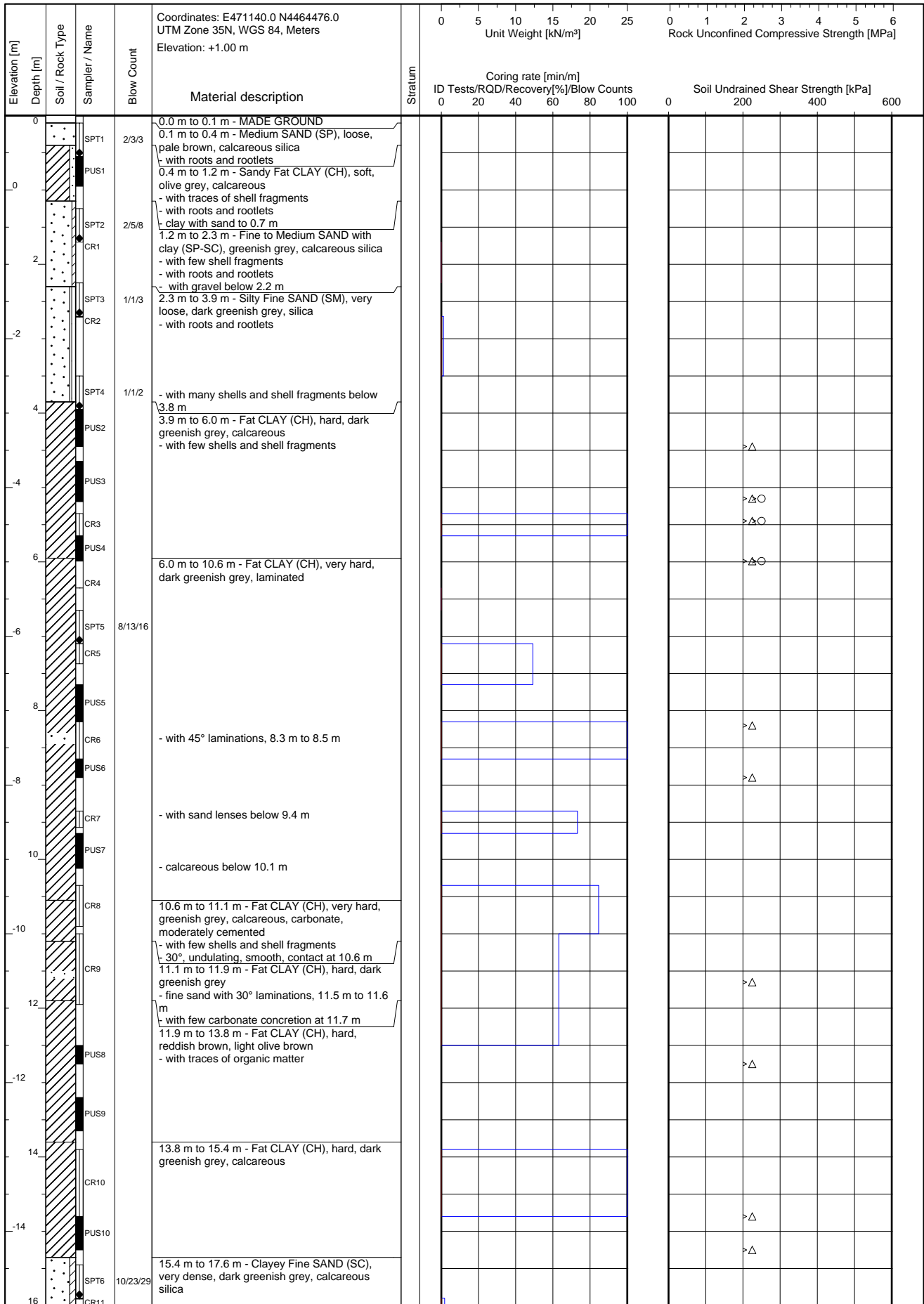


## 添付資料

## 添付資料 1 ボーリング土質柱状図














**GEOTECHNICAL LOG**

LOCATION AAN-1



P2015.0028

## Fugro Onshore Geotechnical Logs Legend:














### ID Tests / Unit weight

-  Unit weight derived from water content
-  Unit weight derived from volume mass calculation
-  Water content
-  Water content derived from test on remoulded soil
-  Plastic limit
-  Liquid limit
-  Plasticity index (= displayed as number above connection line)
-  Percentage fines
-  Carbonate content
-  Organic content
-  Relative density derived from CPT



### Coring rate / Recovery / RQD / Blow count

-  Coring rate
-  Recovery
-  RQD

### Undrained shear strength / UCS / Fracture density

-  Pocket penetrometer
-  Torvane
-  Fallcone
-  Laboratory vane
-  UU-triaxial
-  CU-triaxial
-  Direct simple shear
-  In-situ vane shear test
-  Undrained shear strength derived from CPT
-  Slashed symbol refers to test on remoulded soil
  
-  Unconfined compressive strength derived from point load test
-  Unconfined compressive strength
  
-  Fracture density



### Cone resistance / Sleeve friction

-  Cone resistance
-  Sleeve friction


### Friction ratio / Porewater pressure

-  Friction ratio

### PS-wave velocity

-  P-wave velocity
-  S-wave velocity

### Caliper

-  Caliper



Lean CLAY



Fat CLAY



SILT



Elastic SILT



SAND



GRAVEL



CLAYSTONE



SILTSTONE



SANDSTONE



SHEAR ZONE



CONGLOMERATE



MUDSTONE



LIMESTONE



LIMESTONE, dolomitic



PEAT



DEBRIS



Shell DEBRIS




SHALE




MADE GROUND

CPT  Cone Penetration Test

LS  Liner Sample

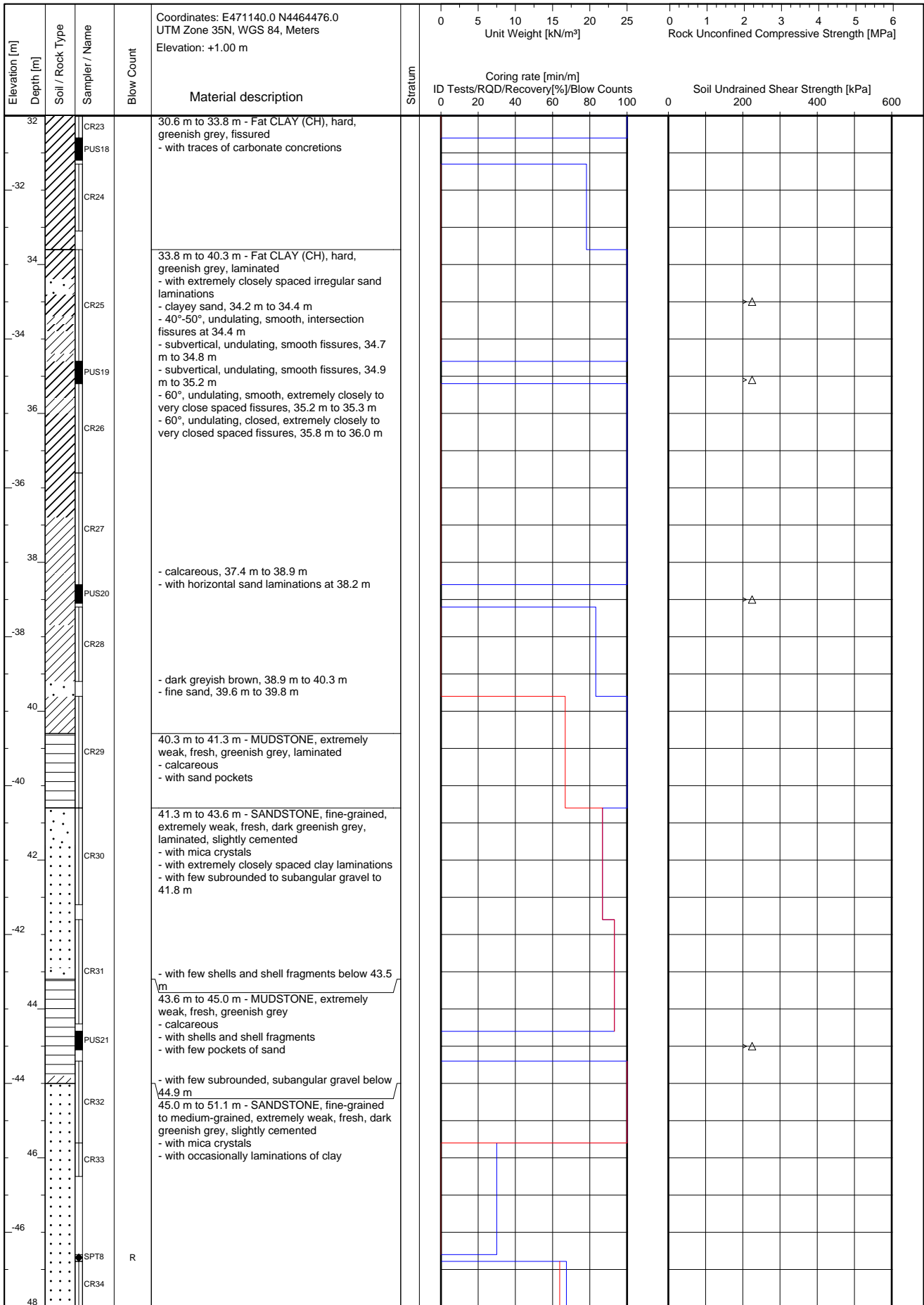
PUS  Push Sample

CR  Rock Core

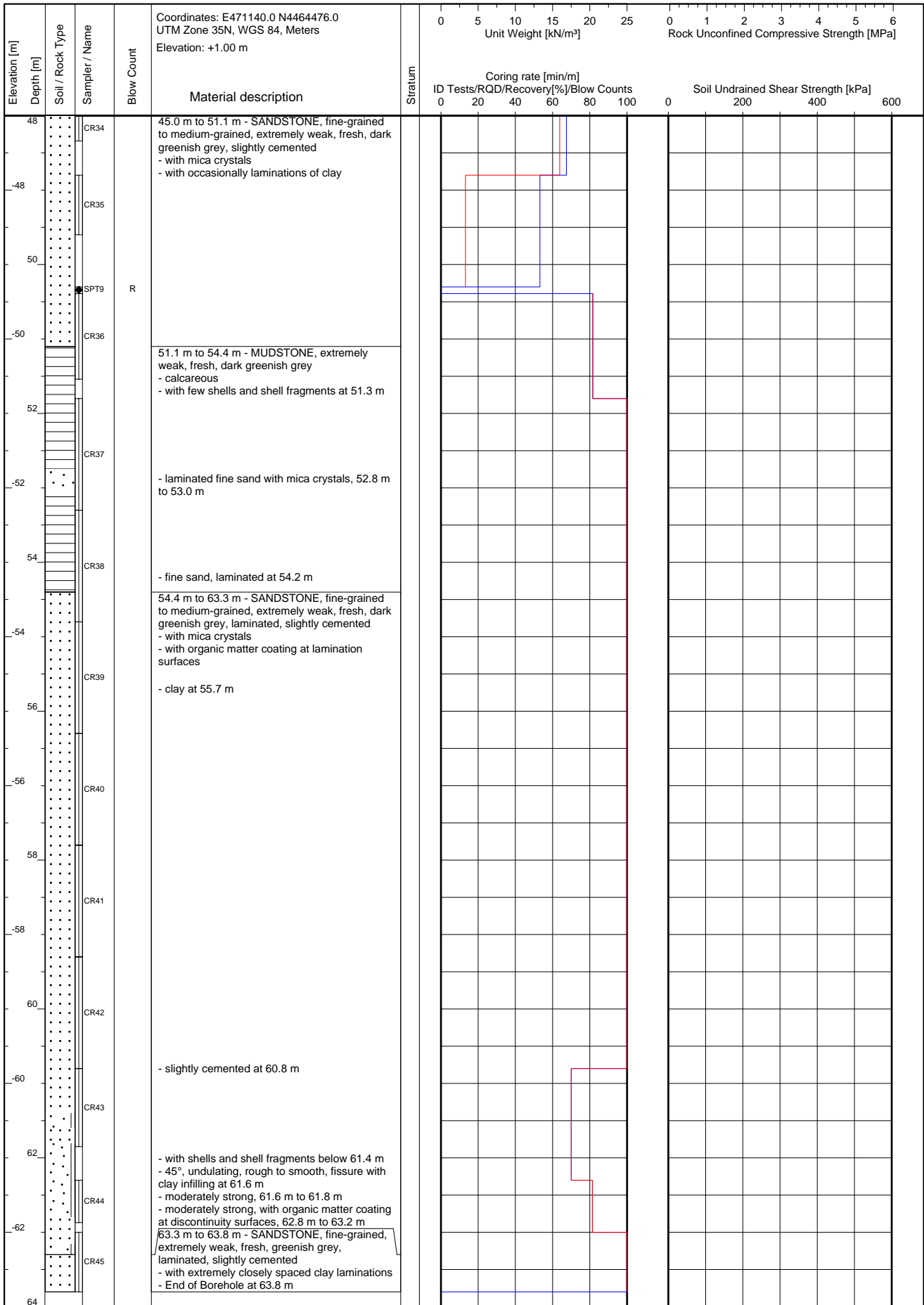
SPT  Standard Penetration Test

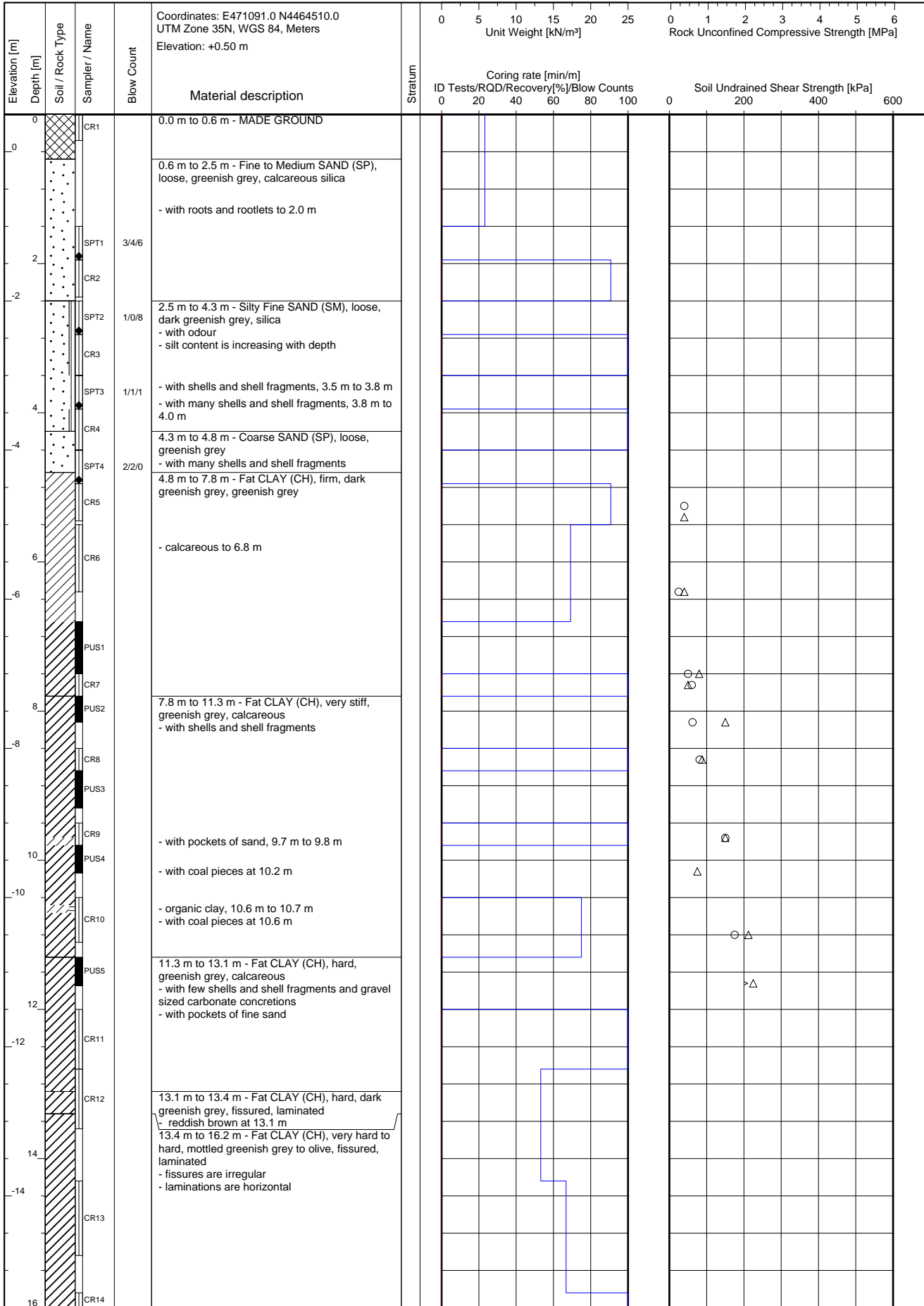
 Groundwater level

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	0 5 10 15 20 25		0 1 2 3 4 5 6										
							Unit Weight [kN/m³]		Rock Unconfined Compressive Strength [MPa]										
							Coring rate [min/m]		Soil Undrained Shear Strength [kPa]										
							ID Tests/RQD/Recovery[%]/Blow Counts												
							0 20 40 60 80 100		0 200 400 600										
16			SPT7	13/26/28	15.4 m to 17.6 m - Clayey Fine SAND (SC), very dense, dark greenish grey, calcareous silica														
-16			CR12		- with few gravel below 17.3 m														
18			PUS11		17.6 m to 22.0 m - Fat CLAY (CH), hard, greenish black														
-18			CR13		- very dark greenish grey to 17.7 m														
-18			CR13		- with traces of organic matter at 18.6 m														
-18			CR13		- clayey fine sand, 19.3 m to 19.4 m														
20			CR14																
-20			PUS12		- clayey fine sand with subvertical laminations, 20.5 m to 20.7 m														
-20			PUS12		- calcareous below 20.7 m														
-20			PUS12		- dark greenish grey below 20.7 m														
22			CR15																
-22			PUS13		- well cemented with shells and shell fragments below 21.9 m														
-22			CR16		22.0 m to 24.8 m - Sandy Fat CLAY (CH), hard, greenish grey														
-22			PUS13																
24			CR17																
-24			PUS14		24.8 m to 29.5 m - Fat CLAY (CH), hard, greenish grey, fissured														
-24			PUS14		- with traces of sand to gravel size carbonate concretions														
26			CR19																
-26			PUS15																
-26			PUS15																
-26			CR20																
28			PUS16																
-28			CR21		- very hard below 27.8 m														
-28			PUS17																
-28			CR21																
30			CR22		29.5 m to 30.6 m - Fat CLAY (CH), hard, very dark grey														
-30			CR22		- with organic matter														
-30			CR23		30.6 m to 33.8 m - Fat CLAY (CH), hard, greenish grey, fissured														
-30			CR23		- with traces of carbonate concretions														
32					- with cemented clay nodules, 31.7 m to 31.9 m														



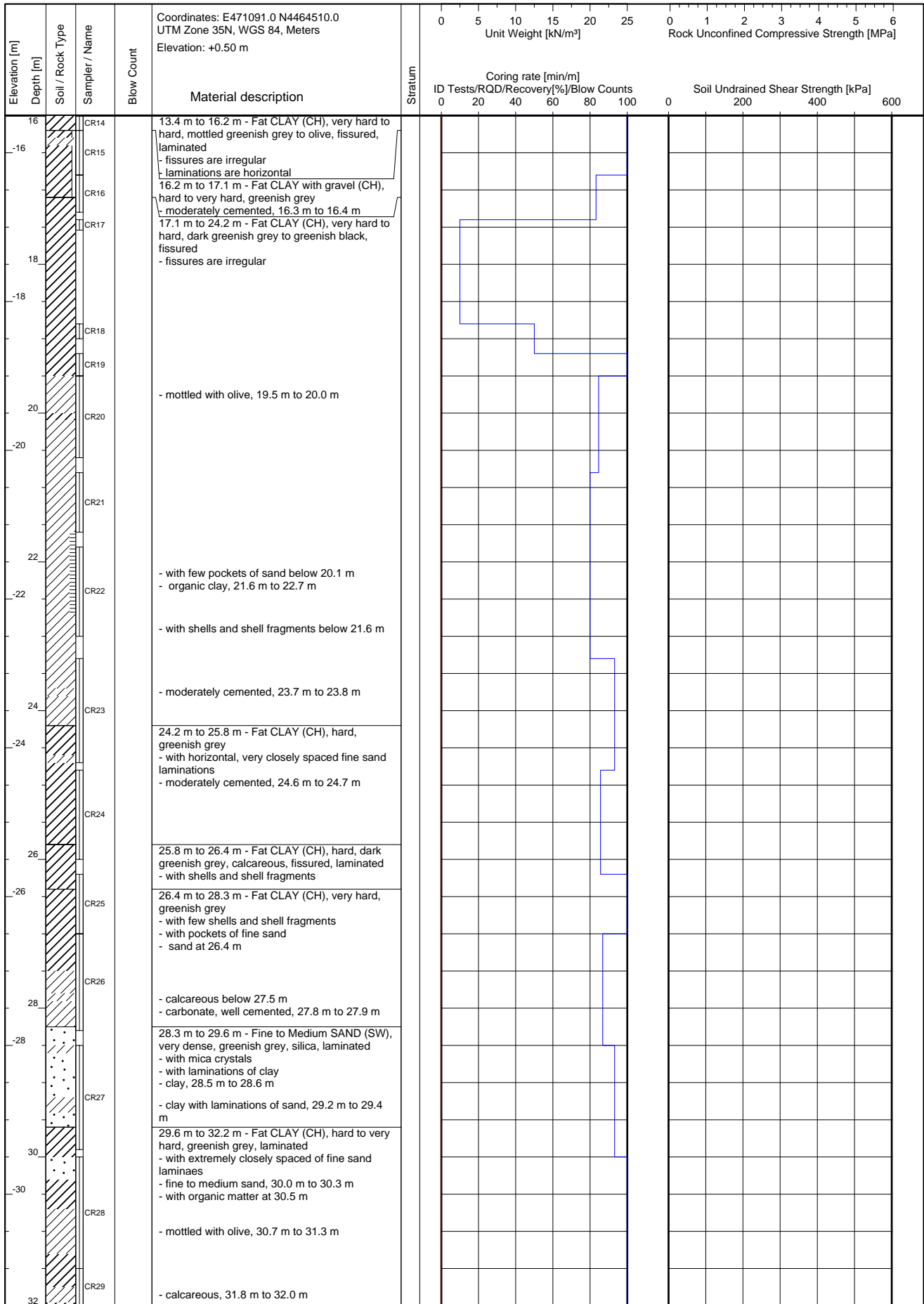
**GEOTECHNICAL LOG**  
LOCATION AAN-1  
P2015.0028





**GEOTECHNICAL LOG**  
LOCATION AAN-1A  
P2015.0028





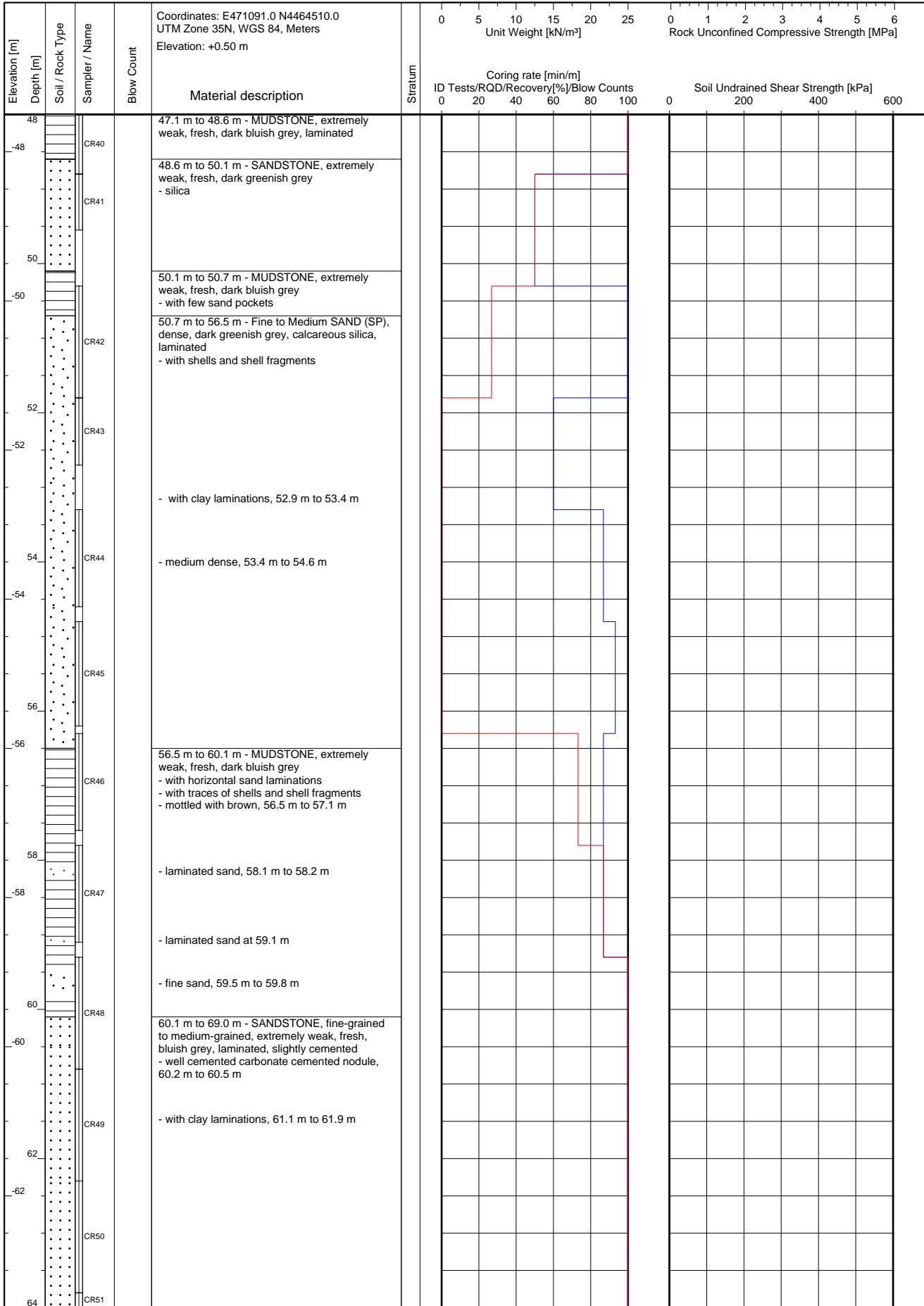
**GEOTECHNICAL LOG**

LOCATION AAN-1A

P2015.0028

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	Unit Weight [kN/m <sup>3</sup> ]		Rock Unconfined Compressive Strength [MPa]						
									Coring rate [min/m]		Soil Undrained Shear Strength [kPa]				
							ID Tests/RQD/Recovery[%]/Blow Counts								
							0 20 40 60 80 100	0	200	400	600				
32	-32		CR29		29.6 m to 32.2 m - Fat CLAY (CH), hard to very hard, greenish grey, laminated - with extremely closely spaced of fine sand laminaes - with organic matter below 32.0 m										
			CR30		32.2 m to 32.9 m - Fat CLAY (CH), hard to very hard, dark grey, calcareous - with shells and shell fragments - mottled with dark greenish grey to 32.4 m - organic clay below 32.7 m										
	-34		CR31		32.9 m to 34.9 m - Fat CLAY (CH), very hard, greenish grey, calcareous, laminated - with few shells and shell fragments - dark greenish grey, fissured to 33.2 m - slightly cemented, 34.0 m to 34.1 m - 10°, undulating, fissure at 34.3 m										
	-36		CR32		34.9 m to 37.6 m - Fat CLAY (CH), very hard, greenish grey, calcareous, laminated - with closely to moderately spaced very thin to thin interlayers of fine to medium sand										
	-38		CR33		37.6 m to 39.0 m - Fat CLAY (CH), very hard, greenish grey, fissured, laminated  - mottled with olive, 38.0 m to 38.5 m  - dark greenish grey, slightly cemented below 38.5 m - organic matter at 38.5 m										
	-40		CR34		39.0 m to 39.7 m - Fine to Medium SAND (SP), very dense, greenish grey, silica - silty below 39.4 m										
	-40		CR35		39.7 m to 40.5 m - Fat CLAY (CH), very hard, greenish grey - organic clay, 39.8 m to 40.0 m  - with few shells and shell fragments below 40.4 m										
	-42		CR36		40.5 m to 44.2 m - MUDSTONE, extremely weak, fresh, greenish grey, weak red - with few carbonate concretions  - fissured, fissures have polished surfaces at 41.9 m - extremely closely spaced fissures, 42.0 m to 42.3 m										
	-44		CR37		- calcareous below 42.3 m - 50°, planar-undulating, closed fissure at 42.5 m - 50°, undulating, slickensided fissure with 50° striations at 43.0 m - 30°, planar-undulating, slickensided fissure at 43.4 m										
	-46		CR38		- sub-vertical, planar-undulating, slickensided fissure with vertical striations at 43.4 m - 50°, undulating, closed fissure at 43.9 m 44.2 m to 44.6 m - Fine to Medium SAND (SP), very dense, greenish grey, silica										
	-46		CR39		44.6 m to 45.1 m - SANDSTONE, extremely weak, fresh, dark bluish grey, laminated, slightly cemented - mudstone, 44.6 m to 44.8 m										
	-46				45.1 m to 46.0 m - MUDSTONE, extremely weak, fresh, dark greenish grey - with shell and shell fragments										
	-46				46.0 m to 47.1 m - Fine to Medium SAND (SP), dense, greenish grey, laminated - slightly cemented sandstone, 46.4 m to 46.5 m										
	-48				47.1 m to 48.6 m - MUDSTONE, extremely weak, fresh, dark bluish grey, laminated										

**GEOTECHNICAL LOG**  
LOCATION AAN-1A  
P2015.0028



**GEOTECHNICAL LOG**  
LOCATION AAN-1A  
P2015.0028

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Coordinates: E471091.0 N4464510.0 UTM Zone 35N, WGS 84, Meters Elevation: +0.50 m	Stratum		Coring rate [min/m]		Soil Undrained Shear Strength [kPa]	
						Unit Weight [kN/m <sup>3</sup> ]	Rock Unconfined Compressive Strength [MPa]	ID Tests/RQD/Recovery[%]/Blow Counts	0 20 40 60 80 100	0 200 400 600	
64	-64		CR51		60.1 m to 69.0 m - SANDSTONE, fine-grained to medium-grained, extremely weak, fresh, bluish grey, laminated, slightly cemented						
					- with clay laminations below 62.3 m						
66	-66		CR52								
			CR53								
68	-68										
					- with many shell and shell fragments, 68.4 m to 68.8 m						
			CR54		69.0 m to 69.8 m - MUDSTONE, extremely weak, fresh, very dark greenish grey - with horizontal sand laminations						
70	-70										
					69.8 m to 70.3 m - SANDSTONE, fine-grained to medium-grained, extremely weak, fresh, bluish grey, laminated, slightly cemented						
					70.3 m to 70.9 m - MUDSTONE, extremely weak, fresh, very dark greenish grey - with horizontal sand laminations						
					70.9 m to 71.5 m - SILTSTONE, extremely to very weak, fresh, bluish grey, laminated						
					71.5 m to 71.7 m - MUDSTONE, extremely weak, fresh, bluish grey, laminated						
					71.7 m to 72.1 m - SANDSTONE, fine-grained to medium-grained, extremely weak, fresh, bluish grey, laminated, slightly cemented						
					- with many shells and shell fragments at 72.1 m						
					72.1 m to 72.6 m - MUDSTONE, extremely weak, fresh, bluish grey, laminated						
					- with many shells and shell fragments at 72.1 m						
					72.6 m to 75.5 m - MUDSTONE, extremely weak, fresh, greenish black-greenish grey - with few sand pockets						
					- greenish black, 73.0 m to 73.1 m						
					- light yellowish brown, 73.1 m to 73.2 m						
					- grey, 73.2 m to 73.4 m						
					- with many shells and shell fragments, 73.4 m to 74.6 m						
					- with charcoal pieces, 74.8 m to 75.3 m						
					- 10-20°, undulating, slickensided fissure at 75.1 m						
					75.5 m to 76.2 m - SANDSTONE, fine-grained, extremely weak, fresh, light greenish grey, slightly cemented						
					76.2 m to 76.7 m - MUDSTONE, extremely weak-very weak, fresh, greenish grey						
					76.7 m to 80.3 m - SANDSTONE, fine-grained to medium-grained, extremely weak, fresh, greenish grey, laminated, slightly cemented						
					- with clay laminae						
					- with mica crystals						
					- slightly cemented, 77.3 m to 78.2 m						
					- well carbonate cemented nodule, 78.6 m to 78.8 m						
					- with clay pockets, 79.5 m to 79.7 m						
					- laminae are irregular at 79.5 m						

**GEOTECHNICAL LOG**  
LOCATION AAN-1A  
P2015.0028

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Coordinates: E471091.0 N4464510.0 UTM Zone 35N, WGS 84, Meters Elevation: +0.50 m	Stratum		Coring rate [min/m]		Soil Undrained Shear Strength [kPa]	
						Unit Weight [kN/m <sup>3</sup> ]	Rock Unconfined Compressive Strength [MPa]	ID Tests/RQD/Recovery[%]/Blow Counts	0 20 40 60 80 100	0 200 400 600	
80			CR61		76.7 m to 80.3 m - SANDSTONE, fine-grained to medium-grained, extremely weak, fresh, greenish grey, laminated, slightly cemented - with clay laminae - with mica crystals						
-80			CR62		80.3 m to 81.0 m - SANDSTONE, medium-grained, extremely weak, fresh, greenish grey, slightly cemented - with shells and shell fragments						
			CR63		81.0 m to 83.6 m - SANDSTONE, fine-grained to medium-grained, extremely weak, fresh, greenish grey, laminated, slightly cemented - with organic matter coating at laminae surfaces - laminae are undulating, 82.0 m to 82.6 m - with clay pockets and few shell fragments, 82.6 m to 82.9 m - with charcoal at 82.6 m						
			CR64		83.6 m to 85.6 m - SANDSTONE, medium-grained, extremely weak, fresh, greenish grey, slightly cemented - with shells and shell fragments - with clay pockets						
-84			CR65		- laminated, 85.0 m to 85.5 m - with many shells and shell fragments below 85.3 m						
			CR66		85.6 m to 94.4 m - MUDSTONE, extremely weak to very weak, fresh, dark greenish grey - sub-vertical, extremely closely spaced, undulating, rough, joint, 85.7 m to 86.1 m - moderately-well carbonate cemented, 85.7 m to 86.1 m						
-86			CR67								
			CR68		- calcareous below 85.7 m - 45°, extremely closely spaced, undulating, slickensided joint at 86.0 m - laminated with sand laminae, 86.1 m to 89.3 m - clay with organic content at 86.6 m - with sand pockets, 86.8 m to 87.0 m						
-90			CR69		- 30°, planar-undulating, slickensided, fissure with horizontal striations at 88.1 m - very weak, 89.3 m to 89.8 m						
			CR70		- laminated without sand below 89.3 m - extremely weak, 89.8 m to 90.4 m						
-92			CR71		- 30°, undulating, slickensided, fissure with 45° striation at 93.9 m - 30°, planar, slickensided, closed fissure with 45° striation at 94.0 m - 50°, undulating, slickensided, closed fissure with 45° striation at 94.2 m 94.4 m to 94.6 m - SHEAR ZONE; - consisting of Mudstone and Sandstone fragments - with 30°, slickensided shear planes						
-94			CR72		94.6 m to 101.0 m - SANDSTONE, medium-grained, extremely weak, fresh, greenish grey, slightly cemented - with shells and shell fragments - extremely weak, 95.0 m to 95.3 m - well carbonate cemented nodule at 95.0 m - mudstone, 95.6 m to 96.0 m						
96											

**GEOTECHNICAL LOG**  
LOCATION AAN-1A  
P2015.0028

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	Unit Weight [kN/m <sup>3</sup> ]		Rock Unconfined Compressive Strength [MPa]	
							0	25	0	6
							Coring rate [min/m]		Soil Undrained Shear Strength [kPa]	
							0	100	0	600
96			CR72		94.6 m to 101.0 m - SANDSTONE, medium-grained, extremely weak, fresh, greenish grey, slightly cemented - with shells and shell fragments - weak-moderately strong, occasionally well cemented, 96.3 m to 96.8 m					
-96			CR73		- medium-coarse, 96.8 m to 98.3 m - weak-moderately strong, occasionally well cemented at 97.2					
98			CR74							
-98			CR75							
100			CR76		101.0 m to 102.1 m - SANDSTONE, fine-grained to coarse-grained, weak to moderately strong, fresh, grey, well cemented					
-100			CR77		102.1 m to 102.8 m - MUDSTONE, very weak, fresh, dark greenish grey - with sand laminations - very weak-weak, 102.5 m to 102.6 m 102.8 m to 103.3 m - SANDSTONE, fine-grained, very weak, fresh, greenish grey, thinly laminated, moderately cemented - with very closely spaced clay laminations 103.3 m to 103.7 m - MUDSTONE, very weak, fresh, dark greenish grey - with sand laminations					
102			CR78		103.7 m to 104.3 m - SANDSTONE, fine-grained, very weak, fresh, greenish grey, thinly laminated, slightly to moderately cemented - with very closely spaced clay laminations 104.3 m to 105.0 m - SILTSTONE, very weak, fresh, thinly laminated, greenish grey - calcareous - laminations are 5° - with few shells and shell fragments					
-102			CR79		105.0 m to 106.3 m - MUDSTONE, very weak, fresh, thinly laminated, dark greenish grey - calcareous - laminations are 5° - with few shell fragments 106.3 m to 108.8 m - SILTSTONE, very weak, fresh, greenish grey - calcareous - with sand pockets - 60°, undulating, slickensided, polished fissure at 107.2 m					
104			CR80		- weak to moderately strong, 107.3 m to 108.6 m					
-104			CR81		108.8 m to 118.6 m - SANDSTONE, fine-grained, very weak, fresh, greenish grey, thinly laminated, slightly to moderately cemented - with very closely spaced thin clay laminations					
106			CR82							
-106			CR83							
108										
-108										
110										
-110										
112										

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	0 5 10 15 20 25		0 1 2 3 4 5 6								
							Unit Weight [kN/m <sup>3</sup> ]		Rock Unconfined Compressive Strength [MPa]								
							Coring rate [min/m]		Soil Undrained Shear Strength [kPa]								
							ID Tests/RQD/Recovery[%]/Blow Counts										
							0 20 40 60 80 100		0 200 400 600								
112	-112		CR83		108.8 m to 118.6 m - SANDSTONE, fine-grained, very weak, fresh, greenish grey, thinly laminated, slightly to moderately cemented - with very closely spaced thin clay laminations - extremely weak, 110.3 m to 115.0 m												
			CR84		- with many shells and shell fragments, 113.7 m to 113.8 m												
			CR85														
			CR86														
			CR87		118.6 m to 119.9 m - MUDSTONE, very weak, fresh, greenish grey - calcareous - with few shell and shell fragments - with carbonate nodules												
			CR88		119.9 m to 123.4 m - MUDSTONE, extremely weak, fresh, weak red, olive brown, mottled greenish grey, laminated, fissured - fissures are extremely closely spaced irregular, polished												
			CR89		- slightly cemented, 121.8 m to 122.3 m												
			CR90		- mottled with dark greenish grey, fissures have polished-slickensided surfaces below 122.3 m - 15-20°, undulating, polished-slickensided, closely spaced fissures, 122.3 m to 122.9 m												
			CR91		123.4 m to 126.3 m - SILTSTONE, very weak-weak, fresh, greenish grey, weak red, moderately cemented - with carbonate nodules - mudstone, extremely weak to very weak, 124.0 m to 124.2 m - mudstone, extremely weak to very weak, 124.5 m to 124.6 m - sandstone, extremely weak, 125.1 m to 125.3 m - mudstone, very weak to weak, 125.4 m to 125.7 m - sandstone, extremely weak, 125.9 m to 126.0 m												
			CR92		126.3 m to 127.4 m - MUDSTONE, very weak-weak, fresh, weak red, moderately cemented - 30°, planar, slickensided, fissure with vertical striation at 126.3 m - shearzone with irregular, slickensided, extremely closely spaced shearplanes, 127.0 m to 127.1 m - siltstone below 127.3 m												
			CR93		127.4 m to 128.0 m - SANDSTONE, fine-grained, extremely weak, fresh, greenish grey, slightly cemented - slightly cemented to 127.7 m												
					128.0 m to 129.8 m - MUDSTONE, very weak-weak, weak red, moderately cemented												

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	Unit Weight [kN/m <sup>3</sup> ]		Rock Unconfined Compressive Strength [MPa]										
							Coring rate [min/m]		Soil Undrained Shear Strength [kPa]										
							0	5	10	15	20	25	0	1	2	3	4	5	6
							ID Tests/RQD/Recovery[%]/Blow Counts	0	20	40	60	80	100	0	200	400	600		
128	-128		CR93		128.0 m to 129.8 m - MUDSTONE, very weak-weak, weak red, moderately cemented														
			CR94		- sandstone, extremely weak, 128.2 m to 128.3 m - siltstone, very weak to weak, 128.4 m to 128.8 m														
			CR95		- 45° planar, slickensided, fissure with vertical striations at 129.2 m - extremely weak, with irregular slickensided fissures, 129.4 m to 129.7 m														
130	-130		CR96		129.8 m to 134.5 m - SANDSTONE, fine-grained to medium-grained, extremely weak, fresh, greenish grey, laminated, slightly cemented														
			CR97		- with mica crystals - very weak to weak, moderately cemented, 129.8 m to 130.0 m - siltstone, very weak, moderately cemented, 130.2 m to 130.6 m - 45° planar, slickensided, fissure with vertical striation at 130.2 m - coarse grained, 131.4 m to 131.7 m														
			CR98		- organic content at 132.5 m														
132	-132		CR99		134.5 m to 135.3 m - SILTSTONE, very weak, fresh, greenish grey														
			CR100		- with few shells and shell fragments														
			CR101		135.3 m to 137.7 m - CONGLOMERATE, very weak-weak, fresh, greenish grey-grey														
			CR102		- with shell and shell fragments														
136	-136		CR103		137.7 m to 139.8 m - SILTSTONE, very weak, fresh, greenish grey														
			CR104		- 25° and 50°, undulating, slickensided, intersecting fissures with vertical striations at 138.9 m - fine sand at 139.1 m - 25°, stepped, polished fissure at 139.6 m														
138	-138		CR105		139.8 m to 147.90 m - SANDSTONE, extremely weak, fresh, greenish grey, laminated, slightly cemented														
			CR106		- with mica crystals - laminae are 5°-10° - mudstone at 140.8 m														
140	-140		CR107		- weak to moderately strong, 143.5 m to 143.6 m														
			CR108		- sub-vertical, planar, smooth, closed, joint with calcite infilling, 143.5 m to 143.6 m														
142	-142		CR109																
144	-144		CR110																

**GEOTECHNICAL LOG**  
LOCATION AAN-1A  
P2015.0028



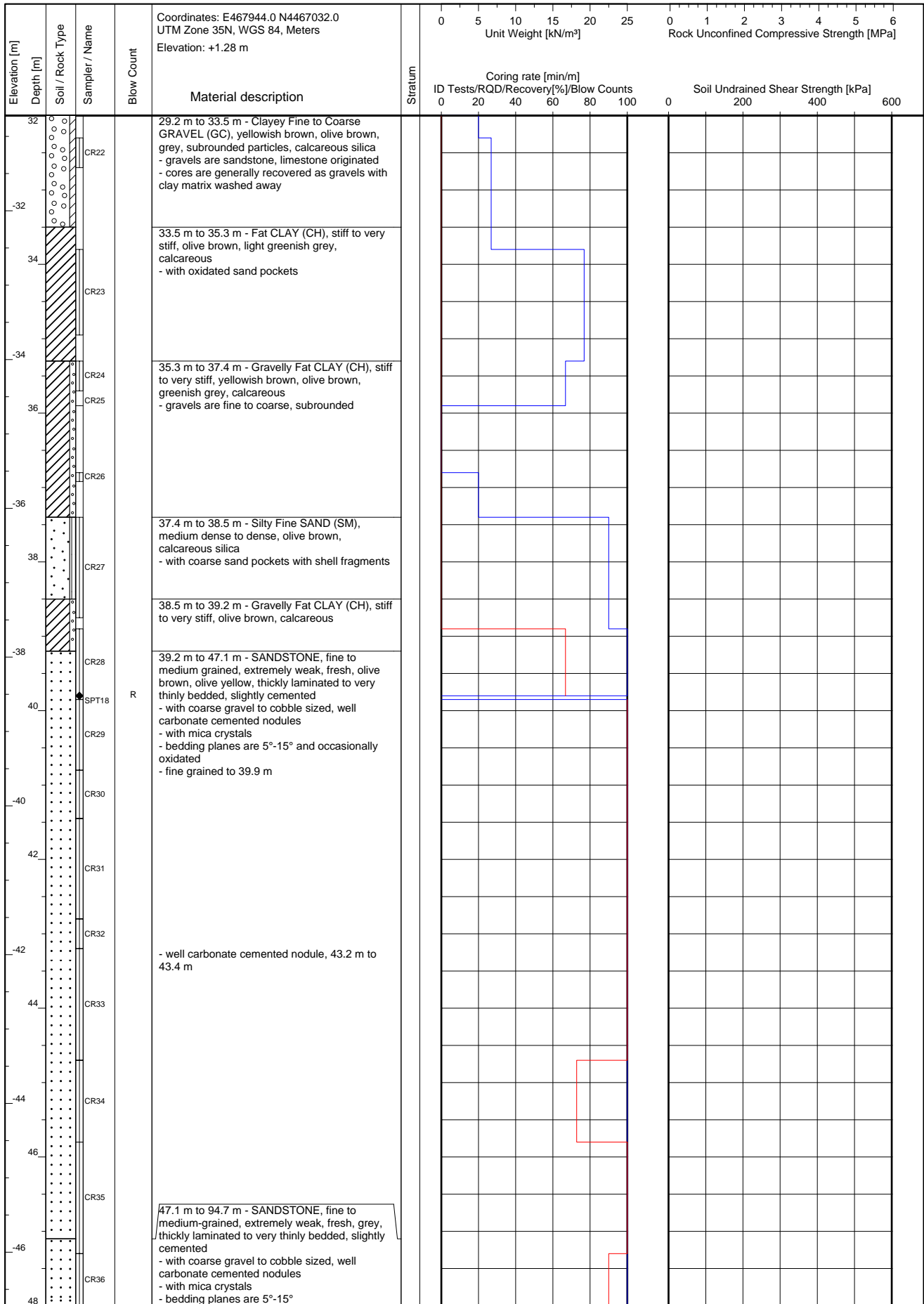
Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Coordinates: E471091.0 N4464510.0 UTM Zone 35N, WGS 84, Meters Elevation: +0.50 m	Stratum		Coring rate [min/m]		Rock Unconfined Compressive Strength [MPa]		Soil Undrained Shear Strength [kPa]	
						ID	Tests/RQD/Recovery[%]/Blow Counts	0	20	40	60	80	100
144	-144				139.8 m to 147.90 m - SANDSTONE, extremely weak, fresh, greenish grey, laminated, slightly cemented - with mica crystals - laminaes are 5°-10°								
	-146		CR105		- 45°, planar, smooth, slickensided fissure at 146.5 m								
	-148		CR106										
	-148		CR107		147.9 m to 149.0 m - SILTSTONE, very weak, fresh, greenish grey - with few shells and shell fragments - 45°, planar, slickensided fissure at 148.0 m - 45°, planar, slickensided fissure at 148.2 m								
	-150		CR108		149.0 m to 150.0 m - MUDSTONE, very weak, fresh, mottled greenish grey, brown - with few shells and shell fragments - fissured, greenish black below 149.3 m - 45°, planar, slickensided fissure at 149.6 m - 45°, planar, slickensided fissure at 149.9 m - End of Borehole at 150.0 m - End of Borehole at 150.0 m								
-150													
152	-152												
154	-154												
156	-156												
158	-158												
160													

**GEOTECHNICAL LOG**  
LOCATION AAN-1A  
P2015.0028

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Coordinates: E467944.0 N4467032.0 UTM Zone 35N, WGS 84, Meters Elevation: +1.28 m	Material description	Stratum	0 5 10 15 20 25		0 1 2 3 4 5 6							
								Unit Weight [kN/m³]		Rock Unconfined Compressive Strength [MPa]							
								Coring rate [min/m]		Soil Undrained Shear Strength [kPa]							
								ID Tests/RQD/Recovery[%]/Blow Counts		0 200 400 600							
								0	20	40	60	80	100	0	200	400	600
0			PUS1			0.0 m to 0.2 m - TOPSOIL											
			PUS2			0.2 m to 1.7 m - Fat CLAY (CH), firm, olive brown, grey, calcareous - with roots and rootlets											
0																	
			PUS3			1.7 m to 3.0 m - Gravelly Medium to Coarse SAND with silt (SW-SM), medium dense, very dark greenish grey, subrounded particles, calcareous silica											
2			SPT1	9/7/5													
			CR1														
			SPT2	4/5/7		3.0 m to 5.8 m - Silty Fine SAND (SM), medium dense, dark greenish grey, calcareous silica - with traces of mica crystals											
-2			CR2			- with many shells and shell fragments at 3.9 m											
			SPT3	4/5/9		- with few shells and shell fragments below 4.5 m											
			CR3														
			SPT4	1/6/7													
			CR4														
			SPT5	1/0/3		5.8 m to 7.6 m - Silty Fine to Coarse SAND (SM), very loose to loose, dark greenish grey, calcareous silica - with very closely spaced clay lenses - occasionally with gravel											
-6			CR5														
			SPT6	3/3/3													
			CR6														
			SPT7	1/2/9		7.6 m to 12.0 m - Silty Fine SAND (SM), loose to medium dense, dark greenish grey, calcareous silica - with few shells and shell fragments - with extremely closely spaced clay lenses											
			CR7														
			SPT8	3/4/6		- medium to coarse sand with gravel, 9.0 m to 9.4 m											
-8			CR8														
			SPT9	11/17/15		- medium to coarse sand with gravel, 10.1 m to 10.6 m											
			CR9														
			PUS4			12.0 m to 14.5 m - Silty Fine SAND (SM), very loose, very dark greenish grey, calcareous silica - with few shells and shell fragments - clay, 12.5 m to 12.6 m - clay at 12.9 m											
-12			SPT10	1/0/1													
			CR10														
			SPT11	0/0/0													
			CR11			14.5 m to 15.7 m - Sandy SILT (ML), soft, very dark greenish grey, calcareous											
-14																	
			PUS5			15.7 m to 16.9 m - Fat CLAY (CH), soft to firm, very dark greenish grey, calcareous											
16																	

**GEOTECHNICAL LOG**  
LOCATION EAN-1  
P2015.0028

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	0 5 10 15 20 25		0 1 2 3 4 5 6							
							Unit Weight [kN/m <sup>3</sup> ]		Rock Unconfined Compressive Strength [MPa]							
							Coring rate [min/m]		Soil Undrained Shear Strength [kPa]							
							ID Tests/RQD/Recovery[%]/Blow Counts		0 200 400 600							
							0	20	40	60	80	100	0	200	400	600
16			CR12		15.7 m to 16.9 m - Fat CLAY (CH), soft to firm, very dark greenish grey, calcareous											
-16			PUS6		16.9 m to 17.7 m - Silty Fine SAND (SM), very loose, very dark greenish grey, calcareous silica - with traces of shells and shell fragments											
			SPT12	0/0/0	17.7 m to 19.6 m - Silty CLAY (CL-ML), soft, very dark greenish grey, calcareous											
-18			CR13													
			PUS7													
20			SPT13	0/3/7	19.6 m to 20.0 m - Silty SAND (SM), loose to medium dense, very dark greenish grey, calcareous silica											
			CR14		20.0 m to 23.0 m - Clayey SAND (SC), loose to medium dense, very dark greenish grey, calcareous silica											
-20			SPT14	0/5/7												
22			CR15		- clay with thin sand laminations, 22.1 m to 22.5 m											
			SPT15	6/8/8	23.0 m to 23.8 m - Fat CLAY (CH), firm, very dark greenish grey, calcareous - with thin sand laminations											
-22			PUS8													
24			CR16		23.8 m to 24.8 m - Fine SAND (SP), loose, very dark greenish grey, calcareous silica											
			SPT16	0/1/1	24.8 m to 25.5 m - Fat CLAY (CH), soft, very dark greenish grey, calcareous											
-24			CR17		25.5 m to 26.2 m - Gravelly SAND with silt (SW-SM), very dark greenish grey, calcareous silica - with shells and shell fragments											
26			PUS9		26.2 m to 28.2 m - Fat CLAY (CH), firm, very dark greenish grey, calcareous - with shells and shell fragments - with traces of sand pockets											
-26			CR18		- with many shells and shell fragments, 27.1 m to 27.2 m											
28			PUS10													
			SPT17	0/5/11	28.2 m to 29.2 m - Fine SAND (SP), medium dense, very dark greenish grey, calcareous silica - with many shells and shell fragments											
-28			CR19													
30			CR20		29.2 m to 33.5 m - Clayey Fine to Coarse GRAVEL (GC), yellowish brown, olive brown, grey, subrounded particles, calcareous silica - gravels are sandstone, limestone originated - cores are generally recovered as gravels with clay matrix washed away											
-30			CR21													
32																



Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Coordinates: E467944.0 N4467032.0 UTM Zone 35N, WGS 84, Meters Elevation: +1.28 m	Material description	Stratum	Unit Weight [kN/m³]		Rock Unconfined Compressive Strength [MPa]		Coring rate [min/m]		Soil Undrained Shear Strength [kPa]		
								ID	Tests/RQD/Recovery[%]/Blow Counts	0	1	2	3	4	5	6
48			CR36			47.1 m to 94.7 m - SANDSTONE, fine to medium-grained, extremely weak, fresh, grey, thickly laminated to very thinly bedded, slightly cemented										
-48			CR37			- with coarse gravel to cobble sized, well carbonate cemented nodules - with mica crystals - bedding planes are 5°-15° - well carbonate cemented nodule, 47.9 m to 48.1 m										
50																
-50			CR38			- bedding planes are 15°-20°, 50.7 m to 51.3 m										
52																
-52			CR39													
54																
-54			CR40			- well carbonate cemented nodule, 53.8 m to 54.0 m										
56																
-56			CR41													
58																
-58			CR42			- medium to coarse grained, 56.3 m to 57.3 m - well carbonate cemented nodule, 56.9 m to 57.0 m										
60																
-60			CR43													
62																
-62			CR44			- well carbonate cemented nodule at 59.8 m										
64																
			CR45													
			CR46			- well carbonate cemented nodule at 62.9 m										
			CR47													

**GEOTECHNICAL LOG**  
LOCATION EAN-1  
P2015.0028

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	Unit Weight [kN/m³]		Rock Unconfined Compressive Strength [MPa]										
							Coring rate [min/m]		Soil Undrained Shear Strength [kPa]										
							0	5	10	15	20	25	0	1	2	3	4	5	6
							ID	Tests/RQD/Recovery[%]	Blow Counts					0	200	400	600		
64			CR48		47.1 m to 94.7 m - SANDSTONE, fine to medium-grained, extremely weak, fresh, grey, thickly laminated to very thinly bedded, slightly cemented														
-64					- with coarse gravel to cobble sized, well carbonate cemented nodules														
					- with mica crystals														
					- bedding planes are 5°-15°														
			CR49		- well carbonate cemented nodule, 63.8 m to 64.3 m														
					- well carbonate cemented nodule, 65.5 m to 65.7 m														
-66			CR50																
68			CR51																
-68																			
70			CR52																
-70																			
72			CR53																
-72			CR54		- 30°, undulating, rough fissure at 73.4 m														
					- 45°, undulating, rough fissure at 73.6 m														
74			CR55		- well carbonate cemented nodule, 74.3 m to 74.5 m														
-74																			
76			CR56		- 45°, undulating, rough fissure at 76.0 m														
					- mudstone with irregular calcite veins, 76.4 m to 76.5 m														
-76			CR57																
					- mudstone, 77.7 m to 77.8 m														
78			CR58		- mudstone at 78.5 m														
-78			CR59		- well carbonate cemented nodule, 79.1 m to 79.2 m														
80					- well carbonate cemented nodule at 80.0 m														

**GEOTECHNICAL LOG**  
LOCATION EAN-1  
P2015.0028

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	Unit Weight [kN/m <sup>3</sup> ]		Rock Unconfined Compressive Strength [MPa]											
							Coring rate [min/m]		Soil Undrained Shear Strength [kPa]											
							0	5	10	15	20	25	0	1	2	3	4	5	6	
							0	20	40	60	80	100	0	200	400	600				
80			CR59		47.1 m to 94.7 m - SANDSTONE, fine to medium-grained, extremely weak, fresh, grey, thickly laminated to very thinly bedded, slightly cemented															
	-80		CR60		- with coarse gravel to cobble sized, well carbonate cemented nodules															
					- with mica crystals															
					- bedding planes are 5°-15°															
	82		CR61		- well carbonate cemented nodule, 81.9 m to 82.0 m															
					- with 5°-10° clay laminations, 82.0 m to 82.8 m															
	-82																			
	84		CR62		- mudstone, 83.7 m to 83.8 m															
					- 45°, planar, smooth fissure at 84.1 m															
	-84		CR63		- well cemented sandstone with vertical, undulating, rough, very closely spaced joints with calcite infilling, 84.8 m to 85.0 m															
	86																			
					- vertical, undulating, rough fissure, 86.3 m to 86.5 m															
	-86		CR64		- 45°, undulating, rough fissure at 87.1 m															
					- subvertical, undulating, rough fissure, 87.4 m to 87.8 m															
	88				- well carbonate cemented nodule at 87.7 m															
			CR65																	
	-88																			
	90		CR66		- fine to coarse grained below 90.8 m															
					- well carbonate cemented nodule at 91.3 m															
	-90		CR67		- well carbonate cemented nodule at 91.9 m															
	92																			
			CR68		- with mudstone seams, 92.9 m to 93.5 m															
	-92																			
	94				- conglomeratic sandstone at 94.0 m															
			CR69		- well cemented, 94.2 m to 94.3 m															
	-94																			
					94.7 m to 97.0 m - MUDSTONE, very weak, fresh, greenish grey, weak red															
					- 60°, undulating, closed fissure with 5-mm thick calcite, 94.7 m to 95.0 m															
	96		CR70		- 10°-20°, planar, smooth, closely spaced fissures, 95.3 m to 96.0 m															

**GEOTECHNICAL LOG**  
 LOCATION EAN-1  
 P2015.0028

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Coordinates: E467944.0 N4467032.0 UTM Zone 35N, WGS 84, Meters Elevation: +1.28 m	Stratum		Coring rate [min/m]		Soil Undrained Shear Strength [kPa]		Rock Unconfined Compressive Strength [MPa]	
						Unit Weight [kN/m <sup>3</sup> ]	Rock Unconfined Compressive Strength [MPa]	ID Tests/RQD/Recovery[%]/Blow Counts	Soil Undrained Shear Strength [kPa]	Unit Weight [kN/m <sup>3</sup> ]	Rock Unconfined Compressive Strength [MPa]		
96			CR70		94.7 m to 97.0 m - MUDSTONE, very weak, fresh, greenish grey, weak red - 45°, planar, smooth, medium spaced fissures, 95.3 m to 96.8 m - siltstone, extremely weak, 96.0 m to 96.2 m								
-96			CR71		97.0 m to 97.9 m - SANDSTONE, extremely weak, fresh, greenish grey, laminated, slightly cemented								
98					- mudstone at 97.8 m - well carbonate cemented nodule at 97.9 m								
-98			CR72		97.9 m to 99.0 m - MUDSTONE, very weak, fresh, greenish grey - sandstone, extremely weak, laminated, 98.2 m to 98.5 m - beddings are 30° below 98.2 m - 45°-55°, undulating, slickensided, closely spaced fissures with subhorizontal striations, 98.5 m to 98.8 m - sandstone, extremely weak, below 98.8 m								
100			CR73		99.0 m to 99.5 m - BRECCIATED MUDSTONE, extremely weak, greenish grey, weak red - gravel sized mudstone fragments cemented in matrix - with irregular, extremely closely spaced slickensided surfaces								
-100					99.5 m to 100.5 m - SANDSTONE, extremely weak, fresh, dark greenish grey, laminated, slightly cemented - with coarse gravel to cobble sized, well carbonate cemented nodules - bedding planes are 10°-15° - 70°, planar, rough to smooth, closely spaced, occasionally closed fissures, 99.8 m to 100.0 m								
102			CR74		100.5 m to 116.5 m - SANDSTONE, fine to medium-grained, extremely weak, fresh, grey, greenish grey, laminated, slightly cemented - with coarse gravel to cobble sized, well carbonate cemented nodules - bedding planes are 10°-15° - conglomeratic sandstone, 101.0 m to 101.3 m - well carbonate cemented nodule at 101.5 m - well carbonate cemented nodule at 102.0 m								
-102			CR75										
104					- beddings are horizontal below 104.0 m								
-104			CR76										
106													
-106			CR77		- 50°, planar, rough, fissure at 106.3 m								
108			CR78		- well carbonate cemented nodule at 108.3 m								
-108			CR79		- 40°, planar, rough, fissure at 109.7 m								
110					- well carbonate cemented nodule at 110.3 m								
-110			CR80										
112			CR81		- well carbonate cemented nodule at 111.9 m								

**GEOTECHNICAL LOG**  
LOCATION EAN-1  
P2015.0028



Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	Unit Weight [kN/m <sup>3</sup> ]		Rock Unconfined Compressive Strength [MPa]		Coring rate [min/m]		Soil Undrained Shear Strength [kPa]									
							0	5	10	15	20	25	0	1	2	3	4	5	6	0	20	40
112			CR81		100.5 m to 116.5 m - SANDSTONE, fine to medium-grained, extremely weak, fresh, grey, greenish grey, laminated, slightly cemented - with coarse gravel to cobble sized, well carbonate cemented nodules - bedding planes are 10°-15° - well carbonate cemented nodule at 112.4 m - well carbonate cemented nodule at 112.8 m																	
-112			CR82																			
114			CR83		- well carbonate cemented nodule at 114.1 m																	
-114			CR84																			
116					- conglomeratic sandstone below 116.3 m																	
-116			CR85		116.5 m to 117.1 m - BRECCIA, extremely weak, very dark greenish grey - subvertical, undulating, slickensided, very closely spaced shear planes with subhorizontal striations - 60°, stepped, slickensided fissure at 116.9 m																	
118			CR86		117.1 m to 123.8 m - SANDSTONE, fine to medium-grained, extremely weak, fresh, grey, greenish grey, laminated, slightly cemented - with coarse gravel to cobble sized, well carbonate cemented nodules - bedding planes are 10°-15° - well carbonate cemented nodule at 117.3 m to 117.5 m - well carbonate cemented nodule at 117.6 m to 117.8 m - well carbonate cemented nodule at 117.9 m - well carbonate cemented nodule at 118.3 m to 118.4 m																	
-118			CR87		- well carbonate cemented nodule at 120.0 m to 120.1 m																	
120																						
-120			CR88		- well carbonate cemented nodule at 121.4 m																	
122																						
-122			CR89		- well carbonate cemented nodule at 122.1 m to 122.2 m																	
124					- brecciated below 123.6 m																	
-124			CR90		123.8 m to 124.5 m - BRECCIATED MUDSTONE, extremely to very weak, greenish grey, weak red - gravel sized mudstone fragments cemented in matrix - with irregular, extremely closely spaced slickensided surfaces - 45°-50°, planar, slickensided, very closely spaced, occasionally closed shear surfaces																	
126					124.5 m to 125.8 m - SILTSTONE, very weak to weak, fresh, grey																	
-126			CR91		125.8 m to 127.3 m - SILTSTONE, very weak to weak, fresh, grey, laminated - with Sandstone laminations																	
128			CR92		127.3 m to 130.5 m - SANDSTONE, extremely weak, fresh, grey, laminated, slightly cemented - with gravel to cobble sized well carbonate cemented nodules																	

Elevation [m]	Depth [m]	Soil / Rock Type	Sampler / Name	Blow Count	Material description	Stratum	Unit Weight [kN/m <sup>3</sup> ]		Rock Unconfined Compressive Strength [MPa]		Coring rate [min/m]		Soil Undrained Shear Strength [kPa]									
							0	5	10	15	20	25	0	1	2	3	4	5	6	0	20	40
128			CR92		127.3 m to 130.5 m - SANDSTONE, extremely weak, fresh, grey, laminated, slightly cemented - with gravel to cobble sized well carbonate cemented nodules																	
-128			CR93																			
130			CR94		- well carbonate cemented nodule, 130.4 m to 130.5 m 130.5 m to 131.0 m - BRECCIATED MUDSTONE, extremely weak, dark greenish grey - with gravel sized carbonate concretions - with irregular, extremely closely spaced slickensided surfaces																	
-130			CR95		131.0 m to 133.7 m - MUDSTONE, very weak, fresh, mottled greenish grey, olive brown and weak red																	
-132			CR96		- subvertical, undulating, slickensided, incipient fissures below 132.8 m - 60°, planar to undulating, smooth fissure at 133.0 m																	
134			CR97		133.7 m to 135.2 m - CONGLOMERATE, very weak, fresh, greenish grey - 20°, planar, closed beddings - sandstone, very weak, 134.2 m to 134.5 m  - sandstone, extremely weak, 134.7 m to 134.8 m																	
-134			CR98		135.2 m to 139.1 m - SANDSTONE, extremely weak, fresh, greenish grey, slightly cemented - with gravel to cobble sized, well carbonate cemented nodules - siltstone to 135.4 m																	
136			CR99		- 60°, undulating, rough fissure at 138.3 m																	
-136			CR100		139.1 m to 141.3 m - MUDSTONE, very weak to weak, fresh, mottled greenish grey and reddish brown - with many carbonate nodules - subvertical, undulating, slickensided, very closely spaced fissures with subvertical striations, 139.1 m to 139.6 m - extremely weak with 30°, planar, closed fissures, 139.6 m to 139.8 m																	
138			CR101																			
-138			CR102		141.3 m to 142.6 m - SILTSTONE, very weak to weak, fresh, greenish grey - with carbonate nodules 142.6 m to 143.2 m - SANDSTONE, fine grained, extremely weak, fresh, greenish grey, laminated to very thinly bedded, slightly cemented - beddings are 20° - 30°-40°, undulating, slickensided, closely spaced fissures with horizontal striations																	
140			CR103		143.2 m to 146.3 m - SANDSTONE, medium to coarse grained, extremely weak, fresh, greenish grey to grey, laminated to very thinly bedded, slightly cemented - with gravel sized well carbonate cemented nodules																	
-140																						
142																						
-142																						
144																						

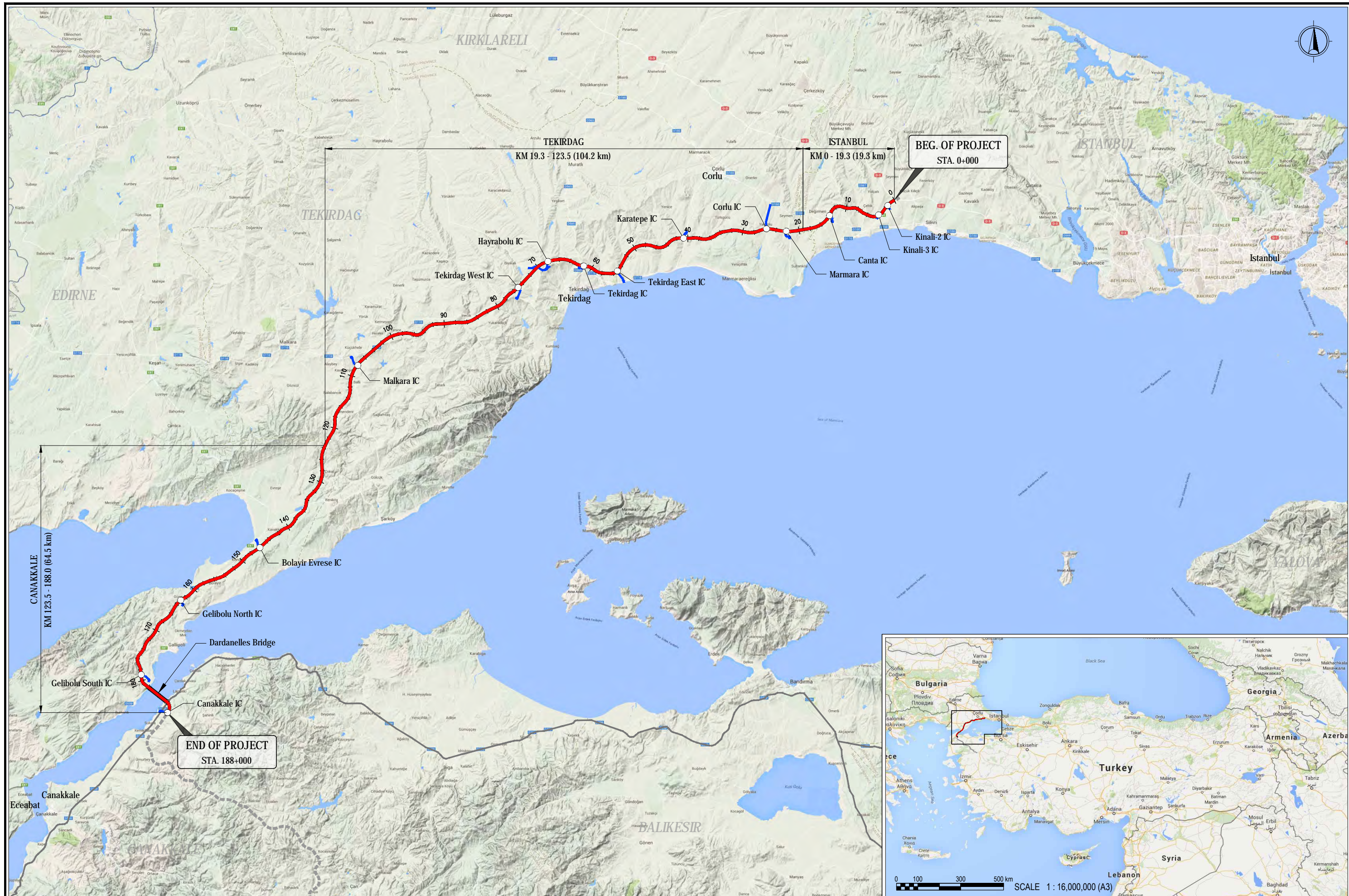
**GEOTECHNICAL LOG**

LOCATION EAN-1

P2015.0028

Elevation [m]	Depth [m]	Soil /Rock Type	Sampler / Name	Blow Count	Material description	Stratum	Unit Weight [kN/m <sup>3</sup> ]		Rock Unconfined Compressive Strength [MPa]											
							Coring rate [min/m]		Soil Undrained Shear Strength [kPa]											
							0	5	10	15	20	25	0	1	2	3	4	5	6	
							0	20	40	60	80	100	0	200	400	600				
144			CR103		143.2 m to 146.3 m - SANDSTONE, medium to coarse grained, extremely weak, fresh, greenish grey to grey, laminated to very thinly bedded, slightly cemented - with gravel sized well carbonate cemented nodules															
-144			CR104																	
146					146.3 m to 146.6 m - SILTSTONE, very weak, fresh, greenish grey - with carbonate nodules															
					146.6 m to 147.1 m - MUDSTONE, very weak, fresh, mottled greenish grey and weak red - with many carbonate nodules - 10°-20°, undulating closed fissure with clay infilling at 146.6 m															
-146			CR105																	
					147.1 m to 147.4 m - SILTSTONE, very weak, fresh, greenish grey - with carbonate nodules															
148					147.4 m to 148.5 m - SANDSTONE, fine grained, extremely weak, fresh, greenish grey, laminated to very thinly bedded, slightly cemented - beddings are 10°-20° - 50°-60°, planar, extremely to very closely spaced, closed fissures 147.7 m to 148.0 m - shear zone, 148.1 m to 148.3 m															
-148			CR106																	
					148.5 m to 150.0 m - SANDSTONE, medium grained, extremely weak, fresh, greenish grey, slightly cemented - subvertical, undulating, closed fissure below 149.3 m - End of Borehole at 150.0 m															
150			CR107																	
-150																				
152																				
-152																				
154																				
-154																				
156																				
-156																				
158																				
-158																				
160																				

## 添付資料 2 道路概略設計図面

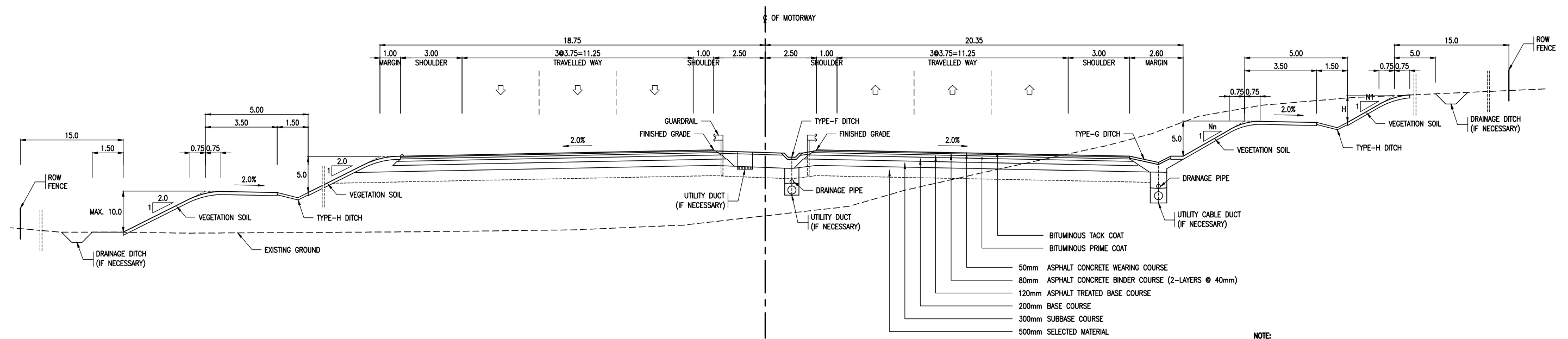


PREPARATORY SURVEY ON THE PROJECT FOR  
 CONSTRUCTION OF DARDANELLES STRAIT CROSSING AND MORTORWAY  
 UNDER PPP SCHEME IN THE REPUBLIC OF TURKEY

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

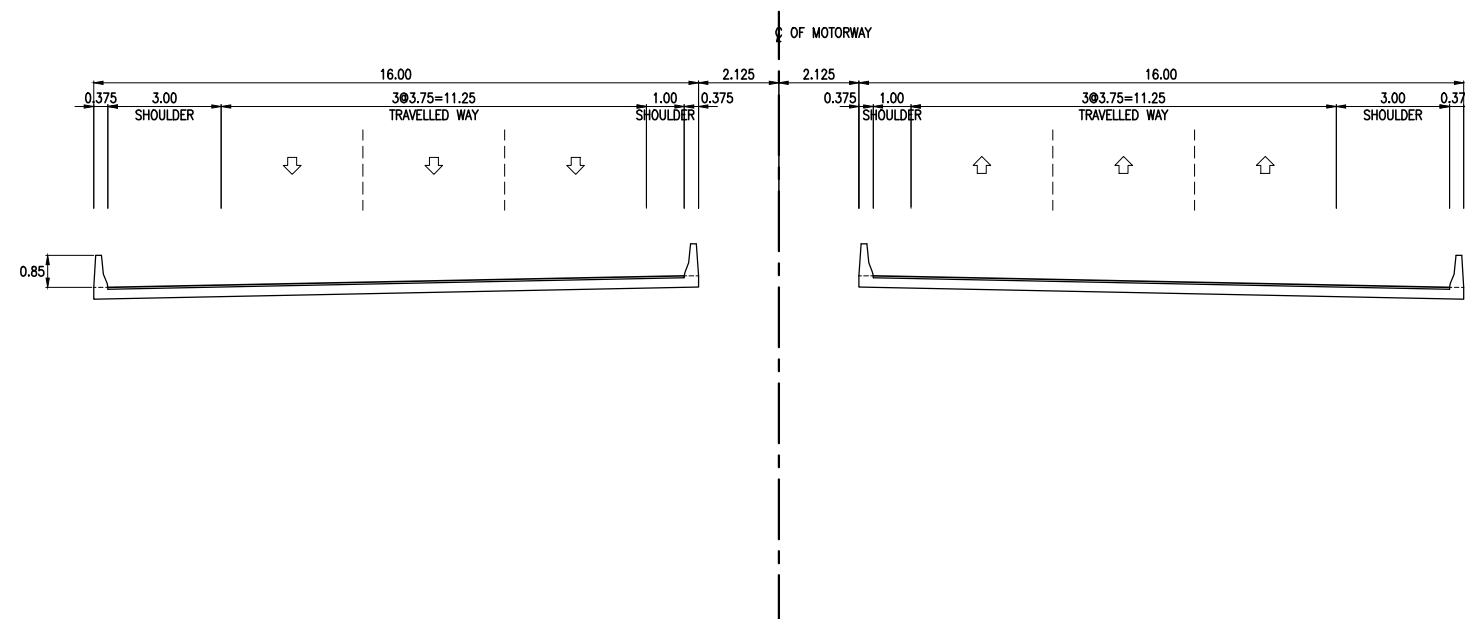
LOCATION MAP

Scale: 1 : 600,000 (A3)

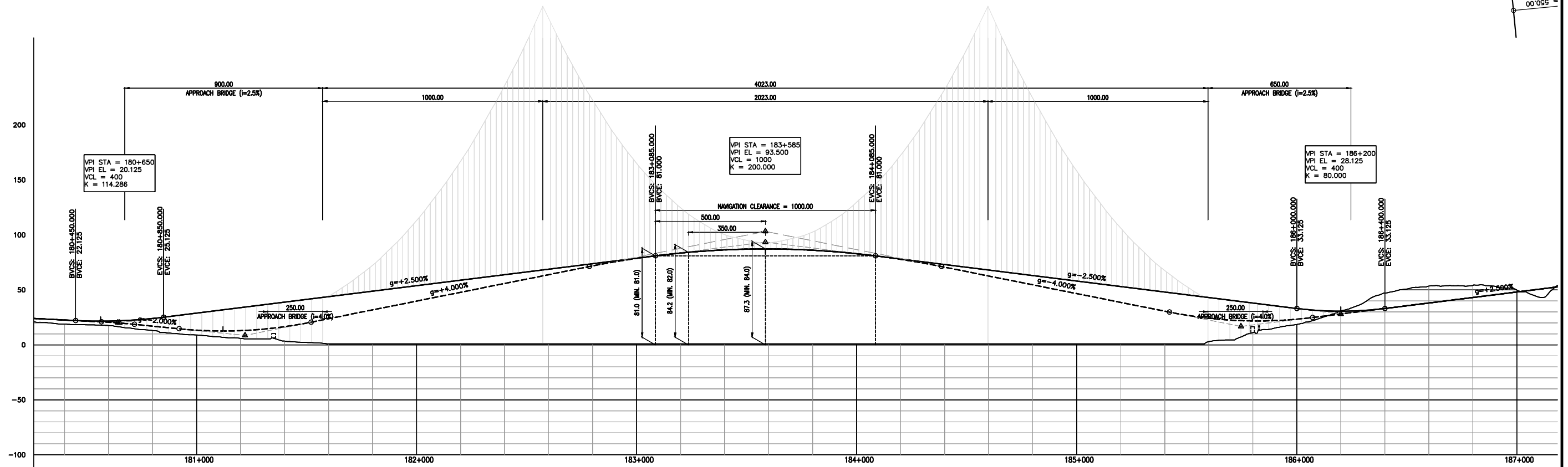
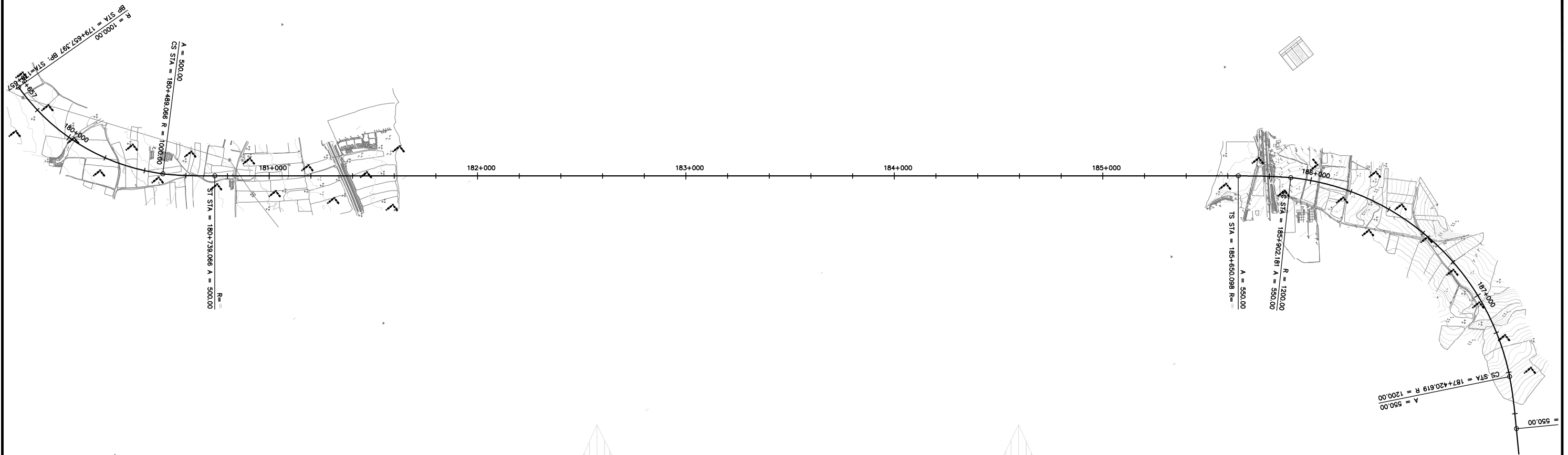


1 EMBANKMENT SECTION  
SCALE 1:100

NOTE:  
 N1 = 4 FOR H < 1.5 m  
 N1 = 3 FOR 1.5 m < H < 3.0 m  
 N1 = 2 FOR 3.0 m < H < 5.0 m  
 N1 SHALL BE DETERMINED BY GEOLOGICAL & GEOTECHNICAL ANALYSIS FOR H > 5 m  
 Nn SHALL BE DETERMINED BY GEOLOGICAL & GEOTECHNICAL ANALYSIS



2 BRIDGE SECTION (SHORT-MEDIUM LENGTH)  
SCALE 1:100

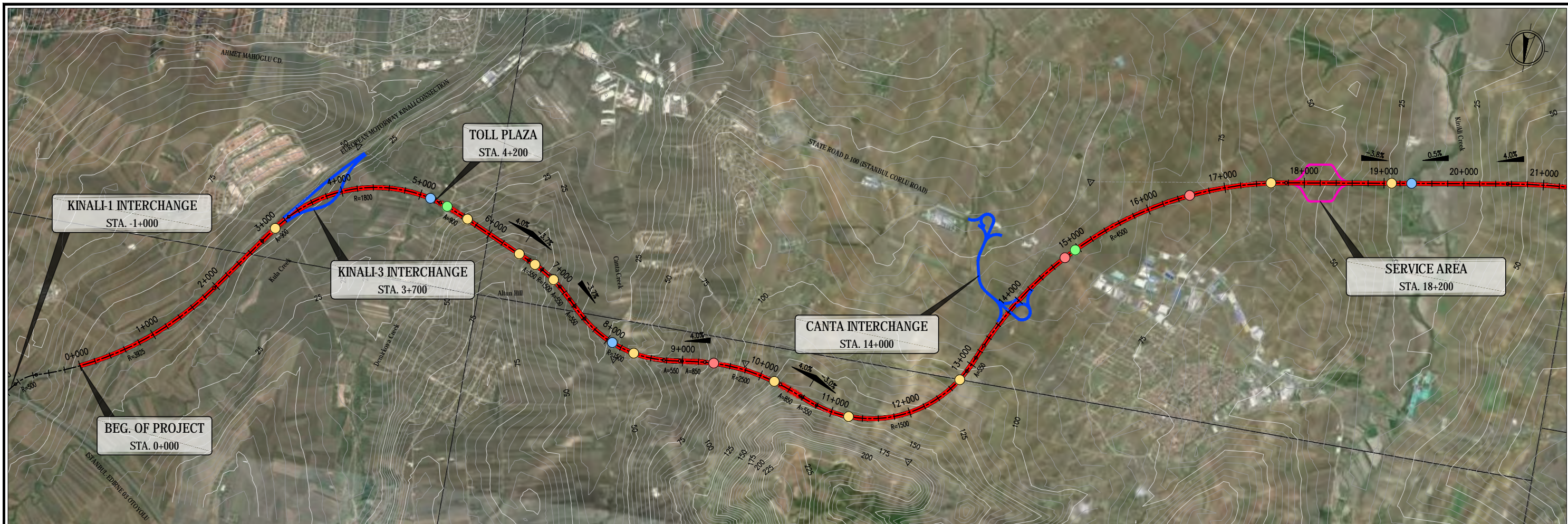


FINISHED GROUND	18.854	21.625	17.613	21.609	13.088	23.084	9.018	28.675	5.965	33.675	3.465	38.675	1.014	43.675	1.003	48.675	1.005	53.675	1.007	58.675	1.009	63.675	1.011	68.675	1.014	73.675	1.016	78.675	1.018	83.544	1.020	86.394	1.021	87.244	1.019	86.094	1.017	82.944	1.015	78.125	1.013	73.125	1.011	68.125	1.009	63.125	1.007	58.125	1.005	53.125	1.003	48.125	3.009	43.125	11.197	38.125	18.976	33.125	30.840	30.625	47.090	33.125	53.449	38.125	54.072	43.125	48.941	48.125	55.749	53.125
EXISTING GROUND	18.854	21.625	17.613	21.609	13.088	23.084	9.018	28.675	5.965	33.675	3.465	38.675	1.014	43.675	1.003	48.675	1.005	53.675	1.007	58.675	1.009	63.675	1.011	68.675	1.014	73.675	1.016	78.675	1.018	83.544	1.020	86.394	1.021	87.244	1.019	86.094	1.017	82.944	1.015	78.125	1.013	73.125	1.011	68.125	1.009	63.125	1.007	58.125	1.005	53.125	1.003	48.125	3.009	43.125	11.197	38.125	18.976	33.125	30.840	30.625	47.090	33.125	53.449	38.125	54.072	43.125	48.941	48.125	55.749	53.125
VERTICAL ALIGNMENT																																																																						
HORIZONTAL ALIGNMENT																																																																						
SUPER ELEVATION																																																																						

PREPARATORY SURVEY ON THE PROJECT FOR  
 CONSTRUCTION OF DARDANELLES STRAIT CROSSING AND MORTORWAY  
 UNDER PPP SCHEME IN THE REPUBLIC OF TURKEY  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

DARDANELLES STRAIT BRIDGE

SCALE 1 : 160,000 (A3)

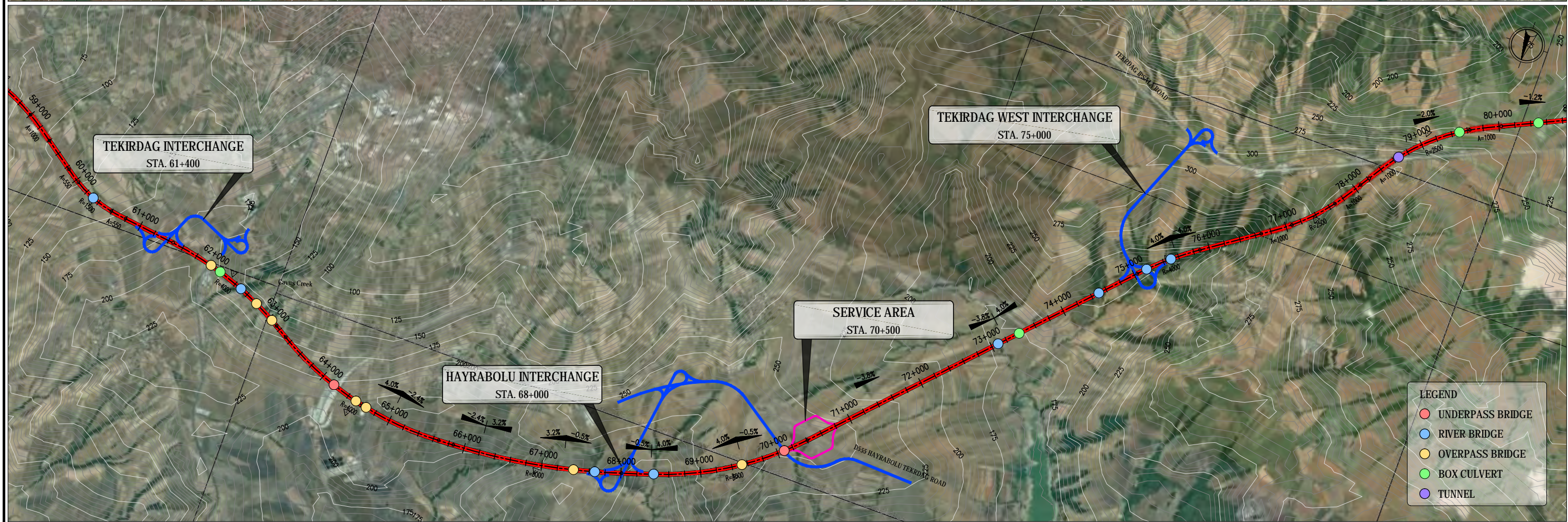
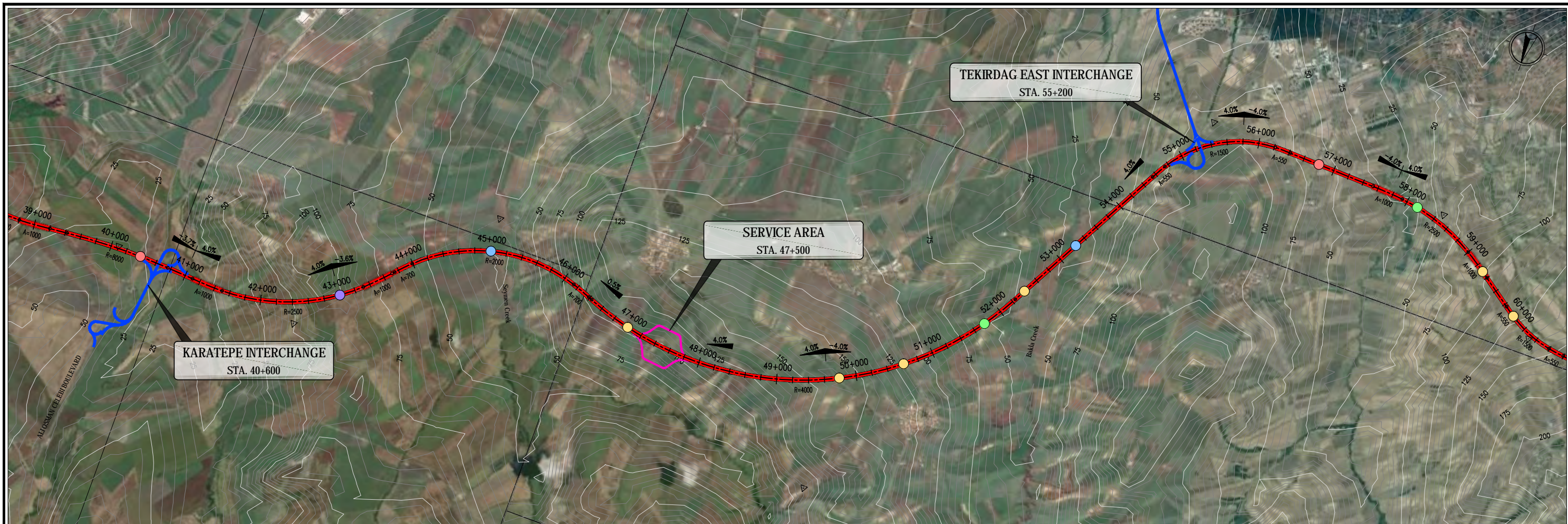


PREPARATORY SURVEY ON THE PROJECT FOR  
 CONSTRUCTION OF DARDANELLES STRAIT CROSSING AND MORTORWAY  
 UNDER PPP SCHEME IN THE REPUBLIC OF TURKEY  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

ALIGNMENT LAYOUT PLAN  
 (01 / 05)







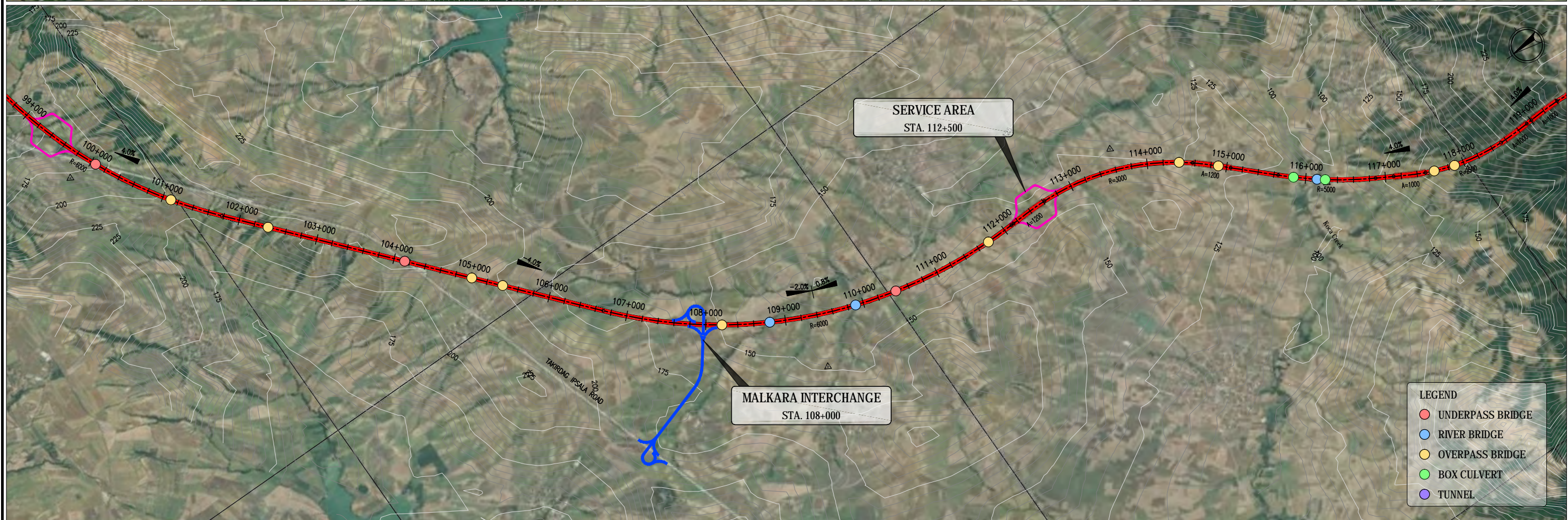
- LEGEND**
- UNDERPASS BRIDGE
  - RIVER BRIDGE
  - OVERPASS BRIDGE
  - BOX CULVERT
  - TUNNEL

PREPARATORY SURVEY ON THE PROJECT FOR  
 CONSTRUCTION OF DARDANELLES STRAIT CROSSING AND MORTORWAY  
 UNDER PPP SCHEME IN THE REPUBLIC OF TURKEY  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

ALIGNMENT LAYOUT PLAN  
 (02 / 05)



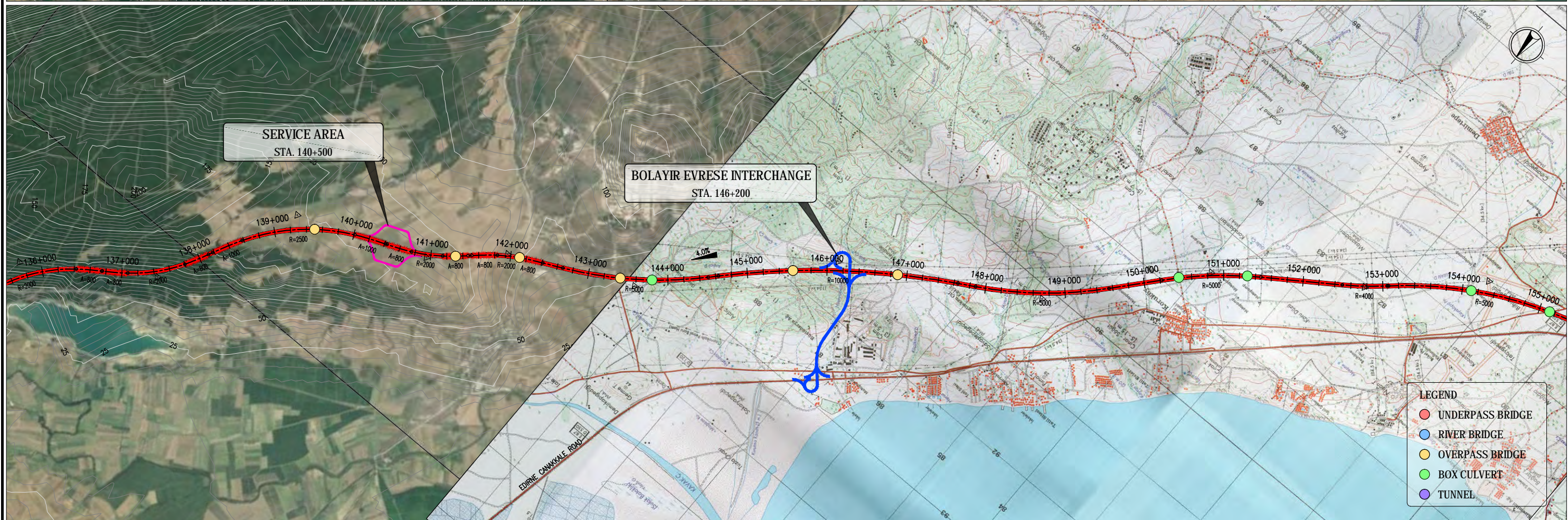
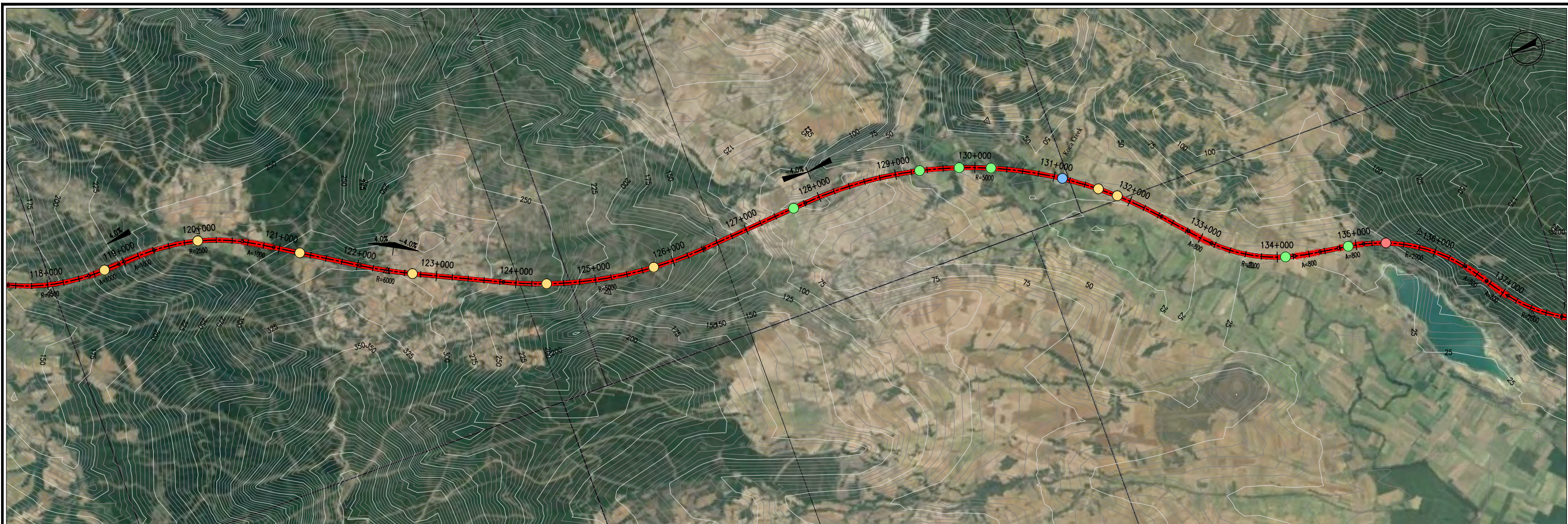
SCALE 1 : 50,000 (A3)



PREPARATORY SURVEY ON THE PROJECT FOR  
 CONSTRUCTION OF DARDANELLES STRAIT CROSSING AND MORTORWAY  
 UNDER PPP SCHEME IN THE REPUBLIC OF TURKEY  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

ALIGNMENT LAYOUT PLAN  
 (03 / 05)

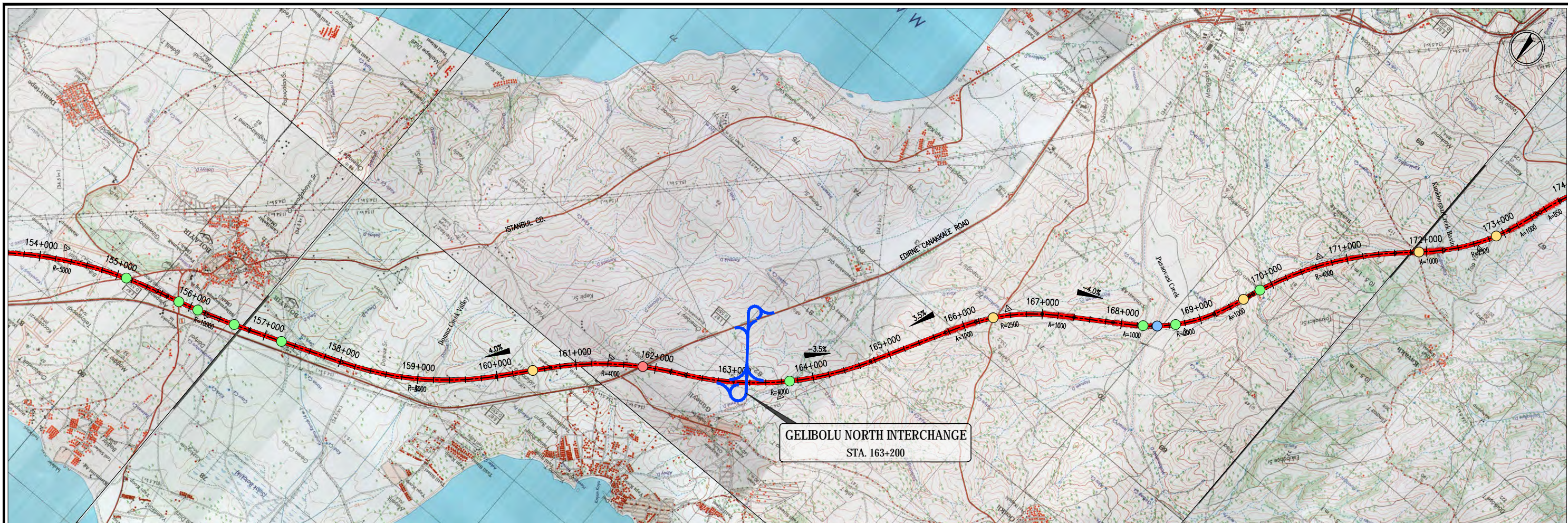




PREPARATORY SURVEY ON THE PROJECT FOR  
 CONSTRUCTION OF DARDANELLES STRAIT CROSSING AND MORTORWAY  
 UNDER PPP SCHEME IN THE REPUBLIC OF TURKEY  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

ALIGNMENT LAYOUT PLAN  
 (04 / 05)





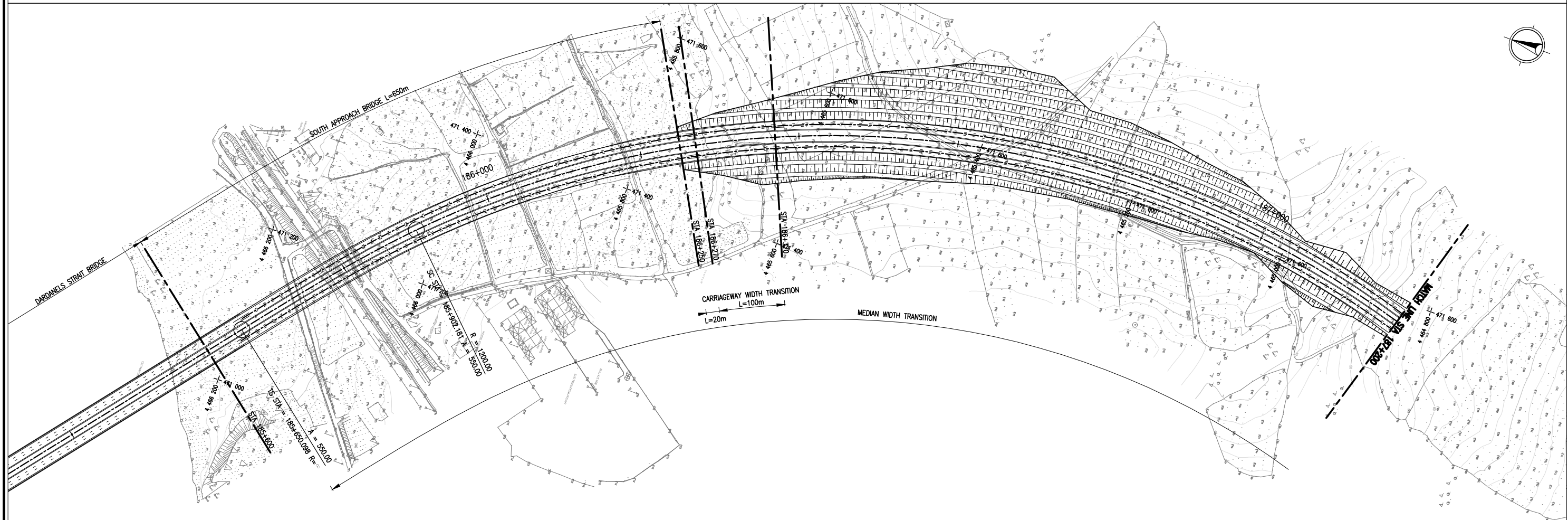
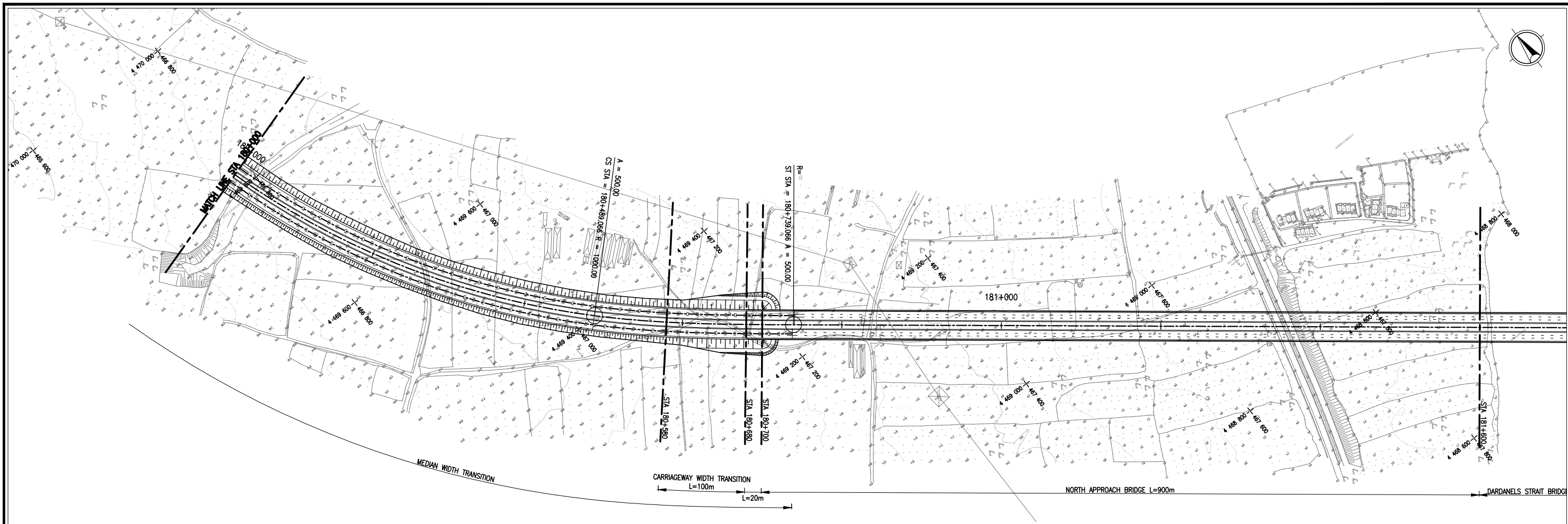
PREPARATORY SURVEY ON THE PROJECT FOR  
CONSTRUCTION OF DARDANELLES STRAIT CROSSING AND MORTORWAY  
UNDER PPP SCHEME IN THE REPUBLIC OF TURKEY

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

ALIGNMENT LAYOUT PLAN  
(05 / 05)



SCALE 1 : 50,000 (A3)



PREPARATORY SURVEY ON THE PROJECT FOR  
 CONSTRUCTION OF DARDANELLES STRAIT CROSSING AND MORTORWAY  
 UNDER PPP SCHEME IN THE REPUBLIC OF TURKEY  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

STRAIT BRIDGE APPROACH  
 PLAN



SCALE 1:5,000 (A3)

## 添付資料 3 KGMの2014年の収支表

DEVELOPMENT OF BUDGET EXPENDITURES

	Budget Year:																											RATE OF INCREASE (%)		REALIZATION PREDICTION END OF 2014 YEAR		
	2014																															
	Corporate Code:																															
	40.52 - HIGHWAYS GENERAL DIRECTORATE																															
	2013 TOTAL REALIZATION	2014 Initial Appropriations	JANUARY REALIZATION		FEBRUARY REALIZATION		FEBRUARY REALIZATION		MARCH REALIZATION		MARCH REALIZATION		APRIL REALIZATION		APRIL REALIZATION		MAY REALIZATION		MAY REALIZATION		JUNE REALIZATION		JUNE REALIZATION		JAUNURAY-JUNE REALIZATION TOTAL		RATE OF INCREASE (%)	JAUNURAY-JUNE REALIZATION		REALIZATION PREDICTION END OF 2014 YEAR		
			2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014		2013	2014		2013	2014
TOTAL OF BUDGET EXPENDITURES	15,345,326.482	7,157,071.000	76,654.354	1,908,765.644	1,829,433.075	2,326,546.098	1,752,778.719	417,780.454	2,581,257.945	3,869,032.824	751,824.870	1,542,486.724	3,012,643.339	4,193,287.400	431,385.394	324,254.574	3,705,788.020	4,670,109.124	693,144.681	476,821.724	5,426,165.167	5,942,308.444	1,720,377.147	1,272,199.318	5,426,165.167	5,942,308.444	9.51	35.36	83.03	16,723,502.000		
01 - PERSONNEL EXPENSES	827,243.229	947,765.000	59,298.077	70,192.638	121,398.051	139,153.557	62,099.974	68,960.919	180,975.568	196,559.101	59,577.517	57,405.544	237,122.250	253,863.973	56,146.682	57,304.872	314,408.425	338,387.129	77,286.175	84,523.154	375,884.795	412,577.821	61,476.370	74,190.691	375,884.795	412,577.821	9.76	45.44	43.53	1,116,330.000		
OFFICERS	172,778.394	198,233.000	19,443.653	22,832.288	33,458.074	39,110.032	14,014.420	16,277.745	47,101.865	54,736.325	13,643.791	15,626.293	62,006.700	72,032.445	14,904.835	17,296.120	75,923.856	88,203.998	13,917.157	16,171.553	90,106.252	103,873.522	14,182.395	15,669.523	90,106.252	103,873.522	15.28	52.15	52.40	362,237.500		
CONTRACTED STAFF	303.273	22.000	31.194	35.620	56.169	66.767	24.975	31.147	79.574	94.776	23.405	28.009	102.979	122.785	23.405	28.009	126.384	153.029	23.405	30.244	151.816	182.850	25.432	29.821	151.816	182.850	20.44	50.06	831.14	22.000		
WORKERS	654,127.259	749,221.000	39,822.565	47,316.840	87,881.721	99,958.204	48,059.156	52,641.363	133,790.619	141,693.258	45,908.898	41,735.055	175,007.638	181,654.792	41,217.019	39,961.533	238,351.827	249,958.246	63,344.189	68,303.454	285,618.947	308,428.304	47,267.119	58,470.059	285,618.947	308,428.304	7.99	43.66	41.17	753,781.500		
TEMPORARY STAFF	34.303	289.000	664	7,890	2,087	18,555	1,423	10,665	3,511	34,742	1,423	16,187	4,934	53,951	1,423	19,209	6,357	71,856	1,423	17,905	7,780	93,145	1,423	21,289	7,780	93,145	1,097.20	22.68	32.23	289.000		
OTHER STAFF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02 - STATE CONTRIBUTIONS COSTS TO SOCIAL SECURITY INSTITUTIONS	158,142.135	195,069.000	10,518.848	11,526.825	21,785.898	23,588.202	11,267.050	12,061.377	32,547.453	35,202.359	10,761.555	11,614.157	44,240.363	47,352.075	11,692.910	12,149.714	59,457.310	63,282.500	15,216.947	15,930.424	73,823.702	78,256.097	14,366.392	14,973.597	73,823.702	78,256.097	6.00	46.68	40.12	782,615.000		
OFFICERS	40,165.073	46,035.000	4,710.119	5,111.253	8,165.840	9,163.201	3,455.721	4,051.948	11,615.002	12,979.550	3,449.163	3,816.348	15,098.643	16,890.725	3,483.640	3,911.176	17,918.512	20,708.830	2,819.870	3,818.104	21,322.188	24,524.004	3,403.676	3,815.175	21,322.188	24,524.004	15.02	53.09	53.27	438,273.000		
CONTRACTED STAFF	13,140	3,000	3,057	167.473	2,507	169,578	550	2,105	5,013	600,582	2,506	431,004	5,339	173,771	326	-426,811	5,666	11,058	326	-162,713	7,490	14,001	1,825	2,944	14,001	1,825	2,944	14,001	86.93	57.00	466.72	3,000
WORKERS	117,904.971	148,976.000	5,805.540	6,247.627	13,617.138	14,253.178	7,811.598	8,005.551	20,926.743	21,618.031	7,309.604	7,364.853	29,135.404	30,281.071	8,208.661	8,663.040	41,531.874	42,554.128	12,396.469	12,273.057	52,492.483	53,707.355	10,960.610	11,153.228	52,492.483	53,707.355	2.31	44.52	36.05	344,284.000		
TEMPORARY STAFF	58,951	55,000	132	472	413	2,245	282	1,774	695	4,197	282	1,952	977	6,509	282	2,312	1,259	8,485	282	1,976	1,540	10,736	282	2,252	1,540	10,736	596.95	2.61	19.52	55,000		
OTHER STAFF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03 - PURCHASE OF GOODS AND SERVICES	1,998,186.315	1,963,017.000	4,671.053	8,844.788	36,077.938	53,287.113	31,406.885	44,442.325	79,428.506	84,261.164	43,350.568	30,974.051	136,928.214	143,920.588	57,499.708	59,659.425	187,822.838	197,006.145	50,894.624	53,085.554	221,926.744	247,046.079	34,103.906	50,039.935	221,926.744	247,046.079	11.32	11.11	12.59	2,401,337.000		
PURCHASE OF GOODS AND MATERIALS FOR PRODUCTION	279,292	308,000	0	0	2,385	0	2,385	0	34,568	19,124	32,183	19,124	41,339	22,318	6,771	3,195	44,132	33,248	2,794	10,929	45,880	42,852	1,748	9,604	45,880	42,852	-6.60	16.43	13.91	308,000		
PURCHASE OF GOODS AND MATERIALS FOR CONSUMPTION	216,380.886	258,038.000	3,554.048	6,366.191	11,895.767	25,747.856	8,341.719	19,381.665	30,502.176	35,960.540	18,606.409	10,212.684	56,071.099	46,558.799	25,568.923	10,598.259	70,145.413	58,849.002	14,074.314	12,290.203	78,662.426	78,282.780	8,517.013	19,433.778	78,662.426	78,282.780	-0.48	36.35	30.34	610,751.000		
FARES	22,883.650	24,815.000	120.349	193.054	584.397	520.287	464.048	327.233	1,225.129	1,044.077	640.732	523.790	2,111.914	1,730.041	886.785	685.964	6,680.596	5,891.030	4,568.682	4,160.989	8,375.689	8,999.496	1,695.093	3,108.466	8,375.689	8,999.496	7.45	36.60	36.27	54,947.000		
TASK EXPENSES	29,920.937	2,146.000	357.853	852.407	2,202.710	2,606.451	1,844.857	1,754.045	3,016.109	4,585.330	813.398	1,978.878	6,077.174	19,722.006	3,061.066	15,136.676	7,960.336	22,451.964	1,883.162	2,729.958	9,598.534	28,842.910	1,638.198	6,390.945	9,598.534	28,842.910	200.49	32.08	1,344.03	17,291.000		
PURCHASE OF SERVICE	124,000.516	129,692.000	441.693	414.770	9,758.910	10,990.458	9,317.217	10,575.688	20,064.558	19,173.438	10,305.648	8,182.980	28,751.487	31,967.835	8,868.929	12,794.397	39,744.632	42,506.593	10,993.144	10,538.757	49,140.408	52,027.376	9,395.776	9,520.783	49,140.408	52,027.376	5.87	39.63	40.12	169,852.000		
REPRESENTATION EXPENSES AND PROMOTION	68,090	69,000	0	0	0	0	0	0	332	0	332	0	721	861	389	861	721	2,004	0	1,142	5,713	7,397	4,991	5,394	5,713	7,397	29.49	8.39	10.72	69,000		
STOCK GOODS, INCORPOREAL RIGHTS, MAINTENANCE AND REPAIR COSTS	8,398.382	13,194.000	2,235	4,758	417.894	312.344	415.658	307.586	1,142.263	792.891	724.370	480.547	1,578.781	1,314.992	436.517	522.101	2,257.655	1,893.758	678.874	578.766	2,861.150	2,684.943	603.495	791.185	2,861.150	2,684.943	-6.16	34.07	20.35	13,364.000		
PROPERTY GOODS MAINTENANCE AND REPAIR COSTS	1,596,254.562	1,534,755.000	194.875	1,013.607	11,215.875	13,109.715	11,021.000	12,096.108	23,443.371	22,685.763	12,227.496	9,576.048	42,295.698	42,603.735	18,852.327	19,917.972	60,989.352	65,378.545	18,693.654	22,774.810	73,236.945	76,158.325	12,247.592	10,779.780	73,236.945	76,158.325	3.99	4.59	4.96	1,534,755.000		
TREATMENT AND FUNERAL EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04 - INTEREST EXPENSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DOMESTIC DEBT INTEREST EXPENSE PAID TO PUBLIC INSTITUTIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OTHER DOMESTIC DEBT INTEREST EXPENSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EXTERNAL DEBT INTEREST EXPENSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DISCOUNT EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INTEREST EXPENSE BELONGING TO SHORT-TERM CASH TRANSACTIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05 - CURRENT TRANSFERS	3,897,306	6,220,000	901,600	316,668	1,121,825	1,125,737	220,225	809,069	1,235,365	1,778,975	113,541	653,239	1,413,691	2,119,902	178,326	340,927	1,519,671	2,165,002	105,980	45,100	1,618,639	3,624,421	98,968	1,459,419	1,618,639	3,624,421	123.92	41.53	58.27	6,220,000		
DUTIES OF LOSSES	2,523,433	4,750,000	900,000																													

Budget Year:	2014																														
Corporate Code:	40.52 - HIGHWAYS GENERAL DIRECTORATE																														
	2013 TOTAL REALIZATION	2014 Initial Appropriations	JANUARY REALIZATION		FEBRUARY REALIZATION		FEBRUARY REALIZATION		MARCH REALIZATION		MARCH REALIZATION		APRIL REALIZATION		APRIL REALIZATION		MAY REALIZATION		MAY REALIZATION		JUNE REALIZATION		JUNE REALIZATION		JAUNURAY-JUNE REALIZATION TOTAL		RATE OF INCREASE (%)	JAUNURAY-JUNE REALIZATION		REALIZATION PREDICTION END OF 2014 YEAR	
			2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014		2013	2014		2013
<b>TOTAL BUDGET INCOME</b>	15,944,055.079	7,157,071.000	2,066,424.464	4,169,007.571	118,696.628	4,338,183.980	-1,947,727.836	169,176.409	5,050,511.846	5,536,698.346	4,931,815.218	1,198,514.365	5,526,626.558	6,357,567.106	476,114.711	820,868.761	6,516,976.828	6,827,683.854	990,350.271	470,116.747	7,772,511.756	7,958,028.617	1,255,534.928	1,130,344.763	7,772,511.756	7,958,028.617	2.39	48.75	111.19	<b>16,723,502.000</b>	
<b>03. Enterprises and Ownership Revenues</b>	886,201.805	959,747.000	55,536.283	71,497.734	90,905.149	143,497.871	35,368.866	72,000.137	146,427.748	219,127.299	55,522.599	75,629.428	192,257.691	295,211.248	45,829.943	76,083.949	302,613.860	372,410.055	110,356.169	77,198.808	402,530.073	463,319.384	99,916.214	90,909.329	402,530.073	463,319.384	15.10	45.42	48.28	<b>809,747.000</b>	
03.1 Goods and Services Revenue	851,281.694	937,017.000	51,986.802	67,361.546	84,970.585	136,833.576	32,983.784	69,472.030	138,449.504	207,498.143	53,478.919	70,664.568	182,136.965	281,551.699	43,687.461	74,053.556	289,652.399	356,411.377	107,515.434	74,859.678	386,698.541	441,457.325	97,046.142	85,045.947	386,698.541	441,457.325	14.16	45.43	47.11	787,017.000	
03.6 Rental Income	32,877.313	22,705.000	3,549.481	4,136.188	5,934.564	6,664.295	2,385.083	2,528.107	7,978.244	11,629.156	2,043.680	4,964.861	10,120.726	13,659.556	2,142.482	2,030.400	12,961.461	15,998.685	2,840.735	2,339.129	15,831.532	21,862.067	2,870.071	5,863.382	15,831.532	21,862.067	38.09	48.15	96.29	22,705.000	
03.9 Other Enterprise and Ownership Revenues	2,042.799	25.000	0	0	0	0	0	0	0	0	0	0	0	-8	0	-8	0	0	0	0	0	0	0	0	0	0	-8	0.00	0.00	-0.03	25.000
<b>04. Received Grants and Aids and Special Revenues</b>	14,905,753.101	6,130,686.000	1,995,000.000	4,083,385.405	7,902.693	4,166,707.166	-1,987,097.307	83,321.761	4,845,902.693	5,251,353.885	4,838,000.000	1,084,646.719	5,269,964.239	5,988,343.278	424,061.546	736,989.393	6,144,964.239	6,372,838.119	875,000.000	384,494.840	7,290,102.495	7,255,413.269	1,145,138.256	882,575.150	7,290,102.495	7,255,413.269	-0.48	48.91	118.35	<b>15,847,117.000</b>	
04.1 Grants and Aids Received From Abroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0
04.2 Grants and Aids from Administration Included in income Central Government	14,792,010.000	6,130,686.000	1,995,000.000	4,081,000.000	0	4,161,010.000	0	80,010.000	4,838,000.000	5,241,010.000	4,838,000.000	1,080,000.000	5,260,000.000	5,973,010.000	422,000.000	732,000.000	6,135,000.000	6,353,010.000	875,000.000	380,000.000	7,228,000.000	7,233,010.000	1,093,000.000	880,000.000	7,228,000.000	7,233,010.000	0.07	48.86	117.98	15,847,117.000	
04.3 Grants and Aids from Other Administrative	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0
04.4 Grants and Aids from People and Institutions	113,743.101	0	0	2,385.405	7,902.693	5,697.166	7,902.693	3,311.761	7,902.693	10,343.885	0	4,646.719	9,964.239	15,333.278	2,061.546	4,989.393	9,964.239	19,828.119	0	4,494.840	62,102.495	22,403.269	52,138.256	2,575.150	62,102.495	22,403.269	-63.93	54.60	0.00	0	
04.5 Project Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0
04.6 Special Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0
<b>05. Other Income</b>	87,763.479	65,858.000	11,559.235	10,198.274	15,549.530	23,575.136	3,990.295	13,376.862	20,371.507	30,372.774	4,821.977	6,797.638	26,587.959	37,700.841	6,216.452	7,328.068	31,299.804	45,636.045	4,711.845	7,935.204	38,117.994	54,226.010	6,818.189	8,589.965	38,117.994	54,226.010	42.26	43.43	82.34	<b>65,858.000</b>	
05.1 Interest Income	10,144.589	10,558.000	1,142.508	775.288	1,436.488	2,865.939	293.980	2,090.652	2,678.970	4,129.993	1,242.483	1,264.054	3,094.865	5,463.933	415.894	1,333.939	4,015.984	6,954.130	921.119	1,490.197	4,880.989	8,172.319	865.005	1,218.190	4,880.989	8,172.319	67.43	48.11	77.40	10,558.000	
05.2 Rates from People and Institutions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0
05.3 Fines	146,377.32	500,000	32.25	79,442.4	32.25	121,292	0	41,850	338	210,869	305	89,577	37,140	325,290	36,802	114,421	231,940	379,766	194,800	54,476	280,305	684,610	48,365	304,844	280,305	684,610	144.24	19.15	136.92	500,000	
05.9 Other Miscellaneous Income	761,553.12,36	548,000.000	104,166.94,69	934,354,3,88	141,130,0,9,94	205,87,904,2,2	3,696,3,15	11,244,3,60	17,692,1,99	26,031,1,91	3,579,1,89	5,444,0,07	23,455,9,54	31,911,6,19	5,763,7,55	5,879,7,07	27,051,8,80	38,302,1,49	3,595,9,26	6,390,5,31	32,956,7,00	45,369,0,81	5,904,8,19	7,066,9,31	32,956,7,00	45,369,0,81	37.66	43.28	82.79	548,000.000	
<b>06. Capital Income</b>	64,336.694	780.000	4,328.947	3,926.159	4,339.256	4,403.807	10,310	477.649	37,809.898	35,844.387	33,470.642	31,440.580	37,816.669	36,311.739	6,771	467.351	38,098.925	36,799.635	282.256	487.896	41,761.194	185,069.954	3,662.269	148,270.319	41,761.194	185,069.954	343.16	64.91	23,726.92	<b>780.000</b>	
06.1 Immovable Sales Revenue	638,870,9,25	580,000	431,891,5,07	391,768,7,5	432,915,0,7	439,168,7,5	11,000	474,000	37,800,3,95	35,829,2,59	33,470,4,80	31,437,5,90	37,800,3,95	36,080,2,80	0	251,021	38,079,6,95	36,568,1,76	279,300	487,896	41,737,8,24	184,817,3,10	3,658,1,29	148,249,1,35	41,737,8,24	184,817,3,10	342,81	65,33	31,865,0,5	580,000	
06.2 Movable Sales Revenue	447,985,0,7	200,000	1,003,1,47	848,9,83	934,1,06	121,38,6,8	-6,90	3,649	9,503	15,129	162	2,990	16,274	231,459	6,771	216,331	19,230	231,459	2,956	0	23,370	252,643	4,140	21,184	23,370	252,643	981,04	5,22	126,32	200,000	