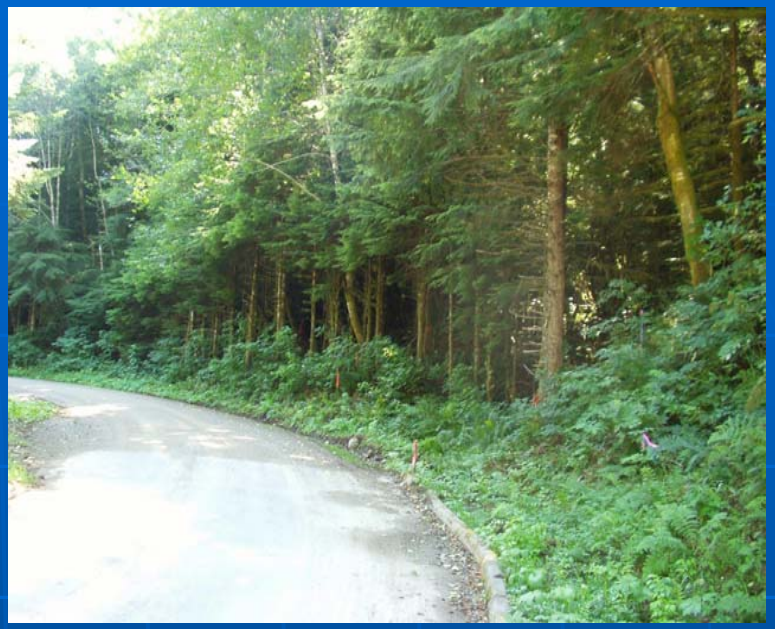
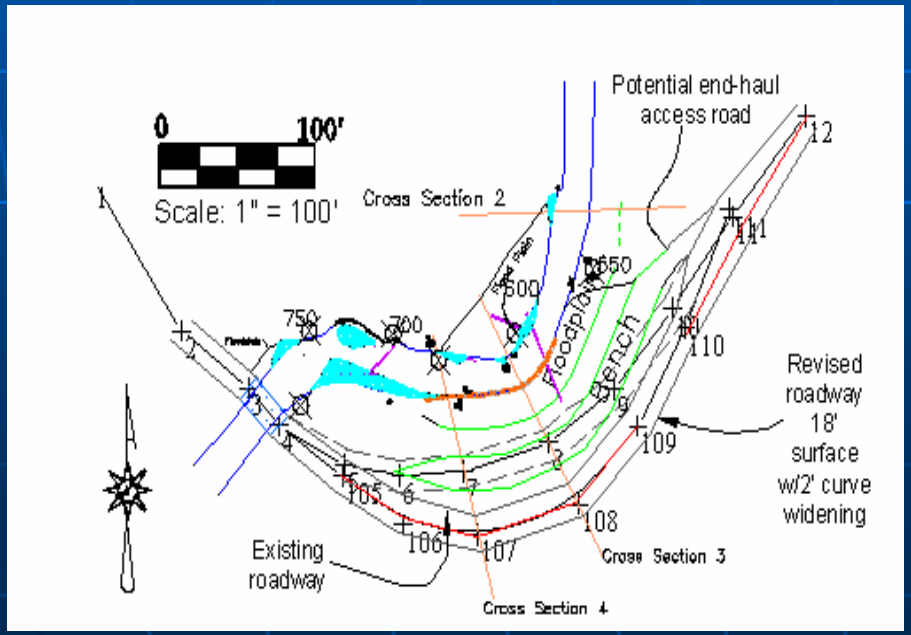
Review of Rack Creek 2004-2005 Projects: LWD and Bank Vegetation





Project Team:

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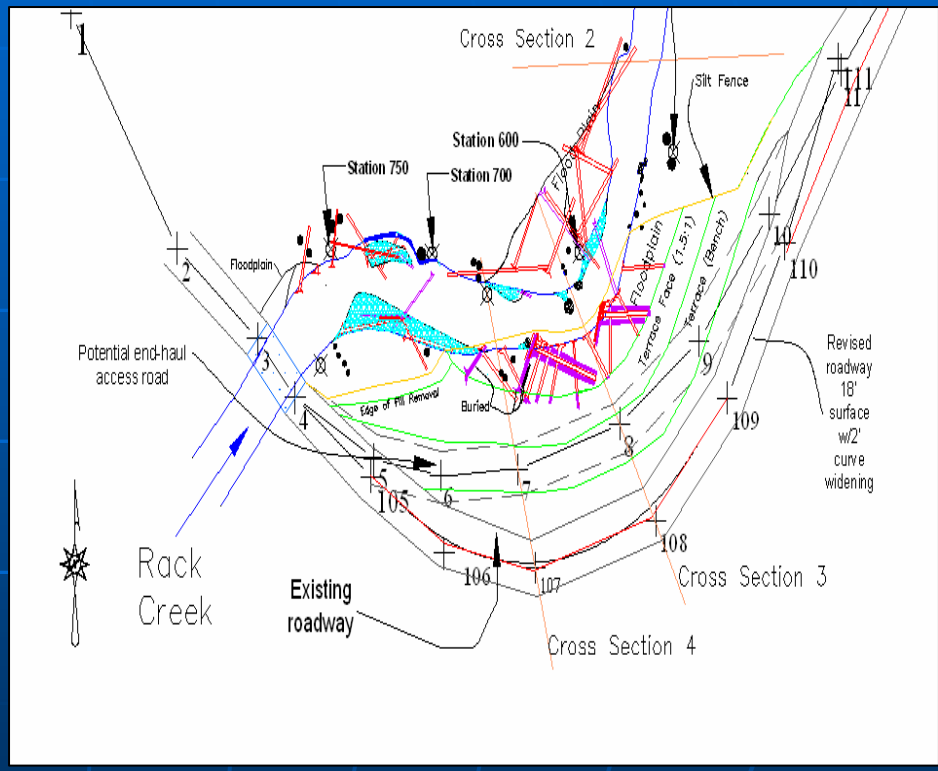
Objectives

- Minimize erosion of road fill
- Improve cover for bull trout
- Minimize delivery of road-generated fine sediment
- Enhance riparian conditions

Design Criteria

- Stable LWD which dissipates energy of >bankful flows
- Scour pools formed by LWD
- Promote storage of cobble and large gravel
- Stable floodplain surfaces
- Native vegetation which minimizes surface erosion and provides future functional LWD



Complexity…

- Mobilization of wood to 2 different staging areas along 200 Road
  - Initial placement via Crane and hand-built techniques)
  - Post-floodplain construction of lwd jams using Excavator
    - Solution: Maps depicting staging areas and color coded logs corresponding to each staging area.
- Coordination with Operations on 200 road improvement work with crane access and temporary road blockage
  - Solution: Groveling, communication, and flexibility
- Working on a core road
  - Solution: Crane work on day before 3-day weekend. Communication

Coordination

- Mobilization of LWD to two staging areas
- Finishing 200 Road improvements for crane access
- Crew/operator availability (June)
- Low flows in creek (August)
- Availability of archeologist for monitoring

Coordination (continued)

- Scheduling EarthCorps crews
  - Installation of silt fence
  - Positioning/repositioning of LWD prior to floodplain excavation
  - Post project cleanup and monitoring
  - Development and implementation of planting plan

Lessons Learned

- Stage LWD as early as possible (preferably in winter)
- Benefited greatly from timely input from Operations and Ecosystems staff
- Pre-project site review with Operations crew chief and archeologist allowed us to sort out monitoring plans

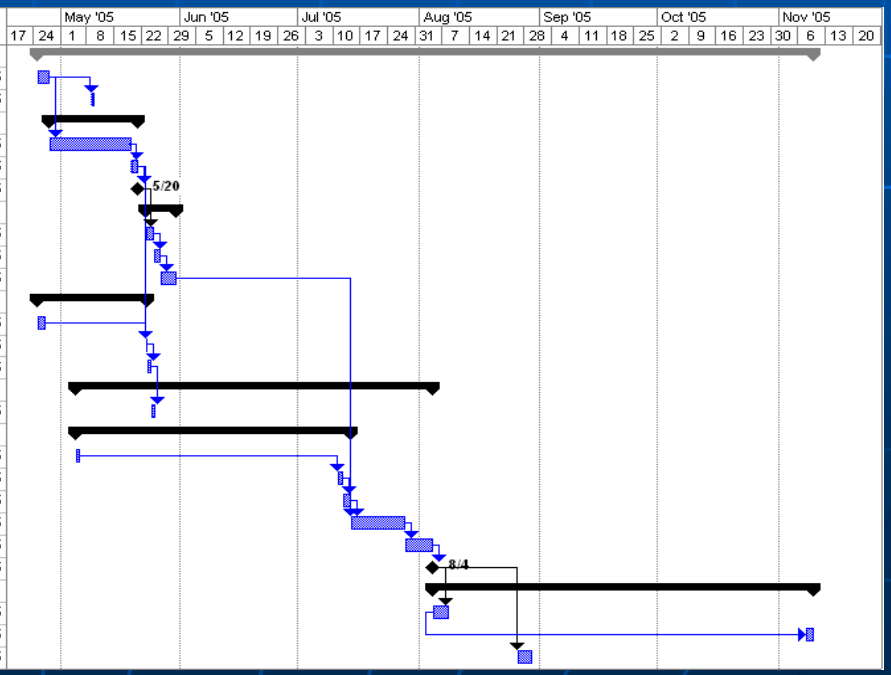
Lessons Learned (continued)

- Thoroughly explain and closely oversee field help… yes, you can actually install silt fencing upside down
- Anticipate issues like high fire precaution levels which dramatically slow progress…

Lessons Learned (continued)

- **Verify availability and order critical materials (e.g., geotec fabric) before you actually need them**
- **The process of laying out logistics in Microsoft Project was helpful**

ID	Task Name	Duration	Start	Finish
0	**Rack Ck Bank Stabilization**	**143 days**	**Mon 4/25/05**	**Wed 11/9/05**
1	Project Design	3 days	Mon 4/25/05	Wed 4/27/05
2	Site Review	4 hrs	Mon 5/9/05	Mon 5/9/05
3	**Permits**	**17 days**	**Thu 4/28/05**	**Fri 5/20/05**
4	HPA-Permit Review	15 days	Thu 4/28/05	Wed 5/18/05
5	Permit Revisions	2 days	Thu 5/19/05	Fri 5/20/05
6	Approved Permit	0 days	Fri 5/20/05	Fri 5/20/05
7	**LWD Mobilization**	**6 days**	**Mon 5/23/05**	**Mon 5/30/05**
8	LWD Relocation -Scope	2 days	Mon 5/23/05	Tue 5/24/05
9	LWD Relocation- Contract	2 days	Wed 5/25/05	Thu 5/26/05
10	LWD Relocation -Transport	2 days	Fri 5/27/05	Mon 5/30/05
11	**Monitoring**	**20.5 days**	**Mon 4/25/05**	**Mon 5/23/05**
12	Monitoring Strategy	2 days	Mon 4/25/05	Tue 4/26/05
13	Pre-Project Monitoring	4 hrs	Mon 5/23/05	Mon 5/23/05
14	Site Layout -Field Demarcation	1 day	Mon 5/23/05	Tue 5/24/05
15	**Implementation**	**65.5 days**	**Thu 5/5/05**	**Thu 8/4/05**
16	Erosion BMP's in Place	1 day	Tue 5/24/05	Wed 5/25/05
17	**LWD Placement (reach)**	**50.5 days**	**Thu 5/5/05**	**Thu 7/14/05**
18	Field Review w/ contractors	1 day	Thu 5/5/05	Thu 5/5/05
19	Contracts	1.5 days	Mon 7/11/05	Tue 7/12/05
20	Implementation	2 days	Tue 7/12/05	Thu 7/14/05
21	Floodplain Construction	10 days	Thu 7/14/05	Thu 7/28/05
22	Log Jam Installation	5 days	Thu 7/28/05	Thu 8/4/05
23	End Construction	0 days	Thu 8/4/05	Thu 8/4/05
24	**Post-Project Work**	**69.5 days**	**Thu 8/4/05**	**Wed 11/9/05**
25	Soil Erosion Mitigation	2 days	Thu 8/4/05	Mon 8/8/05
26	Revegetation	2 days	Tue 11/8/05	Wed 11/9/05
27	Post-Project Monitoring	2 days	Fri 8/26/05	Mon 8/29/05



Lessons Learned (continued)

- **Sort out availability of water trailers well in advance**
- **Set up road signs well in advance**
- **Have seasoned Operations forest worker communicate location of LWD placement to ornery, over-caffeinated crane operators**

Final Product