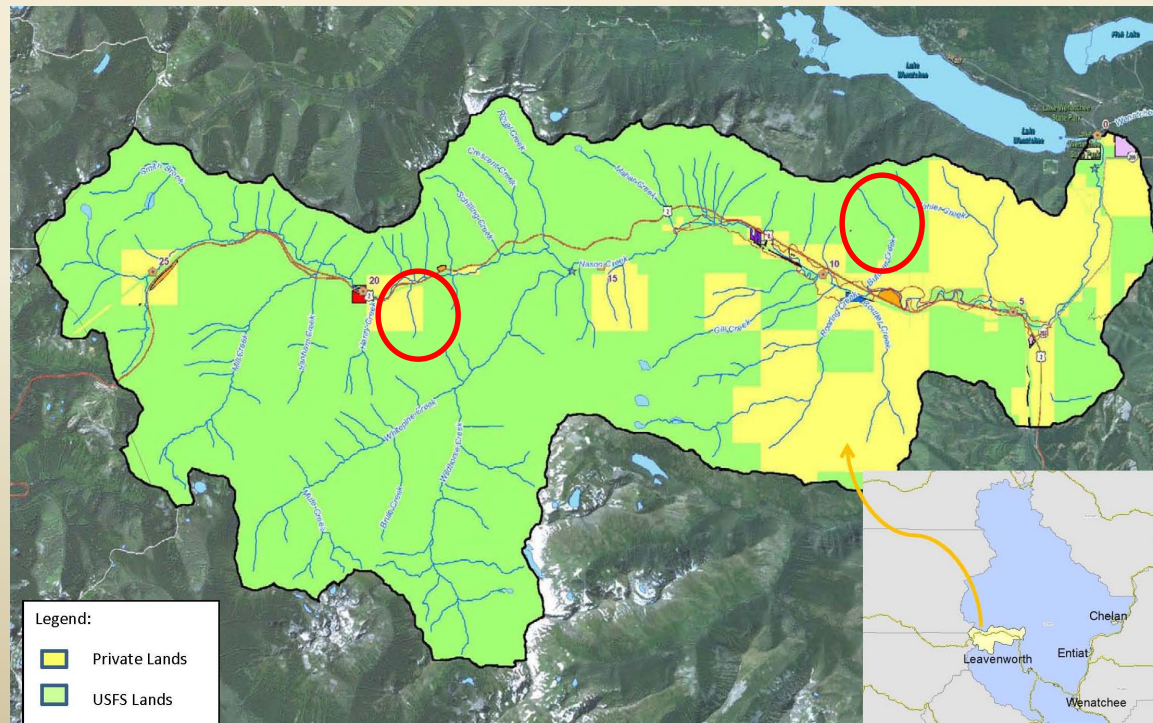
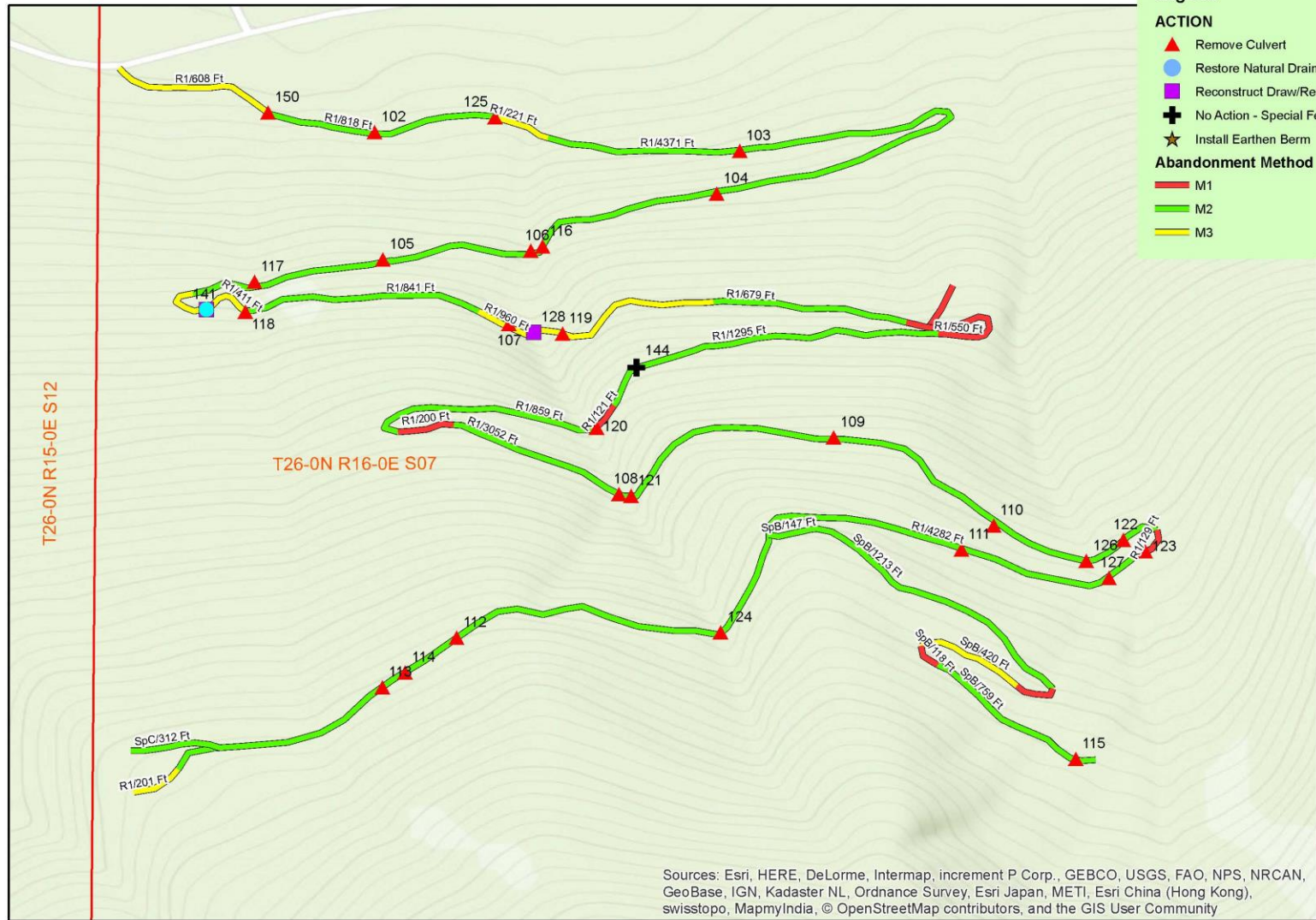


2021 Nason Road Decom

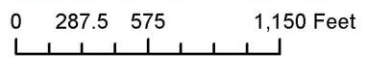
- Chelan PUD mitigation for McKenzie-Beverly transmission line permit renewal
- 8 miles of road decommissioning in Nason watershed on USFS land



Nason Creek Road Abandonment Project



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



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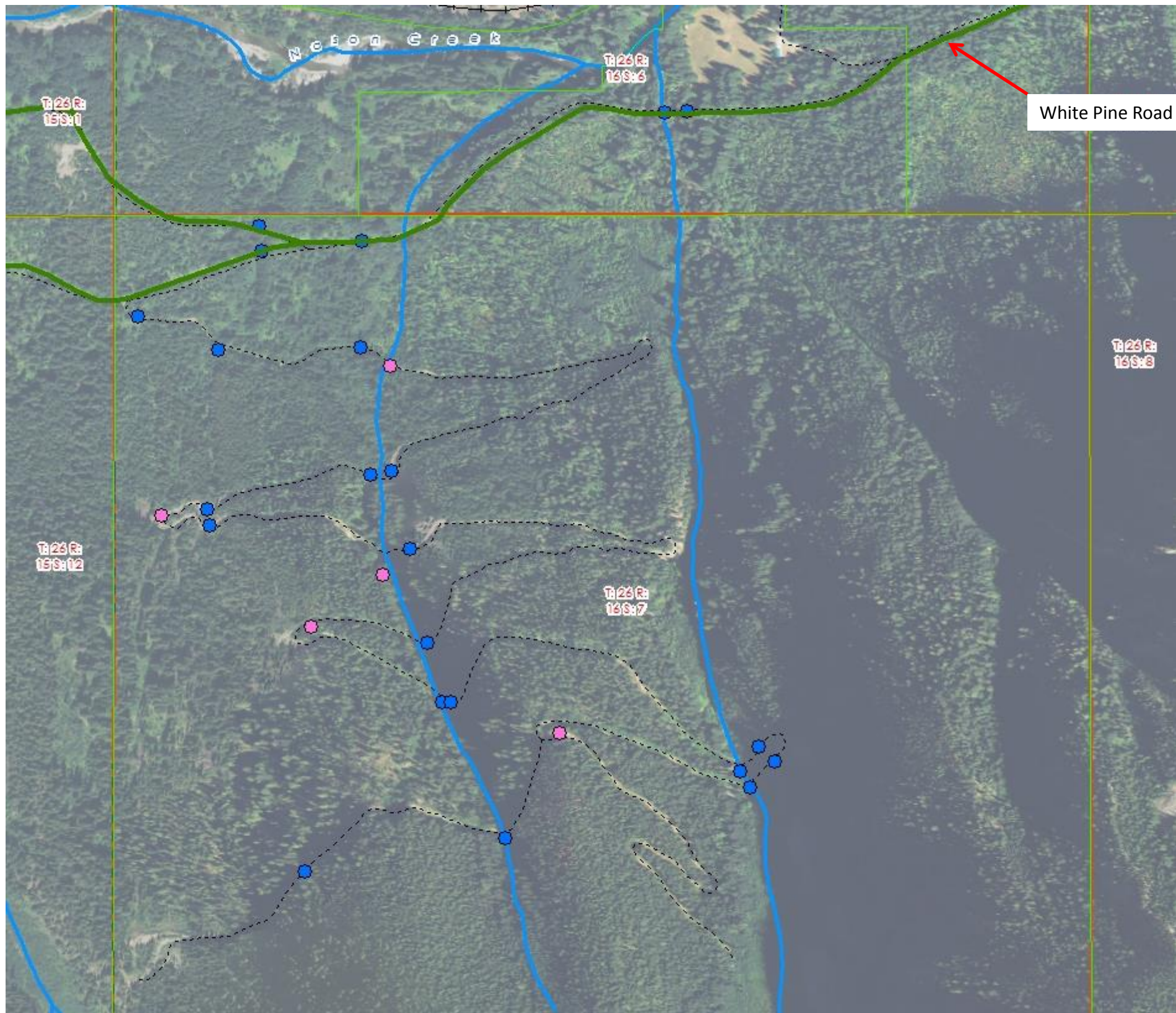
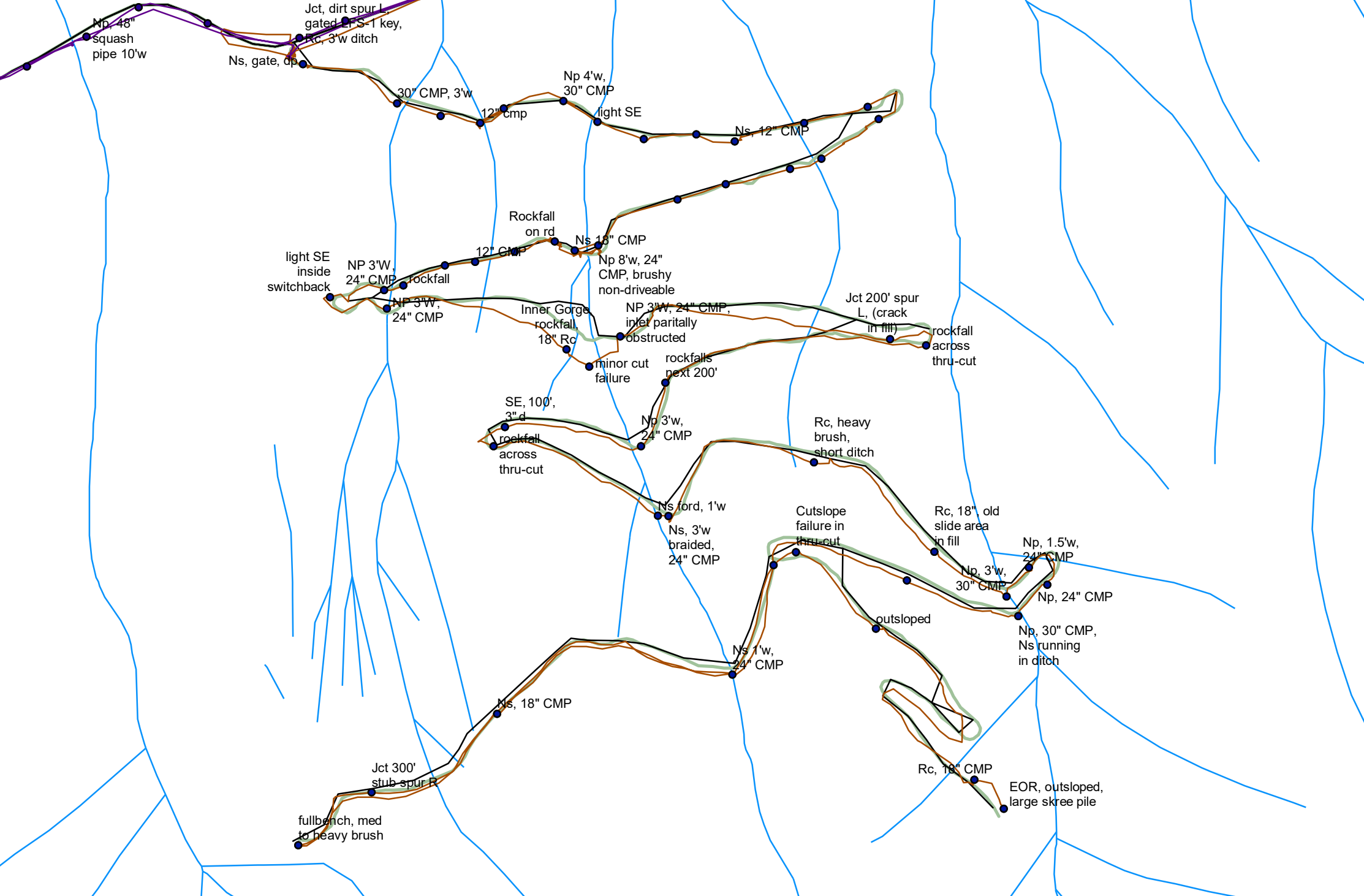


Figure 7: Proposed De-commissioning 4.41 miles of non-system roads (black dash line) in Section 7.

Pink dots = mapped surface erosion, blue dots = mapped stream crossings

Note how the road switchbacks up the hill slope across two tributaries to Nason Creek. Erosion potential is depicted as Project 10 on Figure 1.



Np 48"
squash
pipe 10"
w

Jct, dirt spur L,
gated, S-1 key,
Rc, 3'w ditch
Ns, gate, dip

30" CMP, 3"
w

12" cmp

Np 4"
w, 30"
CMP

light SE

Ns, 12" CMP

Rockfall
on rd

Ns 18" CMP

light SE
inside
switchback

NP 3"
w, 24"
CMP

rockfall

12" CMP

Np 8"
w, 24"
CMP, brushy
non-driveable

NP 3"
w, 24"
CMP

Inner Gorge,
rockfall,
18" Rc

NP 3"
w, 24"
CMP,
inlet partially
obstructed

Jct 200' spur
L, (crack
in fill)

rockfall
across
thru-cut

minor cut
failure

rockfalls
next 200'

SE, 100',
3" d

rockfall
across
thru-cut

Np 3"
w, 24"
CMP

Rc, heavy
brush,
short ditch

Ns ford, 1'w

Ns, 3"
w
braided,
24" CMP

Cutslope
failure in
thru-cut

Rc, 18" old
slide area
in fill

Np, 1.5"
w, 24"
CMP

Np, 3"
w, 30"
CMP

Np, 24" CMP

Np, 30" CMP,
Ns running
in ditch

outsloped

Ns 1" w,
24" CMP

Ns, 18" CMP

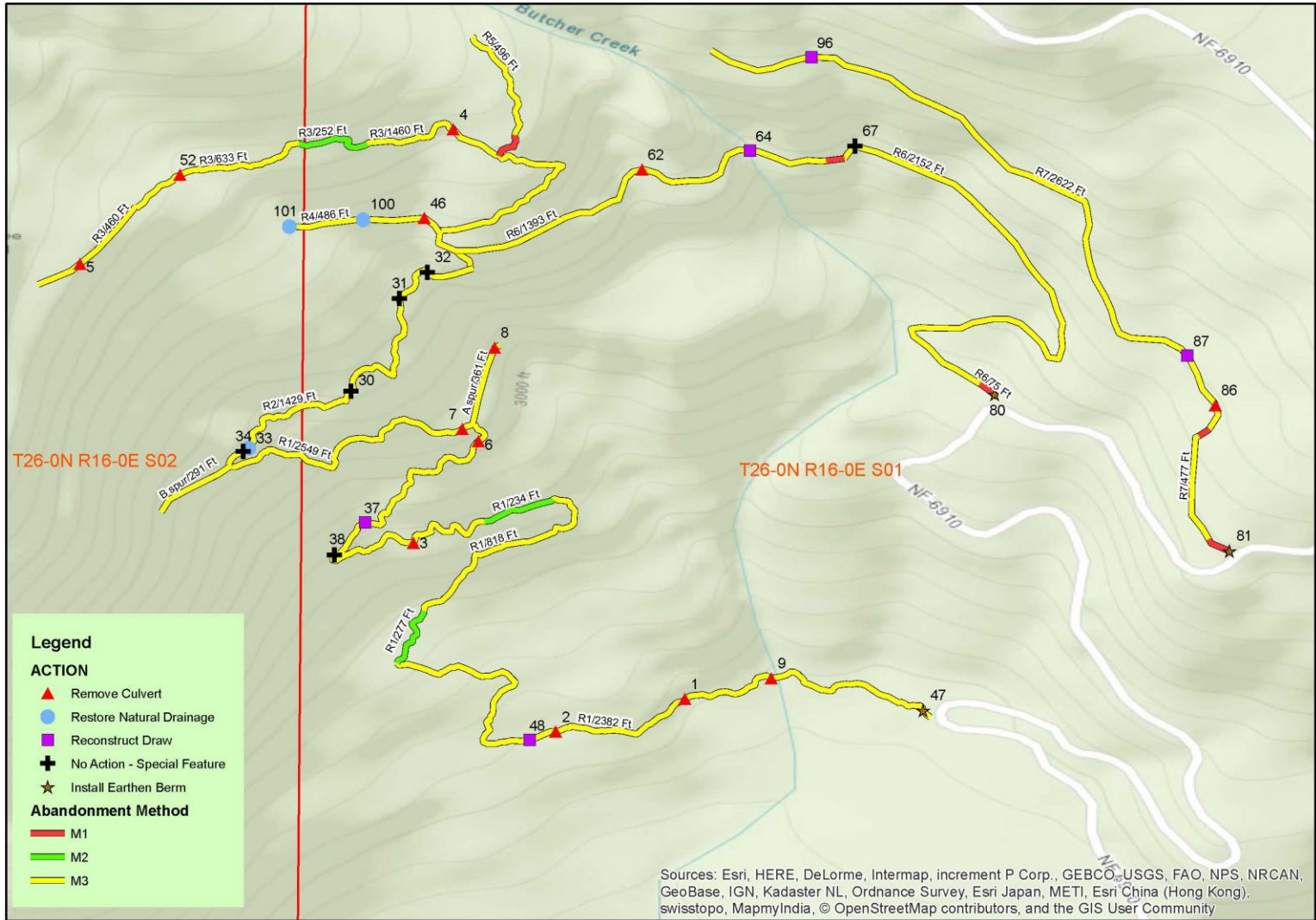
Jct 300'
stub spur R

fullbench, med
to heavy brush

Rc, 18" CMP

EOR, outsloped,
large skree pile

Nason Creek Road Abandonment Project S1 T26N R16E



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



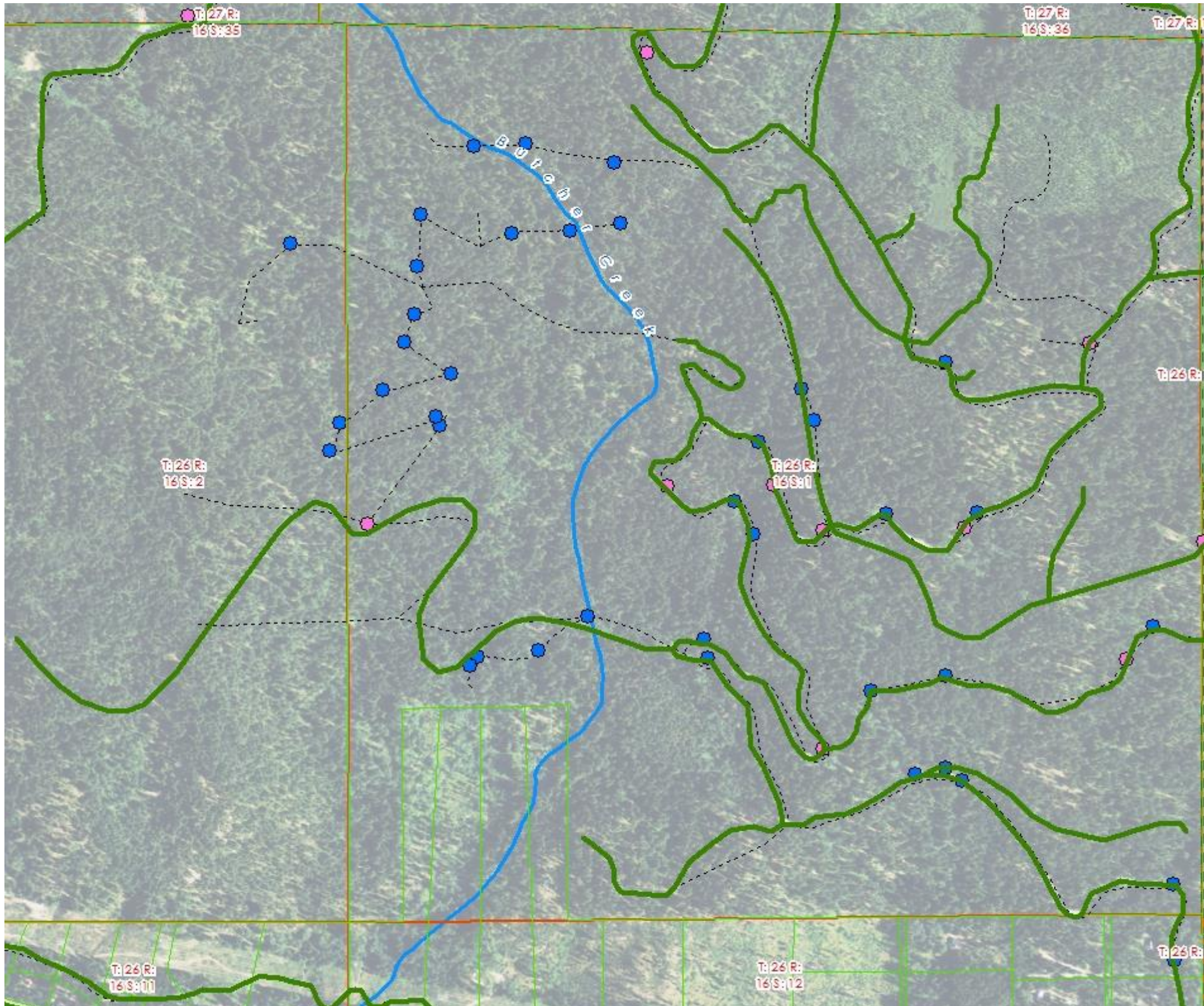
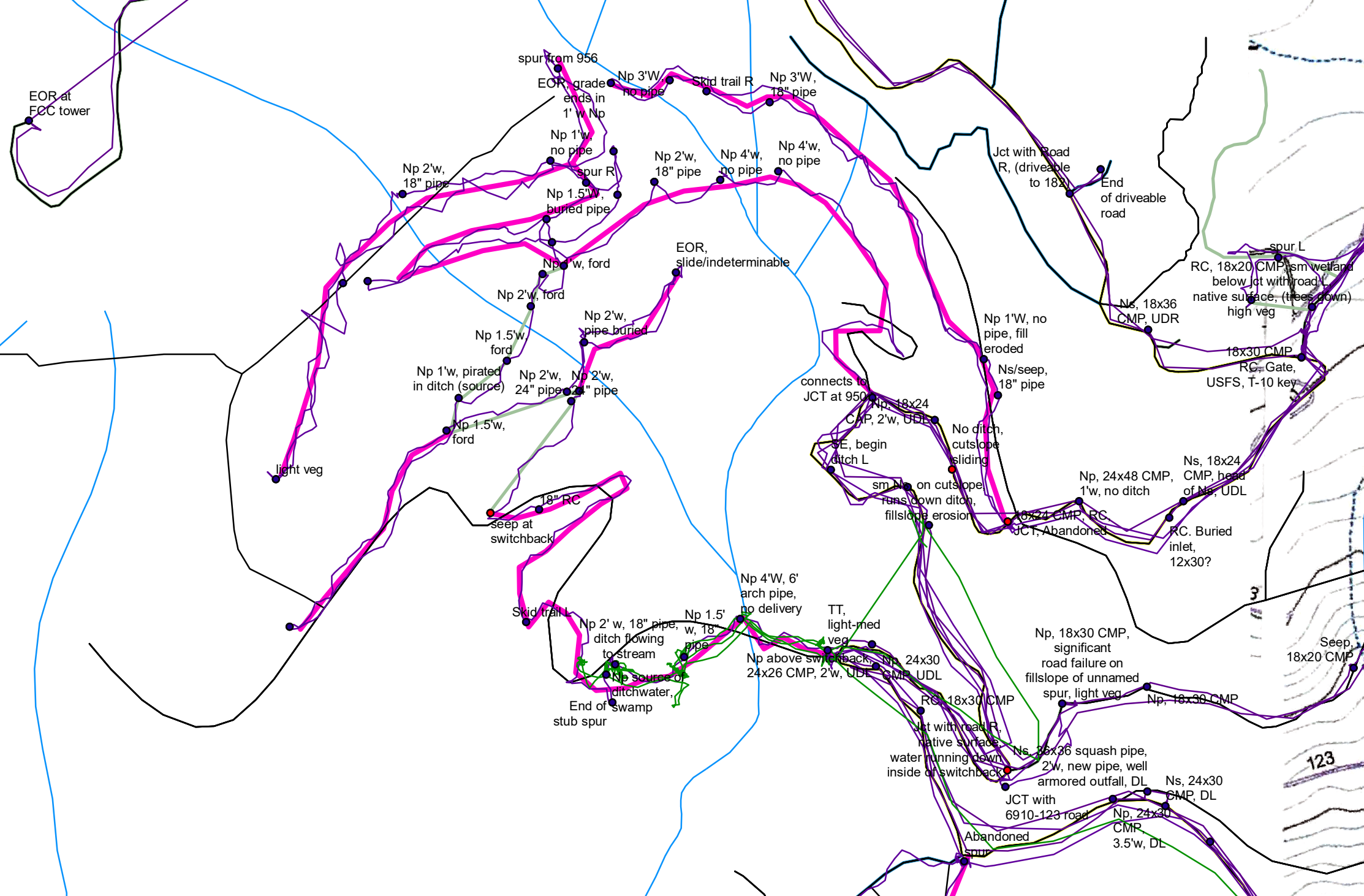


Figure 9: Proposed De-commissioning 1.77 miles of non-system roads (black dash line) in Section 1.

Pink dots = mapped surface erosion, blue dots = mapped stream crossings

Note how the road switchbacks up the hill slope and crosses Butcher creek. Erosion potential is depicted as Project 12 on Figure 1.



EOR at FCC tower

spur from 956

EOR, grade ends in 1' w Np

Np 3'w, no pipe

Skid trail R

Np 3'w, 18" pipe

Np 2'w, 18" pipe

Np 1'w, no pipe

Np 1.5'w, buried pipe

Np 2'w, 18" pipe

Np 4'w, no pipe

Np 4'w, no pipe

Jct with Road R, (driveable to 182)

End of driveable road

Np 1'w, ford

EOR, slide/indeterminable

Np 2'w, ford

Np 2'w, pipe buried

Np 1.5'w, ford

Np 1'w, pirated in ditch (source)

Np 2'w, 24" pipe

Np 2'w, 24" pipe

Np 1.5'w, ford

light veg

18" RC

seep at switchback

connects to JCT at 950

Np, 18x24 CMP, 2'w, UDL

SE, begin ditch L

No ditch, cutslope sliding

sm Np, on cutslope runs down diton, fill/slope erosion

16x24 CMP, RC

Np, 24x48 CMP, 1'w, no ditch

Ns, 18x24 CMP, head of Ns, UDL

RC, Buried inlet, 12x30?

Np 4'w, 6' arch pipe, no delivery

Skid trail L

Np 2'w, 18" pipe, ditch flowing to stream

Np 1.5'w, 18" pipe

Np source of ditchwater, End of swamp stub spur

Np above switchback, 24x26 CMP, 2'w, UDL

TT, light-med veg

Np, 24x30 CMP, UDL

Np, 18x30 CMP, significant road failure on fillslope of unnamed spur, light veg

Seep, 18x20 CMP

RC, 18x30 CMP

Jct with road R, native surface, water running down inside of switchback

Ns, 18x36 squash pipe, 2'w, new pipe, well armored outfall, DL

JCT with 6910-123 road










Abandoned spur

Np, 24x30 CMP, DL











Np, 24x30 CMP, 3.5'w, DL

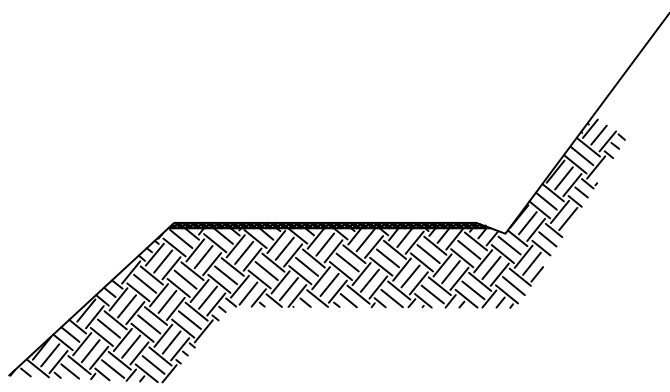
123

WORK DESCRIPTION LIST

WORK DESCRIPTION LIST					
Legal Description	Road Number		Length		Sheet 1 of 1
T26N R16E S1&2	R1-R7, Spurs A & B		19312 ft		
Map Symbol	DESCRIPTION	PAY ITEM	ESTIMATED QUANTITY	Unit	Est Fill Ht.
	Decom Method 1		378	Ft	
	Decom Method 2		763	Ft	
	Decom Method 3		18,171	Ft	
	Remove existing 30' x 18" culvert, re-establish natural drainage		7	EA	Ranges 3-10 ft @ outlet
	Remove existing 30' x 24" culvert, re-establish natural drainage		5	EA	Ranges 5-15 ft @ outlet
	Remove existing 30' x 72" culvert, re-establish natural drainage		1	EA	3 ft @ outlet
	Restore natural drainage		3	EA	
	Construct earthen berm		3	EA	
	Reconstruct draw		5	EA	

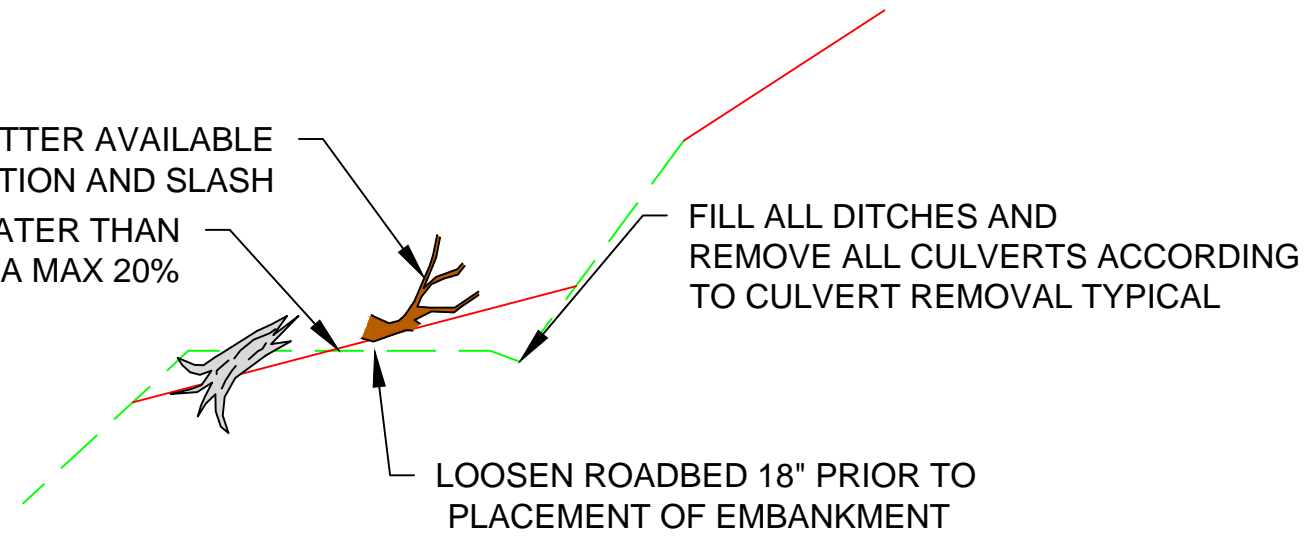
WORK DESCRIPTION LIST

WORK DESCRIPTION LIST					
Legal Description	Road Number		Length		Sheet 1 of 1
T26N R16E S7	R1, Spurs A, B, C				
Map Symbol	DESCRIPTION	PAY ITEM	ESTIMATED QUANTITY	Unit	Est Fill Ht.
	Decom Method 1		1,512	Ft	
	Decom Method 2		18,628	Ft	
	Decom Method 3		2,821	Ft	
	Remove existing 30' x 12" culvert, re-establish natural drainage		4	EA	Ranges 3-8 ft @ outlet
	Remove existing 30' x 18" culvert, re-establish natural drainage		10	EA	Ranges 3-4 ft @ outlet
	Remove existing 30-35' x 24" culvert, re-establish natural drainage		10	EA	Ranges 5-7 ft @ outlet
	Remove existing 30' x 30" culvert, re-establish natural drainage		3	EA	3 ft @ outlet
	Restore natural drainage		0	EA	
	Construct earthen berm		0	EA	
	Reconstruct draw/Recontour		1	EA	



EXISTING GROUND LINE

SCATTER AVAILABLE VEGETATION AND SLASH
 OUTSLOPE 5% GREATER THAN EXISTING GRADE TO A MAX 20%



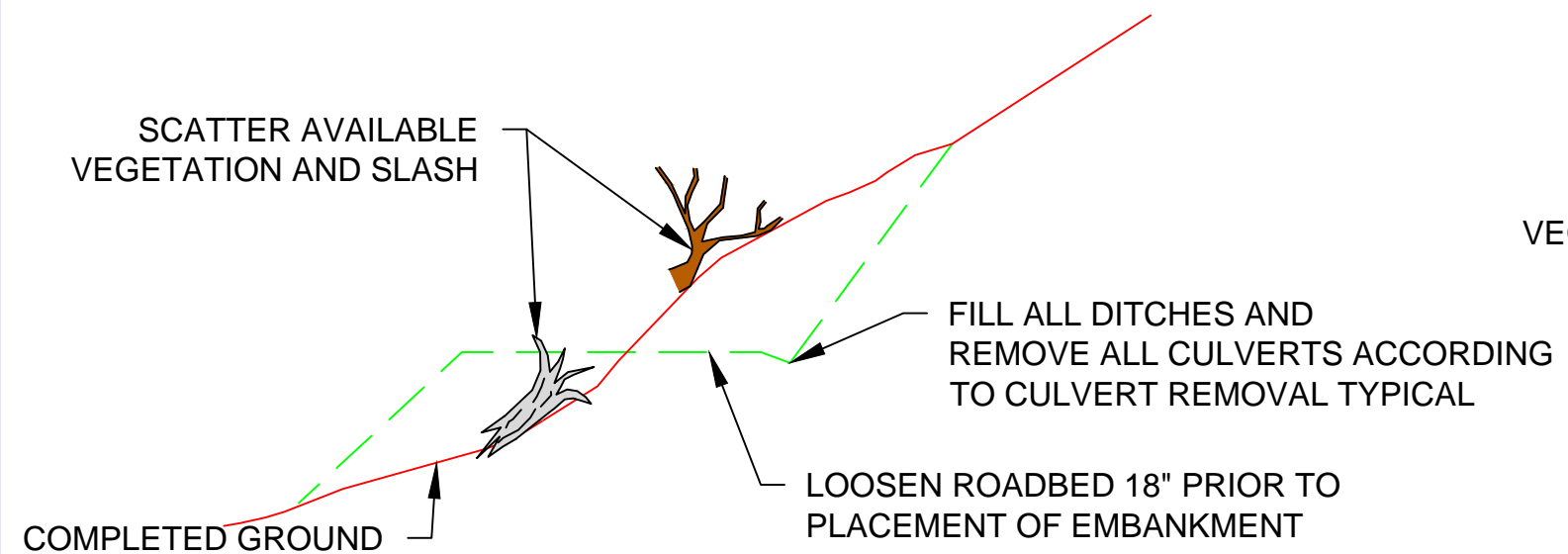
METHOD 2
 (ITEM 21105B)

FILL ALL DITCHES AND REMOVE ALL CULVERTS ACCORDING TO CULVERT REMOVAL TYPICAL

LOOSEN ROADBED 18" PRIOR TO PLACEMENT OF EMBANKMENT

NOTE:
 ALL DISTURBED AREAS SHALL BE SEEDED IF ADEQUATE ON-SITE VEGETATION EXISTS MULCH WILL NOT BE REQUIRED COR WILL VERIFY NEED FOR MULCH PRIOR TO STARTING WORK ON EACH ROAD

SCATTER AVAILABLE VEGETATION AND SLASH

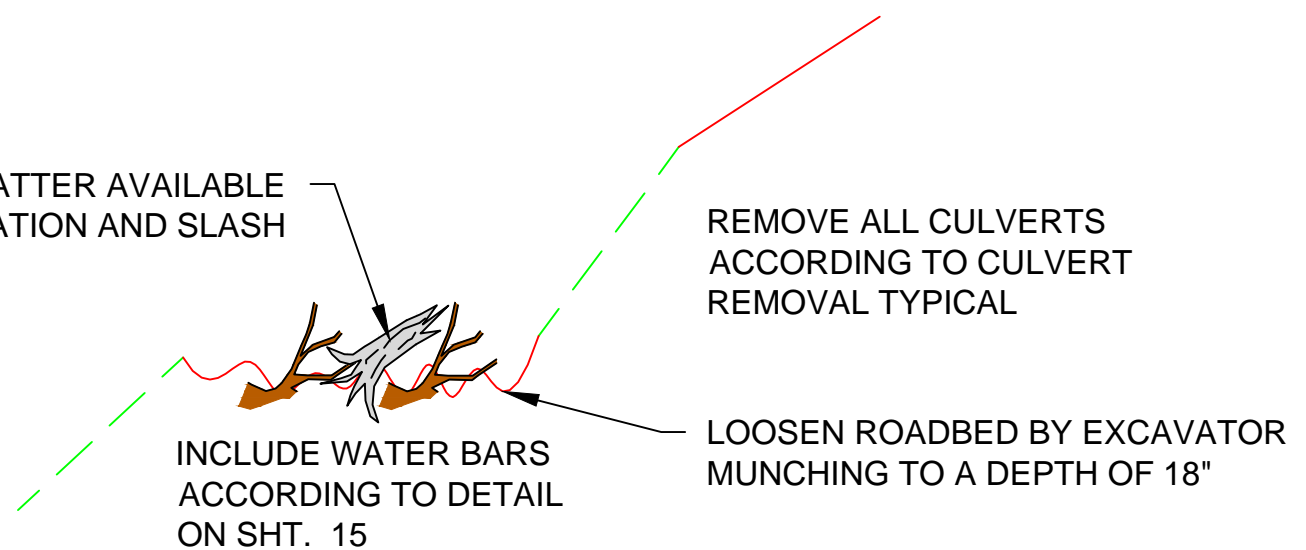


METHOD 1
 (ITEM 21106A)

FILL ALL DITCHES AND REMOVE ALL CULVERTS ACCORDING TO CULVERT REMOVAL TYPICAL

LOOSEN ROADBED 18" PRIOR TO PLACEMENT OF EMBANKMENT

SCATTER AVAILABLE VEGETATION AND SLASH

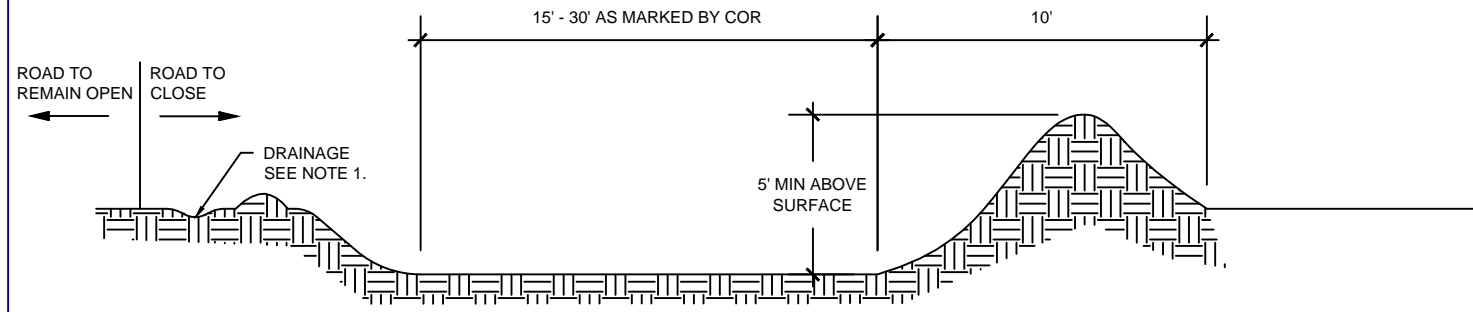


METHOD 3
 (ITEM 21106C)

REMOVE ALL CULVERTS ACCORDING TO CULVERT REMOVAL TYPICAL

LOOSEN ROADBED BY EXCAVATOR MUNCHING TO A DEPTH OF 18"

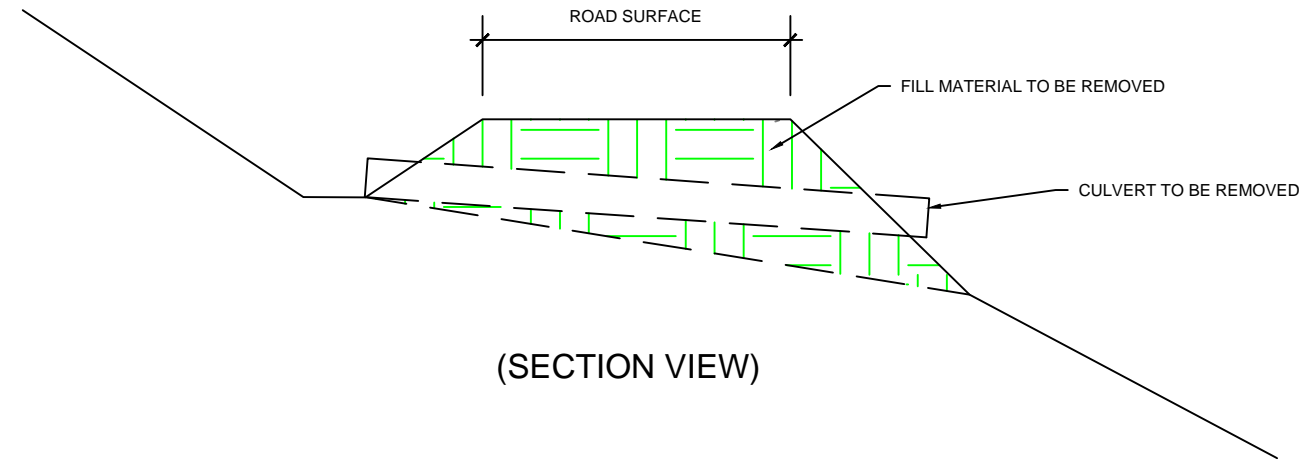
INCLUDE WATER BARS ACCORDING TO DETAIL ON SHT. 15



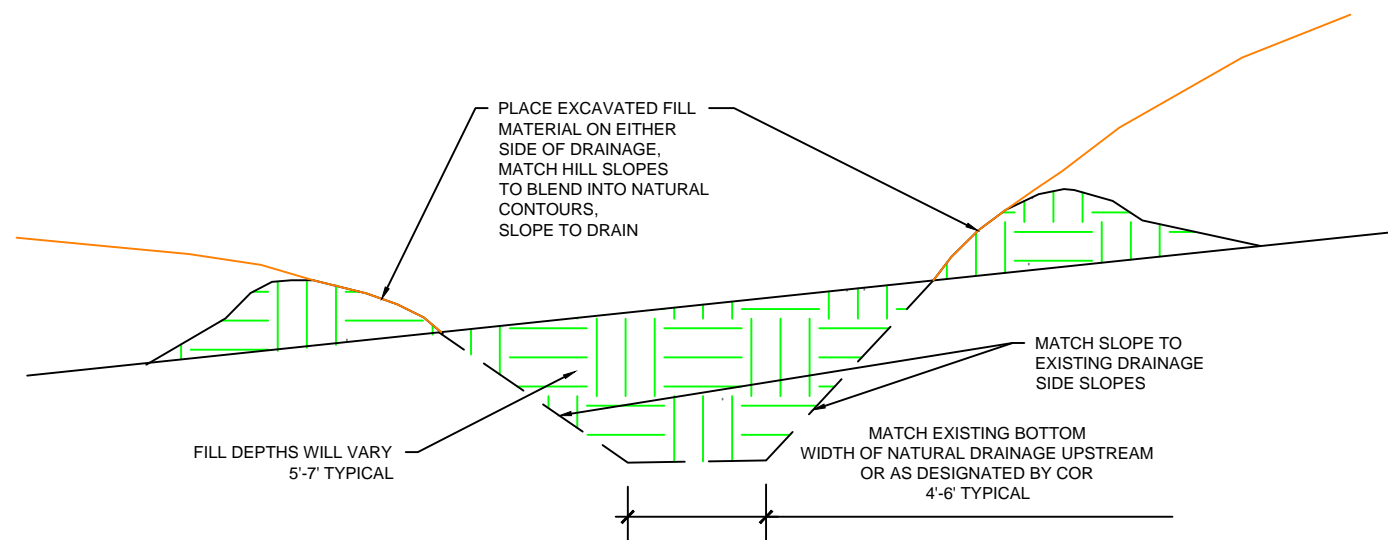
**EARTH CLOSURE BERM
FOR USE WITH ROAD CLOSURE
ITEM 65004
(PROFILE VIEW)**

- NOTES:
 1. CONSTRUCT DITCH LINE OR SMALL EARTH MOUND ACROSS CLOSED ROAD ENTRANCE TO DEFINE EDGE OF REMAINING ROAD
 2. PLACE ROCKS AND/OR LARGE WOODY DEBRIS ON TOP OF BERM TO PREVENT VEHICLES FROM CROSSING

BARRICADE SHALL EXTEND ACROSS THE WIDTH OF THE ROADWAY

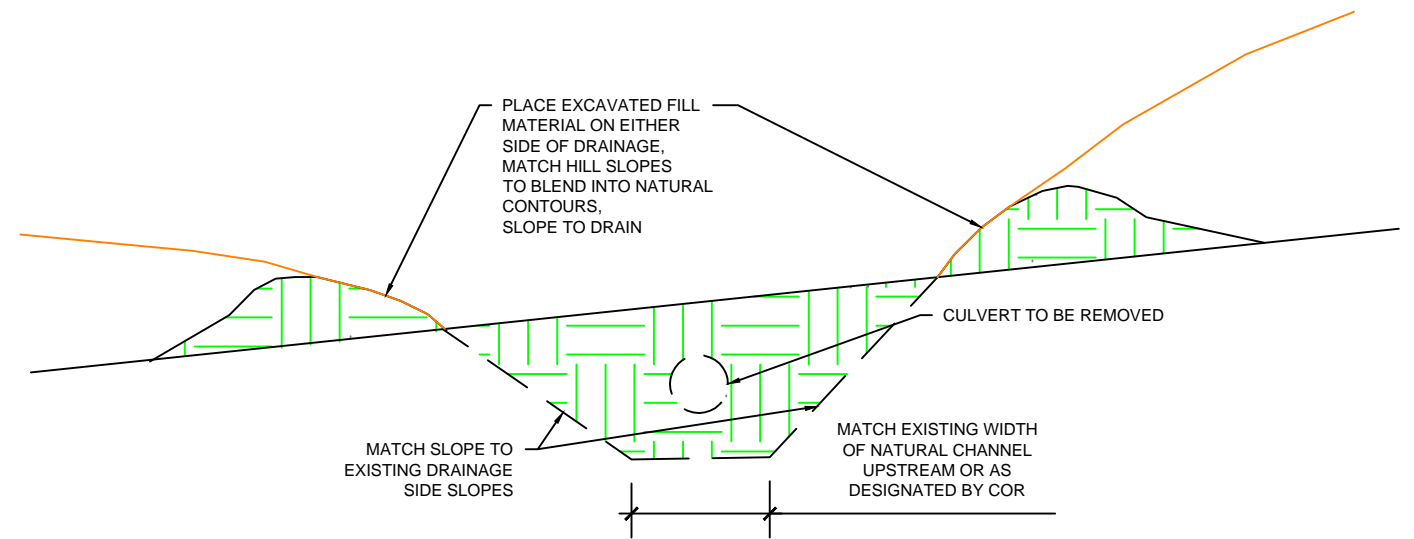


(SECTION VIEW)



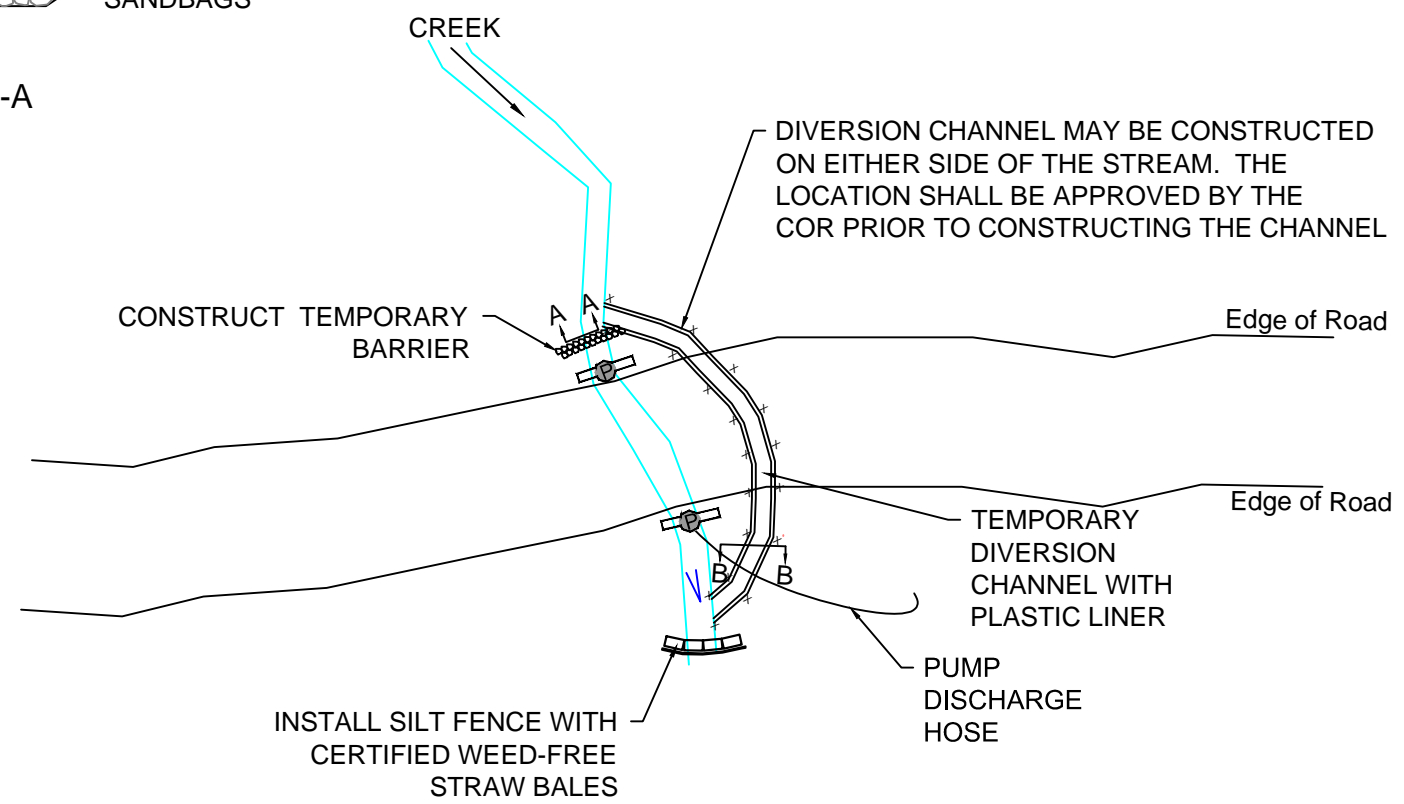
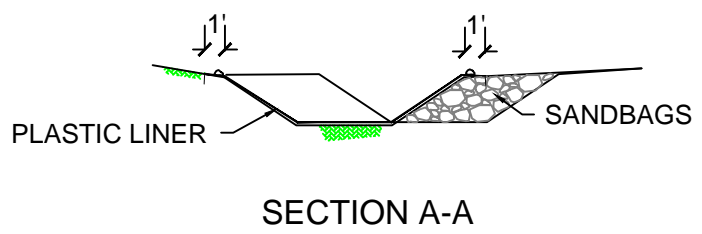
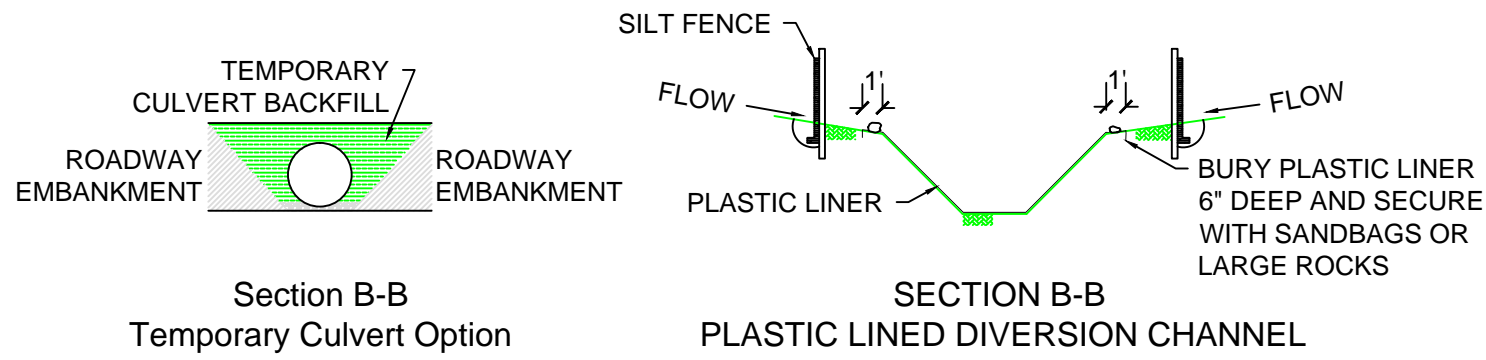
**DRAINAGE EXCAVATION,
TYPE RE-CONSTRUCT DRAW
TYPICAL
ITEM 20420
(PROFILE VIEW)**

NOTE:
 LEAVE SLOPES AND CHANNELS IN A DECOMPACTED CONDITION TO PROMOTE VEGETATIVE RECRUITMENT. COVER EXPOSED SLOPES WITH STRAW MULCH PLACE ROCKS AND VEGETATION IN CHANNEL SIMILAR TO NATURAL CONDITIONS ABOVE OF OR BELOW THE ROAD



**(PROFILE VIEW)
CULVERT REMOVAL
TYPICAL
ITEM 20301**

NOTE:
 LEAVE SLOPES AND CHANNELS IN A DECOMPACTED CONDITION TO PROMOTE VEGETATIVE RECRUITMENT. COVER EXPOSED SLOPES WITH STRAW MULCH (PAY ITEM 62507) PLACE ROCKS AND VEGETATION IN CHANNEL SIMILAR TO NATURAL CONDITIONS ABOVE OF OR BELOW THE ROAD



DEWATER DETAILS
 WASTE WATER FROM PROJECT ACTIVITIES SHALL BE ROUTED TO AN AREA OUTSIDE THE BANKFULL CHANNEL TO ALLOW REMOVAL OF FINE SEDIMENT AND OTHER CONTAMINANTS PRIOR TO INFILTRATING BACK INTO STREAM.

BYPASS OUTLET LOCATION WILL BE STAKED BY THE CONTRACTING OFFICER'S REP. PRIOR TO INSTALLATION.

ROAD TO DEWATER:
 1500135
 1611236

⊕ Sumps for placing pumps to drain excavated area

DIVERSION, SEDIMENT AND EROSION CONTROL
 SPILL KIT AND SPILL PLAN SHALL BE FURNISHED BY THE CONTRACTOR AND ON SITE AT ALL TIMES.

A SILT BARRIER/FILTER SHALL BE CONSTRUCTED BEFORE ANY INSTREAM WORK IS PERFORMED. THE SILT BARRIER SHALL BE CONSTRUCTED OF CERTIFIED WEED FREE STRAW BALES OR OTHER APPROVED METHOD AND SILT FENCE. THE SILT BARRIER SHALL BE INSTALLED TO CONFORM TO GROUND IRREGULARITIES ALONG BOTTOM OF CHANNEL AND INTO EACH BANK TO EFFECTIVELY CHANNEL STREAM FLOW THROUGH THE FILTER MATERIAL.

DISTURBANCE OF STREAM CHANNEL SHALL BE HELD TO A MINIMUM AND SHALL BE RESTORED TO PRE-PROJECT CONDITIONS AT COMPLETION OF PROJECT. THE USE OF HEAVY EQUIPMENT IN THE STREAM SHALL BE HELD TO AN ABSOLUTE MINIMUM. CARE SHALL BE TAKEN TO ENSURE THAT NO PETROLEUM OR TOXICANTS FALL OR LEACH INTO THE STREAM.

A TEMPORARY STREAM DIVERSION SHALL BE CONSTRUCTED BEFORE ANY WORK IS PERMITTED IN THE STREAM CHANNEL. THE TEMPORARY DIVERSION SHALL BE APPROVED BY THE COR BEFORE THE STREAM IS DIVERTED FROM ITS NATURAL CHANNEL. THE TEMPORARY DIVERSION SHALL BE OF SUFFICIENT SIZE TO PASS FLOWS AND DEBRIS FOR THE DURATION OF THE PROJECT. A TEMPORARY DIVERSION DAM SHALL BE CONSTRUCTED OF CLEAN INERT MATERIAL (SANDBAGS, WASHED ROCK, ECOLOGY BLOCKS OR OTHER APPROVED MATERIAL) IN COMBINATION WITH 6 MIL. POLYETHYLENE PLASTIC OR APPROVED EQUAL.

FOREST SERVICE FISH BIOLOGIST WILL BE ON SITE WHEN STREAM IS DIVERTED. CONTRACTOR SHALL GIVE 2 DAYS WRITTEN NOTICE PRIOR TO DIVERTING THE STREAM.

ALL SOIL EROSION AND POLLUTION CONTROL MATERIAL SHALL BE REMOVED FROM GOVERNMENT LAND.

IF PUMPS ARE USED FOR ANY REASON, THE INTAKE SHALL BE SCREENED WITH MATERIAL THAT HAS OPENINGS NO LARGER THAN 5/64 INCH FOR OPENINGS.

- NOTE IF USING CHANNEL:
1. USE PLASTIC LINER ALONG THE ENTIRE LENGTH AND WIDTH OF THE TEMPORARY DIVERSION CHANNEL.
 2. CONSTRUCT DIVERSION CHANNEL AT A MINIMUM GRADE OF 0.5 PERCENT.
 3. DO NOT CONSTRUCT WITH LONGITUDINAL JOINTS IF USING A PLASTIC LINER. BURY THE UPSTREAM EDGE OF THE LINER A MINIMUM OF 6" DEEP AND SECURE WITH RIPRAP, SANDBAGS, OR OTHER APPROVED MATERIAL.