

GENERAL NOTES

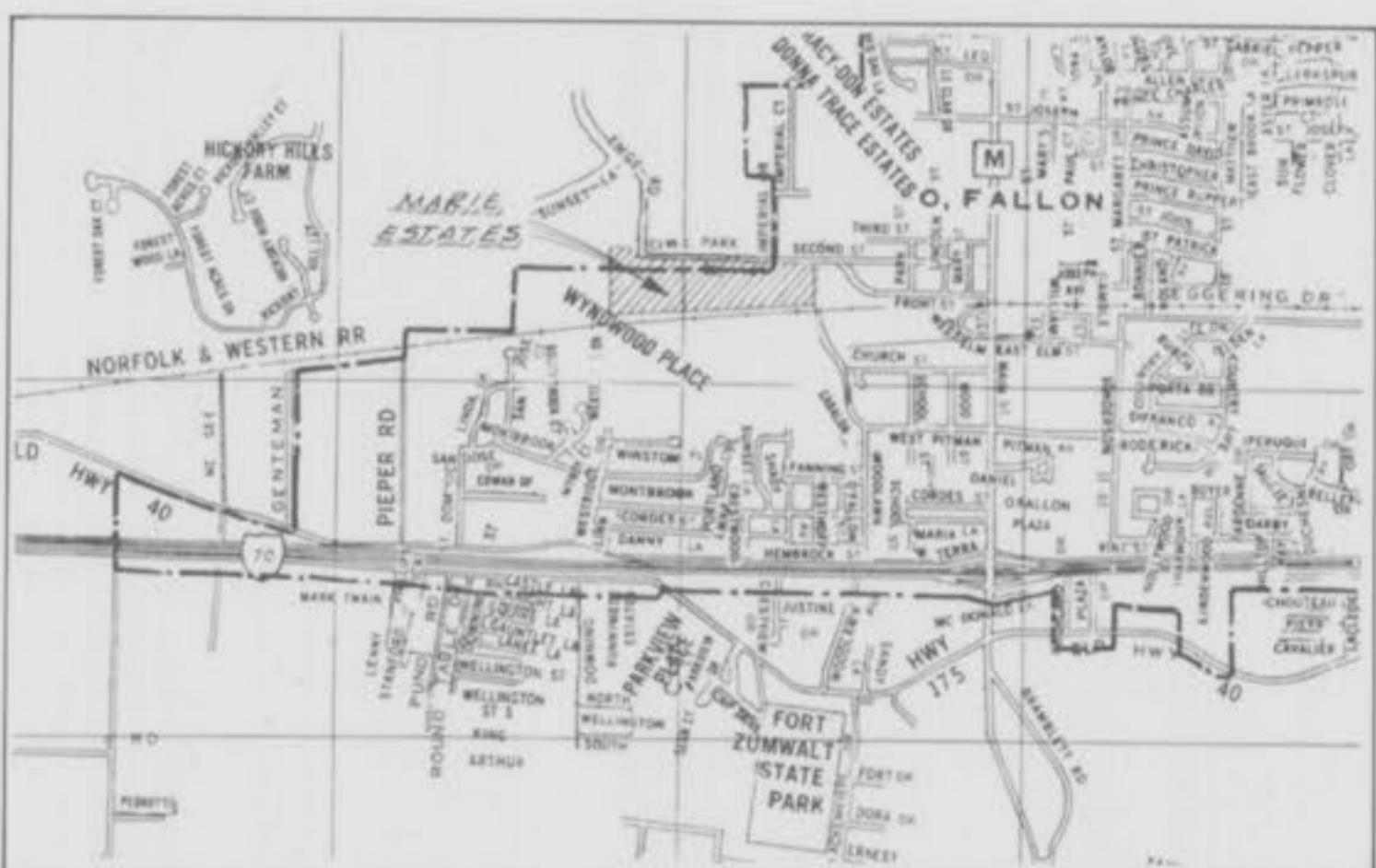
1. Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing and proposed sanitary and storm sewers including house laterals.
2. Underground utilities have been plotted from available information and therefore their locations must be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans shall be the responsibility of the contractor, and shall be located prior to grading or construction of improvements.
3. Polyvinyl Chloride (PVC) shall conform to the requirements of ASTM D-3034 Standard Specifications for the PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, SDR 35.
4. Storm sewers 18" diameter or smaller shall be A.S.T.M. C-14.
5. Storm sewers 21" diameter or larger shall be A.S.T.M. C-76, Class III.
6. All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (A.S.T.M. C-76, Class III) unless noted otherwise on the plans.
7. Corrugated metal pipe shall conform to the standard specifications for corrugated culvert pipe M 36, A.A.S.H.O.
8. All filled places under buildings, proposed storm and sanitary sewer lines and/or paved areas including trench backfills shall be compacted to 90% of maximum density as determined by the "Modified AASHO T-180 Compaction Test" (A.S.T.M. D-1557) unless otherwise specified by local governing authority specifications. All tests shall be verified by a Soils Engineer.
9. All filled places in paved State, County or City roads (Highways) shall be compacted to 90% of maximum density as determined by the "Standard Proctor Test A.A.S.H.O. T-99" (A.S.T.M. D-698) unless otherwise specified by local governing authority specifications. All tests shall be verified by a Soils Engineer.
10. Trench backfills within the road right-of-way will be water jetted and granular backfill will be used under paved areas.
11. Easements shall be provided for storm sewers, sanitary sewers and all utilities on the record plat. See record plat for location and size of easements. This does not apply to house laterals.
12. No area shall be cleared without permission of the developer.
13. All grade shall be within 0.2 feet more or less of those shown on the grading plan.
14. No slope shall be greater than 3:1 and shall be either sodded or seeded and mulched.
15. Barricades will consist of three standard 12"x 36" red and white striped scatchlite hazard markers mounted on two pound "U" channel sign post, with bottom of marker seven feet above pavement surface.
16. All manhole and catch basin tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor. At the time of construction stake-out of the sewer lines, all curb and grate inlets will be face staked. If normal face stakes fall in line with sewer construction the Engineer will set these stakes on a double offset. It shall be the responsibility of the sewer contractor to preserve all face stakes from destruction.
17. All standard street catch basins to have front of inlet 2 feet behind curb.
18. The minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding house connection shall not be less than the diameter of the sanitary sewer plus a vertical distance not less than two and one half feet (2-1/2').
19. Water lines, valves, sleeves, meters and etc. shall meet all specifications and installation requirements of the local governing authority.
20. All cast iron pipe for water mains shall conform to AWWA specification C-106 and/or C-108. The cast iron fittings shall conform to AWWA specification C-110. All rubber gasket joints for water cast iron pressure pipe and fittings shall conform to AWWA specification C-111.
21. All water hydrants and valves shall be cast iron and installed in accordance with plans and details.
22. All sanitary and storm sewers shall meet all specifications and installation requirements of the local governing authority.
23. All PVC water pipe shall have a minimum pressure rating of PR-200 or SDR-21.
24. All PVC sanitary sewer pipe to be DR-35 or equal with crushed stone bedding uniformly graded between 1" and 1/4" size. This bedding shall extend from 6" below the pipe to 12" above the top of pipe.
25. All grading on Missouri State Highway Right-of-Way shall be seeded and mulched and all disturbed Right-of-Way Markers shall be reset at the completion of grading.
26. All sanitary manhole tops shall be set 0.2' higher than the proposed ground except in pavement areas.
27. All sanitary manholes shall have a 31 mil. thick coat of coal tar pitch waterproofing.

# MARIE ESTATES CONDOMINIUM PHASE II

INDEX

- SHEET 1. COVER SHEET.
- SHEET 2. IMPROVEMENT PLAN.
- SHEET 3. STREET, SANITARY & SEWER PROFILES.
- SHEET 4. SEWER PROFILES.
- SHEET 5. DRAINAGE AREA MAP.
- SHEET 6. DETAILS.

## STORM & SANITARY SEWER AS-BUILTS



SITE LOCATION MAP

LEGEND

CB.	Catch basin
D.C.B.	Double catch basin
Y.C.B.	Yard catch basin
2G.C.B.	Two grate catch basin
M.H.	Manhole
F.E.	Flared end section
E.P.	End pipe
C.P.	Concrete pipe
R.C.P.	Reinforced concrete pipe
C.M.P.	Corrugated metal pipe
C.I.P.	Cast iron pipe
P.V.C.	Polyvinyl chloride pipe
V.C.P.	Vitrified clay pipe
C.O.	Clean out
V.T.	Vent trap
—●—	Storm sewer
—●—	Sanitary sewer
—SSD—	Existing contour
—SSP—	Proposed contour
—SL—	Street sign
—EL—	End of lateral
5	Lot or building number
1/2	Depth of rock
—FL—	Existing fence line
—TL—	Existing tree line
—SL—	Street light

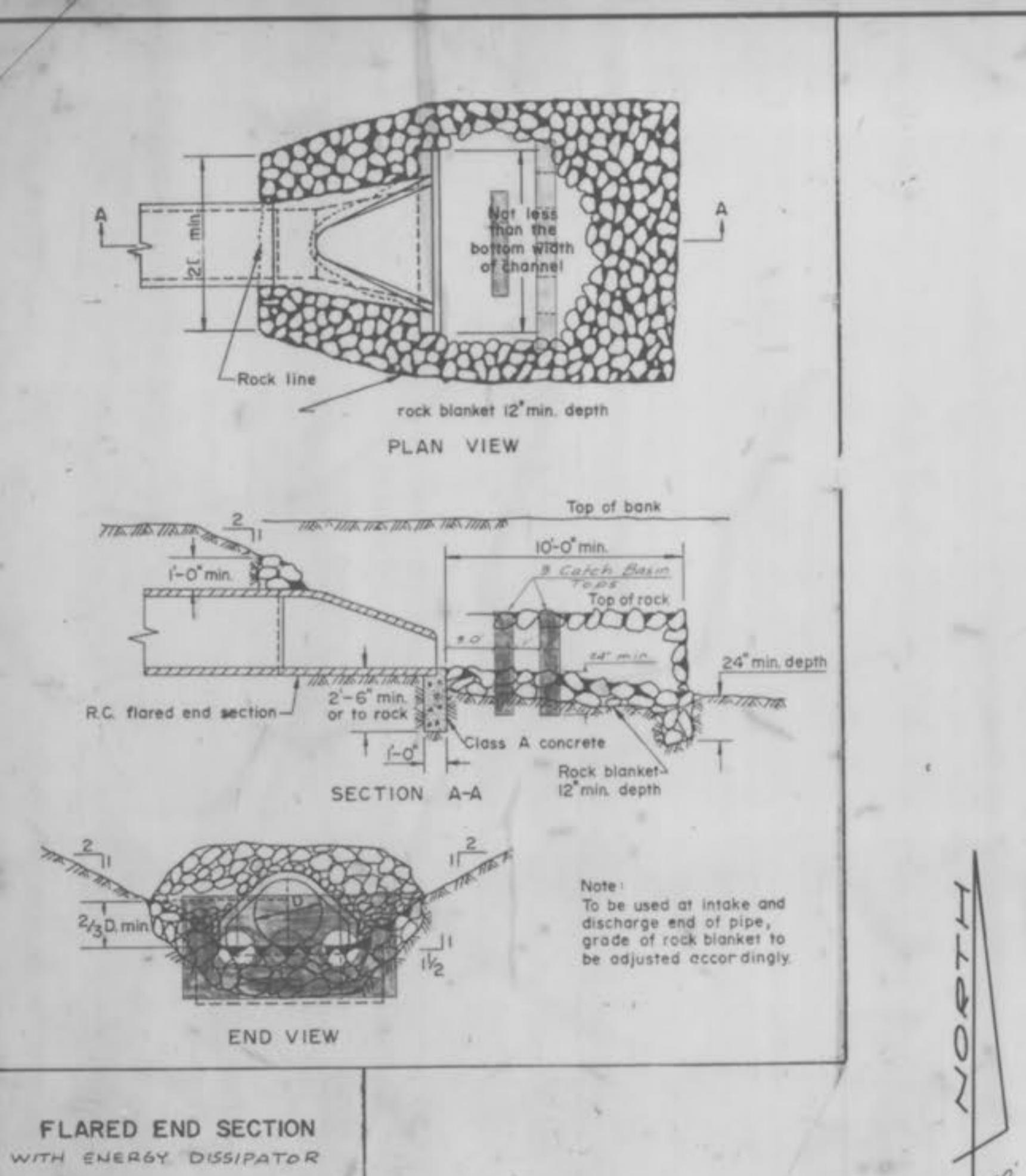
BENCHMARK "G" IN 11-12-62 ON EAST CORNER HEADWALL ON CULVERT ON NORTH SIDE SECOND STREET IN FRONT OF SIGMUND AUTO BODY

This is to certify that the as-constructed elevations, locations and distances shown hereon are correct and were taken in the field during July 1984.

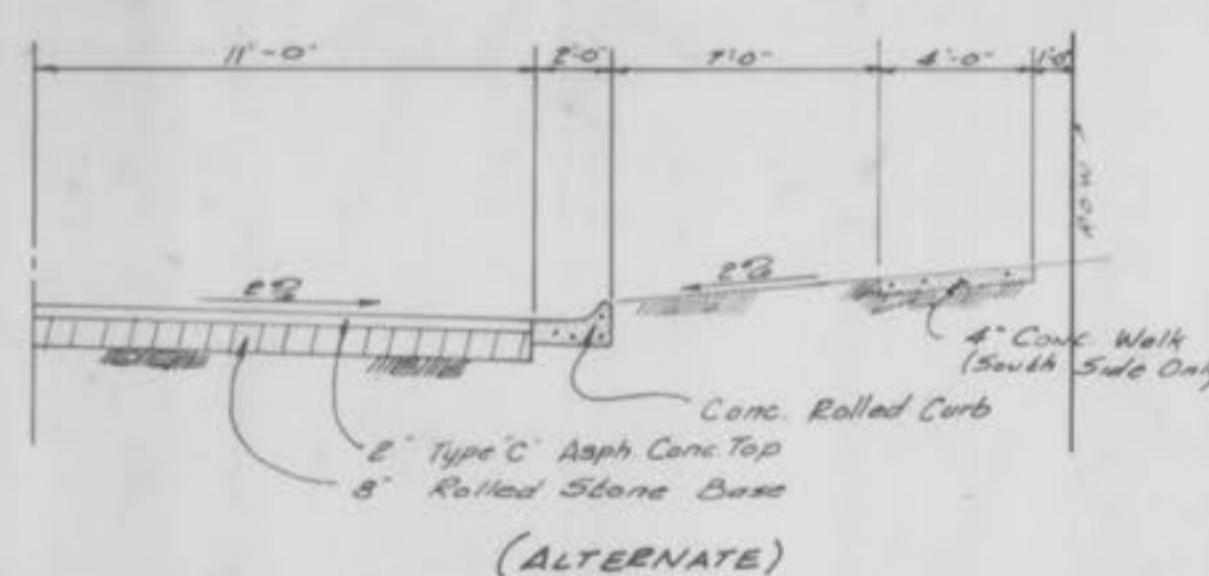
Mo. Reg. L.S. #1506

Flood Plain Elev. 504.0  
U.S.G.S. Datum

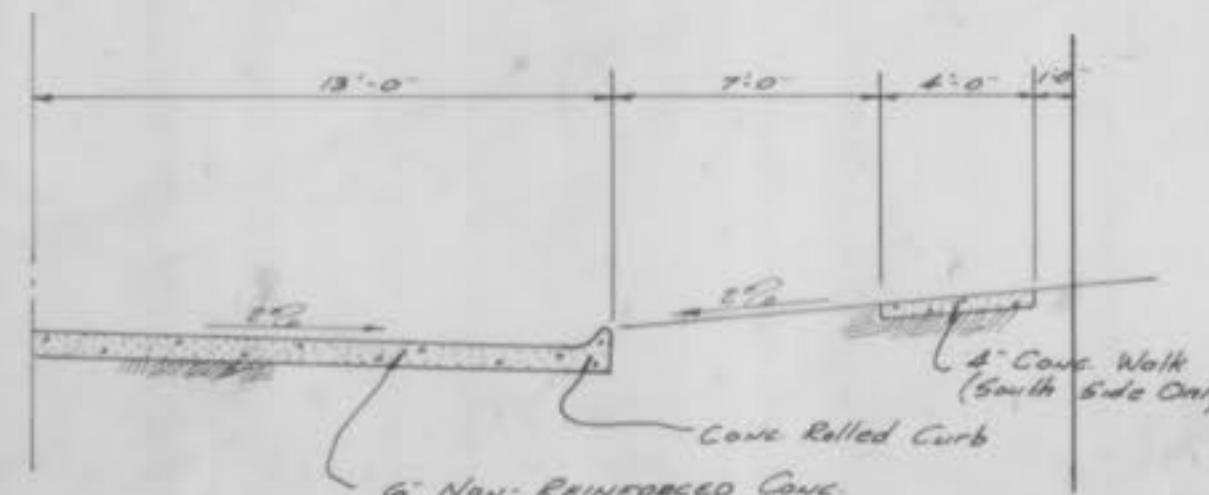
CIVIL ENGINEERS LAND SURVEYORS	REV	DATE	DESCRIPTION	KG #	JB
	1	2-8-84			
RAY PICKETT, PE #14395					
PICKETT RAY & SILVER INC.					
CLARK COLE THOMAS LOWERY BUILDERS INC. 16 TERRA LANE O'FALLOON, MISSOURI 63866					
DRAWN BY LELEK DATE 1-28-84 CHECKED BY DATE 82-015A /16					



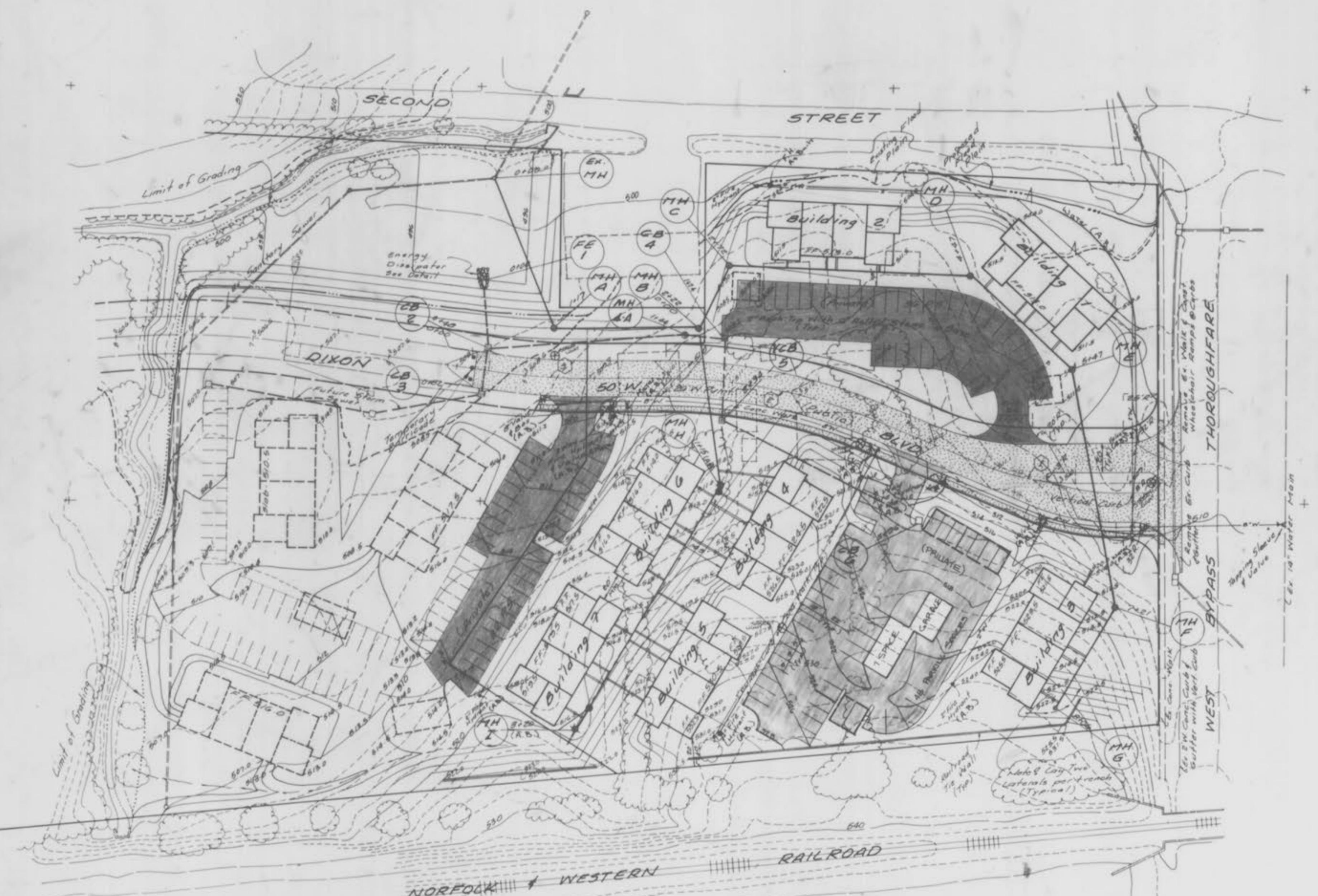
FLARED END SECTION  
WITH ENERGY DISSIPATOR



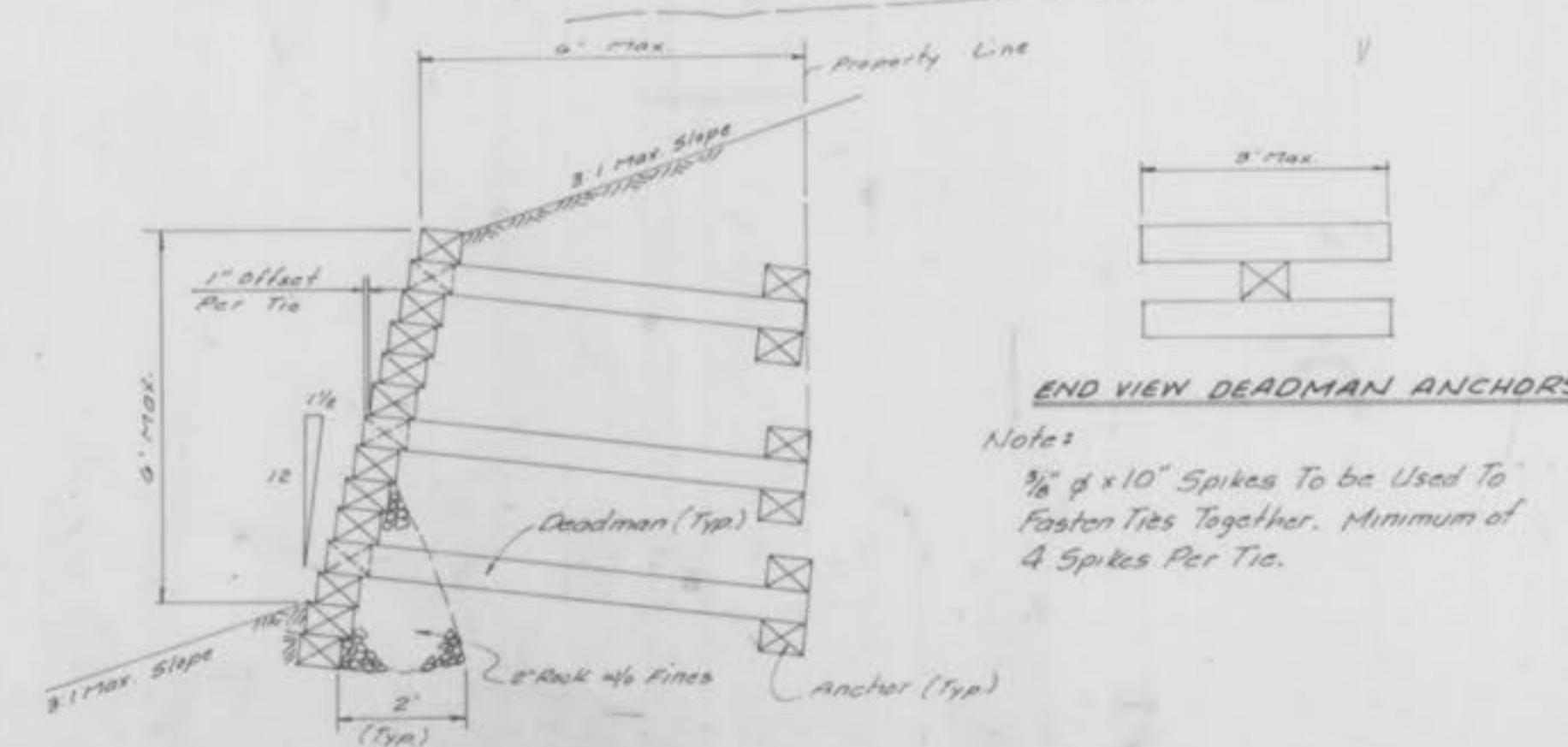
TYPICAL PAVEMENT 1/2 SECTION



TYPICAL PAVEMENT 1/2 SECTION



E curve Data  
 ① 28° 11' 10"  
 R= 105.00'  
 L= 68.00'  
 ② 28° 18' 07"  
 R= 380.00'  
 L= 188.00'  
 ③ 0° 51' 00"  
 R= 667.00'  
 L= 78.00'



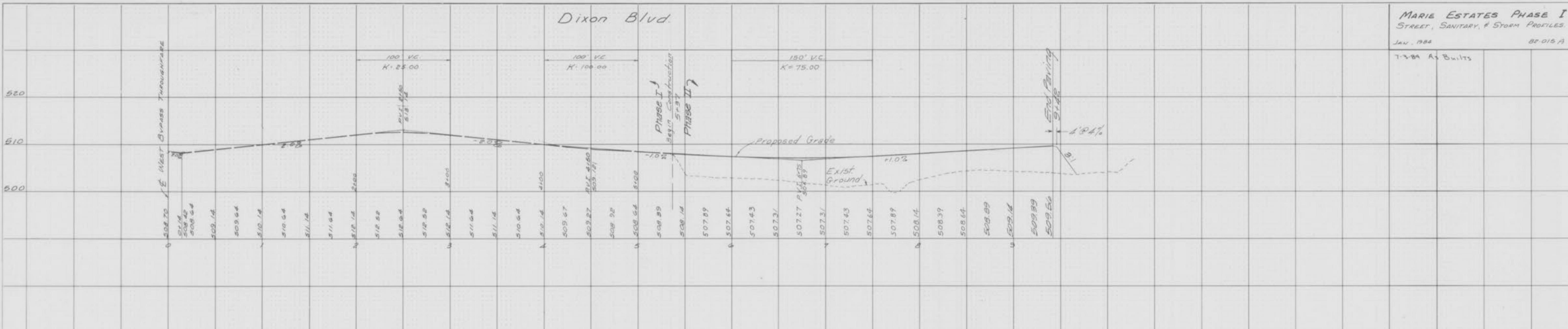
TYPICAL RAILROAD TIE RETAINING WALL

Bid Yardage 22,850 cu.yds.

MARIE ESTATES PHASE I  
STREET, SANITARY & STORM PROFILES  
JAN. 1986

88-015 A

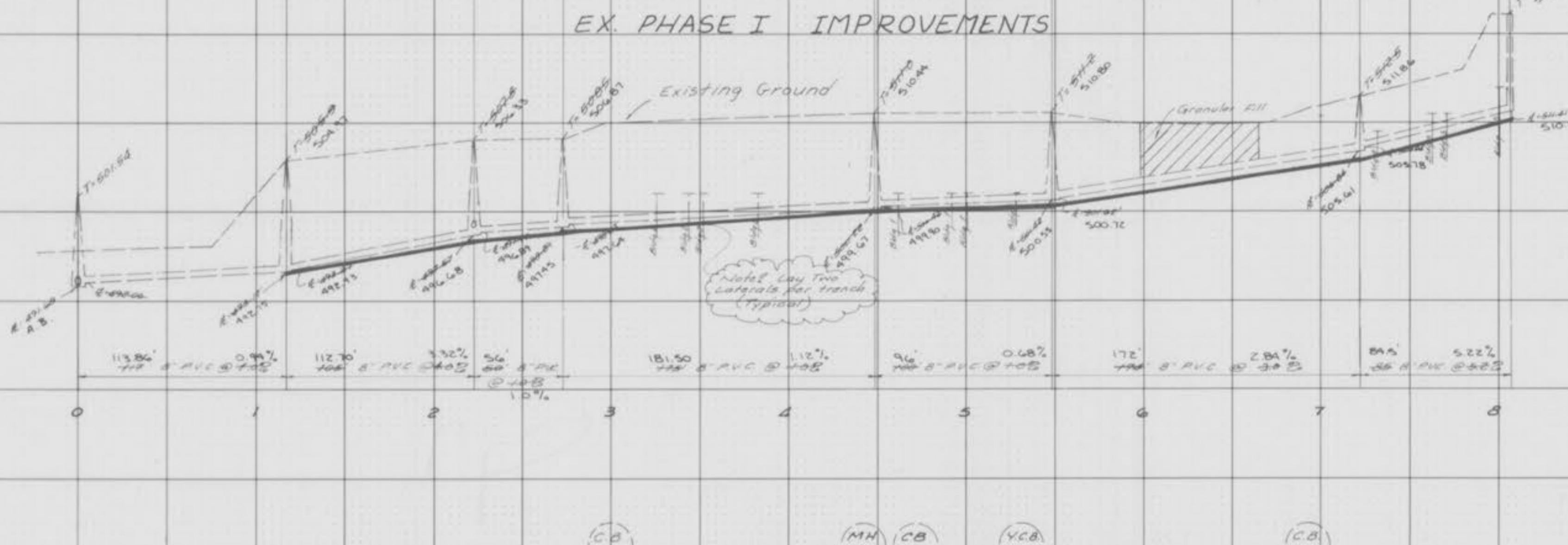
T-3-8A AS BUILT



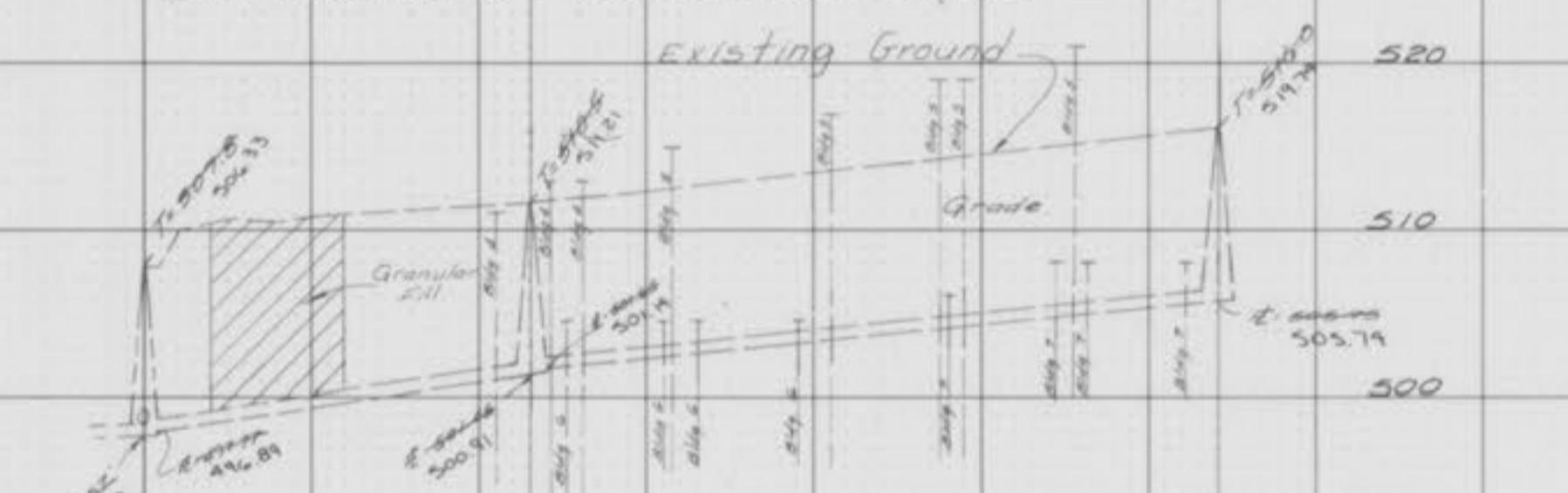
ORIGINAL SURVEY	SURVEYED
PLOTTED	PLOTTED
NOTE BOOK	NOTE BOOK
AREA	AREA
CHARTS	CHARTS

ORIGINAL SURVEY	SURVEYED
PLOTTED	PLOTTED
NOTE BOOK	NOTE BOOK
AREA	AREA
CHARTS	CHARTS

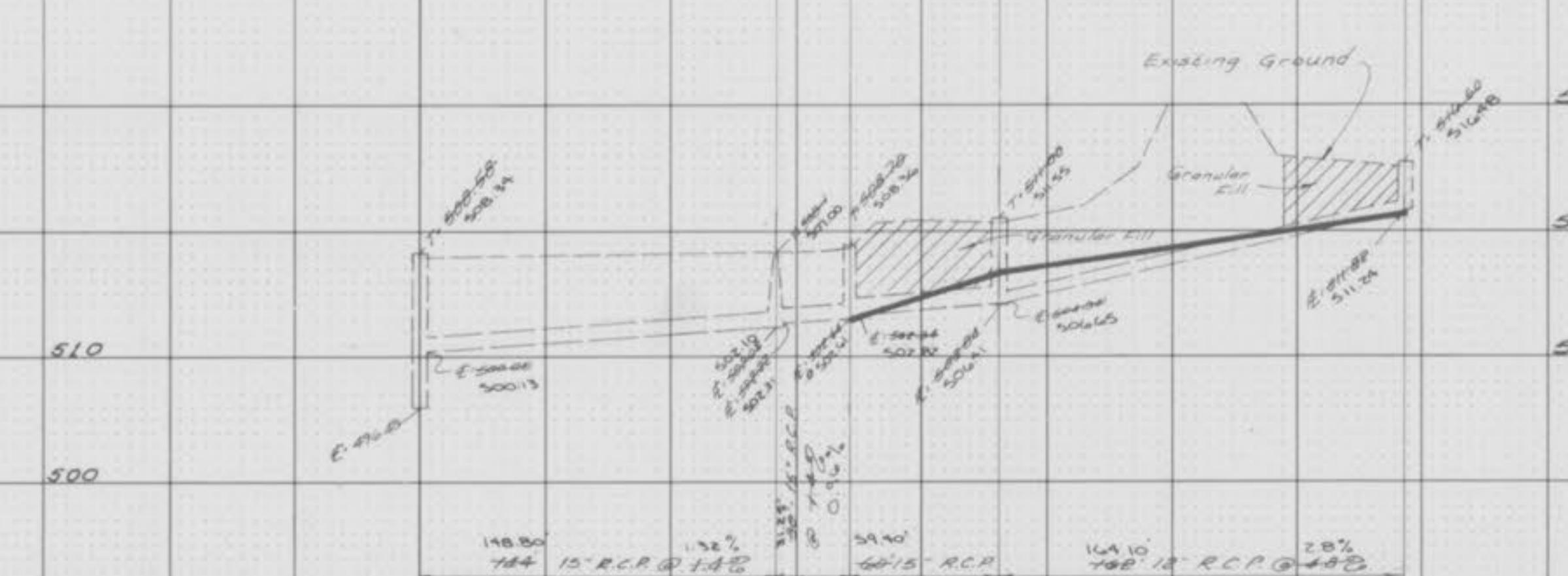
### EX. PHASE I IMPROVEMENTS



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### DETENTION CALCULATIONS

Total Site 23.448 ACRES  
Developed 23.448 x 2.7 = 63.31 ac.  
Undeveloped 23.448 x 1.7 = 39.86 ac.  
Differential Runoff 23.448 ac.  
Storage Required 23.45 x 1800 (30 min) = 42,210 cu. ft.

Volume of Cut in Flood Plain 60,480 cu. ft.  
Volume of Fill in Flood Plain - 19,011 cu. ft.  
Volume of Excess Storage in Flood Plain: 42,469 cu. ft.