CENWS-OD-ME-DMMO

MEMORANDUM FOR: RECORD July 22, 2013

SUBJECT: TIER 1 DETERMINATION REGARDING THE SUITABILITY OF PROPOSED DREDGED MATERIAL FROM THE CITY OF STEVENSON WASTEWATER TREATMENT PLANT OUTFALL, SKAMANIA COUNTY, WASHINGTON.

1. Introduction. This memorandum reflects the consensus determination of the Dredged Material Management Program (DMMP) agencies (U.S. Army Corps of Engineers, Washington State Department of Ecology, Washington State Department of Natural Resources, and the Environmental Protection Agency) regarding the testing status and suitability of up to 1,100 cubic yards (cy) of dredged material from the City of Stevenson Wastewater Treatment Plant Outfall.

2. Background. In 2007, the Piper Road landslide deposited approximately 1 million cubic yards of sediment into the Rock Creek gorge, about ½ mile upstream from the confluence with the Columbia River (Gray and Osborne, 2013). Transport of sediment to the Columbia River since the landslide has covered the outlet pipe for the City of Stevenson's wastewater treatment plant. Dredging of the material covering the outfall pipe is necessary to restore use of the outfall, and in order to expose the pipe so that an extension can be added.

3. Exclusionary Criteria. The Clean Water Act (CWA) Section 404(b)1 Guidelines for Specification of Disposal Sites for Dredged or Fill Material (CFR 40 Section 230.60, subparagraphs a - c) include exclusionary criteria with regard to testing. The Guidelines state that (1) dredged or fill material is most likely to be free from chemical, biological, or other pollutants where it is composed primarily of sand, gravel, or other naturally occurring inert material. Dredged material so composed is generally found in areas of high current or wave energy such as streams with large bed loads or coastal areas with shifting bars and channels; and (2) the extraction site shall be examined in order to assess whether it is sufficiently removed from sources of pollution to provide reasonable assurance that the proposed discharge material is not a carrier of contaminants; and (3) where the discharge site is adjacent to the excavation site and subject to the same sources of contaminants, and materials at the two site are substantially similiar (EPA, 1980). Dredged material that meets these guidelines may be excluded from further testing.

4. Exclusionary Status Determination. A sample of the material to be dredged was collected by bucket during low water in March 7, 2013. Figure 1 is a photo of the collected sample, which shows the material to be primarily sand and gravel with some cobble. The photo clearly shows the coarse nature of the material.

   The DMMP agencies conducted an evaluation of potential sources of contamination from the vicinity of the project. In addition to the material being associated with an outfall, there are two notable upland MTCA cleanup sites in the City of Stevenson: a plywood mill and a filling station, both upriver, along the Columbia, from the site (Figure 2). Although these MTCA cleanup sites are a potential source of contamination to the area, they are upland sources and there is no clear pathway for the spread of contamination from these sites. In addition, the material planned for dredging is presumed to all have originated from the Piper Road landslide.

The proposed disposal of the dredged material is by side casting to a 100' by 100' area immediately downstream of the dredge prism (Figure 3). Therefore the DMMP agencies determined that due to the small volume of material, the coarse nature of the material, recent deposition of the material from the landslide and proximity of the disposal area, the proposed dredged material meets the exclusionary criteria.

In summary, the DMMP agencies have determined that the City of Stevenson's Wastewater Treatment Plant Outfall dredging project meets the exclusionary criteria under the Clean Water Act. No additional sediment testing is required.

This determination does ***not*** constitute final agency approval of the project. During the public comment period that follows a public notice, the resource agencies will provide input on the overall project. A final decision will be made after full consideration of agency input, and after an alternatives analysis is done under section 404(b)(1) of the Clean Water Act.

5. References.

EPA, 1980. *40 CFR Part 230 Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material*, Environmental Protection Agency, December 1980.

Gray and Osborne, 2013. Technical Memorandum: Geomorphology and Estimation of Sedimentation Rates, Emergency Outfall Work, City of Stevenson. March 26, 2013.

6. Signatures.

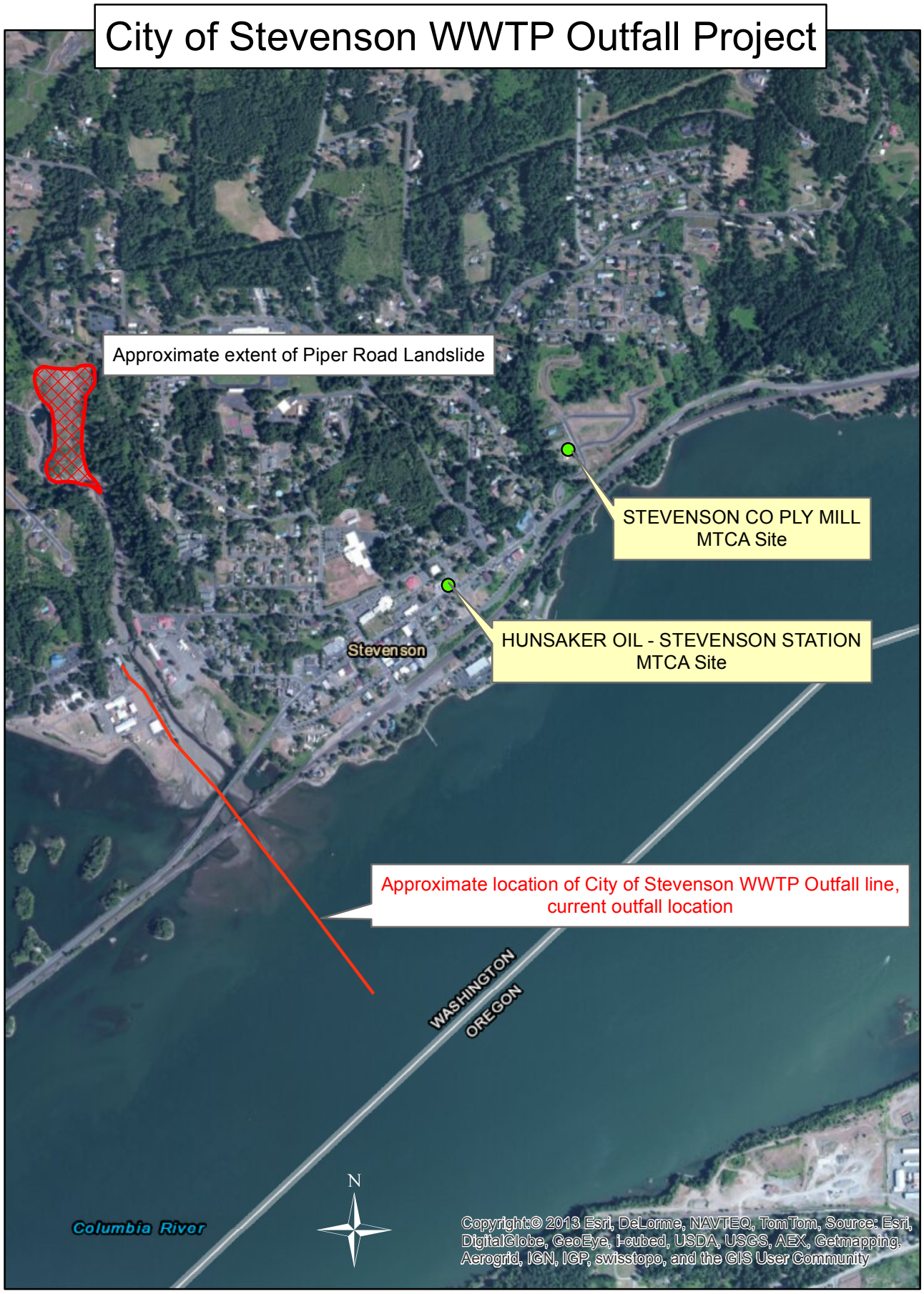
The signed document is on file in the Dredged Material Management Office.

_____	_____
Date	Kelsey van der Elst - Seattle District Corps of Engineers
_____	_____
Date	Justine Barton - Environmental Protection Agency
_____	_____
Date	Laura Inouye, Ph.D. - Washington Department of Ecology
_____	_____
Date	Celia Barton - Washington Department of Natural Resources

Copies furnished:

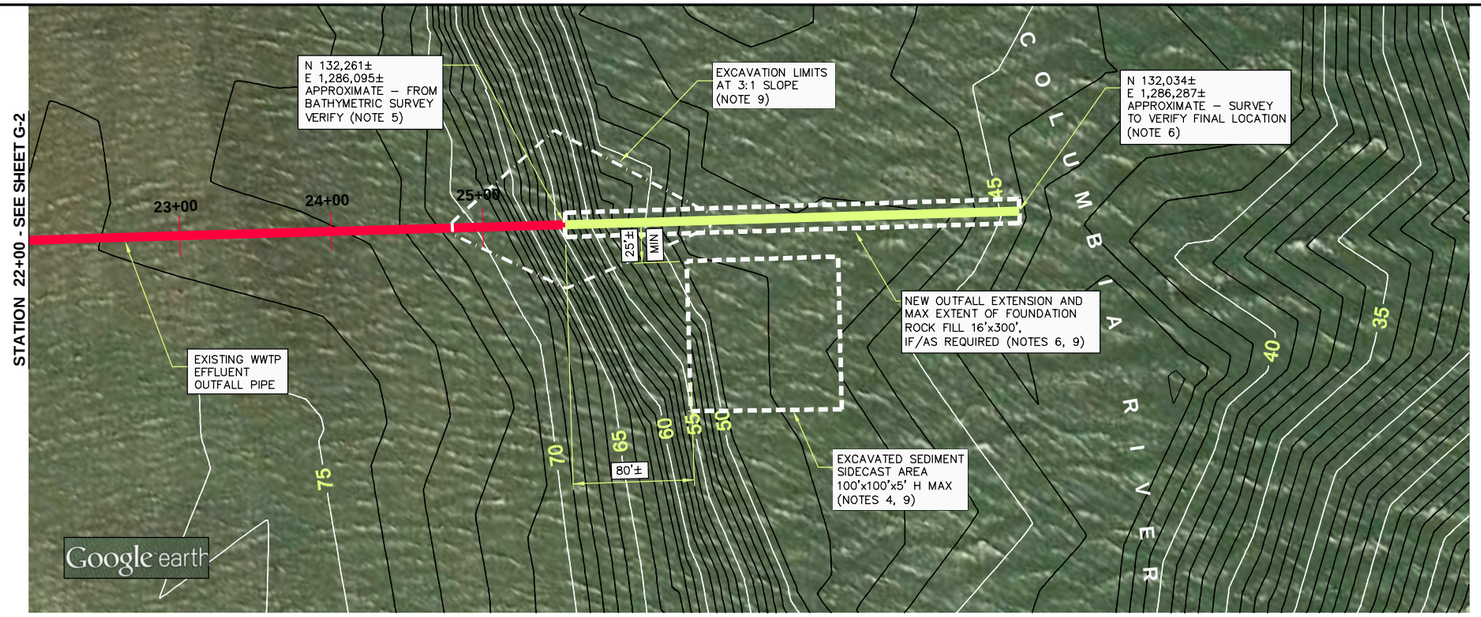
DMMP signatories
Ken Alexander, Gray & Osborne
Jim Dougherty, Gray & Osborne
Ben Shumaker, City of Stevenson
Peter Olmstead, Corps Regulatory OM

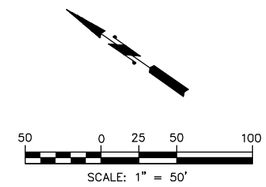
Figure 1. Photo of sample taken March 7, 2013.

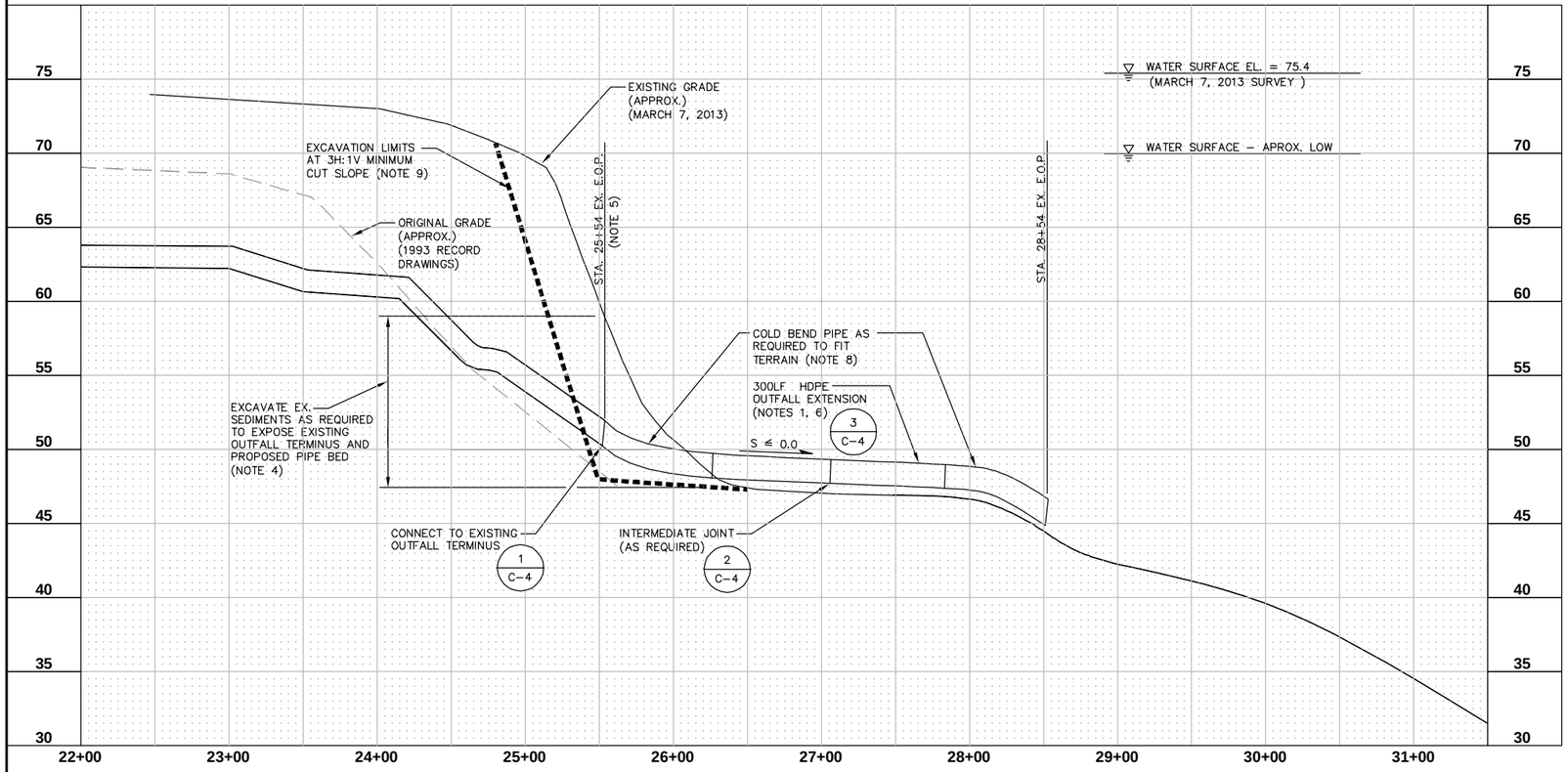


500 250 0 500 Meters

Figure 2.







NOTES:

1. THE NEW OUTFALL PIPE SHALL BE INSTALLED AND BALLASTED AS SHOWN ON SHEET C–4. OUTFALL PIPE MATERIAL SHALL BE:
   SCH "A" (SHOWN): 18" O.D. IPS DR17 HDPE
   SCH "B" (OPTIONAL W/OWNER); 24" O.D. IPS DR17 HDPE

2. THE OUTFALL IS CURRENTLY INACTIVE AND THE FLOW OF TREATED EFFLUENT FROM THE TREATMENT PLANT HAS BEEN TEMPORARILY DIVERTED TO ROCK CREEK. THE CONTRACTOR MAY ANTICIPATE ZERO FLOW THROUGH THE OUTFALL DURING THE CONSTRUCTION PERIOD.

3. THE CONDITION OF THE EXISTING OUTFALL SOUTH OF STA. 16+00 IS UNKNOWN. AT THE OWNER'S OPTION AND PRIOR TO CONNECTION TO THE EXISTING OUTFALL TERMINUS, THE CONTRACTOR SHALL FLUSH THE EXISTING OUTFALL AND PERFORM A VIDEO SURVEY OF THE OUTFALL INTERIOR FROM STA. 16+00 SOUTH TO THE EXISTING TERMINUS, AS DESCRIBED IN THE SPECIFICATIONS, TO VERIFY THAT THE PIPE CONDITION IS NOT COMPROMISED.

4. THE EXISTING OUTFALL TERMINUS IS BURIED UNDER ACCUMULATED OUTWASH SEDIMENTS. GRAB SAMPLES TAKEN IN THE VICINITY OF THE OUTFALL SHOW AN ACCUMULATION OF COARSE, CLEAN SAND WITH PEBBLES. THE CONTRACTOR SHALL EXCAVATE THE ACCUMULATED SEDIMENTS TO EXPOSE THE EXISTING OUTFALL TERMINUS AND THE PROPOSED PIPE PROFILE IN ACCORDANCE WITH THE SPECIFICATIONS AND PERMIT REQUIREMENTS. EXCAVATED SEDIMENTS SHALL BE PLACED ON THE WEST (DOWNSTREAM) SIDE OF THE OUTFALL ALIGNMENT, AT A SUFFICIENT DISTANCE TO PREVENT THEM FROM SLUMPING BACK ONTO THE ALIGNMENT AND NOT CLOSER THAN 50 FEET MINIMUM FROM THE ALIGNMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE SLOPE AND STABILITY OF ANY EXCAVATION, BUT SHALL ASSUME A SHORT–TERM ANGLE OF REPOSE OF 3H:1V FOR PURPOSES OF ESTIMATING EXCAVATION QUANTITIES. THE LONG–TERM ANGLE OF REPOSE OF THE OUTWASH SEDIMENTS IS ESTIMATED AT 5H:1V.

5. EXISTING OUTFALL PIPE ALIGNMENT, PIPE PROFILE AND BOTTOM CONTOURS ARE BASED ON A COMBINATION OF RECORD DRAWINGS AND FIELD OBSERVATION, AND ARE APPROXIMATE. CONTOURS ARE DEVELOPED FROM DEPTH SOUNDINGS TAKEN ON APPROXIMATELY A 50–FOOT GRID. HORIZONTAL AND VERTICAL LOCATIONS OF THE SOUNDINGS ARE ESTABLISHED RELATIVE TO THE EXISTING MH–2 AND MH–3, USING A COMBINATION OF GPS AND FIELD OBSERVATION. THE EXISTING OUTFALL TERMINUS WAS FOUND BY PRESSURIZING THE OUTFALL WITH AIR TO CREATE A BUBBLE STREAM AT THE TERMINUS, AND ITS LOCATION IN THE HORIZONTAL PLANE IS ESTIMATED RELATIVE TO MH–2 AND MH–3, USING A COMBINATION OF GPS AND FIELD OBSERVATION. THE CONTRACTOR IS RESPONSIBLE FOR PHYSICALLY LOCATING THE EXISTING OUTFALL TERMINUS PRIOR TO EXCAVATION. THE CITY WILL ASSIST THE CONTRACTOR IN DETERMINING WHERE TO EXCAVATE BY BUBBLING AIR THROUGH THE OUTFALL.

6. THE COMPOSITION AND DETAILED PROFILE OF THE UNDERLYING RIVERBED AT THE EXISTING OUTFALL TERMINUS AND ALONG THE PROPOSED EXTENSION ALIGNMENT IS UNKNOWN. THE CONTRACTOR SHALL ASSUME IT MAY BE NECESSARY TO ADJUST THE PIPE ALIGNMENT TO AVOID LARGE ROCK FORMATIONS, AND SHALL PERFORM A SURVEY TO DETERMINE AN ALIGNMENT THAT WILL AVOID THE CREATION OF INTERMEDIATE HIGH POINTS IN THE LINE, WHILE MINIMIZING BENDS AND FILL AND MAINTAINING THE GENERAL ALIGNMENT, SLOPE AND GRADE SHOWN ON THE DRAWINGS. THE SELECTED ALIGNMENT SHALL BE SUBJECT TO APPROVAL OF THE OWNER'S ON–SITE REPRESENTATIVE. THE ALIGNMENT SHALL BE MARKED AS DESCRIBED IN THE SPECIFICATIONS, AND VERIFIED BY VIDEO SURVEY PERFORMED BY A DIVER, USING A PNEUMOFATHOMETER TO VERIFY DEPTHS AND A PROBE TO VERIFY SUBGRADE INTEGRITY. FOLLOWING INSTALLATION, SURVEY FINAL LOCATION OF NEW OUTFALL TERMINUS PER SPECIFICATIONS, INCLUDING SLOPE AND HEIGHT ABOVE RIVER BED AT TERMINUS.

7. UPON EXPOSING THE EXISTING TERMINUS BY EXCAVATION AND PRIOR TO CONNECTING THE NEW OUTFALL PIPE, THE CONTRACTOR SHALL PERFORM A VIDEO SURVEY OF THE LAST 200 FEET OF THE PIPE INTERIOR FROM THE OUTFALL TERMINUS, TO VERIFY THE INTEGRITY OF THE EXISTING PIPE AND THAT THE EXISTING PIPE IS CLEAR OF SEDIMENT. IF THE OWNER ELECTS TO COMPLETE THE VIDEO SURVEY FROM STA. 16+00 TO THE OUTFALL TERMINUS (SEE NOTE 3) THIS REQUIREMENT WILL BE DELETED.

8. MINIMUM BEND RADIUS OF THE HDPE OUTFALL PIPE SHALL BE GREATER OF:

   A. 27X PIPE O.D.
   B. 100X PIPE O.D. WITHIN 5 PIPE DIAMETERS OF A FITTING OR FLANGE JOINT
   C. PIPE MANUFACTURER'S RECOMMENDATION

9. LOCATIONS AND LIMITS OF EXCAVATION AND FILL ARE RESTRICTED TO THE AREAS SHOWN. SEE PROJECT PERMIT CONDITIONS FOR ADDITIONAL DETAILS.

Figure 3. Location of proposed disposal site, at least 50 feet from new outfall line.

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

Gray & Osborne, Inc.
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DATE: JUNE 2013	
SCALE: NOTED	
DRAWN: P.G.M.	
CHECKED: G.N.H.	
APPROVED: K.C.A.	

No.	REVISION	DATE	APPD

KENNETH C. ALEXANDER — STATE OF WASHINGTON — 30006 — REGISTERED PROFESSIONAL ENGINEER

GREGORY N. HAREM — STATE OF WASHINGTON — 35176 — REGISTERED PROFESSIONAL ENGINEER

CITY OF STEVENSON
SKAMANIA COUNTY WASHINGTON

EMERGENCY OUTFALL WORK

PLAN AND PROFILE
STATION 22+00 TO STATION 28+54
(EXISTING PLUS NEW)

SHEET: C-3
OF: 4
JOB NO.: 13222.00
DWG: