

HIGHWAY "K" COMMERCIAL AREA SANITARY SEWER EXTENSION

A TRACT OF LAND BEING PART OF U.S. SURVEY 55,
TOWNSHIP 47 NORTH, RANGE 3 EAST
ST. CHARLES COUNTY, MISSOURI

CITY OF O'FALLON GENERAL NOTES

- Gas, water and other underground utilities shall not conflict with the depth or horizontal locations of existing and proposed sanitary and storm sewers, including house laterals.
- 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.
- 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.
- Storm sewers 18" in diameter or smaller shall be ASTM C-14.
- Storm sewers 21" in diameter or larger shall be ASTM C-76, Class II.
- All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (ASTM C-76, Class III) unless noted otherwise in the plans.
- Corrugated metal pipe shall conform to the standard specifications for corrugated culvert pipe M-36, A.A.S.H.O. See plans for gauge.
- All filled places under buildings, proposed sanitary and storm sewer lines, and/or paved areas including trench backfills shall be compacted to 98% of maximum density as determined by the "A.A.S.H.O. T-99 Standard Proctor Test" (ASTM D-698) unless otherwise specified by the local governing authority specifications. All tests will be verified by a soils engineer.
- All earthen filled places within State, County, or City roads (highways) shall be compacted to 98% of maximum density as determined by the "Standard Proctor Test" A.A.S.H.O. T-99 (ASTM D-698) unless otherwise specified by local governing authority specifications. All tests will be verified by a soils engineer.
- All standard and sanitary trench backfills shall be water-jetted. Granular fill will be used under paved areas.
- 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.
- No area shall be cleared without the permission of the developer.
- All grades shall be within 0.2 feet (more or less) of those shown on the grading plan.
- No slope shall be greater than 3:1 and shall be either sodded or seeded and mulched.
- Hazard markers will consist of three (3) standard specification, "Manual on Uniform Traffic Control Devices", and of roadway markers mounted on two (2) pound "V" channel sign post. Each marker shall consist of an eighteen (18) inch diamond reflectorized red panel. The bottom of each panel shall be mounted a minimum of four (4) feet above the elevation of the pavement surface.
- All manhole and curb inlet 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.
- All standard street curb inlets to have front of inlet 2 feet behind curb.
- The minimum vertical distance from the low point of the basement to the rowline 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').
- Water lines, valves, sleeves, meters and etc., shall meet all specifications and installation requirements of the local governing authority.

- All cast iron pipe for water mains shall conform to A.W.W.A. specification C-106 and/or C-108. The cast iron fittings shall conform to A.W.W.A. specification C-110. All rubber gasket joints for water cast iron pressure pipe and fittings shall conform to A.W.W.A. specification C-111.
- All water hydrants and valves shall be cast iron and installed in accordance with plans and details.
- All sanitary and storm sewers shall meet all specifications and installation requirements of the local governing authority.
- All PVC water pipe shall have a minimum pressure rating of PR-200 or SDR-21.
- All PVC sanitary sewer pipe shall 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 the pipe.
- 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.
- All streets must meet the specifications and installation requirements of the City of O'Fallon.
- All sanitary manholes top shall be set 0.2' higher than the proposed ground except in pavement areas.
- All sanitary manholes shall have a 31 mil thick coat of coal tar pitch waterproofing.
- All sanitary service lines shall have a 6" diameter for Multi-family and a 4" diameter for single-family developments.
- Manhole frame and cover shall be Clay and Bailey No. 2008 or Neenah R-1736 or Deeter 1315 or approved equal.
- A drop of 0.2 feet is required through each sanitary manhole.
- The City of O'Fallon shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspection.
- Brick shall not be used on manholes.
- Sewer contractor shall maintain 24" vertical separation between all storm sewers and the sludge force main. Contractor shall be responsible for verifying separation prior to storm sewer installation.
- Waterproofing: Waterproofing will be required on the exterior of all manholes. The bitumen shall consist of two coats of asphalt, coal-tar pitch, or a coating meeting American Society for Testing and Materials (ASTM) D-41. Asphalt shall conform to the requirements of ASTM D-449. Coal-tar pitch shall conform to the requirements of ASTM D-450. Coating shall be 31 mils thickness.
- All work with St. Charles County Right-Of-Way shall be per Class "A" Standards.

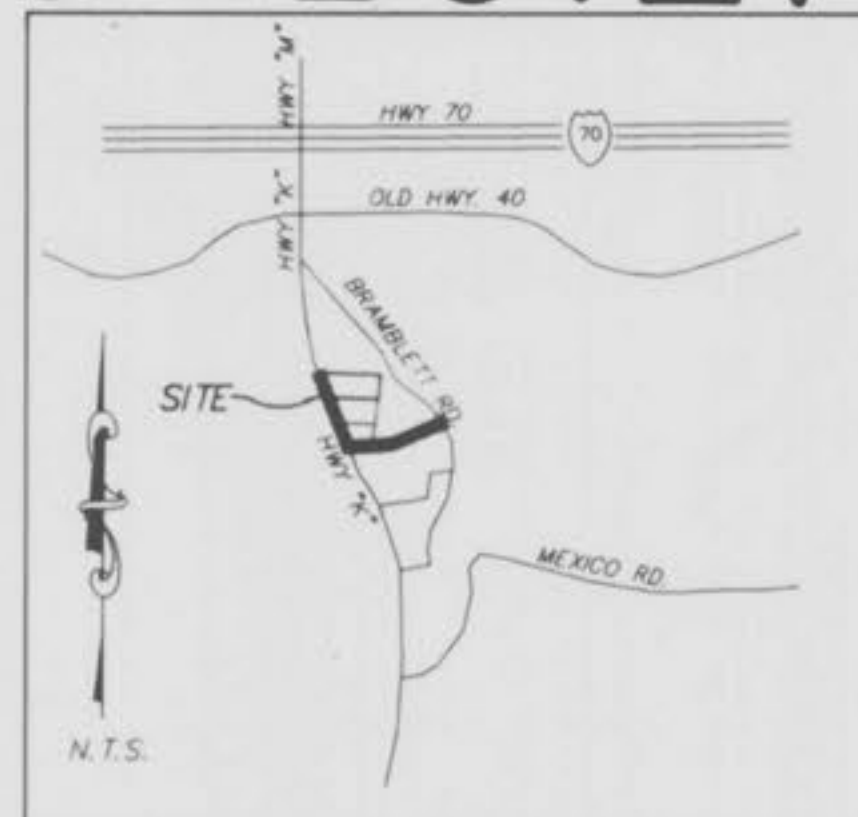
This is to certify to THE CITY OF O'FALLON that these "As-Built" SANITARY SEWER plans are based on actual field surveys conducted during 1995 and the results are shown here on.

by Pickett Ray & Silver

Delmar F. Vincent
MO R.L.S. No 1869

8/3/95
Date

LOCATION MAP "AS-BUILTS"



BENCH MARKS

- BM #2-83 Highway plans for relocation of Highway "K" square on concrete light standard base 97 feet right at Station 12+43 New Highway "K".
Elev. 574.04
- TBM #3-83 80d Spike in base of power pole near northeast corner of Thoele Property at Bramblett Road.
Elev. 567.41

UTILITY COMPANIES

- T.C.I. Coble Company
4160 Old Mill Parkway
St. Peters, Missouri 63376
Attn: Mr. Rick Madala
Phone: (314) 441-7737
- G.T.E. Telephone Company
1000 G.T.E. Drive
Building "E"
Wentzville, Missouri 63385
Attn: Mr. Larry Harris
Phone: (314) 639-3928
- Union Electric Company
200 Calhoun Road
Wentzville, Missouri 63385
Attn: Mr. Ralph Crank
Phone: (314) 327-6203
- St. Charles Gas Corporation
#1 Westbury Square
Building "D"
St. Charles, Missouri 63301
Attn: Mr. Gene Bohler
Phone: (314) 946-9937
- Advance Water Resources (Sanitary Sewer)
205 East 2nd Street
O'Fallon, MO 63366
Attn: Gary Johnson
Phone: (314) 281-2858
- O'Fallon Fire Protection
119 East Elm Street
O'Fallon, Missouri 63366
Attn: Chief David House
Phone: (314) 272-3493
- City of O'Fallon (Zoning) (Storm Sewer) (Water)
138 South Main
O'Fallon, Missouri 63366
Phone: (314) 240-2000
- Missouri State Highway Department (Entrance Permits)
1590 Woodlake Dr.
Chesterfield, Missouri 63017
Attn: Bill Angel
Phone: (314) 540-4100

DRAWING INDEX

Sheet	Description
1	COVER SHEET
2	PLAN AND PROFILE
3	PLAN AND PROFILE
4	PLAN AND PROFILE
5	SEWER DETAILS

LEGEND

Sanitary Sewer (Proposed)	Sanitary Structure	R.C.P. Reinforced Concrete Pipe
Sanitary Sewer (Existing)	Storm Structure	C.M.P. Corrugated Metal Pipe
Storm Sewer (Proposed)	Test Hole	C.I.P. Cast Iron Pipe
Storm Sewer (Existing)	Power Pole	P.V.C. Polyvinyl Chloride
Water Line & Size	Light Standard	V.C.P. Vitrified Clay Pipe
Existing water line	Double Water Meter Setting	
Tee & Valve	Single Water Meter Setting	C.O. Clean Out
Hydrant	C.I. Curb Inlet	V.T. Vent Trap
Cap	S.C.I. Skewed Curb Inlet	T.B.R. To Be Removed
18 Lot or Building Number	D.C.I. Double Curb Inlet	T.B.R.R. To Be Removed & Relocated
Existing Fence Line	G.I. Grate Inlet	T.B.P. To Be Protected
Existing Tree Line	A.I. Area Inlet	T.B.A. To Be Abandoned
Street Sign	D.A.I. Double Area Inlet	B.C. Base Of Curb
Existing Contour	C.C. Concrete Collar	T.C. Top Of Curb
Proposed Contour	F.E. Flared End Section	T.W. Top Of Wall
Grouted Rip-Rap	E.P. End Pipe	B.W. Base Of Wall
End of Lateral	E.D. Energy Dissipator	(TYP) Typical
Asphalt Pavement	M.H. Manhole	U.N.O. Unless Noted Otherwise
Concrete Pavement	C.P. Concrete Pipe	U.I.P. Use in Place

PICKETT RAY & SILVER

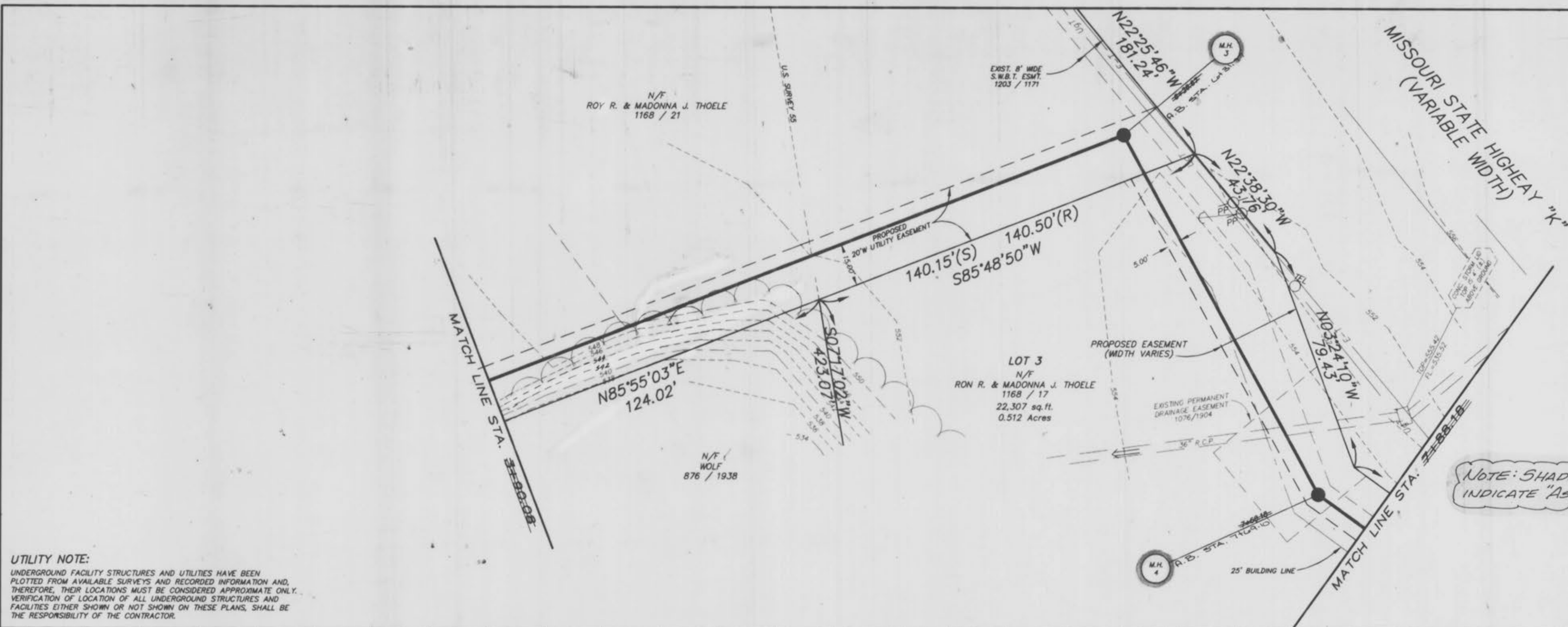
Civil Engineers
Planners
Land Surveyors

333 Mid Rivers Mall Dr.
St. Peters, MO 63376
397-1211 FAX 397-1104

Celebrating 25 Years of Service

ENGINEERS AUTHENTICATION		DEVELOPER	
<p>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 specifications include reference to the date stated hereunder.</p> <p>PICKETT, RAY & SILVER, INC.</p> <p>HAROLD J. BARTCH REGISTERED PROFESSIONAL ENGINEER NUMBER E-17751</p>		<p>PREPARED FOR: THOELE OIL INC. 1703 N. FORTH STREET ST. CHARLES, MO 63301 (314) 774-1617 CONTACT: MR. ROY THOELE</p>	
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<p>DRAWN R.D.W. DATE 11-16-94 CHECKED R.J.T. DATE 11-16-94</p>	<p>FIELD BOOK 376 PROJECT # 87-059 JOB ORDER # 32361</p>	<p>1</p>	<p>5</p>

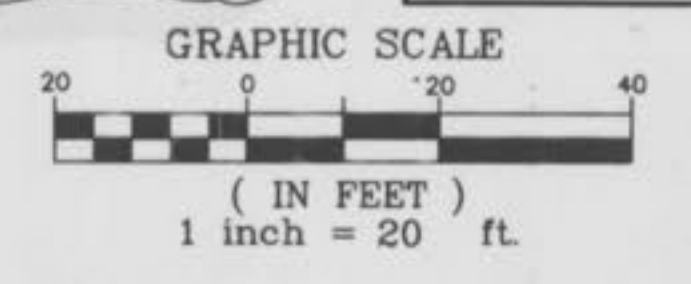
"AS-BUILTS"



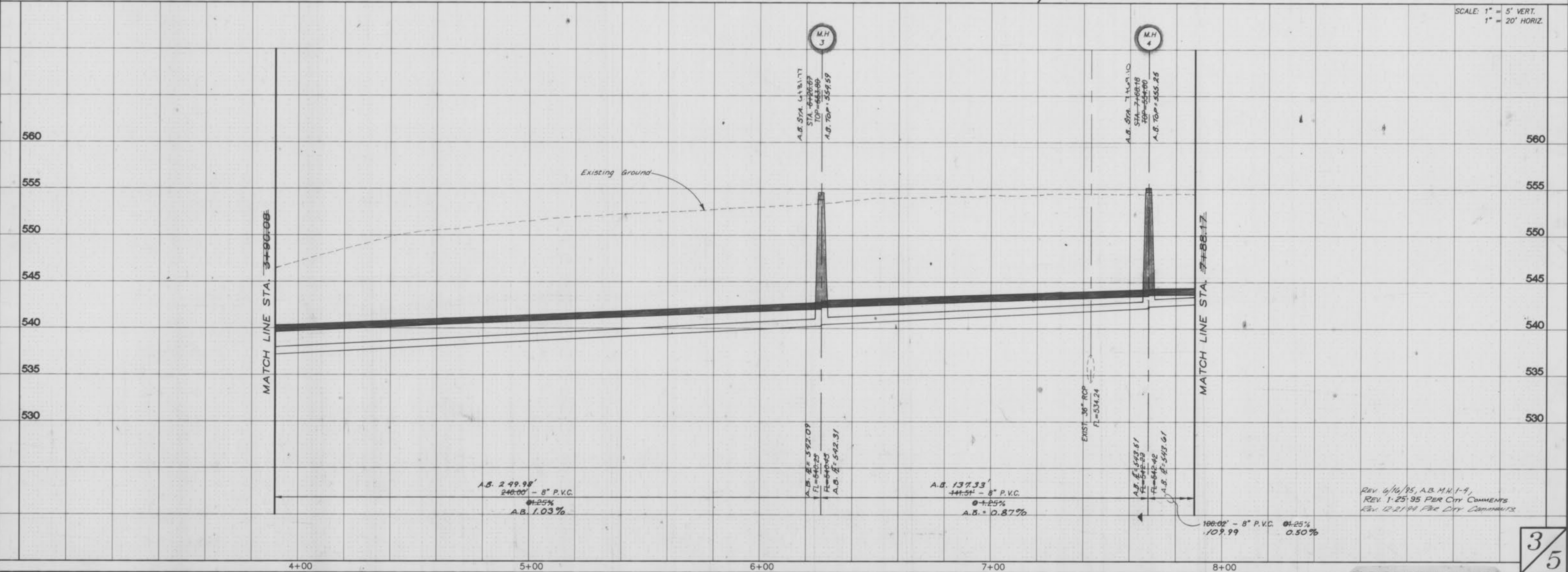
ENGINEERS AUTHENTICATION
The responsibility for professional engineering liability on this project is hereby limited to the set of plans authorized by the seal, signature and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in the project and specifically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

HAROLD BARTON
REGISTERED PROFESSIONAL ENGINEER
NUMBER E-17751
11/1/94

NOTE: SHADED "BALLOONS" INDICATE "AS-BUILT" STRUCTURES.



UTILITY NOTE:
UNDERGROUND FACILITY STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDED INFORMATION AND, THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. VERIFICATION OF LOCATION OF ALL UNDERGROUND STRUCTURES AND FACILITIES EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



SCALE: 1" = 5' VERT.
1" = 20' HORIZ.

REV. 6/16/95, A.B. M.H. 1-4,
REV. 1-25-95 PER CITY COMMENTS
REV. 12-21-94 PER CITY COMMENTS

