Declassified E.O. 12356 Section 3.3/NND No. 785019

ACC 159/PWU

10000/150/467
(VOL. I)

DRAINAGE
(SUPPLEME
JULY - OC

Declassified E.O. 12356 Section 3.3/NND No. 785019

10000/150/467
(VOL. I)

DRAINAGE OF MARSHES, PONTINE, ETC.
(SUPPLEMENT SEPARATE)
JULY - OCT. 1941

| Folio | Date | Ref. | From/To | Subject |
|---|---|---|---|---|
| 1 | 2 June | — | Reg Engr Reg IV. | Visbar Report by Ing Fazio |
| 2 | 2 " | | " " " | " " " " |
| 3-4 | 4 July | — | Mai Wal-Wood. | Notes on Conference with Ca Politi re Fuel |
| 5-7. | 9 " | R4/ENG/6000. | Col Edwards Reg IV. | Est. Fuel Requirements for drainage |
| 8 | 11 " | R4/ENG/700. | D Col. Both. | Info re Littoria Pumping Plants. |
| 9. | 17. " | 158. | DG MRS | Elect Plant for Pumping " |
| 10 | 18 " | R4/ENG/6000 | Region IV. | Repair Est: Littoria Bonifiche |
| 11. | 18 " | 154. | Mai Larsen. | Memo to Col Laffer. |
| 12 & A | 21 " | B-8-10/7C. | Malaria Control. | Conference. |
| 13. | 24 " | [illegible] | Mai Wallwood | Notes on Conference Bonifiche Areas |
| 14 | 26 | 154 | Reg Engr Reg IV | Bonifiche - Pontina - Littoria |
| 15 | 26 | 108 | Min of P. Wks | " " " |
| 16. | — | — | Pumping Plants | — |
| 17. | 12. | — | Consorzio della Bonificazione Pontina | - Re. Elect Mat. Financing. |
| 18-19. | 31 July. | 154. | Finance S.C. | Financing of Pontine Harbor Damage |
| 20-21 | 31 " | — | Region IV. | " Bonifiche - Pontina & Littoria |
| 22-23 | 3 Aug. | 108. | Reg Engr Reg IV | " of Projects. |
| 24-26 | 3 " | 108 | Finance SC. | " Bonifiche - Pontina & Littoria |
| 27 | 6-7 | | Quotations from PRB. | |
| 28 | 14-Aug. | — | Extra ..... | aircraft warning Spraied - |
| 29 | 17-Aug | ES/41 | Economic-Section | Protection of land Reclamation of Irrig Projects |
| 30-31 | 18-Aug | AGR/23 | Agriculture - S. Comm. | Information re land Rec. Area |
| 32 | 19 Aug | B/10 | Budget Officer | Financing Bonifiche P. Wks S. Comm - |
| 33 | 14 Aug | 154 | Reg Engr. Reg IV | Cassino Area - River Rapido and tribs |
| 34 | 18 Aug | 154 | HQ Mob Tr. Regt. Gran Bre | Electrical Plant (Pontine Marshes) |
| 35 | 18 Aug | 154 | Reg. Engr. HQ Reg IV | Electrical Plant (Pontine Marshes) |
| 36 | 31 July | AR/Eng/11 | | 2639 |
| 36 | 17 Aug | 154 | Reg Engrs Reg IV | Cassino area - River Rapido & tributs |
| 37 | 18 Aug | 154 | Ministry of Pub. Wks | Cassino " " " & tributaries |
| 38-39 | 13 Aug | ES/ | Economic Section | |

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| | | | | |
|---|---|---|---|---|
| 14 | 26 | 154 | Reg Engr Reg IV | Bonifiche - Pontina - Littoria |
| 15 | 26 | 108 | Hdr of P. Wks | " " " |
| 16 | — | — | Pumping Plants | — |
| 17 | 12 | — | Consorzio della Bonificazione Pontina | Re. Elect. Plant. Financing. |
| 18-19 | 31 Jul | 154 | Finance S.E. | Financing of Pontine Marshes Drainage. |
| 20-21 | 31 " | — | Region IV. | " Bonifiche - Pontina - Littoria |
| 22-23 | 3 Aug. | 108 | Reg Engr Reg IV | " of Projects. |
| 24-26 | 3 " | 108 | Finance SE. | " Bonifica - Pontina - Littoria |
| 27 | 6-7 | | Quotations from PRB. | |
| 28 | 14 Aug. | — | Extract ..... | Aircraft marches Sprayed - |
| 29 | 17 Aug | 25/41 | Economic Section | Protection of Land Reclamation Info re Projects |
| 30-31 | 18 Aug | AGR/23 | Agriculture - S. Colon. | Information on Land Rec. Areas |
| 32 | 12 Aug | B/70 | Budget Officer | Financing Bonifiche P. Wks S. Colon - |
| 33 | 14 Aug | 159 | Reg. Engr. Reg. IV | Cassino (Area - River Rapido and tributs |
| 34 | 18 Aug | 159 | HQ. 10th Lt. Port. Gran. Bde. | Electrical Plant (Pontine Marshes) |
| 35 | 18 Aug | 159 | Reg. Engr. H.Q. Reg IV | Electrical Plant (Pontine Marshes) |
| 36 | 31 July | AR Eng No. 11 | | 2033 |
| 36 | 17 Aug | 159 | Reg Engr Reg IV | Cassino area - River Rapido & tributs |
| 37 | 18 Aug | 159 | Ministry of Pu. Wks | Cassino " " " & tributaries |
| 38-39 | 13 Aug | ES/20 | Economic Section | Conference on Bonifiche Pontine Marshes. |
| 40A-40 | 14 Aug | 159 | Chief Engr. Div. 5th Ar. | Plain of Area - |
| 41 | 20 " | 205/15 | A.F.H.Q. | Head Reconnaissance - Sacco River |
| 42 | 22 " | R4/Engs/101 II | Eng. Dir. Reg. IV | Cassino - Liri Rapido. |
| 43 A-E | 24 Aug. | 31 | Pu. Wks. Ministry | Proposal for carrying out land reclamation works |
| 44 A-E | 1 Sept. | 159/701 | Engrg. Division | El. mach. tak. away from Consorzio Bonif. |
| 45 | 4 " | R4/ENG/42 | " " | El. plant. Pontine Marshes |
| 46A-C | 8 " | 159 | HQ. 78th. Railway Q Division | do. do. |
| 47 | 10 " | 159 | Reg Engr. Reg IV | Bonifiche Pontina & Littoria |
| 48 | 10 " | 159 | " " " " | Cassino Area - Riv. Rapido Schemes |
| 49 | 21 Aug. | 088 | Air Force Sub. Com | Bonifiche Works |

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| FOLIO | DATE | REFERENCE | FROM/ TO | SUBJECT |
|---|---|---|---|---|
| 50 | 8 SEP. | RIX/PV/17 | Hqtrs Reg. IV | River PO Drainage Area |
| 51 | 11 " | 205/15 | Reg. Comm. Reg 8 | Pisa Province Flooding Prs. |
| 52. | 14 " | 159 | Reg. Eng. Reg. IX | River To drainage Area |
| 53 | 15 " | 159 | Hqtrs. Reg. VIII | Pisa Province - Flooding Prs. |
| 54 | 21 Aug. | 088 | Air Force S.C. | Bonifiche Works |
| 55 | 1 Sep. | 088 | HQ. MAAF, CMF | Flooded Areas |
| 56 | 10 " | MAAF/S.6665. | HQtrs Maaf. | " " |
| 57 | 20 " | 088 | Med. Phot. Intell. Centre | Request for "Cover" of Bonifiche Work |
| 58 | 13 " | 822 | Maj. Larson | unauthorized work |
| 59 | 20 " | RTC 095 | Sicily Reg. HQ. | Public Works |
| 60 | 21 " | 159 | Reg. Engr. Reg IV AMG/AAC V.V.N. | CASS.NO Area - Rapido Scheme |
| 61 | " | " | | Allies Win Battle ag. Malaria |
| 62 | 12 " | R4/ENG/822 | Reg. Engr. Lazio | Priority of work in A.Pont. |
| 63 | 15 " | 15 | AMG VIth Army Eng. | Lucca Flood Plan |
| 64 | 20 " | R4/ENG/822 | Reg Engr. Lazio | priority of work/in Agro |
| 65 | 26 " | 94/ENG/10/11 | " " " | Cassino Area - Riv. Rapido |
| 66 | 16 Oct. | 159 | Min. of P. Works | Proposal for Land rcl. wks |
| 67. | 21 Aug. | 088. | ~~Bonifiche Works (Agric + Antimalaria)~~ To: Air Force S.C. | Bonifiche Idrauliche (Agric & anti malaria) |
| 68 | 1 Sep. | 088. | HQ. MAAF. | Flooded areas (Reclamation Works) |
| 69 | 10 Oct. | 327/F.630 | Ministry of Communic. | Flooding of tunnel |
| ~~70~~ | ~~21 Oct.~~ | ~~3005/PH~~ | ~~Public Health S.C.~~ | " " |
| ~~71~~ | ~~25 Oct~~ | ~~3005/PH~~ | " " " | " " |
| ~~72~~ | ~~25 Oct~~ | ~~3005/PH~~ | " " " | " " |
| 70 | 25 Oct | 108 | Ministry of Pu. WKs Toscana Region | Repairs to Landdrain. wks |
| 71 | 25 Oct | 159 | " " | " 2051 |
| 72 | 18 Oct. | 28/100/PWU/F126 | | Approval of estimate |
| 73 | 27 Oct | 159 | Lazio Region | Cassino Area - R Rapido |
| 74 | 27 Oct | 088 | Min. of Communicat. | Subway - flood of tunnel |
| | | | "Arezzo | Malaria threat |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| | | | | |
|---|---|---|---|---|
| 60 | 21 " | 159 | Reg. Engr. Reg IV AMG/RCC | CASSINO Area - Rapido Scheme |
| 61 | " | " | V. N. V. | Allies War Battle ag. Malaria |
| 62 | 12 " | R4/ENG/822 | Reg. Engr. Lazio | Priority of work in A. Pont. |
| 63 | 15 " | 15 | AMG VIth Army Eng. | Lucca Flood Plan |
| 64 | 20 " | R4/ENG/822 | Reg Engr. Lazio | Priority of work in Agro |
| 65 | 26 " | R4/ENG/10/11 | " " | Cassino Area - Riv. Rapido |
| 66 | 16 Oct. | 159 | Min. of P. Works | Proposal for Land. rcl. wks |
| 67. | 21 Aug. | 088. | ~~Bonifiche Works (Agric + Antimalaria~~ To: Air Force S.C. | Bonifiche Works (Agric + anti malaria) |
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| ~~71~~ | ~~25 Oct~~ | ~~3005/PH~~ | " " " | " " |
| ~~72~~ | ~~25 Oct~~ | 3005/PH | " " " | " " |
| 70 | 25 Oct | 108 | Ministry of Pu. Wks | Repairs to Landdrain. wks |
| 71 | 25 Oct | 158 | Toscana Region | " 2051 |
| 72 | 18 Oct. | 28/100/Pun/226 | " " | Approval of estimate |
| 73 | 27 Oct | 159 | Lazio Region | Cassino Area - R Rapido |
| 74 | 27 Oct | 088 | Min. of Communicat. | Subway - flood of tunnel |
| 75 | 7 Oct. | 159 | "Avanti" | Malaria threat |
| 76 | 24 Oct | 159 | Piemonte Region | Data on Bonfica, Piemonte Region |
| 77 | 30 Oct. | 159 | " " | do do |
| 78 | 26 Oct. | R4/ENG/600.2 | Lazio Region | Bonifica |
| 79 | 26 Oct. | R4/ENG/600.2 | " " | Bonifica Pontina - Macchinery |
| 80 | 1 Nov. | 159 | " " | Ef. Plants of Pontine Marshes |
| 81 | 25 Oct. | 5/516/12 | Abruzzi - Marche Region | Drainage of the Fucino Basin. |

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B-16 FILE

28 OCT Recd

159 CAB PW + U 81

HEADQUARTERS
AMG/ CC
ABRUZZI MARCHE REGION
C.M.F.

TO : The Administration Torlonia : Avezzano
FROM : Regional Engineer Abruzzi Marche Region AC/AMG.
SUBJECT : Drainage of the Fucino Basin, Aquila.
REF : 9/516/12
DATE : 25 October 1944.

1. I am in receipt of Engineer Campini's very excellent report on the work that he is doing in connection with the drainage tunnels serving the Fucino Basin near Avezzano in Aquila.

2. I have personally inspected this work and the damage done to the drainage tunnel by the Germans before leaving and am in general accord with the technical procedure being followed.

3. I agree with the statement of Eng. Campini that if this work is not completed it is quite possible that this entire area of rich agricultural land may be flooded, with great damage to the crops and serious effects upon the countryb food supply. As engineer of this region I do not care to accept responsibility for such a misfortune.

4. I therefore approve the work for continuation at this time as essential to the maintenance of this most productive area and as reserving the remaining stock of cement, (approximately 2.000 q.li) to the use of the Administration on this work. It is believed that this cement will take care of the projects immediate ( this winter's ) needs.

HEADQUARTERS 28 OCT 1944 C. C.

G.A. LATIMER
Lt.Col. C.E.
Regional Engineer

2049

Copy to:
HQ AC, PW. & U. Sub Commission (Attached: Copy of Engr. Campini's report)
Regional Supply, AMG/ AC, Marche Abruzzi Region

Retained in my files.
Hunter 2 Nov.

2575

0867

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED COMMISSION
Public Works and Utilities Sub-Commission
APO 394

HWR/bb

ACC/159/PWU

1 Nov 44

SUBJECT: Electrical Plant of Pontine Marshes.

TO : Regional Commissioner, Lazio-Umbria Region.
(Attention: Regional Engineer).

1. Reference your letter RL/ENG/600.2, dated 26 Oct 44.

2. The action taken by the Regional Engineer is noted with approval.

3. Your attention is drawn, please, to our letter ACC/158/PWU, of 18 Aug 44, to the Regional Engineer, and our letter ACC/159/PWU, of 6 Sept 44, to HQ. 704th Railway Grand Division, with copy to Regional Engineer, both of which refer to the endeavours which were already being made to locate the missing plant.

G.E. RHODES.
Lieut-Colonel, R.E.,
Acting Director.

2048

27 OCT Rec'd 159 CAS.

G.de CEF/gb

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HEADQUARTERS
ALLIED MILITARY GOVERNMENT
LAZIO UMBRIA REGION
(Engineering Division)
APO 394

79

26 October 1944

TO : H.Q.A.C.C.
(Transportation Sub-Commission)(3 copies)

SUBJECT : MONTICAL FONTINA. MACHINERY.

IN REPLY QUOTE: E4/ENG/600.2

Reference conversation (Lt.Col. Findlay - Capt. Duffray) this evening 25th October. -

Enclosed is a copy of a letter in Italian with translation, both in triplicate received from Consorzio della Bonificazione Pontina giving information of the possible location of Machinery chiefly Motors from Pontina Marshes Pumping Stations. -

The motors removed from site included seven 512 HP vertical shaft Motors which are very exceptional and irreplaceable just now. -

Can you do anything to help to locate them.

I can send up an officer if necessary with the party to make enquiries, it is possible that you could assist by ascertaining if there are any places on the line where trucks under load with machinery are located and also by issuing authority to search for such trucks and open any such trucks found and list the contents.

Lt.Col.R.E.
Regional Engineer
Lazio Umbria Region AMG.

Enclosures: 3 copies of letter and translation.
Also detailed list of Missing Machinery.

Copy to:
H.Q.ACC.(P.W.) with one copy of letter and translation.
You may wish to enter into this "Treasure Hunt".

2047

Declassified E.O. 12356 Section 3.3/NND No. 785019

26 October 1944

TO : HQ.A.C.C.
(Transportation Sub-Commission)(3 copies)

SUBJECT : BONIFICA PONTINA. MACHINERY.

IN REPLY QUOTE: B4/ESO/600.2

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HQ.ACC.(P.W.) with one copy of letter and translation.
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2047

Declassified E.O. 12356 Section 3.3/NND No. 785019

/ec

COPY

CONSORZIO DELLA
BONIFICAZIONE PONTINA

N. di prot. 577

Roma, 17 ottobre 1944

OGGETTO:

Recupero macchinario impianti idrovori.

---

Secondo informazioni degne di fede gran parte dei motori e dei trasformatori che i Tedeschi avevano asportato dagli impianti idrovori della Bonifica Pontina si trovano ora su alcuni carri ferroviari lungo la Ferrovia Pisa - Empoli - Siena; qualche altra macchina molto probabilmente si trova ancora sulla linea Firenze - Prato. E' affare di somma importanza, e urgenza che un incaricato del Consorzio possa andare personalmente a verificare e precisare quali e quante siano le macchine ed apparecchi salvati, e, come si potrà iniziare le eventuali pratiche per lo sblocco e per la restituzione.

Il Consorzio ha incaricato del riscontro il Sig. Falso Emilio Carta d'Identità n.901986 - ora abitante a Littoria Via Savoia n. 78, il quale, Capo Tecnico dello zuccherificio di Littoria, essendo di scorta al convoglio Ferroviario che portava verso il Nord dei macchinari dello zuccherificio caricati insieme con quelli della Bonifica, è riuscito in parte a dirottare e in parte a sottrarre al controllo Tedesco, il materiale stesso sabotando il programma del nemico di trasportarlo in Germania.

Si prega vivamente di voler procurare con cortese sollecitudine e favorire l'ottenimento delle autorizzazioni occorrenti al nostro incaricato Sig. Falso perchè possa recarsi a Prato, con la sua motocicletta targata LT - 857, e fare le indagini lungo le linea e nei parchi ferroviari della regione al fine di agevolare il recupero di macchine necessarie ed urgenti per il prosciugamento del territorio del

20-5

Declassified E.O. 12356 Section 3.3/NND No. 785019

idrovori.

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2015

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Declassified E.O. 12356 Section 3.3/NND No. 784019

le "Bonifica Pontina", egualmente interessante l'agricoltura e la riabilitè della Strada Statale n. 7 .

Sigred/ IL DIRETTORE GENERALE
Ing. Leone Terzi

---

Dati utili per le autorizzazioni:

Sig. Felso Emilio
Carta d'Identità n. 501986
Motocicle Benelli - Targa LT - 857
Itinerario : Roma-Siena-Pisa-Firenze-Prato e ritorno.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Translation by ...

CONSORZIO DELLA BONIFICAZIONE PONTINA

17 October 1944

TO : REGIONAL ENGINEER - Region IV ACC

SUBJECT : Salvaging of drainage plants.-

FILE N° : 0577

According to reliable information received a large part of the motors and transformers removed by the Germans from the drainage plants of the Bonifica Pontina is now laying in railway wagons along the railway line Pisa-Empoli-Siena. Some other machines are very probably still on the line Firenze-Prato. It is very important and urgent that a representative of the Consorzio should go personally to verify and ascerta which and how many machines and appararatus have been saved and how it will be possible to initiate the unblocking and the restitution of the above.

The Consorzio has encharged Sig. FALSO EMILIO- identity card 901986 - now residing in Littoria - Via Savoia N°78, for this checking as technical chief of the sugar manufactory and having taken part in the escort of the convoy which was carrying towards the North the machinery of the sugar manufactary together with those of the Bonifica. He has been able to deroute part of the above material and subtract part from the German control saboting the enemy's programme, who wanted to carry all of it in Germany.

We beg you to allow, at your earliest convenience, or to favour Mr. Falso in obtaining the necessary authorisations, so that he should be able to go to Prato on his motorcycle (Reg. N° LT 857) and make inquiries along the line and in the railway park of the Region in order to facilitate the salvaging of the machines most necessary and urgent for the drainage of the Bonifica Pontina Area, so important for agriculture and the viability of Highway N°7.

Useful data for authorisation
Signor Falso Emilio
Identity card N° 901986
Motocycle Benelli (Reg. LT-857)
Itinerary: Roma-Siena-Pisa-Firenze-Prato and return.

IL DIRETTORE GENERALE

2045

Declassified E.O. 12356 Section 3.3/NND No. 784019

28 OCT Recd

159 CMB

G.de CEP/db File

L-1160

PW+U.

78 1637

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
LAZIO UMBRIA REGION
(Engineering Division)
APO 394

26 October 1944

TO : Regional Commissioner Lazio & Umbria Region

SUBJECT : Bonifica.

IN REPLY QUOTE : E4/ENG/600.2

HEADQUARTERS
28 OCT 1944
A. C. C

Reference your E/5548 dated 12th October 1944 and my 600.2 dated 13th October in reply.

1. Enclosed is a Table shewing present position of all pumping Stations - with some remarks in Remarks by me - I have not remarked on Agriculture and Malaria as all pumps out of action effects that. -

The pumps in service and under repair and the works in hand will, when finished, be able to prevent prolonged flooding of Route 7 which is the Military Priority Rank.

The delay of a month in August when the projects recommended to and approved by HQ.ACC. P.W. in July were thrown out by Finance have resulted in doing work now in rains too late which could have been done in fine weather at much less cost.

2. Another report received today from the Engineer who escorted the Machinery Northwards just escaped from North Italy indicates possibility of finding machinery between Pisa and Siena this has been taken up with Transportation Sub Commission today.

Lt.Col.R.E.
Regional Engineer
Lazio Umbria Region AMG.

Enclosures: Copy of Table signed by Ing. Reichsmann

Copy to:

HQ. ACC. P.W.

2047

This very clear summary by Ing. Reichsmann read in conjunction with the detailed technical report on Machinery already in your possession will perhaps enable you to find some of the missing parts elsewhere in Italy.

Declassified E.O. 12356 Section 3.3/NND No. 785019

To : Regional Commissioner Lazio & Umbria Region

SUBJECT : Bonifica.

IN REPLY QUOTE : R4/TEC/600.2

HEADQUARTERS
29011 1944
A. C. C

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Lazio Umbria Region ACC.

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Table returned by hand to Mr Reichsmann 1 Nov 44

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081

MWW/bb

HEADQUARTERS
ALLIED COMMISSION
Public Works and Utilities Sub-Commission
APO 394

77

ACC/139/PWU

30 Oct 44

SUBJECT:: Data on Bonifiche, Piemonte Region.

TO : Regional Commissioner, Piemonte Region.
(Attention: Regional Engineer).

1. Reference your letter of 24 Oct 44.

2. The information and maps that you desire were despatched by the Agriculture Sub-Commission to the Agricultural Officer of Piemonte Region on or about 23 Oct.

3. Please arrange for the Regional Engineer to make use of the Agricultural Officer's copies because it is considered that the labour involved in preparing another set of maps and documents for the sole use of Regional Engineer would not be warrantable.

By Command of Commodore Stone.

G.E. RHODES,
Lieut-Colonel; R.E.,
Acting Director.

2043

Declassified E.O. 12356 Section 3.3/NND No. 785019

Folio

76

26 OCT Recd 159 CCC

HEADQUARTERS
PIEMONTE REGION
ALLIED MILITARY GOVERNMENT
APO 394

24 October 1944

SUBJECT: Data on Bonifica, Piemonte Region.

TO : P.W. and U. Sub Commission ACC Hq.

1. At the last general meeting of the P.W. and U. Sub Commission at ACC Headquarters. Capt. Case of the Agriculture Sub Commission advised the meeting that detailed studies, including maps of the Bonifica or areas subject to flooding were being prepared for the Northern Regions.

2. It is requested that the Engineering Division Piemonte Region be furnished copies of these studies for the area under its Control, if available, and if not available now that request for copies be made.

C. R. Birchett

C. R. BIRCHETT,
Lt. Col. CE,
Regional Engr.

Planned Mr. Hughes 28 Oct

Reply drafted 28 Oct

HEADQUARTERS 26 OCT 1944 A. C. C.

2042

Declassified E.O. 12356 Section 3.3/NND No. 785019



COPY

File 59. 75

AVANTI (Socialist) 7 Oct.44.

1. The malaria threat. Dangerous because of flooding of areas by Germans. Lack of medicine also serious; it is to be regretted that English authorities confiscated 8 tons of quinine at Viterbo a few days ago and sent them to the East.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel.478200

File 159 HWW/ee

74

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/C&S/PWU

27 Oct 44

SUBJECT: Ferrovia Metropolitana di Roma.
Flooding of tunnel near Colosseum.

TO : Ministero delle Comunicazioni.

1. We refer to your letter No.327/F.530 dated 10 Oct.44, which you addressed to the Transportation Sub-Commission.

2. The flooded tunnel has been inspected by officers representing the Public Health, Malaria Control and Public Works departments of this Commission.

3. It is considered that the water in the tunnel, being in darkness, will not give rise to the breeding of mosquito larvae. Therefore, it constitutes no danger to public health, and there is no need either to remove it or to treat it with a larvicide.

4. However, in the open excavation which extends some 300 metres west of the Obelisk of Aksum, and also in the excavation for the proposed railway station near the Colosseum, there are stretches of water that might become breeding places for anopheline mosquitos. The former is the more dangerous and extensive. All that will be necessary in the interests of public health is the weekly application of Paris Green to these pools during the malaria season.

5. In the case of the water in the excavation near the Colosseum, we think it would be possible (at little trouble) to drain much of it away into the sewer which passes under the mouth of the tunnel, but the practicability of this can only be verified by ascertaining the relative levels. If it cannot be so drained it will be sufficient to treat it with Paris Green as already stated in the preceding paragraph.

2075

Copies to: Public Health Sub-Commission
(Malaria Control Branch),
in reference to letters ACC/3005/PH.
of 21 and 25 Oct. 44
File 159.

G.H. RHODES,
Lieut-Colonel, R.E.
Acting Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel.478200

HWW/ee

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APC 394

ACC/159/PWU

27 Oct 44

73

SUBJECT: Cassino Area.- River Rapido Scheme.

TO : Regional Commissioner, Lazio-Umbria Region.
(Attention: Regional Engineer)

1. Ref. your letter R4/ENG/101/11 dated 26 Sept 44.

2. Are you yet in a position to submit Forms ACC/2, please?

By Command of Commodore Stone.

H. W. WESTWOOD
MAJOR, R.E.
for G.E. RHODES,
Lieut-Colonel, R.E.,
Acting Director.

2039

2 ½ overhead of Wks.

Fi 159. 72

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
TOSCANA REGION
PUBLIC WORKS & UTILITIES

RVIII/100/PWU/FIR/6 18-Oct.1944

SUBJECT : Approval of estimate

TO : Director of Public Works Utilities Sub-Commission
HQ ACC/APO/394

B/12

1 - Herewith submitted for your approval is 1 estimate together with form ACC/1 from Chief Engineer, Genio Civile, Florence on following project :

FIR 32 Repairs to hydraulic defences of the river Arno L. 1.000.000.==

2 - In view of the urgency of this work, it has already been put in hand pending approval.

P.L.Lee.

P.L.LEE
Major R.E.
Regional Engineer
2038

Incl. 1

File
MK/alb

Ing Capo Genio Firenze 19/10/44

Declassified E.O. 12356 Section 3.3/NND No. 785019

SUBJECT : Approval of estimate

TO : Director of Public Works Utilities Sub-Commission
HQ ACC/APO/394

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P.L.Lee.

P.L.LEE
Major R.E.
Regional Engineer
2038

Incl. 1

File
MK/alb

Ing Cervi
please examine
23/10

Hildreth
Reply emptied 24 Oct.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel: 489081

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

HWW/bb

ACC/159/PWU

25 Oct 44

SUBJECT: Repairs to land drainage works.-
(i) River Arno; (ii) River Osa;
(iii) River Albegna.

TO : Regional Commissioner, Toscana Region.
(Attention: Regional Engineer).

1. Reference your letter RVIII/100/PWU/FUR/6 dated 18 Oct 44.

2. Returned to you herewith are two sets of documents and one Form ACC/1, approved, in respect of each of the following schemes:-

FUR 32 - River Arno ..... Lire 1,000,000
GRO 59 - River Osa ..... Lire 690,000
GRO 60 - River Albegna ..... Lire 995,000

Please note that the estimated cost of scheme GRO 59 has been reduced from Lire 705,000 to Lire 690,000 in consequence of the correction of an arithmetical error.

3. As all three schemes are within the range 500,000 to 1,000,000 Lire, we presume that they were submitted to this Headquarters for approval because they involve the use of critical materials, but you have not specifically said so. In all such cases in future, will you please furnish a list of the controlled materials required.

By Command of Commodore Stone.

2037

G.E. RHODES,
Lieut-Colonel, R.E.,
Acting Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

1 4 4
159 70

HWW/bb

Tel: 489081

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

25 Oct 44

ACC/108/prcu

SUBJECT: Repairs to land drainage works.-
(i) River Arno; (ii) River Ombrone; (iii) River Albegna.

TO : Ministry of Public Works, Italian Government.
(Attn: Comm. Tizzano).

For your information we forward herewith copies of Forms ACC/1, approving the execution of the following schemes:-

| | | |
|---|---|---|
| (i) | Repairs to the flood defences of the River Arno..... | L. 1,000,000 |
| (ii) | Repairs to bonifica works in the basin of the River Ombrone..... | L. 690,000 |
| (iii) | Repairs to bonifica works in the basin of the River Albegna..... | L. 995,000 |

G.R. HODES.
Lieut-Colonel, R.E.,
Acting Director.

Copy to: File 159.

/nf FUE 15)

69

TRANSLATION

Ministry of Communications
General Inspectorate for Civil Motorization
and for transports in concession

Ref. Serv. 1 - n. 327/P.630 - L/D.

Rome Oct. 10th 1944

For reply and other correspondence, see Malaria Control 26.

TO : ACC - Tn. Sub.Commission

SUBJECT : Subway of Rome; flooding of the tunnel under the antiquarium near the Colosseum.

Societa Italiana Strade Ferrate del Mediterraneo, grantee for the construction of the Subway of Rome (S.U.R.) informed us that, on account of present scarcity of electric power, they did not succeed in obtaining from AGEA the supply of the power required to put in operation the water-draining plant which is located near the Colosseum.

The result was that the water from a spring near the pump-station and, during rain-days, the water from two adjoining sections of the tunnel which are still uncovered, flow together into the tunnel, under the Antiquarium, which is presently filled with about 2 mts water above the top surface of the rails, so that the machinery has been submerged.

It would consequently be necessary to drain off by means of motor-pumps all water which flooded the tunnel in order to be able to disassemble the pump-plant and to take it into a repair-shop where the pieces, which cannot be repaired, could be replaced.

But above Company points out that they are not in a position to carry out above programme on account of lack of suitable equipment and of necessary materials and because they could not bear the expenses.

On the other hand, as several private houses and a military hospital employed by the Allies are in the vicinity an intervention is required also for the sake of public health.

We therefore ask that Sub.Commission to kindly investigate whether said programme could be carried out by the Allied Military authorities; if above possibility exists, closer agreements should be taken directly with Eng. Vito Perrone, General Technical Inspector, Director of General Inspectorate for Civil Motorization (phone 81157), who is charged with the supervision of the equipment

Declassified E.O. 12356 Section 3.3/NND No. 785019

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In the meantime this Ministry has requested General Direction for the Public Health, attached to the Ministry of Interno, that anti-mosquite substances be spread over the zone in order to prevent that malarial infection centers may be created.

We await to know what measures could be taken by that Sub.Commission.

The Minister
sgd Cerabona

Declassified E.O. 12356 Section 3.3/NND No. 784049

# MEMO for FILE 159.

~~Much~~ Much of the previous correspondence regarding FLOODING in the North has been recorded in File 088 (vide folios 46, 47, 48, 49, 50 and 52 thereof). File 088, however, is not appropriate & a matter that is not primarily concerned with Malaria Control. All future correspondence on Flooding will (ENGLISH-EGYPT)
therefore be placed in this File (159), and, if necessary, either copies or references will also be inserted in 088.

File 159 is obviously the appropriate one for this subject, and it is dangerous & bad correspondence on one subject divided between two files.

203

21 Oct.

Declassified E.O. 12356 Section 3.3/NND No. 785019

folios 46, 47, 48, 49, 50 and 52 refer).

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203

21 Oct

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

CMH/cb
68

ACC/088/PWU

1 Sept 44

SUBJECT: Flooded Areas (Reclamation Works)

TO : HQ. M.A.A.F., C.M.F.

1. I attach herewith copy of a letter ACC/088/PWU- 21st Aug. that was addressed to the Air Force S.C. of the A.C.C. I also enclose a copy of the map referred to in that letter.

2. The Air Force S.C., in reply, inform us that the matter should be dealt with by you, probably by your photographic Reconnaissance Section.

3. Kindly acknowledge this letter, with its enclosure, and let us know whether you can take any action.

G. E. Rhodes

G.E. RHODES,
Lt.Colonel, R.E.,
Deputy Director.

Enclosures:
A) copy of a letter ACC/088/PWU
21 August 44.
B) Map referred to.

For subsequent correspondence and information, see SECRET file 203?

Declassified E.O. 12356 Section 3.3/NND No. 785019

COPY

99B
67

Tel.489081

GER/tr

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
AFO 394

ACC/0888/PWU

21 Aug.44

SUBJECT: Bonifiche Works (Agric. & Anti-Malaria).

TO : Air Force S.C.

1. At a conference on 14 Aug in the Exec. Directors Office with representatives from

Agriculture S.C.
Economic Section S.C.
Public Health S.C.
Finance S.C.
Legal S.C.
Public Works S.C.

it was disclosed that the above problem is likely to be far greater in extent and in complexity than was presented by the Pontine Marshes, viz. in N.E. Italy over wide areas, as shown on the map enclosed.

2. It is expected that the enemy will wreck water-pumping stations (for land-drainage), embankments, bridges etc., may block canals, and may take all steps to promote extensive flooding.

3. Is it possible to get a series of air photographs from time to time, showing what the position is, so that this S.C. may have an indication of the problems to be faced?

(Sgd.) G.E.Rhodes.

G.E.RHODES
Lt.Colonel,R.E.
Deputy Director.

Encl.: Map referred to

Copy to file 159

2037

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel.489081

HWW/ce

66

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/159/PWU

16 Oct.44

SUBJECT: Proposals for land-reclamation works.

TO : Ministry of Public Works, Italian Govt.
Attn: Comm. Tizzano.

1. Reference your letter No. 131, dated 24 Aug 44, enclosing a copy of your circular calling for the submission of proposals for the execution of maintenance and repair works in land-reclamation areas.

2. We note that all proposals were to be submitted to you not later than 10 Sep. We are, therefore, writing to say that we shall be interested to know what schemes are now contemplated.

G.E. RHODES,
Lieut-Colonel, R.E.
Acting Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

AGE/gb

CO 65

HEADQUARTERS REGION IV
Allied Control Commission
(Engineering Division)
APO 394

159 ad

26 September 1944

TO : HQ.ACC.(Public Works and Utilities Sub-Commission)
SUBJECT : CASSINO Area - River Rapido Scheme.
IN REPLY QUOTE : R4/ENG/101/11

Reference your letter ACC/159/PWU of 21 September 1944.

1. It is regretted that these ACC/2 have not yet been submitted.

2. Reasons are as follows:-

(a) A Contract was placed, but pending preparation of ACC/2 the contract was terminated by Ministero Lavori Pubblici for political reasons.

(b) In the meantime some of the work is being done by direct labour through Genio Civile.

(c) Tenders have been invited for rest of the work, but contract has not yet been placed.

3. Forms ACC/2 will be submitted as soon as possible.

A.G. Evans.

A.G. EVANS, Major R.E.
for Regional Engineer ACC.IV.

HEADQUARTERS
28 SEP 1944
A. C. C.

Remainder replies 26 Oct

B/F 25 Oct

24 Oct Hwis

3/10 Folios 48 & 60 refer

Declassified E.O. 12356 Section 3.3/NND No. 785019

26 SEP Recd 159

CO HL/fb 624

HEADQUARTERS REGION IV
Allied Control Commission
APO 394

20 September 1944

FILE No : R4/ENG/622

SUBJECT : Priority of Work in AGRO PONTINO.

TO : Regional Engineer, Region IV/ACC.

1. Reference is made to letter dated 12 September, 1944, subject: Order of priority of work in AGRO PONTINO. This letter was prepared only after considerable thought had been given to the various factors involved. As stated verbally upon more than one occassion consideration was given, first, to any and all work which should be done in order to protect Via Appia, or Highway 7, a main supply route. The undersigned is well aware of the importance of this route.

2. Again it is recommended that the remaining work which should be accomplished for the protection of Via Appia, or Highway No 7, is in the Consorzio Bonificazione Pontina, and is specifically the following:

(a) Repairing and rebuilding gates in the Navigation Canal in the vicinity of PONTE MAGGIORE. Some time ago the General Director of Consorzio Bonificazione Pontina was asked to prepare and submit a project on this work, which project is now being prepared, and should be ready within the near future. The purpose of this project is to divert the flood flows of the AMASENO channel from the Navigation Canal to the CANALE DI DIVERSIONE and to another channel roughly parallel to the canale di Diversione.

(b) The prompt completion of the diversion channel for the FIUME UFFENTE: This work was set up as a project and approved by the Director, Public Works and Utilities Sub-Commission.

(c) Repairing and restoring pumping stations in the order named:

2028

(1) CALAMERA
(2) CECCACCIO
(3) PORCELLATTA

./.

Declassified E.O. 12356 Section 3.3/NND No. 785019



All of the above pumping stations are so located that they can remove water from both sides of Via Appia. As a matter of information water will be adjacent to both sides of Via Appia during the rainy season. In the opinion of the writer Via Appia will be threatened unless this water is removed. Applications for electric power to operate these pumping stations are now in this office pending action. It is probable that other pumping stations will have to be operated during flood flows - but this will depend upon where the high stages occur. The Bonifica has two portable electric generating plants which will be used where needed.

3. Within the Consorzio Bonifica di Litteria work is under way on an approved project. Among other items this includes the removal of excess earth, vegetation, and debris from the CANALE DELLA ACQUE ALTE. Where this channel crosses Via Appia there is some debris and a temporary earth fill, which should be removed.

Harry Larson
HARRY LARSON
Major, Corps of Engineers.

Copy to:
✓ Director, P.E. & U. Sub-Commission.
File

Declassified E.O. 12356 Section 3.3/NND No. 785019



(1) Lt. Col. Thompson. 23/9

(2) Major [illegible]. [illegible]
1st Dec

(3). Thom send to R.E.8
for his info: &
retention — as Lucca
will soon be
under Reg. 8 —

R.E.8. for
already see
& info: distribution.
GER.
25/9
23/9.

Declassified E.O. 12356 Section 3.3/NND No. 785019

BEST COPY POSSIBLE

Declassified E.O. 12356 Section 3.3/NND No. 785019

P W + U

Lt. MC CALLUM , AMG IV CORPS 15 September 1944 .

63

SUBJECT: ZOCCA FLOOD PLANE .

TO : Chief, Engineer Div. A.M.G., FIFTH ARMY .

1. Forwarded is a report by the Genio Civile regarding the flood possibilities in the vicinity of ZOCCA.

2. In collaboration with the Genio Civile I carried out a thorough review of the situation and I am satisfied that the Genio Civile and his staff are fully aware of the flood danger, and they are doing all in their power to combat it. But I urge immediate action by army to remove the obstructions and by-passes, as the Genio Civile and his staff are incapable of removing all the obstructions before the weather breaks.

S/ J. M. MC CALLUM

J. M. MC CALLUM,
Lieutenant, M.M.,
Eng. Div. AMG 5th Army,
Attached IV Corps.

1st Ind.
HEADQUARTERS 92ND FIFTH ARMY AMG 464 US ARMY 17 Sept. 1944

905/2

TO : 5th Army Engineer Officer.

1. Forwarded for information and request that action be taken by engineer troops as indicated under the heading "Work for which intervention of the forces is necessary", except par. 3° thereof.

For the Commanding General:

HEADQUARTERS
22SEP1944
A. C. C.

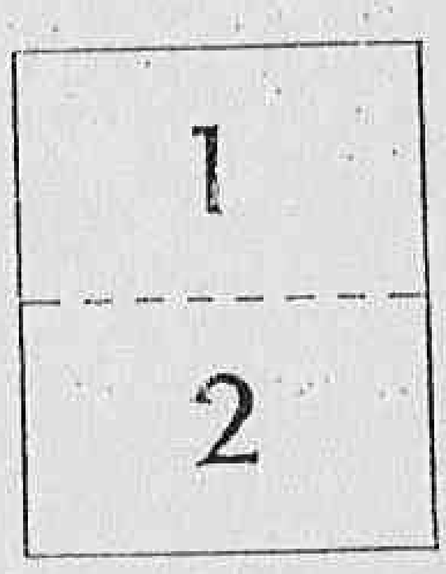
M. M. GARNER 2027
Captain, C.M.P.,
Chief, Engineer Division,
A.M.G., FIFTH ARMY .

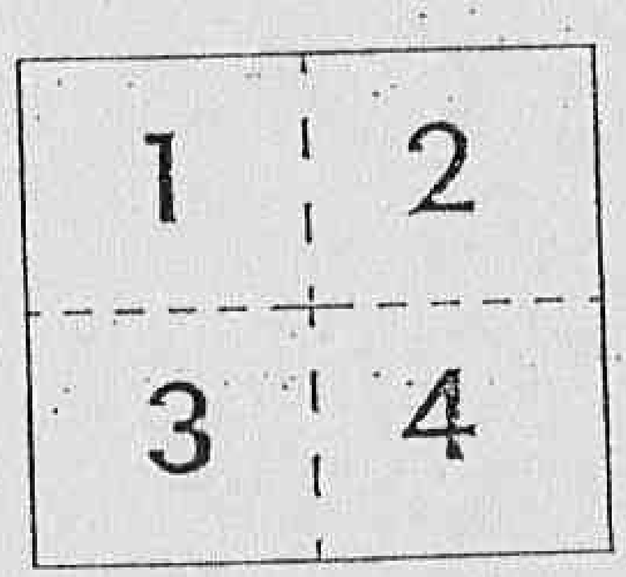
COPY TO:
D.C.M.G.S.
C.C.A.C., A.M.G., IV Corps.
P.C. Lucca Province.
Regional Engineer, Region VIII, A.C.C.
A.C.C., P.W. & U. Sub-Division.

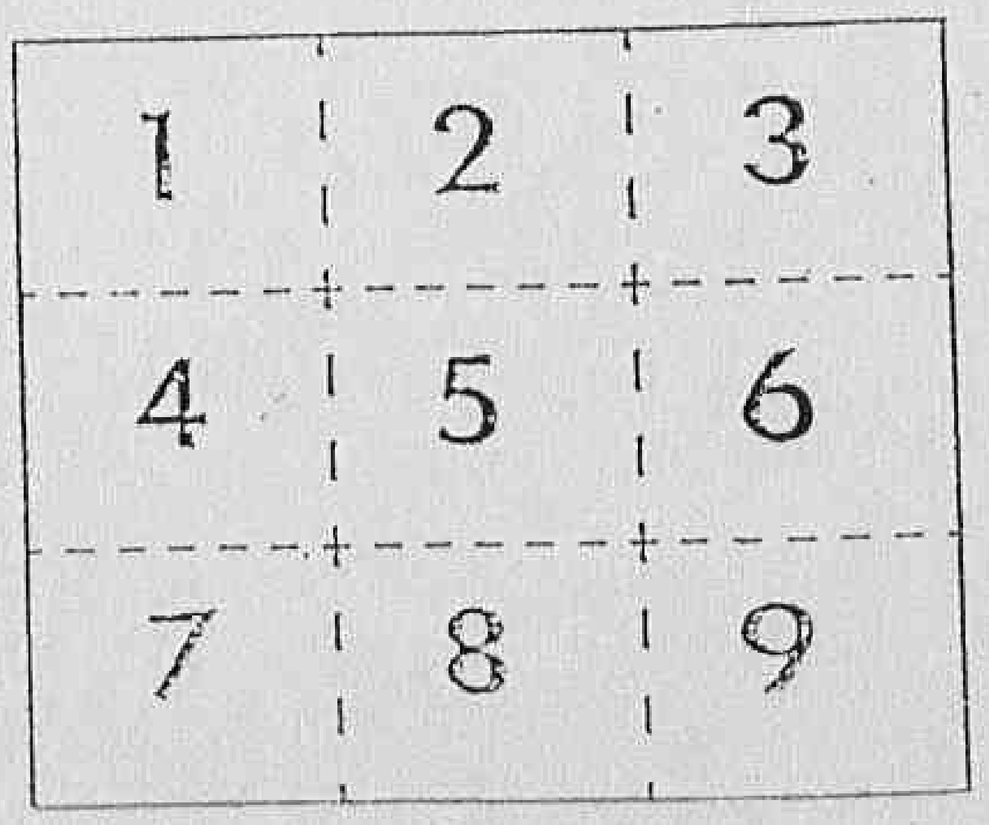
Declassified E.O. 12356 Section 3.3/NND No. 785019

MAPS AND CHARTS TOO LARGE TO FILM
ON ONE EXPOSURE ARE FILMED CLOCKWISE
BEGINNING IN THE UPPER LEFT CORNER,
LEFT TO RIGHT, AND TOP TO BOTTOM.

SEE DIAGRAMS BELOW.



Declassified E.O. 12356 Section 3.3/NND No. 785019

# VTTRIO TFCNICO FRRRIALI di LVCCA

## SCHEMA DEL CONDOTTO PVBBLICO E DEL COLATORE C

Scala 1:25.000



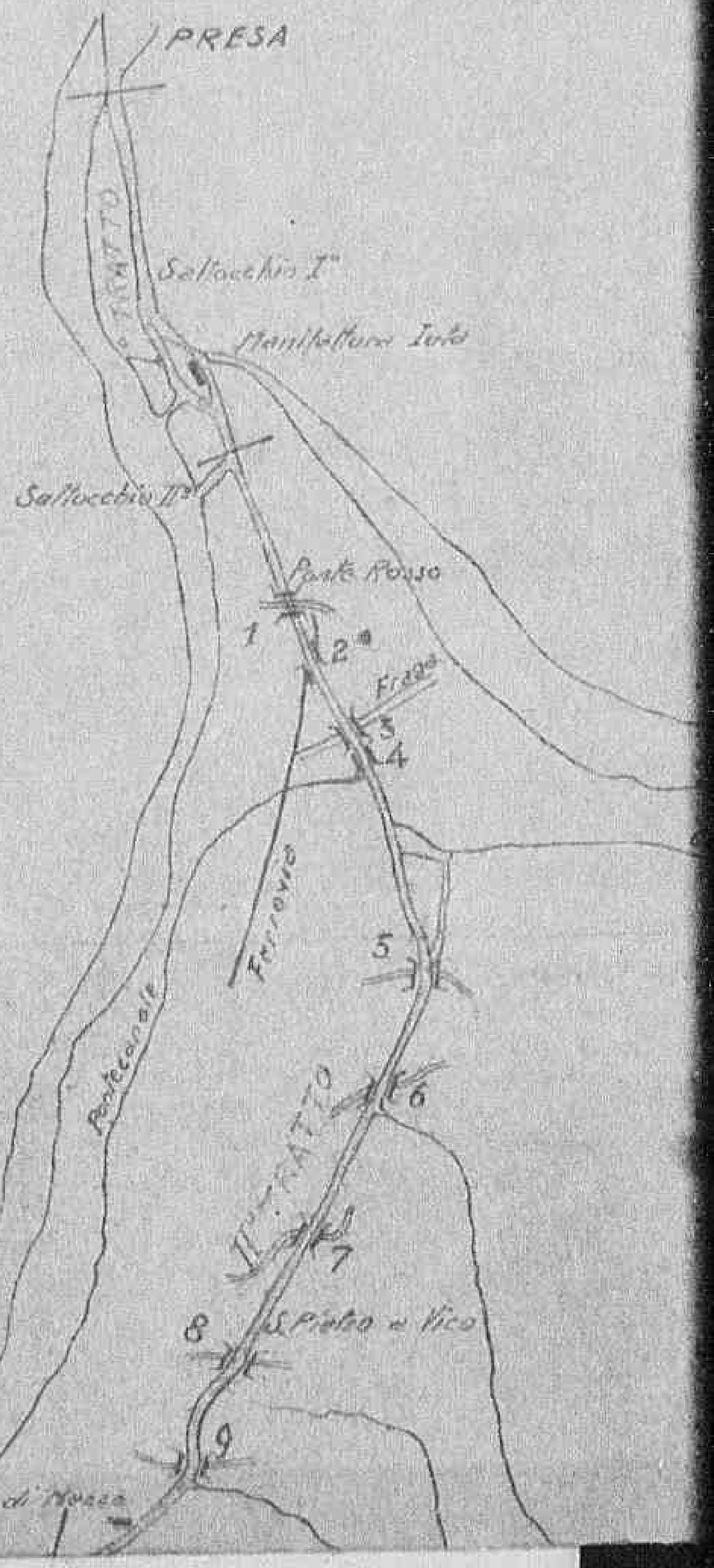
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PRESA

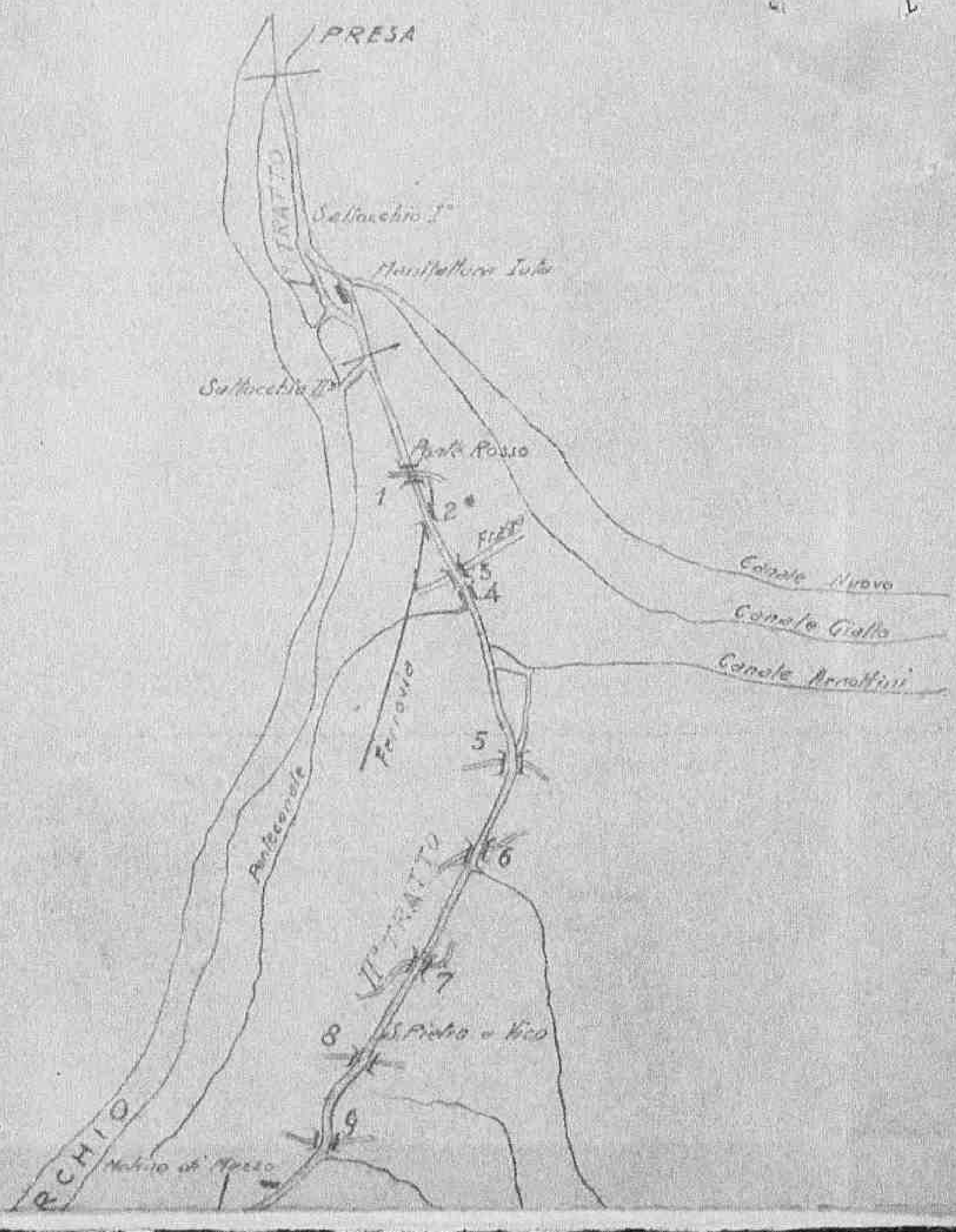
ARIALE di LUCCA

LIRO E DEL COLATORE OZZERI

1:25.000

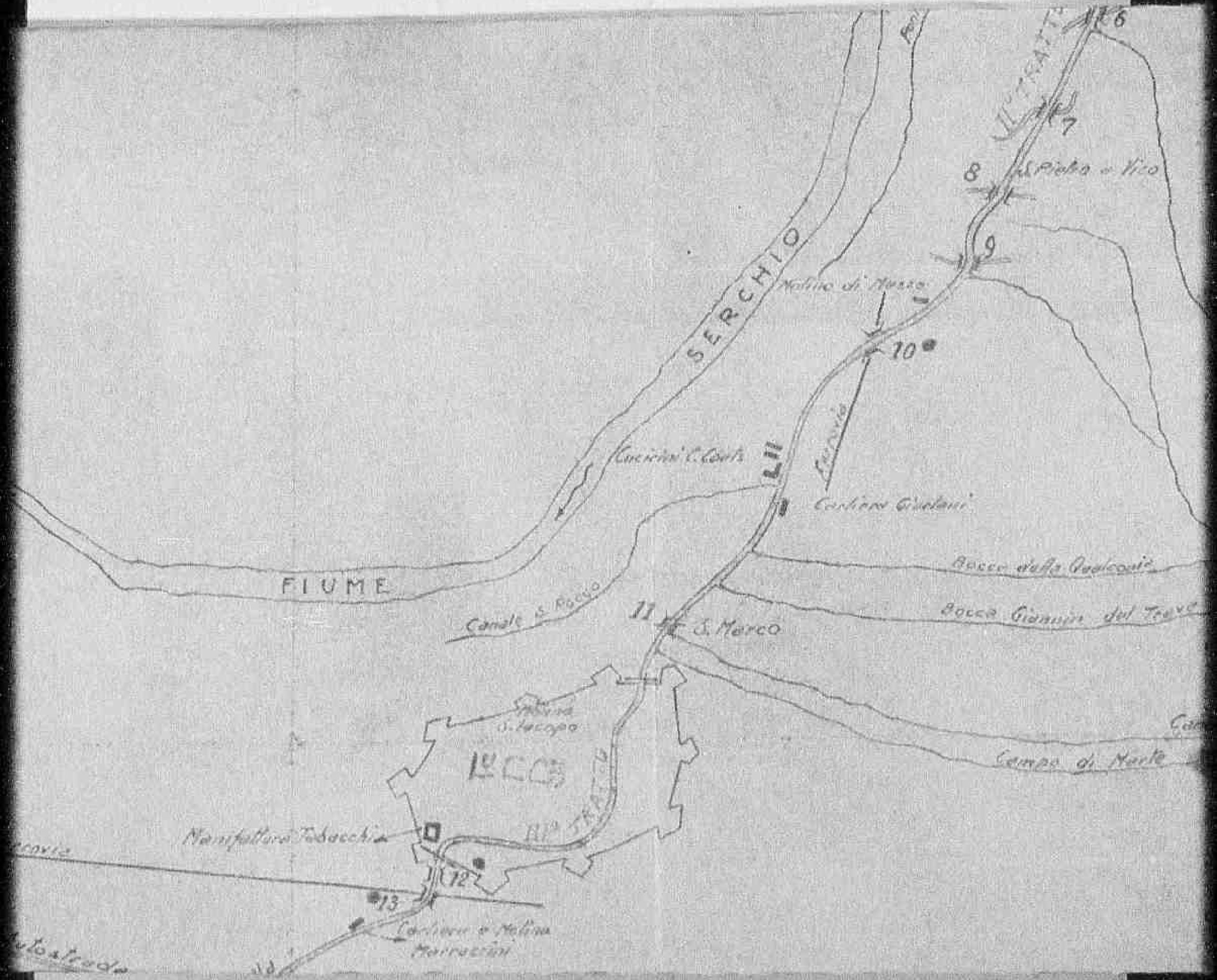


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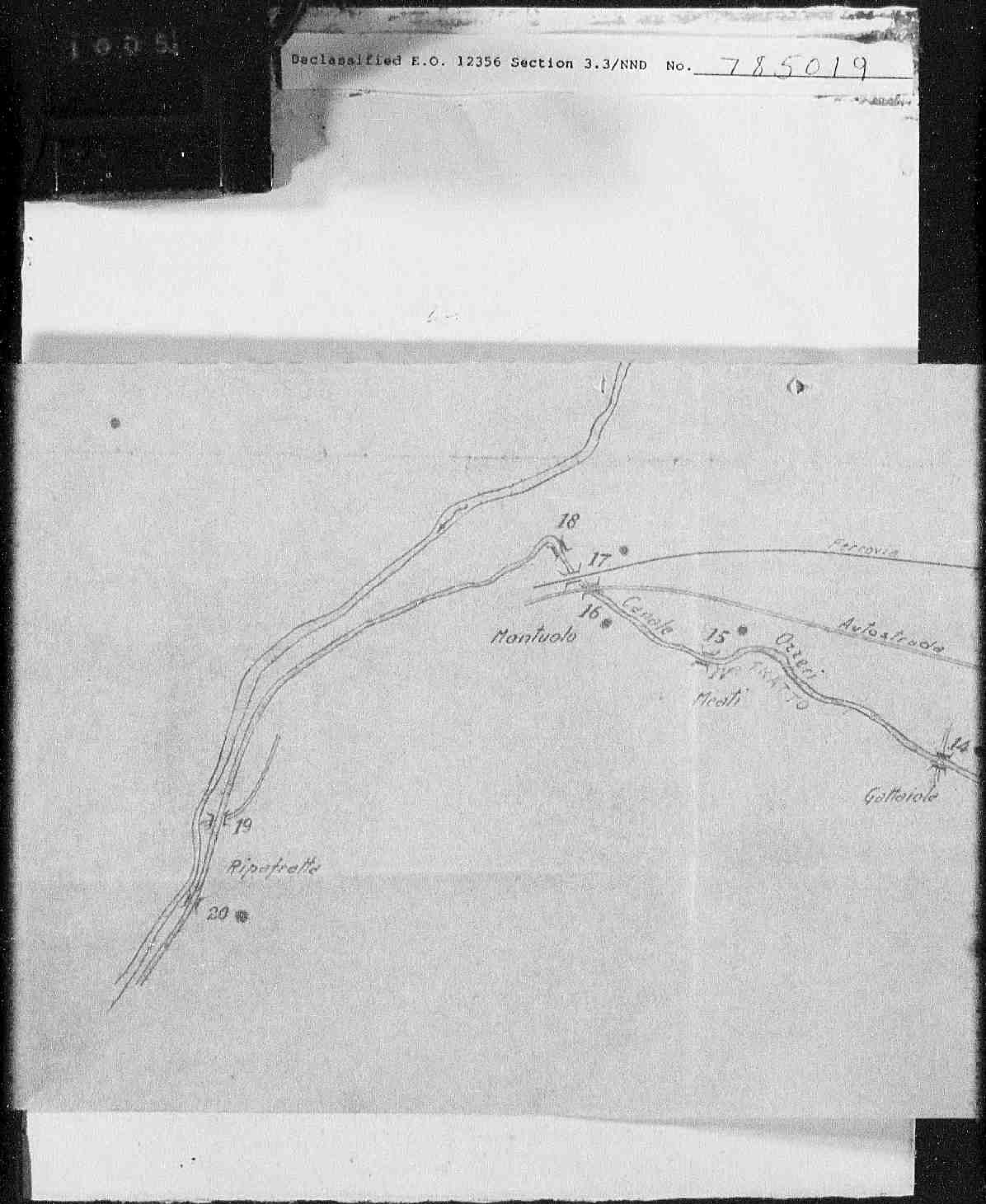
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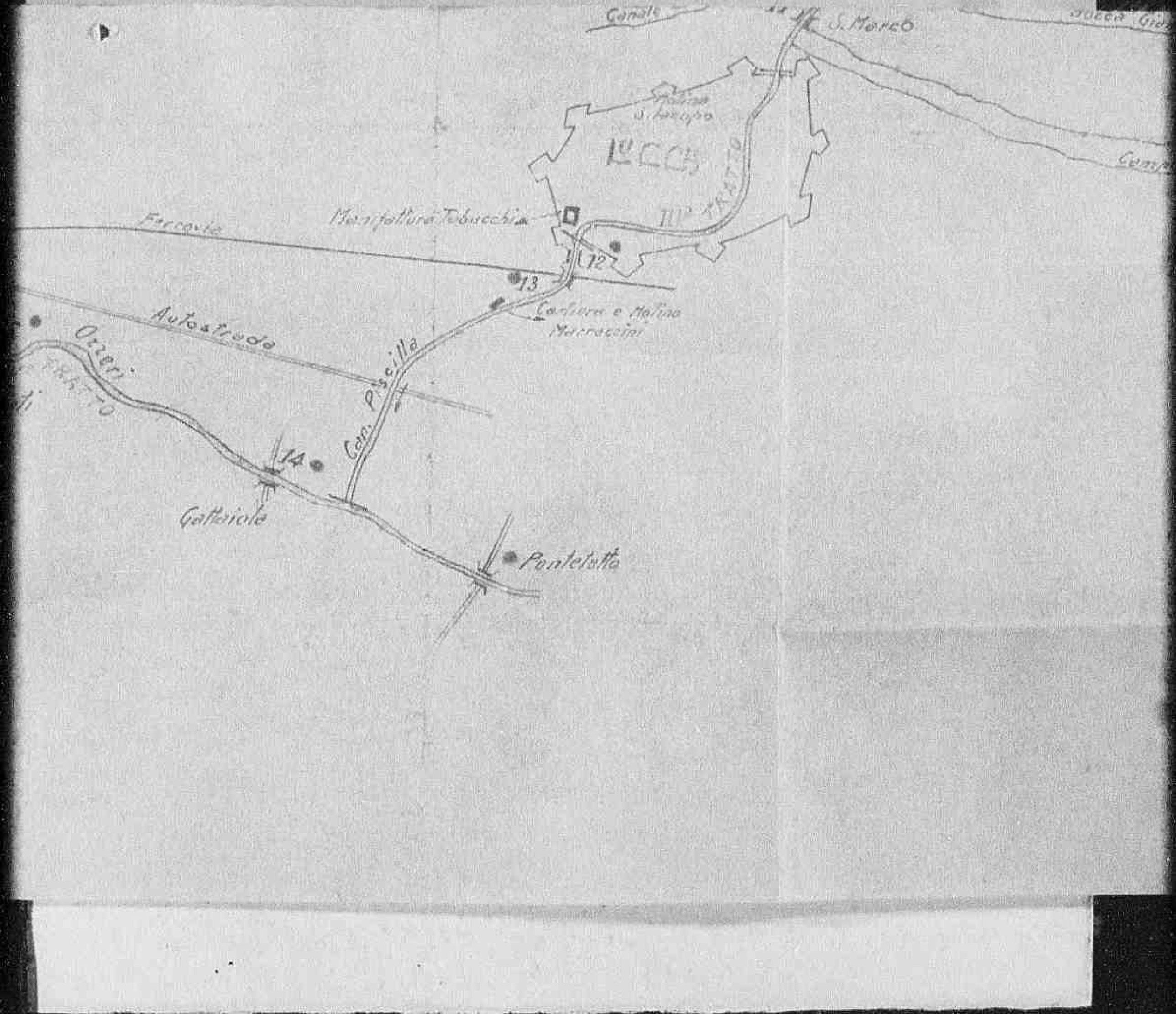


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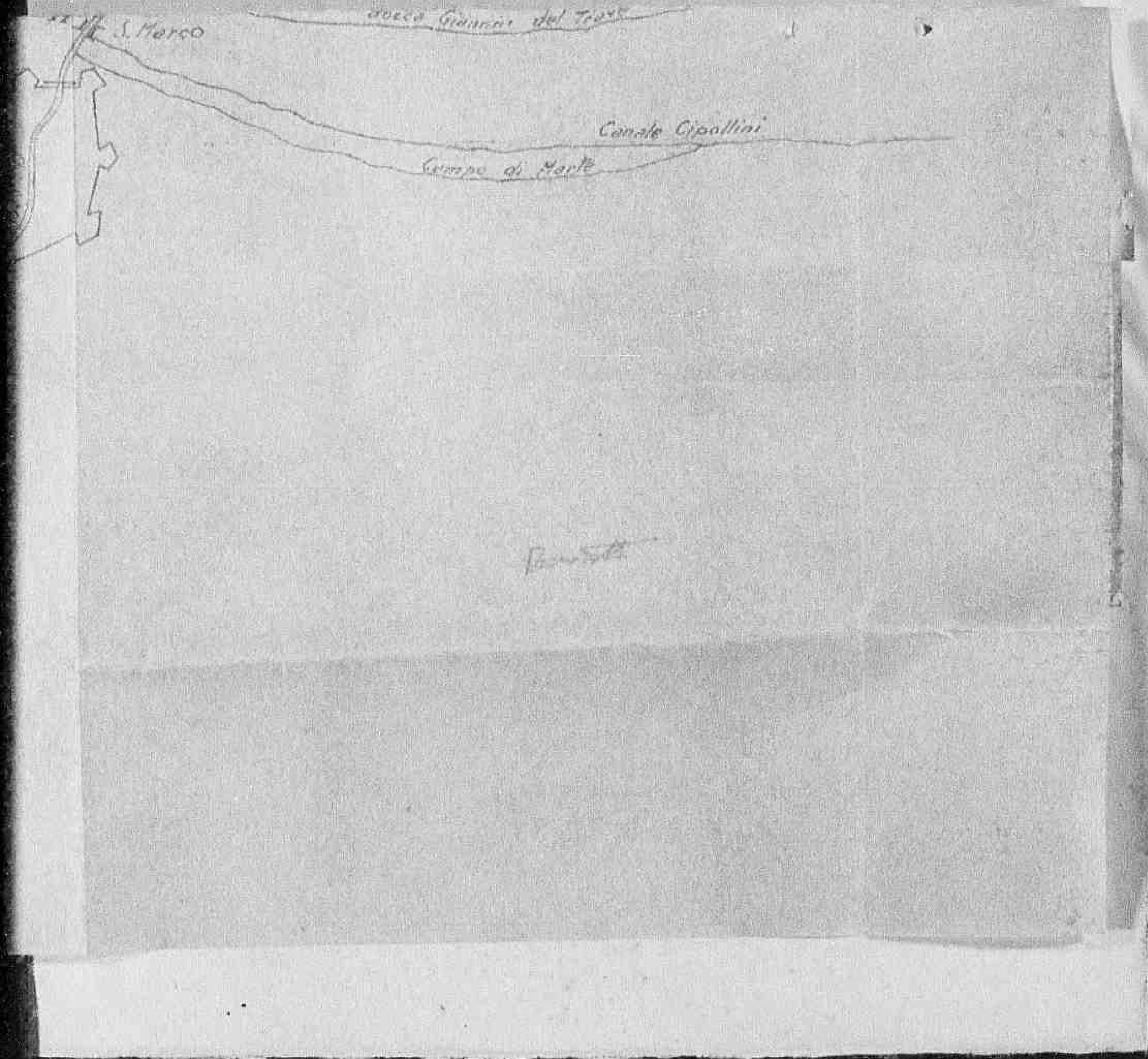


Declassified E.O. 12356 Section 3.3/NND No. 785019



1087

Declassified E.O. 12356 Section 3.3/NND No. 785019



TRANSLATION

UFFICIO TECNICO ERARIALE DI LUCCA

Technical Report Regarding Damages ascertained to the "Condotto Pubblico" Canal, and the reestablishment of same for the purpose of allowing the immediate working of the generators for electric power and of the Mills and also to regulate the overflow of water in the plains near LUCCA .

Summary Description

The Public Conduct is an artificial canal which acquires the water from the SERCHIO River at S. Gemignano di Moriano, about one km. inland from Ponte a Moriano, and returns same to the SERCHIO at about 22 kms. in the Rigoli district, by means of the Ozzari-Regio waste canal, which also serves for the draining of the Bientina swamp and the plains near Lucca.

The entire course can be considered sub-divided as follows:

1) Section between the lock at S. Gemignano and the regulating block at Saltocchio, distance about 2 km. The maximum flow at this section is roughly 16 m.c. per second, which action two turbines of the "Manifattura Juta" provided with an alterator of about 250 KW, which now is probably unservable.

2) Section between the regulating block at Saltocchio to the city of LUCCA, distance about 7 kms. The maximum flow here is reduced to about 6 m.c. per minute in respect of the subsequent section across the city, part of the water being returned to the Serchio by means of the above regulating block.

In this section, the public conduct furnishes power to several mills, at present partly destroyed, and of which the "Molino di Mezzo" deserves special mention. In this mill, a group of turbo-alternators of about 50 KW still efficient is installed.

3) Section within the city walls of Lucca, length about 2 km. flow of 6 m.c. Furnishes power to the Molino di S. Jacobo", which, by hydraulic power alone, can deal with about 120 ql per day, and produce about 50 KW by means of reversable motors. It also provides power to the Manifattura Tabacchi, where an electric station, also of 50 KW, in perfect efficiency, can be actioned.

4) Section between the city of Lucca and the waste canal of Ozzeri; about 2,5 km. Flow 6 m.c. In this section, called"Piscelle", is the Molino Marraccini of limited potentiality and which normally mills for private individuals.

5) Section constituted by the waste canal of Ozzeri, length about

Declassified E.O. 12356 Section 3.3/NND No. 785019

finding from Ponte a Moriano, and returns same to the SERCHIO at about 22 kms. in the Rigoli district, by means of the Cazzeri-Rogio waste canal, which also serves for the draining of the Bientina swamp and the plains near Lucca.

The entire course can be considered sub-divided as follows:

1) Section between the lock at S. Gemignano and the regulating block at Saltocchio, distance about 2 km. The maximum flow at this section is roughly 16 m.c. per second, which action two turbines of the "Manifattura Juta" provided with an alterator of about 250 KW, which now is probably unservable.

2) Section between the regulating block at Saltocchio to the city of LUCCA, distance about 7 kms. The maximum flow here is reduced to about 6 m.c. per minute in respect of the subsequent section across the city, part of the water being returned to the Serchio by means of the above regulating block.

In this section, the public conduct furnishes power to several mills, at present partly destroyed, and of which the "Molino di Mezzo" deserves special mention. In this mill, a group of turbo-alternators of about 50 KW still efficient is installed.

3) Section within the city walls of Lucca, length about 2 km. flow of 6 m.c. Furnishes power to the Molino di S. Jacobo", which, by hydraulic power alone, can deal with about 120 ql per day, and produce about 50 KW by means of reversable motors. It also provides power to the Manifattura Tabacchi, where an electric station, also of 50 KW, in perfect efficiency, can be actioned.

4) Section between the city of Lucca and the waste canal of Cazzeri; about 2,5 km. Flow 6 m.c. In this section, called "Piscella", is the Molino Marraccini of limited potentiality and which normally mills for private individuals.

5) Section constituted by the waste canal of Cazzeri, length about 12,5 Km.

By means of the public conduct and its secondary canals, hydraulic power is also furnished to numerous minor mills which appear to be efficient at the present time, and which could turn out a total of about 25 ql. hourly.

DAMAGES SUSTAINED .

1st Section - It is not possible to establish the damage as this zone is still under war operations. It has , however, been ascertained that the regulating locks at Saltocchio can still be manoevered, but only by hand.

Declassified E.O. 12356 Section 3.3/NND No. 784219

2nd Section - Several Obstructions caused by the destruction of bridges crossing the Public conduct have been located, and these are likely to provoke extended floods in following heavy rains or by the lack of regulation of the flow of the canal, and which, in any case, prevent the normal flow to be utilized for power.
Said obstructions are:

1) Collapse of the road bridge denominated "Ponte Rosso", at the service of the municipal road, and which conducts the state road of the Bremmaro to the Fraga Bridge.
2) Collapse of the railway bridge at about 300 meters north of the former bridge.
3) Collapse of the Canal-bridge , by which the "Fraga" surpasses the Public conduct and of the nearby bridge connecting the road parallel with the "Fraga". Damage here is particularly grave because, not only is it necessary to remove the debris from the public conduct, but it will be necessary to urgently reconstruct a Canal Bridge by means of which the "Fraga" surpassed the public conduct, in order to avoid that the waters of the "Fraga", which are very abbondant during heavy rainfall, overflow in the public conduct which has not sufficient capacity to receive same.
4) Collapse of road bridge immediately north of the "Fraga".
5) Collapse of the road bridge between the "Fraga" and Ceccarelli.
6) Collapse of the road bridge near the mouth of the Fanuccio canal.
7) Collapse of debris in the Cima Mills(Giurlani-Mandoli)near S. Pietro a Vico.
8) Collapse of road bridge in stone near the mouth of the Soccerse Canal.
9) Collapse of the brick road bridge at S. Pietro a Vico.
10) Collapse of Railway Bridge near the Cartiera Francescconi.
11) Collapse of small road bridge in stone at S. Marco,near Lucca.

3rd Section - No damage caused by war operation have been found in the section crossing the city. It will only be necessary to clear some of the obstructions of minor importance.

2024

4th Section - (Piscilla)

12) Collapse of cement bridge in the circular road of Lucca between Porta S. Anna and Porta S. Piero. Owing to the importance of this road, also for military purposes, the prompt intervention of the Military Engineers for the Reconstruction of same( even on a narrower scale) is deemed advisable, in order to consent the passage of vehicles.
13) Railways bridge near the preceding bridge.

Declassified E.O. 12356 Section 3.3/NND No. 768049

parallel with the "Frage". Damage here is particularly grave because, not only is it necessary to remove the debris from the public conduct, but it will be necessary to urgently reconstruct a Canal Bridge by means of which the "Frage" surpassed the public conduct, in order to avoid that the waters of the "Frage", which are very abbondant during heavy rainfall, overflow in the public conduct which has not sufficient capacity to receive same.

4) Collapse of road bridge immediately north of the "Frage".

5) Collapse of the road bridge between the "Frage" and Ceccarelli.

6) Collapse of the road bridge near the mouth of the Fanuccio canal.

7) Collapse of debris in the Cima Mills(Giurlani-Mandoli)near S. Pietro a Vico.

8) Collapse of road bridge in stone near the mouth of the Soccorse Canal.

9) Collapse of the brick road bridge at S. Pietro a Vico.

10) Collapse of Railway Bridge near the Certosa Francescani.

11) Collapse of small road bridge in stone at S. Marco, near Lucca.

3rd Section - No damage caused by war operation have been found in the section crossing the city. It will only be necessary to clear some of the obstructions of minor importance.

2027

4th Section - (Piscilla)

12) Collapse of cement bridge in the circular road of Lucca between Porta S. Anna and Porta S. Piero. Owing to the importance of this road, also for military purposes, the prompt intervention of the Military Engineers for the Reconstruction of same( even on a narrower scale) is deemed advisable, in order to consent the passage of vehicles.

13) Railways bridge near the preceeding bridge.

14) Collapse of road iron bridge leading to Cattaiola.

15) Collapse of road iron bridge near Meati.

16) Collapse of cement bridge serving the motor road near Montuol

17) Collapse of railway bridge close to above.

18) Collapse of the bridge at the service of the state road of the Brennero near Montecolo.

19) Collapse of the bridge of the Motor road before Ripafratta. The removal of debris here will not be necessary as same have fallen on the banks leaving the flow of the water completely free.

Declassified E.O. 12356 Section 3.3/NND No. 784019

20) Collapse of iron bridge at Ripafratta.

The eventual other collapses from Ripafratta to the Serchio do not require immediate attention as it has been ascertained that the waters, here, flow liberally.

The above mentioned damage refer only to the stretch of the M Cnneri to the Fiscilla. Several other destroyed bridges have been located in the section of the Onneri-Regio east of the Fiscilla, as f far as the swamps of Bientina, and to these are to be added the partial fillings executed by the Allied Forces for the use of wading passages. The immediate removal and the substitution of same by temporary bridges is deemed necessary, as the Onneri-Regio constitutes, as stated above, the waste canal of the entire Lucca plain and obstructions are liable to cause floods.

WORK IN HAND. This office, by means of several firms, is attending to the removal of the removable debris from the first four sections. The Ufficio Genio Civile is similarly attending to the fifth section, this section being under their care.

WORK FOR WHICH THE INTERVENTION OF THE FORCES ARE NECESSARY:

1°- Removal of the large iron obstructions referred to in para. No. 2 - 10 - 13 - 14 - 15 - 17 - 20, for which cranes are necessary, or the severing of same with ossidric flame. The use of cranes would be more rapid, but these are not to be found on the spot.
2°- Mining of the debris of the cement bridges in order to render same transportable (par. 12 - 16.)
3°- The furnishing of the material necessary for the reconstruction of the canal bridge of the Fraga (par;3). To be more precise this would require 120 qls. Cement and 12 qls. Iron.
4°- Reconstruction of the bridges across circular road(par;12)

5°- Removal of wading passes on the Onneri-Regio and the substitution of same with temporary bridges. This is particularly important at Pontetetto, on the Provincial road from Pisa to Lucca, crossing the tunnel at S. Maria del Giudice.

2023

REQUIREMENTS OF THIS OFFICE IN ORDER TO ASSURE THE FUNCTIONING OF THE CANAL.

1) - Four seater automobile for urgent intervention in case of floods or accidental damages. It is mat to be noted that this office had the use of a FIAT 508, number plate 50-85 LU belonging to the Garage run by Caturegli & Palagi, who always obtained renewal of their license for the exclusive use of this office. Said car, which has been hidden by the writer in order not to

Declassified E.O. 12356 Section 3.3/NND No. 784049

plain and obstructions are liable to cause floods.

WORK IN HAND. This office, by means of several firms, is attending to the removal of the removable debris from the first four sections. The Ufficio Genio Civile is similarly attending to the fifth section, this section being under their care.

WORK FOR WHICH THE INTERVENTION OF THE FORCES ARE NECESSARY:

1°- Removal of the large iron obstructions referred to in para. No. 2 - 10 - 13 - 14 - 15 - 17 - 20, for which cranes are necessary, or the severing of same with ossidric flame. The use of cranes would be more rapid, but these are not to be found on the spot.

2°- Mining of the debris of the cement bridges in order to render same transportable (par. 12 - 16.)

3°- The furnishing of the material necessary for the reconstruction of the canal bridge of the Praga (par;3). To be more precise this would require 120 qls. Cement and 12 qls. Iron.

4°- Reconstruction of the bridges across circular road(par;12)

5°- Removal of wading passes on the Ozzeri-Regio and the substitution of same with temporary bridges. This is particularly important at Pontetetto, on the Provincial road from Pisa to Lucca, crossing the tunnel at S. Maria del Giudice.

2023

REQUIREMENTS OF THIS OFFICE IN ORDER TO ASSURE THE FUNCTIONING OF THE CANAL.

1) - Four seater automobile for urgent intervention in case of floods or accidental damages. It is not to be noted that this office had the use of a FIAT 508, number plate 30-85 LU belonging to the Garage run by Caturegli & Palagi, who always obtained renewal of their license for the exclusive use of this office. Said car, which has been hidden by the writer in order not to be requisitioned by the Germans, is in perfect condition as far as the mechanical parts are concerned, and would only require 3 tires and relative inner tubes. We inquire whether said tires could be provided and the car placed at our disposal.

2) - Reactivating telephonic communication between this office in Lucca, the S. Gemignano Lock and the Regulator Block at Saltocchio.

3) - The furnishing of 25 tires and relative inner tubes for bicycles necessary for the staff connected with the canal.

L'Ingegnere Capo Errariale
L. Tellarini .

Lucca 15 September 1944 .

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

0 22 SEP Recd 159 Wo Files POW+U HL/6b

HEADQUARTERS REGION IV
Allied Control Commission
APO 394

12 September 1944

FILE N° : R4/ENG/822
SUBJECT : Order of priority of Work in AGRO PONTINO.
TO : Regional Engineer, Region IV, ACC.

1. Considerable progress has been made on the restoration of the drainage systems within the area known as AGRO PONTINA. However, much remains to done in order to restore all arable land to agricultural use and to eliminate the hazard of malaria.

2. It is recommended that the remaining work within the Consorzio Bonifica di Littoria be carried out in the following order:

(a) Repairing and restoring pumping stations in the order named:
(1) OLEVOLA
(2) VALMONTORIO
(3) VITTICA
(4) CATARATTINO
(5) LAVORAZIONE
(6) CAPO PORTIERE

(b) Restoring retaining walls and removing debris from the outlet channel for the CATARATTINO pumping station.

3. It is recommended that the remaining work within the Consorzio Bonifica di Pontina be accomplished in the following order:

(a) Repairing and rebuilding gates in the Navigation Canal in the vicinity of PONTE MAGGIORE.

(b) The prompt completion of the diversion channel for the FIUMI UNITI. This is set up as an approved project.

(c) Removing stones, gravel and debris from under the railroad bridge in the TORRENTE CERE 2627

(d) Repairing and restoring pumping stations in the order named:

./.

Major Westwood
for
22/9

Declassified E.O. 12356 Section 3.3/NND No. 785019



(E) CALABRA
(2) GECCACCIO
(3) PORCELLATTA

4. In connection with the completion of this work it is suggested that contact be maintained with Ing. Leone Terzi, General Director of the Consorzio della Bonificazione Pontina, and with Ing. Scarani, Technical Director of the Consorzio Bonifica di Littoria, both of whom have been extremely helpful and cooperative in this venture.

Harry Larson
HARRY LARSON
Major, Corps of Engineers

Copy to:
Director, P.W. & U. Sub-Commission.
General Director, Consorzio della Bonificazione Pontina.
Technical Director, Consorzio Bonifica di Littoria.
File.

202 14/10

Exh. 127

61

# LIBERATED ITALY

## ALLIES WIN BATTLE AGAINST MALARIA

ROME, September 19 - The Allies have won another important battle in Italy, inflicting a heavy defeat on the Germans and on the ally recruited by the enemy for behind-the-lines sabotage - the malaria-bearing anopheles mosquito.

The Allied victory was achieved "despite the chaos of total war and all that the Germans could do to intensify the malaria potential, reported Colonel Paul F. Russell of the U.S. Army, Chief malariologist of the Allied Control Commission. Colonel Russell is on leave to the Army from the Rockefeller Foundation.

In announcing the Allied victory over the two enemies, he said the Germans had sent two well known entomologists into areas which the Italians over a period of years had drained of mosquito-breeding places. Soon after their visit the German Army reflooded the reclaimed marshes, thus increasing the spread of malaria.

The Germans did succeed in trebling and quadrupling the malaria rate among Italian civilians in some areas but the prompt work of Allied medical officers and engineers saved thousands of lives among the civilian population and the Allied soldiers. Colonel Russel stated:

### Effects of German Sabotage

"In the Pontine Marshes and the Agro Romano areas, malaria rates have been higher than for many years. This has been directly due to German sabotage with consequent flooding of the reclaimed marsh areas. The season of maximum malaria-mosquito breeding had arrived before the area could be entered by the ACC. Mines, booby traps, lack of transport, complete disruption of civil organization, the return of infected refugees, the destruction of screening, -these and other factors have made it impossible to carry out more than palliative measures.-

"However, by September 1, several thousand hectares of land had been drained airplane larviciding was being done at Cotia and Terracina, tons of Paris green dusted, and over five million atabrine tables distributed.

"The situation, bad as it had been, might have been infinitely worse, with complete paralysis of civilian reconstruction activity and serious malaria in Rome itself."

In a report to the ACC covering the nine-month period beginning January 1, Colonel Russel stated:

"The results of the intensive malaria-control program of ACC correlated with military malaria control have kept this disease effectively in check in Sicily, Sardinia, and southern Italy (below the Pontine areas), although the malaria potential was much greater than normal."

Examples of how well the ACC malaria program operated were Sardinia and Foggia, where the incidence of malaria has been from one-third to one-half that of 1943.

No civilian in liberated Italy suffering from malaria in 1944 went untreated because of the lack of specific medicines. More than 11,000,000 atabrine tablets from the Pacific were used.

Declassified E.O. 12356 Section 3.3/NND No. 785019

their visit the German Army reflooded the reclaimed marshes, thus increasing the spread of malaria.

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"However, by September 1, several thousand hectars of land had been drained, airplane larviciding was being done at Cotia and Terracina, tons of Paris green dusted, and over five million atabrine tables distributed.

"The situation, bad as it had been, might have been infinitely worse, with complete paralysis of civilian reconstruction activity and serious malaria in Rome itself."

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Examples of how well the ACC malaria program operated were Sardinia and Foggia, where the incidence of malaria has been from one-third to one-half that of 1943.

No civilian in liberated Italy suffering from malaria in 1944 went untreated because of the lack of specific medicines. More than 11,000,000 atabrine tablets from the United States were made available to civilians through the U.S. Army's Medical Supply Branch in cooperation with ACC's Malaria Control Branch. In addition, 125,000 ampoules of quinine were set aside for civilian use. This supply was augmented by drugs captured from the Germans and by moderate amount of quinine and Italchina remaining to local authorities from 1943.

With the aid of the Italian Government in liberated Italy, the drug supplies were made available to every provincial capital south of the battle-line. The civilian government cooperated in cleaning and redigging 2,000,000 meters

Declassified E.O. 12356 Section 3.3/NND No. 785019

of canals, draining 20,000 hectares of flooded land, repairing or replacing 15 pumps units, applying 20 tons of Paris green, and applying 200,000 gallons of oil.

Colonel Russell reported that the Germans turned the clock back 60 years for the Italian people when they deliberately sabotaged the extensive reclamation projects begun in 1927. The report to the ACC declared:

"One of the great tragedies of the war has been the systematic destruction by the German Army of the great land reclamation projects or "bonifiche" of Italy. Not only has this smashing of pumps, blocking and mining of canals, and deliberate reverse diversion of sea and river water greatly increased the breeding of anopheles malaria mosquitoes. It has also driven from their homes thousands of peasants; has flooded thousands of acres of farm land, and has set back disastrously the economy of vast areas. The area of farm land in south Italy flooded by the Germans is estimated at 37,000 hectares, or 98,000 acres. This figure includes only the areas south of Rome.

"This wanton destruction did not hamper Allied transport, but it dealt a terrible blow to the Italian peasants and it increased the malaria potential enormously. It is no exaggeration to say that in some areas, as in the Agro Romano, the appearance of the land when the Germans were driven back was what it had been in 1800 before the earliest advances in land reclamation had been made".

Colonel Russell paid tribute to the soundness of Italian engineering in the land reclamation projects which made the speedy action, stimulated by the ACC, more effective in achieving considerable salvage. "But complete recovery must await pumps not now available in Italy. It will then take some years for the land to sweeten again".

(END)

2019

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Colonel Russell paid tribute to the soundness of Italian engineering in the land reclamation projects which made the speedy action, stimulated by the ACC, more effective in achieving considerable salvage. "But complete recovery must await pumps not now available in Italy. It will then take some years for the land to sweeten again".

(UNRRA)

2019



Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

60

Tel: 489081

HWW/bb

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/159/PWU

21 Sept. 44.

SUBJECT: CASSINO Area. - River Rapido Scheme.

TO : Regional Engineer, H.Q., Region IV, AMG/ACC.

1. Ref. our letter ACC/159/PWU of 14 Aug. and 10 Sept. 44.

2. Please accept this further reminder that we await form ACC/2 in respect of the above named scheme.

G.E. RHODES,
Lieut-Colonel R(E)PWO.
Acting Director.

See Folio 65

Declassified E.O. 12356 Section 3.3/NND No. 785019

22 SEP Recd 15 hrs.

59

ALLIED CONTROL COMMISSION
SICILY REGION HQ
APO 394

DAB/cb
20 Sept. 44

In reply refer to : RTC 095

SUBJECT : Public Works.

TO : P.W. & Utilities Sub Commission.

Attention Major Westwood.

1. Reference attached letters dated 1 Sept. 44 handed to Major Boyd.

2. These are returned as requested with particulars regarding location and cost.

HEADQUARTERS
22SEP1944
A. C. C.

For the Regional Commissioner

DAVID A. BOYD
Major R.E.
Regional Engineer.

Inc 2

Not brought to attention. Letter drafted anent this letter in Public Works Both Schemes now registered. (Nos. B/10 & B/11) - Johns 15 Oct.

Declassified E.O. 12356 Section 3.3/NND No. 785019

COMMISSIONE ALLEATA DI CONTROLLO
QUARTIERE GENERALE DELLA SICILIA REGIONE I
APO 394

DAB/cb

1 Sett. 44

In risposta
con riferimento al RTC 095

OGGETTO : Manutenzione opera di Bonifica.

A : Provv. OO.PP.

1/ Con riferimento al N. 9596 del 22 Agosto 44.

2. Si restituiscono i moduli ACC/1 firmati da inviare al Ministero dei Lavori Pubblici. I lavori concernono le Paludi Camerina e Pantano in Littoria (Ragusa). La spesa ammonta a L. 590.000.

Per il Commissario Regionale

DAVID A. Boyd
Major R.E.
Ingegnere Regionale

Inc.
documenti e moduli.

Copy to:
P.W. & Utilities Sub Commission
for information.

2016

B/11

Declassified E.O. 12356 Section 3.3/NND No. 785019

8 SEP Recd 159 CAB

P.W. + U.

COMMISSIONE ALLEATA DI CONTROLLO
QUARTIER GENERALE DELLA RIVIERA REGIONE I
A2G 394

DAB/ab

1 Settembre 44.

In risposta
con riferimento al MTC 595

OGGETTO : Manutenzione Bonifica delle Paludi.

A : Provv. CC.PP. Piazza G. Verdi 16

1. Con riferimento al N. 9436 del 1 Sett. 44.

2. Si restituiscono i moduli AGC/1 firmati da inviare al Ministero per l'ulteriore approvazione.

3. I lavori concernono la bonifica delle Paludi Lisimelie, il costo ammonta a L. 465.000

Per il Commissario Regionale

DAVID M. HOYD
Major R.E.
Ingegnere Regionale

Inc
documenti e moduli.

Copy to:
P.W.& Utilities Sub Commission.
for information.
Hq A.C.C.

B/10

A.C.C. 2015
8 Feb 1945

Declassified E.O. 12356 Section 3.3/NND No. 785019

Note for file 159.

Attached is a copy of a letter which, on 20 Sept, was forwarded to Lt. Col. Hickey, with a personal note from Lt. Col. R Rowan, saying that this Sub. Commission would not interest itself in the matter unless submitted by the Regional Engineer.

20 Sept.

10251

Declassified E.O. 12356 Section 3.3/NND No. 785019

Fig 159

58

ALLIED CONTROL COMMISSION
PUBLIC WORKS AND UTILITIES SUB-COMMISSION
APO 394

File: 322

13 September 1944

SUBJECT: Unauthorized work.

TO : Director, Public Works and Utilities Sub-Commission, A.C.C., A.P.O. 394.

1. During an inspection of various activities within the Bonifica di Fontina, on this date, it was found that work was in progress on the repair of a levee along the Fiume Ufente in the vicinity of Migliara 49 (G 262-162). The undersigned was informed that approximately eighty men were employed daily on this restoration work.

2. In repairing this levee a permeable soil containing a large amount of organic matter was placed directly upon the existing portions of the levee. No arrangements had been made for binding the new fill with the old. The fill had been deposited from hand operated cars without tamping, rolling or wetting down. The work was being done apparently under incompetent supervision. The levee as restored will be practically useless against a long sustained high stage.

3. Attention is invited to the fact that it was previously reported that the material used for this work was unsuitable for making any repairs as it was unstable and very porous. Several previous attempts have been made to restore this levee. Some years ago work was started on a diversion channel for the Fiume Ufente solely because the levees along the existing Ufente channel could not be so constructed as to have any permanent value. A project was set up to complete the Ufente diversion channel which project was approved by the Director, Public Works and Utilities Sub-Commission. Approximately 7,000,000 Lire were made available for completing the diversion channel. There was no provision for utilizing any part of these funds for making repairs on the levee along the old Ufente channel, since it was the consensus of opinion that such work would be useless.

4. The undersigned was informed that this work was instigated and started by the adjoining land owners and tenants. However, the payroll is prepared by an assistant of the Consorzio Bonifica di Fontina and submitted by Ing. Bruno Battali to his superiors in Rome. According to information submitted these land

2413

Declassified E.O. 12356 Section 3.3/NND No. 785019

owners and tenants had agreed to pay for this work from their own means. They think that the repair of this levee gives them some security, which in the opinion of the undersigned, is false.

5. In connection with the above the following recommendations are made:

(a) That the repair work now in progress on the levee along the old Ufente channel be discontinued at once.

(b) That any funds used for this repair work which may have been secured from either of two approved projects, in that vicinity, be promptly refunded.

HARRY LARSON,
Major, Corps of Engineers.

Copy to:

Eng. Engr., Reg. IV
P.C., Iloilo Province
File.

2012

-2-

Declassified E.O. 12356 Section 3.3/NND No. 785019

RESTRICTED

File 159 57

HWW/lam

Tel: 489081

HEAD QUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
AFC 394

ACC/088/PWU

20 September 1944

SUBJECT: Request for "Cover" of Bonifiche Works

TO : Mediterranean Photographic Intelligence Centre
HQ. MAAF Intelligence Section
c/o M.A.A.F.H.Q. - A.P.O. 520

1. Reference your letter MPIC/13 of 14 Sept. 1944

2. We fully appreciate the observations in your para.2 and we generally endorse the suggestion in your para.3, viz. that photographs of the principal lock gates, pumping stations etc. on the main waterways of N. Italy, as soon as they have fallen into Allied hands, would largely meet our requirements.
However, to "lock gates", pumping stations, etc" we desire to add also "breaches in rives embankments".

3. We enclose a copy of plan I.S.T.D./K/391, which shows (cross-hatched) the greatest area that could be deliberately inundated. This is, of course, the area with which we are most concerned.

4. If you can furnish us with photographs as defined in para 2. above, with particular reference to the rivers Po and Adige, they will undoubtedly be of great help to us.

5. Regarding para. 4 of your letter, we thank you for the action that you are taking to furnish this Sub-Commission with photographs of damaged Aircraft Factories and Ship building Yards.

201:

G.E. RHODEN
Lieut-Colonel, R.E.
Deputy Director

Enclosure: Plan I.S.T.D./K/391
Copy to File 159

Declassified E.O. 12356 Section 3.3/NND No. 785019

PeCa 159 56

HEADQUARTERS
MEDITERRANEAN ALLIED AIR FORCES
APO 650

D-MIS-1w

MAAF/S.5655/Int. 10 September 1944

SUBJECT: Flooded Areas (Reclamation Works)

TO : Headquarters, Allied Control Commission, Public Works and Utilities Sub-Commission, APO 394 (Att: Lt. Col. C.E. Rhodes)

1. Your letter ACC/PWU, 1 Sept. 1944 has been referred to the Mediterranean Photo Intelligence Center, c/o Mediterranean Allied Photo Reconnaissance Wing.

2. As MPIC determines priority for flying necessary cover required by air, ground or naval forces within the theater, it is suggested that your representative take the matter up with them rather than direct with 90th Photo Reconnaissance Wing.

R. O. STORRY
Colonel, GSC,
Executive,
Intelligence Section.

CC - MPIC

For letter of 4 Feb from M.P.I.C., see file 088.

2019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Je 152
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MAAF/S.6655/Int. 1st Ind. (D-RGS/ojs)

HEADQUARTERS, MEDITERRANEAN ALLIED AIR FORCES, APO 650, 7 Sept. 1944.

HQ, Allied Control Commission, Public Works & Utilities Sub-Commission, APO 534. (Attn: Lt. Col. G. E. RHODES, Deputy Director).

1. It is very probable that 90th Photo Reconnaissance Wing at San Severo can furnish many of the photographs now in existence and that may be taken from time to time.

2. It is suggested that one of your representatives go to the 90th Photo Reconnaissance Wing and ascertain the photographs available and arrange for copies of future photographs of the areas involved. However, because of pressing tactical missions, it is very likely that no special missions can be flown at this time which are not included in regular Photo Reconnaissance flights.

3. After the areas are captured it is very probable that special photo Reconnaissance missions may be provided for on a lower priority.

R. G. STOREY,
Colonel, GSC,
Executive, Intelligence.

Encls: Map withdrawn.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Feb 159

GER/ec

35

COPY

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission

1 Sept 44

ACC/038/PWU

SUBJECT: Flooded Areas (Reclamation Works)

TO : HQ. M.A.A.F., C.M.F.

1. I attach herewith copy of letter ACC/038/PWU- 31st Aug. that was addressed to the Air Force S.C. of the A.C.C. I also enclose a copy of the map referred to in that letter.

2. The Air Force S.C., in reply, inform us that the matter should be dealt with by you, probably by your photographic Reconnaissance Section.

3. Kindly acknowledge this letter, with its enclosure, and let us know whether you can take any action.

G. E. RHODES,
Lt.Colonel,R.E.
Deputy Director.

Enclosures:
A) copy of a letter ACC/038/PWU
31 August 44.
B) Map referred to.

2004

Declassified E.O. 12356 Section 3.3/NND No. 785019

JdC 159

COPY

GER/tr

54

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/038/PWU

21 Aug.44

SUBJECT: Bonifiche Works (Agric. & Anti-Malaria).

TO : Air Force S.C.

1. At a conference on 14 Aug in the Exec. Directors Office with representatives from

Agriculture S.C.
Economic Section S.C.
Public Health S.C.
Finance S.C.
Legal S.C.
Public Works S.C.

it was disclosed that the above problem is likely to be far greater in extent and in complexity than was presented by the Pontine Marshes, viz. in N.E. Italy over wide areas, as shown on the map enclosed.

2. It is expected that the enemy will wreck water-pumping stations (for land-drainage), embankments, bridges etc., may block canals, and may take all steps to promote extensive flooding.

3. Is it possible to get a series of air photographs from time to time, showing what the position is, so that this S.C. may have an indication of the problems to be faced?

(sgd.) G.E.Rhodes.

G.E.RHODES
Lt.Colonel,R.E.
Deputy Director.

Encl.: Map referred to

2008

Declassified E.O. 12356 Section 3.3/NND No. 785019

FILE 53

Tel: 489081

HWW/lam

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/159/PWU

15 September 1944

SUBJECT: Pisa Province - Flooding Problem

TO : HQ. Region VIII
(Asst. Regional Engineer ).

1. Reference attached copy letter 205/15 of 11 Sept.44, from AMG Fifth Army to Regional Commissioner, Reg. VIII.

2. Kindly furnish this Hq. with a brief report on the present situation.

3. It is noted that preliminary reports have already been prepared.

4. Incidentally, we already possess a vague report, dated 16 Aug. 44, signed by "L'Ingegnere Dirigente del Genio Civile di Livorno". It is entitled "Bonifica della Pianura Pisana" but it tells us little.

W.W. LAFFER
Lieut. Colonel
Chief Util & Adm. Div.

Enclosure: Copy letter.

I discussed the matter with Col. Lee at Florence on 28 Sept. He has the matter in hand & is arranging the necessary meeting. He will make the report & will advise us when same is available.

2007

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
FIFTH ARMY
APO 464

11th September 1944

205/15

Subject: Pisa Province - Flooding Problem.

To : Regional Commissioner, Region VIII.

1. It has been known for some time that the blocking of canals and the damage to pumping machinery in the area at the mouths of the Arno and Serchio Rivers might give rise to a serious problem.

2. Yesterday in Pisa the undersigned discussed the matter with the Provincial Commissioner (Lt.Col.Walters) and AMG Fifth Army Engineer (Lt.Mc.Callum), who advised that there would be flooding of large areas when the heavy rains begin. The local Italian Engineer in charge of the scheme is preparing a report on the situation.

3. The problem, though very urgent, is of a long-term nature and not one that AMG Fifth Army are well equipped to handle during the time of rapid tactical developments. It is suggested therefore that Region VIII Engineer deal with the question. If Major Lee proceeds to Pisa he will find that preliminary reports have been prepared.

4. PBS are very much interested in the area concerned for supply dumps and it is considered that they may be able to give appreciable help.

B.B. MAYNE
Colonel, U.S.F.
Chief of Staff
AMG FIFTH ARMY

2006

Copy to:
P.C. Pisa Province
H.Q., A.C.C. RO and MGS
H.Q., A.C.C. Public Works Subcommission.

: kr

Declassified E.O. 12356 Section 3.3/NND No. 785019

1 Attn

52

Tel: 489081

HWW/bb

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/159/PWU

14 Sept. 44.

SUBJECT: River Po Drainage Area.

TO : Regional Engineer, HQ., Region IX AMG
(for attn. of Maj. W.H. Gamble)

1. Ref. your letter R.IX/PU/17, of 8 Sept. 44.

2. Your questions are very generalised. We will do our best to help you but we must commence by observing that it is impossible to furnish comprehensive replies in similar general terms.

3. The natures of "Bonifiche" are diversified. The usual translation of "bonifica" is "land betterment", and the word embraces a variety of operations, ranging from the terracing of mountain slopes to the exclusion of the sea from low lying delta areas.

4. Every "Bonifica", or separate zone of a "Bonifica", presents its own individual problems, depending upon its particular conditions of rainfall, liability to flooding, sub-surface water level, natural gradient, the nature of its soil, the crops which it is intended to produce, and so on.

5. A mass of information is accessible to us but it has to be painstakingly abstracted from voluminous literature. If you will submit specific questions relating to particular areas we will do our utmost to provide the answers.

6. Having made those preliminary remarks, which are intended to be of value in themselves, we will endeavour to deal seriatim with the four questions contained in paragraph 2 of your letter.-

3005

(i) We regret that we are at present unable to tell you

Declassified E.O. 12356 Section 3.3/NND No. 785019

what formulae were adopted by the Italian drainage engineers. The available literature records the results of their calculations but not the methods by which the results were obtained. However, it is evident that the "impermeability factor" must vary greatly, whilst the "time of concentration" must depend on very different conditions from those which obtain in a town sewerage system. Moreover, the latter is probably much less important in a "Bonifica' because the ducts are all open, and far more latitude is offered in the time taken for removal of the accumulated waters.

As to the "impermeability factor", it seems to us that both of the following extremes, and any intermediate condition between them, are quite likely to be met:-

(a) Where the ground water level is above the inverts of the collectors, the run-off of rainfall, apart from evaporation losses, will be complete.

(b) Where the soil is very porous, and the ground water table (at a particular season) is below the inverts of the collectors, the run-off may very well be nil.

We have indicated, above, our contention that the "time of concentration", because it is generally much longer than in sewerage systems, is relatively unimportant; and this is strongly substantiated, in our opinion, by the fact thut, in the copious literature on "bonifiche", although statistics are given of annual or monthly rainfall, no reference is made to "storm intensity".

(ii) We believe that it is not possible to give a general answer to this question, but perhaps it can be answered in part by consideration of our impression that most "bonifica" works have been necessitated by a high sub-surface water level, either seasonal or perennial. Otherwise, we submit, special land drainage works would only be necessary where either the soil or the sub-soil is abnormally impervious.

(iii) We are told that the average maximum safe ground water level for most crops is one metre below the soil surface. Obviously this is not so for rice, and we think that cereals in general probably require less depth of aerated soil than do root crops. No doubt, under emergency conditions, some slight relaxation might be allowable without serious detriment to agricultural production, but we cannot offer a general statement as to how

Declassified E.O. 12356 Section 3.3/NND No. 785019

much the water table might be permitted to rise.

(iv) Under-drainage is not general in Italian agriculture: in fact the only examples of its adoption known to us are aerodromes. Lateral penetration of drainage waters into open channels is generally depended upon in "Bonifiche". Incidentally, the smallest channels are usually about 40 metres apart, are about 0.80 m. wide at their beds, 2 m. wide at the top and 0.80 m. deep. The profile of the ground between the channels is slightly convex, in order both to facilitate surface run-off and to keep the hydraulic gradient in the soil as far as possible below the surface.

7. The Agricultural Sub-Commission has already sent to the Agricultural Officer of Region IX a schedule of pumping stations in the "Bonifiche" of the Region. This schedule indicates the number, sizes and types of the prime movers, their average annual fuel or power consumption, and their annual average hours of work. Such concrete information should provide you with a far more satisfactory foundation for your estimate of power requirements than would any attempt to commence "from scratch" on complex hydraulic calculations for which, in any case, neither you nor we have adequate basal data. We therefore suggest that you obtain the information from your Agricultural Officer forthwith. In furnishing the schedule, the Agricultural Sub-Commission was well aware that the data it contained would be of more direct value to the Regional Engineer than to the Regional Agricultural Officer, but left it to the latter for the sake of uniformity of procedure.

8. We shall be glad to know the results of your own investigations and calculations, and we reiterate that we will do our best to answer specific questions about particular localities.

W.M. LAPPER,
Lieut-Colonel,
Chief, Util.& Adm. Div.

200

Declassified E.O. 12356 Section 3.3/NND No. 785019

13 SEP Rec'd 159 CMB.

FILE

51

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
FIFTH ARMY
APO 464

11th September 1944.

205/15

Subject: Pisa Province - Flooding Problem.

To : Regional Commissioner, Region VIII.

1. It has been known for some time that the blocking of canals and the damage to pumping machinery in the area at the mouths of the Arno and Serchio Rivers might give rise to a serious problem.

2. Yesterday in Pisa the undersigned discussed the matter with the Provincial Commissioner (Lt.Col.Walters) and AMG Fifth Army Engineer (Lt.Mc.Callum), who advised that there would be flooding of large areas when the heavy rains begin. The local Italian Engineer in charge of the scheme is preparing a report on the situation.

3. The problem, though very urgent, is of a long-term nature and not one that AMG Fifth Army are well equipped to handle during the time of rapid tactical developments. It is suggested therefore that Region VIII Engineer deal with the question. If Major Lee proceeds to Pisa he will find that preliminary reports have been prepared.

4. FBS are very much interested in the area concerned for supply dumps and it is considered that they may be able to give appreciable help.

E.B.MAYNE,
Colonel,U.D.F.,
Chief of Staff.
AMG FIFTH ARMY.

Copy to: P.C.Pisa Province.
H.Q.,A.C.C. RC and MGS.
H.Q.,A.C.C. Public Works Subcommission.

:kr

9 SEP Recd
159 C&B.

PW + a file
Lt Col Rogers
Ref 9/9

HEADQUARTERS REGION IX

ALLIED MILITARY GOVERNMENT

Ref : R.IX/Pu/17

8 September 1944

Subject : River PO Drainage Area

To : Chief, Public Works Division, A.C.C. Hq.

1. From a cursory examination of the data available in connection with the above drainage area, it would appear that the pumping capacities of some of the stations and consequent consumption of electric power is relatively on the high side.

2. In the event of the pumping machinery being damaged or totally destroyed, it may well happen that the question of what minimum capacity is absolutely necessary will come to the fore. Furthermore if the machinery is not damaged and pumping operations can continue, the question of consumption of electric power or alternatively, fuel for internal combustion engines will rank of highest importance.

This division requires to know in order that calculations can be proceeded with the following basic information.

(1) What formulae has been adopted by the drainage engineers for the calculation of the run-off, and method adopted for calculation of time of intensity with coefficients for varying strata.

(2) Have pumping capacities been designed to deal with rainfall only, or has a very high figure been taken for volume of water sub-strata water penetrating laterally from outside areas.?

(3) The average level below surface of ground, which it is desired to maintain water level from the agricultural angle.

(4) Is underdrainage general, with collecting sumps, or is lateral penetration of drainage water into dykes or channels depended upon.?

5. It is considered that question 3 will rank of great importance under the present circumstances, as the difference in Horse Powers required with consequent Fuel or Power consumption to maintain water level at say 12 inches below ground level, as against eighteen inches, will it is thought be very great indeed. From the small amount of data available at the moment it would appear that in relation to the annual rainfall a heavy consumption of power is expended in pumping, and the question arises as to

2001

Declassified E.O. 12356 Section 3.3/NND No. 785019

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4. This division would much appreciate the opinion of Headquarters on the matters referred to.

For the Regional Engineer:

W. H. Gamble

W. H. GAMBLE
Major R. W. S.
Region IX

HEADQUARTERS
9 OCT 1944
A C C

Reply drafted.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

159

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el:489081

GER/tr

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

AOS/OBS/PWU

21 Aug,44

SUBJECT : Bonifiche Works ( Agric.&Anti-malaria).

TO : Air Force S.C.

1. At a conference on 14 Aug in the Exec. Directors Office with representatives from

Agriculture S.C.
Economic Section S.C.
Public Health S.C.
Finance S.C.
Legal S.C.
Public Works S.C.

it was disclosed that the above problem is likely to be far greater in extent and in complexity than was presented by the Pontine Marshes, viz. in N.E. Italy over wide areas, as shown on the map enclosed.

2. It is expected that the enemy will wreck water - -pumping stations ( for land-drainage), embankments, bridges etc?,may block canals, and may take all steps to promote ex - tensive flooding .

3. Is it possible to get a series of air photographs from time to time, showing what the position is, so that this S.C. may have an indication of the problems to be faced?

GER.

Encls. Map referred to.

C.E.RHODES
Lt.Colonel,R.E.
Deputy Director .

2000

Copy to file 159

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

HNW/ap

48

10 Sept. 44

ACC/159/PWU

Subject: CASSINO Area. - River Rapido Scheme.

To : Regional Engineer, HQ, Region IV, AMG/ACC.
(Attn: Lt. Col. Findlay)

1. Ref. our letter ACC/159/PWU of 14 Aug. 44, in reply to your letter R4/ENG/101.11 of 31 July 44.

2. Please be reminded that you have not yet submitted Forms ACC/2 in respect of the above named scheme.

W. M. LAPPER,
Lt. Colonel,
Chief, Util & Admin Div.

Declassified E.O. 12356 Section 3.3/NND No. 785019

47 FILE

Tel. 489081

HWW/bb

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/159/PWU

10 Sept.44.

SUBJECT: BONIFICHE - PONTINA and LITTORIA - forms ACC/2.

TO : Regional Engineer, HQ. Region IV, AMG/ACC (Attn: Lt.Col. Findley)

1. Reference our letter ACC/159/PWU of 27 July 44 in reply to your letter R4/ENG/600(b) of 18 July 44.

2. Please be reminded that you have not yet submitted forms ACC/2 in respect of the three schemes which were approved for the "Pontine Marshes".

W.M. LAPPER,
Lieut-Colonel,
Chief, Util.& Adm.Div.

B/F 20 Feb. 1998

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel: 489081

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

HWW/lem 466

ACC/159/PWU 8 Sept. 1944

SUBJECT: Electrical Plant (Pontine Marshes)

TO : HQ. 704th Railway Grand Division A.P.O. 403
(Att. Lt. Col. O.R. Diamond, T.C.)(In duplicate)

1. Reference our letter ACC/159/PWU of 18 Aug.1944 which was in reply to your letter CSC/PK of 13 Aug.44.

2. Information supplementary to that which was given in our previous letter is now submitted to you herewith. (See enclosure).

3. We also enclose a photograph of one of the motors type HOSTO TRAV 375/365, vertical shaft, of the Mazzocchio pumping station.

4. The Consorzio Bonificazione Pontina has expressed the belief that late in March or early in April 1944 most of the machinery was consigned by rail from the sugar mill at Littoria, where it had been stored, to Mirandola (north of Modena) together with the machinery of the sugar mill. It is also believed with some certainty that the first consignment which consisted mainly of plant from the Mazzocchio pumping station (see our previous letter) was destroyed en route by aerial bombardment.

5. Whether the remaining plant reached its destination or whether, alternatively, it is likely still to be found within liberated territory we do not know.

6. We assure you again that we shall greatly appreciate any help that you can render in this matter.

W.M. LAPPER
Lieut-Colonel
Chief, Util & Hyg. Div.

Copy to Regional Engineer HQ Region IV
(Att.of. Lt.Col. Findlay and Maj.Larson)
(Ref. R 4/ENG/412 of 4 Sept.44).

Declassified E.O. 12356 Section 3.3/NND No. 785019

46B

LIST OF ELECTRICAL PLANT REMOVED FROM THE PUMPING STATIONS OF THE BONIFICA PONTINA AND THE BONIFICA OF LITTORIA

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THREE-PHASE ELECTRIC MOTORS

nº 7 TNAV 375/365 type, 500 volts, 510 HP, built by Compagnia Generale di Elettricità, Shop numbers: 114625 = 114626 = 11427 * 114628 = 114629 = 114630 = 114631-Vertical shaft.

nº 2 MAVp 164a type, 260 volts, 157 HP (11515 KW) built by Tecnomasio Italiano Brown Boveri - Shop numbers 119343 and 119344. Vertical shaft.

nº 2 AN 750/4, 260 volts, 66 HP, built by Soc. An. Ercole Marelli - Shop number 115688 and 115689. Horizontal shaft.

nº 1 AN 750/4 type, 260 volts, 66HP. Built by Soc. An. Ercole Marelli - Shop number 222387. Horizontal shaft.

nº 1 AN 608/8 type, 260 volts, 35 HP. Built by Soc. An. Ercole Marelli. Horizontal shaft.

nº 1 MAV 146 type, 33 KW (45 HP), 900 r.p.m. 500 volts. Built by Tecnomasio Italiano Brown Boveri. Shop number 104545 Vertical shaft.

nº 1 MAV 146 type, 22 HP, 450 r.p.m. 500 volts. Same builder. Shop number 104969. Vertical shaft.

nº 2 MAV 146 type, 16 HP, 12 KW, 675 r.p.m. 500 Volts built by Tecnomasio Italiano Brown Boveri. Shop Numbers: 104941 and 104942. Vertical shaft.

nº 2 MQVp type, 18.5 KW, 25 HP, 500 volts, 450 r.p.m. Same builder. Vertical shaft.

nº 1 MSP 2210 type, 176.6 KW, 500 volts, 540/525 r.p.m. built by Tecnomasio Italiano Brown Boveri. Shop number 59978. Horizontal shaft.

nº 1 MSP 208 type, 150 HP, 110 KW, 500 volts. 675 r.p.m. Same builder. Horizontal shaft.

1995

Declassified E.O. 12356 Section 3.3/NND No. 785019

nº 2 TN 500/450 type, 380 HP, 500 volts, 435 r.p.m. built by Compagnia Generale di Elettricità. Horizontal shaft.

nº 2 TN 750/150 type, 150 HP, 500 volts, 660 r.p.m. Same builder. Horizontal shaft.

THREE-PHASE TRANSFORMERS, OIL COOLED AND INSULATED

nº 3 TRK 2711 type, 20000/500 volts, 1450 KVA. Built by Tecnomasio Italiano Brown Boveri. Shop numbers 21790, 21791 and 21792.

nº 2 TN 1647 type, 20000/260 volts, 155 KVA. Same builder. Shop number 24215 and 24216.

nº 2 OT 140 type, 20000/260 volts, 77 KVA. Built by Soc.An. Ercole Marelli. Shop number 3349 and 3350.

nº 1 CTM 100 type, 20000/150 volts, 7 KVA, same builder. Shop number 3373.

nº 2 TN 1647 type, 20000/260 volts, 130 KVA. Same builder. Shop numbers: 22864 and 22865.

nº 2 TNK type, 20000/500 volts, 200 KVA. Same builder. Shop numbers: 24137 and 24138.

nº 2 TOR type, 20000/500 volts, 100 KVA. Built by Compagnia Generale di Elettricità. Shop numbers 10700 and 10701.

nº 2 TN 1647 type, 20000/260 volts, 130 KVA, built by Tecnomasio Italiano Brown Boveri. Shop numbers 23631 and 23632.

nº 1 IIIº type, 20000/260 volts, 60 KVA, built by Soc. An. Breda. Shop number 0484.

nº 4 20000/220/127 volts, 4.5 built by Tecnomasio Italiano Brown Boveri.

nº 1 20000/220/127 volts, 4.5 KVA. Built By Compagnia Generale di Elettricità.

nº 1 TN 1610 type, 20000/260 volts, 95 KVA, Built by Tecnomasio Italiano Brown Boveri. Shop nº 22362 (22363?).

nº 2 TNK type, 20000/500 volts, 17.5 KVA. Built by Tecnomasio Italiano Brown Boveri. Shop Numbers: 23446 and 23447.

nº 1 TNK type, 20000/500 volts, 22 KVA. Same builder. Shop number 23416.

1995

Declassified E.O. 12356 Section 3.3/NND No. 785019



46A

n° 2 TNK type, 20000/500 volts, 38 KVA. Same builder. Shop numbers: 24803 and 24804.

n° 1 TNK type, 20000/500 volts, 45 KVA. Same builder.

n° 2 TNK 993/24 type, 20000/500 volts, 190 KVA. Same builder. Shop numbers: 24821 and 24822.

n° 2 TOR type, 20000/500 volts, 360 KVA, built by Compagnia Generale di Elettricità.

n° 2 TOR type, 20000/500 volts, 150 KVA, same builder.

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With the above plant were also removed essential ancillary equipment, such as high tension automatic and hand switches, measuring instruments, cables and so on.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HL/eb 1613

5 SEP Regd 159 C&B

45 File

HEADQUARTERS REGION IV
Allied Control Commission
(Engineering Division)
APO 394

4 September 1944

TO : Lt. Col. LAPPER, Chief Utilities & Adm.Div. ACC. HQ., P.W. & U.

SUBJECT : Electrical Plant - Pontine Marshes.

FILE NO : R4/ENG/412

37

1. Reference your letter ACC/159/PWU, dated 18 August 1944, asking for further details on the missing electrical plants.

Attached herewith:

(a) List of Motors and Transformers with technical data, trade mark make and plate number.

(b) Three photographs of the Motors MPSTO TMAV 375/365, vertical shafts of the Mazzocchio plants.

For the Regional Engineer:

Harry Larson
HARRY LARSON
Major, Corps of Engineers.

Incl.:
List of equipment
Three photographs of equipment

Lt Col Lapper

Have copies made to take to U.S.
Have also copies made of data
as you have for the P.W. Officers.
We may might this.

Okay H/A
A. C. C.

Oct 1, 1944

70 h
Letter to Division.
See file Gen 8 Oct 1944

Thing satisfactory
Please file with
Form

Spoke with Col. Lapper on his return 8 Oct.
He confirmed action already Taken.
Harry

Declassified E.O. 12356 Section 3.3/NND No. 785019

JEP/gb

2 SEP Rec'd
15[illegible] Corps. PWAU/44E
1581

HEADQUARTERS REGION IV
Allied Control Commission
(Engineering Division)
APO 394

HEADQUARTERS
2 St 1944
A C C

1 September 1944

TO : Lt. Col. W.N. LAPPER
Electr. Section P.W. & U. Sub-Commission
H.Q. ACC.

SUBJECT : Electrical Machinery taken away by Germans from Consorzio Bonifica Littoria and Consorzio Bonificazione Pontina.

FILE N° : R4/ENG/701.

Returned by mail Hqrs.

1. Enclosed memorandum from Consorzio Bonifica Littoria and Consorzio Bonificazione Pontina with photographs attached.

2. Machinery listed in memorandum was taken away by the Germans and shipped to north Italy.

3. Above information is given for the action that might eventually be taken to locate and salvage the machines.

For the Regional Engineer

James E. Breth
JAMES E. BRETH
Lt.Col. Infantry
Public Utilities Officer

Enclosures: 4

Lt Col Lapper
Rec'd 9/9

Maj Bellamy
Reuter
Bertrand Hqrs.

The distribution of this subject has been arranged by this office. Your prompt action has already been taken. Hqrs 8/9

# CONSORZIO DI BONIFICA DI LITTORIA

44D

N. ____

ROMA, li 8 August 1944
VIA BOLZANO, 16 - TELEFONI: 850-826 - 850-827

Risposta a ____

ALLEGATI N. ____

MEMORANDUM FOR COL. BRETH ABOUT THE SITUATION OF THE ELECTRICAL MACINERY OF THE PUMPING STATIONS FO BOTH CONSORZIO BONIFICA LITTORIA & CONSORZIO BONIFICAZIONE PONTINA.

---

It results until now that from the pumping stations of the Consorzio Bonifica Littoria and Consorzio Bonificazione Pontina the Germans took away the following electrical machinery:

THREE-PHASE ELECTRIC MOTORS

n° 7 TNAV 375/365 type, 500 Volts, 510HP, built by Compagnia Generale di Elettricità - Shop numbers: 114625 = 114626 114627 = 114628 = 114629 = 114630 = 114631 vertical shaft

n° 2 MAVp 164a type, 260 volts, 157 HP (115,5 KW), built by Tecnomasio Italiano Brown Boveri - Shop Numbers 119343 and 119344. Vertical shaft.

n° 2 AN750/4 ,260 volts, 66 HP, Built by Soc. An. Ercole Marelli.- Shop number 115688 and 115669. Orizontal shaft.

n° 1 AN 750/4 type, 260 volts, 66 HP. Built by Soc. An. Ercole Marelli.- Shop Number 222387. Orizontal shaft.

n° 1 AN 608/8 type, 260 volts, 35 HP. Built by soc. An. Ercole Marelli.- Orizontal shaft.

n° 1 MAV 146 type, 33 KW (45 HP), 900 r.p.m., 500 volts. Built by Tecnomasio Italiano Brown Boveri. Shop number 104945 Vertical shaft.

n° 1 MAV 146 type, 22 HP, 450 r.p.m., 500 Volts. Same builder. shop number 104969. Vertical shaft.

./..

N. B. - Nella risposta indicare il numero di protocollo della presente

Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLEGATI N.

MEMORANDUM FOR COL. BRETH ABOUT THE SITUATION OF THE ELECTRICAL MACINERY OF THE PUMPING STATIONS FO BOTH CONSORZIO BONIFICA LITTORIA & CONSORZIO BONIFICAZIONE PONTINA.

---

It results until now that from the pumping stations of the Consorzio Bonifica Littoria and Consorzio Bonificazione Pontina the Germans took away the following electrical machinery:

THREE-PHASE ELECTRIC MOTORS

n° 7 TNAV 375/365 type, 500 Volts, 510HP, built by Compagnia Generale di Elettricità - Shop numbers: 114625 = 114626 114627 = 114628 = 114629 = 114630 = 114631 vertical shaft

n° 2 MAVp 164a type, 260 volts, 157 HP (115,5 KW), built by Tecnomasio Italiano Brown Boveri - Shop Numbers 119343 and 119344. Vertical shaft.

n° 2 AN750/4 ,260 volts, 66 HP, Built by Soc. An. Ercole Marelli.- Shop number 115688 and 115669. Orizontal shaft.

n° 1 AN 750/4 type, 260 volts, 66 HP. Built by Soc. An. Ercole Marelli.- Shop Number 222387. Orizontal shaft.

n° 1 AN 608/8 type, 260 volts, 35 HP. Built by soc. An. Ercole Marelli.- Orizontal shaft.

n° 1 MAV 146 type, 33 KW (45 HP), 900 r.p.m., 500 volts. Built by Tecnomasio Italiano Brown Boveri. Shop number 104945 Vertical shaft.

n° 1 MAV 146 type, 22 HP, 450 r.p.m., 500 Volts. Same builder. shop number 104969. Vertical shaft.

./..

N.B. - Nella risposta indicare il numero di protocollo della presente

Declassified E.O. 12356 Section 3.3/NND No. 785019

44C

nº 2 MAV 146 type, 16 HP, 12 KW, 675 r.p.m., 500 volts Built by Tecnomasio Italiano Brown Boveri. Shop numbers: 104941 and 104942. Vertical shaft.

nº 2 MQVp type, 18,5 kw., 25 HP, 500 Volts, 450 r.p.m. Same builder. Vertical shaft

nº 1 MSP 2210 type, 176,6 KW, 500 Volts, 540/525 r.p.m. Built by Tecnomasio Italiano Brown Boveri.- Shop number 59978.- Orizontal shaft.

nº 1 MSP 208 type, 150 HP, 110 KW. 500 volts, 675 r.p.m. Same builder. Orizontal shaft

nº 2 TN 500/450 type, 380 HP, 500 Volts, 435 r.p.m. Built by Compagnia Generale di Elettricità. Orizontal shaft.

nº 2 TN 750/150 type, 150 HP, 500 Volts, 660 r.p.m. Same builder.Orizontal shaft

THREE-PHASE TRANSFORMATORS OIL COOLED AND INSULATED

nº 3 TRK 2711 type, 20000/500 volts, 1450 KVA. Built by Tecnomasio Italiano Brown Boveri. Shop numbers 21790 21791 and 21792.

nº 2 TN 1647 type, 20000/260 volts, 155 KVA. Same builder. shop number 24215 and 24216

nº 2 OT 140 type, 20000/260 volts, 77 KVA. Built by Soc. An. Ercole Marelli. Shop number 3349 and 3350

nº 1 OTM 100 type, 20000/150 volts, 7 KVA, Same builder. Shop number 3373.

nº 1 TN1610 type, 20000/260 volts, 95 KVA. Built by Tecnomasio Italiano Brown Boveri. Shop number 22362 (or 22363 ?)

nº 2 TN 1647 type, 20000/260 volts, 130 KVA. Same builder. Shop numbers: 22864 and 22865.

nº 2 TnK type, 20000/500 ~~KVNM~~ volts, 200 KVA. Same builder. Shop numbers: 24137 and 24138 1929

nº 2 TOR type, 20000/500 volts, 100 KVA. Built by Compagnia Generale di Elettricità. Shop numbers: 10700 and 10701.

nº 2 TN 1647 type, 20000/260 volts, 130 KVA, built by Tecnomasio Italiano Brown Boveri. Shop numbers 23631 and 23632.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Same builder. Vertical shaft

n° 1 MSP 2210 type, 176,6 KW, 500 Volts, 540/525 r.p.m. Built by Tecnomasio Italiano Brown Boveri.- Shop number 59978.- Orizontal shaft.

n° 1 MSP 208 type, 150 HP, 110 KW. 500 volts, 675 r.p.m. Same builder. Orizontal shaft

n° 2 TN 500/450 type, 380 HP, 500 Volts, 435 r.p.m. Built by Compagnia Generale di Elettricità. Orizontal shaft.

n° 2 TN 750/150 type, 150 HP, 500 Volts, 660 r.p.m. Same builder.Orizontal shaft

THREE-PHASE TRANSFORMATORS OIL COOLED AND INSULATED

n° 3 TRK 2711 type, 20000/500 volts, 1450 KVA. Built by Tecnomasio Italiano Brown Boveri. Shop numbers 21790 21791 and 21792.

n° 2 TN 1647 type, 20000/260 volts, 155 KVA. Same builder. shop number 24215 and 24216

n° 2 OT 140 type, 20000/260 volts, 77 KVA. Built by Soc. An. Ercole Marelli. Shop number 3349 and 3350

n° 1 OTM 100 type, 20000/150 volts, 7 KVA, Same builder. Shop number 3373.

n° 1 TN1610 type, 20000/260 volts, 95 KVA. Built by Tecnomasio Italiano Brown Boveri. Shop number 22362 (or 22363 ?)

n° 2 TN 1647 type, 20000/260 volts, 130 KVA. Same builder. Shop numbers: 22864 and 22865.

n° 2 TnK type, 20000/500 volts, 200 KVA. Same builder. Shop numbers: 24137 and 24138

n° 2 TOR type, 20000/500 volts, 100 KVA. Built by Compagnia Generale di Elettricità. Shop numbers: 10700 and 10701.

n° 2 TN 1647 type, 20000/260 volts, 130 KVA, built by Tecnomasio Italiano Brown Boveri. Shop numbers 23631 and 23632.

./..

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019



448

nº 1 IIIº type, 20000/260 volts, 60 KVA, Built by Soc. An. Breda. Shop number 0484

nº 4 20000/220/127 volts, 4,5 KVA, Built by Tecnomasio Italiano Brown Boveri.

nº 1 20000/220/127 volts, 4,5 KVA. Built by Compagnia Generale di Elettricità.

nº 2 TNK type, 20000/500 ~~kyna~~ volts, 17,5 KVA. Built by Tecnomasio Italiano Brown Boveri. Shop numbers: 23446 and 23447.

nº 1 TNK type, 20000/500 volts, 22 KVA. Same builder. Shop number 23416

nº 2 TNK type, 20000/500 volts, 38 KVA. Same builder. Shop numbers: 24803 and 24804.

nº 1 TNK type, 20000/500 volts, 45 KVA. Same builder.

nº 2 TNK 993/24 type, 20000/500 volts, 190 KVA. Same builder. shop numbers: 24821 and 24822

nº 2 TOR type, 20000/500 volts, 360 KVA, Built by Compagnia Generale di Elettricità.

nº 2 TOR type, 20000/500 volts, 150 KVA, same builder.

With this electrical machinery were also taken out the equipments and implements necessary to act them. They ~~we~~ were constituted chiefly by high tension automatic and hand switches, apparatus for measures and control, wires and cables and so on.

---

It results to this Consorzio, from the informations it was able to have about the above listed machinery, that the largest part of it was stored, until the month of August 1945 last April, in to the Sugar-mill in Littoria Station.

At the end of March, or in the first days of April, the machinery was shipped by trucks to Mirandola (Modena) togather with the machinery of the Sugar-mill.

One employee of the Sugar-mill followed the machinery in its travel but he has been cut out from the liber-

./..

Declassified E.O. 12356 Section 3.3/NND No. 785019



444

ated territory. It seem ascertained that the first shipment, which was constituted chiefly by machinery of the pumping station of Mazzocchio, was destryed on the route to Mirandola by an air bombardment.

1988

Declassified E.O. 12356 Section 3.3/NND No. 785019



Acting Director.

You asked if any action was necessary in reference to Dolce's 43B and E in File 159. The letter in question has not previously been passed to me. Having now seen them, I propose the attached reminder, which is submitted for your signature.

19 Oct 1956

Declassified E.O. 12356 Section 3.3/NND No. 785019



O

43 E

Re 43 B.

Major Westwood.

Is any action needed re letter & minute drafted 15 Oct. 1987 (Hm)

GEH. 13/10.

Declassified E.O. 12356 Section 3.3/NND No. 785019



ine north to Foggia . This grid provid
the available power and for the purpose
stations that were left undamaged or we

Total requirements for 1942 wer
of 295,000 kw of this amount Industrial

S.F. railroad lines

Montecatini ( Crotone)

Pertusola ( Crotone)

Anic refinery ( Bari )

S.F. railroad lines ( Foggia)

Cotton mills ( Salerno )

Ilva ( Torre Annunziata )

Alfa Romeo ( Fossigliano)

Ilva ( Bagnoli)

Cotton mills ( Naples)

Paper mills ( Chieti)

Railroad ( Sangro Valley)

Dussi Chemical plants ( Pescara)

← Line loss on deliveries to RF

~~Industrial power~~
~~Electric utility stations~~

Total large indu

Declassified E.O. 12356 Section 3.3/NND No. 785019

25 AUG Recd 150 CMB

Ministero dei Lavori Pubblici

GABINETTO

436

N. di prot. 131
Allegati N. 1
Risposta al foglio del
N.

Roma addì 24 AGO 1944 194

Al Lt.Col.A JENNY
Direttore della Sottocommissione Lavori e Servizi Pubblici della Commissione Alleata di controllo
R o m a

OGGETTO:

Proposte per la esecuzione di opere di bonifica

Trasmetto per conoscenza una circolare che ho diretto agli Ingegneri regionali dipendenti per la formulazione di proposte per opere di bonifica che abbiano carattere di urgenza e mirino al conseguimento di notevoli risultati igienici e produttivi.

IL MINISTRO

Bray

Due to Sub. Com. Lir.

B/F 25

Lt Col Rhoades
Ragan
193

Declassified E.O. 12356 Section 3.3/NND No. 785019

43B

SUBJECT: Proposals for the carrying-out of land-reclamation works.

Please order the Offices depending from you to send me, as quickly as possible, detailed proposals for the carrying-out of works ensuring the immediate attainment of considereble sanitary and productive results, for every land-reclamation area, included in their own territotial district; bearing in mind however :-

a) that first of all they must be works that can be carried out, the necessary materials and equipment being on the spot or easily available; limiting themselves with regard to other works to the absolutely indispensable ones, without which the existing works may be endangered; in such a case, however, reducing the materials, under control or hard to find, needed for the execution of the work, to the minimum;

b) that the works should really need to be undertaken in order to carry out the fight against malaria or to cultivate the land in the coming agrarian year; and that they should be designed t o ensure the functioning or prevent the deterioration of the canals and other existing works (ordinary maintenance and exceptional repair) and to restore works damaged or destroyed in consequance of the ravages of war or of weather conditions;

c) that only in exceptional cases, proposals for the carrying-out of new works will be taken into considera tion and that only for works of limited expenditure, needing to be carried out in order to finish and render efficient works well under way, whose completion will allow of rapidly obtaining important results in the field of agricultural production; in such cases taking also into consideration the possibility, or advisability, of carrying out those improvements of the works themselvs which the experience acquired in the time following on their construction might suggest in the interest of agriculture;

d) that the proposals should be limited to the strictly indispensable ones.

For every land-reclamation area, the proposed works will have to be specified, stating as exactly as possible for each one: the probable cost; the time needed for carrying it out; and if this is to be done directly by the State or by contract.

The works of maintenance and preventative measures against malaria will have to be kept absolutely separate from those of restoration (which, on their part, will have to be subdivided too, according to whether they depend on ravages of war or weather conditions) as also from probable works of completion.

The schedules containing th e above-mentioned proposals, accompained by a brief report, will have to be handed in to me as soon as possible

Declassified E.O. 12356 Section 3.3/NND No. 785019



43A

and not later than September 10th, in three copies.

THE MINISTER.

1983

1061

Declassified E.O. 12356 Section 3.3/NND No. 785019

C.C.

Put all together

in 159.

30 Aug.

Declassified E.O. 12356 Section 3.3/NND No. 785019

FILE N° 42

In reference to the letter of August 22nd, addressed to H.Q. A.C.C, signed Col. Findlay

---

Col. Findlay agreed on the whole with all points of our letter ACC/159/P.W.U. dated August 14th, 1944.

Only as to nr. 28 of the Estimate of the Genio Civile, he affirms that Kg. 1620 are out of the question, and a rough calculation has brought him near Kg. 16,20.

We beg you to note that, in order to cover the point and head of a chestnut pile, the diameter of which is of 20 cm., a weight of about Kg. 30 of iron for each pile is required.

In fact Kg. 1620 = 54 x 30

Above note is by Eng. Ferri. 1987

Mar. 20 Aug.

Declassified E.O. 12356 Section 3.3/NND No. 785019

FILE 159

Riferimento lettera del 22 cop a HQ ACC a firma Lt Col Finsley

Il Col Finsley le è sostanzialmente vicino d'accordo su tutti i punti della sua lettera ACC/159/PWV del 14 cop '44

Sottomette in ricordo all'art 28 della Stima del Codice Civile, afferma che kg 1620 sono fuori portata e che un calcolo abbondante li ha portati vicino a kg 16,20

Facciamo osservare che per ferrare la punta e la testa di un palo di castagno di diametro di cm 20 occorre un peso di ferro facilmente non molto lontano dai kg 30 previsti per ogni palo

Dalla kg 1620 = 54 x 30

Al 3/8

Declassified E.O. 12356 Section 3.3/NND No. 785019

29 AUG Recd 159 CEB.

FILE

GdeCEF/SC.

HEADQUARTERS REGION IV
Allied Control Commission
(Engineering Division)
APO 394

22nd August 1944.

TO : HQ. ACC. (Public Works & Utilities Sub-Commission) Major Watson

SUBJECT: Cassino - Fiume RAPIDO.

IN REPLY QUOTE: R4/ENG/101.11 137

Your ACC/159/PWU dated 14th August 1944.

Para 2 & 4. - I agree. May letter to Genio Civile dated 28th July 1944 a copy of which was enclosed to you as one of the 6 enclosures covers all the items observed on by you.

Sufficient detail was given to them to show that the estimate as it stood was NOT a basis for contract. Actually I had much fuller notes on the scrutiny made here but did NOT deem it necessary or advisable to disclose to them details which it is their job to correct in an estimate full of mistakes.

I was however satisfied that it was a matter requiring immediate action before rains started and I was satisfied that the amount I stated was sufficient to enable the important parts of the jobs included done. This was arrived at roughly as follows:

my figures were

| | | | | |
|---|---|---|---|---|
| Part | I | £. | 1,200,000 | |
| " | II | " | 1,360,000 | i.e. less items 14,15,16 cut out entirely as started |
| " | III | " | 700,000 | |
| " | IV | " | 200,000 | |
| " | V | " | 400,000 | |
| | | £. | 3,860,000 | |

I did NOT make deductions for item 9, 21, 28, 35 or Part IV and V as with an estimate prepared without it being possible to visit closely some of the places on account of mines, it was desirable to leave a margin.

Looking at it from another angle of your total of revised extensions:

| | | |
|---|---|---|
| | £. | 11,127,000 |
| deduct Part II Items 14,15,16 | " | 7,010,000 |
| | " | 4,117,000 |
| Recommended | " | 3,850,000 |
| Leaving deducted empirically for items 9,21,28,35 Part IV & V | " | 267,000 |

This I think you will agree is reasonable.

1939

Declassified E.O. 12356 Section 3.3/NND No. 785019

By an error, when in the turmoil of handing over in my draft, of my covering note it should have read 1/3rd of items of Part II left in. This however was absolutely clear in letter to Genio Civile as £. 7,010,000 was deducted from items 14,15,16.
I regret trouble caused.

Para 3. Regretted - In interval C.R.E. came in and after draft translation asked for a copy; it had to be reviewed and typed instead of sending on original as I intended.

---

Notes on estimate by Genio Civile.

1st Item - Compared with other estimates I do not agree with comment. It is a matter of fact.
2nd Item - Possible so.
3rd Item - 1620 Kilograms is out of the question for 54 piles i.e. 70 lbs each point ahead. A rough calculation perhaps on low side made it nearer 16,2 Kg. probably somewhere between but wrong. No. 1,620 Kg - correct. See attached note.
4th Item - Cement was deemed to be 450/500 Lire the Qle. You will remember that at last meeting 24th July I asked this specific question and Local Resources Board Representation said NO price was fixed That is the trouble in all estimates as NO one really knows what prices are to-day NOT even Local Resources Board, who should fix them?

Many of these other minor items were known to be inaccurate but were regarded as roughly balancing with other items.
The difference is £. 190.000.-

---

The Genio Civile have not yet replied to my important observation 2 and 3 and have been reminded. I know they have difficulty as bridges were old and FROSINONE records destroyed.

---

The plan of this bridge or bridges must depend on that. C.R.E. is preparing plans separately as Bailey Bridges is also being removed shortly.

---

The work is almost sure to be measured or time controlled 1979 except for bridge and that will be contract on the final plan.

N.B. It would be terrible to make criticising observations on other Offices, but a reply is NOT work which, No. need to wait everybody's time.

Lt.Col. R.E.
Regional Engineer ACC. IV.

Declassified E.O. 12356 Section 3.3/NND No. 785019

23 AUG Recd P.W.I.O.

159 Cab

Lt Col Dalton
PWs have translated and reviewed. Ltr. 23/8

HEADQUARTERS
AMG FIFTH ARMY
A.P.O. 464 US ARMY

20 August 1944.

205/15

G PIANURA PISANA

SUBJECT: Flood Plume between Arno and Serchio Rivers.

TO : Regional Engineer, Region VIII, A.C.C.

1. A copy of a report by Ing. Baroia of the Genio Civile in Livorno regarding the Bonifica della Pianura Pisana, giving a general picture of the situation, is enclosed.

2. Further data will be requested from Ing. Scalesse when he puts in his appearance in Pisa Province. His office is in Pisa and his home is in Calci. He is the Capo of the Genio Civile of Pisa Province.

For the Commanding General:

D. M. GAITHER,
Captain, C.M.P.
Chief, Engineer Div.
A.M.G. FIFTH ARMY.

Copy to:
Chief Engineer, P.B.S. LIVORNO.
P. W. & D. Section, A.C.C.
P. C. Pisa Province.
Chief Engineer, FIFTH ARMY.
Incls: Report, Map - 1 : 25.000

HEADQUARTERS 23 AUG 1944 A C.

1978

Maj Eastwood
took
"Relazione" retained by me.
26 Aug.

Declassified E.O. 12356 Section 3.3/NND No. 785019

18 AUG Read

159 Corps. P.W. Utilities

511 14 August 1944

Trans 15th Army Gp

S.Ten.CARRARA VINCENZO

Oggetto: Pianura Pisana

Al : Capt. Gaither and Capt. Foley, PRB

Si informa che la situazione della pianura Pisana in relazione al regime dell'acqua dei fiumi, può, durante i prossimi mesi invernali diventare disastroso perchè il canale emissario della Palude di Bientina ostruito alla foce, romperà le arginature. Il fiume Arno pure ostruito alla foce straripera dagli argini invadendo la pianura poichè già negli inverni passati minacciava di esondare, e nella città di Pisa venivano approntati speciali ripari di fortuna e sacchetti a terra per contenere le acque di piena; inoltre le arginature sono state in più punti indebolite mediante opere di difesa.

Un uguale situazione si presenta per il fiume Serchio il cui argine si ruppe 4 anni fa allagando tutta la pianura, e tutte le arginature dovevano essere rialzate. Inoltre le opere di difesa di guerra costruite dalle truppe germaniche hanno pure intaccato le arginature.

Qualora rompessero gli argini verrebbe allagata tutta la pianura da Filettole alla foce.

Si ritiene che debbano essere predisposte opere di difesa od in ogni caso prevista la possibilità di una rapidissima ritirata delle truppe sulle vicine colline; si fa presente che l'anno 1944 é stato di una siccità eccezionale e sono quindi da temersi violenti ed abbondanti piogge autunnali ed invernali.

Ulteriori informazioni possono essere date dall'Ing. Salvais capo ufficio tecnico del Comune di Livorno.

S.Ten. Carrara Vincenzo.

1st Ind.

HEADQUARTERS AMG FIFTH ARMY, Eng. Div. 13 August 1944

TO : R.C. Region VIII, P.C. Pisa
Engineer " " P.B.S. Livorno
C.A.C. Livorno P.W. & D Sub-Commission, A.C. 1077
P.C. Livorno

1. Forwarded for information and possible formulation of plans. Ing. Salvais and Ing. Bercia are being requested to prepare a report with maps at the earliest possible date, and to advise what firms and equipment are available to cope with the situation.

P.T.O.

Declassified E.O. 12356 Section 3.3/NND No. 785019

It is not likely that 5th Army troops will be available for any of this work.

For the Commanding General:

D.M. GAITHER,
Captain, C.M.P.
Chief, Engineer Division
A.M.G. FIFTH ARMY.

HEADQ...
17 AUG 1944
A. C. C.

Declassified E.O. 12356 Section 3.3/NND No. 785019

12 AUG 8-0
159 at

HEADQUARTERS
ALLIED CONTROL COMMISSION
[illegible] SECTION
APO 394

EB/20 12 August 1954

SUBJECT: Conference on Zonefinis

TO : Administrative Section (5)-(Copies for Public Health & Legal Sub-Comm's)
Agriculture Sub-Commission
Finance Sub-Commission
Public Works and Utilities Sub-Commission

1. A Conference will be held at 1600 hrs., Monday, 16 Aug 54 in the office of the Executive Director, Economic Section (Room 16, 6th Floor) to consider the various aspects of Zonefinis.

2. Please arrange to be represented.

G. M. SHARP, Lt. Colonel, U.S.A.
S.O. I (C.A.), Economic Section

Copy to: Executive Director

Three papers should be placed in a separate Zonefinis file.

1. Lt. Col Lappin
2. Major Norwood
3. EB/F 22/8

Pl. pass attached.
Director & I attended the Conference.
An ACC Circ is being framed & will be issued by PWB on it.
Present known shortly.

Declassified E.O. 12356 Section 3.3/NND No. 785019

38

AUS Recd 15 Aug 44

JBT/cem

HEADQUARTERS
ALLIED CONTROL COMMISSION
ECONOMIC SECTION
APO 394

13 August 1944

ES/20

SUBJECT: Conference on Bonifiche

TO : Administrative Section (2) - (For Public Health & Legal Sub-Comms.)
Agriculture Sub-Commission
Public Works and Utilities Sub-Commission

Reference this Section ES/20, 12 Aug 44, the attached memorandum by Prof. Sullam is forwarded for consideration prior to Monday's Conference notified in the above mentioned letter.

4 pm

J. Bruce Thompson Major RA

J. BRUCE THOMPSON, Major, R.A.
S.O. 2 (C.A.), Economic Section

Declassified E.O. 12356 Section 3.3/NND No. 785019

Rome, 2 August 1944

Strictly confidential

The brief following note concerns :

a) the studies by me done, since 1914, for the defence of the National Territory from the mouth of the Piave to that of Rubicone (studies partially utilised, especially during the last period of the war 1915/18, by the STAFFS of the Army and of the Navy).

b) my activity as President and member of the "Executive of the Land Reclamation Consorsi" in the Po valley from 1911 to 1941 and member of the Executive of the "National Federation of the Land Reclamation Consorsi" from 1919 to 1926.

c) series of studies (published between 1935 and 1937) about "The war and the land Reclamation" and about problems concerning motors of pumping station, petrols, oils etc. (among those, a report at the International Congress for petrols, oils, paraffin etc. 1937, Rome).

d) storical and geographical researches by me done between 1939 and 1942 to prepare a book of two volumes which is going to be published, about the political and agrarian troubles of the low valley of the Po from ancient times to our days.

1974

Eugenio Relli

Declassified E.O. 12356 Section 3.3/NND No. 785019

9 Aug 1944

SECRET

IMPORTANCE OF LAND RECLAMATIONS FOR THE LIFE OF ITALY

The problems of the land reclamations (including also those of irrigation) and other appendages are, after those concerning the conduct of the war, among the most important, much more so, I believe, the most important for the life of Italy.

The destruction of towns, rail-roads, roads, ports are really very great, but people can live also if towns, rail-roads, roads and ports are not rebuilt or rebuilt only partially.

The Italian people, on the contrary, could not live if the land realmations, especially those in the Po Valley, were destroyed.

To prove the exactness and the truth of what I am saying, I detail on the attached list, the dates concerning the principal agrarian products deriving from annual coltivations, or that can be considered annual, viz: wheat, corn, rice, potatoes, sugar-beets, hemp, silk cocoon, of eighteen provinces of Northern Italy, in which there are, since centuries or at least, since several years, the biggest works of land reclamation and irrigation.

I add in the same list some dates on cattle and swine.

The Provinces are:

PIEMONTE: Vercelli and Novara

LOMBARDIA: Milano, Pavia, Cremona, Brescia and Mantova

VENETO: Verona, Rovigo, Padova, Venezia, Treviso, Udine

EMILIA: Parma, Modena, Bologna, Ferrara and Ravenna.

The details are in the abovementioned list; I limit myself, here, to summarize them.

1973

Declassified E.O. 12356 Section 3.3/NND No. 785019

The 18 Provinces have a productive area which is only the 16.6% of the total area of the Kingdom, but they produced in 1942:

30.3 per cent of total wheat
55.4 " " " " corn
97.2 " " " " rice
22.3 " " " " potatoes
81.6 " " " " sugar-beets
76 " " " " hemp
66.1 " " " " cocoons
48.1 " " " " cow's milk

In the same provinces we find:
- 40.4% of all the cattle (and among this 49% of all the cow's milk
- 31.2% of all the swine.

The only weight of the above mentioned products, calculating the sugar-beets transformed in sugar and alcohol (and by-products) is about 79 millions as follows:

| | | |
|---|---|---|
| Wheat | Qli | 19.904.490 |
| Corn | " | 12.386.250 |
| Rice | " | 7.464.685 |
| Potatoes | " | 5.891.340 |
| Sugar | " | 4.200.000 |
| Cow's milk | " | 26.000.000 (Plus the milk necessary for the alimentation of heifers) |
| Cattle-meat | " | 2.200.000 |
| Meat and swine fats" | | 700.000 |
| T o t a l | Qli | 78.746.775 |

To have a complete idea of the agrarian production of the abovementioned 18 Provinces, we should add to these figures all

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the dates concerning the by-products deriving from the annual cultures (tomatoes, cauliflowers, beans, onions and other vegetables) vine, especially in Padova, Verona, Ravenna; fruits (peaches, for example) and many other products of other breedings (Veneto: poultry and eggs).

And, on the other hand, we should also consider the great importance that silk, hemp, rice, fruits and vegetables, have in the Italian exportation.

But to value with exactness what the reclaimed and irrigated lands rappresent for the life of Italy, we should add to the abovementioned figures those representing the same products, or all the livestock (horses, cattle and swine) in all the other provinces where there are the biggest works of land reclamations, and so we will conclude without fear of being wrong that:

WITHOUT THE PRODUCTS OF THE RECLAIMED AND IRRIGATED AREA, ITALY COULD NOT LIVE

Therefore, also a partial destruction of the Italian irrigations and land reclamations (and particularly of those located in Lombardia, Emilia and Veneto) would be an irreparable catastrophe for our Country, also because: for the levels where some of these land reclamations are located, for the nature of the ground of the same one or of others areas, and for the waters or other materials with which they could be covered, the effects of those destructions or of those damages could have a duration of some or several years.

The destructions made by the Germans in Southern Italy, and in the "Pontine Marshes", also being very serious, can give

1972

Declassified E.O. 12356 Section 3.3/NND No. 785019

to you only a pale idea of what is happening or it will happen in Northern Italy if the Allied Forces with air-raids or with heavy artillery, or the Nazi-Fascisti with mines and other destructions will destroy all the pumping stations, embarkments, dikes, etc. just now unfortunately not very far from the rain season. Many regions could be flooded and become consequently completely improductive and probably unihabitable. (Incl. b)

To the destruction of a large quantity of supply, sowed fields, of the same sources of production will follow the compulsory displacement of the population completely without resources and without any possibility to find work.

Unfortunately we cannot now save everything, but we should avoid other destructions or at leaut deaden their effects to make less worse the Italian catastrophe.

I have already proposed, since two months ago, to draw the attention of the Allied Military Commands, and particularly of the M.A.F. and M.A.A.F. (see incl. c) on the importance of these problems, and few evening ago, the radio broadcasted to the "Patriotti" especially in the Ferrara Province, to try to avoid the destruction of the pumping stations.

But these little isolated attemps can have only very limited results.

It is, on the contrary, absolutely indispensable an immediate action, well prepared, energetical and capable to save what it is possible to be saved in those land reclamations already liberated and in those which will be liberated.

This action should be organized by an only organization which should coordinate all the Allied and Italian Military and Civilian activities.

As far as I know, until now nothing has been 1973, or planned to be done.

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The competent Ministry, which is also now that of Agriculture has not any approximative needs on the real conditions of the land reclamation in the liberated areas. The Ministry of Public works has, it seems, its provincial offices of the Genio Civile working, but there in Rome there are only few technicians and fortunately, amongst them, two or three of big value.

The federation of the Consorzi of Land Reclamations has been dissolved but fortunately its precious archives have been saved - and there are in Rome, the "Commissario" (Petrocchi) and the Director (Ing. Ramodoro).

In the face of these scarce and scattered Italian organisations, the Allies have not, at least for the present, a sole and efficient organisation.

I do not know whom the Allied Military Offices charged with these problems and appendages are, but I see that in the A.C.C. the study and the resolution of the problems of land reclamations are divided between Agriculture Sub-Commission, Public Works and also Public Health. The same things, I believe, happen in the regional offices. We should, therefore, as soon as possible, unify all these organisations, which, so scattered, can give only scarce results.

I deem advisable to reorganize the "Under-Secretaryship" for Land Reclamations (which worked till 1943) or it will be much better to found a "Commissariate for "Land Reclamations" which centralises all the studies and all the services for Land Reclamation or attached to the Land Reclamation, not excluding those interessing the Military Authorities.

This "High Commissariate" must have, with the agreement of the A.C.C. all the means necessary to fulfil its tasks.

It will be also in relation with the U.N.R.R.A. .

1977

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On the other hand, it would be also necessary that the A.C.C. organised a special Section or Sub-Commission for land reclamation, here in Rome, able to fulfil all the problems concerning land reclamations, also if the said problem were, apparently, of competente of the Agriculture Sub-Commission or of the Public Works (as it would be at the begining) or of the Economic Section.

This Special Sub-Commission, would be in strict relation with the Military Allied Commands and it could perhaps utilise also offices and other technicians already on duty in the army who have a particular competence on these problems.

To coordinate the works and the studies of the "High Italian Commisariate" and of the new Land Reclamation Sub-Commission, and if necessary, of the office of the U.N.R.R.A. it should be advisable to convoke a special "Commitee" which would meet by the Economic Section or by the "High Commisariate".

The meeting of this Commitee could be also preceded by the constitution of the "High Commisariate" and of the Land Reclamation Sub-Commission.

But all this must be done quickly, very quickly, because each delay in the study and on the resolution of the Italian Land Reclamation problems would represent a very big irreparable mistake.

Signed/ Prof. Angelo Sullam

Incls.

A) List of the principal agrarian products of the reclaimed and irrigated provinces.
B) Military operations in the Reclaimed and Irrigated Areas.
C) Copies of letters sent to the Director of Agriculture F.B.
D) High Commissariate for Land Reclamation.
E) The Land Reclamation Sub-Commission.

1969

Declassified E.O. 12356 Section 3.3/NND No. 785019

:::::::: Prof. ANGELO SULLAM :::: Letter Nr. 2 ::::

SECRET :: URGENT

Subject :

MAPS OF ITALIAN LAND RECLAMATIONS (Bonifiche)

To : :
Major Stanley A n d r e w s :: Agricultural Sub-Commission ACC

(In connection with my letter Nr. 1::)

It is my opinion that it would be very urgent to represent to the Upper Commands (especially of the R.A.F. and the M.A.A.F.) the extension and the importance of the areas of the land reclamations (bonifiche) in Central and Northen Italy.

Therefore I would suggest You to let make at once some copies of the maps (in scale 1/1.000.000) inclosed in the book : Tassinari = La bonifica integrale nel decennale della legge Mussolini : (the map is on the end of the book).

I think also that it would be of great importance to let make copies of the other maps (on larger scale:: 1/300.000:: and 1/200.000) of the bonifiche in Tuscania, Romagna (especially in the province Ravenna) Emilia (province of Ferrara) and in Venetia (provinces of Rovigo and Venice).

Prof. Angelo Sullam

1968

Declassified E.O. 12356 Section 3.3/NND No. 785019

Allegato C. alla relazione 2/8/44

oooooooo

Naples, June 14th. 44

U R G E N T: S E C R E T

SUBJECT: Land reclamations (bonifiche) in the operational areas and in the areas of future operations.

What as happened in the area of Littoria suggeats me to as k you if the A.C.C. will provide, u r g e n t l y, for preserving the "bonifiche" in the operational areas, and also, in connection with the Allied Upper Commands (espeecially of the R.A.F., of the M.A.A.F. and of the "Patriots") for preserving the "bonifiche", that will be included, probably, in the areas of future operations.

I know, doubtlessly, that special instructions were given, for instance, for preserving the dams of the hydroelectric plants between Popoli and Pescara and officiers of the Secret Service were sent at this purposes in the occupied regions (by Germans) before the advance of the 8th. Army on the Adriatic cost.

As You know the "bonifiche" in Central and Northern Italy are larger and more important than, those in Southern Italy and it would therefore extremely interesting (especially to resolve the problem of food) the preservations of all those areas.

I am capable to give You detailled information on this subject.

1967

Prof. Angelo Sullam

// From Prof. SULLAM: letter nr. 1//

Declassified E.O. 12356 Section 3.3/NND No. 785019

1965

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE A.

PRINCIPAL AGRARIAN PROVINCES OF THE AREAS ( reclaimed or irrigated) %.

PIEMONTE : Vercelli e Novara
LOMBARDIA : Milano, Pavia, Cremona, Brescia, Mantova
VENETO : Verona, Rovigo, Padova, Venezia, Treviso, Udine.

| OCCUPATION'S ELEMENTS | UNITS | TOTAL | (1) AREAS CONSIDERED Total | % on kingd |
|---|---|---|---|---|
| Total area | ha. | 31.017.660 | 5.474.273 | 17,6 % |
| Productive area | " | 20.290.752 | 4.768.787 | 16,6 % |
| Plain | " | 6.467.790 | 2.107.793 | 40,1 % |
| WHEAT (cultivated area | " | 5.177.980 | 850.410 | 16,8 % |
| WHEAT (total production | q.li | 69.747.000 | 19.024.490 | 30,3 % |
| WHEAT (production per ha. | " | 12,7 | 22,3 | |
| CORN (cultivated area | ha. | 1.279.274 | 437.973 | 36,5 % |
| CORN (total production | q.li | 22.366.140 | 12.196.260 | 55,4 % |
| CORN (production per ha. | " | 17,8 | 27,9 | |
| RICE (cultivated area | ha. | 160.011 | 155.136 | 97,2 % |
| RICE (total production | q.li | 7.684.310 | 7.464.605 | 97,2 % |
| RICE (production per ha. | " | 47,8 | 47,8 | |
| POTATOES (cultivated area | ha. | 427.256 | 44.863 | 10,5 % |
| POTATOES (total production | q.li | 26.430.740 | 5.891.340 | 22,3 % |
| POTATOES (production per ha. | " | 61,8 | 131,4 | |
| SUGAR BEATS (cultivated area | ha. | 148.260 | 112.114 | 75,6 % |
| SUGAR BEATS (total production | q.li | 36.887.890 | 30.106.370 | 81,6 % |
| SUGAR BEATS (production per ha. | " | 248,7 | 269,0 | |
| CATTLE (total numbers | No. | 8.371.500 | 3.382.999 | 40,4 % |
| CATTLE (numbers per ha. | " | 0,29 | 0,71 | |
| MILK-COW (total numbers | " | 2.614.877 | 1.283.086 | 49,1 % |
| MILK-COW (production per ha. | " | 0,091 | 0,269 | |
| MILK OF COW (total production | hl. | 60.755.000 | 13.082.000 | 43,1 % |
| MILK OF COW (production per ha. | " | 2,41 | 6,83 | |

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...HIGHLIGHTS OF THE AREAS ( reclaimed or irrigated) of :

1. Vercelli e Novara
2. Milano, Pavia, Cremona, Brescia, Mantova
   Verona, Rovigo, Padova, Venezia, Treviso, Udine.

(1)

| ...ERTO | UNITÀ | AREAS CONSERVERAS. Total | ... en Kingdom | |
|---|---|---|---|---|
| | ha. | 31.047.650 | 5.474.073 | 17,6 % |
| | " | 28.690.752 | 4.768.747 | 16,6 " |
| | " | 6.467.796 | 3.167.793 | 48,1 " |
| ...vated area | " | 5.177.980 | 868.410 | 16,8 % |
| ... production | q.li | 65.747.000 | 19.934.490 | 30,3 " |
| ...tion per ha. | " | 12,7 | 22,9 | |
| ...vated area | ha. | 1.253.174 | 456.073 | 36,5 " |
| ... production | q.li | 22.366.140 | 12.366.360 | 55,4 " |
| ...tion per ha. | " | 17,8 | 27,0 | |
| ...vated area | ha. | 160.811 | 155.135 | 97,2 % |
| ... production | q.li | 7.634.310 | 7.468.609 | 97,8 " |
| ...tion per ha. | " | 47,6 | 47,8 | |
| ...vated area | ha. | 427.256 | 44.893 | 10,5 % |
| ... production | q.li | 26.430.748 | 5.091.340 | 32,3 " |
| ...tion per ha. | " | 61,8 | 131,4 | |
| ...vated area | ha. | 148.260 | 112.114 | 75,6 % |
| ... production | q.li | 35.807.890 | 30.108.370 | 81,6 " |
| ...tion per ha. | " | 248,7 | 269,9 | |
| ...reserve | No. | 3.371.508 | 3.393.899 | 40,4 % |
| ...s per ha. | " | 0,29 | 0,71 | |
| ...umbers | " | 2.614.077 | 1.283.035 | 49,1 % |
| ...tion per ha. | " | 0,091 | 0,269 | |
| ... production | hl. | 68.759.000 | 33.082.000 | 48,1 % |
| ...tion per ha. | " | 2,51 | 6,93 | |
| | | | | 31,2 % |

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| | | | | | |
|---|---|---|---|---|---|
| RICE | (total production | q.li | 1[illegible] | [illegible] | [illegible] |
| | (production per ha. | " | 47,8 | 47,8 | |
| POTATOES | (cultivated area | ha. | 427.256 | 44.803 | 10,5 % |
| | (total production | q.li | 26.430.748 | 5.291.340 | 20,3 % |
| | (production per ha. | " | 61,8 | 131,4 | |
| SUGAR BEATS | (cultivated area | ha. | 148.260 | 112.114 | 75,6 % |
| | (total production | q.li | 16.887.890 | 30.108.370 | 81,6 % |
| | (production per ha. | " | 240,7 | 269,0 | |
| CATTLE | (total numbers | No. | 3.371.502 | 3.383.299 | 40,4 % |
| | (numbers per ha. | " | 0,29 | 0,71 | |
| MILK-COW | (total numbers | " | 2.618.077 | 1.203.086 | 39,1 % |
| | (production per ha. | " | 0,691 | 0,269 | |
| MILK OF COW | (total production | hl. | 69.735.000 | 13.082.000 | 18,1 % |
| | (production per ha. | " | 2,41 | 5,83 | |
| SWINE | (total numbers | No. | 3.729.216 | 1.161.281 | 31,2 % |
| | (numbers per ha. | " | 0,13 | 0,244 | |
| HEMP (fiber) | (cultivated area | ha. | 83.441 | 52.671 | 63,3 % |
| | (total production | q.li | 1.008.363 | 756.454 | 76,0 % |
| | (production per ha. | " | 11,3 | 13,1 | |
| SILK COCOON | (seed area | ons. | 460.970 | 298.132 | 64,8 % |
| | (total production | Kg. | 31.953.789 | 21.142.043 | 66,4 % |
| | (production per ha. | " | 69,3 | 71,7 | |

(1) = RICE

In the valuation of the figures we have to consider that in three of the mentioned Re[illegible] (Novara, Vercelli, Pavia) the mountainous areas fill more than fifty per cent of the whole area in almost entirely improductive and therefore unfit to give hospitality to the cattle for seven months of the year.

At the same time, in the Province of Udine the mountains fill almost fifty per cent of the whole province of Vercelli, Bologna and Modena the mountainous area fills an area nearly like plain.

In the zone of high mountains, as we know, the cattle cannot leave in winter time and total of the cattle of the said Provinces concerns the hills and the plains.

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| | | | | |
|---|---|---|---|---|
| production | q.li | 1•[illegible]•370 | [illegible] | [illegible] |
| tion per ha. | " | 47,8 | 47,8 | |
| | ha. | 427.256 | 44.003 | 10,3 % |
| ated area | q.li | 26.430.748 | 5.831.340 | 22,3 % |
| production | " | 61,8 | 131,4 | |
| tion per ha. | | | | |
| | ha. | 140.260 | 112.114 | 79,6 % |
| ated area | q.li | 36.007.990 | 30.108.370 | 81,6 % |
| production | " | 248,7 | 259,0 | |
| tion per ha. | | | | |
| | no. | 0.371.902 | 3.382.919 | 40,4 % |
| ers | " | 0,29 | 0,71 | |
| ers per ha. | | | | |
| | n | 2.614.877 | 1.283.686 | 49,1 % |
| ers | " | 0,991 | 0,269 | |
| ers per ha. | | | | |
| | hl. | 60.755.000 | 33.082.000 | 40,1 % |
| production | " | 2,41 | 6,03 | |
| tion per ha. | | | | |
| | no. | 3.729.216 | 1.161.921 | 31,2 % |
| ers | " | 0,13 | 0,244 | |
| ers per ha. | | | | |
| | ha. | 92.441 | 58.471 | 63,3 % |
| ated area | q.li | 1.008.503 | 756.494 | 76,0 % |
| production | " | 11,3 | 13,1 | |
| tion per ha. | | | | |
| | ons. | 460.970 | 295.132 | 64,0 % |
| | Kg. | 31.953.100 | 21.142.043 | 66,4 % YEAR 1937 |
| production | " | 69,3 | 71,7 | |
| tion per ha. | | | | |

Q

Quotion of the figures we have to consider that in three of the mentioned Regions
Piemonte) the mountainous area fill more than fifty per cent of the whole area which
ry improductive and therefore unfit to give hospitality to the cattle for several
er.

the time, in the Province of Udine the mountains fill almost fifty per cent of the
of Vercelli, Bologna and Modena the mountainous area fills an area nearly like the

me of high mountains, as we know, the cattle cannot leave in winter time and therefore
cattle of the said Provinces concerns the hills and the plains.

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File 31

WWW/bb

Tel: 489081

HEAD QUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/159/PWU

18 Aug, 44

SUBJECT : CASSINO Area - River Rapido and tributaries.

TO : Ministry of Public Works
(att: Comm. Tiszano)

For your information, we send to you with this letter a copy of Form ACC/1, approving a portion of the scheme proposed by the Genio Civile for reinstatement of River control and road works in connection with the River RAPIDO, in the vicinity of Cassino. The approved expenditure has been limited to 3,850,000 Lire.

L.A. JENNY,
Lt-Colonel, G.S.,
Director.

Enclosure: Form ACC/1

Copy to Regional Engineer, HQ Region IV
(without enclosure)

1964

Declassified E.O. 12356 Section 3.3/NND No. 785019

36

Tel:489081

HWW/tr

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/159/PWU

17 Aug,44

SUBJECT : CASSINO Area - River RAPIDO and Tributaries .

TO : Regional Engineer, HQ. Region IV AMG/ACC
attn: Lt.Col. Findlay.

1. Ref. your letter R4/ENG/101.11 of 31 Jul 44 , and further to our letter ACC/159/PWU of 14 Aug 44.

2. Your plan is now returned herewith. A copy has been made for retention by this HQ.

H. W. WESTWOOD
MAJOR R.E.

W.M.LAPPER,
Lieut-Colonel,
Chief, Util. & Adm. Div.

1953

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Tel: [illegible]

File

WEW/ME

15

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/139/PWU

18 Aug 44

SUBJECT: Electrical Plant - Pontine Marshes.
TO : Regional Engineer, H.Q. Region IV, A.M.G./A.C.C.
(Attn: Lt. Col. Findlay and Maj. Larson)

1. In response to a request which we made to the D.G.M.R.S., we have received a letter from 704th Railway Grand Division, stating that certain electric motors have been found, and asking for data which will assist them to identify the missing plant.

2. A copy of our reply, of even ref. and date, is being forwarded to you.

3. If you can furnish any further information that would be of value, kindly submit it to this H.Q. as soon as possible.

W. M. LAPPIN,
Lt. Col.
Chief, Util. & Affs.Div.

1962

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081

HWW/ee

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/159/PWU

18 Aug 44

SUBJECT: Electrical Plant ( Pontine Marshes )

TO : HQ., 704th Railway Grand Division, A.P.O.400.
(Attn. Lt.Col. O.R.DIAMOND, T.C.)

1. Your letter (C9C/WK) of 13 Aug 44. (Copy enclosed herewith for easy reference.)

2. Thank you for the efforts that you are making to locate the electric motors.

3. The following information may assist you in identifying the motors and, possibly, other missing apparatus: -

From MAZZOCCHIO Pumping Station.

SEVEN electric motors: vertical spindle, 3-phase, 500 V., 510 HP, 360 R.P.M., direct coupled.

THREE transformers: 3-phase, V. $\frac{20,000}{500}$ KVA.1430

SEVEN high tension switches.

SEVEN low tension switches.

Starters.

Sundry measuring instruments.

From CAROCETE Pumping Station.

TWO electric motors: horizontal, 3-phase, 260 V., 66 HP, 45 cycles/sec., 1290 R.P.M.
TWO Speed reduction gears for above.
ONE electric motor: horizontal, 3-phase, 260 V., 35 HP, 45 cycles/sec. 650 R.P.M., direct coupled.
TWO transformers: 3-phase, V. $\frac{20,000}{260-130}$ KVA.80.

1967

H.T. switches ( ? No.)
L.T. switches ( ? No.)
Sundry measuring instruments.
ONE small pump and motor set for priming.

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From STRISCIA Pumping Station.

TWO electric motors: vertical spindle, 3-phase, 260 V., 149 HP, 1350 R.P.M.
TWO transformers: 3-phase, V. 20,000/260 KVA.150

ONE H.T. switch
TWO L.T. switches
Sundry measuring instruments.

From GRISCILLI Pumping Station.

ONE small pump and motor set for priming.
Sundry measuring instruments.

From CAIAMPRA Pumping Station.

ONE transformer: 3-phase, V. 20,000/260 KVA.95
ONE H.T. switch
TWO L.T. switches
Sundry measuring instruments.

From CAFOSKICK Pumping Station.

TWO Transformers: 3-phase, V. 20,000/500-500 KVA.95
ONE H.T. switch
TWO L.T. switches
Sundry measuring instruments.

From TABID Pumping Station.

TWO transformers: 3-phase, V. 20,000/260 KVA.120
ONE H.T. switch

From FRASSETE Pumping Station.

ONE L.T. switch.

From SEGA Pumping Station.

ONE transformer: 3-phase, V. 20,000/260-130 KVA.80
ONE H.T. switch.
Sundry measuring instruments.

From MATERA Pumping Station.

TWO transformers: 3-phase, V. 20,000/500 KVA.220
TWO H.T. switches
TWO L.T. switches
Sundry measuring instruments.

From IRSINNO Pumping Station.

TWO transformers: 3-phase, V. 20,000/260 KVA.120
ONE H.T. switch

1969

Declassified E.O. 12356 Section 3.3/NND No. 785019

From PANTANI da Empa Pumping Station.

ONE starter (for 120 HP, 500 V., 3-phase motor)
Sundry measuring instruments.

From CECACCIO Pumping Station.

Sundry measuring instruments.

4. We realise that much of the information given above is somewhat sketchy but we think that the data relating to the more important items, such as motors and transformers, are sufficient to enable you to recognise the missing plant. We have mentioned the switches, starters, measuring instruments etc. in view of the possibility that such items may have been removed in association with the motors and transformers to which they "belonged".

5. We shall greatly appreciate any help that you can render to us in this matter.

6. The information given in this letter has been abstracted from records which were readily available, and we have not waited to obtain more details before replying; but should we acquire further data likely to be of value, we shall, of course, pass it on to you.

Wm. LAFFER,
Lieut-Colonel,
Chief, Util.& Adm .Div.

Copy to: Regional Engineer, Reg.IV
(Attn. of Lt.Col.Findlay and
Maj. Larson)



1959

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081

HWW/mc

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

ACC/159/PWU

14 Aug. 44

Subject: CASSINO Area - River RAPIDO and tributaries.

To : Regional Engineer, H.Q. Region IV AMG/ACC
(Att. of Lt.Col. Findlay)

1. Ref. your letter R4/ENG/101.11 of 31 Jul 44.

2. The shockingly careless manner in which the estimate was prepared by the Genio Civile has caused much trouble, and consequently some delay, in this office.

3. Moreover, we have still not received from you the promised translation of the very lengthy Relazione, and it therefore became eventually necessary to translate it in this office.

4. In regard to your comments to the Genio Civile concerning the errors in the estimate, we have found it necessary to prepare a supplementary schedule of observations. A copy of this is attached (Enclosure 1 ) for your information, and we suggest that you peruse it before studying the remainder of this letter.

5. In the original estimate, as prepared by the Genio Civile, not only were there many errors in individual items, but the totals also were incorrect. We have, therefore, prepared a revision of the estimate, showing only the Item Numbers and amounts, all explanatory text being omitted. It can be read side by side with the original. A copy of this revision is also attached (Enclosure 2 ) for your information.

Declassified E.O. 12356 Section 3.3/NND No. 785019

You will observe that in the summary at the end of it we have compared (a) the erroneous original totals, (b) the correct totals prior to correction of errors in items, and (c) the totals of the corrected estimate.

6. In your letter you recommend approval of the whole of Parts I and III and approximately two thirds of Part III (which we presume to mean Part II ); and in your Form ACC/1 you have recommended approval of the sum of Lire 3,850,000 (which has, presumably, been computed accordingly) in lieu of the sum of Lire 9,500,000 proposed by the Genio Civile.

7. At your request, and in compliance with your own recommendation, we have approved the partial scheme at Lire 3,850,000. Form ACC/1, duly countersigned, is accordihgly returned herewith (enclosure 3).

8. However, we are unable to reconcile the figure with the basis of computation put forward by you. Using the old figures and the new, we obtain the following alternative totals, neither of which agrees with yours:-

| | Original Totals | Revised Totals |
|---|---|---|
| Part I | 1,200,000 | 1,300,000 |
| 2/3 of Part II | 4,667,000 | 5,580,000 |
| Part III | 700,000 | 857,000 |
| Grand Totals | 6,567,000 | 7,737,000 |

You will observe, incidentally, that the sums proposed by the Genio Civile for Part IV, Part V and "Per Imprevisti " are entirely excluded from the above alternatives, and yet the amounts are nearly twice as great as yours.

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9. We shall welcome your further remarks on this unfortunate project, and we take the apportunity to express the hope that future schemes will be submitted to us in a more comprehensible condition.

10. Please submit form ACC/2 (Contracts) in due course, in accordance with the regular procedure.

11. Your plan will be returned when we have taken a copy of it.

GEN.

L.A. JENNY,
Lt-Colonel, C.E.,
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Phone 481894

14 AUG Recd
159 C&P.

Thru Min. of Finance
Phone 489091 Ext 421

32

HEADQUARTERS
ALLIED CONTROL COMMISSION
FINANCE SUB-COMMISSION
Budget Sub-Section
APO 394

12 August 1944.

B/70

SUBJECT: Financing Bonifiche Pontina and Littoria.

TO : Director, Public Works and Utilities Sub-Commission.

1. I attach for your information a copy of letter on the above subject, which has been sent to the Regional Finance Officer, Region IV.

J. R. H. HALL,
Major,
Budget Officer.

FILE

JRHH/t

Lt Col Rapper

Pls note that this work can now proceed. I have agreed with Lt. Col. Findlays request that he be permitted to move Maj. Hanson until we find it necessary to send him to the Po region for studies, etc.

Col. 14/8

Noted 15 Aug 1956

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
FINANCE SUB-COMMISSION
APO 394

8 August 1944.

13065/F

SUBJECT: Bonifiche - Pontine and Littoria.

TO : R.F.O. Region IV.

1. Reference is made to letter this headquarters 13065/F dated 4 August 1944 on the above subject.

2. Additional information has been furnished this headquarters which indicate quite clearly the immediate necessity to carry out the program for drainage of the marshes in question for reasons of health, agriculture, and possible military necessity.

3. You are directed, therefore, to make the necessary funds available in the provinces concerned using Form No. S.B. 6 for the purpose, supported by the appropriate S.B. forms.

Colonel,
Joint Director,
Finance Sub-Commission.

AFHQ/F

Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED CONTROL COMMISSION
APO 394

19 Aug 1947
Date

Suspense _____

| From | | To |
|---|---|---|
| | Chief Commissioner | |
| | Dep. Chief Commissioner | |
| | Secy. Gen. to Chief Commissioner | |
| | Administrative Section | |
| | Security Section | |
| | PW & Displaced Pers. Sub Com. | |
| | Italian Affairs Branch | |
| | Security Branch | |
| | Information Branch | |
| | Establishment Branch | |
| | Ex Office | |
| | G-1 (A) | |
| | G-1 (B) | |
| | G-4 | |
| | Hq Comat (Main Hq) | |
| | Hq Comat (Rear Hq) | |
| | Adjutant (Main Hq) | |
| | Adjutant (Rear Hq) | |
| | Archives & Library | |
| | Pool of Interpreters | |
| | Political Section | |
| | Independent Sub-Commissions | |
| | Navy | |
| | Land Forces | |
| | Air Forces | |
| | Telecommunications & Posts | |
| | War Material Disposal | |
| | Public Relations Officer | |
| | Liaison Section Hq A.C.M.F. | |
| | PUBLIC WORKS | ✓ |
| | AGRICULTURE I-C | |

FOR:

Signature
Remarks/Recommendation ✓
Information
Approval/Disapproval
Appropriate Action
Investigation & Report
Dispatch

REMARKS: By Col Cooper

[illegible] 1951
Ltr

Declassified E.O. 12356 Section 3.3/NND No. 785019

19 AUG [illegible]
159 Cers.

CHA/ge
31

HEADQUARTERS
ALLIED CONTROL COMMISSION
AGRICULTURE SUB-COMMISSION
APO 394

18 August 44

AGR/21

SUBJECT : Information on Land Reclamation Areas

TO : Regional Commissioners
for Regional Agricultural Officers.

1. We have at our disposal in this Headquarters the following information on Land Reclamation Areas:

(a) Location and size of areas.
(b) Type and capacity of pumps.
(c) Type, size and fuel consumption of motors (electric, Diesel and Gasoline)

2. Information of the type mentioned above may be of value to Regional Officers in preparing fuel and oil estimates and for other reference. If information of this type is needed we will endeavour to supply it promptly upon request; however, request must be by province and must outline specifically the information desired.

3. General information of the following types are in process now for all Regions.

(a) Maps (Italy road map 1:200000) showing the location and roughly the type of each Reclamation area in the Region.
(b) Tables by Provinces presenting:
1. Location name and number of each Reclamation area in the province. (The number corresponds to the number on the abovementioned map and locates the Reclamation development on the map).
2. Number of hectares, number of farms and a brief paragraph description of each Reclamation area.
3. Name of administrative and technical personnel for each area.

1953

Declassified E.O. 12356 Section 3.3/NND No. 785019

30A

4. The information referred to in paragraph 3 is organized on a Regional basis and placed in folders in a form for ready reference. It will be provided to Regional Agriculture Officers upon request.

5. Following is a schedule of completion dates for material listed in paragraph 3.

| | |
|---|---|
| Tuscany | completed |
| Emilia | August 25 |
| Regions South of Tuscany | Sept. 15 |

W.A. HARTMAN
Lt. Colonel
Director

DISTRIBUTION:
Economic Section
Public Works
Region I, II, III, IV,
V, VI, VII, VIII,
IX, X, XI, XII.

Declassified E.O. 12356 Section 3.3/NND No. 785019

09

17 AUG Recd

Ref: 397

HEADQUARTERS
ALLIED CONTROL COMMISSION
WORKING SECTION
APO 394

159/ROW

Date/Ex

17 August 1944

WS/44

SUBJECT: Protection of Land Reclamation and Irrigation Projects.

TO : Patriots Branch

1. A very substantial part of the food produced in Northern Italy is grown on irrigated or artificially drained land, which can be kept in production only so long as artificial water channels remain free of obstruction and, in some important areas, only so long as pumping stations remain in operation. Damage to these works will enormously aggravate the food problem, which, as is well-known, is far above all other Italian problems in seriousness. It will also cause a great increase in malaria.

2. It is requested that you take whatever action you consider appropriate to help or induce patriots to prevent damage by the enemy to essential irrigation and drainage works, with special reference to the following:

a. River levels, particularly those of the larger rivers, and most particularly the dangerous points on these levels; dams; and new dykes.

b. Pumping stations, power lines serving them, and stocks of fuel for pumping stations.

c. Artificial reservoirs for irrigation; works for drawing water from rivers, canals and lakes; and irrigation channels.

3. For detailed information and advice regarding the location, general nature and importance of such works in enemy-occupied territory it is suggested you consult Prof. Angelo Sullam, who is employed as a consultant by the Agriculture Subcommission.

A. C. APPLEBY
Executive Director
Economic Section.

Copies to: Agriculture S/C
Public Health S/C
Public Work S/C

Note Volpe 20 Aug (1) Director Noted Rep 17/8

(2) File - (anti-malaria) to me SEB. 17/8.

Le 20 Copper Remote + file Rep 17/8 White

To sel. 1952

Declassified E.O. 12356 Section 3.3/NND No. 785019

98

From "Echo of Occupations" Cairo 14 August 1944

RATION (Sunday Times)

According to Colonel Russell of the Rockefeller Foundation the condition of the Italian Peasant is back to that of 1920 from the Public Health standpoint. They are now spraying the marshes by aircraft and more than 1,000 people are continuously employed fighting malaria. Civilians have been given 6 million atabrine tablets. Fortunately, the Allied forces have discovered North of Rome the bed of quinine, enough to supply Italy for one year.

1951

Declassified E.O. 12356 Section 3.3/NND No. 785019



10 August 1944

Extracts from "Trend of Correspondents Copy"

7 Aug. George Moorand (CBS) :----- After two months of Allied occupation (Rome) there is a shortage of water, no gas, and little electric services .....:.....

Pernicious malaria has re-appeared (in Rome) for the first time in many years, but there is no quinine.....

6 Aug. Col (Blue network) :-------- Owing to the flooding of the Pontine Marshes and the shortage of quinine the first cases of pernicious malaria have been reported in Rome.....

SEE OVER

NOTE : Apropos MALARIA, the following extract is interesting :---

26 July. Brown (Reuter):---------- 4½ tons of quinine, enough for Italy's entire population for a whole year, have been discovered by AMG officers of the 5th Army in the small town of VOLTERRA. The quinine was stored in a state owned warehouse which was untouched in an area otherwise devasted by bombs. The major portion will be distributed for civilian use in malarial areas.

1979

Declassified E.O. 12356 Section 3.3/NND No. 785019

There is no good reason
for attributing the malaria
to the Pontine Marshes. On the
contrary it is far more likely that
Ostia or Maccarese may be
to blame.

Ashley
C Mayo

Declassified E.O. 12356 Section 3.3/NND No. 785019

27

16 August 1944.

QUOTATIONS FROM P.R.B. REGARDING PONTINE MARSHES.

6 Aug 44

"Owing to the flooding of the Pontine Marshes and the shortage of quinine, the first cases of pernicious malaria have been reported in Rome."

7 Aug 44.

"Pernicious malaria has reappeared for the first time in many years, but there is no quinine".

GBR

16/8.

for the writer to furnish the figures of quinine at Volterra for 7 to 10 Aug. Ref. Acc/0322/Plans

Letter from Public Relations Branch to "Malaria" dated 14.9.088.

Also attached note 9

10 Aug

16 Aug.

Declassified E.O. 12356 Section 3.3/NND No. 785019

LAJ/gf

Tel: 489081

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

3 August 1944.

ACC/AC8/PWU

SUBJECT: Financing Bonifiche-Pontine and Littoria.
TO : Director (Col. Foley), Finance Sub-Commission.

1. Some time ago I discussed with you the financing of the immediate rehabilitation of the Pontine Marsh project, exclusive of the re-establishment of pumping stations, etc. We felt that because of its magnitude, it should be handled as an over-all project rather than by the Region. You agreed that we report to the Minister of Public Works and ask him to have the Italian Ministry of Finance provide the money for this. We have carried out your wishes in this respect.

2. I have just received a letter from Region IV, a copy of which is attached. We are somewhat confused at this time as to what to do because of pressure being brought to bear on us by the Public Health and Agriculture Sub-Commissions who consider this project most urgent.

3. Will you please have this matter straightened out at an early date so that work on this much needed project can commence ?

L. A. JENNY.
Lt. Col., C.E.
Director

CC to: Public Health Sub-Comsn.
Agriculture Sub-Comsn.

B/F 10/8.

Declassified E.O. 12356 Section 3.3/NND No. 785019

JVC

Congressional

HEADQUARTERS REGION IV
Allied Control Commission
APO 394

31 July 1944

To: Finance Sub-Commission, A.C.C. HQ
Attention Chief Budget Officer.

Subject: Bonifice - Pontina and Littoria

File No.: R4/F1/460.2

1. The Regional Engineering Officer has referred to us three schemes for restoration works in the bonifice of Pontina and Littoria, as follows:

| | | | |
|---|---|---|---|
| Pontina | dated 9 July 1944 | Lit. 17,965,000 | Line |
| Littoria | dated 9 July 1944 | Lit. 23,153,812 | } 41,131,812 |
| Pontina | dated 9 July 1944 | Lit. 7,113,000 | |

2. In the letter of the Chief, Utilities and Administration Division of the Public Works and Utilities Sub-Commission it is stated: "Action has been initiated at this HQ to ensure availability of funds, but this, presumably, will NOT modify the normal financial procedure necessary at Regional level".

3. It is the function of this Division to decide whether or not the funds spent in the Region are within reason, and whether the expenditure of such funds is helpful to the war effort, or whether such spending will contribute to the inflationary trend, without a comensurate return in necessitous works.

4. Prior to the war these bonifiche got their money by making a loan at a private bank, i.e. a commercial bank as distingquished from the Banca d'Italia and when the work was finished received a grant of 87½% of the amount expended from the Ministery on condition the work was approved, etc.

5. Therefore, it is within the competence of the Regional Finance Officer to recommend the original Italian procedure be followed or whether the funds are made available through AMG/ACC grant at the Banca d'Italia, or through order of the Finance Sub-Commission, ACC HQ.

Declassified E.O. 12356 Section 3.3/NND No. 785019

6. Since in the opinion of the R.F.O. the time of war necessity has passed in the Province of Littoria and no pressing military purpose will be served; since any land which is made available by this drainage work cannot possibly bear crops until next summer and since the amount of money to be expended is extremely large in view of the character and the wealth of the Province, he recommends:

7. The funds not be made available through any channels of AMG/ACC, or through the Italian State, or any of the ministeries.

8. Such funds as are needed for projects correctly approved such be furnished by bank loans through the banks such as the Bank of Santa Spirito, Cassa di Risparmio di Roma, etc. This will provide an additional check on the worthiness of the projects as the banks will not make the loans unless they concur in the necessity of the work.

9. Since the furnishing of such government funds will eventually come to your attention, this Division is on record of having disapproved of the financing of the projects except in the normal Italian way, i.e., private loans from banks.

EDMUND O. HOWELL, JR.,
Col., Inf.
Regional Finance Officer.

Copy to the Provincial Commissioner Littoria
Regional Engineering Officer.

1946

Declassified E.O. 12356 Section 3.3/NND No. 785019

GER/tr

Rol:489081

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

3 Aug,44

ACC/108/PWU

SUBJECT : Financing of Projects .

TO : Regional Engineer . IV .

Ref. your R4/ENG/17(c)1 of 15 July to the Genio Civile re Progress Reports ( copy sent to us), will you please note that:

(a) Only Military Highways are financed directly by the Italian Government.

(b) All other projects, after due approval, are financed by the Region ( as an A.M.G. project) .

(c) For Region IV, however, because of its size, we have asked that the Pontine Marshes project, should be financed as in (a) above, i.e. directly by the Italian Government. This has been asked for through the Ministry of Public Works, in agreement with the Financial C.C.

L.A. JENNY ,
Lt-Colonel, C.E.
Director

1945

Ce 159

U R G E N T 4 AUG Rec'd PW & U 8332

159

GdeCSF/sc.

HEADQUARTERS
Allied Control Commission
APO 394

3rd August 1944.

TO : ACC. (Public Works & Utilities).

SUBJECT: BONIFICHE PONTINE and LITTORIA.

FILE No: R4/ENG/600.2

1. Three projects were approved by you on 26th July 1944 for execution from Special Funds for:

| | | |
|---|---|---|
| Littoria | L. | 23.153.812.- |
| Pontine | " | 17.965.000.- |
| Completion of Pontine Diversion Channels | " | 7.113.000.- |

2. ACC. IV (Finance) has refused to advance AMG funds for these. ~~attached is a copy of his letter.~~

3. As these were approved by you from Special Funds will you please arrange the release of funds from other sources or request Finance Sub-Commission to issue definite authority issued for Funds be released.

4. The matter is urgent as without funds the Bonifica have had to suspend a portion of the work and dismissed the workman and will have to shortly close down entirely.
The matter is particularly urgent for following reasons:

a) Route 7 will be flooded this might be of serious military import.
Particularly in view of the similar report and estimate recently submitted to you for Cassino Bonifica pointing out that there also the waterway was insufficient for both Railway and Road.

b) If the two dry months are lost to work the costs subsequently will rise out of all proportion and in some cases be impossible.

c) The internal communications of Littoria province will be interrupted and the population have to be ~~housing~~ housed elsewhere at a time when the ~~housing~~ of all the population of the devastated areas will be a pressing question.

d) Large areas of agricultural land will be inundated that could easily be saved without use of pumps.

It is recognised that the area North of the Appian way

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| | | |
|---|---|---|
| Littoria | L. | 23.153.812.- |
| Pontine | " | 17.965.000.- |
| Completion of Pontine Diversion Channels | " | 7.113.000.- |

2. ACC. IV (Finance) has refused to advance AMG funds for these. ~~attached is a copy of his letter.~~

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Particularly in view of the similar report and estimate recently submitted to you for Cassino Bonifica pointing out that there also the waterway was insufficient for both Railway and Road.

b) If the two dry months are lost to work the costs subsequently will rise out of all proportion and in some cases be impossible.

c) The internal communications of Littoria province will be interrupted and the population have to be ~~housed~~ housed elsewhere at a time when the housing of all the population of the devastated areas will be a pressing question.

d) Large areas of agricultural land will be inundated that could easily be saved without use of pumps.

5. It is recognised that the area North of the Appian way normally cleared by pumping will be flooded until the Motors can be replaced but with the Diversion made and channels cleared of debris the extent of this flooding will be much less and the quantity of water flowing over the road of much less volume and possibly provision could be made for this.

Lt.Col. R.E.
Regional Engineer ACC IV(P.W.)

~~Enclosure 1 (2 copies).~~

Copy to: Regional Commissioner ACC IV.
ACC. IV (Finance).
ACC. IV (Public Health).
Major Larson.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

FOR FILE 159

JSC

Put in Subject File

HEADQUARTERS REGION IV
Allied Control Commission
APO 394

31 July 1944

Lt. Col. Jones to take the necessary action. 3 Aug

TO: Finance Sub-Commissio n A.C.C. HQ
Attention Chief Budget Officer

SUBJECT: Bonifica - Pontina an d Littoria

File No: RI/FI/460.2

1. The Regional Engineering Officer has referred to us three schemes for restoration works in the bonifica of Pontina and Littoria, as follows:

| | | |
|---|---|---|
| Pontina | dated 9 July 1944 | Lit. 17,965,000 |
| Littoria | dated 9 July 1944 | Lit. 23,153,812 |
| Pontina | dated 9 July 1944 | Lit. 7,113,000 |

2. In the letter of the Chief, Utilities and Administration Division of the Public Works and Utilities Sub-Commission it is stated: "Action has been initiated at this HQ to ensure availability of funds, but this, presumably, will NOT modify the normal financial procedure necessary at Regional level."

3. It is the function of this Division to decide whether or not the funds spent in the Region are within reason, and whether the expenditure of such funds is helpful to the war effort, or whether such spending will contribute to the inflationary trend, without a consensu rate return in necessitous works.

4. Prior to the war these bonifiche got their money by making a loan at a private bank, i.e. a commercial bank as distinguished from the Banca d'Italia and when the work was finished recei ved a grant of 87½% of the amount expended from the Ministry on condition the work was approved, etc.

5. Therefore, it is within the competence of the Regional Finance Officer to recommend the original Italian procedure be followed or whether the funds are made available through AMG/ACC grant at the Banca d'Italia, or through order of the Finance Sub-Commission, ACC HQ.

6. Since in the opinion of the R.F.O. the time of war necessity has passed in the Province of Littoria and no pressing military purpose will be served; since any land which is made available by this drainage work cannot possibly bear crops until next summer and since the amount of money to be expended is extremely large in view of the character and the wealth of the Province, he recommends:

7. The funds not be made available through any channels of AMG/ACC or through the Italian State, or any of the ministries. 1943

8. Such funds, as are needed for projects correctly approved, be furnished by bank loans through the banks such as the Bank of Santa Spirito, Cassa di Risparmio

Declassified E.O. 12356 Section 3.3/NND No. 785019



di Roma, etc. This will provide an additional check on the worthiness of the projects as the banks will not make the loans unless they concur in the necessity of the work.

9. Since the furnishing of such government funds will eventually come to your attention, this Division is on record of having disapproved of the financing of the projects except in the normal Italian way, i.e. private loans from banks.

EDMUND O. HOWELL, JR.,
Col. Inf.
Regional Finance Officer

Copy to the Provincial Commissioner Littoria
Regional Engineering Officer

1942

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. [illegible]9021

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

LAJ/gf

AG3/139/PAU

31 July 1944.

SUBJECT: Financing of Pontine Marshes Drainage.
TO : Finance Sub-Commission. Att: Lt.Col. A.H.F.Stephan.

1. Following our discussion of the need for immediate work to be done in clearing flooded areas in the Pontine Marshes, I wish to state that we consider this work to be most urgent. Representations have been made to us from the Agriculture Sub-Commission and the Malaria Control Commission, and on the strength of these we have taken prompt action, had plans prepared and are now ready to proceed with essential work only, costing approximately fifty million lire. This work merely provides for the clearing of obstructions in the channels so as to permit a reasonable flow with occasional diversion channels around pumping stations where these are considered to be effective. As a consequence, the financing of this question was taken up with the Director of the Finance Sub-Commission and we were advised to ask the Italian Government to finance this undertaking. That request was made to the Minister of Public Works.

2. As further interest in connection with the above, I am attaching hereto a copy of a letter just received from Region IV.

3. If you desire any further proof of the need of this work, I would suggest that you personally contact Lt. Col. Hartman of the Agriculture Sub-Commission and Col. Russel who is in charge of Malaria Control operations under the Public Health Sub-Commission.

L. A. JIMMY,
Lt. Col., C.E.
Director.

CC to: Lt.Col. W.A.Hartman, Agriculture Sub-Com.
Colonel P.F.Russel, Malaria Control,
Public Health Sub-Commission
Regional Engineer, Region IV.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HL/gb

HEADQUARTERS REGION IV
ALLIED CONTROL COMMISSION
APO 394

28 July 1944

TO : Director, Public Works and Utilities

SUBJECT : Request for trucks.

FILE Nº : R4/ENG/267.1

1. Reference is made to a letter dated 9 July 1944, subject: Drainage-Province of Littoria, and to an estimate of the transportation required attached thereto.

2. The need for rehabilitation work on the drainage system in the Pontine Marshes is most urgent. There is a large amount of work necessary because of the extensive damages to the system. Approximately seven thousand acres of land subject to overflow during the rainy season can be restored for agricultural purposes provided the gravity system alone is restored. It is almost needless to state that the present condition of channels, both large and small, is conducive to breeding mosquitoes, many of which are the anopheles variety. The months of July and August are the most favorable for reconstruction work. After that period work can be carried on but it will become increasingly more difficult. In order to do this work with any degree of efficiency and expeditiously it is essential to have available, among other things, transportation. Material must be hauled, certain pieces of equipment must be dismantled and moved into repair shops, and men must be carried to and from their work.

3. It is urgently recommended that the trucks referred to be made available at the earliest possible moment.

E.J. EDWARDS, Colonel,
Regional Engineer

Copies to:
1-Regional Commissioner
1-Public Health Sub-Commission ACC
1-Agricultural Sub-Commission, ACCC
1-Public Health, Region IV
1-Major Larson

1949

Declassified E.O. 12356 Section 3.3/NND No. 785019

PONTINE MARSHES

# ELECTRICAL MAP.

COMM. DOTT. ING. LEONE TERZI
DIRETTORE GENERALE
DEL CONSORZIO DELLA BONIFICAZIONE PONTINA

FILE 159.

ROMA - VIA BOLZANO, 10
TEL. 80887

Declassified E.O. 12356 Section 3.3/NND No. 785019

FILE
159.

CONSORZIO
DELLA
BONIFICAZIONE PONTINA
ROMA

Il Direttore Generale

Roma, July 12 - 1964

Via Bolzano n. 10 - Telef. 80 627

17

Sir

On delivering the promised map I beg to recommend to your kind regard the matter of financing the most important and urgent works, according to filed estimates.

Their requirements exceed by far the exhausted possibilities of my Consort.

With many excuses and respects

yours

Eng Leone Pergi

Lt Col Capper

Rec'd 12/7

1939

Kindness in keeping. Thanks in advance
23 Jul. 64

Declassified E.O. 12356 Section 3.3/NND No. 785019



# PUMPING PLANTS

at Marshes near FIUMICINO

1. pump 1 1/2 Cub/Met/Sec.

   90 HP. 188 Amp. 250 Volt

   675 Revs. Reduction Gear 135 Rev.

   Pump and motor in good order

- - - - - - - - - - - - - - - - - - - - - - - - - - - -

1. Vertical pump. 1 1/2 Cub/Met/Sec.

   60 HP. 250 Volt. 3 phase 50 Cycle

   Pump and motor in good order

- - - - - - - - - - - - - - - - - - - - - - - - - - - -

Situation of above

IMPIANTO IDROVORO OSTIA

1938.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel:478200

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394.

IEW/oo

15

26 July 1944.

ACC/108/PWU

Subject : BONIFICE.- PONTINA and LITTORIA.

To : Ministry of Public Works.
Att. Sig. TIZZANO, Director General.

1. Enclosed herewith for your information are signed copies of three forms ACC/1 in respect of the following schemes which have been approved in principle for early execution.

(a) Removal of obstructions and debris, construction of diversion channels, restoration of embankments, rebuilding of workshops, etc. in the Bonifica Pontina.

Approximate estimate : 17,965,000 Lire.

(b) Repair of workshops, garages and pumping plant, and removal of obstructions and vegetation from channels in the Bonifica di Littoria.

Approximate estimate : 23,153,812 Lire.

(c) Completion of diversion of river Ufente in the Bonifica Pontina.

Approximate estimate : 7,113,000 Lire.

2. Funds are being made available for this work.

L.A. JENNY,
Lieut-Col., C.E.,
Director.

Copy to file 159.

1937

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel.478200

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

HWW/ce

ACC/159/PWU

26 Jul 44

Subject: BONIFICE.-- PONTINA and LITTORIA.

To : Regional Engineer, HQ. Region IV,
A.M.G./A.C.C.

1. Reference your letter R4/ENG/600(b) dated 18 Jul 44.

2. The three schemes for restoration works in the bonifice of Pontina and Littoria are approved in principle. Two copies of form ACC/1 (together with estimates and plans) in respect of each of the three schemes are accordingly returned to you herewith, duly endorsed. Will you kindly hand one set to Maj. Larsen for his use.

3. Action has been initiated at this HQ. to ensure availability of funds, but this, presumably, will NOT modify the normal financial procedure necessary at Regional level.

4. Please submit Form ACC/2 (Contracts) in respect of each of these schemes (or parts thereof) as soon as practicable.

W.M. LAPPER,
Lieut-Colonel,
Chief, Utilities & Adm.Div.

encl.

1936

Declassified E.O. 12356 Section 3.3/NND No. 785019

Roma addì 10 1935

Ministero delle Corporazioni

Al

Prot. N.

Allegati N.

Risposta al foglio N. del

OGGETTO

Lisbona. Both Col. Russell & Capt. Buck

expressed their general agreement of the
proposed measures and promised their
support & R. Schemes, stressed their
seeking to find measures.

Capt. Buck remarked that every
hectare of land drained could produce
a minimum of 15 quintals of wheat,
and that of reclaiming on the effective
by 1st Sept. it will be possible to con
initial settlement.

1935

Maj. R.E.

Declassified E.O. 12356 Section 3.3/NND No. 785019

24 Jul 44.

MEMO. FOR FILE 159.

CONFERENCE ON "BONIFIED AREAS".

A conference was held in Brig. Parkinson's office at 0930 hrs on 24 Jul 44. The following were present:-

Brig. G.S. Parkinson — Public Health.
Col. Russell — Malaria Control
Capt. Hall — Agriculture
Maj: Larson
Maj: Westwood } — P.W. & U.

The object of the conference was to ensure adequate co-operation and co-ordination between the Units and depts. concerned. It was, however, generally agreed that as the two were in the field and that there should be no particular difficulty if departments kept in touch with each other.

Subsequently, at 1100 hrs, Maj. Larson and Maj. Westwood accompanied Col. Russell and Capt. Hall with the intention of the two major projects now proposed by the Ministry of Health and

Declassified E.O. 12356 Section 3.3/NND No. 785019

(File in Docks. order) FILE 159

NOT 80 (illegible)

HEADQUARTERS
Allied Control Commission
APO 394

G.deC.E.F./sc. 124

31st July 1944.

TO : HQ. ACC. (Public Work and Utilities Sub-Commission)

SUBJECT: CASSINO Area - Rapido Fiume and Tributaries

FILE No: R4/ENG/101.11

1. Enclosed is Form ACC/1 in triplicate please return in duplicate with approval (Lire 3.850.000.-).

2. Controlled Materials abstracted from estimate Steel 4 tons, Cement nil 27 tons.

3. Enclosed is copy of following for retention by you:

~~Letter from Genio Civile No 1564 dated 21st July~~
Relazione;
Stima;
Plans (Plans returned)

4. Remarks: I have had a general look at this area.

1) The question of health and agriculture are both long term policies and there are NO inhabitants in CASSINO to consider at present.

2) The two really important things are the safety of the railway and Route 6 in winter.

I recommend the whole of parts I and III of Estimate and approx 2/3th of Part II which should secure them.

3) The filling of craters and BONIFICA scheme must wait.

Attached is short note from roughly reading the scheme. 2 Nos. & copy of letter of Genio Civile 28-9-1931

Lt.Col. R.E.
Deputy Regional Engineer ACC IV.

Number of Enclosures: 8

Copy to: Genio Civile Ispettore Generale for information.
Returned one copy of scheme marked and copy of my notes.

Declassified E.O. 12356 Section 3.3/NND No. 785019

21 JUL Rec'd
117. Cc's.

HEADQUARTERS
ALLIED CONTROL COMMISSION
APO 394
Public Health Sub-Commission

ACC/P-S-10/MD 21 July 1944

SUBJECT: Conference.

TO : Director, Public Works and Utilities Sub-Commission, A.C.C.
ATTENTION: Lieut. Colonel L. A. Jenny.

1. Reference recent conversation, a conference will be held in Brigadier Parkinson's office, Fifth Floor, Room No. 7, at 0930 hours, on Monday morning, 24 July, to discuss policies in regard to rehabilitation of large bonified areas flooded by enemy sabotage.

2. The subject is to be considered from the standpoint of public health, public works, and agriculture.

For Brigadier G. S. PARKINSON:

PAUL F. RUSSELL
Colonel, M. C.
Chief, Malaria Control Branch.

Majors Andrian

470783

see memo for Col Cooper
see letter 24 July 44.

Col Cooper
Plse try to get time to arrange it for Tuesday
Raf 21/7

1933

Capt Lawrence
Lt Col Cooper has made appointment with Col Cooper for this morning at 10 o'clock
Capt

Declassified E.O. 12356 Section 3.3/NND No. 785019

22 JUL Rec'd
22 JUL Rec'd

159 Corps.

18 July 1944

Lt Col Sayers:

There are herewith submitted for your approval three parcels which cover the work most urgently needed at Cvl Littorie and Pontine Barrieres.

Your attention is invited to the statements made by Senior Civil Affairs officers at Anzio Beachhead and Naples.

Harry Larson,
Major C.E.

Statements of Civil Affairs officers Anzio Beachhead and Naples

PONTINE MARSHES
1932
FILE No. 159.

11241

Declassified E.O. 12356 Section 3.3/NND No. 785019

15 June 1944

Please return to me one copy of approved project.

3/ Lawson,
Navajos C E.

Declassified E.O. 12356 Section 3.3/NND No. 785019

EJE/es

HEADQUARTERS REGION IV
Allied Control Commission
APO 394

18th July 1944

TO : Public Works and Utilities Sub-Commission
H.Q. ACC.

20 JUL Recd

SUBJECT: Repair Estimates - Littoria Bonifiche.

FILE NO: R4/ENG/600(b)

HEADQUARTERS
20 LUG 1944
A. C. C.

The attached documents on estimates for the repair and restoration of the Bonifiche in Littoria are forwarded for favour of approval please.

E.J. EDWARDS, Colonel
Regional Engineer

Enclosure:
3 Estimate folders.

Lt Col Rapper

Pls review and if OK sign where provision is made for Lt Col Thompson, change title, and forward for my sig.

Col 7/7

1937

FILE 159

Declassified E.O. 12356 Section 3.3/NND No. 785019

WML/tr

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

17 July.44

ACC/158/PWU

SUBJECT : Electrical Plant .

TO : D.G.M.R.G.

1. The Pontine Marshes irrigation scheme depended to a large extent upon a system of pumping whereby the water was pumped into channels for the main-drainage scheme.

2. The land is invaluable as an agricultural area and it is also being drained as an anti-malaria measure.

3. At the present time irrigation work is being carried out without the use of the pumping plant, partly due to lack of Electric Power but mainly due to the removal of the Electric motors by the enemy from some of the larger pumping stations.

4. As there is just the possibility that these motors may have been left by the Germans in a siding or warehouse, it is requested that you circulate the enquiry and any information which you may obtain in connection with these motors will be appreciated.

W.M.LAPPER,
Lieut-Colonel,
Chief, Util.&Adm.Div.

1939

Ref no 155

Declassified E.O. 12356 Section 3.3/NND No. 785019

13 JUL 44
CB 051

JEB/gb

HEADQUARTERS REGION IV
Allied Control Commission

11 July 1944

TO : Lt.Col.LAPPER,
P.W. and Mt.Sub.Commiss.HQ ACC

SUBJECT : Status of Littoria District Pumping Plants.

FILE N° : R4/ENG/700

Herewith partial informations on status of Littoria district pumping plants.

Further information will be forwarded when received.

J. E. Breth
J.E.BRETH
Lt.Col.INFANTRY
Public Utilities Officer

Enclosures. 2

Lt Col Lapper
13/7

Enclosures to be returned to this office when no longer required.

FILE 159

Declassified E.O. 12356 Section 3.3/NND No. 785019

15 Jul Recd
CCB 19.

Econ Sec (Rpt 40)

U-15467

HEADQUARTERS REGION IV
Allied Control Commission
APO 394

9th July 1944

TO : P.W. and H. Sub Commission, ACC

SUBJECT: Drainage - Province of Littoria.

FILE NO: R4/ENG/500(b)

1. It appears that much can be done to drain the flooded lands in the Province of LITTORIA, given only the fuel to operate existing machinery for removing obstacles to flow.

AGRO PONTINO. 12.000 - 15.000 hectares. Could be drained without pumping.

LITTORIA. About-10.000 hectares. Could be drained without pumping.

2. An estimate of immediate requirements is attached.

Future requirements will be included in for estimate to Pet. Section AAI but if action is to be effective now the quantities are required immediately.

3. It should be understood that every week which passes without action is losing valuable opportunity for drying out the land in time before rains worsen the position and for reducing the malarial problem involved by the flooding.

4. Your help is requested on obtaining an allottment of fuel immediately.

E.J. EDWARDS,
Colonel, R.E.
Regional Engineer

Copies to:
1. Regional Commissioner
1. Agricultural Sub commission, ACC
1. Public Health Sub Comm. ACC
1. Public Health Reg. IV
1. Major Larson
1. Agricultural Reg. IV

Enclosures 2
Copies of estimates

HEADQUARTERS
14 JUL 1944
A. C. C.

Ref Col Rapan
1928
Why is this referred to me? He should make his requirement.
Eng. 15/7

15 Jul

Declassified E.O. 12356 Section 3.3/NND No. 785019

On 17 Jul, after seeing Col. Lapsley,
I discussed this matter with Maj: Brereton
of Industry & Commerce. I then phoned
Col. Edwards, and in reply to my enquiries
obtained the following info:-

(i.) Application has been made to the
Regional Supply Officer in the approved manner
for forecasted requirements for August, that
is they the application was submitted in
time for Riding on the monthly Board
on 15th.

(ii) The quantities in the annexed sheets,
however, represent D.O.L. required immediately
for the remainder of July, and have
nothing to do with the normal application.

(iii) The 8 trucks and 3 motor cycles
should NOT have been included. Col. Edwards
intends to omit a separate letter about them.

Maj: Brereton, though he has
hopeful of obtaining results, has kindly
promised to do his best to secure the
release of some of the D.O.L. at once. I
have promised to see him again tomorrow
afternoon.

[signature] Maj: R.E.
17 Jul 44

Declassified E.O. 12356 Section 3.3/NND No. 785019

WAR DEPARTMENT
Q. M. C. Form No. 401
Revised April 6, 1931

ESTIMATE.

**REQUISITION**

(EXTRA SHEET)

No. 6

Sheet No. _____

| STOCK NO. | ARTICLES | UNIT | ON HAND AND DUE | CONSUMED | REQUIRED | APPROVED |
|---|---|---|---|---|---|---|
| | Gasoline,motor | gal | | | 7527 | |
| | Oil,motor, S A E 30 | qts | | | 180 | |
| | OIL,motor S A E 40 | qts | | | 75 | |
| | Oil,air filter,S A E 50 | qts | | | 54 | |
| | Gear lubricant,EP Nº 140 | qts | | | 40 | |
| | Grease,truck roller,type | lbs | | | 55 | |
| | Grease,wheelbearing,type | lbs | | | 11 | |
| | Grease,cup medium,type A | lbs | | | 10 | |
| | Grease,cup, Nº 3 | lbs | | | 10 | |
| | Grease,cable, open gear type 1 | lbs | | | 88 | |
| | LAST ITEM | | | | | |

NOTE : the fuel and lubricants in the quantities indicated above are essential for the operation of excavating machinery and motor vehicles to be used in the restoration of engineering projects at the Pontine Marshes, for a period of one month.
A copy of either Tally-Out or Shipping Ticket is requested.

1927

U. S. GOVERNMENT PRINTING OFFICE 3—9256

Declassified E.O. 12356 Section 3.3/NND No. 785019

WAR DEPARTMENT
Q. M. C. Form No. 401
Revised April 6, 1921

ESTIMATE

**REQUISITION**

(EXTRA SHEET)

No. 5

Sheet No. _____

| STOCK NO. | ARTICLES | UNIT | ON HAND AND DUE | CONSUMED | REQUIRED | APPROVED |
|---|---|---|---|---|---|---|
| | Truck, 2½ Ton, 6x6 cargo | ea. | 0 | 0 | 8 | |
| | Motorcycle | ea. | 0 | 0 | 3 | |
| | Fuel, Diesel, 28)36 deg. | gal. | 0 | 0 | 2000 | |
| | Oil, crank case, Diesel, Navy No. 9170, SAE 20 | qts. | 0 | 0 | 75 | |

NOTE: Items 1 & 2 are needed in connection with the restoration of engineering projects at the Pontine Marshes. The trucks will be used to carry personnel to and from work projects, and to haul various kinds of materials and supplies.

Items 3 & 4 are essential for the proposed operation of excavating machinery to be used in the restoration of Engineering projects at the Pontine Marshes for a period of one (1) month.

1928

U. S. GOVERNMENT PRINTING OFFICE 3—0238

FOR INCLUSION IN FILE 159.

# PONTINE MARSHES.

This envelope contains copies of the three urgent telegrams submitted on 18 JUL 44. These copies have been sent out for record purposes, and they include Form ACC/1, signed by all concerned, and also the observations of the Basic Circle.

The director of the P.W.E.C. Sub-Commission has requested the Prime authorities to make available the sum of 50,000,000 Lire out of AMG funds, for the execution of this scheme.

EJ Jnl.

Declassified E.O. 12356 Section 3.3/NND No. 784019

by all concerned, and also to
observations of the Swiss Civils.

The Director of the P.W.& O.
Sub-Commission has requested
to insure on this list of
such available the sum
of £ 50,000,000 Lire out of
the funds, for the execution
of the Scheme.

Ltn
Lt Col.

(159)
Supplement

Declassified E.O. 12356 Section 3.3/NND No. 748019

a

1535

Ricev. 18 Gal 46

# CONSORZIO DELLA BONIFICAZIONE PONTINA

ROMA

## Perizia dei lavori e impianti occorrenti per lo sgombero e pulizia dei canali e per il ripristino delle officine consorziali

*Elenco degli allegati*

*Alleg. 1 - Corografia generale*

*" 2 - Stima generale*

Declassified E.O. 12356 Section 3.3/NND No. 785019

# Perizia dei lavori e impianti occorrenti per lo sgombero e pulizia dei canali e per il ripristino delle officine consorziali

## *Elenco degli allegati*

*Alleg. 1 - Corografia generale*

*" 2 - Stima generale*

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Roma 18 LUG 1944 XXII

Corpo del Genio Civile

L'ISPETTORE GENERALE PER IL COMPARTIMENTO
DEL LAZIO ED UMBRIA

Prot. N.° 1535

Risposta al foglio N.° del

Al L'A.M.G.

ROMA

Oggetto Consorzio della bonificazione Pontina- Progetto sgombero ostruzioni dei canali, riparazione argini, diserbi canali e ripristino officina

Il Consorzio della bonificazione Pontina ha redatto in data 8 corr. mese un progetto, dell'importo complessivo di Lire 17.965.000 dei lavori di sgombero delle ostruzioni dei canali eseguite dai tedeschi al fine di provocare allagamenti delle campagne circostanti; di ripristino argini tagliati; di diserbi( sia meccanici che a macchina); di apertura di un tratto ( della lunghezza di circa 250 metri) di canale che permetta di scaricare il Fiume Ufenta nell'Amasseno presso Ponte maggiore al fine di rendere possibile l'accesso delle motobarche diserbatrici nell'Ufente e la rimozione del materiale ostruente il detto Fiume sotto il Ponte dell'Appia.

Per prosciugare ~~suddetta~~ sino alla quota 1 la Zona del Quartuccio fra l'Appia e la collina é pure prevista l'apertura di un canale( lungo circa 700 metri) fra il collettore di arrivo e l'emissario dell'impianto idrovoro di Forcellata.

Il progetto prevede ancora il restauro dei fabbricati di Terracina( autorimessa ed alloggio) e di Pontemaggiore ( cantiere) l'acquisto di 6 gruppi motopompa da 6 a 12 HP,

Declassified E.O. 12356 Section 3.3/NND No. 785019

tre piccoli battipali a mano, paranchi, ecc. carriole, pale, picconi, sacchi a terra, legname vario.

E' stata anche preventivata la spesa per il re upero delle 3 draghe e degli altri natanti del Consorzio, nonché l'acquisto di 2 autocarri, un camioncino e 4 autovetture.

Infine é stata fatta la previsione(L. 400.000) del ripristino dell'impianto telefonico Consorziale( Pontemaggiore- Codurda; Pontemaggiore Terracina; Pontemaggiore-Polo Appio- Littoria)

Le previsioni di spesa sono state fatte in parte a misura ed in parte a calcolo.

Esaminato il progetto esprimo in linea generale parere favorevole alla sua approvazione ritenendo ammissibili i lavori proposti; solo osservo che il costo del nolo giornaliero( pag.2 lettera a della stima) della barca da palombaro( compreso il palombaro un marinaio guida 2 marinai per l'azionamento della macchina ed il marinaio addetto alla barca) esposto in L. 3.000 é assolutamente insufficiente; da indagine fatte presso Ditte specializzate debba essere elevato( compreso tutti gli oneri e benefici) a L. 5.600; con il che si avrebbe una maggiore spesa di L.234.000- che può trovare capienza nella somma per gli imprevisti ed in parte con qualche economia che potrà realizzarsi nell'appalto dei lavori.

A proposito dell'esecuzione dei lavori si consiglia che la maggior parte di essi venga eseguita a mezzo di imprese( se ne dovrebbero invitare almeno tre e scegliere fra queste quella che avrà fatta l'offerta più vantaggiosa;) potranno essere utilmente eseguiti dal Consorzio i lavori di diserbo meccanico, quei dragaggi da eseguire con le proprie draghe la riparazione del proprio macchinario e simili. Per i lavori di cui nel progetto sui é indicato a calcolo l'importo i prezzi dovranno ottenere il benestare dell'Ufficio del Genio Civile di Littoria che avrà l'alta sorveglianza dell'opera

L'ISPETTORE GEN. DI COMPARTIMENTO
(A.Alicata)

Alicata

ALLIED CONTROL COMMISSION
PUBLIC WORKS AND UTILITIES SUB-COMMISSION
Estimate of Work to be carried out

Form ACC/I
(Estimate
Revised
7 June 44)

Note: This form to be filled in triplicate; one copy to be retained in Sub-Comm. H.Q., File, one to be returned to the Regional Engineer when approved, and one to be sent to the Minister of Public Works.

ESTIMATES - CAPITAL EXPENDITURE
( APPROVALS )

1. (a) Building, Bridge, Road, Power Stn, Pumping Stn etc, and location Removal of obstructions and debris, constructing diversion channels, restoring earthfills, rebuilding workshops, and securing tools and equipment in the
(b) By contract or direct labour Both / ~~BONIFICA PONTINA~~
(c) Amount of approximate estimate 17.965.000
(d) Urgency of project Most urgent
(e) Probable time for completion Three months
(f) Special remarks This project is necessary to adequately restore the drainage system so that a large area will be available for agricultural purposes, and to eliminate a malarial hazard.

2. Certificates:

(a) Certified that the attached approximate estimate amounting to Lire 17.965.000 has been prepared by me; it covers the full requirements of the project, and is reasonable in amount.

Italian Engineer
Signature Ing. Leone Terzi Ing Leone Terzi
Official designation General Director
Date, and place 9 July 1944 - Rome, Italy

(b) Agree with the preceding certificate and recommend approval.

Approved
Harry Larson, Major G.S.
Harry Larson, Major G S Date 9 July 1944
Regional Engineer, or his representative.

3. Approved.

(~~Highway Fund~~)
(~~Other~~ Spec. funds ) H. M. Labouisse Lt Col.
Minister of Public Works

Declassified E.O. 12356 Section 3.3/NND No. 785019

1. (a) Building, Bridge, Road, Power Stn, Pumping Stn etc, and location Removal of obstructions and debris, ~~constructing diversion channels, restoring earthfills,~~ rebuilding workshops, and securing tools and equipment in the

(b) By contract or direct labour ~~Both~~ / ~~BONIFICA PONTINA~~

(c) Amount of approximate estimate 17.965.000

(d) Urgency of project Most urgent

(e) Probable time for completion Three months

(f) Special remarks This project is necessary to adequately restore the drainage system so that a large area will be available for agricultural purposes, and to eliminate a malarial hazard.

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Italian Engineer

Signature Ing. Leone Terzi Ing Leone Terzi

Official designation General Director

Date, and place ~~9 July 1944 - Rome, Italy~~

Approved I agree with the preceding certificate and recommend approval.

Harry Larson

Harry Larson, Major C E Date ~~9 July 1944~~

Regional Engineer, or his representative.

3. Approved.

(~~Highway Fund~~)
(~~Other~~ funds ) Spec.

H. A. Labson Lt Col.

Chief Public ~~Works~~ Works Div. P.W.& U.Sub-Comm.ACC.

4. Approved. 26/7/44

Director, P.W.& U. Sub-Commission A.C.C.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

BEST COPY POSSIBLE

alleg. 2

# CONSORZIO

## DELLA BONIFICAZIONE PONTINA

## ROMA

OPERE COMPLEMENTARI DELLA BONIFICA

~~PROGETTO~~

Progetto : LAVORI E IMPIANTI PER LO SCOLMO E PULIZIA

CANALI E PER IL RIPRISTINO DELLE OPPICINE E OPIFICI CONSORZIALI

## STIMA DEI LAVORI

Roma, li 8 luglio 1944

VISTO L'ISPETTORE COMPARTIMENTALE
(A. Alicata)

Visto: IL DIRETTORE

L'INGEGNERE

Declassified E.O. 12356 Section 3.3/NND No. 785019

[redacted]

Progetto : LAVORI E IMPIANTI PER LO SCOMBRO E PULIZIA

CANALI E PER IL RIPRISTINO DELLE OFFICINE E CANTIERI COMMERCIALI

[redacted]

## STIMA DEI LAVORI

Roma, li 6 luglio 1944

VISTO L'ISPETTORE COMPARTIMENTALE
(A. Nicola)

Visto: IL DIRETTORE

L'INGEGNERE

Tip. R. Ceccoli - Roma - Via Piave 52

declassified E.O. 12356 Section 3.3/NND No. 785019

| Num. d'ordine | Num. di elenco o di analisi | DESIGNAZIONE DEI LAVORI | QUANTITÀ | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | A) - Sgombero e pulizia canali | | | | |
| | | ——— § ——— | | | | |
| 1 | - | Demolizione ed asportazione dei rottami relativi a sette sbarramenti costruiti dal nemico attraverso i seguenti alvei principali: 1 - Emissario generale (nella foce di Sadino e al ponte della Prov. Terracina - S. Felice) ..... nº 2 2 - Canale di Navigazione (a Terracina e a Pontemaggiore) ..... nº 2 3 - Amaseno (a Nove Venti) ..... nº 1 4 - Ufente (a Pontemaggiore) ..... nº 1 5 - Diversivo di Linea (Ponte migl. 58) .... nº 1 totale nº 7 | | | | |
| | | ——— | | | | |
| | | Si prevede che lo sgombero richieda tre mesi, con lavoro a mano e con l'impiego di un palombaro per la preparazione dei fornelli e il collocamento di esplosivi; é i- | | | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

———}———

1 - **Demolizione ed asportazione** dei rottami relativi a sette sbarramenti costruiti dal nemico attraverso i seguenti alvei principali:
1 - Emissario generale (nella foce di Badino e al ponte della Prov. Terracina - S. Felice) ..... nº 2
2 - Canale di Navigazione (a Terracina e a Pontemaggiore) ..... nº 2
3 - Amaseno (a Nove Ponti) ..... nº 1
4 - Ufente (a Pontemaggiore) ..... nº 1
5 - Diversivo di Linea (Ponte migl. 58) .... nº 1
totale nº 7

---

Si prevede che lo sgombero richieda tre mesi, con lavoro a mano e con l'impiego di un palombaro per la preparazione dei fornelli e il collocamento di esplosivi; è inoltre necessaria l'opera di un escavatore a cingoli e gru mobile, muniti di benna nor-

Declassified E.O. 12356 Section 3.3/NND No. 785019

| N. d'ordine | Num. di elenco o di analisi | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | dente della capacità di almeno due yarde cubiche per lo sgombero. | | | | |
| | | a) Noleggio di barca da palombaro completamente attrezzata e servita dal personale specializzato occorrente: per giorni 90 a L.3.000= per giorni ..... | 90 | 3.000 | 270.000 | |
| | | b) Noleggio di escavatore o mezzo come sopra, completamente attrezzato e servito da due macchinisti giorni 90 a L.4.000 p.g. | 90 | 4.000 | 360.000 | |
| | | c) Prestazioni di manovali e terrazzieri per il servizio dei mezzi d'opera, la preparazione e rimozione delle impalcature e postazioni di lavoro, lo scarico e trasporto dei materiali di risulta, finimenti vari e opere accessorie: Si stima un fabbisogno complessivo di 10.400 giornate-operaio.( 130 operai in media per tre mesi,con 80 giornate di lavoro ef= | | | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| | | | | | |
|---|---|---|---|---|---|
| | a) Noleggio di barca da palom bare completamente attrezzata e servita dal personale specializzato occorrente: per giorni 90 a L.3.000== per giorni ..... | 90 | 3.000 | 270.000 | |
| | b) Noleggio di escavatore o mezzo come sopra, completamente attrezzato e servito da due macchinisti giorni 90 a L.4.000 p.g. | 90 | 4.000 | 360.000 | |
| | c) Prestazioni di manovali e terrazzieri per il servizio dei mezzi d'opera, la preparazione e rimozione delle impalcature e postazioni di lavoro, lo scarico e trasporto dei materiali di risulta, finimenti vari e opere accessorie: Si stima un fabbisogno complessivo di 10.400 giornate-operaio.( 130 operai in media per tre mesi,con 80 giornate di lavoro effettivo in media) al prez= | | | | |
| | Da riportare | | | 630.000 | |

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| N. d'ordine | Num. di elenco o di analisi | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | | | | 630.000 | |
| | | Importo | | | | |
| | | se da L.141 al giorno più | | | | |
| | | la base di una mercede fi | | | | |
| | | ssa ordinaria di L.90 gior | | | | |
| | | naliere, più il 15 % di | | | | |
| | | maggiorazione per lavoro | | | | |
| | | in acqua per 2/3 delle | | | | |
| | | giornate (ossia il 10 % | | | | |
| | | sulla media), e il 60% per | | | | |
| | | oneri accessori secondo | | | | |
| | | le disposizioni vigenti: | 10.400 | 141 | 1.466.400 | |
| | | a) Provvista di esplosivi | | | | |
| | | detonatori e micce, e re | | | | |
| | | lativi trasporti interni | | | | |
| | | li, per le impalcature e | | | | |
| | | per i cantieri di lavoro: | | | | |
| | | a calcolo..... | | | 160.000 | |
| | | | | | | 2.256.400 |
| 2 | | Riscrizione di costruzioni esi | | | | |
| | | stenti col progetto orelle | | | | |
| | | dei ponti nel canale Portato | | | | |
| | | re (1) Riverstivo di Idice (1) | | | | |
| | | Canale di Navigazione (4), Ca | | | | |
| | | nale Idice (2), Diente (1), Ca | | | | |
| | | vata (1), Emissario di Bonifi | | | | |
| | | che (1), Scaricatore di Formel | | | | |
| | | lata (1), Argenero (1), in To | | | | |
| | | tale n° 17. | | | | |

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| | | | | |
|---|---|---|---|---|
| | | da ordinaria di m.30 x m.1 | | |
| | | naliere, più il 15 % di | | |
| | | maggiorazione per lavoro | | |
| | | in serie per 2/3 delle | | |
| | | giornate (esclusi il 10 % | | |
| | | sulla media), e il 60% per | | |
| | | oneri accessori secondo | | |
| | | le disposizioni vigenti: | 10.400 | 141 | 1.466.400 |
| | d) | Provvista di esplosivi | | | |
| | | detonatori e micce, e sua | | | |
| | | legge: a numero imprecisato | | | |
| | | di, per le impalcature e | | | |
| | | per i cantieri di lavoro: | | | |
| | | a corpo | | | 160.000 |
| | | | | | 1.256.400 |
| 2 | - | Fornitura di centinature per | | | |
| | | archi col preventivo arco | | | |
| | | dei ponti nel canale Portato | | | |
| | | re (1) Diversivo di Lanza (1) | | | |
| | | Canale di Navigazione (4), Ca | | | |
| | | nale Lanza (2), Difesa (3), Ca | | | |
| | | vata (1), Emissario di Torrac | | | |
| | | chia (1), Diversivo di Torrel | | | |
| | | lata (1), Arsenale (1), in to | | | |
| | | tale n° 17. | | | |
| | | Si prevede che il lavoro, per | | | |
| | | il quale sarà necessaria l'o | | | |
| | | | | | 1.256.400 |
| | | Da riportare | | | |

| N. d'ordine | Num. di elenco o di analisi | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | Riporto | | | | 2.256.400 |
| | | pera del palombaro e dell'escavatore di cui al nº 1, poss. da essere eseguito, quanto all'opera dei mezzi subacquei, contemporaneamente al lavoro di cui al Nº1 (a-b) e perciò non si appone una particolare previsione di spesa al riguardo. Si prevede però che per la rimozione dei rottami possa anche essere convenientemente utilizzato il piccolo escavatore a drag-line (Huston 21-B)di cui il Consorzio già dispone e per il quale si valuta un impiego di 60 giornate con la spesa di cui al seg.par.a). | | | | |
| | | a) per noleggio, montaggio e smontaggio del mezzo, con due meccanici: L.1.500 per giorno cadun | 60 | 1.500 | 90.000 | |
| | | b) provvista di combustibile e lubrificanti come al Nº1-c; si stima un fabbisogno complessivo di 5.000 giornate operate (10 operai in ra | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| l'opera dei vari rappresentanti, contemporaneamente al lavoro di cui al NA1 (a-b) e perciò non si espone una particolare previsione di spesa al riguardo. Si prevede però che per la rimozione dei rottami possa anche essere convenientemente utilizzato il piccolo escavatore a drag-line (Ruston 21-B)di cui il Consorzio già dispone e per il quale si valuta un impiego di 60 giornate con la spesa di cui al seg.par.a). | | | | | |
| a) per smontamento, mensilizzazione ed esercizio del mezzo, con due meccanici: L.1.XXX per giorno cadun | 60 | 1.500 | 90.000 | | |
| b) trasporto di macchine e attrezzature come al NA1-c; si stima un fabbisogno complessivo di t.600 giornate operaie (200 operai in media per 3 mesi con 60 giornate lavorative in media) . . . . . | t.600 | 141 | 1.733.600 | | |
| | | | 1.823.600 | 2.256.400 | |
| Da riportare | | | | | |

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| N. d'ordine | Num. di elenco o di rilievi | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | Riporto | | | 1.443.600 | 2.256.400 |
| | | c)provvista di esplosivi ecc. come al nº 1-d a calcolo | | | 236.000 | |
| | | | | | | 1.679.600 |
| 3 | | Rimozione di minori ostruzioni da erbe accumulate contro gli ostacoli, e da materiali vari nei Canali suddetti, nel Mortaccino, nel Botte, e nei corsi d'acqua minori. Si prevede un fabbisogno complessivo di 3.000 giornate-operaio (50 operai per due mesi e mezzo, con 60 giorni di lavoro effettivo) e con l'impiego di 3 barche per due mesi e mezzo. | | | | |
| | | a) prestazione di operaio comune al prezzo medio di L. 141 come sopra ..... | 3.000 | 141 | 423.000 | |
| | | b) noleggio di tre barche p. due mesi e mezzo (giorni complessivi 3 x 30 x 2,5= 225) a L.200 per barca al giorno ..... | 225 | 200 | 45.500 | |
| | | | | | | 468.500 |
| 4 | | Apertura di un tratto di canale provvisorio per scaricare | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | | | | 236.000 | |
| | | | | | 1.679.600 |
| 3 | Rimozione di minori ostruzioni da erbe accumulate contro gli ostacoli, e da materiali vari nei canali sunnominati, nel Mortaccino, nel Botte, e nei corsi d'acqua minori. Si prevede un fabbisogno complessivo di 3.000 giornate-operaio (50 operai per due mesi e mezzo, con 60 giorni di lavoro effettivo) e con l'impiego di 3 barche per due mesi e mezzo. | | | | |
| | a) prestazione di operaio comune al prezzo medio di L. 141 come sopra ..... | 3.000 | 141 | 423.000 | |
| | b) noleggio di tre barche p. due mesi e mezzo (giorni complessivi 3 x 30 x 2,5= 225) a L.200 per barca al giorno ..... | 225 | 200 | 45.500 | |
| | | | | | 468.500 |
| 4 | Apertura di un tratto di canale provvisorio per scaricare l'Ufente nell'Amaseno in prossimità di Pontemaggiore e ren | | | | |
| | Da riportare | | | | 4.404.500 |

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| N. d'ordine | Num. di elenco o di analisi | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | Riporto | | | | 4.404.500 |
| | | dare possibile prima di tut= to l'entrata delle motobarche diserbatrici consorziali nel l'Ufente e poi il totale sgom bero della ostruzione sotto il ponte dell'Ufente per la Via Appia.(lunghezza media me tri 250; larghezza di fondo ( a quota 0,50) m.8; profon= dità media di scavo m.2). Sezione media da scavare mq. 24 Volume totale mc.24x250=6000 Prezzo medio di scavo (a ma= no e con l'ausilio dell'esca vatore consorziale per i due imbocchi in Ufente e in Ama= seno) L. 48 per mc. ..... | 6.000 | $8 | 288.000 | |
| | | | | | | 288.000 |
| 5 | | Apertura di un canale di al= lacciamento fra il collettо= re di arrivo e l'emissario dello stabilimento idrovoro di Forcellate per permettere l'esaurimento a deflusso na= turale del bacino inondato di Quartaccio fino alla quo= | | | | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | | l'Ufente e poi il totale sgom bero della ostruzione sotto il ponte dell'Ufente per la Via Appia.(lunghezza media me tri 250; larghezza di fondo ( a quota 0,50) m.8; profon= dità media di scavo m.2). Sezione media da scavare mq. 24 Volume totale mc.24x250=6000 Prezzo medio di scavo (a ma= no e con l'ausilio dell'esca vatore consorziale per i due imbocchi in Ufente e in Ama= seno) L. 48 per mc. ..... | 6.000 | $8 | 288.000 | |
| | | | | | | 288.000 |
| 5 | | Apertura di un canale di al= lacciamento fra il collettó= re di arrivo e l'emissario dello stabilimento idrovoro di Porcellata per permettere l'esaurimento a deflusso na= turale del bacino inondato di Quartaccio fino alla quo= ta (1) circa: lunghezza m.700; larghezza | | | | |
| | | Da riportare | | | | 4.692.500 |

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| N. d'ordine | Num. di elenco o d. analisi | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | **Riporto** | | | | 4.692.500 |
| | | di fondo (a quota 0,50) m.4; profondità media m.2,50. Sezione media di scavo mq. 36. Volume totale 36x700=mc.25200 Modalità di lavoro e prezzo come sopra, ..... | 25.200 | 48 | 1.209.600 | 1.209.600 |
| 6 | | Restauro argini. In base alle ricognizioni locali si prevede di dover rimuovere, per il tamponamento delle breccie, un volume complessivo di 8.000 mc.con prelievo della terra da cave laterali e col sussidio di parti e pulizzate in legname nelle rotte più gravi (2 nell'utente, lunghezza complessiva m.150, altezza m.3) | | | | |
| | | a) Importo del movimento di terra, con trasporto e pilonatura in argine a L. 60 al mc. ..... | 8.000 | 60 | 480.000 | |
| | | b) Noleggio e consumo legname materiali e mezzi per le paratie, e costruzioni delle stesse, a calcolo..... | | | 190.000 | 670.000 |

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| | | | | | |
|---|---|---|---|---|---|
| | zione media di scavo mq. 36. Volume totale 36x700=mc.25200 Modalità di lavoro e prezzo come sopra, ..... | 25.200 | 48 | 1.209.600 | |
| | | | | | 1.209.600 |
| 6 | Restauro argini. In base alle ricognizioni locali si prevede di dover rimuovere, per il tamponamento delle breccie, un volume complessivo di 8.000 mc.con prelievo della terra da cave laterali e col sussidio di paratie e palizzate in legname nelle rotte più gravi (2 nell'Ufente, lunghezza complessiva m.150, altezza m.3) | | | | |
| | a) Importo del movimento di terra, con trasporto e pilonatura in argine a L. 60 al mc. ..... | 8.000 | 60 | 480.000 | |
| | b) Noleggio e consumo legname materiali e mezzi per le paratie, e costruzioni delle stesse, a calcolo..... | | | 190.000 | |
| | | | | | 670.000 |
| 7 | Pulizia degli alvei, dalle ex | | | | |
| | Da riportare | | | | 6.572.100 |

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| N. d'ordine | Num. di elenco n. di analisi | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | Riporto | | | | 6.578.100 |
| | | be e dei parziali interrimen ti. ( Il lavoro dovrà durar a meno per tutte le spondo, e per il fondo dei canali dove non possono entrare le moto- barche disarbatrici commer ciali; questo, in numero di tre, saranno impiegate per 3 mesi dal disarbo di fondo dei canali maggiori) I prezzi che si espongono ri sultano dall'esperienza ven- tennale del Consorzio, e si sono ottenuti moltiplicando per coefficienti compresi tra 2 e 3 i costi degli ultimi disarbi eseguiti nella prima vera del 1949. | | | | |
| | | a) <u>disarbo a mano e meccanico dei grandi collettori</u> e corsi d'acqua di pianura Km. ..... | 105 | 7.000 | 735.000 | |
| | | b) <u>disarbo a mano canali mi- nori</u> o inaccessibili dal- le disarbatrici .....Km. | 565 | 3.000 | 1.695.000 | |
| | | c) <u>espropriazione</u> per gli sfalci di sponda eseguiti in cana | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| non possono entrare le motobarche diserbatrici commerciali; queste, in numero di tre, saranno impiegate per 3 mesi nel diserbo di fondo dei canali maggiori) | | | | | |
| I prezzi che si espongono risultano dall'esperienza aziendale del Consorzio, e si sono ottenuti moltiplicando per coefficienti compresi tra 2 e 3 i costi degli ultimi diserbi eseguiti nella primavera del 1943. | | | | | |
| a) <u>diserbo a mano e meccanico dei grandi collettori</u> e corsi d'acqua di pianura Km. ..... | 109 | 7.000 | 735.000 | | |
| b) <u>diserbo a mano canali minori</u> e inaccessibili delle diserbatrici .....Km. | 565 | 3.000 | 1.695.000 | | |
| c) <u>spurghi</u> per gli effetti di sponda eseguiti in canali con acqua perenne (maggior disagio per il taglio, | | | | | |
| Da riportare | | | 2.430.000 | 6.57[illegible].000 | |

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| N. d'ordine | Num. di elenco o di cantiere | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | Riporto | | | 2.430.000 | 6.572.000 |
| | | maggior lavoro per la ram= | | | | |
| | | pinatura, impiego di bar= | | | | |
| | | che, e manovre per diver= | | | | |
| | | sioni parziali delle acque) | | | | |
| | | Km. ..... | 450 | 1.500 | 675.000 | |
| | | d) ammortamento e manutenzio= | | | | |
| | | ne motobarche consorziali | | | | |
| | | e noleggio barche e mate= | | | | |
| | | riali per i lavori di cui | | | | |
| | | al titolo precedente a | | | | |
| | | calcolo ..... | | | 180.000 | |
| | | | | | | 3.285.000 |
| | | Importo totale lavori del cap.A (sgombero e pulizia dei canali) .....L. | | | | 9.857.000 |
| | | B) Restauro e riattrezzatura delle Officine e dell'organizzazione cantieri | | | | |
| 1 | | Restauro ai fabbricati ed al= | | | | |
| | | le opere murarie in genere | | | | |
| | | A Terracina: autorimessa e | | | | |
| | | soprastante alloggio e muro | | | | |
| | | di sponda. A Pontemaggiore: | | | | |
| | | ponte di accesso al Cantiere; | | | | |
| | | tramezzi e pareti delle tet= | | | | |
| | | teie-magazzino) a calcolo .. | | | 360.000 | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | | che, e manovre per diver= sioni parziali delle acque, Km. ..... | 450 | 1.500 | 675.000 | |
| | d) | ammortamento e manutenzio= ne motobarche consorziali e noleggio barche e mate= riali per i lavori di cui al titolo precedente a calcolo ..... | | | 180.000 | |
| | | | | | | 5.285.000 |
| | | Importo totale lavori del cap.A (sgombero e pulizia dei canali) .....L. | | | | 9.857.000 |
| | | B) Restauro e rimessatura delle Officine e dell'organizzazione cantieri | | | | |
| 1 | | Restauro ai fabbricati ed al= le opere murarie in genere A Terracina: autorimessa e soprastante alloggio e muro di spenda. A Pontemaggiore: ponte di accesso al Cantiere; tramezzi e pareti della tet= toia-magazzino) a calcolo .. | | | 360.000 | |
| | | | | | | 360.000 |
| 2 | | Rinnovo parziale e riparazio= ne del mag= | | | | |
| | | Da riportare | | | | 360.000 |

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| N. d'ordine | Num. di ebbero o di risolse | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | **Riporto** | | | | 360.000 |
| | | chinario essenziale per l'of | | | | |
| | | ficina e degli attrezzi e u= | | | | |
| | | tensili indispensabili: (un | | | | |
| | | trasformatore da 20KVA, tre | | | | |
| | | motori elettrici da 4 + 5 HP; | | | | |
| | | un trapano, una sega; rias= | | | | |
| | | setto trasmissioni; una sega | | | | |
| | | circolare; riparazione tornio; | | | | |
| | | impianto cannelli e saldatu= | | | | |
| | | re a fiamma ossiacetilenica; | | | | |
| | | strumenti e arnesi da forgia | | | | |
| | | e da banco;incudine,morse, | | | | |
| | | tanaglie, mazze, lime ecc.) | | | | |
| | | a calcolo . . . . . | | | | 260.000 |
| 3 | | Rinnovo scorte di mezzi d'o= | | | | |
| | | pera e macchinari per inter= | | | | |
| | | venti d'emergenza e servizio | | | | |
| | | cantieri. | | | | |
| | | Sei gruppi moto-pompa da 6 | | | | |
| | | a 12 HP, con le occorrenti | | | | |
| | | dotazioni di tubi; 3 pic= | | | | |
| | | coli battipali a mano; una | | | | |
| | | capra; paranchi,taglie, boz | | | | |
| | | zelli e catene e corde ecc. | | | | |
| | | a calcolo . . . . . | | | | 800.000 |
| 4 | | Ricostituzione della dotazio | | | | |
| | | ne di attrezzi e materiali | | | | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | | trasformatore da 20KVA, tre motori elettrici da 4 ÷ 5 HP; un trapano, una sega; riassetto trasmissioni; una sega circolare; riparazione torni; impianto cannelli e saldature a fiamma ossiacetilenica; strumenti e arnesi da forgia e da banco; incudine, morse, tenaglie, mazze, lime ecc.) a calcolo . . . . . | | | | 260.000 |
| 3 | | Rinnovo scorte di mezzi d'opera e macchinari per interventi d'emergenza e servizio cantieri. Sei gruppi moto-pompa da 6 a 12 HP, con le occorrenti dotazioni di tubi; 3 piccoli battipali a mano; una capra; paranchi, taglie, bozzelli e catene e corde ecc. a calcolo . . . . . | | | | 800.000 |
| 4 | | Ricostituzione della dotazione di attrezzi e materiali di scorta fissa per interventi di emergenza (grandi piene e rotture di argini); un | | | | |
| | | Da riportare | | | | 1.420.000 |

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| N. d'ordine | Num. di elenco o di analisi | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | **Riporto** | | | | 1.420.000 |
| | | centinaio di carriole, circa trecento pale e duecento picconi, cinquanta palanchini, cinquanta mazze, cinquanta martelline, trenta asce, e trenta piccozzini, diecimila sacchi a terra, cento torce a vento, duecento quintali di cemento, duecento metri cubi di legname tondo o grossamente squadrato per armature, duecento metri cubi di tavolame per ponteggi, chiodi e cavigli, filo metallico ecc. | | | | |
| | | a calcolo . . . . . | | | | 1.100.000 |
| 5 | | Recupero e rimessa in efficienza di mezzi d'opera galleggianti comerciali. Una draga a vapore (parzialmente affondata); due draghe minori (affondate) tre motobarche diserbatrici e due barconi; | | | | |
| | | a calcolo . . . . . | | | | 600t000 |
| 6 | | Ricostruzione del porto ca- | | | | |

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coni, cinquante palanchini, cinquante mazze, cinquante martelline, trente accie, e trente picconcini, diecimila sacchi a terra, cento torcie a vento, duecento quintali di cemento, duecento metri cubi di legname tondo e grossamente squadrato per armature, duecento metri cubi di tavolame per ponteggi, chiodi e caviglie, filo metallico ecc.

a calcolo . . . . . 1.100.000

5 Recupero e rimessa in efficienza di mezzi d'opera galleggianti consorziali.

Una draga a vapore (parzialmente affondata);

due draghe minori (affondate)

tre motobarche diserbatrici

e due barconi;

a calcolo . . . . . 6007000

6 – Ricostruzione del parco automezzi (due autocarri, un

Da riportare 3.120.000

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| N. d'ordine | Num. di riferimento ai singoli articoli | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | **Riporto** | | | | 3.120.000 |
| | | camioncino e quattro autovetture, con le deteriori e accessorie relative; a calcolo ..... | | | | 1.500.000 |
| 7 | - | Ripristino dei tronchi esterni dell'impianto telefonico consortile (Pontemaggiore-Cadarèe, Pontemaggiore-Terracina, Pontemaggiore-Foro Appio - Littoria) Km. 56 di linea con un centralino a otto apparecchi; a calcolo ..... | | | | 400.000 |
| | | Importo totale opere e impianti del Cap.3. (Restauro e riattrezzatura officine e cantieri) | | | L. | 3.020.000 |
| | | - - - - - - | | | | |
| | | STIMA CONSUNTIVA | | | | |
| | | Lavori e impianti: | | | | |
| | | Sgombro e pulizia canali (stima a) | | | L. | 2.557.000 |
| | | Ripristino officine e cantieri (stima b) | | | * | 9.620.000 |
| | | Totale | | | L. | 14.677.000 |
| | | Imprevisti ( 5 % circa ) | | | * | 744.000 |
| | | | | | L. | 15.421.000 |
| | | Spese generali (il 15 % circa) | | | * | 2.344.000 |
| | | Ammontare della stima | | | L. | 17.965.000 |

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7 - Ripristino dei tronchi esterni dell'impianto telefonico concorziale (Pontemaggiore-Cofarda, Pontemaggiore-Terracina, Pontemaggiore-Foro Appio - Littoria) Km. 56 di linea con un centralino a otto apparecchi;
a calcolo ..... 400.000

Importo totale opere e impianti del Cap.B.
(Restauro e riattrezzatura officine e cantieri) L. 5.020.000

- - - - - -

STIMA COMPLESSIVA

Lavori e impianti:

| | | |
|---|---|---|
| Sgombro e pulizia canali (stima a) | L. | 9.857.000 |
| Ripristino officine e cantieri (stima b) | " | 5.020.000 |
| Totale | L. | 14.877.000 |
| Imprevisti ( 5 % circa ) | " | 744.000 |
| | L. | 15.621.000 |
| Spese generali (il 15 % circa) | " | 2.344.000 |
| Ammontare della stima | L. | 17.965.000 |

Roma 8 luglio 1946

IL DIRETTORE

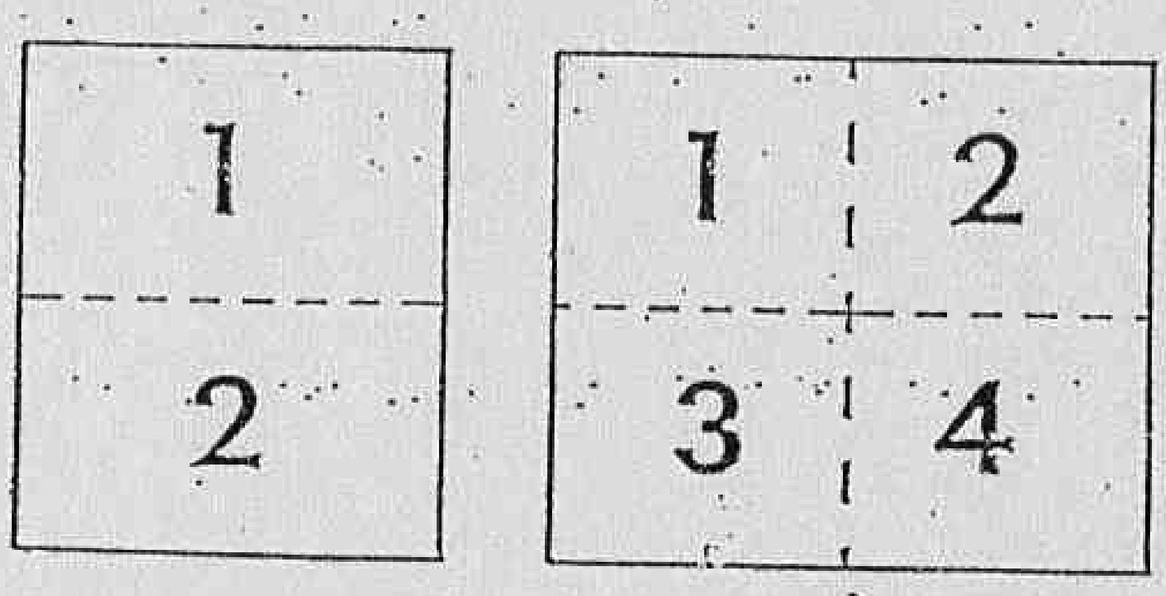
Ing. Lorenzo Pesce

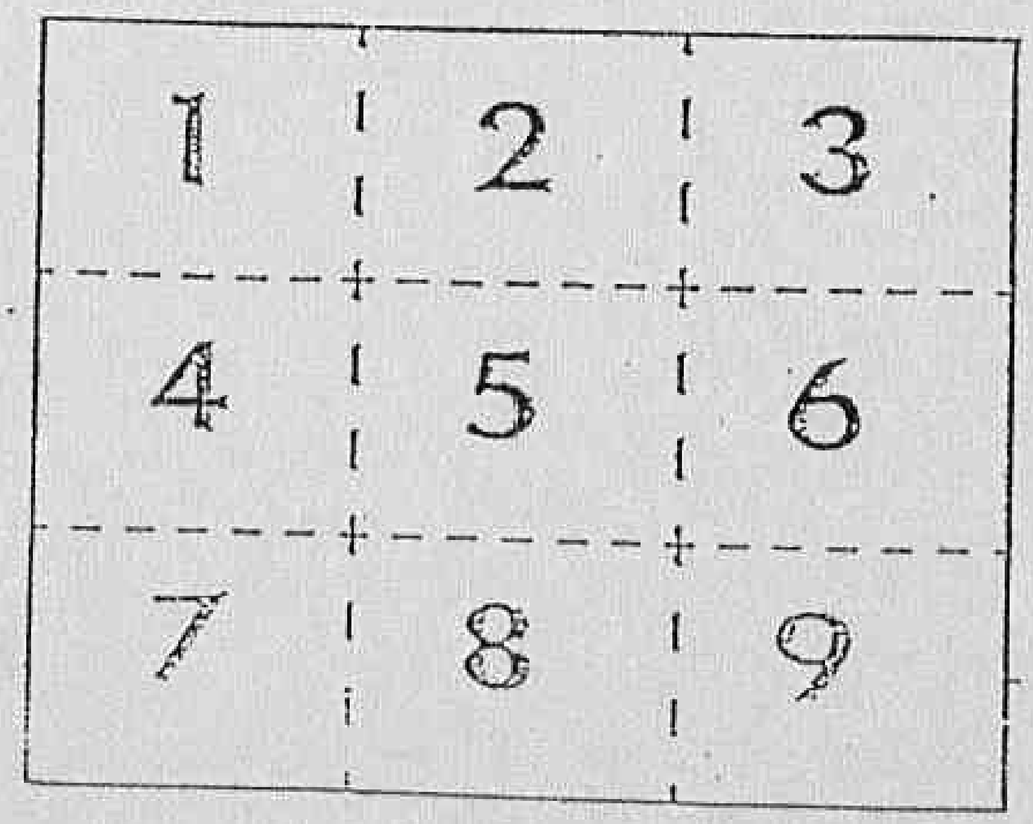
Declassified E.O. 12356 Section 3.3/NND No. 785019

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MAPS AND CHARTS TOO LARGE TO FILM
ON ONE EXPOSURE ARE FILMED CLOCKWISE
BEGINNING IN THE UPPER LEFT CORNER,
LEFT TO RIGHT, AND TOP TO BOTTOM.

SEE DIAGRAMS BELOW.



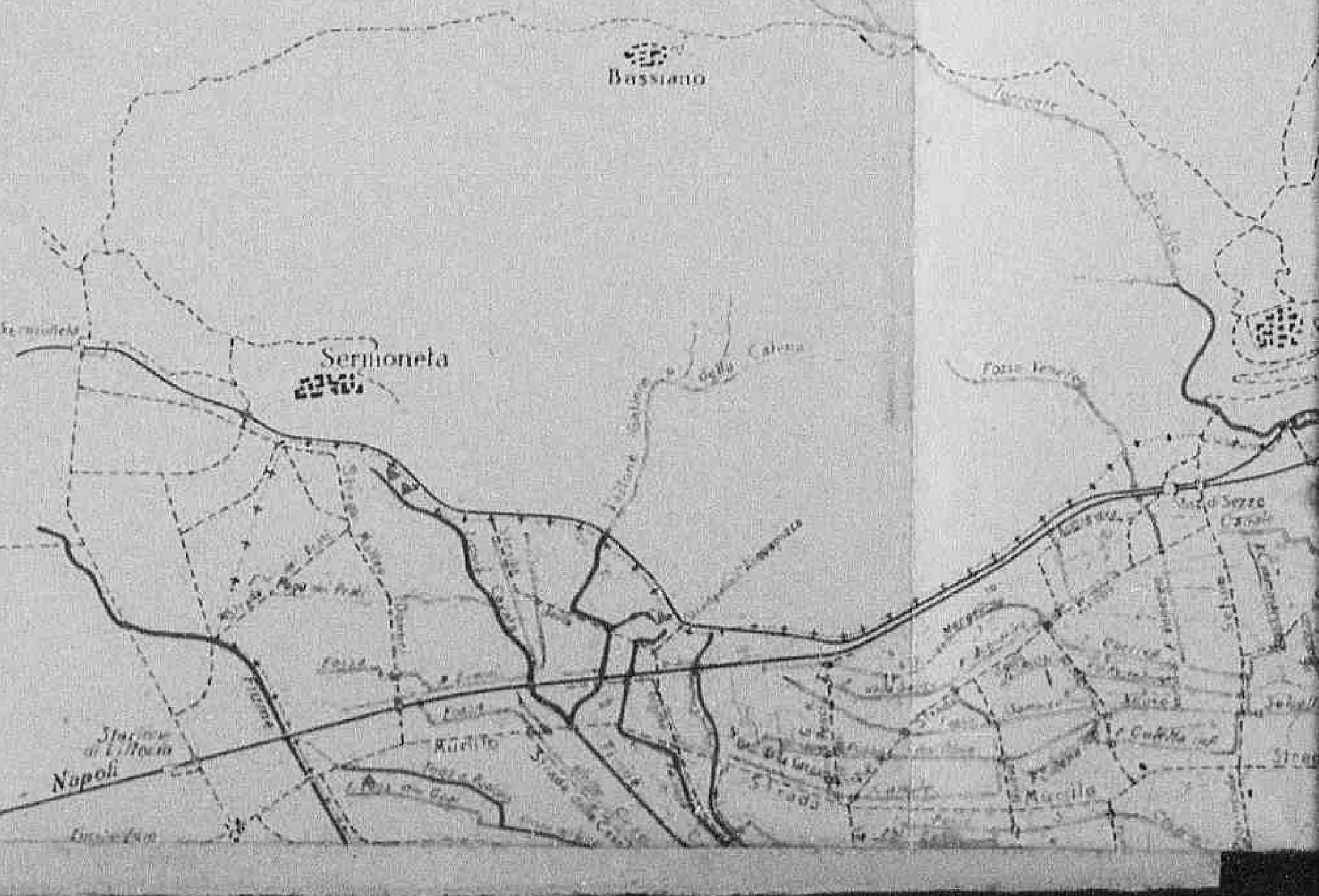
Declassified E.O. 12356 Section 3.3/NND No. 785019

# CONSORZIO
## DELLA BONIFICAZIONE PONTINA

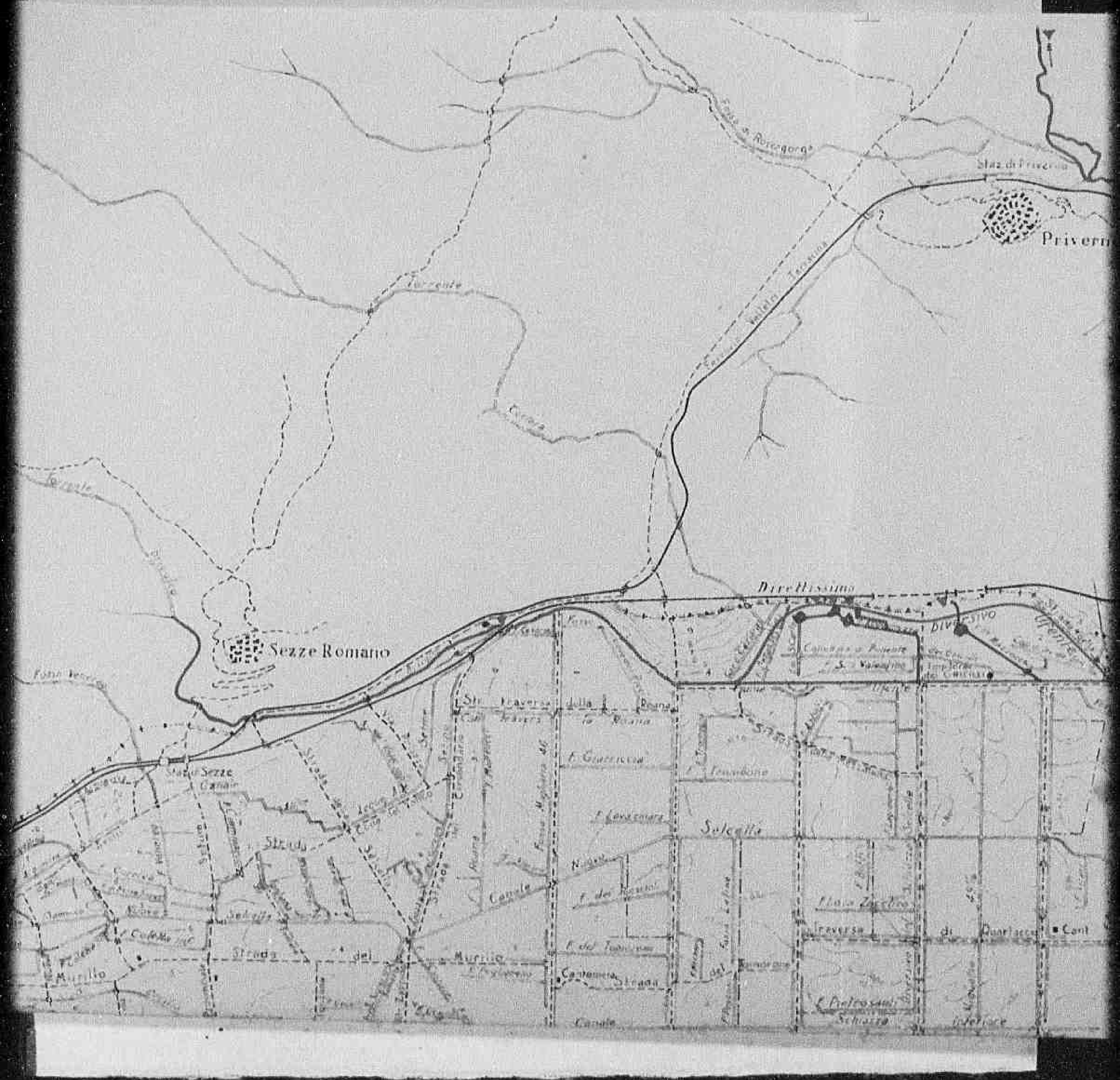
*alleg 1*

# COROGRAFIA

0 1 2 3 4 5 Km



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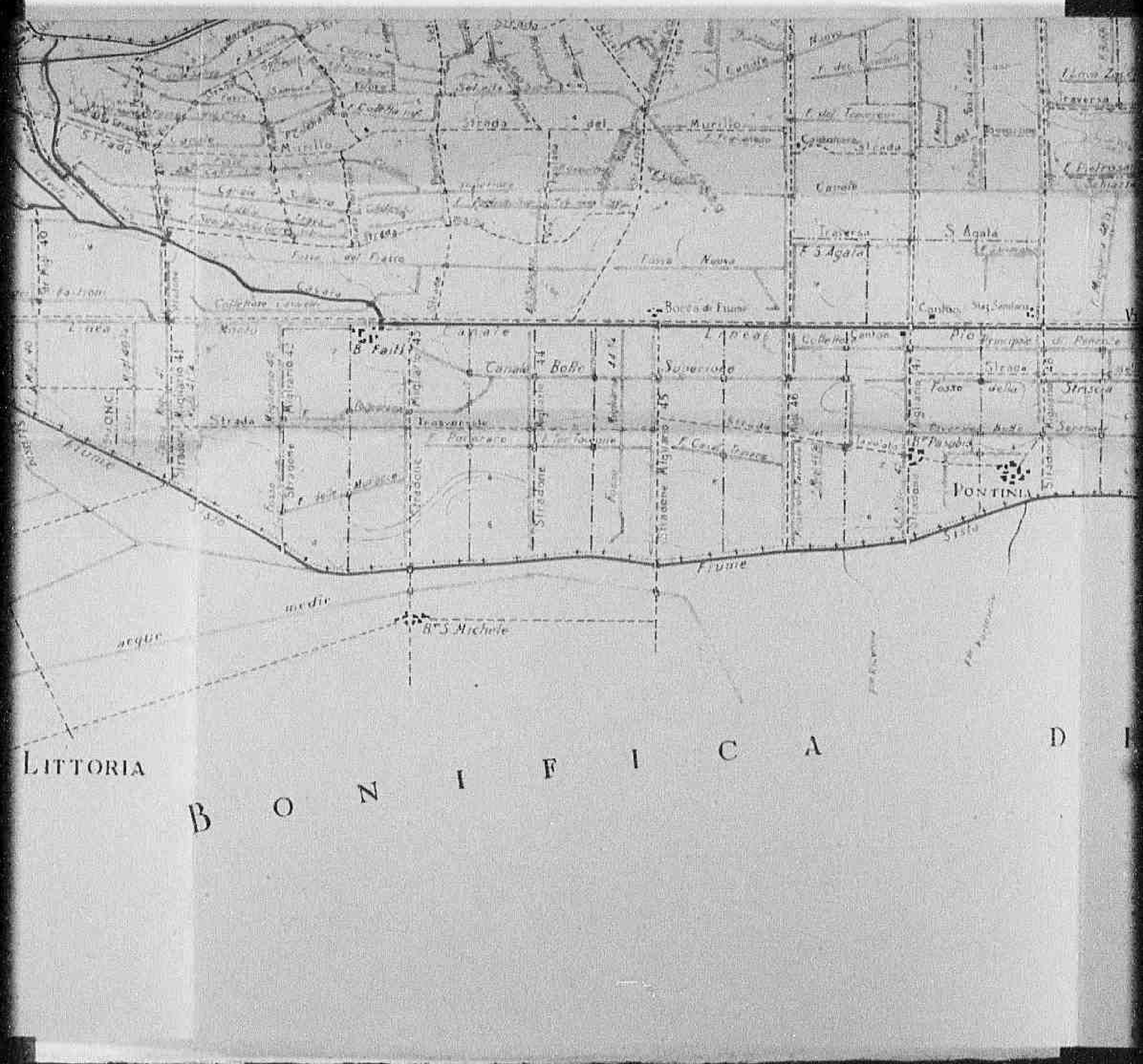


Declassified E.O. 12356 Section 3.3/NND No. 785019

Via Appia

LITTORIA

Declassified E.O. 12356 Section 3.3/NND No. 785019


Fosso
Strada
Fiume
Canale
Fosso Nuovo
Fosso Vecchio
Fosso della Botte
Fosso della Cavata
Fosso della Cavata Grande
Fosso della Cavata Piccola
Fosso della Cavata Piccolissima
Fosso della Cavata Piccolissima
Fosso della Cavata Piccolissima

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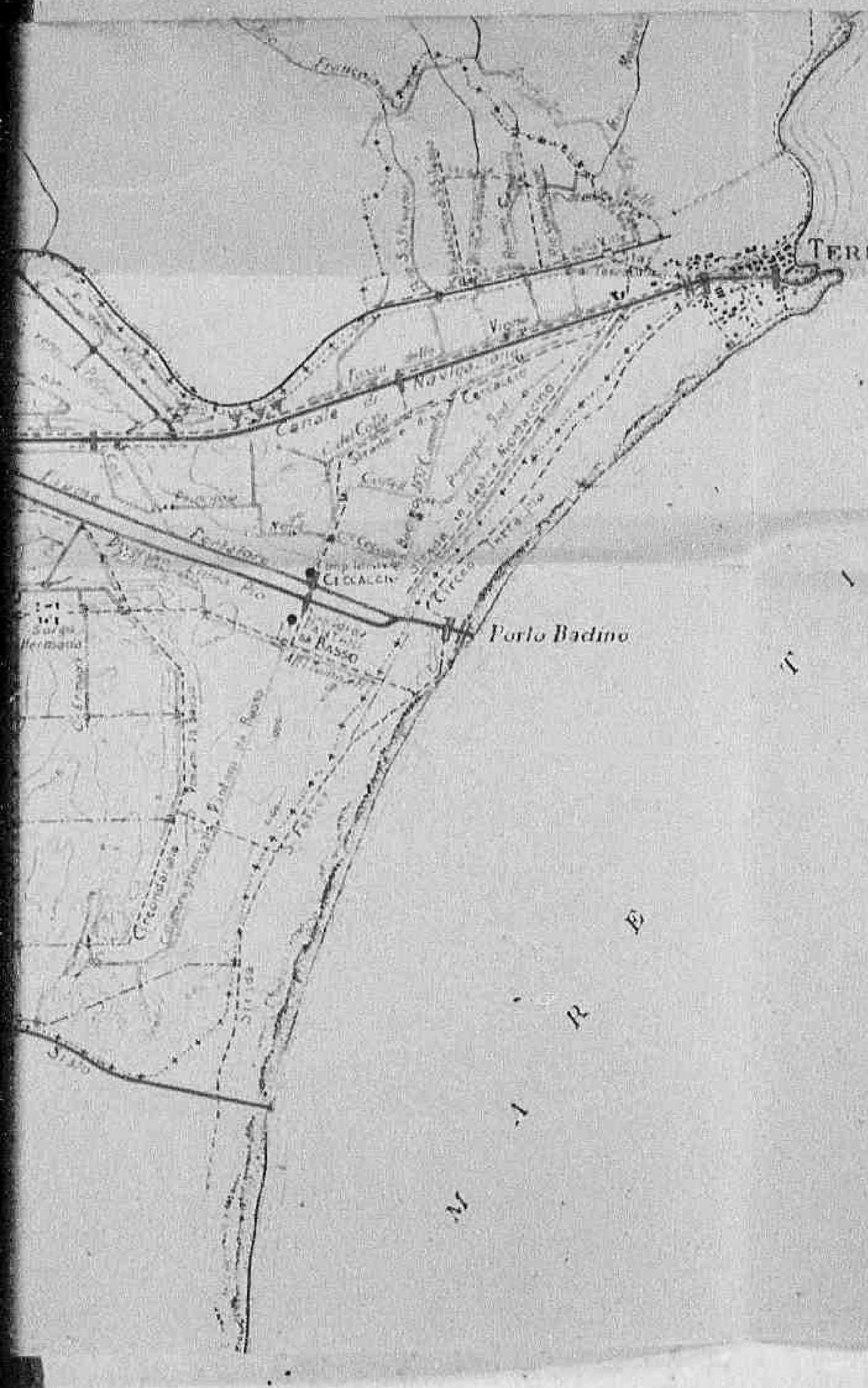



DI LITTORIA

Declassified E.O. 12356 Section 3.3/NND No. 785019


PONTE MAGGIORE
MATERA
TABIO
SEGA
CAPOSELE
Canton
Strada Provinciale
Canale
Fiume
Ponte
Strada
Via
Borgo
Casa
Fosso
Cabina Soc. R.E.
Imp. Idroe.
Imp. Idrov.
Imp. Idrov.
Imp. Idrov

Declassified E.O. 12356 Section 3.3/NND No. 785019




12 million

## Leggenda

- Limite del Comprensorio Pontino
- Strade pubbliche
- " O.N.C.
- Canali
- Canalette d'irrigazione
- Fossi minori
- Impianti Idrovori
- Principali sorgenti
- Canali con acqua di sorgente
- Sbarramenti o grosse ostruzioni attraverso i canali

① Allacciamento Ufente-Amaseno

② Canale di esaurimento naturale del bacino di Quarlaccio

6/ 1536 Rec'd 18 Jun 44

# CONSORZIO DI BONIFICA DI LITTORIA

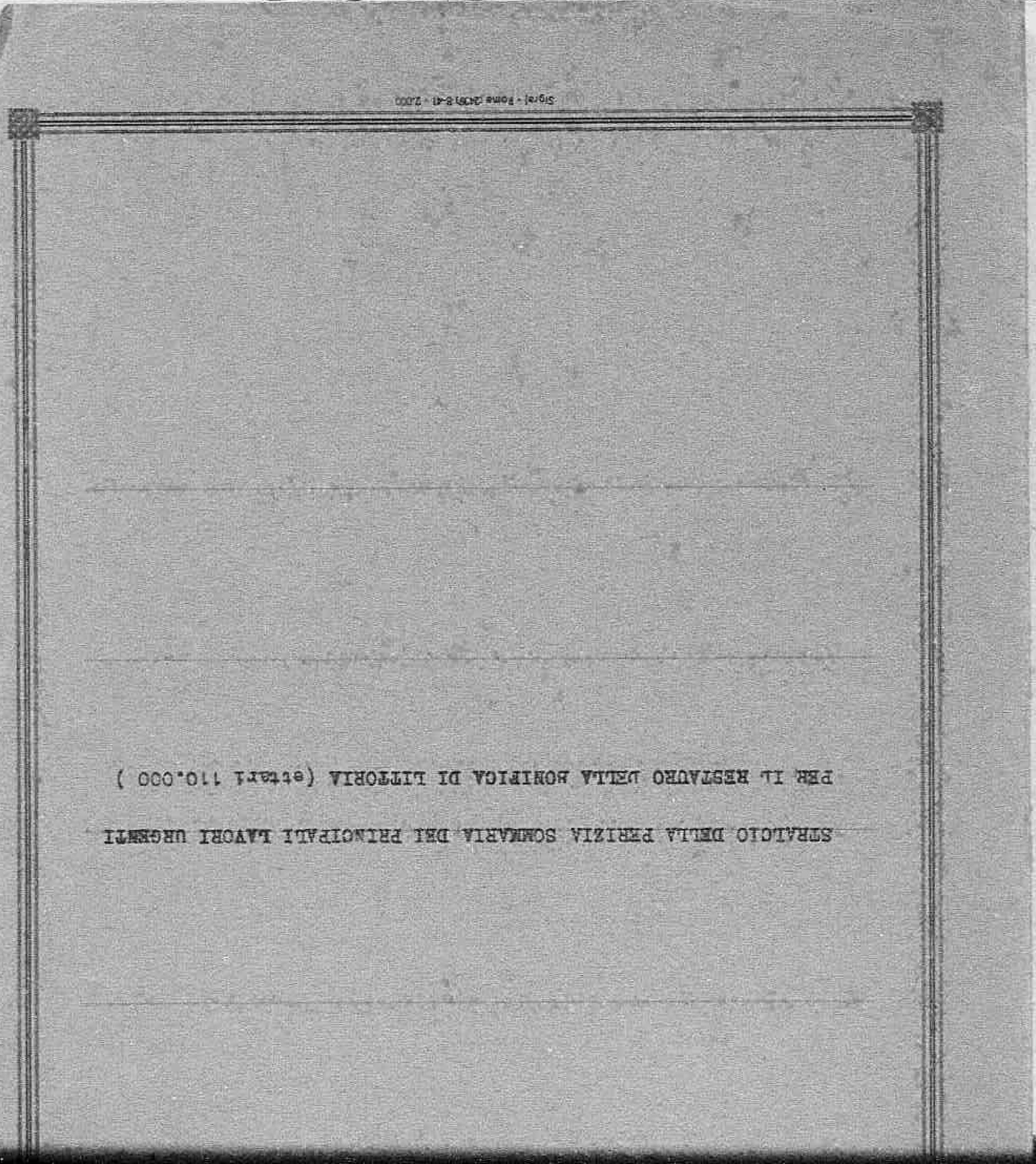
ROMA

STRALCIO DELLA PERIZIA SOMMARIA DEI PRINCIPALI LAVORI URGENTI

PER IL RESTAURO DELLA BONIFICA DI LITTORIA (ettari 110.000 )

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019



SERVIZIO DELLA PERIZIA SOMMARIA DEI PRINCIPALI LAVORI URGENTI

PER IL RESTAURO DELLA MONUMENTALE DI LITTORIA (ettari 110.000 )

ALLIED CONTROL COMMISSION
PUBLIC WORKS AND UTILITIES SUB-COMMISSION

Estimate of Work to be carried out

Form ACC/I
(Estimate
Revised
7 June 44)

Note: This form to be filled in triplicate; one copy to be retained in Sub-Comm. H.Q., File, one to be returned to the Regional Engineer when approved, and one to be sent to the Minister of Public Works.

ESTIMATES - CAPITAL EXPENDITURE

( APPROVALS )

I. (a) Building, Bridge, Road, Power Stn, Pumping Stn etc, and location **Repair work shops, garages, pumping machinery; cleaning and removing vegetation, earth, debris and obstructions from channels in the BONIFICA DI LITTORIA.**

(b) By contract or direct labour **Both**

(c) Amount of approximate estimate **£ 23.153.812**

(d) Urgency of project **Very urgent**

(e) Probable time for completion **Four months**

(f) Special remarks **This project considered essential to restore land to agricultural purposes and to remove a malarial hazard.**

2. Certificates:

(a) Certified that the attached approximate estimate amounting to Lire **23.153.812** has been prepared by me; it covers the full requirements of the project, and is reasonable in amount.

Italian Engineer

Signature **Ing. Emilio Scarani** *E. Scarani Emilio*

Official designation **Technical Director**

Date, and place **9 July 1944 - Rome, Italy**

(b) I agree with the preceding certificate and recommend approval.

Approved. *Harry Larson* **~~Harry Larson, Major C E~~** Date **9 July 1944**

Regional Engineer, or his representative.

3. Approved.

(~~Highway Fund~~)
(~~Other~~ funds ) *H. A. Logan Lt Col*

Declassified E.O. 12356 Section 3.3/NND No. 785019

( Triplicate )

I. (a) Building, Bridge, Road, Power Stn, Pumping Stn etc, and location **Repair work shops,garages, pumping machinery;cleaning and removing vegetation,earth,debris and obstructions from channels in the BONIFICA DI LITTORIA.**

(b) By contract or direct labour **Both**

(c) Amount of approximate estimate **£ 23.153.812**

(d) Urgency of project **Very urgent**

(e) Probable time for completion **Four months**

(f) Special remarks **This project considered essential to restore land to agricultural purposes and to remove a malarial hazard.**

2. Certificates:

(a) Certified that the attached approximate estimate amounting to Lire **23.153.812** has been prepared by me; it covers the full requirements of the project, and is reasonable in amount.

Italian Engineer { Signature **Ing. Emilio Scarani** *E. Scarani Emilio*
Official designation **Technical Director**
Date, and place **9 July 1944 - Rome, Italy**

(b) I agree with the preceding certificate and recommend approval.

Approved Edward Col. **~~Harry Larson, Major C E~~** Harry Larson Date **9 July 1944**
Regional Engineer, or his representative.

3. Approved.

(~~Highway Fund~~)
(~~Other~~ funds ) *H. A. Logan Lt Col*
Spec.
Chief, Public ~~Works~~ *Utilities* Div.P.W.& U.Sub-Comm.ACC.

4. Approved. *R A Sam* *26/7/44*
Director, P.W.& U. Sub-Commission A.C.C.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Roma 1 AUG 1944 194

*Corpo del Genio Civile*

L'ISPETTORE GENERALE PER IL COMPARTIMENTO
DEL LAZIO ED UMBRIA

Al L' A. M. G.

R O M A

Prot. N.° 1536

Risposta al foglio N.° del

Oggetto Consorzio di bonifica di Littoria- Perizia sommaria dei principali lavori urgenti per il restauro della Bonifica di Littoria.-

Il Consorzio di Bonifica di Littoria ha redatto in data 8 corrente mese una perizia sommaria dei più urgenti lavori per rimettere in sesto la bonifica di sua competenza.

La spesa prevista é di L. 23.153.812 ed in genere tale cifra non é sufficientemente giustificata. Anche per partite di lavoro di una certa importanza sono indicate troppo spesso somme a calcolo senza alcuna giustificazione o dato che possa permettere di esprimere un giudizio sulla necessità e congruità della spesa.

E' pertanto necessario che il Consorzio presenti un nuovo progetto in cui si dia giustificazione dei lavori da eseguire.

L'ISPETTORE GEN/ DI COMPARTIMENTO
(A. Alicata)

Alicata

*Corpo del Genio Civile - Ispettorato Compartimentale del Lazio ed Umbria*

# CONSORZIO DI BONIFICA DI LITTORIA

SEDE IN ROMA

**Progetto** STRALCIO DELLA PERIZIA SOMMARIA DEI PRINCIPALI LAVORI URGENTI PER IL RESTAURO DELLA BONIFICA DI LITTORIA

(ettari 110.000)

# STIMA DEI LAVORI

*Roma, li* 8 LUG 1944 *193*

VISTO L'ISPETTORE COMPARTIMENTALE
(A. Alicata)

L'Ingegnere

Declassified E.O. 12356 Section 3.3/NND No. 785019

**Progetto** STRALCIO DELLA PERIZIA SOMMARIA DEI PRINCIPALI LAVORI URGENTI PER IL RESTAURO DELLA BONIFICA DI LITTORIA

(ettari 110.000)

# STIMA DEI LAVORI

*Roma, li* 8 LUG 1944 *193*

**VISTO** L'ISPETTORE COMPARTIMENTALE
*(A. Alicata)*

CORPO REALE del GENIO CIVILE * ROMA * ISPETTORATO COMPARTIMENTALE

**L'Ingegnere**

Declassified E.O. 12356 Section 3.3/NND No. 785019

| N. d'ordine | N. dell'elenco dei prezzi | INDICAZIONE DEI LAVORI | Quantità | Prezzo unitario | IMPORTO Parziale | IMPORTO Totale |
|---|---|---|---|---|---|---|
| | | A)- Lavori assolutamente indispensabili per ristabilire l'efficienza della rete dei canali ed assicurare il regolare deflusso delle acque. | | | | |
| | | I)- Ricostruzione ed attrezzatura del cantiere centrale di Litteria | | | | |
| 1 | | a)- Fabbricati ed annessi: Ricostruzione o restauro dei fabbricati sottoelencati, comprese le relative necessarie demolizioni: magazzino, autorimessa, officina meccanica e tettoia, fabbricato degli uffici consorziali a calcolo | | | 3200000 | |
| 2 | | b)- Rinnovo e riparazione del macchinario essenziale per la officina e degli attrezzi ed utensili indispensabili (dinamo per saldatura elettrica, impianto ossiacetilenico, piatti autocentranti, ventilatori per forgia, forgia a mano, cinghie di cuoio, sega circolare, attrez- | | | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| | | | | |
|---|---|---|---|---|
| | ecologia della rete dei canali ed assicurare il regolare deflusso delle acque. | | | |
| | I)- Ricostruzione ed attrezzatura del cantiere centrale di Littoria | | | |
| 1 | a)- Fabbricati ed annessi: Ricostruzione o restauro dei fabbricati sottoelencati, comprese le relative necessarie demolizioni: magazzino, autorimessa, officina meccanica e tettoia, fabbricato degli uffici consortiali a calcolo | | 3300000 | |
| 2 | b)- Rinnovo e riparazione del macchinario essenziale per le officine e degli attrezzi ed utensili indispensabili (dinamo per saldature elettrica, impianto ossiacetilenico, piatti autocentranti, ventilatori per forgia, forgia a mano, cinghie di cuoio, sega circolare, attrezzi vari per fabbri ed aggiustatori a calcolo | | 300000 - | |
| | A riportare | | 3600000 - | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| N. d'ordine | Elenco dei prezzi | DESIGNAZIONE DEI LAVORI | Quantità | Prezzo unitario | IMPORTO Parziale | IMPORTO Totale |
|---|---|---|---|---|---|---|
| | | Riporto | | | 3o00000 - | |
| 3 | | c)- Ripristino di gruppi motopompe da o a 40 HP.battipali a mano,paranchi,taglie,catene e corde ecc. a calcolo | | | 500000 - | |
| 4 | | d) Ricostruzione della dotazione di attrezzi e materiali di scorta fissa per interventi di emergenza: (grandi piene, rottura di argini ecc.) cento carriole, trecento pale, duecento picconi, cinquanta palanchini,venticinque martelline, quinlici cecie,quattromila sacchi,trecento quintali di cemento,duecento metri cubi di legname fra travi e tavole, dieci quintali di chiodi, bulloni e serramenti vari a calcolo | | | 2000000 - | |
| 5 | | e) Ricupero, rimessa in efficienza dei mezzi d'opera e galleggianti consorziali limitatamente ad un escavatore Bucyrus ed uno Ruston a calcolo | | | 800000 - | |
| | | (N.B. Per l'altro escavatore Ruston e per la draga,si fa notare che essi si trovano in condizio- | | | | |

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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mano,paranchi,taglie,catene e corde ecc. a calcolo | | | | | | | 500000 - | | |
| 4 | | d) Ricostruzione della dotazione di attrezzi e materiali di scorta fissa per interventi di emergenza: (grandi piene, rotture di argini ecc.) cento carriole, trecento pale, duecento picconi, cinquanta palanchini,venticinque martelline, quindici accie,quattromila sacchi,trecento quintali di cemento,duecento metri cubi di legname fra travi e tavole, dieci quintali di chiodi, bulloni e serramenti vari a calcolo | | | | | | | 2000000 - | | |
| 5 | | e) Ricupero, rimessa in efficienze dei mezzi d'opera e gallaggianti consorziali limitatamente ad un escavatore Bucyrus ed uno Ruston a calcolo | | | | | | | 800000 - | | |
| | | (N.B. Per l'altro escavatore Ruston e per la draga,si fa notare che essi si trovano in condizioni tali da non consentire per ora una sommaria valutazione della spesa necessaria per la | | | | | | | | | |
| | | A riportare | | | | | | | 3300000 - | | |

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| N. d'ordine | Elenco dei prezzi | DESIGNAZIONE DEI LAVORI | Quantità | Prezzo unitario | IMPORTO Parziale | IMPORTO Totale |
|---|---|---|---|---|---|---|
| | | Riporto | | | 6900000 - | |
| | | loro rimessa in efficienza) | | | | |
| | | f)- Ricostruzione parco automez- | | | | |
| | | zi (una vettura ed un camion- | | | | |
| | | cino) a calcolo | | | 300000 - | |
| | | | | | | 7200000 - |
| | | II)- Lavori di diserbo a falce | | | | |
| | | e pulizia degli alvei dai parzia- | | | | |
| | | li interrimenti, per la rimessa | | | | |
| | | in efficienza dei canali di sco- | | | | |
| | | lo della bonifica. | | | | |
| | | I prezzi che si espongono risul | | | | |
| | | tano dall'esperianza ventennale | | | | |
| | | del Consorzio e si sono ottenu- | | | | |
| | | ti moltiplicando per un coeffi- | | | | |
| | | ciente compreso fra due e tre i | | | | |
| | | costi degli ultimi diserbi e la- | | | | |
| | | vori vari di manutenzione esegui- | | | | |
| | | ti nella primavera del 1943 | | | | |
| 7 | | 1°)- Collettori con presenza | | | | |
| | | perenne di acqua Km. 50 a lire | | | | |
| | | L. 7000.- | | | 350000 - | |
| 8 | | 2°)- Collettori con fondo non | | | | |
| | | perennemente acquoso | | | | |
| | | Km. 75 a L. 5.000.- | | | 375000 - | |

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| | | | | | |
|---|---|---|---|---|---|
| | | f)- Ricostruzione paro automez- | | | |
| | | zi (una vettura ed un camion- | | | |
| | | cino) a calcolo | | 300000 - | |
| | | | | | 7200000 - |
| | | II)- Lavori di diserbo a falce | | | |
| | | e pulizia degli alvei dai parzia- | | | |
| | | li interrimenti, per la rimessa | | | |
| | | in efficienza dei canali di sco- | | | |
| | | lo della bonifica. | | | |
| | | I prezzi che si espongono risul | | | |
| | | tano dall'esperienza ventennale | | | |
| | | del Consorzio e si sono ottenu- | | | |
| | | ti moltiplicando per un coeffi- | | | |
| | | ciente compreso fra due e tre i | | | |
| | | costi degli ultimi diserbi e la- | | | |
| | | vori vari di manutenzione esegui- | | | |
| | | ti nella primavera del 1943 | | | |
| 7 | | 1°)- Collettori con presenza | | | |
| | | perenne di acqua Km. 50 a lire | | | |
| | | L. 7000.- | | 350000 - | |
| 8 | | 2°)- Collettori con fondo non | | | |
| | | perennemente sommerso | | | |
| | | Km. 75 a L. 5.000.- | | 375000 - | |
| 9 | | 3°)- Canali secondari di scolo | | | |
| | | Km. 1.300 a L. 3.000.- | | 3900000 - | 4025000 - |
| | | A riportare | | | 11325000 - |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| N. d'ordine | Elenco dei prezzi | DESIGNAZIONE DEI LAVORI | Quantità | Prezzo unitario | IMPORTO Parziale | IMPORTO Totale |
|---|---|---|---|---|---|---|
| | | Riporto | | | | 11825000 - |
| | | III)- Lavori necessari per lo sgombero dei canali dei rottami provenienti dalle demolizioni dei ponti | | | | |
| 10 | | a)- Ponti principali | | | | |
| | | Rimozione di ostruzioni formatisi in seguito al crollo dei ponti segnati nella corografia allegata. | | | | |
| | | Si prevede di eseguire il lavoro con l'ausilio di esplosivi e mezzi meccanici, secondo i seguenti elementi: | | | | |
| | | Giornate di escavatore a benna mordente n. | 100 | 1500 - | 150000 - | |
| | | Prestazione di manovali terrazzieri per i servizi dei mezzi d'opera, carico, scarico, allontanamento dei materiali di risulta: | | | | |
| | | giornate n.o00 a ponte per n.3o ponti = giornate n. | 21o00 | 141 - | 3045o0 - | |
| | | Esplosivi, capsule, miccie ecc. a calcolo | | | 304400 - | |
| | | | | | | 3500000 - |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | ni dei ponti | | | | | | |
| 10 | a)- Ponti principali | | | | | | |
| | Rimozione di costruzioni formatisi in seguito al crollo dei ponti segnati nella corografia allegata. | | | | | | |
| | Si prevede di eseguire il lavoro con l'ausilio di esplosivi e mezzi meccanici, secondo i seguenti elementi: | | | | | | |
| | Giornate di escavatore a benna mordente | n. | 100 | 1500 - | 150000 - | | |
| | Prestazione di manovali terrazzieri per i servizi dei mezzi d'opera, carico, scarico, allontanamento dei materiali di risulta: | | | | | | |
| | giornate n.o00 a ponte per n.30 ponti = giornate | n. | 21o00 | 141 - | 3045o00 - | | |
| | Esplosivi, capsule, micce ecc. a calcolo | | | | 304400 - | | |
| | | | | | | 3500000 - | |
| 11 | b)- Ponti secondari | | | | | | |
| | Prestazione di manovali terrazzieri ecc. come alla voce prece- | | | | | | |
| | A riportare | | | | | 15325000 - | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| N. d'ordine | Elenco dei prezzi | DESIGNAZIONE DEI LAVORI | Quantità | Prezzo unitario | IMPORTO Parziale | IMPORTO Totale |
|---|---|---|---|---|---|---|
| | | Riporto | | | | 15325000 - |
| | | dente giornate n. | 23000 | 141 - | 3243000 - | |
| | | Esplosivi, capsule, miccie ecc. e calcolo | | | 257000 - | |
| | | | | | | 3500000 - |
| 12 | | c)- Sbarramenti per irrigazione sul collettore delle Acque Medie | | | | |
| | | Prestazione di manovali, terrazieri ecc. come alle voci precedenti giornate n. | 2000 | 141 - | 282000 - | |
| | | Esplosivi, capsule, miccie ecc. e calcolo | | | 68000 - | |
| | | | | | | 350000 - |
| | | | | | | 19175000 - |
| | | Nota - Per i macchinari degli impianti idrovori per i quali quasi tutti i motori, trasformatori, ed apparecchiature sono stati asportati, mentre i fabbricati, ad eccezione del canale di scarico, hanno subito danni non molto gravi, non si può per ora stabilire con precisione attendibile la spesa neces- | | | | |

declassified E.O. 12356 Section 3.3/NND No. 785019

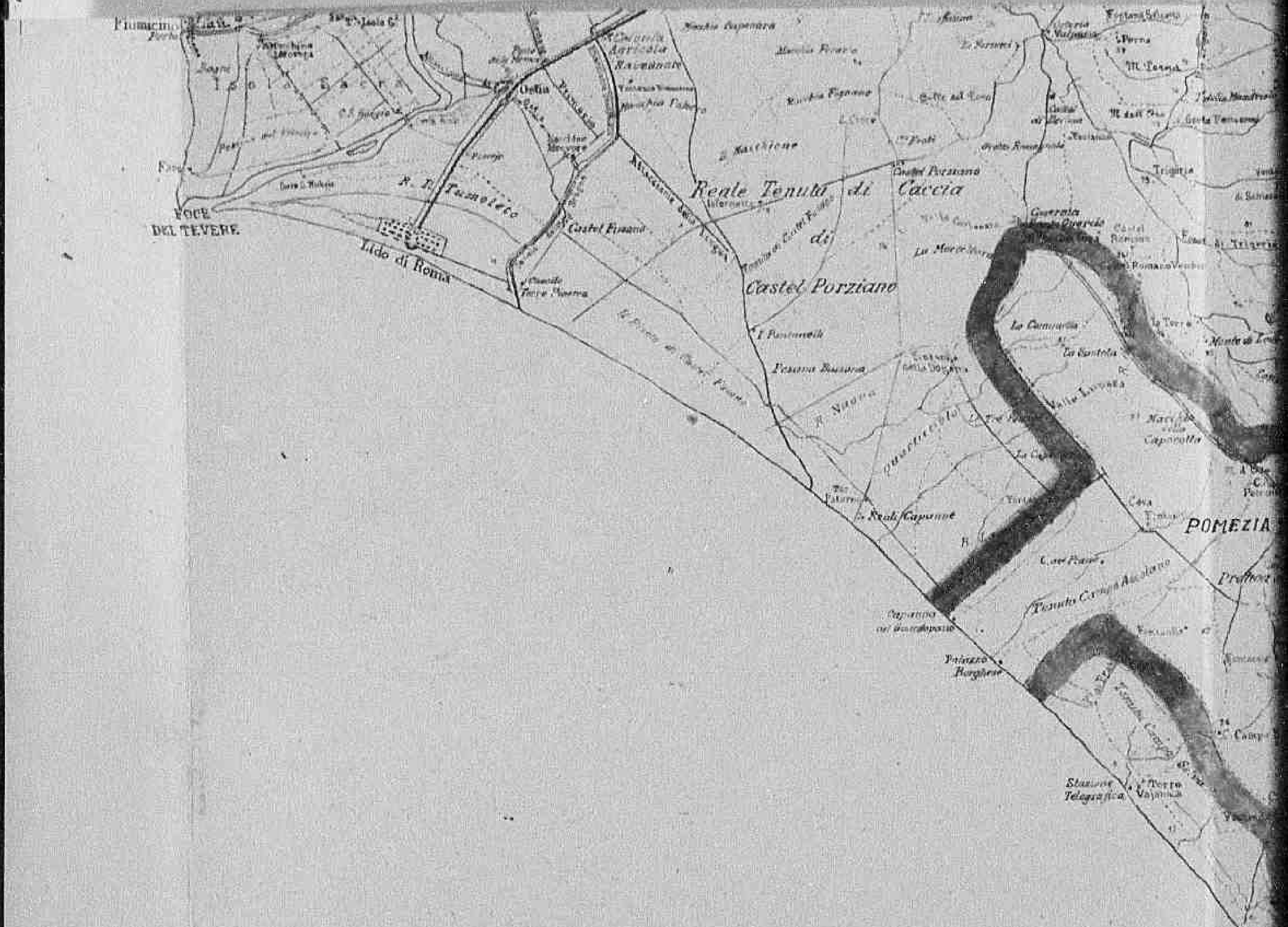
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | dente giornate n. | | | | | | |
| | Esplosivi, capsule, miccie ecc. a calcolo | | | | 257000 - | | |
| | | | | | | 3500000 - | |
| 12 | c)- Sbarramenti per irrigazione sul collettore delle Acque Madie | | | | | | |
| | Prestazione di manovali, terrazieri ecc. come alle voci precedenti giornate n. | 2000 | 141 | - | 282000 - | | |
| | Esplosivi, capsule, miccie ecc. a calcolo | | | | 68000 - | | |
| | | | | | | 350000 - | |
| | | | | | | 19175000 - | |
| | Nota - Per i macchinari degli impianti idrovori per i quali quasi tutti i motori, trasformatori, ed apparecchiature sono stati esportati, mentre i fabbricati, ad eccezione del canale di scarico, hanno subito danni non molto gravi, non si può per ora stabilire con precisione attendibile la spesa necessaria per la ricostruzione e sistemazione. Ugualmente dicasi per quanto riguarda il ri- | | | | | | |
| | A riportare | | | | | 19175000 - | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

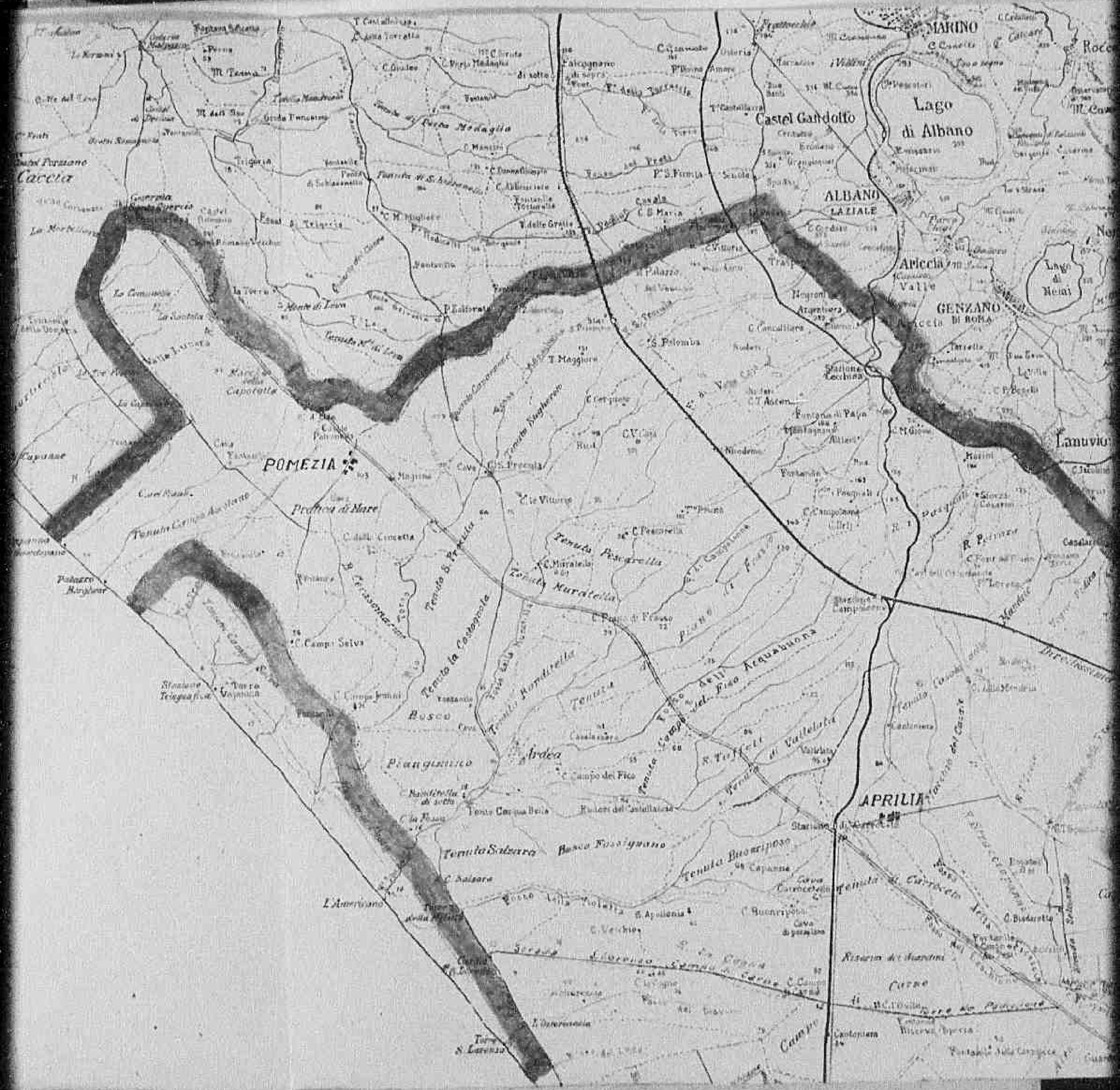
| N. d'ordine | N. dell'elenco dei prezzi | INDICAZIONE DEI LAVORI | Quantità | Prezzo unitario | IMPORTO Parziale | IMPORTO Totale |
|---|---|---|---|---|---|---|
| | | Riporto | | | | 19175000 - |
| | | pristino delle foci a mare del fiume Sisto, del collettore delle Acque Medie, e dei laghi di Fogliano, Caprolace e Paola, costituente attualmente zone minate non ancora accessibili. | | | | |
| 13 | | Imprevisti e finimenti vari, in ragione del 5% sulla somma anzidetta | | | | 958750 - |
| 14 | | Percentuali<br>Si considera un aumento del 15% sull'importo totale dei lavori per spese di studio, sorveglianza, direzione lavori, interessi passivi | | | | 3020062 - |
| | | T o t a l e lire | | | | 23153812 - |
| | | (diconsi lire ventitremilioncentocinquantatremilaottocentododici) | | | | |

Original filed E.O. 12356 Section 3.3/NND No. 785019

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MARINO
Lago di Albano
Castel Gandolfo
ALBANO LAZIALE
Ariccia
GENZANO DI ROMA
Lanuvio
POMEZIA
Pratica di Mare
APRILIA
Tenuta Buonriposo
Tenuta Solforata
Tenuta Muratella
Tenuta Pescarella
Tenuta S. Procula
Tenuta la Cadegola
Tenuta Campo del Fico
Tenuta Cancelliera
Tenuta Castellaccia
Tenuta Cecchina
Tenuta Carroceto
Tenuta Cerquetta
Tenuta Mezzomonte
Tenuta Castelluccia
Tenuta Torre Astura
Tenuta Caposelce
Tenuta Padiglione
Tenuta Fossignano
Tenuta Cisterna
Tenuta Conca
Tenuta Vallelata
Tenuta Campo Boario
Tenuta Cancelliera
Tenuta Castellaccia
Tenuta Cecchina
Tenuta Carroceto
Tenuta Cerquetta
Tenuta Mezzomonte
Tenuta Castelluccia
Tenuta Torre Astura
Tenuta Caposelce
Tenuta Padiglione
Tenuta Fossignano
Tenuta Cisterna
Tenuta Conca
Tenuta Vallelata
Tenuta Campo Boario
Tenuta Solforata
Tenuta Muratella
Tenuta Pescarella
Tenuta S. Procula
Tenuta la Cadegola
Tenuta Campo del Fico

Declassified E.O. 12356 Section 3.3/NND No. 785019

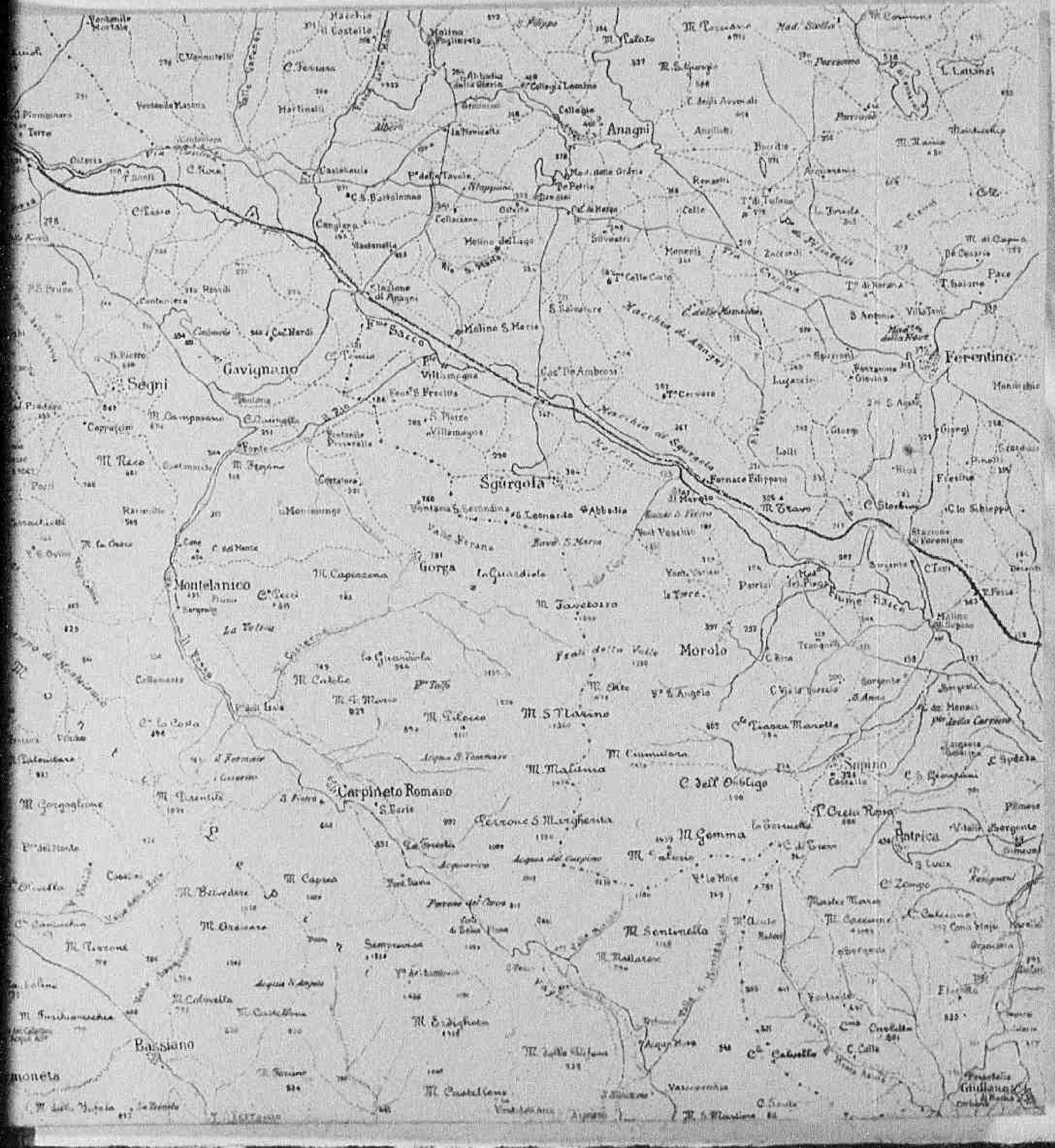
MARINO
Rocca di Papa
Lago di Albano
Castel Gandolfo
ALBANO LAZIALE
Ariccia
Nemi
Lago di Nemi
GENZANO DI ROMA
Lanuvio
VELLETRI
Marchesa d'Oriano
APRILIA
Cisterna di Littoria

2° SEZIONE

Declassified E.O. 12356 Section 3.3/NND No. 785019


Artena
Segni
Gavignano
Montelanico
Carpineto Romano
Norma
Sermoneta
Bassiano
Rocca Massima
Sgurgola
Borgo
Colle Fiorito
Fontana Vetica
Fontana Martina
Osteria
Castellaccio
Molino Pagliarello
Molino del Lago
Molino S. Maria
Villamagna
Fontana S. Leonardo
Fontana S. Procula
Fontana Pisarello
Fontana Vecchia
Fontana Fini
Fontana Bruno
Fontana Rossa
Fontana Pozzi
Fontana Cupa
Fontana Cerreto
Fontana Cocchi
Fontana Cocchi Verdi
Fontana Cavaliere
Fontana Cavaliere
Fontana Cavaliere

Declassified E.O. 12356 Section 3.3/NND No. 785019


Anagni
Segni
Gavignano
Sgurgola
Gorga
Montelanico
Morolo
Carpineto Romano
Bassiano
Ferentino
Patrica
Colleg
Mola
Mola
Mola

Declassified E.O. 12356 Section 3.3/NND No. 785019

# CONSORZIO DI BONIFICA DI LITTORIA

PERIMETRO DEL COMPRENSORIO DELLA BONIFICA DI LITTORIA

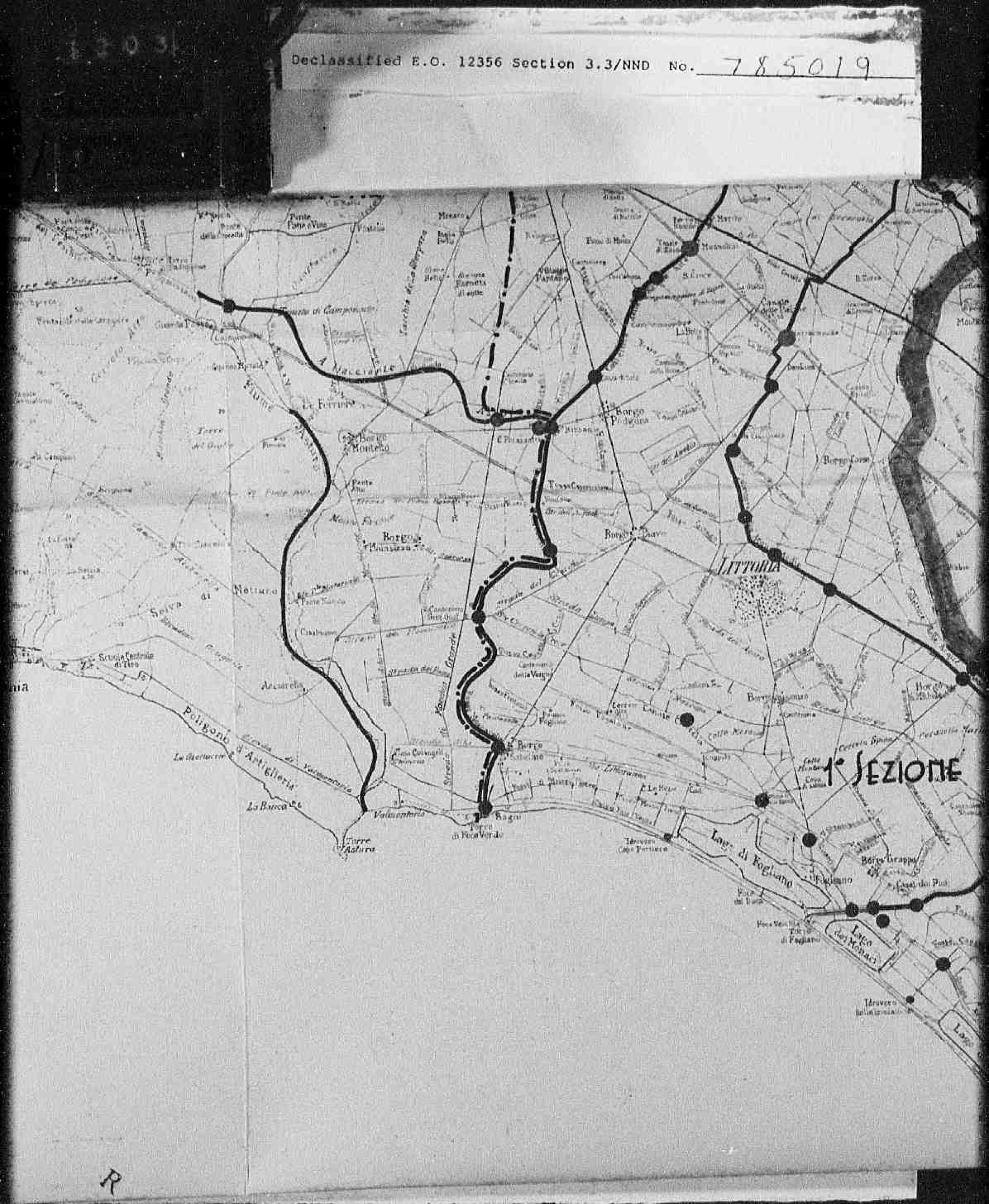
CONFINE FRA LA 1° E LA 2° SEZIONE DELLA BONIFICA

COLLETTORI CON PRESENZA PERENNE D'ACQUA

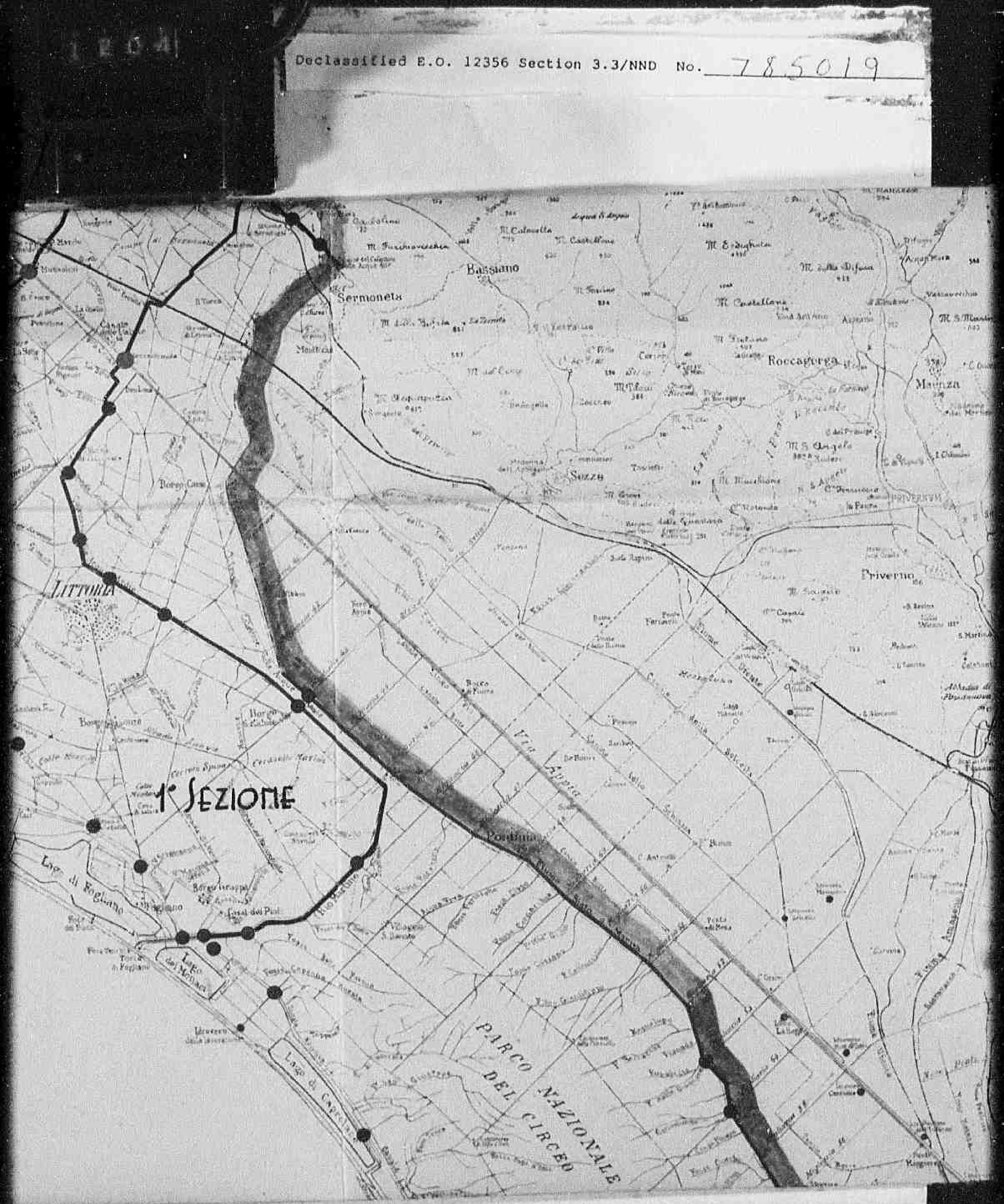
Declassified E.O. 12356 Section 3.3/NND No. 785019


Nettunia
Foce
Nettuno
Le Paludi
Le Pilacce
Le Mole
Le Vignole
Le Cannelle
Le Caprette
Le Cerquette
Le Cerquette
Le Cerqu

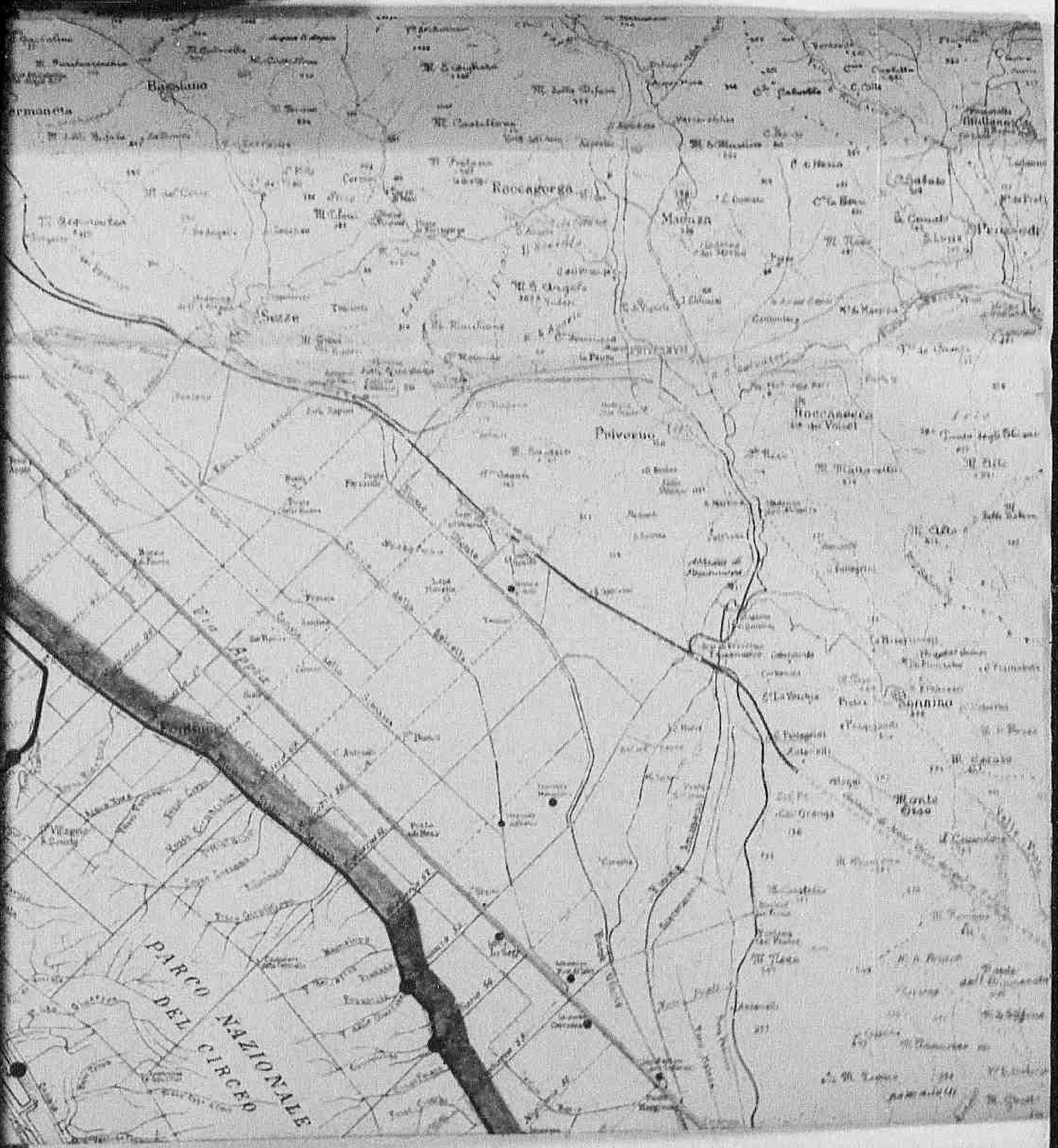
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Declassified E.O. 12356 Section 3.3/NND No. 785019



Declassified E.O. 12356 Section 3.3/NND No. 785019

# CONSORZIO DI BONIFICA DI LITTORIA

PERIMETRO DEL COMPRENSORIO DELLA BONIFICA DI LITTORIA

CONFINE FRA LA 1° E LA 2° SEZIONE DELLA BONIFICA

COLLETTORI CON PRESENZA PERENNE D'ACQUA

COLLETTORI CON FONDO NON PERMANENTEMENTE SOMMERSO

PONTI PRINCIPALI

PONTI DI COMPETENZA DELLO STATO O DELLA PROVINCIA

Scala: 1.100000

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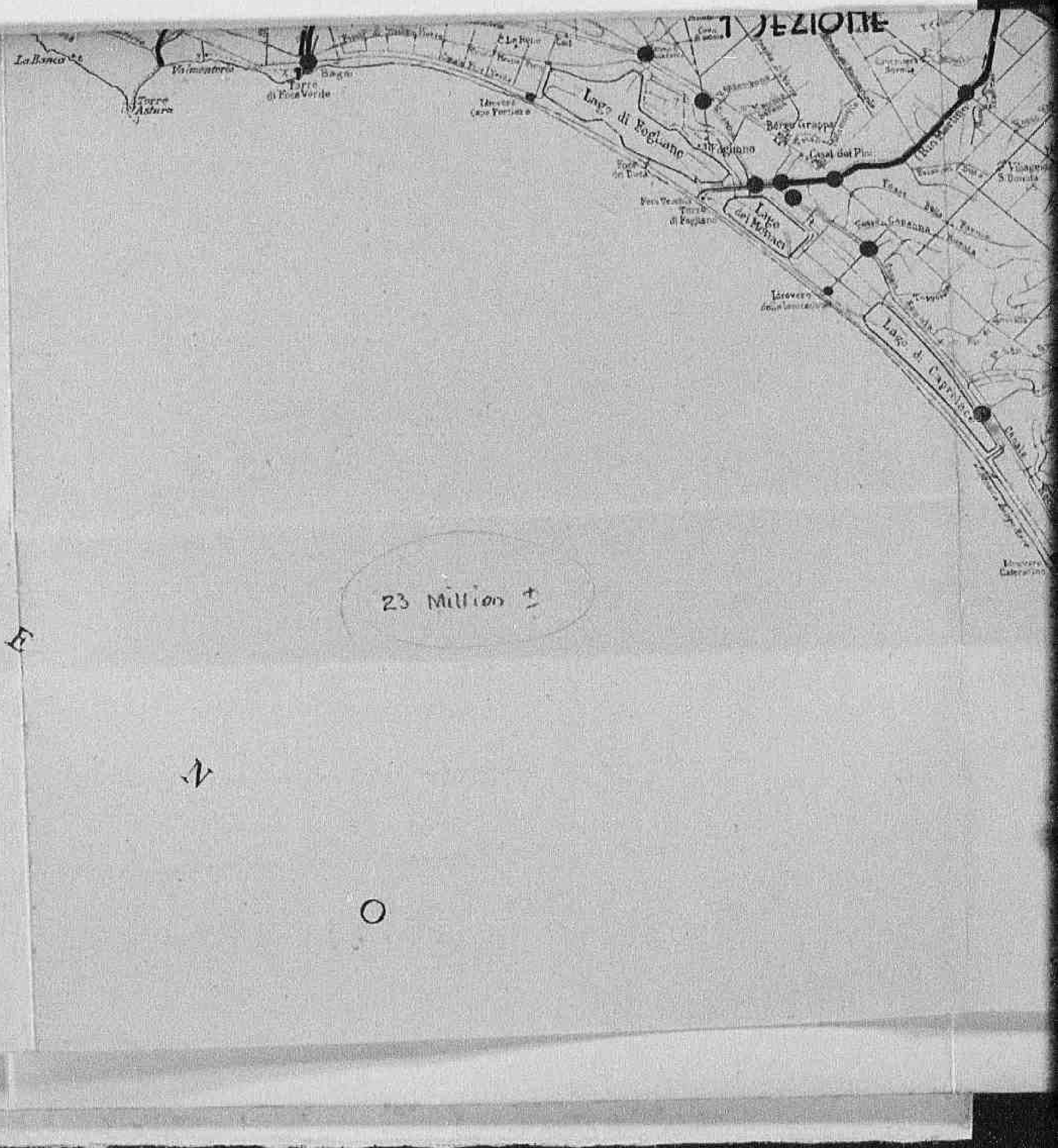
LITTORIA

ICA

ERSO

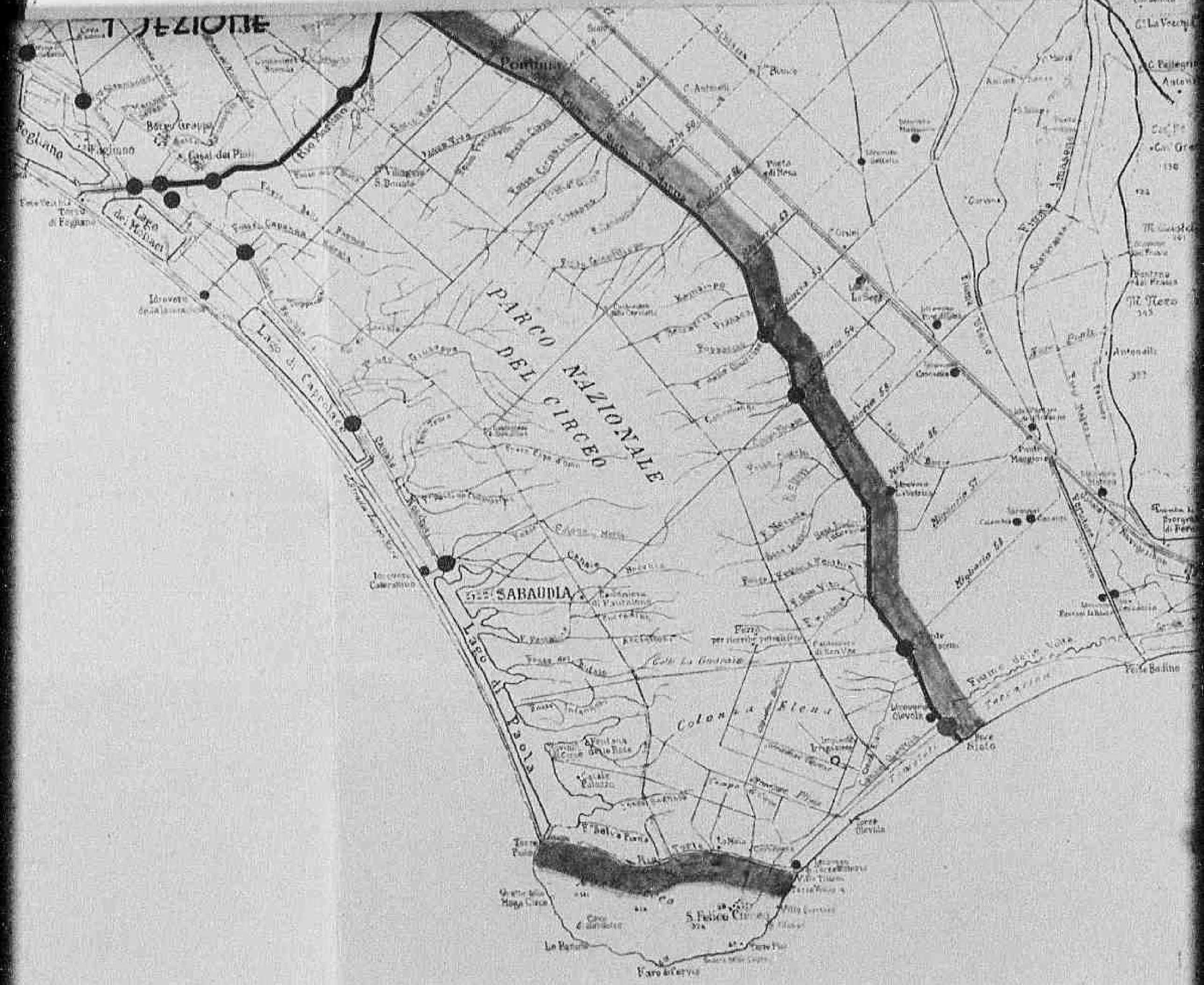
INCIA

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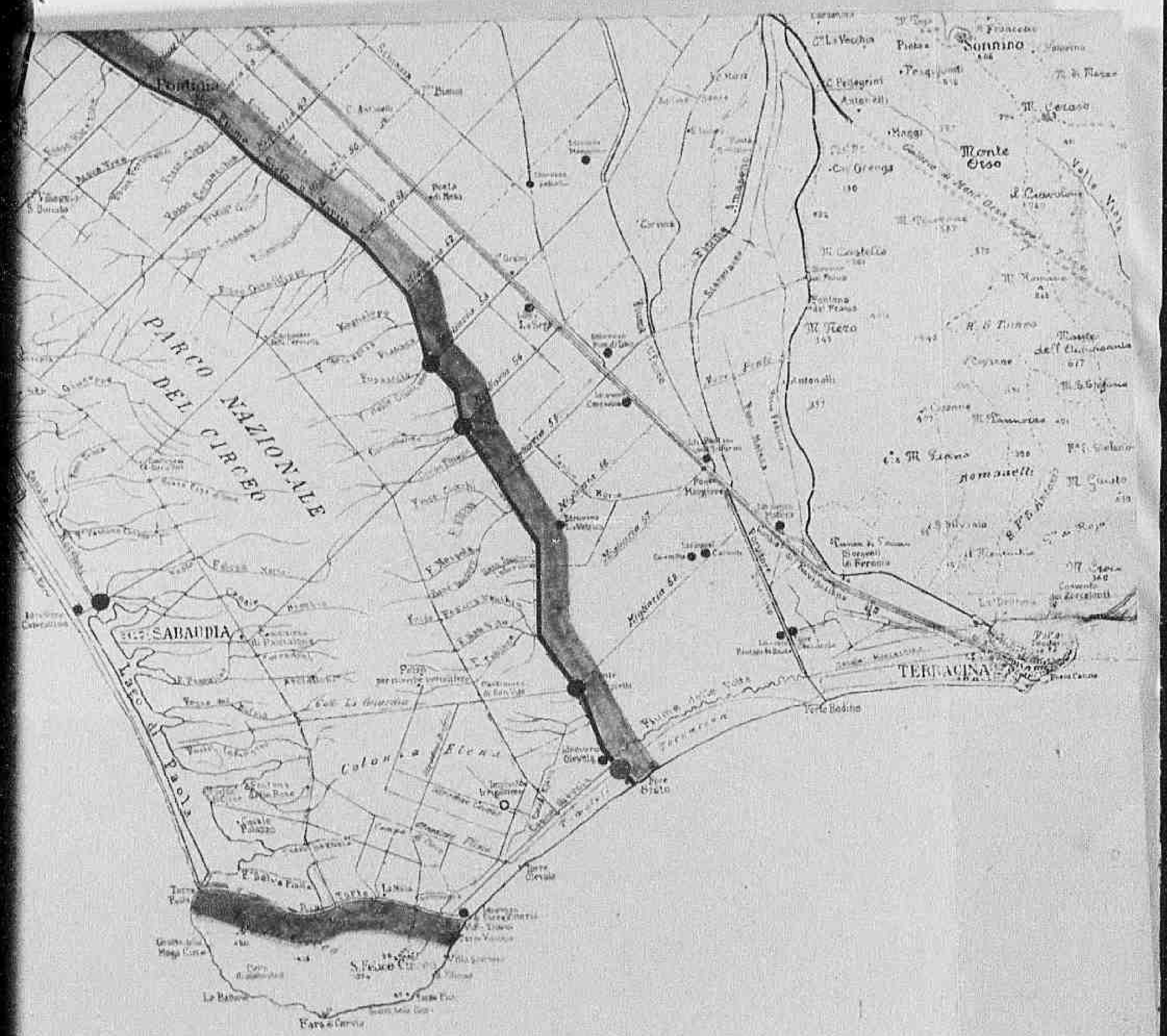

La Banca
Torre Astura
Torre di Foce Verde
Lago di Fogliano
Lago di Caprolace
Lago di Monaci
Canale delle Acque Alte
Canale Circondario Destro
Canale Circondario Sinistro
Canale Mediano
Canale Portatore
Canale Linea Pedemontana
Canale Acque Alte
Canale Acque Medie
Canale Acque Basse
Canale Acque Basse Sinistro
Canale Acque Basse Destro
Canale Acque Medie Sinistro
Canale Acque Medie Destro
Canale Acque Alte Sinistro
Canale Acque Alte Destro
Canale Linea Pedemontana Destro
Canale Linea Pedemontana Sinistro
Canale Portatore Destro
Canale Portatore Sinistro
Canale Mediano Destro
Canale Mediano Sinistro
Canale Circondario Destro
Canale Circondario Sinistro
Canale delle Acque Alte
Lago di Caprolace
Lago di Fogliano
Lago di Monaci
Canale Acque Basse
Canale Acque Medie
Canale Acque Alte
Canale Linea Pedemontana
Canale Portatore
Canale Mediano

1209

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Declassified E.O. 12356 Section 3.3/NND No. 785019



c/ 1537 Rec. 13 Jul 14

# Consorzio della Bonificazione Pontina
Roma

## Lotto XIV (O.C.)

# Perizia per i lavori di completamento necessari al fine di attivare il Diversivo Usente

### Elenco degli allegati

Alleg. 1 - Corografia
" 2 Profilo longitudinale
" 3 Tronco di alveo murato in località Acqua Zolfa
" 4 Computo sommario dei movimenti di scavo
" 5 Stima dei lavori

Declassified E.O. 12356 Section 3.3/NND No. 785019

# Lotto XIV (O.C.)

## Perizia per i lavori di completamento necessari al fine di attivare il Diversivo Ufente

### *Elenco degli allegati*

*Alleg. 1 - Corografia*
*" 2 Profilo longitudinale*
*" 3 Tronco di alveo murato in località Acqua Zolfa*
*" 4 Computo sommario dei mc di scavo*
*" 5 Stima dei lavori*

Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED CONTROL COMMISSION
PUBLIC WORKS AND UTILITIES SUB-COMMISSION

Form ACC/I
(Estimate
Revised
7 June 44)

Estimate of Work to be carried out

Note: This form to be filled in triplicate; one copy to be retained in Sub-Comm. H.Q., File, one to be returned to the Regional Engineer when approved, and one to be sent to the Minister of Public Works.

ESTIMATES - CAPITAL EXPENDITURE

( APPROVALS )

I. (a) Building, Bridge, Road, Power Stn, Pumping Stn etc, and location **Completion of drainage diversion channel in the BONIFICA PONTINA.**

(b) By contract or direct labour **By contract**

(c) Amount of approximate estimate **£ 7.113.000**

(d) Urgency of project **Very urgent**

(e) Probable time for completion **Four months**

(f) Special remarks **This channel is needed to divert the flow of FIUME UFENTE since the material through which the present channel is constructed can not sustain or carry the required quantity of water.**

2. Certificates:

(a) Certified that the attached approximate estimate amounting to Lire **7.113.000** has been prepared by me; it covers the full requirements of the project, and is reasonable in amount.

Italian Engineer { Signature **Ing. Leone Terzi** *Ing Leone Terzi*
Official designation **General Director**
Date, and place **9 July 1944 - Rome, Italy**

(b) I agree with the preceding certificate and recommend approval.

*Approved.* *Harry Larson*
~~Harry Larson, Major C E~~ Date **9 July 1944**
Regional Engineer, or his representative.

3. Approved.

(~~Highway Fund~~)
(~~Other~~ funds ) *L. A. Lapan Lt Col*
spec.
Chief, Public ~~Works~~ utilities Div. P.W. & U. Sub-Comm. ACC

Declassified E.O. 12356 Section 3.3/NND No. 785019

1. (a) Building, Bridge, Road, Power Stn, Pumping Stn etc, and location **Completion of drainage diversion channel in the BONIFICA PONTINA.**

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Italian Engineer

Signature **Ing. Leone Terzi** *Ing Leone Terzi*

Official designation **General Director**

Date, and place **9 July 1944 - Rome, Italy**

(b) I agree with the preceding certificate and recommend approval.

Approved. *Harry Larson* **~~Harry Larson, Major C E~~** Date **9 July 1944**

Regional Engineer, or his representative.

3. Approved.

(~~Highway Fund~~)
(~~Other~~ funds )
Spec.

*h. h. Lapp Lt Col*

Chief, Public ~~works~~ utilities Div.P.W.& U.Sub-Comm.ACC.

4. Approved. *26/7/44*

Director, P.W.& U. Sub-Commission A.C.C.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Roma 18 LUG. 1944 XXII

Corpo del Genio Civile

L'ISPETTORE GENERALE PER IL COMPARTIMENTO DEL LAZIO ED UMBRIA

Al 1° A. M. G.

ROMA

Rif. N.° 1533

Risposta al foglio N.° del

Oggetto Consorzio della bonificazione Pontina- Progetto per il completamento del diversivo Ufente.

Il Consorzio della Bonificazione Pontina ha ridotto in data 8 corrente mese il progetto per il completamento del diversivo Ufente nella località Gricilli, dell'importo complessivo di Lire 7.113.000,00.

Il Fiume Ufente nel tratto denominato Mezzaluna attraversa terreni torbosi( dello spessore di oltre 60 metri) non adatti a sostenere il peso delle arginature le quali si sono (e continuano) più volte abbassate provocando vasti allagamenti con distruzione dei prodotti agricoli) Fu pertanto studiata ed in parte attuata la deviazione dell'Ufente portandola ai piedi della collina ove il terreno é più stabile. Sopravvenuta la guerra i lavori furono sospesi. Ora il Consorzio chiede il finanziamento per completare l'opera iniziata, consistente essenzialmente in scavi e in murature.

Il progetto non é che uno stralcio di quello già a suo tempo approvato.

Esaminato il progetto lo si ritiene meritevole di alprovazione nell'importo previsto di L. 7.113.000,00.

Quanto al modo di esecuzione dei lavori si esprime il pa=

Declassified E.O. 12356 Section 3.3/NND No. 785019

rere che debba essere affettuato a mezzo di idonee Imprese previa gara fra almeno tre di esse.

L'ISPETTORE GEN. DI COMPARTIMENTO
(A. Alicata)

Alicata

*alleg. 5*

# CONSORZIO

## DELLA BONIFICAZIONE PONTINA

## ROMA

OPERE COMPLEMENTARI DELLA BONIFICA

~~LOTTO~~

Progetto : COMPLETAMENTO DELLE OPERE PER L'ATTIVAZIONE DEL

DIVERSIVO UFENTE E SISTEMAZIONE DELLO SBOCCO IN

UFENTE DEL TORRENTE CIARA

## STIMA DEI LAVORI

*Roma, li* 8 luglio 1944

VISTO: L'ISPETTORE COMPARTIMENTALE
(A. Micata)

Visto: IL DIRETTORE

L'INGEGNERE

Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLEGATO A

Progetto : COMPLETAMENTO DELLE OPERE PER L'ATTIVAZIONE DEL DIVERSIVO UFENTE E SISTEMAZIONE DELLE OPERE IN UFENTE DEL TORRENTE CERIARA

# STIMA DEI LAVORI

Roma, li 8 luglio 1944

VISTO L'ISPETTORE COMPARTIMENTALE
(A. Alicata)

Visto: IL DIRETTORE DEL GENIO CIVILE * ROMA

L'INGEGNERE

Tip. R. Cecconi - Roma - Via Piave 52

Declassified E.O. 12356 Section 3.3/NND No. 785019

| Num. d'ordine | Num. di ripetiz. o di analisi | DESIGNAZIONE DEI LAVORI | QUANTITÀ | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| 1 | | Scavo in terra; in presenza di acque, per il completamento dell'alveo, come da computo sommario allegato. Si applica un prezzo unitario ottenuto moltiplicando per il coefficente 2,5 l'ultimo prezzo praticato nel 9-5 per lavori dello stesso tipo; 25x2,5=62,50 che si arrotonda in L. 62.- e per mc. | 68.900 | 62.- | 4.247.050 | |
| 2 | | Scavo in roccia mista a terra in presenza di acque abbondante, presso le sorgenti acqua Zolfo. Prezzo determinato come sopra L.65x2,5=162,50 che si arrotonda in L. 162.- e per mc. | 1.500 | 162.- | 243.000 | |
| 3 | | Scavo in terra e ghiaia per la sistemazione dello sbocco del Cerlare. Prezzo determinato come sopra: L.20x2,5=50, e per mc. | 1.500 | 50.- | 75.000 | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | | to dell'alveo, come da com= | | | | |
| | | puto sommario allegato. | | | | |
| | | Si applica un prezzo unita= | | | | |
| | | rio ottenuto moltiplicando | | | | |
| | | per il coefficente 2,5 l'ul= | | | | |
| | | timo prezzo praticato nel 945 | | | | |
| | | per lavori dello stesso tipo; | | | | |
| | | 25x2,5=62,50 che si arroton= | | | | |
| | | da in L. 62.- e per | mc. | 68.500 | 62.- | 4.247.000 |
| 2 | | Scavo in roccia mista a ter= | | | | |
| | | ra in presenza di acqua ab= | | | | |
| | | bondante, presso le sorgen= | | | | |
| | | ti acqua Zolfa. | | | | |
| | | Prezzo determinato come so= | | | | |
| | | pra L.65x2,5=162,50 che si | | | | |
| | | arrotonda in L. 162.- | | | | |
| | | e per | mc. | 1.500 | 162.- | 243.000 |
| 3 | | Scavo in terra e ghiaia per | | | | |
| | | la sistemazione delle sboc= | | | | |
| | | co del Ceriara. | | | | |
| | | Prezzo determinato come so= | | | | |
| | | pra: L.20x2,5=50, e per | mc. | 1.500 | 50.- | 75.000 |
| 4 | | Muro di sostegno in riva si= | | | | |
| | | nistra da costruirsi in lo= | | | | |
| | | Da riportare | | | | 4.565.000 |

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| N. d'ordine | Numero di elenco o di posizione | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | **Riporto** | | | 4.565.000 | |
| | | calità Acqua Solfa, per m.10 a monte e m.25 a valle del tratto già costruito, con una sezione media di 12 mq: sono 35 x 12 = mq. 420.-, cui si applica un prezzo ottenuto da quello stabilito nel 1943 moltiplicandolo per il coefficiente 1,7 ( tenendo conto che parte del materiale si trova in prossimità del cantiere di lavoro): 1,7x630=1071, che si arrotonda in L. 1070.- e per mq. | 420.- | 1070.- | 449.400 | |
| 5 | | Muri di sponda da costruirsi per i raccordi a monte e a valle del tratto di alveo murato in località Acqua Solfa, con sezione media di 7 mq. per una lunghezza di ml. 60 a monte e ml. 35 a valle: sono 7 x 95 = mq. 665 cui si applica un prezzo ottenuto come sopra: 1,7x470=799 che si arrotonda in L. 800 e per mq. | 665.- | 800.- | 532.000 | |

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| | | | | | |
|---|---|---|---|---|---|
| | a monte e m.25 a valle del tratto già costruito, con una sezione media di 12 mc: sono 35 x 12 = mc. 420.-, cui si applica un prezzo ottenuto da quello stabilito nel 1945 moltiplicandolo per il coefficiente 1,7 ( tenendo conto che parte del materiale si trova in prossimità del cantiere di lavoro): 1,7x630=1071, che si arrotonda in L. 1070.- e per mc. | 420.- | 1070.- | 449.400 | |
| 5 | Muri di sponda da costruirsi per i raccordi a monte e a valle del tratto di alveo murato in località Acqua fetida, con sezione media di 7 mq. per una lunghezza di ml. 60 a monte e ml. 35 a valle: sono 7 x 95 = mc. 665 cui si applica un prezzo ottenuto come segue: 1,7x470=799 che si arrotonda in L. 800 e per mc. | 665.- | 800.- | 532.000 | |
| 6 | Rivestimento in muratura | | | | |
| | Da riportare | | | 5.546.000 | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| N. d'ordine | Num. di riferimento ai disegni | DESIGNAZIONE DEI LAVORI | QUANTITA' | PREZZO | IMPORTO PARZIALE | IMPORTO TOTALE |
|---|---|---|---|---|---|---|
| | | Riporto | | | 5.546.000 | |
| | | dello sbocco del torrente Ca= | | | | |
| | | viara: mc.550 con spessore me | | | | |
| | | dio di cm. 30: | | | | |
| | | sono 550 x 0,30=mc. 165 cui | | | | |
| | | si applica il prezzo di cui | | | | |
| | | a voce precedente maggiorato | | | | |
| | | del 10 % per maggior onere | | | | |
| | | derivante dal ridotto spes= | | | | |
| | | sore. mc. | 165 | 880 | 145.200 | |
| 7 | | Opere provvisionali e access= | | | | |
| | | orie per l'attivazione del | | | | |
| | | Diversivo.- a calcolo | | | 800.000 | |
| | | Totale lavori | | | | 5.891.200 |
| | - | Imprevisti (il 5 % circa) | | | | 294.800 |
| | | | | | | 6.186.000 |
| | | Per spese generali(il 15% circa) | | | | 927.000 |
| | | Ammontare della stima | | | | 7.113.000 |
| | | Roma, 8 luglio 1944 | | | | |
| | | | | | IL DIRETTORE | |

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| | | | | | |
|---|---|---|---|---|---|
| | dio di cm. 30: | | | | |
| | sono 550 x 0,30=mq. 165 cui | | | | |
| | si applica il prezzo di cui | | | | |
| | a voce precedente maggiorato | | | | |
| | del 10 % per maggior onere | | | | |
| | derivante dal ridotto spes- | | | | |
| | sore. | mq. | 165 | 880 | 145.200 |
| 7 | Opere provvisionali e access- | | | | |
| | orie per l'attivazione del | | | | |
| | diversivo.- a calcolo | | | | 200.000 |
| | Totale lavori | | | | 5.991.200 |
| | - Imprevisti (il 5 % circa) | | | | 294.800 |
| | | | | | 6.186.000 |
| | Per spese generali(il 15% circa) | | | | 927.000 |
| | Ammontare della stima | | | | 7.113.000 |

Roma, 8 luglio 1944

IL MINISTRO
Tarchiani

Declassified E.O. 12356 Section 3.3/NND No. 785019

alleg. 3

# Consorzio della Bonificazione Pontina
## Roma

*Opere Complementari della Bonifica*

## Lotto XIV
## Primo stralcio

## Opere principali per la deviazione del Fiume Vfente in Regione Cricilli

*Tronco di alveo murato in località Acqva Zolfa*

Declassified E.O. 12356 Section 3.3/NND No. 785019

*Opere Complementari della Bonifica*

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LOTTO XIV
Primo stralcio

---

# Opere principali per la deviazione del Fiume Vfente in Regione Gricilli

---

*Tronco di alveo murato in località Acqva Zolfa*

*Roma 1 febbraio 1940 XIX*

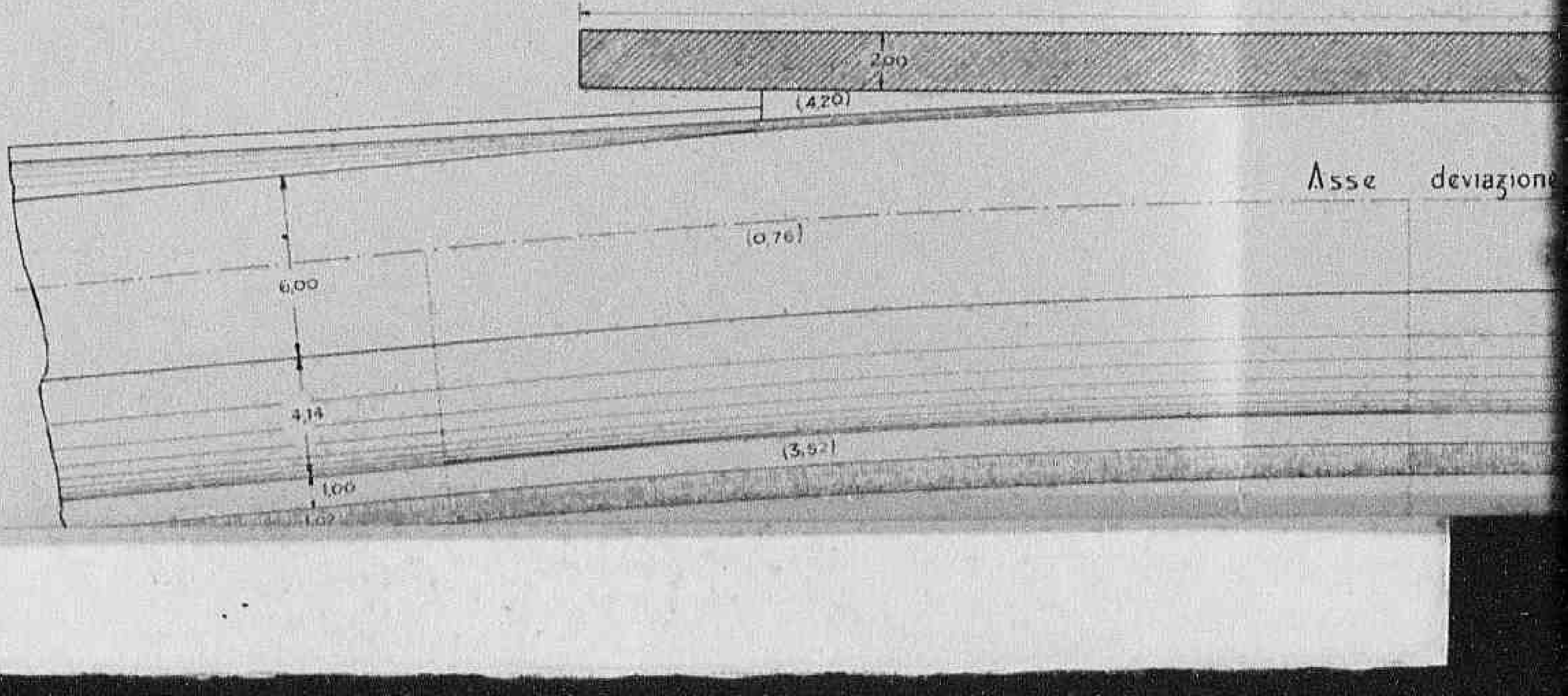
*Dis. N°419 bis*

Declassified E.O. 12356 Section 3.3/NND No. 780019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Sezione a quota

← ROMA — Direttissi



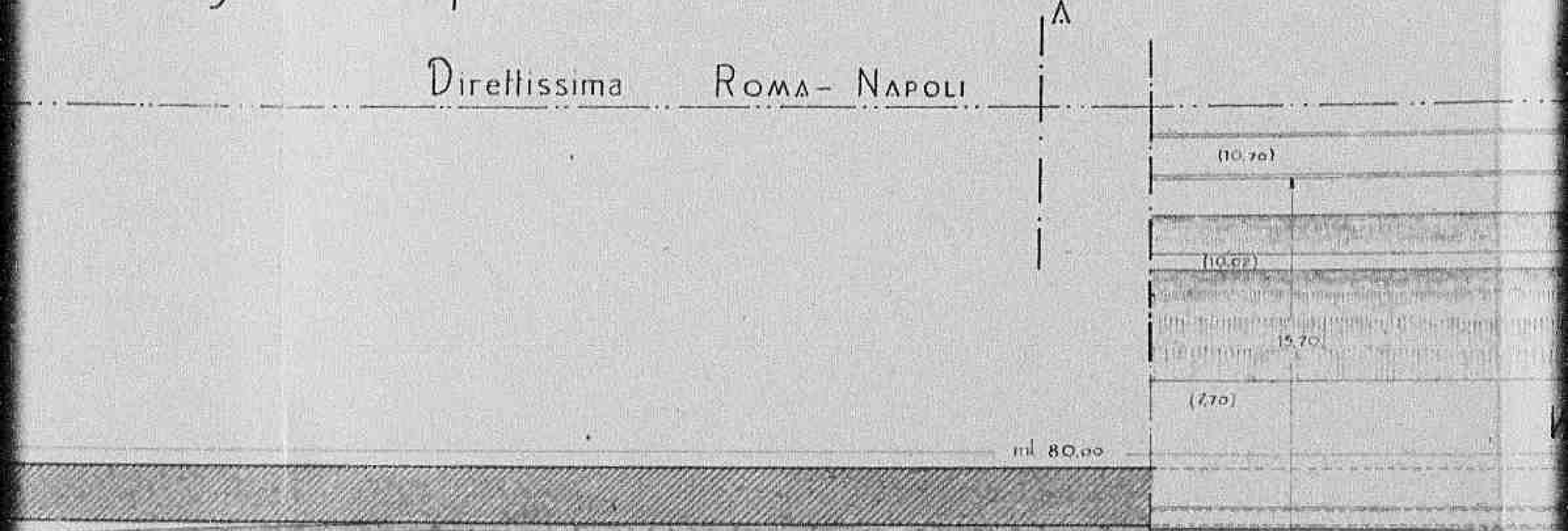
Declassified E.O. 12356 Section 3.3/NND No. 785019

Scala 1:200

## Sezione a quota 4,20

## Pianta ad o

Direttissima Roma - Napoli

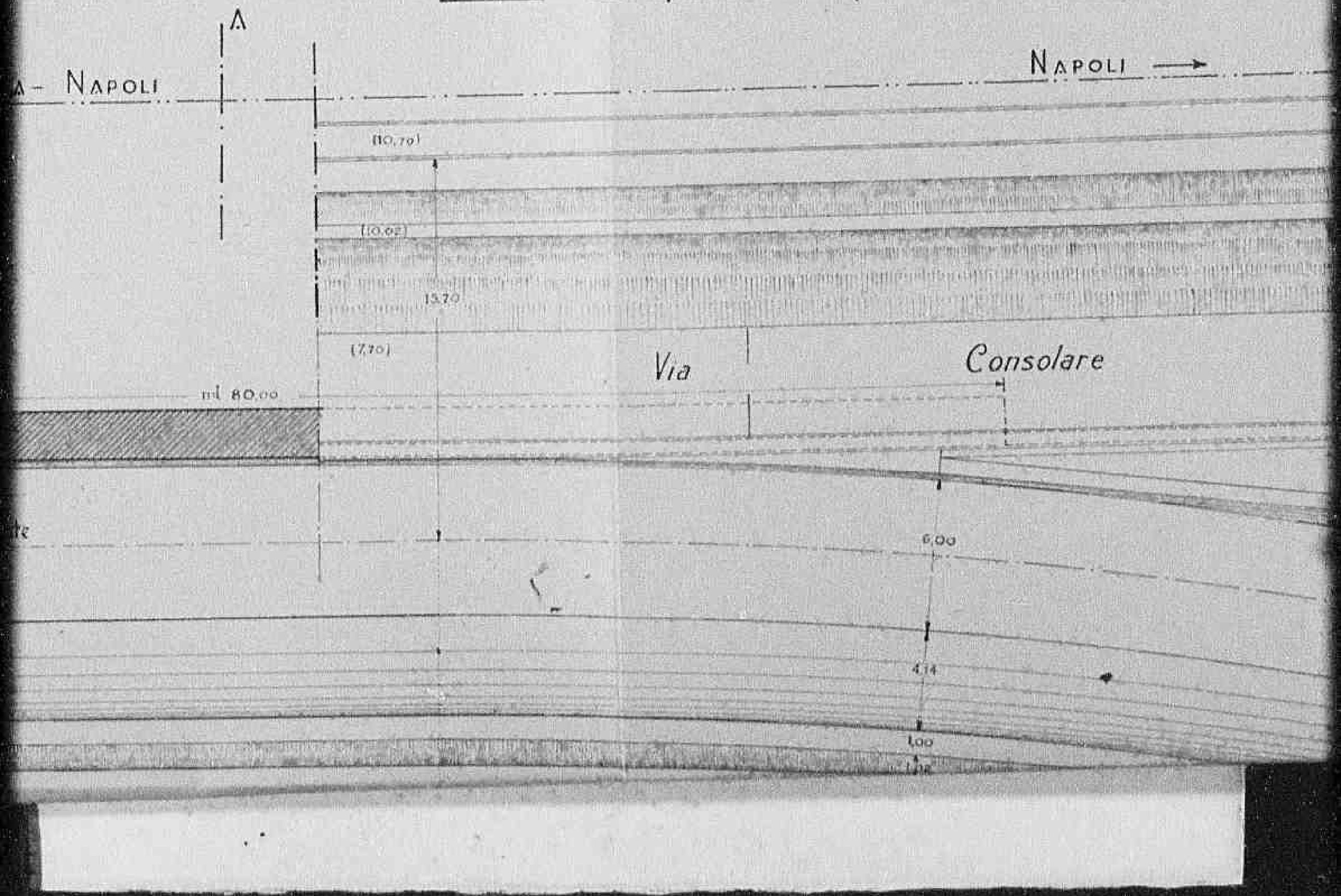



Asse deviazione Fiume Ufente

Declassified E.O. 12356 Section 3.3/NND No. 785019

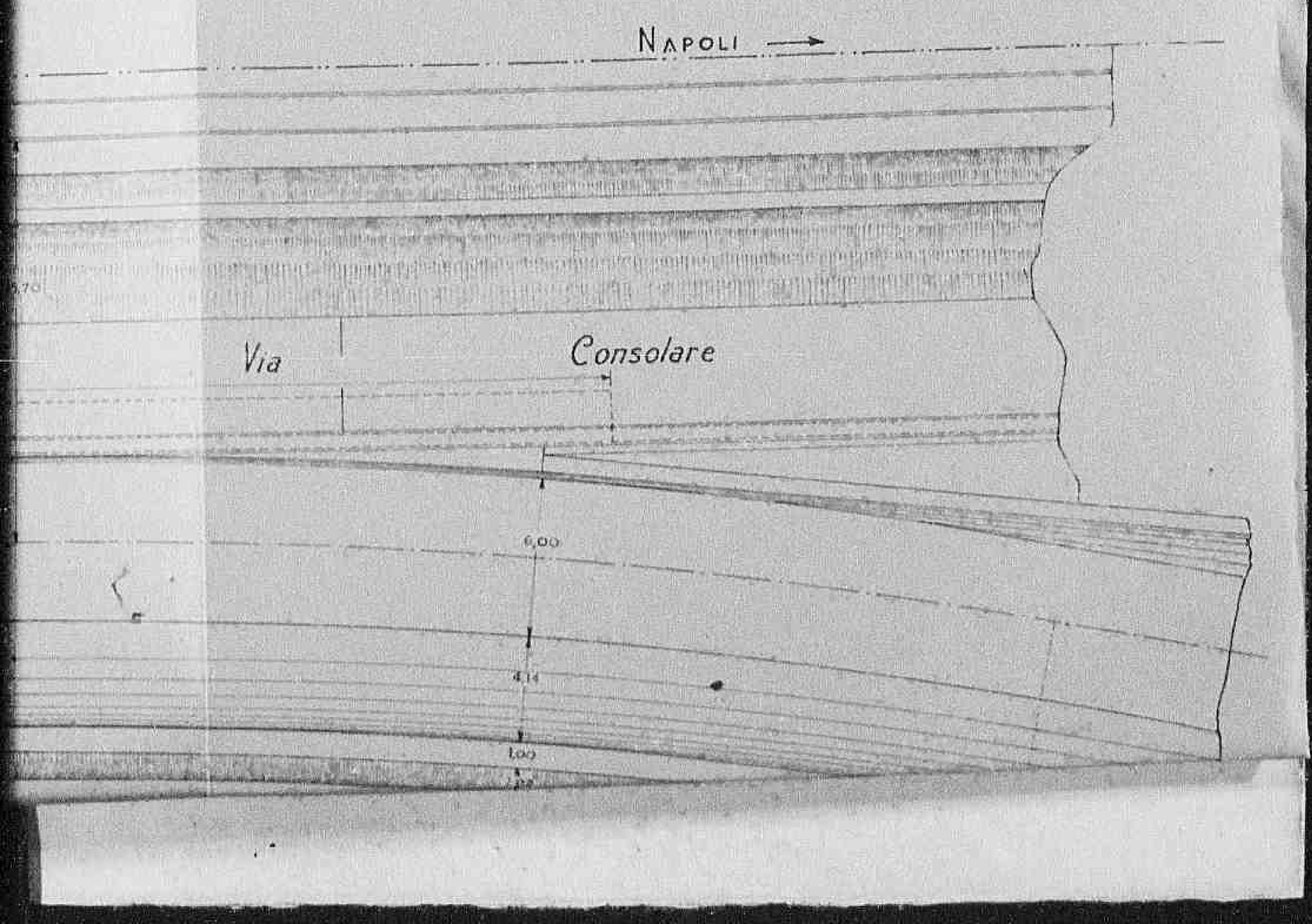
Scala 1:200

# Pianta ad opera completa



Declassified E.O. 12356 Section 3.3/NND No. 785019

Pianta ad opera completa



Declassified E.O. 12356 Section 3.3/NND No. 785019

ROMA

Direttiss

1232

Declassified E.O. 12356 Section 3.3/NND No. 785019

Direttissima Roma - Napoli

(10.70)

(10.65)

(5.70)

(7.70)

ml 80.00

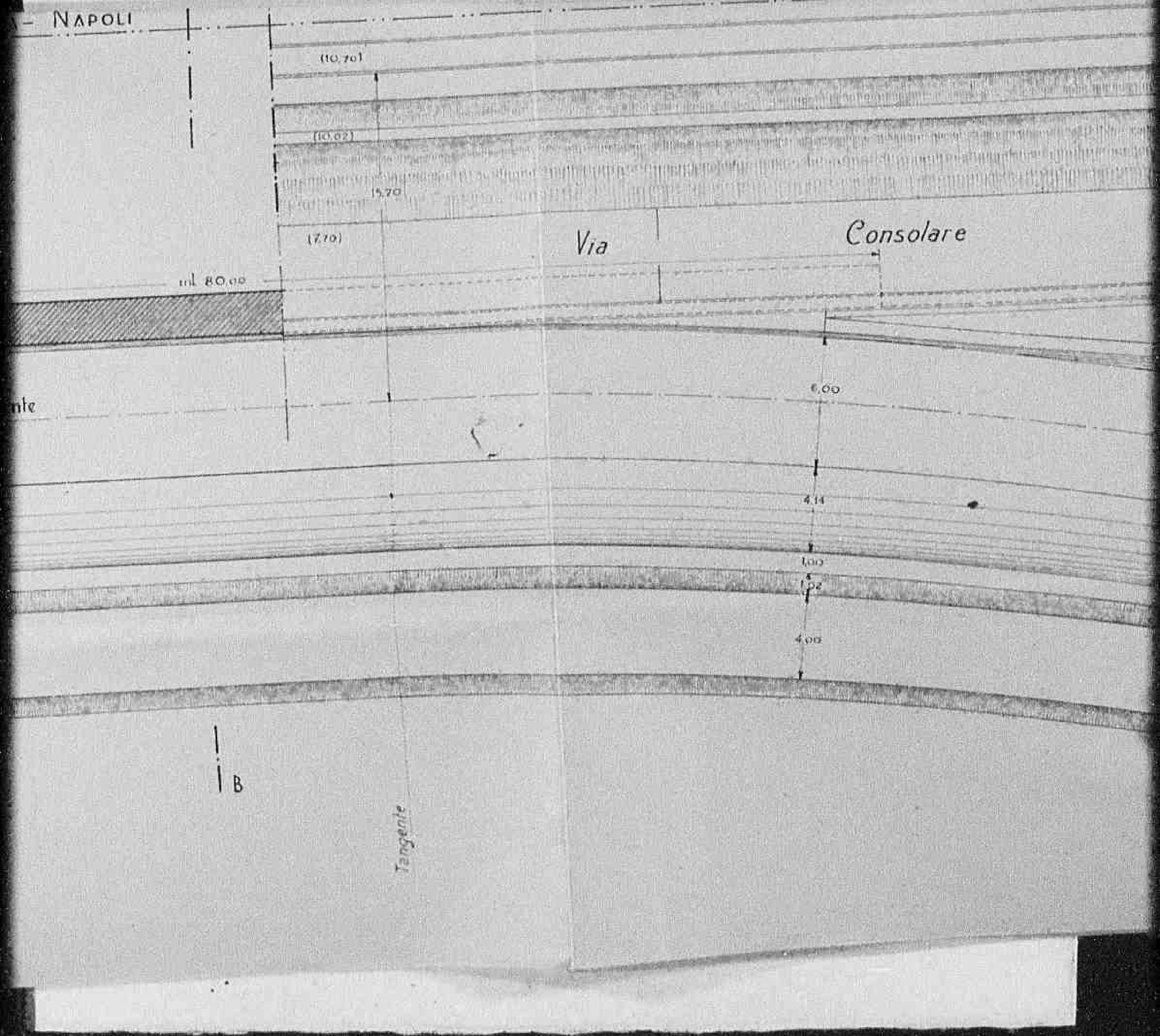
Asse deviazione fiume Ufente

Tangente

B

Tangente

Declassified E.O. 12356 Section 3.3/NND No. 785019

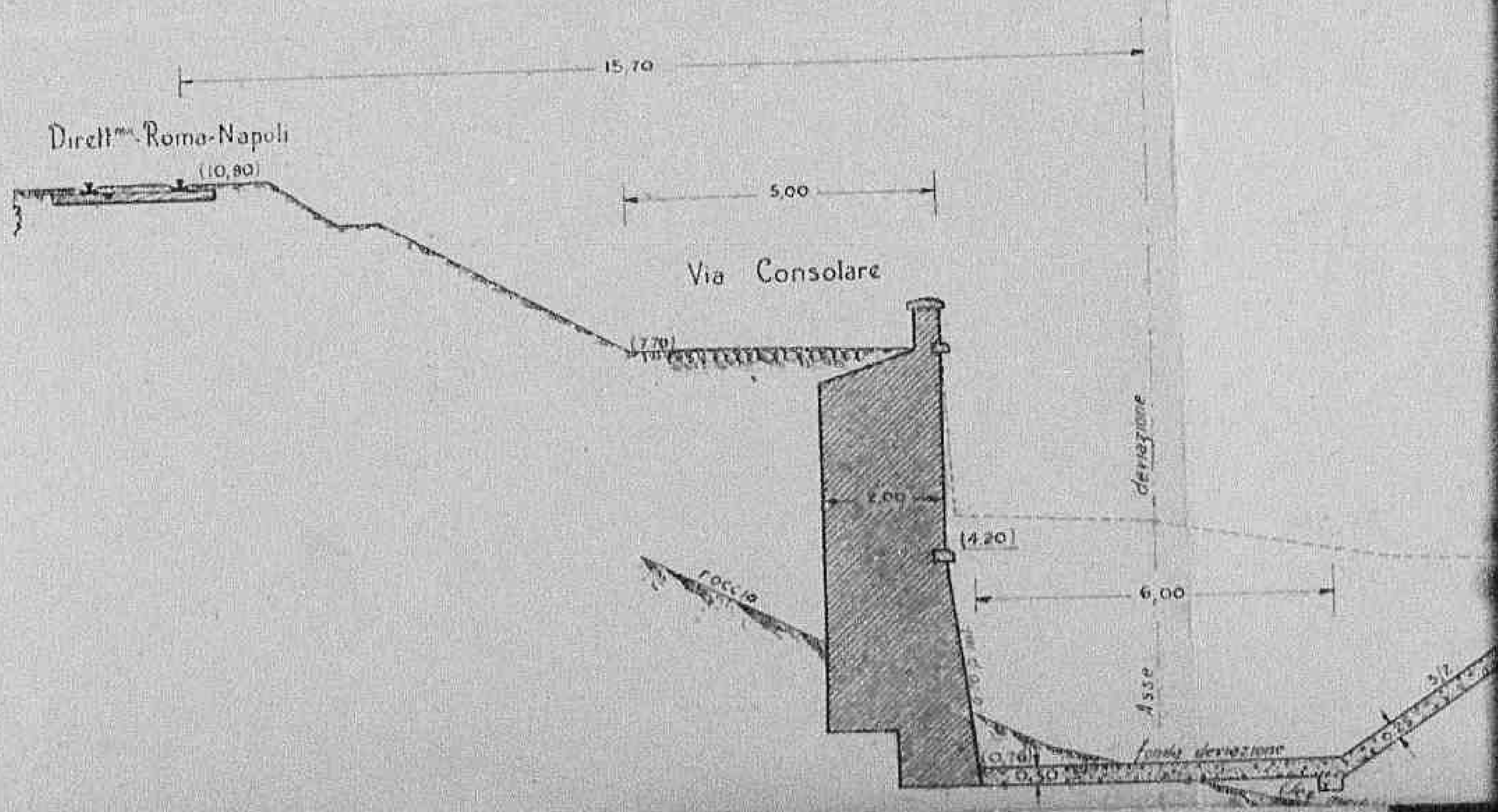


Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

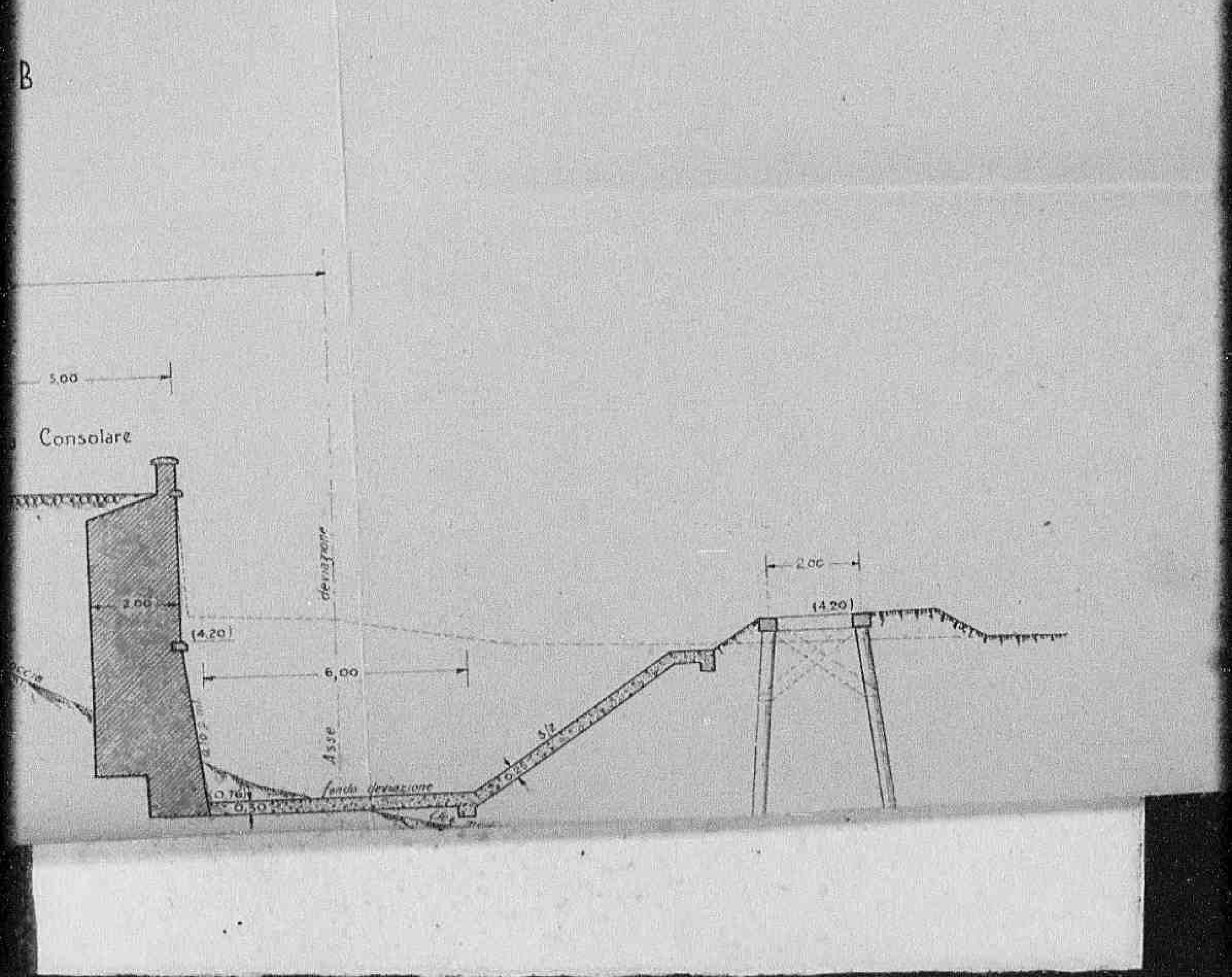
# Sezione A-B

*Scala 1:100*



Declassified E.O. 12356 Section 3.3/NND No. 785019

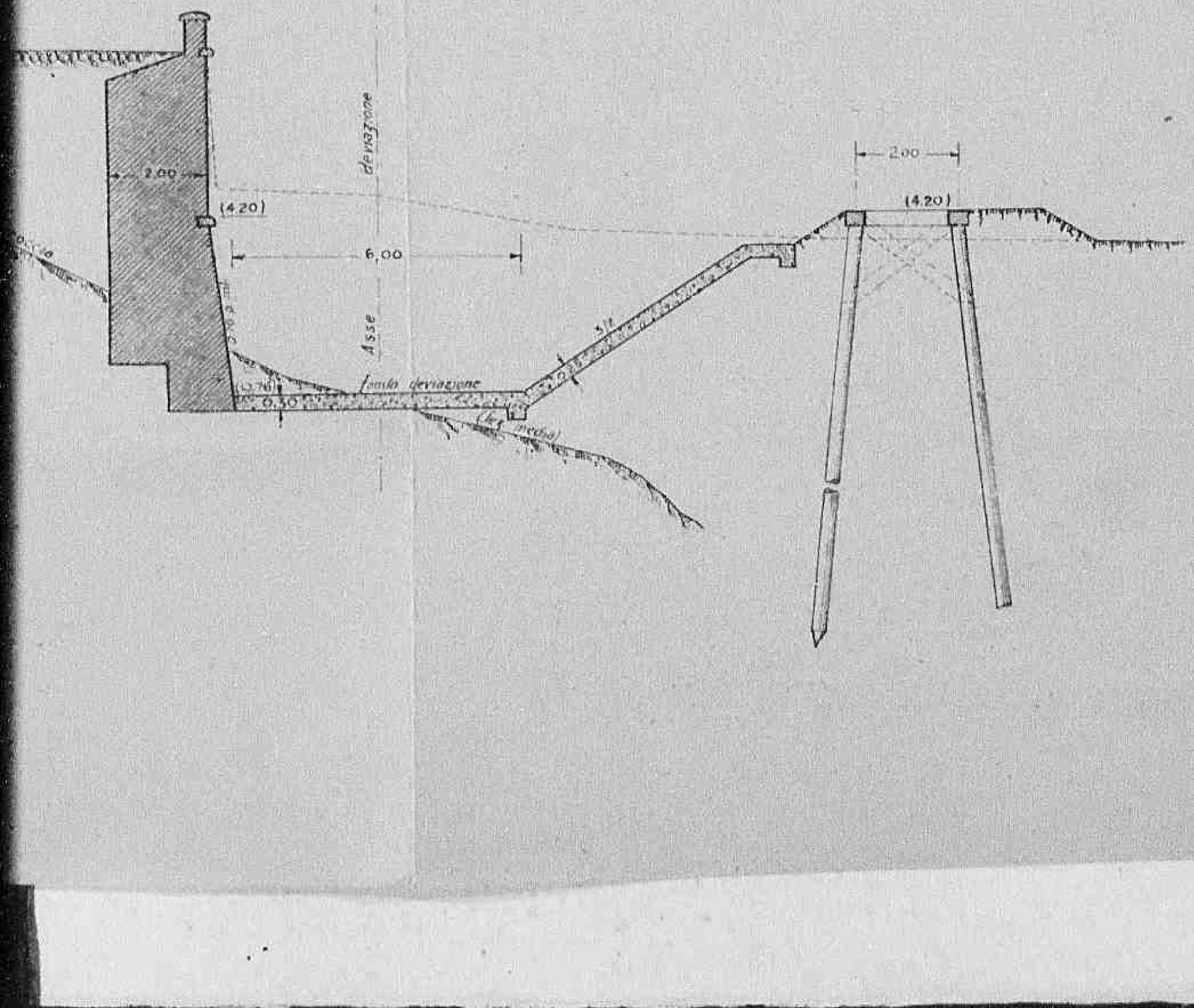
B



Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

a Consolare

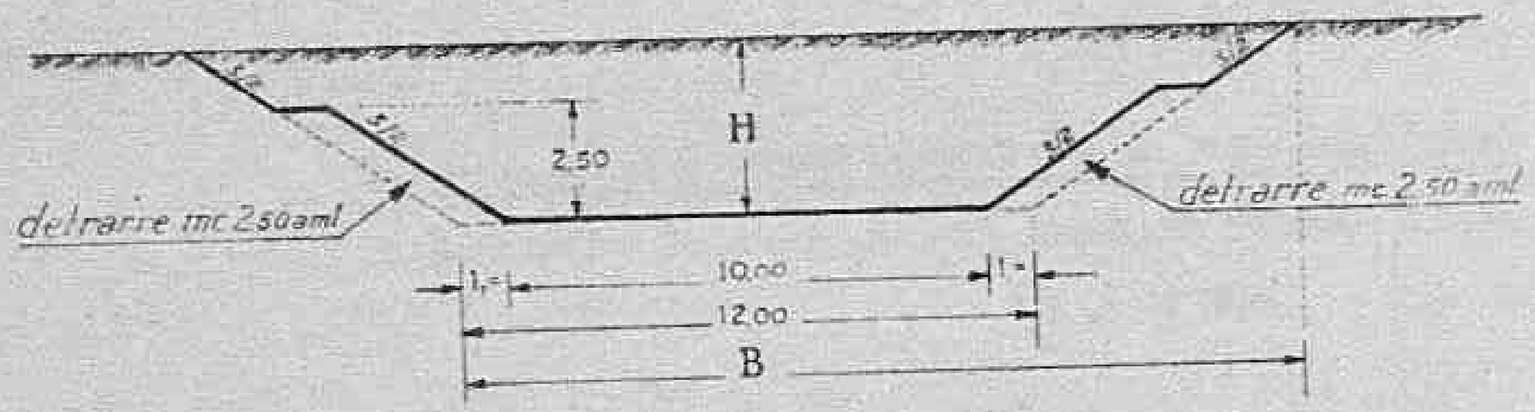


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allegato 4

# Diversivo Ufente

## Computo sommario dei volumi di scavo da eseguirsi




A) - **fra l'Acqua Zolfa e la migliaria** 49 -

| Sezione nº | Distanze m. | H m. | B m. | Area A= BH mq. | Area media mq. | Volumi mc. |
|---|---|---|---|---|---|---|
| 9 bis | | 4,15 | 18,20 | 76 | | |
| | 90 | | | | 97 | 8.700- |
| 10 | | 5,75 | 20,60 | 118 | | |
| | 25 | | | | 118 | 2.900- |
| V 3 | | 5,75 | 20,60 | 118 | | |
| | 30 | | | | 98,5 | 2.900- |
| 10 bis | | 4,30 | 18,45 | 79 | | |
| | 71 | | | | 74,5 | 5.300- |
| 11 bis | | 3,90 | 17,85 | 70 | | |
| | 79 | | | | 71 | 5.600- |
| 12 | | 4,- | 18,- | 72 | | |
| | 100 | | | | 69,5 | 6,900- |
| 12 bis | | 3,80 | 17,70 | 67 | | |
| | 100 | | | | 70,5 | 7.100- |
| 13 | | 4,05 | 18,10 | 74 | | |
| | 140 | | | | 79,5 | 11.100- |
| 14 | | 4,55 | 18,80 | 85 | | |
| | 85 | | | | 74 | 6.300- |
| 14 bis | | 3,65 | 17,50 | 63 | | |
| | 95 | | | | 67 | 6.300- |
| 15 bis | | 3,95 | 17,90 | 71 | | |
| | 98 | | | | 61,5 | 6.000- |
| mig.49 | | 3,15 | 16,70 | 52 | | |
| | 913 | | | | | 69.100- |
| | | | | Si detrae per banchine 2x2,5x913 = | | 4.600- |
| | | | | Volume totale d'escavo | | 64.500- |




A) - **fra l'Acqua Zolfa e la migliaria** 49 -

| Sezione nº | Distanze m. | H m. | B m. | Area A= BH mq. | Area media mq. | Volume mc. |
|---|---|---|---|---|---|---|
| 9 bis | | 4,15 | 18,20 | 76 | | |
| | 90 | | | | 97 | 8.700- |
| 10 | | 5,75 | 20,60 | 118 | | |
| | 25 | | | | 118 | 2.900- |
| V 3 | | 5,75 | 20,60 | 118 | | |
| | 30 | | | | 98,5 | 2.900- |
| 10 bis | | 4,30 | 18,45 | 79 | | |
| | 71 | | | | 74,5 | 5.300- |
| 11 bis | | 3,90 | 17,85 | 70 | | |
| | 79 | | | | 71 | 5.600- |
| 12 | | 4,- | 18,- | 72 | | |
| | 100 | | | | 69,5 | 6,900- |
| 12 bis | | 3,80 | 17,70 | 67 | | |
| | 100 | | | | 70,5 | 7.100- |
| 13 | | 4,05 | 18,10 | 74 | | |
| | 140 | | | | 79,5 | 11.100- |
| 14 | | 4,55 | 18,80 | 85 | | |
| | 85 | | | | 74 | 6.300- |
| 14 bis | | 3,65 | 17,50 | 63 | | |
| | 95 | | | | 67 | 6.300- |
| 15 bis | | 3,95 | 17,90 | 71 | | |
| | 98 | | | | 61,5 | 6.000- |
| mig.49 | | 3,15 | 16,70 | 52 | | |
| | 913 | | | | | 69.100- |
| | | Si detrae per banchine 2x2,5x913 = | | | | 4.600- |
| | | Volume totale d'escavo | | | | 64.500- |
| | | Già escavati | | | | 7.500- |
| | | | | Da riportare | mc. | 57.000- |

B) - **allargamento di m. 2 a valle del ponte per la**

/./.

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| | | |
|---|---|---|
| | Riporto | mc. 57.000- |
| | strada vicinale a progr. 1770<br>Altezza fra il fondo e la scarpata arginale m. 3,10 | |
| | m. 1700 x 3,10 x 2 = | mc 10.500- |
| C) - | <u>Completamento di un tronco lungo 400 m.</u> a monte dello sbocco Ceriara (in regione di circa mc.2,5 a ml) 400 x 2,5 = | mc. 1.000- |
| | Totale scavo in terra | mc. 68.500- |

Roma, 8 luglio 1944

Declassified E.O. 12356 Section 3.3/NND No. 785019

1 2 4 21

Declassified E.O. 12356 Section 3.3/NND No. 785019

*alleg. 1*

# COROGRAFIA

0 125 250 375 500 1 1500 2 km

da ultimare

da escavare

da allargare

Nirottissima

Lago S. Carlo

Lago di Vetrone

Fiume

Vfente

Lago di Mazzocchio

BACINO DEI G[illegible]CILI

Canale di bonifica

Canale Collettore

Collettore

Diversivo

Strada

Strada Mezzalona

R. Lago Manello

Miglio 47

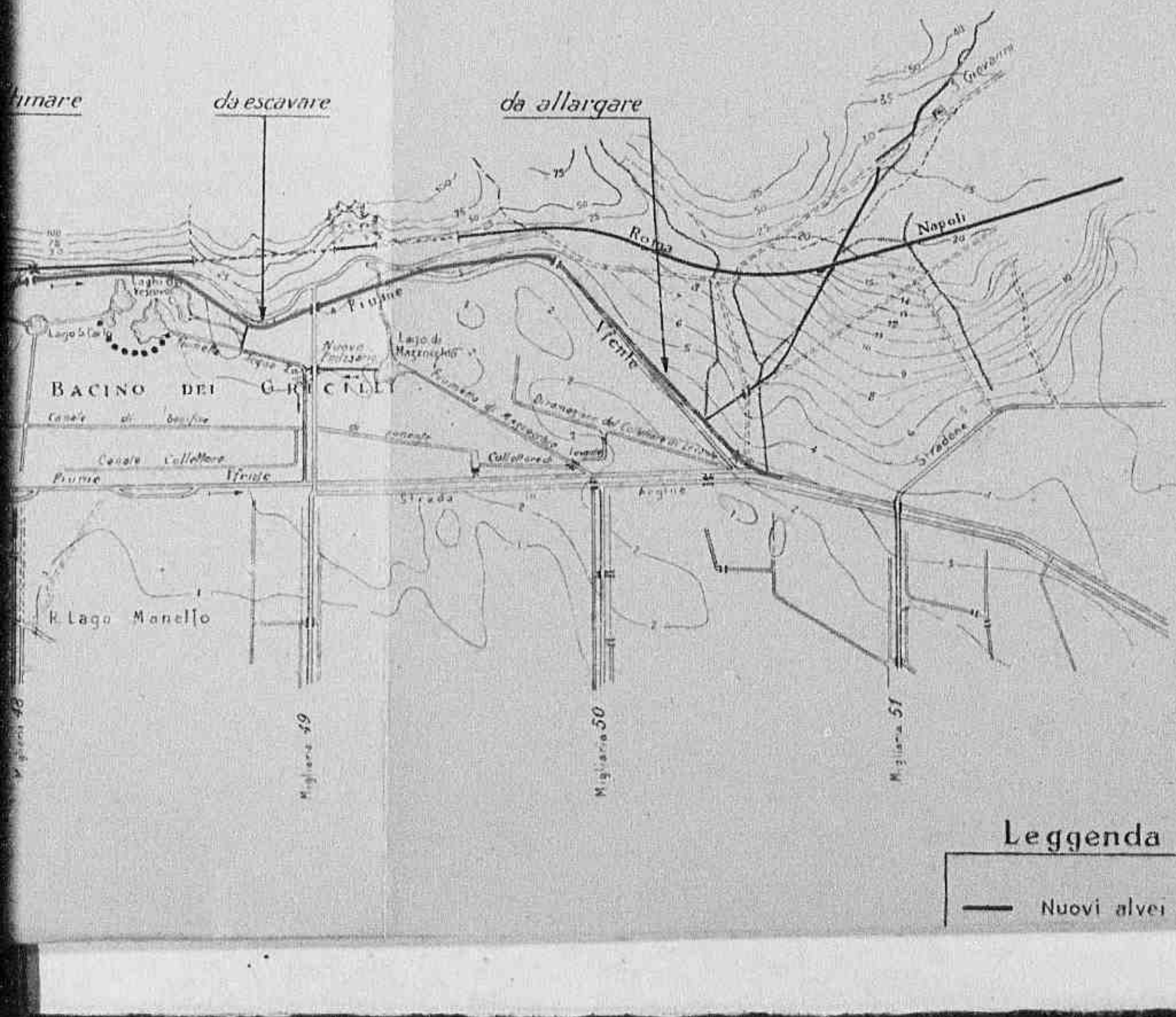
Miglio 48

Miglio 49

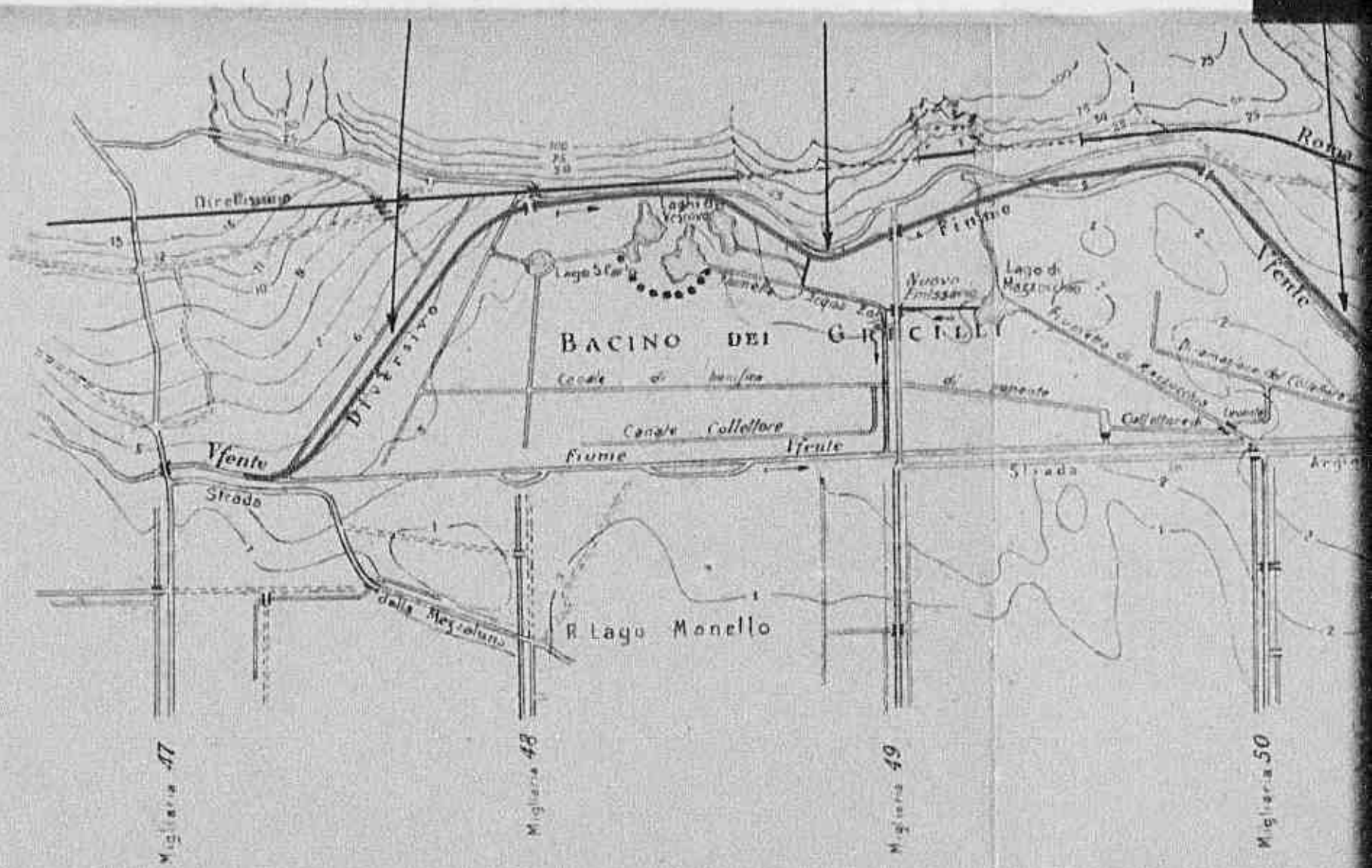
Miglio 50

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alleg. 1

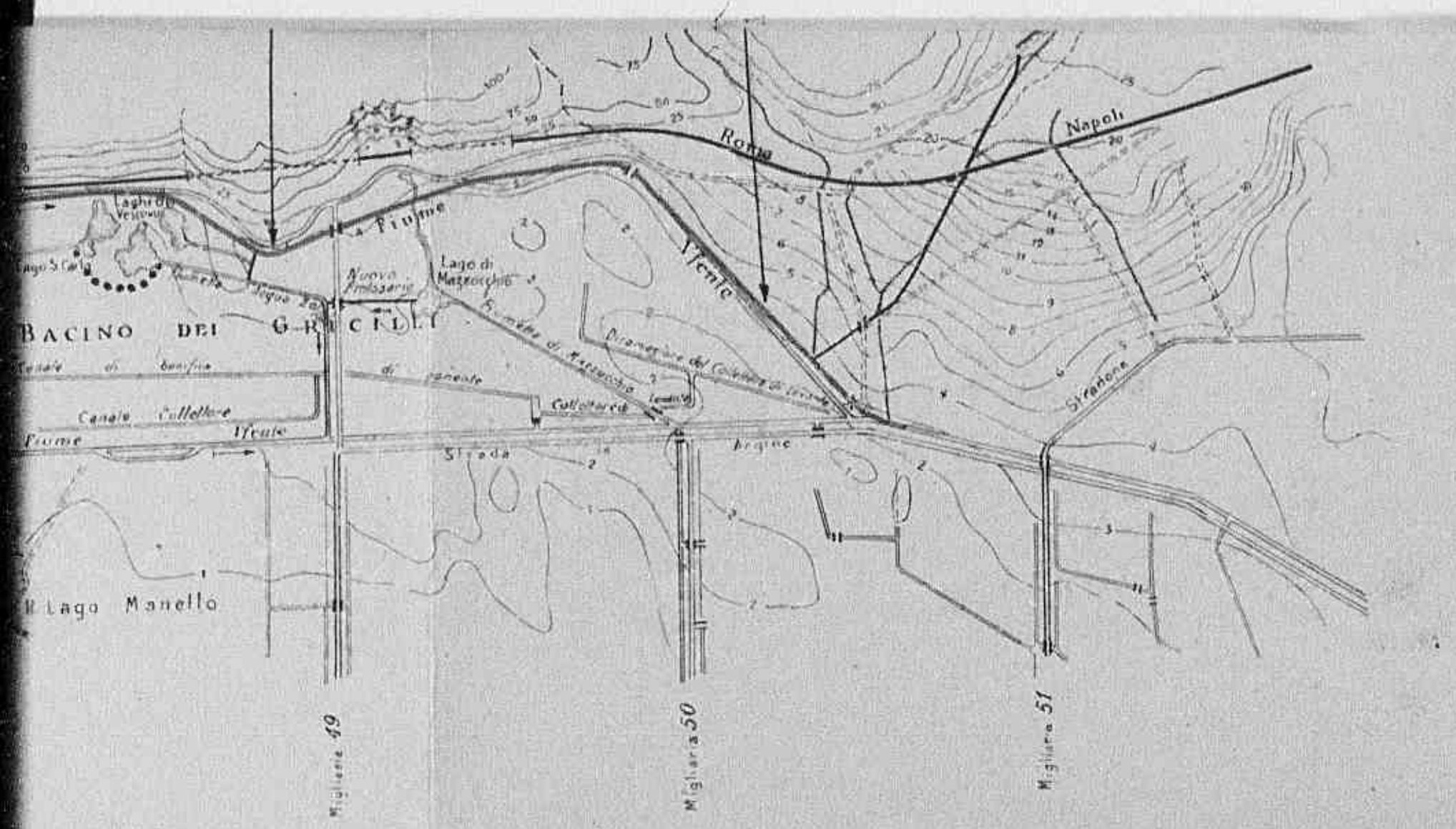

da rimare
da escavare
da allargare
Roma
Napoli
Fiume
Ufente
Lago di Fogliano
Lago di Monaci
Lago di Mezzanello
Lago di Caprolace
Lago di Fondi
Lago di Monticchio
Lago di Fogliano
Lago di Sabaudia
Lago di Paola
Lago di Caprolace
Lago di Fondi
Lago di Monticchio
Lago di Mezzanello
Lago di Monaci

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Scala 1:25'000

Declassified E.O. 12356 Section 3.3/NND No. 785019




## Leggenda

- Nuovi alvei
- Arginatura esistente da sistemare
- Alvei da tombare

alleg. 2

# Consorzio della Bonificazione Pontina
Roma

*Opere Complementari della Bonifica*

## Lotto XIV.
Primo stralcio

## Opere principali per la deviazione del Fiume Vfente in Regione Gricilli.

*Profilo*

Declassified E.O. 12356 Section 3.3/NND No. 785019

*Opere Complementari della Bonifica*

# Lotto XIV.
## Primo stralcio

# Opere principali per la deviazione del Fiume Vfente in Regione Gricilli.

*Profilo*

*Roma, li*

Visto il Direttore

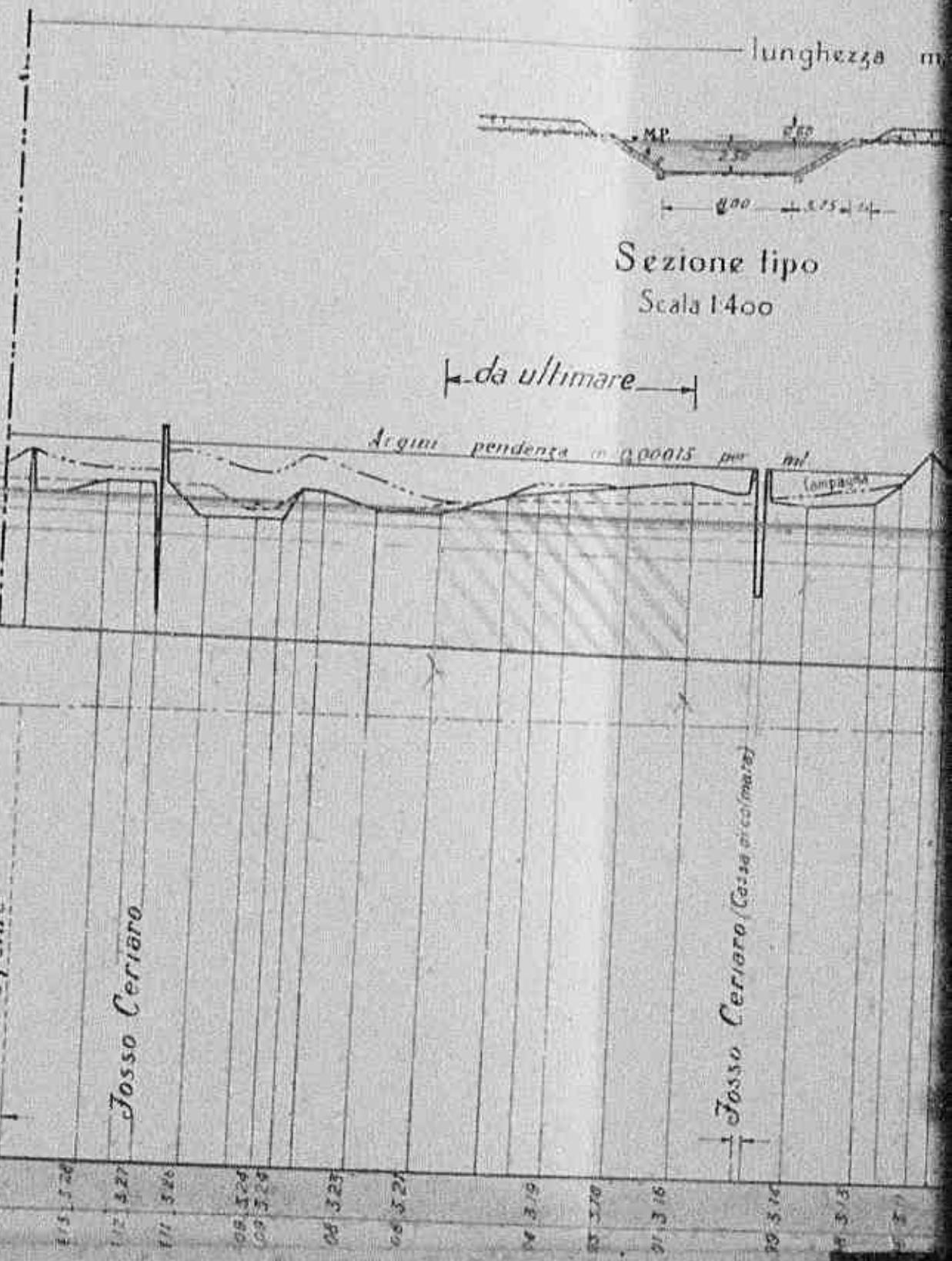
*L'Ingegnere*

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Rapporti { lunghezze 1:10.000
altezze 1:100

Quote { Max piena
Argine sinistro




Sezione tipo
Scala 1:400

Declassified E.O. 12356 Section 3.3/NND No. 785019

lunghezza m 2959




Sezione tipo
Scala 1:400

da ultimare

da escavar

Argini pendenza m 0,0015 per ml

Max piena pendenz

Fosso Cerraro (Cassa di colmata)

Stradella vicinale

Immissione Sorgenti Lago Acqua Zolfa

Lago del Vescovo

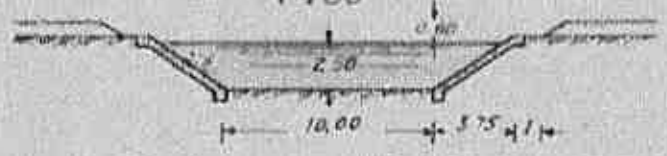
Immissio sorgenti

12501

Declassified E.O. 12356 Section 3.3/NND No. 785019

lunghezza m. 1380

Sezione tipo
1400




da escavare

Ponte

Max piena pendenza m 0.00013 p.m

Immissione Sorgenti

Lago Acqua Zolfa

Lago del Vescovo

Immissione sorgenti

Stradone Migliario 49

Collettore sorgenti

Fontana di Muro

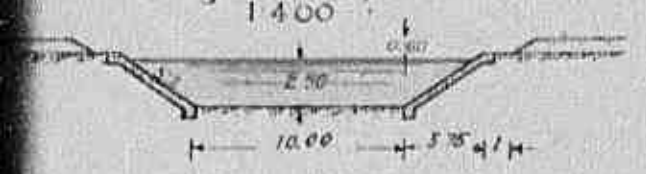
Stradella

Strada vicinale

Declassified E.O. 12356 Section 3.3/NND No. 785019

lunghezza m. 1380

Sezione tipo
1400

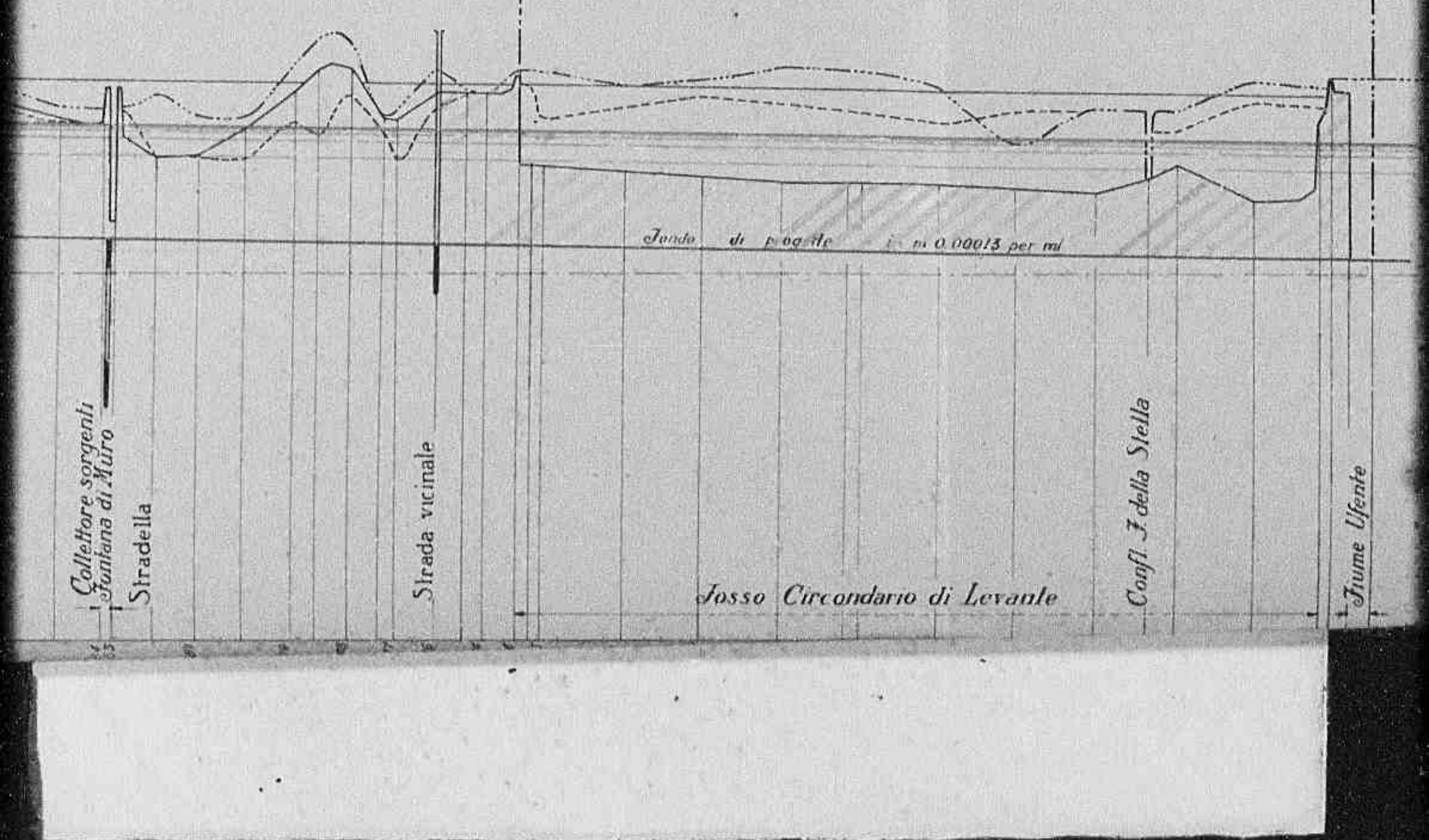


lunghezza m 1620

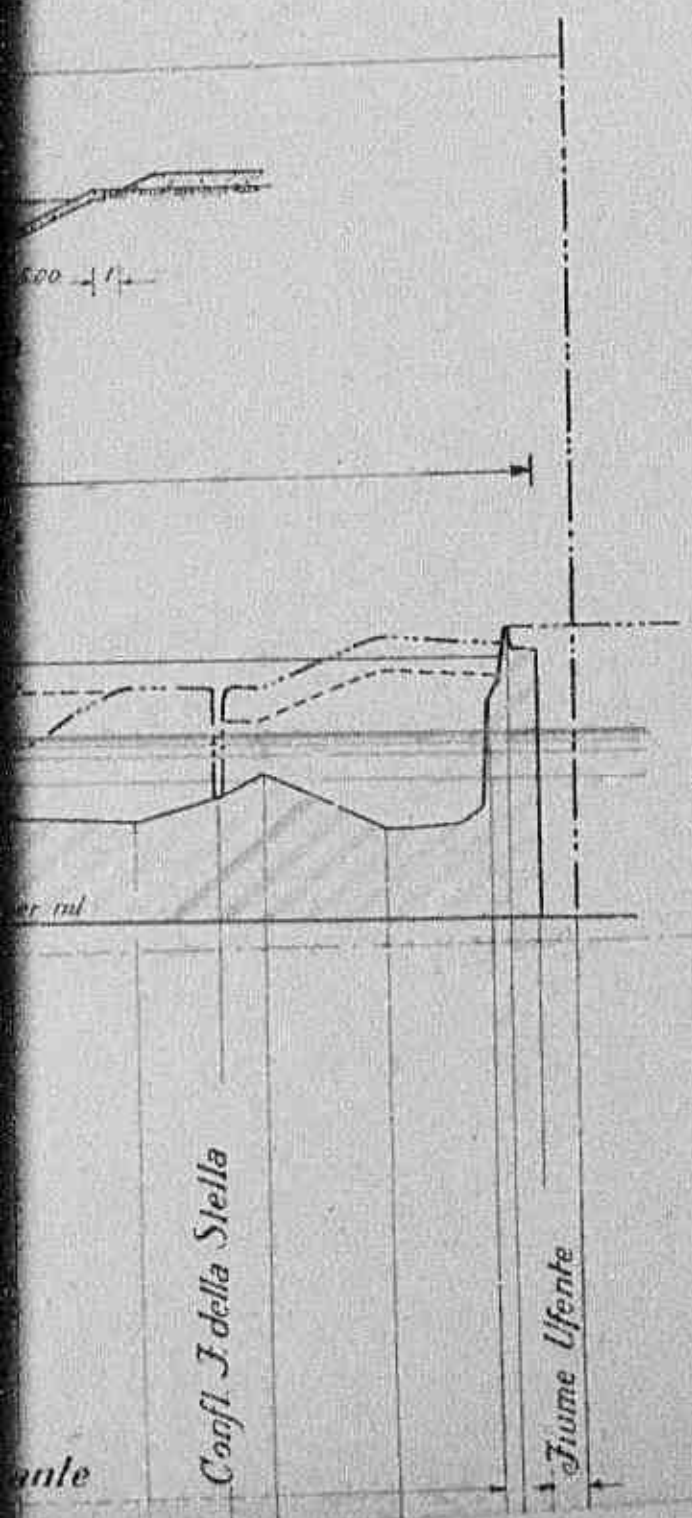


Sezione tipo
Scala 1:400

da allargare

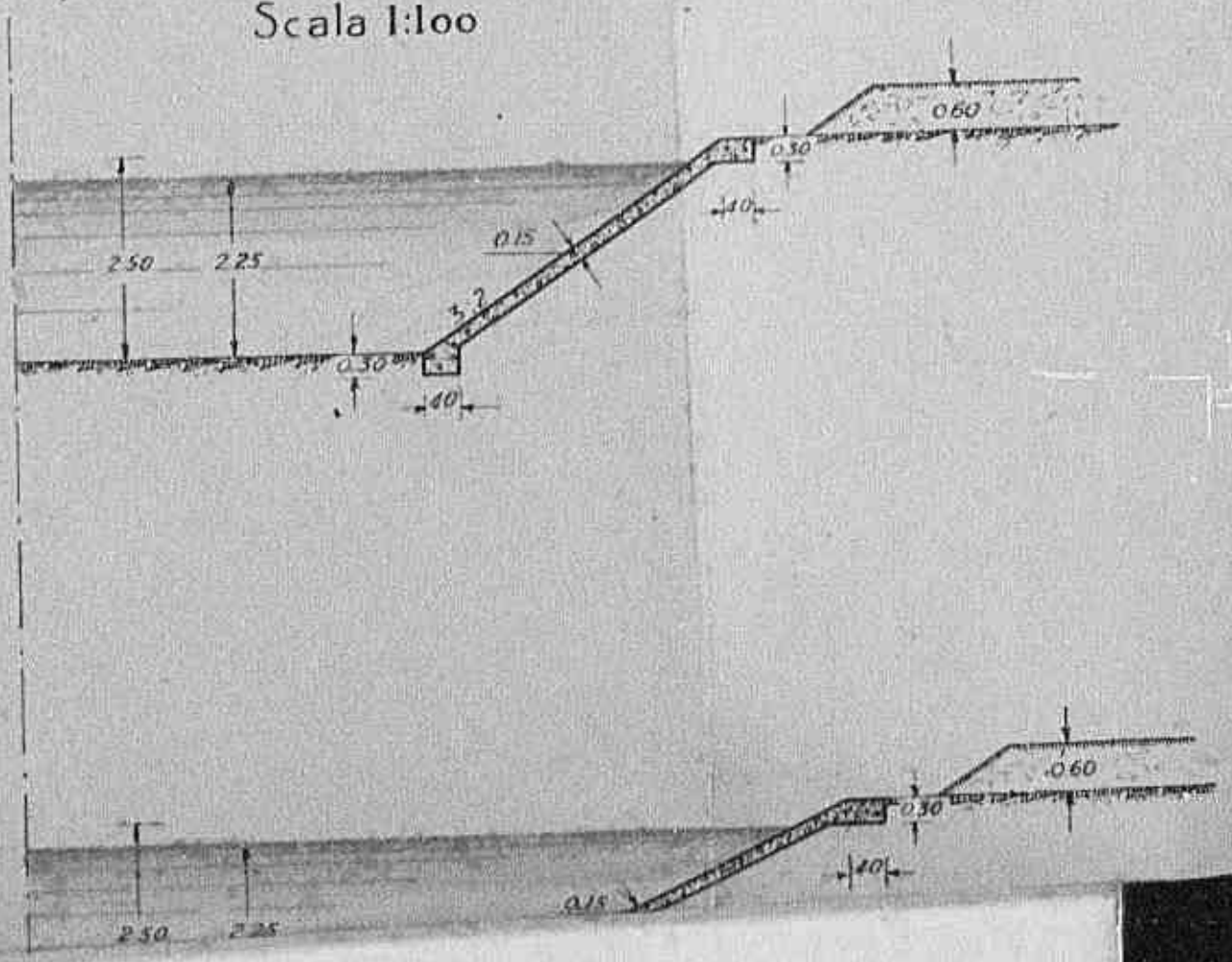


Declassified E.O. 12356 Section 3.3/NND No. 785019




## Tipo rivestimento scarpate

Scala 1:100

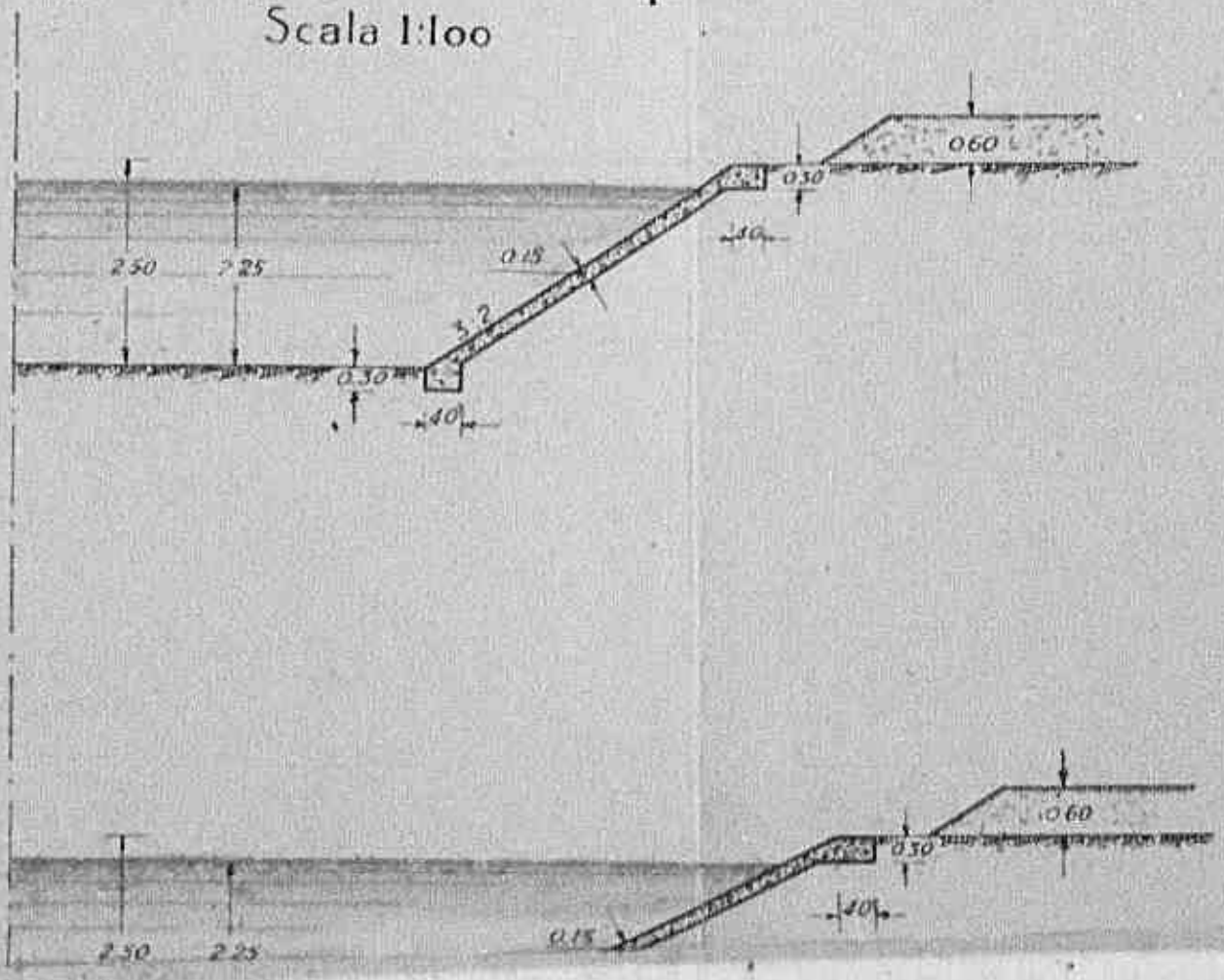


1253

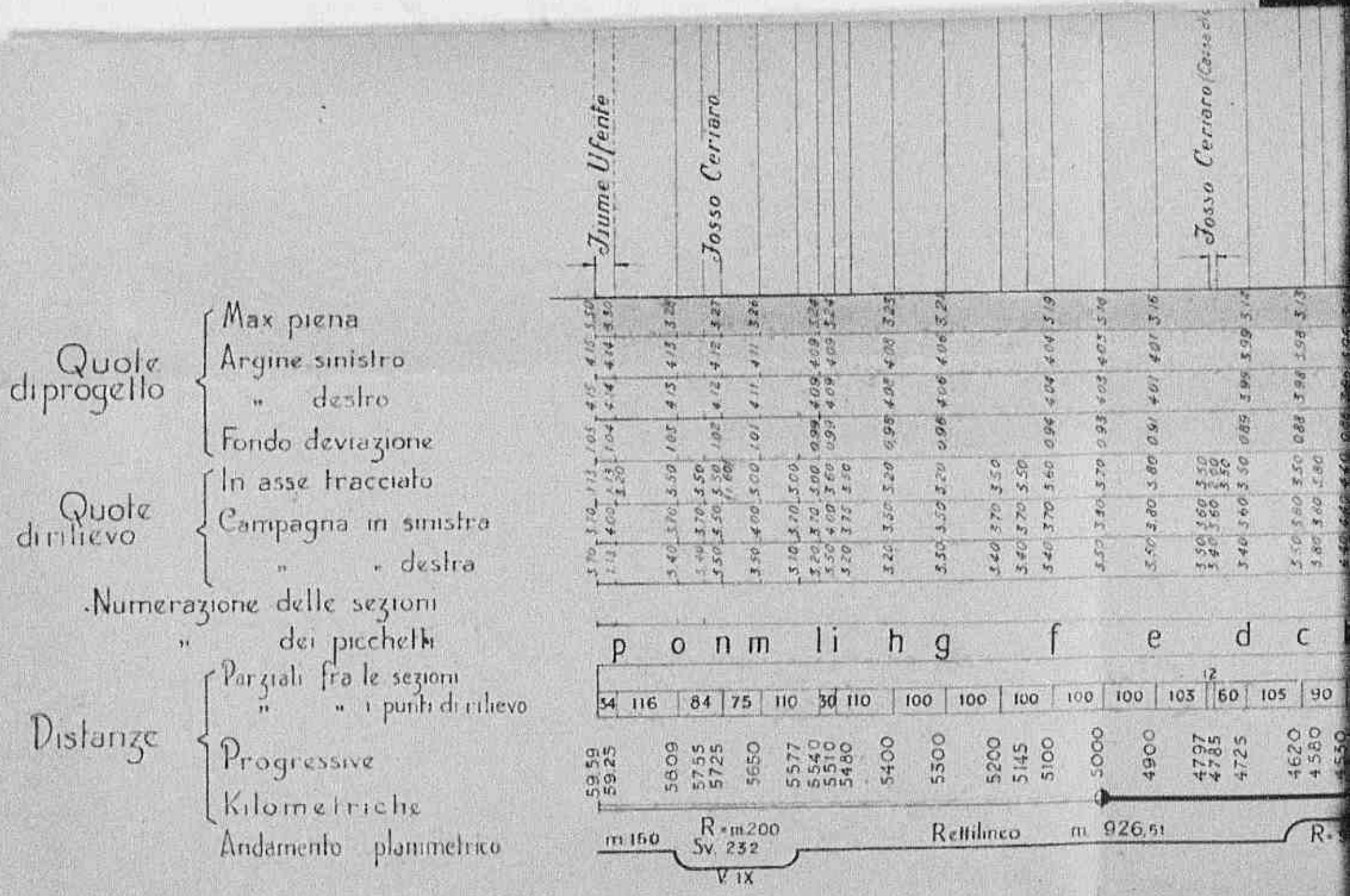
Declassified E.O. 12356 Section 3.3/NND No. 785019

# Tipo rivestimento scarpate

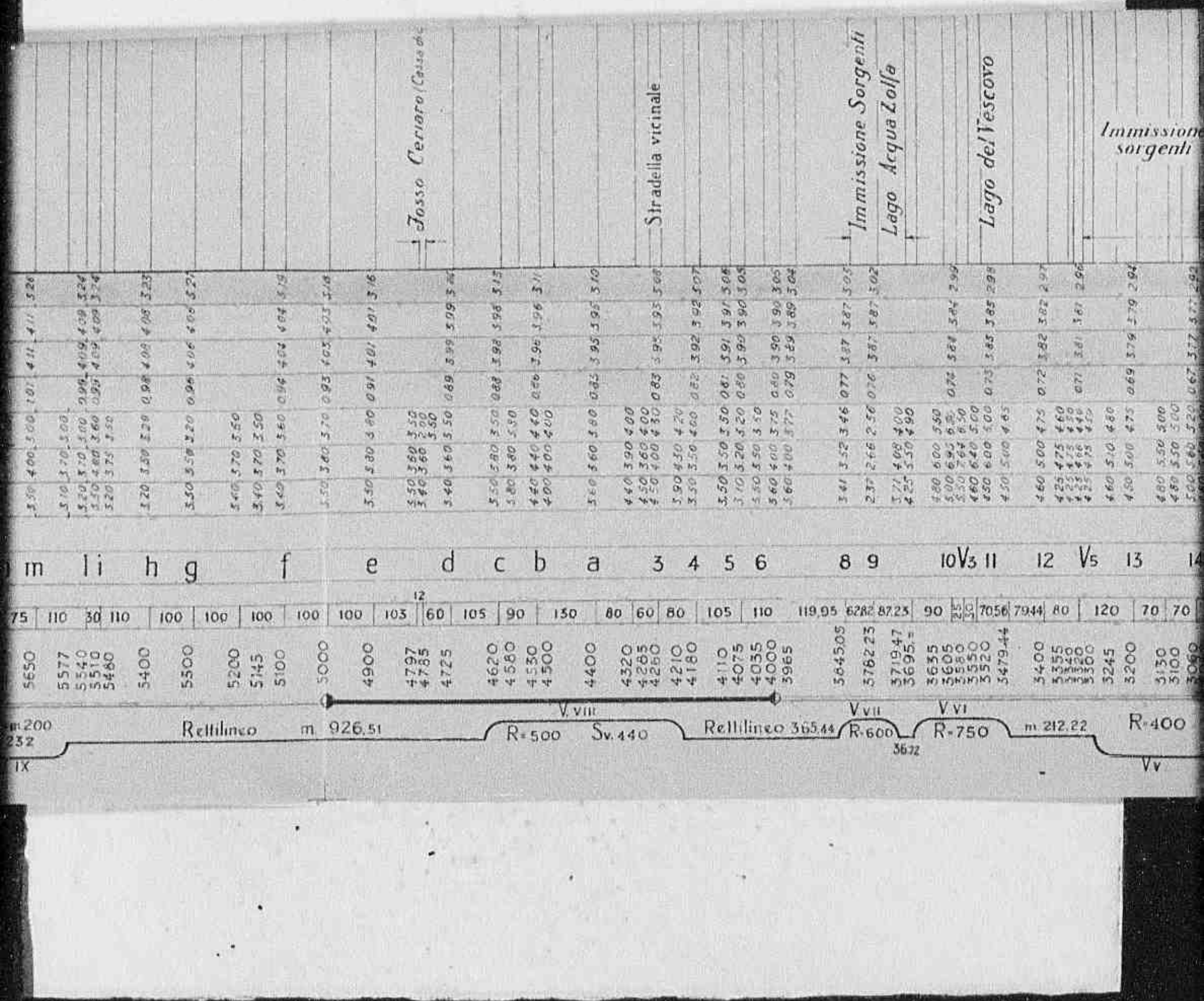
Scala 1:100



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Lago Acqua Zolfa — Largo del Vescovo — Immissione sorgenti — Stradone Migliario 49 — Collettore sorgenti Fontana di Muro — Stradella — Strada vicinale — Fosso

9 — 10 V3 — 11 — 12 V5 — 13 — 14 V7 — 15 — 18 — 19bis — 20 — 21 — 22 — 23 — 24 — V11 — 37 — 38 — 39

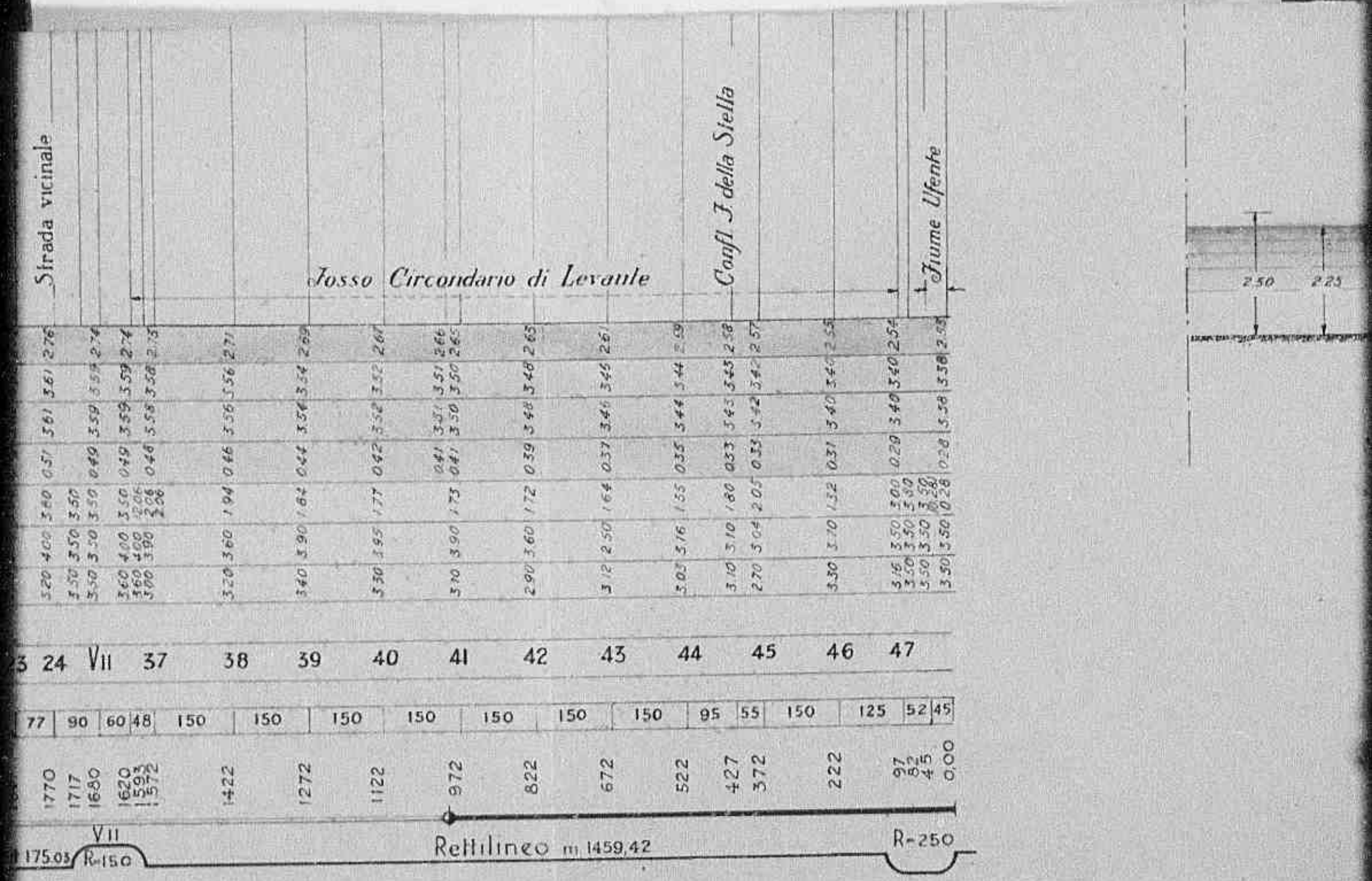
8723 | 90 | 25 | 30 | 7056 | 7944 | 80 | 120 | 70 | 70 | 85 | 45 | 50 | 98 | 122 | 170 | 90 | 15 | 78 | 82 | 85 | 97 | 111 | 85 | 77 | 90 | 60 | 48 | 150 | 150 | 150

3782.23 — 3719.47 — 3695.= — 3635 — 3605 — 3580 — 3550 — 3520 — 3479.44 — 3400 — 3355 — 3300 — 3245 — 3200 — 3130 — 3100 — 3060 — 3032 — 3000 — 2975 — 2930 — 2860 — 2850 — 2782 — 2660 — 2490 — 2400 — 2385 — 2307 — 2225 — 2140 — 2043 — 2000 — 1932 — 1875 — 1847 — 1770 — 1717 — 1680 — 1620 — 1593 — 1572 — 1422 — 1272 — 1122

V VI — R=750 — m. 212.22 — R=400 — Rettilineo m 847.14 — R 200 — m 173.81 — V III — Rett 175.03 — R=150 — V II

V V — V IV — R150

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Confl. f. della Stella

Fiume Ufente

| | | |

1259