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## **ROAD BUILDING, MAINTENANCE AND REPAIRS IN THE KINGDOM OF POLAND IN LIGHT OF PUBLICLY ANNOUNCED GOVERNMENT REPORTS FROM 1843 TO 1859**

**Summary.** The purpose of this paper is to examine the process of building, repairing and maintaining two types of main roads in the Kingdom of Poland, especially during the mid-19th century, when the overall process of expanding the local road transportation network started to considerably slow its pace. Publicly announced parts of official government reports have been taken into consideration in order to describe such endeavours by the Polish transportation authorities concerning first-class and secondary routes (generally paved with the usage of a standardized macadam system) during the period between 1843 and 1859.

**Keywords:** first-class roads, secondary roads, Kingdom of Poland, 19th century

### **1. INTRODUCTION: THE PURPOSE AND IMPORTANCE OF GOVERNMENT REPORTS**

Both in the so-called constitutional period, as well as after the crushing of the November Uprising of 1831, individual ministers/“chief presiding directors” submitted detailed reports “from all government departments, regarding some activities of institutions subordinate to them” to the actual civil authority of the Kingdom of Poland, the Administrative Council. In

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turn, the General Inspector of Warsaw's Supreme Audit Office presented some exact data referring to the "revision of accounts of various branches of administrations". Depending on the period, these reports were subjected to a final summation by various formal administrative bodies, but the constant principle was the public announcement of their most important parts<sup>2</sup>. Since the indicated reports also included many aspects of the deeds of transport administration, especially in the scope of construction, maintenance and repair of roads, it seemed quite reasonable to compile such information, made public by being printed in the pages of the formal government periodical, which, at that time, was the *Official Gazette of the Kingdom of Poland*.

Data collected and presented here concern a specific period, i.e., 1843-1859, during which modern historians recognize (even before the January Uprising of 1863) a significant impact of "partitioning" by Russian authorities on the development of the Polish road transportation network. The information available in the published ministerial reports mostly concerns the following types of road transport structure: a) first-class roads and b) second-class roads. However, the available information on side roads is only fragmentary in nature; hence, this road infrastructure type is not included in this article. The government information on roads, in particular years, provides a fairly clear, although strongly abridged, picture of the endeavours by the Polish administration in terms of building, maintaining and repairing the entirety of the important part of the road network of the Kingdom.

## 2. FIRST-CLASS PAVED ROADS

According to the reports of the highest Polish transportation authority, the Board of Land and Water Communication, the overall length of first-class paved roads (provided with two construction layers or so-called "adamization"), whose maintenance was the responsibility of the state's Road Fund, in 1843 amounted to 1,919,317/617 Russian versts. In addition, there were 27,498/617 versts of urban pavements, which remained under the strict supervision of Polish transportation administrative structures. In total, the length of the first-class paved roads network in the Kingdom of Poland was equal to 1,948 versts at that time. In 1843, in order to maintain state-owned paved tracts in proper conditions, 27,999.75 m<sup>3</sup> of diverse stone material were supplied to the whole of the country. This gave an average supply of 14.5 m<sup>3</sup> of crushed stone per 1 verst of typical paved road.

The cost of "programmable" road maintenance in good traffic conditions cost the Road Fund at this time was generally 420,521 silver roubles and 40 kopecks. The above sum statistically required spending 215 roubles and 95 kopecks per mile of these kinds of road.

As shown in the annual statement, at that time, the paved routes that were in "good condition" covered a length of 1,544,296.617 versts, while the remaining 37,521/617 versts of

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<sup>2</sup> Central Archives of Historical Records in Warsaw. The Second State Council of the Kingdom of Poland: 1833, Signature: 1: 29-30; Central Archives of Historical Records in Warsaw. The Third State Council of the Kingdom of Poland: 1861-1865, Signature: 28, 249; Russian State Historic Archives in St. Petersburg, Special Office of the General Director of Roads of Communication and Public Buildings: On the Report of Chief of the 13th District of Road Communications and Public Buildings with the Presentation of an Atlas of Roads of Communication in the Kingdom of Poland, 1848. Signature: F. 207, Op. 5, d. 400; F.K. Christiani, "Extract from the report on the progress of works concerning paved roads in the Kingdom of Poland in 1819, 1820, 1821, 1822". No date and place of printing; J. Majewski. 1889. "The paved and ordinary roads in the Kingdom of Poland". *Technical Review* Vol. 26, No. 2; J. Leskiewiczowa and F. Ramotowska, eds. 1984. *The Picture of the Kingdom of Poland in the Constitutional Period. Vol. 1, Reports of the State Council Depicting the Activity of the Government in 1816-1828*. Warsaw: State Publishing Company.

“crushed stone roads” needed some serious remodelling of their stone foundation layer. Such works were carried out in 1843 on a length of 31,213.617 versts. In order to be able to properly reinforce the road stone’s lower layer, especially by increasing its thickness on the above indicated length of the first-class transportation network, it was necessary to deliver 3,872.5 cubic fathoms of stone material during the full 12 months of 1843. The amount of money spent on the delivery and heavy-duty strengthening of the road’s internal structure finally reached 58 580 silver roubles and 58.5 kopeks.

It should be also pointed out that, in addition to this structural reinforcement of first-class paved roads during the whole of 1843, some dams located near the localities of Bogucin and Mniocki were also raised (with their total length equal to 529 fathoms), which in turn cost another 8,648 silver roubles and 60.5 kopecks<sup>3</sup>.

With regard to the construction of new first-class tracks, in 1843, the following works were carried out in the Kingdom of Poland:

Tab. 1

Paved roads built in the Kingdom of Poland during 1843<sup>4</sup>

Construction of a first-class paved road	Length (in versts)
The route from the new Zamość settlement to the Austrian border	37,271.617
The track from Bzin (on the Krakow route) to town of Zawichost	86,504.617
The route from Moszczanka to Ivangorod (Dęblin)	9,177.617

In turn, state funding of Polish roads in 1844 was as follows:

Tab. 2

Road Fund of the Kingdom of Poland in 1843<sup>5</sup>

Type and amount of funds	Sum (in silver roubles/ kopecks)
<b>Revenues</b>	
- Residue from 1842	208,052/17
- Earmarked funds for 1843	1,100,553/83
- Total amount of income	1,318,606/0.5
<b>Expenses</b>	
- Agreement of a loan for the construction of paved roads	420,000/0
- Other needs	679,808/79
- Total amount of expenses	1,099,808/7.5
<b>Sum remaining for 1844 in full</b>	218,797/21
- “Schedule for works that had been done or were actually being performed in 1843”	205,164/17.5
- Actual residue for 1844	13,633/4

<sup>3</sup> *Government Gazette of the Kingdom of Poland* (hereafter “GRKP”), 4 July 1848, No. 146: 1177.

<sup>4</sup> GRKP, 4 July 1848, No. 146: 1177.

<sup>5</sup> GRKP, 4 July 1848, No. 146: 1177.

In the following year, 1844, the total length of tracts supported and maintained by the Polish Road Fund did not alter, in any way, in relation to the previous 12-month period, and reached 1,948 versts in general; where city pavements were treated as a part of the country's road system, this added a further 28 versts (roughly counting); thus the paved roads, which traditionally consisted of two layers of crushed stone, were at that time counted as being in the region of 1,919 versts in length. In order to provide the necessary protection and maintenance of first-class roads, a supply of 281,485.6 cubic fathoms of stone material was ordered during the whole 1844, which equated to an average for the delivered crushed stones of 14.2 cubic fathoms per verst. The general costs of repairing and maintaining these paved roads in 1844 amounted to a total of 402,995 silver roubles and 82 kopeks. According to the data presented by Warsaw's Board of Land and Water Communications, the maintenance of first-class tracts (with the addition of expenses for the transport of materials) in 1844 amounted, on average, to 216 silver roubles and 20 kopeks per verst<sup>6</sup>.

Regarding the exact construction process of the first-category roads during 1844, the relevant data are given in the table presented below.

Tab. 3

Paved roads built in the Kingdom of Poland in 1844<sup>7</sup>

Construction of a first-class paved roads	Length (in versts)
The route from the new Zamość settlement to the Austrian border (continuation)	37 (numbers rounded)
The route from Bzin (on the Krakow road) to Zawichost (continuation)	86 (numbers rounded)
The Uściług route leading to Ivangorod (completion)	9 (numbers rounded)

State funding by the Polish Road Fund was estimated in 1844 as follows:

Tab. 4

Road Fund of the Kingdom of Poland in 1844<sup>8</sup>

Type and amount of funds	Sum (in silver roubles/kopecks)
Revenues	
- Total amount of income	1,455,873/24
Expenses	
- Total amount of expenses	1,245,466/77
Sum remaining for 1845 in its entirety:	
- "Schedule for works that had been done or were actually being performed in 1844"	165,526/15
- Actual residue for 1845	44,880/32

<sup>6</sup> GRKP, 12 June 1849, No. 127: 994.

<sup>7</sup> GRKP, 12 June 1849, No. 127: 994.

<sup>8</sup> GRKP, 12 June 1849, No. 127: 994.

Reports that generally cover several (eight) years in the period 1845-1852 give us a partial, but nevertheless rare, opportunity to collate an overview of the state of first-class paved roads in the Kingdom of Poland during these times. First of all, we can trace the exact length of first-class roads and city and town pavements, maintained by the state and considered as a genuine part of the national transportation network.

Tab. 5

First-class paved roads and city pavements maintained in the Kingdom of Poland by the state in the period 1845-1852<sup>9</sup>

Yearly date of maintaining first-class paved roads and city pavements (considered as "roads passing through cities and towns")	Length of diverse first-class roads available in the main Polish transportation network (in versts)
1845	- Urban pavements: 27 - Roads with two crushed stone layers: 534 - Roads with "adamization": 1,393 Total for 1845: 1,954
1846	- City and town pavements: 27 - Roads with two crushed stone layers and "adamization": 2,033 Total in 1846: 2,060
1847	Total in 1847: 2,149
1848	Total in 1848: 2,149
1849	Total in 1849: 2,149
1850	Total in 1850: 2,159
1851	Total in 1851: 2,159
1852	Total in 1852: 2,159

Expenditure for the construction, maintenance and repairs (and administration) of first-class roads in the Kingdom of Poland between 1845 and 1852 was as follows:

Tab. 6

Expenditure for the construction, maintenance, repair and administration of roads in the Kingdom of Poland during the period 1845-1852<sup>10</sup>

Year	Total sum of expenses spent on the construction, maintenance, repair and administration of paved roads in the Kingdom of Poland (in silver roubles)
1845	683,538
1846	490,611

<sup>9</sup> *GRKP*, 13 June 1850, No. 130: 972; *GRKP*, 2 October 1850, No. 220: 1759; *GRKP*, 9 April 1851, No. 80: 542; *GRKP*, 28 May 1851, No. 118: 892; *GRKP*, 18 February 1852, No. 37: 227; *GRKP*, 16 February 1853, No. 35: 204; *GRKP*, 6 October 1853, No. 222: 1667; *GRKP*, 19 September 1854, No. 205: 1718.

<sup>10</sup> *GRKP*, 13 June 1850, No. 130: 972; *GRKP*, 2 October 1850, No. 220: 1759; *GRKP*, 9 April 1851, No. 80: 542; *GRKP*, 28 May 1851, No. 118: 892; *GRKP*, 18 February 1852, No. 37: 227; *GRKP*, 16 February 1853, No. 35: 204; *GRKP*, 6 October 1853, No. 222: 1667; *GRKP*, 19 September 1854, No. 205: 1718.

1847	? – “in comparison to previous year, the road repair costs were 67,865 silver roubles less”
1848	508,553
1849	496 302
1850	598 645
1851	527,524 (including the maintenance of the so-called “external service” and the main office of the Board of the 13th District of Communication, which equated to 113,447 silver roubles; for “proper reparation works”, 414,077 silver roubles were spent)
1852	547 563 (including the maintenance of the so-called “external service” and the office of the Board of the 13th District of Communication, which equated to 113,447 silver roubles; for “proper reparation works”, 439,286 silver roubles were spent)

The statistical expenses for maintaining 1 verst of paved first-class road in the Kingdom of Poland during the period 1845-1852 were as given below:

Tab. 7

Average cost of maintaining of 1 verst of paved first-class road in the Kingdom of Poland during the period 1845-1852<sup>11</sup>

Year	Average sum of money spent on maintaining of 1 verst of paved road (in silver roubles)
1845	232
1846	232
1847	229
1848	236
1849	230
1850	277
1851	247
1852	254

As we can also observe by reading some officially published statements (issued by the tsarist governor) in state-owned newspaper reports, in 1845, the construction process for 1

<sup>11</sup> *GRKP*, 13 June 1850, No. 130: 972; *GRKP*, 2 October 1850, No. 220: 1759; *GRKP*, 9 April 1851, No. 80: 542; *GRKP*, 28 May 1851, No. 118: 892; *GRKP*, 18 February 1852, No. 37: 227; *GRKP*, 16 February 1853, No. 35: 204; *GRKP*, 6 October 1853, No. 222: 1667; *GRKP*, 19 September 1854, No. 205: 1718.

verst of first-class paved road cost, on average, 7,000 silver roubles<sup>12</sup>. As for corvée services, in 1845, these involved 408,772 working days requiring the usage of cars and “beasts of burden”, as well as 550,283 working days requiring the presence of local peasants/workers only<sup>13</sup>. In the following year, 1846, in the manner of corvée road activities, a total of 860,271 working days was used for building and repairing all paved roads in the Kingdom<sup>14</sup>.

Regarding the specific works carried out in the most important branch of the Polish road system during the period 1845-1852, it should be especially noted that, as early as 1847, many new cast iron road signs (which replaced previously existing wooden signs) were manufactured and erected alongside domestic paved tracts. During the whole of this year, 1,339 such road signs were situated by the main routes<sup>15</sup>. By the end of 1849, all such cast iron road signs, totalling 2,299, were put up alongside first-class and secondary paved roads. The issue of replacing these road signs resulted in the need for extraordinary spending, which amounted to 32,524 silver roubles<sup>16</sup>.

From the variety of data provided in reports, a clear picture of the activities of the Board of the 13th District of Communication emerges for the very beginning of the 1850s. Some figures for 1850 itself are shown below:

Tab. 8

Investments in the main paved first-class tracks of the Kingdom of Poland in 1850<sup>17</sup>

Investment	Length	Sum (in silver roubles)
Reconstruction of a bridge on the Narew River near the locality of Zegrze on the Kowno route (completion)	194 fathoms	38,535
	119 fathoms	17,760
Reconstruction of a bridge on the Narew River near the town of Ostrołęka on the Kowno route (completion)	51 versts	30,782
Thickening of the lower stone layer on the Brześć route		

On analysing the most significant roadworks undertaken in 1851 in the Kingdom of Poland, one can in turn highlight some examples.

Tab. 9

Investments in the main road routes of the Kingdom of Poland in 1851<sup>18</sup>

Investment	Length	Sum (in silver roubles)
Repair of the stone foundation (lower) road layer on the Kowno route (completion)	6,264 fathoms	32,493
Reconstruction of part of the Lublin-Uściług (and	14 versts	3,640

<sup>12</sup> GRKP, 2 October 1850, No. 220: 1759.

<sup>13</sup> GRKP, 13 June 1850, No. 130: 972.

<sup>14</sup> GRKP, 2 October 1850, No. 220: 1759.

<sup>15</sup> GRKP, 9 April 1851, No. 80: 542.

<sup>16</sup> GRKP, 18 February 1852, No. 37: 227.

<sup>17</sup> GRKP, 16 February 1853, No. 35: 204.

<sup>18</sup> GRKP, 6 October 1853, No. 222: 1667.

Zamość routes (commencement)		
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Again, in 1851, considerable amounts of money were allocated for the maintenance of the bridge on the Vistula River, near the city of Płock. The Board of the 13th District of Communication decided to spend 7,475 silver roubles on this project during that year<sup>19</sup>.

Especially noteworthy are the series of roadworks carried out during 1852, the most important of which were as follows:

Tab. 10

Investments in tracks of the Kingdom of Poland in 1852<sup>20</sup>

Investment	Length (in versts)	Sum (in silver roubles)
Reconstruction of part of the Lublin-Uściług (and Zamość) route (completion)	14	38,506
Reconstruction of broken stone layers on parts of specific tracks: Białystok route, Brześć route, Królewiec (Königsberg) route and Lublin route (completion)	20	60,129
Reconstruction the exit located near Łomża on the Kowno route (execution)	?	4,000
Construction of river dams protecting tracts in the neighbourhood of Prague (execution)	?	12,550
Reconstruction of a wooden bridge on the Narew River near the locality of Wierzbica (commencement)	?	?

Similar to the previous year, one of the main tasks of the Board of the 13th District of Communication in 1852 was to continue the proper maintenance of the bridge on the Vistula River, near the city of Płock, which over this 12-month period cost the considerable amount of 7,519 silver roubles<sup>21</sup>. According to the report made available in the form of “an extract from the depiction of activities of the Government of the Kingdom of Poland in 1855, submitted... to Tsar Alexander II ... by the Governor of the Kingdom”, the exact length of first-class roads maintained in 1855 in the Kingdom by the state administration “covered” 2,159 versts. During that time, for repairs and proper functioning of these routes, it was necessary to allocate, on average, 4,000 silver roubles per (Russian) verst, having actually paid the same amount of money for 1 cubic fathom of delivered stones. The overall cost of these repairs, as well that of the required supply of (crushed) stone materials, was then estimated at 253 silver roubles and 56 kopecks per verst<sup>22</sup>.

In turn, in 1856, the total length of first-class paved roads, whose maintenance fell on the shoulders of the transportation administration (and on the State Treasury), precisely reached 2,159,173/300 versts. In order to carry out a standardized repairs and maintenance process of this type of road, consisting of two crushed stone layers or covered with so-called “adamization”, 189,335.6 cubic fathoms of stone materials were provided at that time. On the

<sup>19</sup> *GRKP*, 6 October 1853, No. 222: 1667.

<sup>20</sup> *GRKP*, 19 September 1854, No. 205: 1718.

<sup>21</sup> *GRKP*, 19 September 1854, No. 205: 1718.

<sup>22</sup> *GRKP*, 25 October 1858, No. 234: 1776.



basis of the above given information, it appears that, in 1856, precisely 889 cubic fathoms of stone material were delivered per verst of typical first-class paved road.

“Standardized” money spending, related to these first-class routes, led to expenses in the following order: a) 315,966 silver roubles and 90.75 kopecks for general “building” purposes; b) 91,567 silver roubles and 46.75 kopecks for the repairs and maintenance of specific roads. For the operational maintenance of highways, numerous “external transportation services staff” (i.e., people not directly listed as being employed by the Board of the 13th District of Communication), for which 107,635 silver roubles and 44.5 kopecks were allocated in 1856, along with 50% of the whole of the costs required for providing sufficient fiscal support to the Warsaw main office of the 13th District of Communications. Thus, in general, the funding that was generally earmarked for first-class paved roads in the Kingdom of Poland reached a total of 515,169 silver roubles and 82 kopecks in 1856. Therefore, by counting, in an averaged way, the maintenance process cost for 1 verst of first-class paved road in 1856 was statistically 241 silver roubles and 86 kopecks<sup>23</sup>.

During the period 1857-1858, the overall length of paved roads maintained in the Kingdom at the expense of the state was once again estimated to be 2,159,173/300 versts. Solely in 1857, for the purpose of performing standard technical repairs on first-class routes, 156,036.12 cubic fathoms of stones were delivered. However, in the following year, 1,566,413.60 cubic fathoms of such materials (i.e., of crushed stones) were brought to the locality of Polish roadsides. As a consequence, for 1857 and 1858, for a mile of first-class road, 7.32 of cubic fathoms of stone material were statistically supplied. The general costs of the repair and maintenance of first-class highways in the Kingdom of Poland in the same years were as given below:

Tab. 11

Costs for the repair and maintenance of first-class roads in the Kingdom of Poland in 1857<sup>24</sup>

Intended use of sums of money	Sum (in silver roubles/ kopeks)
Delivery of stones	273,752/54.75
Maintenance and repairing of roads	108,033/28.25
Strengthening of the banks of the Niemen River at the 376-verst sign, construction of dams at the 56- and 57-verst signs on the Kalisz route	27,152/43.5
Financial support for the “external road service”; paying out half of the costs required for the functioning of the main office of the Board of 13th District of Communication (of the Russian Empire) in Warsaw	107,635/44.5
Total	516,573/70.75
Statistical cost for 1 verst	242/52

<sup>23</sup> GRKP, 25 January 1856, No. 9: 61.

<sup>24</sup> GRKP, 4 October 1860, No. 216: 1751.

Tab. 12

Costs for the repair and maintenance of first-class roads in the Kingdom of Poland in 1858<sup>25</sup>

Intended use of sums of money	Sum (in silver roubles/kopeks)
Delivery of stones	261,848/99
Maintenance and repairing of roads	97,167/42
Financial support for the “external road service”; paying out half of the costs required for functioning of the main office of the Board of the 13th District of Communication in Warsaw	107,635/44.5
Total	466,651/86.5
Statistical cost for 1 verst	219/8

Apart from these basic expenses for the maintenance and repairs of first-class paved roads in 1857-1858, the following main activities were mentioned in the formal report for this period: a) in 1857, 11,102 silver roubles and 72 kopeks were spent on replacing the old wooden bridge on the Wieprz River near the locality of Koźmin on the Lublin route, where a new bridge of the same construction was erected; b) in the same year, 5,670 silver roubles and 64 kopeks, as well as 5,612 silver roubles and 56 kopecks in 1858, were allocated for the purpose of increasing the number of roadworkers, along with extending the process of professional supervision of telegraph lines; c) in 1858, 6,836 silver roubles and 65 kopecks were paid for continuing the proper protection of 397 fathoms of first-class paved road at the 180th verst of the Brześć route (this expenditure was caused by the necessity to relocate the town of Terespol further away from the Russian “Active Army” fortress of Brześć Litewski, and to erect a completely new bridge on one of the Bug River’s tributary inflows<sup>26</sup>).

In 1859, the total length of first-class paved roads, which were repaired and maintained with the usage of funds from the State Treasury, amounted to about 216,070/300 versts. Maintaining the indicated roads in a condition suitable for transport and communication purposes cost, for the whole 12 months of the indicated year, the sum of 499,937 silver roubles and 50 kopecks. Out of this total amount, a) 322,133 silver roubles and 96 kopecks were allocated for supplying 185,121.3 cubic fathoms of crushed stone material, b) 92,836 silver roubles and 19.5 kopecks were allocated for road construction, repair and maintenance, as well as for various tools required for these purposes, and c) 84,977 silver roubles and 34.5 kopecks were allocated for the salary of employees of road transport services.

An additional duty was imposed in 1859 on the administration of transport services in the Kingdom of Poland, when its structures were burdened even more than before with the constant requirement to control the proper functioning of telegraph lines, which ran along two main routes, located in the north-east of the country, namely, in Augustów Gubernia. In particular, this matter concerned telegraph lines installed along the Królewiec (Königsberg) and Kowno routes. To cover the costs related to this “telegraphic supervision”, Warsaw’s Board of the 13th District of Communication received (directly from the state budget of the Russian Empire) allocated 5,670 silver roubles and 1 kopeck in 1859.

Finally, with regard to the further development of Polish first-class paved roads, it is important to mention the date that would be associated with an important breakthrough in terms of their maintenance, at least for in the forthcoming years. Namely, on 1 September

<sup>25</sup> GRKP, 4 October 1860, No. 216: 1751.

<sup>26</sup> GRKP, 4 October 1860, No. 216: 1751.

1859, the general obligation to maintain, repair and “preserve” these roads was transferred from the field of responsibility of the administrative structures of the Board of the 13th District of Communication to a private sector company. These duties were then taken over by the so-called “Citizens’ Committee” (or, better still, “Civic Company”). The duration of such a contract was set for the period of six years, i.e., from 1 September 1859 until 1 September 1865<sup>27</sup>.

### 3. SECONDARY ROADS

According to contemporaneous official ministerial reports, second-class (secondary) roads in the Kingdom of Poland of the 1840s/early 1850s were primarily built at a rather slow pace. Despite numerous obstacles and difficulties, the overall number of these roads, which were typically built with the usage of “two-day corvée road services”, as well as with the additional help of private workforces of local landowners, and obviously with partial financial support given by “state-owned district economical cash (register) offices and other local resources”, grew steadily<sup>28</sup>.

For the period 1847-1850, we can provide data concerning the total number of second-class roads that were then planned to be built.

Tab. 13

Secondary roads planned for the Kingdom of Poland in the period 1847-1850<sup>29</sup>

Year	Planned length/general number of anticipated road (in versts)
1847	1,380
1848	1,386
1849	1,427
1850	1,413

On the other hand, the officially stated numbers of second-class roads, which were actually built and generally open to the public at the end of each given year, are shown in the table below:

It is unavoidable to admit that the exact length of second-class roads constructed in particular years could have altered significantly.

<sup>27</sup> *GRKP*, 18 September 1861, No. 208: 1405.

<sup>28</sup> *GRKP*, 5 July 1848, No. 147: 1184; *GRKP*, 13 June 1849, No. 128: 1004.

<sup>29</sup> *GRKP*, 9 April 1851, No. 80: 543; *GRKP*, 28 May 1851, No. 118: 892; *GRKP*, 18 February 1852, No. 37: 227; *GRKP*, 16 February 1853, No. 35: 204.

Tab. 14

Second-class category roads actually open to the public in the Kingdom of Poland during the period 1843-1852<sup>30</sup>

Year	Length of secondary roads actually open to traffic (in versts)
1843	144,235.617
1844	157
1845	?
1846	?
1847	203
1848	298
1849	344
1850	411
1851	474
1852	552

Tab. 15

Second-class roads practically constructed in specific years in the Kingdom of Poland during the period 1843-1852<sup>31</sup>

Year	Length of secondary roads actually built (in versts)
1843	46
1844	14
1845	44
1846	14
1847	46
1848	141
1849	67
1850	63
1851	48
1852	

At the beginning of the stated period, i.e., in 1843, relatively non-intensive work was undertaken in order to build second-class roads in the Kingdom.

<sup>30</sup> *GRKP*, 5 July 1848, No. 147: 1184; *GRKP*, 13 June 1849, No. 128: 1004; *GRKP*, 13 June 1850, No. 130: 972; *GRKP*, 2 October 1850, No. 220: 1759; *GRKP*, 9 April 1851, No. 80: 543; *GRKP*, 28 May 1851, No. 118: 892; *GRKP*, 18 February 1852, No. 37: 227; *GRKP*, 16 February 1853, No. 35: 204; *GZKP*, 6 October 1853, No. 222: 1667; *GRKP*, 19 September 1854, No. 205: 1718.

<sup>31</sup> *GRKP*, 5 July 1848, No. 147: 1184; *GRKP*, 13 June 1849, No. 128: 1004; *GRKP*, 13 June 1850, No. 130: 972; *GRKP*, 2 October 1850, No. 220: 1759; *GRKP*, 9 April 1851, No. 80: 543; *GRKP*, 28 May 1851, No. 118: 892; *GRKP*, 18 February 1852, No. 37: 227; *GRKP*, 16 February 1853, No. 35: 204; *GRKP*, 6 October 1853, No. 222: 1667; *GRKP*, 19 September 1854, No. 205: 1718.

Tab. 16

Building second-class roads in the Kingdom of Poland in 1843<sup>32</sup>

Province	Number of secondary roads whose construction had commenced or was continuing
Masovian Gubernia	4
Płock Gubernia	4
Sandomierz Gubernia	4
Kielce Gubernia	4
Augustów Gubernia	1

The final completion of constructing and commissioning a (second-class) mining road, leading from the locality of Dąbrowa to the town of Olkusz, was considered an extremely important event in 1843; the road had a length of 24,417/617 versts. The construction of 19,236/617 versts of other second-class roads was also completed in the Kingdom in 1843<sup>33</sup>.

After omitting the considerable gap in terms of more detailed information concerning Warsaw's transportation administration interests in secondary roads, we may proceed to the mid-1850s, when there were 1,589 versts of partially paved second-class roads in the Kingdom of Poland, which were earmarked for continuous work to be carried out on them. At that time, all such activities, especially of a repairing nature, were carried out in the case of secondary roads using funds remaining in the possession of individual gubernia authorities only. As a result, during the whole of the above-mentioned year, only 41 versts of roads of this type were "made" using strictly local funds. This meant that, until 1 January 1856, throughout the whole territory of the Kingdom of Poland, such building, repairing and maintenance works were completed on just over 738 versts of secondary roads<sup>34</sup>.

In 1856, according to a comprehensive list of secondary tracks, which were planned to be rebuilt "as second-class paved roads" in the Kingdom of Poland using corvée services (carried out mostly by residents of local roadside villages), the total of those that were closed equated to a length of 109,922/300 versts. For fragmented roads (i.e., without being completed) during the whole months of 1856, some partially expensive roadworks were also carried out on a distance of an additional 105 versts. In summary, by the end of 1856, works had been completed on such routes covering a length of 843,322/500 versts. The list of second-class roads that were open in the Kingdom of Poland in 1856 is presented in Table 17.

Tab. 17

Second-class roads actually open to the public in the Kingdom of Poland in 1856<sup>35</sup>

Province	Length of secondary roads actually open to traffic (in versts)
Radom Gubernia	370.5
Warsaw Gubernia	246.5
Płock Gubernia	208
Lublin Gubernia	12
Augustów Gubernia	720.5

<sup>32</sup> *GRKP*, 5 July 1848, No. 147: 1184.

<sup>33</sup> *GRKP*, 5 July 1848, No. 147: 1184.

<sup>34</sup> *GRKP*, 25 October 1858, No. 234: 1777.

<sup>35</sup> *GRKP*, 25 January 1856, No. 9: 61.

According to official plans, during the period 1857-1858, the overall length of so-called “ordinary roads”, which should have been previously remade by employing corvée services, as well as local “sources”, in the form of paved second-class tracks, in the whole of the Kingdom was expected to be as follows: a) for 1857, 171,518/500 versts; b) for 1858, 2,073,119/500 versts. These expectations proved too high. Finally, it was only possible to rebuild 114 versts of second-class roads in 1857, while, in 1858, another 148 versts of second-class roads were opened to the public<sup>36</sup>. In these circumstances, the anticipated overall length of all the “remade” secondary paved road infrastructure must have been much too hard to approach.

Tab. 18

Building of second-class roads in the Kingdom of Poland in 1857<sup>37</sup>

Province	Length of actual roads built (in versts)
Radom Gubernia	50
Warsaw Gubernia	17
Płock Gubernia	33
Lublin Gubernia	1
Augustów Gubernia	13

Tab. 19

Building of second-class roads in the Kingdom of Poland in 1858<sup>38</sup>

Province	Length of actual roads built (in versts)
Radom Gubernia	39
Warsaw Gubernia	66
Płock Gubernia	21
Lublin Gubernia	7
Augustów Gubernia	15

By the last days of 1858, in the Kingdom of Poland, 1,180 versts of new second-class roads were constructed, thus transforming “ordinary roads” into secondary macadam system-built tracks. Of course, the corvée duty was still used as the main economic and structural basis for the ongoing process of building, maintaining and repairing these second-class routes<sup>39</sup>. During the next 12 months, on the territory of the entire Kingdom, the construction and the formal opening of another 156,313/500 versts of secondary roads took place. Once again, it was achieved, in the main, through the use of free corvée services (but also partly through the use of some paid employees). The above meant that, as of 31 December 1859, a total of 1,355, 450/500 versts of such roads were open to public access in the Kingdom of Poland as a whole<sup>40</sup>.

<sup>36</sup> *GRKP*, 5 October 1860, No. 217: 1757.

<sup>37</sup> *GRKP*, 5 October 1860, No. 217: 1757.

<sup>38</sup> *GRKP*, 5 October 1860, No. 217: 1757.

<sup>39</sup> *GRKP*, 5 October 1860, No. 217: 1757.

<sup>40</sup> *GRKP*, 18 September 1860, No. 208: 1405.

#### 4. CONCLUSION

By deciding to publish a variety of information about transportation and the road economy in the Kingdom of Poland between 1843 and 1859, the then Polish governing circles, acting in reality on behalf of the “Russian partitioner”, inevitably exposed, one way or another, the obviously visible and noticeable stagnation (in the case of secondary roads, the extremely slow advancement of the building process) in the construction of local transport networks. Similarly, the maintenance and repair of roads of the first and second categories exhibited no progressive dynamism. In the author’s opinion, the general picture of public endeavours in no way reveals or reflects the image of a large-scale, far-reaching, or seemingly executed with an iron will, nationwide road building and related economic programme, which one would simply expect in the field of transport economy for some 19th century etatistic regulatory model states. Quite striking, in this context, is the virtual abandonment of the development of a secondary-class road network in the eastern part of the country. Perhaps this was, directly or indirectly, due to the simple fact that the 1840s and 1850s were not so conducive to the development of many areas of Polish transport, including most road network developments. Such conclusions do not, however, diminish the obviously cognitive value of the data gathered here from archive material, which, although scattered, provide us with information of invaluable importance.

#### References

1. Central Archives of Historical Records in Warsaw. Druga Rada Stanu Królestwa Polskiego. [In Polish: The Second State Council of the Kingdom of Poland.] 1833. Signature.
2. Central Archives of Historical Records in Warsaw. Trzecia Rada Stanu Królestwa Polskiego [In Polish: The Third State Council of the Kingdom of Poland.] 1861 - 1865. Signature: 28, 249.
3. Christiani, F.K. “Wyciąg ze zdania sprawy o postępie robót około dróg bitych w Królestwie Polskiem: w latach 1819, 1820, 1821, 1822”. [In Polish: “Extract from the report on the progress of works concerning paved roads in the Kingdom of Poland in 1819, 1820, 1821, 1822”.] No date and place of printing.
4. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 4 July 1848, No. 146. Warsaw: J. Jaworski.
5. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 5 July 1848, No. 147. Warsaw: J. Jaworski.
6. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 12 June 1849, No. 127. Warsaw: J. Jaworski.
7. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 13 June 1849, No. 128. Warsaw: J. Jaworski.
8. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 13 June 1850, No. 130. Warsaw: J. Jaworski.
9. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 2 October 1850, No. 220. Warsaw: J. Jaworski.
10. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 9 April 1851, No. 80. Warsaw: J. Jaworski.

11. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 28 May 1851, No. 118. Warsaw: J. Jaworski.
12. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 18 February 1852, No 37. Warsaw: J. Jaworski.
13. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 16 February 1853, No 35. Warsaw: J. Jaworski.
14. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 6 October 1853, No. 222. Warsaw: J. Jaworski.
15. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 19 September 1854, No. 205. Warsaw: J. Jaworski.
16. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 25 January 1856, No. 9: 61. Warsaw: J. Jaworski.
17. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 25 October 1858, No. 234. Warsaw: J. Jaworski.
18. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 4 October 1860, No. 216. Warsaw: J. Jaworski.
19. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 5 October 1860, No. 217. Warsaw: J. Jaworski.
20. *Gazeta Rządowa Królestwa Polskiego*. [In Polish: *Government Gazette of the Kingdom of Poland*.] 18 September 1861, No. 208. Warsaw: J. Jaworski.
21. Lefkowitz J., F. Raomowska, eds. 1884. *Obraz Królestwa Polskiego w okresie konstytucyjnym, t.1, Raporty Rady Stanu Królestwa Polskiego z działalności rządu w latach 1816-1828*. [In Polish: *The Picture of the Kingdom of Poland in the Constitutional Period. Vol. 1, Reports of State Council Depicting the Activity of the Government in 1818-1828*.] Warsaw: State Publishing Painting Company.
22. Majewski Ju. 1889. "Drogi bite i zwyczajne w Królestwie Polskim. Ich budowa, utrzymanie i warunki dalszego rozwoju". *Przegląd Techniczny* Vol. 26, No. 2. Warszawa: Feliks Kucharzewski [In Polish: "Paved and ordinary roads in the Kingdom of Poland". *Technical Review*.] Warsaw: Feliks Kucharzewski.
23. Russian State Historic Archives in St. Petersburg, Osobennaja kancelaria Glavnoupravljajuscego Putej Soobscenia i Publicnyh Zdanii, Po raportu Nacalnika XIII Okruga Putej Soobscenia s predstavleniem atlasa putej soobscenia w Carstwie Polskom. [In Russian: Special Office of the General Director of Roads of Communication and Public Buildings: On the Report of Chief of the 13th District of Road Communications and Public Buildings with the Presentation of an Atlas of Roads of Communication in the Kingdom of Poland.] 1848. Signature: F. 207, Op. 5, d. 400.

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