

**GENERAL NOTES**

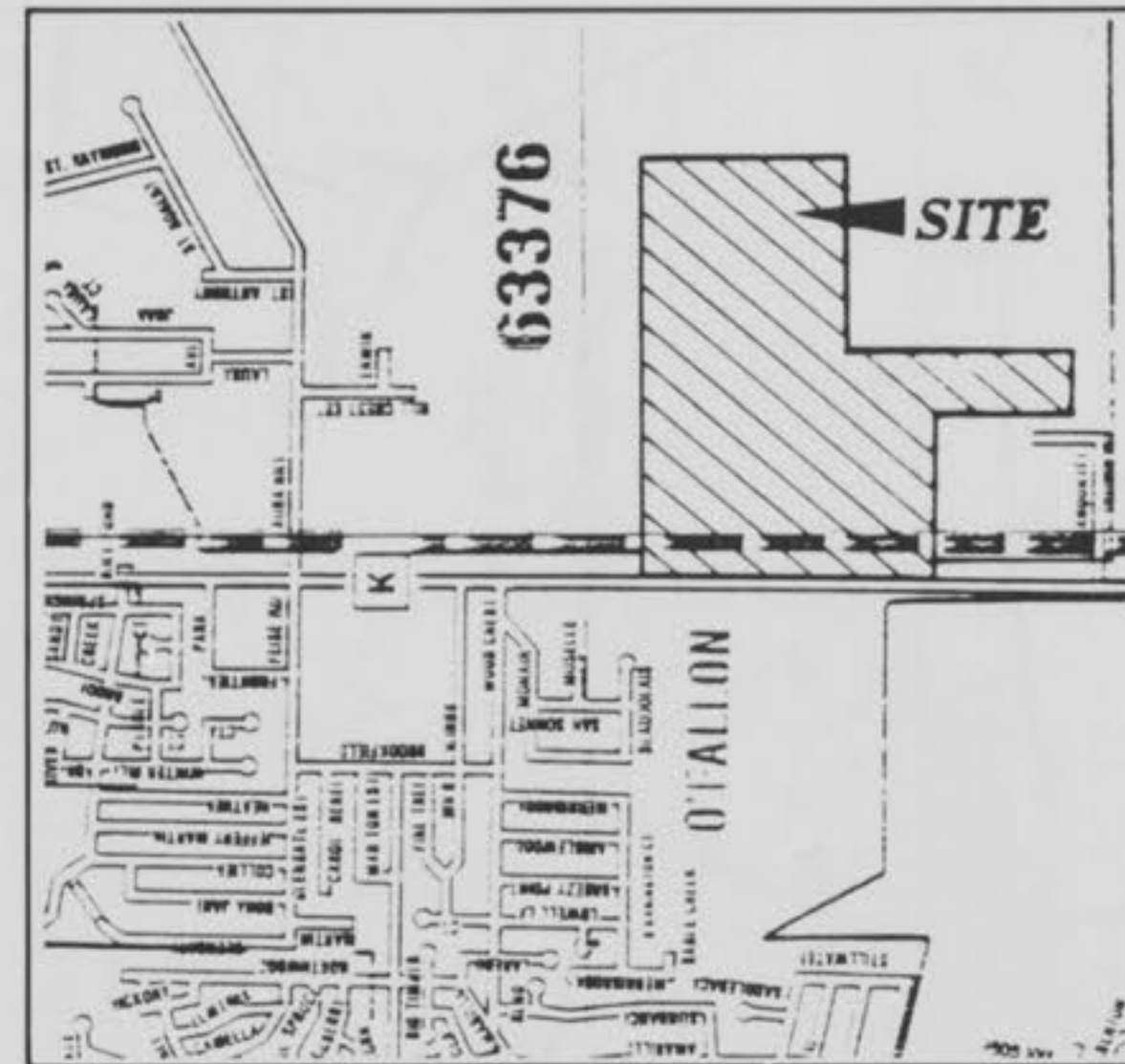
- Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor, and shall be located prior to any grading and/or construction of improvements.
- All standard curb inlets are to have front-of-inlet Z' (two feet) behind curb, within public right-of-way, unless otherwise noted.
- Storm sewers 18" diameter and smaller shall be A.S.T.M. C-14 unless otherwise shown on the plans.
- Storm sewers 21" diameter and larger shall be A.S.T.M. C-76, Class II minimum, unless otherwise shown on the plans.
- All storm sewer pipe in the right-of-way shall be reinforced concrete pipe (A.S.T.M. C-76, Class II minimum).
- Corrugated metal pipe shall conform to the standard specifications for corrugated culvert pipe AASHO M36, aluminumized or asphalt polymer coated.
- 8" P.V.C. sanitary sewer pipe shall meet the following standards: A.S.T.M. D-3034 SDR35, with wall thickness compression joint A.S.T.M. D-3212. An appropriate rubber seal waterstop as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures.
- All filled places, including under paved areas, under buildings, under proposed storm and sanitary sewer lines, and/or paved areas, shall be compacted to 90% of maximum density as determined by the "Modified AASHTO T-180 Compaction Test" (A.S.T.M. D1557). Test shall be verified by a soils engineer.
- All trench backfills under paved areas shall be granular backfill, and water jetted. All other trench backfills may be earth material (free of large clods or stones) and shall be water jetted.
- No slope shall be steeper than 3:1. All slopes shall be seeded and mulched.
- Barricades will be constructed per the standard specifications as shown in the "Manual of Uniform Traffic Control Devices". End of roadway markers shall be mounted 4 feet above the pavement on two pound "U" channel sign posts. Each marker shall consist of an 18" diamond panel with red reflectors.
- All construction and materials used shall conform to current City of O'Fallon Standards and Specifications.
- Easements shall be provided for storm sewers, sanitary sewers, and all utilities on the record plat. See record plat for location, size, and width of easements.
- All water line construction shall conform to current St. Charles Co. Water Dist. No. 2 Standards and Specifications.
- All sanitary sewer construction shall conform to current Duckett Creek, Sewer District Standards and Specifications.
- The length of the concrete encasement around the P.V.C. sanitary sewers and the concrete storm sewers shall extend at least 5' into undisturbed soil to bridge the pipe across the trench backfill. Reinforcing steel shall be placed in the concrete encasement for tensile strength.
- Erosion control shall not be limited to what is shown on the plan. The contractor shall take whatever means necessary to prevent siltation and erosion from entering adjacent roadways, properties, and ditches. Such control might include channeling runoff into sediment basins, channeling runoff into areas where an extra row of straw bales are used. A silt fence might be considered, if necessary.
- All construction and materials shall conform to O'Fallon Fire Protection District Standards.
- The minimum vertical distance from the low point of the basement to the flowline of the sanitary sewer at the corresponding house connection shall not be less than two and one half feet (2 1/2') plus the diameter of the sanitary sewer.
- The most stringent of the above requirements shall apply.
- All streets and right-of-ways shown on these improvement plans will be dedicated to the City of O'Fallon for public use forever.
- When grading operations are completed or suspended for more than 30 days, permanent grass must be established at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided according to the City of O'Fallon Specifications.
- The contractor shall place all fire hydrants within (2) two feet of the street curb.
- The contractor shall place the "steamer" outlet of the fire hydrant toward the street.
- All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri D.H.R. Specification 10CCR.9.120 (7)(E).
- Any wells and/or springs which may exist on this property should be located and sealed in a manner acceptable to the City of O'Fallon.
- All existing trash and debris on-site must be removed and disposed of off-site.
- Debris and foundation material from any existing on-site building or structure which is scheduled to be razed for this development must be disposed of off-site.
- Soft soils in the bottom and banks of any existing or former pond sides or tributaries should be removed, spread out, and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed public right-of-way locations or on any storm sewer location.
- Concrete Pipe Joints shall be M.S.D. Type "A" Approved Compression Joints and shall conform to the requirements of the Specification for Joints and Circular Concrete Sewer and Culvert Pipe, using flexible, watertight, rubber-type gaskets A.S.T.M. C-443 Band-Type. Gaskets depending entirely on cement for adhesion and resistance to displacement during jointing shall not be used.
- All sewer tees built without elevations furnished by the Engineer will be the responsibility of the sewer contractor.
- 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.
- No area shall be cleared without permission of the developer.
- All sanitary laterals shown on plan are to be constructed of 4 inch P.V.C. pipe.
- Brick shall not be used on manholes.
- All gravel for rip-rap shall be high slump ready-mix concrete.
- The Duckett Creek, Sewer District shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspections.
- All P.V.C. sanitary sewer pipe is to be SDR 35 or equal with "clean 1/2" 1/4" granular stone bedding uniformly graded. This bedding shall extend from 4" below the pipe to springline of pipe to 6" above the top of pipe.
- All pipes shall have positive drainage through manholes. No flat base structures are allowed.
- All streets within this set of improvement plans shall be Publicly maintained.

**SPECIFICATIONS**

- Site preparation includes the clearance of all stumps, trees, bushes, shrubs, and weeds; the grubbing and removal of roots and other surface obstructions from the site; and the demolition and removal of any masonry structures. The excavated material shall be properly disposed of off-site. Topsoil and grass in the fill areas shall be thoroughly mixed prior to the placement of any fill. The Soils Engineer shall approve the mixing operation.
- Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory rollers or high speed impact type drum rollers acceptable to the Soils Engineer. The rollers shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.
- The Soils Engineer shall observe and test the placement of the fill to verify that specifications are met. A series of fill density tests will be determined on each lift of fill. Test reports showing fill quality will be made to the owner at regular intervals.
- The Soils Engineer shall verify the thickness of sections of a lift of fill on previous sheets. The contractor shall rework the rejected portion of fill and obtain authorization from the Soils Engineer of its acceptance prior to the placement of additional fill.
- All areas to receive fill shall be excavated to a depth of not less than 6 inches, and then compacted to at least 85 percent of the maximum density as determined by the Modified AASHTO T-180 Compaction Test (A.S.T.M. D1557). Manual edges steeper than 1 vertical to 5 horizontal to receive fill shall have horizontal benches, not less than 18 inches before the placement of any fill. The width and height to be determined by the Soils Engineer. The fill shall be loosely placed in horizontal layers not exceeding 8 inches in thickness and compacted in accordance with the specifications given below. The Soils Engineer shall be responsible for determining the acceptability of soils placed. Any unacceptable soils placed shall be removed at the Contractor's expense.
- The sequence of operations in the fill areas will be fill, compact, verify acceptable soil density, and repetition of the sequence. The acceptable moisture content during the filling operation are those at which satisfactory dry densities can be obtained. The acceptable moisture content during the filling operation on the existing areas are from 2 to 8 percent above the optimum moisture content.
- The surface of the fill shall be finished so that it will not pond water. If at the end of a day's work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.
- Fill placed within proposed street R.O.W. shall be compacted to 90% M.D. Proctor and be 2% below to 2% above optimum moisture content.
- Soft soils in the bottom and banks of any existing or former pond sites should be removed, spread out, and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed right-of-way locations or on storm sewer locations.

# CHERRYWOOD PARC

A TRACT OF LAND BEING PART OF SECTION 4,  
TOWNSHIP 46 N., RANGE 3 E.,  
CITY OF O'FALLON, ST. CHARLES CO., MO.



LOCATION MAP  
N.T.S.

**PROJECT BENCHMARK**  
FIRE HYDRANT AT S.E. CORNER  
OF DARDENNE ELEMENTARY SCHOOL  
"M" IN MUELLER  
U.S.G.S. DATUM ELEV. 574.74

**DEVELOPMENT NOTES:**

- AREA OF TRACT 95.01
- PRESENT ZONING R-4 SINGLE FAMILY RESIDENTIAL
- PROPOSED USE SINGLE FAMILY RESIDENTIAL SUBD.
- TOTAL LOTS PROPOSED 323
- MINIMUM LOT AREA 7,500 SQ.FT.
- SITE IS LOCATED IN OR IS SERVED BY THE FOLLOWING:

**WATER DISTRICT - ST. CHARLES CO. WATER DISTRICT NO. 2**  
**SANITARY - DUCKETT CRK. SEWER DISTRICT**  
**ELECTRIC - UNION ELECTRIC CO.**  
**GAS - ST. CHARLES GAS CO.**  
**TELEPHONE - G.T.E.**

**ENGINEERS AUTHENTICATION**

The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in the project and specifically excludes revisions after this date unless re-authenticated.

ST. CHARLES ENGINEERING AND SURVEYING



*Michael Newell Meiners*  
MICHAEL NEWELL MEINERS  
MISSOURI PROFESSIONAL ENGINEER NUMBER E-22483

**LEGEND**

- BUILDING LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING WOOD AREA
- SILTATION CONTROL
- CREEK OR DITCH
- FL — FLOWLINE
- GAS MAIN
- TELEPHONE CABLE
- WATER MAIN
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC
- STREET SIGN
- GENERAL SURFACE DRAINAGE
- LIGHT STANDARD
- CLEARING AND GRADING LIMITS
- STORM SEWER DESIGNATOR
- SANITARY MANHOLE DESIGNATOR

## SHEET INDEX

COVER SHEET	1
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GRADING PLAN	5 thru 7
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STORM SEWER PROFILES	13 thru 14
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CONSTRUCTION DETAILS	18 thru 23

**PREPARED FOR**

**OWEN & SONS DEVELOPMENT CO.**  
235 JUNGEMAN RD. SUITE 207  
ST. PETERS, MO. 63376

**SANITARY & STORM AS-BUILTS**  
**(AS SHOWN ON PROFILES)**

Revised Feb. 23, 1994  
Dec. 2, 1994 A.D.S. note  
Oct. 2, 1994, Oct. 11, 1994 D.C. See Nov. 4, 1994 per City of O'Fallon.

Sheet 1 of 23

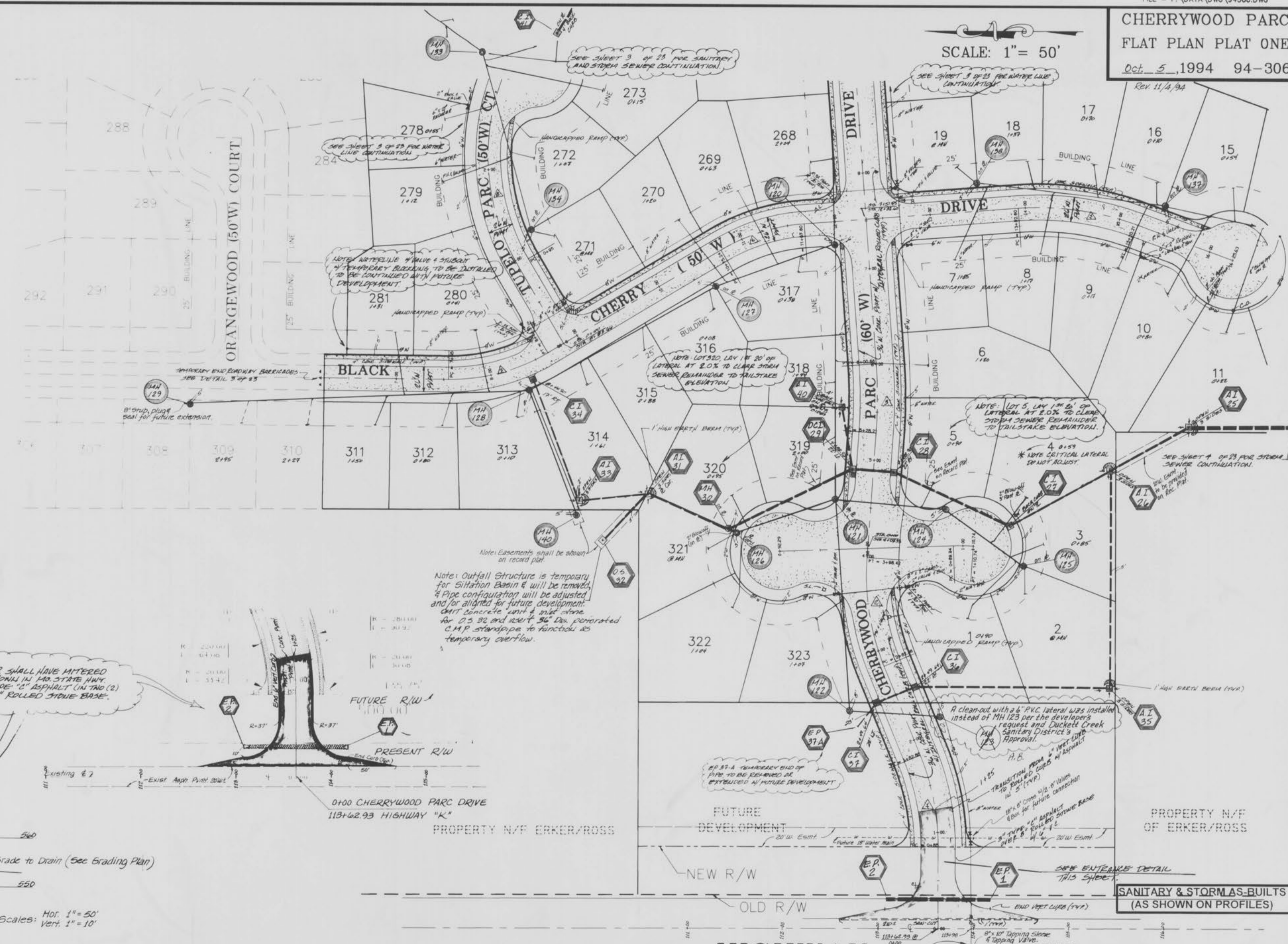
**S C** ST. CHARLES ENGINEERING & SURVEYING  
**E S**

Order No. 94-306  
Date 1/12/94

801 South Fifth Street, Suite 202  
St. Charles, Missouri 63301  
Off. 947-0607, Fax 947-2448

CHERRYWOOD PARC  
FLAT PLAN PLAT ONE  
Oct. 5, 1994 94-306  
Rev. 11/4/94

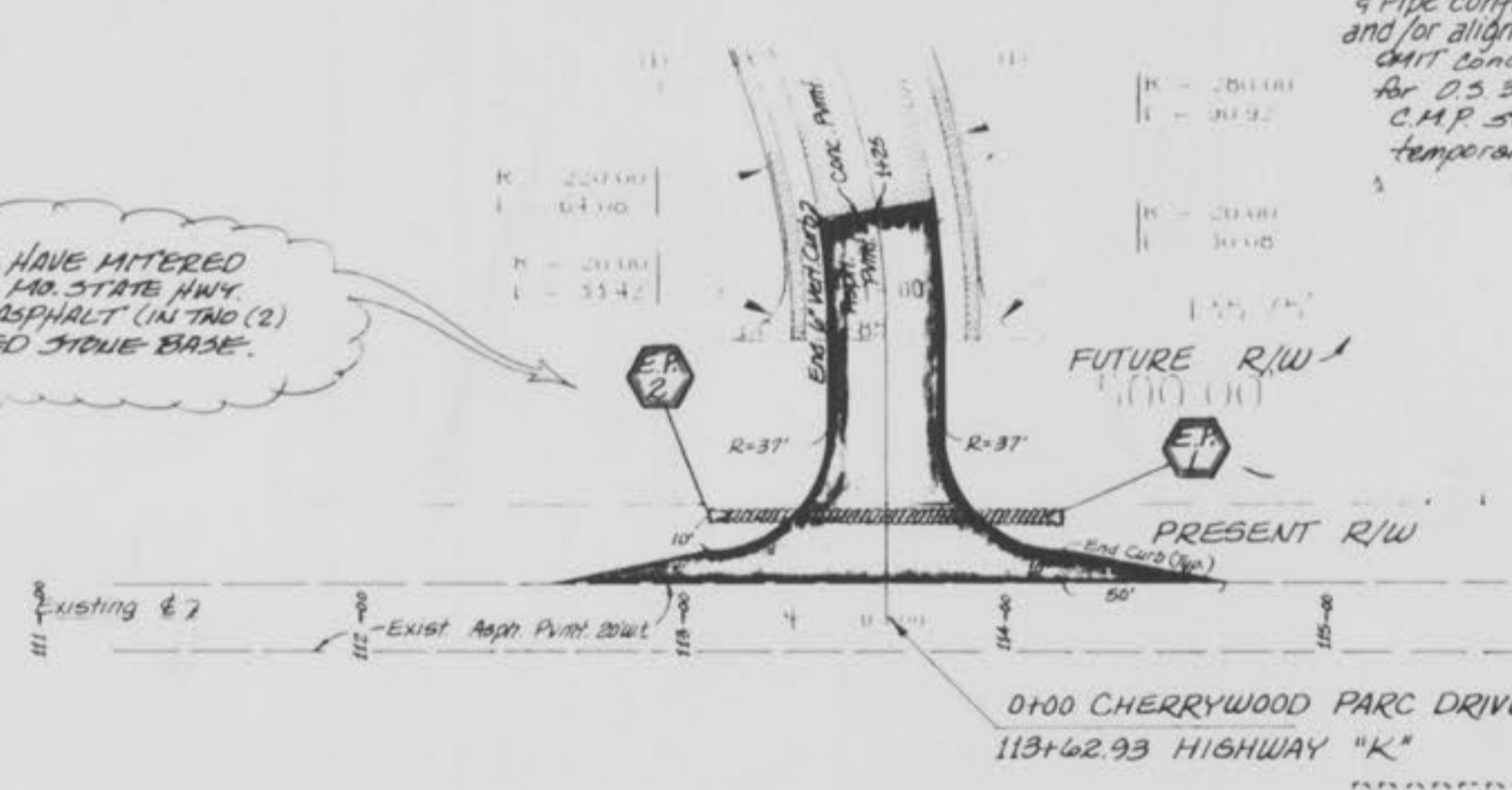
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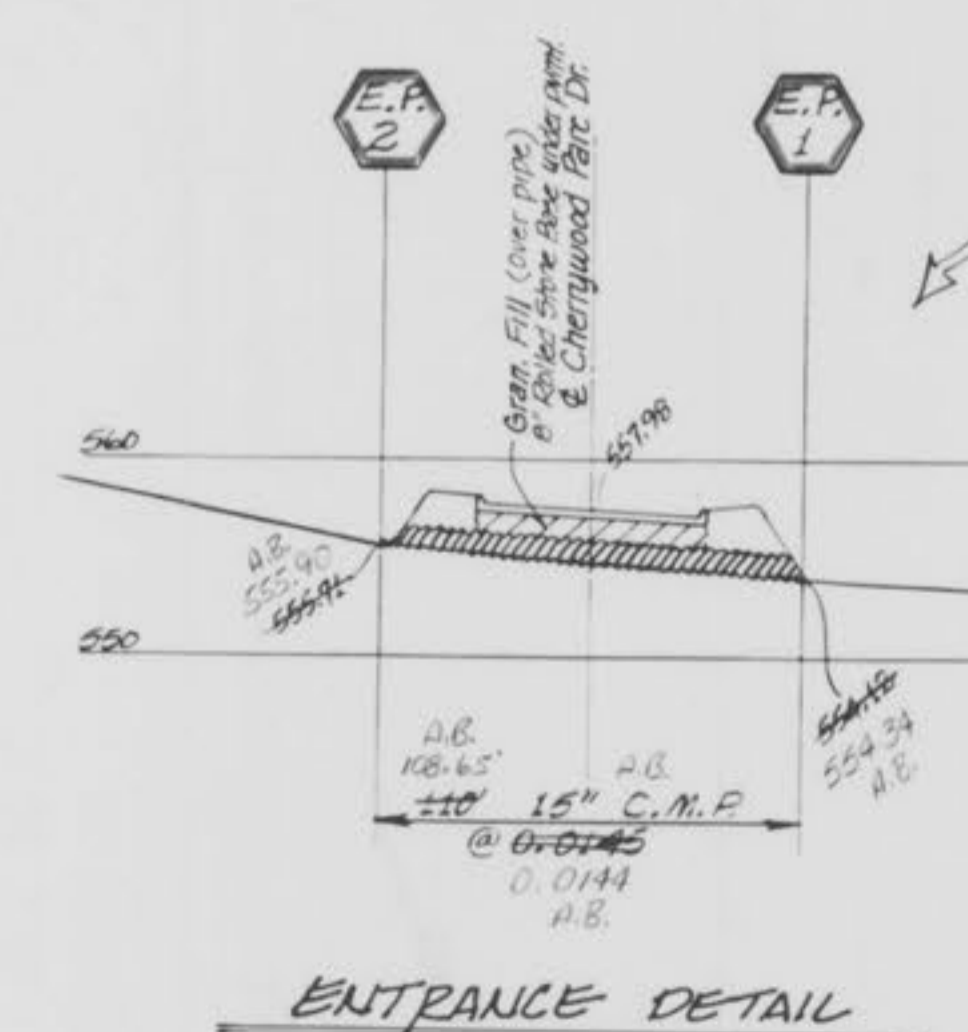
**CURVE DATA**

CURVE#	RADIUS	LENGTH	DELTA
1	250.0'	97.86'	22° 25' 40"
2	250.0'	115.55'	26° 28' 56"
3	500.0'	72.44'	8° 18' 04"
4	400.0'	58.39'	8° 21' 50"
5	300.0'	127.61'	24° 22' 18"
6	200.0'	92.36'	26° 27' 33"
7	200.0'	109.51'	28° 38' 52"
8	225.00'	226.68'	57° 43' 25"

NOTE: ROADWAY C.M.P. SHALL HAVE MITERED ENDS. PAVEMENT SHALL BE FOR STATE HWY. R/W SHALL BE 3" TYPE "C" ASPHALT (IN TWO (2) 1-1/2" LIFTS) OVER 8" ROLLED SHALE BASE.



Note: Outfall Structure is temporary for Siltation Basin & will be removed. Pipe configuration will be adjusted and aligned for future development. Cast concrete curb & inlet stone for 0.5 30 and insert 3/4" Dia. perforated C.M.P. standpipe to function as temporary overflow.



**MANINGS FORMULA FOR PIPE CAPACITY**

$$\frac{1.486}{n} A P^{2/3} S^{1/2} = Q$$

$$\frac{1.486}{0.014} (1.227)(.461)(.1204) = 4.22 \text{ c.f.s. CAPACITY}$$

$$0.84 A c. \times 3.0 = 2.52 \text{ c.f.s. DEMAND } Q$$

Note: 8" water main bore under Highway "K" shall be per Missouri State Highway Department requirements and standards. Pipe shall be ductile iron or steel encased and shall have a minimum 42" cover at all locations (even under ditches) from ditch line to ditch line or toe of slope to toe of slope.

REVISED

**S C E S**

**ST. CHARLES ENGINEERING & SURVEYING**  
801 S. FIFTH STREET, SUITE 202  
ST. CHARLES, MO 63301  
TEL.(314) 947-0607 FAX.(314) 947-2448

ORDER NO. 94-806  
DATE 10/15/94

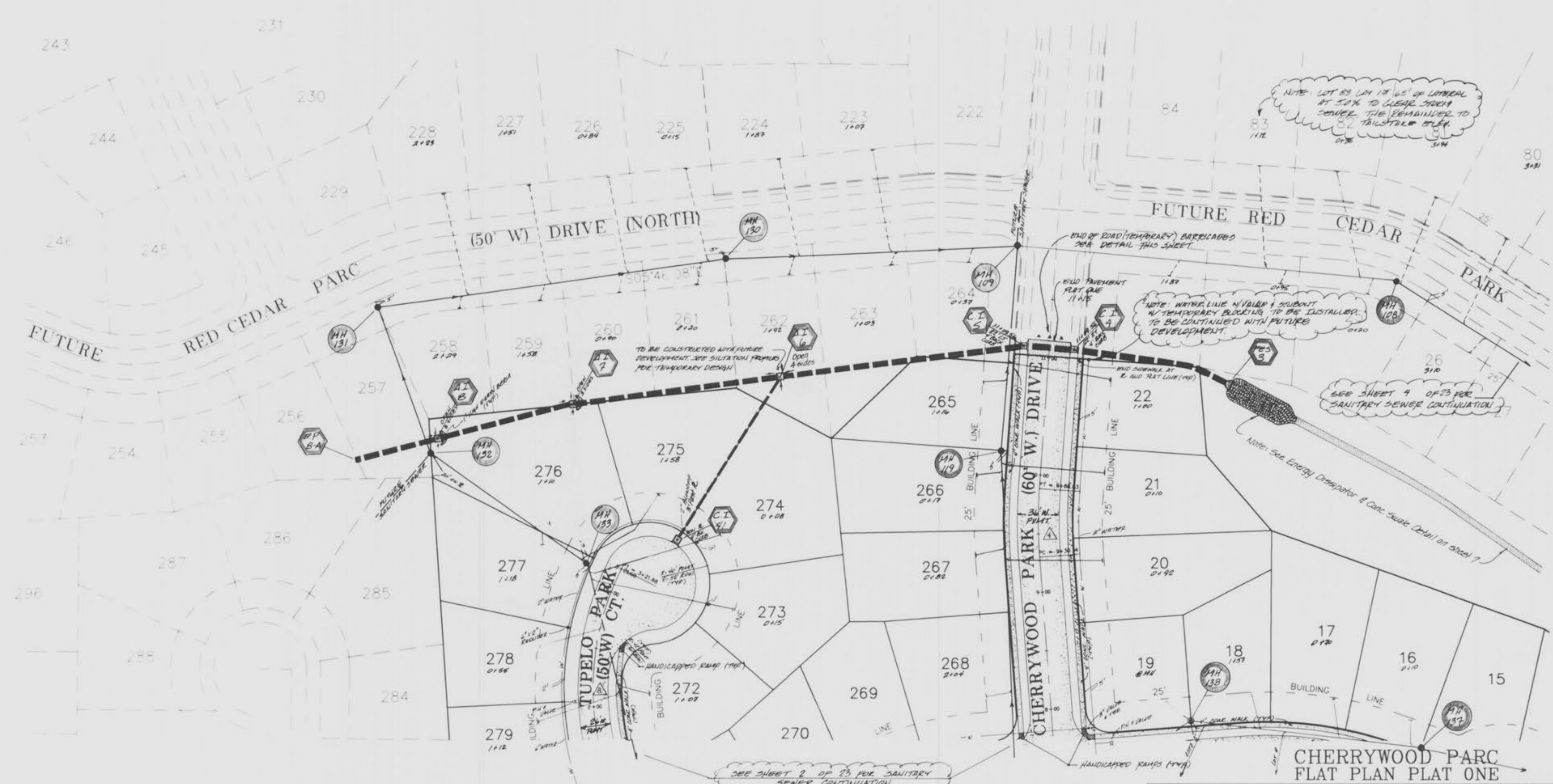
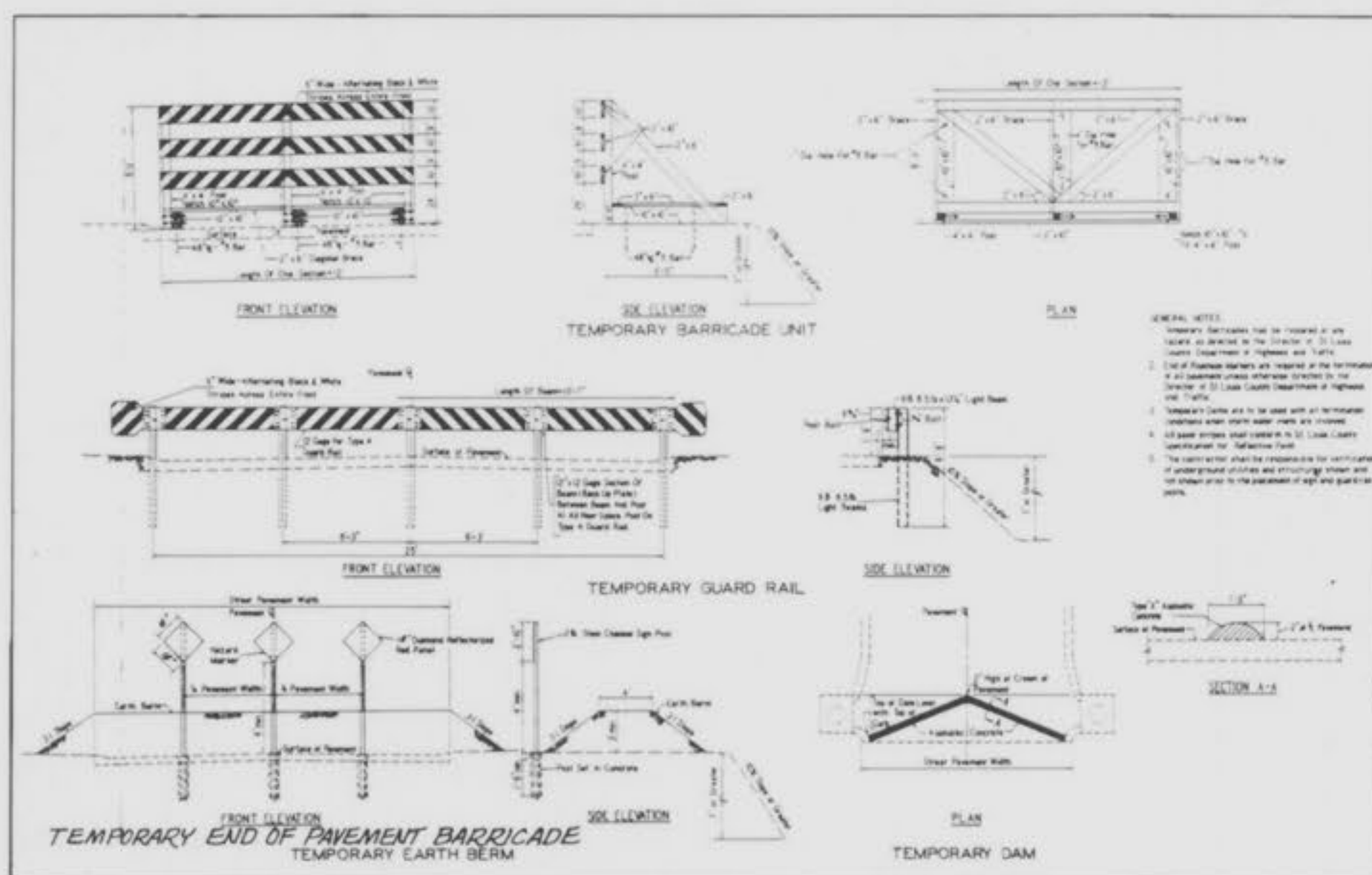
SHEET 2 OF 23

CHERRYWOOD PARC  
FLAT PLAN PLAT ONE

Oct. 5, 1994 94-306

Rev. 11/4/94

SCALE: 1" = 50'



REVISED	SHEET 3 OF 23
<p><b>S C</b> <b>E S</b></p>	<p><b>ST. CHARLES ENGINEERING &amp; SURVEYING</b>                  801 S. FIFTH STREET, SUITE 202                  ST. CHARLES, MO 63301                  TEL.(314) 947-0607 FAX.(314) 947-2448</p>
ORDER NO. 94-306	DATE 10/15/94

SANITARY & STORM AS-BUILTS  
(AS SHOWN ON PROFILES)

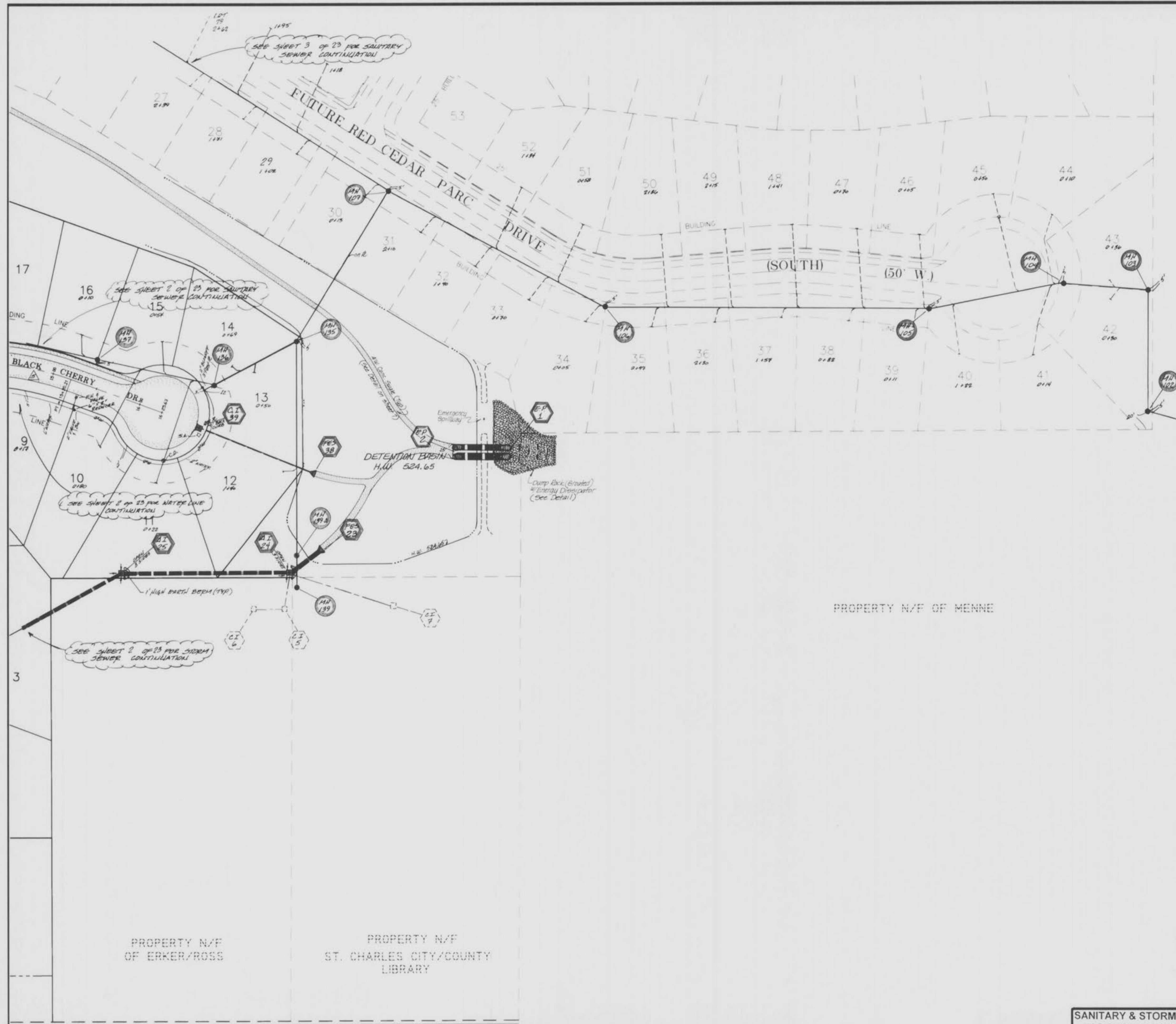
# CHERRYWOOD PARC FLAT PLAN PLAT ONE

Oct. 5, 1994 94-306

Rev. 11/4/94



SCALE: 1" = 50'



Note: See sanitary sewer continuation on Sheet 10 of 23.

Property N/F of Kaplan

PROPERTY N/F OF MENNE

PROPERTY N/F OF ERKER/ROSS

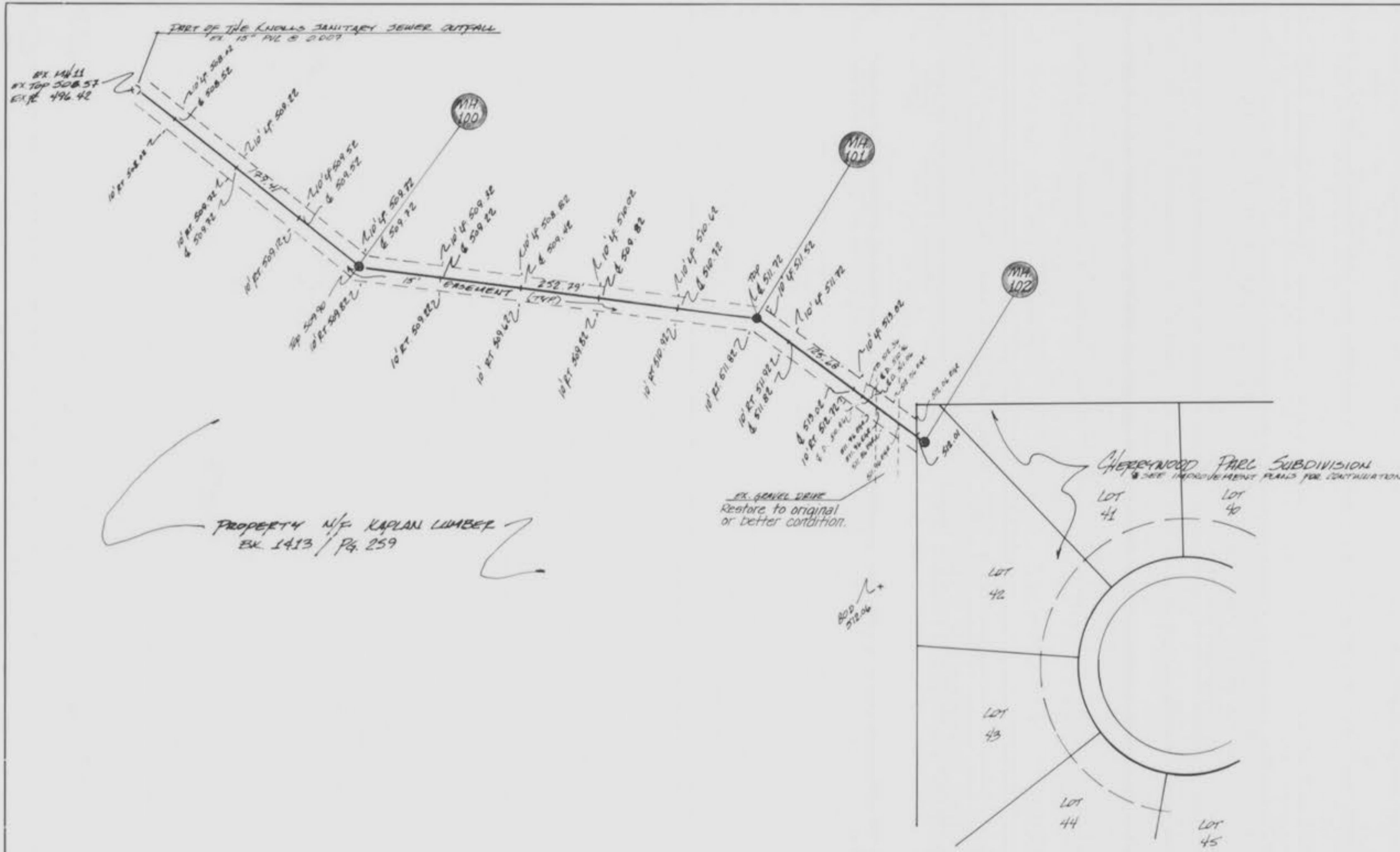
PROPERTY N/F ST. CHARLES CITY/COUNTY LIBRARY

## CHERRYWOOD PARC FLAT PLAN PLAT ONE

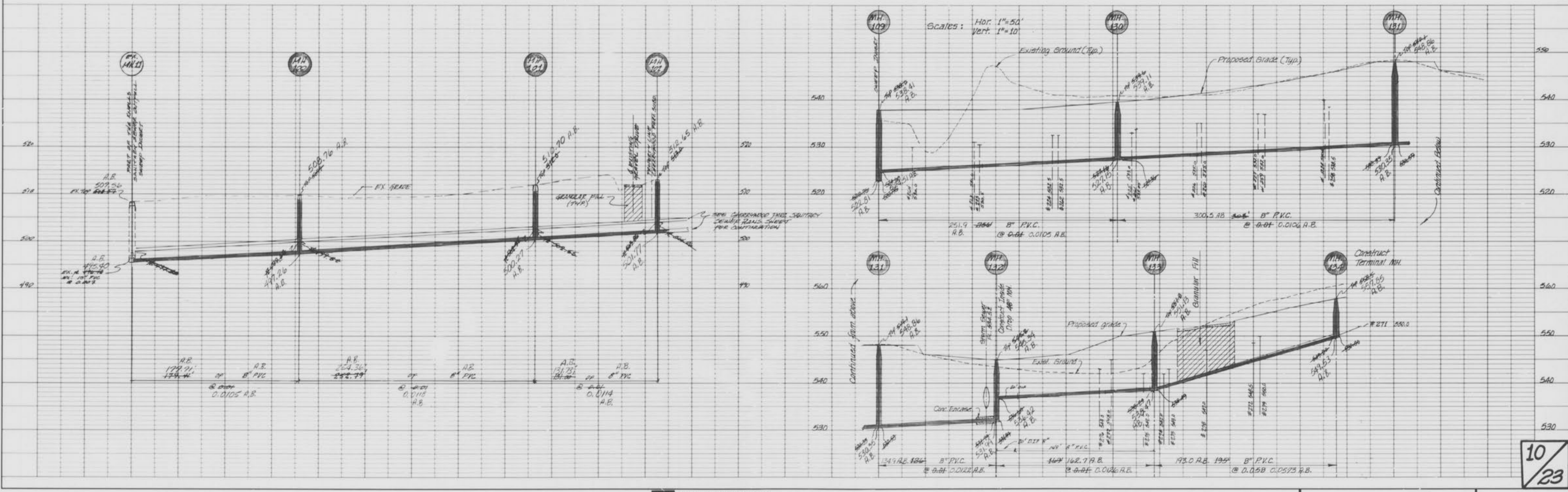
REVISED	SHEET 4 OF 23
<b>S</b> <b>C</b> <b>E</b> <b>S</b>	<b>ST. CHARLES ENGINEERING &amp; SURVEYING</b> 801 S. FIFTH STREET, SUITE 202 ST. CHARLES, MO 63301 TEL.(314) 947-0607 FAX.(314) 947-2448
	ORDER NO. 94-306 DATE 10/15/94
	SANITARY & STORM AS-BUILTS (AS SHOWN ON PROFILES)
	Cherrywood 1016 AS-Built 44

**Cherrywood Parc**  
 Off Site Sanitary Sewer Plan  
 & Sanitary Sewer Profiles

Rev. 10/5/94  
 Rev. 11/4/94



PLAN  
 NOTE BOOK  
 NO.

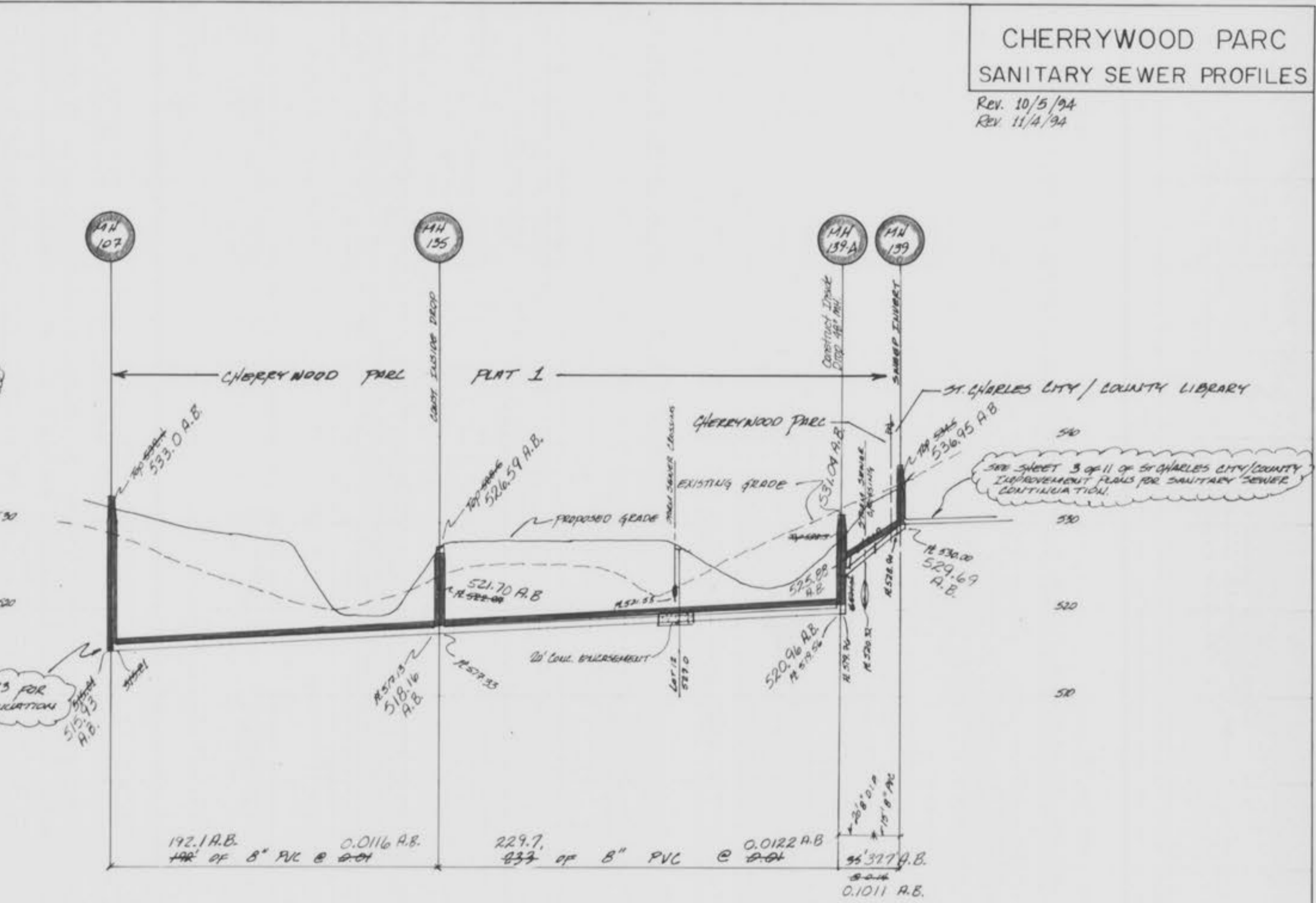
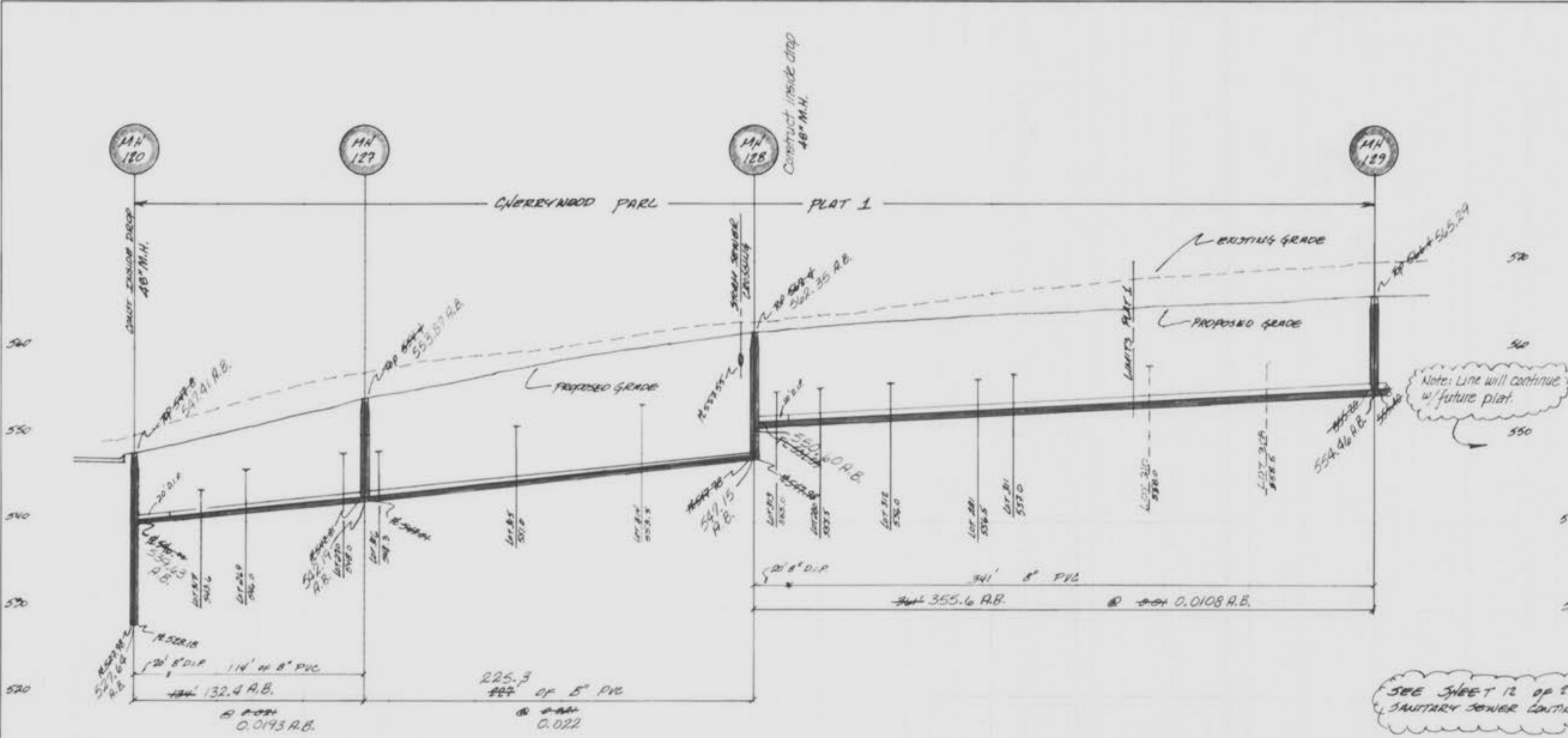


PROFILE  
 NOTE BOOK  
 NO.

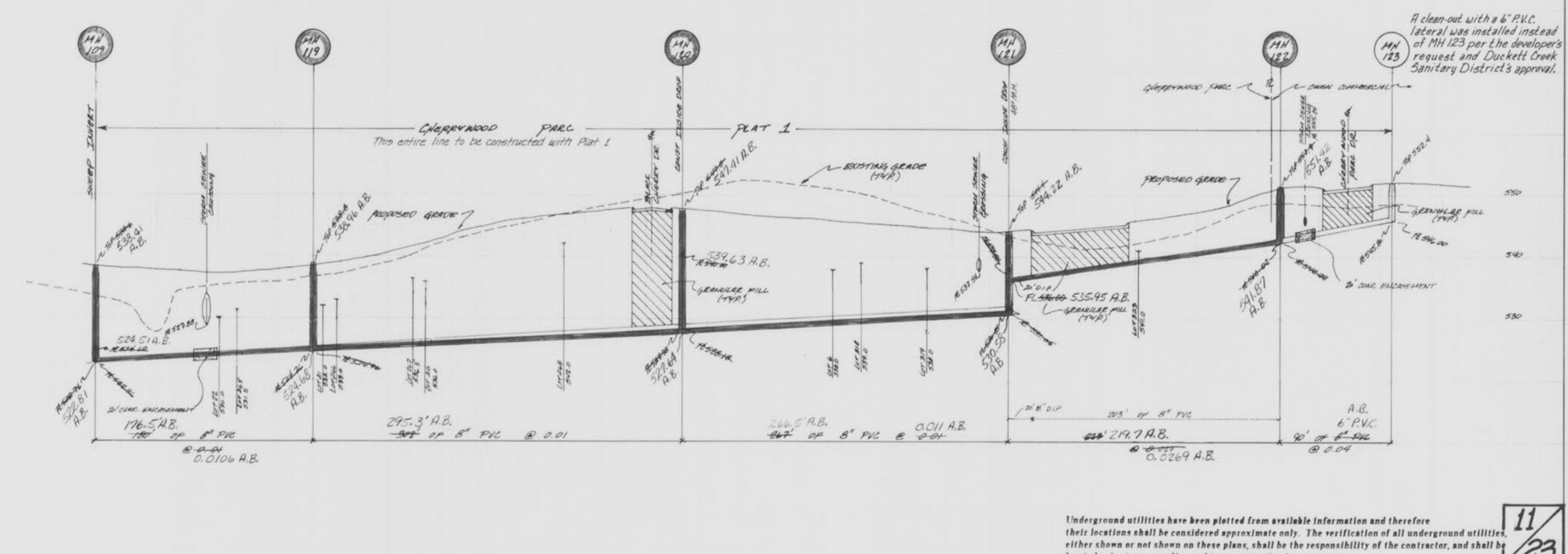
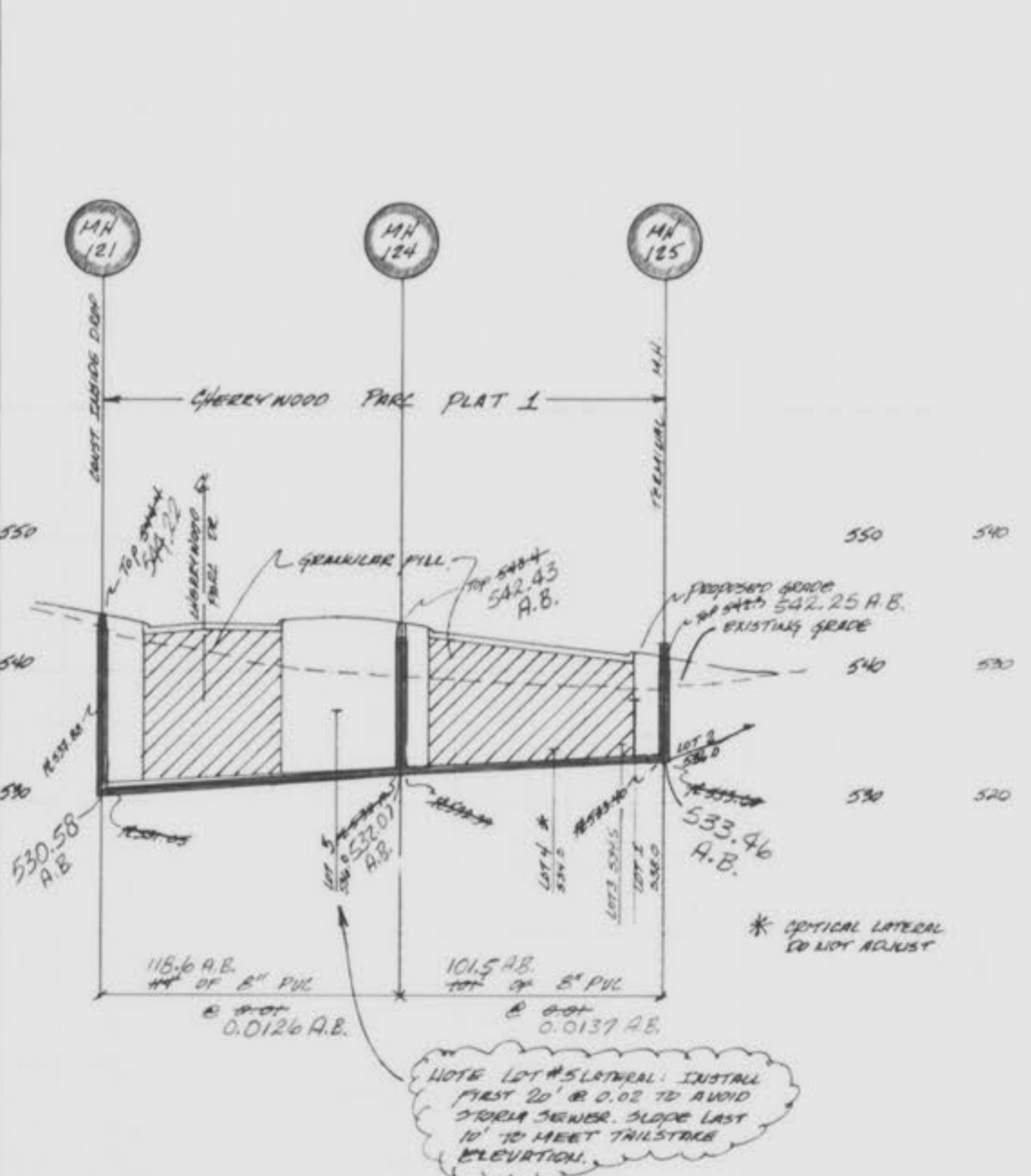
CHERRYWOOD PARC  
SANITARY SEWER PROFILES

Rev. 10/5/94  
Rev. 11/4/94

FINAL SURVEY  
NO. 132.4 A.B.  
DATE: \_\_\_\_\_  
BY: \_\_\_\_\_  
REVISIONS:  
NO. 132.4 A.B.  
NO. 132.4 A.B.  
NO. 132.4 A.B.  
NO. 132.4 A.B.  
NO. 132.4 A.B.



ORIGINAL SURVEY  
NO. 132.4 A.B.  
DATE: \_\_\_\_\_  
BY: \_\_\_\_\_  
REVISIONS:  
NO. 132.4 A.B.  
NO. 132.4 A.B.  
NO. 132.4 A.B.  
NO. 132.4 A.B.  
NO. 132.4 A.B.



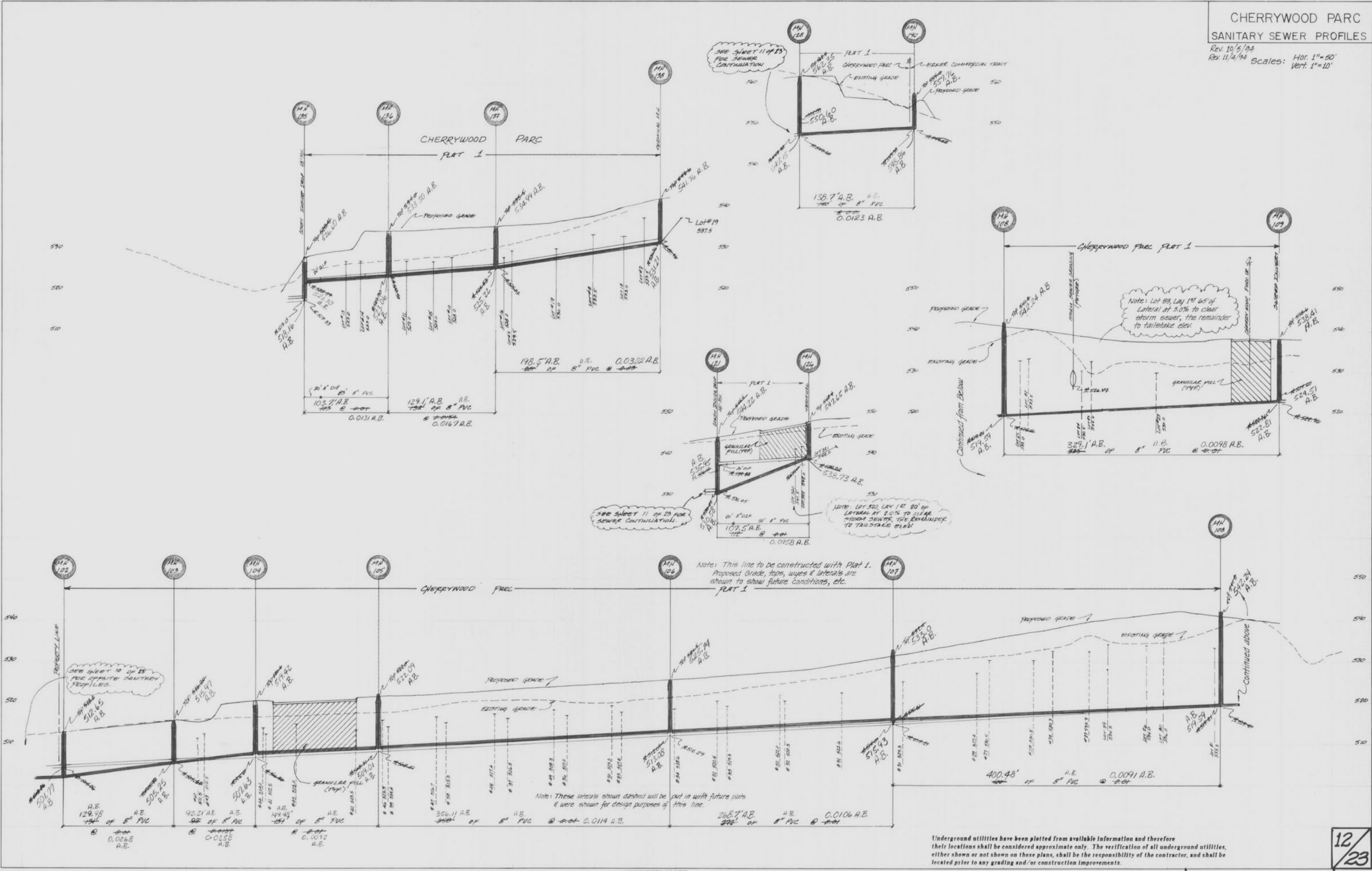
Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor, and shall be located prior to any grading and/or construction improvements.

CHERRYWOOD PARC  
SANITARY SEWER PROFILES

Rev 10/5/94  
Rev 11/4/94  
Scales: Hor. 1"=50'  
Vert. 1"=10'

FINAL SURVEY  
DATE  
BY  
SURVEYED  
NOTED BOOK  
NO  
AREAS CHECKED

ORIGINAL SURVEY  
DATE  
BY  
SURVEYED  
NOTED BOOK  
NO  
AREAS CHECKED



Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification 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 any grading and/or construction improvements.

PLATE 3-FULL CROSS SECTION-FULL DOT  
NATIONAL PRINTING

SANITARY & STORM AS-BUILTS  
(AS SHOWN ON PROFILES)

12/23

Cherrywood Parc  
As-Built

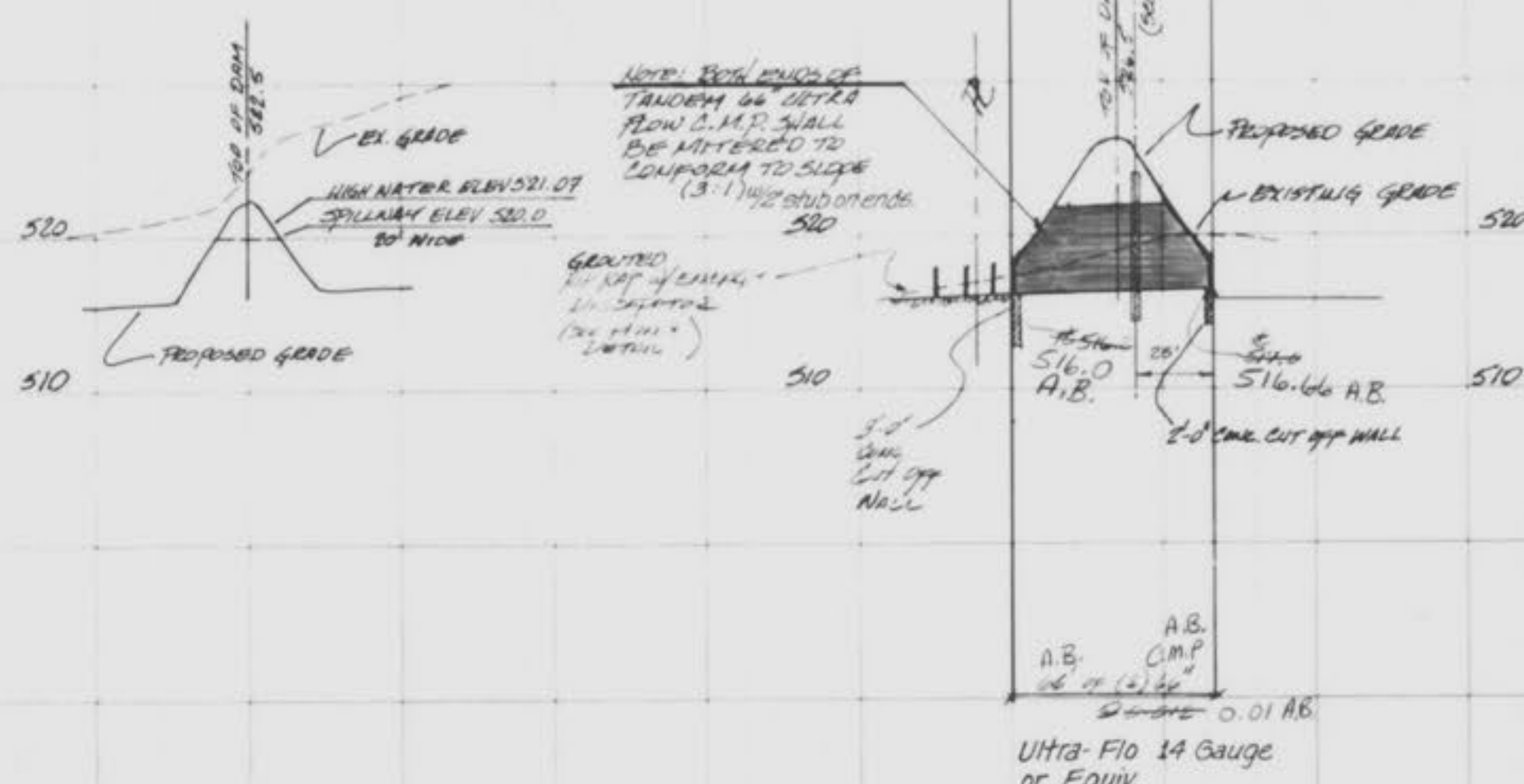
Cherrywood Parc Storm Sewer Profiles

Horz. 1" = 50' 0"  
Vert. 1" = 10' 0"

REV. 10/5/04  
REV. 11/4/04  
REV. 12/6/04

Construction notes for the construction and placement of 66" tandem Ultra-Flow Pipes.

- Manufacturers requirements shall be strictly adhered to.
- Soils Engineer shall observe and supervise the placement and backfilling procedures and test the compaction for compliance with project specifications.
- Rock bedding shall not be used for the outlet piping of the stormwater detention basin.
- A concrete collar shall be placed on each pipe as shown on the plans, and shall be supervised by Soils Engineer.
- The pipes shall be placed on a subgrade shaped to fit the pipe barrel and backfill materials should be properly compacted cohesive soils. The trench backfill materials above the concrete and pipe should be compacted cohesive soils.
- A minimum separation of 4' shall be maintained, and supervised by the soils engineer.

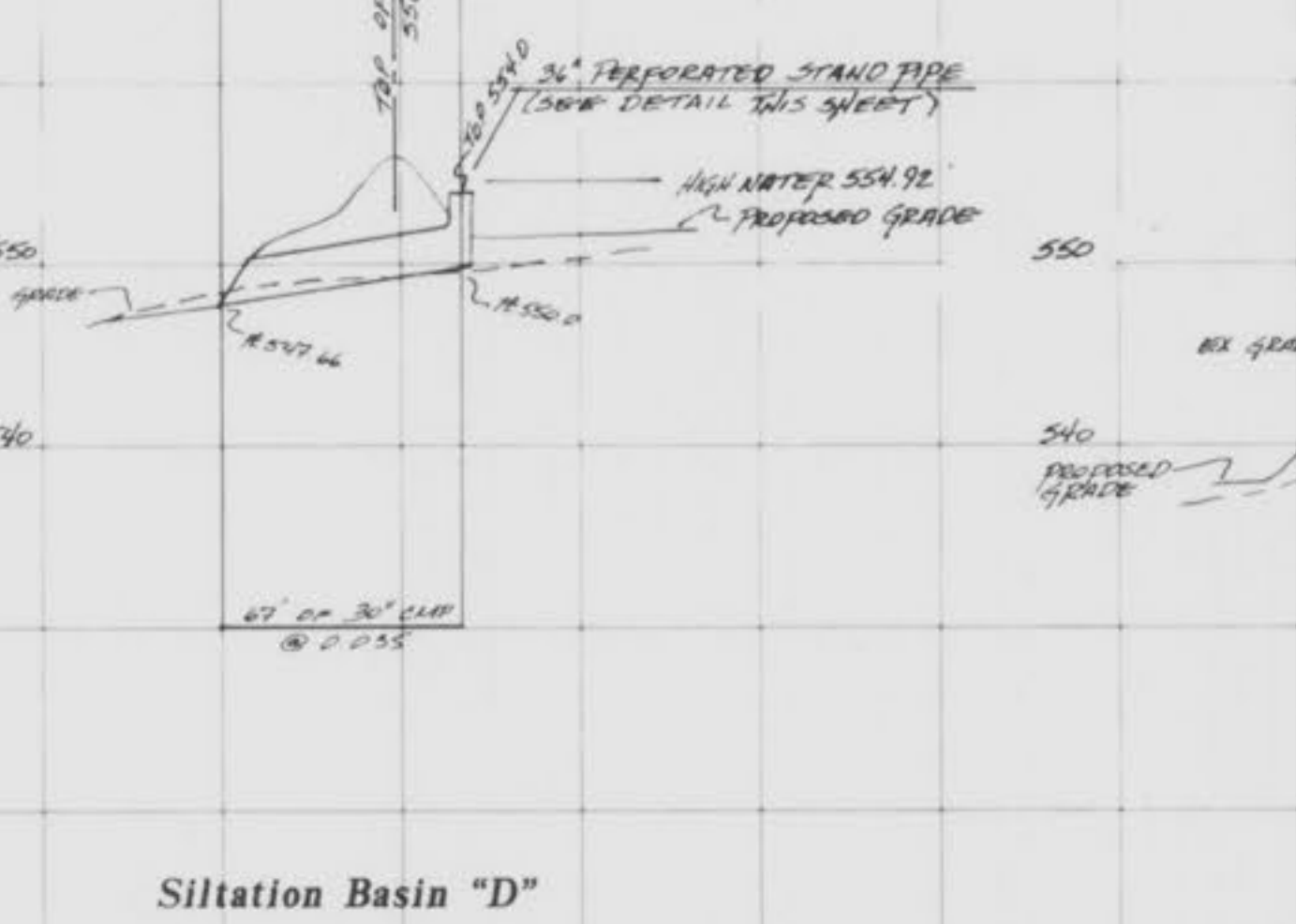


Siltation Basin "A"

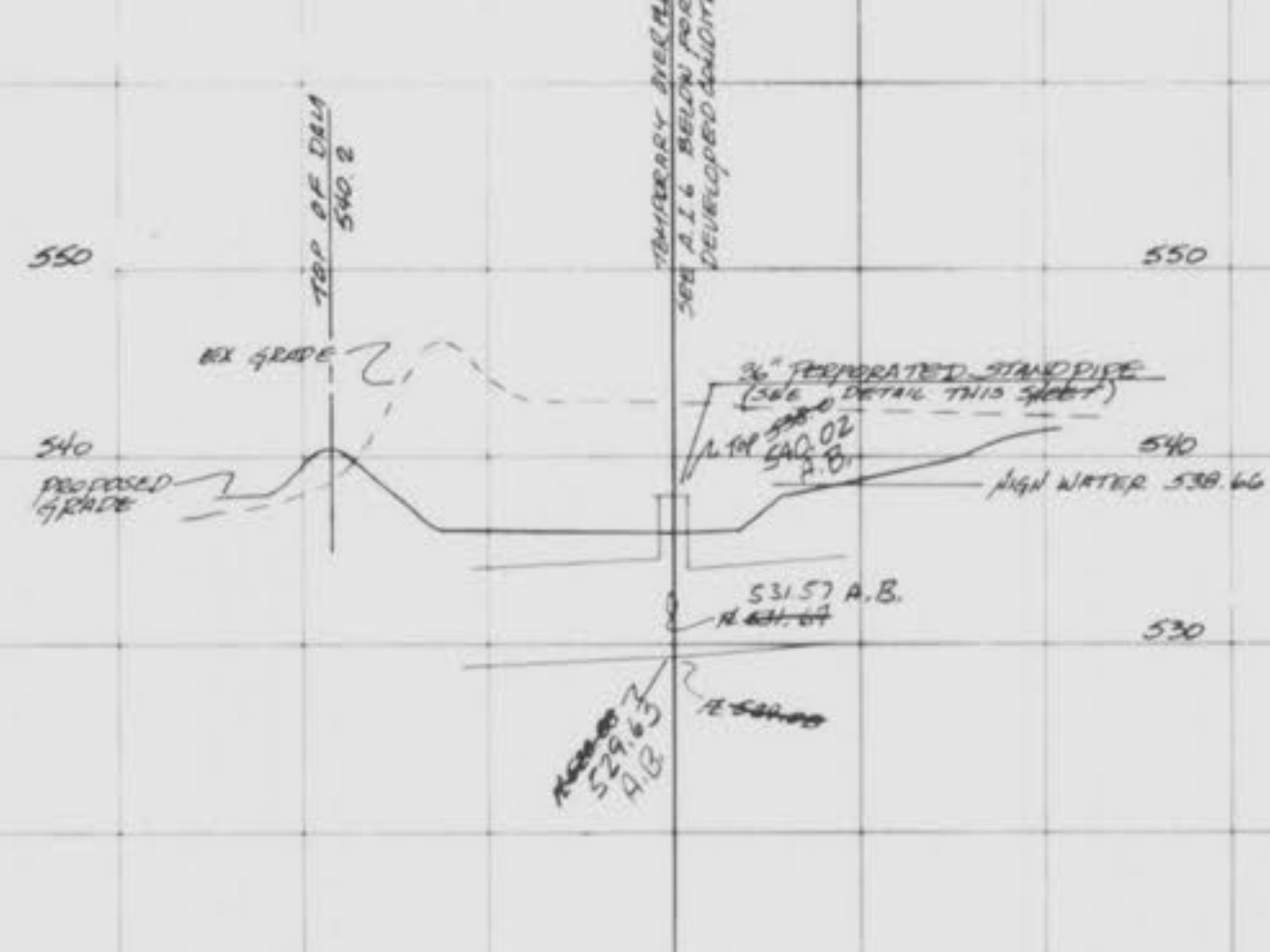
Detention Basin "A" Outfall



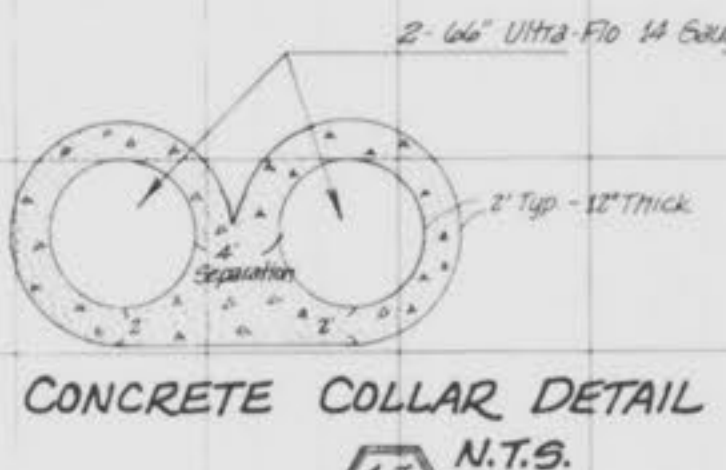
Siltation Basin "C"



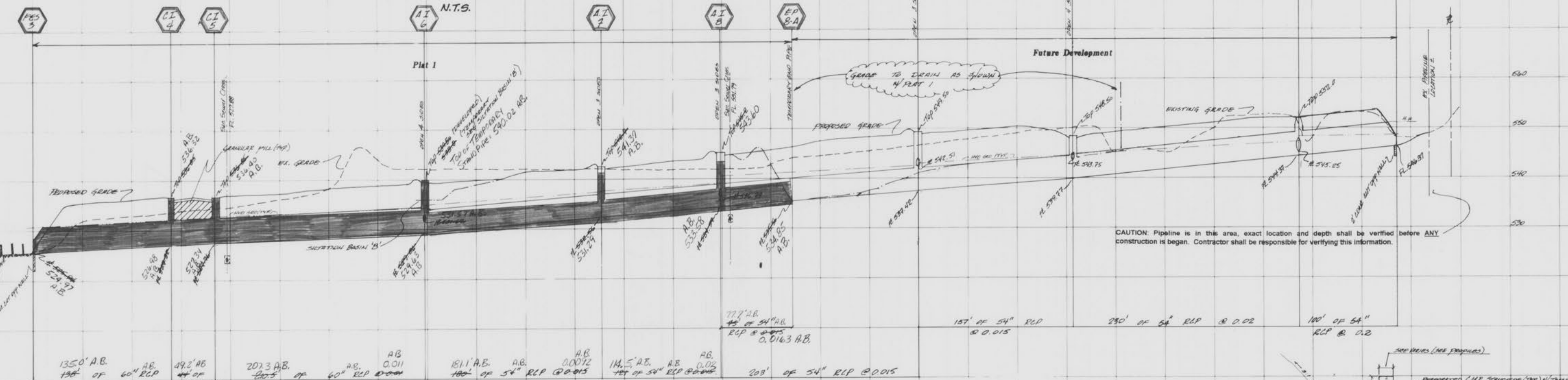
Siltation Basin "D"



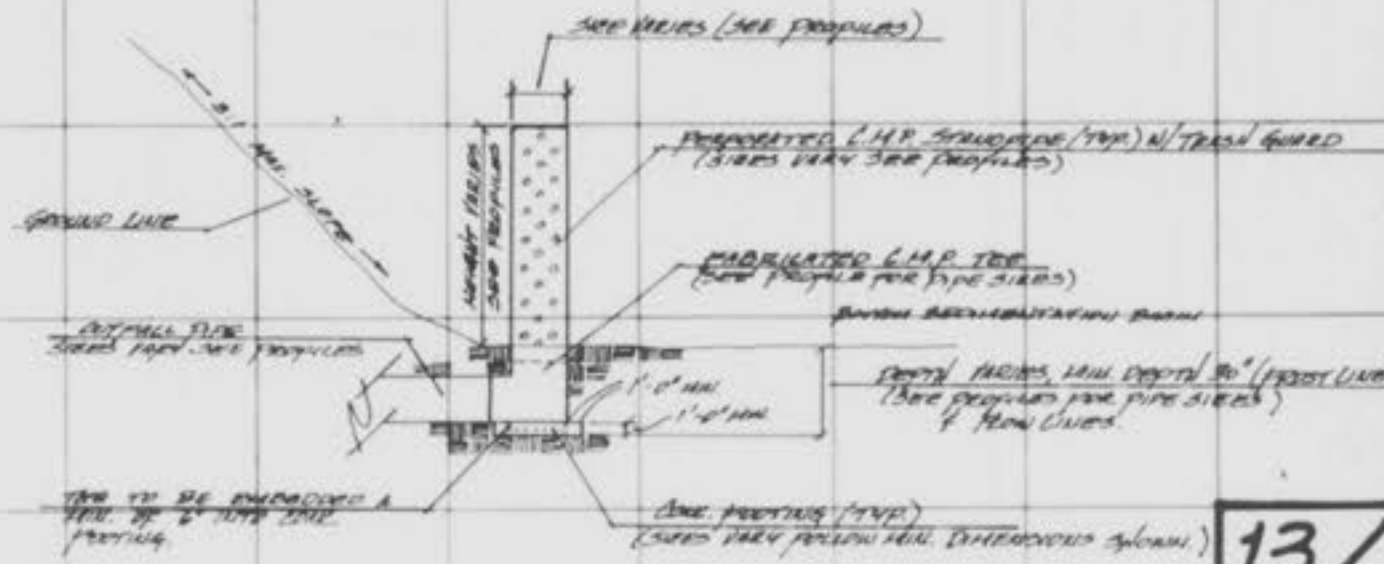
Siltation Basin "B"



CONCRETE COLLAR DETAIL N.T.S.



CAUTION: Pipeline is in this area, exact location and depth shall be verified before ANY construction is begun. Contractor shall be responsible for verifying this information.



Temporary Stand Pipe Detail (N.T.S.)

PLATE 3-FULL CROSS SECTION LINE & DOT  
NATIONAL PRINTFAST  
PRINTED IN U.S.A.

SANITARY & STORM AS-BUILTS  
(AS SHOWN ON PROFILES)

13/23

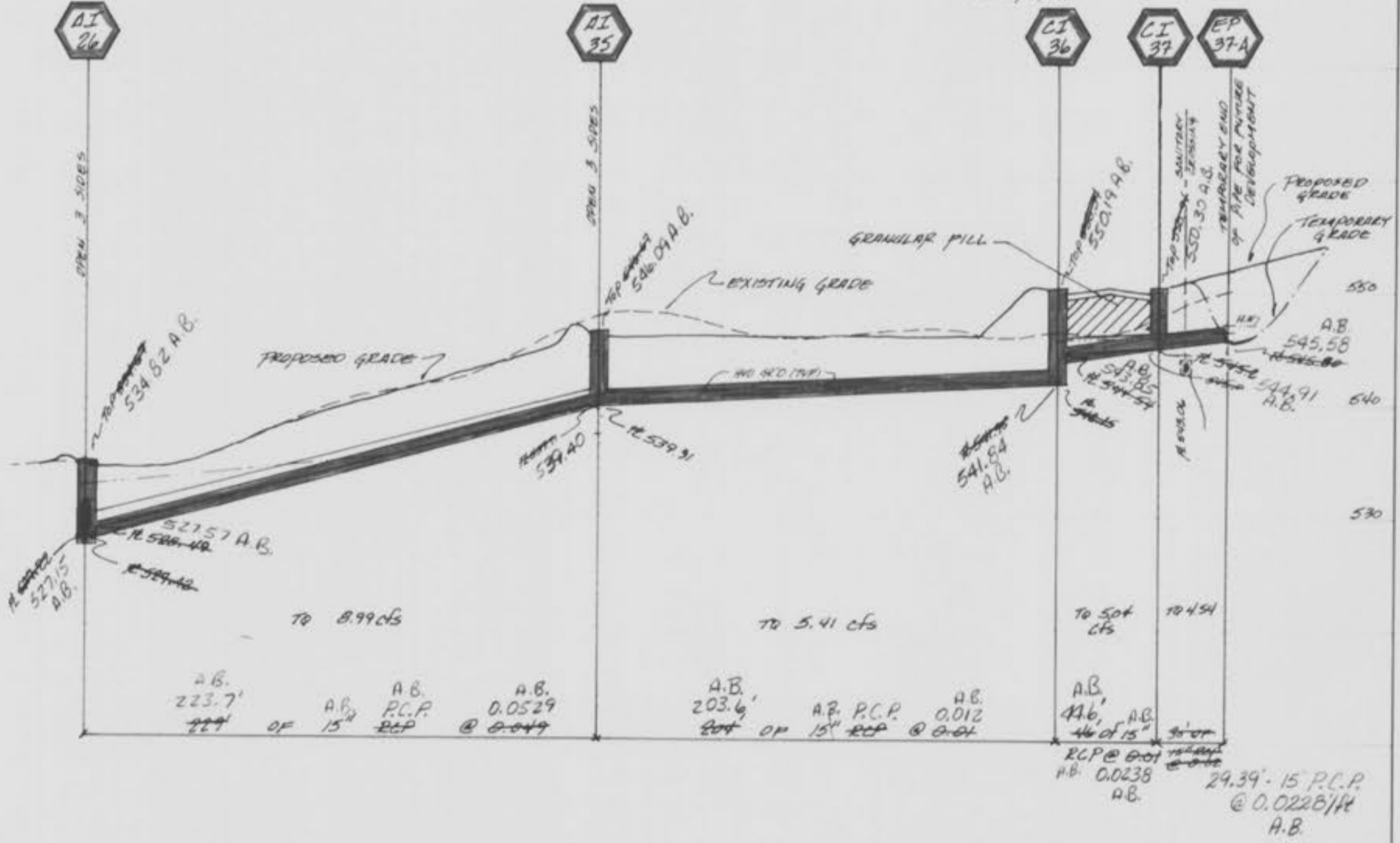
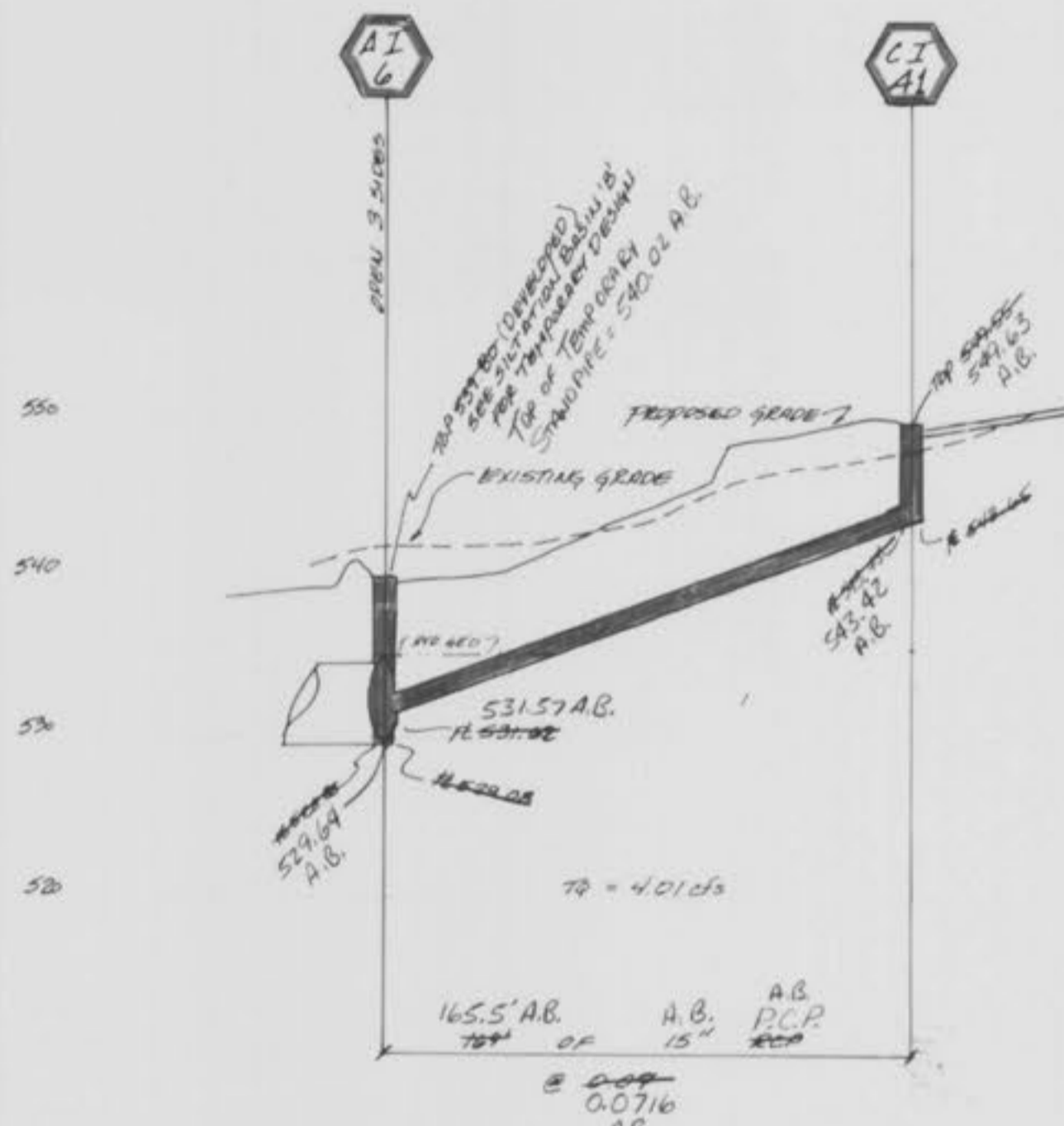
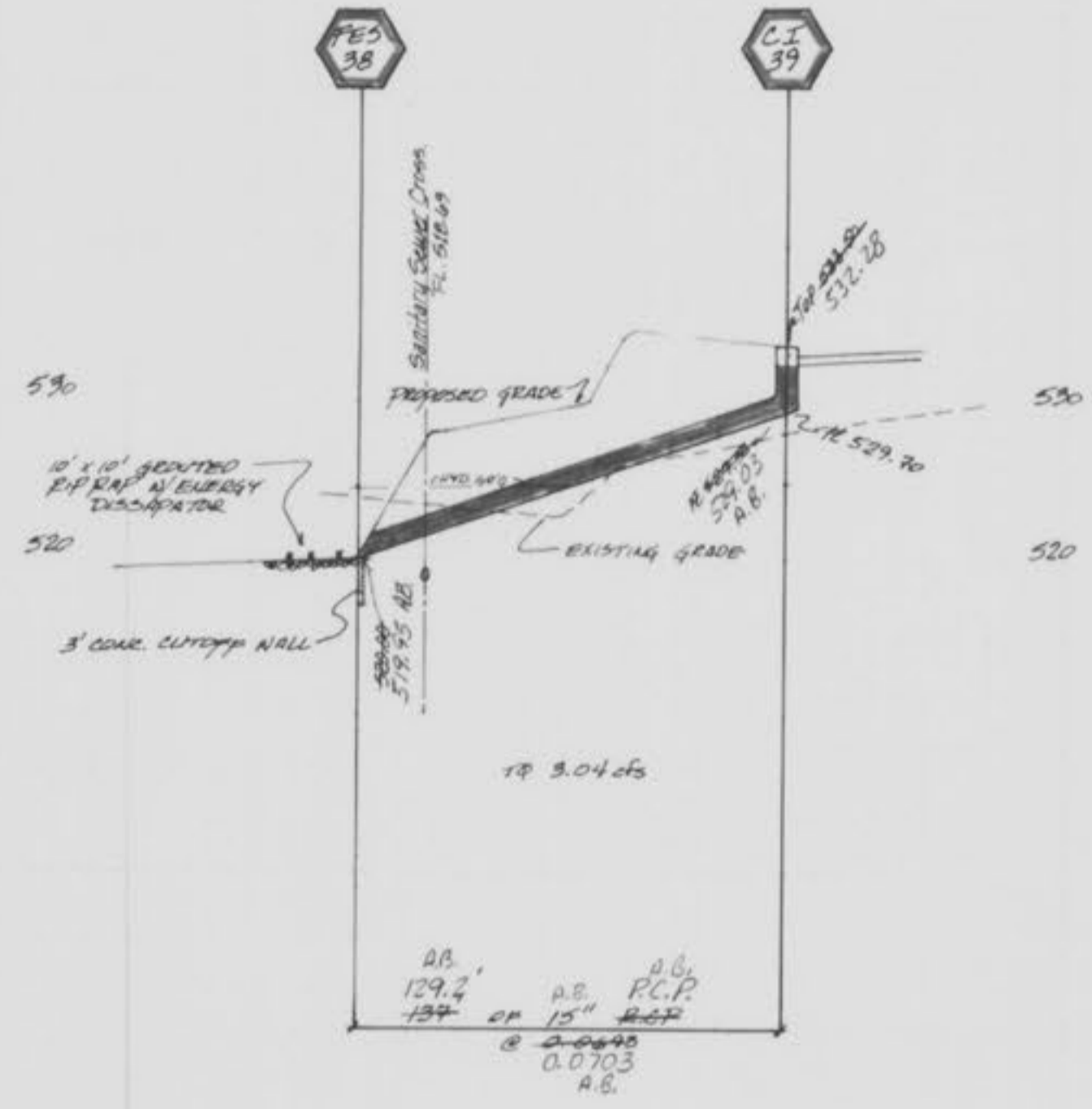
Cherrywood Parc  
As-Built 8/6



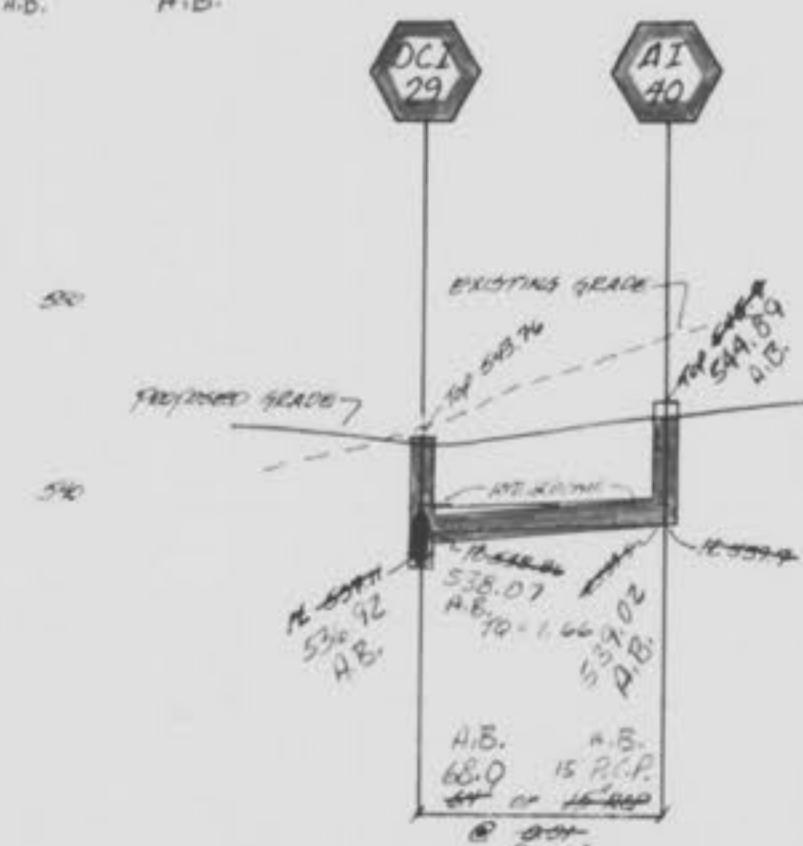
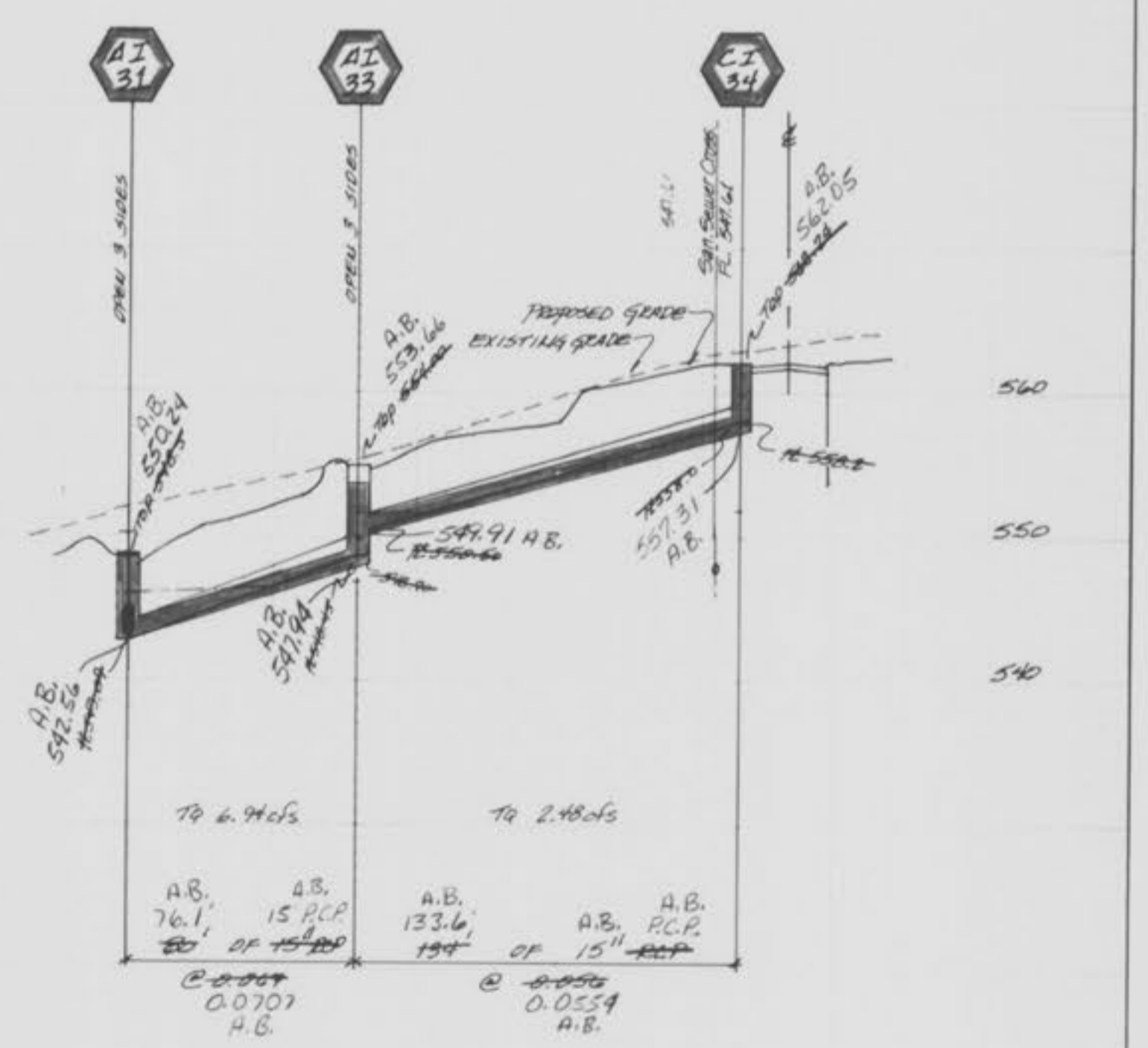
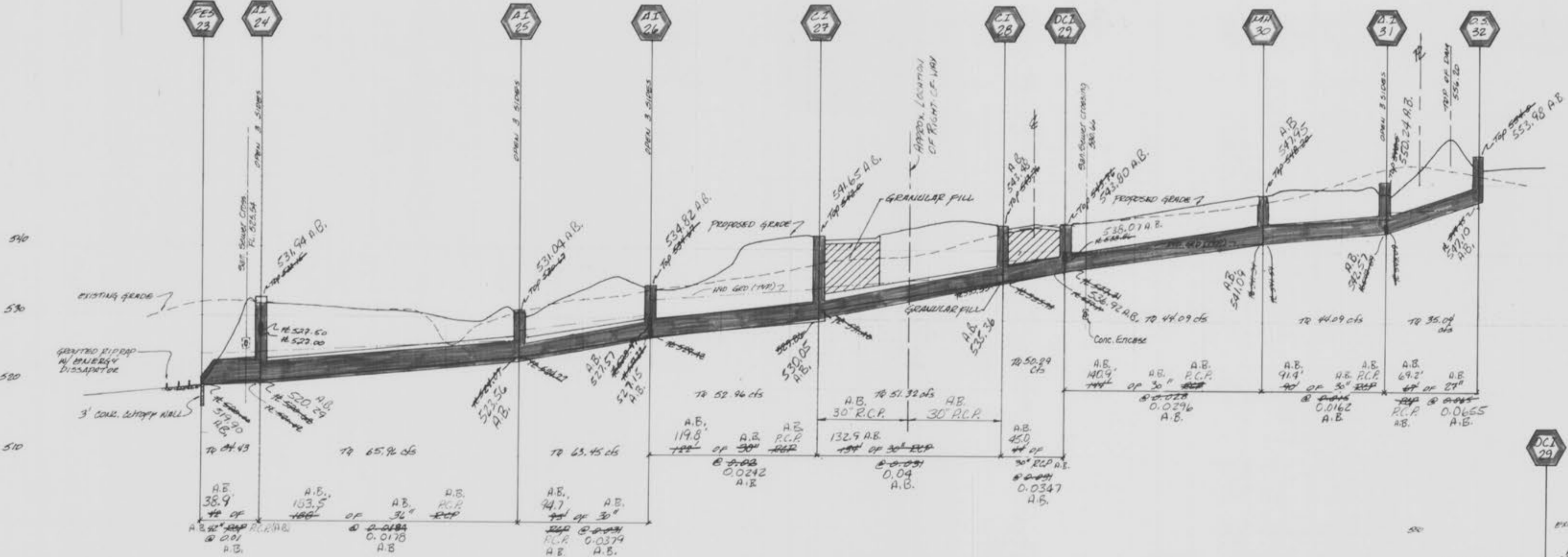
CHERRYWOOD PARC SUBD.  
STORM WATER SEWER PROFILES  
PLAT 1

REV. 10/6/94 REV. 10/2/94  
REV. 11/4/94

The use of High Density Polyethylene Corrugated Pipe with smooth interior wall will be permitted as an acceptable alternative to R.C.P. outside of Public R/W. Pipe shall meet A.S.T.M. D-2321 A.A.S.H.T.O. M-294-921. Concrete Flared End Sections & Inlet Structures shall be required.



NOTE!  
R.C.P. - High Density Polyethylene Corrugated Pipe



The use of High Density Polyethylene Corrugated Pipe with smooth interior wall will be permitted as an acceptable alternative to R.C.P. outside of Public R/W. Pipe shall meet A.S.T.M. D-2321 A.A.S.H.T.O. M-294-921. Concrete Flared End Sections & Inlet Structures shall be required.

DATE	
BY	
REVISED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREA	
AREA CHECKED	

DATE	
BY	
REVISED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREA	
AREA CHECKED	

Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification 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 any grading and/or construction improvements.