



**US Army Corps  
of Engineers®**

Seattle District

# Notice of Preparation / Clean Water Act Public Notice

Planning and Project Management Division  
Environmental and Cultural Resource Branch  
P.O. Box 3755  
Seattle, WA 98124-3755  
ATTN: Kevin McKeag (PM-ER)

Public Notice Date: 30 March 2012  
Expiration Date: 30 April 2012  
Reference: PM-ER-12-05

Name: Drummond Levee Rehabilitation Project

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Interested parties are hereby notified that the U.S. Army Corps of Engineers, Seattle District (Corps) plans to prepare, pursuant to the National Environmental Policy Act (NEPA) Section 102(C), an environmental assessment (EA) for proposed levee repairs on the Drummond Levee near the Town of Drummond, Granite County, Montana. Repairs are intended to address damage to flood control works caused by flooding.

## AUTHORITY

### NEED

During the spring/summer 2011 flood event on the Clark Fork River, Burgman Slough (also known as Morris Creek) was subject to high flows for an extended period. Although there are no gages on the slough, the gages on the Clark Fork indicate relative local conditions. Approximately 44 river miles upstream of the project area, the USGS gage 12324200 on the Clark Fork River at Deer Lodge, MT (approximate river mile 461) shows that the river reached flood stage (5 ft) on June 14, 2011, peaking at 5.01 ft. Approximately 56 river miles downstream of the project area, the USGS gage 12340500 on the Clark Fork River above Missoula MT (approximate river mile 361) reached flood stage (10 ft) three times during spring runoff; May 25 – May 28 (peak 10.92), June 7 – June 17 (peaked at 12.6 on June 10), and June 24-25 (peak 10.2).

Saturation of the Drummond levee, re-circulating flows in the slough, and subsequent drop in flood stage resulted in sloughing and loss of levee embankment material in three locations: Station 11+50 to 12+00; 13+00 to 14+20; and 15+70 to 16+00. High flows also caused the transport of embankment material through the levee along the culvert located at Station 11+00, resulting in excessive settlement directly above this culvert. In the current damaged state, the levee provides a minimum of 2-year level of protection. Repairs would restore the levee to a 10-year level of flood protection.



Figure 1. Site Map. The orange lines illustrate raised railroad beds and the yellow line indicates the full length of the Drummond Levee.

**PURPOSE**

The purpose of the project is to repair and restore the damaged levees to the pre flood level of flood protection (10-year level of protection) to protect lives and property from subsequent flooding.

**PROPOSED ACTION**

Multiple alternatives for prospective work are being considered as follows.

- 1. **No-Action Alternative**  
 No levee repairs would be completed. The damaged levee would remain and there would be a high likelihood of failure of the levee with the occurrence of a 2-year flood event. The results of a failure would include damages to existing residences.
- 2. **Repair In-Kind Alternative**  
 This alternative repairs the levee by returning it to the pre-flood condition with minimal or no change to the character, scope, or size of the levee. This alternative maintains the status quo of the levee at the repair location as existed prior to the flood damage.
- 3. **Setback Alternative**  
 This alternative removes all or part of the existing levee and builds a new levee landward of the existing location. This alternative maintains the level of flood protection but increases floodplain connectivity for the slough.

#### 4. Non-Structural Alternative

This alternative would include no repairs to the damaged levee and would instead relocate all existing structures, utilities and infrastructure protected by the levee beyond the flood inundation zone.

Final selection of the preferred alternative and finalization of the design will occur during the NEPA process and before construction.

The preferred alternative is to repair in-kind. Repairs would consist of replacing scoured material at Sites 1 and 2 with suitable embankment material and restoring to the pre-existing 2:1 slope with dirt. Repair at Site 3 would be re-sloped with suitable embankment material and covered with 12 inch blanket of quarry spalls. The damage at site 3 is approximately 50 ft in length (station 11+50 to 12+00), however the repair requires a transition zone of 25 ft on each end such that the full repair would be 100 ft. Quarry Spall is recommended to reduce the threat for future scour at this location. The culvert located at Station 11+00 is assumed to require replacement and will be investigated in more detail. In-water work would occur. Materials for the repair would come from existing quarries. All disturbed areas would be hydro seeded with native grasses upon completion.

Site	Length	Station	Damage	Repair
Site 1	30 ft	15+70 to 16+00	Sloughed embankment	in kind repair (earthen levee)
Site 2	120 ft	13+00 to 14+20	Sloughed embankment	in kind repair (earthen levee)
Site 3	100 ft	11+25 to 12+25	Toe and bank scour	Maintain footprint, but armor the bank
Site 4	30 ft	11+00	Culvert failure	28' Culvert replacement
<b>Total</b>	<b>280 ft</b>			

#### EXISTING CONDITIONS

The levee is approximately 2,500 feet long. This non-Federal rural levee was constructed to provide flood control protection from periodic recurring flooding from Burgman Slough (also known as Morris Creek), a tributary of the Clark Fork River near the Town of Drummond in Granite County, Montana. The levee protects residential and agricultural property between the Clark Fork River and the town of Drummond. Burgman Slough is a fairly low gradient watercourse, capable of carrying small quantities of fine sediment under flood conditions throughout this reach. The channel bed is characterized by low sand bar development activity and well-preserved channel banks. The slough is bounded by the project levee on the left bank and a raised railroad on the right bank. Neither bank is armored. The levee is dominated by grasses with scattered bushes. The top of levee is 10 ft wide and consists of crushed rock and gravel to create a drivable surface. The protected area includes several fields and pastures with animal access to the slough. The upstream end of the levee commences at an abandoned railroad grade where a 36 inch ungated culvert through the railroad grade drains the slough into the Clark Fork River. The culvert is perched above the Clark Fork River. The levee follows the left bank of Burgman Slough as far as the county road bridge over the slough, where the levee ends and ties into the road. There are several flood gates established across the slough to allow the landowners to back up water to flow through raised culverts in the levee to irrigate fields. Two 18 inch culverts, one at about station 3+50 and one at station 11+00 permit water to irrigate the protected area behind the levee.

## ANTICIPATED IMPACTS

Impacts anticipated from the proposed repairs are discussed below.

Wetlands. Wetlands exist both within the slough channel and behind the levee. A wetland delineation will be needed to ensure that the proposed project is designed to limit wetland impacts. The repair construction work is expected to occur within the footprint of the pre-existing levee. Construction access and staging areas will be along the existing levee or in upland areas. Further impact analysis, consideration of mitigation for any wetland impacts, and coordination will occur during the E&D phase.

Biological Resources. The following species listed as threatened and their critical habitat are found in Granite County:

- Canada Lynx
- Bull trout

Two candidate species also occur in Granite County; wolverine and whitebark pine.

Bull trout are known to occur in the Clark Fork River, though it is unknown if they occur in Morris Creek/Burgman Slough. The Clark Fork in the project area is designated as bull trout critical habitat. According to the Bull Trout Restoration Plan (Montana Department of Fish, Wildlife, and Parks) spawning in the Clark Fork takes place between late August and early November, principally in third and fourth order streams. There is little cover in the project reach and summer water temperatures are likely to be too high to sustain bull trout unless there is extensive groundwater influence.

According to Montana Department of Fish, Wildlife, Montana supports the healthiest lynx population in the lower 48 states. Canada lynx west of the Continental Divide generally occur in subalpine forests at elevations between 1,220 and 2,150 meters. Canada lynx avoid large open areas but do hunt in open spaces adjacent to forests. The project area is at approximately 1200 meters elevation but is surrounded largely by open fields. While no sightings in Drummond are known, sightings have occurred in Granite County within the past 5 years.

Any in-water construction will occur within the approved fish window (June 1 – August 15) using best management practices to limit impacts. Narrowing the toe placement in areas where there are deep pools will reduce impacts to the aquatic habitat.

Although bald eagles were delisted on June 28, 2007, they continue to be protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. These Acts require some measures to continue to prevent eagle “take” resulting from human activities.

Any potential effects of the proposed work on threatened or endangered species and designated critical habitat will be addressed in separate compliance documentation in accordance with Section 7 of the Endangered Species Act.

When completed, this levee repair is not intended or expected to generate appreciable change in habitat conditions as compared with conditions pre-existing the flood event. Repair construction work may result in short-term impacts to fish and wildlife. Construction noise may temporarily disturb any fish and wildlife in the project area. Long-term effects will include a change in bank condition due to rock placement at one location

Water Quality. There may be a temporary increase in turbidity due to construction and fill placement into the slough. Further practices such as the installation of compost socks control

runoff from construction sites and will be considered. At a minimum, visual turbidity monitoring occurs during all in water construction. If turbidity plumes are noted, measurements are taken to assess the level of impact. If turbidity exceeds state standards, construction would be halted and construction methods altered to avoid further exceedances. Impacts to water temperature from loss of shade-producing vegetation are expected to be minimal. No long-term impacts to water quality are expected.

Cultural Resources. Any potential effects of the proposed work to cultural resources will be addressed in separate compliance documentation in accordance with Section 106 of the National Historic Preservation Act (NHPA). Prior to levee repairs, a Corps archeologist will conduct a cultural resources survey of the project area to determine whether there is a potential for the proposed repairs to cause effects to historic properties that may be located in or adjacent to the project area. The NHPA Section 106 cultural resources report will include the findings of the investigation, recommendations which may include archaeological monitoring during construction and a determination of effects to archaeological and historic properties (if any are present). If archaeological monitoring is recommended, the report will include a monitoring plan and protocols to be followed including an inadvertent discovery clause. The Corps' determinations of effects to historic properties, the cultural resources report, and monitoring plan will be submitted to the Montana State Historic Preservation Office (SHPO) and the appropriate Tribes for their review and comment.

Contaminants. The project area is within the Clark Fork operable unit of the Clark Fork River (CFR)/Milltown Reservoir Superfund Site. The CFR Site is a 120-mile stretch of river that runs from Warm Springs, Montana, to Missoula, Montana that is contaminated with mine wastes from upstream Butte and Anaconda sources. In 2004, EPA selected a final remedy for the CFR Site that calls for careful removal of contaminated tailings from slickens areas (areas devoid of vegetation because of contaminants), treatment in place of impacted areas, stream bank reconstruction, land management planning, and institutional controls. Cleanup activities will focus on the 43- mile reach of the river between Warm Springs Ponds and just upstream of Garrison. Minimal cleanup will be conducted in the reach from Garrison (at the confluence with Little Blackfoot) to downstream of Drummond. No cleanup activities are proposed between Drummond and the Milltown Reservoir Sediments operable unit. Contaminants of concern include arsenic, cadmium, copper, lead, and zinc. Copper is the primary contaminant associated with environmental risk, and arsenic is the primary contaminant associated with human risks. Concentrations of metals and arsenic are quite variable within the floodplain of the Clark Fork. In general, studies have concluded that the human health risks are low enough to be considered "acceptable," but the ecological risks are high enough to be considered "not acceptable." Further information and coordination with EPA will be required prior to construction.

Air Quality. Construction vehicles and heavy equipment would temporarily and locally generate gasoline and diesel exhaust fumes, carbon dioxide (CO<sub>2</sub>), carbon monoxide, and dust on roadways. These emissions would be exempt from the conformity requirements under the Clean Air Act, because the project constitutes a routine facility repair activity generating an increase in emissions that is clearly *de minimis*, under 40 CFR 93.153(c)(2)(iv). Unquantifiable but insignificant exacerbation of effects of CO<sub>2</sub> emissions on global climate change is also anticipated.

Noise. Temporary local increases in noise would occur as a result of construction activities. Private residences are very close to some of the work sites. Work for would be done during daylight hours to minimize the adverse effects of noise on businesses and residents.

Recreation. This levee is on privately owned land and is not considered a recreational area.

Traffic. Construction-related traffic may cause disruption of local traffic during construction. Efforts would be made to minimize disturbances to local traffic patterns through signage, notifications, and proper traffic controls.

Cumulative Effects. This non-federal levee was last repaired by the Corps in 1976 for a total of 1900 ft. The Town is responsible for annual operation and maintenance of the Drummond Levee. Maintenance includes mowing, vegetation removal, small repairs, removal of burrowing animals, etc.

Cumulative effects will be assessed during the development of the EA to determine whether the incremental contribution of the Drummond levee repair projects to the overall past, present, and future environmental impacts would be significant.

#### COMPLIANCE WITH OTHER LAWS AND REGULATIONS

In accordance with Section 7(a)(2) of the Endangered Species Act, the Corps will draft a Biological Assessment (BA) and will seek consultation with the U.S. Fish and Wildlife Service (USFWS), regarding the impact of the project on listed species and designated critical habitat.

Granite County is not considered coastal under the Coastal Zone Management Act, so no consistency determination is required.

The project is not anticipated to cause violations of any standards under the Clean Air Act.

Elements of the project involve discharges of fill material into waters of the United States that will be evaluated for substantive compliance with guidelines promulgated by the Environmental Protection Agency under authority of Section 404(b)(1) of the Clean Water Act (CWA). The repairs are expected to stay within the original footprint of the levee, however at Site 3 repairs include a change in materials from an earthen berm to an armored levee. The Corps will seek Certification under CWA Section 401 from the Montana Department of Environmental Quality that the project provides a reasonable assurance of compliance with State water quality standards.

#### EVALUATION

The Corps has made a preliminary determination that the environmental impacts of the proposal can be adequately evaluated under the NEPA through preparation of an EA. Preparation of an EA addressing potential environmental impacts associated with the proposed action is currently underway.

In preparation of the environmental documentation for this project, coordination has been conducted or is ongoing with the following public agencies:

- (1) U.S. Fish and Wildlife Service;
- (2) Environmental Protection Agency;
- (3) Montana Department of Fish, Wildlife, and Parks;
- (4) Montana Department of Environmental Quality;
- (5) Montana State Historic Preservation Office

Any person who has an interest that may be affected by this disposal of fill or dredged material may request a public hearing. The request must be submitted in writing to the District Engineer within the comment period of this notice, and must clearly set forth the following: the interest

that may be affected, the manner in which the interest may be affected by this activity, and the particular reason for holding a public hearing regarding this activity.

The decision whether to conduct the project will be based on an evaluation of the probable impact on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered; among these are: conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare of the people.

The Corps invites submission of comments on the environmental impact of the proposed project. Comments will also be considered in determining whether it would be in the best public interest to proceed with the proposed project. The Corps will consider all submissions received by the expiration date of this notice. The nature or scope of the proposal may be changed upon consideration of the comments received. The Corps will initiate an Environmental Impact Statement (EIS), and afford all the appropriate public participation opportunities attendant to an EIS, if significant effects on the quality of the human environment are identified and cannot be mitigated.

Comments should reach this office, not later than 30 days from the date of this notice in order to ensure consideration. Please submit any comments or requests for additional information to Lester Soule, Project Manager, at 206-764-3699, or email: [lester.e.soule@usace.army.mil](mailto:lester.e.soule@usace.army.mil), or the Environmental Coordinator, Kevin McKeag, at 206-764-3576, or email: [kevin.j.mckeag@usace.army.mil](mailto:kevin.j.mckeag@usace.army.mil).

Address for written comments:

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PROJECT LOCATION MAPS AND DESIGNS



Drummond, Granite County, Montana

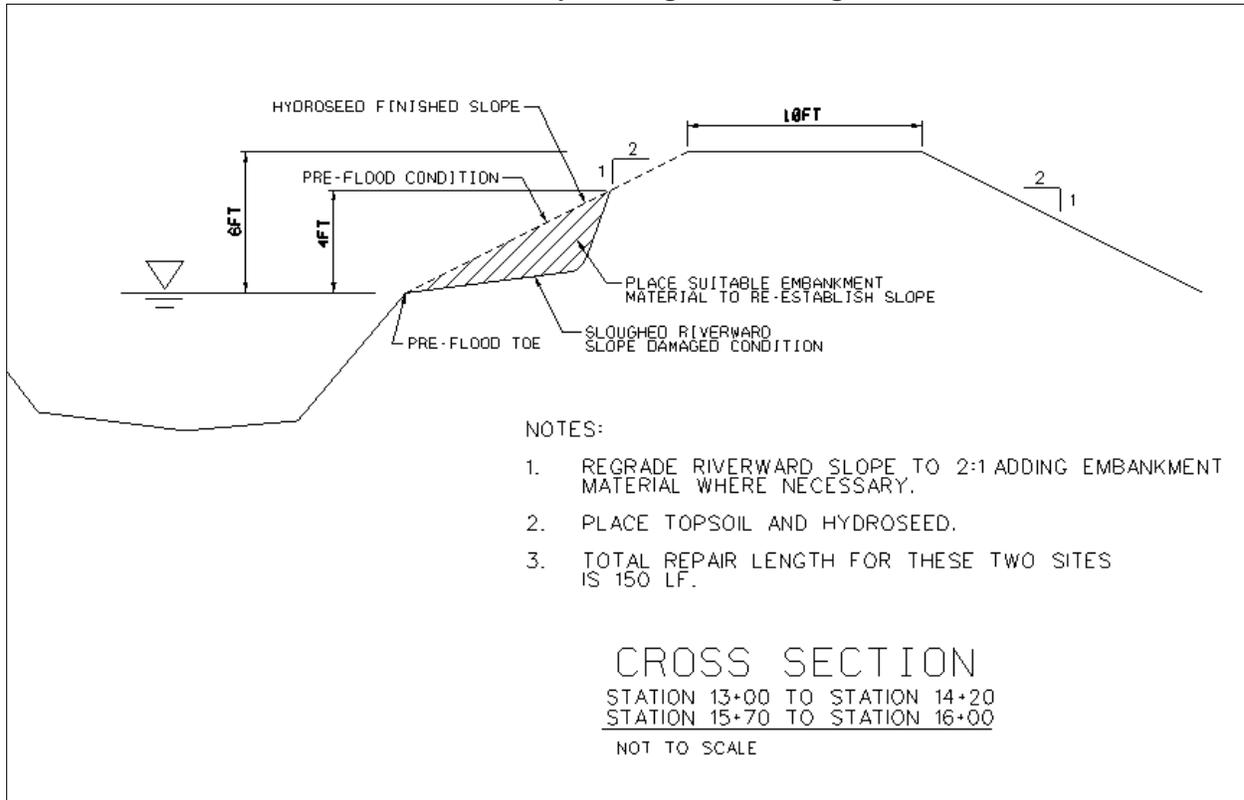
Drummond/Sherman Slough Levee Alignment  
Drummond, Montana



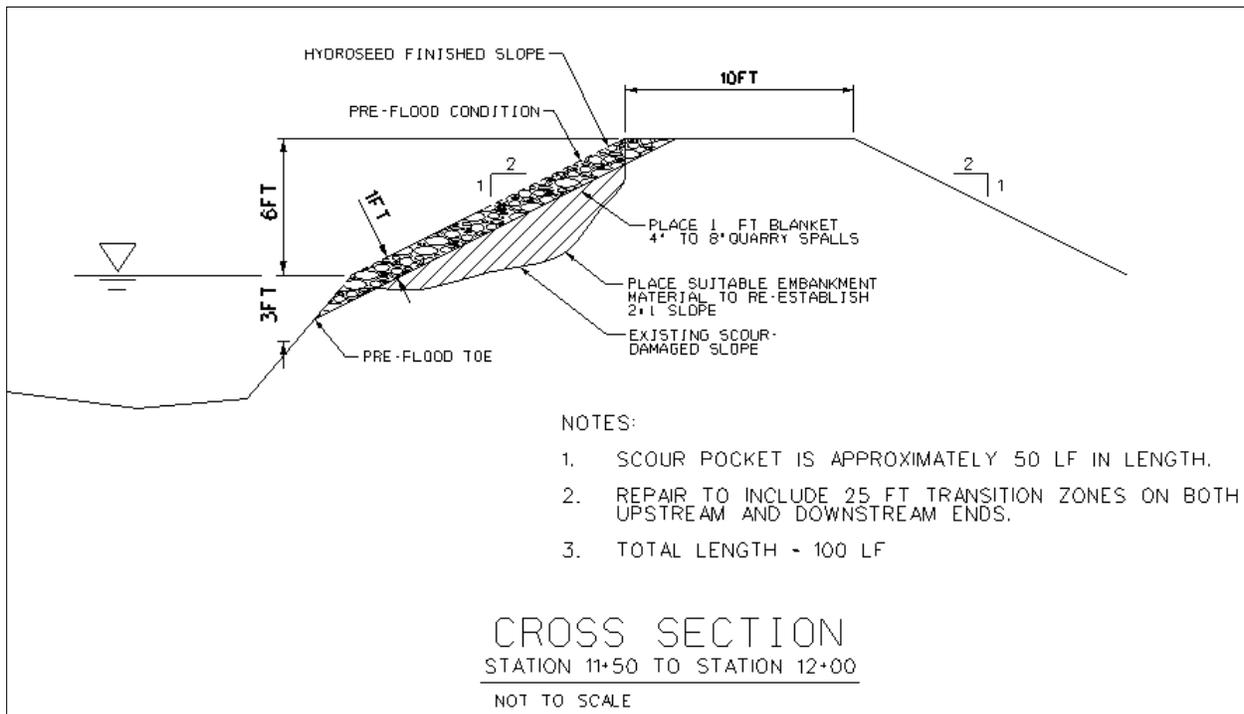
Location Map



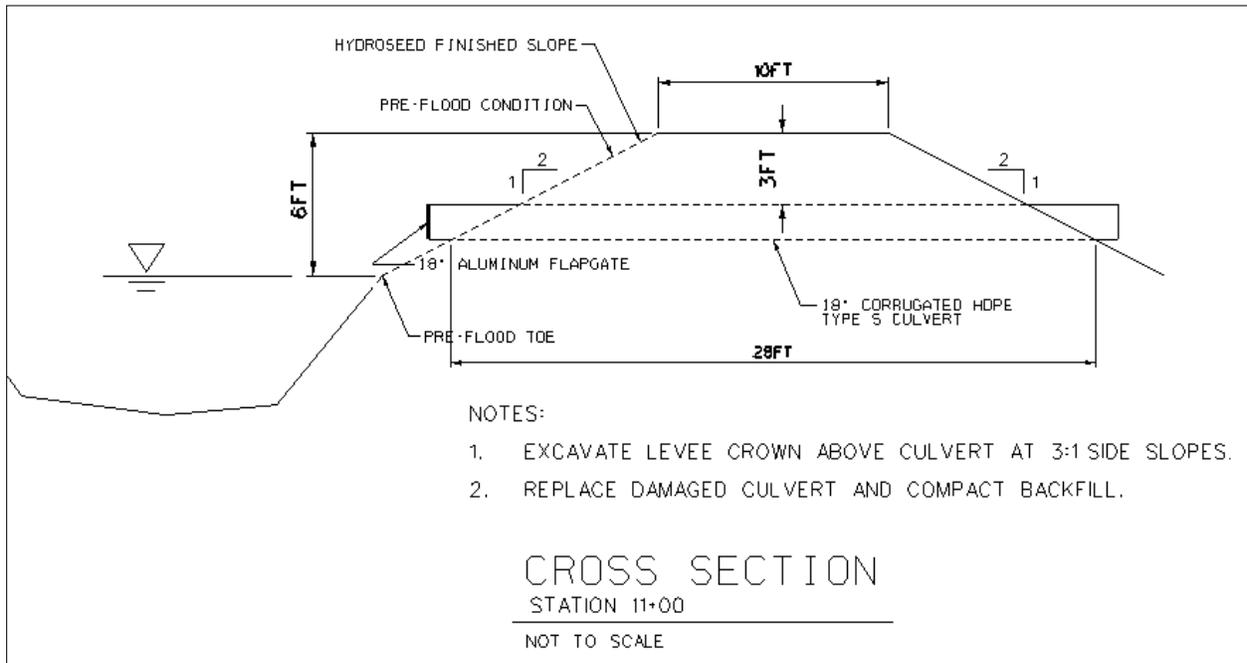
## Preliminary Design Drawings



Proposed work at Sites 1 and 2.



Proposed work at Site 3



Proposed work at Site 4.

Photos of damage.



Sloughing of riverward slope from Stations as seen at 13+00 to 14+20 and 15+70 to 16+00



Scour damage located at Station 11+50 to Station 12+00



