

PIPE SIZE INCHES	DIAMETER		WALL THICKNESS INCHES	CIRCUMFERENCE		TRANSVERSE AREA			LENGTH PER SQ. FOOT OF EXTERNAL SURFACE FEET	VOLUME PER FOOT OF PIPE CU. FT.		GALLONS PER FOOT OF PIPE FOOT OF PIPE	WEIGHT PER FOOT PLAIN ENDS POUNDS	FEET PER TON
	EXTERNAL INCHES	INTERNAL INCHES		EXTERNAL INCHES	INTERNAL INCHES	EXTERNAL SQ. INCHES	INTERNAL SQ. INCHES	METAL SQ. INCHES		EXTERNAL CU. FT.	INTERNAL CU. FT.			
3/4	1.050	.824	.113	3.299	2.589	.866	.533	.333	3.638	.0060	.0037	.0277	1.131	1268.6
	1.030	.742	.154	3.299	2.331	.866	.432	.433	3.638	.0060	.0030	.0225	1.474	1357.1
1	1.315	1.049	.133	4.131	3.296	1.358	.864	.494	2.905	.0094	.0060	.0449	1.679	1191.2
	1.315	.957	.179	4.131	3.007	1.358	.719	.639	2.905	.0094	.0050	.0374	2.172	920.9
1 1/4	1.660	1.380	.140	5.215	4.335	2.164	1.496	.669	2.301	.0150	.0104	.0777	2.271	880.0
	1.660	1.278	.191	5.215	4.015	2.164	1.283	.881	2.301	.0150	.0089	.0666	2.997	667.4
1 1/2	1.900	1.610	.145	5.969	5.058	2.835	2.036	.799	2.010	.0197	.0141	.1058	2.718	735.9
	1.900	1.500	.200	5.969	4.712	2.835	1.767	1.068	2.010	.0197	.0123	.0913	3.631	550.8
2	2.375	2.067	.154	7.461	6.494	4.430	3.356	1.075	1.608	.0308	.0233	.1743	3.653	547.5
	2.375	1.939	.218	7.461	6.092	4.430	2.953	1.477	1.608	.0308	.0205	.1534	5.022	398.2
3	3.500	3.188	.156	10.996	10.015	9.621	7.982	1.639	1.091	.0668	.0554	.4147	5.571	359.0
	3.500	3.068	.216	10.996	9.638	9.621	7.393	2.228	1.091	.0668	.0513	.3840	7.576	284.0
4	4.500	4.188	.156	14.137	13.157	15.904	13.775	2.129	.849	.1104	.0957	.7156	7.238	276.3
	4.500	4.124	.188	14.137	12.958	15.904	13.358	2.547	.849	.1104	.0925	.6939	8.658	231.0
	4.500	4.026	.237	14.137	12.648	15.904	12.730	3.174	.849	.1104	.0884	.6613	10.790	185.3
6	6.625	6.249	.188	20.813	19.632	34.472	30.670	3.802	.577	.2394	.2130	1.5932	12.925	154.7
	6.625	6.249	.188	27.096	25.915	58.426	53.443	4.983	.443	.4057	.3711	2.7763	16.940	116.1
8	8.625	8.249	.188	27.096	25.915	58.426	53.443	4.983	.443	.4057	.3711	2.7763	16.940	116.1
	8.625	8.187	.219	27.096	25.720	58.426	52.643	5.783	.443	.4057	.3656	2.7347	19.661	101.7
10	10.750	10.374	.188	33.772	32.591	90.763	84.524	6.238	.355	.6303	.5870	4.3909	21.207	94.3
	10.750	10.312	.219	33.772	32.396	90.763	83.517	7.245	.355	.6303	.5800	4.3386	24.632	81.2
	10.750	10.250	.250	33.772	32.201	90.763	82.516	8.247	.355	.6303	.5730	4.2865	28.035	71.3
12	12.750	12.312	.219	40.055	38.679	127.676	119.055	8.621	.300	.8866	.8268	6.1847	29.309	68.2
	12.750	12.250	.250	40.055	38.405	127.676	117.859	9.817	.300	.8866	.8185	6.1225	33.375	59.9
	12.750	12.188	.281	40.055	38.290	127.676	116.669	11.007	.300	.8866	.8102	6.0602	37.421	53.4
	12.750	12.126	.312	40.055	38.095	127.676	115.485	12.191	.300	.8866	.8020	5.9992	41.446	48.3
	12.750	11.750	.500	40.055	36.914	127.676	108.434	19.242	.300	.8866	.7530	5.6329	65.416	30.6
14	14.000	13.500	.250	43.982	42.412	153.938	143.139	10.799	.273	1.0690	.9940	7.4358	36.713	54.5
	14.000	13.250	.375	43.982	41.626	153.938	137.886	16.052	.273	1.0690	.9575	7.1629	54.569	36.7
16	16.000	15.500	.250	50.265	48.695	201.062	188.692	12.370	.239	1.3963	1.3104	9.8022	42.053	47.6
	16.000	15.438	.281	50.265	48.500	201.062	187.185	13.877	.239	1.3963	1.2999	9.7239	47.175	42.4
	16.000	15.376	.312	50.265	48.305	201.062	185.687	15.377	.239	1.3963	1.2895	9.6460	52.276	38.3
	16.000	15.250	.375	50.265	47.909	201.062	182.654	18.408	.239	1.3963	1.2684	9.4685	62.979	32.0

PIPE SPECIFICATION

3/4"- 2" incl. API-5L Class I with Class II Physicals.
 4" API-5L Grade B seamless or electric resistance weld.
 6"-16" incl. API-5L Grade X42 electric resistance weld.

*4" - .156 wall available in API - 5L Class I with Class II Physicals for Distribution Service

2	10-26-67	Revised as per Suggestion #22 1728	J.L.L.				
1	6-12-67	Added 4" API-5L Class I with Class II Physicals	J.L.L.	3	1-17-69	SUPERSEDED	J.L.L.

CHG.	DATE	DESCRIPTION	APPRD.	CHG.	DATE	DESCRIPTION	APPRD.
APPROVED <i>J.L.L.</i> <i>11-24-59</i>							

BY DEPT. OF G.O.	GAS STANDARD	SUPERSEDES 281776
DR. O.C. TR.	GAS LINE PIPE DATA	SUPERSEDED BY 283616
CH.		SHEET NO. 1 OF 2 SHEETS
O. K.	PACIFIC GAS AND ELECTRIC COMPANY	DRAWING NUMBER
DATE 11-24-59.	SAN FRANCISCO, CAL.	282690
SCALE		CHANGE 3

A-10-

PIPE SIZE	DIAMETER		WALL THICKNESS	CIRCUMFERENCE		TRANSVERSE		AREA METAL	LENGTH PER SQ. FOOT OF EXTERNAL SURFACE	VOLUME PER FOOT OF PIPE		GALLONS PER FOOT OF PIPE	WEIGHT PER FOOT PLAIN ENDS POUNDS	FEET PER TON
	EXTERNAL INCHES	INTERNAL INCHES		EXTERNAL INCHES	INTERNAL INCHES	EXTERNAL SQ. INCHES	INTERNAL SQ. INCHES			EXTERNAL CU. FT.	INTERNAL CU. FT.			
18	18.000	17.500	.250	56.549	54.978	254.469	240.528	13.941	.212	1.7671	1.6703	12.4950	47.393	42.2
	18.000	17.438	.281	56.549	54.783	254.469	238.827	15.642	.212	1.7671	1.6585	12.4066	53.177	37.6
20	20.000	19.500	.250	62.832	61.261	314.159	298.648	15.512	.191	2.1817	2.0739	15.3142	52.733	37.9
	20.000	19.438	.281	62.832	61.066	314.159	296.752	17.408	.191	2.1817	2.0608	15.4157	50.179	33.8
	20.000	19.376	.312	62.832	60.872	314.159	294.862	19.298	.191	2.1817	2.0476	15.3175	25.605	30.5
	20.000	19.250	.375	62.832	60.476	314.159	291.039	23.120	.191	2.1817	2.0211	15.1189	78.599	25.4
22	22.000	21.376	.312	69.115	67.155	380.133	358.875	21.258	.174	2.6398	2.4922	18.6428	72.269	27.7
	22.000	21.250	.375	69.115	66.759	380.133	354.656	25.476	.174	2.6398	2.4629	18.4237	86.609	23.1
24	24.000	23.438	.281	75.398	73.633	452.389	431.451	20.939	.159	3.1416	2.9962	22.4130	71.184	28.1
	24.000	23.376	.312	75.398	73.438	452.389	429.171	23.218	.159	3.1416	2.9604	22.2946	78.933	25.3
	24.000	23.312	.344	75.398	73.237	452.389	426.824	25.565	.159	3.1416	2.9241	22.1727	86.912	23.0
	24.000	23.250	.375	75.398	73.042	452.389	424.557	27.833	.159	3.1416	2.8883	22.0549	94.620	21.1
	24.000	23.124	.438	75.398	72.646	452.389	419.968	32.422	.159	3.1416	2.8164	21.8165	110.221	18.1
26	26.000	25.376	.312	81.681	79.721	530.929	505.750	25.179	.147	3.6870	3.5122	26.2727	85.598	23.4
	26.000	25.250	.375	81.681	79.325	530.929	500.740	30.189	.147	3.6870	3.4774	26.0125	102.630	19.5
30	30.000	29.500	.250	94.248	92.677	706.858	683.493	23.166	.127	4.9087	4.7465	35.5061	79.434	25.2
	30.000	29.376	.312	94.248	92.287	706.858	677.759	29.099	.127	4.9087	4.7067	35.2082	98.527	20.2
	30.000	29.250	.375	94.248	91.892	706.858	671.957	34.901	.127	4.9087	4.6664	34.9069	118.650	16.9
	30.000	29.000	.500	94.248	91.106	706.858	660.520	46.338	.127	4.9087	4.5869	34.3127	157.532	12.7
34	34.000	33.500	.250	106.814	105.243	907.920	881.413	26.507	.112	6.3050	6.1209	45.7877	90.114	22.2
	34.000	33.376	.312	106.814	104.854	907.920	874.900	33.020	.112	6.3050	6.0757	45.4494	112.255	17.8
	34.000	33.312	.344	106.814	104.653	907.920	871.548	36.372	.112	6.3050	6.0524	45.2752	123.651	16.2
	34.000	33.250	.375	106.814	104.458	907.920	868.307	39.814	.112	6.3050	6.0299	44.1068	135.670	14.9
	34.000	33.188	.406	106.814	104.263	907.920	865.072	42.849	.112	6.3050	6.0074	44.9388	145.668	13.7
	34.000	33.124	.438	106.814	104.062	907.920	861.738	46.182	.112	6.3050	5.9843	44.7656	157.000	12.7
	34.000	33.000	.500	106.814	103.673	907.920	855.299	52.622	.112	6.3050	5.9396	44.4311	178.893	11.2
	34.000	32.876	.562	106.814	103.278	907.920	848.860	59.062	.112	6.3050	5.8949	44.0964	200.806	9.2
36	36.000	35.376	.312	113.097	111.137	1017.876	982.895	34.981	.106	7.0686	6.8257	51.0595	118.920	16.8
	36.000	35.312	.344	113.097	110.936	1017.876	979.342	38.534	.106	7.0686	6.8010	50.8749	130.999	15.3
	36.000	35.250	.375	113.097	110.741	1017.876	975.906	41.970	.106	7.0686	6.7771	50.6964	142.680	14.0
	36.000	35.188	.406	113.097	110.546	1017.876	972.476	45.400	.106	7.0686	6.7533	50.5182	154.341	13.0
	36.000	35.124	.438	113.097	110.345	1017.876	968.942	48.934	.106	7.0686	6.7288	50.3347	166.356	12.0
	36.000	35.062	.469	113.097	110.151	1017.876	965.524	52.352	.106	7.0686	6.7050	50.1571	177.975	11.2
	36.000	35.000	.500	113.097	109.956	1017.876	962.113	55.763	.106	7.0686	6.6813	49.9799	189.573	10.6
	36.000	34.876	.562	113.097	109.561	1017.876	955.674	62.203	.106	7.0686	6.6366	49.6452	211.586	8.2

PIPE SPECIFICATION

18"-36" Fusion weld. Refer to Gas System Design Department

2	1-17-67	SUPERSEDED												
1	10-67	Revised as per Suggestion # 22-1726												

CHG.	DATE	DESCRIPTION	APPR.	CHG.	DATE	DESCRIPTION	APPR.
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APPROVED J.L.L. <i>J.L.L.</i> 2-7-68 1968		GAS STANDARD		SUPERSEDES 281776	
BY DEPT. OF G.O.		GAS LINE PIPE DATA		SUPERSEDED BY 283616	
DR. O.C. TR.		PACIFIC GAS AND ELECTRIC COMPANY		SHEET NO. 2 OF 2 SHEETS	
CH. <i>W.C.P.</i>		SAN FRANCISCO, CAL.		DRAWING NUMBER	
O.K.				282690	
DATE 11-24-59		SCALE		CHANGE 2	