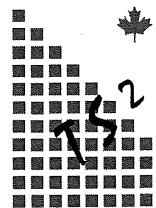


**CROWN CAPITAL ENTERPRISE
LIMITED**

WANCHAI, HONG KONG

**RJSeal™ Application
Xisihuan BeiLu, Wukusong Overpass
Beijing,
Peoples Republic of China**

June 2005



**TS² Consulting Inc.
Lamma, Hong Kong**

CROWN CAPITAL ENTERPRISE LIMITED

RJSeal™ Application Xisihuan BeiLu, Wukusong Overpass Beijing, Peoples Republic of China

June 2005

TABLE OF CONTENTS

Section	Description	Page
1.0	Introduction	1
2.0	Co-operative Program	3
3.0	RJSeal™	4
3.1	Prior Experience	4
4.0	Test Program	5
4.1	RJSeal™ Testing	13
4.2	Hydroplaning Potential	13
4.3	Water Penetration	15
4.4	Macrotexture	15
4.5	Ductility/Viscosity/Penetration Testing	15
5.0	Test Completion Schedule	18

FIGURES

No.	Description	Page
1.0	General Location Map	2
4.0	Specific Location Map	6
4.1	Test Strip on Xisihuan BeiLu	8
4.2	Typical Application Procedure	10
4.3	Finished Surface	11
4.4	Site Visit – June 2005	12
4.5	Outflow Meter	14
4.6	Water Penetration Meter	16
4.7	Sand Patch Test	17
5.0	Test Completion Schedule	19

TABLES

No.	Description	Page
4.1	Geographic Location of Test Strip on Xisihuan BeiLu	5
4.2	Particulars of the Test Strip on Xisihuan BeiLu	7

CROWN CAPITAL ENTERPRISE LIMITED

RJSeal™ Application
Xisihuan BeiLu, Wukusong Overpass Beijing,
Peoples Republic of China

June 2005

APPENDICES

No.	Description
A	RJSeal™ Descriptive Literature
B	Desco D200 Sprayer – Technical Specifications
C	Site Inspection – June 26, 2005



TS² Consulting Inc.
Lamma, Hong Kong

CROWN CAPITAL ENTERPRISE LIMITED

Application of RJSeal™ Xisihuan BeiLu, Wukusong Overpass Beijing Peoples Republic of China

June 2005

1.0 INTRODUCTION

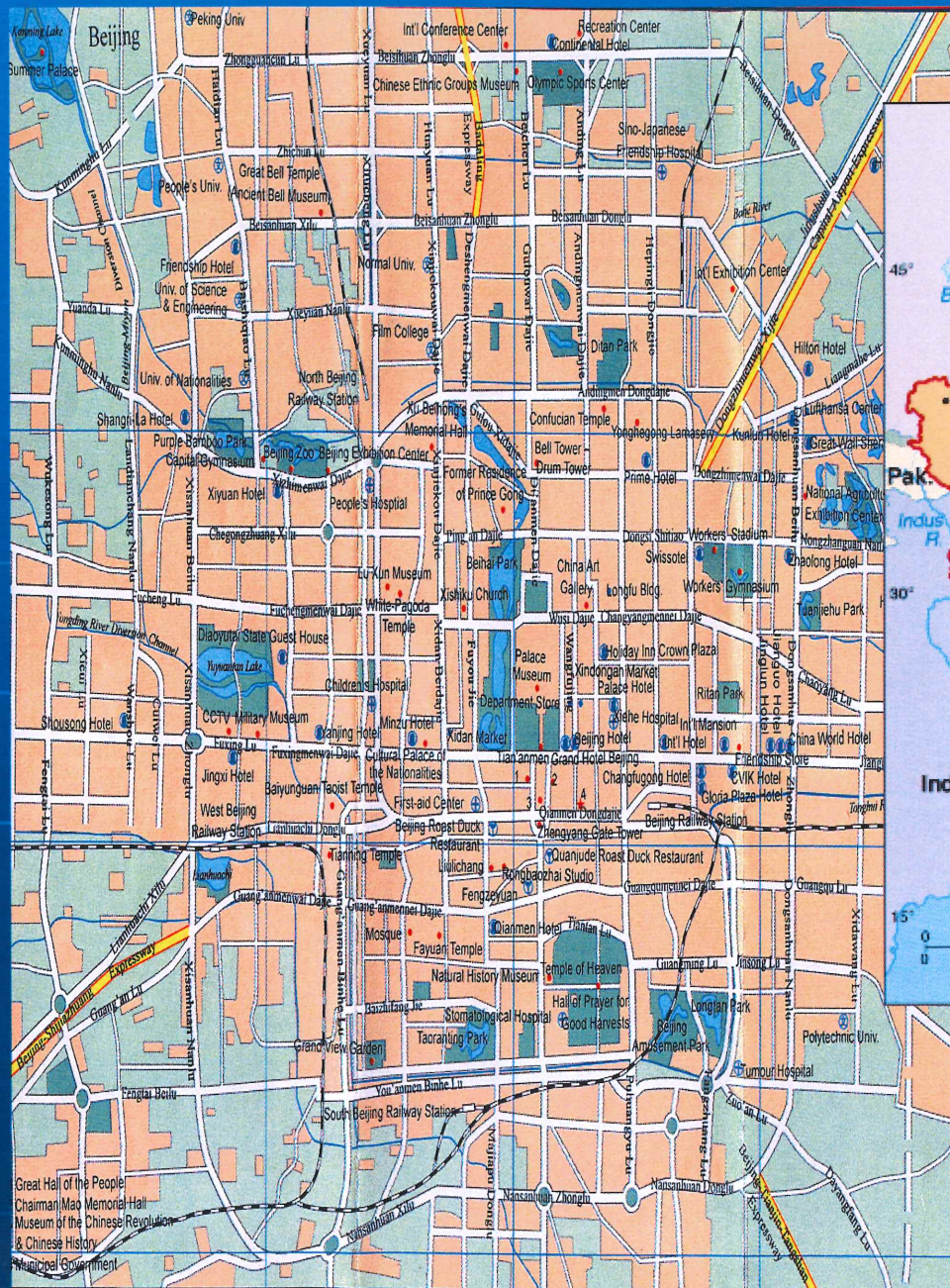
Crown Capital Enterprise Limited of Hong Kong entered into an arrangement in June 2005 with the Beijing Road Combine XinDa ZhiNeng Communication Limited, which is responsible for the maintenance of the Xisihuan BeiLu, Wukusong Overpass in the City of Beijing. This arrangement calls for the analysis of the performance of RJSeal™, a sealer/rejuvenator for asphalt pavement on the Xisihuan BeiLu, Wukusong Overpass; in the City of Beijing, the Capital City of China.

The City of Beijing is a self-administered municipality that is bordered by Hebei Province. See figure 1.0 for a map showing the location of Beijing. The area lies in the lowlands adjacent to the Gulf of BoHai and averages 50 metres in elevation. The regions' latitude (40 degrees north), mean that there are four distinct seasons, with temperatures ranging from 35 Celsius in the long, hot humid summer to -10 Celsius in the short, but frigid winter.

The present population of Beijing is estimated at approximately 15 million. There is no rainy season per-se, just afternoon thunderstorms with accompanying rain and these occur primarily in July thru August, but can extend into September.

In the immediate Beijing area, a significant unconsolidated sedimentary sequence predominates as it lies immediately to the north of the plains that adjoin the Yellow River Delta. There are no outcrop exposures available within the immediate area, although 30 kilometres to the north are hills, which are primarily composed of sedimentary rocks, such as sandstones, siltstones and conglomerates. The asphalt in the area is manufactured from imported materials, which is comprised of crushed and screened sandstone and diorites hauled in from quarries in surrounding Hebei Province, as well as washed gravels from the various rivers.

The bitumen binder for the asphalt is sourced from various locations. Since adjoining Hebei and Shandong Province have their own indigenous oil fields and petroleum refining capacity, there is some domestic asphalt production. Since Beijing is very close to TianJin, which borders the Sea of BoHai, the possibility of bitumen being sourced from offshore is a distinct possibility so refineries in Singapore and the like should not be forgotten.



General Location Map 4.0
RejuvaSeal Demonstration
Wukusong, Beijing

2.0 CO-OPERATIVE PROGRAM

The intent of the arrangement with Beijing Road Combine XinDa ZhiNeng Communication Limited, which is responsible for the Xisihuan BeiLu is to demonstrate RJSeal™ at a location selected by the Maintenance Division. The Application will subsequently allow analysis of the performance of RJSeal™ on a variety of asphalt surfaces. An application was undertaken on the Xisihuan BeiLu, at the Wukusong Overpass between Kilometre 39+685 and Kilometre 41+420, on this eight-lane, divided overpass, in the north west sector of the City of Beijing. The work was undertaken on June 18 thru 22, 2005. The portion of the highway that was treated is composed of an asphalt overlay, nominally 6 centimetres thick, which overlays a concrete bridge deck.

The age of the asphalt pavement is circa 2001. Keen interest was expressed in having the life of the asphalt pavement extended on this highway. The asphalt pavement has some recent patches in the outside (shoulder) lane in both the north bound and the southbound sectors. The Beijing Road Combine XinDa ZhiNeng Communication Limited wish to prevent water percolating through the pavement and also rejuvenate the asphalt pavement.

3.0 RJSeal™

RJSeal™ is a proprietary product that is supplied by Crown Capital Enterprise Limited of Wanchai, Hong Kong. RJSeal™ has been proven in numerous applications in North and South America and recently in China to rejuvenate asphalt pavement at various stages of its life and economically extend the life of the pavement. RJSeal™ is a three component, asphalt sealer rejuvenator that is comprised of Coal Tar, Coal Tar Oils and Petroleum Solvents.

3.1 PRIOR EXPERIENCE

Refer to Appendix A for a copy of the brochure that outlines the experience with RJSeal™ at various locations in North America and South America as well as China. Further information is available from Crown Capital Enterprise Limited. RJSeal™ has been used at numerous airports in North and South America, as well as highways in Alberta, Canada; Cearo State, Brazil and other locations in the U.S.A. Since 2000, RJSeal™ has been demonstrated successfully at over forty six (46) locations in China and forty (40) commercial-scale applications have taken place at various locations, including Shenzhen, Kunming, Shanghai, QinHuangDao and DaQing.

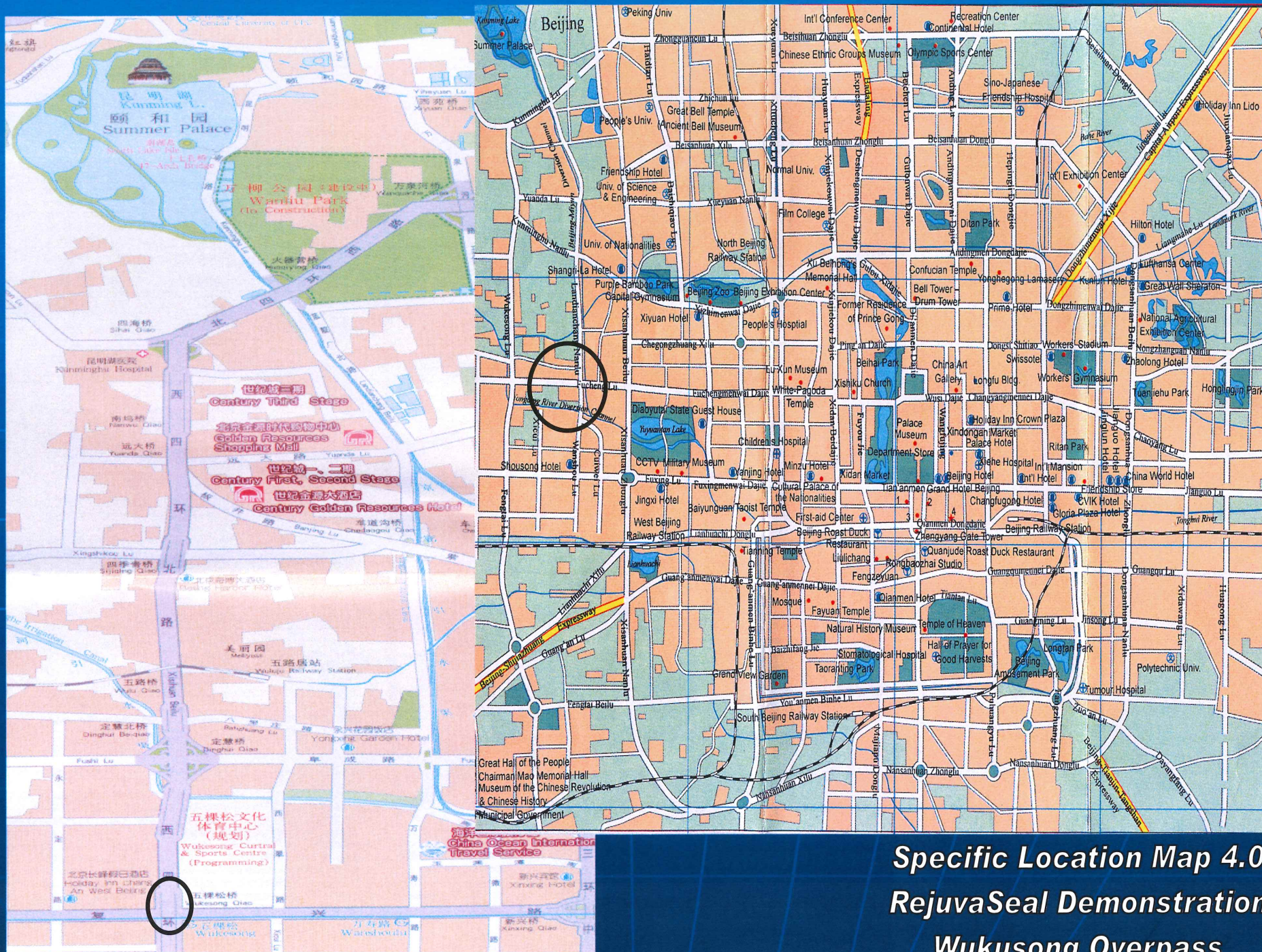
4.0 TEST PROGRAM

Since Beijing is located in a semi-tropical climate (Latitude: 40 North) at a low altitude (50 metres), it's a demanding setting for asphalt, given the year round warm climate (extremes of 45 Celsius in summer and minus 5 Celsius in the winter) and intense exposure to ultraviolet radiation, all which contribute to the oxidation and breakdown of the asphalt binder.

Beijing is responsible for 2,000 kilometres of National Highway; within it's jurisdiction (distances as of year-end 2000) and approximately 3000 kms of City Streets. The Beijing Maintenance Department is responsible for the maintenance of the Xisihuan BeiLu is definitely interested in determining how to economically extend the life of the asphalt road surface. To this end, they agreed to try RJSeal™ on Xisihuan BeiLu, Wukusong Overpass immediately west of the City of Beijing. See Figure 4.0, showing the location of this highway with respect to Beijing and Zhejiang

On June 18, 2005, work commenced on a test strip on Xisihuan BeiLu, an eight lane divided freeway, at the Wukusong Overpass, which was treated with RJSeal™. The location selected for an application of RJSeal™ was at the following geographic location:

Table 4.1		Geographic Location of Test Strip on Xisihuan BeiLu, Wukusong Overpass		
Test Strip		System i.e. Geographic or Universal Transverse Mercator (UTM)	Northing	Easting
Kilometre 39+695	South End	Geographic (deg, min)	39° 54.056'	116° 16.083'
		UTM Grid (50S) (metres)	4417034	437430
Kilometre 41+410	North End	Geographic (deg, min)	39° 54.452'	116° 16.084'
		UTM Grid (50S) (metres)	4417766	437438



Particulars of the test strip are shown in the table that follows:

Table 4.2				Particulars of the Test Strip on Xisihuan BeiLu, Wukusong Overpass							
Date	Work Time	Strip Length (m)	Total Area (m²)	Total Area ft² approx	RJSeal™ Applied			Application Rate			
					US gals	Litres	Kgs	US Gal /yd ²	litres /m ²	m ² /Litre	m ² /Kg
June 18	3.75	715.0	5,363	6,410	324	1,224	1,273	0.051	0.23	4.38	4.21
June 20	3.00	715.0	5,005	5,983	319	1,204	1,252	0.053	0.24	4.16	4.00
June 21	2.50	715.0	5,363	6,410	324	1,224	1,273	0.051	0.23	4.38	4.21
June 22	2.00	715.0	5,005	5,983	319	1,204	1,252	0.053	0.24	4.16	4.00
Total	11.25	2,860	20,735	24,786	1,285	4,856	5,050	0.052	0.23	4.27	4.11

Subsequent inspection of the test strip on June 23, showed that the application rate of 4.3 m²/kg was adequate for the asphalt pavement at this location

The 730 metre long application section on Xisihuan BeiLu, at the Wukusong Overpass is comprised of a hot mix asphalt pavement. See figure 4.0 for the location of the test strip with respect to the City of Beijing is graphically shown in figure 4.1, which follows.



Figure 4.1 Test Strip on WuKuSong Overpass.



There is a slight camber to the road, which causes water to run off toward the shoulder, rather than puddle on the road. No significant oil spills were observed, just the occasional drop of transmission oil, crankcase oil or hydraulic fluid. The asphalt pavement surface was not appreciably worn with no rutting due to traffic wear. There was aging and oxidation of the bitumen, which extended to a depth of several millimetres. There were longitudinal cracks, and also lateral cracks, which had recently been filled with tar. The entire portion of the treated asphalt pavement section overlies a concrete overpass deck.

RJSeal™ was applied, using a crew of 26 workers using two Desco D200 Sprayers. The specifications of these sprayers are shown in Appendix B. They applied the RJSeal™ in a uniform manner. Ambient temperatures at the time of the application on June 18 were in the 24 degree Celsius range, with humidity in the 50% range. Photos showing the test application of RJSeal™ follow in figures 4.2, 4.3 and 4.4. on the following pages.

A site visit on June 23, 2005 (Refer to Appendix C for more details) was made to check to entire test section following the application of the RJSeal™. This is pictorially shown in Figure 4.4 that follows.



Figure 4.2 Typical Application Procedure.

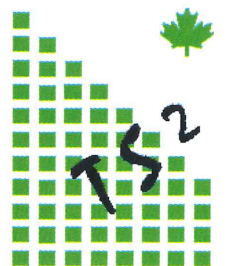




Figure 4.3 Finished Surface.

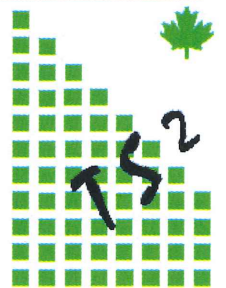
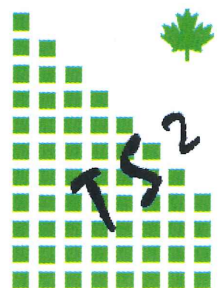




Figure 4.4 Site visit - June 23, 2005



4.1 RJSeal™ Testing

To date the comparison of the asphalt treated with RJSeal™ has been compared over a very short period on Xisihuan BeiLu, Wukusong Overpass.

To enable a comparison on a disciplined, objective basis, the following tests were undertaken.

- Hydroplaning Potential
- Water Penetration
- Macrotexture (Depth of Texture)

At a later date, cores will be acquired from the asphalt pavement for laboratory testing and the following properties of the asphalt pavement will be determined:

- Viscosity
- Ductility
- Penetration
- Softening Point

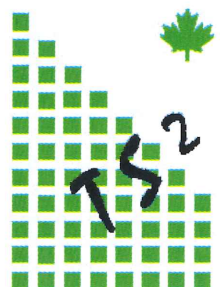
4.2 Hydroplaning Potential

An “Outflow Meter” manufactured in the U.S.A. by Humble Equipment Company of Ruston, Louisiana and sold under the trademark “Outflow Meter” (see figure 4.5) was used to measure the asphalt pavement’s capability to dissipate water prior to and following the application of RJSeal, as concern has been expressed about hydroplaning on the RJSeal™ treated surface, versus the untreated surface. The procedure is documented in the ASTM Standard E2380-05. The Outflow Meter gives readings in seconds for the dissipation of a known quantity of water. It is suggested that any readings between 3 and 10 seconds are satisfactory results for an asphalt surface, if hydroplaning is to be minimized. Results from the tests are shown in the table that follows:

Outflow Meter Tests			
Location	Untreated Pavement (sec)	RJSeal Treated (sec)	Loc'n relative to Expansion Joint
Km 39+695 Lane 3 Northbound	2		4.2 m south
Km 39+695 Lane 2 Northbound	3		4.0 m south
Km 41+410 Lane 3 Southbound	2	3	1.0 m north
Km 41+410 Lane 2 Southbound	3		1.0 m north



Figure 4.5 Outflow Meter



4.3 Water Penetration

Water Penetration Tests (China Testing Standard T 0730-2000) will be undertaken at several locations on the Xisihuan BeiLu, Wukusong Overpass on both treated and segment treated with RJSeal™.

Water Penetration Test			
Location	Untreated pavement (ml)	Treated pavement (ml)	Loc'n relative to Expansion Joint
Km 39+695 Lane 3 Northbound	0		4.2 m south
Km 39+695 Lane 2 Northbound	0		4.0 m south
Km 41+410 Lane 3 Southbound	0		1.0 m north
Km 41+410 Lane 2 Southbound	0		1.0 m north

See Figure 4.6 that follows for a pictorial presentation of the Water Penetration Meter.

4.4 Macrotexture (Depth of Texture)

The sand patch test (ASTM Standard E965-96 OR China Standard T 0961-95) was used to ascertain the Pavement Macrotexture (Depth of Structure). Comparison at several locations on the untreated section in close proximity to the Water Penetration Meter tests. Results are presented in the table that follows:

Sand Patch Tests – Depth of Texture			
Location	Untreated Pavement (mm)	RJSeal Treated (mm)	Loc'n relative to Expansion Joint
Km 39+695 Lane 3 Northbound	0.67		4.2 m south
Km 39+695 Lane 2 Northbound	0.82		4.0 m south
Km 41+410 Lane 3 Southbound	0.76		1.0 m north
Km 41+410 Lane 2 Southbound	0.63		1.0 m north

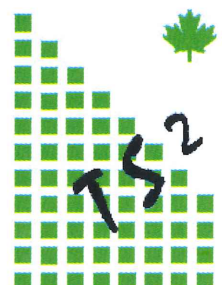
See Figure 4.7 which follows, showing the sand patch testing procedure.

4.5 Ductility/Viscosity/Penetration Testing

This aspect of the testing is beyond the capabilities Crown Capital Enterprise Limited personnel and external assistance has been sought from outside experts in the field of Asphalt Testing. To this end, the Beijing Road Combine XinDa ZhiNeng Communication Limited has retained an independent testing company to conduct tests on the treated section. This will be reported separately.



Figure 4.6 Water Penetration Test



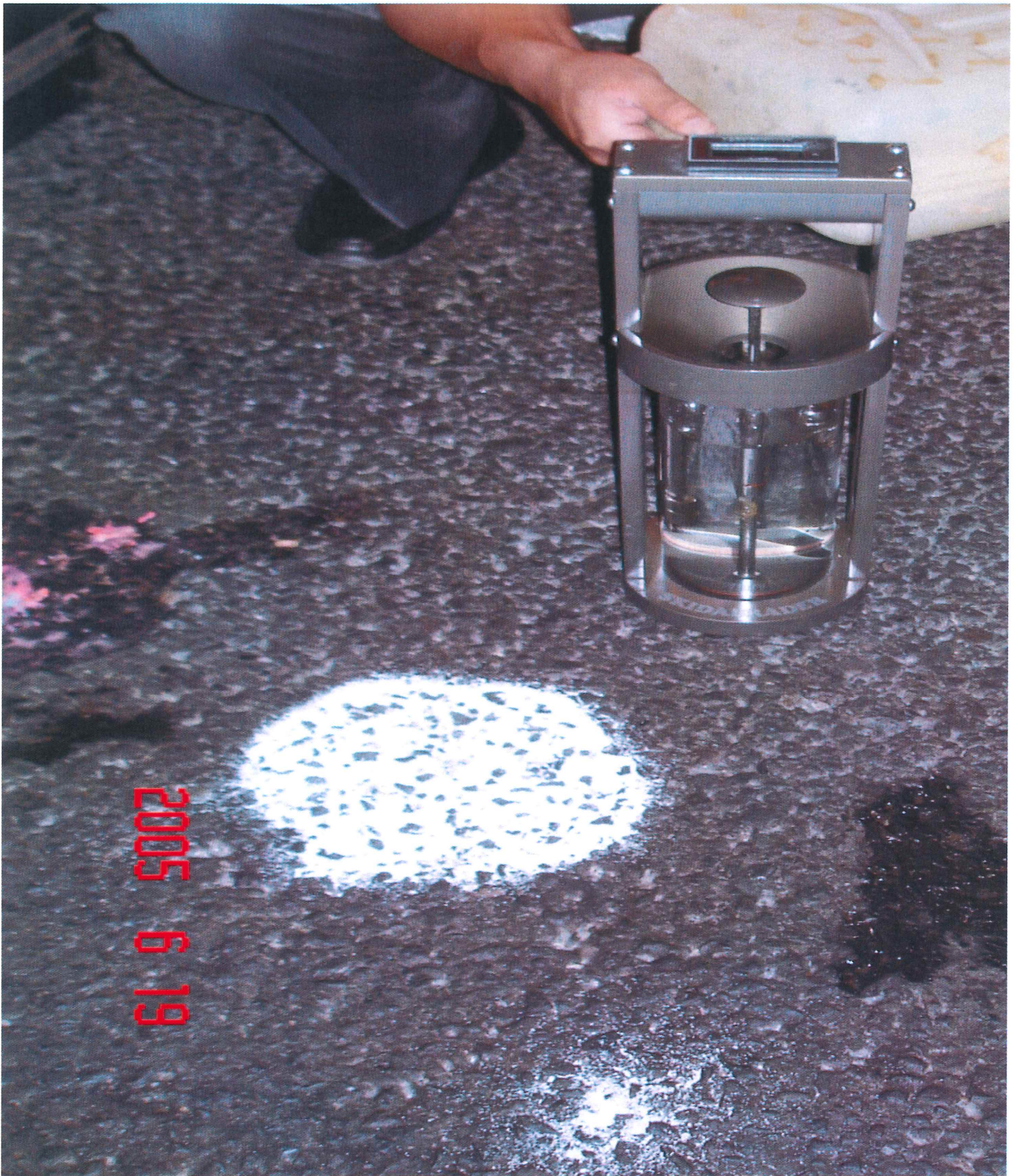
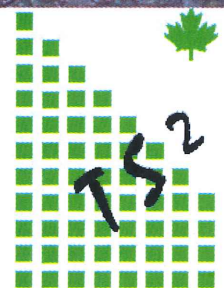


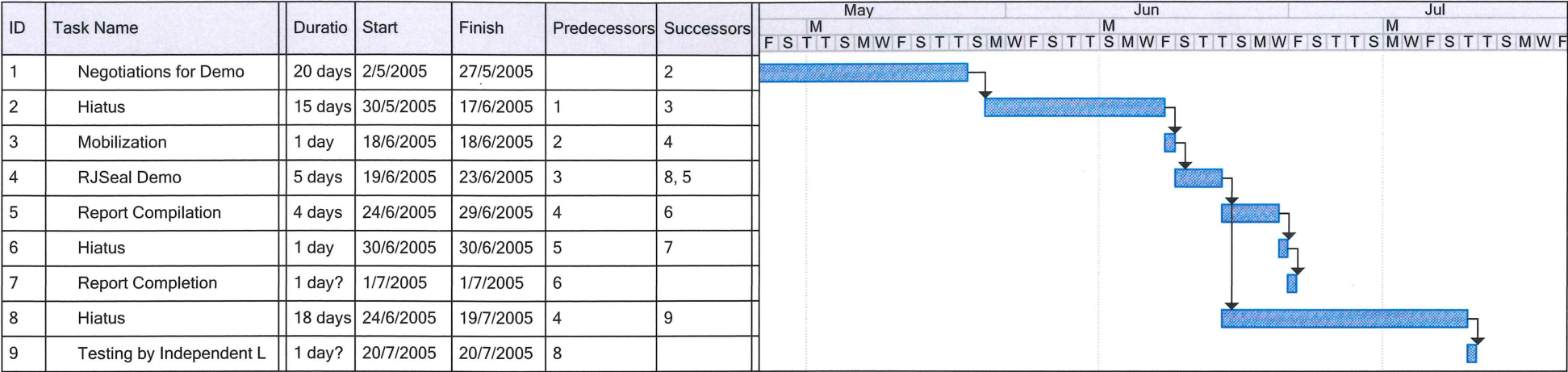
Figure 4.7 Sand Patch Test



5.0 Test Completion Schedule

The technicians from the Xi'an testing laboratory, retained by the Beijing Road Combine XinDa ZhiNeng Communication Limited will be dispatched to undertake further testing on the trial section in the near future. The projected completion of this testing is scheduled as shown in the following chart.

LiveProject - Wukusong Schedule



Normal task:

Split task:

Critical task:

% complete:

Summary task:

Rolled up Summary task:

Milestone:

External task:

Deadline:

CROWN CAPITAL ENTERPRISE LIMITED

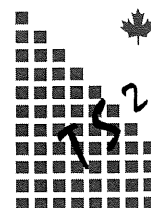
WANCHAI, HONG KONG

**RJSeal™ Application
Xisihuan BeiLu, Wukusong Overpass
Beijing,
Peoples Republic of China**

June 2005

APPENDICES

No.	Description
A	RJSeal™ Descriptive Literature
B	Desco D200 Sprayer – Technical Specifications
C	Site Inspection – June 26, 2005



**TS² Consulting Inc.
Lamma, Hong Kong**

**CROWN CAPITAL ENTERPRISE
LIMITED**

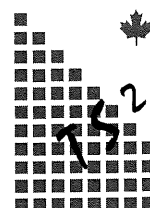
WANCHAI, HONG KONG

**RJSeal™ Application
Xisihuan BeiLu, Wukusong Overpass
Beijing,
Peoples Republic of China**

June 2005

Appendix A

RJSeal™ Descriptive Literature



**TS² Consulting Inc.
Lamma, Hong Kong**

**CROWN CAPITAL ENTERPRISE
LIMITED**

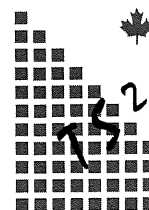
WANCHAI, HONG KONG

**RJSeal™ Application
Xisihuan BeiLu, Wukusong Overpass
Beijing,
Peoples Republic of China**

June 2005

Appendix B

**Desco D200 Sprayer
Technical Specifications**



**TS² Consulting Inc.
Lamma, Hong Kong**

**CROWN CAPITAL ENTERPRISE
LIMITED**

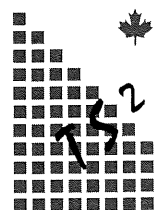
WANCHAI, HONG KONG

**RJSeal™ Application
Xisihuan BeiLu, Wukusong Overpass
Beijing,
Peoples Republic of China**

June 2005

Appendix C

Site Inspection – June 26, 2005



**TS² Consulting Inc.
Lamma, Hong Kong**

CROWN CAPITAL ENTERPRISE LIMITED

RJSeal™ Application Xisihuan BeiLu, Wukusong Overpass Beijing, Peoples Republic of China

June 2005

TABLE OF CONTENTS

Section	Description	Page
1.0	Introduction	1
2.0	Co-operative Program	3
3.0	RJSeal™	4
3.1	Prior Experience	4
4.0	Test Program	5
4.1	RJSeal™ Testing	13
4.2	Hydroplaning Potential	13
4.3	Water Penetration	15
4.4	Macrotexture	15
4.5	Ductility/Viscosity/Penetration Testing	15
5.0	Test Completion Schedule	18
6.0	Statement of Qualifications	20

FIGURES

No.	Description	Page
1.0	General Location Map	2
4.0	Specific Location Map	6
4.1	Test Strip on Xisihuan BeiLu	8
4.2	Typical Application Procedure	10
4.3	Finished Surface	11
4.4	Site Visit – June 2005	12
4.5	Outflow Meter	14
4.6	Water Penetration Meter	16
4.7	Sand Patch Test	17
5.0	Test Completion Schedule	19

TABLES

No.	Description	Page
4.1	Geographic Location of Test Strip on Xisihuan BeiLu	5
4.2	Particulars of the Test Strip on Xisihuan BeiLu	7