

RIVERSIDE CITY OF RIVERSIDE CALIFORNIA



PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE FORCE MAIN PIERCE ST. TO MEGGINSON LN.

CONSTRUCTION LEGEND



- (F)** INSULATION FLANGE (SEE PUBLIC UTILITIES STANDARD CWD-923)
- (105)** PROTECT WATER LINES AGAINST SEWAGE CONTAMINATION BY ENCASING FORCE MAIN. THE NUMBER INDICATES THE LENGTH OF CASING REQUIRED EACH SIDE OF THE WATER LINE & (IN SOME CASES THE STATIONS OF THE BEGINNING AND END OF THE CASING ARE SHOWN). SEE SH. 16 FOR DETAIL.
- (TL)** TEST LEAD (SEE PUBLIC UTILITIES STD. CWD-922, EXCEPT PAINTED FACILITIES ARE ORANGE INSTEAD OF YELLOW)
- (L)** REPLACE TRAFFIC DETECTOR LOOP (6'x6')
- (W.L.)** WELD ALL JOINTS 360° (CML & C AND CONCRETE CYLINDER OPTIONS) OR PLACE MECHANICAL JOINTS (DUCTILE IRON OPTION) WITHIN THE DISTANCE FROM THE FITTING OR WATER LINE CROSSING AS INDICATED IN THE BOTTOM HALF OF THE HEXAGON.
- (ST)** PLACE ANTI-CORROSIVE SURFACE TREATMENT (SEE SPECIAL PROVISIONS) ON THE LINING OF THE FITTING AND PIPE TO 6' EACH SIDE OF THE ANGLE POINT.

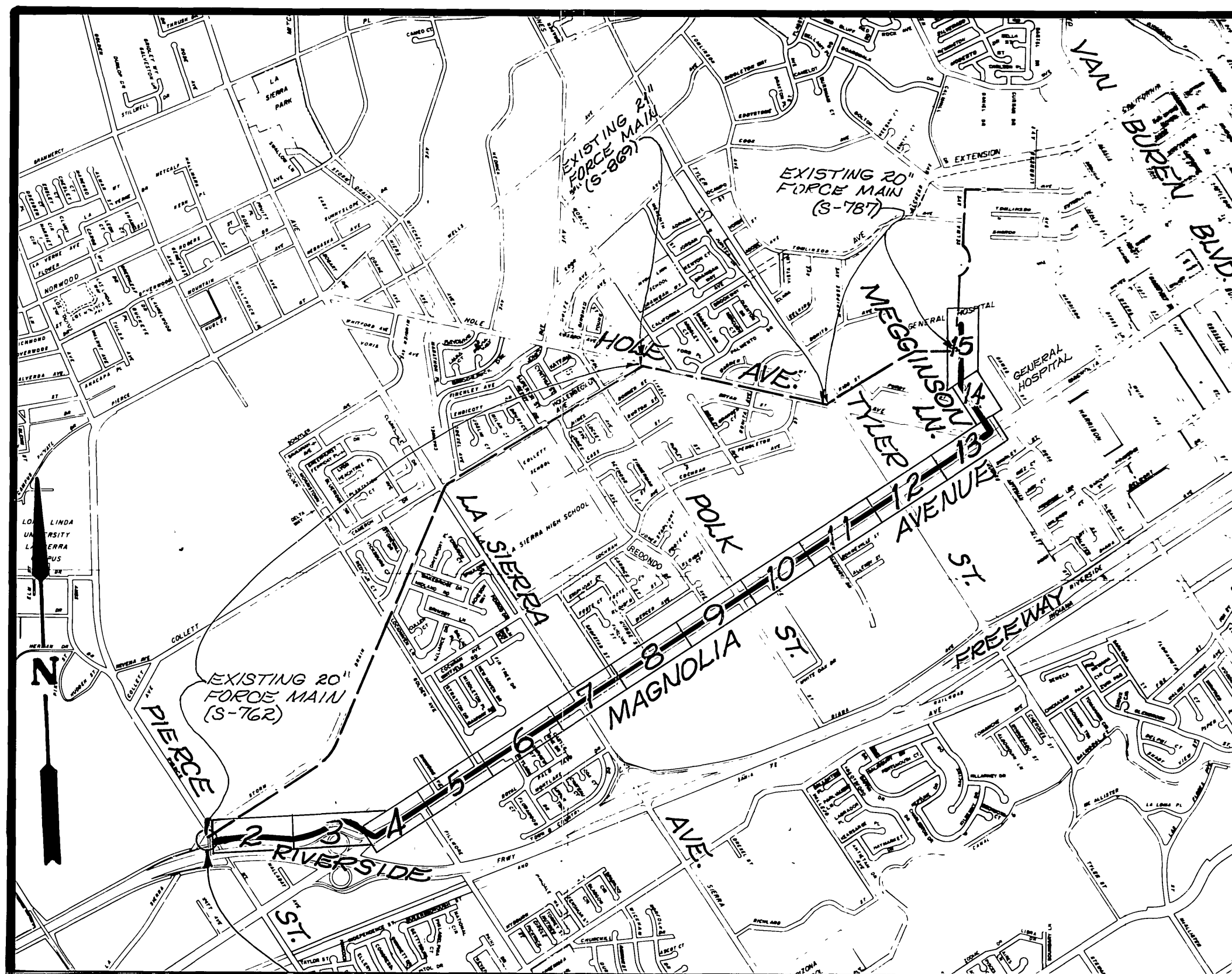
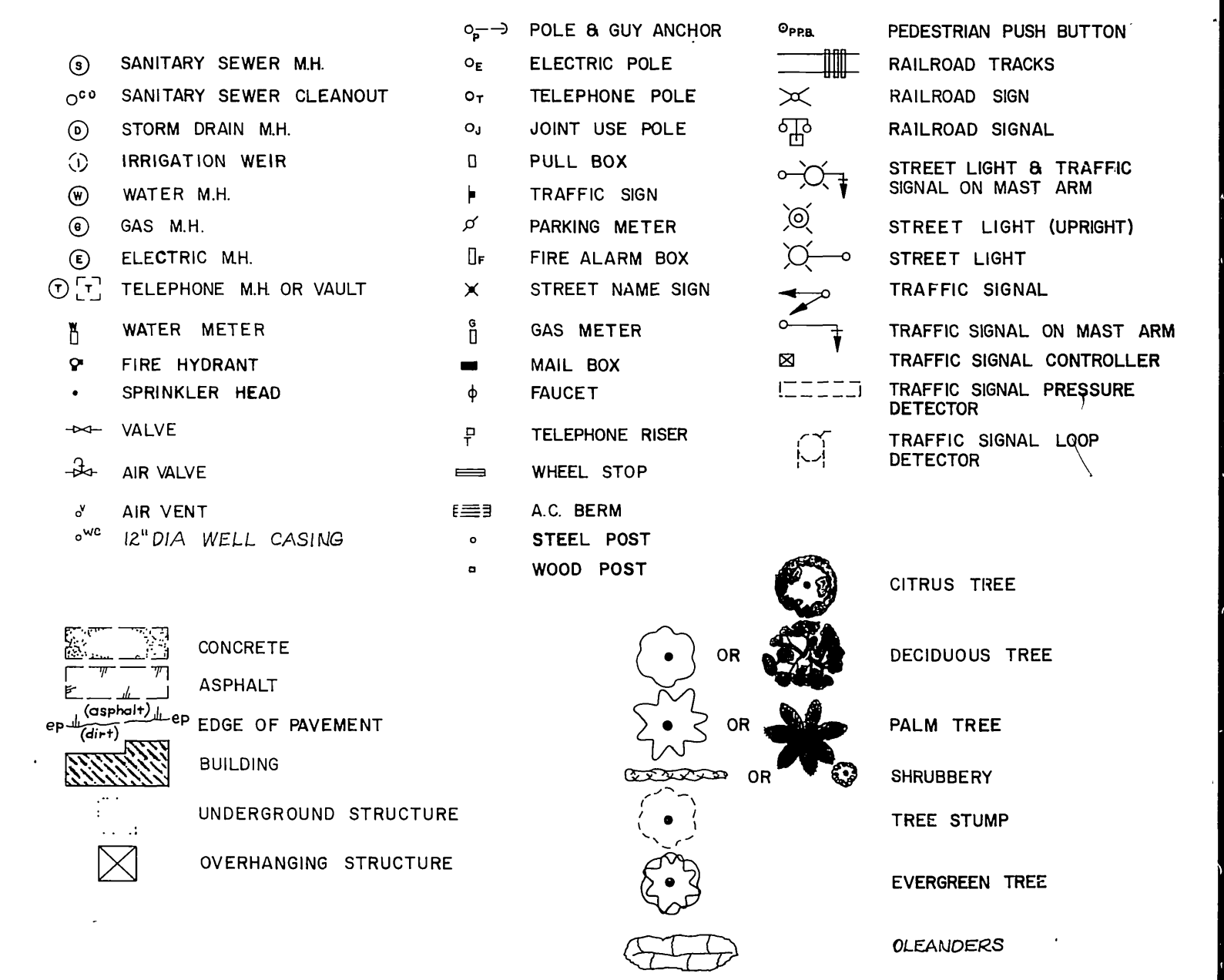
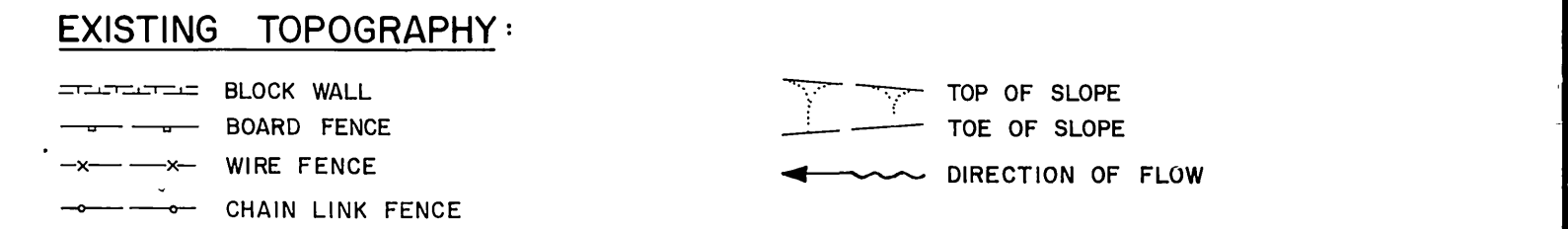
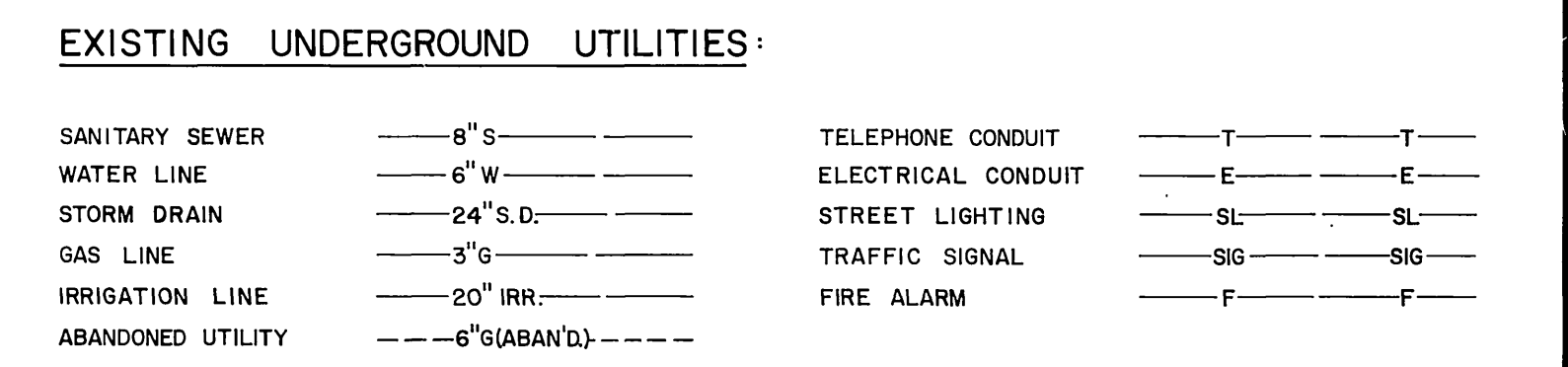
SPECIFIC CONSTRUCTION NOTES

- (100)** NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE RESPECTIVE STANDARD DRAWING AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN OR COVER SHEET BELOW. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.
- (M.H.)** SPECIAL MANHOLES (NEW OR RECONSTRUCTED) ON SHEETS 14 & 15. THE LETTER CORRESPONDS TO A PARTICULAR MANHOLE. THESE MANHOLES SHALL BE LINED OR COATED. SEE SH. 16 AND SPECIAL PROVISIONS.
- (T)** REMOVE EXISTING TREE. CLASS IS SHOWN ON PLAN.
CLASS I - 6" TO 18" DIA
CLASS II - OVER 18" TO 36" DIA
CLASS III - OVER 36" DIA

GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION SHALL CONFORM TO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" 1979 (D-10), THE STATE STD. SPECS., STD. PLANS (DATED JANUARY, 1981), AND SPECIAL PROVISIONS. PIPE MATERIALS FOR THE FORCE MAIN SHALL BE ONE OF THE FOLLOWING:
A. CONCRETE CYLINDER PIPE (SECTION 207-4)
B. STEEL PIPE - CML & C (SECTION 207-10)
C. DUCTILE IRON PIPE, CEMENT MORTAR LINED, WITH POLYETHYLENE ENGAGEMENT (SECTION 207-9)
2. SEE SH. 16 FOR STEEL ENCASEMENT DETAIL.
3. SEE SH. 16 FOR BEDDING DETAIL.
4. EXISTING UTILITIES SHOWN ON THIS PLAN ARE PLOTTED FROM UTILITY RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN ON THIS PLAN. IF THE COVER OF A UTILITY IS KNOWN IT IS SHOWN IN THE PROFILE. UTILITIES SHOWN IN THE PROFILE AS "INDICATES THAT COVER IS UNKNOWN, BUT THE UTILITY IS NOT EXPECTED TO CONFLICT WITH THE PROPOSED IMPROVEMENTS.
5. CONFLICTING SIGNAL CONDUITS WILL BE RELOCATED BY THE CONTRACTOR. (SEE PLANS AND SPECIAL PROVISIONS)
6. SURPLUS EXCAVATED MATERIAL FROM TRENCHING OPERATIONS CAN BE PLACED IN AREAS WHERE THE PIPE HAS LESS THAN THE REQUIRED MINIMUM 15' OF COVER AS INDICATED ON THE PLANS. SEE SPECIAL PROVISIONS FOR GRADING REQUIRED AND FOR SPECIFIC EXCAVATED MATERIAL DISPOSAL AREA.
7. STORAGE OF CONSTRUCTION MATERIAL OR EQUIPMENT SHALL NOT BE ALLOWED IN LANDSCAPED MEDIANS OR PARKWAYS. PRESERVE AND PROTECT ALL EXISTING TREES IN ALL MEDIANS AND PARKWAYS.
8. SEE SHEET 16 FOR OLEANDER PLANTING DETAIL.

EXISTING UNDERGROUND & TOPOGRAPHY LEGEND



"PIERCE STREET SEWAGE PUMP STATION ENLARGEMENT" SEE SHEETS 2 & 16 & DWG. 3-1197

CONDITION	Q (cfs)	V (fps)	HEAD LOSS (psi)		NOTES
			STATIC	FRICTION TOTAL	
EXISTING F.M. (2,115' 2" / 1,603' 20")	12.5	5.20, 5.73	34	18	52 A, D
PROPOSED F.M. (13,860' OF 24")	25	10.40, 11.46	34	72	106 B, E
COMBINED F.M.s (6.25 each)	12.5	3.98	36	8	44 A, D
	25	7.96	36	32	68 B
	6.25 each	2.60, 2.86, 1.94			38 EA. F.M. C

SURGE PRESSURE IS 26 ± 1 PSI, DEPENDING ON THE PIPE MATERIALS USED
 NOTES: A. PRESENT FLOW OF 12.5 cfs PUMPED THROUGH EITHER F.M.
 B. FUTURE FLOW OF 25 cfs PUMPED THROUGH EITHER F.M.
 C. PRESENT FLOW SPLIT - 6.25 cfs TO EACH F.M.
 D. ULTIMATE FLOW SPLIT TO EACH F.M.
 E. EXIST F.M. SHALL NOT BE USED UNDER THIS CONDITION BECAUSE PRESSURE EXCEEDS DESIGN PRESSURE OF THE SYSTEM.

FB-1029/25
 ELEV - 690.41
 BM - PK NAIL IN N'LY CORNER OF EAST HEADWALL OF FLOOD CONTROL CHANNEL 300' N'LY OF FREEWAY CROSSING AT PIERCE.

PROJECT LOCATION PLAN

SCALE 1" = 1600'

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT

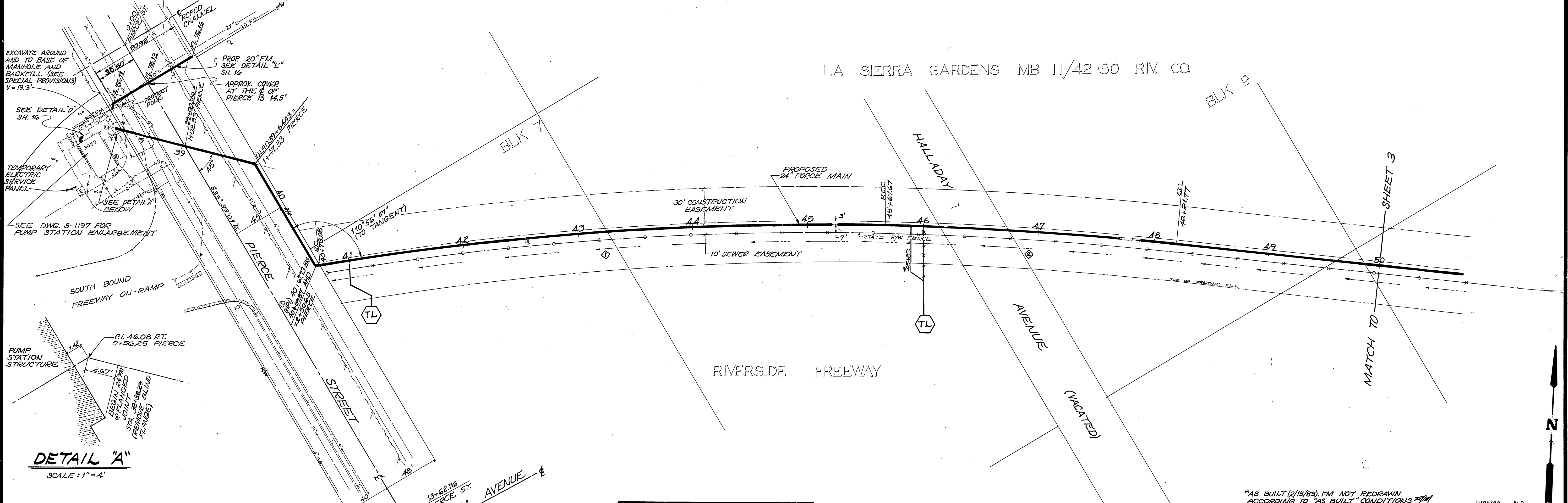
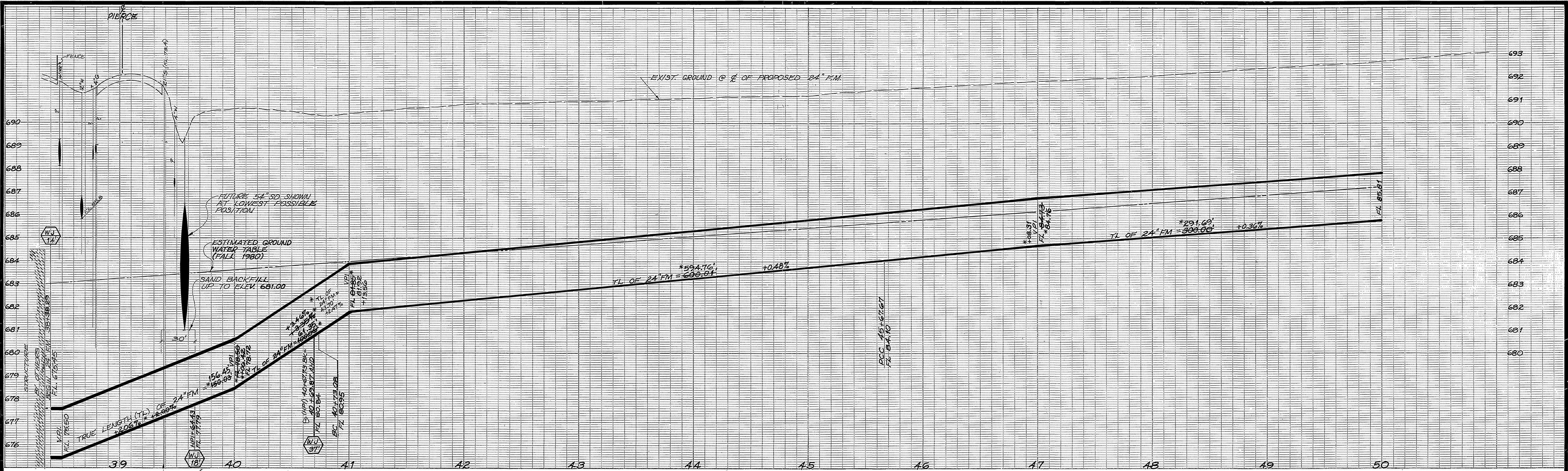
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PRINCIPAL ENGINEER	9/3/81	PUBLIC WORKS DIRECTOR	9/3/81
PARK DEPARTMENT	1-21-81		
TRAFFIC DIVISION	9-1-81		
CHIEF P.W. ENGINEER	8-21		

MAGNOLIA AVENUE FORCE MAIN
 FROM PIERCE TO MEGGINSON

S-1188

SHEET 1 OF 16

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature]



DETAIL "A"
SCALE: 1" = 4'

-CAUTION-
PACIFIC TELEPHONE
CABLES UNDERGROUND
BEFORE EXCAVATING
CALL COLLECT:
7:30 A.M. to 5 P.M. & Holidays
After Hours
714-633-0811 714-547-6606
Orange County 714-684-0071 714-547-6605

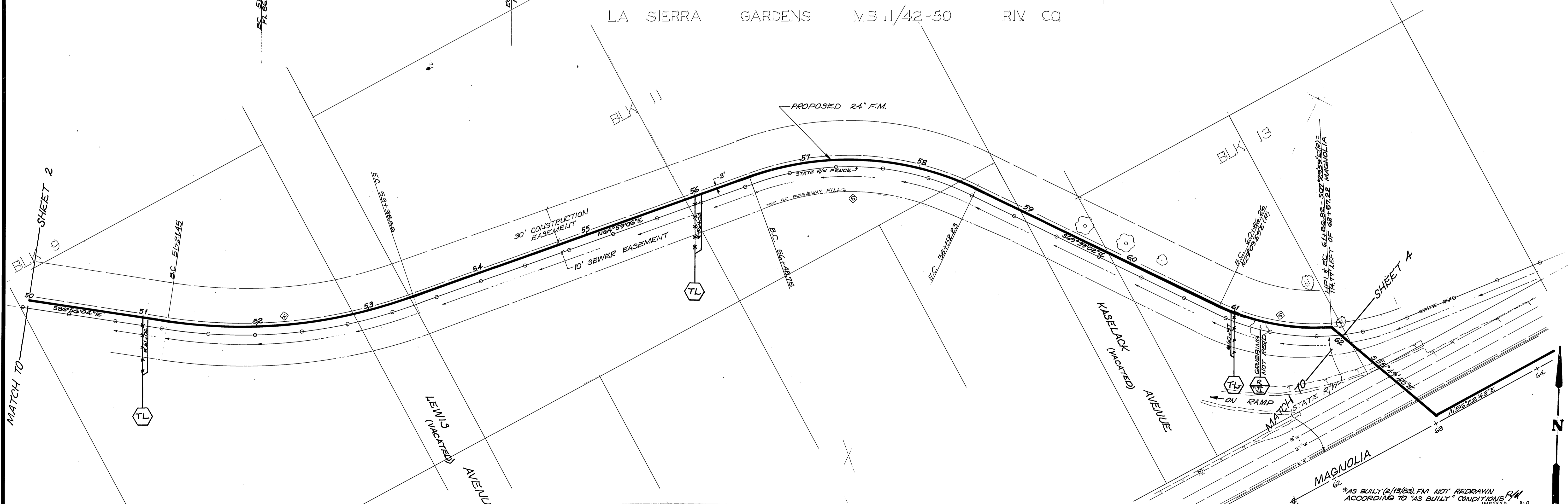
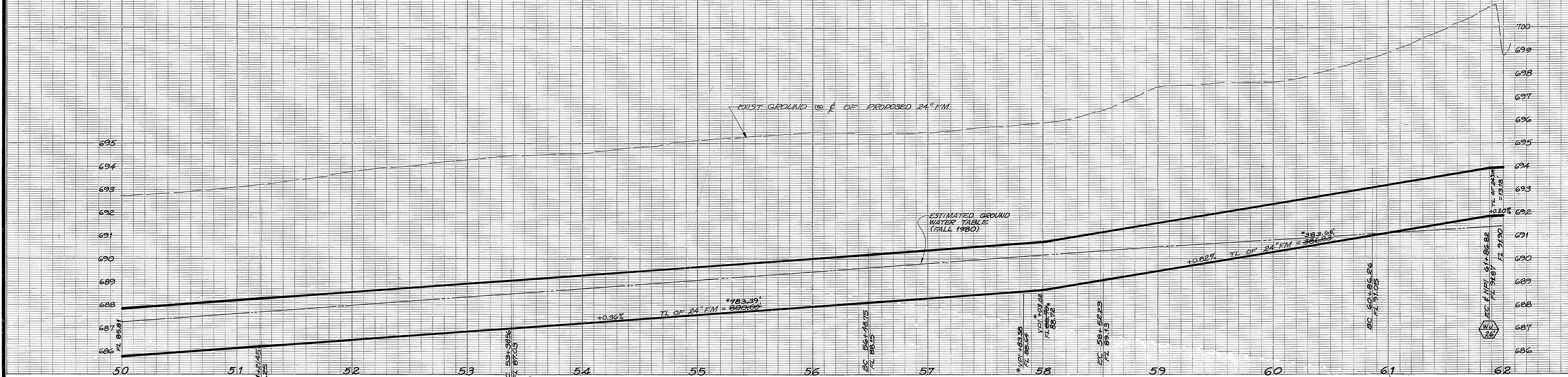
CURVE DATA				
INDEX	R	Δ	T	L
1	2507'	11°18'13"	248.10'	494.59'
2	3257'	04°28'12"	127.11'	254.10'

ADDED EQUATION @ 40+69.87
W/LK 1/2/81
MARK REVISIONS APPR. DATE
DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature] W/LK

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT
APPROVED BY: [Signature] 3/3/81
PRINCIPAL ENGINEER
TRAFFIC DIVISION
CHIEF P.W. ENGINEER
DATE: 6/2/81

*AS BUILT (2/15/83), FM NOT REDRAWN
ACCORDING TO "AS BUILT" CONDITIONS FM
**MAGNOLIA AVENUE
FORCE MAIN**
FROM PIERCE TO MEGGINSON
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'

INDEXED BLP
ACCOUNT NO. 32-577-508
S-1188
SHEET 2 OF 16
FILE NO.



CURVE DATA				
INDEX	R	Δ	T	L
1	443'	28°04'50"	110.78'	217.11'
2	257'	45°21'52"	107.41'	203.48'
3	200'	28°39'58"	51.10'	100.06'

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY: [Signature]
DATE: 8/21/81

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature]

MAGNOLIA AVENUE FORCE MAIN
FROM PIERCE TO MEGGINSON

ACCOUNT NO. 32-577-508

S-1188

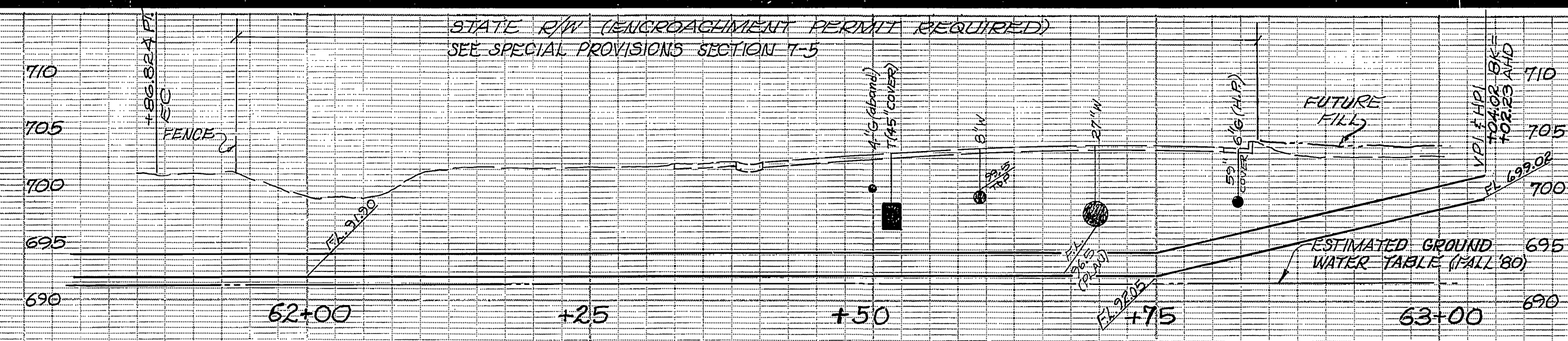
SHEET 3 OF 16

FILE NO.

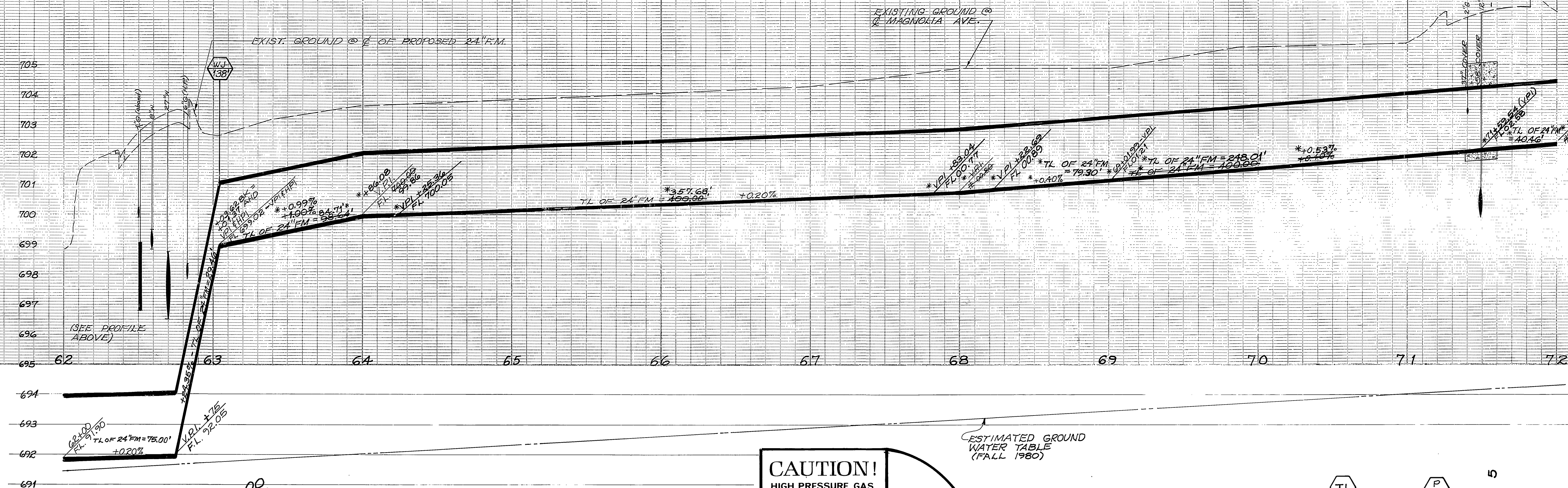
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'

-CAUTION-
PACIFIC TELEPHONE CABLES UNDERGROUND BEFORE EXCAVATING CALL COLLECT:

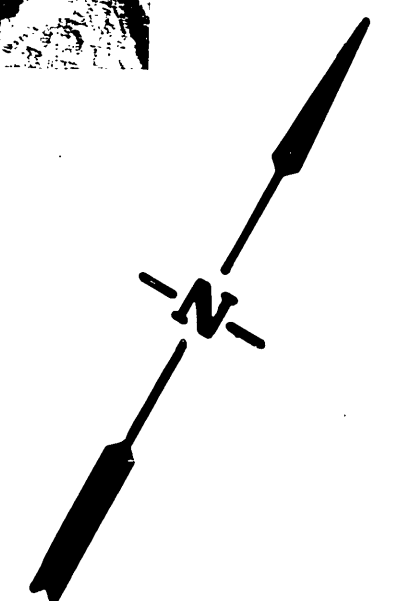
After Hours
7:30 A.M. to 5 P.M. & Holidays
Orange County 714-633-0811 714-547-6606
Riverside County 714-684-0071 714-547-6606



PROFILE AT STATE HIGHWAY R/W
 SCALE: HORIZ. 1" = 10'
 VERT. 1" = 10'

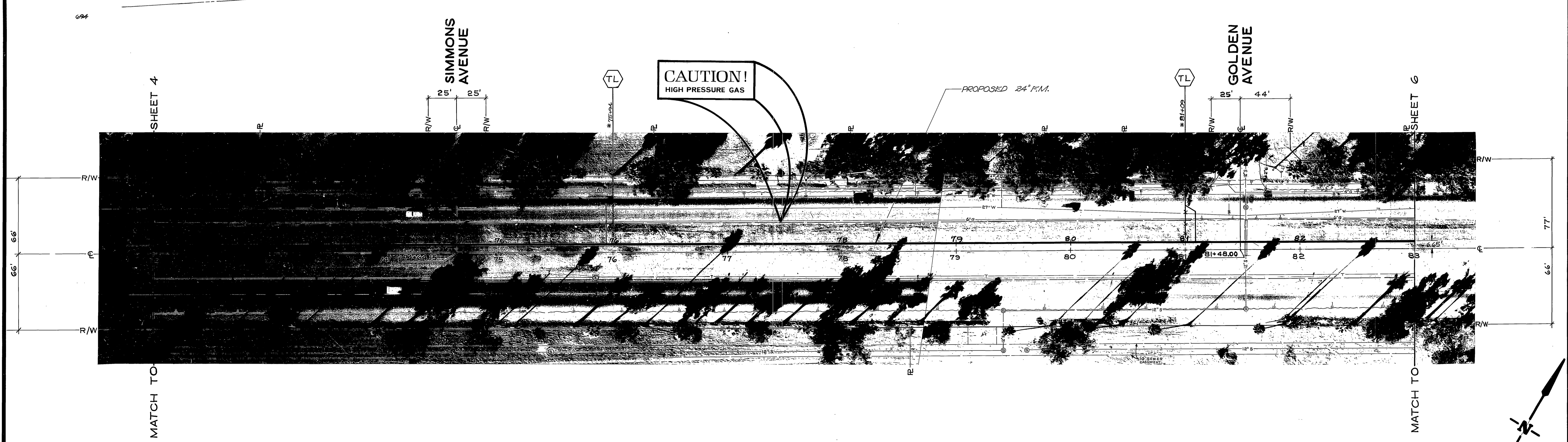
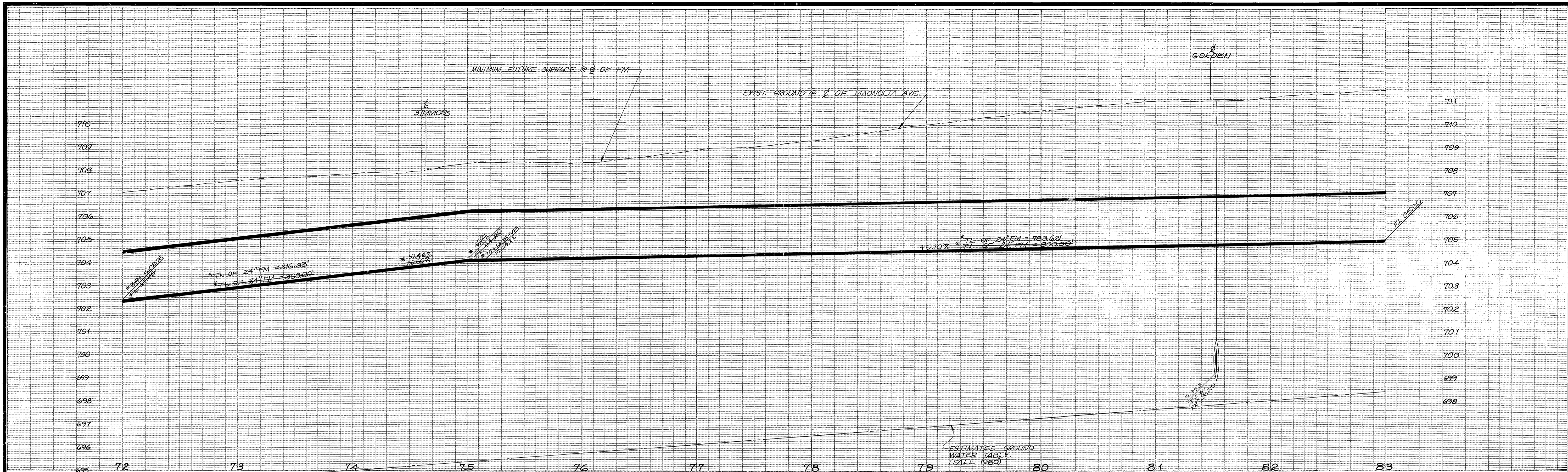


CAUTION!
 HIGH PRESSURE GAS



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CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT				MAGNOLIA AVENUE FORCE MAIN FROM PIERCE TO MEGGINSON		ACCOUNT NO. 32-577-508 S-1188 SHEET 4 OF 16
APPROVED BY PRINCIPAL ENGINEER PARK DEPARTMENT TRAFFIC DIVISION CHIEF P. W. ENGINEER DESIGNED BY DRAWN BY CHECKED BY	BY DATE 7/21/83 7/21/83 8/21/83 8/21/83	APPROVED BY PUBLIC WORKS DIRECTOR DATE 8/24/83	*AS BUILT (2/15/83), FM NOT REDRAWN ACCORDING TO "AS BUILT" CONDITIONS			
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'			INDEXED BLD			



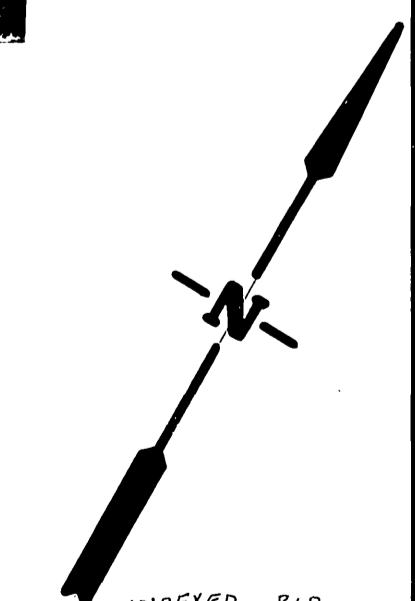
-CAUTION-
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 7:30 A.M. to 5 P.M.
 Orange County 714-633-0811
 Riverside, County 714-684-0071

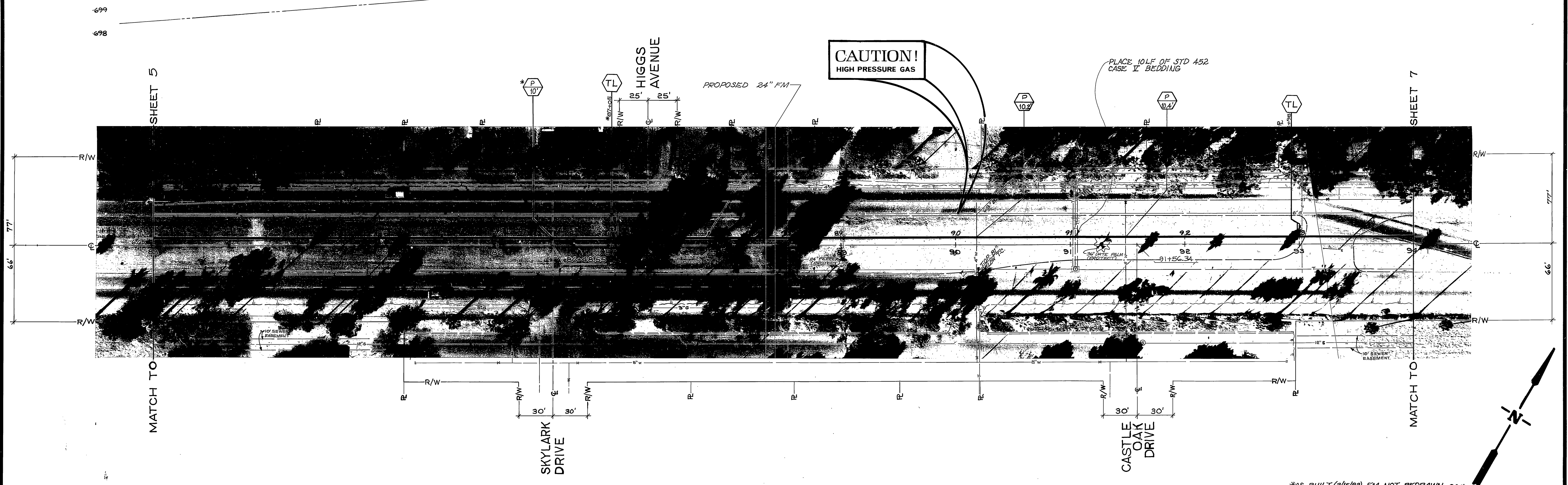
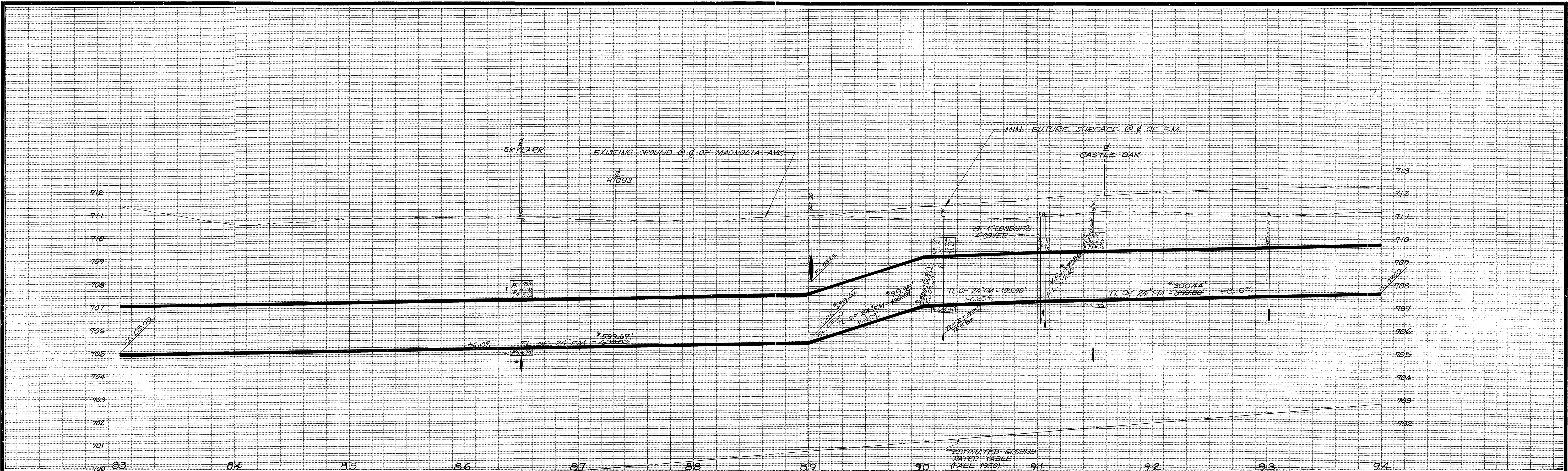


After Hours
 & Holidays
 714-547-6606
 714-547-6606

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT			MAGNOLIA AVENUE FORCE MAIN FROM PIERCE TO MEGGINSON		S-1188 SHEET 5 OF 16
APPROVED BY PRINCIPAL ENGINEER PARK DEPARTMENT TRAFFIC DIVISION CHIEF P.W. ENGINEER	BY DATE 8-3-81 8-1-81 8-2-81 8-21	APPROVED BY PUBLIC WORKS DIRECTOR 	ACCOUNT NO. 32-577-508		
DESIGNED BY DRAWN BY CHECKED BY	REVISIONS APPR. DATE	DATE 8/24/81	HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'		

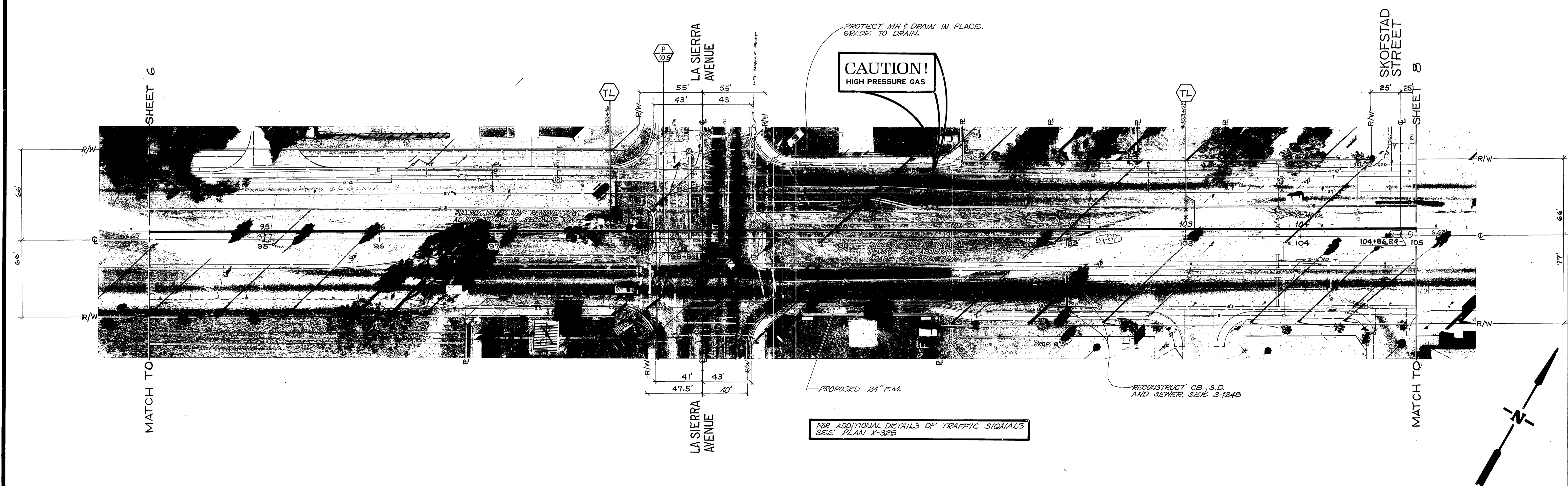
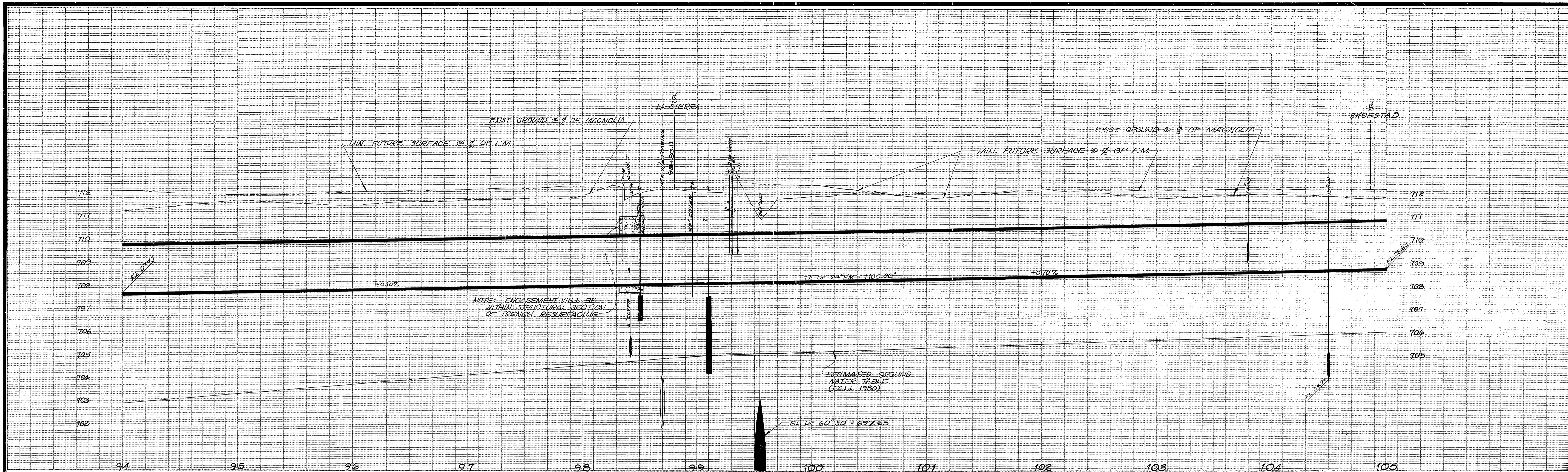
*AS BUILT (2/15/83), FM NOT REDRAWN
 ACCORDING TO "AS BUILT" CONDITIONS F.M.





- CAUTION -
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 7:30 A.M. to 5 P.M. & Holidays
 After Hours
 714-633-0811 & 714-547-6606
 Orange County
 Riverside County 714-684-0071 714-547-6606

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT		MAGNOLIA AVENUE FORCE MAIN FROM PIERCE TO MEGGINSON		INDEXED 84D ACCOUNT NO. 32-577-508 S-1188 SHEET 6 OF 10
APPROVED BY PRINCIPAL ENGINEER PANK DEPARTMENT TRAFFIC DIVISION CHIEF P. W. ENGINEER WLC	BY DATE 8/21/80 R. 21	APPROVED BY PUBLIC WORKS DIRECTOR [Signature] DATE 8/29/80	*AS BUILT (2/15/83), FM NOT REDRAWN ACCORDING TO "AS BUILT" CONDITIONS PWA	
DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature]		HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'		



- CAUTION -
 PACIFIC TELEPHONE
 CABLES UNDERGROUND
 BEFORE EXCAVATING
 CALL COLLECT:
 7:30 A.M. to 5 P.M. & Holidays
 Orange County 714-633-0811 714-547-6606
 Riverside County 714-684-0071 714-547-6606

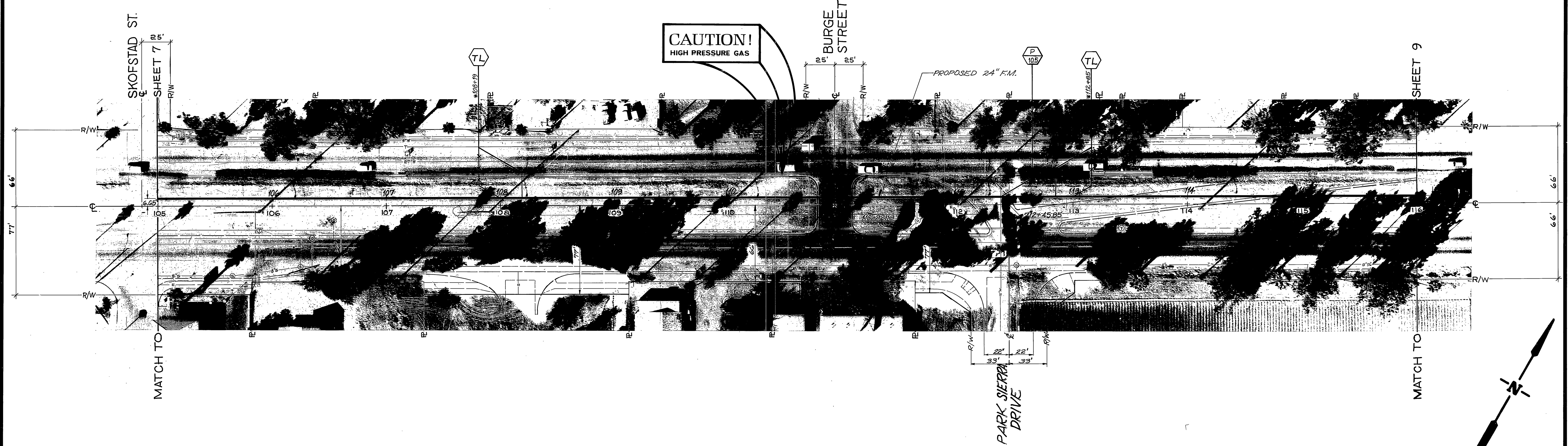
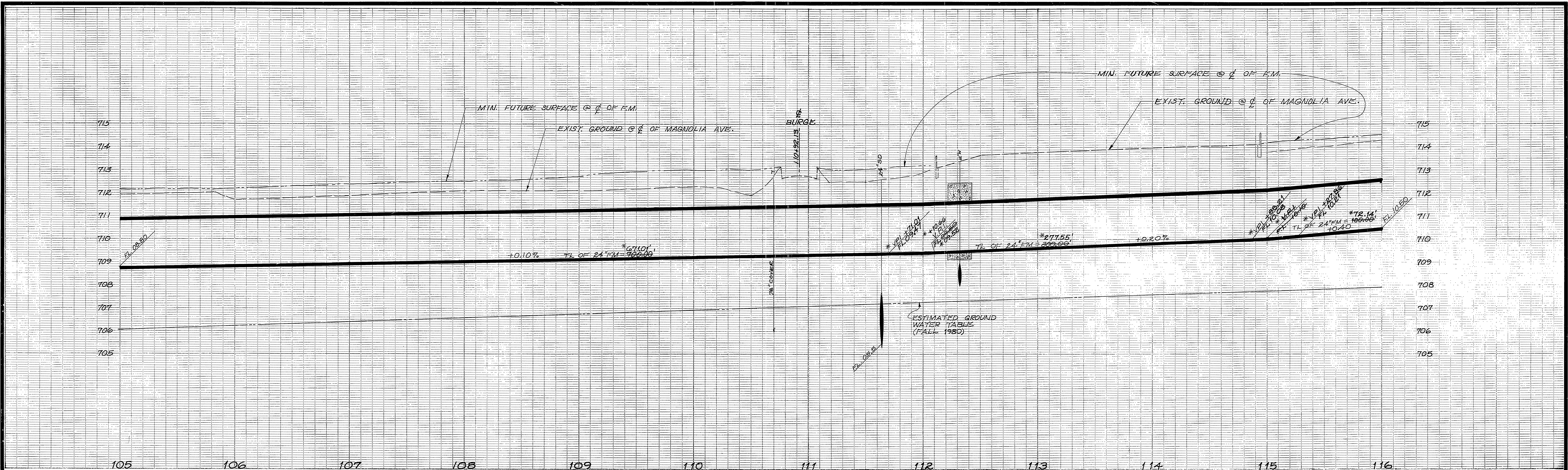
CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT			
APPROVED BY	BY	DATE	APPROVED BY
PRINCIPAL ENGINEER	WEC	8-3-81	Robert A. Walker
PARK DEPARTMENT	WEC	1-13-81	PUBLIC WORKS DIRECTOR
TRAFFIC DIVISION	WEC	2-23-81	
CHIEF P.W. ENGINEER	WEC	2-21	
DESIGNED BY	DRAWN BY	CHECKED BY	DATE
			8/29/81

*AS BUILT-10/16/82 R/W

INDEXED SLD
ACCOUNT NO. 32-577-508
S-1188
SHEET 7 OF 16

MAGNOLIA AVENUE
FORCE MAIN
FROM PIERCE TO MEGGINSON

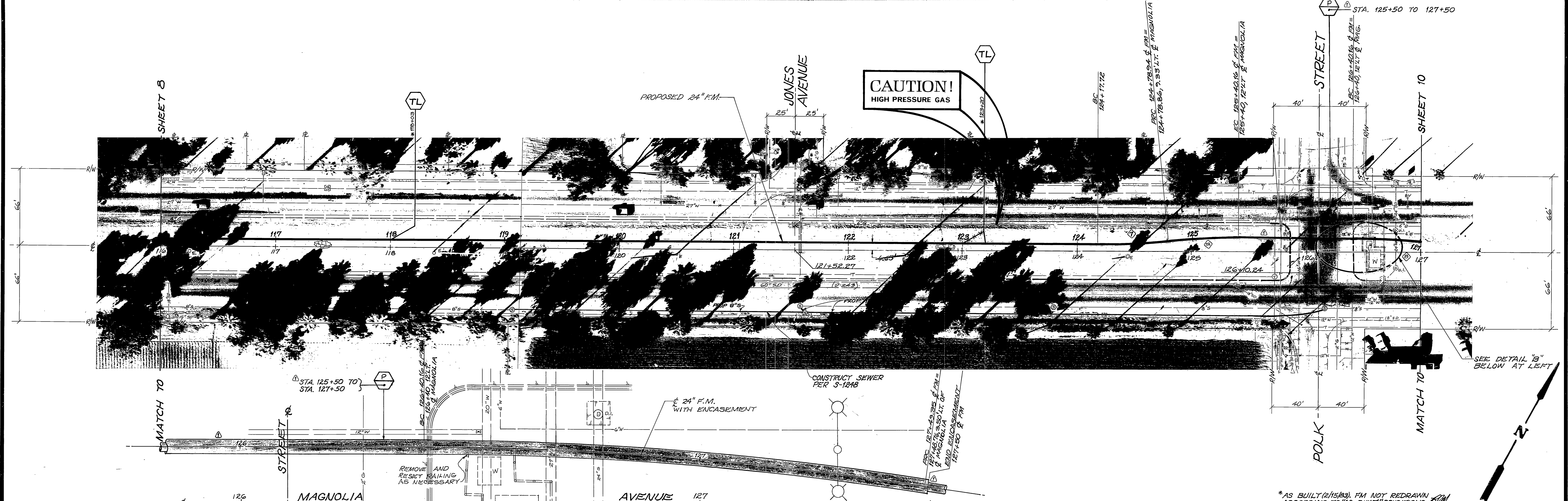
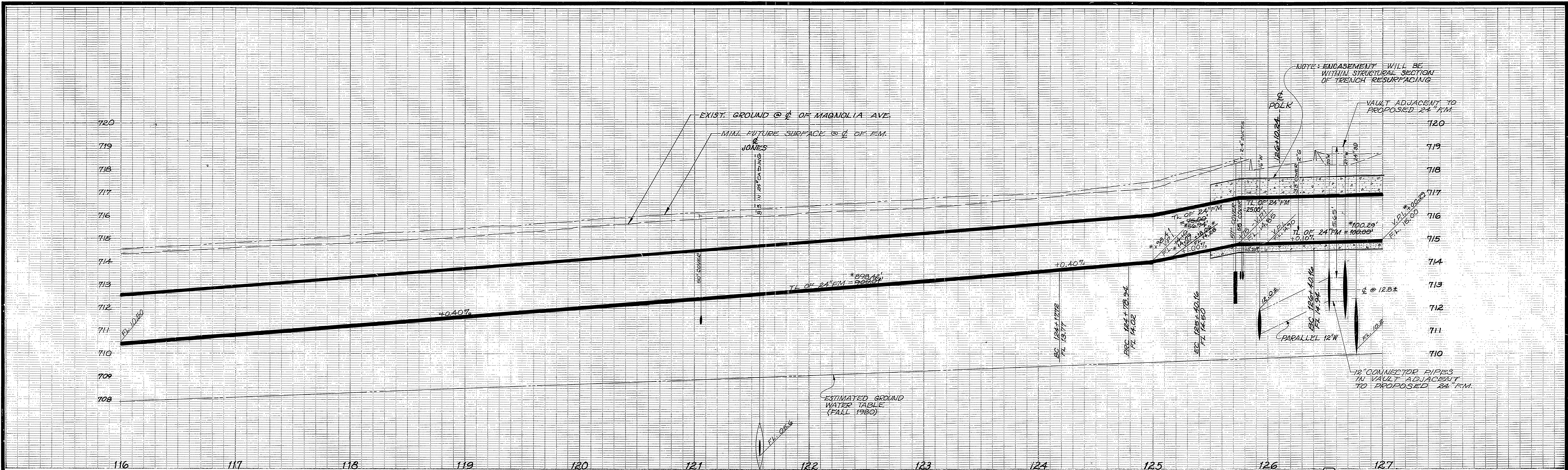
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'



— CAUTION —
 PACIFIC TELEPHONE
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 BEFORE EXCAVATING
 CALL COLLECT

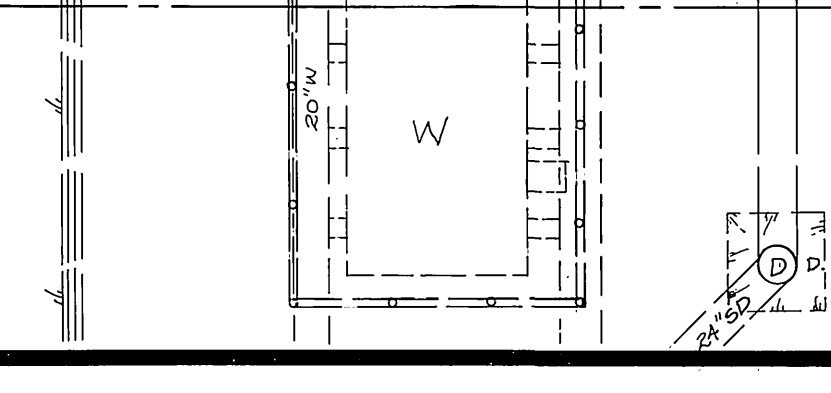
After Hours
 7:30 A.M. to 5 P.M. & Holidays
 Orange County 714-633-0811
 Riverside County 714-684-0071

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT		MAGNOLIA AVENUE FORCE MAIN FROM PIERCE TO MEGGINSON		ACCOUNT NO. 32-577-508 S-1188 SHEET 8 OF 16
APPROVED BY PRINCIPAL ENGINEER PARK DEPARTMENT TRAFFIC DIVISION CHIEF P. W. ENGINEER VULK	BY DATE 8/23/81 8.21	APPROVED BY PUBLIC WORKS DIRECTOR [Signature] DATE 8/24/81	*AS BUILT (2/15/83) FM NOT REDRAWN ACCORDING TO "AS BUILT" CONDITIONS	
DESIGNED BY [Signature] DRAWN BY [Signature] CHECKED BY [Signature]		HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'		



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 Orange County 714-633-0811
 Riverside County 714-684-0071

DETAIL "B"
 SCALE: 1" = 10'



CURVE DATA				
INDEX	R	Δ	T	L
1	700'	5°00'38"	30.63'	61.22'
2	700'	5°00'38"	30.63'	61.22'
3	700'	8°52'17"	54.74'	109.20'

SHIFTED FORCE MAIN ALIGNMENT BETWEEN STA. 124+17.72 AND 126+40.16, ALSO SHIFTED ENCASEMENT 30' TO THE EAST

CITY OF RIVERSIDE
 PUBLIC WORKS DEPARTMENT

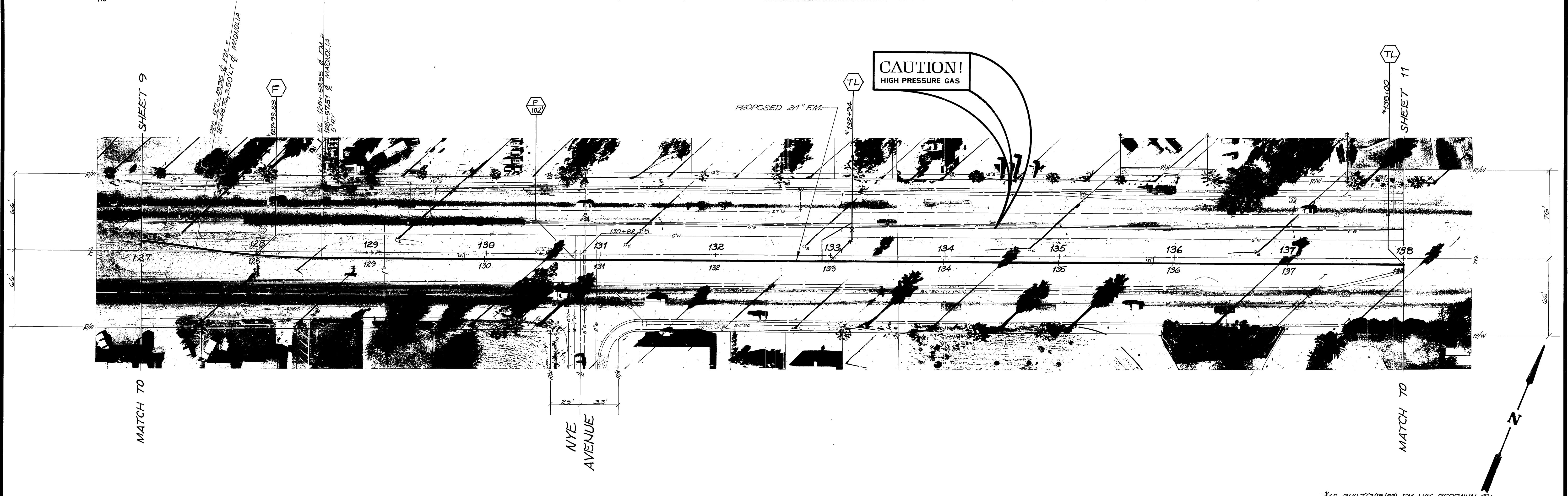
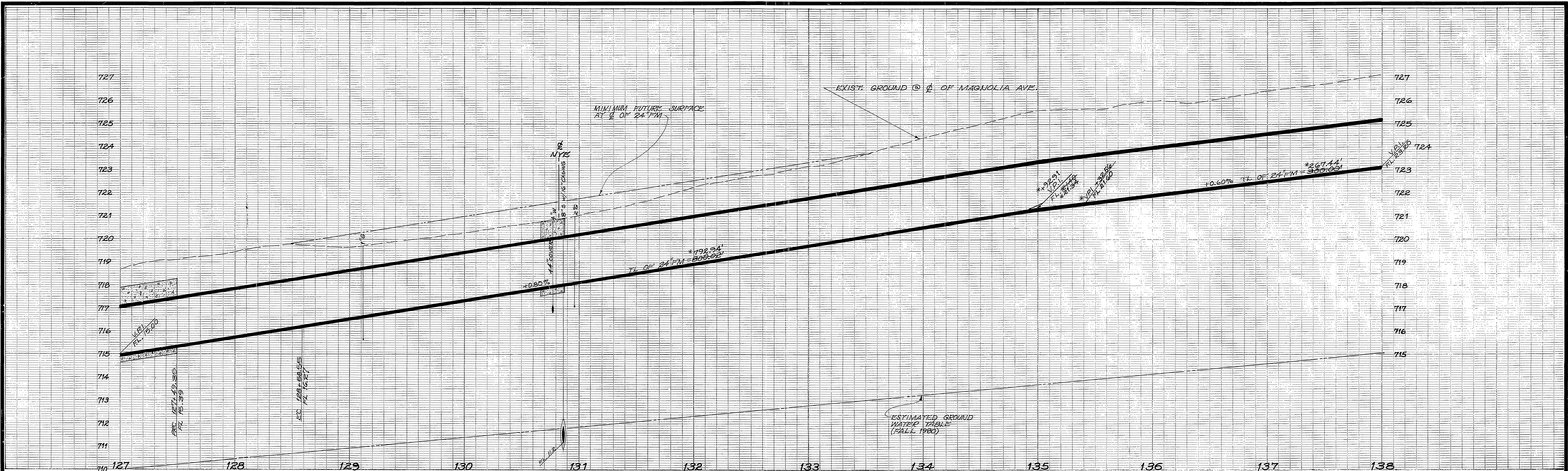
APPROVED BY: [Signature]
 DATE: 8/24/81

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature]

MAGNOLIA AVENUE
FORCE MAIN
 FROM PIERCE TO MEGGINSON

HORIZ. SCALE: 1" = 40'
 VERT. SCALE: 1" = 2'

ACCOUNT NO. 32-577-508
S-1188
 SHEET 9 OF 16



-CAUTION-
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 CALL COLLECT:
 7:30 A.M. to 5 P.M. & Holidays
 Orange County 714-633-0811 714-547-6606
 Riverside County 714-684-0071 714-547-6606

CURVE DATA				
INDEX	R	Δ	T	L
1	700'	8°56'17"	54.71'	109.20'
2				
3				
4				
5				

MARK	REVISIONS	APPR. DATE

CITY OF RIVERSIDE
 PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]* DATE: 8-29-81
 PRINCIPAL ENGINEER
 PARK DEPARTMENT
 TRAFFIC DIVISION
 CHIEF P. W. ENGINEER

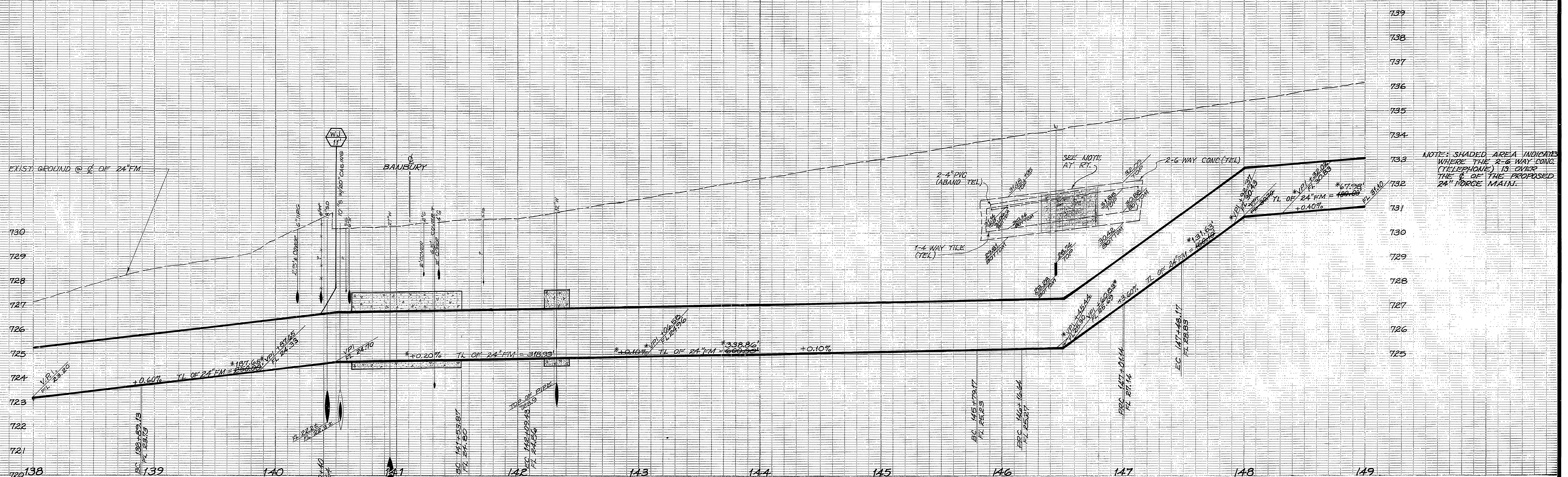
DESIGNED BY: *[Signature]* DRAWN BY: *[Signature]* CHECKED BY: *[Signature]*

MAGNOLIA AVENUE
FORCE MAIN
 FROM PIERCE TO MEGGINSON

HORIZ. SCALE: 1" = 40'
 VERT. SCALE: 1" = 2'

ACCOUNT NO. 32-577-508
S-1188
 SHEET 10 OF 16

*AS BUILT (2/15/83), FM NOT REDRAWN ACCORDING TO 'AS BUILT' CONDITIONS



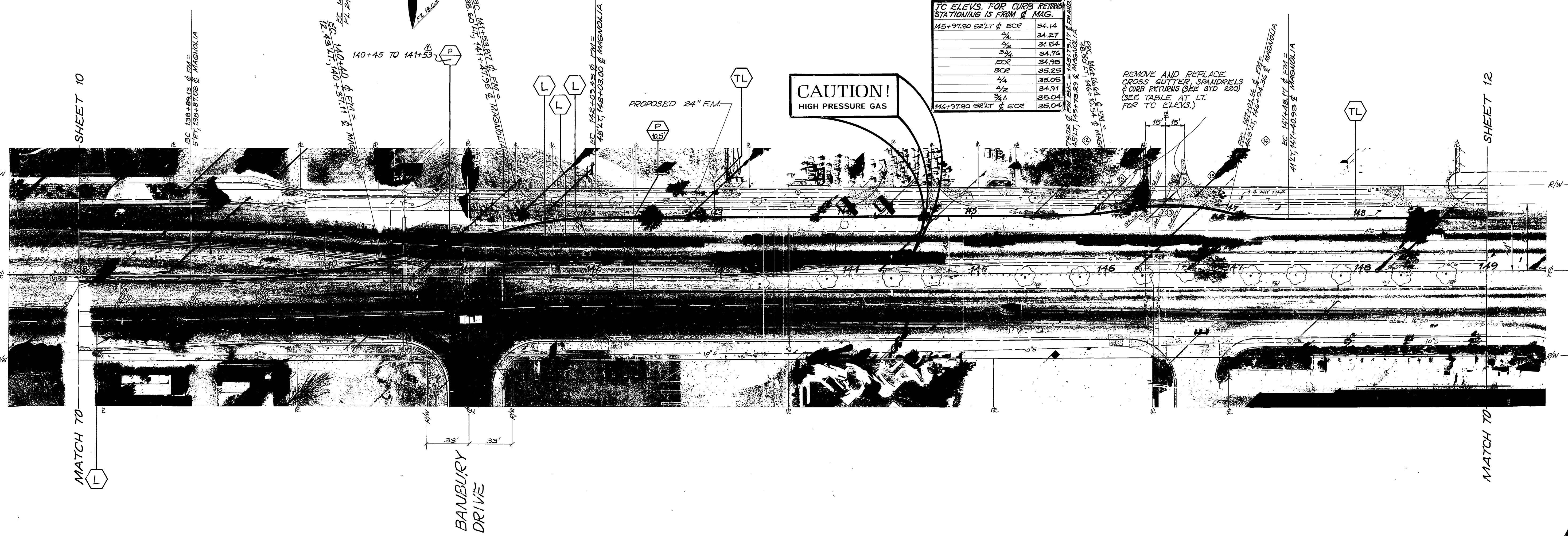
NOTE: SHADED AREA INDICATES WHERE THE 2-6 WAY CONC. (TELEPHONE) IS OVER THE 2-6 OF THE PROPOSED 24" FORCE MAIN.

TC ELEV. FOR CURB RETURN STATIONING IS FROM & MAG.

145+97.00 5/2" LT & BCR	34.14
1/2"	34.27
3/4"	34.54
5/8"	34.76
EC	34.98
BC	35.28
1/4"	35.08
1/2"	34.91
3/4"	35.04
146+97.00 5/2" LT & ECR	35.04

REMOVE AND REPLACE CROSS GUTTERS, SANDPAPERS & CURB RETURNS (SEE STD 220) (SEE TABLE AT LT. FOR TC ELEV.)

CAUTION! HIGH PRESSURE GAS



INDEX	R	Δ	T	L
1	650'	13°17'56"	75.78'	150.87'
2	240'	13°18'46"	27.90'	55.96'
3	200'	10°44'05"	18.79'	37.47'
4	200'	24°42'24"	42.89'	84.50'
5	200'	13°28'19"	23.62'	47.03'
6	35'	90°00'00"	35.00'	54.98'

SHIFTED FM ALIGNMENT BETWEEN 138+89.13 AND 142+09.43, & REDUCED LENGTH OF ENCASEMENT.

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT

APPROVED BY: [Signature] DATE: 8/24/81

PRINCIPAL ENGINEER: [Signature] DATE: 8-23-81

PARK DEPARTMENT: [Signature] DATE: 8/21/81

TRAFFIC DIVISION: [Signature] DATE: 8-21

CHIEF P.W. ENGINEER: [Signature] DATE: 8/24/81

MAGNOLIA AVENUE FORCE MAIN FROM PIERCE TO MEGGINSON

HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'

ACCOUNT NO. 32-577-508

S-1188

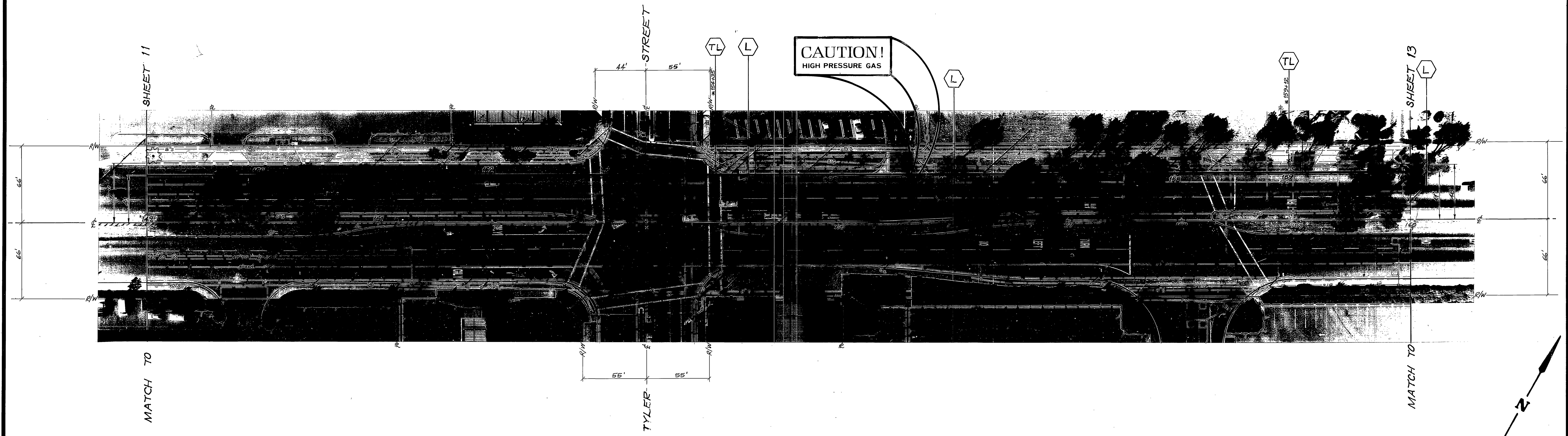
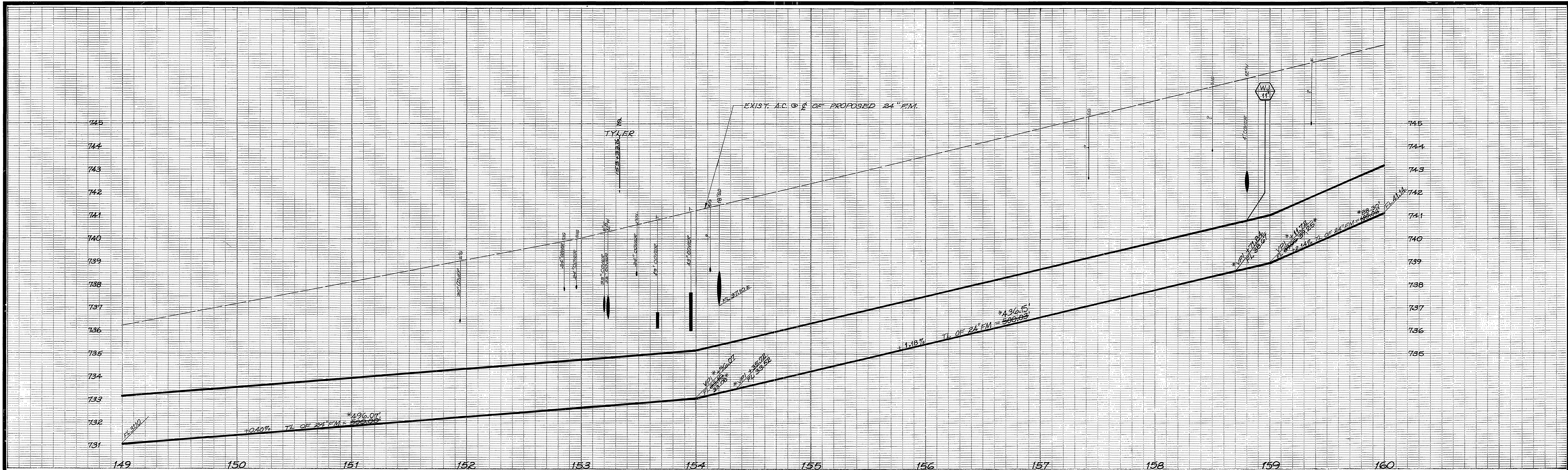
SHEET 11 OF 16

CAUTION - PACIFIC TELEPHONE CABLES UNDERGROUND BEFORE EXCAVATING CALL COLLECT

After Hours & Holidays 7:30 A.M. to 5 P.M.

Orange County 714-633-0811 714-547-6606

Riverside County 714-684-0071 714-547-6606



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& Holidays
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Orange County
714-684-0071 714-547-6606

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT			
APPROVED BY	BY	DATE	APPROVED BY
PRINCIPAL ENGINEER	<i>[Signature]</i>	7-3-88	<i>[Signature]</i>
PARK DEPARTMENT	<i>[Signature]</i>	7/21/88	PUBLIC WORKS DIRECTOR
TRAFFIC DIVISION	<i>[Signature]</i>	7/21/88	
CHIEF P.W. ENGINEER	<i>[Signature]</i>	8.21	
DESIGNED BY	DRAWN BY	CHECKED BY	DATE
			8/24/87

*AS BUILT (2/15/83). FM NOT REDRAWN
ACCORDING TO "AS BUILT" CONDITIONS

INDEXED BLD

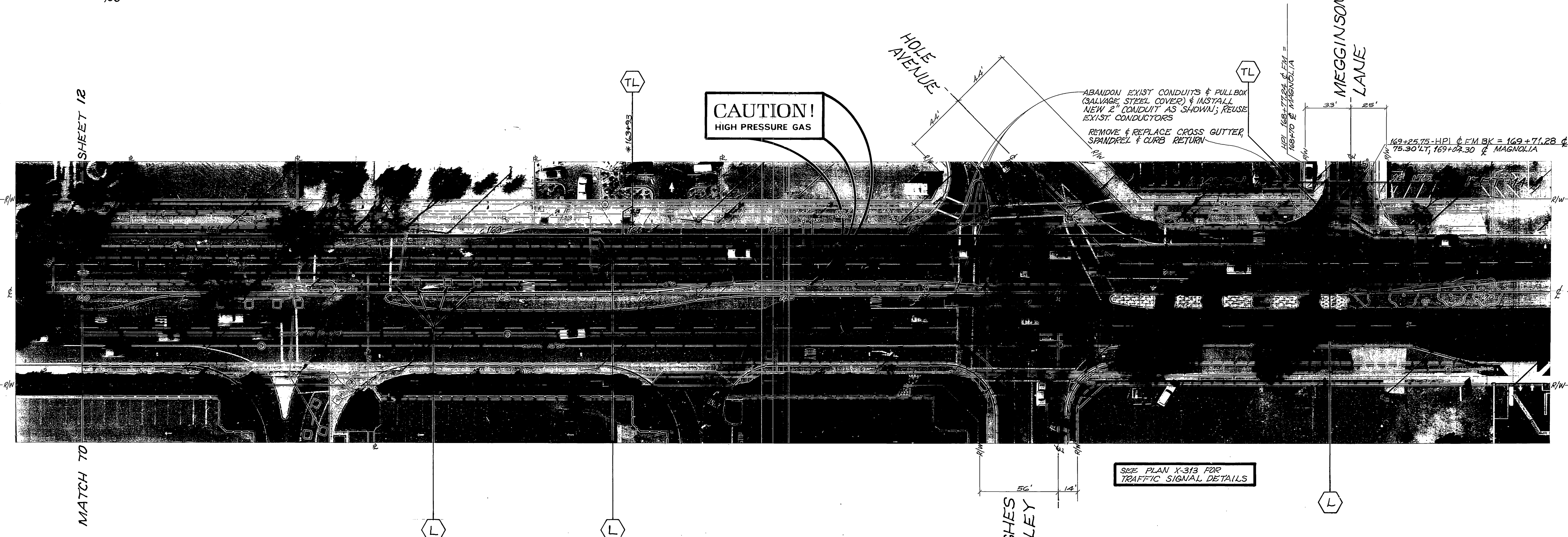
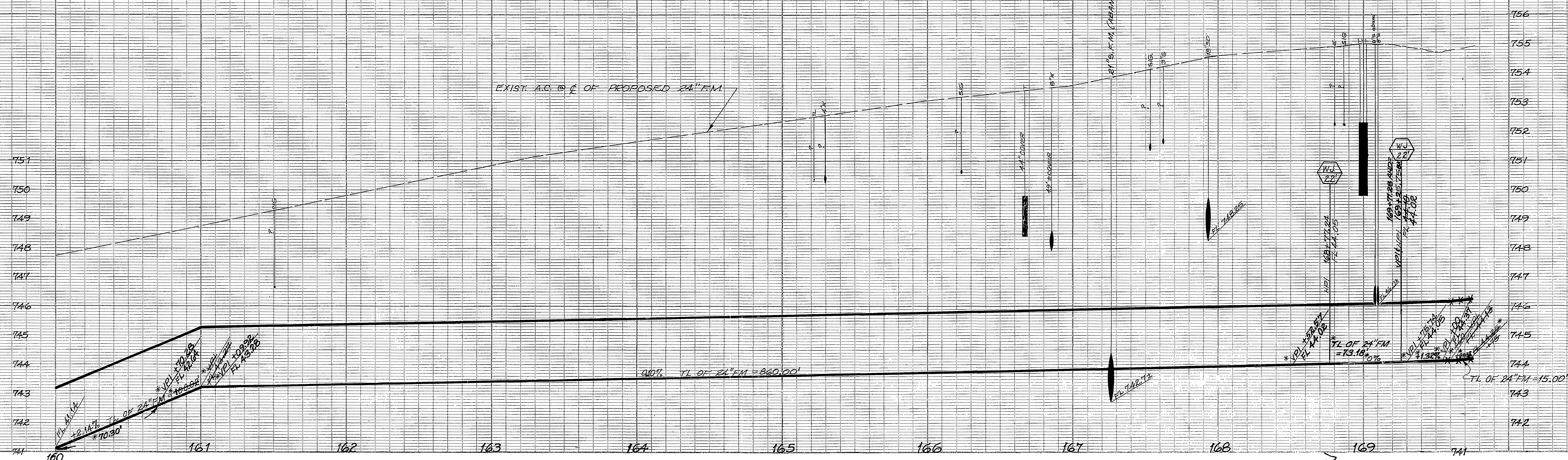
ACCOUNT NO. 32-577-508

S-1188

MAGNOLIA AVENUE
FORCE MAIN
FROM PIERCE TO MEGGINSON

SHEET 12 OF 16

HORIZ. SCALE: 1" = 40'
VERT. SCALE: 1" = 2'



SHEET 12

MATCH TO

CAUTION -
PACIFIC TELEPHONE
CABLES UNDERGROUND
BEFORE EXCAVATING

7:30 A.M. to 5 P.M. & Holidays
After Hours
714-633-0811 714-547-6606
714-684-0071 714-547-6606

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT			
APPROVED BY	BY	DATE	APPROVED BY
PRINCIPAL ENGINEER	<i>[Signature]</i>	8-3-81	<i>[Signature]</i>
PARK DEPARTMENT		7-21-81	PUBLIC WORKS DIRECTOR
TRAFFIC DIVISION		8-18-81	
CHIEF P.W. ENGINEER		8-21	
DESIGNED BY	DRAWN BY	CHECKED BY	DATE
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	8/29/81

*AS BUILT (2/16/83), FM NOT REDRAWN
ACCORDING TO "AS BUILT" CONDITIONS

ACCOUNT NO. 32-577-508

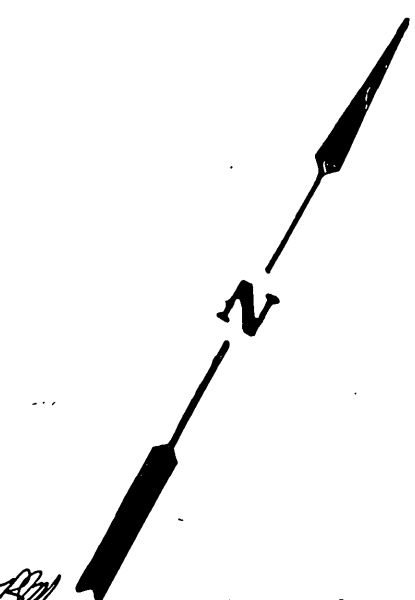
**MAGNOLIA AVENUE
FORCE MAIN**

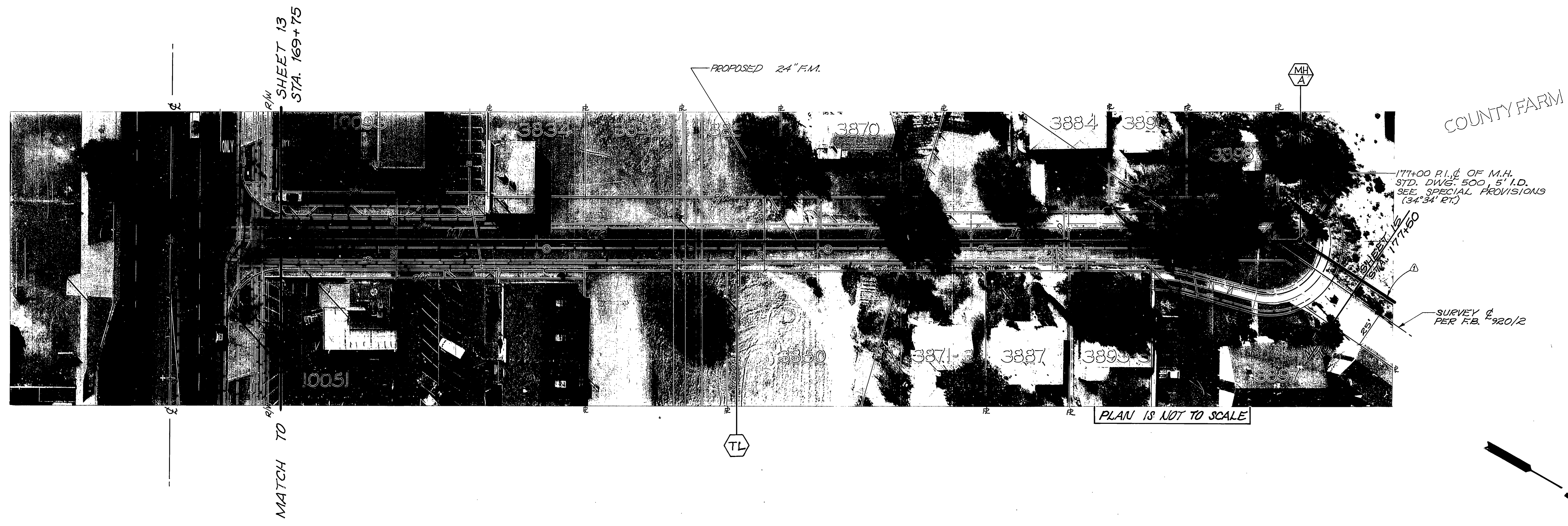
FROM PIERCE TO MEGGINSON

S-1188

SHEET 13 OF 16

HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'



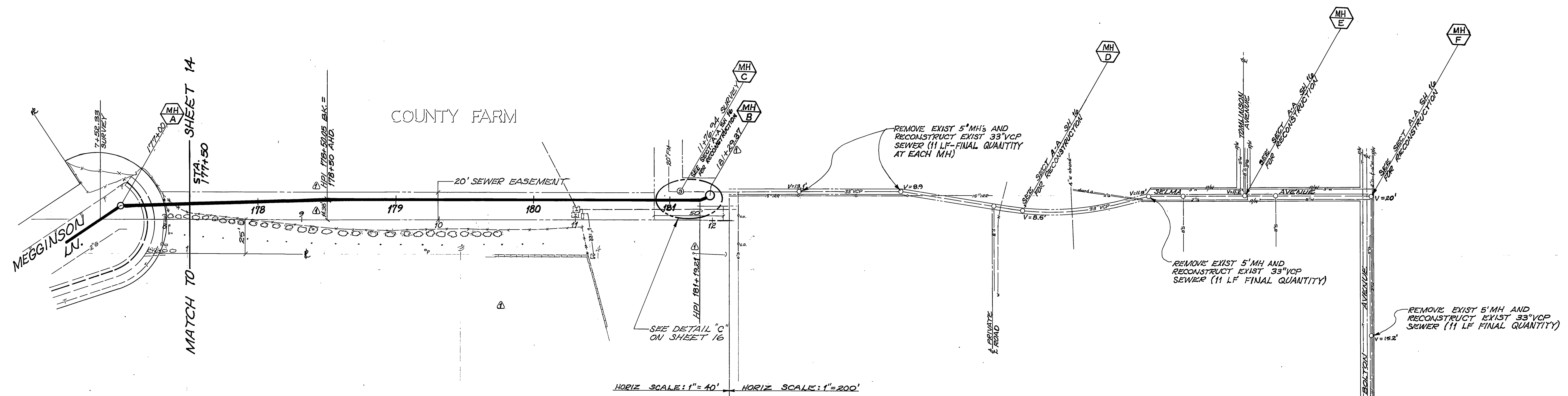
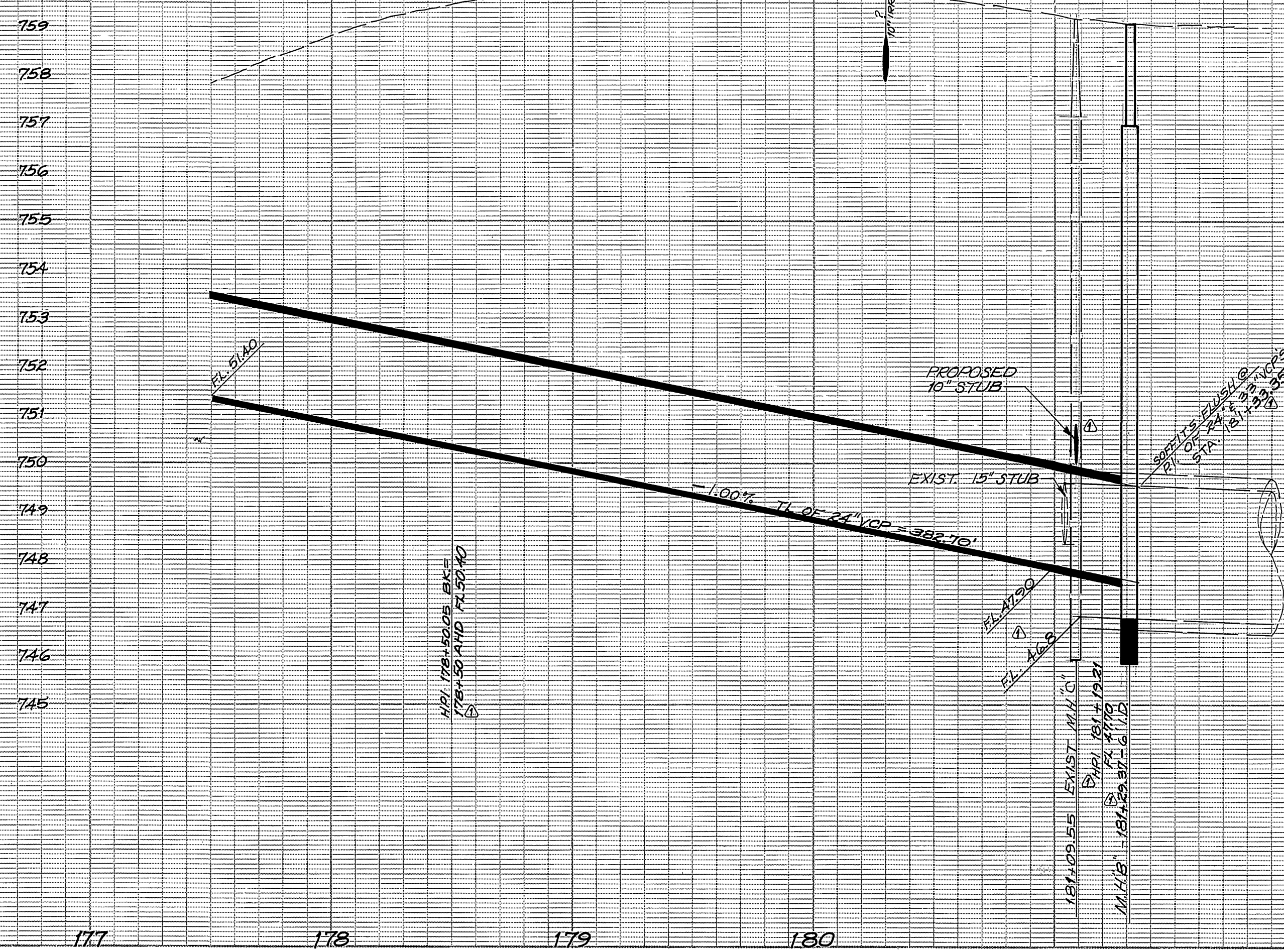


MATCH TO SHEET 13 STA. 169+75

*AS BUILT (2/16/83). FM NOT REDRAWN ACCORDING TO 'AS BUILT' CONDITIONS

- CAUTION -
 PACIFIC TELEPHONE
 CABLES UNDERGROUND
 BEFORE EXCAVATING
 CALL COLLECT:
 7:30 A.M. to 5 P.M.
 Orange County 714-633-0811
 Riverside County 714-684-0071

SHIFTED ALIGNMENT OF 24" VCP DOWNSTREAM OF MH "A" W/LK		CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT		MAGNOLIA AVENUE FORCE MAIN FROM PIERCE TO MEGGINSON		S-1188 SHEET 14 OF 16	
APPROVED BY PRINCIPAL ENGINEER PARK DEPARTMENT TRAFFIC DIVISION CHIEF P.W. ENGINEER	DATE 8-1-81 8-31-81 8-21-81	APPROVED BY PUBLIC WORKS DIRECTOR	DATE 8/29/81	HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 2'	ACCOUNT NO. 32-577-508		
DESIGNED BY DRAWN BY CHECKED BY	W/LK W/LK W/LK						

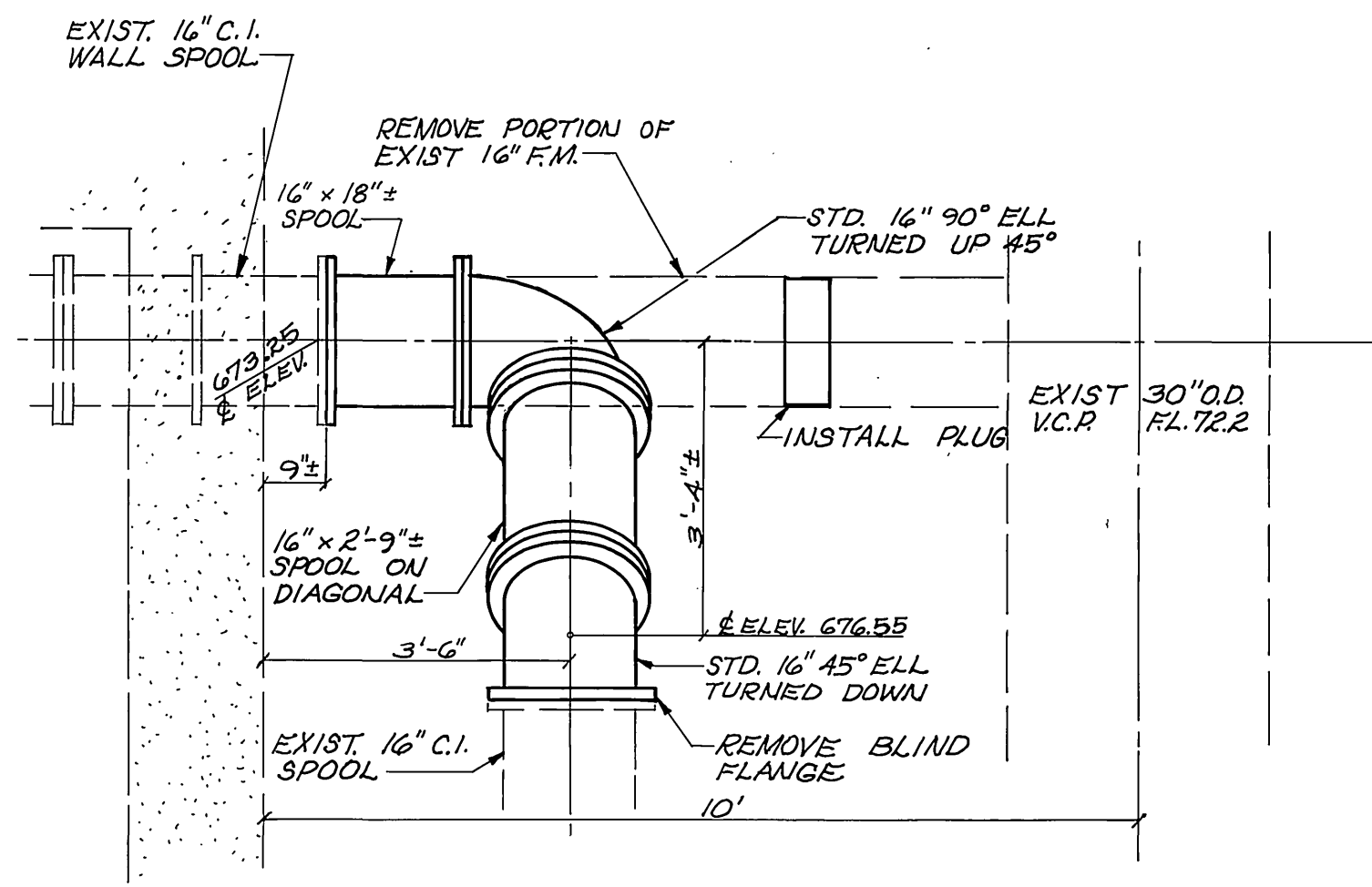


- NOTES:**
1. ALTERNATE METHODS OF REMOVING THE EXIST 5' MH AND RECONSTRUCTION OF THE EXIST 33" VCP SHALL BE CONSIDERED AT TIME OF CONSTRUCTION.
 2. V = DISTANCE FROM TOP OF MH COVER TO RL OF THE MH.
 3. EXISTING SEWER IN THIS AREA (S-787) INSTALLED IN UNSTABLE SILTY SAND IN 1970.
 4. MANHOLES WERE SANDBLASTED THEN COATED INTERNALLY WITH "ZEBRON".

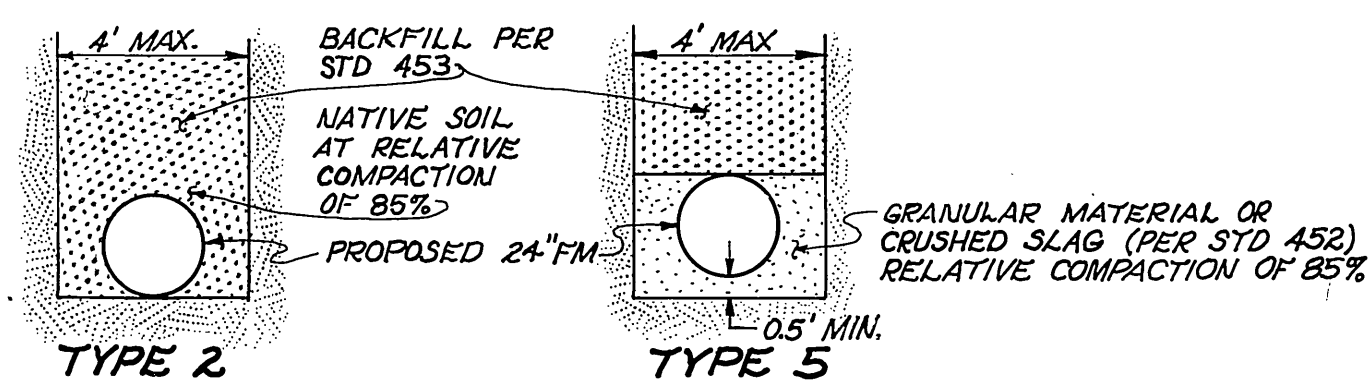
- CAUTION -
 PACIFIC TELEPHONE
 CABLES UNDERGROUND
 BEFORE EXCAVATING
 CALL COLLECT:
 7:30 A.M. to 5 P.M. & Holidays
 Orange County 714-633-0811 714-547-6506
 Riverside County 714-684-0071 714-547-6506

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT		MAGNOLIA AVENUE FORCE MAIN FROM PIERCE TO MEGGINSON		S-1188 SHEET 15 OF 16
APPROVED BY PRINCIPAL ENGINEER PARK DEPARTMENT TRAFFIC DIVISION CHIEF P. W. ENGINEER	APPROVED BY PUBLIC WORKS DIRECTOR	DESIGNED BY DRAWN BY CHECKED BY	DATE	HORIZ. SCALE: AS SHOWN VERT. SCALE: 1"=2' FILE NO.

- CAUTION -
 PACIFIC TELEPHONE
 CABLES UNDERGROUND
 BEFORE EXCAVATING
 CALL COLLECT:
 7:30 A.M. to 5 P.M. & Holidays
 Orange County 714-633-0811 714-547-6506
 Riverside County 714-684-0071 714-547-6506

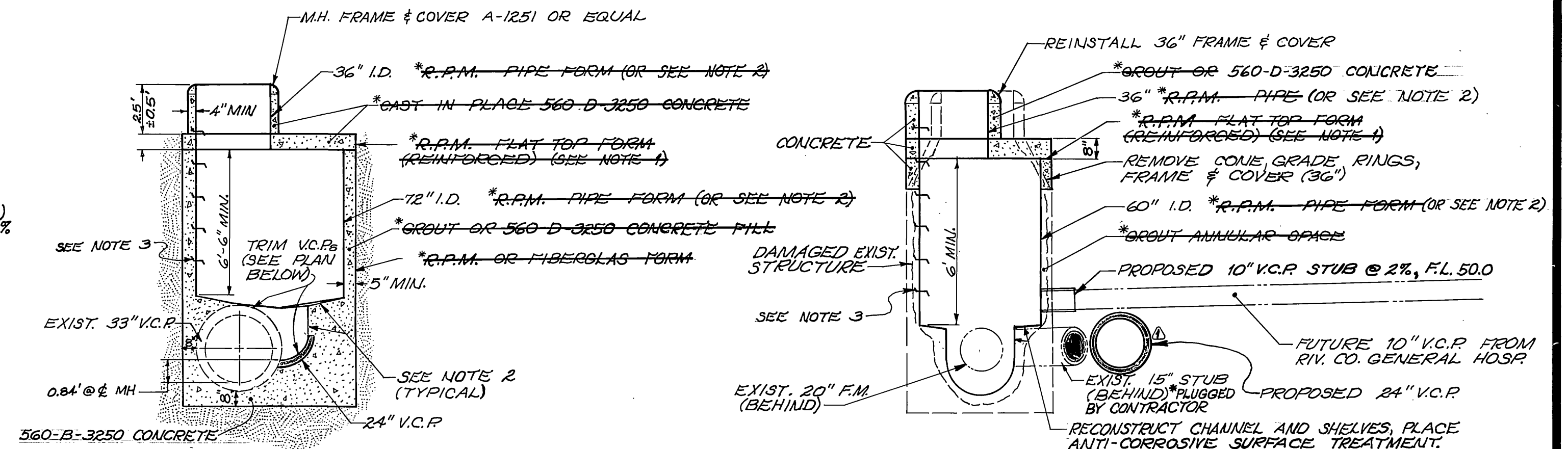


DETAIL D
SCALE: 1"=2'



NOTES:
1. SEE CHART BELOW FOR TRENCH RESURFACING.
2. WHERE GROUND WATER IS ENCOUNTERED IN THE TRENCH EXCAVATE TO A DEPTH OF 6" (MIN) BELOW PROPOSED PIPE AND PLACE 74" CRUSHED ROCK OR CRUSHED SLAG PER STD. 452.

PIPE BEDDING DETAIL
(FORCE MAIN)
N.T.S.



SECTION B-B
(TAKEN AT C OF M.H. 'B')
SCALE: 1"=4'

SECTION A-A
(TAKEN AT C OF M.H. 'C' & 24" V.C.P.)
SCALE: 1"=4'

NOTES:
*1. CONVENTIONAL REINFORCED CONCRETE WITH AN ANTI-CORROSIVE SURFACE TREATMENT MAY BE USED AS AN ALTERNATE (REINFORCEMENT SIMILAR TO STD-131)
2. PLACE RCP WITH ANTI-CORROSIVE SURFACE TREATMENT (SEE SPECIAL PROVISIONS)
3. STEPS SHALL BE SPACED SIMILAR TO STD 500, METAL STEPS SHALL BE 4" IN DIAMETER AND COATED WITH AN ANTI-CORROSIVE SURFACE TREATMENT (SEE SPECIAL PROVISIONS)

NOTE: M.H.'s "D", "E", "F" & "G" SIMILAR CONSTRUCTION (OPTIONAL CONSTRUCTION: EXIST. MH MAY BE REMOVED AND RECONSTRUCTED WITH A STD 500 MH MEETING THE ABOVE CRITERIA AND ALL SURFACES COATED WITH AN ANTI-CORROSIVE SURFACE TREATMENT (SEE SPECIAL PROVISIONS) OR REMOVE EXIST. MH AND PLACE A FIBERGLAS MH THAT MEETS THE ABOVE CRITERIA)

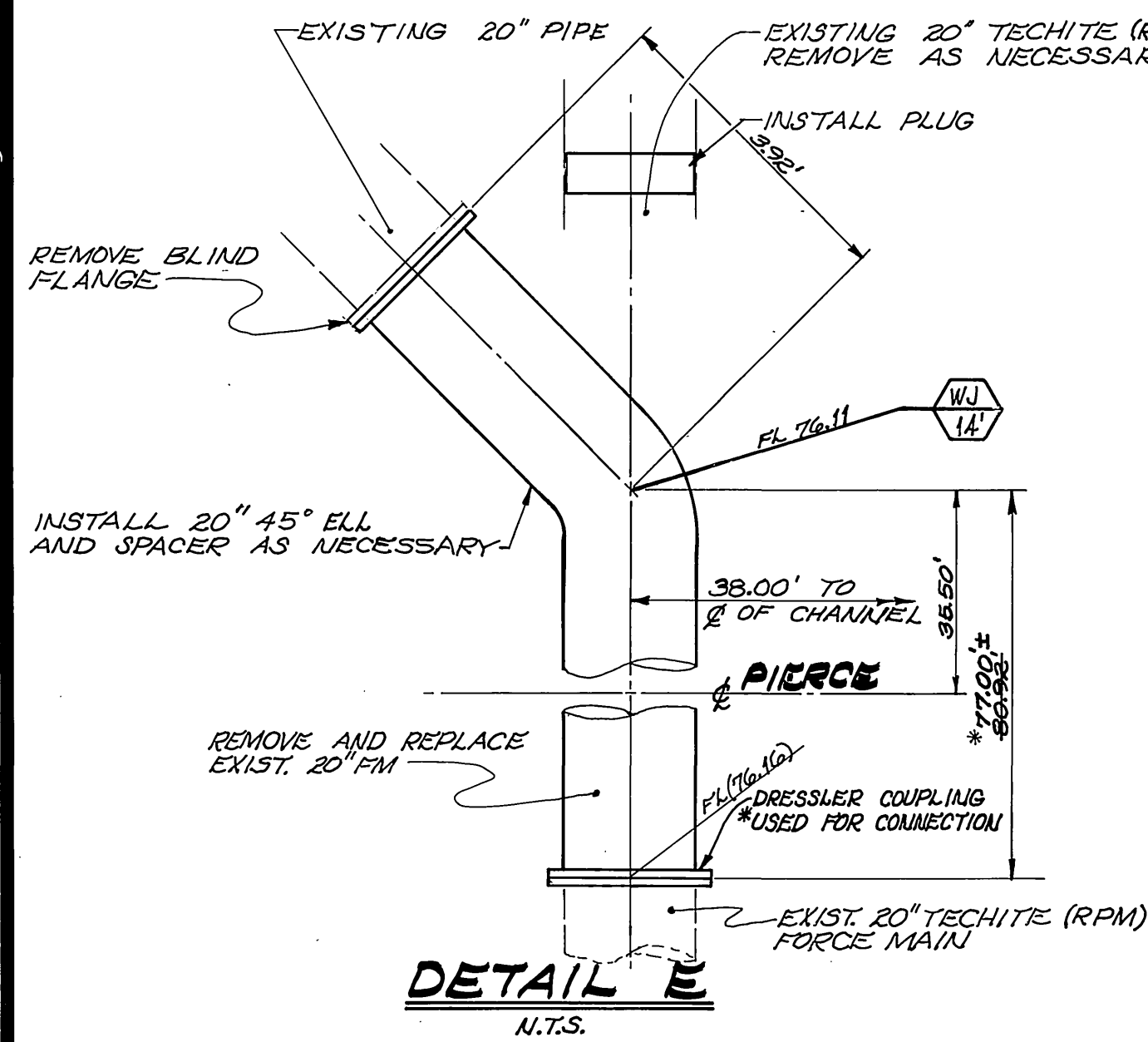
PIPE AND BEDDING LOCATION

LOCATION	PIPE MATERIAL ALTERNATIVES			PIPE CLASS BEDDING TYPE
	C.M.L. & C	CONC. CYL.	DUCTILE IRON	
STA 38+37.97 TO 41+00	150 ROCK	150 ROCK	50 ROCK	* END TYPE 2 BEDDING @ 89+50 AND BEGIN TYPE 5 BEDDING (FOR DUCTILE IRON ONLY)
STA 41+00 TO 63+00	150 TYPE 5	150 TYPE 2	50 TYPE 5	
STA 63+00 TO 78+00	150 TYPE 5	150 TYPE 2	50 TYPE 5	
STA 78+00 TO 83+00	150 TYPE 5	150 TYPE 2	50 TYPE 5	
STA 83+00 TO 98+00	100 TYPE 5	100 TYPE 2	50 TYPE 5	
STA 98+00 TO 128+00	100 TYPE 5	100 TYPE 2	50 TYPE 5	
STA 128+00 TO 133+00	100 TYPE 5	100 TYPE 2	50 TYPE 5	
STA 133+00 TO 139+50	100 TYPE 5	100 TYPE 2	50 TYPE 5	
STA 139+50 TO 141+00	100 TYPE 5	100 TYPE 2	50 TYPE 2	
STA 141+00 TO 147+75	100 TYPE 2	100 TYPE 2	50 TYPE 2	
STA 147+75 TO 150+00	100 TYPE 5	100 TYPE 2	50 TYPE 2	
STA 150+00 TO 176+42.55	100 TYPE 2	100 TYPE 2	50 TYPE 2	

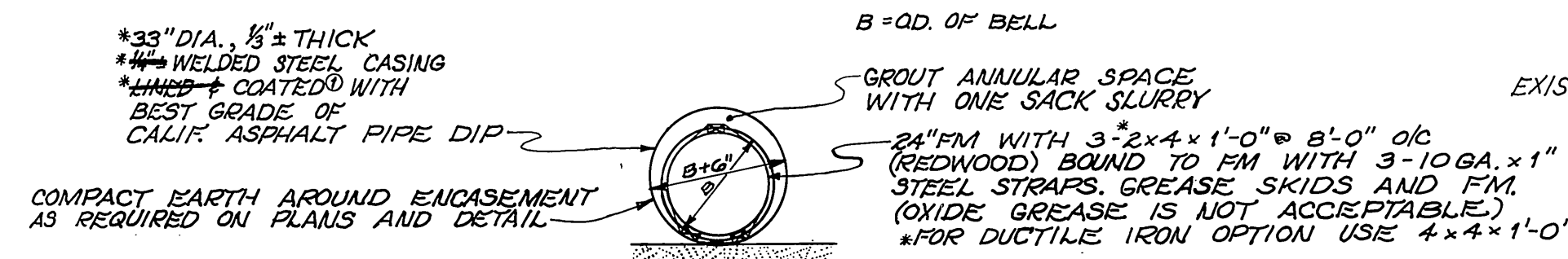
TRENCH RESURFACING

LIMITS	STRUCTURAL SECTION ALTERNATIVES	
	FULL DEPTH AC	94C/BASE
STA 38+60 TO 137+00	0.85'	0.38'/1.15'
STA 137+00 TO 153+00	0.92'	0.38'/1.30'
STA 153+00 TO 154+00	1.20'	0.54'/1.60'
STA 154+00 TO 169+00	0.92'	0.38'/1.30'
STA 169+00 TO 177+15	0.28'	

WHERE THE TRENCH CROSSES PAVED AREAS, WITHIN LIMITS INDICATED, THE TRENCH RESURFACING STRUCTURAL SECTION SHALL BE THE THICKNESS SHOWN IN THE ABOVE TABLE

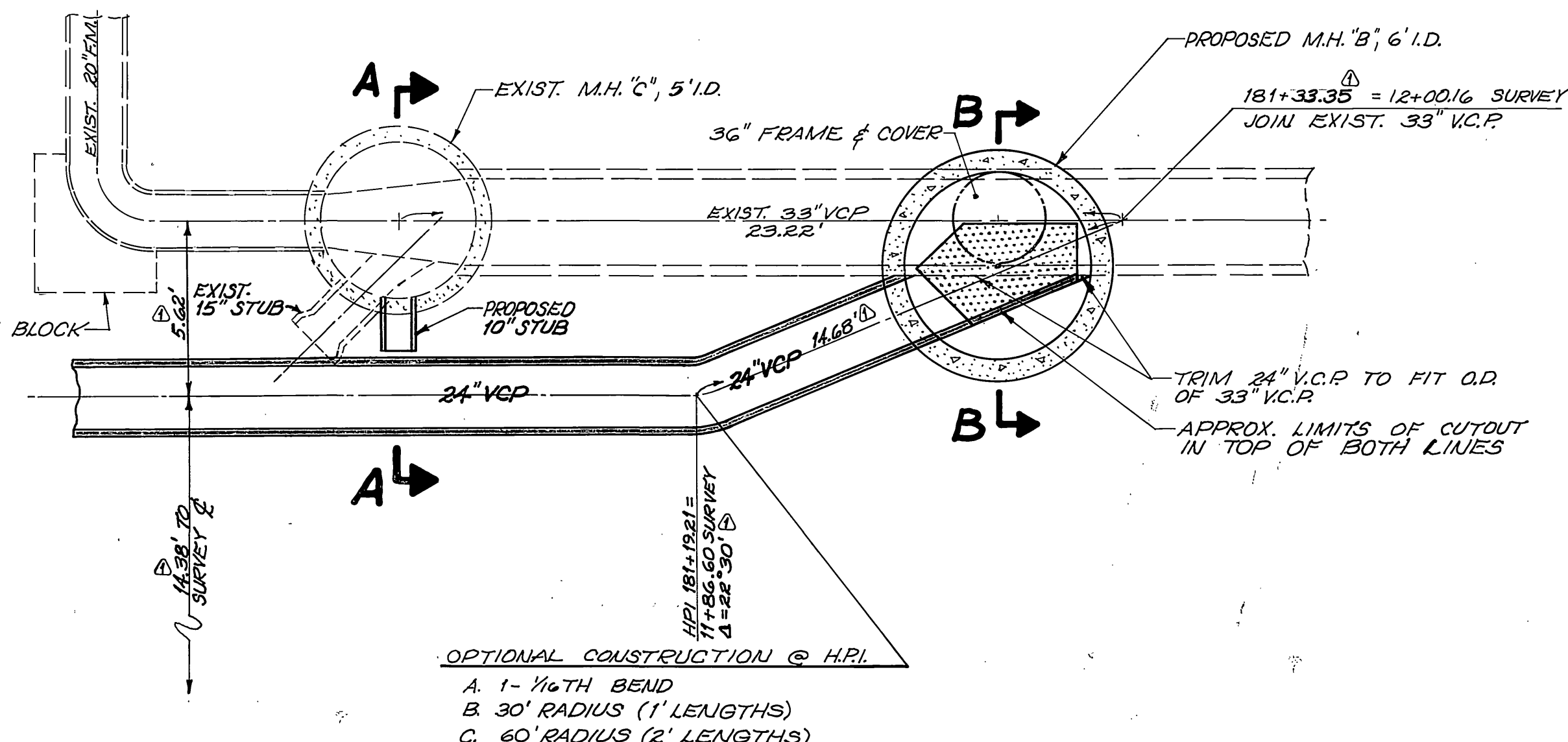


DETAIL E
N.T.S.

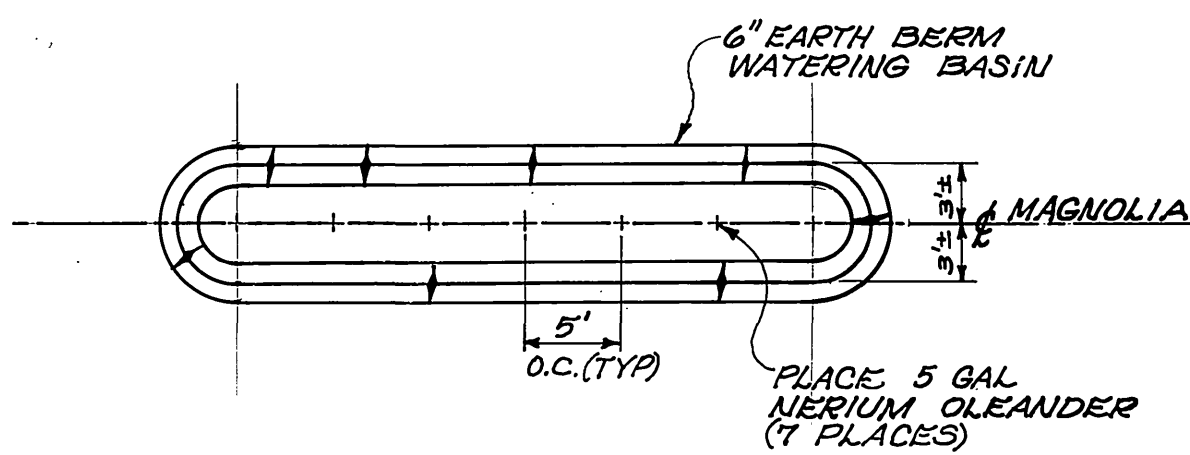


STEEL ENCASEMENT DETAIL
N.T.S.

*COATING USED: KOPPER'S SUPER SERVICE BLACK ASPHALT MASTIC



DETAIL C
(TIE IN AT COUNTY FARM)
SCALE: 1"=4'



OLEANDER PLANTING DETAIL
N.T.S.

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT

APPROVED BY: [Signature] DATE: 8/21/01
 PRINCIPAL ENGINEER: [Signature] DATE: 7-3-01
 PARK DEPARTMENT: [Signature] DATE: 7-3-01
 TRAFFIC DIVISION: [Signature] DATE: 7-3-01
 CHIEF P.W. ENGINEER: [Signature] DATE: 7-3-01

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature]

MAGNOLIA AVENUE FORCE MAIN
FROM PIERCE TO MEGGINSON

SCALE AS SHOWN

ACCOUNT NO. 32-577-508
S-1188
SHEET 16 OF 16