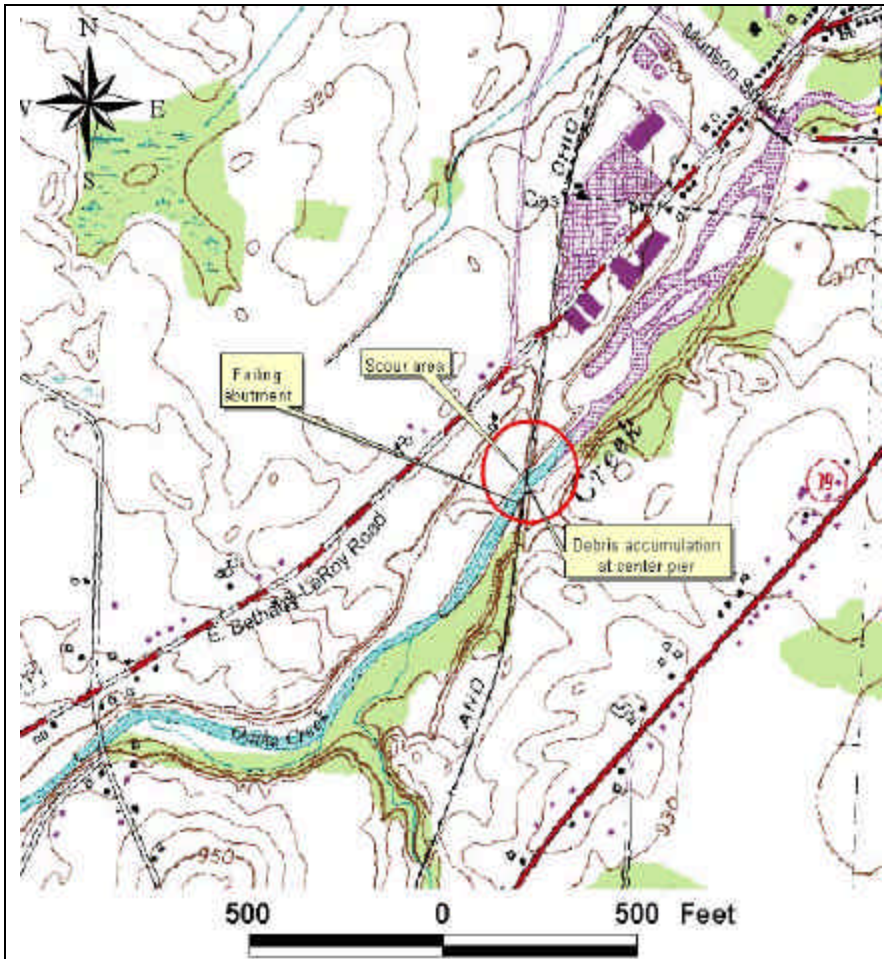


REFERENCE REACH FIELD FORM
STREAM CHANNEL CLASSIFICATION LEVEL II

STREAM TYPE: _____

STREAM NAME: <u>Oatka Creek</u>		DRAINAGE AREA: <u>135.2 sq. miles</u>		BASIN NAME: <u>Oatka</u>	
OBSERVERS: <u>J. Hauber, F. Reese</u>				DATE: <u>10/6/2004</u>	
LOCATION: <u>Oatka Creek at Rochester & Southern Railroad Bridge, Town of LeRoy, Genesee County</u>		Latitude <u>42°57'49"</u>	Longitude <u>78°0'39"</u>	Mapped Soil Type(s)	K Factor
				Wayland silt loam	0.43
				Phelps gravelly loam, 0-3%	0.20
				Ontario loam, 8-15%	0.20
				Kendaia silt loam, 0-3%	0.28
				Lima silt loam, 3-8%	0.28
				Palmyra gravelly loam, 0-3%	0.20

Bankfull WIDTH	103	Ft.(W _{bkf})	Bankfull MAX>DEPTH	4.5+	Ft.(d _{max})	Channel SLOPE		Ft/Ft		%
Bankfull Mean DEPTH	3+	Ft.(d _{bkf})	Flood Prone Area WIDTH	103	Ft.(W _{FP})	Valley SLOPE		Ft/Ft		%
WIDTH/DEPTH Ratio	33		ENTRENCHMENT Ratio	1		SINUOSITY (Stream Dist/Valley Dist.)		1		
Channel MATERIALS: (Pebble Count)			D50		mm	D84		mm		



Oatka Creek Site E-037, at Rochester & Southern Railroad Bridge, Town of LeRoy, Genesee County



2002 Aerial Photograph of Project Site



Failing retaining wall at southwest quadrant of Rochester & Southern Railroad bridge over Oatka Creek



View of northwest quadrant of bridge. Current hits abutment at near right angle, creating scour hole at northwest quadrant.



West/north bank of Oatka Creek near railroad bridge (typical). Note exposed soil in scour areas.



View of Oatka Creek looking downstream (east) from center pier of Rochester & Southern railroad bridge.

Site Description: This site was accessed by canoe because stream channel depths exceeded four feet at several locations. Water levels at this location are controlled by an abandoned dam at Munson Street in the Village of LeRoy. Shale bedrock is exposed along the south bank of the creek. The south bank is steep and heavily vegetated. The north bank is generally vegetated with seasonal grasses, wetland forbs and shrubs. Water levels fluctuate rapidly during flood events. Numerous mid-channel bars have developed behind the Munson Street dam. Two intermittent drainage swales form confluences with the main channel of the Oatka near the railroad bridge.

Statement of Problem:

1. A large scour hole has developed at the northwest quadrant of the Rochester & Southern Railroad bridge. Channel flow hits the bridge abutment at a near right angle, creating an eddy, which has scoured a deep hole in the channel substrate. Further evaluation may be required to determine if this scour hole has affected the bridge substructure.
2. Inspection of the southwest quadrant of the bridge showed that a stone retaining wall has partially collapsed into the creek. Further evaluation is needed to determine an appropriate repair strategy before the entire embankment fails.
3. Access to the site is limited by wetlands and a steep railroad embankment. The bridge is approximately 30-40 feet higher than the stream water surface. The channel is too shallow in spots to permit access by anything other than a canoe or kayak. To get a crane or other tracked vehicle in to the site would require clearing of woody vegetation. Steep slopes on the south side limit access also.

Recommended Restoration/Remediation Methods:

- Install a rock J-vane upstream of the northwest abutment to direct current away from the structure into the main channel of the Oatka.
- Install a rock J-vane upstream of the southwest abutment to direct current away from the failing retaining wall.
- Contact the railroad to advise them of the failing retaining wall.

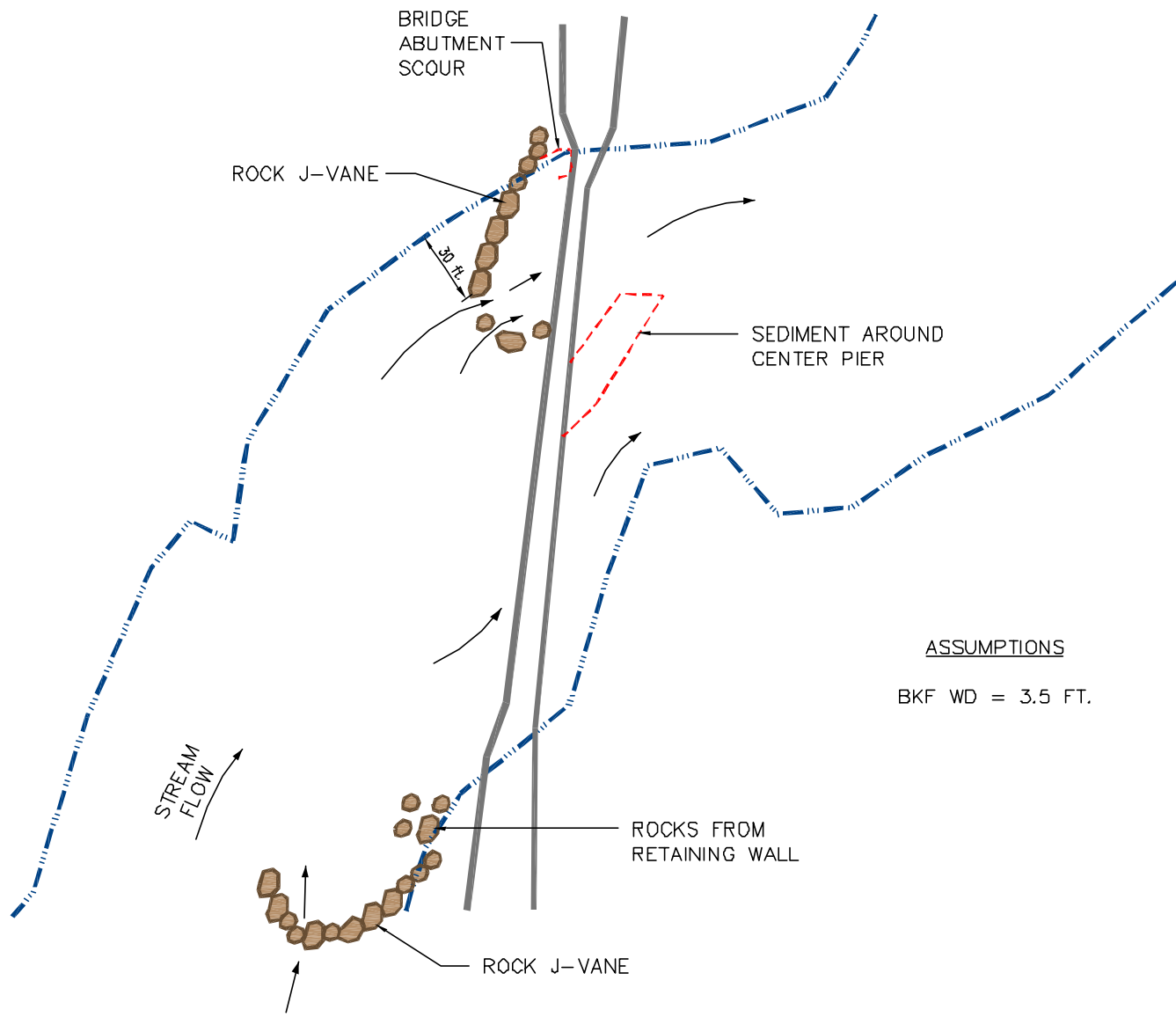
Cost Estimate:

Note: Costs for proposed remediation/restoration measures at this site do not include the cost of securing access easements or certain specialized equipment. Due to the fact that access to the site is controlled by the railroad, and that the railroad would be the prime beneficiary of any remedial activities, it is assumed that the railroad would underwrite these costs. More detailed stream survey and channel morphological analyses will be required to develop a detailed design plan for this site.

Costs for construction of a J-vane to redirect water away from the failing retaining wall were not estimated due to complicated access issues. Further review by the railroad is needed to address this issue.

Item	Unit	Unit Cost	Extended Cost (\$)
Rock J-vane, north abutment	70	46	3220
Excavation	27	15	405
Crane	1	3000	3000
Crane operator (\$140/hr)	8	140	1120
Mobilization			500
Survey (\$1200/day-3 man crew)	2	1200	2400
Plans and permits	L.S.	7500	7500
Estimated Cost for northwest abutment J-vane only			18145

Conceptual Plan Sheets/Standard Details



ASSUMPTIONS
 BKF WD = 3.5 FT.



2230 FENFELD ROAD
 FENFELD, NEW YORK 14526
 TEL: 585.377.1450
 FAX: 585.377.1266

SITE E-37, LEROY
 STREAM RESTORATION STUDY AREAS

P.N. 33802

DATE:	MARCH 2005
APPROX. SCALE:	1" = 50'
DRAWN :	DLS
CHECKED:	FAR