

	LPHA ENGINEERING INC. 1750 SW. SKYLINE BLVD. PORTLAND, OREGON 97221	DESIGNED WIH.	DATE	PROJECT
		DRAWN WIH	SCALE AS SHOWN	
		CHECK TLA.	PROJECT Nº 77-385	
	Ph ( \$03 ) 292-9774	APPROVED		

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SANITARY SEWER

- 1. All sanitary sever pipe shall be concrete and shall conform to ASTM C-14 for extra strength concrete pipe. Manholes shall be precast concrete and shall conform to ASTM C-478. Frames and covers shall be cast iron and shall conform to ASTM A-48, class 30.
- 2. Installation of sanitary sewers shall be according to standard construction methods. All backfill shall be as shown on the detail sheet. 3. Contractor to install 6" laterals to each lot.

WATER LINES

- 1. All water line construction and all materials shall meet the requirements of the City of West Linn, Oregon, State Plumbing Specialty Code and the Oregon State Health Division.
- 2. Material Specifications for water mains: a) All pipe, fittings and other appurtenances shall be free of structural defects and shall be designed for a minimum working pressure of 150 P.S.I. (200 P.S.I., SDR 21 for plastic pipe).
  - b) Ductile iron pipe shall conform to AWWA C-150-76, Class 52, push-on joint. All fittings shall be furnished with mechanical joints con-forming to ANSI A21.11. All fittings shall be class 250.
  - c) P.V.C. plastic water pipe shall conform to ASTM D-2241, 200 P.S.I. (SDR-21) with rubber rings conforming to ASTM D-1869.
  - d) Fire hydrants shall conform to AWWA C-502 and shall be approved by the City of West Linn.
- 3. All pipe shall have a 30" minimum cover measured from finish grade. All tees, bends, elbows and changes in direction of 11% or greater shall be securely blocked using 3,000 psi concrete poured against undisturbed ground as shown on the detail sheet.
- 4. All backfill in public right-of-way shall be approved granular material.
- 5. Upon completion of installation of the water system, all lines shall be flushed and disinfected in conformance with Health Division Guidelines. 6. Water line construction shall comply with regulations of the Oregon State Board of Health and the Department of Environmental Quality regarding the location and separation of water lines and sanitary sewer lines.

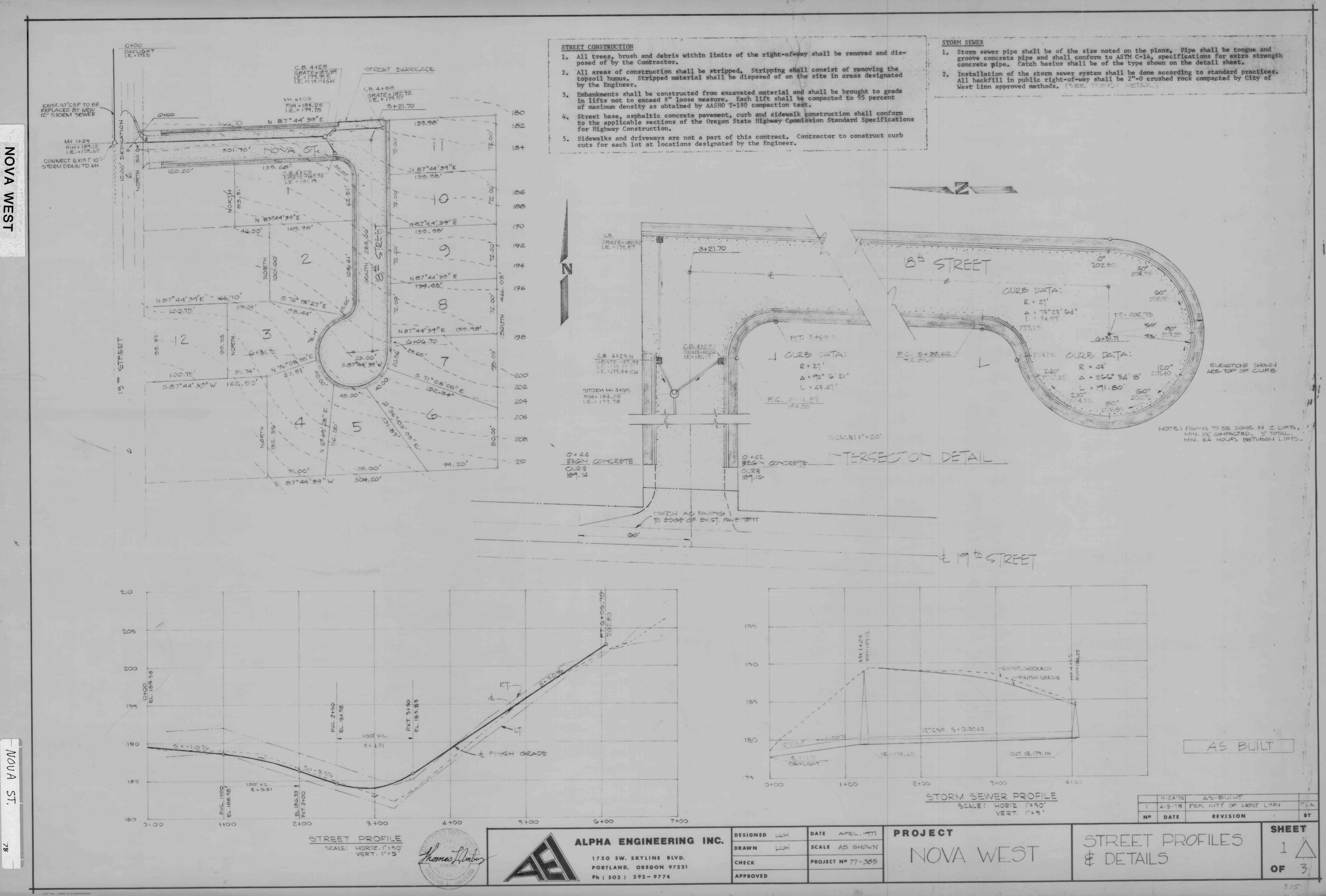
AS BUIL AS BUIL 11-24 75 4.5.78 PER CITY OF WEST LINN REVISION DATE SHEET SEWER & WATER PLAN Z SEWER PROFILE VA WEST OF 385

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