

5 Details of Soil Investigation Quantities at the Proposed Study Pedestrian Underpasses

of Pit (test) Test of G. Water Sample (test/set) Ground Water Sampling (hole) Ground
Water
Leveling
Measurement
(hole) Test of T.-Th.-walled Laboratory Sample test/set) 이걸 Sampling (set) 21 Laboratory Test of SPT Sample (test/set) of Pressure Meter Test (test) Numbers of SPT (test) 240 240 2222 Numb- Boring er of Total Boring Length Hole (m) 240 240 2 ន 24 Name of Roundabout J. 9. Majaz A' Sughra J-12: Asrar Bani Sa'd J-10: Khor A' Sivabi Performed total
Proposed total - S: A' Tharmad U-6: A' Suweig J-7: Al Khadra 2: Al Billah - 3: A' Tareef - 4: Al Qarat J- I: Barka U-8: Oarih

Summary of Details for Soil Investigation Quantities at the Proposed Study Pedestrian Underpasses

SPT: Standard Penetration Test

Details of Soil Investigation Quantities at the Proposed Study Pedestrian Underpasses (1/3)

LOCATION: F/U-1: Darks	1/C-7:	Dal K											
	Depth	SPT	Depth SPT Depth Position Laboratory Tr	Laboratory	Thin-walled	hin-walled Laboratory	Ground	Ground	Ground Laboratory	Location (di	stance fron	Location (distance from the below center) (m)	inter) (m)
Bore Hole	of	(fest)	of (test) of Pressure Test of SPT	Test of SPT		Tube Test of Th Water	Water	Water	Test of	Center of Existing R/A Existing Highway Center	sting R/A	Existing Hig	way Center
or Test Pit Boring	Boring		Meter Test	Sample	Sampling	tube Sample		Sampling	Level Sampling G. Water	to Al Agr to Muscat	o Muscat	01	to sea
	(m)		(m)	(test/set)	(set)	(test/set)	Measure.	(hole)	(test/set)			mountain	
Br-P/U1-1	10	10			0	0					35		. 23
Br-P/U1-2	01	10									35	26	

Location: P/U-2: Al Billah	P/U-2: A	I Bill	ıp qı										
	Depth	SPT	Depth Positio	Depth SPT Depth Position Laboratory Thin-walled Laboratory	Thin-walled	Laboratory	Ground	Ground	Ground Laboratory	Location (distance from the below center) (m)	stance fron	the below c	nter) (m)
Bore Hole	<u>ှ</u>	(test)	of Pressure	of (test) of Pressure Test of SPT		Tube Test of Th.	Vater	Water Test of		Center of Existing R/A Existing Highway C	sting R/A	Existing Hig	way Center
or Test Pit Boring	Boring		Meter Test	Meter Test Sample	93	sampling tube Sample Level Sampling G. Water	Level	Sampling	G. Water	to Al Agr to Muscat	o Muscat	to	to sea
	(m)		(m)	(test/set)	(set)	(test/set)	Measure.	(hole)	(test/set)			mountain	
Br-P/U2-1	10	10			0.0	0	-1				104		31
Br-P/U2-2	- 10	10	:								104	24	

Location: P/U-3: A' Tarecf	P/U 3:	A. Tar	eef										
	Depth	SPT	Depth SPT Depth Position Laboratory Thi	Laboratory	Thin-walled	in-walled Laboratory Ground	Ground	Ground	Ground Laboratory		distance fron	Location (distance from the below center) (1	enter) (m)
Bore Hole	of	(test)	Bore Hole of (test) of Pressure Test of SPT	Test of SPT		Tube Test of Th Water Water	Water	Water	Test of	Center of Ex	sisting R/A	Center of Existing R/A Existing Highway Cente	hway Center
or Test Pit Boring	Boring		Meter Test	Sample S:	Sampling	ampling tube Sample Level Sampling G. Water	Level	Sampling	G. Water	to Al Agr to Muscat	to Muscat	ខ	to sea
	Œ	1 1	(m)	(test/set)	(set)	(test/set)	Measure.	Measure. (hole)	(test/set)			mountain	
Br-P/U3-1	01	10			0	0	1				50		3.1
Br-P/U3-2	10	10					2 to 1 to 2 to 2 to 2 to 2 to 2 to 2 to				50	33	
									477	A			

Bore Hole of (test) of Pressure Test of SPT	h Position Pressure	Lahomatony									
	receire		Thin-walled	Thin-walled Laboratory Ground	Ground	Ground	Ground Laboratory		distance fron	Location (distance from the below center) (m)	nter) (m)
		Test of SPT		Tube Test of Th Water	Water	Water	Test of	Center of Ex	cisting R/A	Test of Center of Existing R/A Existing Highway Center	way Center
or Test Pit Boring Mete	Meter Test	Sample	Sampling	Sampling tube Sample Level Sampling G. Water to Al Agr to Muscat	Level	Sampling	G. Water	to Al Agr	to Muscat	to	to sea
(m) (1)	(u)	(test/set)	(set)	(test/set)	(test/set) Measure. (hole)	(hole)	(test/set)			mountain	
Br-P/U4-1 10 10			0 0	0	1 1				. 31		26
Br-P/U4-2 10 10					·				31	25	

Details of Soil Investigation Quantities at the Proposed Study Pedestrian Underpasses (2/3)

1	r alte		T	
- anton (*	chway Cen to sea	33		
The leaf only	Existing His	mountain	7.1	Į.
	Center of Existing R/A Existing Highway Center to Al Aqr to Muscat to			Ē
	Center of E	-	7.5	31
		(test/set)	1	
	Ground Water Sampling	(hole)	I	
	Ground Water Level	Measure.	-	
	Laboratory Ground Test of Th Water tube Sample Level	(test/set)	0	
	Thin-walled Tube Sampling	(set)	0	
	4. J-4	(test/set)		
mad	Depth SPT Depth Position Laboratory Thin-walled Laboratory of (test) of Pressure Test of SPT Tube Test of The Sample Sample	(m)		
'Thar	SPT D		10	10
P/U-5: /	Depth of Roring	Ê	01	10
Location: P/U-5: A Tharmad	Bore Hole of	W - 100 4 10	Br-P/US-1	Br-P/US-2

Location P/U-6: A' Suweig	P/U-6:	A. Su	veig	•						
	4000	Las	There's Cort Danes Decision I showtood Th	Tohomitory	Thin walled	in walled Laboratory Ground	Ground	Ground	Laboratory	Laboratory Location (distance from the below center) (m)
	ndori	7 70	ישואט זי ושלפטן	TO TO TO TO THE TOTAL OF THE TO	1	10000	Motor	Water	Therefore	Center of Existing R/A Existing Highway Center
Bore Hole	ö	(£63)	Bore Hole of (test) of Pressure 1 est of 3P1	Lest of SP	÷,	LEST OF THE WATER	74 G.C.	, cr.		
Ar Test Dir Boring	Doring		Mater Test	Sample	0,	sampling tube Sample Level Sampling	Ľeve]	Sampling	G. Water	G. Water to Al Agr to Museau to act
1 1 5	200				٠.	(+0.4(00)	OTITION (400) (100)	(6)04	(test/set)	mountain
	<u>E</u>		(m)	(test/set)	(361)	(ובאת אבר)	IVICABULE.	(212)		20
1 7 VO "O					 □	0	1			27
Dr-F/Co-1	2	21			,		-			10
R-D/116.2	10	2								, , , , , , , , , , , , , , , , , , , ,
7-00-1	,	<u>.</u>								

Location:	P/U-7	Al Kh	Location: P/U-7: Al Khadra						
Bore Hole of (test) or Test Pit Boring (m)	Depth of Boring (m)	SPT (test)	Depth Position of Pressure Meter Test (m)	Depth SPT Depth Position Laboratory Thin of (test) of Pressure Test of SPT T Boring Meter Test Sample San (m) (test/set) (Thin-walled Tube Sampling (set)	n-walled Laboratory Ground Ground Tube Test of Th Water Water ampling tube Sample Level Sampling (set) (test/set) Measure. (hole)	Ground Water Sampling (hole)	Laboratory Test of G. Water (test/set)	Location (distance from the below center) (m) Center of Existing R/A Existing Highway Center to Al Aqr to Muscat to to to sea
- C. VC 10	٤	É			=	0	1	-	78
1-/0/4-10			1						78 26
Br-P/U7-2	10	2							

	er) (m) av Center to sea	31		
	Location (distance from the below center) (m) Center of Existing R/A Existing Highway Center to Al Aqr to Muscat to contain to sea mountain		25	
	Thin-walled Laboratory Ground Ground Laboratory Location (distance from Tube Test of Test of Test of Test of Sampling G. Water Sampling G. Water G. Water G. Water Tot of Al Agr to Muscat Control of Muscat G. Water Tot of Al Agr to Muscat G. Water Tot of Al Agr to Muscat G. Water Tot of Al Agr Tot of Muscat G. Water Tot of Al Agr Tot of Muscat G. Water Tot of Al Agr Tot of Muscat G. Water Tot of Al Agr Tot of Muscat G. Water Tot of Al Agr Tot of Muscat G. Water Tot of Al Agr Tot of Muscat G. Water Tot of G. Water Tot of Muscat G. Water Tot of G. Water Tot o	2.5	25	
	Location (Center of E to Al Aqr			
	Laboratory Test of G. Water	(age ages)		
	Ground I Water Sampling			
	Ground Water Level	IVICASULIC.	1	
	Thin-walled Laboratory Ground Tube Test of Th. Water Sampling tube Sample Level	(Tespser)		
	Thin-walled Tube Sampling	(SCt.)		
	Laboratory Test of SPT Sample	(rest/set)		
	Bore Hole of (test) of Pressure Test of SPT or Test Pit Boring Meter Test	(m)		
Oarrib	SPT (test)		2 9	2
P/II-8-1	Depth of Boring	(ii)	10	2
Location P/II-8: Oarib	Bore Hole of (u		Br-P/Us-1	Hr. V N - 7

Details of Soil Investigation Quantities at the Proposed Study Pedestrian Underpasses (3/3)

	TARGE S	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1											
SPT Death P	Death	S	Depth SPT Depth Position Laboratory Thin-walled Laboratory Ground	Thin-walled	Laboratory	Cround	Ground	Ground Laboratory	Location (distance fron	Location (distance from the below center) (m)	enter) (m)	
(test) of Pre	of Pre	SST	Bore Hole of (test) of Pressure Test of SPT	Tube	Test of Th Water	Water	Water	Test of	Test of Center of Existing R/A Existing Highway C	xisting R/A	Existing Hig	nway Center	.:
or Test Pit Boring Moter Test	Mete	H.	st Sample	Sample Sampling tube Sample Level	tube Sample		Sampling	Sampling G. Water	to Al Agr to Muscat	to Muscat	\$	to sca	
(ii)		Ê	(test/set)	(set)	(test/set)		(hole)	(test/set)			mountain		
10				0	.0	1	1		08			25	
10									08		27		

	Ground Laboratory Location (distance from the below center) (m)	Water Test of Center of Existing R/A Existing Highway Center	Sampling G. Water to Al Agr to Muscat to to sea	(hole) (test/set) mountain	70 33	70 50
	_		Level Sar	Measure. (1	1	
	in-walled Laboratory Ground	Test of Th Water	Sampling tube Sample Level	(test/set)	0	
	Thin-walled	Tube	0,1	(set)	0	
	Laboratory	Test of SPT	Sample	(test/set)		
Location: P/U-10: Khor A' Siyabi	Depth SPT Depth Position Laboratory Thi	Bore Hole of (test) of Pressure Test of SPT	Meter Test	(H		
Khor.	SPTI	(test)			21	10
P/U-10:	Death	성	Boring	(E)	2	10
Location:		Bore Hole	or Test Pit Boring		Br-P/U10-1	Br-P/U10-2

Location: P/U-11: Liwa	P/U-11	Liwa			:							
	Death	SPT	Depth SPT Depth Position Laboratory Th	Laboratory	Thin-walled	un-walled Laboratory	Ground	Ground	Laboratory	Location (distance from the below center) (m)	rom the below cente	(m) (z
Bore Hole	6	(test)	Bore Hole of (test) of Pressure Test of SPT	Test of SPT		Test of Th Water	Water	Water	Test of	Center of Existing R/A Existing Highway Center	A Existing Highwa	v Center
or Test Pit Boring	Boring	,	Meter Test	Sample		tube Sample	Level	Sampling	G. Water	Sampling tube Sample Level Sampling G. Water to Al Agr to Muscat	2	to Sea
	E		(iii)	(test/set)		(test/set)	Measure.	(bole)	(test/set)		mountain	
Br-P/UII-1	2	2			0	2	1			50		28
Br-P/U11-2	91	21								- 20	25	

Location:	P/U-12	Asra	ocation: P/U-12: Ayrar Bani Sa'd									:	
	Depth	SPT	Depth SPT Depth Position Laboratory	Laboratory	L -	Thin-walled Laboratory	Ground	Ground	Laboratory	Location (distance from the below center) (m)	e from the b	clow cent	cr) (m)
Bore Hole	, ' 6	(test)	Bore Hole of (text) of Pressure Test of SPT	Test of SPT		Tube Test of Th	Water	Water	Test of	Center of Existing R/A Existing Highway (R/A Existi	ng Highw	ay Center
or Test Pit Boring	Boring	,	Meter Test	Sample		Sampling tube Sample Level		Sampling	G. Water	to Al Agr to Muscat	scat	Q	to sea
) E		(m)	(test/set)		(test/set)	- 61	(hole)	(test/set)		mon	mountain	
Br-P/U12-1	01	OI			0	0	Ţ			65			23
Br-P/U12-2	01	2								65		8	

6 Details of Soil Laboratory Test Quantities at the Proposed Study Roundabouts

	Numbers of			Soil Sample from SPT Sampler	s from SPT	Sampler		Numbers of		Ground Water Sample	mple
	Soil Sample	Natural	Specific	Grain size pH Test	pH Test	Water-soluble	Water-soluble	Ground	pH Test	Chloride	Sulfate
Name of Roundabout	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water	of Ground	Content	Content
	Sampler	Content	(test)	(test)	(test)	of Chloride	of Sulfate	Sample	Water	(test)	(test)
	(samble)	(test)				(test)	(test)	(sample)	(test)		
R/A-2: A' Naseem Garden	6	6	6	6	6	6	6	0	0	0	0
R/A-3: Barka	6	6	6	6	6	6	- 6	0	0	0	0
Junc- 5: Al Muladdah	6	5	6	6	э\ -	6	5	0	0	0	0
R/A-8: Al Khaburah	6	6	6	6	.6	6	6	0	0	0	0
R/A-10: Saham	6	6	. 6	6	6	6	6	0	0	0	0
R/A-12: Sohar	6	6	6	6	6	6	6	2	2	7	2
R/A-14: Falaj Al Qabail	6-	6	6	6	6	6	6	0	0	ဂ	0
[R/A-18: Al Agr	6	.6	6	6	6	6	6	2	2	2	2
									,		
Performed total	72	72	72	72	72	72	72	4	4	4	4
Proposed total	72	72	72	. 72	72	. 72	72	16	16	16	91
00.00								•	,		Ç

Summary of Details for Soil Laboratory Tests Quantities at the Proposed Study Roundabouts

Water-soluble Component of Chloride
 Test (include Chloride Content Test)
 Water-soluble Component of Sulfate
 Test (include Sulfate Content Test)

SPT: Standard Penetration Test

Details of Soil Laboratory Tests Quantities at the Proposed Study Roundabouts (1/4)

Location:	NA.	CA NE	KA-Z: A Nascem Garden										
	Dopt	Position	Depth Position Numbers of			Soil sample from SPT sampler	from SPT	sampler		Numbers of	Grou	Ground water sample	nplc
	ō	of SPT	Soil Sample	Natural	Specific	Grain size	pH Test	Water-soluble	Water-soluble		pH Test	Chloride	Sulfate
Bore Hole	Х	Sample	from SPT	Water	Gravity	Analysis	of Soil	Gravity Analysis of Soil Component Component	Component		of Ground	Content	Content
		(E)	Sampler	Content	(test)	(test)	(test)	of Chloride of Sulfate	of Sulfate	Sample	Water	(test)	(test)
			(samble)	(test)				(test)	(test)	(samble)	(test)		
Br-R/A2-1													
Br-R/A2-2							_						
Br-R/A2-3	3.5	2 7	3	3	m	3	m	'n	S	0	0	0	0
Br-R/A2-4													
Br-R/A2-5	L												
Br-R/A2-6	3 5	5 7	3	m	ĸ	ю	3	3	m				
Br-R/A2-7													
Br-R/A2-8													
Br-R/A2-9	3 5	5 7	3	3	m	8	3	m	ć	.0	0	0	0
Br-R/A2-10													
Br-R/A2-11													

Location:	R/A-3: Barka	ខ										ď.	
	Depth Position	Depth Position Numbers of			Soil sample from SPT sampler	from SPT	sampler		Numbers of		1 C	nplc	·
Bore Hole	of SPT Sample	Soil Sample from SPT	Natural Water	Specific	Specific Grain size pH Test N Gravity Analysis of Soil	pH Test of Soil	Water-soluble Component	ater-solubic	Ground Water	of Gro	Chloride Content	Sulfate Content	
	(H)	Sampler (sample)	Content (test)	(test)	(test)	(test)	of Chloride (test)	of Sulfate (test)	Sample (sample)	Water		(test)	
Br-R/A3-1													
Br-R/A3-2													
Br-R/A3-3	3 5 7	8	က	()	e e	4.0	(i)	£	0	0	0	0	
Br-R/A3-4					-								
Br-R/A3-5						-							
Br-R/A3-6	3 5 7	3.	3		5	3	ro.	ເລ					
Br-R/A3-7													
Br-R/A3-8													
Br-R/A3-9	3 5 7	3.	3	c	3	κņ	т	3	0	0	0	0	
Br-R/A3-10			-										
Br-R/A3-11		-											

SPT: Standard Penetration Test

- Water-soluble Component of Chlonde Test (include Chloride Content Test) - Water-soluble Component of Sulfate Test (include Sulfate Content Test)

Details of Soil Laboratory Tests Quantities at the Proposed Study Roundabouts (2/4)

Location:	Junc-5: Al Muladdah	laddah										
	Depth Position Numbers of	Numbers of			Soil sample from SPT sampler	from SPT	sampler	2	Numbers of	Grou	Ground water sample	plc
	of SPT	Soil Sample	Natural	Specific	Grain size	pH Test	Water-soluble	Water-soluble		pH Test	Chloride	Sulfate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	of Soil	Component	Gravity Analysis of Soil Component Component		of Ground	Content	Content
	(E)	Sampler	Content	(test)	(test)	(test)	of Chloride	of Sulfate	Sample	Water	(test)	(test)
		(sample)	(test)				(test)	(test)	(samble)	(test)		
Br-R/A5-1												
Br-R/A5-2			1									
Br-R/A5-3	3 5 7	3	<u>د</u>	3	'n	3	ĸ	3	0	0	0	0
Br-R/A5-4												
Br-R/A5-5										-		
Br-R/A5-6	3 5 7	3	ß	بې	3	3	es.	3				
Br-R/A5-7				-								
Br-R/A5-8	-											
Br-R/A5-9	3 5 7	3	3	3	3	3	Ó	3	0	0	.0	0
Br-R/A5-10							5					
Br-R/A5-11												

Location:	R/A-8: Al Khaburah	aburah										
	Depth Position	Depth Position Numbers of			Soil sample from SPT sampler	from SPT	sampler	·	Numbers of		Ground water sample	nple
	ofSPT	Soil Sample	Natural	Specific	Grain sizo	pH Test	Water-soluble	Water-soluble	Ground	pH Test	i i	Sulfate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	of Soil	Gravity Analysis of Soil Component Component	Component	Water	of Ground	Content	Content
	(E)	Sampler	Content	(test)	(test)	(test)	of Chloride	of Sulfate	Sample	Water		(test)
		(sample)	(test)				(test)	(test)	(samble)	(test)		
Br-R/A3-1												
Br-R/AS-2	-											
Br-R/AS-3	3 5 7	'n	"	e,	m	'n	en	(ń	0	0	0	၁
Br-R/A8-4												
Br-R/AS-5												
Br-R/A8-6	3.57	3	3	3	3	3	ťń	m				:
Br-R/AS-7												
Br-R/As-8	-											
Br-R/A8-9	3 5 7	3	3	3	c	33	3	က	0	0	၁	Q.
Br-R/A8-10			-									
Br-R/A8-11												

SPT: Standard Penetration Test

Details of Soil Laboratory Tests Quantities at the Proposed Study Roundabouts (3/4)

Location:	E/A-	R/A-10: Saham	æ											٠
	Dept	Position A	Depth Position Numbers of			Soil sample from SPT sampler	from SPT	sampler		Numbers of		Ground water sample	nple	
	ō	of SPT	Soil Sample	ľ	Ĺ	Gram size	pH Test	Specific Grain size pH Test Water-soluble Water-soluble	Water-soluble	Ground	pH Test	Chloride	Sulfate	:
Bore Hole	iš.	Sample	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water	of Ground	Content	Content	
9 3. 3.		Œ	Sampler (Sample)	Content (test)	(test)	(test) (test)	(test)	of Chloride (test)	of Sulfate	Sample (sample)	Water (test)	(test)	(test)	
B 2/410-1														
C 01 V/Q -Q	1	-												
DI-K/A 10-7														٠.
Br-R/A10-3	3 5	5 7	3	3	3	3	3	3	3	0	0	0	၁	
Br-R/A10-4	<u> </u>													
Br-R/A10-5														
Br-R/A10-6	3 5	5 7	8	3	3	ę,	ဗ	3	3					÷
Br-R/A10-7														
Br-R/A10-8														
Br-R/A10-9	3 5	5 7	3	3	3	3	3	3	3	0	0	0	0	
Br-R/A10-10														
Br-R/A10-11	_													

Location:	R/A-12: Sohar								:	:			
3	Depth Position Numbers of	Numbers of		L.	Soil sample from SPT sampler	from SPT	sampler		Jo szaquinn	Grou	Ground water sample	npie	
	of SPT	Soil Sample Natural	Natural	Specific	Grain size	pH Test	Water-solub	Water-soluble	Ground	pH Test	Chloride	Sulfate	
Bore Hole	Sample	from SPT	Water	Gravity	Gravity Analysis	of Soil	Component	Component	Water	of Ground	Content	Content	
	(m)	Sampler	Content	(test)	(test)	(test)	of Chloride	of Sulfate	Sample	Water	(test)	(test)	
		(sample)	(test)				(test)	(test)	(samble)	(test)			
Br-R/A12-1													
Br-R/A12-2													
Br-R/A12-3	3 5 7	3	3	3	3	S	3	3	0	0	0	0	
Br-R/A12-4									1				
Br-R/A12-5											ł		
Br-R/A12-6	3 5 7	£.	3	3	3	3	3	3	1	1	1	-4	
Br-R/A12-7											• •		
Br-R/A12-8	3 5 7	3	3	3	3	3	3	3			•		
Br-R/A12-9									1	1	1	_	
Br-R/A12-10													
Br-R/A12-11													

SPT: Standard Penetration Test

Details of Soil Laboratory Tests Quantities at the Proposed Study Roundabouts (4/4)

Location:	R/A-14: Falaj Al Oabail	Al Oabail										
	Depth Position Numbers of	Numbers of			Soil sample from SPT sampler	from SPT	sampler		Numbers of			31 c
	of SPT	Soil Sample	Natural	Specific	Grain size	pH Test	Water-soluble	Water-soluble	Ground	pH Test		Sulfate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water	of Ground	Content	Content
	(E)	Sampler	Content	(test)	(test)	(test)	(test) (test) of Chloride of Sulfate Sample	of Sulfate	Sample	Water		(test)
		(sample)	(test)				(test)	(1681)	(Sampic)	(1651)		
Br-R/A14-1												
Br-R/A14-2												
Br-R/A14-3	3 5 7	0	3	5	8	3.	3.	3	. 0	0	0	0
Br-R/A14-4												
Br-R/A14-5												
Br-R/A14-6 3	3 5 7	3	es.		e,	3	3	3				
Br-R/A14-7												
Br-R/A14-8												
Br-R/A14-9	3 5 7	'n	(")	3.	3	3	ŝ	(A)	0	٥	0	၁
Br-R/A14-10												
Br-R/A14-11	-								-			

Location:	R/A-18: Al Agr	AAC											
	Depth 1	osition	Depth Position Numbers of		- "	Soil sample from SPT sampler	from SPT	sampler		Numbers of		Ground water sample	mple
	of SPT	£.	Soil Sample	Natural	Specific	Grain size	pH Test	Specific Grain size pH Test Water-soluble Water-soluble Ground	Water-soluble	Ground	pH Test	Chloride	Sulfate
Bore Hole	Sample	ple	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water	of Ground	~	Content
		[E	Sampler	Content	(test)	(test)	(test)	of Chloride	of Sulfate	Sample	Water	(test)	(test)
			(sample)	(test)				(test) (test)	(test)	(sample)	(test)		
Br-R/ATS-T													
Br-R/A18-2		-											
Br-R/A18-3	3 5	7	3	3	3	3	3	Ġ	3	1	1	1	
Br-R/A184													
Br-R/A18-5		-											
Br-R/A18-6													
Br-R/A18-7													
Br-R/A18-8 3 5	3.5	7	3	'n	3	3	ć	3.	3				
Br-R/A18-9 3	S	7	.3:	3	æ	3	3	3	3	1		-1	
Br-R/A18-10								:				Ž.	
Br-R/A18-11													

SPT: Standard Penetration Test

7 Details of Soil Laboratory Test Quantities at the Proposed Study Pedestrian Underpasses

				,		21 21 22		N		Crown Water Comple	mala
	Numbers of			Soll Sample from Sr 1 Sample:	LIOIN OF L	Sampier		ייי מונייייייייייייייייייייייייייייייייי		200	
	Soil Sample	Natural	Specific	Grain size	pH Test	Water-soluble	Specific Grain size pH Test Water-soluble Water-soluble	Ground	pH Test	Chloride	Sulfate
Name of Roundabout	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water	of Ground	Content	Content
	Sampler	Content	(test)	(test)	(test)	of Chloride		Sample	Water	(test)	(test)
	(sample)	(test)				(test)	(test)	(sample)	(test)		
70-1: Barka											
7U-2: Al Billah											
7U-3: A' Tarcer		•									
√U- 4: Al Oarat											
7U-5: A' Tharmad								1	1	1	-1
7U-6: A' Suweig											
7. Al Khadra								1	1	1	1
/U-8: Qarih											
7U-9: Maiaz A' Sughra				12				ı	-	-1	1
/U-10: Khor A' Siyabi									*.		
7/U-11: Liwa											
/U-12: Asrar Bani Sa'd								,			
							-				
Performed total								: 33	3	. 3	3
Proposed total								0	0	0	O
Balance								+ Ω	+3	+3	+3
The same of the sa											

Summary of Details for Soil Laboratory Test Quantities at the Proposed Study Pedestrian Underpasses

- Water-soluble Component of Chloride Test (include Chloride Content Test) - Water-soluble Component of Sulfate Test (include Sulfate Content Test)

SPT: Standard Penetration Test

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Details of Soil Laboratory Test Quantities at the Proposed Study Pedestrian Underpasses (1/3)

Location:	P/U-1: Barka		47.14	100 TANA								
	Depth Position	Numbers of	2.		Soil sample from SPT sampler	from SPT	sampler		Numbers of	Grou	Ground water sample	pole
	of SPT	Soil Sample N	Natural	Specific	Grain size pH Test	pH Test	Water-soluble	Water-soluble Water-soluble	Ground	pH Test	Chloride	Sulfate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water	of Ground	Content	Content
	(a	Sampler	Content	(test)	(test)	(test)	of Chloride	of Sulfate	Sample	Water	(test)	(test)
		(samble)	(test)				(test)	(test)	(sample)	(test)		
Br-P/U1-1												
Br-P/U1-2					<u> </u>							

Location:	ocation: P/U-2: Al Billah	ų										
	Depth Position	Numbers of			Soil sample from SPT sampler	from SPT	sampler	I.	Numbers of	Grou	Ground water sampl	aple
	of SPT	Soil Sample Natural	Natura	Specific	Grain size	pH Test	Water-soluble	Vater-soluble Water-soluble	Ground	pH Test	Chloride	Sulfate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	of Soil	Component		Water	of Ground	Content	Content
	æ	Sampler	Content	(test)	(test)	(test)	of Chloride	of Sulfate	Sample	Water	(test)	(test)
		(sample)	(test)		-		(test)	(test)	(sample)	(test)		
Br-P/U2-1												
Br-P/U2-2					:							

		1										
<u> </u>	Appth Position Numbers of	Numbers of		Ø	Soil sample from SPT sampler	from SPT	sampler		Ź	Grou	nd water sam	plc
	of SPT	Soil Sample Natural S	Natura	pecific	Grain size pH Test	pH Test	Water-soluble Water-soluble	Water-soluble	Ground	pH Test	Test Chloride Su	Sulfate
Bore Hole S	Sample	from SPT	Water	Gravity		of Soil	Analysis of Soil Component	Component	Water	of Ground Content	Content	Content
	æ	Sampler	Content	(test)	(test)	(test)	of Chloride	of Sulfate	Sample	Water	(test)	(test)
		(sample)	(test)				(test)	(test)	(sample)	(test)		
Br-P/U3-1												
Br-P/U3-2												

1							·
	nple	Sulfate	Content	(test)			
	Ground water sample	Chloride	Content	(test)			
	Grou	pH Test	of Ground	Water	(test)		
	Numbers of	Ground	Water	Sample	(samble)		
		Water-soluble	Component	of Sulfate	(test)		
	sampler	Water-soluble Water-soluble	Component	of Chloride	(test)		
	Soil sample from SPT sampler	Grain size pH Test	of Soil	(test)			
	Soil sample	Grain size	Analysis of Soil	(test)			
		Specific (Gravity	(test)			
		Natural	Water	O	(test)		
	Numbers of	Soil Sample Natural	from SPT	Sampler	(samble)		
Location: P/U-4: Al Qarat	Depth Position Numbers of	of SPT		(B)			
Location:			Bore Hole			Br-P/U4-1	Br-P/U4-2

SPT: Standard Penetration Test

Details of Soil Laboratory Test Quantities at the Proposed Study Pedestrian Underpasses (2/3)

P/U-5: A' Tharmad

Location:

	Depth Position	Numbers of			Soil sample from SPT sampler	from SPT	sampler		Numbers of		Ground water sample	npic
	of SPT	03	Natural	Specific	Grain size	<u> </u>	Water-soluble	Water-soluble Water-soluble	Ground	pH Test	Chloride	Sultate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water	of Ground	Content	Content
	(m)	Sampler	Content	(test)	(test)	(test)	of Chloride	of Sulfate	Sample (comple)	Water	(test)	(test)
		(Statistic)	(1551)				(16-31)	(1671)	(Sauther)	7557		
Br-P/U5-1									Ĭ		, ii	Ī
Br-P/U5-2												
Location:	P/U-6: A' Suweiq	ciq	:									
	Depth Position	Numbers of			Soil sample from SPT sampler	from SPT	sampler		Numbers of		Ground water sample	nple
	of SPT	9,	Natural	Specific	Grain size	pH Test	Water-soluble	Water-soluble Water-soluble	Ground	pH Test	Chloride	Sulfate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water	of Ground	Content	Content
	(m)	Sampler (sample)	Content (test)	(test)	(test)	(test)	ot Chlonde (test)	of Sulfate (test)	Sample (sample)	Water (test)	(test)	(test)
Br-P/06-1												
Br-P/U6-2												
						1						
Location:	P/U-7: Al Khadra	dra										
	Depth Position Numbers of	Numbers of			Soil sample from SPT sampler	from SPT	sampler		Numbers of		Ground water sample	nple
	of SPT	Soil Sample	Natural		Grain size	_	Water-soluble	Water-soluble Water-soluble	Ground	pH Test	Chloride	Sulfate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water	of Ground	Content	Content
	a a	Sampler (sample)	Content (test)	(test)	(test)	(test)	of Chloride (test)	of Sulfate (test)	Sample (sample)	Water (test)	(test)	(test)
Br-P/U7-1									-			, , , , , , , , , , , , , , , , , , ,
Br-P/U7-2					-1			4				
Location:	P/U-S: Qarih				James B. James			Sandara Taylor B				
	Depth Position	Numbers of			Soil sample from SPI	L 1	sampler		Numbers of		Ground water sample	npic
	of SPT	W		Specific	Grain size	pH Test	Water-soluble	Water-soluble Water-soluble	Ground	pH Test	Chloride	Sulfate
Bore Hole	Sample	from SPT		Gravity	Analysis	of Soil	Component	Component	Water	of Ground	Content	Content
	<u>E</u>	Sampler (sample)	Content (test)	(test)	(test)	(test)	of Chloride (test)	of Sulfate (test)	Sample (sample)	Water (test)	(test)	(test)
Br-P/US-1												
Br-P/U8-2					:							
						**************************************	¥			-	Average Annual Contract of the	~

- Water-soluble Component of Chloride Test (include Chloride Content Test) - Water-soluble Component of Sulfate Test (include Sulfate Content Test)

SPT: Standard Penetration Test

Details of Soil Laboratory Test Quantities at the Proposed Study Pedestrian Underpasses (3/3)

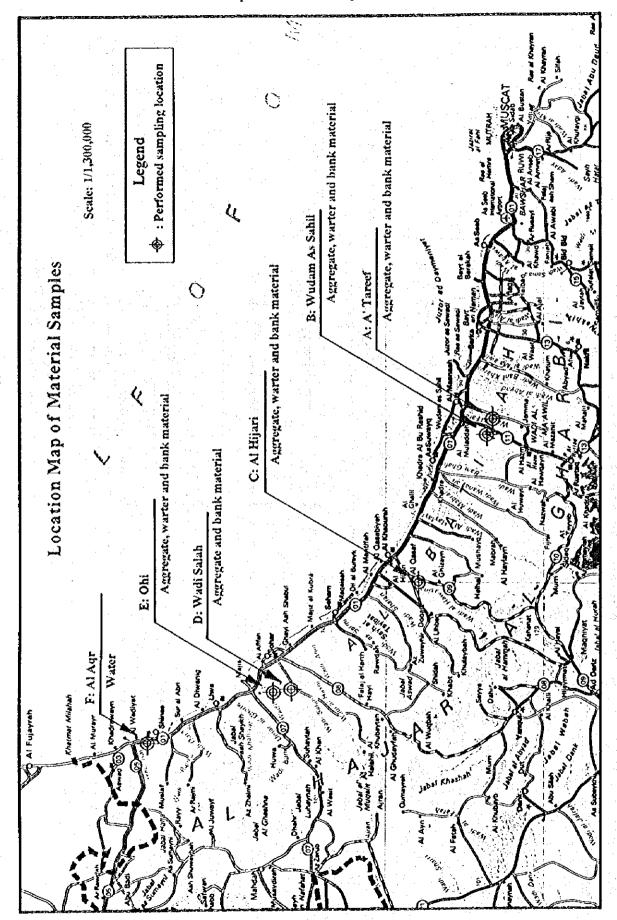
of Soil sample from SPT sampler Numbers of Ground water sample from SPT sampler Numbers of Ground water sample from SPT sampler Numbers of Ground water sample from Specific Grain size pH Test Water-soluble Ground Water Chloride of Soil Component Component Water Ground Content (test)	Location	ocation: P/U-9: Majaz A' Suchra	A' Suchra				•						
of SPT Soil Sample Natural Specific Grain size pH Test Water-soluble Water-soluble Ground pH Test Chloride Sample from SPT Water Gravity Analysis of Soil Component Component Sample Water (test)		Depth Position	Numbers of			Soil sample	from SPT			Numbers of	Crom	nd water sar	nplc
Sample from SPT Water Gravity Analysis of Soil Component Component Water of Ground Content (test) (test) (test) of Chloride of Sulfate Sample Water (test)		of SPT	Soil Sample		Specific	Grain size	pH Test	qn	Water-soluble	Ground	pH Test	Chloride	Sulfate
(m) Sampler Content (test) (test) of Chloride of Sulfate Sample Water (test) (test) (test) (test) (test) 1	Bore Hole	Sample	from SPT		Gravity	•		Component	Component	Water	of Ground	Content	Content
(test) (test) (test) (sample)	-	·(£)	Sampler	Content	(test)	(test)		of Chloride	of Sulfate	Sample	Water	(test)	(test)
Br-2/09-1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			(sample)	(test)				(test)	(test)	(sample)	(test)		
Br-P/09-2	Br-P/U9-1									- I	Ţ	1	1
	Br-P/U9-2												

Location:	ocation: P/U-10: Khor A' Siyabi	A' Sivabi										
	Depth Position	Numbers of			Soil sample	oil sample from SPT sampler	sampler		Numbers of	Grom	Ground water sample	oble
	TAS Jo	Soil Sample Natural	Natural	Specific	Gram size	Grain size pH Test	Water-soluble Water-soluble	Water-soluble	Ground	pH Test	Chloride	Sulfate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	Analysis of Soil	Component	Component	Water	of Ground	Content	Content
	(B)	Sampler	Content	(test		(test)	of Chloride	of Sulfate	Sample	Water	(test)	(test)
		(sample)	(test)				(test)	(test)	(sample)	(test)		
Br-P/U10-1												
Br-P/U10-2												

	nple	Sulfate	Content	(test)			
	Ground water sample	Chloride	Content	(test)	-		
		pH Test	of Ground	Water	(test)		
	Numbers of	Ground	Water	Sample	(samble)		
		Grain size pH Test Water-soluble Water-soluble	Component	of Sulfate	(test)		
	sampler	Water-soluble	Analysis of Soil Component	(test) of Chloride	(test)		
	soil sample from SPT sampler	pH Test	of Soil	(test)			
	Soil sample	Grain size					
		pecific	Gravity	(test)			
		Natural	Water	Content	(test)		
	Numbers of	Soil Sample	from SPT	Sampler	(sample)		
ocation: P/U-11: Liwa	Depth Position	of SPT	Sample	(m)			
Location:			Bore Hole			Br-2/011-1	Br-P/U11-2
						:	

Location:	ocation: P/U-12: Asrar Bani Sa'd	Bani Sa'd										
	Depth Position	Numbers of			Soil sample from SPT sampler	from SPT	sampler	1	Numbers of		Ground water sample	nple
-	of SPT	Soil Sample	Natural	Specific	Grain size	pH Test	Specific Grain size ph Test Water-soluble Water-soluble	Water-soluble	Ground	Ground pH Test Chloride	Chloride	Sulfate
Bore Hole	Sample	from SPT	Water	Gravity	Analysis	of Soil	Component	Component	Water		Content	Content
	Œ	Sampler	Content	(test)	(test)	(test)	(test) (test) (test) of Chloride o	~;	Sample		(test)	(test)
		(sample)	(test)				(test)	(test)	(sample)	(test)		
Br-P/U12-1												
Br-P/U12-2		*										

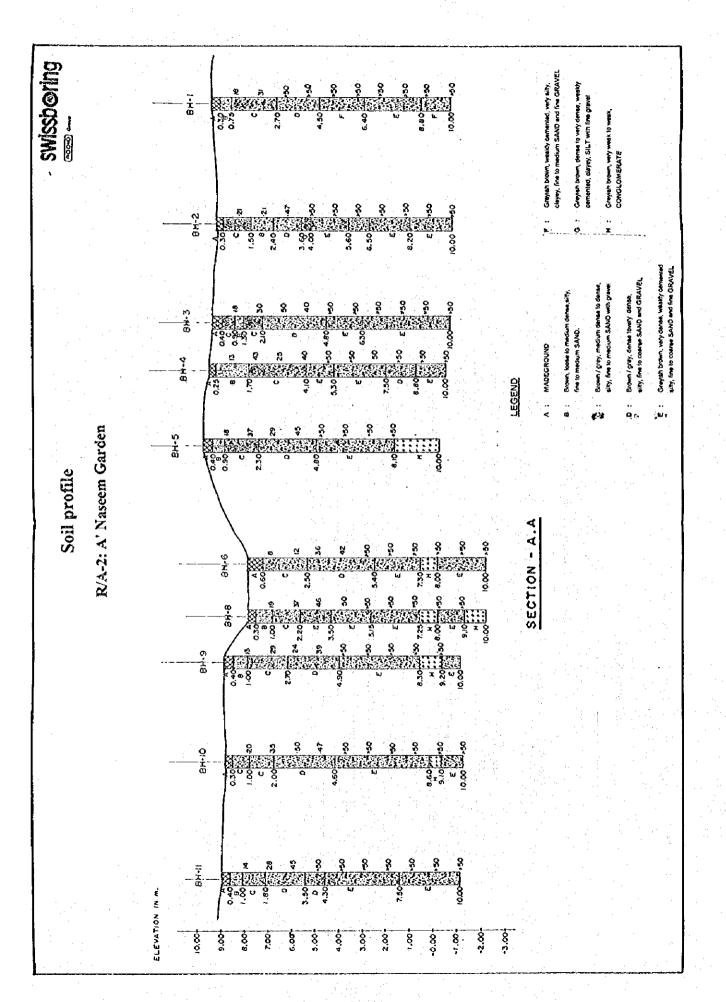
SPT: Standard Penetration Test

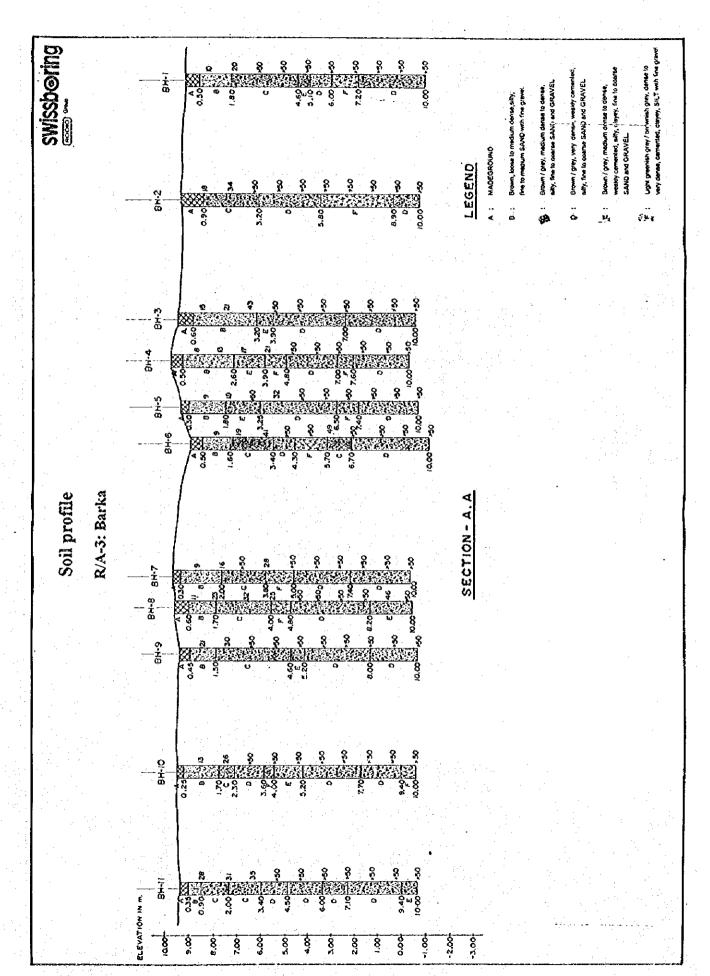


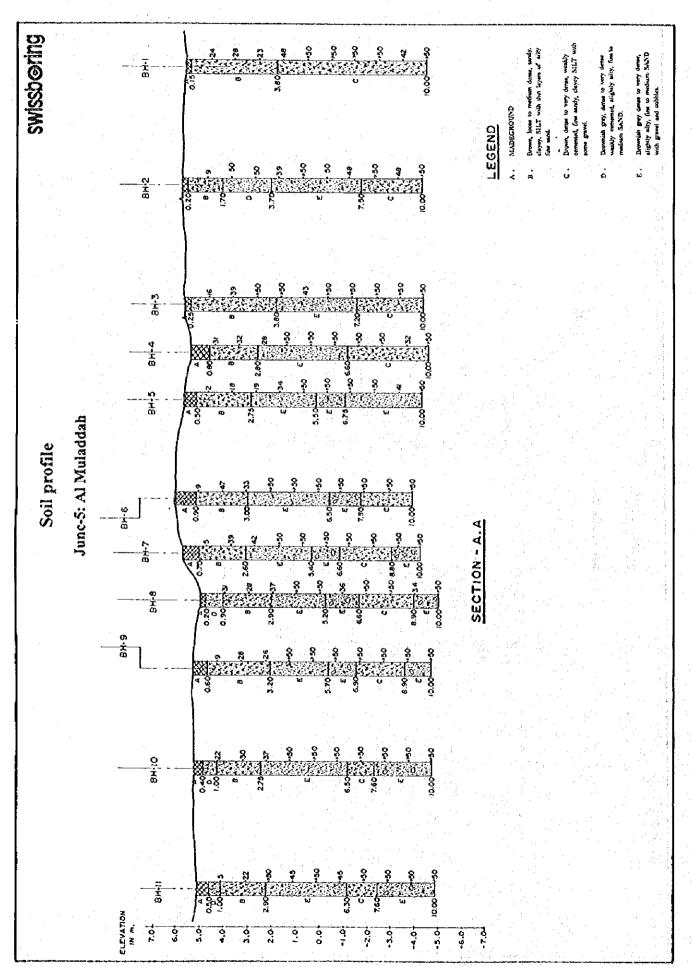
Partial Soil Conditions at the Four Proposed Study Roundabouts

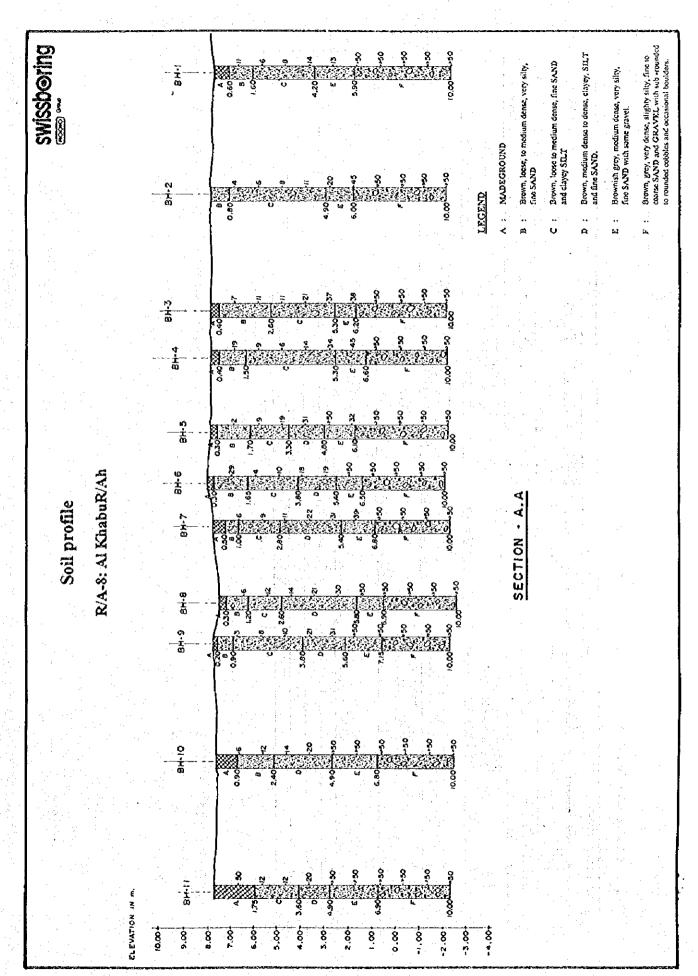
Partial Soil Conditions at the Four Proposed Study Roundabouts

_	T									ı
(0)	Density	Very dense	Very dense	Dense to very dense	Very dense	N.A.	N.A.	N.A.	N.A.	
Bearing layer (N value ≥ 50)	Depth	3.0 m - 5.0 m	3.0 m - 5.0 m	4.0 m - 6.0 m	5.0 m - 7.0 m	7.0 m - 9.0 m	N.A.	3.0 m - 5.0 m	N.A.	
Bearing lo	Soil conditions	Silty, fine to coarse SAND and fine GRAVEL	Silty, fine to coarse SAND and GRAVEL	Slightly silty, fine to medium SAND with gravel and cobbles	Slightly silty, fine to coarse SAND and GRAVEL with rounded cobbies and boulders 5.0 m - 7.0 m	N.A	N.A.	N.A.	Ϋ́	
(0)	Density	2.0 m - 4.0 m Dense to very dense	m dense to	Dense to very dense	4.0 m - 6.0 m Medium dense	N.A.	N.A.	N.A.	N.A.	
Bearing laver (N value ≥ 30)	Depth	2.0 m - 4.0 m	Mediu 2.0 m • 5.0 m dense	2.0 m - 4.0 m	4.0 m - 6.0 m	6.0 m - 8.0 m	N.A.	1.0 m - 4.0 m	NA	
Bearing la	Soil conditions	Silty, fine to coarse SAND and GRAVEL	Silv, fine to coarse SAND and GRAVEL	Weekly cemented, slightly silty. fine to medium SAND	Very silty, fine SAND with some gravel	ΥX	N.A.	N.A.	N.A.	
Name of roundabout		Silty, fine to co	R/A- 3 : Barka	Junc- S : Al Muladdah	R/A- 8 : Al Khaburah	R/A- 10 : Saham	R/A- 12 : Sohar	R/A- 14 : Falaj Al Qabail	R/A- 18 : Al Agr	









11 Partial Soil Conditions at the Four Proposed Study Pedestrian Underpasses

Name of roundabout	ndabout	Bearing la	ng laver (N value≥30)	(0)	Bearing la	Bearing layer (N value ≥ 50)	(0)
		Soil conditions	Depth	Density	Soil conditions	Depth	Density
P/U- 1 : Barka		. Y.Y.	A.Z	N.A.	Y.Y.	N.A.	N.A.
P/U-2 : Al Billah	lah	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
P/U-3 : A' Tareef	eef	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
P/U- 4 : Al Qarat	rat	Y.Y.	N.A.	N.A.	N.A.	N.A.	N.A.
P/U- S : A' Tharmad	ттад	Slightly silty, fine to medium SAND and GRAVEL with cobbles	2.0 m - 3.0 m Dense	Dense	Cemented, sandy, slightly clayer SILT with occasional fine gravel	3.0 m - 7.0 m	Dense to very dense
P/U- 6 : A' Suweig	<i>w</i> eiq	Slightly silty, fine to coarse SAND with fine gravel	5.0 m	Dense	Cemented, slightly silty, fine to medium SAND with fine gravel	6.0 m - 7.0 m	Very dense
P/U- 7 : Al Khadra	adra	to medium SAND with some gravel and occasional cobbles	3.0 m - 4.0 m	Dense	cemented, fine SAND and SILT with occasional fine gravel	3.0 m - 8.0 m	Dense to very dense
P/U- 8 : Qarih		Fine SAND and SILT	8.0 m	Medium dense	Weekly cemented, sandy	9.0 m	Dense to very dense
P/U- 9 : Majaz A' Sughra	: A' Sughra	N.A.	N.A.	NA	N.A.	N.A.	N.A.
P/U- 10 : Khor A' Sivabi	A' Sivabi	Z.A.	N.A.	N.A.	N.A.	N.A.	N.A.
P/U- 11 : Liwa		Z.A.	N.A.	N.A.	N.A.	N.A.	N.A.
P/U- 12: Asrar Bani Sa'd	Bani Sa'd	X.A.	Z.A.	N.A.	N.A.	Ä.A.	N.A.

Partial Soil Conditions at the Four Proposed Study Pedestrian Underpass locations

N.A.: Not available at the time of this reporting