



MAR 05 2014

Memorandum

February 27, 2014

TO: J. Carpenter / M. ~~Foster~~ <sup>Fleming</sup>

THRU: D. Whitehouse / B. White <sup>WJW</sup>

FROM: W. Smith / S. Golbek <sup>SG</sup>

SUBJECT: Contract 8127  
Snowshed to Keechelus Dam Phase 1C – Replace Snowshed and Add Lanes  
State Project  
Change Order No. 73 “Add Snow Nets-Sector 14”

Attached for your review is the HQ approved and executed Change Order No. 73 for this project.

**Description of the Change:** This change order provides full compensation for the design and construction of new rows of 3.5 meter snow nets located in the vicinity of Rock Sector XIV (Sta. LW 1405+00 to 1407+25).

**Evolution of the Change:** Pre-construction, the hillside slope labeled as Sector XIV was moderately vegetated with a rocky rough surface. This location did not experience significant avalanche activity. The original contract plans contained minimal excavation or change on the slope in this area and thus no snow nets were necessary or included in the design. However, due to bedrock being encountered lower than expected it became necessary to excavate a cut up the slope to catch existing. This change was added by executing project change order No. 47 which added steep slope excavation. After this excavation began the project office was contacted by John Stimberis, WSDOT Hyak maintenance’s Avalanche Forecast & Control Specialist. John was concerned that the new slope, now relatively smooth and devoid of any vegetation or other objects could potentially result in avalanches. The project office contacted its consultant avalanche expert (Chris Wilbur) and requested that he review and analyse the newly constructed slope to determine if an avalanche hazard existed and if so what mitigation measures he recommended. The consultant avalanche expert determined that an avalanche hazard does exist and recommended that additional rows of snow nets be constructed. Following the recommendation the project office directed the contractor to design and install additional snow nets in accordance with the contract provisions at this location.

**Entitlement:** This change order adds Work to the contract as ordered by the Project Engineer and the Contractor is entitled to compensation for this additional Work.

**Price:** The Project Office has prepared an independent engineers estimate based on price quotes received from suppliers, manufactures and support services necessary to complete the work.

Original bid item prices were not used to calculate the cost of this added work because; the work added is being requested 4 years after the original bid items were priced; The work is different in that it adds surface roughening to the slope in-between the fence rows; The work requires an additional mobilization with helicopter; Access to the work is more difficult on a smooth steep slope. The calculated engineers estimate unit price was compared against both the design PS&E backup price and the original WSDOT engineer bid estimate price. Both of which are higher than the agreed change order price. Contactor has agreed to complete the work for the prices as calculated by the Engineer.

**Contract Time:** There is no change to contract time associated with this change order.

Please contact Will Smith, at (509) 577-1844, if you have any questions or comments.

WS: sg

Enclosures: Change Order #73, Checklists, Engineer's Estimate

cc: Change Order File

**WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER**


DATE: 01/14/14  
Page 1 of 5

CONTRACT NO: 008127 FEDERAL AID NO:  
CONTRACT TITLE: I-90, SNOWSHED TO KEECHELUS DAM PHASE 1C - REPLACE  
CHANGE ORDER NO: 73 ADD SNOW NETS-SECTOR 14

PRIME CONTRACTOR: [REDACTED] GUY F. ATKINSON CONSTRUCTION, LLC.  
707 SOUTH GRADY WAY STE 500  
RENTON WA 98057-3224

Ordered by Engineer under the terms of Section 1-04.4 of the Standard Specifications




Change proposed by Contractor

ENDORSED BY:  CONTRACTOR DATE 1/22/14	SURETY CONSENT:  ATTORNEY IN FACT  DATE
---	---

ORIGINAL CONTRACT AMOUNT: 177,144,342.66  
 CURRENT CONTRACT AMOUNT: 183,243,111.57  
 ESTIMATED NET CHANGE THIS ORDER: 1,237,399.00  
 ESTIMATED CONTRACT TOTAL AFTER CHANGE: 184,480,510.57

Approval Required:  Region  Olympia Service Center  Local Agency



<input checked="" type="checkbox"/> APPROVAL RECOMMENDED  PROJECT ENGINEER DATE 2/27/14	<input type="checkbox"/> EXECUTED EXECUTED:  STATE CONSTRUCTION ENGINEER DATE 3-20-2014
<input checked="" type="checkbox"/> APPROVAL RECOMMENDED REGIONAL ADMIN:  BY: W. Brian DATE 3/11/14	<input type="checkbox"/> EXECUTED OTHER APPROVAL WHEN REQUIRED  SIGNATURE DATE  REPRESENTING

**WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER**

DATE: 01/14/14  
Page 2 of 5

CONTRACT NO: 008127

CHANGE ORDER NO: 73

All work, materials, and measurements to be in accordance with the provisions of the Standard Specifications and Special Provisions for the type of construction involved.

This contract is revised as follows:

**DESCRIPTION:**

This change order provides full compensation for all designing, furnishing, assembling and installing snow nets within the limits shown on page 5 of this change order. These snow nets shall be located in the area of steep slope excavation addressed by change order 47 (Approximate Station LW 1405+00 to 1407+25).

Three new items are added as shown on page 4.

**MATERIALS REQUIREMENTS:**

All materials shall meet the requirements of the "All Addenda Incorporated with CRIP" Contract Plans and Provisions, 2010 Standard Specifications and Change Order 29 as related to 3.5 M Snow Nets.

**CONSTRUCTION REQUIREMENTS:**

All work shall be in accordance with the "All Addenda Incorporated with CRIP" Contract Plans and Provisions, 2010 Standard Specifications, Change Order 29 as related to 3.5 M Snow Nets.

All snow nets added by this change order shall be in place and operational prior I-90 traffic being placed on the final LW alignment below these fences.

The work associated with this change order does not include any annual post winter site inspections, adjustments or repairs as required by the contract for the other snow net locations.

**MEASUREMENT:**

"CO #73-Sector 14 Snow Net 3.5 m", shall be measured by the lineal foot along the ground line of the completed structure, measured from the end base plates

"CO #73-Sector 14 Snow Net-Mobilization", shall be measured by lump sum and shall include all costs to deliver all approved materials for "CO #73-Sector 14 Snow Net 3.5 m" to the point of installation.

"CO #73-Sector 14 Snow Net-Design", shall be measured by lump sum and shall include all Engineering costs to research, survey, design and layout "CO #73-Sector 14 Snow Net 3.5 m".

**PAYMENT:**

**WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER**

DATE: 01/14/14  
Page 3 of 5

CONTRACT NO: 008127

CHANGE ORDER NO: 73

"CO #73-Sector 14 Snow Net 3.5 m", per lineal foot, payment shall be in accordance with the "Snow Nets" payment provision as detailed on page 547 and 548 of the "All Addenda Incorporated with CRIP" Contract Provisions, 2010 Standard Specifications and Change Order 29.

"CO #73-Sector 14 Snow Net-Mobilization", Lump Sum, payment shall be made by 50% payment once the anchor installation is started and the remaining 50% once all the snow nets are mobilized onto the slope.

"CO #73-Sector 14 Snow Net-Design", Lump Sum, payment shall be made following the Engineers written approval that all the Snow Net submittals requirements listed in the Contract Provision have been completed.

**CONTRACT TIME:**

There is no change to contract time associated with this change order.

**WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER**

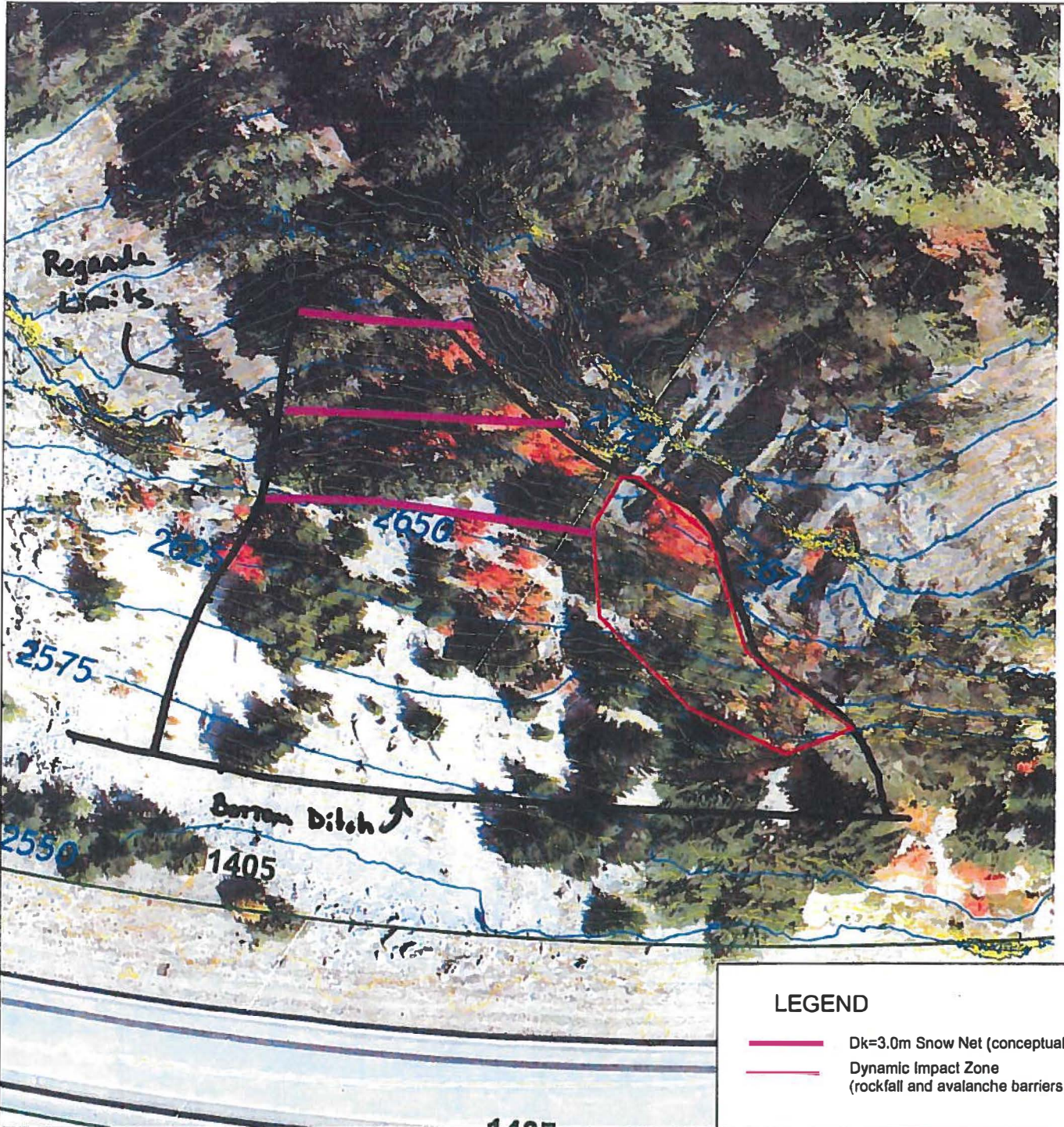
DATE: 01/14/14  
Page 4 of 5

<b>CONTRACT NO: 008127</b>				<b>CHANGE ORDER NO: 73</b>			
ITEM NO	GROUP NO	STD ITEM	ITEM DESCRIPTION	UNIT MEASURE	UNIT PRICE	EST QTY CHANGE	EST AMT CHANGE

1090	01		CO #73-SECTOR 14 SNOW NET 3.5 M	L.F.	2,163.50	474.00	1,025,499.00
1096	01		CO# 73-SECTOR 14 SNOW NET-MOBILIZATION	L.S.	98,900.00	98,900.00	98,900.00
1097	01		CO #73-SECTOR 14 SNOW NET-DESIGN	L.S.	113,000.00	113,000.00	113,000.00

-----  
1,237,399.00  
-----

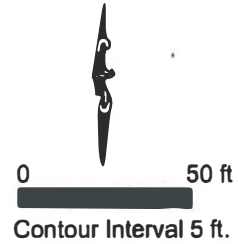




# Avalanche Mitigation Concept

## Sector 15 Cut Slope

**PRELIMINARY**  
for Review Only



**URS**  
Arthur I. Means, P.E., Inc.  
Wilbur Engineering, Inc.

August 14, 2013