STORM DRAINAGE REPORT

For:

RIVER TRAIL APARTMENTS

1617 E Main Ave

Puyallup, Washington

Prepared By:

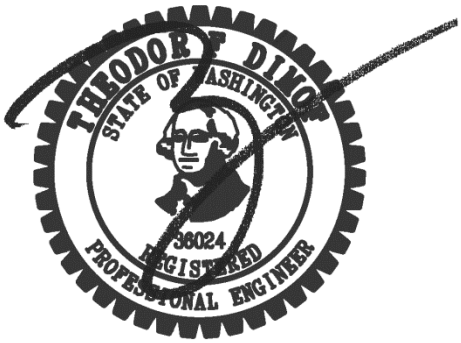
Ted Dimof, P.E.

Bush, Roed & Hitchings, Inc.

15400 SE 30th Pl Ste 100

Bellevue, WA 98007

(206) 323-4144



BRH Job No. 2022068

Date: September 8th, 2022
Revised November 16, 2022

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List of Figures

Appendices

1.0 – PROJECT OVERVIEW

The River Trail Apartments project proposes to replace the existing parking lot and concrete walk. The site is located at 1617 E Main Ave, parcel #0420262058.

The existing site is developed with a building and parking lot. The site is level with a slight slope towards the paved driveway to the west.

The total amount of new and replaced hard surface is 4,866 square feet (SF), triggering Minimum Requirements 1-5.

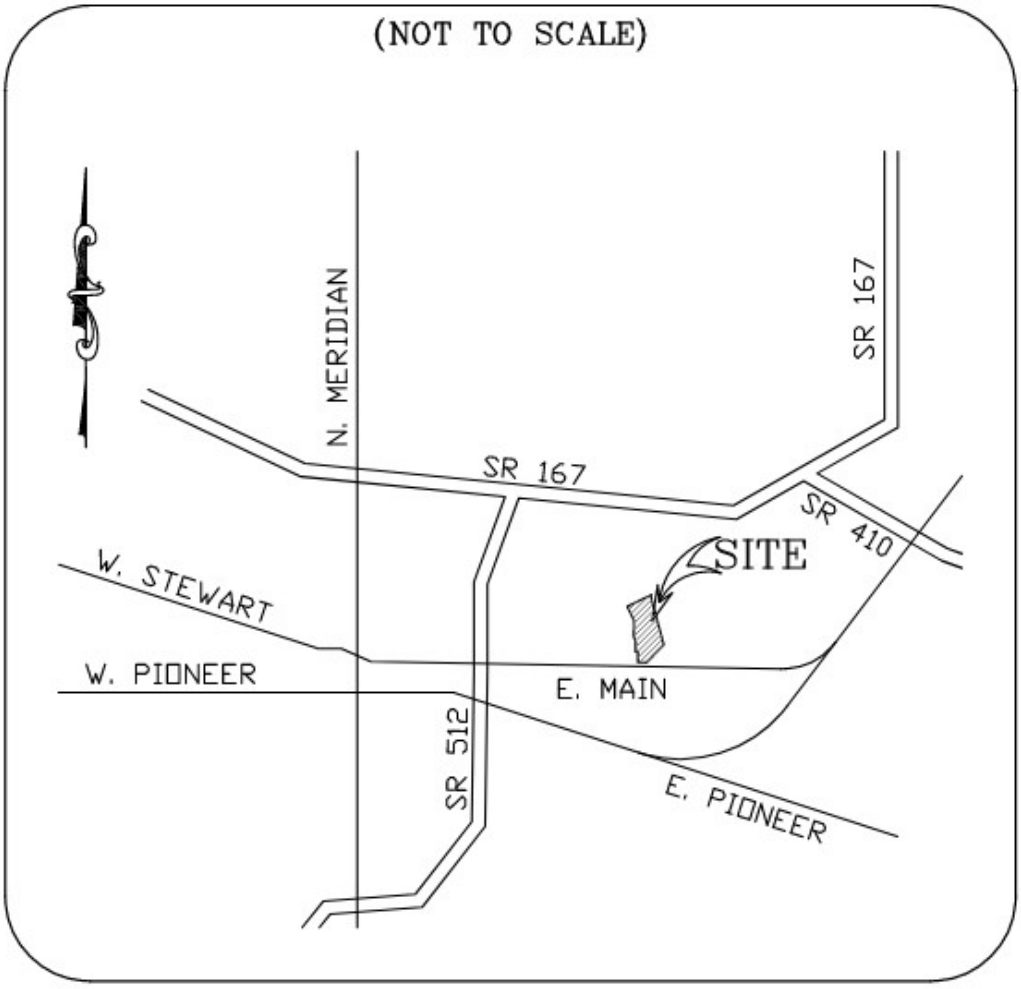


Figure 1.1 – Vicinity Map

2.0 – MINIMUM REQUIREMENTS

Stormwater Code and Engineering Standards
This project will use the 2014 Stormwater Management Manual for Western Washington.

Minimum Requirements Analysis

To establish the minimum requirements for this project, the "Flow Chart for Determining Requirements for Redevelopments" was used. The site adds/replaces 4,866 SF of new and replaced hard surface, therefore, minimum requirements 1 through 5 apply.

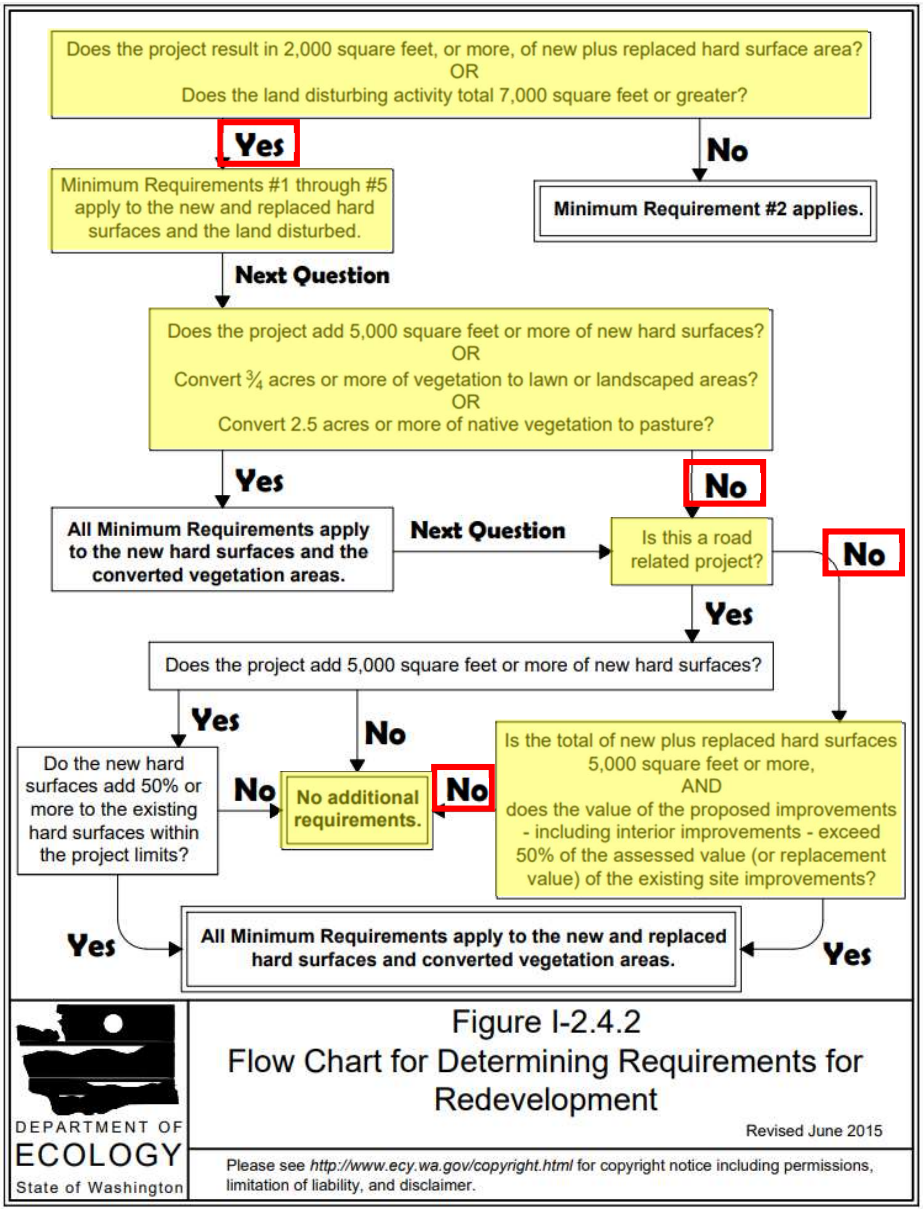


Figure 2.1 – Minimum Requirements for New Developments

1. **Preparation of Stormwater Site Plans**
   A stormwater site plan has been developed per ECY standards and is included in **APPENDIX C.** of this report.

2. **Construction Stormwater Pollution Prevention Plan (SWPPPs)**
   A SWPPP has been completed and included in this submittal. See **SECTION 4.0** of this report in accordance with ECY standards.

3. **Source Control of Pollution**
   Not applicable. There will be no outdoor storage of fertilizers, pesticides, equipment, or materials that will allow pollutants to enter the stormwater system.

4. **Preservation of Natural Drainage Systems and Outfalls**
   The proposed grading on-site will be designed to preserve existing drainage patterns. Stormwater will continue to drain to the east into the paved driveway and eventually into Puget Sound via the Puyallup River.

5. **On-Site Stormwater Management**
   The 2,000 SF impervious surface threshold has been exceeded and On-Site Stormwater Management will be required. List #1 was applied to all replaced hard surfaces on-site. See **SECTION 5.0** of this report.

3.0 – SITE AND BASIN ASSESSMENT

3.1 – Phased Off-site Analysis

The project site drains to the Puyallup River, a tributary of the Puget Sound. There is no off-site drainage that enters the site.

3.2 – Sub-Basin Description

The site currently discharges to the west and the proposed project will connect to the existing storm drain in the paved driveway to the west. Stormwater from the driveway travels south to the main in E Main St, where it eventually discharges to the Puyallup River.

3.3 – Soils/Infiltration Rates

Field testing by Merit Engineering determined the subsurface soil conditions of the site. The soil on-site from top to bottom consists of organic, silty topsoil (OL), silt (ML), sand (SP), and gravelly sand (SW). Because the soils types near the surface of the site are prohibitive towards infiltration, it is assumed that infiltration is infeasible. See **APPENDIX B** for full report.

3.4 – Critical Areas

The site is identified to have a high liquefaction potential and lies within the “100-500 year frequency” for volcanic hazards but is suitable for the proposed project if recommendations in the geotechnical report are followed. See **APPENDIX B** for the full report.

3.5 – Assessment Summary

A Basin map has been completed and can be found in **APPENDIX A** of this report.

3.6 – Facility Sizing and Downstream Analysis

The entirety of storm drainage on-site is proposed to drain to a new catch basin in the parking lot. Water then drains to a catch basin in the paved driveway and discharges south to an existing storm main located in E Main St. No detention is required for the site.

4.0 – STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Refer to the SWPPP report submitted separately.

5.0 – ON-SITE STORMWATER MANAGEMENT

The purpose of MR-5 is to design the site to retain as much stormwater on-site as possible using various BMPs described in Volume I of the 2014 SWMMWW. List #1 has been used to determine BMP feasibility for each replaced hard surface.

List #1: On-Site SW BMPs for project triggering MR 1-5:

The site consists of 4,866 sf of new and replaced hard surface, including the proposed parking lot pavement and concrete walkway, and 1,830 sf of landscape.

Lawn and Landscaped Areas:

1. Post-Construction Soil: All landscaping is proposed to have amended soils per BMP T5.13.

Roofs:

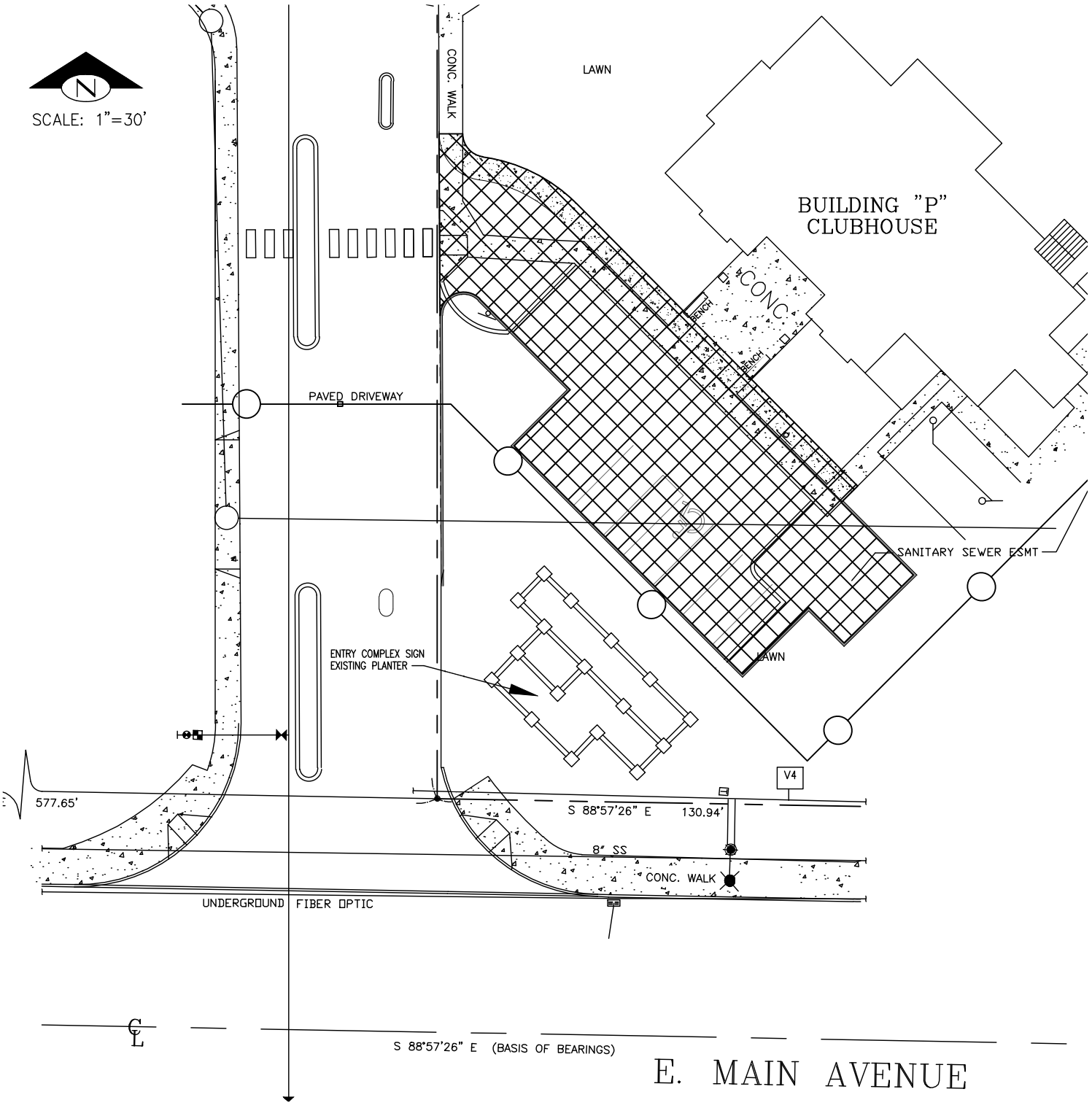
1. Not applicable.

Hard Surfaces:

Parking Pavement and Concrete Walkway:

1. Full Dispersion: This BMP is infeasible for the site due to lack of a vegetated flow path.
2. Permeable Pavement: According to the geotechnical report, the topsoil on-site consists of dark brown and silty soil and the layer underlaying the topsoil is brown to gray clayey silt. Both soil types are prohibitive to infiltration, therefore making this BMP infeasible.
3. Rain Gardens: Infeasible due to site constraints
4. Bioretention: Infeasible due to site constraints
5. Sheet Flow Dispersion: Infeasible due to site constraints
6. Concentrated Flow Dispersion: Infeasible due to site constraints

APPENDIX A



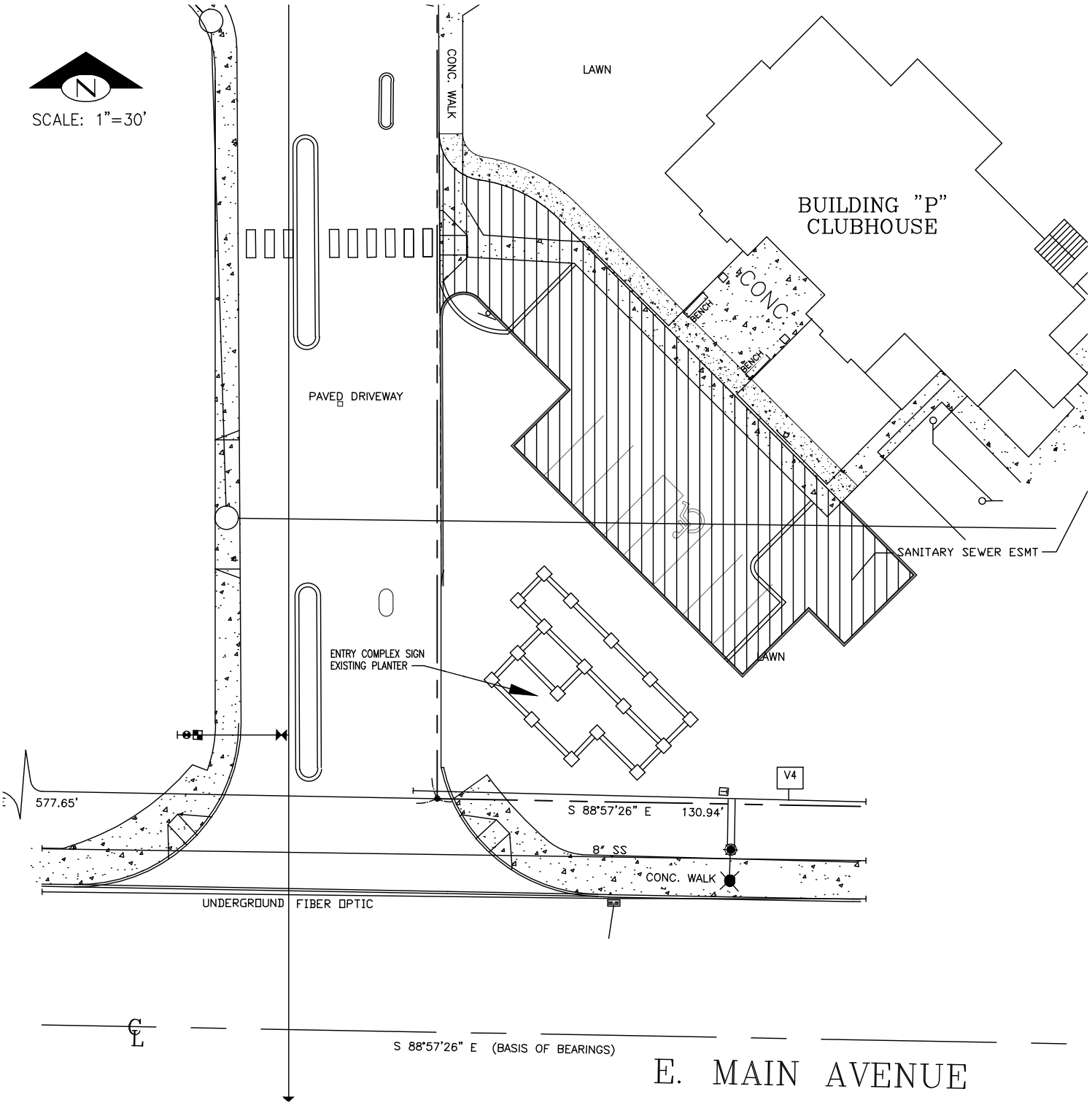
IMPERVIOUS AREA
NEW AND OR REPLACED
= 4,866.00 SF

JOB NO	2022068.00
SCALE	AS NOTED
DRAWN	WPG
CHECKED	TFD
DATE	4/15/22

BUSH, ROED & HITCHINGS, INC.
CIVIL ENGINEERS & LAND SURVEYORS
2009 MINOR AVE. EAST, SEATTLE, WA 98102
(206) 323-4144 FAX (206) 323-7135
1-800-935-0508 E-MAIL: INFO@BRHINC.COM

EXISTING AREA REPLACEMENT
1617 EAST MAIN AVENUE
RIVER TRAIL APARTMENTS
PUYALLUP WASHINGTON

LAYERSTATE:



NEW POLLUTION GENERATING SURFACE
= 4,191.00SF

JOB NO	2022068.00
SCALE	AS NOTED
DRAWN	WPG
CHECKED	TFD
DATE	4/15/22

BUSH, ROED & HITCHINGS, INC.
CIVIL ENGINEERS & LAND SURVEYORS
2009 MINOR AVE. EAST, SEATTLE, WA 98102
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POLLUTION GENERATING SURFACE
1617 EAST MAIN AVENUE
RIVER TRAIL APARTMENTS
PUYALLUP WASHINGTON

LAYERSTATE:

APPENDIX B

MERIT ENGINEERING INC.

GEOTECHNICAL ENGINEERING REPORT

Barovic Property
1600 East Main Avenue
Puyallup, Washington

Prepared for:

American Property Development
110- 110th Avenue NE, Suite 550
Bellevue, Washington 98004

November 19, 2003
Project No. KF0630361

2715 Meridian Street
Bellingham, Washington 98225
Telephone: (360)738-6083
Fax: (360)738-1499
email: merit@MeritEngineering.com
http://www.MeritEngineering.com

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www.MeritEngineering.com

November 19, 2003
Project No. KF0630361

Mr. Greg Borrego
American Property Development, Inc.
110- 110th Avenue NE, Suite 550
Bellevue, WA 98004

Re: Geotechnical Investigation
Barovic Property
1600 East Main Avenue
Puyallup, Washington

Dear Greg:

At your request we have conducted a geotechnical investigation for the above referenced project. The following geotechnical report represents the results of our field study and derives conclusions on the feasibility of development on the site.

Thank you for this opportunity to work with you on this project. Please contact us if you have any questions about this report.

Sincerely,

Austin X. Huang, Ph.D., P.E.
Principal

GEOTECHNICAL ENGINEERING REPORT

Barovic Property
1600 East Main Avenue
Puyallup, Washington

Report Prepared for:

American Property Development, Inc.
110 – 110th Avenue NE, Suite 550
Bellevue, WA

by

Austin X. Huang, Ph.D., P.E.
Principal

Project No. KF0630361
November 19, 2003

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1. INTRODUCTION

American Property Development of Bellevue, Washington, requested Merit Engineering, Inc. to conduct a geotechnical engineering investigation for construction of the proposed Phase I Development of the Barovic Property in Puyallup, Washington. The project site is located at approximately 1600 East Main Avenue, in the city of Puyallup, Washington. The project area and vicinity is shown in Figure A-1 and the site plan with test pit locations in Figure A-2 in the Appendix.

We understand that the proposed structures will be light weight wood-framed 3-story apartment buildings with associated roads and parking.

The objective of this study was to investigate the subsurface soil and groundwater conditions at the proposed project site, derive conclusions, and provide recommendations for design of foundations to support the proposed structures.

2. SCOPE

The scope of work for this study is in compliance with our proposal (#PKD0216306) dated April 24th, 2003 and included:

- Conduct 2 test borings to maximum depth of 30´;
- Conduct 7 test pits to maximum depth of 10´;
- Log soil and groundwater conditions;
- Perform laboratory soil index test if necessary;
- Perform engineering analysis
- Prepare this engineering report addressing:

  (1) surface conditions;
  (2) subsurface conditions;
  (3) groundwater conditions; and

  Provide Recommendations for:

  (4) foundation design parameters,
  (5) structural fill and compaction criteria,
  (6) foundation retaining wall design parameters,
  (7) drainage,
  (8) site grading, and
  (9) pavement design parameters.

3. SITE INVESTIGATION

3.1 Surface Conditions

The property is currently being used as cropland with strawberries and corn as the principle crops. It is bordered to the north by the Puyallup River and to the east by Linden Golf & Country Club. It is bordered to the south by several commercial businesses (across East Main Avenue), and to the west by a small strip mall and a Safeway store.

3.2 Subsurface Conditions

Subsurface soil and groundwater conditions at the project site were explored by conducting seven (7) test pits and two (2) test borings in the areas of the proposed buildings and parking lots. Procedures for test pit and boring excavations included soil sample collection, and logging soil and groundwater conditions.

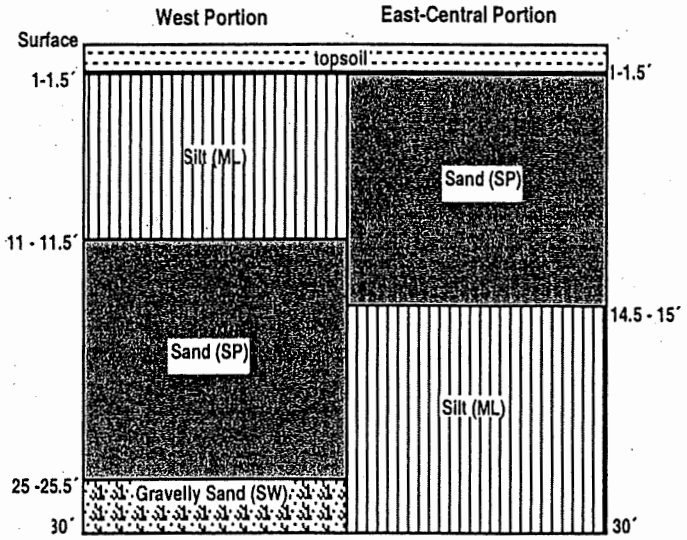
Soil logs and SPT (*Standard Penetration Test*[+]) results are presented in the Appendix (Figures B-1 through B-9). The descriptions of the soil symbols and classification used in this report also are presented in the Appendix (Figure B-0). As shown in the following schematic drawing, the soils at this site consist of, from top to bottom:

a. Organic, silty topsoil (OL);

b. Silt (ML)

c. Sand (SP)

d. Gravelly sand (SW)



a. Topsoil (OL)

Dark brown, silty topsoil with abundant root structure was found to a depth of 15″ to 18″

[+] SPT consists of driving a split-barrel sampler of 1.5″ ID (*Inside Diameter*) and 2″ OD (*Outside Diameter*) 18″ into ground using a 140 pounds hammer with 30″ of free fall. The number of blows for last one foot of penetration is obtained as blow count, N which is correlated with the strength properties of soil.

in all test pits and test borings. It was generally dry.

b. Silt (ML)

Brown to gray clayey silt occurs at approximately the same depths (~1-1.5′) throughout the west half of the site. Clayey silt was found around 15′ on the east-central portion of the site. The silt is semi-cohesive with a low plasticity index and varied from soft to very stiff in consistency.

c. Sand (SP)

Brown to gray, very fine to coarse-grained sands were found throughout the entire substratum in all seven test pits and both test borings. The sands are mostly poorly graded and loosely to densely compacted. Sands found between 6′ and 10′ depth on the western portion of the site were found at approximately 1′ below the surface on the east-central portion of the property.

d. Gravelly sand (SW)

Gray to brown gravelly sand was found on the west portion of the property at 25 to 25.5′. The gravelly sand is well graded.

3.3. Geologic Background

The project area is located in a level area, approximately 200′ from the Puyallup River. Holocene alluvium is the primary sediment located at the subject property. The fine-grained, silty nature of the on site soils indicate that they were likely deposited in a low energy environment, probably a floodplain. The project location is located within the FIRM 100-year floodplain.

Critical Areas Ordinance (CAO) maps were reviewed for the subject property with the intent of identifying possible geologic hazards associated with the property. The map identified a

"High" liquefaction (seismic) potential associated with the property. The property also lies within the "100 – 500 year frequency" of volcanic hazard occurrence.

3.4. Surface and Ground Water Conditions

Moist soils were observed below 3′ in all of the test pits and throughout test borings. The water table was encountered at different depths for each test boring. Test boring B-1 located in the northwest portion of the property encountered groundwater at 16′. The water table depth was 8′ below surface at test boring B-2 located on the east-central portion of the property. During test pit excavation, the water table was encountered at 9′ below surface. At the time of test pit excavation, monitoring wells located on the property were measured for static water levels. Water level data indicated average water levels at 10-12′ below the property surface.

Surface water was not observed during our field investigation on October 20th, 2003.

4. CONCLUSIONS AND RECOMMENDATIONS

Sandy soils with groundwater were found in test pit investigation, which is suspicious for liquefaction‡ during a seismic event. Therefore, 2 test borings were drilled with field SPT tests. Laboratory test on soil grain size distribution and soil index classifications were also performed in order to determine liquefaction potential at the site.

We also understand that the site will be graded so that the buildings will be above 100-year flood level, complying with local building codes requirement.

Based on the field and laboratory test results, our analysis revealed the following two scenarios:

‡ Liquefaction is a phenomenon associated primarily with saturated cohesionless soils under zero effective stress. Effective stress equal the confining pressure of the soil minus pore water pressure. When saturated cohesionless soils undergo cyclic seismic loading, the induced excessive pore pressure cannot dissipate and thus grows larger. When the pore pressure becomes equal to the confining pressure from the overburden load, the effective stress of the soil becomes zero and therefore, the soil looses its strength or stiffness and becomes liquefied. This will consequently result in the settlement of buildings or ground breaking.

a. *West portion (Test Boring #1):* The sandy soils are approximately 12′ below the surface and the groundwater is 16′ below the surface, plus the blow count numbers are high. Therefore, liquefaction potential is low under the design seismic event.

b. *East central portion (Test Boring #2):* Sandy soil below the groundwater table is a thin layer of approximately 6′, which will be overlain by approximately 8′ to 10′ of compacted dense native and import structural fill that is non-liquefiable.

According to National Research Council Committee on Earthquake Engineering (1985), such a thick layer of non-liquefiable overburden will suppress liquefaction from ground breaking and therefore catastrophic damage to structures.

Therefore, we conclude, based on this investigation, that the site is suitable for the proposed project if the recommendations in this report are followed.

4.1 Site Preparation and Grading

We recommend stripping the top soils from the areas of the proposed building and parking lot. We recommend grading the exposed subgrade away from footing and slab-on-grade locations to minimize the potential for accumulation of surface water. We anticipate that soil excavation can be accomplished with conventional equipment (excavators or bulldozers).

Due to the fine-grained, moisture-sensitive nature of the on-site soil, we recommend that site work be done during an extended period of dry weather. Significant additional costs and construction difficulty could be incurred if work proceeds in wet weather.

A temporary cut slope at the basement construction site without support should be no steeper than 2:1 (Horizontal to Vertical). We recommend that we evaluate the site conditions for suitable cut slope during site excavation. Temporary shoring will be required for excavation near or below the groundwater level.

We recommend compacting the native subgrade sand at the east-central portion to at least 95% of the ASTM D-1557 maximum dry density.

We recommend that we observe and verify site excavation to suitable soil stratum, observe proof-roll, test to verify imported fill materials, and observe and test compaction of structural fill materials.

4.2 Foundation Design Parameters

We understand that the site will be re-graded and import structural fill will be placed on the property. Therefore, footings will be on either the import structural fill or compacted native soils.

All perimeter footings should be at least 18 inches below the final outside grade for frost protection. The base width of the footings shall be between 12 and 24 inches for continuous, and between 2 and 3 feet for isolated, spread footings.

Under the condition of satisfying the above recommendation, an allowable soil bearing pressure of 1,000 psf (*pounds per square foot*) and 1,500 psf are recommended for native soils and import fill with thickness equal or greater than the width of the footing, respectively. The bearing pressure recommended may be increased by ⅓ for transient wind or seismic loads.

Assuming construction of the proposed structure is accomplished as recommended above, we estimate the total settlement of the foundations should be in the order of 1˝ and differential settlement between two adjacent load-bearing components will be about ½-inch. Most settlement will occur immediately during construction when loads are applied.

We recommend proof-rolling the native soils and structural fill before placement of footings with a loaded dump truck to reveal soft or yielding surficial soils. Any soft subgrade soils encountered during site excavation or exposed during proof-rolling should be removed and replaced with structural fill as recommended in the Structural Fill section of this report.

We recommend that we review those portions of the plans and specifications that pertain to earthwork and foundations to ensure that they are consistent with the recommendations in

this report. We recommend that we verify footing excavation to suitable soil stratum, test to verify imported fill materials, and observe and test compaction of structural fill.

4.3 Seismic Design Parameters

The project site is located in Seismic Zone 3 according to UBC (*Uniform Building Code*). UBC maps the United States into 4 seismic zones. Zone 1 to 4 represent area having the least to the most earthquake activities. The soil profile at the site may be defined as S_D, representing a soil profile with dense or stiff soil conditions, where the soil depth exceeds 200 feet.

1992 SDCLU (*Seattle Department of Construction and Land Use*) recommends that design criteria for soil bearing capacity consider a one in 100 year seismic event, an earthquake ground motion that has a 40% probability of exceedance in 50 years. The analysis should be based on a near crustal event having an assumed magnitude of 6.5 and occurring directly below the site. For such an event, SDCLU allows use of a minimum value of horizontal peak ground acceleration of 0.17g and 0.20g (g is acceleration due to gravity) for firm glacial till and alluvial fill, respectively. These values are considered to be reasonable for engineering design at northwest Washington area. Therefore, we recommend using a minimum value of horizontal peak ground acceleration of 0.20g for the soils at the site.

4.4 Slab-On-Grade Floor

The slab-on-grade-floor may be supported on the building pads prepared as recommended above. At least 4-inches of crushed rock should be placed between the slab and the slab subgrade as a capillary break. Thicker section of capillary break material may be required due to the effect of wet weather conditions on earthwork construction should construction proceed in wet weather.

A vapor barrier visquine should be placed between the slab and the capillary break material. An additional 1 to 2 inches of sand may be placed on top of the vapor barrier if desired to aid

in concrete curing. In addition, use of a commercial concrete slab sealant for moisture protection may prove to be very helpful.

4.5 Foundation Drainage

We understand that the site will be drained by surrounding drain system in the subject property as a whole and the area surrounding buildings will be paved impermeable surface, therefore, perimeter footing drain may not be necessary under this circumstance. Roof downspouts should be tightlined to a storm drain system. In addition, the site should be graded so that surface water runoff is directed to catch basins that are attached to a storm sewer drain.

4.6 Lateral Earth Pressures

We recommend placing structural fill behind retaining walls. The horizontal thickness of the fill should be at least ½ the height of the wall. For the structural fill as recommended in the Structural Fill section of this report with a level ground, the parameters of the lateral earth pressures are listed in the Table 1.

TABLE 1. Lateral Earth Pressures Parameters

Soils	Active, K_a	Passive, K_p	At Rest, K_o
Structural Fills	0.28	3.54	0.44
Equivalent Fluid Pressure* (pcf):			
Structural Fills	34	425	53

*The equivalent fluid pressure is the product of lateral earth pressure coefficient and the unit weight of the soil.

Design of subsurface walls should include appropriate lateral load due to adjacent surcharge. Under uniform surcharge q_o, lateral load due to a uniformly distributed lateral pressure σ, should be added to active and at rest soil lateral pressure, respectively as defined in the following equation:

$$\sigma = \begin{cases} K_a q_o & \text{for active case} \\ K_o q_o & \text{for at rest case} \end{cases}$$

A coefficient of base friction of 0.55 and 0.45 may be used between concrete and structural fill and between concrete and native sand, respectively. However, if passive pressures are used in conjunction with frictional resistance to determine lateral resistance to sliding, only ½ the value of passive pressure presented above should be used since larger strains are required to mobilize passive soil resistance as compared to frictional resistance.

4.7 Structural Fill

Structural fill should be placed on a firm, horizontal subgrade in about 10- inch thick loose lifts and compacted to at least 95% of the ASTM D-1557 maximum dry density for footings, grade slab, parking and road, and sidewalks.

Backfill immediately behind retaining walls or adjacent to foundation stem walls should be compacted to about 90% of the ASTM D-1557 maximum dry density. Care must be taken to avoid over-compaction immediately behind walls. Backfill behind retaining walls must be free draining material.

It is important that plumbing and utility trenches be properly backfilled. Backfill in the trenches should meet the appropriate compaction criteria described above.

We recommend that the imported structural fill meet the specification - 9-03.12 (1) B, APWA/DOT, 1991 that is typical in this area as base granular materials with exception that percent passing U.S. No. 200 Sieve shall not exceed 5% and all materials smaller than 4″. The imported structural fill should be well graded granular material conforming to the following gradation:

Table 2. Specification of Imported Fill Materials

Sieve Size	Percent Passing by weight
4″ Square	100
¼″ Square	25 min.
U.S. No. 200	5.0 max.
Dust Ratio $\frac{\%\text{ Passing U.S. No. 200}}{\%\text{ Passing U.S. No. 40}}$	⅔ max.
Sand Equivalent	30 min.

4.8 Pavement Design Parameters

Pavement for roads and parking must be placed over the firm subgrade - the firm sandy soil or on import structural fill. The recommended pavement design parameters for the clay soils at the site and imported structural fill as recommended in the Structural Fill section of this report are listed in Table 3.

Table 3. Soil Parameters for Pavement Design

Soil	CBR[1]	R[2] (California)	k[3] (psi/in)
Native Soils	4.8	28	85
Structural Fill	6.7	34	95

1. *California Bearing Ratio*
2. *Hveem's Resistance*
3. *Subgrade Modulus*

In Table 3, the CBR values were estimated on the basis of soil classifications while R and k values were determined from correlation between CBR and R values, and between R and k, respectively.

We recommend compacting the base course to a minimum 95% of ASTM D-1557 maximum dry density. Efforts should be made to limit the amount of water entering the base course in order to prevent the road base from saturation so as to assure the pavement durability.

Frost damage sometimes affects pavement in this area where moist silty subgrade is encountered. To fully protect against this type of damage, a pavement section including granular base must extend to a depth of at least 18-inches total. However, thinner sections may be used if occasional damage is acceptable in return for the more economical pavement section.

We recommend asphalt concrete be Class B aggregate material conforming to local Standard Specifications for Road, Bridge, and Municipal Construction.

Construction equipment having loads greater than those expected on the asphalt pavement should be avoided on the parking areas. A haul road or increased pavement section should be installed to allow heavier construction equipment movement.

5. GENERAL CONDITIONS

The recommendations provided herein are based on our understanding of the project at this time. We expect the on-site soil conditions to reflect our findings, however, some variations may occur. Should soil conditions be encountered that cause concerns and/or are not discussed herein, Merit Engineering Inc. should be contacted immediately to determine if additional or alternate recommendations are required.

We recommend that we review those portions of the plans and specifications that pertain to earthwork and foundations to ensure that they are consistent with the recommendations in this report. We recommend that we verify site excavation to suitable soil stratum, observe proof-roll, verify imported fill materials, and observe and test compaction of structural fill.

This report is prepared for American Property Development, Bellevue, Washington for the specific application to the proposed Barovic Phase 1 development. The project site is located at 1600 East Main Avenue, in the city of Puyallup, Washington as shown in Figures A1 and A2 in the Appendix. This report is completed in accordance with generally accepted geotechnical engineering practices in this area. No other warranty, expressed or implied, is made.

This report is instrument of our professional service, and we (Merit Engineering, Inc.) shall retain an ownership and property interest therein. We grant American Property Development, Inc. a license to use the instrument of our professional service for the purpose of constructing the above mentioned proposed structure. We do not permit reuse or modification of this document for application to a different structure other than the one proposed at the site or to another property because soil and subsurface conditions are unique and site specific for different locations.

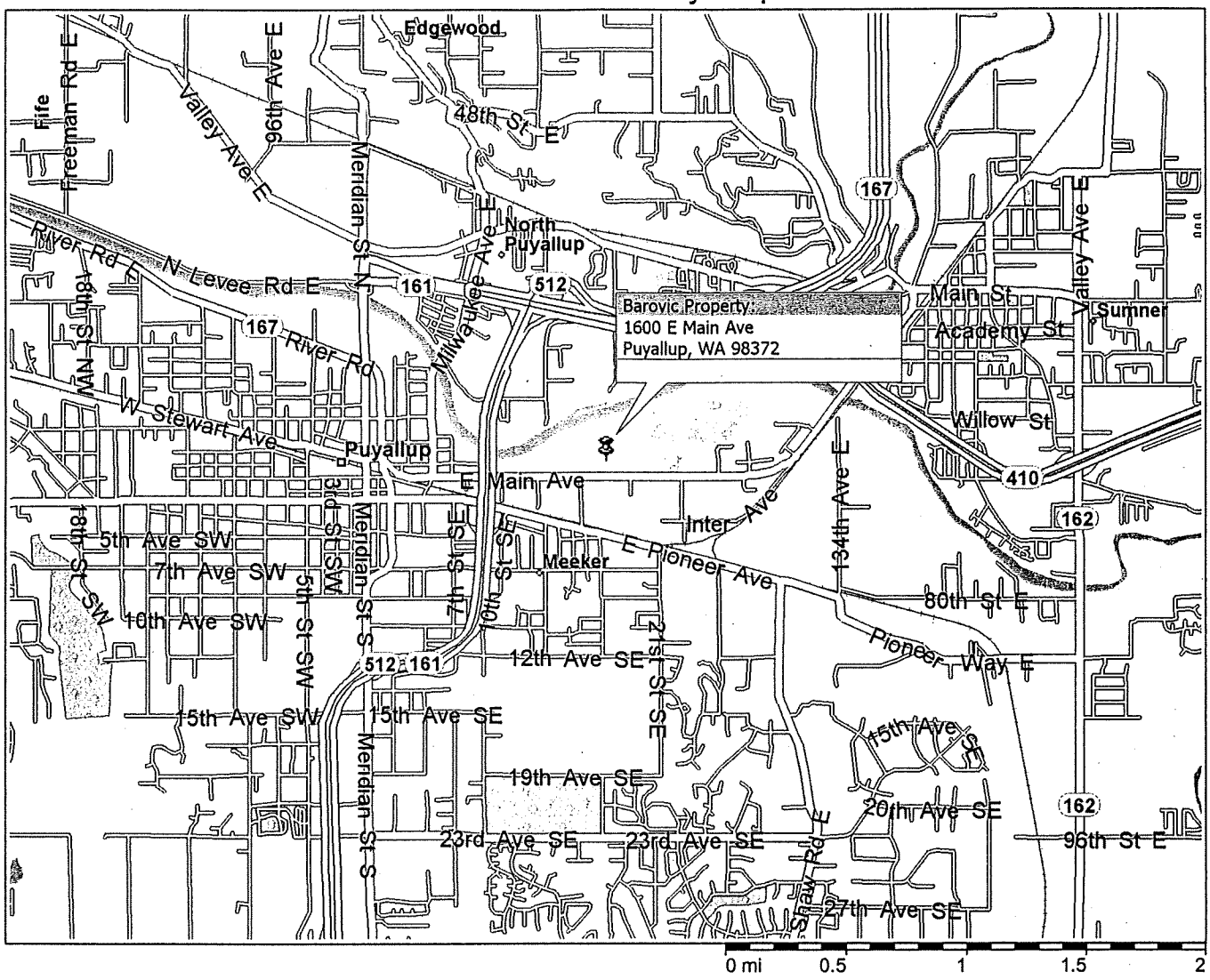
APPENDIX

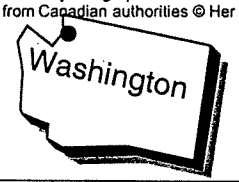
Subsurface conditions at the site were investigated by conducting 7 test pits to a maximum depth of 10 feet on July 1st, 2003 and 2 test borings to a maximum depth of 30 feet on October 20th, 2003

The locations of the test pits and borings were determined by a representative from Merit Engineering Inc. and are shown approximately on the Site Plan (Figure A-2) presented in the Appendix. Depths referred to in the soil logs in this report are relative to the existing ground surface at the time of the field investigation.

The description of subsurface conditions is based on the observations made at the site at the time of the field investigation in conjunction with laboratory test results conducted in Merit Engineering's laboratory. Soil logs are presented in Figures B-1 through B-9. The soils observed in the site were classified using the USCS (*Unified Soils Classification System*) in accordance with ASTM D-2488-69 and ASTM D 2487. This classification system is also presented in the Appendix (Figure B-0).

Location & Vicinity Map





PROJECT NO. KF0630361	**PROJECT LOCATION & VICINITY MAP**	DATE: 11/6/03	*Figure A-1*

Barovic Property
1600 East Main Avenue
Puyallup, Washington

For: American Property Development, Inc.

MERIT ENGINEERING INC.
2715 Meridian Street
Bellingham, Washington 98225
Telephone: (360)738-6083
Fax: (360)738-1499
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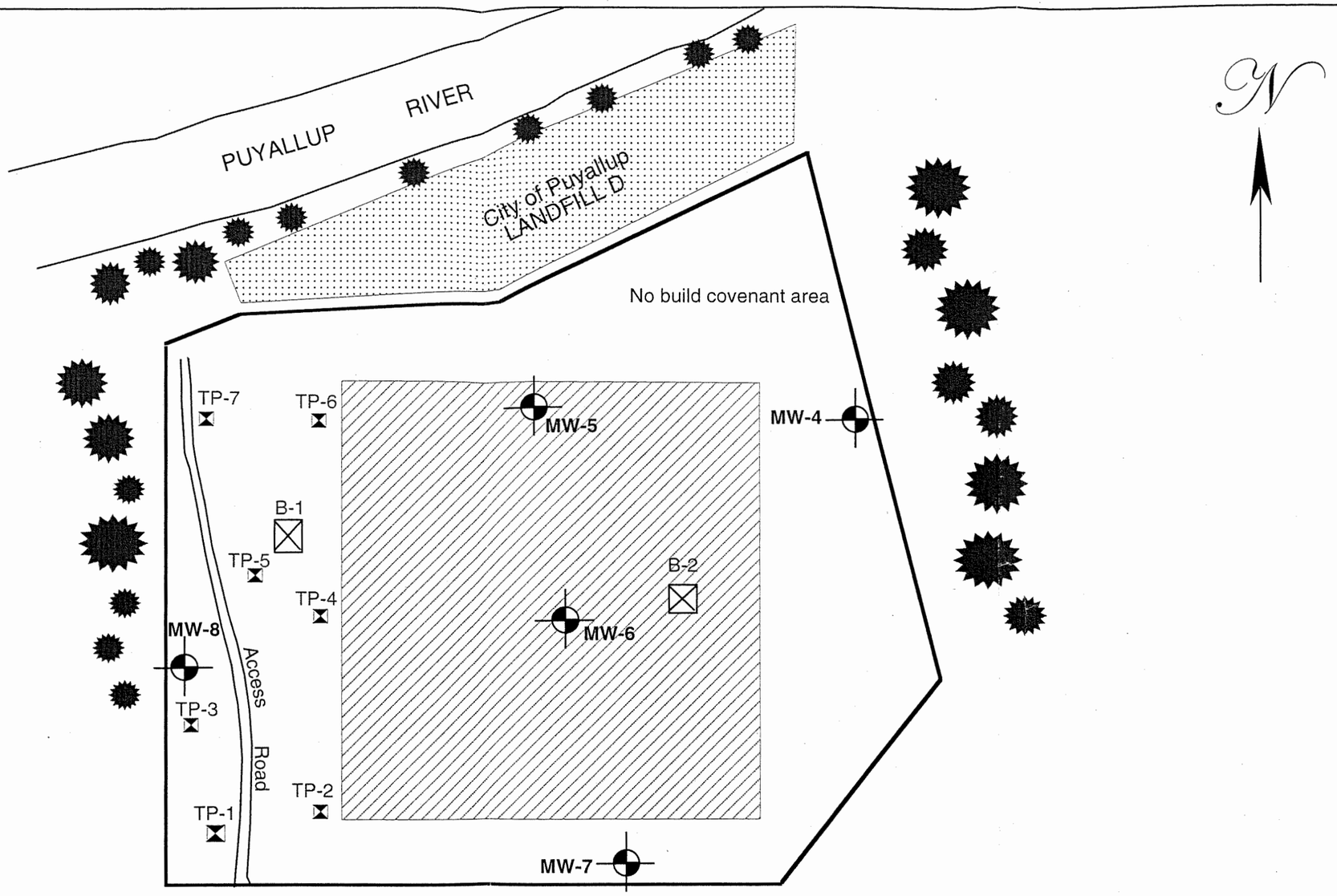
LEGEND

- Approximate test pit location
- Approximate test boring location
- Monitoring Well
- Site Boundary
- Landfill
- Road
- Trees and other vegetation
- Cropland



EAST MAIN AVENUE

Barovic Property 1600 East Main Avenue Puyallup, Washington		**SITE PLAN**		
		PROJECT NO.	DATE	APPROVED BY
For: American Property Development, Inc.		KF0630361	10-29-03	A.X.H.
Figure A-2	***Scale: not to scale***	Note:		

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Appendix B

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS				DESCRIPTION	
COARSE GRAINED SOILS more than 50% retained on #200 sieve	GRAVELS more than 50% coarse fraction is larger than No. 4 sieve	Gravels with less than 5% fines		GW	Well graded gravels, gravel-sand mixtures
				GP	Poorly graded gravels, gravel-sand mixtures
		Gravels with more than 12% fines		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS more than 50% coarse fraction is smaller than No. 4 sieve	Sands with less than 5% fines		SW	Well graded sands, gravelly sands
				SP	Poorly graded sands, gravelly sands
		Sands with more than 12% fines		SM	Silty sands, sand-silt mixtures
				SC	Clayey sands, sand-clay mixtures
FINE GRAINED SOILS more than 50% passing #200 sieve	SILTS AND CLAYS Liquid Limit less than 50			ML	Inorganic silts & very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, or lean clays
				OL	Organic clays and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid Limits greater than 50			MH	Inorganic silts, micaceous or diatomacious fine, sandy or silty soils, elastic silts
				CH	Inorganic clays of high plasticity, fat clays
				OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS				PT	Peat and other highly organic soils
UNCONTROLLED FILL					Uncontrolled, with highly variable constituents

LEGEND

SAMPLE		SYMBOL	
	SPLIT SPOON SAMPLER	∇	GROUNDWATER TABLE
	SHELBY TUBE SAMPLER	q_u	PENETROMETER READING TSF (*tons per square foot*)

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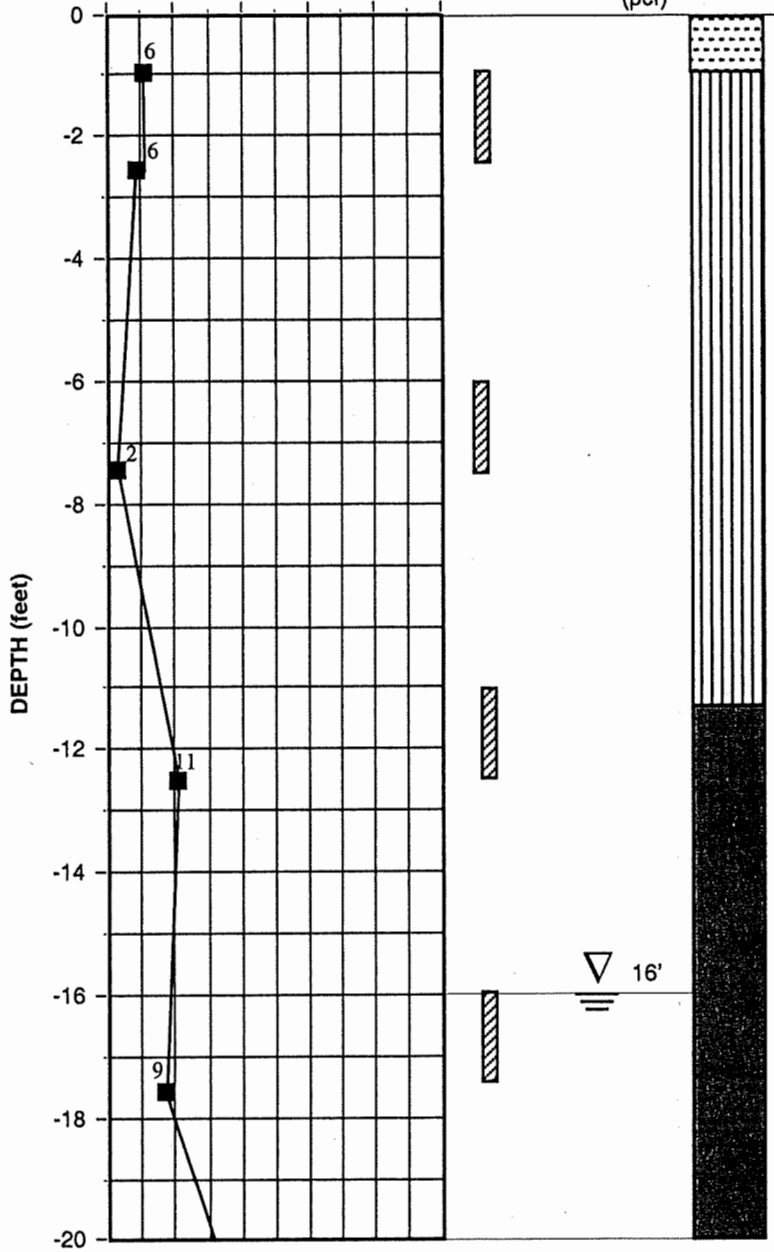
SOIL CLASSIFICATION & LEGEND

Figure B-0

STANDARD PENETRATION TEST B-1	SOIL DESCRIPTION AND CLASSIFICATION



Y =
X =
Surface Elevation ≈

TOPSOIL (OL):
Silty soil, brown, moist, with roots.

SILT (ML):
Sand, very fine, brown, moist, loose.

Clayey silt, brown, moist, soft to stiff.

$q_u \approx 1.75$ - 2.25 tsf

SAND (SP):
Sand, brown, coarse grained, moist to very wet, poorly graded, medium dense.

CONTINUED ON NEXT PAGE

Notes:

Project No. KF0630361	Date 10-22-03	**LOG OF TEST BORING**	Approved by AH	*Figure B-1*

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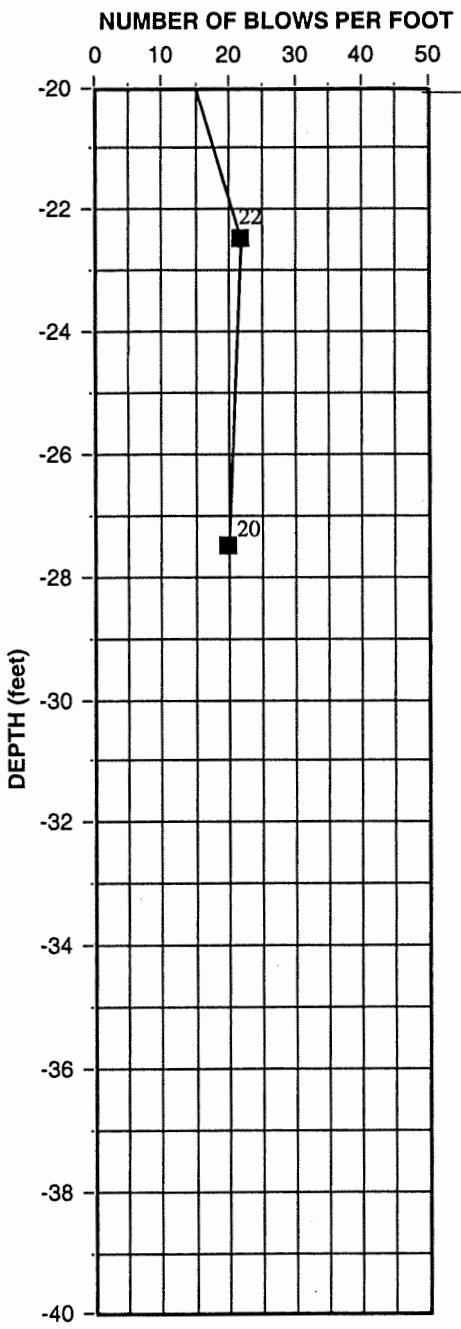
STANDARD PENETRATION TEST B-1	SOIL DESCRIPTION AND CLASSIFICATION



Moisture Content (%)

Unit Weight (pcf)

Y =
X =
Surface Elevation ≈

SAND (SW):
Gravelly sand, brown-gray, well graded, wet, dense.

Boring terminated at 27.5´

Notes:

Project No. KF0630361	Date 10-22-03	**LOG OF TEST BORING**	Approved by AH	*Figure B-1b*

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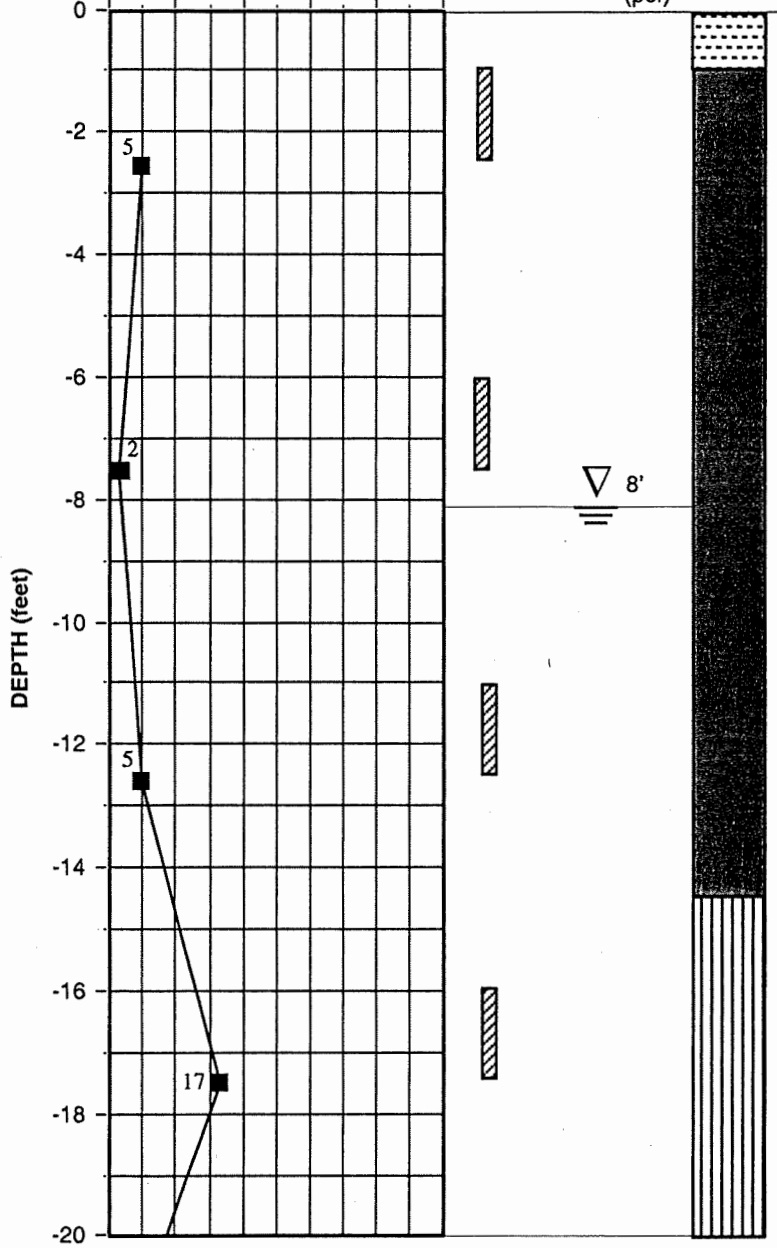
STANDARD PENETRATION TEST B-2	SOIL DESCRIPTION AND CLASSIFICATION



Y =
X =
Surface Elevation ≈

TOPSOIL (OL):
Silty soil, brown, moist, with roots.

SAND (SP):
Sand, brown, medium grained, poorly graded, moist, loose.

Sand, brown, coarse grained, poorly graded, wet, loose.

SILT (ML):
Clayey silt, gray, wet, stiff to very stiff .

$q_u \approx 1.00$ - 2.25 tsf

CONTINUED ON NEXT PAGE

Notes:

Project No. KF0630361	Date 10-22-03	**LOG OF TEST BORING**	Approved by AH	*Figure B-2*

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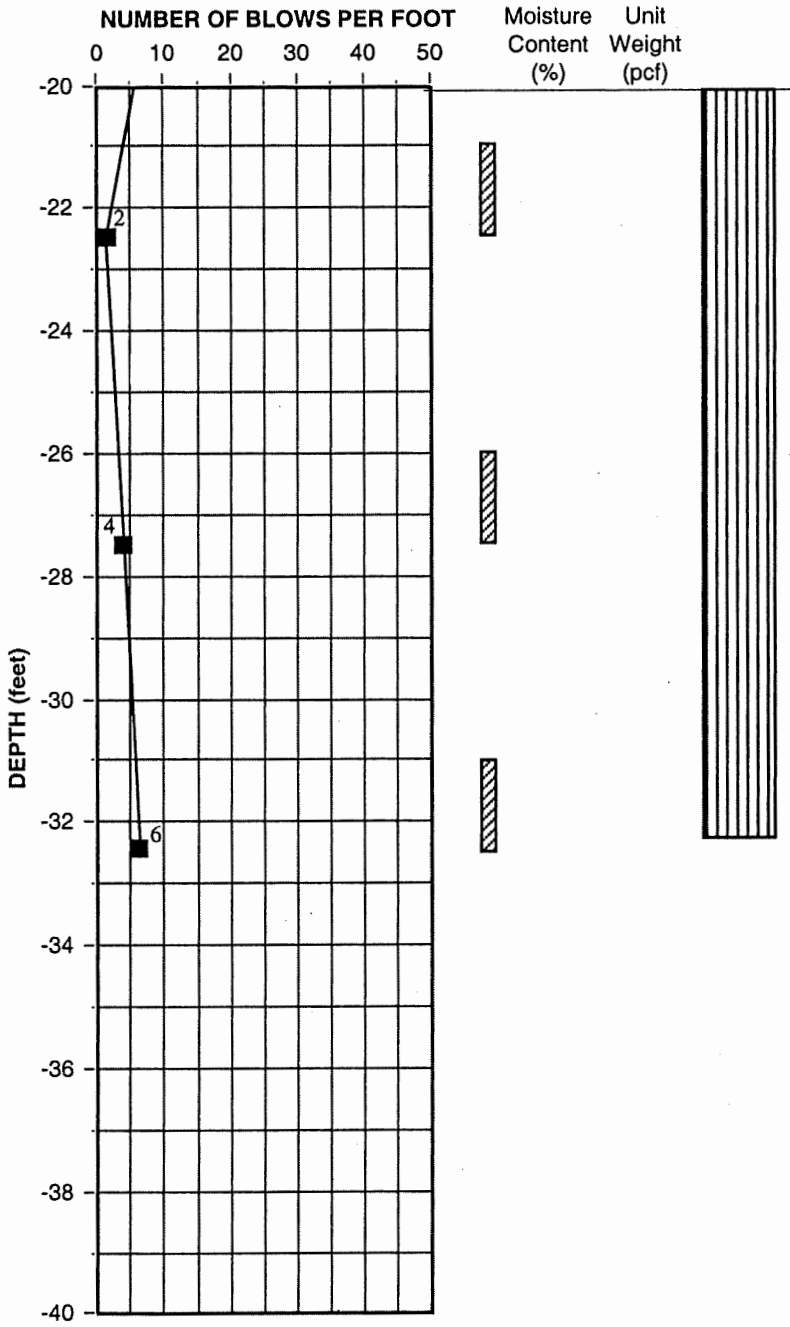
STANDARD PENETRATION TEST B-2	SOIL DESCRIPTION AND CLASSIFICATION



Y =
X =
Surface Elevation ≈

Clayey silt, gray-blue, wet, soft to medium.

Clayey silt, gray-blue, wet, stiff .

$q_u \approx 1.5$ tsf

Boring terminated at 32.5´

Notes:

Project No. KF0630361	Date 10-22-03	**LOG OF TEST BORING**	Approved by AH	*Figure B-2b*

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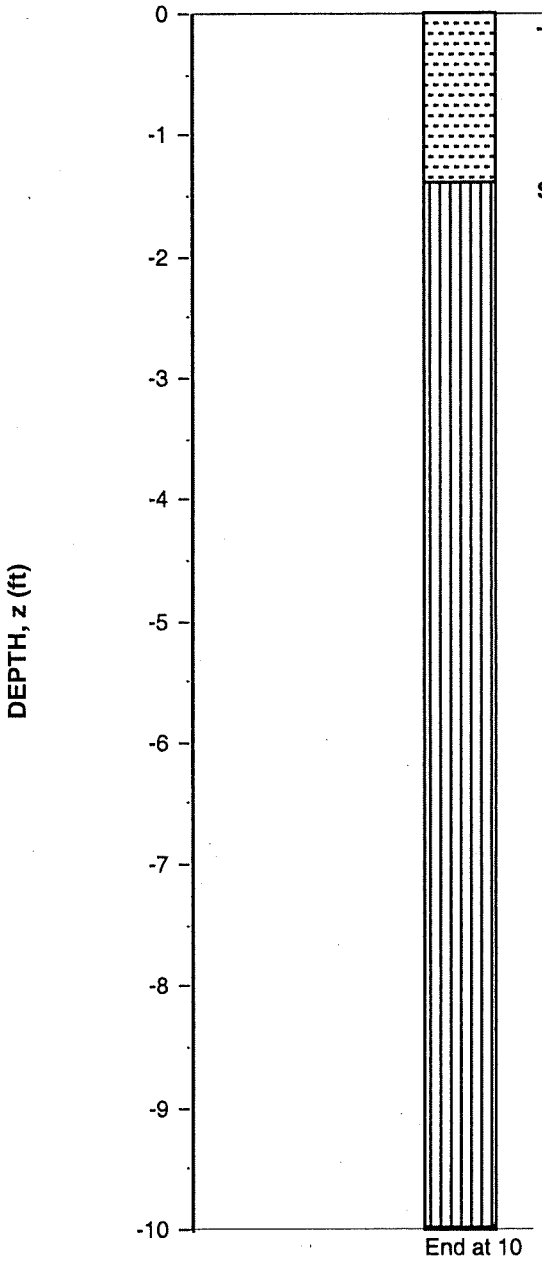
TEST PIT #1	Surface Elevation ≈ X = Y =	SOIL DESCRIPTION AND CLASSIFICATION



TOPSOIL (OL)
Silty soil, brown, dry, with roots.

SILT (ML)
Sand, very fine, brown, moist, loose.

Clayey silt, brown to gray, moist, soft to stiff.

Notes:

Project No. KF0630361	Date 07-1-03	Approved by AH	*Figure B-3*

Barovic Property
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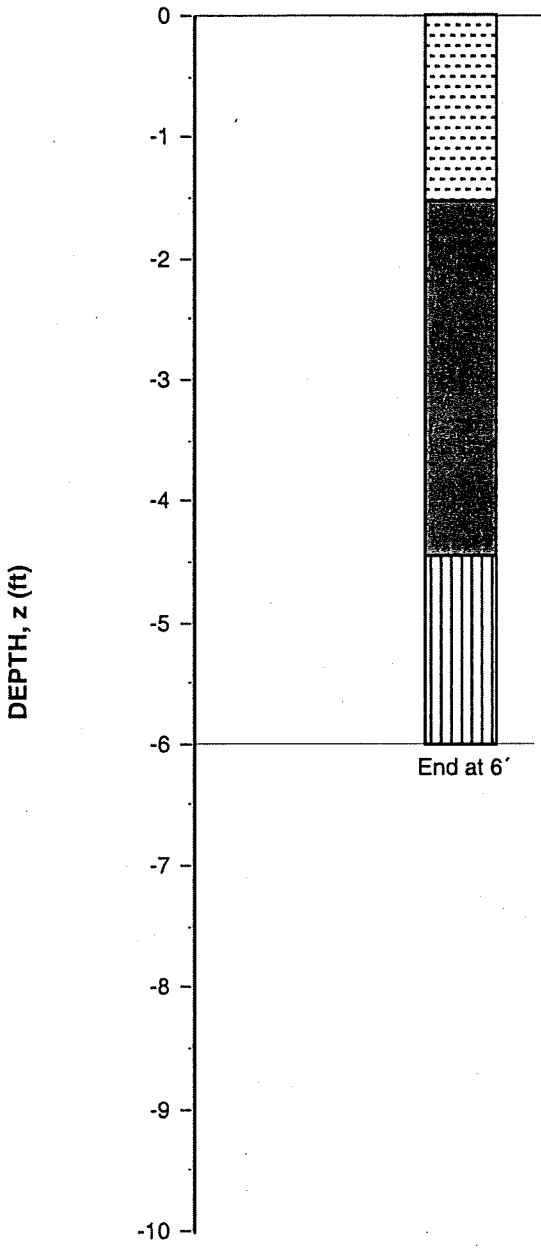
TEST PIT #2	Surface Elevation ≈ X = Y =	SOIL DESCRIPTION AND CLASSIFICATION



TOPSOIL (OL):
Silty soil, brown, dry, with roots.

SAND (SP-SM):
Silty sand, very fine, gray-brown, damp, poorly graded, loose.

SILT (ML):
Clayey silt, gray, damp, soft to stiff.

Notes:

Project No. KF0630361	Date 07-1-03	Approved by AH	*Figure B-4*

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Puyallup, Washington

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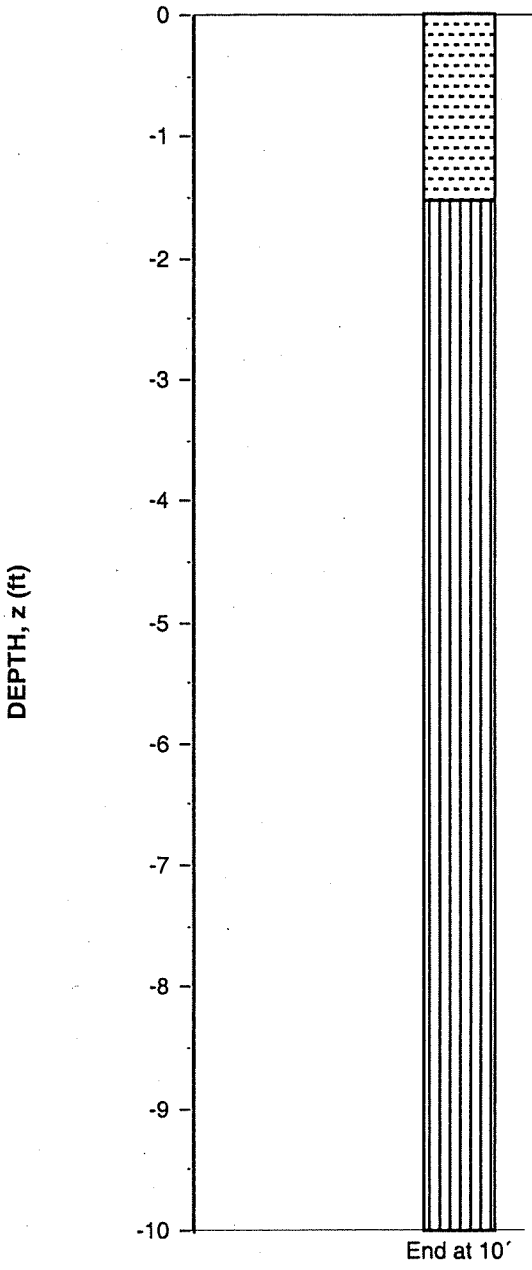
TEST PIT #3	Surface Elevation ≈ X = Y =	SOIL DESCRIPTION AND CLASSIFICATION



TOPSOIL (OL):
Silty soil, brown, dry, with roots.

SILT (ML):
Sand, very fine, brown, moist, loose.

Clayey silt, brown, moist, soft to stiff.

Notes:

Project No. KF0630361	Date 07-1-03	Approved by AH	*Figure B-5*

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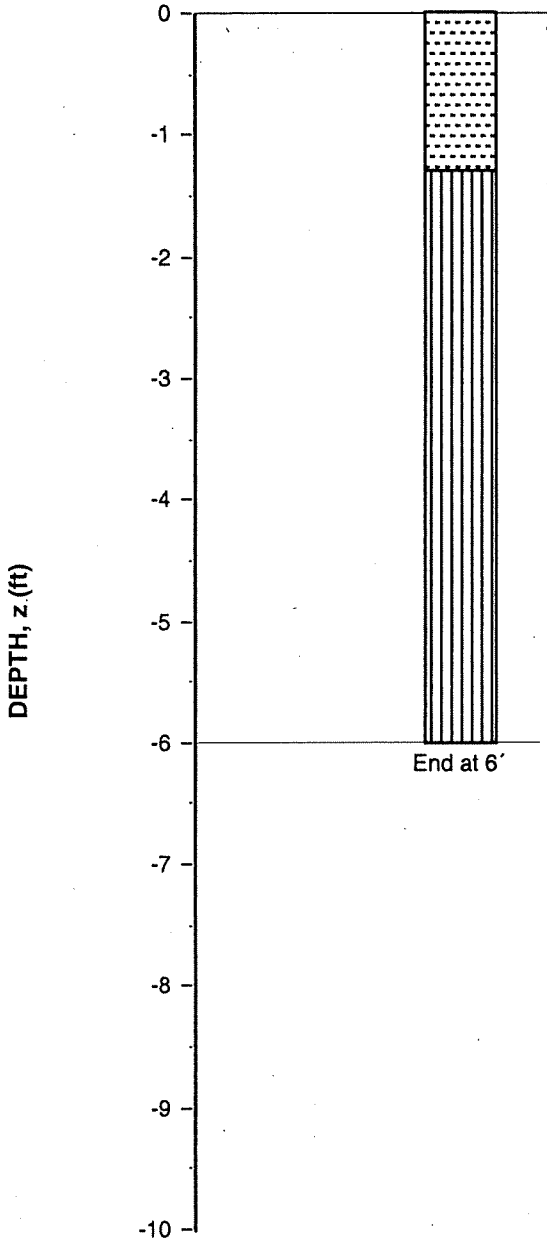
TEST PIT #4	Surface Elevation ≈ X = Y =	SOIL DESCRIPTION AND CLASSIFICATION



TOPSOIL (OL):
Silty soil, brown, moist, with roots.

SILT (ML):
Sand, very fine, brown, moist, loose.

Notes:

Project No. KF0630361	Date 07-1-03	Approved by AH	*Figure B-6*

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Puyallup, Washington

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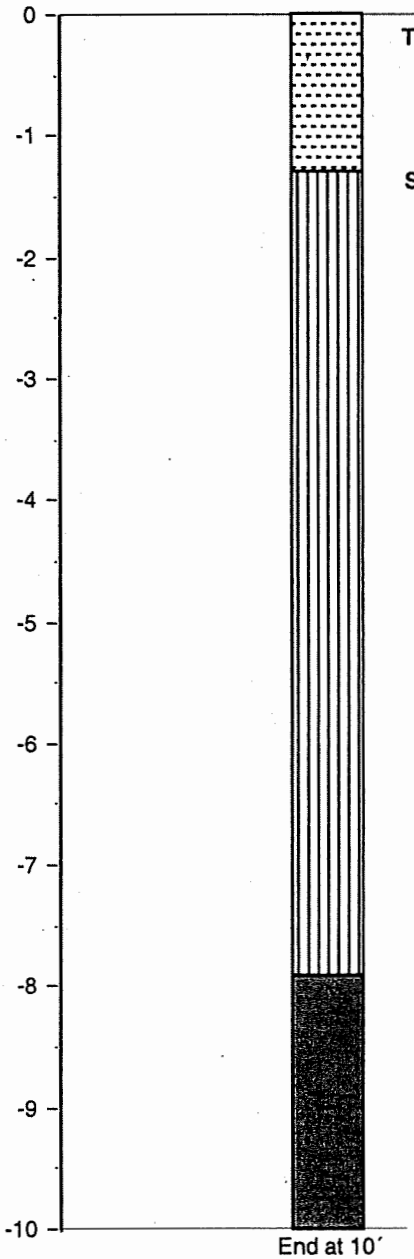
TEST PIT #5	Surface Elevation ≈ X = Y =	SOIL DESCRIPTION AND CLASSIFICATION



TOPSOIL (OL):
Silty soil, brown, damp, with roots

SILT (ML):
Brownand gray silty sand; fine grained, poorly sorted, moist.

SAND (SP):
Sand, brown, coarse grained, moist to very wet, poorly graded, medium dense.

Notes:

Project No. KF0630361	Date 07-1-03	Approved by AH	*Figure B-7*

Barovic Property
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Puyallup, Washington

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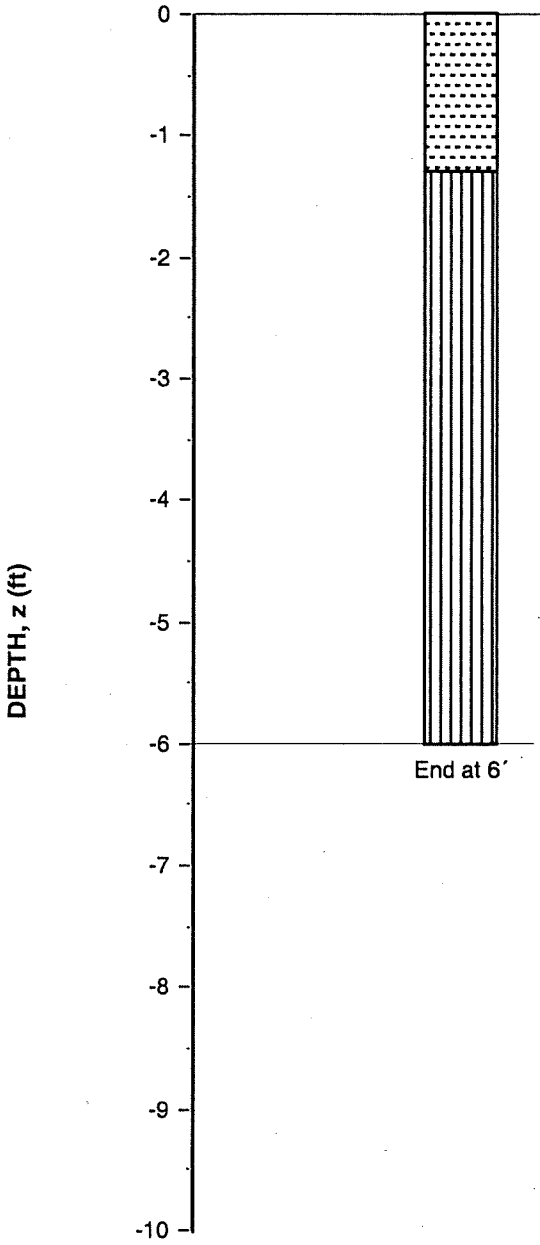
TEST PIT #6	Surface Elevation ≈ X = Y =	SOIL DESCRIPTION AND CLASSIFICATION



TOPSOIL (OL):
Silty soil, brown, damp, with roots

SILT (ML):
Sand, very fine,brown, moist, loose.

Clayey silt, gray -brown, moist, soft to stiff.

Notes:

Project No. KF0630361	Date 07-1-03	Approved by AH	*Figure B-8*

Barovic Property
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Puyallup, Washington

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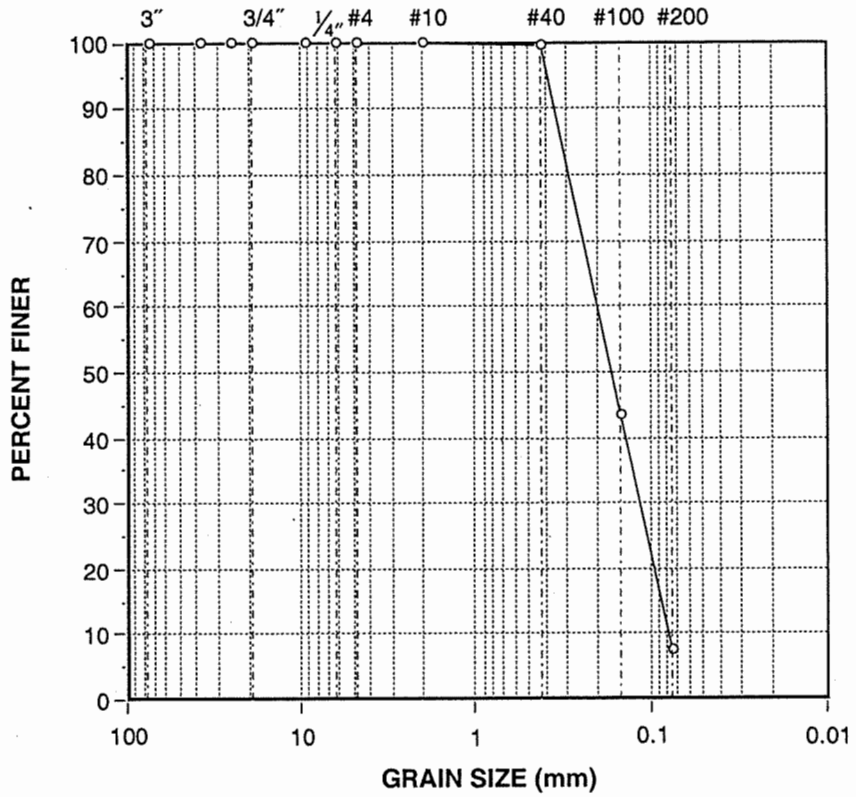
Grain Size Distribution



SAMPLE SOURCE: Test Pit #2
SAMPLE DEPTH: 3′
SOIL TYPE: Silty, Poorly Graded Sand (SP-SM)

ASTM D 2487

SIEVE SIZE	% PASSING
3″	100.00
1-1/2″	100.00
1″	100.00
3/4″	100.00
3/8″	100.00
1/4″	100.00
#4	100.00
#10	100.00
#20	100.00
#40	99.52
#60	
#100	43.25
#200	7.30

Project No. KF0630361	Date 7-2-03	**LABORATORY TESTS**	Approved by AH	*Figure C-1*

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Puyallup, Washington

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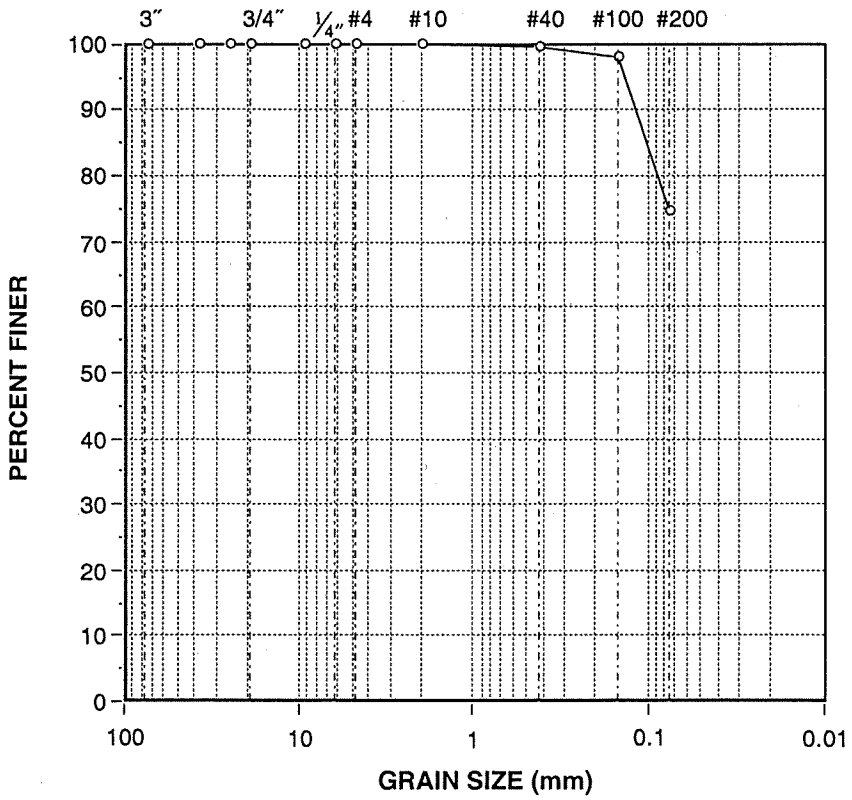
Grain Size Distribution



SIEVE SIZE	% PASSING
3″	100.00
1-1/2″	100.00
1″	100.00
3/4″	100.00
3/8″	100.00
1/4″	100.00
#4	100.00
#10	100.00
#20	100.00
#40	99.60
#60	
#100	97.96
#200	74.41

SAMPLE SOURCE: Test Pit #4
SAMPLE DEPTH: 4′
SOIL TYPE: Inorganic Silt (ML)

ASTM D 2487

Project No. KF0630361	Date 7-2-03	**LABORATORY TESTS**	Approved by AH	*Figure C-2*

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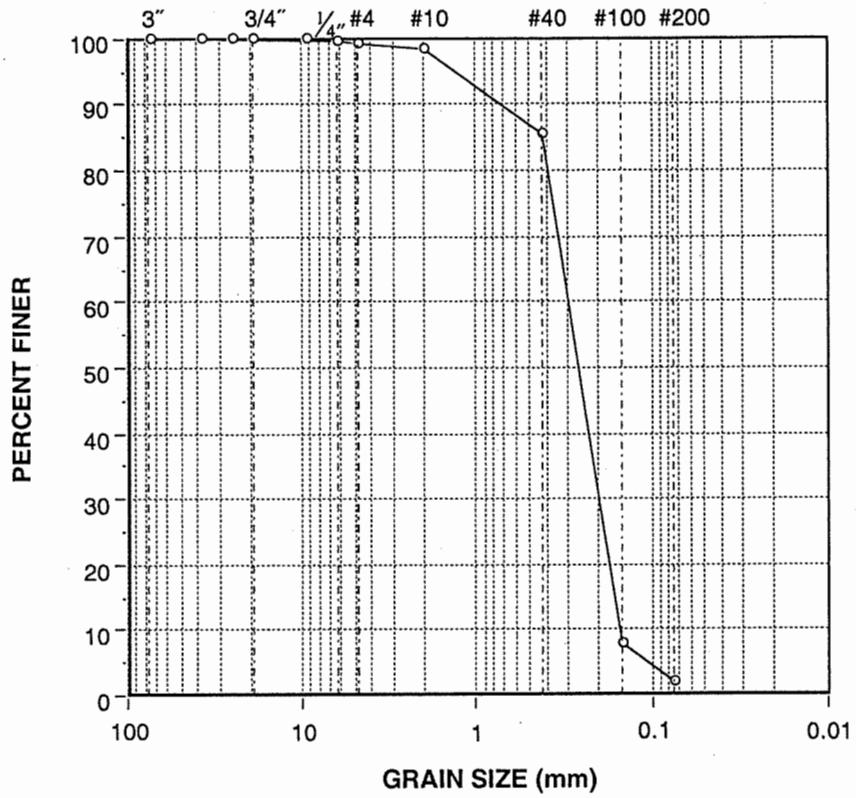
Grain Size Distribution



SAMPLE SOURCE: Test Boring B-2
SAMPLE DEPTH: 7.5′
SOIL TYPE: Sand, poorly graded (SP)

ASTM D 2487

SIEVE SIZE	% PASSING
3″	100.00
1-1/2″	100.00
1″	100.00
3/4″	100.00
3/8″	100.00
1/4″	99.6
#4	99.24
#10	98.41
#20	
#40	85.54
#60	
#100	7.8
#200	2.08

Project No. KF0630361	Date 10-22-03	**LABORATORY TESTS**	Approved by AH	*Figure C-3*

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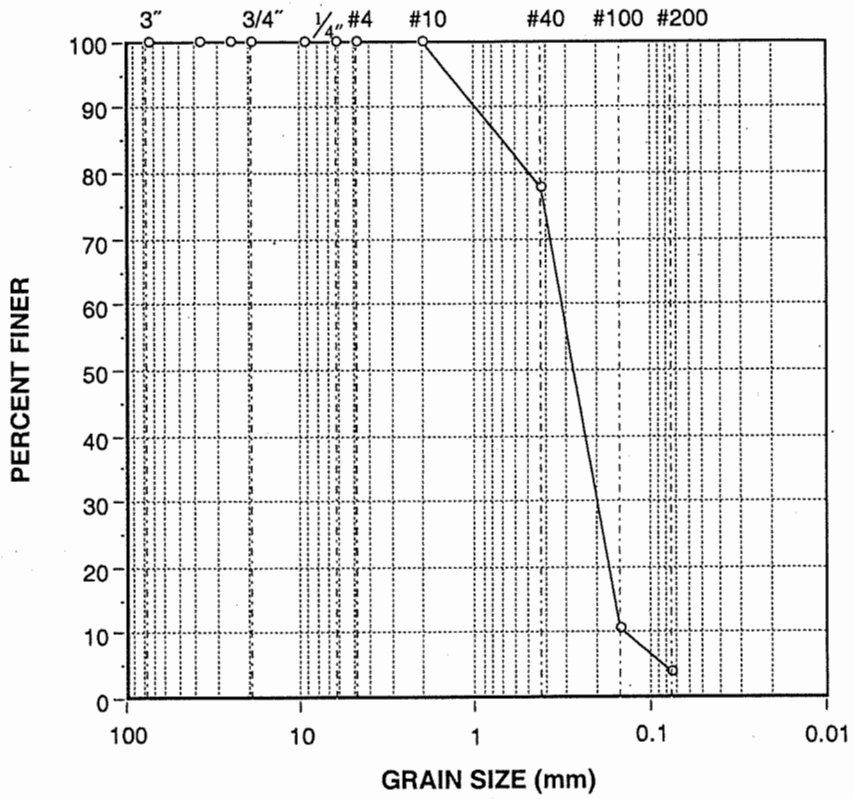
Grain Size Distribution



SAMPLE SOURCE: Test Boring B-1
SAMPLE DEPTH: 17.5′
SOIL TYPE: Sand, poorly graded (SP)

ASTM D 2487

SIEVE SIZE	% PASSING
3″	100.00
1-1/2″	100.00
1″	100.00
3/4″	100.00
3/8″	100.00
1/4″	100.00
#4	100.00
#10	99.83
#20	
#40	77.72
#60	
#100	10.51
#200	4.0

Project No.KF0630361	Date 10-22-03	**LABORATORY TESTS**	Approved by AH	*Figure C-4*

Barovic Property
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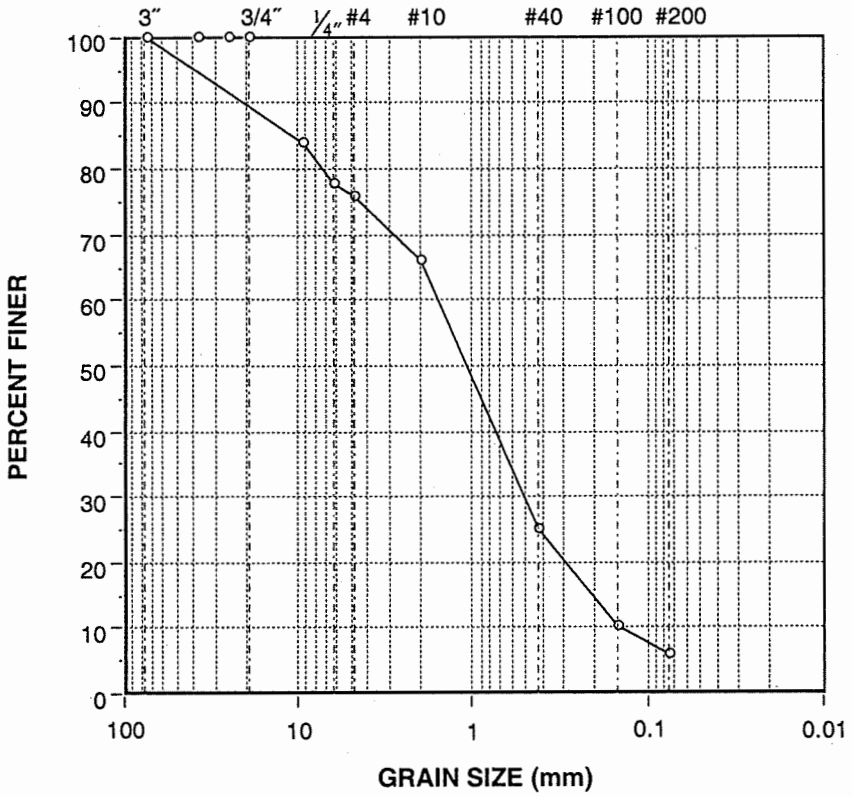
Grain Size Distribution



SAMPLE SOURCE: Test Boring B-1
SAMPLE DEPTH: 27.5 ′
SOIL TYPE: Gravelly sand, well graded (SW)

ASTM D 2487

SIEVE SIZE	% PASSING
3″	100.00
1-1/2″	100.00
1″	100.00
3/4″	100.00
3/8″	83.9
1/4″	77.72
#4	75.66
#10	66.0
#20	
#40	25.0
#60	
#100	9.96
#200	5.75

Project No.KF0630361	Date 10-22-03	**LABORATORY TESTS**	Approved by AH	*Figure C-5*

Barovic Property
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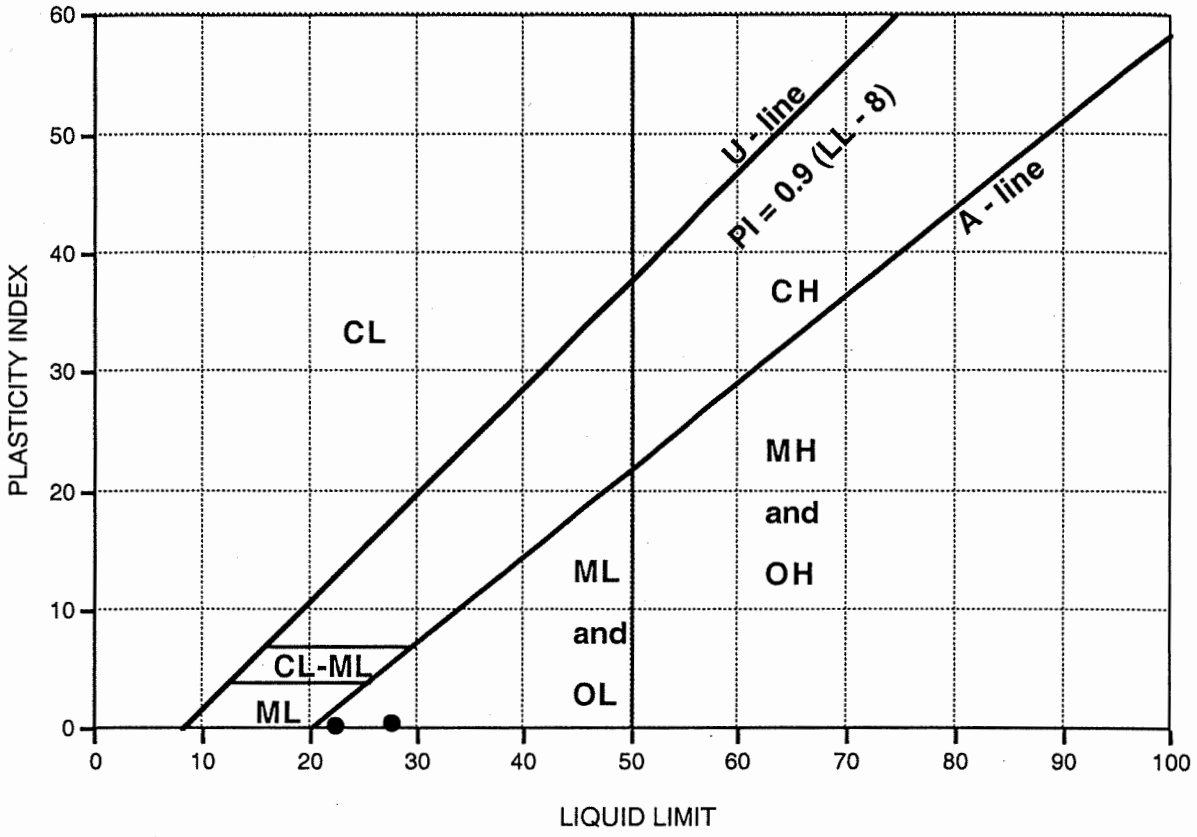

ATTERBERG LIMITS

Sample Depth (feet)	Plastic Limit, PL	Liquid Limit, LL	Plasticity Index, PI	Liquidity Index, LI
7.5	27.65	28.1	0.45	~
22.5	22.40	22.0	0.40	~

where: $PI = LL - PL$

ω_n = natural water content of the soil.

$$LI = \frac{\omega_n - PL}{PI}$$

Project No. KF0630361	Date 10-28-03	**LABORATORY TEST**	Approved by AH	*Figure C-6*

Barovic Property
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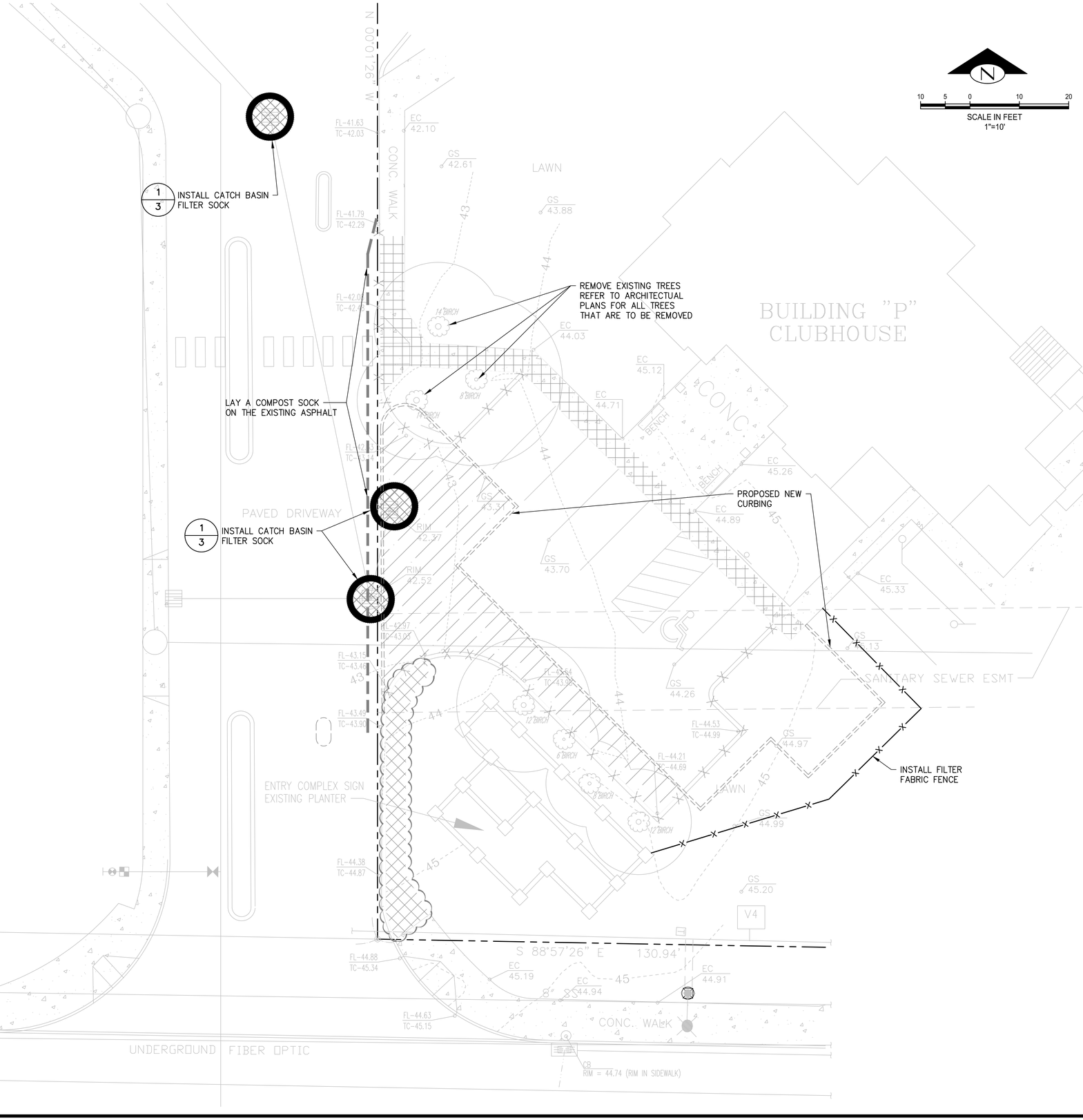
APPENDIX C



NOTES:

SILT FENCE

CATCH BASIN PROTECTION

COMPOST SOCK

EXISTING ASPAHLT TO BE REMOVED

EXISTING CONCRETE SIDEWALK TO BE REMOVED

EXISTING CURB TO REMOVED

EROSION CONTROL NOTES:

1. ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING (253) 841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE MEETING.
2. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A 'PUNCH LIST' PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE 'STANDARD SPECIFICATIONS'), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HERINAFTER REFERRED TO AS THE 'CITY STANDARDS').
4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
5. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE CITY ENGINEER PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.
6. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS HOURS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.
7. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLANS SHALL BE CLEARLY FLAGGED IN THE FIELD AND OBSERVED DURING CONSTRUCTION.
8. ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION OF THE EROSION CONTROL FACILITIES PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE CITY, UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ONSITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE PERMITTEE.
9. THE EROSION AND SEDIMENTATION CONTROL SYSTEM FACILITIES DEPICTED ON THESE PLANS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITTEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.
10. APPROVAL OF THESE PLANS IS FOR GRADING, TEMPORARY DRAINAGE, EROSION AND SEDIMENTATION CONTROL ONLY. IT DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STORM DRAINAGE DESIGN, SIZE OR LOCATION OF PIPES, RESTRICTORS, CHANNELS, OR RETENTION FACILITIES.
11. ANY DISTURBED AREA WHICH HAS BEEN STRIPPED OF VEGETATION AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 30 DAYS OR MORE, MUST BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING, OR OTHER APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION. GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF APRIL THROUGH SEPTEMBER INCLUSIVE. SEEDING MAY PROCEED OUTSIDE THE SPECIFIED TIME PERIOD WHENEVER IT IS IN THE INTEREST OF THE PERMITTEE BUT MUST BE AUGMENTED WITH MULCHING, NETTING, OR OTHER TREATMENT APPROVED BY THE CITY.
12. IN CASE EROSION OR SEDIMENTATION OCCURS TO ADJACENT PROPERTIES, ALL CONSTRUCTION WORK WITHIN THE DEVELOPMENT THAT WILL FURTHER AGGRAVATE THE SITUATION MUST CEASE, AND THE OWNER/CONTRACTOR WILL IMMEDIATELY COMMENCE RESTORATION METHODS. RESTORATION ACTIVITY WILL CONTINUE UNTIL SUCH TIME AS THE AFFECTED PROPERTY OWNER IS SATISFIED.
13. NO TEMPORARY OR PERMANENT STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN CRITICAL AREAS OR ASSOCIATED BUFFERS, OR THE CRITICAL ROOT ZONE FOR VEGETATION PROPOSED FOR RETENTION.

CONSTRUCTION SEQUENCE

1. HOLD A PRECONSTRUCTION MEETING WITH THE CITY AND OBTAIN REQUIRED PERMITS.
2. ESTABLISH CLEARING AND GRADING LIMITS.
3. CONSTRUCT PROTECTION DEVICES FOR CRITICAL AREAS AND SIGNIFICANT TREES PROPOSED FOR RETENTION.
4. SCHEDULE AN EROSION CONTROL INSPECTION WITH THE CITY.
5. GRADING ACTIVITIES CAN COMMENCE AFTER ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

APPROVED

BY_____
CITY OF PUYALLUP
ENGINEERING SERVICES

DATE_____

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1-800-935-0508
info@brhinc.com
WWW.BRHINC.COM

NO	REVISION	DATE
	CITY REVISIONS	1/16/2022

EROSION CONTROL PLAN
RIVER TRAIL APARTMENTS
1617 EAST MAIN AVENUE
PUYALLUP PIERCE CO WASHINGTON

drawn by	checked by
WPG	TFD
scale	date
AS NOTED	11/16/22
job no.	
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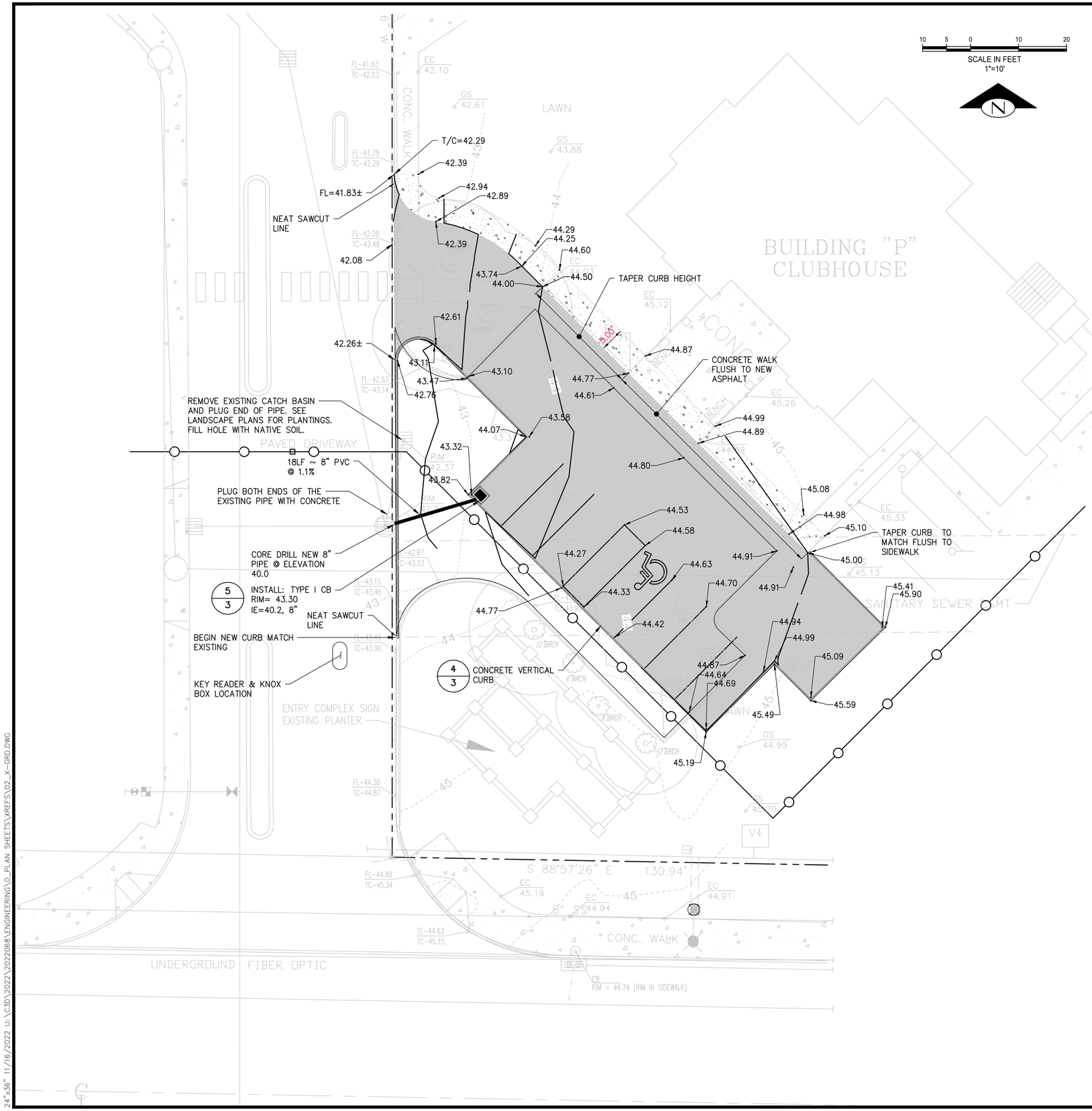

LEGEND:

- NEW ASPHALT REPLACEMENT MATCH EXISTING IN KIND — 3/3
- NEW CONCRETE SIDEWALK
- NEW CONCRETE CURB — 4/3
- NEW FENCE PER ARCH PLANS
- NEW TYPE I CATCH BASIN — 5/3

CITY OF PUYALLUP GENERAL NOTES:

1. ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE APPROVED ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES AT (253-841-5568) TO SCHEDULE THE MEETING. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN SET OF APPROVED PLANS AT THE MEETING.
2. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE 'STANDARD SPECIFICATIONS'), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE 'CITY STANDARDS').
4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
5. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE CITY PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.
6. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.
7. ANY STRUCTURE AND/OR OBSTRUCTION THAT REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.
8. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE TRUE ELEVATIONS AND LOCATIONS OF HIDDEN UTILITIES. ALL VISIBLE ITEMS SHALL BE THE ENGINEER'S RESPONSIBILITY.
9. THE CONTRACTOR SHALL INSTALL, REPLACE, OR RELOCATE ALL SIGNS, AS SHOWN ON THE PLANS OR AS AFFECTED BY CONSTRUCTION, PER CITY STANDARDS.
10. POWER, STREET LIGHT, CABLE, AND TELEPHONE LINES SHALL BE IN A TRENCH LOCATED WITHIN A 10-FOOT UTILITY EASEMENT ADJACENT TO PUBLIC RIGHT-OF-WAY. RIGHT-OF-WAY CROSSINGS SHALL HAVE A MINIMUM HORIZONTAL SEPARATION FROM OTHER UTILITIES (SEWER, WATER, AND STORM) OF 5 FEET.
11. ALL CONSTRUCTION SURVEYING FOR EXTENSIONS OF PUBLIC FACILITIES SHALL BE DONE UNDER THE DIRECTION OF A WASHINGTON STATE LICENSED LAND SURVEYOR OR A WASHINGTON STATE LICENSED PROFESSIONAL CIVIL ENGINEER.
12. DURING CONSTRUCTION, ALL PUBLIC STREETS ADJACENT TO THIS PROJECT SHALL BE KEPT CLEAN OF ALL MATERIAL DEPOSITS RESULTING FROM ON-SITE CONSTRUCTION, AND EXISTING STRUCTURES SHALL BE PROTECTED AS DIRECTED BY THE CITY.
13. CERTIFIED RECORD DRAWINGS ARE REQUIRED PRIOR TO PROJECT ACCEPTANCE.
14. A NPDES STORMWATER GENERAL PERMIT MAY BE REQUIRED BY THE DEPARTMENT OF ECOLOGY FOR THIS PROJECT. FOR INFORMATION CONTACT THE DEPARTMENT OF ECOLOGY, SOUTHWEST REGION OFFICE AT (360)407-6300.
15. ANY DISTURBANCE OR DAMAGE TO CRITICAL AREAS AND ASSOCIATED BUFFERS, OR SIGNIFICANT TREES DESIGNATED FOR PRESERVATION AND PROTECTION SHALL BE MITIGATED IN ACCORDANCE WITH A MITIGATION PLAN REVIEWED AND APPROVED BY THE CITY'S PLANNING DIVISION. PREPARATION AND IMPLEMENTATION OF THE MITIGATION PLAN SHALL BE AT THE DEVELOPER'S EXPENSE.

APPROVED

BY_____
CITY OF PUYALLUP
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NO	REVISION	DATE
	CITY REVISIONS	11/16/2022

GRADING PLAN
RIVER TRAIL APARTMENTS
1617 EAST MAIN AVENUE
PUYALLUP PIERCE CO WASHINGTON

drawn by	checked by
WPG	TFD
scale	date
AS NOTED	11/16/22

job no. 2022068.00

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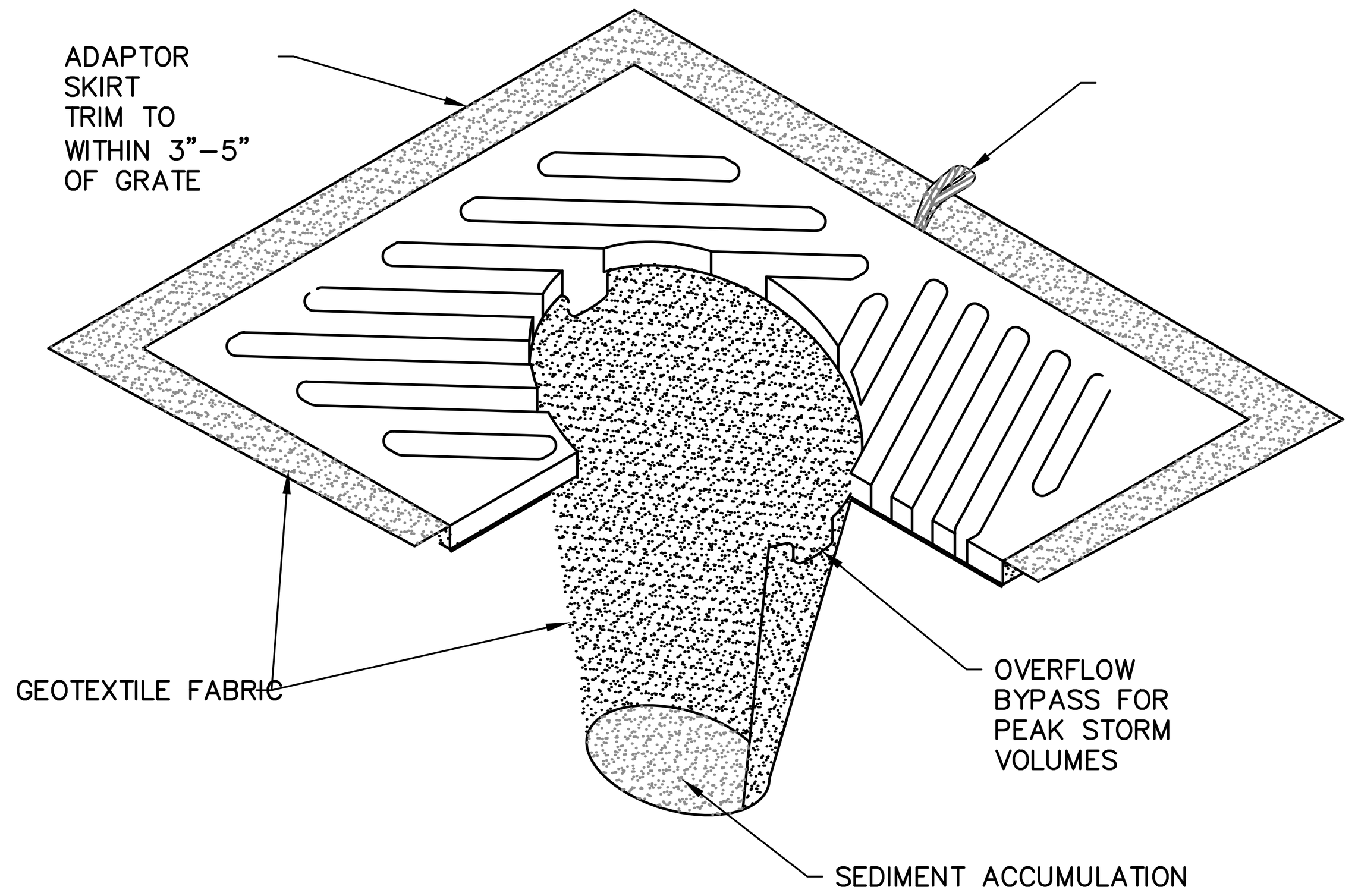
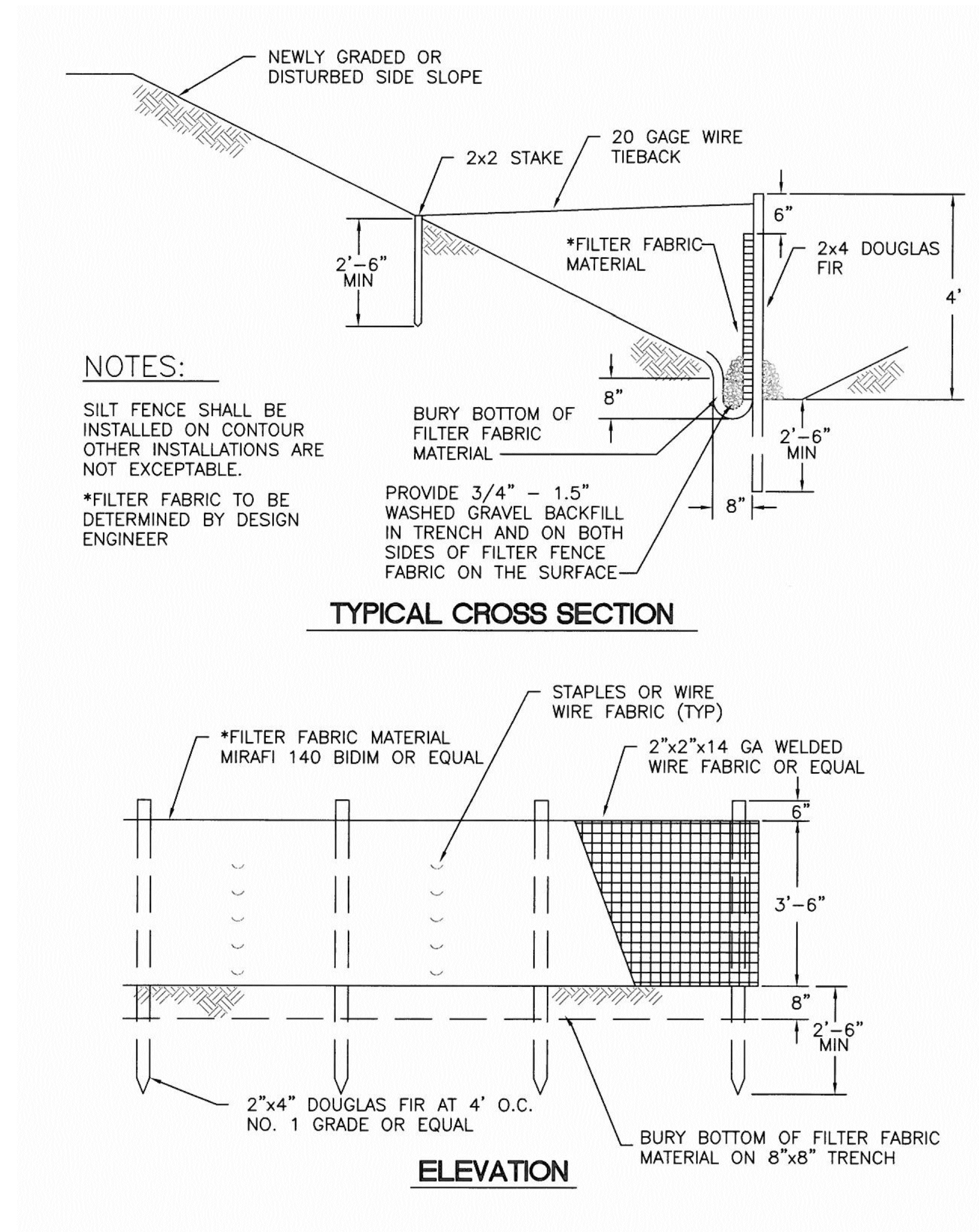


NOTES:

1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL .
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.

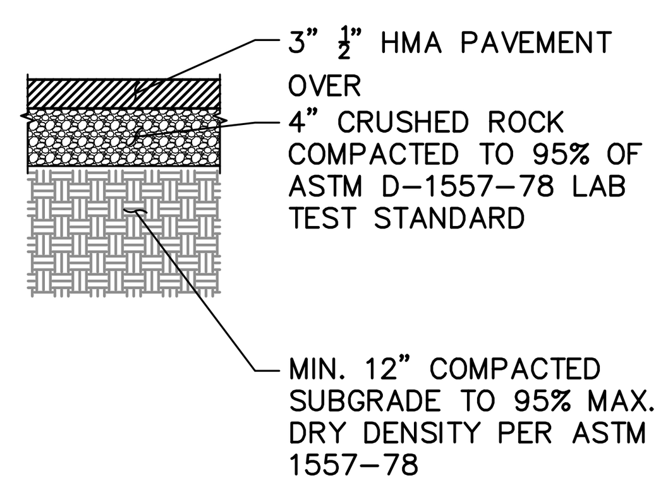
CATCH BASIN PROTECTION 1/–
NOT TO SCALE



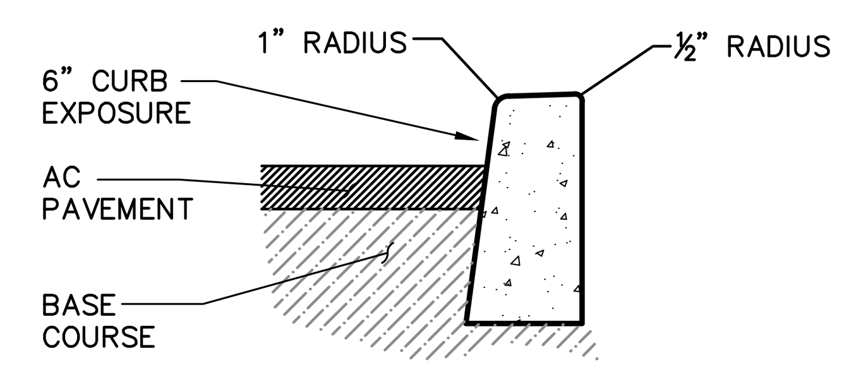
NOTES:

SILT FENCE SHALL BE INSTALLED ON CONTOUR OTHER INSTALLATIONS ARE NOT EXCEPTABLE.

*FILTER FABRIC TO BE DETERMINED BY DESIGN ENGINEER



PAVING SECTION 3/–
NOT TO SCALE

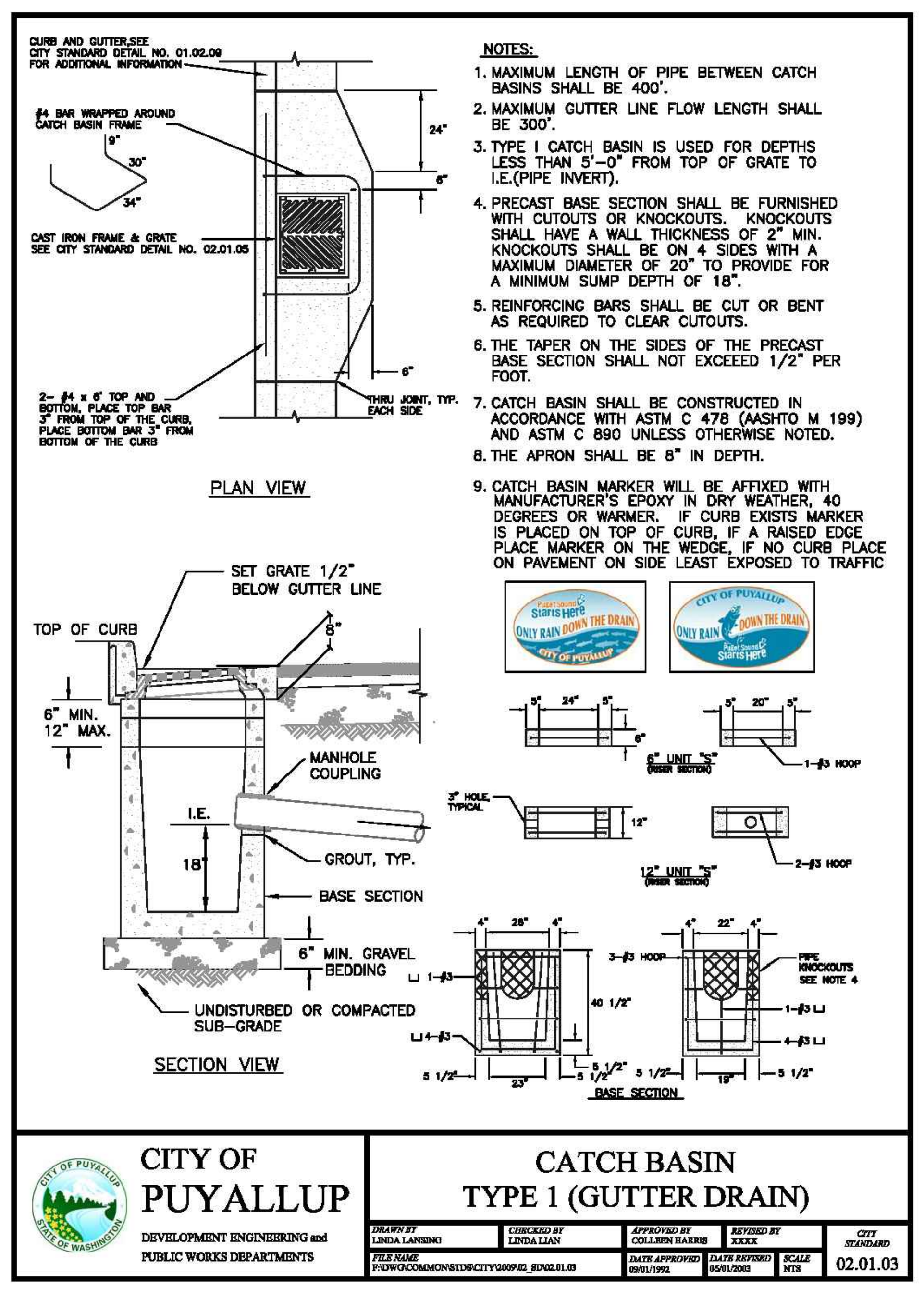


CONTRACTOR NOTE

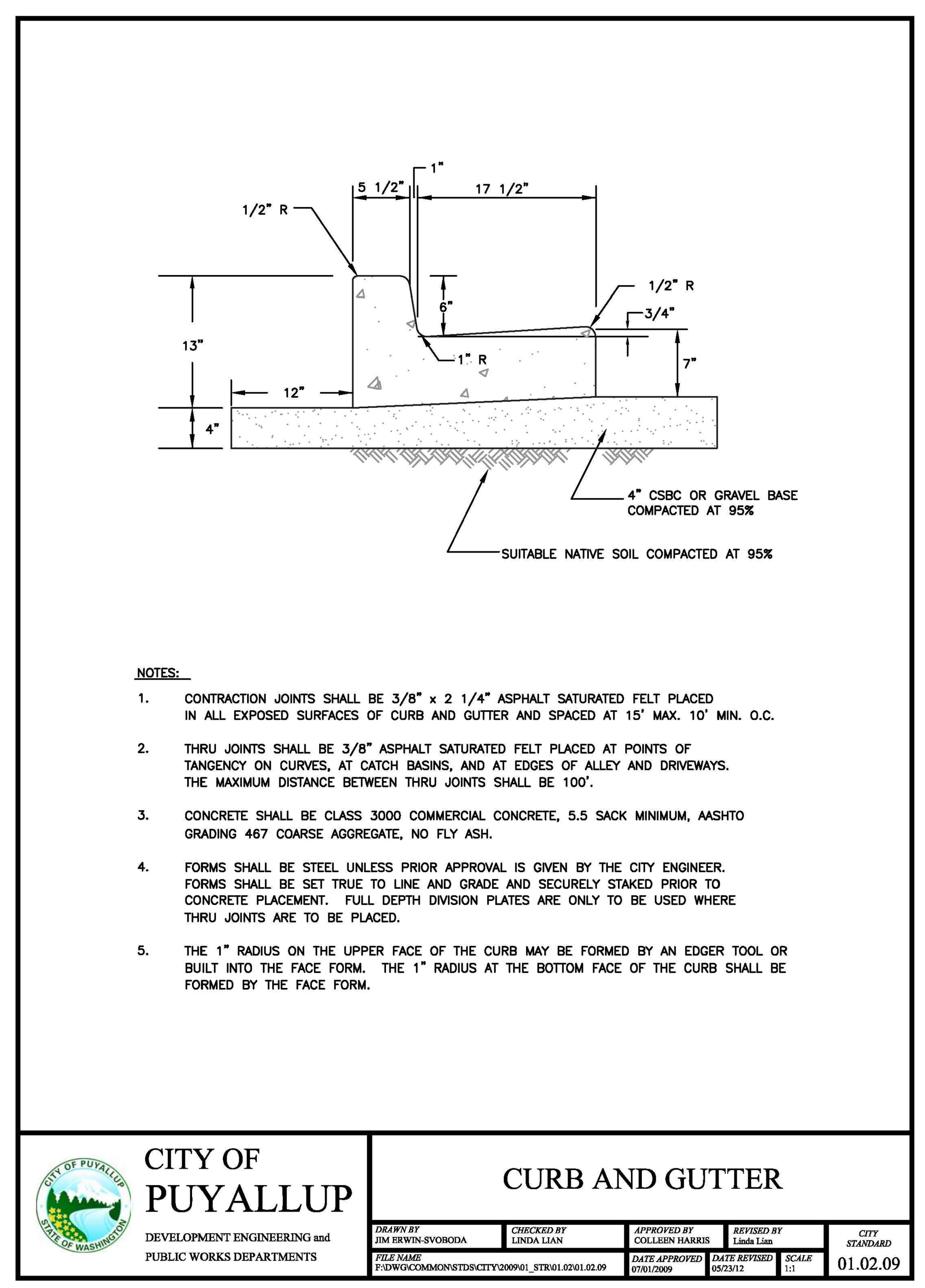
INSTALL MONOLITHIC CURB ADJECANT TO SIDEWALK.

CONCRETE VERTICAL CURB 4/–
NOT TO SCALE

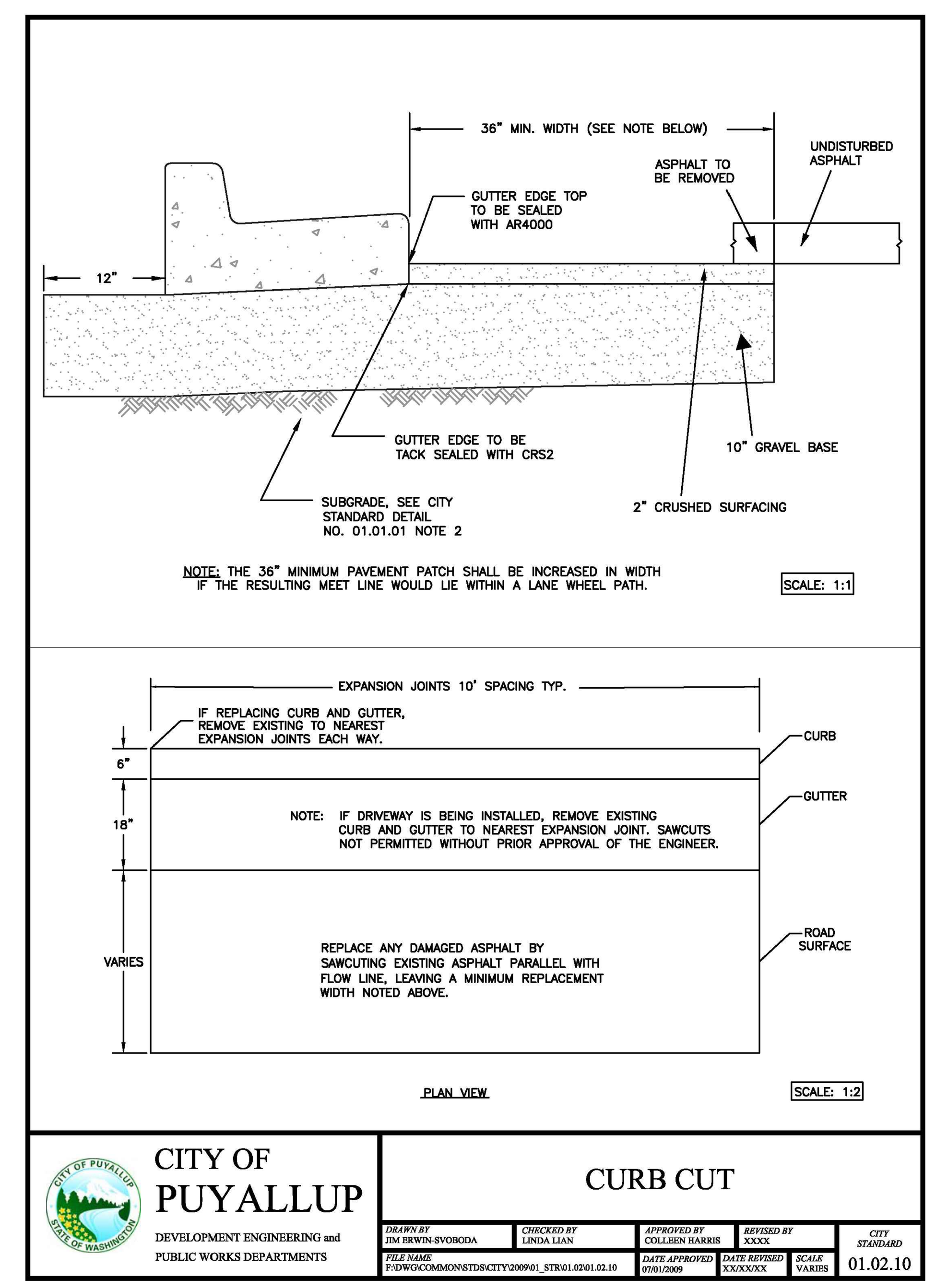
SILT FENCE 2/–
SCALE: NTS



TYPE I CATCH BASIN 5/–
NOT TO SCALE



CURB AND GUTTER 6/–
NOT TO SCALE



CURB CUT 7/–
NOT TO SCALE

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DETAIL SHEET
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