Archives I 10,006—16-8 77.

(1) Number of pages 102

(2) Date of repair 20287

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W. DEPARTMENT

G.O. No. 3180
B.P. No.

Press.
Mis.

Dated 22. 12. 1881 197 .

Not to be folded or roughly handled

DV

VI

In/G. No. 2323

for heading

~~Municipal Office,~~
Madras, 9th Decr 1881

RENT No. 3348

From

A. T. Arundel Esqr
President, Municipal Commission,

3180/1

To

The Hon'ble. L. Davidson C. S. I.
Chief Secretary to Government
Fort Saint George

Sir,

In reply to G. O. No 2721 W dated 3rd November (Public Works) I have the honor to forward a Memorandum on the subject by the Vice President Mr Jones which gives full explanation on the points in question.

I have the honor to be
Sir,
Your most obedt Servt

A. T. Arundel
President Municl Commn

Fin^l Dep^t
1881.

Madras Municipality

From, (Mun^l - drainage)
The President
Municipal Commission
Madras

To,
The Chief Secretary
to Government
Fort St. George

R O & C No 2323.

Dated 29^th } November /81.
Desp^d 29^th }
~~Recd 30~~ }
Rec^d 2^d Dec^r

CURRENT No. 3310

Subject

Forwards a Memorandum on the subject referred to in G. O. No 2721 W dated 3^rd November 1881.

G O 2721 W. 3-11-81
3181 W. 22-12-81
C O 2903- 3-12-81

P E No 1934

Transferred to the P. W. Dep^t.

R Davidson
Chief Sec^y

1^st Dec^r /81

30/11/81

22^nd Dec^r No 3181 W.

No 4

Memo in reply to G O 3^rd November 81 No 2721 W.

3 18/3

In reference to letter from Superintendent of Harbour Works embodied in the above and chiefly in regard to paras Nos 3 & 4 the following explanation is that required by Government in the above order.

2 The channels discharging within the Harbour area referred to by Mr Thorowgood receive an extremely small quantity of sewage when compared with the quantity flowing into the Main Drain and while these drains are flowing day and night because they are above the level of the sea and of the intercepting sewer, the Main Drain at its southern end is closed and is pumped only during the day from 6 a.m. to 6 p.m. with 2 hours intermission at midday. The sewer then during these two hours and during the night is a sewer of deposit and therefore a large quantity of sewage must be swept out of the drain when it is opened on the occasion of

of a storm overflow. Without an additional engine and a very increased staff it would be impossible to keep pumping out the sewage continually and so prevent the deposit. The very slight gradient of the sewer is an additional reason why the deposit is so much more than in the other smaller sewer referred to.

3. To adopt Mr. Thorowgood's suggestion as to allowing the drain only to run off when the drain is nearly full of rain to the top would be to cause at least most disastrous flooding in the lower parts of Black Town. The drain with its full area is only sufficient to discharge a rain fall over the area drained equal to 1/4" per hour. An infinitely decreased area means an infinitely decreased discharge while even now the secondary drains leading into the Main Drain are frequently burst open into the street for want of sufficient outlet of the flood waters which they carry.

4 The reorganization of the drainage

does.

does not at present extend itself to the disposal of flood waters and so far as I can see even should irrigation arrangements be made for their disposal the Fort Outfall would remain in statu quo. 31/80 A

5 Para 8 might lead Government to suppose that a sewer had been designed by the Superintendent of the Harbour Works which would have carried away the storm water from the Fort Drain but so far as this office is aware no intercepting sewer which would have carried off the storm water was ever even proposed and no intercepting sewer passing along the beach could effectively do so as the floor of the drain even at its present outfall is below mean sea level. A large storm water sewer was however proposed in connection with the other lesser drains referred to by the Superintendent.

6 Although the sand is still increasing in front of the drain and will have extended some 180 feet more in 1884 the same necessity for a further

extension of the drain, will not then exist as before that time it is trusted that the Main Drain will have been relieved of all sewage and will then be wholly for the discharge of storm waters.

Vice President M. C.

Madras
17 November 1881

P. W. C. No. 2893

Municipal Office.
Public Works and Conservancy Department.
Madras, 6th December 1881.

3180/9

From
A. T. Arundel Esq.
President, Municipal Commission.

To
Colonel Ross Thompson R.E.
Offg. Under Secretary to Government
Pub. Works Department

Sir,

In reply to your letter No. 2002 dated 3rd December I have the honor to forward a letter from the Vice President giving the information you require. As the works connected with the main outfall in the drainage scheme of Black Town, viz. Pumping Engines, outfall pipe and channel, lie at the northern end of the Town and must first be undertaken, it is clear that the diversion of the sewage that now falls into the South Main Drain must be postponed until these essential works are completed. The outfall works are estimated to cost one lac of rupees and to be completed by the end of 1882. The connecting works required to relieve the South Main Drain of sewage are now estimated by Mr. Jones to cost Rs 3,22,000, and will probably take a further

urther period of between one and two years
to complete.

If therefore the proposed exten-
ions of the present South Main Drain
e not carried out, the exhalations from
ch are now at times poison the air of
he Town and the neighbourhood will re-
main in statu quo till 1884.

I have the honor to be
Sir,
Your Most Obedt Servant

A. Z. Arundel
President Munl Com

P. W. C. No. 119

Recd 8th Dec 81

P. W. C. No. 2392

Municipal Office.

Public Works and Conservancy Department

Madras, 5th December 1881.

From
A. Jones Esqr
Vice President, Municipal Commission.

3180/11

To
A. T. Arundel Esquire
President, Munl. Commission

Sir,

In reply to letter No. 2003 dated 2nd December 1881 from the Under Secretary to Government Public Works Department I have the honor to inform you that before the sewage now flowing out at the Fort can be diverted from its present outfall, not only will it be necessary to complete the works proposed to be completed each year and costing about 1 lac, viz. The Pump Well & House, Erection of Engine & Pumps, Outfall Pipe & Channel, which are necessarily the basis of the scheme, but that in addition it would be necessary to undertake the alteration of the whole or certainly a great portion of the surface drainage which flows into the Valley along which Popham's Broadway runs, and to construct the proposed new Main Sewer No. 1 which is to carry off the drainage to the Pumping Station.- Such additional work would amount to

Surface Drainage	2,79,981
Sewer No 1 ...	42,525
Total	3,22,526

Though it cannot be positively affirmed that the whole surface drainage of this section would require to be carried out if the sewage had to be diverted from the Fort to Sewer No 1, there is no doubt that a very considerable portion would require to be so.

I have the honor to be
Sir,
Your Most Obedt Servant
(signed) J. A. Jones
Vice President Munl Comr

(True Copy)

N. Arundel
President M.C.

Municipal Office
19th December, 1881

3/180
12

My dear Lankley,

With reference to our Meeting and discussion yesterday about the extension of the Fort or South main Drain Outfall I enclose a letter from Jones explaining what he would be able to do in 1882 towards the scheme for relieving the present main drain of sewage, and what his additional proposals would cost.

You will see that he considers he could finish in 1882 about one half of the new sewer which is to take the place of the present main drain and which is provided for in the general Drainage scheme. The remainder would be finished in 1883. The total cost of this new sewer would be Rs 46,400.

The injury to the Harbour will I suppose set aside the arrangement for the transfer of the Harbour Engines, Engine House &c. to the Municipality, and we must make our own arrangements. These we have already prepared for, and have written home to enquire of Messrs [illegible] Gwynne & Co. the cost of Engines to work the pumps already ordered of them. Pending definite information from [illegible] we estimate the cost of Engines and Engine Houses at Rs 16,500.

If the Drainage Scheme be thus urged on during 1882 we shall require a Loan of Rs 74,000 instead of the Rs [illegible] at first proposed by [illegible] Pumps & Chambers Rs [illegible] Engines &c [illegible]

The interest on the additional Loan of Rs 68,000 would be at 6 per cent (4 per cent interest and 2 per cent Sinking Fund) Rs 4080 or at 7 per cent Rs 4760 per annum. Half these amounts only would be required as the money would not be required before the middle of the year.

If the Government and the amounts required — a question [illegible] reference — there will be no difficulty in obtaining

---

No 10 3182/13

obtaining the assent of the Commissioners to the additional Loan, but if we have to go into the market we must await the result of the attempt about to be made to raise the loan of Rs 350000 already sanctioned, viz Rs 100,000 for Drainage and Rs 250,000 for Water Supply extension.

Under the most favorable conditions the new Sewer to relieve the South main drain cannot be completed till well into 1883 so that as was agreed yesterday the necessity for extending the Outfall of the main drain is still as urgent as ever.

Yours Sincerely

A Arundel

P. W. C. No.

Municipal Office.

PUBLIC WORKS AND CONSERVANCY DEPARTMENT,

Madras, 19th December 1881.

From J. A Jones Esq
Vice President, Municipal Commission.

3180/14

To

A. T. Arundel Esq
President, Munl. Commission

SIR,

With reference to our meeting with Colonel Sankey, Chief Engineer at the outfall of the Black Town Main Drain near the North-East angle of Fort, I have the honor to annex the following information with regard to the proposal for the immediate execution of the Sewer No 1 along Popham's Broadway which will carry off to the new Pumping Station the sewage now flowing into the Main Drain

2. The sewer will be throughout its length below the level of the present Main Drain, and therefore by temporarily connecting it at intervals with the Main Drain all or nearly all of the sewage could be drawn from the latter, and the outfall at the Fort relieved of almost

all sewage matters.

3 The estimated cost of this Sewer s Rs 38,680, of the temporary connections necessary about Rs 3,500 in all Rs 42,180. To this has to be added 10% for supervision and contingencies so that the estimated total required to carry out the work will be Rs 46398 (say Rs 46,400).

4 As it is probable the Harbour Engines will not now be available, and as the works proposed to be executed with the Lakh of Rupees to be borrowed during 1882 do not include the cost of Engines or Buildings, about Rs 45,000 will be required for these works.

5 The total amount therefore which could be spent on Drainage Works in 1882, if funds be available, will be as follows:—

Outfall Works, Pump Well & Sewer No 3 :	1,00,000
*50% of Sewer No 1 = $\frac{46400}{2}$ = (Remainder to be executed in 1883)	23,200
Engines, Boilers & Buildings	45,000
	1,68,200

A.

6 The acceptance of these proposals will not dispense with the necessity for the extension of the Main Drain outfall, and this, I think, was the opinion of all present at yesterday's meeting. 31st/5

I have the honor to be
Sir,
Your most obedt Servt
(Sd) J. L. Jones
Vice President &c

(Vice Chn)
A. Arundell
President

p 13

Special

The Hon W Huddleston

The Rt Hon the Governor

3180/16

Memo

For orders

The President Municip
Commission Madras
brought to notice in
his letter No 895 of
26 July 1881 that
notwithstanding
the construction of the
intercepting sewer along
the base of the Harbour
discharging to the
north of the works
the sluice of the
main sewer immediately
north of the Fort has
to be opened in times
of flood with the
result that the pent-
-up sewage is discharg
over the sands in
front creating a very

[illegible]

The belt of sand
now intervening between
the Sluice and the
Sea is some 350 feet
and must increase
owing to the existence
of the Harbour Works

Government in their
order No 2721 W of
the 3rd Novr 1881 en-
-quired in the report of
the Supdt. of the Harbour
works whether by better
arrangements in regard
to the pumping at the
tail of the Fort Sewer
the quantity of actual
sewage in the Storm
water at such times
could not so far be
kept down as to ren-
der the issue from
Sluice at least as
inoffensive as other
surplus dy
discharging within
Harbour limits

In reply to this it
is pointed out that
notwithstanding the
best arrangements as
regards the pumps
owing to the dead
slope in the present
main Sewer a very
large quantity of
Sewage must remain
ponded back behind
the Sluice, and that
until the sewage has
been diverted as
proposed in the new
drainage Scheme in
the reverse direction towards
the North of the town
there can be no radical
Change in this respect

It is in fact clear
1st that an extension
of the main Sewer
to the furthest limit
possible across the
Sands as proposed

by the President at
an Estimated cost
of Rs 13,663 is abso-
19 -lutely necessary as
an immediate relief
and 2d that even
after the construction
of the new main Sewer
diverting the Sewage to
the north of the town
this extension of the
present main Sewer
across the Sands is
needed for the discharge
of all Storm Water
which under all
circumstances it will
still have to convey
to the Sea

Further enquiries
and an examination
of the works on the
Spot with the President
of the Municipal
Commission (See
annexed communication)

817
3180/28

[illegible]
in order to divert
the whole of the
sewage now carried
by the Fort drain
to the north of the
town the outfall
channel, sewage
well & pumps, as also
main sewer to the
north will have to
be executed as part
of the drainage scheme
of the Municipality

Mr Jones as will
be observed Estima
at first that Rs
3.22.000 would have
to be expended
before the requisi
relief could be
afforded and t
probably three y
in all would be
required be the o
-ation; it however
would now appe

([illegible] letter [illegible]
from Mr Arundel of
19th instant) that
the money and time
required can be
sensibly reduced

If as I understand
the Municipality
could be lent Rs
1,68,000 in 1882 at
6 % (4 interest on
loan, 2 to sinking
fund) and could
secure a further
loan possibly of
Rs 25,000 in 1883
they would be enabled
to guarantee the
diversion of all
sewage from the
Fort main drain
by the end of the
latter year

As to the estimates
of the drain across
the Sands is (to
absolutely [illegible]

after all only a
palliative I would
strongly urge the de-
22 -sirability of at once
accepting the proposal
now made and
authorize the Municipality
to lose no time in
commencing and
finishing off the
work

They might also
be entrusted with
the construction of
the extension of the
main drain across
the Lands at the
cost of Rs 13,663, the
amount being met
from the Harbour
Works Estimate

It can hardly
be doubted, that
this would under all
the circumstances be
the proper incidence

of the charge, at the same time the Govt. may possibly be disposed to re-commend to the S. of S. that the amount be met from Imperial (Military) or that a general contribution from this source be made to the Municipality on the ground that the removal of this long standing and intolerable nuisance in the immediate vicinity of the Fort is a matter in which the Military authorities, who for years have been loud in their complaints, are directly interested in the matter

21/12/81

Alternative Estimate

3rd DIVISION: S. M. No. 318/5 MASONRY.

Estimate of the ~~Expense of~~ Probable Cost of Extending the Main Drain from Present Doors to the Sea - (B - 349 feet)

Measurement.				Particulars of Works.	Rate.	Per.	Amount.
Length.	Breadth.	Height.	Contents.				
				Excavation			
100	4	16	6400				
200	8	20	32000				
40	11	22	9680				
Total			48080	Excavation and including Baling	@ 3 a	Cyd	333-14-2
Cyds			1780 20/27				
				Concrete in Cement			
2×333	3/4	2	4327				
333	8 3/4	1/4	728 7/16				
7	10	1	70				
2×7	3 1/2	2 1/2	122 1/2				
Total			5249 15/16	Concrete in Cement	@ 7 3	Cft	2378-14-
355	8 3/4	1 3/4	5099 1/16	Laterite stone and brunt	@ 2 2	Cyd	4014-11
Cyds			188 23/27				
				Carried over			3114-11

Length.	Breadth.	Height.	Contents.	Particulars of Works.	Rate.	Per.	Amount.
				Brought over			3114.1.1
				English Bricks Arch work in Chunam			
1×19	1¼	"	23¾				
2×3	1¼	"	7½				
2×4	½	"	4				
			35¼	× 333 = 11738¼			
			11738¼				
2×7	6	2½	210				
Total	–		11948¼	Arch work in Chunam with English Bricks including Centering	" 5 9	%	4293.14.3
				Plastering			
333	16	"	5328				
345	10	"	3450				
7	10	"	70				
340	21¼	"	7225				
Total	–		16073	Plastering with 2 Coats of Portland Cement	5 " "	%	803
				Carried over			8211.9.9

3/10

Length.	Breadth.	Height.	Contents.	Particulars of Works.	Rate.	Per.	Amount.
				Brought over			8211.9.9
				Granite stones			
7×14	1	"	98				
7×12	1	"	84				
1×12	2	"	24				
Total	–		206	Granite stones including Dressing	2 8 "	%	5.15.0
			1	Iron watertight Swinging door as per detailed plan as per D. P. W. work shop estimate (Cartage included)	—		2000.0.0
				Fixing the above	—		200.0.0
			1	Door to prevent sand entering drain including fixing			200.0.0
				10% for Sundries except on door			872.6.3
				Total Rupees			11999.0.0

Public Works & Conservancy Dept.
Madras,
12th July 1881.

Assistant Engineer.

Vice President.

1881.

3rd DIVISION. No. S. WARD.

Rupees 11999 – –

Estimate of the ~~Expense~~ Probable Cost of Extending the Main Drain from Present doors to the Sea (B-349 feet)

Date.

Sanctioned.

MEMO.

Budget Grant for 188

Additional allotment to meet unpaid bills of 188

Amount of Estimates Sanctioned for 188

Amount of Requisitions do

Amount otherwise appropriated

Total to date

Balance Rupees

Amount of the estimate No

Amount still available Rs.

	Rupees.	Rupees.

3rd DIVISION. S. W. No. 3180/7 MASONRY.

Estimate of the ~~Expense of~~ Probable Cost of Extending the Main Drain from Present doors to the Sea (B/Bg 349 feet)

Measurement.				Particulars of Works.	Rate.	Per.	Amount.
Length.	Breadth.	Height.	Contents.				
				Excavation			
100	4	16	6400				
200	5	20	32000				
40	11	22	9680				
Total			48080	Excavation & including Bailing	" 3 a	c yd	333-14-2
Cyds			1780 20/27				
				Concrete in Cement			
333	15 1/4	1 1/2	7617 3/8				
2 × 333	2 1/2	1	1665				
7	10	1	70				
2 × 7	3 1/2	2 1/2	122 1/2				
Total			9474 7/8	Concrete in Cement	" 7 3p	cft	4293-4-10
				English Brick Work in Chunam			
1 × 19	1 1/4	"	23 3/4				
2 × 3	1 1/4	"	7 1/2				
			31 1/4				

Carried over 4627.3.0

Measurement. Length.	Breadth.	Height.	Contents.	Particulars of Works.	Rate.	Per.	Amount.
				Brought over			1,6973-0
			31¼				
2×4	½	0	4				
			35¼ × 333 = 11738¼				
			11738¼				
2×7	6	2½	210				
Total			11948¾	Brick work in Chunam mortar English bricks	0 57	%	14293-14-5
				Plastering			
333	16	0	5328				
345	10	0	3450				
7	10	0	70				
340	21¼	0	7225				
Total			16073	Plastering with 2 Coats of Portland Cement	5-0-0	%	803-10-3
				Granite Stone			
7×14	1	0	98				
7×12	1	0	84				
1×12	2	0	24				
Total			206	Granite stone including Dressing	2-8-0	1	515-0-0
				Carried over			10239-14-3

3/8
8

Measurement. Length.	Breadth.	Height.	Contents.	Particulars of Works.	Rate.	Per.	Amount.
				Brought over			10239-11-5
			1	Iron water light swinging door as per detailed plan & as per D. P. W. workshop estimate (Centage included)			2000-0-0
				Fixing the above			200-0-0
			1	Door to prevent sand entering drain including fixing			200-0-0
				10% for Sundries except on doors			1023-14-4
				Total Rupees			13663-0-0

Public Works & Conservancy Dept.
Madras,
13th July - 1881.

Assistant Engineer.

Vice President.

1881.

3d DIVISION. f WARD.

No.

In Encl 2/4603/81

Rupees. 13663 — „ — „

Probable

Estimate of the ~~Expense of~~

Cost of Extending the Main Drain from Present Door to the Sea (Abt 3149 feet)

Sanctioned.

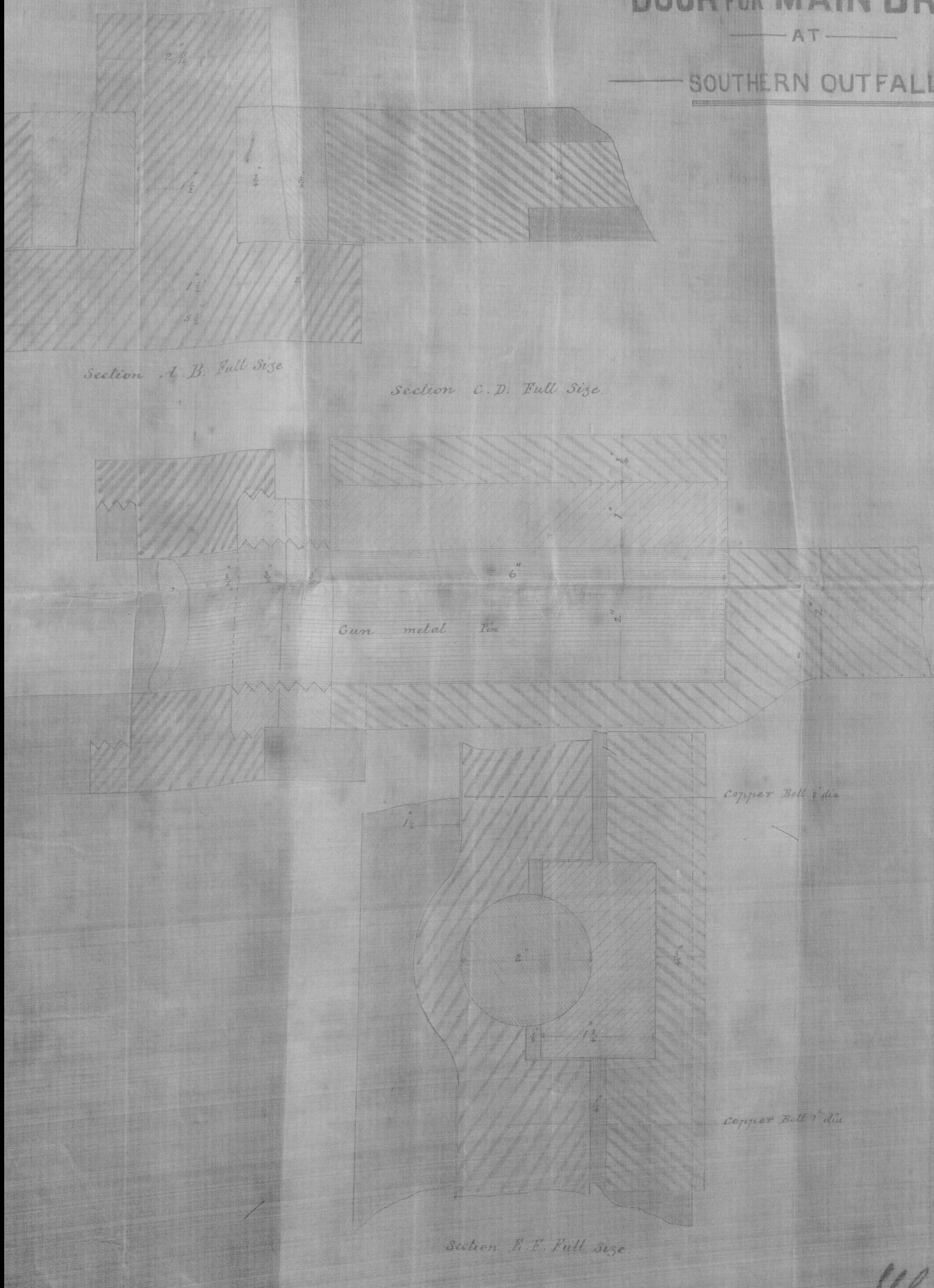
Date.

President.

MEMO

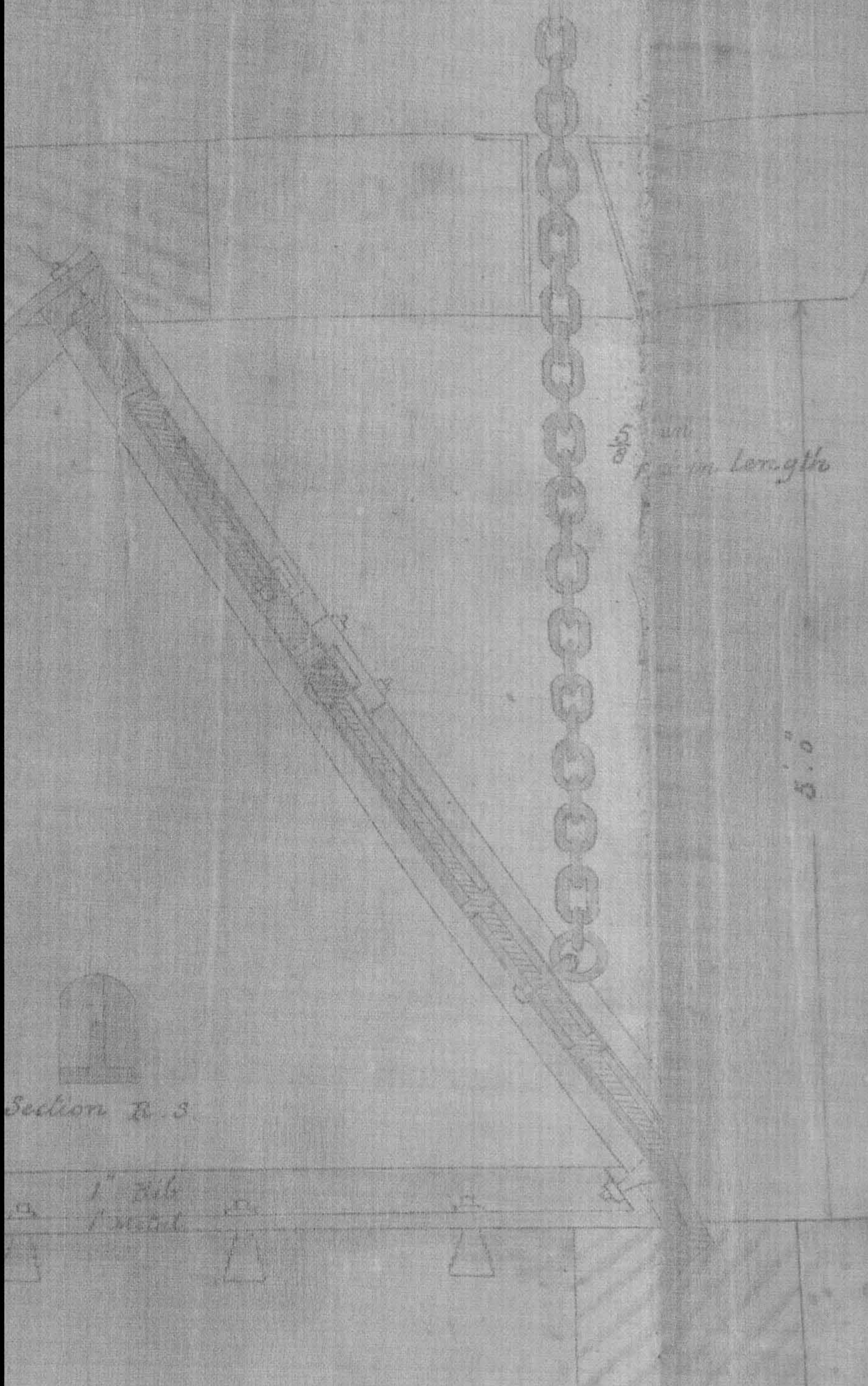
	Rupees.	Rupees.
Budget Grant for 188		
Additional allotment to meet unpaid bills of 188		
Amount of Estimates Sanctioned for 188		
Amount of Requisitions do		
Amount otherwise appropriated		
Total to date		
Balance Rupees		
Amount of this estimate No.		
Amount still available Rs.		

DETAILS
OF PROPOSED
DOOR FOR MAIN DRAIN
AT
SOUTHERN OUTFALL.

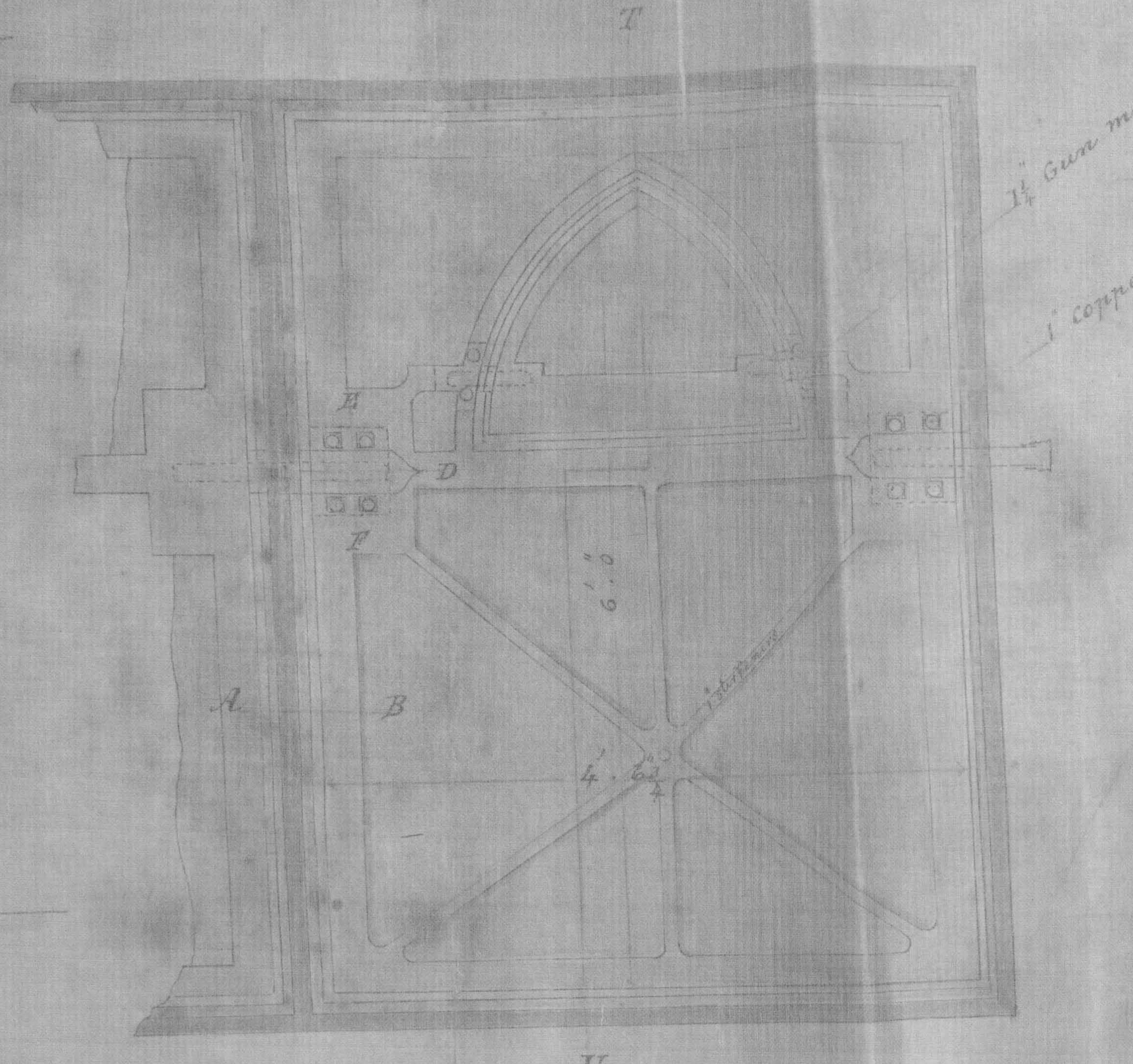

Section A. B. Full Size

Section C. D. Full Size

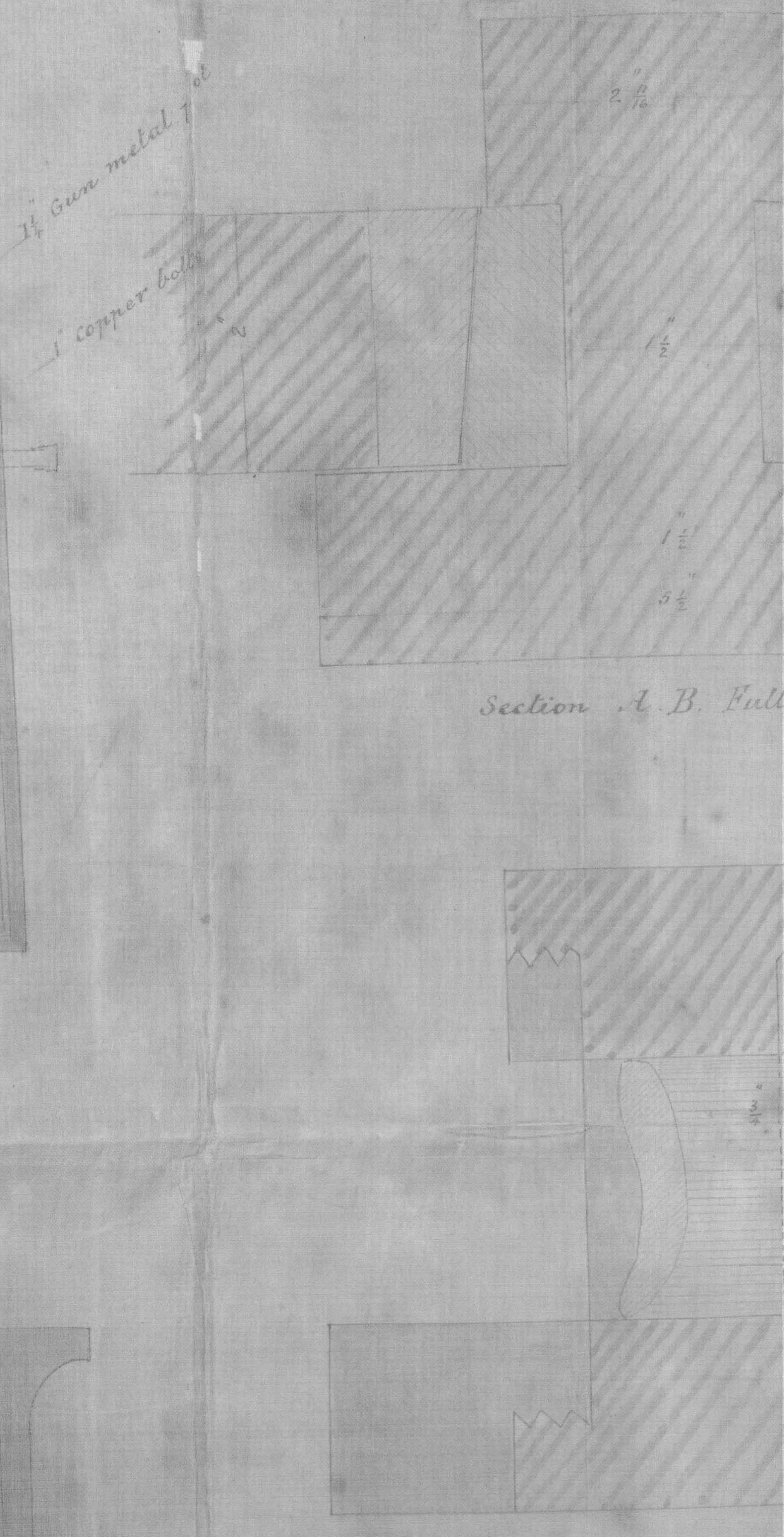
Section E. F. Full Size



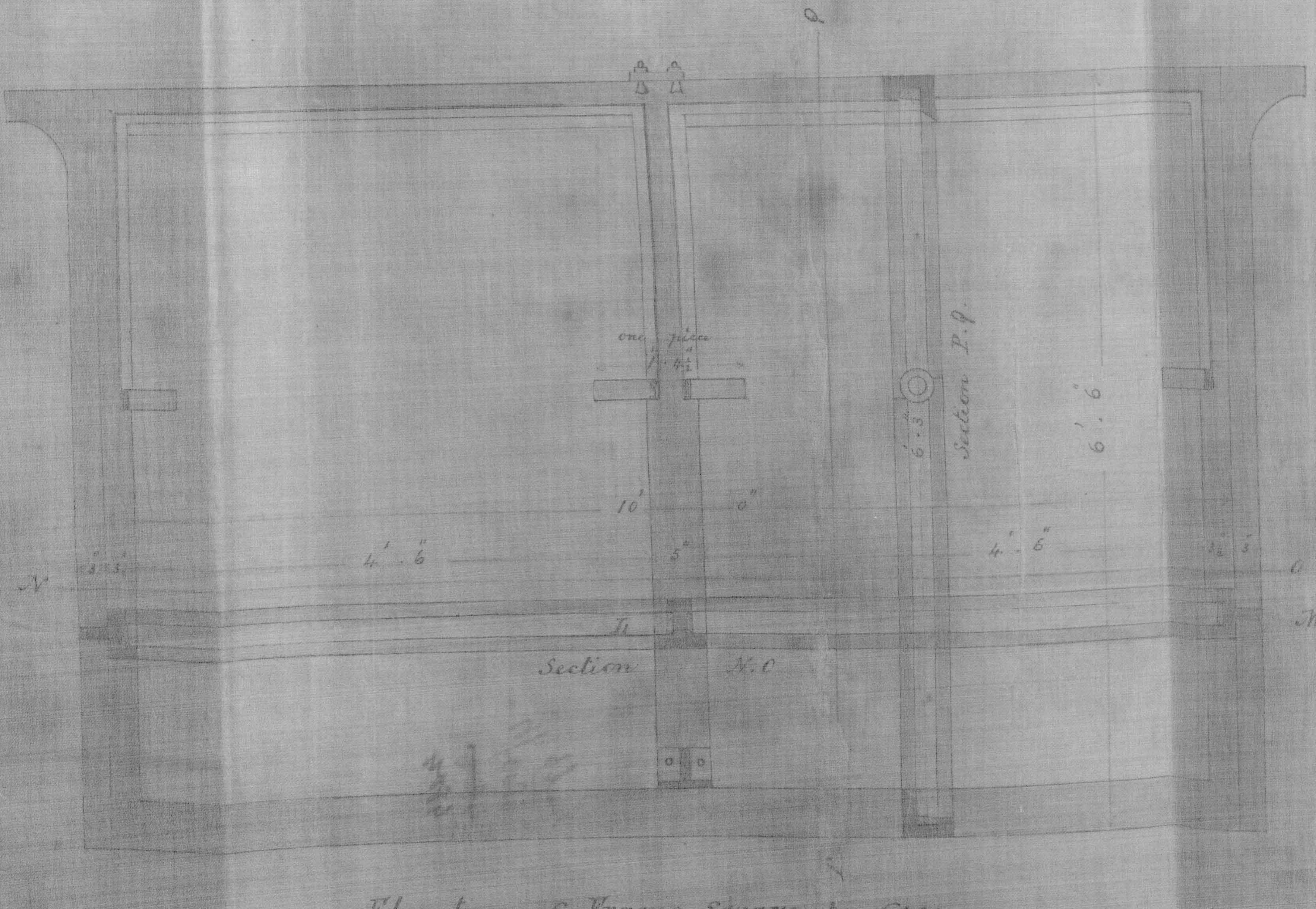
ctional Elevation T. U.



Elevation on line L. M
parallel to face of door.



Section A. B. Full



Elevation of Frame Square to face.

Scale 10 Feet = 1 Inch

No. 3180 W 7

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 22d Decr/81

Read the following:—

rsuant of the Finl. Deptt.
934 dated 1st Decr 1881 } N. C. No. 2323 d/ 29th Novr/81
tter from the President M. Commn.

from the President M. M. C. — ... .. 2393 d/ 6th Decr — ..

— .. — .. — .. ——— 1 .. 19 — .. — ..

by Chief Engr. ——— 21st — .. — ..

The Right Honble. the Governor in Council sanctions the Estimate of Rs. 13,663 submitted by the President of the Madras Municipal Commission for the extension seaward of the Southern Main drain near the Fort, and as the evil complained of is directly traceable to the action of the Harbour Piers, the cost will be met from the Estimate for the Harbour Works.

The work now sanctioned will be carried out by the Municipality, and will

~~The Hon. W. Hudleston~~

be commenced at once

The other works proposed in the papers recorded above will be deferred for the present.

R.S.

22/12/81

S. Engr. 3rd Circle ✓
President Mun. Commn. ✓
Supt. & E. H. Works ✓
Exr. S.W. Circle ✓
Fin. Dept. ✓

despd 7-1-82

22.10.07
11-11-15 B II

7062

7196.it

Govt. of (1881) Madras.

PUBLIC WORKS.

To

Dated

Issued

Recd.

Encl.

G. O. 22nd Nov. 1881, No. 3180.

Nos.

Southern Main Drain near the Fort.

Este: of Rs 13,663 for extension seaward of the — sanctioned for execution by the Municipality, and the Cost to be met from the Este: for the Harbour Works.