

FLH CULVERT ASSESSMENT FORM

Overall Rating

Good

Fair

Poor

Critical

Unknown

Performance Problems

Notes by: _____ Date: _____ Project: _____

Measurements by: _____ Time: _____

Site Information:

Facility Location: _____ Lat/Long _____

Milepost: _____ Project Station: _____ GPS Road CL Waypoint No. _____

Named waterway: _____ Direction of Flow: _____

Culvert Information:

No. of Barrels: _____ Barrel Length (approx): _____ Barrel Slope: Mild / **Steep** _____

Skew (0 degrees = perpendicular to road): _____ Approx Cover: Upstream _____ Downstream _____

Barrel Shape (circle one) **Circular** Box Elliptical Pipe Arch Arch

Diameter: _____ / Span _____ x Rise _____

Pipe Material (circle one): **Metal** - Concrete / RCP - Corrugated Plastic - Smooth Plastic - Timber - Masonry

Appurtenances (circle one):

Upstream : Projecting / Mitered / Headwall / Headwall & Wingwalls / **Flared End Section** _____

Downstream : Projecting / Mitered / Headwall / Headwall & Wingwalls / **Flared End Section** _____

Flowing or standing water? N / **Y** Depth: _____ (ft) Est. Flow Velocity: _____ (ft/s) Possible AOP/fish passage? Y / **N**

Utilities Present (list)? Y / N _____ Possible historic features? Y / N Open Bottom? Y / **N**

Culvert Condition and Performance (circle / check all that apply and provide appropriate explanations below)

| Category | Rating | | | | | |
|-----------------------|-------------|-------------|-------------|------|-----|------------|
| Invert deterioration | Good | Fair | Poor | Crit | Unk | N/A |
| Joints & Seams | Good | Fair | Poor | Crit | Unk | N/A |
| Corrosion / Chemical | Good | Fair | Poor | Crit | Unk | N/A |
| Cross-Section Deform | Good | Fair | Poor | Crit | Unk | N/A |
| Cracking | Good | Fair | Poor | Crit | Unk | N/A |
| Liner / Wall | Good | Fair | Poor | Crit | Unk | N/A |
| Mortar and Masonry | Good | Fair | Poor | Crit | Unk | N/A |
| Rot and Marine Borers | Good | Fair | Poor | Crit | Unk | N/A |
| Headwall/Wingwall | Good | Fair | Poor | Crit | Unk | N/A |
| Apron | Good | Fair | Poor | Crit | Unk | N/A |
| Flared End Section | Good | Fair | Poor | Crit | Unk | N/A |
| Pipe End | Good | Fair | Poor | Crit | Unk | N/A |
| Scour Protection | Good | Fair | Poor | Crit | Unk | N/A |

Performance Problems Requiring Level 1 Action

- Debris/Veg Blockage > 1/3 of rise at inlet or outlet ☐
- Sediment Blockage 1/3 to 3/4 of rise at inlet/outlet ☐
- Buoyancy or Crushing-Related Inlet Failure ☐
- Poor Channel Alignment ☐
- Previous and/or Frequent Overtopping ☐
- Local Outlet Scour ☐

Performance Problems Requiring Level 2 Action

- Embankment Piping ☐
- Channel Degradation / Headcut (circle one) ☐
- Embankment Slope Instability ☐
- Sediment Blockage > 3/4 Rise at Inlet or Outlet ☐
- Sediment Blockage > 1/3 Rise Throughout Barrel ☐

Other Problems Requiring Level 2 Action

- No Access / Ends Totally Buried / Submerged ☐
- Aggressive Abrasion/Corrosion/Chemical (circle) ☐
- Exposed Footing (Open-Bottom Culvert Only) ☐

Photos (number): _____ Inlet _____ Outlet _____ Roadway (ahead) _____ Roadway (back) _____ View downstream

_____ View upstream Others: _____

Notes / Recommendations:



Bravo Environmental
 6705 NE 175th St
 Kenmore, Wa 98028
 Tel: 425-424-9000
 Fax: 425-424-9002
 E-mail:

Inspection Report / Inspection: 1

| | | | | | |
|--------------------------------------|-----------------|-----------------------|--------------------------------------|--|-------------------------|
| Date 5/18/2011 | P/O. No. | Weather Dry | Surveyor's Name JOEL vASEY | Pipe Segment Reference | Section No. 6 |
| Certificate No. u-304-1198 | Survey Customer | System Owner | Date Cleaned | Pre-Cleaning No Pre-Cleaning | Sewer Category |

| | | |
|-----------------------------|------------------------------------|-----------------------------------|
| Street 274+89 | Use of Sewer Stormwater | Upstream MH INLET-W |
| City Port Angeles | Drainage Area | Dowstream MH OUTLET |
| Loc. details | Flow Control | Dir. of Survey Upstream |
| Location Code | Length surveyed 93.11 ft | Section Length 93.11 ft |

| | | |
|---|---------------|------------------------------|
| Purpose of Survey Maintenance Related | Joint Length | 18 inch |
| Year Laid | Dia./Height | Corrugated Metal Pipe |
| Year Rehabilitated | Material | |
| Tape / Media No. 1 | Lining Method | |

Add. Information :

| 1:240 | Position | Observation | MPEG | Photo | | | |
|-------|----------|--|----------|-------|------|------|------|
| | 0.00 | End of Pipe / OUTLET | 00:00:00 | | | | |
| | 0.00 | Water Level, 5 %of cross sectional area | 00:00:53 | | | | |
| | 3.50 S1 | Roots Medium Barrell, from 05 to 08 o'clock, 10 %, within 8 inches of joint: YES, Start | 00:01:00 | | | | |
| | 7.45 | Infiltration Stain, from 03 to 06 o'clock, within 8 inches of joint: YES | 00:03:35 | | | | |
| | 7.45 F1 | Roots Medium Barrell, from 05 to 08 o'clock, 10 %, within 8 inches of joint: YES, Finish | 00:14:08 | | | | |
| | 58.88 | Infiltration Stain, from 02 to 09 o'clock, within 8 inches of joint: YES | 00:08:01 | | | | |
| | 65.42 | Infiltration Stain, at 03 o'clock, within 8 inches of joint: YES | 00:09:35 | | | | |
| | 77.38 | Infiltration Weeper, at 09 o'clock, within 8 inches of joint: YES | 00:11:18 | | | | |
| | 93.11 | End of Pipe / INLET-W | 00:14:10 | | | | |
| | | | | | | | |
| QSR | QMR | SPR | MPR | OPR | SPRI | MPRI | OPRI |
| 0000 | 4C21 | 0 | 74 | 74 | 0 | 3.89 | 3.89 |