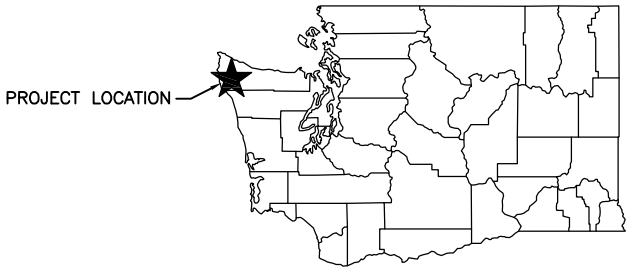
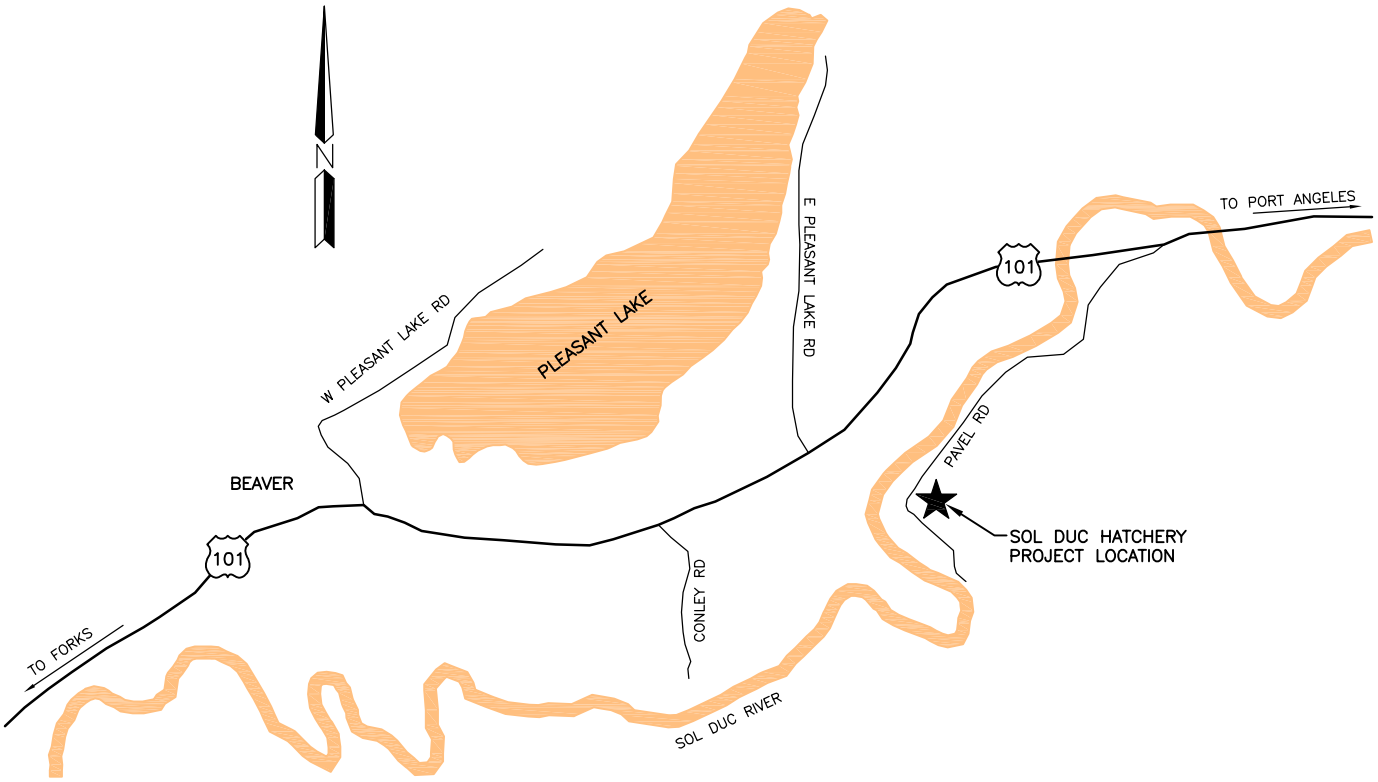


STATE MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

ENG. PROJECT NO. CM:H32:12-2

PORTION OF: SEC 36 T30N R13W

REFERENCE NUMBER:

APPLICANT:
WASHINGTON DEPT. of FISH & WILDLIFE
600 CAPITOL WAY N.
OLYMPIA, WA 98501-1091

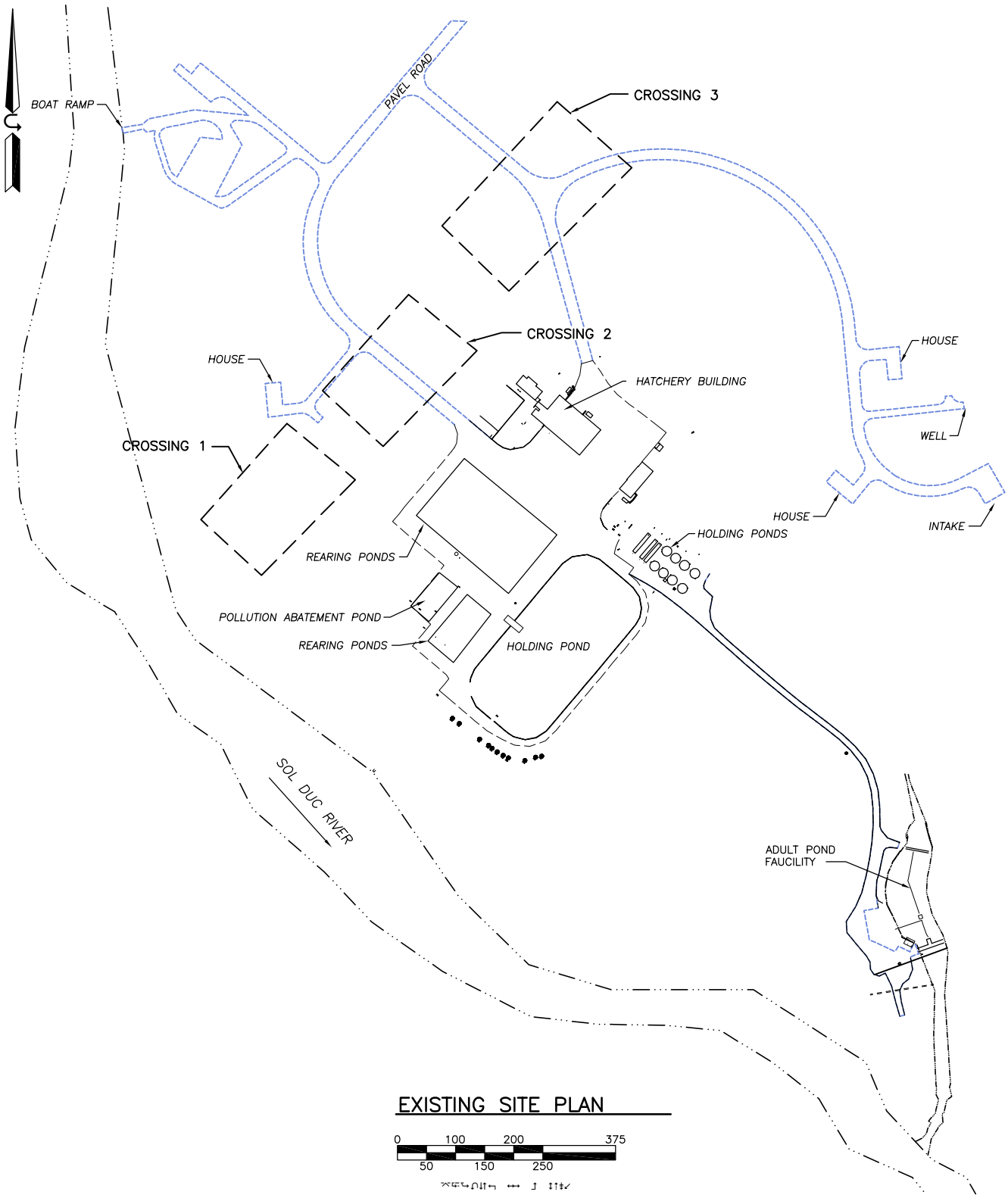
ADJACENT PROPERTY OWNER:
1. DNR
2

PROJECT LOCATION (ADDRESS):
SOL DUC HATCHERY
1423 PAVEL ROAD
BEAVER, WA 98305

LAT/LONG: 48° 03' 17"N/124° 18' 21"W
DATUM: NAD 83, NAVD 88
SHEET 1 OF 11 DATE: 5-15-14

PROPOSED PROJECT:
FISH BARRIER REMOVAL

IN: SOL DUC RIVER
NEAR/AT: FORKS, WA
COUNTY: CALLAM
STATE: WA



EXISTING SITE PLAN

0 100 200 375
50 150 250

REFERENCE NUMBER:

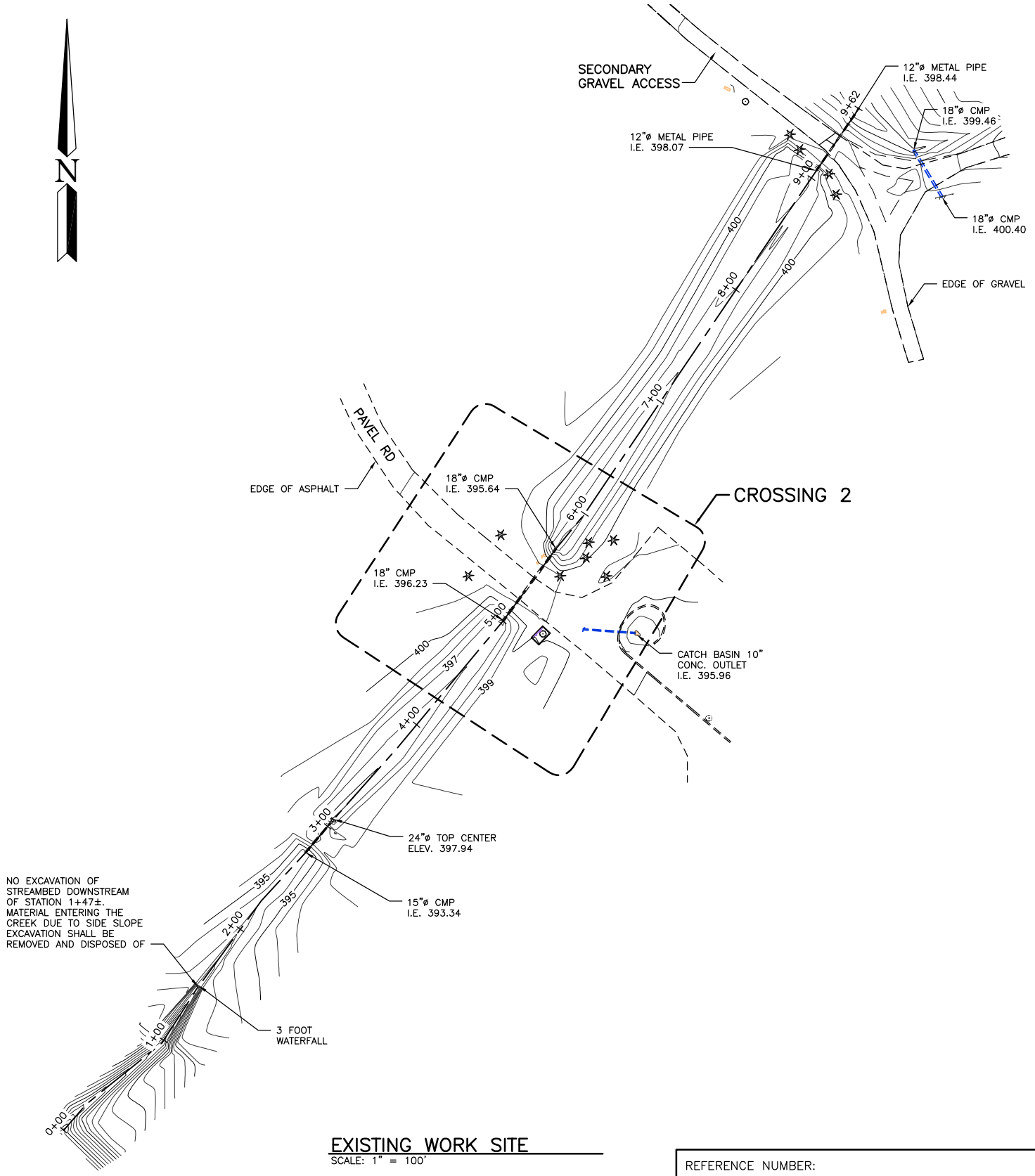
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:
FISH BARRIER REMOVAL

LOCATION: SOL DUC HATCHERY

SHEET 2 OF 11 DATE: 5-15-14

ENG. PROJECT NO. CM:H032:14-1



EXISTING WORK SITE

SCALE: 1" = 100'

0 50 100
25 75 150

SCALE: 1" = 100'

REFERENCE NUMBER:

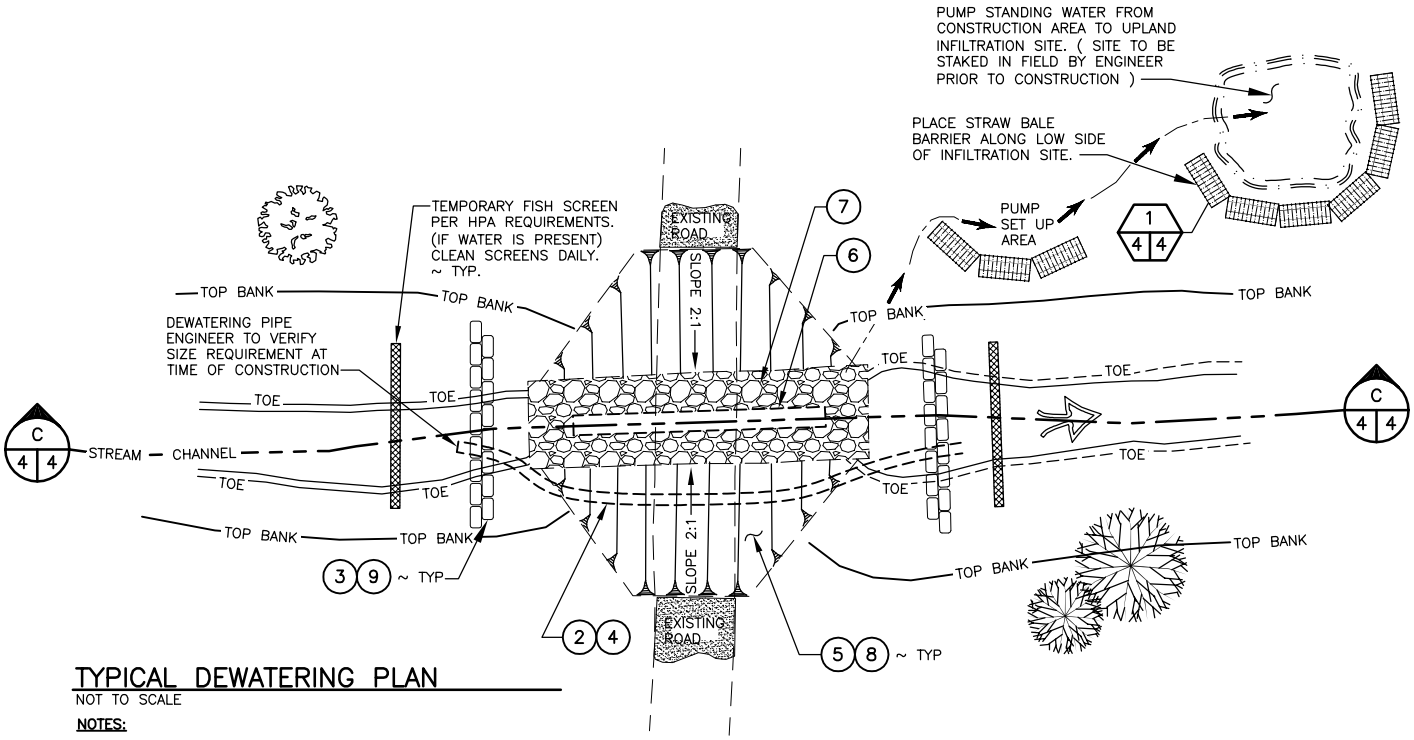
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:
FISH BARRIER REMOVAL

LOCATION: SOL DUC HATCHERY

SHEET 3 OF 11 DATE: 5-15-14

ENG. PROJECT NO. CM:H032:14-1

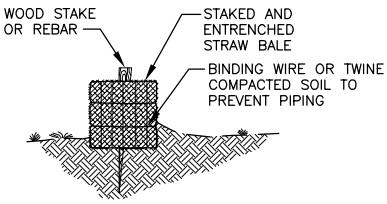


TYPICAL DEWATERING PLAN

NOT TO SCALE

NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH HPA.
2. DURING CONSTRUCTION (IF WATER IS PRESENT) STREAM LOW SHALL BE DIVERTED THROUGH BYPASS PIPE. IF HIGH FLOW, (2) DIVERSION PIPES MAY BE NEEDED OR BY USE OF PUMP.
3. PLACE BAGS FILLED WITH PEA GRAVEL TO SEAL BYPASS INLET AND OUTLET
4. DIVERSION SHALL BE APPROVED BY INSPECTOR PRIOR TO EXCAVATION.
5. EXCAVATE EXISTING FILL.
6. REMOVE EXISTING CULVERT AND DISPOSE OF OFF SITE
7. PLACE NEW BED MATERIAL MIX AND REMOVE BYPASS PIPE/PUMP.
8. COVER ALL EXPOSED SOIL WITH STRAW MULCH AND GRASS SEED. (SEE SITE RESTORATION PLAN)
9. REMOVE DIVERSION BAGS AND FISH SCREENS BY HAND.



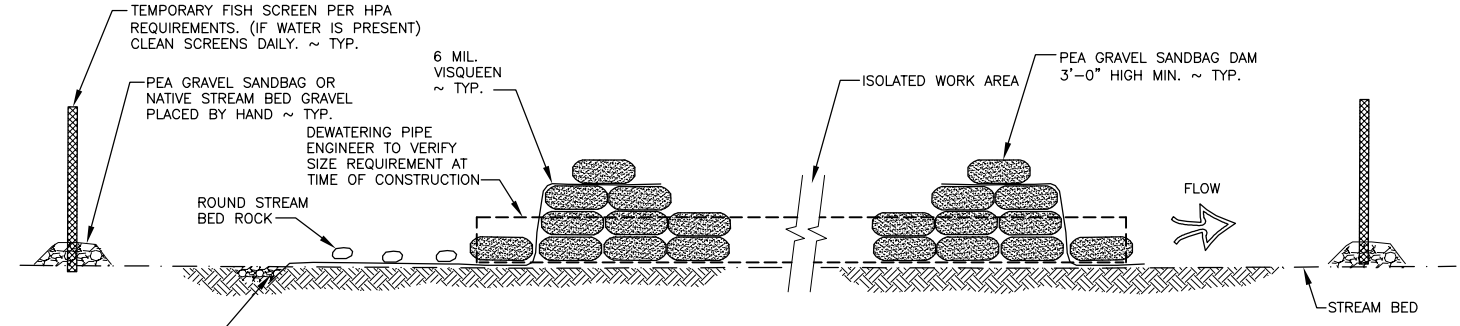
DETAIL

NOT TO SCALE

1
4 4

NOTES:

1. BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
2. THE BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE A MINIMUM OF 4 INCHES. BACKFILL SOIL SHALL CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHALL BE BUILT UP 4 INCHES AGAINST THE UPHILL SIDE OF THE BARRIER. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST 2 STAKES OR REBAR DRIVEN THROUGH THE BALE.
3. THE GAP BETWEEN THE BALES SHALL BE CHINKED (FILLED BY WEDGING) WITH STRAW TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES.



SECTION

NOT TO SCALE

C
4 4

REFERENCE NUMBER:

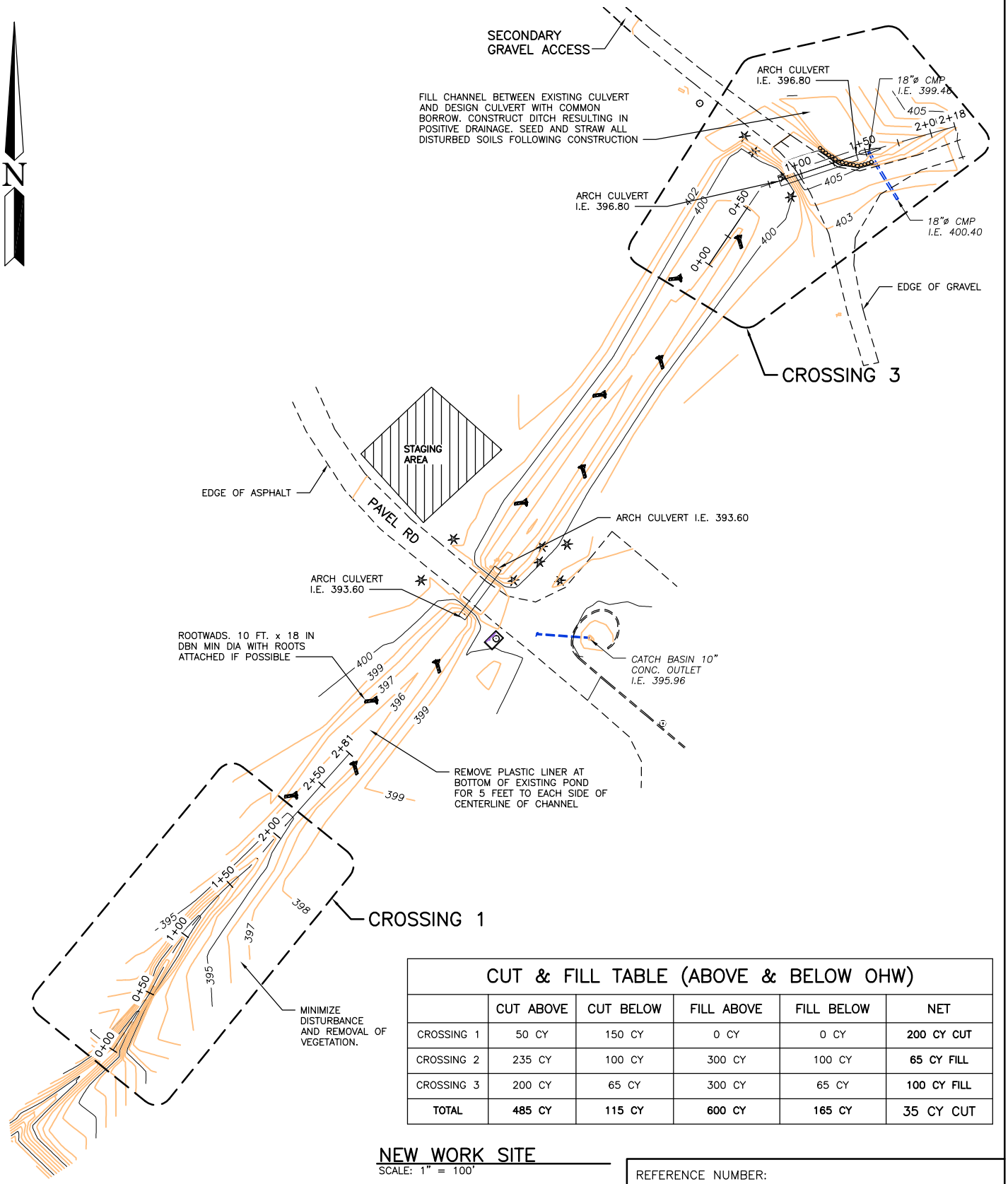
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:
FISH BARRIER REMOVAL

LOCATION: SOL DUC HATCHERY

SHEET 4 OF 11 DATE: 5-15-14

ENG. PROJECT NO. CM:H032:14-1



CUT & FILL TABLE (ABOVE & BELOW OHW)

	CUT ABOVE	CUT BELOW	FILL ABOVE	FILL BELOW	NET
CROSSING 1	50 CY	150 CY	0 CY	0 CY	**200 CY CUT**
CROSSING 2	235 CY	100 CY	300 CY	100 CY	**65 CY FILL**
CROSSING 3	200 CY	65 CY	300 CY	65 CY	**100 CY FILL**
TOTAL	**485 CY**	**115 CY**	**600 CY**	**165 CY**	35 CY CUT

NEW WORK SITE

SCALE: 1" = 100'

0 50 100
25 75 150

SCALE: 1" = 100'

REFERENCE NUMBER:

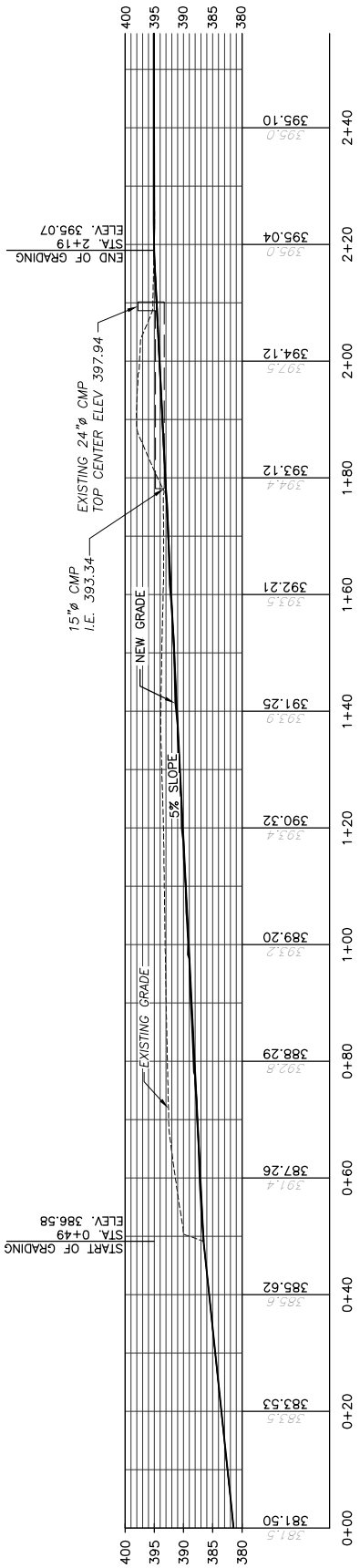
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:
FISH BARRIER REMOVAL

LOCATION: SOL DUC HATCHERY

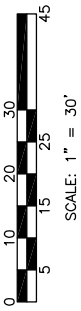
SHEET 5 OF 11 DATE: 5-15-14

ENG. PROJECT NO. CM:H032:14-1



CROSSING 1 PROFILE

SCALE: 1" = 30'



REFERENCE NUMBER:

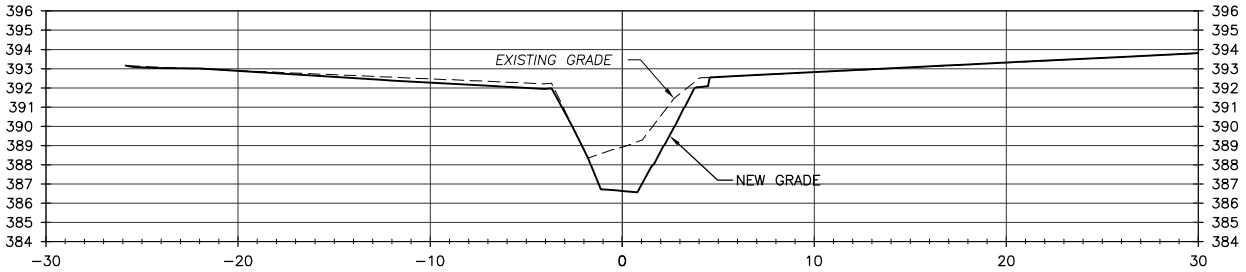
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:
FISH BARRIER REMOVAL

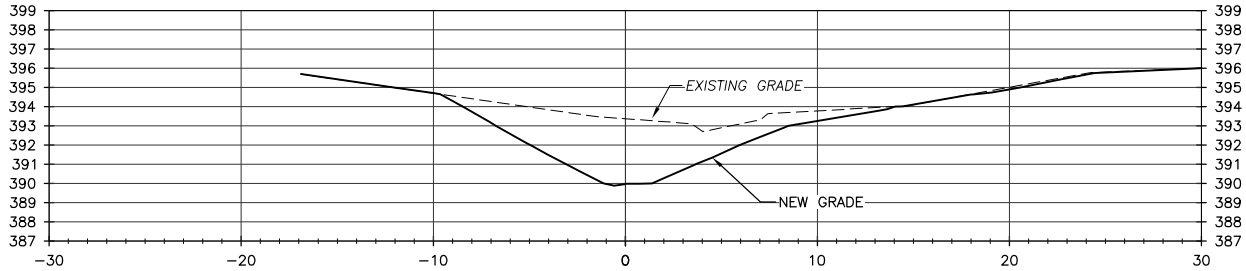
LOCATION: SOL DUC HATCHERY

SHEET 6 OF 11 DATE: 5-15-14

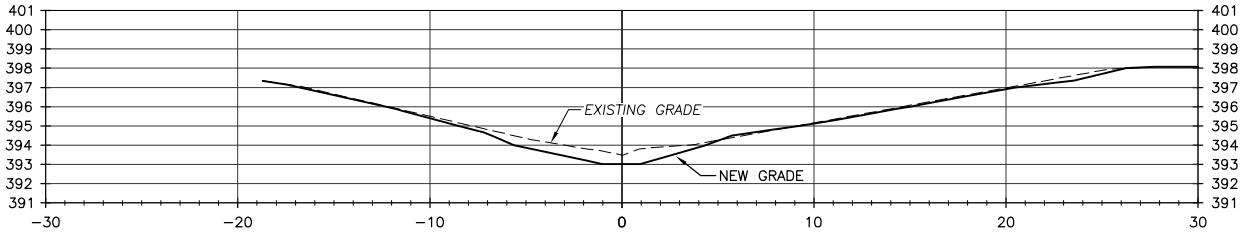
ENG. PROJECT NO. CM:H032:14-1



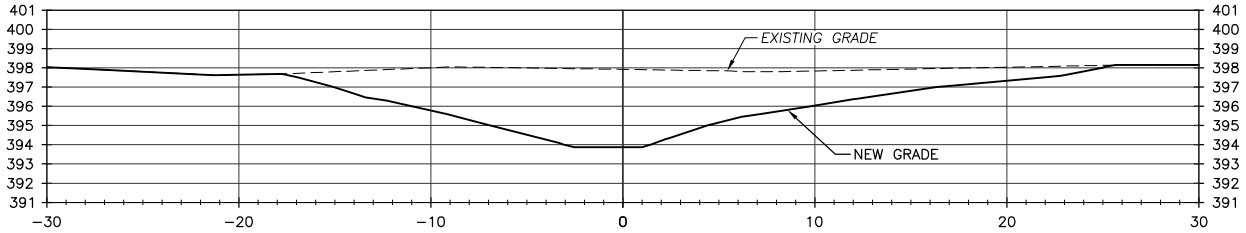
0+50



1+15



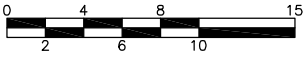
1+78



1+95

CROSSING 1 SECTIONS

SCALE: 1" = 10'



SCALE: 1" = 10'

REFERENCE NUMBER:

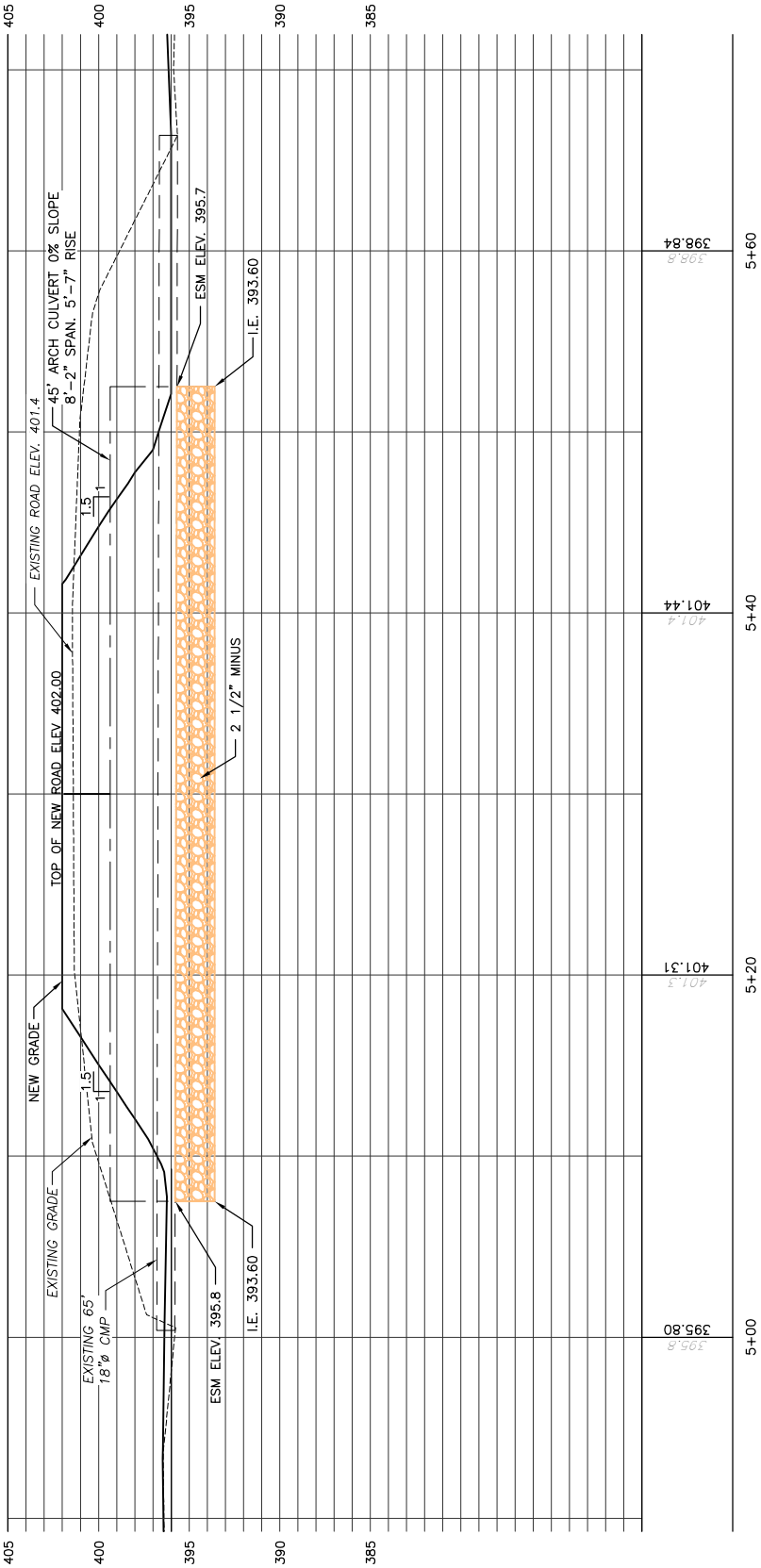
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:
FISH BARRIER REMOVAL

LOCATION: SOL DUC HATCHERY

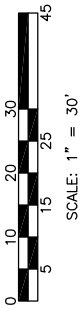
SHEET 7 OF 11 DATE: 5-15-14

ENG. PROJECT NO. CM:H032:14-1



CROSSING 2 PROFILE

SCALE: 1" = 30'



REFERENCE NUMBER:

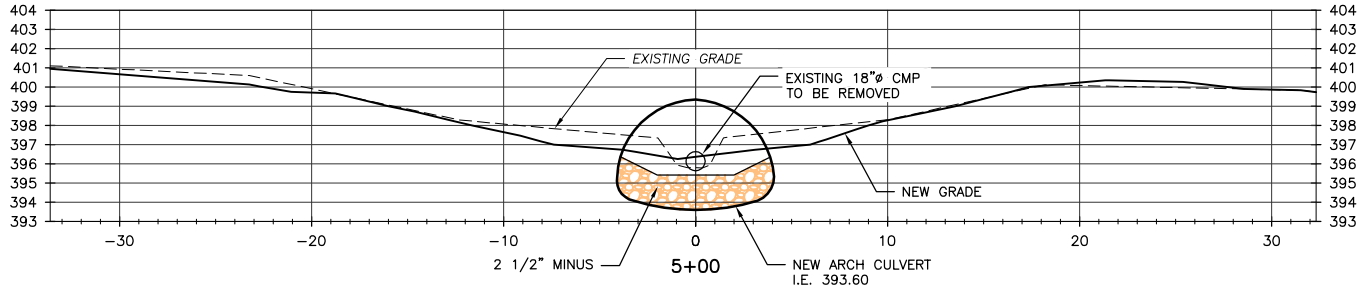
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

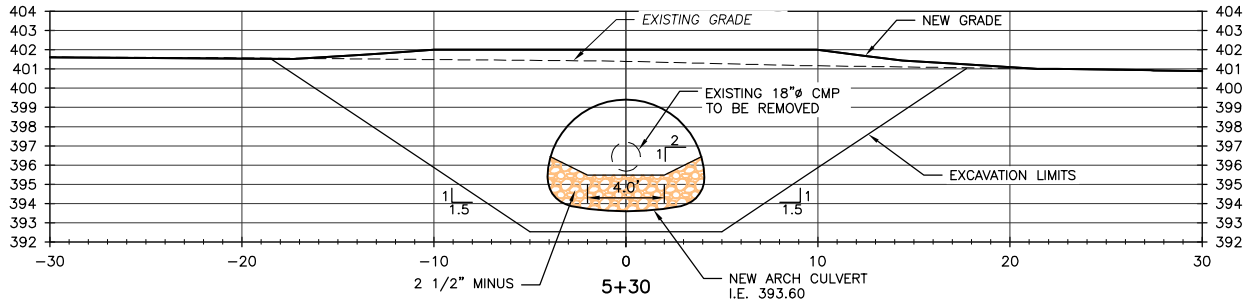
PROPOSED PROJECT:
FISH BARRIER REMOVAL

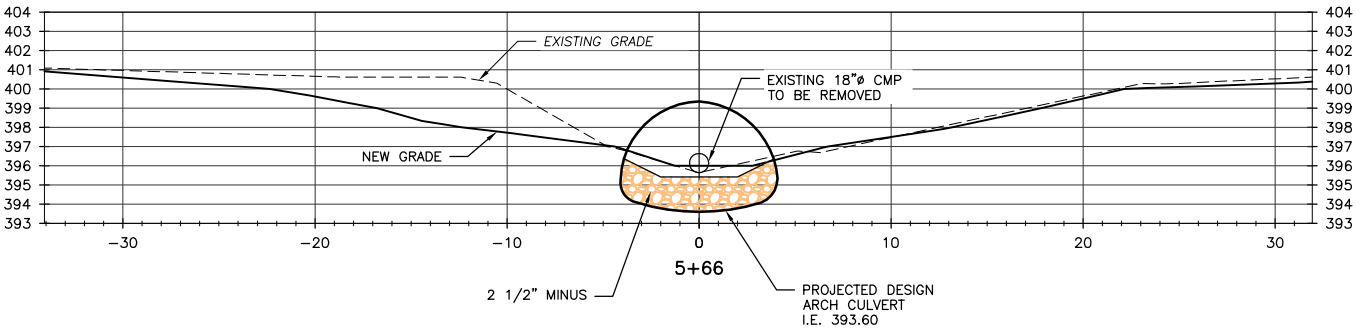
LOCATION: SOL DUC HATCHERY

SHEET 8 OF 11 DATE: 5-15-14

ENG. PROJECT NO. CM:H032:14-1

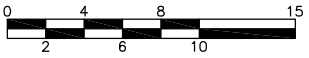






CROSSING 2 SECTIONS

SCALE: 1" = 10'



SCALE: 1" = 10'

REFERENCE NUMBER:

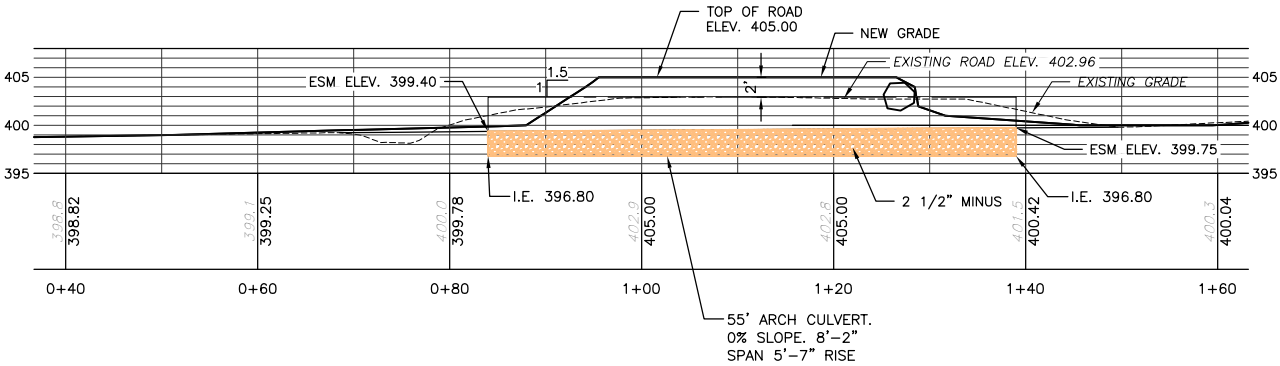
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:
FISH BARRIER REMOVAL

LOCATION: SOL DUC HATCHERY

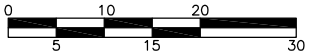
SHEET 9 OF 11 DATE: 5-15-14

ENG. PROJECT NO. CM:H032:14-1

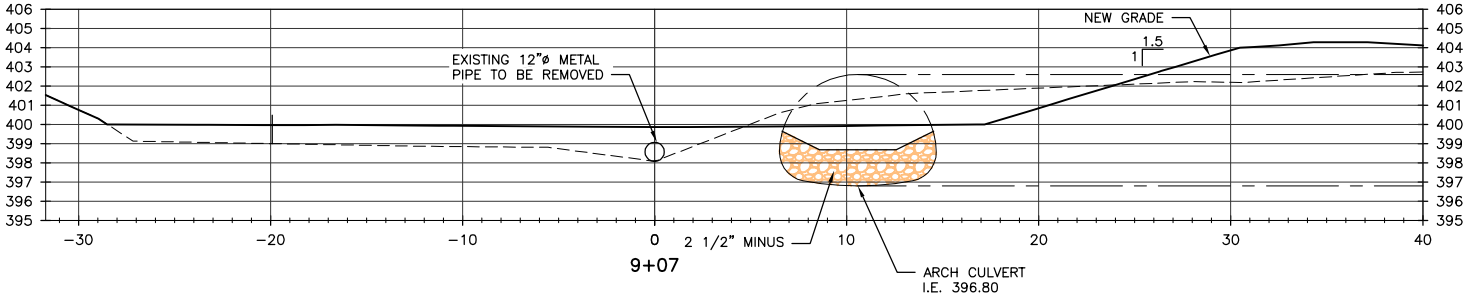


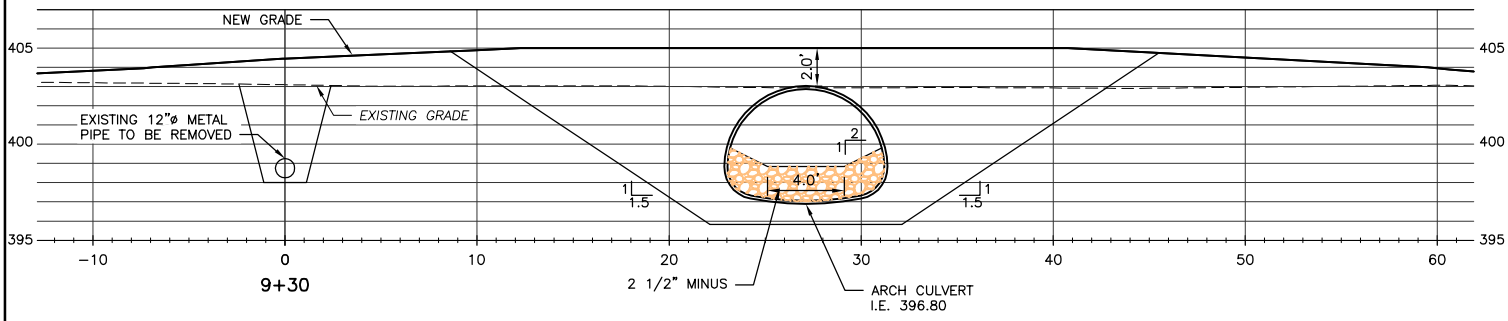
CROSSING 3 PROFILE

SCALE: 1" = 20'



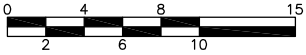
SCALE: 1" = 20'





CROSSING 3 SECTIONS

SCALE: 1" = 10'



SCALE: 1" = 10'

REFERENCE NUMBER:

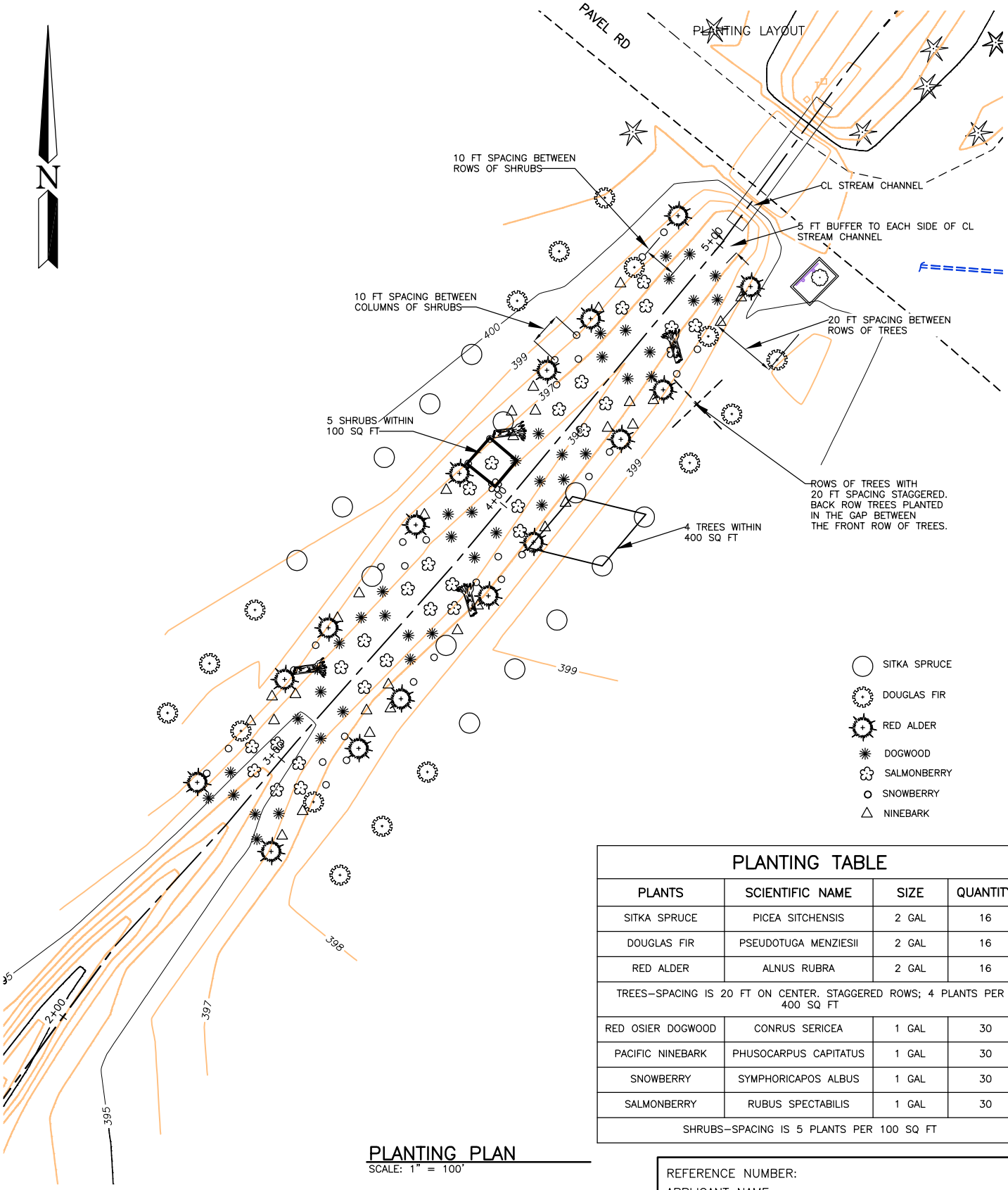
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:
FISH BARRIER REMOVAL

LOCATION: SOL DUC HATCHERY

SHEET 10 OF 11 DATE: 5-15-14

ENG. PROJECT NO. CM:H032:14-1



PLANTING TABLE

PLANTS	SCIENTIFIC NAME	SIZE	QUANTITY
SITKA SPRUCE	PICEA SITCHENSIS	2 GAL	16
DOUGLAS FIR	PSEUDOTUGA MENZIESII	2 GAL	16
RED ALDER	ALNUS RUBRA	2 GAL	16
TREES–SPACING IS 20 FT ON CENTER. STAGGERED ROWS; 4 PLANTS PER 400 SQ FT			
RED OSIER DOGWOOD	CONRUS SERICEA	1 GAL	30
PACIFIC NINEBARK	PHUSOCARPUS CAPITATUS	1 GAL	30
SNOWBERRY	SYMPHORICAPOS ALBUS	1 GAL	30
SALMONBERRY	RUBUS SPECTABILIS	1 GAL	30
SHRUBS–SPACING IS 5 PLANTS PER 100 SQ FT			

PLANTING PLAN

SCALE: 1" = 100'

0 50 100
25 75 150

SCALE: 1" = 100'

REFERENCE NUMBER:

APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:
FISH BARRIER REMOVAL

LOCATION: SOL DUC HATCHERY

SHEET 11 OF 11 DATE: 5–15–14

ENG. PROJECT NO. CM:H032:14–1

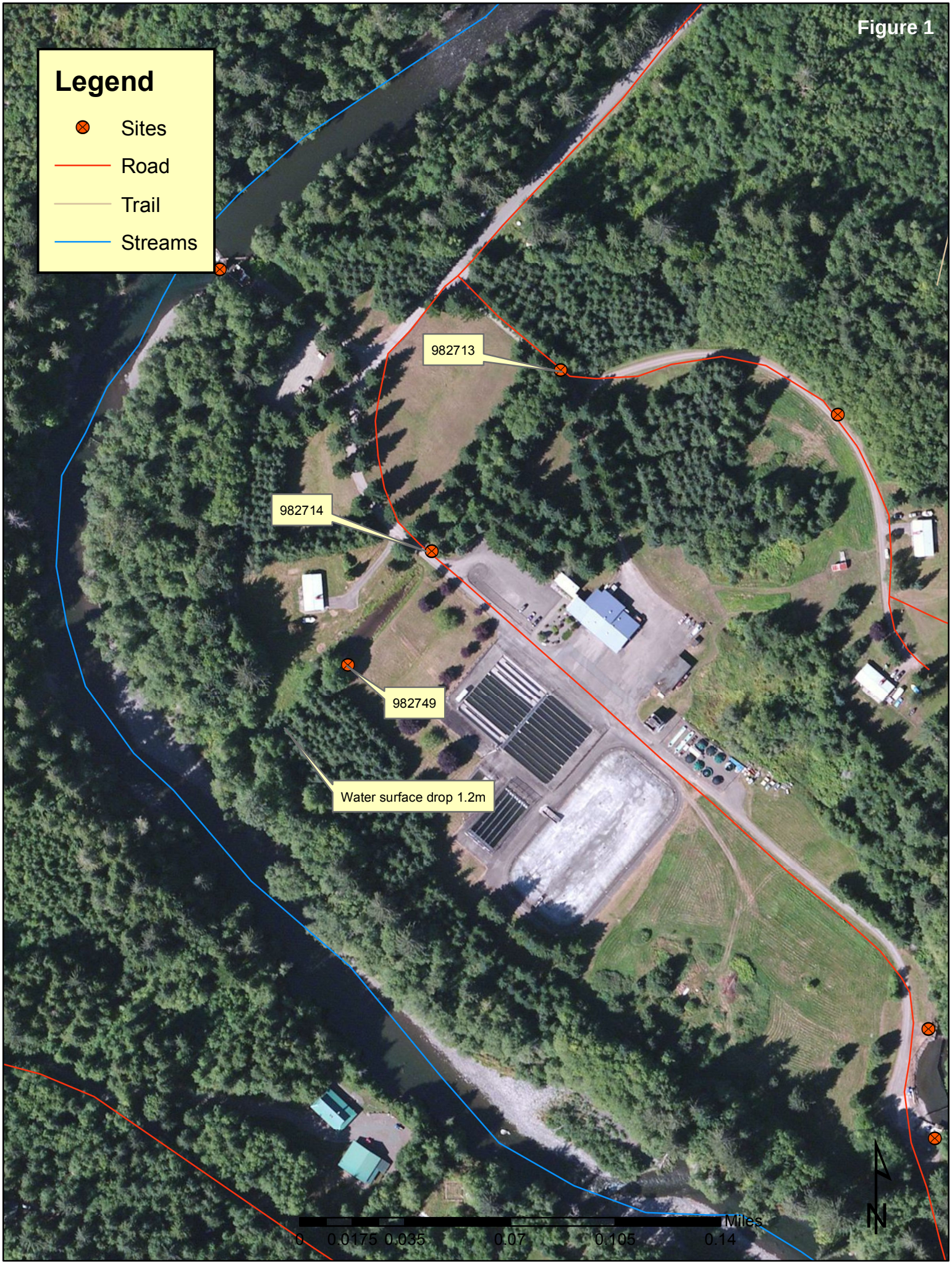


Figure 1
Legend
Sites
Road
Trail
Streams
982713
982714
982749
Water surface drop 1.2m
0 0.0175 0.035 0.07 0.105 0.14
Miles
N