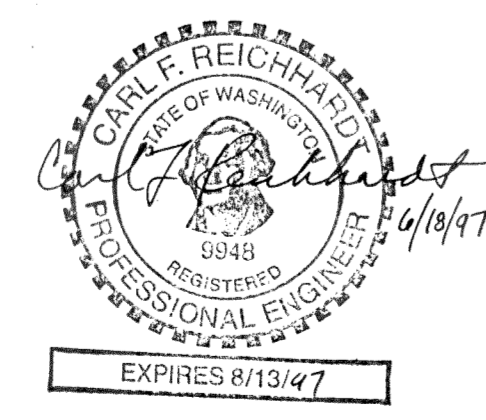
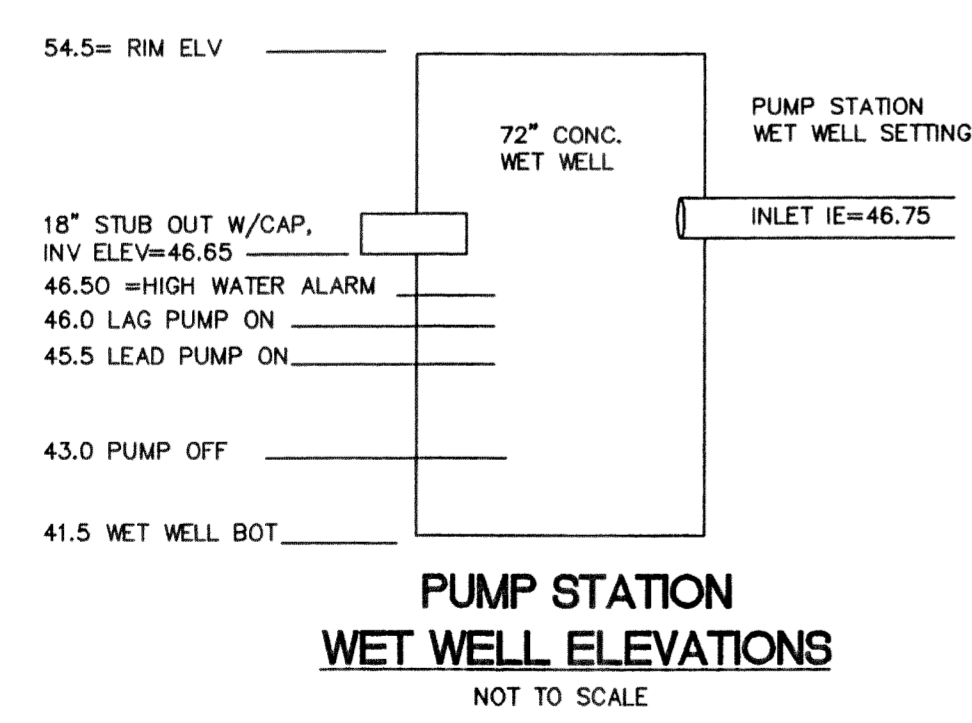
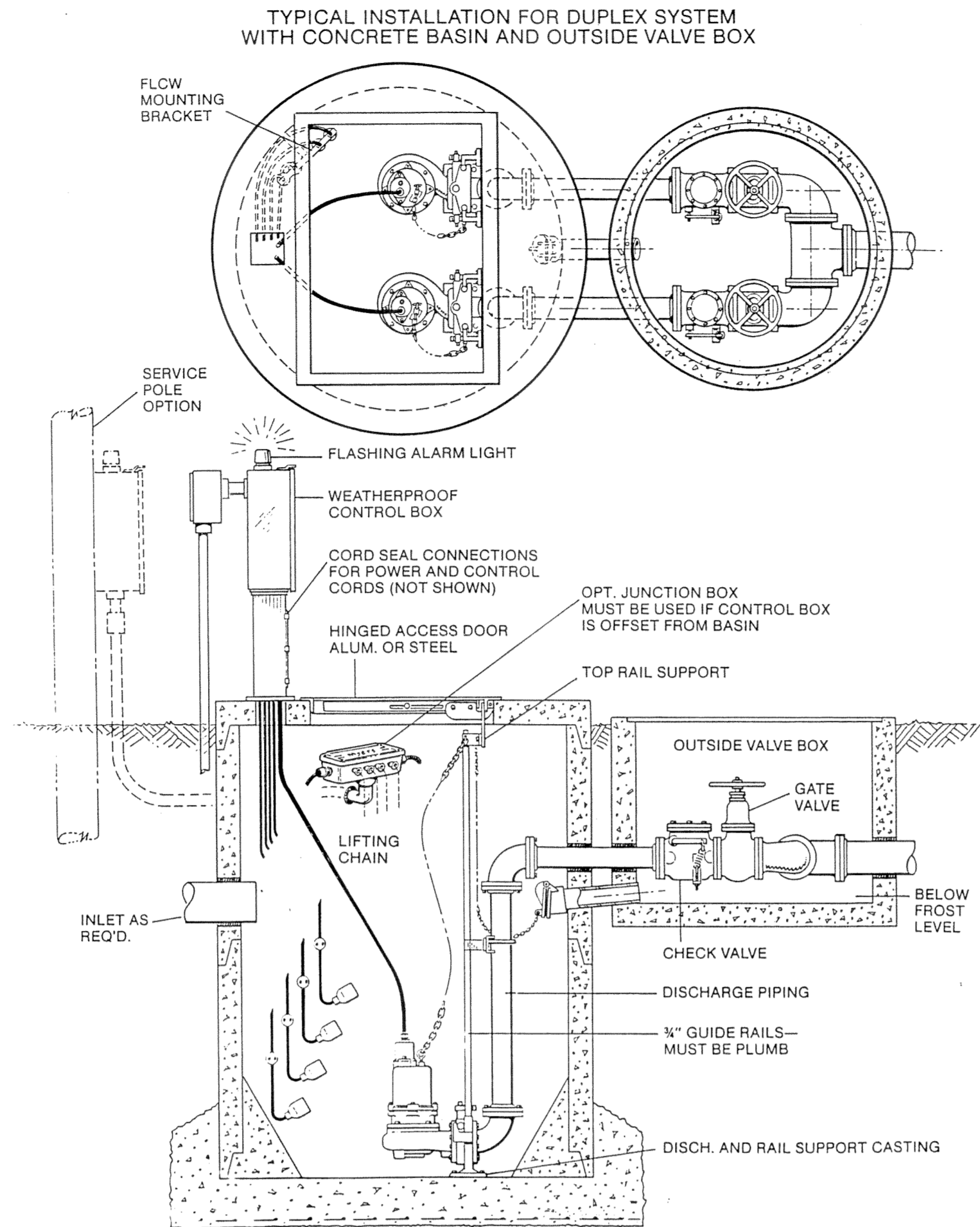


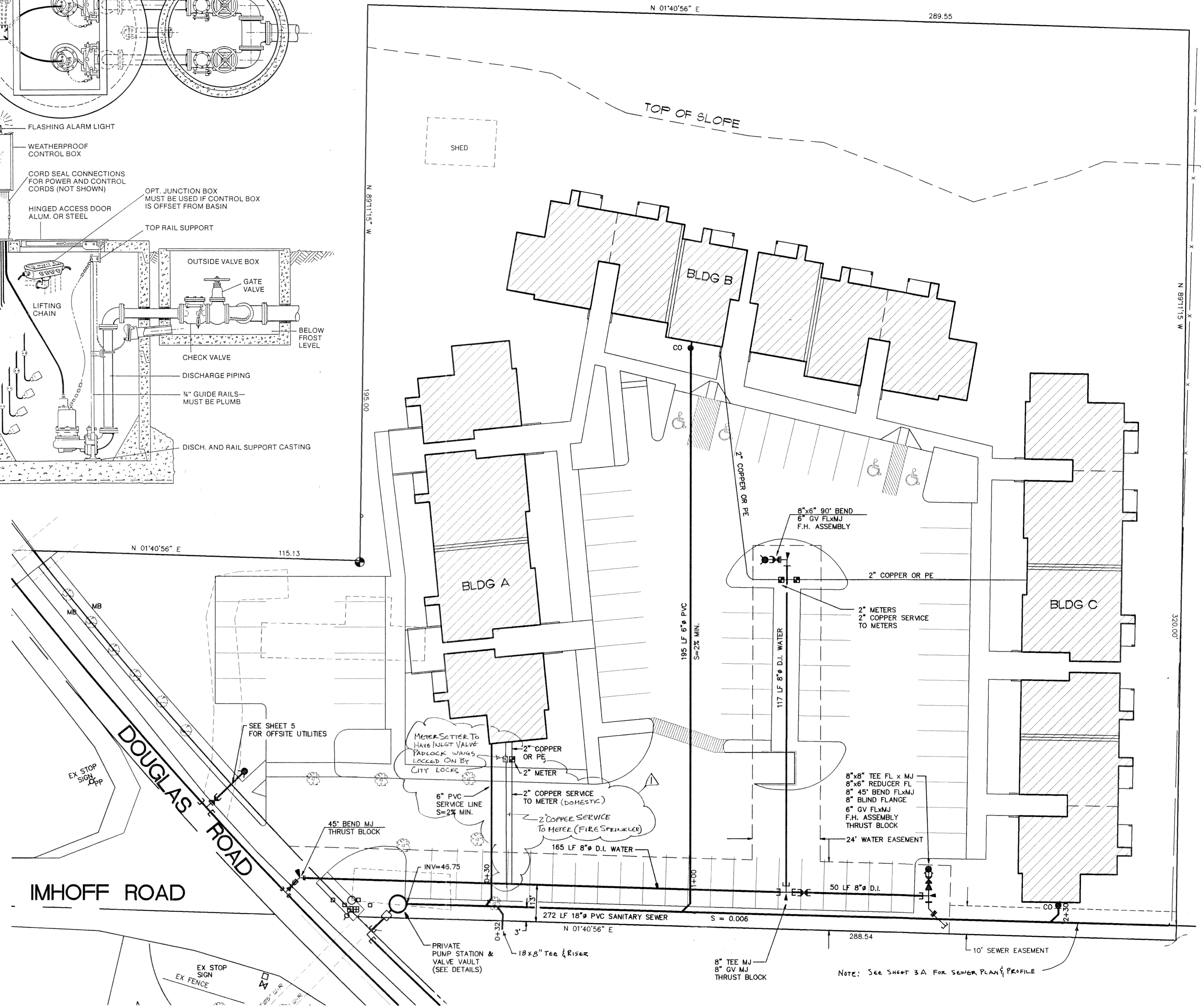
SPECIFICATIONS FOR UTILITY WORK

1. Standards.
 - a. Standard Specifications shall be the "1996 Standard Specifications for Road, Bridge and Municipal Construction", By WSDOT and APWA. Standard Plans shall be the "Standard Plans for Road, Bridge and Municipal Construction", By WSDOT and APWA.
 - b. All work and materials for site development shall be in accordance with the Standard Specifications and the City of Ferndale Development Standards.
2. Water Service.
 - a. Water service to the buildings shall be 2" constructed in accordance with City of Ferndale Standards, Section 705-C and Drawing W-5. Meters shall be provided by the City and paid for by the Contractor.
 - b. Fire Hydrants shall be installed in accordance with City of Ferndale Drawing W-1. Hydrants shall include a Storz adapter.
 - c. Water mains shall be Ductile Iron, and shall be installed, inspected and tested in accordance with City of Ferndale Standards, Section 701B.
 - d. Sprinkler connections shall be designed by the installer, and shall be approved by the City of Ferndale.
3. Sanitary Sewer System.
 - a. Sanitary sewers shall be installed, inspected and tested in accordance with City of Ferndale Standards, Section 706. Pipe and fittings for sanitary sewers shall be PVC, ASTM D3034-SDR 35. Pipe shall be bedded in pea gravel or native sand if approved by the engineer.
 - b. Manholes shall conform to City of Ferndale Drawings SS-2 through SS-4 and SS-9. Cleanouts shall conform to Drawing SS-5.
 - c. Force main from the pump station to the existing City sewer system shall be 4" PVC, Schedule 40.
4. Private Sewer Pump Station
 - a. Pump Station components shall be explosion proof, supplied as a system by one manufacturer, and shall be installed in a concrete wet well. Valves shall be installed in a separate vault located adjacent to the pump station. Pump station shall be provided with the following:
 - 1) Duplex non-clog submersible pumps, each capable of 80 gpm @ 15' TDH, capable of passing a 3" solid. Discharge flange shall be 4" standard. Pumps shall be Meyers 4VX, Barnes 4XSE or equivalent. Motors shall be three phase, matched with the pump for maximum efficiency.
 - 2) Electrical equipment shall be supplied by the pump manufacturer and shall be UL approved and in accordance with the National Electric Code. Junction box connecting pump and control cords shall be explosion proof and have a sealed removable aluminum cover. Panel shall be NEMA3 for outdoor use and shall be fitted with a hasp and padlock. Level controls shall be ball floats with sealed mercury tube switches or pressure sensor of a type approved by the engineer. Duplex control panel shall include a main circuit breaker for each pump, magnetic contactor with quick trip ambient compensated overload block, main circuit breaker for alarm and control circuits, separate auxiliary circuit breaker for alarm and control circuits, yellow run light for each pump, H-O-A switch for each pump, red seal failure light for each pump, alarm switch for on-off and test, outside flashing alarm light, elapse time meters for each pump, alternator relay to alternate pumps on each successive cycle, and override circuit to start both pumps if level rises in wet well or to start second pump if one pump fails, override circuit shall also turn on alarm, and terminal strip to make motor and control connections. Controls shall operate with intrinsically safe relays to meet explosion proof requirements. A locking generator connection shall be provided on the outside of the panel.
 - 3) Lift out rail system supplied by pump manufacturer, and shall include all necessary flanges, discharge bases, sealing plates. No fabricated steel parts or steel fasteners shall be allowed. A simple sliding down of the pump and guide plate on the guide rails shall cause the unit to be automatically connected and sealed to the base. The guide rail shall be firmly attached to the access hatch frame. Galvanized lifting chain shall be fastened to each pump, and shall be of adequate length to lift the pump out of the wet well. Hatch shall be aluminum, with double hinged covers opening to at least 36" x 48". Covers shall have hold open bars that can be locked in open position. The covers shall be provided with locking devices. The guide rail shall be firmly attached to the access hatch frame. Galvanized lifting chain shall be fastened to each pump, and shall be of adequate length to lift the pump out of the wet well. Hatch shall be aluminum, with double hinged covers opening to at least 36" x 48". Covers shall have hold open bars that can be locked in open position. The covers shall be provided with locking devices.
 - b. Check valves and plug valves shall be 4" and shall be located in a separate vault located outside of the wet well. Each pump shall have its own valves. Check valves shall be spring loaded. Hatch for the valve vault shall be similar to the hatch for the pump station, with at least a 30" x 36" opening.
 - c. Pump station shall be privately owned and maintained.
5. Trench and Excavation Safety.
 - a. The Contractor shall be responsible for design and monitoring all trench and excavation safety systems which may be required by State and Federal Regulations.



APPROVED
JUN 19 1997
BY: *[Signature]*

GRAPHIC SCALE
1 inch = 20 ft.

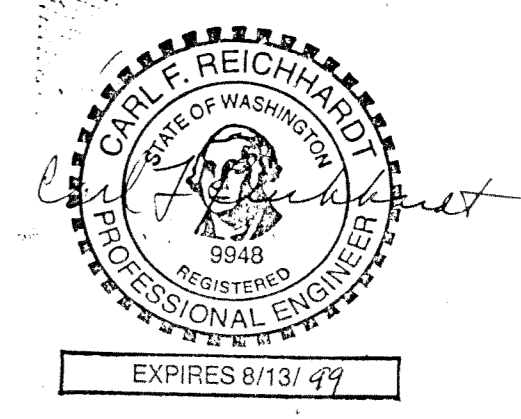
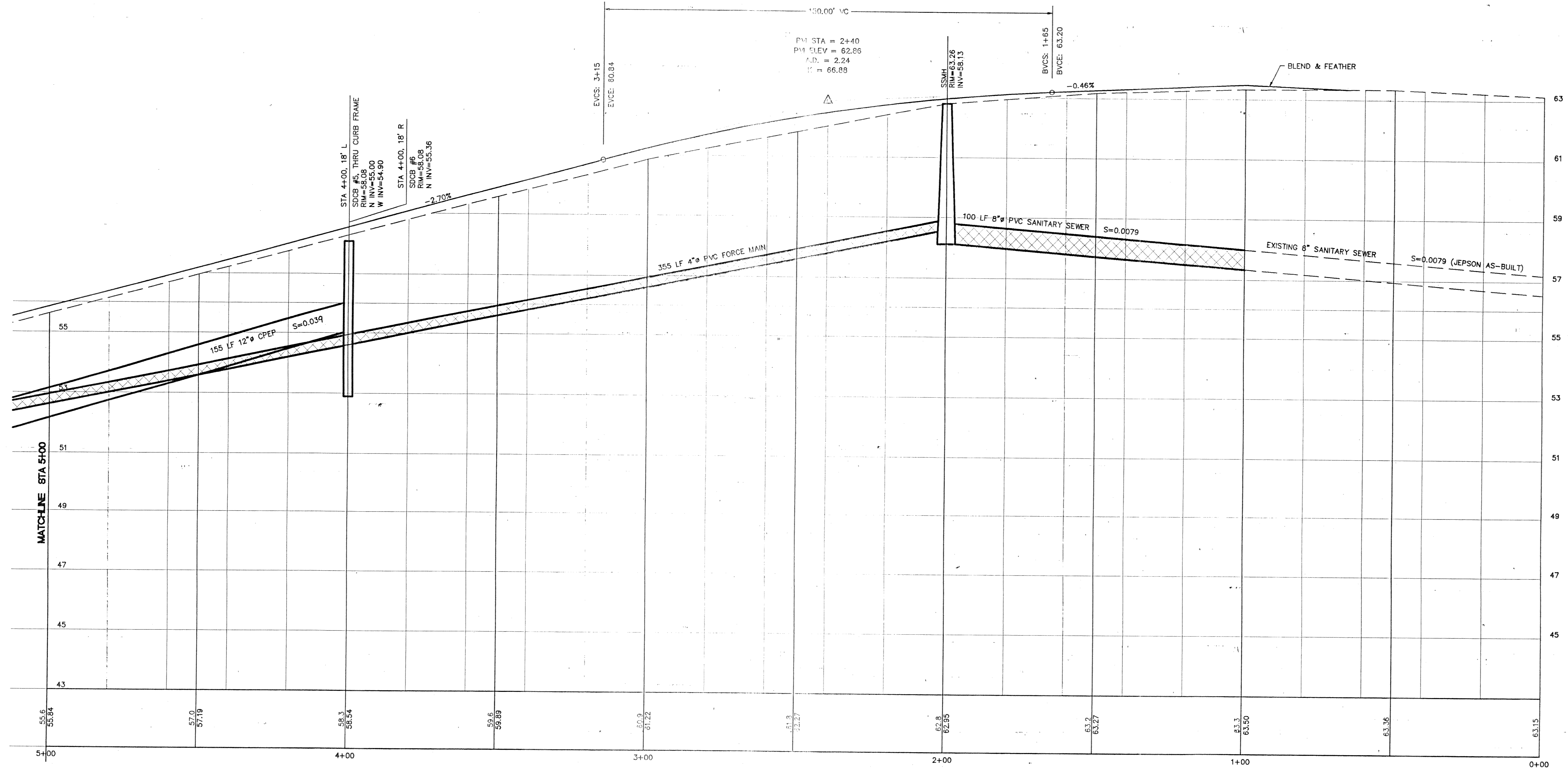
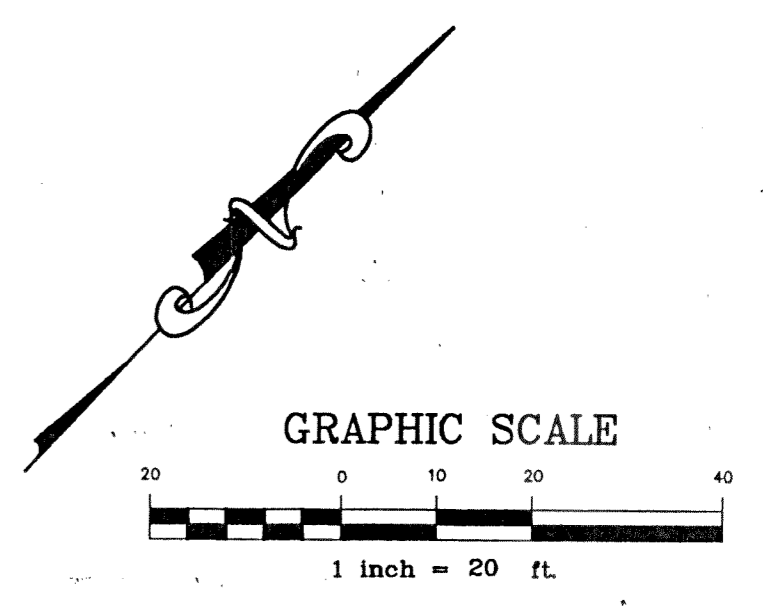
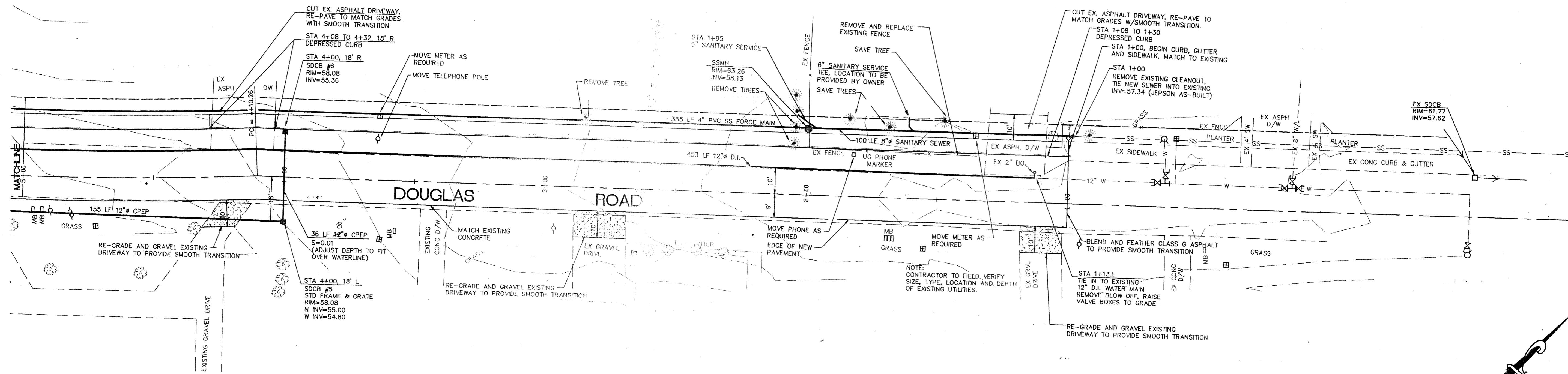


DESIGNED BY <i>CFR</i>		REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	NO.	DATE	1/28/98	ADDED FIRE SERVICE FOR BLDG A	BY	<i>CFR</i>	
DRAWN BY <i>TRP</i>									
CHECKED BY <i>CFR</i>									
BEACON MANOR ASSOCIATES 620-650 W 41ST AVE VANCOUVER, BC V5Z 2M9					UTILITY PLAN BEACON MANOR FERDALE, WASHINGTON				
JOB# / DWG 6040-U		SCALE H: 1"=20'		SITE v. n/a		DATE 1/13/97		SHEET C3 of 6	

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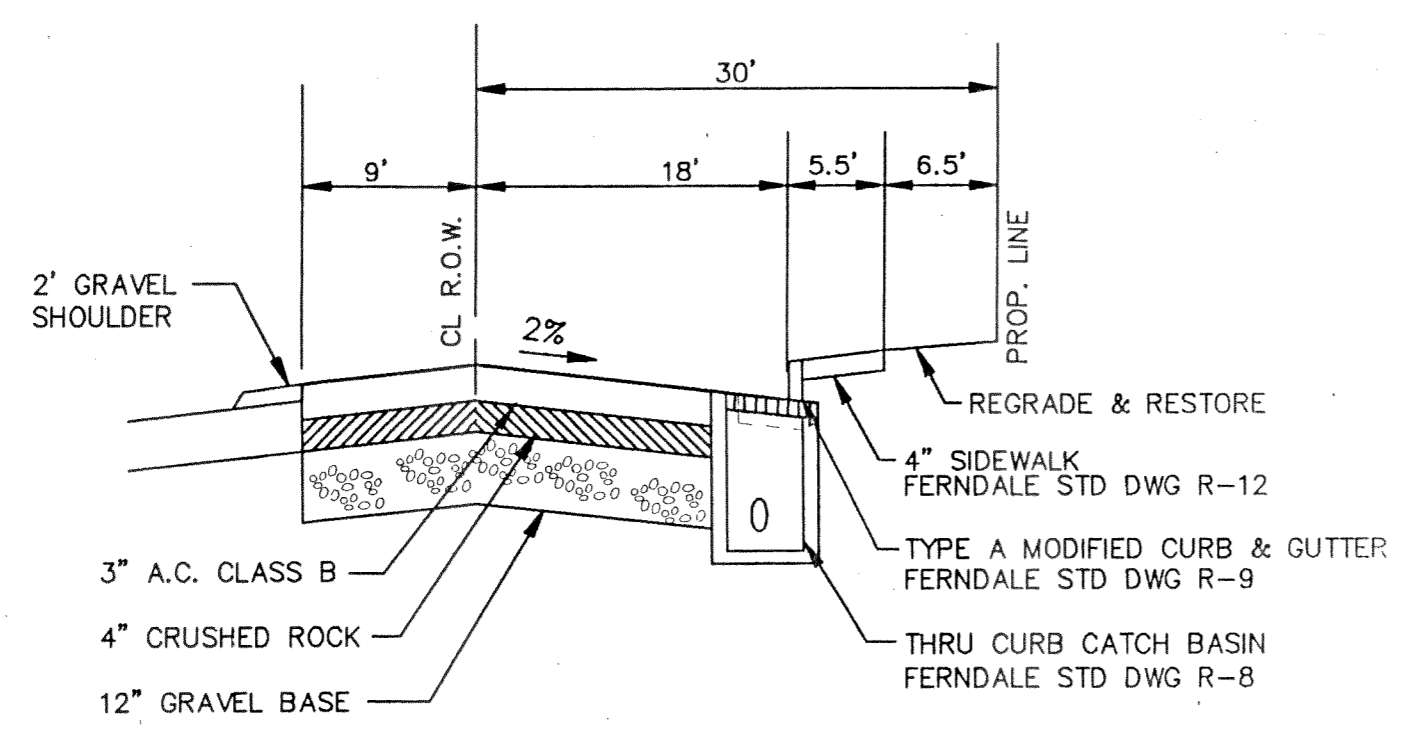
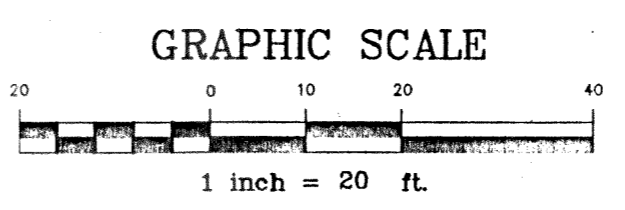
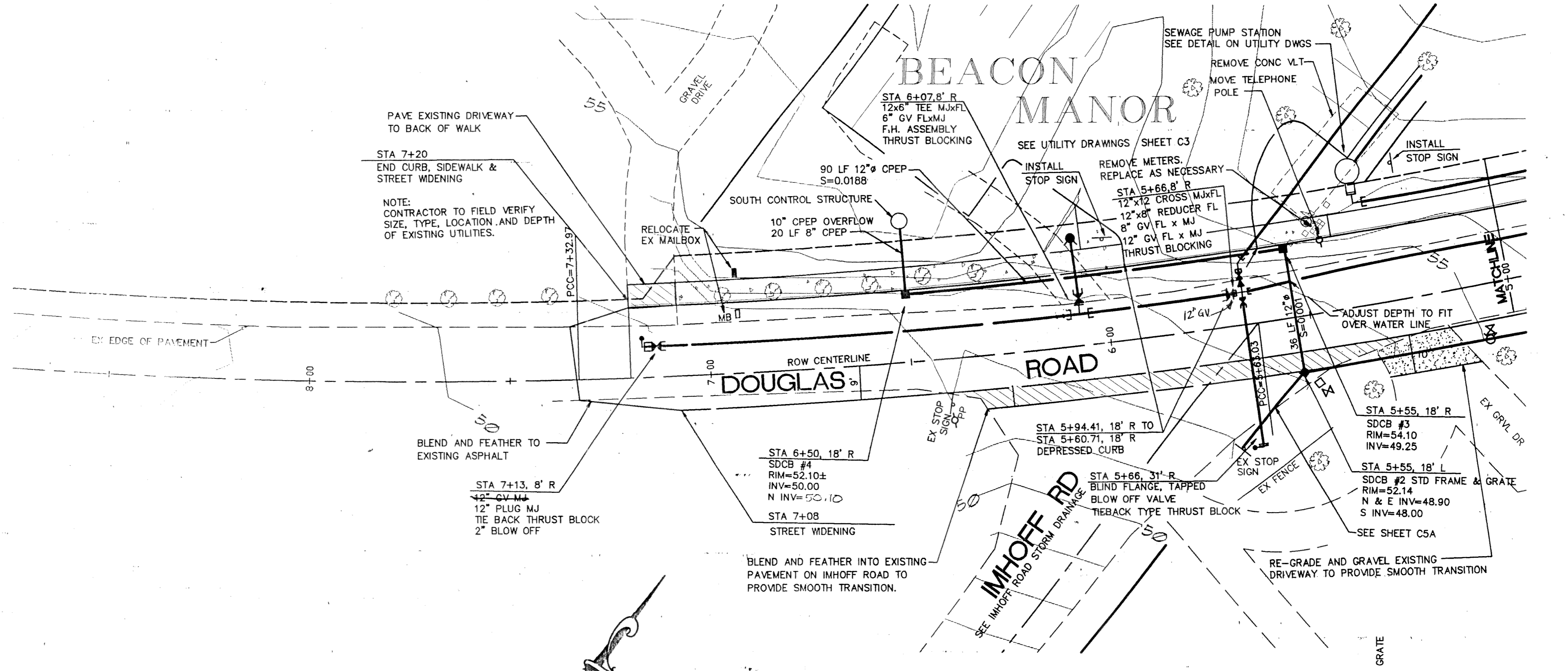
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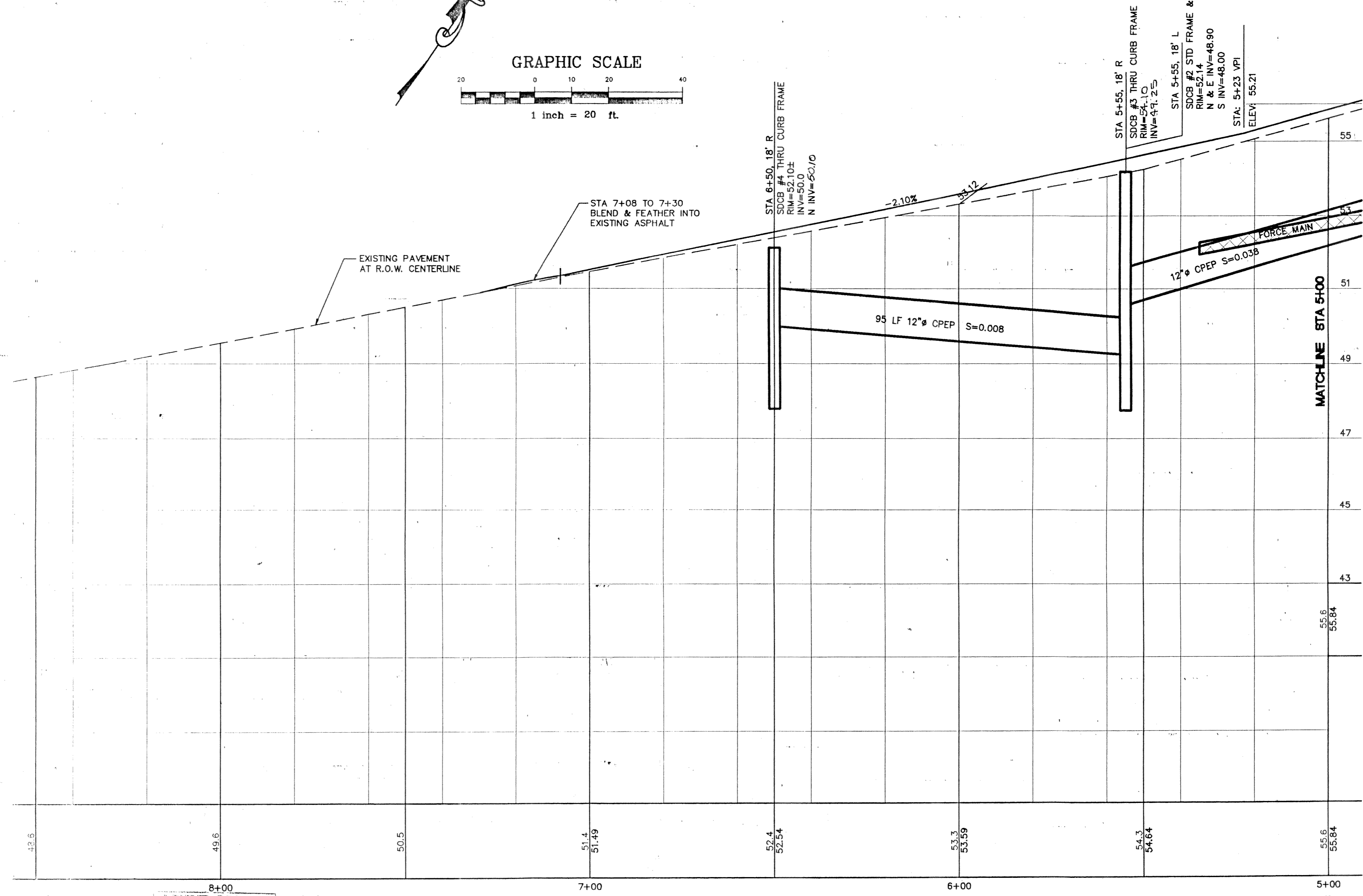
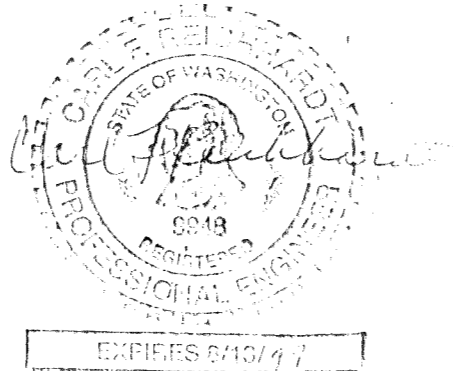
DESIGNED BY CFR	REICHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Ph (360) 354-3687 Lynden, Washington 98264 Fax (360) 354-0407	NOV 9 1997	NOV 9 1997	BEACON MANOR ASSOCIATES 620-650 W 41ST AVE VANCOUVER, BC V5Z 2M9	STA 1+00 TO 6+50 DOUGLAS ROAD FERDALE, WASHINGTON	JOB# / DWG 6040 SITE	DATE 1/13/97
DRAWN BY TRP		NO. 1	DATE 11/9/97	BY CFR	SCALE H: 1"=20' V: 1"=2'	SHEET CA of 6	
CHECKED BY		NO. DATE	REVISION	BY			

SPECIFICATIONS FOR STREET WORK IN DOUGLAS ROAD

1. Standards.
 - a. Standard Specifications shall be the "1996 Standard Specifications for Road, Bridge and Municipal Construction", By WSDOT and APWA. Standard Plans shall be the "Standard Plans for Road, Bridge and Municipal Construction", By WSDOT and APWA.
 - b. All work and materials shall be in accordance with the Standard Specifications and the City of Ferndale Development Standards.
2. Existing Improvements and Utilities.
 - a. Existing Utilities which may be encountered and/or damaged during excavation shall be properly repaired, abandoned, removed, plugged or capped as applicable. The appropriate Utility Companies shall be notified as required.
 - b. All materials from demolition and removal of unsuitable and excess excavation shall be removed from the site and disposed of by the Contractor in an approved and permitted waste site.
 - c. Existing mailboxes requiring relocation shall be constructed in accordance with Ferndale Drawing M-1.
 - d. Water services which are to be relocated shall be in accordance with applicable Ferndale Standards, including Drawings W5, W6 and W14.
 - e. Power and Telephone facilities which must be relocated, including both underground and above ground shall be coordinated with the appropriate utility company.
3. Excavation and Fill.
 - a. Excavated material which is to be utilized as fill material shall be approved by the engineer. Material shall be placed and compacted to a minimum of 95% maximum dry density under all paved surfaces. Compaction shall be verified by an approved testing laboratory.
4. Streets.
 - a. Existing grades shall be maintained as closely as possible in order to match existing driveways and private improvements.
 - b. Street sections shall be constructed in accordance with City of Ferndale Drawing R-1, Alternate Section.
 - c. Curb and Gutter shall be in accordance with Ferndale Drawings R-6 and R-9.
 - d. Sidewalks shall be in accordance with Ferndale Drawing R-12.
 - e. Shoulders along pavement edges which do not have curb and gutter shall be finished with 2" depth of crushed rock, approximately 2' wide. Existing gravel driveways shall be graded and graveled with clean crushed limestone to a distance of approximately 10' from the edge of the asphalt to provide a smooth transition. Paved driveways shall be cut back as shown on the drawings to provide a smooth transition. Areas between the shoulder or sidewalk and the property line which are affected by construction shall be neatly graded, filled with topsoil and restored to their original condition.
 - f. Utilities installed under paved section shall be backfilled with compacted gravel backfill.
5. Storm Drainage.
 - a. Pipe shall be N-12 corrugated polyethylene pipe, bedded in accordance with Drawing SS-1.
 - b. Catch basins shall be Type I with through curb inlets in accordance with Drawings ST-1 and ST-8.



STA 5+42 TO 7+08
TYPICAL STREET SECTION
NOT TO SCALE



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DRAWN BY TRP		NO. 1	DATE 11/3/97	REVISION STORM DRAIN SYSTEM - COMPLETE REVISION	SCALE H: 1"=20' v: 1"=2'	SHEET 05 of 6		
CHECKED BY		BY CFR	REVISION	DATE				

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11/2/97