

اعلان داوطلبی و دعوت به نرخ دهی

تاریخ اعلان: 21.02.2019

تاریخ ختم: 06.03.2019

از شما ویا شرکت شما دعوت بعمل میآوریم تا یک آفرمهر و امضاً شده شرکت تان را برای تدارکات ذیل
ارایه نمایید:

پروژ: اعمار سرک جویچه های اطراف آن و پیاده روها

شهر: کابل

ناحیه: هفده هم شاروالی کابل

موقعیت: گذر/وسک ۳۰

قرارداد کننده: شورای گذر/وسک

موسسه همکار تخنیکی: دفتر اسکان بشر ملل متحد (UN-Habitat)

نظارت کننده: شاروالی کابل و ناحیه هفده هم

تمویل کننده: دفتر کمک های ایالات متحده امریکا (USAID)

شرکت های علاقمند میتوانند اسناد داوطلبی را از سایت های ذیل ویا آدرس دفتر ساحوی هییتات واقع در ناحیه
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این برنامه در همکاری نزدیک شاروالی ها، ریاست اراضی و وزارت شهر سازی و مسکن و اشتراک فعالانه مردم و منظم سازی گذرهای ستندرد به همکاری تکنیکی دفتر اسکان بشر ملل متحد (UN-Habitat) و کمک مالی اتحادیه اروپا و کمک های ایالات متحده امریکا (USAID) در یک دوره چهار ساله (2015-2020) مورد تطبیق قرار دارد.

این پروژه (اعمار سرک با جویچه و پیاده رو) در پروسه پلانگذاری عمل استراتژیک تشخیص، اعمار و مورد بهره برداری قرار خواهر گرفت.

پیشنهاد (آفر) پروژه:

اعمار (سرک با جویچه آن) واقع ناحیه (۱۷) شهر کابل. قیمت پیشنهاد باید شامل تمام مصارفات پروژه (مواد ساختمانی، کارگران مسلکی و غیر مسلکی، ماشینری، خدمات، ترانسپورت و غیره) بخاطر اعمار درست و با کیفیت پروژه پیشنهاد شده فوق باشد.

بازدید از ساحه کار:

از تمام شرکت ها جداً تقاضا میگردد به تاریخ... 27/02/2019 روز (چهارشنبه). به ساعت (9) بجه (قبل) از ظهر از ساحه باز دید نمایند.

محل: (ناحیه هفده هم شهر کابل) نمبر مایل (انجینر مامور آغا صالحی 0729001236) و (عنایب الله کجک 0728436622)

مشخصات تکنیکی:

تغییر و تعویض در مشخصات تکنیکی پروژه پیشنهادی این پیشنهاد قابل قبول نیست به جز تایید کتبی مسؤول پروگرام. تمام اسناد پیشنهاد (آفر) مطابق به حصول و مقررات دولت جمهوری اسلامی افغانستان در چوکات و مقررات تهیه و تدارکات صورت میگردد و معیار های ذیل در جریان ارزیابی مدنظر گرفته میشود.

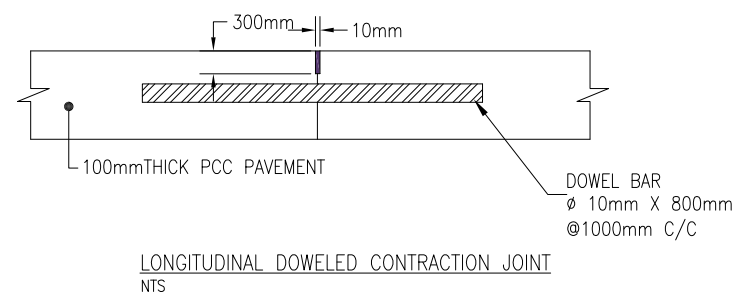
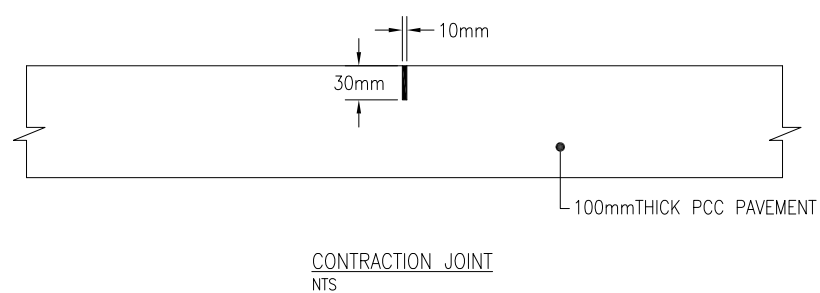
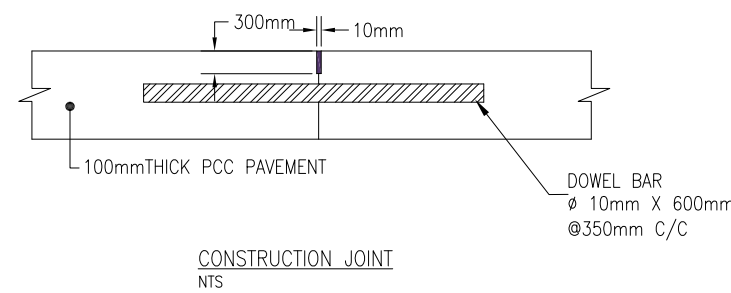
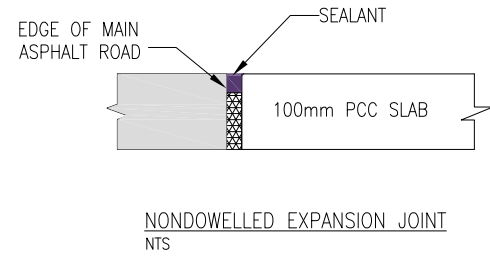
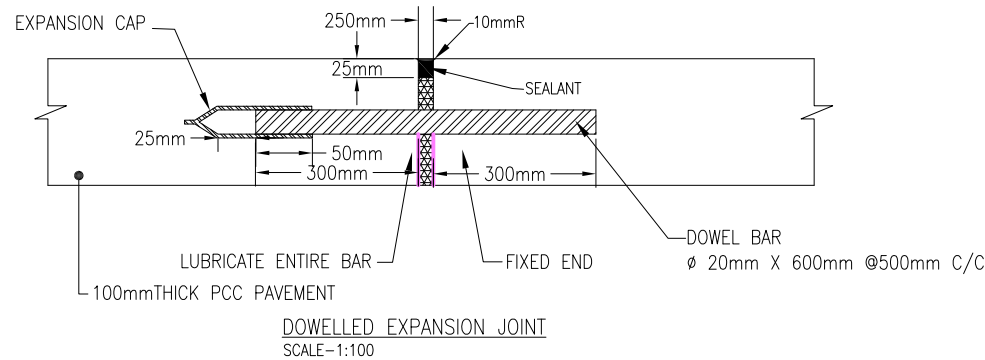
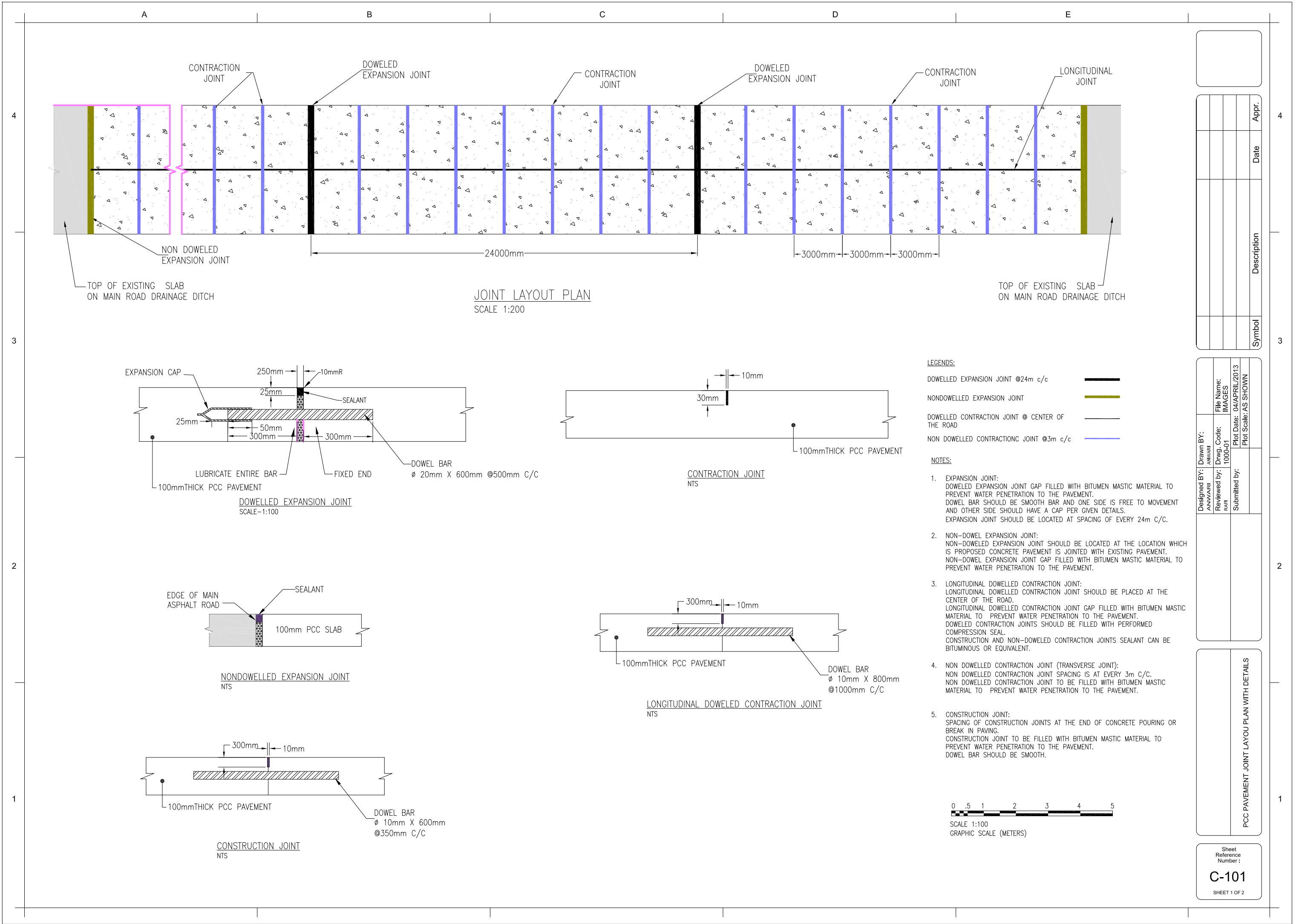
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- کاپی جواز قابل اعتبار ساختمانی ضمیمه گردد.
 - تجربه کاری مشابه حد اقل از سه پروژه که قیمت هر پروژه حد اقل ۳۰,۰۰۰ دالر امریکایی باشد با ارایه لست پروژه ها مشابه بادر ج معلومات ذیل ضمیمه گردد:
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 - مسئول شرکت.
 - قیمت پروژه ها.
 - مدت قرارداد.
 - شماره مایل و آدرس الکترونیکی.
 - صورت حساب بانکی از سه ماه اخیر که بیلانس پولی شان حد اقل ۱۰,۰۰۰ دالر امریکایی باشد.
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 - پلان مصنویت کار
 - پلان کنترول کیفیت
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 - لست پرسونل تکنیکی و اداری: یک نفر انجینر ساحوی، یک نفر سفتی انجینر، یک نفر کارمند اداری، یک نفر کارمند مالی و یک نفر آمر پروژه با خلص سوانح آنها.
 - ۱۰ فیصد تضمین کاری از مجموعه قیمت پروژه بشکل کتبی ارایه گردد که این تضمین به مدت 6 ماه بعد از تکمیل پروژه اعتبار داشته باشد، (شرکت قراردادی باید تعهد نماید که دو هفته بعد از امضای قرارداد 10 فیصد از کل قیمت پروژه را به شکل بانک گرانتی نزد شورا قرار داده و این بانک گرانتی در جریان تطبیق پروژه و به مدت 6 ماه بعد از تکمیلی پروژه مدار اعتبار باشد).
 - قیمت واقعی مناسب و کمترین.
- نوت: تمام اسناد ضروری خواسته شده را بصورت کامل داشته باشند. امکانات تکنیکی شرکت ها بعد از ارزیابی اسناد مالی و تکنیکی آن در ساحه بررسی میگردد.

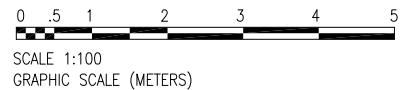
مهر و امضا داوطلب

دستورالعمل برای داوطلبان:

1. از شما درخواست میشود تا آفر خود را تا ساعت (2) بجای بعد از ظهر به وقت محلی به تاریخ (06/03/2019) روز چهارشنبه به آدرس دفتر ساحوی برنامه شهر برای همه (هیئات) واقع در ناحیه هفدهم شهر کابل تعمیر ناحیه به (عنایب الله کجک 0728436622) تسلیم نمائید. تسلیمی آفرها بعد از تاریخ و ساعت ذکر شده فوق قابل قبول نمی باشد .
2. نرخ های شما باید برای مدت 90. روز از تاریخ دریافت آن قابل اعتبار باشد.
3. داوطلبان باید برای تمام تدارکات درخواست شده در ذیل نرخ بدهند، در غیر آن آفر آنها رد خواهد شد.
4. داوطلبان باید همه صفحات آفر را مهر و امضا نمایند.
5. هر یک داوطلب باید صرف یک آفر ارائه نماید.
6. نرخ ها صرف باید به دالر داده شوند.
7. در صورتیکه تضمین برای اجناس، امور ساختمانی و خدمات درخواست شده لازم باشد، باید در آفرهای خود آن را ذکر نمایند.
8. امر خریداری به داوطلبانیکه آفرهای آنها در اصل جوابگو تشخیص شده و نازلترین و مناسبترین نرخ را ارائه نموده اند، قبل از ختم مدت اعتبار آفر صادر خواهد شد. علی الرغم موارد فوق، فرمایش دهنده حق قبول یا رد آفرها و لغو مراحل داوطلبی را برای خود محفوظ داشته و در هر زمانیکه خواسته باشد تمام آفرها را قبل از اعطای قرارداد رد نموده میتواند.
9. پرداخت ها با در نظر داشت فیصدی پیشرفت امور ساختمانی صورت خواهد گرفت.
10. ما منتظر دریافت آفرهای شما بوده و برای علاقمندی شما در این پروژه تشکر مینماییم.
11. نازلترین قیمت تنها معیار برای اعطا قرارداد نمیشد قیمت ها باید واقعی و مناسب باشد.



- LEGENDS:**
- DOWELED EXPANSION JOINT @24m c/c
 - NONDOWELED EXPANSION JOINT
 - DOWELED CONTRACTION JOINT @ CENTER OF THE ROAD
 - NON DOWELED CONTRACTION JOINT @3m c/c
- NOTES:**
- EXPANSION JOINT:
DOWELED EXPANSION JOINT GAP FILLED WITH BITUMEN MASTIC MATERIAL TO PREVENT WATER PENETRATION TO THE PAVEMENT.
DOWEL BAR SHOULD BE SMOOTH BAR AND ONE SIDE IS FREE TO MOVEMENT AND OTHER SIDE SHOULD HAVE A CAP PER GIVEN DETAILS.
EXPANSION JOINT SHOULD BE LOCATED AT SPACING OF EVERY 24m C/C.
 - NON-DOWEL EXPANSION JOINT:
NON-DOWELED EXPANSION JOINT SHOULD BE LOCATED AT THE LOCATION WHICH IS PROPOSED CONCRETE PAVEMENT IS JOINED WITH EXISTING PAVEMENT.
NON-DOWEL EXPANSION JOINT GAP FILLED WITH BITUMEN MASTIC MATERIAL TO PREVENT WATER PENETRATION TO THE PAVEMENT.
 - LONGITUDINAL DOWELED CONTRACTION JOINT:
LONGITUDINAL DOWELED CONTRACTION JOINT SHOULD BE PLACED AT THE CENTER OF THE ROAD.
LONGITUDINAL DOWELED CONTRACTION JOINT GAP FILLED WITH BITUMEN MASTIC MATERIAL TO PREVENT WATER PENETRATION TO THE PAVEMENT.
DOWELED CONTRACTION JOINTS SHOULD BE FILLED WITH PERFORMED COMPRESSION SEAL.
CONSTRUCTION AND NON-DOWELED CONTRACTION JOINTS SEALANT CAN BE BITUMINOUS OR EQUIVALENT.
 - NON DOWELED CONTRACTION JOINT (TRANSVERSE JOINT):
NON DOWELED CONTRACTION JOINT SPACING IS AT EVERY 3m C/C.
NON DOWELED CONTRACTION JOINT TO BE FILLED WITH BITUMEN MASTIC MATERIAL TO PREVENT WATER PENETRATION TO THE PAVEMENT.
 - CONSTRUCTION JOINT:
SPACING OF CONSTRUCTION JOINTS AT THE END OF CONCRETE POURING OR BREAK IN PAVING.
CONSTRUCTION JOINT TO BE FILLED WITH BITUMEN MASTIC MATERIAL TO PREVENT WATER PENETRATION TO THE PAVEMENT.
DOWEL BAR SHOULD BE SMOOTH.



Symbol	Description	Date	Appr.

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PCC PAVEMENT JOINT LAYOUT PLAN WITH DETAILS

Joints in Concrete Construction

Reported by ACI Committee 224

Grant T. Halverson¹
ChairmanRandall W. Proton¹
SecretaryPeter Barlow
Florian G. Barth
Alfred G. Bishara²
Howard L. Boggs
Merle E. Brander³
David Darwin¹
Fouad H. Fouad²David W. Fowler
Peter Gergely
Will Hamen
M. Nadim Hassoun
William Lee
Tony C. Lin²
Edward G. Nawy³Harry M. Palmbaum
Keith A. Paulina²
Andrew Scanlon
Ernest K. Schrader²
Wenai Suaris
Lewis H. Tuthill²
Zoran A. Zolinski¹ Principal author.² Editorial subcommittee.

In addition to the above, committee associate member Michael J. Pfeiffer, consulting member LeRoy A. Lutz, past member Amfin Rusten, and nonmember Gay S. Puccio (Chairman, Committee 504) were principal authors; Committee 325 member Michael I. Darier was a contributing author.

This report reviews the state of the art in design, construction, and maintenance of joints in concrete structures subjected to a wide variety of use and environmental conditions. In some cases, the option of eliminating joints is considered. Aspects of various joint sealant materials and jointing techniques are discussed. The reader is referred to ACI 504R for a more comprehensive treatment of sealant materials, and to ACI 224R for a broad discussion of the causes and control of cracking in concrete construction. Chapters in the report focus on various types of structures and structural elements with unique characteristics: buildings, bridges, slabs-on-grade, tunnel linings, canal linings, precast concrete pipe, liquid-retaining structures, walls, and mass concrete.

Keywords: bridges, buildings, canals, canal linings, concrete construction, construction joints, contraction joints, design, environmental engineering, concrete structures, isolation joints, joints, parking lots, pavements, runways, slabs-on-grade, tunnels, tunnel linings, walls.

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Reference to this document shall not be made in contract documents. If items found in this document are desired by the Architect/Engineer to be a part of the contract documents, they shall be restated in mandatory language for incorporation by the Architect/Engineer.

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ACI 224.3R-95 became effective August 3, 1995.
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CHAPTER 1—INTRODUCTION

1.1—Joints in concrete structures

Joints are necessary in concrete structures for a variety of reasons. Not all concrete in a given structure can be placed continuously, so there are construction joints that allow for work to be resumed after a period of time. Since concrete undergoes volume changes, principally related to shrinkage and temperature changes, it can be desirable to provide joints and thus relieve tensile or compressive stresses that would be induced in the structure. Alternately, the effect of volume changes can be considered just as other load effects are considered in building design. Various concrete structural ele-

ments are supported differently and independently, yet meet and match for functional and architectural reasons. In this case, compatibility of deformation is important, and joints may be required to isolate various members.

Many engineers view joints as artificial cracks, or as means to either avoid or control cracking in concrete structures. It is possible to create weakened planes in a structure, so cracking occurs in a location where it may be of little importance, or have little visual impact. For these reasons, ACI Committee 224—Cracking, has developed this report as an overview of the design, construction, and maintenance of joints in various types of concrete structures, expanding on the currently limited treatment in ACI 224R. While other ACI Committees deal with specific types of structures, and joints in those structures, this is the first ACI report to synthesize information on joint practices into a single document. Committee 224 hopes that this synthesis will promote continued re-evaluation of recommendations for location and spacing of joints, and the development of further rational approaches.

Diverse and sometimes conflicting guidelines are found for joint spacing. Table 1.1 reports various recommendations for contraction joints, and Table 1.2 provides a sampling of requirements for expansion joints. It is hoped that, by bringing the information together in this Committee Report, recommendations for joint spacing may become more rational, and possibly more uniform.

Aspects of construction and structural behavior are important when comparing the recommendations of Tables 1.1 and

Table 1.1—Contraction joint spacings

Author	Spacing
Merrill (1943)	20 ft (6 m) for walls with frequent openings, 25 ft (7.5 m) in solid walls.
Fintel (1974)	15 to 20 ft (4.5 to 6 m) for walls and slabs on grade. Recommends joint placement at abrupt changes in plan and at changes in building height to account for potential stress concentrations.
Wood (1981)	20 to 30 ft (6 to 9 m) for walls.
PCA (1982)	20 to 25 ft (6 to 7.5 m) for walls depending on number of openings.
ACI 302.1R	15 to 20 ft (4.5 to 6 m) recommended until 302.1R-89, then changed to 24 to 36 times slab thickness.
ACI 350R-83	30 ft (9 m) in sanitary structures.
ACI 350R	Joint spacing varies with amount and grade of shrinkage and temperature reinforcement.
ACI 224R-92	One to three times the height of the wall in solid walls.

Table 1.2—Expansion joint spacings

Author	Spacing
Lewerenz (1907)	75 ft (23 m) for walls.
Hunter (1953)	80 ft (25 m) for walls and insulated roofs, 30 to 40 ft (9 to 12 m) for uninsulated roofs.
Billig (1960)	100 ft (30 m) maximum building length without joints. Recommends joint placement at abrupt changes in plan and at changes in building height to account for potential stress concentrations.
Wood (1981)	100 to 120 ft (30 to 35 m) for walls.
Indian Standards Institution (1964)	45 m (= 148 ft) maximum building length between joints.
PCA (1982)	200 ft (60 m) maximum building length without joints, 120 ft (36 m) in sanitary structures partially filled with liquid (closer spacings required when no liquid present).
ACI 350R-83	

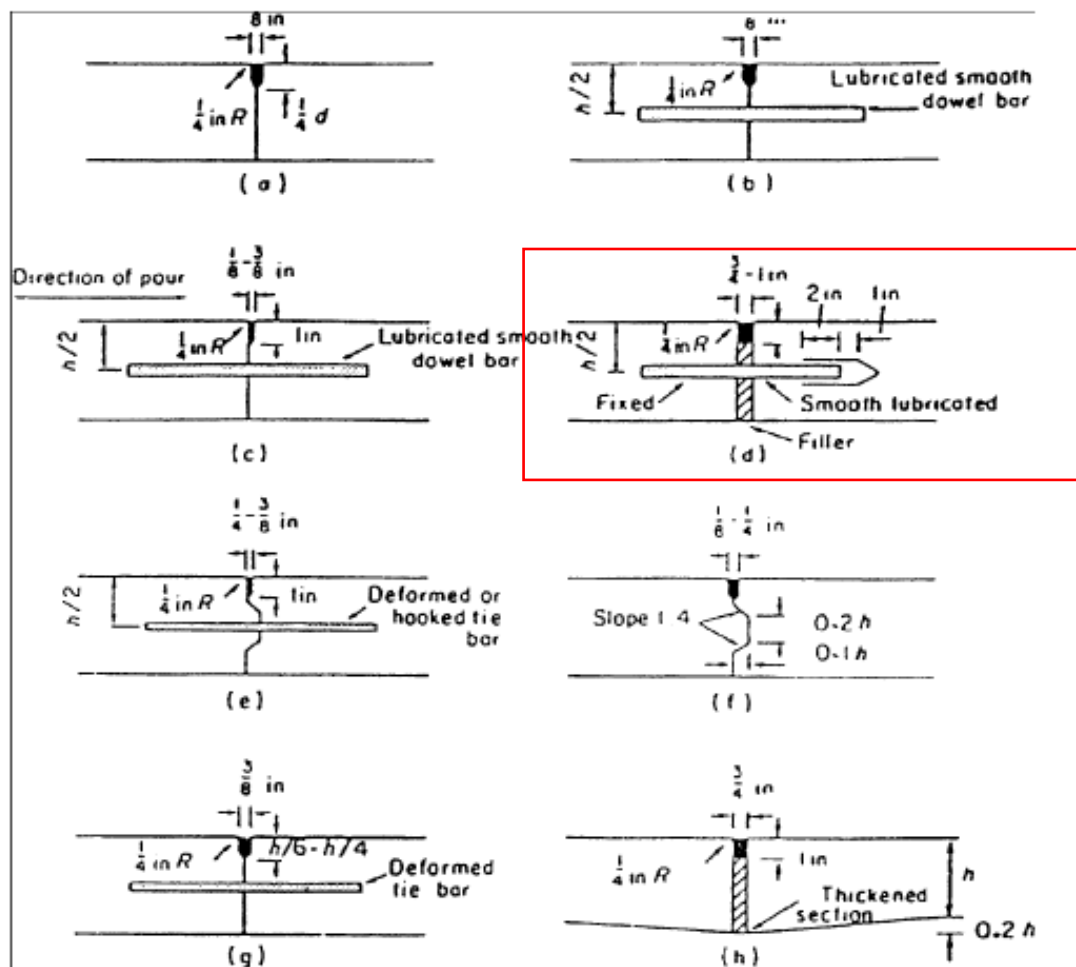


Fig. 6.1—Pavement joints

sign will allow infiltration of water and incompressibles that result in pumping, erosion, and loss of support in the sub-base. Pavement failure can then result.

Joints for concrete pavements can be divided according to their desired function into the usual three basic groups: contraction joints, isolation, or expansion joints, and construction joints. Longitudinal joints as special cases of contraction/construction joints also are recognized in pavement construction. They allow a hinge-like action and control the effects of warping. Fig. 6.1 shows typical details of pavement joints. ACI 325.7R discusses post-tensioned highway slabs.

6.2—Contraction joints

Contraction joints are transverse joints whose function is to relieve tensile stresses resulting from contraction and curling of the concrete. They are not intended to relieve the ef-

fects of large expansions. However, pavements are unlikely to expand to a volume greater than when the concrete is placed, so these joints can accommodate the required movements. In conventional groove contraction joints [Fig. 6.1(a) and Fig. 6.1(b)] a groove at least $1/4$ of the slab thickness (or at least $1/2$ slab thickness for pavements built on stabilized base, according to PCA 1992a) is cut or formed at the pavement surface to force cracks to occur at the joint location. For cut grooves, concrete is sawed as soon as possible after placing the concrete. Sawing is delayed until the concrete does not ravel (see Chapter 2). Transverse grooves are cut first. According to the American Concrete Pavement Association (ACPA 1991), contraction joints at 60- to 80-ft (20- to 25-m) spacings may be cut first in some cases. The initial cut should be at least $1/8$ -in. (3-mm) wide to create a functioning joint; joints may be recut and widened later to fashion a prop-

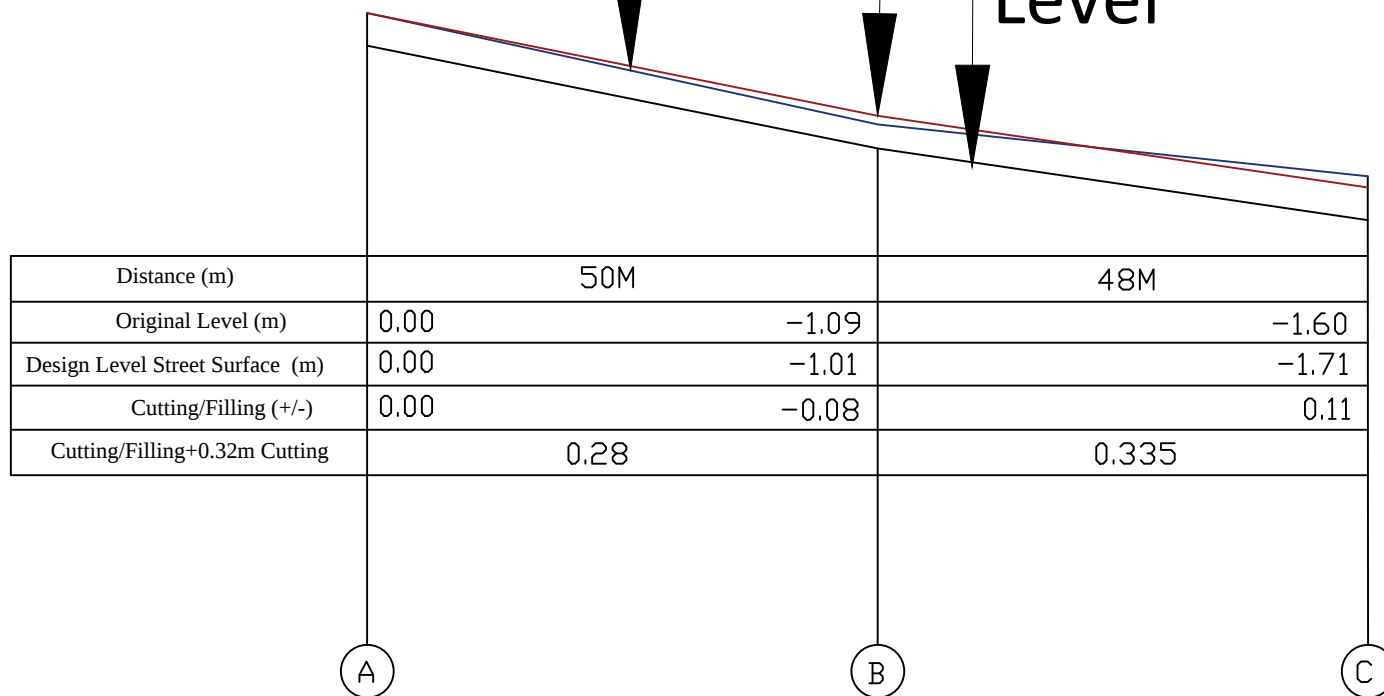


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TIT-1			District	17	DRAWN :	Eng .Rahmatullah "Rahimi"	District Engineer				
TIT-2			GA	30	CHECKED :	Eng .Majdood Rahman "Habib"	Sr. District Engineer		SCALE:	N.T.S	
TIT-3			UNH PROJECT NO.	NO.	APPROVED SR ENG:				AS SHOWN		

Existing Road Level

Design Level

Excavated Road Level

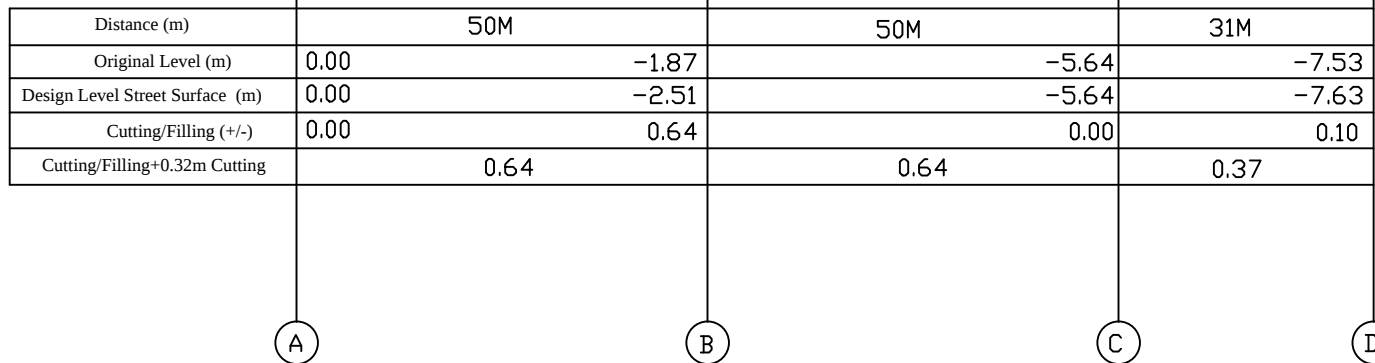
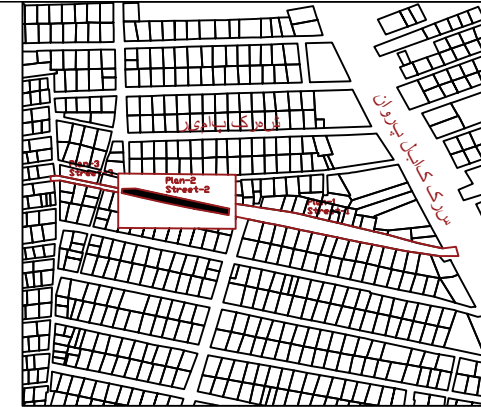


CLIENT		SHEET CONTENTS		NAMES		POSITION	SIGNATURE	DATE	SHEET NO.	REVISION	DATE
PROJECT		Long Profile of St-3, GA-30	PROVINCE	KABUL	DESIGNED :	Eng .Mamur Agha "Salehi"	District Engineer		CROSS SECTION Sheet - 1/1	FIRST ISSUE	Oct 2018
TIT-1			District	17	DRAWN :	Eng .Rahmatullah "Rahimi"	District Engineer				
TIT-2			GA	30	CHECKED :	Eng .Majdood Rahman "Habib"	Sr. District Engineer		SCALE:	N.T.S	
TIT-3			UNH PROJECT NO.	NO.	APPROVED SR ENG:				AS SHOWN		

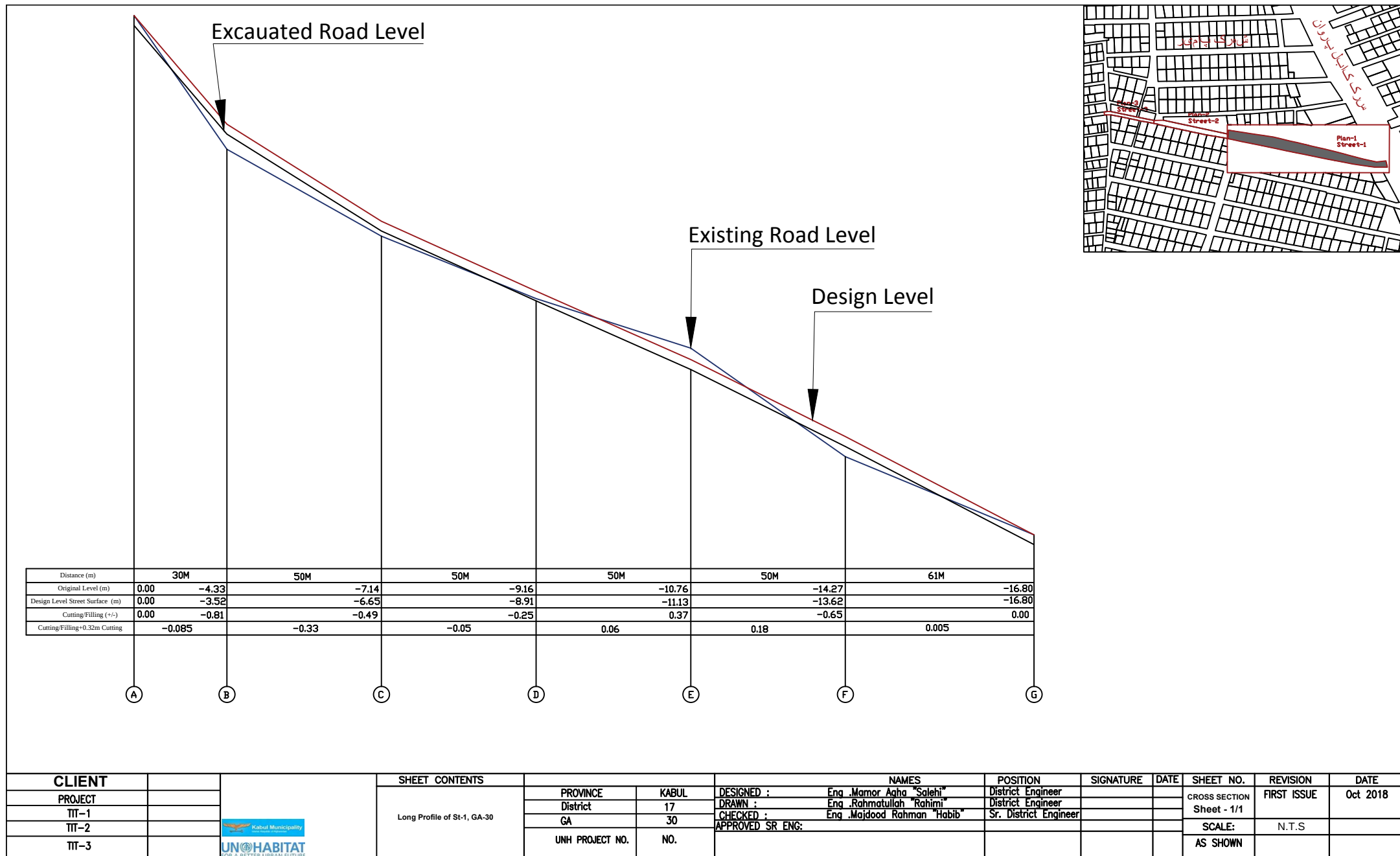
Existing Road Level

Design Level

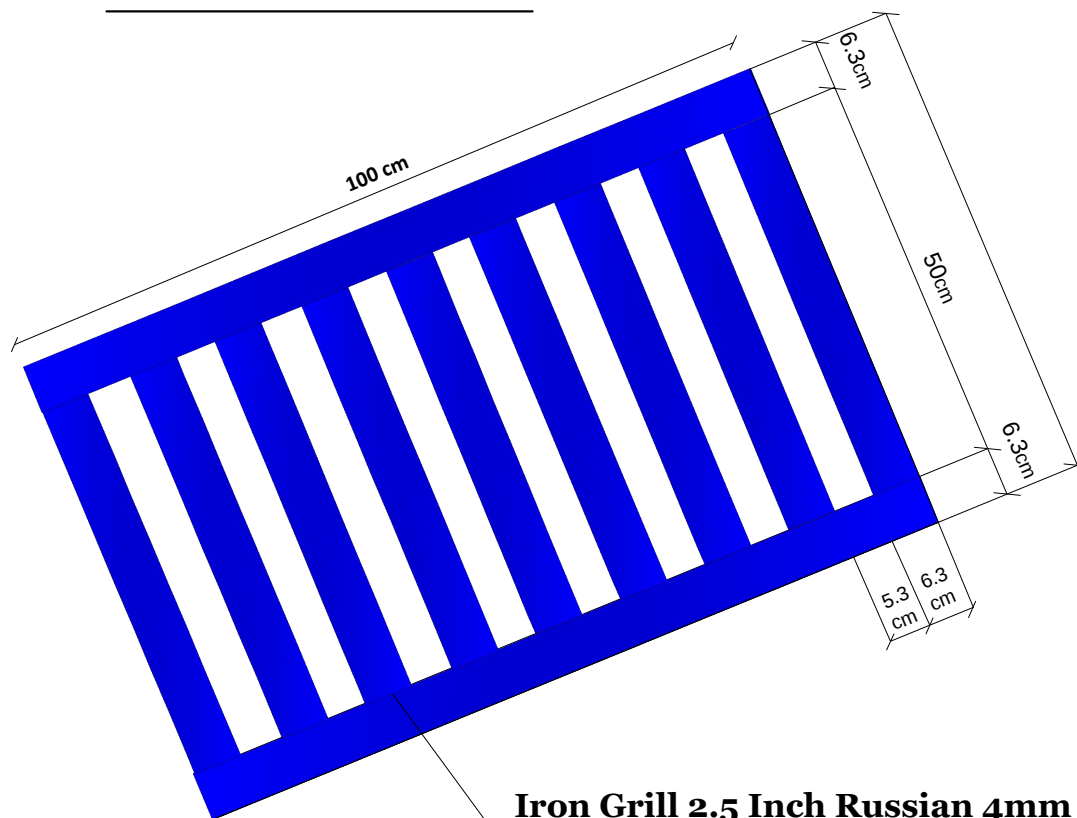
Excauated Road Level



CLIENT		SHEET CONTENTS		NAMES		POSITION	SIGNATURE	DATE	SHEET NO.	REVISION	DATE
PROJECT		 Long Profile of St-2, GA-30	PROVINCE	KABUL	DESIGNED :	Eng .Mamur Agha "Salehi"	District Engineer		CROSS SECTION Sheet - 1/1	FIRST ISSUE	Oct 2018
TIT-1			District	17	DRAWN :	Eng .Rahmatullah "Rahimi"	District Engineer				
TIT-2			GA	30	CHECKED :	Eng .Majdood Rahman "Habib"	Sr. District Engineer		SCALE:	N.T.S	
TIT-3			UNH PROJECT NO.	NO.	APPROVED SR ENG:				AS SHOWN		

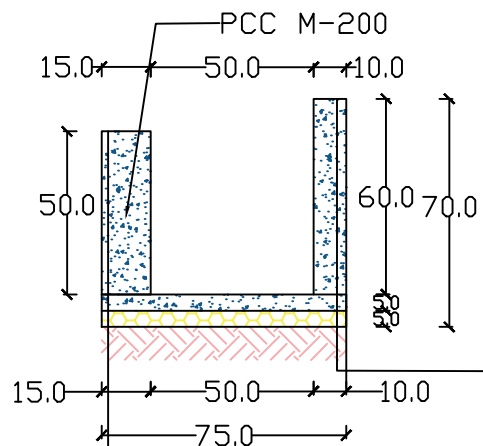


Iron Grill Details section



CLIENT			SHEET CONTENTS	PROVINCE	KABUL	NAMES	POSITION	SIGNATURE	DATE	SHEET NO.	REVISION	DATE
PROJECT				District	17	DESIGNED :	Eng. Mamor Agha "Salehi"	District Engineer		CROSS SECTION	FIRST ISSUE	Oct 2018
TIT-1				GA	30	DRAWN :	Eng. Rahmatullah "Rahimi"	District Engineer		Sheet - 1/1		
TIT-2						CHECKED :	Eng. Majdood Rahman "Habib"	Sr. District Engineer		SCALE:	N.T.S	
TIT-3				UNH PROJECT NO.	NO.	APPROVED SR ENG:				AS SHOWN		

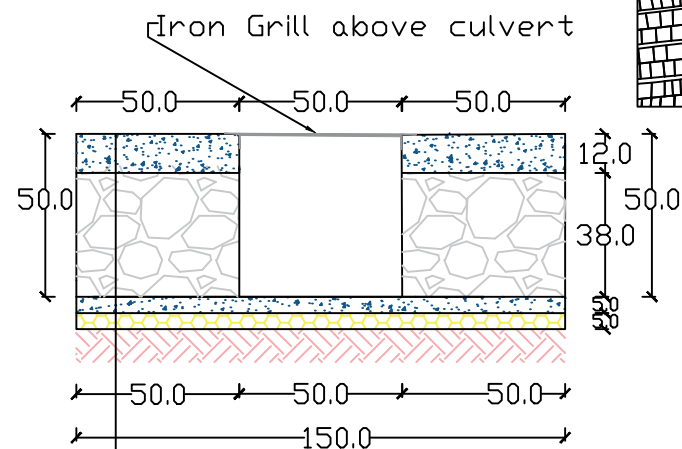
Detail A



PCC Wall M-200 T=15cm
PCC bed M-200 T=5cm
Crashed gravel T= 5cm
Subgrade compaction

PCC Wall M-200 T=10cm
PCC bed M-200 T=5cm
Crashed gravel T= 5cm
Subgrade compaction

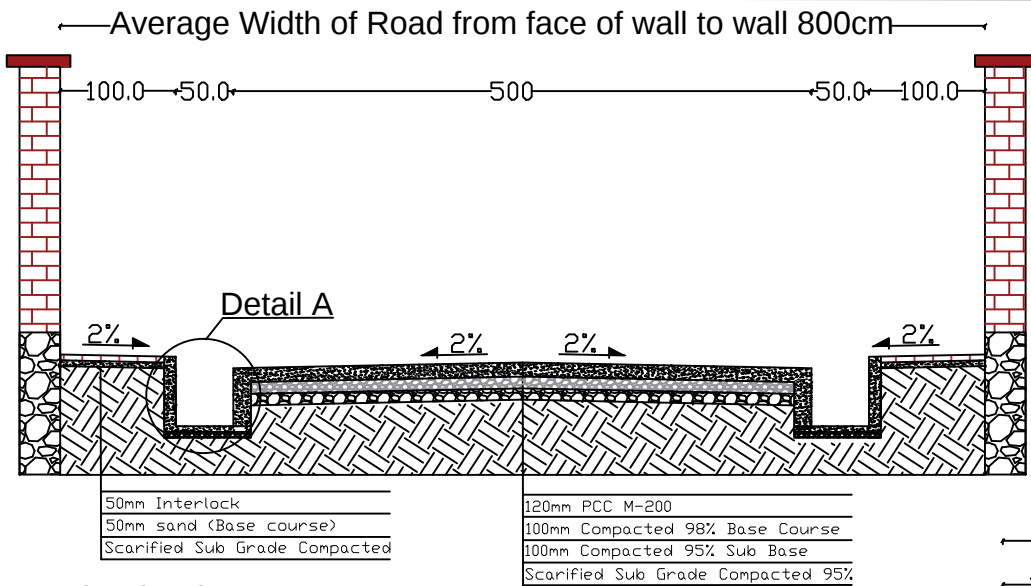
Detail B



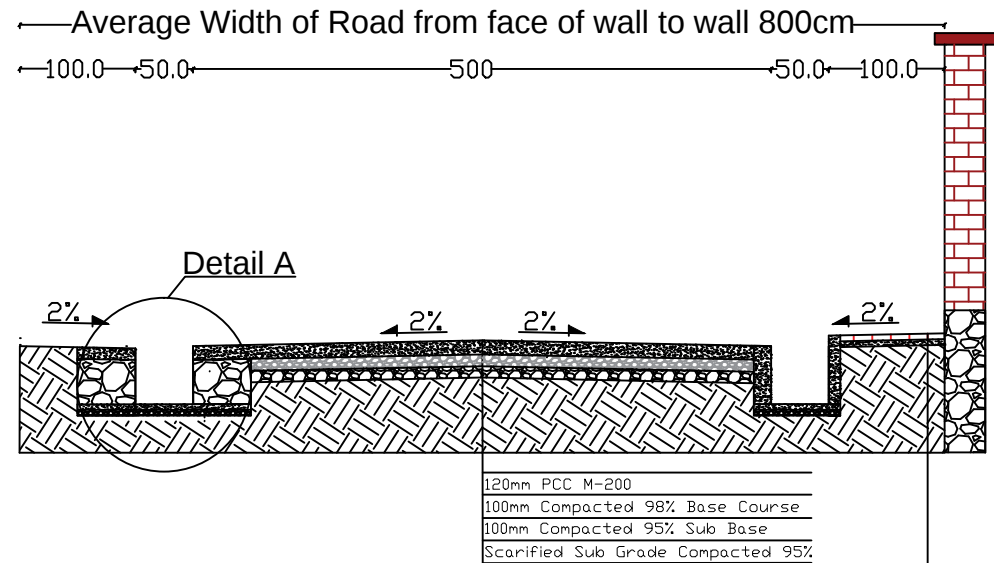
PCC M-200 T=12cm
Stone Masonry
PCC M-200 T= 5cm
Crashed gravel T= 5cm
Subgrade compaction



CLIENT		 UN HABITAT FOR A BETTER URBAN FUTURE	SHEET CONTENTS		NAMES		POSITION	SIGNATURE	DATE	SHEET NO.	REVISION	DATE
PROJECT			PROVINCE	KABUL	DESIGNED :	Eng .Mamur Agha "Salehi"	District Engineer			CROSS SECTION Sheet - 1/1	FIRST ISSUE	Oct 2018
TIT-1			District	17	DRAWN :	Eng .Rahmatullah "Rahimi"	District Engineer					
TIT-2			GA	30	CHECKED :	Eng .Majdood Rahman "Habib"	Sr. District Engineer			SCALE:	N.T.S	
TIT-3			UNH PROJECT NO.	NO.	APPROVED SR ENG:					AS SHOWN		

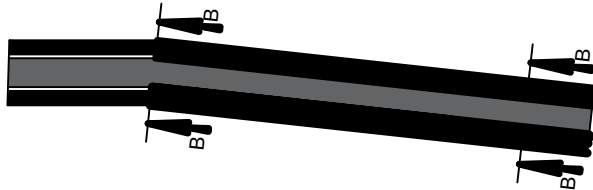


Section (A-A)
Street crosssection in normal lengths

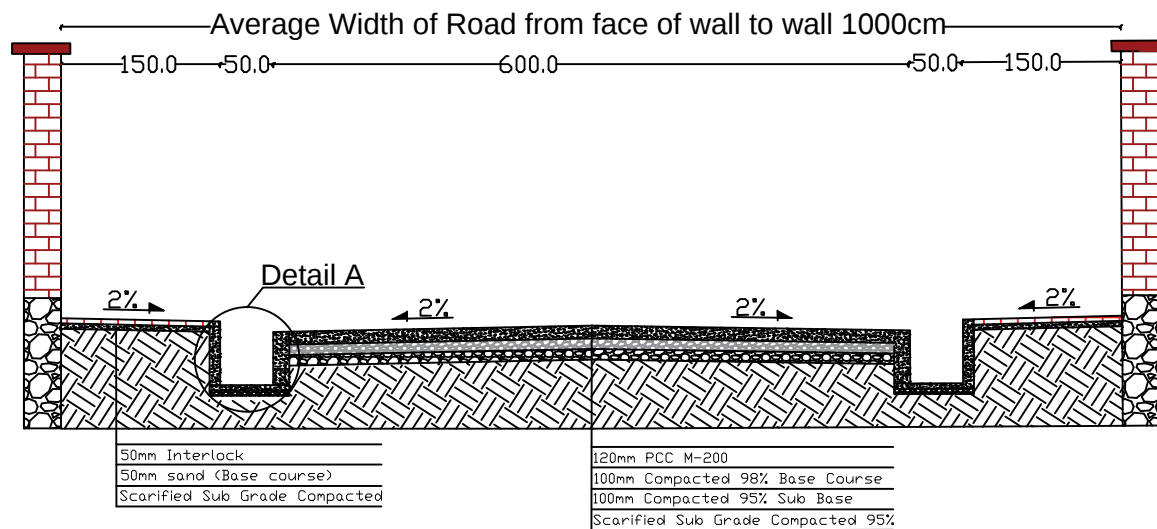


Section (B-B)
Street cross section on distribution lengths.

Plan of street#3
L=98m



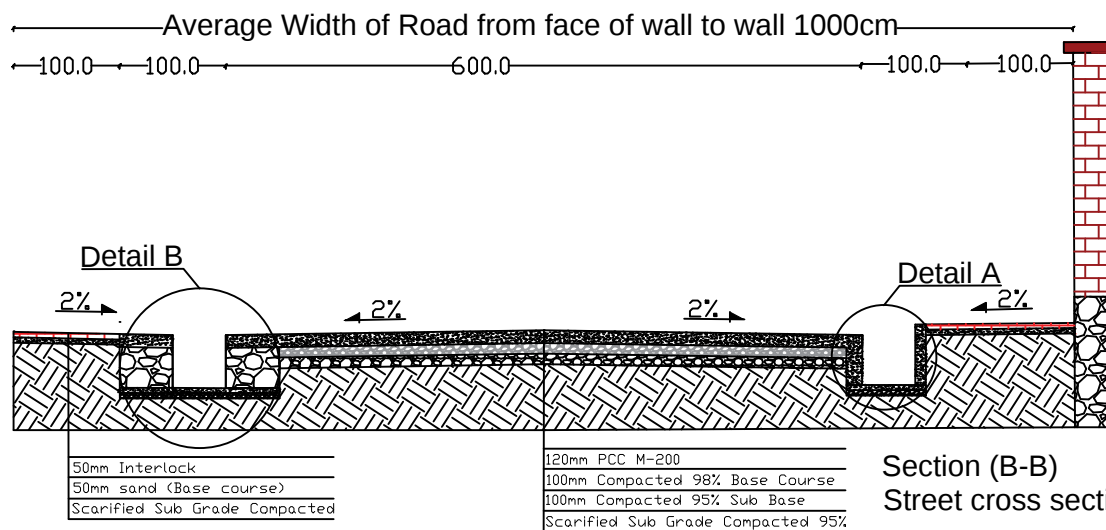
CLIENT		 	SHEET CONTENTS		NAMES		POSITION	SIGNATURE	DATE	SHEET NO.	REVISION	DATE	
PROJECT			Cross Section of St-3, GA-30	PROVINCE	KABUL	DESIGNED :	Eng .Mamur Agha "Salehi"	District Engineer			CROSS SECTION Sheet - 1/1	FIRST ISSUE	Oct 2018
TIT-1				District	17	DRAWN :	Eng .Rahmatullah "Rahimi"	District Engineer					
TIT-2				GA	30	CHECKED :	Eng .Majdood Rahman "Habib"	Sr. District Engineer					
TIT-3				UNH PROJECT NO.	NO.	APPROVED SR ENG:						SCALE:	N.T.S
										AS SHOWN			



Section (A-A)
Street cross section in normal lengths

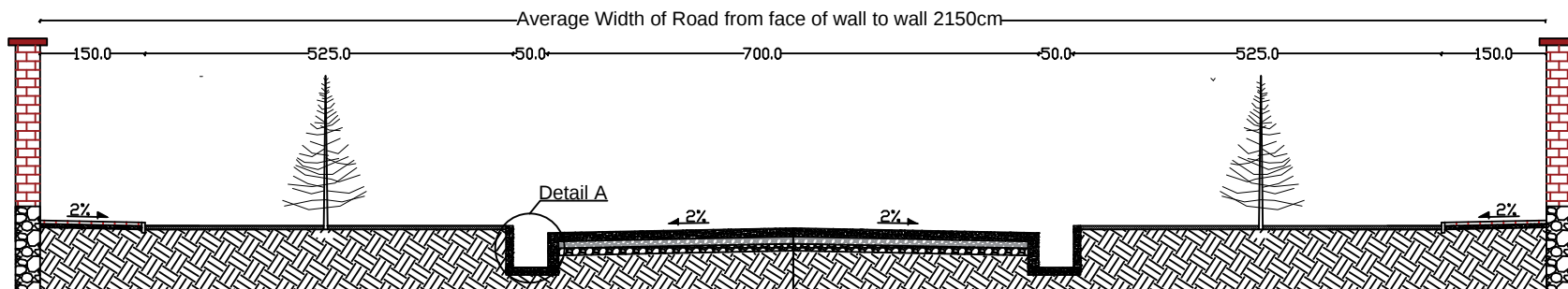


Plan of street#2
L=131m

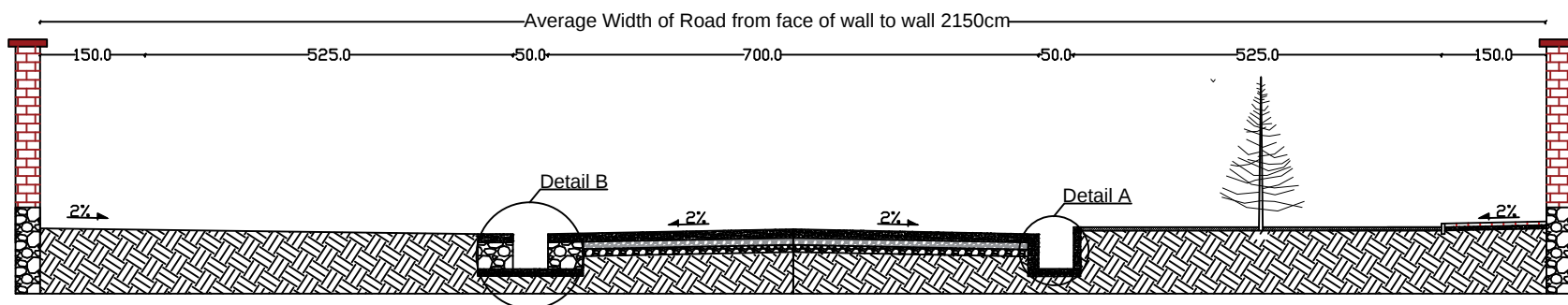


Section (B-B)
Street cross section on distribution lengths.

CLIENT		SHEET CONTENTS		NAMES		POSITION	SIGNATURE	DATE	SHEET NO.	REVISION	DATE
PROJECT		Corss Section of St-2, GA-30	PROVINCE	KABUL	DESIGNED :	Eng .Mamor Agha "Salehi"	District Engineer		CROSS SECTION Sheet - 1/1	FIRST ISSUE	Oct 2018
TIT-1			District	17	DRAWN :	Eng .Rahmatullah "Rahimi"	District Engineer				
TIT-2			GA	30	CHECKED :	Eng .Majdood Rahman "Habib"	Sr. District Engineer		SCALE:	N.T.S	
TIT-3			UNH PROJECT NO.	NO.	APPROVED SR ENG:				AS SHOWN		



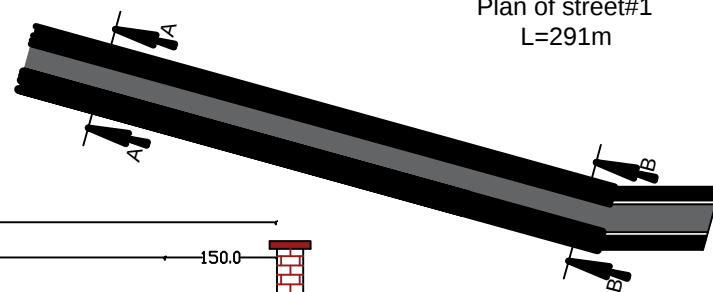
Section (A-A)
Street cross-section in normal lengths



Section (B-B)
Street cross section on distribution lengths.



Plan of street#1
L=291m



CLIENT		SHEET CONTENTS		NAMES		POSITION	SIGNATURE	DATE	SHEET NO.	REVISION	DATE
PROJECT		Cross Section of St-1, GA-30	PROVINCE	KABUL	DESIGNED :	Eng .Mamur Agha "Salehi"	District Engineer		CROSS SECTION Sheet - 1/1	FIRST ISSUE	Oct 2018
TIT-1			District	17	DRAWN :	Eng .Rahmatullah "Rahimi"	District Engineer				
TIT-2			GA	30	CHECKED :	Eng .Majdood Rahman "Habib"	Sr. District Engineer		SCALE:	N.T.S	
TIT-3			UNH PROJECT NO.	NO.	APPROVED SR ENG:				AS SHOWN		

City for All (CFA)

Cost Break Down for Drainage and Road Project

CIA Title:

Province

District:

Gozar:

Access Improvement (Pavement of street, pedestrian and drain construction)

Kabul

17.00

30.00

No	Item	Quantity	Unit	Unit cost	Total cost
				USD	USD
1	Mobilization, Demobilization and site cleaning تجهیز ساحه کاری با پاکاری ان	1.00	LS		
2	Leveling and 95% compaction of Sub-grade with all required activities %هموار کاری با 95 تپک کاری طبقه سب گرید سرک با امورات ایجابی آن	3143.35	m2		
3	Sub-base course (mix design included) for street with leveling, 95% compacting and all other required activities تهیه مواد سب بیس سرک با تهیه مکس دیزاین آن معه هموار کاری با 95% تپک کاری و دیگر امورات ایجابی آن	314.34	m3		
4	Base course (mix design included) for street with leveling, 98% compacting and all other required activities تهیه مواد بیس کورس (با تهیه مکس دیزاین) سرک معه هموار کاری آن با 98% تپک کاری و دیگر امورات ایجابی آن	314.34	m3		
5	PCC M-200 for street surface and drainage (mix design of concrete included) with casting and all other required activities تهیه کانکریت مارک 200 برای سرک و جویچه و ریخت آن در ساحه با تهیه مکس دیزاین آن و دیگر امورات ایجابی آن	557.48	m3		
6	Crash gravel (size 25mm) for base of drainages with leveling and all other required activities تهیه جغل کرش (سایز ۲۵ملمی) برای کف جویچه و هموار کاری آن با دیگر امورات ایجابی	40.46	m3		
7	Stone masonry of drainage M-200 with all required activities سنگ کاری جویچه ها از سنگ کوهی رخدار با مصالحه مارک 200 و دیگر امورات ایجابی آن	14.82	m3		
8	Curing (10 days) of street and drainage with all other required activities حد اقل 10 روز ابدهی سرک و جویچه با دیگر امورات ایجابی آن	5973.19	m2		
9	Shuttering (plywood) for streets and drainages with all required activities قالب بندی کناره های سرک و جویچه از تخته پلاي وود با دیگر امورات ایجابی آن	1715.74	m2		
10	Pointing of stone masonry drainage with all required activities هنگاف کاری سنگ کاری جویچه ها با مجوله و دیگر امورات ایجابی آن	29.64	m2		
11	Interlock 5cm for wearing of padestrian with all other required activities سنگ شانی پیاده رو ها از سنگ انترلاک 5 سانتی متر با تمام امورات ایجابی آن مطابق نقشه های موجوده	1414.50	m2		
Total					

Note: All Construction material must be approved by responsible Technical Person.

1. PCC must be according to mix design.
2. Water must be clean and drinkable.
3. Steel bar used for concrete joints must be smooth fubricated according to design and free from corrosion.
4. Expension Joints according to the joint layout.
5. Contraction joints according to the joint layout.
6. Construction joints according to the joint layout.
7. All Joints must be filled by bitumen mastic.
8. Only slump tests are included.



CTU47

CTU30

CTU16

CTU28

بلبرک بڈھو ریسٹ مراد