

**City of Great Falls
Public Works/Engineering**

INTER-OFFICE MEMORANDUM

DATE: **March 11, 2021**

PROJECT: **City of Great Falls Standards for Design and Construction, OF 1723.0
Proposed Modifications Creating Revision No 1**

The following are a list of the proposed changes to the City of Great Falls Standards for Design and Construction. The original document was adopted via Resolution 10346 on May 19, 2020. The following changes will modify the original version of the City of Great Falls Standards for Design and Construction, and if approved will create the official "City of Great Falls Standards for Design and Construction Revision No 1".

1. Chapter 5 Water Systems - Page 35 of 97 Section 5.2.2.B.I - modify the following sentence

"Shall be installed at each leg of every tee and cross, and at each intersection crossing;"

To read

"Shall be installed at each leg of every tee and cross and at each road intersection crossing. A valve is not required to be installed on the downhill/gradient side of the main on a tee leading to a fire hydrant;"

2. Chapter 5 Water Systems – Page 36 of 97 Section 5.2.4.A.III – modify the following sentence

"Spacing shall not exceed 300 feet in commercial areas;"

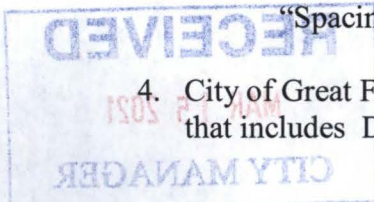
To read

"Spacing of fire hydrants in commercial and industrial areas shall not exceed the distances stated in the International Fire Code while meeting the requirements of the Montana Department of Environmental Quality;"

3. Chapter 5 Water Systems – Page 36 of 97 Section 5.2.4.A.IV – Delete the following sentence

"Spacing shall not exceed 200 feet in industrial areas;"

4. City of Great Falls Standard Details – replace the Table of Contents with an updated table that includes Detail 5-70 Sample Port, Detail 5-71 Typical Exterior Sand & Oil



Interceptor, Detail 5-75 Typical Exterior Grease Interceptor, Detail 5-76 Typical Interior Grease Interceptors

- 5. City of Great Falls Standard Details – add the following standard details
 - Detail 5-70 Sample Port
 - Detail 5-71 Typical Exterior Sand & Oil Interceptor
 - Detail 5-75 Typical Exterior Grease Interceptor
 - Detail 5-76 Typical Interior Grease Interceptors

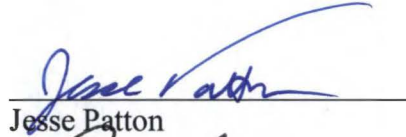
Please do not hesitate to contact me if you have any questions.

Respectfully Submitted,



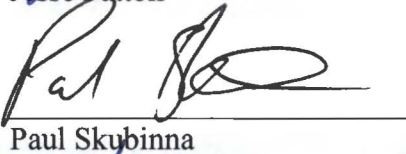
Jesse Patton, PE
Senior Civil Engineer
(406) 771-1258

Approved



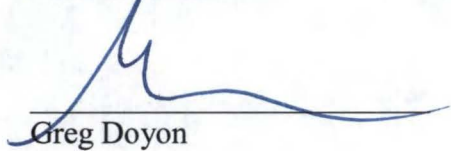
Jesse Patton

3-11-2021
Date



Paul Skubinna

3/11/21
Date



Greg Doyon

Date

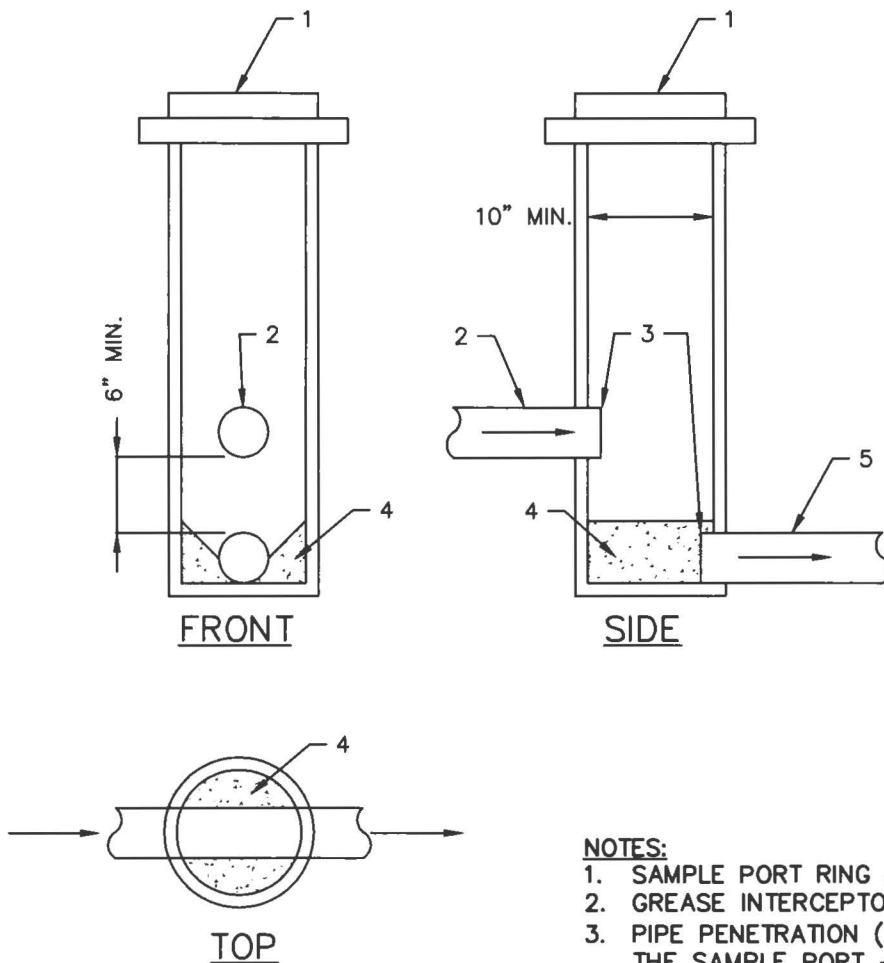
Typical Details - Article 5

	Drawing Number	Current Drawing Date
Monument Box	5-01	1987
Straight Curb	5-03	1987
Barrier Curb	5-04	2011
Mountable Curb	5-05	1999
Integral Curb & Gutter Details	5-06	2017
Standard Concrete Alley Apron- Grass back of curb	5-08A	2012
Standard Concrete Alley Apron- Sidewalk back of curb	5-08B	2012
Standard Concrete Alley Apron- City Jobs	5-08C	2012
Standard Concrete Alley Apron- City Jobs	5-08D	2012
Standard A/C Paving Alley	5-09	1994
Driveway - Sidewalk at curb	5-10A	2019
Driveway - Sidewalk not at curb	5-10B	2019
Curb and Sidewalk cross section	5-10C	2015
Driveway - Straight Curb sidewalk not at curb	5-10D	2015
Driveway - Downtown Decorative Stamp	5-10E	2019
Old type sidewalks at Intersection	5-11	1987
Sidewalk Transition at curb to not at curb	5-13	1987
Sidewalk transition w/ handicap ramp at curb-not at curb	5-13B	2006
Park Path Cross section	5-14	1988
Valley Gutter - w/ existing curb & gutter	5-15	1991
Valley Gutter - w/ Double HC ramps	5-15A	2009
Valley Gutter - w/ Single HC ramp	5-15B	2009
Sidewalk drainage crossing gutter	5-16	2012
Handicap ramp at mid-block with boulevard sidewalk	5-17	2016
Handicap ramp at mid-block with attached sidewalk	5-17B	Under Review
Handicap ramp at mid-block w/ full width boulevard sidewalk	5-18	2016
Handicap ramp at center of corner	5-19	2016
Handicap ramps double at corner in boulevard areas	5-20	2016
Handicap ramps double at corner sidewalk at curb	5-21	2016
Handicap ramps double at corner sidewalk at curb	5-21B	2019
Handicap ramps Double Central Business dist.	5-22	2016
Handicap ramps Double Old Boulevard area	5-24	2016
Trench Detail - Type 1	5-30	1987
Trench Detail - Type 2	5-31	1999
Trench Method of Payment	5-32	1987
Water main Casing Detail	5-33	1995
Flowable Fill Trench Plug	5-34	2009
Trench Pavement Replacement	5-36	1987
Gate Valve Detail	5-39	2011
Fire Hydrant Detail - City of Great Falls	5-40	1992

Fire Hydrant Replacement on exist. Hyd lead	5-41	1993
Fire Hydrant Guard (bollards)	5-42	1987
Thrust Blocking Details	5-43	1987
Water Service expansion loop	5-44	1987
Water Service replacement connections	5-45	2001
Water Service / Storm Draing Xing	5-45A	2017
Water meter installation	5-46	1987
Water Service entrance over 2"	5-47	1995
Meter Pit - Residential	5-48	1987
Meter Pit - Residential	5-48A	1994
Meter Vault - Large meters	5-49	2006
Irrigation Manhole - 1-1/2" meter and up	5-49A	2009
Sanitary sewer main at water main crossing	5-50	1993
Sewer Repair coupling	5-52	1987
Sewer Service connection in trench	5-53	1987
Sewer Service riser in trench	5-54	1987
Storm sewer inlet	5-60	2014
Storm sewer corner inlet apron	5-61A	2014
Storm sewer curb inlet apron - Type 1	5-61B	2014
Storm sewer curb inlet apron - Type 2	5-61C	2014
Storm sewer corner inlet apron	5-61D	2014
Sanitary Sewer Manhole ring & cover	5-63	1987
Sewer Manhole Short	5-64	1987
Sewer Manhole standard	5-65	2010
Manhole Connection - PVC	5-69	1987
Sample Port	5-70	2019
Typical Exterior Sand & Oil Interceptor	5-71	2019
Typical Exterior Grease Interceptor	5-75	2019
Typical Interior Grease Interceptor	5-76	2019
Fixed Barricade	5-80	1993
Dead End - Warning Sign	5-81	2009

SAMPLE PORTS

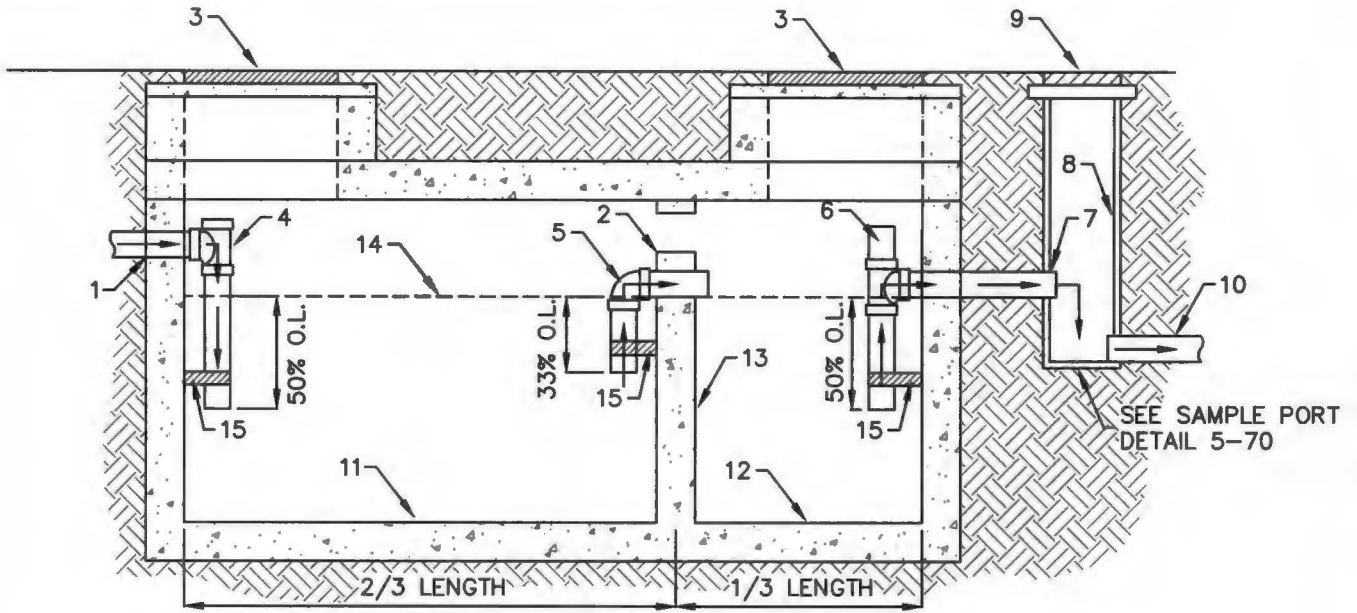
1. ALL INTERCEPTORS ARE TO BE INSTALLED WITH A SAMPLING PORT THAT RECEIVES FLOW FROM THE INTERCEPTOR'S EFFLUENT.
2. TEE PIPING ON THE INTERCEPTOR'S INTERIOR WILL NOT SUFFICE AS A SAMPLE PORT.
3. SAMPLE PORTS MUST BE LOCATED IN AREAS PROTECTED FROM VEHICLE TRAFFIC.
4. SAMPLE PORTS ARE TO BE CLEANED AND INSPECTED DURING ROUTINE INTERCEPTOR PUMPING.
5. SAMPLE PORTS WILL HAVE A MINIMUM 10" DIAMETER ACCESS COVER.
6. SAMPLE PORTS WILL HAVE A MINIMUM 6" DROP BETWEEN INLET AND DISCHARGE PIPING.
7. SAMPLE PORTS MUST DRAIN COMPLETELY AND NOT HOLD WATER. BOTTOM TO BE GROUTED AND SLOPED
8. INLET PIPE PENETRATION MUST EXTEND 1" PAST THE INSIDE WALL OF THE SAMPLE PORT. PENETRATIONS ARE TO BE SEALED TO PREVENT LEAKS.



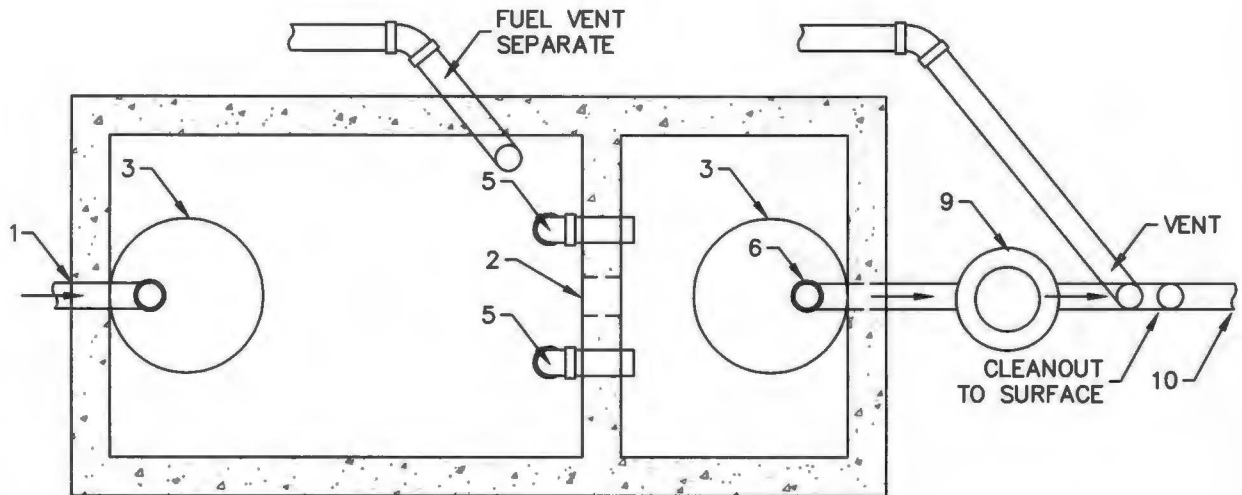
NOTES:

1. SAMPLE PORT RING AND LID
2. GREASE INTERCEPTOR DISCHARGE LINE
3. PIPE PENETRATION (EXTEND 1" PAST THE INSIDE WALL OF THE SAMPLE PORT - MUST BE SEALED TO PREVENT LEAKS. IF USING PVC, A SADDLE MUST BE USED)
4. GROUT (SLOPED TO WASTEWATER CHANNEL - THE SAMPLE PORT MUST DRAIN COMPLETELY AND NOT HOLD WATER)
5. SAMPLE PORT DISCHARGE LINE TO CITY'S SANITARY SEWER

SAMPLE PORT



SECTION VIEW



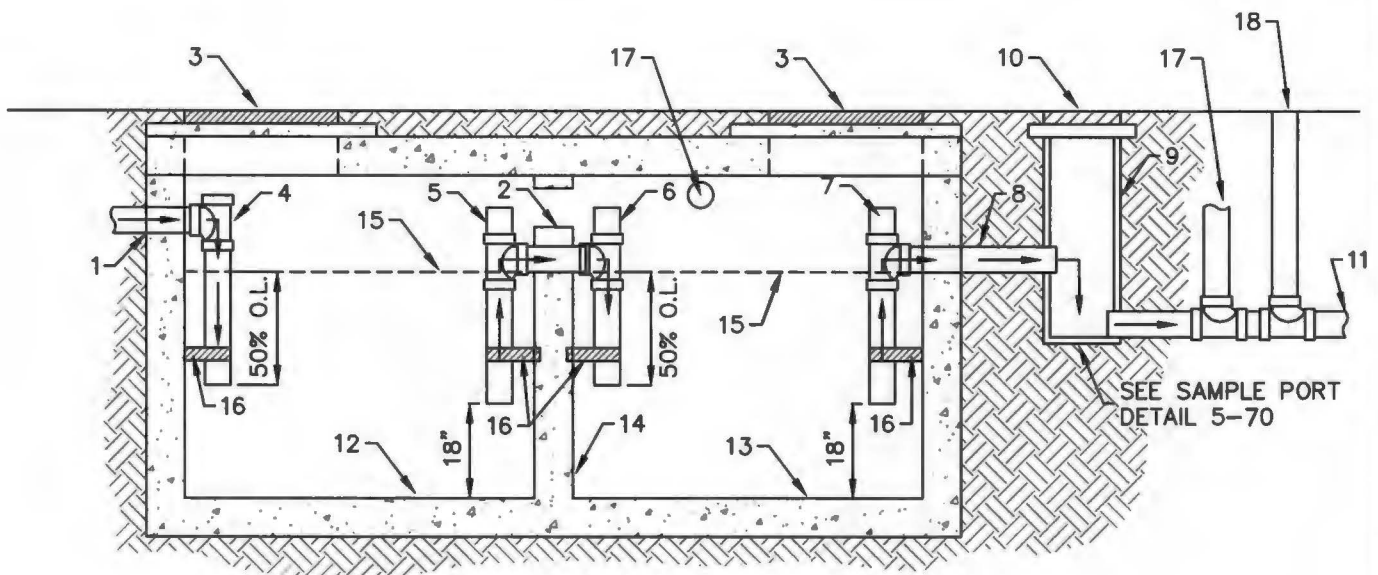
PLAN VIEW

NOTES:

1. INFLUENT LINE
2. 6" DIAMETER VENT SLEEVE
3. MINIMUM 24" OPENING, BOLTED LID WITH GASKET
4. PRIMARY CHAMBER INLET PIPING (MUST EXTEND TO 50% OF THE OPERATING LEVEL)
5. PRIMARY CHAMBER OUTLET PIPING (MUST EXTEND TO 33% OF THE OPERATING LEVEL)
6. SECONDARY CHAMBER OUTLET PIPING (MUST EXTEND TO 50% OF THE OPERATING LEVEL)
7. SAND & OIL INTERCEPTOR DISCHARGE LINE
8. SAMPLE PORT (MINIMUM 10" DIAMETER, PROVIDE A 6" VERTICAL DROP - SEE 5-70)
9. SAMPLE PORT RING AND LID
10. SAMPLE PORT DISCHARGE LINE TO CITY'S SANITARY SEWER
11. PRIMARY CHAMBER (2/3 TOTAL VOLUME). CHAMBER SHALL BE VENTED SEPARATELY
12. SECONDARY CHAMBER (1/3 TOTAL VOLUME)
13. BAFFLE
14. OPERATING LEVEL
15. PIPE SUPPORT

FOR MORE INFORMATION, CONTACT THE INDUSTRIAL
PRETREATMENT COORDINATOR'S OFFICE AT 406-727-8390

TYPICAL EXTERIOR SAND & OIL INTERCEPTOR

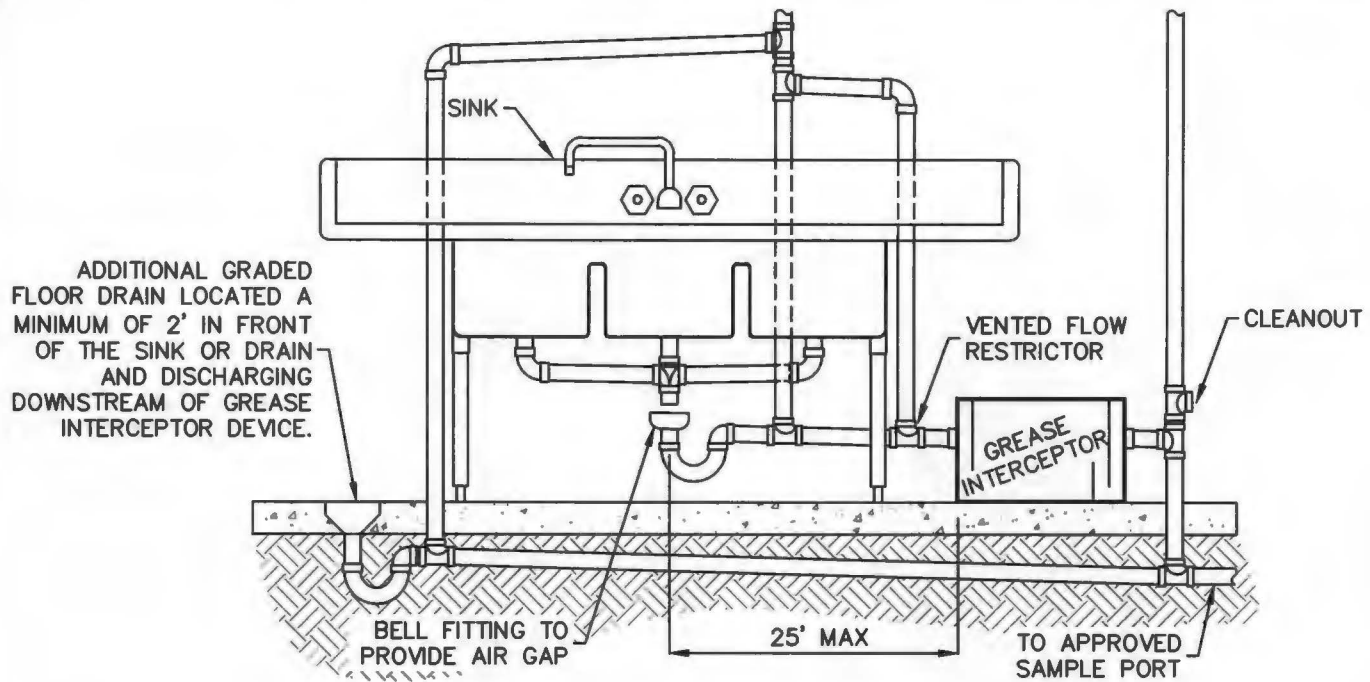


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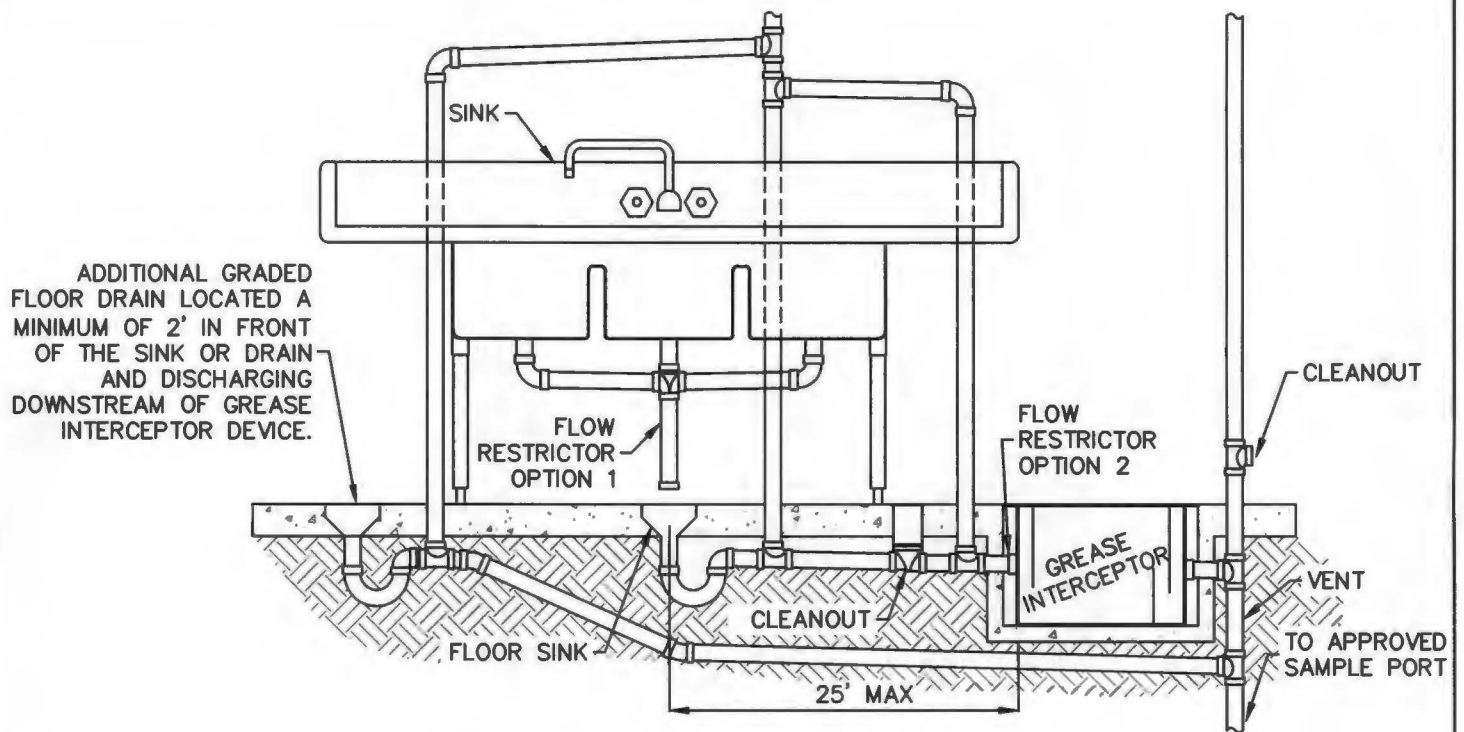
1. INFLUENT LINE
2. 6" DIAMETER VENT SLEEVE
3. MINIMUM 24" OPENING WITH RING AND LID, OR VENTED AND BOLTED CASKITED LID IN AREAS OF HIGH TRAFFIC
4. PRIMARY CHAMBER INLET PIPING (MUST EXTEND TO 50% OF THE OPERATING LEVEL)
5. PRIMARY CHAMBER OUTLET PIPING (MUST EXTEND TO 18" FROM BOTTOM OF CHAMBER)
6. SECONDARY CHAMBER INLET PIPING (MUST EXTEND TO 50% OF THE OPERATING LEVEL)
7. SECONDARY CHAMBER OUTLET PIPING (MUST EXTEND TO 18" FROM BOTTOM OF CHAMBER)
8. GREASE INTERCEPTOR DISCHARGE LINE
9. SAMPLE PORT
10. SAMPLE PORT RING AND LID
11. SAMPLE PORT DISCHARGE LINE TO CITY'S SANITARY SEWER
12. PRIMARY CHAMBER (2/3 TOTAL VOLUME)
13. SECONDARY CHAMBER (1/3 TOTAL VOLUME)
14. BAFFLE
15. GREASE INTERCEPTOR OPERATING LEVEL
16. PIPE SUPPORT
17. VENT
18. CLEANOUT

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TYPICAL EXTERIOR GREASE INTERCEPTOR



INTERIOR ABOVE GRADE GREASE INTERCEPTOR



INTERIOR BELOW GRADE GREASE INTERCEPTOR

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