

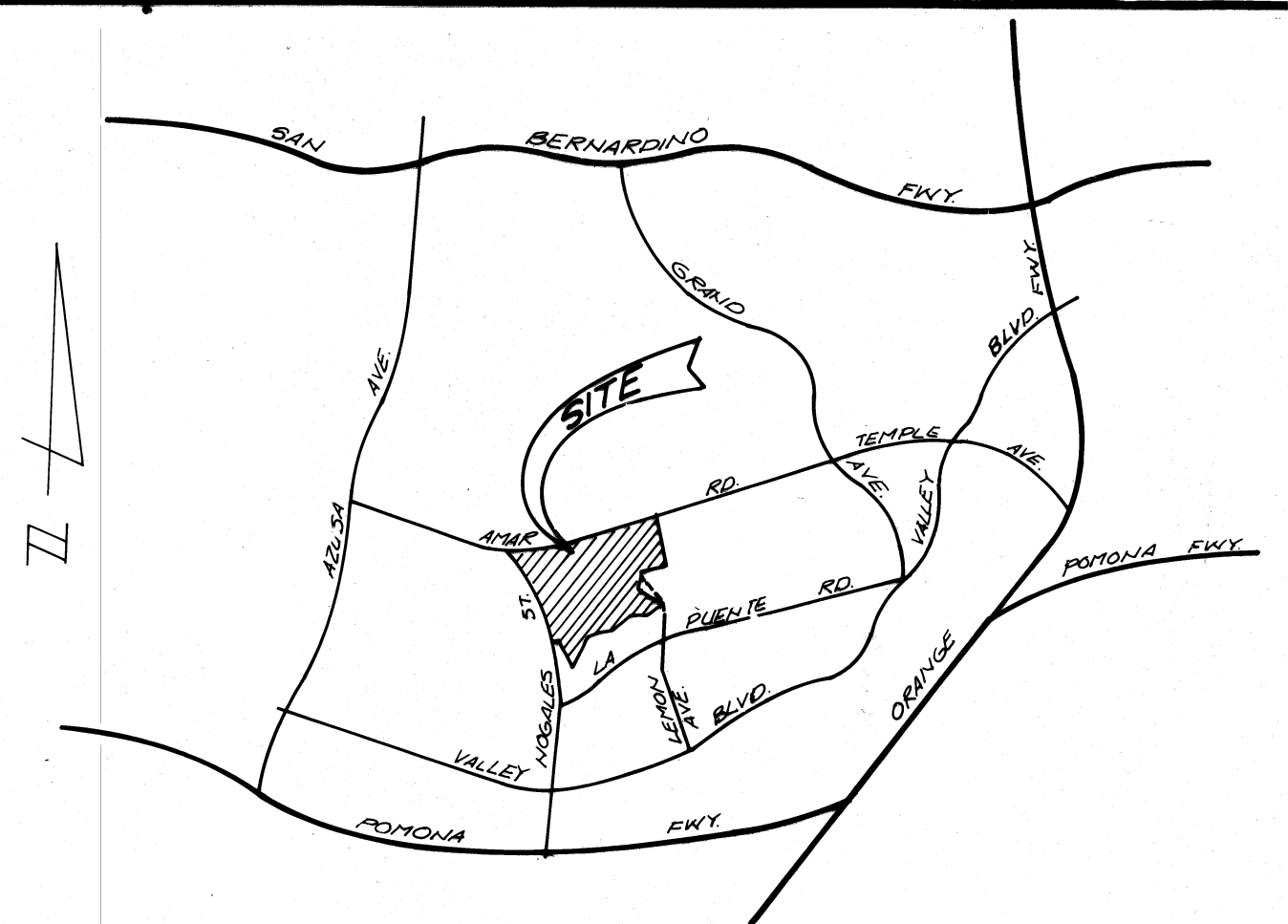
**GENERAL NOTES FOR STORM DRAIN CONSTRUCTION**

21. GALVANIZE ALL METAL PARTS AFTER FABRICATION.  
 22. THE PIPE IS TO BE MANUFACTURED WITH ADDITIONAL CONC. OVER THE INVERT STEEL AS SPECIFIED ON THE PROFILE OF THESE PLANS.

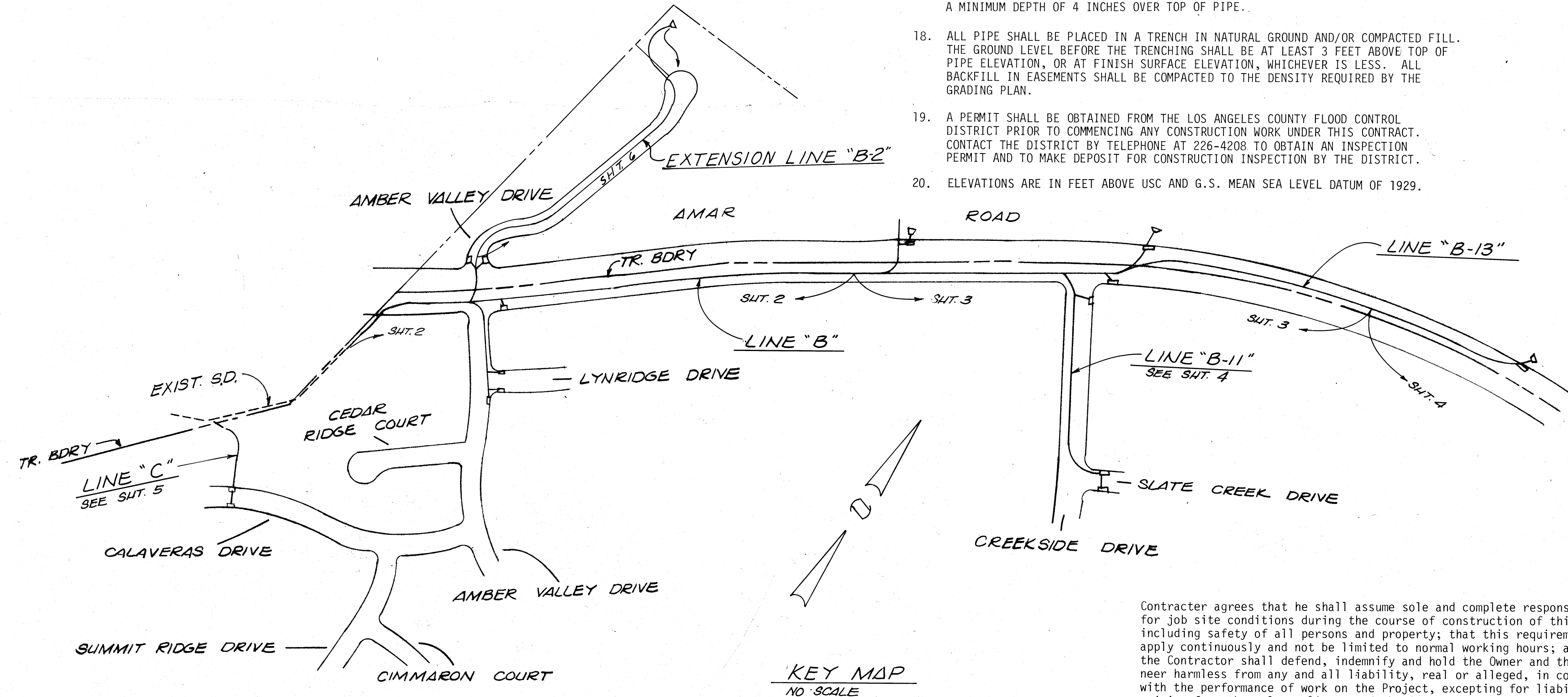
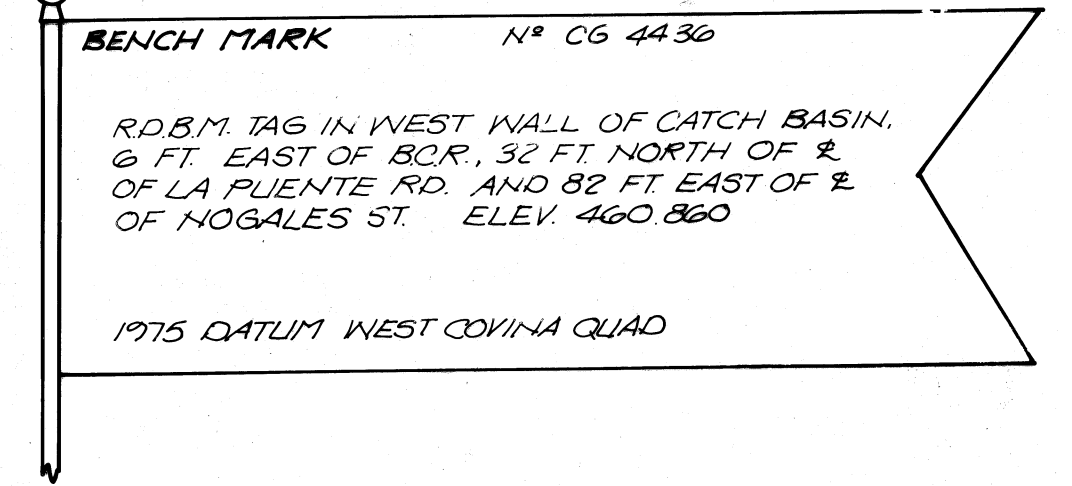
- ALL PIPE LAID IN OPEN TRENCH SHALL BE BEDDED IN ACCORDANCE WITH LOS ANGELES COUNTY ENGINEER CASE AD BEDDING PER STANDARD NO. D-54
- 24 HOURS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT INSPECTOR AT (213) 226-4206, AND WALNUT CITY ENGINEER AT (714) 595-2279.
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (1979 EDITION) AND TO THE SATISFACTION OF THE CITY ENGINEER.
- BEFORE WORK COMMENCES, THE CONTRACTOR MUST OBTAIN A PERMIT FROM THE CITY ENGINEER TO EXCAVATE WITHIN CITY STREETS. THE PERMIT WILL BE ISSUED WITHOUT FEE.
- ALL BACKFILL SHALL BE COMPACTED TO A RELATIVE DENSITY OF 90%.
- ALL STATE AND LOCAL TRENCH SAFETY RULES WILL BE RIGIDLY ENFORCED.
- THE CONTRACTOR MUST MAINTAIN ALL TRAFFIC SIGNS IN AN UPRIGHT, READILY DISCERNIBLE POSITION, FREE FROM OBSTRUCTIONS TO MOTORIST'S VISION, AND SHALL RESET SAME IN THE PROPER POSITION UPON COMPLETION OF CONSTRUCTION.
- EXISTING UTILITIES CROSSING STORM DRAIN SHALL BE SUPPORTED PER L.A.C.F.C.D. STD. 2-D 173.1-3, AS DIRECTED BY THE CITY ENGINEER.
- THE CONTRACTOR SHALL FURNISH A LETTER OF CERTIFICATION FROM THE PIPE MANUFACTURER AS TO TEST RESULTS OF THE PIPE INSTALLED.
- R.C.P. SHALL BE MANUFACTURED AND INSPECTED IN ACCORDANCE WITH SECTION 207-2.7, 2.8 AND 2.9 OF STANDARD SPECIFICATIONS.
- ALL PIPE LENGTHS SHOWN ARE HORIZONTAL PROJECTIONS, UNLESS OTHERWISE NOTED.
- THIS STORM DRAIN WILL NOT BE ACCEPTED FOR MAINTENANCE UNTILL THE STREETS HAVE BEEN PAVED, MANHOLES BROUGHT UP TO GRADE AND THE SYSTEM CLEANED TO THE SATISFACTION OF THE CITY ENGINEER.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7-10.4.1 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION IN REGARD TO SAFETY ORDERS.
- THE CONTRACTOR SHALL CONFORM TO THE "MINIMUM PUBLIC SAFETY REQUIREMENTS" AS SHOWN ON LOS ANGELES COUNTY ENGINEER STANDARD 5-2.
- ALL CONCRETE SHALL BE 3,000 POUNDS PER SQUARE INCH PORTLAND CEMENT CONCRETE, UNLESS OTHERWISE SHOWN.
- REINFORCEMENT SHALL BE REFORMED BARS OF INTERMEDIATE GRADE STEEL AS PER ASTM A-615, GRADE 60.
- THE INSPECTOR MAY HAVE THE OPTION TO REQUIRE CONCRETE BACKFILL DURING CONSTRUCTION WHEN THE PIPE HAS LESS THAN ONE FOOT OF COVER AND IS SUBJECT TO HEAVY EQUIPMENT TRAFFIC. THE CONCRETE BACKFILL SHALL CONSIST OF 1:3:5 MIX CONCRETE, POURED FROM WALL TO WALL OF TRENCH AND FROM BOTTOM OF TRENCH TO A MINIMUM DEPTH OF 4 INCHES OVER TOP OF PIPE.
- ALL PIPE SHALL BE PLACED IN A TRENCH IN NATURAL GROUND AND/OR COMPACTED FILL. THE GROUND LEVEL BEFORE THE TRENCHING SHALL BE AT LEAST 3 FEET ABOVE TOP OF PIPE ELEVATION, OR AT FINISH SURFACE ELEVATION, WHICHEVER IS LESS. ALL BACKFILL IN EASEMENTS SHALL BE COMPACTED TO THE DENSITY REQUIRED BY THE GRADING PLAN.
- A PERMIT SHALL BE OBTAINED FROM THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PRIOR TO COMMENCING ANY CONSTRUCTION WORK UNDER THIS CONTRACT. CONTACT THE DISTRICT BY TELEPHONE AT 226-4208 TO OBTAIN AN INSPECTION PERMIT AND TO MAKE DEPOSIT FOR CONSTRUCTION INSPECTION BY THE DISTRICT.
- ELEVATIONS ARE IN FEET ABOVE USC AND G.S. MEAN SEA LEVEL DATUM OF 1929.

**INDEX TO STANDARD DRAWINGS**

- 2-D 88 LOCAL DEPRESSION NO. 2
- 2-D 96 STANDARD DROP STEP
- 2-D 102 MANHOLE NO. 1
- 2-D 107 CONCRETE RINGS, REDUCER AND PIPE FOR MANHOLE SHAFT
- 2-D 112 JUNCTION STRUCTURE NO. 2
- 2-D 113 MANHOLE NO. 4
- 2-D 156 MANHOLE FRAME AND COVER FOR CATCH BASINS
- 2-D 157 CATCH BASIN REINFORCEMENT FOR ROUND MANHOLES.
- 2-D 160 CATCH BASIN NO. 1
- 2-D 162 CATCH BASIN NO. 2
- 2-D 163 CATCH BASIN NO. 3
- 2-D 172 CATCH BASIN REINFORCEMENT
- 2-D 173 PIPE SUPPORT ACROSS TRENCHES
- 2-D 175 REMOVABLE PROTECTION FOR CATCH BASINS
- 2-D 184 MANHOLE NO. 2
- 2-D 188 TRANSITION STRUCTURE NO. 3
- 2-D 190 PIPE CONNECTIONS TO EXISTING STORM DRAINS
- 2-D 193 JUNCTION STRUCTURE NO. 4
- 2-D 224 CONNECTION TO CATCH BASIN FOR PIPES 12 INCHES THRU 72 INCHES
- 2-D 232 DETAIL OF CATCH BASIN OPENING
- 2-D 264 ADJUSTABLE PROTECTION BAR STIRRUP
- 2-D 265 INLET NO. 1
- 2-D 393 CONCRETE COLLAR FOR PIPE 12 INCHES THROUGH 66 INCHES
- 2-D 472 STANDARD 24-INCH MANHOLE FRAME AND COVER



**VICINITY MAP**  
NO SCALE



Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this Project including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineer harmless from any and all liability, real or alleged, in connection with the performance of work on the Project, excepting for liability arising from the sole negligence of the Owner or the Engineer.

**NOTICE TO CONTRACTOR**

The existence and location of any underground utility pipe or structures shown on these Plans are obtained by a search of available records. Approval of this Plan by the City of Walnut does not constitute a representation as to the accuracy or completeness of the location or the existence or non-existence of any underground utility pipe or structure within the limits of this Project. The Contractor is required to take all due precautionary means to protect the utility lines not of record or not shown on this Plan.

**QUANTITY ESTIMATE**

ITEM	QUANTITY	UNIT
MANHOLE NO 1	10	EA.
MANHOLE NO 2	1	EA.
MANHOLE NO 4	4	EA.
JUNCTION STRUCTURE NO 2	6	EA.
JUNCTION STRUCTURE NO 4	4	EA.
CATCH BASIN NO 1	3	EA.
CATCH BASIN NO 2	3	EA.
CATCH BASIN NO 3 W=10'	2	EA.
W=14'	4	EA.
W=21'	3	EA.
W=28	2	EA.
CONCRETE COLLAR	9	EA.
BRICK & MORTAR PLUG	5	EA.
INLET STRUCTURE	3	EA.
18" RCP - 1800 D	44	LF.
18" RCP - 1800 D	10	LF.
18" RCP - 2000 D	310	LF.
18" RCP - 2200 D	32	LF.
18" RCP - 2400 D	350	LF.
21" RCP - 1600 D	40	LF.
21" RCP - 1800 D	8	LF.
21" RCP - 2400 D	40	LF.
DEBRIS POSTS	15	EA.
24" RCP - 1800 D	181	LF.
24" RCP - 2000 D	339	LF.
ASPHALT	2600	SF.
24" RCP - 2400 D	1114	LF.
CURB ONLY	245	LF.
24" RCP - 2400 D W/1/2" COVER	24	LF.
CONCRETE DITCH W=2'	245	LF.
30" RCP - 1800 D W/1/2" COVER	29	LF.
DRIVEWAY APRON	226	SF.
14' GATE	2	EA.
33" RCP - 2400 D	199	LF.
5' FENCE	430	LF.
36" RCP - 1800 D W/1/2" COVER	1092	LF.
BANK PROTECTION	450	SF.
36" RCP - 2100 D W/1/2" COVER	106	LF.
12" CMP 16 ga. ASPHALT COATED	55	LF.
48" C.S.P. OUTLET TOWER	1	EA.
42" RCP 1700 D	261	LF.

NOTE: QUANTITIES SHOWN ARE APPROXIMATE ONLY IT IS THE CONTRACTORS RESPONSIBILITY TO SUPPLY PIPE SIZE, LENGTH & D-LOADS SHOWN IN PLANS.

REVISIONS	
ADDED SHEET 6, THE EXTENSION TO LINE B-2 & REVISED QUANTITIES TO REFLECT THIS ADDITION	
REVISOR: <i>Steven E. Barnhart</i> RE. NO. 25147 APPROVED: <i>[Signature]</i> DATE: 11/18/80	REVISOR: _____ RE. NO. _____ APPROVED: _____ DATE: _____

CITY OF WALNUT APPROVED

PLANS PREPARED BY: *Steven E. Barnhart* 11-28-80  
*Steven E. Barnhart* REC 25147  
 Planning, Engineering & Surveying  
**Hinsaker & Associates Inc.** (714) 754-1011  
 3001 Red Hill, Building VI, Suite 212, Costa Mesa, CA 92626

**CITY OF WALNUT**  
 STORM DRAIN IMPROVEMENTS  
 MISCELLANEOUS TRANSFER DRAIN NO 917  
 LINES B+C

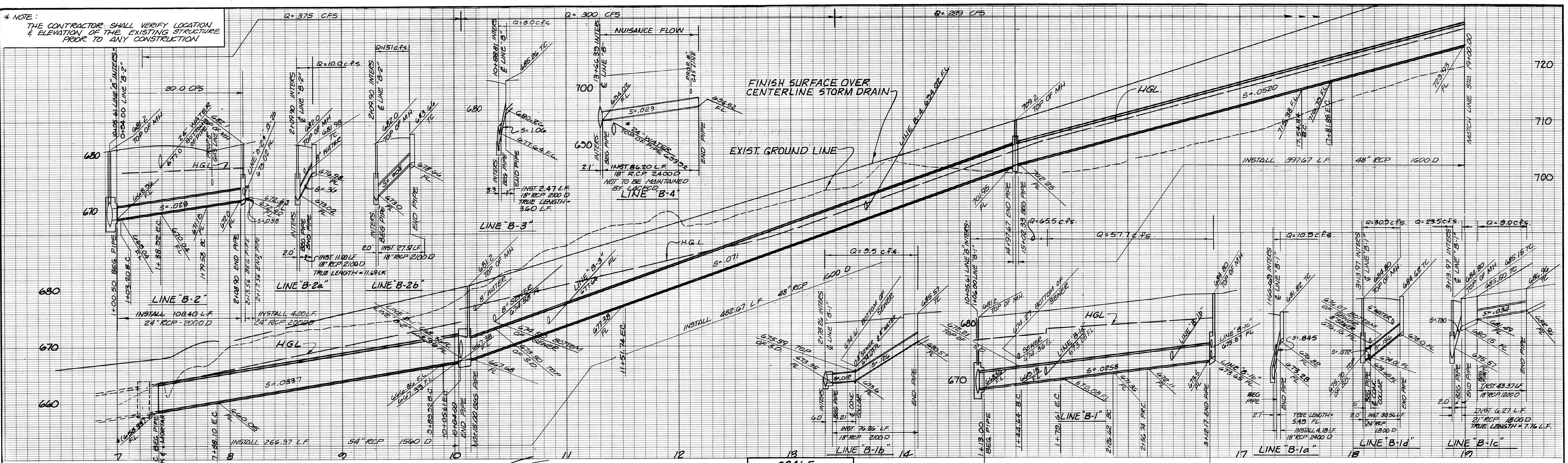
TR. 36673 STORM DRAIN IMPROVEMENTS SHEET 1 OF 6

126A

WPC 180

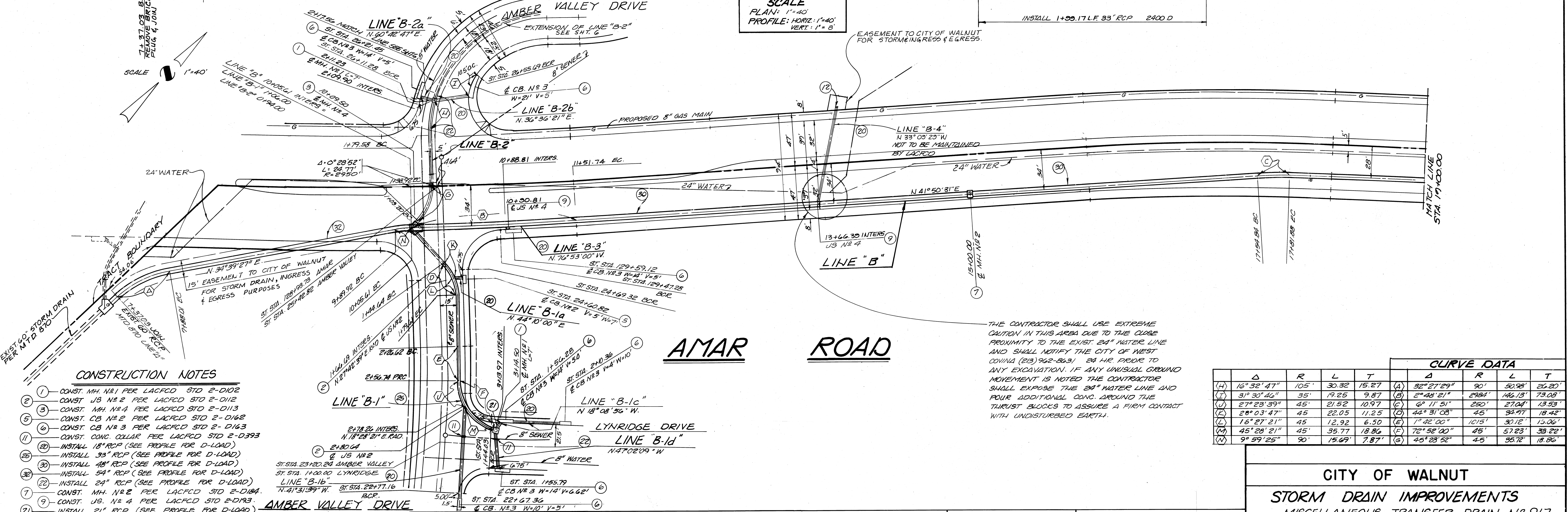
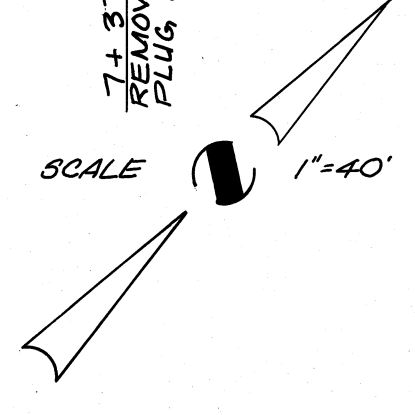


\* NOTE:  
THE CONTRACTOR SHALL VERIFY LOCATION & ELEVATION OF THE EXISTING STRUCTURE PRIOR TO ANY CONSTRUCTION



SCALE  
PLAN: 1"=40'  
PROFILE: HORIZ: 1"=40'  
VERT: 1"=8'

EASEMENT TO CITY OF WALNUT FOR STORMINGRESS & EGRESS.



**CONSTRUCTION NOTES**

1. CONST. MH. N#1 PER LACFD STD 2-D102
2. CONST. JS N#2 PER LACFD STD 2-D112
3. CONST. MH. N#4 PER LACFD STD 2-D113
4. CONST. CB N#2 PER LACFD STD 2-D162
5. CONST. CB N#3 PER LACFD STD 2-D163
6. CONST. CONC. COLLAR PER LACFD STD 2-D393
7. INSTALL 18" RCP (SEE PROFILE FOR D-LOAD)
8. INSTALL 33" RCP (SEE PROFILE FOR D-LOAD)
9. INSTALL 48" RCP (SEE PROFILE FOR D-LOAD)
10. INSTALL 54" RCP (SEE PROFILE FOR D-LOAD)
11. INSTALL 24" RCP (SEE PROFILE FOR D-LOAD)
12. CONST. MH. N#2 PER LACFD STD 2-D184
13. CONST. JS. N#4 PER LACFD STD 2-D193
14. INSTALL 21" RCP (SEE PROFILE FOR D-LOAD)
15. CONST. 8" BRICK & MORTAR PLUG OR JOIN IF GRADING STRUCT. IS EXIST.
16. INSTALL 18" CMP 16 ga. ASPHALT COATED

**AMAR ROAD**

THE CONTRACTOR SHALL USE EXTREME CAUTION IN THIS AREA DUE TO THE CLOSE PROXIMITY TO THE EXIST 24" WATER LINE AND SHALL NOTIFY THE CITY OF WEST COVINA (213) 962-2631 24 HR. PRIOR TO ANY EXCAVATION. IF ANY UNUSUAL GROUND MOVEMENT IS NOTED THE CONTRACTOR SHALL EXPOSE THE 24" WATER LINE AND POUR ADDITIONAL CONC. AROUND THE THURST BLOCKS TO ASSURE A FIRM CONTACT WITH UNDISTURBED EARTH.

**CURVE DATA**

Δ	R	L	T	Δ	R	L	T
(H) 16° 32' 47"	105'	30.32	15.27	(A) 52° 27' 29"	90'	50.98	26.20'
(I) 31° 30' 46"	35'	19.25	9.87	(B) 2° 48' 21"	2984'	146.13'	73.08'
(J) 27° 23' 39"	45'	21.52	10.97	(C) 6° 11' 51"	250'	27.04'	13.53'
(K) 28° 03' 47"	45'	22.05	11.25	(D) 44° 31' 08"	45'	34.97	18.42'
(L) 16° 27' 21"	45'	12.92	6.50	(E) 1° 42' 00"	1015'	30.12'	15.06'
(M) 45° 28' 21"	45'	35.77	18.86	(F) 70° 58' 00"	45'	57.23'	33.22'
(N) 9° 59' 25"	90'	15.69	7.87'	(G) 45° 28' 52"	45'	35.72'	18.86'

**CITY OF WALNUT**

**STORM DRAIN IMPROVEMENTS**

MISCELLANEOUS TRANSFER DRAIN N# 917  
LINE "B"  
LINE "B" STA. 7+37.03 TO 19+00.00  
LINE "B-1" STA. 1400.00 TO 3+12.17 & LINE "B-2" STA. 1400.00 TO 2+09.90

126B

TR. 30673 STORM DRAIN IMPROVEMENTS SHEET 2 OF 6

**REVISIONS**

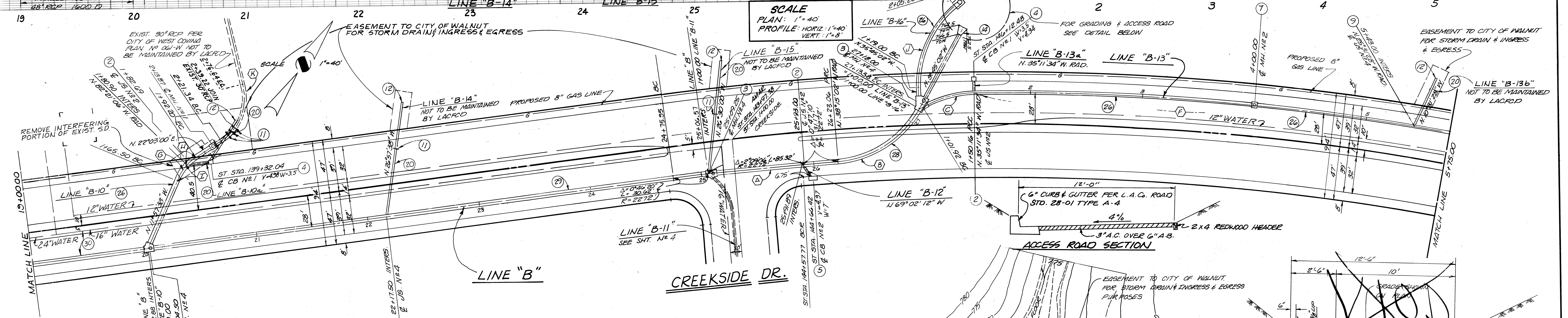
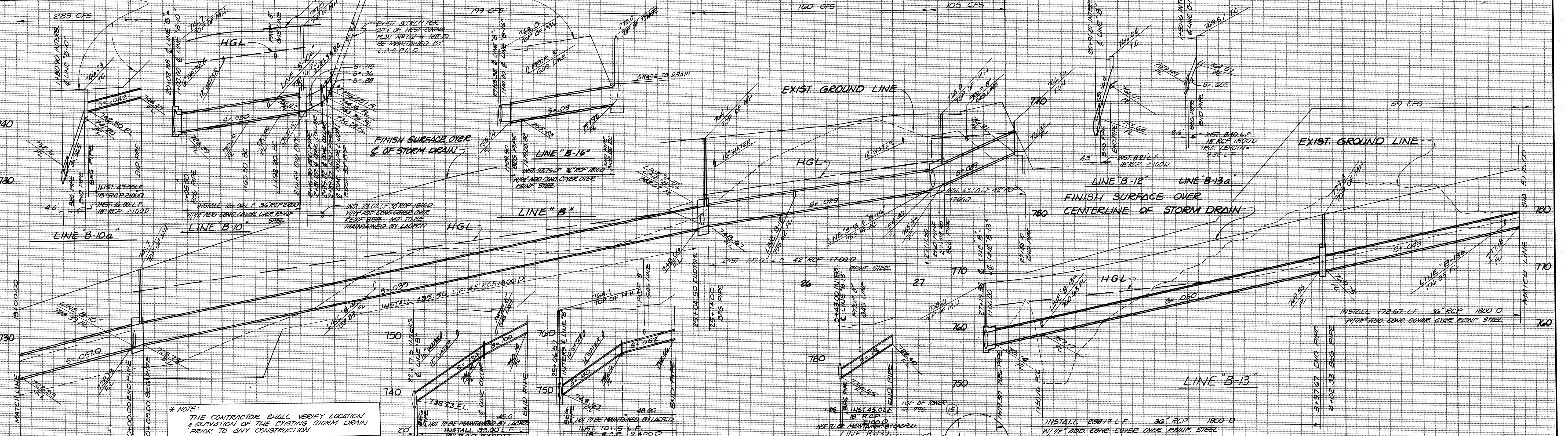
NO.	DATE	DESCRIPTION
1	2/1/18	ADDED 24" WATER LINE

CITY OF WALNUT APPROVED  
*[Signature]* 12/1/20  
CITY ENGINEER  
FRANK GULINSBERG RE 1225

PLANS PREPARED BY:  
**Hunsaker Associates Inc.**  
Planning, Engineering & Surveying  
(714) 754-1011  
3001 Red Hill, Building VI, Suite 212, Costa Mesa, CA 92626



FINISH SURFACE OVER & OF STORM DRAIN

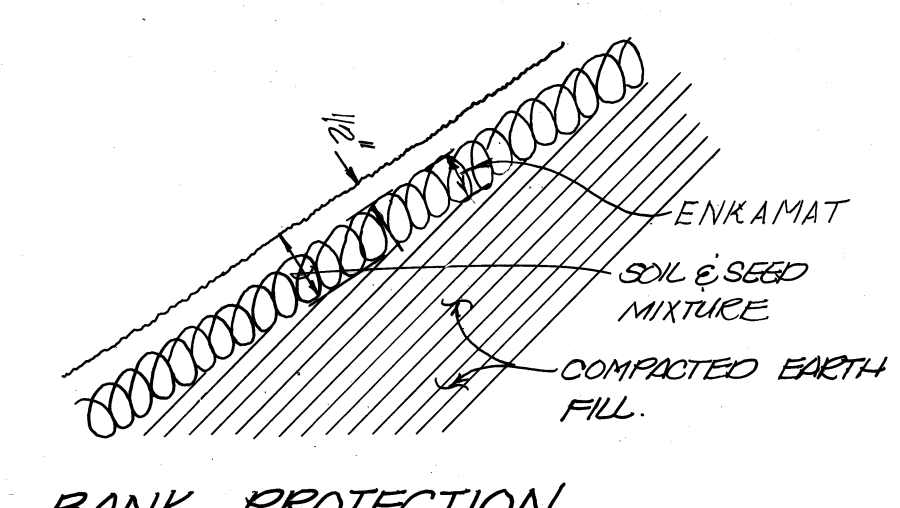


- CONSTRUCTION NOTES**
1. CONST. MH N#2 PER LACFCD STD 2-D184
  2. CONST. U.S. N#2 PER LACFCD STD 2-D112
  3. CONST. MH. N#4 PER LACFCD STD 2-D113
  4. CONST. C.B. N#1 PER LACFCD STD 2-D160
  5. CONST. C.B. N#2 PER LACFCD STD 2-D163
  6. CONST. U.S. N#4 PER LACFCD STD 2-D193
  7. CONST. CONC. COLLAR PER LACFCD STD 2-393
  8. CONST. 8" BRICK & MORTAR PLUG OR JOIN IF GRADING STRUCT. IS EXIST.
  9. INSTALL 18" RCP (SEE PROFILE FOR D-LOAD)
  10. INSTALL 30" RCP (SEE PROFILE FOR D-LOAD)
  11. INSTALL 42" RCP (SEE PROFILE FOR D-LOAD)
  12. INSTALL 45" RCP (SEE PROFILE FOR D-LOAD)
  13. INSTALL 48" RCP (SEE PROFILE FOR D-LOAD)
  14. INSTALL 12" CMP 1/4" ASPHALT COATED
  15. CONST. INLET PER DETAIL (SHT. 5)
  16. CONST. DEBRIS POST PER DETAIL (SHT. 5)
  17. INSTALL 36" RCP (SEE PROFILE FOR D-LOAD)
  18. CONST. OUTLET TOWER PER DETAIL (SHT. 5)
  19. CONST. ACCESS ROAD & DRIVEWAY PER DETAIL HEREON
  20. CONST. BANK PROTECTION - PROTECT WITH ENKAMAT 7020 OR EQUIVALENT (INSTALL PER MANUFACTURERS INSTRUCTIONS & DETAIL HEREON.)

**CURVE DATA**

Δ	R	L	T
Δ 3° 42' 36"	2272'	147.12'	73.58'
B 57° 30' 00"	90'	90.32'	49.38'
C 30° 42' 32"	90'	48.24'	24.71'
F 13° 18' 34"	2328'	540.78'	271.61'
G 34° 00' 38"	45'	26.71'	13.76'
H 14° 24' 06"	45'	11.31'	5.68'
J 19° 36' 32"	45'	15.40'	7.78'
K 53° 00' 00"	90'	83.25'	44.87'
L 70° 24' 37"	45'	55.30'	31.75'

**AMAR ROAD**



**REVISIONS**

NO.	DESCRIPTION	DATE
1	ADDED 12" & 16" WATER LINES & BANK PROTECTION NOTE & DETAIL	2/10/81
2	REVISED ACCESS ROAD SECTION	11/3/81
3	REVISED ACCESS ROAD SECTION	11/3/81

**CITY OF WALNUT APPROVED**

**PLANS PREPARED BY:**  
**Hunsaker Associates Inc.**  
 Planning, Engineering & Surveying  
 3001 Red Hill, Building VI, Suite 212, Costa Mesa, CA 92626  
 (714) 754-1011

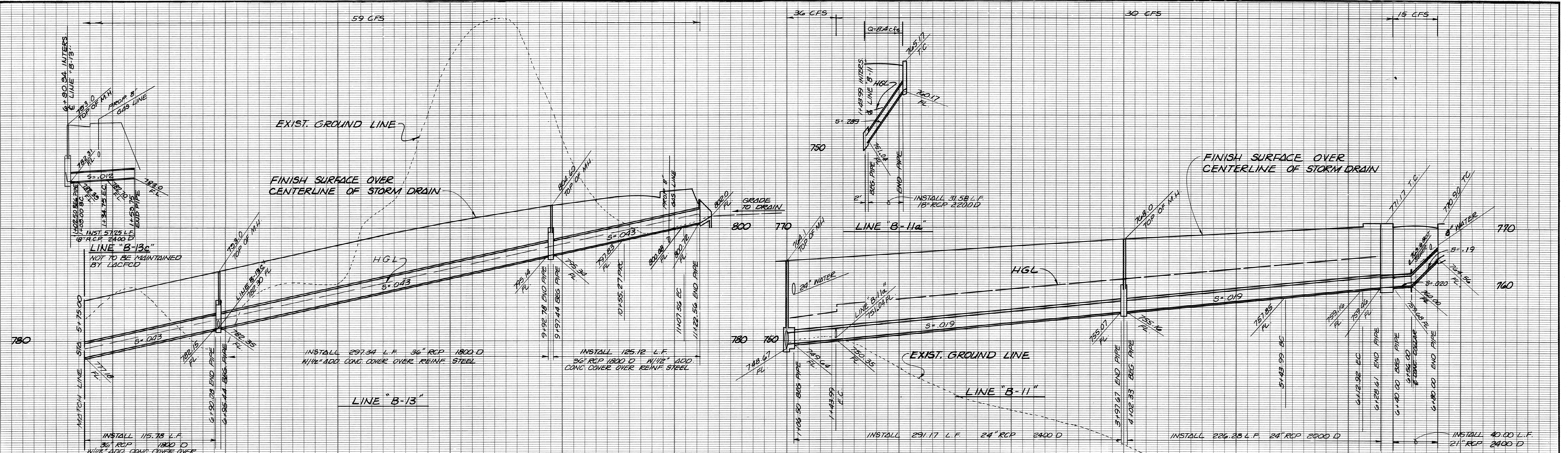
**CITY OF WALNUT**

**STORM DRAIN IMPROVEMENTS**  
 MISCELLANEOUS TRANSFER DRAIN N# 917  
 LINE "B"  
 LINE "B" STA 19+00.00 TO 27+90.00 & LINE "B-13" STA 1+00.00 TO 5+75.00

TR. 36673      STORM DRAIN IMPROVEMENTS      SHEET 3 OF 6  
 WPC 180

260

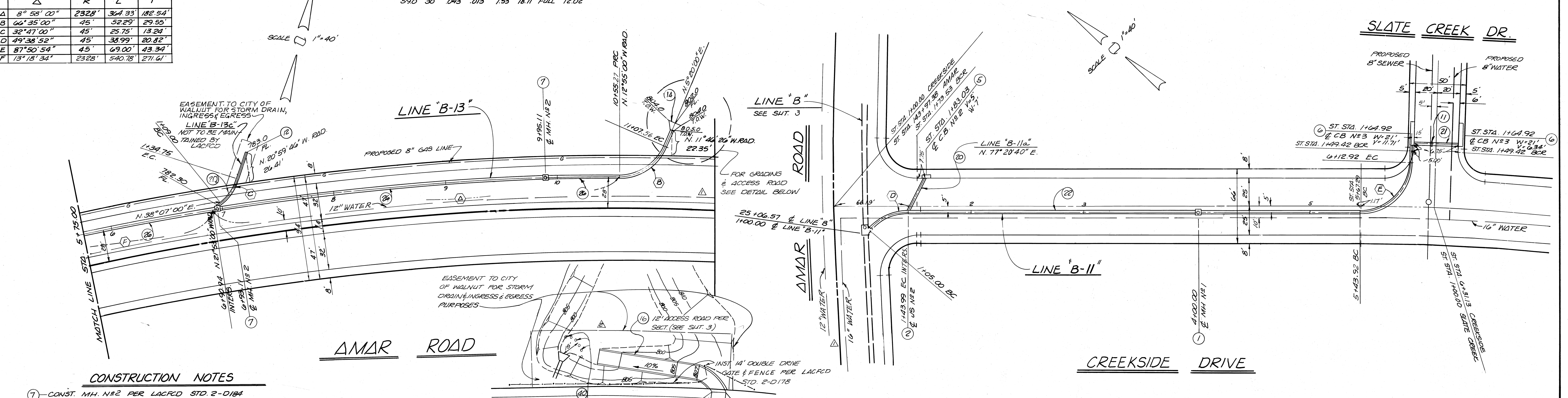




CURVE DATA				
Δ	R	L	T	
A	8° 58' 00"	2328'	344' 33"	182.54'
B	66° 35' 00"	45'	52.29'	29.55'
C	32° 47' 00"	45'	25.75'	13.24'
D	49° 38' 52"	45'	38.99'	20.82'
E	87° 50' 54"	45'	69.00'	43.34'
F	13° 18' 34"	2328'	540.78'	271.61'

HYDRAULIC DATA									
Q	D	S	N	D <sub>1</sub>	V <sub>1</sub>	D <sub>2</sub>	V <sub>2</sub>	D <sub>3</sub>	V <sub>3</sub>
59.0	30"	0.043	0.013	1.53	18.71	FULL	12.02'		

SCALE  
 PLAN: 1" = 40'  
 PROFILE: HORIZ: 1" = 40'  
 VERT: 1" = 8'



- CONSTRUCTION NOTES**
- CONST. MH. N#2 PER LACFCO STD. 2-D184
  - CONST. JS N#2 PER LACFCO STD. 2-D112
  - CONST. CB N#2 PER LACFCO STD. 2-D162
  - CONST. CB N#3 PER LACFCO STD. 2-D163
  - INSTALL 18" RCP (SEE PROFILE FOR D-LOAD)
  - INSTALL 24" RCP (SEE PROFILE FOR D-LOAD)
  - INSTALL 30" RCP (SEE PROFILE FOR D-LOAD)
  - INSTALL 15" CMP 16ga ASPHALT COATED
  - CONST. 8" BRCK & MORTAR PLUG OR JOIN IF GRADING STRUCT. IS EXIST.
  - INSTALL 21" RCP (SEE PROFILE FOR D-LOAD)
  - CONST. INLET PER DETAIL (SHT. 5)
  - CONC. COLLAR PER LACFCO STD. 2-D393.
  - CONST. DEBRIS POST PER DETAIL SHT. 5
  - INSTALL 36" RCP (SEE PROFILE FOR D-LOAD)
  - CONST. ACCESS ROAD & DRIVEWAY PER DETAIL HEREON

**REVISIONS**

Δ ADDED 12" & 16" WATER LINES	Δ REVISED R/W OF EASEMENT
REVISED BY: <i>Steve Elwood</i> RE. N° 25167 APPROVED: <i>Flus</i> DATE: 3/10/81	REVISED BY: <i>Steve Elwood</i> RE. N° 25167 APPROVED: <i>Flus</i> DATE: 5/4/81

CITY OF WALNUT APPROVED

PLANS PREPARED BY:  
**Hunsaker Associates Inc.**  
 Planning, Engineering & Surveying  
 3001 Red Hill, Building VI, Suite 212, Costa Mesa, CA 92626  
 (714) 754-1011

**CITY OF WALNUT**

**STORM DRAIN IMPROVEMENTS**

MISCELLANEOUS TRANSFER DRAIN N° 917

LINE "B"

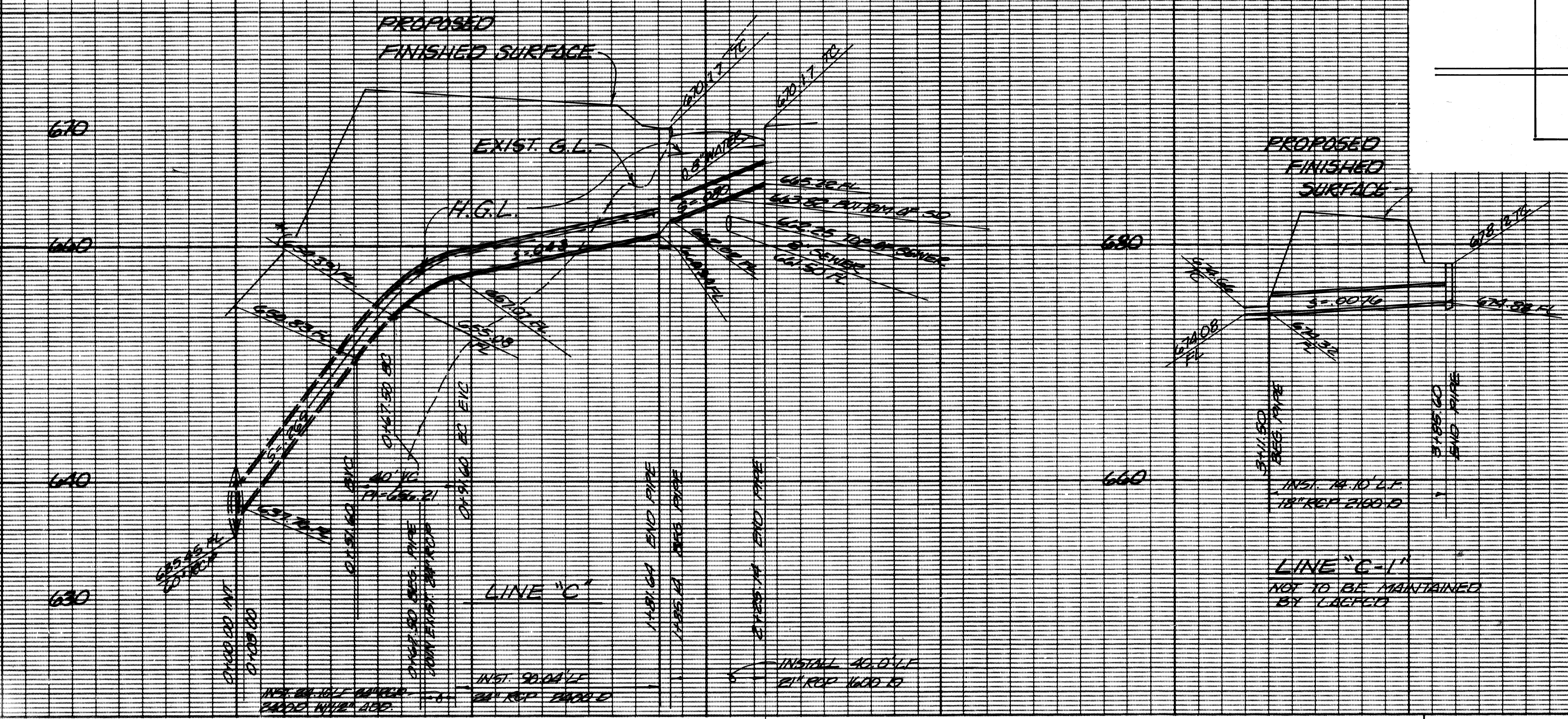
LINE B-13 STA. 5+75.00 TO 11+22.45 & LINE B-11 STA. 1+00.00 TO 6+80.00

TR. 36673 STORM DRAIN IMPROVEMENTS SHEET 4 OF 6



46.5 CFS 23.3 CFS

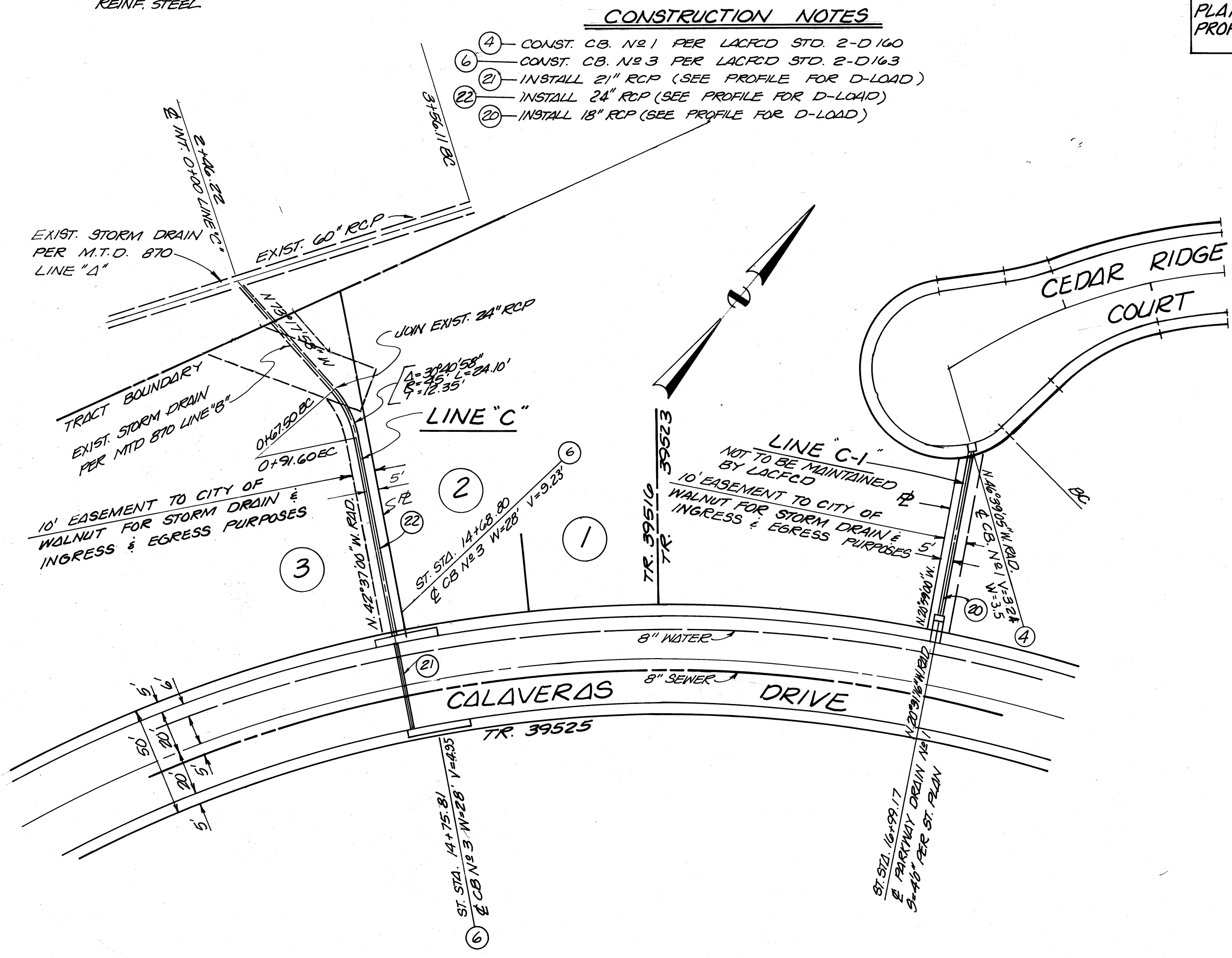
\* NOTE:  
THE CONTRACTOR SHALL VERIFY LOCATION & ELEVATION OF THE EXISTING STRUCTURE PRIOR TO ANY CONSTRUCTION



SCALE  
PLAN: 1"=40'  
PROFILE: HORIZ: 1"=40'  
VERT: 1"=8'

**CONSTRUCTION NOTES**

- 1) CONST. CB. NO. 1 PER LACFD STD. 2-D140
- 2) CONST. CB. NO. 3 PER LACFD STD. 2-D163
- 3) INSTALL 21" RCP (SEE PROFILE FOR D-LOAD)
- 4) INSTALL 24" RCP (SEE PROFILE FOR D-LOAD)
- 5) INSTALL 18" RCP (SEE PROFILE FOR D-LOAD)



REVISIONS					
REVISED BY	RE. NO.	REVISION	RE. NO.	REVISION	RE. NO.

CITY OF WALNUT APPROVED

*[Signature]* 11/1/20  
CITY ENGINEER  
FRANK SALFINGER RE. 12225

PLANS PREPARED BY:  
**Hunsaker & Associates Inc.**  
Planning, Engineering & Surveying  
(714) 754-1011  
3001 Red Hill, Building VI, Suite 212, Costa Mesa, CA 92626

**CITY OF WALNUT**

**STORM DRAIN IMPROVEMENTS**

MISCELLANEOUS TRANSFER DRAIN NO. 917

LINE "C"

STA. 0+43.33 TO 2+23.04

**126E**

TR. 36673	STORM DRAIN IMPROVEMENTS	SHEET 5 OF 6
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WPC 180

