Republic of the Philippines
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES

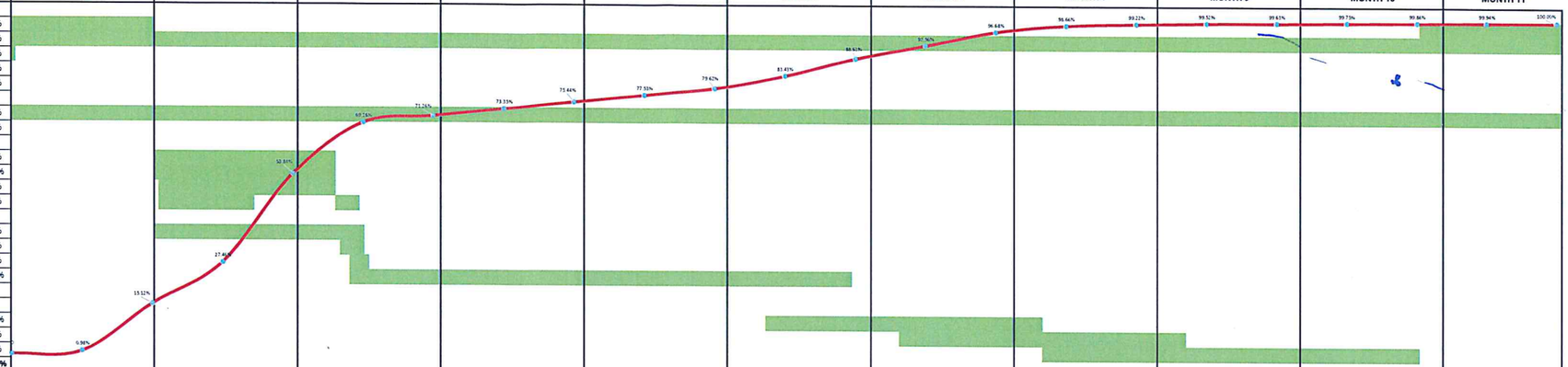
ASPHALT OVERLAY OF RUNWAY INCLUDING SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

Brgy. Dalakit, Catarman, Northern Samar

CONSTRUCTION SCHEDULE
GANTT CHART AND S-CURVE

Three Hundred Sixty (360) Calendar Days

ITEM	WORK DESCRIPTION	QTY.	UNIT	TOTAL COST (PhP)	WT. (%)
I	**GENERAL REQUIREMENTS**				
I.a	Mobilization and Demobilization	1.00	lot	875,416.32	0.31%
I.b	Construction Safety and Health Program	1.00	lot	201,216.33	0.07%
I.c	Project Billboard/Sign Board	2.00	ea.	18,588.53	0.01%
I.d	Provision of Project Equipment	1.00	lot	646,800.00	0.23%
I.e	Provision of Communication Equipment for the Engineer	1.00	lot	157,500.00	0.06%
II	**FACILITIES FOR THE ENGINEERS**				
II.a	Provision of Living Quarters for the Engineer	1.00	lot	189,000.00	0.07%
II.b	Provision of 4x2 Pick Up Type Service Vehicle for the Engineer	1.00	lot	1,681,000.00	0.60%
III	**ASPHALT OVERLAY OF RUNWAY**				
P-603-5.1	Emulsified Asphalt Tack Coat (Cationic CRS-1)	36.30	M.T.	5,071,529.74	1.81%
P-403-8.1a	Asphalt Mix Pavement Surface (Bituminous Hot Laid)	8,770.00	M.T.	172,910,197.45	61.83%
P-101-5.1b	Removal of Existing Asphalt Pavement and Asphalt Temporary Transitions	21,082.05	sq.m.	3,376,128.40	1.21%
P-620	Runway Markings	3,462.00	sq.m.	424,022.34	0.15%
IV	**SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION**				
P-151-4.2	Clearing and Grubbing	2,608.28	sq.m.	5,934,270.61	2.12%
P-152	Excavation and Disposal	1,955.39	cu.m.	767,251.33	0.27%
P-152-4.1e	Embankment from Roadway Excavation	1,466.54	cu.m.	352,525.45	0.13%
P-152-4.2	Embankment from Borrow Source	53,800.01	cu.m.	40,833,580.57	14.60%
V	**PROVISION OF SLOPE PROTECTION**				
1.00	**Civil/ Structural Works**				
1.01	Structural Steel Sheet Piles	464.00	l.m.	39,618,937.67	14.17%
1.02	Concrete Works	237.21	cu.m.	4,959,322.07	1.77%
1.03	Grouted Riprap	407.00	cu.m.	1,643,854.94	0.59%
				279,661,141.76	**100.00%**



	MONTH 1				MONTH 2				MONTH 3				MONTH 4				MONTH 5			
Percent Accomplishment (PLAN), %	0.94%	0.04%	0.05%	0.04%	14.06%	12.33%	14.08%	12.29%	14.05%	1.28%	1.12%	0.98%	1.12%	0.98%	1.12%	0.98%	1.12%	0.98%	1.12%	0.98%
Cumulative Percent Accomplishment (PLAN), %	0.94%	0.98%	1.03%	1.06%	15.12%	27.46%	41.54%	53.84%	67.88%	69.16%	70.28%	71.26%	72.37%	73.35%	74.46%	75.44%	76.56%	77.53%	78.65%	79.62%
Monthly Accomplishment Amount (PLAN), Php	2,977,616.66				147,579,376.02				48,717,522.87				11,702,757.27				11,702,757.27			
Cumulative Monthly Accomplishment Amount (PLAN), Php	2,977,616.66				150,556,992.68				199,274,515.55				210,977,272.82				222,680,030.10			

	MONTH 6				MONTH 7				MONTH 8				MONTH 9				MONTH 10				MONTH 11			
Percent Accomplishment (PLAN), %	1.12%	2.69%	3.07%	2.13%	2.02%	1.92%	2.19%	1.92%	1.72%	0.26%	0.30%	0.26%	0.24%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.04%	0.04%	0.04%	0.04%	0.02%
Cumulative Percent Accomplishment (PLAN), %	80.74%	83.43%	86.50%	88.63%	90.64%	92.56%	94.76%	96.68%	98.40%	98.66%	98.96%	99.22%	99.46%	99.52%	99.58%	99.63%	99.70%	99.75%	99.81%	99.86%	99.90%	99.94%	99.98%	*****
Monthly Accomplishment Amount (PLAN), Php	25,175,065.21				22,512,302.77				7,113,590.77				1,156,200.89				629,178.59				394,773.44			
Cumulative Monthly Accomplishment Amount (PLAN), Php	247,855,095.31				270,367,398.07				277,480,988.84				278,637,189.73				279,266,368.32				279,661,141.76			

Prepared by :

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Sumitted by :

RAUL R. CRUCENA
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Recommending Approval:

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Department Manager III, AED-ADMS

Approved by:

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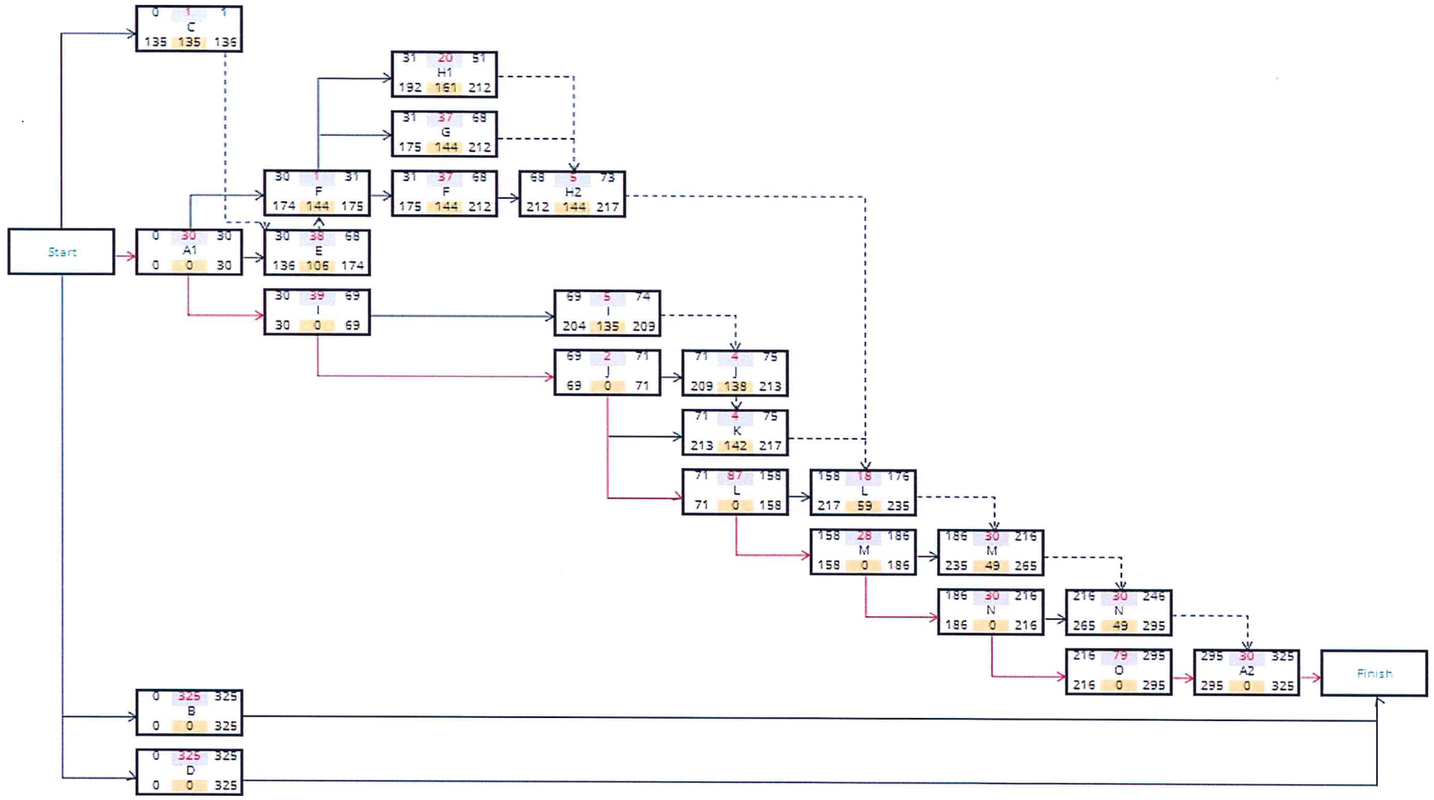
NETWORK DIAGRAM / PERT-CPM

Three Hundred Sixty (360) Calendar Days Inclusive of Thirty Five (35) Calendar Days



NODES	ITEMS		ACTIVITIES	DURATION (DAYS)	PREDECESSOR
0-30	A1	I.a.1	Mobilization	30	-
295-325	A2	I.a.2	Demobilization	30	O
0-325	B	I.b	Construction Safety and Health Program	325	-
0-1	C	I.c	Project Billboard/Sign Board	1	-
0-325	D	II.a	Provision of Living Quarters for the Engineer	325	-
30-68	E	P-603-5.1	Emulsified Asphalt Tack Coat (Cationic CRS-1)	38	A1
30-68	F	P-403-8.1a	Asphalt Mix Pavement Surface (Bituminous Hot Laid)	38	A1
31-68	G	P-101-5.1b	Removal of Existing Asphalt Pavement and Asphalt Temporary Transitions	37	F
31-51	H1	P-620	Runway Markings	20	F
68-73	H2	P-620	Runway Markings	5	F
30-74	I	P-151-4.2	Clearing and Grubbing	44	A1
69-75	J	P-152	Excavation and Disposal	5	I
71-75	K	P-152-4.1e	Embankment from Roadway Excavation	4	J
71-176	L	P-152-4.2	Embankment from Borrow Source	105	J
158-216	M	1.01	Structural Steel Sheet Piles	58	L
186-246	N	1.02	Concrete Works	60	M
216-295	O	1.03	Grouted Riprap	79	N

CRITICAL PATH (A1,I,J,L,M,N,O,A2)
= 30+39+2+87+28+30+79+30
= *325.00 Calendar Days*
= ***Three Hundred Sixty (360) Calendar Days Inclusive of Thirty Five (35) Calendar Days***

ES	t	EF
Activity		
LS	S	LF

ES	t	EF
Activity		
LS	S	LF

Designation	Description
ES	Early Start
EF	Early Finish
LS	Late Start
LF	Late Finish
t	Duration
S	Slack/Float

Prepared by :

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Department Manager III, AED-ADMS

Approved by :

LTCOL VALENTINO A. DIONELA PAF (RET)
Assistant Director General II, ADMS

GENERAL NOTES:

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AS WELL AS ANY REGULATIONS, STANDARDS, CODES OR SPECIFICATION REFERENCES THEREIN.
2. COORDINATION OF WORK WITH THE CAAP MANAGEMENT AND OTHER STAKEHOLDERS IS MANDATORY SO AS TO MINIMIZE IMPACTS ON AIRPORT OPERATIONS.
3. CONTRACTOR WILL NOT BE PERMITTED TO ENTER/ACCESS THE CONSTRUCTION AREA WITHOUT PROPER CLEARANCES FROM THE CAAP MANAGEMENT/CONTROL TOWER.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING INCIDENTAL GRADING AND INFRASTRUCTURE NECESSARY FOR THE TEMPORARY HAUL ROADS; ANY DISTURBED AREA SHALL BE RETURNED TO A CONDITION THAT IS EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ALL DAMAGE TO EXISTING PAVEMENT USED FOR HAUL ROUTES BY CONSTRUCTION OR HAULING EQUIPMENT.
6. CONSTRUCTION ACTIVITIES WITHIN THE AIRSIDE ARE SUBJECT TO CHANGE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER COORDINATION, PLANNING AND SCHEDULING WITH CAAP-PMO REGULARLY.
7. EXCAVATED MATERIALS AND DEBRIS SHALL NOT BE STOCKPILED HIGHER THAN 1 METER FROM THE EXISTING GROUND/GRADE. UNLESS APPROVED OTHERWISE BY THE CAAP MANAGEMENT/PMO.
8. THE CONTRACTOR'S WASTE MATERIAL SHALL BE DISPOSED OF OFF AIRSIDE LIMITS IN THE DESIGNATED DISPOSAL AREA.
9. CONSTRUCTION TRAFFIC SHALL YIELD TO AIRCRAFT TRAFFIC AT ALL TIMES.
10. ALL FOREIGN OBJECT DEBRIS (FOD) MUST BE KEPT OFF ACTIVE OPERATION AREAS.

STEEL SHEET PILE WITH GROUTED RIPRAP WALL:

1. ALL DIMENSIONS MUST CHECKED ON SITE AND NOT SCALED FROM THIS DRAWING.

2. ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METERS UNLESS STATED OTHERWISE.

3. THE SUBGRADE SURFACE ON WHICH THE ROCK RIPRAP, FILTER, BEDDING, OR GEOTEXTILE IS TO BE PLACED SHALL BE CUT OR FILLED AND GRADED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS.

4. WHEN FILL TO SUBGRADE LINES ARE REQUIRED, IT SHALL CONSIST OF APPROVED MATERIAL AND SHALL BE COMPACTED TO A DENSITY EQUAL TO THE ADJACENT EXISTING SOIL MATERIAL.

5. STONES FOR RIPRAP SHALL BE DENSE, SOUND AND FREE FROM CRACKS, SEAMS AND OTHE DEFECTS CONDUCIVE TO ACCELERATED WEATHERING. THE STONES SHALL BE ANGULAR TO SUB-ROUNDED IN SHAPE WITH THE GREATES DIMENSION NOT GREATER THAN TWO (2) TIMES THE LEAST DIMENSION.

6. STONES RANGING FROM A MINIMUM OF 5KGS. TO A MAXIMUM OF 10KGS. SHALL BE USED AND PLACED EITHER BY EQUIPMENT OR HAND WITH ITS LONGEST AXIS PERPENDICLAR TO THE SLOPE IN CLOSE CONTACT WITH EACH ADJACENT STONE.

7. WEEP HOLES SHALL BE PLACED HORIZONTALLY AT THE LOWEST POINTS WHERE FREE OUTLETS FOR WATER CAN BE OBTAINED AND SHALL BE SPACED AT NOT MORE THAN 2METERS CENTER TO CENTER IN A STAGGERED MANNER.

8. REINFORCING BARS INTERSECTING TO THE STEEL SHEET PILES MUST BE DRILLED AND WELDED INTO IT TO PROVIDE A STABLE CONNECTION.

9. PROVIDE EXPANSION JOINT AT EVERY 20METERS LENGTH OF PILE COPING, INCLINED COLUMN AND BEAMS.

10. PROVIDE CONTRACTION JOINT AT EVERY 5METERS LENGTH OF PILE COPING, INCLINED COLUMN AND BEAMS.

11. STEEL SHEET PILES WILL BE DRIVEN WITH 4 METERS SUBMERGED TO WATER LINE AND 2 METERS EXPOSED ABOVE THE WATER LINE.

SAFETY NOTES:

1. THIS CONTRACTOR SHALL BE AWARE OF AND PREVENT THE FOLLOWING TYPE OF SAFETY PROBLEMS AND/OR HAZARDS:

   A. PILES OF SCRAPE ASPHALT, CONSTRUCTION MATERIALS, TEMPORARY STRUCTURES, OR OTHER OBJECTS IN THE VICINITY OF THE OPEN RUNWAY OR TAXIWAY.

   B. VEHICLE OR EQUIPMENT, WHETHER OPERATING OR IDLE, ON ANY OPEN RUNWAY OR TAXIWAY WHICH COULD INTERFERE WITH THE MOVEMENT OF THE AIRCRAFT.

   C. TRASH OR OTHER MATERIALS WITH FOREIGN OBJECT (FOD) POTENTIAL, WHETHER ON RUNWAY, TAXIWAYS, OR APRON; OR IN RELATED SAFETY AREAS.

   D. FAILURE TO CONTROL UNAUTHORIZED VEHICLE AND HUMAN ACCESS FROM ACTIVE AIRCRAFT OPERATING AREAS.

   E. CONSTRUCTION ACTIVITIES OR MATERIALS WHICH COULD HAMPER THE RESPONSE OF AIRCRAFT RESCUE AND FIRE FIGHTING OR OTHER EMERGENCY EQUIPMENT FROM REACHING AIRCRAFT.

   F. BIRD ATTRACTANTS ON AIRFIELD SUCH AS EDIBLE (FOOD SCRAPS, ETC;) MISCELLANEOUS TRASH. OR PONDED WATER.

2. DEBRIS, WASTE, AND LOOSE MATERIALS CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEAR OR PROPELLERS, OR BEING INGESTED IN JET ENGINES SHALL NOT BE ALLOWED IN ACTIVE AIRCRAFT MOVEMENT AREAS OR ADJACENT GRASSED AREAS. MATERIALS OBSERVED IN THESE AREAS SHALL BE REMOVED IMMEDIATELY AND/OR CONTINUOUSLY BY THE CONTRACTOR.
3. CONSTRUCTION VEHICLE AND EQUIPMENT MUST HAVE ROTATING BEACON ALL DAY DURING CONSTRUCTION WITHIN THE ACTIVE AIRFIELD. A TWO-WAY RADIO COMMUNICATION WITH THE CONTROL TOWER PERSONNEL FROM THE CAAP ARE REQUIRED ALL THE TIME DURING CONSTRUCTION.

ASPHALT PAVEMENT:

1. AGGREGATE FOR ASPHALTIC CONCRETE PAVING:
   PROVIDE A MIXTURE OF SAND, MINERAL AGGREGATE, AND LIQUD ASPHALT MIXED IN SUCH PROPORTIONS THAT THE PERCENTAGE OF WEIGHT WILL BE WITHIN:

SIEVE SIZES	PERCENTAGE PASSING
19mm ($\frac{3}{4}$")	100
9.5mm ($\frac{3}{8}$")	67-85
6.4mm ($\frac{1}{4}$")	50-65
2.4mm (No. 8 Mesh)	37-50
600µm (No. 30 Mesh)	15-25
75µm (No. 200 Mesh)	3-8

2. ASPHALTS;
   COMPLY WITH PROVISIONS OF ASPHALTS INSTITUTE SPECIFICATIONS;

   ASPHALT BINDER : PMB (PG 76-10)
   WITH 5% - 8% BINDER

   TACK COAT : CATIONIC - CRS-1

   SEALER : OXIDIZE BITUMEN 115-15

3. THE ASPHALT PLANT SHALL BE LOCATED WITHIN THE MAXIMUM RADIUS OF 50 KM TO ENSURE THE PROPER TEMPERATURE IS MAINTAINED BEFORE LAYING.
4. PROVIDE HOT PLANT-MIXED ASPHALTIC CONCRETE PAVING MATERIALS.
   TEMPERATURE LEAVING THE PLANT : 180°C (356°F) MINIMUM
   TEMPERATURE AT PLACEMENT : 150°C (302°F) MINIMUM
   170°C (338°F) MAXIMUM
5. DO NOT ACCEPT MATERIALS UNLESS COVERED WITH TARPAULIN UNTIL UNLOADED AND HAS A TEMPERATURE OF NOT LESS THAN 150°C.
6. NO ASPHALT MIXTURE SHALL BE PLACED UNTIL AN ACCEPTABLE MIX DESIGN HAS BEEN SUBMITTED TO THE CAAP-PMO FOR REVIEW AND APPROVED IN WRITING. WHEN THE PROJECT REQUIRES ASPHALT MIXTURES OF DIFFERING AGGREGATE GRADATIONS AND/OR BINDERS, A SEPARATE JMF SHALL BE SUBMITTED FOR EACH MIX. IF THERE IS A CHANGE IN MATERIAL SOURCES, A NEW JMF MUST BE SUBMITTED TO THE CAAP-PMO FOR REVIEW AND APPROVED IN WRITING BEFORE THE NEW MATERIAL IS USED.
7. DO NOT COMMENCE PLACEMENT OF ASPHALTIC CONCRETE MATERIALS WHEN THE ATMOSPHERIC TEMPERATURE IS BELOW 10°C NOT DURING FOG, RAIN OR OTHER UNSUITABLE CONDITIONS.
8. SEALING WORKS ON DEFECTS LIKE CRACKS SHALL BE PERFORMED BY THE CONTRACTOR. TRANSVERSE AND LONGITUDINAL JOINTS OF EXISTING PAVEMENT SHALL ALSO BE SEALED BEFORE PAVING.
9. PRIOR TO APPLICATION OF BITUMINOUS TACK COAT, ALL LOOSE STONES, DEBRIS AND OTHER SCATTERED MATERIALS ON THE SURFACE OF EXISTING PAVEMENT SHALL BE CLEANED/REMOVED WITH THE USE OF POWER BLOWER AND/OR POWER BROOM.
10. THE DISTRIBUTOR TRUCK SHALL BE EQUIPPED WITH A MINIMUM 12-FOOT (3.7M) SPREADER SPRAY BAR WITH INDIVIDUAL NOZZLE CONTROL WITH COMPUTER-CONTROLLED APPLICATION RATES.
11. THE ASPHALT PAVER SHALL BE EQUIPPED WITH A CONTROL SYSTEM CAPABLE OF AUTOMATICALLY MAINTAINING THE SPECIFIED SCREED GRADE AND ELEVATION.
12. THE MIXTURE SHALL BE SPREAD AND STRUCK OFF TO MATCH THE GRADE AND ELEVATIONS SHOWN ON THE DRAWINGS.
13. AFTER THE MATERIALS HAS BEEN SPREAD TO THE PROPER DEPTH, ROLL IT UNTIL THE SURFACE IS HARD, SMOOTH, UNYIELDING AND ACHIEVES A MINIMUM OF AT LEAST 97% OF THE THEORETICAL DENSITY, ADHERING TO THE THICKNESS AND ELEVATIONS DEPICTED IN THE DRAWINGS.
14. THE NEWLY PAVED SECTION SHALL BE CLOSED TO TRAFFIC UNTIL SUCH TIME THAT THE TEMPERATURE COOLS DOWN TO ATMOSPHERIC TEMPERATURE OF 60-70°C.

REFERENCE/S:

1. DPWH DO 11 S 2019
2. FAA AC 150-5370 10H
3. PAVEMENT DESIGN FOR AIRFIELD, UFC 3-260-02

REPUBLIC OF THE PHILIPPINES
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MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

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Assistant Director General II, ADMS

APPROVED:

LTGEN RAULIL DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

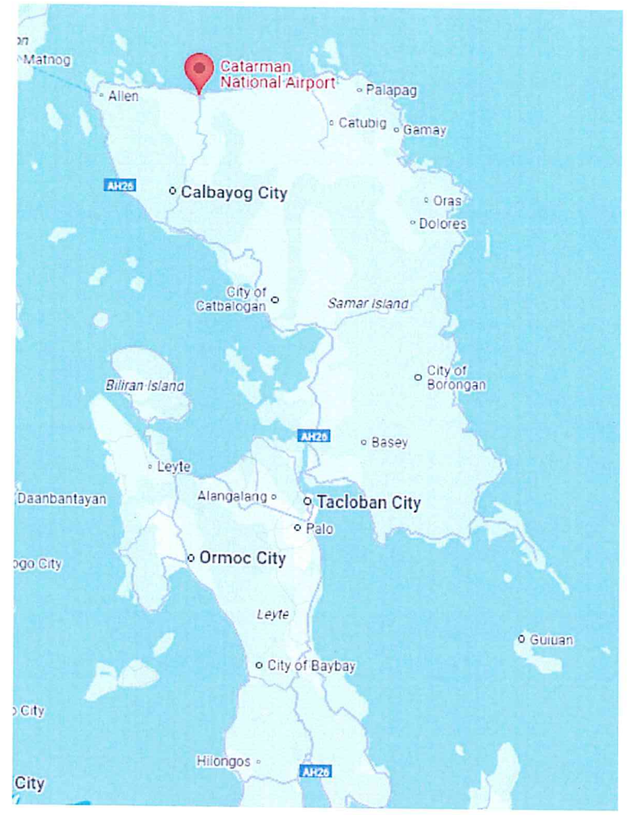
PROJECT TITLE:
ASPHALT OVERLAY
OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

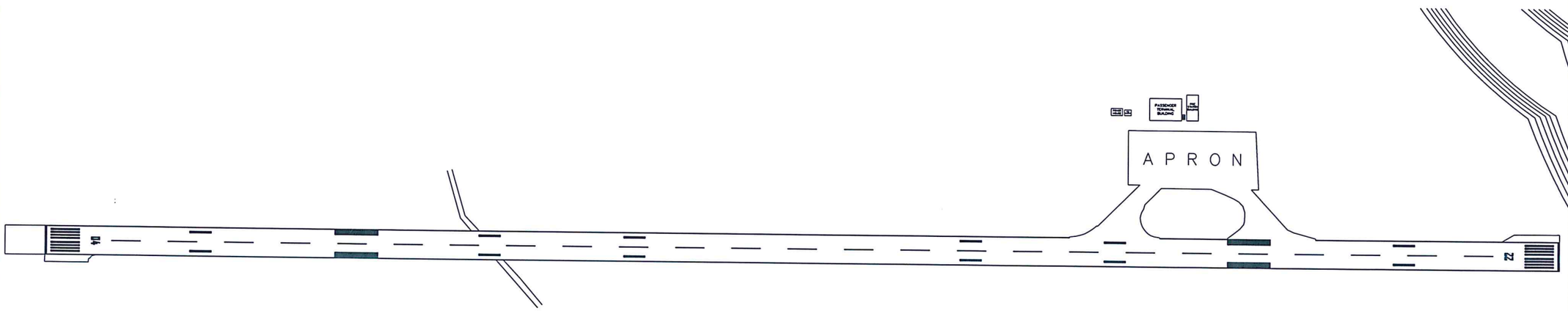
SHEET CONTENTS:
- GENERAL NOTES

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 01	
	01	33

1 CW-02 | CW-02 AERIAL VIEW
SCALE: NTS.



2 CW-02 | CW-02 LOCATION MAP
SCALE: NTS.



3 CW-02 | CW-02 AIRPORT LAYOUT
SCALE: NTS.

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Division Chief III, IDDD

SUBMITTED BY:

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Assistant Director General II, ADMS

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DIRECTOR GENERAL

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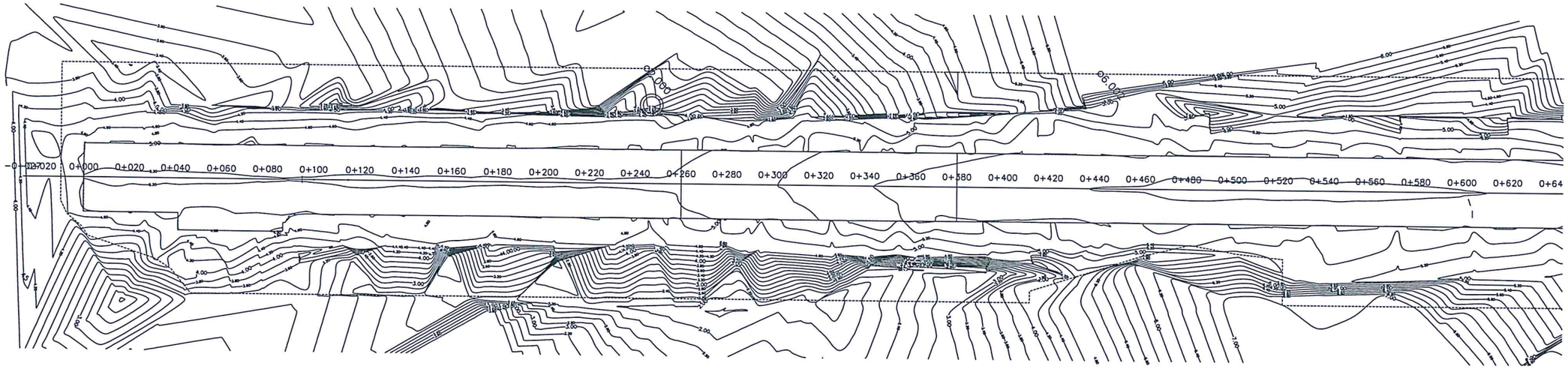
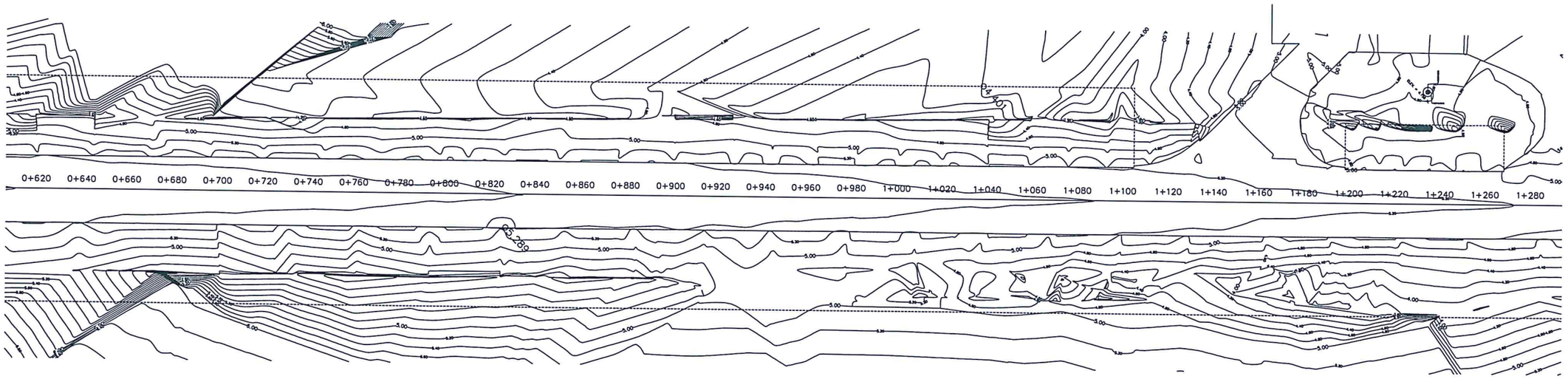
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
- VICINITY MAP
- AERIAL VIEW
- AIRPORT LAYOUT

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 02	
	02	32





1 CW-03 CW-03

AIRPORT TOPOGRAPHIC PLAN

SCALE: 1:2000

REPUBLIC OF THE PHILIPPINES
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MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

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DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

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RAUL R. CRUCENA
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SUBMITTED BY:

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DIRECTOR GENERAL

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LOCATION:

CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:

- TOPOGRAPHIC PLAN

DRAWING SCALE:	SHEET NO.:	
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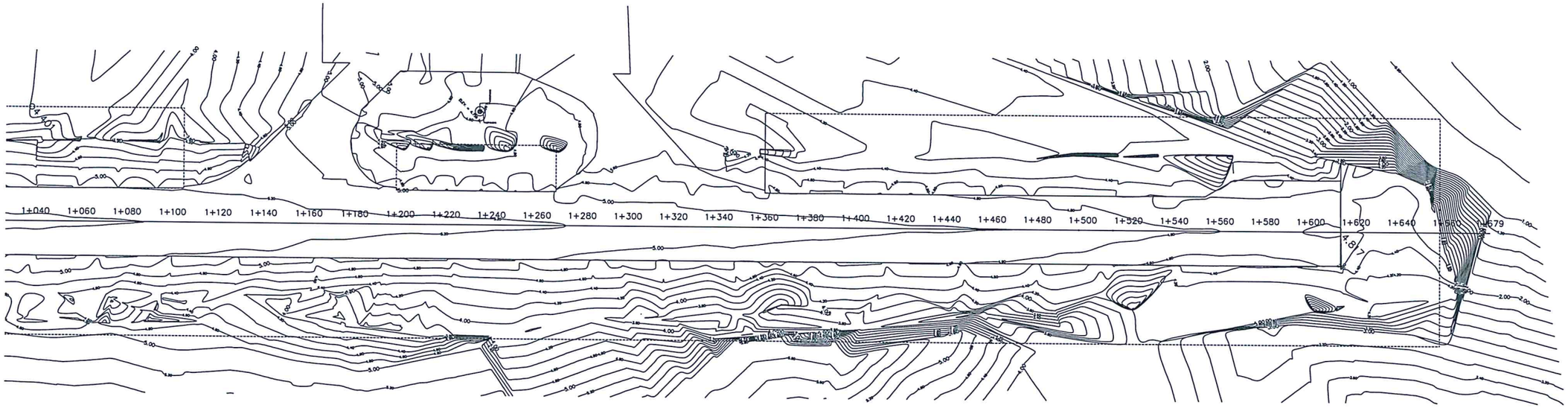
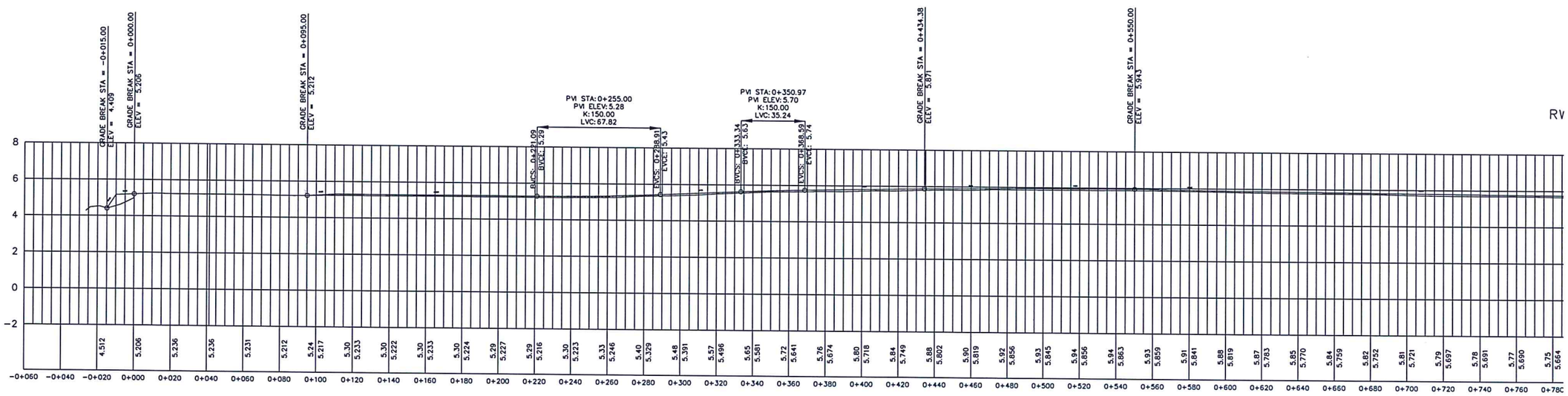
	03	33



1 AIRPORT TOPOGRAPHIC PLAN

CW-04 | CW-04

SCALE: 1:2000



STA. -0+060.00 TO STA. 0+760.00

2 RUNWAY CENTER LINE PROFILE

CW-04 | CW-04

SCALE: 1:2500M

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INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

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DRAWN BY:	MDDL
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DATE:	

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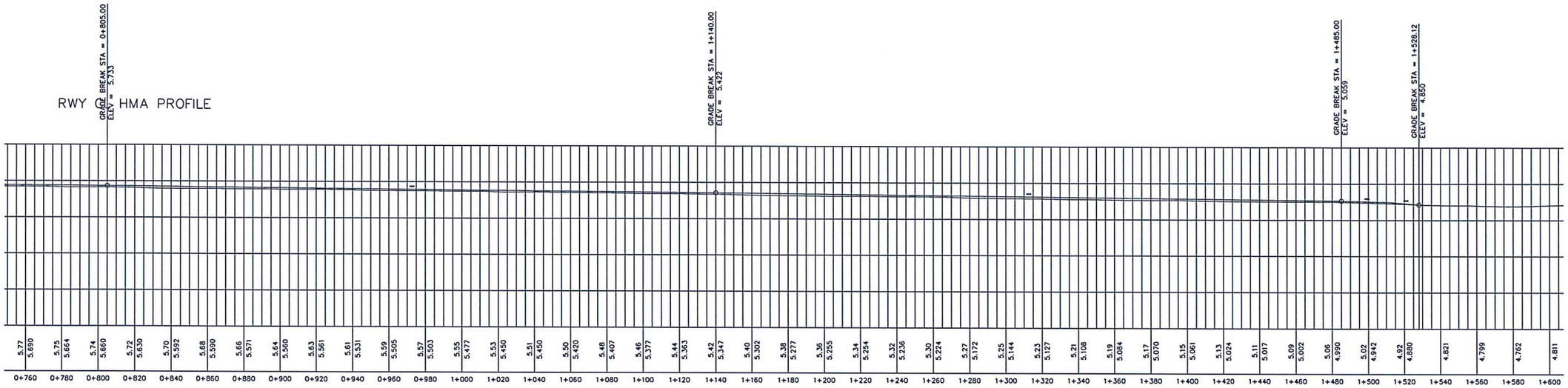
SHEET CONTENTS:
- TOPOGRAPHIC PLAN
- RUNWAY CENTER LINE PROFILE

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 04	
	04	33

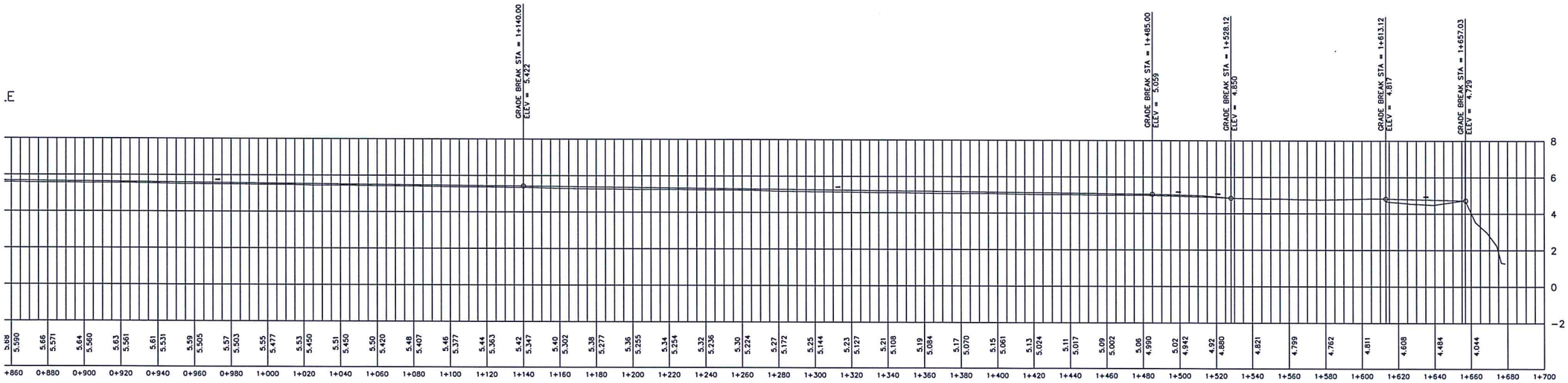


STA. 0+780.00 TO STA. 1+600.00

1 CW-05 CW-05

RUNWAY CENTER LINE PROFILE

SCALE: 1:2500M



STA. 0+880.00 TO STA. 1+700.00

2 CW-05 CW-05

RUNWAY CENTER LINE PROFILE

SCALE: 1:2500M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

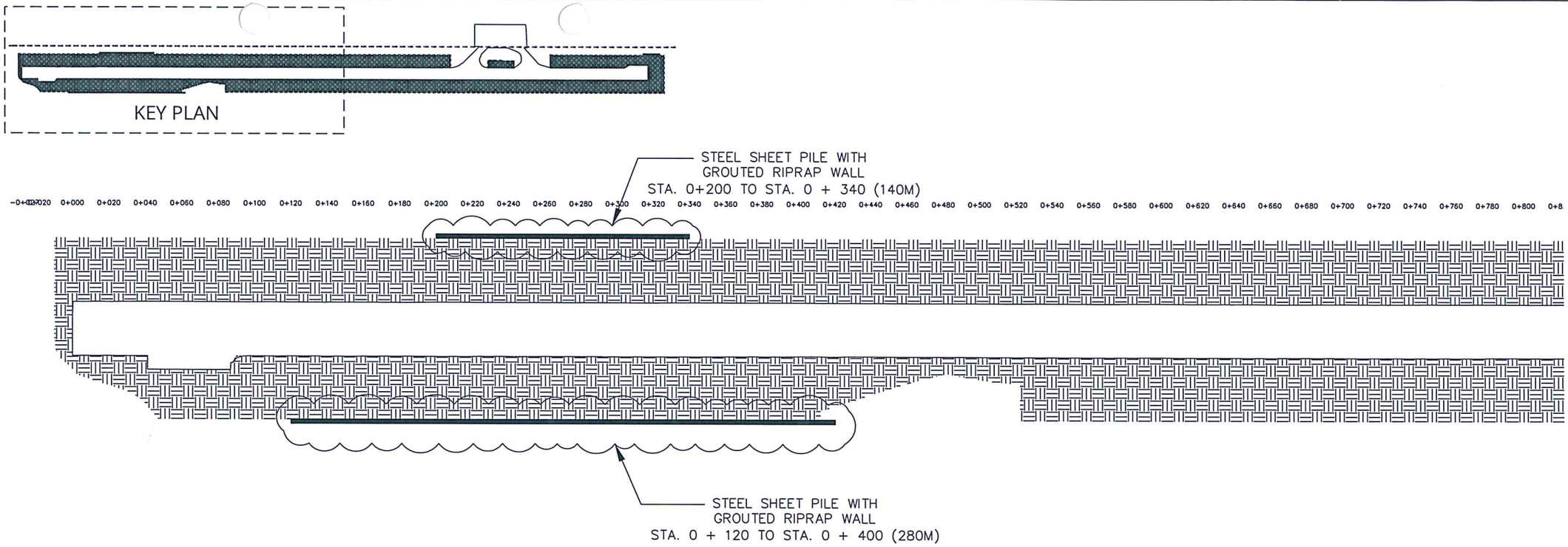
NOTE/REVISIONS:

PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
• RUNWAY CENTER LINE PROFILE

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 05	
	05	33

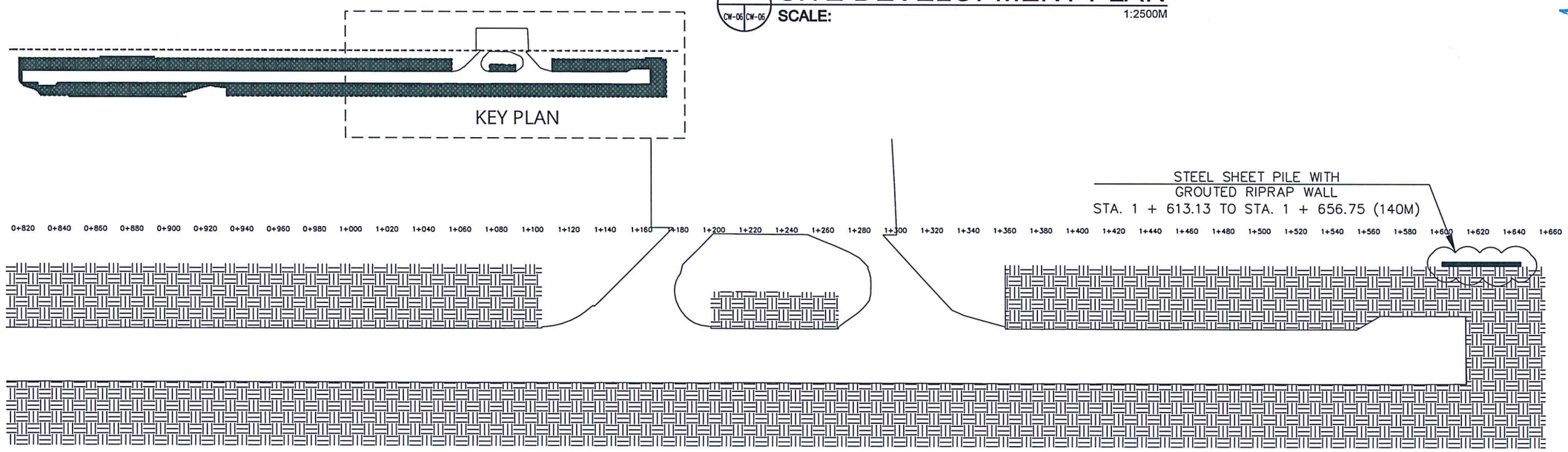


STA. -0+0270.00 TO STA. 0+800.00

1 (CW-06 / CW-06)

SITE DEVELOPMENT PLAN

SCALE: 1:2500M



COVERAGE OF SHOULDER AND STRIP GRADE CORRECTION

STA. 0+820.00 TO STA. 1+660.00

2 (CW-06 / CW-06)

SITE DEVELOPMENT PLAN

SCALE: 1:2500M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief II, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

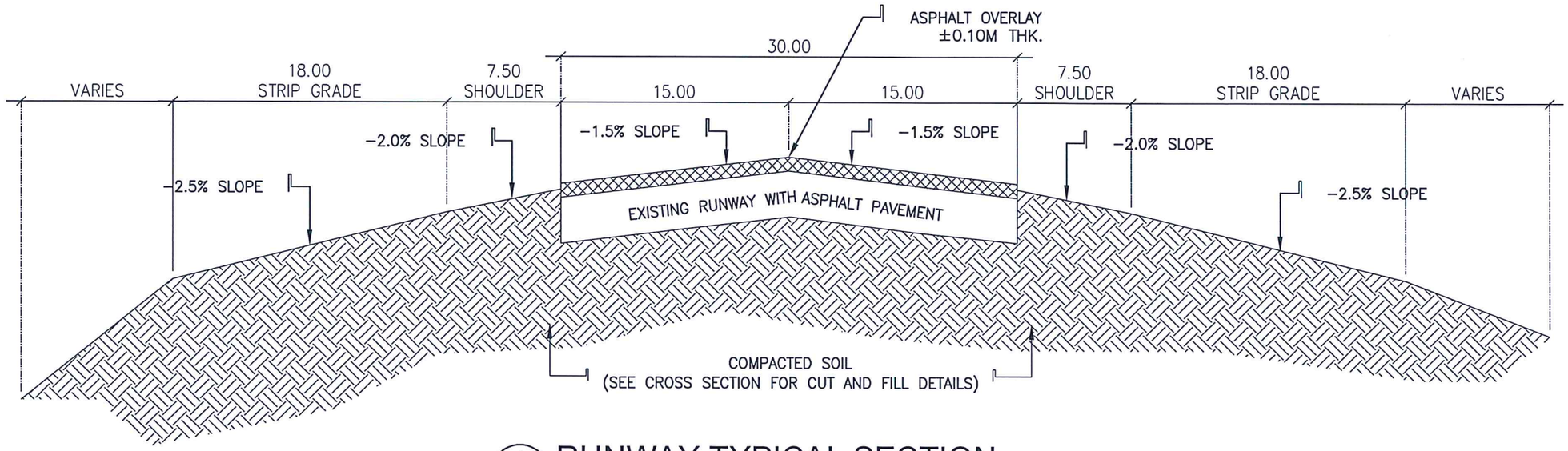
NOTE/REVISIONS:

PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

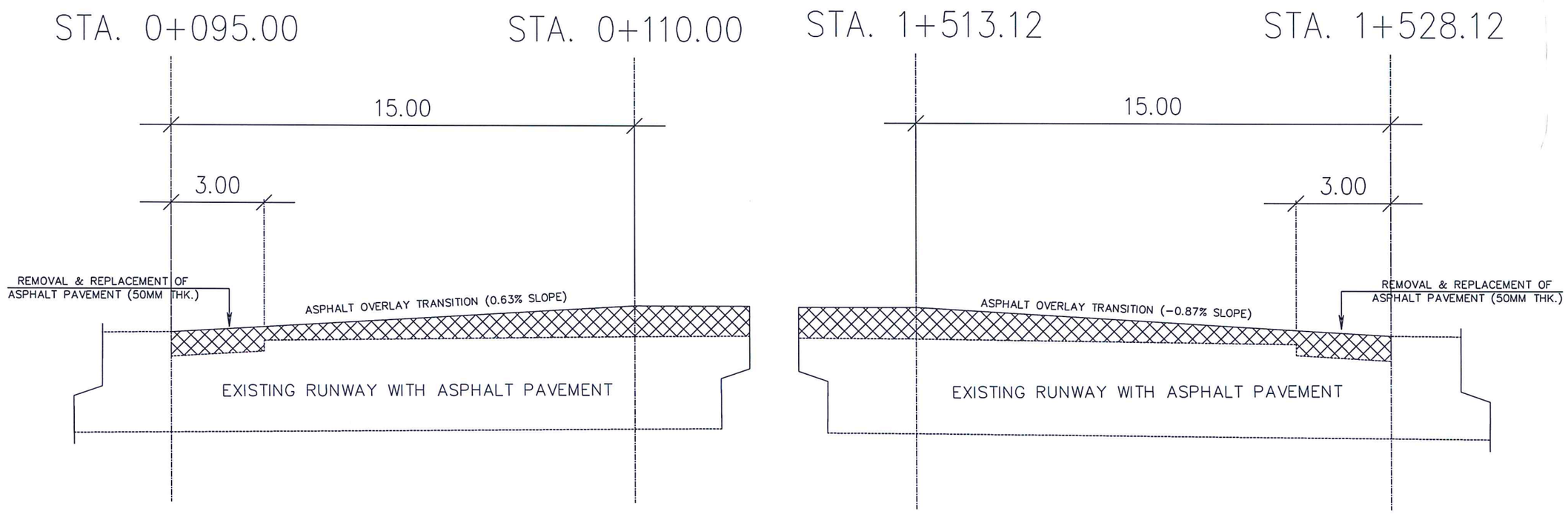
SHEET CONTENTS:
- SITE DEVELOPMENT PLAN

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 06	
	06	33



1 CW-07 CW-07 **RUNWAY TYPICAL SECTION**

SCALE: NTS



2 CW-07 CW-07 **PERMANET LONGIDUTINAL TRANSITIONS**

SCALE: NTS

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief II, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

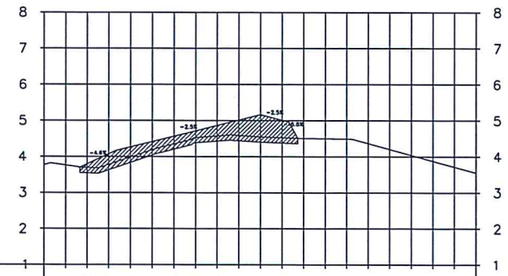
PROJECT TITLE:
ASPHALT OVERLAY
OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
- RUNWAY TYPICAL SECTION
- PERMANENT LONGITUDINAL TRANSITIONS

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 07	
	07	33

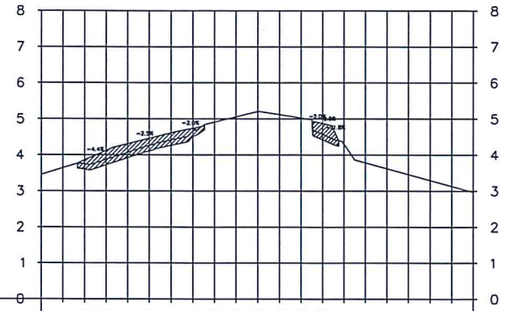
-0+010.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	3.76	
-54.00	3.76	
-48.00	3.69	3.80
-42.00	3.78	4.07
-36.00	3.98	4.26
-30.00	4.19	4.41
-24.00	4.35	4.56
-18.00	4.53	4.71
-12.00	4.57	4.86
-6.00	4.59	5.01
0	4.55	5.16
6.00	4.53	5.01
12.00	4.51	
18.00	4.50	
24.00	4.49	
30.00	4.37	
36.00	4.20	
42.00	4.04	
48.00	3.88	
54.00	3.71	
60.00	3.55	

OVERLAY THICKNESS	

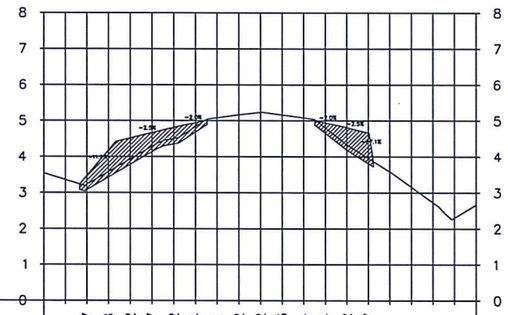
0+000.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	3.45	
-54.00	3.64	
-48.00	3.75	3.86
-42.00	3.87	4.12
-36.00	4.07	4.31
-30.00	4.26	4.46
-24.00	4.41	4.61
-18.00	4.67	4.74
-12.00	4.95	4.82
-6.00	5.13	4.86
0	5.21	4.89
6.00	5.13	4.92
12.00	5.03	4.96
18.00	4.57	4.88
24.00	4.30	
30.00	3.78	
36.00	3.62	
42.00	3.46	
48.00	3.29	
54.00	3.13	
60.00	2.97	

OVERLAY THICKNESS	

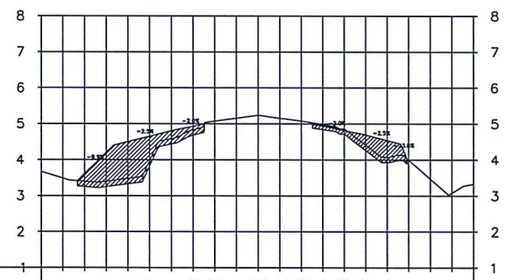
0+020.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	3.54	
-54.00	3.35	
-48.00	3.23	3.47
-42.00	3.58	4.18
-36.00	3.93	4.52
-30.00	4.28	4.67
-24.00	4.50	4.82
-18.00	4.84	4.94
-12.00	5.08	5.01
-6.00	5.16	5.02
0	5.24	5.02
6.00	5.16	5.03
12.00	5.08	5.04
18.00	4.81	4.94
24.00	4.34	4.82
30.00	3.96	4.67
36.00	3.58	
42.00	3.16	
48.00	2.73	
54.00	2.30	
60.00	2.67	

OVERLAY THICKNESS	

0+040.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	3.67	
-54.00	3.49	
-48.00	3.40	3.61
-42.00	3.40	4.21
-36.00	3.48	4.51
-30.00	3.98	4.66
-24.00	4.59	4.81
-18.00	4.83	4.93
-12.00	5.07	5.00
-6.00	5.16	5.01
0	5.24	5.02
6.00	5.15	5.02
12.00	5.08	5.03
18.00	4.99	4.94
24.00	4.86	4.82
30.00	4.41	4.69
36.00	4.08	4.54
42.00	4.00	
48.00	3.47	
54.00	3.08	
60.00	3.33	

OVERLAY THICKNESS	

STA. -0+010.00 TO STA. 0+040.00

1 (CW-08 | CW-08)

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:
RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:
ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:
LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:
LTGEN RAULL DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

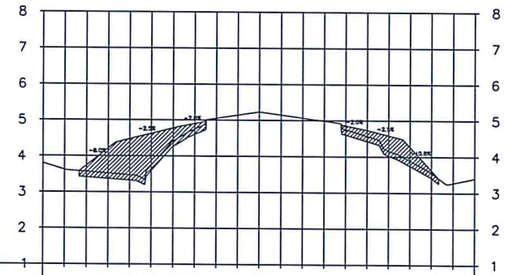
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. -0+010.00 - STA 0+040.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 08	
	08	33

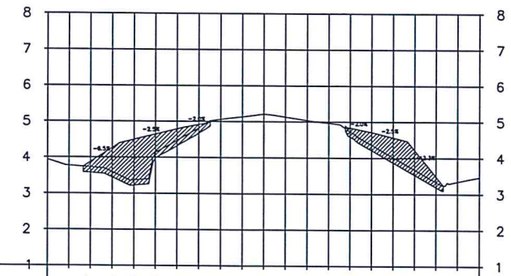
0+060.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	3.80	
-54.00	3.62	
-48.00	3.56	3.74
-42.00	3.52	4.22
-36.00	3.48	4.48
-30.00	3.74	4.63
-24.00	4.42	4.78
-18.00	4.75	4.91
-12.00	5.05	4.97
-6.00	5.14	4.96
0	5.23	4.95
6.00	5.14	4.94
12.00	5.02	4.94
18.00	4.93	4.93
24.00	4.75	4.86
30.00	4.57	4.74
36.00	4.17	4.59
42.00	3.89	4.27
48.00	3.56	3.63
54.00	3.28	
60.00	3.40	

OVERLAY THICKNESS	

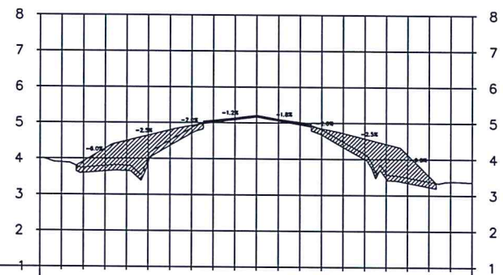
0+080.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	3.93	
-54.00	3.77	
-48.00	3.73	3.87
-42.00	3.60	4.26
-36.00	3.37	4.49
-30.00	4.14	4.64
-24.00	4.47	4.79
-18.00	4.83	4.92
-12.00	5.06	4.98
-6.00	5.13	4.97
0	5.21	4.95
6.00	5.13	4.94
12.00	5.04	4.93
18.00	4.97	4.92
24.00	4.74	4.84
30.00	4.36	4.72
36.00	4.02	4.57
42.00	3.68	4.23
48.00	3.34	3.49
54.00	3.35	
60.00	3.47	

OVERLAY THICKNESS	

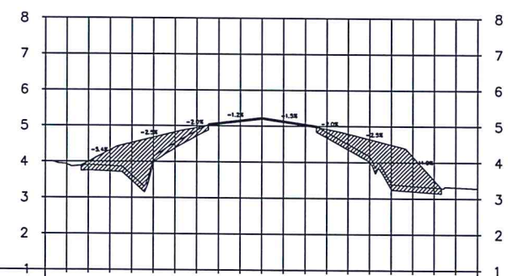
0+095.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.00	
-54.00	3.90	
-48.00	3.75	3.92
-42.00	3.80	4.28
-36.00	3.81	4.50
-30.00	4.04	4.65
-24.00	4.51	4.80
-18.00	4.86	4.92
-12.00	5.07	5.06
-6.00	5.14	5.14
0	5.21	5.21
6.00	5.11	5.11
12.00	5.03	5.00
18.00	4.83	4.85
24.00	4.48	4.72
30.00	4.15	4.57
36.00	3.61	4.42
42.00	3.50	4.13
48.00	3.38	3.54
54.00	3.38	
60.00	3.36	

OVERLAY THICKNESS	-0.01, 0.00, 0.00, 0.00, -0.03

0+100.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.00	
-54.00	3.93	
-48.00	3.91	4.00
-42.00	3.88	4.32
-36.00	3.62	4.53
-30.00	4.08	4.68
-24.00	4.53	4.83
-18.00	4.87	4.96
-12.00	5.07	5.09
-6.00	5.14	5.17
0	5.22	5.24
6.00	5.12	5.15
12.00	5.03	5.06
18.00	4.84	4.92
24.00	4.50	4.79
30.00	4.15	4.64
36.00	3.42	4.49
42.00	3.35	4.17
48.00	3.31	3.51
54.00	3.31	
60.00	3.28	

OVERLAY THICKNESS	0.03, 0.03, 0.03, 0.04, 0.03

STA. 0+060.00 TO STA. 0+100.00

1 CW-09 CW-09

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

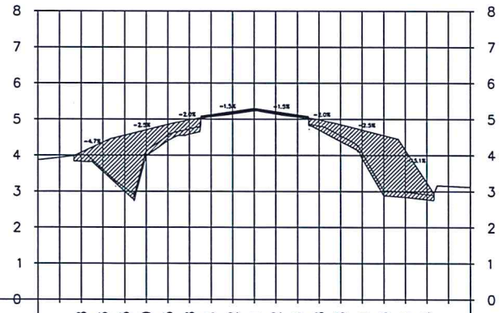
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+060.00 - STA 0+100.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 09	
	09	33

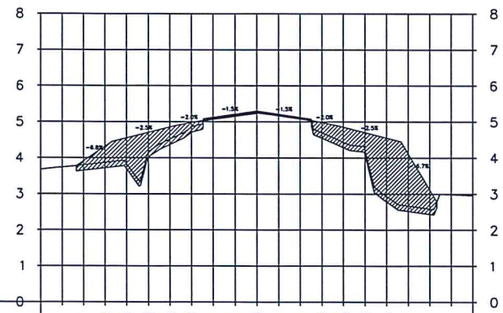
0+110.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		3.87
-54.00		3.94
-48.00	4.08	4.00
-42.00	4.36	3.60
-36.00	4.55	3.10
-30.00	4.70	4.12
-24.00	4.85	4.54
-18.00	4.98	4.73
-12.00	5.13	5.06
-6.00	5.22	5.14
0	5.31	5.23
6.00	5.22	5.14
12.00	5.13	5.05
18.00	4.98	4.82
24.00	4.86	4.55
30.00	4.71	4.07
36.00	4.56	3.03
42.00	4.15	2.99
48.00	3.24	2.92
54.00		3.14
60.00		3.12

OFFSET	OVERLAY THICKNESS
-12.00	0.07
-6.00	0.08
0	0.07
6.00	0.08
12.00	0.07

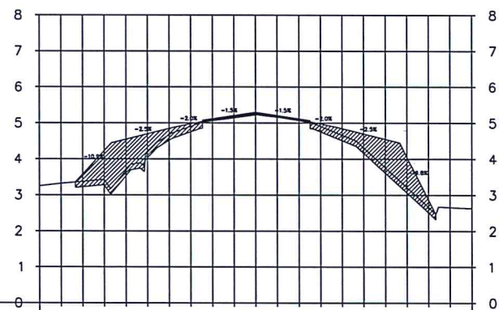
0+120.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		3.67
-54.00		3.74
-48.00	3.91	3.80
-42.00	4.32	3.87
-36.00	4.55	3.83
-30.00	4.70	4.15
-24.00	4.85	4.52
-18.00	4.98	4.85
-12.00	5.12	5.06
-6.00	5.21	5.15
0	5.30	5.23
6.00	5.21	5.16
12.00	5.12	5.08
18.00	4.98	4.70
24.00	4.85	4.44
30.00	4.70	4.23
36.00	4.55	2.93
42.00	4.12	2.67
48.00	3.12	2.59
54.00		2.98
60.00		2.95

OFFSET	OVERLAY THICKNESS
-12.00	0.06
-6.00	0.07
0	0.07
6.00	0.05
12.00	0.05

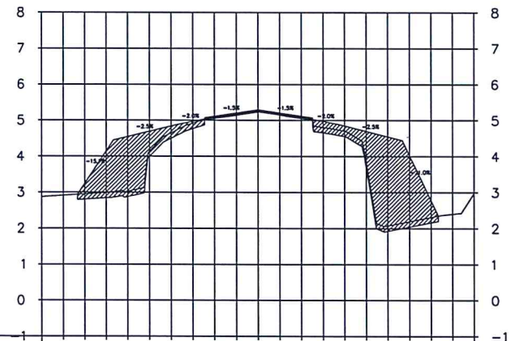
0+140.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		3.25
-54.00		3.32
-48.00	3.57	3.37
-42.00	4.23	3.41
-36.00	4.55	3.68
-30.00	4.70	4.17
-24.00	4.85	4.67
-18.00	4.98	4.91
-12.00	5.12	5.05
-6.00	5.21	5.14
0	5.30	5.22
6.00	5.21	5.16
12.00	5.12	5.07
18.00	4.98	4.91
24.00	4.85	4.66
30.00	4.70	4.31
36.00	4.55	3.76
42.00	4.06	3.21
48.00	2.87	2.66
54.00		2.66
60.00		2.63

OFFSET	OVERLAY THICKNESS
-12.00	0.07
-6.00	0.08
0	0.08
6.00	0.06
12.00	0.06

0+160.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		2.87
-54.00		2.91
-48.00	3.24	2.95
-42.00	4.15	2.99
-36.00	4.55	3.03
-30.00	4.70	4.14
-24.00	4.85	4.65
-18.00	4.97	4.92
-12.00	5.12	5.05
-6.00	5.21	5.13
0	5.30	5.23
6.00	5.21	5.15
12.00	5.12	5.05
18.00	4.98	4.81
24.00	4.85	4.70
30.00	4.70	3.81
36.00	4.55	2.07
42.00	4.03	2.19
48.00	2.77	2.31
54.00		2.40
60.00		2.98

OFFSET	OVERLAY THICKNESS
-12.00	0.07
-6.00	0.07
0	0.07
6.00	0.06
12.00	0.07

STA. 0+110.00 TO STA. 0+160.00

1 CW-10 CW-10

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

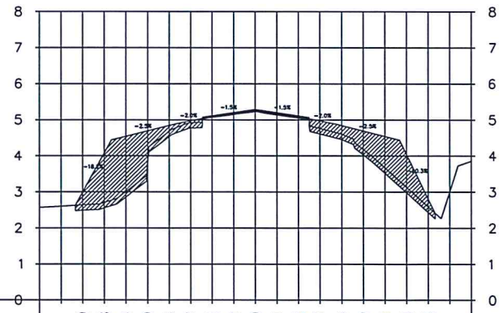
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+110.00 - STA 0+160.00

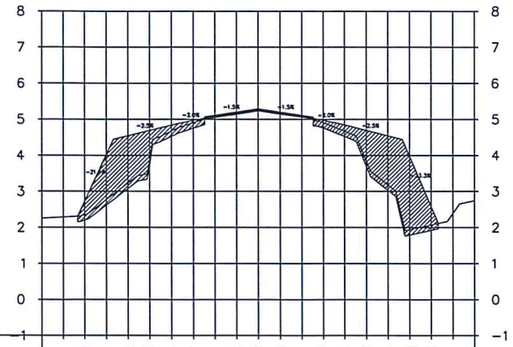
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 10	
	10	33

0+180.00



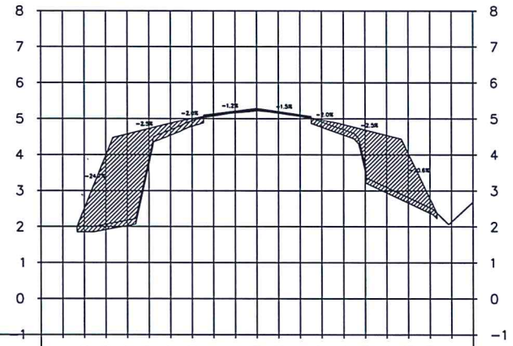
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		2.57	
-54.00		2.60	
-48.00	2.99	2.64	
-42.00	4.08	2.71	
-36.00	4.54	3.01	
-30.00	4.69	3.86	
-24.00	4.84	4.68	
-18.00	4.97	4.92	
-12.00	5.12	5.06	0.05
-6.00	5.21	5.14	0.06
0	5.30	5.22	0.07
6.00	5.21	5.13	0.07
12.00	5.12	5.05	0.07
18.00	4.97	4.76	
24.00	4.84	4.61	
30.00	4.69	4.18	
36.00	4.54	3.67	
42.00	4.04	3.13	
48.00	2.82	2.59	
54.00		3.01	
60.00		3.86	

0+200.00



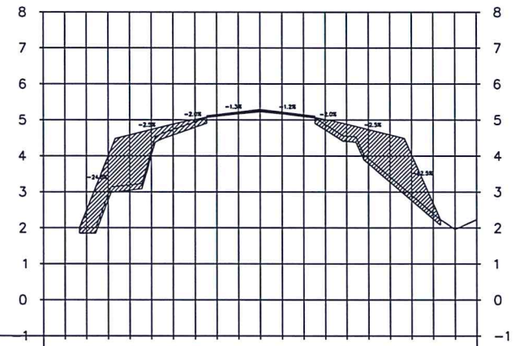
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		2.25	
-54.00	2.73	2.28	
-48.00	4.01	2.35	
-42.00	4.54	2.77	
-36.00	4.69	3.23	
-30.00	4.84	3.88	
-24.00	4.97	4.68	
-18.00	5.11	4.90	
-12.00	5.20	5.05	0.06
-6.00	5.29	5.13	0.07
0	5.20	5.23	0.07
6.00	5.11	5.14	0.06
12.00	4.97	5.06	0.05
18.00	4.84	4.91	
24.00	4.69	4.67	
30.00	4.54	3.85	
36.00	3.98	3.18	
42.00	2.58	1.94	
48.00		2.07	
54.00		2.39	
60.00		2.75	

0+220.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		2.00	
-54.00		2.00	
-48.00	2.49	2.00	
-42.00	3.98	2.06	
-36.00	4.57	2.17	
-30.00	4.72	3.87	
-24.00	4.87	4.69	
-18.00	5.00	4.94	
-12.00	5.14	5.07	0.07
-6.00	5.21	5.16	0.06
0	5.29	5.22	0.07
6.00	5.20	5.16	0.04
12.00	5.11	5.07	0.04
18.00	4.97	4.91	
24.00	4.84	4.70	
30.00	4.69	3.70	
36.00	4.54	3.09	
42.00	4.03	2.81	
48.00	2.79	2.52	
54.00		2.13	
60.00		2.69	

0+240.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		2.00	
-54.00		2.00	
-48.00	2.50	2.00	
-42.00	3.99	2.92	
-36.00	4.58	3.19	
-30.00	4.73	4.18	
-24.00	4.88	4.73	
-18.00	5.01	4.95	
-12.00	5.15	5.10	0.05
-6.00	5.22	5.17	0.06
0	5.30	5.22	0.08
6.00	5.22	5.16	0.06
12.00	5.15	5.09	0.06
18.00	5.01	4.87	
24.00	4.89	4.55	
30.00	4.74	3.93	
36.00	4.59	3.42	
42.00	4.03	2.91	
48.00	2.68	2.39	
54.00		1.96	
60.00		2.23	

STA. 0+180.00 TO STA. 0+240.00

1 CW-11 CW-11

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

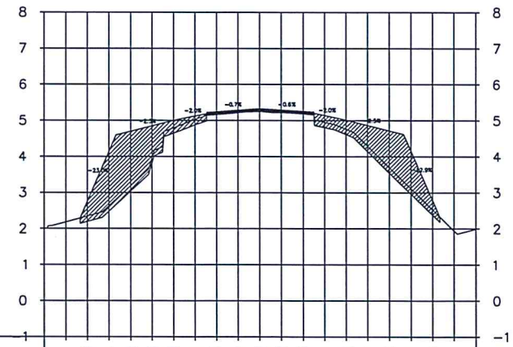
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+180.00 - STA 0+240.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 11	
	11	33

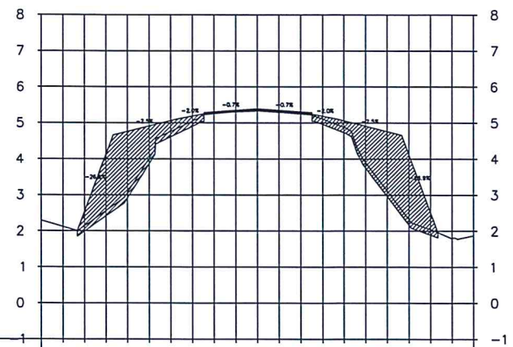
0+260.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		2.00
-54.00	2.18	2.35
-48.00	2.75	2.63
-42.00	4.13	3.18
-36.00	4.70	3.96
-30.00	4.85	4.80
-24.00	5.00	5.03
-18.00	5.12	5.16
-12.00	5.25	5.21
-6.00	5.29	5.25
0	5.33	5.21
6.00	5.30	5.18
12.00	5.26	4.95
18.00	5.14	4.76
24.00	5.02	4.29
30.00	4.87	3.69
36.00	4.72	3.11
42.00	4.16	2.52
48.00	2.79	1.94
54.00		1.99
60.00		

OFFSET	OVERLAY THICKNESS
-12.00	0.09
-6.00	0.08
0	0.09
6.00	0.09
12.00	0.08

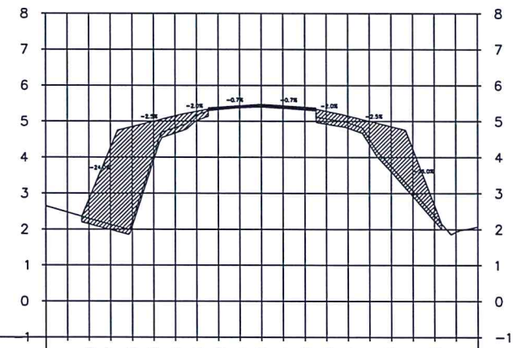
0+280.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		2.29
-54.00	2.53	2.12
-48.00	4.13	2.14
-42.00	4.76	2.56
-36.00	4.91	3.07
-30.00	5.06	4.01
-24.00	5.19	4.76
-18.00	5.31	5.05
-12.00	5.35	5.25
-6.00	5.40	5.30
0	5.35	5.33
6.00	5.31	5.29
12.00	5.19	5.25
18.00	5.06	5.11
24.00	4.91	4.88
30.00	4.76	3.91
36.00	4.12	3.12
42.00	2.51	2.33
48.00		2.04
54.00		1.80
60.00		1.87

OFFSET	OVERLAY THICKNESS
-12.00	0.06
-6.00	0.05
0	0.07
6.00	0.06
12.00	0.06

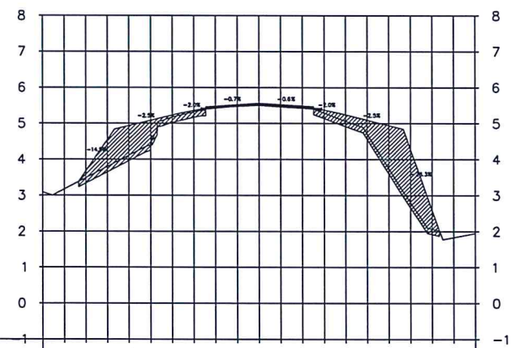
0+300.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		2.64
-54.00	2.47	2.47
-48.00	2.83	2.29
-42.00	4.27	2.13
-36.00	4.85	2.23
-30.00	5.00	4.05
-24.00	5.15	4.82
-18.00	5.28	5.17
-12.00	5.40	5.32
-6.00	5.44	5.37
0	5.48	5.39
6.00	5.44	5.36
12.00	5.40	5.32
18.00	5.28	5.08
24.00	5.16	4.97
30.00	5.01	4.51
36.00	4.86	3.75
42.00	4.24	3.07
48.00	2.68	2.38
54.00		1.93
60.00		2.07

OFFSET	OVERLAY THICKNESS
-12.00	0.08
-6.00	0.07
0	0.09
6.00	0.08
12.00	0.08

0+320.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		3.08
-54.00	3.67	3.17
-48.00	4.54	3.48
-42.00	4.93	3.80
-36.00	5.08	4.11
-30.00	5.23	4.43
-24.00	5.36	5.17
-18.00	5.48	5.32
-12.00	5.53	5.42
-6.00	5.57	5.47
0	5.53	5.50
6.00	5.49	5.46
12.00	5.37	5.42
18.00	5.25	5.29
24.00	5.10	5.07
30.00	4.95	4.71
36.00	4.28	3.74
42.00	2.58	2.80
48.00		2.07
54.00		1.83
60.00		1.95

OFFSET	OVERLAY THICKNESS
-12.00	0.06
-6.00	0.06
0	0.07
6.00	0.07
12.00	0.07

STA. 0+260.00 TO STA. 0+320.00

1 CW-12 CW-12

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief II, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

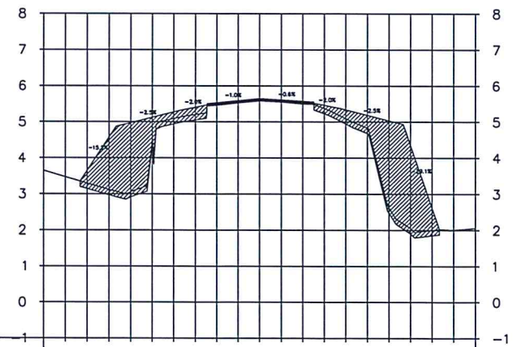
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+260.00 - STA 0+320.00

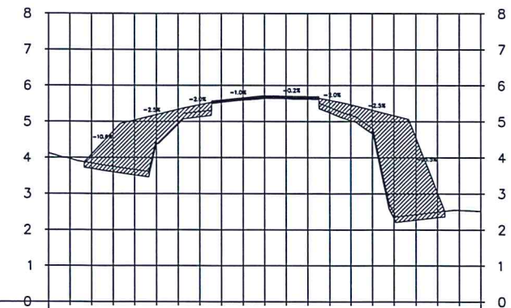
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 12	
	12	33

0+340.00



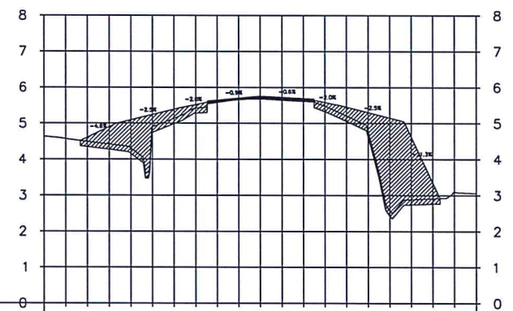
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		3.65	
-54.00		3.47	
-48.00	3.66	3.30	
-42.00	4.57	3.12	
-36.00	4.98	3.06	
-30.00	5.13	4.52	
-24.00	5.28	5.09	
-18.00	5.40	5.20	
-12.00	5.53	5.46	0.08
-6.00	5.59	5.52	0.07
0	5.65	5.58	0.07
6.00	5.62	5.55	0.07
12.00	5.58	5.50	0.08
18.00	5.47	5.38	
24.00	5.34	5.10	
30.00	5.19	4.84	
36.00	5.04	2.62	
42.00	4.36	2.05	
48.00	2.61	2.00	
54.00		2.01	
60.00		2.06	

0+360.00



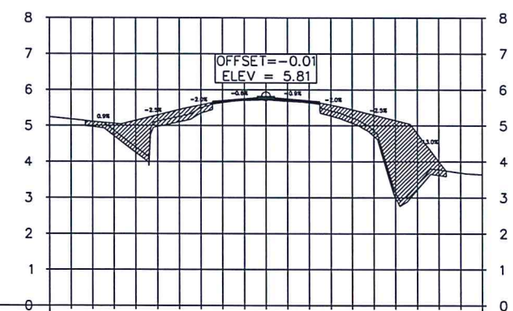
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.13	
-54.00		3.97	
-48.00	4.09	3.84	
-42.00	4.73	3.75	
-36.00	5.04	3.66	
-30.00	5.19	4.52	
-24.00	5.34	5.07	
-18.00	5.47	5.28	
-12.00	5.60	5.53	0.07
-6.00	5.66	5.59	0.07
0	5.72	5.64	0.08
6.00	5.70	5.63	0.08
12.00	5.59	5.62	0.08
18.00	5.47	5.40	
24.00	5.32	5.17	
30.00	5.17	2.46	
36.00	4.56	2.42	
42.00	3.03	2.49	
48.00		2.54	
54.00		2.51	
60.00			

0+380.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.64	
-54.00	4.57	4.49	
-48.00	4.61	4.42	
-42.00	4.90	4.31	
-36.00	5.09	4.90	
-30.00	5.24	5.14	
-24.00	5.39	5.43	
-18.00	5.52	5.58	
-12.00	5.65	5.65	0.07
-6.00	5.71	5.67	0.05
0	5.76	5.64	0.09
6.00	5.73	5.61	0.09
12.00	5.69	5.48	0.09
18.00	5.58	5.21	
24.00	5.45	4.78	
30.00	5.30	2.58	
36.00	5.15	2.89	
42.00	4.63	2.91	
48.00	3.35	3.10	
54.00		3.05	
60.00			

0+400.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		5.24	
-54.00		5.18	
-48.00	5.12	5.11	
-42.00	5.07	4.86	
-36.00	5.15	4.40	
-30.00	5.30	5.12	
-24.00	5.45	5.25	
-18.00	5.58	5.50	
-12.00	5.70	5.64	0.07
-6.00	5.75	5.70	0.05
0	5.80	5.72	0.08
6.00	5.75	5.67	0.08
12.00	5.70	5.63	0.07
18.00	5.57	5.42	
24.00	5.45	5.22	
30.00	5.30	4.86	
36.00	5.15	3.14	
42.00	4.79	3.36	
48.00	4.00	3.77	
54.00		3.69	
60.00		3.64	

STA. 0+340.00 TO STA. 0+400.00

1 RUNWAY & STRIP CROSS SECTION VIEW

CW-13 CW-13

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:
RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:
ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:
LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:
LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

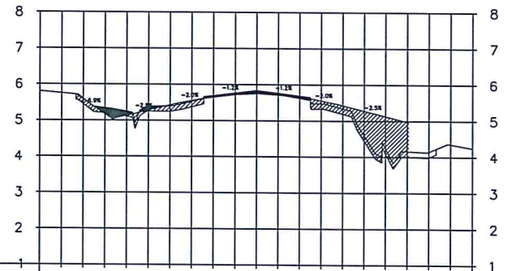
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+340.00 - STA 0+400.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 13	
	13	32

0+420.00



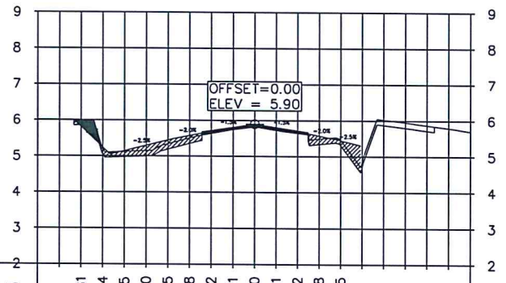
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		5.81	
-54.00	5.75	5.75	
-48.00	5.60	5.60	
-42.00	5.35	5.35	
-36.00	5.25	5.25	
-30.00	5.39	5.39	
-24.00	5.40	5.40	
-18.00	5.52	5.52	
-12.00	5.65	5.65	0.05
-6.00	5.72	5.72	0.05
0	5.75	5.75	0.09
6.00	5.71	5.71	0.06
12.00	5.62	5.62	0.07
18.00	5.48	5.48	
24.00	5.34	5.34	
30.00	4.60	4.60	
36.00	4.24	4.24	
42.00	4.16	4.16	
48.00	4.15	4.15	
54.00	4.36	4.36	
60.00		4.25	

OFFSET	PROPOSED ELEVATIONS
-60.00	
-54.00	5.58
-48.00	5.17
-42.00	5.13
-36.00	5.28
-30.00	5.43
-24.00	5.55
-18.00	5.69
-12.00	5.77
-6.00	5.84
0	5.77
6.00	5.69
12.00	5.56
18.00	5.43
24.00	5.28
30.00	5.13
36.00	4.98
42.00	
48.00	
54.00	
60.00	

0+440.00

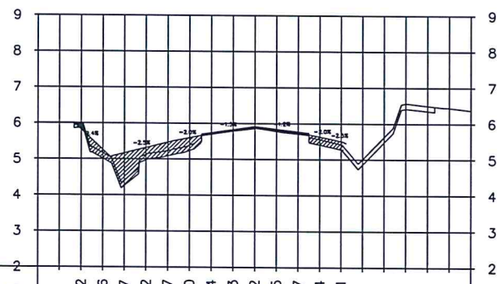
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		6.00	
-54.00		6.00	
-48.00	5.81	6.00	
-42.00	5.22	6.00	
-36.00	5.13	5.04	
-30.00	5.28	5.16	
-24.00	5.43	5.46	
-18.00	5.55	5.47	
-12.00	5.70	5.64	0.05
-6.00	5.79	5.72	0.07
0	5.88	5.80	0.08
6.00	5.79	5.73	0.06
12.00	5.70	5.64	0.05
18.00	5.55	5.56	
24.00	5.43	5.47	
30.00	5.28	5.09	
36.00		4.49	
42.00		5.10	
48.00		5.20	
54.00		5.10	
60.00		5.01	

0+460.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		6.00	
-54.00		6.00	
-48.00	5.81	6.00	
-42.00	5.24	5.20	
-36.00	5.15	5.13	
-30.00	5.30	5.15	
-24.00	5.45	5.34	
-18.00	5.58	5.50	
-12.00	5.72	5.63	0.09
-6.00	5.81	5.74	0.07
0	5.90	5.82	0.08
6.00	5.81	5.72	0.09
12.00	5.72	5.64	0.08
18.00	5.58	5.49	
24.00	5.45	5.46	
30.00		4.87	
36.00		6.03	
42.00		5.95	
48.00		5.87	
54.00		5.79	
60.00		5.70	

0+480.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		6.01	
-54.00		6.01	
-48.00	5.82	6.01	
-42.00	5.26	5.17	
-36.00	5.17	4.41	
-30.00	5.32	5.13	
-24.00	5.47	5.24	
-18.00	5.60	5.39	
-12.00	5.74	5.70	0.04
-6.00	5.83	5.78	0.05
0	5.92	5.86	0.07
6.00	5.85	5.78	0.07
12.00	5.77	5.71	0.06
18.00	5.64	5.56	
24.00	5.51	5.42	
30.00		5.01	
36.00		5.64	
42.00		6.57	
48.00		6.50	
54.00		6.45	
60.00		6.37	

STA. 0+420.00 TO STA. 0+480.00

1 CW-14 CW-14

RUNWAY & STRIP CROSS SECTION VIEW

SCALE:

HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. GRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

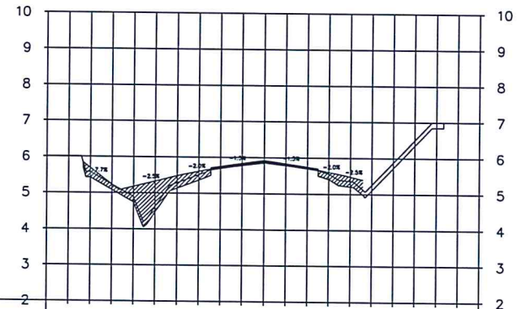
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+420.00 - STA 0+480.00

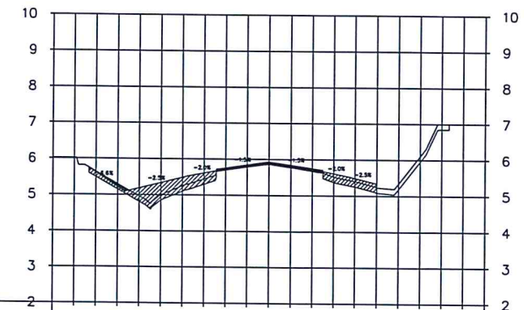
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 14	
	14	33

0+500.00



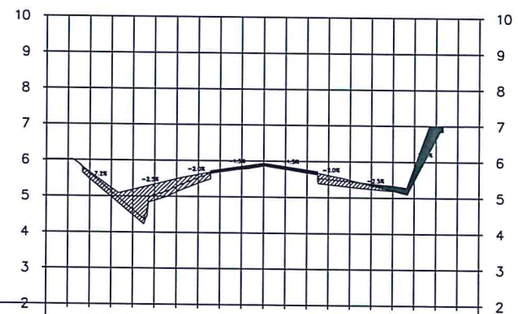
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		6.01	
-54.00		6.01	
-48.00	5.69	5.57	
-42.00	5.23	5.23	
-36.00	5.18	4.88	
-30.00	5.33	4.62	
-24.00	5.48	5.29	
-18.00	5.61	5.52	
-12.00	5.75	5.69	0.06
-6.00	5.84	5.77	0.07
0	5.93	5.84	0.09
6.00	5.84	5.78	0.06
12.00	5.75	5.70	0.06
18.00	5.61	5.56	
24.00	5.48	5.36	
30.00		5.26	
36.00		5.88	
42.00		6.50	
48.00		7.00	
54.00		7.00	
60.00		7.00	

0+520.00



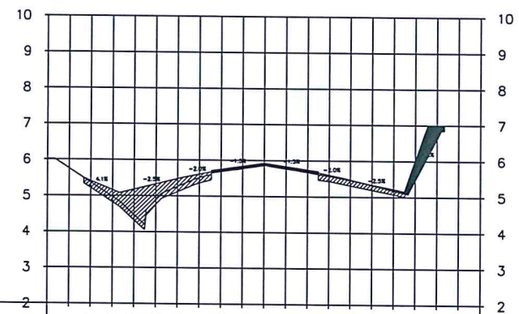
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		6.01	
-54.00	5.61	6.01	
-48.00	5.22	5.64	
-42.00	5.18	5.30	
-36.00	5.33	4.96	
-30.00	5.48	5.00	
-24.00	5.61	5.25	
-18.00	5.76	5.44	
-12.00	5.85	5.69	0.06
-6.00	5.94	5.78	0.06
0	5.85	5.86	0.08
6.00	5.76	5.77	0.07
12.00	5.61	5.68	0.08
18.00	5.49	5.52	
24.00		5.40	
30.00		5.23	
36.00		6.10	
42.00		7.00	
48.00		7.00	
54.00		7.00	
60.00		7.00	

0+540.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		6.01	
-54.00		6.02	
-48.00	5.66	5.63	
-42.00	5.23	5.12	
-36.00	5.19	4.62	
-30.00	5.34	5.04	
-24.00	5.49	5.27	
-18.00	5.62	5.53	
-12.00	5.76	5.68	0.08
-6.00	5.85	5.77	0.08
0	5.94	5.86	0.08
6.00	5.85	5.77	0.08
12.00	5.76	5.68	0.08
18.00	5.62	5.51	
24.00	5.49	5.45	
30.00	5.34	5.39	
36.00	5.19	5.34	
42.00	5.47	5.86	
48.00	6.62	7.00	
54.00		7.00	
60.00		7.00	

0+560.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		6.01	
-54.00	5.41	5.75	
-48.00	5.16	5.36	
-42.00	5.18	4.97	
-36.00	5.33	4.47	
-30.00	5.48	4.90	
-24.00	5.61	5.26	
-18.00	5.75	5.51	
-12.00	5.84	5.68	0.07
-6.00	5.93	5.77	0.07
0	5.84	5.86	0.07
6.00	5.75	5.77	0.07
12.00	5.61	5.67	0.07
18.00	5.48	5.58	0.08
24.00	5.33	5.46	
30.00	5.18	5.34	
36.00	5.46	5.23	
42.00	6.62	6.03	
48.00		7.00	
54.00		7.00	
60.00		7.00	

STA. 0+500.00 TO STA. 0+560.00

1 RUNWAY & STRIP CROSS SECTION VIEW

CW-15 | CW-15

SCALE:

HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief II, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

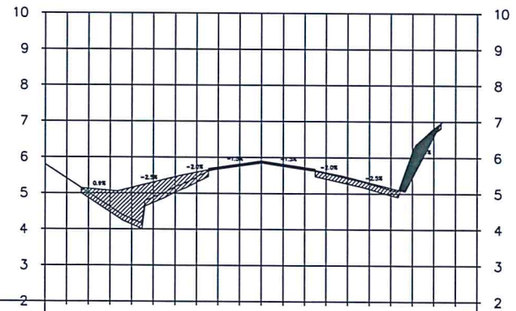
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+500.00 - STA 0+560.00

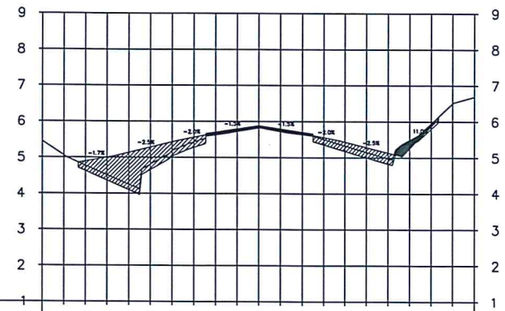
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 15	
	15	33

0+580.00



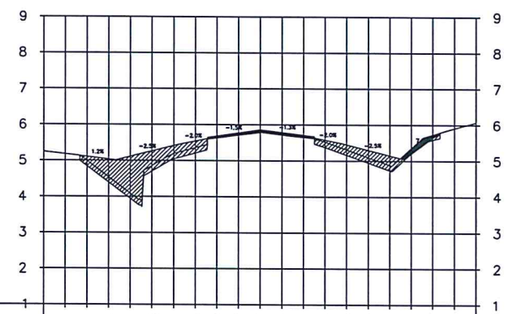
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		5.79	
-54.00	5.40	5.40	
-48.00	5.13	5.01	
-42.00	5.07	4.62	
-36.00	5.16	4.29	
-30.00	5.31	4.89	
-24.00	5.46	5.17	
-18.00	5.58	5.45	
-12.00	5.73	5.66	0.06
-6.00	5.82	5.75	0.07
0	5.91	5.84	0.07
6.00	5.82	5.75	0.07
12.00	5.73	5.66	0.06
18.00	5.59	5.56	
24.00	5.46	5.42	
30.00	5.31	5.28	
36.00	5.16	5.10	
42.00	5.44	6.17	
48.00	6.58	6.81	
54.00		7.00	
60.00		7.00	

0+600.00



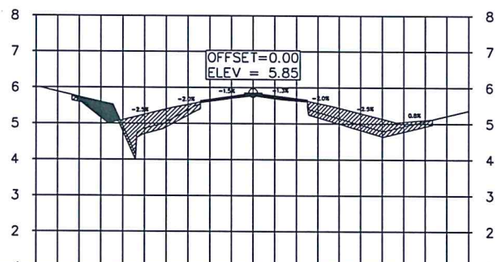
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		5.45	
-54.00	4.89	5.06	
-48.00	5.00	4.77	
-42.00	5.13	4.51	
-36.00	5.28	4.25	
-30.00	5.43	4.81	
-24.00	5.56	5.19	
-18.00	5.70	5.43	
-12.00	5.79	5.62	0.08
-6.00	5.88	5.72	0.08
0	5.79	5.82	0.07
6.00	5.70	5.72	0.08
12.00	5.56	5.64	0.07
18.00	5.43	5.51	
24.00	5.28	5.33	
30.00	5.13	5.15	
36.00	5.26	4.98	
42.00	5.92	5.49	
48.00		5.95	
54.00		6.51	
60.00		6.69	

0+620.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		5.26	
-54.00	5.18	5.18	
-48.00	5.11	4.99	
-42.00	5.04	4.54	
-36.00	5.11	4.09	
-30.00	5.26	4.85	
-24.00	5.41	5.19	
-18.00	5.54	5.36	
-12.00	5.69	5.63	0.06
-6.00	5.78	5.71	0.07
0	5.87	5.78	0.08
6.00	5.79	5.71	0.08
12.00	5.72	5.65	0.07
18.00	5.58	5.52	
24.00	5.45	5.31	
30.00	5.30	5.10	
36.00	5.15	4.88	
42.00	5.20	5.36	
48.00	5.64	5.73	
54.00		5.91	
60.00		6.07	

0+640.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		6.00	
-54.00	5.63	5.88	
-48.00	5.16	5.75	
-42.00	5.10	5.61	
-36.00	5.25	4.93	
-30.00	5.40	4.86	
-24.00	5.53	5.05	
-18.00	5.67	5.38	
-12.00	5.76	5.61	0.06
-6.00	5.85	5.70	0.06
0	5.78	5.77	0.08
6.00	5.70	5.69	0.09
12.00	5.57	5.63	0.07
18.00	5.44	5.32	
24.00	5.29	5.14	
30.00	5.14	4.97	
36.00	5.06	4.79	
42.00	5.10	4.92	
48.00		5.07	
54.00		5.22	
60.00		5.37	

STA. 0+580.00 TO STA. 0+640.00

1 CW-16 | CW-16

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:
RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:
ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:
LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:
LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

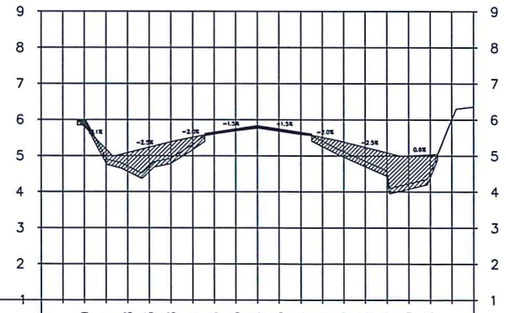
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+580.00 - STA 0+640.00

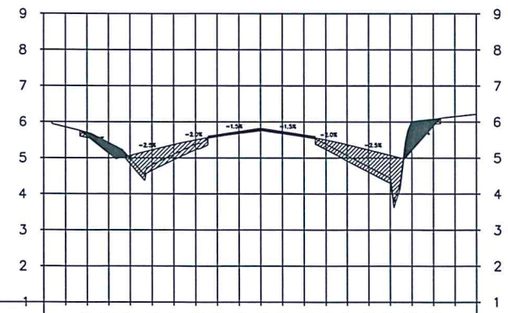
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 16	
	16	33

0+660.00



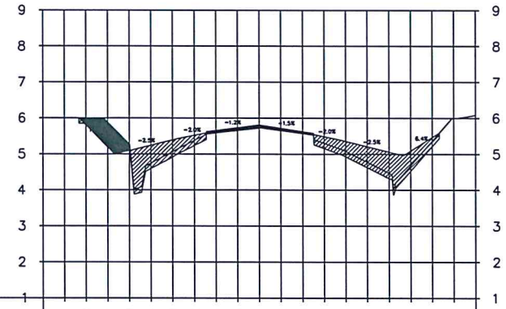
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
60.00		6.00	
-54.00	6.00	6.00	
-48.00	5.80	6.00	
-42.00	5.19	4.94	
-36.00	5.08	4.71	
-30.00	5.23	4.70	
-24.00	5.38	4.94	
-18.00	5.51	5.31	
-12.00	5.66	5.59	0.06
-6.00	5.75	5.68	0.07
0	5.84	5.76	0.08
6.00	5.75	5.68	0.07
12.00	5.66	5.59	0.07
18.00	5.51	5.41	
24.00	5.39	5.11	
30.00	5.24	4.85	
36.00	5.09	4.54	
42.00	5.00	4.23	
48.00	5.03	4.56	
54.00		6.02	
60.00		6.36	

0+680.00



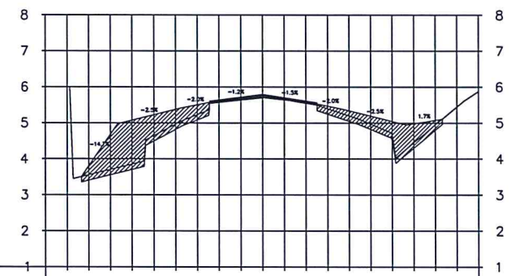
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
60.00		6.00	
-54.00	5.60	5.85	
-48.00	5.13	5.70	
-42.00	5.07	5.43	
-36.00	5.22	4.98	
-30.00	5.37	4.80	
-24.00	5.50	5.09	
-18.00	5.64	5.38	
-12.00	5.73	5.58	0.06
-6.00	5.82	5.67	0.06
0	5.73	5.75	0.07
6.00	5.64	5.67	0.06
12.00	5.50	5.58	0.06
18.00	5.37	5.38	
24.00	5.22	5.06	
30.00	5.07	4.75	
36.00	4.44	5.07	
42.00	5.20	6.01	
48.00	5.88	6.08	
54.00		6.15	
60.00		6.21	

0+700.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
60.00		6.00	
-54.00	6.00	6.00	
-48.00	5.80	6.00	
-42.00	5.19	5.88	
-36.00	5.09	5.28	
-30.00	5.24	4.74	
-24.00	5.39	5.07	
-18.00	5.52	5.38	
-12.00	5.66	5.58	0.08
-6.00	5.73	5.65	0.08
0	5.81	5.72	0.09
6.00	5.72	5.65	0.07
12.00	5.63	5.57	0.06
18.00	5.49	5.30	
24.00	5.36	5.08	
30.00	5.21	4.78	
36.00	5.06	4.47	
42.00	5.09	4.68	
48.00	5.47	5.37	
54.00		6.00	
60.00		6.08	

0+720.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
60.00		6.00	
-54.00	6.00	6.00	
-48.00	3.80	3.56	
-42.00	4.68	3.71	
-36.00	5.08	3.86	
-30.00	5.23	4.64	
-24.00	5.38	4.97	
-18.00	5.51	5.23	
-12.00	5.64	5.56	0.08
-6.00	5.72	5.63	0.09
0	5.79	5.70	0.10
6.00	5.70	5.64	0.07
12.00	5.54	5.54	0.07
18.00	5.61	5.40	
24.00	5.47	5.20	
30.00	5.34	4.97	
36.00	5.19	4.65	
42.00	5.04	4.45	
48.00	4.98	4.95	
54.00	5.08	5.45	
60.00		5.88	

STA. 0+660.00 TO STA. 0+720.00

1 CW-17 CW-17

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL LEDEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

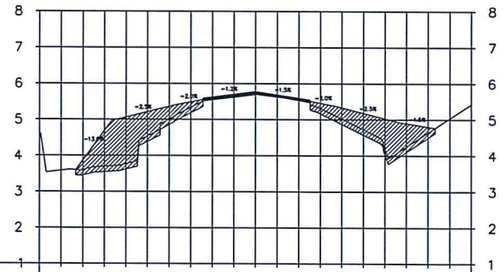
PROJECT TITLE:
ASPHALT OVERLAY
OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+660.00 - STA 0+720.00

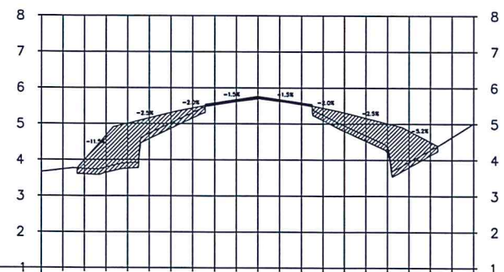
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 17	
	17	33

0+740.00



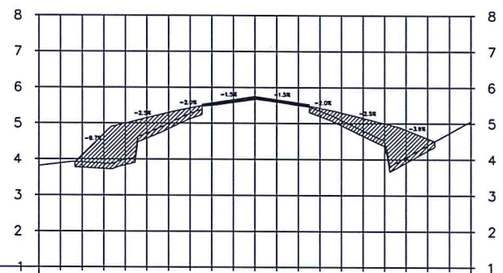
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.64	
-54.00	3.58	3.60	
-48.00	3.87	3.69	
-42.00	4.69	3.77	
-36.00	5.06	4.54	
-30.00	5.21	5.00	
-24.00	5.36	5.34	
-18.00	5.49	5.54	0.09
-12.00	5.63	5.61	0.09
-6.00	5.70	5.69	0.09
0	5.78	5.62	0.07
6.00	5.69	5.53	0.07
12.00	5.60	5.31	
18.00	5.46	5.02	
24.00	5.33	4.73	
30.00	5.18	4.18	
36.00	5.03	4.25	
42.00	4.90	4.65	
48.00	4.81	5.04	
54.00		5.43	
60.00			

0+760.00



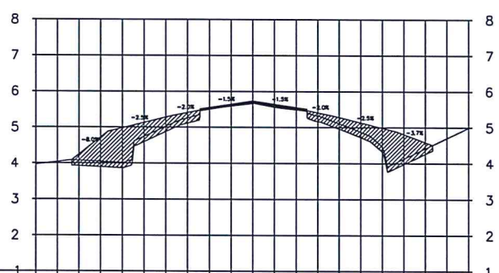
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		3.66	
-54.00	3.73	3.73	
-48.00	3.99	3.75	
-42.00	4.68	3.80	
-36.00	5.01	3.91	
-30.00	5.16	4.73	
-24.00	5.31	5.02	
-18.00	5.44	5.32	
-12.00	5.59	5.52	0.07
-6.00	5.68	5.61	0.06
0	5.77	5.69	0.07
6.00	5.68	5.62	0.05
12.00	5.59	5.53	0.05
18.00	5.44	5.24	
24.00	5.31	4.95	
30.00	5.16	4.68	
36.00	5.01	4.37	
42.00	4.81	3.95	
48.00	4.50	4.28	
54.00		4.64	
60.00		5.02	

0+780.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		3.81	
-54.00	3.89	3.89	
-48.00	4.12	3.91	
-42.00	4.70	3.88	
-36.00	5.00	3.99	
-30.00	5.15	4.73	
-24.00	5.30	4.99	
-18.00	5.43	5.27	
-12.00	5.57	5.50	0.08
-6.00	5.66	5.57	0.09
0	5.75	5.66	0.09
6.00	5.66	5.59	0.07
12.00	5.57	5.50	0.07
18.00	5.43	5.34	
24.00	5.30	5.09	
30.00	5.15	4.80	
36.00	5.00	4.49	
42.00	4.82	4.06	
48.00	4.59	4.40	
54.00		4.73	
60.00		5.07	

0+800.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		3.96	
-54.00	4.04	4.04	
-48.00	4.25	4.08	
-42.00	4.72	4.04	
-36.00	4.98	4.01	
-30.00	5.13	4.74	
-24.00	5.28	5.03	
-18.00	5.41	5.26	
-12.00	5.56	5.50	0.06
-6.00	5.65	5.58	0.06
0	5.74	5.66	0.08
6.00	5.65	5.56	0.09
12.00	5.56	5.49	0.07
18.00	5.41	5.32	
24.00	5.29	5.11	
30.00	5.14	4.87	
36.00	4.99	4.46	
42.00	4.81	4.13	
48.00	4.59	4.42	
54.00		4.71	
60.00		5.00	

STA. 0+740.00 TO STA. 0+800.00

1 CW-18 CW-18

RUNWAY & STRIP CROSS SECTION VIEW

SCALE:

HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAULIL DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

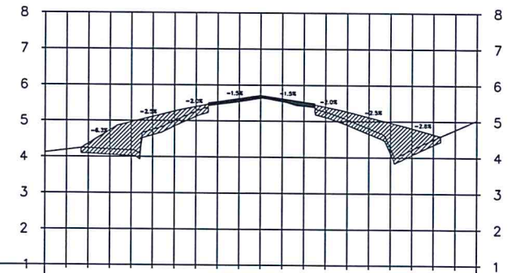
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+740.00 - STA 0+800.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 18	
	18	33

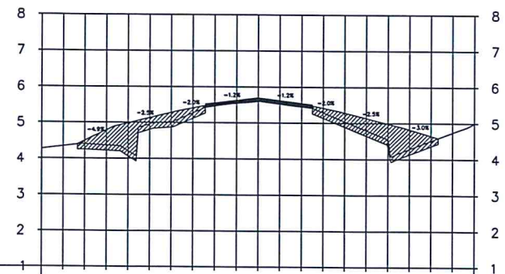
0+820.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.12
-54.00	4.19	4.19
-48.00	4.37	4.24
-42.00	4.74	4.21
-36.00	4.97	4.18
-30.00	5.12	4.75
-24.00	5.27	5.01
-18.00	5.39	5.27
-12.00	5.54	5.45
-6.00	5.63	5.53
0	5.72	5.63
6.00	5.63	5.54
12.00	5.54	5.41
18.00	5.40	5.26
24.00	5.27	5.05
30.00	5.12	4.81
36.00	4.97	4.26
42.00	4.81	4.22
48.00	4.65	4.50
54.00		4.77
60.00		5.04

OFFSET	OVERLAY THICKNESS
-12.00	0.08
-6.00	0.10
0	0.09
6.00	0.09
12.00	0.12

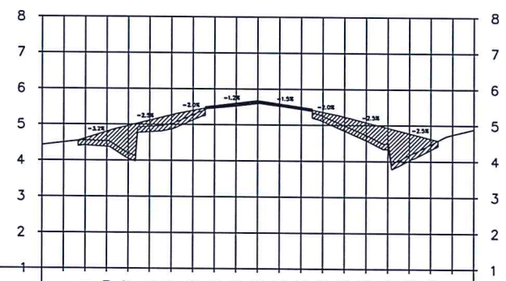
0+840.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.27
-54.00		4.34
-48.00	4.49	4.40
-42.00	4.79	4.37
-36.00	4.98	4.21
-30.00	5.13	4.96
-24.00	5.28	5.02
-18.00	5.41	5.27
-12.00	5.55	5.46
-6.00	5.63	5.54
0	5.70	5.59
6.00	5.63	5.52
12.00	5.55	5.45
18.00	5.41	5.29
24.00	5.29	5.04
30.00	5.14	4.80
36.00	4.99	4.50
42.00	4.83	4.29
48.00	4.65	4.51
54.00		4.74
60.00		5.00

OFFSET	OVERLAY THICKNESS
-12.00	0.09
-6.00	0.09
0	0.11
6.00	0.11
12.00	0.10

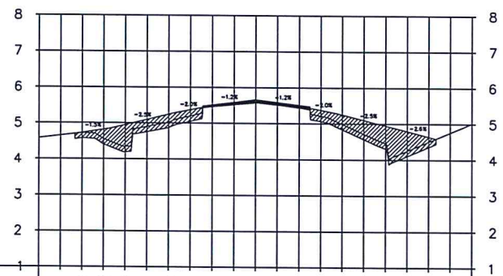
0+860.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.42
-54.00	4.50	4.50
-48.00	4.61	4.56
-42.00	4.80	4.53
-36.00	4.97	4.20
-30.00	5.12	4.95
-24.00	5.27	5.02
-18.00	5.39	5.28
-12.00	5.53	5.46
-6.00	5.61	5.52
0	5.68	5.59
6.00	5.59	5.52
12.00	5.50	5.43
18.00	5.36	5.25
24.00	5.23	4.99
30.00	5.08	4.73
36.00	4.93	4.49
42.00	4.78	4.17
48.00	4.63	4.48
54.00		4.75
60.00		4.89

OFFSET	OVERLAY THICKNESS
-12.00	0.07
-6.00	0.09
0	0.09
6.00	0.07
12.00	0.07

0+880.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.57
-54.00	4.65	4.65
-48.00	4.72	4.72
-42.00	4.73	4.55
-36.00	4.82	4.34
-30.00	4.95	4.90
-24.00	5.10	5.02
-18.00	5.25	5.20
-12.00	5.37	5.45
-6.00	5.51	5.51
0	5.59	5.57
6.00	5.66	5.51
12.00	5.59	5.43
18.00	5.51	5.21
24.00	5.38	4.99
30.00	5.25	4.72
36.00	5.10	4.46
42.00	4.95	4.26
48.00	4.80	4.51
54.00	4.65	4.76
60.00		5.02

OFFSET	OVERLAY THICKNESS
-12.00	0.06
-6.00	0.08
0	0.09
6.00	0.08
12.00	0.08

STA. 0+820.00 TO STA. 0+880.00

1 CW-19 CW-19

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

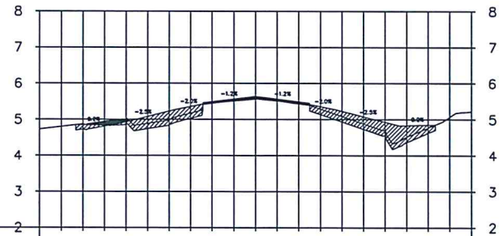
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+820.00 - STA 0+880.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 19	
	19	33

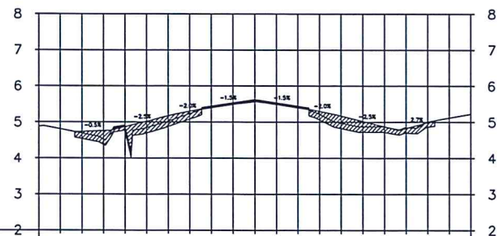
0+900.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.73
-54.00	4.85	4.80
-48.00	4.83	4.87
-42.00	4.93	4.95
-36.00	5.08	5.00
-30.00	5.23	4.89
-24.00	5.36	4.99
-18.00	5.49	5.17
-12.00	5.57	5.45
-6.00	5.64	5.51
0	5.57	5.56
6.00	5.49	5.51
12.00	5.36	5.43
18.00	5.23	5.29
24.00	5.08	5.08
30.00	4.93	4.88
36.00	4.84	4.71
42.00	4.85	4.52
48.00		4.77
54.00		5.07
60.00		5.22

OFFSET	OVERLAY THICKNESS
-12.00	0.05
-6.00	0.06
0	0.08
6.00	0.06
12.00	0.07

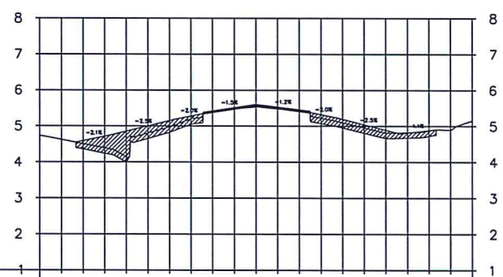
0+920.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.88
-54.00	4.74	4.81
-48.00	4.76	4.69
-42.00	4.87	4.52
-36.00	5.02	4.87
-30.00	5.17	4.85
-24.00	5.30	5.03
-18.00	5.45	5.23
-12.00	5.54	5.40
-6.00	5.63	5.49
0	5.54	5.56
6.00	5.45	5.50
12.00	5.30	5.41
18.00	5.18	5.22
24.00	5.03	4.98
30.00	4.88	4.87
36.00	4.83	4.87
42.00	4.99	4.85
48.00		5.01
54.00		5.12
60.00		5.23

OFFSET	OVERLAY THICKNESS
-12.00	0.04
-6.00	0.04
0	0.06
6.00	0.04
12.00	0.03

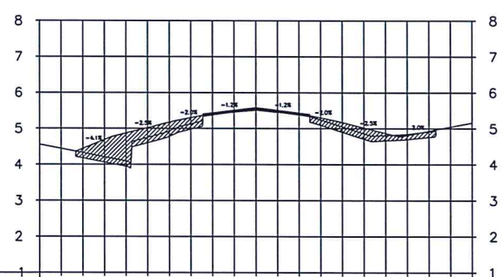
0+940.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.74
-54.00	4.62	4.62
-48.00	4.51	4.51
-42.00	4.39	4.39
-36.00	4.15	4.15
-30.00	4.85	4.80
-24.00	5.00	4.98
-18.00	5.15	5.20
-12.00	5.28	5.38
-6.00	5.43	5.48
0	5.52	5.53
6.00	5.61	5.48
12.00	5.53	5.40
18.00	5.46	5.22
24.00	5.32	5.10
30.00	5.19	4.96
36.00	5.04	4.81
42.00	4.89	4.83
48.00	4.82	4.88
54.00	4.88	4.90
60.00		5.16

OFFSET	OVERLAY THICKNESS
-12.00	0.04
-6.00	0.04
0	0.08
6.00	0.05
12.00	0.05

0+960.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.56
-54.00	4.45	4.44
-48.00	4.69	4.33
-42.00	4.87	4.21
-36.00	5.02	4.09
-30.00	5.17	4.75
-24.00	5.30	4.93
-18.00	5.44	5.13
-12.00	5.51	5.38
-6.00	5.59	5.45
0	5.51	5.51
6.00	5.44	5.38
12.00	5.30	5.24
18.00	5.18	5.05
24.00	5.03	4.86
30.00	4.88	4.82
36.00	4.82	4.85
42.00	4.93	4.91
48.00		5.05
54.00		5.16
60.00		

OFFSET	OVERLAY THICKNESS
-12.00	0.06
-6.00	0.06
0	0.08
6.00	0.07
12.00	0.06

STA. 0+900.00 TO STA. 0+960.00

1 CW-20 CW-20

RUNWAY & STRIP CROSS SECTION VIEW

SCALE:

HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL P. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

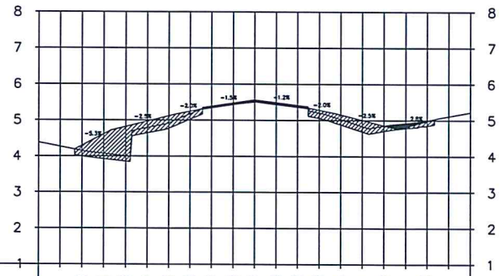
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+900.00 - STA 0+960.00

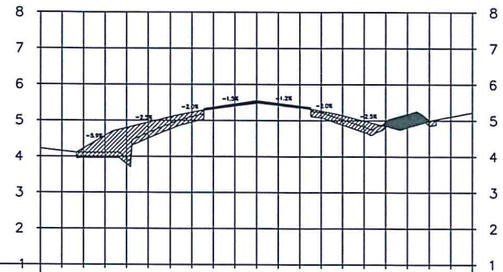
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 20	
	20	33

0+980.00



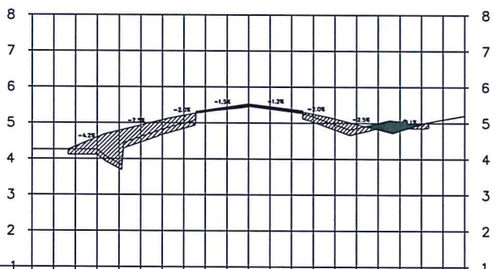
OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS	OVERLAY THICKNESS
-60.00	4.38		
-54.00	4.26		
-48.00	4.14	4.29	
-42.00	4.07	4.61	
-36.00	4.00	4.82	
-30.00	4.79	4.97	
-24.00	4.92	5.12	
-18.00	5.17	5.24	
-12.00	5.36	5.39	0.03
-6.00	5.44	5.48	0.04
0	5.50	5.57	0.07
6.00	5.43	5.50	0.06
12.00	5.36	5.42	0.06
18.00	5.20	5.28	
24.00	5.03	5.16	
30.00	4.83	5.01	
36.00	4.85	4.86	
42.00	4.93	4.81	
48.00	5.00	4.98	
54.00	5.11		
60.00	5.23		

1+000.00



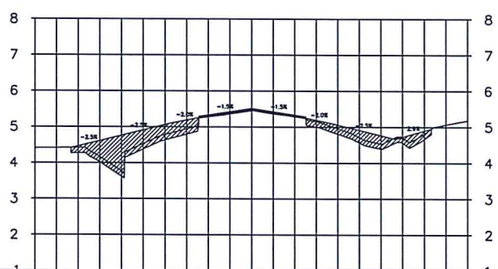
OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS	OVERLAY THICKNESS
-60.00	4.22		
-54.00	4.15	4.23	
-48.00	4.10	4.58	
-42.00	4.11	4.80	
-36.00	3.94	4.95	
-30.00	4.66	5.10	
-24.00	4.91	5.23	
-18.00	5.10	5.37	
-12.00	5.32	5.46	0.05
-6.00	5.40	5.55	0.06
0	5.48	5.48	0.07
6.00	5.42	5.40	0.05
12.00	5.35	5.27	0.05
18.00	5.22	5.14	
24.00	5.03	4.99	
30.00	4.82	4.84	
36.00	4.97	4.80	
42.00	5.19	4.98	
48.00	5.01		
54.00	5.11		
60.00	5.22		

1+020.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS	OVERLAY THICKNESS
-60.00	4.25		
-54.00	4.26		
-48.00	4.26	4.34	
-42.00	4.26	4.60	
-36.00	3.87	4.78	
-30.00	4.61	4.93	
-24.00	4.82	5.08	
-18.00	4.99	5.21	
-12.00	5.30	5.35	0.05
-6.00	5.37	5.44	0.07
0	5.45	5.53	0.08
6.00	5.38	5.46	0.08
12.00	5.31	5.38	0.08
18.00	5.17	5.25	
24.00	4.96	5.12	
30.00	4.85	4.97	
36.00	5.00	4.82	
42.00	5.05	4.78	
48.00	4.99	4.97	
54.00	5.10		
60.00	5.21		

1+040.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS	OVERLAY THICKNESS
-60.00	4.41		
-54.00	4.41	4.47	
-48.00	4.42	4.61	
-42.00	4.16	4.76	
-36.00	3.77	4.91	
-30.00	4.53	5.06	
-24.00	4.78	5.19	
-18.00	4.94	5.33	
-12.00	5.27	5.42	0.06
-6.00	5.35	5.51	0.07
0	5.45	5.42	0.06
6.00	5.36	5.33	0.06
12.00	5.29	5.19	0.04
18.00	5.15	5.06	
24.00	4.96	4.91	
30.00	4.72	4.76	
36.00	4.54	4.71	
42.00	4.71	4.81	
48.00	4.81	5.07	
54.00	5.07		
60.00	5.18		

STA. 0+980.00 TO STA. 1+040.00

1 CW-21 CW-21

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAULIL DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

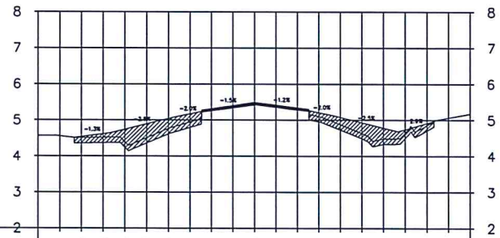
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 0+980.00 - STA 1+040.00

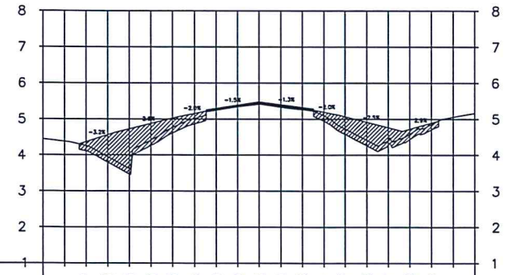
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 21	
	21	33

1+060.00



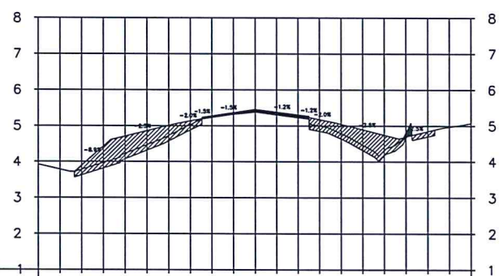
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.57	
-54.00	4.54	4.56	
-48.00	4.62	4.51	
-42.00	4.74	4.52	
-36.00	4.89	4.39	
-30.00	5.04	4.51	
-24.00	5.17	4.77	
-18.00	5.32	4.95	
-12.00	5.41	5.26	0.06
-6.00	5.50	5.34	0.07
0	5.42	5.42	0.08
6.00	5.35	5.35	0.07
12.00	5.21	5.28	0.06
18.00	5.08	5.10	
24.00	4.93	4.88	
30.00	4.78	4.64	
36.00	4.74	4.48	
42.00	4.91	4.65	
48.00		4.86	
54.00		5.06	
60.00		5.18	

1+080.00



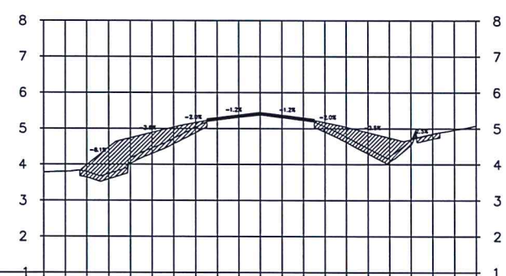
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.44	
-54.00	4.37	4.38	
-48.00	4.56	4.26	
-42.00	4.73	3.95	
-36.00	4.88	3.62	
-30.00	5.03	4.41	
-24.00	5.15	4.76	
-18.00	5.30	5.01	
-12.00	5.39	5.24	0.06
-6.00	5.48	5.33	0.05
0	5.40	5.41	0.07
6.00	5.33	5.32	0.08
12.00	5.19	5.26	0.07
18.00	5.07	5.10	
24.00	4.92	4.73	
30.00	4.77	4.42	
36.00	4.72	4.42	
42.00	4.90	4.59	
48.00		4.86	
54.00		5.06	
60.00		5.17	

1+100.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		3.93	
-54.00	3.78	3.78	
-48.00	3.89	3.78	
-42.00	4.43	3.97	
-36.00	4.71	4.23	
-30.00	4.86	4.47	
-24.00	5.01	4.73	
-18.00	5.13	5.03	
-12.00	5.28	5.23	0.05
-6.00	5.37	5.31	0.06
0	5.46	5.38	0.08
6.00	5.38	5.30	0.08
12.00	5.31	5.22	0.08
18.00	5.17	5.00	
24.00	5.05	4.79	
30.00	4.90	4.47	
36.00	4.75	4.33	
42.00	4.70	4.81	
48.00	4.84	4.85	
54.00		4.97	
60.00		5.07	

1+104.77



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		3.78	
-54.00	3.99	3.80	
-48.00	4.48	3.79	
-42.00	4.74	3.74	
-36.00	4.89	4.17	
-30.00	5.04	4.45	
-24.00	5.17	4.72	
-18.00	5.30	5.03	
-12.00	5.38	5.23	0.08
-6.00	5.45	5.31	0.07
0	5.38	5.37	0.08
6.00	5.30	5.30	0.08
12.00	5.22	5.22	0.08
18.00	5.17	5.05	
24.00	5.04	4.77	
30.00	4.89	4.45	
36.00	4.74	4.22	
42.00	4.69	4.69	
48.00	4.84	4.86	
54.00		4.96	
60.00		5.08	

STA. 1+060.00 TO STA. 1+104.77

1 CW-22 CW-22

RUNWAY & STRIP CROSS SECTION VIEW

SCALE:

HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L. DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

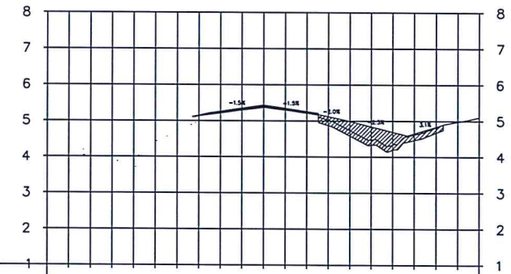
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+060.00 - STA 1+104.77

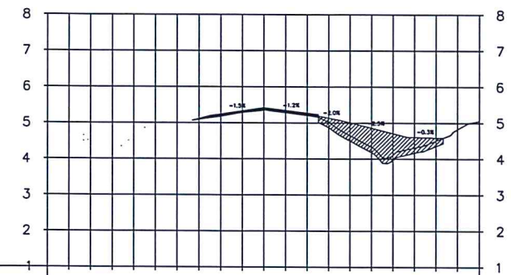
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 22	
	22	33

1+120.00



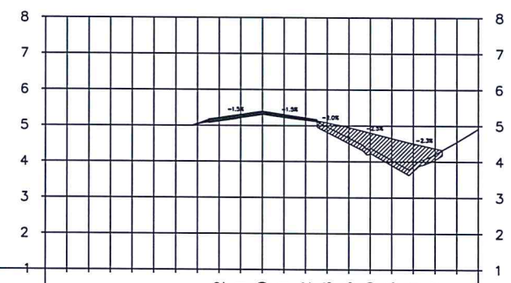
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.09	
-54.00		4.14	
-48.00		4.16	
-42.00		4.05	
-36.00		3.88	
-30.00		4.55	
-24.00		4.86	
-18.00		5.11	
-12.00	5.26	5.21	0.05
-6.00	5.35	5.29	0.06
0	5.44	5.36	0.08
6.00	5.35	5.29	0.06
12.00	5.26	5.21	0.05
18.00	5.12	5.02	
24.00	4.99	4.73	
30.00	4.84	4.48	
36.00	4.69	4.34	
42.00	4.65	4.62	
48.00	4.84	4.82	
54.00		4.98	
60.00		5.10	

1+140.00



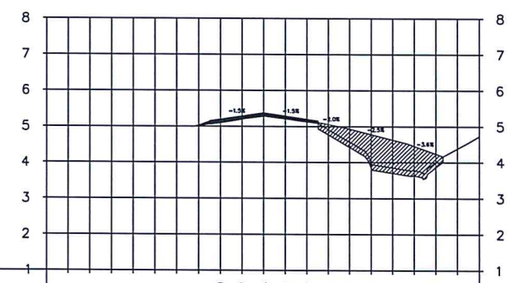
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.52	
-54.00		4.59	
-48.00		4.64	
-42.00		4.54	
-36.00		4.77	
-30.00		5.02	
-24.00		5.05	
-18.00		5.07	
-12.00	5.24	5.17	0.07
-6.00	5.33	5.28	0.05
0	5.42	5.35	0.07
6.00	5.35	5.28	0.07
12.00	5.27	5.20	0.07
18.00	5.14	5.02	
24.00	5.01	4.65	
30.00	4.86	4.33	
36.00	4.71	4.12	
42.00	4.60	4.32	
48.00	4.59	4.51	
54.00		4.83	
60.00		5.06	

1+160.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.98	
-54.00		5.00	
-48.00		4.98	
-42.00		4.97	
-36.00		4.96	
-30.00		4.99	
-24.00		5.02	
-18.00		5.05	
-12.00	5.22	5.11	0.11
-6.00	5.31	5.20	0.11
0	5.40	5.30	0.10
6.00	5.31	5.22	0.09
12.00	5.22	5.15	0.07
18.00	5.08	4.96	
24.00	4.95	4.66	
30.00	4.80	4.36	
36.00	4.65	4.05	
42.00	4.51	3.89	
48.00	4.37	4.19	
54.00		4.55	
60.00		4.92	

1+180.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		5.04	
-54.00		5.04	
-48.00		5.00	
-42.00		4.82	
-36.00		4.73	
-30.00		4.82	
-24.00		4.86	
-18.00		4.96	
-12.00	5.20	5.09	0.11
-6.00	5.29	5.19	0.10
0	5.38	5.28	0.10
6.00	5.29	5.21	0.08
12.00	5.20	5.12	0.08
18.00	5.06	4.91	
24.00	4.93	4.57	
30.00	4.78	4.00	
36.00	4.63	3.85	
42.00	4.46	3.79	
48.00	4.24	4.02	
54.00		4.39	
60.00		4.73	

STA. 1+120.00 TO STA. 1+180.00

1 CW-23 CW-23

RUNWAY & STRIP CROSS SECTION VIEW

SCALE:

HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

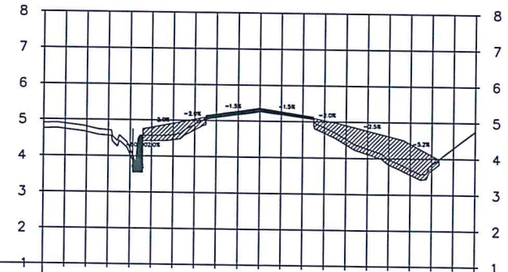
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+120.00 - STA 1+180.00

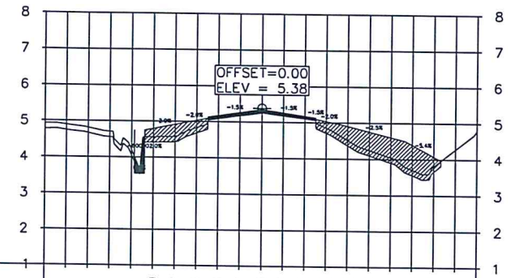
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 23	
	23	33

1+198.03



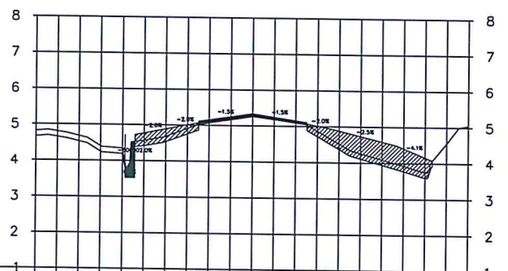
PROPOSED ELEVATIONS									4.80	4.92	5.04	5.18	5.27	5.36	5.27	5.18	5.04	4.91	4.76	4.61	4.41	4.09		
EXISTING ELEVATIONS	4.90	4.89	4.81	4.71	4.19	4.57	4.61	4.89	5.08	5.17	5.26	5.18	5.10	4.84	4.26	3.97	3.71	3.83	4.30	4.77				
OFFSET	60.00	-54.00	-48.00	-42.00	-36.00	-30.00	-24.00	-18.00	-12.00	-6.00	0	6.00	12.00	18.00	24.00	30.00	36.00	42.00	48.00	54.00	60.00			
OVERLAY THICKNESS									0.10	0.10	0.10	0.09	0.08											

1+200.00



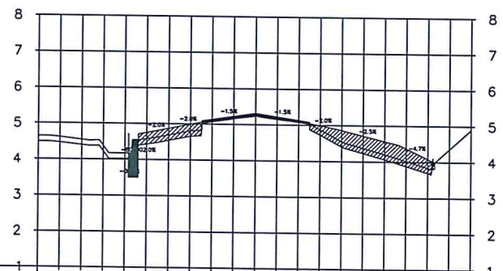
PROPOSED ELEVATIONS									4.80	4.92	5.04	5.18	5.27	5.36	5.27	5.18	5.04	4.91	4.76	4.61	4.40	4.08		
EXISTING ELEVATIONS	4.92	4.90	4.82	4.70	4.20	4.57	4.58	4.83	5.08	5.17	5.25	5.18	5.10	5.18	5.04	4.86	4.52	4.25	4.05	3.71	3.81	4.28	4.79	
OFFSET	60.00	-54.00	-48.00	-42.00	-36.00	-30.00	-24.00	-18.00	-12.00	-6.00	0	6.00	12.00	18.00	24.00	30.00	36.00	42.00	48.00	54.00	60.00			
OVERLAY THICKNESS									0.10	0.10	0.10	0.09	0.08											

1+220.00



PROPOSED ELEVATIONS									4.77	4.89	5.01	5.16	5.25	5.34	5.25	5.16	5.01	4.89	4.74	4.59	4.41	4.16		
EXISTING ELEVATIONS	4.81	4.80	4.68	4.40	4.29	4.57	4.69	4.91	5.07	5.16	5.25	5.17	5.09	4.87	4.52	4.26	4.09	3.92	3.74	4.55	5.05			
OFFSET	60.00	-54.00	-48.00	-42.00	-36.00	-30.00	-24.00	-18.00	-12.00	-6.00	0	6.00	12.00	18.00	24.00	30.00	36.00	42.00	48.00	54.00	60.00			
OVERLAY THICKNESS									0.09	0.09	0.08	0.07	0.07											

1+240.00



PROPOSED ELEVATIONS									4.75	4.87	4.99	5.14	5.23	5.32	5.23	5.14	4.99	4.87	4.72	4.57	4.37	4.09		
EXISTING ELEVATIONS	4.64	4.62	4.55	4.38	4.17	4.58	4.69	4.81	5.06	5.15	5.24	5.15	5.07	4.88	4.56	4.38	4.21	4.03	3.84	4.36	4.90			
OFFSET	60.00	-54.00	-48.00	-42.00	-36.00	-30.00	-24.00	-18.00	-12.00	-6.00	0	6.00	12.00	18.00	24.00	30.00	36.00	42.00	48.00	54.00	60.00			
OVERLAY THICKNESS									0.07	0.07	0.08	0.07	0.06											

STA. 1+198.03 TO STA. 1+240.00

1 / CW-24 CW-24

RUNWAY & STRIP CROSS SECTION VIEW

SCALE:

HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief IV, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

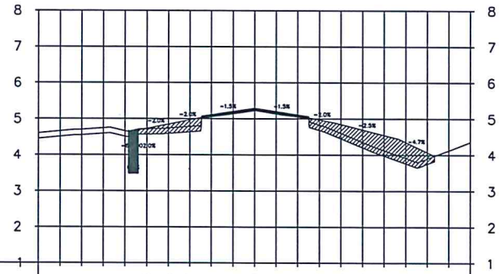
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+198.03 - STA 1+240.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 24	
	24	33

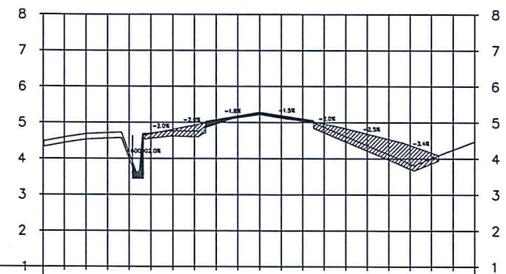
1+260.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.60	
-54.00	4.65	
-48.00	4.70	
-42.00	4.74	
-36.00	4.66	
-30.00	4.72	4.73
-24.00	4.74	4.85
-18.00	4.78	4.97
-12.00	5.05	5.12
-6.00	5.13	5.21
0	5.22	5.30
6.00	5.13	5.21
12.00	5.05	5.12
18.00	4.83	4.97
24.00	4.60	4.85
30.00	4.36	4.70
36.00	4.13	4.55
42.00	3.91	4.35
48.00	3.90	4.07
54.00	4.13	
60.00	4.36	

OFFSET	OVERLAY THICKNESS
-12.00	0.06
-6.00	0.07
0	0.07
6.00	0.08
12.00	0.07

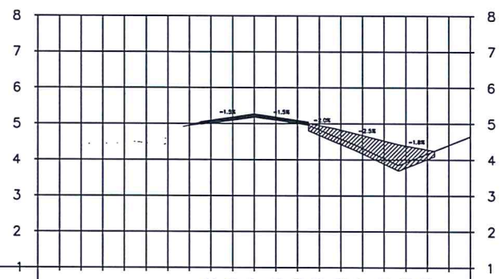
1+268.24



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.49	
-54.00	4.59	
-48.00	4.68	
-42.00	4.71	
-36.00	4.14	
-30.00	4.71	4.69
-24.00	4.77	4.81
-18.00	4.75	4.93
-12.00	4.96	5.08
-6.00	5.12	5.18
0	5.21	5.29
6.00	5.12	5.20
12.00	5.03	5.11
18.00	4.87	4.96
24.00	4.62	4.84
30.00	4.37	4.69
36.00	4.12	4.54
42.00	3.86	4.37
48.00	4.01	4.16
54.00	4.25	
60.00	4.48	

OFFSET	OVERLAY THICKNESS
-12.00	0.12
-6.00	0.06
0	0.07
6.00	0.08
12.00	0.07

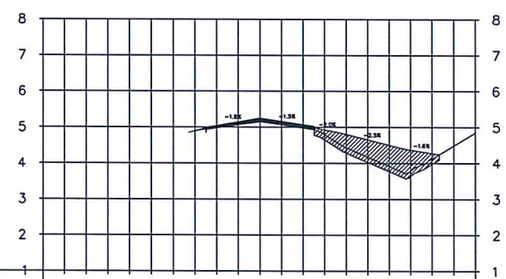
1+280.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.50	
-54.00	4.50	
-48.00	4.53	
-42.00	4.59	
-36.00	4.62	
-30.00	4.61	
-24.00	4.61	
-18.00	4.85	
-12.00	5.01	5.09
-6.00	5.09	5.18
0	5.17	5.27
6.00	5.09	5.18
12.00	5.00	5.09
18.00	4.83	4.95
24.00	4.57	4.82
30.00	4.31	4.67
36.00	4.03	4.52
42.00	3.92	4.39
48.00	4.16	4.28
54.00	4.41	
60.00	4.65	

OFFSET	OVERLAY THICKNESS
-12.00	0.08
-6.00	0.09
0	0.10
6.00	0.09
12.00	0.09

1+300.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.48	
-54.00	4.46	
-48.00	4.46	
-42.00	4.45	
-36.00	4.46	
-30.00	4.56	
-24.00	4.65	
-18.00	4.75	
-12.00	4.98	5.04
-6.00	5.07	5.15
0	5.14	5.25
6.00	5.06	5.16
12.00	4.97	5.07
18.00	4.80	4.93
24.00	4.43	4.80
30.00	4.17	4.65
36.00	3.92	4.50
42.00	3.79	4.37
48.00	4.12	4.28
54.00	4.49	
60.00	4.85	

OFFSET	OVERLAY THICKNESS
-12.00	0.07
-6.00	0.08
0	0.11
6.00	0.10
12.00	0.10

STA. 1+260.00 TO STA. 1+300.00

1 / CW-25 CW-25

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAULL DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

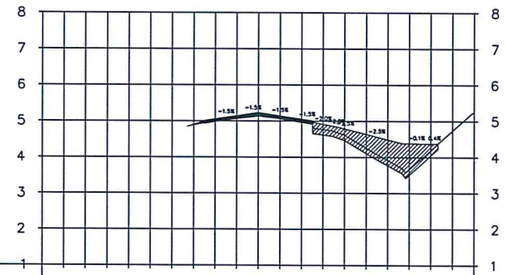
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+260.00 - STA 1+300.00

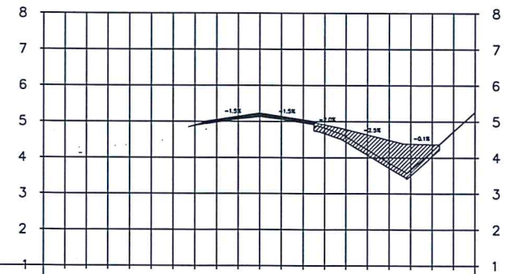
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 25	
	25	33

1+318.01



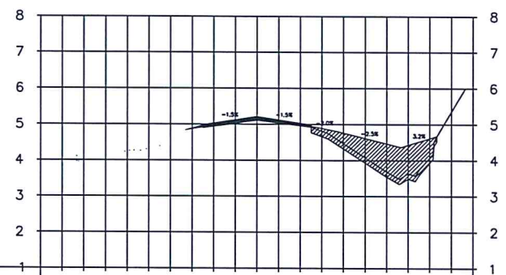
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.33	
-54.00		4.30	
-48.00		4.32	
-42.00		4.44	
-36.00		4.53	
-30.00		4.61	
-24.00		4.69	
-18.00		4.85	
-12.00	5.05	4.97	0.08
-6.00	5.14	5.06	0.08
0	5.23	5.13	0.11
6.00	5.14	5.05	0.09
12.00	5.05	4.96	0.09
18.00	4.91	4.77	
24.00	4.78	4.61	
30.00	4.63	4.25	
36.00	4.48	3.91	
42.00	4.38	3.67	
48.00	4.37	4.20	
54.00		4.74	
60.00		5.25	

1+320.00



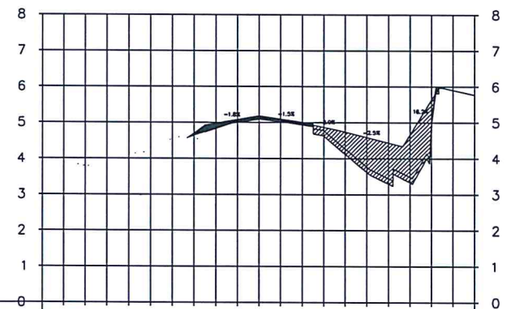
OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.32	
-54.00		4.28	
-48.00		4.29	
-42.00		4.42	
-36.00		4.50	
-30.00		4.57	
-24.00		4.69	
-18.00		4.84	
-12.00	5.05	4.97	0.08
-6.00	5.14	5.06	0.08
0	5.23	5.13	0.11
6.00	5.14	5.05	0.09
12.00	5.05	4.96	0.09
18.00	4.91	4.82	
24.00	4.78	4.58	
30.00	4.63	4.22	
36.00	4.48	3.86	
42.00	4.38	3.65	
48.00	4.37	4.19	
54.00		4.73	
60.00		5.26	

1+340.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.16	
-54.00		4.12	
-48.00		4.13	
-42.00		4.26	
-36.00		4.39	
-30.00		4.47	
-24.00		4.64	
-18.00		4.79	
-12.00	5.03	4.94	0.09
-6.00	5.12	5.02	0.10
0	5.21	5.11	0.10
6.00	5.12	5.03	0.09
12.00	5.03	4.96	0.08
18.00	4.89	4.81	
24.00	4.76	4.47	
30.00	4.61	4.08	
36.00	4.46	3.69	
42.00	4.42	3.63	
48.00	4.61	4.08	
54.00		5.35	
60.00		6.00	

1+360.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS	OVERLAY THICKNESS
-60.00		4.23	
-54.00		4.08	
-48.00		3.94	
-42.00		4.07	
-36.00		4.24	
-30.00		4.40	
-24.00		4.70	
-18.00		4.70	
-12.00	4.98	4.83	0.15
-6.00	5.09	5.00	0.09
0	5.19	5.08	0.11
6.00	5.10	5.02	0.08
12.00	5.01	4.93	0.08
18.00	4.87	4.78	
24.00	4.74	4.27	
30.00	4.59	3.77	
36.00	4.44	3.45	
42.00	4.67	3.49	
48.00	5.64	5.04	
54.00		5.91	
60.00		5.77	

STA. 1+318.01 TO STA. 1+360.00

1 CW-26 CW-26

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

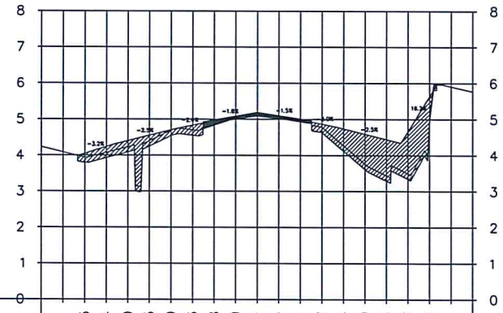
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+318.01 - STA 1+360.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 26	
	26	33

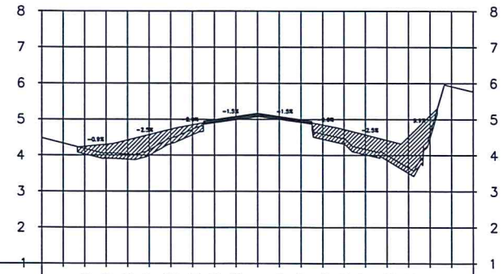
1+360.13



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.23
-54.00	4.05	4.08
-48.00	4.24	3.94
-42.00	4.40	4.07
-36.00	4.55	4.23
-30.00	4.70	4.40
-24.00	4.83	4.70
-18.00	4.98	4.70
-12.00	5.09	4.83
-6.00	5.19	5.00
0	5.10	5.08
6.00	5.01	5.02
12.00	4.87	4.93
18.00	4.74	4.77
24.00	4.59	4.27
30.00	4.44	3.76
36.00	4.67	3.44
42.00	5.64	3.49
48.00		5.05
54.00		5.90
60.00		5.77

OFFSET	OVERLAY THICKNESS
-12.00	0.15
-6.00	0.09
0	0.11
6.00	0.08
12.00	0.08

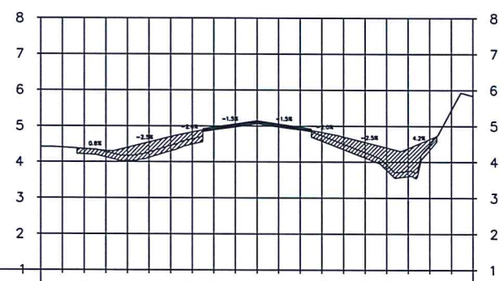
1+380.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.48
-54.00	4.25	4.33
-48.00	4.30	4.18
-42.00	4.42	4.06
-36.00	4.57	4.03
-30.00	4.72	4.15
-24.00	4.85	4.47
-18.00	4.99	4.72
-12.00	5.08	4.90
-6.00	5.17	4.98
0	5.08	5.07
6.00	4.99	4.99
12.00	4.99	4.91
18.00	4.85	4.60
24.00	4.72	4.47
30.00	4.57	4.17
36.00	4.42	4.01
42.00	4.52	3.65
48.00	5.11	4.63
54.00		5.92
60.00		5.77

OFFSET	OVERLAY THICKNESS
-12.00	0.09
-6.00	0.10
0	0.10
6.00	0.09
12.00	0.08

1+400.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.42
-54.00	4.40	4.40
-48.00	4.36	4.37
-42.00	4.31	4.28
-36.00	4.40	4.18
-30.00	4.55	4.27
-24.00	4.70	4.45
-18.00	4.83	4.64
-12.00	4.97	4.88
-6.00	5.06	4.97
0	5.15	5.06
6.00	5.06	4.97
12.00	4.97	4.89
18.00	4.83	4.73
24.00	4.70	4.50
30.00	4.55	4.27
36.00	4.40	3.93
42.00	4.38	3.75
48.00	4.64	4.48
54.00		5.45
60.00		5.84

OFFSET	OVERLAY THICKNESS
-12.00	0.09
-6.00	0.09
0	0.09
6.00	0.09
12.00	0.08

1+420.00

OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		4.37
-54.00	4.28	4.29
-48.00	4.28	4.28
-42.00	4.38	4.28
-36.00	4.53	4.24
-30.00	4.68	4.27
-24.00	4.80	4.43
-18.00	4.95	4.69
-12.00	5.04	4.86
-6.00	5.13	4.94
0	5.04	5.02
6.00	4.95	4.95
12.00	4.80	4.86
18.00	4.68	4.68
24.00	4.53	4.47
30.00	4.38	4.14
36.00	4.45	3.89
42.00	4.96	3.50
48.00		4.77
54.00		5.43
60.00		5.28

OFFSET	OVERLAY THICKNESS
-12.00	0.09
-6.00	0.09
0	0.10
6.00	0.09
12.00	0.08

STA. 1+360.13 TO STA. 1+420.00

1 CW-27 CW-27

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:
RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:
ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:
LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:
LTGEN RAUL L. DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

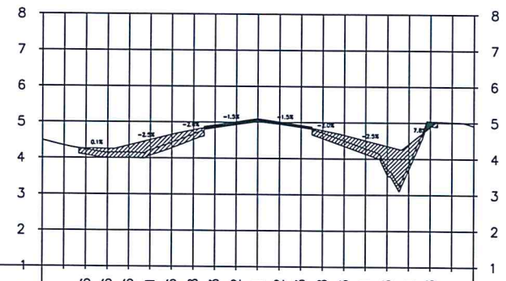
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+360.13 - STA 1+420.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 27	
	27	33

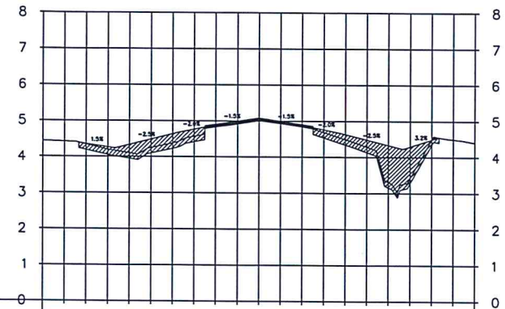
1+440.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.49	
-54.00	4.34	4.26
-48.00	4.23	4.26
-42.00	4.16	4.36
-36.00	4.15	4.51
-30.00	4.22	4.66
-24.00	4.43	4.78
-18.00	4.67	4.93
-12.00	4.84	5.02
-6.00	4.93	5.11
0	5.02	5.02
6.00	4.95	4.93
12.00	4.86	4.78
18.00	4.71	4.66
24.00	4.50	4.51
30.00	4.28	4.36
36.00	3.71	4.41
42.00	3.85	4.88
48.00	5.05	
54.00	5.02	
60.00	4.92	

OFFSET	OVERLAY THICKNESS
-12.00	0.09
-6.00	0.09
0	0.09
6.00	0.07
12.00	0.07

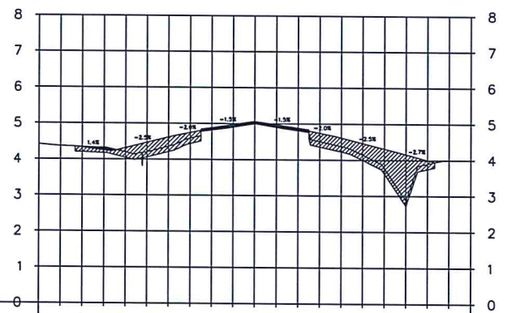
1+460.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.44	
-54.00	4.42	
-48.00	4.34	4.36
-42.00	4.20	4.27
-36.00	4.10	4.34
-30.00	4.25	4.49
-24.00	4.38	4.64
-18.00	4.57	4.76
-12.00	4.83	4.91
-6.00	4.91	5.00
0	5.00	5.09
6.00	4.93	5.00
12.00	4.84	4.91
18.00	4.69	4.76
24.00	4.49	4.64
30.00	4.29	4.49
36.00	3.31	4.34
42.00	3.43	4.30
48.00	4.50	4.49
54.00	4.50	
60.00	4.41	

OFFSET	OVERLAY THICKNESS
-12.00	0.08
-6.00	0.09
0	0.08
6.00	0.07
12.00	0.07

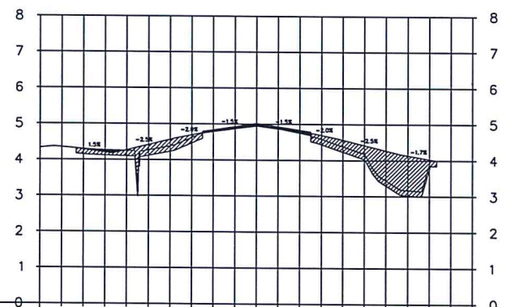
1+480.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.41	
-54.00	4.36	
-48.00	4.34	4.32
-42.00	4.32	4.24
-36.00	4.19	4.31
-30.00	4.20	4.46
-24.00	4.36	4.61
-18.00	4.59	4.74
-12.00	4.81	4.88
-6.00	4.90	4.97
0	4.99	5.06
6.00	4.89	4.97
12.00	4.80	4.88
18.00	4.51	4.74
24.00	4.38	4.61
30.00	4.14	4.46
36.00	3.77	4.31
42.00	2.88	4.16
48.00	3.90	4.00
54.00	4.00	
60.00	4.00	

OFFSET	OVERLAY THICKNESS
-12.00	0.07
-6.00	0.08
0	0.07
6.00	0.08
12.00	0.08

1+500.00



OFFSET	EXISTING ELEVATIONS	PROPOSED ELEVATIONS
-60.00	4.33	
-54.00	4.35	
-48.00	4.29	4.28
-42.00	4.27	4.20
-36.00	4.25	4.27
-30.00	4.27	4.42
-24.00	4.38	4.57
-18.00	4.61	4.69
-12.00	4.78	4.84
-6.00	4.86	4.93
0	4.94	5.02
6.00	4.86	4.93
12.00	4.75	4.84
18.00	4.58	4.69
24.00	4.38	4.57
30.00	4.18	4.42
36.00	3.44	4.27
42.00	3.17	4.13
48.00	3.89	4.03
54.00	3.99	
60.00	4.00	

OFFSET	OVERLAY THICKNESS
-12.00	0.05
-6.00	0.06
0	0.08
6.00	0.06
12.00	0.09

STA. 1+440.00 TO STA. 1+500.00

1 CW-28 CW-28

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:
RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:
ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:
LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:
LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

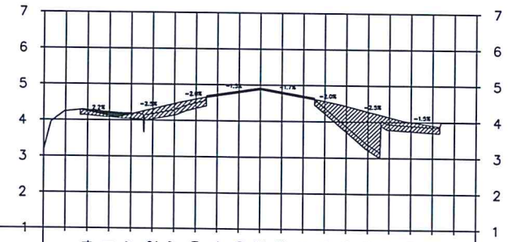
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+440.00 - STA 1+500.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 28	
	28	33

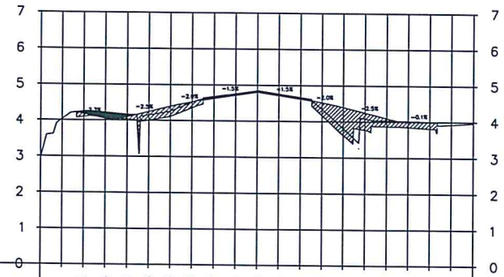
1+520.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		3.18
-54.00	4.24	4.24
-48.00	4.11	4.28
-42.00	4.17	4.23
-36.00	4.32	4.19
-30.00	4.47	4.18
-24.00	4.60	4.30
-18.00	4.74	4.49
-12.00	4.83	4.72
-6.00	4.92	4.79
0	4.82	4.88
6.00	4.71	4.78
12.00	4.56	4.66
18.00	4.43	4.36
24.00	4.28	3.86
30.00	4.13	3.36
36.00	4.00	3.93
42.00	3.91	3.89
48.00		3.85
54.00		3.99
60.00		3.99

OFFSET	OVERLAY THICKNESS
-12.00	0.02
-6.00	0.04
0	0.04
6.00	0.04
12.00	0.05

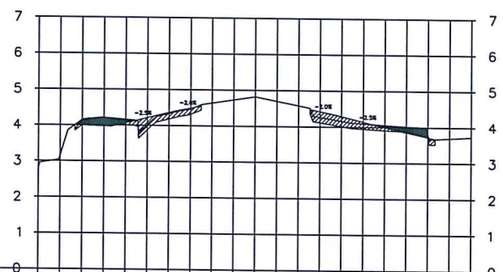
1+528.12



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		2.96
-54.00	4.18	4.03
-48.00	4.04	4.25
-42.00	4.10	4.23
-36.00	4.25	4.17
-30.00	4.40	4.15
-24.00	4.53	4.26
-18.00	4.67	4.51
-12.00	4.76	4.68
-6.00	4.85	4.76
0	4.76	4.85
6.00	4.67	4.76
12.00	4.53	4.64
18.00	4.40	4.34
24.00	4.25	3.81
30.00	4.10	4.08
36.00	4.00	4.04
42.00	3.99	4.03
48.00		4.00
54.00		3.93
60.00		3.97

OFFSET	OVERLAY THICKNESS
-12.00	-0.01
-6.00	0.00
0	0.00
6.00	0.00
12.00	0.03

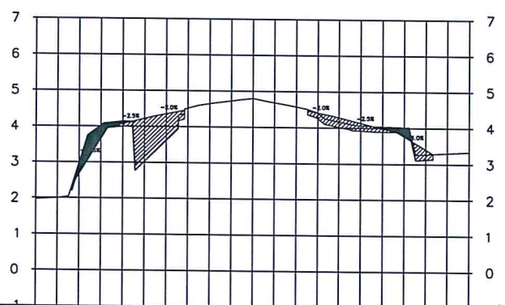
1+540.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		2.81
-54.00	3.99	3.16
-48.00	3.97	4.15
-42.00	4.06	4.22
-36.00	4.21	4.17
-30.00	4.36	4.03
-24.00	4.49	4.33
-18.00	4.54	4.46
-12.00	4.54	4.57
-6.00	4.53	4.73
0	4.53	4.82
6.00	4.52	4.72
12.00	4.42	4.59
18.00	4.29	4.26
24.00	4.14	4.16
30.00	3.99	4.09
36.00	3.85	4.06
42.00	3.72	4.02
48.00		3.81
54.00		3.70
60.00		3.73

OFFSET	OVERLAY THICKNESS

1+560.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		1.96
-54.00	2.66	2.00
-48.00	3.64	3.00
-42.00	4.07	4.03
-36.00	4.22	4.14
-30.00	4.35	3.17
-24.00	4.45	3.76
-18.00	4.46	4.52
-12.00	4.47	4.64
-6.00	4.48	4.73
0	4.49	4.80
6.00	4.50	4.68
12.00	4.41	4.57
18.00	4.29	4.40
24.00	4.14	4.17
30.00	3.99	4.07
36.00	3.76	4.04
42.00	3.40	4.03
48.00		3.27
54.00		3.31
60.00		3.34

OFFSET	OVERLAY THICKNESS

STA. 1+520.00 TO STA. 1+560.00

1 CW-29 CW-29

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief II, IDDD

SUBMITTED BY:

ARNEL R BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

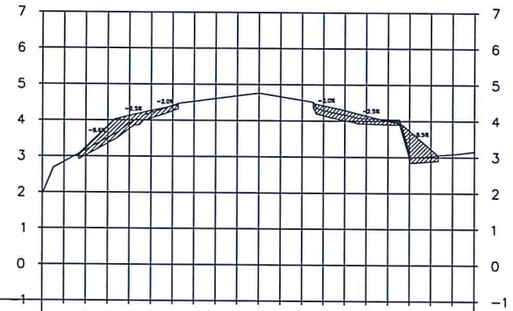
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+520.00 - STA 1+560.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 29	
	29	33

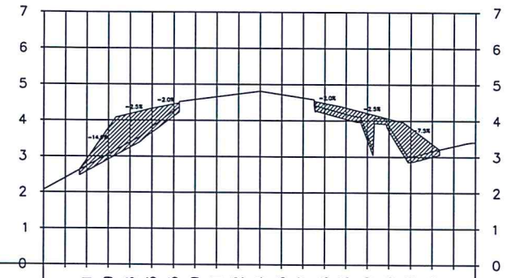
1+580.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		1.94
-54.00	2.84	3.18
-48.00	3.26	3.51
-42.00	3.83	3.91
-36.00	4.13	4.21
-30.00	4.28	4.41
-24.00	4.40	4.47
-18.00	4.44	4.64
-12.00	4.45	4.71
-6.00	4.47	4.76
0	4.48	4.67
6.00	4.50	4.58
12.00	4.51	4.30
18.00	4.42	4.16
24.00	4.30	4.07
30.00	4.15	4.05
36.00	4.00	3.06
42.00	3.73	3.03
48.00	3.22	3.09
54.00		3.16
60.00		

OVERLAY THICKNESS	

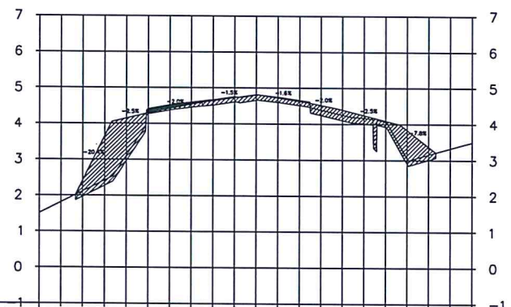
1+600.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		2.07
-54.00	2.91	2.40
-48.00	3.79	2.73
-42.00	4.18	3.06
-36.00	4.33	3.39
-30.00	4.45	3.81
-24.00	4.49	4.26
-18.00	4.51	4.59
-12.00	4.52	4.67
-6.00	4.54	4.75
0	4.55	4.81
6.00	4.57	4.73
12.00	4.48	4.63
18.00	4.35	4.35
24.00	4.20	4.19
30.00	4.05	3.61
36.00	3.80	3.86
42.00	3.35	3.01
48.00		3.16
54.00		3.30
60.00		3.40

OVERLAY THICKNESS	

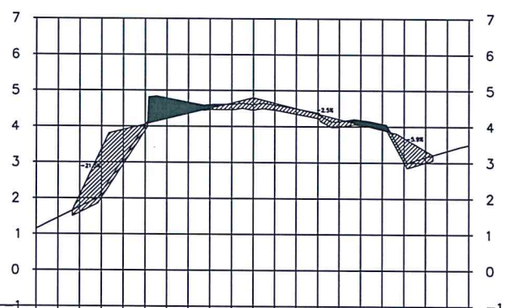
1+613.12



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		1.51
-54.00	1.81	1.81
-48.00	2.42	2.11
-42.00	3.64	2.42
-36.00	4.15	3.11
-30.00	4.30	4.41
-24.00	4.42	4.52
-18.00	4.54	4.60
-12.00	4.64	4.67
-6.00	4.73	4.76
0	4.82	4.80
6.00	4.74	4.75
12.00	4.66	4.66
18.00	4.52	4.39
24.00	4.39	4.25
30.00	4.24	4.17
36.00	4.09	4.07
42.00	3.84	3.06
48.00	3.37	3.16
54.00		3.33
60.00		3.49

OVERLAY THICKNESS	

1+620.00



OFFSET	PROPOSED ELEVATIONS	EXISTING ELEVATIONS
-60.00		1.15
-54.00	1.45	1.45
-48.00	2.08	1.75
-42.00	3.37	2.16
-36.00	3.90	3.10
-30.00	4.05	4.03
-24.00	4.20	4.79
-18.00	4.35	4.67
-12.00	4.50	4.61
-6.00	4.65	4.61
0	4.80	4.61
6.00	4.65	4.60
12.00	4.50	4.49
18.00	4.35	4.38
24.00	4.20	4.14
30.00	4.05	4.18
36.00	3.90	4.08
42.00	3.68	3.17
48.00	3.33	3.15
54.00		3.33
60.00		3.49

OVERLAY THICKNESS	

1 (CW-30 / CW-29)

STA. 1+580.00 TO STA. 1+620.00

RUNWAY & STRIP CROSS SECTION VIEW

SCALE: HOR. 1:1700M
VER. 1:170M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:
RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:
ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:
LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:
LTGEN RAUL L. DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

NOTE/REVISIONS:

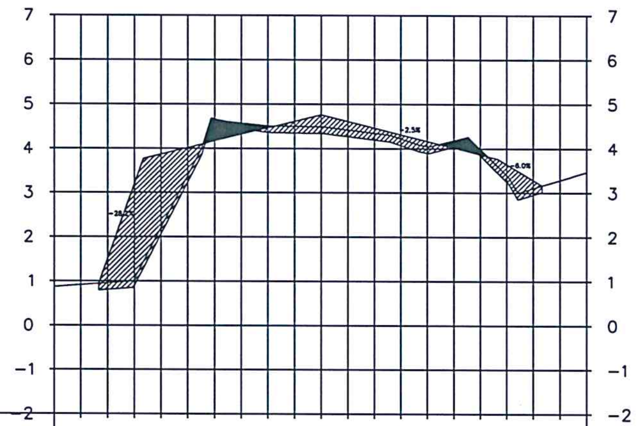
PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+580.00 - STA 1+620.00

DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 30	
	30	33

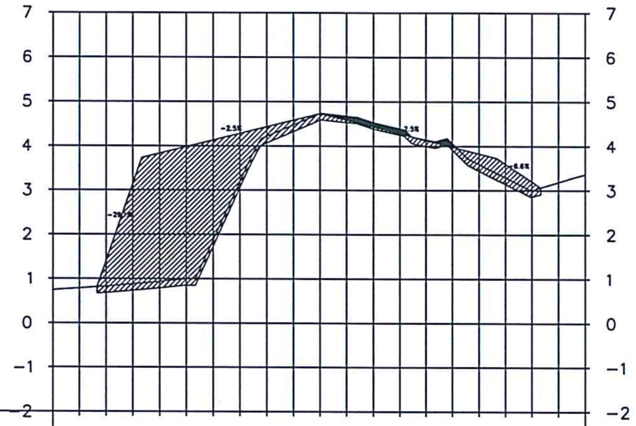
1+640.00



PROPOSED ELEVATIONS			1.51	3.20	3.86	4.01	4.16	4.31	4.46	4.61	4.76	4.61	4.46	4.31	4.16	4.01	3.86	3.64	3.29		
EXISTING ELEVATIONS	0.87	0.91	0.96	1.04	2.21	3.38	4.67	4.58	4.51	4.50	4.48	4.42	4.35	4.22	4.05	4.18	3.99	3.40	3.11	3.29	3.47
OFFSET	−60.00	−54.00	−48.00	−42.00	−36.00	−30.00	−24.00	−18.00	−12.00	−6.00	0	6.00	12.00	18.00	24.00	30.00	36.00	42.00	48.00	54.00	60.00

OVERLAY THICKNESS	

1+656.75



EXISTING ELEVATIONS																					
PROPOSED ELEVATIONS																					
OFFSET	−60.00	−54.00	−48.00	−42.00	−36.00	−30.00	−24.00	−18.00	−12.00	−6.00	0	6.00	12.00	18.00	24.00	30.00	36.00	42.00	48.00	54.00	60.00

1
CW-31 CW-31

STA. 1+640.00 TO STA. 1+656.75

RUNWAY & STRIP CROSS SECTION VIEW

SCALE:
HOR. 1:1700M
VER. 1:170M

BAGONG PILIPINAS

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

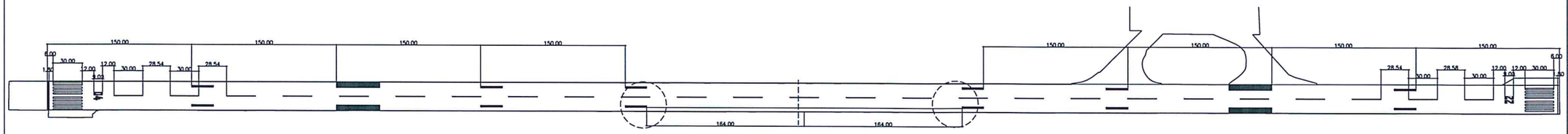
NOTE/REVISIONS:

PROJECT TITLE:
ASPHALT OVERLAY
OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

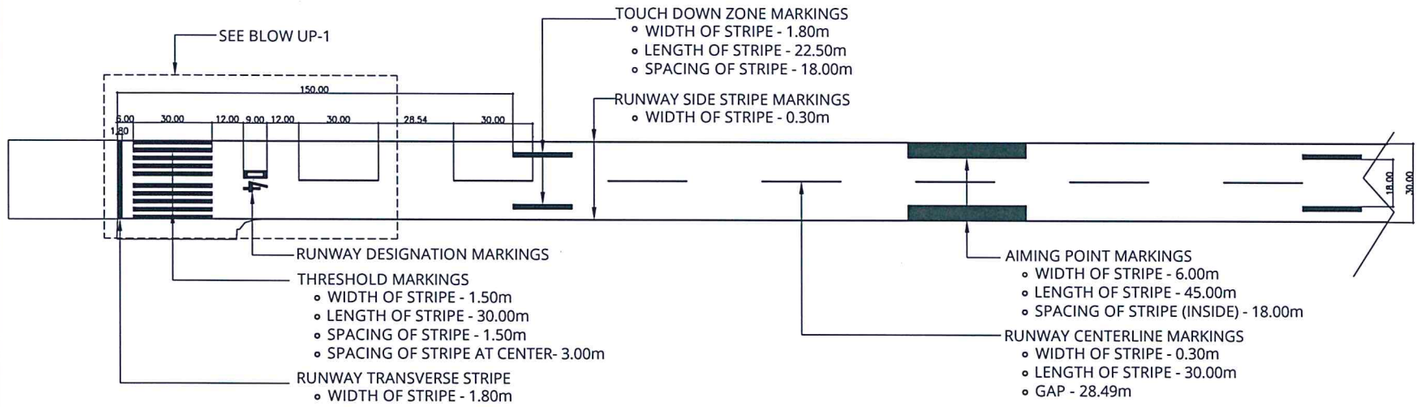
LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
SECTION VIEW
STA. 1+640.00 - STA 1+656.75

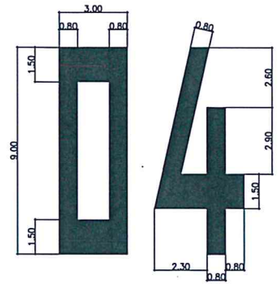
DRAWING SCALE:	SHEET NO.:
AS SHOWN	CW - 31 31 33

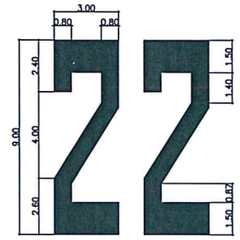


THE TOUCHDOWN ZONE MARKING SCHEME MAINTAINS A 275M "NO-MARKING ZONE" FROM THE MIDPOINT OF THE RUNWAY BACK TOWARDS THE THRESHOLD. ANY PAIRS OF MARKINGS THAT EXTEND BEYOND THIS 275M LIMIT FROM THE RUNWAY MIDPOINT ARE ELIMINATED". (FAA 150-5340-1M)

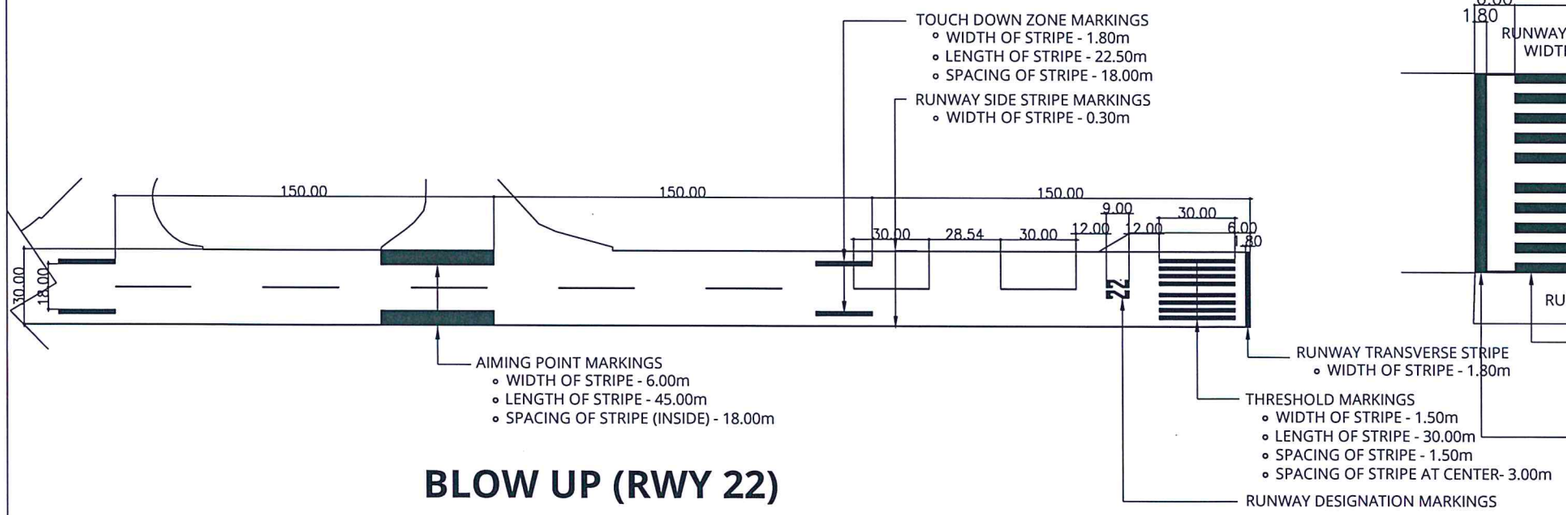


BLOW UP (RWY 04)

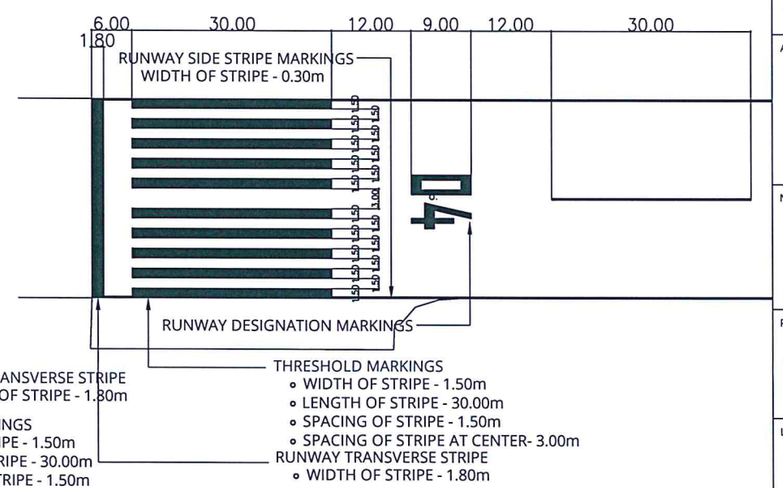




RUNWAY DESIGNATION MARKINGS



BLOW UP (RWY 22)



BLOW UP-1

1 CW-32 CW-32

RUNWAY MARKINGS

SCALE: 1:5000M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	MDDL
REVIEWED BY:	
DATE:	

CHECKED BY:

RAUL R. CRUCENA
Division Chief III, IDDD

SUBMITTED BY:

ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMEND APPROVAL:

LTCOL VALENTINO A DIONELA PAF (RET)
Assistant Director General II, ADMS

APPROVED:

LTGEN RAUL L DEL ROSARIO AFP (RET)
DIRECTOR GENERAL

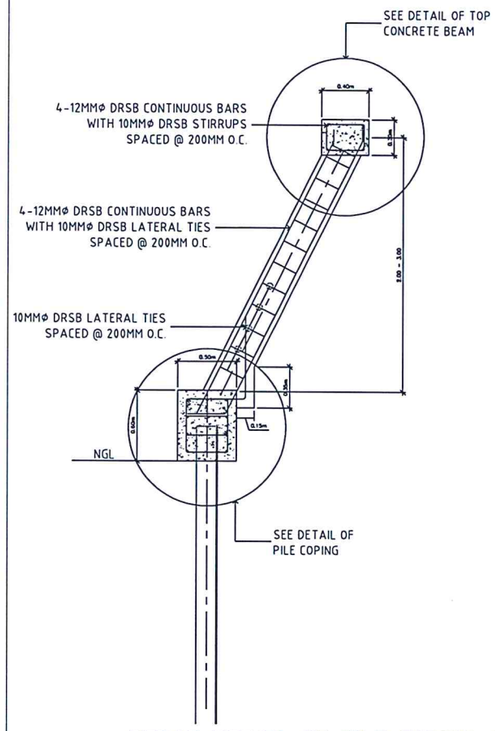
NOTE/REVISIONS:

PROJECT TITLE:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

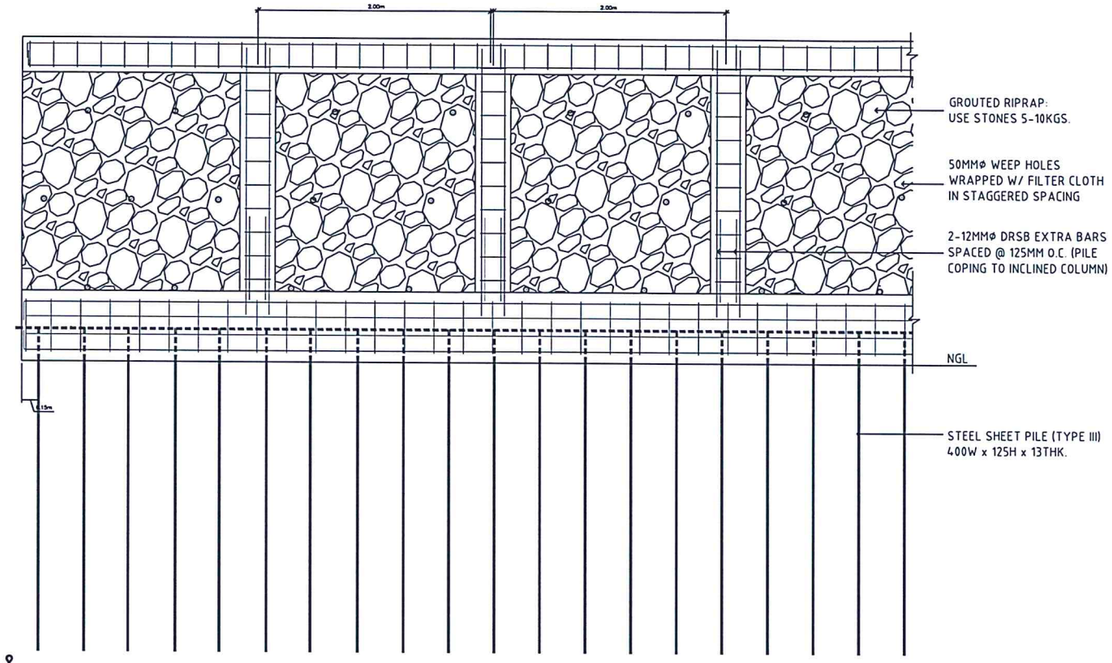
LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
• RUNWAY MARKINGS

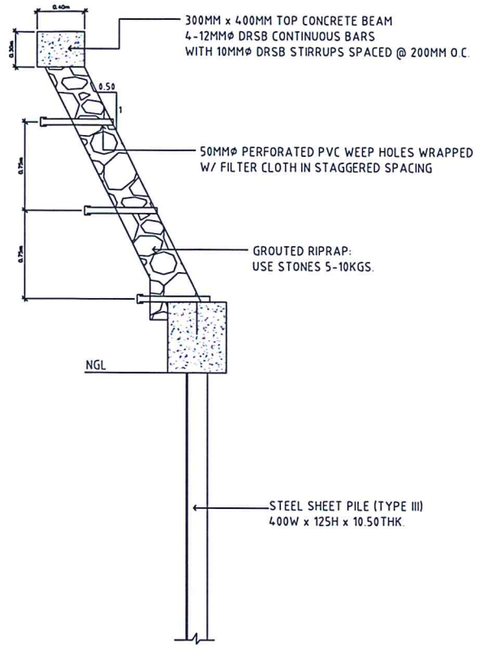
DRAWING SCALE:	SHEET NO.:	
AS SHOWN	CW - 32	
	32	33



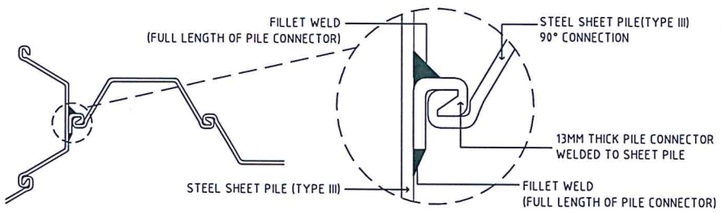
1 CW-33 CW-33 REBAR DETAIL OF PILE COPING & GROUTED RIPRAP WALL
SCALE 1:30 M



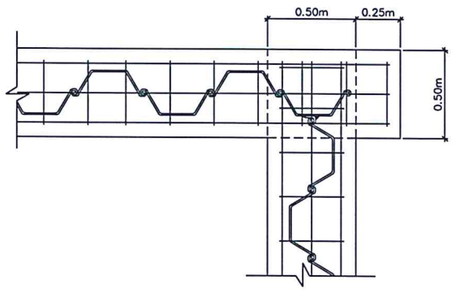
2 CW-33 CW-33 TYPICAL SECTION OF GROUTED RIPRAP WALL
SCALE 1:30 M



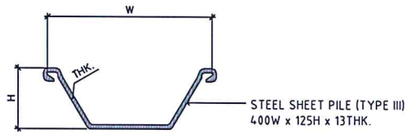
3 CW-33 CW-33 DETAILS OF WEEP HOLES
SCALE 1:30 M



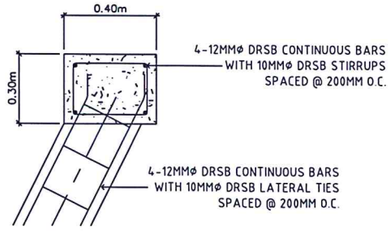
4 CW-33 CW-33 STEEL SHEET PILE CONNECTOR DETAIL
SCALE NTS



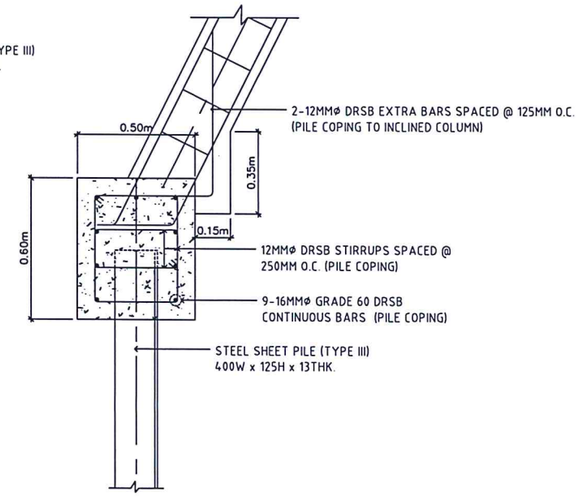
5 CW-33 CW-33 CONNECTION DETAIL OF PILE COPING
SCALE 1:20 M



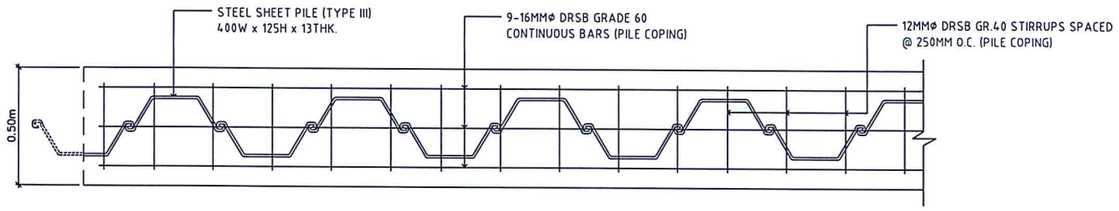
6 CW-33 CW-33 CROSS SECTION OF STEEL SHEET PILE
SCALE NTS



8 CW-33 CW-33 DETAIL OF TOP CONCRETE BEAM
SCALE NTS



9 CW-33 CW-33 DETAIL OF PILE COPING
SCALE 1:15 M



7 CW-33 CW-33 TYPICAL DETAIL OF PILE COPING
SCALE 1:15 M

REPUBLIC OF THE PHILIPPINES
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, 1300 PASAY CITY

AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF:	INITIAL / DATE	
DESIGNED BY:	IDDD	
DRAWN BY:	KMO	
CHECKED BY:	FMN	

CHECKED BY:
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Assistant Director General II, ADMS

APPROVED:
LTGEN RAUL L DEL ROSARIO AFP (RET)
Director General

NOTES/REVISIONS:

PROJECT:
ASPHALT OVERLAY OF RUNWAY INCL. SHOULDER GRADE CORRECTION AND STRIP GRADE CORRECTION

LOCATION:
CATARMAN AIRPORT
BRGY. DALAKIT, CATARMAN, NORTHERN SAMAR

SHEET CONTENTS:
AS SHOWN

DRAWING SCALE:	SHEET NO:	
AS SHOWN	CW - 33	
	33	33