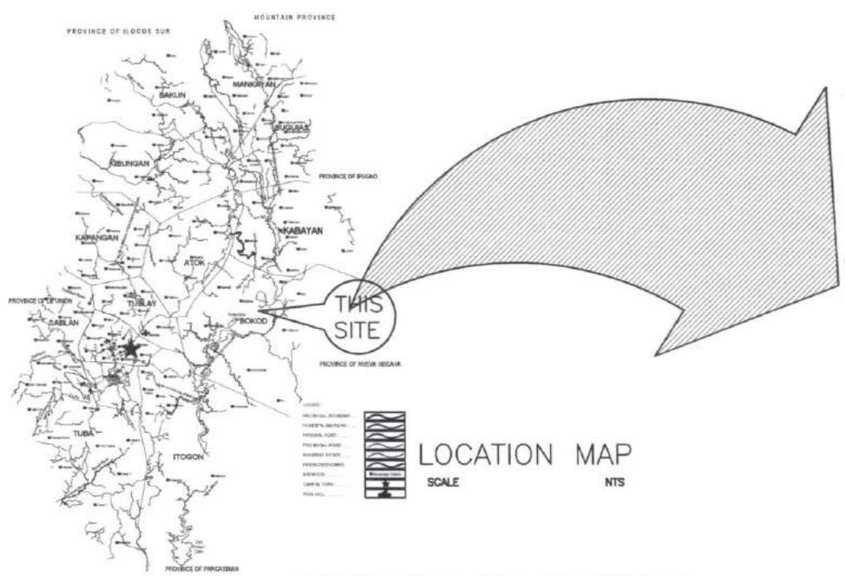
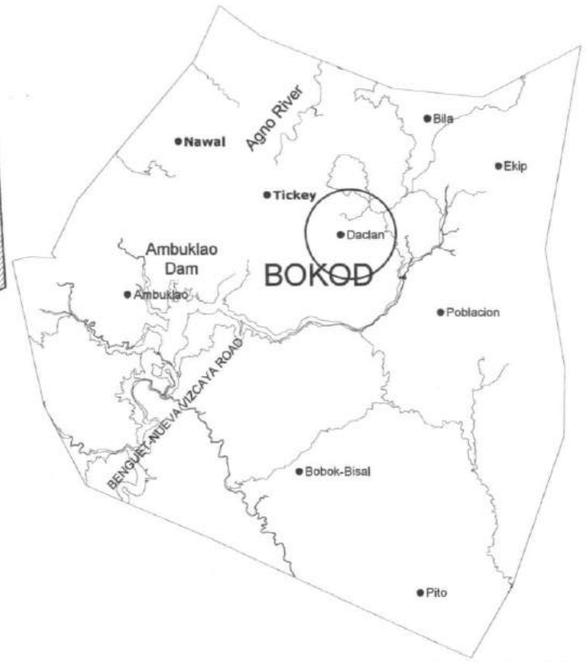


LOCATION MAP
SCALE NTS

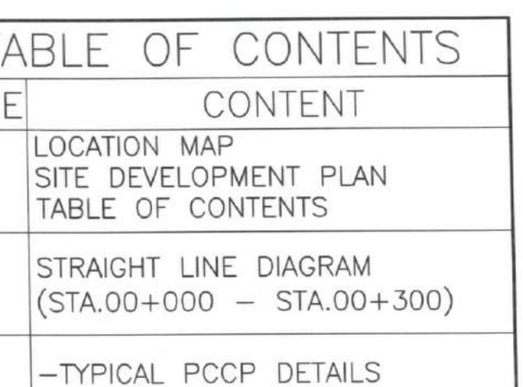
PROVINCE OF BENGUET
DRAWN NOT TO SCALE



MUNICIPALITY OF BOKOD
DRAWN NOT TO SCALE

TABLE OF CONTENTS

PROPOSED END OF THE PROJECT



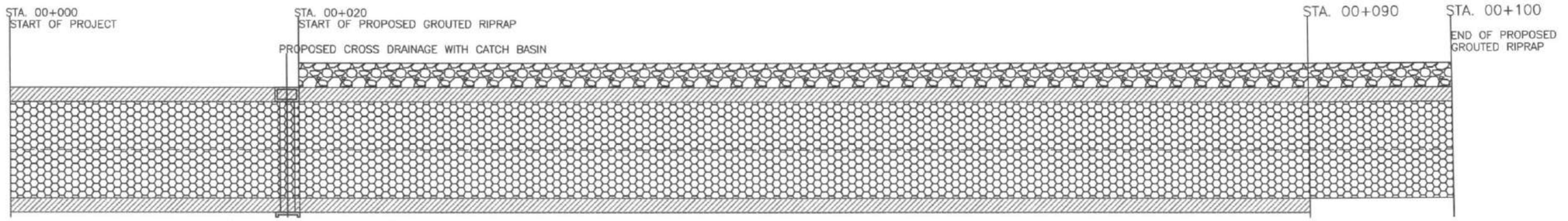
NOTE: BEFORE THE START OF THE ACTUAL CONSTRUCTION, THE "AS–STAKED" PLAN SHOULD BE SUBMITTED TO THE BENGUET STATE UNIVERSITY PLANNING AND DEVELOPMENT OFFICE IN ORDER THAT IMMEDIATE STEPS MAY BE TAKEN TO CORRECT OR ADJUST WHATEVER APPRECIABLE DEVIATION THERE MAY BE FROM THE ORIGINAL PLAN.

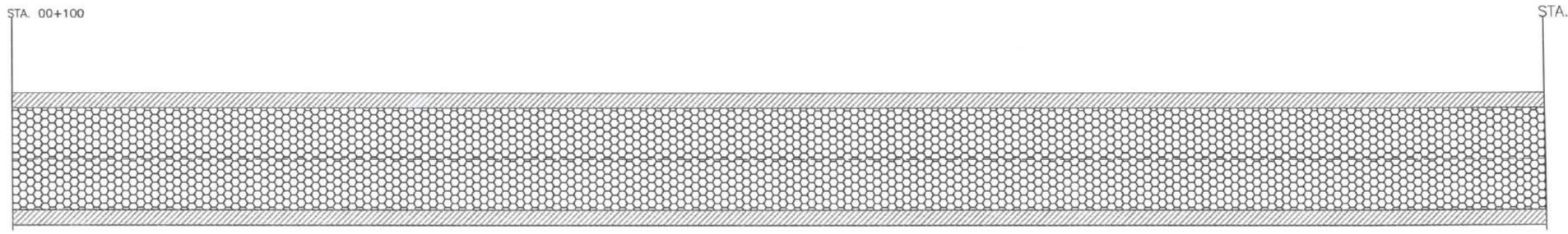
PROPOSED START OF THE PROJECT

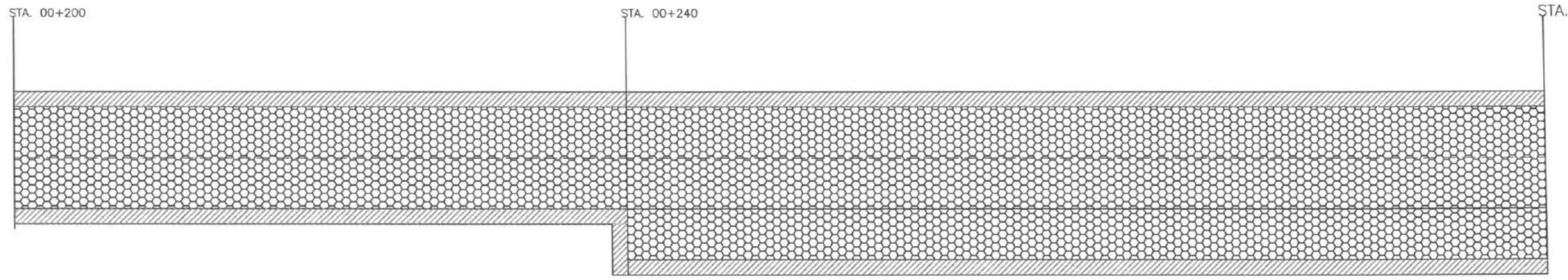
SITE DEVELOPMENT PLAN
DRAWN NOT TO SCALE

REPUBLIC OF THE PHILIPPINES
BENGUET STATE UNIVERSITY
LA TRINIDAD, BENGUET, 2601

PROJECT TITLE / LOCATION:	SHEET CONTENT:	PREPARED BY:	SUBMITTED BY:	RECOMMENDED BY:	APPROVED:	SHEET NO.:
REPAIR AND IMPROVEMENT OF BSU BOKOD CAMPUS ROAD NETWORK –DACLAN, BOKOD, BENGUET	LOCATION MAP SITE DEVELOPMENT PLAN TABLE OF CONTENTS	SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER	MELVIN JOHN M. AROMIN DIRECTOR, PLANNING AND DEVELOPMENT OFFICE	ALLAN C. SACPA VICE PRESIDENT – ADMINISTRATION & FINANCE	FELIPE SALAING COMILA UNIVERSITY PRESIDENT	01/06



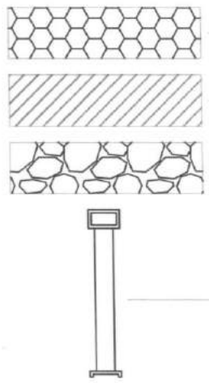




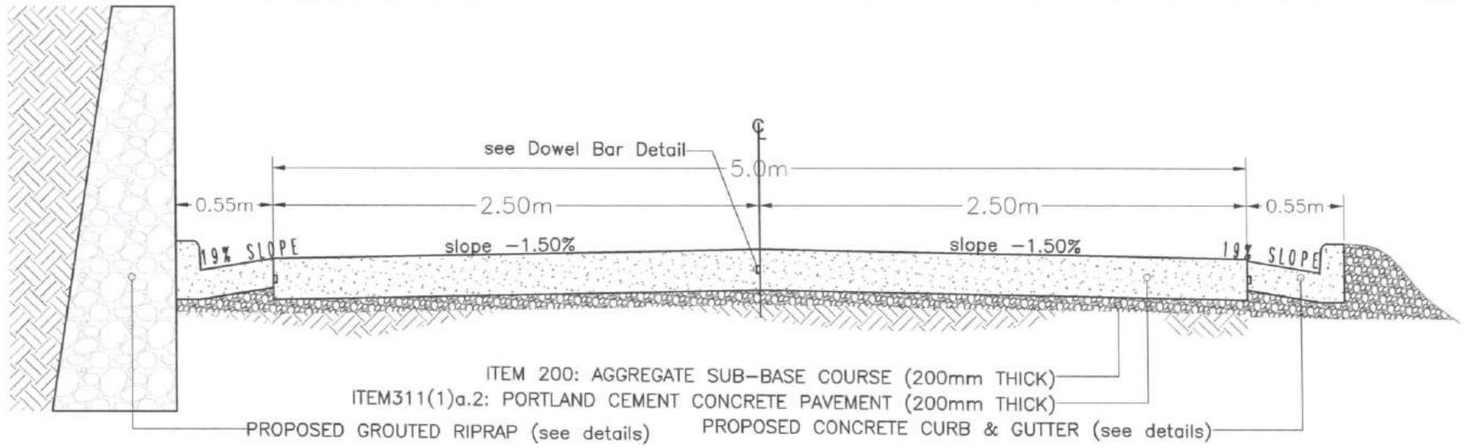
STRAIGHT LINE DIAGRAM

DRAWN NOT TO SCALE

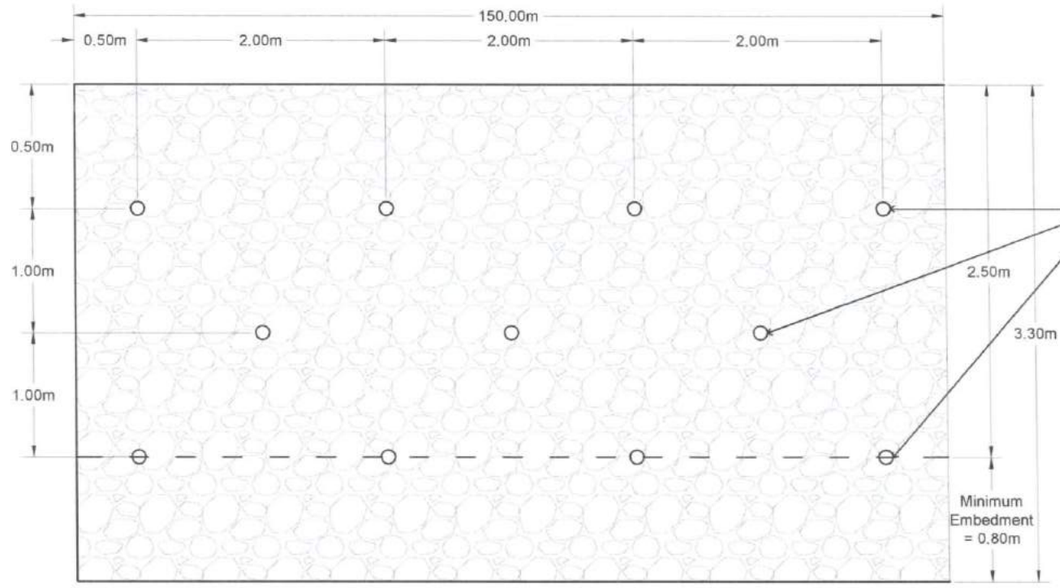
LEGENDS:



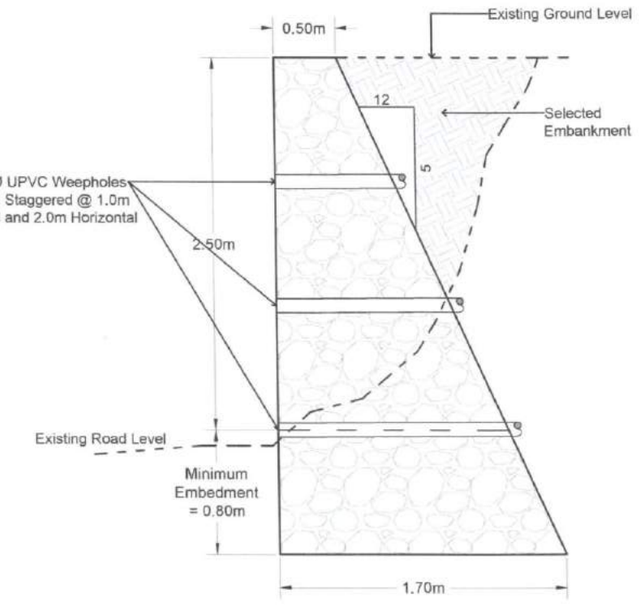
REPUBLIC OF THE PHILIPPINES BENGUET STATE UNIVERSITY LA TRINIDAD, BENGUET, 2601	PROJECT TITLE / LOCATION: REPAIR AND IMPROVEMENT OF BSU BOKOD CAMPUS ROAD NETWORK –DACLAN, BOKOD, BENGUET	SHEET CONTENT: STRAIGHT LINE DIAGRAM –STA. 00+000 – STA. 00+300	PREPARED BY: SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER	SUBMITTED BY: MELVIN JOHN M. AROMIN DIRECTOR, PLANNING AND DEVELOPMENT OFFICE	RECOMMENDED BY: ALLAN C. SACPA VICE PRESIDENT – ADMINISTRATION & FINANCE	APPROVED: FELIPE SALAING COMILA UNIVERSITY PRESIDENT	SHEET NO.: 02 06



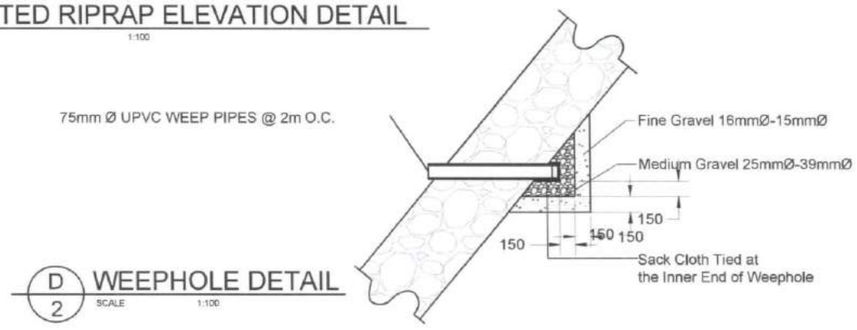
TYPICAL PCCP SECTION DETAILS
DRAWN NOT TO SCALE



B/2 GROUTED RIPRAP ELEVATION DETAIL
SCALE 1:100



C/2 GROUTED RIPRAP SECTION DETAIL
SCALE 1:100



D/2 WEEPHOLE DETAIL
SCALE 1:100

NOTE: COST OF FINE /MEDIUM GRAVEL, WEEPHOLES, SACK CLOTH (BURLAP CLOTH) USE FOR THE WEEPHOLE SHALL BE CONSIDERED SUBSIDIARY TO COMPLETION OF PAY ITEM WHERE IT IS USED. SLOPE OF WEEPHOLE SHALL LEAVE A SLOPE OF A 0.50%

REPUBLIC OF THE PHILIPPINES
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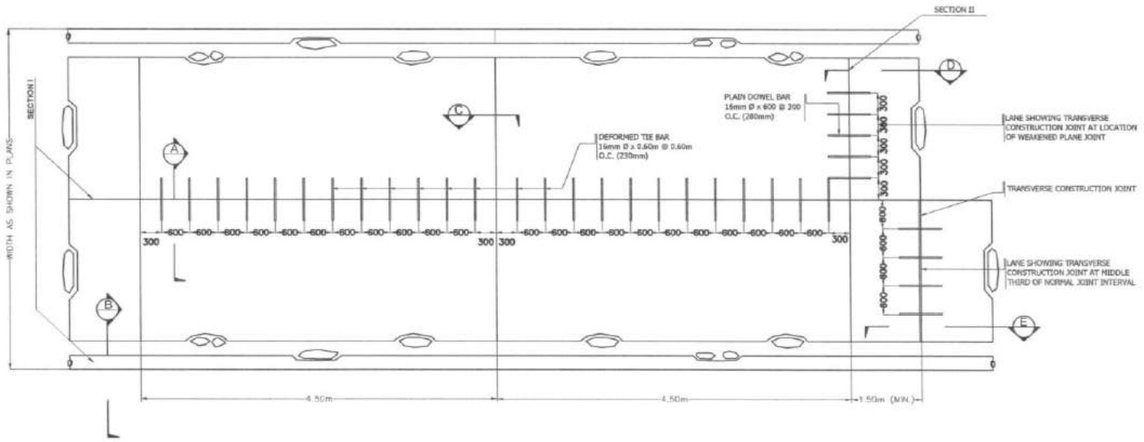
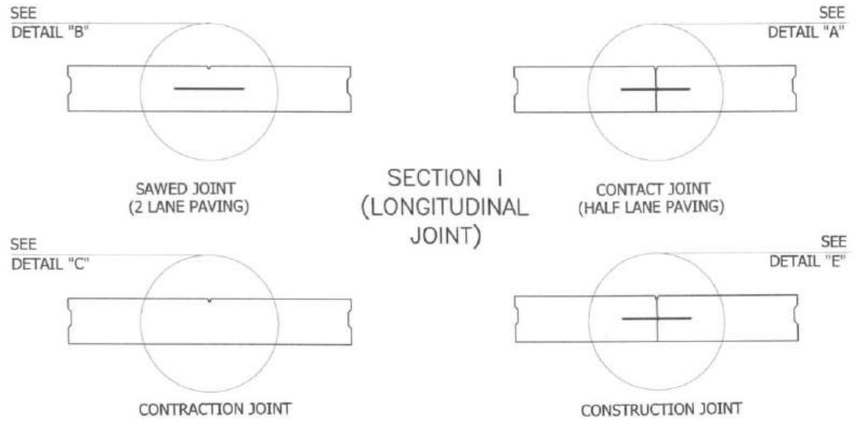
REPAIR AND IMPROVEMENT OF BSU BOKOD CAMPUS ROAD NETWORK –DACLAN, BOKOD, BENGUET	–TYPICAL PCCP SECTION DETAILS –GROUTED RIPRAP DETAILS	SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER	MELVIN JOHN M. AROMIN DIRECTOR, PLANNING AND DEVELOPMENT OFFICE	ALLAN C. SACPA VICE PRESIDENT – ADMINISTRATION & FINANCE	FELIPE SALAING COMILA UNIVERSITY PRESIDENT	03/06



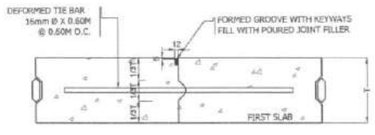
TYPICAL PLAN OF TWO LANE PAVEMENT (200mm)

DRAWN

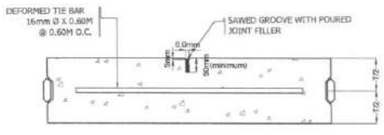
NOT TO SCALE



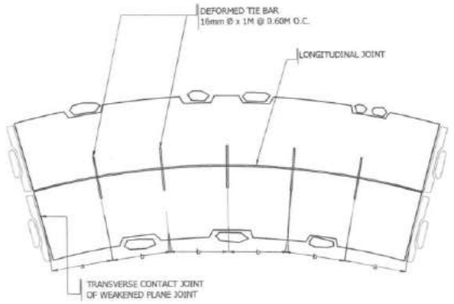
SECTION II
(TRANSVERSE
JOINT)



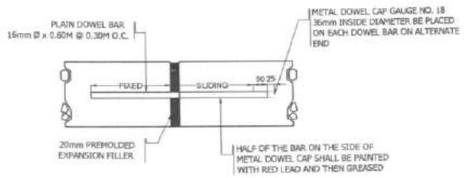
DETAIL "A"



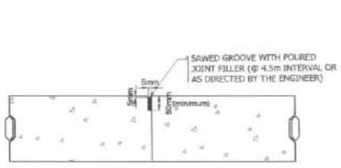
DETAIL "B"



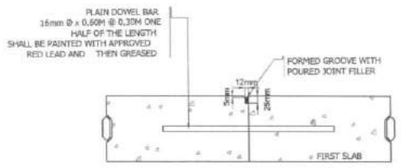
DETAIL OF BAR SPACING
ALONG CURVES



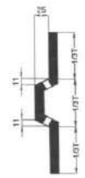
DETAIL OF EXPANSION JOINT (DOWELED) AT
CERTAIN INTERSECTIONS AND STRUCTURES



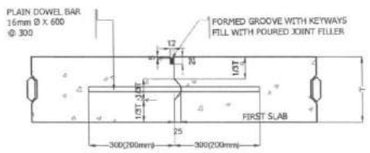
DETAIL "C"



DETAIL "D"

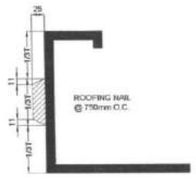


METAL SIDE
FORM



DETAIL "E"

KEYED TRANSVERSE CONSTRUCTION ON CONTACT JOINT (TO BE
PLACED ONLY IN MIDDLE THIRD OF NORMAL JOINT INTERVAL)



METAL SIDE FORM
DETAIL OF SIDE FORMS

DETAILS OF JOINTS IN
RIGID PAVEMENT

REPUBLIC OF THE PHILIPPINES
BENGUET STATE UNIVERSITY
LA TRINIDAD, BENGUET, 2601

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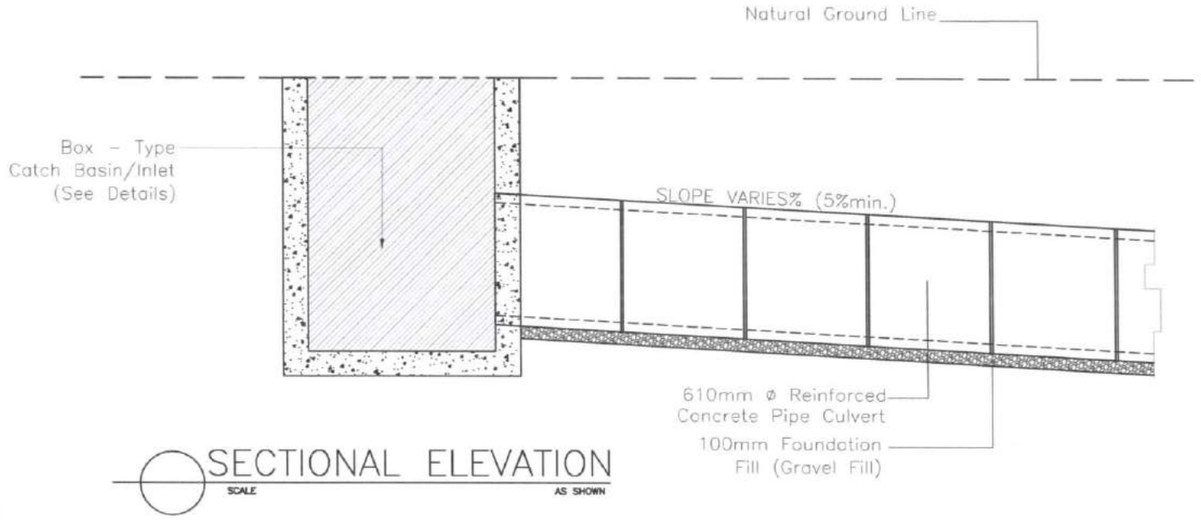
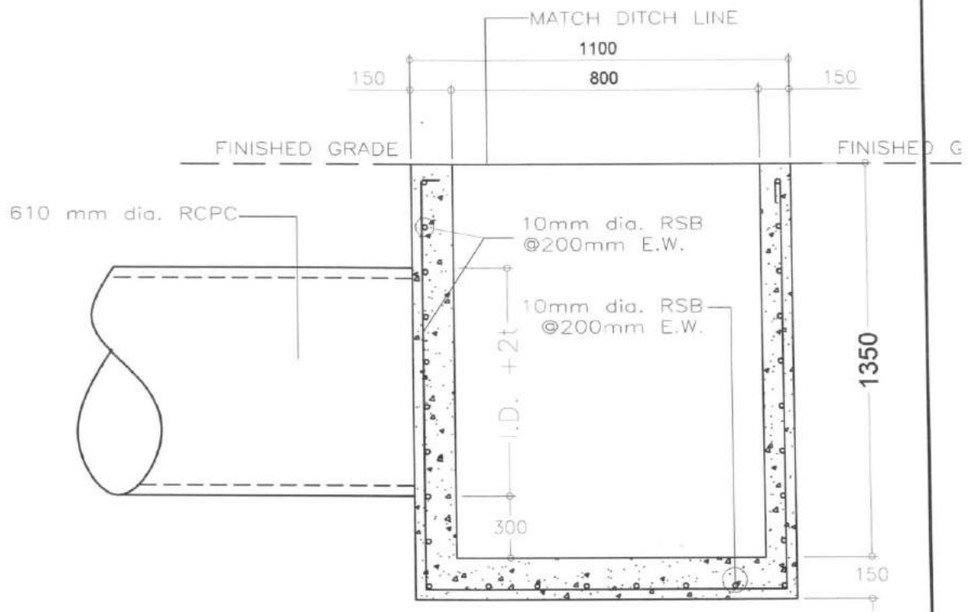
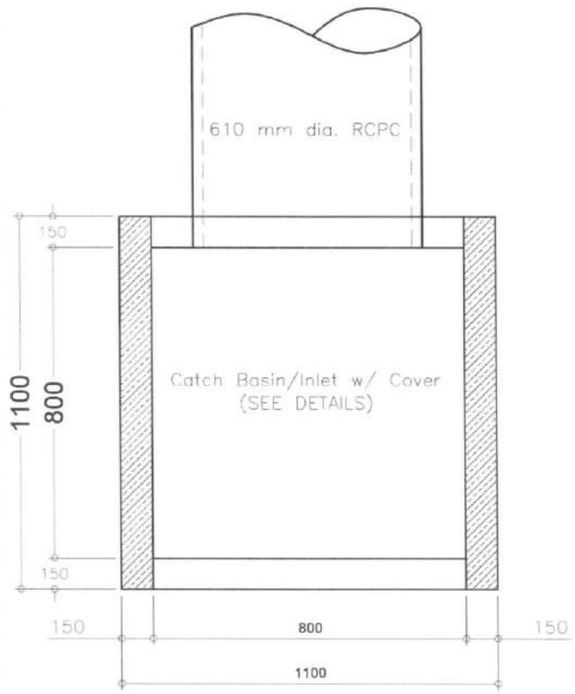
REPAIR AND IMPROVEMENT OF BSU BOKOD CAMPUS ROAD NETWORK –DACLAN, BOKOD, BENGUET	–TYPICAL PCCP DETAILS	SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER	MELVIN JOHN M. AROMIN DIRECTOR, PLANNING AND DEVELOPMENT OFFICE	ALLAN C. SACPA VICE PRESIDENT – ADMINISTRATION & FINANCE	FELIPE SALAING COMILA UNIVERSITY PRESIDENT	04/06



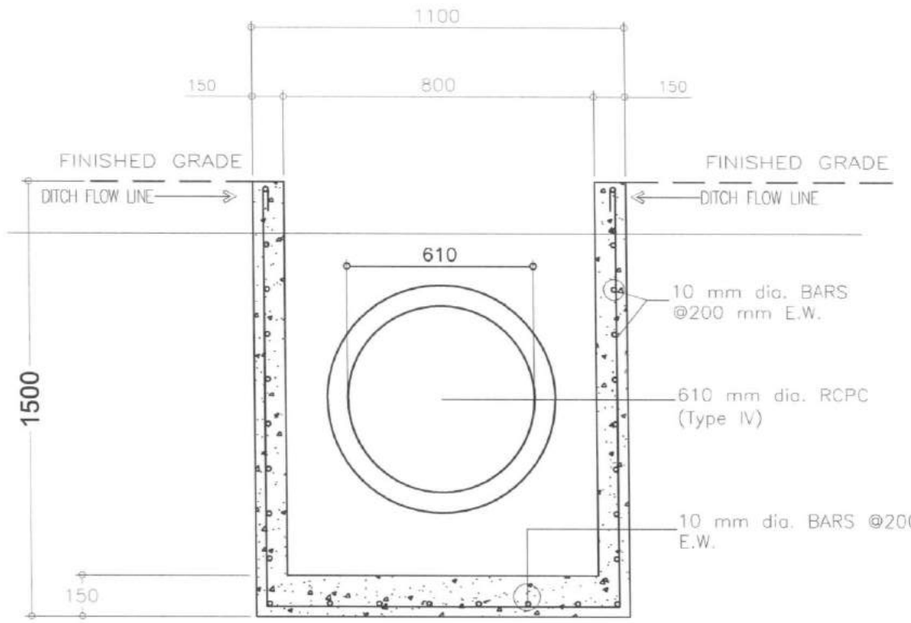
SECTIONAL ELEVATION
SCALE AS SHOWN



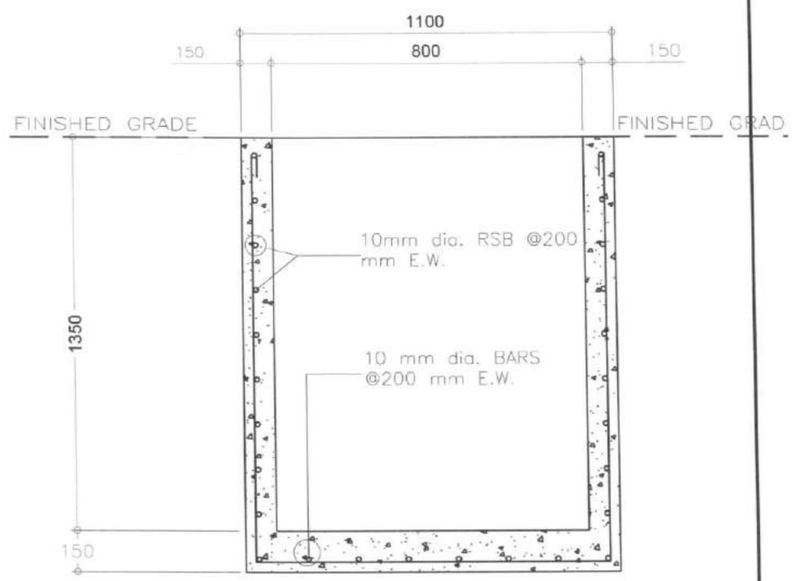
SIDE VIEW



TOP VIEW



FRONT VIEW



BACK VIEW

TYPICAL BOX–TYPE CATCH BASIN/INLET SECTION DETAILS
SCALE AS SHOWN

REPUBLIC OF THE PHILIPPINES
BENGUET STATE UNIVERSITY
LA TRINIDAD, BENGUET, 2601

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REPAIR AND IMPROVEMENT OF BSU BOKOD CAMPUS ROAD NETWORK –DACLAN, BOKOD, BENGUET	–TYPICAL BOX–TYPE CATCH BASIN/INLET SECTION DETAILS	SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER	MELVIN JOHN M. AROMIN DIRECTOR, PLANNING AND DEVELOPMENT OFFICE	ALLAN C. SACPA VICE PRESIDENT – ADMINISTRATION & FINANCE	FELIPE SALAING COMILA UNIVERSITY PRESIDENT	05 06

GENERAL NOTES

I. STANDARD SPECIFICATIONS

a) ALL WORKS SHALL COMPLY WITH DPWH STANDARD SPECIFICATIONS FOR HIGHWAYS, BRIDGES, AND AIRPORTS, REVISED 2013, SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS PERTAINING TO THE PROJECT.

II. DIMENSIONS

a) UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS WHICH INCLUDE STATIONINGS, DISTANCE BETWEEN CONTROL POINTS AND DIMENSIONS OF PIPES AND BOX CULVERTS AS SHOWN IN THE PLAN, PROFILE, AND CROSS-SECTION ARE IN METERS, AND THE UNIT OF MEASURE AS SHOWN IN THE DETAILS OF STRUCTURES ARE IN METERS.

III. STATIONINGS

a) THE ROAD STATIONINGS AND ELEMENTS OF CURVES ARE RELATIVE TO THE ULTIMATE CENTERLINE OF THE ROAD.

b) EQUATION OF STATIONS WHEN USED (BACK STATION/AHEAD STATION) ARE PROVIDED AT THE BEGINNING OR END OF THE CURVE AND/OR AT FULL STATION.

IV. HORIZONTAL CONTROL

a) BASIC TRAVERSE STATIONS WERE ESTABLISHED BASED ON STATIONS OF EXISTING KM. POSTS AND EXISTING PERMANENT STRUCTURES AT THE PROJECT SITE.

V. VERTICAL CONTROL

a) ELEVATIONS WERE ASSUMED AT THE FIRST BENCH MARK AT THE BEGINNING OF EACH SECTION OF THE PROJECT.

b) BENCH MARKS WERE ESTABLISHED AT EXISTING UNDISTURBED STRUCTURES AT DIFFERENT INTERVALS ALONG THE PROJECT.

VI. HORIZONTAL ALIGNMENT

a) THE HORIZONTAL ALIGNMENT SHOWN IN THESE DRAWINGS FOLLOWS THE LONGITUDINAL JOINT OF THE PORTLAND CEMENT CONCRETE PAVEMENT (WHICH IS DEFINED AS THE EXISTING CENTERLINE) WITH MINOR DEVIATION DUE MAINLY TO SOME CONSTRUCTION ERRORS DURING ORIGINAL CONSTRUCTION STAGE. MINOR ADJUSTMENT OF THE HORIZONTAL ALIGNMENT MAY BE MADE AS DIRECTED BY THE ENGINEER TO SUIT THE ACTUAL FIELD CONDITION.

VII. REMOVAL OF EXISTING STRUCTURES & OBSTRUCTIONS

a) ALL WORKS SHALL COMPLY WITH CLAUSE 39 "REQUIREMENTS AND CONDITIONS OF CONTRACT" VOLUME-1 OF THE STANDARD SPECIFICATION FOR PUBLIC WORKS AND HIGHWAYS, 2013.

b) PORTIONS OF EXISTING UTILITIES, SUCH AS WATER MAINS, IRRIGATION CHANNELS, TELEPHONE POST AND TRUNKLINES, ETC. THAT MAY CAUSE OBSTRUCTION TO THE CONSTRUCTION OF THIS PROJECT SHALL BE RELOCATED BY THE ENTITY OR OWNER CONCERNED. EXTREME PRECAUTION SHALL BE EXERCISED BY THE CONTRACTOR NOT TO DAMAGE ANY SECTION OF THE EXISTING PUBLIC UTILITIES DURING CONSTRUCTION. ANY REPAIR OF DAMAGE THEREOF SHALL BE ON THE ACCOUNT OF THE CONTRACTOR. ANY REMOVAL OF MISCELLANEOUS STRUCTURES THAT MAY BE REQUIRED SHALL BE CONSIDERED SUBSIDIARY WORK PERTAINING TO OTHER CONTRACT ITEM. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK EXCEPT FOR SPECIFIC ITEMS EXPLICITLY IDENTIFIED FOR PAYMENT IN THE BID SCHEDULE.

VIII. ROAD CONNECTIONS AND PRIVATE ENTRANCES

a) APPROACHES AND ROAD ENTRANCES SHALL BE CONSTRUCTED BY THE CONTRACTOR AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER IN SUCH A MANNER TO ENSURE SMOOTH CONNECTIONS AND RIDING QUALITY.

b) NO OPENING FOR DRIVEWAYS OR PRIVATE ENTRANCES SHALL BE ALLOWED EXCEPT WITH THE PRIOR APPROVAL FROM THE PROPER AUTHORITIES.

IX. DRAINAGE STRUCTURES

a) EXACT LOCATIONS, SLOPES, OUTFALLS, AND INVERT ELEVATIONS OF DRAINAGE STRUCTURES SHALL BE CHECKED IN THE FIELD BY THE ENGINEER. MINOR ADJUSTMENT MAY BE MADE WITH THE APPROVAL OF THE ENGINEER TO SUIT ACTUAL FIELD CONDITIONS.

b) ANY REVISIONS, REMOVAL AND/OR RELAYING OF DRAINAGE STRUCTURES AS DIRECTED BY THE ENGINEER TO SUIT EXISTING FIELD CONDITIONS SHALL BE CONSIDERED AS SUBSIDIARY WORK PERTAINING TO OTHER CONTRACT ITEMS. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK UNLESS OTHERWISE SPECIFICALLY IDENTIFIED FOR PAYMENT IN THE BID SCHEDULE.

c) EXISTING DRAINAGE STRUCTURES OR PART THEREOF REMOVED BY THE CONTRACTOR THAT ARE STILL SERVICEABLE SHALL BE TURNED OVER TO THE GOVERNMENT AND SHALL BE DEPOSITED AT A PLACE WITHIN THE PROJECT SITE DESIGNATED BY THE ENGINEER WITHOUT ANY EXTRA COMPENSATION. EXTREME PRECAUTION SHALL BE EXERCISED BY THE CONTRACTOR NOT TO DAMAGE THESE MATERIALS DURING THE REMOVAL AND HANDLING.

X. STRUCTURAL CONCRETE STRUCTURES

X.1) CONCRETE

a) UNLESS OTHERWISE INDICATED ON THE PLANS, THE MINIMUM CYLINDER STRENGTH OF STRUCTURAL CONCRETE @ 28 DAYS SHALL BE 21.00 MPa.

b) THE MINIMUM COVERING FROM SURFACE OF CONCRETE TO THE FACE OF THE NEAREST BAR SHALL BE 50mm. ALL CONCRETE SHALL BE POURED WHERE THERE IS A PERMISSIBLE WEATHER CONDITION AND NO OTHER ENVIRONMENTAL HAZARD WILL AFFECT THE POURING.

X.1) REINFORCING STEEL

a) REINFORCING BARS FOR ALL STRUCTURES SHALL BE GRADE 60 (Fy=414 MPa) FOR BARS LARGER THAN 16 mm DIAMETER. GRADE 40 (Fy= 275.8 MPa) FOR BARS 16 mm DIAMETER OR SMALLER. ALL REBARS SHALL BE FREE OF MILL SCALES, OIL OR ANY SUBSTANCE THAT MAY IMPAIR/WEAKEN BOND WITH CONCRETE.

a) REINFORCING BAR SPLICING

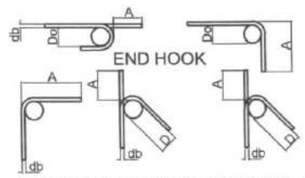
WHERE SPLICING IS PERMITTED, THE MINIMUM LAP LENGTH OF BARS SHALL BE AS PER AASHTO ARTICLE 8.32. ALL SPLICES SHALL BE STAGGERED AT LEAST 40 BAR DIAMETER. WHERE BUTT WELD IS USED IN LIEU OF LAPPED CONNECTIONS, THIS SHALL DEVELOP AT LEAST 125 % OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCING STEEL BAR. REINFORCING BARS SHALL BE ACCURATELY FORMED TO THE SHAPES AND DIMENSIONS INDICATED ON THE PLAN UNLESS OTHERWISE PERMITTED, ALL REINFORCING BARS REQUIRING BENDING SHALL BE BENT COLD. WHEN REINFORCING BARS ARE BENT BY HEATING, THE ENTIRE OPERATION SHALL BE APPROVED BY THE ENGINEER.

b) HOOKS AND BENDS

HOOKS AND BENDS SHALL BE AS SHOWN IN THE FOLLOWING TABLE

TABLE FOR VALUES OF A OR G

SIZE OF BARS	END HOOKS		STIRRUP & TIE		STIRRUP TIE
	180°	90°	90°	135°	135°
10	125	150	100	100	125
12	150	200	113	113	163
16	175	250	150	138	200



STIRRUP & TIE HOOK STIRRUP - TIE

Do = 6 db for db < 30 D = 4 db for db < 20
Do = 8.7 db for db > 30 D = 6 db for db > 30

XI. SLOPE/EMBANKMENT PROTECTION WORKS (GROUTED RIPRAP/STONE MASONRY)

a) FOUNDATION OF EMBANKMENT PROTECTION WORKS SHALL SIT ON A FIRM AND STABLE FOUNDATION. SOIL BORING TEST SHALL BE CONDUCTED DURING CONSTRUCTION TO VERIFY THE ACTUAL SOIL BEARING CAPACITY OF SOIL. SOFT SPOTS UNDER THE FOUNDATION SHALL BE REMOVED AND REPLACED WITH SUITABLE BEDDING MATERIALS OR CONCRETE CLASS "B".

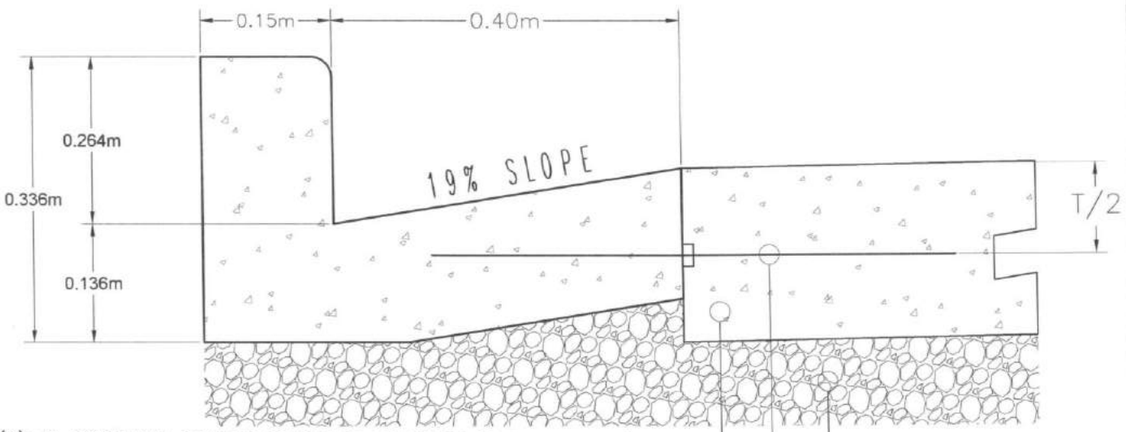
b) SOFT SPOTS BETWEEN THE CUT FACE AND SLOPE/EMBANKMENT PROTECTION WALLS MUST BE FILLED WITH ROCKS OR SUITABLE MATERIALS. SUCH BACKFILL MATERIALS PLACED BEHIND THE WALL SHALL BE FREE DRAINING, NON EXPANSIVE AND WATER SHALL BE DRAINED BY WEEPHOLES PLACED AT SUITABLE INTERVALS AND ELEVATIONS.

c) THE DEPTH OF PENETRATION SHALL BE MEASURED FROM THE LEVEL OF THE ORIGINAL GROUND SURFACE AND SHALL NOT INCLUDE EXCAVATED MATERIALS.

d) THE THICKNESS OR DIAMETER OF STONES FOR STONE MASONRY SHALL NOT BE LESS THAN 150MM.

XII. BATAS PAMBANSA BLG. 344 (ACCESSIBILITY LAW)

IN ACCORDANCE TO BATAS PAMBANSA BLG. 344, ACCESSIBILITY FOR THE DISABLED PERSON SHALL BE PROVIDED AT THE DESIGNATED PLACED IN BUILT-UP AREAS ALONG THE PROJECT ROAD, THE IMPLEMENTING OFFICE SHALL IDENTIFY THE LOCATIONS OF AND PROVIDE ACCESSIBILITY FACILITIES FOR PERSONS WITH DISABILITY AND ACCORDANCE WITH D.O. 37 SERIES OF 2009.



ITEM311(1)a.2: PORTLAND CEMENT CONCRETE PAVEMENT (200mm THICK)
12mm ø TIE BARS (Deformed) Spaced @ 0.60m O.C.
ITEM 200: AGGREGATE SUB-BASE COURSE (200mm THICK)

TYPICAL CURB AND GUTTER SECTION DETAILS

DRAWN NOT TO SCALE

REPUBLIC OF THE PHILIPPINES BENGUET STATE UNIVERSITY LA TRINIDAD, BENGUET, 2601	PROJECT TITLE / LOCATION: REPAIR AND IMPROVEMENT OF BSU BOKOD CAMPUS ROAD NETWORK -DACLAN, BOKOD, BENGUET	SHEET CONTENT: -GENERAL NOTES -TYPICAL CURB AND GUTTER SECTION DETAILS	PREPARED BY: SHERIFF JOHN C. LA MADRID, PROJECT DEVELOPMENT OFFICER	SUBMITTED BY: MELVIN JOHN M. AROMIN, DIRECTOR, PLANNING AND DEVELOPMENT OFFICE	RECOMMENDED BY: ALLAN C. SACPA, VICE PRESIDENT - ADMINISTRATION & FINANCE	APPROVED: FELIPE SALAING COMILA, UNIVERSITY PRESIDENT	SHEET NO.: 06 / 06