

Grease Interceptor Design Checklist



DISCLAIMER - This checklist is provided to Consulting Engineers for the express purpose of assisting them in compiling private grease interceptor design plans for submittal to Pierce County Public Works. This checklist is merely a guide to assist the design engineer in providing the minimum information required for plan submittal. This checklist should be utilized in conjunction with the grease interceptor standard plans in completing your design. The complexity of your design may require additional information not included on this checklist. This checklist may be revised from time to time and the design engineer should insure that he/she has the most recent copy prior to compiling a design. If you have any questions regarding this checklist, please contact our office at (253) 798-7210.

A. Submittals

All application submittals and resubmittals must be made at: <https://palsonline.co.pierce.wa.us/palsonline/#/dashboard>

Initial application submittal requirements:

Done N/A

1.
 - a. A completed [Commercial Sewer Service Permit Application](#) (A3), **AND**
 - b. Grease interceptor plans, **AND**
 - c. Plumbing plans, **AND**
 - i. If there are off-site or on-site Private Sanitary Sewer Easements required, submit the draft private easement documents for our review prior to execution and recording with the Pierce County Auditor's Office.
 - ii. If the proposed private sewer line will serve more than one existing parcel, a draft Perpetual Reciprocal Easement, Mutual Maintenance Agreement and Covenant Running with the Land must be submitted for our review prior to execution and recording with the Pierce County Auditor's Office. The off-site private easements must be executed and recorded prior to plan approval.
 - d. Other supporting documents (if any).

2.

Prior to plan approval, the owner/tenant must submit a maintenance agreement with a firm equipped and trained to pump and dispose of waste from grease interceptors. At a minimum, the agreement must state that, during initial operation, inspection must occur every 30 days. Pumping or maintenance shall be performed as necessary. Upon recommendation of the Maintenance Service Representative, inspection or pumping maintenance frequency may be increased or decreased subject to approval by Pierce County.

B. Drafting

- | <u>Done</u> | <u>N/A</u> |
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| 1. | Vicinity Map: Identify project location on map, provide a north arrow and identify the scale used. Vicinity Maps must include a major arterial (e.g., SR512, I-5, Canyon Road East, etc. |
| 2. | Plan size is 22" x 34" with sheets numbered consecutively (1 of 3, 2 of 3, etc.). |
| 3. | Blank approval signature block in upper right hand corner must be five (5) inches wide. |
| 4. | Place "Plan approval expires one (1) year from the date of approval" inside or under signature block. |
| 5. | Engineering scale and north arrow: North arrow must point toward top half of sheet. |
| 6. | Existing/proposed adjacent roads: Show and label road names, include existing/proposed edge of pavement, road centerline, utilities, shoulder ditch, existing/proposed right-of-way, and easements. Clearly identify roads as public or private. |
| 7. | Show and label all existing structures on the site to remain or to be demolished. All plumbed buildings to remain must be connected to the existing or proposed sanitary sewer system. Connection charges for each building to remain must be paid under a separate Sewer Service Permit (SWCO). |
| 8. | Project description: Number of units/buildings/lots/seats/employees, etc., must be identified on the plans. Include the proposed use for each building (commercial office building, process building, etc.) |
| 9. | Color text and graphics are not allowed. |
| 10. | Minimum text height is 0.08 inches. Minimum line width is 0.005 inches. Smaller text and lines may be allowed if they are legible, able to be scanned, and are reproducible. |
| 11. | Hatching patterns (lines or dots) must be used in lieu of solid hatching (fill). |
| 12. | Show Standard Pierce County Sewer Division general notes for grease interceptors on the plans. |
| 13. | Floor plan with schematic plumbing drawing of the tenant space: Show how all fixtures are plumbed to or around the grease interceptor. The schematic waste plumbing plans must match the plumbing drawing approved by the local plumbing jurisdiction. |
| 14. | Interceptor design should be on one sheet if possible. |

C. Survey

- | <u>Done</u> | <u>N/A</u> |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | State the name of the licensed surveyor/engineer who provided the field topography on the plans. Include the date when the survey was completed. |
| 2. | Two foot contour intervals: Show the existing and proposed topography for entire property. If the property is flat, provide spot elevations. |

C. Survey (cont.)

- | | <u>Done</u> | <u>N/A</u> | |
|----|-------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3. | | | Elevations and contours must be based on NAVD 88. |
| 4. | | | Pierce County Benchmark or Temporary Benchmark: Location and elevation must be shown on the plans. |
| 5. | | | Bearings and distances for all existing property lines: Show parcel number(s) and property lines of the existing and adjacent parcel(s). |
| 6. | | | Show 100-year flood plain elevation on plans. All manholes, cleanouts, and vaults shall be set a minimum of one (1) foot above flood plain elevation. If the property is not in the flood plain, make note of this on the plans. |
| 7. | | | All public and private off-site sewer easements must be recorded and shown on the plans along with the respective Auditor's File Numbers (AFN) prior to plan approval. |
| 8. | | | All public and private on-site sewer easements must be shown on the plans prior to plan approval, and must be recorded and their respective Auditor's File Numbers (AFN) added to the as-builts prior to final acceptance. |
| 9. | | | Show the bearings and distances of existing and proposed sewers within existing and proposed easements as well as the easement boundaries. |

D. Utilities

- | | <u>Done</u> | <u>N/A</u> | |
|----|-------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | | | All existing/proposed utilities in vicinity of grease interceptor and building sewer shown on plans. |
| 2. | | | Parallel sewer and water lines must have ten (10) feet of horizontal separation (separation shall be measured from the outer wall of the pipes). |
| 3. | | | Sanitary sewer lines and water crossings: <ul style="list-style-type: none">a. The standard minimum vertical separation for water lines is 1.5 feet above the sanitary sewer line. Separation shall be measured from the outer walls of the pipes.b. If concrete encasement of the sanitary sewer is provided, then a reduced minimum vertical separation of 0.75 feet will be allowed. The concrete encasement shall extend 10 feet on each side of the crossing.c. Class 52 ductile iron pipe may be used for the sanitary sewer in lieu of concrete encasement provided that there is no transitioning to other pipe materials between manholes.d. Contact the Sewer Division for unusual circumstances for the Sewer Division to determine if a reduced minimum vertical separation will be allowed. Additional provisions will be required. |

E. Building Sewer

- | <u>Done</u> | <u>N/A</u> | | | | | | | |
|---------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|--------------|--------------|---------------|---------------|
| 1. | | The plan view must show and label the existing and proposed building sewer pipe and grease interceptor. Pipe must be labeled with the length, diameter, type, and slope. Sewer pipes must be dimensioned from buildings, property lines, and water lines. Show sleeves, trench dams, and concrete encasement of sewer pipe, if any. See the Building Sewer Installation Guidelines for more information. | | | | | | |
| 2. | | Show and label all existing and proposed manholes, cleanouts and sewer lines, located on or adjacent to parcel. Show existing sewers as dashed lines, and proposed sewers as solid lines. | | | | | | |
| 3. | | Prior to the submittal of plans the point of connection (sewer main and sewer manhole) must be field verified unless bubble data/information exists. The location of existing sewer manhole ladder, invert and rim elevations must be field verified and shown on the plans as "Field Verified". | | | | | | |
| 4. | | Show and label the existing side sewer stub "bubble" data. You can find the "bubble" data by researching the sewer main as-built plan drawings at http://matterhorn3.co.pierce.wa.us/publicgis/ , or by contacting a Sewer Division Engineering Technician at (253) 798-2737 or Sewer Division Engineer at (253) 798-4050. | | | | | | |
| 5. | | If a side sewer stub does not exist, show the proposed tap, its distance from the upstream and downstream sewer manhole, the pipe length, diameter, type, and the invert elevation of the proposed connection point to the existing sewer main. Show the existing sewer main, including pipe length, diameter, type and slope and both the upstream and downstream sewer manholes with the field verified rim elevations and invert elevations. If the sewer stub will cross other existing or proposed utilities, show and label them. | | | | | | |
| 6. | | Side sewer taps will not be allowed to existing sewer lines 18 inches in diameter or greater. | | | | | | |
| 7. | | Any ductile iron pipe (DIP) used must be Class 52 and lined per Pierce County Sanitary Sewer Specifications. All sewers to be constructed in fill areas must be DIP. | | | | | | |
| 8. | | Minimum cover over pipe: <table border="0" style="margin-left: auto; margin-right: auto;"><thead><tr><th style="text-align: center;"><u>Public ROW & Public
Sewer Easement</u></th><th style="text-align: center;"><u>Private Property not within a
Public Sewer Easement</u></th></tr></thead><tbody><tr><td style="text-align: center;">5 Feet (PVC)</td><td style="text-align: center;">3 Feet (PVC)</td></tr><tr><td style="text-align: center;">5 Feet (D.I.)</td><td style="text-align: center;">3 Feet (D.I.)</td></tr></tbody></table> | <u>Public ROW & Public
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Public Sewer Easement</u> | 5 Feet (PVC) | 3 Feet (PVC) | 5 Feet (D.I.) | 3 Feet (D.I.) |
| <u>Public ROW & Public
Sewer Easement</u> | <u>Private Property not within a
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| 5 Feet (PVC) | 3 Feet (PVC) | | | | | | | |
| 5 Feet (D.I.) | 3 Feet (D.I.) | | | | | | | |
| 9. | | Gravity building sewers shall have a minimum 2% slope. | | | | | | |
| 10. | | Show and label the existing and proposed cleanouts. Label all cleanouts with rim (top) elevation and invert (bottom) elevation. | | | | | | |
| 11. | | Cleanouts located in paved areas require rings and covers. | | | | | | |
| 12. | | Cleanouts are required at 100-foot intervals and at bends totaling 90 degrees or more. | | | | | | |

E. Building Sewer (cont.)

- | | <u>Done</u> | <u>N/A</u> | |
|-----|-------------|------------|-------------------------------------------------------------------|
| 13. | | | Show and label the plumbing outlets(s) from the building. |
| 14. | | | Show and label existing on-site septic system components, if any. |
| 15. | | | Show limits of paving (driveway or parking lot). |
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F. Grease Interceptor Design

- | | <u>Done</u> | <u>N/A</u> | |
|-----|-------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | | | Interceptor Sizing Criteria must be based on Chapter 7 and 10 of the most recent version of the Uniform Plumbing Code. |
| 2. | | | Sizing calculations shall be shown on the plans. |
| 3. | | | Each business for which an interceptor is required must have an interceptor which must serve only the business unless otherwise approved by the Sewer Division. |
| 4. | | | Plans must list, show, and label all plumbing fixtures connected to the interceptor. |
| 5. | | | The interceptor shall be installed as close as possible to source of grease. |
| 6. | | | The interceptor shall be located where it is easily accessible for inspection and maintenance. |
| 7. | | | Must maintain a minimum 1:1 slope set back from base of building foundation to the bottom of excavation where interceptor is to installed. |
| 8. | | | Venting must be from interceptor access manholes or as approved by Public Works–Sewer Division. |
| 9. | | | Size of venting in accordance with Chapters 9 and 10 of the most recent version of Uniform Plumbing Code. |
| 10. | | | Interceptor detail (top and side views) must include: <ul style="list-style-type: none">a. Invert elevations at inlet and outlet.b. Elevation at base of interceptor, top of interceptor, and at ground level over interceptor.c. Manufacturer and Model Numbers of all manufactured units.d. Interceptor size (gallons) and interior dimensions (height to designed water level, width and length) to insure that proper volume is provided. The minimum size for a gravity interceptor is 750 gallons. |

F. Grease Interceptor Design (cont.)

Done

N/A

- e. A 6-inch diameter cleanout (Straight Tee Riser) is required on the outlet side of the Interceptor.
 - f. Additional test tee located downstream from "Y" wherein the effluent from interceptor has been combined with the effluent from the restrooms and/or other facilities not allowed to be connected to the interceptor.
 - g. 24-inch minimum access hole(s) with gas tight manhole frame and cover.
 - h. Minimum of two (2) compartments with fittings designed for grease retention.
 - i. Adequate number of access manholes to provide for cleaning all compartments of interceptor.
 - j. If the interceptor is in a traffic area or loading area, adequate reinforcement is required to insure that it can sustain HS 20 loading.
 - k. All sewer line connections to concrete interceptors shall be core drilled and sealed with Kor-n-seal boot.
 - l. The interior of a concrete interceptor vault shall be waterproofed with coal tar epoxy or Sewer Division approved equal.
11. Plans stamped, signed and dated by a Professional Engineer registered with the State of Washington.