# **SIERRA YOYO DESAN ROAD**

**PROTOCOLS** 

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# 1 **DEFINITIONS**

Concessionaire - SYD Road Limited Partnership

CSA - Canadian Standards Association

LHML – Ledcor Highway Maintenance Ltd (the Road Operator)

MEM - Ministry of Energy & Mines

MoT – Ministry of Transport

PSSG - Ministry of Public Protection & Solicitor General

OGC - Oil & Gas Commission

RoW - Road Right of Way

# 2 INTRODUCTION

These protocols are intended to clarify the permitting/ application/ approval process relating to Infrastructure Developments such as:

- Pipeline crossings
- Utility routes along the SYD Road
- New or amended accesses
- Seismic survey activity

As well as operations such as:

- Abnormal load movements (oversized/ overweight loads)
- Vehicle movements during road bans
- Discretionary road use
- Provision of Signs and Markers

## 2.1 Permitting Authority

The permitting authorities for development permits (new/ altered access roads, utility crossings, pipeline crossings, etc) and operations (oversized/ overweight vehicles, road bans, etc) on the SYD Road are:

Industry	Type of Permit	Permitting Authority	Contact Details
Forestry	Development	Ministry of Forests	Peter Smith
			(250) 774 5511
Oil/ Gas	Development	Oil & Gas Commission	James Gladysz
			(250) 261 5705
Minerals	Development	Ministry of Energy &	Travis Ferbey
		Mines	(250) 953 3773
All	Oversized/ overweight vehicle movements, highway crossings, etc	Ministry of Public Protection and Solicitor General	Doug Elliot PO Box 9250 Stn Prov. Gov't, Victoria, BC V8W9J2 (250) 953-4017

All	Overweight vehicle move during Road Bans	SYD Road Limited Partnership	Brenda Martin 1200 -1067 West Cordova St, Vancouver, BC, V6C 1C7 (604) 699 2941
All	Road Closure	SYD Road Limited Partnership	Brenda Martin 1200 -1067 West Cordova St, Vancouver, BC, V6C 1C7 (604) 699 2941
All	Discretionary Use	SYD Road Limited Partnership	Brenda Martin 1200 -1067 West Cordova St, Vancouver, BC, V6C 1C7 (604) 699 2941

The permitting processes for works affecting the SYD Road will be similar to the permitting process for existing resource roads, with the added requirement that all permit applications be referred to the SYD Partnership by the Permitting Authority for review.

# 2.2 Approval Process

Applications will be referred to the Concessionaire by the Approving Authority for review and comment.

The Concessionaire will send any critical comments to the approving authority.

# 2.3 Inspections

When the application is for a Development Permit, and where appropriate, LHML will carry out condition inspections of the road affected by the development on behalf of the Concessionaire.

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Where appropriate, a copy of the inspection report will be provided to the developer as a reference document in order to resolve any disputes relating to the standards of completion.

## 3 INFRASTRUCTURE DEVELOPMENT

## 3.1 General Requirements

The following requirements will apply to any infrastructure development projects that impinge on the roadway (i.e. pipe crossing, new access, etc).

#### 3.1.1 Reinstatement

Any disturbance of the road surface, sub-base, road base, shoulder, drainage channel or any other part of the road infrastructure, is to be reinstated in accordance with the Standard Specification for Highway Construction – 2004 within a timescale agreed with the Concessionaire before work commences. A maintenance period of three months from completion of the development will generally apply (except where the development is temporary, i.e. temporary winter access). Any reinstatement defects which arise during this period will remain the responsibility of the developer to repair.

Should any reinstatement be deemed substandard or not be completed within the agreed timescale the Concessionaire reserves the right to complete the work and through the offices of the Permitting Authority, recharge the cost to the developer.

## 3.1.2 Traffic Management

The developer will be required to submit a traffic management plan to the Concessionaire that complies with the latest edition of the "Traffic Control Manual for Work on Roadways" and the "Manual of Standard Signs and Pavement Markings" for the work in and around the SYD road.

All Concessionaire costs associated with traffic management and supervision will be charged to the developer.

# 3.2 Pipeline Crossings

#### 3.2.1 Standards

All applications will comply with the requirements of the Oil and Gas Commission, the provisions of the Pipeline Act, and conform to the Canadian Standards Association CSA Z662-03 – Oil & Gas Pipelines.

Should any requirements herein exceed these standards, the requirements of this document will be considered to be paramount.

#### 3.2.2 Drawings

All referrals will be accompanied by a complete set of engineer certified drawings and, where appropriate, supporting calculations pertinent to the design of the pipeline crossing.

#### 3.2.3 Depth of Cover

Pipeline crossings will be constructed to provide a minimum depth of cover in accordance with Table 4.9 CSA Z662-03 at all times. Exceptions to this will not be permitted.

#### 3.2.4 Drainage Structures

No crossing will be permitted within 300 m of a bridge approach.

No crossing will be permitted within 100 m of a drainage course or drainage structure (culvert).

## 3.2.5 Crossing Method

#### 3.2.5.1 Cased or Non-cased

Cased and non-cased buried pipelines will be permitted. If cased, the casing will be continuous and inserted by directional augering or other Concessionaire. approved method. The casing will be designed to be of equal or greater life span than the utility pipe/ cable.

The internal diameter of the casing will be at least 5 cm greater than the external diameter of the utility pipe/ cable. An exception may be made where steel casing of polyethylene pipe is installed. In this case the next greater size diameter of casing is to be used.

The casing will extend across the full width of the road right-of-way.

#### 3.2.5.2 Vents

Pipeline casing vents will not be placed within the limits of the SYD road right-ofway.

#### 3.2.5.3 Marking of Crossings

All pipeline crossings will be clearly marked using proprietary marker posts on completion of the pipeline installation. The marker posts will be placed on the top of the back slope and at the edge of the right-of-way. If the crossing is constructed by excavation, suitable underground warning tape (detectable where the crossing is non-metallic) must be inserted into the backfill no less than 300 mm higher than the crown of the casing and no less than 900 mm below the road surface.

# 3.2.5.4 Intersecting Angle

The crossing should be constructed at right angles to the centerline of the road. However intersecting angles of less than 90° will be considered. No crossing with an intersecting angle less than 70° will be permitted.

# 3.2.5.5 Crossing Records

The developer will provide the Concessionaire a copy of the as-built record of the pipeline crossing within 180 days of the completion of the pipeline installation works.

## 4 NEW ACCESS OR INTERSECTING ROADWAY

## 4.1 General

All accesses/ intersecting roadways must be constructed in a manner that is not detrimental to the continued safety of the Road Users, the Road Operator, SYD Road Partnership Inc or members of the Public.

## 4.2 New Access

All new permanent accesses onto the SYD road will comply with Appendix 1 – New Access or Intersecting Road Detail and the provisions of "New Access or Intersecting Roadways" (BC Supplement to TAC Geometric Design Manual).

## 4.2.1 Temporary Access

Temporary access will either be:

- Low grade summer access constructed in non-frozen ground conditions
- Winter access "no" or "low" impact road constructed from compacted snow/ice.

In all cases natural drainage will be maintained. Design will be in accordance with OGC Planning & Construction Guidelines.

Provision of a drainage culvert may be waived if the Concessionaire, in conjunction with the Provincial Entity, determines that it is not necessary for continued safety on the SYD Road.

The end of season removal of the temporary approach must be completed without restricting or reducing the existing flow of watercourses.

In all cases the developer must provide a work schedule which will include the anticipated start date for constructing the approach and the date of removal. This duration will generally not exceed three months or extend later than March 31 (or start of spring thaw – which ever comes first) of any calendar year.

This latter provision may be extended if an inspection by the Concessionaire deems the continued use of the access will not be detrimental to the SYD Road. In this case, written approval for an extension may be granted. Granting an extension does not waive the responsibility of the developer to ensure that the existing drainage patterns are maintained.

All costs associated with the construction, maintenance and removal of temporary approaches and repairs to any resulting damage to the Concession Highway will be the responsibility of the developer.

With the prior approval of the Concessionaire, temporary approaches may be constructed using snow/ice fill, provided the completed approach supports the design loading and provides a smooth transition to the SYD road.

The provision for gravel surfacing may be modified to suit the construction of a temporary approach. However geometrics and signage will remain in full force and effect.

Temporary accesses must be constructed in a manner which:

- Does not cause deleterious materials (loose gravel, stone, mud, snow or ice) to track onto the SYD Road, or into watercourses, drainage ditch or any other part of the permanent road structure.
- Ensures the surface grade of the temporary access blends with the grade of the permanent structure so as not to cause a stepped intersection.

 Ensures that users of the access approaching the SYD road can safely stop before entering the SYD road.

The developer must exercise due care and diligence in the installation, operation and removal of the temporary access and take every measure possible to minimize ground disturbance and impact to the environment.

## 4.2.2 Permanent Access Design

#### 4.2.2.1 Geometry

The access will be constructed to a minimum road width of 8 m with 10 m turning radii and 3:1 side slopes. The centreline intersecting angle will be no less than 70 degrees with the first 10 m of access roadway constructed at right angles to the SYD roadway. A typical plan and cross section is provided in Appendix 1.

#### 4.2.2.2 Road formation

The access will be constructed of sound sub grade material and able to support the designated traffic loads year round, built so that it promotes drainage away from the road crown (0.04mm/m minimum cross fall) and is a smooth transition to and from the SYD road with no more than a 2% gradient and no less than 1%. The access will be designed to ensure that the cross fall on the SYD road is not altered in any way.

The design will comply with the latest edition of Transportation Association of Canada, "Geometric Design Guide" and also take into consideration the "BC Supplement to the TAC Guide".

## 4.2.2.3 Signage

The design will include advance warning and standard stop signs, 60 cm X 60 cm. Signs will be of aluminium construction and be installed on TeleSpar posts with break away anchors. Signs will be installed in accordance with the latest edition of the "Manual for Standard Signs and Pavement Markings".

#### 4.2.2.4 Surface Treatment

The surface is to be covered with a minimum 75 mm of crushed surfacing gravel, having a maximum size of 50 mm and extend over the entire road surface and up to the edge of the right-of-way.

## 4.2.2.5 Drainage

All accesses will include a culvert with a minimum diameter of 600 mm across the intersection. The culvert will be constructed on a sound bed with a minimum of 300mm cover and promote drainage. If required additional culverts my have to be installed within the right-of-way to maintain existing drainage patterns. All costs related to drainage provisions for the access are the responsibility of the developer.

#### 4.2.2.6 Sight Distance

The developer will ensure that sight distances of no less than 150 m in either direction are maintained within the access design. The developer will be responsible for the costs associated with maintaining adequate sight distances.

The Developer should make every effort to tie the new access into an existing access. Where this cannot be achieved the access should be a minimum of

150 m from the nearest existing access and 300 m from the nearest bridge approach.

Once completed the developer is responsible for maintaining the access road in an acceptable condition and for preventing the tracking of material onto the SYD road. The developer is responsible for all future costs related to maintaining the access and associated drainage (including the intersection culvert). The developer will be advised by the Concessionaire of any deficiencies that arise either to the access or to the related drainage system. The Concessionaire reserves the right to remove the access in the event that the deficiencies are not corrected within the time frame determined by the Concessionaire after receipt of a defect notification.

## 4.2.2.7 Geophysical Survey Activity

Geophysical exploration activities will not be permitted within the SYD Road RoW without authorisation from the Concessionaire.

## 5 ROAD USE

## 5.1 General

The SYD Partnership protocols are written with the intent to allow road users unencumbered access to the SYD Road for normal use. However, the nature of the Road and local conditions, such as weather and traffic volume, may require the application of road use restrictions under certain circumstances. Where possible, but not in all cases, the SYD Partnership may endorse exceptional road use while restrictions are in effect – SYD Partnership has the authority to either refuse requests for exception use, or approve such use with certain safeguards to ensure the Road is available for all to use.

## 5.1.1 Exceptional Use

Can be categorised as:

- Transport of oversized and over weight vehicles
- Road closures
- Transport of prohibited loads during road bans
- Discretionary road use

Oversized/ overweight vehicle moves are permitted by the Ministry of Public Safety and the Solicitor General (PSSG). All other cases of exceptional use will be reviewed and authorised by the SYD Road Ltd Partnership.

## 5.2 Road Closures

#### 5.2.1 General

No road user may unduly restrict the movement of traffic on the SYD by closing the Road. However, at the discretion of the SYD Road Partnership local short term lane closures may be permitted. Where permitted, all lane closures will be provided with traffic control. There are two types of closure that will be considered:

- Extended Lane Closure (>30mins)
- Short Term Lane Closure (<30mins)

#### 5.2.2 Extended Lane Closure (> 30 minutes)

The applicant will specify the expected duration and provide a contingency plan for emergency traffic. The applicant will identify the specific kilometre of the affected road.

The applicant will provide the Concessionaire 5 days notice of the requirement for an extended lane closure. The Concessionaire (SYD Partnership) will either decline or approve the request for an extended lane closure and will provide such notification to the requester with 48 hours of application. Approvals will stipulate any an all conditions the Concessionaire considers appropriate to accommodate the extended lane closure with minimal inconvenience or risk to all road users. Notice of the lane closure will be sign posted on the SYD road, and will be posted on the SYD website (<a href="www.sydroad.com">www.sydroad.com</a>) for a period of no less than 48 hours prior to the closure commencing.

The applicant will schedule the closure for between 10 pm and 4 am to reduce the impact on other road users.

The applicant will be required to provide flag persons for all lane closures.

Lane closures will normally not be permitted to extend for more than 2 hrs however, they may (with prior approval from the Concessionaire) extend for periods up to 6 hours conditional on the closure always being manned and traffic control provided.

Under no circumstances will a daytime closure be permitted. Once the work commences the applicant must ensure that operations are completed.

## 5.2.3 Short Term Closure (< 30 minutes)

The Concessionaire may, subject to availability, provide signs and barricades for short term closures of less than 30 minutes. The signs will be considered adequate traffic control provided there is full visibility for more than 300 m in each direction. Where 300m minimum sight distance is not possible or practical the Concessionaire may still permit a temporary closure subject to additional warning signs being installed. Barricades will be erected in conjunction with the advanced warning signs.

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## 5.2.4 Supervision

Depending on the nature of the activity for which the short term or extended lane closure applies, the Concessionaire may elect to provide on site supervision for part of, or the whole duration of the activity. The cost of supervision will be borne by the Applicant. Supervision will be charged out on an hourly rate basis and will be inclusive from the time the supervisor leaves his depot until the time he returns. Charges will also be levied to cover the cost of transportation and equipment used during the closure, such as signage.

#### 6 ROAD BANS:

#### 6.1 General

The commencement date for Road Bans will be determined by SYD Road Limited Partnership through consultation with the Ministry of Transportation Evaluation Engineer (or their consultants). It is anticipated that bans for the SYD Road will coincide with bans on other MoT controlled gravel roads within the northern BC area. Road bans will generally extend between two and three months following Spring thaw (dictated by local climatic conditions). Where possible a notice period of 48hrs will be provided before the application of a road ban. If road conditions allow, the Concessionaire may consider partial relaxation of bans (i.e. where portions remain in a frozen condition or where sections have adequately firmed up to be able to carry full loads).

The MOT will consult with the Concessionaire before applying/ removing a road ban. Road bans limit the loading to 75% of Provincial maximum legal axle weight. Gravel roads are the first to be banned and the last to have the condition removed.

Provincial maximum axle weights are:

Single Axle: Maximum allowable axle Weight 7,500 kg
Tandem Axle: Maximum allowable Axle Weight 17,000kg
Tridem Axle: Maximum allowable Axle Weight 24,000 kg

Total: Maximum Allowable Load 64 tonnes (without permit)

Total: Maximum Allowable Load 85 tonnes (with permit)

The Ministry of Public Safety & Solicitor General (PSSG) regulates the users, provides enforcement and processes applications for overweight or over size

loads. Movement of overweight vehicles during Ban periods is entirely at the discretion of the Concessionaire. If the Concessionaire agrees to permit an overweight load to move during a ban the following steps are taken:

- The Road User applies to the Concessionaire for a permit to travel the SYD with an overweight load (>75% legal axle weight). An application fee of \$1000 is applied to cover administrative costs.
- The Road User will sign a Road Use Agreement and include detailed information on date, time, start and finish locations and duration of the required move.
- The Concessionaire advises the PSSG of all permits issued.. The Concessionaire will advise PSSG of the time, duration, location and dates for a certain load to travel down the Road.
- The applicant indemnifies the Concessionaire in writing against all damages to the SYD as a result of their use during a ban period. The applicant is advised that the permit is valid during the period requested in Schedule A of the Road Use Agreement. Generally the Concessionaire will restrict hauls to between late evening and early morning.
- The Concessionaire will have a road monitor evaluate the resulting damage attributed to a particular overweight move. This damage will be charged back to the road user at cost + 15%.
- The master agreement will still apply for subsequent overload permits during ban periods, however the submission of Schedule A with load and transport details along with the application fee of \$1000 are necessary for consideration.
- All information relating to road bans will be posted on the SYD website (www.sydroad.com)

## 7 DISCRETIONARY ROAD USE

This provision is intended to cover activities that are not permitted under general road use but may, under special circumstance, be permitted at the discretion of the Concessionaire.

#### 7.1 General

The applicant will provide the following information for evaluation of the intended discretionary use.

- Nature of the discretionary use
- Load details
- Professional Engineer to certify the load design
- Duration of the request
- Potential Impacts
- Traffic Management Plan

Following the application the Concessionaire will:

- Approve the application outright, OR
- Approve the application with conditions, OR
- Deny the application

Whichever outcome, the Concessionaire's decision is final.

The Concessionaire reserves the right to carry out an independent review of the applicant's proposal at the applicant's expense.

Without exception, discretionary use of the Road will only be permitted once the applicant has agreed in writing to bear the cost of any repairs arising from the discretionary use. Any repairs arising from the discretionary use of the road will be remedied and supervised by the Concessionaire. The Operations Manager

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will review the road condition and advise the applicant on the extent, nature and estimate of the cost of the work that will be undertaken.

Use of excessive speeds and/or careless driving will not be tolerated on the SYD road. Failure to abide by the road use conditions may result in revoking all privileges in the use of the SYD road.

#### 8 OVERWEIGHT AND OVERSIZE VEHICLE EXEMPTIONS

## 8.1 General

The PSSG regulates the users, provides enforcement and processes applications for overweight or over size loads. The PSSG will refer exceptional applications to the Concessionaire for comment. The Concessionaire will respond with any necessary conditions to be applied to the oversized load. Conditions will include:

- Proponent entering into a SYD Road Use Agreement
- Proponent agreeing to pay the SYD Partnership fees for undertaking a bridge assessment

The Concessionaire has the discretion to decline any request to move the overweight or oversize load on any portion of the SYD Road.

Restrictions will include but not be limited to:

#### 8.1.1 Oversize Vehicle Restrictions

Size restrictions applicable to the SYD Road are:

Width Restrictions: Not to exceed 5.0 meters

Height Restriction: There is no current height restriction

applicable to the SYD Road

Where the size of vehicle exceeds these values the Road User may apply to the PSSG for a permit to travel over the SYD Road. PSSG will refer this application to the Concessionaire for the either the Concessionaire's concurrence or decline.

## 8.1.2 Overweight Vehicle Restrictions

Weight restrictions that apply on the SYD Road are:

Gross Vehicle Weight: Not to exceed 85,000 kg

Maximum permissible axle loads: As laid out in the Commercial Transport

Manual – Section 3 – Permits – General (PSSG website

www.pssg.gov.bc.ca/cvse), where Bulletin 24 - Heavy Haul - Overload/Oversize will apply.

Where axle loads/ gross vehicles weights exceed these permitted values the Proponent may apply to the PSSG for a permit to travel over the SYD Road. PSSG will refer this application to the Concessionaire for the either the Concessionaire's concurrence or decline.

Weight restrictions during Road Ban periods are 75% of the permitted axle load values during normal periods.

## 8.1.3 Overweight Vehicles – Bridge Evaluation

Historically overweight vehicle permits for the SYD Road were issued by the Ministry of Public Safety and Solicitor General (PSSG) on behalf of the Ministry of Transport. With the signing of the Concession Agreement, the responsibility for approving overweight loads (over 85 tonnes) shifted to SYD Road Limited Partnership who are now responsible for undertaking bridge evaluations for overweight vehicles. The process still involves PSSG issuing the overweight permit, however they will only do so once SYD Road Limited Partnership have confirmed that the load is acceptable over SYD Road bridges.

The process for applying for overweight permits will now be:

• Road user applies to PSSG for an overweight vehicle permit — the road user provides all necessary load information to PSSG using their existing application process.

- PSSG refers application to SYD Road Limited Partnership where the proposed overweight load is to traverse one or more of the SYD Road bridges
- SYD Road Limited Partnership request the Road User complete and returns a signed road use agreement bridge evaluation will not be undertaken until the signed agreement has been received

SYD Road Limited Partnership, through its consultants undertake the bridge evaluation and either:

- Approve the application Notification is sent directly to PSSG who will in turn issue the overweight vehicle permit. Approval may be conditional on providing additional bridge protection (i.e. re-distribution of load, providing additional axles, etc)
- Reject the application Notification is sent to PSSG with a copy to the Road User.

The list of the bridges that require SYD Road Limited Partnership approval for overweight loads is as follows:

Fort Nelson River Snake River

Lichen Creek (PetroCan#1)

Sahtaneh River (PetroCan #2)

Beaver

Kotcho

**Broddy** 

Doug Clay

Gibson

The Concession Agreement permits SYD Road Limited Partnership to collect reasonable expenses for undertaking the bridge evaluations. The scale of fees is entirely dependent on how many and which bridges are to be traversed and covers SYD Road Limited Partnership's consultant, overhead and administration costs. The scale of fees is:

	Bridge Name	Fee per bridge
I	Fort Nelson River	\$1050
2	Snake River	\$450
3	Lichen	\$450
4	Sahteneh	\$450
5	Beaver Creek	\$450
6	Broddy	\$450
7	Doug Clay	\$450
8	Gibson	\$450
9	Kotcho	\$530

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**PLUS** an administrative fee of \$1000 per application.

# 9 SIGNS AND MARKINGS

# 9.1 Sign Installation

The installations of commercial signs within the right-of-way will not be permitted.

