

**GENERAL NOTES FOR STORM DRAIN CONST.**

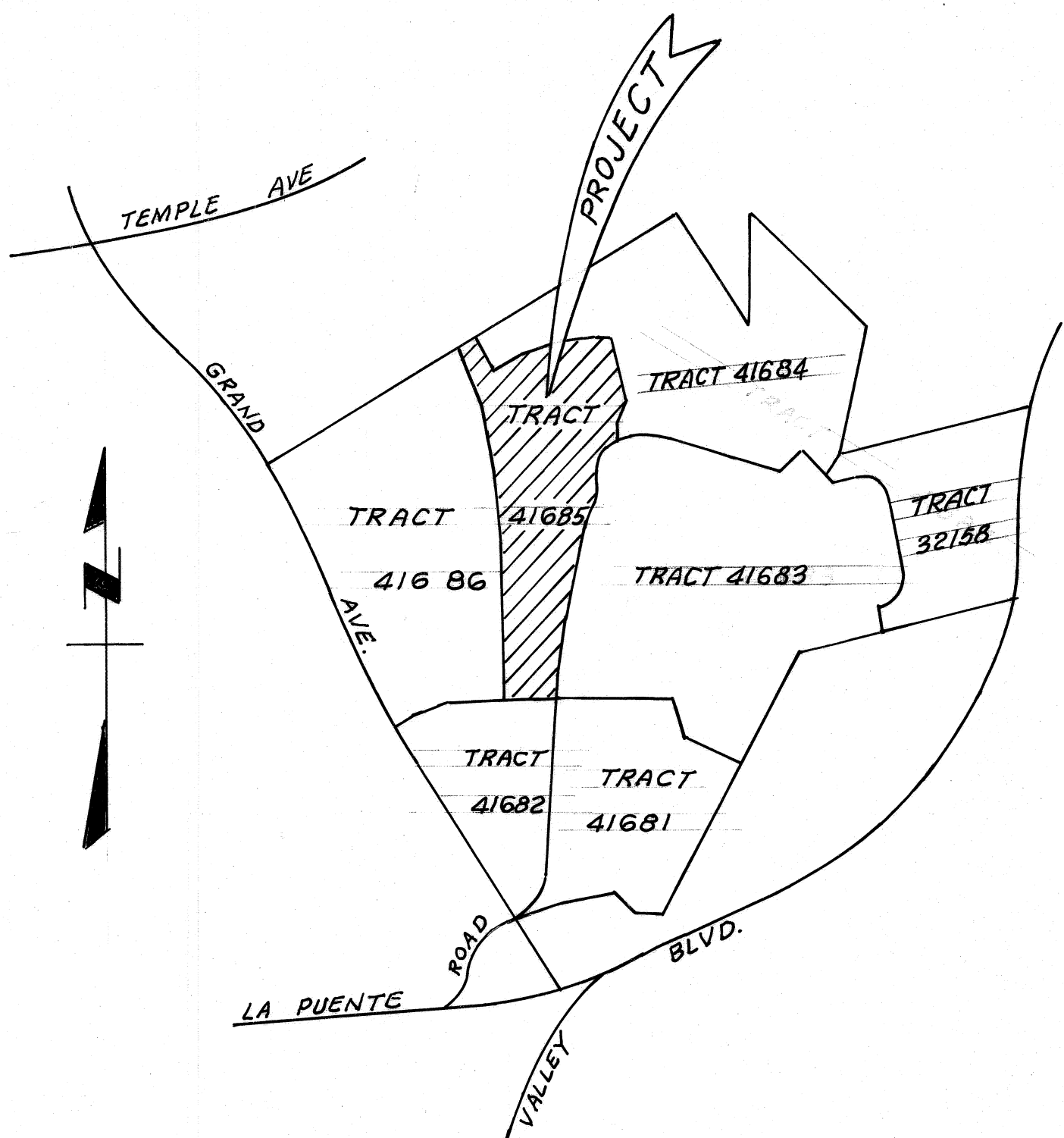
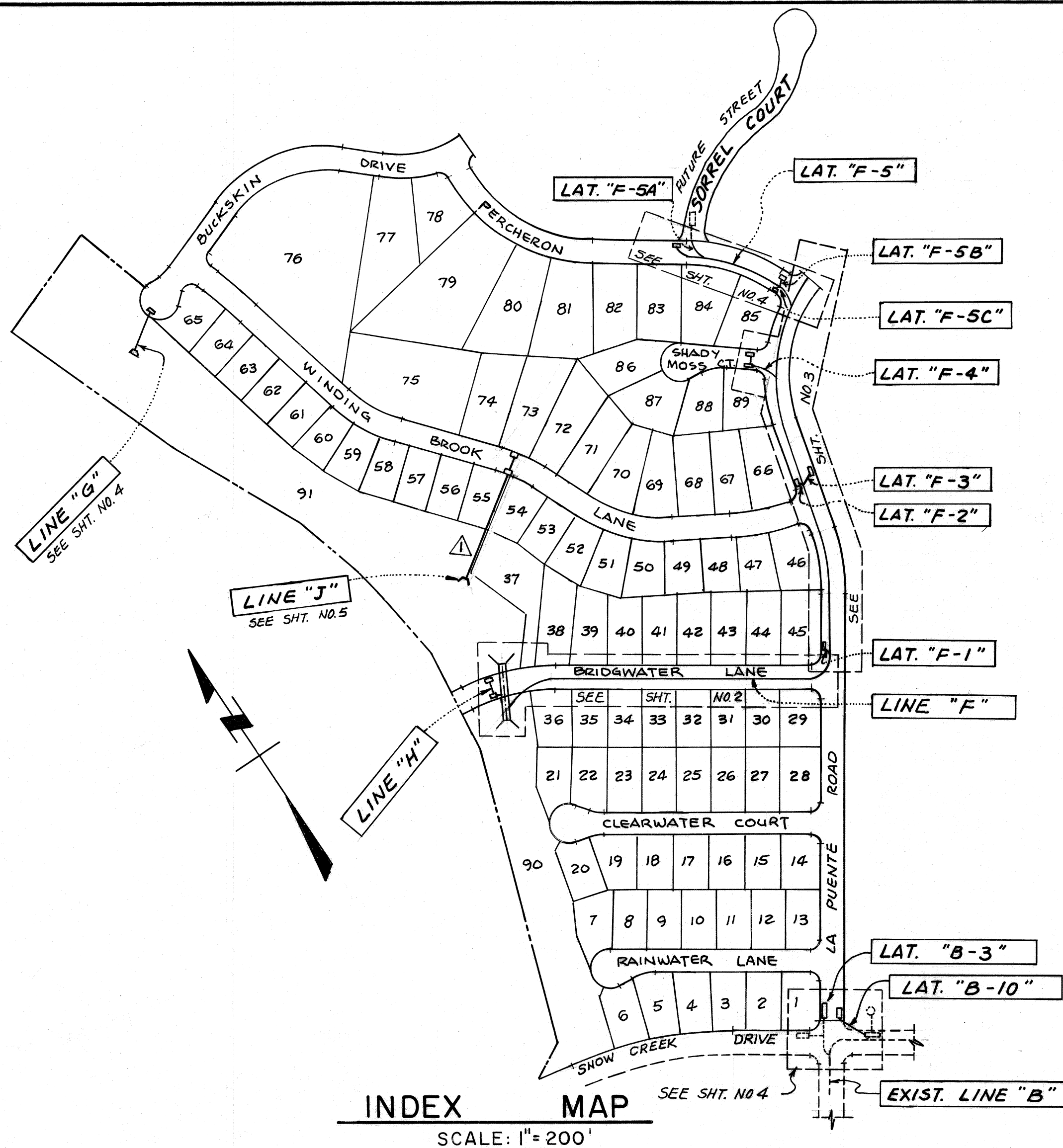
- ALL PIPE LAID IN OPEN TRENCH SHALL BE BEDDED IN ACCORDANCE WITH LAC.F.C.D. STD. NO. 2-D177
- 48 HOURS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER (714) 594-3702.
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECS FOR PUBLIC WORKS CONSTRUCTION AND SUPPLEMENT, 1982 EDITION, WITH 1983 SUPPLEMENT.
- 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 AND FREE FROM OBSTRUCTION TO MOTORISTS VISION AND SHALL RESET SAME IN THE PROPER POSITION UPON COMPLETION OF CONSTRUCTION.
- EXISTING UTILITIES CROSSING THE STORM DRAIN SHALL BE SUPPORTED PER LAC.F.C.D. STD. 2-D175 AS DIRECTED BY THE CITY ENGINEER.
- RCP SHALL BE MANUFACTURED AND INSPECTED IN ACCORDANCE WITH SECTION 207-2.6, 2.7, 2.8 AND 2.9 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (1982 EDITION), WITH 1983 SUPPLEMENT.
- THE CONTRACTOR SHALL FURNISH A LETTER OF CERTIFICATION FROM THE PIPE MANUFACTURER AS TO TEST RESULTS OF THE PIPE INSTALLED.
- ALL PIPE LENGTH SHOWN ARE HORIZONTAL PROJECTIONS, UNLESS OTHERWISE NOTED.
- ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 P.S.I.
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615 - GRADE 60.
- THE ENGINEER, V.T.N., HAS INVESTIGATED ALL AVAILABLE RECORDS OF THE CITY AND OF THE UTILITY COMPANIES INVOLVED AND ALL KNOWN SUBSTRUCTURES ARE SHOWN HEREON. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES, WHETHER OR NOT SHOWN HEREON AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR THE TOTAL EXPENSE OF REPAIR OR REPLACEMENT OF SAID SUBSTRUCTURES DAMAGED BY HIS OPERATION IN CONNECTION WITH THE PROSECUTION OF SAID WORK.
- THIS STORM DRAIN WILL NOT BE ACCEPTED FOR MAINTENANCE UNTIL THE STREETS HAVE BEEN PAVED, MANHOLES BROUGHT UP TO GRADE AND THE SYSTEM IS CLEANED TO THE SATISFACTION OF THE CITY ENGINEER.
- ELEVATIONS ARE IN FEET ABOVE U.S.C.G.S. MEAN SEA LEVEL DATUM OF 1929.
- FINISH ALL EXPOSED EDGES WITH 3/4" CHAMFER.
- ALL STEEL THAT IS TO BE CONTINUOUS SHALL HAVE A MINIMUM LAP AT SPLICES OF 30 BAR DIAMETERS.
- ALL PIPE TO BE IMBEDDED A MINIMUM OF 5 INCHES INTO HEADWALLS OR STRUCTURES.

**QUANTITY ESTIMATE**

| NO | QUANTITY DESCRIPTION  | QUANTITY | UNIT |
|----|---|----------|------|
| ①  | 60" RCP 1400-D  | 201      | L.F. |
| ②  | 51" RCP 1500-D  | 97       | L.F. |
| ③  | MANHOLE NO. 2 PER LACFCD STD. DWG. NO. 2-D184                         | 7        | EA.  |
| ④  | JUNCTION STRUCTURE NO. 3, PER LACFCD STD. DWG. NO. 2-D191             | 2        | EA.  |
| ⑤  | 18" RCP 1400-D  | 217      | L.F. |
| ⑥  | CATCH BASIN NO. 2 PER LACFCD STD. DWG. NO. 2-D162                     | 6        | EA.  |
| ⑦  | 24" RCP 1400-D  | 47.02    | L.F. |
| ⑧  | CATCH BASIN NO. 3 PER LACFCD STD. DWG. NO. 2-D163 (W=10')             | 5        | EA.  |
| ⑨  | MANHOLE NO. 1 PER LACFCD STD. DWG. NO. 2-D102                         | 3        | EA.  |
| ⑩  | OUTLET STRUCTURE PER DETAIL ON SHT. NO. 5                             | 2        | EA.  |
| ⑪  | BRICK & CEMENT MORTAR SEAL AT THE END OF PIPE                         | 2        | EA.  |
| ⑫  | PIPE ANCHOR PER L.A. CO. ENGR. STD. 0-72                              | 2        | EA.  |
| ⑬  | CONC. COLLAR PER L.A.C.F.C.D. STD. DWG. NO. 2-D-393                   | 1        | EA.  |
| ⑭  | CATCH BASIN NO. 1 PER L.A.C.F.C.D. STD. DWG. NO. 2-D-160              | 2        | EA.  |
| ⑮  | 36" RCP 1400-D  | 1,012    | L.F. |
| ⑯  | 30" RCP 1200-D  | 39.75    | L.F. |
| ⑰  | 18" RCP 1600-D  | 413.94   | L.F. |
| ⑱  | 24" RCP 1800-D  | 238      | L.F. |
| ⑲  | 33" RCP 1000-D  | 5        | L.F. |
| ⑳  | REMOVAL BRICK & MORTAR SEAL   | 2        | EA.  |
| ㉑  | 18" RCP 1000-D  | 36.01    | L.F. |
| ㉒  | 45" RCP 1000-D  | 120.00   | L.F. |
| ㉓  | CATCH BASIN NO. 3 PER LACFCD STD DWG. NO. 2-D-163 (W=14')             | 1        | EA.  |
| ㉔  | REMOVE PORTION OF EXIST. 30" CMP AND SEAL THE REMAINDER WITH BULKHEAD | 1        | EA.  |

**REMARKS ON QUANTITY ESTIMATE:**

1. CHECK WITH DEVELOPER OR MAIN ENGINEER OF THOSE PIPES INDICATED BY "X". PORTION OF PIPES HAVE BEEN PURCHASED.



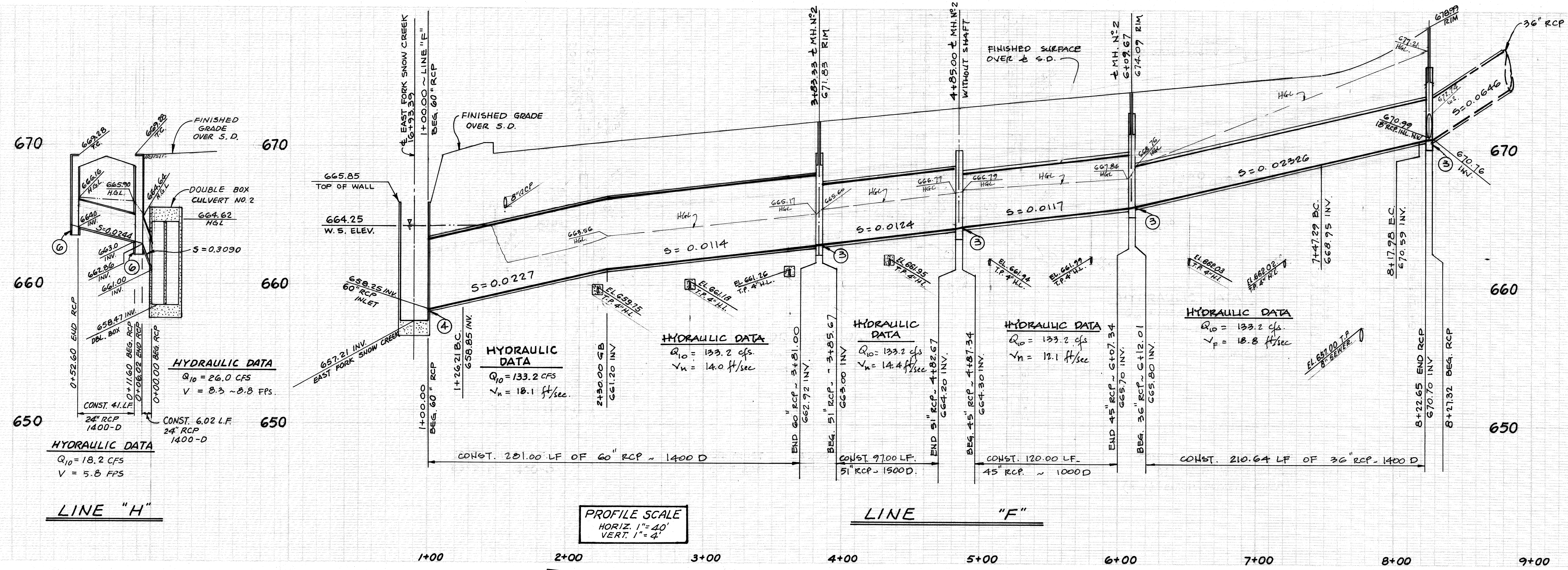
| REVISIONS   | BASIS OF BEARINGS  | BENCHMARK:  | APPROVED BY:  | PLANS PREPARED BY:   |
|---|--|---|---|--|
| <p>② ADDED 6" WATER LINE, SEE SHEET 4. REVISED THE ALIGNMENT OF LINE "J" FROM STA. 3+59.00 TO STA. 4+03.69 AND ADDED NOTE ① SEE SHEET 5.</p> <p>Richard L. Bowman<br/>REVISION BY: RICHARD BOWMAN RE. NO. 24573<br/>APPROVED: DATE:</p> | <p>① REVISED LINE "G", PLAN AND PROFILE - AND LAT. "F-5A" PROFILE ONLY. (SHEET NO. 4)</p> <p>-REVISED THE ALIGNMENT OF LINE "J", PLAN AND PROFILE (SHEET NO. 5).</p> <p>-REVISED QUANTITY ESTIMATE AND INDEX MAP. (SHEET NO. 1)</p> <p>REVISION BY: DATE: 7/5/85</p> | <p>N 22° 58' 05" W FOR THE CENTERLINE OF GRAND AVE, AS SHOWN ON TRACT NO. 40715 RECORDED IN BOOK 998, PAGES 80 THROUGH 84 INCLUSIVE OF MAPS, RECORDS OF LOS ANGELES COUNTY.</p> | <p>BM.C.G. 1781 ELEV. 617.011</p> <p>R.D. B.M. TAG NR CTR. OF CONC. HDWL. 24 FT. N. &amp; LA PUENTE ROAD + 0.2 MI. W/O GRAND AVE.</p> <p>COVINA QUAD 1975</p> <p>JACK LOTT 11/27/84<br/>CITY ENGINEER</p> | <p>V.T.N. CONSOLIDATED INC.<br/>2301 CAMPUS DRIVE<br/>IRVINE, CA. 92713 (714) 851-5200</p> <p>JAMES J. MCCARTHY RCE 17969 DATE</p> |

IF CONSTRUCTION OF IMPROVEMENTS AS SHOWN HEREON ARE NOT COMMENCED WITHIN 18 MONTHS OF APPROVAL DATE, THESE PLANS ARE SUBJECT TO REVIEW BY THE CITY.

**CITY OF WALNUT**

**TRACT NO. 41685  
STORM DRAIN**

**SHEET  
1  
OF  
5**

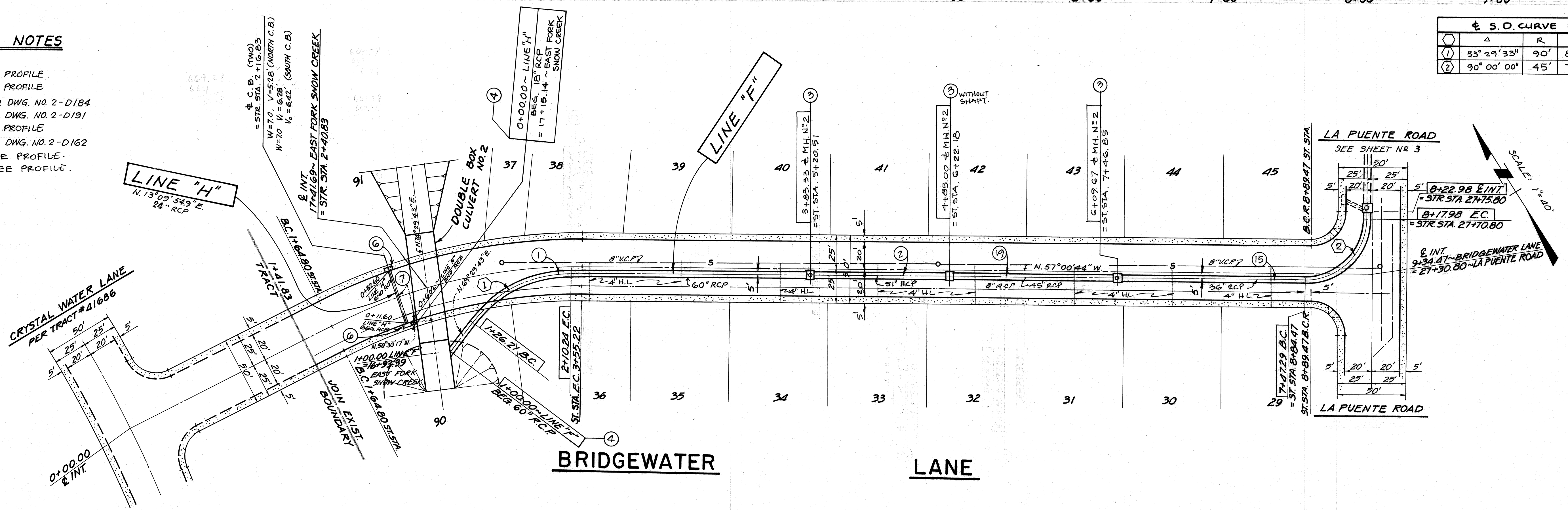


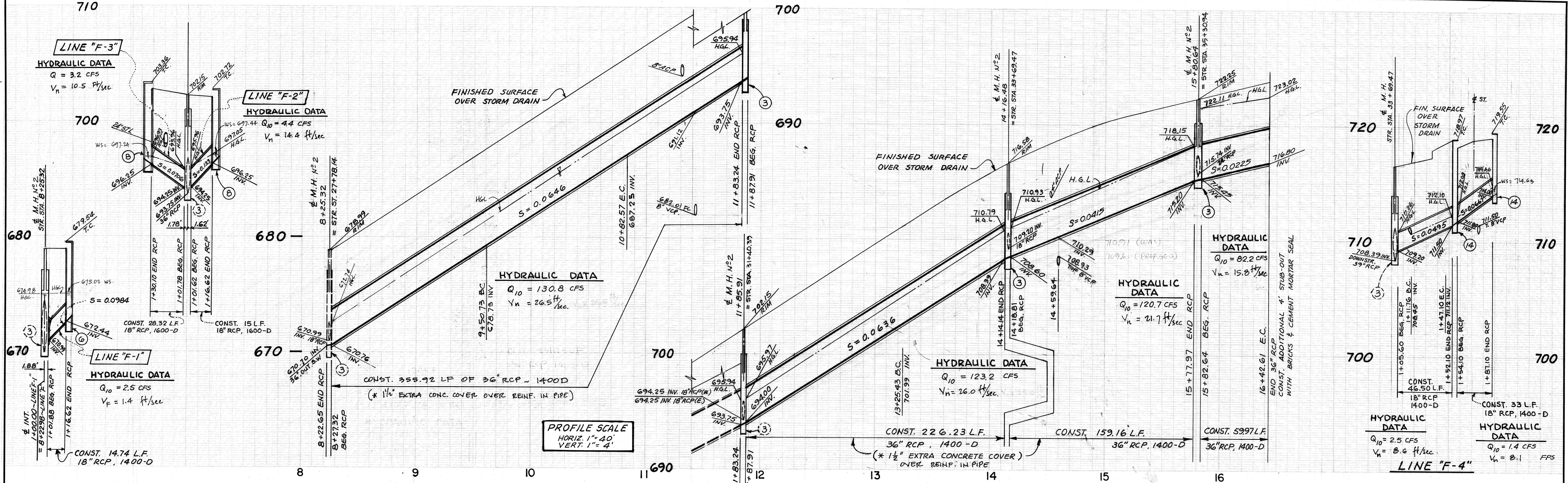
**CONSTRUCTION NOTES**

- ① - CONST. 60" RCP, "D"-LOAD, SEE PROFILE.
- ② - CONST. 51" RCP, "D"-LOAD, SEE PROFILE.
- ③ - CONST. M.H. NO. 2, PER LACFCD STD. DWG. NO. 2-D184
- ④ - CONST. J.S. NO. 3, PER LACFCD STD. DWG. NO. 2-D191
- ⑦ - CONST. 24" RCP, "D"-LOAD, SEE PROFILE.
- ⑥ - CONST. C.B. NO. 2, PER LACFCD STD. DWG. NO. 2-D162
- ⑮ - CONST. 36" RCP, "D"-LOAD - SEE PROFILE.
- ⑭ - CONST. 45" RCP, "D"-LOAD - SEE PROFILE.

**± S.D. CURVE DATA**

| Δ | R           | L   | T             |
|---|-------------|-----|---------------|
| ① | 53° 29' 33" | 90' | 84.03' 45.36' |
| ② | 90° 00' 00" | 45' | 70.69' 45.00' |



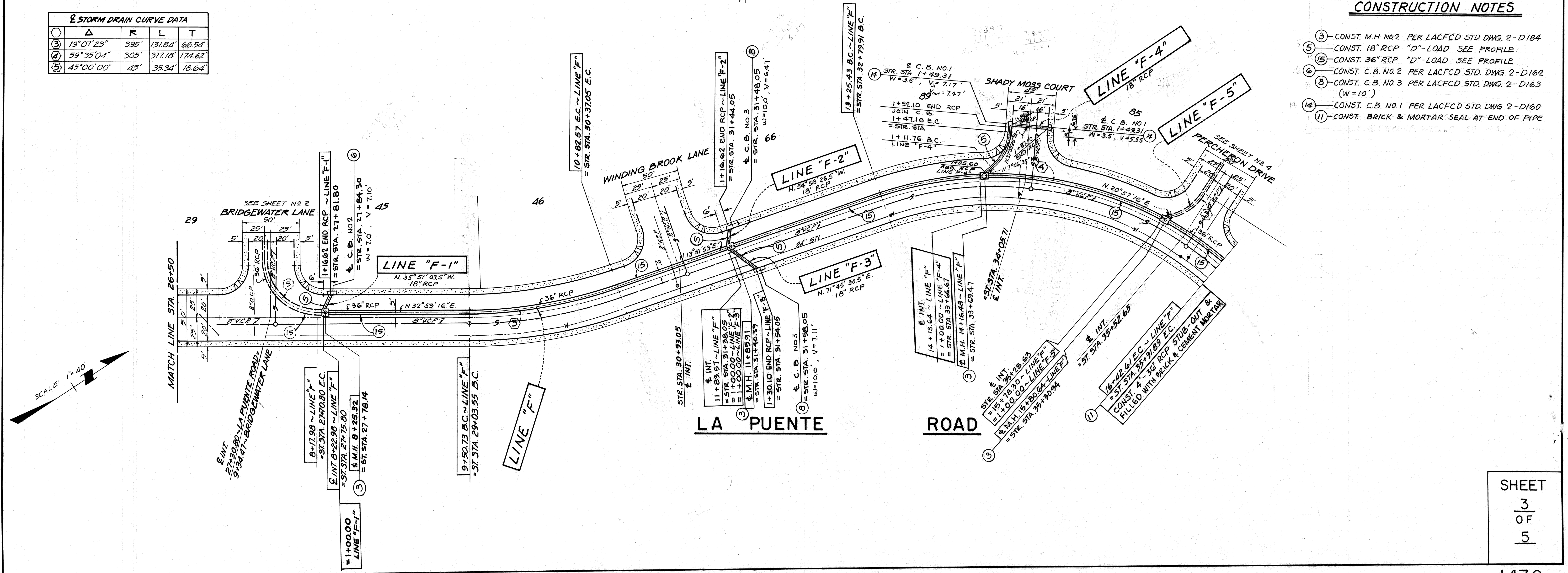


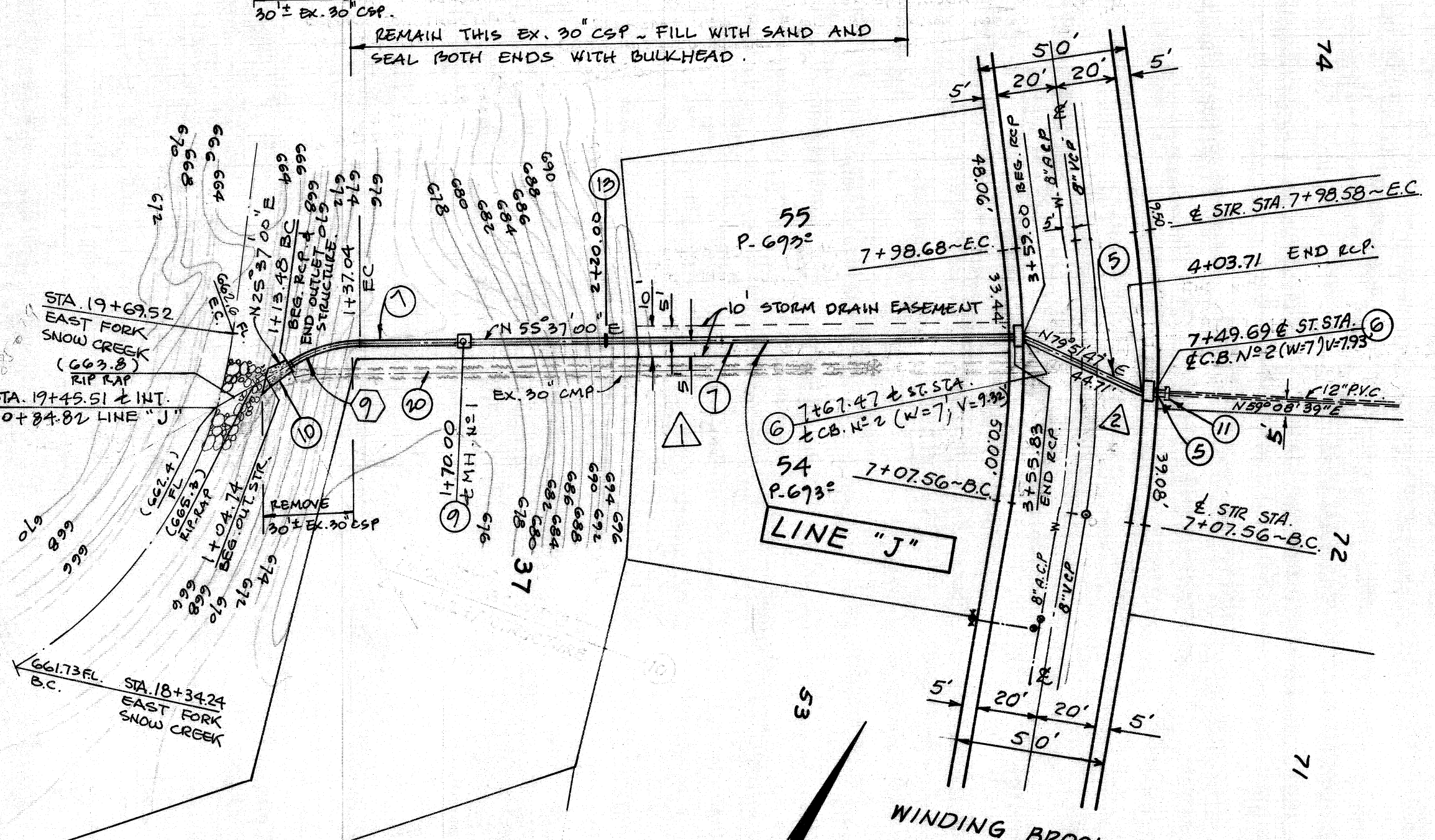
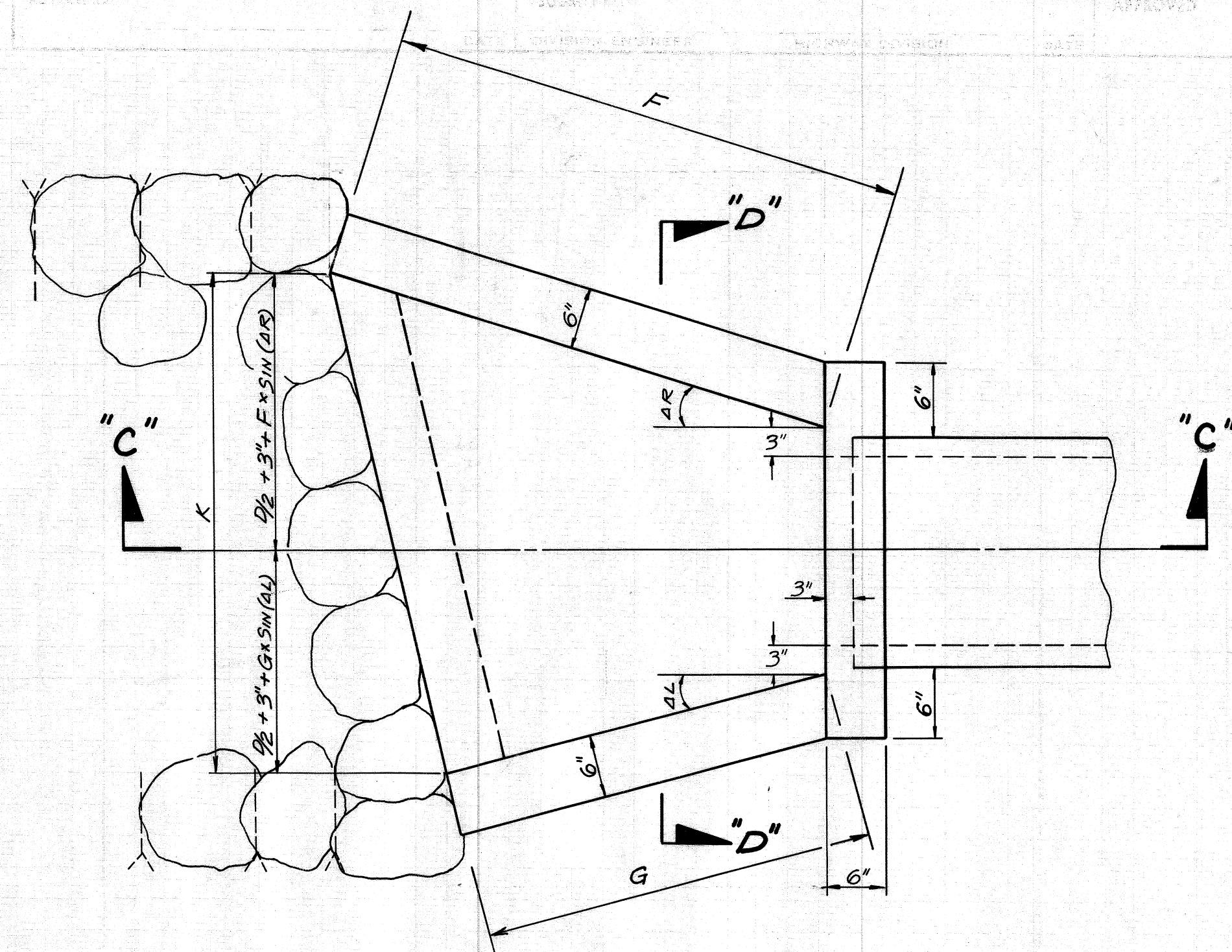
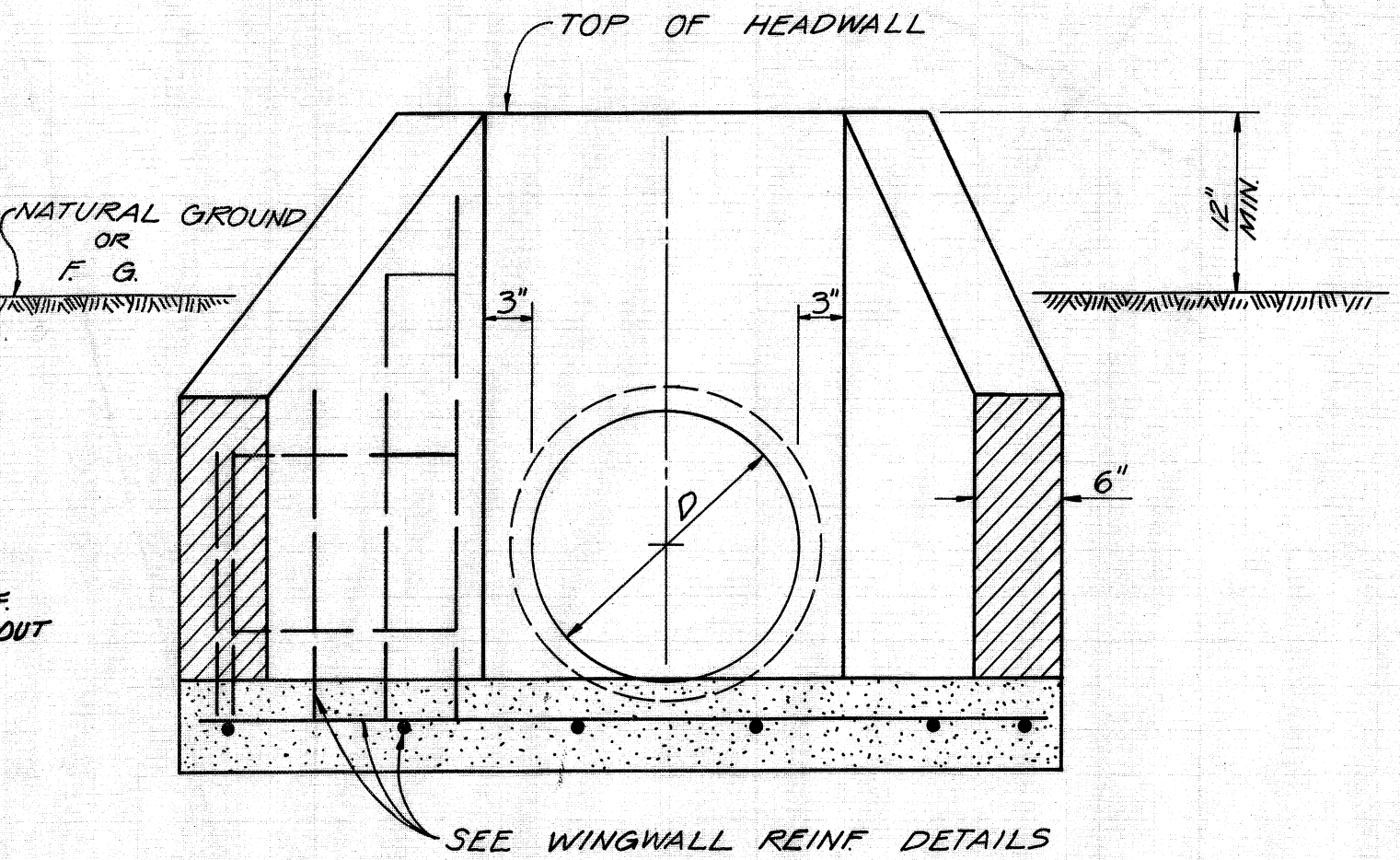
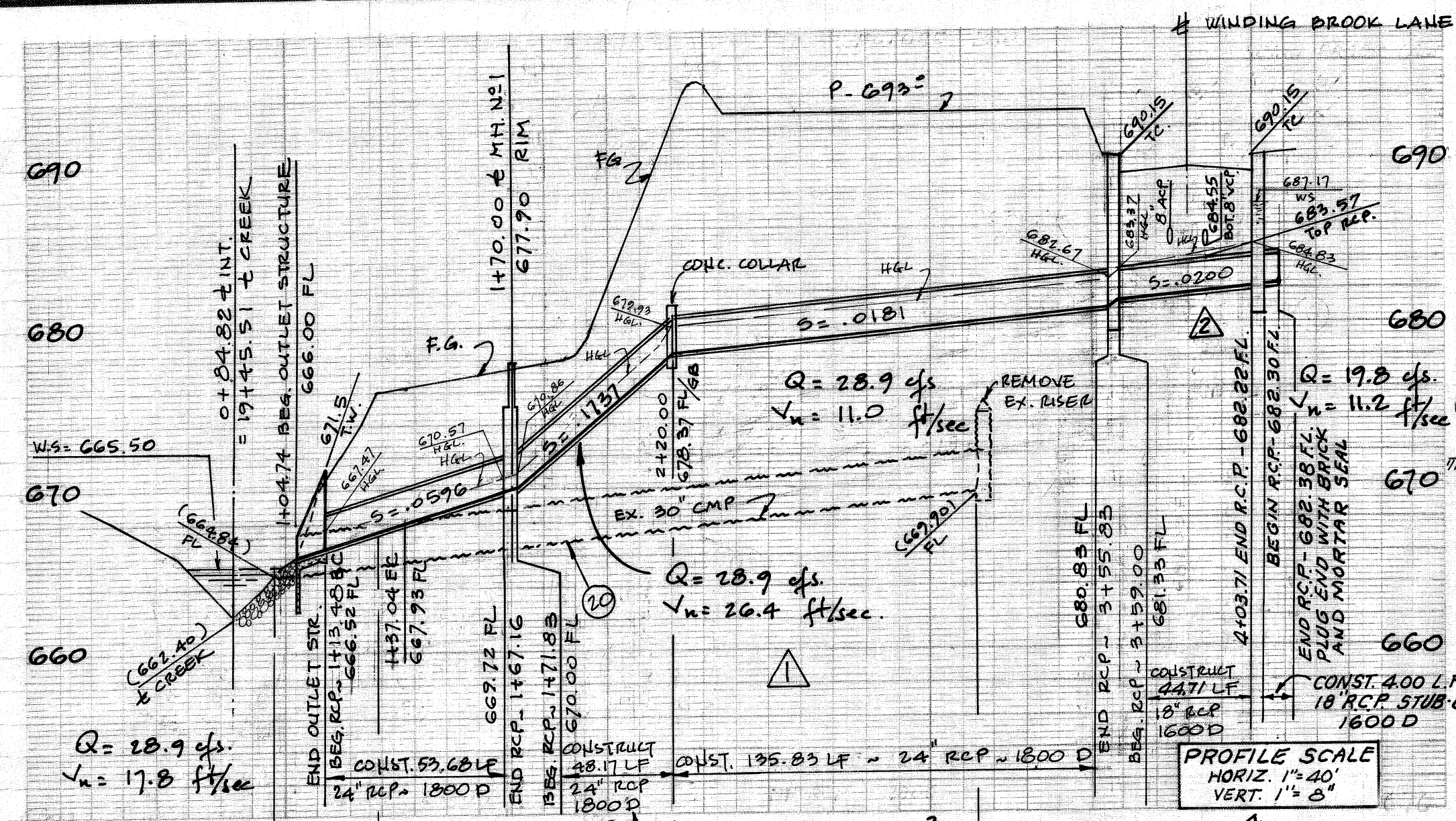
**STORM DRAIN CURVE DATA**

| Δ         | R    | L       | T       |
|-----------|------|---------|---------|
| 19°07'23" | 395' | 131.84' | 66.54'  |
| 59°35'04" | 305' | 317.18' | 174.62' |
| 45°00'00" | 45'  | 39.34'  | 18.64'  |

**CONSTRUCTION NOTES**

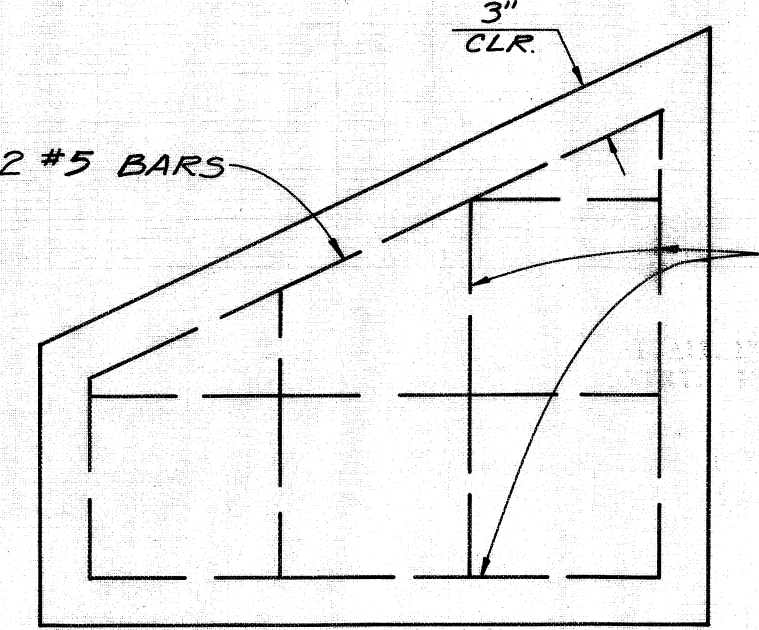
- ③ CONST. M.H. NO.2 PER LACFCO STD. DWG. 2-D184
- ⑤ CONST. 18" RCP "D"-LOAD SEE PROFILE.
- ⑬ CONST. 36" RCP "D"-LOAD SEE PROFILE.
- ⑭ CONST. C.B. NO.2 PER LACFCO STD. DWG. 2-D162
- ⑧ CONST. C.B. NO.3 PER LACFCO STD. DWG. 2-D163 (W=10')
- ⑭ CONST. C.B. NO.1 PER LACFCO STD. DWG. 2-D160
- ⑪ CONST. BRICK & MORTAR SEAL AT END OF PIPE



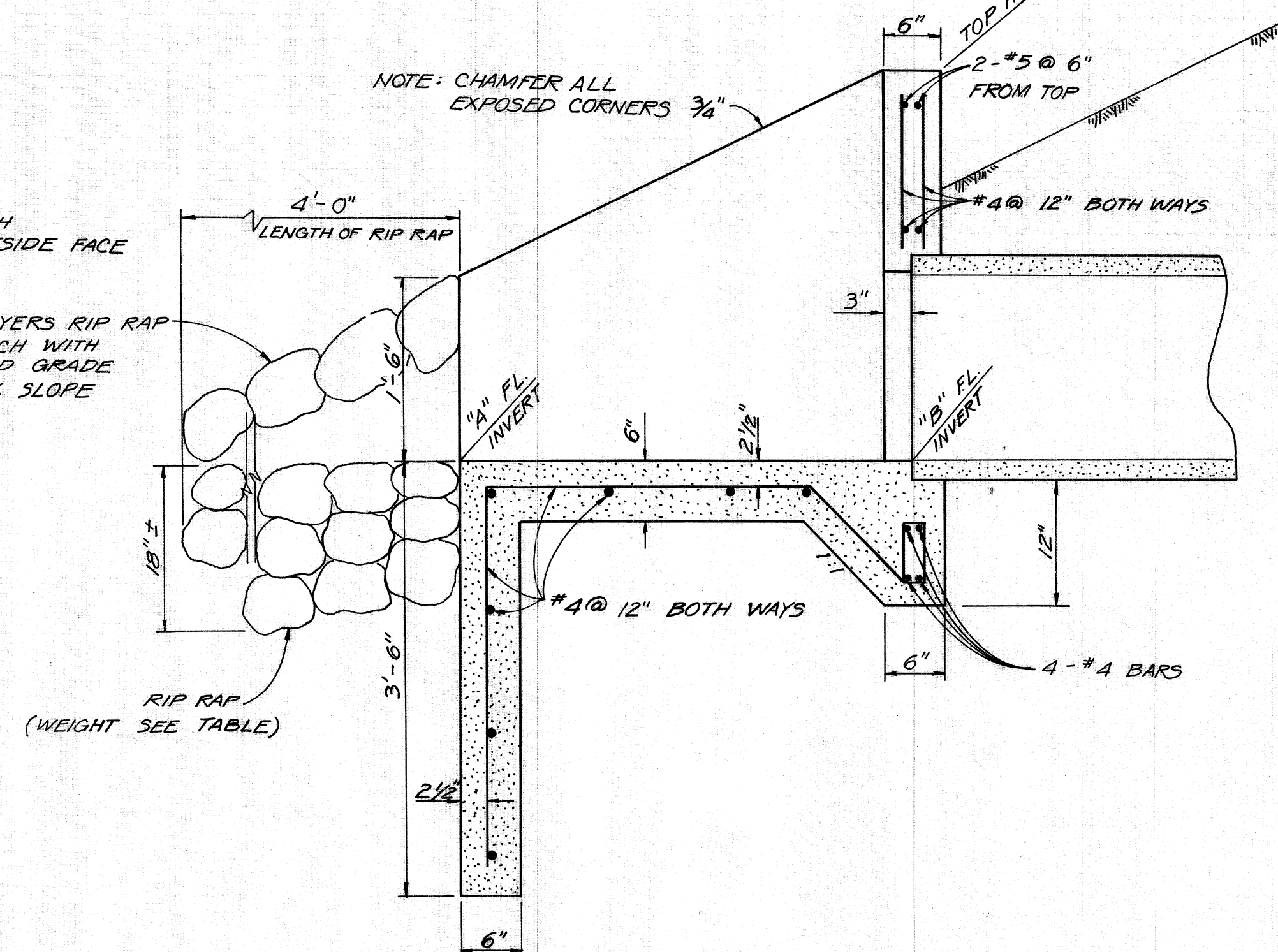


**SECTION "D-D"**

**PLAN**  
SCALE: N.T.S.



**WINGWALL REINFORCING**



**SECTION "C-C"**  
SCALE: N.T.S.

**STORM DRAIN DATA**

|   |                              |
|---|------------------------------|
| 9 | $\Delta = 30^{\circ}00'00''$ |
|   | $R = 45'$                    |
|   | $L = 23.56'$                 |
|   | $T = 12.06'$                 |

| LINE | END STRUCTURE | PIPE DIA. | K     | AR        | AL        | F    | G     | FL "A" INVERT | FL "B" INVERT | TOP HOWL | WEIGHT RIP RAP                      |
|------|---------------|-----------|-------|-----------|-----------|------|-------|---------------|---------------|----------|-------------------------------------|
| "G"  | OUTLET        | 18"       | 8.28' | 15'00'00" | 17'30'00" | 8.0' | 14.0' | 689.71        | 690.18        | 695.00   | 80 <sup>NS</sup> 100 <sup>NS</sup>  |
| "J"  | OUTLET        | 24"       | 5.22' | 6'45'00"  | 8'30'00"  | 6.0' | 13.5' | 663.20        | 663.40        | 675.50   | 100 <sup>NS</sup> 120 <sup>NS</sup> |

**CONSTRUCTION NOTE**

- 5 - CONST. 18" RCP "D" - LOAD AS SHOWN ON PLAN
- 9 - CONST. M.H. NO. 1 PER LACFCD STD. NO. 2D-102
- 10 - CONST. OUTLET STRUCTURE PER DETAIL HEREON
- 13 - CONST. CONCRETE COLLAR PER LACFCD STD. NO. 2D-393
- 6 - CONST. CATCH BASIN NO. 2 PER LACFCD STD. NO. 2D-162
- 7 - CONST. 24" RCP "D" - LOAD AS SHOWN ON PLAN
- 20 - REMOVE PORTION OF EXIST. 30" CSP AS SHOWN ON PLAN AND SEAL BOTH ENDS WITH BULKHEAD
- 11 - CONST. BRICK & MORTAR SEAL AT END OF PIPE.

**REVISIONS**

| NO. | DESCRIPTION  | DATE    |
|-----|--|---------|
| 1   | REVISED THE ALIGNMENT OF LINE "J" FROM STA. 3+59.00 TO STA. 4+03.69 AND ADDED NOTE (11). | 2/15/85 |
| 2   | REVISED THE ALIGNMENT OF LINE "J" PLAN AND PROFILE.                                      | 2/15/85 |

SHEET  
5  
OF  
5