PROJECT LOCATION FOR THE "CLOVER CREEK IMPROVEMENTS AT PARKLAND PRAIRIE PRESERVE" IS JUST SOUTHWEST OF THE INTERSECTION OF TULE LAKE ROAD SOUTH AND YAKIMA AVENUE SOUTH IN PARKLAND, WASHINGTON. CONSTRUCTION ACCESS WILL BE THROUGH AN EXISTING GATE ON THE EAST SIDE OF THE PRAIRIE PRESERVE.

MAP SCALE: 1" = 1,000' (FROM DELORME 1999).

CLOVER CREEK IMPROVEMENTS
AT PARKLAND PRAIRIE PRESERVE

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DRAWING LIST:
1. PROJECT LOCATION & DRAWING LIST
2. EXISTING PRESERVE SITE PLAN
3. SITE PLAN FOR CHANNEL IMPROVEMENTS
4. SECTIONS AND DETAILS
5. STREAMBED AND BANK DETAILS
6. PRAIRIE MOUND DETAILS

THE PROJECT SITE IS LOCATED AT THE PARKLAND PRAIRIE PRESERVE IN PARKLAND, WASHINGTON. THE PRESERVE IS AN UNDEVELOPED FOUR ACRES OF LAND JUST SOUTH OF TULE LAKE ROAD SOUTH AND WEST OF YAKIMA AVENUE SOUTH.
NOTES:
1. ELEVATIONS SHOWN ARE BASED ON AN "ASSUMED" ELEVATION (NAIL = 300.0') AND DO NOT MATCH ACTUAL SITE ELEVATIONS.
2. CONTOUR INTERVAL = 1'.

SCALE: 1' = 50'
LEGEND FOR CHANNEL IMPROVEMENTS

- INDIVIDUAL ROOT WADS (30 each) & LOGS (30 each) WITH TRUNKS BURIED INTO BANKS FOR ANCHOR.
- STREAMBED & STREAMBANK "ARMOR" MATERIALS WITH 6'-12' SIZE BOULDERS & COBBLES. FILL Voids WITH NATIVE SOILS.
- PRAIRIE MOUNDS WITH EXTRAS-12" HIGH EACH. 6 MOUNDS TOTAL (BUILD IN CLUSTERS) (AVOID EXISTING TREES)
- MATERIALS WITH 6'-12' SIZE BOULDERS & COBBLES. FILL Voids WITH NATIVE SOILS.

NOTES:

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2. CONTOUR INTERVAL = 1'.

SCALE: 1' = 50'

100 FEET
EXISTING PRAIRIE GROUND LEVEL = NEW TOP OF BANK

12'-LONG ARMOR BANDS FOR CREEK BED & BANKS, SEE SITE PLAN

100-YEAR FLOOD (660 CFS)

ARMORED CHANNEL SLOPES TO 2.5% ABOVE TOE OF BANK

NEW CHANNEL BOTTOM SLOPE 0.36%

NOTE: NEV STREAMBANKS SHOWN AS 2:1 BUT WILL VARY FROM 1.5:1 TO 2:1 FOR VARIABLE TOPOGRAPHY

1.5' THICK ARMORED CHANNEL WITH 6'-12' SIZE BOULDERS & COBBLES W/ VOIDS FILLED WITH NATIVE SOILS

SECTION D (NEW CHANNEL PROFILE SHOWING ARMOR BAND)

CHANNEL BOTTOM SLOPES UP FROM DEEPEST POINT TO NEW TOE OF STREAMBANK. BOULDERS, ETC CONTINUOUS ACROSS CHANNEL BOTTOM BUT NOT SHOWN.

NEW CHANNEL 22'-WIDE AVERAGE, BUT VARIES 18'-WIDE TO 26'-WIDE

100-YEAR FLOOD (660 CFS)

ROOT WADS 18'-24' DIA. TRUNK BURIED IN BANK (LOGS SIMILAR WITH BROKEN ENDS INTO CREEK)

EXISTING TRENCH SLOPE

EXCAVATE NEW CHANNEL THROUGH EXISTING GRAVELY SOILS

EXCAVATE NEV CHANNEL FLOOD (660 CFS)

REPLACE EXISTING ASPHALT CURBS & CHANNEL BOTTOM

SECTION C (TYPICAL NEW CHANNEL W/ MINIMUM CUT & FILL)

ROOT WADS EXTEND 1/4 INTO CREEK

BURY 8' TO 10' TRUNK IN BANK

NOTE: NEV STREAMBANKS SHOWN AS 2:1 BUT WILL VARY FROM 1.5:1 TO 2:1 FOR VARIABLE TOPOGRAPHY

0 1 2 3 4 5 6 7 8 9 10 SCALE: 1' = 5'

CLOVER CREEK IMPROVEMENTS
# PARKLAND PRAIRIE PRESERVE
SOUTH PUGET SOUND SALMON ENHANCEMENT GROUP
STREAMBED AND BANK DETAILS DRAWING 4
NE. CHANNEL 22' -IDE AVERAGE, 17'-IDE TO 26'-IDE 100-YEAR FLOOD (<660 CFS)

EXISTING PRAIRIE GROUND

EXCAVATE

1.5' THICK ARMORED CHANNEL WITH 6'-12' SIZE BOULDERS COBBLES W/ VOIDS FILLED WITH NATIVE SOILS (EACH ARMOR BAND 12'-LONG)

100-YEAR FLOOD (<660 CFS)

NEW CHANNEL 22'-WIDE AVERAGE, BUT VARIES 18'-WIDE TO 26'-WIDE

SECTION B (TYPICAL NEW CHANNEL W/ MEDIUM CUT & FILL, ARMORED STREAMBED)

CENTERLINE NEW CHANNEL

TIE OF BANK SLOPE

GRADUAL SLOPE

FILL FROM EXCAVATIONS

REMOVE EXISTING ASPHALT PAVEMENT & CURBS

EXISTING SOUTH BANK

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EXISTING TRENCH AS SHOWN SITE PLAN

SECTION A (TYPICAL NEW CHANNEL THROUGH EXISTING GRAVEL, SAND & SOILS)

EXCAVATE NEW CHANNEL THROUGH EXISTING GRAVEL, SAND & SOILS

CRUVER CREEK IMPROVEMENTS

PARKLAND PRAIRIE PRESERVE

SOUTH PUGET SOUND SALMON ENHANCEMENT GROUP

SECTIONS AND DETAILS

DRAWING 3

SCALE: 1" = 5'
PARKLAND PRAIRIE AND WILDLIFE PRESERVE

EXISTING FENCES

WALK-IN ACCESS THROUGH FENCE

EXISTING PRESERVE SITE PLAN

SCALE: 1' = 50'

0 10 20 30 40 50 100 FEET

NOTES:
1. ELEVATIONS SHOWN ARE BASED ON AN "ASSUMED" ELEVATION (NAIL = 300.0') AND DO NOT MATCH ACTUAL SITE ELEVATIONS.
2. CONTOUR INTERVAL = 1'.

EXISTING PRESERVE SITE PLAN

CLOVER CREEK IMPROVEMENTS
AT PARKLAND PRAIRIE PRESERVE
SOUTH PUGET SOUND SALMON
ENHANCEMENT GROUP

EXISTING FENCE
SCHOOL GROUNDS

JUNE 2008
NOTES:
1. ELEVATIONS SHOWN ARE BASED ON AN "ASSUMED" ELEVATION (NAIL = 300.0') AND DO NOT MATCH ACTUAL SITE ELEVATIONS.
2. CONTOUR INTERVAL = 1'.

LEGEND FOR CHANNEL AND PRAIRIE IMPROVEMENTS

- Individual root wads (30 each) & logs (30 each) with trunks buried into banks for anchor (see details other drawings) placed 3/4 of wood pieces on outside of channel meanders.
- Prairie mounds for long-term "storage" of surplus excavated materials (see details other drawings).
- Prairie mounds to be created with extra excavated materials; each mound 30'-diameter x 3'-high. 44 mounds total, with regular pattern to be laid out by engineer.

WATER CONTROL & EROSION CONTROL NOTES:
1. Clover Creek through the prairie is normally dry during July through mid-September. Water control is not expected to be required for this project.
2. Contractor shall spread erosion control seed over all cut slopes, fill areas, meadows, and disturbed soils (e.g. temporary roads and staging area) at end of construction (all raw soils).
3. Contractor shall spread straw over sloping streambanks only immediately after seed application (see specs).

WALK-IN ACCESS THROUGH FENCE

EXISTING FENCES

NATIVE PLANT SALVAGE: About 50 small plants will be flagged shall be carefully scooped up by contractor (in excavator bucket) and walked over to south side of creek (new fill area) for re-planting as channel excavation proceeds. Native plant salvage will be considered "incidental" to project excavation.

WATER CONTROL & EROSION CONTROL NOTES:
1. Clover Creek through the prairie is normally dry during July through mid-September. Water control is not expected to be required for this project.
2. Contractor shall spread erosion control seed over all cut slopes, fill areas, meadows, and disturbed soils (e.g. temporary roads and staging area) at end of construction (all raw soils).
3. Contractor shall spread straw over sloping streambanks only immediately after seed application (see specs).

CROSS-HATCHED AREA:
- Existing prairie plants (location is approximate). Prairie mound construction to avoid these prairie plants.

CLAY CREEK IMPROVEMENTS
- Site plan for channel improvements

SOUTH PUGET SOUND SALMON ENHANCEMENT GROUP
- Site plan for channel improvements

JUNE 2008

CLOVER CREEK IMPROVEMENTS
- Existing prairie plants (location is approximate). Prairie mound construction to avoid these prairie plants.

SCHOOL EXISTING CHANNEL Lenght = 620'.
- Proposed channel, length = 660'.
- Sinuosity = 1.1

FILL CROSS-HATCH AREA TO ELEV. 297.0' (PROTECT TREES)

FILL CROSS-HATCH AREA TO ELEV. 297.5' (PROTECT TREES)

FILL CROSS-HATCH AREA TO ELEV. 298.0' (PROTECT TREES)

EXISTING TERRACE

BASELINE STA. 4.000

SECTION A DRAWING 4

SECTION B DRAWING 5

SECTION C DRAWING 6

SECTION A DRAWING 5

SECTION B DRAWING 4

SECTION C DRAWING 6

NORTH (APPROX.)

6 10 20 50 100 FEET

SCALE 1" = 50'

THICK DASH-DOT LINE SHOWS LOW POINT IN CHANNEL MEANDERING TO WITHIN 4' EACH OUTSIDE BEND, SEE DETAILS

NOTE:
- ELEVATIONS SHOWN ARE BASED ON AN "ASSUMED" ELEVATION (NAIL = 300.0') AND DO NOT MATCH ACTUAL SITE ELEVATIONS.
- CONTOUR INTERVAL = 1'.

EXISTING CHANNEL LENGTH = 620'.
- PROPOSED CHANNEL, LENGTH = 660'.
- SINUOSITY = 1.1
EXISTING PRairie GROUND

SECTION A
(TYPICAL NEW CHANNEL
W/ MAXIMUM CUT & FILL)

SECTION B
(TYPICAL NEW CHANNEL
W/ MEDIUM CUT & FILL)

NEW CHANNEL 22'-WIDE AVERAGE,
BUT VARIES 18'-WIDE TO 26'-WIDE

100-YEAR FLOOD (660 CFS)

CENTERLINE NEW CHANNEL

TOE OF BANK SLOPE

EXCAVATED SLOPES DRAWN
@ 2:1 SLOPE, BUT WILL
VARY 1.5:1 TO 2:1. SEE SITE
PLAN (ENGINEER WILL SET SLOPE STAKES).

EXCAVATE DITCH

USE GRAVELS &
COBBLES REMOVED
FROM DITCH FOR
BOTTOM FOOT
STREAMBED FILL

FILL FROM
EXCAVATIONS

REMOVE EXISTING ASPHALT
PAVEMENT & CURBS

EXISTING SOUTH BANK

REMOVE EXISTING COBBLES,
GRAVEL, ETC. (VARIES)
PRIOR TO ASPHALT REMOVAL.
USE THESE MATERIALS FOR
NEW STREAM CHANNEL

CHANNEL BOTTOM NOTES:
1. LOWEST POINT FOR NEW CHANNEL IS 0.5' BELOW
EXISTING ASPHALT AT ENDS NEW CHANNEL REACHES.
2. LOW POINT IN CHANNEL WIDTH SHALL MEANDER FROM
NORTH-TO-SOUTH TD WITHIN 4' OF THE TOE BANK SLOPES.
3. LOW POINT OF CHANNEL IS 1' +/- LOWER ELEVATION
THAN TOE OF BANK SLOPES.

SCALE: 1" = 5'
JUNE 2008
CLOVER CREEK IMPROVEMENTS
AT PARKLAND PRAIRIE PRESERVE
SOUTH PUGET SOUND SALMON
ENHANCEMENT GROUP
SECTIONS AND DETAILS
DRAWING 4
EXISTING PRAIRIE GROUND
LEVEL = NEW TOP OF BANK

100-YEAR FLOOD (660 CFS)

ROOTWADS AND LOGS
BURIED INTO NEW
CHANNEL BANKS WITH
TRUNKS WITHIN 1' ELEV.
CHANNEL BOTTOM, SEE SITE PLAN

NEW CHANNEL BOTTOM =
EXISTING GRAVELY SOILS

CLOVER CREEK
FLOW

EXCAVATE

EXISTING DITCH SLOPE

EXISTING SOUTH
BANK

SECTION D
NEW CHANNEL PROFILE
SHOWING ARMOR BAND

CHANNEL BOTTOM SLOPES UP 1'
FROM DEEPEST POINT TO NEW
TOE OF STREAMBANK.

NEW CHANNEL 22'-WIDE AVERAGE,
BUT VARIES 18'-WIDE TO 26'-WIDE

NOTE: NEW STREAMBANKS DRAWN AS
2:1 BUT WILL VARY FROM 1.5:1 TO 3:1
FOR VARIABLE TOPOGRAPHY

EXISTING GRAVELLY SOILS
EXCAVATE NEV CHANNEL
THROUGH EXISTING
GRAVEL, SAND &
SOILS

ROOTVADS EXTEND 5' +/-
INTO CREEK

ROOTVADS EXTEND 4' TO 6' INTO
CHANNEL

ROOTVADS 12'-24' DIA.
THROUGH EXISTING
GRAVEL, SAND & SOILS
(10'-14' LENGTH
LOGS SIMILAR)

Section C
(TYPICAL NEW
CHANNEL
W/ MINIMUM CUT & FILL)

LOW POINT FOR CHANNEL
THIS SIDE ON OUTSIDE
MEANDER (SEE SITE PLAN)

REMOVE EXISTING ASPHALT
CURVES & CHANNEL BOTTOM

EXCAVATE NEW CHANNEL
THROUGH EXISTING
GRAVEL, SAND & SOILS

JUNE 2008

CLOVER CREEK IMPROVEMENTS
AT PARKLANDS PRAIRIE PRESERVE
SOUTH PUGET SOUND SALMON
ENHANCEMENT GROUP
STREAMBED AND BANK DETAILS
DRAWING 5

SCALE: 1' = 5'

EXISTING PRAIRIE GROUND
LEVEL = NEW TOP OF BANK

NEW CHANNEL BOTTOM SLOPE 0.365

SECTION C
(TYPICAL NEV CHANNEL
VI
MINIMUM CUT & FILL)

CENTRAL LINE NEW CHANNEL

ROOTVADS 12'-24' DIA.
THROUGH EXISTING
GRAVEL, SAND & SOILS
(10'-14' LENGTH
LOGS SIMILAR)

EXCAVATE NEW CHANNEL
THROUGH EXISTING
GRAVEL, SAND & SOILS

ROOTVADS 5'/+/-
INTO CREEK

EXISTING SOUTH
BANK

L

SECTION C
(TYPICAL NEV CHANNEL
VI
MINIMUM CUT & FILL)

CENTRAL LINE NEW CHANNEL

ROOTWADS 12'-24' DIA.
THROUGH EXISTING
GRAVEL, SAND & SOILS
(10'-14' LENGTH
LOGS SIMILAR)

EXCAVATE NEW CHANNEL
THROUGH EXISTING
GRAVEL, SAND & SOILS

ROOTWADS 5'/+/-
INTO CREEK

EXISTING SOUTH
BANK

NOTE: NEW STREAMBANKS DRAWN AS
2:1 BUT WILL VARY FROM 1.5:1 TO 3:1
FOR VARIABLE TOPOGRAPHY

EXISTING GRAVELLY SOILS
EXCAVATE NEV CHANNEL
THROUGH EXISTING
GRAVEL, SAND &
SOILS

ROOTVADS EXTEND 5' +/-
INTO CREEK

ROOTVADS EXTEND 4' TO 6' INTO
CHANNEL

ROOTVADS 12'-24' DIA.
THROUGH EXISTING
GRAVEL, SAND & SOILS
(10'-14' LENGTH
LOGS SIMILAR)

Section C
(TYPICAL NEW
CHANNEL
W/ MINIMUM CUT & FILL)

LOW POINT FOR CHANNEL
THIS SIDE ON OUTSIDE
MEANDER (SEE SITE PLAN)

REMOVE EXISTING ASPHALT
CURVES & CHANNEL BOTTOM

EXCAVATE NEW CHANNEL
THROUGH EXISTING
GRAVEL, SAND & SOILS

JUNE 2008

CLOVER CREEK IMPROVEMENTS
AT PARKLANDS PRAIRIE PRESERVE
SOUTH PUGET SOUND SALMON
ENHANCEMENT GROUP
STREAMBED AND BANK DETAILS
DRAWING 5

SCALE: 1' = 5'

EXISTING PRAIRIE GROUND
LEVEL = NEW TOP OF BANK

NEW CHANNEL BOTTOM SLOPE 0.365
MOUND CONSTRUCTION NOTES:

1. ALL SOILS FOR MOUND CONSTRUCTION WILL COME FROM CHANNEL EXCAVATION.
2. ENGINEER WILL LAY OUT MOUND CENTER LOCATIONS.
3. DO NOT COMPACT SOILS PLACED FOR MOUNDS.

DIAGRAM:
- **30' (+/-) DIAMETER PRARIE MOUND, TYPICAL**
- **2' GAP BETWEEN MOUNDS**
- **ROUND OFF TOPS OF MOUNDS**
- 20% MOUND SLOPE, TYP.

ELEVATION (FEET):
- Existing Prairie Ground
- Mound Height

SOUTH PUSET SOUND SALMON ENHANCEMENT GROUP
CLOVER CREEK IMPROVEMENTS AT PARKLAND PRARIE PRESERVE
DRAWING 6

SCALE: 1' = 5'

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