

prescribed setback area), maximum size (as stipulated by PMC 20.20.040(5) detached accessory buildings) and/or total quantity of permitted accessory structure(s) (as stipulated by PMC 20.20.010(2)) may be replaced, enlarged or modified in volume, area, or space; provided, that:

(a)Total or partial replacement of the nonconforming accessory structure in an R zone is permitted only if it involved the same or less extent of setback encroachment and/or total square footage, including no greater structural height, bulk or floor area than previously existed within a setback area, and the replacement is completed within one year of the demolition and the building to be replaced is an accessory structure in an R zone.

TO THE PROJECT ENGINEER UPON COMPLETION OF THE PROJECT

THIS PROJECT MUST BE STAKED PRIOR TO CONSTRUCTION BY THE DESIGN ENGINEER OR BY A LICENSED LAND SURVEYOR.

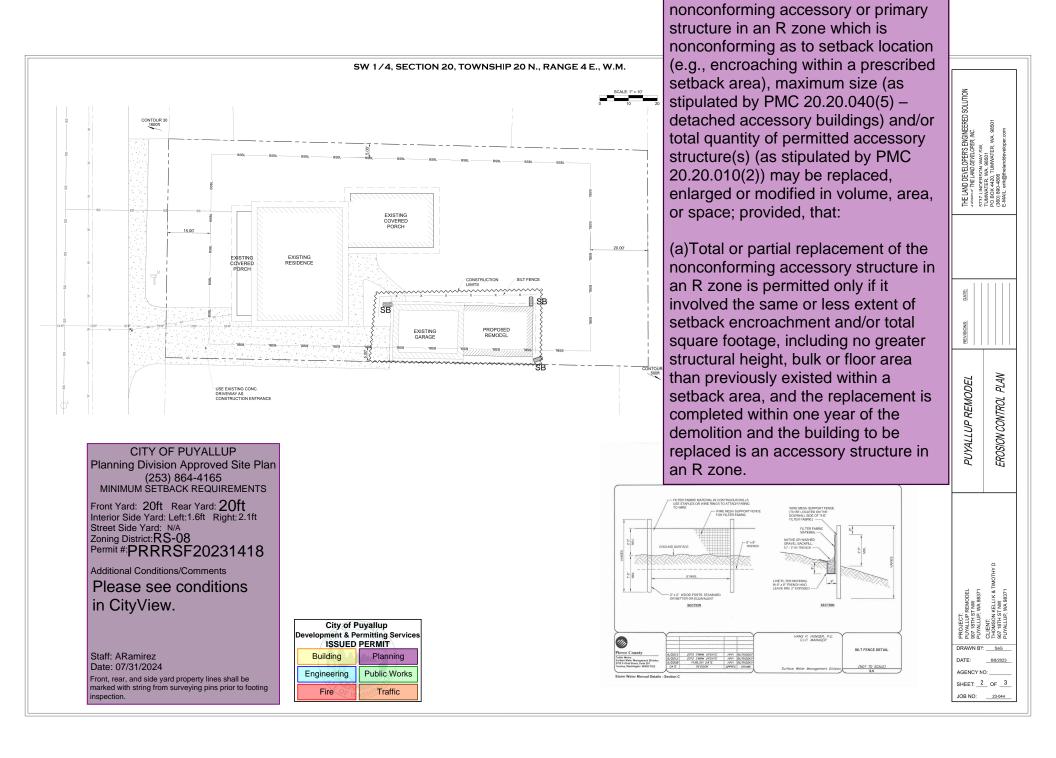
GS THAT SHALL INCLUDE, CLEARLY AND LEGIBLY MAR

CONTRACTOR AS-BUILT:

1 OF 3 SHEET

SHEET AND SITE PLAN

PUYALLUP REMODEL



Planning Condition: (2) A

SW 1/4, SECTION 20, TOWNSHIP 20 N., RANGE 4 E., W.M.





Development Engineering Handout 9 Soil Amendment

Summary: Soil amendment is a process of treating disturbed soils on a construction site in Summary: construction are noncontrol to a construction of such control to construction of such condent present or soft and endorse to restore the soft with respect to absorption, other to restore the soft with respect to shorption, storage and first and to a construction of the control to t

Soil Amendment Requirement: The Stormwater Manual requires amendment of disturbed soils for all sites which either create 2003 sf or more impervious surface OR disturb 7000 sf or more of the site. This threshold would include all new home construction, but may exclude some smaller projects with limited site disturbance. All disturbed areas on a project site mus be amended except.

- The building footprint and all areas within 10 feet of the actual building.
 Areas that are or will be made impervious in conjunction with the current project such as
- Areas where actual septic drain fields have been or will be installed in conjunction with the current project (this exception does not apply to reserve drain field areas, these must be amended).

 Areas within the drie line of mediance and the contraction of the contraction.
- amended).

 Areas within the drip line of existing trees to be retained.
- Anywhere the original native solis have not been significantly disturbed and/or displaced. This may be a difficult judgment call in some cases. While it is not our intent that vegetation removal alone tregger the requirement to amend solis, traditional cleaning with a bladed piece of equipment will certainly 'significantly disturb or displace' the top layer of native soil
- Any areas classified as critical slopes or with slopes of 33% or greater

In many cases an applicant can greatly reduce the cost and effort required to amend soils by strictly limiting the disturbance of native soils on his or her project site.

Soil Amendment Methods: The stormwater manual provides three different approved methods or options for amending soils. Each of the options includes a requirement to scarify or till the existing subgrade and then add a soil mixed with an amending component in order to achieve a target percentage of organic content to a given depth. It is important to note that simply mporting and spreading material on top of an existing, undisturbed subgrade is never an acceptable method of soil amendment. It is also important to note that each method or option includes one set of specifications for amending lawn areas and another for amending land areas (planting beds and any other landscaped areas not designated to be lawn). Specific requirements for amending soils by each of the acceptable methods are provided on the requirements tor following pages.

Development Engineering Handout 9 Soil Amendment

6. Native Site/Soil Preservation - As mentioned on page 1, native soils which have not been removed or disturbed do not have to be amended. Planning for and strictly controlling soils disturbance on your site can greatly reduce your soil amendment burden.

Material Quantity Estimates: The following are generic estimates of the required amounts of materials required to amend each 1000 square feet of disturbed area by either Option 1 or 3

Option 1 - Amend with Organic Compost - Lawn Areas

2 inches compost material per square foot = .167 cf/sf x 1000 sf = 167 cf ÷ 27 cf/cv = 6.2 cv

Plan on 6.2 cubic yards of compost material per 1000 sf to be amended.

Option 1 - Amend with Organic Compost - Landscape Areas

3 inches compost material per square foot = .25 cf/sf x 1000 sf = 250 cf \div 27 cf/cy = 9.26 cy

Plan on 9 1/4 cubic yards of compost material per 1000 sf to be amended.

Option 3 - Amend with Imported Topsoil - Lawn Areas

3 inches imported topsoil per square foot = .25 cf/sf x 1000 sf = 250 cf + 27 cf/cy = 9.26 cy

Plan on 9 1/4 cubic yards of imported topsoil per 1000 sf to be amended.

Option 3 - Amend with Imported Topsoil - Landscape Areas

6 inches of imported topsoil per square foot = .5 cf/sf x 1000 sf = 500 cf + 27 cf/cy = 18.5 cy 2 inches of organic mulch per square foot = .167 cf/sf x 1000 sf = 167 cf + 27 cf/cy = 6.2 cy

Plan on 18.5 cubic yards of imported topsoil per 1000 sf to be amended.
Plan on 6.2 cubic yards organic mulch per 1000 sf planting beds to be amended.

Amended Soils Inspection Method: When the approved site development plan indicates that National solid inspection freetond, when the approves are development pair interest and solid amendment is required, the Pierce County inspector will verify soil amendment prior to final inspection approval for residential and commercial projects, and prior to bond release for subdivisions. The inspector will take the following steps to verify soil amendment;

- Look to see that it appears that soil unsendents that been completed over all disturbed uses.
 Nicks at least three cold samples, per sent C minimum for every small titles) using a step probe.
 This should reveal that soil is bose and contains organic material to the design depth by method employer tickets, receipts (pecifying delivery address) or lab test results for suitable amending media according to method chosen. The decument provided will be reviewed to

Development Engineering Handout 9 Soil Amendment

Option 1 - Amend with Organic Compos

Lawn Areas - Amend to 5% Organic Content

- · Scarify or till existing soils to a depth of 10 inches.
- Place and rototill 2 inches of composted material into the top 6 inches of scarified soil for a finished depth of 12 inches of un-compacted soil.
- Water or roll to compact soil to 85% of maximum
 Rake to level and remove woody debris and rocks we woody debris and rocks larger than 1 inch in diameter

Landscape Areas/Planting Beds - Amend to 10% Organic Content

- Searify or till existing soils to a depth of 9 inches.
 Place and rototill 3 inches of composted material into the top 5 inches of scarified soil for a finished depth of 12 inches of uncompacted soil.
 Rake and remove rocks larger than 2 inches in diameter.
- · Mulch planting areas with 2 inches of organic mulch.

Compost used for Soil Amendment must be "Class A Compost" per Washington DOE Interim Compost Quality Guidelines (WAC Ch 173-350 Sec 220), which lists the following criteria;

- 35% Organic Content Minimum.

Ph of 6.0 – 8.0 (up to 8.5 in wetlands
Carbon to Nitrogen Ratio of < 25:1.

100% passing a 1 inch sieve.

The local products "Cedar Grove Compost" & "Corliss Fine Prep Organic Compost" meet these

Option 2 - Stockpile, Protect & Reuse Existing Soils

Lawn Areas – Amend to 5% Organic Content Landscape Areas/Planting Beds – Amend to 10% Organic Content

- · Remove. Stockpile & Protect existing topsoil for reuse.
- <u>Test</u> stockpiled soils to determine organic content & suitability. Submit test results and mix
- Test stockpiled soils to determine organic content & suitability. Submit test results and mit proposal to country for approval.

 Seartly or till existing subgrade 4 inches.

 Flace and till a total 25 inches of replaced topsoil and imported compost according to approved mix ratio to achieve finished depth of 12 inches of inches mix of the control of
- areas or 2 inch in diameter in landscape areas.

 Mulch planting areas with 2 inches of organic mulch or stockpiled duff.

Development Engineering Handout 9 Soil Amendment

verify utilization of appropriate amending media at reasonable quantities given the extent of

Sources for Suitable Materials: While not specifically endorsed or recommended by Pier County, the following commercial establishments are known to carry materials suitable for

- Cedar Grove Composting, 17825 Cedar Grove Rd SE, Maple Valley, WA 98038, www.cedar-grove.com, 877-764-5748.
- Lloyd Enterprises Inc., 80 5th Ave, Milton, WA 98354 <u>www.lloydenterprisesinc.com</u>, 253-
- 674-0092.
 Randles Sand & Gravel, Inc., 19209 Canyon Rd E, Puyallup, WA 98375, www.randlessandandgravel.net, 253-531-6835.
 Corliss Resources, 18001 Meridian Ave E, Puyallup, WA 98375
 www.corlissresources.com, 253-891-680.

- www.corlissresources.com, 253-891-6680.
 Purdy Topsoil and Gravel, 5819 133rd St NW, Gig Harbor, WA 98332, http://randlessandandgravel.net/purdy-topsoil-and-gravel-.html (253) 857-5850

References: The guidance in this handout is based on relevant material from the following

- · 2008 Pierce County Stormwater Management and Site Development Manual (with 2012
- Low Impact Development Technical Guidance Manual for Puget Sound, December 2012. published by the WSU Puyallup Research & Extension Center and the Puget Sound
- Pattnership.

 "Building Soil" Guidelines and Resources for Implementing Soil Quality and Depth BMP
 T5.13 from the 2012 WDOE Stormwater Management Manual for Western Washington.

Questions or Comments: Questions or comments concerning this handout may be directed to Scott Murdock, Development Engineering Inspection Supervisor at Scott.Murdock@co.pierce.w or 253-798-3756.

Development Engineering Handout 9 Soil Amendment

Option 3 - Amend with Imported Topsoil Lawn Areas - Amend to 3-5% Organic Content

Use imported topsoil mix comprised primarily of sand or sandy loam and containing 3-5% organic matter (Typically $\sim\!\!25\%$ compost).

- · Scarify or till existing subgrade in two directions to a 6 inch depth.
- Place 3 inches of topsoil mix on surface.
 Water or roll to compact soil to 85% maximum.
 Rake smooth and remove surface rocks over 1 inch in diameter.

Landscape Areas - Amend to 10% Organic Content

Use imported topsoil mix comprised primarily of sand or sandy loam and containing 10% organic matter (Typically ~40% compost).

- Scarify or till existing subgrade in two directions 6 inch depth.

 Place 3 inches of topsoil mix on surface and till into 2 inches of soil.
- · Place additional 3 inches of topsoil mix on the surface to achieve a finished, uncompacted depth of 12 inches
- Rake smooth and remove surface rocks over 2 inches in diameter.

Mulch planting beds with 2 inches organic mulc

Planning Considerations: Many contractors have been frustrated by delays in securing final project approvals because they did not properly plan to meet amended soil requirements. Pierce County recommends proponents consider the following issues when planning site work for securing the project of the planning site work for the planning site work f nty recommends proponents consider the i ects subject to amended soil requirements;

- Cost When this requirement was first implemented, Pierce County requested estimates from several contractors to amend soil on 10,000 square feet of a typical residential lot. Four contractors responded and the least expensive estimate was 4.51 of unitizing Option 1.
 Piacement Soil amendment requires significant manual labor to avoid compaction of soils by traditional bursy equipment.
 Elevation Changes Soil amendment results in a finished elevation increase of amendment.
 Bievation Changes Soil amendment results in a finished elevation increase of amendment.

- amendment.

 Materials Availability Don't wait to the last minute to verify that the materials you hope to use for soil amendment are both suitable and readily available. See Material Quantity Estimates section below.

 Inspection and Documentation Requirements Pierce County inspectors will verify soil amendment and vill require documentation for the testing and/or purchase of the media used to amendment and vill require documentation for the testing and/or purchase of the media used to amendment and materials are receipts or produce documentation (and) rate that the product conforms with the applicable specification for the method chosen.

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- SITE CONSTRUCTION NOTES:

 1. SEE ATTACHED GEOTECHNICAL REPORT, DATED ---- FOR ADDITIONAL INFO. ALL EROSION AND SEDIMENTATION CONTROL DEVICES SHOWN ON THESE DRAWING SHALL BE INSTALLED AS THE FIRST STAGE OF SITE PREPARATION SEE DETAIL 2/A1.0 AND ----
- 3. REMOVAL OF VEGETATION SHALL BE LIMITED TO THE ACTIVE CONSTRUCTION AREAS.
- A. UPON REMOVAL OF VEGETATION AND RE-CONTOURING OF THE SITE, ANY EXPOSED SOILS SHALL BE COVERED WITH A 2" LAYER OF STRAW FOR EXPOSED CONTROL CONTROL.
- 5. ON-SITE SOILS ARE NOT RECOMMENDED FOR STRUCTURAL FILL. STRUCTURAL FILL STRUCTURAL FILE STRUCTURA FILE STRUCTURAL FILE STRUC 6. HYDROSEED ALL EXPOSED AREAS UPON COMPLETION OF GRADINI
- CONTRACTOR TO DEPOSIT EXCESS CUT MATERIAL IN DESIGNATED ON-SITE APPROVED LOCATIONS (SEE OVERALL SITE PLAN). 8. FLAGGING OF WETLAND BUFFERS TO BE PRESERVED
- ROOF DRAINS TO BE TIGHTLINED AND DIRECTED TO RAIN GARDEN, SEE ATTACHED DESIGN.
- 10. RETAINING WALLS TO BE CONSTRUCTED OF 18"-30" DECORATIVE ROCKS. SEE RETAINING WALL DESIGN DATED ------ BY ERIK AINSWORTH, P.E. DI ERIK AINSMURIH, P.E.

 11. FOUNDATION DRAINS TO BE TIGHTLINED AND DIRECTED TO RAIN GARDEN, SEE ATTACHED DESIGN.

- NOTES FOR CONSTRUCTION STORMWATER POLLUTION PREVENTION
- JIES FOR CONSTRUCTION STORMALER POLLUTION PREVENTION

 I, APPROVAL OF THIS CONSTRUCTION SWPPP DOES NOT CONSTITUTE AN
 APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND
 LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION
 DETENTION/INFILTRATION FACILITIES, UTILITIES, ETC.).
- 2. THE IMPLEMENTATION OF THIS CONSTRUCTION SWPPP AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE CONSTRUCTION SWPPP FACILITIES IS THE RESPONSIBILITY OF THE APPLICANTICONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATIONAL-AMOSCAPMOR IS ESTABLISHED.
- 3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURN'S CLEARN'S LIMITS SHALL BE FEMBRIZED. THE ELAGGING FLAGGE MANNIANCE BY THE APPLICANTICONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- 4 THE CONSTRUCTION SWPPP FACILITIES SHOWN ON THIS PLAN MUST BE THE CONSTRUCTION SWPPP FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- 5. THE CONSTRUCTION SWPPP FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS, DURING THE CONSTRUCTION PERIOD, THESE CONSTRUCTION SWPPP FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE
- 6. THE CONSTRUCTION SWIPP FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANTICONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- THE CONSTRUCTION SWPPP FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
- 8. AT NO TIME SHALL MORE THAN 1 FOOT OF SEDMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAYING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAWED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

SOLUTION THE LAND DEVELOPER'S ENGINEER PUYALLUP REMODEL PROJECT:
PLYALLUP REMODEL
907 18TH ST NW
PUYALLUP, WA 98371
CLIENT:
THOMSON KELLI K & TI
907 18TH ST NW
PUYALLUP, WA 98371 DRAWN BY: SaG

DATE: 6/8/2023 AGENCY NO: SHEET: 3 OF 3

23-044

JOB NO: