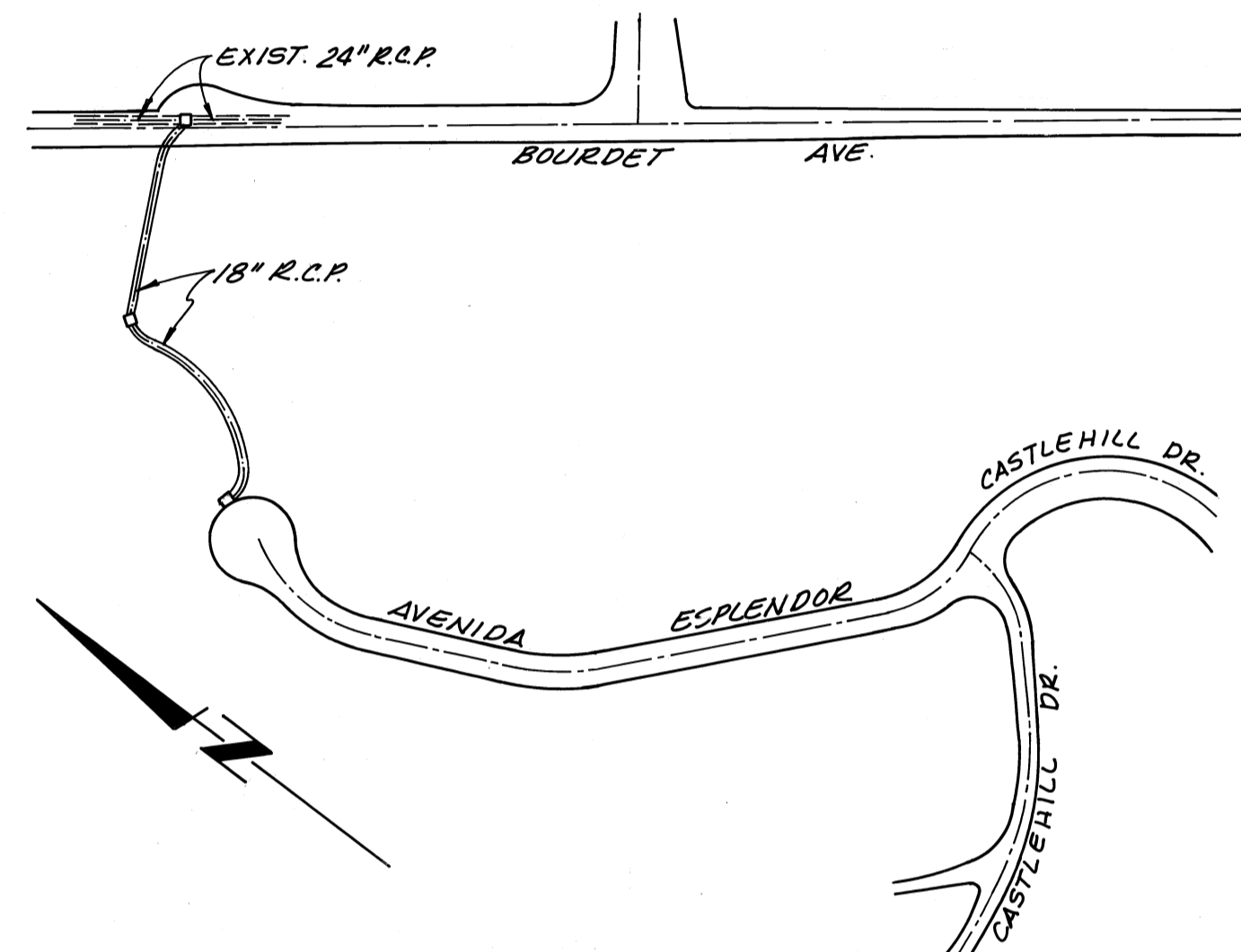
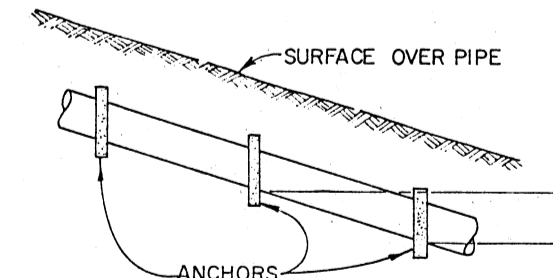
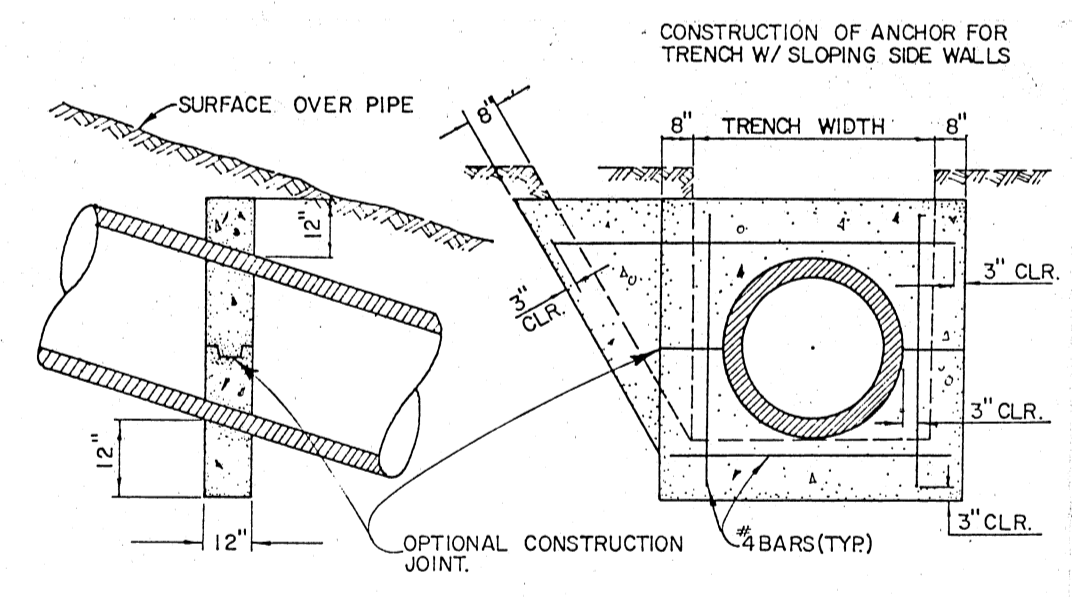


PROJECT LOCATION MAP
NO SCALE



VICINITY MAP
NO SCALE



- Notes:**
1. Pipe anchors shall be constructed at 7' vertical interval on all slopes of 5:1 or steeper.
 2. All reinforcing steel shall be #4 bars.
 3. Concrete shall be class 500-C-2500 concrete.

SLOPE ANCHOR DETAIL
NO SCALE

NO	REVISION	REV. R.C.E. NO.	APPROVED BY	DATE

HYDRAULIC DATA							
LINE	STA. TO STA.	Q50	SLOPE (So)	n	d	D (ft.)	V (f.p.s.)

BENCH MARK: C.G. 2691
R.D.B.M. TAG IN N. C.B. VALLEY BLVD
1 FT. E. OF B.C.R. AT N.E. CORNER OF
CASTLEHILL DR. & VALLEY BLVD. 40
FT. N. & 75 FT. E. OF & INT.
ELEV. = 510.153

STORM DRAIN PLANS IN ASSESSMENT DISTRICT 89-1
P.D. No. _____

GENERAL NOTES (Cont'd)

22. ALL BACKFILL AND FILL AROUND CLOSED CONDUIT IN STREET RIGHTS-OF-WAY SHALL BE BROUGHT UP TO SUBGRADE OF THE ROAD OR TO 2 FEET ABOVE THE TOP OF THE CONDUIT, WHICHEVER IS LESS, THE DEPARTMENT SHALL INSPECT ALL BACKFILL AND FILL ABOVE AFOREMENTIONED LIMITS. APPLICATIONS FOR AN ENGINEER OR INSPECTOR IN CONNECTION WITH THE WORK SHALL BE MADE BY THE CONTRACTOR AT LEAST 24 HOURS BEFORE HIS SERVICE IS REQUIRED. CALL (818) 458-3141.
23. ALL PIPE IN OPEN TRENCH SHALL BE BEDDED ACCORDING TO STANDARD DRAWING NO. 2-D177, CASE III, EXCEPT BELL AND SPIGOT PIPE WHICH SHALL BE CASE I BEDDING, UNLESS OTHERWISE SHOWN. "W" VALUES SHALL BE AS SPECIFIED ON STANDARD DRAWING NO. 2-D177 FOR CASE III BEDDING, NOTES 3(a), 3(b), AND 3(c). IF THE "W" VALUE AT THE TOP OF THE PIPE IS EXCEEDED, THE BEDDING SHALL BE MODIFIED, AND/OR PIPE OF ADDITIONAL STRENGTH SHALL BE PROVIDED. THE PROPOSED MODIFICATION SHALL BE APPROVED BY THE DISTRICT.
24. ALL PIPES SHALL BE PLACED IN TRENCH IN NATURAL GROUND AND/OR COMPACTED FILL. THE GROUND LEVEL BEFORE THE TRENCHING SHALL BE AT LEAST 3 FEET ABOVE THE TOP OF THE PIPE ELEVATION, OR AT FINISH SURFACE ELEVATION, WHICHEVER IS LESS. ALL BACKFILLS IN EASEMENTS SHALL BE COMPACTED TO THE DENSITY REQUIRED BY THE GRADING PLAN.
25. PIPE SHALL BE EMBEDDED 5 INCHES INTO ALL STRUCTURES INCLUDING INLET AND HEADWALLS, UNLESS OTHERWISE SPECIFIED.
26. THE PIPE IS TO BE MANUFACTURED WITH AN ADDITIONAL CONCRETE THICKNESS OVER THE INVERT REINFORCEMENT AS SPECIFIED IN PROFILE ON THESE PLANS.
27. ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. MEAN SEA LEVEL DATUM OF 1929, UNLESS OTHERWISE INDICATED.
28. ALL CATCH BASINS WITHIN THE DEDICATED STREET RIGHTS-OF-WAY SHALL BE CONSTRUCTED PER THE STREET PLANS.
29. THE CONTRACTOR SHALL PROVIDE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES UNTIL THIS STORM DRAIN SYSTEM IS OPERABLE.
30. ALL REFERENCES ON THIS PLAN TO THE COUNTY ENGINEER, ROAD DEPARTMENT, OR FLOOD CONTROL DISTRICT SHALL APPLY TO THE APPROPRIATE SECTIONS OF THE DEPARTMENT OF PUBLIC WORKS.
31. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
32. WHERE THE UTILITIES ARE INDICATED ON THE DRAWINGS TO BE SUPPORTED, SAID SUPPORTS SHALL BE IN ACCORDANCE WITH STANDARD PLAN NO. 244-0, UNLESS OTHERWISE INDICATED.
33. ALL OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES SHALL BE SEALED WITH 8 INCHES OF BRICK AND MORTAR OR 8 INCHES OF CONCRETE, UNLESS OTHERWISE SHOWN.
34. MANHOLES NO. 1, 2, 3, AND 4, SHALL USE THE STANDARD PLANS 630-0 FOR THE "FRAME AND COVER" AND 635-0 FOR THE "STANDARD DROP STEP."

GENERAL NOTES:

1. A PERMIT SHALL BE OBTAINED FROM THE LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS PRIOR TO COMMENCING ANY CONSTRUCTION WORK UNDER THIS CONTRACT. CONTACT THE DEPARTMENT BY TELEPHONE AT (818) 458-3129 TO OBTAIN AN INSPECTION AND CONNECTION PERMIT AND TO MAKE DEPOSIT FOR CONSTRUCTION INSPECTION.
2. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION DIVISION BY TELEPHONE, (818) 458-3141 AT LEAST 24 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT. THE CONTRACTOR SHALL SUBMIT A DEPOSIT FOR CONSTRUCTION INSPECTION TO THE COUNTY DIRECTOR OF PUBLIC WORKS, 900 FREEMONT AVE., ALHAMBRA, CONSTRUCTION INSPECTION SECTION AT LEAST 24 HOURS BEFORE STARTING WORK UNDER THIS CONTRACT. COPIES OF ALL PERMITS MUST BE FILED WITH THE DIRECTOR OF PUBLIC WORKS PRIOR TO SUBMITTING THE DEPOSIT.
3. THIS STORM DRAIN WILL NOT BE ACCEPTED FOR MAINTENANCE UNTIL THE STREETS HAVE BEEN PAVED, MANHOLES BROUGHT TO GRADE AND THE SYSTEM CLEANED TO THE SATISFACTION OF THE DIRECTOR OF PUBLIC WORKS.
4. APPROVAL OF THIS PLAN BY THE COUNTY OF LOS ANGELES DOES NOT CONSTITUTE A REPRESENTATION TO THE ACCURACY OF THE LOCATION, OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY, PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL SHEETS.
5. ALL WORK SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1985 EDITION," INCLUDING SUPPLEMENTS AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE DIRECTOR OF PUBLIC WORKS.
6. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7-10.41 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION IN REGARD TO SAFETY ORDERS.
7. THE CONTRACTOR SHALL CONFORM TO THE "MINIMUM PUBLIC SAFETY REQUIREMENTS" AS SHOWN ON LOS ANGELES COUNTY ENGINEER STANDARD S-2.
8. TRANSVERSE REINFORCEMENT AND TRANSVERSE JOINTS SHALL BE PLACED AT RIGHT ANGLES (OR RADIAL) TO THE CONDUIT CENTERLINE EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS.
9. ALL STEEL ADJACENT TO FACE OF CONCRETE SHALL HAVE 2 1/2" CLEARANCE UNLESS OTHERWISE SPECIFIED.
10. REINFORCEMENT SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE STEEL, PER A.S.T.M. A-615-GRADE 60.
11. ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "MANUAL OF STANDARD PRACTICES".
12. DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE TO CENTERLINE OF STEEL UNLESS OTHERWISE NOTED.
13. ALL STEEL THAT IS TO BE CONTINUOUS SHALL HAVE A MINIMUM LAP OF 30 BAR DIAMETERS OR 18" WHICHEVER IS GREATER.
14. NO CONCRETE SHALL BE PLACED UNTIL THE FORMS AND REINFORCING STEEL HAVE BEEN PLACED, INSPECTED AND APPROVED.
15. ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH AN ULTIMATE 28 DAY COMPRESSIVE STRENGTH OF 3250 psi, UNLESS OTHERWISE NOTED.
16. ALL CONSTRUCTION JOINTS IN THE FOOTING OF SLABS AND WALLS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED.
17. ALL EXPOSED EDGES SHALL BE FINISHED WITH A 3/4" CHAMFER.
18. UNLESS OTHERWISE SHOWN, CONCRETE DIMENSIONS SHALL BE MEASURED VERTICALLY OR HORIZONTALLY AND PARALLEL OR AT RIGHT ANGLES (OR RADIAL) TO THE CENTER LINE OF CONSTRUCTION.
19. THE INSPECTOR MAY HAVE THE OPTION TO REQUIRE CONCRETE BACKFILL DURING CONSTRUCTION WHEN THE PIPE HAS LESS THAN ONE FOOT OF COVER AND IS SUBJECTED TO HEAVY EQUIPMENT TRAFFIC. THE CONCRETE BACKFILL SHALL CONSIST OF 1:3:5 MIX PORTLAND CEMENT CONCRETE POURED FROM WALL TO WALL OF TRENCH AND FROM BOTTOM OF TRENCH TO A MINIMUM OF 4 INCHES OVER THE TOP OF THE PIPE.
20. ALL BACKFILLS AND FILLS TO BE USED AS SUBGRADE SHALL BE COMPACTED TO A RELATIVE DENSITY OF 90% UNLESS OTHERWISE SPECIFIED.
21. A SOILS ENGINEER SHALL CERTIFY THAT ALL FILLS AND BACKFILLS OVER UNDERGROUND STORM DRAINS OUTSIDE OF STREET RIGHTS-OF-WAY HAVE BEEN COMPACTED OR CONSOLIDATED TO A 90% DENSITY. THIS CERTIFICATION SHALL BE SUBMITTED TO THE DIRECTOR OF THE PUBLIC WORKS PRIOR TO THE ACCEPTANCE OF THE WORK BY THE COUNTY.

LIST OF STANDARD PLANS

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

MANHOLE NO. 1	2-D102
CONC. RINGS, REDUCER & PIPE FOR M.H. SHAFT	2-D107
JUNCTION STRUCTURE NO. 2	2-D112
C.B. REINFORCEMENT FOR ROUND M.H.'S	2-D157
ADJUSTABLE PROTECTION BAR STIRRUP	2-D264
CATCH BASIN NO. 3	2-D163
DETAIL OF C.B. OPENING	2-D232
STANDARD A-615 REINFORCING BAR	2-D171
CATCH BASIN REINFORCEMENT	2-D172
REMOVABLE PROTECTION BAR FOR C.B.	2-D175

PUBLIC WORKS CONSTRUCTION

STANDARD DROP STEP	635-0
STANDARD 24" M.H. FRAME & COVER	630-0

LOS ANGELES COUNTY ENGINEERS

PIPE BEDDING	D-54
MINIMUM PUBLIC SAFETY REQUIREMENTS	S-2

PRIVATE ENGINEERS NOTICE TO CONTRACTORS

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THIS MAP.
THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING.

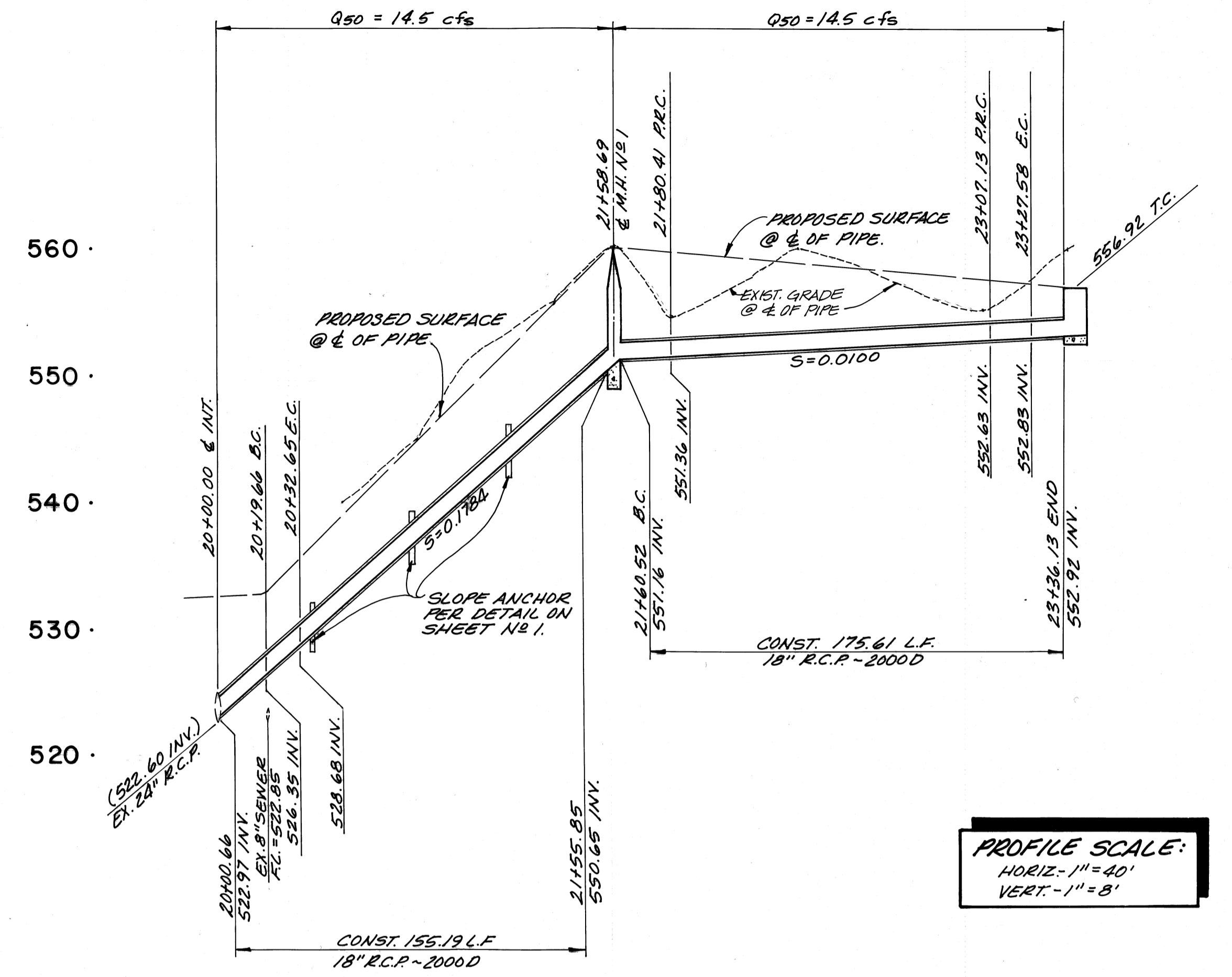
Ronald L. Kranzer 5-4-89
REGISTERED CIVIL ENGINEER No. 18503 DATE

CITY OF WALNUT
ASSESSMENT DISTRICT 89-1
**AVENIDA ESPLENDOR
STORM DRAIN IMPROVEMETS**

178 A

SHT 1 OF 2 SHTS

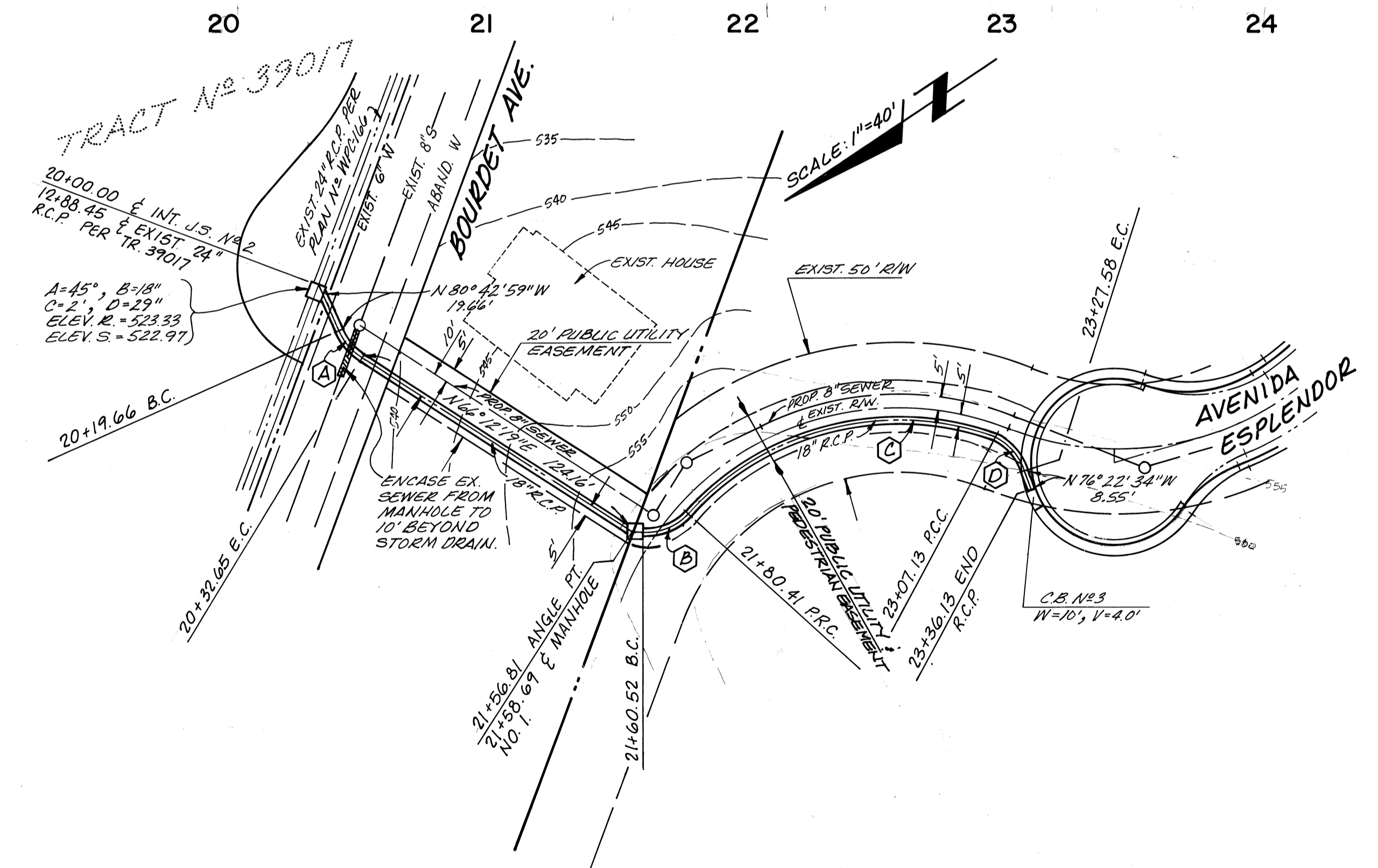
RKA civil engineers, inc.
308 Lemon Creek Dr. Walnut, Ca. 91789
(714) 594-9702 (818) 331-8323
Ronald L. Kranzer 5-4-89
RONALD L. KRANZER R.C.E. 18503 DATE



PROFILE SCALE:
HORIZ. - 1" = 40'
VERT. - 1" = 8'

CURVE DATA				
CURVE	Δ	RADIUS	LENGTH	TANGENT
(A)	33°04'42"	22.50'	12.99'	6.68'
(B)	50°39'37"	22.50'	19.89'	10.65'
(C)	64°00'25"	110.00'	126.72'	71.44'
(D)	52°04'19"	22.50'	20.45'	10.99'

CONSTRUCTION NOTES:



NO.	REVISION	REVISED BY	APPROVED BY	DATE

RKA civil engineers, inc.
398 Lemon Creek Dr. Walnut, Ca. 91789
(714) 594-9702 (818) 331-8323
Ronald L. Kranzer R.C.E. 18503
DATE 5-4-85

CITY OF WALNUT
ASSESSMENT DISTRICT 89-1
AVENIDA ESPLENDOR
STORM DRAIN IMPROVEMENTS

#178 B