



Lampiran 1. Data *Standard Penetration Test* (SPT)

		<b>SUB SURFACE EXPLORATION LOG</b> <b>ASTM D1586 – 11, SNI 4153-2008</b> DED Bandara Kulon Progo Yogyakarta														
<b>Client</b> : PT. Angkasa Pura I <b>Location</b> : Glagah <b>Easting</b> : 397818 m <b>Northing</b> : 9125420 m		<b>Date Commenced</b> : 21-Apr-17 <b>Date Completed</b> : 23-Apr-17 <b>Bore Master</b> : Aris <b>Field Engineer</b> : Hasan Tri Atmojo		<b>Weather</b> : Cloudy <b>Drilling Rig</b> : DM-01 <b>Core Diameter</b> : 73 mm <b>Water Depth</b> : - 3.2 m												
Depth (m)	Sample Type	USCS Classification	Graphic Log	Description	Field PP Test qu (kg/cm <sup>2</sup> )	N SPT		Unit Weight (kN/m <sup>3</sup> )	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	
						Depth (m)	N Value									Blow / cm
0																
1				Coarse SAND, very dark grey, moist, loose to medium dense												
2							18/30									
3				Fine SAND, dark grey, wet, medium dense												
4							12/30									
5				Coarse SAND, black, wet, medium to very dense												
6							19/30									
7				Coarse SAND w/ fine gravel, dark grey, wet, very dense												
8							85/23									
9				Fine GRAVEL w/ few coarse sand, dark grey, wet, very dense												
10							50/3									
11				Coarse SAND w/ coarse gravel, dark grey, wet, very dense												
12							50/8									
13							50/17									
14				end of drilling at 14.0 m												
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																

- Undisturbed Sample (UDS)
- Disturbed Sample (UDS)
- Mazier Sample
- Piston Sample
- PP - Pocket Penetrometer
- LL - Liquid Limit
- PL - Plastic Limit
- PI - Plasticity Index

Bore Hole :  
**DB - 01**



## SUB SURFACE EXPLORATION LOG ASTM D1586 – 11, SNI 4153-2008

DED Bandara Kulon Progo Yogyakarta



**Client** : PT. Angkasa Pura I  
**Location** : Glagah  
**Easting** : 397540 m  
**Northing** : 9125519 m

**Date Commenced** : 21-Apr-17  
**Date Completed** : 22-Apr-17  
**Bore Master** : Nanang  
**Field Engineer** : Yanuar Rifa'i

**Weather** : Cloudy  
**Drilling Rig** : DM-01  
**Core Diameter** : 73 mm  
**Water Depth** : -2.7 m

Depth (m)	Sample Type	USCS Classification	Graphic Log	Description	Field PP Test qu (kg/cm <sup>2</sup> )	N SPT		Unit Weight (kN/m <sup>3</sup> )	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	
						Depth (m)	N Value									Blow / cm
0						10										
1						20										
2				Fine SAND, dark grey, dry, loose		30										
3						40										
4						50										
5						9/30										
6				Fine SAND, dark grey, wet, loose to dense		50/19										
7						50/25										
8						50/27										
9						50/27										
10				Fine SAND w/ fine gravel, dark grey, wet, dense		50/20										
11																
12				end of drilling at 12.0 m												
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																

- Undisturbed Sample (UDS)
- Disturbed Sample (UDS)
- Mazier Sample
- Piston Sample

- PP - Pocket Penetrometer
- LL - Liquid Limit
- PL - Plastic Limit
- PI - Plasticity Index

**Bore Hole :**  
**DB - 02**



## SUB SURFACE EXPLORATION LOG ASTM D1586 – 11, SNI 4153-2008

DED Bandara Kulon Progo Yogyakarta



**Client** : PT. Angkasa Pura I  
**Location** : Glagah  
**Easting** : 937246 m  
**Northing** : 9125626 m

**Date Commenced** : 23-Apr-17  
**Date Completed** : 24-Apr-17  
**Bore Master** : Nanang  
**Field Engineer** : Yanuar Rifa'i

**Weather** : Cloudy  
**Drilling Rig** : DM-01  
**Core Diameter** : 73 mm  
**Water Depth** : - 3.77 m

Depth (m)	Sample Type	USCS Classification	Graphic Log	Description	Field PP Test qu (kg/cm <sup>2</sup> )	N SPT		Unit Weight (kN/m <sup>3</sup> )	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	
						Depth (m)	N Value									Blow / cm
0																
1																
2				Fine SAND, dark grey, dry, loose			11/30									
3																
4							14/30									
5																
6				Fine SAND, dark grey, wet, medium dense			18/30									
7																
8							50/30									
9																
10				Fine SAND w/ some gravel, dark grey, wet, dense			50/18									
11																
12				Medium GRAVEL w/ some fine sand, dark grey, very dense			50/15									
13																
14				end of drilling at 14.0 m			50/17									
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																

- Undisturbed Sample (UDS)
- Disturbed Sample (UDS)
- Mazier Sample
- Piston Sample

- PP - Pocket Penetrometer
- LL - Liquid Limit
- PL - Plastic Limit
- PI - Plasticity Index

**Bore Hole :**  
**DB - 03**

**Client** : PT. Angkasa Pura I  
**Location** : Glagah  
**Easting** : 396961 m  
**Northing** : 9125732 m

**Date Commenced** : 25-Apr-17  
**Date Completed** : 26-Apr-17  
**Bore Master** : Nanang  
**Field Engineer** : Yanuar Rifa'i

**Weather** : Cloudy  
**Drilling Rig** : DM-01  
**Core Diameter** : 73 mm  
**Water Depth** : -2.7 m

Depth (m)	Sample Type	USCS Classification	Graphic Log	Description	Field PP Test qu (kg/cm <sup>2</sup> )	N SPT		Unit Weight (kN/m <sup>3</sup> )	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	
						Depth (m)	N Value									Blow / cm
0						10										
1						20										
2				Fine SAND, dark grey, dry, loose		30										
3						40										
4						50										
5						10/30										
6				Fine SAND, dark grey, wet, medium dense to dense		7/30										
7						18/30										
8				Medium SAND w/ some medium gravel, dark grey, wet, very dense		50/17										
9						50/18										
10				Medium SAND w/ little gravel, dark grey, wet, very dense		50/15										
11						50/14										
12				Medium SAND w/ medium gravel, dark grey, wet, very dense												
13																
14				<i>end of drilling at 14.0 m</i>												
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																

- |                          |                          |
|--------------------------|--------------------------|
| Undisturbed Sample (UDS) | PP - Pocket Penetrometer |
| Disturbed Sample (UDS)   | LL - Liquid Limit        |
| Mazier Sample            | PL - Plastic Limit       |
| Piston Sample            | PI - Plasticity Index    |

Bore Hole :  
**DB - 04**



## SUB SURFACE EXPLORATION LOG ASTM D1586 – 11, SNI 4153-2008

DED Bandara Kulon Progo Yogyakarta



**Client** : PT. Angkasa Pura I  
**Location** : Glagah  
**Easting** : 396695 m  
**Northing** : 9125825 m

**Date Commenced** : 27-Apr-17  
**Date Completed** : 28-Apr-17  
**Bore Master** : Nanang  
**Field Engineer** : Hasan Tri Atmojo

**Weather** : Clear  
**Drilling Rig** : DM-01  
**Core Diameter** : 73 mm  
**Water Depth** : - 2.2 m

Depth (m)	Sample Type	USCS Classification	Graphic Log	Description	Field PP Test qu (kg/cm <sup>2</sup> )	N SPT		Unit Weight (kN/m <sup>3</sup> )	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	
						Depth (m)	N Value									Blow / cm
0						10										
1			●●●●●	Fine SAND, dark grey, moist, loose		20										
2			●●●●●			30										
3			●●●●●	Fine SAND, dark grey, wet, loose		40										
4			●●●●●			50										
5			●●●●●	Coarse SAND, dark grey, wet, loose to very dense		60										
6			●●●●●			70										
7			●●●●●	Coarse SAND w/ few fine gravel, dark grey, wet, very dense		80										
8			●●●●●			90										
9			●●●●●	Coarse SAND, dark grey, wet, very dense		100										
10			●●●●●			110										
11			●●●●●	Coarse SAND w/ few fine gravel, dark grey, wet, very dense		120										
12			●●●●●			130										
13				<i>end of drilling at 12.0 m</i>		140										
14						150										
15						160										
16						170										
17						180										
18						190										
19						200										
20						210										
21						220										
22						230										
23						240										
24						250										
25						260										
26						270										
27						280										
28						290										
29						300										
30						310										

- Undisturbed Sample (UDS)
- ▣ Disturbed Sample (UDS)
- Mazier Sample
- ▭ Piston Sample

- PP - Pocket Penetrometer
- LL - Liquid Limit
- PL - Plastic Limit
- PI - Plasticity Index

Bore Hole :  
**DB - 05**



## SUB SURFACE EXPLORATION LOG ASTM D1586 – 11, SNI 4153-2008

DED Bandara Kulon Progo Yogyakarta



**Client** : PT. Angkasa Pura I  
**Location** : Sidorejo  
**Easting** : 396334 m  
**Northing** : 9125937 m

**Date Commenced** : 28-Apr-17  
**Date Completed** : 29-Apr-17  
**Bore Master** : Nanang  
**Field Engineer** : Yanuar Rifa'i

**Weather** : Clear  
**Drilling Rig** : DM-01  
**Core Diameter** : 73 mm  
**Water Depth** : - 2.4 m

Depth (m)	Sample Type	USCS Classification	Graphic Log	Description	Field PP Test qu (kg/cm <sup>2</sup> )	N SPT		Unit Weight (kN/m <sup>3</sup> )	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	
						Depth (m)	N Value									Blow / cm
0																
1																
2				Fine SAND, dark grey, dry, loose				7/30								
3																
4				Fine SAND, dark grey, wet, medium dense				15/30								
5				Medium SAND, dark grey, wet, dense												
6								50/25								
7																
8				Medium SAND w/ some medium gravel, dark grey, wet, dense				50/29								
9																
10								50/15								
11				Coarse SAND w/ medium gravel, dark grey, wet, dense												
12								50/14								
13				<i>end of drilling at 12.0 m</i>												
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																

- |                          |                          |
|--------------------------|--------------------------|
| Undisturbed Sample (UDS) | PP - Pocket Penetrometer |
| Disturbed Sample (UDS)   | LL - Liquid Limit        |
| Mazier Sample            | PL - Plastic Limit       |
| Piston Sample            | PI - Plasticity Index    |

Bore Hole :  
**DB - 06**