

CANADA KUWAIT PETROCHEMICAL LIMITED PARTNERSHIP

SCOPE OF WORK

for

**Strengthening of Namepi Creek Bridge (BF74397) Substructure for Transport of
Permit Loads and Other Work**

BF74397 Carrying Hwy 28 over Namepi Creek, 2 km W of Radway

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1. SCOPE OF WORK

The scope of work for this project includes, but is not limited to, the following:

- Traffic accommodation;
- Water Control;
- Headslope excavation;
- Supply and Fabrication of Pier Bracing Structural Steel;
- Install of Pier Bracing;
- Headslope repairs, including rip rap and seeding; and
- Installation of netting along deck soffit of BF71116 to prevent building of nests.

Unless otherwise specified, the Contractor shall supply all materials necessary to complete the Work. A complete job is called for, therefore any labour, material, equipment, tool or incidental item not specifically mentioned, but necessary for completeness will be considered incidental to the Work, and no separate or additional payment will be made.

1.1 Environmental Information

The following environmental information is available for this proposal and is shown in Schedule B3 - Attachments.

- Environmental Risk Assessment – Namepi Creek Bridge File 74397 dated December, 2019 by Basin Environmental Ltd.

2. SPECIAL PROVISIONS

2.1 STANDARD SPECIFICATIONS, SPECIFICATION AMENDMENTS AND TYPICAL DRAWINGS

2.1.1.1 Department Name Change

Due to government reorganization, the Department's name has changed. As a result, some specifications, drawings, plans and other documents in this contract may continue to reference Alberta Infrastructure, Alberta Infrastructure and Transportation or Alberta Transportation and Utilities. Please be advised that any references to Alberta Infrastructure, Alberta Infrastructure and Transportation or Alberta Transportation and Utilities shall mean Alberta Transportation.

2.1.1.2 Standard Specifications for Highway Construction and Bridge Construction Work

The specifications for highway and bridge construction work, which shall form part of the Contract Agreement, are published in the following Department manuals:

- General Specifications, Specification Amendments and Supplemental Specifications for Highway and Bridge Construction – Edition 16, 2019;
- Standard Specifications for Highway Construction – Edition 15, 2013;
- Standard Specifications for Bridge Construction – Edition 16, 2017.

2.1.1.3 Typical Drawings

The following additional specifications and typical drawings, which form part of the Contract Agreement, are available for viewing and/or download from the Departments web site at the following address: www.transportation.alberta.ca under the "Bridges and Structures – Fabrication and Construction" heading.

- Typical minimum requirements for traffic accommodation and construction zone temporary signing are included in the manual entitled "Traffic Accommodation in Work Zones Manual, 1st Edition, 2008".

It may be necessary for the Contractor to modify these drawings and/or develop new drawings to address non-typical situations when developing the Traffic Accommodation Strategy in accordance with specification 7.1, Traffic Accommodation and Temporary Signing.

- Typical minimum requirements for pavement markings are included in the Department manual entitled "Alberta Highway Pavement Marking Guide, 2nd Edition, issued March 2003".
- Drawings showing the typical minimum requirements for permanent highway signage are available through the "Typical Signage Drawings" link.
- Drawings showing the typical minimum requirements for barriers are available through the "Typical Barrier Drawings" and "Roadside Design Guide" links.

- Typical minimum requirements for erosion and sediment control devices are available through the “Design Guidelines for Erosions and Sediment Control For Highways” link.
- Typical minimum requirements for highway street lighting devices are included in the Department manual entitled “Highway Lighting Guide – 2003”.
- All other typical plans and drawings are included in the Department manual entitled “CB-6 Highway Standard Plates – Revised August 2002”.

Hard copy versions of select manuals are available for purchase from:

Alberta Transportation
Strategic Procurement Branch
Suite 100, 1st Floor, Twin Atria Building
4999 – 98 Ave.
Edmonton, AB, T6B 2X3

Telephone: (780) 415-1068

Proponents are advised that, from time to time, the Department may issue revisions to existing drawings, and/or may insert drawings into the above-mentioned manuals without re-printing hard-copy editions of the manual. These new and/or revised drawings will be available on the Department's web site.

Proponents are further advised that any drawing revisions and/or new drawings that are posted on the Department's web site as of five calendar days prior to the date set for the opening of proposals, will apply to this Project.

Any standard drawings that are not available on the Department's web site will be included in the Contract documents.

2.1.1.4 Specification Amendments

The Specification Amendments listed in the following Table are contained in the manual entitled "General Specifications, Specification Amendments and Supplemental Specifications for Highway and Bridge Construction - Edition 15, 2013". Items that are marked with an "X" are applicable to this Contract; items that are not so marked do not apply. The Contractor is advised that the applicable Specification Amendments may contain modifications to the payment clauses for the Specifications amended.

X	AMENDMENTS TO SPECIFICATIONS	
	DESIGNATION	GENERAL DESCRIPTION
	SECTION 1 – GENERAL SPECIFICATIONS	
	AMC_C125.2	Priority Line Painting for Site Occupancy
	AMC_C125.3	Non-Priority Line Painting for Site Occupancy
	AMC_S53.1	Construction Staking and Survey Majority by Contractor
	AMC_S53.2	Construction Staking and Survey Majority by Owner's Representative
	AMC_S53.3	Construction Staking and Survey for Bridge Structures
	AMC_C230	Diesel Fuel Cost Adjustment

X	AMENDMENTS TO SPECIFICATIONS	
	DESIGNATION	GENERAL DESCRIPTION
	SECTION 3 – SURFACING	
	AMC_S116	Tolerances for Surface Finish
	AMC_S155	Hot In-Place Recycled Asphalt Pavement – EPS
	AMC_S201	Acceptance Testing for Contracts with Small Quantities (less than 1000 tonnes) of Asphalt Concrete Pavement (ACP)
	SECTION 5 - MATERIALS	
	AMC_S9.4	Supply of Aggregate – With Option
	AMC_S9.5	Supply of Aggregate – No Option
	AMC_S9.6	Supply of Aggregate – Designated Source
	AMC_C218	Interim Supply of Materials
	BRIDGE CONSTRUCTION SPECIFICATIONS	
	AMC_B013	Adjustment of Completion Date and Liquidated Damages
	AMC_B010	Site Occupancy for Contracts with Major Bridge Component
	AMC_B011	Lane Closure for Bridge Construction
	AMC_B020	Site Offices for Bridge Structure Construction
	AMC_B219	Course of Construction Insurance – Optional
	SUPPLEMENTAL SPECIFICATIONS	
	6.15	Fish Capture and Release

2.2 GENERAL

The Contractor is advised that the dimensions of existing bridge elements shown on the Drawings are nominal; are based on construction drawing records and Owner's Representative field inspections; and are intended primarily for proposal purposes. The Owner's Representative and CKPC assume no responsibility for their accuracy. All dimensions shall be field confirmed by the Contractor prior to fabrication or construction.

Each Proponent, by submitting a proposal, acknowledges that the structure to be strengthened under this contract has been examined and that every detail of the scope and intent of the Work required is understood. Each Proponent further acknowledges that the site and surrounding area was examined and that all conditions and any restrictions which could affect or limit operation during construction such as environmental constraints, public traffic, and surrounding property issues are known.

The estimated quantities shown on the Drawings or contained in this document are provided for information purposes only. Quantity estimates are based on in-place dimensions to the neat lines shown on the Drawings. Prior to submitting a bid, the Contractor shall review the quantities and satisfy himself of the actual quantities required to complete the Work.

Unless otherwise specified, the Contractor shall supply all materials necessary to complete the Work. A complete job is called for, therefore any labor, material,

equipment, tool or incidental item not specifically mentioned, but necessary for completeness will be considered incidental to the Work, and no separate or additional payment will be made.

2.3 EXISTING STRUCTURE DETAILS

BF74397 is a three span 6.0 m - 10.0 m - 6.0 m Type "SM" prestressed concrete girder bridge located on Highway 28 west of Radway. The bridge is 14.7 m wide with a clear roadway width of 13.8 m. The bridge is supported on treated timber caps on treated timber piles at the abutments, and steel HP pile caps on treated timber piles at the piers. The bridge deck, which has an 50 mm nominal asphalt concrete pavement overlay plus waterproofing membrane, consists of 12 lines of girders. The existing bridgerail is a double tube bridgerail (non-crash tested) and the guardrail is a strong post system with turndown ends.

As part of the Work, netting will be required to be installed on BF71116 for anticipated strengthening of that structure. BF71116 is five span bridge with 76.5 – 77.0 – 77.0 – 76.5 m continuous spans and a 12.2 m jump span at the north approach. Each span consists of four lines of steel plate girders spaced at 2.84 m and supporting a composite concrete deck. The abutments are reinforced concrete abutments supported on steel H-piles while the piers consist of solid shaft reinforced concrete piers supported on spread footings.

2.4 CONSTRUCTION SCHEDULE

The Contractor shall make every attempt to schedule his work to reduce overall construction duration, meet the construction deadlines, and minimize traffic disruption. For this contract, traffic disruption refers to the work, equipment, labor, or materials that restrict the normal driving speed and the horizontal or vertical clearances available to traffic along Highway 28, 500 m on either side of the structure.

The Contractor is advised that there may be restrictions placed on the Construction schedule by environmental constraints as dictated by the Department and legislation identified in the "Environmental Requirements" section of this document.

The Contractor shall provide all submission required by the Owner's Representative for review 7 days prior to commencing tasks related to the associated submission.

2.5 SCHEDULED CONSTRUCTION MEETINGS

The Contractor shall be responsible for scheduling, coordinating and hosting weekly construction meetings with CKPC, the Owner's Representative and affected utility companies. These meetings shall be held at the Contractor's site office.

All costs associated with these meetings will be considered incidental to the Work and no separate or additional payment will be made.

2.6 ENVIRONMENTAL REQUIREMENTS

2.6.1.1 Environmental Regulations

Notification as required by the Alberta Water Act, Code of Practice for Watercourse Crossings shall be sent to Alberta Environment and Parks (AE&P) by the Owner's Representative three weeks prior to construction. Information regarding the Code of Practice for Watercourse Crossings may be obtained from the AESRD website at:

<https://www.alberta.ca/water-codes-of-practice.aspx>

All costs associated with adhering to the above environmental regulations and Special Provisions, to install environmental protection measures, temporary erosion control devices, including all materials, labor, tools, and equipment not specifically mentioned but necessary for a complete job will be considered incidental to the Work and no separate or additional payment will be made.

2.6.1.2 Environmental Management

General

The Contractor shall ensure effective implementation of his Environmental Construction Operations (ECO) Plan by meeting the requirements of Subsection 1.2.50, Environmental Management, of General Specifications 1.2.50, by training staff and sub-contractors, assigning responsibilities, incorporating procedures and by regular reporting at project meetings. On a daily basis the Contractor shall inspect and record condition of environmental measures contained in his ECO Plan and any deficiencies shall be rectified as they are discovered.

Should site conditions change and the Contractor foresees difficulties in meeting the proposal special provisions and conditions of their ECO Plan or an event occurs that breaches these it is the Contractor's responsibility to inform the Owner's Representative as soon as possible and to react to be in compliance.

The Contractor is advised that no deleterious substances (including but not limited to sediment, debris, petroleum products) shall be allowed to enter Namepi Creek or any other body of water whether flowing or static. Refueling, hazardous material storage areas shall be at minimum 100 m from any water body. Construction equipment shall not travel outside of the highway right of way or temporary field authorization limits until the Contractor has written permission from the registered land owner and specifically authorized by the Owner's Representative. The Contractor shall display increased awareness of Project personnel to the presence of wildlife and eliminating potential wildlife attractants by properly storing and removing waste from work sites. The Contractor shall remove all waste from the site each night.

Following construction, any disturbed areas shall be re-contoured, top-soiled and seeded. Erosion and sediment control (ESC) devices shall remain in place until the vegetation has been fully established. The inclusion of permanent erosion control measures in this proposal does not in any way relieve the Contractor of his responsibilities under General Specification 1.2.50.

The Contractor shall prepare an ECO plan for this project which shall include, but are not limited to, the following site-specific requirements:

- Detailed debris and wash water accommodation strategy;
- Minimize disturbance to the existing channel;
- Measures to ensure that turbidity is controlled;
- Ensure that a system is in place to prevent runoff from disturbed ground directly entering the channel;
- Procedure and location for refueling of equipment;
- Inspect the system on regular basis during both working and non-working hours; and,
- Handling, storage, and application of construction materials (including but not limited to sandblasting, placing concrete, filling of voids, and application of sealer and sealants).

In addition to the above requirements, the ECO Plan shall address all requirements noted in the Environmental Risk Assessment Report prepared by Basin Environmental Ltd.

The Contractor is advised that the watercourse is Class C waterway with a Restricted Activity Period (RAP) extending from April 16 to June 30.

The nesting season is from April 14 to August 28 of any year and if the schedule of work occurs during the nesting season then a nest sweep will be required no more than seven days prior to construction. If an active nest is found, a minimum 100 m buffer (i.e., the buffer distance is dependent upon species) will be established until the fledglings have left the nest.

All Work shall be carried out in compliance with the conditions, requirements and restrictions of the specifications, environmental documents / reports which may include but not limited to the following documentation:

- Environmental Risk Assessment reports
- Water Act, Codes of Practice for Watercourse Crossings
- Migratory Birds Convention Act - Environment Canada

In case of conflict, the more stringent requirements shall apply.

All Work shall be isolated from the Namepi creek water body. The Contractor shall construct temporary works as necessary to accommodate all products of construction at all times in accordance with all applicable environmental documents/regulations. The Contractor shall contain all debris and wash water and prevent it from falling into the river. If the Contractor fails to contain the debris or wash water, work will cease immediately until an acceptable revised method of work is submitted to the Owner's Representative and approved.

2.6.1.3 Control of Equipment

The Contractor shall carefully control all equipment and work operations so that his operations do not extend beyond the designated working limits unless otherwise specifically authorized by the Owner's Representative.

2.6.1.4 Burning

Burning will not be permitted under this Contract.

2.6.1.5 Campsites

Campsites will not be permitted under this Contract.

2.6.1.6 Historical Resources

Pursuant to Section 31 of the Historical Resources Act, should any paleontological or historical resources be discovered during the conduct of construction activities, the Owner's Representative is to be informed immediately. Pursuant to information from the appropriate governing body, it may be necessary for Alberta Transportation to issue further instructions regarding the documentation of these resources.

2.6.1.7 Control of Weeds and Pests

The Contractor shall ensure all equipment, vehicles, tools and other items are clean of soil prior to entering and leaving the site.

The Contractor shall submit a proposed procedure for weed and pest control to the Owner's Representative a minimum of two weeks prior to the pre-construction meeting for review and acceptance. The Contractor's equipment, vehicles, materials or personnel will not be permitted to enter the site prior to acceptance of the Contractor's procedure for weed and pest control.

All cost associated with weed and pest control will be considered incidental to the Work, and no separate or additional payment will be made.

2.6.1.8 Control of Clubroot

Clubroot, caused by *Plasmodiophora brassicae*, is a serious disease of cruciferous crops (i.e. mustards, canola, etc.) which can result in reduced to severe yield losses. Clubroot was declared a pest under Alberta's Agricultural Pests Act in April 2007. Enforcement of the Act is the responsibility of the Agricultural Service Board located in each municipality.

The Contractor shall carry out his operations in accordance with the following Provisions and the Best Management Practices outlined in the Alberta Clubroot Management Plan which is available on-line at the following location:

[http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/agdex11519](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex11519)

2.6.1.9 ECO Plan Requirements

As part of the ECO Plan, the Contractor shall detail his proposed Clubroot control measures for soil disturbance work at locations involving Clubroot infected soils.

Details shall include proposed equipment cleaning procedures as well as any control measures recommended by the Region's Agricultural Fieldman.

No work shall not commence until the Contractor's ECO Plan has been reviewed and accepted by the Owner's Representative and by CKPC.

All costs associated with the implementation of Clubroot control measures, including those required by the applicable Agricultural Service Board, will be considered incidental to the Work and no separate or additional payment will be made.

2.6.1.10 Wildlife Disturbance Avoidance

Further to the requirements of Section 1.2.50, Environmental Management, of Specification 1.2, General, the Contractor's operations under this Contract shall be in accordance with the following.

Vegetation clearing shall be avoided during the site's bird breeding season: April 14 until August 28.

In order to comply with the Provincial Wildlife Act, the Federal Migratory Birds Convention Act and the Species at Risk Act in the event that clearing and/or other disturbances of vegetation are deemed necessary to carry out the Work or to provide a Contractor laydown area during April 14 until August 28; the Contractor shall employ a qualified Wildlife Specialist to carry out a pre-disturbance survey of the area requiring disturbance to determine the presence of nesting birds, sensitive or at-risk species. The survey area shall include an appropriate buffer zone as determined by the Wildlife Specialist.

If the pre-disturbance survey reveals the presence of any active nests, sensitive or at risk species; the Contractor shall revise his ECO plan and incorporate any mitigation measures deemed necessary by the Wildlife Specialist.

All costs associated with the pre-disturbance survey will be considered incidental to the Work, and no separate or additional payment will be made. Payment for implementation of mitigation recommended by the Wildlife specialist will be made in accordance with Section 1.2.25, Extra Work, of Specification 1.2, General.

The Contractor shall have no claim against CKPC for any inconvenience or delay resulting from these requirements.

2.6.1.11 Environmental Permits and Approval

There are no project specific permits for this project; however, work shall be carried out in compliance with the Department of Fisheries and Oceans' (DFO) Fisheries Act "Measures to Avoid Harm" (found on the DFO website), the Special Provisions contained herein and the ERA.

2.6.1.12 Alberta Environment and Parks (AE&P)

The Contractor is advised that they are responsible to apply for a Temporary Field Authorization (TFA) if they require additional temporary workspace outside of the right-of-way. Workspace outside the right-of-way is not anticipated for this project. All costs associated with additional TFA permitting will be considered incidental to the work and no separate payment will be made. The Contractor shall have no claim against the CKPC for any delay or costs arising from obtaining their TFA.

A copy of the TFA shall be provided to the Owner's Representative prior to construction of the temporary workspace and kept on site.

2.7 TRAFFIC ACCOMMODATION

The Contractor shall be responsible for determining how access through the construction site will be safely provided. Such information shall be detailed in the Contractor's Traffic Accommodation Strategy which shall be submitted to the Owner's Representative for review and acceptance at least 7 days prior to the pre-construction meeting as a pre-construction requirement.

The Contractor's Traffic Accommodation Strategy (TAS) shall include a comprehensive traffic accommodation plan, including all temporary signing. Further to Section 7.1 of the Standard Specifications for Highway Construction, no Work shall be performed until the comprehensive traffic accommodation plan has been reviewed and accepted by the Owner's Representative and the Department.

The Contractor is advised that the actual AADT at this location, determined in 2018, was 3,200 vehicles per day.

In addition to the requirements of Appendix A, Section 7, Specification 7.1, Traffic Accommodation and Temporary Signing, of the Specifications for Bridge Construction, the following shall apply:

- All lanes shall remain open during work. Temporary closures may be permitted only as required to safely transport equipment across Highway 28;
- The Contractor shall limit the speed in the construction zone to a maximum of 70 km/hr and shall ensure that Emergency Services are informed of reduced clearances, and speed zones.
- The Contractor shall ensure that during construction shall not hinder traffic flow.
- The Contractor should be advised that Highway 28 at BF74397 is part of the Alberta High Load Corridor (HLC) network. As such, a higher percentage of heavy truck traffic can be expected to be encountered during the work. Consideration of this should be given in the TAS.

A clearly identifiable contact telephone number shall be posted at the worksite to enable emergency response. The Contractor shall designate competent personnel to monitor traffic accommodations on a 24-hour continuous basis while traffic control is in place. He shall provide those persons with adequate resources to ensure traffic accommodation equipment is functioning properly and to respond to traffic accommodation problems quickly and efficiently.

2.8 LAYDOWN AREAS

The Contractor may establish his laydown area within the Right-of-Way subject to approval of the Owner's Representative. The Contractor shall be responsible for obtaining all permits required for their laydown area for work outside of the Right-of-Way.

2.9 UTILITIES

The Contractor's attention is drawn to Section 1.2.49, Safeguarding Utility Installations, of the General Specifications.

Additional specific requirements for work in the vicinity of utilities and coordination with the owners and/or operators are listed under the particular utility.

The Contractor is advised that electric and telecommunication (copper and fibre optic) utilities are located near the bridge. A gas line located approximately 100 m north of the structure was also located. The Contractor shall contact Alberta One Call to confirm the location of the utilities. The Contractor shall take care not to damage or disturb any utilities. Any damages or disturbances shall be immediately reported to the utility company and the Owner's Representative.

All Work related to exposing and relocation of underground utilities (if required) will be considered incidental to the Work and no separate or additional payment will be made.

2.10 EXISTING TIMBER BRACING – REMOVE AND DISPOSE

Remove and disposal of existing timber bracing shall be only to the extent as required to install the new steel pier bracing. As noted on the drawings, the existing timber bracing will be used as a brace member between the exterior timber pile braced by the new steel members and its adjacent timber pile. The removed timber bracing shall be stored in accordance with Section 23 of the BCS.

Payment for Existing Timber Bracing – Remove and Dispose will be made on the basis of the lump sum price bid for this work. Unless otherwise specified, the Contractor shall supply all materials necessary to complete the Work. A complete job is called for, therefore any labour, material, equipment, tool or incidental items not specifically mentioned, but necessary completeness will be considered incidental to the Work, and no separate or additional payment will be made.

2.11 PREPARATION OF TIMBER PILES

Preparation of timber piles shall include all work complete as to facilitate install of the new steel bracing on the piles as detailed on the drawings. This shall include, but is not limited to:

- Drill holes in the timber pier piles and treat new holes with creosote;
- Trim piles as required to install vertical plate braces
- re-install existing timber bracing as per the drawings.

Steel shear plate connectors shall conform to the requirements of CAN/CSA O86-01 (Engineering Design of Wood), Clause 10.3.1.3.

Bolt holes in the treated timber shall be accurately aligned and drilled not less than 1.0 mm or more than 2.0 mm larger than the bolt diameter. Grooves for shear plates

shall be in accordance with the requirements of CAN/CSA O86-01 (Engineering Design of Wood), Clause 10.3.1.4.

Payment for Preparation of Timber Piles will be made on the per pile basis bid price for this work. Unless otherwise specified, the Contractor shall supply all materials necessary to complete the Work. A complete job is called for, therefore any labour, material, equipment, tool or incidental items not specifically mentioned, but necessary completeness will be considered incidental to the Work, and no separate or additional payment will be made.

2.12 STRUCTURAL STEEL – SUPPLY AND FABRICATION

Supply and fabrication of structural steel for the new pier bracing shall be in accordance with **Section 6** of *Alberta Transportation's Standard Specifications for Bridge Construction*.

Payment for Structural Steel – Supply and Fabrication will be made on the per tonne basis bid price for this work. Unless otherwise specified, the Contractor shall supply all materials necessary to complete the Work. A complete job is called for, therefore any labour, material, equipment, tool or incidental items not specifically mentioned, but necessary completeness will be considered incidental to the Work, and no separate or additional payment will be made.

2.13 INSTALLATION OF PIER BRACING

Installation of Pier Bracing shall be in accordance with **Section 6** of *Alberta Transportation's Standard Specifications for Bridge Construction*.

This work shall include, but is not limited to,

- install new diagonal braces between exterior vertical braces and adjacent interior vertical braces
- fit new field splices as per the drawings where required and install new horizontal braces. Provide shim plates as required.

Payment for Installation of Pier Bracing will be made on the basis of the lump sum price bid for this work. Unless otherwise specified, the Contractor shall supply all materials necessary to complete the Work. A complete job is called for, therefore any labour, material, equipment, tool or incidental items not specifically mentioned, but necessary completeness will be considered incidental to the Work, and no separate or additional payment will be made.

2.14 SITE RESTORATION

After completion of the work, the headslopes shall be restored to their pre-construction condition.

All costs associated with restoring the site of disturbed areas shall be considered incidental to the Work, and no separate or additional payment will be made.

2.15 TOP-SOILING AND SEEDING

All disturbed areas shall be restored and seeded in accordance with Specification 2.20, "Seeding", of the Standard Specifications for Highway Construction.

Unless otherwise determined by the Owner's Representative, seed mix supplied by the Contractor shall be:

Seed Mix Zone	Native Seed Mix – Zone 4		Percentage by Dry Weight
	Common Name	Latin Name	
4 Mixedgrass and Dry Mixedgrass	Slender Wheat Grass	Agropyron trachycaulum	30%
	Canada Wildrye	Elymus canadensis	15%
	Mountain Brome	Bromus carinatus	15%
	Northern Wheat Grass	Agropyron dasystachyum	10%
	Western Wheat Grass	Agropyron smithii	5%
	Indian Rice Grass	Orzyopsis hymenoides	5%
	Alkali Grass	Puccinellia distans	10%
	Needle and Thread Grass	Stipa comata	10%

All costs associated with restoring and seeding of disturbed areas shall be considered incidental to the Work, and no separate or additional payment will be made.

2.16 HEAVY ROCK RIP-RAP, CLASS 1M – SUPPLY AND INSTALL

Rip-rap shall be in accordance with Section 10 "Heavy Rock Riprap", of the Specifications for Bridge Construction; the following Provisions; and as shown on the Drawings:

- Class 1M heavy rock rip-rap shall be placed along the headslopes as required to restore to pre-construction condition;
- Minimum thickness of rip-rap shall be 0.350 m;
- Rip-rap shall be hand placed;
- Heavy machinery shall not be permitted on side slopes to facilitate rip-rap placement;
- Vegetation on side slopes of bridge shall be maintained during construction or other suitable sediment and erosion control devices shall be put in place.

Payment for Heavy Rock Rip-Rap will be made on the basis of the per cubic meter bid price for this work. Unless otherwise specified, the Contractor shall supply all materials necessary to complete the Work. A complete job is called for, therefore any labour, material, equipment, tool or incidental items not specifically mentioned, but necessary completeness will be considered incidental to the Work, and no separate or additional payment will be made.

2.17 BF71116 BIRD NETTING

To mitigate concerns related to building of nests in the strengthening zones of BF71116, the Contractor shall install netting (or approved equivalent to prevent nest construction) along the deck soffit and girder top flanges as directed by the Owner's Representative. The materials and plans shall be reviewed and approved by the Owner's Representative and Department prior to the Contractor commencing work.

Payment for BF71116 will be made on the per square meter of netting bid price for this work. Unless otherwise specified, the Contractor shall supply all materials necessary to complete the Work. A complete job is called for, therefore any labour, material, equipment, tool or incidental items not specifically mentioned, but necessary completeness will be considered incidental to the Work, and no separate or additional payment will be made.

3. PLANS, DRAWINGS AND PERMITS

The following drawings are as shown in Schedule B3 - Attachments.

3.1 SEPARATE DRAWINGS

DRAWING No.	DESCRIPTION
NE-31-58-20-W4 Site 74397 Sheet 1 of 3	IFQ-Namepi Creek Bridge Hwy28, 2km W of Radway – Rehabilitation Layout
NE-31-58-20-W4 Site 74397 Sheet 2 of 3	IFQ-Namepi Creek Bridge Hwy28, 2km W of Radway – Rehabilitation Layout
NE-31-58-20-W4 Site 74397 Sheet 3 of 3	IFQ-Namepi Creek Bridge Hwy28, 2km W of Radway – Rehabilitation Layout

Contractors are advised that drawings issued for proposal are photocopy reproductions and, due to file conversion and/or reproduction variations, scaling off of these drawings shall not be relied upon as accurate.

3.2 STANDARD BRIDGE DRAWINGS

The following standard bridge drawings are applicable to work under this Contract. These drawings may be viewed or downloaded from the Department website at the following location: <http://www.transportation.alberta.ca/4738.htm>.

Drawing No.	Description
S1301-Rev 7	Prestressed Concrete 6 m Type SM-510 Interior Girder
S1302-Rev 5	Prestressed Concrete 6 m Type SM-510 Curb Girder
S1307-Rev 7	Prestressed Concrete 10 m Type SM-510 Interior Girder
S1308-Rev 5	Prestressed Concrete 10 m Type SM-510 Curb Girder
S1420-Rev 4	'SM' Precast Bridges Treated Timber Substructure – Sheet 1
S1421 Rev 0	'SM' Precast Bridges Treated Timber Substructure – Sheet 2
S1446-Rev 2	Steel Cap System for Treated Timber Piles Standard SM Bridges