62-6218 (REV. 1/85)

PGandE
FOR INTRA-COMPANY USES

From Region or Department: VICE PRESIDENT - GAS OPERATIONS
To Region or Department:
FILE NO.: 410.21-1
RE: LETTER OF
SUBJECT: Revision of Standard Practice 410.21-1

January 16, 1985

MANAGERS, GAS OPERATIONS
REGIONAL MANAGERS:

The attached is revised Standard Practice 410.21-1. Pages 21 through 30 have been added to the Standard Practice Supplement and now include procedures for mapping special facilities. The Commercial, Distribution, and Planning Departments collaborated on these changes. Drawing 182358, sheets 1, 2, and 3, Symbol Requirments Operating Maps and Diagrams, have been brought up to date and are included. In the process of updating the supplement, the Standard Practice was rewritten according to Standard Practice No. 201-1.

All holders of the Gas Mappers Manual will receive a copy of Standard Practice 410.21-1 with revision 22, which will be issued by March 1, 1985.

Additional copies of this Standard Practice may be obtained from Gas Operations, 77 Beale Street, San Francisco (ext. 1604).

Howard M. McKinley

H. M. McKINLEY

ICOdom(3515):ala

Attachments

cc: EBLangley, Jr.
Division Managers
District Managers
Regional Gas Superintendents
Division Gas Superintendents
District Gas Superintendents
Regional Gas Engineers
Division Gas Engineers
District Gas Engineers
Director Procedures Analysis

62-7501 REV. 2/64 Pacific Gas and Electric Company

STANDARD PRACTICE

STANDARD PRACTICE NO. 410.21-1

ISSUING DEPARTMENT GAS SYSTEM PLANNING — PAGE NO 1 (of) 1 EFFECTIVE 3/1/85

CORPORATE OFFICER VICE PRESIDENT - GAS OPERATIONS — REPLACING PAGE NO 1 (of) 1 EFFECTIVE 4/1/77

SUBJECT:

MAPPING STANDARDS, GAS DEPARTMENT 1" = 100' PLAT SHEETS

POLICY

1. It is the Company policy to create, maintain, and reevaluate as needed a set of legible maps designed to satisfy the requirements of the Company.

2. Maps are to be made in the California Coordinate System according to controls, symbols, and drafting details designated by Gas Operations.

PURPOSE

To establish basic minimal standards for mapping Company gas facilities.

REFERENCE: S.P. 468-2 "Gas Service Record Procedure"

RESPONSIBILITY

It is the responsibility of the Division Gas Superintendent to comply with the standards for preparing and maintaining the maps.

SUPPLEMENT

Detailed Mapping Standards are a supplement of this Standard Practice and should be filed in the Gas Mappers Manual, Section 1, Mapping Standards.

APPROVED BY

I. C. Odom
Manager, Gas System Planning

H. M. McKinley
Vice President - Gas Operations

*Paragraph Revised (Portions Underlined)
**Paragraph Added

I. PLAT SHEETS

1. General. The following instructions shall apply to the making and maintaining of gas distribution maps for the purpose of recording data necessary for mapping and distribution engineering procedures.

2. Coverage and Control. Coverage shall be by 1" = 100' scale plat sheets and 1" = 500' scale distribution maps. They shall be drawn by the division to show the gas system within the division.

   a. The 1" = 100' scale plat sheets, drawn in the California Coordinate System, shall be the same size (23" x 32½) and bear the same coordinate values in a common grid with those of other departments. Coordinate values shall be shown on top right and bottom left of each plat. See Exhibit A. The x and y coordinate values for the map system are those established from the x and y coordinate values given on U.S.G.S. topographic maps. When using coordinate values, show the x coordinate value (horizontal 2,000,000) first and the y coordinate value (vertical 200,000) second. The zone number should also be shown.

   b. Horizontal control of the 1" = 100' scale plat sheets and related 1" = 500' scale distribution maps shall be by 1:24,000 U.S.G.S. topographic maps where available or by 1:62,500. A copy of Bulletin No. 79-64, "Topographic Mapping in California", may be purchased from Printing Division, Document Section, Sacramento, California 95802, or paragraph 8b can be used for reference and ordering maps.

3. Material of Originals. Plats shall be drawn or traced on "Mylar" polyester film tracings available on order from Emeryville, as noted on Exhibit A.

4. Ink Work on Mylar Film. New tracing: Clean the film thoroughly with Bestine Solvent & Thinner, Teledyne Post #385C - 170 Mylar cleaner, K & E Herculene Powder 580692or ABC Dry Clean Pad K & E 580660. Fingermarks or other surface contamination may interfere with ink take or adhesion.

   a. All culture and topographic features shall be inked on the back side of the tracing and all plant data and lettering shall be inked on the front side.

   *b. Kohinoor 3072F, 3080F or Pelican 17 ink shall be used.

   c. Any type of ruling pen or mechanical lettering guide may be used, provided line widths and the size and legibility of lettering are in close approximation to those shown throughout the instructions. Drafting instruments with carboloy points are recommended for matte surfaces.

   *d. If map is drawn in pencil prior to inking, use light lines of "plastic lead" designed for mylar (Staedtler K-1 Mars lead, Staedtler K-1 Mars pencil, Dixon FTR11 pencil, Dixon FTR22 pencil) to avoid graphite buildup.

   *e. If the sheet has inking already on it, clean the film thoroughly to prepare surface for ink take.

I. Plat Sheets

f. Erasing Small Areas. Use a moistened "Q-tip" or soft eraser such as "Koh-I-Lar" 286, "Tad" vinyl K & E 580600, "Race Kleen" vinyl K & E 580604, Eberhard Faber 521, A. W. Faber 1960 peel-off "Magic Rub" in pencil form or equivalent. A felt pen such as "Flo-Master" filled with water or solution may be used to moisten ink line before erasing.

g. Erasing Large Areas. For new lines, use a solution of ammonia and water, 20% clorox and water, Formula 409 or Leroy pen cleaning fluid. For old lines, let solution stand for 3 or 4 minutes and wipe off. Let film dry before inking. Erasing machine, Xacto knife or other abrasive methods will not be used.

5. Line Weight Conversion Table

LINE WIDTHS			EQUIVALENT PENS			
DIMENSIONS MM	DIMENSIONS INCHES	P.G.&E. STANDARD**	STAEDTLER MARS	RAPIDOGRAPH ACETOGRAPH	LEROY STANDARD	CASTELL TG(H)
0.10 MM	0.004"	000	MF 5X0 ● UF ● 4X0	●6X0 ●5X0		●000
0.20 MM	0.008"	00	● 0.1 000	●4X0	●4X0	●00
0.30 MM	0.012"	0	● 0.2 00	●3X0 ●00	●3X0 ●00	●0
0.40 MM	0.016"	1	● 0.3 0 ● 0.4 1	●0	●0	●1
0.50 MM	0.020"	2	● 0.5 2	●1	●1	●2
0.60 MM	0.024"	2-1/2	● 0.6 2-1/2	●2 ●2-1/2	●2	●2-1/2
0.80 MM	0.032"	3	● 0.8 3	●3	●3	●3
1.00 MM	0.039"	4	● 1.0 3-1/2		●4	●4
1.20 MM	0.047"	5	● 1.2 4	●4		●5
1.40 MM	0.055"	6	● 1.4 5		●5	●6
2.00 MM	0.079"	7	● 2.0 6	●6 ●7	●6	●7
2.50 MM	0.098"	8		●8	●8	
3.00 MM	0.118"	9		●9		
4.00 MM	0.158"	10		●10	●10	

Line Weight Conversion Table Continued

LINE WIDTHS			EQUIVALENT PENS			
DIMENSIONS MM	DIMENSIONS INCHES	P.G.&E. STANDARD**	KOH-I-NOOR RAPIDOMETRIC*	LEROY METRIC*	PELICAN GRAPHOS*	DIETZGEN WRICO
0.10 MM	0.004"	000	.13	.13	A0.1 A0.12	
0.20 MM	0.008"	00	.18	.18	A0.16 A0.2	
0.30 MM	0.012"	0	.25	.25	A0.25 A0.3	7T
0.40 MM	0.016"	1	.35	.35	A0.35 A0.4	7
0.50 MM	0.020"	2	.50	.50	A0.5	6
0.60 MM	0.024"	2-1/2	.70	.70	A0.6 A0.70	5
0.80 MM	0.032"	3			T0.8	4
1.00 MM	0.039"	4	1.00	1.00	T1.0	
1.20 MM	0.047"	5			T1.25	
1.40 MM	0.055"	6	1.40	1.40		3
2.00 MM	0.079"	7	2.00	2.00	T1.6	2
2.50 MM	0.098"	8			T2.5	
3.00 MM	0.118"	9				
4.00 MM	0.158"	10			T4.0	

**BASED ON THE NORTH AMERICAN STANDARD.
*SIZES QUOTED IN MM (EUROPEAN STANDARD).

I. Plat Sheets

6. Map Compilation. Plats shall be prepared by one of the following methods:

a. By Photographic Projection in Two Steps. First, the coordinates of the related 1" = 500' map are accurately laid out on 1:24,000 topographic maps precisely joined. Ink in borders with a thin line and circle corners. From this a 1:4 enlargement is made in one piece by the General Office, Reprographics Department, Rm. B-136, 245 Market Street, San Francisco. Use Form 62-3254, "Requisition for Reprographic Work" as follows:

(1) Photographic right reading

(2) Silver film

(3) Special Instructions - Enlarge the area shown with corners circled from 1" = 2000' to 1" = 500' (4 times) to 36.8" x 65"

Secondly, upon receipt of film enlargement, lightly ink in the coordinates of the 1" = 100' plats by dividing into eight equal parts across the top and 10 down the side. Add plat numbers in pencil. Outline the area to be blown up by applying colored or masking tape just outside the plat corners. Place requisition the same as above, except with special instructions: "Enlarge grid sections outlined in tape from 1" = 500' to 1" = 100' (5 times) to 23" x 32.5". Each section to be photographed separately." Silver film or KP5 paper may be used.

In tracing these film enlargements, use only the centerline of roads and streets for horizontal control and proceed to scale in block outlines and street widths in the same manner as in paragraph 6a.

b. Use of Kail Reflecting Projector, Pantograph or Drafting Machine should be minimumized. First preference should be given to the photographic projection method when enlarging or reducing maps to proper scale.

c. Duplicate Tracing. When the same area is being mapped by both departments, use the other department's 100' plat tracings, if available, before the plant data has been added, providing they are drawn in the California Coordinate System and bear proper coordinate values. Order a duplicate tracing, as listed below, from General Office Reprographics Department on Form 62-3254, Requisition for Reprographics Work.

(1) Photographic, reverse reading, Washoff film.

(2) Kohinoor Liquid Eraser #291, A 20% clorox & water solution or Formula 409 can be used for making corrections to washoff film.

I. Plat Sheets

(3) Use Kodagraph Eradicator KP 46508c or K & E 58-0246 erasing fluid set for making corrections to silver films (not wash off).

(4) Ink work on duplicate tracing same as in paragraph 4.

d. Trace Existing Plats. The other department's 100' plat tracings with plant data on them may be used, providing they are drawn in the California Coordinate System and bear coordinate values. Topographical and cultural features to be traced off directly on the reverse side of the tracing.

(1) Gas plats and maps shall be made available to other mapping departments on a reciprocal basis.

7. Title. Part of the title common to other departments is already imprinted on the top of the plat tracing. For additional lettering to complete the title, see Exhibit A.

a. At the division's option, the name of the city or town may be lettered in Wrico 290 under the plat number.

8. Numbering of Plats. To be on a system-wide basis according to the index maps prepared by Gas Operations. Index maps listed below show the number and coordinates of the 1" = 500' maps.

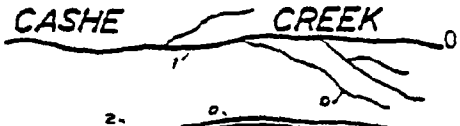
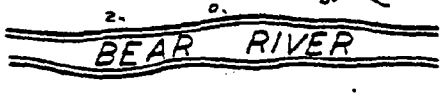
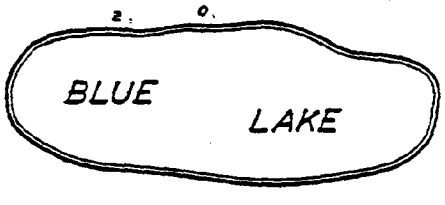
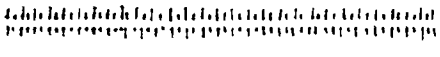
a. The 1" = 100' plat sheet number shall be the number of the 1" = 500' map together with its grid position on that map, for example, 2040-B2. See Drawing 083150, sheet 6, "Drafting Details for 1" = 500' Maps".

b. The following drawings show the index to 1" = 500' maps and U.S.G.S. topographic maps coverage for each division.

Division	Index to 500' Maps	U.S.G.S. Maps
Coast Valleys	384917,18	384967,68
Colgate	384908	384958
De Sabla	384906,07	384956,57
Drum	384909	384959
East Bay	384919	384969
Humboldt	384901,02	384951,52
North Bay	384913,14	384963,64
Sacramento	384910,11	384960,61
San Francisco	384912	384962
San Joaquin	384920,21,22,23	384970,71,72,73
" "	384924,25,26,27	384974,75,76,77
San Jose	384912	384962
Shasta	384904,05	384954,55
Stockton	384915,16	384965,66

9. Adjoining Map Number. The number shall be mechanically lettered outside the plotting area adjacent to the coordinate lines and should be shown only for those maps completed. See Exhibit A.

I. Plat Sheets

Feature	Symbol	PG&E Standard Line Weight	
Creeks or Sloughs		0 & 1	Identify with slant capitals using SCN 140 Wrico
Rivers (small)		0 & 2	Identify with slant capitals using SCN 140 Wrico
Rivers (large)		0 & 2	Identify with slant capitals using SCN 200 Wrico
Lakes, Bays, Reservoirs, etc.		0 & 2	When small, identify with slant capitals using SCN 140. When large, use SCN 200 Wrico
Levees		1	

LETTERING

13. Street and Road Names. Names shall be lettered approximately .1" above the property line and not less than .8" from intersecting street, where feasible, lettered in VCN 140 Wrico. Where space does not permit using this size letter, a smaller size may be used.

    a. Names may be inked in on the back side of the tracing at the division's option.

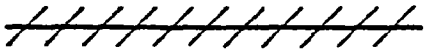
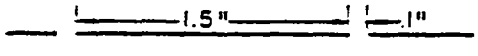
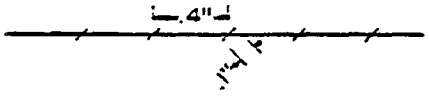
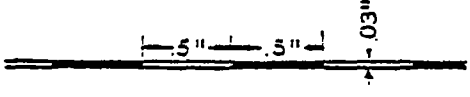
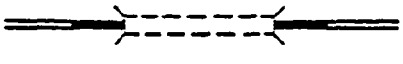
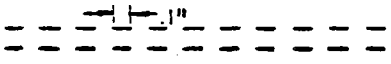
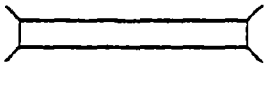
14. Highways. In cities and towns where highways are known by another name, the dedicated name shall be shown the same as in paragraph 15. The words "Interstate Hwy.", "U.S. Hwy.", or "State Hwy." with route number shall be shown in parenthesis following the dedicated name.

    a. Centerline of highways with identifiable highway stations to be shown only where they will be of help in plotting services and gas main. If needed, letter in freehand numerals .075" in height.

15. Street Name Change. Old name shall not be shown unless needed to substantiate former records. In such cases, place old name in parenthesis when adding new name.

16. Street Width. Only indicate when not at even 5 foot intervals, i.e., a street width of 55 feet is not to be indicated, whereas a width of 56' will be shown. When it is necessary to indicate a street width, it should be centered within the street area at both ends of the street on the map and also at points where street may change width. Show in freehand numerals not to exceed .10" in height.

I. Plat Sheets

Feature	Symbol	PG&E Standard Line Weight	
(c) Subdivision Boundaries		0	
Division Boundaries		1	Identify with VCN 120 Wrico
District Boundaries		1	Identify with VCN 120 Wrico
Service Area Boundary (with foreign companies)		0	Identify with SCN 120 Wrico
(d) Railroads		0 & 3	Identify with slant capitals using SCN 120 Wrico
Railroad Tunnels		0 & 3	
Canals, Aqueducts, Irrigation Ditches		0	Identify with slant capitals using SCN 90 Wrico drawn to scale where feasible
Bridges		0	Location, length, and width to be drawn to scale where feasible

(c) Identify subdivision by number (assigned by the county) in Wrico VCN 90 If number is not available, identify by name. Lot lines within subdivisions should not be shown, since subdivision prints may be consulted when necessary. In localities where the house numbering system does not exist, tick marks for lot corners may be shown. Show lot number adjacent to tick mark in back of lot in .075" freehand, vertical numbers.

(d) Where an annual fee is charged for pipe crossings and the record is kept by the Land Department, the permit number need not be shown. Where the record is not kept by the Land Department, permit number is to be shown in freehand numerals .075" in height.

I. Plat Sheets

17. City Limits. The name of the incorporated city followed by the words "City Limits" shall be lettered on that side of the line, which is within the city, lettered in VCN 120 Wrico. In fast-growing areas plastic lead pencil may be temporarily used.

18. County Lines. On either side of the county line shall be shown the names of the respective counties, lettered in VCN 120 Wrico.

19. Meter and Regulator Stations, Schools and Hospitals, and Other Landmarks. To be shown in vertical capital letters not larger than Wrico 120.

20. Names of Lakes, Rivers, Creeks, and Railroads. See paragraph 12.

21. Survey Stations for Right-of-Way shall be shown at right angles to the survey line in small freehand letters .075" in height.

22. Gas Wells. To be shown according to well status legend shown on Drawing 083150, sheet 7, "Drafting Details for 500' maps.

    a. Name of well to be lettered in freehand capital letters .09" high or VCN 90 Wrico.

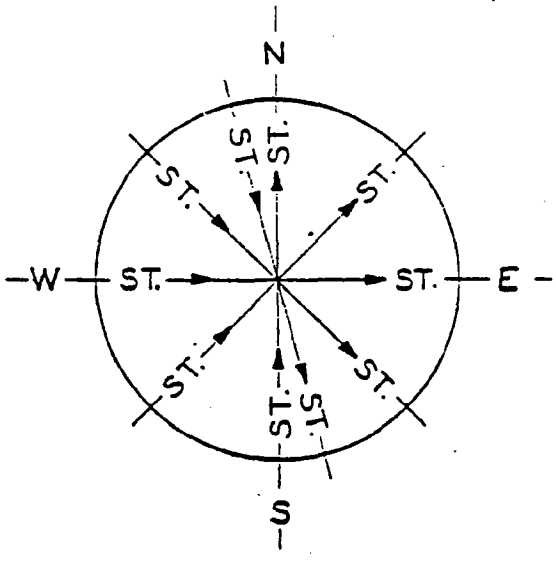
    b. Incompleted abandoned wells need not be shown.

23. Pens to be Used. For freehand lettering, use Rapidograph type pens or equivalent according to weight of line desired.

24. Mechanical Lettering Guides. See paragraph 4c, "Ink Work on Mylar Film."

25. Guide for Direction of Lettering.

26. Military Reservation. The name shall be lettered with VCN 90 Wrico on that side of the line which is within the reservation, and "Military Res." where the name is already indentified in large letters (CVC 250 Wrico).



MAPPING STANDARDS

II. Gas Mains

1. General. All live gas mains shall be shown on the plat sheets in black ink lines (weight no. 2, par. 5, Plat Sheets). The pressure shall be designated to bona fide systems within the established company limitations and according to the following legend:

Low Pressure Main	———————	(7" W.C. nominal)
Semi-High Pressure Main	—.4"— — —.05" — —.1"	(25 psig maximum)
High-Pressure Main	—.4"— — —.05"	(60 psig maximum)
Transmission Pressure Main	— —.15" — —.05"	(60 psig minimum)

2. MLX Main Extensions and Subdivision Deposits shall be circled in green pencil and deposit number shown. When refunded in full, erase green deposit area line and number.

3. Salvaged and Abandoned Mains. To be removed from plat sheets. Consult with supervisory personnel for local operating procedures. See S.P. 463.2, Abandonment of Gas Mains & Services.

4. Jointly-Owned Main — 6" P.G.&E. & S.C.G. CO. — (Weight No. 2½, Par. 5, Plat Sheets) In accordance with pressure

*PG&E Owned Pipelines (not gas) — .05" .05" 10" P.G.&E. OIL LINE 1" — (Weight No. 0 Par. 5, Plat Sheets)

5. Foreign-Owned Main — 10" S.C.G. CO. — (Weight No. 0, Par. 5, Plat Sheets)

6. Standard Symbols shall be according to the following legend in size and weight indicated, using a "Do-All" template or equivalent.

Valve- Valve closed - Plastic Valve — (IN PENCIL) CLOSED — PL

Check valve

*Regulator Station (show no.) — #123

Drip

Blow-off (Indicate size) — 2

Insulating fitting
Includes flanges, joints & couplings

Insulated valve - regulator pit — #123

Mechanical Coupling

End of Main

Reducer or job limit

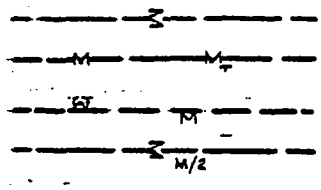
II. Gas Mains

Pressure control fitting.
Line Tap

Bottom or Top Tap

Side Tap

*Line Stopper. Mueller half fitting.



Welding tee. Straight extension and lateral extension.

Valve tee. Straight extension and lateral extension.

Compressor (privately-owned)

Compressor (PG&E-owned)

Gas street light

Casing (Indicate size, location, length, vent, and vent size)

Mains tied and not tied

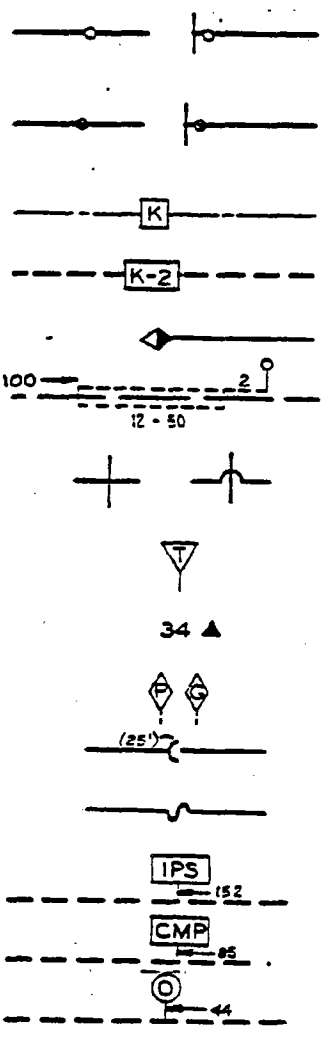
Telemeter

Cathodic protection station

Pressure Tap - Gage Lines

Riser (Indicate height)

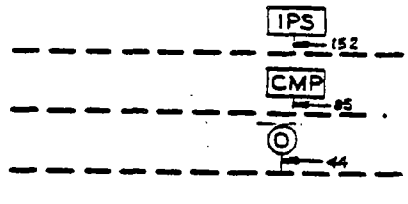
Warm-Up Loop



*Inhibitor Pump Station (indicate location)

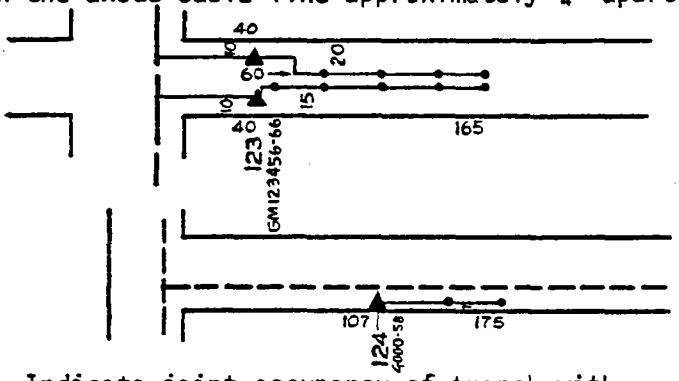
*Corrosometer Probe (indicate location)

*Odorizer (not in stations, indicate location)

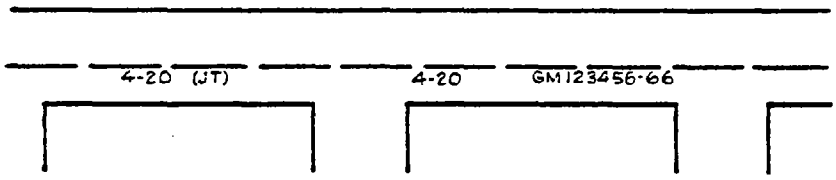


II. Gas Mains

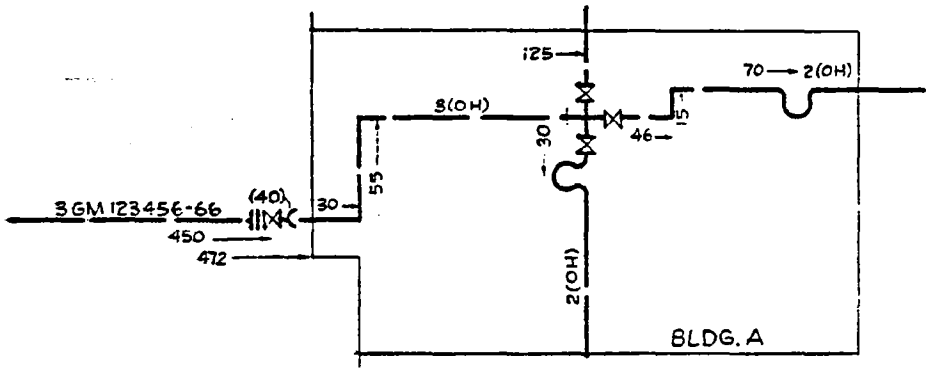
b. Cathodic Protection Station Rectifier shall be shown as a solid triangle .10" in height. Cable and anode extension shall be shown by a solid line (weight no. 0, par. 5, Plat Sheets). Anodes shall be represented by dots on the anode cable line approximately ¼" apart.



13. Joint Trench Indicate joint occupancy of trench with other facilities and utilities by using the symbol JT in parentheses immediately following the location of main. Show symbol only in those blocks joint occupancy occurs; thus:

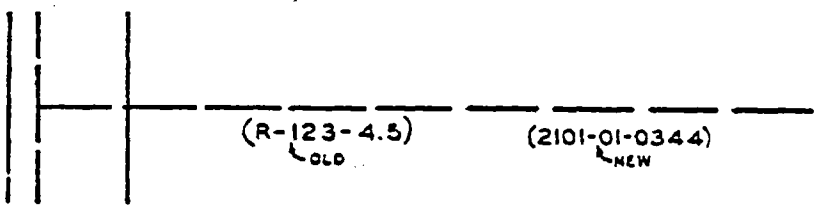


14. Overhead Main When main is installed above-ground (as in a shopping center roof installation), indicate by adding symbol letters (OH) immediately following the size. Also, indicate riser by a half-circle on the main and showing height of riser in parentheses; thus:



II. Gas Mains

10. Main In Private Right of Way. Show the Land Department document number in parenthesis along the main lettered in VCN 90 Wrico.



11. Fittings. All valves, regulators, drips, miscellaneous fittings, angles in main, etc., shall be located from the nearest intersecting street, road, or alley.

a. Only one dimension arrow is to be indicated with the arrow head opposite the point involved and pointing away from the property line from which it is located.

b. All measurements are to be shown within the street area. No measurement shall be indicated for any valve, fitting, angle point in main, etc., that is within one foot of any other point that has already been located. All figures for measurements are to be freehand, vertical lettering .075" in height.

c. On transmission line valves, show mileage number originating from line plat, operating diagram, or operating map with VCN 90 Wrico

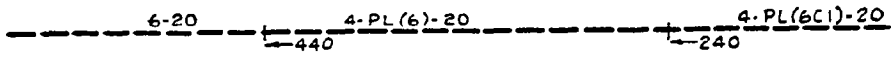
d. Where main is in private right of way with no cross-streets for tie-in purposes, fittings shall be located by pipeline stationing.

12. Pipe Protection

a. Galvanic and Test Galvanic Anodes (with frame & cover) will not be shown. These records will be kept in the cathodic protection file folders.

II. Gas Mains

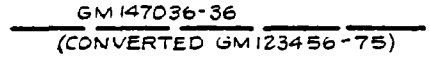
15. Insert Mains When a main is installed within an old main, the original size shall follow the kind of pipe in parentheses. Conventional casing shall be shown in accordance with paragraph 6. Show only in those blocks insert occurs; thus:



16. Telemeter, Pressure Tap, or Gauge Line See III Gas Service Item 11, Page 19.

17. Purchased, Reactivated, Transferred from another Account Mains Show the authorization and year, with the year of original installation in parentheses; i.e.: GM 123456-75 (36) and correct plat symbol if necessary.

18. Converted Main For a main which has been converted from one pressure system to another, change the main to its new symbol and leave the original authorization and year in its proper location. Show the converting authorization and year in parentheses on the other side of the main; i.e. (converted GM 123456-75).

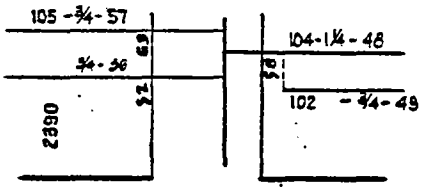


19. Plastic Valves Show immediately below the standard valve symbol as "PL."

20. Duct Lines Contractor installed duct lines for future main insert shall be shown as a solid line with size, type of material, and word "duct" (i.e., 4"PL duct) with adequate dimensioning in pencil. Erase pencil work when main is inserted or duct is not used at time of main installation. Use standard insert main symbol, see Item 15.

III. Gas Services

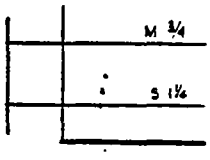
e. House Numbers. House numbers are to be shown at right angles to the street in which the house is numbered.



f. Type of Joint. Services are assumed to be welded and only joints other than welded shall be indicated according to the following legend immediately preceeding the size of pipe thus:

Mechanical joints - M

Screwed joints - S



g. Kind of Pipe. Services are assumed to be steel and only pipe other than steel shall be indicated according to the following legend immediately following the size of pipe thus:

Cast-Iron - CI — 4 CI

Copper - CU — ½ CU

Plastic - PL — ½ PL

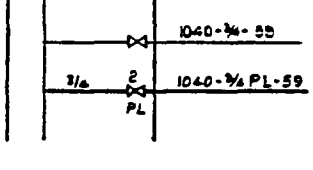
Plastic pipe shall be assumed to have a locating wire.

h. Type of Coating. No types of coating will be shown.

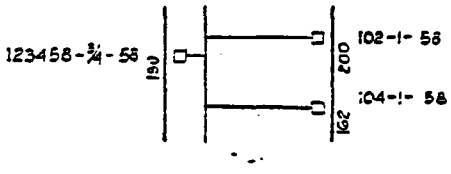
i. Bare Pipe. Show immediately following the size of pipe as "B" — ¾ B

j. Service Installation Record number = SIR - (obsoleted Coast Counties Gas & Electric Co. designation)

2. Service valve shall be shown by the standard symbol in the street area regardless of true location & without dimension thus:



3. Service Meter. Service to meter shall show company-owned facilities only. Service line shall terminate at the meter indicated by a small open square in the street area regardless of true location & without dimension thus:



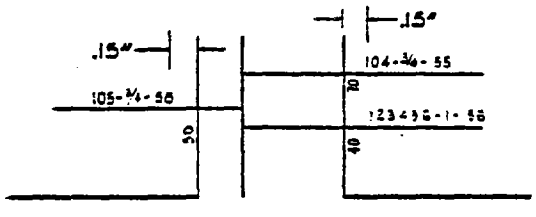
MAPPING STANDARDS

III. Gas Services

1. Posting Gas Services

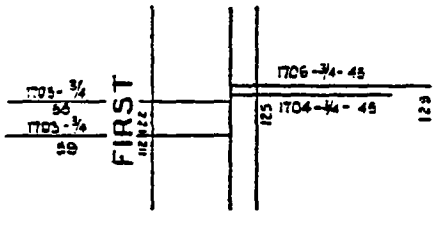
a. All live gas services shall be posted to the plat sheet in accordance with this standard. They shall be indicated by a black solid ink line (weight no. 0, par. 5, Plat Sheets) & shown connected to main from which they are fed. They shall be posted at right angles to the main and extend a maximum of .8" inside the property line.

b. The house number, size, and year installed shall be shown above the line and in the order mentioned, starting or ending .15" from the property line. The gas service record number shall be shown only where no house number exists. The location, to the nearest intersecting street, shall be shown adjacent to the service inside the property line. Information on service to be lettered freehand vertical and .075" in height. Do not show inch marks on service sizes.



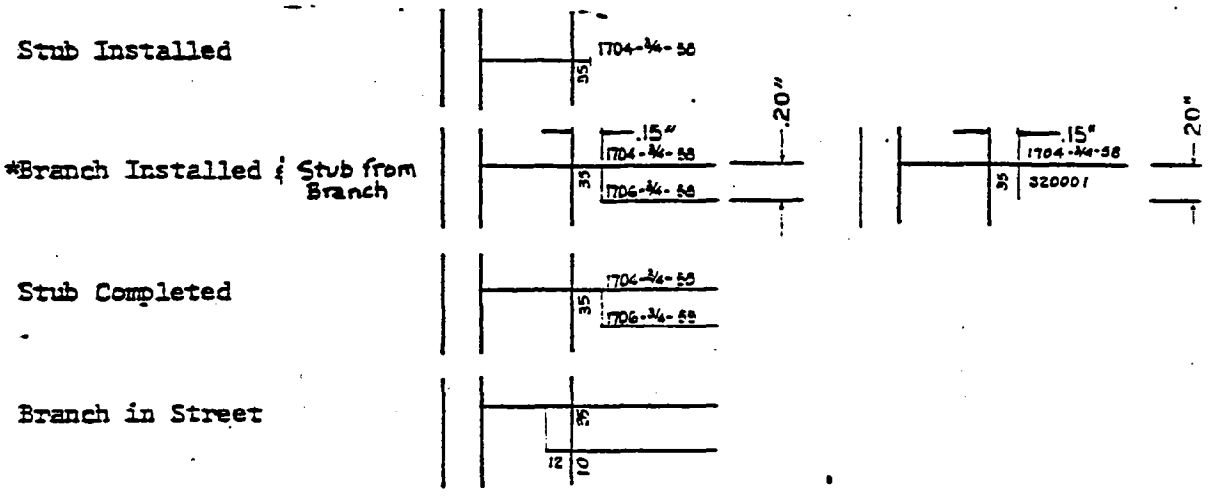
c. Where service pipe is not at right angles to main or property line, additional measurements must be indicated. See Section IV Misc., Item 11, page 22.

d. When space is not available, information may be shown below the service line.

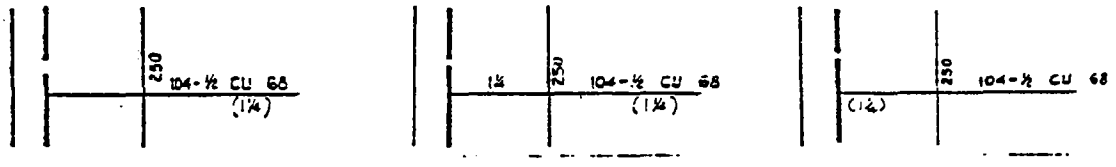


III. Gas Services

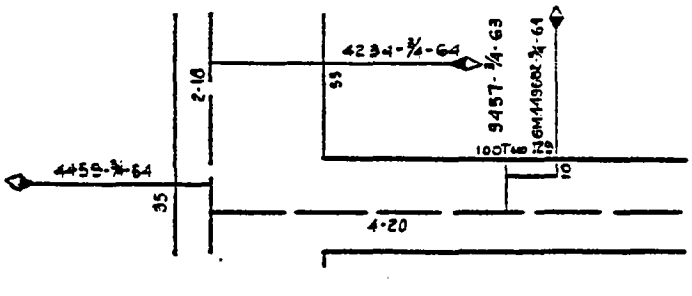
8. Branch Services shall be shown at a minimum of .20" from the original service and start at least .15" in from the property line except in cases where branch taps off in the street area. In such cases, offset shall be drawn to scale and dimensioned. Each service is a branch to the other. See example of progressive installation below: The 45° angle or other alternate installation does not require special posting or symbol.



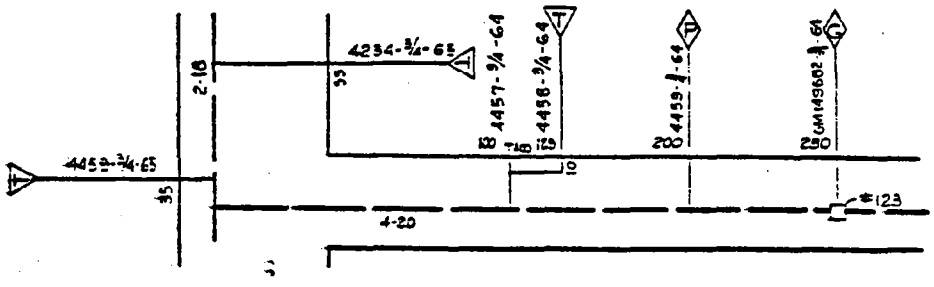
9. Insert Service. Casings shall not be shown; however, when a new service is installed within an old service, the new size shall follow the house number. The old size shall be shown beneath the service line in parenthesis thus:



10. Gas Street Light. To be shown with the street light symbol in its scaled position and located from street property lines thus:

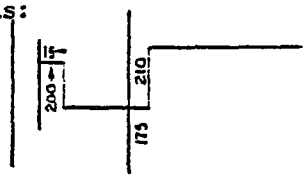


11. Telemeter, Pressure Tap or Gauge Line to be shown with appropriate symbol in its scaled position and located from street property lines thus:

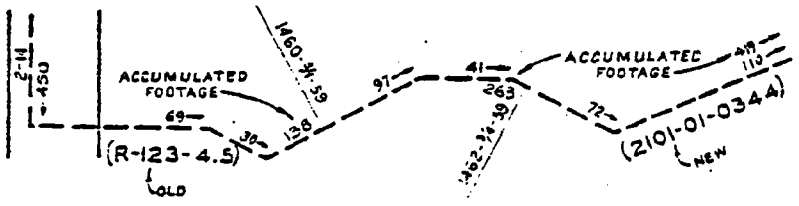


III. Gas Services

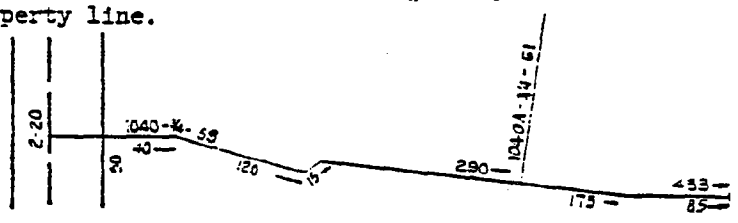
4. Offset in service within the street area and/or adjacent to PL shall be shown to scale with dimensions thus:



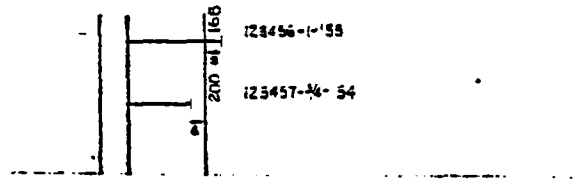
5. Location. Service taps off main in private rights of way, will be dimensioned back to the nearest street property line and lettered freehand with a size of .075" in height thus:



6. Excess Service shall be posted as any other service except where it may be difficult to determine which direction service may run along a private road, etc. In such cases the entire length may be shown. Measurements begin at property line.

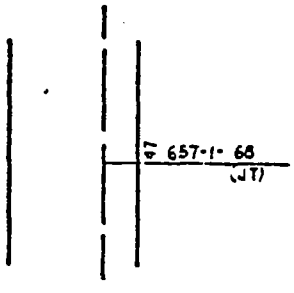


7. Stub Services. Services which are cut to stubs and ending at the property line shall be so indicated. Show distance to property line, if end of stub is more than one foot from property line.



III. Gas Services

12. Joint Trench. Service installed in a joint trench shall show (JT) in parentheses beneath the service line, in vertical capital letters .075" high.



13. Pipe Protection.

    a. Galvanic and test galvanic anodes (with frame & cover) will not be shown. These records will be kept in the cathodic protection file folder.

14. Riser. No riser, riser insert kit, fiberglass or copper at end of riser shall be shown.

15. Pressure control fittings and fusible plug nipples shall not be shown.

16. Regulators. No regulators on high pressure gas services shall be shown. It is known to have regulation and can be found on the gas service record.

17. Electrolysis Test Station shall not be shown on services.

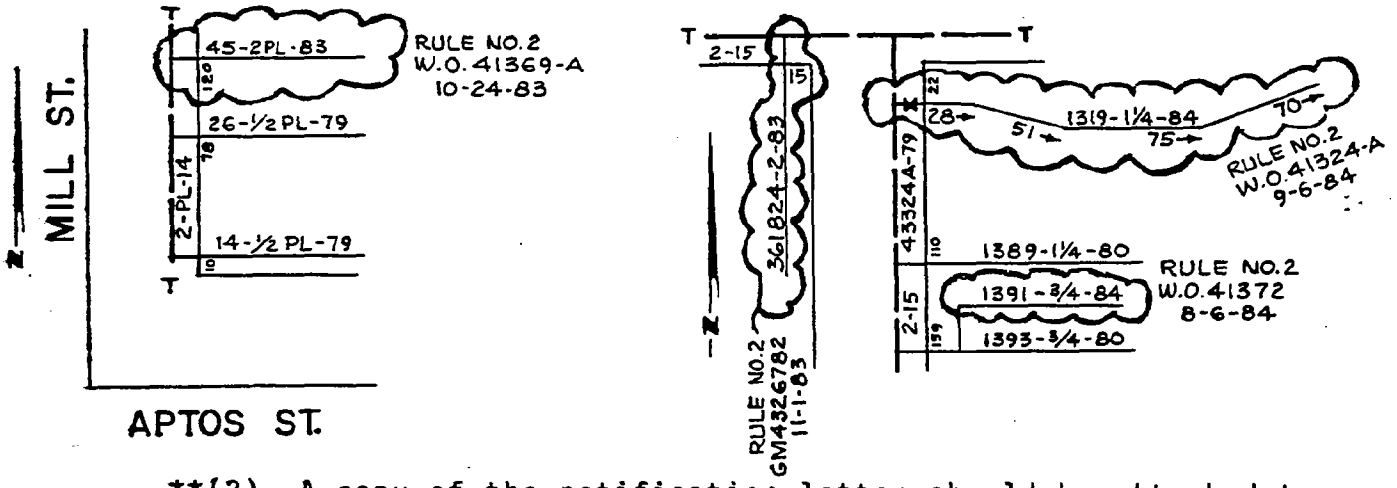
18. Duct Lines. Contractor installed duct lines for future service insert shall be shown as a solid line with size, type of material and word "duct" (i.e., 2 PL duct) with adequate dimensioning in pencil. Erase pencil work when service is inserted or duct is not used at time of service installation. Use standard insert service, see Item 9.

III. Gas Services

19. Procedures for Mapping Special Facilities (Rule No. 2):

**a. When notification has been received (via carbon copy of the Marketing Departments's cover letter and service agreement attachment) that a service has been installed under Rule No. 2 as a special facility, the following steps should be followed regarding posting and record retention:

**(1). Upon receipt of the notification letter (see page 23), date when the letter was received by the mapping department. Using a green pencil (similar to that used to highlight MLX's - see page 9, Section II), circle the subject service on the plat sheet. Using the same pencil, write in freehand capital letters (approx. 0.10" in height) "RULE NO. 2" adjacent to the service. Below, or immediately adjacent to this, in the same pencil and in freehand (approx. 0.10" in height), write the GM/WO number, and the date the special facility was available for service should be posted to the plat sheet. Note the examples below. Posting should take place no later than 15 working days upon reciept of the letter by the mapping department.



**(2). A copy of the notification letter should be attached to, and filed with, the service order. The original letter should be kept in a binder or file indicating that it contains special facility notification letters. The letter, and associated pencil posting, should be retained for the life of the facility.

**(3). If a service is altered or relocated, check to see if the service will remain classified as a special facility. If this is so, ensure that the altered or relocated service retains the special facility pencil-posting as specified in paragraph "a." and that the notification letter copy remains filed with the correct service order.

**paragraph added 11-84

III. Gas Services

19. Procedures for Mapping Special Facilities (Rule No. 2 - cont'd.):

**b. If, for some reason, the service is altered or relocated under a different rule, the pencil-posting should be removed and the notification letter copy retained with the service order should be disposed of. The notification letter binder or file should have a separate space denoting that the letters contained are for existing services which were altered or relocated under a different rule ,and should be retained for the life of the facility.

**(1). If a service is converted to main, the notification letter copy filed with the service order should be disposed of, and the pencil-posting should be removed. If the service is removed or abandoned-in-place, the same procedures should be followed regarding copies of the notification letter filed with the service order and with pencil-posting. In either case, the notification letter binder or file should have a separate space denoting that the letters contained are for converted or abandoned facilities and should be permanently retained.

**c. The pencil-posting of special facilities is not limited to new-business facilities installed entirely under Rule 2. Instances may arise where existing mains which were installed under Rule 15, and/or existing services installed under Rule 16, may have facilities connected to them under Rule 2. Only those portions of these facilites installed under Rule 2 should be indicated on the plat sheets as oulined in paragraphs 19 a. and 19 b.

**paragraph added 11-84

SAMPLE NOTIFICATION LETTER

Intra-Office Memorandum

MS. G. S. Gee (Construction Accounting Department)
MR. E. M. Schroeder (Processing Department, formerly Customer Accounting)

Attached for your files is a fully signed copy of a special facilities agreement, dated _____, for the subject applicant.

The applicant payment of $_____ was processed on _____ on D&C _____ for the advance of $_____ and the Equivalent One-Time Payment of $_____.

The date the special facilities were first available for service was _____.

Authorized Signature
Title

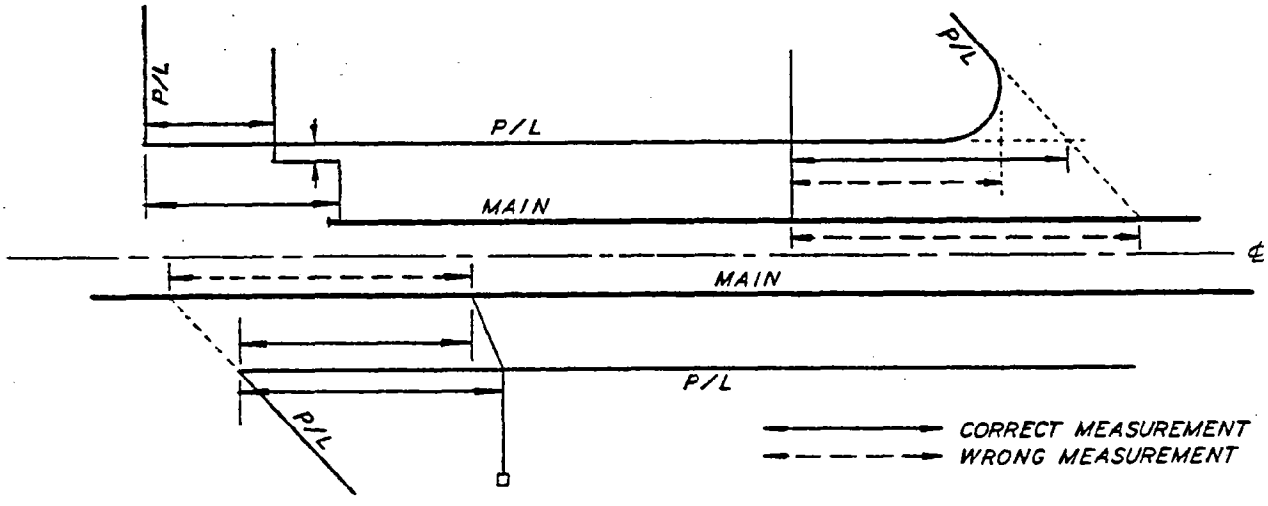
abc/xx

Attachment

cc: Division Marketing
District Customer Services
Division Electric/Gas Superintendent - Please map special facilities on plat maps and reference WO/GM _____ and Special Facilities dated _____.

IV. Miscellaneous

11. All measurements are to be taken from intersecting property lines and measured along property lines. No measurements are to be made along the line of main.



12. Plastic pencil leads recommended for mylar films shall be used if extensive temporary pencil work is required, See Section I, Item 4d, Page 1.

13. Posting of installed facilities (mains & services) should be accomplished within 30 days of physical completion of work (S.P. 410-1, Item 13).

14. Estimates shall be posted to plat sheets at the time the estimate is prepared. This posting should show its proposed configuration, size, street name and L.E., W.O., or G.M. number in plastic pencil. (S.P. 403.2, Item 10c)

IV. Miscellaneous

1. Year of installation for services should be shown using the last two digits only.

2. Replaced services, as well as new services, installed within an existing service shall be given the same gas service record number and the service identified with the size of the new pipe installed. See Standard Practice 468-2.

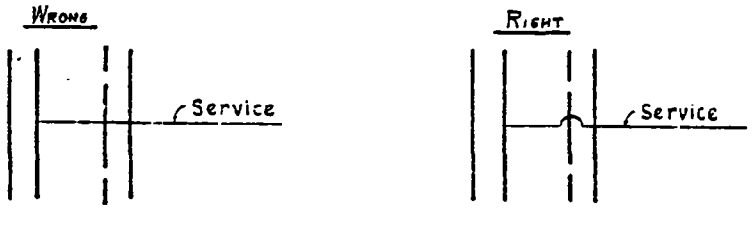
3. Abandoned services, after being cut at the main and plugged, are to be removed from the plat sheets. Abandoned gas service records are to be filed for future reference for a period of six years. If service is re-run on the same lot, give service the same number and attach old service record to new. See 2 above.

4. PG&E service from jointly-owned or foreign-owned mains shall be indicated in the same manner as those from PG&E mains.

5. Foreign-owned service fed from PG&E main should be indicated by a dash-dot line (weight no. 0, par. 5, Plat Sheets) with location, size and ownership.

6. Industrial services shall be posted the same as any other service. Work order numbers for the installation of services 3" or larger, as well as for subsequent work performed, should be shown on the Gas Service Record, Form 62-4183 and attach to the installing gas service record.

7. Services connected and not connected. Connected services shall be shown by intersecting lines and when not connected by looping the main thus:



8. Filing gas service record by block number or by transmission line number and posting the block numbering system to plats shall be in accordance with Standard Practice 468-2 and "Standard for Posting Block System to Plats" contained in the Mapper's Manual.

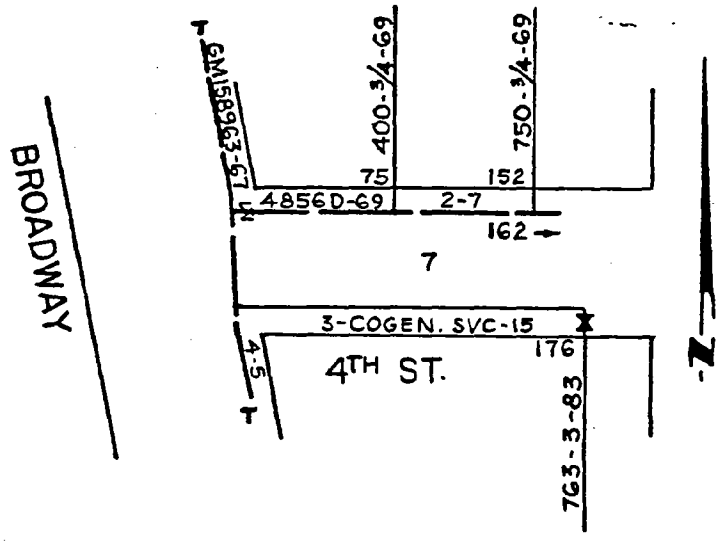
9. Distances within one foot of an existing given dimension or property line should not be shown.

10. When a gas service line is cut by plat sheet borders, it is not necessary to post the service information to both plat sheets. If space is available show size of service on both sheets. The service information will be posted to that plat sheet which has sufficient space to clearly show the standard posting.

MAPPING STANDARDS

IV. Miscellaneous

**15. Special circumstances may arise where services to cogeneration customers will parallel existing main. Given the thin, solid line that is used for symbolizing services, it is easy to confuse this with a low-pressure main, or as a property line. The following examples illustrate how these services should be posted to the plat sheets, the accompanying sections giving general posting instructions and specific instructions for each example.



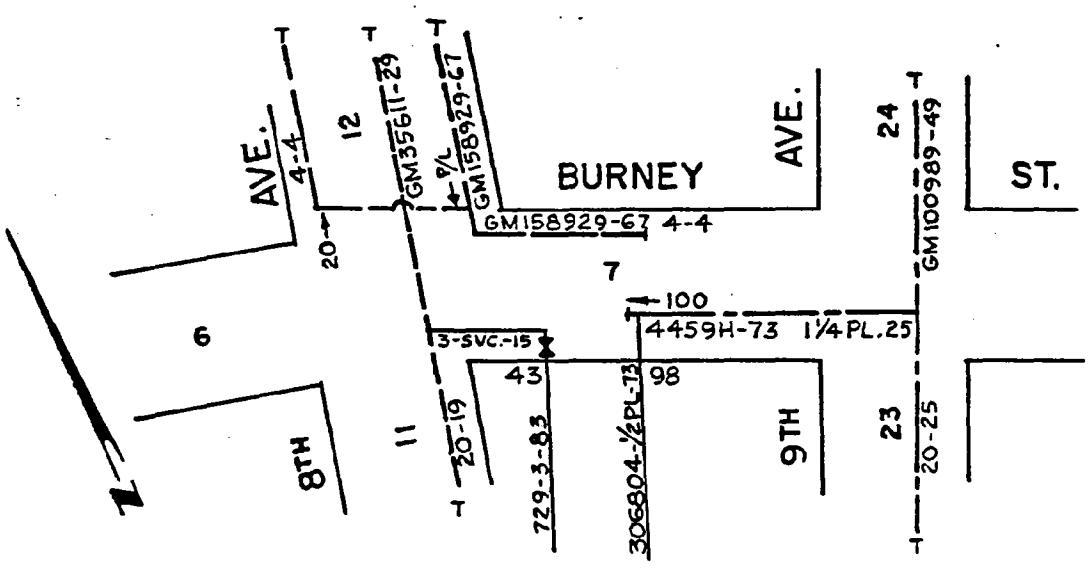
**a. Example "A" - The service should be posted to scale with respect to property lines and other company facilities. As with mains (Section II, Paragraph 9), if the service is less than 10 feet away from the property line, the service should be posted 10 feet (0.10") away to allow for identification. Approximately equidistant between the points of tap and termination, the title "COGEN. SVC." should be posted between the service and the referencing property line. Preceding the "COGEN. SVC.", the nominal diameter of the pipe (in inches) should be posted, separated by a hyphen from "COGEN. SVC.". The distance from the reference property line (in feet) should be posted following "COGEN. SVC.". All lettering should be freehand, approximately 0.075" in height.

**(1). If the service is a "considerable distance" service after it crosses the property line, it should be posted using the guidelines in Section III, Paragraph 6 (See Example G). At the point where the service terminates paralleling the franchise/private property line and changes direction such that it will cross this property line, the remaining portion of the service is posted as a service coming from a main in the street using previously established guidelines.

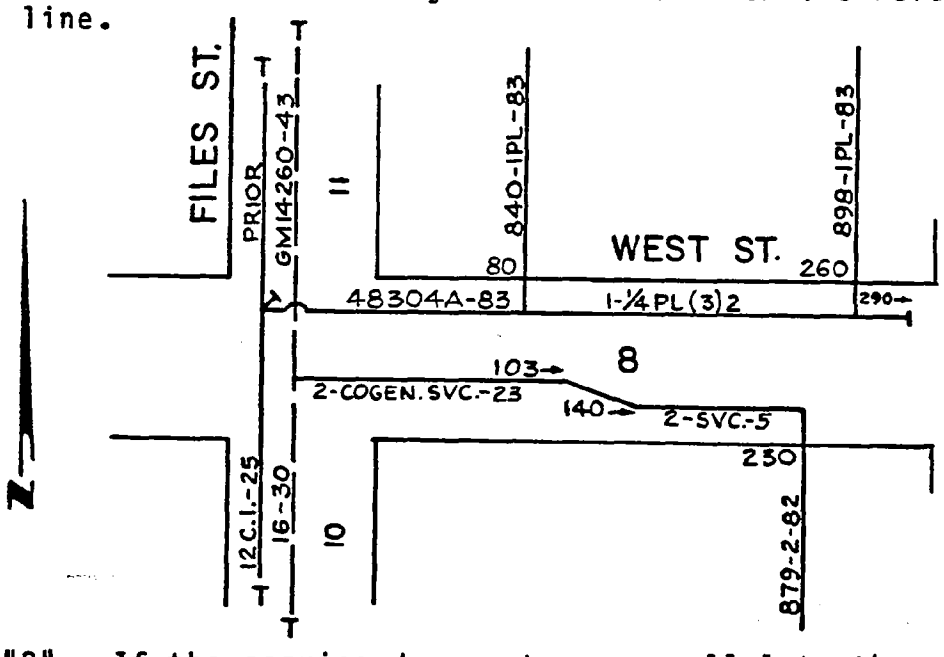
**paragraph added 11-84

MAPPING STANDARDS

IV. Miscellaneous (cont'd.)



**b. Example "B" - If there is not enough space for "COGEN. SVC.", the label may be shortened to "SVC." still preceded by the service diameter and followed by the distance from the reference property line.

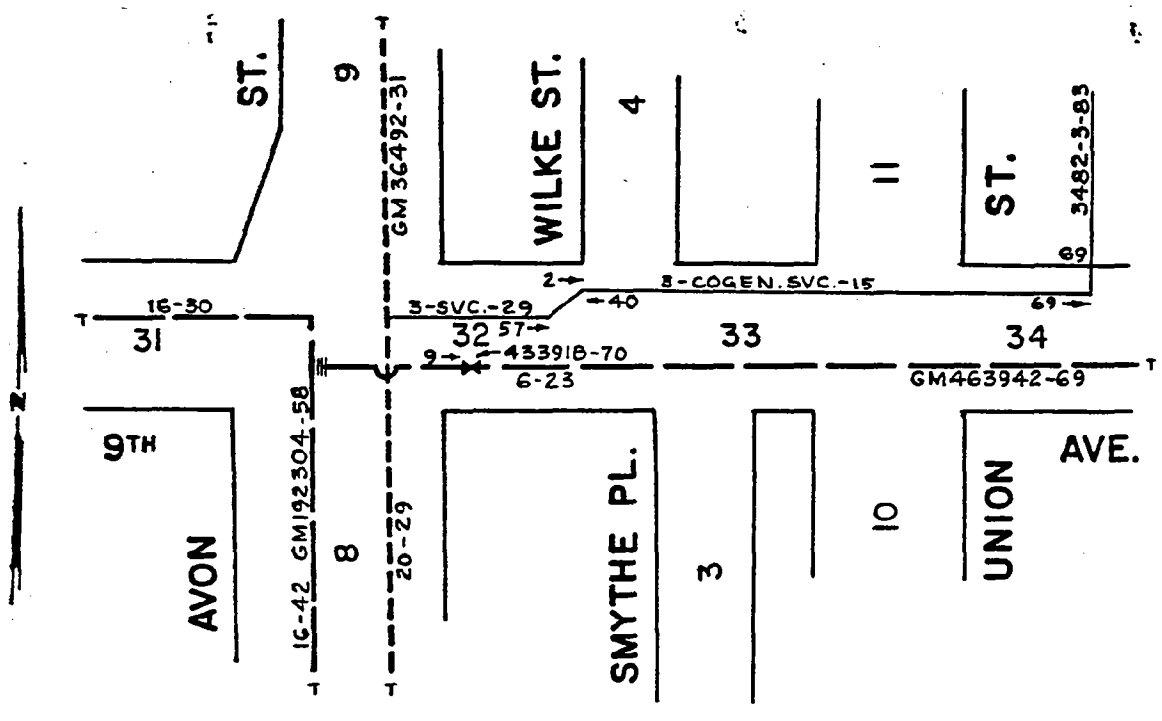


**c. Example "C" - If the service does not run parallel to the property line, dimension arrows should be used to show the location of the main. Note that the "COGEN. SVC.", with the accompanying diameter and distance from property line, is posted to show the change in location with respect to the reference property line.

**paragraph added 11-84

MAPPING STANDARDS

IV. Miscellaneous (cont'd.)



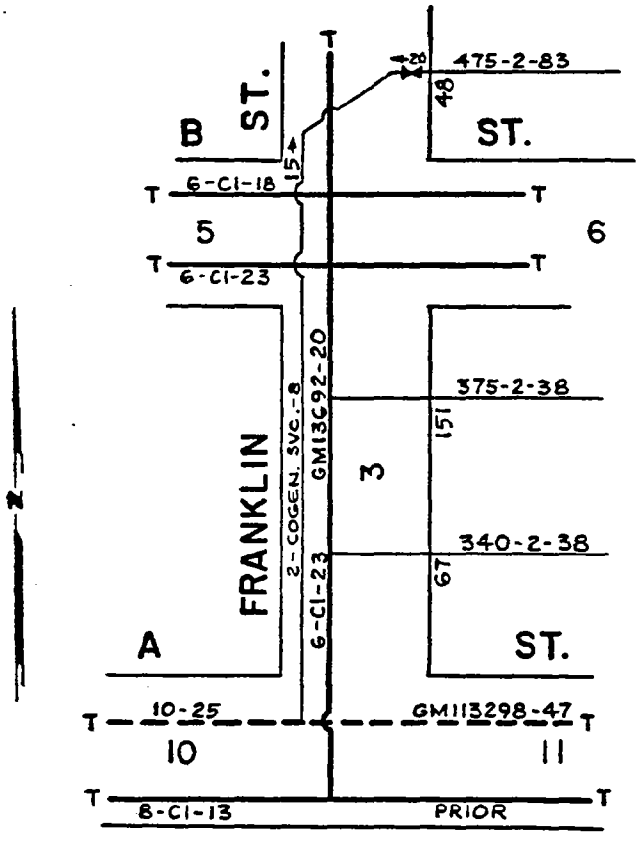
**d. Example "D" - If the service crosses one or more intersections between points of tap and termination, the distance from the nearest intersecting property line should be used to show the location of service termination.

**(1). Where the service crosses several intersections, care should be used in dimensioning. Any change in direction of the service, such as shown in the example above, should be indicated by dimension arrow to the nearest property line. If a change in direction occurs in an intersection between property lines, the point of direction change should be referenced to both property lines. Where the service changes direction toward the franchise/private property line, this point should also be referenced to the nearest property line. Note in the example above that the "COGEN.SVC" and "SVC." labels have been posted to show the difference in distance away from the franchise/private property line, similar to the "diameter/distance-from-property-line" label used on mains.

**paragraph added 11-84

MAPPING STANDARDS

IV. Miscellaneous (cont'd.)



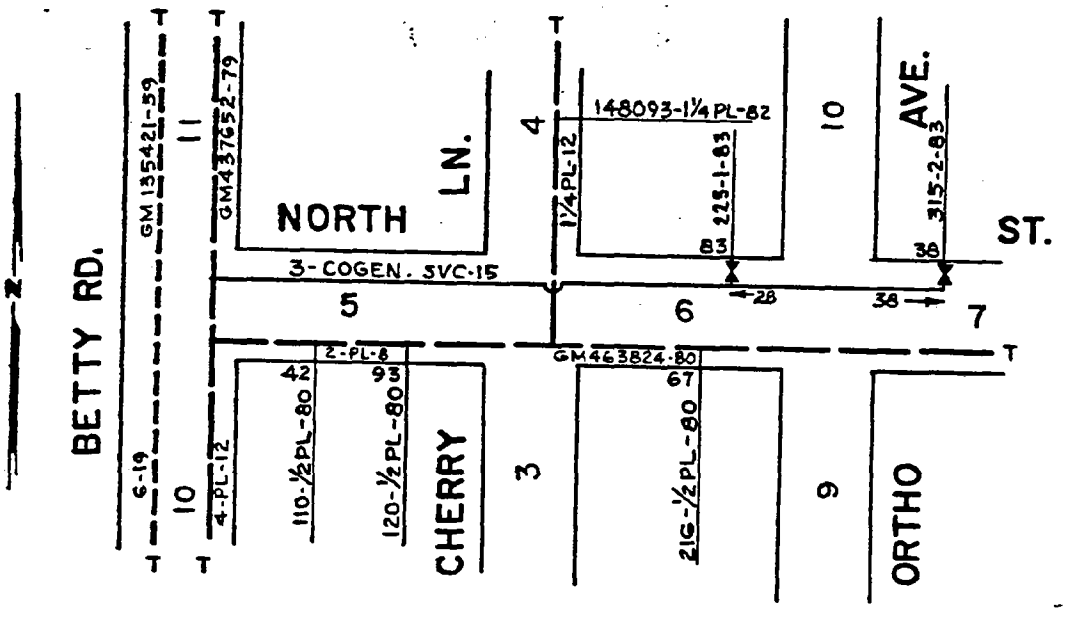
**e. Example "E" - If the service crosses from one side of the street to the other, be sure to indicate any changes in direction with dimension arrows referencing the nearest property lines.

**f. Examples "F" & "G" (on next page) - If a branch is installed off of the service, it should be posted as shown. The distance from the nearest intersecting property line to the point of branch should be dimensioned as shown.

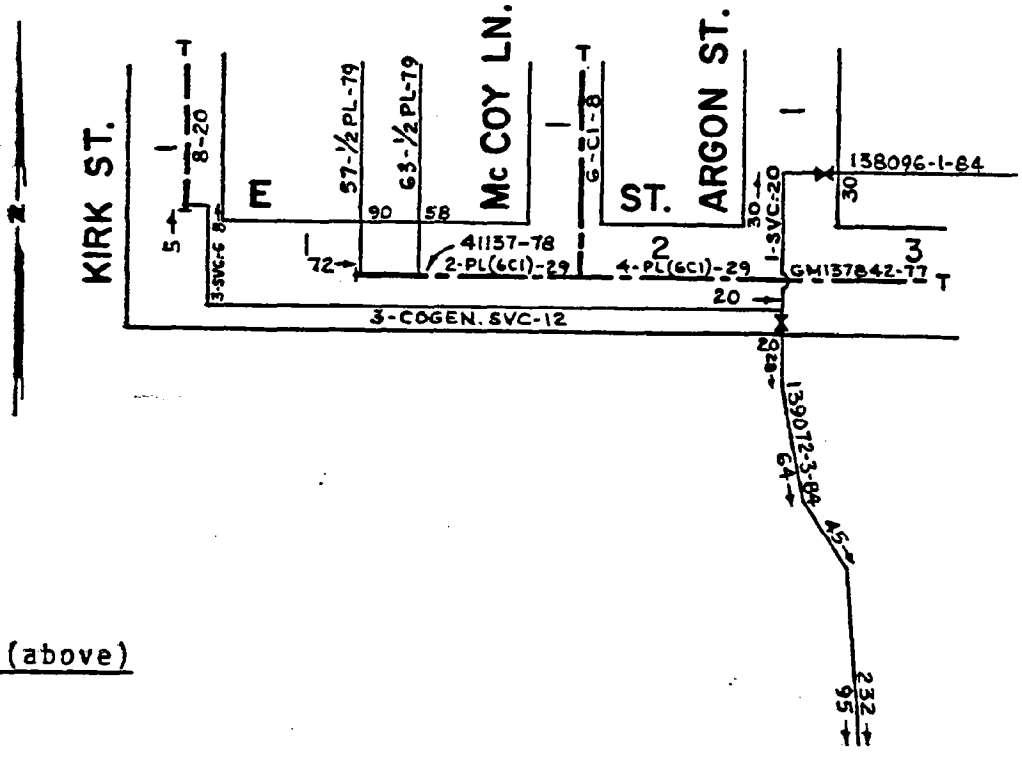
**paragraph added 11-84

MAPPING STANDARDS

IV. Miscellaneous (cont'd.)



** Example "F" (above)



** Example "G" (above)

**added 11-84

MAPPING STANDARDS

c. Chipped lines and lettering should be touched up prior to reproduction.

d. Lettering and lines not wanted on the new copy should be done with a non-photographing pencil. The following Eagle Verithin colors will not photograph:

No. 751	True Green
No. 738½	Light Green
No. 741½	Azure Blue
No. 740½	Sky Blue
No. 761½	Non-Photo Blue
No. 735	Canary Yellow
No. 735½	Lemon Yellow
No. 757	Flesh Yellow
No. 10840	Violet Staedtler "Mars - Non-Print"
No. 389	Thinex Apple Green
No. 910	Prisma Color True Green

4. Security

a. The Divisions should store a copy of the original mylar in another building for protection against fire or other loss. Microfilm that is produced for the leak survey program, or paper prints, is produced whenever original mylars are photographed in the General Office may also serve as security copies. Copies should be made every two to five years so they will be reasonably up-to-date.

5. Filing. Filing of original tracings shall be attached to the company's "Standard Map Filing Rod", Drawing 033651, on order from Emeryville. Attachment to rod is made by folding over the binding edge of the tracing and fastening the lap with Scotch 810 mending tape or Scotch 137 double stick tape. Care should be taken not to cover working area of plat sheet with tape or Mylar Film.

6. Map Cabinet. A "Standard Steel Cabinet for Gas and Electric Maps", Drawing 283111, has been designed to use the standard map rod. Cabinets may be ordered through Purchasing and Stores Department on Debit Requisition Form

a. Existing wood cabinets should not be replaced merely to utilize the standard map rod.

MAPPING STANDARDS

V. Working Prints

1. Material. The working prints will be the original mylar tracing and hang in the map cabinets.

2. Care

a. Mappers should not use electric erasing machines and should be cautious when hand erasing on mylars.

b. Use one of the inks which works well on mylar.

c. Maps must be kept reasonably clean. Ink will not adhere to dirty maps.

d. Districts which prefer to post work in red ink so work posted since the last reproduction can be easily distinguished should use Koh-I-Noor #3071 Acetate Ink. Only pens (Acetograph) designed for this type of ink should be used. Conventional pens are not compatible with acetate inks.

e. Avoid graphite buildup by writing notes and posting estimates neatly with "plastic lead" pencils designed for mylar.

f. Avoid spilling fluids on the surface. This will remove inked lines.

g. Avoid contact with open flame or burning cigarettes.

h. Do not crease, cut, tear or puncture.

i. Avoid bumping mylars against objects as this may cause ruptures or creases.

j. Close map cabinets nightly.

k. All personnel, other than mapping, should be cautioned on proper use and care of mylar tracings by the local operating head.

l. Original tracings are never to be taken from the mapping or gas engineering work area.

3. Reproduction for a duplicate of the original mylar tracing.

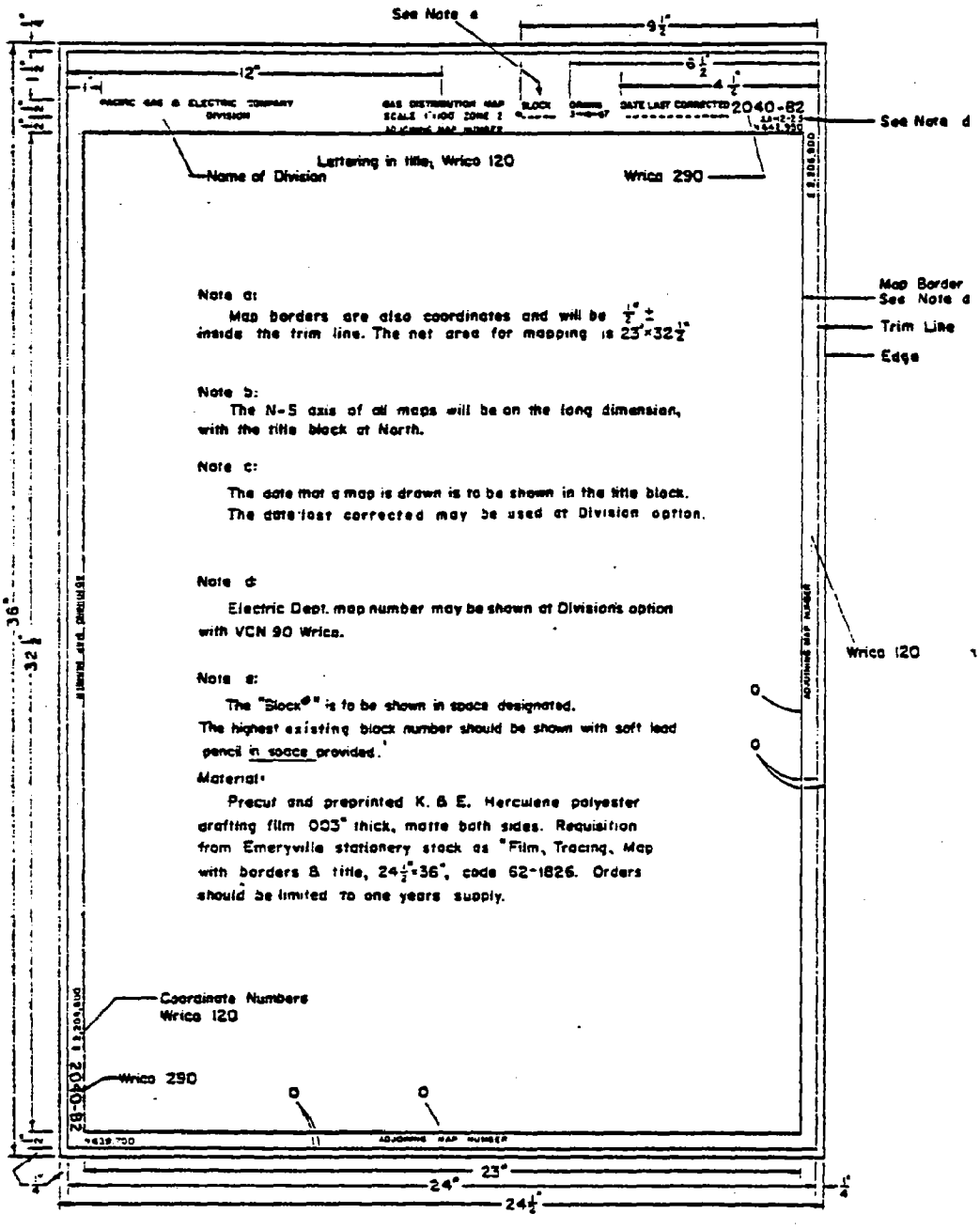
a. A paper copy of the mylar should be made and held locally before sending the original to design Drafting's Reproduction Services. The paper copy will provide security against unexpected loss of the original. For best reproduction, the mylar original rather than the paper copy should be sent to Reproduction Services.

b. Dirty maps should be cleaned by the mapping staff prior to reproduction.

ATTACHMENTS

Exhibit A - Title Block Details, Outline and Dimensions of Standard Map Sheet.

Exhibit B - Typical Section of 1" - 100' Map.



Note a:
Map borders are also coordinates and will be ½" ± inside the trim line. The net area for mapping is 23"×32½"

Note b:
The N-S axis of all maps will be on the long dimension, with the title block at North.

Note c:
The date that a map is drawn is to be shown in the title block. The date last corrected may be used at Division option.

Note d
Electric Dept. map number may be shown at Division's option with VCN 90 Wrico.

Note e:
The "Block" is to be shown in space designated. The highest existing block number should be shown with soft lead pencil in space provided.

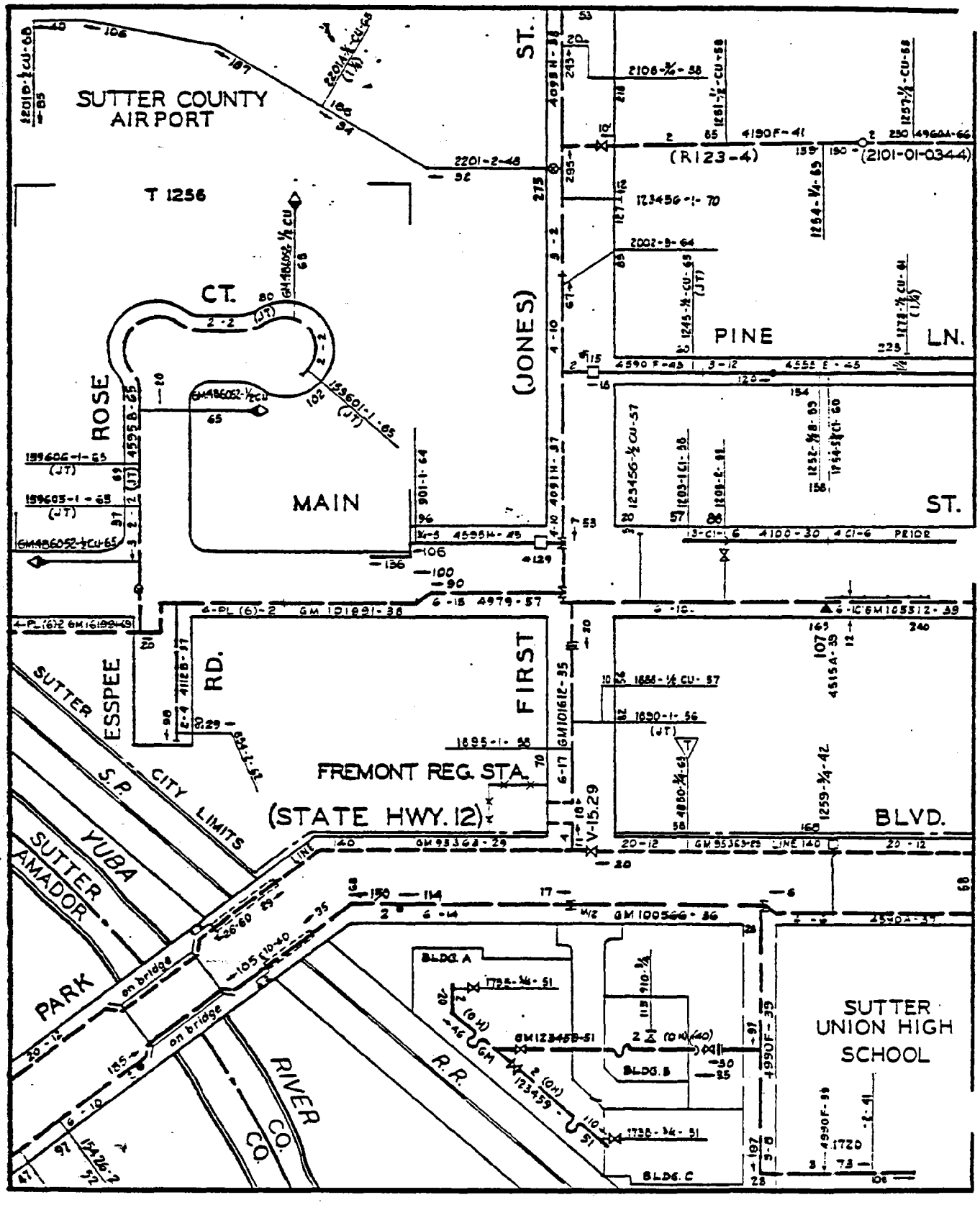
Material:
Precut and preprinted K. & E. Herculene polyester drafting film .003" thick, matte both sides. Requisition from Emeryville stationery stock as "Film, Tracing, Map with borders & title, 24½"×36", code 62-1826. Orders should be limited to one years supply.

TITLE BLOCK DETAILS
OUTLINE AND DIMENSIONS OF STANDARD MAP SHEET

EXHIBIT B

EFFECTIVE 12-1-79

Supplement Std. Prac. 410.21-1 - Pg. 35



PORTION OF 1"=100' MAP

LINE WEIGHT CONVERSION TABLE

LINE WIDTHS			EQUIVALENT PENS			
DIMENSIONS MM	DIMENSIONS INCHES	P.G.& E. STANDARD**	STAEDTLER MARS	RAPIDOGRAPH ACETOGRAPH	LEROY STANDARD	CASTELL TG(H)
			● MF 5X0 ● UF 4X0			
0.10 MM	0.004"	000	● 0.1 3X0	● 6X0 ● 5X0		● 000
0.20 MM	0.008"	00	● 0.2 00	● 4X0	● 4X0	● 00
0.30 MM	0.012"	0	● 0.3 0	● 3X0 ● 00	● 3X0 ● 00	● 0
0.40 MM	0.016"	1	● 0.4 1	● 0	● 0	● 1
0.50 MM	0.020"	2	● 0.5 2	● 1	● 1	● 2
0.60 MM	0.024"	2-1/2	● 0.6 2-1/2	● 2 ● 2-1/2	● 2	● 2-1/2
0.80 MM	0.032"	3	● 0.8 3	● 3	● 3	● 3
1.00 MM	0.039"	4	● 1.0 3-1/2		● 4	● 4
1.20 MM	0.047"	5	● 1.2 4	● 4		● 5
1.40 MM	0.055"	6	● 1.4 5		● 5	● 6
2.00 MM	0.079"	7	● 2.0 6	● 6 ● 7	● 6	● 7
2.50 MM	0.098"	8		● 8	● 8	
3.00 MM	0.118"	9		● 9		
4.00 MM	0.158"	10		● 10	● 10	

**BASED ON THE NORTH AMERICAN STANDARD.

APPROVED BY						
GS.						
	5	4-15-77	REDRAWN, REVISED & ADDED SH. 1A	V.N.M.		GS.
	CHG.	DATE	DESCRIPTION	BY	CH.	APPD.

BY GAS OPER.	DRAFTING DETAILS FOR 1"=500' GAS MAPS		
SUPV.		SUPERSEDES	
DR. V.N.M.		SUPERSEDED BY	
CH. J.L.B.		SHEET NO. 1	SHEETS
O.K.	PACIFIC GAS AND ELECTRIC COMPANY SAN FRANCISCO CAL.	DRAWING NUMBER	CHANGE
DATE 5-1-59 / SCALE NONE		083150	5

LINE WEIGHT CONVERSION TABLE

LINE WIDTHS			EQUIVALENT PENS			
DIMENSIONS MM	DIMENSIONS INCHES	P.G.&E. STANDARD**	KOH-I-NOOR RAPIDOMETRIC*	LEROY METRIC*	PELICAN GRAPHOS*	DIETZGEN WRICO
0.10 MM	0.004"	000	.13	.13	A0.1 A0.12	
0.20 MM	0.008"	00	.18	.18	A0.16 A0.2	
0.30 MM	0.012"	0	.25	.25	A0.25 A0.3	7T
0.40 MM	0.016"	1	.35	.35	A0.35 A0.4	7
0.50 MM	0.020"	2	.50	.50	A0.5	6
0.60 MM	0.024"	2-1/2	.70	.70	A0.6 A0.70	5
0.80 MM	0.032"	3			T0.8	4
1.00 MM	0.039"	4	1.00	1.00	T1.0	
1.20 MM	0.047"	5			T1.25	
1.40 MM	0.055"	6	1.40	1.40		3
2.00 MM	0.079"	7	2.00	2.00	T1.6	2
2.50 MM	0.098"	8			T2.5	
3.00 MM	0.118"	9				
4.00 MM	0.158"	10			T4.0	

**BASED ON THE NORTH AMERICAN STANDARD.
*SIZES QUOTED IN MM. (EUROPEAN STANDARD)

APPROVED BY	CHG.	DATE	DESCRIPTION	BY	CH.	APPD.

BY GAS OPER.
SUPV.
DR. V.N.M.
CH. J.L.B.
O.K.

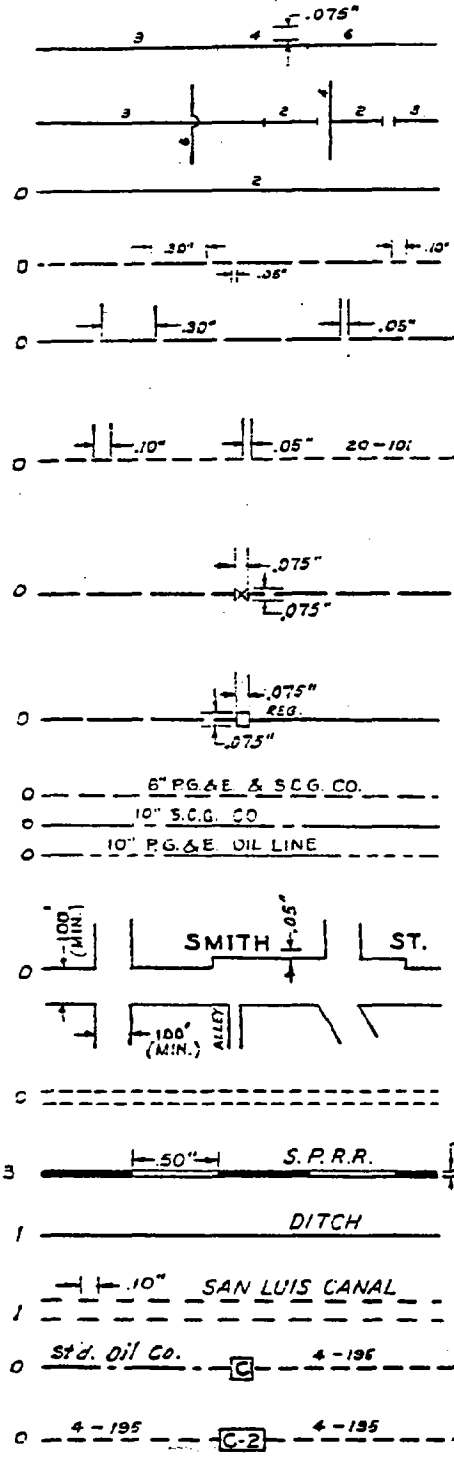
DATE: 4-15-77
SCALE: NONE

DRAFTING DETAILS FOR 1"=500' GAS MAPS

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO CAL.

SUPERSEDES
SUPERSEDED BY
SHEET NO. 1A
SHEETS
DRAWING NUMBER: 083150
CHANGE

Supplement Std. Prac. 410.21-1 – Pg. 37



Change in Size of main

Mains not Tied in. Show tick mark only where it may not be obvious, especially on H.P. mains.

L.P. Show size, once in each block.

S.H.P. Show size, once in each block.

H.P. Show size, once in each block.

T.P. Show size, once in each block. On transmission line show line number after the size as indicated.

Valve Identify transmission line valves with VCN 90 Wrico.

Regulator Sta. Identify with small freehand letters (Show number if required).

Jointly-Owned Main
Foreign Owned Pipelines
P.G.&E. Owned Pipelines (Not Gas)

Streets, St. Names Identify with vertical 90 wrico. Streets over 100' wide, show true width

Pvt. Rds., R/W (only IF needed)

R.R. Identify with slant 90 Wrico

Irrigation Ditch Identify with slant 90 Wrico

Canal, Aqueduct Identify with slant 90 Wrico

Compressor Station - Privately Owned

Compressor Station - P.G.&E. Owned

CHG.	DATE	DESCRIPTION	APPRD.
5	12-70	CHANGED DIMENSIONS AT CHANGE IN SIZE, VALVE, & REG. PIT, ETC.	G.B.

CHG.	DATE	DESCRIPTION	APPRD.
7	12-1-79	Added Foreign Owned Pipelines	G.B.
6	4-77	Added Joint Owned, Pipelines, Ditch, Canal	G.B.

APPROVED Piet

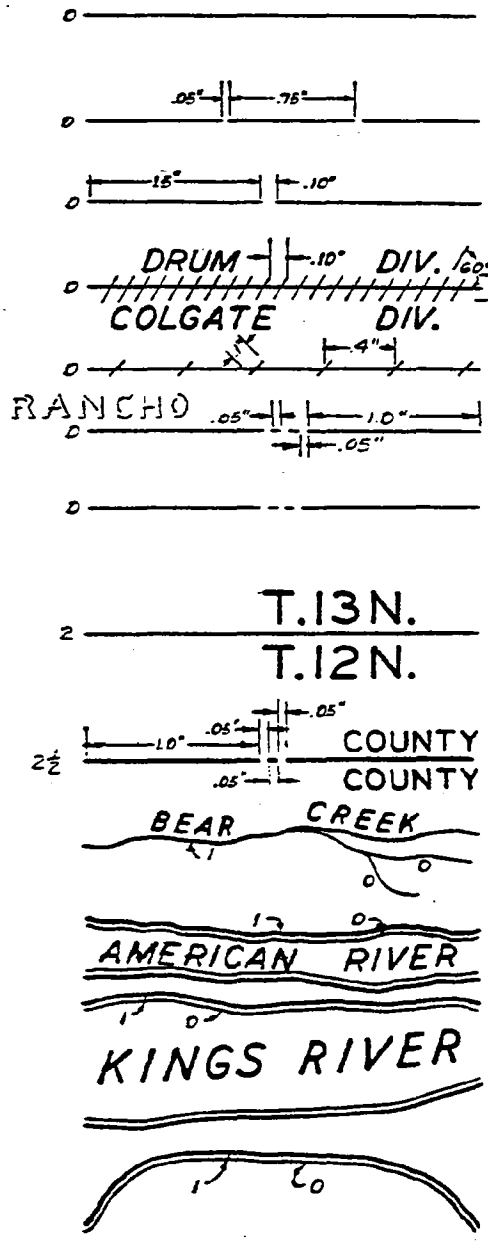
BY	GAS OPER.
DSGN.	J.W.C.
DR.	H.J.R.
CH.	G.B.B.
O.K.	G.B.
DATE	5-1-59
SCALE	NONE

DRAFTING DETAILS FOR 1"=500' GAS MAPS

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CAL.

SUPERSEDES
SUPERSEDED BY
SHEET NO. 2 SHEETS
DRAWING NUMBER 083150
CHANGE 7

61-8894 9-67 250



* *Section–Property Lines* Identify section number with vertical 200 wrico numerals in center of section, where applicable.

* *Projected Section*

District Boundary Identify with slant 140 wrico.

Division Boundary Identify with slant 140 wrico.

Service Area Boundary Identify with SCN 120 Wrico

Rancho Lines Identify with 5/32" vertical shaded letters or VHCN 250 shadow wrico in center of area.

Military Reservation Identify with vertical 90 wrico using name inside line within reservation and "Military Res" where identified in large letters (CVC 250 wrico).

* *Township & Range* Identify with vertical 200 wrico.

County Line Identify with vertical 120 wrico

Creeks & Sloughs Identify with slant 120 wrico.

Rivers Small- Identify with slant 140 wrico
Large- " " " 200 "

Bays, Lakes etc.
Small – Identify with slant 140 wrico
Large – " " " 200 "

* *Not shown unless needed for locating gas lines, wells, or fields.*

CHG.	DATE	DESCRIPTION	APPR.	CHG.	DATE	DESCRIPTION	APPR.
2	1-64	ADDED SIZE & TYPE OF LETTERING	P.A.H.	4	12-70	ADDED MILITARY RES. SYMBOL	GB.
6	4-80	DELETED CITY LIMITS	GB.	5	4-77	BROUGHT TO DATE. SERVICE AREA BOUNDARY.	G.B.

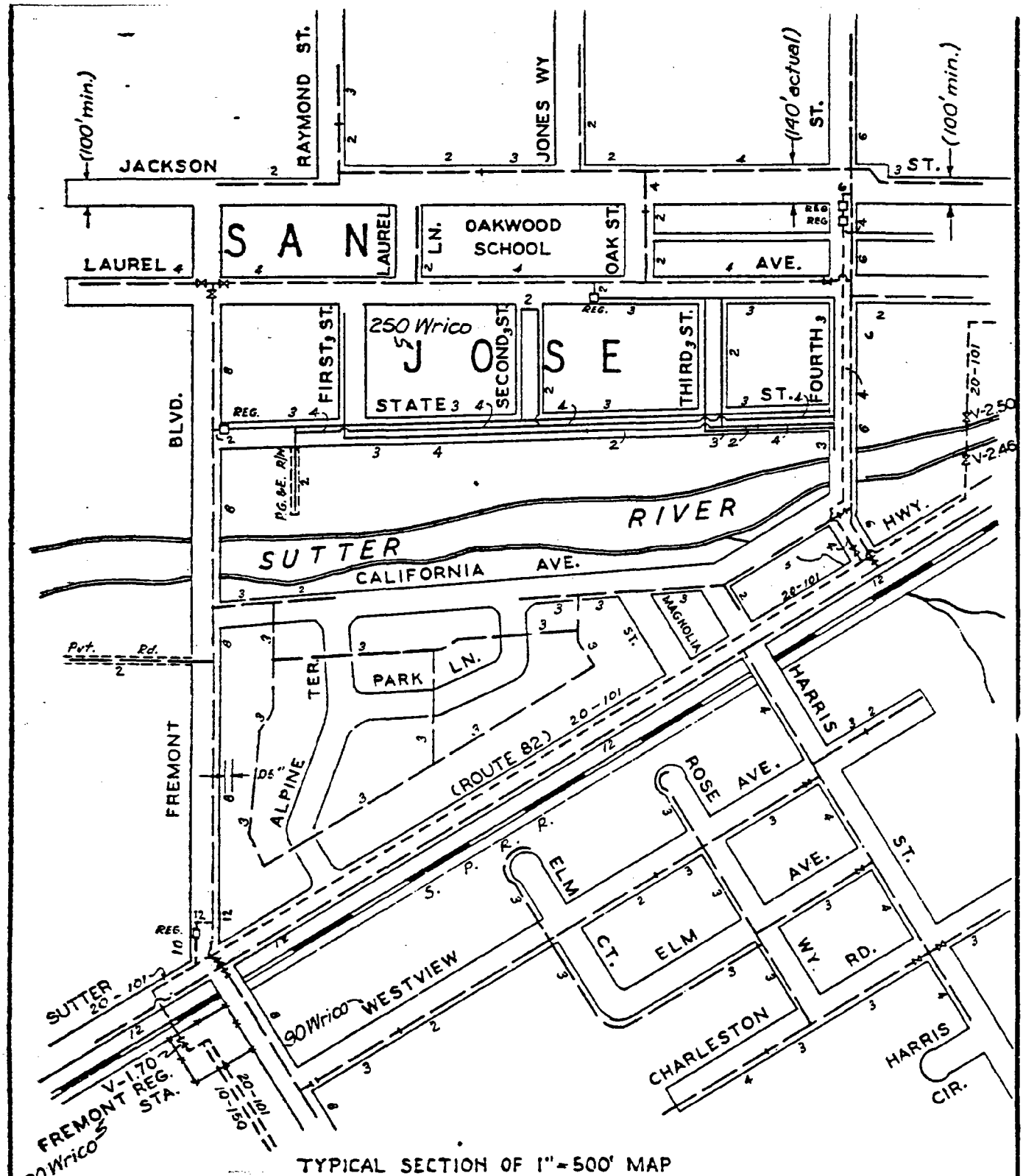
APPROVED Pad.

BY	GAS OPER.
DSGN.	J.W.C.
DR.	H.J.R.
CH.	G.B.B.
O.K.	G.B.
DATE	5-1-59
SCALE	NONE

DRAFTING DETAILS FOR 1"=500' GAS MAPS

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CAL.

SUPERSEDES	
SUPERSEDED BY	
SHEET NO. 3	SHEETS
DRAWING NUMBER	CHANGE
083150	6



TYPICAL SECTION OF 1"=500' MAP

APPROVED BY	CHG.	DATE	DESCRIPTION	GW	BY	CH.	APPRD.
Path.	5	4-77	BROUGHT TO DATE & MADE NEW ORIGINAL.		V.M.		G.B.
	3	9-64	CHANGED H.P. & T.P. MAIN SYMBOL				P.A.H.
	2	1-64	ADDED FREMONT STA., HARRIS CIR., CITY LIMITS				P.A.H.
	6	4-80	DELETED CITY LIMITS		R.A.B.		G.B.

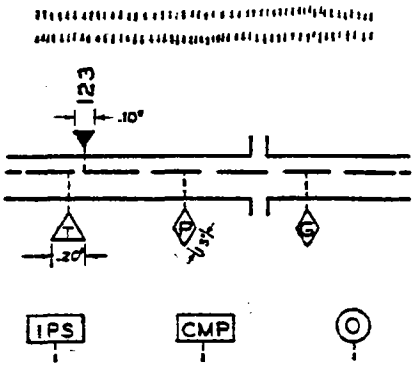
SUPERV. BY GAS OPER.
DSGN. P. A. H.
DR. M. M. C.
CH. G. B. B.
O.K. G.B.
DATE 5-1-59
SCALE 1"=500'

DRAFTING DETAILS FOR 1" = 500' GAS MAPS

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

DRAWING LIST
SUPERSEDES
SUPERSEDED BY
SHEET NO. 5 SHEETS
DRAWING NUMBER 083150
CHANGE 6

Supplement Std. Prac. 410.21-1 - Pg. 40

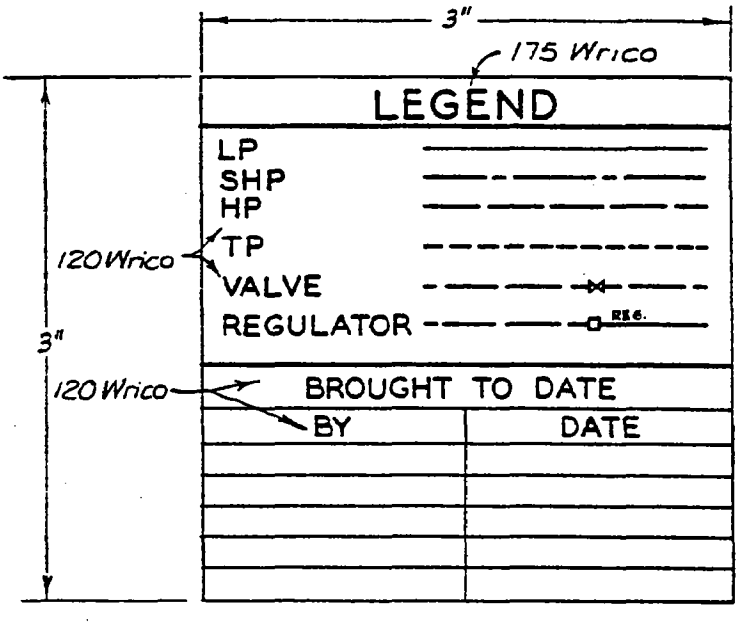


Levees

Cathodic Protection Station Identify with 90 - Wrico.

Telemeter, Pressure Tap, Gage Line as required by local option. Identify with 90 Wrico.

Inhibitor Pump Station, Corrosometer Probe, Odorizer (Not in stations). Identify with 90 Wrico.



290 Wrico

SANTA CRUZ, N. & VICINITY

PACIFIC GAS AND ELECTRIC CO. ← 120 Wrico

SAN JOSE DIVISION

ZONE 3 1959

90 Wrico

SCALE

500 0 500 1000 1500 FT.

CHG	DATE	DESCRIPTION	APPRD.	CHG.	DATE	DESCRIPTION	APPRD.
5	12-70	ADDED ETS & SHP SYMBOLS	GB.				
4	11-69	REDRAWN & BROUGHT TO DATE	GB.	6	4-77	BTD. Omitted ETS symbol.	GB.

APPROVED

BY GAS OPER.
DSGN. M.M.C.
DR. A.O.T.
CH. M.C.
O.K. GS

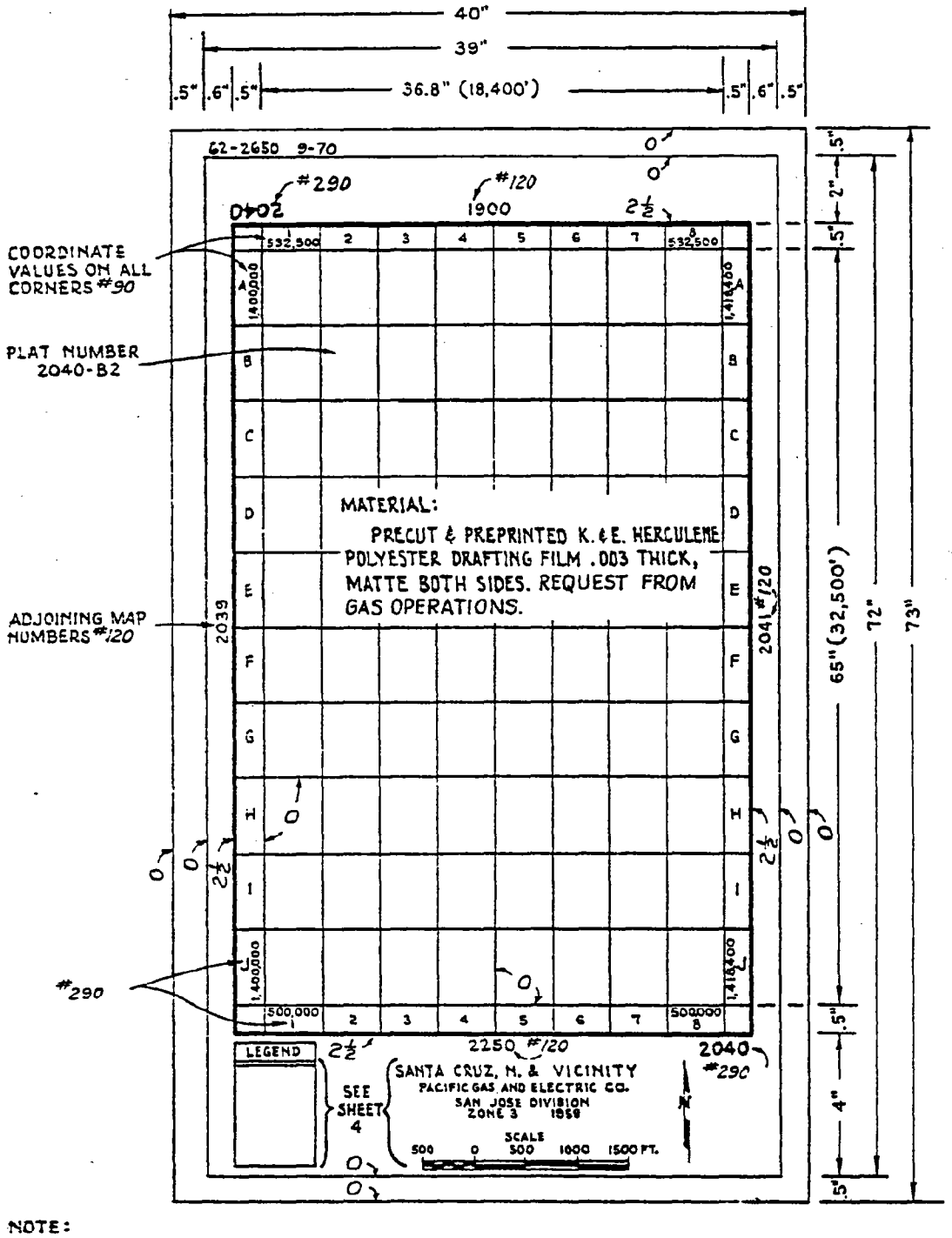
DATE 5-1-59 | SCALE NONE

DRAFTING DETAILS FOR 1"=500' GAS MAPS

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CAL.

SUPERSEDES
SUPERSEDED BY
SHEET NO. 4 SHEETS
DRAWING NUMBER 083150 | CHANGE 6

Supplement Std. Prac. 410.21-1 - Pg. 41



NOTE:

MAPPING AREA 36.8"×65" = (8×10-100' PLATS)
MAP TRIM LINE 39"×72"
TRACING TRIM LINE 40"×73"

OUTLINE & DIMENSIONS OF MAP IN CALIFORNIA COORDINATE SYSTEM.

APPROVED BY								
P.A.H.								
	2	4-15-77	BROUGHT TO DATE.					G.B.
	1	9-1-65	ADDED MATERIAL NOTE AND STATIONERY STOCK NUMBER					P.A.H.
	CHG.	DATE	DESCRIPTION	GM	BY	CH.	APPRD.	

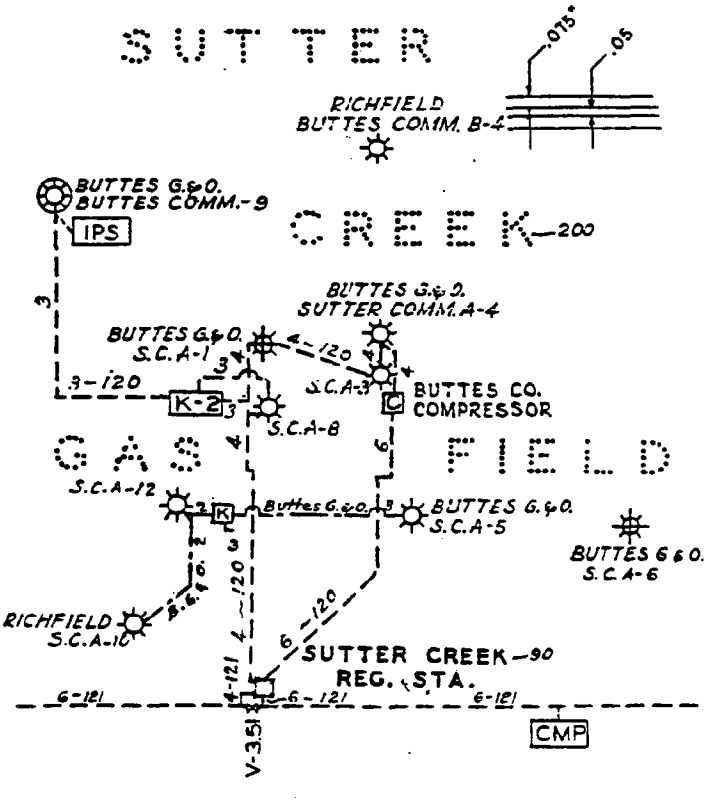
BY GAS OPER.	DRAWING LIST		
DSGN. P.A.H.	SUPERSEDES		
DR. M.M.C.	SUPERSEDED BY		
CH. G.B.B.	SHEET NO. 6	SHEETS	
O.K. G.B.	DRAWING NUMBER	CHANGE	
DATE 8-26-63 / SCALE NONE	083150	2	

DRAFTING DETAILS FOR 1"= 500' GAS MAPS

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

WELL STATUS LEGEND

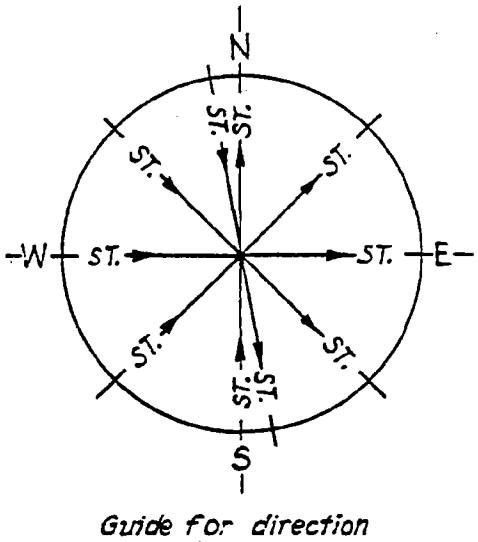
- Location*
- Core Hole*
- Suspended*
- Oil Producer Idle
- Oil Producer
- Gas & Oil Producer
- Gas Producer
- Uncompleted Abandoned*
- Abandoned Oil Well
- Abandoned Oil & Gas Well
- Abandoned Gas Well
- Gas Storage Well
- Abandoned Gas Storage Well
- Dual Completion Gas Well
- Abandoned Dual Completion Gas Well
- Water Disposal Well, Former Producer*
- Water Disposal Well, Former Suspended*



Note:

Well Symbols should be as shown, NO larger.

* Not required on 1"=100' or 1"=500' maps.



Guide for direction of lettering

CHG.	DATE	DESCRIPTION	GM BY	CH.	APPRD.
4	9-70	ADDED WATER DISPOSAL WELL SYMBOLS	A.T.	M.C.	G.B.
5	4-77	BROUGHT TO DATE	A.T.	M.C.	G.B.
2	8-64	TRANSMISSION MAIN SHOWN IN SHORT DASHED LINE			R.A.H.
6	4-80	ELIM. DRILLING SYMBOL	R.A.B.		G.B.

APPROVED BY: P.A.H.

BY GAS OPER.
DSGN. P.A.H.
DR. M.M.C.
CH. G.B.B.
D.K. G.B.
DATE 8-28-83
SCALE NONE

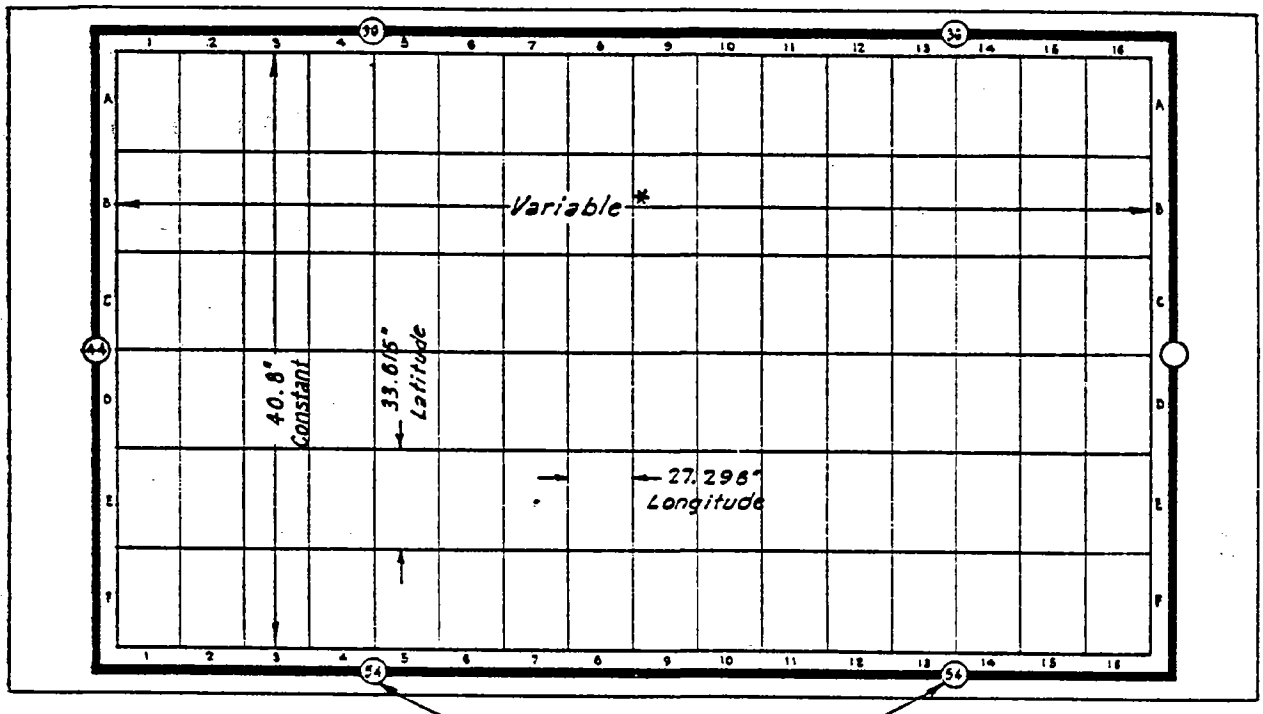
DRAFTING DETAILS FOR 1" = 500' GAS MAPS

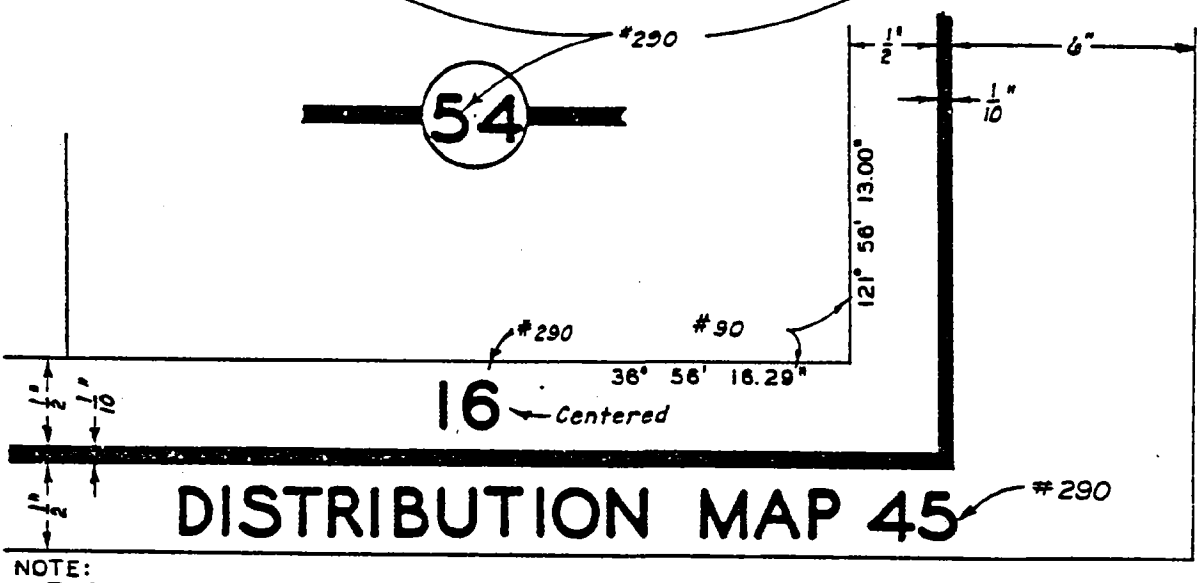
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

DRAWING LIST
SUPERSEDES
SUPERSEDED BY
SHEET NO. 7 SHEETS
DRAWING NUMBER 083150
CHANGE 6

SEE "BAY AREA GRID FOR 1"=500' MAPS" DWG. 383828

* To be determined from "Grid Detail for 1"=100' Plats" Dwg. 181433





DISTRIBUTION MAP 45

NOTE:
THIS SHEET IS APPLICABLE TO EAST BAY & SAN FRANCISCO DIVISIONS ONLY.
OVERALL PLAT SHEET SIZE 24-1/2" X 38-1/4" (INCLUDING TRIM).

CHG.	DATE	DESCRIPTION	APPRD.	CHG.	DATE	DESCRIPTION	APPRD.
2	12-70	ADDED MORE MAP NUMBERS	GB.				
1	8-63	CHANGED TITLE & ADDED NOTE	P.A.H.	3	4-77	BROUGHT TO DATE.	GB.

APPROVED P.A.H.

BY	GAS OPER.
DR.	J.W.C. TR. H.J.R.
CH.	G.B.B.
O.K.	GB.
DATE	5-1-59
SCALE	NONE

DRAFTING DETAILS FOR 1" = 500' GAS MAPS

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CAL.

SUPERSEDES	
SUPERSEDED BY	
SHEET NO. 8	SHEETS
DRAWING NUMBER	CHANGE
083150	3

Supplement Std. Prac. 410.21-1 - Pg. 44

PROCEDURE FOR UPDATING GAS OPERATIONS CLOTH MOUNTED 1" = 500'
AND 1000' GAS DISTRIBUTION MAPS

1. UPDATE ORIGINAL TRACING ANNUALLY ACCORDING TO POSTING SCHEDULE DWG. 082556.
2. SEND PRINT TO GAS SYSTEM PLANNING DEPT. AND REQUEST CLOTH-MOUNTED MAP.
3. UPDATE CLOTH-MOUNTED MAP.
   - A. POST IN INK ALL STREETS AND GAS MAINS.
   - B. ERASE PENCIL NOTATIONS RELATED TO NEWLY POSTED STREETS AND GAS MAINS, NOT FUTURE ESTIMATES.
   - C. COLOR CODE GAS MAINS ACCORDING TO THIS STANDARD.
   - D. OBSERVE "CORRECTION LIST" AT BOTTOM OF MAP.
     1. MAKE NECESSARY CORRECTIONS OR CHANGES.
     2. CROSS OUT ITEMS COMPLETED.
     3. DO NOT DESTROY LIST.
   - E. USE BROUGHT TO DATE BOX IN PENCIL.
4. RETURN CLOTH-MOUNTED MAP TO GAS SYSTEM PLANNING DEPARTMENT.
5. NOTIFY GAS SYSTEM PLANNING DEPT. OF THOSE MAPS WHICH DO NOT REQUIRE UPDATING.

NOTES:

1. TO INSURE UNIFORM COLOR, WINSOR NEWTON ARTISTS OPAQUE WATER COLORS IN TUBES ARE TO BE USED IN COLORING GAS MAIN EXTENSIONS. DO NOT SUBSTITUTE.

2. MIX COLORS TO EQUAL PROPORTIONS, COLOR, WATER AND LE PAGE'S MUCILAGE GLUE. MIX ONLY AMOUNT REQUIRED.

3. BEST RESULTS ARE OBTAINED BY APPLYING MIXED COLOR WITH OLD RULING PEN.

4. THESE COLORS DO NOT APPLY TO 1" = 100 PLAT SHEETS BUT SHOULD BE USED ELSEWHERE WHEN COLOR CODE IS REQUIRED.

5. FOR SIZES NOT SHOWN (5", 9", etc.) POST MAIN IN ALTERNATE COLORS OF NEXT STANDARD SIZE LARGER AND NEXT STANDARD SIZE SMALLER.

6. ALL COLORS SHALL BE UNIFORM, REGARDLESS OF PRESSURE OF MAIN OR TRANSMISSION LINE.

SIZE OF PIPE	COLOR	EXAMPLE (H.P. SHOWN)
UNDER 3"	BLACK	
3"	CADMIUM ORANGE	
4"	CADMIUM RED	
6"	CERULEAN BLUE	
8"	COBALT VIOLET	
10"	CHROME YELLOW	
12"	INDIAN RED	
16" & OVER	DESIGNERS RAW SIENNA (BROWN)	

CHG.	DATE	DESCRIPTION	APPRD.	CHG.	DATE	DESCRIPTION	APPD.
8	9-20-73	Redrawn (Supersedes 080514)	GB				

APPROVED

BY GAS OPER.
DSGN.
DR. LSB
CH. J.C.
O.K. J.B.
DATE 5-14-73
SCALE NONE

DRAFTING DETAILS FOR 1" = 500' GAS MAPS

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO CAL.

SUPERSEDES 080514
SUPERSEDED BY
SHEET NO. 2 SHEETS
DRAWING NUMBER 083150
CHANGE 8

PROCEDURE FOR CREATING A 1" = 500' GAS DISTRIBUTION MAP FROM AN EXISTING 1" = 1000' GAS DISTRIBUTION MAP.

1. A PRINT OF THE REQUIRED PORTION OF THE 1000' MAP FOR ENLARGEMENT SHOULD BE SENT TO THE GENERAL OFFICE REPROGRAPHICS DEPARTMENT. FILL OUT A REQUISITION REQUESTING A BLOW UP FROM 1" = 1000' TO 1" = 500' ON SILVER FILM OR KP-5.

2. THIS BLOW UP WILL BE USED AS AN ORIGINAL AND BE TRACED, USING CENTER LINES FOR REFERENCE FOR ALL STREETS, MAINTAINING A MINIMUM WIDTH OF 100'.

3. THE TITLE OF THE NEW MAP SHALL NOT BE EXACTLY THE SAME AS THE EXISTING 1000' MAP. IT SHOULD HAVE A SEPARATE TITLE OR SIMILAR TO THE EXISTING TITLE WITH THE QUADRANT ADDED, SUCH AS COLUSA & VIC 1000' MAP TO COLUSA, SE, & VIC 500' MAP; PROVIDED AN EXISTING MAP DOES NOT HAVE THIS TITLE.

4. THE EXISTING 1000' MAP WILL SHOW:

   a. SHOW HEAVY POSTING LIMIT LINE AND WORDING "POSTING LIMIT, SEE MAP 2067" IN 290 SLANT WRICO INSIDE THE LIMIT AREA.

   b. ALL DISTRIBUTION MAINS, WITHIN THE POSTING LIMIT, WILL BE TAKEN OFF MAP.

   c. THE OBSOLETED MAP NUMBER SHOULD BE TAKEN OFF MAP. IN SITUATIONS WHERE ERASING IS IMPRACTICAL, CROSS OUT OBSOLETE NUMBER WITH TWO LINES, LEAVING NUMBER VISIBLE UNDERNEATH.

   d. CHANGE ALL REFERENCES AND RECORDS TO AGREE.

5. A PRINT OF THE NEW MAP SHOULD BE SENT TO GAS OPERATIONS FOR REVIEW. UPON APPROVAL, THE ORIGINAL MYLAR TRACING WILL BE SENT TO GAS SYSTEM PLANNING FOR CLOTH MOUNTING.

APPROVED BY [redacted]	CHG.	DATE	DESCRIPTION	BY	CH.	APPD.
BY GAS OPER						
SUPV. [redacted]						
DR.						
CH.						
O.K.						
DATE 4-15-77 / SCALE						

DRAFTING DETAILS
FOR 1"=500' GAS MAPS
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO CAL.

SUPERSEDES
SUPERSEDED BY
SHEET NO. 10 SHEETS
DRAWING NUMBER 083150 CHANGE

STANDARD FOR POSTING BLOCK SYSTEM TO PLATS

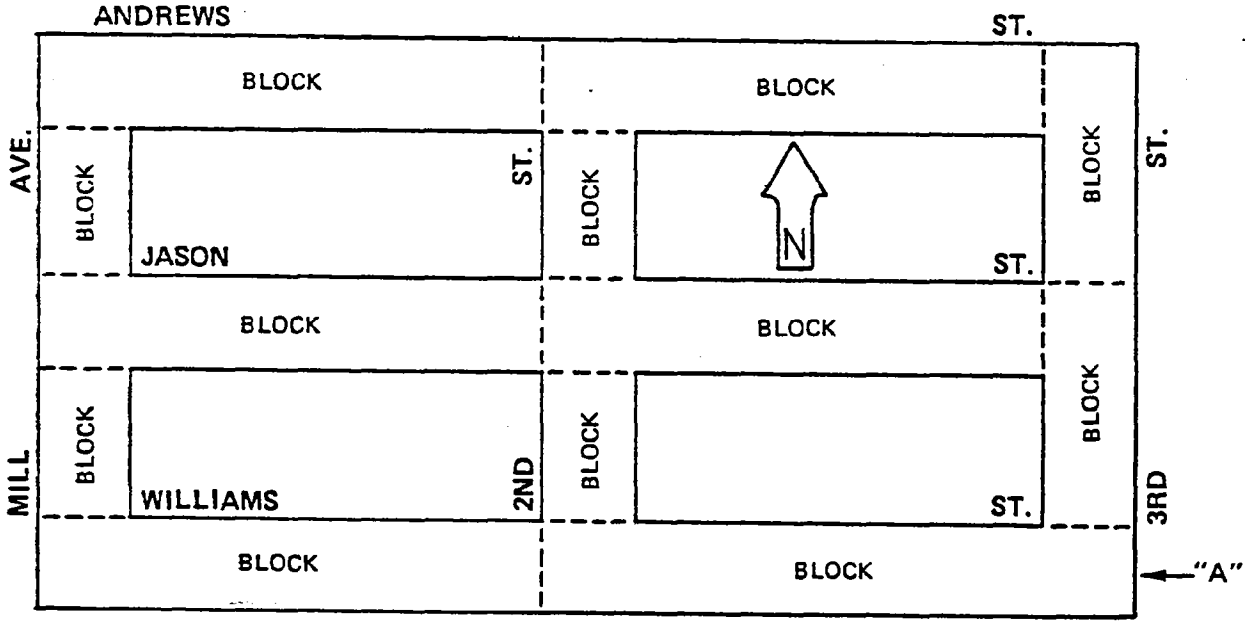
INDEX

*Paragraph Revised May 1980

STANDARD FOR POSTING BLOCK SYSTEM TO PLATS

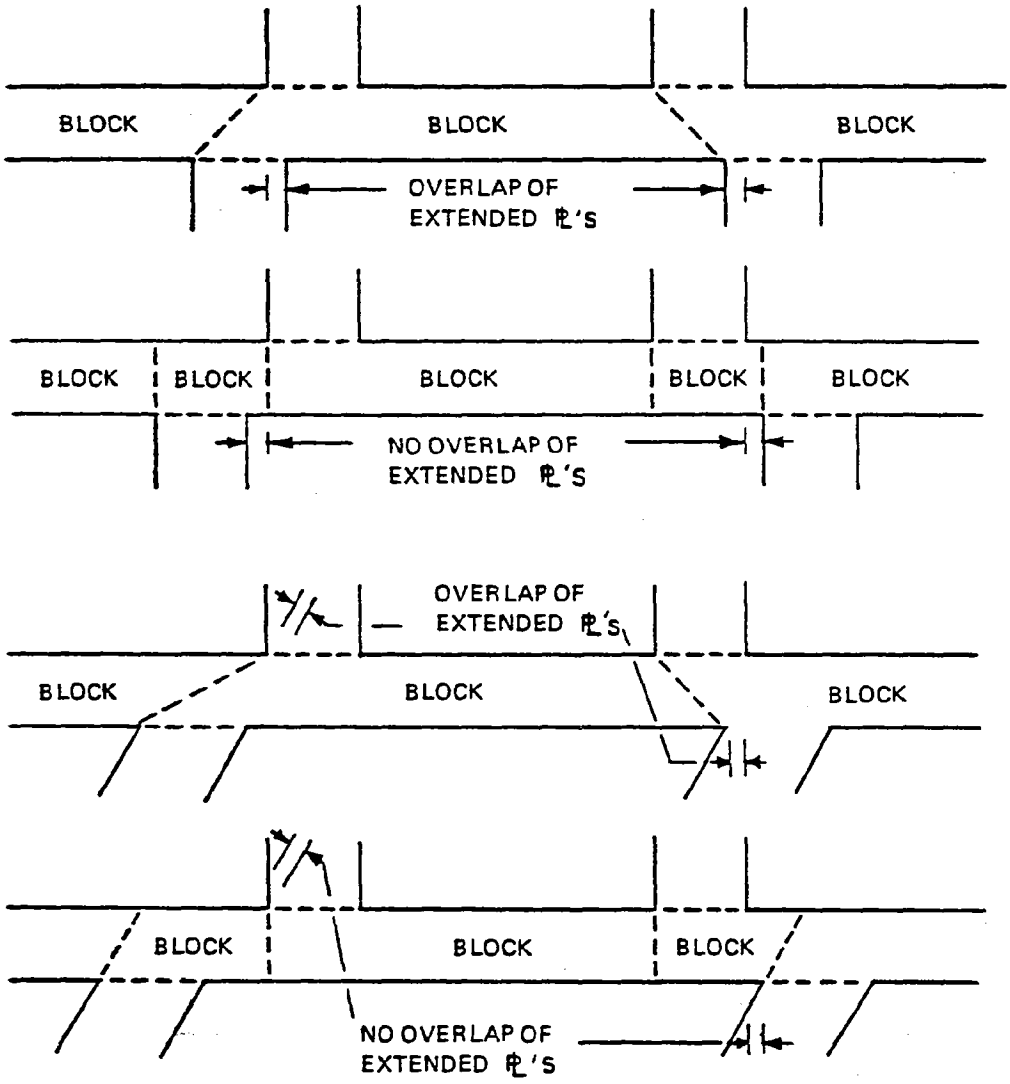
I. Block definitions
   A. General definition
      A block is an area in which gas main is installed or could be installed, and which is usually bounded by property lines, extensions, or connections of property lines.
   B. Types of blocks
      (In the following diagrams solid lines are property lines and short dashed lines are extensions or connections of property lines).
      1. Typical street block
         (The term street includes public roads, prescriptive right roads, highways and frontage roads where facilities exist).

Blocks formed by east-west streets include the intersection to the west and blocks formed by north-south streets include the intersection to the north. At common intersections the east-west block has preference. Exception is the intersections at 'A' (Intersection included with the block to the west). Street crossings at different grades are not considered intersections and blocks maintain their continuity.

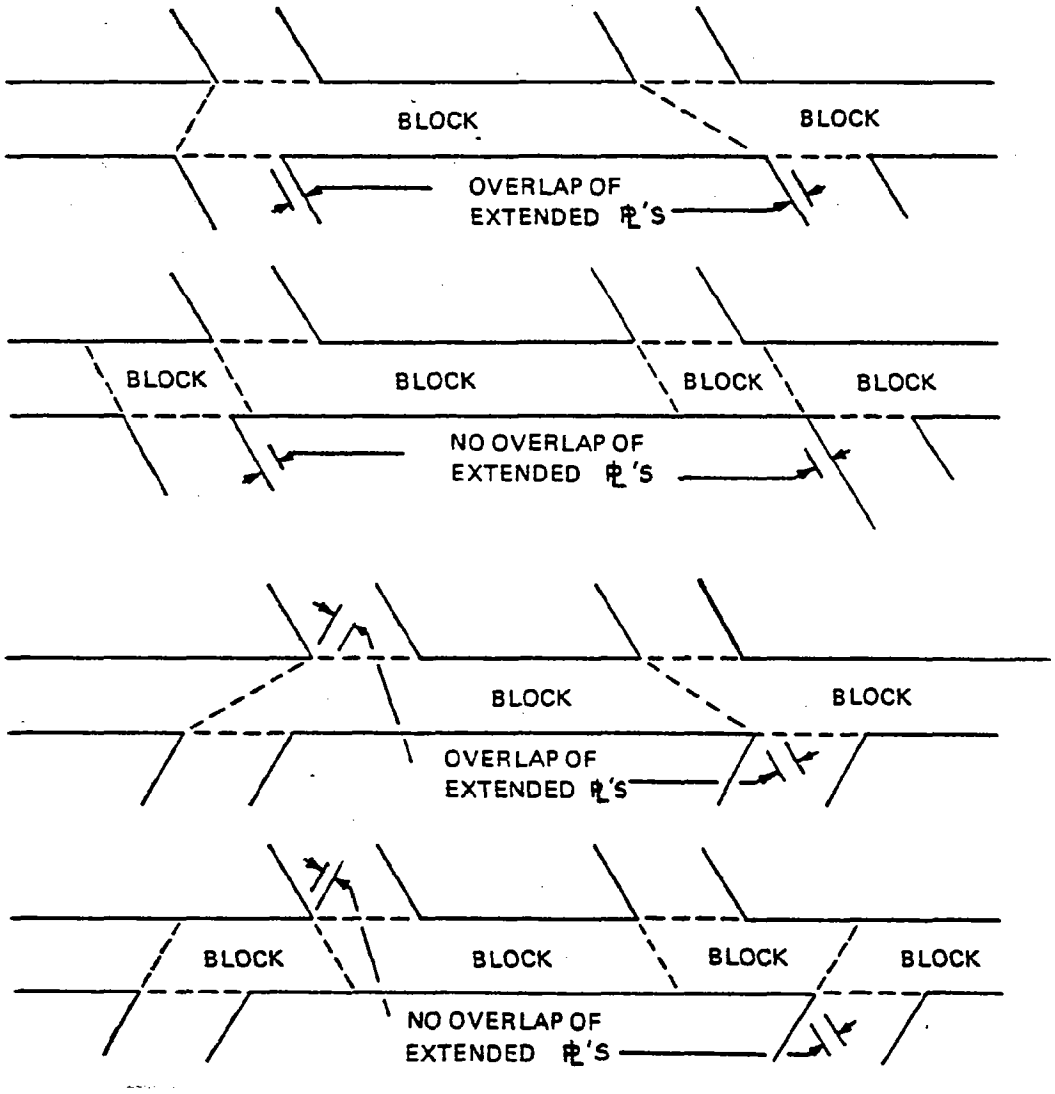


I. B. 2. Street blocks with offset intersections

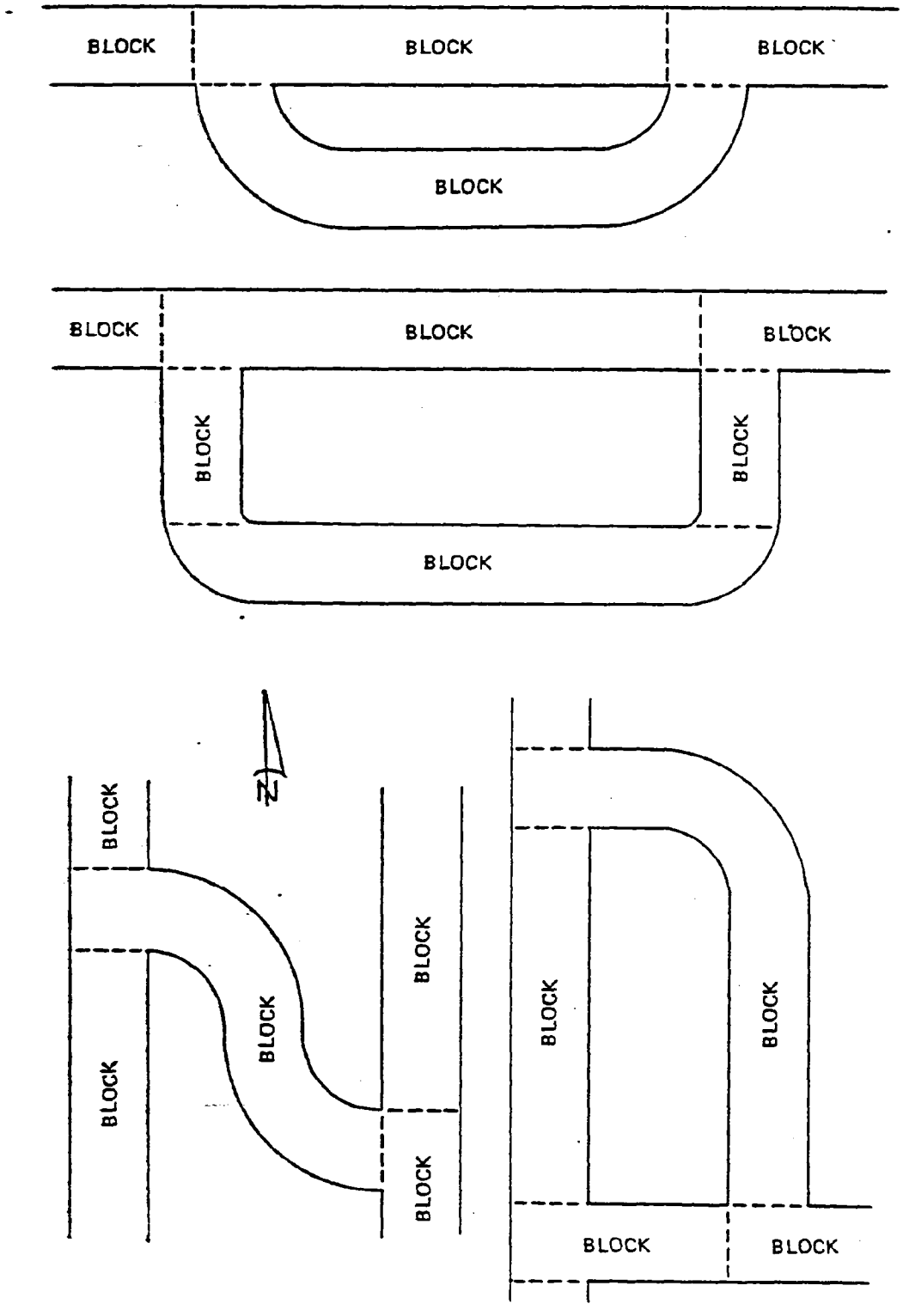
If the offset streets are extended across the intersected street and they overlap, the offset intersection is included with the proper block.
If the extended streets do not overlap, a separate block is formed.



I. B. 2. Street blocks with offset intersections (Cont'd.)

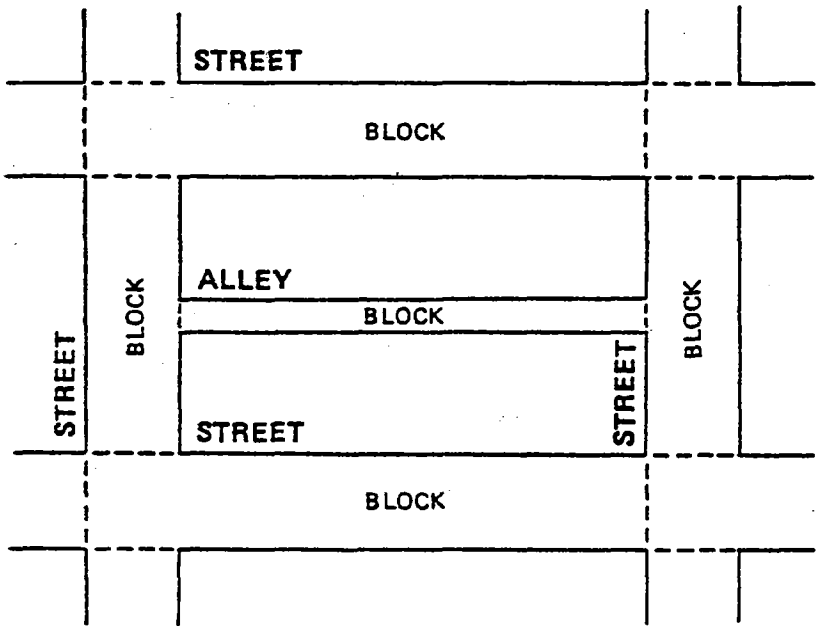


I. B. 3. Curved street blocks



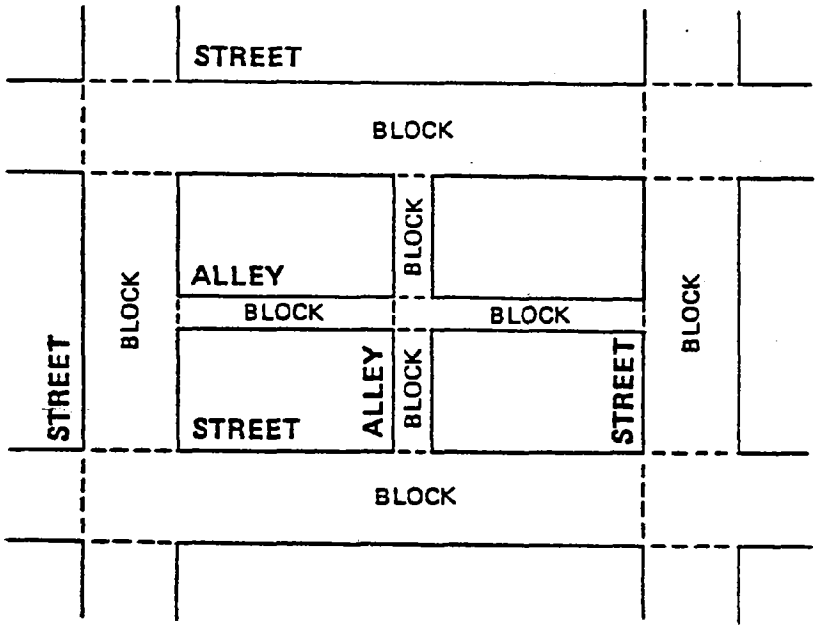
I. B. 4. Alley Blocks

Alley blocks which intersect streets do not break street block continuity.



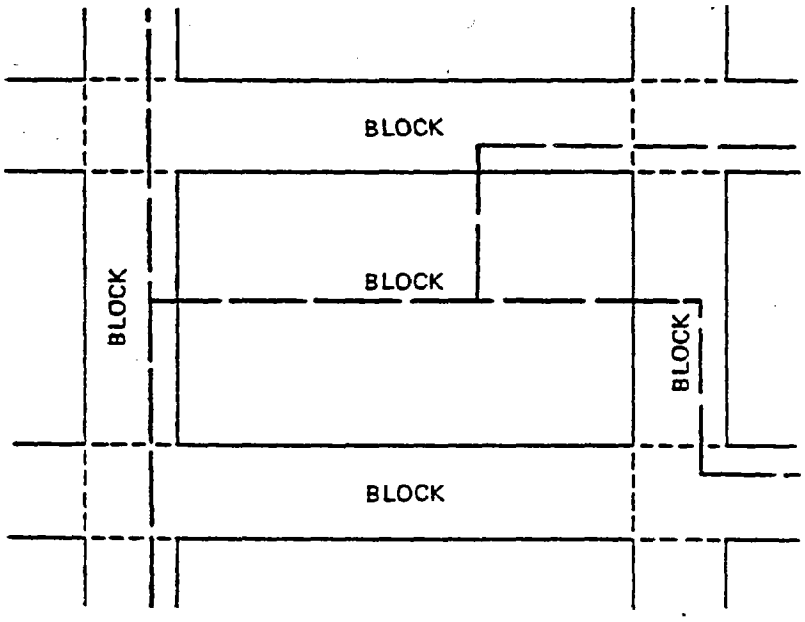
Network of alley

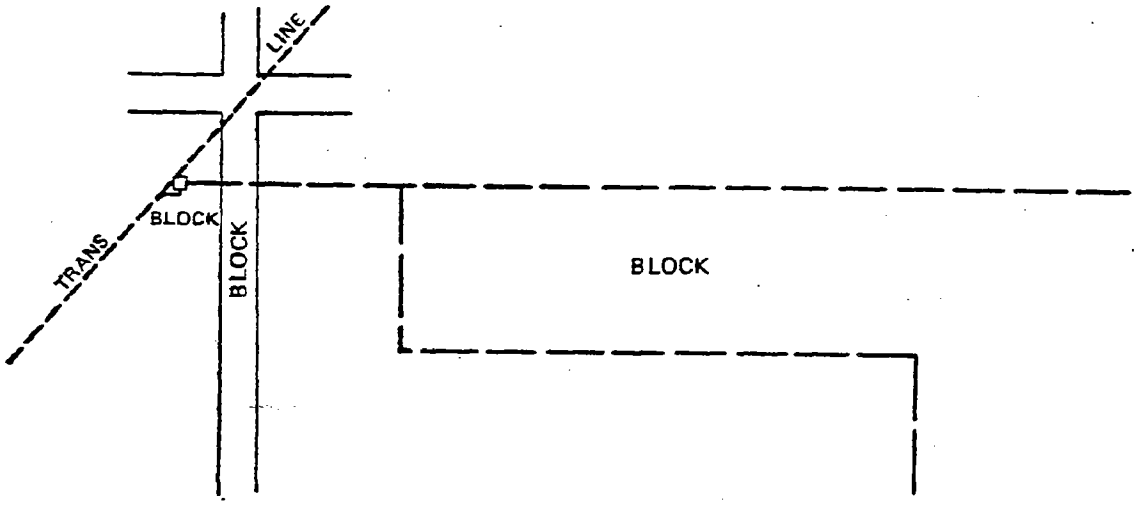
Network of alley blocks between streets follow street block limitation definitions.



I. B. 5. Private property and easement blocks

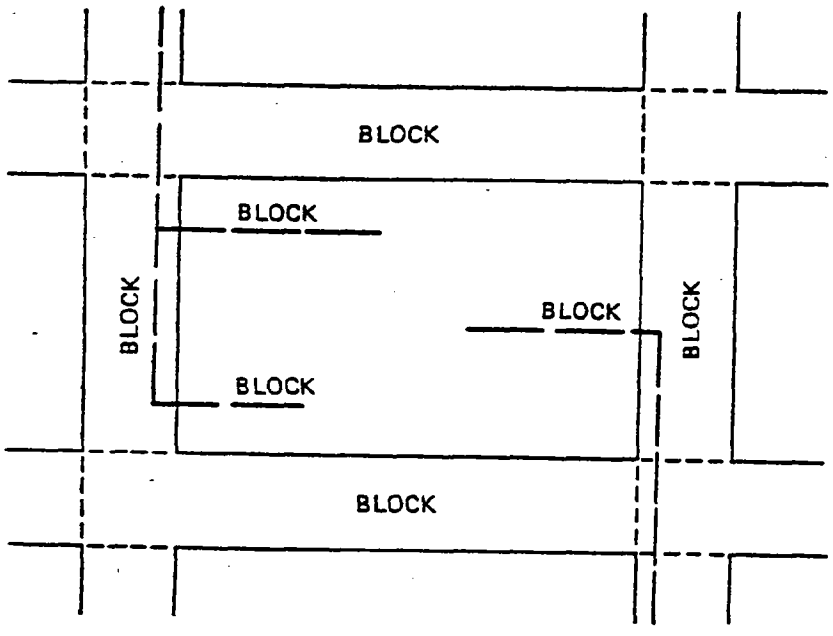
(Heavy dashed lines are gas mains).
A continuous gas main network on private property is considered to be within a single block.





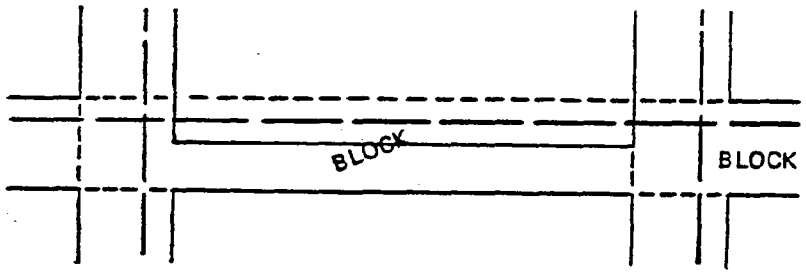
I. B. 5. Private property and easement blocks (Cont'd.)

Separated sections of gas main on private property are to be considered within separate blocks.

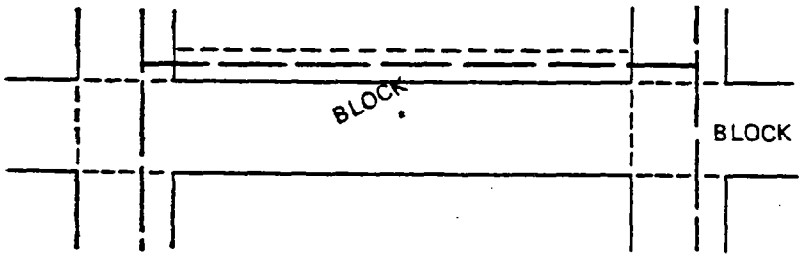


I. B. 5. Private property and easement blocks (Cont'd.)

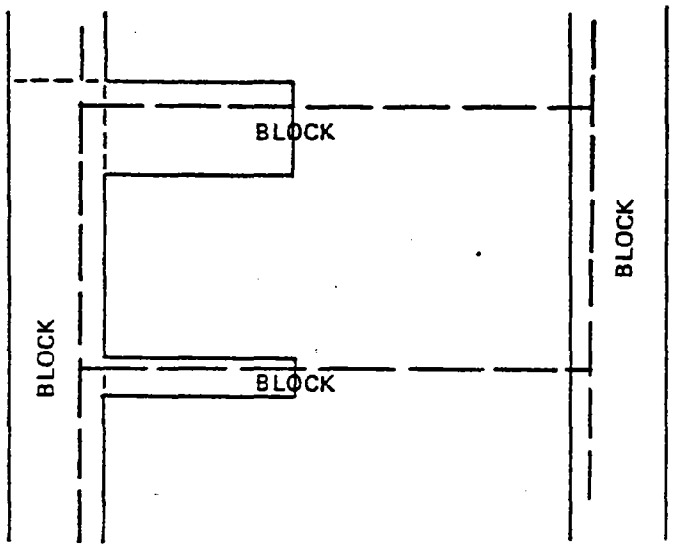
Block boundaries are to follow normal property line locations.



Block area to include gas main contiguous to street on R/W easement, etc.



I. B. 6. Dead end streets and alleys.



II. Block numbering

A. Assignments of blocks to plats

1. When block is assigned

A block is assigned to a plat that is drawn or designated to be drawn.

2. Block within plat border

When a block lies entirely within a plat border, the block will be assigned to that plat.

3. Block split by plat border

When a block is split by a plat border the block is assigned to that plat which contains the major area of that block.

B. Assignment of numbers to blocks

1. Blocks that are assigned numbers

Blocks assigned to a plat are in turn assigned a number if active gas main exists within the block or is likely to exist there in the future.

2. Block numbers form a series

The numbers assigned to blocks which belong to a plat, form a numbered series starting from one.

3. File reference number

The block number along with its plat number and wall map number forms the reference number to filed information concerning that block.

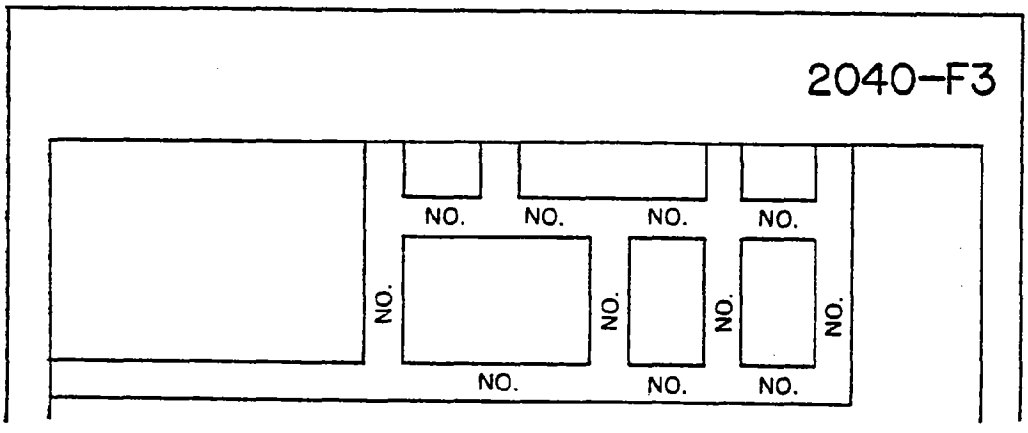
e.g. W. M. 2040 - P. S. B 7 - BL. 6

II. (Block numbering (Cont'd.)

C. Posting block numbers

1. Block within a plat border

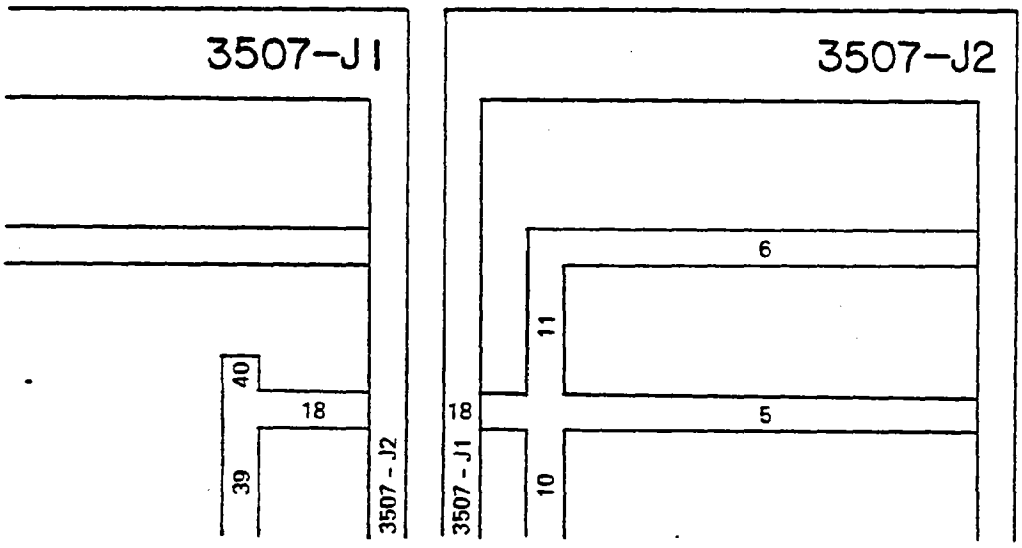
If a block lies entirely within a plat border, the block number will be posted within that block.



II. C. 2. Block split by plat border

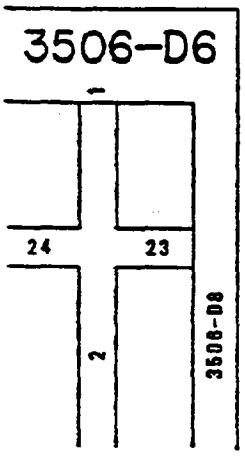
A block which is split by a plat border will have the block number posted to each plat. On the plat to which the block was assigned, the block number will be posted <u>within</u> the plat border and within the block area.

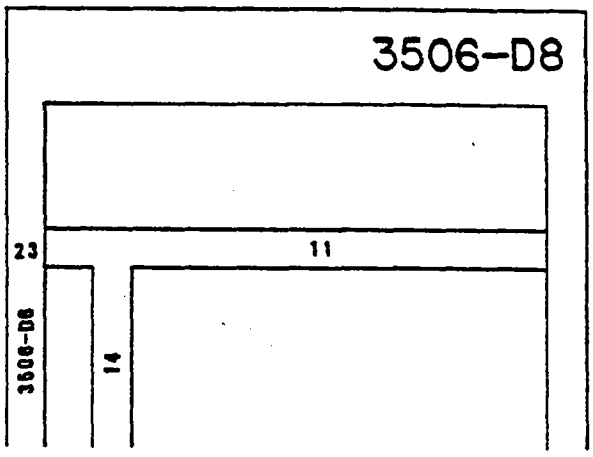
On the adjacent plat, the block number will be posted <u>outside</u> the plat border and contiguous to the split block. Thus, the block number posted outside the plat border together with the adjacent plat number and wall map number will supply the required reference.



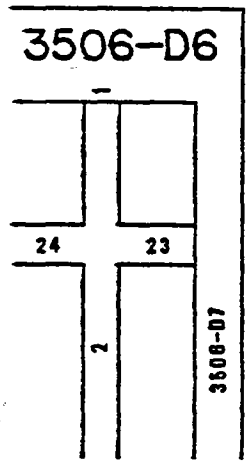
II. C. 2. Block split by plat border (Cont'd.)

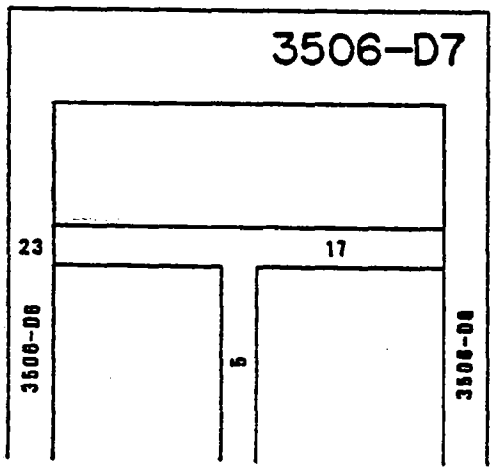
Where an intervening plat is not made and the adjacent plats contain the ends of a block that would traverse the missing plat, care must be taken not to assign different block numbers to that block.

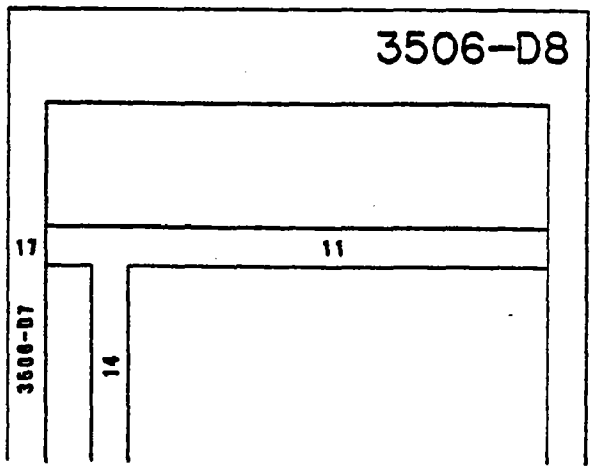




When the intervening plat is later made (in this case, D7) and has block numbers assigned to it which may alter the original numbering on the two earlier plats (D6 and D8), then the block and plat reference numbers must be changed on all plats.

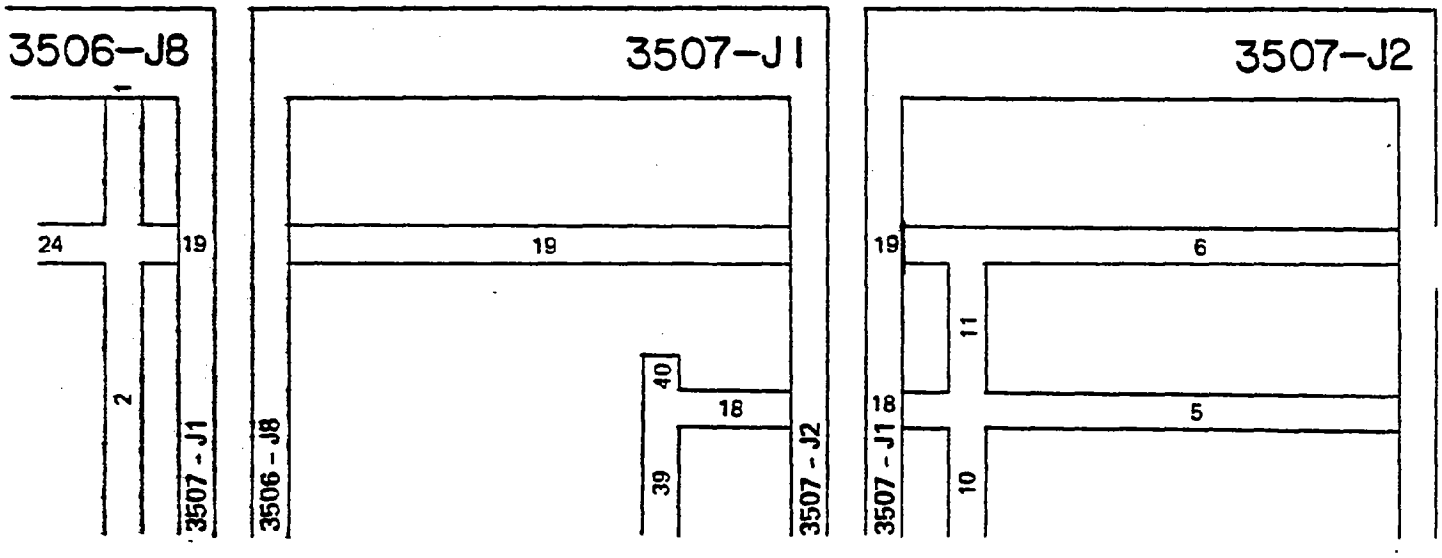






II. C. 2. Block split by plat border (Cont'd.)

Where the block traverses more than two plats, each plat through which the block traverses shall contain sufficient data to locate filed information.



II. C. 3. How to post block numbers

A block number is to be posted only once to a plat.

Where the number is posted within the block, it should be as near to the center as possible.

The number shall not interfere with the gas plant posting.

If it is impossible to post a number within a block area, post it so proper interpretation can be made.

A block number is not to be changed or relocated to another plat unless a new intersecting or abandoned block necessitates the changes.

Block boundaries are not to be drawn on plats.

4. When to post block numbers

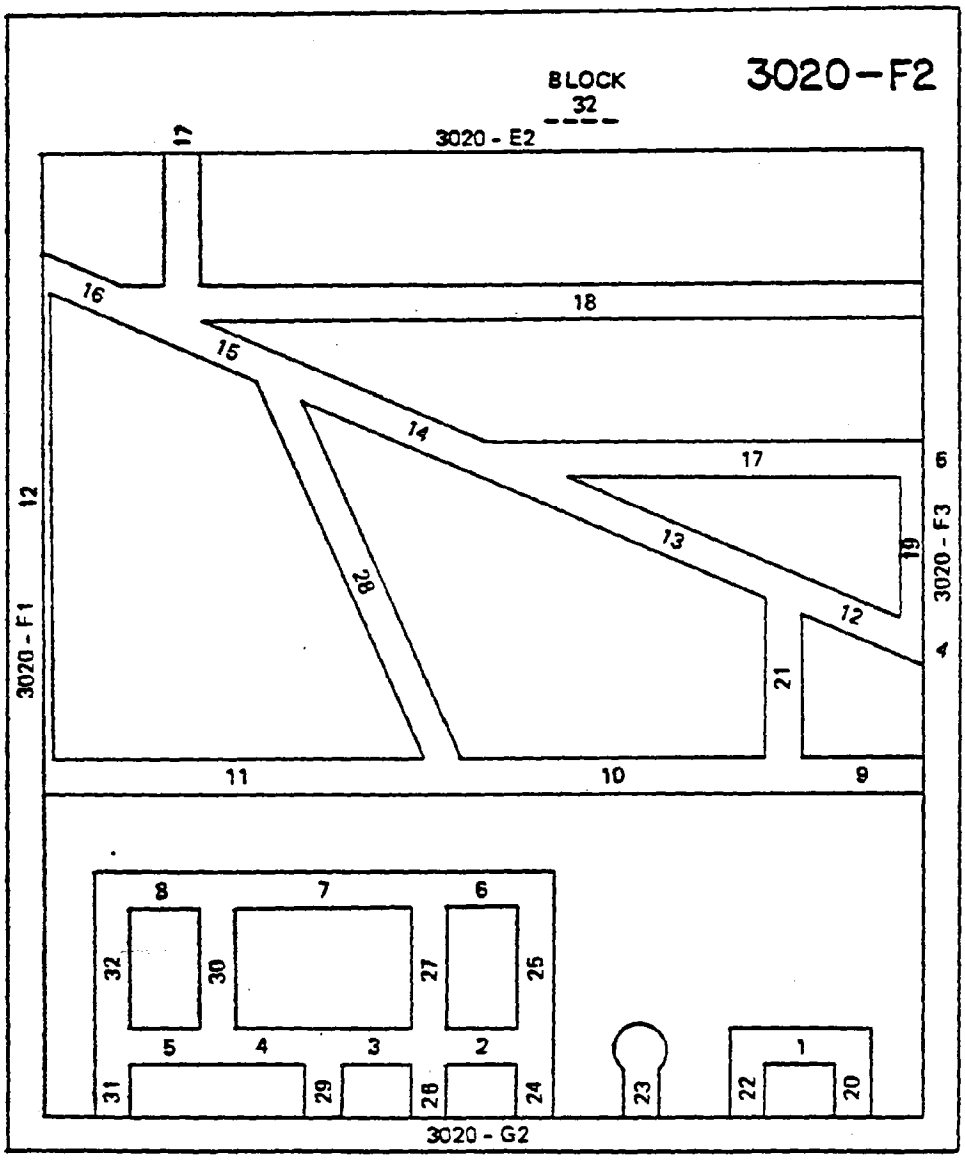
The block numbers will be posted to a plat after all gas plant has been posted.

II. C. 5. Sequence of block numbering

The numbering will begin with the east-west blocks, starting from the east and proceeding to the west. Do this in a pattern from south to north.

Number the north-south blocks next, starting from the south and proceeding to the north. Do this in a pattern moving from east to west.

Diagonal streets are to be incorporated in the above numbering pattern when the general east or north direction of each is determined. Determination is made by either service address, street name, or predominant direction.



Revised April 1981

II. C. 6. Size of block number

The block number will be posted with a #120 Wrico Guide and the Leak Repair Sketch designation with a #90 Wrico Guide.

7. Highest block number

The highest existing block number being used in a plat series is listed at the top of the plat in the space provided. This is to be updated as new blocks are added so subsequent block numbers can be easily determined.

III. Block changes

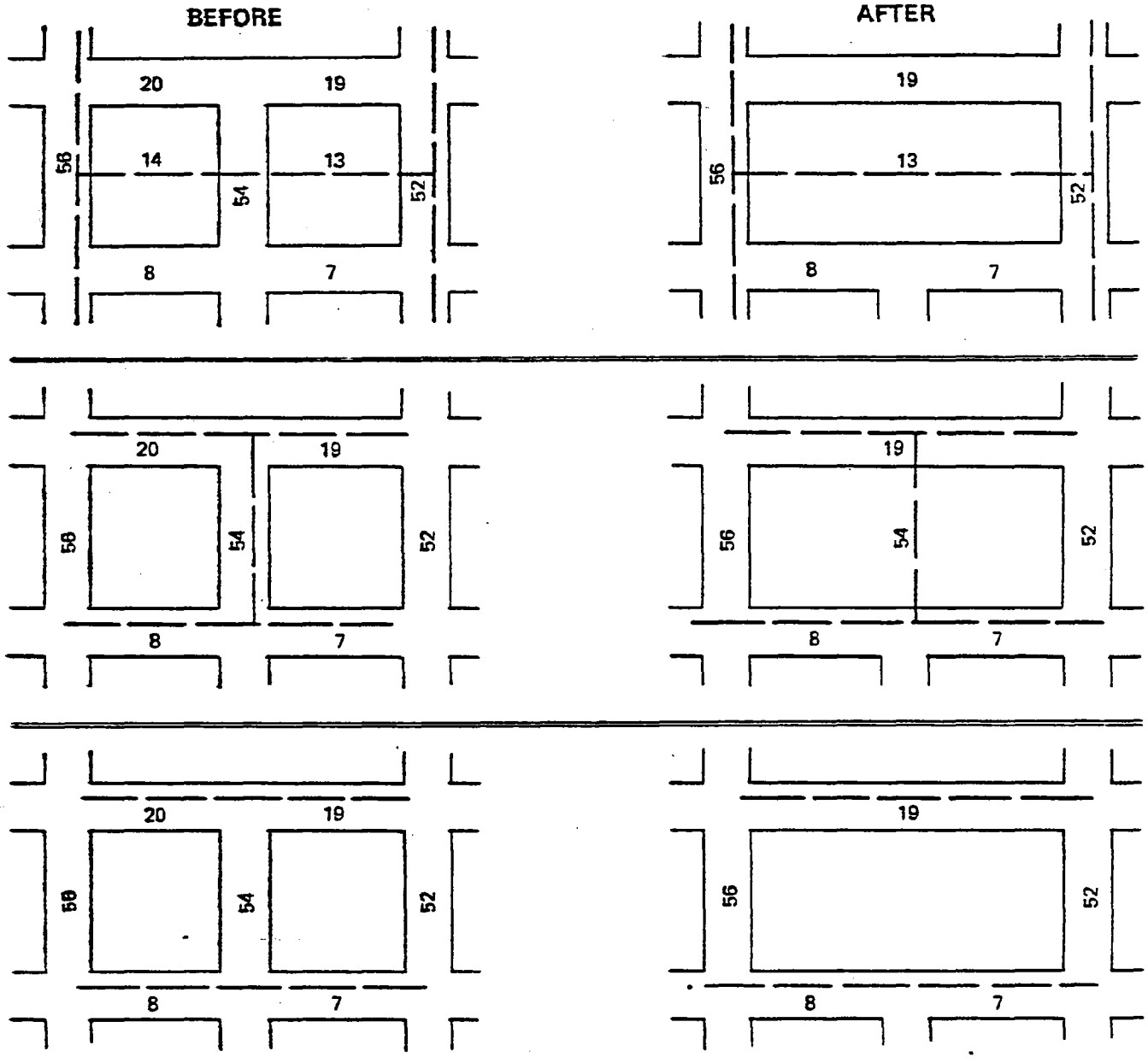
A. Geography changes

1. Streets or alleys altered

If streets or alleys are extended, shortened, or the width is changed, a re-evaluation of number assignment should be made to maintain prescribed standards.

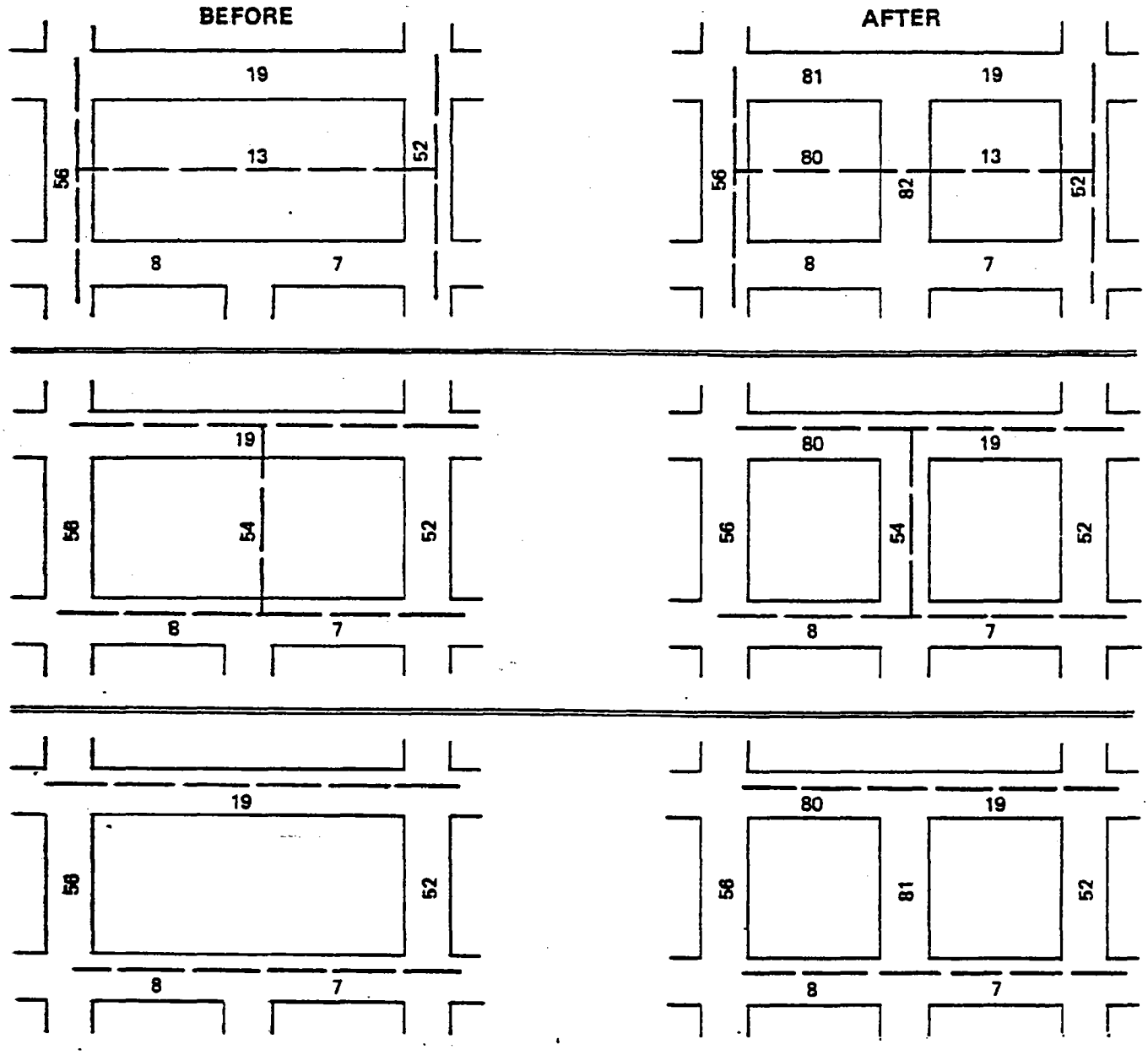
III. A. 2. Abandoned streets

When a street is abandoned and its removal eliminates the requirement for block separations, the previously separated blocks are combined: one block number remains while the other becomes inactive. The inactive numbers are listed next to the highest block number at top of plat.



III. A. 3. New streets

When a street is formed and results in block divisions, the separated blocks are renumbered. If gas main is involved, re-evaluation of the block and number is necessary. If a new number is used, correct highest number at top of plat. If an inactive block number is used, erase the reference to it at top of plat. Inactive block numbers must be used first, starting with the lowest number up to the highest, before the next highest new block number is used.



III. B. Gas Plant changes

1. Main installed

When a gas main is installed in a block where no number exists, a new or inactive number is assigned to the block. The block data at top of plat is then up-dated. Inactive numbers must be used first in numerical order, from smallest to largest, before the next highest new block number is used.

2. Main abandoned

When a gas main is abandoned with street or alley abandonment, the block number is removed from the block area and listed at top of plat as an inactive number. These inactive numbers must be used first in numerical order, from smallest to largest, before the next highest new block number is used.

3. Any changes in block area or main may require up-dating and/or changing filed records. All records must be checked for adequacy and correctness after changes are made on plats.

All pipeline corrosion coatings fall within one of the listed categories. Acceptable abbreviations are in parentheses. Other names for coatings in the category are listed. Use only the category names or abbreviations shown for all records.

1. HOT APPLIED ASPHALT:
   (H. A. Asph.)

   Asphalt
   Asphalt Enamel w/Felt
   Felt
   Fiberglass
   Hot Asphalt
   Paint and Floatine.
   P-2 Wrap
   Single Wrap
   Double Wrap
   Triple Wrap
   Decoto Wrap
   White Mica Coated

2. SOMASTIC:
   (Som.)

   Somastic Asphalt

3. COLD APPLIED TAPE:
   (Tape)

   Polyken Tape
   Plastic Wrap
   Plastic Triple Wrap
   Line Travel Wrap
   Plastic Double Wrap
   Polyken Coat

4. EXTRUDED PLASTIC:
   (Ex. Pl.)

   Plastic Coat
   Polypropylene
   X-Tru Coat

5. FUSION BONDED EPOXY:
   (F. B. Ep.)

   Napguard Coated
   Scotch Kote

6. BARE:

   Uncoated

7. COAL TAR:
   (C. Tar)

   Coal Tar Coating
   Mastic

8. PAINT

Notes: 1. For coatings applied in Decoto:
   (a) before 1970 - all sizes - hot applied asphalt.
   (b) 1970 and 1971 - 16" and larger - hot applied asphalt.
   (c) 1970 and after - 12" and smaller - cold applied tape.
   (d) 1972 and after - all sizes - cold applied tape.

2. Concrete and gunite coatings are used to provide negative buoyancy. They do not give corrosion protection. As they are actually weights, their presence should not be shown under "Coating" on the pipeline survey sheets. However, the presence of these weights and coatings should be indicated on the pipeline survey sheets and must be on gas transmission plat sheets and other applicable records.

CHG.	DATE	DESCRIPTION	APPRD.	CHG.	DATE	DESCRIPTION	APPRD.
1	11-74	CHANGED NOTE 2					
0	3-72	ISSUED FOR USE.					

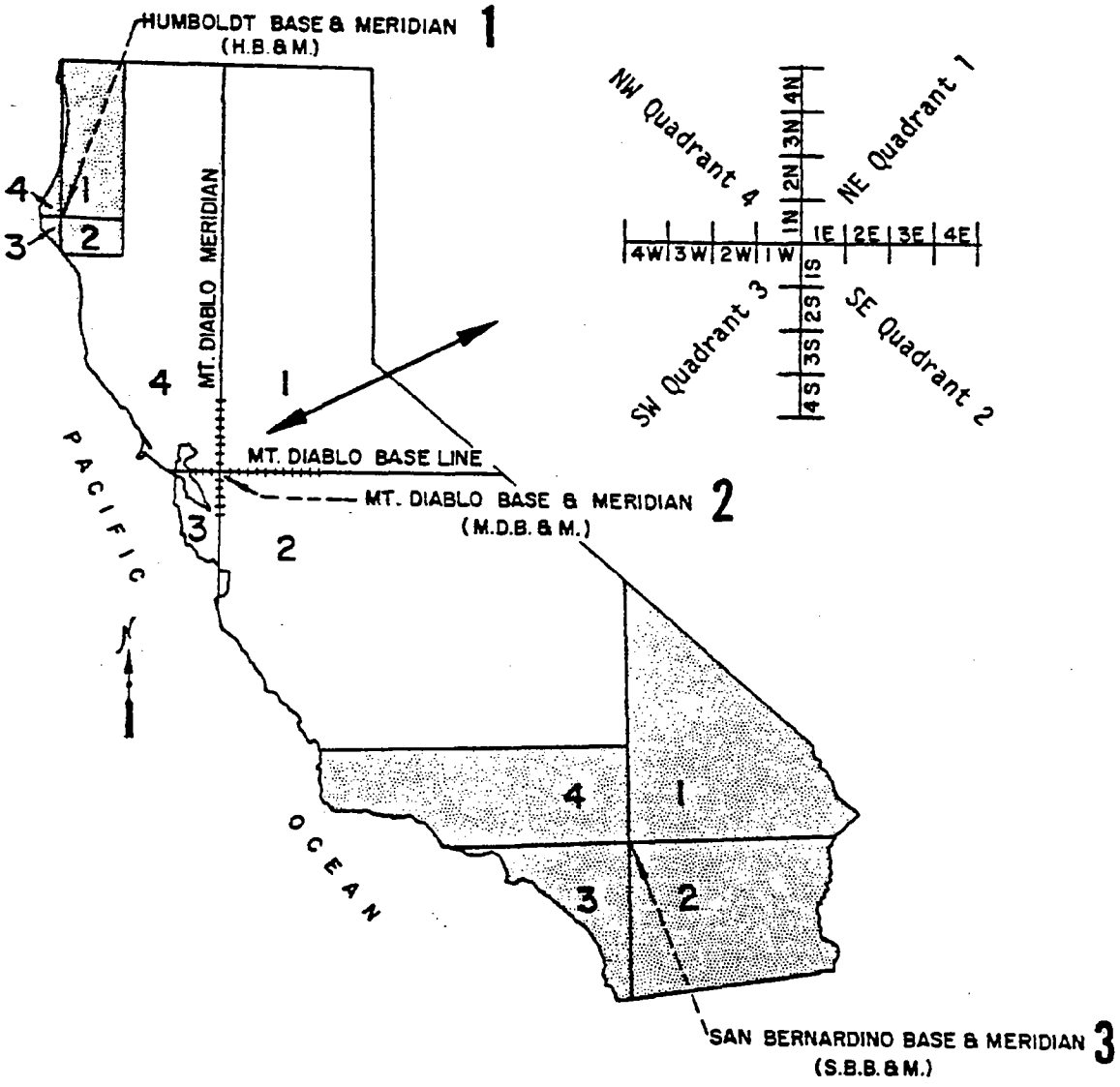
APPROVED

BY	PIPING - DATA SHEET	SUPERSEDES	
DSGN.	NAMES OF PIPE COATINGS FOR USE ON PIPELINE SURVEY SHEETS & OTHER RECORDS	SUPERSEDED BY	
DR.		SHEET NO.	SHEETS
CH.	GAS STANDARD	DRAWING NUMBER	CHANGE
O.K.	PACIFIC GAS AND ELECTRIC COMPANY	086373	1
DATE 3-72	SCALE		

PRINTED ON DIEPO NO. 1000N CLEARPRINT 4-71

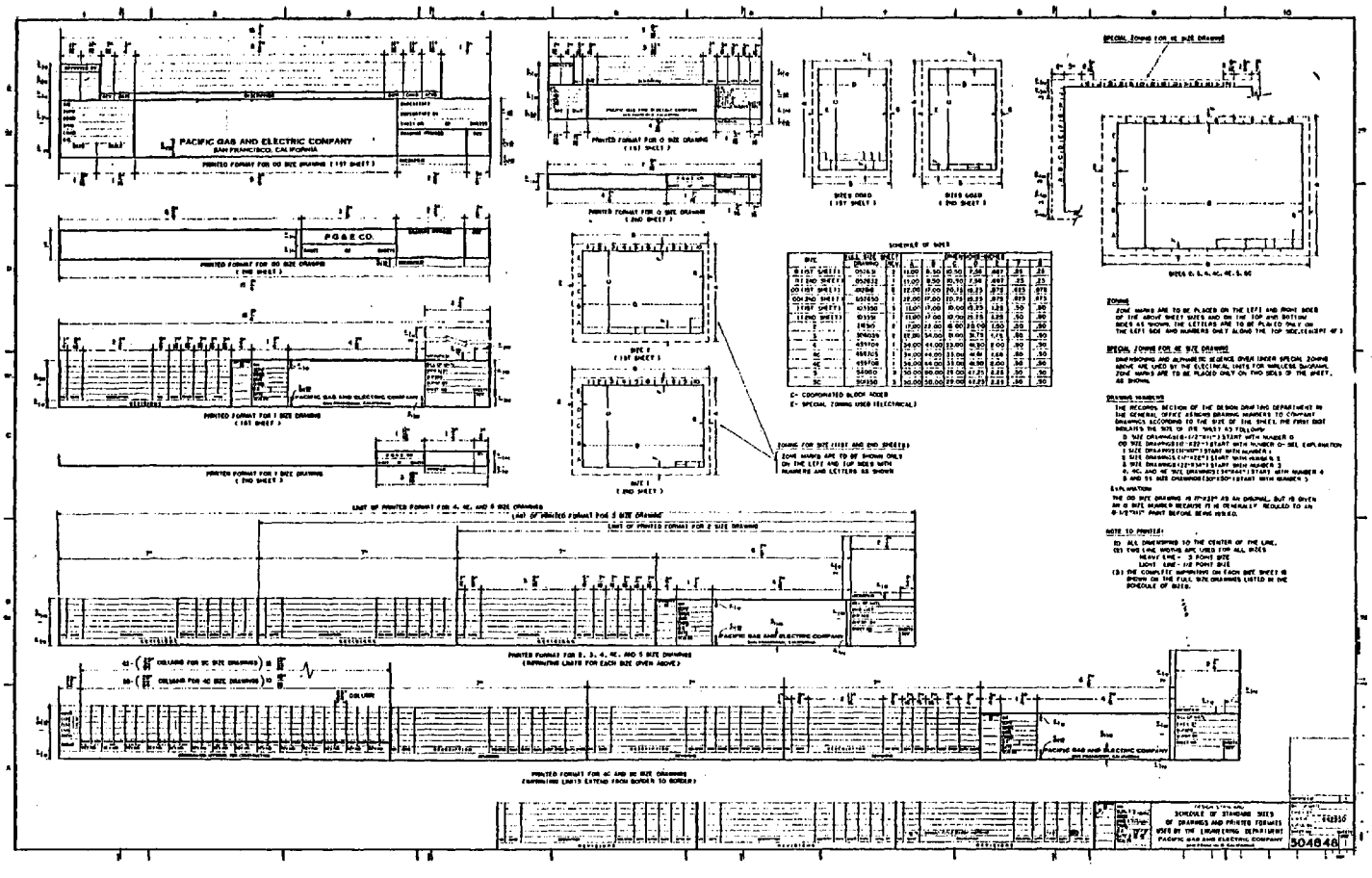
GENERAL OFFICE LAND DEPARTMENT

DOCUMENT NUMBERING SYSTEM



DOCUMENT NUMBER 2102-05-0344

- 2102 — Base & Meridian, Mt. Diablo
- 21 — Quadrant, 1 N & E
- 02 — Township, 2N
- 05 — Range, 5E
- 0344 — Document Number



Supplement Std. Prac. 410.21-1 - Pg. 70

STANDARD DRAWING SIZES

GENERAL OFFICE ENGINEERING DEPARTMENT

Sheet Size	General Office	Letter Size	Alphabetical (outside)	
8½"x 11"	"0"	1	"A"	
17" x 22" *	"00"	4 X	-	
11" x 17"	"1"	2 X	"B"	
17" x 22"	"2"	4 X	"C"	
22" x 34"	"3"	6 X	"D"	
34" x 44"	"4"	8 X	"E"	
30" x 50"	"5"		"J"	(34" Roll)
Large odd Size	"5 oversize"		"K"	(44" Roll)
Vendor	"6"			

* "00" size Drawing is 17" x 22" as an original but is given an "0" size number as it is generally reduced to 8½"x 11" prints

G.O. Engr. Department drawing number designations

1st Digit - Original Drawing size ("0", "1", "2" etc.)

2nd Digit - Department origin. Gas Operations "8" number on all sized drawings. All other numbers are maintained by Engineering Records, Design Drafting Department, 21st floor, 77 Beale Street.

3rd through 6th Digits - Actual drawing number.

General Office Land Department

"A" According to size - Max. 17" x 25"

"B" Standard size (tracings) - 18" x 23"

"C" Subdivision Maps only - regardless of size

"D" According to size - max. 24" x 36"

"L" Tracings & Prints - max. 9" x 14"

"R" Large size drawings 36" x 48"

A, D, L & R - Drawings made by PGandE according to size with exception of Record of Survey and Parcel Maps.

A, D, L & R - Drawings made by others according to size, no exceptions other than Subdivision Maps

D - Record of Survey Maps and Parcel Maps only, made by PGandE.

Supplement Std. Prac. 410.21-1 - Pg. 73