

HaRakevet

הרכבת

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and the Middle East
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140.01.

The proposed Etihad Railways Push Pull set. Photo IRJ

The start of a new Series is always opportunity for some meditations. How much longer can we keep going? The team that helps put Harakevet together and proofreads and prints and sends it out is getting older.... But it would be nice to aim for Issue 150 at least. Please God. We do, after all, do it all for fun..... As Steve has more family commitments in the USA the summer issue will be in July, not June.

On the whole we try to avoid getting dragged too deeply into political events although they cannot be wholly ignored. At the end of December 2022 Israel's 37th. Government and cabinet was sworn in; for our concerns it is important simply to note that Miri Regev remains Transport Minister – for now. However the involvement of what are often called "Religious Parties" means that issues concerning infrastructure and maintenance work on the Jewish Sabbath have also arisen and have become controversial. One wonders whether the haste with which IR is relaying, electrifying, modernising platforms etc. is to get as much done before further problems arise.... ? Barely a week goes by without some further modernisation project on a section of the network.

From a personal point of view more irritating were the facts that the packet of Issue 138 (September 2022) sent by Steve to me in Germany never arrived; A replacement package with copies of Issues 138 and 139 did indeed arrive in December but (a) had to be collected from a central UPS shop and (b) I received a week later a letter demanding just over €8 in Customs Duty! All part of the Brexit results....

News is exciting – work on building the "renewed" 1918 north-south line (now called the Eastern Line) and Modi'in to Rishon continues with tenders for a new station at Ramle South and there are visions (tunnel visions?) for a new Metro network in Jerusalem and much more besides. Only a few decades ago Syria and Iraq represented complex ancient civilisations while the Arabian peninsula was mainly sandy wasteland with some tiny primitive medieval principalities along the Gulf coast. Now Syria and Iraq are ruins of their former selves whereas the Gulf States are booming with railway plans as is Saudi Arabia. Saudi Arabia now has a surplus of over 27,000 eager female candidates for the job of driving trains, whilst "We have a problem with the human element" says the Egyptian Minister of Transport. Hmmm.

So, a mix together with some historical items. Enjoy!

The Editor.

140:03 • *G 26 N° 605, Dimona, 31 January 1993.*
(Photo courtesy of Gilles Lefranc)



News from the line

140:04.

(i). TRACKWORKS AT TEL-AVIV HAHAGANA

From a press release of 28.11.2022 by Israel Railways Ltd.:

"As an integral part of annual infrastructure maintenance programme of upgrading and replacing track elements at Tel-Aviv HaHagana railway station, the following changes on traffic will take place on Friday, 09.12.2022 and on Saturday night, 10.12.2022:

*Trains between Modi'in and Tel-Aviv Savidor/Central will not operate.

*In the night between Thursday 08.12.2022 and Friday 09.12.2022 there will be no night trains between Tel-Aviv Savidor/Central and Ben-Gurion airport stations.

*In the night between Saturday night 10.12.2022 and Sunday 11.12.2022 night trains between Jerusalem Navon, Ben-Gurion Airport, and Tel-Aviv Savidor/Central stations will operate between Jerusalem Navon and Tel-Aviv HaHagana railway stations only, and will not call at Tel-Aviv HaShalom and Tel-Aviv Savidor/Central stations.

*Trains between Be'er-Sheva Central and Tel-Aviv Savidor/Central stations will operate between Be'er-Sheva Central and Lod only, and will not call at any of the Tel-Aviv stations.

*Trains on the A1 between Jerusalem Navon and Herzliya will operate in split services; between Jerusalem Navon and Ben-Gurion Airport from the south and Herzliya and Tel-Aviv HaHagana stations from the north, and will not operate between Ben-Gurion Airport and Tel-Aviv HaHagana stations.

*Trains on the Rehovot - Netanya line will operate in split services; between Rehovot and Lod stations from the south, and between Netanya and Tel-Aviv HaHagana stations from the north, and will not operate between Lod, Kfar-Habad and Tel-Aviv HaHagana stations.

**Trains on the Beit-Shemesh - Netanya line, will operate in split services; between Beit-Shemesh and Lod from the south, and between Netanya and Tel-Aviv HaHagana stations from the north, and will not operate between Lod, Lod Ganei-Aviv and Tel-Aviv HaHagana stations.

The railways will provide free bus shuttle services between Lod and Tel-Aviv Savidor/Central and between Ben-Gurion airport and Tel-Aviv Savidor/Central stations. Traffic will resume on Sunday, 11.12.2022 at 05:00."

(ii). LIFESAVER

From a press release of 07.12.2022 by Israel Railways Ltd.:

"The life of a passenger was saved Wednesday morning, 07.12.2022, thanks to the resourcefulness of the railways' team members, inspector Mr. Oren Lart, a doctor who was on the train, Netanya station master Mr. Hayim Murad and his team, and the railways' command team.

While the train was running near Netanya station, the passenger aged 40 suddenly complained of chest pains, probably due to a cardiac event; Inspector Oren Lart immediately identified this and called the rescue forces and assisted the doctor who was on the train with first-aid activities, using the on-train medical equipment.

At the same time, Inspector Oren Lart coordinated a special and unplanned stop at

Netanya station, where the station team headed by the station master Mr. Hayim Murad was prepared to receive the passenger including the on-standby defibrillator device.

The emergency services arrived within few minutes, gave the necessary medical treatment and took the passenger fully conscious to further treatment.

The defibrillator devices have been installed at all whole railway sites, and this is not the first time that lives of passengers and railways' employees were saved thanks to the devoted and trained employees."

(iii). ACCESS RESTRICTIONS

From a press release of 12.12.2022 by Israel Railways Ltd.:

"Due to a shortage of security personnel at station check points and the low demand for rail services at weekends, from Saturday night 17.12.2022 and on each Saturday night until further notice the main stations will be served only partially, namely only one entrance will be open, serving as an Exit too.

Also from Friday, 23.12.2022, services on the following lines: Nahariya - Haifa Hof-HaCarmel, Ashkelon - Rishon-LeZion Moshe Dayan – Herzliya,, Modi'in - Jerusalem Navon; and Rishon LeZion-HaRishonim - Lod will end at 13:00 instead of 14:00 due to low demand. The railways are doing their best to recruit the necessary people."

(iv). THE NEW FAST LINE TO HAIFA?

Aharon writes: "The National Council for Infrastructures and the National Authority for Public Transport has clarified that the line will run (if built at all) only between Shefayim (north of Herzliya) and Haifa Hof-HaCarmel stations; the project speaks of 250 km/h trains to cut journey time to 30 minutes; a simple calculation can show that a train of 200 km/h will do it in 36 minutes but at a much lower price; we'll wait and see!"

(v). ELECTRIFICATION PROGRESS AND WORKS

"The railways continue accelerating the electrification and recently completed 500 km out of 1,000 km planned for the electrification completion. Electrification infrastructure will be completed shortly between Netanya and Binyamina. This will enable the revival of passenger services on evenings, Fridays and Saturday nights on the coast line and between the northern stations, Haifa and Tel-Aviv which were suspended during works.

Due to the progress of electrification on the Western Negev line between Ashkelon, Sderot, Netivot, Ofakim and Be'er-Sheva, the following changes will take place at these stations:

From Saturday night 31.12.2022 and until completion of works in the area, train activity will end between Sundays and Thursdays at about 20:00. The last train No. 269 on the Western Negev line between Sundays and Thursdays will depart from Ashkelon at 19:31 and arrive at Be'er-Sheva Central at 20:34.

In the opposite direction, the last train No. 284 on the Western Negev line between Sundays and Thursdays will depart from Be'er-Sheva Central at 19:21 and arrive at Ashkelon at 20:22.

On Fridays and Saturdays nights there will be no trains on the line and the stations of Sderot, Netivot and Ofakim will be closed.

The railways will operate free alternative bus shuttle services between the closed stations in addition to strengthening of the public transport services in the area."

(vi). WORKS IN THE SOUTH:

From a press release of 03.01.2023 by Israel Railways Ltd.:

"The railways continue the electrification project at full tempo and will perform several vital works to finish electrifying sections along the coast line, on late Thursdays' evenings, Fridays and Saturday nights when demand for services are low, which will cause the following changes on traffic at Ashkelon, Ashdod, Yavne, Rehovot, Be'er-Ya'akov, and Lod:

*Trains on the Rehovot-Netanya line:

On Thursdays from 22:00 and until regular traffic resumes on Sundays at about 05:00 on the dates of: 05.01.2023 to 08.01.2023, 12.01.2023 to 15.01.2023, 19.01.2023 to 22.01.2023 and 26.01.2023 to 29.01.2023, trains from the south will start/terminate at Lod and will not call at Yavne East, Be'er-Ya'akov and Rehovot; alternative free bus services will be provided by the railways.

*Trains on the Ashkelon - Rishon LeZion Moshe Dayan - Herzliya line:

On Thursdays from 22:00 and until service end on 05.01.2023, 12.01.2023, 19.01.2023 and 26.01.2023, trains from the south will start/terminate at Rishon LeZion Moshe Dayan and will not call at Ashkelon, Ashdod and Yavne West.

On Fridays 13.01.2023 and 27.01.2023 and Saturday nights 14.01.2023 and 28.01.2023 during all hours of operation, trains from the south will start/terminate at Rishon-LeZion Moshe Dayan and will not call at Ashkelon, Ashdod and Yavne West.

On these dates and hours the stations of Ashkelon, Ashdod and Yavne West will be closed; alternative free bus services will be provided by the railways."

(vii). AIRPORT LINE NIGHT TRAINS

Some better news: Due to the public's request and further to checking of demand for night trains prepared with the Airports Authority, the railways will start operating from Saturday night 31.12.2022 the requested services between Tel-Aviv Savidor/Central, Ben-Gurion Airport and Jerusalem Navon in both directions, including the night between Thursdays and Fridays.

On the nights between Tuesdays and Wednesdays the night trains will operate between Tel-Aviv Savidor/Central and Ben-Gurion Airport only, and will not go to Jerusalem Navon, due to the need to perform vital maintenance works in the tunnels, which requires the line to be closed as such works cannot be performed with train movements. This gap is filled by the 485 bus which now runs ONLY on this night, hourly, until Wednesday morning when trains resume.

(viii). CHANUKAH GIFTS

From a Press release of 25.12.2022: "While providing services to hundreds of thousands of children and their parents during the numerous events of the Hanukkah holidays, the railways' employees did not forget the sick children who have to stay at hospitals. As on every year, the employees headed by Mr. Nissim Sharvit and Mr. Ezra Yitzhak from the Passenger Services department gave over 60 sets of gifts containing sweets, toys, construction and assembly toys and branded gifts, collected by donations from the employees, their families and Israel Railways Ltd.

These were been given to the children and their families, as well as to the dedicated medical staff of Shamir (Assaf HaRofeh) Medical Centre.

Mr. Nissim Sharvit said: "It is hard to describe the excitement we felt upon arrival to the medical centre in the railways' uniform and the feeling that we brought light to the eyes of the children and the medical staff; I'm happy to have the right and possibility to cheer the children who had to stay at the medical centre during the holidays."

(ix). TEL AVIV SAVIDOR UPGRADING

Press release of 25.12.2022:

"As an integral part of the railways' annual maintenance programme works of upgrading and track components replacement at Tel-Aviv Savidor/Central railway station on Friday 06.01.2023 only will cause the following changes on traffic:

*Trains on the Jerusalem Navon - Herzliya line will run regularly, but the service will be extended to Beit-Yehoshua and Netanya stations.

*Services on the Ashkelon - Rishon-LeZion Moshe Dayan - Herzliya stations will be split; between Ashkelon and Tel-Aviv HaHagana (from the south) and Herzliya and B'nei-Brak from the north; trains will not call at Tel-Aviv HaShalom, Tel-Aviv Savidor/Central and Tel-Aviv University stations, which will be reachable by changing trains at Tel-Aviv HaHagana or Herzliya stations.

*Services between Be'er-Sheva and Tel-Aviv Savidor/Central will operate between Be'er-Sheva and Tel-Aviv HaHagana stations only and will not call at Tel-Aviv Hahalom and Tel-Aviv Savidor/Central stations, which will be reachable by changing trains at Tel-Aviv HaHagana station.

*Services between Tel-Aviv Savidor/Central and Modi'in will operate between Modi'in and Tel-Aviv HaHagana stations only and will not call at Tel-Aviv HaShalom and Tel-Aviv Savidor/Central stations, which will be reachable by changing trains at Tel-Aviv HaHagana station.

*Services between Rehovot and Netanya stations will operate between Rehovot and Tel-Aviv HaHagana stations only and will not call at Tel-Aviv Savidor/Central, Tel-Aviv University, Herzliya, Beit-Yehoshua and Netanya stations, which will be reachable by changing trains at Tel-Aviv HaHagana station.

*Services between Beit-Shemesh and Netanya stations will operate between Beit-Shemesh and Tel-Aviv HaHaganah stations only and will not call at Tel-Aviv HaShalom, Tel-Aviv Savidor/Central, Tel-Aviv University, Herzliya, Beit-Yehoshua, Netanya Sapir and Netanya stations, which will be reachable by changing trains at Tel-Aviv HaHagana station, with the exception of Netanya Sapir station which will be closed on that day.

*The railways will provide alternative free bus shuttle services between Tel-Aviv HaHagana, Tel-Aviv Savidor/Centra, and B'nei-Brak in both directions.

*Traffic will resume on Saturday night at about 18:00."

(x). SIEMENS TRAINSETS TO BEIT SHEMESH

Sybil wrote: "On 09.01.2023 I was on a bus at 08:45 heading to Jerusalem, and as I always do at a time when I know there should be a train in Beit Shemesh station I looked down. I nearly fell out of the bus! A blue Siemens train, in Beit Shemesh!

This afternoon I went to the station to investigate this extraordinary phenomenon. It turns out they started running Siemens trains to Beit Shemesh "about two weeks ago". They can't be sure in advance which will be Siemens, no set running pattern, but the station manager told me that it's very likely that tomorrow the 08:36 arrival/08:50 departure will be a Siemens. And he even finished my sentence for me, "... so you can photograph it!" How things have changed."



• 760 Train of Siemens stock at Beit Shemesh, 18/01/23. Photo Sybil Ehrlich

(xi). POLITICS

Regev says Shabbat train work to be reduced, answering Haredi party's demands

"Transportation Minister says work planned for Saturdays to be spread across weekdays, though key safety tasks will continue as planned; Predecessor decries 'surrender to blackmail'.

From "Times of Israel" 11.01.23: "Transportation Minister Miri Regev announced on Wednesday that maintenance carried out on the public intercity rail system over Shabbat will be reduced, following demands from the Haredi parties in the coalition.

According to a plan presented by the Ministry and Israel Railways officials at a meeting Wednesday, some of the maintenance work scheduled for Saturdays will be spread out over weeknights to ensure that only crucial work necessary for the safety of passengers is carried out on Shabbat, Regev's office said in a statement.

"The minister ordered that the services to the public will not be harmed in any way due to the plan presented at the meeting," the statement read.

UTJ head Yitzhak Goldknopf demanded on Saturday that the work ends, stating that in his party's coalition agreement with Likud, "it was agreed this work would end" in line with the religious "status quo".

The party's strict adherence to Jewish law had the potential to spark a coalition crisis by testing the boundaries of religion and state, in a coalition in which Likud is more secular and liberal than each of its far-right and religious political bedfellows.

UTJ has long taken issue with public works projects on the Sabbath, and has previously pushed train maintenance to the fore of coalition crises. The party tried to demand power plants stop generating energy on Shabbat in December, but Likud struck the clause from its coalition agreement. An official from Israel Railways told the Kan public broadcaster that Regev's decision is problematic and "will cause huge delays in many projects. It is a step backward."

Labour chair Merav Michaeli, who served as transportation minister in the previous government, called the announced changes an "embarrassing spin."

"There is no way to move rail works from Shabbat to the middle of the week without harming the service, simply because all hours of the night are already being used for work," she tweeted.

"During my time as minister, we sped up works on Shabbat to restore service faster. Miri and Bibi capitulated to Haredi blackmail and are harming the railway and its services," she added, using a nickname for Prime Minister Benjamin Netanyahu.

Yisrael Beytenu chair Avigdor Liberman slammed the "shameful decision" and echoed Michaeli's charge that Regev and Netanyahu gave in to blackmail.

"Bibi promised he would not harm the status quo, but like always, he also lied this time," Liberman tweeted. "We will demand a special debate in the Knesset and use all the means at our disposal in order to overturn the decision."

The UTJ-Likud coalition agreement, like all of Likud's agreements with its religious partners, includes vague language promising to preserve the religion and state status quo.

"The status quo will be preserved in issues of religion and state according to what has been accepted for decades in Israel. The government will honour

Shabbat," the coalition agreement states.

Regev, who held the role before Michaeli, said she would reexamine several of her immediate predecessor's initiatives, including public transportation and carpool lanes on intercity highways, a congestion tax and plans for the Tel Aviv metro.

The secular Michaeli had previously pushed to have the upcoming Tel Aviv light rail operate on Shabbat, causing an uproar within the ultra-Orthodox community and leading to Regev's pushback."

(xii). NETANYA AREA WORKS

From a press release of 16.01.2023 by Israel Railways Ltd.:

"Due to electrification infrastructure works to be performed which can't be carried out while trains are on move, the following changes on traffic in the areas of Netanya and Herzliya on the nights of Thursdays, on Fridays and Saturday nights during hours of operation during the first half of January and the second half of February 2023:

On Thursdays: 19.01.2023, 26.01.2023, 02.02.2023, and 09.02.2023:

Train 135 departing each Thursday from Nahariya station at 21:52 and terminating at Ben-Gurion airport, will instead operate in split services: from the north between Nahariya and Haifa Hof-HaCarmel and from the south between Herzliya, Ben-Gurion Airport and Modi'in.

On Fridays and Saturday nights: 20-21.01.2023, 27-28.01.2023, 03-04.02.2023, 10-11.02.2023:

Trains on the Rehovot - Netanya line will operate between Rehovot, Lod and Herzliya only and will not call at Beit-Yehoshua and Netanya.

Trains on the Beit-Shemesh - Netanya will operate between Beit-Shemesh and Herzliya only and will not call at Netanya Sapir and Netanya.

The railways will provide alternative free bus services to/from closed stations. Traffic will resume each Sunday at 05:00."

(xiii). EILAT LINE ARTICLE.

From "Haaretz" 19.01.2023: "In theory, it sounds amazing: a high-speed train to Eilat, the country's southernmost city on the shores of the Red Sea. This was attested to by Prime Minister Benjamin Netanyahu in his recent Knesset speech enumerating the new government's goals, in which he described it as a major national project: "The mission is to develop the country's infrastructures, including developing a high-speed rail that will travel hundreds of kilometres per hour and connect the country from Kiryat Shmona to Eilat."

In recent years, the planned train to Eilat has been so anticipated that it received the flattering nickname of "the inland Suez Canal."

But the reality is different, and the plan is a nightmare for those dealing with the environment and nature preservation. The planned route of the train crosses through nature reserves and some of the country's most attractive hiking trails.

Raya Shourky, director of the Nature and Parks Authority, said it's hard to analyze what the consequences of the train route would be, as a comprehensive program has not yet been formed, and the project is moving forward in piece-by-piece stages. The authority believes it's worth re-examining alternatives that have been proposed, and the project needs to strike a balance between the benefits for the public and the preservation of landscapes in the Negev and the uniqueness of the Eilat gulf area. According to the authority's Southern District director, Gilad Gabbay, the rail line would be devastating to nature preservation and violates decades-long planning for the landscape in the South.

A quick look at the history of plans for a train to Eilat shows that Netanyahu is enamoured with the idea. Twenty years ago, he promoted the plan with all his might in his capacity as finance minister, calling it "a convenient and inexpensive alternative to the passage of goods from the Far East to Europe via the Suez Canal and a line for passenger trains."

In August 2005, the railway to Eilat was declared a national infrastructure plan. The government of Ehud Olmert cancelled it over a lack of economic viability, but Netanyahu continued to promote it. In 2009, as Prime Minister,

he announced the start of a railway project to Eilat. In 2013 the District Planning and Building Committee in the Southern District approved a route connecting Be'er Sheva to Dimona and Eilat. Then came budget cuts, postponements and delays. In June 2020 the district committee approved moving forward with the first section, from Be'er Sheva to Mishor Rotem, but a year later Avigdor Lieberman, then finance minister, announced that the plan would be halted.

The plan states that the expected cost is 40 Billion Shekels (\$17 Billion), which few believe is a realistic sum. The planned length of the line is 260 kilometres, and a very optimistic estimate of the number of passengers is 5 million a year. The equation is simple — the length of one of the lines on the light rail project under construction is 24 kilometres. The cost of its construction is more than 18 Billion shekels.

Opponents of the plan point to several problems besides the environmental impact - particularly the price, with 130 Million Shekels having already been invested in the planning. The planned route is supposed to include more than 60 bridges and five tunnels, plus a long tunnel between Dimona and the Arava Desert, right in the heart of one of the most beautiful and beloved hiking areas in the country. In addition, there is still a lack of clarity regarding the southern part of the tracks. It is assumed that freight trains will not be entering Eilat and that therefore a terminal will be built a few kilometres north of the city. The cargo will thus be transported by trucks from the final station on the line to the port. In an objection to the project, the Society for the Protection of Nature in Israel states: "We are concerned about the severe harm that will be caused to wildlife, plants and the unique landscapes of the Negev, which will be greatly damaged. A train to Eilat will cross the extraordinary desert landscapes of the Negev ... and change them forever. A railroad track with an endless row of electricity poles will destroy a beautiful and impressive region that hundreds of thousands of people travel in every year."

In recent years, the Tourism Ministry has spearheaded a program focusing in the south, which includes parks, trails and other sites intended to develop tourism between the Dead Sea and Eilat. Members of the Society for the Protection of Nature say the train will do exactly the opposite by damaging nature and landscapes in those areas.

Gilad Gabbay of the Nature and Parks Authority says people are being misled. "They're doing a bait-and-switch here," he says. "The public is told, 'you want to go to Eilat fast and safely, here you go, we will build a high-speed train whose journey will take a little more than two hours.' But in fact, they are planning a freight railway that is hardly talked about. It is clear to everyone that this is uneconomic, wrong, and geopolitically dangerous. Some will say that the Chinese are being sold another strip of the State of Israel. For us, the Israelis, only environmental harm will come out of this. No one is talking about the fact that these are huge cargo trains, which will work non-stop."

During a visit to one of the area's mountains, and surrounded by silence, Gabbay says: "Everything will be lost. Think about the noise pollution, the light pollution, the changes in the landscape, huge freight trains that run here 24 hours a day. It's unimaginable. ... The tracks will block the passage of animals, and we have not yet said anything about the sensitive coral reef in Eilat, which will of course also be affected by the passage of goods."

The train has great support in the city of Eilat. The mayor, Eli Lankri, reached an agreement with the previous Finance and Transportation ministers on continuing to plan the railway route with a budget of 30 Million Shekels. The municipality appointed Sharon Ben Ezra, who headed the Ramon Airport Administration on behalf of the Israel Airports Authority, as the project's manager, while continuing working with the National Roads Company to complete the planning.

"The two train lines (passengers and cargo) have tremendous significance for the city of Eilat and for the country as a whole," Lankri said in response to a request for comment, and said that "this is not a project with a narrow interest that will only serve the residents of the south, but a project of national and international strategic importance, whose fruits and contribution in the fields of tourism, economy, employment and security will be dramatic. I believe that thanks to Eilat's geographical location and the fact that we have two ports here, sea and air, together with the Abraham Accords in the background, the railway

will serve as a land bridge to the Arab world, which will of course make it a valuable national asset."

In a recent conversation with Meir Tzur, head of the Middle Arava Regional Council, he said: "I am in favour of the train because it is a major transportation route. With the help of the railway, it is possible to make the port in Eilat a significant one. Most of all, this will give a tremendous development boost to the Arava and to Eilat. But, in the midst of all this, we are also in favour of preserving the values of nature. We don't want to create a monster that will destroy the area."

Transportation Ministry said that "since the economic examination of the project was conducted many years ago on the basis of previous assumptions, the Transportation Ministry is currently embarking on a new economic examination of the project's updated configuration."

with an overground line through empty landscape with no utilities to be moved... As we have seen, the line to Nahal Tzin is already there and currently disused. A line to the Port at Eilat would have to go round the city, certainly, but this is not impossible. The alternative is massive convoys of road trucks each carrying one container clogging the Arava road.]

(xiv). ELECTRIFICATION TO NETANYA COMPLETED

From a press release of 16.01.2023 by Israel Railways Ltd.:

"Last week electrification has been completed up to Netanya. A new timetable will be introduced on Saturday night, 11.02.2023:

The services between Tel-Aviv and Haifa will resume on Fridays with a frequency of 1 train/hour in each direction until about 13:00. Services between Sundays and Thursdays will be extended until about midnight.

Services on the current suburban line between Rehovot, Tel-Aviv and Binyamina will be upgraded by extending activity hours until about midnight; on Fridays until about 13:00; services will be extended from Rehovot to Ashkelon.

The night services between Jerusalem Navon, Ben-Gurion Airport and Tel-Aviv will be significantly upgraded and will be extended to Binyamina, calling also at Herzliya, Netanya and Hadera West at a frequency of 1 train/hour each direction.

Each night between Tuesday and Wednesday trains will terminate at Ben-Gurion Airport and thus not call at Jerusalem Navon, due to the need to perform vital maintenance works on the AI tunnels, which cannot be done with trains on the move. Due to low demands particularly on each second train/hour between Modi'in and Jerusalem Navon, frequency will reduce to 1 train/hour each direction."

(xv). LOST PROPERTY

From a press release of 15.01.2023 by Israel Railways Ltd.:

"The railways' Lost Property Department has published its results for 2023:

The railways' employees have returned to passengers over 9,200 lost belongings, among these were: 2,330 hand bags, 1,173 wallets, 1,110 cellular phones, 335 suitcases, 881 various documents (identity cards, passports, soldiers' and security service cards, etc.), and 1,204 various plastic bags.

The most valuable item returned was a bank cheque for \$284,000 (NIS 1 Million) found at Jerusalem Navon station, and which was returned to its owner after 24 hours.

The stations with the greatest number of losses were: Nahariya, Herzliya, Jerusalem Navon and Be'er-Sheva - where trains terminate and thus cause the losses.

The railways recommend that passengers write on their belongings their name and cellular phone number to cut returning times; also to contact in each case the station team or anybody of the railways' teams."

(xvi). FELAFEL

From a press release of 19.01.2023 by Israel Railways Ltd.: The railways employees are celebrating the value of life with "Dugo":

"Yesterday, Wednesday 18.01.2023, the Railways joined for the first time the initiative of Mr. David Leitner, a survivor of the Auschwitz death march, who started eating Falafel (an Arabic and Israeli food consisting of chickpea balls and Tehina etc.) on this date - the start of the death march. At all the railways' dining rooms as well as in the railways' management offices, and other sites, a Falafel dish was served as an integral part of the lunch.

[E d . comments: It is a strange article – apparently hundreds of thousands of tourists already enter this silent, empty landscape.... How? The main argument against the line seems to be that Netanyahu is in favour of it. It also mixes up proposed passenger and freight routes and confuses the costs of laying an LRT route in an urban area and mostly underground



Mr. David Leitner, nicknamed "Dugo", told that when he came to Israel in 1949 after the Holocaust and walked through the Mahane Yehuda Market, he ate for the first time in his life the Falafel balls which reminded him of the buns of which his mother told him during the Holocaust. He fell in love so much with the Falafel that he decided that on each 18th of January he will eat Falafel until his stomach will "explode".

"Dugo" ends his annual Falafel meal with the saying "The Jewish people is eternal", and we can only join the hope and wish him long healthy years!

Meals with Falafel were served at various railway sites, with blue boards on which was written: "Israel Railways Ltd. are also celebrating life with you."

(xvii). SOCKS EDUCATION

From a press release of 01.02.2023 by Transport Ministry & Israel Railways Ltd.

"Drops from the sky?"

The stormy weather of this week increases traffic congestion significantly, particularly in the mornings, thus increasing the risk of accidents.

As part of the policy to encourage change from private cars to public transport and to rail in particular, both the ministry and the railways gave this morning, 01.02.2023, about 3,000 pairs of dry socks to the passengers, in order to let them start their day warm and dry after arriving at the railway stations of Tel-Aviv (HaShalom in particular) from stations all over the network on a stormy and rainy morning.

The railways mention that "this activity is to cherish and appreciate the rail users who contribute daily - with emphasis on rainy days - to reduce traffic congestion and improve safety by reducing the number of cars from roads."

(xviii). LABOUR RELATIONS

From a press release of 02.02.2023: "After years of disagreements, negotiations, threats of strikes, etc., today a collective agreement was signed between Israel Railways Ltd., the railways' union, and the General Labour Union, with the participation of Transport Minister Mrs. Miri Regev, the General Labour Union chairman Mr. Arnon Bar-David, Israel Railways Ltd. General Manager Mr. Michael (Micha) Maixner, Israel Railways Ltd. Chairman Mr. Moshe Shimoni, etc.

Transport Minister Mrs. Miri Regev said: "The workers are the solution - not the problem; therefore, I instructed all sides involved to make all the efforts to sign the agreement and I'm excited that it has happened at last; we have lot of work to perform, and a good working relationship is an exclusive condition for achieving our targets."

(xix). TREE PLANTING.

This is another of those items which has little to do with actual Railway services but which helps to illustrate how IR is uniquely embedded and integrated into both the soil of the Jewish State and its calendar. (The issues of the Sabbath are but one example, special timetables for festivals another.) For our non-Jewish readers: According to the Talmud here are four "New Years" – one for Kings, one for Animals (for sacrifice), one for the Calendar Year – and one for Trees. Thus one can calculate the age of a tree for tithing purposes. This date is the 15th of the Spring month of Shevat – the full moon - but rather than writing the number "Fifteen" with the Hebrew letters for "Ten" and "Five" – "Yud" and "Hey" - which would look like a Name of God, considered "holy" – the custom is to write it instead as "Nine" and "Six" – "Tet" and "Vav". (Think of how Romans would have used the letters "X" and "V"). The "Vav" in turn can be used either as a hard consonant or a vowel "u". Hence the term "Tu Bi'Shvat" means the 15th. Day of the Month of Shevat (not the 96th!).

So: From a press release of 05.02.2023 by Israel Railways Ltd.:

"Celebration of Planting Trees:

As part of the Tu BiShvat celebrations, the railways planted trees and seedlings during recent weeks at Nachshonim and Rinatya (south of Rosh Ha'Ayin and north of Lod) as a part of laying the infrastructure for the Eastern Line. Among the species of trees planted were: Cypress, Carob, Pomegranate, Stone Bush and Gum Goddess. These planting activities have been performed in order to link the railway line with the surrounding scenery.

In addition to the Eastern Line, the railways have planted trees and bushes over hundreds of acres as part of building new lines and stations. These activities have been done in order to improve the scenery and ecology as well as stabilizing the tracks' steep embankments against landslide, and for adding natural shade at stations.

The Tu BiShvat celebrations have become a Zionist tradition since 1908, in order by such planting to overcome the desert which dominated most of the area which is today the State of Israel."

And: From a press release of 06.02.2023 by Israel Railways Ltd.:

"As part of the Tu BiShvat planting celebrations and in order to promote the business sites at the new Lod station, passengers enjoyed this morning gifts in the form of seedling flowers and a coupon for purchase in a variety of shops on the site.

This is the first step to opening more such sites of combining railway stations, business areas and offices premises."



• Tu BiShvat Planting. Note line in background

Picture by courtesy of Mr. Matan Berkovich - IR's spokesman assistant.)

(xx). FURTHER ELECTRIFICATION WORKS, LOD AREA

From 15.2: "Israel Railways Ltd. have recently announced that due to works of upgrading electrification infrastructures on the section between Tel-Aviv and Lod, the following traffic changes take place late every night at Lod area between 12.02.2023 and 23.02.2023 included:

*Train 56 departing from Be'er-Sheva Central to Tel-Aviv Savidor/Central at 22:26, terminates at Lod instead of Tel-Aviv Savidor/Central.

*Train 296 departing from Ashkelon to Tel-Aviv Savidor/Central at 22:28 terminates at Lod instead of Tel-Aviv Savidor/Central.

*Train 291 departing from Binyamina to Tel-Aviv Savidor/Central at 23:07 terminates at Tel-Aviv Hahagana instead of Ashkelon.

*The railways provide alternative free bus shuttle services from Lod to Tel-Aviv Savidor/Central, and from Tel-Aviv Savidor/Central to Ashkelon."

(xxi). DISTURBANCES

On 21.02.2023: "Due to an electric failure on the electrified network, just after completion of maintenance and upgrading works which took place during the night, traffic over the Sharon circle line stopped at about 05:50 and consequently the stations of Ra'anana, Hod-HaSharon, Kfar-Sava, Rosh-HaAyin North, Petach-Tikva and B'nei-Brak were temporarily closed.

As if that was not enough, a person who walked into a forbidden area was hit by a passing train at around 09:20. It was not before 10:20 that traffic started to resume gradually."

(xxii). TRACKLAYING ON THE NEW EASTERN LINE



• *rack laying near Hadera East. Credit for pictures: Israel Roads.*

The Transport Ministry announced on 21.02.2023, that a significant milestone had been achieved on the Eastern Line project. The subcontractor Israel Roads have started laying tracks on the northern edge of the line near Hadera East new station.

The forecast for completion of the 65 km between Hadera East (eventually from Remez Junction between Hadera East and the coast line) and Lod is 2026, when the \$2.9 Billion (NIS 10 Bn) 160 km/h project will include a double track, most advanced signaling and communication systems, more than 46 bridges and grade separations, and five new railway stations, two of which to serve the Arab population. *See also pictures next page.....*

(xxiii). DOUBLE DECK MULTIPLE UNITS EXTEND SERVICES

From a press release of 23.02.2023 by Israel Railways Ltd.:

"On 21.02.2023 the railways performed a significant step integrating the new Siemens Desiro DDEMU trains, with a test run of a 240m long train with more than 1,000 seats which took place between Binyamina and Ashkelon along the coast line. This configuration had successfully operated so far mainly on the AI between Tel-Aviv and Jerusalem; now the aim is to replace diesel trains by electric trains where lines are electrified."

- *10-car emu train.*
- *Courtesy of Mr. Matan Berkovich. Credit for photos: Mr. Shabtai Tal - CLOUDVIEW.*



(xxiv). FURTHER ELECTRIFICATION NEWS

From a press release of 27.02.2023 by Israel Railways Ltd.:

"The railways continue electrifying the network at full tempo, and while electric trains provide already services from Binyamina - the midway point between Tel-Aviv and Haifa - and Ashkelon in the south, electrification is now taking place also on the Western Negev line between Ashkelon and Be'er-Sheva through Shderot, Netivot and Ofakim, as well as at the stations of Be'er-Sheva.

Due to the works to take place at Be'er-Sheva North/University station and the adjacent huge depot, there will be the following traffic changes at Be'er-Sheva area, Lehavim/Rahat and Kiryat-Gat from Saturday night 04.03.2023 and until further notice, both at weekday evenings as well as on Fridays and Saturday nights:

*Between Sunday and Thursday, from about 21:00 and until end of working hours on each day, the stations of Be'er-Sheva Central and Be'er-Sheva North/University will be closed and trains on the Be'er-Sheva – Tel-Aviv - Nahariya line will start/terminate at Kiryat-Gat; the railways will provide alternative free shuttle bus services between the stations of: Sheva North/University, Lehavim/Rahat and Kiryat-Gat.

*On Fridays through all working hours the stations of Be'er-Sheva Central and Be'er-Sheva North/University will be closed and trains on the Be'er-Sheva-Tel-Aviv-Nahariya will start/terminate at Be'er-Sheva North/University station; the railways will provide free alternative shuttle bus services between the stations of: Be'er-Sheva Sheva North/University and Be'er-Sheva Central stations.

*On Saturday nights through all working hours the stations of Be'er-Sheva Central and Be'er-Sheva North/University will be closed and trains on the Be'er-Sheva – Tel-Aviv - Nahariya line will start/terminate at Lehavim/Rahat; the railways will provide free alternative shuttle bus services between the stations of: Be'er-Sheva Central, Be'er-Sheva Sheva North/University and Lehavim/Rahat stations."

(xxv). PLATFORM HEIGHT ADJUSTMENTS

From a press release of 28.02.2023 by Israel Railways Ltd.:

"Due to works of raising track height in order to reduce the gap at the platforms of Ashdod and Ashkelon stations, the following traffic changes will take place between 09.03.2023 at 22:00 and Saturday night, 11.03.2023 including:

*On Thursday 09.03.2023, from 22:00 until the end of activity:

Trains on the Binyamina - Ashkelon line will start/terminate at Ashdod and will not call at Ashkelon.



• *Tracklaying near Airport City. (Photos Aharon Gazit)*



*Trains on the Herzliya - Rishon-LeZion Moshe Dayan - Ashkelon line will start/terminate at Yavne West and will not call at Ashkelon and Ashdod.

The railways will provide alternative bus shuttle services free of charge between Yavne West, Ashdod and Ashkelon, as well as between Yavne West, Ashkelon, Shderot, Netivot and Ofakim, and Be'er-Sheva Sheva North/University.

*On Friday 10.03.2023 and Saturday night trains on the Binyamina - Ashkelon line will start/terminate at Rehovot and will not call at Yavne East, Ashdod and Ashkelon.

* Trains on the Herzliya - Rishon-LeZion Moshe Dayan - Ashkelon line will start/terminate at Yavne West and will not call at Ashkelon and Ashdod.

The railways will provide alternative free bus shuttle services between Yavne West, Ashdod and Ashkelon, as well as between Yavne West, Ashkelon, Shderot, Netivot and Ofakim, and Be'er-Sheva Sheva North/University. Traffic will resume on Sunday, 12.03.2023 at about 05:00."

And also: From a press release of 06.03.2023 by Israel Railways Ltd.:

Due to works raising platforms height at Ra'anana West and Ashdod stations, works of fitting the electricity infrastructures at Ashdod station, also extending platform lengths and infrastructure works by Israel Roads and the B'nei-Brak Economical Company at B'nei-Brak station, the following temporary traffic changes will take place between Thursday 16.03.2023 at 22:00 and Saturday night 18.03.2023 including the Sharon circle line and the stations of Ashdod and Ashkelon:

*On Thursday 16.03.2023: trains on the line: Herzliya - Rishon-LeZion Moshe Dayan - Ashkelon, will operate between B'nei-Brak in the north and Yavne West in the south, and will not call at: Ra'anana, Hod-HaSharon Sokolov, Kfar-Sava Nordau, Rosh-HaAyin North, Petach-Tikva, Ashdod and Ashkelon.

*Train No. 291 departing from Binyamina at 23.07 will terminate at Rehovot and will not call at Ashdod and Ashkelon.

*On Friday 17.03.2023: trains between Binyamina and Ashkelon will start/terminate at Rehovot and will not call at Yavne East, Ashdod and Ashkelon.

Trains on the line: Herzliya - Rishon-LeZion Moshe Dayan - Ashkelon, will operate between B'nei-Brak in the north and Yavne West in the south and will not call at: Ra'anana, Hod-HaSharon Sokolov, Kfar-Sava Nordau, Rosh-HaAyin North, Petach-Tikva, Ashdod and Ashkelon.

*On Saturday night 18.03.2023: trains on the line: Herzliya - Rishon-LeZion Moshe Dayan - Ashkelon will operate between B'nei-Brak in the north and Ashkelon in the south and will not call at: Ra'anana, Hod-HaSharon Sokolov, Kfar-Sava Nordau, Rosh-HaAyin North and Petach-Tikva.

The railways will provide alternative free bus shuttle services over the closed sections and between the closed stations. Traffic will resume on Sunday 19.03.2023 at about 05:00.

(xxvi). PURIM CELEBRATIONS

From a press release of 08.03.2023 by Israel Railways Ltd.

The railways have fulfilled a dream of a sweet 6 years old boy - Yehuda Neumann (Newman), who is also a strong rail enthusiast, to dress up as a railway inspector for one day as part of the Purim holiday - a carnival of masks and dressing up. It all started several weeks ago, when his parents contacted the customer service centre and told the representative about their son's dream; the railway employees immediately enlisted for the mission and ordered an inspector uniform and a full kit, of course child size.

On Tuesday 07.03.2023 the boy visited the Jerusalem Navon station, helped the teams who gave service for tens of thousands of passengers celebrating the Purim carnival, received explanation from the station master Mr. Eran Ben-David about the station and its systems, joined inspector Mr. Ben Nati, and also performed announcements.

On Wednesday 08.03.2023 passengers who arrived at Tel-Aviv HaShalom station were surprised to find that the station had become part of the famous fairy story of Alice in Wonderland; a lot of colourful decorations from the story had been distributed all over the station, as well as the well-known figures which came alive: the Queen of Hearts, the Mad Hatter, the Caterpillar on the Giant Mushroom, and the Rabbit that is in a hurry all the time.

Makeup positions, souvenir equipment and Hamantaschen (small Purim cakes) awaited the passengers.



• Interior of Tel-Aviv Hashalom station on Wednesday 08.03.2023; pictures by courtesy of Mr. Matan Berkovich, IR spokesman, and his assistant Mr. Daniel Vogel.

(xxvii). TRACKWORKS IN TEL AVIV

From a press release of 09.03.2023 by Israel Railways Ltd.: Due to track maintenance works to take place at Tel-Aviv HaHagana railway station on Friday 24.03.2023 only, the following changes will take place to traffic:

On Thursday 23.03.2023, from about 24:00:

*Train 56 departing from Kiryat-Gat 23:17 ends at Lod and will not call at Tel-Aviv HaHagana, Tel-Aviv HaShalom and Tel-Aviv Savidor/Central stations.

*Train 296 departing from Ashkelon at 23:28 will terminate at Lod and will not call at Lod Ganei-Aviv, Kfar-Habad, Tel-Aviv HaHagana, Tel-Aviv HaShalom and Tel-Aviv Savidor/Central stations.

*Train 291 departing from Binyamina at 23:07 will run in split form: between Binyamina and Tel-Aviv HaHagana, and between Lod and Ashkelon, and will not call at Kfar-Habad and Lod Ganei-Aviv stations.

*Train 137 departing from Nahariya at 22:48 will terminate at Tel-Aviv HaHagana and will not call at Ben-Gurion Airport, Outskirts and Mod'l'n Central stations.

On Friday, 24.03.2023 throughout operating hours:

*Night trains between Binyamina, Tel-Aviv, Ben-Gurion Airport and Jerusalem Navon will run in split form: between Binyamina and Tel-Aviv HaHagana, and between Ben-Gurion Airport and Jerusalem Navon; trains will not run between Tel-Aviv HaHagana and Ben-Gurion Airport, thus, there will be no service from Binyamina, Hadera West, Netanya, Herzliya and Tel-Aviv to Ben-Gurion Airport stations.

*Trains on the Herzliya - Jerusalem Navon line will run in split form: between Herzliya and Tel-Aviv HaHagana, and between Ben-Gurion Airport and Jerusalem Navon;

trains will not run between HaHagana and Ben-Gurion Airport, thus, there will be no service from Herzliya and Tel-Aviv to Ben-Gurion Airport and Jerusalem Navon stations.

*Trains on the Nahariya - Be'er-Sheva line will run in split form: between Nahariya and Tel-Aviv HaHagana, and between Lod and Be'er-Sheva, thus, there will be no service between Tel-Aviv HaHagana and Lod stations.

*Trains on the Binyamina - Ashkelon line will run in split form: between Binyamina and Tel-Aviv HaHagana, and between Lod and Ashkelon, thus, there will be no service between Tel-Aviv HaHagana and Lod stations.

* Trains on the Netanya - Beit-Shemesh line will run in split form: between Netanya and Tel-Aviv HaHagana, and between Lod and Beit-Shemesh, thus no service between Tel-Aviv HaHagana and Lod stations.

*Trains between Tel-Aviv Savidor/Central and Modi'in stations will not operate.

The railways will provide alternative bus shuttle stations free of charge between the closed sections and stations. Traffic will resume on Saturday night, 25.03.2023, at about 19:00.



TENDERS

(i). Tender No. 122173: Invitation to receive Offers for Purchasing and Maintenance of Lifting Facilities for Disabled Passengers:

The contract is for 36 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 27.12.2022.

(ii). R.F.I. No. 122180: Information regarding Writing Management and Command Lines for high voltage switching:

Latest date for submission of proposals: 10.01.2023.

(iii). Tender No. 122171: Providing Services of Dynamic Analysis and Simulation for functioning of Freight Car Braking Systems combined with Vent Valve 705223 #8:

The contract is for 36 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 10.01.2023.

(iv). Israel Railways Ltd. Tender No. 122181: Providing Maintenance Services for Cranes of all types at all sites: The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 28.12.2022.

(v). International Tender No. 42207

"For the Design, Manufacture and Supply of Bogie Cleaning Machine

General Terms and Conditions: Israel Railways Ltd., in accordance with its obligations under the Israeli Mandatory Tender Laws, its implementing regulations and the International Agreement on Government Procurement, wishes to obtain bids for: The design, manufacture and supply of Bogie Cleaning Machine ("B.C.M") for ISR's railway vehicles and parts, all in accordance with and subject to the terms specified in these General Terms and Conditions and the accompanying Tender Documents.

1. Pre-requisites for Participation in the Tender (the "Pre-requisites"): For the interpretation of this tender, the following definitions shall apply: "Manufacturing Plant" – the manufacturing plant which is controlled by the Bidder and proposed for the manufacture and supply of B.C.M under the Agreement, as specified in the Bidder's Manufacturing Plant Nomination Form (Appendix D). "Notified Body" - A body accredited by a national railway authority/regulator or an international railway authority authorized to provide the applicable accreditation, as approved by ISR in writing and in advance. 1.1 The bidder must be the designer, manufacturer and supplier of the proposed B.C.M.

1.2 The bidder has designed, manufactured and supplied, commencing from 2016 and up to the final submission date, at least two (2) electrical B.C.M similar to the technical specifications no. M05-524 set out in Annex A. 3 The Manufacturing Plant must be certified for a Quality Control system in accordance with ISO 9001 or 9002....."

(vi). OIL FILTERS

"ISR's GM26 and NRE locomotive's fleet is equipped with Clark's AE-25 air filters corresponding to the Diesel Engines type I6-645-E3B. The spec below specify ISR requirements

for purchasing oil filters from this type.

2. Requirements for Purchasing

2.1 The supplied air filters shall be fully compatible to EMD part number 9093588 (see AppendixB), that would be fully appropriate for assembling on EMD's engine types.

2.2 All of the relevant parts must be new.

2.3 The supplier must ensure that air filter configuration is completely meet with ISR configuration.

2.4 The provided air filters must ensure fully appropriation for engine performance and all necessary protective devices...."

and:

8-Dec-22 3 / 8

Israel Railways Ltd. Rolling Stock Division

1. Introduction

ISR's JT42 locomotive's fleet is equipped with Clark's C-12E Michiana oil filters corresponding to the Diesel Engines type I2N-710G3B-T3. The spec. below specify ISR

requirements for purchasing oil filters from this type.

2. Requirements for Purchasing

2.1. The supplied oil filters shall be fully compatible to EMD part number 8345482 (see

Appendix B), that would be fully appropriate for assembling on EMD's engine types."

(vii). Tender No. 122174: Creation, Supply, Assimilation and Maintenance of an Employees' Recruiting System: The contract is for 36 months with optional extensions of up to additional 84 months. Latest date for submission of proposals: 02.02.2023.

(viii). Tender No. 121107: Providing Maintenance Services for the railways Refueling (diesel oil) and Lubrication devices and sites: The railways intend to select 2 winning bidders; one for each of the 2 operational areas-north and south. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 05.02.2023.

(ix). Tender No. 121141: Providing services for Recruitment ,head hunting': The contract is for 24 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 09.02.2023.

(x). Tender No. 123211: Solutions for Mobile Signage. Latest date for submission of proposals: 03.01.2023.

(xi). Tender No. 22168 : Performing sub-contractual of Infrastructures and laying of Cables. Latest date for submission of proposals: 06.02.2023.

(xii). Tender No. 22168: Purchasing and supply of Cables. Specification attached. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 06.02.2023. For 600V; For outdoor use near railway tracks, in ducts, concrete conduits or direct burial. The cable shall be designed for a lifetime of 25 years in such applications.

(xiii). Tender No. 21740: Ramla South Railway Station on the Modi'in - Rishon-LeZion Moshe Dayan No. 431 line (under construction): Latest date for submission of proposals: 20.02.2023.

(xiv). Tender No. 22109: Providing Services of Maintenance, Restoration and Building Fences and Gates along railway lines, various sites and stations in the Northern Region: The railways intend to select one winning bidder only. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 21.02.2023.

(xv). Request for Information: to provide Information regarding Renting Areas at the railways' Dimona station: Latest date for submission of proposals: 28.02.2023.

(xvi). Tender No. 222106: Design and build a Fourth Track on the Ayalon railway line: Description: The 4th track on the Ayalon railway line is a National Infrastructures project, includes a 4.65 km track beside the existing three tracks; it starts north of Tel-Aviv Savidor Central railway station and ends south of Tel-Aviv HaHagana railway station; the track structure will be built within the Ayalon creek on a concrete box above which the track will consist of slab track, while adapting the urban drainage systems to the new track and regulation of the Ayalon creek stream during winters. Latest date for submission of proposals: 04.03.2023.

(xvii). International Tender No. 42208 for Bogie and Spring Test Stand.

The Spring Test Stand shall be designed to perform a static test of conical bonded rubber springs, helical springs and sets of springs. The spring test press shall be manufactured with a system that enables buckling measurement. Dedicated software package shall control the test stand and help with test data analysis.

(xviii). Tender No. 122160: Supply of Data Recorders for the Braking System of JT locomotives: The contract is for 24 months with optional extensions of up to additional 24 months. Latest date for submission of proposals:

27.02.2023. The technical specification describes the requirements of Israel Railways Ltd.(ISR) for the supply of a stand-alone data logger for Israel Railways (ISR) locomotives and coaches. 1.2 The data logger is used to check and detect leakage of electrical voltage (-40V to+40V) or current (4-20 mA), temperature (0-760 °C), pressure (0-15 Bar), etc. as a result of a defect and/or malfunction in the systems installed in ISR's Rolling Stock (hereinafter referred to as "ISR's vehicles" together with the information in the table in Section 8). 1.3 The data logger includes the capability for condition-based diagnostics and early detection of wear and damage to various brake valves based on data from pressure/current/voltage/temperature sensors, etc., already installed or to be added to the locomotive subsystem. 1.4 The data logger is intended to be used on current ISR vehicles as described in Appendix 1, but also on vehicles to be purchased and/or operated by IR in the future. Therefore, the data logger should be easily adaptable to the different types of coaches, wagons, locomotives, and railroad maintenance machines in use around the world today; furthermore, the supplier is requested to specify exactly which types of coaches, wagons, locomotives, and railroad maintenance machines the data logger cannot be adapted to.

(xix). Tender No. 32301: Annual framework agreement for Supply of Electrical Equipment and Parts: The contract is for 12 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 28.02.2023.

(xx). Tender No. 22195: Annual framework agreement for Performing Tracks Under Structure Maintenance along the whole network:

Latest date for submission of proposals: 20.02.2023.

(xxi). Tender No. 122179: Providing Services of Investment Portfolios Management: The contract is for 24 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 02.03.2023.

(xxii). Israel Railways Ltd. Tender No. 203102: Operating Temporary Stands (Pop-Up) at Railway Stations: The intention is to operate the stands for selling a variety of items (non-food) at the following stations: Tel-Aviv Savidor/Central - 2 stands; Tel-Aviv HaShalom - 2 stands; and Jerusalem Navon - 1 stand. The Railways reserve the rights to operate such stands at additional stations. The contract is for 12 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 23.02.2023.

(xxiii). Israel Railways Ltd. Tender No. 122177: Providing Services of Periodic Inventory Count at the railways' different Warehouses: The contract is for 12 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 16.03.2023.

(xxiv). Tender No. 122158: Quotations for Manufacturing and Supply of Steel Structures including Signal Posts and Points Turnout Arms: The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 23.03.2023.

(xxv). Tender No. 223119: Providing Services of Detection and Exploration of Underground Various Systems by NTD, Ground Penetration Radar, etc.:

The railways intend to select up to 5 winning bidders. The contract is for 12 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 26.03.2023.

(xxvi). Tender No. 121116: Providing Cleaning Services at the Railways' Offices, Sites, Stations and Operational Areas: The contract is for 24 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 26.03.2023.

(xxvii). Tender No. 122166: Frame agreement for providing services of manufacturing, supply and installation of low-voltage boards, up to 3300 A, at various railway sites: The contract is for 24 months with optional extensions of up to 36 additional months. Latest date for submission of proposals: 27.03.2023.

(xxviii). Tender No. 32302: Frame agreement for Supply of Refreshments: The contract is for 12 months with optional extensions of up to 48 additional months. Latest date for submission of proposals: 28.03.2023.

140:06.

Light Rail



A. TEL-AVIV LRV/METRO project:

(i). NTA International Tender No.019/2022: METRO CONSULTANCY

"Metropolitan Mass Transit System Ltd. ("NTA") is an Israeli government owned company tasked with the development of the mass transit system in the Tel Aviv metropolitan area, which includes, inter alia, a metro network, comprising three (3) mostly underground Metro lines (the "Programme"

and the "Metro Line Projects" respectively). Capitalized terms used herein shall have the meanings ascribed thereto in the ITB

1. NTA, in accordance with its obligations under the Israeli Mandatory Tenders Law, 5752-1992, the Mandatory Tenders Regulations, 5753-1993 and further implementing regulations promulgated thereunder, hereby invites entities from the public sector outside Israel, to participate in the Tender Process.

2. The purpose of the Tender Process is to select a "public entity consultancy arm" which has the experience in both initiating, promoting and managing a large-scale metro project on behalf of a state or municipality and providing professional expert consultancy services which relate to metro transportation systems.

3. NTA expects to require professional advice and general consultancy services, from time to time, with respect to issues which arise during the "on-going" management of the Programme or with respect to specific issues.

4. Threshold Requirements – The Bidders shall be required to demonstrate compliance with the Threshold Requirements and other requirements, all as detailed in the ITB.5. The ITB and any updates thereto shall be available for online review and download from NTA's website at www.nta.co.il/en/ under the "Tenders" tab, for no charge.

6. Any questions or requests for clarifications shall be addressed in writing only to the Tender Mailbox: tender5-metro@nta.co.il by no later than 22.12.2022 at 13:00 (Israel standard time)

7. Submission Date – the date for the submission of the Bids is 26.1.2023, by no later than 13:00 (Israel standard time). The Bids shall be deposited in the designated Tender box located at NTA's offices, Harokmim 26 Holon, building A, 9th floor. All Bidders shall be responsible for receiving confirmation of their Bid submission.

8. The Tender is a two-stage evaluation tender with additional competitive process; such terms are defined in the Mandatory Tenders Regulations, 5753-993.

9. This notice contains general and preliminary information only. Bidders are required to comply with all the provisions of the Tender Documents, in their entirety. Public Tender No. 019/2022 Invitation to Bid in a Tender for the Provision of Consultancy Services in connection with the Tel Aviv Metropolitan MetroNetwork (the "ITB") www.nta.co.il "

(ii). NTA Tender No. 671/2022: Providing investigation services in the field of Land, including Land Expropriation: NTA intends to select up to two winning bidders. The contract is for 36 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 04.01.2023.

(iii). NTA Tender No. 418/2022: Providing services of Traffic Design and Consulting for NTA Occasional Works: NTA intends to select up to four winning bidders. The contract is for 24 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 09.01.2023.

(iv). METRO SCHEME PROPOSALS

From Steve Sattler: "The planned enormous project to build a METRO under the extended Gush Dan region: This mega-project is now being planned and exploratory digging is being carried out in Holon to test the type of sub-soil and clay that the tunnelling will need to go through.

The master-plan, that was designed on paper three years ago, calls for three Metro lines {M1 Red, M2 Blue and M3 Grey} that will cross-cross the central Gush Dan region but also service Rehovot and Tzomet Bilu in the South, North Ra'anana and Kfar Saba in the North, and Petach Tikva and Rosh HaAyin in the East.

The planned budget is 150 Billion Shekels - but obviously this number will grow and may even double.

The project will be fully set-up by 2033 - but engineers expect the central section to be opened for commercial use in stages from 2028.

The New Knesset will need to pass a set of new laws to allow legal digging, disruptions and the budget in stages. Money will come from the MOT.

One major issue is will work be done on Shabbat? The Tel Aviv municipality has no such problem but other local councils are already demanding that no work be done on Shabbat.

Three big TBM will be assembled for the actual tunnelling. These same monster machines will also assemble the concrete, curved and fitted plates at the tunnel-walls while they work. Engineers estimate that the TBMs will create 80 metres of tunnel every working day for each machine.

Ten business consortiums are competing for the Michraz [the tender] and the MOT will choose only three - one for each tunnel.

NETA, the central father-company of the MOT will be the central co-ordinator and all the money will pass through the NETA accountants. So far NETA has used up 400M Shekels [this year] on pre-planning and minor exploratory work. Next year [2023/4] NETA will use 1 Bn. Shekels as 'real work' and then in 2025 8 Billion.

Engineers are including in the planning - the contingency situation of an earthquake in the region that may destroy the tunnels - so each tunnel will have some flexibility built-into it - at source.

Each winning Consortium will be free to bring in foreign workers to work the project but local and social politics may create problems with importing 'foreign-workers' over our local Arab-Palestinians.

It is now accepted across the Modern Middle East that Tel Aviv will become the centre of a



• Petach Tikva Interchange

network of roads, fast-trains, this metro, the light rail, bicycle paths and automatic cabs and driverless buses by 2040."

(v). NTA Tender : Providing services of Legal Advice regarding the effectiveness of Internal Control (SOX-404): NTA intends to select one winning bidder only. The contract is for 36 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 15.02.2023.

(vi). On 31.01.23 Transport Ministry and NTA announced, that soon passengers will be able to ride on the Red Line LRV trains free of charge in order to receive public opinion; no date has yet however been set.

(vii). NTA Tender No. 705/2022: Providing Community Relations services for NTA: NTA intends to select up to 2 winning bidders. The contract is



• TA Tram

for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 09.03.2023.

(viii). NTA Tender No. 525/2022: Providing services of Car Lease in the system of operational leasing for NTA: NTA intends to select 1 winning bidder. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 15.03.2023.

(ix). NTA Tender No. 081/2023: Supply, and Maintenance Services of a Task Management, Protocols and Work Programmes system: NTA intends to select one winning bidder only. The contract is for 36 months with optional extensions of up to additional 84 months. Latest date for submission of proposals: 16.03.2023.

(x). NTA Tender No. 038/2023: Providing Consulting and Design Services regarding Ecology: NTA intends to select one winning bidder only. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 19.04.2023.



• Balfour station 05.12.2022 (Photo Aharon Gazit)

B. JERUSALEM

(i). MOSSAD.

The Israeli film 'Mossad', (2020), a parody on almost every spy film one has ever seen, best described as Bond unbonded, includes a sequence where some terrorists of the RBG group ('Really Bad Guys') drop the tank off a lorry against the 'Bridge of Strings' in Jerusalem which thereupon begins to crumble, the cables snapping one after another, and various scenes of panic inside trams.

(ii). GREEN LINE TRIBULATIONS

From Steve Sattler on 01.01.2022: "A Review of the current 'atmosphere' and tensions on the 2 km stretch of the Bar-Ilan Road rails installation.

The planned GREEN line of the Jerusalem light-rail will run up and down Bar-Ilan Road in North Jerusalem. The main section of this road runs through a very busy and congested Ultra-Orthodox mega-neighbourhood.

Since June 2021 the contractors have been digging and installing new water, drains and sewage pipes and power and communications lines - underground on this road. By April 2023 they will start installing the rails, stations and the overhead power wires. Crews, tractors and cranes work from 7 am till dusk and occasionally till 11pm. The road is open like a WWI trench in sections. The traffic runs a narrow slalom course in a narrow lane.

The road has been opened for the deep trenches (up to 5 metres deep) in sections and thus the usual four or five lanes on this road are now down to two. The road is very busy with buses, trucks, private cars, ambulances, fire-trucks and police cars and the enormous trucks for the excavations and new pipes. Some 40 yellow-jacketed road supervisors control the traffic and close parts of the road on and off - during work hours. It is very busy and some trips [up or down] can take over 20 minutes.

A small but vocal group of Ultra-Orthodox demonstrators will congregate and demonstrate on or near the road fairly frequently against this new municipal light-rail. One of their arguments is that they want this Green Line to run in a tunnel under the road. They also fear that another mayor of Jerusalem [not the current one] might allow the light-rail to run on the Sabbath and Jewish Holydays.

The Police come and break-up the demonstrations, but this leaves a lot of 'bad-blood' for all concerned. Some demonstrations cause damage to equipment and endanger the lives of people.

The current City Mayor [Moshe Leon - an accountant] is very efficient and runs the city well; and he is sensitive to the shouting by his 'citizens'.

The city and the Ministry of Transport has now produced a 4-page free booklet in Hebrew to explain the need for this Green Line, the excavations and the increase in quality of life that will be the end-result of all this digging in 3-5 years time.

This booklet - 'Al HaDerech' Vol I. (On the Road) presents the case for the digging, noise and discomfort that will [eventually] pass and thus give the residents a new set of high-quality plumbing, electricity, communications and transport.

Jerusalem is now a modern mega-CITY of over 1.2 Million residents and tourists. The old infrastructure, the leaky pipes, the inadequate drainage man-holes and the need for a quick, reliable and modern TRAM network has created a five-year 'grey-zone' whereby digging, noise and a lot of discomfort - almost everywhere in the city - is now the Normal daily situation. We all hope that by 2026 we will see the light at the end of the tunnel."

[Ed. adds: Theodor Herzl in his "Altneuland" envisaged a modern state where the utilities would be laid next to and not under the main road carriageways - so that maintenance and repair would not involve blocking the actual thoroughfares!]

(iii). OUT OF THE DEPTHS I CALLED TO THEE..... A NEW JERUSALEM METRO SYSTEM?

On 24.01.23 Steve Sattler wrote the following. [This would be an amazing and complex project, not just for political but also for archaeological reasons, it is said one cannot dig a spade into the soil in Jerusalem without finding some old bones..... Just as a matter of interest it is an editorial decision to cover the planned Metro systems now and in the future within the "Light Rail" rubric although, technically, these are a form of intensive urban heavy-rail. Ed.]

"The Jerusalem City Planning unit of the Municipality has started their project to build a METRO in Jerusalem. The planning has begun.

The current project to build nine light-rail lines (electric trams) that criss-cross the city and link some distant suburbs is now fully in place and three lines are under construction. Nevertheless by 2030 the city engineers know that Jerusalem, with a population of between 1.5 to 1.8 Million residents and over 450,000 tourists will out-grow the light-rail and the public bus services.

Thus, the extension to the 'underground' A1 line from the coast will have four underground stations across Jerusalem in addition to the already overcrowded Navon station, and probably a continuation of this train into the Gush Etzion.

Now, the Minhal HaTichnun (Planning Directorate) of the City - as the Manager of Planning said yesterday at a conference, is planning a METRO with either 18 or 33 stations for Greater Jerusalem.

The rock under Jerusalem is limestone, so several TBMs will be used to do the work and the project - in practice, - will take 15 years. The A1 train stations will all be some 60 metres underground, so the Metro will be between 20 - 40 metres underground.

The first stage of the planning will also include several drillings deep into the limestone at selected sites to study the rock and the water-pockets. The 'first-stage plans' will then be put before the National Planning Board for further study and 'the go-ahead'."

(iv). SERVICE FREQUENCIES INCREASED:

From a press release of 31.01.2023 by the Transport Ministry:

"Good news for Jerusalem citizens:

From tomorrow, Wednesday 01.02.2023, the Jerusalem LRV will perform 331 daily journeys between Sunday and Thursday between 05:30 and midnight; the improved frequencies will be mainly at night to avoid long waiting times and increase safety.

Since the beginning of January 2023 the number of trains in service between 19:00 and 20:00 has been increased and train frequency improved from 10 to 6 minutes; now the frequency between 20:00 and 22:00 will increase from 12 to 10 minutes, and from 15 to 12 minutes between 22:00 and 24:00. Both Transport Minister Mrs. Miri Regev and the mayor of Jerusalem Mr. Moshe Leon said that the LRV is the most convenient mean of public transport and should be further improved."

(v). TEST RUNS ON EXTENSIONS:

The Jerusalem LRV trains are now performing test runs on the Red Line extended sections to/from Hadassah Medical Centre at the southern section and north of Pisgat Ze'ev on the northern extended section.



• *Ora station.*

(vi). NEW SYSTEM FOR HANDICAPPED TRAVELLERS

Innovative Accessibility IoT System by "Step-Hear" for People with Disabilities in Rolling Stock and Platforms will be operating soon: (From their press information): One of the main barriers in the everyday life of people with reduced mobility is commuting. People with blindness and visual impairment even more,

are totally reliant either on others to drive them around or on public transportation. The sad reality is that many of them just avoid leaving their home most of the time, and that lack of accessible public transportation results in significantly lower percentage of participation in the workforce, lower participation in leisure activities and in consumption, thus affecting economy and society as a whole.

Step-Hear has developed an IoT system that solves some of the barriers that people with disabilities encounter while travelling by trams, trains or metro.

The Step-Hear system for people with disabilities has been around almost a decade.

Step-Hear IoT devices, that are pre-installed in public or commercial places and on public transportation, are operated by a free, accessible smartphone app, or by a personal wrist activator.

The system started as an accurate wayfinding system, indoors and outdoors, designed for the needs of people with blindness or visual impairment by audio anchoring and audio guidance.

Other IoT features were added, then expanding to provide solutions for even more types of disabilities, such as opening coded doors from the Step-Hear app, notifying the venue staff that a person with disability has arrived and requires assistance, etc.

The latest development of the system is an innovative interactive system for public transportation, now implemented for the first time for rail transportation in the Jerusalem Light Rail. The system was integrated into the new CAF Spanish tram cars that are now arriving and will soon be operating on the track.

The system removes barriers along the whole journey in the light rail, mostly for people with blindness or visual impairment and also for people with reduced mobility – aiming to offer them independence, dignity and more safety.

The journey begins with finding the exact spot of a platform on the street, which is difficult for a person with blindness or severe visual impairment. When the user of the Step-Hear app reaches the vicinity of the stop, an 'audio-sign' says the name of the stop or platform, gives a description of which side of the platform leads to what direction, and by the way provides the 'audio anchoring' to find the exact location of the stop on the street.

Since all audio guidance is also received from the app, users that are 'shy' and don't wish to hear the name of the stop from the audio-sign, can change the setting so to hear the audio guidance only from the app, and then only a short 'beep' will be heard from the audio-sign, for the sound anchoring. Also, live information of the next time of arrival of the different lines is available in the app.

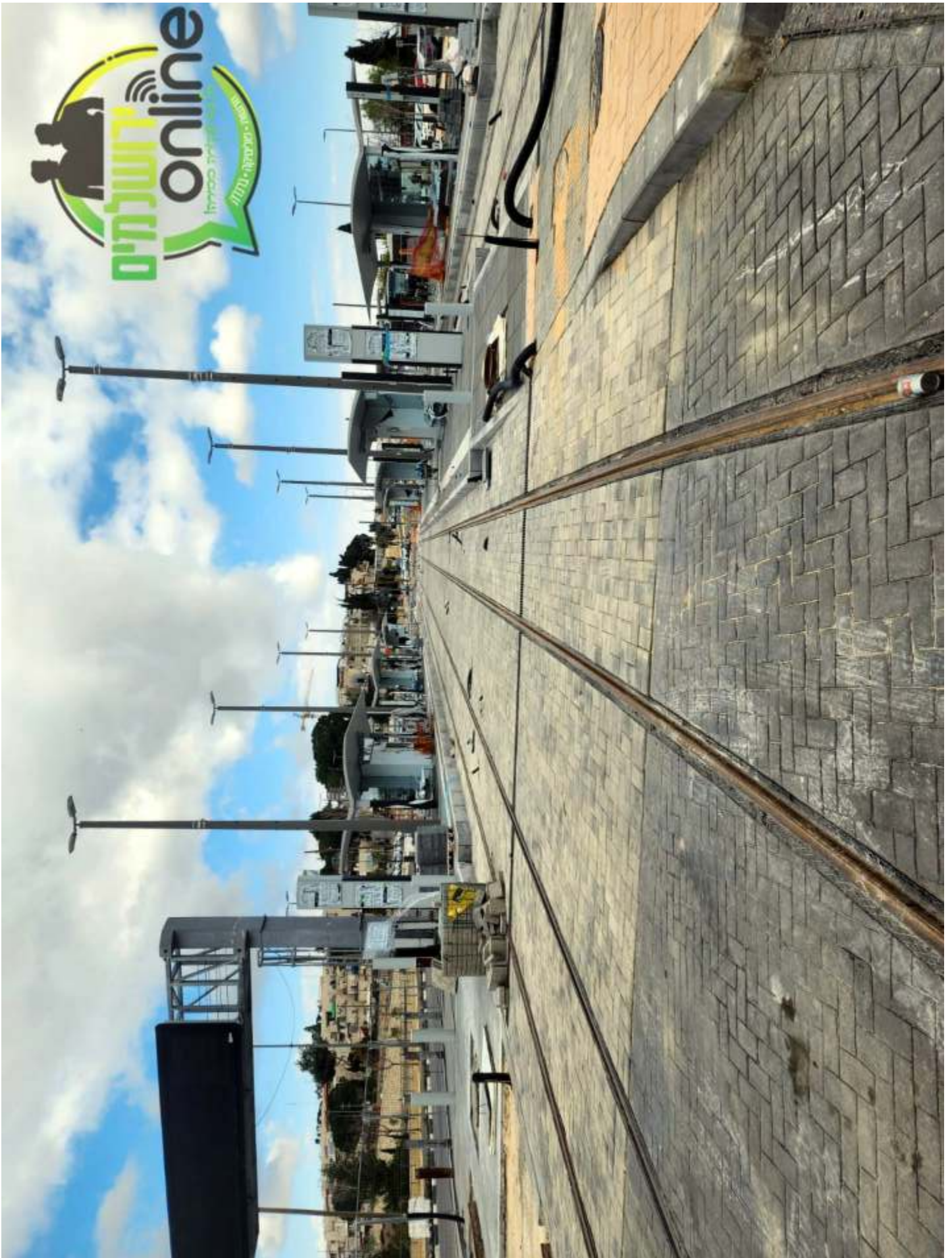
The users can choose their destination stop, and the driver of the relevant tram line that is about to arrive receives an alert that a person with disability is about to board the tram. Also, a short while before the users' desired tram is about to arrive, they receive a push alert in the app.

When the tram arrives, the system identifies the door closest to the user - it activates a different sound indication above that door, as long as the door is open, helping severe visually impaired or blind users not to miss their train due to the time it takes them to find the door and board.

The system automatically opens the closest door - thus bypassing the need to find and push a physical button, as is required in the Jerusalem Light Rail – again, helping users with blindness or visual impairment, as well as users with reduced mobility, not to miss their train due to the long time it would take to perform that task.

The closest door also receives a command to be opened for a longer time than the other doors, limited by the departure time of the train.

The same actions are provided on the coach itself, preventing users with blindness approaching the door on the wrong side of the tram, or not reaching the door fast enough.



The new Ora tram stop on the way to Hadassah Ein Kerem hospital, almost complete, March 2023. (Photo Paul Star.)

Other Middle East Railways

A. U.A.E.

(i). ETIHAD.

From "R.G.I." 05.12.2022:

"Etihad Rail has signed an agreement to transport 1-3 Million tonnes of polyolefins annually from Borouge's petrochemical complex in Al Ruways Industrial City via rail for export. The time required to transport Borouge's products will be reduced from 12h to 4h. "This strategic partnership comes in line with Etihad Rail's efforts to provide logistics solutions to some of the country's largest companies, where they can transport goods through the rail network at reduced costs and time", said Chairman of Etihad Railway Theyab bin Mohamed."

(ii). ETIHAD RAIL PHASE 2.

From "I.R.J." 17.01.23: "Last year was a busy time for Etihad Rail, the company taking forward the ambitious rail development programme of the United Arab Emirates (U.A.E.). Having started work in January 2020 on the 1200km Phase 2 of the UAE National Rail Network, which will run from Fujairah to the border with Saudi Arabia at Ghuweifat, Etihad Rail has completed 75% of the project within only 28 months, says Mr Mohammed Alshehi, deputy executive director of projects at Etihad Rail.

"More than 27,000 workers completed construction work across 3000 sites, recording more than 130 million safe man-hours," Alshehi says. Key milestones reached in 2022 included completing construction of the main line between Abu Dhabi and Dubai in March, with tracklaying on the main line in Sharjah and Ras Al Khaimah finished in October. "We are forging ahead with construction work at an accelerated pace to deliver the project on time and within budget," Alshehi says.

As it works to deliver one of the largest infrastructure projects in the UAE and the wider region, Etihad Rail has faced many challenges, starting with the administrative and regulatory environment.

"One of the challenges that the company has faced during construction is the number of licences and approvals required to work across the UAE, with each individual emirate having its own set of regulations and guidelines," Alshehi

(Continued from page 15) The process of integrating the system started with the Jerusalem Transportation Masterplan team (JET), which had a vision of including accessibility in the new tenders for extending lines or new lines. JET then consulted with The Israeli Center for the Blind to understand the barriers and needs of people with blindness, before incorporating these requirements in the general tender. The consortium that won the tender included CAF, that turned to Step-Hear for implementation. Step-Hear had to comply with all European standards and regulations for the train industry since the system communicates with the TMC.

Step-Hear was founded in 2008 as a technological startup by the parent company Mahalev, which has been a market leader in the assistive technology segment in Israel for the last 25 years. Step-Hear has installed so far thousands of devices for accessible wayfinding and assistance and recently have developed the systems for accessible public transportation, the first project was a pilot commissioned by the Israeli Ministry of Transportation in buses, and now the project for the Jerusalem Light Rail with CAF Spain which is innovative in the rail sector for accessibility is a full implementation.

The new CAF tram cars have already arrived in Jerusalem and will start operating on the tracks from mid 2023.

A short video can be found at:
https://www.youtube.com/watch?v=4_gOBa_zIAY

says. "Etihad Rail has successfully obtained approvals from 40,000 stakeholders, with the support of 180 entities."

During construction itself, the major challenge is building a railway in desert conditions, with the workforce surrounded by sand dunes and subject to extreme temperatures. "We managed to mitigate the impact of the harsh environment through learning from partners and measures such as incorporating a sand filtration system in our locomotives," Alshehi says. Another challenge was building over 400 bridges at the same time, managed by different teams which required large volumes of construction materials.

Etihad Rail has also worked to mitigate noise and pollution during construction, carefully planning different elements of the project which combines work in remote areas with busy urban centres. "Building the railway in Fujairah also had its own set of unique construction challenges for our teams to tackle, due to the harsh topography of the Al Hajar Mountains, mixed with its incredible biodiversity," Alsheshi says.

Innovation played a key role in tackling this challenge on the route of Phase 2 between Fujairah and Sharjah. "Our teams used powerful blasting technology to drive through the dense rock, moving 38 million tonnes of material," Alshehi says. On the completed railway, Etihad Rail has installed a Rock Fall Detection (RFD) system to monitor the alignment in deep cuttings and to detect landslides or rock falls blocking the track. It is able to detect an obstacle with a height of 200mm or more and alerts the control centre when such an incident occurs.

"In addition, due to the Covid-19 pandemic, we faced challenges in dealing with stakeholders, suppliers and contractors, recruiting specialised capabilities," he says. "We managed to overcome all these challenges and move forward with the construction of this strategic national project."

Alongside innovation, Alshehi stresses the crucial role that UAE nationals have played developing the country's rail network. "It would have never been possible to achieve what we have achieved without the efforts of our Emirati talents," he says. "Our first priority when embarking on this project was to build a team of talented individuals to plan, construct and operate the network, and this we achieved very successfully. Etihad Rail has invested in local intellectual capital and continues to do so, following international best practice."

Working with the Abu Dhabi Vocational Education and Training Institute (Adveti), Etihad Rail has established a three-year diploma programme for transport engineering and management, the first of its kind in the UAE. "Participants are able to specialise in one of four categories: train captain, train controller, rolling stock technician and systems technician," Alshehi explains. The first batch of 10 students graduated in 2020 after completing their studies with work experience at the Etihad Rail depot in Al Mirfa, and a second batch has since enrolled, including four female students.

Building a Freight Network

As construction of the main line progresses, Etihad Rail is working to provide the strategically-located terminals that will be key to meeting its objective of moving 60 million tonnes of freight a year, playing a vital role in providing logistics solutions that drive value for customers. "We are working to enable the easy transfer of goods from sea to train and from train to truck, to strengthen the UAE's global status as a pivotal logistics and trading hub," Alshehi says. Etihad Rail is developing freight terminals at key ports, including Khalifa Industrial Zone Abu Dhabi (Kizad), Ruwais, Jebel Ali, Al Ghayl and Fujairah.

Major terminals include the facility at Industrial City of Abu Dhabi (ICAD) "which is the largest inland rail freight terminal in the country," Alshehi says. It will have capacity to handle over 20 million tonnes, and Etihad Rail completed work to connect the ICAD terminal to the UAE National Rail Network in September 2022. At Dubai Industrial City (DIC), an advanced freight terminal will cover 51.1ha and have a capacity of 5 Million tonnes.

"The UAE National Rail Network will provide enhanced connectivity, which will effectively bring businesses closer together, extend geographic markets, make a larger and more mobile labour force available, and facilitate more efficient trade," Alshehi says.

He reports that Etihad Rail has already signed commercial agreements with three of the UAE's largest industrial producers, securing 60% of the transport capacity of the UAE national rail network. For Stevin Rock, Etihad Rail will transport 3.5M tonnes of construction materials from its quarries in Ras Al Khaimah to Abu Dhabi with 500 train movements a year. Another future customer is Western Banoona Group, which will send 4.5M tonnes of aggregates by rail from Fujairah to Dubai and Abu Dhabi. Etihad Rail will also be moving steel products produced by Al Ghurair Iron & Steel (AGIS) for export through the Icad terminal to Khalifa Port in Abu Dhabi and Jebel Ali in Dubai.

More recently, Alshehi reports that Etihad Rail has signed terms for a strategic partnership with petrochemicals producer Borouge to move 1.3M tonnes of polyolefins a year from its production facility in Al Ruways Industrial City for export.

Alongside the contracts, Etihad Rail's freight fleet is also starting to take shape. In August 2022 the company took delivery of the first of 38 SD70 locomotives from Progress Rail and the first of 842 multi-purpose wagons that are being built by CRRC.

"Our locomotives are equipped with the latest filtering innovations such as the pulse sand filtering system, which ensures that the train operates at high effectiveness and efficiency when passing through desert regions," Alshehi says. "They also incorporate and comply with the latest technologies and standards for reducing emissions." The Etihad Rail locomotive fleet is equipped with ETCS Level 2 "in order to ensure safety, security and reliability, in addition to efficiency and sustainability."

Etihad Rail has opted for diesel traction, but Alshehi says there is potential for electrification in the UAE. "Diesel traction technology is highly reliable, and given that heavy-haul freight was the first service to operate on the UAE national rail network, diesel traction is the most appropriate," Alshehi says. He points out that in building a railway and moving traffic away from road, Etihad Rail is already contributing to a reduction in CO2 emissions. "We recently signed a memorandum of understanding with Progress Rail to discuss potential opportunities for the development and deployment of an autonomous, zero-emissions port-to-port concept in the future," he adds.

Passenger services

The development of the UAE's first mainline rail passenger services is one of three strategic projects. Services are planned between 11 cities located on the Phase 2 network, from Al Sila near the Saudi border to Fujairah via Ruwais, Al Mirfa, Abu Dhabi, Dubai, Sharjah, and Al Dhaid. Rail is expected to reduce journey times by up to 40% compared with road. This includes a journey time of 50 minutes from Abu Dhabi to Dubai and from Dubai to Fujairah, and a 1h



• Etihad Railways Push-Pull set

10min journey time from Abu Dhabi to Ruwais. The journey from Abu Dhabi to Fujairah will take 1h 40min.

Etihad Rail signed a Dirhams 1.99Bn agreement with First Abu Dhabi Bank in February 2022 to finance passenger services, with the bank the certified lead arranger for the loan. The railway also confirmed a Dirhams 1.2Bn (\$US 326.7M) order with CAF in June for the supply of a fleet of push-pull diesel trains. The trains will meet European standards with a maximum speed of 200km/h, with capacity for more than 400 passengers. CAF said the base contract is worth more than €250M although neither party could confirm the number of trains included in the order.

This is not the full extent of Etihad Rail's passenger ambitions. In September, Etihad and Oman Rail announced a partnership to form a joint venture, Oman-Etihad Rail, to design, develop and operate a railway network to connect Sohar Port in Oman with the UAE national network, backed with an investment of \$US 3Bn.

The 303km railway will run from the Port of Sohar on the Gulf of Oman to UAE's national network at Abu Dhabi via Al Ain. "The network will provide both passenger and freight services, which will contribute to improving the movement of goods and passengers between the two countries," Alshehi says, adding that passenger trains will operate at up to 200km/h, offering 1h 40min journey times between Sohar and Abu Dhabi, and 47 minutes from Sohar to Al Ain.

The board of Oman-Etihad Rail met for the first time in October 2022, when Mr Ahmed Al Musawa Al Hashemi was appointed as CEO and Mr Mohammed bin Zahran Al Mahrouqi as deputy CEO. Speaking at the British Railway Industry Association's annual conference in London on November 11, Al Hashemi said that interoperability requirements for the link to Oman had been agreed, including loading gauge and signalling, and that design work was underway prior to tendering.

No date has been confirmed yet for the start of construction, but expect progress here and with Phase 2 of the Etihad Rail network in 2023 as this impressive project edges closer to the start of full operation."

(iii). OMAN SEEKS CONSULTANTS FOR MUSCAT METRO

Launch of the tendering process means the idea of an urban rail system is being actively pursued.

From "I.R.J." 01.02.2023:

"Efforts to establish the first Metro in Muscat, capital of Oman, look set to bear fruit now that the country's Ministry of Transport, Communications and Information Technology (MTCIT) has invited international consultants to bid for a contract to provide advisory services for the project.

Phase I of the tendering process will primarily focus on the pre-feasibility stage of project development and bids for the consultancy contract are due to be opened today (February 1).

It was announced in July 2021 that a metro line for Muscat was being planned to run from Ruwi and Muttrah in the east via the city centre to the airport and Seeb in the west. It was being planned as part of a range of infrastructure projects drawn up under the Oman National Spatial Strategy (ONSS).

The consultants will be required to support MTCIT in "delivering key decisions" relating to the metro project.

Currently there are no railways in Oman and Muscat's public transport options are limited to buses, taxis and shared hail-and-ride vehicles. Advocates of the Metro say that it would reduce traffic congestion, increase the city's appeal to tourists, reduce the carbon footprint of Oman's public transport and, if powered by electricity or potentially green hydrogen in the future, would contribute to the country's decarbonisation strategy.

MTCIT has also commissioned a study on behalf of the Muscat Governorate to assess what the social and economic benefits of the project might be. In a television interview, Oman's Minister of Transport, Communications and Information Technology, Eng. Said bin Hamoud al Maawali, said a team of experts was studying ways of ensuring the planned metro's long-term viability."

Due to the early press date of the last issue and the delayed delivery of some sources we include here also some news items from the November 2022 issue of "I.R.J."

(iv). 'I.R.J.' p.8. OMAN AND U.A.E. SIGN CROSS-BORDER AGREEMENT

"Oman Rail and Etihad Rail, the national railway developer and operator in the United Arab Emirates, have signed a \$US3Bn agreement to design, construct and operate a 303km cross-border railway from the port of Sohar on the Gulf of Oman via Al Ain to UAE's national network at Abu Dhabi.

Passenger trains will operate on the new line at up to 200km/h, reducing journey time from Sohar to Abu Dhabi 1h 40min, and from Sohar to Al Ain to 47 minutes. Freight trains will operate at up to 120km/h.

Oman Rail and Etihad Rail will form the Oman-Etihad Rail Company to take the project forward, including funding mechanisms and the project schedule. The new joint company will also undertake design, development and operation of the railway. The agreement outlines a strategic roadmap for a sustainable project which will contribute to bolstering the solid relations between the UAE and Oman, and will play an instrumental role in facilitating national and regional trade by connecting the UAE National Rail Network with Sohar Port, says Mr. Shadi Malak, CEO of Etihad Rail."

(v). RAS AL KHAIMAH. p.13. "Etihad Rail has completed tracklaying of a 5.7km section of main line in the Emirate of Ras Al Khaimah, another key step towards completing Phase 2 of the UAE National Rail Network. Tracklaying was completed on the 45km Sharjah section in July and work is continuing on the final 90km of the railway from Ras Al Khaimah to the Fujairah port."

(vi). DUBAI

'I.R.J.' Nov. 2022 p.15. "Dubai Roads and Transport Authority (RTA) has invited tenders for the construction of a 20.6km extension to the Green Line from Al Jadaf across the Creek to the Dubai Harbour development and Academic City and a 3.5km eastward extension of the Red Line from Centrepoint to Mirdif City Centre."



(vii). CHINESE PUSH-PULL SETS ORDERED

From "R.G.I." 08.02.2023: "Etihad Rail has awarded CRRC Qingdao Sifang a contract to supply three push-pull trainsets with options for up to 20 more. Each trainset will comprise a diesel locomotive, five intermediate passenger cars and a driving trailer coach. They will have a design speed of 220 km/h, but would operate at 200 km/h in normal service. The trains will be designed to cope with high temperatures and the sandy desert environment. The interiors will feature first- and second-class accommodation and family zones, with wi-fi and powerful air-conditioning. Deliveries are scheduled to begin in 2025, and the agreement signed on January 31 includes a 15-year warranty period."

(viii). U.A.E. LAUNCHES FREIGHT NETWORK

From "I.R.J." 23.02.2023: "Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the United Arab Emirates (U.A.E.) and ruler of Dubai, officially launched the UAE freight rail network during a ceremony held at the main Control and Maintenance Centre in Al Fayan, Abu Dhabi, on February 23.

The second phase of the Etihad Rail network stretches for 900km from Ghuweifat on the border with Saudi Arabia in the east to Fujairah in the west. The network connects four major ports and seven logistics zones located at Ruwais, Industrial City of Abu Dhabi (ICAD), Khalifa Port, Dubai Industrial City, Jebel Ali Port, Al Ghail and Fujairah Port.

Construction was split into four work packages and work on the first commenced in February 2020. The project required the construction of 593 bridges and crossings, and nine tunnels with a length of 6.5km, while 120 million cu.m. of material was excavated. The standard-gauge network is equipped with ETCS Level 2. Eleven contractors, 25 consultants, and 28,000 specialists worked on the project. It took 133 million working hours to complete, and 40,000 approvals from 180 government agencies.

Al Maktoum described the project to connect the seven Emirates as strengthening "our capabilities and competitiveness and consolidating our unity."

Sheikh Theyab bin Mohamed bin Zayed Al Nahyan, member of the Abu Dhabi Executive Council and chairman of Etihad Rail, praised the work of Emiratis to deliver the new railway network. "Thanks to them, we won the bet, and we succeeded in launching a railway network with international specifications that extends to about 900km across the Emirates," he says.

The network is operated with a fleet of 38 3.4MW EMD SD70 locomotives supplied by Progress Rail and 1000 wagons supplied by CRRC. Contracts have been signed with freight customers including Stevin Rock and Borogue, and the network is expected to carry 60 M tonnes of freight a year, contributing Dirhams 200Bn (\$US 54.45Bn) to the UAE economy. It will also reduce road transport emissions by 21% initially and by 40% by 2050.

No launch date has been confirmed for the start of passenger services on the network. Etihad Rail has ordered push-pull train fleets from CAF and CRRC and Al Maktoum posted pictures of himself and other UAE dignitaries following a ceremony onboard a pilot passenger train that was delivered to the UAE in 2022. The first phase of the UAE national network, the 264km line from Habshan to Shah and Ruwais, opened in 2016.

The ceremony took place at the main control and maintenance centre in Al Fayan, Abu Dhabi."

ABU DHABI SOVEREIGN WEALTH FUND TO SUPPORT OMAN-UAE RAIL PROJECT

"Meanwhile, Oman-Etihad Rail, the company overseeing a project to build a new railway between the two countries, has signed a cooperation agreement with Abu Dhabi sovereign wealth fund Mubadala to support development of the \$US 3Bn project.

Oman-Etihad Rail was established in September with the objective of constructing a 303km cross-border railway from the port of Sohar on the Gulf of Oman to the UAE's national network at Abu Dhabi via Al Ain. Under the agreement the partners will form working groups and joint committees to benefit from shared expertise and knowledge, combine efforts to develop economic and financial feasibility studies as well as joint investment to develop the railway project and enhance its added value.

"The signing of the cooperation agreement between Oman-Etihad Rail and Mubadala reflects the commitment of both parties to building strategic partnerships and strengthening co-operation with leading entities to promote investment, economic growth, and comprehensive development in both countries," says UAE minister of energy and infrastructure and chairman of Oman-Etihad Rail, Mr Suhail bin Mohammed Faraj Faris Al Mazrouei.

"The agreement will contribute to enhancing and developing the national economy in the UAE and the Sultanate by improving supply chain efficiency, opening new cross-border trade opportunities, and providing safe and sustainable means of transport by rail for passengers and goods."

Diesel passenger trains are envisaged to operate at up to 200km/h and freight trains at up to 120km/h on the new line. No schedule has yet been confirmed for delivery of the project.

Etihad Rail signed a contract with CRRC for the supply of three push-pull diesel passenger trains earlier this month with an option for up to 20 of the 200km/h sets. The manufacturer says it expects the trains to enter service in 2025."

From "R.G.I." 03.03.2023. "Abu Dhabi's sovereign wealth fund Mubadala Investment Co is to support Oman-Etihad Rail Co with the development of plans for a mixed traffic railway connecting the UAE with Oman. Working groups are to be formed to share expertise and undertake joint economic and financial feasibility studies for the US\$3Bn project. OER was formed in September 2022 as a joint venture of national railway project promoters Oman Rail and Etihad Rail. It envisages that future 200 km/h passenger trains would offer a 1 h 40 min journey time on a 303 km route from Sohar to Abu Dhabi, while freight trains would run at up to 120 km/h.

The signing of the co-operation agreement with Mubadala 'reflects the commitment of both parties to building strategic partnerships and strengthening co-operation with leading entities to promote investment, economic growth and comprehensive development in both countries', said Suhail bin Mohammed Faraj Faris Al Mazrouei, UAE Minister of Energy & Infrastructure and Chairman of OER, on February 20."

B. TURKEY

(i). FREIGHT LINK TO TURKMENISTAN.

From "R.G.I." 12.12.2022: "An inaugural freight service from Izmir in Turkey arrived at Tashkent in Uzbekistan on December 3. The transit time on the 4,500 km route via Iran and Turkmenistan was 25 days. The launch of the service was agreed at a meeting of the Organization of Turkic States, with the initial monthly operation planned to increase to twice a month in the future."

(ii). ISTANBUL AUTOMATED LINE M8 INAUGURATED.

From "Metro Report International" 09.01.23:

"The 14.3 km automated Metro Line M8 linking Bostanci with Dudullu on the Anatolian side of Istanbul opened on January 6. The line has 13 stations and passes through four districts with a total of 1.7 Million inhabitants.

Civil works started in 2016 but were suspended at 55% completion in 2019 for a year because of a funding shortfall.

The fully-automated metro line is capable of running with 90-sec headways and has capacity to move 44,400 passengers per hour per direction. Full-height platform screen doors have been installed at all stations.

Journey time between Bostanci and Dudullu is 21 min. Interchange is provided with the Marmaray suburban rail line and ferries at Bostanci, with Line M5 at Dudullu, and with M4 at Kozyatagi and M5 at IMES.

As part of the project, underground park-and-ride facilities have been built at Bostanci and Kozyatagi. These have car parking spaces for a total of 2,831 vehicles.

Hyundai Rotem has supplied 10 four-car driverless trainsets under a December 2017 contract. Each train is 86.3m long and 2,900mm wide, with capacity for 1,081 passengers. They have a maximum speed of 80 km/h.

- A 2km extension of the city's M7 metro line from Mecidiyeköy to Yildiz with an intermediate station at Fulya opened on January 2. Line M7 is now 19.2km long and serves 17 stations. It is currently being extended from Yildiz to Kabatas."

(iii). M11 AUTOMATED METRO LINE TO AIRPORT OPENS

From "Metro Report Intl." 26.01.2023:

"The 34km first phase of metro Line M11 to Istanbul's main airport opened on January 22, connecting Kagithane on M7 with the main entrance of the airport and Kargo Terminali. It was originally hoped that Line M11 would open with the airport, scheduled for February 2018. The airport opening was held up until April 2019, but construction of the Metro was further slowed by funding issues and the Covid-19 pandemic.

The line is fully underground. It has a capacity of up to 800,000 passengers a day. Trains run every 3 min in the peaks, and although it is fully automated, there will be a member of staff on board for an unspecified initial period.

A station will open at the airport's Terminal 2 in the future, and a one-station extension from Kagithane to Gayrettepe on M2 is under construction with opening scheduled for June.

The six-station second phase of M11 between the airport and the western terminus of the Marmaray commuter line at Halkali railway station is scheduled to be completed by the end of the year.

M11 is being built by a consortium of Turkey's Kolin Insaat and Senbay Madencilik under a November 2016 contract worth €999.8M. Signalling is being supplied by defence electronics group Aselsan.

Speaking at the opening ceremony, Transport Minister Adil Karaismailoglu said M11 was the longest metro line in Turkey to be constructed under a single tender, and also the fastest, with trains operating at up to 120 km/h. "We will complete our other metro investments and increase Istanbul's rail network from 284.3 km to 380.2 km", he said.

CRRC Zhuzhou has supplied 176 Metro cars equipped for GoA4 unattended operation under a TL1.5Bn contract awarded in April 2020, with 60% domestic content. They can operate in four or eight-car formations.

The line is owned by the Ministry of Transport & Infrastructure and operated by national railway operator TCDD Tasimacilik. It is integrated into Istanbul's metro system, but in common with other lines developed by the Ministry, has been branded with its U symbol, instead of the Opposition Party-controlled municipality's M logo."

(iv). TURKISH CONTRACTOR TAKES OVER CHINESE SCHEMES IN AFRICA

From "I.R.J." 19.01.23: "Uganda has cancelled its \$US 2.3Bn deal signed with China Harbour Engineering Company (CHEC) in 2014 to build a 273km standard-gauge route from the capital, Kampala, to the Kenyan border town of Malaba, and has instead signed a Memorandum of Understanding (MoU) with Turkish civil works contractor Yapi Merkezi.

Uganda's project coordinator, Mr Perez Wamburu, said last week that the government would instead use syndicated loans from export credit agencies to

finance the project. Wamburu said the Export-Import Bank of China had yet to respond to Uganda's latest request for funding nearly two years after it was submitted, after previously responding immediately to its proposals.

"From the time of our last financing submission in February 2021, we have heard only silence," he told The East African. "After submission, we waited for a few months, it was silence, and up to now, it's still silence from Exim Bank."

Uganda is now reportedly considering taking an alternative route to the coast through its southern neighbour Tanzania, where Yapi Merkezi is already involved in the construction of the Standard Gauge Railway (SGR) network. This could impact the commercial viability of Kenya's under-construction SGR.

While construction of the Malaba - Kampala SGR line has been delayed, the government has focused on rehabilitating part of its 1000mm-gauge network. In June 2020 the Ugandan government approved \$US 376M to refurbish the 215km 1000mm-gauge Malaba - Kampala route.

South Sudan, Kenya, Uganda and Rwanda had agreed about a decade ago to build an SGR to carry freight and passengers between Mombasa and the South Sudanese capital of Juba via Malaba, Kampala and Kigali. Kenya received \$US 5Bn from the Export-Import Bank of China to build the first phase of the railway, from Mombasa to Naivasha in the Central Rift Valley, which was completed in 2017. But plans for the extension of the line to Malaba on the border with Uganda have stalled.

The Kenyan government last year announced it was asking for a longer repayment period for the \$US 5Bn lent by the Export-Import Bank of China to fund construction of the SGR from Mombasa to Naivasha.

Meanwhile, Tanzania is progressing with a 2561km rail network between the port of Dar es Salaam and Mwanza on Lake Victoria. Tanzania signed a \$US 2.21Bn contract on December 20 with a joint venture between China Civil Engineering Construction Corporation (CCECC) Tanzania and China Railway for the construction of a 506km standard-gauge railway (SGR) from Tabora to Kigoma on Lake Tanganyika.

In July, Tanzania Railway Corporation (TRC) signed a \$US 900.1M contract with Yapi Merkezi for the construction of the Tabora - Isaka section of the 1219km Dar es Salaam - Mwanza SGR.

The "South China Morning Post" reported that Chinese Foreign Ministry spokesman Mr Wang Wenbin would not give a direct answer on the termination of the deal with Uganda but said China and Uganda "have a comprehensive cooperative partnership and the practical cooperation between the two countries is a pacesetter for China-Africa cooperation".

"Over the past few years, China and Uganda have conducted a series of fruitful cooperation on railways, hydropower stations, expressways, oil and gas development and infrastructure, bringing tangible benefits to the two peoples," Wang said. "China stands ready to work with the international community to continue to carry out infrastructure, investment and financing cooperation with African countries."

(v). EARTHQUAKE CATASTROPHE DAMAGE

On 6 Feb. southern Turkey and northern Syria were hit by a major earthquake with numerous aftershocks causing immense destruction, damage and loss of life. (Now estimated as over 50,000 fatalities) This is from "I.R.J". 07.02.23:

"Information is emerging about how rail services in Turkey and Syria have been affected following February 6's 7.8-magnitude earthquake, which has left at least 5,000 dead and caused devastation and destruction to buildings and structures.

In Syria, the north-west part of the country is worst affected, and all rail traffic has been suspended by the Transport Ministry. Although freight traffic has a minor role on Syria's railways, daily passenger trains between the main cities are of importance to commuters, including services to Aleppo and Latakia which are among the worst affected.

In Turkey, the central-southern part of the country has been worst hit. It is believed that a total of 1275km of railway lines have been seriously affected by the earthquake in the Kahramanmaraş region of central Turkey, including damage to 446 bridges, 6161 culverts and 175 tunnels. Track has been left

twisted and damaged, particularly on the Toprakkale - Narli, Narli - Malatya and Narli - Gaziantep sections of the network, while 10 substations providing electric power for rail lines are out of action.

In addition there are reports that part of the 25.5km Gaziray suburban commuter railway, which opened in November 2022, has collapsed.

Rail transport is proving to be very important to earthquake relief efforts. Turkish State Railways (TCDD) reports that trains carrying aid materials, construction equipment, electricity generators and shelters have been despatched from stations at Kocaeli and Afyonkarahisar to the regions impacted by the earthquake.

On February 7 a 20-wagon "Hope Train" departed from Kocaeli Köseköy to Adana, near the quake zone, which will provide transport and shelter for victims as well as equipment to support excavation and relief efforts. Further construction equipment and aid materials were due to be loaded at Akşehir and Konya onto a 19-vehicle train departing from Afyonkarahisar Ali Cetinkaya station. The train consists of 12 passenger coaches, four loads of construction equipment and three loads of aid materials.

TCDD will offer Disaster Transfer Trains for people impacted on February 8, running from Iskenderun to Mersin via Osmaniye, Ceyhan, Adana, and Tarsus. The trains will depart at 09.00, 12.00, 15.00, 18.00 and 21.00 from both Iskenderun and Mersin. Trains have also been offered for victims from Malatya and Yazihan to Sivas and Ankara.

Meanwhile, railway station waiting rooms and passenger coaches at Adana, Mersin, Osmaniye, Iskenderun, Diyarbakır, Elazığ and Malatya have been made available around the clock to meet the housing needs of residents displaced by the disaster. In total accommodation has been provided for 3400 people and an aid campaign has also been organised by TCDD management and employees.

Of additional concern for the transport sector is that fact that Turkey is an important hub on the international rail freight map, forming a southern branch of the Middle Corridor route connecting Asia with Europe. Turkish ports are also important for freight transported by rail for shipment to Europe. The earthquake has caused a huge fire among containers waiting on the dockside for shipment at the Turkish Mediterranean port of Iskenderun."

(vi). SOLAR POWER PLANTS FOR RAIL USE

From 'R.G.I.' 11.02.2023: "Infrastructure manager TCDD has begun construction of a 100 MW solar power plant at Bogazliyan southeast of Ankara at a cost of TL780M. The plant is the largest of ten that TCDD is taking forward as part of efforts to generate 75% of its power supply requirements from renewable sources by 2025.

In December the company announced it would develop a 70 MW solar plant at Polatli at a cost of TL546M. It is also planning to build solar energy facilities at Kırklareli (12 MW), Balıkesir (10 MW), and Konya (22.5 MW). The company has set itself an objective of reducing CO2 emissions from traction power supply activities by at least 75% by 2035, compared to the 1990 level."

(vii). KAYSERI LIGHT RAIL EXTENDED

From "Metro Report Intl." 08.03.23: "On March 2 Mayor Memduh Büyükkılıç opened a 6.7 km extension of Kayseri light rail line T3 from Anafartalar northeast to Kumsal AVM, saying the Turkish city is 'continuing our work in order to increase the quality of transport' for residents."

C. EGYPT

(i). NEW LINE TO BELBEIS

From 'I.R.J.' Nov. 2022 p.17. Egypt: "The European Bank for Reconstruction and Development (ERBD) is to provide a sovereign loan of up to €40M to Egyptian National Railways to partially finance construction of a new line linking Robeiky, 10th of Ramadan Dry Port and Belbeis."

(ii). TALGO INTER-CITY TRAINS ENTER SERVICE IN EGYPT

From "I.R.J." 29.12.2022:

"Egyptian National Railway (ENR) has put into service the first of six locomotive-hauled inter-city trains supplied by Talgo, Spain, on its premier Cairo - Alexandria route.

ENR awarded Talgo a contract worth €158M to supply the six trains in April 2019, financed by the European Bank for Reconstruction and Development (EBRD). The deal included the construction of a new Talgo maintenance facility in Egypt where the trains will be maintained for the next eight years. The new trains were manufactured at Talgo's factory in Alava, Spain.

The aluminium-bodied coaches are similar to those which Talgo is building for Germany and Denmark, but have high-power redundant air-conditioning systems which are certified to operate at temperatures of up to 50°C, based on Talgo's experience with its high-speed trains which operate between Mecca and Medina in Saudi Arabia.

The Talgo trains for ENR have a maximum commercial speed of 160km/h. Each train consists of a locomotive and 15 trailer coaches providing a total of 490 seats. There are five first-class coaches in each train plus eight second-class coaches, a mixed-use coach with a Cafeteria and seats for people with reduced mobility, and a technical car. The trains have WiFi throughout and an infotainment system in the first-class coaches.

Night trains: ENR awarded Talgo a second contract worth €280M in August 2022 for seven overnight passenger trains. Delivery of these trains will start in 2024 and they will be maintained at Talgo's new facility under a 15-year contract."

. Talgo sets

"R.G.I." on 13.01.23 noted on this same topic: "The first of the Talgo trainsets ordered by Egyptian National Railways for use on the routes from Cairo north to Alexandria and south to Aswan entered service on December 24. Talgo said the new stock would increase capacity and service quality on the routes, while its lightweight aluminium coach design would reduce energy consumption per passenger.

In April 2019 Egyptian National Railways selected the Spanish company to supply and maintain a fleet of six 160 km/h inter-city trainsets. The €157M contract was financed by the European Bank for Reconstruction & Development, and includes eight years of maintenance at a depot which Talgo has built in Cairo. Each of the trainsets includes five first class and eight second class coaches, a buffet car and a generator car, giving a total of 490 seats. Talgo told Railway Gazette International that it is also providing the diesel-electric locomotives, manufactured by Progress Rail.

The trainsets draw on Talgo's experience with the high speed trains it supplied for Saudi Arabia's Haramain line. The ENR sets are certified to operate at temperatures of up to 50°C, with pressure sealing to minimise sand ingress and powerful and redundant air-conditioning systems. The interiors include CCTV, wi-fi throughout and passenger infotainment system in first class.

The trains are being manufactured at Talgo's Alava factory in Spain. The first was delivered to the port of Alexandria in March 2022, and the third and fourth trains arrived on January 2 this year."

(iii). KONTROM TO SUPPLY GSM-R SIGNALLING



: Harak. 140.07 Egypt Talgo 2nd class coach interior



From "I.R.J." 10.01.23: "The consortium led by Siemens Mobility that is building the high-speed network for Egypt has awarded Kontron Transportation a turnkey contract to supply a GSM-R radio communications system.

Kontron says that it will be supplying its most advanced railway communications technology, fully compliant with International Union of Railways (UIC) standards, for the 2,000km of electrified railway that will connect 60 stations across Egypt.

Equipped with ETCS Level 2, the high-speed network will have three main routes:

The Green Line will connect Mersa Matruh and Alexandria with the New Administrative Centre (NAC) and Ain Sukhna.

The Blue Line will run from Cairo to Abu Simbel via Qena, Luxor and Aswan, and the Red Line from Luxor via Qena and Hurghada to Safaga.

The Kontron GSM-R system will be based on IP cybersecure technology, enabling a smooth transition from GSM-R to the 5G Future Rail Mobile Communication System (FRMCS).

"We are honoured to be part of this amazing project, which will give 90% of Egyptians access to safe, clean and reliable long-distance transport," says Mr Bernd Eder, chief operating officer at Kontron Transportation. "Connecting cities all across the country while also cutting down on carbon emissions is a great undertaking in which we get to play a major role."

(iv). PERMANENT WAY FOR THE FIRST HIGH-SPEED LINE

From "R.G.I." 08.02.23: "voestalpine Railway Systems delivers 219 turnouts and 144 rail expansion devices for Egyptian prestige project.

The National Tunnelling Authority of Egypt (NAT) has undertaken an ambitious project: A 1,800-kilometre-long high-speed network, on which trains will travel at a maximum speed of 250 km/h, is to connect the Red Sea with the Mediterranean Sea in the future. The railway system will be equipped with the latest technology and meet European standards. Equipped with the latest computer-based interlocking technology, the signalling system will comply with the European Train Control System (ETCS) level 2.

voestalpine Railway Systems is supplying for the construction phase of the Green Line - Egypt's first high-speed line 219 turnouts and 144 rail expansion devices to compensate for temperature-related changes in track length on bridges and viaducts. The first section of track connecting the port of Sokhna on the Red Sea and the Mediterranean ports of Marsa Matrouh and Alexandria, moreover, thanks to a highly functional digital track management software and its integrated tools, the track's assets are monitored and managed throughout the entire product life cycle. The ultimate benefit: increased availability and optimised life cycle costs.

"By digitally mapping the plant structure and a plant-specific maintenance strategy, as well as the associated standardised documentation of maintenance activities, unplanned downtimes can be prevented, and the reliability and thus the availability of the plants can be optimised over the entire plant life cycle." (Theresa Passath, Customer Manager & Sales)

(v). NGE TO BUILD 330km EGYPTIAN HIGH-SPEED LINE

From "I.R.J." 01.03.2023: "ORASCOM and The Arab Contractors have signed a contract with NGE, France, for its subsidiary TSO to build 330km of high-speed railway in Egypt.

The double-track line will run from Ain Al Sokhna, near Alexandria, via October 6 City on the outskirts of Cairo to Borg El Arab. The line will have more than 100 turnouts.

Egypt's National Authority for Tunnels (NAT) signed a Memorandum of Understanding (MoU) in January 2021 with Siemens Mobility, Orascom Construction and The Arab Contractors to design, build, equip and commission Egypt's first high-speed line. The 460km phase one will connect El-Alamein on the Mediterranean Sea to Ain Sokhna on the Red Sea, via the New Administrative Capital. A 200km phase two will extend the line from El Alamein to Marsa Matrouh.

The line, which will have a design speed of 250km/h, will carry both freight and passenger services, with express trains operating at 200km/h, regional trains running at 160km/h and freight trains at 120km/h. The line will have 20 stations.

NGE says it won the contract through its capacity to implement planning adapted to the client's objectives, as well as its experience with high-speed project management. It says that work will start "in early 2023" and will require the mobilisation of up to 500 people on-site.

"We are proud to make a significant contribution to this project, which will provide nearly 90% of the Egyptian population with access to fast and reliable

public transport," says COO international and major projects at NGE, Mr Orso Vesperini. "It will also make a significant contribution to sustainability by shifting freight traffic to rail and stimulating Egypt's economic development."

(vi). CARRIAGE MAINTENANCE CONTRACT From 'R.G.I.' 12.02.23: "Chairman of Egyptian National Railways Mohamed Amer and Transmashholding Vice-President Sergo Kurbanov have signed a €430M, 12-year agreement for the maintenance of the coaches which are being supplied under a contract agreed in 2018. So far 725 of the 1,350 ordered coaches have been delivered. The latest agreement includes training local staff and the supply of spare parts. Maintenance will be undertaken at a depot to be built in the suburbs of Cairo as part of a planned industrial cluster to be developed with international suppliers."

(vii). ACCIDENTS

From "ABC News" 07.03.2023: "A passenger train derailed Tuesday north of Cairo, killing at least two people and injuring 16 others, Egyptian authorities said. It was the latest in a series of rail accidents in the country in recent years.

The train went off its tracks as it travelled through a station in the city of Qalyub on its way to the city of Menouf in the Nile Delta, state prosecutors said in a statement. They said they had opened an investigation into the cause of the crash.

At least 20 ambulances were dispatched and the injured were transferred to hospitals, health authorities said. Videos of the aftermath posted on Facebook showed crowds of people and emergency services gathering around the rail cars, which had remained upright. In other footage, passengers were seen being pulled from the wreckage through rail-car windows.

Train derailments and crashes are common in Egypt, where the railway system which has a history of mismanagement and poor maintenance of equipment. In recent years, the government announced modernization initiatives to improve its railways. In 2018, President Abdel Fattah el-Sisi said some 250 Billion Egyptian Pounds, or \$8.13 Billion, would be needed to properly overhaul the North African country's neglected rail network.

In 2021, two trains collided in the southern Egyptian city of Tahta, killing 32 people. Later that year, a train derailed in the Qalyubia province, killing 11 people. Egypt's deadliest train crash was in 2002, when more than 300 people were killed after a fire broke out on an overnight train journeying from Cairo to southern Egypt."

"Agence France Presse" for 7. March added more detail and background:-

"Two people were killed and several others injured Tuesday in a train accident north of Cairo, Egypt's health ministry said after the country's latest rail tragedy. A ministry statement said there were "two dead in the train accident at Qalyub, while the injured are in a stable condition." An earlier ministry toll that reported one dead also listed 16 injured, including six already treated and released.

The incident occurred in Qalyub, just north of the capital Cairo in the Nile Delta. Egypt's national rail authority said the accident occurred when a passenger train entering Qalyub station went through a stop signal. "That led to the derailment of the locomotive and the first carriage," the authority said in a statement.

Pictures from the scene showed first responders converging on rail cars which still appeared to be right side up, behind a high wall in a built-up area. Police formed a perimeter to hold back crowds who perched on other walls nearby. A crane was later brought in to lift a derailed car which appeared to be partially crumpled.

Egyptian rail accidents have mostly been blamed on poor infrastructure and maintenance. In April 2021 Transport Minister Kamel el-Wazir fired the rail authority's head following an uproar in the Arab world's most populous country over mismanagement of dilapidated train lines. The sacking came two days after an accident that cost 23 lives. Ashraf Raslan was dismissed as part of a shuffle of ten top railway officials. "The goal of these decisions is not merely about leadership changes of the authority but are in line with the next stage which demands... a complete upgrade of the railway network," the transport ministry said at the time. The changes "underway aim to provide better services, working around the clock to serve commuters and to upgrade...

this essential service which transports millions of passengers yearly", it said in a statement.

In March 2021, at least 20 people died and nearly 200 were injured in a train crash in southern Egypt, according to an official toll which authorities revised several times. The prosecution service later alleged the driver of the speeding Egyptian train and his assistant had both left the driver's cabin when it crashed into another train, which was stationary. The assistant on the second train had used cannabis and was under the influence of the painkiller Tramadol, as was a track signalman, the prosecutor also alleged.

Wazir, a former general, was named Transport Minister after a 2019 train collision blamed on human error. "We have a problem with the human element," he said, pledging to set up an automated network by 2024. President Abdel Fattah al-Sisi has vowed to hold to account those responsible for the recurrent deadly accidents on Egypt's railways in recent years. One of the deadliest came in 2002 when a fire ripped through a crowded train south of the capital, killing 373 people.

Egypt's roads are also the scene of regular deadly accidents. Roads are often poorly maintained and driving rules flouted."

[Editor adds: If accidents are so frequent it may not be a good idea to have fixed TALGO sets of carriages whereby if one is damaged the whole set cannot be used until the repair is complete. In this case one carriage is clearly badly crumpled.... The quotation: "We have a problem with the human element" deserves to be written large on many institutions.....]



High-speed services between Mecca and Medina began on December 31 2017 with trial operation of 111 services carrying over 15,880 invited passengers.

The first commercial services began on October 11 2018. The full timetable was introduced on March 31 2021 when the 12-year operating component of the contract to build, operate and maintain the high-speed line came into force. There is an option to extend this term to 17 years."

(ii). FIRST WOMEN TRAIN DRIVERS START.

From "I.R.J." 26.01.2023: "Saudi Arabia is celebrating the start of work by 34 female train drivers on the Haramain high-speed line between Mecca and Medina.

More than 28,000 women applied for the roles when they were made public. Of these, 14,000 applicants completed the first phase of the selection process and underwent an on-site examination at the Saudi Railway Polytechnic in Qassim.

The initiative is the ninth to recruit local Saudi train drivers for the high-speed line, which entered service in October 2018. The training programme, which commenced in March 2022, included theoretical and practical modules of 1157 hours, covering basic railway concepts, infrastructure and signalling knowledge, traffic and safety regulations, and technical aspects of the train among other topics.

Practical training, which comprised 674 hours of driving monitored by Renfe supervisors, began in August. Of the 34 recruits, six were already part of the Renfe KSA staff, working in areas such as station services or as onboard train personnel. The average age is 26.8 years and 73% have a university degree. The recruitment initiative takes Renfe KSA's train driver staff to 140 with now almost a quarter female."

[One wonders whether other railway operators world-wide suffering from recruitment problems might not also be interested in this vast pool of enthusiastic "wannabe" train drivers! Ed.]



Woman driver (from renfe/KSA)

D. SAUDI ARABIA

(i). HARAMAIN SUCCESS

From "I.R.J." 03.01.2023: "The Haramain high-speed line between Mecca and Medina has carried a total of 5.6 Million passengers since services resumed on March 31 2021.

Spanish national operator Renfe, which forms part of the consortium which operates the 453km high-speed line, says that 2022 was marked by a resurgence in demand following the Covid-19 pandemic.

Under the restrictions on travel within Saudi Arabia, high-speed services were suspended from April 2020 until March 31 2021. Since then over 23,500 trains have been operated, with passenger numbers steadily rising to reach 500,000 a month in November 2022.

These services have operated over 7 M km with train punctuality above 97.5%, Renfe reports.

Over 80 services a day have been provided at peak times, with trains operating in multiple to carry pilgrims between the holy cities of Mecca and Medina during Ramadan and Hajj.

E. IRAN.

KARAJ SECOND METRO LINE.

From "Metro Report Intl.": "An initial 5.5 km section of the 27 km Metro Line 2 currently under construction in Karaj opened for limited passenger services on February 27.

The second Metro line in Karaj, 40 km west of Tehran, was opened by Interior Minister Ahmad Vahidi. The initial section links Chehel-o-panj Metri Golshahr with Ayatallah Taleqani, with four intermediate stations yet to open. Services are only operating on Sundays and Tuesdays from 11.00 to 13.00, running every 30 min — more frequent services will be introduced over time.

Construction started in 2005 and so far 15 km of underground alignment has been excavated. Extensions are going on west of Chehel-o-panj Metri Golshahr to Kamalshahr on the Karaj – Qazvin motorway, and south from Ayatallah Taleqani to Mallard City. Interchange will be provided at Karaj main line station with Line 1; this interurban route runs into the capital, where it is designated as Tehran Line 5.



The line is operated by seven-car trainsets supplied by domestic manufacturer IRICO.
In the long term, the city is planning a six-line network totalling 126.5 km."



CATASTROPHE AT PALESTINE:

No, not that one..... But just out of general interest, we include here the report on a derailment with near-catastrophic consequences at East Palestine, Ohio. It is worth noting that, to make matters even worse, Donald Trump visited the location some days later to try to win some Brownie points. The Preliminary Report also provides many insights into freight train operations in the US, the length of trains, the operating procedures etc.

Preliminary Report: February 23, 2023

?On February 3, 2023, about 8:54 p.m. local time, eastbound Norfolk Southern Railway (NS) general merchandise freight train 32N derailed 38 railcars on main track 1 of the NS Fort Wayne Line of the Keystone Division in East Palestine, Ohio. [1] (See figure.) The derailed equipment included 11 tank cars carrying hazardous materials that subsequently ignited, fueling fires that damaged an additional 12 non-derailed railcars. First responders implemented a 1-mile evacuation zone surrounding the derailment site that affected up to 2,000 residents. There were no reported fatalities or injuries. At the time of the accident, visibility conditions were dark and clear; the weather was 10°F with no precipitation.

?Train 32N comprised 2 head-end locomotives, 149 railcars, and 1 distributed power locomotive located between railcars 109 and 110. The consist included 20 placarded hazardous materials tank cars transporting combustible liquids, flammable liquids, and flammable gas, including vinyl chloride. [2] Train 32N was traveling about 47 mph at the time of the derailment, which was less than the maximum authorized timetable speed of 50 mph. [3] Train movements near the derailment site are authorized by cab signals and wayside signal indications with an overlaid positive train control system and are coordinated by the NS Cleveland East train dispatcher located in Atlanta, Georgia. The positive train control system was enabled and operating at the time of the derailment.

Train 32N was operating with a dynamic brake application as the train passed a wayside defect detector on the east side of Palestine, Ohio, at milepost (MP) 49.81. [4] The wayside defect detector, or hot bearing detector (HBD), transmitted a critical audible alarm message instructing the crew to slow and stop the train to inspect a hot axle. The train engineer increased the dynamic brake application to further slow and stop the train. During this deceleration, an automatic emergency brake application initiated, and train 32N came to a stop.

? On the Fort Wayne Line of the Keystone Division, NS has equipped their rail network with HBD systems to assess the temperature conditions of wheel bearings while en route. The function of the HBD is to detect overheated bearings and provide audible real-time warnings to train crews. Train 32N passed three HBD systems on its trip before the derailment. At MP 79.9, the suspect bearing from the 23rd car had a recorded temperature of 38°F above ambient temperature. When train 32N passed the next HBD, at MP 69.01, the bearing's recorded temperature was 103°F above ambient. The third HBD, at MP 49.81, recorded the suspect bearing's temperature at 253°F above

NOTES AND COMMENTS.

ambient. NS has established the following HBD alarm thresholds (above ambient temperature) and criteria for bearings:

- ?Between 170°F and 200°F, warm bearing (non-critical); stop and inspect
- A difference between bearings on the same axle greater than or equal to 115°F (non-critical); stop and inspect
- Greater than 200°F (critical); set out railcar

? After the train stopped, the crew observed fire and smoke and notified the Cleveland East dispatcher of a possible derailment. With dispatcher authorization, the crew applied handbrakes to the two railcars at the head of the train, uncoupled the head-end locomotives, and moved the locomotives about 1 mile from the uncoupled railcars. Responders arrived at the derailment site and began response efforts.?

On February 5, responders mitigated the fire, but five derailed DOT-105 specification tank cars (railcars 28–31 and 55) carrying 115,580 gallons of vinyl chloride continued to concern authorities because the temperature inside one tank car was still rising. This increase in temperature suggested that the vinyl chloride was undergoing a polymerization reaction, which could pose an explosion hazard. Responders scheduled a controlled venting of the five vinyl chloride tank cars to release and burn the vinyl chloride, expanded the evacuation zone to a 1-mile by 2-mile area, and dug ditches to contain released vinyl chloride liquid while it vaporized and burned. The controlled venting began about 4:40 p.m. on February 6 and continued for several hours.



While on scene, National Transportation Safety Board (NTSB) investigators examined railroad equipment and track conditions; reviewed data from the signal system, wayside defect detectors, local surveillance cameras, and the lead locomotive's event recorder and forward-facing and inward-facing image recorders; and completed interviews. NTSB investigators identified and examined the first railcar to derail, the 23rd railcar in the consist. Surveillance video from a local residence showed what appeared to be a wheel bearing in the final stage of overheat failure moments before the derailment. The wheel bearing and affected wheelset have been collected as evidence and will be examined by the NTSB. The vinyl chloride tank car top fittings, including the relief valves, were also removed and examined by the NTSB on scene. The top fittings will be shipped to Texas for testing under the direction of the NTSB.

The hazardous material tank cars have been decontaminated. NTSB investigators returned to Ohio on February 21, 2023, to examine each hazardous material tank car, document damage, and secure evidence for laboratory analysis.

The NTSB's investigation is ongoing. Future investigative activity will focus on the wheelset and bearing; tank car design and derailment damage; a review

ADVENTURES OF A GERMAN ENGINE DRIVER IN TURKEY IN WORLD WAR ONE

140:09.

In June 2022 at a reception of the Catholic Church (!) in Berlin I met Werner Hoffmann and following the usual pleasantries which somehow diverged onto the topic of Prussian P8 steam locomotives (I cannot now remember how) I learned that his grandfather had been an engine driver in Turkey! So the conversation deepened and he sent me the following report (which I have translated) and illustrations.

"My paternal grandfather was born in 1870 in Nuttlar, District Meschede, in Sauerland. Since he had what was for then a significant height of 1.84m, he served from 4 November 1891 to 11 September 1893 as a Grenadier in the 3rd. Company of the Königin Augusta-Garde-Grenadier-Regiments Nr. 4 in Koblenz. In 1894, following successful training as a locomotive driver, he was granted Beamte status. In 1896 he married and together with my grandmother they had seven children. The salary of a Royal Prussian Locomotive Driver with Beamte status was at that time sufficient for him to be able to build a 2-storey house for his large family in 1906. In 1913 he earned an annual salary of 2,100 Marks. According to one of the conversion tables this would work out as €18,081 or a monthly salary of 2,740 Euros.



Following the outbreak of the First World War, on 2nd August 1914 a military alliance was formed between the German Empire and the Ottoman Empire. This apparently included the support of the

(Continued from page 26) of the accident response, including the venting and burning of the vinyl chloride; railcar design and maintenance procedures and practices; NS use of wayside defect detectors; and NS railcar inspection practices.

"ATLANTA–Norfolk Southern Corporation (NYSE: NSC) President and CEO Alan H. Shaw shared a letter this week with the community of East Palestine, Ohio.

"We will not walk away, East Palestine. "When I visited East Palestine last week, you told me how the train derailment has upended your lives and how concerned you are about the safety of your air, water, and land. Many of you have also reached out to Norfolk Southern to share your fears, your anger, and your frustration. "I hear you. We hear you. "I know you also have questions about whether Norfolk Southern will be here to help make things right. "My simple answer is that we are here and will stay here for as long as it takes to ensure your safety and to help East Palestine recover and thrive. "Our work is underway. Crews are cleaning the site thoroughly, responsibly, and safely. Our Family Assistance Center is helping community members meet immediate needs. Together with local health officials, we have implemented a comprehensive testing program to ensure the safety of East Palestine's water, air, and soil. And we have established a \$1 million community support fund as a down payment on our commitment to help rebuild. "But our work is far from over. As we continue site clean-up, the NTSB moves forward with its investigation, and necessary environmental testing is carried out, I promise to keep you updated every step of the way. "I know there are still a lot of questions without answers. I know you're tired. I know you're worried. We will not let you down. Alan H. Shaw"

railway branch within the Ottoman Empire. My grandfather volunteered for service as a locomotive driver in Turkey. He was officially "In the service of the Chief of the Royal Prussian Military Railways with the Anatolian Railways in the Near East, as it states in a certificate. („im Dienst des Chefs des Königlich Preußischen Feldeisenbahnwesens bei den Anatolischen Bahnen in Klein-Asien“.) He was stationed at the station of Haidar Pascha.

Here, on 7. September 1917, there was a major catastrophic explosion. It is described on the internet

<https://www.weltkrieg2.de/kriegstagebuch-6-september-1917/>

as follows: "An ammunition explosion at the station Haidar-Pascha (the Asiatic terminal at Constantinople) shook the planned 'Yilderim'-Offensive." An account can also be found on

<https://de.rayhaber.com/2019/10/haydarpasa-garitarihi-yapilis-hikayesi-ve-haydar-baba-turbesi/>

One of the most noteworthy but alas also worst memories in the history of Haydarpasa Station is the sabotage which an English spy carried out on 6 September 1917. As a result of the sabotage caused by this English spy as the munitions were being loaded onto wagons standing and waiting to be transported to the depot, there was an immense explosion and an enormous fire began. Hundreds of soldiers were

wounded as a result of the explosion and fire. Damage was caused to houses in Kadiköy and windows in Selimiye."

My grandfather was involved in fighting this fire. In a Declaration by the Chief Works Manager of the Anatolian Railways is stated : "I hereby confirm that the Locomotive Driver Carl Hoffmann demonstrated excellent behaviour following the catastrophic explosion on 6. September 1917 in Haidar-Pascha, in that from the event of the explosion until 11 pm without pause he carried out all the shunting movements I ordered. In view of the situation, that initially there were no shunting personnel at all available and later only untrained ones, and also that none of the signals was illuminated and that all the signals remained at the positions they had had at the time of the explosion, in other words initially the road had to be set and distance from points had to be established, Driver Hoffmann whilst ignoring the constant mortal danger, with the greatest concentration and cold-bloodedness continued to work. In this manner some 50 valuable passenger carriages and 30 goods wagons could be rescued, which otherwise would certainly have fallen victim to the fire. Of the goods wagons 20 were loaded with ammunition, 4 with aeroplanes and 6 with automobiles, in one of which was also a safe with 20,000 Marks.

R. H ä m m e r l e,

Werkmeister der Anatolischen Eisenbahn"

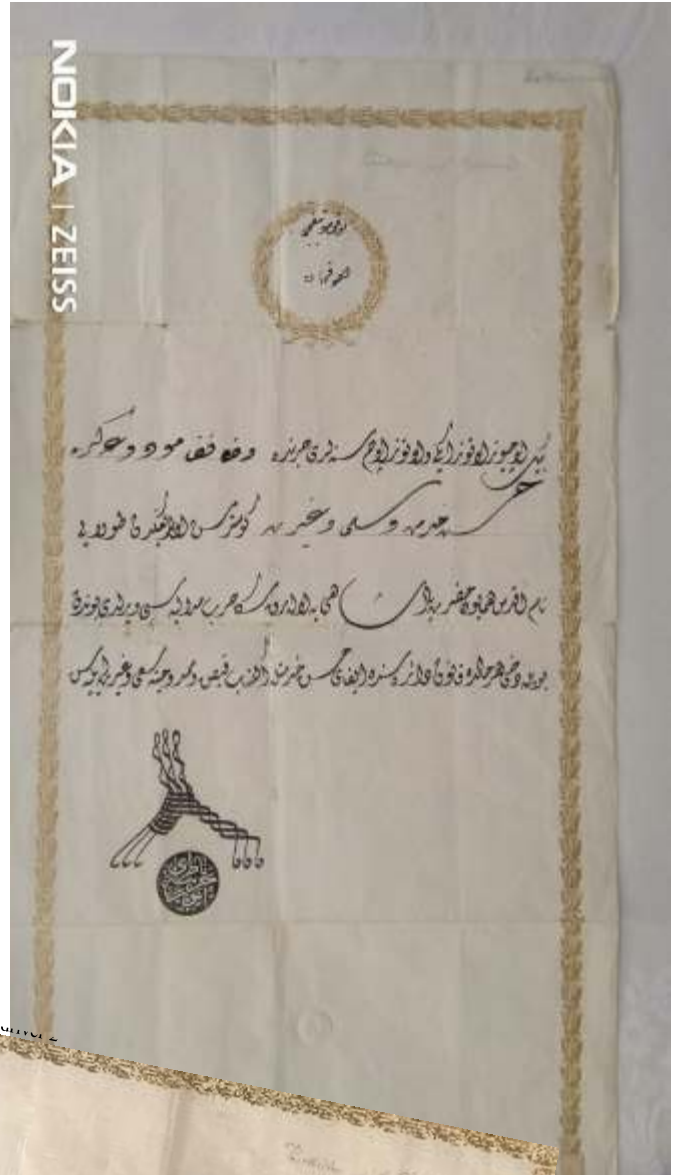
This action led to my grandfather being awarded the "Iron Crescent Moon" by the Ottoman Minister for War, Enver Pasha. I attach the calligraphic Ottoman document.

My grandfather was given at the time a German translation of the award certificate. It may be noted that a date is given which lies before the 6th September; this could be the result of the Ottoman Empire at that time still using a different calendar to the Christian countries and a mistake was made in calculating between them. I cannot vouch for the accuracy of the translation.

In addition the "Königl. Preussischen Lokomotiv - Führer im Dienste des Chefs des Feldeisenbahnwesens bei den Anatolischen Bahnen in Klein - Asien" was awarded the "Eiserne Kreuz II. Klasse".

My grandfather also received a pocket watch with Ottoman symbols on the watch face. It was apparently made in France since it refers to "Petit Lyon" and "8 Jours"; to this was attached a ribbon with 5 medallions in Ottoman script. He then had two photographs of himself taken in Constantinople – one shows him sitting on a chair with a water pipe and wearing a fez; the other shows him with his "Litevka", a railwayman's working uniform. It shows him following the award of the Ottoman Half-Moon and the Iron Cross II. Class – both these hang in the buttonholes of his uniform.

From stories told me by my father Paul Hoffmann, who was born 26 June 1900 as the second son, I know that my Grandfather with his locomotive traversed the Bagdadbahn up to the current border between Turkey and Syria. His service with the Anatolian Eisenbahn in the Ottoman Empire was in the years 1332 and 1333 of the Ottoman calendar, as one can tell from an official translation of his award certificate."



BY RAIL TO PERSIA IN 1973.

Thanks to Marc Stegemann for this two-part article by Werner Sölch from 'Eisenbahn Magazin' 12/73 and 2/74.

Part 1:

In the past century a traveller could only get to Persia by horse or with the British India Steam Navigation Co. The first plans for construction of a railway were intended mainly to serve the need for a link between England and India. In 1842 the British considered a Pave project and in 1856 a plan by Robert Stephenson for building a line from Constantinople through southern Persia eastwards, after Henry Blossie Lynch had surveyed possible transport routes in the region in 1831. In 1868 the concession for a line Tehran – London via Odessa, Berlin and Emden was granted, but neither this nor any other major railway project came to fruition.

The first railway in Persia was the short line from Tehran to Rey opened in 1888. In 1911 a Russo-German treaty saw an extension of the Baghdadbahn to Khanikin by the Germans and further to Tehran by the Russians, However the First World War destroyed this plan. Nevertheless it was during the war that the first international railway link to Persia was built, in Russian broad-gauge from Djulfa to Tabriz. In 1938 there followed the completion of the Trans-Iranian north-south link from Bandar Shah to Bandar Shahpur, in 1957 came the line to Mashhad and 1958 the line from Tehran to Tabriz. The area around Tabriz had been occupied by Russia until 1946 and until 1947 had formed an own State of Azerbaidjan.

The Transanatolian Railway in Turkey was extended to Erzurum in 1939 and in 1944 to Kurtalan; Finally in 1971 the Shah, with support from CENTO, built the direct line from Van in Turkey to link with the Persian railway network. Some of the most important projects are the line to Zahidan, the link to Bandar Abbas and the electrification at 25kV of the Djulfa – Tabriz line now rebuilt to standard gauge.

The train for European travellers to Persia was, before the Second World War, the 'Taurus Express' Haidarpara – Nussaybin / Tel Kotschek. From here to Kirkuk the traveller proceeded by car, further to Khanikin with the railway and then from there once more by car to Tehran. Later the normal way went from Haidarpara with the 'Dogu-Ekspres' to Erzurum and further by bus to Tabriz. In Iran, from September 1973 express trains run from Djulfa with Soviet sleeping cars to Tehran, also from Tehran to Khorramshahr and Mashhad, while there are also slower stopping trains among others to Bafgh in the South-East and to Gorgan in the North.

The Turkish trains of Eastern Anatolia convey as well as normal seating carriages also a sleeping car of the CIWL, of the types SG, SGT, STU, Y or YU. At the end of the 1960's the restaurant cars and in 1972 the sleeping cars were taken over from the CIWL by the TCDD and largely replaced by newly-constructed vehicles. In Iran one finds mainly German bogie carriages in use, equivalent to the 1953 type of the DB. These include air-conditioned couchette cars of the 1st. Class and restaurant cars, though not sleeping cars.

The locomotives of the Turkish 'Dogu-Ekspres' were for years on the section Haidarpara to Ankara the classes 46 051-061 (2-8-2's, built Henschel 1937); on to Sivas locos of the series 56 117-166 (2-10-0, built CKD and Skoda 1949); to Erzurum 56 301-388 (2-10-0, built Vulcan/USA 1948); and to Kars 56 501-533 (2-10-0, German Kriegsloks of class 52). The connecting train to Akhuria was hauled by class 55.0, the Prussian G10 0-10-0. The 'Vangözü-Ekspres' for example ran from Ankara in 1965 with the class 56 117-166 and east of Sivas with class 56 001-079 (2-10-0, Henschel 1937).

In 1965 the changeover to Diesel power began, initially between Haidarpara and Ankara, and in the early 1970's also further eastwards. This involved mainly use of DE21 (Co-Co, General Electric), DE24 (Co-Co, Alsthom) and initially also DE20 (Co-Co, General Electric)

In Iran in the 1930's various locos of wheel arrangements 0-6-0. 0-6-OT, 2-6-0, 2-6-4T and 4-6-4T were in operation, albeit many of them were more active in shunting service. To these were added, following a specific plan, the following new orders:

1934: 2-8-0 2cyl. Superheated, Beyer-Peacock, later Nos. 41.01-05

1936: 4-8-2 3cyl. Superheated, Nohab, later Nos. 42.01-12

1936: 4-8-2+2-8-4, Beyer Peacock, later Nos. 86.01-04 (Garratts)

1938: 2-8-0 2cyl. Superheated. By Krupp, Henschel, Esslingen, Nos. 41.11-59.

1938: 2-10-0 2cyl. Superheated. Henschel, Later Nos. 51.01-16.

In the same year ten Austrian 0-10-0's of the class 80 (0-10-0) were acquired. These machines were however already withdrawn by 1942. In August 1941 the Allies occupied Persia and the Trans-Iranian railway developed into a strategically important line for supply of the Soviet Union. In consequence other locomotives came to Iran, especially:

2-8-0 British War Department, Iranian Nos. 41.100-246 (later some were passed on to Iraq, Italy and Palestine Railways)

2-8-2 US Transportation Corps, Iran Nos. 42.400-490.

2-10-2 British War Dept.: From Krupp 1937 for the Tientsin-Pukow Railway as Nos. 61-66; in Iran Nos. 52.500-506.

In 1951 the last steam locomotives delivered were a class of 2-10-2 as class 52 from Vulcan Locomotive Works (USA). Whilst 2-axle Diesel locos by Davenport had already been used in the 2nd. World War by the US Transportation Corps. From 1956 General Motors machines were ordered.

Today the four- and six-axle General Motors Diesel locos have driven out the steam locomotives in all of Persia. It is not known whether this surprisingly fast changeover from steam was especially necessary economically in view of the low personnel costs.

Passenger travel by air was first introduced in Persia in 1925 by the 'Jumkers Luftverkehr Persien'. In 1929 and 1930 the southern part of Persia was incorporated into the west-European air routes to Asia. From 1938 Deutsche Lufthansa flew to Tehran, the Iranian State Airlines linked Persia with Baghdad and following the Second World War Iran was fully integrated into the international air traffic network.

Nevertheless the train Istanbul – Tehran is still well occupied today, especially as the 2nd class fare is just about 50 Marks, the IATA air fare almost ten times as much. Unfortunately the Express runs only once per week, and in consequence in summer 1973 the tickets from Tehran were sold out a month in advance! The railway press has in the meantime reported that in Tehran issues of more frequent service and even a sleeping car link with Germany are being discussed.

Part 2.

In Istanbul the 'Pera Palace' remains as a reminder of the luxury and the social exclusivity which rail passengers once enjoyed – the fancy hotel which the

Compagnie Internationale des Wagons-Lits et des Grands Express Européens established some eighty years ago for its rich clientèle. In contrast the carriages look rather poor and shabby. But what a public has this simple train to convey! With Turks, Persians, Israelis, Pakistanis and even inhabitants of the Far East (one is travelling via India and Malaysia direct to Singapore) and especially with Americans and Western Europeans who are tired of civilisation – one is dressed in a form of billowing white night shirt, another in a Janitscharen uniform or something similar – this train is more international than any other in the world.

Whilst a man from Florida sits in the Restaurant Car and explains his study of the Hindu religion, the train makes its way along the Sea of Marmara past 50Hz electric locos of class E40, and one of the last 4-8-0's of Class 46.0. It is Wednesday 12th. August 1973. Behind the French Diesel loco (DE24, Co-Co) there are: seven carriages for Tatvan, and then a new Restaurant Car; two Iranian and two Turkish carriages for Tehran (only the 1st. Class fitted as couchettes for lying down) and a Sleeping Car, which unfortunately runs only as far as Tatvan. Later in the night in Bilecik a French DE18 (Bo-Bo) will come to the rear of the train as banking assistance - under the star-filled sky of Anatolia.

"Le jour qui passe ne revient plus" a Persian teaches in French on the following morning; he had indeed been compelled to sleep on the floor but now knows how to enjoy the journey with quantities of good-smelling rose-essence, good wine and oriental songs. Ankara displays not a single steam locomotive any more – E40's have taken over the suburban traffic and a Diesel-Electric DE21 (Co-Co, General Electric) now hauls the Istanbul – Tehran train. On the way the passenger train from Zonguldak is still headed by a 46.2 (2-8-2 of the American 'Middle East' class), and below on the Kizilirmak river stand English 2-8-0's of the series 45.151-170, Czech and American 2-10-0's of the classes 56.1 and 56.3, a scrap-condition Prussian ten-coupled loco of class 55.0 and later in Yerköy a 2-6-0 will also be spotted.

Ochre and reddish hills form the horizon of Anatolia like dunes offering always the same picture: brown earth, almost no trees, only yellow grass, now and then waving children and a single track losing itself into the distance – to Europe or Asia. Somewhere the 'Taurus Express' from Baghdad comes past with the usual delay of ten hours, with an old, former CIWL sleeping Car of type SGT marshalled at the end.

The 'Dogü-Ekspres'i' on the other track at Bogazköprü conveys on this day Saloon Car No. 14 for some prominent person. In Kayseri a 2-8-0 of the American wartime type stands gleaming in the sun and 2-10-0's of classes 56.1, 56.3 and 56.5, the German Kriegsloks. A Hindu woman with a red spot on her forehead descends from one of the Iranian through coaches and washes baby clothes at the station fountain.

The Restaurant Car is overfilled until late in the night. In what language is NOT spoken here? Scraps of conversation fly across and between the tables in French, Turkish, English, Swiss-German and Farsi; Turkish wine (without sulphur!) and good menus create an atmosphere which has long disappeared from Western European railways – that cosmopolitan milieu which Agatha Christie described in 'Stambul Train' and Paul Bourget in 'Voyageuses'.

Young people from all countries are the actors here; the Englishman with the long white night shirt; an Austrian who has left his big yellow dog 'Samanta' in the compartment ("Your dog will not come to dinner?" an Oriental asks him), a hippy-man with a pony tail hairstyle, a European in a Russian coat, a blonde girl in a brown Franciscan robe (it is here in the train from Europe to Asia that fashion is decided, not in Paris any more); The 'Pakistan Colony' (which appears only after the main fixed Menu is finished, in order to eat more cheaply 'à la carte') and a young Frenchman who with his beautiful girl friend is travelling from Dijon to Calcutta.

The night is full of wonders: white, black and silver brown bizarre clouds around a full moon (a Persian explains why only here above the high-situated Steppe regions such cloud formations can occur); ahead the chain of lights of the 13 carriages can be seen dipping into a valley, the headlight of the locomotive lighting up the red cliff face and a river (a tributary of the Euphrates) which reflects glittering for all of a moment, before the light is swallowed up by another tunnel.

Malatya greets us at some point in the night with a cavalcade of heavy pre-war 2-10-0 locomotives of class 56.0. In the morning of the third day of the journey the train climbs with much effort between solidified lava mounds. Only a very few other vehicles are to be seen. A DH8 (0-8-0D, diesel-hydraulic) comes past with a colourfully-liveried daytime train from Adana and in Elazig 56.117 stands next to some 46.2's and one or two Prussian types. The journey continues endlessly through the stone gorges towards the Murat.

A wide, empty array of tracks with but one solitary 46.2 marks the station of Mus, where the railway terminated some years ago. A long gradient leads on the left side of a wide valley to an altitude of 1,700m. Stone-built tunnels erected against snowdrifts stand strangely in the bare landscape.

In the late afternoon there comes in sight at last the blue Lake Vangözü - following some reversals and turning on a triangle of tracks a Prussian 0-8-0 numbered 44.012 loads the four through coaches into the three tracks of the white ferry ship 'Refet Ünal', while from the east the sister ship 'Orhan Artiman' arrives with the carriages from Tehran. The continuing journey over the lake in the middle of the high mountains – five times as large as Lake Constance - is truly romantic. To the left side a 4,100m high volcanic cone reflects in the evening mist, there is no other ship to be seen, and only after some hours do the lights of the pier of Van come into sight on the starboard side.

The people stand on the tracks until midnight and watch as a DH6.5, the German V60, hauls the carriages from the ferry. Around 1am the train departs from Van station. The howling noise that starts straight away indicates that a different machine has been put on the front. It must be audible for miles around in this empty primitive landscape, in which the track rises to an altitude of over 2,000 metres. The pale surface of a salt sea lies dead and sinister to our left.

The morning sun shines now on the monster locomotive that had brought the train in the night from Vangözü: Brutal and square-cornered, blackened with Diesel fumes, (not attractively-formed like the European diesel locos) it stands, twenty metres long, between bare cliffs – a 3,300hp Co-Co of General Motors of the Iranian State Railways.

The station is called Razi and on the station are large portraits of the Shah and Farah – the train is at the Persian border. It is now the fourth day since departure from Istanbul and gradually the stresses of the journey make themselves noticeable. Since Van the coaches have been over-filled, people sleep in the corridors and the toilets – simply a hole in the floor – are so unhealthily covered with filth that someone sees it better to perform his excretions in the vestibule between the carriages. A fellow traveller has an attack of fever – paratyphus is suspected – and a doctor carefully checks the vaccination passes.

Slowly the General Motors machine with its 28 wagons – eight passenger coaches and twenty goods wagons – makes its way downwards, over the 410m long red Kotur Viaduct through a desert of stones with no green whatsoever and without life. At lunchtime the Iranian Restaurant Car, with its air-conditioning, fresh flowers on the tables and the panorama of the light-blue Rezaieh Sea visible from the windows, makes a strange contrast to what has been seen until now. And suddenly, near Sulfiyan where the tracks approach the Soviet border, there is a sensation for any railway enthusiast: rusting, surrounded by brown steppe grass, stand in the loneliness rows of old Russian steam locomotives.

They are machines of class 'O', which are rusting away here now as wrecks. They are coupled to four-axle tenders; one of them carries on its cabside the number 'O 406' in European numbers. These 0-8-0 freight locomotives were built first in 1889; together with their various sub-types more than 8,000 of this class were constructed. More Soviet locos are standing stored or dumped near Tabriz, this time 0-10-0's of Class E. Of this type various sub-classes were also developed; unfortunately it is not possible to make out any numbers or identification marks as we pass by. Nearby stand American 2-8-2's of the 'Middle-East' class, a 2-10-0 built in Germany and four-wheeled Russian passenger coaches – also all in scrap condition. The only locomotives which are seen working as we travel through Persia are Bo-Bo and Co-Co types of General Motors.

From Tabriz the train departs so quickly that some of the passengers are left behind. In the late afternoon the Rezaieh Sea shimmers once more to our

right, the coastline framed by a white salt wilderness. In a small station the carriages come to a stand and on the platform the 'Lost Sons' are standing and waving – they had followed us from Tabriz in a taxi.

In Maragheh the General Motors machine shunts the now-nine carriages around before it sets off into the evening once more climbing into a bare Steppe. Where there are water courses the Express winds its way in the dusk past fruit orchards and by leafy woods which seem to exist only in Persia. Men, women and children sit at a fountain in a village and watch the strange carriages pass.

Actually this entire Express with its numerous European and American passengers provides a wonderful message for those "Apostles of Progress" (it seems many of them sit in various railway headquarters) who preach of the demise of the long-distance train. And as though the wonders of this journey have not yet been enough, in the fourth night yet another wonder comes: unbelievably and irrealily the lighted snake of coaches enters a valley in which it is so deep and the cliff formations so grotesque that they seem to be wholly impossible, more the creation of a slightly mad model railway layout builder – the 'Valley of the Moon Mountains' near Mianeh.

On the next morning, after a journey of four nights and with a delay of ten hours, the train finally enters the station of Teheran."

FROM THE BAGDADBAHN TO FRANCE

In 'Eisenbahn Baukompanien', originally written 1922 by Wilhelm Kretschmann – updated with new text by Gabriel Habermann – (Transpress 2019) is a detailed account of the German military railway construction engineers and their many works. Following the invasion of Belgium and Northern France by the Kaiser's troops in August 1914 they had to restore many lines on which the retreating railwaymen had sabotaged tracks, bridges and tunnels and managed this with amazing speed.

On p.127: The 122m long bridge at Anhee was an older structure with four openings of some 30m span. The combined centre pier between the two tracks had been constructed as a high plate girder, whilst

the two outer ones were formed of lattice work. Due to the explosive demolition the two river piers and the land span on the right bank had been thoroughly destroyed. The girders of the two centre spans had dipped down but due to their continuity had remained largely intact and were only bent in two places, the land span on the left bank was almost untouched.

The single-track reconstruction work was ordered on 4. September 1914 by the Chief of Military Railways from the 'Gutehoffnungswerk' at Oberhausen and a limit of 25 days set for completion. The two centre spans were raised and the destroyed piers rebuilt with stonework, and at the same time the two bent sections repaired as best as possible in the limited time.... For the destroyed landward span, which had to be replaced by something new, the firm responsible had at their works a bridge span intended for the Bagdadbahn of 40m length. This was shortened appropriately at the factory and then built into place using a crane and scaffolding built on the wreckage of the former bridge. On 23 September 1914 the weight test was carried out and the bridge was then handed over for operations.."

140:11.

WORLD WAR ONE MEMORIALS

Topics come from a variety of sources. In March 2023 a Terry Wallace posted a query on the chat of the Industrial Railway Society concerning a memorial he had photographed in Israel in 1992 but he was hazy as to the location. The upper (square) panel has an Arabic inscription, the lower one refers to over a hundred members of the Egyptian Labour Corps who were buried "near here". Clearly it referred to the construction of what became the Sinai Military Railway.

See: https://en.wikipedia.org/wiki/Egyptian_Labour_Corps

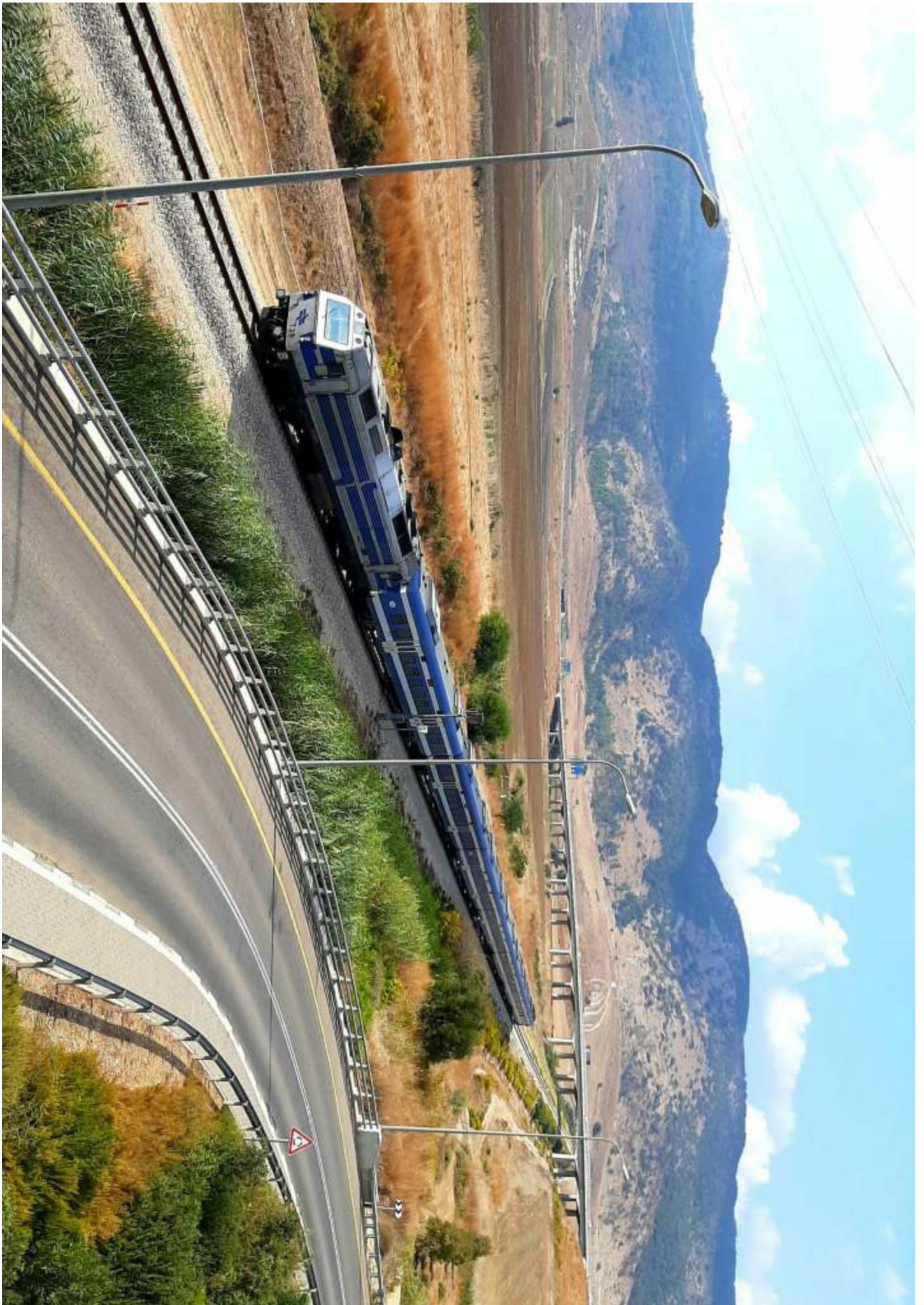
Sybil was able to add the following:

"There is a place called Kfar Aza, which means Gaza Village. It is about 2 km from the Gaza Strip, definitely in Israel. There is a similar memorial near the old Nahal Sorek/Wadi Surar station on the Jaffa-Jerusalem line, but it's not exactly the same, as you can see.

<https://amudan.co.il/w/P946865> (sorry, that's the only picture of it that I can find).

On November 13, 1917, the British conquered Nahal Sorek station from the Turkish army, losing seven Indian soldiers in the battle. In their memory, and in memory of 112 Egyptian forced labourers who upgraded the railway line and were killed by the Turks and by an epidemic that broke out at that place, the memorial was constructed in the form of an obelisk of hewn stone, with an inscription in English in their memory and an inscription in Arabic in praise of God. The inscription relates to the 112 Egyptians buried nearby. A parallel memorial is in Netiv Ha'asara. As of 2013 the memorial was vandalised and the inscription scraped off, so only the Arabic is still legible. In 2017 the British War Graves Commission renovated the memorial and replaced the inscription."





**A train on the Jezreel line heading for Beit Shean, with the Carmel range in the background.
 . (Photo Ilan Borshtein).**