



CONCRETE ACTIVITY SDN BHD

PRESENTS

SOIL CONCRETING TECHNOLOGY
USING
K-GSC METHOD



K-G.S.C

(MALAYSIA)



- ✚ **Natural Soil Recycling Technology**
- ✚ **Soil Improvement Technology**
- ✚ **Foundation Construction**
- ✚ **Solidifying Agent for Industrial Wastes.**

CONCRETE ACTIVITY SDN.BHD (Co. No.685494-K)
(K-G.S.C. Malaysia)

A02-3, 4th Floor, Pusat Perdagangan Taman Dagang
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Selangor Darul Ehsan

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cdrtan@hotmail.com

WHO IS CONCRETE ACTIVITY?

- A Registered Sdn Bhd Company in Malaysia a subsidiary of K-GSC under the Korea T&G Co. Ltd.

Addressed : A02-3, 4th Floor

Pusat Perdagangan Taman Ampang
Jalan Dagang Besar,
68000, Ampang,
Selangor Darul Ehsan. Malaysia

What is K-GSC?

- KOREA, GREEN, SOIL, CONCRETE
- IT IS AN INORGANIC NEUTRAL HIGHLY EFFICIENT AGENT.

What is it for?

- Use for Stabilizing of all kind of soil.
- Improve Soil Properties.
- Solidify and Strengthen the Soil.

K-G.S.C. CHEMICAL PROPERTIES STANDARD

NO	CHEMICAL	MOLECULAR	PERCENTAGE	REMARK
1	Ammonium Chloride	NH_4Cl	5	
2	Sodium Chloride	$NaCl$	25	
3	Iron Chloride	$FeCl_3$	2	
4	Carbon	C	1	
5	Magnesium Chloride	$MgCl_2$	20	
6	Potassium Chloride	KCl	11	
7	Calcium Chloride	$CaCl_2$	10	
8	Magnesium Oxide	Raw MgO (Milk)	15	
9	Ethylene Glycol	EG	1	
10	Waterproofing Agent		3	
11	Emulsification Powders		3	
	TOTAL		100%	

MIXING PROPORTIONS WITH K-G.S.C. TO THE EXISTING SOIL

NO	ITEM	SOIL		WEAK SOIL		NORMAL SOIL		FINE SOIL	
		WATER	CLAY						
1	SOIL	1	m^3	1	m^3	1	m^3	1	m^3
2	PORTLAND CEMENT	273	kg	210	kg	162	kg	125	kg
3	K-G.S.C.	2.9	kg	2.2	kg	1.7	kg	1.3	kg
4	CLEAN WATER	10	L	25	L	35	L	50	L

Remark

The volume of clean water will depends on the contains of the existing soil

Management Principle

CONCRETE ACTIVITY SDN BHD.

Development of new products

Acceleration of finding new markets

Internationalization of new technology

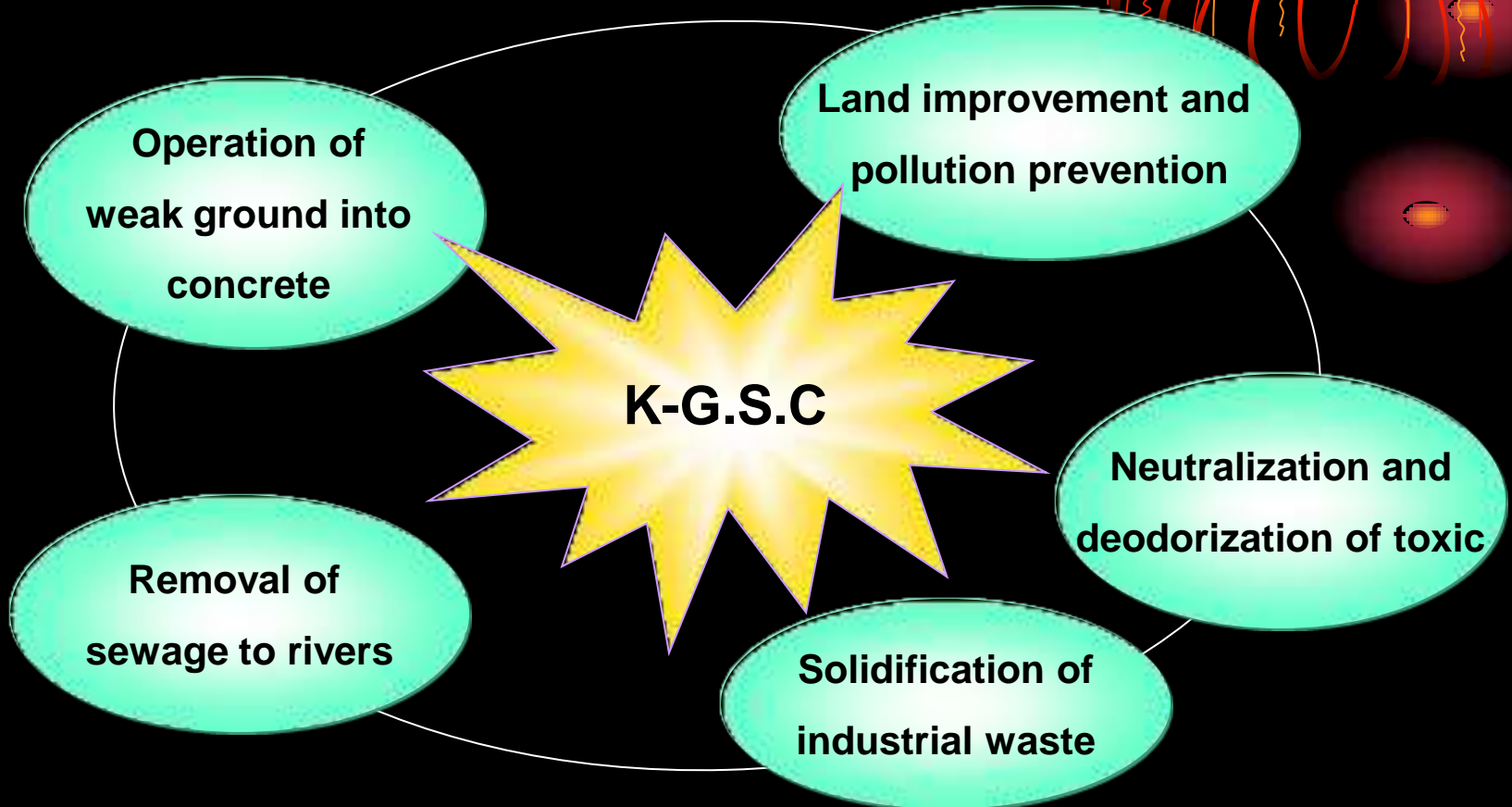
Operation of environmental civil engineering

Development of environment restoration system

R&D-centered typical venture business

Functions of K-G.S.C method of construction

K-G.S.C Project



SAVE TIME, MONEY, ENVIRONMENT, AND THE EARTH

Application of K-G.S.C

- **Weak Ground Improvement**
 - Swampy ground improvement
 - For mud hardening
- **Foundation Construction**
 - Land reclamation works
 - Foundation structures
 - Side Wall Foundation
- **Paving Works**
- **Ocean Floor Improvements**
- **Natural Soil Recycling Technology.**

KGSC USE FOR:—

- Base Foundation
- Watertight works for Base Foundation
- Soil concreting to Grade 25
- Road Construction with Safety Factor of 1.50
- Improves, Solidifies and Stabilizes poor grade soil, pit swampy soil and marine clay.

Application Fields / 现在K-G.S.CH10 有用的活用在多种工事上*

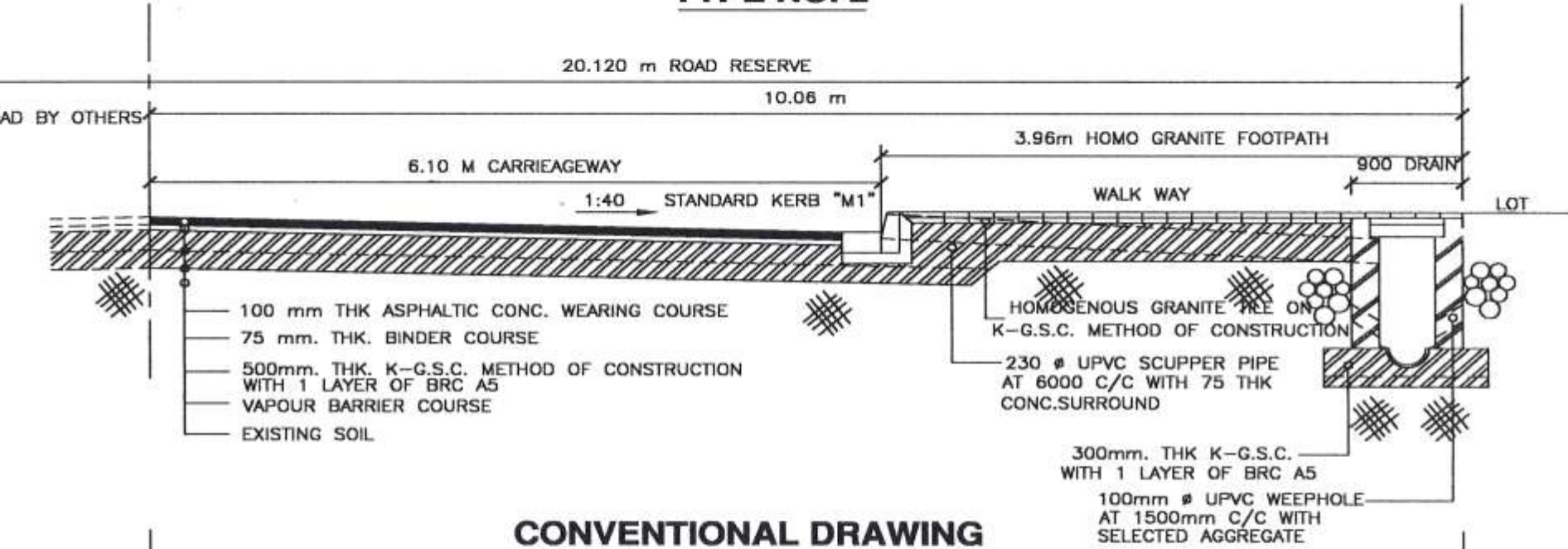
<p>道路·傾斜面 Roads & Slopes</p>	 노빈개량 Roadbed Improvement	 法面 Slopes Stabilization	 경사면안정 Slopes Stabilization
<p>基礎 Foundation</p>	 포(佈)기초 Strip	 옹벽기초 Wall Protection	 노상(踏床)기초 Road Ballast
	 첩탑(鐵塔)기초 Tower	 관(官)기초 Piping	 전주(電柱)기초 Electric Pole
	 풀장기초 Water Pool	 용수로(用水路)기초 Flume	 보강 Development
<p>止水·止土 Stopping of Water & Land</p>	 Stopping of Water & Land	 Stopping of Water & Land	 성토안정(盛土安定) Land Redamation
<p>其他 Repairs</p>	 함몰(陷沒) Depression	 공동(空洞) Hollow	 이변(異邊) Development

* K-G.S.CH10는 현재 여러가지 종류의 공사에서 유용하게 활용되고 있습니다.
 K-G.S.CH10 is being used in a wide range of construction works.

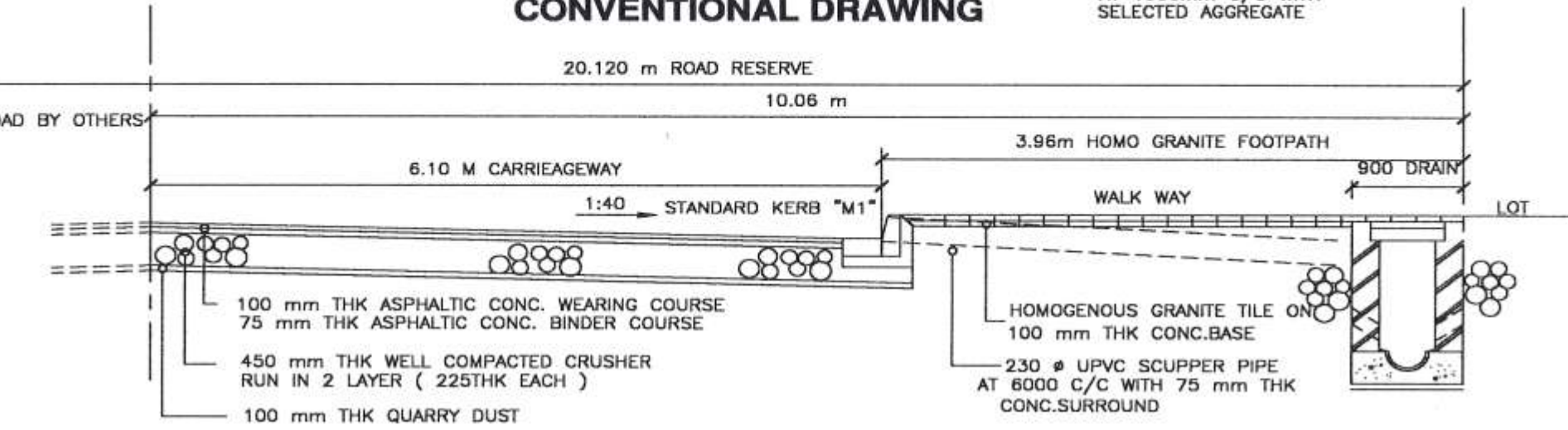
DETAIL OF ROAD

PROPOSED CONSTRUCTION DESIGN OF K-G.S.C. METHOD

TYPE NO. 2

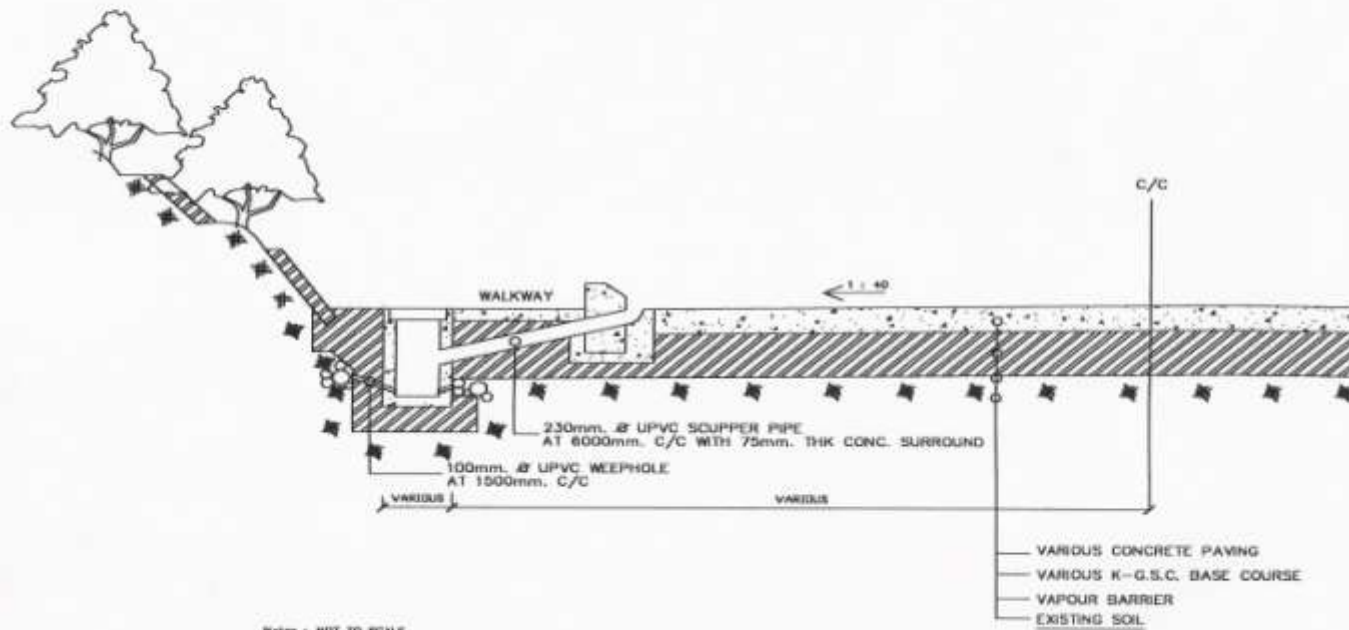


CONVENTIONAL DRAWING

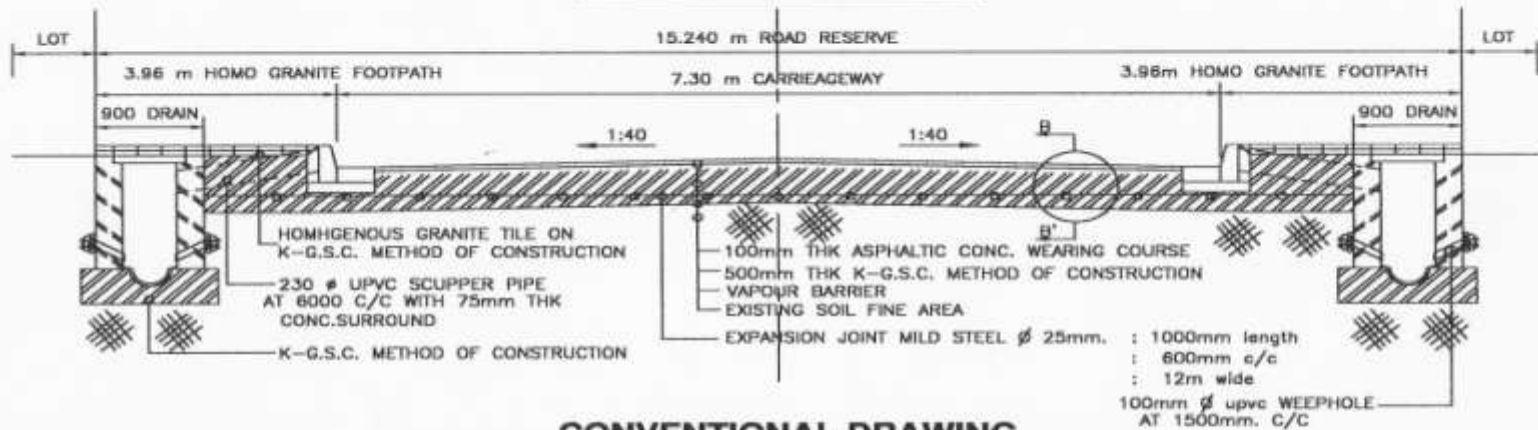


ROAD DETAILS K-G.S.C METHOD

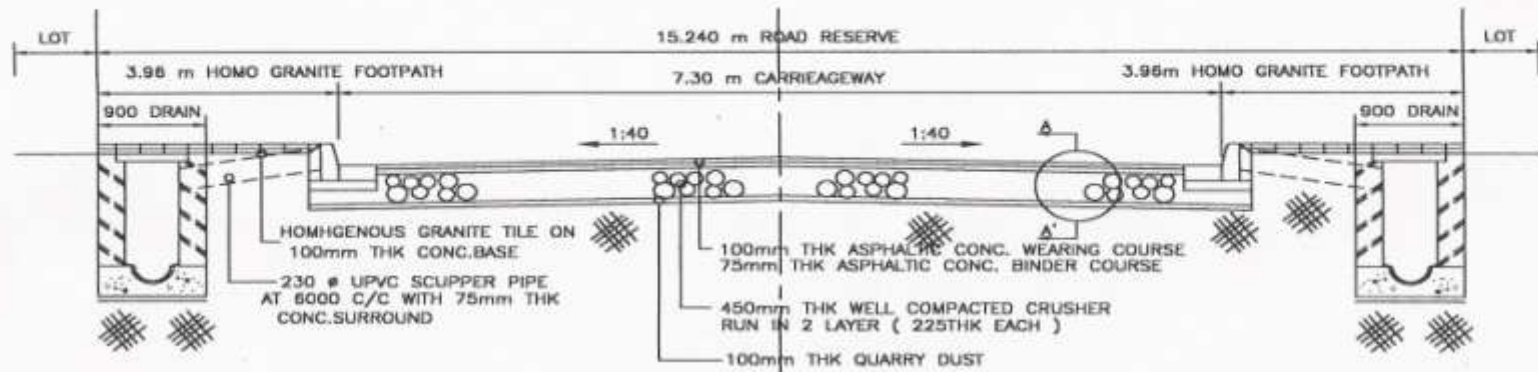
DETAIL OF ROAD PROPOSED CONSTRUCTION DESIGN OF K-G.S.C. METHOD FINE & NORMAL SOIL CONDITION



**DETAIL OF ROAD
PROPOSED CONSTRUCTION DESIGN OF K-G.S.C. METHOD
FOR EXPANSION JOINT**

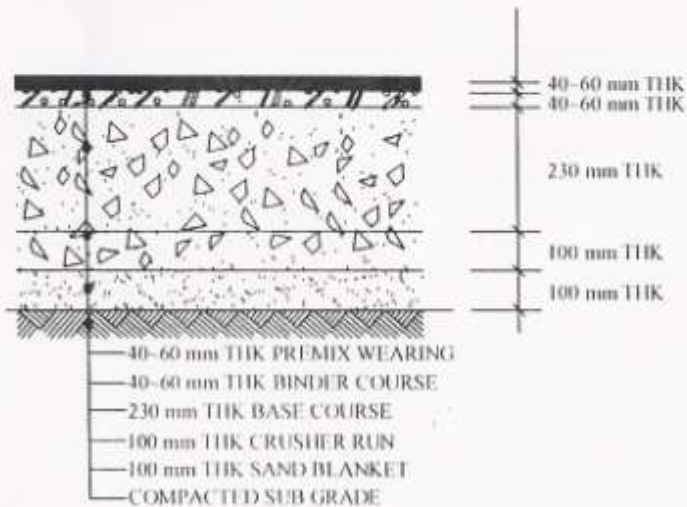


CONVENTIONAL DRAWING

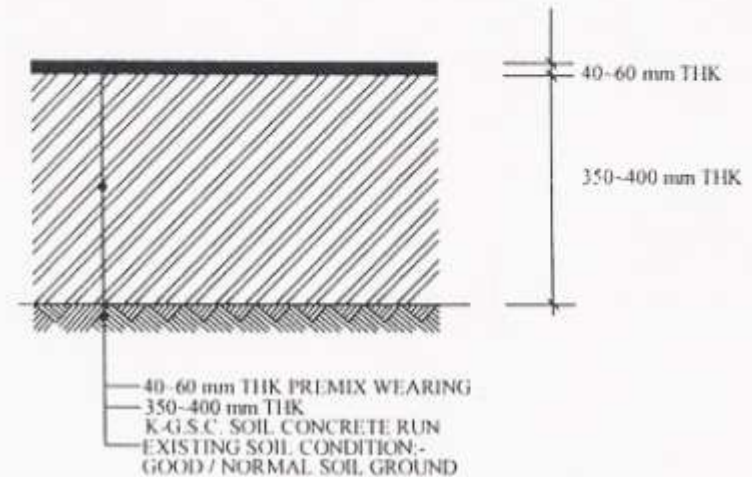


TYPICAL SECTION OF COMPARISON IN COST OF CONSTRUCTION FOR ROAD WORK BETWEEN CONVENTIONAL DESIGN & K-G.S.C. DESIGN

ROAD WORK OF CONVENTIONAL DESIGN



ROAD WORK OF K-G.S.C. DESIGN



PROCEEDING WORK SCOPE

1. Level & Marking (4 times work)
2. Excavation
3. Disposal
4. Back Filling
5. Compacting
6. Sand Blanket
7. Water Spraying
8. Crusher Run
9. Compacting
10. Water Spraying
11. Base Course
12. Compacting
13. Binder Course
14. Premix Wearing Course

PROCEEDING WORK SCOPE

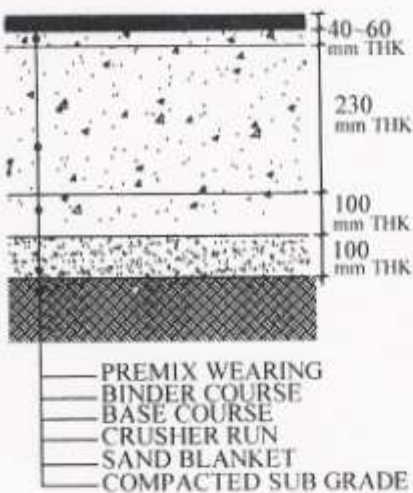
1. Level & Marking
2. Excavation
3. Sub grade compacting
4. K-G.S.C. Mixing
(existing soil + cement +
K-G.S.C. + water)
5. Back Filling & Leveling
6. Compacting
7. Premix Wearing Course

BENEFITS & ADVANTAGES

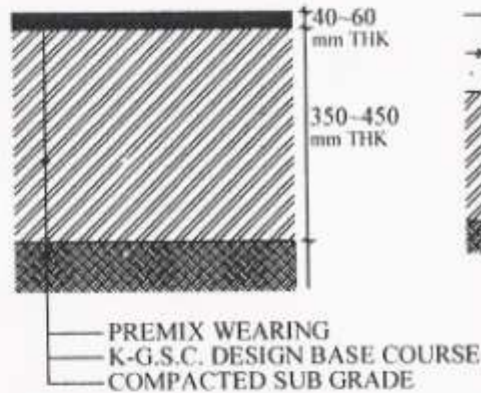
1. Uses the usual existing all natural soil
2. Cost saving in actual operation cost.
 - 2-1 Materials/machinery and manpower cost
 - 2-2 Increase in productivity
 - 2-3 Shortening the period of work
 - 2-4 Maintenance works cost
3. F.S. 1.5 Bearing Pressure compared to conventional design
4. Environmental friendly and protection of natural environment

TYPICAL SECTION OF COMPARISON FOR ROAD BETWEEN CONVENTIONAL DESIGN AND K-G.S.C. DESIGN

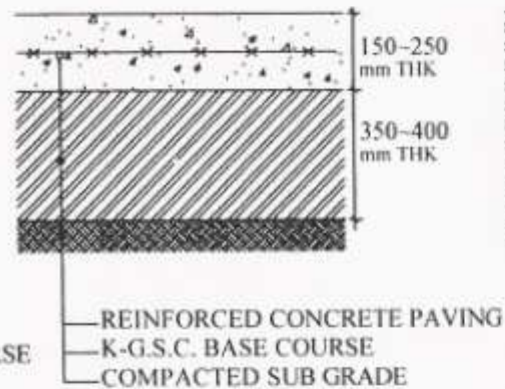
CONVENTIONAL DESIGN



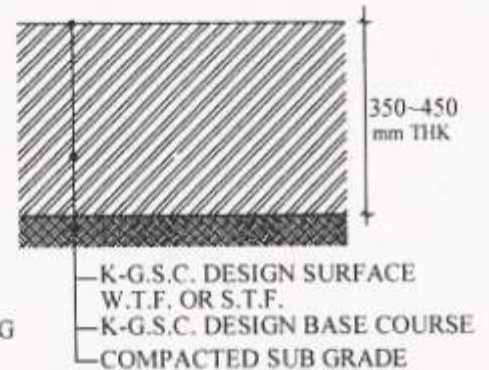
K-G.S.C. DESIGN OF ROAD SURFACE AND BASE COURSE



PREMIX WEARING ROAD
GENERAL ROAD



CONCRETE PAVING ROAD
GENERAL ROAD

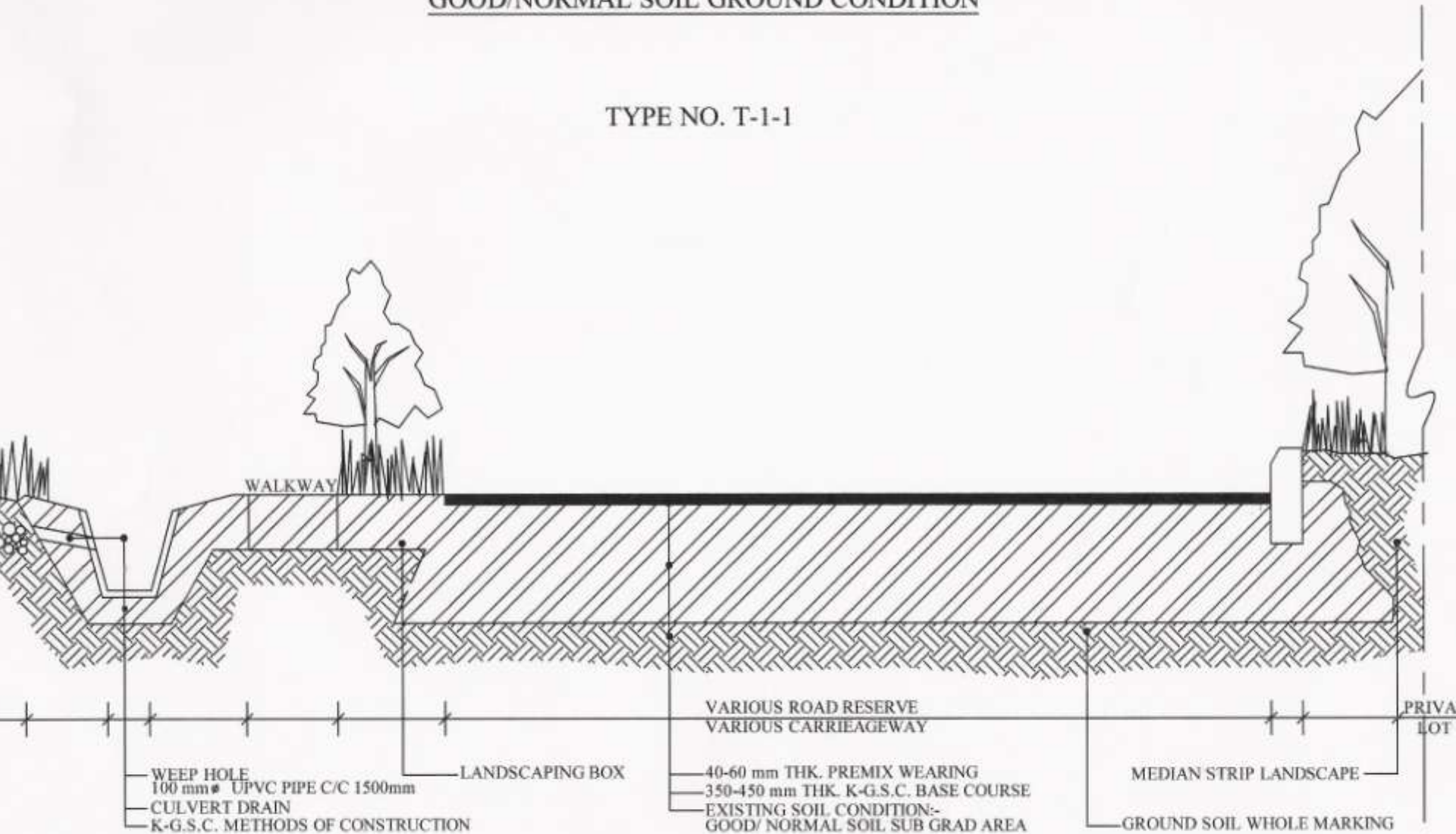


RE: W.T.F. : WOOD TROWEL FINISH
S.T.F. : STEEL TROWEL FINISH

K-G.S.C. DESIGN SURFACE ROAD
TIMBER ROAD
FARMING ROAD
FARMING WATERWAY ROAD
CONSTRUCTION ACCESS ROAD
PARK WALK WAY
BANK REVETMENT ROAD
TOWN ROAD

TYPICAL SECTION OF ROAD BASE COURSE DESIGN OF K-G.S.C.
GOOD/NORMAL SOIL GROUND CONDITION

TYPE NO. T-1-1



NOTES: NOT TO SCALE

K-G.S.C. DESIGN FOR DURABLE SUPPORT

K-G.S.C. METHOD OF CONSTRUCTION IS MOST SUITABLE FOR REPAIR AND REMEDIAL WORKS OF VARIOUS UNEVEN SUBSIDENCE OF ROAD.

NEWS 4 Road still riddled with potholes

WEDNESDAY April 10 2002

By SALINA KHALID

No amount of patching up, it seems, would solve the pothole problems along Jalan Dato' Abu Bakar in Section 16, Petaling Jaya, unless the underground water pipe is replaced.

The Petaling Jaya Municipal Council (MPPJ) development and maintenance director (engineering), Abdul Haq Abdul Hamid, admitted that "the only solution for the problem is replacing the pipe."

The old pipe, he said, would continue leaking despite the holes being constantly sealed up.

Leakage from the pipes will loosen the soil in the area. And with the high number of vehicles passing the road, it is easy for the surface to break into potholes," he added.

After they were patched up yet again by MPPJ on Tuesday last week, the potholes returned several days later, much to motorists' annoyance.

The potholes are usually spotted at two locations in Jalan Dato' Abu Bakar, near the Section 16 roundabout and the slip road to Pulas Damansara.

The deteriorating pipe, said Haq, could not take the high water pressure being exerted through it. The weight of passing vehicles added to the condition.

But the task of replacing the pipe does not fall under the local authority, the Selangor Waterworks Corporation (Perbadanan Urus Air Selangor or PUSAS) is responsible.

"But residents usually called us to complain about the matter and ask why we did not fix the problem," said Haq.

"The only way we could help is patch up the hole so that no motorists will get hurt."

Last month, Menteri Besar Datuk Seri Dr Mohamed Khir Yuss had said that the state was looking for suitable companies to provide a loan to PUSAS to replace the water pipes in both Selangor and Federal Territory spanning 5,000km and costing RM1.2bil.

"We are trying our best to get a company that's willing to provide us with a low interest loan, between 4% and 5%, in parity with the 6%," Dr Khir said, adding that the state government had talked to several interested parties.



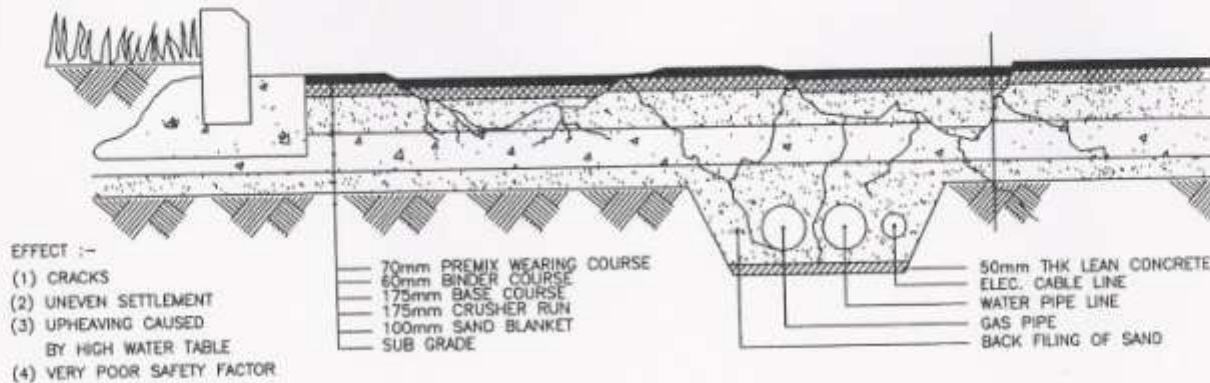
Potholes are reappearing on the road in this picture taken on Sunday. On Tuesday last week, MPPJ workers had patched up the potholes.



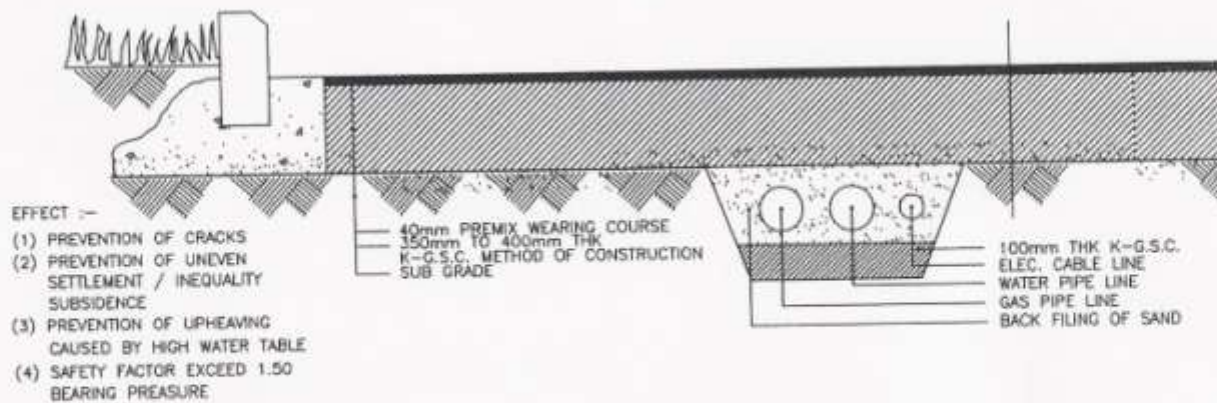
A March 18 picture shows a big pothole posing a danger to motorists along Jalan Section 16/1.

DAMAGED ROAD - CONVENTIONAL DESIGN

TYPE NO: 8



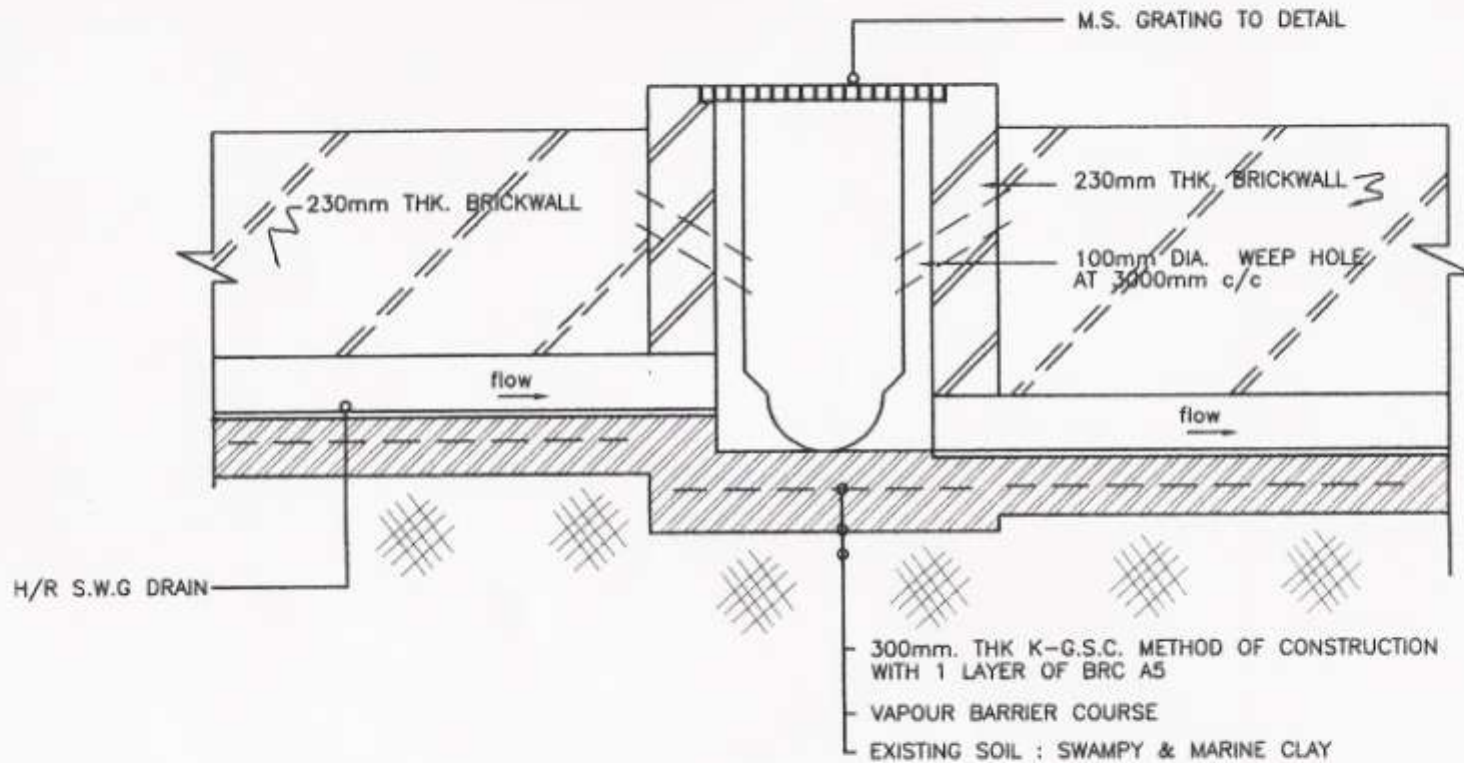
K-G.S.C. DESIGN OF REPAIR AND REMEDIAL WORK



NOTES: NOT TO SCALE

DETAIL OF DRAIN

PROPOSED CONSTRUCTION DESIGN OF K-G.S.C. METHOD SWAMPY & MARINE CLAY CONDITION

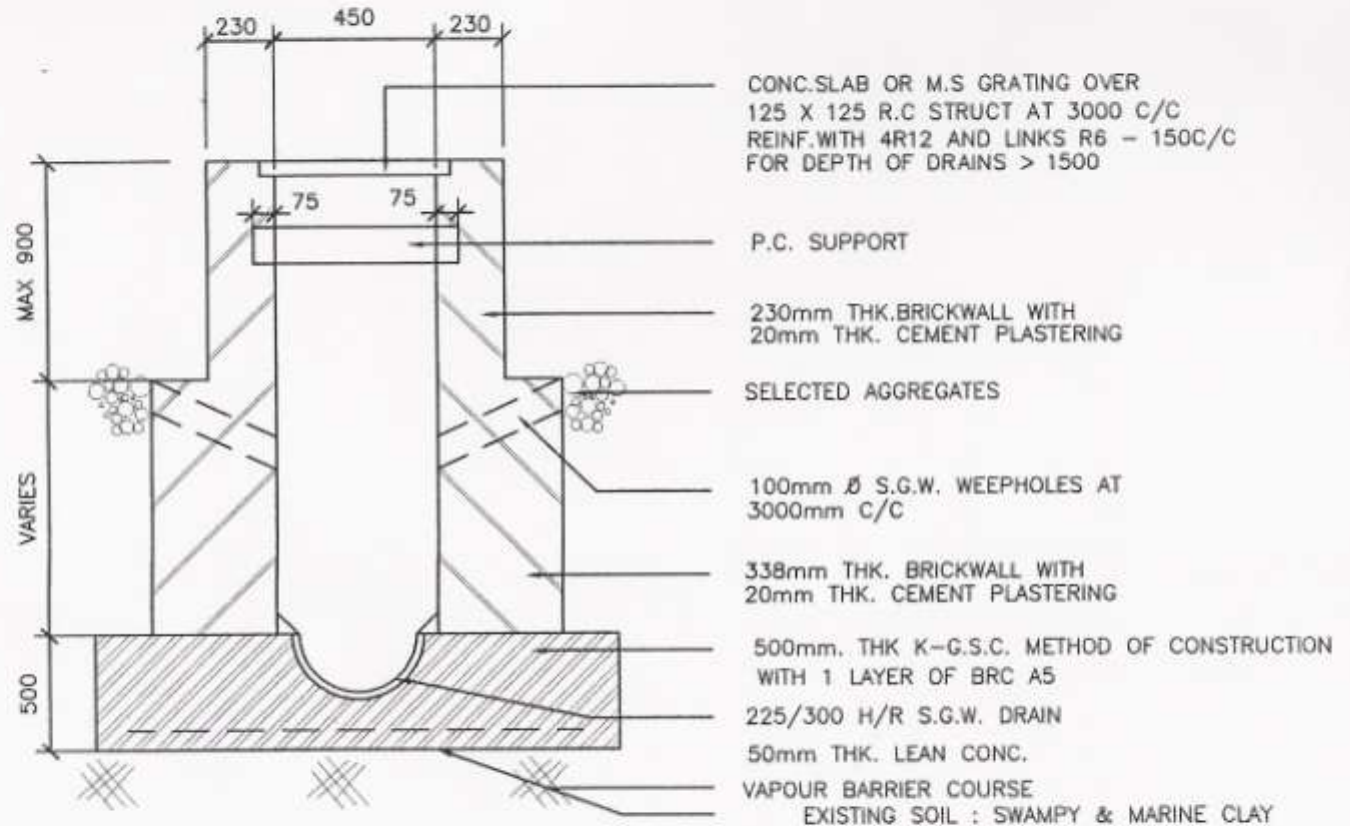


SECTION A - A

NOTES : Not to scale

DETAIL OF DRAIN

PROPOSED CONSTRUCTION DESIGN OF K-G.S.C. METHOD
SWAMPY & MARINE CLAY CONDITION



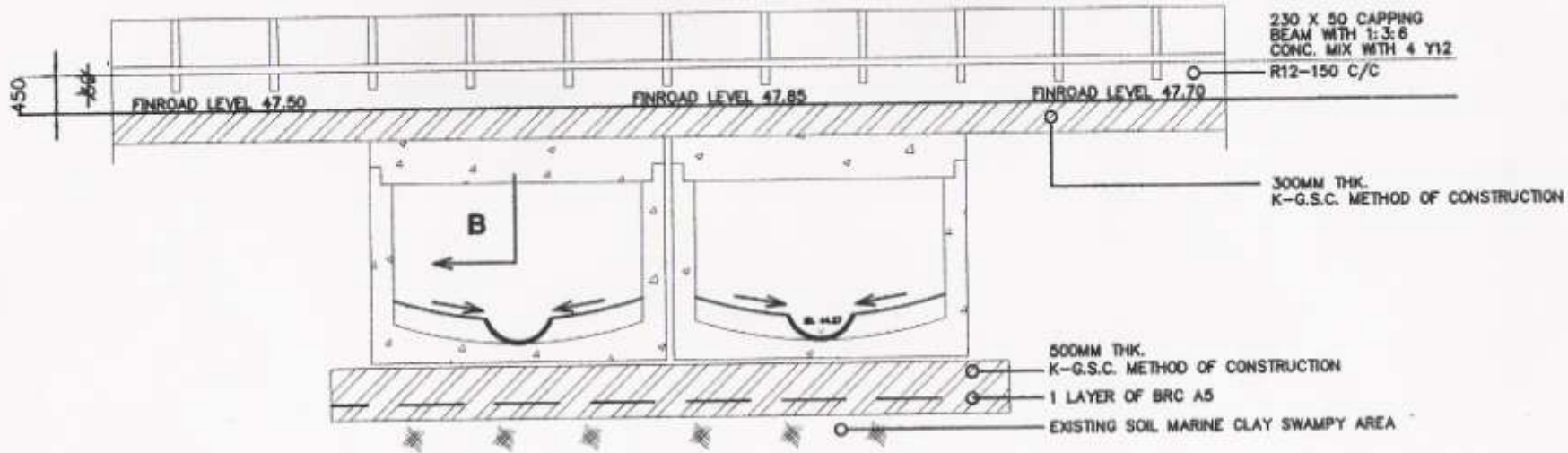
TYPICAL DETAIL OF H/R S.G.W. : DRAIN

NOTES : Not to scale

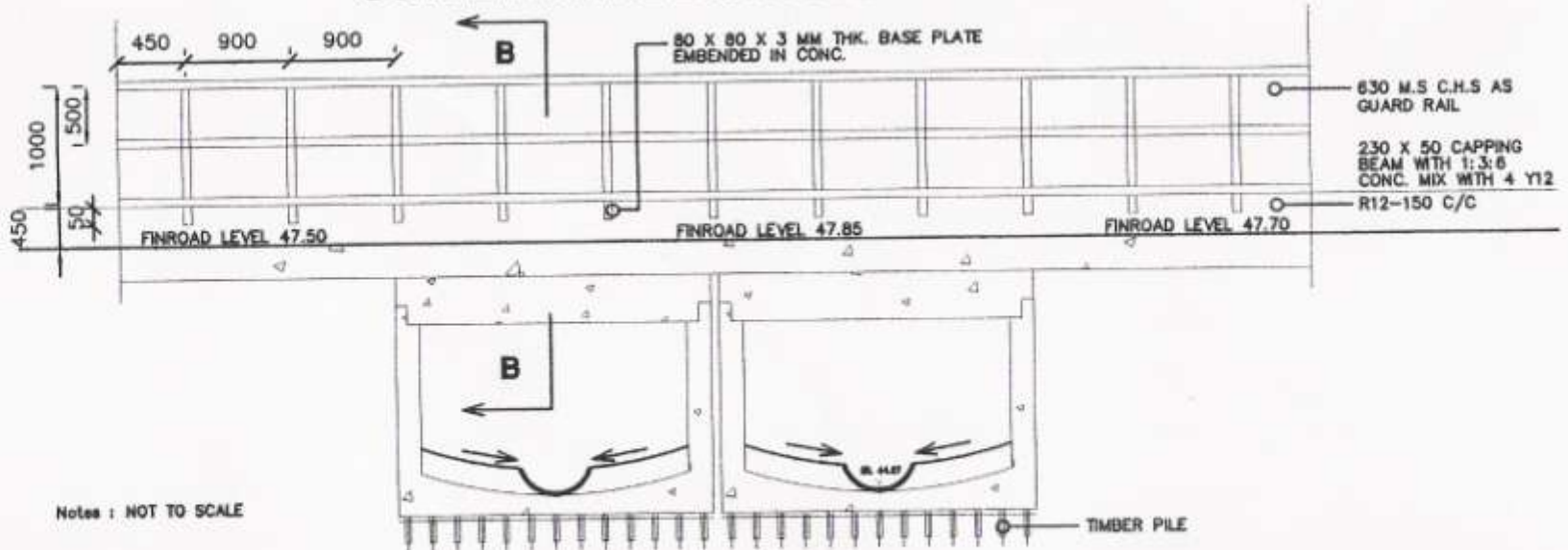
DETAIL OF DRAINAGE

PROPOSED CONSTRUCTION DESIGN OF K-G.S.C. METHOD

SWAMPY & MARINE CLAY CONDITION



CONVENTIONAL DRAIN SECTION DRAWING



Notes : NOT TO SCALE

K-G.S.C USE FOR:—

- Reclamation Works
- Pavement Works
- Drainage Works
- Foundation Works

It is cost saving plus Environmental Friendly Soil Hardening Technology.

Benefits to all Civil Engineering and General Construction Works.

PRICE COMPARISON

NORMAL ROAD SUB SURFACE WORKS

● CONVENTIONAL

- COST INCUR ON DISPOSAL
- COST VARIES ON QUARRY DUST OR SAND FILL
- COST VARIES ON ROCKS OR CURSHER RUNS
- TRUCKS OR LORRIES MOVEMENT MANAGEMENT
- TIME TAKEN FOR SOIL SETTLEMENT
- MAY REQUIRE VERTICAL DRAIN FOR SOFT SOIL

● K-G.S.C METHOD

- REUSED THE DISPOSAL
- COST INCURR ON THE USAGE OF CEMENT
- COST INCURR ON THE USAGE ON KGSC CHEMICAL
- NO TRAFFIC PROBLEMS
- SETTLEMENT IN SITU
- NO VERTICAL DRAIN REQUIRED AND GEO TEXTILES

How much can save?

- Depending on the soil condition, the availability of materials and the transportation cost.
- Safe on Transport, material wastage, time and other intangible wastage especially on the traffic and transportation management.
- Generally there is a cost saving of about 20 to 30 percent

SIRIM TEST REPORT



SIRIM QAS SDN. BHD. (Company No. 410234-X)
No. 1, Puncak Jalil 1, Jalan Puncak Jalil, Seksyen 7
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TEST REPORT

REPORT NO : 2001CB0988	PAGE : 1 OF 2
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Our Ref. : SQAS/CBMT/T.REC/CSL#2
Issued by : Construction and Building Materials Testing Section
Issued date : 26 DEC 2001
Product : Concrete Cube
Reference Standard/ Method of test : MS 26 : Part 2 : 1991
Method of Testing Concrete
Part 2 : Method of testing hardened concrete
Section three : Method for determination of the compressive concrete cubes
Applicant : SURE PHOENIX SDN. BHD.
No. 24, 1st Floor, Plaza City One
Jalan Marshi Abdullah
50100 Kuala Lumpur
Manufacturer : SAMUI DEVELOPMENT CO. LTD.
Description of sample : 4 nos. of concrete were received for testing.
Brand : Soil Concrete
Date received : 11/12/2001
Job No. : 01TSD3838

Approved Signatories:


(Y.M. RAJA NOR NIHAH)
Senior Technical Executive




(MOHD. FAUZI ISMAIL)
Manager
Construction and Building Materials Testing Section
Testing Services Department

SIRIM TEST REPORT

TEST REPORT

REPORT NO : 2001CB0988

PAGE : 2 OF 2

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COMPRESSIVE STRENGTH FOR CONCRETE CUBES

Submitted By : Sure Phoenix Sdn. Bhd.

Brand : Soil Concrete Cube

No. of Specimen : 4 Nos.

Size of Specimen : 150 mm x 150 mm x 150 mm.

Testing Date : 11.12.2001.

NOTE
THIS VALUE IS ONLY FOR CALCULATION
NOTING THAT THE

Specimen Reference	Casting Date	Density (kg/m ³)	Compressive Load (kN)	Compressive strength (MN/m ²)
WS 1	04.12.2001	1310	17.8	0.80
FS 1	13.11.2001	1970	209.3	9.30
NS 1	27.11.2001	2250	539.0	24.0
NS 2	27.11.2001	2200	766.0	34.0



26 DEC 2001

Solidifying the soft soil.



PINTEC PROJECT IN SUNGKAI, PERAK, MALAYSIA



PREPARATION OF
EXISTING SOIL

SCALING WORKS – KGSC METHOD

SCALING WORK
IM SAND



MIXING WORKS



SAND 50%

EXISTING MARINE CLAY

SOIL 50%

MIXING WORK

Mokpo Airport Foundation Works



Mokpo Airport Leveling the Foundation



K.G.S.C METHOD OF SOIL HARDENING

K.G.S.C Project

SLOPE IMPROVEMENT



KGSC DRAINAGE FOUNDATION

Monsoon Drain KGSC Technology



Examples of application of K-G.S.C method

Chen Nam, Korea (Working

lot)

K.G.S.C Project



Examples of application of K-G.S.C method

K.G.S.C Project

Gu Rye, Korea (road construction)



We Can Solve This Soil Problem



GOMBAK SITE PACKAGE 5 GENERAL VIEW (Before)



USING EXCAVATOR TO MIX THE OPC AND SOIL



SPRAYING THE CHEMICAL



Rubbish Soft Mud Oozing Out



Mud Overflow After Compaction



ARRESTING BAD SOIL EXCAVATION



Refilling with KGSC as well as Excavating



Compacting As Filling Up



FINAL COMPACTION



CALL US

WE WILL HELP YOU

- Manufacturer

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Book-gu, Gwangju, Korea

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FAX: +82 62 367 9500

A02-3, 4th Floor

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