

1391
Otay Water
on Wightman

- X. Section -

W322

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Clay Res. - San Diego 2nd U.P.L.
Schedule IV

Construction Field Book
1930

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Trench Yardage	Page	2-34
Bellhole "	"	67
Pavement removed	"	65
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Curb "	"	65
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"	"	63-65

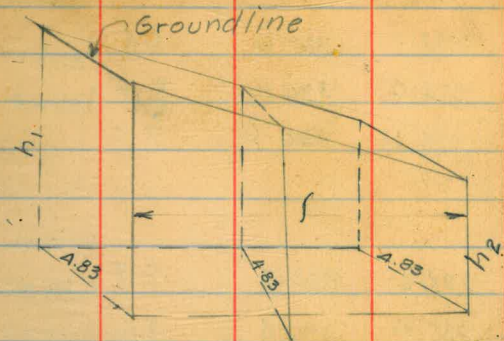
Otay Reservoir - San Diego
Second Main Pipe Line

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Trench Yardage	1 22,869.10	1-32 & 67-69
Pavement Removed Yardage for Bas A. vs Valve chambers etc.	2 27,315.00	64 & 65
Sidewalk Removed Extra	1665.40	65
conc. Gutter Rivd.	" 113.70	65
Curb removed	" 105.00	65
Pavement replaced	3 34.47	

Trench Yardage

01



Method used in computation
on Page 2.

Ground line considered as
a level right line.

$$\text{Mean end area, } M = 4.83 \times \left(\frac{h_1 + h_2}{2} \right)$$

$$V = \int M.$$

Sta	El. Ground	grade	Ht.	Mean End Area sq. ft.	Dist	Co yd.	Totals.
855+12 ⁰⁵	337.1	330.6	6.5			12.97	
+22	338.6	330.6	8.0	35.02	10	18.02	
+35	338.1	330.6	7.5	37.43	13		
				37.21	18.5	25.48	
L+53 ⁴⁵	338.6	330.7	7.9	39.87	46.5	68.63	
856+00	339.4	330.8	8.6	41.56	50	76.92	
+50	339.5	330.9	8.6	42.04	50	77.82	279.84 4/7/30
857+00	339.8	331.0	8.8	42.77	50	79.16	
+50	340.0	331.1	8.9	42.77	50	79.16	
858+00	340.0	331.2	8.8	42.77	50	79.16	237.40 4/8/30
+50	340.2	331.3	8.9	43.01	50	79.61	
859+00	340.3	331.4	8.9	43.01	50	79.61	
+50	340.4	331.5	8.9	43.01	50	79.61	
860+00	340.5	331.6	8.9	42.26	52.55	82.25	
+52 ⁵⁵	340.4	331.8	8.6	41.54	0.46	0.71	321.79 4/9/30
2. ft. +53 ⁰¹	340.4	331.8	8.6	41.54	0.46	0.71	
+53 ⁴²	340.4	331.8	8.6	42.50	46.53	73.24 73.61	
861+00	340.9	331.9	9.0	43.47	50	80.50	
+50	341.1	332.1	9.0	43.71	50	80.95	235.40 235.47 4/10/30
862+00	341.3	332.2	9.1	42.75	50	79.16	
+50	341.0	332.4	8.6	41.06	50	76.03	
863+00	340.9	332.5	8.4	40.09	50	74.24	
+50	340.9	332.7	8.2	39.12	50	72.45	
864+00	340.8	332.8	8.0				301.88 4/11/30

Sta.	Ground Elev.	Grade Elev.	Ht.	Mean End Area Sq. ft.	Dist.	Yardage.	Totals.
864+00	340.8	332.8	8.0	37.19	50	68.87	
+50	340.4	333.0	7.4	33.33	42	51.84	
+92	339.9	333.5	6.4				
+92	^{curb.} 339.3	333.5	5.8	30.43	8.83	9.95	
^{L.P.} 865+00 ⁸³	340.4	333.6	6.8	29.70	49.17	54.09	
+50	339.7	334.2	5.5	24.39	50	45.17	229.92 9/12/30
866+00	339.1	334.5	4.6	21.01	50	38.91	
+50	338.9	334.8	4.1	20.77	50	38.46	
867+00	339.2	334.7	4.5	22.70	50	42.04	
+50	339.5	334.6	4.9	24.63	50	45.62	
868+00	339.8	334.5	5.3	25.84	162	15.79	
^{curb.} +162	339.9	334.5	5.4				
^{gutter} +162	339.5	334.5	5.4	26.58	37.96	37.39	
^{L.P.} +54 ⁴¹	340.0	334.4	5.6	28.27	45.54	47.68	
869+00	340.7	334.6	6.1	29.00	50	53.70	
+50	340.6	334.7	5.9	28.52	50	52.80	372.39 Monday 9/14/30
870+00	340.8	334.9	5.9	28.76	50	53.25	
+50	341.1	335.1	6.0	28.27	50	52.35	
871+00	340.9	335.2	5.7	28.52	60	63.36	
+60	341.5	335.4	6.1				
+80	342.1	335.7	67	30.22	20	22.38	

Sta	Ground Elev.	Grade Elev.	Hgt.	Mean End Area	Dist.	Yardage	Totals
871+80	342.1	335.7	6.4	29.97	16	17.76	
+96	341.9	335.9	6.0	29.97	54	59.94	
872+50	344.0	337.45 ^(6.5)	6.4				
				31.66	66	77.42	
873+16	346.0	339.3	6.7				
				31.90	24	28.34	
+40	346.1	339.6	6.5	31.17	24	27.72	374.80 ✓ 4/15/30
+64	345.7	339.3	6.4	31.17	36	41.58	
874+00	344.8	338.3	6.5				
				32.14	60	71.40	
+60	343.3	336.5 ⁺	6.8				
				31.42	40	46.56	
875+00	342.0	335.8	6.2				
				34.07 32.87 ✓	50	32.10 60.85 ✓	
+50	342.4	335.0	7.4 ^(7.4)				
				59.29 38.18 ✓	50	33.00 70.70 ✓	
876+00	342.6	334.2	8.4				
				42.28	50	78.30	
+50	342.5	333.4	9.1				
				44.22	50	81.90	401.66 ✓ 4/16/30
877+00	342.7	333.5	9.2				
				43.98	50	81.45	
+50	342.9	333.9	9.0				
				43.25	50	80.10	
878+00	343.3	334.4	8.9				
				43.25	50	80.10	
+50	343.8	334.8	9.0				
							323.55 ✓ 4/17/30

Sta.	Ground Elev.	Grade Elev.	Hgt.	Mean or End Area	Dist.	Yardage	Totals per day
878+50	343.8	334.8	9.0	44.95	50	83.25	
879+00	344.8	335.2	9.6	47.61	50	98.15	
+50	345.7	335.6	10.1	50.02	50	92.65	
880+00	346.6	336.0	10.6	52.44	50	97.10	361.15
+50	347.2	336.1	11.1	53.92	50	99.85	4/18/30
881+00	347.4	336.2	11.2	53.92	21	41.93	
+21	347.3	336.2	11.1	52.44	12	23.30	
+33	346.8	336.2	10.6	52.02		33.07	
				52.68	17	32.85	
+50	347.4	336.25	11.15	55.18		33.17	
				55.36	50	102.19	300.34 ✓
						102.11	300.04
						102.55	300.80 4/19/30
882+00	348.0	336.3	11.7	56.09	50	103.85	
+50	347.9	336.4	11.5	55.05		101.94 ✓	
				55.12	50	102.10	
883+00	347.8	336.5	11.3	53.67	50	99.40	305.19 ✓
+50	347.6	336.7	10.9			305.35	4/21/30
884+00	347.5	336.9	10.6	51.96	50	96.20	

Sta	Ground Elev	Grade Elev	Hgt.	Mean End Area	Dist.	Yardage	Totals.
884+00	347.5	336.9	10.6			91.20	
				50.02	50	92.65	
+50	347.2	337.1	10.1				
				47.12	12	20.94	
+62	346.6	337.2	9.4				
				46.16	18	30.78	
+80	347.0	337.3	9.7				
				45.67	20	33.84	
885+00	346.6	337.4	9.2				
				45.92	12	20.41	294.82 ✓ 7/22/30
+12	347.2	337.4	9.8				
				48.57	38	68.36	
+50	347.9	337.6	10.3				
				50.75	50	194.00	
886+00	348.5	337.8	10.7				
				52.92	50	198.00	
+50	349.4	338.2	11.2				
				52.92	50	98.00 ✓	358.36 ✓
						94.00	354.36 4/23/30
887+00	349.6	338.9	10.7				
				51.23	50	94.85	
+50	350.2	339.7	10.5				
				49.30	50	91.30	
888+00	350.4	340.5	9.9				
				45.92	50	85.04 ✓	
+50	351.1	342.0	9.1			94.00	
889+00	351.6	343.6	8.0				
				41.32	50	76.55	

Sta.	Ground Elev.	Grade Elev.	Hgt.	Mean End Area	Dist	Yardage	Totals.
889+00	351.6	343.6	8.0				
+50	352.1	345.1	7.0	36.25	50	67.15	414.89 ✓ 423.85 4/24/30 Monthly Estimate
890+00	352.7	346.1	6.6	32.87	50	60.85	
+50	353.4	346.4	7.0	32.87	50	60.85	5294.16 ✓
891+00	353.9	346.7	7.2	34.31	50	63.55	5294.16 ✓ 5298.41 ← 4/24/30 5300.11
+50	354.4	347.0	7.4	35.28	50	65.35	185.25 ✓ 4/25/30
892+00	354.7	347.3	7.4	35.76	50	66.25	
+50	355.0	347.6	7.4	35.76	50	66.25	
893+00	355.0	347.9	7.1	35.05	50	64.90	
+50	355.1	347.6	7.5	35.28	50	65.35	
894+00	355.1	347.0	8.1	37.70	50	69.80	
+50	355.3	346.4	8.9	41.08	50	76.10	
895+00	355.1	345.8	9.3	43.98	50	81.45	
+50	354.8	345.1	9.7	45.92	50	85.05	
						20.50 ✓	

Sta.	Ground Elev.	Grade Elev.	Hgt.	Mean End Area	Dist	Yardage	Totals.
88	895+50	354.8	345.1	9.7		640.50	
				47.85	50	88.60	
	896+00	354.6	344.5	10.1			
				47.54	40	73.40	802.50 4/28/30
89	B.K. +40	354.4	344.0	10.4			
				48.33	60	107.40	
	897+00	354.1	344.5	9.6			
	+			44.95	50	83.25	
89	+50	353.9	344.9	9.0			
				42.29	25	39.15	
	+75	353.6	345.1	8.5			
				39.88	12	17.72	
89	+87	353.2	345.2	8.0			
				38.96	13	18.73	
	898+00	353.4	345.3	8.1			
				38.90	15	21.61	
89	+15	353.4	345.4	8.0			
				39.14	25	36.57 38.25	36.24
	+40	353.8	345.6	8.2			
				37.45	10	13.87	
89	+50	353.0	345.7	7.3			
				35.28	50	65.35	
	899+00	353.5	346.2	7.3			
				34.80	50	64.45	
89	+50	353.7	346.6	7.1			
				34.55	50	64.00	531.77
	B.K. 900+00	354.2	347.0	7.2			532.10 453.78 4/29/30

	Ground El.	Grade	Ht.	Mean End Area	Dist	Yardage	Totals
				34.55 ✓ 34.07	50	64.00 ✓ 63.10	
900+50	354.3	347.1	7.1	34.80	50	64.45	
901+00	354.4	347.1	7.3	35.04	50	64.90	193.35 ✓ 192.45 4/30/30
+50	354.4	347.2	7.2	34.78 ✓ 33.87	04	5.16 ✓	
+54	354.4	347.2	7.2	33.35	14	17.29	
+68	353.9	347.3	6.6	33.35	32	39.52	
902+00	354.5	347.3	7.2	33.11	21	25.75	
+21	353.8	347.3	6.5	32.36 ✓ 33.38	14	16.79	
+35	354.2	347.3	6.9	33.35	15	18.52	
+50	354.2	347.3	6.9	32.87	50	60.85	
903+00	354.1	347.4	6.7	31.66	50	58.57 ✓ 58.85	
+50	353.8	347.4	6.4	30.93	50	57.30	
904+00	353.9	347.5	6.4	31.42	50	58.20	
+50	353.5	346.9	6.6			358.23	

Sta	Ground Elev.	Grade Elev.	Hgt.	Mean End Area	Dist	Yardage	Totals
904+00	353.5	346.9	6.6	32.38	50	358.23	417.90 ✓
						59.95	418.18 5/20/30
905+00	353.1	346.3	6.8	32.62	34	41.07	
+34	352.5	345.8	6.7	31.90	16	18.90	
+50	352.1	345.6	6.5	33.11	25	30.65	
+75	352.5	345.3	7.2	33.59	25	31.10	
906+00	351.7	345.0	6.7	34.56	15	19.20	
+15	352.2	344.6	7.6	38.18	35	49.49	
+50	351.8	343.6	8.2	40.36	50	74.75	
907+00	350.7	343.2	8.5	42.53	50	78.75	
+50	349.9	340.8	9.1	43.74	50	81.00	
908+00	349.4	340.4	9.0	41.32	50	76.55	501.46 5/21/30
+50	348.4	340.3	8.1	37.94	50	70.25	
909+00	347.8	340.2	7.6	35.28	17	18.30	
+14	347.2	340.2	7.0			88.55	

Sta.	Ground Elev.	Grade Elev.	Hgt.	Mean End Area.	Dist.	Yardage	Totals.
909+14	347.2	340.2	7.0			99.55	
				32.87	12	14.60	
+26	346.7	340.1	6.6				
				33.35	24	29.64	
+50	347.3	340.1	7.2				
				34.07	50	63.10	
910+00	346.9	340.0	6.9				
				31.90	50	59.05	
+50	344.5	338.2	6.3				
				31.17	50	57.75	
911+00	343.0	336.4	6.6				
				32.14	50	59.50	
+50	341.3	334.6	6.7				
				30.93	50	57.30	429.49 5/22/30
912+00	338.9	332.8	6.1				
				29.48	50	54.60	
+50	337.1	331.0	6.1				
				30.93	50	57.30	
913+00	335.9	329.2	6.7				
				35.76	50	66.25	
+50	335.7	327.6	8.1				
				39.63	50	73.40	
914+00	336.2	327.9	8.3				
				40.60	50	75.20	
+50	337.6	329.1	8.5				
				41.08	50	76.10	
915+00	338.8	330.3	8.5			402.85	

Sta	Ground Elev.	Grade Elev.	Hgt.	Mean End Area.	Dist.	Yardage	Totals
915+00	338.8	330.3	8.5			402.85	
				40.60	50	75.20	
+50	339.8	331.5	8.3				
				40.11	50	74.30	
916+00	340.9	332.6	8.3				
				40.60	50	75.20	
+50	342.3	333.8	8.5				
				39.15	50	72.50	
917+00	342.7	335.0	7.7				
				38.40	✓ 25	35.57	735.62 5/23/32
+25	343.1	334.9	9.2				
				38.64	✓ 15	21.44 24.16	
+40	342.6	334.8	7.8				
				38.40	✓ 10	14.23	
+50	342.9	334.8	8.1				
				40.57	✓ 50	75.20	
918+00	343.3	334.6	8.7				
				42.26	✓ 50	78.30	
+50	343.1	334.30	8.8				
				42.50	✓ 50	79.75	
919+00	342.9	334.1	8.8				
				42.50	✓ 50	78.75	
+50	342.7	333.9	8.8				
				42.02	✓ 50	77.85	
920+00	342.3	333.7	8.6				
				42.50	✓ 50	78.75	
+50	342.5	333.5	9.0				
							503.67 <u>510.99</u>

	Ground Elev.	Grade Elev.	Ht.	M.E.A.	Dist	Ydgc.	totals
920+50			9.0				
920+67	342.8	333.4	9.4	44.40 ✓	17	27.95 ✓	
				45.40 ✓	33	10.99 84.15	
921+00	342.7	333.3	9.4				
				44.68 ✓	19	31.46	
+19	342.3	333.2	9.1				
				45.16 ✓	14	23.44	
+33	342.7	333.1	9.6				
				45.16 ✓	67	112.16	<u>4523.41</u>
922+00	342.0	332.9	9.1				
				42.99 ✓	50	79.65	
+50	341.4	332.7	8.7				
				42.02 ✓	50	77.85	<u>911.32</u> <u>4523.41</u> 739.98 4552.35 919.70 5/29/30 4453.18 5/29/30
923+00	341.0	332.3	8.7				
				42.02 ✓	50	77.85 ✓	
+50	340.5	331.8	8.7				
				42.02 ✓	50	77.85 ✓	
924+00	339.9	331.2	8.7				
				41.55 ✓	33	50.79	<u>206.49</u> 5/26/30
+33	339.5	331.0	8.5				
				41.55 ✓	44	67.72 ✓	
+77	339.3	330.6	8.7				
				42.02 ✓	23	35.81 ✓	
925+00	338.8	330.1	8.7				
				41.80 ✓	14	21.67 ✓	
+14	338.4	329.8	8.6				
				39.83 ✓	36	53.17 ✓	
+50	336.2	329.3	7.9				
						178.37	

	Ground Elev.	Grade Elev.	H.T.	M.E.A	Dist.	Ydge	Totals
925+50	336.2	328.3	7.9			178.37	
				37.43	50	69.35 ✓	
926+00	332.9	325.3	7.6				
				35.74	50	66.25 ✓	
+50	329.6	322.4	7.2				
				34.29	50	63.55 ✓	
927+00	326.5	319.5	7.0				377.52 ✓ 5/27/30
				31.88	50	59.05 ✓	
+50	322.8	316.6	6.2				
				28.74	50	53.25 ✓	
928+00	320.4	314.7	5.7				
				27.77	13	13.38 ✓	
+13	320.1	314.3	5.8				
				28.50	24	25.34 ✓	
+37	319.5	313.5	6.0				
				30.43	13	14.66 ✓	
+50	319.7	313.1	6.6				
				30.19	29	32.45 ✓	
+79	319.0	313.1	5.9				
				28.98	14	15.04 ✓	
+93	319.5	313.4	6.1				
				29.95	7	7.77 ✓	
929+00	320.0	313.7	6.3				
				31.64	50	58.65 ✓	
+50	323.2	316.4	6.8			279.59	

	Ground Elev	Grade Elev.	Ht.	MEA.	Dist	Ydpe	Totals
929+50	323.2	316.4	6.8			279.59	
				33.33	50	61.75 ✓	
930+00	326.5	319.5	7.0				
				34.05	50	63.10 ✓	
+50	329.7	322.6	7.1				
				34.53	50	64.00 ✓	
931+00	332.9	325.7	7.2				
				33.81	50	62.65 ✓	
+50	335.7	328.9	6.8				
				32.60	50	60.40 ✓	
932+00	338.2	331.5	6.7				
				31.15	50	57.75 ✓	
+50	338.4	332.2	6.2				
				30.19	22	24.62 ✓	673.8 6.5/28/30 ✓
+72	338.6	332.3	6.3				
				32.12	28	33.32 ✓	
933+00	339.4	332.4	7.0				
				35.26	50	65.35 ✓	
+50	340.3	332.7	7.6				
				39.36	50	72.95 ✓	
934+00	341.7	333.0	8.7				
				39.86	50	73.85 ✓	
+50	342.6	334.8	7.8				
				33.81	50	62.65 ✓	
935+00	344.0	337.8	6.2			308.12	

	Ground	Grade	Ht.	M.E.A	Dist	Ydgs	Totals
935+00	344.0	337.8	6.2			308.12	
				30.19	50.		55.95 ✓
+50	345.3	339.0	6.3				
				31.88	22.		25.98 ✓
+72	346.0	339.1	6.9				
				34.05	28.		35.34 ✓
936+00	346.3	339.1	7.2				
				34.78	11.		14.18 ✓
+11	346.3	339.1	7.2				
				33.33	27.		33.34 ✓
+38	345.7	339.1	6.6				
				32.60	12.		14.50 ✓
+50	346.1	339.2	6.9				
				34.29	50.		63.55 ✓
937+00	346.6	339.3	7.3				
				34.78	50.		64.45 ✓
+50	346.5	339.4	7.1				
				35.50	50.		65.80 ✓
938+00	347.1	339.5	7.6				
				36.46	50.		67.60 ✓
+50	347.2	339.7	7.5				<u>748.81</u> ✓ 5/29/30
				36.46	50.		67.60 ✓
939+00	347.4	339.8	7.6				
				37.19	50.		68.90 ✓
+50	347.8	340.0	7.8				136.50 ✓

	Ground Elev	Grade Elev	Ht.	M.E.A.	Dist	Ydgc Totals
939+50	347.8	340.0	7.8			36.50
				35.98	16	21.34 ✓
+66	347.2	340.1	7.1			
				35.74	25	33.12 ✓
+91	347.8	340.1	7.7			
				36.71	9	12.24 ✓
940+00	347.6	340.1	7.5			
				33.81	18	22.55 ✓
+18	346.7	340.2	6.5			
				32.84	14	17.04 ✓
+32	347.3	340.2	7.1			
				34.78	18	23.20 ✓
+50	347.6	340.3	7.3			
				35.02	50	64.90 ✓
941+00	347.7	340.5	7.2			
				35.50	50	65.80 ✓
+50	348.1	340.6	7.5			
				35.74	50	66.25 ✓
942+00	348.1	340.8	7.3			
				35.74	50	66.25 ✓
+50	348.4	340.9	7.5			
				36.22	50	67.15 ✓
943+00	348.6	341.1	7.5			
				35.98	32	42.69 ✓
+32	348.5	341.1	7.4			639.03 ✓

	Ground	Grade	Ht	MEA	Dist	Ydgc	Totals
943+32	348.5	341.1	7.4			639.03	
				34.78	18		23.20 ✓
+50	348.2	341.2	7.0				
				34.29	50		63.55 ✓
944+00	348.6	341.4	7.2				
				35.98	12		16.01 ✓
+12	349.1	341.4	7.7				
				38.40	38		54.07 ✓
+50	349.7	341.5	8.2				
				40.09	50		74.36 ✓
945+00	350.1	341.7	8.4				
				41.79	50		77.40 ✓
+50	350.7	341.8	8.9				
				43.71	50		81.06 ✓
946+00	351.6	342.4	9.2				<u>1028.56</u> 5/30/30
				42.74	50		79.20 ✓
+50	352.0	343.5	8.5				
				35.26	50		<u>65.35</u> 144.52 5/31/30
947+00	352.6	346.5	6.1				
				29.95	50		55.50 ✓
+50	352.7	346.4	6.3				
				31.63	50		58.65 ✓
948+00	352.1	345.3	6.8				
				32.84	50		60.85 ✓
+50	349.4	342.6	6.8				175.00

	Ground	Grade	Ht	M.E.A	Dist	Ydge Totals
948+50	349.4	342.6	6.8			175.00
				34.29	50	63.55 ✓
949+00	346.6	339.2	7.4			
				37.67	50	69.80 ✓
+50	344.5	336.3	8.2			
				38.64	50	71.60 ✓
950+00	342.6	334.8	7.8			
				35.50	50	65.80 ✓
+50	340.2	333.3	6.9			
				30.91	50	57.30 ✓
951+00	337.8	331.9	5.9			
				28.01	8	8.30 ✓
+08	337.3	331.6	5.7			
				29.70	42	46.24 ✓
+50	337.1	330.5	6.6			
				32.84	22	26.77 ✓
+72	336.7	329.7	7.0			<u>584.36</u> ✓ P.C.L. 6/2/30
				31.88	28	33.07 ✓
952+00	334.9	328.7	6.2			
				28.76	50	53.25 ✓
+50	331.0	325.3	5.7			
				27.05	50	50.10 ✓
953+00	327.2	321.7	5.5			
				27.05	50	50.10 ✓
+50	323.7	318.0	5.7			186.5 ✓

	Ground Elev	Grade Elev	Ht	MEA.	Dist	Ydgp	Totals
953+50	323.7	318.0	5.7			136.52	
				26.81	50		49.70 ✓
954+00	319.8	314.4	5.4				
				27.05	9		9.02 ✓
+09	319.5	313.7	5.8				
				28.01	19		19.72 ✓
+28	317.2	312.4	5.8				
				29.22	12		13.00 ✓
+40	318.0	311.7	6.3				
				28.98	18 ⁸⁴		20.23 ✓
L +58 ⁸⁴	316.7	311.0	5.7				
				29.95	13 ¹⁶		14.61 ✓
+72	317.5	310.8	6.7				
				36.22	5		6.72 ✓
+77	319.1	310.8	8.3				
				40.09	15		22.29 ✓
+92	319.3	311.0	8.3				
				42.74	8		12.67 ✓
955+00	320.7	311.3	9.4				
				44.92	18		29.97 ✓
+18	321.3	312.1	9.2				
				41.05	6		9.13 ✓
+24	320.8	313.0	7.8				
				37.91	26		36.53 ✓
+50	321.9	314.0	7.9				430.11 ✓

Note: Trench width
4.0 from 959+00

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	Ground Elev	Grade Elev	H.t.	M.E.A	Dist	Ydge	Totals
955+50	321.9	314.0	7.9			430.11	
				35.74	50		66.25 ✓
956+00	323.9	317.0	6.9				
				33.33	50		61.75 ✓
+50	325.6	318.7	6.9				
				34.05	50		63.10 ✓
957+00	327.5	320.3	7.2				
				33.81	50		62.65 ✓
+50	328.8	322.0	6.8				
				32.36	50		59.95 ✓
958+00	330.2	323.6	6.6				
				32.60	50		60.40 ✓
+50	332.2	325.3	6.9				<u>804.21</u> ✓
				33.11	50		61.30 ✓
959+00	333.8	327.0	6.8				
				29.2			
				38.19	21		22.70 ✓
+21	335.2	327.4	7.8				
				31.6	22		25.74 ✓
+43	335.7	327.7	8.0				
				31.6	21		24.57 ✓
+64	335.8	328.0	7.8				
				32.4	13		15.60 ✓
+77	336.6	328.2	8.4				149.91 ✓

✓
A.C.L.
6/3/30

	Grd. Elev	Grade Elev	Ht	MEA	Dist	Ydgs	Totals
959+77	336.1	328.2	7.9			149.71	
				32.8	23	27.94 ✓	
960+00	337.2	328.7	8.5			61.85	
				33.4	50	61.80 ✓	
+50	339.0	330.8	8.2				
				30.4	50	56.30 ✓	
961+00	340.7	333.7	7.0				
				26.60	50	49.25 ✓	345.25 ✓
+50	342.5	336.2	6.3				345.25 6/9/30
				24.60	58	52.84 ✓	
962+08	343.3	337.3	6.0				
				23.4	42	36.40 ✓	
+50	343.3	337.6	5.7			36.33 ✓	
				23.6	50	43.70 ✓	
						43.65 ✓	
963+00	342.8	336.7	6.1				
				25.4	50	47.04 ✓	
+50	342.3	335.7	6.6			47.00 ✓	
				27.0	50	50.70 ✓	
964+00	341.7	334.6	7.1				
				29.2	50	54.05 ✓	
+50	341.1	333.6	7.5				
				30.0	50	55.55 ✓	340.32 ✓
965+00	340.5	333.0	7.5				340.32 6/10/30

	Ground	Grade	H.t.	M.E.A.	Dist	Ydgc	Totals
965+00	340.5	333.0	7.5				
				29.19 ✓	50	54.05 ✓	
+50	340.0	332.9	7.1				
				27.00 ✓	50	50.00 ✓	
966+00	339.3	332.9	6.4				
				25.00 ✓	38 ¹²	35.30 35.20 ✓	
+38 ¹²	338.9	332.8	6.1				
				24.40 ✓	11 ⁸⁸	10.74 ✓	
+50	338.9	332.8	6.1				
				24.20 ✓	10	8.96 ✓	
+60	338.8	332.8	6.0				
				23.4	40	34.67 34.60 ✓	
967+00	338.0	332.3	5.7				
				22.8	50	42.20 ✓	235.92 ✓ ✓ 235.95 6/11/30 ✓ ✓
+50	337.3	331.6	5.7				
				22.2	50	41.11 41.05 ✓	
968+00	336.4	331.0	5.4				
				24.6	50	45.55 ✓	
+50	336.2	329.3	6.9				
				29.8	50	55.19 55.15 ✓	
969+00	335.9	327.9	8.0				
				30.8	50	57.05 ✓	
+50	336.0	328.6	7.4				
				28.0	50	51.85 ✓	
970+00	337.1	330.5	6.6				
						250.65 250.75	

	Ground	Grade	Ht.	M.E.A	Dist	Ydgc	Totals
990+00	337.1	330.5	6.6			250.65 ⁷⁵	
				26.0	50	48.15 ✓	
+50	339.2	332.8	6.4				
				25.8	26	24.83 ✓	
+76	340.3	333.8	6.5				
				25.6	24	22.75 ✓	
991+00	341.1	334.8	6.3				
				26.0	13 ⁰³	12.54 ✓	
+13 ⁰³	341.5	334.8	6.7				
				26.2	36.72	35.86 ✓	
+50	341.5	335.1	6.4				
				27.2	50	50.35 ✓	
992+00	342.3	335.1	7.2				
				29.9	50	54.45 ✓	
+50	342.7	335.2	7.5				
				30.4	50	56.30 ✓	
993+00	343.0	335.3	7.7				
				31.6	50	58.50 ✓	
+50	343.4	335.3	8.1				
				32.8	50	60.75 ✓	
994+00	343.7	335.4	8.3				
				33.8	50	62.55 ✓	
+50	344.1	335.5	8.6				
				34.8	50	64.45 ✓	
995+00	344.4	335.6	8.8				
						357.04	
						356.95 ✓	

445.23 ✓
 445.13 6/12/30

	Ground	Grade	HT	MEA	Dist	Edge	Totals
975+00	344.4	335.6	8.8			357.00 356.95 65.19 65.15 ✓	
+50	344.4	335.6	8.8	35.2	50	66.30 66.25 ✓	
976+00	344.8	335.7	9.1			527.14 ✓ 38.61 ✓	526.96 6/13/30
+28 ³³	345.0	335.7	9.3	36.8	28 ³³	30.00 ✓	
+50	345.2	335.8	9.4	37.9	21 ⁶⁷	70.74 70.70 ✓	
977+00	345.5	335.8	9.7	38.2	50	72.96 72.90 ✓	
+50	345.9	335.9	10.0	39.4	50	74.45 74.40 ✓	317.95
978+00	346.1	336.0	10.1	40.2	50	70.00 ✓ 69.95 ✓	
+50	346.3	337.5	8.8	7.45 37.8	50	318.15 ✓ 317.95 6/14/30	
			8.1	32.4	50	60.00 ✓	
979+00	347.4	340.0	7.4	28.2	50	52.20 ✓	
+50	349.2	342.5	6.7	2.05 28.2	50	47.90 ✓	
			6.4	25.6	50	45.95 ✓	
980+00	351.1	345.0	6.1	6.2 24.8	50	205.55 ✓	
+50	352.1	346.6	6.3				

	Ground	Grade	Ht.	M.E.A	Dist	Yd.	Totals
980+50	352.9	346.6	6.3			205.55 ✓ 47.04 47.00 ✓	
			6.35	25.4	50		
981+00	354.6	348.2	6.4				
			6.55	26.2	50	48.50 ✓	
+50	356.5	349.8	6.7				
			6.8	27.2	50	50.35 ✓	
982+00	358.3	351.4	6.9				
			6.65	26.60	19	18.72 ✓	
+19	358.4	352.0	6.4				
			6.3	25.2	31	28.92 ✓	
+50	359.2	353.0	6.2				
			6.1	24.4	50	45.20 ✓	
983+00	360.6	354.6	6.0				
			5.95	23.80	50	44.08 44.00 ✓	
+50	362.1	356.2	5.9				
			5.9	23.6	50	43.70 43.65 ✓	
984+00	363.7	357.8	5.9				
			5.95	23.8	50	44.08 44.00 ✓	
+50	365.4	359.4	6.0				
			6.1	24.9	50	45.20 ✓	
985+00	367.1	360.9	6.2				
			6.2	24.8	32.77	30.10 29.85 ✓	
+32.77	367.7	361.5	6.2				
			6.4	25.6	36	34.13 ✓	
EVC +68.2	367.7	361.1	6.6				
						153.4 153.51 153.18	

532.06 ✓
531.89 6/16/30

	Ground Elev	Grade Elev.	Hgt	Med.	Dist.	Yds	Totals.
^{EVC} 985+68 ²²	367.8	361.1	6.7			153.51 153.18	
			⁶⁷ 6.7	26.8	31.23	31.01	184.52 ✓ 184.19 6/17/30
986+00	367.0	360.3	6.7				
			⁶⁶ 6.7	26.4	50	48.90	
+50	365.5	359.0	6.5				
			⁶⁴³ 6.5	25.80	50	47.75	
987+00	364.1	357.7	6.4				
			⁶²⁷ 6.4	25.00	50	46.30	
+50	362.5	356.4	6.1				
			⁶²⁷ 6.1	25.0	50	46.30	
988+00	361.5	355.1	6.4				
			⁶⁴⁵ 6.4	25.80	50	47.75	237.00 ✓ 6/18/30
+50	360.3	353.8	6.5				
			⁶²⁰ 6.5	25.0	32	29.63	
^{PVC} +82	359.0	353.0	6.0				
			⁶¹⁵ 6.0	29.60	12	10.93	
+94	359.0	352.7	6.3				
			⁶³⁵ 6.3	25.90	12	11.28	
989+06	359.0	352.6	6.4				
			⁶²⁵ 6.4	25.0	12	11.11	
^{EVC} +18	358.7	352.6	6.1				
			^{5.8} 6.1	23.2	32	27.50 27.46	
+50	358.2	352.7	5.5				
			^{5.6} 5.5	22.4	50	41.45	
990+00	358.6	352.9	5.7				
						131.90 131.86	

	Ground Elev.	Grade Elev.	Hgt.	Med.	Dist	Yard.	Totals
990+00	358.6	352.9	5.7 ^{5.75}			131.90 42.59 42.55 ✓	
+50	358.9	353.1	5.8 ^{5.7}			42.96 42.90 ✓	
991+00	359.1	353.3	5.8 ^{5.75}			43.33 43.25 ✓	260.78 ✓ 260.56 6/19/30
+50	359.4	353.5	5.9 ^{5.9}			43.70 43.65 ✓	
992+00	359.6	353.7	5.9 ^{6.05}				
+50	360.1	353.9	6.2 ^{6.25}			24.2 50 44.80 ✓	
+80 ^{Brk}	360.3	354.0	6.3 ^{6.2}			25.0 30 27.78 ✓	
+80	360.3	354.0	6.3			24.8 20 18.35 ✓	
993+00	360.4	354.3	6.1 ^{5.85}			43.33 43.25 ✓	177.99 ✓ 177.86 6/20/30
+50	360.8	355.2	5.6 ^{5.45}			40.37 40.30 ✓	
994+00	361.3	356.0	5.3 ^{5.05}			44.89 44.82 ✓	
+60 ^{Brk}	361.8	357.0	4.8 ^{4.95}			29.33 29.28 ✓	
995+00	362.2	357.1	5.1 ^{5.35}			39.63 39.55 ✓	
+50	362.7	357.1	5.6			159.22 153.95	153.95
						460.51	665

	Ground Elev	Grade Elev.	Hgt.	Med.	Dist	Yds.	Totals
995+50	362.7	357.1	5.6			159.22 53.95 42.96 42.90 ✓	
			^{5.4}	23.2	50		
996+00	363.2	357.2	6.0				
				29.0	60	53.34 ✓	
^{Brk} +60	363.2	357.2	6.0				✓ 286.96 ✓
			^{6.15}	24.60	40	36.44 ✓	286.63 6/21/30
997+00	363.7	357.4	6.3				
			^{6.45}	25.80	50	47.75 ✓	
+50	364.3	357.7	6.6				
			^{6.65}	26.60	50	49.25 ✓	
^{Brk} 998+00	364.7	358.0	6.7				
			^{6.85}	27.40	50	50.79 ✓	147.74 ✓
+50	365.2	358.2	7.0			50.70 ✓	147.70 6/23/30
			^{7.05}	28.2	50	52.20 ✓	
999+00	365.5	358.4	7.1				
			^{7.2}	28.8	50	53.35 ✓	
+50	365.9	358.6	7.3				
			^{7.35}	29.40	50	54.45 ✓	
1000+00	366.2	358.8	7.4				
			^{7.5}	30.0	40	44.44 ✓	209.44 ✓
+70	366.6	359.0	7.6				204.39 6/29/30
			^{6.9}	27.6	60	61.32 ✓	
1001+00	366.8	360.6	6.2				
			^{5.75}	23.00	50	42.60 ✓	
+50	367.2	361.9	5.3			42.55 ✓	

	Ground Elev	Grade Elev	Hgt.	Med.	Dist	Vols	Totals	Monthly estimate
1001+50	367.2	361.9	5.3			103.92 103.87 35.93 35.85		
^{Brk} 1002+00	367.6	363.2	4.4	19.40	50			
			^{4.6}	18.4	50		34.05	
+50	368.0	363.2	4.8				37.41	
			^{5.05}	20.2	50		37.35	
1003+00	368.5	363.2	5.3					
			^{5.05}	21.80	50		40.37 40.30	
+50	368.8	363.2	5.6				49.70 ✓	
			^{5.9}	23.6	50		43.65	
1004+00	369.4	363.2	6.2				295.38 ✓	
			^{6.3}	25.2	20		295.07 6/25/20	9107.24 A.C.L.
^{Brk} +20	369.6	363.2	6.4				18.66	9107.24 ✓
			^{6.3}	25.2	30		27.99	9104.76 6/25/20
+50	369.9	363.7	6.2				43.33 ✓	
			^{5.85}	23.40	50		48.25	
1005+00	370.0	364.5	5.5				39.26 ✓	
			^{5.3}	21.2	50		39.20	
+50	370.5	365.4	5.1				36.30 ✓	
			^{4.9}	19.6	50		36.25	
1006+00	370.9	366.2	4.7					
			^{4.55}	18.20	20		13.46	
^{Brk} +20	370.9	366.5	4.4				19.78 ✓	
			^{4.05}	17.80	30		19.74	198.78
+50	370.9	366.4	4.5				198.55	

	Ground Elev.	Grade Elev.	Hgt.	Dist.	Yds	Totals
1006+50	370.9	366.4	4.5		198.78 198.55	
				20.0	50	37.04 ✓
1007+00	371.8	366.3	5.5			
			6.85	23.40	50	43.33 ✓
+50	372.3	366.1	6.2			
			6.5	26.2	50	48.52 ✓
1008+00	372.9	366.0	6.9			
			7.4	29.6	50	54.80
+50	373.5	365.6	7.9			
				31.6	50	58.50 ✓
1009+00	373.1	365.2	7.9			440.97 ✓
				32.0	50	<u>58.50</u> 448.05 6/26/30
+50	373.0	364.9	8.1			
				32.8	50	60.75
1010+00	372.8	364.5	8.3			
			8.5	33.90	50	61.85
+50	372.7	364.3	8.4			61.80
				33.6	50	62.20
1011+00	372.5	364.1	8.4			
				33.8	50	62.55
+50	372.4	363.9	8.5			
				34.2	14	17.72
+64	372.3	363.7	8.6			
			8.5	34.60	36	46.12
1012+00	372.1	363.4	8.7			<u>370.44</u> 6/27/30

10	1012+00	372.1	363.4	8.7				
					39.60	7 ⁵	9.61	
	+07 ^E	371.9	363.3	8.6				
	+07.5	372.9	363.3	9.6				
					42.8	42 ⁵	67.36	
	+50	375.0	363.2	11.8				
				11.85	47.4	10	17.54	
	+60	375.1	363.2	11.9				
				9.45	37.80	50.86	71.21 ✓	
							71.15	
	1013+10 ⁸⁶	375.1	368.1	7.0				
				5.6	27.4	31.40	26.03	
	+42 ²⁵	375.4	371.2	4.2				

1003.16

19175 ✓

1003.16 ✓

1010.49 6/28/30 7/25/30

Trench Yardage

Total Page 2-32

Continued Page 69

19927.97 cu. yds.

T.M.M.
Sept. 30 - 1930

19927.97 ✓

2908.36 ✓ page 69

22836.33 ✓ cu. yds

Grand Total

Trench Yardage

Measured July 19, 1930

Pavement Ruined by Slooping

33

(23 x 1)	Sta 962+64	(6" asph.)
(12 x 0.5)	✓ 963+50	(6" asph.)
(18 x 1.5)	" 965+00	6" asph.
(12.5 x 1.5)	✓ " "	" "
(8.5 x 0.75)	965+25	" "
(6.0 x 1.0)	969+25	" "
(4.0 x 1.0)	970+50	" "
(20.0 x 1.5)	✓ ✓	" "
(4 x 2.5)	982+30	4' conc - 2' asph.
(7.5 x 37)	984+70	" " "
(11.0 x 0.75)	984+90	" " "
(9.5 x 0.5)	985+20	" " "
(10.0 x 1.5)	989+40	6" asphalt.
(8.0 x 0.75)	"	" "
(21.0 x 1.25)	"	" "
(6.0 x 0.4)	994+00	" "
(4.0 x 0.5)	996+30	4' conc - 2' asph.
(8.0 x 2.0)	998+85	" " "
(3.5 x 0.3)	"	" "
(3.0 x 0.5)	"	" "
(6.0 x 0.75)	"	" "
(2.0 x 0.5)	"	" "
(7.0 x 0.5)	"	" "
(5.5 x 1.0)	1004+70	6" asph.
(5.5 x 1.0)	1004+90	" "

(3.5 x 0.5)	1007+40	6" asphalt.
(3.5 x 2.5)	} 1010+00	6" "
(8.5 x 1)		
(23.0 x 2.0)		
(9.5 x 1.0)	} 1012+07	4' conc 2' asphalt.
(8.5 x 1.25)		

(8.0 x 2.0)	} chammaone
4.0 x 1.0	
14.5 x 1.0	}
8.0 x 5.0	

Pavement Measurements - Base

47th to Van Dyke Measured by Frank Latus

47th St	Menlo	46th	45th	Chamaine
60.0	59.5	60.00	60.0	59.75
4.75	5.83	5.80	6.25	8.33
4.75	9.90	5.70	4.75	8.00
4.75	8.90	4.90	4.80	7.40
5.00	8.00	4.75	5.90	5.66
4.90	7.50	4.90	5.25	5.25
4.90	6.50	4.90	5.00	5.75
4.75	5.75	4.90	5.50	5.25
4.90	4.90	4.90	5.00	5.75
4.75	4.80	4.75	6.00	6.90
5.00	4.60	5.00	7.50	7.50
4.90	5.75	4.90	8.00	6.75
4.90	4.75	4.90	6.25	5.00
4.66	4.75	4.75	6.25	4.90
4.90	4.75	65.05	7.25	5.00
4.80	4.75	5.00	3.70	27.44
4.75	5.50	5.00	13	14
4.80	5.00	5.00	13	12

4.83 x 60 = 289.80
 Contract = 289.80
 Diff = 0.0

5.9 x 59.5 = 350.6
 289.8
 60.8
 5.89

5.0 x 60 = 300.0
 289.8
 10.2

6.0 x 60 = 360.0
 289.8
 70.2

5.75 x 6.2 = 376.4
 370.4
 6.0

5.5 x 6.5 = 357.5
 314.0
 43.5

5.0 x 59.9 = 299.5
 289.8
 9.7

6.2 x 59.9 = 371.4
 289.8
 81.6

11.5 x 79.75 = 917.1
 886.4
 30.7

11.1 x 6.1 = 67.71
 488.0
 386.0
 10.16

Highland	44th	Fairmont	43rd	Van Dyke
65.0	59.9	59.9	79.75	80.0
8.00	5.00	6.75	12.70	8.25
6.80	5.00	5.50	12.10	7.90
6.00	5.00	5.25	11.75	8.90
5.90	5.00	5.75	11.70	7.90
5.00	5.00	5.25	11.33	6.50
5.00	4.90	5.60	11.70	6.00
5.00	4.90	5.95	12.75	5.00
5.00	5.00	5.75	12.50	5.50
5.00	4.90	5.25	12.80	5.25
5.00	5.00	6.10	11.75	5.00
5.00	5.00	6.25	11.20	5.10
5.00	5.00	7.00	9.90	5.33
4.90	5.00	7.90	9.50	5.25
5.00	5.50	8.00	9.60	5.25
5.90	70.20	86.30	10.00	5.10
82.50	11.00	5.40	12.75	5.90
70.2 = 5.0	12.60	6.75	207.63	110.08

Note: Underlined numbers indicate length of area measured. Numbers in column indicate lateral widths.

Measurement of Pavement - Base

80' wide 42nd St.	80' wide Marlborough	6' conc. Central	40" H 80.0	Extra base 26 7/8"
5.8	8.0	80.0	5.4	6.2
7.2	8.2	6.0	5.1	6.2
5.3	8.1	5.0	5.1	6.4
5.3	7.5	5.2	5.1	5.7
8.2	7.2	5.1	5.2	5.9
8.5	7.8	5.1	5.2	5.2
9.5	9.3	5.1	5.9	5.3
8.0	9.0	5.1	5.1	7.5
6.5	7.4	6.1	5.1	7.2
5.5	6.4	6.1	5.2	6.1
5.5	6.0	6.3	5.2	5.3
5.2	5.3	7.3	5.1	5.2
5.1	5.2	7.0	5.3	5.5
5.2	6.0	7.1	6.3	5.4
6.0	5.1	6.4	6.7	5.3
6.5	5.2	6.2	6.3	5.6
8.8	5.3	6.0	6.2	5.4
9.3	6.6	7.0	7.1	5.3
8.6	6.9	9.7	7.1	6.5
7.0	7.5	13.1	9.4	6.0
8.1	8.0	17.0	117.1	5.4
7.0	7.0	18.7		
6.3	23.3			
6.3	24.2			
6.9	208.1			
9.0	9.0			

$145.1 = 6.9$
 21
 $6.9 \times 80 = 552.0$
 $concr = 386.4$
 $Diff = 165.6$

$6.9 \times 80 = 552.0$
 $concr = 386.4$
 $Diff = 165.6$

$117.1 = 5.8$
 $5.8 \times 80 = 467.2$
 $concr = 386.4$
 $Diff = 80.8$

$123.1 = 5.8$
 $5.8 \times 80 = 464.0$
 $concr = 386.4$
 $Diff = 77.6$

Take paid by Water Dept.
 $14.3 \times 21 = 300.3$
 12.7
 115.6

To be paid by Water Dept.
 $14.3 \times 21 = 300.3$
 12.7
 115.6

Base Measurement
 Top Measurement on
 Page 47, Column 4

Marlborough	39th St	37th St	Charrokee
9.0	80.0		80.0
6.6			11.3
7.5			7.6
6.3			7.2
5.1			7.3
4.4			8.1
3.4			7.9
33.3			7.7
5.5			6.0
5.3			5.3
3.9			5.9
2.0			5.4
54.0			5.3
4.9			6.3
4.9			7.4
4.9			8.3
4.9			8.2
4.9			8.0
4.9			9.8
4.9			9.5
4.9			9.0
4.9			8.6
4.9			6.8
4.9			2.5
4.9			7.8
4.9			182.2
4.9			7.6

Patch
 Extra it
 Charrokee

$77.9 \times 5.3 = 413.87$
 453.5
 386.4
 67.1

$77.9 \times 5.3 = 413.87$
 453.5
 386.4
 67.1

121.9
 386.4
 35.5

423.5
 386.4
 47.1

39th St
 37th St
 Charrokee
 Wilson
 Swift

182.2
 7.6

↓ Sou. Line Univ. Ave
Univ. Ave.

$(7.0 + 5.9 + 5.2 + 6.1 + 7.8 + 8.6 + 10.0 + 10.3) \times 17.8 = 189.3$ 135.4
 $(11.4 + 10.0 + 8.0 + 7.5 + 6.2 + 5.5 + 6.2 + 7.3) \times 21.3 = 165.3$
 Contr = $39.2 \times 4.54 = 177.5$
 Holes in center 47.8 contr. 122.1
 Diff = 123.2

N of Univ - Water Dev. Extra.

$(7.1 + 11.9 + 17.4 + 22.5 + 21.8 + 21.3 + 21.1 + 20.3 + 21.0) \times 77.2$
 $+ 21.1 + 22.5 + 21.0 + 15.6 + 7.0 + 6.9 + 5.0$
 $16.5 \times 77.2 = 1273.8$ 350.5
 Contr ASA $\times 77.2 = 923.3$ 961.9
 Diff = 38.6
 Add 38.6 for topping excess Page 44 Col. 2

To L in Wabash. contr = 708.0 X
 $156.6 \times 4.8 + 20.2 = 771.9$ Diff = 630.9 X

L in Wabash. Contr = 64.0 X
 $(6.2 + 6.0 + 6.4 + 6.2 + 6.2 + 5.9) / 4.1 = 86.0$ Diff = 22.2 X

5.6	4.5
5.2	5.1
5.2	6.0
5.4	6.8
4.8	6.4
5.0	5.8
5.0	5.8
4.8	5.5
4.6	4.6
4.5.4	95.9

$\frac{95.9}{18} = 5.3$ X
 $5.3 \times 65.0 = 344.5$ X
 Contr. $4.54 \times 65 = 295.1$ X
 Diff = 49.4 X

57.0	Water Dev	170.0	128.0	
4.5	85.0	5.0	5.2	
4.5	4.6	6.3	6.6	
6.0	6.0	6.6	6.6	
5.8	5.8	6.3	6.6	
6.0	6.0	5.8	5.4	
4.5	6.2	110.0	5.7	4.9
5.3	6.4	5.0	5.7	5.4
15.5	5.9	5.0	6.0	4.5
6.0	7.5	4.8	5.5	5.7
6.0	8.6	4.7	5.0	4.6
5.9	9.3	4.6	5.0	4.5
4.6	8.3	4.8	5.2	4.8
4.8	5.0	28.9	5.3	5.5
5.2	5.0	5.2	5.2	4.9
5.3	7.2	+9 sft.	4.8	4.9
4.6	8.1	4.9	4.8	4.8
57.7	11.8	4.8	4.8	4.9
5.2 x 30 = 156	12.4	4.8	4.7	4.7
Contr = 186.2	11.7	4.6	4.6	4.9
Diff = 19.8	4.8	4.7	4.7	4.8
69.0	11.7	4.6	4.6	4.9
4.8	11.2	4.7	4.7	4.8
4.6	8.9	5.0	5.0	5.9
4.5	6.4	5.4	5.4	4.9
4.6	5.6	5.0	5.0	243.0
18.5	5.8	5.3	5.3	128.0
4.6 x 29 = 317.4	5.5	5.3	5.3	128.0
4.5 x 69 = 313.3	5.5	5.3	5.3	128.0
Diff = 4.1	5.1	5.3	5.3	128.0
184.3	5.1	5.3	5.3	128.0

Add 26.5
 7A x 85 = 592.5
 7A x 85 = 592.5
 Contr. 4.54 x 85 = 385.9
 Diff = 206.6

South line of boundary to N.L. 92.82
Beginning at Orange

71.0	76.4	122.8 = 12.8	72.2	233.5
4.8	4.6	123 x 11.5 = 141.5	7.8	5.8
4.8	4.6	137.7	8.3	5.3
4.8	85.8	106.3	7.6	4.8
4.8	5.4	-38.4	5.3	4.6
19.2	5.4	19.2	4.6	254.0
	5.4 x 48 = 259.2	4.8	4.6	
	centr. 454 x 48 = 217.9	4.6	4.5	
	Diff = 41.3	4.4	4.4	
		4.5	4.5	
		5.7	5.7	
		6.0	6.0	
		6.8	6.8	
		4.7	5.6	
		4.5	6.9	
		4.5	7.9	
		4.6	10.1	
		5.2	10.7	
		5.7	10.4	
		4.8	10.3	
		4.6	8.0	
		4.9	7.1	
		6.1	7.0	
		6.6	7.2	
		8.0	233.5	
		8.0		
		8.0		

E. Line of Boundary

100.0	4.7	39.0	151.0	43.6
7.3	4.8	4.7	5.6	4.5
6.0	4.8	4.9	6.0	4.8
4.9	127.0	4.8	164.6	219.3
4.8	5.6	5.6	164.5	4.65
4.6	6.0	6.0	73.0	
4.71	5.0	7.2	4.6	
4.6	4.7	7.2	7.2	
5.2	4.7	4.9	13.3	
4.7	4.8	4.8	12.2	
4.5	4.9	4.7	11.2	
4.6	5.0	4.8	10.7	
6.7	4.7	4.7	9.6	
7.2	4.8	4.6	8.6	
4.9	4.7	4.6	8.0	
4.6	38.3	69.4	8.0	
4.6	4.8	8.0	8.0	
4.7	4.8	8.1	8.0	
4.7	4.7	7.1	7.1	
4.8	4.7	5.0	5.0	
4.8	4.7	4.7	4.7	
4.7	4.7	4.7	4.7	
5.3	4.7	4.7	4.7	
4.6	5.3	5.3	5.3	
175.5		151.0		
117.5		152.9		

Water Dev. toward S. Bound.

4.8 x 71 = 340.8
centr. = 322.3
Diff = 21.0

85.6 = 5.4
5.4 x 48 = 259.2
centr. 454 x 48 = 217.9
Diff = 41.3

122.8 = 12.8
123 x 11.5 = 141.5
137.7
106.3

Add excess for tapping A, B
Page 45 Col. 5

6.35 x 144 = 915.8
centr. 454 x 144 = 653.8
Diff = 262.0
413.3
675.3

38.3 = 4.8
96 x 100 = 480
centr. = 454
Diff = 26

69.4 = 4.96
141 x 496 x 39 = 193.4
centr. = 454 x 39 = 177.1
Diff = 16.3

7.5 x 73 = 547.5
centr. 454 x 73 = 331.4
Diff = 216.1
227.1

Add 110 sp. excess tapping eye 45, Col. 8

465 x 43.6 = 202.7
centr. 454 x 43.6 = 197.9
Diff = 4.8

38

Beginning of EL Iowa				
100.00	7.3	B.O. 20 Iowa water dev.	276.8	82.0
7.7	6.5	14.0	4.7	4.6
4.9	6.2	3.0	4.7	9.6
4.8	5.4	5.5	4.6	9.1
4.7	4.8	4.2	4.6	5.1
4.8	4.7	2.5	4.6	4.9
4.9	4.7	1.8	4.6	5.2
6.0	4.7	1.8	4.9	4.8
6.6	4.7	2.8	4.8	4.7
4.9	194.9	21.6	4.8	4.7
4.7			4.8	4.6
4.8			47.1	5.7
5.2			6.8	6.8
5.3			6.6	6.6
5.8			4.6	4.6
7.6			5.3	5.3
6.9			5.0	5.0
6.4			5.0	5.0
8.0			4.9	4.9
9.2			5.0	5.0
10.2			6.2	6.2
8.5			6.2	6.2
7.5			123.0	123.0
6.5				
145.9				

$6.09 \times 100 = 609$
 $4.54 \times 100 = 454$
 Diff = 155
 $4.71 \times 14 = 65.94$
 $4.54 \times 10 = 45.4$
 Diff = 20.54
 $3.1 \times 14 = 43.4$
 $4.54 \times 10 = 45.4$
 Diff = 2.0

$4.71 \times 276.8 = 1303.7$
 $4.54 \times 276.8 = 1256.7$
 Diff = 47.0
 $4.71 \times 276.8 = 1303.7$
 $4.54 \times 276.8 = 1256.7$
 Diff = 47.0

$5.6 \times 82 = 459.2$
 $4.54 \times 82 = 372.3$
 Diff = 86.9

1427.3
 362.0
 Diff = 65.3

Gas Main Alley w. of F.I.		only		39	
800	81.0	115.5	300.0	119.1	
4.8	4.6	5.2	5.2	4.7	
4.6	5.9	4.6	4.8	5.8	
4.6	5.1	4.8	4.8	131.6	
4.8	5.4	4.8	4.8		
4.7	5.0	4.6	4.6		
4.8	4.8	5.0	5.0		
4.7	4.8	4.7	4.7		
4.7	5.3	5.3	5.3		
4.7	5.2	5.0	5.0		
4.7	4.6	4.7	4.7		
47.1	4.6	5.2	5.2		
4.6	4.6	5.6	5.6		
4.7	4.7	5.3	5.3		
4.8	4.8	4.7	4.7		
4.6	4.6	4.7	4.7		
4.6	4.6	4.8	4.8		
6.5	7.2	4.6	4.6		
6.6	6.6	4.7	4.7		
6.6	6.6	4.6	4.6		
5.0	5.0	4.6	4.6		
5.2	5.2	4.7	4.7		
115.5	4.6	4.6	4.6		
	4.7	4.7	4.7		
	4.6	4.6	4.6		
	4.7	4.7	4.7		
	119.1				

$6.5 \times 3.8 + 7 \times 4.5 + 4 \times 2.6 = 61.4$ 59ff.

426.1
 367.7
 Diff = 58.4

$4.9 \times 300 = 1470.0$
 $4.54 \times 300 = 1362.0$
 Diff = 108.0

Gas Main Alley w of Ohio	71.0	100.0	Gas Main Alley w of 30th
6.5 X 1.6	5.8	5.2	200
5.0 X 1.5	5.3	5.5	
17.9	5.1	4.6	
	5.0	4.6	
	6.3	4.6	
	6.5	4.8	
	6.8	6.1	
	4.7	6.2	
	4.6	8.2	
	4.7	6.2	
	4.9	6.3	
	4.6	7.4	
	4.6	6.6	
	5.6	5.6	
	4.5	5.3	
	4.5	5.6	
	4.6	6.4	
	5.4	5.1	
	6.5	4.6	
	6.1	4.6	
	5.5	4.9	
	4.5	4.5	

6.5 X 1.6
5.0 X 1.5
17.9
=

5.3 X 71 = 376.3
379.3
4.54 X 100 = 454.0
Diff = 57.0

123.1

5.6 X 100 = 560.0
4.5 X 100 = 454.0
Diff = 106.0

4.5 + 3.0 + (11 X 7.5) + (22.5 X 0.75) = 92.5
98.0
Diff = 64.5

7.5 X 2.3 + 2 = 16.75
200 X 4.6 + (4.7 X 2.7) = 200

(3.5 X 2.7) + (2.2 X 2.7) = 12.4
0.0

Gas Main Alley w of Kansas	65.0	42.0	168.0
4.6	4.6	4.6	
4.6	5.1		
4.6	7.6		
	8.6		
	9.5		
	9.0		
	8.2		
	7.8		
	8.2		
	7.0		
	6.0		
	5.6		
	6.4		
	5.3		
	4.6		
	103.5		

4.6 X 6.5 = 29.9
4.5 X 6.5 = 29.25
Diff = 3.9

103.5 = 6.9
6.9 X 4.6 = 289.8
4.54 X 4.2 = 190.7
Diff = 99.1

4.6 X 168.0 = 772.8
4.54 X 168 = 762.7
Diff = 10.1

5 X 3 + 5 X 3 = 30.0

Gas Main Alley w of Kansas

184.0	116.8	238.0	175.0	138.5	366.1
5.2	5.6	4.6	8.9	10.6	6.2
5.5	6.4	5.6	8.6	9.7	5.3
5.8	6.4	7.4	8.4	9.0	4.6
5.8	8.0	7.6	8.0	8.5	382.1 ✓
5.4	6.0	7.7	5.7	9.8	
4.6	5.8	8.9	4.6	10.7	
5.8	5.8	278.8	4.6	11.4	1422.8
5.8	4.9		4.6	10.8	794.5
4.6	5.0		4.6	11.4	628.3
4.6	5.1		5.8	12.5	
5.3	5.5		6.3	12.6	
5.5	5.3		5.4	11.2	
4.9	4.6		4.6	12.6	
4.6	4.6		4.6	12.5	
4.6	4.6		4.6	11.5	
4.6	5.6		4.6	10.5	
4.6	6.1		6.0	11.3	
4.8	5.6		6.4	11.2	
5.7	4.8		7.3	8.0	
5.3	4.7		7.5	8.0	
4.6	5.0		7.7	7.4	
4.6	4.8		9.6	6.4	
4.6	238.0		138.5	366.1	
116.8	237.0		138.4	366.0	

5.6 x 184 = 1012.0
 4.54 x 184 = 835.4
 Diff. = 176.6

813 x 175 = 1422.8
 454 x 175 = 794.5
 Diff = 628.3

4.0 + 14.5 + 12.5 x 4.6
 = 573.5
 4.54 x 14.5 = 65.83
 Diff = 26.0

125.0	In Idaho St	Holes on Iowa	Holes on Iowa	Idaho St
	57.7	17.2	19.3	57.7
	4.6	11.0	0.0	4.5
	4.8	10.9	4.0	6.0
	4.6	11.6	5.0	6.7
	6.2	12.3	8.7	6.7
	8.0	10.9	14.0	7.7
	8.3	11.4	14.6	8.1
	7.8	10.0	14.3	8.1
	6.4	3.4	11.8	7.0
	6.8	0.0	8.3	6.6
	6.3	8.1	3.4	5.9
	5.0	156.5	1.0	5.6
	4.6	0.0	0.0	6.5
	4.8	4.8	85.1	7.2
	6.5	0.0		6.6
	6.7	1.3		7.1
	6.6	2.4		8.0
	9.5	3.1		108.3 ✓
	8.2	5.5		
	3.2			
	0.0			
	15.5			
		85.1 = 7.1		
		140.0		
		137.0		
		7.1 x 19.3 =		
		137.0		
		108.3 = 4.77		
		16		
		4.77 x 57.7 = 390.6		
		4.54 x 57.7 = 262.0		
		Diff = 128.6		

15.5 = 2.2
 2.2 x 98 = 190.6
 171.6

108.3 = 4.77
 16
 4.77 x 57.7 = 390.6
 4.54 x 57.7 = 262.0
 Diff = 128.6

Measurements at Paving - Topping

47 th St	Menlo	46 th	Chamaine	45 th	Highland	44 th	Fairmont	43 rd	Vandyke	42 nd	42 Marlborough
	10.8										
57	8.8	6.0	8.8	6.7	8.3	5.9	7.3	12.7	9.3	8.8	6.9
55	8.0	6.0	8.7	5.7	7.0	6.2	5.7	12.8	10.1	8.0	7.0
54	8.9	5.4	10.0	5.4	6.2	6.5	5.6	12.1	9.9	10.0	9.0
54	6.8	5.4	9.4	6.4	6.3	5.3	6.3	12.7	7.6	10.0	8.6
54	6.0	5.8	5.8	5.7	5.4	5.5	6.3	11.6	8.0	7.6	7.0
	6.0	6.8	6.3	5.5	5.4	5.4	5.7	12.4	6.7	6.5	5.7
	6.4	5.5	6.3	5.6	5.5	5.4	6.2	13.2	5.9	5.5	5.7
	6.0	5.4	5.5	6.0	5.4	5.4	7.0	13.0	6.0	5.6	7.0
	6.8	5.5	6.9	7.7	5.4	5.4	5.8	12.6	6.0	5.8	5.8
	6.8	5.4	7.6	10.3	5.3	5.5	5.8	11.6	5.7	6.5	6.9
	6.3	5.4	7.9	10.6	5.2	6.0	6.8	11.0	5.8	7.9	7.0
	6.0	5.7	5.7	10.1	5.3		6.4	10.5	5.9	10.0	7.3
	7.0		5.1	10.0			8.0	10.5	6.2	9.3	9.0
			5.8	9.0			8.4	11.6	6.1	6.6	9.7
							9.0	13.9	6.2	7.7	8.3
								13.5	6.6	6.6	8.1
									7.9	6.8	9.9
											8.9



41 st	Central	40 th	39 th	37 th	Cherokee	36 th	Wilson	35 th	Swift
9.7	5.6	8.4	5.8			5.6	6.4	5.6	7.2
7.6	6.8	6.5	5.5			5.6	5.9	5.7	7.0
7.3	6.3	5.8	5.6			5.7	5.9	5.9	5.9
6.9	6.0	6.0	5.6			5.9	5.9	6.0	5.9
7.0	6.3	6.9	5.6			5.9	5.8	5.8	6.0
5.6	6.0	6.0	5.4			5.6	5.8	5.7	5.8
5.5	5.7	5.5	5.4			5.7	5.7	5.7	5.9
5.4	5.8	5.3	5.5			5.7	5.7	5.7	5.9
5.3	5.8	5.5	5.5			5.5	5.9	5.6	5.8
5.4	6.6	5.6	5.5			5.7	6.0	5.7	5.9
6.2	7.8	5.5	5.5			6.2	6.0	5.5	5.9
5.3	6.7	5.5	5.6			6.5	6.0	5.6	6.0
5.3	6.2	5.6	6.7			7.6	6.7	5.7	5.9
5.5	7.8	5.7	7.6			8.7	7.5	5.7	5.5
5.6	7.5	5.7				8.5	7.7	5.9	5.8
6.0	7.3	5.5							
	7.2	6.0							
	7.5								
	8.2								

+ (5.4 x 0.8)

41st

Central

40th39th37th

Cherokee

36th

Wilson

35th

Swift

43

9.7	5.6	8.4	5.8
7.6	6.8	6.5	5.5
7.3	6.3	5.8	5.6
6.9	6.0	6.0	5.6
7.0	6.3	6.9	5.6
5.6	6.0	6.0	5.4
5.5	5.7	5.5	5.4
5.4	5.8	5.3	5.5
5.3	5.8	5.5	5.5
5.4	6.6	5.6	5.5
6.2	7.8	5.5	5.5
5.3	6.7	5.5	5.6
5.3	6.2	5.6	6.7
5.5	7.8	5.7	7.6
5.6	7.5	5.7	
6.0	7.3	5.5	
	7.2	6.0	
	7.5		
	8.2		

5.6	6.4	5.6	7.2
5.6	5.9	5.7	7.0
5.7	5.9	5.9	5.9
5.9	5.9	6.0	5.9
5.9	5.8	5.8	6.0
5.6	5.8	5.7	5.8
5.7	5.7	5.7	5.9
5.7	5.7	5.7	5.9
5.5	5.9	5.6	5.8
5.7	6.0	5.7	5.9
6.2	6.0	5.5	5.9
6.5	6.0	5.6	6.0
7.6	6.7	5.7	5.9
8.7	7.5	5.7	5.5
8.5	7.7	5.9	5.8

T554x08

Univ Ave	No. of Univ. Water Del.							Net Alloc. of Wash. Water Del.				
<u>17.8</u>	<u>77.2</u>	<u>156.6</u>	<u>14.1</u>	<u>65.0</u>	<u>57.0</u>	<u>30.0</u>	<u>69.0</u>	<u>85.0</u>	<u>110.0</u>	<u>170.0</u>		5.3
7.0	7.5	5.4	5.7	5.9	5.0	6.1	5.1	6.3	5.5	6.9		5.2
6.2	14.6	5.3	6.0	5.6	5.5	6.6	5.2	6.1	5.6	6.8		5.2
6.9	22.4	5.0	6.8	5.2	5.6	5.3	5.2	6.6	5.6	6.6		5.2
8.9	22.1	5.0	6.4	5.7	5.8	5.5	5.3	6.7	5.4	6.1		5.7
10.0	21.3	6.0	6.4	5.1	5.0	5.3	5.3	7.7	5.0	5.9		
10.6	20.8	5.5		6.0	5.4		5.0	9.2	5.7	5.3		
Holes Center.	21.5	5.5		7.0	5.3		5.2	9.8		5.4		
(2.4 x 2.7)	21.4	5.5		6.6			5.3	6.1		5.4		
(7.9 x 2.9)	23.5			5.3				6.2		5.5		
(2.5 x 7.8)	18.6							8.5		5.1		
X	10.8							12.4	+9.42	5.5		
<u>21.3</u>	<u>5.6</u>							12.6		5.5		
11.3	210.1 ✓							11.4		5.2		
8.9								8.5		5.5		
7.2								6.4		5.5		
5.7								6.2		5.6		
6.3								5.6		7.1		
7.8								136.3 ✓		6.0		
								80 x 85 = 680.0		5.9		
								136.3 = 8.0		5.3		
								Base on		6.0		
								Page 37 col. B.		5.0		
										5.8		
										5.2		

~~No. of Univ. Water Del.~~

~~Net Alloc. of Wash. Water Del.~~

Holes Center.

(2.4 x 2.7)
(7.9 x 2.9)
(2.5 x 7.8)

210.1 = 17.5
17.5 x 77.2

= 1351.0 ✓

Base Meas.
1273.8
Page 37

Top Meas.

136.3 = 8.0
17 80 x 85 = 680.0

Base on
Page 37 col. B.

71.0

71.0
5.4
5.4
5.4
5.5
6.0

48.0
6.3
6.2
5.8
5.2
6.8
7.3
5.2
5.0
5.3

Blowoff
Lined in
Water Dev.

11.1 x 11.5 = 127.65
- 3.8
123.85
123.9

$\frac{55.7}{5} = 11.1$

Water
Dev.

142.0
5.5
4.9
4.9
7.8
8.0
9.0
9.9
11.6
13.8
15.8
16.0
17.6
19.1
21.4
21.0
16.7
15.0
15.1
15.0
13.4
13.2
13.5
11.2
8.4

327.1 ✓

$\frac{327.1}{2.7} = 121.1$

12.1 x 144 = 1742.4

Topiramine Base 9/5/8 page 38

X

X

30 Orange

239

7.6
6.0
5.0
5.0
5.2
4.8
4.9
4.8
5.5
6.5
4.7
4.7
4.9
5.2
5.1
4.9
5.0
5.0
4.7
4.8
4.9
4.9
4.9

5.0
5.1
4.9
4.9
4.9
5.0
5.1
5.1
5.0
5.1
5.2
5.1
5.1
4.9
5.0
4.9
4.8
5.0

Water
Dev.

X (8)

73.0
7.7
7.5
13.5
12.4
11.2
10.0
8.4
8.2
8.2
8.2
5.7
4.9
4.8
4.9
5.4
5.8
6.0
132.8 ✓

to use 32^{mg}

$\frac{132.8}{17} = 7.8$

7.8 x 73 = 569.4
Added on page 38 Col. 11.

45

X

EL Iowa to web 1760.

Patches	Patches
Iowa St.	Iowa
1.9 x 2.8	5.2
	.8
1.9 x 1.6	3.0
	5.7
1.7 x 1.1	3.3
	0.0
.8 x .6	13.8 ✓
2.6 x 1.7	
8.0 x 0.4	
17.8	
11.0	
11.2	
12.0	
12.7	
12.1	
7.8	

$$\frac{13.8}{3} = 4.6$$
~~$$2.8 \times 5.2 = 14.6$$~~

4.0	3.9	5.2		
2.8	4.0	5.2		
3.2	4.3	5.1		
216.0	4.6	3.9		
3.0	4.9	4.5		
4.0 x 3.0	5.0	4.5		
= 12.0 ✓	5.5	4.2		
	6.1	4.5		
3.5	7.0	4.5		
2.6	4.5	3.7		
2.4	4.5	242.7 ✓		
15.0	4.2	4.7		
2.5	4.3	4.6		
2.5 x 3.5	4.2	4.7		
= 8.7 ✓	4.0	4.8		
	4.6	5.0		
3.7	4.7	5.2		
3.3	4.6	5.1		
3.4	4.3	5.2		
6.7	4.4	5.9		
3.35	4.4	5.0		
135 x 27 =	4.2	4.9		
12.4 ✓	4.3	4.8		
	3.9	5.7		
4.5 x 2.7	3.9	5.7		
= 6.7 ✓				

Release 3¹¹ 12
 Carbon 7/14/50
 Patch on Lincoln 33.9 to Alley West North side
 208 x 2.67
 55.36
 235.4
 Carbon Boundary
 91.4 x 2.67
 244.0
 1106.4
 242.7 = 4.7
 52

$$\frac{77.7}{17} = 4.6$$

①

$$4.6 \times 6.9 = 31.74$$

②

$$\frac{36.2}{13} = 2.8$$

③ $2.8 \times 44.6 = 124.88$

$$68.5 = 9.8$$

④ Used Base measurement for topping page 36.

$$127.8 = 15.0$$

⑤ Skin Patch $\frac{532.5}{2} = 266.3$

~~X~~

$$\frac{35.8}{6} = 6.0$$

⑥

$6.0 \times 21.4 = 128.4$
Used base measurement page 36, Col. 6

$$\frac{37.7}{6} = 6.3$$

⑦

Used Base Measurement page 36, Col. 7.

Patch N side
Lincoln at
Alley w. of Wash.
69.0
3.5
4.1
4.5
5.2
6.1
7.0
6.4
5.7
5.6
5.3
4.2
3.7
3.4
3.0
3.4
3.4
3.2
77.7

Patch N side
Lincoln W of
Wash. X

44.6
2.3
2.6
2.5
2.9
3.2
3.0
3.0
2.6
3.0
3.0
2.7
2.4
36.2

Patch on
Cherokee

19.5
2.0
5.6
10.0
~~10.3~~
~~8.0~~
~~13.0~~
19.6
68.5
Top Meas. 12.3

Patch on
Cherokee

35.5
2.6
7.4
14.5
15.7
20.4
20.3
21.0
21.0
12.2
12.3
12.8
17.6
177.8
Top Meas.

Patch on
10th

21.4
5.3
8.0
6.5
5.5
5.3
5.2
35.8

Patch on
Marlborough

10.0
4.3
6.3
6.8
7.9
7.4
5.0
37.7

50

57

69

Pavement replaced in Euclid
at Wightman.

$$\frac{42.8 + 38.5}{2} \times 9 = 365.85$$

$$21.5 \times 7.4 = 159.10$$

$$3.4 \times 7.5 = 16.65$$

$$541.60 +$$

$$230.50 +$$

$$311.1$$

contract

Diff.

Pavement replaced E of Euclid
at Lantana

33.5

10.6

8.1

5.6

5.1

6.2

7.4

9.4

11.3

12.5

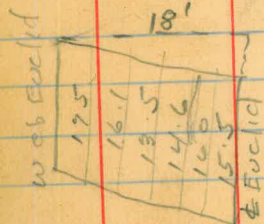
76.2

$$\begin{array}{r} 284.7 + \\ 130.4 + \\ \hline 154.3 \\ \text{Contract} = 130.4 \\ 8.5 \times 33.5 = \\ \hline 76.2 - 8.5 \\ \hline 9 \end{array}$$

Walk, gutter & curb replaced
on Lantana, Euclid.

Measured 9/5/30

855+35	conc gutter	$3.5 \times 20.5 =$	71.7	pavement	X
	curb	17 lin ft	=	47.0	✓
	Sidewalk	$5 \times 20.8 =$	104.0		✓
860+53	gutter	$3.5 \times 82 =$	287.0		✓
865+00	curb	15 lin ft	=	40.0	X
865+00- 868+20	Sidewalk		1553.0		X
	curb	12 lin ft	=	32.0	✓
	walk on return		123.4		X
866+75	3 x 3 walks		9.0		X
	total		2267.1		1717.4



Pavement replaced West of Euclid at
Lantana.

17.5

16.1

13.5

14.6

16.0

15.5

Average $15.5 \times 18 = 279.0$ X
Contract 130.4 X
Diff 148.6

Check of Pavement Removed
8/18/30 Loudon.

61

Sq. ft.

47 th st to swift Ave (inc.)	7747.35
S.L. of Univ Ave to E.L.	
Boundary 19' omitted at Univ Ave	5245.97
S.L. of Orange Ave to W.L.	
32 nd st.	1602.62
E.L. of Iowa St to W. curb of	
Idaho 9' omitted at 30 th	10562.31
Lantana to W.L. of Euclid	
Including sidewalk on Euclid.	2156.71
	27,315

284.7
279.0
541.6
1105.3

Pavement removed. (Contract Cumulative)

Sq. ft.	Sq. ft.	Sq. ft.	1 in. ft. curb
5" Asphalt.	6" Conc.	6" Conc.	8" x 10" x 16"
Highland 313.95	at Wightman Euclid 230.49	Euclid = Wightman 6 ✓ x	
45th 289.80	Euclid Lantana 260.82	Euclid 6 ✓ x	
Chammonc 289.80	491.31	Lantana 13 ✓ x	
46th 289.80	425/30	25	125/30
Menlo 289.80	Central 386.40 ✓		
47th 289.80	5/25/30	Boundary → 80.0	0/25/30
1758.15			
4/25/30	4" Conc	Web Idaho → 50	
Menlo 289.80	2" Asphalt sur	5" Asp. Pavemnt	
46th 289.80	Univ 349.58	36th ✓ 15.45 60 386.40 ✓	
Chammonc 289.80	Orange Bound 32nd 1602.60	Wilson ✓ 386.40 ✓	
45th 314.00	Iowa-Kansas 1793.30	35th ✓ 386.40 ✓	
Highland 314.00	3745.48	6/25/30	
44th 289.80	B.O. Mt. Drain 1st → 16.70		
Pavement 289.80	Kas-Idaho → 985.18		
43rd 386.40			
Van Dyke 386.40	Summary from this sheet		
42nd 386.40	Lantana Drive Curb 13.0" = 34.71 pavement.		
Marlborough 386.40	Sidewalk 37.8" = 37.80		
41st 386.40	Gutter 118.69 = 118.69		
5/25/30 2511.60	= 186.20 pavement		
40th 386.40			
39th 386.40			
37th 386.40			
Cherokee 386.40			
1545.60			

4" Sidewalk	5" Conc. Gutter
39 ft	
Euclid 67.6 ✓ x	(855+80) Lantana 30.57 ✓ x
Between Lantana & Wightman 1560.0 ✓ x	(860+53) Lantana 83.12 ✓ x
Lantana 37.8 ✓ x	11369 ✓ x
16651.4	
4/25/30	4/25/30
Menlo 289.80	
46th 289.80	
Chammonc 289.80	
45th 314.00	
Highland 314.00	
44th 289.80	
Pavement 289.80	
43rd 386.40	
Van Dyke 386.40	
42nd 386.40	
Marlborough 386.40	
41st 386.40	
40th 386.40	
39th 386.40	
37th 386.40	
Cherokee 386.40	

20.00 ← Drain from B.O. Lincoln W. of 33rd

Kas-Idaho 2356.30

16.7 ← B.O. Drain 1st St.

66

Bellhole Yardage *(Contract Quantities)*

	Yd.	Ht of Bell hole	Ht of hole	Yd.
L868+54 ⁴⁶	3.93	5.6	9.0	2.13 ✓
855+49 ²⁵ Valve	11.00	7.9	8.7	2.08 ✓
855+12 ²⁵	4.67	6.5	8.6	2.07 ✓
	1.92 ✓	7.7	9.0	2.13 ✓
36" C.I.P.	1.84 ✓	7.2	9.0	2.13 ✓
	2.05 ✓	8.5	9.0	2.13 ✓
	2.05 ✓	8.5	9.0	2.13 ✓
	2.07 ✓	8.6	9.0	2.13 ✓
	2.09 ✓	8.8	9.0	2.13 ✓
	2.08 ✓	8.7	9.0	2.13 ✓
	2.07 ✓	8.6	8.7	2.08 ✓
	2.09 ✓	8.8	9.0	2.13 ✓
	2.11 ✓	8.9	9.0	2.13 ✓
	2.07 ✓	8.6	9.0	2.13 ✓
	2.08 ✓	8.7	9.0	2.13 ✓
	2.07 ✓	8.6	9.0	2.13 ✓
	2.07 ✓	8.6	9.0	2.13 ✓
	2.07 ✓	8.6	9.0	2.13 ✓
	2.07 ✓	8.6	8.3	2.01 ✓
	2.07 ✓	8.6	9.0	2.13 ✓
	2.08 ✓	8.7	9.0	2.13 ✓
	2.07 ✓	8.6	9.0	2.13 ✓
	2.08 ✓	8.7	9.0	2.13 ✓
	2.08 ✓	8.7	9.0	2.13 ✓
	2.08 ✓	8.9	9.0	2.13 ✓
	2.08 ✓	8.7	9.0	2.13 ✓
	61.85			114.81

$$V = 18.75 + (4.26 \times h) \text{ cuft.}$$

$$V \text{ for 1 foot ht. above grade} = .16 \text{ cuft.} \quad \checkmark$$

$$V \text{ for part below grade} = .69 \quad \checkmark$$

ht. above grade	Yd.
1	.16
4	.64
5	.80
6	.96
7	1.12
8	1.28
9	1.44
10	1.60
11	1.76
12	1.92

Ht of Hole	Yd.	Ht of Hole	Yd.
9.0	114.81 ✓	8.6	138.14
9.0	2.13 ✓	8.5	2.06
9.0	2.13 ✓	8.3	2.01
9.0	2.13 ✓		8.70
9.0	2.13 ✓		6.64
9.0	2.13 ✓		159.60
9.0	2.13 ✓		162.63
9.0	2.13 ✓		
8.7	2.08 ✓		
8.7	2.08 ✓		
	138.14		

863+12
Bend.
855+53⁴⁵
Bend.
860+53²¹

Bell holes

Band.	Av. Ht.	Yd.	
865+00 ⁸³		7.95	
16 holes to 865+00 ⁸³	7.7	30.72 ✓	
28 holes to 868+50 ²⁶	5.5	43.96 ✓	
22 holes to E.L. 47 th	6.0	36.30 38.28	
28 holes to E.L. Mead	6.3	47.32 ✓	
28 holes to E.L. 26 th	8.1	55.44 ✓	
29 holes to E.L. Cham.	10.3	65.52 ✓	
28 holes to E.L. 45 th	10.8	67.76 ✓	
28 holes to E.L. Highland	10.5	66.36 ✓	
28 holes to E.L. 24 th	8.0	55.16 ✓	
28 holes to E.L. Fairmont	8.0	55.16 ✓	
		<u>533.63</u>	531.65
			5125/30
28 holes to E.L. 43 rd	9.5	61.88 ✓	
31 holes to E.L. Van Hook	7.4	57.97 ✓	
32 holes to E.L. 42 nd	6.5	55.36 ✓	
31 holes to E.L. Marlborough	8.0	61.07 ✓	
30 holes to E.L. 41 st	6.5	51.90 ✓	
11' long. special.		6.6	
Special 8' long.		5.3	
31 holes to E.L. Central	9.3	62.62 ✓	
32 holes to E.L. 40 th	8.6	66.24 ✓	
32 holes to E.L. 39 th	8.9	67.52 ✓	
31 holes to E.L. 38 th	7.3	57.66 ✓	
Special 10' long.	6.0	5.40	
		<u>559.52</u> ✓	

Bell holes

	Av. Ht.		
31 holes to E.L. 37 th	6.6	54.25 ✓	
32 holes to E.L. Chevrolet	7.0	57.92 ✓	
31 holes to E.L. 36 th	7.1	56.73 ✓	
32 holes to E.L. Wilson	7.1	58.56 ✓	
36 holes to E.L. 35 th	7.9	62.40 62.72	
31 holes to E.L. Swift	6.9	55.47 55.80	
27 holes to E.L. Wash special	5.8	46.98 ✓	
10' long	8.0	4.60	
Special 10' long	8.0	8.50	
35 holes to E.L. 34 th	7.3	65.10 ✓	
22 holes to E.L. 33 rd	7.9	58.52 ✓	
35 holes to E.L. Lincoln	7.0	141.92 ✓	
23 holes to E.L. Lincoln special 7' long.	7.0	141.52 ✓	
8.5	5.00		
14 holes to E.L. Lincoln Board	7.3	35.28 ✓	
63 holes to E.L. Bilk.	8.6	178.92 ✓	
29 holes to E.L. Orange	6.9	69.89 ✓	
30 holes to E.L. Board & Howard	6.7	56.88 ✓	
28 holes to E.L. Iowa	6.6	65.52 ✓	
Band 9324+58 ⁸⁴		10.00	
962+07 ⁹²		9.80	
966+38 ⁹⁴		7.40	
971+13 ⁰³		13.40	
985+32 ⁷²		14.00	
		<u>1137.29</u>	
		1136.66 ✓	

559.52
1137.29
1696.81 6/25/30

Tunnel under tracks Div 254d.

Bell holes

	Av Ht.	Yd.	
31 Bell holes			
to EL. Illinois	6.4	70.99 ✓	
32 Bells to			
EL Ohio	6.2	71.68 ✓	
32 Bells to			
E.L. 30 th	7.6	82.88 ✓	
31 - Bells to			
EL. Kansas	6.2	69.44 ✓	
32 - Bells to			
EL Utah St.	5.9	69.12 ✓	
31 - Bells to			
EL Idaho	8.5	87.42 ✓	
8 holes to			
Lake side line	10.7	26.96	
Special 13' long	12.0	14.76	
Special 13' long	11.0	14.89	
4 holes to	7.0	9.76	
		<u>517.90</u>	

7/25/30

Total

2908.36 Cu

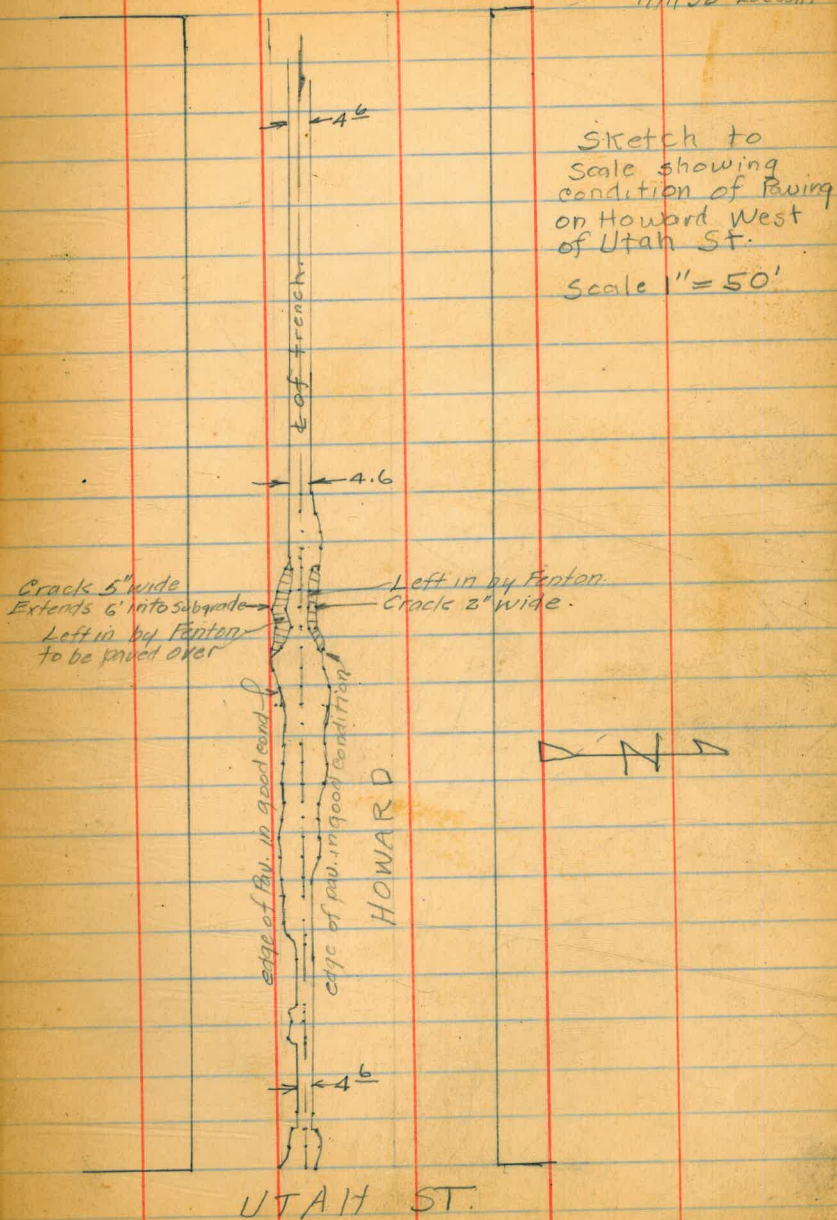
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(T) W. M. Sept. 30-1930

IDAHO ST

69

9/11/30 Loudon.



72

75

76

78

Yardage for Blow-offs,
Air Valves - Valve chambers.

Wrightman & Wabash. 68

Valve box Lanfara	<u>11.0 yd</u>	1	
Valve box Wabash	<u>13.1 yd</u>	1	
Valve box At Reservoir	<u>86.7 yd</u>		(12 x 19.5 x 140)
#1	<u>14.3 yd</u>		estimator 9/25/50
#2	<u>15.4</u>	"	
#3	<u>12.2</u>	"	(37.7 sq ft Pav Remove 31.1 replace)
#4	<u>8.6</u>	"	
#5	<u>9.9</u>	"	
#6	<u>13.0</u>	"	(37.7 sq ft Pav Remove 31.4 replace)
#7	<u>10.1</u>	"	(37.7 " " " " 31.4 " " " ")

Air Valves.

AV #1	<u>3 yd</u>	1
AV #2	<u>3.1 yd</u>	1
VA #3	<u>2.7</u>	1

Anchor Block at reservoir 2.4 yd ✓

Special Draw for B.O. at Wabash 55.3 yd - No Sched



DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 1/2 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body

IMPROVED TABLES

AND

INFORMATION

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections. Degree of curve with a given I may be found by dividing tangent (or external), opposite I by given tangent (or external). The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

40⁰⁰

Ash. Payment. SE Cor.
4.8

10 + 16⁶" inside
12 x 18' - 8" outside

93273
90150
3123

12/10
830

1.67
12
20.04



fac. Greene x Outfit 2⁵⁰ 2 hr.

13
156
52 4.
27 | 104
108