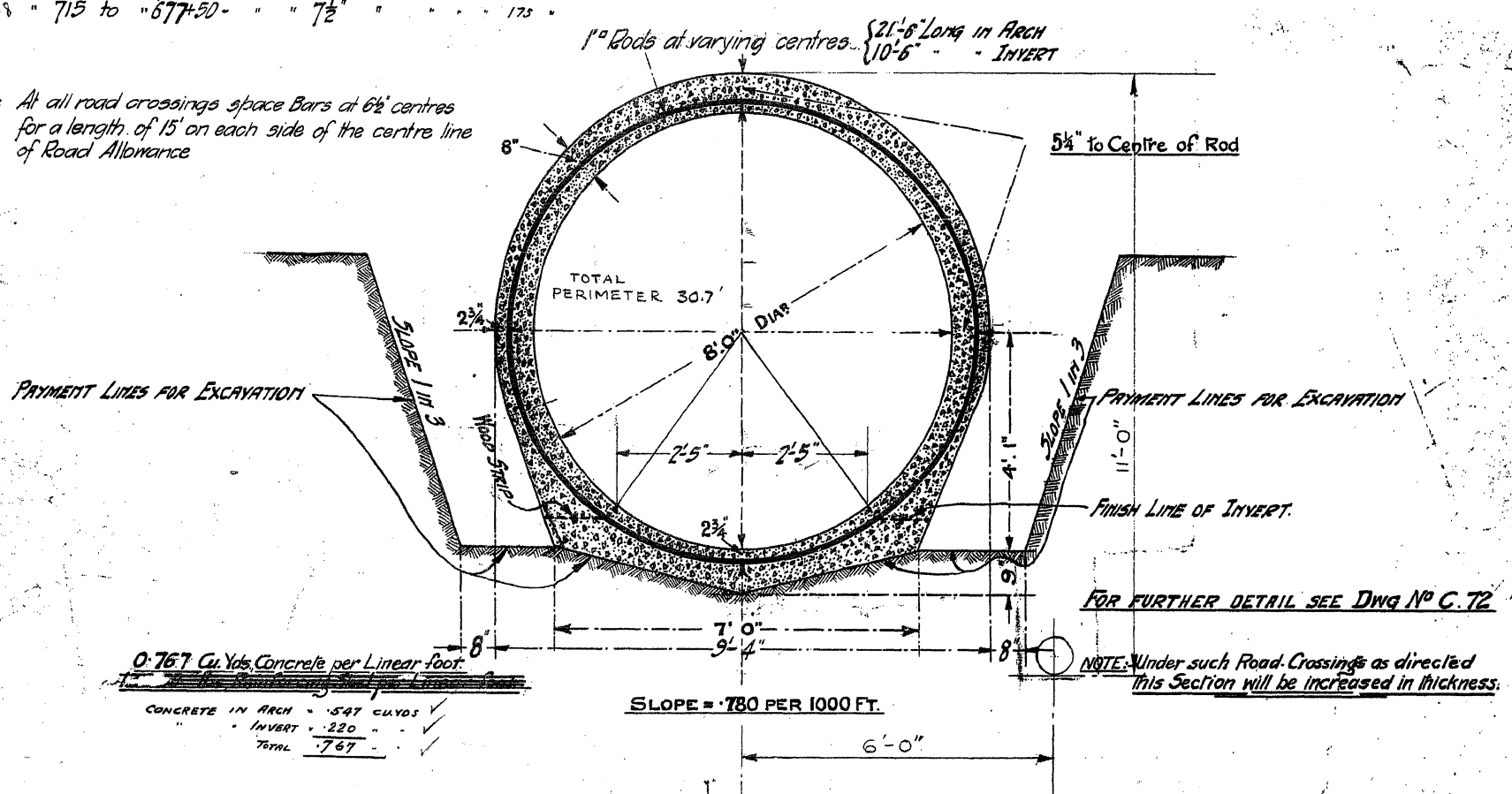


B.143

Spacing of Bars

Sta. 900 to Sta. 860	Bars at 10" centres	wl. per ft.	125 lbs
" 880 to " 795	" 9" "	"	130 "
" 795 to " 750	" 8 1/2" "	"	150 "
" 750 to " 715	" 8" "	"	164 "
" 715 to " 677+50	" 7 1/2" "	"	175 "

Note: At all road crossings space Bars at 6" centres for a length of 15' on each side of the centre line of Road Allowance



0.767 Cu. Yds. Concrete per Linear Foot.
 CONCRETE IN ARCH = .547 CU YDS
 " INVERT = .220 " "
 TOTAL .767

CONTRACT No. 30
 SHEET No. 3

AQUEDUCT SEC "A"

B.143

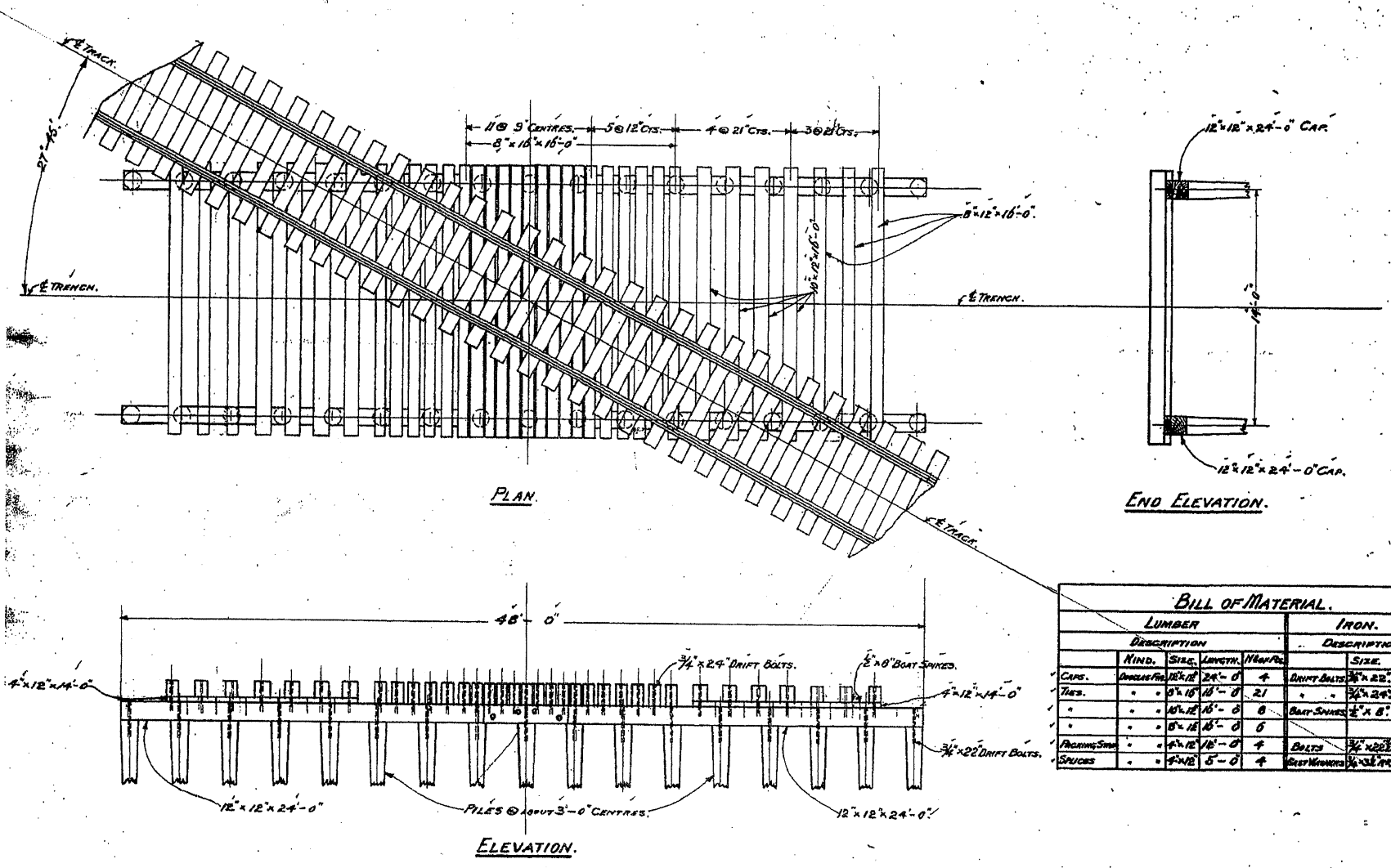
DESIGNED BY
 CHECKED BY
 APPROVED BY

Nov. 4-14 - All Dimensions Checked and Revised. M.S.
 PAYMENT LINES FOR EXCAVATION, FINISH LINE OF INVERT, LENGTH OF RODS ADDED 8th Sept 1915.
 Note: RE OVERLAPPING OF RODS TAKEN OUT
 Length of Rods in Arch changed from 22'-0" to 21'-6" - 27-9-15. F.S.A.
 Length of Rods in Arch changed from 22'-0" to 21'-6" - 27-9-15. F.S.A. also 07-2-17. D.G.M.E.K.
 Length of Rods in Arch changed from 22'-0" to 21'-6" - 27-9-15. F.S.A. (R. King)

James H. P. Frost
 CONSULTING ENGINEER
 W. Schaefer
 CHIEF ENGINEER

GREATER WINNIPEG WATER DISTRICT
 8'-0" CIRCULAR REINFORCED AQUEDUCT
 17 July 1914
 Scale 1/2" = 1'

C274



LUMBER				IRON	
DESCRIPTION	KIND.	SIZE	LENGTH	QUANTITY	DESCRIPTION
Caps.	Angle Iron	12x12	24'-0"	4	DRIFT BOLTS
Truss	"	8x12	16'-0"	21	"
"	"	12x12	16'-0"	8	BOAT SPIKES
"	"	8x12	16'-0"	6	"
Decking	"	4x12	16'-0"	4	BOLTS
Splices	"	4x12	5'-0"	4	DRIFT BOLTS

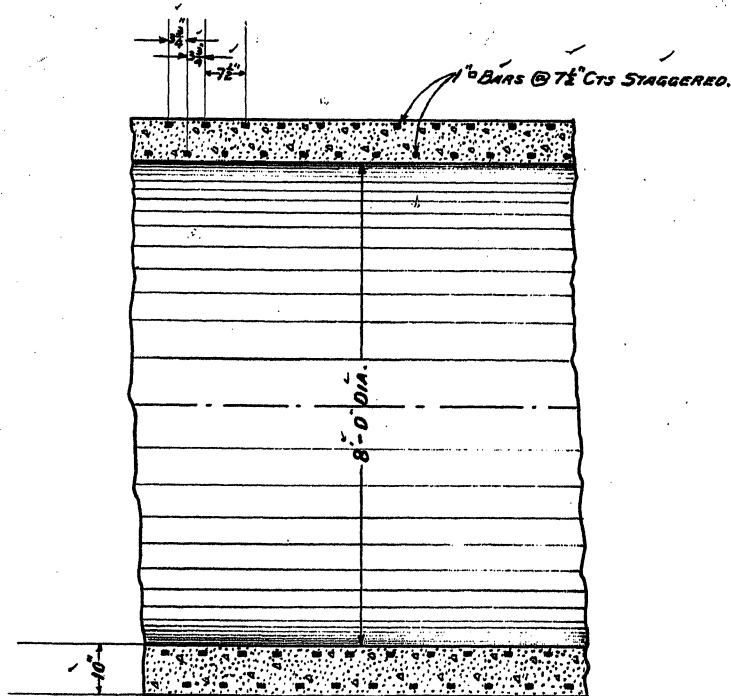
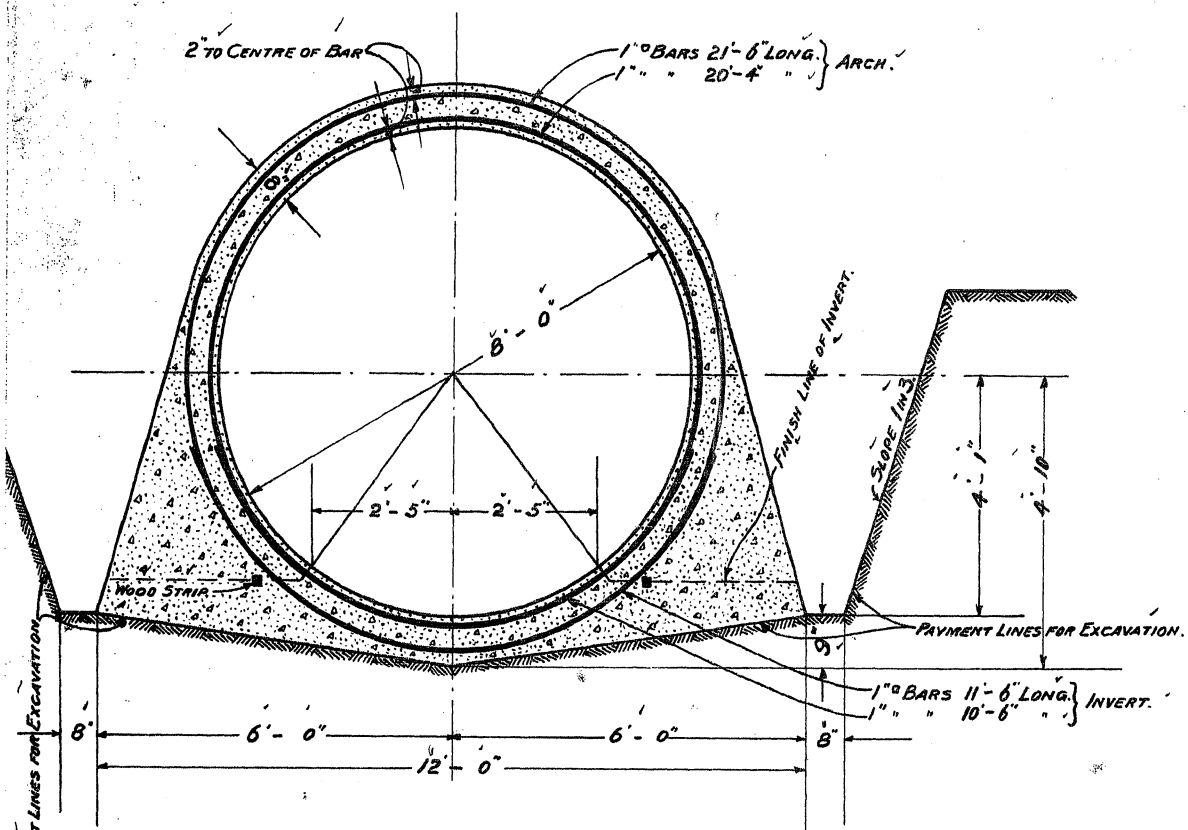
CONTRACT 30.

C274.

DRAWN BY: R.S.
 CHECKED BY: R.S.
 APPROVED BY: [Signature]

W. Schaefer
 CHIEF ENGINEER.

GREATER WINNIPEG WATER DISTRICT.
 BRIDGE OVER AQUEDUCT AT DEACON.



LONGITUDINAL SECTION OF PIPE.

CONCRETE IN ARCH = 0.829 CU YDS PER LINEAR FOOT. STEEL IN ARCH = 982.5 = 3340.5 Lbs.
 " " INVERT = 0.397 " " " " " " " " INVERT = 516.5 = 1756.1 " "
 TOTAL = 1.226 " " " " " " TOTAL 1499.0 = 5096.6 " PER 15'-0" SECTION.

CONTRACT 30.

B346.

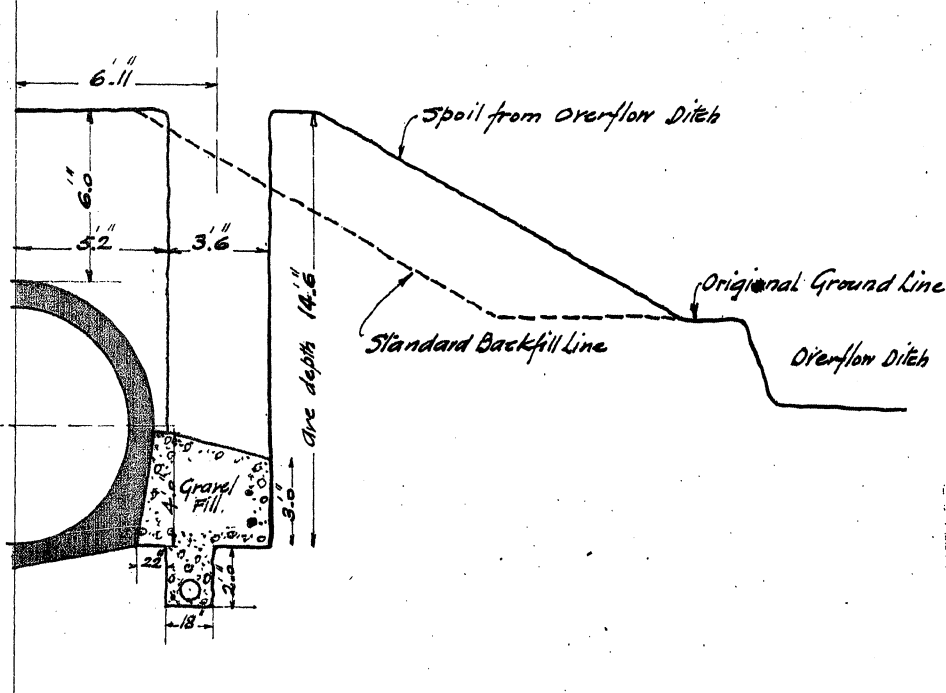
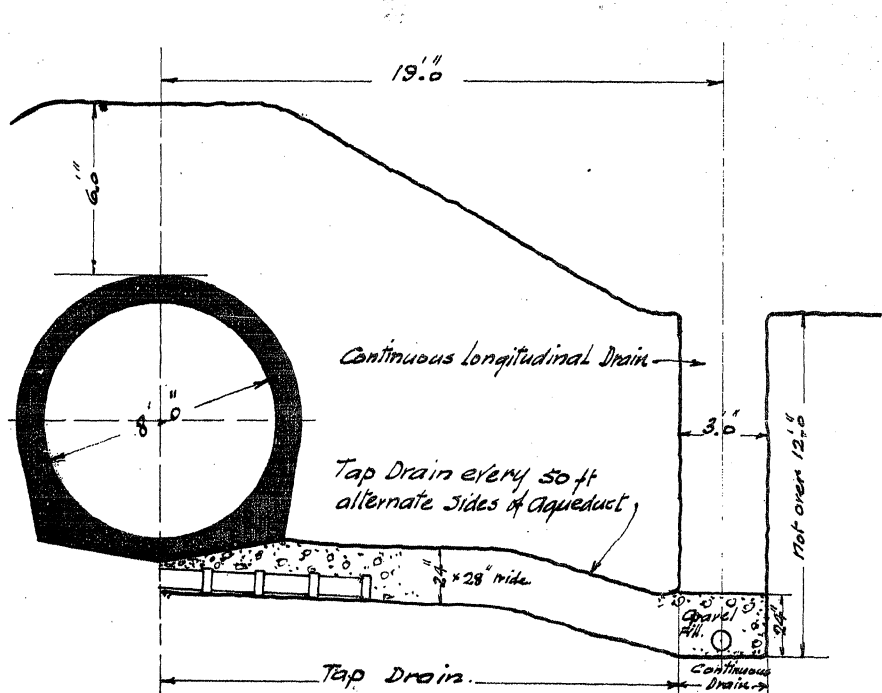
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 Traced by R.S.
 Checked by [Signature]
 Approved by [Signature]

[Signature]
 Chief Engineer.

GREATER WINNIPEG WATER DISTRICT.
 8'-0" CIRCULAR REINFORCED AQUEDUCT.
 DOUBLE REINFORCED FOR RAILWAY CROSSING.
 June 5th 1918. Scale 1/4" = 1 ft.

Decrease in quantities of material & labor required for this method
 Excavation & backfill for Tap Drains 100 @ 17.5 = 1750 ft @ 200 per lin. ft. \$ 3500.00
 Tile pipe 8 lin. ft. per Drain = 800 lin. ft. @ 27¢ 216.00
 Gravel backfill 1.94 Cu yds per Drain = 194 Cu yds @ \$1.75 339.50
 \$ 4055.50

Additional material & labor required for this method.
 Extra Excavation 22.09 Cu ft per ft = for 3515 lin. ft = 2876 Cu yds @ 300 = 8628.00
 Extra Gravel backfill 13.59 Cu ft per ft for 3515 lin. ft = 1769 Cu yds @ 1.75 3095.75
 \$ 11723.75



Method "A" of underdrainage which is the basis of payment to Fowler & Young
 None of the tap drains have been constructed and it is proposed to omit
 these entirely at a saving of \$ 4055.50 per mile.

Proposed Method "B" of Underdraining South Side Aqueduct Section "A" between Stns
 864+85 & 900+00
 Increased cost for this section will be \$ 11723.75

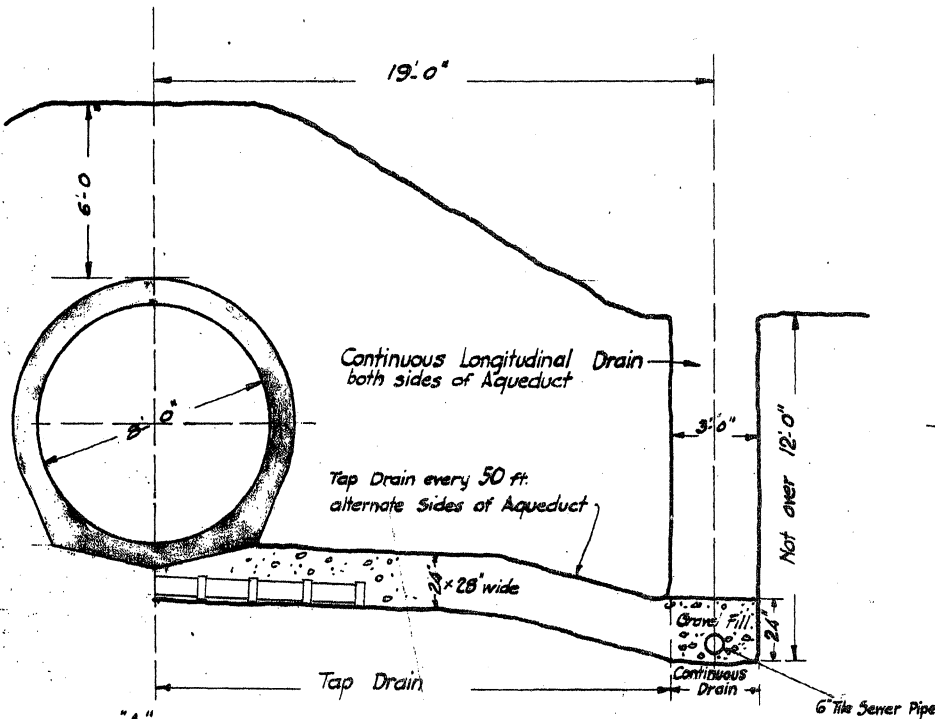
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 Checked by [Signature]
 Approved [Signature]

W.S. Chase
 Chief Engineer.

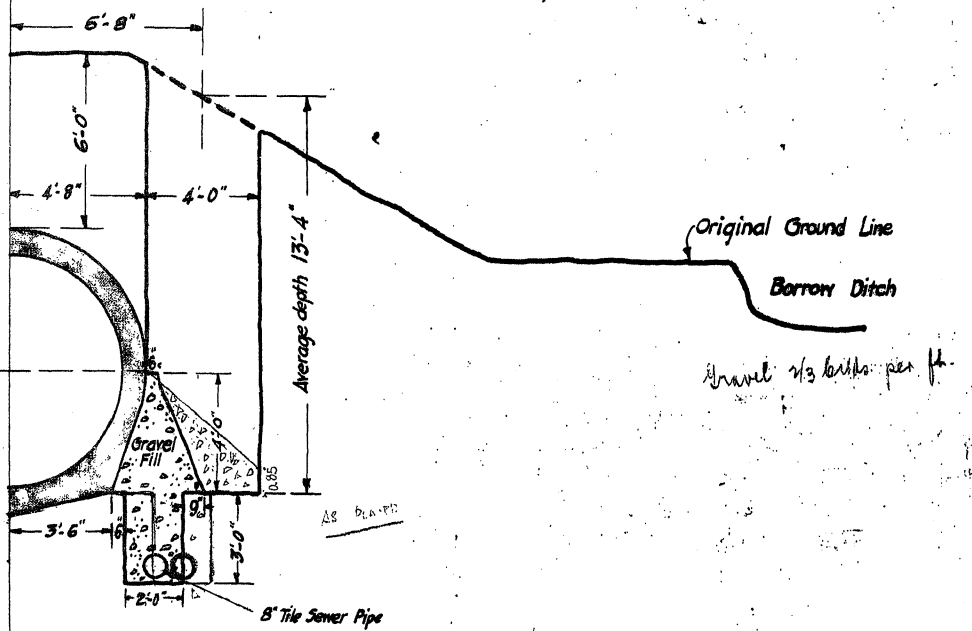
GREATER WINNIPEG WATER DISTRICT
 Comparison of Methods of Underdrainage
 of Aqueduct Section "A"
 20-7-1920. Scale 1/4" = 1 ft.

B.384

Feb 4. 210000
 Mile Pipe 19000
 229000



Method "A" of underdrainage which is the basis of payment to Fowler & Young and estimated to cost \$26,000⁰⁰ per Mile



Proposed Method "C" of Underdraining South side of Aqueduct Section "A" between sta. 795+07 & 846+94 and both sides of Aqueduct between sta. 677+50 & 795+07 Estimated to cost \$60,000⁰⁰ per Mile.

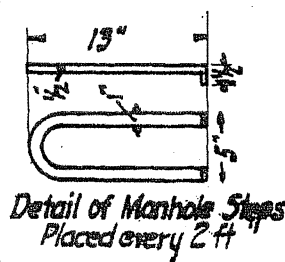
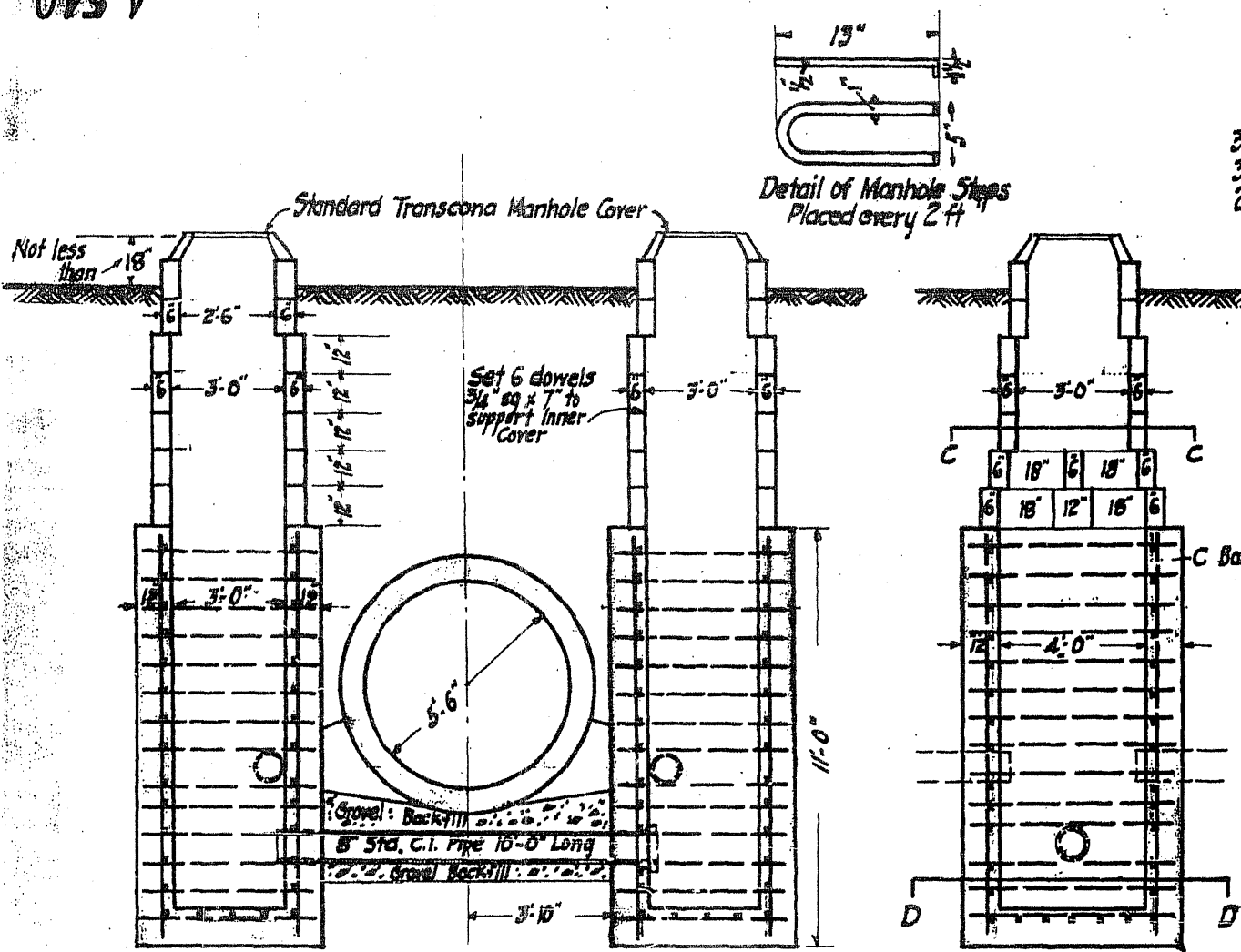
B.384

Drawn by J.S.
 Traced by J.S.
 Checked by J.S.
 Approved J.S.

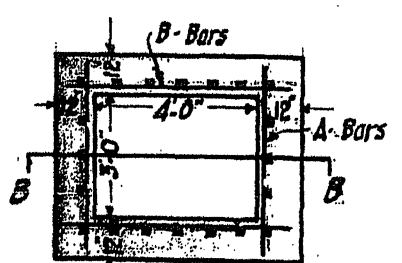
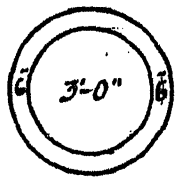
W. H. Davis
 Engineer.

GREATER WINNIPEG WATER DISTRICT
 Comparison of Methods of Underdrainage of Aqueduct Section A
 Jan. 5, 1921. Scale 1/4" = 1 foot

A 540



- List of Reinforcing Steel for 1 Manhole
- 33 A Bars 3/4" x 4'-6" Long
 - 31 B " 3/4" x 5'-6" "
 - 20 C " 3/4" x 10'-6" "



SECTION B.B

A 540

Drawn by J.S.
 Traced by J.S.
 Checked by J.S.
 Approved J.S.

W. H. Davis
 Engineer

GREATER WINNIPEG WATER DISTRICT
 Manhole details over Underdrains for Lock Joint Pipe
 May 3rd 1921. Scale 1/4" = 1 ft.

