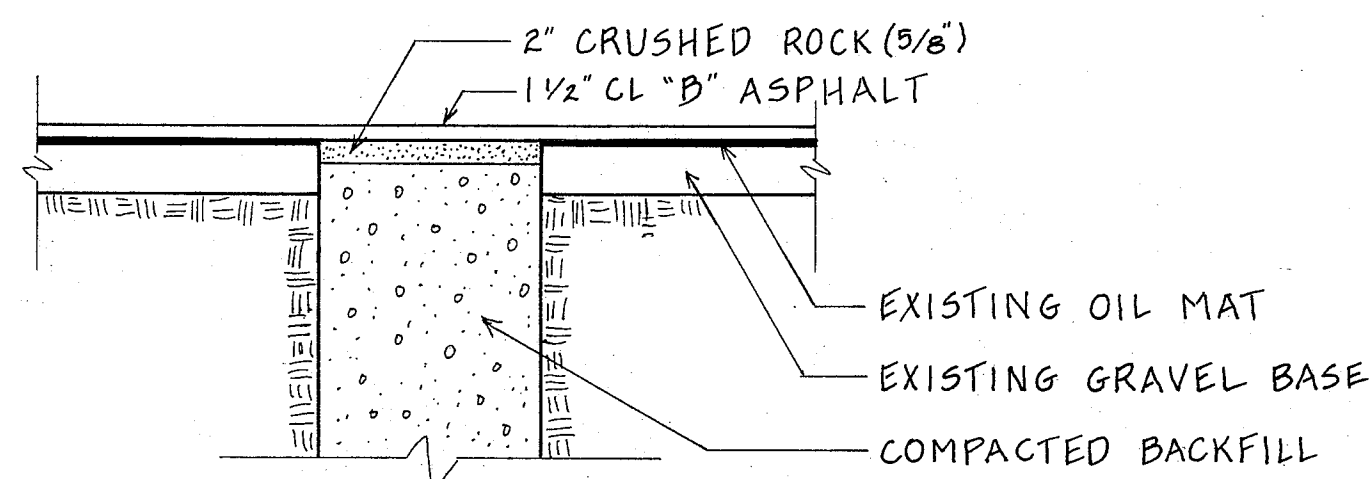
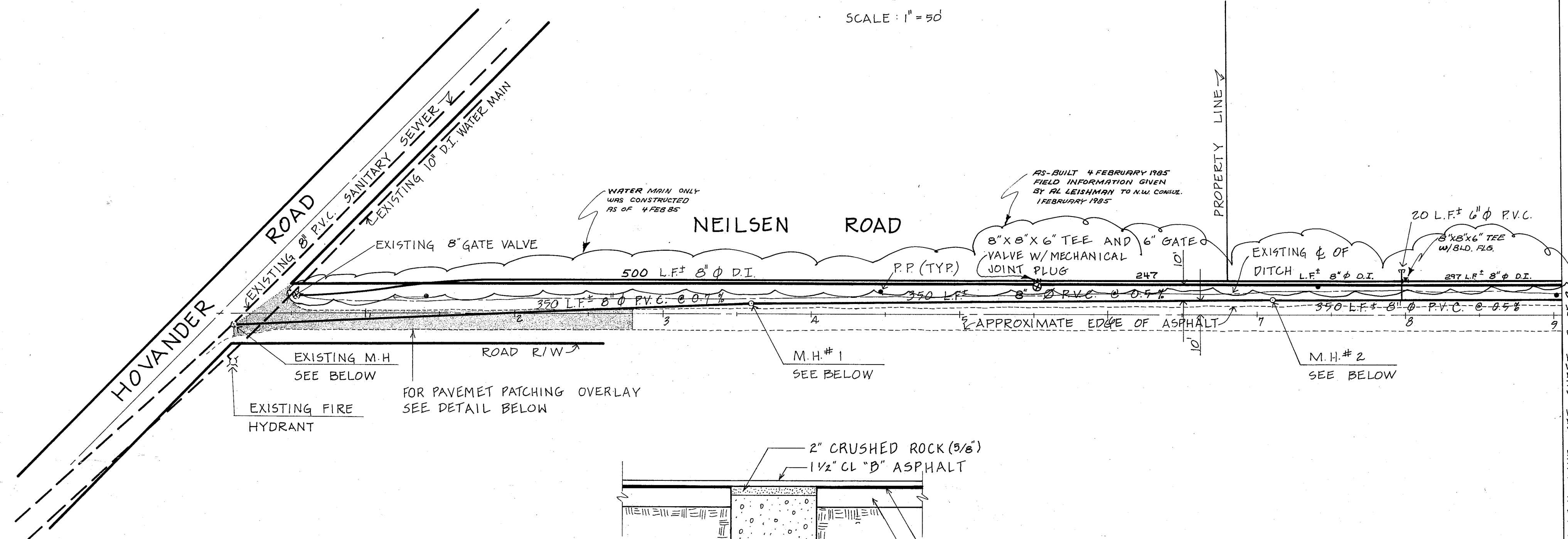


SCALE: 1" = 50'



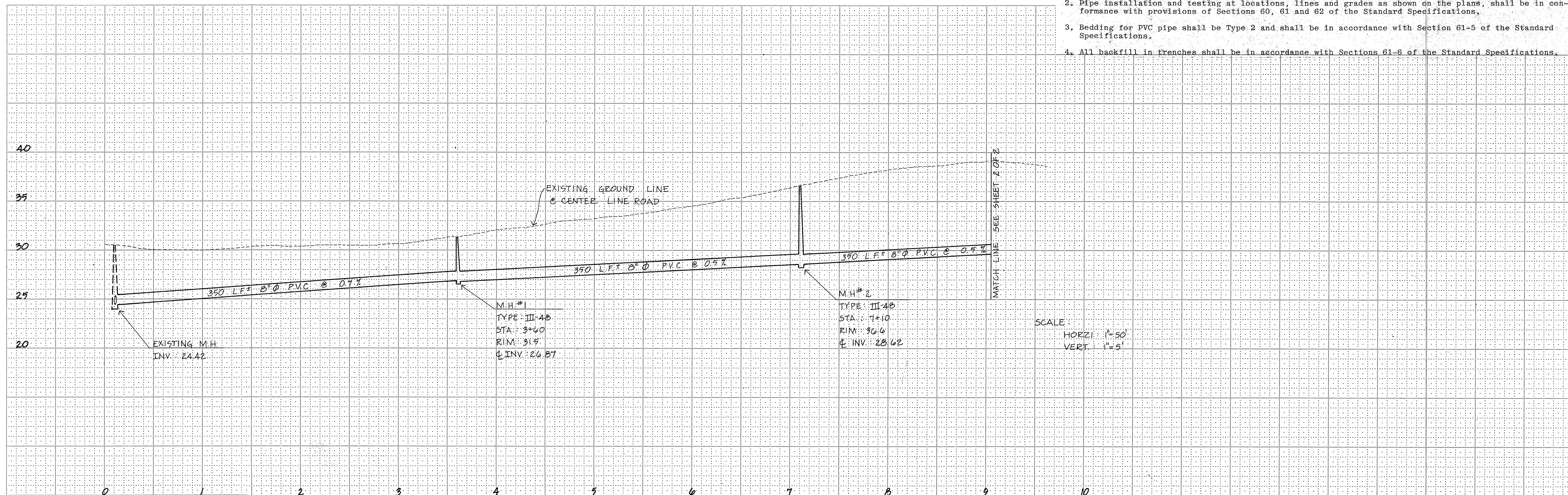
SECTION OF PAVEMENT PATCH

NTS

- GENERAL CONDITIONS**
1. All materials, workmanship and testing shall conform to A.P.W.A. 1981 Edition Specifications, unless otherwise noted within these plans.
 2. The contractor must assume the risk of meeting quicksand, hardpan, boulders, clay, rubbish, existing utility lines, water table and other unforeseen obstacles.
 3. The vertical datum is a U.S.G.S. bench mark (brass disk) located at the southeast corner of the main street bridge. Elevation = 34.90.
 4. All pipe grades and inverts are computed from centerline of manhole to centerline of manhole.
 5. A two-year maintenance bond in an amount to be determined by the City (but not less than 25% of the project cost) shall be submitted prior to acceptance of the project.
 6. The sanitary sewer shall be laid a minimum of at least 10 feet, horizontally, from any existing or proposed water main.
 7. All locations of existing utilities shown are approximate. It shall be the responsibility of the contractor to verify the true and correct location of them.
 8. The restoration and clean-up of the water and sewer main construction shall conform to the applicable portions of section 57 of the Standard Specifications. Payment shall be considered as incidental to the construction of the project and all costs thereof shall be included by the contractor in other items of work.
 9. The contractor shall obtain a revocable encroachment permit issued by the City of Ferndale before construction begins.
 10. The contractor shall obtain and follow the City of Ferndale's standards and requirements for all utility cuts within the roadway section.
 11. A 1 1/2" CLASS "B" ASPHALT OVERLAY SHALL BE INSTALLED FROM THE BEGINNING OF THE JOB TO APPROXIMATELY STATION 2+80. THE CONSTRUCTION MATERIALS AND METHOD SHALL MEET THE REQUIREMENTS OF SECTION 34 OF THE A.P.W.A. SPECIFICATIONS.

- GRAVITY SEWER**
1. Non-reinforced concrete sewer pipe with bell and spigot end shall conform to ASTM Designation C-14 Extra Strength. All pipe shall be coupled with a 'Standard O-Ring' type of rubber gasket.
 2. PVC Pipe and fitting shall conform to ASTM Specifications D-3033 latest issue: "Type PSP Poly (vinyl-chloride) (PVC) Sewer Pipe and Fitting". All pipe and fittings shall be made from PVC compounds as defined and described in ASTM D1784. Joints made with pipe and fittings or with belled end pipe shall have elastomeric gasket joints.
 3. Fittings, unless otherwise indicated, for various pipe shall be the same as the pipe material.
 4. Manhole installation and testing shall conform to the requirements of Section 63 of the Standard Specifications and shall be constructed at such locations and to such dimensions as shown on plans and standard detail. Manholes, Type I-48 shall be used for depths greater than 8'-0".

- CONSTRUCTION SPECIFICATIONS**
1. Pipe joints shall be made in strict conformance with the manufacturers recommendations and directions.
 2. Pipe installation and testing at locations, lines and grades as shown on the plans, shall be in conformance with provisions of Sections 60, 61 and 62 of the Standard Specifications.
 3. Bedding for PVC pipe shall be Type 2 and shall be in accordance with Section 61-5 of the Standard Specifications.
 4. All backfill in trenches shall be in accordance with Sections 61-6 of the Standard Specifications.



NORTHWEST CONSULTANTS
CIVIL & STRUCTURAL ENGINEERING
1401 ASTOR, BELLINGHAM, WA. 1206/676-9058

AL LEISHMAN
5490 NEILSEN RD.
FERNDAL, WA. 98248

SCALE: SEE ABOVE
DATE: 7/5/84
DRAWN BY: J.R.F.
CHECKED BY: E.F. & J.W.
JOB NO: 84-1232

REVISIONS
MARK DESCRIPTION DATE BY
1. 8/1/84 84-1232 J.R.F.
2. 8/1/84 84-1232 J.R.F.

NEILSEN RD. IMPROVEMENTS

**WATER DISTRIBUTION SYSTEM &
SANITARY SEWER PLAN & PROFILE**



SHEET
1
OF
2

JOB # 84-1232

SCALE: 1" = 50'

1. Water mains, service lines, valves, hydrants and fittings shall be constructed as shown on the plans as required by the State Department of Public Health, the City of Ferndale, and specified herein.
2. Water pipe and fittings shall be ductile iron pipe Class 50 and shall comply with Section 72-3 of the Standard Specifications.
3. Buried gate valves shall meet the material and installation requirements as outlined in Section 75 of the Standard Specifications. They shall have a non-rising stem, shall open counterclockwise and sufficient wrenches to operate all valves shall be provided.
4. All gate valves adjacent to a tee or cross shall be flange connected.
5. Fire hydrants shall meet the material and installation requirements as outlined in Section 77 of the Standard Specifications. The hydrant shall be installed so that the direction of the pumper connection faces the roadway. The fire hydrant shall be a Iowa F&O or approved equal.
6. Valve boxes shall be cast iron, 2-piece screw type extension, equal to Atlas Foundry Company or Olympi Foundry Company and shall conform to Section 75 and Section 76 of the Standard Specifications.
7. All backfill in trenches shall meet the material and compaction requirements of Section 73 of the Standard Specifications or as approved by the Public Works Department.
8. The pipe shall be laid to the alignment and grades furnished by the engineer. Where the alignment or grade requires deflections in excess of recommended limits with standard pipe lengths, a sufficient number of shorter lengths shall be used.
9. Trench depth shall be as required to provide a minimum of 36" cover from finished grade.
10. No pipe shall be covered until it has been inspected and permission to backfill has been obtained. Backfilling and surface restoration shall follow closely the installation and the testing of the pipe.
11. Concrete blocking shall meet the requirements of Section 74-2.13 of the Standard Specifications.
12. Prior to acceptance of the work, all sections of pipe shall be subjected to a hydrostatic test as per Section 74-2.11 of the Standard Specifications.
13. Sterilization of water mains shall be accomplished by the contractor in accordance with the requirements of the State Health Department, the City of Ferndale and in a manner satisfactory to the engineer and as outlined in Section 74-2.12 of the Standard Specifications.
14. The water services shall meet all the material and workmanship requirements of the City of Ferndale.

