

**APPLICATION PROCEDURES FOR
PLACEMENT OF UNDERGROUND TELECOMMUNICATION CABLES
IN THE VICINITY OF TRANSPORTATION FACILITIES
UNDER THE JURISDICTION OF ALBERTA TRANSPORTATION**

- 1.0 Application Procedures
- 2.0 General Construction Guidelines

June, 2012

1.0 APPLICATION PROCEDURES

Application for telecommunication lines paralleling and/or crossing highways under the jurisdiction of Alberta Transportation shall be submitted to the appropriate District Office.

Application for telecommunication lines paralleling and/or crossing public roads other than highways within the boundaries of any Municipal District or County should be submitted to the appropriate Municipality.

The applicant shall allow up to 30 working days for application processing.

Applications shall be submitted for any work related to construction and/or modification of the existing and planned telecommunication lines which:

- a) cross the highway right-of-way, or
- b) parallel an existing within the highway right-of-way.

Alberta Transportation will not be responsible for any cost of cable repairs if accidentally damaged during highway related works and/or relocation, if the cable is located in areas not complying with the conditions covered in these requirements and guidelines and/or the plans attached to and supporting the application for the telecommunication line.

1.1 APPLICATION REQUIREMENTS

The applicant shall clearly state the purpose of the application and the type of facility.

The applicant must provide highway number(s), legal land description and particulars of the contact person responsible for the application.

Incomplete applications without proper documentation will be returned without review.

A copy of the consent issued shall be provided to the contractor and made available for verification at the construction site at all times.

No construction may be undertaken without a valid consent.

Only work covered by the original consent can be performed at the site. Any additional work, significant variation or change from the original consent also requires additional approval(s).

Each of the drawings submitted with the application shall have a number for reference purposes.

1.1.1 The Conventional Buried Cable (not fibre optics)

Applications shall be supported by an overall plan or a key map of the facility, with suggested scale of 1:20,000 showing clearly, in colour, the extent of the proposed line and any associated facilities (e.g. pedestals) and end points.

Attached to the application is a sample plan.

1.1.2 Fibre Optic Cables

Applications shall be supported by an overall plan or a vicinity map with suggested scale 1:20,000 showing clearly, in colour, the extent of the proposed line and any associated facilities (e.g. splice bunkers) including location of starting and end points, and:

- 1) Two (2) copies of engineering plan(s) for each highway crossing showing precise crossing location, a highway cross-section at the crossing and highway profile for a minimum 400 metres in each direction of the crossing. The profile shall be drawn in the horizontal scale of 1:5000 and vertical of 1:200, the cross-section shall be drawn in the horizontal scale of 1:2500 and vertical of 1:200.
- 2) The cross-section drawing shall contain legal crossing description, method of construction, depth of cover, extent of casing, cable profile through the crossing, right-of-way boundaries and type of highway surface as well as the marker location; and
- 3) One typical drawing of the types of manholes or bunkers, if used.

1.1.3 Application For “Drops”

Application for “drops”, if highway crossing is intended, shall be supported with a sketch outlining the extent of the intended work.

2.0 GENERAL CONSTRUCTION GUIDELINES

2.01 CONSTRUCTION COMMENCEMENT AND COMPLETION

The applicant shall contact the appropriate Operations Manager or the Development and Planning Technologist at least two working days prior to commencement of construction to review the project.

The applicant shall contact the appropriate Operations Manager or Development and Planning Technologist at least two working days prior to construction completion to allow for site inspection.

2.02 USAGE OF THE OPEN CUT METHOD

The open cut method for installation of a telecommunication cable(s) at any developed public roadway is **not** permitted.

2.03 PARALLEL CABLE LOCATION WITHIN HIGHWAY RIGHT-OF-WAY

Telecommunication lines paralleling a highway surface shall not be installed closer to the highway driving surface than the toe of sideslope. The sideslope **shall not** be disturbed during cable installation.

2.04 CROSSING INSTALLATION PRACTICES IN HIGHWAYS AND PUBLIC ROADWAYS

Buried cables crossing highways or public roadways shall be constructed by a push pipe or boring method.

Private Driveways and Undeveloped Road Allowances – Buried cable crossings of private unpaved driveways and/or undeveloped road allowances may be constructed by open cut method provided full restoration of the crossing area is carried out as soon as is reasonably practicable following construction completion.

Minimum Offset Between Highway Crossings and Private Driveways – Minimum offset between the location of the highway cable crossing and private driveways or accesses shall be 10 metres.

2.05 MINIMUM DEPTH OF COVER

The minimum depth of cover over the telecommunication line, if it is placed in the right-of-way of a highway, shall be

- a) 1.0 metre for conventional (copper) toll buried cable,
- b) 0.6 metre for all other conventional (copper) cables, and
- c) 1.0 metre for fibre optic cable.

For the purpose of a crossing, the minimum depth of cover is understood as minimum depth under the lowest point in the cross-section and shall be a minimum of 1.4 metres for all types of cable.

2.06 INTERSECTION ANGLE OF TELECOMMUNICATION LINE CROSSING OF THOROUGHFARE

The desirable angle of crossing is between 70 and 90 degrees; however, other angles may also be accepted in special circumstances.

2.07 CASING CROSSING

The casing shall be inserted by boring or jacking or other approved method. Casing shall be designed to be of an equal or greater life span than the carrier line/cable.

2.08 EXTENT OF THE CASING

Casing shall extend under the road surface between the toes of the sideslopes.

2.09 BORED OR AUGURED CROSSING

Casing shall be fitted into a bored or augured hole in such a way as to provide a snug fit for the casing.

2.10 DRAINAGE STRUCTURE

A permanent telecommunication line shall not be permitted inside a culvert or drainage structure or closer than a minimum distance of 2.5 times the culvert diameter, or 5 metres beyond the limits of any existing bank or bed rip-rap protection, whichever distance is greater.

2.11 LINE ATTACHMENTS TO BRIDGE STRUCTURES

Telecommunication cable shall not be attached to a bridge structure without the written consent of the appropriate Regional Bridge Engineer.

2.12 LINES IN THE VICINITY OF BRIDGE STRUCTURES

Telecommunication cables shall be located at the minimum offset of 15 metres from bridge footings and abutments. Should placement under a guidebank, rip-rap, slope protection, retaining wall and/or river training works be required, consent shall be obtained from the appropriate Regional Bridge Engineer.

2.13 TRANS CATHODIC PROTECTION BEDS

No cable installation shall be installed in the vicinity of marked Alberta Transportation cathodic protection beds.

2.14 OPEN EXCAVATION, MATERIAL AND EQUIPMENT STORAGE

No open excavation shall take place, nor shall any material or equipment be deposited or stored any closer than 6 metres of a bridge to earth retaining structure (without special consensus of the appropriate Regional Bridge Engineer), and 4 metres from the shoulder break of a highway, or a toe of sideslope, whichever distance is greater.

2.15 EXCAVATION IN CENTRAL MEDIAN

No excavation or any other type of work is permitted in the central median of the highway without the approval of the appropriate Operations Manager.

2.16 BACKFILLING OF OPEN TRENCHES

The backfilling of all open trenches in the highway or public road rights-of-way or within 6 metres of a bridge pier or earth retaining structure shall be undertaken immediately after the installation has been placed and passed any necessary inspection. Backfill materials shall be thoroughly compacted with mechanical compactors and the owner of the telecommunication line will be held responsible for any settling in backfill for a period of one year after the completion of the work or period thereafter until backfill settlement and erosion have stabilized.

2.17 WASTE MATERIAL

All waste material shall be removed and all disturbed areas shall be leveled and trimmed in an approved manner and re-seeded where necessary to restore the right-of-way to the original or better conditions.

2.18 MANHOLES, BURIED SPLICE BOXES OR VAULTS

Manholes, buried splice boxes or vaults located within the highway right-of-way shall be placed "flush" with the adjacent ground.

2.19 MANHOLES IN THE ROADWAY SIDESLOPES

No manholes shall be placed in the sideslopes unless special approval is obtained from the appropriate Operations Manager.

2.20 MANHOLES IN THE MEDIAN

No manholes shall be located within the centre median of multi-lane highways unless a special permit is obtained from the appropriate Operations Manager.

2.21 CONSTRUCTION SAFETY

All reasonable precautions shall be undertaken during construction to protect and safeguard public safety and property owners. This includes barricading, signing and flagperson(s) as required, to protect and safeguard the lives and property of the travelling public and adjacent property owners. At no time shall the highway or public roadway be closed to traffic. Where normal traffic patterns are to be interrupted due to ditching or other operations, prior approval must be first obtained. Suitable signs shall be erected and if required, a flagperson(s) shall be used to direct traffic through the disrupted area as approved by the appropriate Operations Manager. All flagperson(s) shall be properly certified.

The signs required shall be provided by the proponent or the contractor responsible for the cable installation.

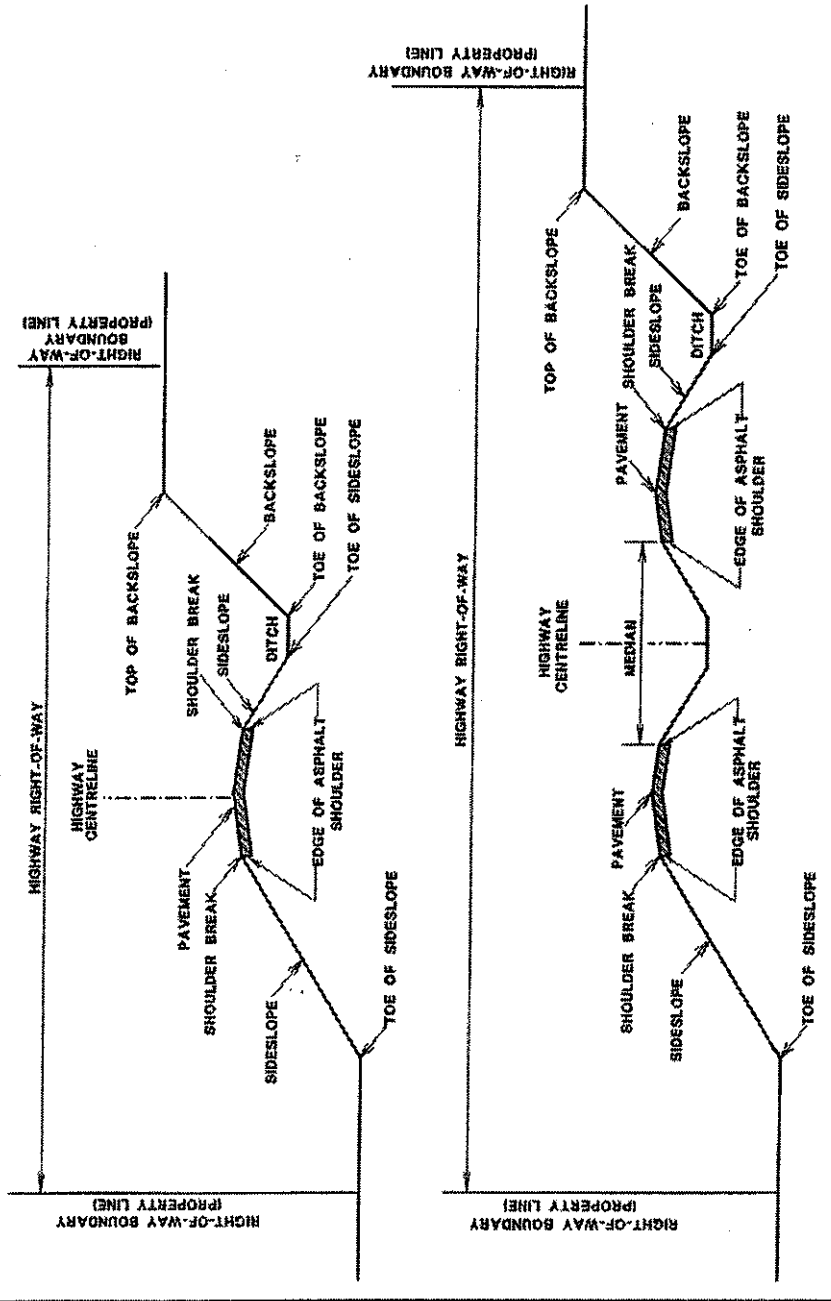
No work is to be conducted during darkness or reduced visibility.

2.22 CONSTRUCTION SIGNING

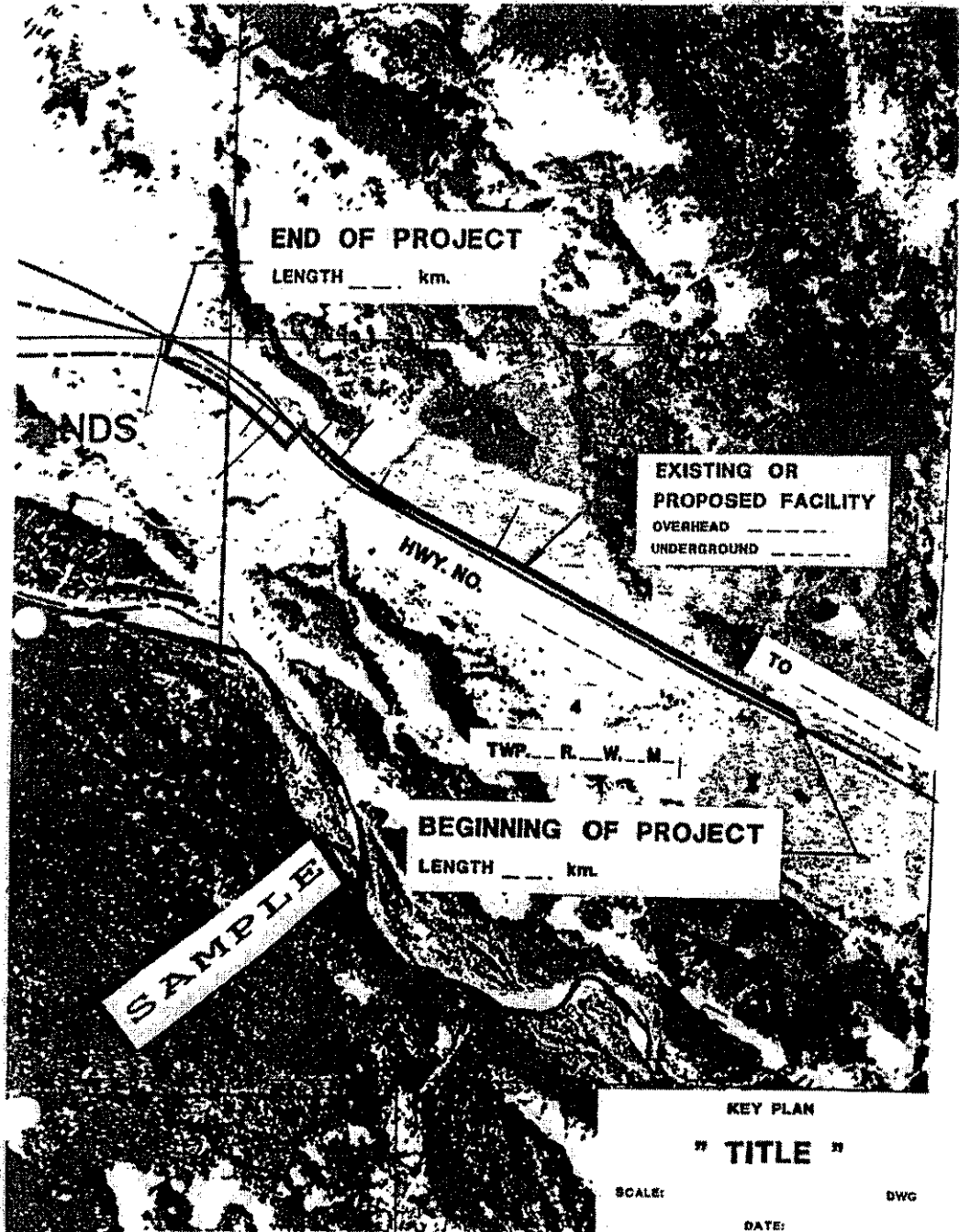
Contractors are to meet the requirements of the latest edition of the *Traffic Accommodation in Work Zones 2008 (1st Edition)* manual published by Alberta Transportation. The manual is available on the internet at www.transportation.alberta.ca/3815.htm.

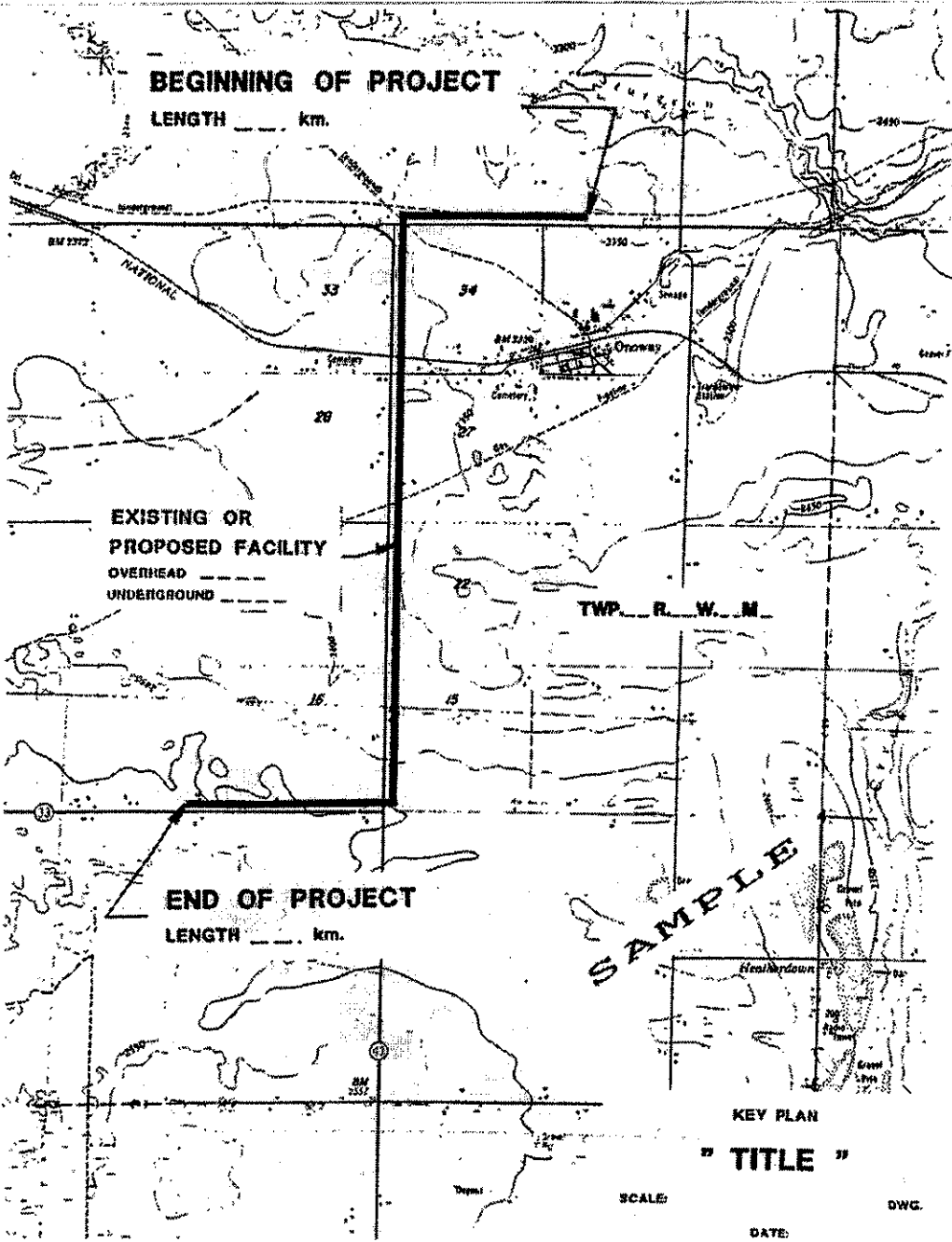
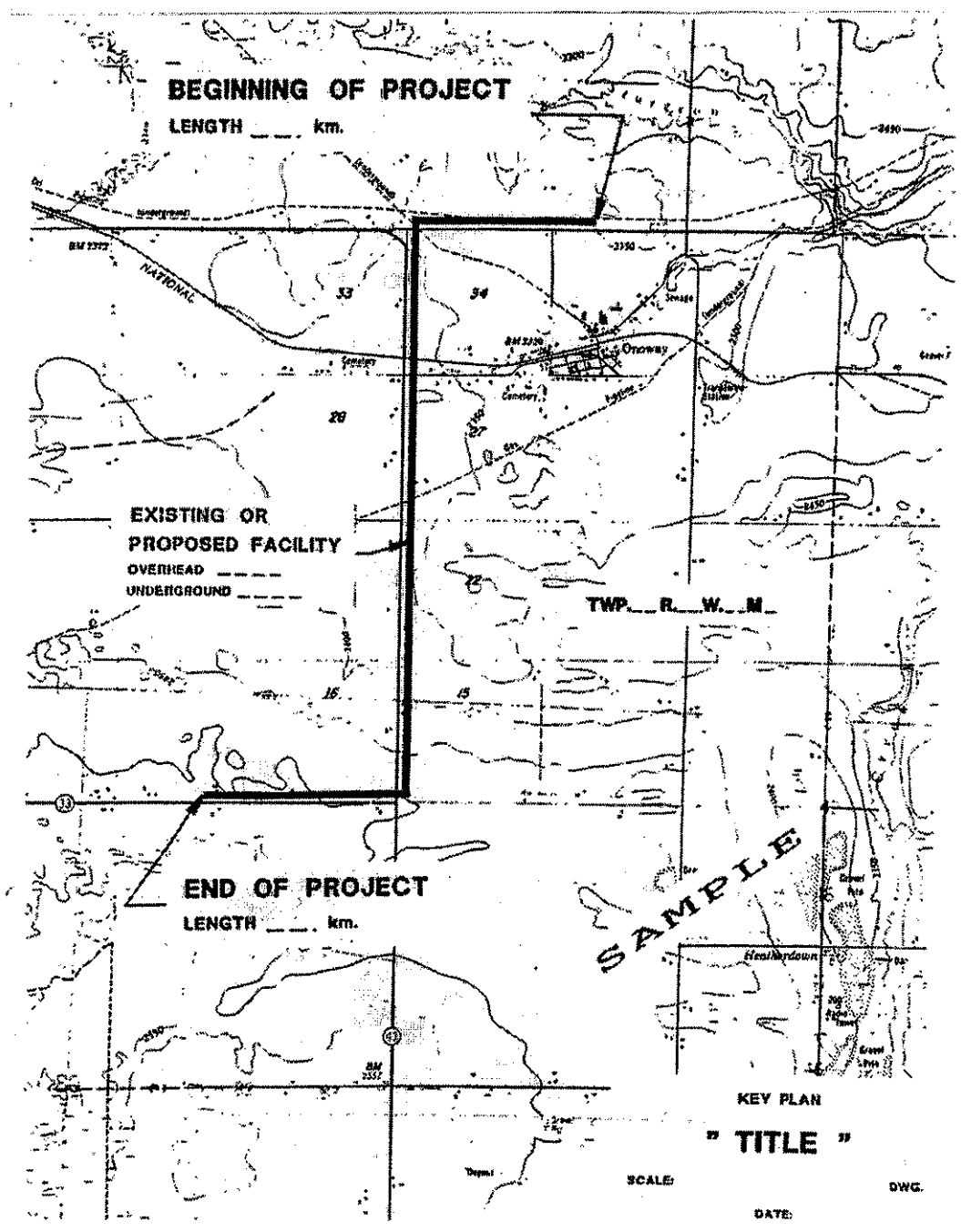
If the signing requirements are not met, the appropriate Operations Manager or his representatives have the right to halt all construction until proper signing is erected. The signs are to be removed immediately following construction completion.

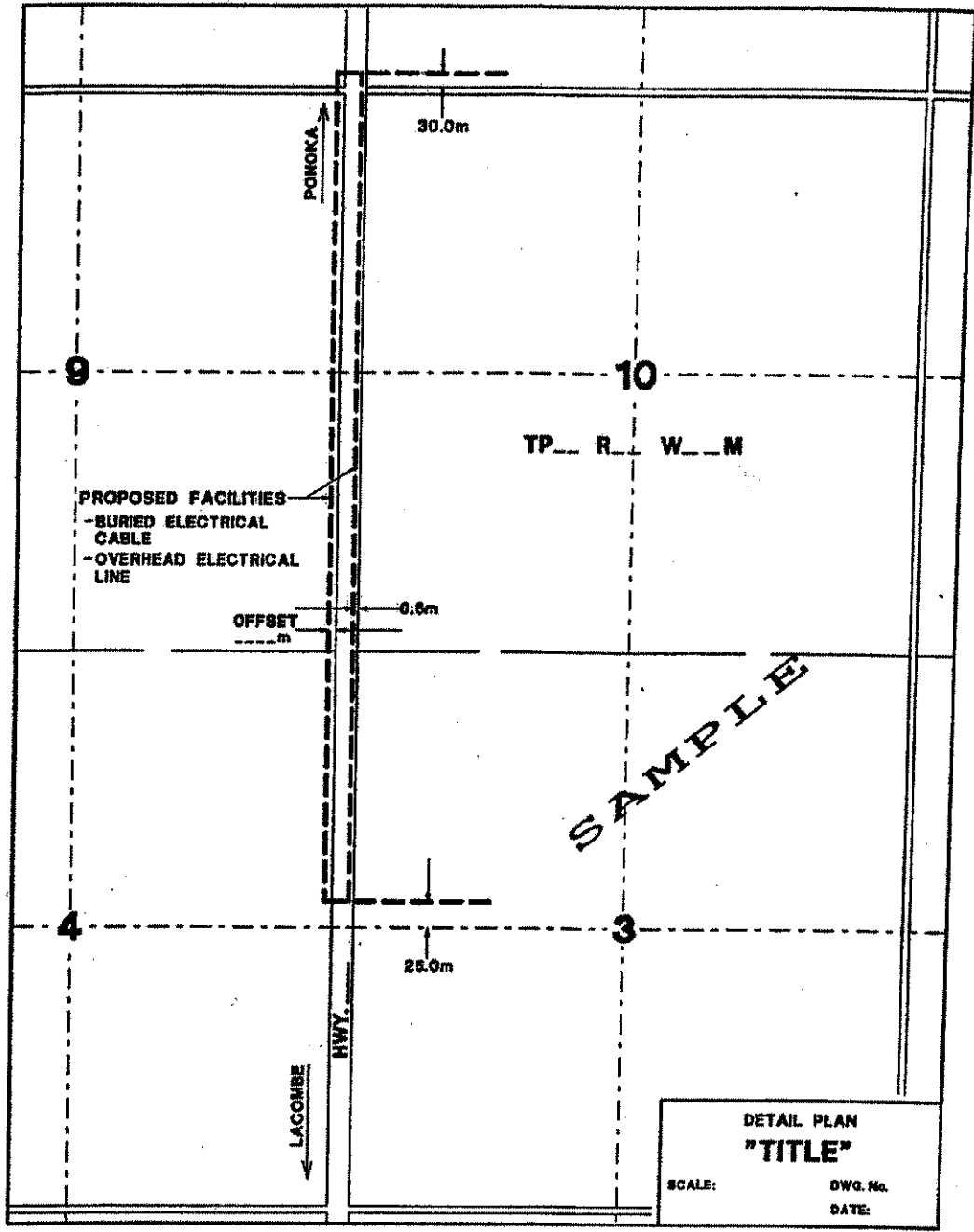
SCHEDULE "A" ELEMENTS OF HIGHWAY CROSS-SECTION

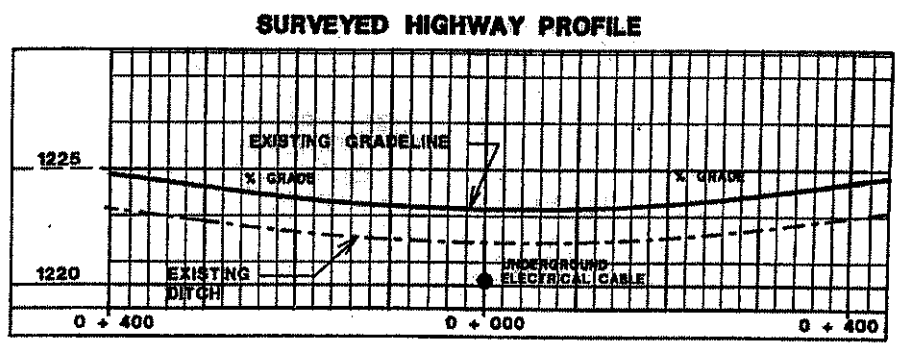
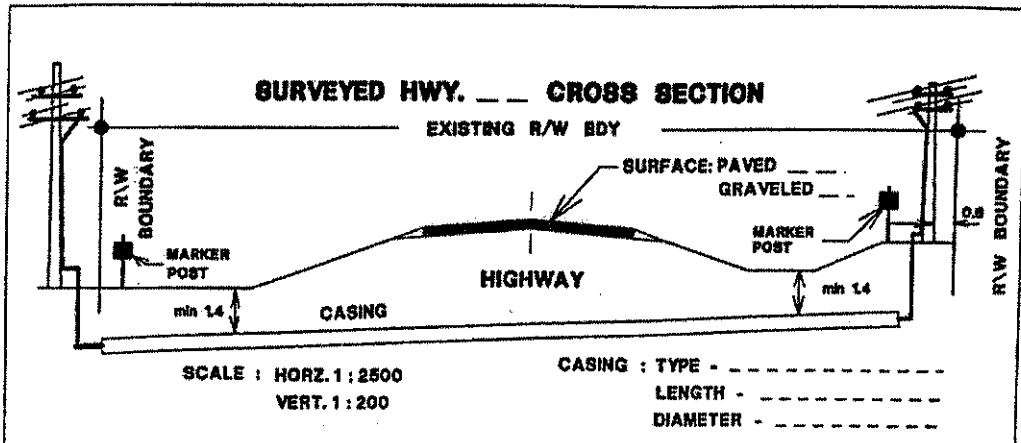


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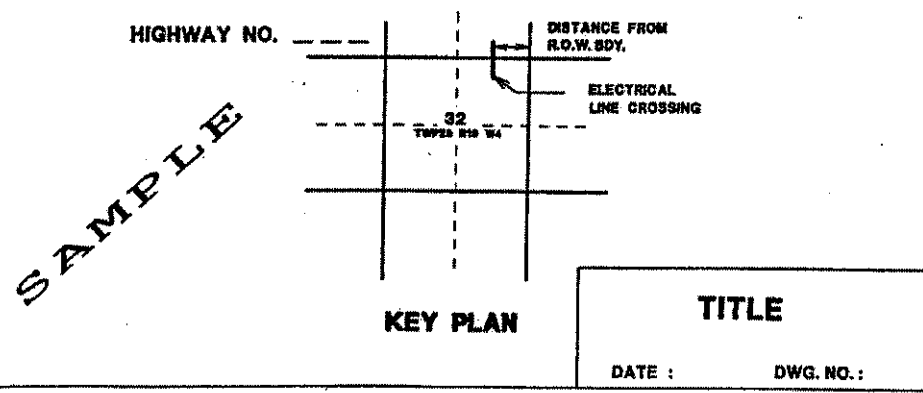








SCALE : HORZ. 1 : 5000
VERT. 1 : 200



Alberta Transportation District Office Locations / Phone Numbers

ATHABASCA	Unit #2, Jewell Building, 3603 – 53rd Street T9S 1A9	(780) 675-2624	transdevelopmentathabasca@gov.ab.ca
CALGARY	2nd Floor, Willowglen Business Park, 803 Manning Road N.E. T2E 7M8	(403) 297-6311	transdevelopmentcalgary@gov.ab.ca
EDSON	Room 202, Provincial Building, 111 – 54th Street T7E 1T2	(780) 723-8250	transdevelopmentedson@gov.ab.ca
FORT MCMURRAY	6th Floor, West Tower, Provincial Building, 9915 Franklin Avenue T9H 2K4	(780) 743-7430	Application.Permit.FM@gov.ab.ca
GRANDE PRAIRIE	1401, Provincial Building, 10320 – 99th Street T8V 6J4	(780) 538-5310	transdevelopmentgrandeprairie@gov.ab.ca
HANNA	P.O. Box 1300, Provincial Building, 401 Centre Street T0J 1P0	(403) 854-5550	transdevelopmenthanna@gov.ab.ca
LETHBRIDGE	3rd Floor, Administration Building, 909 3rd Avenue N. T1H 0H5	(403) 381-5426	transdevelopmentlethbridge@gov.ab.ca
PEACE RIVER	3rd Floor, Provincial Building, Bag 900, Box 29, 9621 96 Avenue, T8S 1T4	(780) 624-6280	transdevelopmentpeaceriver@gov.ab.ca
RED DEER	#401, Provincial Building, 4920 - 51st Street T4N 6K8	(403) 340-5166	transdevelopmentreddeer@gov.ab.ca
STONY PLAIN	Room 223, Provincial Building, 4709 – 44th Avenue T7Z 1N6	(780) 963-5711	transdevelopmentstonyplain@gov.ab.ca
VERMILION	Box 28, Provincial Building, 4701 – 52nd Street T9X 1J9	(780) 853-8178	transdevelopmentvermilion@gov.ab.ca