 megawatts of new electricity, over 20 years. Our generating capacity is 700,000 megawatts now, so that a 15% increase, to 800,000 MW, would satisfy the need to electrify our railroads. Not anything out of the realm of reality.

EIR: Some people have said that we can keep shipping goods, say from Asia, and we can just bring them into the ports of Long Beach and Los Angeles. And those are two big ports. About 25 to 40% of American trade from abroad comes through there—then they just ship them out through the Alameda Corridor. What's your thinking on that?

Cooper: I got a letter from a fellow that I know, who lives in Los Angeles, who tells me that the railroads are now turning traffic away from the Alameda Corridor use because they don't have any more capacity. The biggest problem with that analogy is that you have transportation bottlenecks on the land. . . And of course, two years ago, it was pretty critical in Los Angeles, which is why they had to start bringing the ships up to Seattle in much larger numbers. In fact, they overloaded our port, because they couldn't handle it in Los Angeles.

EIR: And your port is up in Seattle?

Cooper: Yes, Seattle-Tacoma, right. My assessment—and its done in great detail in my study—is that 20% of the trans-Pacific traffic, and the Russians say 6% of the world's commerce, could be going through the Bering Strait tunnel. I don't think that's unreasonable; 200-300 million tons a year looks like a pretty reasonable number.

EIR: So you take it off the ships. . .

Cooper: No, what you can't handle on the ship you bring by train.

EIR: Would you put a port up in the northern part up there, in Alaska, where some of these Asian goods could be shipped to?

Cooper: If you did that, you would do it at Port McKenzie, just southwest of Anchorage. Actually that is discussed in my study. That's a possibility. Prince Rupert is probably equally logical. What's going to happen at Prince Rupert? They're going to bring it up to 2.5 million containers a year, and then it's going to be at capacity.

Every year, we add in trade about the amount of traffic that's handled through the Port of Oakland. That's what we add throughout the world.

A couple of things may change this. Well, if the U.S. dollar falls substantially, we aren't going to import any more goods. It looks like, from what I'm reading from the *EIR* and other sources, that that could be happening. Oil prices are going up. When are we going to get to the point where it is no longer going to be possible to implement the free trade syndrome, because there's not going to be cheap oil available, and without any cheap oil, the free trade movement becomes economically unviable.

We're going back to a manufacturing society because we need to in the United States, as the result of high oil prices.

EIR: In your rough estimate, what would building this do for the U.S. economy?

Cooper: It would require us to retool our economy. You know, the machine tool decline would have to reverse. All the domestic supply industries, and, of course, the need for developing all the resources would go back up again, and all that would have to happen.

EIR: One last thing: You mentioned that you were contacted by Associated Press?

Cooper: Yes, I was interviewed by them last Thursday.

EIR: What did they ask you?

Cooper: A lot of questions, that started out along the line of: "Is this a fantasy?" And "we don't believe it." It's for real. By the time I got done with this guy, he did believe it. And I said: "Russia has a strategic interest. And it is to sell oil and gas, and electricity to the United States. It's in their strategic interest. They want to put us in the same position that western Europe is in."

But we have to realize they are the repository of the resources. And it is in their strategic interest to do this, and that's why they're proposing it. I said, also, they have the financial capability right now to do this. I said, look, if they wanted to finance this, what would they do? They would take some of their gold—can they get \$100 billion of gold? Yes, at \$600 an ounce, they certainly can. That's our collateral.

Now, do we make somewhere between \$6.5 and \$10 billion a year in oil revenues that could be pledged to keep this thing going. Certainly could. I said, if you had 20- or 30-year bonds, at 5 or 6% interest, would this work? Certainly would. And I said, that is the point. And what is your traffic potential? 200 to 300 million tons a year going through. I said look, just to give an example: coal. There's huge amounts of it in northwestern Alaska. Where could you ship it to? China. Yes, some of it would go by boat, but you've got ports that are closed part of the year because of ice, and the port infrastructure is relatively limited; it's all clogged up anyway in China.

I said, why don't you ship some of that really low-sulphur coal from Alaska, and put it by the people who use it in their homes for heating or cooking in China, which lots of people there do. Then you would have high-quality coal, which would be low-sulphur coal, low ash, low volatile content. It would improve air quality, just that alone! And it would be good for freight traffic business. And thus there would be plenty of traffic going west through the Bering Strait tunnel. He said: "Oh." I said, it's something you could do.

EIR: Is the Bering Strait frozen for half the year?

Cooper: Here's my understanding of it, and I flew over it in 2001. I went up to Nome, and the plane went to Kotzebue first, we flew along the Bering Strait in mid-June. South of the line where the Diomed Islands were, from Wales to Uelen it was open water with patches of ice. North of that line, north of the Bering Strait, where the tunnel would be, was covered with ice, with some open water. Now the global warming enthusiasts are saying, the ice is melting in the Arctic Ocean, its melting, and blah, blah, blah. Maybe it is, maybe it isn't. Ice is a factor, and that's why you probably wouldn't want to build a bridge. Not only that, it's where the storms of the world start. The weather is pretty horrible, and you know, they say there's no place like Nome—been there.

I was there for—believe it or not—a summit conference between Alaska and Chukotka in June 2001, as the representative of State Representative Jeannette James.

It was interesting to see, out in the ocean, the water, how the difference in the ice was. But you have to deal with ice, you have to deal with bad weather, you don't want to build a bridge because of the weather. It would be better to build a tunnel where it is 70 degrees, and you're a hundred feet below where the water is.

EIR: So you said the deepest part of the Strait is about 170, 180 feet.

Cooper: 170, 180, 200 feet. Something like that.

EIR: How much would you build the tunnel below the water?

Cooper: About 100 feet.

EIR: So that's not really that deep?

Cooper: No, not really. It's not like Gibraltar, where you've got to go down quite a ways, 1,000 or 2,000 feet, because of the way the shape of the channel is.

EIR: LaRouche has been talking about thinking of the next 50 years, and how you plan projects for the generation, two generations, because many of these great projects have a life-span of that. How long would this project take?

Cooper: the minimum would be 10 years. If you got serious, you could get it built in 10 years. It could be as long as 20 years. Actually, what I think is going to happen is it can be built in increments, you can get started—I noticed my cost projections, if you built just from Yakutsk to Fort Nelson, they were looking at \$65 billion, with a double-track system. And the tunnel cost was about \$15 billion, which is about the same as the cost of the English Channel tunnel—a shorter link, but more complicated.

My assessment was, if you build a double-track tunnel, it's about \$15 billion, but I think you're going to need three tracks, and my estimate is, it's \$25 billion. And my estimate is probably \$75 billion for the same distance, instead of \$65 billion.

EIR: OK, so you're going to have three tracks. Would you have fiber optic cables in there. . .

Cooper: Yes, and electrical utilities. Power plants along the line at 300- to 400-mile increments, or whatever it is. Nuclear, coal, gas, hydro—whatever will work there. The thing is, once you build a power plant, if you build it bigger than what the electric railroad's demands are, you can use all the rest of the electricity for local economic development. Exactly what the LaRouche movement has been advocating.

EIR: In terms of comparing this, say for instance, to the tunnel between France and England, or in Japan, the Sikan tunnel, how would you rate the difficulty?

Cooper: Probably easier than either of those, because of more stable soil, and the fact that it doesn't have to be as deep. You don't have rock fissure problems, as you have in the English Channel, and you're not building in an earthquake fault zone as you are with the tunnel in Japan.

EIR: Former Alaska Governor Walter Hickel was at this April 24 conference, describing such big projects as "the alternative to war." The Russians, historically, were oriented toward American System networks, which helped build the Trans-Siberian Railroad. Do you think the Russians are thinking about such precedents now?

Cooper: My personal belief is that it was Vladimir Putin's intention, from the day he became the President of Russia, on New Year's Eve of 1999, that he wanted to establish a strong relationship with the United States, and even wanted there to be an alliance. That opportunity is still open, and needs to be based around the Bering Strait railroad tunnel project.