GOSFORD CITY COUNCIL

43.

Kahibah Creek Floodplain Management Study

APRIL 1991

WILLING & PARTNERS
CONSULTING ENGINEERS

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PREFACE

The State Government's Flood Policy is directed at providing solutions to existing flooding problems in developed areas and to ensuring that new development is compatible with the flood hazard and does not create additional flooding problems in other areas.

Under the Policy, the management of flood liable land remains the responsibility of local government. The State subsidises flood mitigation works to alleviate existing problems and provides specialist technical advice to assist councils in the discharge of their floodplain management responsibilities.

The Policy provides for technical and financial support by the Government through the following four sequential stages:

1.	Flood Study	-	determines the nature and extent of the flood problem.
2.	Floodplain Management Study	-	evaluates management options for the floodplain in respect of both existing and proposed development.
3.	Floodplain Management Plan	-	involves formal adoption by Council of a plan of management for the floodplain.
4.	Implementation of the Plan	-	construction of flood mitigation works to protect existing development.
		-	use of Local Environmental Plans to ensure new development is compatible with the flood hazard.

The Kahibah Creek Floodplain Management Study constitutes the second stage of the management process for the Kahibah Creek catchment and has been prepared for Gosford City Council to investigate the feasibility of various floodplain management strategies to alleviate existing flood problems. The findings are based upon extensive consultation with Council officers.

Under the process set down in the Floodplain Development Manual this study should serve as an input to the formulation by Council of a Floodplain Management Plan for the Kahibah Creek floodplain. That plan should have the knowledge and support of the local community.

GLOSSARY

Annual Exceedance Probability (AEP)	refers to the probability or risk of a flood of a given size occurring or being exceeded in any given year. A 90% AEP flood has a high probability of occurring or being exceeded; it would occur quite often and would be relatively small. A 1% AEP flood has a low probability of occurrence or being exceeded; it would be fairly rare but it would be relatively large.
Australian Height Datum (AHD)	a common national plane of level corresponding approximately to mean sea level.
catchment	the area draining to a site. It always relates to a particular location and may include the catchments of tributary streams as well as the main stream.
designated flood	(See flood standard)
development	the erection of a building or the carrying out of work; or the use of land or of a building or work; or the subdivision of land.
discharge	the rate of flow of water measured in terms of volume over time. It is to be distinguished from the speed or velocity of flow which is a measure of how fast the water is moving rather than how much is moving.
flood	relatively high stream flow which overtops the natural or artificial banks in any part of a stream or river.
flood hazard	potential for damage to property or persons due to flooding.
flood liable land	land which would be inundated as a result of the standard flood.
floodplain	the portion of a river valley, adjacent to the river channel, which is covered with water when the river overflows during floods.
floodplain management measures	the full range of techniques available to floodplain managers.
floodplain management options	the measures which might be feasible for the management of a particular area.
flood standard (or designated flood)	the flood selected for planning purposes. The selection should be based on an understanding of flood behaviour and the associated flood risk. It should also take into account social, economic and ecological considerations.

flood storages	those parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood.
floodways	those areas where a significant volume of water flows during floods. They are often aligned with obvious naturally defined channels. Floodways are areas which, even if only partially blocked, would cause a significant redistribution of flood flow, which may in turn adversely affect other areas. They are often, but not necessarily, the areas of deeper flow or the areas where higher velocities occur.
high hazard	possible danger to life and limb; evacuation by trucks difficult; potential for structural damage; social disruption and financial losses could be high.
hydraulics	the term given to the study of water flow in a river, in particular, the evaluation of flow parameters such as stage and velocity.
hydrograph	a graph which shows how the discharge changes with time at any particular location.
hydrology	the term given to the study of the rainfall and runoff process as it relates to the derivation of hydrographs for given floods.
management plan	a document including, as appropriate, both written and diagrammatic information describing how a particular area of land is to be used and managed to achieve defined objectives. It may also include description and discussion of various issues, problems, special features and values of the area, the specific management measures which are to apply and the means and timing by which the plan will be implemented.
mathematical/computer models	the mathematical representation of the physical processes involved in runoff and streamflow. These models are often run on computers due to the complexity of the mathematical relationships. In this report, the models referred to are mainly involved with rainfall, runoff and streamflow.
peak discharge	the maximum discharge occurring during a flood event.
probable maximum flood	the flood calculated to be the maximum which is likely to occur.

probability	a statistical measure of the expected frequency or occurrence of flooding. For a fuller explanation see Annual Exceedance Probability.
runoff	the amount of rainfall which actually ends up as streamflow, also known as rainfall excess.
stage	equivalent to 'water level'. Both are measured with reference to a specified datum.
stage hydrograph	a graph which shows how the water level changes with time. It must be referenced to a particular location and datum.

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1.0 SUMMARY

This floodplain management study has been undertaken in accordance with the NSW Government Floodplain Development Manual (Ref. 1), to identify and investigate possible flood mitigation and floodplain management options for the Kahibah Creek system. The study area, of approximately 640 ha, comprises the catchment of all five branches of Kahibah Creek, to the west and south-west of Umina. Both existing catchment conditions and fully urban catchment conditions were considered.

The objective of the study was to evaluate measures to remedy or prevent flooding, scouring, siltation and erosion within the catchment. It was estimated on the basis of a house floor level survey, that 18 houses are flood-liable under existing conditions in the 1% AEP flood.

The hydrographs used to determine flood levels, discharges and flow velocities are those derived in the course of the Kahibah Creek Flood Study. Hydrographs were generated for urbanised catchment conditions by increasing impervious portions on the flatter subcatchments in the northern and eastern parts of the catchment to 40%.

Possible structural flood mitigation options were modelled using the WILCELL layout evolved for the Flood Study. Channel and bridge works were modelled by making adjustments to cross-section and weir profiles and by amending Manning's roughness coefficient. The structural measures identified for the catchment included:

. Floodways
. Channel improvements
. Culvert waterway enlargements
. Retarding basins

Non-structural and social measures investigated included:

. Voluntary purchase
. Flood proofing of buildings
. House raising
. Zoning
. Building and development controls
. Flood insurance
. Flood warning

Many combinations of the various measures identified were modelled, both for existing catchment conditions and for fully urban catchment conditions. The extent of works required to compensate for filling within property boundaries was also investigated.

The most effective scheme for flooding under existing catchment conditions was found to be a combination of the following:

- Construction of the bridge at Mt Ettalong Road and the associated channel works upstream and downstream, as designed by McMillan Britton & Kell.

- Construction of the channel works at Neera Road as designed by Council.

- Enlargement of the Ettymalong Creek channel between Cowper Road bridge and McLaurin Road.

- Enlargement of the Greenhaven Drive arm of Kahibah Creek

- Removal of silt from Iluka Lagoon and provision of a sediment trap upstream to prevent further degradation.

- Imposition of building controls to ensure that adequate (that is, at least 500 mm) freeboard is provided for new development.

- Zoning restrictions to ensure that the integrity of floodways is preserved; to prevent filling or other development in flood storage areas; and to prevent filling within property boundaries until other compensatory works are undertaken.

- Consideration should be given to implementing a flood warning system.

For fully developed catchment conditions, the following additional measures would be required to allow filling to take place within property boundaries:

- Doubling the capacity of the culverts at Brisbane Avenue and Calypta Road by adding two extra cells at each location, or by providing equivalent flow area by other means.

- Lowering the invert along the Australia Avenue arm of Kahibah Creek between Australia Avenue and Osborne Avenue; at the same time, replacing and augmenting the culvert at McEvoy Avenue. The replacement culvert should have an invert level at the upstream side of RL 2.36 m AHD and should include one extra pipe, or should provide equivalent flow area by other means

- Tripling the capacity of the culvert at Etta Road east by adding two extra pipes.

These measures are estimated to reduce flood levels to below house floor levels throughout the catchment. The following measures are optional, but could be provided to increase freeboard, and may be implemented at some future time if it is considered necessary to do so:

- Construct a retarding basin with a capacity of 50,000 m^3 at the Council depot site west of the Ettymalong Swamp arm of Kahibah Creek.

- Excavate an extra cutting through Mt Ettalong Road to convey Kahibah Creek flows to the eastern side of what is now the northern loop of Ettymalong Creek, and construct an extra bridge to carry Mt Ettalong Road over the cutting.

- Acquire or raise (if possible) low-lying houses with marginal freeboard.

These measures are all intended to alleviate mainstream flooding. Local drainage problems causing flooding at Wilks Avenue, McManus Close, The Rampart, Silvania Road and Edgecliff Road should also be addressed.

The estimated cost of works recommended to alleviate flooding, siltation and scouring problems under existing catchment conditions is $1,439,000, of which $1,319,000 is directly related to flood mitigation. The saving in net present worth of average annual flood damages with these works in place, assuming a discount rate of 7% and a design life of 50 years, is estimated to be $198,000, giving a benefit cost ratio of 0.15.

The proposed works are not expected to produce any adverse environmental impacts.

A draft Floodplain Management Plan has been prepared. The plan is a planning document intended to provide the basis for the future management of floodprone land along Kahibah Creek. Zoning limits for the eleven different areas of the floodplain are defined.

2.0 INTRODUCTION

2.1 General

Gosford City Council, through its Floodplain Management Committee, is developing a floodplain management strategy for the Kahibah Creek catchment in accordance with the provisions of the NSW Government Floodplain Development Manual (**Ref. 1**).

This report presents the results of a Floodplain Management Study, which forms the second step in the process of developing and implementing a Floodplain Management Plan.

The objective of this study is to identify and evaluate strategies to remedy or prevent flooding, scouring, siltation and erosion within the Kahibah Creek catchment. Management strategies are considered in terms of their physical, environmental, social and economic effects.

The Kahibah Creek catchment comprises an area of approximately 640 ha, and is situated to the west and south-west of Umina, near Broken Bay (see Figure 1). Flooding problems in the south-western part of the catchment have led to that area being the subject of an earlier detailed investigation. This study treats the catchment as a whole, and it is intended to prevent problems of a similar type occurring in the remainder of the catchment, and to propose effective solutions to existing problems.

2.2 Scope

In order to meet Council's aims to ensure that new development should not be flood-liable and to minimise the flood liability of existing development, structural and non-structural management strategies have been examined.

The study comprises the following elements:

- assessment of environmental conditions within the catchment under existing conditions,
- identification of structural mitigation measures and modelling of their effects on 1% AEP flood behaviour,
- identification and consideration of non-structural flood mitigation options,
- damages assessment, based on house count and surveyed floor levels,
- economic analysis of flood mitigation options, including consideration of flood damages averted,
- environmental assessment of possible strategies,
- selection and preliminary design of a preferred option,
- evaluation of maintenance requirements for proposed drainage works.

3.0 BACKGROUND

3.1 Catchment Description

3.1.1 General

The catchment of Kahibah Creek occupies an area of approximately 640 ha bounded by Mount Ettalong to the south; high ridges to the west and the higher parts of the Umina to the north. The eastern boundary of the northern part of catchment is indefinite, because of the very flat grades in the area; however, the limit may be as far east as Ocean Drive. A catchment plan is given in Figure 2.

The terrain is varied, ranging from very steep, wooded slopes with sandstone outcrops on the southern and western margins of the catchment to fully urbanised flat areas to the north and in the centre. The slopes which form the escarpment of the Brisbane Water National Park, have average slopes as great as 1 in 3 in some places, and rise to a height of approximately 200 m above sea level. These slopes meet the coastal plain at an abrupt change of grade. At the base of the slopes there are the remnants of three swamps. These areas, known as Ettymalong Swamp, Iluka Lagoon and Kahibah Swamp, are low lying, enclosed basins which formerly provided temporary storage of water flowing from the creeks and gullies running down from the hillsides. Iluka Lagoon continues to function in this way, though it is somewhat silted due to construction activities upstream; however, the flood retarding effect of Kahibah Swamp is diminished due to filling, and Ettymalong Swamp has been filled to the extent that it no longer stores any water. These three areas are drained by a system of creeks which flow in a generally easterly direction.

3.1.2 Drainage System

The Kahibah Creek system includes five main arms - the Neera Road arm, the Ettymalong Swamp arm, the Iluka Lagoon arm, the Greenhaven Drive arm and the Australia Avenue arm.

The Neera Road and Ettymalong Swamp arms skirt the southern and northern edges, respectively, of the area which was formerly Ettymalong Swamp, but is now the site of a residential subdivision. These two arms join just downstream of the Cowper Road Extension Bridge to form Ettymalong Creek, which then flows under the Cowper Road Bridge and north to its confluence with Kahibah Creek.

Iluka Lagoon intercepts runoff from slopes to the north west, and from subdivisions to the north and south, and discharges into the Iluka Lagoon arm, also known as Iluka Creek. Iluka Lagoon is showing signs of siltation due to the construction activities in the vicinity. A concrete channel conveys runoff from the new Jacaranda Estate into the lagoon. Iluka Creek, a formal channel, flows through a box culvert under Kallaroo Road and joins Kahibah Creek approximately 250 m upstream of its confluence with Ettymalong Creek.

The Greenhaven Drive and Australia Avenue arms of Kahibah Creek are formal channels, and drain the northern part of the catchment. The Greenhaven Drive arm flows from Kahibah Swamp along the western side of the reserve to the east of Greenhaven Drive. This arm then turns to flow east along the southern boundary of the electrical substation to meet the Australia Avenue arm. The Australia Avenue arm begins at the northern end of the catchment and flows southward along the eastern side of the reserve through culverts under Australia Avenue, Priestman Avenue, McEvoy Avenue, Nowack Avenue and Osborne Avenue. Downstream of the confluence of the Greenhaven Drive and Australia Avenue arms, Kahibah Creek flows south through culverts under Brisbane Avenue and Calypta Road. Downstream of the confluence with Iluka Creek at Albany Square, the creek flows through a cutting to join Ettymalong

Creek at the McLaurin Road reserve. In the past Ettymalong Creek continued to flow north almost to Calypta Road, then pass under Mount Ettalong Road and turn to flow south past Umina Oval and the caravan park; however, a channel has been cut along the McLaurin Road reserve joining the two reaches of the creek. The northern loop of Ettymalong Creek now stores water during periods of high flow.

The creek passes through a box culvert under Mount Ettalong Road, and then turns through ninety degrees to flow south past the caravan park. At the southern extremity of the caravan park, Ettymalong Creek turns to flow north for approximately 100 m, then flows south and east to discharge into Broken Bay at the southern end of Umina Beach. There is a sand bar at the point where the creek discharges, which appears to have a level of approximately RL 0.5 m AHD.

The channels of Iluka Creek and Kahibah Creek formerly had a meandering habit. Cuttings have been excavated to straighten the courses of the creeks, with the result that billabongs now exist behind dwellings in Monash, Elanora and Yarrabin Roads.

3.2 Data

3.2.1 Plans and Surveys

All available maps, plans and reports of relevance were obtained and used in this study. A list of drawings obtained is presented in Appendix A.

3.2.2 Survey Datum

The survey plans and other information show levels to a variety of datums. For consistency all levels in this report are expressed in metric units to Australian Height Datum (AHD).

3.2.3 Hydrologic Data

Hydrologic data used in this study were derived in the course of the Kahibah Creek Flood Study, in accordance with the 1987 edition of Australian Rainfall and Runoff (ARR-1987; Ref. 2). Hydrographs for fully urban conditions were derived as described in Appendix B.

3.2.4 Tide Data

Design tide data were derived from measurements of the flood tide of May 1974 reported in Ref. 3. This tide has been assigned an AEP of 1%.

3.2.5 Soils and Geological Data

Soil and geological data were obtained from field inspection. The sandplain area consists of deep quartz sands deposited as ancient dunes. In swamp areas, the soils are rich in organic matter, consisting of saturated humic soils and peat layers.

The escarpment lands consist of the massive Hawkesbury sandstone, with the Terrigal formations beneath.

More detailed information is presented in Appendix C.

3.2.6 Environmental Data

Environmental data were obtained from field observation. Detailed descriptions of communities and inventories of species are presented in Appendix C.

3.2.7 Property Data

Information concerning the nature and numbers of floodprone properties was obtained from field inspections carried out on 24th April 1990. Floor levels of potentially flood-prone properties were later surveyed. This information was used to evaluate flood damage estimates. Information about extra properties was obtained from topographic survey maps provided by Council.

3.3 Previous Studies

3.3.1 Ettymalong Creek Flood Study and Environmental Effects Assessment, March 1989, by Willing and Partners (Ref. 4)

This report was prepared for Council. Its aims were:

- to assess a hydrologic and hydraulic study previously prepared by Lyall & Macoun Consulting Engineers for the developer of the Ettymalong Swamp site,
- to determine the impact of the 1% AEP flood and the flood mitigation works required to reduce the flooding of existing properties,
- to assess the environmental effects and consequences of stormwater drainage works outlined in the Lyall & Macoun report.

3.3.2 Addendum to Ettymalong Creek Flood Study and Environmental Effects Assessment - Review of Public Submissions on Report, August 1989, by Willing & Partners (Ref. 5)

This report was prepared for Council, to analyse and respond to submissions from the public received following the completion and public display of the Ettymalong Creek Flood Study and Environmental Effects Assessment report.

3.3.3 Other Studies

Other reports and related documents are discussed in Ref. 4. They are generally not directly relevant to this study.

3.4 Kahibah Creek Flood Study

The Kahibah Creek Flood Study was undertaken in conjunction with this Floodplain Management Study to define the nature and extent of the flood hazard for the Kahibah Creek system, under existing conditions. The study area was as for this study.

Flood behaviour in the creek system is influenced by the storage effects of remnants of the swamps at the foot of the escarpment in the western part of the catchment; by timing of storms over the catchment and, downstream of Mt Ettalong Road, by tidal influences. The interaction of the five arms of the system is such that the effects of timing of floods have a marked influence on flood levels.

Because there are no streamflow data for the catchment, flood hydrographs were estimated using a synthetic hydrologic model. These hydrographs were then input to a hydraulic model to determine flood heights and velocities throughout the study area.

The RAFTS rainfall-runoff model was selected for the hydrologic analysis. Discharge hydrographs for the two severe floods which occurred on 6th January 1989 and 7th February 1990 were computed using catchment parameters which were compatible with the Ettymalong Creek Flood Study and Environmental Effects Assessment (Ref. 4) and consistent with the nature of the catchment.

The calibrated RAFTS model was used to generate design flood hydrographs for the 1%, 2% and 5% Annual Exceedance Probability (AEP) events. Design rainfall intensities and storm temporal patterns were in accordance with procedures recommended in the 1987 edition of Australian Rainfall and Runoff (ARR) (Ref. 2). Discharge hydrographs for an extreme flood were generated by doubling hydrograph ordinates for the 1% AEP flood.

Discharge hydrographs were input to the WILCELL hydraulic model. WILCELL is an unsteady state, quasi two-dimensional cell type model, capable of modelling both channel and floodplain flows, storage effects and tidal conditions experienced in the Kahibah Creek system. Ocean tidal behaviour was used to define downstream entrance conditions.

Calibration of the WILCELL model was carried out using observed flood levels from the 6th January 1989 and 7th February 1990 floods, with the tides which occurred at the time of the floods. Calibration involved adjusting channel roughness parameter values until satisfactory agreement was obtained between computed and observed flood levels.

With WILCELL calibrated, flood behaviour for the 1% AEP design flood was investigated. This involved consideration of the effects of different storm durations and of relative phasing differences between storms over the northern and southern parts of the catchment. The 2 hour storm was found to produce higher flood levels than the 1.5 hour storm, which is the critical storm in terms of peak discharge.

Design flood profiles were then generated for the 2%, 5% and extreme floods.

3.5 Hydraulics

A range of hydraulic modelling techniques is available to simulate flood behaviour in river and creek systems. Selection of an appropriate model depends on observation and consideration of the flow regime in the study area, and on the ability of the model to simulate the factors influencing flood behaviour.

Where extensive inundated floodplains are a feature of the system, a one-dimensional model is not applicable, since flow directions are influenced by the topography of the floodplain, and a "cells" type approach is often used.

In the Kahibah Creek system, flooding is influenced by the temporary storage of floodwaters in the channel system, in Iluka Lagoon and the remnants of Kahibah Swamp, and in other low-lying areas. In addition, flow directions vary as water spreads into storage areas and along overland flow paths, constituting a two-dimensional flow behaviour. A further factor influencing flood behaviour is the interaction between floods and tides.

The WILCELL model was selected for the hydraulic analysis of possible flood mitigation measures and development options as it is capable of modelling the above factors. The river and floodplain are modelled as a series of cells with boundaries reflecting topographical features of the modelled area. WILCELL is a modified version of the model originally developed by Weiss (Ref. 6), and was used to model hydraulic behaviour for existing conditions in the Kahibah Creek Flood Study.

3.6 Modelling

3.6.1 Hydrologic Modelling

The RAFTS model layout used to generate hydrographs for the Kahibah Creek Flood Study and for this study is shown in Figure 2. Calibration of the hydrologic model is discussed in detail in the Kahibah Creek Flood Study report. The design flood hydrographs used to evaluate flood mitigation measures for existing catchment conditions are those derived in the course of the Flood Study.

Flood hydrographs were derived for fully urban conditions on the basis of zoning of much of the catchment for dual occupancy. The flatter areas in the subcatchments which drain to the Iluka Lagoon arm, the Greenhaven Drive arm and the Australia Avenue arm were assumed to be 40% impervious, with initial losses and continuing loss rates adjusted as shown in Appendix B. Impervious portions of subcatchments on sloping land were adjusted to reflect an estimate of the maximum likely amount of development. Amended catchment parameters and resulting hydrographs are presented in Appendix B.

3.6.2 Hydraulic Modelling

The cell layout used for hydraulic modelling is the one used in the Kahibah Creek Flood Study, and is shown in Figures 3 and 4. Detailed information about model calibration and design flood runs for existing conditions is contained in the Flood Study report. The cell layout consists of 69 cells with boundaries formed from 33 cross sections (most of which are subdivided into three segments) and 81 weirs. The configuration of the cells and the locations of cross sections and weirs forming the cell boundaries were determined using topographical mapping and survey data. The cell layout was structured to allow the effects of developments in the study area on flood behaviour to be readily taken into account.

It is possible to incorporate flood mitigation works into the WILCELL model by modification of weirs and cross-sections.

Culverts were modelled for existing conditions by allowing a pre-processor program to calculate stage-area-discharge relationships for over-road flows, based on road profiles and a broad-crested weir discharge coefficient of 1.7. Stage-area-discharge relationships for the culverts were calculated manually, and were added to the computer-generated overflow relationships to provide a total stage-area-discharge relationship for the weir. Each culvert was modelled in this way, to allow flows to be computed accurately. When it was desired to model the effects of replacement of a culvert with a bridge with a clear span, the stage-area-discharge relationship for an open section of channel corresponding to the channel cross-section and slope just outside the existing culvert was computed. This new relationship then replaced the existing one.

Enlargements of channel section were modelled by altering the cross-section and weir profiles for existing conditions and amending Manning's 'n' values where necessary, to enable calculation of revised stage-area-conveyance relationships for incorporation in the model. In this way, the WILCELL input files were altered to represent the physical effects of the proposed flood mitigation works. The Manning's 'n' values adopted for post-works conditions are presented in Appendix B.

3.7 Problem Areas

The areas worst affected by flooding from the creek system are:

- Neera Road and Cowper Road
- Mt Ettalong Road near the cutting at the McLaurin Road reserve
- Elanora Road near Albany Square
- Greenhaven Drive
- Iluka Road and Stella Road
- Monash Road

In addition, the following areas are affected by flooding from local runoff:

- Wilks Avenue and McManus Close
- The Rampart
- Sylvania Road and Edgecliff Road

Iluka Lagoon is subject to degradation by silt which is being washed down from building sites upstream.

Scouring is a problem in Ettymalong Creek downstream of Mt Ettalong Road. The left bank of the creek at the caravan park is severely affected, as is the right bank at Berrima Crescent, at the mouth of the creek.

Flood profiles for the 1% AEP flood under existing conditions, for all branches of the creek system, are shown in Figure 5 to 7. Eighteen houses are estimated to be inundated in the 1% AEP flood, of which ten are in Neera Road, three are in Cowper Road, three are in Mt Ettalong Road and two are in Elanora Road. Several other houses have unsatisfactorily small freeboard in the 1% AEP flood.

Peak flood levels and flow velocities at key locations in the system are presented in Table 3.1. Velocities are generally those estimated for the next cell boundary downstream.

The highest peak flow velocities in the system occur through the culverts at McEvoy Avenue, on the Australia Avenue arm of Kahibah Creek, and the northern loop of the Ettymalong Creek channel at Mt Ettalong Road.

It can be seen from the flood profiles that most of the culverts, and particularly those at Mt Ettalong Road, Etta Road and along the Australia Avenue arm of Kahibah Creek, produce considerable afflux, resulting in raised water levels upstream.

The channels in the Kahibah Creek system generally have insufficient capacity to convey flood flows. At higher flows, obstructions such as fences, sheds and at least one chicken run which have been built in the floodway aggravate the flood hazard. Concern has been expressed by residents about one particular location, in Bena Road, where part of the waterway area has been obstructed by fencing and chicken sheds.

TABLE 3.1

PEAK FLOOD LEVELS AND FLOW VELOCITIES - 1% AEP FLOOD, EXISTING CONDITIONS

Location	Cell No.	Peak Flood Level (m-AHD)	Peak Flow Velocity (m/s)
u/s Mt Ettalong Rd	13	4.1	2.6
Neera Rd	26	4.3	1.9
Albany Square	32	4.1	0.2
Iluka Lagoon	39	4.2	0.5
Calypta Road	42	4.1	1.9
Greenhaven Drive	54	4.7	1.0
Osborne Avenue	50	4.4	0.8
Australia Avenue	64	4.8	2.7

4.0 PRELIMINARY ASSESSMENT OF GENERAL FLOODPLAIN MANAGEMENT STRATEGIES

4.1 General

Flood mitigation and discharge management measures have been investigated with two main objectives:

. To reduce the impact of flooding in existing developed areas.

. To offset the effect of current proposals for further urban development in the catchment on flood levels and flood behaviour.

Structural, non-structural and social measures have been investigated, as means of achieving the stated objectives. Structural measures include:

. Floodways
. Bypass Floodways
. Channel Improvements
. Culvert Waterway Enlargements
. Levees
. Retarding Basins
. Deflector Banks

Bypass floodways, levees and deflector banks are not feasible measures for the study area because of the flow regime, space constraints and the developed nature of the catchment, and are not discussed further in this report.

Non-structural measures considered are:

. Voluntary Purchase
. Flood Proofing of Buildings
. House Raising
. Zoning
. Building and Development Controls

Social measures include:

. Flood Insurance
. Flood Warning and Evacuation Planning
. Flood awareness campaigns

Structural options are discussed in Section 4.3, non-structural options are discussed in Section 4.4, and social measures are discussed in Section 4.5, in the context of their relevance to the study area.

4.2 Approaches to Flood Mitigation

In any given area, the alternative approaches of implementing structural and non-structural measures may be mutually exclusive: for example, there would be little point in raising a house, and none whatever in removing it, if it was in an area to be protected by a levee or by channel works. However, in theory at least, there could be opportunities for joint use, such as the purchase of a group of particularly low-lying properties to simplify and reduce costs of a levee or channel proposal. Some property purchase may be essential for construction purposes.

Non-structural options can have problems in implementation, but they have two major advantages compared to schemes of structural works:

(a) They can be applied selectively, whereas a levee or channel scheme cannot readily target only worst affected houses.

(b) They can be applied as opportunities arise over time, whereas a levee or channel scheme is ineffective until fully completed.

The flood standard adopted in the evaluation of options is the 1% AEP flood.

4.3 Structural Measures

4.3.1 Floodways

It is not possible to create new floodways in the study area, because of the high level of development; however, planning measures can be implemented to ensure retention of existing floodway areas for drainage purposes. This is discussed further in Section 4.4.

4.3.2 Channel Improvements

Generally, the ability of a stream channel to discharge floodwater can be increased by enlarging or straightening the channel, and by clearing the channel banks of obstructions to flow, such as scrub and fallen trees. The effect of channel improvements is to reduce the amount of overbank flow during times of flood and hence the depth of flooding. Caution must be exercised as channel improvements facilitate the transfer of floodwaters downstream and may worsen downstream flooding problems. Other possible disadvantages of channel improvements can include the destruction of riverine habitat and the visual impact of replacing a naturally varying channel section with a section appearing as a man-made drain. Landscaping can, in time, mitigate the visual impact to a large degree. The tendency to erode is increased also, if scour protection works are not undertaken as velocities increase.

Channel improvements can be undertaken with beneficial effects throughout the Kahibah Creek system, and are the most suitable structural measure available for dealing with the lack of discharge capacity in the existing system. As well as channel enlargement works, bank protection works can be carried out.

Channel works for the study area should, where possible, avoid concrete lining and invert structures. Grassed channels with batters kept as flat as possible are preferable.

4.3.3 Culvert Waterway Enlargements

Where culvert openings are small, relative to the total flow area of channel and floodplain upstream and downstream, then enlargement of the culvert can be beneficial in reducing upstream flood levels. However, as with channel improvements, caution must be exercised to ensure that there are no adverse effects downstream. Similarly, where new culverts or bridges are proposed, waterway areas should be sufficient to avoid causing significant increases in upstream flood levels.

Culvert replacement or augmentation has been investigated at each culvert in the Kahibah Creek system, and has been found to be an effective means of reducing flood levels.

4.3.4 Retarding Basins

Retarding basins may be described as areas of open space designed to collect and store flood runoff for release at a controlled rate. With careful design, considerable reductions in peak discharges, and therefore flood levels, can be achieved. If sufficient open space is available for their construction, retarding basins provide a cost-effective means of upgrading stormwater drainage capacity in urban areas.

The space available for retarding basin construction in the Kahibah Creek catchment is very limited. Iluka Lagoon and Kahibah Swamp behave to some extent as natural retarding basins. The only site which has any potential for storage of runoff is situated at the Council depot to the west of the Neera Road - Lakeview Parade area.

4.4 Non-Structural Options

4.4.1 General

The intention of non-structural measures is to:

- reduce the susceptibility of new development to damage and disruption from floods by means such as zoning, development and building controls,

- ensure that new development does not worsen the flood problems experienced by existing development,

Voluntary purchase of properties and flood-proofing are usually included in the non-structural category of management measures although, as discussed below, they may involve very substantial cost and involve physical changes to properties.

4.4.2 Voluntary Purchase

For existing properties which face a high flood hazard and where no significant reduction of the hazard is practicable, the physical removal of the building from the property, or its demolition, is an option. The voluntary purchase scheme has been developed by the State Government to enable councils to purchase such properties, by voluntary agreement with the owner, and convert the land to open space. Voluntary purchase is expensive, but may be less expensive than providing flood mitigation works to protect just one or two properties.

4.4.3 Flood Proofing of Buildings

Flood proofing by raising habitable floors above flood level is an important option for residential development in flood affected areas. Although simple in principle, the flood proofing of buildings has a number of practical difficulties. Construction of flood walls to protect individual buildings would only be feasible on the flood fringe areas where the depth of flooding is shallow and where flow paths would not be adversely affected. Moreover, there would be the need for ensuring sealing of all possible inlets in the event of a flood emergency.

Raising of floor levels either by building on earth mounds or by using high base structures would be the most effective method of floodproofing. These methods have been widely used in NSW for new building development. House raising is discussed separately below.

Freeboard for floor levels is required to allow for differences in the water level across the floodplain or increases as a result of wave action and the effect of any subsequent infill development. In addition, there are advantages in having adequate freeboard to reduce the likelihood of sewer surcharges in buildings and to provide an in-built

factor of safety to cover the situation when floods higher than the designated flood occur.

4.4.4 House Raising

For existing houses in lower hazard areas, house raising is the most practicable form of floodproofing. However, the biggest obstacle to house raising is the cost, which is borne fully by the property owner. A light-framed bungalow (timber or fibro) can cost about $20,000 to raise. There are understood to be satisfactory techniques available for raising brick veneer houses and even full brick houses, but these would be more expensive.

Some of the advantages and disadvantages of house-raising are listed below.

Advantages

- Major reduction of tangible flood damage.
- Lessening of intangible costs, e.g. stress and anxiety.
- Under-house space available for garage, storage etc.
- Enhanced re-sale value for property.
- Reduction of afflux.

Disadvantages

- House significantly above ground; steps inconvenient, difficult for the elderly.
- House isolated at times of flood; some intangible costs remain.
- Over-floor flooding may still be possible in extreme events.
- Need to ensure that under-house space is cleared in times of flood.
- Enhanced re-sale price does not generally cover costs of raising.
- House more exposed to high winds.
- Increased maintenance costs.

In respect of this option, the NSW Government provides special loans through the State Bank. Owners of flood liable homes are eligible to receive such loans to assist in financing house raising. However, the scheme was developed in 1964 and the conditions surrounding its application have become outdated in the economic climate of 1991. Details of those conditions are given in Ref. 7.

The present scheme is quite restrictive and has not met wide acceptance. Liberalisation of Government assistance in this regard could be of considerable practical assistance. A revision of the current standard has recently been recommended by a NSW Government Task Force (Ref. 7).

4.4.5 Zoning

Land zoning is an effective and long lasting means of containing growth in flood damage. Because of this, Council should give priority consideration to the effects of flooding in Local Environmental Plans. In zoning flood liable land and land which has the potential to affect flood behaviour, the following factors are important:

. whether the land is in the high hazard, or floodway, category,

. potential for future development to have an adverse impact on flood behaviour and thereby on existing development,

. whether adequate access is available during floods,

- whether certain classes of development should be excluded because of additional or special risk to their users, e.g. hospitals, caravan parks, and accommodation for aged people.

4.4.6 Building and Development Controls

Building and development controls can be adopted by Council as a consent authority in the form of a Development Control Plan.

To contain the growth in flood losses, conditions should be imposed on new developments and redevelopments to ensure that they do not add to the overall level of flood damage. Typically, buildings should be flood proofed, as previously discussed.

Section 90(1)(g) of the Environmental Planning and Assessment Act requires a consent authority determining a development application to consider:

> "Whether the land to which that development application relates is unsuitable for that development by reason of its being, or being likely to be, subject to flooding, tidal inundation, subsidence, slip or bush fire or to any other risk"

Many planning authorities impose the condition that the minimum floor level of new buildings must be 0.5 m above the expected 1% AEP flood level. Conditions of this type are very effective.

4.5 Social Measures

4.5.1 General

The intention of social measures is to reduce the impact of flooding on existing development through the use of flood warning systems, evacuation planning, and public awareness programmes.

4.5.2 Flood Insurance

Flood insurance is not a measure that can effectively be introduced in a single catchment area. No effective flood insurance scheme for householders operates anywhere in NSW, although large industrial establishments are often able to obtain cover by individual negotiation with insurers. A fundamental difficulty is that flood insurance does not reduce the physical and economic risks of development, but merely redistributes them throughout the community. It is considered that flood insurance is not a viable option in the Kahibah Creek study area.

4.5.3 Flood Warning

In the past, provision of effective flood warnings in catchments with very short response times such as Kahibah Creek has been regarded as impracticable. However, with recent technological improvements such as telemetry and real-time flood modelling with microcomputers, there is potential for successful implementation of flood warning systems even on small urban catchments.

The main limitation on a flood warning system in the Kahibah Creek catchment would be the short catchment response time of 1.5 to 2 hours. The travel time of flood peaks through the catchment will be of the order of 0.5 hour. Because of these short times, meteorological forecasting techniques would be of little value and any flood warning system would instead need to be based on information relayed from weather radar. Direct warning to areas at risk would be given by means of sirens; by police with mobile, high-powered loudspeakers; by telephone to individual houses or to one person

in a group who warns other people in the group, or by radio and television. To have maximum effectiveness the system would need to be operated locally, probably by the Gosford City Council, in co-operation with the SES.

At this stage it is not possible to estimate the likely costs and benefits of a flood warning system in the Kahibah Creek catchment. A flood warning system may be useful for providing forecasts of floods exceeding the magnitude of the 1% AEP flood, especially considering that, even with all the structural flood mitigation options implemented, freeboard will still be limited.

4.6 Conclusions

Because of the nature of development and flooding in the Kahibah Creek catchment the most appropriate approach to flood mitigation is a combination of structural measures, in the form of channel and culvert upgrading and, possibly, retarding basin works; non-structural measures, in the form of flood proofing, zoning, building and development controls and, perhaps, voluntary purchase; and social measures, in the form of flood warning.

5.0 STRUCTURAL FLOODPLAIN MANAGEMENT OPTIONS

5.1 General

The following structural flood mitigation and catchment management measures have been investigated:

- construction of a bridge at Mt Ettalong Road and channel improvements downstream, as designed by McMillan Britton and Kell (MBK), as shown on Drawings NC171-P1 to NC171-P4.
- enlargement of the Neera Road arm as recommended in the Ettymalong Creek Flood Study and Environmental Effects Assessment, to Council's design, as shown on Drawings C16/72 to C16/79.
- amplification of the culverts at Calypta Road, Kallaroo Road, Brisbane Avenue, Osborne Avenue, McEvoy Avenue, Australia Avenue and Etta Road east,
- enlargement of the Ettymalong Creek channel between the Cowper Road bridge and the confluence with Kahibah Creek,
- enlargement of the Greenhaven Drive arm of Kahibah Creek, and of Kahibah Creek downstream of the confluence of the Greenhaven Drive and Australia Avenue arms,
- excavation of an extra cutting to convey flows from Kahibah Creek across Mt Ettalong Road, to the north of the existing cutting at the McLaurin Road reserve,
- lowering the invert of the Australia Avenue arm of Kahibah Creek,
- removal of accumulated silt from Iluka Lagoon, to provide an invert level over the area of the Lagoon of approximately RL 2.0, and provision of a sediment trap,
- construction of a retarding basin on the Council depot site west of Neera Road.
- grassing of floodways and channels.

Because of the severity of the problem, and because each section of the system affects all other sections, none of these measures alone is sufficient to prevent flooding of houses in the 1% AEP flood. The most effective strategy consists of a combination of some or all of these measures, possibly in combination with property acquisition where appropriate. Consequently, the five arms of the Kahibah Creek system are considered together in this section of the report, rather than treating them separately.

Management strategies have been investigated under three separate conditions:

- existing catchment conditions with existing ground profiles,
- fully urban catchment conditions with existing ground profiles,
- fully urban catchment with properties filled above the 1% AEP flood level to site boundaries.

The individual flood mitigation measures are discussed below, and options for treatment of grassed floodways are discussed and compared

5.2 Mt Ettalong Road Bridge and Downstream Works

It is proposed that the existing twin 2.4 x 2.7 m box culvert at Mt Ettalong Road be replaced by a bridge with a clear span. The channel under the bridge has been designed with an invert width of 9.4 m, a top width of 14 m and batter slopes of 1 in 1. The channel downstream of Mt Ettalong Road, and upstream of Mt Ettalong Road as far as the confluence with Kahibah Creek is to be formalised, with invert levels similar to existing levels, and 1 in 1 batters lined with placed rock spall bank protection.

Different bridge and channel widths were modelled, to determine whether constructing the bridge with a top width of 20 m, instead of 14 m, with further channel widening downstream would reduce flood levels upstream to an appreciably greater extent. It was estimated that the extra decrease in peak flood level in the Cowper Road - Neera Road area ranged from 60 mm to 150 mm, and so provision of the extra width from the McLaurin Road cutting through the bridge and downstream to the ocean was not considered worthwhile.

Re-alignment of the channel is proposed at the bend downstream of Mt Ettalong Road culvert, and at the southern bend upstream of the ocean outlet.

Sketches of the proposed works are shown in Figures 8, 9 and 10.

McMillan Britton & Kell have designed to works to be constructed in three stages, as shown on their design drawings. The estimated cost of the bridge and Stage 1 channel works is $480,000, with the cost for channel works in Stages 2 and 3 estimated to be $390,000.

5.3 Neera Road Channel Improvements

The proposed arrangement for the Neera Road channel consists of a trapezoidal cross-section with batter slopes of 1.5:1 lined with grouted revetment mattress to the bank level on the northern side. On the southern side, the revetment mattress extends up from the invert for a height of 1 m. The batter on the southern side then flattens to form an access track, with a grassed batter at a slope of 2:1 from the southern edge of the access track to bank level. The invert, varying from RL 0.5 m AHD to RL 0.74 m AHD, is 0.75 m wide, and the access track has a width of 3.5 m. This arrangement provides a slightly larger flow area at full depth than that proposed in the Ettymalong Creek Flood Study and Environmental Effects Assessment, and thus would reduce floodlevels further. The estimated cost of the Neera road works is $295,000. The proposed arrangement is shown in Figure 11.

5.4 Amplification of Culverts

The effects of replacement and amplification of the culverts at Calypta Road, Kallaroo Road, Brisbane Avenue, Osborne Avenue, McEvoy Avenue, Australia Avenue and Etta Road east were investigated. It was found that the most beneficial effects on flood levels, particularly with fully urban catchment conditions and filling to floodway boundaries, could be achieved by enlarging the culverts at Calypta Road (add two extra cells - see Figure 12), Brisbane Avenue (add two extra cells - see Figure 13), McEvoy Avenue (add one extra cell - see Figure 14) and Etta Road east (add two extra cells - see Figure 15). The remaining culverts should be left as existing, as they help to delay the arrival of the flood peaks from the Iluka Lagoon and Australia Avenue arms, thus slightly reducing flood levels downstream. The costs of culvert works at Calypta Road, Brisbane Avenue, Etta Road East and McEvoy Avenue are estimated to be $104,000, $109,000, $38,000 and $45,000 respectively.

5.5 Enlargement of the Ettymalong Creek Channel

Widening of the channel between the Cowper Road bridge and the confluence with Kahibah Creek will help to reduce flood levels along Cowper Road and Neera Road. It was assumed for the purposes of modelling that the channel at the Cowper Road bridge would be widened as much as possible without disturbing the bridge. It appears that it may be feasible to enlarge the invert to 6.3 m, with 1 in 1 batters which would need to be protected with placed rock spalls or similar reinforcement. Further downstream, at cross-section 9 (see Figure 9 for location) an invert width of 14.5 m with 1 in 1.5 batters, which would need to be protected with grass reinforcement such as environmental matting, was assumed. The top width of the channel would be of the order of 20 m, which should fit within the space available with room for maintenance access. The invert level of the creek at the Cowper Road bridge was assumed to be at RL 0.0, as specified by Lyall & Macoun, Consulting Engineers, in their drainage design for North Pearl Estate. The invert level at cross-section 9 was assumed to be RL 0.7, allowing for a constant adverse grade along that reach of creek channel, rising to RL 1.0 at the bridge. Figures 16 and 17 show the proposed arrangement. Widening this channel as described is estimated to cost $93,000.

5.6 Enlargement of the Kahibah Creek Channel

Widening of the channel of the Greenhaven Drive arm of Kahibah Creek from downstream of the Kahibah Swamp outlet, and of Kahibah Creek from the confluence of the Greenhaven Drive and Australia Avenue arms down to the confluence with Ettymalong Creek, was investigated. The channel invert was assumed to have a constant grade between the outlet from Kahibah Swamp and Albany Square, as shown on Figure 23. The invert was found to have an optimum width of 12 m upstream of the confluence with the Australia Avenue arm, and 14 m downstream, with batters of 1 in 3. The effect of this channel widening would be to reduce flood levels from Albany Square upstream to the northern end of Greenhaven Drive. The estimated cost of widening the Greenhaven Drive arm of Kahibah Creek is $61,000, and widening of the main north arm of Kahibah Creek from the confluence of the Greenhaven Drive and Australia Avenue arms to the confluence with Ettymalong Creek was estimated to cost $90,000.

Figures 18 and 19 show the proposed cross-sections for the main north arm of Kahibah Creek and the Greenhaven Drive arm, respectively.

5.7 Excavation of an Extra Cutting through Mt Ettalong Road

The effect of adding an extra cutting approximately 100 m north of the existing culvert at the McLaurin Road reserve was modelled. It was assumed that the additional cutting, crossed by a second Mt Ettalong Road bridge, would have a width of 20 m, and would be directly connected with the main north arm of Kahibah Creek by a cutting through the spit of land between Kahibah Creek and the northern loop of Ettymalong Creek.

This measure was estimated to increase flood levels by up to 0.1 m along the main channel and the Greenhaven Drive arm of Kahibah Creek (due to timing differences), and reduce flood levels in the Ettymalong Creek, Neera Road and Iluka Creek channels by up to 0.1 m, 0.08 m and 0.06 m respectively. Immediately downstream of the cutting, peak water levels were estimated to increase by 0.08 m, but further downstream, peak water levels were reduced.

The estimated cost for construction of the channel and bridge is $580,000.

5.8 Lowering of the Invert of the Australia Avenue Arm

Reduction of the invert levels along the Australia Avenue arm of Kahibah Creek would be necessary to enable drainage lines to be connected from the area between Kahibah Creek and Ocean Beach Road. A typical cross-section is shown in Figure 20, and the channel invert adopted for modelling purposes is shown on Figure 23. It would be necessary to replace the culvert at McEvoy Avenue if the invert of the channel were lowered, and the culvert capacity should be improved by the addition of an extra cell at that time.

5.9 Removal of Silt from Iluka Lagoon

Iluka Lagoon was modelled as existing, and also as having its invert at RL 2.0, with the margins of the lagoon sloping down to that level at the existing batter. The lagoon is subject to degradation by silt and sand entering from the upstream end, where the concrete drain from Homan Close discharges. The invert of the lagoon could be lowered by removal of this accumulated silt, and further siltation prevented by the installation of a sediment trap upstream, with strict controls to prevent erosion of particulate matter from building sites. The hydraulic effect of restoration of the flood storage capacity of Iluka Lagoon is to reduce flood levels in Iluka Creek, but flood levels elsewhere were not affected to any appreciable extent; however, environmental benefits would result from removal of silt and prevention of further degradation.

Dredging of Iluka Lagoon to remove accumulated silt is estimated to cost $70,000, and installation of a sediment trap upstream of the lagoon is estimated to cost $50,000.

5.10 Retarding Basin

The effect of construction of a retarding basin at the Council depot site upstream of the Ettymalong Swamp arm was investigated. The only mapping available for that area is the 1:25,000 topographic map of Broken Bay, with a 10 m contour interval; consequently, the stage-storage characteristics for the basin, as modelled, are very coarse, and the results are indicative only. It was assumed for the purpose of modelling that the basin had an embankment height of 5 m, a storage volume at 5 m depth of 50,000 m^3 and one 900 mm diameter outlet pipe. The basin, though of necessity crudely modelled, was estimated to reduce the peak of hydrograph 1 from 59 m^3/s to 37 m^3/s. The net effect of this, with all other works in place, is to reduce flood levels in Neera Road by up to 0.16 m; in Iluka Creek by up to 0.06 m; in Kahibah Creek by up to 0.05 m, and at Mt Ettalong Road, by up to 0.10 m, assuming fully urban catchment conditions and filling of properties. With backyards not filled, the differences in peak flood level produced by the basin are estimated to be greater. A very preliminary cost estimate for basin construction is $500,000.

5.11 Treatment Of Grassed Floodways

Grassing of formalised floodways can generally be treated two ways. The choice will depend on the landscape treatment desired, the predicted channel velocity and the ability of vegetation to withstand these velocities without erosion taking place, the expected environmental impacts, and of course follow up maintenance. Environmental, aesthetic and economic considerations should be evaluated before the final option is chosen.

The two basic treatments available are:

- grassing the channel using commercially available grasses - Option 1
- revegetating the channel using native vegetation - Option 2.

Soil types on the Woy Woy sandplain are generally deep quartz sands which are highly porous, permeable and disassociate very easily. They are difficult to stabilise without a shallow angle of repose. The soils are also nutrient poor, with extremely low levels of total available phosphorus. Thus natural vegetation occupying the sandplain areas are adapted to withstand such low amount of nutrients but as well extremely dry conditions due to the porous nature of the soil.

Option 1 - Grassed Floodway Using Commercially Available Grasses

Since natural creek lines have the 'B' horizon exposed, it makes the job of establishing grass cover difficult. This is even more so with the sandy soils because any nutrient added moves easily through the soil profile and grasses quickly suffer from stress once the initial fertiliser application is used and/or lost.

In all cases the channel bank profile should be topsoiled or soil mixed with the subsoil. The source of this could be soil from the immediate site or imported soil of a suitable quality.

Areas of the floodway are then turfed or sown with the appropriate seed/grass mixture. In the case of the soft sandy soils added protection with a base material such as 'Enkamat' or 'Terramat' is desirable.

The choice of grasses suitable for this purpose is not great and will ultimately depend on the expected velocity through the channel. For example the Australian Turf Grass Institute gives the following criteria and may perhaps be suitable for floodway banks.

WARM SEASON GRASSES

Grass	Wear Tolerance	Shoot Density
Couch	Very Good	High
Kikuyu	Good	High
Buffalo	Intermediate	Medium

COOL SEASON GRASSES

Perennial Rye	Good	Medium
Tall Fescue	Good	Low
Kentucky Blue	Intermediate	Medium

Floodway inverts could be grassed with the following species, given their ability to withstand submersion:

COOL SEASON GRASSES

Grass	Submergence Tolerance	Season
Couch	Good	Warm
Buffalo	Good	Warm
Scotwater Couch	Good	Warm
Queensland Blue	Good	Warm
Perennial Rye	Good	Cool
Tall Fescue	Very good	Cool
Kentucky Blue	Good	Cool

The commercially available grasses, with the exception of Couch (**Cynodon dactylon**) and Saltwater Couch (**Paspalum distichum**), will require regular additions of fertiliser to maintain satisfactory growth rates. Some other visually aesthetic grasses used for revegetation purposes such as Rhodes Grass (**Chloris gayana**) will also require regular fertiliser for they are high nutrient acquiring species.

The choice of these grasses, however, can cause environmental impacts, both throughout the waterway and at discharge points. Fertiliser additions will change the normally occurring oligotrophic waters to one with higher nutrient loads, which can lead to weeds in the waterway and algal blooms. Maintenance of the grass will be required also, such as mowing and the eradication of unwanted weeds and plants. Addition of this material (eg grass cuttings) to the water can also cause similar environmental impact. In the case of Kahibah Creek, waters are already carrying higher nutrient loads due to existing levels of urbanisation.

The use of solely native grass species endemic to both sites, for the drainage floodway, would in all probability be unsatisfactory because the shoot density is too low (**eg Entolasia stricta**) and the plants will not tolerate human passage and high water velocities (**eg Themeda australis**). They would be more suitable on higher bank sections.

The following figures show the maximum permissible velocities of some of these grasses for the channels and waterways that they will withstand without scouring. These figures are for flow 0.9 m deep and, for deeper flows, higher velocities should be used.

Species	**Maximum Velocity m/s**
Kikuyu	2.5
Couch	2.5
Carpet Grass	2.5
Rhodes Grass	2.0
Improved Pasture Grasses	2.0
Native Grasses	2.0
Tussock Grasses	1.5
Lucerne	1.0

Option 2 - Revegetation with Native Species

In all cases irrespective of soil type, the perimeter of the channels should be first topsoiled with soil of the 'A' horizon layer which is endemic to the site. The soil should be collected from the immediate vicinity, preferably from an area where native vegetation is growing, so that it contains native seed propagules.

After topsoiling native species will be seen germinating. In areas of sparse germination, the embankments should be planted with **Acacia spp** endemic to the site. Seed should be collected from the site and first grown to tube stock size before planted. This is all that should be needed to establish a cover of native species. **Acacia spp** will partly perform the function of fixing nitrogen and adding it to the soil and if additions of past fertiliser are present change any ammonium nitrate to a more usable nitrate form, suitable for native species.

However, with use of native species no fertiliser should be used. Native species generally do not need any fertiliser and therefore environmental impacts to the water regime can be minimised.

Considering the two options commercial grasses are more suitable for higher velocities and native species for lower velocities. Of the grasses investigated both Couch and Carpet Grass are perhaps ideal for waterway embankments. Both are readily available and will withstand higher velocities. Couch in particular will wear well and is tolerant of submerged conditions and does not require fertiliser. However, in soils of the Woy Woy sandplain some initial fertiliser will probably be required.

Carpet grass also has the advantage of tolerating higher velocities and is generally non invasive to native plant communities except in very wet conditions. Fertiliser is also not generally needed for this species. Kangaroo Grass, although now available can be used for top embankment areas.

5.12 Conclusions

The hydraulic impacts of the more helpful combinations of the measures described in Sections 5.2 to 5.8 can be seen from Figures 21 to 38. No single measure will render all dwellings flood free in the 1% AEP flood.

The measure which has the greatest impact, and which is therefore the most urgently needed measure, is the combination of 14 m span bridge with spill through abutments and associated channel works at, upstream and downstream of Mt Ettalong Road, as designed, by McMillan Britton and Kell. This, combined with channel works in Neera Road as designed by Council, and in Ettymalong Creek between the Cowper Road bridge and McLaurin Road, as described above, is capable of conveying the 1% AEP flood without flooding above the habitable floor level of upstream properties, although freeboard will still be limited. It would also be advisable to widen the Greenhaven Drive arm of Kahibah Creek, and regrade the invert, to improve freeboard for the lower-lying houses in Greenhaven Drive.

The environmental effects of each of the flood mitigation measures investigated have been considered, and are discussed in detail in Appendix C. No adverse impacts are expected to result from the measures proposed, provided that channel banks are revegetated; sand is not stored along the creek; Iluka Lagoon is dredged; trees are planted behind the banks of the channels to reduce the amount of light reaching the channel; and the channel invert level just downstream of Kahibah Swamp in not altered.

It seems, then, that the most appropriate course of action in the short term, to deal with the problems which apply for existing catchment conditions, is to implement the bridge and channel works designed by McMillan Britton and Kell; the channel works discussed above for the Neera Road arm and Ettymalong Creek, and for the Greenhaven Drive arm of Kahibah Creek; to apply building regulations and zoning restrictions to ensure that adequate freeboard is provided, and that filling and other development does not take place in floodway and flood storage areas; and to investigate the possibility of implementing a flood warning system. These works will be referred to hereafter as Stage 1 works.

For future conditions, with further urban development and filling of properties outside the floodway limits, additional works will be necessary, and these include some or all of the remainder of the measures described above. The management strategies available for future conditions are discussed in Section 8.

6.0 EFFECTS OF FUTURE DEVELOPMENT

6.1 General

The effects of future development in the Kahibah Creek catchment were modelled in two ways. Firstly, the hydrologic model was altered to enable higher impervious fractions to be modelled in those subcatchments where it seemed likely that medium density development would occur. In addition, the areas to the north of the northern loop of Ettymalong Creek and to the east of the Australia Avenue arm of Kahibah Creek, which currently have no street drainage, were modelled as contributing flow to hydrographs 6 and 9. Details of subcatchment parameters are given in Appendix B. The hydrographs affected by this were hydrographs 6, 9, 10, 11 and 12. Secondly, changes were made to the ground surface profiles in the hydraulic model to model the effects of filling within property boundaries to above the 1% AEP flood levels.

6.2 Hydraulic Effects

The effects of further catchment urbanisation, and then urbanisation with backyard filling, were modelled with works carried out as proposed at and downstream of Mt Ettalong Road, at Neera Road and along Ettymalong Creek. These works were selected because they are the most urgently needed works, which would produce the greatest improvement in flood levels in the short term.

The maximum differences in peak flood level, measured from an "existing catchment conditions" base, are given in Table 6.1.

TABLE 6.1

EFFECTS OF FURTHER URBANISATION

Location	Total Increase in Flood Level (m)	
	Urban Catchment	Urban Catchment + Properties Filled
Neera Road	0.04-0.05	0.18-0.23
Cowper Road	0.06	0.24
Ettymalong Creek upstream McLaurin Road	0.09-0.11	0.29-0.31
Kahibah Creek - main north arm	0.09-0.29	0.31-0.62
Greenhaven Drive arm	0.24-0.27	0.47-0.55
Australia Avenue arm	0.28-0.34	0.71-0.87
Iluka Lagoon arm	0.07-0.09	0.01-0.02

6.3 Conclusions

It can be seen from the results shown in Table 6.1 that the effect of future urbanisation are significant, and that the effects of backyard filling with ultimate catchment development are approximately double those for ultimate catchment development alone.

These results highlight the necessity for providing a particular standard of channel and culvert upgrading for existing catchment conditions, and further works at some time in the future to deal with ultimate catchment conditions. WILCELL runs for the three sets of catchment conditions with culvert works and a retarding basin upstream of the Ettymalong Swamp arm produced differences in flood levels, which were, for the northern branches of the creek, approximately half of those shown in Table 6.1.

7.0 IMPACTS OF EXTREME FLOODING AND THE GREENHOUSE EFFECT

7.1 Extreme Flood

An analysis of flood behaviour was carried out for an extreme flood, which was taken to have a discharge twice that of a 1% AEP flood. It is not possible to assign an annual exceedance probability to this extreme flood, but it would be an extremely rare event, though somewhat smaller than the probable maximum flood (PMF).

It was found that, for existing catchment and channel conditions, the extreme flood produced peak water levels up to 0.5 m higher than the 1% AEP flood along Neera Road and Ettymalong Creek; up to 0.6 m higher along Iluka Creek and in the northern loop of Ettymalong Creek; up to 0.7 m higher in the main northern channel of Kahibah Creek and the Greenhaven Drive arm, and up to 0.8 m higher downstream of Mt Ettalong Road and in the Australia Avenue arm of Kahibah Creek. These results are shown on the flood profiles in Figures 5 to 7.

With the bridge and channel works at and downstream of Mt Ettalong Road, and channel works along Neera Road, Ettymalong Creek and the Greenhaven Drive arm of Kahibah Creek, the difference between extreme and 1% AEP flood levels are up to 0.6 m along Ettymalong Creek upstream and downstream of McLaurin Road along Neera Road and in Iluka Creek; up to 0.7 m in the northern loop of Ettymalong Creek and in the Australia Avenue arm of Kahibah Creek, and up to 0.8 m along the main north arm and the Greenhaven Drive arm of Kahibah Creek. Flood profiles for this case are shown in Figures 21 to 28.

Under existing catchment and channel conditions, it is estimated that 89 dwellings would be flooded in the extreme flood. Implementation of the works proposed for existing catchment conditions would reduce the estimated number of houses flooded in this event to 28.

7.2 Greenhouse Effect

It is possible that the global warming predicted to occur in the future will produce either or both of two effects: increase in sea level, due to expansion of water in the ocean; and increase in precipitation.

The tidal tailwater condition modelled for the design floods was that measured in May, 1974. It has been assigned an annual exceedance probability of 1%. The peak tide level was RL 1.64 AHD. It was calculated as being mean high water springs plus an allowance for storm surge and wave set up. Mean high water springs is approximately RL 0.65 m AHD. It is considered that the combination of the tide modelled with the 1% AEP flood is so unlikely as to obviate the need for separate modelling of raised tide levels caused by the greenhouse effect, and that the modelling as carried out would give sufficient indication of the combined effect of a a large flood with an abnormally high tailwater condition.

The effects of an increase in precipitation have been modelled elsewhere in the Gosford area by increasing flood discharges by 20%. It was demonstrated in the floodplain management studies for Erina Creek and Narara Creek that increasing discharges by 20% produced an increase of approximately 300 mm in peak flood levels. As a result, Council decided to increase the minimum allowable freeboard in floodprone areas from 300 mm to 500 mm. The effects of increased precipitation in the Kahibah Creek catchment are expected to be consistent with results calculated elsewhere, and so it would be prudent to apply the 500 mm minimum freeboard requirement to the Kahibah Creek catchment to allow for possible sea level rise, increased rainfall intensity, large flood and uncertainty about statistically predicted rainfall intensities.

8. FLOODPLAIN MANAGEMENT SCHEMES

8.1 General

The existing creek system is so severely inadequate for the conveyance of flood flows that it is impossible to evolve and compare a range of distinctly different options to solve the flooding problem. For existing catchment conditions, a combination of bridge and channel works, discussed in Section 5, will suffice to prevent above-floor flooding of houses. This arrangement uses the full width of the drainage reserves.

Four options were investigated which would remove the risk of above-floor flooding for fully urban catchment conditions, with properties filled above the 1% AEP flood level to the boundaries of the drainage reserve. This scenario was considered to represent ultimate catchment conditions. These options were really only variations on a single set of works, consisting of the works proposed for existing catchment conditions with enlargement and regrading of the main north arm of Kahibah Creek and upgrading of the culverts at Calypta Road, Brisbane Avenue, McEvoy Avenue and Etta Road east. This base set of measures is Option 1. The three variations modelled are:

- Option 2 - as Option 1, with a 50,000 m^3 retarding basin at the Council depot west of the Ettymalong Swamp area.
- Option 3 - Option 1, with the invert of the Australia Avenue arm lowered, to permit the connection of drainage lines from the area to the east.
- Option 4 - Option 1, with an extra cutting and bridge approximately 100 m north of the existing cutting in the McLaurin Road reserve.

The effects of the four options are compared in Figures 29 to 32, and peak discharges and flow velocities are given in Table 8.1.

An additional option, which consisted of Option 3 with the extra cutting and bridge at Mt Ettalong Road and with the Osborne Avenue culvert enlarged, was also modelled, but was not proceeded with further, because flood levels in Kahibah Creek were found to be too high. Flood profiles for this option are shown in Figures 21 to 28.

8.2 Option 1

With Option 1 in place, all dwellings would be flood-free in the 1% AEP flood with the ultimate development scenario, but freeboard for several dwellings in Neera Road, Calypta Road, Greenhaven Drive, Elanora Road and Mt Ettalong Road upstream of Etta Road east would be very small. In Neera road, practically no freeboard would be provided at two dwellings.

The estimated capital cost of Option 1 is $1,825,000. This includes works to remove sediment from, and prevent further degradation of, Iluka Lagoon.

8.3 Option 2

The addition of a retarding basin to the works provided in Option 1 reduces flood levels in all arms of the creek system. In the Lakeview Parade and Neera Road arms, the maximum extra flood level reductions, compared with Option 1, are 0.36 and 0.16 m respectively. The differences in other branches are smaller (see Figures 29 to 31).

The results are indicative only, as modelling of the basin was necessarily crude, due to the unavailability of large scale mapping for the Council Depot site. Nonetheless, the effect of a basin of that size is expected to be significant.

It is estimated that the cost of implementing Option 2 would be $2,325,000. This includes an allowance of $500,000 for construction of the basin, which was calculated by rule of thumb, on the basis of $1,000 per cubic metre of storage. It may be possible to construct the basin from earth fill and gabions, as the State Rail Authority has done with some of its more recently constructed retarding basins in the Sydney area.

8.4 Option 3

The addition of Australia Avenue channel invert lowering to the works of Option 1 produces an estimated reduction in peak flood levels in the Australia Avenue arm of up to 0.16 m compared to Option 1. In the main north arm of Kahibah Creek, flood levels are reduced by up to 0.01 m but elsewhere, flood levels are increased slightly - by up to 0.03 m along Neera Road, and up to 0.01 m in all other branches of the system.

The purpose of the Australia Avenue arm works is, as discussed above, to allow the connection of a large undrained area of the Woy Woy sandplain into the Kahibah Creek system, so the flood level reduction in the Australia Avenue arm is purely incidental. Flood level changes elsewhere are due to slight differences in timing of flood peaks.

The estimate cost to implement Option 3 is $2,073,000.

8.5 Option 4

The addition of the extra bridge and cutting to the Option 1 works would have the net hydraulic effects described in Section 5.7. The effects of the extra opening through Mt Ettalong Road on flood levels are generally beneficial, but the increase in computed flood levels in the main north arm is sufficient to reduce freeboard at one dwelling in Calypta Road to the point where it is almost non-existent.

The estimated cost to implement Option 4 is $2,405,000.

8.6 Discussion

The Stage 1 works discussed in Section 5.11 will suffice for existing catchment conditions in the 1% AEP flood, although freeboard will still be limited. Zoning regulations can then be implemented to prevent further development in the floodplain until compensating works, in terms of Option 1, 2 , 3 or 4, can be constructed.

Because each section of the creek system is so sensitive to changes in each other section, it is necessary to adopt a long-term scheme which will reduce flood levels as much as practicable in each branch without tipping the balance to worsen conditions in another branch. The only flood mitigation measure which can reduce flood levels everywhere is the retarding basin and, due to the developed nature of the catchment, suitable basin sites are limited. Also, basin construction can be expensive compared to, say, acquisition of houses.

Of the four options considered for ultimate catchment conditions, Option 3 appears to be preferable on grounds of relative cost effectiveness, although Option 2 offers most advantage hydraulically. If it is desired to construct a street drainage system in the area between the Australia Avenue channel and Ocean Beach Road, then reduction of invert levels along the Australia Avenue arm will be necessary.

The problem of severely limited freeboard at the two houses in Neera Road and less severely limited freeboard elsewhere can be dealt within one of three ways: by buying the properties involved; by implementing further works such as the a retarding basin or second bridge and cutting, or by taking no further action and allowing events to take their course. This decision can probably be deferred for the time being, until it is seen what form further development is likely to take.

The "filling of backyards" scenario is very much hypothetical at this stage, but is conistent with Council's proposed policy of requiring blocks to be filled above the 1% AEP flood level upon future (re)development. It represents filling up to property boundaries on both sides of the creek, along the entire length of Iluka Creek, Kahibah Creek (including the Greenhaven Drive and Australia Avenue arms) and Ettymalong Creek upstream of Mt Ettalong Road, and would thus be the ultimate condition.

One factor which will play a large part in flood levels in a major flood is channel maintenance. The computed flood profiles in Figures 21 to 35 were estimated on the basis of Manning's 'n' equal to 0.045 in Kahibah Creek and the Greenhaven Drive arm. Figures 36 to 38 show the effect of reducing Manning's 'n' to 0.030 along Kahibah Creek and the Greenhaven Drive arm - flood levels are estimated to be reduced by up to 0.2 m in Kahibah Creek and the Greenhaven Drive arm, and increased slightly everywhere else. A reduction of this order probably corresponds to an improvement in channel condition from weedy and brushy to medium-length grass. Regular maintenance of channels is important in keeping flood levels down. It is also important to inspect channels and drainage reserves regularly to ensure that fences, chicken runs and the like are not constructed encroaching into floodway areas.

Economic analysis has been carried out for existing catchment conditions, with the recommended scheme but not for the options investigated for ultimate catchment conditions. Any comparison between existing conditions and a hypothetical development scenario at some unknown future time would be meaningless at best and, at worst, misleading. The benefit-cost ratio for the works recommended for existing catchment conditions is estimated to be 0.15. In calculating this ratio, only works which would affect the flooding problems have been taken into account. The cost of flood damages under existing catchment conditions is estimated to be reduced from $158,000 to $5,000 in the 1% AEP flood, and the average annual damage cost is estimated to be reduced from $16,000 to $1,700. The 1% AEP flood damage cost corresponding to the computed flood profiles for Option 3, with properties existing, is estimated to be $16,000 with an average annual damage cost of $5,100. In reality, the cost would be likely to be lower than this, because filling of blocks would reduce the amount of external property damage.

8.7 Conclusions and Recommendations

The most appropriate course of action consists of a combination of staged construction of structural flood mitigation options, with zoning restrictions and development limits to prevent inappropriate use of floodway and flood storage areas.

The recommended flood mitigation measures are, for existing catchment conditions:

- Construct the bridge at Mt Ettalong Road with a 14 m top width, together with associated channel works upstream and downstream to the outlet, in accordance with the design prepared by McMillan Britton & Kell.

- Construct channel works in the Neera Road channel in accordance with Council's most recent design.

- Increase the capacity of the Ettymalong Creek channel between the Cowper Road bridge and the confluence with Kahibah Creek by providing the greatest invert width possible at the bridge to enable the use of 1 in 1 batters without interfering with the bridge piers, and an invert width downstream of the bridge of 14.5 m with 1 in 1.5 batters, protected with placed rock spalls at the bridge and reinforced grass downstream.

- Enlargement of the Greenhaven Drive arm of Kahibah Creek by providing a channel invert width of 12 m, with batter slopes of 1 in 3.

- Removal of accumulated silt from Iluka Lagoon and provision of a sediment trap, with the introduction of building regulations to prevent the removal by runoff of particulate matter from building sites.

- Introduction of floor level control to ensure that at least 500 mm freeboard is provided for new development.

- Zoning restrictions defining floodway and flood storage area, and ensuring that such areas are used only for flood-compatible purposes.

Before further catchment urbanisation is permitted, and before any filling of private property in the floodplain is allowed, the following measures should be implemented:

- Double the capacity of the culverts at Brisbane Avenue and Calypta Road by adding two extra cells at each location, or by providing equivalent flow area by other means.

- Lower the invert along the Australia Avenue arm of Kahibah Creek between Australia Avenue and Osborne Avenue, as indicated in Figure 23. At the same time, replace and augment the culvert at McEvoy Avenue. The replacement culvert should have an invert level at the upstream side of RL 2.36 and should include one extra pipe, or should provide equivalent flow area by other means

- Triple the capacity of the culvert at Etta Road east by adding two extra pipes.

These measures are estimated to reduce flood levels to below house floor levels throughout the catchment. The following measures are intended to increase freeboard, and may be implemented at some future time if it is considered necessary to do so:

- Construct a retarding basin with a capacity of 50,000 m^3 at the Council depot site west of the Ettymalong Swamp arm of Kahibah Creek.

- Excavate an extra cutting through Mt Ettalong Road to convey Kahibah Creek flows to the eastern side of what is now the northern loop of Ettymalong Creek, and construct an extra bridge to carry Mt Ettalong Road over the cutting.

- Acquire or raise (if possible) low-lying houses with marginal freeboard. The houses most likely to be involved are Numbers 2 (Lot 100) and 22 (Lot 11) Neera Road, and Numbers 23 (Lot 165), 25 (Lot 164) and 27 (Lot 163) Calypta Road. The following houses would also have little freeboard (but not as severely limited as those mentioned above): Numbers 48 (Lot 57), 56 (Lot 61) and 58 (Lot 62) Greenhaven Drive, Number 31 (Lot 561) Elanora Road, Number 36 (Pt 10) Mt Ettalong Road, Numbers 50 (Lot 25), 20 (Lot 10), 18 (Lot 9) and 4 (Lot 2) Neera Road and Numbers 3 (Lot 38), 15 (Lot 44) and 17 (Lot 45) Cowper Road. Other dwellings would have freeboard of 200 mm or more.

In addition, zoning should be used to preserve floodways and flood storage areas in perpetuity for the passage of flood waters. Existing encroachments, such as fences and chicken sheds, should be removed and the zoning restrictions should be vigourously enforced.

Consideration should be given to implementation of a flood warning system to provide as much warning as possible of impending flooding.

Action should be taken to improve local drainage, to prevent local flooding problems at Wilks Avenue and McManus Close, The Rampart, and the Silvania Road and Edgecliff Road area.

TABLE 8.1
PEAK DISCHARGE IN m^3/s AND MAXIMUM AVERAGE IN m/s AT KEY LOCATIONS

Channel Conditions		Existing	Stage 1	Stage 2			
Catchment Conditions		Existing	Existing	Urban, with backyard filling			
Option		-	-	1	2	3	4
Neera Road	Q	26	28	28	28	28	28
	V	1.5-1.9	1.6-1.7	1.4-1.5	1.4-1.5	1.4-1.5	1.6
Cowper Road	Q	58	76	70	57	70	73
	V	1.4-1.8	1.7-2.0	1.1-1.6	1.4-1.5	1.4-1.7	1.6-1.8
Mt Ettalong Rd	Q	33	86	99	88	99	104*
at McLaurin Rd	V	2.6	4.1	4.3	4.1	4.3	1.5-2.4
Ettymalong Ck	Q	48	90	110	100	111	110
d/s Mt Ettalong Rd	V	1.5-2.2	1.7-3.1	1.9-3.3	1.9-3.2	1.9-3.4	1.3-3.3
Iluka Ck	Q	13	14	12	13	12	13
	V	0.5-1.8	0.5-1.9	0.5-1.6	0.5-1.7	0.5-1.6	0.5-1.7
Albany Square	Q	21	30	42	43	42	44
	V	0.1-0.8	1.0-1.3	0.9-1.1	0.9-1.1	0.9-1.1	1.0-1.2
Calypta Rd	Q	15	19	31	31	31	32
	V	1.9	1.9	1.4	1.4	1.4	1.4
Greenhaven	Q	15	21	27	27	27	27
Drive	V	0.6-0.9	0.5-0.8	0.6-0.9	0.6-0.9	0.7-0.9	0.6-0.9
Australia	Q	11	11	19	19	20	19
Ave Arm	V	0.7-3.0	0.9-3.0	0.8-3.5	0.8-3.5	0.6-3.5	0.8-3.5

*This peak discharge figure is the combined flow through the McLaurin Road channel and the extra cutting.

9. DRAFT FLOODPLAIN MANAGEMENT PLAN

9.1 Introduction

The Floodplain Management Plan constitutes the third stage of the management process for the Kahibah Creek catchment, and is intended to provide the basis for the future management of floodprone land along Kahibah Creek. The Plan is a planning document, not a list of structural works to be undertaken, and it defines clearly the zoning limits for the different areas of the floodplain.

9.2 Description of the Plan

The floodplain was subdivided into eleven areas, which are described in this document. The areas are shown in Figure 1, and are:

KC1	Floodways
KC2	Kahibah Creek Main North Arm
KC3	Greenhaven Drive Arm
KC4	Australia Avenue Arm
KC5	Elanora Road Flood Storage Area
KC6	Mt Ettalong Road Floodway
KC7	McLaurin Road to Outlet
KC8	Iluka Creek and Lagoon
KC9	Cowper Road to McLaurin Road
KC10	Neera Road Branch
KC11	Lakeview Parade and Kahibah Road Arm

The key features of the Plan are:

- ultimately no buildings will be flooded above habitable floor levels in the 1% AEP flood. This will be achieved by floor level control for new development, and channel and bridge works to reduce flood levels below the floors of existing buildings;
- provision for limited development on flood fringe land subject to strict controls;
- land within the floodway will be maintained in perpetuity for the passage of flood flows;
- staging of works;
- controls for future catchment development.

10. ACKNOWLEDGEMENTS

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In completing this report Willing & Partners have been assisted by advice and information from the Public Works Department, Gosford City Council, Maritime Services Board, Bureau of Meteorology, and residents of the Kahibah Creek catchment.

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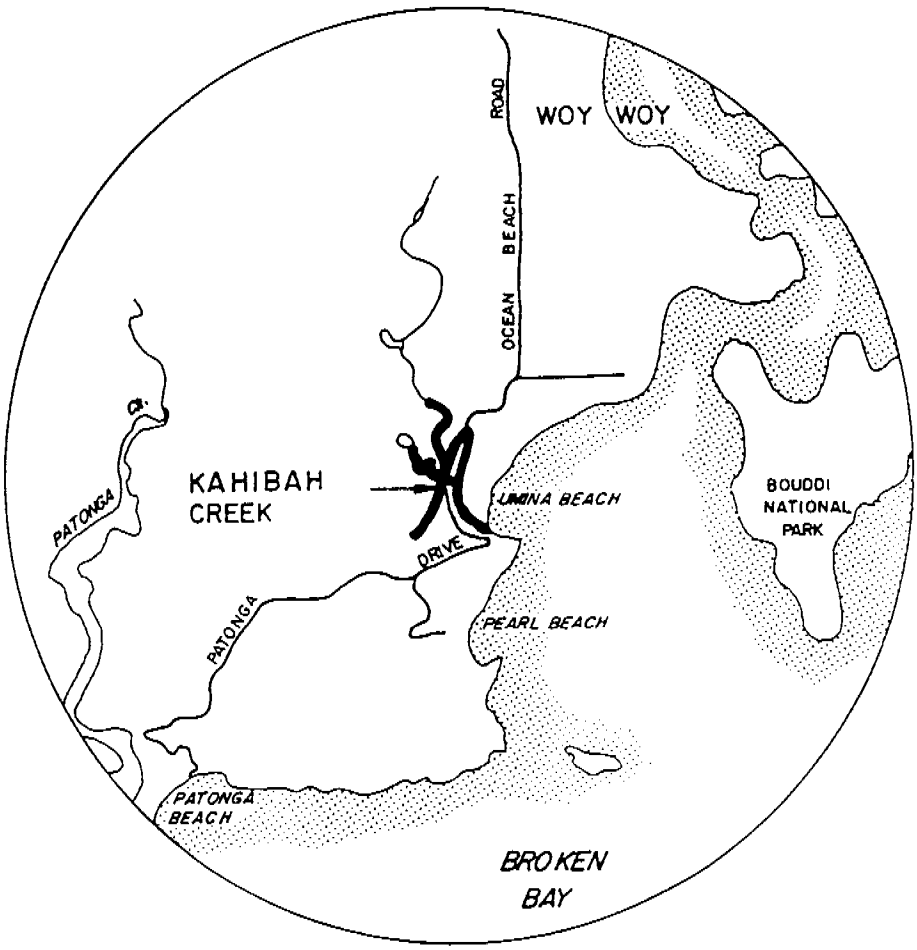
FIGURES



KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

LOCALITY PLAN

FIGURE 1

N° 6509

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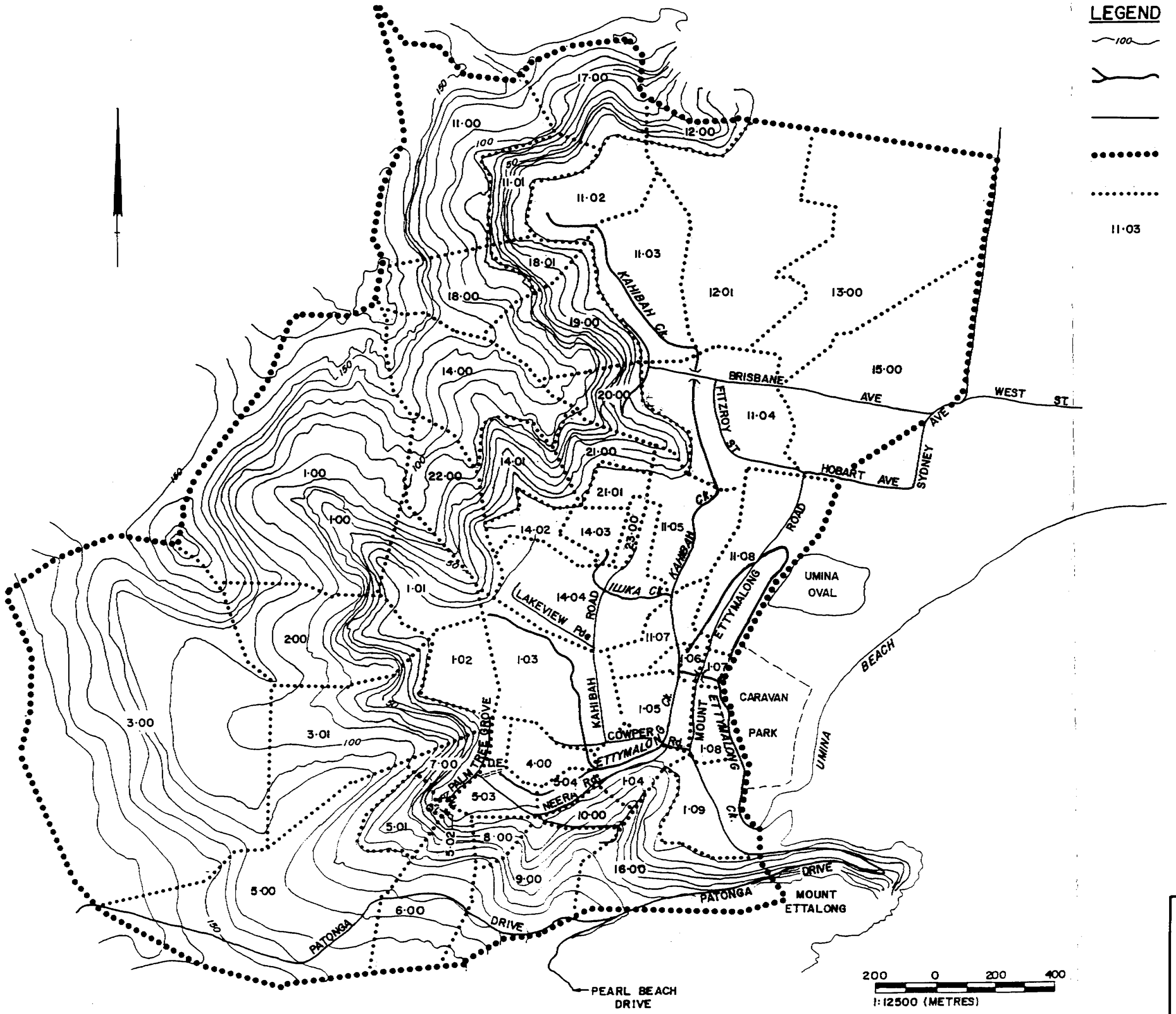
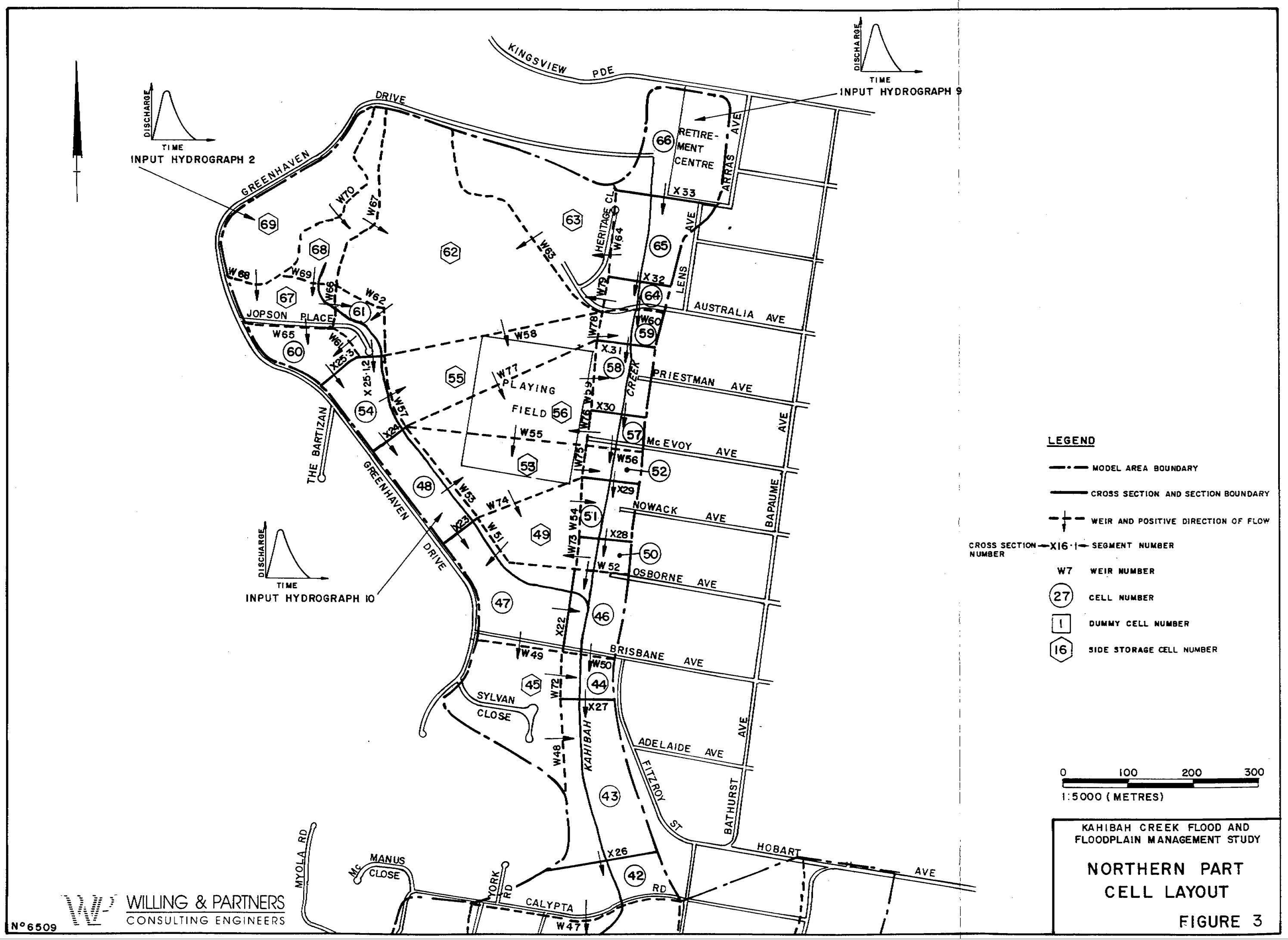


KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

CATCHMENT MAP

FIGURE 2

N° 6509



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CONSULTING ENGINEERS

N°6509

KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

NORTHERN PART CELL LAYOUT

FIGURE 3

INPUT HYDROGRAPH 11

INPUT HYDROGRAPH 12

INPUT HYDROGRAPH 1

INPUT HYDROGRAPH 6

INPUT HYDROGRAPH 8

INPUT HYDROGRAPH 5

INPUT HYDROGRAPH 4

INPUT HYDROGRAPH 3

INPUT HYDROGRAPH 7

INPUT HYDROGRAPH 13

DISCHARGE

TIME

WATER LEVEL

MYOLA RD

Mc MANUS CLOSE

WILKS AVE

HOMAN CLOSE

AIRLY RD

STELLA RD

ILUKA RD

LAKEVIEW PDE

MONASH RD

McLAURIN RD

KORINA AVE

COWPER RD

ETTYMALONG RD

NEERA

PALM TREE GROVE

EDGECLIFF RD

YORK RD

CALYPTA RD

KALLAROO RD

ALBANY RD

KAHIBAH CREEK

DORA RD

LUKA CK

YARRABIN CREEK

SYLVANIA RD

MOUNT ETTALONG RD

ETTA RD

ETTALONG RD

HOBART AVE

CARAWA ST

MELBOURNE AVE

UMINA OVAL

CARAVAN PARK

UMINA BEACH

LEGEND

MODEL AREA BOUNDARY

CROSS SECTION AND SECTION BOUNDARY

WEIR AND POSITIVE DIRECTION OF FLOW

CROSS SECTION NUMBER — X16·1 — SEGMENT NUMBER

W7 WEIR NUMBER

27 CELL NUMBER

1 DUMMY CELL NUMBER

16 SIDE STORAGE CELL NUMBER

0 100 200 300

1:5000 (METRES)

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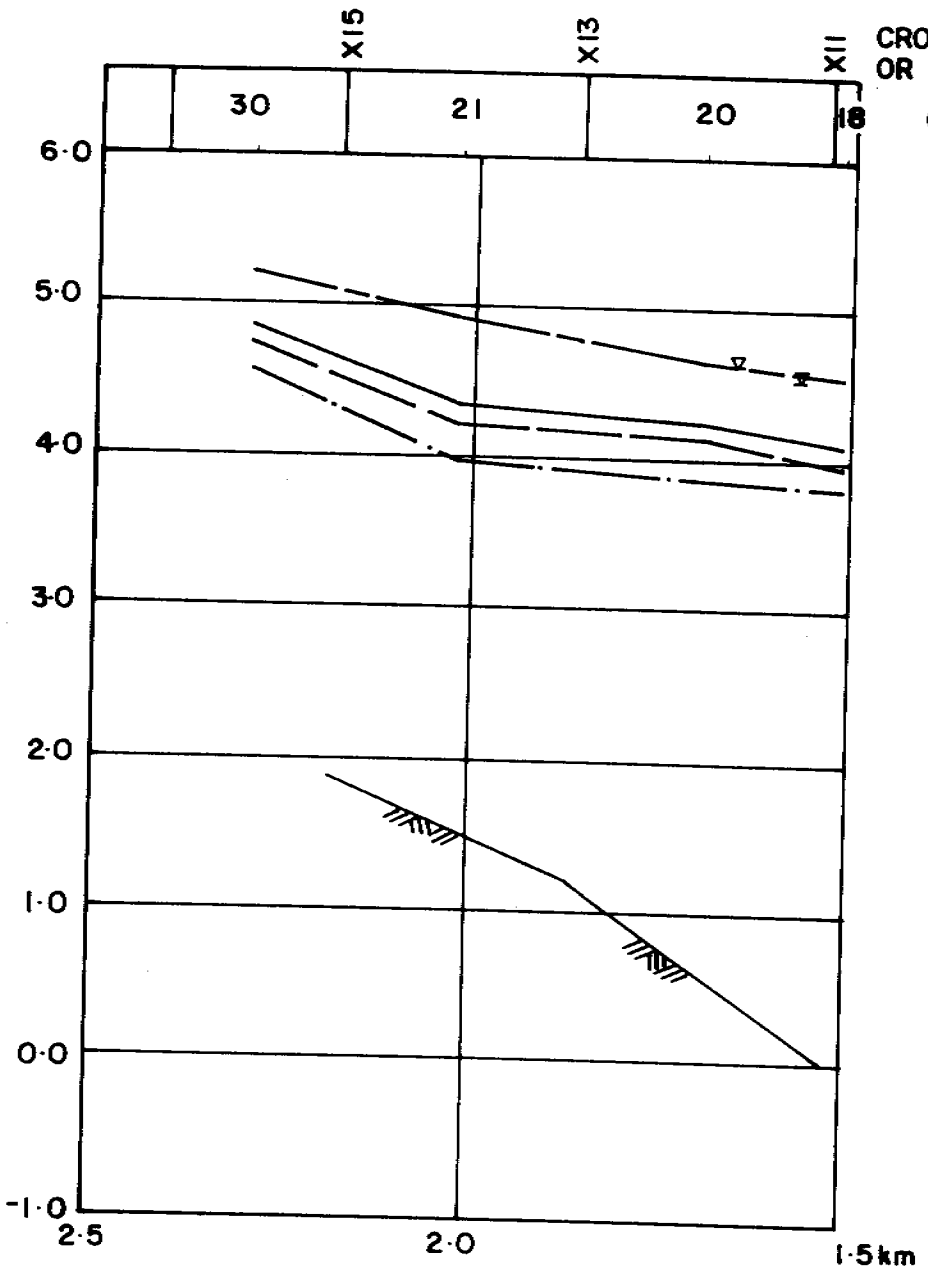
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

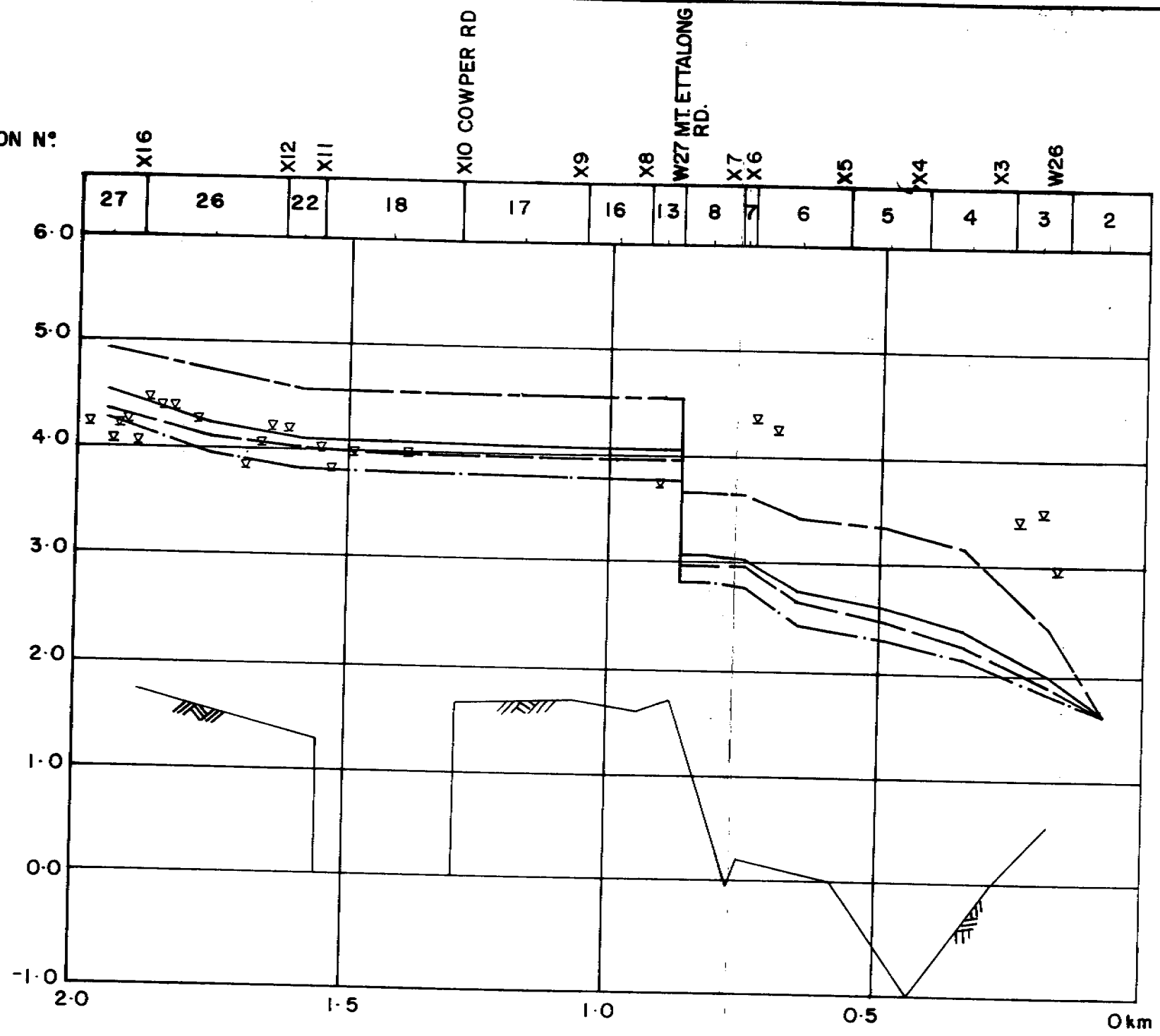
SOUTHERN PART CELL LAYOUT

FIGURE 4

N°6509



ETTYMALONG SWAMP ARM



ETTYMALONG CREEK AND NEERA ROAD ARM

LEGEND

1% AEP FLOOD
2% AEP FLOOD
5% AEP FLOOD
EXTREME FLOOD

N° 6509

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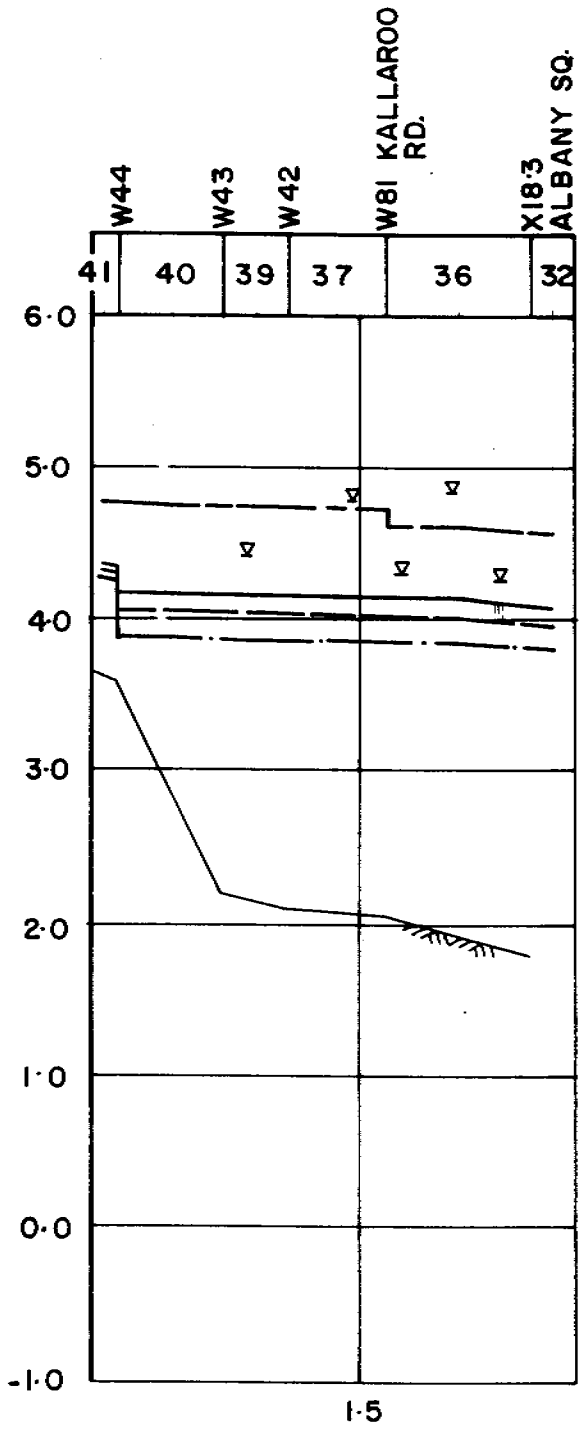
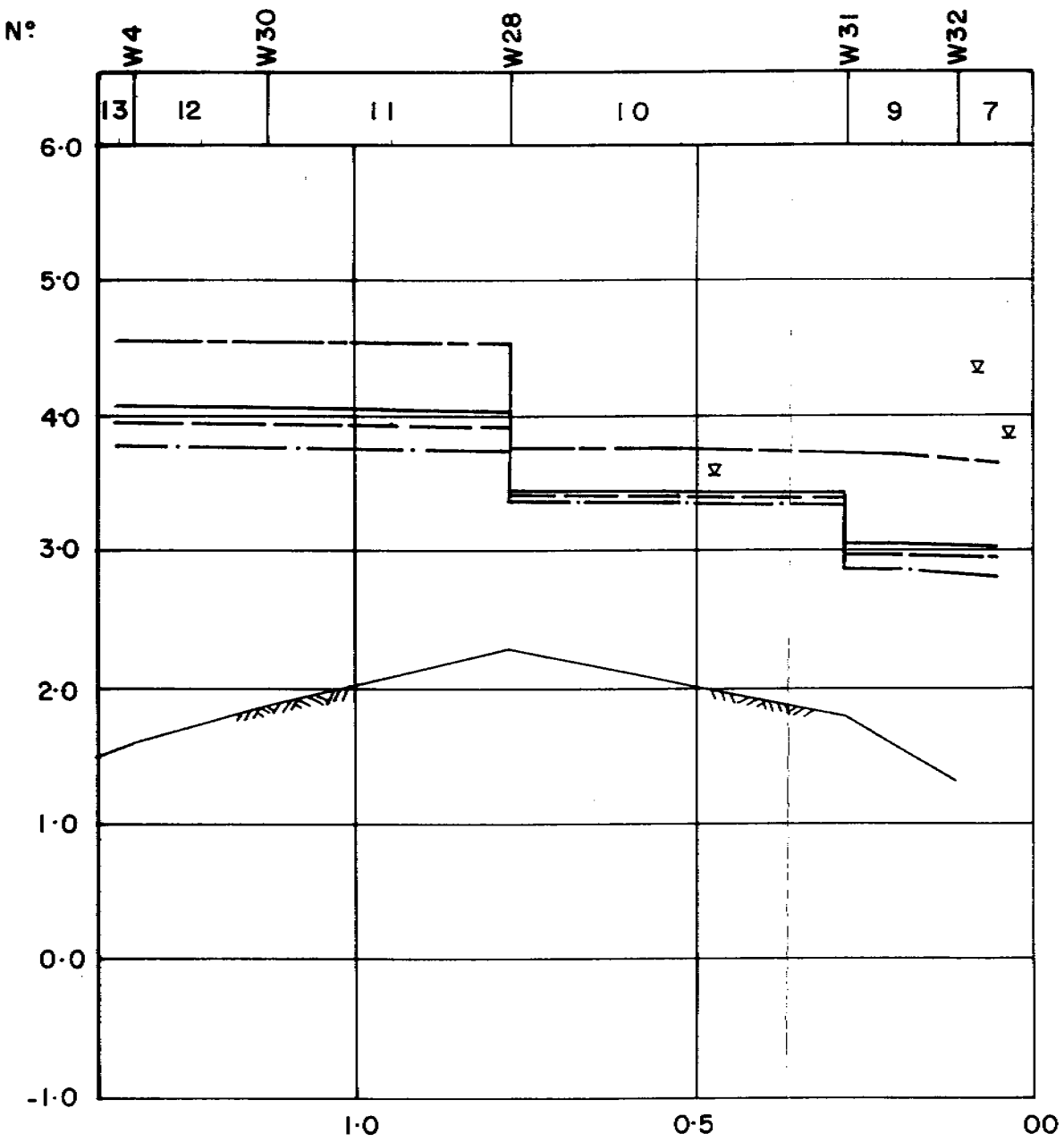
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

FLOOD PROFILES
EXISTING CONDITIONS

FIGURE 5



ILUKA LAGOON ARM



ETTYMALONG CREEK - NORTHERN LOOP

LEGEND

——— 1% AEP FLOOD
— — — 2% AEP FLOOD
—·—·— 5% AEP FLOOD
— – — – — EXTREME FLOOD

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KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

FLOOD PROFILES EXISTING CONDITIONS

FIGURE 6

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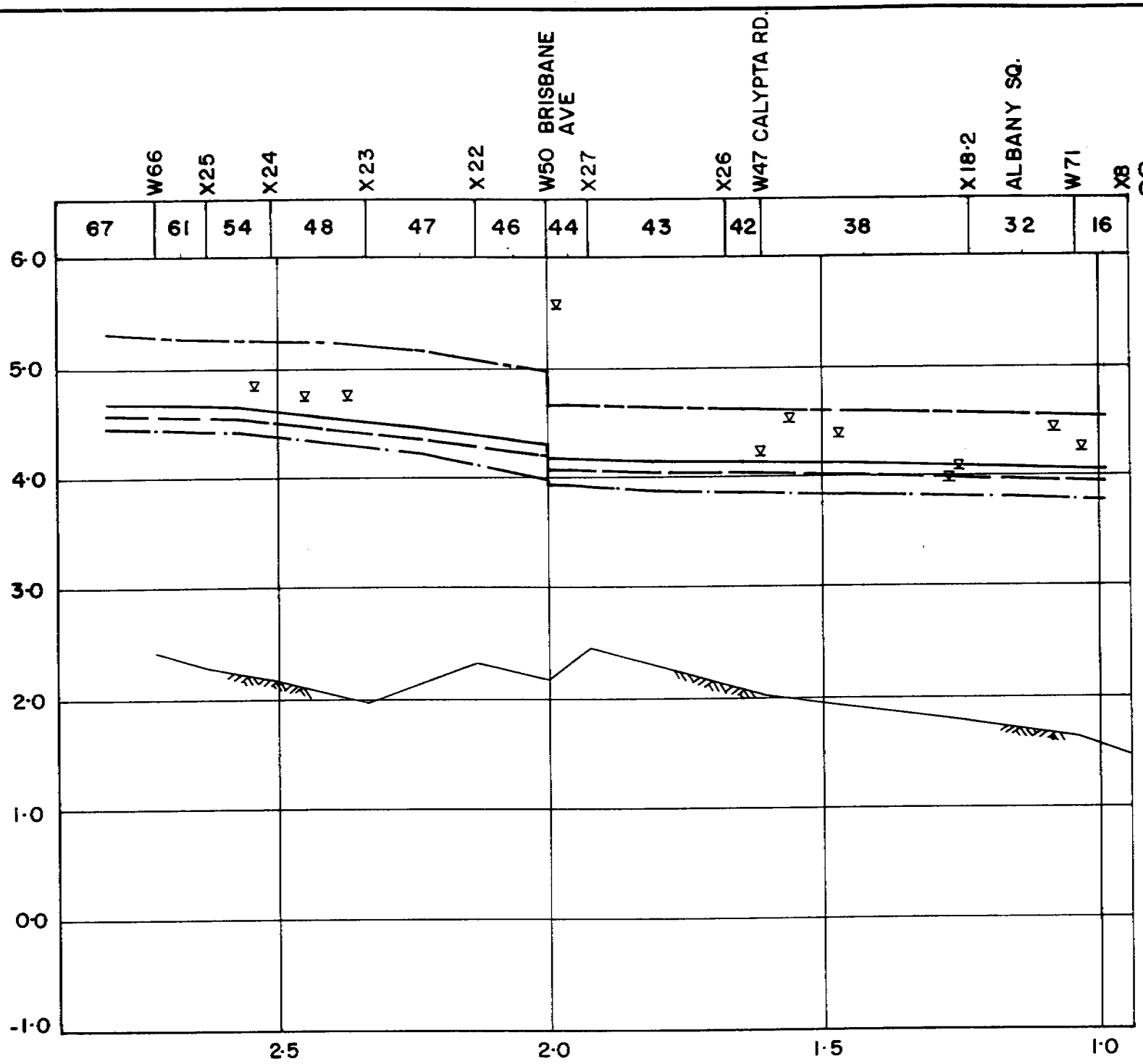
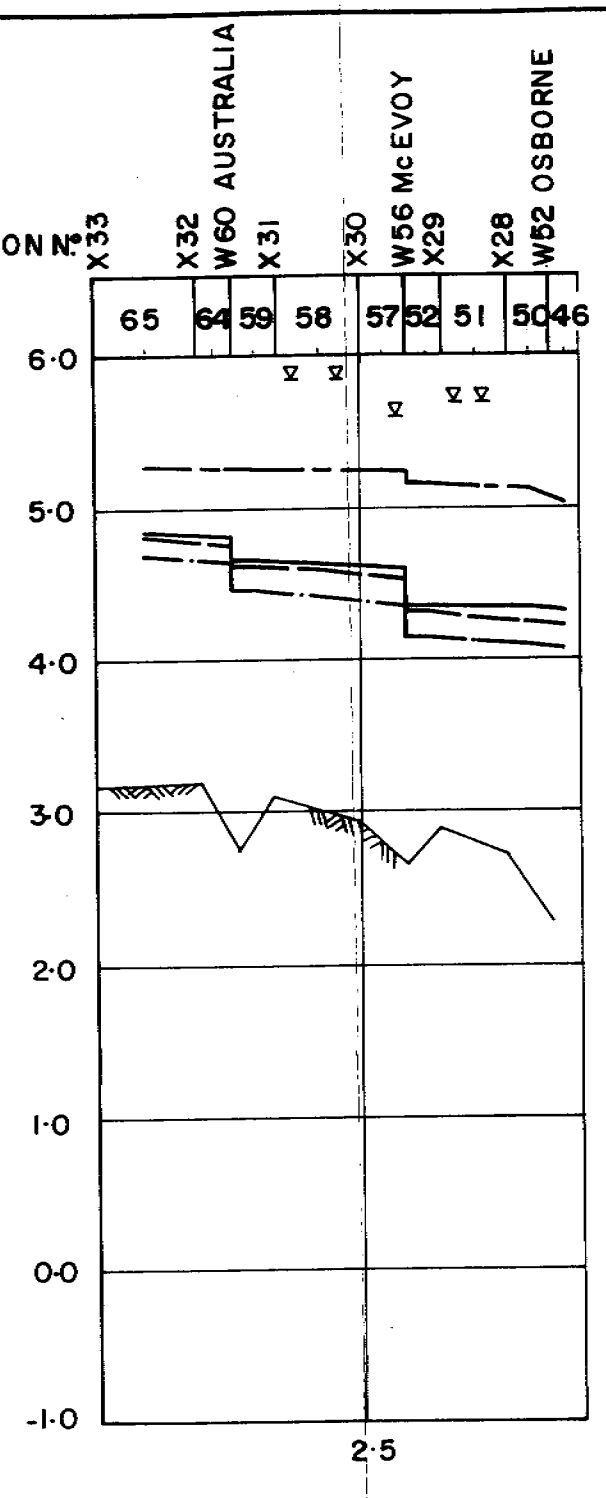


GREENHAVEN DRIVE ARM AND KAHIBAH CREEK



AUSTRALIA AVENUE ARM

LEGEND

——— 1% AEP FLOOD
— — 2% AEP FLOOD
—·— 5% AEP FLOOD
—– – – EXTREME FLOOD

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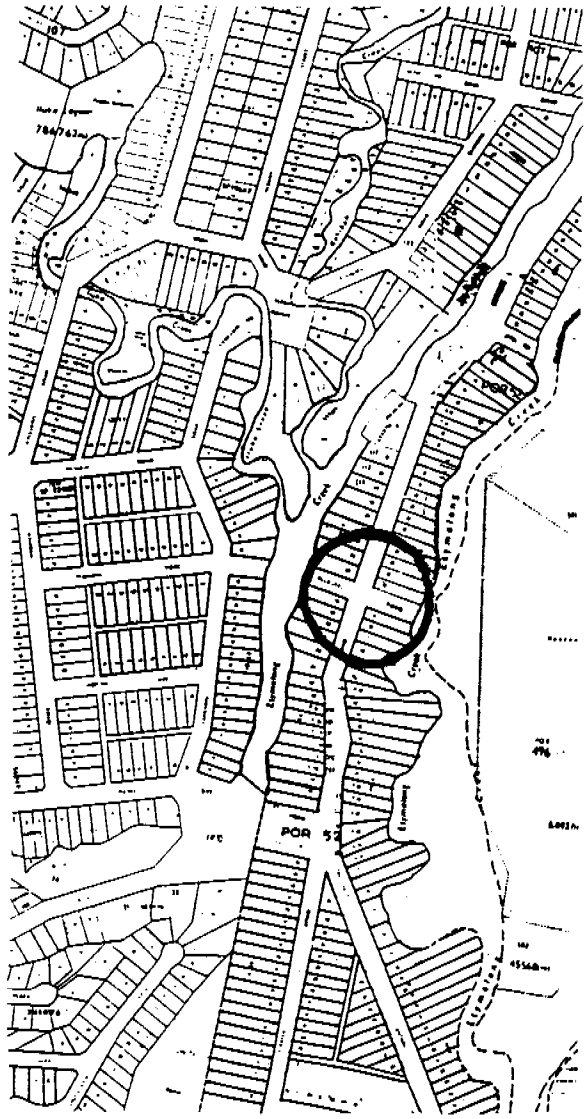
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

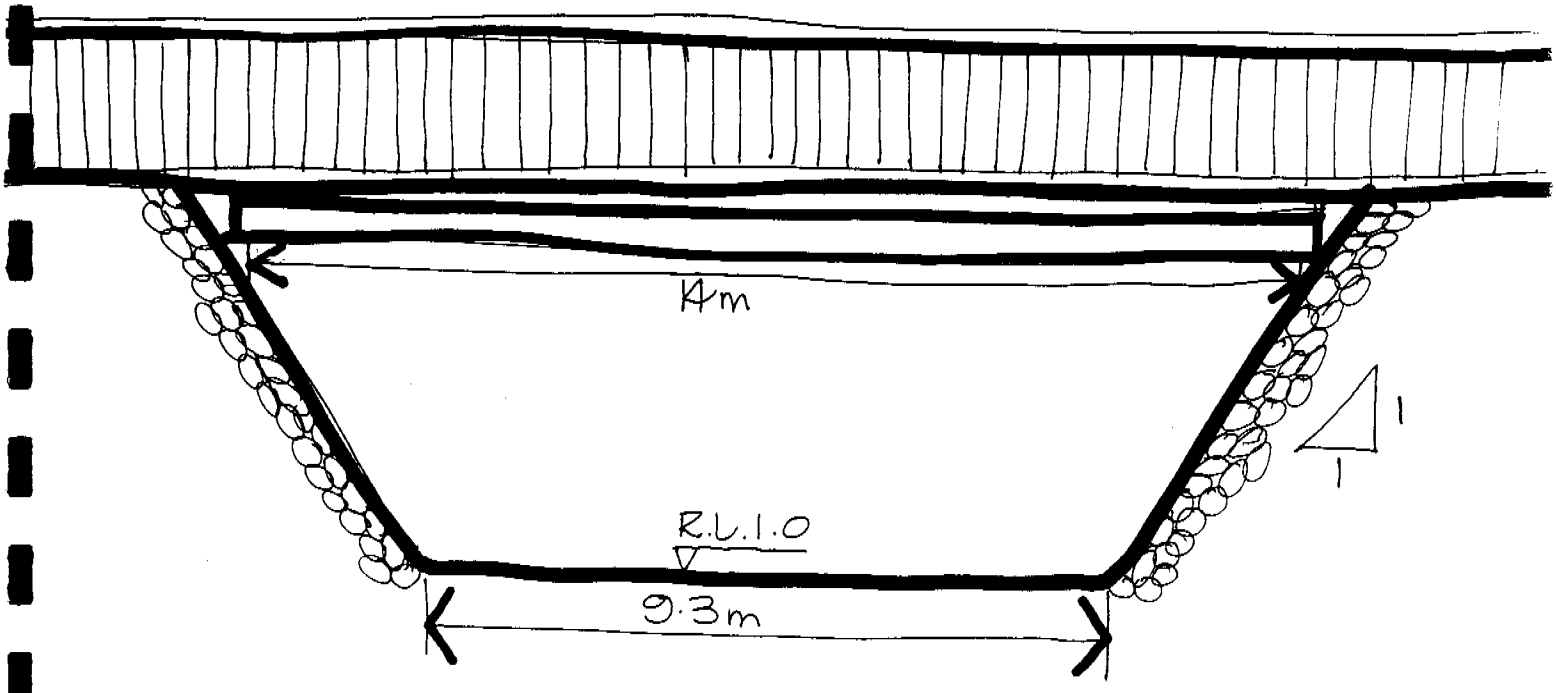
FLOOD PROFILES
EXISTING CONDITIONS

FIGURE 7

N°6509



DEMOLISH EXISTING CULVERT AND CONSTRUCT BRIDGE



MT ETTALONG ROAD AT McLAURIN ROAD REGERVE

SCALE 1:100

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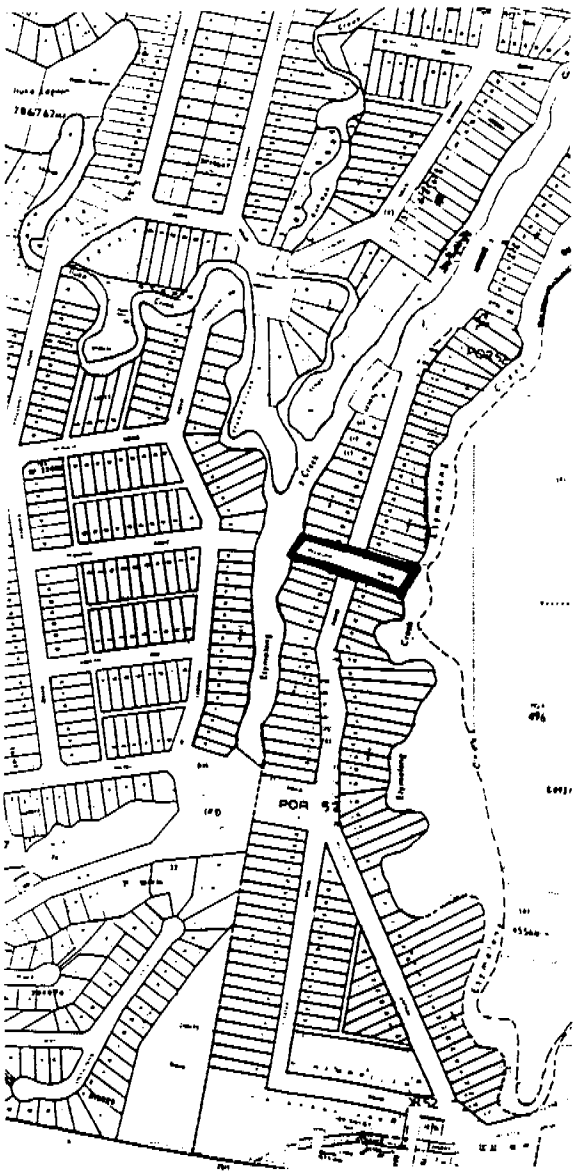
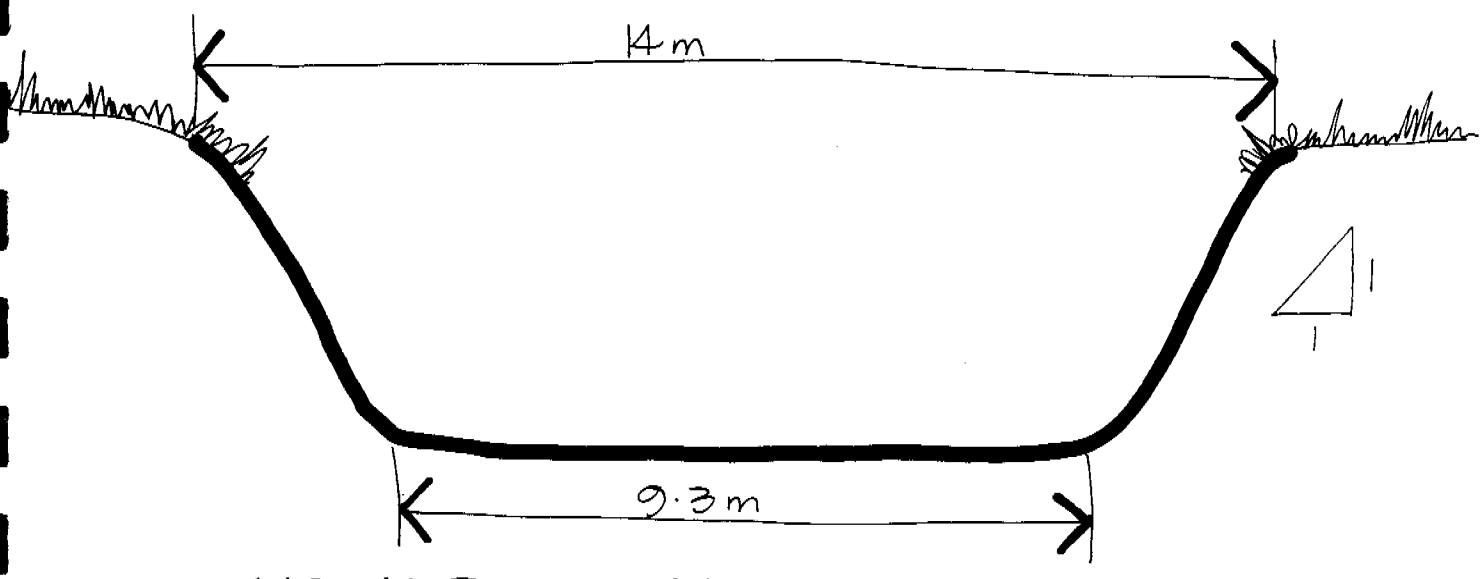
FIGURE 8



ENLARGE CHANNEL
PROVIDE SCOUR
PROTECTION

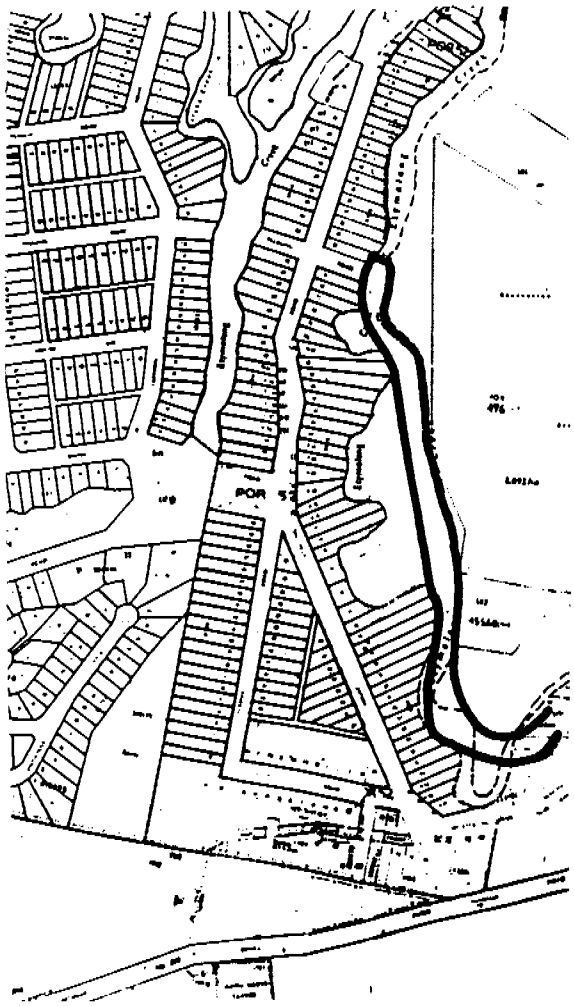


McLAURIN ROAD CHANNEL

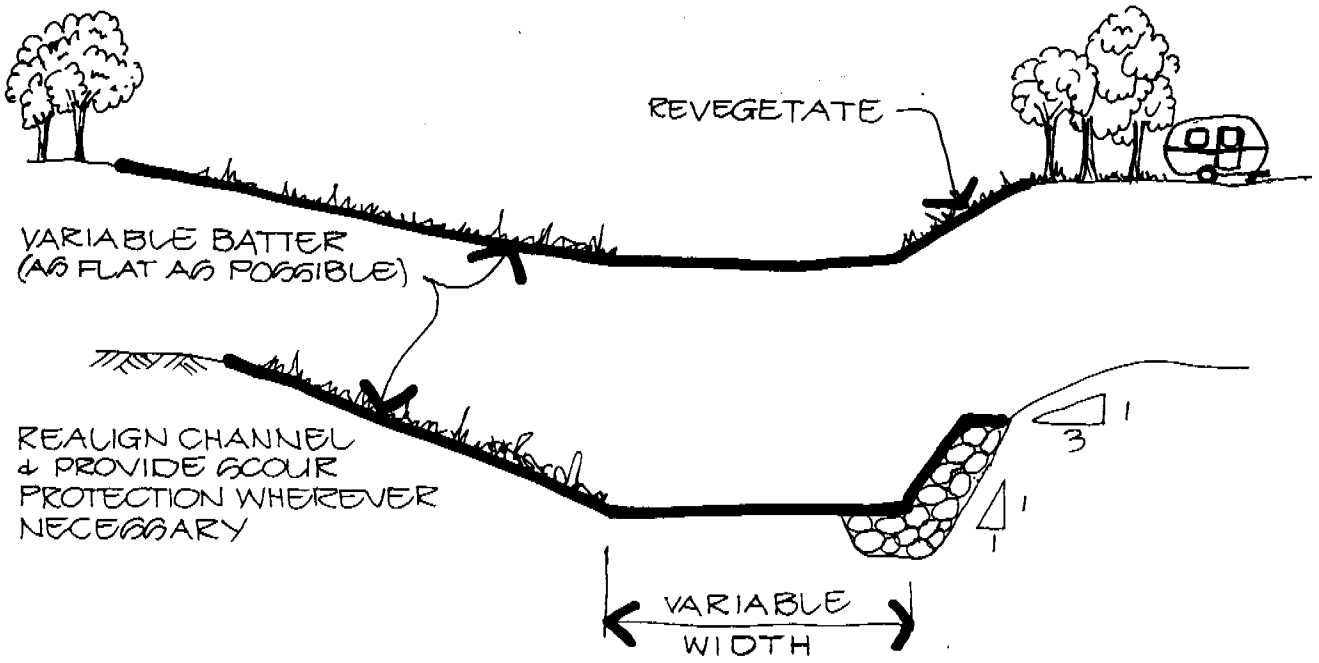
SCALE 1:100

WILLING & PARTNERS

FIGURE 9



REALIGN CHANNEL
PROVIDE SCOUR
PROTECTION



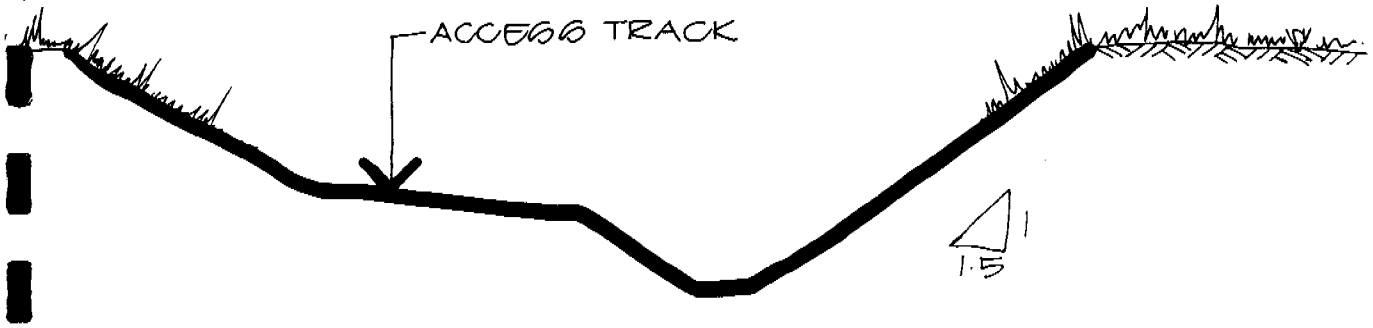
TYPICAL CROSS SECTION DOWNSTREAM OF MT ETTALONG ROAD

SCALE 1:20

WILLING & PARTNERS
CONSULTING ENGINEERS

FIGURE 10

RECONSTRUCT CHANNEL

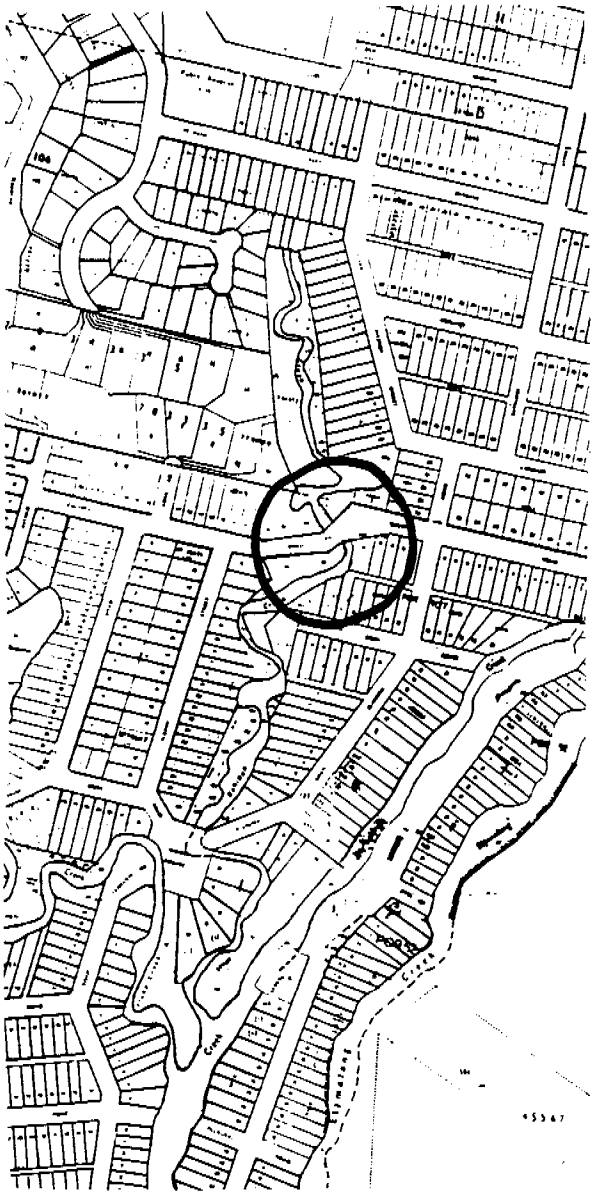


NEERA ROAD CHANNEL

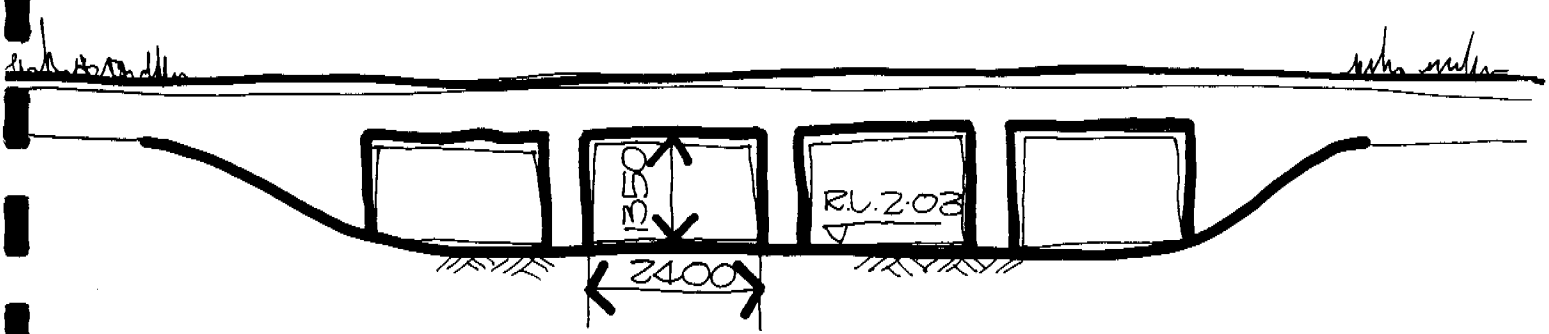
SCALE 1:100

WILLING & PARTNERS
CONSULTING ENGINEERS

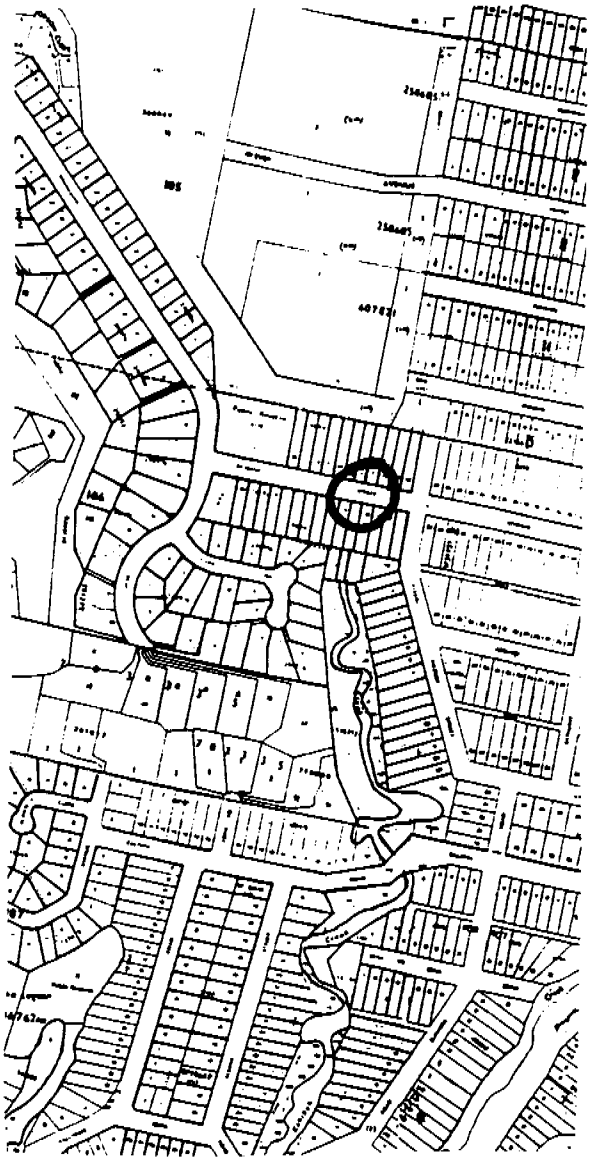
FIGURE 11



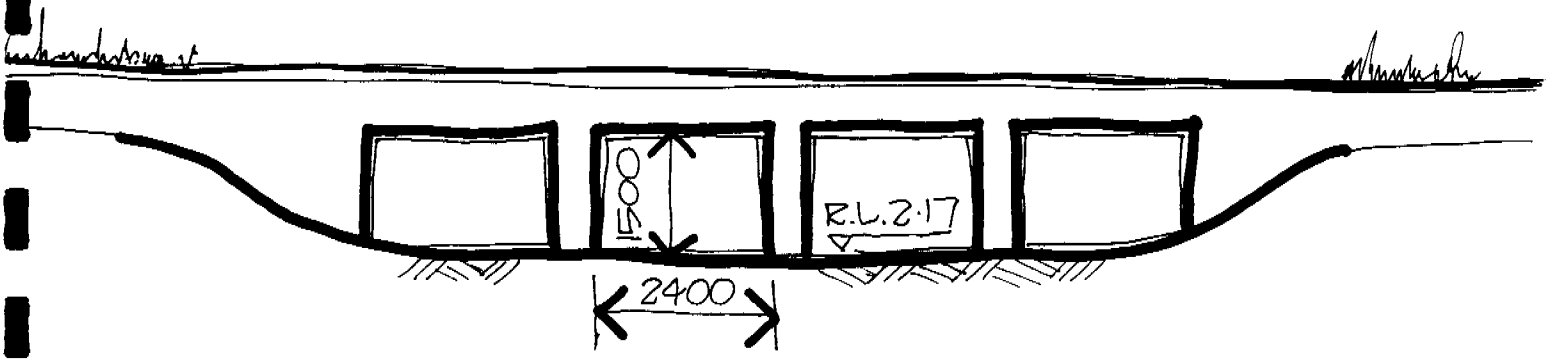
DOUBLE CULVERT CAPACITY



CALYPTA ROAD
SCALE 1:100



DOUBLE CULVERT
CAPACITY



BRISBANE AVENUE

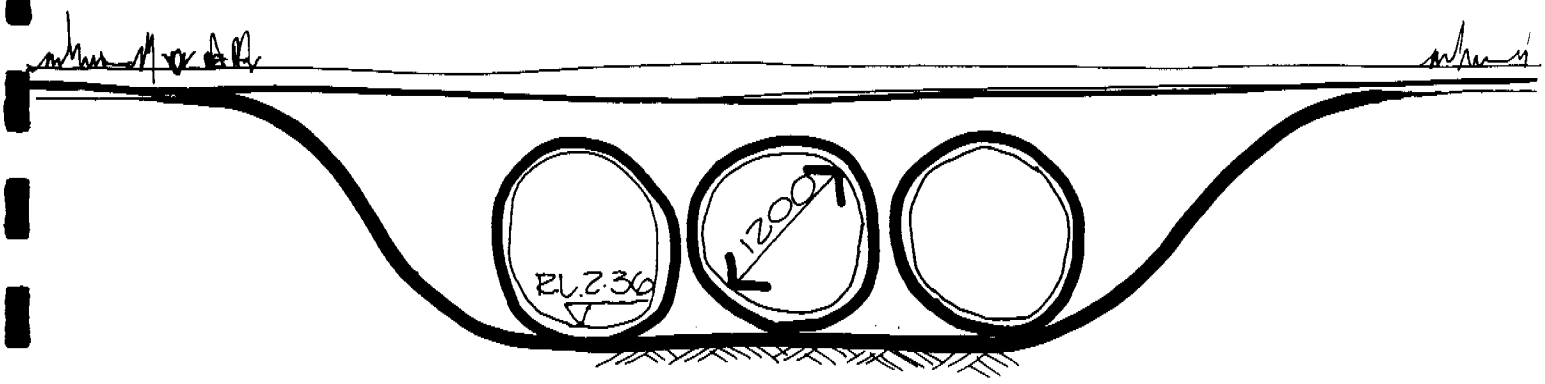
SCALE 1:100

WILLING & PARTNERS
CONSULTING ENGINEERS

FIGURE 13

LOWER CULVERT INVERT LEVEL

INCREASE CULVERT CAPACITY

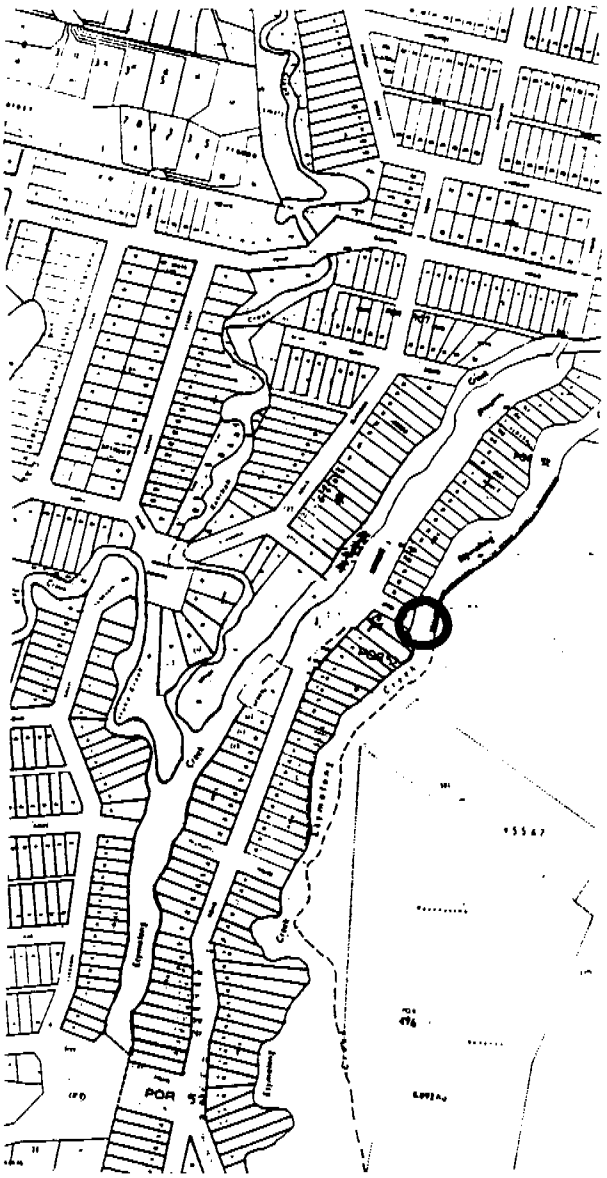


McEVOY AVENUE

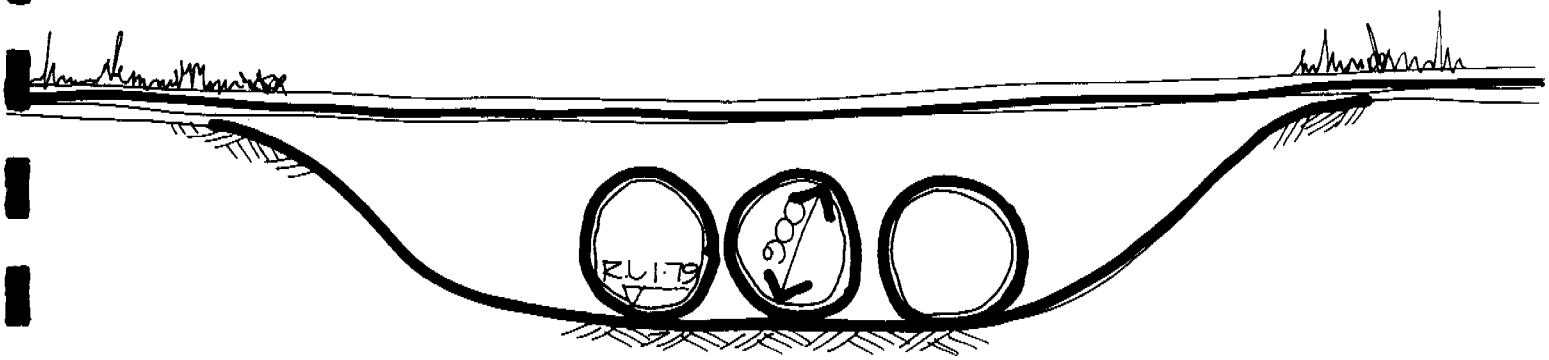
SCALE : 1:50

WILLING & PARTNERS
CONSULTING ENGINEERS

FIGURE 14



TREBLE CULVERT
CAPACITY

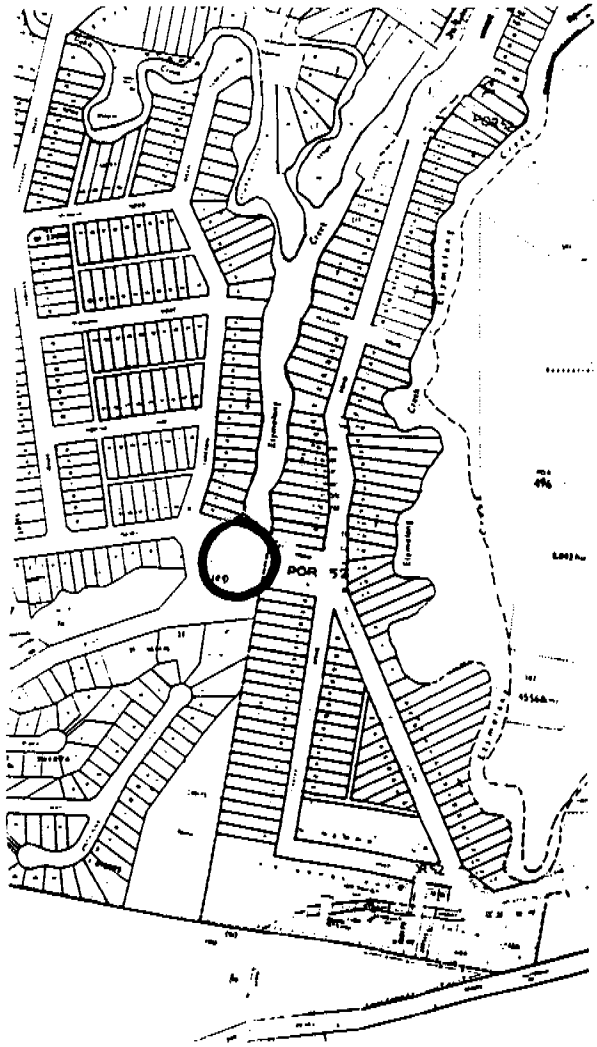


ETTA ROAD EAST

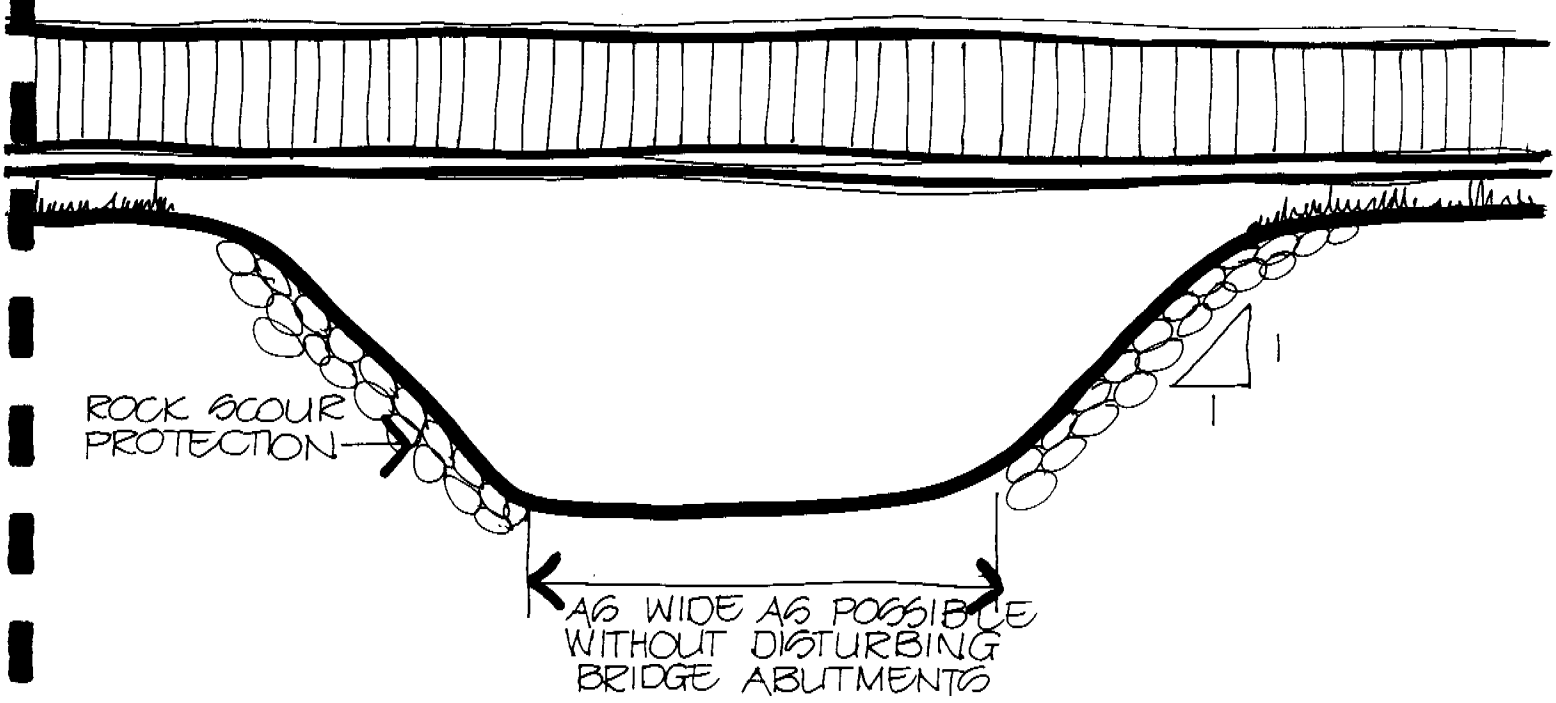
SCALE 1:50

WILLING & PARTNERS

FIGURE 15



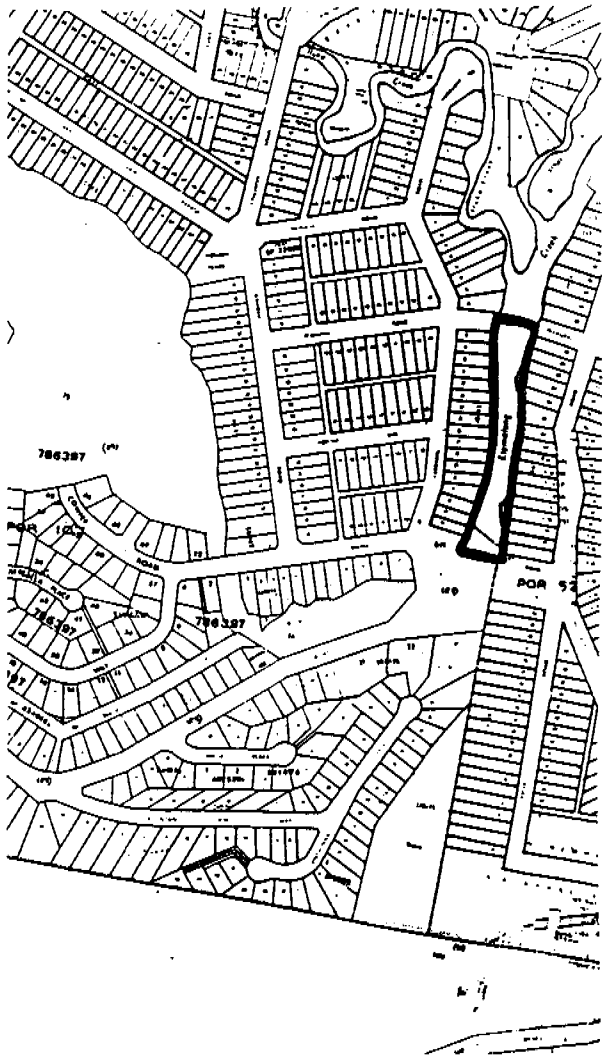
ENLARGE BRIDGE WATERWAY AREA



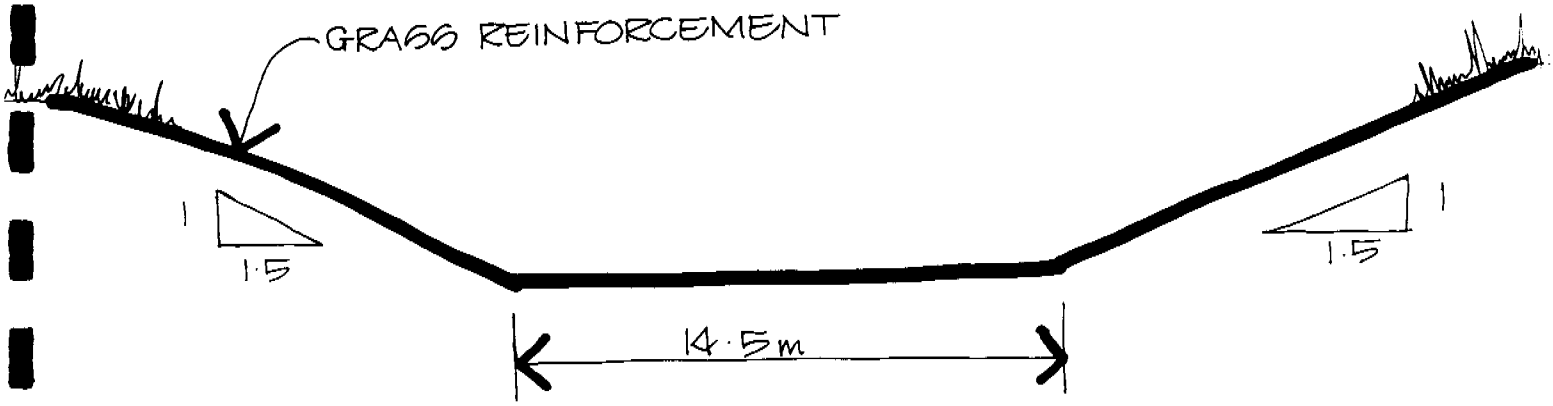
ETTYMALONG CREEK AT COWPER ROAD BRIDGE

WILLING & PARTNERS

FIGURE 16



ENLARGE CHANNEL

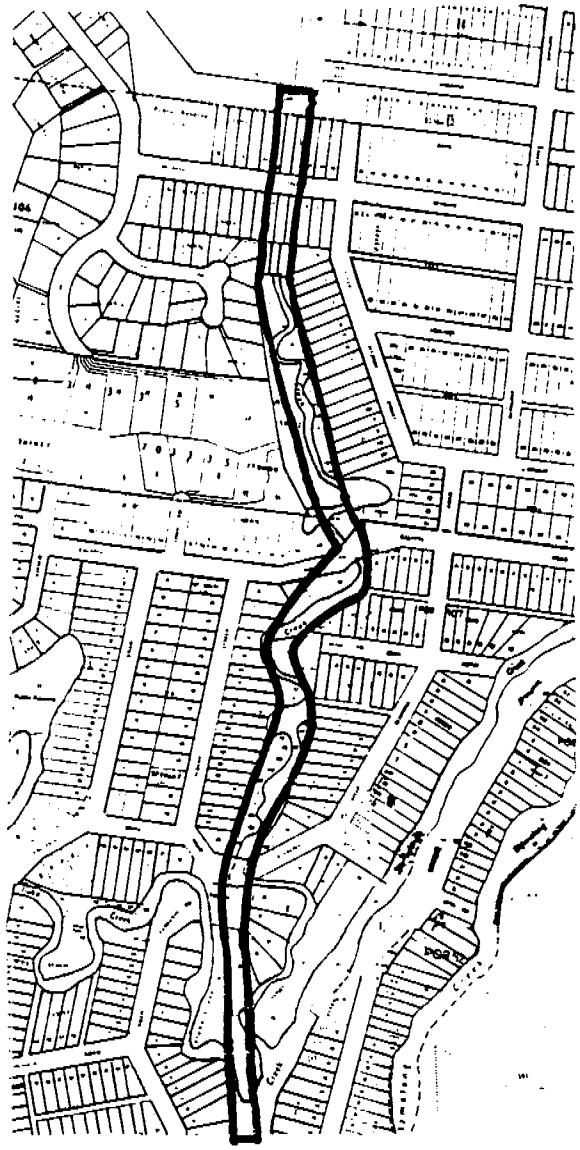


ETTYMALONG CREEK DOWNSTREAM OF COWPER ROAD

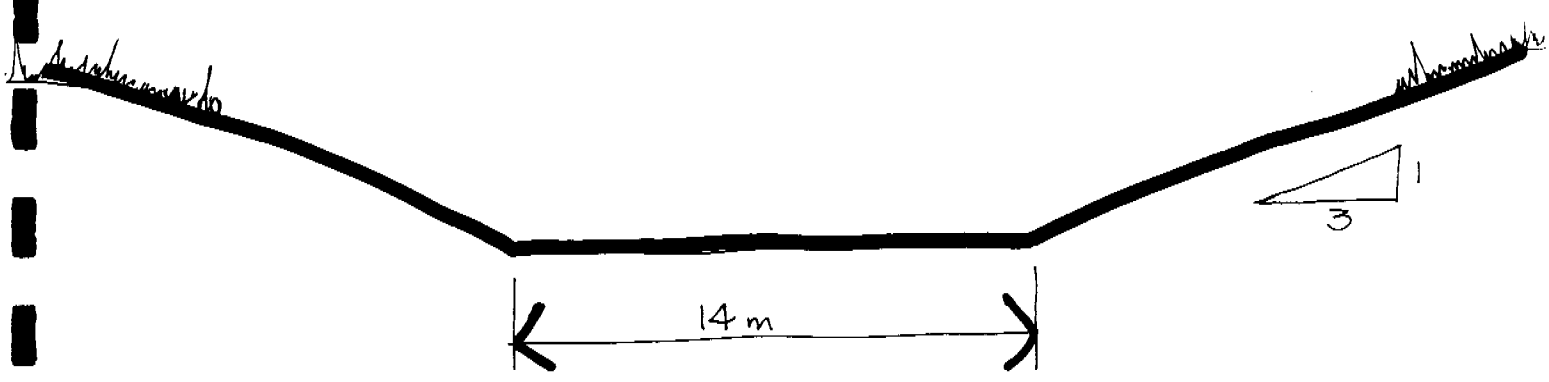
SCALE 1:20

WILLING & PARTNERS
CONSULTING ENGINEERS

FIGURE 17



ENLARGE CHANNEL



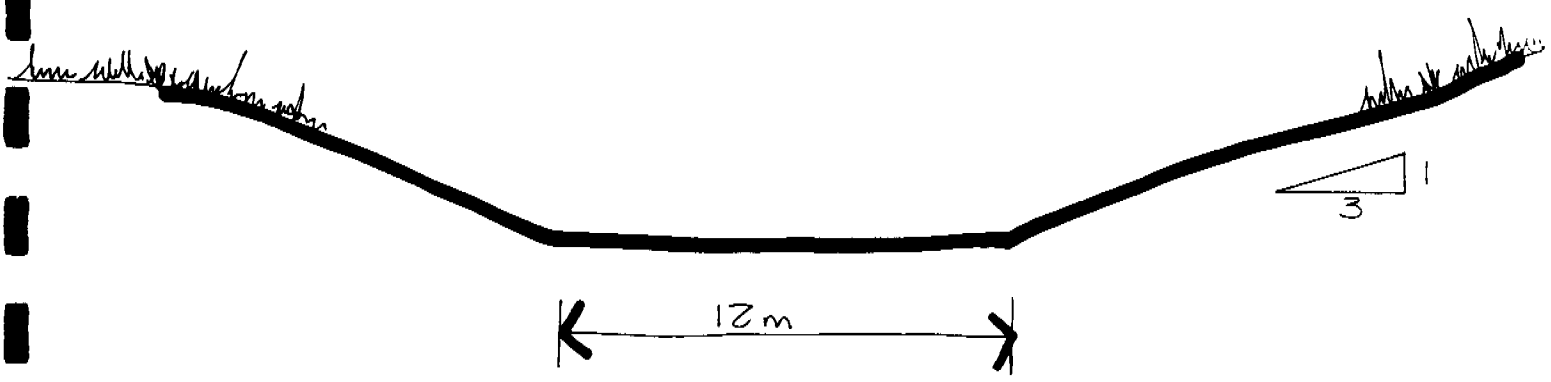
MAIN NORTH ARM OF KAHIBAH CREEK

SCALE 1:20

WILLING & PARTNERS
CONSULTING ENGINEERS

FIGURE 18

ENLARGE CHANNEL

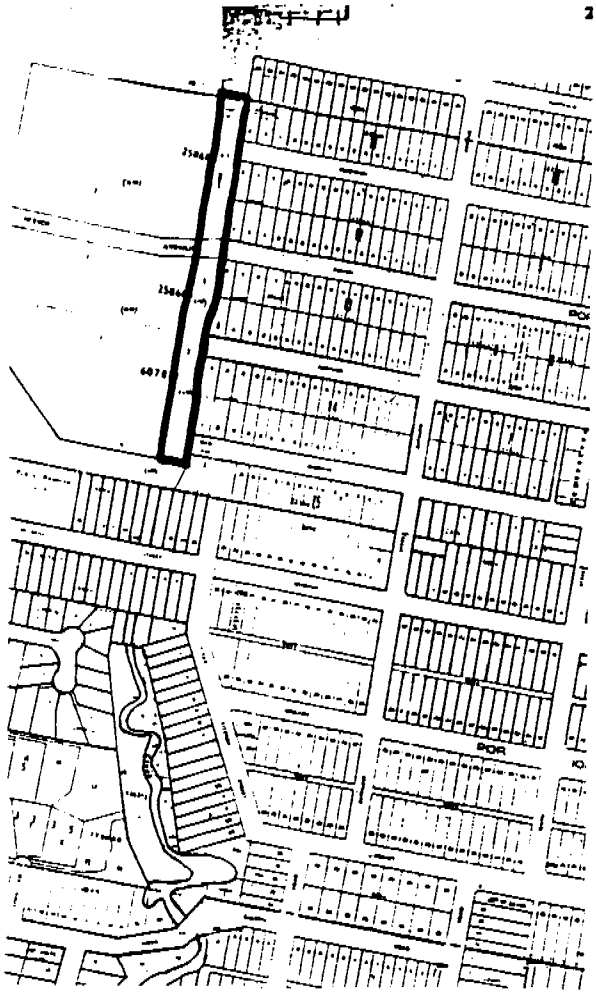


GREENHAVEN DRIVE ARM

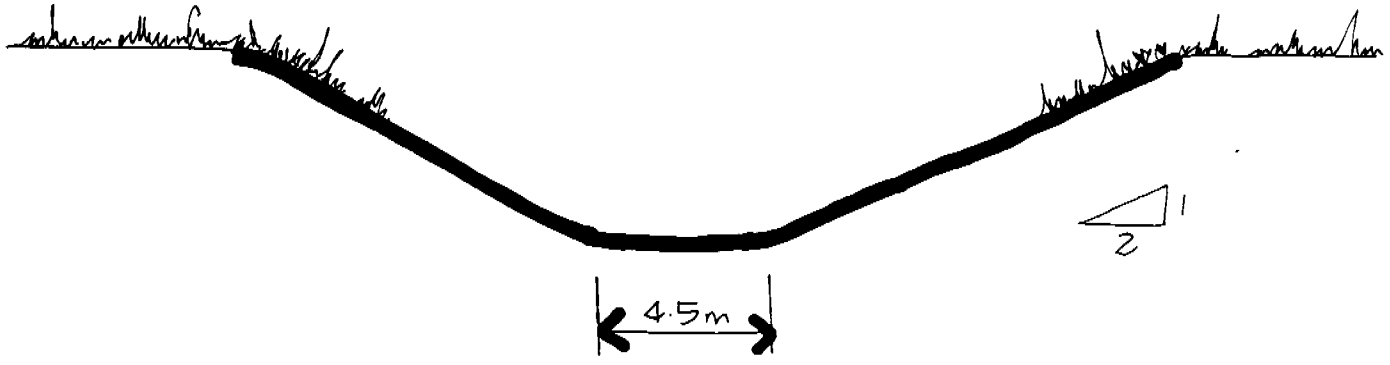
SCALE 1:20

WILLING & PARTNERS
CONSULTING ENGINEERS

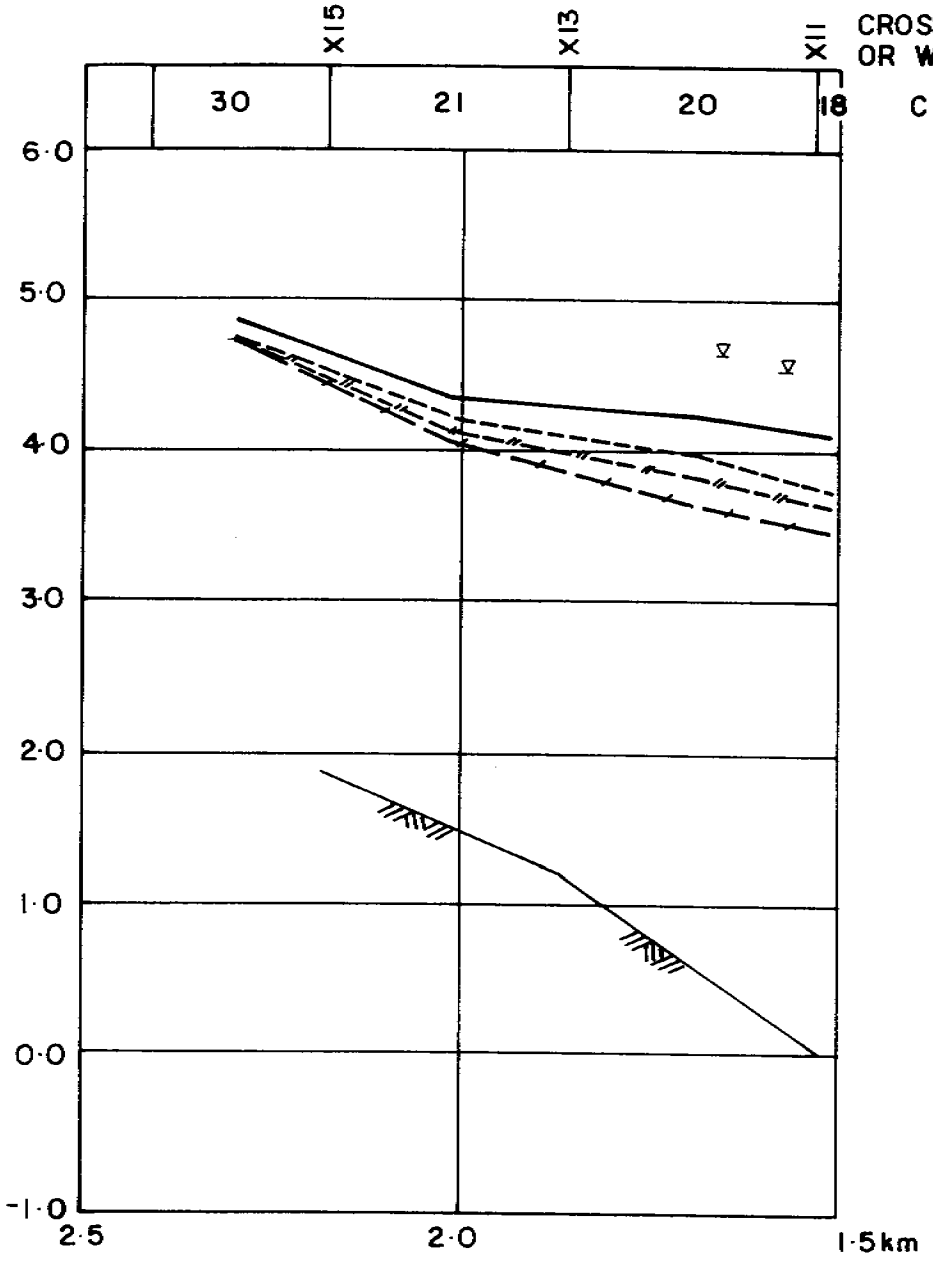
FIGURE 19



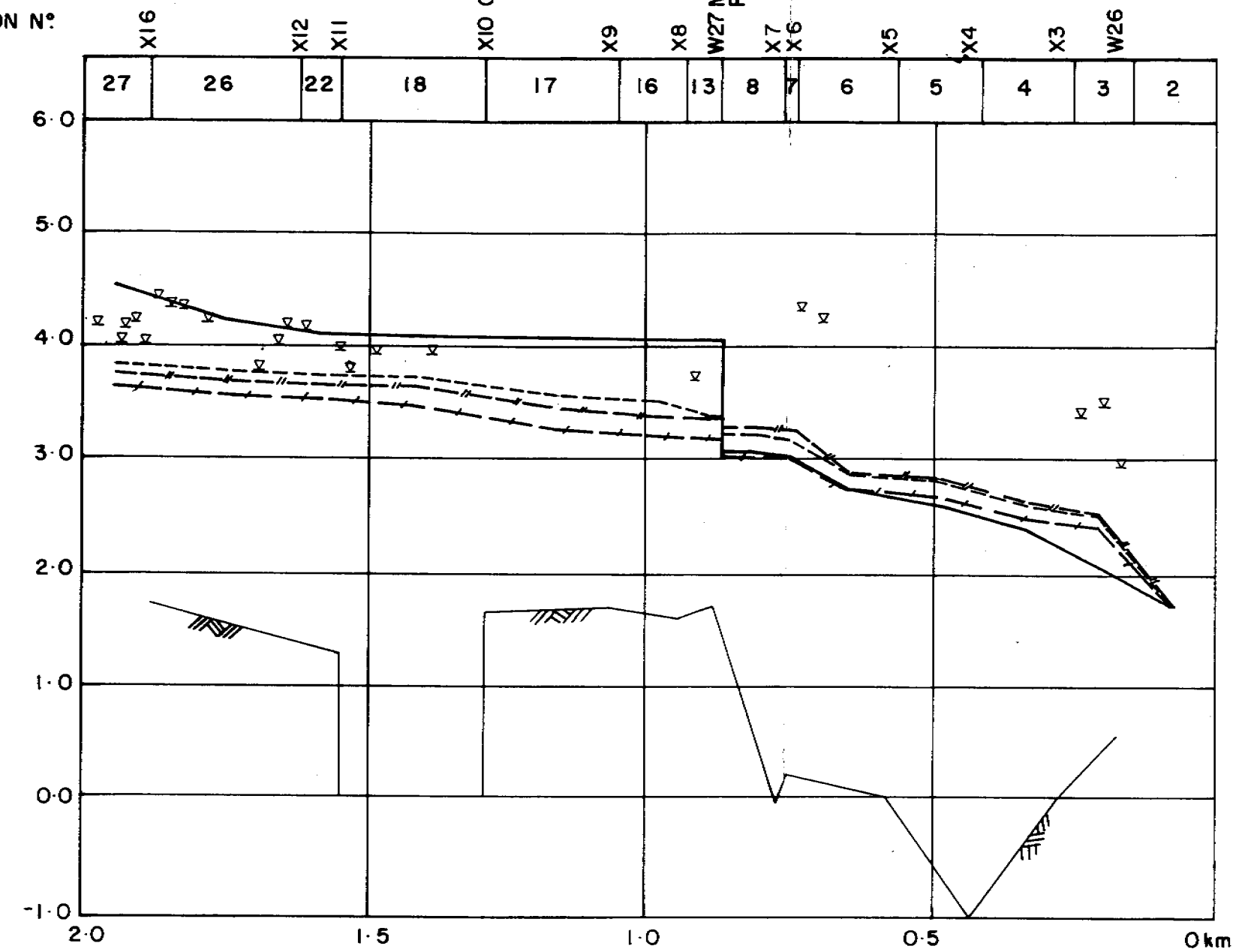
LOWER CHANNEL INVERT
AUGMENT CULVERT
ENLARGE CHANNEL



AUSTRALIA AVENUE ARM
(WIDTH VARIES)
SCALE 1:20



ETTYMALONG SWAMP ARM



ETTYMALONG CREEK AND NEERA ROAD ARM

LEGEND

——— ① EXISTING CONDITIONS.

—/— —/— ② EXISTING CATCHMENT CONDITIONS; NEERA ROAD, ETTYMALONG CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT. ETTALONG ROAD (STAGE 1)

------ ③ URBAN CATCHMENT WITH BACKYARDS FILLED. WORKS AS FOR ②, WITH KAHIBAH CREEK CHANNEL ENLARGED AND CULVERT AMPLIFICATION AT CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST. AUSTRALIA AVENUE ARM INVERT LOWERED. (STAGE 2, OPTION 3)

—//—/— ④ AS FOR ③, WITH ADDITIONAL BRIDGE AT NORTHERN SITE UNDER MT ETTALONG ROAD, AND CULVERT AMPLIFICATION AT OSBORNE AVENUE. (STAGE 2, OPTION 3 WITH EXTRA WORKS)

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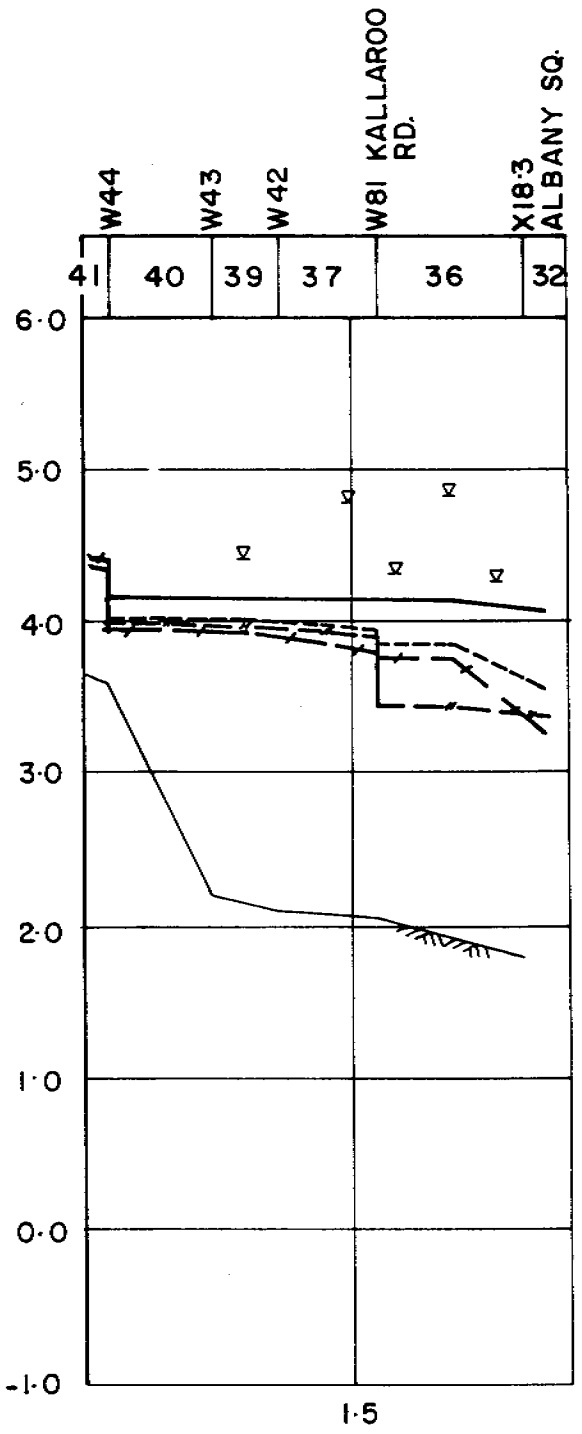
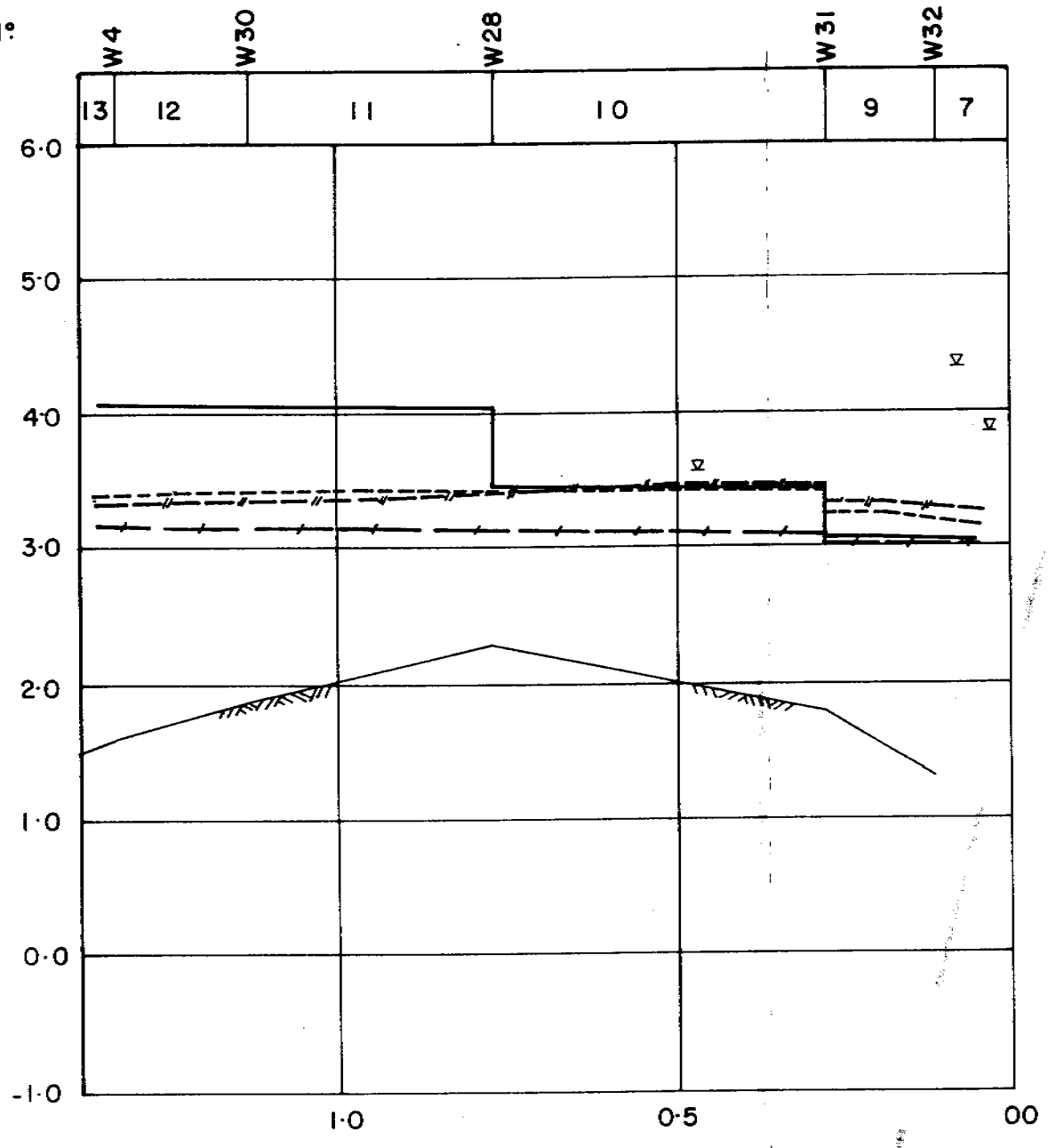
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

1% AEP FLOOD PROFILES STAGED WORKS

FIGURE 21



ILUKA LAGOON ARM



ETTYMALONG CREEK - NORTHERN LOOP

LEGEND

——— ① EXISTING CONDITIONS

—/— —/— ② EXISTING CATCHMENT CONDITIONS; NEERA ROAD, ETTYMALONG CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT. ETTALONG ROAD (STAGE 1)

- - - - - - ③ URBAN CATCHMENT WITH BACKYARDS FILLED. WORKS AS FOR ②, WITH KAHIBAH CREEK CHANNEL ENLARGED AND CULVERT AMPLIFICATION AT CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST. AUSTRALIA AVENUE ARM INVERT LOWERED. (STAGE 2, OPTION 3)

—//—//— ④ AS FOR ③, WITH ADDITIONAL BRIDGE AT NORTHERN SITE UNDER MT ETTALONG.ROAD, AND CULVERT AMPLIFICATION AT OSBORNE AVENUE. (STAGE 2, OPTION 3 WITH EXTRA WORKS)

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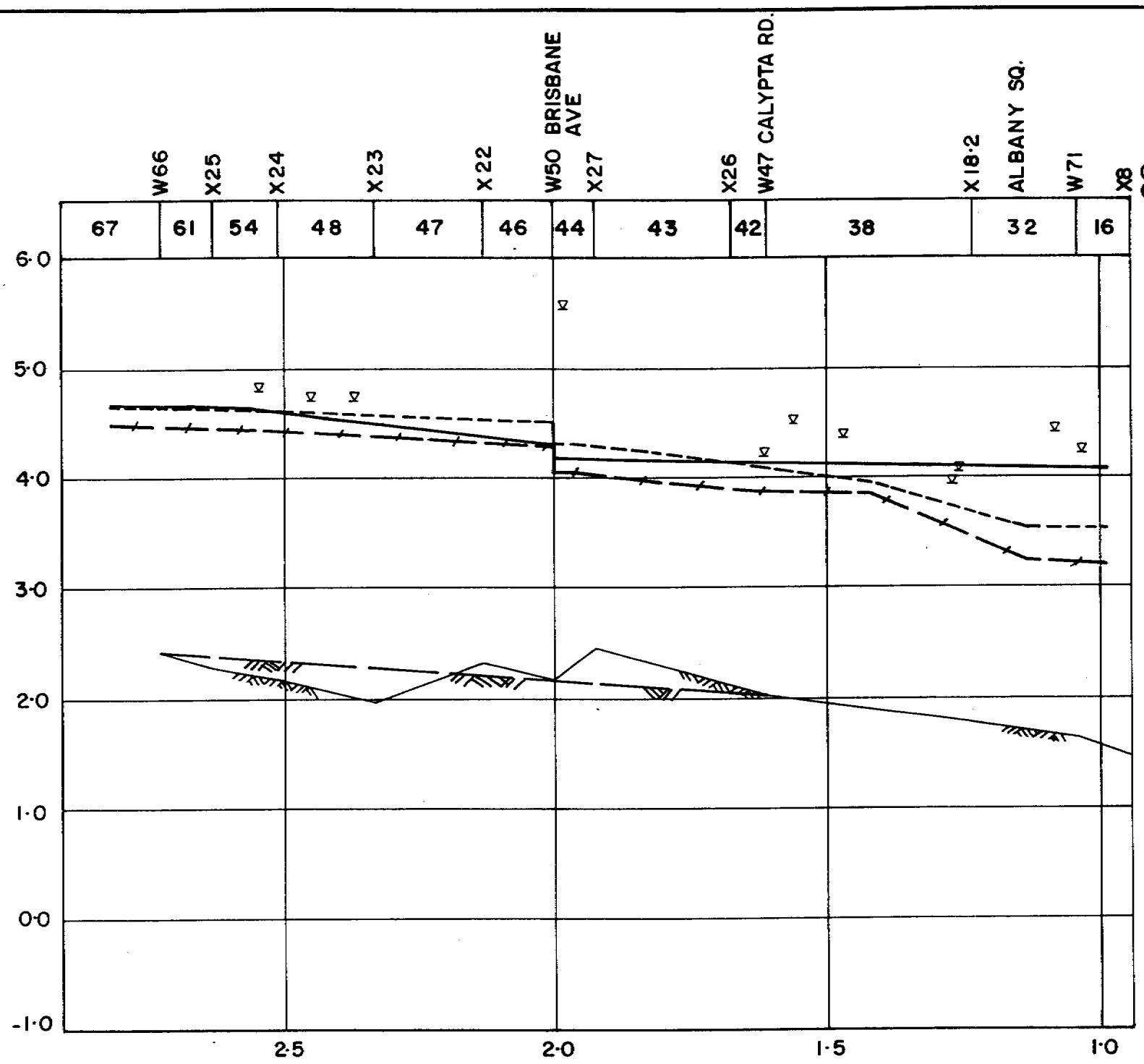
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

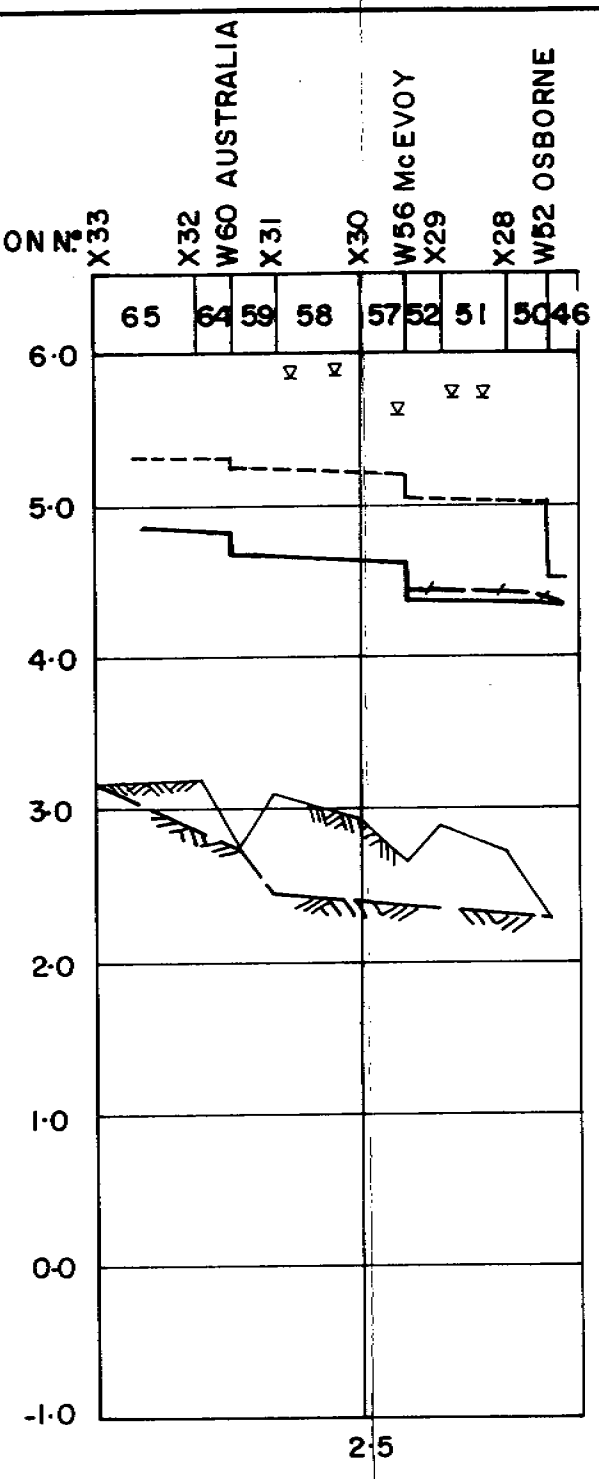
1% AEP FLOOD PROFILES STAGED WORKS

FIGURE 22

N° 6509



GREENHAVEN DRIVE ARM AND KAHIBAH CREEK



AUSTRALIA AVENUE ARM

LEGEND

——— ① EXISTING CONDITIONS

—/— —/— ② EXISTING CATCHMENT CONDITIONS; NEERA ROAD, ETTYMALONG CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT. ETTALONG ROAD (STAGE 1)

- - - - - - ③ URBAN CATCHMENT WITH BACKYARDS FILLED. WORKS AS FOR ②, WITH KAHIBAH CREEK CHANNEL ENLARGED AND CULVERT AMPLIFICATION AT CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST. AUSTRALIA AVENUE ARM INVERT LOWERED. (STAGE 2, OPTION 3)

--//--//- ④ AS FOR ③, WITH ADDITIONAL BRIDGE AT NORTHERN SITE UNDER MT ETTALONG.ROAD, AND CULVERT AMPLIFICATION AT OSBORNE AVENUE. (STAGE 2, OPTION 3 WITH EXTRA WORKS)

DESIGN INVERT

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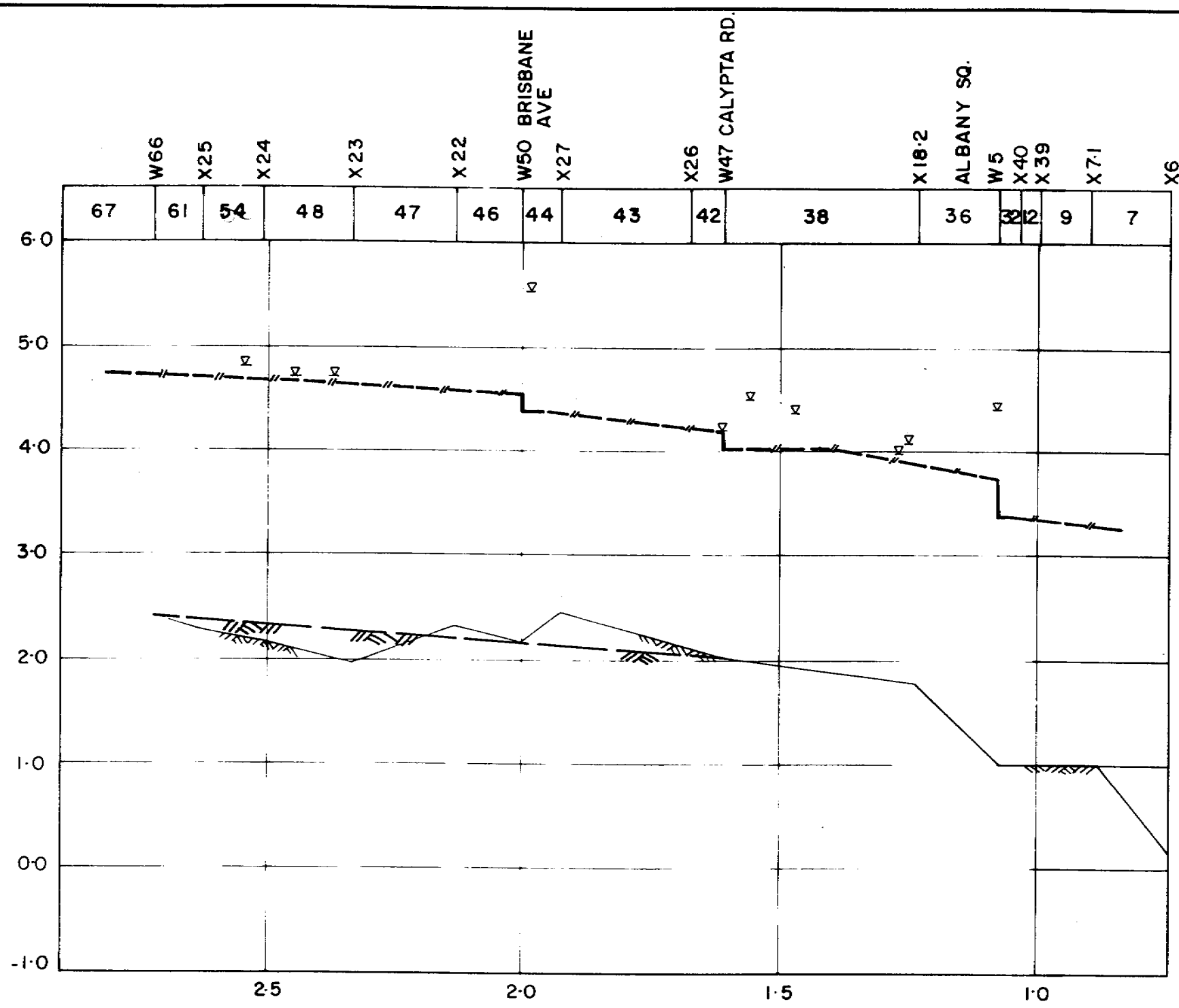
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

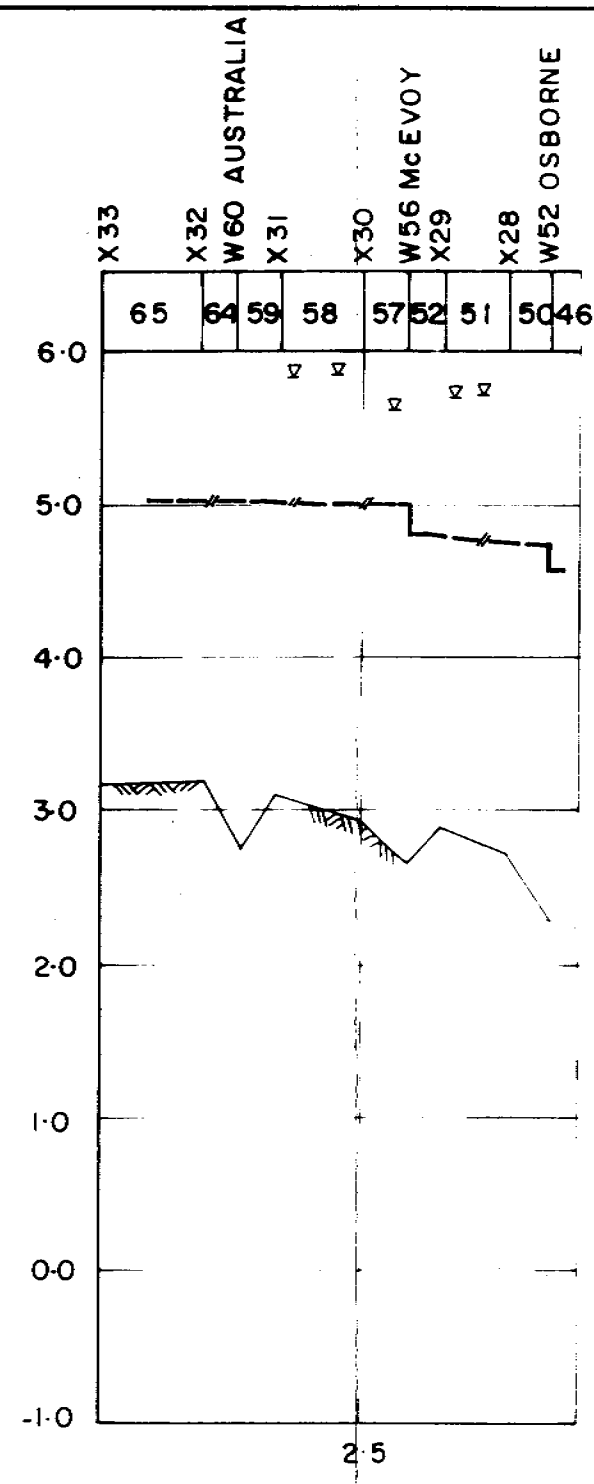
1% AEP FLOOD PROFILES STAGED WORKS

FIGURE 23

Nº 6509



GREENHAVEN DRIVE ARM AND KAHIBAH CREEK



AUSTRALIA AVENUE ARM

LEGEND

——— ① EXISTING CONDITIONS

—·—·— ② EXISTING CATCHMENT CONDITIONS; NEERA ROAD, ETTYMALONG CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT. ETTALONG ROAD (STAGE 1)

- - - - - - ③ URBAN CATCHMENT WITH BACKYARDS FILLED. WORKS AS FOR ②, WITH KAHIBAH CREEK CHANNEL ENLARGED AND CULVERT AMPLIFICATION AT CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST. AUSTRALIA AVENUE ARM INVERT LOWERED. (STAGE 2, OPTION 3)

——//——// ④ AS FOR ③, WITH ADDITIONAL BRIDGE AT NORTHERN SITE UNDER MT ETTALONG.ROAD, AND CULVERT AMPLIFICATION AT OSBORNE AVENUE. (STAGE 2, OPTION 3 WITH EXTRA WORKS)

DESIGN INVERT

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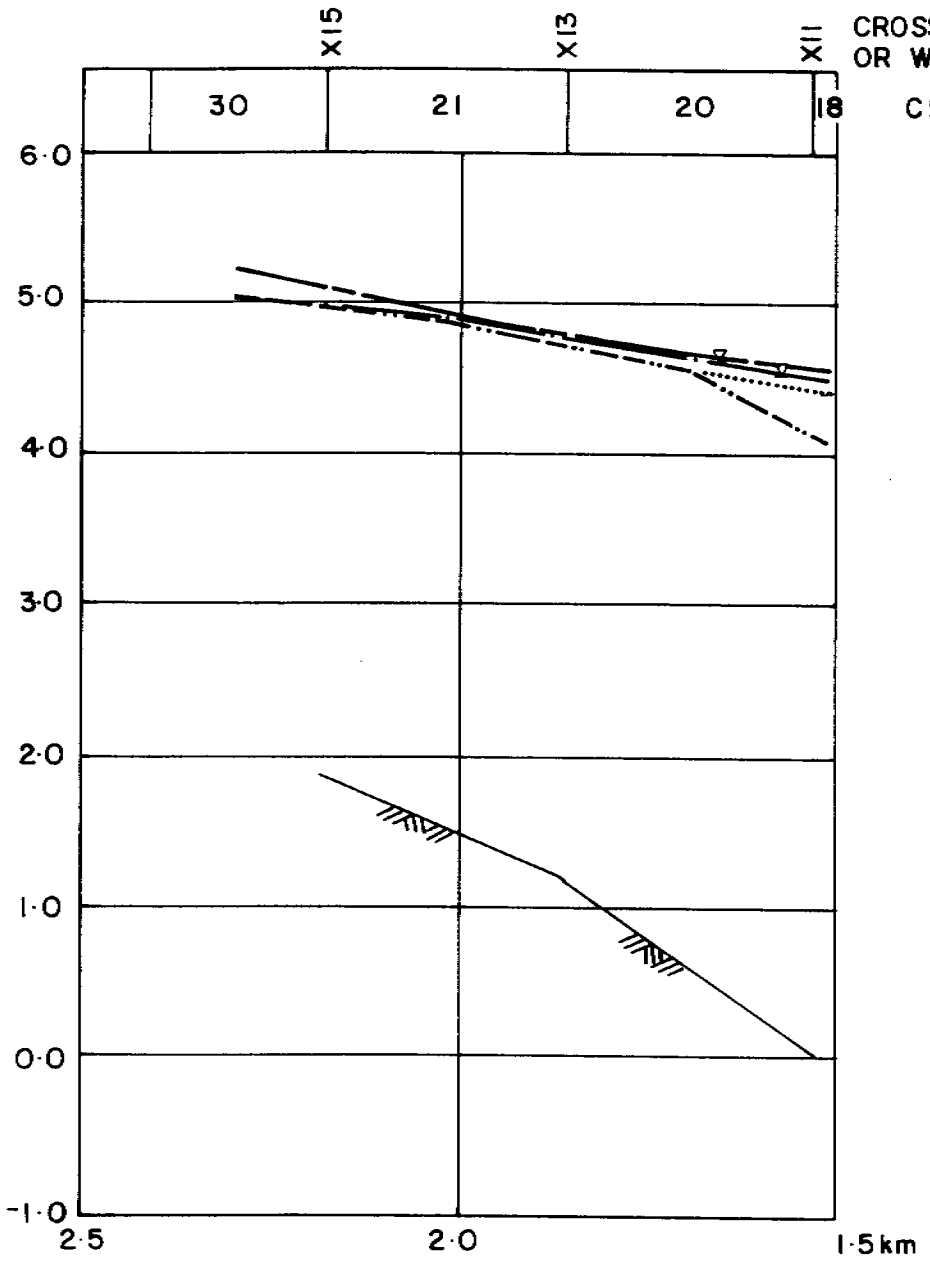
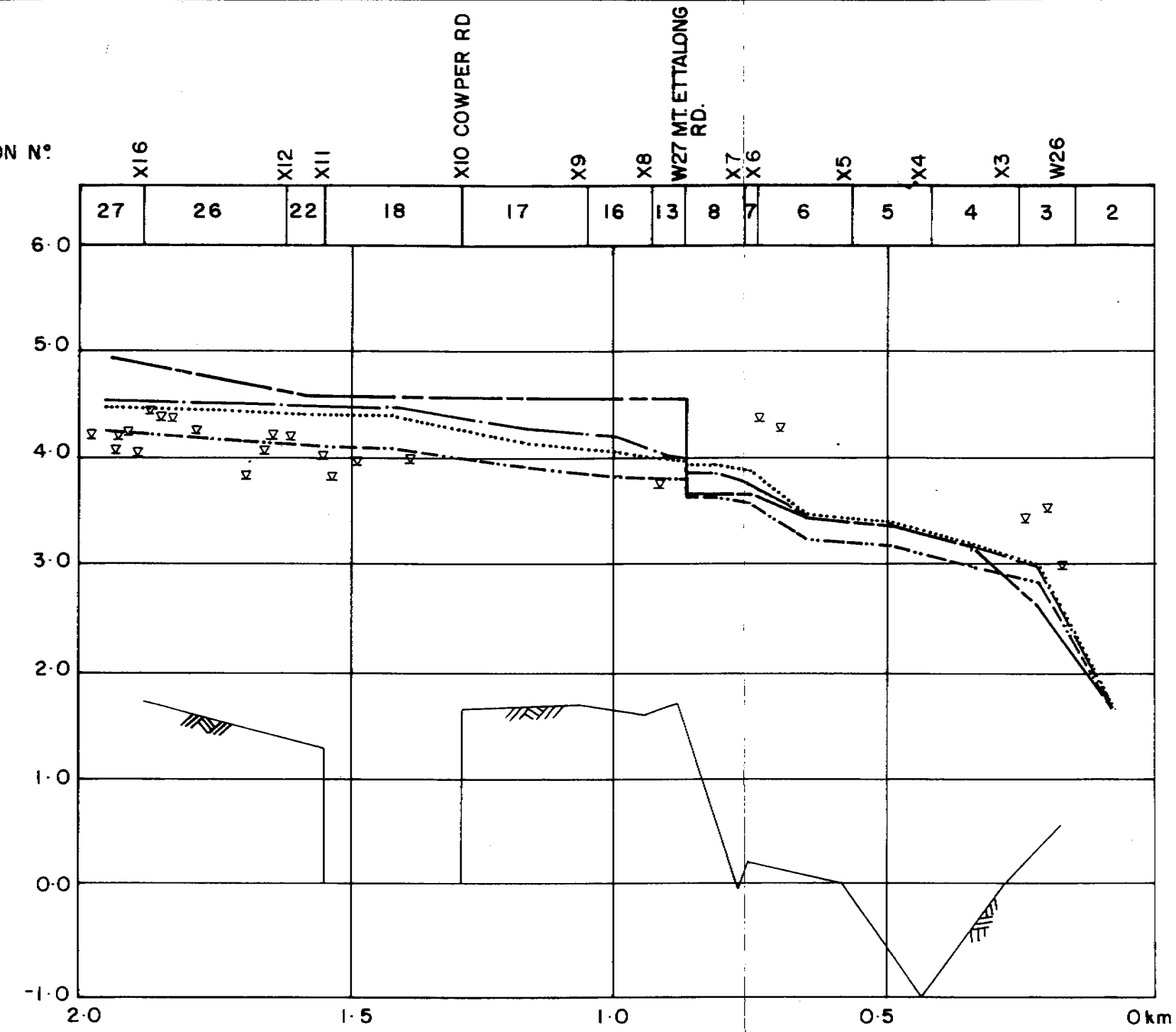
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

1% AEP FLOOD PROFILES STAGED WORKS

FIGURE 24



ETTYMALONG SWAMP ARM



ETTYMALONG CREEK AND NEERA ROAD ARM

LEGEND

——— ① EXISTING CONDITIONS

———·——— ② EXISTING CATCHMENT CONDITIONS; NEERA ROAD, ETTYMALONG CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT. ETTALONG ROAD (STAGE 1)

———·——— ③ URBAN CATCHMENT WITH BACKYARDS FILLED. WORKS AS FOR ②, WITH KAHIBAH CREEK CHANNEL ENLARGED AND CULVERT AMPLIFICATION AT CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST. AUSTRALIA AVENUE ARM INVERT LOWERED. (STAGE 2, OPTION 3)

..... ④ AS FOR ③, WITH ADDITIONAL BRIDGE AT NORTHERN SITE UNDER MT ETTALONG.ROAD, AND CULVERT AMPLIFICATION AT OSBORNE AVENUE. (STAGE 2, OPTION 3 WITH EXTRA WORKS)

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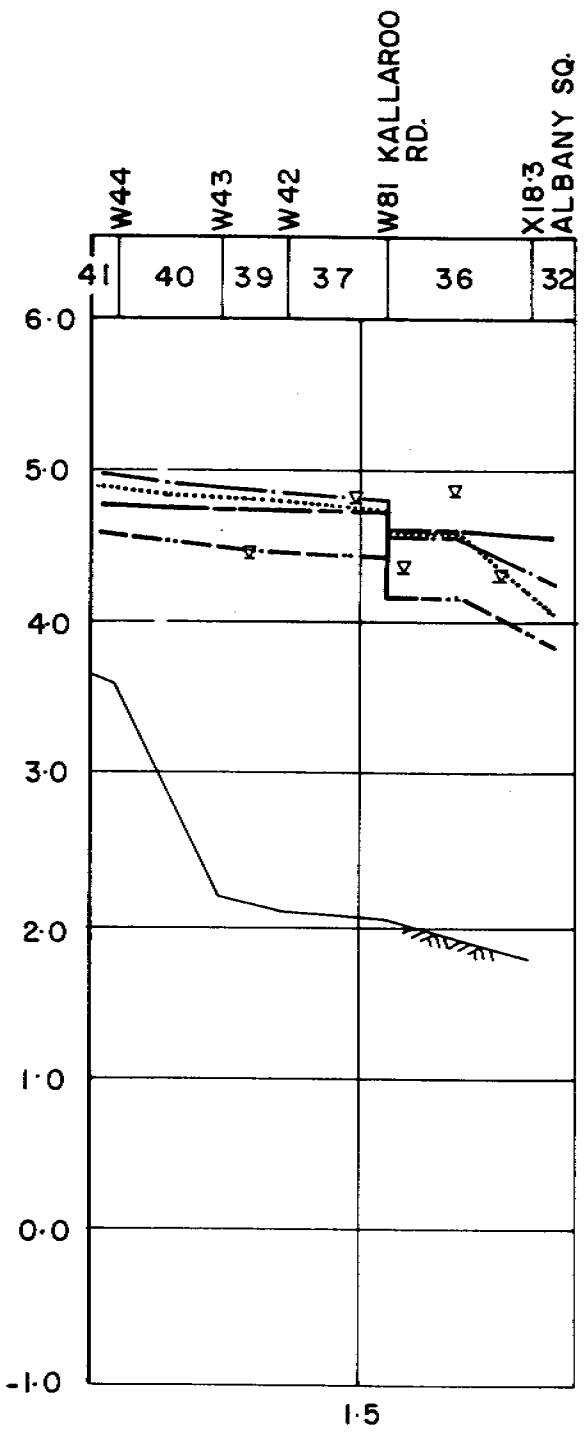
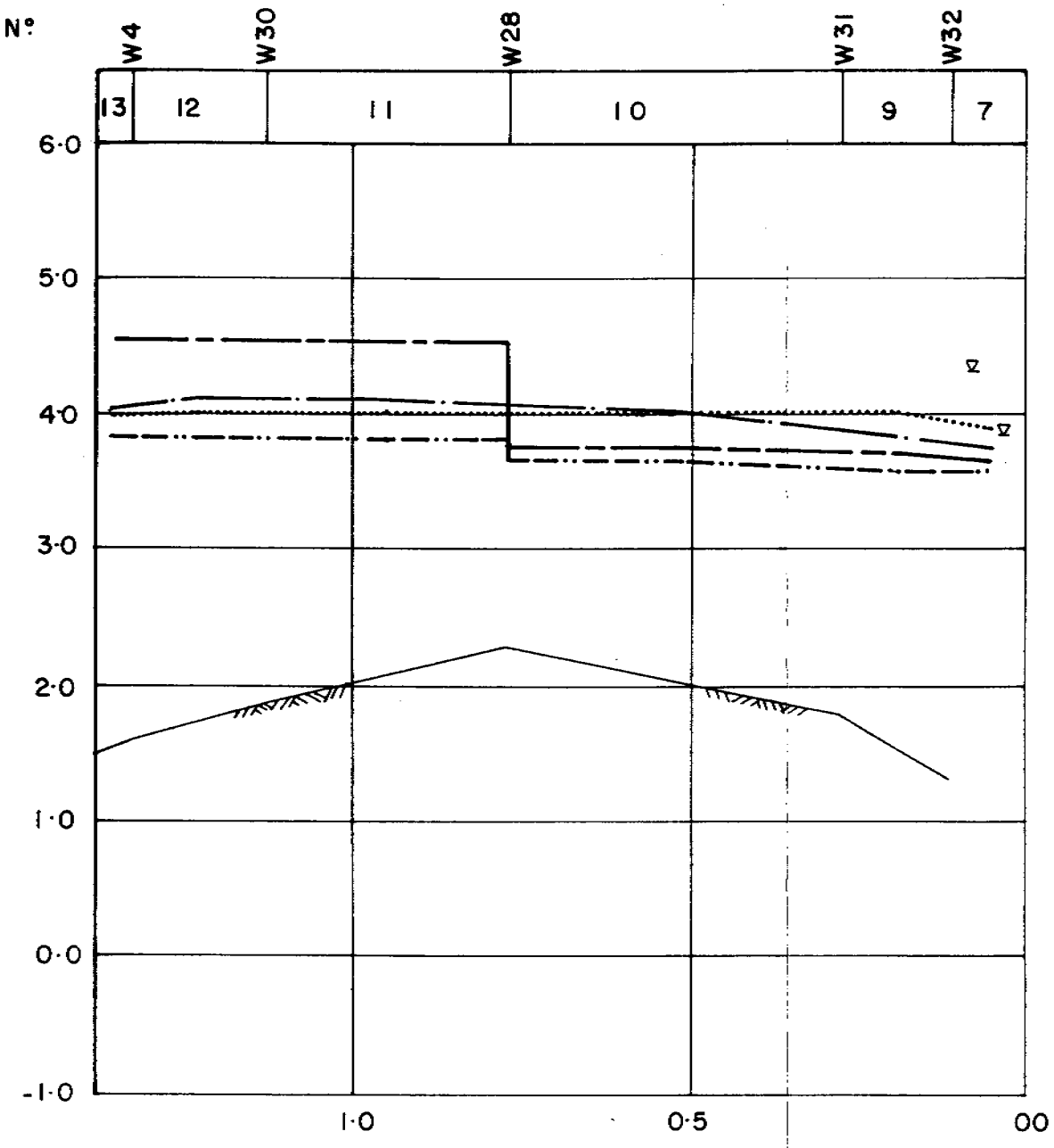
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

EXTREME FLOOD PROFILES STAGED WORKS

FIGURE 25



ILUKA LAGOON ARM



ETTYMALONG CREEK - NORTHERN LOOP

LEGEND

——— ① EXISTING CONDITIONS

- - - - - - ② EXISTING CATCHMENT CONDITIONS; NEERA ROAD, ETTYMALONG CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT. ETTALONG ROAD (STAGE 1)

——·—— ③ URBAN CATCHMENT WITH BACKYARDS FILLED. WORKS AS FOR ②, WITH KAHIBAH CREEK CHANNEL ENLARGED AND CULVERT AMPLIFICATION AT CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST. AUSTRALIA AVENUE ARM INVERT LOWERED. (STAGE 2, OPTION 3)

..... ④ AS FOR ③, WITH ADDITIONAL BRIDGE AT NORTHERN SITE UNDER MT ETTALONG.ROAD, AND CULVERT AMPLIFICATION AT OSBORNE AVENUE. (STAGE 2, OPTION 3 WITH EXTRA WORKS)

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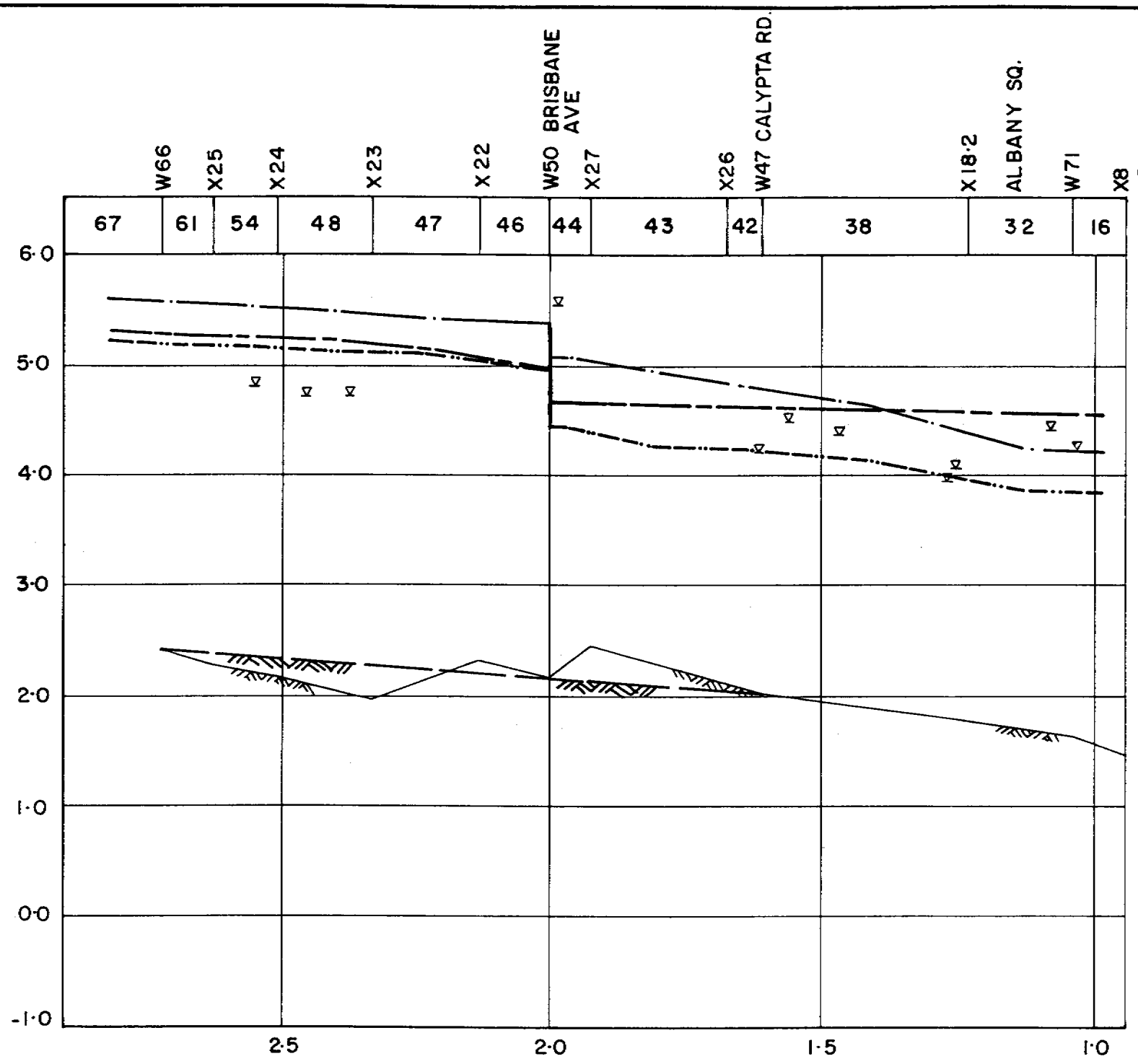
CONSULTING ENGINEERS

KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

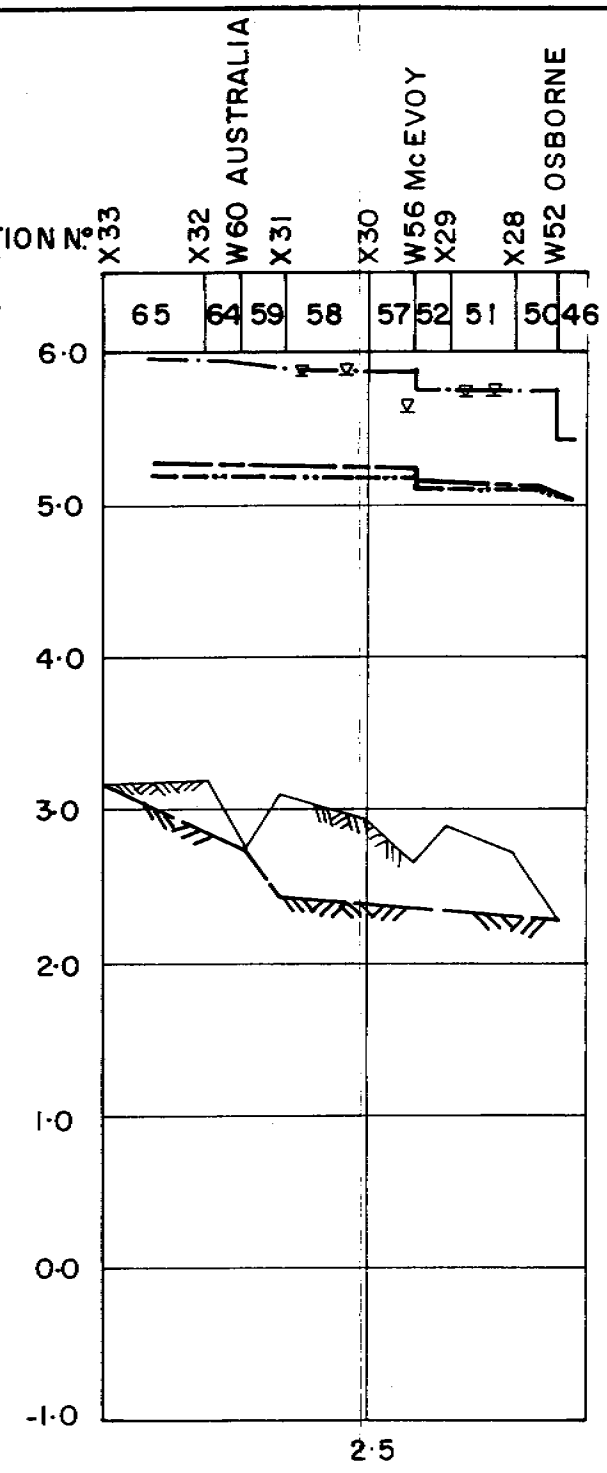
EXTREME FLOOD PROFILES STAGED WORKS

FIGURE 26

N° 6509



GREENHAVEN DRIVE ARM AND KAHIBAH CREEK



AUSTRALIA AVENUE ARM

LEGEND

——— ① EXISTING CONDITIONS

– – – – ② EXISTING CATCHMENT CONDITIONS; NEERA ROAD, ETTYMALONG CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT. ETTALONG ROAD (STAGE 1)

——·—— ③ URBAN CATCHMENT WITH BACKYARDS FILLED. WORKS AS FOR ②, WITH KAHIBAH CREEK CHANNEL ENLARGED AND CULVERT AMPLIFICATION AT CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST. AUSTRALIA AVENUE ARM INVERT LOWERED. (STAGE 2, OPTION 3)

····· ④ AS FOR ③, WITH ADDITIONAL BRIDGE AT NORTHERN SITE UNDER MT ETTALONG.ROAD, AND CULVERT AMPLIFICATION AT OSBORNE AVENUE. (STAGE 2, OPTION 3 WITH EXTRA WORKS)

DESIGN INVERT

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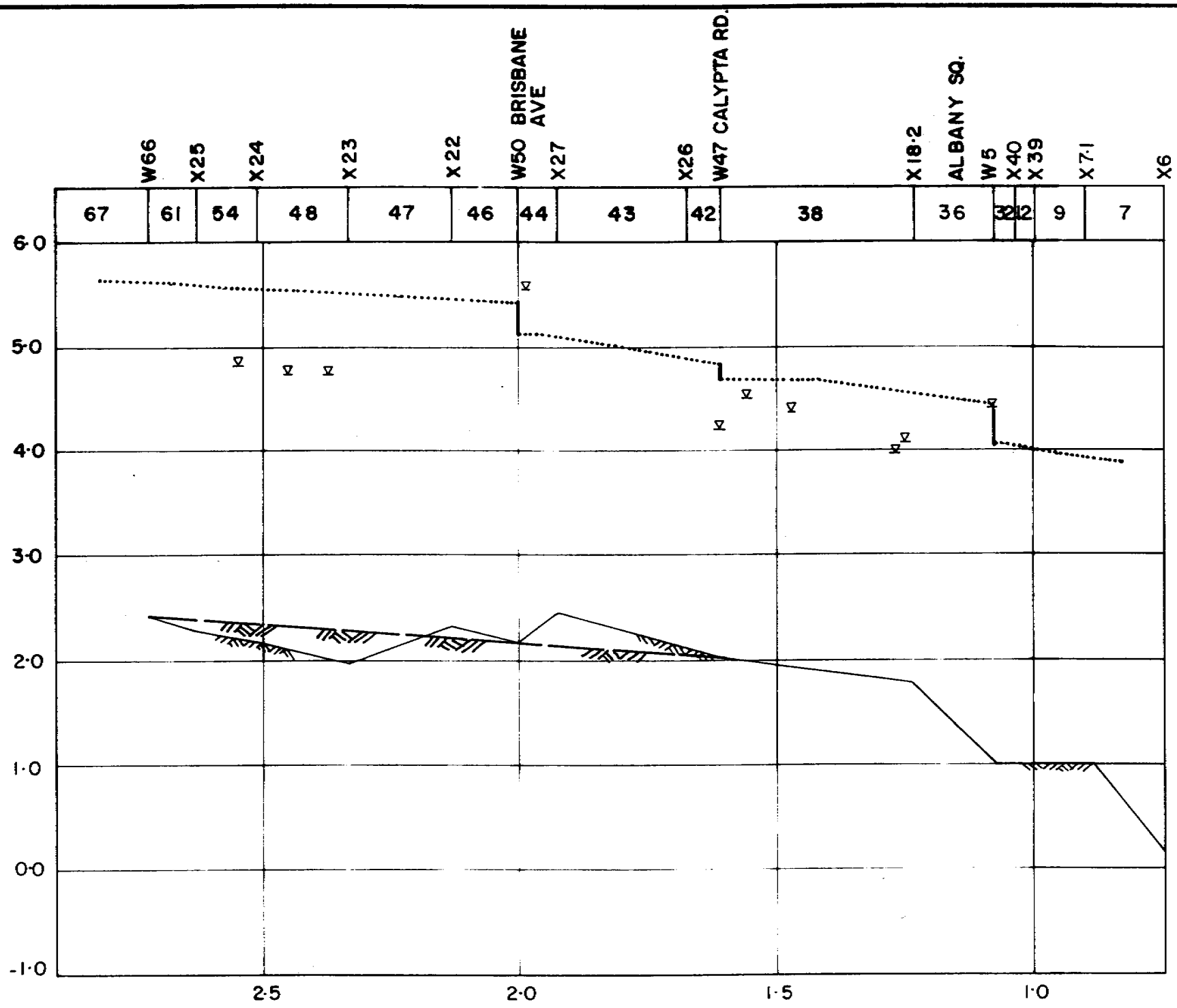
Nº 6509

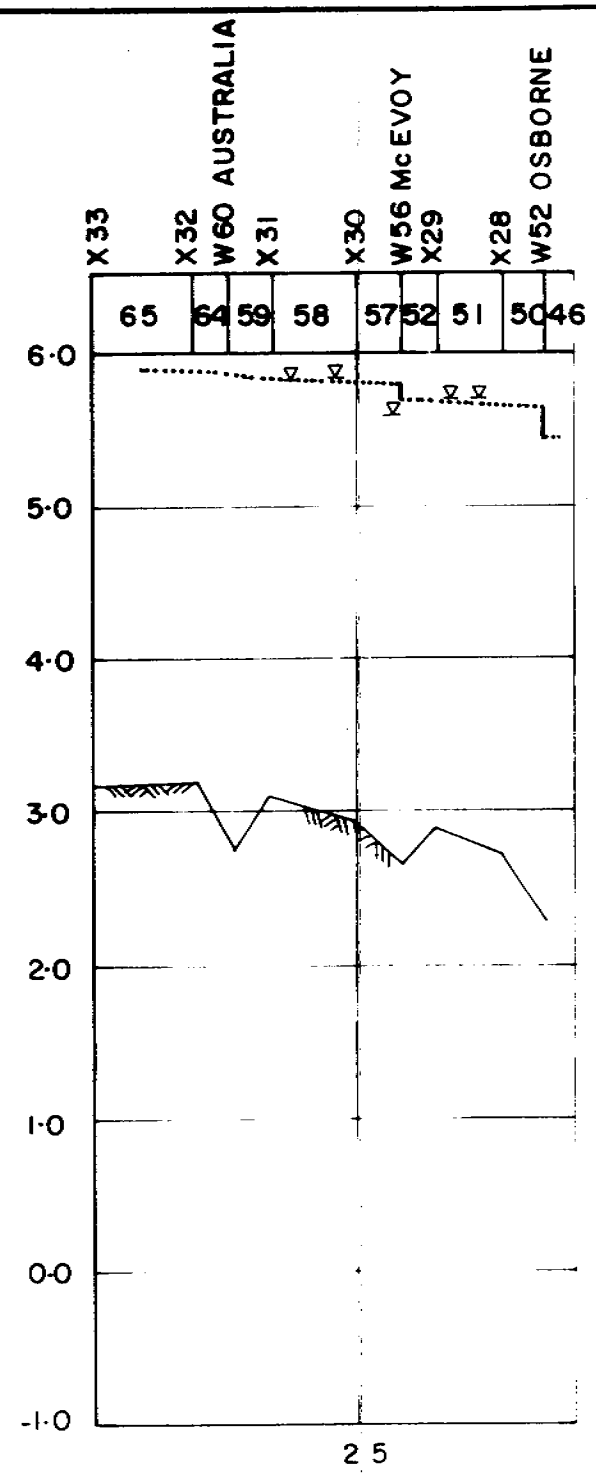
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

EXTREME FLOOD PROFILES STAGED WORKS

FIGURE 27



GREENHAVEN DRIVE ARM AND KAHIBAH CREEK



AUSTRALIA AVENUE ARM

LEGEND

——— ① EXISTING CONDITIONS

– – – – ② EXISTING CATCHMENT CONDITIONS; NEERA ROAD, ETTYMALONG CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT. ETTALONG ROAD (STAGE 1)

——·—— ③ URBAN CATCHMENT WITH BACKYARDS FILLED. WORKS AS FOR ②, WITH KAHIBAH CREEK CHANNEL ENLARGED AND CULVERT AMPLIFICATION AT CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST. AUSTRALIA AVENUE ARM INVERT LOWERED. (STAGE 2, OPTION 3)

..... ④ AS FOR ③, WITH ADDITIONAL BRIDGE AT NORTHERN SITE UNDER MT ETTALONG.ROAD, AND CULVERT AMPLIFICATION AT OSBORNE AVENUE. (STAGE 2, OPTION 3 WITH EXTRA WORKS)

DESIGN INVERT

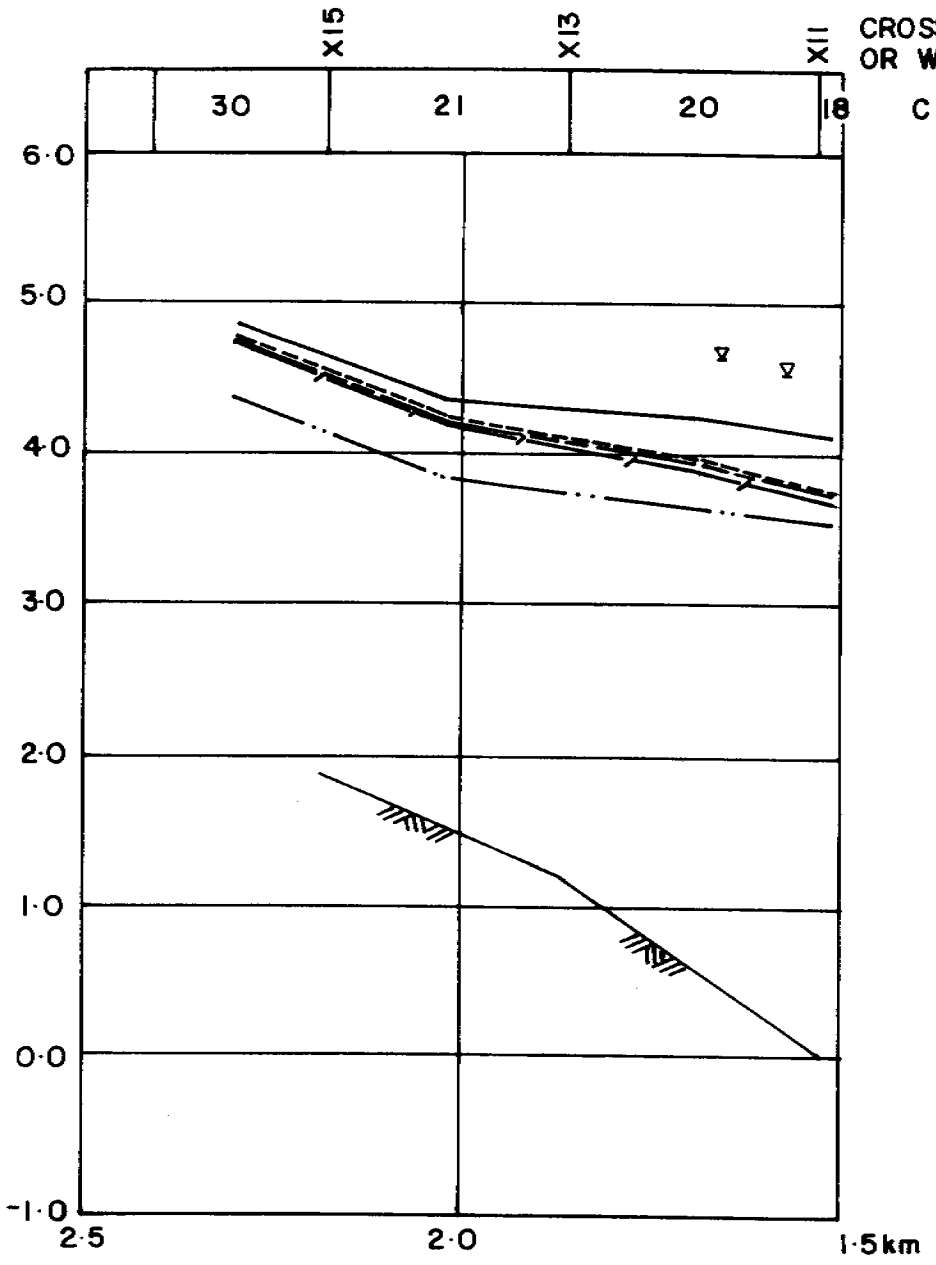
WILLING & PARTNERS
CONSULTING ENGINEERS

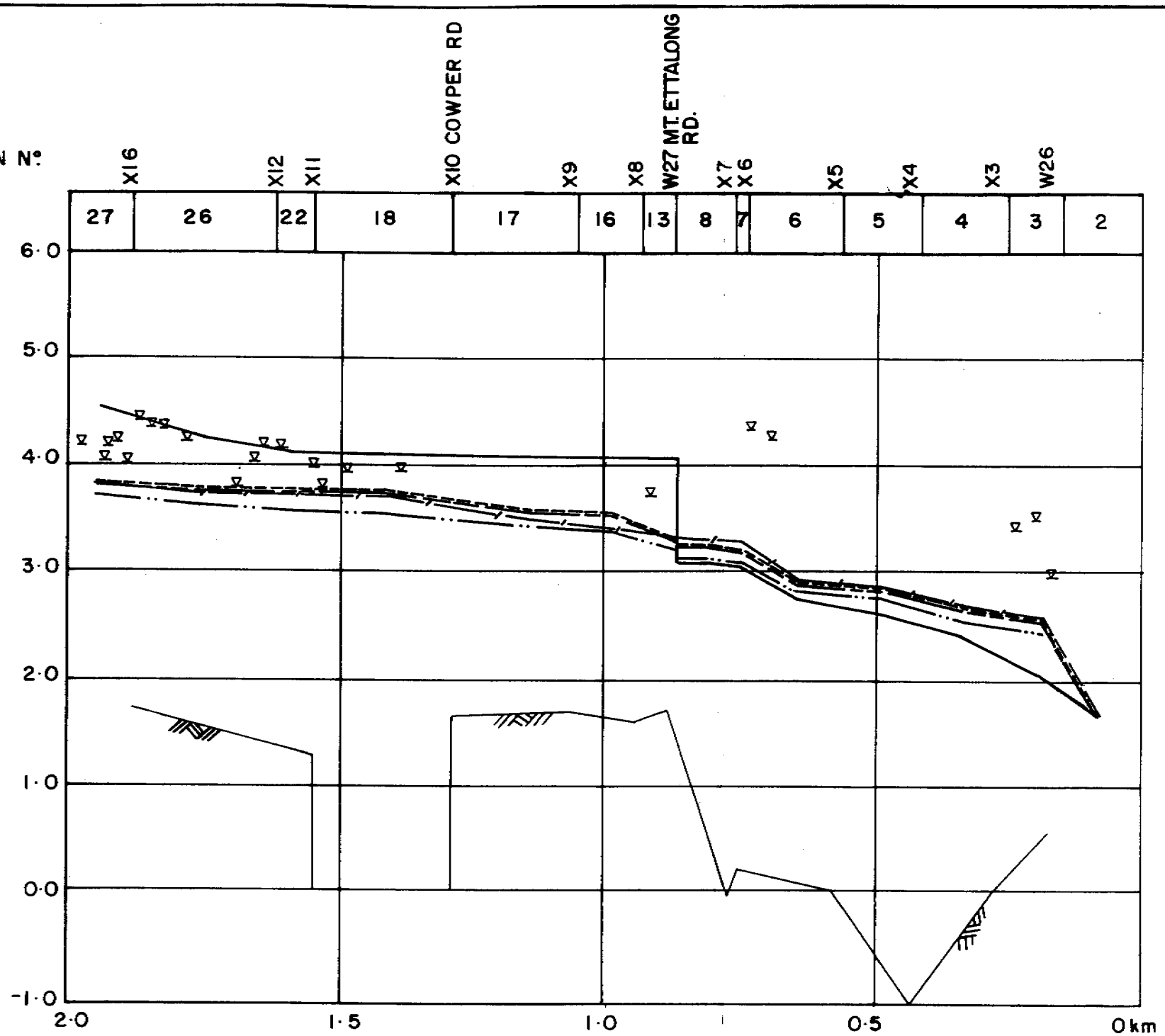
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

EXTREME FLOOD PROFILES STAGED WORKS

FIGURE 28

N°6509





ETTYMALONG SWAMP ARM

ETTYMALONG CREEK AND NEERA ROAD ARM

LEGEND

URBAN CONDITIONS; BACKYARDS FILLED

——— ① NEERA ROAD, ETTYMALONG CREEK AND KAHIBAH CREEK (INCLUDING GREENHAVEN DRIVE) CHANNEL WORKS COMPLETE; BRIDGE AT MT ETTALONG ROAD;CULVERT AMPLIFICATION AT CALYPTA ROAD (4 CELLS), BRISBANE AVENUE (4 CELLS), McEVOY AVENUE (3 CELLS) AND ETTA ROAD EAST (3 CELLS). (OPTION 1)

——·—— ② AS FOR ①, BUT WITH BASIN UPSTREAM OF ETTYMALONG SWAMP ARM. (OPTION 2)

- - - - - - - ③ AS FOR ①, BUT WITH AUSTRALIA AVENUE INVERT LOWERED. (OPTION 3)

—/——/— ④ AS FOR ①, BUT WITH EXTRA MT ETTALONG ROAD BRIDGE AT NORTHERN SITE. (OPTION 4)

——— ⑤ EXISTING.

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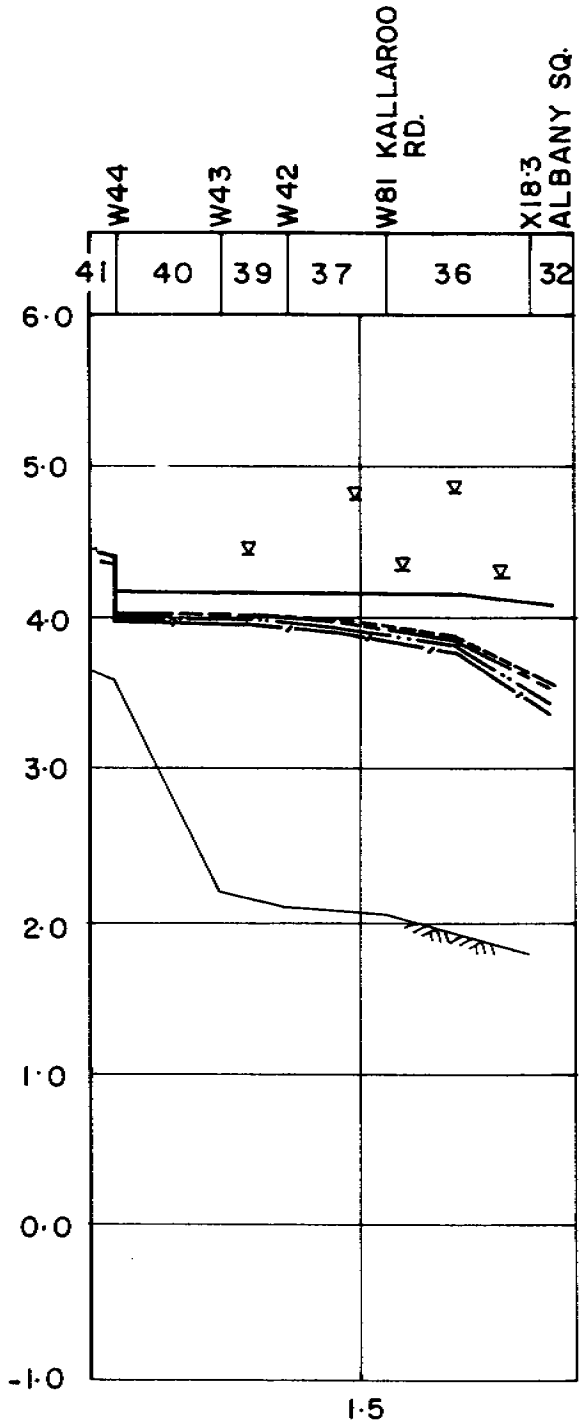
N° 6509

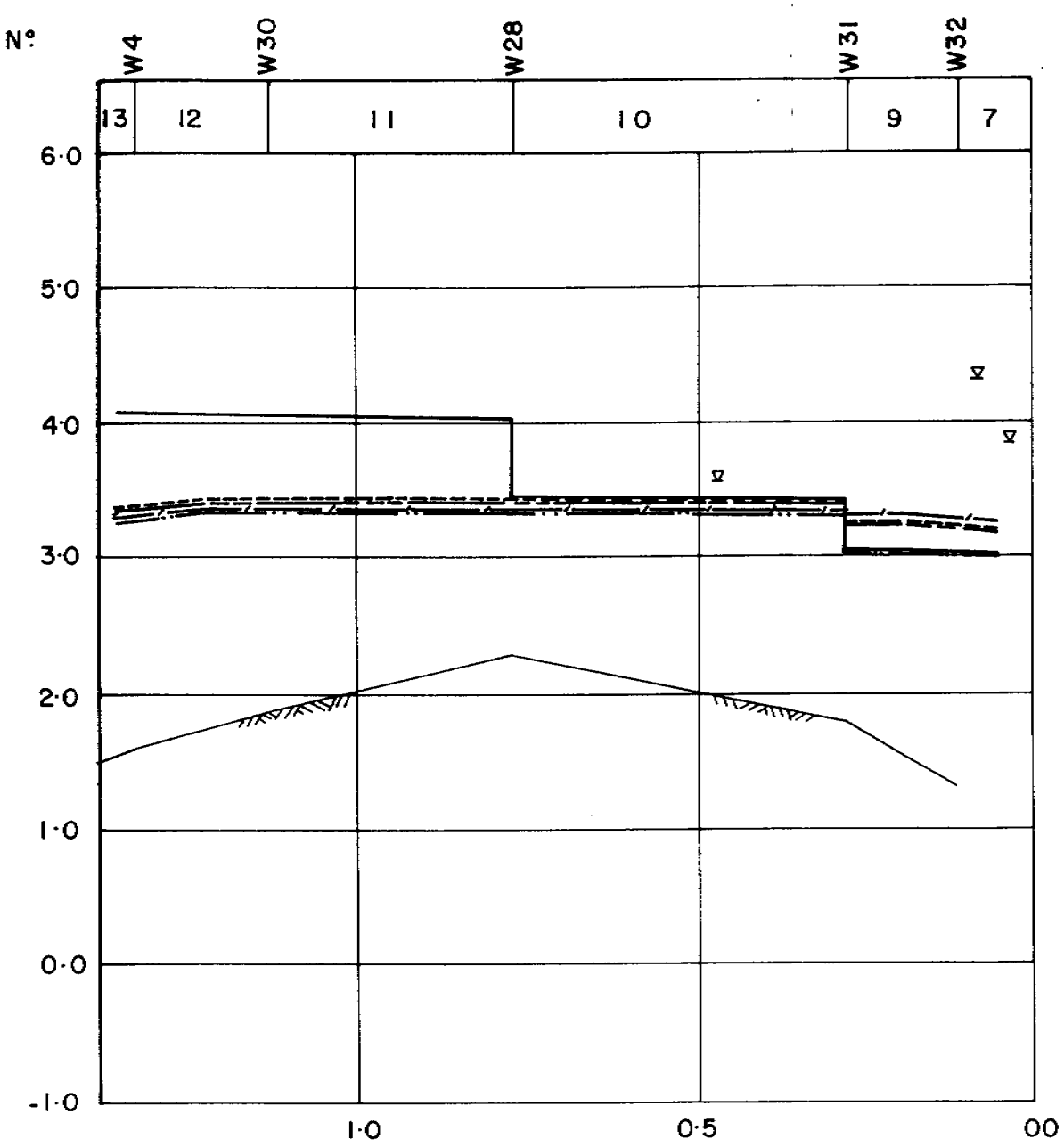
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

1% AEP FLOOD PROFILES
STAGE 2 WORKS
OPTIONS 1, 2, 3 AND 4

FIGURE 29



ILUKA LAGOON ARM



ETTYMALONG CREEK - NORTHERN LOOP

LEGEND

URBAN CONDITIONS; BACKYARDS FILLED

——— ① NEERA ROAD, ETTYMALONG CREEK AND KAHIBAH CREEK (INCLUDING GREENHAVEN DRIVE) CHANNEL WORKS COMPLETE; BRIDGE AT MT ETTALONG ROAD;CULVERT AMPLIFICATION AT CALYPTA ROAD (4 CELLS), BRISBANE AVENUE (4 CELLS), McEVOY AVENUE (3 CELLS) AND ETTA ROAD EAST (3 CELLS). **(OPTION 1)**

—— ·—— ② AS FOR ①, BUT WITH BASIN UPSTREAM OF ETTYMALONG SWAMP ARM. **(OPTION 2)**

- - - - - - - ③ AS FOR ①, BUT WITH AUSTRALIA AVENUE INVERT LOWERED. **(OPTION 3)**

— /——/— ④ AS FOR ①, BUT WITH EXTRA MT ETTALONG ROAD BRIDGE AT NORTHERN SITE. **(OPTION 4)**

——— ⑤ EXISTING.

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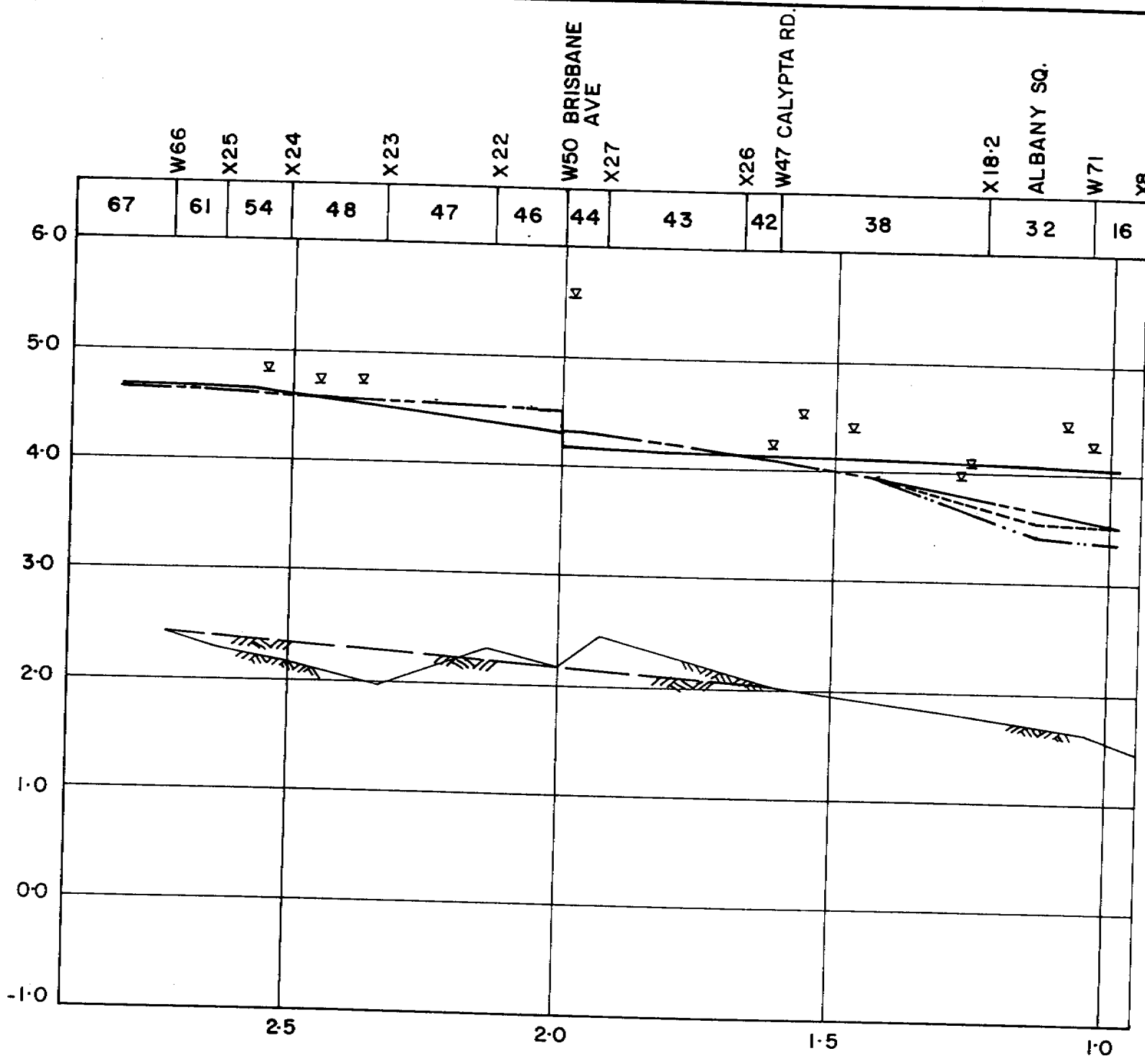
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

1% AEP FLOOD PROFILES STAGE 2 WORKS OPTIONS 1, 2, 3 AND 4

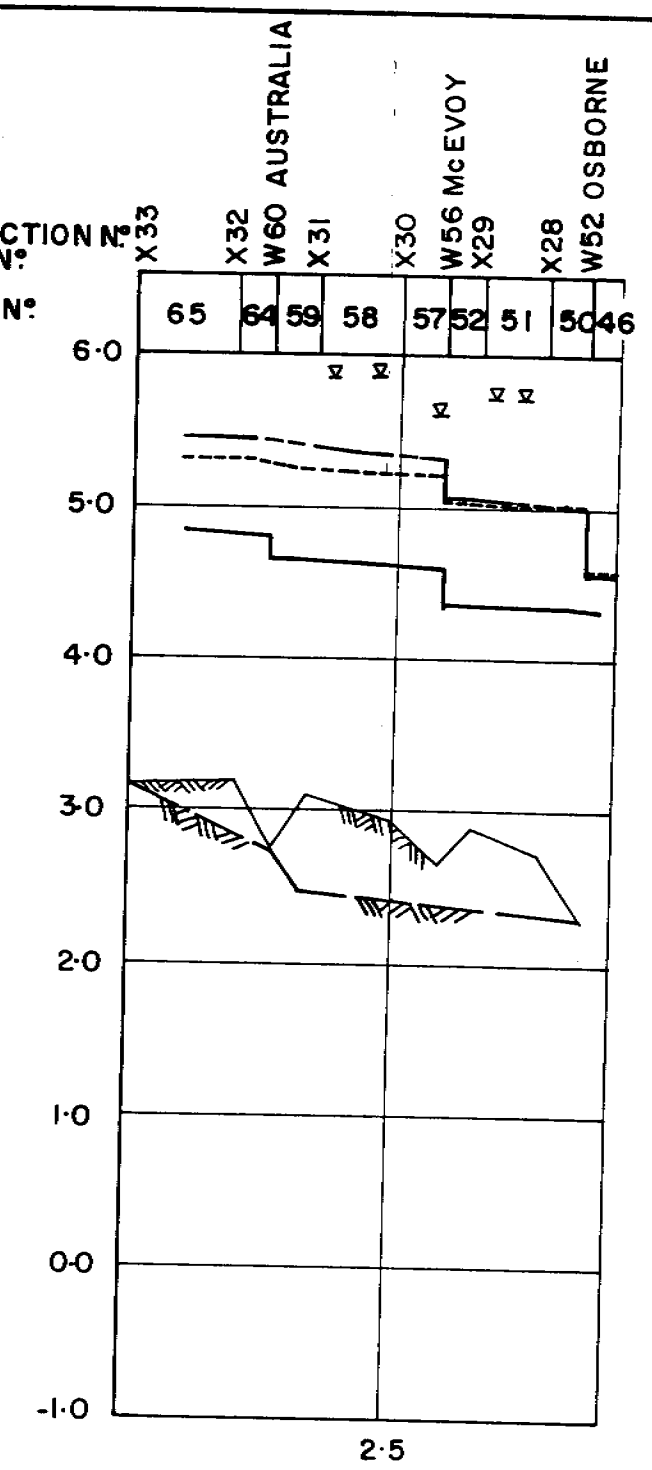
FIGURE 30

N° 6509



GREENHAVEN DRIVE ARM AND KAHIBAH CREEK

URBAN CONDITIONS; BACKYARDS FILLED



AUSTRALIA AVENUE ARM

LEGEND

- ① NEERA ROAD, ETTYMALONG CREEK AND KAHIBAH CREEK (INCLUDING GREENHAVEN DRIVE) CHANNEL WORKS COMPLETE; BRIDGE AT MT ETTALONG ROAD;CULVERT AMPLIFICATION AT CALYPTA ROAD (4 CELLS), BRISBANE AVENUE (4 CELLS), McEVOY AVENUE (3 CELLS) AND ETTA ROAD EAST (3 CELLS). (OPTION 1)
- ② AS FOR ①, BUT WITH BASIN UPSTREAM OF ETTYMALONG SWAMP ARM. (OPTION 2)
- ③ AS FOR ①, BUT WITH AUSTRALIA AVENUE INVERT LOWERED. (OPTION 3)
- ④ AS FOR ①, BUT WITH EXTRA MT ETTALONG ROAD BRIDGE AT NORTHERN SITE. (OPTION 4)
- ⑤ EXISTING.
- DESIGN INVERT

Nº6509

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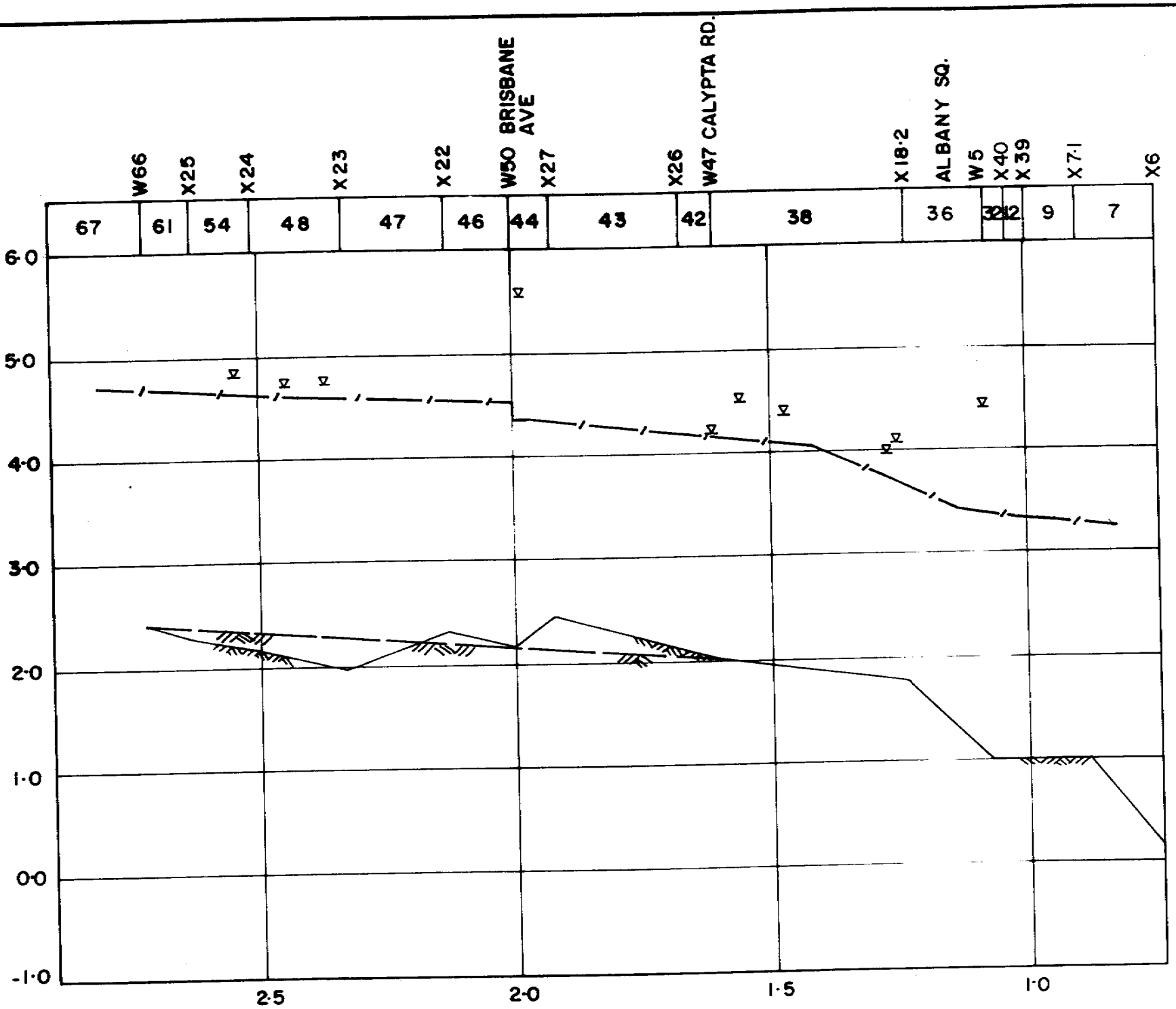
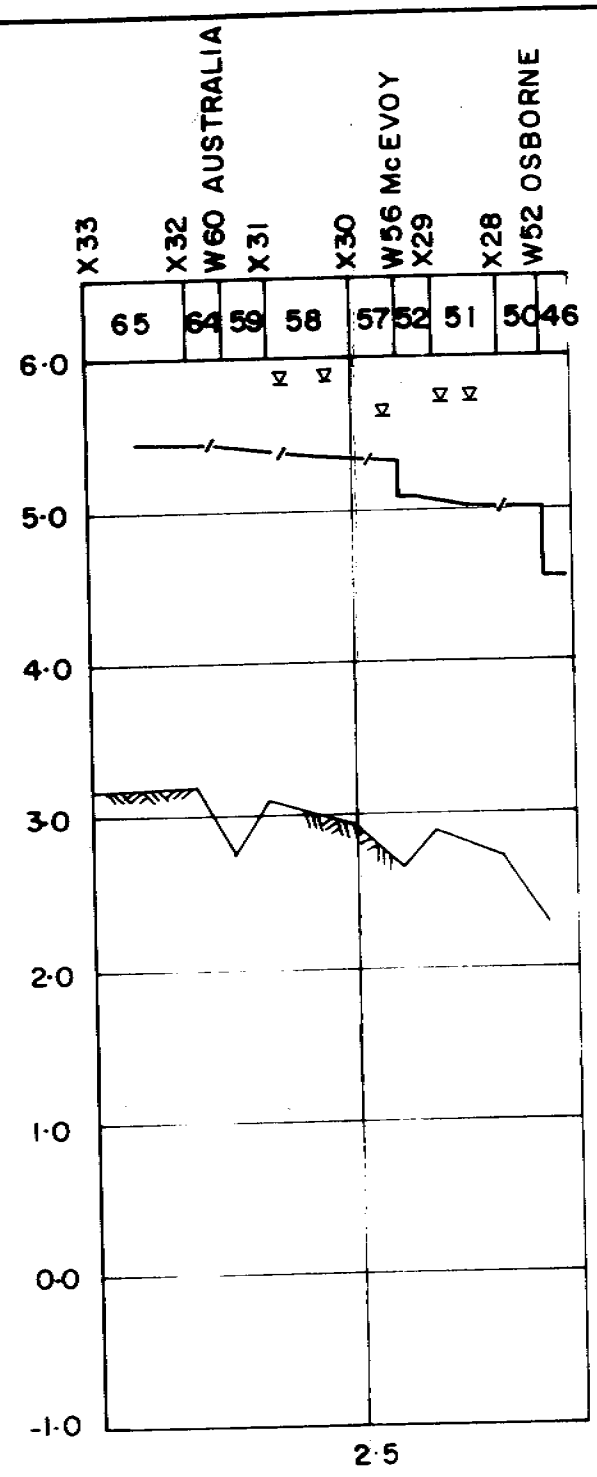
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

1% AEP FLOOD PROFILES STAGE 2 WORKS OPTIONS 1, 2, 3 AND 4

FIGURE 31



GREENHAVEN DRIVE ARM AND KAHIBAH CREEK



AUSTRALIA AVENUE ARM

LEGEND

URBAN CONDITIONS; BACKYARDS FILLED

——— ① NEERA ROAD, ETTYMALONG CREEK AND KAHIBAH CREEK (INCLUDING GREENHAVEN DRIVE) CHANNEL WORKS COMPLETE; BRIDGE AT MT ETTALONG ROAD;CULVERT AMPLIFICATION AT CALYPTA ROAD (4 CELLS), BRISBANE AVENUE (4 CELLS), McEVOY AVENUE (3 CELLS) AND ETTA ROAD EAST (3 CELLS). **(OPTION 1)**

——··—— ② AS FOR ①, BUT WITH BASIN UPSTREAM OF ETTYMALONG SWAMP ARM. (OPTION 2)

– – – – – ③ AS FOR ①, BUT WITH AUSTRALIA AVENUE INVERT LOWERED. (OPTION 3)

——/——/– ④ AS FOR ①, BUT WITH EXTRA MT ETTALONG ROAD BRIDGE AT NORTHERN SITE. (OPTION 4)

——— ⑤ EXISTING.

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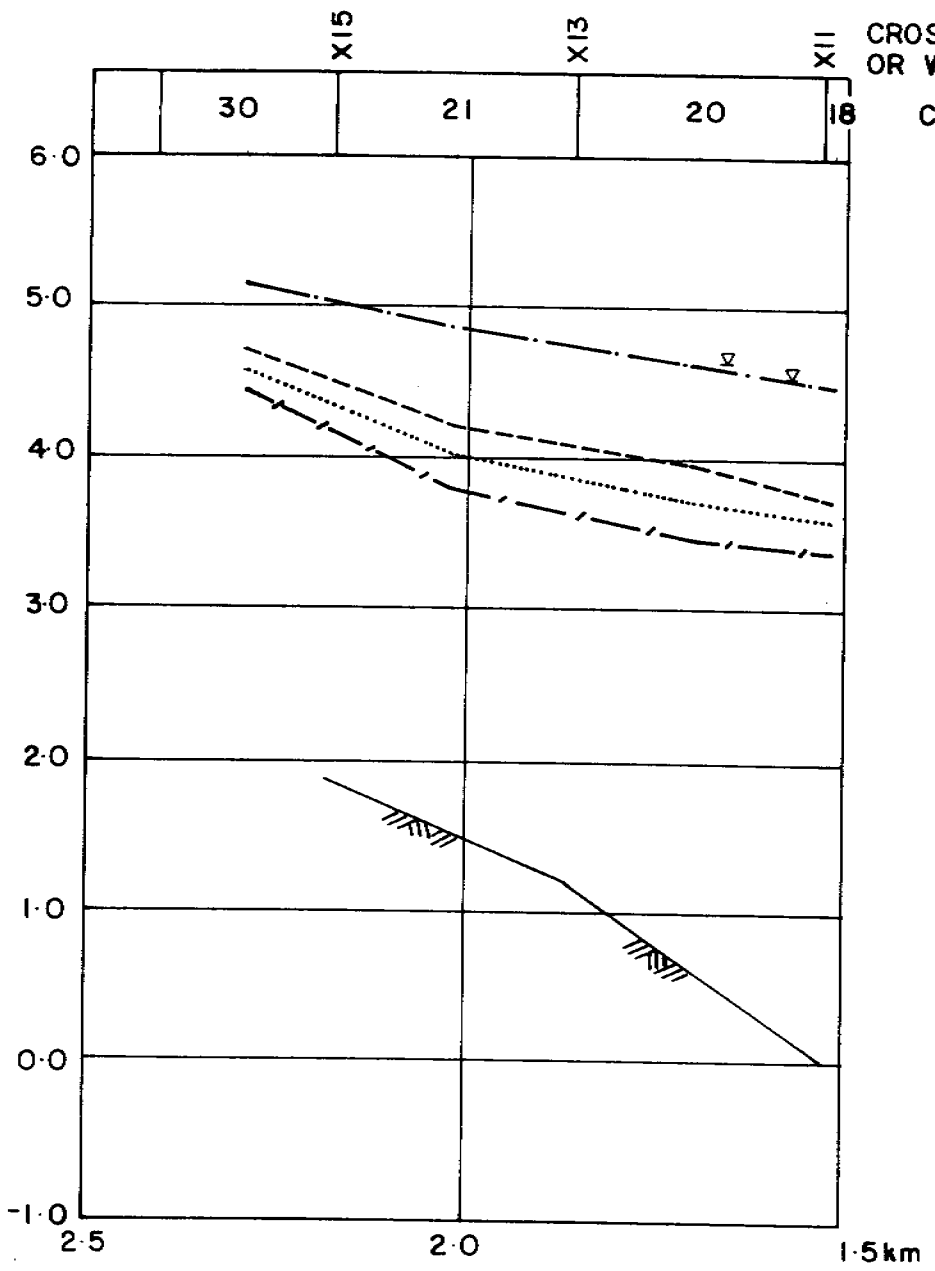
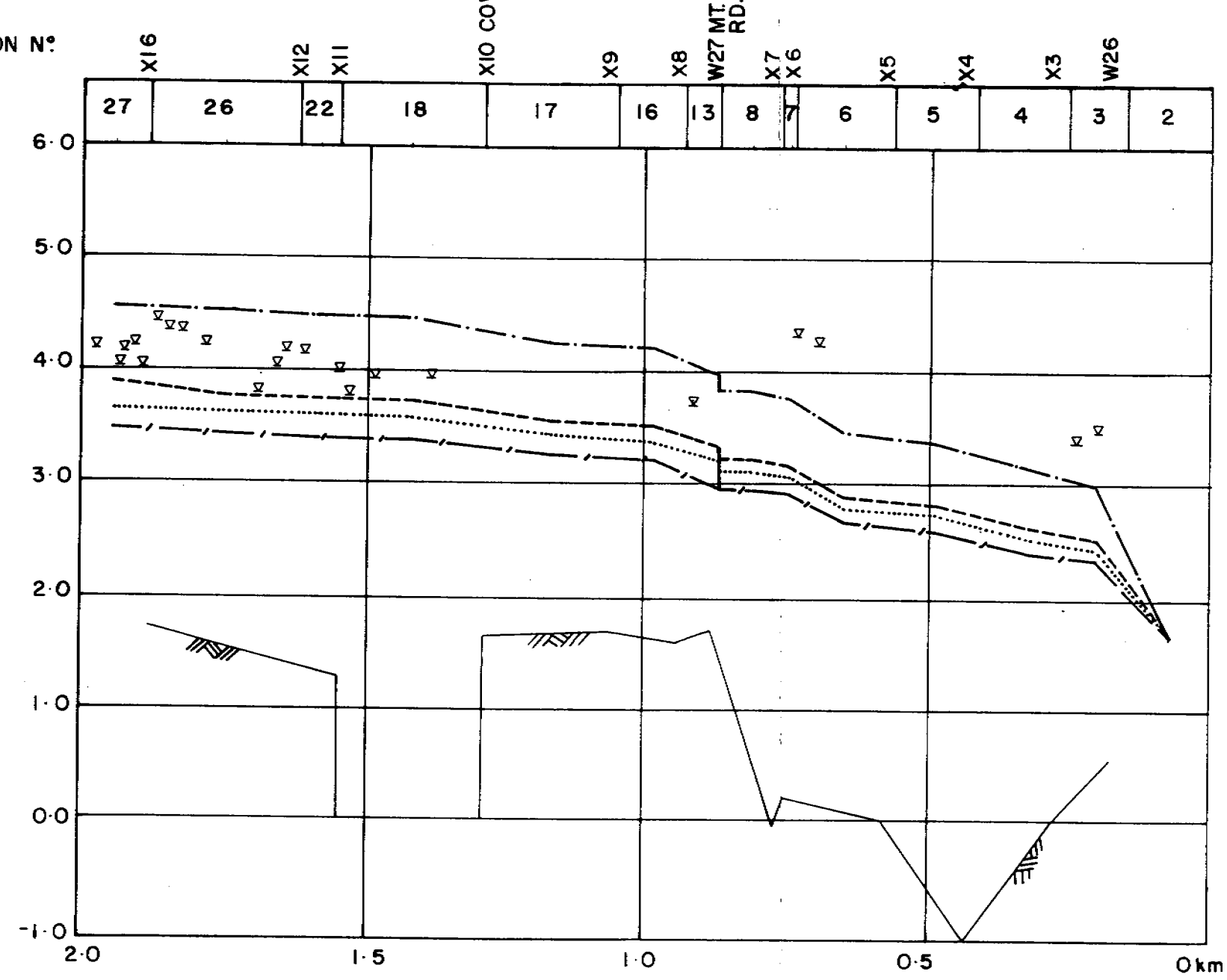
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

1% AEP FLOOD PROFILES
STAGE 2 WORKS
OPTIONS 1, 2, 3 AND 4

FIGURE 32



ETTYMALONG SWAMP ARM



ETTYMALONG CREEK AND NEERA ROAD ARM

LEGEND

URBAN CATCHMENT, BACKYARDS FILLED. NEERA ROAD, ETTYMALONG CREEK, KAHIBAH CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT ETTALONG ROAD; CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST CULVERTS AUGMENTED; AUSTRALIA AVENUE ARM INVERT LOWERED.

1 1% AEP FLOOD

2 2% AEP FLOOD

3 5% AEP FLOOD

4 EXTREME FLOOD

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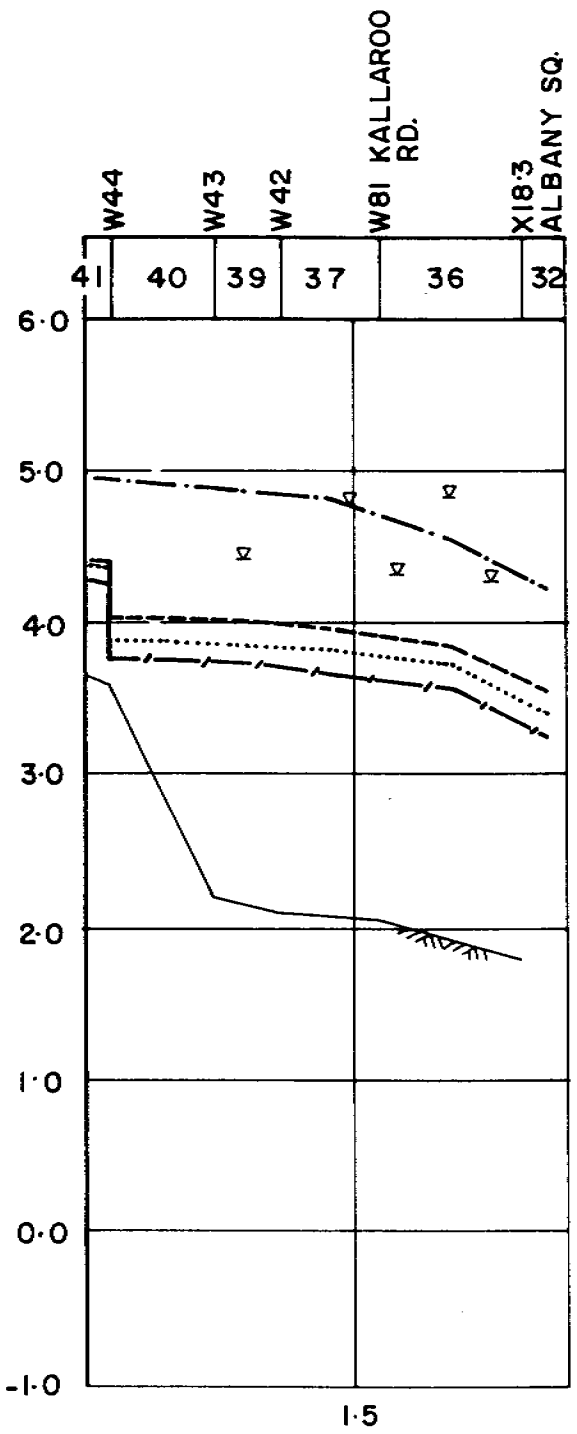
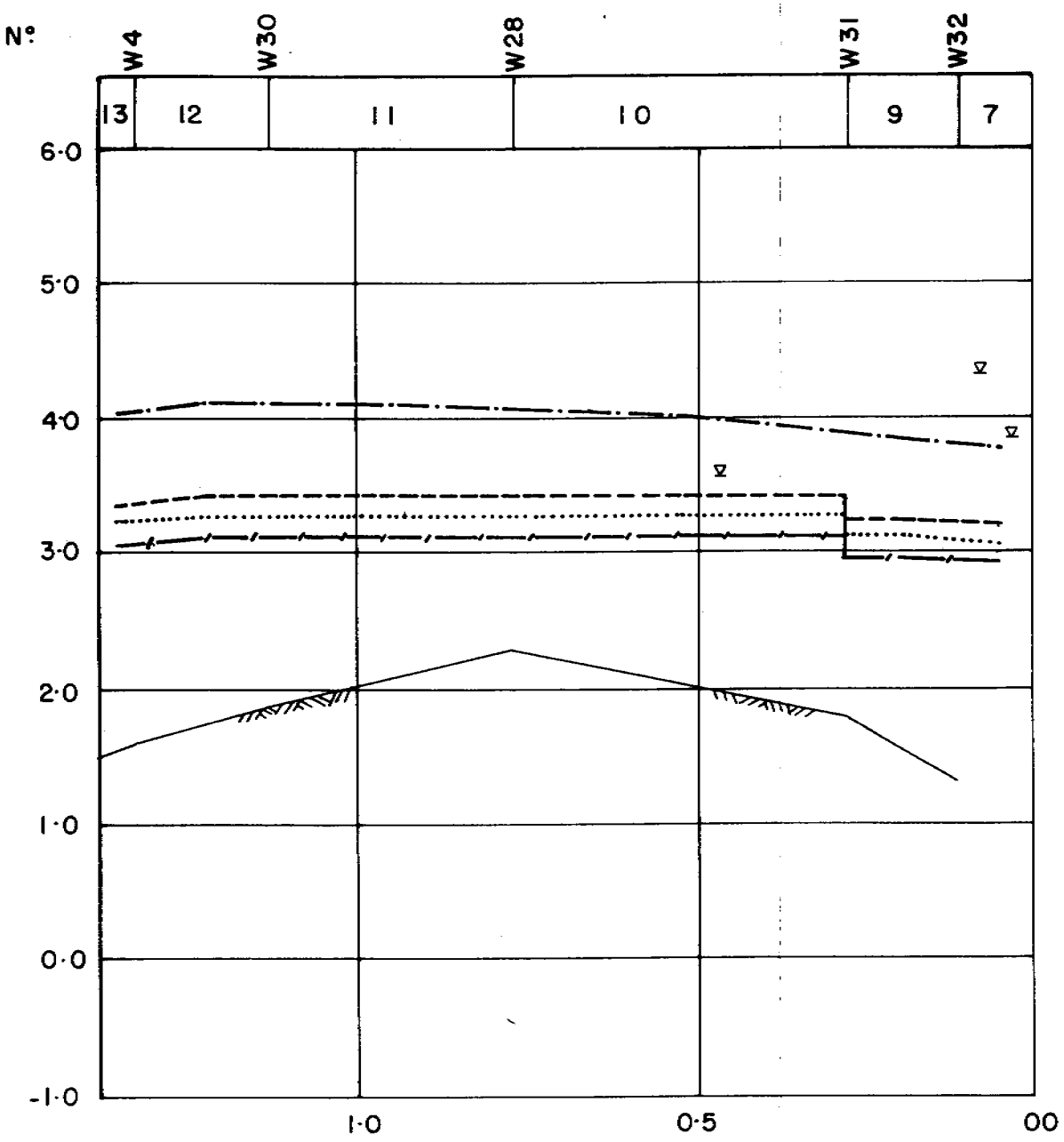
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

DESIGN FLOOD PROFILES
STAGE 2, OPTION 3 WORKS

FIGURE 33



ILUKA LAGOON ARM



ETTYMALONG CREEK - NORTHERN LOOP

LEGEND

URBAN CATCHMENT, BACKYARDS FILLED. NEERA ROAD, ETTYMALONG CREEK, KAHIBAH CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT ETTALONG ROAD; CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST CULVERTS AUGMENTED; AUSTRALIA AVENUE ARM INVERT LOWERED.

1 1% AEP FLOOD

2 2% AEP FLOOD

3 5% AEP FLOOD

4 EXTREME FLOOD

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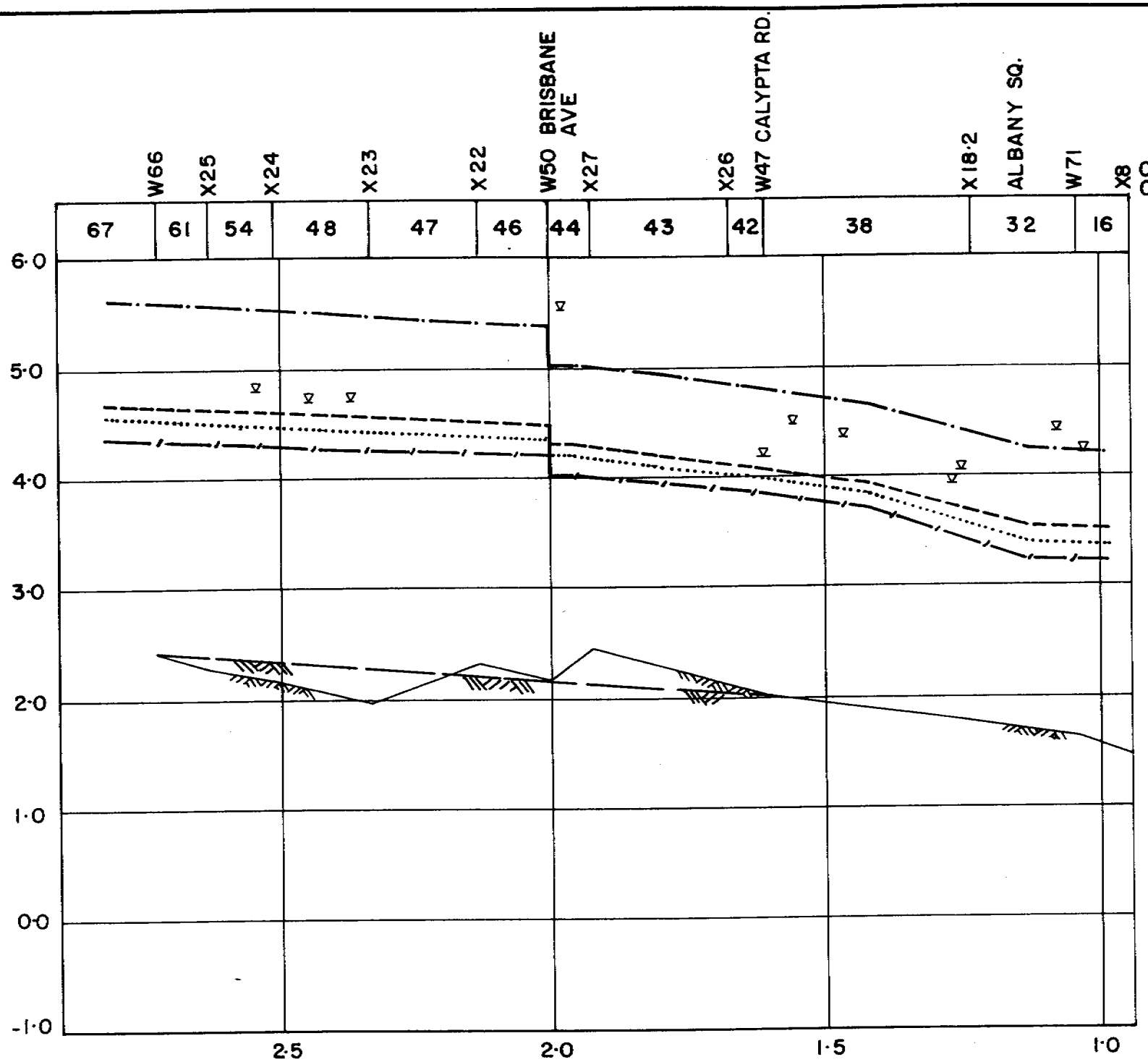
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

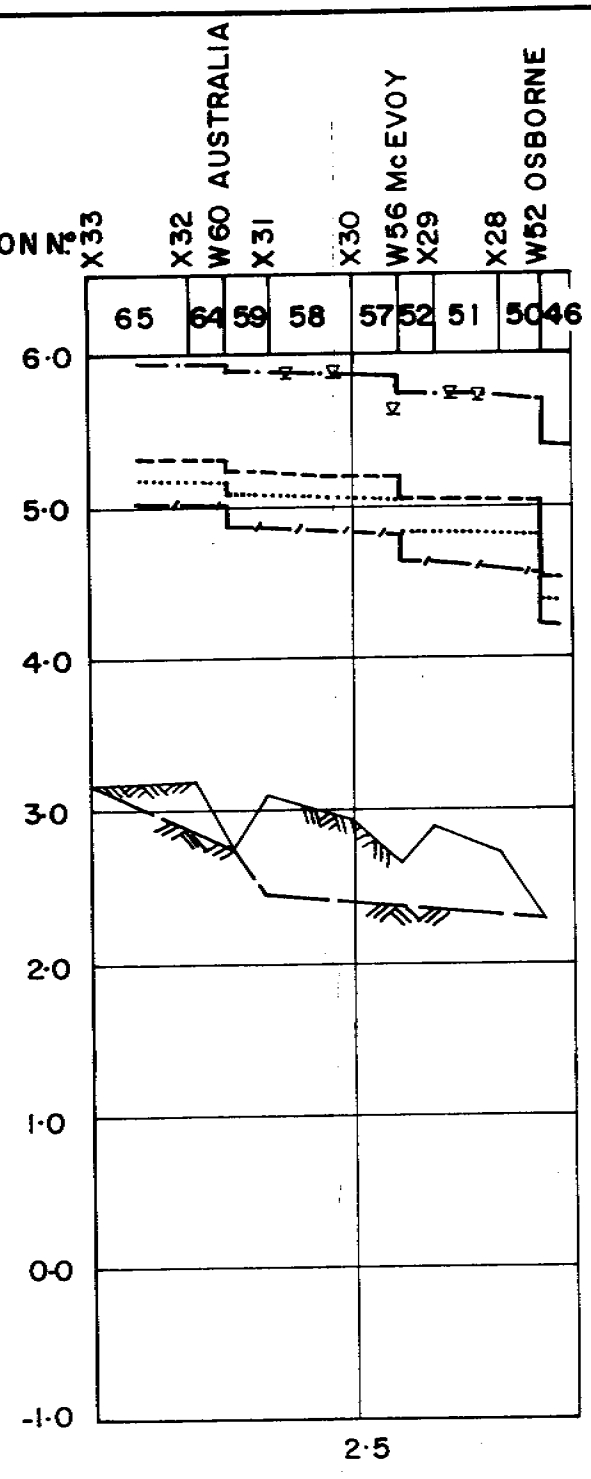
DESIGN FLOOD PROFILES STAGE 2, OPTION 3 WORKS

FIGURE 34

Nº 6509



GREENHAVEN DRIVE ARM AND KAHIBAH CREEK



AUSTRALIA AVENUE ARM

LEGEND

URBAN CATCHMENT, BACKYARDS FILLED. NEERA ROAD, ETTYMALONG CREEK, KAHIBAH CREEK AND GREENHAVEN DRIVE CHANNELS ENLARGED; BRIDGE AT MT ETTALONG ROAD; CALYPTA ROAD, BRISBANE AVENUE, MCEVOY AVENUE AND ETTA ROAD EAST CULVERTS AUGMENTED; AUSTRALIA AVENUE ARM INVERT LOWERED.

- 1 1% AEP FLOOD
- 2 2% AEP FLOOD
- 3 5% AEP FLOOD
- 4 EXTREME FLOOD
- DESIGN INVERT

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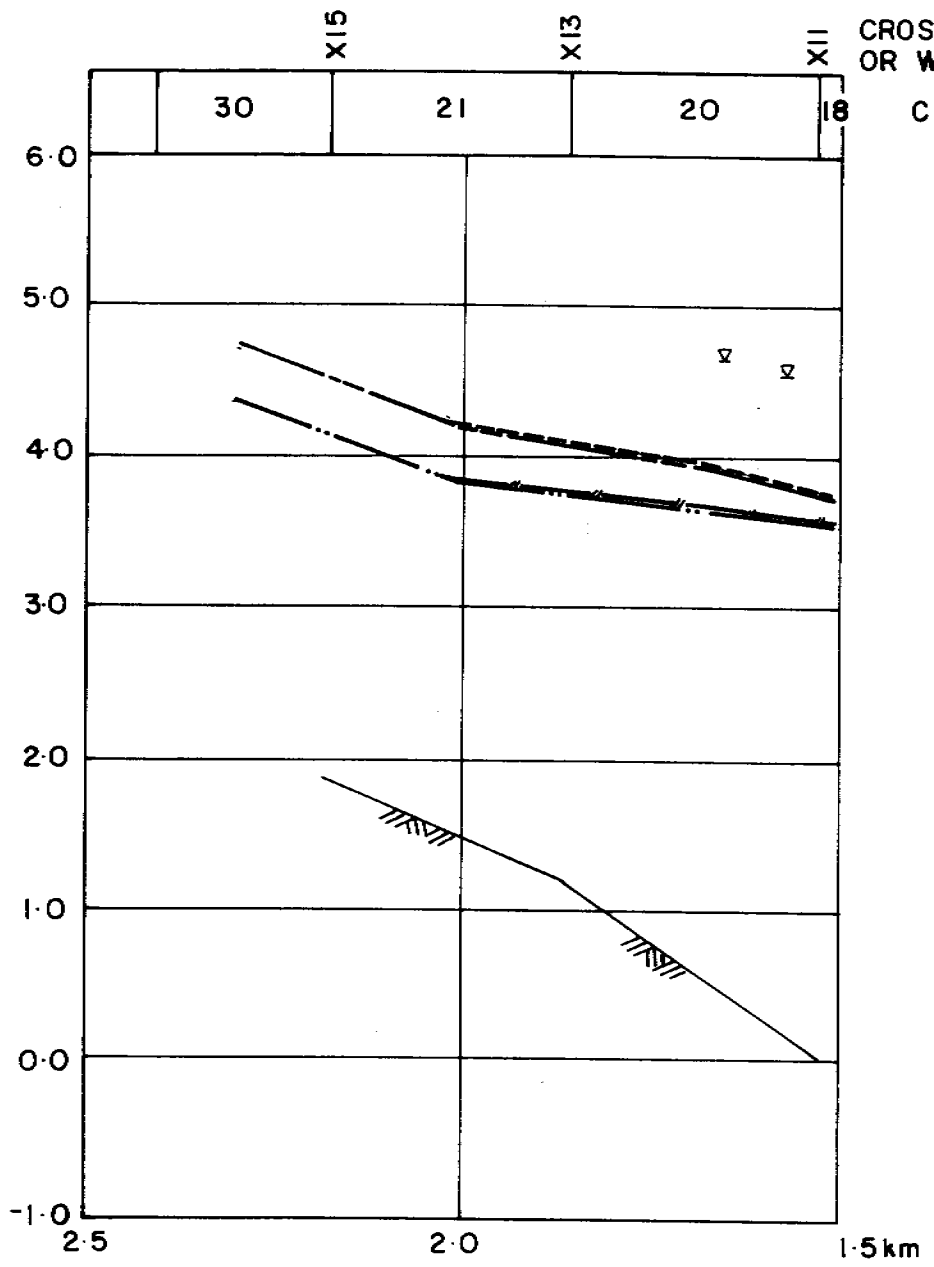
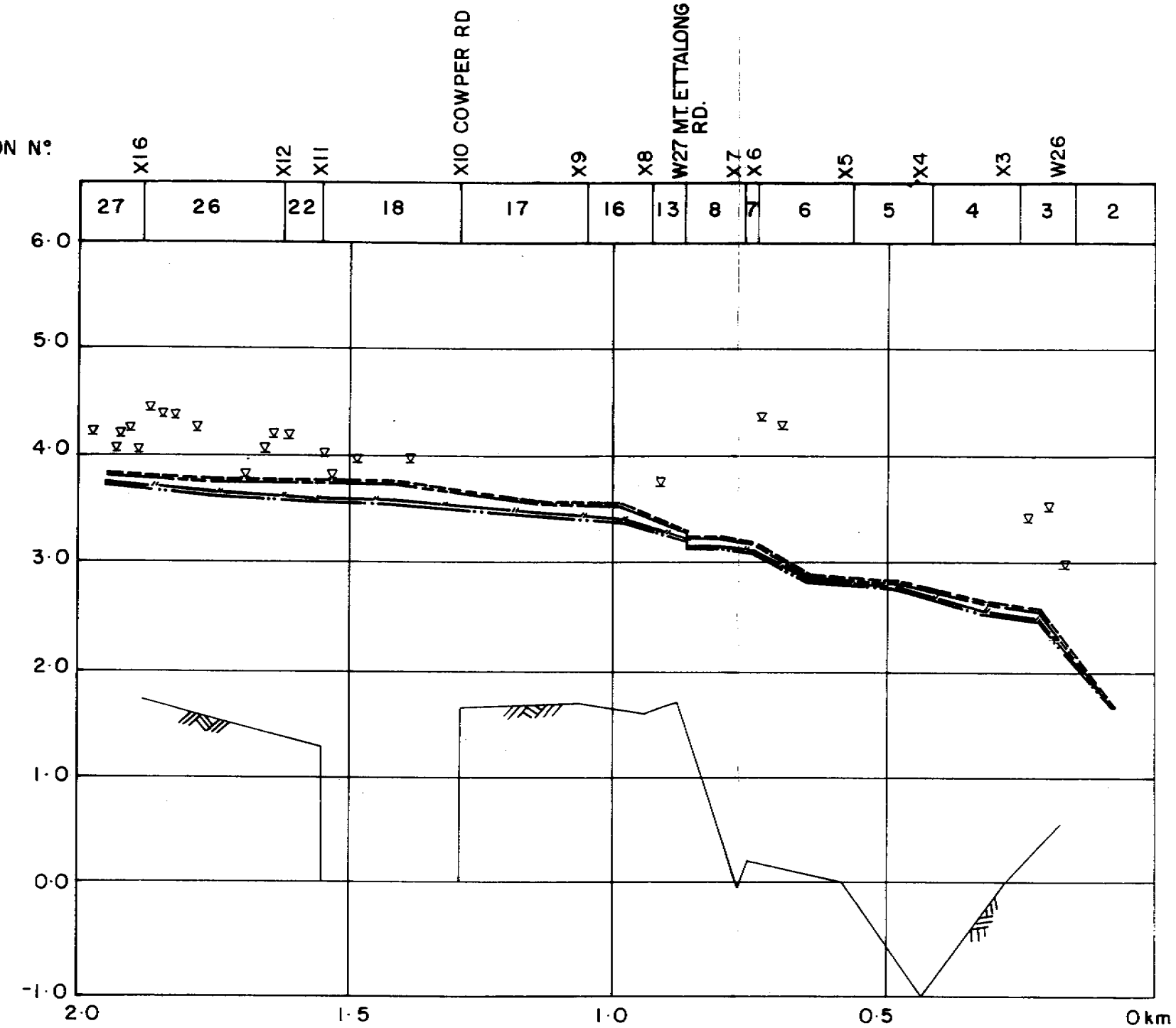
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

DESIGN FLOOD PROFILES
STAGE 2, OPTION 3 WORKS

FIGURE 35



ETTYMALONG SWAMP ARM



ETTYMALONG CREEK AND NEERA ROAD ARM

LEGEND

- ① STAGE 2, OPTION 1 WORKS - n = 0.045 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS
- ② STAGE 2, OPTION 1 WORKS - n = 0.030 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS
- ③ STAGE 2, OPTION 2 WORKS - n = 0.045 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS
- ④ STAGE 2, OPTION 2 WORKS - n = 0.030 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS

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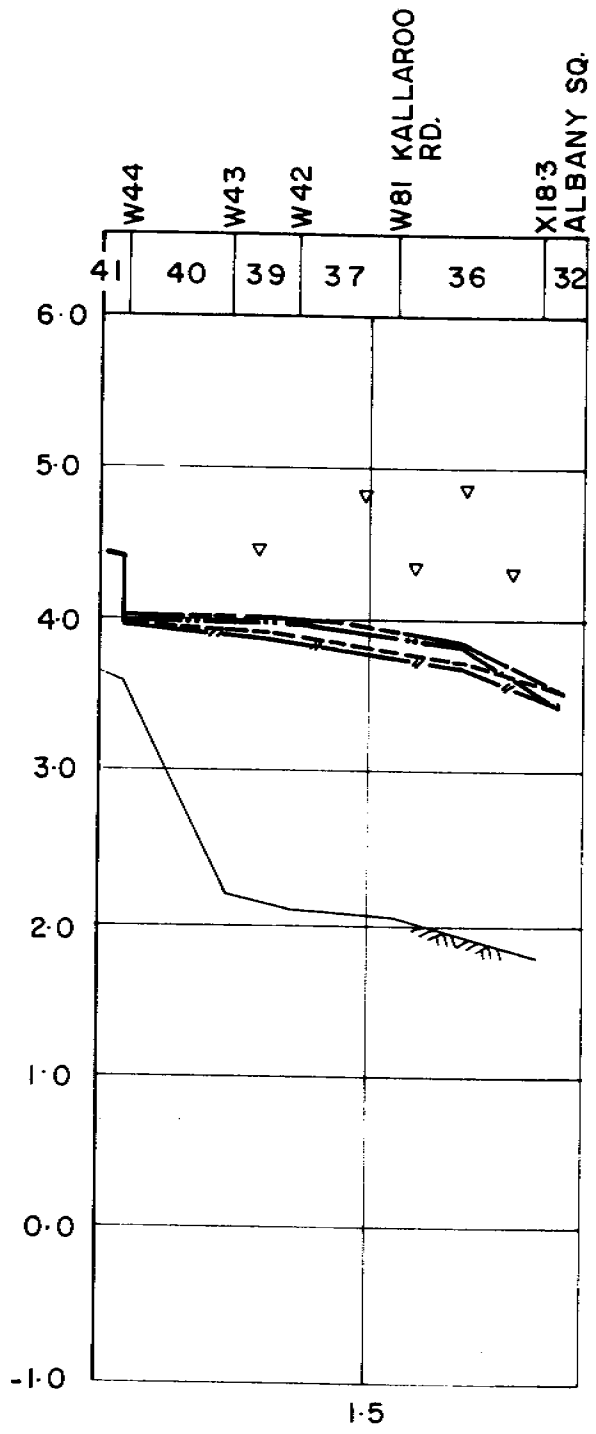
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

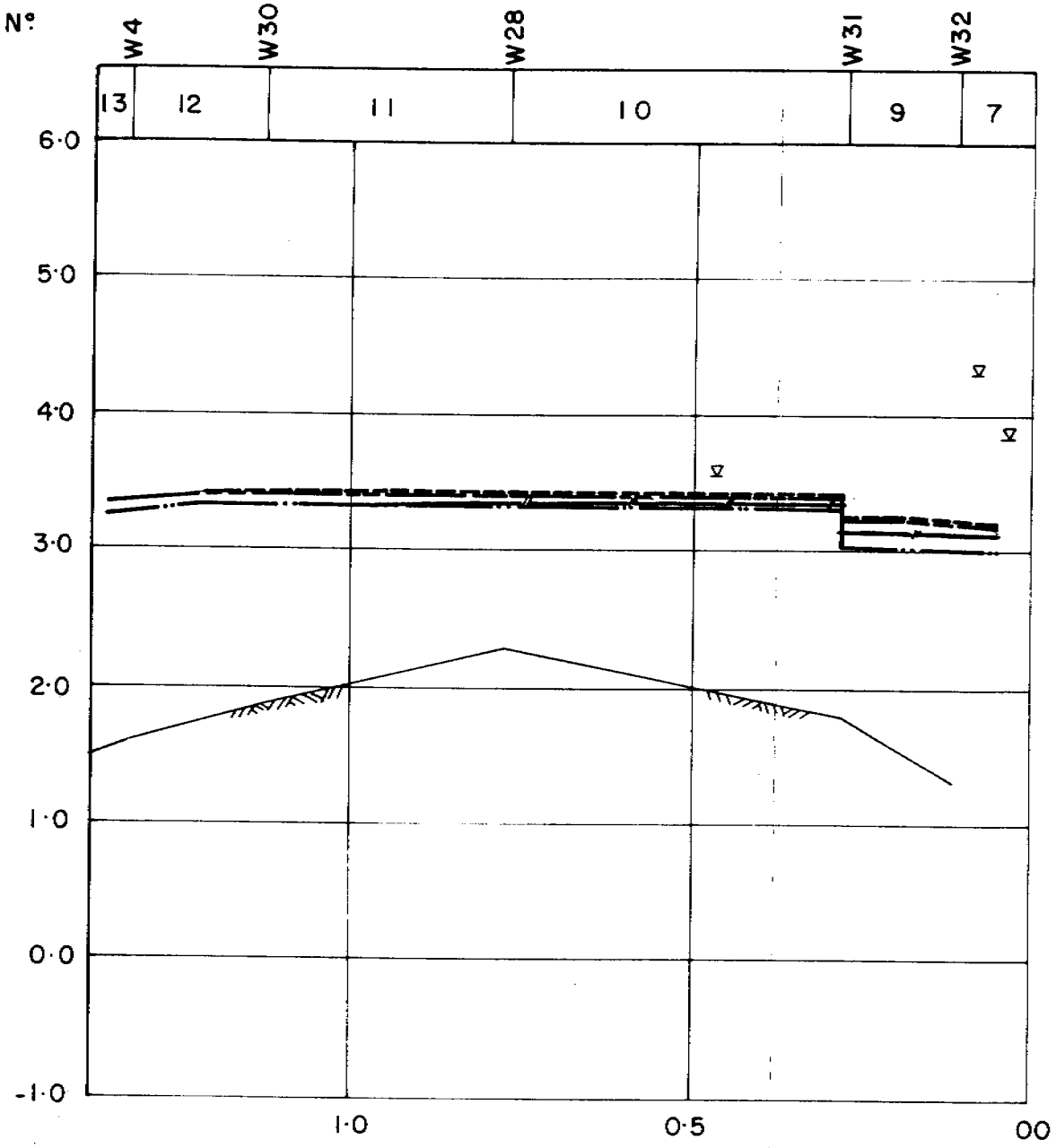
1% AEP FLOOD PROFILES EFFECTS OF CHANNEL ROUGHNESS

FIGURE 36

N° 6509



ILUKA LAGOON ARM



ETTYMALONG CREEK - NORTHERN LOOP

LEGEND

——— ① STAGE 2, OPTION 1 WORKS - n = 0.045 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS

- - - - - - ② STAGE 2, OPTION 1 WORKS - n = 0.030 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS

——·—— ③ STAGE 2, OPTION 2 WORKS - n = 0.045 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS

——//—— ④ STAGE 2, OPTION 2 WORKS - n = 0.030 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS

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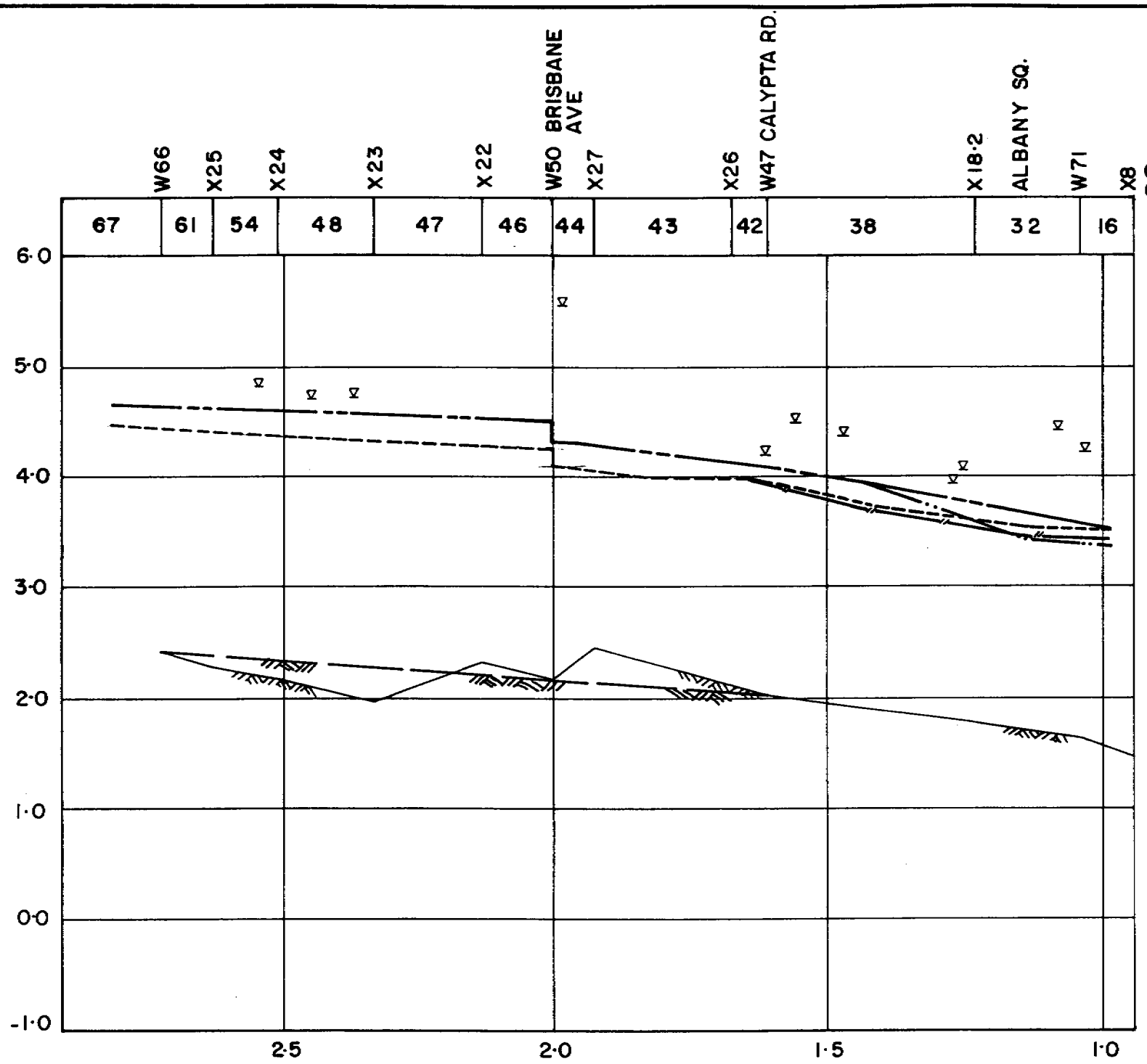
KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

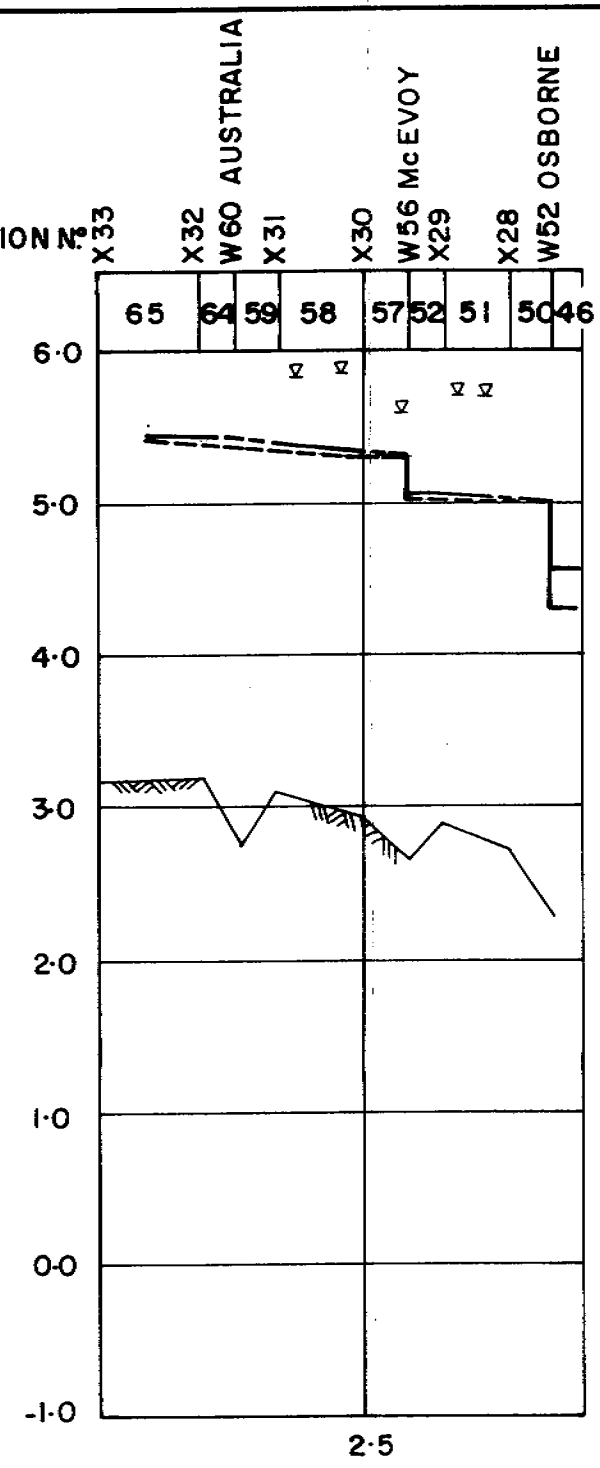
1% AEP FLOOD PROFILES EFFECTS OF CHANNEL ROUGHNESS

FIGURE 37

N° 6509



GREENHAVEN DRIVE ARM AND KAHIBAH CREEK



AUSTRALIA AVENUE ARM

LEGEND

——·—— ① STAGE 2, OPTION 1 WORKS - n = 0.045 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS

– – – – – ② STAGE 2, OPTION 1 WORKS - n = 0.030 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS

——·—— ③ STAGE 2, OPTION 2 WORKS - n = 0.045 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS

——//—— ④ STAGE 2, OPTION 2 WORKS - n = 0.030 IN KAHIBAH CREEK AND GREENHAVEN DRIVE ARMS

DESIGN INVERT

WILLING & PARTNERS
CONSULTING ENGINEERS

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KAHIBAH CREEK FLOOD AND FLOODPLAIN MANAGEMENT STUDY

1% AEP FLOOD PROFILES EFFECTS OF CHANNEL ROUGHNESS

FIGURE 38

APPENDIX A

DATA

APPENDIX A.1 - LIST OF MAPS AND DRAWINGS REFERRED TO

Map or Drawing No.	Date	Title	Scale	Type
9130-1-N	1985	Broken Bay	1:25,000	Topographic
U2782-1	1987	Broken Bay	1:4,000	Orthophotomap
U2790-7	1987	Woy Woy	1:4,000	Orthophotomap
16/41-45 (5 sheets)	1985	Topographic Survey - Ettalong Creek	1:500	Contour and detail plan
86339-19X) 86339-20X) 86339-4X)		Gosford Regional Sewerage - Ocean Beach Cat. 4	1:1,000H 1:200V	Sewer longitudinal sections
86340-15X) 86340-16X) 86340-19X) 86340-20X)	1988	Gosford Regional Sewerage - Ocean Beach Cat. 0B3	1:1,000H 1:200V	Sewer longitudinal sections
	1988	Sewer Work as Executed for Bruce Kerr Pty Ltd	1:1,000	Sewer longitudinal sections
286C-4		Cadastral Plan - Regional Sewerage	1:1,000	Sewer plan
83215/8X 277C-2	1986	Detail Sheet 2790-732	1:1,000	Sewer plan - WAE
86339/4X 286A-2	1988	Detail Sheet	1:1,000	Sewer plan - WAE
286D-3	1987	Cadastral Plan - Regional Sewerage	1:1,000	Sewer plan
86340/7X 286A-4	1988	Detail Sheet	1:1,000	Sewer plan - WAE
84457/5X 286B-1	1987	Detail Sheet	1:1,000	Sewer plan - WAE
286C-1	1987	Cadastral Plan - Regional Sewerage	1:1,000	Sewer plan

Map or Drawing No.	Date	Title	Scale	Type
286C-2		Cadastral Plan - Regional Sewerage	1:1,000	Sewer plan
277C-4		Cadastral Plan - Regional Sewerage	1:1,000	Sewer plan
84311/4X 277D-3	1986	Detail Sheet	1:1,000	Sewer Plan - WAE
86340-6X 286B-3	1988	Detail Sheet	1:1,000	Sewer Plan - WAE
	1990	Creek Transects - Kahibah Creek Flood Study (3 sheets)	1:100V 1:500H areas	Surveyed cross-sections of creek and overbank
286D) 286C) 277D) 286A) 277C) 286B)	1990	Road Number Series	1:2,000	Cadastral maps showing locations of surveyed cross-sections

APPENDIX A.2 - PROPERTY DATA

The following sheets summarise observations made in the field on 24th April 1990 concerning the nature and numbers of potentially floodprone properties. Surveyed floor levels are given on the sheets. Some floor levels were obtained from copies of cadastral maps provided by Council in the course of the Ettymalong Creek Flood Study and Environmental Effects Assessment. These levels are not shown on the sheets.

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

(1)

STREET: Neera Rd / Palm Tree Grove / Neera Rd

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: FLATS? NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION: B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
58	1	R									✓				[illegible]		
60	2	R									✓				[illegible]		
10	3	R	~~M~~ S		N		1	Y	N		✓				[illegible]		
8	4	R	~~M~~ S		N		1	Y	N		✓				[illegible]		
6	5	R	S		N		1	Y	N		✓				0		
4	6	R	S		N		1	Y	N			✓			[illegible]		
2	7	R	M		N		1	Y	N		✓				[illegible]		
75	8	R	L		N		2	Y	N	✓	✓				[illegible]		
73	9	R	M		N		1		N		✓				[illegible]		
54	10	R	M		N		2	Y	N		✓	✓2			15		
52	11	R	S		N		1	Y	N		✓				30		
50	12	R	M		N		1		N		✓				50		
48	13	R	M		N		1		N		✓				70		
46	14	R	S		N		1		N				✓		80		
44	15	R	S		N		1		N		✓				95		
42	16	R	M		N		2	Y	N		✓	✓2			[illegible]		
40	17	R	M		N		1		N		✓				125		
38	18	R	~~S~~ M		N		1		N			✓			[illegible]		
36	19	R	M		N		1		N		✓				[illegible]		
34	20	R	M		N		1		N		✓				[illegible]		

(2)

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET: Neera Rd / Cowper Rd

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: FLATS? NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
32	21	R	M		N		1		N	✓		½			1[illegible]		
30	22	R	M		N		1		N	✓					[illegible]0		
28	23	R	M		N		1		N	.	✓				105		
26	24	R	M		N		1		N		✓				125		
24	25	R	M		N		1		N		✓				140		
22	26	R	M		N		2		N		✓	½			[illegible]		
20	27	R	M		N		1		N		✓				27[illegible]		
18	28	R	S		N		1		N		✓				[illegible]5		
16	29	R	S		N		1		N		✓				[illegible]0		
14	30	R	S		N		1		N		✓				[illegible]5		
12	31	R	M		N		1		N		✓				[illegible]0		
10	32	R	S		N		1		N		✓				[illegible]5		
8	33	R	S		N		1		N		✓				[illegible]0		
6	34	R	M		N		1		N		✓				[illegible]0		
4	35	R	M		N		1		N		✓				940		
2	36	R	M		N		1		N		✓				955		
1	37	R	S		N		1		N			✓			1125		
3	38	R	S		N		1		N			✓			1110		
5	39	R	S		N		1		N			✓			1090		
7	40	R	S		N		1		N				✓		1070		

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET: Cowper Road/ Lake View Parade

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
9	41	R	S				2	N	N			✓			1055		
11	42	R	Very S		N		1		N		✓				1045		
13	43	R	S		N		1		N			✓			1035		
15	44	R	S		N		1		N			✓			1030		
17	45	R	S		N		1		N	✓	✓				1005		
19	46	R	S		N		1		N			✓			995		
21	47	R	S		N		1		N		✓				980		
23	48	R	M		N		1		N	✓					965		
24	49	R	S		N		1		N			✓			415		
22	50	R	S		N		1		N	✓					425		
20	51	R	S		N		1		N			✓			440		
18	52	R	S		N		1		N			✓			450		
16	53	R	S		N		1		N			✓			465		
14	54	R	S		N		1		N			✓			475		
12	55	R	S		N		1		N			✓			490		
10	56	R	M		N		2	Y	N			✓			505		
8	57	R	M		N		1		N	✓		✓	✓		515		
6	58	R	S		N		1		N				✓		525		
4	59	R	M		N		1		N	✓					535		
2	60	R	S		N		1		N			✓			550		

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET: ~~Monash~~ Kahibah Rd

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
2	61	R	S		N		1		N			✓			505		
4	62	R	S		N		1					✓			511		
6	63	R	M		N		2	Y		✓		✓2			610		
8	64	R	S		N		1		N			✓			620		
10	65	R	S		N		1		N			✓			635		
12	66	R	S		N		1		N			✓			645		
14	67	R	S		N		1		N			✓			660		
16	68	R	S		N		1		N			✓			670		
18	69	R	S		N		1		N			✓			680		
20	70	Vacant					~~1~~		~~N~~			~~✓~~			695		
22	71	R	S		N		1		N			✓			710		
24	72	R	M		N		2	Y	N			✓			720		
26	73	R	S		N		1		N			✓			735		
28	74	R	S		N		1		N			✓			745		
30	75	R	~~M~~		~~N~~	3	1		N			✓			755		
32	76	R	M		Y	3	1		N			✓			770		
34	77	R	S		N		1		N			✓			780		
36	78	R	M		N		1		N	✓					795		
38	79	Vacant													805		
40	80	R	M		N		1		N			✓			820		

with granny flat

(3)

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET: Kahibah Rd / ~~Cowper Rd~~ Barrima Cres / Monash Rd

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	FLATS? NO. ON GRND FL	NO. OF STOREYS	IF >1, GRND FL LIVING AREA? Y OR N	SPLIT LEVEL? Y OR N	B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
42	81	R	S		N		1		N			✓			830		
44	82	R	S		N		1		N	✓					840		
2	83	R	M		N		2	Y	N			✓			3195		3.95
3	84	R	~~M~~S		N		1		N		✓				3205		3.77
4	85	R	S		N		1		N			✓			3215		4.26
5	86	R	S		N		1		N			✓			3225		3.99
6	87	R	S		N		1		N			✓			3235		3.52
7	88	R	M		N		2	Y	N	✓(1/2)		✓(1/2)			3255		3.48
8	89	R	S		N		1		N	✓					3265		3.91
1/1	90	R	S		~~N~~Y	✓	1		N		✓				7200		5.02
2/1	91	R	S		~~N~~Y	✓	1		N		✓				7200		5.02
3/1	92	R	S		Y	✓	1		N		✓				7200		5.02
4	93	R	S		N		1		N			✓			7300 All brick now No 6		5.05
6	94	R	S		N		1		N			✓			7300		5.00
8	95	R	S		N		1		N	✓		✓	✗	JAN "	1990 3.74 1.5 3.86	flood "	4.93
3	96	R	S		N		1		N			✓		APRIL	1988 3.95 7200	"	4.97
5	97	R	S		N		1		N			✓		JAN	1989 3.96 7200	3.98	4.84
7	98	R	S		N		2	Y	N			✓			~~Jan 1990~~ 7200	~~3.74~~	4.81
9	99	R	S		N		1		N	Masonry - Fibro					7200		4.86
11	100	R	S		N		1		N			✓			7200		5.01

KAHIBAH ..IEEK FLOODPLAIN MANAGEMENT S. .DY

STREET: Monash Rd / Yarrahin Rd

STREET NO	SHOT NO	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION: B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
13	101	R	~~S~~M		N		1		N			✓			7600		4.91
15	102	R	Mouse		N		1		N			✓			7700		4.59
17	103	R	M		N		1		N			✓			7800		4.96
19	104	R	~~S~~		N		1		N			✓			7900		4.98
Y66	105	R	M		N		1		N	✓					1605		4.57
15	106	R	M		N		1		N	✓					7500		4.72
64	107	R	S		N		1		N			✓			1650		4.88
13	108	R	S		N		1		N				✓		7300		4.79
62	109	R	S		N		1		N	✓					1555		4.37
11	110	R	S		N		1		N			✓			7300		4.93
60	111	R	M		N		1		N			✓			1620		4.66
9	112	R	M		N		1		N			✓			7300		4.82
58	113	R	M		N		2	Y	N	✓		✓			1605		4.39
7	114	R	M		N		1		N	✓					7300		4.88
56	115	R	S		N		1		N			✓			1590		4.69
5	116	Vacant													7500		
54	117	R	S		N		1		N			✓			1575		4.63
3	118	R	S		N		1		N			✓			7300		4.91
52	119	R	M		N		1		N	✓					1565		4.23
50	120	R	M		N		1		N	✓					1545		4.48

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET: Yarrabin Rd / Kallara Rd / Iluka Rd / Stella Rd / Wilkes Ave ~~Gatehouse Rd~~

STREET ID	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: NO. ON GRND FL	IF R: NO. OF STOREYS	IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
36	121	R	S		N		1		N			✓			1445		4.44
34	122	R	S		N		1		N			✓			1430		4.41
41	123	R	S		N		1		N			✓					5.92
43	124	R	S		N		1		N			✓			7300		5.90
39	125	R	?				?								7300		4.29
8	126	R	M		N		1		N	✓					7050		4.76
1	127	R	S		N		1		~~N~~			✓			7400		4.44
7	128	R	S		N		1		N		✓				7400		4.77
9	129	R	S		N		1		N	✓					7400		4.45
11	130	R	S		N		1		N	✓					7300		5.02
13	131	R	S		N		1		N			✓			7300		5.21
15	132	R	~~M~~ S		N		1		N			✓			7400		5.33
17	133	R	S		N		1		N	✓					7400		5.03
19	134	R	S		N		1		N	✓					7400		5.34
21	135	R	~~S~~M		N		1		N	✓					7400		5.31
23	136	R	S		N		1		N	✓					7400		5.44
25	137	R	S		N		1		N	✓					7400		5.75
10	138	R	M		N		1		N	✓					2167		4.89
17	139	R	M		N		1		N	✓					2167		4.69
15	140	R	S~~M~~		N		1		N	✓					2230		4.88

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET: Wilks Ave/Mt Ef Rd/Glanora Rd

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
13	141	R	M		N		2	Y	N	✓		1/2			2525		4.99
11	142	R	M		N		1		N	✓					2523		5.38
9	143	R	M		N		2	Y	N	✓					2545		5.40
96	144	R	S		N		1		N	✓					1605		4.28
98	145	R	S		N		1		N			✓			4620		4.47
100	146	R	S		N		1		N			✓			4650		4.46
102	147	R	S		N		1		N				✓		2011		4.47
104	148	R	M		N		2	Y	N	✓					[illegible]	**	3.83
106	149	R	S		N		1		N			✓			4600		4.47
108	150	R	S		N		1		N			✓			2600		4.43
112	151	R	L		N		1		N	✓					3043		4.37
114	152	R	S		N		1		N			✓			2655		4.45
116	153	R	S		N		1		N			/			2670		4.59
118	154	R	S		N		1		N			✓			2630		4.23
122	155	R	S		N		1		N			✓			2700		4.36
63	156	R	S		N		1		N	✓					3535		
61	157	R	S		N		1		N	✓					3535		
59	158	R	M		N		2	Y	N	✓		1/2			3535		
34	159	R	M		N		1		N	✓					5110		4.08
31	160	R	M		N		1		N	✓					5130		3.97

KAHIBAH [illegible]EEK FLOODPLAIN MANAGEMENT ST[illegible]Y

STREET: Jopson Cl / Greenhaven Drive / Brisbane St

STREET NO	SHOT NO	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: FLATS? NO. ON GRND FL	IF R: NO OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION: B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
11	161	R	S		N		1		N	✓					6400		5.97
70	162	R	M		N		1		N	✓		[illegible]			6345		5.63
68	163	R	M		N		1		N	✓			[illegible] 1988		6330		5.07
66	164	R	M		N		1		N	✓	*	[illegible]	30 [illegible] 1988		6310 4.43	Flood	4.84
64	165	R	M		N		1		N	✓		Jan	1989		6295 4.65	Flood	5.23
62	166	R	M		N		2	Y	N	✓					6280		4.80
60	167	R	M		N		1		N	✓					6260	4.9	~~4.87~~
58	168	R	M		N		1		N	✓					6245	4.71	~~4.72~~
56	169	R	M		N		2	Y	N	✓					6220	4.73	4.33
54	170	R	M		N		1		N	✓					6205	4.80	4.79
52	171	R	M		N		1		N	✓					6185		4.94
50	172	R	S		N		1		N	✓					6165		5.14
48	173	R	S		N		1		N	✓					6150		4.70
46	174	R	M		N		2	Y	N	✓		✓			[illegible]		4.86
44	175	R	S		N		1		N	✓					[illegible]		5.59
42	176	R	S		N		1		N	✓					[illegible]		5.27
40	177	R	M		N		1		N	✓					[illegible]		5.26
134	178	R	M		N		1		N	✓		✓			7500		4.93
132	179	R	S		N		1		N			✓			7500		4.88
130	180	R	S		N		1		N	✓					7500		5.12

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET: Brisbane St / Nawack / McEvoy / Priestman / Mt Ettalong Rd

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: FLATS? NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
128	181	R	S		N		1		N	✓					7500		5.2
108	182	R	S		N		1		N			✓			5875		5.4
115	183	R	S		N		1		N	✓					5912		5.9
98	184	R	S		N		1		N	✓					6610		5.[illegible]
103	185	R	S		N		1		N	✓					6660		5.[illegible]
102	186	R	S		N		1		N				✓		6715		6.0
103	187	R	S		N		1		N	✓					6760		5.6
104	188	R	M		N		2	Y	N				✓		6835		5.8
111	189	R	S		N		1	N	N	✓					6880		5.8
18	190	R			N		2			✓					4140		4.0?
20	191	R			N		1					✓			[illegible]		3.71
22	192	R			N		1			✓					4140		3.5?
24	193	R			N		2			✓					4140		3.9?
26	194	R			N		2			✓					4140		3.7
28	195	R			N		1					✓			[illegible]		4.0?
30	196	R			N		1					✓			[illegible]		3.98
32	197	R			N							✓		ALUM CLAD	[illegible]		3.7?
34	198	R			N							✓			[illegible]		3.8?
36	199	R			N							✓		ALUM CLAD	[illegible]		3.9?
38	200	R			N							✓			[illegible]		3.5?

Extra properties - from Council's topo maps.

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET:

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL	
elb	5		R	M						✓					7400	4.0	4.60	✓
	3		R	M								✓			7400	4.0	4.46	✓
	1		R	M						✓					7400	4.0	?	
albu	33			S								✓			1917	4.5	4.72	✓
	31			M								✓			1907	4.5	4.68	✓
	29			S								✓			1897	4.5	4.93	✓
Pora	14			M								✓			1880	4.5	4.96	✓
	6			S							?				1790	4.5	4.47	✓
ghou	15			M											7500	4.4	4.94	
	17			M											7500	4.4	4.69	
	19			M											7500	4.4	4.91	
	21			M											7500	4.4	5.01	
	22			M											7500	4.4	5.04	
lanor	6			M						✓					5000	4.0	4.53	
	8			M						✓					5015	4.1	4.72	
	10			M						✓					5030	4.2	4.58	
	12			M						✓					5045	3.7	4.60	
tta	1			M								✓			5060	3.7	4.56	
	3			S								✓	✓		5060	3.9	4.77	
	5									✓		✓						

extra properties.

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET:

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION B	BV	F	WB	GI	CHAINAGE (start →)	GROUND LEVEL	FLOOR LEVEL
50			S												~~5330~~	4.3	5.12
52			M												5355	4.3	4.48
															~~5360~~		
29			S												5160	3.5	4.52
27			S ~~M~~												5170	~~4~~ 3.0	4.83
25			~~S~~ M												5185	4.0	5.11
23			S												5200	4.0	4.61
19			M												5225	3.9	4.67
17			S												5240	3.9	4.55
15			M												5250	4.5	5.57
~~13~~ 11			~~S~~ M												5275	4.5	4.69
17			M												5295	3.9	4.49
15			S												5320	3.9	4.33
26			S												5360	3.8	5.20
24			M												5365	4.8	5.48
22			S												5370	4.5	~~4~~ 4.98
20			M												5375	4.7	5.00
27			M												5460	3.5	4.23
25			M												5450	3.3	4.17
23			M												5445	3.2	4.19
19			S												5440	3.5	4.86

Extra properties

KAHIBAH CREEK FLOODPLAIN MANAGEMENT STUDY

STREET:

STREET NO.	SHOT NO.	COMM (C), INDUST (I) OR RESID (R)	SIZE S, M, L	IF C OR I: VALUE L, M OR H	IF R: FLATS? Y OR N	IF R: NO. ON GRND FL	IF R: NO. OF STOREYS	IF R: IF >1, GRND FL LIVING AREA? Y OR N	IF R: SPLIT LEVEL? Y OR N	TYPE OF CONSTRUCTION B	BV	F	WB	GI	CHAINAGE	GROUND LEVEL	FLOOR LEVEL
38				M								✓			1480	4·0	4·45
40				M								✓			1495	4·0	4·62
42				M								✓			1510	4·1	4·46
44				M						✓		-			1525	4·2	4·98
46				M						✓					1535	4·2	4·98
48				M						✓					1545	4·3	4·44
50				M						✓					1555	4·0	4·44
~~1650~~ 65				~~H~~ M								✓			3535	3·5	4·41
57				M						✓					3550	3·2	4·50
55				S						✓					3565	3·2	4·91
53				S								✓			3575	3·5	4·80
51				M						✓					3585	3·5	4·46
34				M											Start		
36				~~M~~ S											~~5185~~ 5225	4·5	5·05
38				~~S~~ M											5240	4·4	5·05
40				S											5250	4·4	5·19
42				~~M~~ S											5265	4·4	5(?)
44				M											5275	4·6	5·30
46				M											5290	4·4	5·29
48				~~S~~ M											5310	4·6	5·20
															~~5335~~		5·05

APPENDIX B

MODELLING

APPENDIX B - MODELLING

B.1 Hydrologic Modelling

For details of calibration and RAFTS model parameters for existing conditions, with computed food hydrographs, please see the Kahibah Creek Flood Study report.

Flood hydrographs were derived for fully urban conditions on the basis of zoning of much of the catchment for dual occupancy. The flatter areas in the subcatchments which drain to the Iluka Lagoon arm, the Greenhaven Drive arm and the Australia Avenue arm were assumed to be 40% impervious, with initial losses and continuing loss rates adjusted as shown in Table B.1. Impervious portions of subcatchments on sloping land were adjusted to reflect an estimate of the maximum likely amount of development. Amended catchment parameters are shown in Table B.1. The resulting hydrographs are presented in Figures B1 to B6.

TABLE B.1

SUBCATCHMENT PARAMETER VALUES - FULLY URBAN CONDITIONS

Subcatchment No. (see Fig. 2)	Area (ha)	Impervious Area (%)	Slope (%)	Routing Parameter B	Initial Loss (mm)	Continuing Loss Rate (mm/h)
1.00	50.8	5	13.9	0.08	10.0	1.5
1.01	10.2	5	3.3	0.08	10.0	1.5
2.00	18.0	5	17.8	0.04	20.0	3.5
3.00	81.3	5	4.4	0.10	20.0	3.5
3.01	23.4	5	22.2	0.02	10.0	1.5
1.02	6.2	0	0.9	0.07	20.0	3.5
1.03	15.5	7	0.6	0.10	20.0	3.5
5.00	36.6	5	11.1	0.08	20.0	3.5
5.01	4.6	5	26.1	0.02	10.0	1.5
6.00	11.7	6	25.3	0.02	10.0	1.5
5.02	0.01	0	0.01	0.02	10.0	1.5
7.00	4.0	7	39.6	0.01	10.0	1.5
8.00	2.5	6	32.0	0.01	10.0	1.5
5.03	4.6	30	1.1	0.02	20.0	3.5
9.00	13.1	6	22.6	0.03	10.0	1.5
10.00	2.6	2	24.0	0.01	10.0	1.5
5.04	1.7	20	1.2	0.01	20.0	3.5
4.00	3.9	0	1.4	0.04	20.0	3.5
5.05	0.01	0	0.01	0.02	20.0	3.5
1.04	4.8	10	9.8	0.01	20.0	3.5
1.05	5.5	25	1.7	0.02	20.0	3.5
1.06	1.6	15	0.8	0.02	20.0	3.5
11.00	25.0	6	21.6	0.11	10.0	1.5
11.01	5.8	6	42.0	0.02	10.0	1.5
18.00	9.2	10	27.2	0.02	10.0	1.5
18.01	4.1	10	34.6	0.02	10.0	1.5
17.00	8.2	7	44.8	0.02	10.0	1.5
11.02	0.1	0	0.1	0.04	10.0	2.5
11.03	12.3	40	2.8	0.08	10.0	2.5

Table B.1 continued

Subcatchment No. (see Fig. 2)	Area (ha)	Impervious Area (%)	Slope (%)	Routing Parameter B	Initial Loss (mm)	Continuing Loss Rate (mm/h)
19.00	11.5	18.5	36.0	0.02	10.0	1.5
11.04	15.1	40	0.3	0.12	10.0	2.5
12.00	3.1	7	57.0	0.01	10.0	1.5
12.01	35.2	40	0.5	0.07	10.0	2.5
13.00	35.1	40	0.1	0.16	10.0	2.5
12.02	0.1	0	0.1	0.02	10.0	2.5
20.00	7.2	15.6	37.0	0.02	10.0	1.5
11.05	17.0	40	0.6	0.04	10.0	2.5
11.06	10.1	40	5.4	0.01	10.0	2.5
14.00	16.1	9	17.7	0.10	10.0	1.5
14.01	8.0	5	26.1	0.06	10.0	1.5
22.00	9.3	5	32.6	0.06	10.0	1.5
14.02	3.7	7	2.0	0.01	10.0	2.5
21.00	6.7	6	34.0	0.01	10.0	1.5
21.01	3.2	40	2.1	0.01	10.0	2.5
23.00	1.4	40	2.0	0.01	10.0	2.5
14.03	0.1	0	0.1	0.02	10.0	2.5
14.04	3.0	5	0.1	0.24	20.0	3.5
14.05	15.0	40	0.7	0.04	10.0	2.5
11.07	0.1	0	0.01	0.02	10.0	2.5
11.08	5.1	40	1.0	0.02	10.0	2.5
15.00	26.7	40	0.1	0.13	10.0	2.5
11.09	15.3	40	0.5	0.05	10.0	2.5
1.07	1.1	18	1.7	0.01	20.0	3.5
1.08	3.4	15	0.5	0.04	20.0	3.5
16.00	15.7	8	26.4	0.02	10.0	1.5
1.09	8.8	22	0.9	0.04	20.0	3.5

B.2 Hydraulic Modelling

Values of Manning's 'n' used to model structural floodplain management options are given in Tables B.2 and B3. Table B.2 shows the roughness coefficients used for Stage 1 works; Table B.3 shows those used to model Stage 2 works.

TABLE B.2

MANNING'S 'N' FOR CROSS-SECTIONS - STAGE 1 WORKS

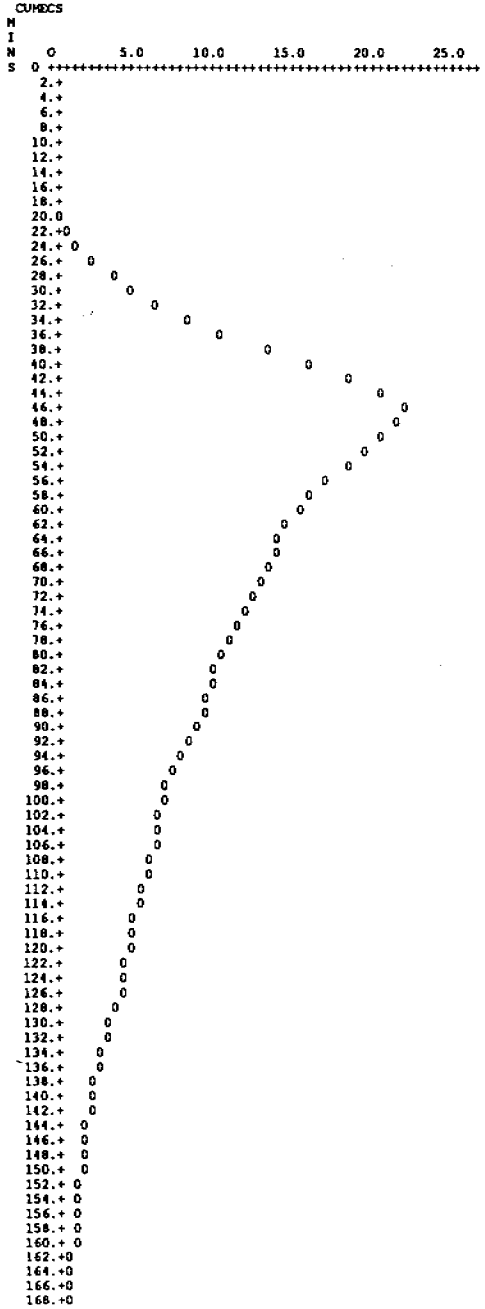
Cross-Section	Seg. 1	Seg. 2	Seg. 3
1	0.025	0.025	0.025
3	0.035	0.025	0.035
4	0.030	0.020	0.030
5	0.030	0.020	0.030
6	0.035	0.025	0.035
7	0.030	0.020	0.030
8	0.030	0.020	0.030
9	0.200	0.030	0.200
10	0.100	0.030	0.100
11	0.030	0.030	0.030
12	0.035	0.030	0.035
13	0.200	0.035	0.100
14	0.100	0.100	0.100
15	0.035	0.060	0.100
16	0.035	0.030	0.035
17	0.100	0.100	0.100
18	0.100	0.035	0.035
19	0.100	0.100	0.100
22	0.045	0.045	0.100
23	0.045	0.045	0.100
24	0.045	0.045	0.100
25	0.045	0.100	0.100
26	0.100	0.035	0.100
27	0.100	0.035	0.100
28	0.100	0.030	0.060
29	0.100	0.030	0.060
30	0.100	0.030	0.060
31	0.100	0.030	0.100
32	0.100	0.030	0.100
33	0.100	0.030	0.100
34	0.030	0.020	0.030

TABLE B.3

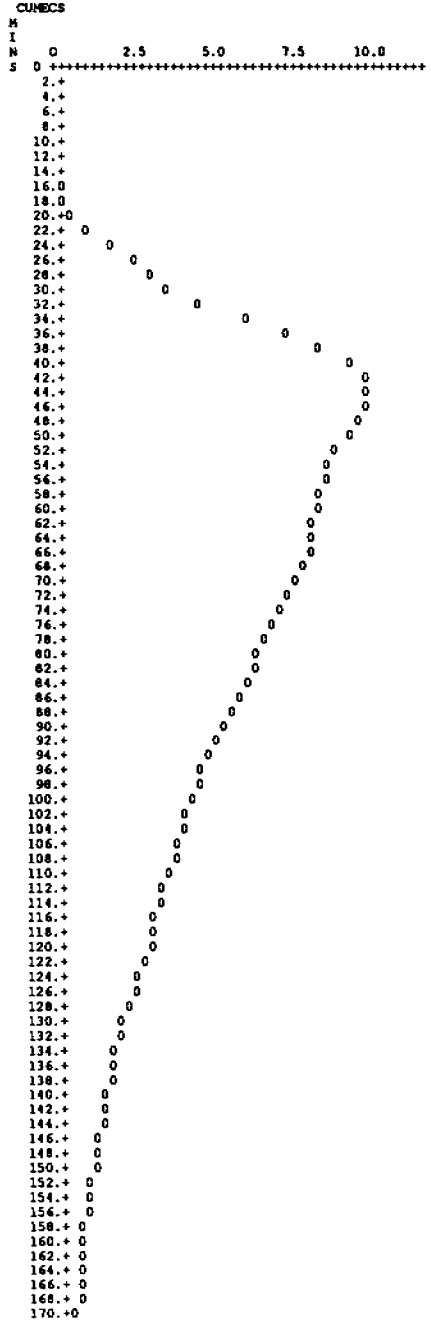
MANNING'S 'N' FOR CROSS-SECTIONS - STAGE 2 WORKS

Cross-Section	Seg. 1	Seg. 2	Seg. 3
1	0.025	0.025	0.025
3	0.035	0.025	0.035
4	0.030	0.020	0.030
5	0.030	0.020	0.030
6	0.035	0.025	0.035
7	0.030	0.020	0.030
8	0.030	0.020	0.030
9	0.200	0.030	0.200
10	0.100	0.030	0.100
11	0.030	0.030	0.030
12	0.035	0.030	0.035
13	0.200	0.035	0.100
14	0.100	0.100	0.100
15	0.035	0.060	0.100
16	0.035	0.030	0.035
17	0.100	0.100	0.100
18	0.100	0.045	0.045
19	0.100	0.100	0.100
22	0.045	0.045	0.100
23	0.045	0.045	0.100
24	0.045	0.045	0.100
25	0.060	0.100	0.100
26	0.100	0.045	0.100
27	0.100	0.045	0.100
28	0.100	0.045	0.060
29	0.100	0.045	0.060
30	0.100	0.045	0.060
31	0.100	0.045	0.100
32	0.100	0.030	0.100
33	0.100	0.030	0.100
34	0.030	0.020	0.030

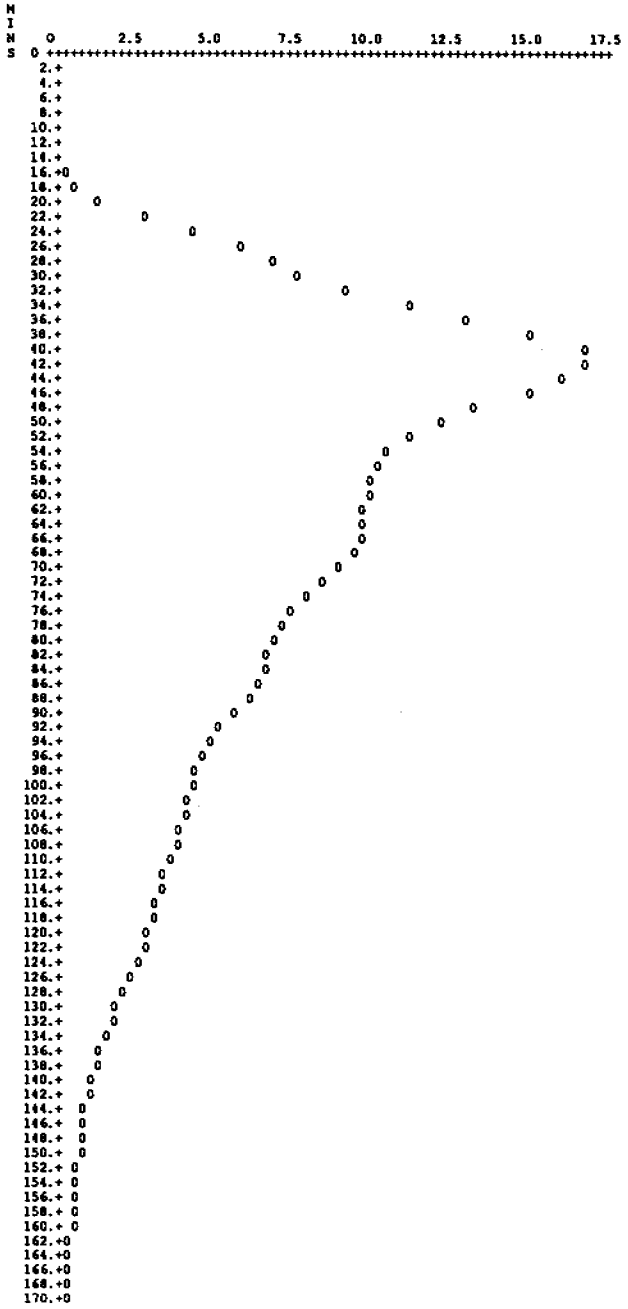
HYDROGRAPH 9



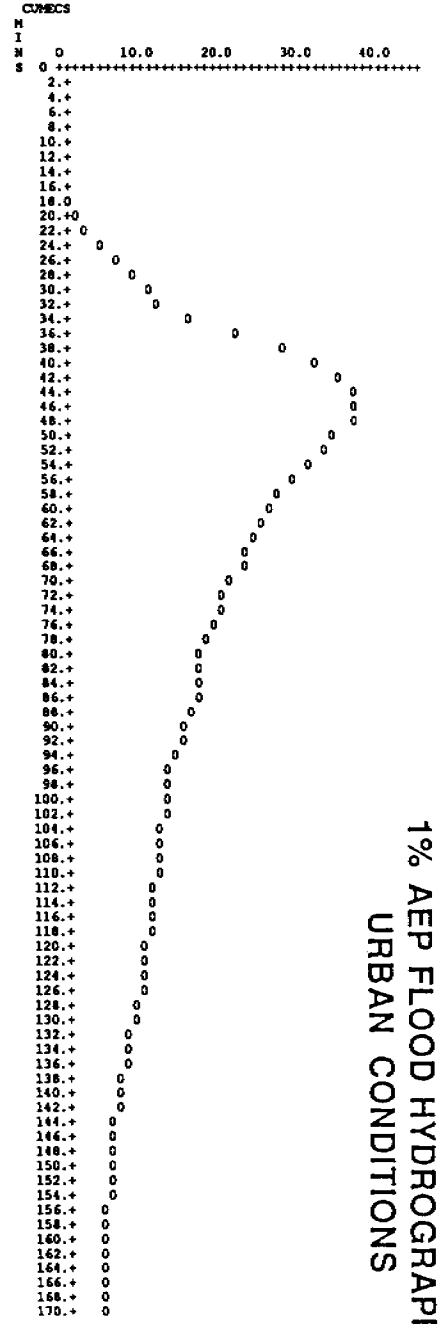
HYDROGRAPH 6



HYDROGRAPH 2



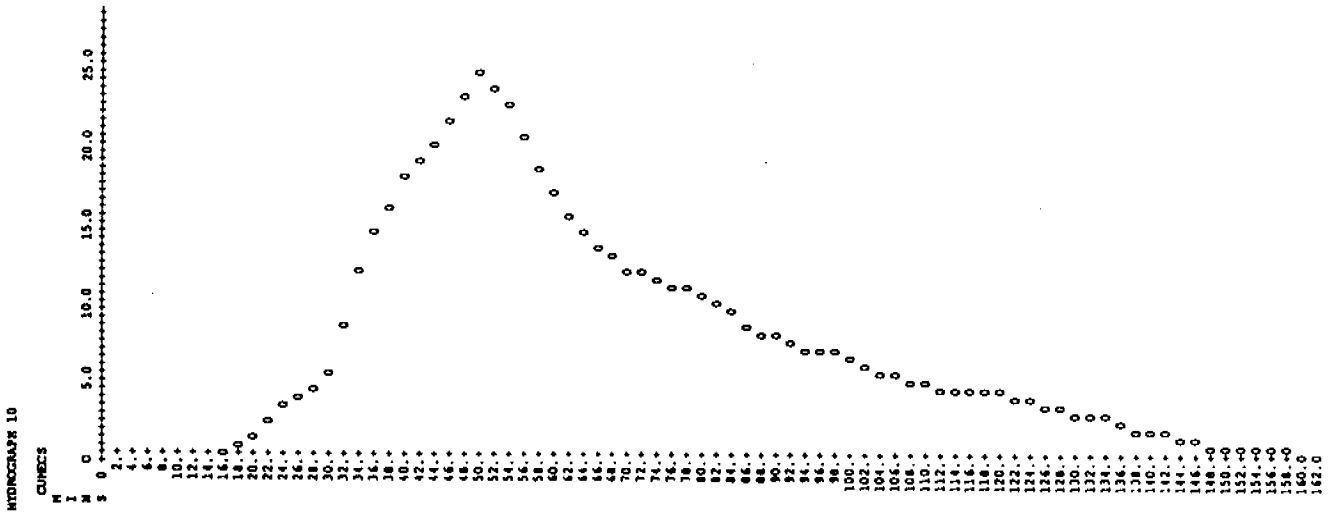
HYDROGRAPH 1 WITH BASIN

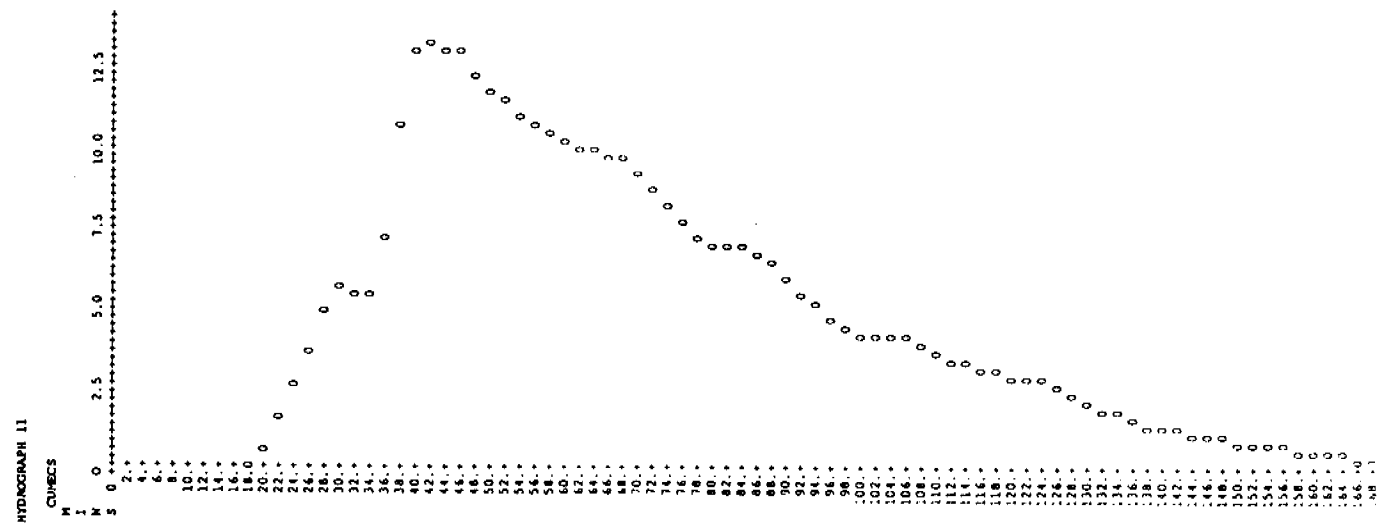


1% AEP FLOOD HYDROGRAPHS
URBAN CONDITIONS

FIGURE B1

1% AEP FLOOD HYDROGRAPHS
URBAN CONDITIONS





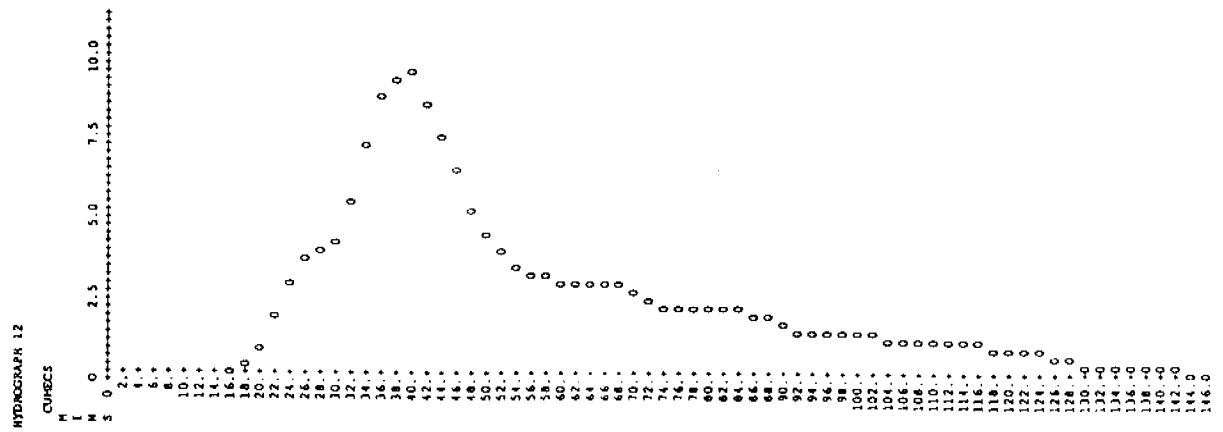
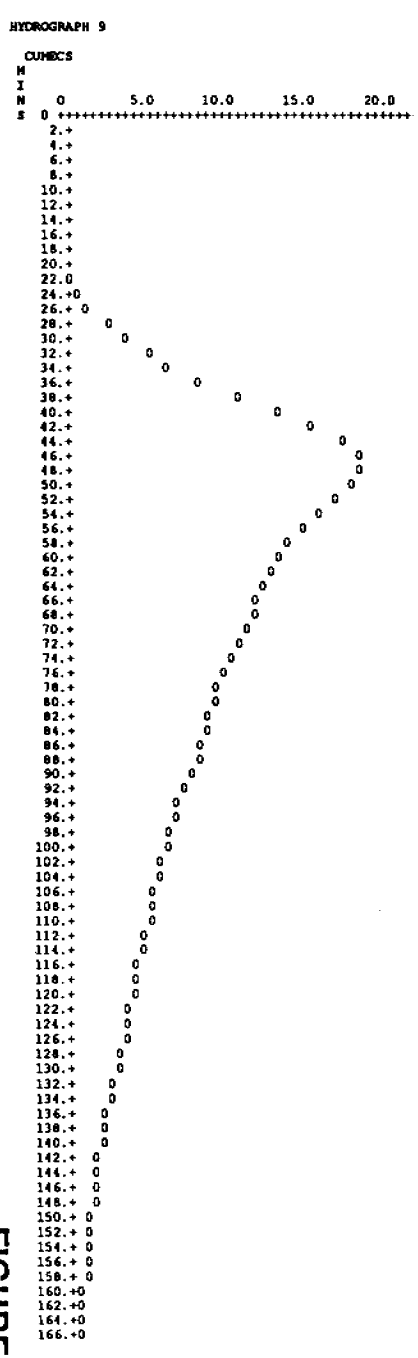
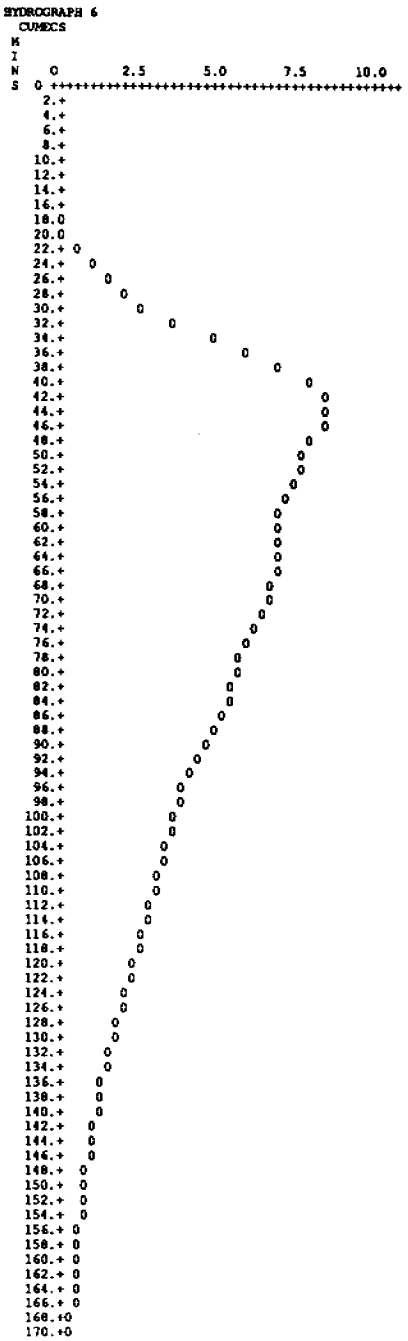
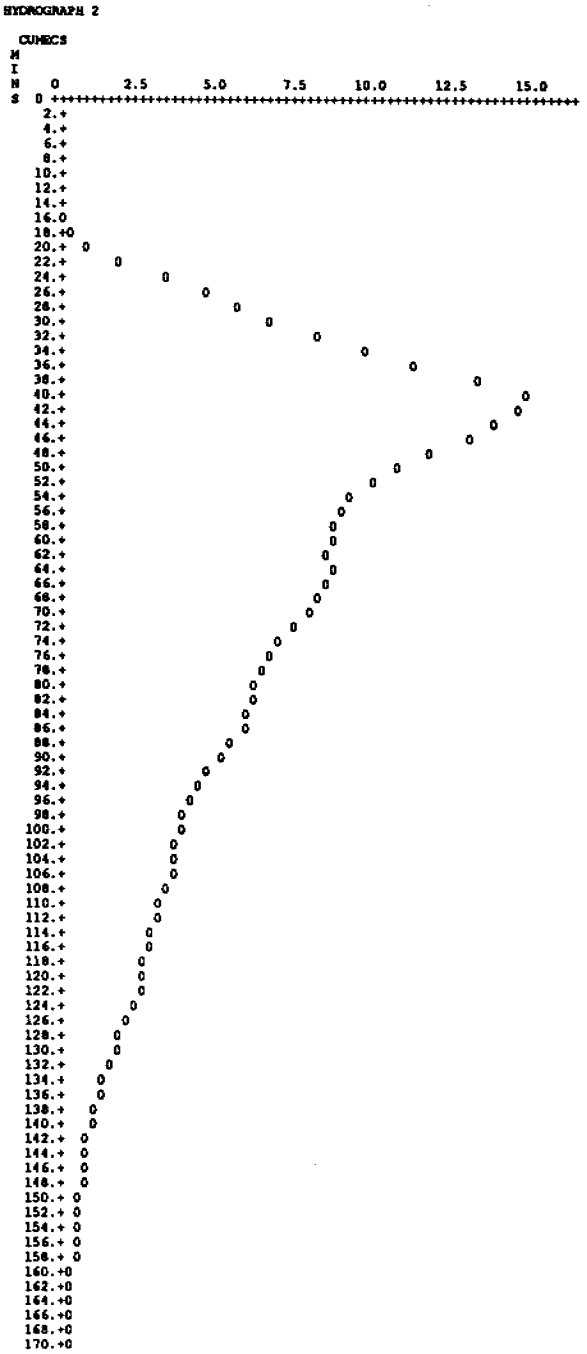
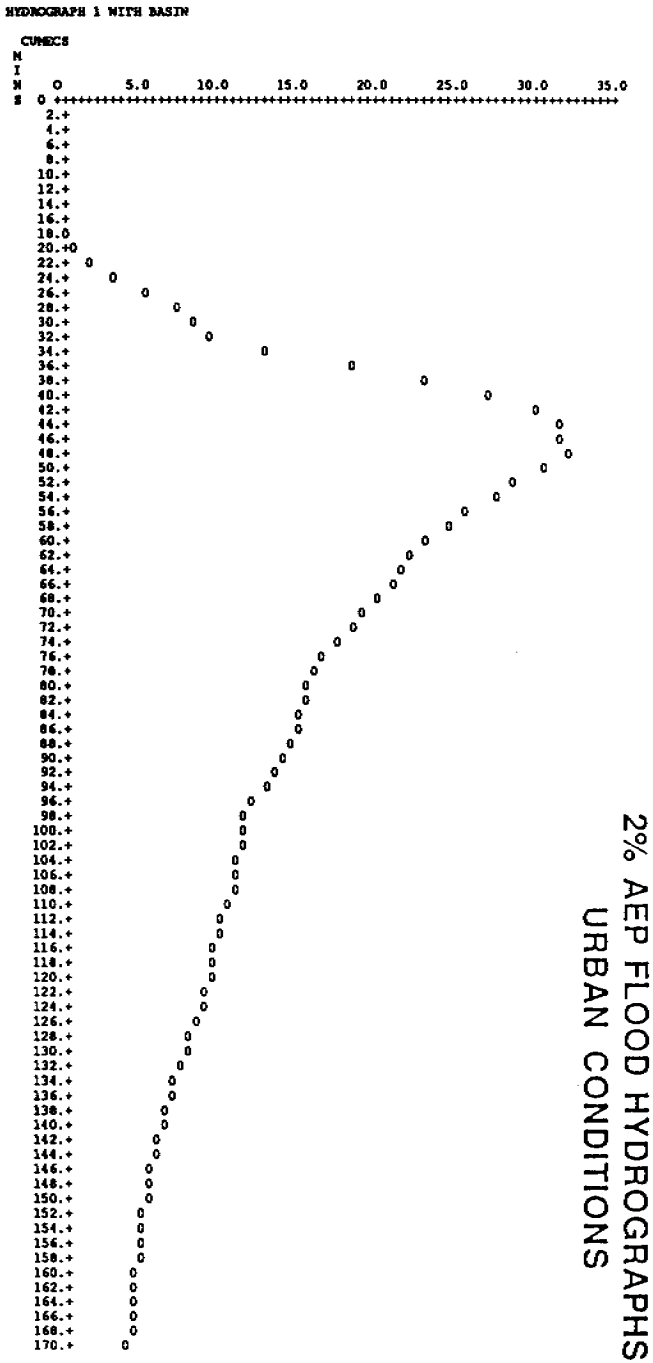


FIGURE B2





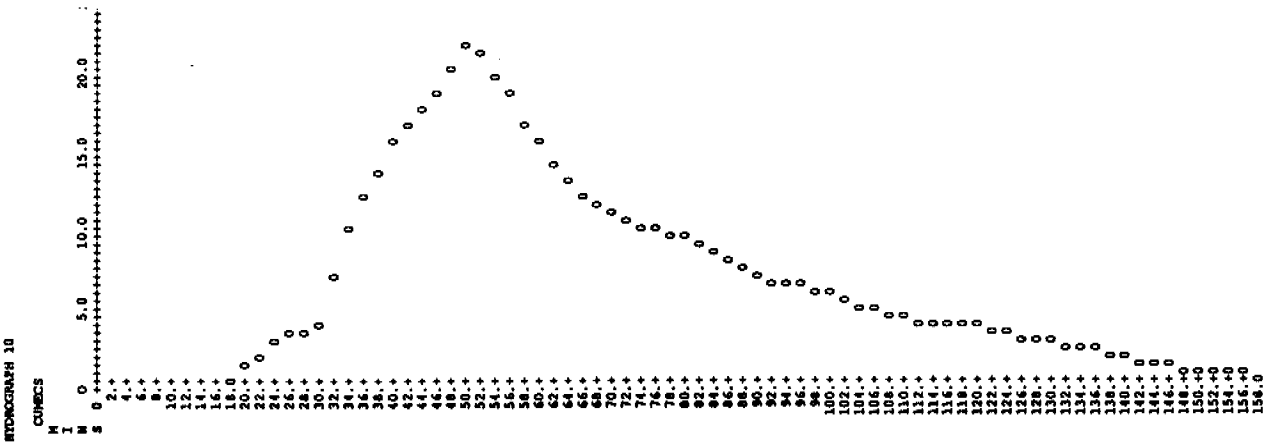


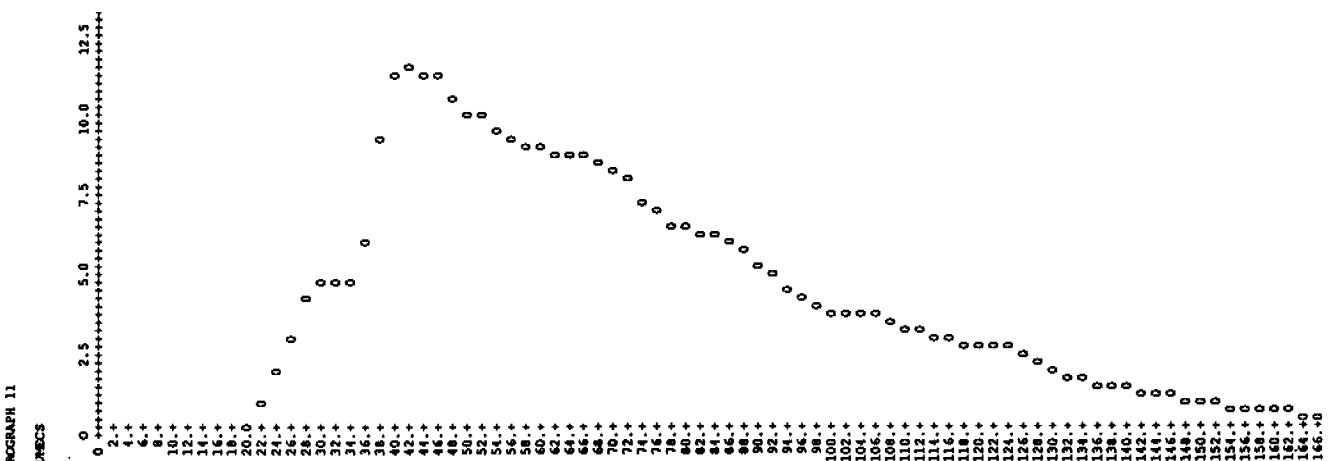


2% AEP FLOOD HYDROGRAPHS
URBAN CONDITIONS

FIGURE B3

2% AEP FLOOD HYDROGRAPHS
URBAN CONDITIONS





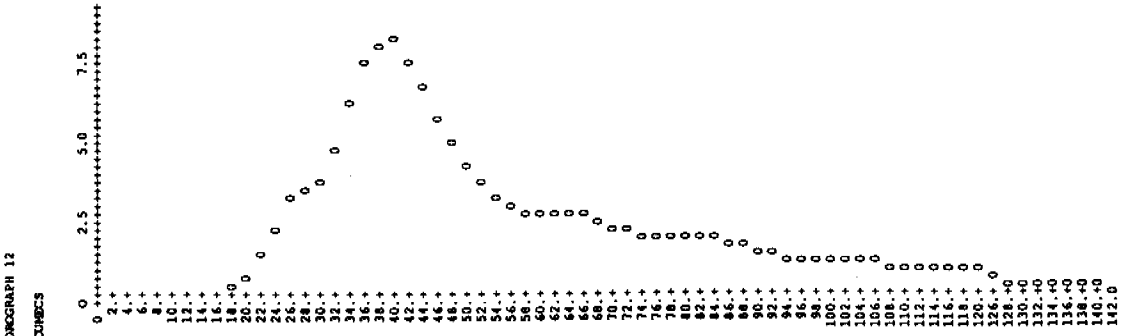
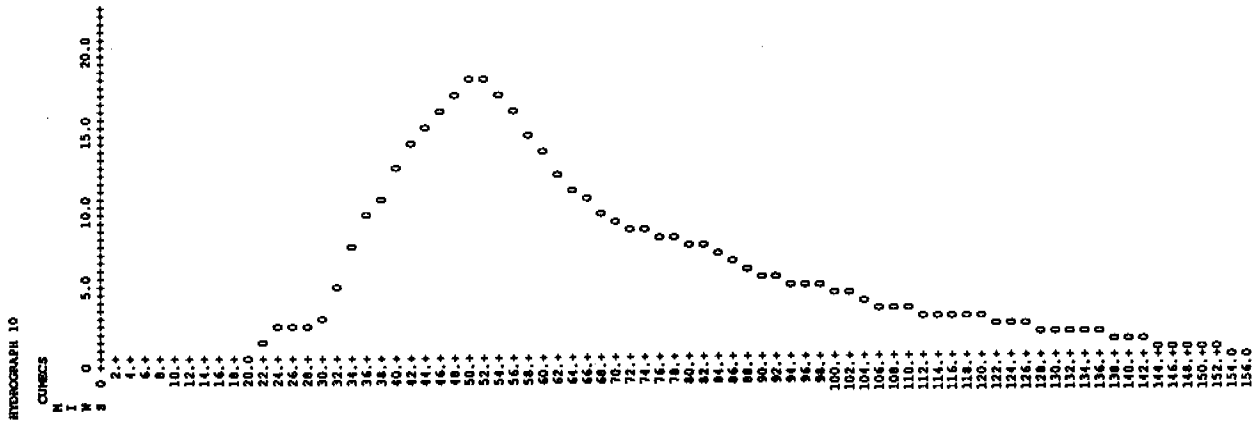


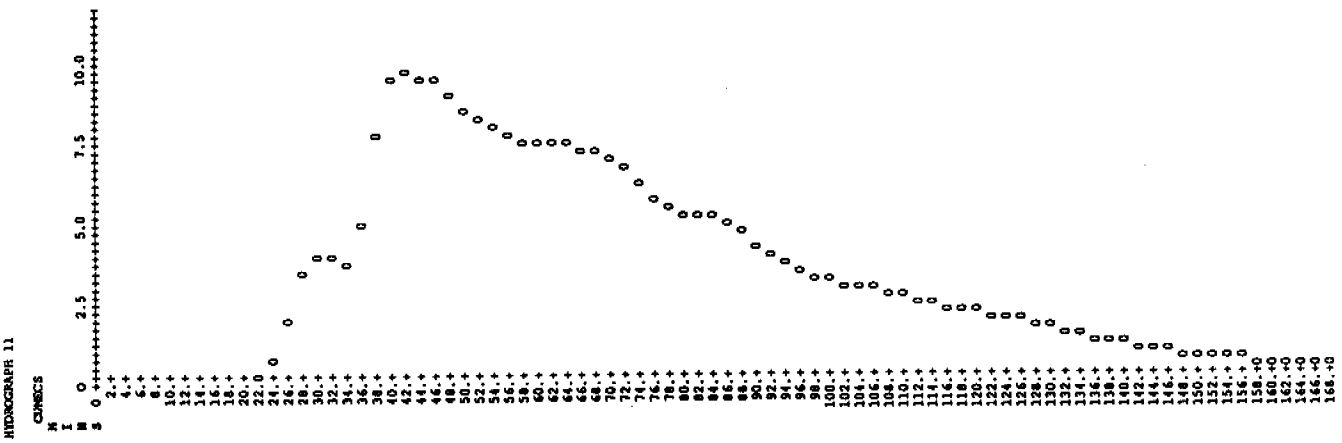
FIGURE B4

5% AEP FLOOD HYDROGRAPHS
URBAN CONDITIONS

FIGURE B5

5% AEP FLOOD HYDROGRAPHS
URBAN CONDITIONS





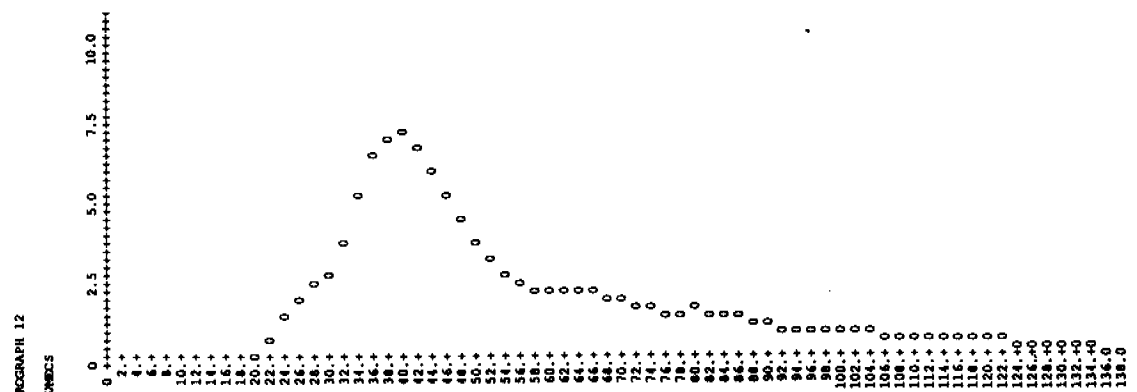


FIGURE B6

APPENDIX C
ENVIRONMENTAL ASSESSMENT

GOSFORD CITY COUNCIL

KAHIBAH CREEK REPORT

DRAINAGE INVESTIGATION

ENVIRONMENTAL ASSESSMENT

ANDREWS.NEIL ARCHITECTS.PLANNERS
207 Albany Street North
Gosford 2250
Tel. (043) 24 3633

February 1991

TABLE OF CONTENTS

1.0 THE EXISTING ENVIRONMENT

The following section describes both the land use and biophysical attributes present along Kahibah and Iluka Creeks. Overall, the environment is described using the landscape approach which incorporates a land system, subdivided into several land units. All land units that have a relationship to the creek flood plain are shown on Figure 1. Discussion of the biophysical attributes within the land system has also been included.

1.1 THE BRISBANE WATER LAND SYSTEM

The Brisbane Water Land System, for the purposes of this study, includes three land units based on the dominant influence of geology and geomorphology re-occurring throughout the area. It includes the sand plain in general, the slopes of the escarpment and the ridge caps of the plateaux. In particular, this system can be representative from Woy Woy to Patonga. Figure 1 shows the land system as a perspective diagram.

The study area is confined to land unit 3, the alluvial sand plain of which Kahibah and Iluka Creeks form the major drainage lines and Kahibah Swamp and Iluka Lagoon the only remaining semi-permanent fresh water swamps.

1.1.1 Hydrology

The confluence of Iluka Creek and Kahibah Creek begins near Albany Square. Iluka Creek drains south-east to this point from Iluka Lagoon. A subdivision (Jacaranda Estate) lies within the catchment of Iluka Lagoon to which it drains via a concrete culvert.

Kahibah Creek drains south easterly and then southerly to the confluence with Iluka Creek. Another branch of Kahibah Creek flows from the north to join the main branch at Osborne Street. Kahibah Swamp is the source of Kahibah Creek on the north-western branch but has now been reduced due to encroaching development. Concrete inverts drain into Kahibah Swamp.

Originally the creeks meandered through the sandplain and in some places were controlled by the orientation of the successive beach dunes. Between 1970 and 1975 the meanders were straightened into drainage channels. This in fact, has left residual oxbows along the creek systems which function as storage retention during times of inundation.

Two lagoons occur on the creeks; Kahibah Swamp and Iluka Lagoon. Both are identified under State Environmental Planning Policy No. 14 and function also as storage retention areas, although their storage capacities have now been somewhat curtailed.

1.1.2 Topography

The topography of the sand plain generally comprises a series of beach dunes (called strand lines) oriented in a north to north-west direction. They have been formed as a series of dunes and swales but their recognition in the field is now diffuse due to urban development. Low points in the system, i.e., the swales, are often waterlogged due to impervious soil layers and the difference in elevation between the swale and dune is usually not more than one or two metres. Overall, the topography is flat rising to not more than 5 metres above sea level but two low lying areas are present which pond water from escarpment drainage (Kahibah Swamp and Iluka Lagoon). Further, oxbows along creek lines are also low lying which also pond water during high storm events.

Adjacent coastal escarpment lands are steep. At the base, slopes, are smooth and undulating but the plateaux are capped by a resistant rock strata which gives rise to steep cliffs, benches and flat ridges. The latter is nominated the Brisbane Water Escarpment which rises up to an elevation of some 200 metres above sea level (Figure 1).

1.1.3 Geology

The flat capped plateaux and steep cliffs of the escarpment are of Hawkesbury Sandstone geology. Massive quartz sandstones comprise this formation which are often interspersed with frequent cross-bedding and interbedded shale lenses. The sandstones are very resistant to weathering and result in steep vertical cliffs which break away along joint planes as sandstone blocks.

Two types of soils generally form from this geology. On plateau tops yellow earths occur which comprise a deeper sandy loam where interbedded shale lenses are exposed beneath the soil surface. Sandy topsoil layers are derived from coarse sandstone wash of the weathering sandstone outcrops. Where sandstone outcrops near the surface, shallow, skeletal, infertile, sandy lithosols occur not usually more than 5 cm deep. Deeper soil accumulations occur between intercises and behind rock boulders. Both soil types are prone to erosion from surface wash if they become devoid of vegetation.

Smooth undulating slopes at the base of the escarpment are of the Terrigal Formations of the Narrabeen Group of rocks. The Terrigal Formations are also a sedimentary unit but have been derived from quartz sandstones, claystones, siltstones and breccias. Thus they produce a predominantly clay based soil forming yellow podsolics, which comprises a grey sandy 'A' horizon and a yellow clay loam 'B' horizon. The former is derived from coarse sandstone wash of outcropping boulders whilst the latter is formed from in-situ weathering of the shale dominated country rock.

Such soils also have a high gully and rill erosion hazard which becomes pronounced on steep and unvegetated slopes. If the sandy topsoil layer is removed it exposes the contrasting sub-soil layer, which because of its differing textural characteristics is difficult to revegetate.

Sand plain areas are of recent origin called the Quaternary. According to the Geological Survey of New South Wales (1980) those located around Kahibah Creek date from the Holocene, that is the existing period up to 100 000 years ago. Thus a succession of beach dunes have accumulated under a wave regime and resulted in a soil which is a deep yellow fine to medium grained quartz sand. Soils surrounding the Kahibah Creek system are of 2 types; sands and hardpans. Throughout the entire creek area sands are evident. These comprise deep quartz azonal sands with a shallow A1 horizon of grey sands and an A2 horizon of deep yellow sands. Throughout the A2 horizon evidence of shell fragments and granular pebbles is noticeable whilst further distant from the present coastline (eg. between Osborne Street and Kahibah Swamp) their presence is less noticeable. They are highly leached of nutrients and humus.

Along the upper reaches of Iluka Creek and Kahibah Creek and within Iluka lagoon and Kahibah Swamp a hardpan soil is present. Such soils comprise a shallow grey sandy A1 horizon grading into a A2 horizon of black 'coffee rock' sand cemented with organic matter. This overlies a red brown sandy 'B' horizon of "coffee rock" which is lightly cemented and iron indurated. These soils form an impermeable layer, remain saturated and are responsible for the occurrence of the wetland ecosystems.

The sand plain soils, which if denuded of vegetation, are prone to erosion. Along drainage channels cut bank erosion is particularly prevalent and sheet erosion occurs along bank shoulders, creating pockets of sediment within the waterways.

1.1.4 Vegetation

Vegetation has been described in terms of its structure according to Specht (1981) and floristics in terms of the classic style of Benson and Fallding (1981). Overall, the vegetation descriptions applied are in keeping with current vegetation mapping standards.

COMMUNITY 1 - CLOSED SEDGELAND

Structure	Dense cover of sedges up to 2 metres high.
Habitat	Shallow enclosed freshwater swamp with organic muds and silts.
Distribution	Kahibah Swamp only.
Main Species Present	Baumea articulata
Comments	This is the only representation of this community type on the Woy Woy sandplain.

COMMUNITY 2 - CLOSED SEDGELAND

Structure	Dense cover of sedges up to 2 metres high.
Habitat	Enclosed freshwater swamp with deeper waters. Usually low nutrient content.
Distribution	Iluka Lagoon.
Main Species Present	Lepironia articulata
Comments	This species is restricted in distribution on the Central Cost. Degradation is occurring as a result of silt entering via the table drain and lowering of the water table caused by the new channel outlet.

COMMUNITY 7 - OPEN FOREST

Structure	Trees up to 30 metres high with an open canopy cover. Understorey dry with a dense cover of smaller trees, shrubs, monocotyledons and herbs.
Habitat	Valley floors in sheltered situations. Low water tables present. Podsolised sands.
Distribution	North of Ettymalong Swamp and generally over the western sandplain area.
Main Species Present	Trees: Angophora costata, Eucalyptus gummifera, E. paniculata, Syncarpia glumulifera. Occasionally E. piperita ssp. piperita. Smaller Trees: Allocasuarina torulosa, Persoonia linearis, Elaeocarpus reticulatus, Monotocca elliptica, Banksia serrata. Shrubs: Macrozamia communis, Correa reflexa var. reflexa, Platylobium formosum, Acacia suaveolens, Woollsia pungens. Monocots: Pteridium esculentum, Culcita dubia.
Comments	Not exclusive to the study area but remains on the western fringes.

Vegetation present in the study area is a reflection of the soil, drainage and aspect conditions. Behind the beach on deep yellow sands, with minimal podsolisation (more recent beach dunes) are woodlands of Eucalyptus botryoides (Bangalay) and Angophora floribunda (Rough Barked Apple). The understorey is xeromorphic and a major component is Banksia serrata. Soils are deep, dry with the watertable about 2 metres below the surface. Some tolerance to salt and wind spray is a feature of this community. Further landward, the beach dunes possess a greater deal of podsolisation with a greater humus content in the soil, resulting in more acid soil conditions. Where wind and salt spray are less, the community changes to E. gummifera (Red Bloodwood) and A.costata (Sydney Red Gum) open forests.

Organic soils of the sandplain are found around the creeks and swamps where watertables remain permanently high. E. robusta (Swamp Mahagony) and Melaleuca quinquenervia then dominate. Casuarina glauca is also present but is more common in brackish conditions, under tidal influence. These communities are also at times subject to inundation. Where water is ponded and permanent, Lepironia articulata and Baumea articulata occur, the former in deeper waters. In brackish conditions Cladium procerum occurs (Willing & Partners 1989).

1.0 THE EXISTING ENVIRONMENT Contd.

1.1.5 Fauna

Faunal detail for the waterway areas has been presented previously (Willing & Partners 1989). Pertinent factors to note are that a large number of birds, particularly waterbirds, are present in areas where sufficient aquatic plant food material and habitat is available to support such populations. Bush birds are generally absent due to the lack of sufficient low vegetative cover but would be present in low numbers in natural vegetation beside the oval in Osborne Street.

1.1.6 Bush Fires

Within the context of this study bush fires are an important component of the existing environment, although they are not directly applicable to the sand plain (land unit 3). Bush fires on the adjacent escarpment whether they be natural, deliberately lit, or hazard reduction burns, depending on the season, intensity and extent, can lead to denudation of understorey vegetation. In times of heavy rainfall, this factor together with the presence of large exposed areas of sandstone rock surface can create "flashy" runoff conditions over slopes bringing with it quantities of ash and slit into the creek systems and exaggerating flood peaks. Twice over the past two years residents in the general area have experienced such a situation.

1.1.7 Land Use

Land use in the study area is almost exclusively residential with recreational and special uses interspersed. These special uses include an electricity substation, Umina High School and various drainage easements associated with the creek. There is little potential for other major land uses to locate within the area given residential character and capability. In terms of the present study, the major consideration will be in the intensification of this residential development either through redevelopment and/or rezoning for more intensive development.

Redevelopment, which includes subdivision, villa and dual occupancy development, is somewhat limited by the existing pattern of residential development and demand. What little redevelopment as is occurring takes the form of dual occupancy. It is not anticipated that such development will intensify development substantially in the catchment. Although flats are permitted in the 2(a) zone (which covers most of the lowland residential development), the existing zoning restrictions under this zone will restrict flat development within the study area. Similarly, rezonings would not be expected to occur to the extent that they would intensify residential development dramatically.

2.0 EXISTING MANAGEMENT ISSUES

Apart from the problems of flooding a number of management issues are present which apply directly to Kahibah Creek and its associated waterways. The issues outlined are continual, require regular maintenance by Council staff, are often the subject of interaction between Council and residents and in all probability are seen to contribute to flood peaks or at least reduce the hydraulic efficiency of the channels.

2.1 SEDIMENTATION

Kahibah Creek traverses through soils that are soft, sandy and highly erodible. Stream bank erosion is particularly prevalent with high flow patterns which leads to sedimentation pockets accumulating within the waterway. Furthermore, upslope development on the Terrigal Formation soils leads to silt fan accumulation within waterways at the foot of slopes.

At both the lagoons, Kahibah Swamp and Iluka Lagoon, sedimentation is extreme. At Iluka Lagoon, the water retention capacity due to silt accumulation has probably been reduced by more than one third. Sedimentation is also beginning to reduce the capacity of Kahibah Swamp particularly at the north western proximity. The source is from upslope and adjacent development within the catchment and erosion of Terrigal Formation soils.

Other important sediment pockets are originating from street drain run-off through the quartz sands (Brisbane Street to the Retirement Village), inputs from culverts (Brisbane Street to the Retirement Village, Albany Square to Iluka Lagoon), sewerage construction (Brisbane Street to Kahibah Swamp) and from beside all culvert headwalls.

2.2 WEED INVASION AND ALGAE POPULATIONS

The weed invasion problem within the waterways has been discussed previously (Willing & Partners 1989) which is a direct result of sedimentation and nutrient input. Weed colonies present in the waterbody are probably the result of three main factors:

- adequate available light conditions which can penetrate the water body.
- soil deposits reaching the waterbody from bank erosion and stormwater inputs.
- nutrient contributions from septic tank seepage, sediment pockets, stormwater inputs and dumping of rubbish on creek banks.

If any one of the factors are increased it results in increased growth of aquatic plants.

Exposed sediment fans above the level of the water, e.g., Iluka Lagoon, lead to colonisation by terrestrial weed species such as Paspalum urvillei, which displaces native plant flora. This then reduces the amenity of the area and the capacity to support native fauna. Exotic weed species require high light conditions, high nutrient sources and bare exposed soil surfaces.

Under wet weather conditions discharges from stormwater drains leads to significant increases in soluble and particulate phosphates and nitrate nitrogen which is either taken up by the water plants or is trapped by the water plants and incorporated into the sediment, enriching it. Aquatic plants thereby utilise these nutrients increasing their biomass and as decomposition takes place nutrients are recycled back into the nutrient reservoir.

In reduced sediment (anaerobic conditions) plant nutrients such as Fe, Mg, P, S and Si are present in available form. Some plants can utilise these nutrients through root systems and other specialised structures. It may also be expected that at night dissolved oxygen concentrations in the water would be low (due to an excess of respiration over photosynthesis) which would given rise to conditions for the release of nutrients (from a reduced sediment) for use by plants.

Soluble nutrient and particulate nutrient inputs from stormwater drains, bank soil erosion, and weed and grass decomposition are in all probability trapped by the plants growing along the bank shore as well as by the algae attached to leaf surfaces. Algae, in particular, can uptake vast quantities of nutrients. Particulate nutrient forms become incorporated directly onto the sediment thereby enriching the available nutrient reservoirs (Cheng 1984). Along one section (Brisbane Street to Kahibah Swamp) effluent, presumably from washing machines, was observed flowing into the creek. Algal bloom conditions were present along this section of the creek. Washing powders contain quantities of phosphorous which can lead to conditions suitable for blooms.

The large biomass of weed within Kahibah Creek probably poses problems for the hydraulic efficiency of the channel but as well, when nutrient concentrations are high causes algal blooms which reduces the creek's amenity.

2.3 REGULAR MAINTENANCE

Regular maintenance is required to keep channels free of plant debris and silt. Presently, this is undertaken by machinery. Creeks are excavated and the debris is stored along creek banks. The next rains and winds transfer the material back into the waterbody recycling the nutrients and rebuilding the nutrient reservoir of the waterbody. Thus nutrients again become available and sediment pockets again accumulate in the bottom of the channel for use by plants. Therefore, while the maintenance process is continual aquatic weed populations can easily re-establish themselves.

During the latest maintenance operation large heaps of sand have been stockpiled along various sections of the creek. Further, vast disturbance of vegetation and soil along the section between Brisbane Street and Kahibah Swamp have only created conditions for further sedimentation of the creek on a large scale.

2.4 REVEGETATION OF CREEK BANKS

Existing creek banks remain denuded of vegetation in general, which is leading to sedimentation and colonisation by weed species within waterways. The problem is simply explained. Vegetation occupying the deep sands of land unit 3 is confined to the top humus layer of the A1 soil horizon. Recent channel alteration of cutting banks leaves no humus layer available. Instead the A2 soil horizon is exposed which is a highly leached layer containing very little nutrient and organic matter content. Consequently little vegetation colonises the exposed surface and because sands are not cohesive erosion takes place (Figure 2).

2.5 PUBLIC RESERVE ENCROACHMENT

It was noted during site investigations that there may be some encroachments into the drainage easements and public reserve areas adjoining the creeks by private landowners. These encroachments include fences and, possibly, garden sheds and the like. While this is essentially a management issue, these encroachments could be restricting the flow of water in high flow situations. While it is not a significant problem at present, if it is allowed to continue it may reduce the effectiveness of the drainage system and lead to localised flooding.

3.0 LAND CAPABILITY

The land capability stage of the study addresses the conservation status of the natural vegetation, the ability of the creek system to support waterfowl and the erosion risk based on physical limitations of the soil. Assessment of land capability is set out in Table 1 according to possible infrastructural factors which may be involved in channel alteration.

Both wetland areas qualify at the regional significance level because such ecosystems are poorly represented in reserves in the Central Coast region. However both areas are being impacted by sediment inputs and encroachment by urbanisation which lessens their viability. State Environmental Planning Policy No 14 applies to both areas.

The channel areas now contain little or no vegetation except along the Brisbane Avenue to Kahibah Creek section. Here sandplain vegetation is present (Willing and Partners, 1988) which qualifies at a high level of significance at the local scale. Vegetation samples of this community type are only found conserved in the grounds of the Crommelin Native Arboretum at Pearl Beach (Forsite Landscape Architects and Planners, 1989). One species however, Maundia triglochinoides, an aquatic macrophyte, is classified as a species of special conservation significance to the Central Coast region (Benson 1986) which is found between Albany Square and Iluka Lagoon and other isolated locations along the channel.

Soils along the channel sections are part of the "Recent Sand Dune Complex" (Holocene) which are only stable when vegetated. They are highly porous, permeable, incoherent and therefore have a high potential erosion hazard, particularly from stream bank erosion along cut bank sections. Only in upper channel locations around the Iluka Lagoon and Kahibah Swamp does the soil become more stable, where hardpans are evident. Although lower horizons of these soil types are more stable, the upper A1 horizon has a potential erosion hazard if it becomes denuded of vegetation.

The ability of the creek system to support waterfowl varies and is dependant on two factors: the extent of aquatic microphyte vegetation which can provide food and shelter, and the extent of open water which is subject to rising flood levels. Considering each of the factors only the section between Albany Square and Calypta Road qualifies at any level. Both wetland areas do not qualify at this level due to the lack of open water although food and shelter are available.

4.0 DISCUSSION

The proposed alterations to the drainage lines for the study area are detailed below:

- Provide sediment traps to prevent further siltation of Iluka Lagoon. Leave existing sediment.
- Iluka Creek (including Kallaroo Road culvert) should remain as existing.
- Install two extra 2.4 m x 1.5 m box culvert sections at Brisbane Avenue, thus doubling culvert capacity.
- Widen the Greenhaven Drive arm of Kahibah Creek - provide an invert width of 12 m, with 1 in 3 batters downstream of the outlet from Kahibah Swamp.
- Widen the Kahibah Creek channel downstream of the confluence of the Greenhaven Drive and Australia Avenue arms - provide a 14 m wide invert with 1 in 3 batters.

Fully Urban Catchment Conditions

All of the above, plus the following:

- Install two extra 900 mm diameter RCPs at the crossing at Etta Road east, thus trebling the culvert capacity.
- Install two extra 2.4 m x 1.35 m box culvert sections at Calypta Road, thus doubling the culvert capacity.

Fully Urban Catchment Conditions with Backyards Filled

All of the above, plus the following:

- Install one extra 1200 mm diameter RCP at McEvoy Avenue, thus increasing the culvert capacity by 50%
- Provide a retarding basin at the Council depot west of Neera Road - very approximately 50,000 m^3 of storage with a 5 m high embankment.

The main impact anticipated is to allow the existing sediment to remain in Iluka Lagoon. As flood events continue to occur, this sediment will wash further into the lagoon. Eventually the native vegetation will be displaced by weeds and a change to the ecosystem will occur. Ultimately the wetland would reduce its capacity to function as a biological filter and as wildlife habitat.

Installing sediment traps on the upstream sections of Iluka Lagoon is desirable. An access track for maintenance must be provided however, and clearing should take place after each heavy storm event or once their capacity exceeds 30%. These devices will at least slow sedimentation of the lagoon and creek system and reduce the possibility of weed colonisation along the channel. However, without removing the sand from the Iluka Lagoon weed colonisation along the channel may be expected for some time.

No change to existing conditions is expected to occur along Iluka Channel. This channel is subject to fluctuations in water level (i.e. between dry and wet conditions), which is suited to the colonisation by Typha sp. It is anticipated this plant will continue to colonise this channel and regular maintenance will be required to clear the channel.

It is not anticipated any adverse impacts will occur from widening the channels along the Greenhaven Drive arm and downstream of the confluence of the Greenhaven Drive and Australia Avenue arms provided two conditions are met.

- Firstly, there should be no change in invert levels just downstream of Kahibah Swamp. Water levels in the swamp should remain as they have always been for the plants present are adapted to particular water levels.
- Secondly, the channel sides should be vegetated to prevent future sedimentation of the invert.

4.0 DISCUSSION Contd.

The additional culverts under fully urban catchment conditions with backyards filled should have no adverse impacts, provided culvert invert levels are maintained. Changes are only anticipated if invert levels are lowered to lower water levels which would cause wetland areas to dry out. The lagoon area north and south of Etta Road however, is also subject to fluctuations in water level and during dry periods becomes colonised by various weed species (e.g. Myriophyllum sp.). From time to time this area will have to be cleared of weeds as regular maintenance routine.

Overall, no sections of the channel have a high significance value (Table 1). Widening channels therefore will not affect the conservation value along the creek lines. The only problem anticipated is along the Greenhaven Drive arm, where the existing vegetation would qualify as bushland under State Environmental Planning Policy No. 19. To avoid damage to this area the final design details should include widening southern banks of the channel. Furthermore, along the Brisbane Street to Kahibah Swamp sections all areas where E.robusta occurs would need to be avoided where possible.

To reduce future maintenance for the channel the banks should be revegetated. A number of options are available to undertake this task. Grassing the channel with some shrubs is an appropriate option, but fertilisers may have to be used in the first instance which will increase nutrient loads to the waterway.

Trees should also be strategically placed behind channel banks to prevent erosion and provide reduced light conditions to the waterway.

Utilising the above procedures (combined with the recommended batter slopes), the physical capability of the soils will not be exceeded and the nature conservation capability will not be decreased.

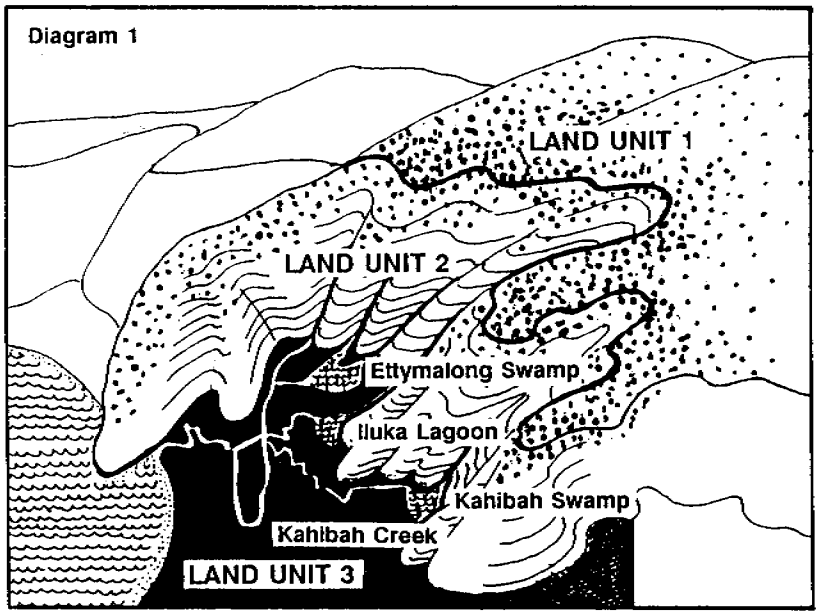
5.0 CONCLUSIONS AND RECOMMENDATIONS

The natural systems of the Kahibah Creek channel have been investigated. It has been found the two lagoon areas have some significance and erosion of soft sandy soils is a major cause of sedimentation and weed colonisation along the channel. With the recommended changes, to alleviate flooding, no adverse impacts are expected along the channel but Iluka Lagoon will continue to deteriorate.

To reduce regular maintenance along the drainage channels it is recommended that:

- Sand removed from the channel be stored only for a short time. It should be analysed and if found suitable be used for beach nourishment, pending discussions with the Department of Public Works. It should not be stored along the creek and allowed to wash into waterways.
- Revegetate channel banks to reduce future channel maintenance. Methods to carry out this task will be subject to future discussions with officers of Gosford City Council.
- If Iluka Lagoon is not dredged, then the silted area should be grassed and maintained to help prevent further erosion through Iluka Channel. This section of the lagoon should then function as a grassed floodway.

Diagram 1



Brisbane Water Land System

Steep cliffed slopes and plateaux on sedimentary rocks with sandy skeletal and podsol soils. Open forests dominated by Angophora costata complex; flat low lying sandplains of quaternary sands dissected by several creeks and low lying swamps - mainly cleared.

LAND UNIT	LANDFORM AND GEOLOGY	SOILS	VEGETATION	POTENTIAL HAZARDS
1	**Hawkesbury Sandstones** crests and upper slopes with exposed sandstone rock and steep cliffs. Some interbedded shale lenses present	(i) Flat plateaux tops: deeper yellow earths of sandy loams (ii) Side slopes: skeletal shallow coarse sands with deeper accumulations behind boulders	E.haemastoma A.costata E.gummifera **Woodland** A.costata E.gummifera E.piperita **Open Forest**	Naturally vegetated (Brisbane Waters National Park) but frequent bushfire hazard reduction burning can lead to soil erosion - **hazard** - moderate to high for sheet erosion
2	**Gosford Group** lower escarpment areas with smooth undulating slopes up to 30 deg. Some sandstone outcrops present fallen from escarpment above. High shale component.	Yellow podsol soils with a sandy 'A' horizon and a deep yellow sandy clay 'B' horizon	A.floribunda E.paniculata E.punctata E.maculata **Open Forest**	Naturally vegetated but frequent bushfire hazard reduction burning can lead to soil erosion - **hazard** - moderate to high for gully erosion
3	Flat alluvial sand plains of successive beach dunes interspersed with creeks and lagoons	Deep quartz sands either podsolised or of recent origin. Sometimes indurated or hard pan layer present. Peaty waterlogged gley soils present in lagoons	Mainly cleared. Patches of A.costata E.gummifera E.piperita on podsolised sands. Creek vegetation comprises E.robusta and M.quinquenervia Recent beach dunes comprises E.botryoides and A.floribunda	High soil erosion on creek banks. Low lying areas subject to inundation and high water tables present where hardpans exist

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Project

Kahibah Creek Drainage Study

Location

Umina N.S.W.

Client

Willing and Partners Pty.Ltd.

Drawing Title

Environmental assessment

Date May 1990 Project No 90018

Scale N.T.S.

Drawn by K.L.M. Drawing No

Amendments

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

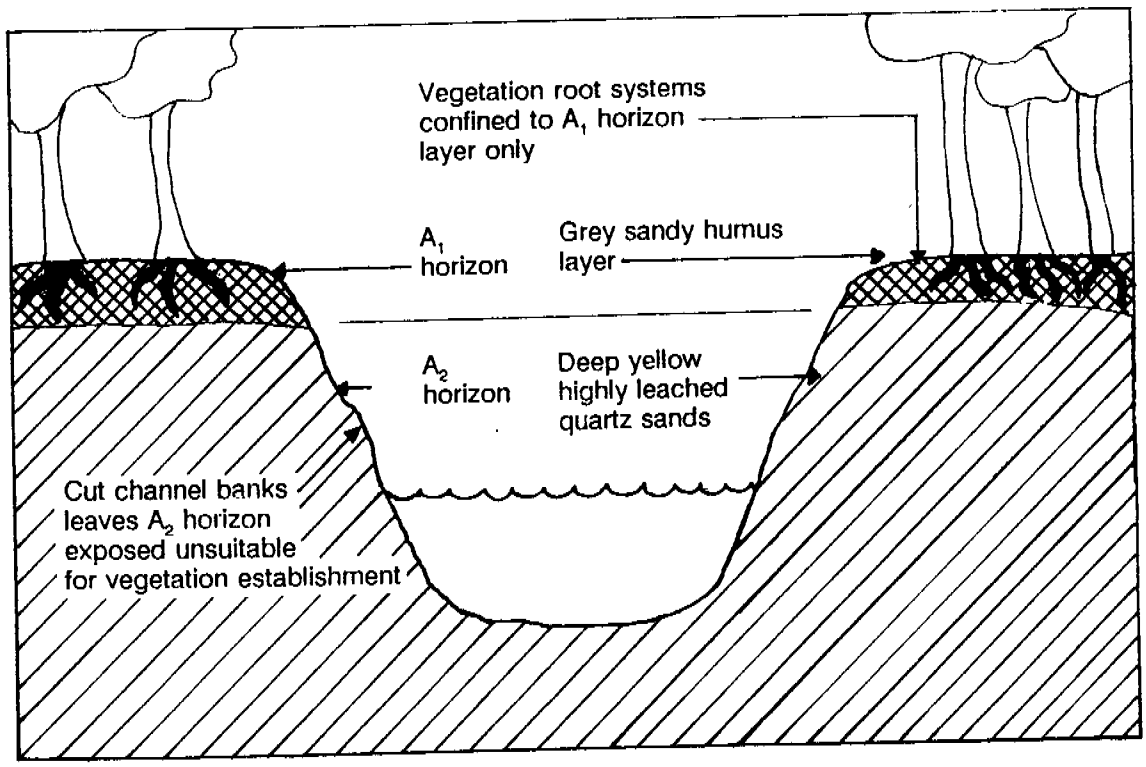

Figure 2 Cross Section of situation in Kahibah Creek showing existing vegetation.

APPENDIX 1

PHOTOGRAPHIC SUPPLEMENT

KAHIBAH CREEK PHOTOGRAPHIC SUPPLEMENT

Photograph 1 Dredged sand stockpiled beside Iluka Creek. This situation allows for re-sedimentation of the creek.

Photograph 2 Disturbance to natural vegetation and sand plain by dredging works on Kahibah Creek in the vicinity of Greenhaven Drive. This situation also allows for re-sedimentation of the creek.

APPENDIX 2

LAND CAPABILITY ASSESSMENT

Table 1 . Land Capability of Kahibah Creek System (after New South Wales Department of Lands, 1986)

LAND UNIT 3

Vegetation	Representativeness	Rare, Endangered or Species of special Conservation Significance	Degree of Disturbance	Fauna	Ability to Support Support Water Fowl Populations	Rare, Endangered or Species of Special Conservation Significance	Soil	Erosion Potential	Remarks
Kahibah Swamp	Regional Significance	Low Significance	Partially disturbed by sedimentation		Medium	Low Significance	Saturated hard pan	Low	SEPP 14 Wetland
Iluka Lagoon	Regional Significance	Low Significance	Partially disturbed by sedimentation		Medium	Low Significance	Saturated hard pan	Low	SEPP 14 Wetland
Iluka Channel	No Significance	Local Significance Maundia triglochinoides present	-		Low	Low Significance	Deep quartz sands	High	Banks would require special approach to revegetate
Albany Square to Calypta Rd	No Significance	No Significance	-		High	Low Significance	Deep quartz sands	High	Banks would require special approach to revegetate
Calypta Rd to Brisbane St	No Significance	Local Significance Maundia triglochinoides present	-		Medium	Low Significance	Deep quartz sands	High	Banks would require special approach to revegetate
Brisbane St to Kahibah Swamp	Local Significance	Local Significance Eucalyptus robusta around fringes	Partial edge disturbance		Low	Low Significance	Deep quartz sands	High	Banks would require special approach to revegetate. Algal bloom present.
Brisbane St to Retirement Village	No Significance	No Significance	-		Low	Low Significance	Deep quartz sands	High	Would require special approach to revegetate. Largesediment pockets evident.

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APPENDIX D

SCHEDULE OF COSTS

APPENDIX D - SCHEDULE OF COSTS

These costs are preliminary cost estimated only, and subject to amendment dependent upon survey, geotechnical investigations and detailed design.

1.	Bridge and channel works at and downstream of Mt Ettalong Road, in accordance with McMillan, Britton & Kell's design:		
	Stage 1	$	480,000
	Stage 2	$	240,000
	Stage 3	$	150,000
2.	Neera Road channel works	$	295,000
3.	Ettymalong Creek channel works from Cowper Road to McLaurin Road	$	93,000
4.	Kahibah Creek - main north arm channel works	$	90,000
5.	Greenhaven Drive arm of Kahibah Creek - Channel works	$	61,000
6.	Extra bridge and cutting at Mt Ettalong Road	$	580,000
7.	Australia Avenue arm of Kahibah Creek - Channel and culvert works	$	293,000
8.	Removal of silt from Iluka Lagoon	$	70,000
9.	Installation of a sediment trap upstream of Iluka Lagoon	$	50,000
10.	Upgrading of the Calypta Road culvert	$	104,000
11.	Upgrading of the Brisbane Avenue culvert	$	109,000
12.	Upgrading of the Etta Road East culvert	$	38,000
13.	Retarding basin upstream of Ettymalong Swamp arm	$	500,000
	TOTAL COST	**$**	**3,153,000**

APPENDIX E

FLOOD DAMAGES ASSESSMENT

APPENDIX E - FLOOD DAMAGES ASSESSMENT

E.1 Introduction

Damages from flooding may be categorised typically as either financial or social in nature and are often referred to as tangible damages and intangible damages, respectively.

Tangible damages may be subdivided into direct and indirect damages. Direct damages are those caused by the physical contact of flood water with damageable property. They include damages to commercial and residential building structures and contents, and infrastructure such as electricity, gas, water supply and sewerage reticulation. Direct damages also include damage to motor vehicles and other plant and equipment.

Indirect damages result from the interruption of community activities, including traffic flows, trade, industrial production, costs to relief agencies, evacuation of people and contents and cleanup after the flood. Generally, tangible damages are measurable in dollar values.

Factors affecting intangible damages may include:

- inconvenience
- isolation
- disruption of family and social activities
- anxiety, pain and suffering, trauma
- physical ill-health
- psychological ill-health

The damage estimates derived in this study are for the tangible damages only. While it is recognised that the various factors included in the intangible category may be significant, these effects have not been quantified due to difficulties in obtaining and reliably interpreting quantitative data.

Damage estimates may be either potential or actual damage estimates. Potential damages are often higher than actual damages because potential damage estimates make no allowance for the fact that some items may be able to be evacuated before the flood, provided sufficient warning time is available. Further, in estimating potential damages many items are assumed to be destroyed which, in an actual flood, may not be damaged beyond repair.

E.2 Flood Damages for Typical Properties

E.2.1. General

Tangible flood damages were evaluated considering the following components:

- direct residential damages
- external damages
- indirect damages

E.2.2 Direct Residential Damages

The direct residential damages were calculated as a function of the depth of flooding of the house for a typical property. Potential flood damages were derived from figures presented in Ref. 8 which are based on damage costs for the 1986 Sydney floods. No distinction based on construction material or condition was made since the damage figures given in Ref. 8 are an average for all properties affected. It is considered that these figures reflect the typical types of houses in the study area.

The damages presented in Ref. 8 are actual damages. These costs represented a diminution of approximately 25% of the potential damages. This reduction was achieved by action taken by householders to remove some items out of reach of the floodwaters. The damage costs were therefore multiplied by 1.33, to produce potential damage costs, and adjusted to account for inflation.

Potential flood damages are converted to estimated actual flood damages considering the average flood warning time and preparedness of the residents. The average flood warning time for the catchment, which has a short response time, would be of the order of 30 minutes. In view of this short warning time, it is unlikely that residents could take action which would reduce their losses to any great extent, particularly if flooding occurs at night. Actual damages have thus been assumed to equal potential damages. The adopted flood damages are shown in Table E.1

TABLE E.1
AVERAGE DIRECT RESIDENTIAL DAMAGES

Depth over floor m	Damage ($) Very small Dwelling	Small to Medium Dwelling	Large Dwelling
0	0	0	
0.1	2,000	4,000	9,000
0.6	6,000	11,000	20,000
1.5	14,000	15,000	26,000

E.2.3 External Damages

External damages were evaluated as a function of depth of flooding above ground level for a typical developed property. This included an allowance of $1,000 for damage to fences, gardens, lawns, etc. independent of depth. The depth dependent damages covered cars, caravans, boats and trailers.

The adopted estimated actual depth dependent damages are summarised in Table E.2 and Figure E1.

TABLE E.2
AVERAGE DIRECT EXTERNAL DAMAGES

Depth over ground m	Damage $
0.0	0
0.6	660
1.0	3,300
2.0	6,600
3.0	6,600

E.2.5 Indirect Flood Damages

In common with other flood damage studies, indirect flood damages were determined as a percentage of direct damages. The adopted figure for residential property was 15%. This is the same as was applied for Sydney (Ref. 8), Brisbane and Adelaide (Ref. 9), Macksville (Ref. 10) and Camden (Ref. 11).

E.2.6 Clean-up Costs

Clean-up costs for residential property were evaluated as a function of depth of flooding and the value of the time of those involved in the clean-up, which was taken as half the average weekly earnings. The equation for clean-up time was taken from the study for Adelaide (Ref. 9):

$$N = 5.5 \ln (d/0.023) \quad \text{E.1}$$

where N = number of man-days required to clean up the average property
d = depth of flooding (m)

The value of the time of those involved in the clean-up operations was adopted as $287 per week, which gave clean-up costs:

$$\$ \text{ Clean-up} = 316 \ln (d/0.023) \quad \text{E.2}$$

E.3 Estimate of Flood Damages

E.3.1 Survey and Flood Level Data

Calculation for damages in design floods were based on surveyed floor level and ground level data obtained in April, 1990. Information about the nature of the properties identified as requiring inclusion in the assessment was gathered in the field. One hundred and ninety-seven properties were involved in the field survey. Information about an extra fifty-eight properties was obtained from Council's 1:500 topographic survey map, which shows house floor levels.

Flood profiles used to assess the 1%, 2% and 5% AEP and extreme flood damages were obtained from the WILCELL runs, as shown in Figures 5 to 7 and 21 to 38.

E.3.2 DAMAGE Program

The flood damages were estimated by use of a flood damage calculation program, DAMAGE, developed by Willing & Partners. This program makes use of multiple stage-damage curves and computed water surface profiles. Each property for which survey information is available is assigned a creek chainage, which relates to chainages used in hydraulic modelling. Thus, the water level at each property can be calculated from the water surface profile.

E.4 Estimated Actual Damage for Design Floods

The DAMAGE program, when run with the flood conditions produce by the WILCELL model for existing conditions and for the Stage 1 and Stage 2 (Option 3) works (see Section 8), gave the estimates of flood damages shown in Table E.3. The program also calculated the average annual damage costs.

TABLE E.3
SUMMARY OF FLOOD DAMAGES

	Existing Conditions	Stage 1	Stage 2 (Option 3)
Extreme Flood:			
No of houses	89	28	78
Cost	$960,000	$246,000	$808,000
1% AEP Flood:			
No of houses	18	0	0
Cost	$158,000	$5,000	$16,000
2% AEP Flood:			
No of houses	13	0	0
Cost	$83,000	$3,000	$9,000
5% AEP Flood:			
No of houses	4	0	0
Cost	$33,000	$1,000	$3,000
Average Annual Damage Cost	$16,000	$2,000	$5,000
NPW of AAD*	$221,000	$23,000	$71,000

* The net present worth of average annual damages was calculated assuming a discount rate of 7% and a design life of 50 years.

The damage cost estimates shown in Table E.3 include an estimate for flooding of backyards.

APPENDIX F

DATA FILES

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! Rafts 2.5 data file generated by Graft 1.0
 1   1
KAHIBAH CREEK - ARI 100year 2hour event
    1     1    2    0    1.0000.050   10  300
! --- STORM DATA
!2.0 hours duration (24 x 5 minutes):
120.00    10.00     56,96     24
0.024     0.052     0.033     0.049     0.091     0.052     0.167     0.119
0.053     0.033     0.034     0.043     0.043     0.024     0.024     0.034
0.024     0.012     0.012     0.025     0.012     0.013     0.013     0.014
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11.0600.0001300.0000.0000000.000001.0000
111.000.0001300.0000.0000000.000001.0000
111.010.0001300.0000.0000000.000001.0000
118.000.0001300.0000.0000000.000001.0000
118.010.0001300.0000.0000000.000001.0000
011.0118.011300.000                    0
117.000.0001300.0000.0000000.000001.0000
011.0117.001300.000                    0
111.0200.001100.0000.0000000.000001.0000
111.030.0001300.0000.0000000.000001.0000
119.000.0001300.0000.0000000.000001.0000
011.0319.001300.000                    0
111.040.0001300.0000.0000000.000001.0000
112.000.0001300.0000.0000000.000001.0000
112.010.0001300.0000.0000000.000001.0000
113.000.0001300.0000.0000000.000001.0000
012.0113.001300.000                    0
112.020.0001100.0000.0000000.000001.0000
011.0412.021300.000                    0
120.000.0001300.0000.0000000.000001.0000
011.04Z0.001300.000                    0
111.050.0001300.0000.0000000.000001.0000
111.060.0001300.0000.0000000.000001.0000
114.000.0001300.0000.0000000.000001.0000
114.010.0001300.000                    0
122.000.0001300.0000.0000000.000001.0000
014.0122.001300.000                    0
114.0200.001300.0000.0000000.000001.0000
121.000.0001300.0000.0000000.000001.0000
121.010.0001300.0000.0000000.000001.0000
014.0221.011300.000                    0
123.000.0001300.0000.0000000.000001.0000
014.0223.001300.000                    0
114.0300.001100.0000.0000000.000001.0000
114.0400.001300.0000.0000000.000001.0000
114.0500.001300.0000.0000000.000001.0000
011.0614.051300.000                    0
111.070.0001300.0000.0000000.000001.0000
111.080.0001300.0000.0000000.000001.0000
115.000.0001300.0000.0000000.000001.0000
011.0815.001300.000                    0
111.090.0001300.0000.0000000.000001.0000
01.06011.091300.000                    0
11.0700.0001300.0000.0000000.000001.0000
11.0800.0001300.0000.0000000.000001.0000
116.000.0001300.0000.0000000.000001.0000
01.08016.001300.000                    0
11.0900.0001300.0000.0000000.000001.0000
0
! --- LINK    1.00
! ------ CATCHMENT DATA
 50.800000  5.000000 13.900000  0.080000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
5.000
! --- NEW LINK    1.01
! ------ CATCHMENT DATA
 10.200000  5.000000  3.300000  0.080000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
3.000
! --- LINK    2.00
! ------ CATCHMENT DATA
 18.000000  5.000000 17.799999  0.040000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
3.000
! --- LINK    3.00
! ------ CATCHMENT DATA
 81.300000  5.000000  4.400000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
7.000
! --- LINK    3.01
! ------ CATCHMENT DATA
 23.400000  5.000000 22.200000  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
2.000
! --- LINK    1.02
! ------ CATCHMENT DATA
  6.200000  0.000000  0.900000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
2.000
! --- LINK    1.03
! ------ CATCHMENT DATA
 15.500000  7.000000  0.600000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
   0
! --- LINK    5.00
! ------ CATCHMENT DATA
```

```
 36.600000  5.000000 11.100000  0.080000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
5.000
! --- NEW LINK 5.01
! ------ CATCHMENT DATA
  4.600000  5.000000 26.100000  0.020000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
1.000
! --- LINK    6.00
! ------ CATCHMENT DATA
 11.700000  6.000000 25.299999  0.020000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
2.000
! --- LINK    5.02 DUMMY
! ------ CATCHMENT DATA
  0.010000  0.000000  0.010000  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ BASIN DATA
0.0000.0000.000200.01.0000.0002.7600.0001.50011110.00000010.0000.0000.00000.0001
0.000000001.000000000.000000000
    7
0.0004.0008.00012.0016.0020.0024.00
0.0001.2001.8702.3803.0403.4105.350
    8
  0.000000343.000000 558.00000 961.000001459.000002023.000003090.000003927.00000
  0.000000  0.800000  1.050000  1.500000  2.000000  2.500000  3.314000  3.900000
    8
  0.0000000.05000000 1.2000000 15.80000019.400000062.8000000102.300000148.900000
  0.0000000.058000000.169000000.500000000.548000000.740000000.940000001.14000000
! ------ LAG DATA
    0
! --- LINK    7.00
! ------ CATCHMENT DATA
  4.000000  7.000000 39.599998  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    8.00
! ------ CATCHMENT DATA
  2.500000  6.000000 32.000000  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    5.03
! ------ CATCHMENT DATA
  4.600000 30.000000  1.100000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    9.00
! ------ CATCHMENT DATA
 13.100000  6.000000 22.600000  0.030000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   10.00
! ------ CATCHMENT DATA
  2.600000  2.000000 24.000000  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    5.04
! ------ CATCHMENT DATA
  1.700000 20.000000  1.200000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    4.00
! ------ CATCHMENT DATA
  3.900000  0.000000  1.400000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    5.05 DUMMY
! ------ CATCHMENT DATA
  0.010000  0.000000  0.010000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    1.04
! ------ CATCHMENT DATA
  4.800000 10.000000  9.800000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    1.05
! ------ CATCHMENT DATA
  5.500000 25.000000  1.700000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    1.06
! ------ CATCHMENT DATA
  1.600000 15.000000  0.800000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   11.00
! ------ CATCHMENT DATA
 25.000000  8.200000 21.600000  0.110000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  5.0
! --- LINK   11.01
! ------ CATCHMENT DATA
  5.800000  6.000000 42.000000  0.020000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   18.00
! ------ CATCHMENT DATA
  9.200000  12.40000 27.200000  0.020000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  5.0
! --- LINK   18.01
! ------ CATCHMENT DATA
  4.100000  10.00000 34.600000  0.020000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   17.00
! ------ CATCHMENT DATA
  8.200000  12.90000 44.800000  0.020000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   11.02 DUMMY
! ------ CATCHMENT DATA
  0.100002 00.000000 0.1000000  0.040000 10.000000  2.50000000.000
```

```
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   11.03
! ------ CATCHMENT DATA
 12.300002 10.000000  2.800000  0.080000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   19.00
 11.500002 10.000000  36.00000  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   11.04
! ------ CATCHMENT DATA
 15.100000 12.000000  0.300000  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   12.00
! ------ CATCHMENT DATA
  3.100000  18.00000 57.000000  0.010000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  5.0
! --- LINK   12.01
! ------ CATCHMENT DATA
 35.200002 40.000000 0.5000000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    5
! --- LINK   13.00
! ------ CATCHMENT DATA
 35.099998 40.000000  0.100000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   12.02 DUMMY
! ------ CATCHMENT DATA
  0.100002 00.000000 0.1000000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   20.00
! ------ CATCHMENT DATA
  7.200000 10.00000   37.00000  0.020000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   11.05
! ------ CATCHMENT DATA
 17.000000 25.000000  0.600000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   11.06
! ------ CATCHMENT DATA
 10.100000 20.000000  5.400000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   14.00
! ------ CATCHMENT DATA
 16.100000  13.40000 17.700000  0.100000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  5.0
! --- LINK   14.01
! ------ CATCHMENT DATA
  8.000000  6.500000 26.100000  0.06000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  3.0
! --- LINK   22.00
! ------ CATCHMENT DATA
  9.300000  5.600000 32.600000  0.06000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  3.0
! --- LINK   14.02
! ------ CATCHMENT DATA
 3.7000000  40.00000  2.000000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  3.0
! --- LINK   21.00
! --     CATCHMENT DATA
  6.700000  15.90000 34.000000  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  3.0
! --- LINK   21.01
! ------ CATCHMENT DATA
  3.200000  40.00000 2.1000000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  3.0
! --- LINK   23.00
! ------ CATCHMENT DATA
 1.4000000  40.00000 2.0000000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  3.0
! --- LINK   14.03 DUMMY
! ------ CATCHMENT DATA
  0.100000  00.00000 0.1000000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   14.04
! ------ CATCHMENT DATA
 3.0000000  5.000000 0.1000000  0.240000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   14.05
! ------ CATCHMENT DATA
 15.000001 25.000000  0.700000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   11.07 DUMMY
! ------ CATCHMENT DATA
  0.010000  0.000000  0.010000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   11.08
! ------ CATCHMENT DATA
  5.100000 20.000000  1.000000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
```

```
    0
! --- LINK    15.00
! ------ CATCHMENT DATA
 26.700001 30.000000  0.100000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    11.09
! ------ CATCHMENT DATA
 15.300000 20.000000  0.500000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK     1.07
! ------ CATCHMENT DATA
  1.100000 18.000000  1.700000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK     1.08
! ------ CATCHMENT DATA
  3.400000 15.000000  0.500000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK    16.00
! ------ CATCHMENT DATA
 15.700000  8.000000 26.400000  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK     1.09
! ------ CATCHMENT DATA
  8.800000 22.000000  0.900000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
```

```
! Rafts 2.5 data file generated by Graft 1.0
 1   1
KAHIBAH CREEK - ARI 100year 2hour event
    1     1    2    0    1.0000.050   10  300
! --- STORM DATA
!2.0 hours duration (24 x 5 minutes):
120.00    100.0     56.96     24
0.024     0.052     0.033     0.049     0.091     0.052     0.167     0.119
0.053     0.033     0.034     0.043     0.043     0.024     0.024     0.034
0.024     0.012     0.012     0.025     0.012     0.013     0.013     0.014
11.0000.0001300.0000.0000000.000001.0000
11.0100.0001300.0000.0000000.000001.0000
12.0000.0001300.0000.0000000.000001.0000
01.0102.0001300.000                    0
23.0000.0001300.0000.0000000.000001.0000
13.0100.0001300.0000.0000000.000001.0000
01.0103.0101300.000                    0
11.0200.0001100.0000.0000000.000001.0000
0
! --- LINK    1.00
! ------ CATCHMENT DATA
 50.800000  5.000000 13.900000  0.080000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
5.000
! --- NEW LINK    1.01
! ------ CATCHMENT DATA
 10.200000  5.000000  3.300000  0.080000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
3.000
! --- LINK    2.00
! ------ CATCHMENT DATA
 18.000000  5.000000 17.799999  0.040000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
3.000
! --- LINK    3.00
! ------ CATCHMENT DATA
 81.300000  5.000000  4.400000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ BASIN DATA
0.0000.0000.000 10.00.9000.000100.00.0001.00010100.00000010.0000.0000.00000.0000
   2
  0.000000 50000.000
  0.000000  5.000000
! ------ LAG DATA
7.000
! --- LINK    3.01
! ------ CATCHMENT DATA
 23.400000  5.000000 22.200000  0.000000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
2.000
! --- LINK    1.02
! ------ CATCHMENT DATA
  6.200000  0.000000  0.900000  0.000000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
0.000
```

```
! Rafts 2.5 data file generated by Graft 1.0
 1   1
KAHIBAH CREEK - ARI 100year 2hour event
    1     1     2     0     1.0000.050    10   300
! --- STORM DATA
!2.0 hours duration (24 x 5 minutes):
120.00     100.00     56.96      24
0.024      0.052      0.033      0.049      0.091      0.052      0.167      0.119
0.053      0.033      0.034      0.043      0.043      0.024      0.024      0.034
0.024      0.012      0.012      0.025      0.012      0.013      0.013      0.014
115.000.0001300.0000.0000000.000001.0000
!11.09 renumbered to 15.01 for Rafts addition
115.010.0001100.0000.0000000.000001.0000
0
! --- LINK   15.00
! ------ CATCHMENT DATA
 26.700001 40.000000  0.100000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    5
! --- LINK   11.09
! ------ CATCHMENT DATA
 15.300000 40.000000  0.500000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
```

```
! Rafts 2.5 data file generated by Graft 1.0
 1    1
KAHIBAH CREEK - 100 year 2 hour event
    1     1    2    0    1.0000.050   10  720
! --- STORM DATA
!2.0 hours duration (24 x 5 minutes):
120.00    10.00     56.96     24
0.024     0.052     0.033     0.049     0.091     0.052     0.167     0.119
0.053     0.033     0.034     0.043     0.043     0.024     0.024     0.034
0.024     0.012     0.012     0.025     0.012     0.013     0.013     0.014
111.030.0001300.0000.0000000.000001.0000
119.000.0001300.0000.0000000.000001.0000
011.0319.001300.000                    0
111.040.0001300.0000.0000000.000001.0000
120.000.0001300.0000.0000000.000001.0000
011.0420.001300.000                    0
111.050.0001300.0000.0000000.000001.0000
111.060.0001100.0000.0000000.000001.0000
0
! --- LINK   11.03
! ------ CATCHMENT DATA
!B value doubled to attenuate flood
 12.300002 40.000000  2.800000  0.080000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  5.0
! --- LINK   19.00
 11.500002 18.500000  36.00000  0.020000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  5.0
! --- LINK   11.04
! ------ CATCHMENT DATA
 15.100000 40.000000  0.300000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  5.0
! --- LINK   20.00
! ------ CATCHMENT DATA
  7.200000 15.60000   37.00000  0.020000 10.000000  1.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  5.0
! --- LINK   11.05
! ------ CATCHMENT DATA
 17.000000 40.000000  0.600000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
  5.0
! --- LINK   11.06
! ------ CATCHMENT DATA
 10.100000 40.000000  5.400000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
```

```
! Rafts 2.5 data file generated by Graft 1.0
 1    1
KAHIBAH CREEK - 100 year 2 hour event
    1     1    2    0    1.0000.050   10  720
! --- STORM DATA
!2.0 hours duration (24 x 5 minutes):
120.00     10.00      56.96      24
0.024      0.052      0.033      0.049      0.091      0.052      0.167      0.119
0.053      0.033      0.034      0.043      0.043      0.024      0.024      0.034
0.024      0.012      0.012      0.025      0.012      0.013      0.013      0.014
114.0400.001300.0000.0000000.000001.0000
114.0500.001300.0000.0000000.000001.0000
!11.07 & 11.08 renumbered 14.06 & 14.07 for RAFTS summation
114.060.0001300.0000.0000000.000001.0000
114.070.0001100.0000.0000000.000001.0000
0
! --- LINK   14.04 ILUKA LAGOON
! ------ CATCHMENT DATA
 3.0000000  5.000000 0.1000000  0.240000 20.000000  3.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   14.05
! ------ CATCHMENT DATA
 15.000001 40.000000  0.700000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
! --- LINK   11.07
! ------ CATCHMENT DATA
  0.010000  0.000000  0.010000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! --- STORM DATA
! ------ LAG DATA
    0
! --- LINK   11.08
! ------ CATCHMENT DATA
  5.100000 40.000000  1.000000  0.000000 10.000000  2.50000000.000
999990.0000.0000.0000.0000.0000.0000.0000.0000.000
! ------ LAG DATA
    0
```

```
691382251 238 1382060600.5 1% 360.0011 0.9 KAHIBAH CREEK MBKWKS00006666 0 0 0 0
  60003  6 0.120   0   00100.1 5.0 0.25                                    11
|37eo+       813464750              -0.5 0.505
 3679x8+*  13 8 8 7363238321110474650462218           0 1 005
 1    0.50 0 1100                   0 1
 2    0.51 0       1100             0     3   26                    300. 13 1
 3    0.52 0 3111              4    0   2    26                     308.
 4    0.53 0 4111 3111       3 5    0                               210.
 5    0.64 0 5111 4111       4 6    0     15    12                  108.
 6    0.75 0 6111 5111       5 7    0     14     2        8    80   293.  8
 7    0.86 0 7111 6111       6 8    0      9    32                   56.
 8   1.065 034111 7111       713    0    6 9 80 3                    49.
 9   1.290 0              1         0    812   329     710 3231     140.
10   1.790 0              2         0    911 3128                          6
11   1.840 0              3         0   1038 2846       12   30
12   1.581 0              4         0   1113 30 4      932 29 5
13   1.301 0 811134111       816    0   1214  4 6                    70.
14   1.210 0              5         0   1315  611      617  210
15   3.700 0              6         0    518 1213     14    11
16   1.350 0 9111 8111      1317    0   3233 71 8                   130.
17   1.500 010111 9111      1618    0   1419 10 9                   230.  7
18   1.730 01111110111      1722  200   15    13      19    15      155.  3
19   3.600 0              7         0   1720  914     3318  715
20   1.850 01311111100      1821    0   3325 3316     19    14      335.
21   1.900 01510013111      2030    0   3529 3725                   305.
22   1.850 01211111011      1823  260     25    17                   70.
23   1.870 01610012100      2227    0   2426 2324     25    18      180.
24   4.300 0              8         0   2523 1923       28   21
25   3.870 014111             29    0   2024 1619     2223 1718     312.
26   1.900 01601112011      2227    0   23    24                    300.
27   2.000 0      16111     23  26  0     28    22                  108.  4
28   4.300 0              9         0   2729 2220     24    21
29   4.000 01501114111      2530    0   21    25      28    20      120.  5
30   2.300 01711115111      29  21  0                               300.  1
31   2.500 0      17111             0 1
32   1.500 018111             36  380   1216  571       34   35     470.
33   3.880 0              1         0   3419 34 7     1620  833
34   3.140 0              2         0   3235 3538     3633 3634
35   3.340 0              3         0   3440 3840     3721 3937
36   2.300 0      18001     32      0   3834 4136       37   81     130.
37   2.400 0      19110     38      0   3635 8139       39   42     195.
38   2.200 01911018110      3237    0   1142 4647     3936 4541     740.
39   2.410 0              4         0   3740 4243       38   45
40   2.420 0              5         0   3941 4344     35    40             12
41   3.590 0              6         0   40    44                           11
42   2.500 026111             43    0   38    47                    185.
43   2.550 02711126111      4244    0     45    48                  245.
44   2.750 0      27111     43      0     45    72      46    50    130.
45   3.710 0              7         0   4347 4849     44    72
46   2.800 022111             47    0   4450 5052                   260.
47   2.850 02311122111      4648    0   4549 4951                   290.
48   2.900 02411123111      4754    0   53    53                    175.
49   4.310 0              8         0   4753 5174     5150 5473
50   2.900 028111             51    0   46    52      49    73       95.
51   3.000 02911128111      5052    0     49    54                   90.
52   3.200 0      29111     51      0     53    75      57    56     95.
53   3.590 0              9         0   4956 7455     5248 7553
54   2.950 02511124111      4860  610   55    57                    130. 10
55   3.110 0              1         0   5662 7758     5954 7857
56   3.591 0              2         0   5355 5577     5857 5976
57   3.250 030111             58    0   52    56      56    76      105.
58   3.350 03111130111      5759    0     56    59                  105.
59   3.450 0      31111     58      0     55    78      64    60    105.
60   4.000 0      25001     54      0     61    61      67    65    270.
61   3.000 0      25110     54      0   6062 6162       67    66    290.
62   3.111 0              3         0   5568 5867     6163 6263
63   4.620 0              4         0   6265 6364       64   79
64   3.550 032111             65    0   59    60      63    79       45.
65   3.600 03311132111      6466    0   63    64                    130.
66   3.650 0      33111     65      0                               340.  9
67   3.010 0              5         0   6069 6568     6168 6669
68   3.020 0              6         0   6769 6970     62    67
69   5.020 0              7         0   67    68      68    70             2
 1 5 3       0    1.7   2.0  11.0  18.8
          1.29    2.0   3.0   4.0   4.9
 2 6 3       0    3.6   4.8   9.8  44.2  60.1
          1.65    2.0   3.0   4.0   5.0   5.5
 3 6 3       0    2.4   4.6   9.4  33.0  55.0
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 4 5 3       0    2.5   2.6  10.6  14.6
           1.6    2.0   3.0   4.0   4.9
 5 3 3       0    3.9   10.
           2.0    4.0   5.0
 6 3 3       0    1.1   5.3
           2.0    4.0   5.0
 7 3 3       0    9.4  39.9
           3.6    4.0   4.5
 8 2 3       0   15.9
           4.0    5.0
 9 5 3       0    4.2   5.1   5.5   6.4
           4.0    6.0   8.0  10.0  12.0
10 3 3       0    0.2  22.3
           3.8    4.0   4.8
11 5 3       0    1.3   5.4  19.4  22.4
           2.5    3.0   4.0   5.0   6.0
12 6 3       0    1.8  13.2  29.7  44.8  61.0
           3.6    4.0   5.0   6.0   7.0   8.0
13 5 3       0    4.3   9.3  19.5  30.1
           2.1    3.0   4.0   5.0   6.0
14 6 3       0    4.1  10.4  18.9  23.9  25.5  26.1  26.7  26.7
           2.2    3.0   4.0   5.0   6.0   7.0   8.0   9.0  10.0
15 8 3       0    0.2   0.3   1.0   1.3   1.4   1.6   2.0
          3.64    4.0   5.0   6.0   7.0   8.0   9.0  10.0
16 5 3       0    0.8   4.2  25.5  27.4
           3.7    4.0   5.0   6.0   6.2
17 3 3       0   14.3  14.3
           5.0    5.6   6.6
18 4 3       0    3.2  22.1  22.1
          4.82    5.0   5.8   8.5
19 5 3       0    3.8  16.3  25.4  25.4
           3.1    4.0   5.0   5.1   8.0
20 4 3       0    1.0  22.0  22.0
          4.82    5.0   5.8   8.0
21 8 3       0    2.6  41.6  69.3  70.0  71.6  73.2  73.6
           3.1    4.0   5.0   6.0   7.0   8.0   9.0  10.0
22 7 3       0    4.8  24.6  27.8  29.7  32.0  32.3
           4.6    5.0   6.0   7.0   8.0   9.0  10.0
23 5 3       0    0.5   7.5  10.1  12.7
           2.2    3.0   4.0   5.0   6.0
24 5 3       0    8.1  12.0  14.5  15.1
           3.1    4.0   5.0   6.0   7.0
25 6 3       0    9.7  23.1  26.7  28.1  29.5
           5.0    6.0   7.0   8.0   9.0  10.0
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            0. 3000.  720.  300.  420.  300.  120.  180.  240.  420.  600.  960.
         1860. 1980. 2700.50080.
  219      0.5    0.7   6.0   7.0   7.8  16.8  17.0  16.6  15.0  13.4  10.6   9.8
           9.7    7.4   6.8   6.1   4.5   0.5   0.5
            0. 1020.  540.  120.  120.  600.   60.   60.  240.  120.  360.  480.
          240.  600.  360.  360.  600. 4080.50000.
  3 9      1.0    1.0   1.5   1.0   2.8   2.8   1.0   0.5   0.5
            0. 2700.  420.  180.  360.  180.  600.  300.50000.
```

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          4.0   1.5   0.5   0.5
           0. 2760.  600.  240.  300.  180.  180.  120.  840.  720.  420. 1740.
        900.  660. 1020.50000.
 5 8      1.0   0.5   3.0   3.5   3.0   1.0   0.5   0.5
           0. 3300. 1200.  600. 1140. 2340. 1380.50000.
 6 9      0.5   1.0   1.0   1.0   1.0   1.0   1.0   0.5   0.5
           0. 3180.  540.  840.  840. 1860. 2940. 1080.50000.
 7 9      1.0   0.5   1.0   1.5   3.5   3.5   1.0   0.5   0.5
           0. 2460.  660.  480.  420.  240.  960. 1140.50000.
 815      1.0   0.5   7.0   6.0  14.0  13.0   6.0   4.5   3.0   3.0   2.0   2.0
          1.5   0.5   0.5
           0. 2400. 1020.  240.  300.  300.  540. 1020.  480.  600.  360.  600.
        360. 1620.50000.
 916      0.5   0.5   2.6   7.0  10.8  11.4  11.6  11.5   7.5   6.7   5.1   4.6
          4.4   3.1   0.5   0.5
           0. 1380.  420.  360.  240.  120.  180.   60.  240.  360.  480.  360.
        240.  720. 3480.50000.
1018      0.5   0.7   3.4  12.3  15.7  20.0  20.3  20.0  16.4  14.6  12.2  11.8
          8.7   5.7   4.3   2.2   0.5   0.5
           0. 1440.  360.  480.  360.  360.   60.   60.  360.  240.  600.  240.
        840. 1080.  960. 1080. 2640.50000.
1117      0.5   0.5   5.7  11.3  12.5  13.3  13.4  13.2  11.6  10.1   9.9   7.8
          5.9   4.9   1.6   0.5   0.5
           0. 3240.  720.  360.  120.  120.   60.   60.  480.  480.  120.  720.
        840.  360. 2640. 1920.50000.
1214      0.5   0.5   1.6   6.7   7.6   7.7   7.6   6.7   4.9   3.6   2.5   1.4
          0.5   0.5
           0. 3240.  360.  480.  120.   60.   60.  240.  360.  480.  840. 1800.
       2160.50000.
13 9     0.09  0.07  0.99  1.55  1.64  1.55  0.99  0.07  0.47
           0. 1800. 4500. 7200. 3600. 3600. 7200.10800.10800.
 111 10   .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
 111 10   .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
          .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
          .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
1        -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
        -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
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 211 10   .00  2.05  8.60  23.4  50.0  85.7 129.5 180.5 238.1 302.2 372.2
          .00  9.55  25.7  61.7 105.7 149.7 193.7 237.7 281.7 325.7 369.7
          .00  9.55  25.7  61.7 105.7 149.7 193.7 237.7 281.7 325.7 369.7
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         4.26  4.46  4.66  4.86  5.06  5.26  5.46  5.66  5.86  6.06  6.26
 3 5 10   .00  3.04  10.2  22.4  38.7
 3 5 10   .00  3.04  10.2  22.4  38.7
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          .00  10.1  23.3  39.8  56.3
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         3.79  4.37  4.87  5.37  5.87
 410 10   .00   .85  5.52  14.2  27.0  45.2  70.4 102.8 142.8 189.3
 410 10   .00   .85  5.52  14.2  27.0  45.2  70.4 102.8 142.8 189.3
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 611 10   .00   .42  2.67  7.84  16.9  31.1  50.7  74.9 103.1 135.0 170.4
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          .00  2.45  9.79  22.0  39.2  63.7  89.7 115.7 141.7 167.7 193.7
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         2.30  2.70  3.10  3.50  3.90  4.30  4.70  5.10  5.50  5.90  6.30
 7 7 10   .00  4.94  26.8  62.2 108.8 165.2 230.6
 7 7 10   .00  4.94  26.8  62.2 108.8 165.2 230.6
          .00  32.5  99.9 167.4 234.9 302.4 369.9
          .00  32.5  99.9 167.4 234.9 302.4 369.9
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         3.88  4.38  4.88  5.38  5.88  6.38  6.88
 8 8 10   .00   .90  9.75  37.6  79.6 133.4 197.9 272.2
 8 8 10   .00   .90  9.75  37.6  79.6 133.4 197.9 272.2
          .00  2.97  26.5  64.0 101.5 139.0 176.5 214.0
          .00  2.97  26.5  64.0 101.5 139.0 176.5 214.0
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 911 10   .00  7.15  41.1 123.8 247.2 404.4 591.9 807.2 1049. 1315. 1605.
 911 10   .00  7.15  41.1 123.8 247.2 404.4 591.9 807.2 1049. 1315. 1605.
          .00  14.9  59.9 133.3 206.8 280.3 353.8 427.3 500.8 574.3 647.8
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1011 10   .00  24.5 130.2 330.0 603.0 939.6 1334. 1782. 2280. 2827. 3419.
1011 10   .00  24.5 130.2 330.0 603.0 939.6 1334. 1782. 2280. 2827. 3419.
          .00  31.1 104.6 190.6 276.6 362.6 448.6 534.6 620.6 706.6 792.6
          .00  31.1 104.6 190.6 276.6 362.6 448.6 534.6 620.6 706.6 792.6
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1111 10   .00   .93  6.42  20.3  40.6  66.5  97.2 132.5 172.1 215.7 263.1
1111 10   .00   .93  6.42  20.3  40.6  66.5  97.2 132.5 172.1 215.7 263.1
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1211 10   .00  1.77  10.9  27.6  50.4  78.3 111.0 148.1 189.4 234.6 283.6
1211 10   .00  1.77  10.9  27.6  50.4  78.3 111.0 148.1 189.4 234.6 283.6
          .00  4.00  15.0  27.0  39.0  51.0  63.0  75.0  87.0  99.0 111.0
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1311 10   .00  11.8  38.2  76.7 126.5 187.3 259.1 341.9 435.1 538.1 650.2
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          .00  3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
          .00  3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
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         3.89  4.09  4.29  4.49  4.69  4.89  5.09  5.29  5.49  5.69  5.89
1511 10   .00  4.47  19.7  43.6  74.5 111.8 154.8 203.2 256.8 315.2 378.4
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          .00  14.6  39.0  63.4  87.8 112.2 136.6 161.0 185.4 209.8 234.2
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         3.80  4.00  4.20  4.40  4.60  4.80  5.00  5.20  5.40  5.60  5.80
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         3.87  4.07  4.27  4.47  4.67  4.87  5.07  5.27  5.47  5.67  5.87
1711 10   .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
1711 10   .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
          .00  2.71  12.1  24.3  36.5  48.7  60.9  73.1  85.3  97.5 109.7
          .00  2.71  12.1  24.3  36.5  48.7  60.9  73.1  85.3  97.5 109.7
        4.47  4.67  4.87  5.07  5.27  5.47  5.67  5.87  6.07  6.27  6.47
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	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	
1811	10 .00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2	
1811	10 .00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2	
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3	
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3	
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	
1911	10 .00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1	
1911	10 .00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1	
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2	
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2	
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30	
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30	
2012	10 .00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7
2012	10 .00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70
2111	10 .00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4	
2111	10 .00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4	
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2	
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2	
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	
2212	10 .00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8
2212	10 .00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08
2312	10 .00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.
2312	10 .00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88
2411	10 .00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2	
2411	10 .00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2	
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0	
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0	
	3.90	4.20	4.50	4.80	5.10	5.40	5.70	6.00	6.30	6.60	6.90	
	3.90	4.20	4.50	4.80	5.10	5.40	5.70	6.00	6.30	6.60	6.90	
2511	10 .00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.	
2511	10 .00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.	
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0	
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0	
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	
2611	10 .00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.	
2611	10 .00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.	
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7	
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7	
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75	
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75	
2712	10 .00	7.28	21.4	40.9	65.3	94.6	128.8	167.8	227.7	397.3	633.2	918.1
2712	10 .00	7.28	21.4	40.9	65.3	94.6	128.8	167.8	227.7	397.3	633.2	918.1
	.00	4.95	10.4	16.4	22.8	29.8	37.2	45.2	72.8	142.8	212.8	282.8
	.00	4.95	10.4	16.4	22.8	29.8	37.2	45.2	72.8	142.8	212.8	282.8
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50
2812	10 .00	0.76	2.25	3.50	4.30	4.80	97.1	255.9	472.2	738.7	1051.	1405.
2812	10 .00	0.76	2.25	3.50	4.30	4.80	97.1	255.9	472.2	738.7	1051.	1405.
	.00	0.71	1.27	1.27	1.27	1.27	106.6	194.8	283.0	371.2	459.4	547.6
	.00	0.71	1.27	1.27	1.27	1.27	106.6	194.8	283.0	371.2	459.4	547.6
	2.27	2.77	3.27	3.77	4.27	4.54	5.00	5.30	5.60	5.90	6.20	6.50
	2.27	2.77	3.27	3.77	4.27	4.54	5.00	5.30	5.60	5.90	6.20	6.50
2912	10 .00	.46	2.89	8.50	18.3	32.7	51.2	73.2	98.4	126.6	157.7	191.5
2912	10 .00	.46	2.89	8.50	18.3	32.7	51.2	73.2	98.4	126.6	157.7	191.5
	.00	4.51	18.0	40.6	72.2	109.2	146.2	183.2	220.2	257.2	294.2	331.2
	.00	4.51	18.0	40.6	72.2	109.2	146.2	183.2	220.2	257.2	294.2	331.2
	4.04	4.24	4.44	4.64	4.84	5.04	5.24	5.44	5.64	5.84	6.04	6.24
	4.04	4.24	4.44	4.64	4.84	5.04	5.24	5.44	5.64	5.84	6.04	6.24
3010	10 .00	0.11	0.73	1.40	10.2	48.0	128.0	267.8	459.8	695.9		
3010	10 .00	0.11	0.73	1.40	10.2	48.0	128.0	267.8	459.8	695.9		
	.00	0.22	0.57	0.57	10.3	35.0	73.4	128.4	183.4	238.4		
	.00	0.22	0.57	0.57	10.3	35.0	73.4	128.4	183.4	238.4		
	1.84	2.00	2.50	3.01	3.51	4.01	4.51	5.01	5.51	6.01		
	1.84	2.00	2.50	3.01	3.51	4.01	4.51	5.01	5.51	6.01		
3112	10 .00	0.23	0.70	1.40	1.55	5.66	33.3	112.3	250.1	435.9	663.5	928.8
3112	10 .00	0.23	0.70	1.40	1.55	5.66	33.3	112.3	250.1	435.9	663.5	928.8
	.00	0.11	0.54	0.64	0.64	6.03	27.2	71.7	124.2	176.7	229.2	281.7
	.00	0.11	0.54	0.64	0.64	6.03	27.2	71.7	124.2	176.7	229.2	281.7
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50
3211	10 .00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1	
3211	10 .00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1	
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4	
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4	
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29	
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29	
3312	10 .00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5
3312	10 .00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67
3412	10 .00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7
3412	10 .00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59
3512	10 .00	.27	1.75	6.45	17.3	32.8	52.3	75.5	101.9	131.5	164.0	199.4
3512	10 .00	.27	1.75	6.45	17.3	32.8	52.3	75.5	101.9	131.5	164.0	199.4
	.00	2.52	10.5	35.0	71.0	107.0	143.0	179.0	215.0	251.0	287.0	323.0
	.00	2.52	10.5	35.0	71.0	107.0	143.0	179.0	215.0	251.0	287.0	323.0
	3.57	3.87	4.17	4.47	4.77	5.07	5.37	5.67	5.97	6.27	6.57	6.87
	3.57	3.87	4.17	4.47	4.77	5.07	5.37	5.67	5.97	6.27	6.57	6.87
3612	10 .00	.36	11.2	40.9	96.9	182.4	291.2	420.7	569.9	735.5	915.8	1110.
3612	10 .00	.36	11.2	40.9	96.9	182.4	291.2	420.7	569.9	735.5	915.8	1110.
	.00	.48	13.1	34.5	70.6	114.8	161.1	209.9	260.3	310.7	361.1	411.5
	.00	.48	13.1	34.5	70.6	114.8	161.1	209.9	260.3	310.7	361.1	411.5
	3.14	3.44	3.74	4.04	4.34	4.64	4.94	5.24	5.54	5.84	6.14	6.44
	3.14	3.44	3.74	4.04	4.34	4.64	4.94	5.24	5.54	5.84	6.14	6.44
3712	10 .00	.39	2.45	7.21	15.5	28.0	45.5	68.6	97.9	133.9	177.2	228.4
3712	10 .00	.39	2.45	7.21	15.5	28.0	45.5	68.6	97.9	133.9	177.2	228.4
	.00	1.94	7.75	17.4	31.0	48.4	69.8	94.9	124.0	156.9	193.8	234.4
	.00	1.94	7.75	17.4	31.0	48.4	69.8	94.9	124.0	156.9	193.8	234.4
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
3812	10 .00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2
3812	10 .00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
3912	10 .00	1.91	14.6	41.3	81.8	136.3	209.7	299.6	404.0	521.9	652.4	794.8
3912	10 .00	1.91	14.6	41.3	81.8	136.3	209.7	299.6	404.0	521.9	652.4	794.8
	.00	5.85	27.7	56.3	89.0	128.2	175.5	223.1	270.8	318.5	366.3	414.0
	.00	5.85	27.7	56.3	89.0	128.2	175.5	223.1	270.8	318.5	366.3	414.0
	3.34	3.64	3.94	4.24	4.54	4.84	5.14	5.44	5.74	6.04	6.34	6.64
	3.34	3.64	3.94	4.24	4.54	4.84	5.14	5.44	5.74	6.04	6.34	6.64

4012 10	.00	.21	1.36	3.98	8.57	15.5	25.2	38.0	54.1	74.1	98.0	126.3
4012 10	.00	.21	1.36	3.98	8.57	15.5	25.2	38.0	54.1	74.1	98.0	126.3
	.00	1.07	4.29	9.64	17.1	26.8	38.6	52.5	68.6	86.8	107.1	129.6
	.00	1.07	4.29	9.64	17.1	26.8	38.6	52.5	68.6	86.8	107.1	129.6
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	6.97
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	6.97
41 9 10	.00	18.4	99.9	290.8	575.9	946.7	1393.	1907.	2486.			
41 9 10	.00	18.4	99.9	290.8	575.9	946.7	1393.	1907.	2486.			
	.00	21.1	78.6	168.1	262.8	360.3	457.8	555.3	652.8			
	.00	21.1	78.6	168.1	262.8	360.3	457.8	555.3	652.8			
	2.66	3.16	3.66	4.16	4.66	5.16	5.66	6.16	6.66			
	2.66	3.16	3.66	4.16	4.66	5.16	5.66	6.16	6.66			
4210 10	.00	.90	6.90	20.6	47.7	104.9	205.4	346.8	522.2	728.2		
4210 10	.00	.90	6.90	20.6	47.7	104.9	205.4	346.8	522.2	728.2		
	.00	2.18	10.4	23.3	49.3	101.4	175.8	253.3	330.8	408.3		
	.00	2.18	10.4	23.3	49.3	101.4	175.8	253.3	330.8	408.3		
	2.11	2.61	3.11	3.61	4.11	4.61	5.11	5.61	6.11	6.61		
	2.11	2.61	3.11	3.61	4.11	4.61	5.11	5.61	6.11	6.61		
4310 10	.00	5.42	27.3	64.1	116.0	186.9	281.2	401.5	545.0	709.3		
4310 10	.00	5.42	27.3	64.1	116.0	186.9	281.2	401.5	545.0	709.3		
	.00	20.9	60.9	105.8	158.6	225.9	308.9	402.9	497.3	591.7		
	.00	20.9	60.9	105.8	158.6	225.9	308.9	402.9	497.3	591.7		
	2.18	2.68	3.18	3.68	4.18	4.68	5.18	5.68	6.18	6.68		
	2.18	2.68	3.18	3.68	4.18	4.68	5.18	5.68	6.18	6.68		
4412 10	.00	.84	5.32	18.6	47.6	92.1	151.7	226.9	318.3	426.6	552.6	697.0
4412 10	.00	.84	5.32	18.6	47.6	92.1	151.7	226.9	318.3	426.6	552.6	697.0
	.00	1.48	6.02	18.1	37.3	58.9	82.9	109.3	138.2	169.5	203.3	239.6
	.00	1.48	6.02	18.1	37.3	58.9	82.9	109.3	138.2	169.5	203.3	239.6
	3.59	3.89	4.19	4.49	4.79	5.09	5.39	5.69	5.99	6.29	6.59	6.89
	3.59	3.89	4.19	4.49	4.79	5.09	5.39	5.69	5.99	6.29	6.59	6.89
4511 10	.00	2.85	12.0	27.6	50.0	80.3	118.1	162.6	213.0	269.1	330.5	
4511 10	.00	2.85	12.0	27.6	50.0	80.3	118.1	162.6	213.0	269.1	330.5	
	.00	17.2	45.6	79.5	120.7	169.5	219.5	269.5	319.5	369.5	419.5	
	.00	17.2	45.6	79.5	120.7	169.5	219.5	269.5	319.5	369.5	419.5	
	4.81	5.01	5.21	5.41	5.61	5.81	6.01	6.21	6.41	6.61	6.81	
	4.81	5.01	5.21	5.41	5.61	5.81	6.01	6.21	6.41	6.61	6.81	
4612 10	.00	.82	5.12	12.7	23.2	36.9	54.9	76.7	101.9	130.2	161.5	195.5
4612 10	.00	.82	5.12	12.7	23.2	36.9	54.9	76.7	101.9	130.2	161.5	195.5
	.00	12.6	43.2	77.3	114.7	157.8	212.0	266.2	320.4	374.6	428.8	483.0
	.00	12.6	43.2	77.3	114.7	157.8	212.0	266.2	320.4	374.6	428.8	483.0
	4.56	4.76	4.96	5.16	5.36	5.56	5.76	5.96	6.16	6.36	6.56	6.76
	4.56	4.76	4.96	5.16	5.36	5.56	5.76	5.96	6.16	6.36	6.56	6.76
4711 10	.00	1.4	6.5	12.0	34.1	149.7	375.7	725.6	1235.	1889.	2662.	
4711 10	.00	1.4	6.5	12.0	34.1	149.7	375.7	725.6	1235.	1889.	2662.	
	.00	2.62	4.06	6.34	32.6	104.4	205.0	331.6	492.5	655.0	817.6	
	.00	2.62	4.06	6.34	32.6	104.4	205.0	331.6	492.5	655.0	817.6	
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
4811 10	.00	3.09	17.3	45.1	86.0	137.8	199.3	269.8	348.7	435.5	529.9	
4811 10	.00	3.09	17.3	45.1	86.0	137.8	199.3	269.8	348.7	435.5	529.9	
	.00	12.6	42.9	83.6	127.1	170.6	214.1	257.6	301.1	344.6	388.1	
	.00	12.6	42.9	83.6	127.1	170.6	214.1	257.6	301.1	344.6	388.1	
	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41	6.71	
	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41	6.71	
4911 10	.00	1.34	5.09	11.3	20.1	31.7	45.7	62.0	80.3	100.5	122.6	
4911 10	.00	1.34	5.09	11.3	20.1	31.7	45.7	62.0	80.3	100.5	122.6	
	.00	13.3	31.9	54.8	81.8	111.7	141.7	171.7	201.7	231.7	261.7	
	.00	13.3	31.9	54.8	81.8	111.7	141.7	171.7	201.7	231.7	261.7	
	5.32	5.52	5.72	5.92	6.12	6.32	6.52	6.72	6.92	7.12	7.32	
	5.32	5.52	5.72	5.92	6.12	6.32	6.52	6.72	6.92	7.12	7.32	
5011 10	.00	3.1	6.2	12.5	15.2	23.0	28.0	55.0	137.3	259.2	414.8	
5011 10	.00	3.1	6.2	12.5	15.2	23.0	28.0	55.0	137.3	259.2	414.8	
	.00	2.54	3.98	6.38	7.2	7.2	7.82	34.0	74.0	114.0	154.0	
	.00	2.54	3.98	6.38	7.2	7.2	7.82	34.0	74.0	114.0	154.0	
	2.17	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
	2.17	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
5112 10	.00	10.8	34.5	69.2	112.2	161.9	217.5	278.5	344.3	414.6	489.2	567.9
5112 10	.00	10.8	34.5	69.2	112.2	161.9	217.5	278.5	344.3	414.6	489.2	567.9
	.00	24.9	57.6	94.4	131.4	168.4	205.4	242.4	279.4	316.4	353.4	390.4
	.00	24.9	57.6	94.4	131.4	168.4	205.4	242.4	279.4	316.4	353.4	390.4
	5.06	5.26	5.46	5.66	5.86	6.06	6.26	6.46	6.66	6.86	7.06	7.26
	5.06	5.26	5.46	5.66	5.86	6.06	6.26	6.46	6.66	6.86	7.06	7.26
5211 10	.00	1.20	2.00	5.60	9.60	12.5	20.6	61.0	136.9	240.3	367.8	
5211 10	.00	1.20	2.00	5.60	9.60	12.5	20.6	61.0	136.9	240.3	367.8	
	.00	1.91	3.14	3.53	3.53	3.53	11.6	38.6	68.7	98.7	128.8	
	.00	1.91	3.14	3.53	3.53	3.53	11.6	38.6	68.7	98.7	128.8	
	2.30	3.10	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
	2.30	3.10	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
53 9 10	.00	10.1	51.8	112.1	186.3	272.2	368.3	473.6	587.5			
53 9 10	.00	10.1	51.8	112.1	186.3	272.2	368.3	473.6	587.5			
	.00	24.8	77.3	129.8	182.3	234.8	287.3	339.8	392.3			
	.00	24.8	77.3	129.8	182.3	234.8	287.3	339.8	392.3			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
5612 10	0.0	1.0	2.4	4.0	4.8	6.6	8.2	14.6	59.9	144.9	260.8	403.7
5612 10	0.0	1.0	2.4	4.0	4.8	6.6	8.2	14.6	59.9	144.9	260.8	403.7
	0.0	0.52	1.7	2.3	2.3	2.3	2.3	9.39	42.1	75.7	109.4	143.0
	0.0	0.52	1.7	2.3	2.3	2.3	2.3	9.39	42.1	75.7	109.4	143.0
	2.67	3.00	3.50	3.87	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.67	3.00	3.50	3.87	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
5712 10	.00	2.71	15.3	42.1	81.2	129.0	184.1	245.5	312.7	385.1	462.5	544.5
5712 10	.00	2.71	15.3	42.1	81.2	129.0	184.1	245.5	312.7	385.1	462.5	544.5
	.00	6.19	24.8	55.0	88.0	121.0	154.0	187.0	220.0	253.0	286.0	319.0
	.00	6.19	24.8	55.0	88.0	121.0	154.0	187.0	220.0	253.0	286.0	319.0
	4.02	4.32	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32
	4.02	4.32	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
5912 10	.00	1.55	9.80	28.8	59.4	99.5	147.9	203.9	267.0	336.7	412.9	495.1
5912 10	.00	1.55	9.80	28.8	59.4	99.5	147.9	203.9	267.0	336.7	412.9	495.1
	.00	3.57	14.3	32.0	52.0	72.0	92.0	112.0	132.0	152.0	172.0	192.0
	.00	3.57	14.3	32.0	52.0	72.0	92.0	112.0	132.0	152.0	172.0	192.0
	4.91	5.11	5.31	5.51	5.71	5.91	6.11	6.31	6.51	6.71	6.91	7.11
	4.91	5.11	5.31	5.51	5.71	5.91	6.11	6.31	6.51	6.71	6.91	7.11
6011 10	.00	0.65	0.90	2.2	3.0	18.5	86.5	198.5	346.2	525.7	734.0	
6011 10	.00	0.65	0.90	2.2	3.0	18.5	86.5	198.5	346.2	525.7	734.0	
	.00	0.55	0.76	1.1	1.1	19.9	59.5	100.1	140.7	181.3	221.9	
	.00	0.55	0.76	1.1	1.1	19.9	59.5	100.1	140.7	181.3	221.9	
	2.73	3.33	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
	2.73	3.33	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
6110 10	.00	.44	2.50	6.90	14.2	24.7	38.8	56.4	77.6	102.6		
6110 10	.00	.44	2.50	6.90	14.2	24.7	38.8	56.4	77.6	102.6		
	.00	.73	2.91	6.55	11.6	18.2	25.9	34.6	44.3	54.9		
	.00	.73	2.91	6.55	11.6	18.2	25.9	34.6	44.3	54.9		
	5.61	5.81	6.01	6.21	6.41	6.61	6.81	7.01	7.21	7.41		
	5.61	5.81	6.01	6.21	6.41	6.61	6.81	7.01	7.21	7.41		
6212 10	.00	7.91	40.6	92.5	160.2	242.0	336.8	443.5	561.7	690.7	830.1	979.5

6212 10	.00	7.91	40.6	92.5	160.2	242.0	336.8	443.5	561.7	690.7	830.1	979.5
	.00	23.2	66.7	110.2	153.7	197.2	240.7	284.2	327.7	371.2	414.7	458.2
	.00	23.2	66.7	110.2	153.7	197.2	240.7	284.2	327.7	371.2	414.7	458.2
	4.02	4.32	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32
	4.02	4.32	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32
6310 10	.00	.69	5.77	22.1	59.2	114.9	186.3	272.1	371.4	483.5		
6310 10	.00	.69	5.77	22.1	59.2	114.9	186.3	272.1	371.4	483.5		
	.00	5.22	27.1	81.8	175.6	271.8	369.4	468.2	568.4	669.9		
	.00	5.22	27.1	81.8	175.6	271.8	369.4	468.2	568.4	669.9		
	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32		
	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32		
6412 10	.00	5.07	22.1	47.9	81.1	120.9	166.7	218.2	275.1	337.0	403.9	475.6
6412 10	.00	5.07	22.1	47.9	81.1	120.9	166.7	218.2	275.1	337.0	403.9	475.6
	.00	18.2	45.2	72.2	99.2	126.2	153.2	180.2	207.2	234.2	261.2	288.2
	.00	18.2	45.2	72.2	99.2	126.2	153.2	180.2	207.2	234.2	261.2	288.2
	4.85	5.05	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05
	4.85	5.05	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05
6512 10	.00	3.51	19.8	51.5	98.0	157.6	227.0	304.9	390.5	483.1	582.1	687.2
6512 10	.00	3.51	19.8	51.5	98.0	157.6	227.0	304.9	390.5	483.1	582.1	687.2
	.00	5.77	23.1	46.8	76.6	107.4	138.2	169.0	199.8	230.6	261.4	292.2
	.00	5.77	23.1	46.8	76.6	107.4	138.2	169.0	199.8	230.6	261.4	292.2
	5.22	5.42	5.62	5.82	6.02	6.22	6.42	6.62	6.82	7.02	7.22	7.42
	5.22	5.42	5.62	5.82	6.02	6.22	6.42	6.62	6.82	7.02	7.22	7.42
6611 10	.00	.76	4.23	11.9	26.9	58.9	108.9	173.9	252.0	342.1	443.4	
6611 10	.00	.76	4.23	11.9	26.9	58.9	108.9	173.9	252.0	342.1	443.4	
	.00	1.78	5.93	13.7	27.2	57.4	89.2	121.7	154.2	186.7	219.2	
	.00	1.78	5.93	13.7	27.2	57.4	89.2	121.7	154.2	186.7	219.2	
	2.43	2.93	3.43	3.93	4.43	4.93	5.43	5.93	6.43	6.93	7.43	
	2.43	2.93	3.43	3.93	4.43	4.93	5.43	5.93	6.43	6.93	7.43	
67 5 10	.00	1.41	8.91	26.2	56.3							
67 5 10	.00	1.41	8.91	26.2	56.3							
	.00	3.22	12.9	29.0	51.5							
	.00	3.22	12.9	29.0	51.5							
	6.00	6.30	6.60	6.90	7.20							
	6.00	6.30	6.60	6.90	7.20							
6812 10	.00	1.15	7.30	21.5	46.1	83.2	131.6	189.7	256.7	331.9	415.0	505.4
6812 10	.00	1.15	7.30	21.5	46.1	83.2	131.6	189.7	256.7	331.9	415.0	505.4
	.00	2.61	10.5	23.5	41.8	64.4	87.4	110.4	133.4	156.4	179.4	202.4
	.00	2.61	10.5	23.5	41.8	64.4	87.4	110.4	133.4	156.4	179.4	202.4
	5.02	5.22	5.42	5.62	5.82	6.02	6.22	6.42	6.62	6.82	7.02	7.22
	5.02	5.22	5.42	5.62	5.82	6.02	6.22	6.42	6.62	6.82	7.02	7.22
6910 10	.00	3.84	27.5	72.8	136.9	217.7	313.5	423.3	546.0	680.9		
6910 10	.00	3.84	27.5	72.8	136.9	217.7	313.5	423.3	546.0	680.9		
	.00	12.4	48.2	90.7	135.2	180.6	226.1	271.6	317.1	362.6		
	.00	12.4	48.2	90.7	135.2	180.6	226.1	271.6	317.1	362.6		
	2.82	3.32	3.82	4.32	4.82	5.32	5.82	6.32	6.82	7.32		
	2.82	3.32	3.82	4.32	4.82	5.32	5.82	6.32	6.82	7.32		
7012 10	.00	15.6	47.7	94.9	157.3	236.2	333.2	447.5	575.9	717.1	870.1	1034.
7012 10	.00	15.6	47.7	94.9	157.3	236.2	333.2	447.5	575.9	717.1	870.1	1034.
	.00	21.0	46.1	76.3	110.8	151.1	197.1	245.9	295.1	344.8	395.1	445.8
	.00	21.0	46.1	76.3	110.8	151.1	197.1	245.9	295.1	344.8	395.1	445.8
	5.02	5.22	5.42	5.62	5.82	6.02	6.22	6.42	6.62	6.82	7.02	7.22
	5.02	5.22	5.42	5.62	5.82	6.02	6.22	6.42	6.62	6.82	7.02	7.22
7112 10	.00	1.96	8.85	29.5	79.0	182.1	339.6	556.3	832.7	1160.	1535.	1953.
7112 10	.00	1.96	8.85	29.5	79.0	182.1	339.6	556.3	832.7	1160.	1535.	1953.
	.00	2.47	7.70	21.7	55.9	108.2	170.2	244.3	321.8	399.3	476.8	554.3
	.00	2.47	7.70	21.7	55.9	108.2	170.2	244.3	321.8	399.3	476.8	554.3
	1.20	1.70	2.20	2.70	3.20	3.70	4.20	4.70	5.20	5.70	6.20	6.70
	1.20	1.70	2.20	2.70	3.20	3.70	4.20	4.70	5.20	5.70	6.20	6.70
7210 10	.00	1.29	7.96	21.3	40.9	65.7	95.3	129.2	167.2	209.0		
7210 10	.00	1.29	7.96	21.3	40.9	65.7	95.3	129.2	167.2	209.0		
	.00	5.36	20.3	39.8	60.8	81.8	102.8	123.8	144.8	165.8		
	.00	5.36	20.3	39.8	60.8	81.8	102.8	123.8	144.8	165.8		
	4.53	4.83	5.13	5.43	5.73	6.03	6.33	6.63	6.93	7.23		
	4.53	4.83	5.13	5.43	5.73	6.03	6.33	6.63	6.93	7.23		
7311 10	.00	20.2	60.7	113.9	177.1	249.0	328.6	415.2	508.4	607.7	712.7	
7311 10	.00	20.2	60.7	113.9	177.1	249.0	328.6	415.2	508.4	607.7	712.7	
	.00	27.6	57.6	87.6	117.6	147.6	177.6	207.6	237.6	267.6	297.6	
	.00	27.6	57.6	87.6	117.6	147.6	177.6	207.6	237.6	267.6	297.6	
	5.46	5.66	5.86	6.06	6.26	6.46	6.66	6.86	7.06	7.26	7.46	
	5.46	5.66	5.86	6.06	6.26	6.46	6.66	6.86	7.06	7.26	7.46	
74 9 10	.00	3.08	19.1	48.7	89.1	138.7	196.9	262.9	336.3			
74 9 10	.00	3.08	19.1	48.7	89.1	138.7	196.9	262.9	336.3			
	.00	17.1	64.8	117.3	169.8	222.3	274.8	327.3	379.8			
	.00	17.1	64.8	117.3	169.8	222.3	274.8	327.3	379.8			
	5.06	5.36	5.66	5.96	6.26	6.56	6.86	7.16	7.46			
	5.06	5.36	5.66	5.96	6.26	6.56	6.86	7.16	7.46			
7511 10	.00	2.25	12.0	27.2	46.3	68.6	93.6	121.1	150.9	182.8	216.6	
7511 10	.00	2.25	12.0	27.2	46.3	68.6	93.6	121.1	150.9	182.8	216.6	
	.00	3.70	13.3	23.3	33.3	43.3	53.3	63.3	73.3	83.3	93.3	
	.00	3.70	13.3	23.3	33.3	43.3	53.3	63.3	73.3	83.3	93.3	
	5.52	5.72	5.92	6.12	6.32	6.52	6.72	6.92	7.12	7.32	7.52	
	5.52	5.72	5.92	6.12	6.32	6.52	6.72	6.92	7.12	7.32	7.52	
7611 10	.00	1.36	8.45	21.9	40.3	62.9	89.5	119.7	153.3	190.1	230.1	
7611 10	.00	1.36	8.45	21.9	40.3	62.9	89.5	119.7	153.3	190.1	230.1	
	.00	3.13	12.0	22.0	32.0	42.0	52.0	62.0	72.0	82.0	92.0	
	.00	3.13	12.0	22.0	32.0	42.0	52.0	62.0	72.0	82.0	92.0	
	5.47	5.67	5.87	6.07	6.27	6.47	6.67	6.87	7.07	7.27	7.47	
	5.47	5.67	5.87	6.07	6.27	6.47	6.67	6.87	7.07	7.27	7.47	
77 9 10	.00	30.0	108.5	222.2	365.9	536.8	732.7	952.1	1194.			
77 9 10	.00	30.0	108.5	222.2	365.9	536.8	732.7	952.1	1194.			
	.00	81.6	177.6	273.6	369.6	465.6	561.6	657.6	753.6			
	.00	81.6	177.6	273.6	369.6	465.6	561.6	657.6	753.6			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
7810 10	.00	2.64	13.8	31.6	54.8	83.0	115.6	152.3	193.0	237.4		
7810 10	.00	2.64	13.8	31.6	54.8	83.0	115.6	152.3	193.0	237.4		
	.00	7.75	22.8	37.8	52.8	67.8	82.8	97.8	112.8	127.8		
	.00	7.75	22.8	37.8	52.8	67.8	82.8	97.8	112.8	127.8		
	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32		
	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32		
7910 10	.00	3.25	15.2	33.6	57.4	86.0	119.0	156.1	197.2	242.0		
7910 10	.00	3.25	15.2	33.6	57.4	86.0	119.0	156.1	197.2	242.0		
	.00	9.25	24.3	39.3	54.3	69.3	84.3	99.3	114.3	129.3		
	.00	9.25	24.3	39.3	54.3	69.3	84.3	99.3	114.3	129.3		
	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32		
	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32		
8010 10	.00	.42	2.45	6.26	12.0	19.5	28.4	38.8	50.4	63.2		
8010 10	.00	.42	2.45	6.26	12.0	19.5	28.4	38.8	50.4	63.2		
	.00	6.40	22.2	42.1	65.8	89.8	113.8	137.8	161.8	185.8		
	.00	6.40	22.2	42.1	65.8	89.8	113.8	137.8	161.8	185.8		
	3.50	3.90	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10		
	3.50	3.90	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10		
8111 10	.00	9.3	15.9	21.6	26.4	33.9	63.9	112.4	172.8	243.7	322.6	
8111 10	.00	9.3	15.9	21.6	26.4	33.9	63.9	112.4	172.8	243.7	322.6	
	.00	5.7	7.2	7.2	7.2	11.5	28.5	48.5	68.5	88.5	108.5	
	.00	5.7	7.2	7.2	7.2	11.5	28.5	48.5	68.5	88.5	108.5	
	2.05	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
	2.05	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
82 7 10	.00	42.8	176.1	375.2	630.1	934.8	1286.					
82 7 10	.00	42.8	176.1	375.2	630.1	934.8	1286.					
	.00	47.7	113.7	179.7	245.7	311.7	377.7					
	.00	47.7	113.7	179.7	245.7	311.7	377.7					
	4.55	5.05	5.55	6.05	6.55	7.05	7.55					
	4.55	5.05	5.55	6.05	6.55	7.05	7.55					

```
38   1
1.0     .0 .025 21  1  1
        -5.000                  .025          -5.000                  .025
  -5.000     .0 0.000E+00 0.000E+00
  -4.500    95.0 0.475E+02 0.120E+04
  -4.000    95.0 0.950E+02 0.380E+04
  -3.500    95.0 0.143E+03 0.747E+04
  -3.000    95.0 0.190E+03 0.121E+05
  -2.500    95.0 0.238E+03 0.175E+05
  -2.000    95.0 0.285E+03 0.237E+05
  -1.500    95.0 0.333E+03 0.307E+05
  -1.000    95.0 0.380E+03 0.383E+05
   -.500    95.0 0.428E+03 0.466E+05
   .000     95.0 0.475E+03 0.556E+05
   .500     95.0 0.523E+03 0.651E+05
  1.000     95.0 0.570E+03 0.753E+05
  1.500     95.0 0.618E+03 0.860E+05
  2.000     95.0 0.665E+03 0.973E+05
  2.500     95.0 0.713E+03 0.109E+06
  3.000     95.0 0.760E+03 0.122E+06
  3.500     95.0 0.808E+03 0.135E+06
  4.000     95.0 0.855E+03 0.148E+06
  4.500     95.0 0.903E+03 0.162E+06
  5.000     95.0 0.950E+03 0.176E+06
2.0     .0 .025 10  2  3
         2.000                  .045          2.000                  .100
    .500     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
   1.000     .0 0.000E+00 0.000E+00            14.3 0.607E+01 0.137E+03              .0 0.000E+00 0.000E+00
   1.500     .0 0.000E+00 0.000E+00            18.5 0.143E+02 0.476E+03              .0 0.000E+00 0.000E+00
   2.000     .0 0.000E+00 0.000E+00            41.0 0.283E+02 0.877E+03              .0 0.000E+00 0.000E+00
   2.500    29.0 0.131E+02 0.170E+03           41.0 0.488E+02 0.218E+04            15.6 0.391E+01 0.155E+02
   3.000    29.0 0.276E+02 0.592E+03           41.0 0.693E+02 0.391E+04            25.0 0.150E+02 0.107E+03
   3.500    29.0 0.421E+02 0.120E+04           41.0 0.898E+02 0.602E+04            25.0 0.275E+02 0.293E+03
   4.000    29.0 0.566E+02 0.196E+04           41.0 0.110E+03 0.849E+04            25.0 0.400E+02 0.547E+03
   4.500    29.0 0.711E+02 0.287E+04           41.0 0.131E+03 0.113E+05            25.0 0.525E+02 0.861E+03
   5.000    29.0 0.856E+02 0.391E+04           41.0 0.151E+03 0.144E+05            25.0 0.650E+02 0.123E+04
3.0     .0 .025 13  2  3
        -1.000                  .035          -1.000                  .035
  -1.000     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
   -.500     .5 0.125E+00 0.113E+01            9.0 0.450E+01 0.113E+03              .5 0.125E+00 0.113E+01
   .000     1.0 0.500E+00 0.714E+01            9.0 0.900E+01 0.360E+03             8.1 0.819E+00 0.490E+01
   .500     1.5 0.113E+01 0.211E+02            9.0 0.135E+02 0.708E+03            11.4 0.569E+01 0.971E+02
  1.000     2.0 0.200E+01 0.454E+02            9.0 0.180E+02 0.114E+04            15.5 0.122E+02 0.282E+03
  1.500     2.5 0.313E+01 0.823E+02            9.0 0.225E+02 0.166E+04            26.6 0.227E+02 0.562E+03
  2.000     3.0 0.450E+01 0.134E+03            9.0 0.270E+02 0.225E+04            36.5 0.385E+02 0.110E+04
  2.500     3.5 0.613E+01 0.202E+03            9.0 0.315E+02 0.290E+04            48.7 0.596E+02 0.189E+04
  3.000    35.5 0.138E+02 0.204E+03            9.0 0.360E+02 0.363E+04            62.6 0.874E+02 0.304E+04
  3.500    50.1 0.368E+02 0.835E+03            9.0 0.405E+02 0.442E+04            73.4 0.121E+03 0.471E+04
  4.000    56.1 0.635E+02 0.192E+04            9.0 0.450E+02 0.526E+04            85.0 0.161E+03 0.680E+04
  4.500    56.1 0.915E+02 0.354E+04            9.0 0.495E+02 0.617E+04            85.0 0.203E+03 0.102E+05
  5.000    56.1 0.120E+03 0.552E+04            9.0 0.540E+02 0.713E+04            85.0 0.246E+03 0.139E+05
4.0     .0 .020 12  2  3
         .560                   .030           .400                   .030
  -.320     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
   .000     .0 0.000E+00 0.000E+00            3.0 0.484E+00 0.703E+01              .0 0.000E+00 0.000E+00
   .500     .0 0.000E+00 0.000E+00            7.2 0.315E+01 0.893E+02              .1 0.650E-02 0.252E-01
  1.000     .4 0.923E-01 0.875E+00            7.5 0.690E+01 0.321E+03              .8 0.234E+00 0.299E+01
  1.500     .9 0.421E+00 0.663E+01            7.5 0.106E+02 0.663E+03             7.2 0.224E+01 0.333E+02
  2.000    10.0 0.177E+01 0.179E+02           7.5 0.144E+02 0.110E+04            10.7 0.672E+01 0.161E+03
  2.500    34.5 0.129E+02 0.221E+03           7.5 0.182E+02 0.161E+04            14.2 0.129E+02 0.399E+03
  3.000    59.0 0.363E+02 0.869E+03           7.5 0.219E+02 0.220E+04            17.5 0.209E+02 0.772E+03
  3.500    64.4 0.682E+02 0.235E+04           7.5 0.257E+02 0.287E+04            17.5 0.296E+02 0.138E+04
  4.000    64.4 0.100E+03 0.447E+04           7.5 0.294E+02 0.360E+04            17.5 0.384E+02 0.213E+04
  4.500    64.4 0.133E+03 0.711E+04           7.5 0.332E+02 0.440E+04            17.5 0.471E+02 0.300E+04
  5.000    64.4 0.165E+03 0.102E+05           7.5 0.369E+02 0.526E+04            17.5 0.559E+02 0.398E+04
5.0     .0 .020 13  2  3
         .300                   .030           .600                   .030
 -1.100     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
   -.500    .0 0.000E+00 0.000E+00            2.3 0.684E+00 0.141E+02              .0 0.000E+00 0.000E+00
   .000     .0 0.000E+00 0.000E+00            4.2 0.230E+01 0.711E+02              .0 0.000E+00 0.000E+00
   .500     .2 0.243E-01 0.147E+00            5.7 0.483E+01 0.199E+03              .0 0.000E+00 0.000E+00
  1.000     .9 0.298E+00 0.415E+01            5.9 0.777E+01 0.430E+03             1.1 0.220E+00 0.241E+01
  1.500    1.5 0.876E+00 0.175E+02            5.9 0.107E+02 0.736E+03            24.0 0.447E+01 0.486E+02
  2.000    2.1 0.176E+01 0.442E+02            5.9 0.137E+02 0.110E+04            75.0 0.308E+02 0.568E+03
  2.500    2.7 0.294E+01 0.880E+02            5.9 0.166E+02 0.153E+04            98.5 0.742E+02 0.205E+04
  3.000    9.1 0.493E+01 0.102E+03            5.9 0.196E+02 0.201E+04           122.1 0.129E+03 0.448E+04
  3.500    9.1 0.948E+01 0.305E+03            5.9 0.225E+02 0.254E+04           145.6 0.196E+03 0.798E+04
  4.000    9.1 0.140E+02 0.586E+03            5.9 0.255E+02 0.311E+04           155.0 0.273E+03 0.133E+05
  4.500    9.1 0.186E+02 0.935E+03            5.9 0.284E+02 0.374E+04           155.0 0.350E+03 0.201E+05
  5.000    9.1 0.231E+02 0.135E+04            5.9 0.314E+02 0.441E+04           155.0 0.428E+03 0.280E+05
6.0     .0 .025 13  2  3
         .500                   .035           .500                   .035
  .150     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
   .500    .0 0.000E+00 0.000E+00            8.0 0.140E+01 0.175E+02              .0 0.000E+00 0.000E+00
  1.000     .5 0.125E+00 0.113E+01            8.0 0.540E+01 0.166E+03              .4 0.109E+00 0.840E+00
  1.500    1.0 0.500E+00 0.715E+01            8.0 0.940E+01 0.418E+03              .9 0.438E+00 0.597E+01
  2.000    1.5 0.113E+01 0.211E+02            8.0 0.134E+02 0.754E+03             2.7 0.101E+01 0.128E+02
  2.500   12.3 0.487E+01 0.722E+02            8.0 0.174E+02 0.117E+04            10.9 0.520E+01 0.867E+02
  3.000   20.7 0.131E+02 0.271E+03            8.0 0.214E+02 0.165E+04            15.2 0.117E+02 0.273E+03
  3.500   27.6 0.256E+02 0.682E+03            8.0 0.254E+02 0.219E+04            19.4 0.204E+02 0.584E+03
  4.000   27.6 0.394E+02 0.140E+04            8.0 0.294E+02 0.279E+04            19.4 0.301E+02 0.112E+04
  4.500   27.6 0.532E+02 0.231E+04            8.0 0.334E+02 0.346E+04            19.4 0.398E+02 0.178E+04
  5.000   27.6 0.670E+02 0.340E+04            8.0 0.374E+02 0.417E+04            19.4 0.495E+02 0.257E+04
  5.500   27.6 0.808E+02 0.464E+04            8.0 0.414E+02 0.494E+04            19.4 0.592E+02 0.346E+04
  6.000   27.6 0.946E+02 0.604E+04            8.0 0.454E+02 0.576E+04            19.4 0.689E+02 0.445E+04
7.0     .0 .020 13  2  3
         .700                   .030           .700                   .030
  -.900     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
  -.500     .0 0.000E+00 0.000E+00            3.9 0.780E+00 0.132E+02              .0 0.000E+00 0.000E+00
  0.000     .0 0.000E+00 0.000E+00            6.8 0.344E+01 0.107E+03              .0 0.000E+00 0.000E+00
   .500     .0 0.000E+00 0.000E+00            8.7 0.731E+01 0.313E+03              .0 0.000E+00 0.000E+00
  1.000     .3 0.450E-01 0.336E+00            9.5 0.120E+02 0.672E+03              .3 0.450E-01 0.336E+00
  1.500     .8 0.320E+00 0.460E+01            9.5 0.167E+02 0.117E+04              .8 0.320E+00 0.460E+01
  2.000    1.3 0.845E+00 0.168E+02            9.5 0.215E+02 0.178E+04             1.3 0.846E+00 0.168E+02
  2.500    1.8 0.162E+01 0.400E+02            9.5 0.262E+02 0.248E+04             2.2 0.165E+01 0.380E+02
  3.000    2.3 0.265E+01 0.768E+02            9.5 0.310E+02 0.327E+04             3.9 0.315E+01 0.813E+02
  3.500    2.8 0.392E+01 0.130E+03            9.5 0.358E+02 0.415E+04             5.6 0.550E+01 0.166E+03
  4.000  130.0 0.254E+02 0.284E+03            9.5 0.405E+02 0.511E+04             5.6 0.828E+01 0.328E+03
  4.500  130.0 0.904E+02 0.235E+04            9.5 0.453E+02 0.615E+04             5.6 0.111E+02 0.531E+03
  5.000  130.0 0.155E+03 0.580E+04            9.5 0.500E+02 0.727E+04             5.6 0.138E+02 0.771E+03
8.0     .0 .020 17  2  3
         1.000                  .030          1.000                  .030
  1.000     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
  1.500     .5 0.125E+00 0.131E+01            9.0 0.450E+01 0.142E+03              .5 0.125E+00 0.131E+01
  2.000    1.0 0.500E+00 0.834E+01            9.0 0.900E+01 0.450E+03             1.0 0.500E+00 0.834E+01
  2.500   84.5 0.122E+02 0.111E+03            9.0 0.135E+02 0.885E+03            31.4 0.409E+01 0.345E+02
  3.000   94.8 0.595E+02 0.145E+04            9.0 0.180E+02 0.143E+04            33.2 0.205E+02 0.488E+03
  3.500   94.8 0.107E+03 0.384E+04            9.0 0.225E+02 0.207E+04            33.2 0.371E+02 0.131E+04
  4.000   94.8 0.154E+03 0.708E+04            9.0 0.270E+02 0.281E+04            33.2 0.537E+02 0.243E+04
  4.500   94.8 0.202E+03 0.111E+05            9.0 0.315E+02 0.363E+04            33.2 0.703E+02 0.381E+04
  5.000   94.8 0.249E+03 0.157E+05            9.0 0.360E+02 0.454E+04            33.2 0.869E+02 0.542E+04
  5.500   94.8 0.296E+03 0.210E+05            9.0 0.405E+02 0.552E+04            33.2 0.104E+03 0.726E+04
  6.000   94.8 0.344E+03 0.269E+05            9.0 0.450E+02 0.658E+04            33.2 0.120E+03 0.930E+04
  6.500   94.8 0.391E+03 0.334E+05            9.0 0.495E+02 0.771E+04            33.2 0.137E+03 0.115E+05
  7.000   94.8 0.439E+03 0.404E+05            9.0 0.540E+02 0.892E+04            33.2 0.153E+03 0.140E+05
  7.500   94.8 0.486E+03 0.480E+05            9.0 0.585E+02 0.102E+05            33.2 0.170E+03 0.166E+05
  8.000   94.8 0.533E+03 0.560E+05            9.0 0.630E+02 0.115E+05            33.2 0.187E+03 0.194E+05
  8.500   94.8 0.581E+03 0.646E+05            9.0 0.675E+02 0.129E+05            33.2 0.203E+03 0.223E+05
  9.000   94.8 0.628E+03 0.736E+05            9.0 0.720E+02 0.144E+05            33.2 0.220E+03 0.255E+05
9.0     .0 .030 17  2  3
         2.800                  .200          2.230                  .200
  .700     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
 1.200     .0 0.000E+00 0.000E+00            16.0 0.763E+01 0.153E+03              .0 0.000E+00 0.000E+00
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    1.700      .0 0.000E+00 0.000E+00
    2.200      .0 0.000E+00 0.000E+00
    2.700      .0 0.000E+00 0.000E+00
    3.200      5.9 0.132E+01 0.242E+01
    3.700     14.0 0.604E+01 0.172E+02
    4.200     48.9 0.196E+02 0.530E+02
    4.700     48.9 0.440E+02 0.205E+03
    5.200     48.9 0.685E+02 0.428E+03
    5.700     48.9 0.929E+02 0.712E+03
    6.200     48.9 0.117E+03 0.105E+04
    6.700     48.9 0.142E+03 0.144E+04
    7.200     48.9 0.166E+03 0.188E+04
    7.700     48.9 0.191E+03 0.236E+04
    8.200     48.9 0.215E+03 0.289E+04
    8.700     48.9 0.240E+03 0.345E+04
10.0     .0 .030 19  2  3
          4.500                .100
     .000      .0 0.000E+00 0.000E+00
     .500      .0 0.000E+00 0.000E+00
    1.000      .0 0.000E+00 0.000E+00
    1.500      .0 0.000E+00 0.000E+00
    2.000      .0 0.000E+00 0.000E+00
    2.500      .0 0.000E+00 0.000E+00
    3.000      .0 0.000E+00 0.000E+00
    3.500      .0 0.000E+00 0.000E+00
    4.000     15.5 0.240E+01 0.693E+01
    4.500     41.0 0.172E+02 0.964E+02
    5.000     41.0 0.377E+02 0.356E+03
    5.500     41.0 0.582E+02 0.735E+03
    6.000     41.0 0.787E+02 0.122E+04
    6.500     41.0 0.992E+02 0.179E+04
    7.000     41.0 0.120E+03 0.244E+04
    7.500     41.0 0.140E+03 0.318E+04
    8.000     41.0 0.161E+03 0.399E+04
    8.500     41.0 0.181E+03 0.486E+04
    9.000     41.0 0.202E+03 0.583E+04
11.0     .0 .030 19  2  3
          3.700                .030
     .000      .0 0.000E+00 0.000E+00
     .500      9.9 0.496E+01 0.977E+02
    1.000      9.9 0.993E+01 0.293E+03
    1.500     10.0 0.149E+02 0.547E+03
    2.000     10.0 0.199E+02 0.842E+03
    2.500     10.0 0.249E+02 0.117E+04
    3.000     10.0 0.299E+02 0.152E+04
    3.500     10.1 0.350E+02 0.189E+04
    4.000     65.1 0.438E+02 0.104E+04
    4.500     86.4 0.859E+02 0.269E+04
    5.000     86.4 0.129E+03 0.529E+04
    5.500     86.4 0.172E+03 0.856E+04
    6.000     86.4 0.215E+03 0.124E+05
    6.500     86.4 0.259E+03 0.169E+05
    7.000     86.4 0.302E+03 0.218E+05
    7.500     86.4 0.345E+03 0.272E+05
    8.000     86.4 0.388E+03 0.332E+05
    8.500     86.4 0.431E+03 0.396E+05
    9.000     86.4 0.475E+03 0.463E+05
12.0     .0 .030 18  2  3
          3.860                .035
     .560      .0 0.000E+00 0.000E+00
    1.000      .0 0.000E+00 0.000E+00
    1.500      .0 0.000E+00 0.000E+00
    2.000      .0 0.000E+00 0.000E+00
    2.500      .0 0.000E+00 0.000E+00
    3.000      .0 0.000E+00 0.000E+00
    3.500      .0 0.000E+00 0.000E+00
    4.000      3.3 0.303E+00 0.176E+01
    4.500     69.2 0.243E+02 0.346E+03
    5.000     97.8 0.689E+02 0.156E+04
    5.500     97.8 0.118E+03 0.381E+04
    6.000     97.8 0.167E+03 0.680E+04
    6.500     97.8 0.216E+03 0.104E+05
    7.000     97.8 0.265E+03 0.147E+05
    7.500     97.8 0.313E+03 0.195E+05
    8.000     97.8 0.362E+03 0.248E+05
    8.500     97.8 0.411E+03 0.306E+05
    9.000     97.8 0.460E+03 0.369E+05
13.0     .0 .035 17  2  3
          4.000                .200
    1.100      .0 0.000E+00 0.000E+00
    1.500      .0 0.000E+00 0.000E+00
    2.000      .0 0.000E+00 0.000E+00
    2.500      .0 0.000E+00 0.000E+00
    3.000      .0 0.000E+00 0.000E+00
    3.500      .0 0.000E+00 0.000E+00
    4.000      .0 0.000E+00 0.000E+00
    4.500     53.1 0.133E+02 0.264E+02
    5.000     85.0 0.510E+02 0.181E+03
    5.500     85.0 0.935E+02 0.498E+03
    6.000     85.0 0.136E+03 0.930E+03
    6.500     85.0 0.179E+03 0.146E+04
    7.000     85.0 0.221E+03 0.209E+04
    7.500     85.0 0.264E+03 0.280E+04
    8.000     85.0 0.306E+03 0.359E+04
    8.500     85.0 0.349E+03 0.446E+04
    9.000     85.0 0.391E+03 0.541E+04
14.0     .0 .100 10  2  3
          6.000                .100
    5.200      .0 0.000E+00 0.000E+00
    5.500     30.0 0.450E+01 0.127E+02
    6.000     80.0 0.320E+02 0.174E+03
    6.500     80.0 0.720E+02 0.671E+03
    7.000     80.0 0.112E+03 0.140E+04
    7.500     80.0 0.152E+03 0.233E+04
    8.000     80.0 0.192E+03 0.344E+04
    8.500     80.0 0.232E+03 0.472E+04
    9.000     80.0 0.272E+03 0.615E+04
    9.500     80.0 0.312E+03 0.773E+04
15.0     .0 .060 17  2  3
          4.000                .035
    1.800      .0 0.000E+00 0.000E+00
    2.000      3.3 0.529E+00 0.441E+01
    2.500      6.5 0.296E+01 0.494E+02
    3.000      9.7 0.704E+01 0.158E+03
    3.500     12.9 0.127E+02 0.349E+03
    4.000     16.2 0.200E+02 0.639E+03
    4.500     85.0 0.561E+02 0.121E+04
    5.000     90.0 0.998E+02 0.304E+04
    5.500     90.0 0.145E+03 0.565E+04
    6.000     90.0 0.190E+03 0.887E+04
    6.500     90.0 0.235E+03 0.126E+05
    7.000     90.0 0.280E+03 0.169E+05
    7.500     90.0 0.325E+03 0.217E+05
    8.000     90.0 0.370E+03 0.269E+05
    8.500     90.0 0.415E+03 0.326E+05
    9.000     90.0 0.460E+03 0.387E+05
    9.500     90.0 0.505E+03 0.453E+05
16.0     .0 .030 19  2  3
          3.740                .035
     .740      .0 0.000E+00 0.000E+00
    1.000      .0 0.000E+00 0.000E+00
    1.500      .0 0.000E+00 0.000E+00
    2.000      .0 0.000E+00 0.000E+00

   17.5 0.160E+02 0.491E+03
   19.0 0.252E+02 0.979E+03
   19.9 0.349E+02 0.164E+04
   20.0 0.449E+02 0.248E+04
   20.0 0.549E+02 0.346E+04
   20.0 0.649E+02 0.458E+04
   20.0 0.749E+02 0.581E+04
   20.0 0.849E+02 0.716E+04
   20.0 0.949E+02 0.862E+04
   20.0 0.105E+03 0.102E+05
   20.0 0.115E+03 0.119E+05
   20.0 0.125E+03 0.136E+05
   20.0 0.135E+03 0.155E+05
   20.0 0.145E+03 0.175E+05
   20.0 0.155E+03 0.195E+05
4.500                .100
      .0 0.000E+00 0.000E+00
     7.3 0.340E+01 0.657E+02
     8.3 0.730E+01 0.210E+03
     9.3 0.117E+02 0.418E+03
    10.3 0.166E+02 0.689E+03
    11.3 0.220E+02 0.102E+04
    12.2 0.279E+02 0.142E+04
    13.1 0.342E+02 0.188E+04
    14.0 0.409E+02 0.241E+04
    14.9 0.482E+02 0.301E+04
    14.9 0.556E+02 0.382E+04
    14.9 0.631E+02 0.472E+04
    14.9 0.705E+02 0.568E+04
    14.9 0.780E+02 0.672E+04
    14.9 0.854E+02 0.782E+04
    14.9 0.929E+02 0.899E+04
    14.9 0.100E+03 0.102E+05
    14.9 0.108E+03 0.115E+05
    14.9 0.115E+03 0.129E+05
3.310                .030
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
     2.3 0.751E+00 0.111E+02
     3.8 0.225E+01 0.483E+02
     8.6 0.581E+01 0.140E+03
    10.4 0.105E+02 0.333E+03
    12.1 0.162E+02 0.608E+03
    13.5 0.226E+02 0.988E+03
    13.8 0.295E+02 0.151E+04
    13.8 0.364E+02 0.215E+04
    13.8 0.432E+02 0.287E+04
    13.8 0.501E+02 0.367E+04
    13.8 0.570E+02 0.454E+04
    13.8 0.639E+02 0.549E+04
    13.8 0.708E+02 0.652E+04
    13.8 0.777E+02 0.761E+04
    13.8 0.846E+02 0.876E+04
    13.8 0.915E+02 0.998E+04
    13.8 0.983E+02 0.113E+05
3.170                .035
      .0 0.000E+00 0.000E+00
     2.1 0.621E+00 0.855E+01
     3.6 0.203E+01 0.421E+02
     8.4 0.530E+01 0.122E+03
    10.1 0.993E+01 0.305E+03
    11.9 0.154E+02 0.570E+03
    13.0 0.217E+02 0.947E+03
    14.5 0.288E+02 0.141E+04
    14.5 0.360E+02 0.205E+04
    14.5 0.433E+02 0.279E+04
    14.5 0.505E+02 0.361E+04
    14.5 0.578E+02 0.451E+04
    14.5 0.650E+02 0.549E+04
    14.5 0.723E+02 0.655E+04
    14.5 0.795E+02 0.768E+04
    14.5 0.868E+02 0.889E+04
    14.5 0.940E+02 0.102E+05
    14.5 0.101E+03 0.115E+05
3.930                .100
      .0 0.000E+00 0.000E+00
     5.2 0.144E+01 0.173E+02
     9.2 0.504E+01 0.949E+02
    13.2 0.106E+02 0.259E+03
    17.2 0.182E+02 0.532E+03
    21.2 0.278E+02 0.936E+03
    24.9 0.394E+02 0.150E+04
    24.9 0.519E+02 0.237E+04
    24.9 0.643E+02 0.339E+04
    24.9 0.768E+02 0.456E+04
    24.9 0.892E+02 0.586E+04
    24.9 0.102E+03 0.728E+04
    24.9 0.114E+03 0.883E+04
    24.9 0.127E+03 0.105E+05
    24.9 0.139E+03 0.123E+05
    24.9 0.151E+03 0.142E+05
    24.9 0.164E+03 0.161E+05
6.000                .100
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
     2.8 0.688E+00 0.262E+01
     5.5 0.275E+01 0.166E+02
     8.3 0.619E+01 0.490E+02
    11.0 0.110E+02 0.106E+03
    17.5 0.181E+02 0.180E+03
    24.0 0.285E+02 0.311E+03
    30.5 0.421E+02 0.511E+03
6.000                .100
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
    30.0 0.750E+01 0.496E+02
    60.0 0.300E+02 0.315E+03
    90.0 0.675E+02 0.929E+03
   120.0 0.120E+03 0.200E+04
   120.0 0.180E+03 0.393E+04
   120.0 0.240E+03 0.635E+04
   120.0 0.300E+03 0.921E+04
   120.0 0.360E+03 0.125E+05
   120.0 0.420E+03 0.161E+05
   120.0 0.480E+03 0.202E+05
   120.0 0.540E+03 0.245E+05
3.660                .035
      .0 0.000E+00 0.000E+00
     1.5 0.297E+00 0.310E+01
     3.0 0.144E+01 0.265E+02
     4.5 0.333E+01 0.814E+02

      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
11.1 0.455E+01 0.126E+02
11.1 0.101E+02 0.474E+02
11.1 0.157E+02 0.984E+02
11.1 0.212E+02 0.163E+03
11.1 0.268E+02 0.240E+03
11.1 0.323E+02 0.329E+03
11.1 0.379E+02 0.429E+03
11.1 0.434E+02 0.539E+03
11.1 0.490E+02 0.658E+03
11.1 0.545E+02 0.787E+03
11.1 0.601E+02 0.925E+03
11.1 0.656E+02 0.107E+04
11.1 0.712E+02 0.123E+04

      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
12.0 0.281E+01 0.107E+02
24.7 0.120E+02 0.739E+02
37.4 0.275E+02 0.224E+03
54.1 0.503E+02 0.479E+03
54.1 0.774E+02 0.981E+03
54.1 0.104E+03 0.162E+04
54.1 0.131E+03 0.237E+04
54.1 0.159E+03 0.324E+04
54.1 0.186E+03 0.422E+04
54.1 0.213E+03 0.529E+04
54.1 0.240E+03 0.646E+04
54.1 0.267E+03 0.772E+04
54.1 0.294E+03 0.907E+04

      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
14.4 0.153E+01 0.115E+02
88.5 0.268E+02 0.404E+03
101.7 0.762E+02 0.209E+04
106.0 0.128E+03 0.484E+04
110.3 0.182E+03 0.848E+04
112.9 0.238E+03 0.131E+05
112.9 0.295E+03 0.186E+05
112.9 0.351E+03 0.249E+05
112.9 0.408E+03 0.319E+05
112.9 0.464E+03 0.397E+05
112.9 0.520E+03 0.480E+05
112.9 0.577E+03 0.570E+05

      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
     6.0 0.101E+01 0.882E+01
14.7 0.618E+01 0.989E+02
21.7 0.153E+02 0.345E+03
28.7 0.279E+02 0.781E+03
35.7 0.440E+02 0.144E+04
35.7 0.619E+02 0.255E+04
35.7 0.797E+02 0.388E+04
35.7 0.976E+02 0.544E+04
35.7 0.115E+03 0.720E+04
35.7 0.133E+03 0.915E+04
35.7 0.151E+03 0.113E+05
35.7 0.169E+03 0.136E+05

      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
     5.1 0.180E+00 0.192E+00
41.8 0.119E+02 0.516E+02
78.4 0.420E+02 0.277E+03
93.1 0.870E+02 0.832E+03
93.1 0.134E+03 0.170E+04
93.1 0.180E+03 0.280E+04
93.1 0.227E+03 0.410E+04
93.1 0.273E+03 0.560E+04
93.1 0.320E+03 0.728E+04
93.1 0.366E+03 0.913E+04
93.1 0.413E+03 0.111E+05

      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
52.0 0.260E+02 0.164E+03
52.0 0.520E+02 0.520E+03
52.0 0.780E+02 0.102E+04
52.0 0.104E+03 0.165E+04
52.0 0.130E+03 0.239E+04
52.0 0.156E+03 0.324E+04
52.0 0.182E+03 0.420E+04

      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
134.3 0.666E+02 0.417E+03
136.7 0.134E+03 0.133E+04
139.0 0.203E+03 0.262E+04
139.0 0.273E+03 0.427E+04
139.0 0.342E+03 0.624E+04
139.0 0.412E+03 0.849E+04
139.0 0.481E+03 0.110E+05

      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
      .0 0.000E+00 0.000E+00
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     2.500      .0 0.000E+00 0.000E+00          9.3 0.648E+01 0.159E+03          .0 0.000E+00 0.000E+00
     3.000      .0 0.000E+00 0.000E+00         11.1 0.116E+02 0.369E+03          .0 0.000E+00 0.000E+00
     3.500      .0 0.000E+00 0.000E+00         13.0 0.176E+02 0.668E+03          .0 0.000E+00 0.000E+00
     4.000      2.6 0.235E+00 0.134E+01        13.7 0.244E+02 0.111E+04         24.7 0.409E+01 0.352E+02
     4.500     91.6 0.164E+02 0.150E+03        13.7 0.312E+02 0.167E+04         42.2 0.208E+02 0.371E+03
     5.000     91.6 0.623E+02 0.137E+04        13.7 0.381E+02 0.233E+04         59.7 0.463E+02 0.112E+04
     5.500     91.6 0.108E+03 0.345E+04        13.7 0.449E+02 0.307E+04         59.7 0.761E+02 0.256E+04
     6.000     91.6 0.154E+03 0.621E+04        13.7 0.518E+02 0.389E+04         59.7 0.106E+03 0.444E+04
     6.500     91.6 0.200E+03 0.959E+04        13.7 0.586E+02 0.478E+04         59.7 0.136E+03 0.671E+04
     7.000     91.6 0.245E+03 0.135E+05        13.7 0.655E+02 0.575E+04         59.7 0.166E+03 0.935E+04
     7.500     91.6 0.291E+03 0.180E+05        13.7 0.723E+02 0.678E+04         59.7 0.196E+03 0.123E+05
     8.000     91.6 0.337E+03 0.230E+05        13.7 0.792E+02 0.789E+04         59.7 0.225E+03 0.156E+05
     8.500     91.6 0.383E+03 0.284E+05        13.7 0.860E+02 0.905E+04         59.7 0.255E+03 0.192E+05
     9.000     91.6 0.429E+03 0.343E+05        13.7 0.929E+02 0.103E+05         59.7 0.285E+03 0.231E+05
     9.500     91.6 0.475E+03 0.406E+05        13.7 0.997E+02 0.116E+05         59.7 0.315E+03 0.273E+05
17.0     .0 .100 16  2  3
         2.500                    .100    2.500                    .100
     2.500      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     3.000     25.0 0.125E+02 0.787E+02        10.0 0.500E+01 0.315E+02         20.0 0.100E+02 0.630E+02
     3.500     25.0 0.250E+02 0.250E+03        10.0 0.100E+02 0.100E+03         20.0 0.200E+02 0.200E+03
     4.000     25.0 0.375E+02 0.491E+03        10.0 0.150E+02 0.197E+03         20.0 0.300E+02 0.393E+03
     4.500     25.0 0.500E+02 0.794E+03        10.0 0.200E+02 0.318E+03         20.0 0.400E+02 0.635E+03
     5.000     25.0 0.625E+02 0.115E+04        10.0 0.250E+02 0.461E+03         20.0 0.500E+02 0.921E+03
     5.500     25.0 0.750E+02 0.156E+04        10.0 0.300E+02 0.624E+03         20.0 0.600E+02 0.125E+04
     6.000     25.0 0.875E+02 0.202E+04        10.0 0.350E+02 0.807E+03         20.0 0.700E+02 0.161E+04
     6.500     25.0 0.100E+03 0.252E+04        10.0 0.400E+02 0.101E+04         20.0 0.800E+02 0.202E+04
     7.000     25.0 0.113E+03 0.307E+04        10.0 0.450E+02 0.123E+04         20.0 0.900E+02 0.245E+04
     7.500     25.0 0.125E+03 0.366E+04        10.0 0.500E+02 0.146E+04         20.0 0.100E+03 0.292E+04
     8.000     25.0 0.138E+03 0.428E+04        10.0 0.550E+02 0.171E+04         20.0 0.110E+03 0.343E+04
     8.500     25.0 0.150E+03 0.495E+04        10.0 0.600E+02 0.198E+04         20.0 0.120E+03 0.396E+04
     9.000     25.0 0.163E+03 0.566E+04        10.0 0.650E+02 0.226E+04         20.0 0.130E+03 0.453E+04
     9.500     25.0 0.175E+03 0.640E+04        10.0 0.700E+02 0.256E+04         20.0 0.140E+03 0.512E+04
    10.000     25.0 0.188E+03 0.718E+04        10.0 0.750E+02 0.287E+04         20.0 0.150E+03 0.575E+04
18.0     .0 .035 10  2  3
         3.400                    .100    3.470                    .035
     1.780      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     2.000      .0 0.000E+00 0.000E+00         7.3 0.863E+00 0.591E+01         3.6 0.362E+00 0.223E+01
     2.500      .0 0.000E+00 0.000E+00        10.5 0.532E+01 0.853E+02         6.2 0.280E+01 0.461E+02
     3.000      .0 0.000E+00 0.000E+00        13.7 0.114E+02 0.282E+03         8.8 0.653E+01 0.149E+03
     3.500     30.5 0.214E+01 0.363E+01       16.8 0.190E+02 0.581E+03        26.3 0.120E+02 0.201E+03
     4.000     59.9 0.256E+02 0.146E+03       20.7 0.284E+02 0.983E+03        66.0 0.338E+02 0.614E+03
     4.500    107.0 0.679E+02 0.501E+03       29.2 0.402E+02 0.140E+04        66.0 0.668E+02 0.191E+04
     5.000    107.0 0.121E+03 0.132E+04       60.0 0.645E+02 0.192E+04        66.0 0.998E+02 0.373E+04
     5.500    107.0 0.175E+03 0.243E+04       60.0 0.945E+02 0.362E+04        66.0 0.133E+03 0.601E+04
     6.000    107.0 0.228E+03 0.379E+04       60.0 0.124E+03 0.574E+04        66.0 0.166E+03 0.870E+04
19.0     .0 .100  5  2  2
         4.550                    .100    4.550                    .100
     4.550      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     5.000    132.0 0.411E+02 0.189E+03         .0 0.000E+00 0.000E+00
     5.500    132.0 0.107E+03 0.931E+03         .0 0.000E+00 0.000E+00
     6.000    132.0 0.173E+03 0.207E+04         .0 0.000E+00 0.000E+00
     6.500    132.0 0.239E+03 0.355E+04         .0 0.000E+00 0.000E+00
20.0     .0 .013  8  2  3
         4.090                    .060    4.090                    .060
     3.640      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     4.000      .0 0.000E+00 0.000E+00         1.9 0.346E+00 0.812E+01          .0 0.000E+00 0.000E+00
     4.500      3.1 0.632E+00 0.364E+01        2.4 0.153E+01 0.830E+02         4.2 0.955E+00 0.595E+01
     5.000      6.8 0.311E+01 0.305E+02        2.4 0.273E+01 0.218E+03         8.6 0.415E+01 0.423E+02
     5.500     10.6 0.747E+01 0.981E+02        2.4 0.393E+01 0.401E+03        12.0 0.950E+01 0.135E+03
     6.000     10.6 0.128E+02 0.240E+03        2.4 0.513E+01 0.626E+03        12.0 0.155E+02 0.305E+03
     6.500     10.6 0.181E+02 0.427E+03        2.4 0.633E+01 0.889E+03        12.0 0.215E+02 0.527E+03
     7.000     10.6 0.234E+02 0.656E+03        2.4 0.753E+01 0.119E+04        12.0 0.275E+02 0.794E+03
21.0     .0 .013  6  2  3
         4.760                    .100    4.760                    .100
     4.530      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     5.000      .6 0.770E-01 0.179E+00         2.0 0.711E+00 0.269E+02          .5 0.580E-01 0.131E+00
     5.500      2.0 0.732E+00 0.361E+01        2.0 0.171E+01 0.117E+03         1.5 0.551E+00 0.264E+01
     6.000      3.3 0.206E+01 0.143E+02        2.0 0.271E+01 0.251E+03         6.0 0.157E+01 0.618E+01
     6.500      4.7 0.405E+01 0.353E+02        2.0 0.371E+01 0.424E+03        21.0 0.106E+02 0.665E+02
     7.000      5.0 0.653E+01 0.746E+02        2.0 0.471E+01 0.631E+03        21.0 0.211E+02 0.209E+03
22.0     .0 .045 15  2  3
         3.740                    .045    4.750                    .100
     2.220      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     2.500      .0 0.000E+00 0.000E+00        13.7 0.359E+01 0.326E+02          .0 0.000E+00 0.000E+00
     3.000      .0 0.000E+00 0.000E+00        16.7 0.112E+02 0.188E+03          .0 0.000E+00 0.000E+00
     3.500      .0 0.000E+00 0.000E+00        19.6 0.202E+02 0.453E+03          .0 0.000E+00 0.000E+00
     4.000      .8 0.113E+00 0.657E+00        21.8 0.307E+02 0.843E+03          .0 0.000E+00 0.000E+00
     4.500      2.2 0.860E+00 0.985E+01       23.4 0.420E+02 0.136E+04          .0 0.000E+00 0.000E+00
     5.000      3.6 0.230E+01 0.366E+02       24.1 0.540E+02 0.202E+04        11.5 0.144E+01 0.359E+01
     5.500     18.1 0.556E+01 0.557E+02       24.1 0.660E+02 0.282E+04        62.0 0.142E+02 0.534E+02
     6.000     24.5 0.176E+02 0.310E+03       24.1 0.781E+02 0.373E+04        69.4 0.489E+02 0.387E+03
     6.500     24.5 0.298E+02 0.749E+03       24.1 0.901E+02 0.474E+04        69.4 0.836E+02 0.946E+03
     7.000     24.5 0.421E+02 0.133E+04       24.1 0.102E+03 0.584E+04        69.4 0.118E+03 0.169E+04
     7.500     24.5 0.543E+02 0.204E+04       24.1 0.114E+03 0.703E+04        69.4 0.153E+03 0.259E+04
     8.000     24.5 0.666E+02 0.286E+04       24.1 0.126E+03 0.831E+04        69.4 0.188E+03 0.364E+04
     8.500     24.5 0.788E+02 0.379E+04       24.1 0.138E+03 0.968E+04        69.4 0.222E+03 0.483E+04
     9.000     24.5 0.911E+02 0.482E+04       24.1 0.150E+03 0.111E+05        69.4 0.257E+03 0.615E+04
23.0     .0 .045 16  1  2
         5.060                    .045    4.310                    .100
     2.290      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     2.500     13.3 0.265E+01 0.201E+02         .0 0.000E+00 0.000E+00
     3.000     16.3 0.101E+02 0.160E+03         .0 0.000E+00 0.000E+00
     3.500     19.1 0.189E+02 0.411E+03         .0 0.000E+00 0.000E+00
     4.000     22.1 0.292E+02 0.770E+03         .0 0.000E+00 0.000E+00
     4.500     24.5 0.410E+02 0.126E+04        6.8 0.685E+00 0.148E+01
     5.000     25.9 0.536E+02 0.189E+04       23.7 0.831E+01 0.413E+02
     5.500     26.1 0.666E+02 0.271E+04       30.0 0.220E+02 0.179E+03
     6.000     26.1 0.797E+02 0.365E+04       34.1 0.382E+02 0.411E+03
     6.500     26.1 0.927E+02 0.470E+04       34.1 0.552E+02 0.761E+03
     7.000     26.1 0.106E+03 0.585E+04       34.1 0.723E+02 0.119E+04
     7.500     26.1 0.119E+03 0.711E+04       34.1 0.893E+02 0.170E+04
     8.000     26.1 0.132E+03 0.846E+04       34.1 0.106E+03 0.227E+04
     8.500     26.1 0.145E+03 0.990E+04       34.1 0.123E+03 0.291E+04
     9.000     26.1 0.158E+03 0.114E+05       34.1 0.141E+03 0.361E+04
     9.500     26.1 0.171E+03 0.130E+05       34.1 0.158E+03 0.437E+04
24.0     .0 .045 16  1  2
         4.820                    .045    4.140                    .100
     2.350      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     2.500     12.9 0.187E+01 0.114E+02         .0 0.000E+00 0.000E+00
     3.000     15.4 0.903E+01 0.139E+03         .0 0.000E+00 0.000E+00
     3.500     17.4 0.172E+02 0.372E+03         .0 0.000E+00 0.000E+00
     4.000     19.4 0.264E+02 0.701E+03         .0 0.000E+00 0.000E+00
     4.500     20.2 0.364E+02 0.115E+04        6.3 0.110E+01 0.341E+01
     5.000     20.5 0.466E+02 0.172E+04       15.5 0.656E+01 0.369E+02
     5.500     20.5 0.569E+02 0.239E+04       24.7 0.166E+02 0.127E+03
     6.000     20.5 0.671E+02 0.316E+04       32.6 0.312E+02 0.303E+03
     6.500     20.5 0.774E+02 0.400E+04       32.6 0.475E+02 0.610E+03
     7.000     20.5 0.876E+02 0.492E+04       32.6 0.638E+02 0.998E+03
     7.500     20.5 0.979E+02 0.592E+04       32.6 0.801E+02 0.146E+04
     8.000     20.5 0.108E+03 0.698E+04       32.6 0.964E+02 0.198E+04
     8.500     20.5 0.118E+03 0.812E+04       32.6 0.113E+03 0.257E+04
     9.000     20.5 0.129E+03 0.933E+04       32.6 0.129E+03 0.322E+04
     9.500     20.5 0.139E+03 0.106E+05       32.6 0.145E+03 0.393E+04
25.0     .0 .100 16  2  3
         4.000                    .045    7.430                    .100
     2.400      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     2.500      4.4 0.387E+00 0.168E+01         .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     3.000      9.0 0.394E+01 0.497E+02         .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     3.500     11.0 0.894E+01 0.169E+03         .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     4.000     12.9 0.149E+02 0.351E+03         .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     4.500     12.9 0.213E+02 0.638E+03        5.7 0.154E+01 0.645E+01          .0 0.000E+00 0.000E+00
     5.000     12.9 0.278E+02 0.991E+03        6.3 0.454E+01 0.356E+02          .0 0.000E+00 0.000E+00
     5.500     12.9 0.343E+02 0.140E+04        7.0 0.788E+01 0.824E+02          .0 0.000E+00 0.000E+00
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    6.000    12.9 0.407E+02 0.187E+04      7.7 0.116E+02 0.145E+03      .0 0.000E+00 0.000E+00
    6.500    12.9 0.472E+02 0.239E+04      8.4 0.156E+02 0.223E+03      .0 0.000E+00 0.000E+00
    7.000    12.9 0.536E+02 0.296E+04      9.0 0.199E+02 0.317E+03      .0 0.000E+00 0.000E+00
    7.500    12.9 0.601E+02 0.358E+04      9.6 0.246E+02 0.431E+03      .8 0.277E-01 0.296E-01
    8.000    12.9 0.665E+02 0.424E+04      9.6 0.294E+02 0.580E+03     6.4 0.184E+01 0.794E+01
    8.500    12.9 0.730E+02 0.495E+04      9.6 0.342E+02 0.746E+03    12.1 0.647E+01 0.426E+02
    9.000    12.9 0.794E+02 0.570E+04      9.6 0.390E+02 0.929E+03    17.8 0.139E+02 0.118E+03
    9.500    12.9 0.859E+02 0.649E+04      9.6 0.438E+02 0.113E+04    23.4 0.242E+02 0.247E+03
26.0      .0 .035  9  2  3
          3.120                   .100  3.200                   .100
    2.130     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    2.500    1.0 0.516E-02 0.151E-02      10.6 0.200E+01 0.187E+02      .0 0.000E+00 0.000E+00
    3.000   28.5 0.945E+01 0.452E+02      16.3 0.873E+01 0.164E+03      .0 0.000E+00 0.000E+00
    3.500   39.7 0.267E+02 0.205E+03      18.0 0.176E+02 0.492E+03     6.1 0.911E+00 0.257E+01
    4.000   51.0 0.502E+02 0.495E+03      18.0 0.266E+02 0.979E+03    16.2 0.648E+01 0.351E+02
    4.500   55.3 0.768E+02 0.953E+03      18.0 0.356E+02 0.159E+04    26.2 0.171E+02 0.129E+03
    5.000   59.5 0.105E+03 0.154E+04      18.0 0.446E+02 0.232E+04    34.6 0.323E+02 0.308E+03
    5.500   79.5 0.138E+03 0.199E+04      18.0 0.536E+02 0.315E+04    43.1 0.517E+02 0.584E+03
    6.000   79.5 0.178E+03 0.303E+04      18.0 0.626E+02 0.408E+04    50.5 0.753E+02 0.983E+03
27.0      .0 .035  9  2  2
          4.970                   .100  4.530                   .100
    2.460     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00
    2.500     .0 0.000E+00 0.000E+00      4.1 0.819E-01 0.172E+00
    3.000     .0 0.000E+00 0.000E+00     13.6 0.597E+01 0.976E+02
    3.500     .0 0.000E+00 0.000E+00     16.3 0.135E+02 0.333E+03
    4.000     .0 0.000E+00 0.000E+00     19.1 0.223E+02 0.695E+03
    4.500     .0 0.000E+00 0.000E+00     21.8 0.325E+02 0.119E+04
    5.000     .8 0.113E-01 0.684E-02     23.0 0.438E+02 0.187E+04
    5.500   63.0 0.108E+02 0.335E+02     23.0 0.553E+02 0.277E+04
    6.000   63.0 0.423E+02 0.325E+03     23.0 0.668E+02 0.379E+04
28.0      .0 .030  9  2  3
          5.430                   .100  5.460                   .060
    2.730     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00      5.5 0.132E+01 0.168E+02      .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00      7.3 0.452E+01 0.106E+03      .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00      9.2 0.865E+01 0.265E+03      .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00     11.0 0.137E+02 0.501E+03      .0 0.000E+00 0.000E+00
    5.000     .0 0.000E+00 0.000E+00     12.9 0.197E+02 0.822E+03      .0 0.000E+00 0.000E+00
    5.500    7.4 0.526E+00 0.903E+00     14.5 0.265E+02 0.125E+04    17.5 0.166E+01 0.577E+01
    6.000   18.0 0.873E+01 0.539E+02     14.5 0.338E+02 0.186E+04    17.5 0.104E+02 0.123E+03
    6.500   18.0 0.177E+02 0.175E+03     14.5 0.411E+02 0.258E+04    17.5 0.192E+02 0.339E+03
29.0      .0 .030  9  2  3
          4.650                   .100  5.520                   .060
    2.890     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00      4.6 0.471E+00 0.343E+01      .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00      7.1 0.338E+01 0.672E+02      .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00      9.6 0.754E+01 0.208E+03      .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00     12.1 0.130E+02 0.437E+03      .0 0.000E+00 0.000E+00
    5.000    4.8 0.839E+00 0.262E+01     13.5 0.194E+02 0.795E+03     2.5 0.614E-01 0.875E-01
    5.500   12.5 0.495E+01 0.267E+02     14.5 0.264E+02 0.126E+04    27.0 0.743E+01 0.523E+02
    6.000   17.5 0.136E+02 0.114E+03     14.5 0.337E+02 0.189E+04    28.0 0.214E+02 0.298E+03
    6.500   17.5 0.223E+02 0.262E+03     14.5 0.409E+02 0.262E+04    28.0 0.354E+02 0.690E+03
30.0      .0 .030 10  2  3
          4.730                   .100  4.980                   .060
    2.920     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00      2.0 0.794E-01 0.307E+00      .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00      6.1 0.260E+01 0.476E+02      .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00      7.7 0.606E+01 0.164E+03      .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00      9.2 0.103E+02 0.347E+03      .0 0.000E+00 0.000E+00
    5.000    7.0 0.941E+00 0.247E+01     10.4 0.153E+02 0.614E+03     1.1 0.109E-01 0.846E-02
    5.500   36.5 0.847E+01 0.320E+02     10.4 0.205E+02 0.100E+04    26.8 0.737E+01 0.519E+02
    6.000   47.8 0.323E+02 0.248E+03     10.4 0.257E+02 0.146E+04    26.8 0.208E+02 0.292E+03
    6.500   47.8 0.562E+02 0.625E+03     10.4 0.309E+02 0.199E+04    26.8 0.342E+02 0.670E+03
    7.000   47.8 0.801E+02 0.113E+04     10.4 0.361E+02 0.258E+04    26.8 0.476E+02 0.116E+04
31.0      .0 .030  9  2  3
          4.490                   .100  4.670                   .100
    3.110     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00      5.2 0.145E+01 0.204E+02      .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00      7.2 0.454E+01 0.107E+03      .0 0.000E+00 0.000E+00
    4.500     .2 0.121E-02 0.353E-03      9.2 0.863E+01 0.264E+03      .0 0.000E+00 0.000E+00
    5.000   20.0 0.372E+01 0.121E+02      9.6 0.134E+02 0.533E+03    26.0 0.547E+01 0.193E+02
    5.500   42.1 0.217E+02 0.139E+03      9.6 0.182E+02 0.889E+03    26.0 0.185E+02 0.147E+03
    6.000   42.1 0.427E+02 0.432E+03      9.6 0.230E+02 0.131E+04    26.0 0.315E+02 0.358E+03
    6.500   42.1 0.638E+02 0.841E+03      9.6 0.278E+02 0.180E+04    26.0 0.445E+02 0.637E+03
    7.000   42.1 0.848E+02 0.135E+04      9.6 0.326E+02 0.235E+04    26.0 0.575E+02 0.976E+03
32.0      .0 .030  9  2  3
          4.650                   .100  4.550                   .100
    3.200     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00      4.5 0.100E+01 0.120E+02      .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00      6.6 0.378E+01 0.838E+02      .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00      8.7 0.762E+01 0.222E+03      .0 0.000E+00 0.000E+00
    5.000   14.6 0.321E+01 0.117E+02      9.1 0.121E+02 0.469E+03    25.8 0.955E+01 0.492E+02
    5.500   14.6 0.105E+02 0.844E+02      9.1 0.167E+02 0.797E+03    25.8 0.224E+02 0.205E+03
    6.000   14.6 0.178E+02 0.203E+03      9.1 0.212E+02 0.119E+04    25.8 0.353E+02 0.436E+03
    6.500   14.6 0.251E+02 0.360E+03      9.1 0.258E+02 0.165E+04    25.8 0.482E+02 0.732E+03
    7.000   14.6 0.324E+02 0.552E+03      9.1 0.304E+02 0.216E+04    25.8 0.611E+02 0.109E+04
33.0      .0 .030  9  2  3
          5.160                   .100  4.650                   .100
    3.180     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00      4.8 0.126E+01 0.167E+02      .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00      6.3 0.403E+01 0.953E+02      .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00      7.7 0.753E+01 0.231E+03      .0 0.000E+00 0.000E+00
    5.000     .0 0.000E+00 0.000E+00      8.7 0.117E+02 0.441E+03     7.9 0.146E+01 0.474E+01
    5.500   13.5 0.398E+01 0.176E+02      8.9 0.161E+02 0.739E+03     7.9 0.541E+01 0.420E+02
    6.000   13.5 0.107E+02 0.921E+02      8.9 0.206E+02 0.111E+04     7.9 0.936E+01 0.105E+03
    6.500   13.5 0.175E+02 0.208E+03      8.9 0.250E+02 0.154E+04     7.9 0.133E+02 0.188E+03
    7.000   13.5 0.242E+02 0.358E+03      8.9 0.295E+02 0.202E+04     7.9 0.173E+02 0.291E+03
34.0      .0 .020 27  2  3
          1.000                   .030  1.000                   .030
    1.000     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    1.300     .3 0.450E-01 0.336E+00      9.4 0.282E+01 0.632E+02      .3 0.450E-01 0.336E+00
    1.600     .6 0.180E+00 0.214E+01      9.4 0.564E+01 0.201E+03      .6 0.180E+00 0.214E+01
    1.900     .9 0.405E+00 0.630E+01      9.4 0.846E+01 0.394E+03      .9 0.405E+00 0.630E+01
    2.200    1.2 0.720E+00 0.136E+02      9.4 0.113E+02 0.637E+03     1.2 0.720E+00 0.136E+02
    2.500    1.5 0.113E+01 0.246E+02      9.4 0.141E+02 0.924E+03     1.5 0.113E+01 0.246E+02
    2.800    1.8 0.162E+01 0.400E+02      9.4 0.169E+02 0.125E+04     1.8 0.162E+01 0.400E+02
    3.100    2.1 0.221E+01 0.603E+02      9.4 0.197E+02 0.162E+04     2.1 0.221E+01 0.603E+02
    3.400    2.3 0.288E+01 0.866E+02      9.4 0.226E+02 0.202E+04     2.3 0.288E+01 0.866E+02
    3.700    2.3 0.357E+01 0.117E+03      9.4 0.254E+02 0.246E+04     2.3 0.357E+01 0.117E+03
    4.000    2.3 0.426E+01 0.149E+03      9.4 0.282E+02 0.293E+04     2.3 0.426E+01 0.149E+03
    4.300    2.3 0.495E+01 0.183E+03      9.4 0.310E+02 0.344E+04     2.3 0.495E+01 0.183E+03
    4.600    2.3 0.564E+01 0.217E+03      9.4 0.338E+02 0.397E+04     2.3 0.564E+01 0.217E+03
    4.900  113.9 0.123E+02 0.918E+02      9.4 0.367E+02 0.454E+04    16.7 0.749E+01 0.133E+03
    5.200  113.9 0.465E+02 0.840E+03      9.4 0.395E+02 0.514E+04    16.7 0.125E+02 0.313E+03
    5.500  113.9 0.806E+02 0.210E+04      9.4 0.423E+02 0.577E+04    16.7 0.175E+02 0.549E+03
    5.800  113.9 0.115E+03 0.379E+04      9.4 0.451E+02 0.642E+04    16.7 0.226E+02 0.835E+03
    6.100  113.9 0.149E+03 0.585E+04      9.4 0.479E+02 0.710E+04    16.7 0.276E+02 0.117E+04
    6.400  113.9 0.183E+03 0.826E+04      9.4 0.508E+02 0.781E+04    16.7 0.326E+02 0.154E+04
    6.700  113.9 0.217E+03 0.110E+05      9.4 0.536E+02 0.855E+04    16.7 0.376E+02 0.196E+04
    7.000  113.9 0.251E+03 0.140E+05      9.4 0.564E+02 0.931E+04    16.7 0.426E+02 0.241E+04
    7.300  113.9 0.286E+03 0.173E+05      9.4 0.592E+02 0.101E+05    16.7 0.476E+02 0.291E+04
    7.600  113.9 0.320E+03 0.209E+05      9.4 0.620E+02 0.109E+05    16.7 0.527E+02 0.344E+04
    7.900  113.9 0.354E+03 0.248E+05      9.4 0.649E+02 0.118E+05    16.7 0.577E+02 0.400E+04
    8.200  113.9 0.388E+03 0.289E+05      9.4 0.677E+02 0.126E+05    16.7 0.627E+02 0.459E+04
    8.500  113.9 0.422E+03 0.332E+05      9.4 0.705E+02 0.135E+05    16.7 0.677E+02 0.522E+04
    8.800  113.9 0.456E+03 0.378E+05      9.4 0.733E+02 0.144E+05    16.7 0.727E+02 0.588E+04
35.0      .0 .030 15  2  3
          4.560                   .200  3.830                   .200
    2.030     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    2.500     .0 0.000E+00 0.000E+00     16.8 0.724E+01 0.137E+03      .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00     19.8 0.164E+02 0.477E+03      .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00     22.8 0.271E+02 0.997E+03      .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00     25.3 0.392E+02 0.172E+04    105.5 0.252E+02 0.484E+02
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    4.500     .0 0.000E+00 0.000E+00
    5.000    17.7 0.389E+01 0.708E+01
    5.500    76.7 0.220E+02 0.479E+02
    6.000    81.0 0.625E+02 0.263E+03
    6.500    81.0 0.103E+03 0.604E+03
    7.000    81.0 0.143E+03 0.105E+04
    7.500    81.0 0.184E+03 0.159E+04
    8.000    81.0 0.224E+03 0.221E+04
    8.500    81.0 0.265E+03 0.292E+04
    9.000    81.0 0.305E+03 0.370E+04
36.0     .0 .030 15  2  2
         4.880                    .200
    2.180     .0 0.000E+00 0.000E+00
    2.500     .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00
    5.000     4.9 0.293E+00 0.224E+00
    5.500    53.3 0.175E+02 0.416E+02
    6.000    53.3 0.441E+02 0.195E+03
    6.500    53.3 0.708E+02 0.428E+03
    7.000    53.3 0.975E+02 0.728E+03
    7.500    53.3 0.124E+03 0.109E+04
    8.000    53.3 0.151E+03 0.151E+04
    8.500    53.3 0.177E+03 0.198E+04
    9.000    53.3 0.204E+03 0.250E+04
37.0     .0 .030 14  2  3
         3.050                    .100
    2.820     .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00
    3.500     .6 0.127E+00 0.397E+00
    4.000    1.2 0.564E+00 0.291E+01
    4.500    1.8 0.131E+01 0.900E+01
    5.000    8.8 0.298E+01 0.138E+02
    5.500   38.7 0.116E+02 0.514E+02
    6.000   50.0 0.365E+02 0.293E+03
    6.500   50.0 0.615E+02 0.700E+03
    7.000   50.0 0.865E+02 0.124E+04
    7.500   50.0 0.111E+03 0.189E+04
    8.000   50.0 0.137E+03 0.264E+04
    8.500   50.0 0.162E+03 0.350E+04
    9.000   50.0 0.187E+03 0.445E+04
38.0     .0 .030 13  2  3
         4.480                    .100
    3.210     .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00
    4.500     .6 0.581E-02 0.269E-02
    5.000   28.7 0.589E+01 0.205E+02
    5.500   40.2 0.250E+02 0.182E+03
    6.000   40.2 0.451E+02 0.486E+03
    6.500   40.2 0.652E+02 0.899E+03
    7.000   40.2 0.853E+02 0.141E+04
    7.500   40.2 0.105E+03 0.200E+04
    8.000   40.2 0.125E+03 0.268E+04
    8.500   40.2 0.146E+03 0.343E+04
    9.000   40.2 0.166E+03 0.426E+04

   26.8 0.522E+02 0.267E+04
   27.0 0.657E+02 0.390E+04
   27.0 0.792E+02 0.532E+04
   27.0 0.927E+02 0.692E+04
   27.0 0.106E+03 0.867E+04
   27.0 0.120E+03 0.106E+05
   27.0 0.133E+03 0.127E+05
   27.0 0.147E+03 0.149E+05
   27.0 0.160E+03 0.172E+05
   27.0 0.174E+03 0.197E+05
5.380                    .200
     .0 0.000E+00 0.000E+00
   15.4 0.470E+01 0.707E+02
   17.5 0.129E+02 0.347E+03
   19.7 0.222E+02 0.789E+03
   21.9 0.326E+02 0.139E+04
   24.0 0.441E+02 0.214E+04
   25.9 0.567E+02 0.308E+04
   26.7 0.699E+02 0.428E+04
   26.7 0.832E+02 0.573E+04
   26.7 0.966E+02 0.735E+04
   26.7 0.110E+03 0.911E+04
   26.7 0.123E+03 0.110E+05
   26.7 0.137E+03 0.131E+05
   26.7 0.150E+03 0.153E+05
   26.7 0.163E+03 0.176E+05
5.130                    .060
     .0 0.000E+00 0.000E+00
    4.2 0.382E+00 0.254E+01
    6.1 0.321E+01 0.684E+02
    6.8 0.643E+01 0.199E+03
    7.5 0.100E+02 0.386E+03
    8.2 0.139E+02 0.625E+03
    8.4 0.181E+02 0.953E+03
    8.4 0.223E+02 0.135E+04
    8.4 0.265E+02 0.180E+04
    8.4 0.307E+02 0.230E+04
    8.4 0.349E+02 0.285E+04
    8.4 0.391E+02 0.344E+04
    8.4 0.433E+02 0.408E+04
    8.4 0.475E+02 0.476E+04
4.510                    .060
     .0 0.000E+00 0.000E+00
    4.4 0.910E+00 0.104E+02
    6.8 0.371E+01 0.802E+02
    9.2 0.771E+01 0.221E+03
    9.2 0.123E+02 0.481E+03
    9.2 0.169E+02 0.816E+03
    9.2 0.215E+02 0.122E+04
    9.2 0.261E+02 0.168E+04
    9.2 0.307E+02 0.221E+04
    9.2 0.353E+02 0.278E+04
    9.2 0.399E+02 0.341E+04
    9.2 0.445E+02 0.409E+04
    9.2 0.491E+02 0.482E+04

  148.8 0.887E+02 0.314E+03
  178.9 0.172E+03 0.838E+03
  203.3 0.267E+03 0.160E+04
  217.0 0.374E+03 0.269E+04
  217.0 0.482E+03 0.411E+04
  217.0 0.591E+03 0.576E+04
  217.0 0.699E+03 0.763E+04
  217.0 0.808E+03 0.970E+04
  217.0 0.916E+03 0.120E+05
  217.0 0.102E+04 0.144E+05

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    5.0 0.923E+00 0.499E+01
    8.9 0.481E+01 0.530E+02
    8.9 0.926E+01 0.158E+03
    8.9 0.137E+02 0.304E+03
    8.9 0.182E+02 0.486E+03
    8.9 0.226E+02 0.700E+03
    8.9 0.271E+02 0.945E+03
    8.9 0.315E+02 0.122E+04

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
   31.8 0.138E+02 0.132E+03
   31.8 0.297E+02 0.474E+03
   31.8 0.456E+02 0.968E+03
   31.8 0.615E+02 0.159E+04
   31.8 0.774E+02 0.234E+04
   31.8 0.933E+02 0.319E+04
   31.8 0.109E+03 0.414E+04
   31.8 0.125E+03 0.520E+04
   31.8 0.141E+03 0.635E+04
```

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691382251 238 1382060600.5 1% 360.0011 0.9 KAHIBAH CREEK MBKWKS00006666 0 0 0 0
  60003  6 0.120   0   00100.1 5.0 0.25                                    11
|37@o+       813464750             -0.5 0.505
3679x@+*  13 8 8 736323832111047465046221 8         0 1 005
 1   0.50 0 1100                    0 1
 2   0.51 0       1100              0    3   26                 300. 13 1
 3   0.52 0 3111          4         0    2   26                 308.
 4   0.53 0 4111 3111     3 5       0                           210.
 5   0.64 0 5111 4111     4 6       0   15   12                 108.
 6   0.75 0 6111 5111     5 7       0   14    2     8   80      293.  8
 7   0.86 0 7111 6111     6 8       0    9   32                  56.
 8  1.065 034111 7111     713       0   6 9 80 3                 49.
 9  1.290 0               1         0  812  329   710 3231      140.
10  1.790 0               2         0  911 3128                       6
11  1.840 0               3         0 1038 2846   12   30
12  1.581 0               4         0 1113 30 4   932 29 5
13  1.301 0 811134111      816      0 1214  4 6                   70.
14  1.210 0               5         0 1315  611   617  210
15  3.700 0               6         0  518 1213  14   11
16  1.350 0 9111 8111     1317      0 3233 71 8                  130.
17  1.500 010111 9111     1618      0 1419 10 9                  230.  7
18  1.730 01111110111     1722  200 15   13     19   15         155.  3
19  3.600 0               7         0 1720  914  3318  715
20  1.850 01311111100     1821      0 3325 3316  19   14        335.
21  1.900 01510013111     2030      0 3529 3725                  305.
22  1.850 01211111011     1823  260   25   17                    70.
23  1.870 01610012100     2227      0 2426 2324  25   18        180.
24  4.300 0               8         0 2523 1923    28   21
25  3.870 014111            29      0 2024 1619  2223 1718      312.
26  1.900 01601112011     2227      0 23   24                    300.
27  2.000 0      16111    23  26    0    28   22                 108.  4
28  4.300 0               9         0 2729 2220  24   21
29  4.000 01501114111     2530      0 21   25    28   20         120.  5
30  2.300 01711115111     29  21    0                            300.  1
31  2.500 0      17111              0 1
32  1.500 018111             36  380 1216  571    34   35       470.
33  3.880 0               1         0 3419 34 7  1620  833
34  3.140 0               2         0 3235 3538  3633 3634
35  3.340 0               3         0 3440 3840  3721 3937
36  2.300 0      18001     32       0 3834 4136    37   81      130.
37  2.400 0      19110     38       0 3635 8139    39   42      195.
38  2.200 01911018110     3237      0 1142 4647  3936 4541      740.
39  2.410 0               4         0 3740 4243    38   45
40  2.420 0               5         0 3941 4344  35   40              12
41  3.590 0               6         0  40   44                        11
42  2.500 026111            43      0  38   47                   185.
43  2.550 02711126111     4244      0    45   48                  245.
44  2.750 0      27111     43       0    45   72     46   50      130.
45  3.710 0               7         0 4347 4849  44   72
46  2.800 022111            47      0 4450 5052                  260.
47  2.850 02311122111     4648      0 4549 4951                  290.
48  2.900 02411123111     4754      0  53   53                   175.
49  4.310 0               8         0 4753 5174  5150 5473
50  2.900 028111            51      0  46   52    49   73         95.
51  3.000 02911128111     5052      0    49   54                  90.
52  3.200 0      29111     51       0    53   75     57   56      95.
53  3.590 0               9         0 4956 7455  5248 7553
54  2.950 02511124111     4860  610  55   57                    130. 10
55  3.110 0               1         0 5662 7758  5954 7857
56  3.591 0               2         0 5355 5577  5857 5976
57  3.250 030111            58      0  52   56    56   76       105.
58  3.350 03111130111     5759      0    56   59                 105.
59  3.450 0      31111     58       0    55   78     64   60     105.
60  4.000 0      25001     54       0    61   61     67   65     270.
61  3.000 0      25110     54       0 6062 6162     67   66     290.
62  3.111 0               3         0 5568 5867  6163 6263
63  4.620 0               4         0 6265 6364    64   79
64  3.550 032111             65     0  59   60    63   79        45.
65  3.600 03311132111     6466      0  63   64                  130.
66  3.650 0      33111     65       0                          340.  9
67  3.010 0               5         0 6069 6568  6168 6669
68  3.020 0               6         0 6769 6970  62   67             2
69  8.000 0               7         0  67   68    68   70
 1 5 3       0   1.7   2.0   8.8   8.8
          1.29   2.0   3.0   4.0   8.0
 2 6 3       0   3.6   4.8   9.8  16.0  16.0
          1.65   2.0   3.0   4.0   5.0   8.0
 3 6 3       0   2.4   4.6   9.4  15.4  15.4
          1.85   2.0   3.0   4.0   5.0   8.0
 4 5 3       0   2.5   2.6  10.3  10.3
           1.6   2.0   3.0   4.0   8.0
 5 3 3       0   3.9   10.
           2.0   4.0   5.0
 6 3 3       0   1.1   5.3
           2.0   4.0   5.0
 7 3 3       0   9.4  39.9
           3.6   4.0   4.5
 8 2 3       0  15.9
           4.0   5.0
 9 5 3       0   4.2   5.1   5.5   6.4
           4.0   6.0   8.0  10.0  12.0
10 3 3       0   0.2  22.3
           3.8   4.0   4.8
11 5 3       0   1.3   5.4  19.4  22.4
           2.5   3.0   4.0   5.0   6.0
12 6 3       0   1.8  13.2  29.7  44.8  61.0
           3.6   4.0   5.0   6.0   7.0   8.0
13 4 3       0   4.3   9.0   9.0
           2.1   3.0   4.0   8.0
14 5 3       0   4.1  10.4  13.2  13.2
           2.2   3.0   4.0   5.0   8.0
15 8 3       0   0.2   0.3   1.0   1.3   1.4   1.6   2.0
          3.64   4.0   5.0   6.0   7.0   8.0   9.0  10.0
16 5 3       0   0.8   4.2  25.5  27.4
           3.7   4.0   5.0   6.0   6.2
17 3 3       0  14.3  14.3
           5.0   5.6   6.6
18 4 3       0   3.2  22.1  22.1
          4.82   5.0   5.8   8.5
19 5 3       0   3.8  16.3  25.4  25.4
           3.1   4.0   5.0   5.1   8.0
20 4 3       0   1.0  22.0  22.0
          4.82   5.0   5.8   8.0
21 8 3       0   2.6  41.6  69.3  70.0  71.6  73.2  73.6
           3.1   4.0   5.0   6.0   7.0   8.0   9.0  10.0
22 7 3       0   4.8  24.6  27.8  29.7  32.0  32.3
           4.6   5.0   6.0   7.0   8.0   9.0  10.0
23 5 3       0   0.5   7.5  10.1  12.7
           2.2   3.0   4.0   5.0   6.0
24 5 3       0   8.1  12.0  14.5  15.1
           3.1   4.0   5.0   6.0   7.0
25 6 3       0   9.7  23.1  26.7  28.1  29.5
           5.0   6.0   7.0   8.0   9.0  10.0
 116       1.0   1.0  10.0  20.0  48.0  53.0  58.5  57.0  50.0  40.0  30.0  20.0
          10.0   3.0   0.5   0.5
            0. 3000.  720.  300.  420.  300.  120.  180.  240.  420.  600.  960.
         1860. 1980. 2700.50080.
 218       0.5   0.6   1.6   6.0  16.8  17.0  16.6  15.0  13.4  10.6   9.7   7.4
           6.7   4.5   2.9   1.1   0.5   0.5
            0. 1020.  180.  360.  840.   60.   60.  240.  120.  360.  720.  600.
          480.  840. 1440. 1320. 1320.50000.
 3 9       1.0   1.0   1.5   1.0   2.8   2.8   1.0   0.5   0.5
            0. 2700.  420.  180.  360.  180.  600.  300.50000.
```

```
 416      1.0   1.0   8.5  10.0  20.0  21.5  27.0  27.5  18.0  15.0  11.5   6.0
          4.0   1.5   0.5   0.5
           0. 2760.  600.  240.  300.  180.  180.  120.  840.  720.  420. 1740.
         900.  660. 1020.50000.
 5 8      1.0   0.5   3.0   3.5   3.0   1.0   0.5   0.5
           0. 3300. 1200.  600. 1140. 2340. 1380.50000.
 616      0.5   0.6   3.5   5.9   9.4   9.7   9.8   9.9   9.8   9.1   8.9   7.9
          4.4   1.8   0.5   0.5
           0. 3000.  600.  240.  360.  120.  120.   60.   60.  240.  120.  840.
        1920. 2160. 2520.50000.
 7 9      1.0   0.5   1.0   1.5   3.5   3.5   1.0   0.5   0.5
           0. 2460.  660.  480.  420.  240.  960. 1140.50000.
 815      1.0   0.5   7.0   6.0  14.0  13.0   6.0   4.5   3.0   3.0   2.0   2.0
          1.5   0.5   0.5
           0. 2400. 1020.  240.  300.  300.  540. 1020.  480.  600.  360.  600.
         360. 1620.50000.
 917      0.5   0.5   5.1  10.3  20.7  21.9  21.4  18.3  14.6  13.8  10.2   9.3
          7.2   4.3   2.7   0.5   0.5
           0. 1200.  600.  360.  480.  120.  120.  360.  480.  240.  960.  360.
         600. 1680.  720. 3120.50000.
1017      0.5   0.6   5.4  12.1  18.0  24.3  24.4  23.7  22.3  17.0  12.2  10.8
          4.7   4.3   1.2   0.5   0.5
           0.  960.  840.  240.  360.  600.   60.   60.  120.  360.  600.  480.
        2040.  480. 1680. 1320.50000.
1120      0.5   0.8   5.7   5.5  13.0  13.3  13.3  13.1  11.6  10.1   9.6   7.1
          6.9   6.4   4.3   4.3   2.9   1.6   0.5   0.5
           0. 3000.  600.  240.  360.   60.   60.  240.  240.  720.  360.  720.
         240.  240.  720.  360. 1080.  840. 1920.50000.
1218      0.5   0.6   3.8   4.3   8.7   9.2   9.4   6.4   5.3   3.6   3.1   2.9
          2.3   2.2   1.6   0.9   0.5   0.5
           0. 2880.  480.  240.  360.  120.  120.  360.  120.  360.  360.  480.
         360.  600.  480. 1920.  600.50000.
13 9     0.09  0.07  0.99  1.55  1.64  1.55  0.99  0.07  0.47
           0. 1800. 4500. 7200. 3600. 3600. 7200.10800.10800.
 111 10   .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
 111 10   .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
          .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
          .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
 1       -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
        -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
 211 10   .00  10.8  34.1  66.9 107.9 156.2 211.4 273.1 340.8 414.4 493.6
 211 10   .00  10.8  34.1  66.9 107.9 156.2 211.4 273.1 340.8 414.4 493.6
          .00  44.0  88.0 132.0 176.0 220.0 264.0 308.0 352.0 396.0 440.0
          .00  44.0  88.0 132.0 176.0 220.0 264.0 308.0 352.0 396.0 440.0
         8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40  9.60  9.80 10.00
         8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40  9.60  9.80 10.00
 3 5 10   .00  2.28  8.75  20.1  35.9
 3 5 10   .00  2.28  8.75  20.1  35.9
          .00  8.41  20.7  37.2  53.7
          .00  8.41  20.7  37.2  53.7
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         3.79  4.29  4.79  5.29  5.79
 412 10   .00   .84  5.33  13.2  23.7  36.6  51.6  68.6  87.6 108.3 130.8 154.9
 412 10   .00   .84  5.33  13.2  23.7  36.6  51.6  68.6  87.6 108.3 130.8 154.9
          .00  4.77  17.1  30.1  43.2  56.2  69.2  82.3  95.3 108.4 121.5 134.5
          .00  4.77  17.1  30.1  43.2  56.2  69.2  82.3  95.3 108.4 121.5 134.5
         1.58  2.08  2.58  3.08  3.58  4.08  4.58  5.08  5.58  6.08  6.58  7.08
         1.58  2.08  2.58  3.08  3.58  4.08  4.58  5.08  5.58  6.08  6.58  7.08
 512 10   .00   .89  5.62  16.0  31.1  50.3  73.0  99.0 128.1 160.2 195.1 232.7
 512 10   .00   .89  5.62  16.0  31.1  50.3  73.0  99.0 128.1 160.2 195.1 232.7
          .00  8.49  33.9  76.7 107.7 144.7 181.8 218.8 255.9 292.9 330.0 367.1
          .00  8.49  33.9  76.7 107.7 144.7 181.8 218.8 255.9 292.9 330.0 367.1
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         2.36  2.86  3.36  3.86  4.36  4.86  5.36  5.86  6.36  6.86  7.36  7.86
 612 10   .00   .76  4.83  14.2  31.1  56.4  88.5 126.7 170.4 219.4 273.3 331.8
 612 10   .00   .76  4.83  14.2  31.1  56.4  88.5 126.7 170.4 219.4 273.3 331.8
          .00  3.82  15.3  34.4  63.7  96.2 128.7 161.2 193.7 226.2 258.7 291.2
          .00  3.82  15.3  34.4  63.7  96.2 128.7 161.2 193.7 226.2 258.7 291.2
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 7 7 10   .00  4.94  26.8  62.2 108.8 165.2 230.6
 7 7 10   .00  4.94  26.8  62.2 108.8 165.2 230.6
          .00  32.5  99.9 167.4 234.9 302.4 369.9
          .00  32.5  99.9 167.4 234.9 302.4 369.9
         3.88  4.38  4.88  5.38  5.88  6.38  6.88
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 8 7 10   .00  15.1  47.6  93.4 150.6 218.1 295.2
 8 7 10   .00  15.1  47.6  93.4 150.6 218.1 295.2
          .00  37.5  75.0 112.5 150.0 187.5 225.0
          .00  37.5  75.0 112.5 150.0 187.5 225.0
         8.00  8.30  8.60  8.90  9.20  9.50  9.80
         8.00  8.30  8.60  8.90  9.20  9.50  9.80
 9 7 10   .00  43.2 136.4 267.4 431.1 624.4 845.0
 9 7 10   .00  43.2 136.4 267.4 431.1 624.4 845.0
          .00  73.5 147.0 220.5 294.0 367.5 441.0
          .00  73.5 147.0 220.5 294.0 367.5 441.0
         8.00  8.30  8.60  8.90  9.20  9.50  9.80
         8.00  8.30  8.60  8.90  9.20  9.50  9.80
10 4 10   .00  85.5 270.2 529.6
10 4 10   .00  85.5 270.2 529.6
          .00  86.0 172.0 258.0
          .00  86.0 172.0 258.0
         8.00  8.40  8.80  9.20
         8.00  8.40  8.80  9.20
1111 10   .00   .67  4.61  14.5  29.1  47.7  69.8  95.1 123.5 154.8 188.8
1111 10   .00   .67  4.61  14.5  29.1  47.7  69.8  95.1 123.5 154.8 188.8
          .00  2.11  10.1  22.1  34.1  46.1  58.1  70.1  82.1  94.1 106.1
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         3.70  3.90  4.10  4.30  4.50  4.70  4.90  5.10  5.30  5.50  5.70
1211 10   .00   .65  4.04  10.2  18.7  29.0  41.1  54.9  70.2  86.9 105.1
1211 10   .00   .65  4.04  10.2  18.7  29.0  41.1  54.9  70.2  86.9 105.1
          .00  4.00  15.0  27.0  39.0  51.0  63.0  75.0  87.0  99.0 111.0
          .00  4.00  15.0  27.0  39.0  51.0  63.0  75.0  87.0  99.0 111.0
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1311 10   .00  4.93  16.0  32.0  52.8  78.2 108.2 142.8 181.7 224.7 271.5
1311 10   .00  4.93  16.0  32.0  52.8  78.2 108.2 142.8 181.7 224.7 271.5
          .00  15.5  32.0  49.5  67.9  87.4 107.8 129.2 150.8 172.4 194.0
          .00  15.5  32.0  49.5  67.9  87.4 107.8 129.2 150.8 172.4 194.0
         4.00  4.30  4.60  4.90  5.20  5.50  5.80  6.10  6.40  6.70  7.00
         4.00  4.30  4.60  4.90  5.20  5.50  5.80  6.10  6.40  6.70  7.00
1411 10   .00   .36  2.26  7.21  20.4  40.4  65.9  96.5 131.7 171.2 214.8
1411 10   .00   .36  2.26  7.21  20.4  40.4  65.9  96.5 131.7 171.2 214.8
          .00  3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
          .00  3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
         3.89  4.09  4.29  4.49  4.69  4.89  5.09  5.29  5.49  5.69  5.89
         3.89  4.09  4.29  4.49  4.69  4.89  5.09  5.29  5.49  5.69  5.89
1511 10   .00  4.47  19.7  43.6  74.5 111.8 154.8 203.2 256.8 315.2 378.4
1511 10   .00  4.47  19.7  43.6  74.5 111.8 154.8 203.2 256.8 315.2 378.4
          .00  14.6  39.0  63.4  87.8 112.2 136.6 161.0 185.4 209.8 234.2
          .00  14.6  39.0  63.4  87.8 112.2 136.6 161.0 185.4 209.8 234.2
         3.80  4.00  4.20  4.40  4.60  4.80  5.00  5.20  5.40  5.60  5.80
         3.80  4.00  4.20  4.40  4.60  4.80  5.00  5.20  5.40  5.60  5.80
1611 10   .00   .82  6.60  20.3  43.8  78.5 126.1 188.7 265.6 354.9 455.7
1611 10   .00   .82  6.60  20.3  43.8  78.5 126.1 188.7 265.6 354.9 455.7
          .00  4.29  20.0  45.7  80.2 122.8 174.6 236.5 299.7 362.8 426.0
          .00  4.29  20.0  45.7  80.2 122.8 174.6 236.5 299.7 362.8 426.0
         3.87  4.07  4.27  4.47  4.67  4.87  5.07  5.27  5.47  5.67  5.87
         3.87  4.07  4.27  4.47  4.67  4.87  5.07  5.27  5.47  5.67  5.87
1711 10   .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
1711 10   .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
          .00  2.71  12.1  24.3  36.5  48.7  60.9  73.1  85.3  97.5 109.7
```

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1811 10	.00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2	
1811 10	.00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2	
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3	
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3	
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	
1911 10	.00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1	
1911 10	.00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1	
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2	
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2	
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30	
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30	
2012 10	.00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7
2012 10	.00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70
2111 10	.00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4	
2111 10	.00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4	
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2	
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2	
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	
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2212 10	.00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8
2212 10	.00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08
2312 10	.00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.
2312 10	.00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88
2411 10	.00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2	
2411 10	.00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2	
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0	
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0	
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2511 10	.00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.	
2511 10	.00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.	
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0	
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0	
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	
2611 10	.00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.	
2611 10	.00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.	
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7	
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7	
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75	
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75	
2712 10	.00	5.89	17.3	33.1	52.9	76.6	104.2	135.8	171.4	211.1	255.2	303.8
2712 10	.00	5.89	17.3	33.1	52.9	76.6	104.2	135.8	171.4	211.1	255.2	303.8
	.00	4.95	10.4	16.4	22.8	29.8	37.2	45.2	53.6	62.7	72.3	82.6
	.00	4.95	10.4	16.4	22.8	29.8	37.2	45.2	53.6	62.7	72.3	82.6
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50
2811 10	.00	2.3	3.2	3.9	4.8	11.7	32.7	63.9	104.2	152.7	208.8	
2811 10	.00	2.3	3.2	3.9	4.8	11.7	32.7	63.9	104.2	152.7	208.8	
	.00	1.27	1.27	1.27	1.27	8.51	18.7	29.1	39.5	50.2	60.9	
	.00	1.27	1.27	1.27	1.27	8.51	18.7	29.1	39.5	50.2	60.9	
	2.27	3.27	3.70	4.04	4.64	5.00	5.50	6.00	6.50	7.00	7.50	
	2.27	3.27	3.70	4.04	4.64	5.00	5.50	6.00	6.50	7.00	7.50	
29 8 10	.00	4.99	15.8	30.9	49.8	72.2	97.7	126.1				
29 8 10	.00	4.99	15.8	30.9	49.8	72.2	97.7	126.1				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
3012 10	.00	0.11	0.73	1.40	10.1	41.3	96.0	170.1	261.2	367.3	487.6	621.3
3012 10	.00	0.11	0.73	1.40	10.1	41.3	96.0	170.1	261.2	367.3	487.6	621.3
	.00	0.22	0.57	0.57	10.0	27.9	49.1	70.2	91.3	112.5	133.6	154.8
	.00	0.22	0.57	0.57	10.0	27.9	49.1	70.2	91.3	112.5	133.6	154.8
	1.84	2.00	2.50	3.01	3.51	4.01	4.51	5.01	5.51	6.01	6.51	7.01
	1.84	2.00	2.50	3.01	3.51	4.01	4.51	5.01	5.51	6.01	6.51	7.01
3112 10	.00	0.69	2.10	4.20	4.65	8.88	27.4	56.3	93.7	138.8	191.0	249.4
3112 10	.00	0.69	2.10	4.20	4.65	8.88	27.4	56.3	93.7	138.8	191.0	249.4
	.00	0.33	1.62	1.92	1.92	6.73	16.6	26.5	36.5	46.5	56.5	66.5
	.00	0.33	1.62	1.92	1.92	6.73	16.6	26.5	36.5	46.5	56.5	66.5
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50
3211 10	.00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1	
3211 10	.00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1	
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4	
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4	
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29	
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29	
3312 10	.00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5
3312 10	.00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67
3412 10	.00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7
3412 10	.00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59
35 5 10	.00	5.20	16.4	32.2	52.0							
35 5 10	.00	5.20	16.4	32.2	52.0							
	.00	36.0	72.0	108.0	144.0							
	.00	36.0	72.0	108.0	144.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
36 5 10	.00	46.9	132.7	243.9	375.5							
36 5 10	.00	46.9	132.7	243.9	375.5							
	.00	50.4	100.8	151.2	201.6							
	.00	50.4	100.8	151.2	201.6							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
3710 10	.00	4.44	28.0	82.5	177.2	320.9	521.2	784.2	1105.	1476.		
3710 10	.00	4.44	28.0	82.5	177.2	320.9	521.2	784.2	1105.	1476.		
	.00	12.1	48.4	109.0	193.8	302.7	435.9	589.0	744.0	899.0		
	.00	12.1	48.4	109.0	193.8	302.7	435.9	589.0	744.0	899.0		
	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30		
	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30		
3812 10	.00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2
3812 10	.00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
39 5 10	.00	21.5	68.1	133.5	215.2							
39 5 10	.00	21.5	68.1	133.5	215.2							
	.00	47.7	95.4	143.1	190.8							
	.00	47.7	95.4	143.1	190.8							

	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
40 8 10	.00	8.78	27.8	54.4	87.7	127.1	172.0	222.1				
40 8 10	.00	8.78	27.8	54.4	87.7	127.1	172.0	222.1				
	.00	33.0	66.0	99.0	132.0	165.0	198.0	231.0				
	.00	33.0	66.0	99.0	132.0	165.0	198.0	231.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
41 4 10	.00	104.9	331.5	649.9								
41 4 10	.00	104.9	331.5	649.9								
	.00	97.5	195.0	292.5								
	.00	97.5	195.0	292.5								
	8.00	8.50	9.00	9.50								
	8.00	8.50	9.00	9.50								
4210 10	.00	3.67	24.6	74.1	149.0	244.7	359.2	491.0	672.5	962.7		
4210 10	.00	3.67	24.6	74.1	149.0	244.7	359.2	491.0	672.5	962.7		
	.00	6.58	26.7	60.0	93.7	127.5	161.3	195.2	286.5	410.5		
	.00	6.58	26.7	60.0	93.7	127.5	161.3	195.2	286.5	410.5		
	2.11	2.91	3.71	4.51	5.31	6.11	6.91	7.71	8.51	9.31		
	2.11	2.91	3.71	4.51	5.31	6.11	6.91	7.71	8.51	9.31		
4310 10	.00	16.7	73.2	165.8	289.1	439.2	613.8	811.2	1049.	1349.		
4310 10	.00	16.7	73.2	165.8	289.1	439.2	613.8	811.2	1049.	1349.		
	.00	44.3	115.4	195.4	275.7	356.1	436.6	517.1	648.7	799.8		
	.00	44.3	115.4	195.4	275.7	356.1	436.6	517.1	648.7	799.8		
	2.18	2.98	3.78	4.58	5.38	6.18	6.98	7.78	8.58	9.38		
	2.18	2.98	3.78	4.58	5.38	6.18	6.98	7.78	8.58	9.38		
44 8 10	.00	11.4	64.1	156.2	281.5	436.8	629.8	904.6				
44 8 10	.00	11.4	64.1	156.2	281.5	436.8	629.8	904.6				
	.00	10.5	34.5	61.0	88.1	115.8	155.0	215.7				
	.00	10.5	34.5	61.0	88.1	115.8	155.0	215.7				
	3.59	4.39	5.19	5.99	6.79	7.59	8.39	9.19				
	3.59	4.39	5.19	5.99	6.79	7.59	8.39	9.19				
45 8 10	.00	9.51	30.0	58.9	94.9	137.5	186.1	240.4				
45 8 10	.00	9.51	30.0	58.9	94.9	137.5	186.1	240.4				
	.00	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	.00	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
46 8 10	.00	5.06	16.0	31.3	50.5	73.2	99.0	127.9				
46 8 10	.00	5.06	16.0	31.3	50.5	73.2	99.0	127.9				
	.00	54.2	108.4	162.6	216.8	271.0	325.2	379.4				
	.00	54.2	108.4	162.6	216.8	271.0	325.2	379.4				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
4712 10	.00	3.00	13.5	24.4	34.9	70.1	125.6	198.6	291.4	396.2	527.0	650.9
4712 10	.00	3.00	13.5	24.4	34.9	70.1	125.6	198.6	291.4	396.2	527.0	650.9
	.00	5.84	8.72	13.3	18.3	34.1	54.9	76.0	97.1	118.2	139.3	160.5
	.00	5.84	8.72	13.3	18.3	34.1	54.9	76.0	97.1	118.2	139.3	160.5
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
48 5 10	.00	14.0	44.1	86.4	139.3							
48 5 10	.00	14.0	44.1	86.4	139.3							
	.00	43.5	87.0	130.5	174.0							
	.00	43.5	87.0	130.5	174.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
49 8 10	.00	3.32	10.5	20.6	33.1	48.0	65.0	83.9				
49 8 10	.00	3.32	10.5	20.6	33.1	48.0	65.0	83.9				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
5011 10	.00	6.20	12.4	25.0	33.6	46.0	55.7	86.9	102.5	145.1	197.8	
5011 10	.00	6.20	12.4	25.0	33.6	46.0	55.7	86.9	102.5	145.1	197.8	
	.00	5.08	7.96	12.8	14.4	14.4	14.7	22.9	35.0	47.2	59.6	
	.00	5.08	7.96	12.8	14.4	14.4	14.7	22.9	35.0	47.2	59.6	
	2.08	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
	2.08	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
51 8 10	.00	16.5	46.8	86.0	132.4	185.0	243.2	306.5				
51 8 10	.00	16.5	46.8	86.0	132.4	185.0	243.2	306.5				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
5212 10	.00	1.20	2.00	2.40	5.60	9.60	12.5	20.1	45.6	84.7	135.2	196.0
5212 10	.00	1.20	2.00	2.40	5.60	9.60	12.5	20.1	45.6	84.7	135.2	196.0
	.00	1.91	3.14	3.53	3.53	3.53	3.53	10.5	23.7	37.1	50.4	65.8
	.00	1.91	3.14	3.53	3.53	3.53	3.53	10.5	23.7	37.1	50.4	65.8
	2.30	3.10	3.50	3.80	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.30	3.10	3.50	3.80	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
53 5 10	.00	28.8	81.3	149.4	230.0							
53 5 10	.00	28.8	81.3	149.4	230.0							
	.00	52.5	105.0	157.5	210.0							
	.00	52.5	105.0	157.5	210.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
5612 10	.00	1.50	3.60	6.00	7.20	9.90	12.3	18.6	43.8	88.6	148.6	222.1
5612 10	.00	1.50	3.60	6.00	7.20	9.90	12.3	18.6	43.8	88.6	148.6	222.1
	0.0	0.78	2.55	3.5	3.5	3.5	3.5	9.51	24.8	41.7	58.5	75.3
	0.0	0.78	2.55	3.5	3.5	3.5	3.5	9.51	24.8	41.7	58.5	75.3
	2.67	3.00	3.50	3.87	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.67	3.00	3.50	3.87	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
57 5 10	.00	18.1	51.1	93.9	144.6							
57 5 10	.00	18.1	51.1	93.9	144.6							
	.00	33.0	66.0	99.0	132.0							
	.00	33.0	66.0	99.0	132.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
59 8 10	.00	11.5	36.5	71.5	115.3	167.0	226.0	291.9				
59 8 10	.00	11.5	36.5	71.5	115.3	167.0	226.0	291.9				
	.00	20.0	40.0	60.0	80.0	100.0	120.0	140.0				
	.00	20.0	40.0	60.0	80.0	100.0	120.0	140.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
6011 10	.00	0.65	0.90	1.00	3.00	17.9	72.0	154.5	260.9	388.9	536.5	
6011 10	.00	0.65	0.90	1.00	3.00	17.9	72.0	154.5	260.9	388.9	536.5	
	.00	0.55	0.76	1.1	1.1	18.5	46.5	74.6	102.6	130.7	158.7	
	.00	0.55	0.76	1.1	1.1	18.5	46.5	74.6	102.6	130.7	158.7	
	2.73	3.33	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
	2.73	3.33	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
61 8 10	.00	8.52	24.1	44.2	68.1	95.2	125.1	157.7				
61 8 10	.00	8.52	24.1	44.2	68.1	95.2	125.1	157.7				
	.00	11.2	22.4	33.6	44.8	56.0	67.2	78.4				
	.00	11.2	22.4	33.6	44.8	56.0	67.2	78.4				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				

```
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
62 5 10    .00  19.7  62.1 121.7 196.3
62 5 10    .00  19.7  62.1 121.7 196.3
           .00  43.5  87.0 130.5 174.0
           .00  43.5  87.0 130.5 174.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
6310 10    .00   .69  5.77  22.1  59.2 114.9 186.3 272.1 371.4 483.5
6310 10    .00   .69  5.77  22.1  59.2 114.9 186.3 272.1 371.4 483.5
           .00  5.22  27.1  81.8 175.6 271.8 369.4 468.2 568.4 669.9
           .00  5.22  27.1  81.8 175.6 271.8 369.4 468.2 568.4 669.9
          4.62  4.92  5.22  5.52  5.82  6.12  6.42  6.72  7.02  7.32
          4.62  4.92  5.22  5.52  5.82  6.12  6.42  6.72  7.02  7.32
64 8 10    .00  9.33  29.5  57.8  93.2 135.0 182.7 236.0
64 8 10    .00  9.33  29.5  57.8  93.2 135.0 182.7 236.0
           .00  27.0  54.0  81.0 108.0 135.0 162.0 189.0
           .00  27.0  54.0  81.0 108.0 135.0 162.0 189.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
65 8 10    .00  23.4  66.2 121.7 187.3 261.8 344.2 433.7
65 8 10    .00  23.4  66.2 121.7 187.3 261.8 344.2 433.7
           .00  30.8  61.6  92.4 123.2 154.0 184.8 215.6
           .00  30.8  61.6  92.4 123.2 154.0 184.8 215.6
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
66 9 10    .00  2.47  14.2  50.7 132.6 250.8 399.9 576.6 779.1
66 9 10    .00  2.47  14.2  50.7 132.6 250.8 399.9 576.6 779.1
           .00  4.06  15.8  50.8 101.7 153.5 205.4 257.4 309.4
           .00  4.06  15.8  50.8 101.7 153.5 205.4 257.4 309.4
          2.43  3.23  4.03  4.83  5.63  6.43  7.23  8.03  8.83
          2.43  3.23  4.03  4.83  5.63  6.43  7.23  8.03  8.83
67 9 10    .00  44.4 141.3 279.2 453.4 661.5 901.9 1173. 1474.
67 9 10    .00  44.4 141.3 279.2 453.4 661.5 901.9 1173. 1474.
           .00  76.4 154.3 233.7 314.7 397.1 481.2 566.6 652.4
           .00  76.4 154.3 233.7 314.7 397.1 481.2 566.6 652.4
          8.00  8.30  8.60  8.90  9.20  9.50  9.80 10.10 10.40
          8.00  8.30  8.60  8.90  9.20  9.50  9.80 10.10 10.40
68 8 10    .00  13.5  42.7  83.7 135.0 195.5 264.6 341.8
68 8 10    .00  13.5  42.7  83.7 135.0 195.5 264.6 341.8
           .00  23.0  46.0  69.0  92.0 115.0 138.0 161.0
           .00  23.0  46.0  69.0  92.0 115.0 138.0 161.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
6910 10    .00  3.84  27.5  72.8 136.7 217.3 312.9 422.3 544.7 679.4
6910 10    .00  3.84  27.5  72.8 136.7 217.3 312.9 422.3 544.7 679.4
           .00  12.4  48.1  90.6 135.0 180.2 225.6 270.9 316.4 361.8
           .00  12.4  48.1  90.6 135.0 180.2 225.6 270.9 316.4 361.8
          2.82  3.32  3.82  4.32  4.82  5.32  5.82  6.32  6.82  7.32
          2.82  3.32  3.82  4.32  4.82  5.32  5.82  6.32  6.82  7.32
70 4 10    .00 158.9 457.0 853.3
70 4 10    .00 158.9 457.0 853.3
           .00 132.8 271.0 414.8
           .00 132.8 271.0 414.8
          8.00  8.50  9.00  9.50
          8.00  8.50  9.00  9.50
7111 10    .00  14.2  72.6 195.5 372.6 595.4 859.3 1161. 1499. 1916. 2496.
7111 10    .00  14.2  72.6 195.5 372.6 595.4 859.3 1161. 1499. 1916. 2496.
           .00  12.1  46.4  91.6 138.1 184.5 231.0 277.6 324.1 419.1 543.1
           .00  12.1  46.4  91.6 138.1 184.5 231.0 277.6 324.1 419.1 543.1
          1.30  2.10  2.90  3.70  4.50  5.30  6.10  6.90  7.70  8.50  9.30
          1.30  2.10  2.90  3.70  4.50  5.30  6.10  6.90  7.70  8.50  9.30
72 5 10    .00  6.74  21.3  41.7  67.3
72 5 10    .00  6.74  21.3  41.7  67.3
           .00  21.0  42.0  63.0  84.0
           .00  21.0  42.0  63.0  84.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
73 8 10    .00  22.8  64.5 118.5 182.5 255.0 335.2 422.4
73 8 10    .00  22.8  64.5 118.5 182.5 255.0 335.2 422.4
           .00  30.0  60.0  90.0 120.0 150.0 180.0 210.0
           .00  30.0  60.0  90.0 120.0 150.0 180.0 210.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
74 5 10    .00  12.6  39.7  77.9 125.5
74 5 10    .00  12.6  39.7  77.9 125.5
           .00  52.5 105.0 157.5 210.0
           .00  52.5 105.0 157.5 210.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
75 8 10    .00  7.60  21.5  39.5  60.8  85.0 111.7 140.8
75 8 10    .00  7.60  21.5  39.5  60.8  85.0 111.7 140.8
           .00  10.0  20.0  30.0  40.0  50.0  60.0  70.0
           .00  10.0  20.0  30.0  40.0  50.0  60.0  70.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
76 8 10    .00  5.77  18.2  35.8  57.7  83.5 113.0 146.0
76 8 10    .00  5.77  18.2  35.8  57.7  83.5 113.0 146.0
           .00  10.0  20.0  30.0  40.0  50.0  60.0  70.0
           .00  10.0  20.0  30.0  40.0  50.0  60.0  70.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
77 9 10    .00  30.0 108.5 222.2 365.9 536.8 732.7 952.1 1194.
77 9 10    .00  30.0 108.5 222.2 365.9 536.8 732.7 952.1 1194.
           .00  81.6 177.6 273.6 369.6 465.6 561.6 657.6 753.6
           .00  81.6 177.6 273.6 369.6 465.6 561.6 657.6 753.6
          4.82  5.12  5.42  5.72  6.02  6.32  6.62  6.92  7.22
          4.82  5.12  5.42  5.72  6.02  6.32  6.62  6.92  7.22
78 5 10    .00  6.78  21.4  42.0  67.7
78 5 10    .00  6.78  21.4  42.0  67.7
           .00  15.0  30.0  45.0  60.0
           .00  15.0  30.0  45.0  60.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
79 5 10    .00  6.78  21.4  42.0  67.7
79 5 10    .00  6.78  21.4  42.0  67.7
           .00  15.0  30.0  45.0  60.0
           .00  15.0  30.0  45.0  60.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
8010 10    .00   .42  2.45  6.26  12.0  19.5  28.4  38.8  50.4  63.2
8010 10    .00   .42  2.45  6.26  12.0  19.5  28.4  38.8  50.4  63.2
           .00  6.40  22.2  42.1  65.8  89.8 113.8 137.8 161.8 185.8
           .00  6.40  22.2  42.1  65.8  89.8 113.8 137.8 161.8 185.8
          3.50  3.90  4.30  4.70  5.10  5.50  5.90  6.30  6.70  7.10
          3.50  3.90  4.30  4.70  5.10  5.50  5.90  6.30  6.70  7.10
8112 10    .00  3.10  9.30  12.0  21.6  26.4  30.0  43.7  69.0 101.2 139.4 181.8
8112 10    .00  3.10  9.30  12.0  21.6  26.4  30.0  43.7  69.0 101.2 139.4 181.8
           .00   5.7   7.2   7.2   7.2   7.2   7.2  14.8  25.7  36.7  47.6  58.6
           .00   5.7   7.2   7.2   7.2   7.2   7.2  14.8  25.7  36.7  47.6  58.6
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82 1 10    .00
82 1 10    .00
           .00
           .00
          8.00
          8.00
```

```
38   1
1.0     .0 .025 21  1  1
        -5.000                  .025          -5.000                  .025
  -5.000     .0 0.000E+00 0.000E+00
  -4.500    95.0 0.475E+02 0.120E+04
  -4.000    95.0 0.950E+02 0.380E+04
  -3.500    95.0 0.143E+03 0.747E+04
  -3.000    95.0 0.190E+03 0.121E+05
  -2.500    95.0 0.238E+03 0.175E+05
  -2.000    95.0 0.285E+03 0.237E+05
  -1.500    95.0 0.333E+03 0.307E+05
  -1.000    95.0 0.380E+03 0.383E+05
   -.500    95.0 0.428E+03 0.466E+05
   .000     95.0 0.475E+03 0.556E+05
   .500     95.0 0.523E+03 0.651E+05
  1.000     95.0 0.570E+03 0.753E+05
  1.500     95.0 0.618E+03 0.860E+05
  2.000     95.0 0.665E+03 0.973E+05
  2.500     95.0 0.713E+03 0.109E+06
  3.000     95.0 0.760E+03 0.122E+06
  3.500     95.0 0.808E+03 0.135E+06
  4.000     95.0 0.855E+03 0.148E+06
  4.500     95.0 0.903E+03 0.162E+06
  5.000     95.0 0.950E+03 0.176E+06
2.0     .0 .025 10  2  3
        2.000                   .045          2.000                   .100
   .500      .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
  1.000      .0 0.000E+00 0.000E+00           14.3 0.607E+01 0.137E+03              .0 0.000E+00 0.000E+00
  1.500      .0 0.000E+00 0.000E+00           18.5 0.143E+02 0.476E+03              .0 0.000E+00 0.000E+00
  2.000      .0 0.000E+00 0.000E+00           41.0 0.283E+02 0.877E+03              .0 0.000E+00 0.000E+00
  2.500    29.0 0.131E+02 0.170E+03           41.0 0.488E+02 0.218E+04            15.6 0.391E+01 0.155E+02
  3.000    29.0 0.276E+02 0.592E+03           41.0 0.693E+02 0.391E+04            25.0 0.150E+02 0.107E+03
  3.500    29.0 0.421E+02 0.120E+04           41.0 0.898E+02 0.602E+04            25.0 0.275E+02 0.293E+03
  4.000    29.0 0.566E+02 0.196E+04           41.0 0.110E+03 0.849E+04            25.0 0.400E+02 0.547E+03
  4.500    29.0 0.711E+02 0.287E+04           41.0 0.131E+03 0.113E+05            25.0 0.525E+02 0.861E+03
  5.000    29.0 0.856E+02 0.391E+04           41.0 0.151E+03 0.144E+05            25.0 0.650E+02 0.123E+04
3.0     .0 .025 13  2  3
       -1.000                   .035         -1.000                   .035
  -1.000      .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
   -.500      .5 0.125E+00 0.113E+01            9.0 0.450E+01 0.113E+03              .5 0.125E+00 0.113E+01
    .000     1.0 0.500E+00 0.714E+01            9.0 0.900E+01 0.360E+03             8.1 0.819E+00 0.490E+01
    .500     1.5 0.113E+01 0.211E+02            9.0 0.135E+02 0.708E+03            11.4 0.569E+01 0.971E+02
  1.000      2.0 0.200E+01 0.454E+02            9.0 0.180E+02 0.114E+04            15.5 0.122E+02 0.282E+03
  1.500      2.5 0.313E+01 0.823E+02            9.0 0.225E+02 0.166E+04            26.6 0.227E+02 0.562E+03
  2.000      3.0 0.450E+01 0.134E+03            9.0 0.270E+02 0.225E+04            36.5 0.385E+02 0.110E+04
  2.500      3.5 0.613E+01 0.202E+03            9.0 0.315E+02 0.290E+04            48.7 0.596E+02 0.189E+04
  3.000     35.5 0.138E+02 0.204E+03            9.0 0.360E+02 0.363E+04            62.6 0.874E+02 0.304E+04
  3.500     50.1 0.368E+02 0.835E+03            9.0 0.405E+02 0.442E+04            73.4 0.121E+03 0.471E+04
  4.000     56.1 0.635E+02 0.192E+04            9.0 0.450E+02 0.526E+04            85.0 0.161E+03 0.688E+04
  4.500     56.1 0.915E+02 0.354E+04            9.0 0.495E+02 0.617E+04            85.0 0.203E+03 0.102E+05
  5.000     56.1 0.120E+03 0.552E+04            9.0 0.540E+02 0.713E+04            85.0 0.246E+03 0.139E+05
4.0     .0 .020 12  2  3
        .560                    .030           .400                    .030
   -.320      .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
    .000      .0 0.000E+00 0.000E+00            3.0 0.484E+00 0.703E+01              .0 0.000E+00 0.000E+00
    .500      .0 0.000E+00 0.000E+00            7.2 0.315E+01 0.893E+02              .1 0.650E-02 0.252E-01
  1.000       .4 0.923E-01 0.875E+00            7.5 0.690E+01 0.321E+03              .8 0.234E+00 0.299E+01
  1.500       .9 0.421E+00 0.663E+01            7.5 0.106E+02 0.663E+03             7.2 0.224E+01 0.333E+02
  2.000     10.0 0.177E+01 0.179E+02            7.5 0.144E+02 0.110E+04            10.7 0.672E+01 0.161E+03
  2.500     34.5 0.129E+02 0.221E+03            7.5 0.182E+02 0.161E+04            14.2 0.129E+02 0.399E+03
  3.000     59.0 0.363E+02 0.869E+03            7.5 0.219E+02 0.220E+04            17.5 0.209E+02 0.772E+03
  3.500     64.4 0.682E+02 0.235E+04            7.5 0.257E+02 0.287E+04            17.5 0.296E+02 0.138E+04
  4.000     64.4 0.100E+03 0.447E+04            7.5 0.294E+02 0.360E+04            17.5 0.384E+02 0.213E+04
  4.500     64.4 0.133E+03 0.711E+04            7.5 0.332E+02 0.440E+04            17.5 0.471E+02 0.300E+04
  5.000     64.4 0.165E+03 0.102E+05            7.5 0.369E+02 0.526E+04            17.5 0.559E+02 0.398E+04
5.0     .0 .020 13  2  3
        .300                    .030           .600                    .030
  -1.100      .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
   -.500      .0 0.000E+00 0.000E+00            2.3 0.684E+00 0.141E+02              .0 0.000E+00 0.000E+00
    .000      .0 0.000E+00 0.000E+00            4.2 0.230E+01 0.711E+02              .0 0.000E+00 0.000E+00
    .500      .2 0.243E-01 0.147E+00            5.7 0.483E+01 0.199E+03              .0 0.000E+00 0.000E+00
  1.000       .9 0.298E+00 0.415E+01            5.9 0.777E+01 0.430E+03             1.1 0.220E+00 0.241E+01
  1.500      1.5 0.876E+00 0.175E+02            5.9 0.107E+02 0.736E+03            24.0 0.447E+01 0.486E+02
  2.000      2.1 0.176E+01 0.442E+02            5.9 0.137E+02 0.110E+04            75.0 0.308E+02 0.568E+03
  2.500      2.7 0.294E+01 0.880E+02            5.9 0.166E+02 0.153E+04            98.5 0.742E+02 0.205E+04
  3.000      9.1 0.493E+01 0.102E+03            5.9 0.196E+02 0.201E+04           122.1 0.129E+03 0.448E+04
  3.500      9.1 0.948E+01 0.305E+03            5.9 0.225E+02 0.254E+04           145.6 0.196E+03 0.798E+04
  4.000      9.1 0.140E+02 0.586E+03            5.9 0.255E+02 0.311E+04           155.0 0.273E+03 0.133E+05
  4.500      9.1 0.186E+02 0.935E+03            5.9 0.284E+02 0.374E+04           155.0 0.350E+03 0.201E+05
  5.000      9.1 0.231E+02 0.135E+04            5.9 0.314E+02 0.441E+04           155.0 0.428E+03 0.280E+05
6.0     .0 .025 13  2  3
        .500                    .035           .500                    .035
   .150      .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
   .500      .0 0.000E+00 0.000E+00            8.0 0.140E+01 0.175E+02              .0 0.000E+00 0.000E+00
  1.000      .5 0.125E+00 0.113E+01            8.0 0.540E+01 0.166E+03              .4 0.109E+00 0.940E+00
  1.500     1.0 0.500E+00 0.715E+01            8.0 0.940E+01 0.418E+03              .9 0.438E+00 0.597E+01
  2.000     1.5 0.113E+01 0.211E+02            8.0 0.134E+02 0.754E+03             2.7 0.101E+01 0.128E+02
  2.500    12.3 0.487E+01 0.722E+02            8.0 0.174E+02 0.117E+04            10.9 0.520E+01 0.867E+02
  3.000    20.7 0.131E+02 0.271E+03            8.0 0.214E+02 0.165E+04            15.2 0.117E+02 0.273E+03
  3.500    27.6 0.256E+02 0.682E+03            8.0 0.254E+02 0.219E+04            19.4 0.204E+02 0.584E+03
  4.000    27.6 0.394E+02 0.140E+04            8.0 0.294E+02 0.279E+04            19.4 0.301E+02 0.112E+04
  4.500    27.6 0.532E+02 0.231E+04            8.0 0.334E+02 0.346E+04            19.4 0.398E+02 0.178E+04
  5.000    27.6 0.670E+02 0.340E+04            8.0 0.374E+02 0.417E+04            19.4 0.495E+02 0.257E+04
  5.500    27.6 0.808E+02 0.464E+04            8.0 0.414E+02 0.494E+04            19.4 0.592E+02 0.346E+04
  6.000    27.6 0.946E+02 0.604E+04            8.0 0.454E+02 0.576E+04            19.4 0.689E+02 0.445E+04
7.0     .0 .020 13  2  3
        .700                    .030           .700                    .030
   -.900      .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
   -.500      .0 0.000E+00 0.000E+00            3.9 0.780E+00 0.132E+02              .0 0.000E+00 0.000E+00
   0.000      .0 0.000E+00 0.000E+00            6.8 0.344E+01 0.107E+03              .0 0.000E+00 0.000E+00
    .500      .0 0.000E+00 0.000E+00            8.7 0.731E+01 0.313E+03              .0 0.000E+00 0.000E+00
  1.000       .3 0.450E-01 0.336E+00            9.5 0.120E+02 0.672E+03              .3 0.450E-01 0.336E+00
  1.500       .8 0.320E+00 0.460E+01            9.5 0.167E+02 0.117E+04              .8 0.320E+00 0.460E+01
  2.000      1.3 0.845E+00 0.168E+02            9.5 0.215E+02 0.178E+04             1.3 0.846E+00 0.168E+02
  2.500      1.8 0.162E+01 0.400E+02            9.5 0.262E+02 0.248E+04             2.2 0.165E+01 0.380E+02
  3.000      2.3 0.265E+01 0.768E+02            9.5 0.310E+02 0.327E+04             3.9 0.315E+01 0.813E+02
  3.500      2.8 0.392E+01 0.130E+03            9.5 0.358E+02 0.415E+04             5.6 0.550E+01 0.166E+03
  4.000    130.0 0.254E+02 0.284E+03            9.5 0.405E+02 0.511E+04             5.6 0.828E+01 0.328E+03
  4.500    130.0 0.904E+02 0.235E+04            9.5 0.453E+02 0.615E+04             5.6 0.111E+02 0.531E+03
  5.000    130.0 0.155E+03 0.580E+04            9.5 0.500E+02 0.727E+04             5.6 0.138E+02 0.771E+03
8.0     .0 .020 17  2  3
        1.000                   .030          1.000                   .030
  1.000      .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
  1.500      .5 0.125E+00 0.131E+01            9.0 0.450E+01 0.142E+03              .5 0.125E+00 0.131E+01
  2.000     1.0 0.500E+00 0.834E+01            9.0 0.900E+01 0.450E+03             1.0 0.500E+00 0.834E+01
  2.500     6.7 0.149E+01 0.172E+02            9.0 0.135E+02 0.885E+03             1.9 0.113E+01 0.221E+02
  3.000     6.7 0.483E+01 0.117E+03            9.0 0.180E+02 0.143E+04             3.7 0.280E+01 0.632E+02
  3.500     6.7 0.818E+01 0.270E+03            9.0 0.225E+02 0.207E+04             3.7 0.466E+01 0.139E+03
  4.000     6.7 0.115E+02 0.460E+03            9.0 0.270E+02 0.281E+04             3.8 0.654E+01 0.231E+03
  4.500     6.7 0.149E+02 0.679E+03            9.0 0.315E+02 0.363E+04             3.8 0.841E+01 0.333E+03
  5.000     6.7 0.183E+02 0.920E+03            9.0 0.360E+02 0.454E+04             3.8 0.103E+02 0.444E+03
  5.500     6.7 0.216E+02 0.118E+04            9.0 0.405E+02 0.552E+04             3.8 0.122E+02 0.561E+03
  6.000     6.7 0.250E+02 0.146E+04            9.0 0.450E+02 0.658E+04             3.8 0.141E+02 0.683E+03
  6.500     6.8 0.284E+02 0.174E+04            9.0 0.495E+02 0.771E+04             3.8 0.160E+02 0.810E+03
  7.000     6.8 0.317E+02 0.205E+04            9.0 0.540E+02 0.892E+04             3.8 0.179E+02 0.941E+03
  7.500     6.8 0.351E+02 0.236E+04            9.0 0.585E+02 0.102E+05             3.8 0.198E+02 0.107E+04
  8.000     6.8 0.385E+02 0.267E+04            9.0 0.630E+02 0.115E+05             3.8 0.217E+02 0.121E+04
  8.500    94.8 0.859E+02 0.257E+04            9.0 0.675E+02 0.129E+05            33.2 0.383E+02 0.125E+04
  9.000    94.8 0.133E+03 0.535E+04            9.0 0.720E+02 0.144E+05            33.2 0.549E+02 0.228E+04
9.0     .0 .030 17  2  3
        2.800                   .200          2.230                   .200
   .700      .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00
  1.200      .0 0.000E+00 0.000E+00           16.0 0.763E+01 0.153E+03              .0 0.000E+00 0.000E+00
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     1.700       .0 0.000E+00 0.000E+00
     2.200       .0 0.000E+00 0.000E+00
     2.700       .0 0.000E+00 0.000E+00
     3.200       .1 0.139E-01 0.729E-02
     3.700       .2 0.702E-01 0.634E-01
     4.200       .2 0.170E+00 0.206E+00
     4.700       .3 0.313E+00 0.465E+00
     5.200       .4 0.499E+00 0.867E+00
     5.700       .5 0.729E+00 0.144E+01
     6.200       .6 0.100E+01 0.220E+01
     6.700       .7 0.132E+01 0.316E+01
     7.200       .8 0.168E+01 0.437E+01
     7.700       .8 0.208E+01 0.582E+01
     8.200     48.9 0.121E+02 0.226E+02
     8.700     48.9 0.366E+02 0.142E+03
10.0       .0 .030 19  2  3
         4.500                     .100
      .000       .0 0.000E+00 0.000E+00
      .500       .0 0.000E+00 0.000E+00
     1.000       .0 0.000E+00 0.000E+00
     1.500       .0 0.000E+00 0.000E+00
     2.000       .0 0.000E+00 0.000E+00
     2.500       .0 0.000E+00 0.000E+00
     3.000       .0 0.000E+00 0.000E+00
     3.500       .0 0.000E+00 0.000E+00
     4.000       .0 0.000E+00 0.000E+00
     4.500     11.0 0.183E+01 0.545E+01
     5.000     11.1 0.736E+01 0.539E+02
     5.500     11.2 0.129E+02 0.134E+03
     6.000     11.2 0.185E+02 0.238E+03
     6.500     11.3 0.242E+02 0.360E+03
     7.000     11.4 0.298E+02 0.500E+03
     7.500     11.4 0.355E+02 0.653E+03
     8.000     11.5 0.413E+02 0.818E+03
     8.500     41.0 0.618E+02 0.771E+03
     9.000     41.0 0.823E+02 0.124E+04
11.0       .0 .030 19  2  3
         3.700                     .030
      .000       .0 0.000E+00 0.000E+00
      .500      9.9 0.496E+01 0.977E+02
     1.000      9.9 0.993E+01 0.293E+03
     1.500     10.0 0.149E+02 0.547E+03
     2.000     10.0 0.199E+02 0.842E+03
     2.500     10.0 0.249E+02 0.117E+04
     3.000     10.0 0.299E+02 0.152E+04
     3.500     10.1 0.350E+02 0.189E+04
     4.000     65.1 0.438E+02 0.104E+04
     4.500     86.4 0.859E+02 0.269E+04
     5.000     86.4 0.129E+03 0.529E+04
     5.500     86.4 0.172E+03 0.856E+04
     6.000     86.4 0.215E+03 0.124E+05
     6.500     86.4 0.259E+03 0.169E+05
     7.000     86.4 0.302E+03 0.218E+05
     7.500     86.4 0.345E+03 0.272E+05
     8.000     86.4 0.388E+03 0.332E+05
     8.500     86.4 0.431E+03 0.395E+05
     9.000     86.4 0.475E+03 0.463E+05
12.0       .0 .030 18  2  3
         3.860                     .035
      .560       .0 0.000E+00 0.000E+00
     1.000       .0 0.000E+00 0.000E+00
     1.500       .0 0.000E+00 0.000E+00
     2.000       .0 0.000E+00 0.000E+00
     2.500       .0 0.000E+00 0.000E+00
     3.000       .0 0.000E+00 0.000E+00
     3.500       .0 0.000E+00 0.000E+00
     4.000      3.3 0.303E+00 0.176E+01
     4.500     69.2 0.243E+02 0.346E+03
     5.000     97.8 0.689E+02 0.156E+04
     5.500     97.8 0.118E+03 0.381E+04
     6.000     97.8 0.167E+03 0.680E+04
     6.500     97.8 0.216E+03 0.104E+05
     7.000     97.8 0.265E+03 0.147E+05
     7.500     97.8 0.313E+03 0.195E+05
     8.000     97.8 0.362E+03 0.248E+05
     8.500     97.8 0.411E+03 0.306E+05
     9.000     97.8 0.460E+03 0.369E+05
13.0       .0 .035 17  2  3
         4.000                     .200
     1.100       .0 0.000E+00 0.000E+00
     1.500       .0 0.000E+00 0.000E+00
     2.000       .0 0.000E+00 0.000E+00
     2.500       .0 0.000E+00 0.000E+00
     3.000       .0 0.000E+00 0.000E+00
     3.500       .0 0.000E+00 0.000E+00
     4.000       .0 0.000E+00 0.000E+00
     4.500     53.1 0.133E+02 0.264E+02
     5.000     85.0 0.510E+02 0.181E+03
     5.500     85.0 0.935E+02 0.498E+03
     6.000     85.0 0.136E+03 0.930E+03
     6.500     85.0 0.179E+03 0.146E+04
     7.000     85.0 0.221E+03 0.209E+04
     7.500     85.0 0.264E+03 0.280E+04
     8.000     85.0 0.306E+03 0.359E+04
     8.500     85.0 0.349E+03 0.446E+04
     9.000     85.0 0.391E+03 0.541E+04
14.0       .0 .100 10  2  3
         6.000                     .100
     5.200       .0 0.000E+00 0.000E+00
     5.500     30.0 0.450E+01 0.127E+02
     6.000     80.0 0.320E+02 0.174E+03
     6.500     80.0 0.720E+02 0.671E+03
     7.000     80.0 0.112E+03 0.140E+04
     7.500     80.0 0.152E+03 0.233E+04
     8.000     80.0 0.192E+03 0.344E+04
     8.500     80.0 0.232E+03 0.472E+04
     9.000     80.0 0.272E+03 0.615E+04
     9.500     80.0 0.312E+03 0.773E+04
15.0       .0 .060 17  2  3
         4.000                     .035
     1.800       .0 0.000E+00 0.000E+00
     2.000      3.3 0.529E+00 0.441E+01
     2.500      6.5 0.298E+01 0.494E+02
     3.000      9.7 0.704E+01 0.158E+03
     3.500     12.9 0.127E+02 0.349E+03
     4.000     16.2 0.200E+02 0.639E+03
     4.500     85.0 0.561E+02 0.121E+04
     5.000     90.0 0.998E+02 0.304E+04
     5.500     90.0 0.145E+03 0.565E+04
     6.000     90.0 0.190E+03 0.887E+04
     6.500     90.0 0.235E+03 0.126E+05
     7.000     90.0 0.280E+03 0.169E+05
     7.500     90.0 0.325E+03 0.217E+05
     8.000     90.0 0.370E+03 0.269E+05
     8.500     90.0 0.415E+03 0.326E+05
     9.000     90.0 0.460E+03 0.387E+05
     9.500     90.0 0.505E+03 0.453E+05
16.0       .0 .030 19  2  3
         3.740                     .035
      .740       .0 0.000E+00 0.000E+00
     1.000       .0 0.000E+00 0.000E+00
     1.500       .0 0.000E+00 0.000E+00
     2.000       .0 0.000E+00 0.000E+00
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  17.5 0.160E+02 0.491E+03
  19.0 0.252E+02 0.979E+03
  19.9 0.349E+02 0.164E+04
  20.0 0.449E+02 0.248E+04
  20.0 0.549E+02 0.346E+04
  20.0 0.649E+02 0.458E+04
  20.0 0.749E+02 0.581E+04
  20.0 0.849E+02 0.716E+04
  20.0 0.949E+02 0.862E+04
  20.0 0.105E+03 0.102E+05
  20.0 0.115E+03 0.119E+05
  20.0 0.125E+03 0.136E+05
  20.0 0.135E+03 0.155E+05
  20.0 0.145E+03 0.175E+05
  20.0 0.155E+03 0.195E+05

4.500                     .100
    .0 0.000E+00 0.000E+00
   7.3 0.340E+01 0.657E+02
   8.3 0.730E+01 0.210E+03
   9.3 0.117E+02 0.418E+03
  10.3 0.166E+02 0.689E+03
  11.3 0.220E+02 0.102E+04
  12.2 0.279E+02 0.142E+04
  13.1 0.342E+02 0.188E+04
  14.0 0.409E+02 0.241E+04
  14.9 0.482E+02 0.301E+04
  14.9 0.556E+02 0.382E+04
  14.9 0.631E+02 0.472E+04
  14.9 0.705E+02 0.568E+04
  14.9 0.780E+02 0.672E+04
  14.9 0.854E+02 0.782E+04
  14.9 0.929E+02 0.899E+04
  14.9 0.100E+03 0.102E+05
  14.9 0.108E+03 0.115E+05
  14.9 0.115E+03 0.129E+05

3.310                     .030
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
   2.3 0.751E+00 0.111E+02
   3.8 0.225E+01 0.483E+02
   8.6 0.581E+01 0.140E+03
  10.4 0.105E+02 0.333E+03
  12.1 0.162E+02 0.608E+03
  13.5 0.226E+02 0.988E+03
  13.8 0.295E+02 0.151E+04
  13.8 0.364E+02 0.215E+04
  13.8 0.432E+02 0.287E+04
  13.8 0.501E+02 0.367E+04
  13.8 0.570E+02 0.454E+04
  13.8 0.639E+02 0.549E+04
  13.8 0.708E+02 0.652E+04
  13.8 0.777E+02 0.761E+04
  13.8 0.846E+02 0.876E+04
  13.8 0.915E+02 0.998E+04
  13.8 0.983E+02 0.113E+05

3.170                     .035
    .0 0.000E+00 0.000E+00
   2.1 0.621E+00 0.855E+01
   3.6 0.203E+01 0.421E+02
   8.4 0.530E+01 0.122E+03
  10.1 0.993E+01 0.305E+03
  11.9 0.154E+02 0.570E+03
  13.0 0.217E+02 0.947E+03
  14.5 0.288E+02 0.141E+04
  14.5 0.360E+02 0.205E+04
  14.5 0.433E+02 0.279E+04
  14.5 0.505E+02 0.361E+04
  14.5 0.578E+02 0.451E+04
  14.5 0.650E+02 0.549E+04
  14.5 0.723E+02 0.655E+04
  14.5 0.795E+02 0.768E+04
  14.5 0.868E+02 0.889E+04
  14.5 0.940E+02 0.102E+05
  14.5 0.101E+03 0.115E+05

3.930                     .100
    .0 0.000E+00 0.000E+00
   5.2 0.144E+01 0.173E+02
   9.2 0.504E+01 0.949E+02
  13.2 0.106E+02 0.259E+03
  17.2 0.182E+02 0.532E+03
  21.2 0.278E+02 0.936E+03
  24.9 0.394E+02 0.150E+04
  24.9 0.519E+02 0.237E+04
  24.9 0.643E+02 0.339E+04
  24.9 0.768E+02 0.456E+04
  24.9 0.892E+02 0.586E+04
  24.9 0.102E+03 0.728E+04
  24.9 0.114E+03 0.883E+04
  24.9 0.127E+03 0.105E+05
  24.9 0.139E+03 0.123E+05
  24.9 0.151E+03 0.142E+05
  24.9 0.164E+03 0.161E+05

6.000                     .100
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
   2.8 0.688E+00 0.262E+01
   5.5 0.275E+01 0.166E+02
   8.3 0.619E+01 0.490E+02
  11.0 0.110E+02 0.106E+03
  17.5 0.181E+02 0.180E+03
  24.0 0.285E+02 0.311E+03
  30.5 0.421E+02 0.511E+03

6.000                     .100
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
  30.0 0.750E+01 0.496E+02
  60.0 0.300E+02 0.315E+03
  90.0 0.675E+02 0.929E+03
 120.0 0.120E+03 0.200E+04
 120.0 0.180E+03 0.393E+04
 120.0 0.240E+03 0.635E+04
 120.0 0.300E+03 0.921E+04
 120.0 0.360E+03 0.125E+05
 120.0 0.420E+03 0.161E+05
 120.0 0.480E+03 0.202E+05
 120.0 0.540E+03 0.245E+05

3.660                     .035
    .0 0.000E+00 0.000E+00
   1.5 0.297E+00 0.310E+01
   3.0 0.144E+01 0.265E+02
   4.5 0.333E+01 0.814E+02
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    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
  11.1 0.455E+01 0.126E+02
  11.1 0.101E+02 0.474E+02
  11.1 0.157E+02 0.984E+02
  11.1 0.212E+02 0.163E+03
  11.1 0.268E+02 0.240E+03
  11.1 0.323E+02 0.329E+03
  11.1 0.379E+02 0.429E+03
  11.1 0.434E+02 0.539E+03
  11.1 0.490E+02 0.658E+03
  11.1 0.545E+02 0.787E+03
  11.1 0.601E+02 0.925E+03
  11.1 0.656E+02 0.107E+04
  11.1 0.712E+02 0.123E+04

    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
   4.1 0.288E+00 0.480E+00
   4.2 0.237E+01 0.149E+02
   4.3 0.448E+01 0.402E+02
   4.3 0.662E+01 0.727E+02
   4.4 0.880E+01 0.110E+03
   4.5 0.110E+02 0.152E+03
   4.5 0.133E+02 0.198E+03
   4.6 0.156E+02 0.247E+03
  54.1 0.426E+02 0.350E+03
  54.1 0.697E+02 0.794E+03

    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
   1.0 0.202E+00 0.202E+01
  41.8 0.105E+02 0.138E+03
  48.4 0.335E+02 0.856E+03
  52.8 0.588E+02 0.204E+04
  57.1 0.863E+02 0.364E+04
  59.8 0.116E+03 0.571E+04
  59.8 0.146E+03 0.829E+04
  59.9 0.176E+03 0.112E+05
  59.9 0.206E+03 0.144E+05
  60.0 0.236E+03 0.179E+05
 112.9 0.292E+03 0.175E+05
 112.9 0.348E+03 0.235E+05

    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
   6.0 0.101E+01 0.882E+01
  14.7 0.618E+01 0.989E+02
  21.7 0.153E+02 0.345E+03
  28.7 0.279E+02 0.781E+03
  35.7 0.440E+02 0.144E+04
  35.7 0.619E+02 0.255E+04
  35.7 0.797E+02 0.388E+04
  35.7 0.976E+02 0.544E+04
  35.7 0.115E+03 0.720E+04
  35.7 0.133E+03 0.915E+04
  35.7 0.151E+03 0.113E+05
  35.7 0.169E+03 0.136E+05

    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
   5.1 0.180E+00 0.192E+00
  41.8 0.119E+02 0.516E+02
  78.4 0.420E+02 0.277E+03
  93.1 0.870E+02 0.832E+03
  93.1 0.134E+03 0.170E+04
  93.1 0.180E+03 0.280E+04
  93.1 0.227E+03 0.410E+04
  93.1 0.273E+03 0.560E+04
  93.1 0.320E+03 0.728E+04
  93.1 0.366E+03 0.913E+04
  93.1 0.413E+03 0.111E+05

    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
  52.0 0.260E+02 0.164E+03
  52.0 0.520E+02 0.520E+03
  52.0 0.780E+02 0.102E+04
  52.0 0.104E+03 0.165E+04
  52.0 0.130E+03 0.239E+04
  52.0 0.156E+03 0.324E+04
  52.0 0.182E+03 0.420E+04

    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
 134.3 0.666E+02 0.417E+03
 136.7 0.134E+03 0.133E+04
 139.0 0.203E+03 0.262E+04
 139.0 0.273E+03 0.427E+04
 139.0 0.342E+03 0.624E+04
 139.0 0.412E+03 0.849E+04
 139.0 0.481E+03 0.110E+05

    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
    .0 0.000E+00 0.000E+00
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     2.500      .0 0.000E+00 0.000E+00          9.3 0.648E+01 0.159E+03           .0 0.000E+00 0.000E+00
     3.000      .0 0.000E+00 0.000E+00         11.1 0.116E+02 0.369E+03           .0 0.000E+00 0.000E+00
     3.500      .0 0.000E+00 0.000E+00         13.0 0.176E+02 0.668E+03           .0 0.000E+00 0.000E+00
     4.000      2.6 0.235E+00 0.134E+01        13.7 0.244E+02 0.111E+04         24.7 0.409E+01 0.352E+02
     4.500     91.6 0.164E+02 0.150E+03        13.7 0.312E+02 0.167E+04         42.2 0.208E+02 0.371E+03
     5.000     91.6 0.623E+02 0.137E+04        13.7 0.381E+02 0.233E+04         59.7 0.463E+02 0.112E+04
     5.500     91.6 0.108E+03 0.345E+04        13.7 0.449E+02 0.307E+04         59.7 0.761E+02 0.256E+04
     6.000     91.6 0.154E+03 0.621E+04        13.7 0.518E+02 0.389E+04         59.7 0.106E+03 0.444E+04
     6.500     91.6 0.200E+03 0.959E+04        13.7 0.586E+02 0.478E+04         59.7 0.136E+03 0.671E+04
     7.000     91.6 0.245E+03 0.135E+05        13.7 0.655E+02 0.575E+04         59.7 0.166E+03 0.935E+04
     7.500     91.6 0.291E+03 0.180E+05        13.7 0.723E+02 0.678E+04         59.7 0.196E+03 0.123E+05
     8.000     91.6 0.337E+03 0.230E+05        13.7 0.792E+02 0.789E+04         59.7 0.225E+03 0.156E+05
     8.500     91.6 0.383E+03 0.284E+05        13.7 0.860E+02 0.905E+04         59.7 0.255E+03 0.192E+05
     9.000     91.6 0.429E+03 0.343E+05        13.7 0.929E+02 0.103E+05         59.7 0.285E+03 0.231E+05
     9.500     91.6 0.475E+03 0.406E+05        13.7 0.997E+02 0.116E+05         59.7 0.315E+03 0.273E+05
17.0     .0 .100 16  2  3
          2.500                .100          2.500                .100
     2.500      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00           .0 0.000E+00 0.000E+00
     3.000     25.0 0.125E+02 0.787E+02        10.0 0.500E+01 0.315E+02         20.0 0.100E+02 0.630E+02
     3.500     25.0 0.250E+02 0.250E+03        10.0 0.100E+02 0.100E+03         20.0 0.200E+02 0.200E+03
     4.000     25.0 0.375E+02 0.491E+03        10.0 0.150E+02 0.197E+03         20.0 0.300E+02 0.393E+03
     4.500     25.0 0.500E+02 0.794E+03        10.0 0.200E+02 0.318E+03         20.0 0.400E+02 0.635E+03
     5.000     25.0 0.625E+02 0.115E+04        10.0 0.250E+02 0.461E+03         20.0 0.500E+02 0.921E+03
     5.500     25.0 0.750E+02 0.156E+04        10.0 0.300E+02 0.624E+03         20.0 0.600E+02 0.125E+04
     6.000     25.0 0.875E+02 0.202E+04        10.0 0.350E+02 0.807E+03         20.0 0.700E+02 0.161E+04
     6.500     25.0 0.100E+03 0.252E+04        10.0 0.400E+02 0.101E+04         20.0 0.800E+02 0.202E+04
     7.000     25.0 0.113E+03 0.307E+04        10.0 0.450E+02 0.123E+04         20.0 0.900E+02 0.245E+04
     7.500     25.0 0.125E+03 0.366E+04        10.0 0.500E+02 0.146E+04         20.0 0.100E+03 0.292E+04
     8.000     25.0 0.138E+03 0.428E+04        10.0 0.550E+02 0.171E+04         20.0 0.110E+03 0.343E+04
     8.500     25.0 0.150E+03 0.495E+04        10.0 0.600E+02 0.198E+04         20.0 0.120E+03 0.396E+04
     9.000     25.0 0.163E+03 0.566E+04        10.0 0.650E+02 0.226E+04         20.0 0.130E+03 0.453E+04
     9.500     25.0 0.175E+03 0.640E+04        10.0 0.700E+02 0.256E+04         20.0 0.140E+03 0.512E+04
    10.000     25.0 0.188E+03 0.718E+04        10.0 0.750E+02 0.287E+04         20.0 0.150E+03 0.575E+04
18.0     .0 .045 16  2  3
          3.450                .100          8.000                .045
     1.780      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00           .0 0.000E+00 0.000E+00
     2.000      .0 0.000E+00 0.000E+00        15.3 0.323E+01 0.253E+02          3.6 0.362E+00 0.173E+01
     2.500      .0 0.000E+00 0.000E+00        18.3 0.116E+02 0.189E+03          6.2 0.280E+01 0.358E+02
     3.000      .0 0.000E+00 0.000E+00        21.3 0.215E+02 0.476E+03          8.8 0.653E+01 0.116E+03
     3.500     10.0 0.780E+00 0.141E+01       24.1 0.329E+02 0.886E+03         11.3 0.116E+02 0.252E+03
     4.000     10.0 0.579E+01 0.386E+02       25.6 0.454E+02 0.145E+04         16.7 0.181E+02 0.413E+03
     4.500     10.0 0.108E+02 0.106E+03       26.5 0.585E+02 0.216E+04         17.5 0.267E+02 0.747E+03
     5.000     10.0 0.158E+02 0.194E+03       26.6 0.718E+02 0.300E+04         18.4 0.357E+02 0.116E+04
     5.500     10.0 0.208E+02 0.299E+03       26.7 0.851E+02 0.393E+04         19.2 0.451E+02 0.164E+04
     6.000     10.1 0.259E+02 0.417E+03       26.7 0.985E+02 0.495E+04         20.1 0.549E+02 0.218E+04
     6.500     10.1 0.309E+02 0.547E+03       26.8 0.112E+03 0.605E+04         20.9 0.651E+02 0.280E+04
     7.000     10.1 0.359E+02 0.686E+03       26.9 0.125E+03 0.723E+04         21.8 0.758E+02 0.348E+04
     7.500     10.1 0.410E+02 0.833E+03       26.9 0.139E+03 0.847E+04         22.6 0.869E+02 0.422E+04
     8.000     10.1 0.460E+02 0.988E+03       27.0 0.152E+03 0.978E+04         23.5 0.985E+02 0.503E+04
     8.500    102.0 0.970E+02 0.912E+03       65.0 0.185E+03 0.792E+04         66.0 0.131E+03 0.442E+04
     9.000    102.0 0.148E+03 0.184E+04       65.0 0.217E+03 0.104E+05         66.0 0.164E+03 0.641E+04
19.0     .0 .100  3  2  2
          8.000                .100          8.000                .100
     8.000      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     8.500    132.0 0.660E+02 0.416E+03         .0 0.000E+00 0.000E+00
     9.000    132.0 0.132E+03 0.132E+04         .0 0.000E+00 0.000E+00
20.0     .0 .013  8  2  3
          4.090                .060          4.090                .060
     3.640      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00           .0 0.000E+00 0.000E+00
     4.000      .0 0.000E+00 0.000E+00         1.9 0.346E+00 0.812E+01           .0 0.000E+00 0.000E+00
     4.500      3.1 0.632E+00 0.364E+01        2.4 0.153E+01 0.830E+02          4.2 0.955E+00 0.595E+01
     5.000      6.8 0.311E+01 0.305E+02        2.4 0.273E+01 0.218E+03          8.6 0.415E+01 0.423E+02
     5.500     10.6 0.747E+01 0.981E+02        2.4 0.393E+01 0.401E+03         12.0 0.950E+01 0.135E+03
     6.000     10.6 0.128E+02 0.240E+03        2.4 0.513E+01 0.626E+03         12.0 0.155E+02 0.305E+03
     6.500     10.6 0.181E+02 0.427E+03        2.4 0.633E+01 0.889E+03         12.0 0.215E+02 0.527E+03
     7.000     10.6 0.234E+02 0.656E+03        2.4 0.753E+01 0.119E+04         12.0 0.275E+02 0.794E+03
21.0     .0 .013  6  2  3
          4.760                .100          4.760                .100
     4.530      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00           .0 0.000E+00 0.000E+00
     5.000      .6 0.770E-01 0.179E+00         2.0 0.711E+00 0.269E+02           .5 0.580E-01 0.131E+00
     5.500      2.0 0.732E+00 0.361E+01        2.0 0.171E+01 0.117E+03          1.5 0.551E+00 0.264E+01
     6.000      3.3 0.206E+01 0.143E+02        2.0 0.271E+01 0.251E+03          6.0 0.157E+01 0.618E+01
     6.500      4.7 0.405E+01 0.353E+02        2.0 0.371E+01 0.424E+03         21.0 0.106E+02 0.665E+02
     7.000      5.0 0.653E+01 0.746E+02        2.0 0.471E+01 0.631E+03         21.0 0.211E+02 0.209E+03
22.0     .0 .045 15  2  3
          3.740                .045          4.750                .100
     2.220      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00           .0 0.000E+00 0.000E+00
     2.500      .0 0.000E+00 0.000E+00        13.7 0.359E+01 0.326E+02           .0 0.000E+00 0.000E+00
     3.000      .0 0.000E+00 0.000E+00        16.7 0.112E+02 0.188E+03           .0 0.000E+00 0.000E+00
     3.500      .0 0.000E+00 0.000E+00        19.6 0.202E+02 0.453E+03           .0 0.000E+00 0.000E+00
     4.000      .8 0.113E+00 0.657E+00        21.8 0.307E+02 0.843E+03           .0 0.000E+00 0.000E+00
     4.500     2.2 0.860E+00 0.985E+01        23.4 0.420E+02 0.136E+04           .0 0.000E+00 0.000E+00
     5.000     3.6 0.230E+01 0.366E+02        24.1 0.540E+02 0.202E+04          0.0 0.193E-02 0.755E-03
     5.500    18.1 0.556E+01 0.557E+02        24.1 0.660E+02 0.282E+04          0.0 0.174E-01 0.141E-01
     6.000    24.5 0.176E+02 0.310E+03        24.1 0.781E+02 0.373E+04           .1 0.483E-01 0.552E-01
     6.500    24.5 0.298E+02 0.749E+03        24.1 0.901E+02 0.474E+04           .1 0.947E-01 0.135E+00
     7.000    24.5 0.421E+02 0.133E+04        24.1 0.102E+03 0.584E+04           .1 0.157E+00 0.264E+00
     7.500    24.5 0.543E+02 0.204E+04        24.1 0.114E+03 0.703E+04           .2 0.234E+00 0.452E+00
     8.000    24.5 0.666E+02 0.286E+04        24.1 0.126E+03 0.831E+04           .2 0.327E+00 0.705E+00
     8.500    24.5 0.788E+02 0.379E+04        24.1 0.138E+03 0.968E+04         69.4 0.350E+02 0.216E+03
     9.000    24.5 0.911E+02 0.482E+04        24.1 0.150E+03 0.111E+05         69.4 0.697E+02 0.680E+03
23.0     .0 .045 16  1  2
          5.060                .045          4.310                .100
     2.290      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     2.500     13.3 0.265E+01 0.201E+02         .0 0.000E+00 0.000E+00
     3.000     16.3 0.101E+02 0.160E+03         .0 0.000E+00 0.000E+00
     3.500     19.1 0.189E+02 0.411E+03         .0 0.000E+00 0.000E+00
     4.000     22.1 0.292E+02 0.770E+03         .0 0.000E+00 0.000E+00
     4.500     24.5 0.410E+02 0.126E+04         .4 0.796E-01 0.208E+00
     5.000     25.9 0.536E+02 0.189E+04         .5 0.322E+00 0.142E+01
     5.500     26.1 0.666E+02 0.271E+04         .6 0.612E+00 0.321E+01
     6.000     26.1 0.797E+02 0.365E+04         .7 0.949E+00 0.555E+01
     6.500     26.1 0.927E+02 0.470E+04         .8 0.133E+01 0.848E+01
     7.000     26.1 0.106E+03 0.585E+04         .9 0.177E+01 0.120E+02
     7.500     26.1 0.119E+03 0.711E+04        1.0 0.225E+01 0.163E+02
     8.000     26.1 0.132E+03 0.846E+04        1.1 0.277E+01 0.212E+02
     8.500     26.1 0.145E+03 0.990E+04       34.1 0.198E+02 0.130E+03
     9.000     26.1 0.158E+03 0.114E+05       34.1 0.369E+02 0.367E+03
     9.500     26.1 0.171E+03 0.130E+05       34.1 0.539E+02 0.691E+03
24.0     .0 .045 16  1  2
          4.820                .045          4.140                .100
     2.350      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
     2.500     12.9 0.187E+01 0.114E+02         .0 0.000E+00 0.000E+00
     3.000     15.4 0.903E+01 0.139E+03         .0 0.000E+00 0.000E+00
     3.500     17.4 0.172E+02 0.372E+03         .0 0.000E+00 0.000E+00
     4.000     19.4 0.264E+02 0.701E+03         .0 0.000E+00 0.000E+00
     4.500     20.2 0.364E+02 0.115E+04        1.0 0.328E+00 0.131E+01
     5.000     20.5 0.466E+02 0.172E+04        1.0 0.842E+00 0.509E+01
     5.500     20.5 0.569E+02 0.239E+04        1.1 0.137E+01 0.972E+01
     6.000     20.5 0.671E+02 0.316E+04        1.1 0.191E+01 0.148E+02
     6.500     20.5 0.774E+02 0.400E+04        1.1 0.247E+01 0.203E+02
     7.000     20.5 0.876E+02 0.492E+04        1.1 0.303E+01 0.261E+02
     7.500     20.5 0.979E+02 0.592E+04        1.2 0.362E+01 0.322E+02
     8.000     20.5 0.108E+03 0.698E+04        1.2 0.421E+01 0.386E+02
     8.500     20.5 0.118E+03 0.812E+04       34.6 0.215E+02 0.147E+03
     9.000     20.5 0.129E+03 0.933E+04       34.6 0.388E+02 0.392E+03
     9.500     20.5 0.139E+03 0.106E+05       34.6 0.561E+02 0.725E+03
25.0     .0 .100 16  2  3
          4.000                .060          7.430                .100
     2.400      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00           .0 0.000E+00 0.000E+00
     2.500      4.4 0.387E+00 0.126E+01         .0 0.000E+00 0.000E+00           .0 0.000E+00 0.000E+00
     3.000      9.0 0.394E+01 0.373E+02         .0 0.000E+00 0.000E+00           .0 0.000E+00 0.000E+00
     3.500     11.0 0.894E+01 0.126E+03         .0 0.000E+00 0.000E+00           .0 0.000E+00 0.000E+00
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    4.000   12.9 0.149E+02 0.263E+03          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    4.500   12.9 0.213E+02 0.479E+03          0.0 0.628E-02 0.339E-02         .0 0.000E+00 0.000E+00
    5.000   12.9 0.278E+02 0.743E+03          .1 0.251E-01 0.215E-01          .0 0.000E+00 0.000E+00
    5.500   12.9 0.343E+02 0.105E+04          .1 0.565E-01 0.635E-01          .0 0.000E+00 0.000E+00
    6.000   12.9 0.407E+02 0.140E+04          .1 0.101E+00 0.137E+00          .0 0.000E+00 0.000E+00
    6.500   12.9 0.472E+02 0.179E+04          .1 0.157E+00 0.248E+00          .0 0.000E+00 0.000E+00
    7.000   12.9 0.536E+02 0.222E+04          .2 0.226E+00 0.403E+00          .0 0.000E+00 0.000E+00
    7.500   12.9 0.601E+02 0.268E+04          .7 0.325E+00 0.610E+00          .8 0.277E-01 0.296E-01
    8.000   12.9 0.665E+02 0.318E+04          4.2 0.154E+01 0.513E+01         6.4 0.184E+01 0.794E+01
    8.500   12.9 0.730E+02 0.371E+04          9.6 0.634E+01 0.384E+02         12.1 0.647E+01 0.426E+02
    9.000   12.9 0.794E+02 0.428E+04          9.6 0.111E+02 0.983E+02         17.8 0.139E+02 0.118E+03
    9.500   12.9 0.859E+02 0.487E+04          9.6 0.159E+02 0.179E+03         23.4 0.242E+02 0.247E+03
26.0     .0 .045 15  2  3
        3.120                .100          3.200                .100
    2.100     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    2.500     .0 0.000E+00 0.000E+00          16.0 0.592E+01 0.675E+02        .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00          19.0 0.147E+02 0.272E+03        .0 0.000E+00 0.000E+00
    3.500     .3 0.518E-01 0.119E+00          20.0 0.246E+02 0.621E+03        5.6 0.839E+00 0.237E+01
    4.000     .6 0.278E+00 0.112E+01          20.0 0.346E+02 0.110E+04        14.9 0.597E+01 0.324E+02
    4.500    1.0 0.683E+00 0.372E+01          20.0 0.446E+02 0.167E+04        23.5 0.157E+02 0.120E+03
    5.000    1.3 0.127E+01 0.849E+01          20.0 0.546E+02 0.234E+04        23.6 0.275E+02 0.301E+03
    5.500    1.7 0.203E+01 0.159E+02          20.0 0.646E+02 0.310E+04        23.6 0.393E+02 0.538E+03
    6.000    2.1 0.298E+01 0.265E+02          20.0 0.746E+02 0.394E+04        23.7 0.512E+02 0.823E+03
    6.500    2.4 0.410E+01 0.406E+02          20.0 0.846E+02 0.486E+04        23.8 0.630E+02 0.115E+04
    7.000    2.8 0.540E+01 0.586E+02          20.0 0.946E+02 0.586E+04        23.9 0.750E+02 0.151E+04
    7.500    3.1 0.688E+01 0.810E+02          20.0 0.105E+03 0.693E+04        23.9 0.869E+02 0.191E+04
    8.000    3.5 0.854E+01 0.108E+03          20.0 0.115E+03 0.806E+04        24.0 0.989E+02 0.234E+04
    8.500   79.5 0.483E+02 0.339E+03          20.0 0.125E+03 0.927E+04        48.5 0.123E+03 0.220E+04
    9.000   79.5 0.881E+02 0.923E+03          20.0 0.135E+03 0.105E+05        48.5 0.147E+03 0.297E+04
27.0     .0 .045 15  2  3
        4.970                .100          4.530                .100
    2.150     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    2.500     .0 0.000E+00 0.000E+00          15.9 0.523E+01 0.551E+02        .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00          18.6 0.139E+02 0.250E+03        .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00          21.3 0.238E+02 0.562E+03        .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00          24.0 0.352E+02 0.990E+03        .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00          26.7 0.479E+02 0.154E+04        .0 0.000E+00 0.000E+00
    5.000     .1 0.113E-02 0.652E-03          28.2 0.616E+02 0.226E+04        0.0 0.640E-02 0.364E-02
    5.500     .6 0.249E+00 0.103E+01          28.2 0.757E+02 0.318E+04        .1 0.273E-01 0.252E-01
    6.000     .7 0.569E+00 0.307E+01          28.2 0.898E+02 0.423E+04        .1 0.626E-01 0.762E-01
    6.500     .7 0.907E+00 0.547E+01          28.2 0.104E+03 0.539E+04        .1 0.112E+00 0.166E+00
    7.000     .7 0.126E+01 0.814E+01          28.2 0.118E+03 0.667E+04        .1 0.177E+00 0.304E+00
    7.500     .8 0.164E+01 0.111E+02          28.2 0.132E+03 0.805E+04        .2 0.255E+00 0.497E+00
    8.000     .8 0.203E+01 0.143E+02          28.2 0.146E+03 0.953E+04        .2 0.349E+00 0.753E+00
    8.500   57.6 0.308E+02 0.197E+03          28.2 0.160E+03 0.111E+05        .2 0.449E+00 0.115E+01
    9.000   57.6 0.596E+02 0.592E+03          28.2 0.174E+03 0.128E+05        .2 0.550E+00 0.161E+01
28.0     .0 .045 15  2  3
        5.430                .100          5.460                .060
    2.730     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00          5.5 0.132E+01 0.112E+02         .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00          7.3 0.452E+01 0.704E+02         .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00          9.2 0.865E+01 0.177E+03         .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00          11.0 0.137E+02 0.334E+03        .0 0.000E+00 0.000E+00
    5.000     .0 0.000E+00 0.000E+00          12.9 0.197E+02 0.548E+03        .0 0.000E+00 0.000E+00
    5.500    3.8 0.134E+00 0.143E+00          14.5 0.265E+02 0.831E+03        17.5 0.166E+01 0.577E+01
    6.000   12.0 0.553E+01 0.323E+02          14.5 0.338E+02 0.124E+04        17.5 0.104E+02 0.123E+03
    6.500   12.1 0.116E+02 0.108E+03          14.5 0.411E+02 0.172E+04        17.5 0.192E+02 0.339E+03
    7.000   12.1 0.176E+02 0.212E+03          14.5 0.483E+02 0.225E+04        17.5 0.279E+02 0.635E+03
    7.500   12.2 0.237E+02 0.338E+03          14.5 0.556E+02 0.285E+04        17.5 0.367E+02 0.100E+04
    8.000   12.2 0.298E+02 0.484E+03          14.5 0.628E+02 0.349E+04        17.5 0.454E+02 0.143E+04
    8.500   18.0 0.388E+02 0.599E+03          14.5 0.701E+02 0.419E+04        17.5 0.542E+02 0.192E+04
    9.000   18.0 0.478E+02 0.849E+03          14.5 0.773E+02 0.494E+04        17.5 0.629E+02 0.246E+04
    9.500   18.0 0.568E+02 0.113E+04          14.5 0.846E+02 0.573E+04        17.5 0.717E+02 0.306E+04
29.0     .0 .045 15  2  3
        4.650                .100          5.520                .060
    2.890     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00          4.6 0.471E+00 0.229E+01         .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00          7.1 0.338E+01 0.448E+02         .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00          9.6 0.754E+01 0.138E+03         .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00          12.1 0.130E+02 0.291E+03        .0 0.000E+00 0.000E+00
    5.000    4.8 0.839E+00 0.262E+01          13.5 0.194E+02 0.530E+03        2.5 0.614E-01 0.875E-01
    5.500   11.5 0.495E+01 0.281E+02          14.5 0.264E+02 0.843E+03        27.0 0.743E+01 0.523E+02
    6.000   11.5 0.107E+02 0.990E+02          14.5 0.337E+02 0.126E+04        28.0 0.214E+02 0.298E+03
    6.500   11.6 0.165E+02 0.198E+03          14.5 0.409E+02 0.174E+04        28.0 0.354E+02 0.690E+03
    7.000   11.6 0.223E+02 0.319E+03          14.5 0.482E+02 0.229E+04        28.0 0.494E+02 0.120E+04
    7.500   11.7 0.281E+02 0.457E+03          14.5 0.554E+02 0.289E+04        28.0 0.634E+02 0.182E+04
    8.000   11.7 0.340E+02 0.611E+03          14.5 0.627E+02 0.355E+04        28.0 0.774E+02 0.254E+04
    8.500   17.5 0.427E+02 0.712E+03          14.5 0.699E+02 0.426E+04        28.0 0.914E+02 0.335E+04
    9.000   17.5 0.515E+02 0.971E+03          14.5 0.772E+02 0.502E+04        28.0 0.105E+03 0.425E+04
    9.500   17.5 0.602E+02 0.126E+04          14.5 0.844E+02 0.583E+04        28.0 0.119E+03 0.523E+04
30.0     .0 .045 14  2  3
        4.730                .100          4.980                .060
    2.920     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00          2.0 0.794E-01 0.205E+00         .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00          6.1 0.260E+01 0.317E+02         .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00          7.7 0.606E+01 0.109E+03         .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00          9.2 0.103E+02 0.231E+03         .0 0.000E+00 0.000E+00
    5.000    7.0 0.941E+00 0.247E+01          10.4 0.153E+02 0.410E+03        1.1 0.109E-01 0.846E-02
    5.500   14.0 0.684E+01 0.421E+02          10.4 0.205E+02 0.668E+03        26.8 0.737E+01 0.519E+02
    6.000   14.1 0.139E+02 0.133E+03          10.4 0.257E+02 0.974E+03        26.8 0.208E+02 0.292E+03
    6.500   14.1 0.209E+02 0.258E+03          10.4 0.309E+02 0.133E+04        26.8 0.342E+02 0.670E+03
    7.000   14.1 0.279E+02 0.411E+03          10.4 0.361E+02 0.172E+04        26.8 0.476E+02 0.116E+04
    7.500   14.2 0.350E+02 0.586E+03          10.4 0.413E+02 0.215E+04        26.8 0.610E+02 0.176E+04
    8.000   14.2 0.421E+02 0.780E+03          10.4 0.465E+02 0.262E+04        26.8 0.744E+02 0.245E+04
    8.500   47.8 0.660E+02 0.791E+03          10.4 0.517E+02 0.313E+04        26.8 0.878E+02 0.323E+04
    9.000   47.8 0.899E+02 0.132E+04          10.4 0.569E+02 0.367E+04        26.8 0.101E+03 0.409E+04
31.0     .0 .045 13  2  3
        4.490                .100          4.670                .100
    3.110     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00          5.2 0.145E+01 0.136E+02         .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00          7.2 0.454E+01 0.716E+02         .0 0.000E+00 0.000E+00
    4.500     .2 0.121E-02 0.353E-03          9.2 0.863E+01 0.176E+03         .0 0.000E+00 0.000E+00
    5.000   14.7 0.353E+01 0.136E+02          9.6 0.134E+02 0.356E+03         26.0 0.547E+01 0.193E+02
    5.500   14.7 0.109E+02 0.869E+02          9.6 0.182E+02 0.592E+03         26.0 0.185E+02 0.147E+03
    6.000   14.8 0.183E+02 0.201E+03          9.6 0.230E+02 0.875E+03         26.0 0.315E+02 0.358E+03
    6.500   14.8 0.257E+02 0.348E+03          9.6 0.278E+02 0.120E+04         26.0 0.445E+02 0.637E+03
    7.000   14.8 0.331E+02 0.520E+03          9.6 0.326E+02 0.157E+04         26.0 0.575E+02 0.976E+03
    7.500   14.9 0.405E+02 0.715E+03          9.6 0.374E+02 0.197E+04         26.0 0.705E+02 0.137E+04
    8.000   14.9 0.479E+02 0.929E+03          9.6 0.422E+02 0.241E+04         26.0 0.836E+02 0.182E+04
    8.500   42.1 0.690E+02 0.918E+03          9.6 0.470E+02 0.288E+04         26.0 0.966E+02 0.231E+04
    9.000   42.1 0.901E+02 0.143E+04          9.6 0.518E+02 0.339E+04         26.0 0.110E+03 0.286E+04
32.0     .0 .030 13  2  3
        4.650                .100          4.550                .100
    3.200     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00          4.5 0.100E+01 0.120E+02         .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00          6.6 0.378E+01 0.838E+02         .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00          8.7 0.762E+01 0.222E+03         .0 0.000E+00 0.000E+00
    5.000   14.5 0.319E+01 0.116E+02          9.1 0.121E+02 0.469E+03         25.8 0.955E+01 0.492E+02
    5.500   14.5 0.104E+02 0.817E+02          9.1 0.167E+02 0.797E+03         25.8 0.224E+02 0.205E+03
    6.000   14.5 0.177E+02 0.193E+03          9.1 0.212E+02 0.119E+04         25.8 0.353E+02 0.436E+03
    6.500   14.6 0.250E+02 0.335E+03          9.1 0.258E+02 0.165E+04         25.8 0.482E+02 0.732E+03
    7.000   14.6 0.323E+02 0.503E+03          9.1 0.304E+02 0.216E+04         25.8 0.611E+02 0.109E+04
    7.500   14.6 0.396E+02 0.692E+03          9.1 0.349E+02 0.273E+04         25.8 0.740E+02 0.150E+04
    8.000   14.6 0.468E+02 0.900E+03          9.1 0.395E+02 0.334E+04         25.8 0.869E+02 0.195E+04
    8.500   14.6 0.542E+02 0.115E+04          9.1 0.440E+02 0.401E+04         25.8 0.998E+02 0.246E+04
    9.000   14.6 0.615E+02 0.141E+04          9.1 0.486E+02 0.472E+04         25.8 0.113E+03 0.301E+04
33.0     .0 .030 13  2  3
        5.160                .100          4.650                .100
    3.180     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00          4.8 0.126E+01 0.167E+02         .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00          6.3 0.403E+01 0.953E+02         .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00          7.7 0.753E+01 0.231E+03         .0 0.000E+00 0.000E+00
    5.000     .0 0.000E+00 0.000E+00          8.7 0.117E+02 0.441E+03         7.8 0.144E+01 0.467E+01
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    5.500   13.4 0.395E+01 0.173E+02      8.9 0.161E+02 0.739E+03      7.8 0.535E+01 0.398E+02
    6.000   13.4 0.107E+02 0.883E+02      8.9 0.206E+02 0.111E+04      7.8 0.926E+01 0.956E+02
    6.500   13.4 0.174E+02 0.195E+03      8.9 0.250E+02 0.154E+04      7.9 0.132E+02 0.166E+03
    7.000   13.5 0.241E+02 0.329E+03      8.9 0.295E+02 0.202E+04      7.9 0.171E+02 0.248E+03
    7.500   13.5 0.308E+02 0.485E+03      8.9 0.339E+02 0.256E+04      7.9 0.211E+02 0.338E+03
    8.000   13.5 0.376E+02 0.660E+03      8.9 0.384E+02 0.314E+04      7.9 0.250E+02 0.437E+03
    8.500   13.5 0.443E+02 0.869E+03      8.9 0.428E+02 0.377E+04      7.9 0.289E+02 0.558E+03
    9.000   13.5 0.511E+02 0.110E+04      8.9 0.473E+02 0.445E+04      7.9 0.329E+02 0.690E+03
34.0     .0 .020 27  2  3
        1.000                .030     1.000                .030
    1.000    .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
    1.300    .3 0.450E-01 0.336E+00      9.4 0.282E+01 0.632E+02       .3 0.450E-01 0.336E+00
    1.600    .6 0.180E+00 0.214E+01      9.4 0.564E+01 0.201E+03       .6 0.180E+00 0.214E+01
    1.900    .9 0.405E+00 0.630E+01      9.4 0.846E+01 0.394E+03       .9 0.405E+00 0.630E+01
    2.200   1.2 0.720E+00 0.136E+02      9.4 0.113E+02 0.637E+03      1.2 0.720E+00 0.136E+02
    2.500   1.5 0.113E+01 0.246E+02      9.4 0.141E+02 0.924E+03      1.5 0.113E+01 0.246E+02
    2.800   1.8 0.162E+01 0.400E+02      9.4 0.169E+02 0.125E+04      1.8 0.162E+01 0.400E+02
    3.100   2.1 0.221E+01 0.603E+02      9.4 0.197E+02 0.162E+04      2.1 0.221E+01 0.603E+02
    3.400   2.3 0.288E+01 0.866E+02      9.4 0.226E+02 0.202E+04      2.3 0.288E+01 0.866E+02
    3.700   2.3 0.357E+01 0.117E+03      9.4 0.254E+02 0.246E+04      2.3 0.357E+01 0.117E+03
    4.000   2.3 0.426E+01 0.149E+03      9.4 0.282E+02 0.293E+04      2.3 0.426E+01 0.149E+03
    4.300   2.3 0.495E+01 0.183E+03      9.4 0.310E+02 0.344E+04      2.3 0.495E+01 0.183E+03
    4.600   2.3 0.564E+01 0.217E+03      9.4 0.338E+02 0.397E+04      2.3 0.564E+01 0.217E+03
    4.900 113.9 0.123E+02 0.918E+02      9.4 0.367E+02 0.454E+04     16.7 0.749E+01 0.133E+03
    5.200 113.9 0.465E+02 0.840E+03      9.4 0.395E+02 0.514E+04     16.7 0.125E+02 0.313E+03
    5.500 113.9 0.806E+02 0.210E+04      9.4 0.423E+02 0.577E+04     16.7 0.175E+02 0.549E+03
    5.800 113.9 0.115E+03 0.379E+04      9.4 0.451E+02 0.642E+04     16.7 0.226E+02 0.835E+03
    6.100 113.9 0.149E+03 0.585E+04      9.4 0.479E+02 0.710E+04     16.7 0.276E+02 0.117E+04
    6.400 113.9 0.183E+03 0.826E+04      9.4 0.508E+02 0.781E+04     16.7 0.326E+02 0.154E+04
    6.700 113.9 0.217E+03 0.110E+05      9.4 0.536E+02 0.855E+04     16.7 0.376E+02 0.196E+04
    7.000 113.9 0.251E+03 0.140E+05      9.4 0.564E+02 0.931E+04     16.7 0.426E+02 0.241E+04
    7.300 113.9 0.286E+03 0.173E+05      9.4 0.592E+02 0.101E+05     16.7 0.476E+02 0.291E+04
    7.600 113.9 0.320E+03 0.209E+05      9.4 0.620E+02 0.109E+05     16.7 0.527E+02 0.344E+04
    7.900 113.9 0.354E+03 0.248E+05      9.4 0.649E+02 0.118E+05     16.7 0.577E+02 0.400E+04
    8.200 113.9 0.388E+03 0.289E+05      9.4 0.677E+02 0.126E+05     16.7 0.627E+02 0.459E+04
    8.500 113.9 0.422E+03 0.332E+05      9.4 0.705E+02 0.135E+05     16.7 0.677E+02 0.522E+04
    8.800 113.9 0.456E+03 0.378E+05      9.4 0.733E+02 0.144E+05     16.7 0.727E+02 0.588E+04
35.0     .0 .030 15  2  3
        4.560                .200     3.830                .200
    2.030    .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
    2.500    .0 0.000E+00 0.000E+00     16.8 0.724E+01 0.137E+03       .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00     19.8 0.164E+02 0.477E+03       .0 0.000E+00 0.000E+00
    3.500    .0 0.000E+00 0.000E+00     22.8 0.271E+02 0.997E+03       .0 0.000E+00 0.000E+00
    4.000    .0 0.000E+00 0.000E+00     25.3 0.392E+02 0.172E+04     15.0 0.375E+01 0.734E+01
    4.500    .0 0.000E+00 0.000E+00     26.8 0.522E+02 0.267E+04     15.0 0.113E+02 0.449E+02
    5.000   0.0 0.568E-02 0.156E-02     27.0 0.657E+02 0.390E+04     15.1 0.188E+02 0.103E+03
    5.500    .1 0.259E-01 0.118E-01     27.0 0.792E+02 0.532E+04     15.1 0.263E+02 0.177E+03
    6.000    .1 0.609E-01 0.369E-01     27.0 0.927E+02 0.692E+04     15.1 0.339E+02 0.265E+03
    6.500    .1 0.110E+00 0.817E-01     27.0 0.106E+03 0.867E+04     15.1 0.414E+02 0.363E+03
    7.000    .1 0.175E+00 0.151E+00     27.0 0.120E+03 0.106E+05     15.2 0.490E+02 0.472E+03
    7.500    .2 0.254E+00 0.248E+00     27.0 0.133E+03 0.127E+05     15.2 0.566E+02 0.589E+03
    8.000    .2 0.347E+00 0.376E+00     27.0 0.147E+03 0.149E+05     15.2 0.642E+02 0.714E+03
    8.500   81.0 0.408E+02 0.126E+03     27.0 0.160E+03 0.172E+05    217.0 0.173E+03 0.732E+03
    9.000   81.0 0.814E+02 0.397E+03     27.0 0.174E+03 0.197E+05    217.0 0.281E+03 0.165E+04
36.0     .0 .030 15  2  3
        4.880                .200     5.380                .200
    2.180    .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
    2.500    .0 0.000E+00 0.000E+00     15.4 0.470E+01 0.707E+02       .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00     17.5 0.129E+02 0.347E+03       .0 0.000E+00 0.000E+00
    3.500    .0 0.000E+00 0.000E+00     19.7 0.222E+02 0.789E+03       .0 0.000E+00 0.000E+00
    4.000    .0 0.000E+00 0.000E+00     21.9 0.326E+02 0.139E+04       .0 0.000E+00 0.000E+00
    4.500    .0 0.000E+00 0.000E+00     24.0 0.441E+02 0.214E+04       .0 0.000E+00 0.000E+00
    5.000   0.0 0.233E-03 0.181E-04     25.9 0.567E+02 0.308E+04       .0 0.000E+00 0.000E+00
    5.500   0.0 0.622E-02 0.145E-02     26.7 0.699E+02 0.428E+04       0.0 0.552E-03 0.763E-04
    6.000   0.0 0.203E-01 0.700E-02     26.7 0.832E+02 0.573E+04       0.0 0.147E-01 0.609E-02
    6.500    .1 0.425E-01 0.187E-01     26.7 0.966E+02 0.735E+04        .1 0.481E-01 0.295E-01
    7.000    .1 0.727E-01 0.384E-01     26.7 0.110E+03 0.911E+04        .1 0.101E+00 0.788E-01
    7.500    .1 0.111E+00 0.675E-01     26.7 0.123E+03 0.110E+05        .2 0.172E+00 0.161E+00
    8.000    .1 0.158E+00 0.108E+00     26.7 0.137E+03 0.131E+05        .2 0.263E+00 0.284E+00
    8.500   53.3 0.268E+02 0.817E+02     26.7 0.150E+03 0.153E+05        .2 0.364E+00 0.487E+00
    9.000   53.3 0.535E+02 0.258E+03     26.7 0.163E+03 0.176E+05        .2 0.464E+00 0.731E+00
37.0     .0 .030 14  2  3
        3.050                .100     5.130                .060
    2.820    .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00      4.2 0.382E+00 0.254E+01       .0 0.000E+00 0.000E+00
    3.500    .6 0.127E+00 0.397E+00      6.1 0.321E+01 0.684E+02       .0 0.000E+00 0.000E+00
    4.000   1.2 0.564E+00 0.291E+01      6.8 0.643E+01 0.199E+03       .0 0.000E+00 0.000E+00
    4.500   1.8 0.131E+01 0.900E+01      7.5 0.100E+02 0.386E+03       .0 0.000E+00 0.000E+00
    5.000   8.8 0.298E+01 0.138E+02      8.2 0.139E+02 0.625E+03       .0 0.000E+00 0.000E+00
    5.500  16.2 0.998E+01 0.699E+02      8.4 0.181E+02 0.953E+03      5.0 0.923E+00 0.499E+01
    6.000  16.3 0.181E+02 0.185E+03      8.4 0.223E+02 0.135E+04      8.9 0.481E+01 0.530E+02
    6.500  16.3 0.262E+02 0.337E+03      8.4 0.265E+02 0.180E+04      8.9 0.926E+01 0.158E+03
    7.000  16.3 0.344E+02 0.520E+03      8.4 0.307E+02 0.230E+04      8.9 0.137E+02 0.304E+03
    7.500  16.4 0.426E+02 0.728E+03      8.4 0.349E+02 0.285E+04      8.9 0.182E+02 0.486E+03
    8.000  16.4 0.508E+02 0.960E+03      8.4 0.391E+02 0.344E+04      8.9 0.226E+02 0.700E+03
    8.500  50.0 0.758E+02 0.960E+03      8.4 0.433E+02 0.408E+04      8.9 0.271E+02 0.945E+03
    9.000  50.0 0.101E+03 0.154E+04      8.4 0.475E+02 0.476E+04      8.9 0.315E+02 0.122E+04
38.0     .0 .030 13  2  3
        4.480                .100     4.510                .060
    3.210    .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
    3.500    .0 0.000E+00 0.000E+00      4.4 0.910E+00 0.104E+02       .0 0.000E+00 0.000E+00
    4.000    .0 0.000E+00 0.000E+00      6.8 0.371E+01 0.802E+02       .0 0.000E+00 0.000E+00
    4.500    .6 0.581E-02 0.269E-02      9.2 0.771E+01 0.221E+03       .0 0.000E+00 0.000E+00
    5.000  15.0 0.452E+01 0.201E+02      9.2 0.123E+02 0.481E+03     31.8 0.138E+02 0.132E+03
    5.500  15.0 0.120E+02 0.101E+03      9.2 0.169E+02 0.816E+03     31.8 0.297E+02 0.474E+03
    6.000  15.1 0.196E+02 0.222E+03      9.2 0.215E+02 0.122E+04     31.8 0.456E+02 0.968E+03
    6.500  15.1 0.271E+02 0.374E+03      9.2 0.261E+02 0.168E+04     31.8 0.615E+02 0.159E+04
    7.000  15.1 0.347E+02 0.553E+03      9.2 0.307E+02 0.221E+04     31.8 0.774E+02 0.234E+04
    7.500  15.2 0.423E+02 0.754E+03      9.2 0.353E+02 0.278E+04     31.8 0.933E+02 0.319E+04
    8.000  15.2 0.498E+02 0.975E+03      9.2 0.399E+02 0.341E+04     31.8 0.109E+03 0.414E+04
    8.500  40.2 0.699E+02 0.964E+03      9.2 0.445E+02 0.409E+04     31.8 0.125E+03 0.520E+04
    9.000  40.2 0.901E+02 0.147E+04      9.2 0.491E+02 0.482E+04     31.8 0.141E+03 0.635E+04
```

```
691382251 238 1382060600.5 1% 360.0011 0.9 KAHIBAH CREEK MBKWK500006666 0 0 0 0
  60003  6 0.120   0   00100.1 5.0 0.25                                    11
|37ec+       813464750            -0.5 0.505
 3679x8+*  13 8 8 736323832111047465046221 8          0 1 005
  1   0.50 0 1100                  0 1
  2   0.51 0      1100             0     3   26                 300. 13 1
  3   0.52 0 3111                4   0   2   26                 308.
  4   0.53 0 4111 3111      3 5    0                            210.
  5   0.64 0 5111 4111      4 6    0    15   12                 108.
  6   0.75 0 6111 5111      5 7    0    14    2      8   80     293.  8
  7   0.86 0 7111 6111      6 8    0     9   32                  56.
  8  1.065 034111 7111      713    0   6 9 80 3                  49.
  9  1.290 0                1      0   812  329    710 3231     140.
 10  1.790 0                2      0   911 3128                        6
 11  1.840 0                3      0  1038 2846    12   30
 12  1.581 0                4      0  1113 30 4    932 29 5
 13  1.301 0 811134111     816     0  1214  4 6                  70.
 14  1.210 0                5      0  1315  611    617  210
 15  3.700 0                6      0   518 1213   14   11
 16  1.350 0 9111 8111     1317    0  3233 71 8                  130.
 17  1.500 010111 9111     1618    0  1419 10 9                  230.  7
 18  1.730 01111110111     1722  200  15   13     19   15       155.  3
 19  3.600 0                7      0  1720  914   3318  715
 20  1.850 01311111100     1821    0  3325 3316   19   14       335.
 21  1.900 01510013111     2030    0  3529 3725                  305.
 22  1.850 01211111011     1823  260    25   17                  70.
 23  1.870 01610012100     2227    0  2426 2324   25   18       180.
 24  4.300 0                8      0  2523 1923     28   21
 25  3.870 014111             29    0  2024 1619  2223 1718     312.
 26  1.900 01601112011     2227    0  23   24                    300.
 27  2.000 0      16111    23  26   0     28   22                108.  4
 28  4.300 0                9      0  2729 2220   24   21
 29  4.000 01501114111     2530    0  21   25     28   20       120.  5
 30  2.300 01711115111     29  21   0                           300.  1
 31  2.500 0      17111            0 1
 32  1.500 018111              36  380  1216  571    34   35     470.
 33  3.880 0                1      0  3419 34 7   1620  833
 34  3.140 0                2      0  3235 3538   3633 3634
 35  3.340 0                3      0  3440 3840   3721 3937
 36  2.300 0      18001     32      0  3834 4136     37   81     130.
 37  2.400 0      19110     38      0  3635 8139     39   42     195.
 38  2.200 01911018110      3237    0  1142 4647   3936 4541     740.
 39  2.410 0                4      0  3740 4243     38   45
 40  2.420 0                5      0  3941 4344   35   40              12
 41  3.590 0                6      0   40   44                        11
 42  2.500 026111              43    0  38   47                    185.
 43  2.550 02711126111     4244    0    45   48                   245.
 44  2.750 0      27111     43      0    45   72     46   50       130.
 45  3.710 0                7      0  4347 4849   44   72
 46  2.800 022111              47    0  4450 5052                  260.
 47  2.850 02311122111     4648    0  4549 4951                  290.
 48  2.900 02411123111     4754    0  53   53                    175.
 49  4.310 0                8      0  4753 5174   5150 5473
 50  2.900 028111              51    0  46   52     49   73        95.
 51  3.000 02911128111     5052    0    49   54                   90.
 52  3.200 0      29111     51      0    53   75     57   56       95.
 53  3.590 0                9      0  4956 7455   5248 7553
 54  2.950 02511124111     4860  610  55   57                    130. 10
 55  3.110 0                1      0  5662 7758   5954 7857
 56  3.591 0                2      0  5355 5577   5857 5976
 57  3.250 030111              58    0  52   56     56   76       105.
 58  3.350 03111130111     5759    0    56   59                   105.
 59  3.450 0      31111     58      0    55   78     64   60       105.
 60  4.000 0      25001     54      0    61   61     67   65       270.
 61  3.000 0      25110     54      0  6062 6162     67   66       290.
 62  3.111 0                3      0  5568 5867   6163 6263
 63  4.620 0                4      0  6265 6364     64   79
 64  3.550 032111              65    0  59   60     63   79        45.
 65  3.600 03311132111     6466    0  63   64                     130.
 66  3.650 0      33111     65      0                             340.  9
 67  3.010 0                5      0  6069 6568   6168 6669
 68  3.020 0                6      0  6769 6970   62   67              2
 69  8.000 0                7      0  67   68     68   70
  1 5 3      0   1.7   2.0   8.8   8.8
          1.29   2.0   3.0   4.0   8.0
  2 6 3      0   3.6   4.8   9.8  16.0  16.0
          1.65   2.0   3.0   4.0   5.0   8.0
  3 6 3      0   2.4   4.6   9.4  15.4  15.4
          1.85   2.0   3.0   4.0   5.0   8.0
  4 5 3      0   2.5   2.6  10.3  10.3
           1.6   2.0   3.0   4.0   8.0
  5 3 3      0   3.9   10.
           2.0   4.0   5.0
  6 3 3      0   1.1   5.3
           2.0   4.0   5.0
  7 3 3      0   9.4  39.9
           3.6   4.0   4.5
  8 2 3      0  15.9
           4.0   5.0
  9 5 3      0   4.2   5.1   5.5   6.4
           4.0   6.0   8.0  10.0  12.0
 10 3 3      0   0.2  22.3
           3.8   4.0   4.8
 11 5 3      0   1.3   5.4  19.4  22.4
           2.5   3.0   4.0   5.0   6.0
 12 6 3      0   1.8  13.2  29.7  44.8  61.0
           3.6   4.0   5.0   6.0   7.0   8.0
 13 4 3      0   4.3   9.0   9.0
           2.1   3.0   4.0   8.0
 14 5 3      0   4.1  10.4  13.2  13.2
           2.2   3.0   4.0   5.0   8.0
 15 8 3      0   0.2   0.3   1.0   1.3   1.4   1.6   2.0
          3.64   4.0   5.0   6.0   7.0   8.0   9.0  10.0
 16 5 3      0   0.8   4.2  25.5  27.4
           3.7   4.0   5.0   6.0   6.2
 17 3 3      0  14.3  14.3
           5.0   5.6   6.6
 18 4 3      0   3.2  22.1  22.1
          4.82   5.0   5.8   8.5
 19 5 3      0   3.8  16.3  25.4  25.4
           3.1   4.0   5.0   5.1   8.0
 20 4 3      0   1.0  22.0  22.0
          4.82   5.0   5.8   8.0
 21 8 3      0   2.6  41.6  69.3  70.0  71.6  73.2  73.6
           3.1   4.0   5.0   6.0   7.0   8.0   9.0  10.0
 22 7 3      0   4.8  24.6  27.8  29.7  32.0  32.3
           4.6   5.0   6.0   7.0   8.0   9.0  10.0
 23 5 3      0   0.5   7.5  10.1  12.7
           2.2   3.0   4.0   5.0   6.0
 24 5 3      0   8.1  12.0  14.5  15.1
           3.1   4.0   5.0   6.0   7.0
 25 6 3      0   9.7  23.1  26.7  28.1  29.5
           5.0   6.0   7.0   8.0   9.0  10.0
 117       1.0   1.0  10.5  11.8  27.6  35.4  36.9  36.7  34.4  27.3  23.2  17.4
          16.9  13.5   6.6   2.3   0.5
            0. 2880.  720.  120.  360.  240.  120.  240.  120.  480.  480.  840.
           240.  720. 2760. 9480.50080.
 218       0.5   0.6   1.6   6.0  16.8  17.0  16.6  15.0  13.4  10.6   9.7   7.4
           6.7   4.5   2.9   1.1   0.5   0.5
            0. 1020.  180.  360.  840.   60.   60.  240.  120.  360.  720.  600.
           480.  840. 1440. 1320. 1320.50000.
 3 9       1.0   1.0   1.5   1.0   2.8   2.8   1.0   0.5   0.5
            0. 2700.  420.  180.  360.  180.  600.  300.50000.
```

```
 416      1.0   1.0   8.5  10.0  20.0  21.5  27.0  27.5  18.0  15.0  11.5   6.0
          4.0   1.5   0.5   0.5
           0. 2760.  600.  240.  300.  180.  180.  120.  840.  720.  420. 1740.
         900.  660. 1020.50000.
 5 8      1.0   0.5   3.0   3.5   3.0   1.0   0.5   0.5
           0. 3300. 1200.  600. 1140. 2340. 1380.50000.
 616      0.5   0.6   3.5   5.9   9.4   9.7   9.8   9.9   9.8   9.1   8.9   7.9
          4.4   1.8   0.5   0.5
           0. 3000.  600.  240.  360.  120.  120.   60.   60.  240.  120.  840.
      1920. 2160. 2520.50000.
 7 9      1.0   0.5   1.0   1.5   3.5   3.5   1.0   0.5   0.5
           0. 2460.  660.  480.  420.  240.  960. 1140.50000.
 815      1.0   0.5   7.0   6.0  14.0  13.0   6.0   4.5   3.0   3.0   2.0   2.0
          1.5   0.5   0.5
           0. 2400. 1020.  240.  300.  300.  540. 1020.  480.  600.  360.  600.
      360. 1620.50000.
 917      0.5   0.5   5.1  10.3  20.7  21.9  21.4  18.3  14.6  13.8  10.2   9.3
          7.2   4.3   2.7   0.5   0.5
           0. 1200.  600.  360.  480.  120.  120.  360.  480.  240.  960.  360.
      600. 1680.  720. 3120.50000.
1017      0.5   0.6   5.4  12.1  18.0  24.3  24.4  23.7  22.3  17.0  12.2  10.8
          4.7   4.3   1.2   0.5   0.5
           0.  960.  840.  240.  360.  600.   60.   60.  120.  360.  600.  480.
     2040.  480. 1680. 1320.50000.
1120      0.5   0.8   5.7   5.5  13.0  13.3  13.3  13.1  11.6  10.1   9.6   7.1
          6.9   6.4   4.3   4.3   2.9   1.6   0.5   0.5
           0. 3000.  600.  240.  360.   60.   60.  240.  240.  720.  360.  720.
      240.  240.  720.  360. 1080.  840. 1920.50000.
1218      0.5   0.6   3.8   4.3   8.7   9.2   9.4   6.4   5.3   3.6   3.1   2.9
          2.3   2.2   1.6   0.9   0.5   0.5
           0. 2880.  480.  240.  360.  120.  120.  360.  120.  360.  360.  480.
      360.  600.  480. 1920.  600.50000.
 13 9     0.09  0.07  0.99  1.55  1.64  1.55  0.99  0.07  0.47
           0. 1800. 4500. 7200. 3600. 3600. 7200.10800.10800.
  111 10   .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
  111 10   .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
           .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
           .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
 1        -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
         -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
  211 10   .00  10.8  34.1  66.9 107.9 156.2 211.4 273.1 340.8 414.4 493.6
  211 10   .00  10.8  34.1  66.9 107.9 156.2 211.4 273.1 340.8 414.4 493.6
           .00  44.0  88.0 132.0 176.0 220.0 264.0 308.0 352.0 396.0 440.0
           .00  44.0  88.0 132.0 176.0 220.0 264.0 308.0 352.0 396.0 440.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40  9.60  9.80 10.00
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40  9.60  9.80 10.00
 3 5 10   .00  2.28  8.75  20.1  35.9
 3 5 10   .00  2.28  8.75  20.1  35.9
           .00  8.41  20.7  37.2  53.7
           .00  8.41  20.7  37.2  53.7
          3.79  4.29  4.79  5.29  5.79
          3.79  4.29  4.79  5.29  5.79
 412 10   .00   .84  5.33  13.2  23.7  36.6  51.6  68.6  87.6 108.3 130.8 154.9
 412 10   .00   .84  5.33  13.2  23.7  36.6  51.6  68.6  87.6 108.3 130.8 154.9
           .00  4.77  17.1  30.1  43.2  56.2  69.2  82.3  95.3 108.4 121.5 134.5
           .00  4.77  17.1  30.1  43.2  56.2  69.2  82.3  95.3 108.4 121.5 134.5
          1.58  2.08  2.58  3.08  3.58  4.08  4.58  5.08  5.58  6.08  6.58  7.08
          1.58  2.08  2.58  3.08  3.58  4.08  4.58  5.08  5.58  6.08  6.58  7.08
 512 10   .00   .89  5.62  16.0  31.1  50.3  73.0  99.0 128.1 160.2 195.1 232.7
 512 10   .00   .89  5.62  16.0  31.1  50.3  73.0  99.0 128.1 160.2 195.1 232.7
           .00  8.49  33.9  70.7 107.7 144.7 181.8 218.8 255.9 292.9 330.0 367.1
           .00  8.49  33.9  70.7 107.7 144.7 181.8 218.8 255.9 292.9 330.0 367.1
          2.36  2.86  3.36  3.86  4.36  4.86  5.36  5.86  6.36  6.86  7.36  7.86
          2.36  2.86  3.36  3.86  4.36  4.86  5.36  5.86  6.36  6.86  7.36  7.86
 612 10   .00   .76  4.83  14.2  31.1  56.4  88.5 126.7 170.4 219.4 273.3 331.8
 612 10   .00   .76  4.83  14.2  31.1  56.4  88.5 126.7 170.4 219.4 273.3 331.8
           .00  3.82  15.3  34.4  63.7  96.2 128.7 161.2 193.7 226.2 258.7 291.2
           .00  3.82  15.3  34.4  63.7  96.2 128.7 161.2 193.7 226.2 258.7 291.2
          2.30  2.80  3.30  3.80  4.30  4.80  5.30  5.80  6.30  6.80  7.30  7.80
          2.30  2.80  3.30  3.80  4.30  4.80  5.30  5.80  6.30  6.80  7.30  7.80
 7 7 10   .00  4.94  26.8  62.2 108.8 165.2 230.6
 7 7 10   .00  4.94  26.8  62.2 108.8 165.2 230.6
           .00  32.5  99.9 167.4 234.9 302.4 369.9
           .00  32.5  99.9 167.4 234.9 302.4 369.9
          3.88  4.38  4.88  5.38  5.88  6.38  6.88
          3.88  4.38  4.88  5.38  5.88  6.38  6.88
 8 7 10   .00  15.1  47.6  93.4 150.6 218.1 295.2
 8 7 10   .00  15.1  47.6  93.4 150.6 218.1 295.2
           .00  37.5  75.0 112.5 150.0 187.5 225.0
           .00  37.5  75.0 112.5 150.0 187.5 225.0
          8.00  8.30  8.60  8.90  9.20  9.50  9.80
          8.00  8.30  8.60  8.90  9.20  9.50  9.80
 9 7 10   .00  43.2 136.4 267.4 431.1 624.4 845.0
 9 7 10   .00  43.2 136.4 267.4 431.1 624.4 845.0
           .00  73.5 147.0 220.5 294.0 367.5 441.0
           .00  73.5 147.0 220.5 294.0 367.5 441.0
          8.00  8.30  8.60  8.90  9.20  9.50  9.80
          8.00  8.30  8.60  8.90  9.20  9.50  9.80
 10 4 10  .00  85.5 270.2 529.6
 10 4 10  .00  85.5 270.2 529.6
           .00  86.0 172.0 258.0
           .00  86.0 172.0 258.0
          8.00  8.40  8.80  9.20
          8.00  8.40  8.80  9.20
 1111 10  .00   .67  4.61  14.5  29.1  47.7  69.8  95.1 123.5 154.8 188.8
 1111 10  .00   .67  4.61  14.5  29.1  47.7  69.8  95.1 123.5 154.8 188.8
           .00  2.11  10.1  22.1  34.1  46.1  58.1  70.1  82.1  94.1 106.1
           .00  2.11  10.1  22.1  34.1  46.1  58.1  70.1  82.1  94.1 106.1
          3.70  3.90  4.10  4.30  4.50  4.70  4.90  5.10  5.30  5.50  5.70
          3.70  3.90  4.10  4.30  4.50  4.70  4.90  5.10  5.30  5.50  5.70
 1211 10  .00   .65  4.04  10.2  18.7  29.0  41.1  54.9  70.2  86.9 105.1
 1211 10  .00   .65  4.04  10.2  18.7  29.0  41.1  54.9  70.2  86.9 105.1
           .00  4.00  15.0  27.0  39.0  51.0  63.0  75.0  87.0  99.0 111.0
           .00  4.00  15.0  27.0  39.0  51.0  63.0  75.0  87.0  99.0 111.0
          3.70  3.90  4.10  4.30  4.50  4.70  4.90  5.10  5.30  5.50  5.70
          3.70  3.90  4.10  4.30  4.50  4.70  4.90  5.10  5.30  5.50  5.70
 1311 10  .00  4.93  16.0  32.0  52.8  78.2 108.2 142.8 181.7 224.7 271.5
 1311 10  .00  4.93  16.0  32.0  52.8  78.2 108.2 142.8 181.7 224.7 271.5
           .00  15.5  32.0  49.5  67.9  87.4 107.8 129.2 150.8 172.4 194.0
           .00  15.5  32.0  49.5  67.9  87.4 107.8 129.2 150.8 172.4 194.0
          4.00  4.30  4.60  4.90  5.20  5.50  5.80  6.10  6.40  6.70  7.00
          4.00  4.30  4.60  4.90  5.20  5.50  5.80  6.10  6.40  6.70  7.00
 1411 10  .00   .36  2.26  7.21  20.4  40.4  65.9  96.5 131.7 171.2 214.8
 1411 10  .00   .36  2.26  7.21  20.4  40.4  65.9  96.5 131.7 171.2 214.8
           .00  3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
           .00  3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
          3.89  4.09  4.29  4.49  4.69  4.89  5.09  5.29  5.49  5.69  5.89
          3.89  4.09  4.29  4.49  4.69  4.89  5.09  5.29  5.49  5.69  5.89
 1511 10  .00  4.47  19.7  43.6  74.5 111.8 154.8 203.2 256.8 315.2 378.4
 1511 10  .00  4.47  19.7  43.6  74.5 111.8 154.8 203.2 256.8 315.2 378.4
           .00  14.6  39.0  63.4  87.8 112.2 136.6 161.0 185.4 209.8 234.2
           .00  14.6  39.0  63.4  87.8 112.2 136.6 161.0 185.4 209.8 234.2
          3.80  4.00  4.20  4.40  4.60  4.80  5.00  5.20  5.40  5.60  5.80
          3.80  4.00  4.20  4.40  4.60  4.80  5.00  5.20  5.40  5.60  5.80
 1611 10  .00   .82  6.60  20.3  43.8  78.5 126.1 188.7 265.6 354.9 455.7
 1611 10  .00   .82  6.60  20.3  43.8  78.5 126.1 188.7 265.6 354.9 455.7
           .00  4.29  20.0  45.7  80.2 122.8 174.6 236.5 299.7 362.8 426.0
           .00  4.29  20.0  45.7  80.2 122.8 174.6 236.5 299.7 362.8 426.0
          3.87  4.07  4.27  4.47  4.67  4.87  5.07  5.27  5.47  5.67  5.87
          3.87  4.07  4.27  4.47  4.67  4.87  5.07  5.27  5.47  5.67  5.87
 1711 10  .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
 1711 10  .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
           .00  2.71  12.1  24.3  36.5  48.7  60.9  73.1  85.3  97.5 109.7
```

	.00	2.71	12.1	24.3	36.5	48.7	60.9	73.1	85.3	97.5	109.7	
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	
1811 10	.00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2	
1811 10	.00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2	
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3	
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3	
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	
1911 10	.00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1	
1911 10	.00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1	
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2	
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2	
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30	
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30	
2012 10	.00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7
2012 10	.00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70
2111 10	.00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4	
2111 10	.00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4	
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2	
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2	
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	
2212 10	.00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8
2212 10	.00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08
2312 10	.00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.
2312 10	.00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88
2411 10	.00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2	
2411 10	.00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2	
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0	
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0	
	3.90	4.20	4.50	4.80	5.10	5.40	5.70	6.00	6.30	6.60	6.90	
	3.90	4.20	4.50	4.80	5.10	5.40	5.70	6.00	6.30	6.60	6.90	
2511 10	.00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.	
2511 10	.00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.	
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0	
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0	
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	
2611 10	.00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.	
2611 10	.00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.	
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7	
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7	
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75	
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75	
2712 10	.00	5.89	17.3	33.1	52.9	76.6	104.2	135.8	171.4	211.1	255.2	303.8
2712 10	.00	5.89	17.3	33.1	52.9	76.6	104.2	135.8	171.4	211.1	255.2	303.8
	.00	4.95	10.4	16.4	22.8	29.8	37.2	45.2	53.6	62.7	72.3	82.6
	.00	4.95	10.4	16.4	22.8	29.8	37.2	45.2	53.6	62.7	72.3	82.6
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50
2811 10	.00	2.3	3.2	3.9	4.8	11.7	32.7	63.9	104.2	152.7	208.8	
2811 10	.00	2.3	3.2	3.9	4.8	11.7	32.7	63.9	104.2	152.7	208.8	
	.00	1.27	1.27	1.27	1.27	8.51	18.7	29.1	39.5	50.2	60.9	
	.00	1.27	1.27	1.27	1.27	8.51	18.7	29.1	39.5	50.2	60.9	
	2.27	3.27	3.70	4.04	4.64	5.00	5.50	6.00	6.50	7.00	7.50	
	2.27	3.27	3.70	4.04	4.64	5.00	5.50	6.00	6.50	7.00	7.50	
29 8 10	.00	4.99	15.8	30.9	49.8	72.2	97.7	126.1				
29 8 10	.00	4.99	15.8	30.9	49.8	72.2	97.7	126.1				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
3012 10	.00	0.11	0.73	1.40	10.1	41.3	96.0	170.1	261.2	367.3	487.6	621.3
3012 10	.00	0.11	0.73	1.40	10.1	41.3	96.0	170.1	261.2	367.3	487.6	621.3
	.00	0.22	0.57	0.57	10.0	27.9	49.1	70.2	91.3	112.5	133.6	154.8
	.00	0.22	0.57	0.57	10.0	27.9	49.1	70.2	91.3	112.5	133.6	154.8
	1.84	2.00	2.50	3.01	3.51	4.01	4.51	5.01	5.51	6.01	6.51	7.01
	1.84	2.00	2.50	3.01	3.51	4.01	4.51	5.01	5.51	6.01	6.51	7.01
3112 10	.00	0.69	2.10	4.20	4.65	8.88	27.4	56.3	93.7	138.8	191.0	249.4
3112 10	.00	0.69	2.10	4.20	4.65	8.88	27.4	56.3	93.7	138.8	191.0	249.4
	.00	0.33	1.62	1.92	1.92	6.73	16.6	26.5	36.5	46.5	56.5	66.5
	.00	0.33	1.62	1.92	1.92	6.73	16.6	26.5	36.5	46.5	56.5	66.5
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50
3211 10	.00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1	
3211 10	.00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1	
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4	
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4	
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29	
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29	
3312 10	.00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5
3312 10	.00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67
3412 10	.00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7
3412 10	.00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59
35 5 10	.00	5.20	16.4	32.2	52.0							
35 5 10	.00	5.20	16.4	32.2	52.0							
	.00	36.0	72.0	108.0	144.0							
	.00	36.0	72.0	108.0	144.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
36 5 10	.00	46.9	132.7	243.9	375.5							
36 5 10	.00	46.9	132.7	243.9	375.5							
	.00	50.4	100.8	151.2	201.6							
	.00	50.4	100.8	151.2	201.6							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
3710 10	.00	4.44	28.0	82.5	177.2	320.9	521.2	784.2	1105.	1476.		
3710 10	.00	4.44	28.0	82.5	177.2	320.9	521.2	784.2	1105.	1476.		
	.00	12.1	48.4	109.0	193.8	302.7	435.9	589.0	744.0	899.0		
	.00	12.1	48.4	109.0	193.8	302.7	435.9	589.0	744.0	899.0		
	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30		
	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30		
3812 10	.00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2
3812 10	.00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
39 5 10	.00	21.5	68.1	133.5	215.2							
39 5 10	.00	21.5	68.1	133.5	215.2							
	.00	47.7	95.4	143.1	190.8							
	.00	47.7	95.4	143.1	190.8							

	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
40 8 10	.00	8.78	27.8	54.4	87.7	127.1	172.0	222.1				
40 8 10	.00	8.78	27.8	54.4	87.7	127.1	172.0	222.1				
	.00	33.0	66.0	99.0	132.0	165.0	198.0	231.0				
	.00	33.0	66.0	99.0	132.0	165.0	198.0	231.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
41 4 10	.00	104.9	331.5	649.9								
41 4 10	.00	104.9	331.5	649.9								
	.00	97.5	195.0	292.5								
	.00	97.5	195.0	292.5								
	8.00	8.50	9.00	9.50								
	8.00	8.50	9.00	9.50								
4210 10	.00	3.67	24.6	74.1	149.0	244.7	359.2	491.0	672.5	962.7		
4210 10	.00	3.67	24.6	74.1	149.0	244.7	359.2	491.0	672.5	962.7		
	.00	6.58	26.7	60.0	93.7	127.5	161.3	195.2	286.5	410.5		
	.00	6.58	26.7	60.0	93.7	127.5	161.3	195.2	286.5	410.5		
	2.11	2.91	3.71	4.51	5.31	6.11	6.91	7.71	8.51	9.31		
	2.11	2.91	3.71	4.51	5.31	6.11	6.91	7.71	8.51	9.31		
4310 10	.00	16.7	73.2	165.8	289.1	439.2	613.8	811.2	1049.	1349.		
4310 10	.00	16.7	73.2	165.8	289.1	439.2	613.8	811.2	1049.	1349.		
	.00	44.3	115.4	195.4	275.7	356.1	436.6	517.1	648.7	799.8		
	.00	44.3	115.4	195.4	275.7	356.1	436.6	517.1	648.7	799.8		
	2.18	2.98	3.78	4.58	5.38	6.18	6.98	7.78	8.58	9.38		
	2.18	2.98	3.78	4.58	5.38	6.18	6.98	7.78	8.58	9.38		
44 8 10	.00	11.4	64.1	156.2	281.5	436.8	629.8	904.6				
44 8 10	.00	11.4	64.1	156.2	281.5	436.8	629.8	904.6				
	.00	10.5	34.5	61.0	88.1	115.8	155.0	215.7				
	.00	10.5	34.5	61.0	88.1	115.8	155.0	215.7				
	3.59	4.39	5.19	5.99	6.79	7.59	8.39	9.19				
	3.59	4.39	5.19	5.99	6.79	7.59	8.39	9.19				
45 8 10	.00	9.51	30.0	58.9	94.9	137.5	186.1	240.4				
45 8 10	.00	9.51	30.0	58.9	94.9	137.5	186.1	240.4				
	.00	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	.00	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
46 8 10	.00	5.06	16.0	31.3	50.5	73.2	99.0	127.9				
46 8 10	.00	5.06	16.0	31.3	50.5	73.2	99.0	127.9				
	.00	54.2	108.4	162.6	216.8	271.0	325.2	379.4				
	.00	54.2	108.4	162.6	216.8	271.0	325.2	379.4				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
4712 10	.00	3.00	13.5	24.4	34.9	70.1	125.6	198.6	291.4	396.2	527.0	650.9
4712 10	.00	3.00	13.5	24.4	34.9	70.1	125.6	198.6	291.4	396.2	527.0	650.9
	.00	5.84	8.72	13.3	18.3	34.1	54.9	76.0	97.1	118.2	139.3	160.5
	.00	5.84	8.72	13.3	18.3	34.1	54.9	76.0	97.1	118.2	139.3	160.5
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
48 5 10	.00	14.0	44.1	86.4	139.3							
48 5 10	.00	14.0	44.1	86.4	139.3							
	.00	43.5	87.0	130.5	174.0							
	.00	43.5	87.0	130.5	174.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
49 8 10	.00	3.32	10.5	20.6	33.1	48.0	65.0	83.9				
49 8 10	.00	3.32	10.5	20.6	33.1	48.0	65.0	83.9				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
5011 10	.00	6.20	12.4	25.0	33.6	46.0	55.7	86.9	102.5	145.1	197.8	
5011 10	.00	6.20	12.4	25.0	33.6	46.0	55.7	86.9	102.5	145.1	197.8	
	.00	5.08	7.96	12.8	14.4	14.4	14.7	22.9	35.0	47.2	59.6	
	.00	5.08	7.96	12.8	14.4	14.4	14.7	22.9	35.0	47.2	59.6	
	2.08	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
	2.08	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
51 8 10	.00	16.5	46.8	86.0	132.4	185.0	243.2	306.5				
51 8 10	.00	16.5	46.8	86.0	132.4	185.0	243.2	306.5				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
5212 10	.00	1.20	2.00	2.40	5.60	9.60	12.5	20.1	45.6	84.7	135.2	196.0
5212 10	.00	1.20	2.00	2.40	5.60	9.60	12.5	20.1	45.6	84.7	135.2	196.0
	.00	1.91	3.14	3.53	3.53	3.53	3.53	10.5	23.7	37.1	50.4	65.8
	.00	1.91	3.14	3.53	3.53	3.53	3.53	10.5	23.7	37.1	50.4	65.8
	2.30	3.10	3.50	3.80	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.30	3.10	3.50	3.80	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
53 5 10	.00	28.8	81.3	149.4	230.0							
53 5 10	.00	28.8	81.3	149.4	230.0							
	.00	52.5	105.0	157.5	210.0							
	.00	52.5	105.0	157.5	210.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
5612 10	.00	1.50	3.60	6.00	7.20	9.90	12.3	18.6	43.8	88.6	148.6	222.1
5612 10	.00	1.50	3.60	6.00	7.20	9.90	12.3	18.6	43.8	88.6	148.6	222.1
	0.0	0.78	2.55	3.5	3.5	3.5	3.5	9.51	24.8	41.7	58.5	75.3
	0.0	0.78	2.55	3.5	3.5	3.5	3.5	9.51	24.8	41.7	58.5	75.3
	2.67	3.00	3.50	3.87	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.67	3.00	3.50	3.87	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
57 5 10	.00	18.1	51.1	93.9	144.6							
57 5 10	.00	18.1	51.1	93.9	144.6							
	.00	33.0	66.0	99.0	132.0							
	.00	33.0	66.0	99.0	132.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
59 8 10	.00	11.5	36.5	71.5	115.3	167.0	226.0	291.9				
59 8 10	.00	11.5	36.5	71.5	115.3	167.0	226.0	291.9				
	.00	20.0	40.0	60.0	80.0	100.0	120.0	140.0				
	.00	20.0	40.0	60.0	80.0	100.0	120.0	140.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
6011 10	.00	0.65	0.90	1.00	3.00	17.9	72.0	154.5	260.9	388.9	536.5	
6011 10	.00	0.65	0.90	1.00	3.00	17.9	72.0	154.5	260.9	388.9	536.5	
	.00	0.55	0.76	1.1	1.1	18.5	46.5	74.6	102.6	130.7	158.7	
	.00	0.55	0.76	1.1	1.1	18.5	46.5	74.6	102.6	130.7	158.7	
	2.73	3.33	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
	2.73	3.33	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
61 8 10	.00	8.52	24.1	44.2	68.1	95.2	125.1	157.7				
61 8 10	.00	8.52	24.1	44.2	68.1	95.2	125.1	157.7				
	.00	11.2	22.4	33.6	44.8	56.0	67.2	78.4				
	.00	11.2	22.4	33.6	44.8	56.0	67.2	78.4				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				

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          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
62 5 10    .00  19.7  62.1 121.7 196.3
62 5 10    .00  19.7  62.1 121.7 196.3
           .00  43.5  87.0 130.5 174.0
           .00  43.5  87.0 130.5 174.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
6310 10    .00   .69  5.77  22.1  59.2 114.9 186.3 272.1 371.4 483.5
6310 10    .00   .69  5.77  22.1  59.2 114.9 186.3 272.1 371.4 483.5
           .00  5.22  27.1  81.8 175.6 271.8 369.4 468.2 568.4 669.9
           .00  5.22  27.1  81.8 175.6 271.8 369.4 468.2 568.4 669.9
          4.62  4.92  5.22  5.52  5.82  6.12  6.42  6.72  7.02  7.32
          4.62  4.92  5.22  5.52  5.82  6.12  6.42  6.72  7.02  7.32
64 8 10    .00  9.33  29.5  57.8  93.2 135.0 182.7 236.0
64 8 10    .00  9.33  29.5  57.8  93.2 135.0 182.7 236.0
           .00  27.0  54.0  81.0 108.0 135.0 162.0 189.0
           .00  27.0  54.0  81.0 108.0 135.0 162.0 189.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
65 8 10    .00  23.4  66.2 121.7 187.3 261.8 344.2 433.7
65 8 10    .00  23.4  66.2 121.7 187.3 261.8 344.2 433.7
           .00  30.8  61.6  92.4 123.2 154.0 184.8 215.6
           .00  30.8  61.6  92.4 123.2 154.0 184.8 215.6
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
66 9 10    .00  2.47  14.2  50.7 132.6 250.8 399.9 576.6 779.1
66 9 10    .00  2.47  14.2  50.7 132.6 250.8 399.9 576.6 779.1
           .00  4.06  15.8  50.8 101.7 153.5 205.4 257.4 309.4
           .00  4.06  15.8  50.8 101.7 153.5 205.4 257.4 309.4
          2.43  3.23  4.03  4.83  5.63  6.43  7.23  8.03  8.83
          2.43  3.23  4.03  4.83  5.63  6.43  7.23  8.03  8.83
67 9 10    .00  44.4 141.3 279.2 453.4 661.5 901.9 1173. 1474.
67 9 10    .00  44.4 141.3 279.2 453.4 661.5 901.9 1173. 1474.
           .00  76.4 154.3 233.7 314.7 397.1 481.2 566.6 652.4
           .00  76.4 154.3 233.7 314.7 397.1 481.2 566.6 652.4
          8.00  8.30  8.60  8.90  9.20  9.50  9.80 10.10 10.40
          8.00  8.30  8.60  8.90  9.20  9.50  9.80 10.10 10.40
68 8 10    .00  13.5  42.7  83.7 135.0 195.5 264.6 341.8
68 8 10    .00  13.5  42.7  83.7 135.0 195.5 264.6 341.8
           .00  23.0  46.0  69.0  92.0 115.0 138.0 161.0
           .00  23.0  46.0  69.0  92.0 115.0 138.0 161.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
6910 10    .00  3.84  27.5  72.8 136.7 217.3 312.9 422.3 544.7 679.4
6910 10    .00  3.84  27.5  72.8 136.7 217.3 312.9 422.3 544.7 679.4
           .00  12.4  48.1  90.6 135.0 180.2 225.6 270.9 316.4 361.8
           .00  12.4  48.1  90.6 135.0 180.2 225.6 270.9 316.4 361.8
          2.82  3.32  3.82  4.32  4.82  5.32  5.82  6.32  6.82  7.32
          2.82  3.32  3.82  4.32  4.82  5.32  5.82  6.32  6.82  7.32
70 4 10    .00 158.9 457.0 853.3
70 4 10    .00 158.9 457.0 853.3
           .00 132.8 271.0 414.8
           .00 132.8 271.0 414.8
          8.00  8.50  9.00  9.50
          8.00  8.50  9.00  9.50
7111 10    .00  14.2  72.6 195.5 372.6 595.4 859.3 1161. 1499. 1916. 2496.
7111 10    .00  14.2  72.6 195.5 372.6 595.4 859.3 1161. 1499. 1916. 2496.
           .00  12.1  46.4  91.6 138.1 184.5 231.0 277.6 324.1 419.1 543.1
           .00  12.1  46.4  91.6 138.1 184.5 231.0 277.6 324.1 419.1 543.1
          1.30  2.10  2.90  3.70  4.50  5.30  6.10  6.90  7.70  8.50  9.30
          1.30  2.10  2.90  3.70  4.50  5.30  6.10  6.90  7.70  8.50  9.30
72 5 10    .00  6.74  21.3  41.7  67.3
72 5 10    .00  6.74  21.3  41.7  67.3
           .00  21.0  42.0  63.0  84.0
           .00  21.0  42.0  63.0  84.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
73 8 10    .00  22.8  64.5 118.5 182.5 255.0 335.2 422.4
73 8 10    .00  22.8  64.5 118.5 182.5 255.0 335.2 422.4
           .00  30.0  60.0  90.0 120.0 150.0 180.0 210.0
           .00  30.0  60.0  90.0 120.0 150.0 180.0 210.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
74 5 10    .00  12.6  39.7  77.9 125.5
74 5 10    .00  12.6  39.7  77.9 125.5
           .00  52.5 105.0 157.5 210.0
           .00  52.5 105.0 157.5 210.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
75 8 10    .00  7.60  21.5  39.5  60.8  85.0 111.7 140.8
75 8 10    .00  7.60  21.5  39.5  60.8  85.0 111.7 140.8
           .00  10.0  20.0  30.0  40.0  50.0  60.0  70.0
           .00  10.0  20.0  30.0  40.0  50.0  60.0  70.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
76 8 10    .00  5.77  18.2  35.8  57.7  83.5 113.0 146.0
76 8 10    .00  5.77  18.2  35.8  57.7  83.5 113.0 146.0
           .00  10.0  20.0  30.0  40.0  50.0  60.0  70.0
           .00  10.0  20.0  30.0  40.0  50.0  60.0  70.0
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
77 9 10    .00  30.0 108.5 222.2 365.9 536.8 732.7 952.1 1194.
77 9 10    .00  30.0 108.5 222.2 365.9 536.8 732.7 952.1 1194.
           .00  81.6 177.6 273.6 369.6 465.6 561.6 657.6 753.6
           .00  81.6 177.6 273.6 369.6 465.6 561.6 657.6 753.6
          4.82  5.12  5.42  5.72  6.02  6.32  6.62  6.92  7.22
          4.82  5.12  5.42  5.72  6.02  6.32  6.62  6.92  7.22
78 5 10    .00  6.78  21.4  42.0  67.7
78 5 10    .00  6.78  21.4  42.0  67.7
           .00  15.0  30.0  45.0  60.0
           .00  15.0  30.0  45.0  60.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
79 5 10    .00  6.78  21.4  42.0  67.7
79 5 10    .00  6.78  21.4  42.0  67.7
           .00  15.0  30.0  45.0  60.0
           .00  15.0  30.0  45.0  60.0
          8.00  8.30  8.60  8.90  9.20
          8.00  8.30  8.60  8.90  9.20
8010 10    .00   .42  2.45  6.26  12.0  19.5  28.4  38.8  50.4  63.2
8010 10    .00   .42  2.45  6.26  12.0  19.5  28.4  38.8  50.4  63.2
           .00  6.40  22.2  42.1  65.8  89.8 113.8 137.8 161.8 185.8
           .00  6.40  22.2  42.1  65.8  89.8 113.8 137.8 161.8 185.8
          3.50  3.90  4.30  4.70  5.10  5.50  5.90  6.30  6.70  7.10
          3.50  3.90  4.30  4.70  5.10  5.50  5.90  6.30  6.70  7.10
8112 10    .00  3.10  9.30  12.0  21.6  26.4  30.0  43.7  69.0 101.2 139.4 181.8
8112 10    .00  3.10  9.30  12.0  21.6  26.4  30.0  43.7  69.0 101.2 139.4 181.8
           .00   5.7   7.2   7.2   7.2   7.2   7.2  14.8  25.7  36.7  47.6  58.6
           .00   5.7   7.2   7.2   7.2   7.2   7.2  14.8  25.7  36.7  47.6  58.6
          2.05  2.50  3.00  3.50  4.00  4.50  5.00  5.50  6.00  6.50  7.00  7.50
          2.05  2.50  3.00  3.50  4.00  4.50  5.00  5.50  6.00  6.50  7.00  7.50
82 1 10    .00
82 1 10    .00
           .00
           .00
          8.00
          8.00
```

```
691382251 238 1382060600.5 1% 360.0011 0.9 KAHIBAH CREEK MBKWKS00006666 0 0 0 0
  60003  6 0.120   0   00100.1 5.0 0.25                              11
|37oo+       813464750           -0.5 0.505
 3679x@+*  13 8 8 7363238321110474650462218          0 1 005
 1   0.50 0 1100                 0 1
 2   0.51 0      1100            0     3   26                 300. 13 1
 3   0.52 0 3111           4     0   2   26                   308.
 4   0.53 0 4111 3111    3 5     0                            210.
 5   0.64 0 5111 4111    4 6     0    15   12                 108.
 6   0.75 0 6111 5111    5 7     0    14    2     8   80      293.  8
 7   0.86 0 7111 6111    6 8     0     9   32                  56.
 8  1.065 034111 7111    713     0   6 9 80 3                  49.
 9  1.290 0             1        0   812  329   710 3231      140.
10  1.790 0             2        0   911 3128                       6
11  1.840 0             3        0  1038 2846    12   30
12  1.581 0             4        0  1113 30 4   932 29 5
13  1.301 0 811134111    816     0  1214  4 6                  70.
14  1.210 0             5        0  1315  611   617  210
15  3.700 0             6        0   518 1213  14   11
16  1.350 0 9111 8111   1317     0  3233 71 8                 130.
17  1.500 010111 9111   1618     0  1419 10 9                 230.  7
18  1.730 01111110111   1722  200  15   13     19   15        155.  3
19  3.600 0             7        0  1720  914  3318  715
20  1.850 01311111100   1821     0  3325 3316  19   14        335.
21  1.900 01510013111   2030     0  3529 3725                 305.
22  1.850 01211111011   1823  260    25   17                   70.
23  1.870 01610012100   2227     0  2426 2324  25   18        180.
24  4.300 0             8        0  2523 1923   28   21
25  3.870 014111          29     0  2024 1619  2223 1718      312.
26  1.900 01601112011   2227     0  23   24                   300.
27  2.000 0     16111   23  26   0    28   22                 108.  4
28  4.300 0             9        0  2729 2220  24   21
29  4.000 01501114111   2530     0  21   25    28   20        120.  5
30  2.300 01711115111   29  21   0                            300.  1
31  2.500 0     17111            0 1
32  1.500 018111          36  380  1216  571    34   35       470.
33  3.880 0             1        0  3419 34 7  1620  833
34  3.140 0             2        0  3235 3538  3633 3634
35  3.340 0             3        0  3440 3840  3721 3937
36  2.300 0     18001   32       0  3834 4136    37   81      130.
37  2.400 0     19110   38       0  3635 8139    39   42      195.
38  2.200 01911018110   3237     0  1142 4647  3936 4541      740.
39  2.410 0             4        0  3740 4243    38   45
40  2.420 0             5        0  3941 4344  35   40             12
41  3.590 0             6        0  40   44                         11
42  2.500 026111          43     0  38   47                   185.
43  2.550 02711126111   4244     0    45   48                 245.
44  2.750 0     27111   43       0    45   72    46   50      130.
45  3.710 0             7        0  4347 4849  44   72
46  2.800 022111          47     0  4450 5052                 260.
47  2.850 02311122111   4648     0  4549 4951                 290.
48  2.900 02411123111   4754     0  53   53                   175.
49  4.310 0             8        0  4753 5174  5150 5473
50  2.900 028111          51     0  46   52    49   73         95.
51  3.000 02911128111   5052     0    49   54                  90.
52  3.200 0     29111   51       0    53   75    57   56       95.
53  3.590 0             9        0  4956 7455  5248 7553
54  2.950 02511124111   4860  610  55   57                    130. 10
55  3.110 0             1        0  5662 7758  5954 7857
56  3.591 0             2        0  5355 5577  5857 5976
57  3.250 030111          58     0  52   56    56   76        105.
58  3.350 03111130111   5759     0    56   59                 105.
59  3.450 0     31111   58       0    55   78    64   60      105.
60  4.000 0     25001   54       0    61   61    67   65      270.
61  3.000 0     25110   54       0  6062 6162    67   66      290.
62  3.111 0             3        0  5568 5867  6163 6263
63  4.620 0             4        0  6265 6364    64   79
64  3.550 032111          65     0  59   60    63   79         45.
65  3.600 03311132111   6466     0  63   64                   130.
66  3.650 0     33111   65       0                            340.  9
67  3.010 0             5        0  6069 6568  6168 6669
68  3.020 0             6        0  6769 6970  62   67              2
69  8.000 0             7        0  67   68    68   70
 1 5 3      0   1.7   2.0   8.8   8.8
         1.29   2.0   3.0   4.0   8.0
 2 6 3      0   3.6   4.8   9.8  16.0  16.0
         1.65   2.0   3.0   4.0   5.0   8.0
 3 6 3      0   2.4   4.6   9.4  15.4  15.4
         1.85   2.0   3.0   4.0   5.0   8.0
 4 5 3      0   2.5   2.6  10.3  10.3
          1.6   2.0   3.0   4.0   8.0
 5 3 3      0   3.9   10.
          2.0   4.0   5.0
 6 3 3      0   1.1   5.3
          2.0   4.0   5.0
 7 3 3      0   9.4  39.9
          3.6   4.0   4.5
 8 2 3      0  15.9
          4.0   5.0
 9 5 3      0   4.2   5.1   5.5   6.4
          4.0   6.0   8.0  10.0  12.0
10 3 3      0   0.2  22.3
          3.8   4.0   4.8
11 5 3      0   1.3   5.4  19.4  22.4
          2.5   3.0   4.0   5.0   6.0
12 6 3      0   1.8  13.2  29.7  44.8  61.0
          3.6   4.0   5.0   6.0   7.0   8.0
13 4 3      0   4.3   9.0   9.0
          2.1   3.0   4.0   8.0
14 5 3      0   4.1  10.4  13.2  13.2
          2.2   3.0   4.0   5.0   8.0
15 8 3      0   0.2   0.3   1.0   1.3   1.4   1.6   2.0
         3.64   4.0   5.0   6.0   7.0   8.0   9.0  10.0
16 5 3      0   0.8   4.2  25.5  27.4
          3.7   4.0   5.0   6.0   6.2
17 3 3      0  14.3  14.3
          5.0   5.6   6.6
18 4 3      0   3.2  22.1  22.1
         4.82   5.0   5.8   8.5
19 5 3      0   3.8  16.3  25.4  25.4
          3.1   4.0   5.0   5.1   8.0
20 4 3      0   1.0  22.0  22.0
         4.82   5.0   5.8   8.0
21 8 3      0   2.6  41.6  69.3  70.0  71.6  73.2  73.6
          3.1   4.0   5.0   6.0   7.0   8.0   9.0  10.0
22 7 3      0   4.8  24.6  27.8  29.7  32.0  32.3
          4.6   5.0   6.0   7.0   8.0   9.0  10.0
23 5 3      0   0.5   7.5  10.1  12.7
          2.2   3.0   4.0   5.0   6.0
24 5 3      0   8.1  12.0  14.5  15.1
          3.1   4.0   5.0   6.0   7.0
25 6 3      0   9.7  23.1  26.7  28.1  29.5
          5.0   6.0   7.0   8.0   9.0  10.0
  116     1.0   1.0  10.0  20.0  48.0  53.0  58.5  57.0  50.0  40.0  30.0  20.0
         10.0   3.0   0.5   0.5
           0. 3000.  720.  300.  420.  300.  120.  180.  240.  420.  600.  960.
        1860. 1980. 2700.50080.
  218     0.5   0.6   1.6   6.0  16.8  17.0  16.6  15.0  13.4  10.6   9.7   7.4
          6.7   4.5   2.9   1.1   0.5   0.5
           0. 1020.  180.  360.  840.   60.   60.  240.  120.  360.  720.  600.
         480.  840. 1440. 1320. 1320.50000.
  3 9     1.0   1.0   1.5   1.0   2.8   2.8   1.0   0.5   0.5
           0. 2700.  420.  180.  360.  180.  600.  300.50000.
```

```
 416      1.0   1.0   8.5  10.0  20.0  21.5  27.0  27.5  18.0  15.0  11.5   6.0
          4.0   1.5   0.5   0.5
          0. 2760.  600.  240.  300.  180.  180.  120.  840.  720.  420. 1740.
        900.  660. 1020.50000.
 5 8      1.0   0.5   3.0   3.5   3.0   1.0   0.5   0.5
          0. 3300. 1200.  600. 1140. 2340. 1380.50000.
 616      0.5   0.6   3.5   5.9   9.4   9.7   9.8   9.9   9.8   9.1   8.9   7.9
          4.4   1.8   0.5   0.5
          0. 3000.  600.  240.  360.  120.  120.   60.   60.  240.  120.  840.
       1920. 2160. 2520.50000.
 7 9      1.0   0.5   1.0   1.5   3.5   3.5   1.0   0.5   0.5
          0. 2460.  660.  480.  420.  240.  960. 1140.50000.
 815      1.0   0.5   7.0   6.0  14.0  13.0   6.0   4.5   3.0   3.0   2.0   2.0
          1.5   0.5   0.5
          0. 2400. 1020.  240.  300.  300.  540. 1020.  480.  600.  360.  600.
        360. 1620.50000.
 917      0.5   0.5   5.1  10.3  20.7  21.9  21.4  18.3  14.6  13.8  10.2   9.3
          7.2   4.3   2.7   0.5   0.5
          0. 1200.  600.  360.  480.  120.  120.  360.  480.  240.  960.  360.
        600. 1680.  720. 3120.50000.
1017      0.5   0.6   5.4  12.1  18.0  24.3  24.4  23.7  22.3  17.0  12.2  10.8
          4.7   4.3   1.2   0.5   0.5
          0.  960.  840.  240.  360.  600.   60.   60.  120.  360.  600.  480.
       2040.  480. 1680. 1320.50000.
1120      0.5   0.8   5.7   5.5  13.0  13.3  13.3  13.1  11.6  10.1   9.6   7.1
          6.9   6.4   4.3   4.3   2.9   1.6   0.5   0.5
          0. 3000.  600.  240.  360.   60.   60.  240.  240.  720.  360.  720.
        240.  240.  720.  360. 1080.  840. 1920.50000.
1218      0.5   0.6   3.8   4.3   8.7   9.2   9.4   6.4   5.3   3.6   3.1   2.9
          2.3   2.2   1.6   0.9   0.5   0.5
          0. 2880.  480.  240.  360.  120.  120.  360.  120.  360.  360.  480.
        360.  600.  480. 1920.  600.50000.
13 9     0.09  0.07  0.99  1.55  1.64  1.55  0.99  0.07  0.47
          0. 1800. 4500. 7200. 3600. 3600. 7200.10800.10800.
  111 10  .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
  111 10  .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
          .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
          .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
 1      -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
       -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
  211 10  .00  10.8  34.1  66.9 107.9 156.2 211.4 273.1 340.8 414.4 493.6
  211 10  .00  10.8  34.1  66.9 107.9 156.2 211.4 273.1 340.8 414.4 493.6
          .00  44.0  88.0 132.0 176.0 220.0 264.0 308.0 352.0 396.0 440.0
          .00  44.0  88.0 132.0 176.0 220.0 264.0 308.0 352.0 396.0 440.0
         8.00 8.20  8.40  8.60  8.80  9.00  9.20  9.40  9.60  9.80 10.00
         8.00 8.20  8.40  8.60  8.80  9.00  9.20  9.40  9.60  9.80 10.00
 3 5 10  .00  2.28  8.75  20.1  35.9
 3 5 10  .00  2.28  8.75  20.1  35.9
          .00  8.41  20.7  37.2  53.7
          .00  8.41  20.7  37.2  53.7
         3.79 4.29  4.79  5.29  5.79
         3.79 4.29  4.79  5.29  5.79
 412 10  .00   .84  5.33  13.2  23.7  36.6  51.6  68.6  87.6 108.3 130.8 154.9
 412 10  .00   .84  5.33  13.2  23.7  36.6  51.6  68.6  87.6 108.3 130.8 154.9
          .00 4.77  17.1  30.1  43.2  56.2  69.2  82.3  95.3 108.4 121.5 134.5
          .00 4.77  17.1  30.1  43.2  56.2  69.2  82.3  95.3 108.4 121.5 134.5
         1.58 2.08  2.58  3.08  3.58  4.08  4.58  5.08  5.58  6.08  6.58  7.08
         1.58 2.08  2.58  3.08  3.58  4.08  4.58  5.08  5.58  6.08  6.58  7.08
 512 10  .00   .89  5.62  16.0  31.1  50.3  73.0  99.0 128.1 160.2 195.1 232.7
 512 10  .00   .89  5.62  16.0  31.1  50.3  73.0  99.0 128.1 160.2 195.1 232.7
          .00 8.49  33.9  70.7 107.7 144.7 181.8 218.8 255.9 292.9 330.0 367.1
          .00 8.49  33.9  70.7 107.7 144.7 181.8 218.8 255.9 292.9 330.0 367.1
         2.36 2.86  3.36  3.86  4.36  4.86  5.36  5.86  6.36  6.86  7.36  7.86
         2.36 2.86  3.36  3.86  4.36  4.86  5.36  5.86  6.36  6.86  7.36  7.86
 612 10  .00   .76  4.83  14.2  31.1  56.4  88.5 126.7 170.4 219.4 273.3 331.8
 612 10  .00   .76  4.83  14.2  31.1  56.4  88.5 126.7 170.4 219.4 273.3 331.8
          .00 3.82  15.3  34.4  63.7  96.2 128.7 161.2 193.7 226.2 258.7 291.2
          .00 3.82  15.3  34.4  63.7  96.2 128.7 161.2 193.7 226.2 258.7 291.2
         2.30 2.80  3.30  3.80  4.30  4.80  5.30  5.80  6.30  6.80  7.30  7.80
         2.30 2.80  3.30  3.80  4.30  4.80  5.30  5.80  6.30  6.80  7.30  7.80
 7 7 10  .00  4.94  26.8  62.2 108.8 165.2 230.6
 7 7 10  .00  4.94  26.8  62.2 108.8 165.2 230.6
          .00 32.5  99.9 167.4 234.9 302.4 369.9
          .00 32.5  99.9 167.4 234.9 302.4 369.9
         3.88 4.38  4.88  5.38  5.88  6.38  6.88
         3.88 4.38  4.88  5.38  5.88  6.38  6.88
 8 7 10  .00  15.1  47.6  93.4 150.6 218.1 295.2
 8 7 10  .00  15.1  47.6  93.4 150.6 218.1 295.2
          .00 37.5  75.0 112.5 150.0 187.5 225.0
          .00 37.5  75.0 112.5 150.0 187.5 225.0
         8.00 8.30  8.60  8.90  9.20  9.50  9.80
         8.00 8.30  8.60  8.90  9.20  9.50  9.80
 9 7 10  .00  43.2 136.4 267.4 431.1 624.4 845.0
 9 7 10  .00  43.2 136.4 267.4 431.1 624.4 845.0
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          .00 73.5 147.0 220.5 294.0 367.5 441.0
         8.00 8.30  8.60  8.90  9.20  9.50  9.80
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10 4 10  .00  85.5 270.2 529.6
10 4 10  .00  85.5 270.2 529.6
          .00 86.0 172.0 258.0
          .00 86.0 172.0 258.0
         8.00 8.40  8.80  9.20
         8.00 8.40  8.80  9.20
1111 10  .00   .67  4.61  14.5  29.1  47.7  69.8  95.1 123.5 154.8 188.8
1111 10  .00   .67  4.61  14.5  29.1  47.7  69.8  95.1 123.5 154.8 188.8
          .00 2.11  10.1  22.1  34.1  46.1  58.1  70.1  82.1  94.1 106.1
          .00 2.11  10.1  22.1  34.1  46.1  58.1  70.1  82.1  94.1 106.1
         3.70 3.90  4.10  4.30  4.50  4.70  4.90  5.10  5.30  5.50  5.70
         3.70 3.90  4.10  4.30  4.50  4.70  4.90  5.10  5.30  5.50  5.70
1211 10  .00   .65  4.04  10.2  18.7  29.0  41.1  54.9  70.2  86.9 105.1
1211 10  .00   .65  4.04  10.2  18.7  29.0  41.1  54.9  70.2  86.9 105.1
          .00 4.00  15.0  27.0  39.0  51.0  63.0  75.0  87.0  99.0 111.0
          .00 4.00  15.0  27.0  39.0  51.0  63.0  75.0  87.0  99.0 111.0
         3.70 3.90  4.10  4.30  4.50  4.70  4.90  5.10  5.30  5.50  5.70
         3.70 3.90  4.10  4.30  4.50  4.70  4.90  5.10  5.30  5.50  5.70
1311 10  .00  4.93  16.0  32.0  52.8  78.2 108.2 142.8 181.7 224.7 271.5
1311 10  .00  4.93  16.0  32.0  52.8  78.2 108.2 142.8 181.7 224.7 271.5
          .00 15.5  32.0  49.5  67.9  87.4 107.8 129.2 150.8 172.4 194.0
          .00 15.5  32.0  49.5  67.9  87.4 107.8 129.2 150.8 172.4 194.0
         4.00 4.30  4.60  4.90  5.20  5.50  5.80  6.10  6.40  6.70  7.00
         4.00 4.30  4.60  4.90  5.20  5.50  5.80  6.10  6.40  6.70  7.00
1411 10  .00   .36  2.26  7.21  20.4  40.4  65.9  96.5 131.7 171.2 214.8
1411 10  .00   .36  2.26  7.21  20.4  40.4  65.9  96.5 131.7 171.2 214.8
          .00 3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
          .00 3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
         3.89 4.09  4.29  4.49  4.69  4.89  5.09  5.29  5.49  5.69  5.89
         3.89 4.09  4.29  4.49  4.69  4.89  5.09  5.29  5.49  5.69  5.89
1511 10  .00  4.47  19.7  43.6  74.5 111.8 154.8 203.2 256.8 315.2 378.4
1511 10  .00  4.47  19.7  43.6  74.5 111.8 154.8 203.2 256.8 315.2 378.4
          .00 14.6  39.0  63.4  87.8 112.2 136.6 161.0 185.4 209.8 234.2
          .00 14.6  39.0  63.4  87.8 112.2 136.6 161.0 185.4 209.8 234.2
         3.80 4.00  4.20  4.40  4.60  4.80  5.00  5.20  5.40  5.60  5.80
         3.80 4.00  4.20  4.40  4.60  4.80  5.00  5.20  5.40  5.60  5.80
1611 10  .00   .82  6.60  20.3  43.8  78.5 126.1 188.7 265.6 354.9 455.7
1611 10  .00   .82  6.60  20.3  43.8  78.5 126.1 188.7 265.6 354.9 455.7
          .00 4.29  20.0  45.7  80.2 122.8 174.6 236.5 299.7 362.8 426.0
          .00 4.29  20.0  45.7  80.2 122.8 174.6 236.5 299.7 362.8 426.0
         3.87 4.07  4.27  4.47  4.67  4.87  5.07  5.27  5.47  5.67  5.87
         3.87 4.07  4.27  4.47  4.67  4.87  5.07  5.27  5.47  5.67  5.87
1711 10  .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
1711 10  .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
          .00 2.71  12.1  24.3  36.5  48.7  60.9  73.1  85.3  97.5 109.7
```

	.00	2.71	12.1	24.3	36.5	48.7	60.9	73.1	85.3	97.5	109.7		
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47		
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47		
1811 10	.00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2		
1811 10	.00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2		
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3		
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3		
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77		
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77		
1911 10	.00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1		
1911 10	.00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1		
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2		
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2		
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30		
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30		
2012 10	.00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7	
2012 10	.00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7	
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8	
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8	
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70	
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70	
2111 10	.00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4		
2111 10	.00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4		
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2		
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2		
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30		
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30		
2212 10	.00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8	
2212 10	.00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8	
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0	
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0	
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08	
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08	
2312 10	.00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.	
2312 10	.00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.	
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7	
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7	
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88	
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88	
2411 10	.00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2		
2411 10	.00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2		
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0		
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0		
	3.90	4.20	4.50	4.80	5.10	5.40	5.70	6.00	6.30	6.60	6.90		
	3.90	4.20	4.50	4.80	5.10	5.40	5.70	6.00	6.30	6.60	6.90		
2511 10	.00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.		
2511 10	.00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.		
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0		
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0		
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00		
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00		
2611 10	.00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.		
2611 10	.00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.		
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7		
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7		
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75		
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75		
2712 10	.00	5.89	17.3	33.1	52.9	76.6	104.2	135.8	171.4	211.1	255.2	303.8	
2712 10	.00	5.89	17.3	33.1	52.9	76.6	104.2	135.8	171.4	211.1	255.2	303.8	
	.00	4.95	10.4	16.4	22.8	29.8	37.2	45.2	53.6	62.7	72.3	82.6	
	.00	4.95	10.4	16.4	22.8	29.8	37.2	45.2	53.6	62.7	72.3	82.6	
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	
2811 10	.00	2.3	3.2	3.9	4.8	11.7	32.7	63.9	104.2	152.7	208.8		
2811 10	.00	2.3	3.2	3.9	4.8	11.7	32.7	63.9	104.2	152.7	208.8		
	.00	1.27	1.27	1.27	1.27	8.51	18.7	29.1	39.5	50.2	60.9		
	.00	1.27	1.27	1.27	1.27	8.51	18.7	29.1	39.5	50.2	60.9		
	2.27	3.27	3.70	4.04	4.64	5.00	5.50	6.00	6.50	7.00	7.50		
	2.27	3.27	3.70	4.04	4.64	5.00	5.50	6.00	6.50	7.00	7.50		
29 8 10	.00	4.99	15.8	30.9	49.8	72.2	97.7	126.1					
29 8 10	.00	4.99	15.8	30.9	49.8	72.2	97.7	126.1					
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0					
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0					
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40					
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40					
3012 10	.00	0.11	0.73	1.40	10.1	41.3	96.0	170.1	261.2	367.3	487.6	621.3	
3012 10	.00	0.11	0.73	1.40	10.1	41.3	96.0	170.1	261.2	367.3	487.6	621.3	
	.00	0.22	0.57	0.57	10.0	27.9	49.1	70.2	91.3	112.5	133.6	154.8	
	.00	0.22	0.57	0.57	10.0	27.9	49.1	70.2	91.3	112.5	133.6	154.8	
	1.84	2.00	2.50	3.01	3.51	4.01	4.51	5.01	5.51	6.01	6.51	7.01	
	1.84	2.00	2.50	3.01	3.51	4.01	4.51	5.01	5.51	6.01	6.51	7.01	
3112 10	.00	0.69	2.10	4.20	4.65	8.88	27.4	56.3	93.7	138.8	191.0	249.4	
3112 10	.00	0.69	2.10	4.20	4.65	8.88	27.4	56.3	93.7	138.8	191.0	249.4	
	.00	0.33	1.62	1.92	1.92	6.73	16.6	26.5	36.5	46.5	56.5	66.5	
	.00	0.33	1.62	1.92	1.92	6.73	16.6	26.5	36.5	46.5	56.5	66.5	
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50	
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50	
3211 10	.00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1		
3211 10	.00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1		
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4		
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4		
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29		
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29		
3312 10	.00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5	
3312 10	.00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5	
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6	
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6	
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67	
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67	
3412 10	.00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7	
3412 10	.00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7	
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2	
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2	
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59	
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59	
35 5 10	.00	5.20	16.4	32.2	52.0								
35 5 10	.00	5.20	16.4	32.2	52.0								
	.00	36.0	72.0	108.0	144.0								
	.00	36.0	72.0	108.0	144.0								
	8.00	8.30	8.60	8.90	9.20								
	8.00	8.30	8.60	8.90	9.20								
36 5 10	.00	46.9	132.7	243.9	375.5								
36 5 10	.00	46.9	132.7	243.9	375.5								
	.00	50.4	100.8	151.2	201.6								
	.00	50.4	100.8	151.2	201.6								
	8.00	8.30	8.60	8.90	9.20								
	8.00	8.30	8.60	8.90	9.20								
3710 10	.00	4.44	28.0	82.5	177.2	320.9	521.2	784.2	1105.	1476.			
3710 10	.00	4.44	28.0	82.5	177.2	320.9	521.2	784.2	1105.	1476.			
	.00	12.1	48.4	109.0	193.8	302.7	435.9	589.0	744.0	899.0			
	.00	12.1	48.4	109.0	193.8	302.7	435.9	589.0	744.0	899.0			
	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30			
	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30			
3812 10	.00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2	
3812 10	.00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2	
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0	
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0	
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00	
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00	
39 5 10	.00	21.5	68.1	133.5	215.2								
39 5 10	.00	21.5	68.1	133.5	215.2								
	.00	47.7	95.4	143.1	190.8								
	.00	47.7	95.4	143.1	190.8								

	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
40 8 10	.00	8.78	27.8	54.4	87.7	127.1	172.0	222.1				
40 8 10	.00	8.78	27.8	54.4	87.7	127.1	172.0	222.1				
	.00	33.0	66.0	99.0	132.0	165.0	198.0	231.0				
	.00	33.0	66.0	99.0	132.0	165.0	198.0	231.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
41 4 10	.00	104.9	331.5	649.9								
41 4 10	.00	104.9	331.5	649.9								
	.00	97.5	195.0	292.5								
	.00	97.5	195.0	292.5								
	8.00	8.50	9.00	9.50								
	8.00	8.50	9.00	9.50								
4210 10	.00	3.67	24.6	74.1	149.0	244.7	359.2	491.0	672.5	962.7		
4210 10	.00	3.67	24.6	74.1	149.0	244.7	359.2	491.0	672.5	962.7		
	.00	6.58	26.7	60.0	93.7	127.5	161.3	195.2	286.5	410.5		
	.00	6.58	26.7	60.0	93.7	127.5	161.3	195.2	286.5	410.5		
	2.11	2.91	3.71	4.51	5.31	6.11	6.91	7.71	8.51	9.31		
	2.11	2.91	3.71	4.51	5.31	6.11	6.91	7.71	8.51	9.31		
4310 10	.00	16.7	73.2	165.8	289.1	439.2	613.8	811.2	1049.	1349.		
4310 10	.00	16.7	73.2	165.8	289.1	439.2	613.8	811.2	1049.	1349.		
	.00	44.3	115.4	195.4	275.7	356.1	436.6	517.1	648.7	799.8		
	.00	44.3	115.4	195.4	275.7	356.1	436.6	517.1	648.7	799.8		
	2.18	2.98	3.78	4.58	5.38	6.18	6.98	7.78	8.58	9.38		
	2.18	2.98	3.78	4.58	5.38	6.18	6.98	7.78	8.58	9.38		
44 8 10	.00	11.4	64.1	156.2	281.5	436.8	629.8	904.6				
44 8 10	.00	11.4	64.1	156.2	281.5	436.8	629.8	904.6				
	.00	10.5	34.5	61.0	88.1	115.8	155.0	215.7				
	.00	10.5	34.5	61.0	88.1	115.8	155.0	215.7				
	3.59	4.39	5.19	5.99	6.79	7.59	8.39	9.19				
	3.59	4.39	5.19	5.99	6.79	7.59	8.39	9.19				
45 8 10	.00	9.51	30.0	58.9	94.9	137.5	186.1	240.4				
45 8 10	.00	9.51	30.0	58.9	94.9	137.5	186.1	240.4				
	.00	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	.00	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
46 8 10	.00	5.06	16.0	31.3	50.5	73.2	99.0	127.9				
46 8 10	.00	5.06	16.0	31.3	50.5	73.2	99.0	127.9				
	.00	54.2	108.4	162.6	216.8	271.0	325.2	379.4				
	.00	54.2	108.4	162.6	216.8	271.0	325.2	379.4				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
4712 10	.00	3.00	13.5	24.4	34.9	70.1	125.6	198.6	291.4	396.2	527.0	650.9
4712 10	.00	3.00	13.5	24.4	34.9	70.1	125.6	198.6	291.4	396.2	527.0	650.9
	.00	5.84	8.72	13.3	18.3	34.1	54.9	76.0	97.1	118.2	139.3	160.5
	.00	5.84	8.72	13.3	18.3	34.1	54.9	76.0	97.1	118.2	139.3	160.5
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
48 5 10	.00	14.0	44.1	86.4	139.3							
48 5 10	.00	14.0	44.1	86.4	139.3							
	.00	43.5	87.0	130.5	174.0							
	.00	43.5	87.0	130.5	174.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
49 8 10	.00	3.32	10.5	20.6	33.1	48.0	65.0	83.9				
49 8 10	.00	3.32	10.5	20.6	33.1	48.0	65.0	83.9				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
5011 10	.00	6.20	12.4	25.0	33.6	46.0	55.7	86.9	102.5	145.1	197.8	
5011 10	.00	6.20	12.4	25.0	33.6	46.0	55.7	86.9	102.5	145.1	197.8	
	.00	5.08	7.96	12.8	14.4	14.4	14.7	22.9	35.0	47.2	59.6	
	.00	5.08	7.96	12.8	14.4	14.4	14.7	22.9	35.0	47.2	59.6	
	2.08	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
	2.08	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
51 8 10	.00	16.5	46.8	86.0	132.4	185.0	243.2	306.5				
51 8 10	.00	16.5	46.8	86.0	132.4	185.0	243.2	306.5				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
5212 10	.00	1.20	2.00	2.40	5.60	9.60	12.5	20.1	45.6	84.7	135.2	196.0
5212 10	.00	1.20	2.00	2.40	5.60	9.60	12.5	20.1	45.6	84.7	135.2	196.0
	.00	1.91	3.14	3.53	3.53	3.53	3.53	10.5	23.7	37.1	50.4	65.8
	.00	1.91	3.14	3.53	3.53	3.53	3.53	10.5	23.7	37.1	50.4	65.8
	2.30	3.10	3.50	3.80	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.30	3.10	3.50	3.80	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
53 5 10	.00	28.8	81.3	149.4	230.0							
53 5 10	.00	28.8	81.3	149.4	230.0							
	.00	52.5	105.0	157.5	210.0							
	.00	52.5	105.0	157.5	210.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
5612 10	.00	1.56	5.70	8.85	12.0	18.0	43.5	88.6	148.6	222.1	306.8	421.6
5612 10	.00	1.56	5.70	8.85	12.0	18.0	43.5	88.6	148.6	222.1	306.8	421.6
	.00	1.83	3.36	3.39	3.39	9.45	24.8	41.6	58.4	75.2	92.0	125.7
	.00	1.83	3.36	3.39	3.39	9.45	24.8	41.6	58.4	75.2	92.0	125.7
	2.36	3.00	3.50	4.00	4.50	5.04	5.50	6.00	6.50	7.00	7.50	8.00
	2.36	3.00	3.50	4.00	4.50	5.04	5.50	6.00	6.50	7.00	7.50	8.00
57 5 10	.00	18.1	51.1	93.9	144.6							
57 5 10	.00	18.1	51.1	93.9	144.6							
	.00	33.0	66.0	99.0	132.0							
	.00	33.0	66.0	99.0	132.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
59 8 10	.00	11.5	36.5	71.5	115.3	167.0	226.0	291.9				
59 8 10	.00	11.5	36.5	71.5	115.3	167.0	226.0	291.9				
	.00	20.0	40.0	60.0	80.0	100.0	120.0	140.0				
	.00	20.0	40.0	60.0	80.0	100.0	120.0	140.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
6012 10	.00	1.30	2.40	3.40	18.1	72.0	154.6	261.1	389.9	536.6	702.6	899.7
6012 10	.00	1.30	2.40	3.40	18.1	72.0	154.6	261.1	389.9	536.6	702.6	899.7
	.00	0.93	1.1	1.1	18.5	46.5	74.6	102.6	130.7	158.7	186.8	227.4
	.00	0.93	1.1	1.1	18.5	46.5	74.6	102.6	130.7	158.7	186.8	227.4
	2.60	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50
	2.60	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50
61 8 10	.00	8.52	24.1	44.2	68.1	95.2	125.1	157.7				
61 8 10	.00	8.52	24.1	44.2	68.1	95.2	125.1	157.7				
	.00	11.2	22.4	33.6	44.8	56.0	67.2	78.4				
	.00	11.2	22.4	33.6	44.8	56.0	67.2	78.4				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				

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          8.00  8.20  8.40  8.60  8.80  9.00  9.20  9.40
62 5 10    .00 19.7  62.1 121.7 196.3
62 5 10    .00 19.7  62.1 121.7 196.3
           .00 43.5  87.0 130.5 174.0
           .00 43.5  87.0 130.5 174.0
          8.00 8.30  8.60  8.90  9.20
          8.00 8.30  8.60  8.90  9.20
6310 10    .00  .69  5.77  22.1  59.2 114.9 186.3 272.1 371.4 483.5
6310 10    .00  .69  5.77  22.1  59.2 114.9 186.3 272.1 371.4 483.5
           .00 5.22  27.1  81.8 175.6 271.8 369.4 468.2 568.4 669.9
           .00 5.22  27.1  81.8 175.6 271.8 369.4 468.2 568.4 669.9
          4.62 4.92  5.22  5.52  5.82  6.12  6.42  6.72  7.02  7.32
          4.62 4.92  5.22  5.52  5.82  6.12  6.42  6.72  7.02  7.32
64 8 10    .00 9.33  29.5  57.8  93.2 135.0 182.7 236.0
64 8 10    .00 9.33  29.5  57.8  93.2 135.0 182.7 236.0
           .00 27.0  54.0  81.0 108.0 135.0 162.0 189.0
           .00 27.0  54.0  81.0 108.0 135.0 162.0 189.0
          8.00 8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00 8.20  8.40  8.60  8.80  9.00  9.20  9.40
65 8 10    .00 23.4  66.2 121.7 187.3 261.8 344.2 433.7
65 8 10    .00 23.4  66.2 121.7 187.3 261.8 344.2 433.7
           .00 30.8  61.6  92.4 123.2 154.0 184.8 215.6
           .00 30.8  61.6  92.4 123.2 154.0 184.8 215.6
          8.00 8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00 8.20  8.40  8.60  8.80  9.00  9.20  9.40
66 9 10    .00 2.47  14.2  50.7 132.6 250.8 399.9 576.6 779.1
66 9 10    .00 2.47  14.2  50.7 132.6 250.8 399.9 576.6 779.1
           .00 4.06  15.8  50.8 101.7 153.5 205.4 257.4 309.4
           .00 4.06  15.8  50.8 101.7 153.5 205.4 257.4 309.4
          2.43 3.23  4.03  4.83  5.63  6.43  7.23  8.03  8.83
          2.43 3.23  4.03  4.83  5.63  6.43  7.23  8.03  8.83
67 9 10    .00 44.4 141.3 279.2 453.4 661.5 901.9 1173. 1474.
67 9 10    .00 44.4 141.3 279.2 453.4 661.5 901.9 1173. 1474.
           .00 76.4 154.3 233.7 314.7 397.1 481.2 566.6 652.4
           .00 76.4 154.3 233.7 314.7 397.1 481.2 566.6 652.4
          8.00 8.30  8.60  8.90  9.20  9.50  9.80 10.10 10.40
          8.00 8.30  8.60  8.90  9.20  9.50  9.80 10.10 10.40
68 8 10    .00 13.5  42.7  83.7 135.0 195.5 264.6 341.8
68 8 10    .00 13.5  42.7  83.7 135.0 195.5 264.6 341.8
           .00 23.0  46.0  69.0  92.0 115.0 138.0 161.0
           .00 23.0  46.0  69.0  92.0 115.0 138.0 161.0
          8.00 8.20  8.40  8.60  8.80  9.00  9.20  9.40
          8.00 8.20  8.40  8.60  8.80  9.00  9.20  9.40
6910 10    .00 3.84  27.5  72.8 136.7 217.3 312.9 422.3 544.7 679.4
6910 10    .00 3.84  27.5  72.8 136.7 217.3 312.9 422.3 544.7 679.4
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          2.82 3.32  3.82  4.32  4.82  5.32  5.82  6.32  6.82  7.32
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70 4 10    .00 158.9 457.0 853.3
70 4 10    .00 158.9 457.0 853.3
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7111 10    .00 14.2  72.6 195.5 372.6 595.4 859.3 1161. 1499. 1916. 2496.
7111 10    .00 14.2  72.6 195.5 372.6 595.4 859.3 1161. 1499. 1916. 2496.
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          1.30 2.10  2.90  3.70  4.50  5.30  6.10  6.90  7.70  8.50  9.30
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72 5 10    .00 6.74  21.3  41.7  67.3
72 5 10    .00 6.74  21.3  41.7  67.3
           .00 21.0  42.0  63.0  84.0
           .00 21.0  42.0  63.0  84.0
          8.00 8.30  8.60  8.90  9.20
          8.00 8.30  8.60  8.90  9.20
73 8 10    .00 22.8  64.5 118.5 182.5 255.0 335.2 422.4
73 8 10    .00 22.8  64.5 118.5 182.5 255.0 335.2 422.4
           .00 30.0  60.0  90.0 120.0 150.0 180.0 210.0
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          8.00 8.20  8.40  8.60  8.80  9.00  9.20  9.40
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74 5 10    .00 12.6  39.7  77.9 125.5
74 5 10    .00 12.6  39.7  77.9 125.5
           .00 52.5 105.0 157.5 210.0
           .00 52.5 105.0 157.5 210.0
          8.00 8.30  8.60  8.90  9.20
          8.00 8.30  8.60  8.90  9.20
75 8 10    .00 7.60  21.5  39.5  60.8  85.0 111.7 140.8
75 8 10    .00 7.60  21.5  39.5  60.8  85.0 111.7 140.8
           .00 10.0  20.0  30.0  40.0  50.0  60.0  70.0
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76 8 10    .00 5.77  18.2  35.8  57.7  83.5 113.0 146.0
76 8 10    .00 5.77  18.2  35.8  57.7  83.5 113.0 146.0
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77 9 10    .00 30.0 108.5 222.2 365.9 536.8 732.7 952.1 1194.
77 9 10    .00 30.0 108.5 222.2 365.9 536.8 732.7 952.1 1194.
           .00 81.6 177.6 273.6 369.6 465.6 561.6 657.6 753.6
           .00 81.6 177.6 273.6 369.6 465.6 561.6 657.6 753.6
          4.82 5.12  5.42  5.72  6.02  6.32  6.62  6.92  7.22
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78 5 10    .00 6.78  21.4  42.0  67.7
78 5 10    .00 6.78  21.4  42.0  67.7
           .00 15.0  30.0  45.0  60.0
           .00 15.0  30.0  45.0  60.0
          8.00 8.30  8.60  8.90  9.20
          8.00 8.30  8.60  8.90  9.20
79 5 10    .00 6.78  21.4  42.0  67.7
79 5 10    .00 6.78  21.4  42.0  67.7
           .00 15.0  30.0  45.0  60.0
           .00 15.0  30.0  45.0  60.0
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          8.00 8.30  8.60  8.90  9.20
8010 10    .00  .42  2.45  6.26  12.0  19.5  28.4  38.8  50.4  63.2
8010 10    .00  .42  2.45  6.26  12.0  19.5  28.4  38.8  50.4  63.2
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           .00 6.40  22.2  42.1  65.8  89.8 113.8 137.8 161.8 185.8
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          3.50 3.90  4.30  4.70  5.10  5.50  5.90  6.30  6.70  7.10
8112 10    .00 3.10  9.30  12.0  21.6  26.4  30.0  43.7  69.0 101.2 139.4 181.8
8112 10    .00 3.10  9.30  12.0  21.6  26.4  30.0  43.7  69.0 101.2 139.4 181.8
           .00  5.7   7.2   7.2   7.2   7.2   7.2  14.8  25.7  36.7  47.6  58.6
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82 1 10    .00
82 1 10    .00
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           .00
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38   1
1.0     .0 .025 21  1  1
       -5.000                    .025          -5.000                    .025
  -5.000     .0 0.000E+00 0.000E+00
  -4.500    95.0 0.475E+02 0.120E+04
  -4.000    95.0 0.950E+02 0.380E+04
  -3.500    95.0 0.143E+03 0.747E+04
  -3.000    95.0 0.190E+03 0.121E+05
  -2.500    95.0 0.238E+03 0.175E+05
  -2.000    95.0 0.285E+03 0.237E+05
  -1.500    95.0 0.333E+03 0.307E+05
  -1.000    95.0 0.380E+03 0.383E+05
   -.500    95.0 0.428E+03 0.466E+05
    .000    95.0 0.475E+03 0.556E+05
    .500    95.0 0.523E+03 0.651E+05
   1.000    95.0 0.570E+03 0.753E+05
   1.500    95.0 0.618E+03 0.860E+05
   2.000    95.0 0.665E+03 0.973E+05
   2.500    95.0 0.713E+03 0.109E+06
   3.000    95.0 0.760E+03 0.122E+06
   3.500    95.0 0.808E+03 0.135E+06
   4.000    95.0 0.855E+03 0.148E+06
   4.500    95.0 0.903E+03 0.162E+06
   5.000    95.0 0.950E+03 0.176E+06
2.0     .0 .025 10  2  3
       2.000                    .045          2.000                    .100
    .500     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   1.000     .0 0.000E+00 0.000E+00           14.3 0.607E+01 0.137E+03             .0 0.000E+00 0.000E+00
   1.500     .0 0.000E+00 0.000E+00           18.5 0.143E+02 0.476E+03             .0 0.000E+00 0.000E+00
   2.000     .0 0.000E+00 0.000E+00           41.0 0.283E+02 0.877E+03             .0 0.000E+00 0.000E+00
   2.500    29.0 0.131E+02 0.170E+03          41.0 0.488E+02 0.218E+04          15.6 0.391E+01 0.155E+02
   3.000    29.0 0.276E+02 0.592E+03          41.0 0.693E+02 0.391E+04          25.0 0.150E+02 0.107E+03
   3.500    29.0 0.421E+02 0.120E+04          41.0 0.898E+02 0.602E+04          25.0 0.275E+02 0.293E+03
   4.000    29.0 0.566E+02 0.196E+04          41.0 0.110E+03 0.849E+04          25.0 0.400E+02 0.547E+03
   4.500    29.0 0.711E+02 0.287E+04          41.0 0.131E+03 0.113E+05          25.0 0.525E+02 0.861E+03
   5.000    29.0 0.856E+02 0.391E+04          41.0 0.151E+03 0.144E+05          25.0 0.650E+02 0.123E+04
3.0     .0 .025 13  2  3
      -1.000                    .035          -1.000                    .035
  -1.000     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   -.500     .5 0.125E+00 0.113E+01            9.0 0.450E+01 0.113E+03             .5 0.125E+00 0.113E+01
    .000    1.0 0.500E+00 0.714E+01            9.0 0.900E+01 0.360E+03            8.1 0.819E+00 0.490E+01
    .500    1.5 0.113E+01 0.211E+02            9.0 0.135E+02 0.708E+03           11.4 0.569E+01 0.971E+02
   1.000    2.0 0.200E+01 0.454E+02            9.0 0.180E+02 0.114E+04           15.5 0.122E+02 0.282E+03
   1.500    2.5 0.313E+01 0.823E+02            9.0 0.225E+02 0.166E+04           26.6 0.227E+02 0.562E+03
   2.000    3.0 0.450E+01 0.134E+03            9.0 0.270E+02 0.225E+04           36.5 0.385E+02 0.110E+04
   2.500    3.5 0.613E+01 0.202E+03            9.0 0.315E+02 0.290E+04           48.7 0.596E+02 0.189E+04
   3.000   35.5 0.138E+02 0.204E+03            9.0 0.360E+02 0.363E+04           62.6 0.874E+02 0.304E+04
   3.500   50.1 0.368E+02 0.835E+03            9.0 0.405E+02 0.442E+04           73.4 0.121E+03 0.471E+04
   4.000   56.1 0.635E+02 0.192E+04            9.0 0.450E+02 0.526E+04           85.0 0.161E+03 0.688E+04
   4.500   56.1 0.915E+02 0.354E+04            9.0 0.495E+02 0.617E+04           85.0 0.203E+03 0.102E+05
   5.000   56.1 0.120E+03 0.552E+04            9.0 0.540E+02 0.713E+04           85.0 0.246E+03 0.139E+05
4.0     .0 .020 12  2  3
       .560                    .030           .400                    .030
   -.320     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
    .000     .0 0.000E+00 0.000E+00            3.0 0.484E+00 0.703E+01             .0 0.000E+00 0.000E+00
    .500     .0 0.000E+00 0.000E+00            7.2 0.315E+01 0.893E+02             .1 0.650E-02 0.252E-01
   1.000     .4 0.923E-01 0.875E+00            7.5 0.690E+01 0.321E+03             .8 0.234E+00 0.299E+01
   1.500     .9 0.421E+00 0.663E+01            7.5 0.106E+02 0.663E+03            7.2 0.224E+01 0.333E+02
   2.000   10.0 0.177E+01 0.179E+02            7.5 0.144E+02 0.110E+04           10.7 0.672E+01 0.161E+03
   2.500   34.5 0.129E+02 0.221E+03            7.5 0.182E+02 0.161E+04           14.2 0.129E+02 0.399E+03
   3.000   59.0 0.363E+02 0.869E+03            7.5 0.219E+02 0.220E+04           17.5 0.209E+02 0.772E+03
   3.500   64.4 0.682E+02 0.235E+04            7.5 0.257E+02 0.287E+04           17.5 0.296E+02 0.138E+04
   4.000   64.4 0.100E+03 0.447E+04            7.5 0.294E+02 0.360E+04           17.5 0.384E+02 0.213E+04
   4.500   64.4 0.133E+03 0.711E+04            7.5 0.332E+02 0.440E+04           17.5 0.471E+02 0.300E+04
   5.000   64.4 0.165E+03 0.102E+05            7.5 0.369E+02 0.526E+04           17.5 0.559E+02 0.398E+04
5.0     .0 .020 13  2  3
       .300                    .030           .600                    .030
  -1.100     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   -.500     .0 0.000E+00 0.000E+00            2.3 0.684E+00 0.141E+02             .0 0.000E+00 0.000E+00
    .000     .0 0.000E+00 0.000E+00            4.2 0.230E+01 0.711E+02             .0 0.000E+00 0.000E+00
    .500     .2 0.243E-01 0.147E+00            5.7 0.483E+01 0.199E+03             .0 0.000E+00 0.000E+00
   1.000     .9 0.298E+00 0.415E+01            5.9 0.777E+01 0.430E+03            1.1 0.220E+00 0.241E+01
   1.500    1.5 0.876E+00 0.175E+02            5.9 0.107E+02 0.736E+03           24.0 0.447E+01 0.486E+02
   2.000    2.1 0.176E+01 0.442E+02            5.9 0.137E+02 0.110E+04           75.0 0.308E+02 0.568E+03
   2.500    2.7 0.294E+01 0.880E+02            5.9 0.166E+02 0.153E+04           98.5 0.742E+02 0.205E+04
   3.000    9.1 0.493E+01 0.102E+03            5.9 0.196E+02 0.201E+04          122.1 0.129E+03 0.448E+04
   3.500    9.1 0.948E+01 0.305E+03            5.9 0.225E+02 0.254E+04          145.6 0.196E+03 0.798E+04
   4.000    9.1 0.140E+02 0.586E+03            5.9 0.255E+02 0.311E+04          155.0 0.273E+03 0.133E+05
   4.500    9.1 0.186E+02 0.935E+03            5.9 0.284E+02 0.374E+04          155.0 0.350E+03 0.201E+05
   5.000    9.1 0.231E+02 0.135E+04            5.9 0.314E+02 0.441E+04          155.0 0.428E+03 0.280E+05
6.0     .0 .025 13  2  3
       .500                    .035           .500                    .035
    .150     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
    .500     .0 0.000E+00 0.000E+00            8.0 0.140E+01 0.175E+02             .0 0.000E+00 0.000E+00
   1.000     .5 0.125E+00 0.113E+01            8.0 0.540E+01 0.166E+03             .4 0.109E+00 0.940E+00
   1.500    1.0 0.500E+00 0.715E+01            8.0 0.940E+01 0.418E+03             .9 0.438E+00 0.597E+01
   2.000    1.5 0.113E+01 0.211E+02            8.0 0.134E+02 0.754E+03            2.7 0.101E+01 0.128E+02
   2.500   12.3 0.487E+01 0.722E+02            8.0 0.174E+02 0.117E+04           10.9 0.520E+01 0.867E+02
   3.000   20.7 0.131E+02 0.271E+03            8.0 0.214E+02 0.165E+04           15.2 0.117E+02 0.273E+03
   3.500   27.6 0.256E+02 0.682E+03            8.0 0.254E+02 0.219E+04           19.4 0.204E+02 0.584E+03
   4.000   27.6 0.394E+02 0.140E+04            8.0 0.294E+02 0.279E+04           19.4 0.301E+02 0.112E+04
   4.500   27.6 0.532E+02 0.231E+04            8.0 0.334E+02 0.346E+04           19.4 0.398E+02 0.178E+04
   5.000   27.6 0.670E+02 0.340E+04            8.0 0.374E+02 0.417E+04           19.4 0.495E+02 0.257E+04
   5.500   27.6 0.808E+02 0.464E+04            8.0 0.414E+02 0.494E+04           19.4 0.592E+02 0.346E+04
   6.000   27.6 0.946E+02 0.604E+04            8.0 0.454E+02 0.576E+04           19.4 0.689E+02 0.445E+04
7.0     .0 .020 13  2  3
       .700                    .030           .700                    .030
   -.900     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   -.500     .0 0.000E+00 0.000E+00            3.9 0.780E+00 0.132E+02             .0 0.000E+00 0.000E+00
   0.000     .0 0.000E+00 0.000E+00            6.8 0.344E+01 0.107E+03             .0 0.000E+00 0.000E+00
    .500     .0 0.000E+00 0.000E+00            8.7 0.731E+01 0.313E+03             .0 0.000E+00 0.000E+00
   1.000     .3 0.450E-01 0.336E+00            9.5 0.120E+02 0.672E+03             .3 0.450E-01 0.336E+00
   1.500     .8 0.320E+00 0.460E+01            9.5 0.167E+02 0.117E+04             .8 0.320E+00 0.460E+01
   2.000    1.3 0.845E+00 0.168E+02            9.5 0.215E+02 0.178E+04            1.3 0.846E+00 0.168E+02
   2.500    1.8 0.162E+01 0.400E+02            9.5 0.262E+02 0.248E+04            2.2 0.165E+01 0.380E+02
   3.000    2.3 0.265E+01 0.768E+02            9.5 0.310E+02 0.327E+04            3.9 0.315E+01 0.813E+02
   3.500    2.8 0.392E+01 0.130E+03            9.5 0.358E+02 0.415E+04            5.6 0.550E+01 0.166E+03
   4.000  130.0 0.254E+02 0.284E+03            9.5 0.405E+02 0.511E+04            5.6 0.828E+01 0.328E+03
   4.500  130.0 0.904E+02 0.235E+04            9.5 0.453E+02 0.615E+04            5.6 0.111E+02 0.531E+03
   5.000  130.0 0.155E+03 0.580E+04            9.5 0.500E+02 0.727E+04            5.6 0.138E+02 0.771E+03
8.0     .0 .020 17  2  3
       1.000                    .030          1.000                    .030
   1.000     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   1.500     .5 0.125E+00 0.131E+01            9.0 0.450E+01 0.142E+03             .5 0.125E+00 0.131E+01
   2.000    1.0 0.500E+00 0.834E+01            9.0 0.900E+01 0.450E+03            1.0 0.500E+00 0.834E+01
   2.500    6.7 0.149E+01 0.172E+02            9.0 0.135E+02 0.885E+03            1.9 0.113E+01 0.221E+02
   3.000    6.7 0.483E+01 0.117E+03            9.0 0.180E+02 0.143E+04            3.7 0.280E+01 0.632E+02
   3.500    6.7 0.818E+01 0.270E+03            9.0 0.225E+02 0.207E+04            3.7 0.466E+01 0.139E+03
   4.000    6.7 0.115E+02 0.460E+03            9.0 0.270E+02 0.281E+04            3.8 0.654E+01 0.231E+03
   4.500    6.7 0.149E+02 0.679E+03            9.0 0.315E+02 0.363E+04            3.8 0.841E+01 0.333E+03
   5.000    6.7 0.183E+02 0.920E+03            9.0 0.360E+02 0.454E+04            3.8 0.103E+02 0.444E+03
   5.500    6.7 0.216E+02 0.118E+04            9.0 0.405E+02 0.552E+04            3.8 0.122E+02 0.561E+03
   6.000    6.7 0.250E+02 0.146E+04            9.0 0.450E+02 0.658E+04            3.8 0.141E+02 0.683E+03
   6.500    6.8 0.284E+02 0.174E+04            9.0 0.495E+02 0.771E+04            3.8 0.160E+02 0.810E+03
   7.000    6.8 0.317E+02 0.205E+04            9.0 0.540E+02 0.892E+04            3.8 0.179E+02 0.941E+03
   7.500    6.8 0.351E+02 0.236E+04            9.0 0.585E+02 0.102E+05            3.8 0.198E+02 0.107E+04
   8.000    6.8 0.385E+02 0.267E+04            9.0 0.630E+02 0.115E+05            3.8 0.217E+02 0.121E+04
   8.500   94.8 0.859E+02 0.257E+04            9.0 0.675E+02 0.129E+05           33.2 0.383E+02 0.125E+04
   9.000   94.8 0.133E+03 0.535E+04            9.0 0.720E+02 0.144E+05           33.2 0.549E+02 0.228E+04
9.0     .0 .030 17  2  3
       2.800                    .200          2.230                    .200
    .700     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   1.200     .0 0.000E+00 0.000E+00           16.0 0.763E+01 0.153E+03             .0 0.000E+00 0.000E+00
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    1.700     .0 0.000E+00 0.000E+00      17.5 0.160E+02 0.491E+03       .0 0.000E+00 0.000E+00
    2.200     .0 0.000E+00 0.000E+00      19.0 0.252E+02 0.979E+03       .0 0.000E+00 0.000E+00
    2.700     .0 0.000E+00 0.000E+00      19.9 0.349E+02 0.164E+04     11.1 0.455E+01 0.126E+02
    3.200     .1 0.139E-01 0.729E-02      20.0 0.449E+02 0.248E+04     11.1 0.101E+02 0.474E+02
    3.700     .2 0.702E-01 0.634E-01      20.0 0.549E+02 0.346E+04     11.1 0.157E+02 0.984E+02
    4.200     .2 0.170E+00 0.206E+00      20.0 0.649E+02 0.458E+04     11.1 0.212E+02 0.163E+03
    4.700     .3 0.313E+00 0.465E+00      20.0 0.749E+02 0.581E+04     11.1 0.268E+02 0.240E+03
    5.200     .4 0.499E+00 0.867E+00      20.0 0.849E+02 0.716E+04     11.1 0.323E+02 0.329E+03
    5.700     .5 0.729E+00 0.144E+01      20.0 0.949E+02 0.862E+04     11.1 0.379E+02 0.429E+03
    6.200     .6 0.100E+01 0.220E+01      20.0 0.105E+03 0.102E+05     11.1 0.434E+02 0.539E+03
    6.700     .7 0.132E+01 0.316E+01      20.0 0.115E+03 0.119E+05     11.1 0.490E+02 0.658E+03
    7.200     .8 0.168E+01 0.437E+01      20.0 0.125E+03 0.136E+05     11.1 0.545E+02 0.787E+03
    7.700     .8 0.208E+01 0.582E+01      20.0 0.135E+03 0.155E+05     11.1 0.601E+02 0.925E+03
    8.200    48.9 0.121E+02 0.226E+02     20.0 0.145E+03 0.175E+05     11.1 0.656E+02 0.107E+04
    8.700    48.9 0.366E+02 0.142E+03     20.0 0.155E+03 0.195E+05     11.1 0.712E+02 0.123E+04
10.0     .0 .030 19  2  3
         4.500                  .100    4.500                  .100
    .000     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
    .500     .0 0.000E+00 0.000E+00       7.3 0.340E+01 0.657E+02       .0 0.000E+00 0.000E+00
   1.000     .0 0.000E+00 0.000E+00       8.3 0.730E+01 0.210E+03       .0 0.000E+00 0.000E+00
   1.500     .0 0.000E+00 0.000E+00       9.3 0.117E+02 0.418E+03       .0 0.000E+00 0.000E+00
   2.000     .0 0.000E+00 0.000E+00      10.3 0.166E+02 0.689E+03       .0 0.000E+00 0.000E+00
   2.500     .0 0.000E+00 0.000E+00      11.3 0.220E+02 0.102E+04       .0 0.000E+00 0.000E+00
   3.000     .0 0.000E+00 0.000E+00      12.2 0.279E+02 0.142E+04       .0 0.000E+00 0.000E+00
   3.500     .0 0.000E+00 0.000E+00      13.1 0.342E+02 0.188E+04       .0 0.000E+00 0.000E+00
   4.000     .0 0.000E+00 0.000E+00      14.0 0.409E+02 0.241E+04       .0 0.000E+00 0.000E+00
   4.500    11.0 0.183E+01 0.545E+01     14.9 0.482E+02 0.301E+04      4.1 0.288E+00 0.480E+00
   5.000    11.1 0.736E+01 0.539E+02     14.9 0.556E+02 0.382E+04      4.2 0.237E+01 0.149E+02
   5.500    11.2 0.129E+02 0.134E+03     14.9 0.631E+02 0.472E+04      4.3 0.448E+01 0.402E+02
   6.000    11.2 0.185E+02 0.238E+03     14.9 0.705E+02 0.568E+04      4.3 0.662E+01 0.727E+02
   6.500    11.3 0.242E+02 0.360E+03     14.9 0.780E+02 0.672E+04      4.4 0.880E+01 0.110E+03
   7.000    11.4 0.298E+02 0.500E+03     14.9 0.854E+02 0.782E+04      4.5 0.110E+02 0.152E+03
   7.500    11.4 0.355E+02 0.653E+03     14.9 0.929E+02 0.899E+04      4.5 0.133E+02 0.198E+03
   8.000    11.5 0.413E+02 0.818E+03     14.9 0.100E+03 0.102E+05      4.6 0.156E+02 0.247E+03
   8.500    41.0 0.618E+02 0.771E+03     14.9 0.108E+03 0.115E+05     54.1 0.426E+02 0.350E+03
   9.000    41.0 0.823E+02 0.124E+04     14.9 0.115E+03 0.129E+05     54.1 0.697E+02 0.794E+03
11.0     .0 .030 19  2  3
         3.700                  .030    3.310                  .030
    .000     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
    .500     9.9 0.496E+01 0.977E+02       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   1.000     9.9 0.993E+01 0.293E+03      2.3 0.751E+00 0.111E+02       .0 0.000E+00 0.000E+00
   1.500    10.0 0.149E+02 0.547E+03      3.8 0.225E+01 0.483E+02       .0 0.000E+00 0.000E+00
   2.000    10.0 0.199E+02 0.842E+03      8.6 0.581E+01 0.140E+03       .0 0.000E+00 0.000E+00
   2.500    10.0 0.249E+02 0.117E+04     10.4 0.105E+02 0.333E+03       .0 0.000E+00 0.000E+00
   3.000    10.0 0.299E+02 0.152E+04     12.1 0.162E+02 0.608E+03       .0 0.000E+00 0.000E+00
   3.500    10.1 0.350E+02 0.189E+04     13.5 0.226E+02 0.988E+03      1.0 0.202E+00 0.202E+01
   4.000    65.1 0.438E+02 0.104E+04     13.8 0.295E+02 0.151E+04     41.8 0.105E+02 0.138E+03
   4.500    86.4 0.859E+02 0.269E+04     13.8 0.364E+02 0.215E+04     48.4 0.335E+02 0.856E+03
   5.000    86.4 0.129E+03 0.529E+04     13.8 0.432E+02 0.287E+04     52.8 0.588E+02 0.204E+04
   5.500    86.4 0.172E+03 0.856E+04     13.8 0.501E+02 0.367E+04     57.1 0.863E+02 0.364E+04
   6.000    86.4 0.215E+03 0.124E+05     13.8 0.570E+02 0.454E+04     59.8 0.116E+03 0.571E+04
   6.500    86.4 0.259E+03 0.169E+05     13.8 0.639E+02 0.549E+04     59.8 0.146E+03 0.829E+04
   7.000    86.4 0.302E+03 0.218E+05     13.8 0.708E+02 0.652E+04     59.9 0.176E+03 0.112E+05
   7.500    86.4 0.345E+03 0.272E+05     13.8 0.777E+02 0.761E+04     59.9 0.206E+03 0.144E+05
   8.000    86.4 0.388E+03 0.332E+05     13.8 0.846E+02 0.876E+04     60.0 0.236E+03 0.179E+05
   8.500    86.4 0.431E+03 0.395E+05     13.8 0.915E+02 0.998E+04    112.9 0.292E+03 0.175E+05
   9.000    86.4 0.475E+03 0.463E+05     13.8 0.983E+02 0.113E+05    112.9 0.348E+03 0.235E+05
12.0     .0 .030 18  2  3
         3.860                  .035    3.170                  .035
    .560     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   1.000     .0 0.000E+00 0.000E+00       2.1 0.621E+00 0.855E+01       .0 0.000E+00 0.000E+00
   1.500     .0 0.000E+00 0.000E+00       3.6 0.203E+01 0.421E+02       .0 0.000E+00 0.000E+00
   2.000     .0 0.000E+00 0.000E+00       8.4 0.530E+01 0.122E+03       .0 0.000E+00 0.000E+00
   2.500     .0 0.000E+00 0.000E+00      10.1 0.993E+01 0.305E+03       .0 0.000E+00 0.000E+00
   3.000     .0 0.000E+00 0.000E+00      11.9 0.154E+02 0.570E+03       .0 0.000E+00 0.000E+00
   3.500     .0 0.000E+00 0.000E+00      13.0 0.217E+02 0.947E+03      6.0 0.101E+01 0.882E+01
   4.000     3.3 0.303E+00 0.176E+01     14.5 0.288E+02 0.141E+04     14.7 0.618E+01 0.989E+02
   4.500    69.2 0.243E+02 0.346E+03     14.5 0.360E+02 0.205E+04     21.7 0.153E+02 0.345E+03
   5.000    97.8 0.689E+02 0.156E+04     14.5 0.433E+02 0.279E+04     28.7 0.279E+02 0.781E+03
   5.500    97.8 0.118E+03 0.381E+04     14.5 0.505E+02 0.361E+04     35.7 0.440E+02 0.144E+04
   6.000    97.8 0.167E+03 0.680E+04     14.5 0.578E+02 0.451E+04     35.7 0.619E+02 0.255E+04
   6.500    97.8 0.216E+03 0.104E+05     14.5 0.650E+02 0.549E+04     35.7 0.797E+02 0.388E+04
   7.000    97.8 0.265E+03 0.147E+05     14.5 0.723E+02 0.655E+04     35.7 0.976E+02 0.544E+04
   7.500    97.8 0.313E+03 0.195E+05     14.5 0.795E+02 0.768E+04     35.7 0.115E+03 0.720E+04
   8.000    97.8 0.362E+03 0.248E+05     14.5 0.868E+02 0.889E+04     35.7 0.133E+03 0.915E+04
   8.500    97.8 0.411E+03 0.306E+05     14.5 0.940E+02 0.102E+05     35.7 0.151E+03 0.113E+05
   9.000    97.8 0.460E+03 0.369E+05     14.5 0.101E+03 0.115E+05     35.7 0.169E+03 0.136E+05
13.0     .0 .035 17  2  3
         4.000                  .200    3.930                  .100
   1.100     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   1.500     .0 0.000E+00 0.000E+00       5.2 0.144E+01 0.173E+02       .0 0.000E+00 0.000E+00
   2.000     .0 0.000E+00 0.000E+00       9.2 0.504E+01 0.949E+02       .0 0.000E+00 0.000E+00
   2.500     .0 0.000E+00 0.000E+00      13.2 0.106E+02 0.259E+03       .0 0.000E+00 0.000E+00
   3.000     .0 0.000E+00 0.000E+00      17.2 0.182E+02 0.532E+03       .0 0.000E+00 0.000E+00
   3.500     .0 0.000E+00 0.000E+00      21.2 0.278E+02 0.936E+03       .0 0.000E+00 0.000E+00
   4.000     .0 0.000E+00 0.000E+00      24.9 0.394E+02 0.150E+04      5.1 0.180E+00 0.192E+00
   4.500    53.1 0.133E+02 0.264E+02     24.9 0.519E+02 0.237E+04     41.8 0.119E+02 0.516E+02
   5.000    85.0 0.510E+02 0.181E+03     24.9 0.643E+02 0.339E+04     78.4 0.420E+02 0.277E+03
   5.500    85.0 0.935E+02 0.498E+03     24.9 0.768E+02 0.456E+04     93.1 0.870E+02 0.832E+03
   6.000    85.0 0.136E+03 0.930E+03     24.9 0.892E+02 0.586E+04     93.1 0.134E+03 0.170E+04
   6.500    85.0 0.179E+03 0.146E+04     24.9 0.102E+03 0.728E+04     93.1 0.180E+03 0.280E+04
   7.000    85.0 0.221E+03 0.209E+04     24.9 0.114E+03 0.883E+04     93.1 0.227E+03 0.410E+04
   7.500    85.0 0.264E+03 0.280E+04     24.9 0.127E+03 0.105E+05     93.1 0.273E+03 0.560E+04
   8.000    85.0 0.306E+03 0.359E+04     24.9 0.139E+03 0.123E+05     93.1 0.320E+03 0.728E+04
   8.500    85.0 0.349E+03 0.446E+04     24.9 0.151E+03 0.142E+05     93.1 0.366E+03 0.913E+04
   9.000    85.0 0.391E+03 0.541E+04     24.9 0.164E+03 0.161E+05     93.1 0.413E+03 0.111E+05
14.0     .0 .100 10  2  3
         6.000                  .100    6.000                  .100
   5.200     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   5.500    30.0 0.450E+01 0.127E+02       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   6.000    80.0 0.320E+02 0.174E+03       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   6.500    80.0 0.720E+02 0.671E+03      2.8 0.688E+00 0.262E+01     52.0 0.260E+02 0.164E+03
   7.000    80.0 0.112E+03 0.140E+04      5.5 0.275E+01 0.166E+02     52.0 0.520E+02 0.520E+03
   7.500    80.0 0.152E+03 0.233E+04      8.3 0.619E+01 0.490E+02     52.0 0.780E+02 0.102E+04
   8.000    80.0 0.192E+03 0.344E+04     11.0 0.110E+02 0.106E+03     52.0 0.104E+03 0.165E+04
   8.500    80.0 0.232E+03 0.472E+04     17.5 0.181E+02 0.180E+03     52.0 0.130E+03 0.239E+04
   9.000    80.0 0.272E+03 0.615E+04     24.0 0.285E+02 0.311E+03     52.0 0.156E+03 0.324E+04
   9.500    80.0 0.312E+03 0.773E+04     30.5 0.421E+02 0.511E+03     52.0 0.182E+03 0.420E+04
15.0     .0 .060 17  2  3
         4.000                  .035    6.000                  .100
   1.800     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   2.000     3.3 0.529E+00 0.441E+01       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   2.500     6.5 0.298E+01 0.494E+02       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   3.000     9.7 0.704E+01 0.158E+03       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   3.500    12.9 0.127E+02 0.349E+03       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   4.000    16.2 0.200E+02 0.639E+03       .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   4.500    85.0 0.561E+02 0.121E+04     30.0 0.750E+01 0.496E+02       .0 0.000E+00 0.000E+00
   5.000    90.0 0.998E+02 0.304E+04     60.0 0.300E+02 0.315E+03       .0 0.000E+00 0.000E+00
   5.500    90.0 0.145E+03 0.565E+04     90.0 0.675E+02 0.929E+03       .0 0.000E+00 0.000E+00
   6.000    90.0 0.190E+03 0.887E+04    120.0 0.120E+03 0.200E+04       .0 0.000E+00 0.000E+00
   6.500    90.0 0.235E+03 0.126E+05    120.0 0.180E+03 0.393E+04    134.3 0.666E+02 0.417E+03
   7.000    90.0 0.280E+03 0.169E+05    120.0 0.240E+03 0.635E+04    136.7 0.134E+03 0.133E+04
   7.500    90.0 0.325E+03 0.217E+05    120.0 0.300E+03 0.921E+04    139.0 0.203E+03 0.262E+04
   8.000    90.0 0.370E+03 0.269E+05    120.0 0.360E+03 0.125E+05    139.0 0.273E+03 0.427E+04
   8.500    90.0 0.415E+03 0.326E+05    120.0 0.420E+03 0.161E+05    139.0 0.342E+03 0.624E+04
   9.000    90.0 0.460E+03 0.387E+05    120.0 0.480E+03 0.202E+05    139.0 0.412E+03 0.849E+04
   9.500    90.0 0.505E+03 0.453E+05    120.0 0.540E+03 0.245E+05    139.0 0.481E+03 0.110E+05
16.0     .0 .030 19  2  3
         3.740                  .035    3.660                  .035
    .740     .0 0.000E+00 0.000E+00        .0 0.000E+00 0.000E+00       .0 0.000E+00 0.000E+00
   1.000     .0 0.000E+00 0.000E+00       1.5 0.297E+00 0.310E+01       .0 0.000E+00 0.000E+00
   1.500     .0 0.000E+00 0.000E+00       3.0 0.144E+01 0.265E+02       .0 0.000E+00 0.000E+00
   2.000     .0 0.000E+00 0.000E+00       4.5 0.333E+01 0.814E+02       .0 0.000E+00 0.000E+00
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    2.500      .0 0.000E+00 0.000E+00
    3.000      .0 0.000E+00 0.000E+00
    3.500      .0 0.000E+00 0.000E+00
    4.000     2.6 0.235E+00 0.134E+01
    4.500    91.6 0.164E+02 0.150E+03
    5.000    91.6 0.623E+02 0.137E+04
    5.500    91.6 0.108E+03 0.345E+04
    6.000    91.6 0.154E+03 0.621E+04
    6.500    91.6 0.200E+03 0.959E+04
    7.000    91.6 0.245E+03 0.135E+05
    7.500    91.6 0.291E+03 0.180E+05
    8.000    91.6 0.337E+03 0.230E+05
    8.500    91.6 0.383E+03 0.284E+05
    9.000    91.6 0.429E+03 0.343E+05
    9.500    91.6 0.475E+03 0.406E+05
17.0     .0 .100 16  2  3
         2.500                    .100
    2.500      .0 0.000E+00 0.000E+00
    3.000     25.0 0.125E+02 0.787E+02
    3.500     25.0 0.250E+02 0.250E+03
    4.000     25.0 0.375E+02 0.491E+03
    4.500     25.0 0.500E+02 0.794E+03
    5.000     25.0 0.625E+02 0.115E+04
    5.500     25.0 0.750E+02 0.156E+04
    6.000     25.0 0.875E+02 0.202E+04
    6.500     25.0 0.100E+03 0.252E+04
    7.000     25.0 0.113E+03 0.307E+04
    7.500     25.0 0.125E+03 0.366E+04
    8.000     25.0 0.138E+03 0.428E+04
    8.500     25.0 0.150E+03 0.495E+04
    9.000     25.0 0.163E+03 0.566E+04
    9.500     25.0 0.175E+03 0.640E+04
   10.000     25.0 0.188E+03 0.718E+04
18.0     .0 .045 16  2  3
         3.450                    .100
    1.780      .0 0.000E+00 0.000E+00
    2.000      .0 0.000E+00 0.000E+00
    2.500      .0 0.000E+00 0.000E+00
    3.000      .0 0.000E+00 0.000E+00
    3.500     10.0 0.780E+00 0.141E+01
    4.000     10.0 0.579E+01 0.386E+02
    4.500     10.0 0.108E+02 0.106E+03
    5.000     10.0 0.158E+02 0.194E+03
    5.500     10.0 0.208E+02 0.299E+03
    6.000     10.1 0.259E+02 0.417E+03
    6.500     10.1 0.309E+02 0.547E+03
    7.000     10.1 0.359E+02 0.686E+03
    7.500     10.1 0.410E+02 0.833E+03
    8.000     10.1 0.460E+02 0.988E+03
    8.500    102.0 0.970E+02 0.912E+03
    9.000    102.0 0.148E+03 0.184E+04
19.0     .0 .100  3  2  2
         8.000                    .100
    8.000      .0 0.000E+00 0.000E+00
    8.500    132.0 0.660E+02 0.416E+03
    9.000    132.0 0.132E+03 0.132E+04
20.0     .0 .013  8  2  3
         4.090                    .060
    3.640      .0 0.000E+00 0.000E+00
    4.000      .0 0.000E+00 0.000E+00
    4.500      3.1 0.632E+00 0.364E+01
    5.000      6.8 0.311E+01 0.305E+02
    5.500     10.6 0.747E+01 0.981E+02
    6.000     10.6 0.128E+02 0.240E+03
    6.500     10.6 0.181E+02 0.427E+03
    7.000     10.6 0.234E+02 0.656E+03
21.0     .0 .013  6  2  3
         4.760                    .100
    4.530      .0 0.000E+00 0.000E+00
    5.000      .6 0.770E-01 0.179E+00
    5.500     2.0 0.732E+00 0.361E+01
    6.000     3.3 0.206E+01 0.143E+02
    6.500     4.7 0.405E+01 0.353E+02
    7.000     5.0 0.653E+01 0.746E+02
22.0     .0 .045 15  2  3
         3.740                    .045
    2.220      .0 0.000E+00 0.000E+00
    2.500      .0 0.000E+00 0.000E+00
    3.000      .0 0.000E+00 0.000E+00
    3.500      .0 0.000E+00 0.000E+00
    4.000      .8 0.113E+00 0.657E+00
    4.500     2.2 0.860E+00 0.985E+01
    5.000     3.6 0.230E+01 0.366E+02
    5.500    18.1 0.556E+01 0.557E+02
    6.000    24.5 0.176E+02 0.310E+03
    6.500    24.5 0.298E+02 0.749E+03
    7.000    24.5 0.421E+02 0.133E+04
    7.500    24.5 0.543E+02 0.204E+04
    8.000    24.5 0.666E+02 0.286E+04
    8.500    24.5 0.788E+02 0.379E+04
    9.000    24.5 0.911E+02 0.482E+04
23.0     .0 .045 16  1  2
         5.060                    .045
    2.290      .0 0.000E+00 0.000E+00
    2.500     13.3 0.265E+01 0.201E+02
    3.000     16.3 0.101E+02 0.160E+03
    3.500     19.1 0.189E+02 0.411E+03
    4.000     22.1 0.292E+02 0.770E+03
    4.500     24.5 0.410E+02 0.126E+04
    5.000     25.9 0.536E+02 0.189E+04
    5.500     26.1 0.666E+02 0.271E+04
    6.000     26.1 0.797E+02 0.365E+04
    6.500     26.1 0.927E+02 0.470E+04
    7.000     26.1 0.106E+03 0.585E+04
    7.500     26.1 0.119E+03 0.711E+04
    8.000     26.1 0.132E+03 0.846E+04
    8.500     26.1 0.145E+03 0.990E+04
    9.000     26.1 0.158E+03 0.114E+05
    9.500     26.1 0.171E+03 0.130E+05
24.0     .0 .045 16  1  2
         4.820                    .045
    2.350      .0 0.000E+00 0.000E+00
    2.500     12.9 0.187E+01 0.114E+02
    3.000     15.4 0.903E+01 0.139E+03
    3.500     17.4 0.172E+02 0.372E+03
    4.000     19.4 0.264E+02 0.701E+03
    4.500     20.2 0.364E+02 0.115E+04
    5.000     20.5 0.466E+02 0.172E+04
    5.500     20.5 0.569E+02 0.239E+04
    6.000     20.5 0.671E+02 0.316E+04
    6.500     20.5 0.774E+02 0.400E+04
    7.000     20.5 0.876E+02 0.492E+04
    7.500     20.5 0.979E+02 0.592E+04
    8.000     20.5 0.108E+03 0.698E+04
    8.500     20.5 0.118E+03 0.812E+04
    9.000     20.5 0.129E+03 0.933E+04
    9.500     20.5 0.139E+03 0.106E+05
25.0     .0 .100 16  2  3
         4.000                    .060
    2.400      .0 0.000E+00 0.000E+00
    2.500      4.4 0.387E+00 0.126E+01
    3.000      9.0 0.394E+01 0.373E+02
    3.500     11.0 0.894E+01 0.126E+03

    9.3 0.648E+01 0.159E+03
   11.1 0.116E+02 0.369E+03
   13.0 0.176E+02 0.668E+03
   13.7 0.244E+02 0.111E+04
   13.7 0.312E+02 0.167E+04
   13.7 0.381E+02 0.233E+04
   13.7 0.449E+02 0.307E+04
   13.7 0.518E+02 0.389E+04
   13.7 0.586E+02 0.478E+04
   13.7 0.655E+02 0.575E+04
   13.7 0.723E+02 0.678E+04
   13.7 0.792E+02 0.789E+04
   13.7 0.860E+02 0.905E+04
   13.7 0.929E+02 0.103E+05
   13.7 0.997E+02 0.116E+05
2.500                    .100
     .0 0.000E+00 0.000E+00
    10.0 0.500E+01 0.315E+02
    10.0 0.100E+02 0.100E+03
    10.0 0.150E+02 0.197E+03
    10.0 0.200E+02 0.318E+03
    10.0 0.250E+02 0.461E+03
    10.0 0.300E+02 0.624E+03
    10.0 0.350E+02 0.807E+03
    10.0 0.400E+02 0.101E+04
    10.0 0.450E+02 0.123E+04
    10.0 0.500E+02 0.146E+04
    10.0 0.550E+02 0.171E+04
    10.0 0.600E+02 0.198E+04
    10.0 0.650E+02 0.226E+04
    10.0 0.700E+02 0.256E+04
    10.0 0.750E+02 0.287E+04
8.000                    .045
     .0 0.000E+00 0.000E+00
    15.3 0.323E+01 0.253E+02
    18.3 0.116E+02 0.189E+03
    21.3 0.215E+02 0.476E+03
    24.1 0.329E+02 0.886E+03
    25.6 0.454E+02 0.145E+04
    26.5 0.585E+02 0.216E+04
    26.6 0.718E+02 0.300E+04
    26.7 0.851E+02 0.393E+04
    26.7 0.985E+02 0.495E+04
    26.8 0.112E+03 0.605E+04
    26.9 0.125E+03 0.723E+04
    26.9 0.139E+03 0.847E+04
    27.0 0.152E+03 0.978E+04
    65.0 0.185E+03 0.792E+04
    65.0 0.217E+03 0.104E+05
8.000                    .100
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
4.090                    .060
     .0 0.000E+00 0.000E+00
     1.9 0.346E+00 0.812E+01
     2.4 0.153E+01 0.830E+02
     2.4 0.273E+01 0.218E+03
     2.4 0.393E+01 0.401E+03
     2.4 0.513E+01 0.626E+03
     2.4 0.633E+01 0.889E+03
     2.4 0.753E+01 0.119E+04
4.760                    .100
     .0 0.000E+00 0.000E+00
     2.0 0.711E+00 0.269E+02
     2.0 0.171E+01 0.117E+03
     2.0 0.271E+01 0.251E+03
     2.0 0.371E+01 0.424E+03
     2.0 0.471E+01 0.631E+03
4.750                    .100
     .0 0.000E+00 0.000E+00
    13.7 0.359E+01 0.326E+02
    16.7 0.112E+02 0.188E+03
    19.6 0.202E+02 0.453E+03
    21.8 0.307E+02 0.843E+03
    23.4 0.420E+02 0.136E+04
    24.1 0.540E+02 0.202E+04
    24.1 0.660E+02 0.282E+04
    24.1 0.781E+02 0.373E+04
    24.1 0.901E+02 0.474E+04
    24.1 0.102E+03 0.584E+04
    24.1 0.114E+03 0.703E+04
    24.1 0.126E+03 0.831E+04
    24.1 0.138E+03 0.968E+04
    24.1 0.150E+03 0.111E+05
4.310                    .100
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .4 0.796E-01 0.208E+00
     .5 0.322E+00 0.142E+01
     .6 0.612E+00 0.321E+01
     .7 0.949E+00 0.555E+01
     .8 0.133E+01 0.848E+01
     .9 0.177E+01 0.120E+02
    1.0 0.225E+01 0.163E+02
    1.1 0.277E+01 0.212E+02
   34.1 0.198E+02 0.130E+03
   34.1 0.369E+02 0.367E+03
   34.1 0.539E+02 0.691E+03
4.140                    .100
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    1.0 0.328E+00 0.131E+01
    1.0 0.842E+00 0.509E+01
    1.1 0.137E+01 0.972E+01
    1.1 0.191E+01 0.148E+02
    1.1 0.247E+01 0.203E+02
    1.1 0.303E+01 0.261E+02
    1.2 0.362E+01 0.322E+02
    1.2 0.421E+01 0.386E+02
   34.6 0.215E+02 0.147E+03
   34.6 0.388E+02 0.392E+03
   34.6 0.561E+02 0.725E+03
7.430                    .100
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    24.7 0.409E+01 0.352E+02
    42.2 0.208E+02 0.371E+03
    59.7 0.463E+02 0.112E+04
    59.7 0.761E+02 0.256E+04
    59.7 0.106E+03 0.444E+04
    59.7 0.136E+03 0.671E+04
    59.7 0.166E+03 0.935E+04
    59.7 0.196E+03 0.123E+05
    59.7 0.225E+03 0.156E+05
    59.7 0.255E+03 0.192E+05
    59.7 0.285E+03 0.231E+05
    59.7 0.315E+03 0.273E+05
     .0 0.000E+00 0.000E+00
    20.0 0.100E+02 0.630E+02
    20.0 0.200E+02 0.200E+03
    20.0 0.300E+02 0.393E+03
    20.0 0.400E+02 0.635E+03
    20.0 0.500E+02 0.921E+03
    20.0 0.600E+02 0.125E+04
    20.0 0.700E+02 0.161E+04
    20.0 0.800E+02 0.202E+04
    20.0 0.900E+02 0.245E+04
    20.0 0.100E+03 0.292E+04
    20.0 0.110E+03 0.343E+04
    20.0 0.120E+03 0.396E+04
    20.0 0.130E+03 0.453E+04
    20.0 0.140E+03 0.512E+04
    20.0 0.150E+03 0.575E+04
     .0 0.000E+00 0.000E+00
    3.6 0.362E+00 0.173E+01
    6.2 0.280E+01 0.358E+02
    8.8 0.653E+01 0.116E+03
   11.3 0.116E+02 0.252E+03
   16.7 0.181E+02 0.413E+03
   17.5 0.267E+02 0.747E+03
   18.4 0.357E+02 0.116E+04
   19.2 0.451E+02 0.164E+04
   20.1 0.549E+02 0.218E+04
   20.9 0.651E+02 0.280E+04
   21.8 0.758E+02 0.348E+04
   22.6 0.869E+02 0.422E+04
   23.5 0.985E+02 0.503E+04
   66.0 0.131E+03 0.442E+04
   66.0 0.164E+03 0.641E+04
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    4.2 0.955E+00 0.595E+01
    8.6 0.415E+01 0.423E+02
   12.0 0.950E+01 0.135E+03
   12.0 0.155E+02 0.305E+03
   12.0 0.215E+02 0.527E+03
   12.0 0.275E+02 0.794E+03
     .0 0.000E+00 0.000E+00
     .5 0.580E-01 0.131E+00
    1.5 0.551E+00 0.264E+01
    6.0 0.157E+01 0.618E+01
   21.0 0.106E+02 0.665E+02
   21.0 0.211E+02 0.209E+03
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    0.0 0.193E-02 0.755E-03
    0.0 0.174E-01 0.141E-01
     .1 0.483E-01 0.552E-01
     .1 0.947E-01 0.135E+00
     .1 0.157E+00 0.264E+00
     .2 0.234E+00 0.452E+00
     .2 0.327E+00 0.705E+00
   69.4 0.350E+02 0.216E+03
   69.4 0.697E+02 0.680E+03
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
```

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    4.000   12.9 0.149E+02 0.263E+03      .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    4.500   12.9 0.213E+02 0.479E+03      0.0 0.628E-02 0.339E-02      .0 0.000E+00 0.000E+00
    5.000   12.9 0.278E+02 0.743E+03      .1 0.251E-01 0.215E-01      .0 0.000E+00 0.000E+00
    5.500   12.9 0.343E+02 0.105E+04      .1 0.565E-01 0.635E-01      .0 0.000E+00 0.000E+00
    6.000   12.9 0.407E+02 0.140E+04      .1 0.101E+00 0.137E+00      .0 0.000E+00 0.000E+00
    6.500   12.9 0.472E+02 0.179E+04      .1 0.157E+00 0.248E+00      .0 0.000E+00 0.000E+00
    7.000   12.9 0.536E+02 0.222E+04      .2 0.226E+00 0.403E+00      .0 0.000E+00 0.000E+00
    7.500   12.9 0.601E+02 0.268E+04      .7 0.325E+00 0.610E+00      .8 0.277E-01 0.296E-01
    8.000   12.9 0.665E+02 0.318E+04     4.2 0.154E+01 0.513E+01     6.4 0.184E+01 0.794E+01
    8.500   12.9 0.730E+02 0.371E+04     9.6 0.634E+01 0.384E+02    12.1 0.647E+01 0.426E+02
    9.000   12.9 0.794E+02 0.428E+04     9.6 0.111E+02 0.983E+02    17.8 0.139E+02 0.118E+03
    9.500   12.9 0.859E+02 0.487E+04     9.6 0.159E+02 0.179E+03    23.4 0.242E+02 0.247E+03
26.0     .0 .045 15  2  3
         3.120                  .100    3.200                  .100
    2.100    .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    2.500    .0 0.000E+00 0.000E+00    16.0 0.592E+01 0.675E+02      .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00    19.0 0.147E+02 0.272E+03      .0 0.000E+00 0.000E+00
    3.500    .3 0.518E-01 0.119E+00    20.0 0.246E+02 0.621E+03     5.6 0.839E+00 0.237E+01
    4.000    .6 0.278E+00 0.112E+01    20.0 0.346E+02 0.110E+04    14.9 0.597E+01 0.324E+02
    4.500   1.0 0.683E+00 0.372E+01    20.0 0.446E+02 0.167E+04    23.5 0.157E+02 0.120E+03
    5.000   1.3 0.127E+01 0.849E+01    20.0 0.546E+02 0.234E+04    23.6 0.275E+02 0.301E+03
    5.500   1.7 0.203E+01 0.159E+02    20.0 0.646E+02 0.310E+04    23.6 0.393E+02 0.538E+03
    6.000   2.1 0.298E+01 0.265E+02    20.0 0.746E+02 0.394E+04    23.7 0.512E+02 0.823E+03
    6.500   2.4 0.410E+01 0.406E+02    20.0 0.846E+02 0.486E+04    23.8 0.630E+02 0.115E+04
    7.000   2.8 0.540E+01 0.586E+02    20.0 0.946E+02 0.586E+04    23.9 0.750E+02 0.151E+04
    7.500   3.1 0.688E+01 0.810E+02    20.0 0.105E+03 0.693E+04    23.9 0.869E+02 0.191E+04
    8.000   3.5 0.854E+01 0.108E+03    20.0 0.115E+03 0.806E+04    24.0 0.989E+02 0.234E+04
    8.500  79.5 0.483E+02 0.339E+03    20.0 0.125E+03 0.927E+04    48.5 0.123E+03 0.220E+04
    9.000  79.5 0.881E+02 0.923E+03    20.0 0.135E+03 0.105E+05    48.5 0.147E+03 0.297E+04
27.0     .0 .045 15  2  3
         4.970                  .100    4.530                  .100
    2.150    .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    2.500    .0 0.000E+00 0.000E+00    15.9 0.523E+01 0.551E+02      .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00    18.6 0.139E+02 0.250E+03      .0 0.000E+00 0.000E+00
    3.500    .0 0.000E+00 0.000E+00    21.3 0.238E+02 0.562E+03      .0 0.000E+00 0.000E+00
    4.000    .0 0.000E+00 0.000E+00    24.0 0.352E+02 0.990E+03      .0 0.000E+00 0.000E+00
    4.500    .0 0.000E+00 0.000E+00    26.7 0.479E+02 0.154E+04      .0 0.000E+00 0.000E+00
    5.000    .1 0.113E-02 0.652E-03    28.2 0.616E+02 0.226E+04     0.0 0.640E-02 0.364E-02
    5.500    .6 0.249E+00 0.103E+01    28.2 0.757E+02 0.318E+04      .1 0.273E-01 0.252E-01
    6.000    .7 0.569E+00 0.307E+01    28.2 0.898E+02 0.423E+04      .1 0.626E-01 0.762E-01
    6.500    .7 0.907E+00 0.547E+01    28.2 0.104E+03 0.539E+04      .1 0.112E+00 0.166E+00
    7.000    .7 0.126E+01 0.814E+01    28.2 0.118E+03 0.667E+04      .1 0.177E+00 0.304E+00
    7.500    .8 0.164E+01 0.111E+02    28.2 0.132E+03 0.805E+04      .2 0.255E+00 0.497E+00
    8.000    .8 0.203E+01 0.143E+02    28.2 0.146E+03 0.953E+04      .2 0.349E+00 0.753E+00
    8.500  57.6 0.308E+02 0.197E+03    28.2 0.160E+03 0.111E+05      .2 0.449E+00 0.115E+01
    9.000  57.6 0.596E+02 0.592E+03    28.2 0.174E+03 0.128E+05      .2 0.550E+00 0.161E+01
28.0     .0 .045 16  2  3
         5.430                  .100    5.350                  .060
    2.310    .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    2.500    .0 0.000E+00 0.000E+00     5.3 0.927E+00 0.641E+01      .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00     7.3 0.406E+01 0.594E+02      .0 0.000E+00 0.000E+00
    3.500    .0 0.000E+00 0.000E+00     9.3 0.818E+01 0.161E+03      .0 0.000E+00 0.000E+00
    4.000    .0 0.000E+00 0.000E+00    11.3 0.133E+02 0.316E+03      .0 0.000E+00 0.000E+00
    4.500    .0 0.000E+00 0.000E+00    13.2 0.194E+02 0.530E+03      .0 0.000E+00 0.000E+00
    5.000    .0 0.000E+00 0.000E+00    15.2 0.266E+02 0.810E+03      .0 0.000E+00 0.000E+00
    5.500   3.4 0.120E+00 0.129E+00    16.8 0.347E+02 0.118E+04    16.4 0.156E+01 0.541E+01
    6.000  10.8 0.497E+01 0.290E+02    16.8 0.431E+02 0.170E+04    16.4 0.976E+01 0.115E+03
    6.500  10.9 0.104E+02 0.964E+02    16.8 0.515E+02 0.228E+04    16.4 0.180E+02 0.318E+03
    7.000  10.9 0.158E+02 0.189E+03    16.8 0.599E+02 0.294E+04    16.4 0.262E+02 0.595E+03
    7.500  11.0 0.213E+02 0.302E+03    16.8 0.683E+02 0.365E+04    16.4 0.344E+02 0.938E+03
    8.000  11.0 0.268E+02 0.431E+03    16.8 0.767E+02 0.443E+04    16.4 0.426E+02 0.134E+04
    8.500  16.8 0.352E+02 0.532E+03    16.8 0.851E+02 0.527E+04    16.4 0.508E+02 0.180E+04
    9.000  16.8 0.436E+02 0.760E+03    16.8 0.935E+02 0.617E+04    16.4 0.590E+02 0.231E+04
    9.500  16.8 0.520E+02 0.102E+04    16.8 0.102E+03 0.712E+04    16.4 0.672E+02 0.287E+04
29.0     .0 .045 16  2  3
         4.650                  .100    5.520                  .060
    2.350    .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    2.500    .0 0.000E+00 0.000E+00     4.7 0.649E+00 0.384E+01      .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00     6.8 0.353E+01 0.490E+02      .0 0.000E+00 0.000E+00
    3.500    .0 0.000E+00 0.000E+00     9.0 0.750E+01 0.142E+03      .0 0.000E+00 0.000E+00
    4.000    .0 0.000E+00 0.000E+00    11.2 0.126E+02 0.289E+03      .0 0.000E+00 0.000E+00
    4.500    .0 0.000E+00 0.000E+00    13.4 0.187E+02 0.497E+03      .0 0.000E+00 0.000E+00
    5.000   4.8 0.839E+00 0.262E+01    14.8 0.258E+02 0.795E+03     2.3 0.586E-01 0.834E-01
    5.500  11.5 0.495E+01 0.281E+02    15.8 0.335E+02 0.117E+04    25.8 0.709E+01 0.499E+02
    6.000  11.5 0.107E+02 0.990E+02    15.8 0.414E+02 0.166E+04    26.7 0.204E+02 0.285E+03
    6.500  11.6 0.165E+02 0.198E+03    15.8 0.493E+02 0.222E+04    26.7 0.338E+02 0.658E+03
    7.000  11.6 0.223E+02 0.319E+03    15.8 0.572E+02 0.285E+04    26.7 0.471E+02 0.115E+04
    7.500  11.7 0.281E+02 0.457E+03    15.8 0.651E+02 0.354E+04    26.7 0.605E+02 0.174E+04
    8.000  11.7 0.340E+02 0.611E+03    15.8 0.730E+02 0.428E+04    26.7 0.738E+02 0.242E+04
    8.500  17.5 0.427E+02 0.712E+03    15.8 0.809E+02 0.508E+04    26.7 0.872E+02 0.320E+04
    9.000  17.5 0.515E+02 0.971E+03    15.8 0.888E+02 0.593E+04    26.7 0.101E+03 0.405E+04
    9.500  17.5 0.602E+02 0.126E+04    15.8 0.967E+02 0.684E+04    26.7 0.114E+03 0.499E+04
30.0     .0 .045 15  2  3
         4.730                  .100    4.980                  .060
    2.400    .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    2.500    .0 0.000E+00 0.000E+00     5.0 0.480E+00 0.222E+01      .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00     7.0 0.349E+01 0.473E+02      .0 0.000E+00 0.000E+00
    3.500    .0 0.000E+00 0.000E+00     9.0 0.750E+01 0.142E+03      .0 0.000E+00 0.000E+00
    4.000    .0 0.000E+00 0.000E+00    11.1 0.125E+02 0.290E+03      .0 0.000E+00 0.000E+00
    4.500    .0 0.000E+00 0.000E+00    13.1 0.186E+02 0.496E+03      .0 0.000E+00 0.000E+00
    5.000   4.7 0.635E+00 0.167E+01    14.5 0.255E+02 0.786E+03     1.0 0.103E-01 0.799E-02
    5.500  11.4 0.524E+01 0.309E+02    14.5 0.328E+02 0.119E+04    25.3 0.696E+01 0.490E+02
    6.000  11.5 0.110E+02 0.103E+03    14.5 0.400E+02 0.166E+04    25.3 0.196E+02 0.276E+03
    6.500  11.5 0.167E+02 0.201E+03    14.5 0.473E+02 0.220E+04    25.3 0.323E+02 0.632E+03
    7.000  11.5 0.225E+02 0.321E+03    14.5 0.545E+02 0.278E+04    25.3 0.449E+02 0.110E+04
    7.500  11.6 0.282E+02 0.459E+03    14.5 0.618E+02 0.343E+04    25.3 0.576E+02 0.166E+04
    8.000  11.6 0.340E+02 0.612E+03    14.5 0.690E+02 0.413E+04    25.3 0.702E+02 0.231E+04
    8.500  45.2 0.566E+02 0.635E+03    14.5 0.763E+02 0.487E+04    25.3 0.829E+02 0.305E+04
    9.000  45.2 0.792E+02 0.111E+04    14.5 0.835E+02 0.567E+04    25.3 0.955E+02 0.386E+04
31.0     .0 .045 15  2  3
         4.490                  .100    4.670                  .100
    2.440    .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    2.500    .0 0.000E+00 0.000E+00     4.0 0.235E+00 0.782E+00      .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00     6.1 0.276E+01 0.353E+02      .0 0.000E+00 0.000E+00
    3.500    .0 0.000E+00 0.000E+00     8.1 0.629E+01 0.114E+03      .0 0.000E+00 0.000E+00
    4.000    .0 0.000E+00 0.000E+00    10.1 0.108E+02 0.241E+03      .0 0.000E+00 0.000E+00
    4.500    .2 0.917E-03 0.268E-03    12.1 0.164E+02 0.423E+03      .0 0.000E+00 0.000E+00
    5.000  12.6 0.284E+01 0.105E+02    12.4 0.225E+02 0.708E+03    25.3 0.532E+01 0.188E+02
    5.500  12.6 0.915E+01 0.717E+02    12.4 0.287E+02 0.106E+04    25.3 0.180E+02 0.143E+03
    6.000  12.7 0.155E+02 0.168E+03    12.4 0.349E+02 0.147E+04    25.3 0.307E+02 0.348E+03
    6.500  12.7 0.218E+02 0.291E+03    12.4 0.411E+02 0.193E+04    25.3 0.433E+02 0.619E+03
    7.000  12.7 0.282E+02 0.435E+03    12.4 0.473E+02 0.244E+04    25.3 0.560E+02 0.950E+03
    7.500  12.8 0.346E+02 0.598E+03    12.4 0.535E+02 0.299E+04    25.3 0.686E+02 0.133E+04
    8.000  12.8 0.410E+02 0.776E+03    12.4 0.597E+02 0.359E+04    25.3 0.813E+02 0.177E+04
    8.500  40.0 0.610E+02 0.771E+03    12.4 0.659E+02 0.424E+04    25.3 0.940E+02 0.225E+04
    9.000  40.0 0.810E+02 0.124E+04    12.4 0.721E+02 0.492E+04    25.3 0.107E+03 0.278E+04
32.0     .0 .030 15  2  3
         4.650                  .100    4.550                  .100
    2.750    .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00      .0 0.000E+00 0.000E+00
    3.000    .0 0.000E+00 0.000E+00     4.9 0.104E+01 0.122E+02      .0 0.000E+00 0.000E+00
    3.500    .0 0.000E+00 0.000E+00     7.9 0.424E+01 0.914E+02      .0 0.000E+00 0.000E+00
    4.000    .0 0.000E+00 0.000E+00    10.9 0.894E+01 0.255E+03      .0 0.000E+00 0.000E+00
    4.500    .0 0.000E+00 0.000E+00    13.9 0.151E+02 0.520E+03      .0 0.000E+00 0.000E+00
    5.000  11.0 0.242E+01 0.877E+01    14.5 0.224E+02 0.968E+03    23.9 0.884E+01 0.456E+02
    5.500  11.0 0.793E+01 0.615E+02    14.5 0.296E+02 0.155E+04    23.9 0.208E+02 0.189E+03
    6.000  11.0 0.134E+02 0.144E+03    14.5 0.369E+02 0.223E+04    23.9 0.327E+02 0.404E+03
    6.500  11.1 0.190E+02 0.249E+03    14.5 0.441E+02 0.300E+04    23.9 0.447E+02 0.678E+03
    7.000  11.1 0.245E+02 0.372E+03    14.5 0.514E+02 0.387E+04    23.9 0.566E+02 0.101E+04
    7.500  11.1 0.300E+02 0.509E+03    14.5 0.586E+02 0.482E+04    23.9 0.686E+02 0.139E+04
    8.000  11.1 0.356E+02 0.660E+03    14.5 0.659E+02 0.586E+04    23.9 0.805E+02 0.181E+04
    8.500  11.1 0.411E+02 0.840E+03    14.5 0.731E+02 0.697E+04    23.9 0.925E+02 0.228E+04
    9.000  11.1 0.467E+02 0.104E+04    14.5 0.804E+02 0.817E+04    23.9 0.104E+03 0.279E+04
    9.500  11.1 0.522E+02 0.125E+04    14.5 0.876E+02 0.943E+04    23.9 0.116E+03 0.334E+04
```

```
33.0      .0 .030 13  2  3
         5.160                  .100
   3.180      .0 0.000E+00 0.000E+00
   3.500      .0 0.000E+00 0.000E+00
   4.000      .0 0.000E+00 0.000E+00
   4.500      .0 0.000E+00 0.000E+00
   5.000      .0 0.000E+00 0.000E+00
   5.500    13.4 0.395E+01 0.173E+02
   6.000    13.4 0.107E+02 0.883E+02
   6.500    13.4 0.174E+02 0.195E+03
   7.000    13.5 0.241E+02 0.329E+03
   7.500    13.5 0.308E+02 0.485E+03
   8.000    13.5 0.376E+02 0.660E+03
   8.500    13.5 0.443E+02 0.869E+03
   9.000    13.5 0.511E+02 0.110E+04
34.0      .0 .020 27  2  3
         1.000                  .030
   1.000      .0 0.000E+00 0.000E+00
   1.300      .3 0.450E-01 0.336E+00
   1.600      .6 0.180E+00 0.214E+01
   1.900      .9 0.405E+00 0.630E+01
   2.200     1.2 0.720E+00 0.136E+02
   2.500     1.5 0.113E+01 0.246E+02
   2.800     1.8 0.162E+01 0.400E+02
   3.100     2.1 0.221E+01 0.603E+02
   3.400     2.3 0.288E+01 0.866E+02
   3.700     2.3 0.357E+01 0.117E+03
   4.000     2.3 0.426E+01 0.149E+03
   4.300     2.3 0.495E+01 0.183E+03
   4.600     2.3 0.564E+01 0.217E+03
   4.900   113.9 0.123E+02 0.918E+02
   5.200   113.9 0.465E+02 0.840E+03
   5.500   113.9 0.806E+02 0.210E+04
   5.800   113.9 0.115E+03 0.379E+04
   6.100   113.9 0.149E+03 0.585E+04
   6.400   113.9 0.183E+03 0.826E+04
   6.700   113.9 0.217E+03 0.110E+05
   7.000   113.9 0.251E+03 0.140E+05
   7.300   113.9 0.286E+03 0.173E+05
   7.600   113.9 0.320E+03 0.209E+05
   7.900   113.9 0.354E+03 0.248E+05
   8.200   113.9 0.388E+03 0.289E+05
   8.500   113.9 0.422E+03 0.332E+05
   8.800   113.9 0.456E+03 0.378E+05
35.0      .0 .030 15  2  3
         4.560                  .200
   2.030      .0 0.000E+00 0.000E+00
   2.500      .0 0.000E+00 0.000E+00
   3.000      .0 0.000E+00 0.000E+00
   3.500      .0 0.000E+00 0.000E+00
   4.000      .0 0.000E+00 0.000E+00
   4.500      .0 0.000E+00 0.000E+00
   5.000     0.0 0.568E-02 0.156E-02
   5.500      .1 0.259E-01 0.118E-01
   6.000      .1 0.609E-01 0.369E-01
   6.500      .1 0.110E+00 0.817E-01
   7.000      .1 0.175E+00 0.151E+00
   7.500      .2 0.254E+00 0.248E+00
   8.000      .2 0.347E+00 0.376E+00
   8.500    81.0 0.408E+02 0.126E+03
   9.000    81.0 0.814E+02 0.397E+03
36.0      .0 .030 15  2  3
         4.880                  .200
   2.180      .0 0.000E+00 0.000E+00
   2.500      .0 0.000E+00 0.000E+00
   3.000      .0 0.000E+00 0.000E+00
   3.500      .0 0.000E+00 0.000E+00
   4.000      .0 0.000E+00 0.000E+00
   4.500      .0 0.000E+00 0.000E+00
   5.000     0.0 0.233E-03 0.181E-04
   5.500     0.0 0.622E-02 0.145E-02
   6.000     0.0 0.203E-01 0.700E-02
   6.500      .1 0.425E-01 0.187E-01
   7.000      .1 0.727E-01 0.384E-01
   7.500      .1 0.111E+00 0.675E-01
   8.000      .1 0.158E+00 0.108E+00
   8.500    53.3 0.268E+02 0.817E+02
   9.000    53.3 0.535E+02 0.258E+03
37.0      .0 .030 14  2  3
         3.050                  .100
   2.820      .0 0.000E+00 0.000E+00
   3.000      .0 0.000E+00 0.000E+00
   3.500      .6 0.127E+00 0.397E+00
   4.000     1.2 0.564E+00 0.291E+01
   4.500     1.8 0.131E+01 0.900E+01
   5.000     8.8 0.298E+01 0.138E+02
   5.500    16.2 0.998E+01 0.699E+02
   6.000    16.3 0.181E+02 0.185E+03
   6.500    16.3 0.262E+02 0.337E+03
   7.000    16.3 0.344E+02 0.520E+03
   7.500    16.4 0.426E+02 0.728E+03
   8.000    16.4 0.508E+02 0.960E+03
   8.500    50.0 0.758E+02 0.960E+03
   9.000    50.0 0.101E+03 0.154E+04
38.0      .0 .030 13  2  3
         4.480                  .100
   3.210      .0 0.000E+00 0.000E+00
   3.500      .0 0.000E+00 0.000E+00
   4.000      .0 0.000E+00 0.000E+00
   4.500      .6 0.581E-02 0.269E-02
   5.000    15.0 0.452E+01 0.201E+02
   5.500    15.0 0.120E+02 0.101E+03
   6.000    15.1 0.196E+02 0.222E+03
   6.500    15.1 0.271E+02 0.374E+03
   7.000    15.1 0.347E+02 0.553E+03
   7.500    15.2 0.423E+02 0.754E+03
   8.000    15.2 0.498E+02 0.975E+03
   8.500    40.2 0.699E+02 0.964E+03
   9.000    40.2 0.901E+02 0.147E+04
```

```
4.650                 .100
     .0 0.000E+00 0.000E+00
    4.8 0.126E+01 0.167E+02
    6.3 0.403E+01 0.953E+02
    7.7 0.753E+01 0.231E+03
    8.7 0.117E+02 0.441E+03
    8.9 0.161E+02 0.739E+03
    8.9 0.206E+02 0.111E+04
    8.9 0.250E+02 0.154E+04
    8.9 0.295E+02 0.202E+04
    8.9 0.339E+02 0.256E+04
    8.9 0.384E+02 0.314E+04
    8.9 0.428E+02 0.377E+04
    8.9 0.473E+02 0.445E+04

1.000                 .030
     .0 0.000E+00 0.000E+00
    9.4 0.282E+01 0.632E+02
    9.4 0.564E+01 0.201E+03
    9.4 0.846E+01 0.394E+03
    9.4 0.113E+02 0.637E+03
    9.4 0.141E+02 0.924E+03
    9.4 0.169E+02 0.125E+04
    9.4 0.197E+02 0.162E+04
    9.4 0.226E+02 0.202E+04
    9.4 0.254E+02 0.246E+04
    9.4 0.282E+02 0.293E+04
    9.4 0.310E+02 0.344E+04
    9.4 0.338E+02 0.397E+04
    9.4 0.367E+02 0.454E+04
    9.4 0.395E+02 0.514E+04
    9.4 0.423E+02 0.577E+04
    9.4 0.451E+02 0.642E+04
    9.4 0.479E+02 0.710E+04
    9.4 0.508E+02 0.781E+04
    9.4 0.536E+02 0.855E+04
    9.4 0.564E+02 0.931E+04
    9.4 0.592E+02 0.101E+05
    9.4 0.620E+02 0.109E+05
    9.4 0.649E+02 0.118E+05
    9.4 0.677E+02 0.126E+05
    9.4 0.705E+02 0.135E+05
    9.4 0.733E+02 0.144E+05

3.830                 .200
     .0 0.000E+00 0.000E+00
   16.8 0.724E+01 0.137E+03
   19.8 0.164E+02 0.477E+03
   22.8 0.271E+02 0.997E+03
   25.3 0.392E+02 0.172E+04
   26.8 0.522E+02 0.267E+04
   27.0 0.657E+02 0.390E+04
   27.0 0.792E+02 0.532E+04
   27.0 0.927E+02 0.692E+04
   27.0 0.106E+03 0.867E+04
   27.0 0.120E+03 0.106E+05
   27.0 0.133E+03 0.127E+05
   27.0 0.147E+03 0.149E+05
   27.0 0.160E+03 0.172E+05
   27.0 0.174E+03 0.197E+05

5.380                 .200
     .0 0.000E+00 0.000E+00
   15.4 0.470E+01 0.707E+02
   17.5 0.129E+02 0.347E+03
   19.7 0.222E+02 0.789E+03
   21.9 0.326E+02 0.139E+04
   24.0 0.441E+02 0.214E+04
   25.9 0.567E+02 0.308E+04
   26.7 0.699E+02 0.428E+04
   26.7 0.832E+02 0.573E+04
   26.7 0.966E+02 0.735E+04
   26.7 0.110E+03 0.911E+04
   26.7 0.123E+03 0.110E+05
   26.7 0.137E+03 0.131E+05
   26.7 0.150E+03 0.153E+05
   26.7 0.163E+03 0.176E+05

5.130                 .060
     .0 0.000E+00 0.000E+00
    4.2 0.382E+00 0.254E+01
    6.1 0.321E+01 0.684E+02
    6.8 0.643E+01 0.199E+03
    7.5 0.100E+02 0.386E+03
    8.2 0.139E+02 0.625E+03
    8.4 0.181E+02 0.953E+03
    8.4 0.223E+02 0.135E+04
    8.4 0.265E+02 0.180E+04
    8.4 0.307E+02 0.230E+04
    8.4 0.349E+02 0.285E+04
    8.4 0.391E+02 0.344E+04
    8.4 0.433E+02 0.408E+04
    8.4 0.475E+02 0.476E+04

4.510                 .060
     .0 0.000E+00 0.000E+00
    4.4 0.910E+00 0.104E+02
    6.8 0.371E+01 0.802E+02
    9.2 0.771E+01 0.221E+03
    9.2 0.123E+02 0.481E+03
    9.2 0.169E+02 0.816E+03
    9.2 0.215E+02 0.122E+04
    9.2 0.261E+02 0.168E+04
    9.2 0.307E+02 0.221E+04
    9.2 0.353E+02 0.278E+04
    9.2 0.399E+02 0.341E+04
    9.2 0.445E+02 0.409E+04
    9.2 0.491E+02 0.482E+04
```

```
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    7.8 0.144E+01 0.467E+01
    7.8 0.535E+01 0.398E+02
    7.8 0.926E+01 0.956E+02
    7.9 0.132E+02 0.166E+03
    7.9 0.171E+02 0.248E+03
    7.9 0.211E+02 0.338E+03
    7.9 0.250E+02 0.437E+03
    7.9 0.289E+02 0.558E+03
    7.9 0.329E+02 0.690E+03

     .0 0.000E+00 0.000E+00
     .3 0.450E-01 0.336E+00
     .6 0.180E+00 0.214E+01
     .9 0.405E+00 0.630E+01
    1.2 0.720E+00 0.136E+02
    1.5 0.113E+01 0.246E+02
    1.8 0.162E+01 0.400E+02
    2.1 0.221E+01 0.603E+02
    2.3 0.288E+01 0.866E+02
    2.3 0.357E+01 0.117E+03
    2.3 0.426E+01 0.149E+03
    2.3 0.495E+01 0.183E+03
    2.3 0.564E+01 0.217E+03
   16.7 0.749E+01 0.133E+03
   16.7 0.125E+02 0.313E+03
   16.7 0.175E+02 0.549E+03
   16.7 0.226E+02 0.835E+03
   16.7 0.276E+02 0.117E+04
   16.7 0.326E+02 0.154E+04
   16.7 0.376E+02 0.196E+04
   16.7 0.426E+02 0.241E+04
   16.7 0.476E+02 0.291E+04
   16.7 0.527E+02 0.344E+04
   16.7 0.577E+02 0.400E+04
   16.7 0.627E+02 0.459E+04
   16.7 0.677E+02 0.522E+04
   16.7 0.727E+02 0.588E+04

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
   15.0 0.375E+01 0.734E+01
   15.0 0.113E+02 0.449E+02
   15.1 0.188E+02 0.103E+03
   15.1 0.263E+02 0.177E+03
   15.1 0.339E+02 0.265E+03
   15.1 0.414E+02 0.363E+03
   15.2 0.490E+02 0.472E+03
   15.2 0.566E+02 0.589E+03
   15.2 0.642E+02 0.714E+03
  217.0 0.173E+03 0.732E+03
  217.0 0.281E+03 0.165E+04

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    0.0 0.552E-03 0.763E-04
    0.0 0.147E-01 0.609E-02
     .1 0.481E-01 0.295E-01
     .1 0.101E+00 0.788E-01
     .2 0.172E+00 0.161E+00
     .2 0.263E+00 0.284E+00
     .2 0.364E+00 0.487E+00
     .2 0.464E+00 0.731E+00

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    5.0 0.923E+00 0.499E+01
    8.9 0.481E+01 0.530E+02
    8.9 0.926E+01 0.158E+03
    8.9 0.137E+02 0.304E+03
    8.9 0.182E+02 0.486E+03
    8.9 0.226E+02 0.700E+03
    8.9 0.271E+02 0.945E+03
    8.9 0.315E+02 0.122E+04

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
   31.8 0.138E+02 0.132E+03
   31.8 0.297E+02 0.474E+03
   31.8 0.456E+02 0.968E+03
   31.8 0.615E+02 0.159E+04
   31.8 0.774E+02 0.234E+04
   31.8 0.933E+02 0.319E+04
   31.8 0.109E+03 0.414E+04
   31.8 0.125E+03 0.520E+04
   31.8 0.141E+03 0.635E+04
```

Kcon1%MBKex30

```
701383231 240 1402060600.5 1% 360.0011 0.9 KAHIBAH CREEK EXTBGE00006666 0 0 0 0
  60003  6 0.120   0   00100.1 5.0 0.25                                   11
|37eo+        813464750            -0.5 0.505
 3679x@+*  13 8 8 736323832111047465046221 8         0 1 005
 1   0.50 0 1100                  0 1
 2   0.51 0       1100            0     3   26                    300. 13 1
 3   0.52 0 3111             4    0   2    26                     308.
 4   0.53 0 4111 3111      3 5    0                               210.
 5   0.64 0 5111 4111      4 6    0    15    12                   108.
 6   0.75 0 6111 5111      5 7    0    14     2       8    80     293.  8
 7   0.86 0 7111 6111      6 8   90                               150.
 8  0.565 034111 7011      713    0   6 9 80 3                     49.
 9  1.290 039111 7100      712    0   810   331                    55.
10  1.790 0             1         0   911 3128                          6
11  1.840 0             2         0  1038 2846   1232 3029
12  1.581 04011139111.02  932     0    13     4    11    30       100.
13  1.900 0 811134111     816     0  1214   4 6                    70.
14  1.210 0             3         0  1315   611   617  210
15  3.700 0             4         0   518 1213   14    11
16  1.350 0 9111 8111     1317    0  3633 71 8   32    83         130.
17  1.500 010111 9111     1618    0  1419 10 9                    230.  7
18  1.730 01111110111     1722  200  15    13    19    15         155.  3
19  3.600 0             5         0  1720   914  3318  715
20  1.850 01311111100     1821    0  3325 3316   19    14         335.
21  1.900 01510013111     2030    0  3529 3725                    305.
22  1.850 01211111011     1823  260    25    17                    70.
23  1.870 01610012100     2227    0  2426 2324   25    18         180.
24  4.300 0             6         0  2523 1923    28   21
25  3.870 014111            29    0  2024 1619   2223 1718        312.
26  1.900 01601112011     2227    0  23    24                     300.
27  2.000 0      16111    23  26  0    28    22                   108.  4
28  4.300 0             7         0  2729 2220   24    21
29  4.000 01501114111     2530    0  21    25    28    20         120.  5
30  2.300 01711115111     29  21  0                               300.  1
31  2.500 0      17111            0 1
32  1.550 0      40111,02 12      0  1136 29 5    16   83         100.
33  3.880 0             8         0  3419 34 7   1620  833
34  3.140 0             9         0  3635 3538   5433 3634
35  3.340 0             1         0  3440 3840   3721 3937
36  1.500 018111            54  380  3216  571    34   35         470.
37  2.400 0      19110    38      0  5435 8139    39   42         195.
38  2.200 01911018110     3637    0  1142 4647   3954 4541        740.
39  2.410 0             2         0  3740 4243    38   45
40  2.420 0             3         0  3941 4344   35    40              12
41  3.590 0             4         0  40    44                          11
42  2.500 026111            43    0  38    47                     185.
43  2.550 02711126111     4244    0    45    48                   245.
44  2.750 0      27111    43      0    45    72     46   50       130.
45  3.710 0             5         0  4347 4849   44    72
46  2.800 022111            47    0  4450 5052                    260.
47  2.850 02311122111     4648    0  4549 4951                    290.
48  2.900 02411123111     4760    0  53    53                     175.
49  4.310 0             6         0  4753 5174   5150 5473
50  2.900 028111            51    0  46    52    49    73          95.
51  3.000 02911128111     5052    0    49    54                    90.
52  3.200 0      29111    51      0    53    75     57   56        95.
53  3.590 0             7         0  4956 7455   5248 7553
54  2.300 0      18001     36     0  3834 4136    37   81         130.
55  3.110 0             8         0  5662 7758   5960 7857
56  3.591 0             9         0  5355 5577   5857 5976
57  3.250 030111            58    0  52    56    56    76         105.
58  3.350 03111130111     5759    0    56    59                   105.
59  3.450 0      31111    58      0    55    78     64   60       105.
60  2.950 02511124111     4870  610  55    57                     130. 10
61  3.000 0      25110    60      0  7062 6162    67   66         290.
62  3.111 0             1         0  5568 5867   6163 6263
63  4.620 0             2         0  6265 6364    64   79
64  3.550 032111            65    0  59    60    63    79          45.
65  3.600 03311132111     6466    0  63    64                     130.
66  3.650 0      33111    65      0                               340.  9
67  3.010 0             3         0  7069 6568   6168 6669
68  3.020 0             4         0  6769 6970   62    67               2
69  8.000 0             5         0  67    68    68    70
70  4.000 0      25001    60      0    61    61    67    65       270.
 1 6 3     0   3.6   4.8   9.8  16.0  16.0
        1.65   2.0   3.0   4.0   5.0   8.0
 2 6 3     0   2.4   4.6   9.4  15.4  15.4
        1.85   2.0   3.0   4.0   5.0   8.0
 3 3 3     0   3.9   10.
         2.0   4.0   5.0
 4 3 3     0   1.1   5.3
         2.0   4.0   5.0
 5 3 3     0   9.4  39.9
         3.6   4.0   4.5
 6 2 3     0  15.9
         4.0   5.0
 7 5 3     0   4.2   5.1   5.5   6.4
         4.0   6.0   8.0  10.0  12.0
 8 3 3     0   0.2  22.3
         3.8   4.0   4.8
 9 5 3     0   1.3   5.4  19.4  22.4
         2.5   3.0   4.0   5.0   6.0
10 6 3     0   1.8  13.2  29.7  44.8  61.0
         3.6   4.0   5.0   6.0   7.0   8.0
11 4 3     0   4.3   9.0   9.0
         2.1   3.0   4.0   8.0
12 5 3     0   4.1  10.4  13.2  13.2
         2.2   3.0   4.0   5.0   8.0
13 8 3     0   0.2   0.3   1.0   1.3   1.4   1.6   2.0
        3.64   4.0   5.0   6.0   7.0   8.0   9.0  10.0
14 5 3     0   0.8   4.2  25.5  27.4
         3.7   4.0   5.0   6.0   6.2
15 3 3     0  14.3  14.3
         5.0   5.6   6.6
16 4 3     0   3.2  22.1  22.1
        4.82   5.0   5.8   8.5
17 5 3     0   3.8  16.3  25.4  25.4
         3.1   4.0   5.0   5.1   8.0
18 4 3     0   1.0  22.0  22.0
        4.82   5.0   5.8   8.0
19 8 3     0   2.6  41.6  69.3  70.0  71.6  73.2  73.6
         3.1   4.0   5.0   6.0   7.0   8.0   9.0  10.0
20 7 3     0   4.8  24.6  27.8  29.7  32.0  32.3
         4.6   5.0   6.0   7.0   8.0   9.0  10.0
21 5 3     0   0.5   7.5  10.1  12.7
         2.2   3.0   4.0   5.0   6.0
22 5 3     0   8.1  12.0  14.5  15.1
         3.1   4.0   5.0   6.0   7.0
23 6 3     0   9.7  23.1  26.7  28.1  29.5
         5.0   6.0   7.0   8.0   9.0  10.0
 116     1.0   1.0  10.0  20.0  48.0  53.0  58.5  57.0  50.0  40.0  30.0  20.0
        10.0   3.0   0.5   0.5
          0. 3000.  720.  300.  420.  300.  120.  180.  240.  420.  600.  960.
       1860. 1980. 2700.50080.
 218     0.5   0.6   1.6   6.0  16.8  17.0  16.6  15.0  13.4  10.6   9.7   7.4
         6.7   4.5   2.9   1.1   0.5   0.5
          0. 1020.  180.  360.  840.   60.   60.  240.  120.  360.  720.  600.
        480.  840. 1440. 1320. 1320.50000.
 3 9     1.0   1.0   1.5   1.0   2.8   2.8   1.0   0.5   0.5
          0. 2700.  420.  180.  360.  180.  600.  300.50000.
 416     1.0   1.0   8.5  10.0  20.0  21.5  27.0  27.5  18.0  15.0  11.5   6.0
         4.0   1.5   0.5   0.5
          0. 2760.  600.  240.  300.  180.  180.  120.  840.  720.  420. 1740.
```

```
        900.   660. 1020.50000.
 5 8     1.0    0.5    3.0    3.5    3.0    1.0    0.5    0.5
           0. 3300. 1200.  600. 1140. 2340. 1380.50000.
 616     0.5    0.6    3.5    5.9    9.4    9.7    9.8    9.9    9.8    9.1    8.9    7.9
         4.4    1.8    0.5    0.5
           0. 3000.  600.  240.  360.  120.  120.   60.   60.  240.  120.  840.
      1920. 2160. 2520.50000.
 7 9     1.0    0.5    1.0    1.5    3.5    3.5    1.0    0.5    0.5
           0. 2460.  660.  480.  420.  240.  960. 1140.50000.
 815     1.0    0.5    7.0    6.0   14.0   13.0    6.0    4.5    3.0    3.0    2.0    2.0
         1.5    0.5    0.5
           0. 2400. 1020.  240.  300.  300.  540. 1020.  480.  600.  360.  600.
       360. 1620.50000.
 917     0.5    0.5    5.1   10.3   20.7   21.9   21.4   18.3   14.6   13.8   10.2    9.3
         7.2    4.3    2.7    0.5    0.5
           0. 1200.  600.  360.  480.  120.  120.  360.  480.  240.  960.  360.
       600. 1680.  720. 3120.50000.
1017     0.5    0.6    5.4   12.1   18.0   24.3   24.4   23.7   22.3   17.0   12.2   10.8
         4.7    4.3    1.2    0.5    0.5
           0.  960.  840.  240.  360.  600.   60.   60.  120.  360.  600.  480.
      2040.  480. 1680. 1320.50000.
1120     0.5    0.8    5.7    5.5   13.0   13.3   13.3   13.1   11.6   10.1    9.6    7.1
         6.9    6.4    4.3    4.3    2.9    1.6    0.5    0.5
           0. 3000.  600.  240.  360.   60.   60.  240.  240.  720.  360.  720.
       240.  240.  720.  360. 1080.  840. 1920.50000.
1218     0.5    0.6    3.8    4.3    8.7    9.2    9.4    6.4    5.3    3.6    3.1    2.9
         2.3    2.2    1.6    0.9    0.5    0.5
           0. 2880.  480.  240.  360.  120.  120.  360.  120.  360.  360.  480.
       360.  600.  480. 1920.  600.50000.
13 9    0.09   0.07   0.99   1.55   1.64   1.55   0.99   0.07   0.47
           0. 1800. 4500. 7200. 3600. 3600. 7200.10800.10800.
 111 10  .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
 111 10  .00 162.5 513.4 1006. 1622. 2350. 3180. 4108. 5127. 6234. 7425.
         .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
         .00  95.0 190.0 285.0 380.0 475.0 570.0 665.0 760.0 855.0 950.0
 1      -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
       -5.00 -4.00 -3.00 -2.00 -1.00   .00  1.00  2.00  3.00  4.00  5.00
 211 10  .00  10.8  34.1  66.9 107.9 156.2 211.4 273.1 340.8 414.4 493.6
 211 10  .00  10.8  34.1  66.9 107.9 156.2 211.4 273.1 340.8 414.4 493.6
         .00  44.0  88.0 132.0 176.0 220.0 264.0 308.0 352.0 396.0 440.0
         .00  44.0  88.0 132.0 176.0 220.0 264.0 308.0 352.0 396.0 440.0
        8.00 8.20 8.40 8.60 8.80 9.00 9.20 9.40 9.60 9.80 10.00
        8.00 8.20 8.40 8.60 8.80 9.00 9.20 9.40 9.60 9.80 10.00
 3 5 10  .00  2.28  8.75  20.1  35.9
 3 5 10  .00  2.28  8.75  20.1  35.9
         .00  8.41  20.7  37.2  53.7
         .00  8.41  20.7  37.2  53.7
        3.79 4.29 4.79 5.29 5.79
        3.79 4.29 4.79 5.29 5.79
 4 3 10  .00  6.29  19.9
 4 3 10  .00  6.29  19.9
         .00  25.5  51.0
         .00  25.5  51.0
        8.00 8.50 9.00
        8.00 8.50 9.00
 512 10  .00  7.30  23.6  47.4  78.2 119.0 192.4 311.0 465.9 652.2 867.0 1108.
 512 10  .00  7.30  23.6  47.4  78.2 119.0 192.4 311.0 465.9 652.2 867.0 1108.
         .00  7.75  16.0  24.8  34.0  49.8  85.5 131.0 176.5 222.1 267.6 313.2
         .00  7.75  16.0  24.8  34.0  49.8  85.5 131.0 176.5 222.1 267.6 313.2
        1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50
        1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50
 612 10  .00   .76  4.83  14.2  31.1  56.4  88.5 126.7 170.4 219.4 273.3 331.8
 612 10  .00   .76  4.83  14.2  31.1  56.4  88.5 126.7 170.4 219.4 273.3 331.8
         .00  3.82  15.3  34.4  63.7  96.2 128.7 161.2 193.7 226.2 258.7 291.2
         .00  3.82  15.3  34.4  63.7  96.2 128.7 161.2 193.7 226.2 258.7 291.2
        2.30 2.80 3.30 3.80 4.30 4.80 5.30 5.80 6.30 6.80 7.30 7.80
        2.30 2.80 3.30 3.80 4.30 4.80 5.30 5.80 6.30 6.80 7.30 7.80
 7 7 10  .00  4.94  26.8  62.2 108.8 165.2 230.6
 7 7 10  .00  4.94  26.8  62.2 108.8 165.2 230.6
         .00  32.5  99.9 167.4 234.9 302.4 369.9
         .00  32.5  99.9 167.4 234.9 302.4 369.9
        3.88 4.38 4.88 5.38 5.88 6.38 6.88
        3.88 4.38 4.88 5.38 5.88 6.38 6.88
 8 7 10  .00  15.1  47.6  93.4 150.6 218.1 295.2
 8 7 10  .00  15.1  47.6  93.4 150.6 218.1 295.2
         .00  37.5  75.0 112.5 150.0 187.5 225.0
         .00  37.5  75.0 112.5 150.0 187.5 225.0
        8.00 8.30 8.60 8.90 9.20 9.50 9.80
        8.00 8.30 8.60 8.90 9.20 9.50 9.80
 9 7 10  .00  43.2 136.4 267.4 431.1 624.4 845.0
 9 7 10  .00  43.2 136.4 267.4 431.1 624.4 845.0
         .00  73.5 147.0 220.5 294.0 367.5 441.0
         .00  73.5 147.0 220.5 294.0 367.5 441.0
        8.00 8.30 8.60 8.90 9.20 9.50 9.80
        8.00 8.30 8.60 8.90 9.20 9.50 9.80
10 4 10  .00  85.5 270.2 529.6
10 4 10  .00  85.5 270.2 529.6
         .00  86.0 172.0 258.0
         .00  86.0 172.0 258.0
        8.00 8.40 8.80 9.20
        8.00 8.40 8.80 9.20
1111 10  .00   .67  4.61  14.5  29.1  47.7  69.8  95.1 123.5 154.8 188.8
1111 10  .00   .67  4.61  14.5  29.1  47.7  69.8  95.1 123.5 154.8 188.8
         .00  2.11  10.1  22.1  34.1  46.1  58.1  70.1  82.1  94.1 106.1
         .00  2.11  10.1  22.1  34.1  46.1  58.1  70.1  82.1  94.1 106.1
        3.70 3.90 4.10 4.30 4.50 4.70 4.90 5.10 5.30 5.50 5.70
        3.70 3.90 4.10 4.30 4.50 4.70 4.90 5.10 5.30 5.50 5.70
1211 10  .00   .65  4.04  10.2  18.7  29.0  41.1  54.9  70.2  86.9 105.1
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         .00  4.00  15.0  27.0  39.0  51.0  63.0  75.0  87.0  99.0 111.0
         .00  4.00  15.0  27.0  39.0  51.0  63.0  75.0  87.0  99.0 111.0
        3.70 3.90 4.10 4.30 4.50 4.70 4.90 5.10 5.30 5.50 5.70
        3.70 3.90 4.10 4.30 4.50 4.70 4.90 5.10 5.30 5.50 5.70
1311 10  .00  4.93  16.0  32.0  52.8  78.2 108.2 142.8 181.7 224.7 271.5
1311 10  .00  4.93  16.0  32.0  52.8  78.2 108.2 142.8 181.7 224.7 271.5
         .00  15.5  32.0  49.5  67.9  87.4 107.8 129.2 150.8 172.4 194.0
         .00  15.5  32.0  49.5  67.9  87.4 107.8 129.2 150.8 172.4 194.0
        4.00 4.30 4.60 4.90 5.20 5.50 5.80 6.10 6.40 6.70 7.00
        4.00 4.30 4.60 4.90 5.20 5.50 5.80 6.10 6.40 6.70 7.00
1411 10  .00   .36  2.26  7.21  20.4  40.4  65.9  96.5 131.7 171.2 214.8
1411 10  .00   .36  2.26  7.21  20.4  40.4  65.9  96.5 131.7 171.2 214.8
         .00  3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
         .00  3.06  12.2  35.3  80.9 126.5 172.1 217.7 263.3 308.9 354.5
        3.89 4.09 4.29 4.49 4.69 4.89 5.09 5.29 5.49 5.69 5.89
        3.89 4.09 4.29 4.49 4.69 4.89 5.09 5.29 5.49 5.69 5.89
1511 10  .00  4.47  19.7  43.6  74.5 111.8 154.8 203.2 256.8 315.2 378.4
1511 10  .00  4.47  19.7  43.6  74.5 111.8 154.8 203.2 256.8 315.2 378.4
         .00  14.6  39.0  63.4  87.8 112.2 136.6 161.0 185.4 209.8 234.2
         .00  14.6  39.0  63.4  87.8 112.2 136.6 161.0 185.4 209.8 234.2
        3.80 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 5.80
        3.80 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 5.80
1611 10  .00   .82  6.60  20.3  43.8  78.5 126.1 188.7 265.6 354.9 455.7
1611 10  .00   .82  6.60  20.3  43.8  78.5 126.1 188.7 265.6 354.9 455.7
         .00  4.29  20.0  45.7  80.2 122.8 174.6 236.5 299.7 362.8 426.0
         .00  4.29  20.0  45.7  80.2 122.8 174.6 236.5 299.7 362.8 426.0
        3.87 4.07 4.27 4.47 4.67 4.87 5.07 5.27 5.47 5.67 5.87
        3.87 4.07 4.27 4.47 4.67 4.87 5.07 5.27 5.47 5.67 5.87
1711 10  .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
1711 10  .00   .86  5.82  16.8  32.3  51.7  74.7 101.0 130.3 162.6 197.6
         .00  2.71  12.1  24.3  36.5  48.7  60.9  73.1  85.3  97.5 109.7
         .00  2.71  12.1  24.3  36.5  48.7  60.9  73.1  85.3  97.5 109.7
        4.47 4.67 4.87 5.07 5.27 5.47 5.67 5.87 6.07 6.27 6.47
        4.47 4.67 4.87 5.07 5.27 5.47 5.67 5.87 6.07 6.27 6.47
```

1811 10	.00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2	
1811 10	.00	1.93	8.37	18.0	30.5	45.4	62.5	81.8	103.0	126.2	151.2	
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3	
	.00	8.29	20.3	32.3	44.3	56.3	68.3	80.3	92.3	104.3	116.3	
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	
	4.77	4.97	5.17	5.37	5.57	5.77	5.97	6.17	6.37	6.57	6.77	
1911 10	.00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1	
1911 10	.00	.17	1.05	3.85	11.5	24.9	42.9	65.0	90.7	119.8	152.1	
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2	
	.00	2.00	8.00	27.4	68.7	118.0	167.2	216.5	265.7	315.0	364.2	
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30	
	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90	6.10	6.30	
2012 10	.00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7
2012 10	.00	1.31	8.27	24.3	52.3	94.1	149.1	216.3	295.6	386.8	489.7	603.7
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8
	.00	2.26	9.04	20.3	36.1	55.5	75.9	97.2	119.6	142.8	166.8	190.8
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	8.70
2111 10	.00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4	
2111 10	.00	6.41	29.1	63.7	108.2	161.7	223.5	292.9	369.6	453.2	543.4	
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2	
	.00	27.2	69.2	111.2	153.2	195.2	237.2	279.2	321.2	363.2	405.2	
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	
	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10	7.50	7.90	8.30	
2212 10	.00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8
2212 10	.00	.63	3.98	11.7	24.0	40.7	61.9	87.8	118.4	154.0	194.6	239.8
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0
	.00	3.67	14.7	32.5	53.2	76.0	101.0	128.2	157.5	189.0	222.0	255.0
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08
	4.48	5.08	5.68	6.28	6.88	7.48	8.08	8.68	9.28	9.88	10.48	11.08
2312 10	.00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.
2312 10	.00	5.25	41.6	107.2	195.8	304.6	431.9	576.2	736.7	912.5	1103.	1307.
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7
	.00	27.9	114.9	206.1	297.3	388.5	479.7	570.9	662.1	753.3	844.5	935.7
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88
	4.48	4.88	5.28	5.68	6.08	6.48	6.88	7.28	7.68	8.08	8.48	8.88
2411 10	.00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2	
2411 10	.00	6.94	27.4	57.7	96.2	142.1	194.9	254.1	319.4	390.5	467.2	
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0	
	.00	56.5	130.0	203.5	277.0	350.5	424.0	497.5	571.0	644.5	718.0	
	3.90	4.20	4.50	4.80	5.10	5.40	5.70	6.00	6.30	6.60	6.90	
	3.90	4.20	4.50	4.80	5.10	5.40	5.70	6.00	6.30	6.60	6.90	
2511 10	.00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.	
2511 10	.00	11.4	72.2	210.4	422.6	695.2	1022.	1397.	1819.	2285.	2792.	
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0	
	.00	17.6	70.4	154.0	242.0	330.0	418.0	506.0	594.0	682.0	770.0	
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	
	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	
2611 10	.00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.	
2611 10	.00	5.93	21.9	59.0	141.1	266.6	428.6	622.6	846.1	1097.	1374.	
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7	
	.00	6.61	16.3	41.9	84.7	132.2	179.7	227.2	274.7	322.2	369.7	
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75	
	.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.25	5.75	
2712 10	.00	2.10	7.47	14.6	23.5	32.4	37.3	45.8	50.4	70.3	98.0	133.2
2712 10	.00	2.10	7.47	14.6	23.5	32.4	37.3	45.8	50.4	70.3	98.0	133.2
	.00	1.94	4.64	7.34	10.0	12.7	13.0	13.0	15.2	24.2	33.9	44.2
	.00	1.94	4.64	7.34	10.0	12.7	13.0	13.0	15.2	24.2	33.9	44.2
	1.59	2.00	2.50	3.00	3.50	4.00	4.50	4.77	5.00	5.50	6.00	6.50
	1.59	2.00	2.50	3.00	3.50	4.00	4.50	4.77	5.00	5.50	6.00	6.50
2811 10	.00	2.3	3.2	3.9	4.8	11.7	32.7	63.9	104.2	152.7	208.8	
2811 10	.00	2.3	3.2	3.9	4.8	11.7	32.7	63.9	104.2	152.7	208.8	
	.00	1.27	1.27	1.27	1.27	8.51	18.7	29.1	39.5	50.2	60.9	
	.00	1.27	1.27	1.27	1.27	8.51	18.7	29.1	39.5	50.2	60.9	
	2.27	3.27	3.70	4.04	4.64	5.00	5.50	6.00	6.50	7.00	7.50	
	2.27	3.27	3.70	4.04	4.64	5.00	5.50	6.00	6.50	7.00	7.50	
2910 10	.00	0.11	0.73	1.40	8.58	30.0	61.9	102.7	151.7	207.7	270.6	340.0
2910 10	.00	0.11	0.73	1.40	8.58	30.0	61.9	102.7	151.7	207.7	270.6	340.0
	.00	0.22	0.57	0.57	8.07	18.6	29.1	39.7	50.2	60.8	71.3	81.9
	.00	0.22	0.57	0.57	8.07	18.6	29.1	39.7	50.2	60.8	71.3	81.9
	1.84	2.00	2.50	3.01	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00
	1.84	2.00	2.50	3.01	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00
3010 10	.00	.79	7.33	23.0	46.0	75.3	110.1	150.2	195.1	244.6		
3010 10	.00	.79	7.33	23.0	46.0	75.3	110.1	150.2	195.1	244.6		
	.00	1.65	8.84	19.3	29.8	40.4	50.9	61.5	72.0	82.6		
	.00	1.65	8.84	19.3	29.8	40.4	50.9	61.5	72.0	82.6		
	3.12	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50		
	3.12	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50		
3112 10	.00	0.69	2.10	4.20	4.65	8.88	27.4	56.3	93.7	138.8	191.0	249.4
3112 10	.00	0.69	2.10	4.20	4.65	8.88	27.4	56.3	93.7	138.8	191.0	249.4
	.00	0.33	1.62	1.92	1.92	6.73	16.6	26.5	36.5	46.5	56.5	66.5
	.00	0.33	1.62	1.92	1.92	6.73	16.6	26.5	36.5	46.5	56.5	66.5
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50
	1.79	2.00	2.50	3.00	3.11	3.50	4.00	4.50	5.00	5.50	6.00	6.50
3211 10	.00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1	
3211 10	.00	.66	2.70	9.64	24.7	50.6	87.9	134.6	189.8	252.8	323.1	
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4	
	.00	2.47	6.83	23.7	50.1	87.4	128.3	169.3	210.3	251.3	292.4	
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29	
	1.29	1.79	2.29	2.79	3.29	3.79	4.29	4.79	5.29	5.79	6.29	
3312 10	.00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5
3312 10	.00	1.84	7.44	16.5	28.5	42.9	59.7	78.6	99.5	122.3	147.0	173.5
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6
	.00	13.2	34.0	56.4	78.8	101.2	123.6	146.0	168.4	190.8	213.2	235.6
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67
	4.47	4.67	4.87	5.07	5.27	5.47	5.67	5.87	6.07	6.27	6.47	6.67
3412 10	.00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7
3412 10	.00	1.36	8.58	24.1	46.2	74.1	107.0	144.7	186.9	233.2	283.5	337.7
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2
	.00	8.29	33.2	67.2	101.2	135.2	169.2	203.2	237.2	271.2	305.2	339.2
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59
	4.39	4.59	4.79	4.99	5.19	5.39	5.59	5.79	5.99	6.19	6.39	6.59
35 5 10	.00	5.20	16.4	32.2	52.0							
35 5 10	.00	5.20	16.4	32.2	52.0							
	.00	36.0	72.0	108.0	144.0							
	.00	36.0	72.0	108.0	144.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
36 5 10	.00	46.9	132.7	243.9	375.5							
36 5 10	.00	46.9	132.7	243.9	375.5							
	.00	50.4	100.8	151.2	201.6							
	.00	50.4	100.8	151.2	201.6							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
3710 10	.00	4.44	28.0	82.5	177.2	320.9	521.2	784.2	1105.	1476.		
3710 10	.00	4.44	28.0	82.5	177.2	320.9	521.2	784.2	1105.	1476.		
	.00	12.1	48.4	109.0	193.8	302.7	435.9	589.0	744.0	899.0		
	.00	12.1	48.4	109.0	193.8	302.7	435.9	589.0	744.0	899.0		
	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30		
	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30		
3812 10	.00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2
3812 10	.00	1.02	6.29	17.0	34.6	60.2	95.1	138.9	190.3	248.8	313.9	385.2
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0
	.00	3.93	14.9	30.2	50.9	77.0	108.0	140.0	172.0	204.0	236.0	268.0
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
39 5 10	.00	21.5	68.1	133.5	215.2							
39 5 10	.00	21.5	68.1	133.5	215.2							
	.00	47.7	95.4	143.1	190.8							
	.00	47.7	95.4	143.1	190.8							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
40 8 10	.00	8.78	27.8	54.4	87.7	127.1	172.0	222.1				

40 8 10	.00	8.78	27.8	54.4	87.7	127.1	172.0	222.1			
	.00	33.0	66.0	99.0	132.0	165.0	198.0	231.0			
	.00	33.0	66.0	99.0	132.0	165.0	198.0	231.0			
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40			
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40			
41 4 10	.00	104.9	331.5	649.9							
41 4 10	.00	104.9	331.5	649.9							
	.00	97.5	195.0	292.5							
	.00	97.5	195.0	292.5							
	8.00	8.50	9.00	9.50							
	8.00	8.50	9.00	9.50							
4210 10	.00	3.67	24.6	74.1	149.0	244.7	359.2	491.0	672.5	962.7	
4210 10	.00	3.67	24.6	74.1	149.0	244.7	359.2	491.0	672.5	962.7	
	.00	6.58	26.7	60.0	93.7	127.5	161.3	195.2	286.5	410.5	
	.00	6.58	26.7	60.0	93.7	127.5	161.3	195.2	286.5	410.5	
	2.11	2.91	3.71	4.51	5.31	6.11	6.91	7.71	8.51	9.31	
	2.11	2.91	3.71	4.51	5.31	6.11	6.91	7.71	8.51	9.31	
4310 10	.00	16.7	73.2	165.8	289.1	439.2	613.8	811.2	1049.	1349.	
4310 10	.00	16.7	73.2	165.8	289.1	439.2	613.8	811.2	1049.	1349.	
	.00	44.3	115.4	195.4	275.7	356.1	436.6	517.1	648.7	799.8	
	.00	44.3	115.4	195.4	275.7	356.1	436.6	517.1	648.7	799.8	
	2.18	2.98	3.78	4.58	5.38	6.18	6.98	7.78	8.58	9.38	
	2.18	2.98	3.78	4.58	5.38	6.18	6.98	7.78	8.58	9.38	
44 8 10	.00	11.4	64.1	156.2	281.5	436.8	629.8	904.6			
44 8 10	.00	11.4	64.1	156.2	281.5	436.8	629.8	904.6			
	.00	10.5	34.5	61.0	88.1	115.8	155.0	215.7			
	.00	10.5	34.5	61.0	88.1	115.8	155.0	215.7			
	3.59	4.39	5.19	5.99	6.79	7.59	8.39	9.19			
	3.59	4.39	5.19	5.99	6.79	7.59	8.39	9.19			
45 8 10	.00	9.51	30.0	58.9	94.9	137.5	186.1	240.4			
45 8 10	.00	9.51	30.0	58.9	94.9	137.5	186.1	240.4			
	.00	50.0	100.0	150.0	200.0	250.0	300.0	350.0			
	.00	50.0	100.0	150.0	200.0	250.0	300.0	350.0			
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40			
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40			
46 8 10	.00	5.06	16.0	31.3	50.5	73.2	99.0	127.9			
46 8 10	.00	5.06	16.0	31.3	50.5	73.2	99.0	127.9			
	.00	54.2	108.4	162.6	216.8	271.0	325.2	379.4			
	.00	54.2	108.4	162.6	216.8	271.0	325.2	379.4			
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40			
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40			
4712 10	.00	3.00	13.5	24.4	34.9	70.1	125.6	198.6	291.4	396.2	527.0	650.9
4712 10	.00	3.00	13.5	24.4	34.9	70.1	125.6	198.6	291.4	396.2	527.0	650.9
	.00	5.84	8.72	13.3	18.3	34.1	54.9	76.0	97.1	118.2	139.3	160.5
	.00	5.84	8.72	13.3	18.3	34.1	54.9	76.0	97.1	118.2	139.3	160.5
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.03	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
48 5 10	.00	14.0	44.1	86.4	139.3							
48 5 10	.00	14.0	44.1	86.4	139.3							
	.00	43.5	87.0	130.5	174.0							
	.00	43.5	87.0	130.5	174.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
49 8 10	.00	3.32	10.5	20.6	33.1	48.0	65.0	83.9				
49 8 10	.00	3.32	10.5	20.6	33.1	48.0	65.0	83.9				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
5011 10	.00	6.20	12.4	25.0	33.6	46.0	55.7	86.9	102.5	145.1	197.8	
5011 10	.00	6.20	12.4	25.0	33.6	46.0	55.7	86.9	102.5	145.1	197.8	
	.00	5.08	7.96	12.8	14.4	14.4	14.7	22.9	35.0	47.2	59.6	
	.00	5.08	7.96	12.8	14.4	14.4	14.7	22.9	35.0	47.2	59.6	
	2.08	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
	2.08	2.70	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	
51 8 10	.00	16.5	46.8	86.0	132.4	185.0	243.2	306.5				
51 8 10	.00	16.5	46.8	86.0	132.4	185.0	243.2	306.5				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	.00	37.0	74.0	111.0	148.0	185.0	222.0	259.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
5212 10	.00	1.20	2.00	2.40	5.60	9.60	12.5	20.1	45.6	84.7	135.2	196.0
5212 10	.00	1.20	2.00	2.40	5.60	9.60	12.5	20.1	45.6	84.7	135.2	196.0
	.00	1.91	3.14	3.53	3.53	3.53	3.53	10.5	23.7	37.1	50.4	65.8
	.00	1.91	3.14	3.53	3.53	3.53	3.53	10.5	23.7	37.1	50.4	65.8
	2.30	3.10	3.50	3.80	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.30	3.10	3.50	3.80	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
53 5 10	.00	28.8	81.3	149.4	230.0							
53 5 10	.00	28.8	81.3	149.4	230.0							
	.00	52.5	105.0	157.5	210.0							
	.00	52.5	105.0	157.5	210.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
5412 10	.00	6.31	27.9	59.7	98.9	144.3	195.1	250.8	311.1	375.4	443.7	515.8
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	.00	9.87	29.5	49.5	69.5	89.5	109.5	129.5	149.5	169.5	189.5	209.5
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
	5.25	5.45	5.65	5.85	6.05	6.25	6.45	6.65	6.85	7.05	7.25	7.45
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
55 9 10	.00	6.91	52.0	129.0	234.1	365.7	520.8	697.5	894.5			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	.00	27.8	102.8	179.9	262.3	346.3	430.3	514.3	598.3			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
5612 10	.00	1.50	3.60	6.00	7.20	9.90	12.3	18.6	43.8	88.6	148.6	222.1
5612 10	.00	1.50	3.60	6.00	7.20	9.90	12.3	18.6	43.8	88.6	148.6	222.1
	0.0	0.78	2.55	3.5	3.5	3.5	3.5	9.51	24.8	41.7	58.5	75.3
	0.0	0.78	2.55	3.5	3.5	3.5	3.5	9.51	24.8	41.7	58.5	75.3
	2.67	3.00	3.50	3.87	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.67	3.00	3.50	3.87	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
57 5 10	.00	18.1	51.1	93.9	144.6							
57 5 10	.00	18.1	51.1	93.9	144.6							
	.00	33.0	66.0	99.0	132.0							
	.00	33.0	66.0	99.0	132.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
5812 10	.00	.78	4.57	12.7	26.9	47.6	79.3	135.7	214.8	312.5	426.8	556.6
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	.00	4.28	15.5	33.2	58.9	88.9	146.9	246.4	348.4	450.4	552.4	654.4
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
	3.11	3.41	3.71	4.01	4.31	4.61	4.91	5.21	5.51	5.81	6.11	6.41
59 8 10	.00	11.5	36.5	71.5	115.3	167.0	226.0	291.9				
59 8 10	.00	11.5	36.5	71.5	115.3	167.0	226.0	291.9				
	.00	20.0	40.0	60.0	80.0	100.0	120.0	140.0				
	.00	20.0	40.0	60.0	80.0	100.0	120.0	140.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
6011 10	.00	0.65	0.90	1.00	3.00	17.9	72.0	154.5	260.9	388.9	536.5	
6011 10	.00	0.65	0.90	1.00	3.00	17.9	72.0	154.5	260.9	388.9	536.5	
	.00	0.55	0.76	1.1	1.1	18.5	46.5	74.6	102.6	130.7	158.7	
	.00	0.55	0.76	1.1	1.1	18.5	46.5	74.6	102.6	130.7	158.7	
	2.73	3.33	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
	2.73	3.33	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
61 8 10	.00	8.52	24.1	44.2	68.1	95.2	125.1	157.7				
61 8 10	.00	8.52	24.1	44.2	68.1	95.2	125.1	157.7				
	.00	11.2	22.4	33.6	44.8	56.0	67.2	78.4				
	.00	11.2	22.4	33.6	44.8	56.0	67.2	78.4				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
62 5 10	.00	19.7	62.1	121.7	196.3							
62 5 10	.00	19.7	62.1	121.7	196.3							

	.00	43.5	87.0	130.5	174.0							
	.00	43.5	87.0	130.5	174.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
6310 10	.00	.69	5.77	22.1	59.2	114.9	186.3	272.1	371.4	483.5		
6310 10	.00	.69	5.77	22.1	59.2	114.9	186.3	272.1	371.4	483.5		
	.00	5.22	27.1	81.8	175.6	271.8	369.4	468.2	568.4	669.9		
	.00	5.22	27.1	81.8	175.6	271.8	369.4	468.2	568.4	669.9		
	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32		
	4.62	4.92	5.22	5.52	5.82	6.12	6.42	6.72	7.02	7.32		
64 8 10	.00	9.33	29.5	57.8	93.2	135.0	182.7	236.0				
64 8 10	.00	9.33	29.5	57.8	93.2	135.0	182.7	236.0				
	.00	27.0	54.0	81.0	108.0	135.0	162.0	189.0				
	.00	27.0	54.0	81.0	108.0	135.0	162.0	189.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
65 8 10	.00	23.4	66.2	121.7	187.3	261.8	344.2	433.7				
65 8 10	.00	23.4	66.2	121.7	187.3	261.8	344.2	433.7				
	.00	30.8	61.6	92.4	123.2	154.0	184.8	215.6				
	.00	30.8	61.6	92.4	123.2	154.0	184.8	215.6				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
66 9 10	.00	2.47	14.2	50.7	132.6	250.8	399.9	576.6	779.1			
66 9 10	.00	2.47	14.2	50.7	132.6	250.8	399.9	576.6	779.1			
	.00	4.06	15.8	50.8	101.7	153.5	205.4	257.4	309.4			
	.00	4.06	15.8	50.8	101.7	153.5	205.4	257.4	309.4			
	2.43	3.23	4.03	4.83	5.63	6.43	7.23	8.03	8.83			
	2.43	3.23	4.03	4.83	5.63	6.43	7.23	8.03	8.83			
67 9 10	.00	44.4	141.3	279.2	453.4	661.5	901.9	1173.	1474.			
67 9 10	.00	44.4	141.3	279.2	453.4	661.5	901.9	1173.	1474.			
	.00	76.4	154.3	233.7	314.7	397.1	481.2	566.6	652.4			
	.00	76.4	154.3	233.7	314.7	397.1	481.2	566.6	652.4			
	8.00	8.30	8.60	8.90	9.20	9.50	9.80	10.10	10.40			
	8.00	8.30	8.60	8.90	9.20	9.50	9.80	10.10	10.40			
68 8 10	.00	13.5	42.7	83.7	135.0	195.5	264.6	341.8				
68 8 10	.00	13.5	42.7	83.7	135.0	195.5	264.6	341.8				
	.00	23.0	46.0	69.0	92.0	115.0	138.0	161.0				
	.00	23.0	46.0	69.0	92.0	115.0	138.0	161.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
6910 10	.00	3.84	27.5	72.8	136.7	217.3	312.9	422.3	544.7	679.4		
6910 10	.00	3.84	27.5	72.8	136.7	217.3	312.9	422.3	544.7	679.4		
	.00	12.4	48.1	90.6	135.0	180.2	225.6	270.9	316.4	361.8		
	.00	12.4	48.1	90.6	135.0	180.2	225.6	270.9	316.4	361.8		
	2.82	3.32	3.82	4.32	4.82	5.32	5.82	6.32	6.82	7.32		
	2.82	3.32	3.82	4.32	4.82	5.32	5.82	6.32	6.82	7.32		
70 4 10	.00	158.9	457.0	853.3								
70 4 10	.00	158.9	457.0	853.3								
	.00	132.8	271.0	414.8								
	.00	132.8	271.0	414.8								
	8.00	8.50	9.00	9.50								
	8.00	8.50	9.00	9.50								
7112 10	.00	7.06	23.9	50.5	91.0	145.0	212.4	291.5	381.3	481.2	590.5	708.9
7112 10	.00	7.06	23.9	50.5	91.0	145.0	212.4	291.5	381.3	481.2	590.5	708.9
	.00	7.72	16.8	28.7	44.1	61.5	79.5	97.6	115.6	133.7	151.7	169.8
	.00	7.72	16.8	28.7	44.1	61.5	79.5	97.6	115.6	133.7	151.7	169.8
	1.20	1.70	2.20	2.70	3.20	3.70	4.20	4.70	5.20	5.70	6.20	6.70
	1.20	1.70	2.20	2.70	3.20	3.70	4.20	4.70	5.20	5.70	6.20	6.70
72 5 10	.00	6.74	21.3	41.7	67.3							
72 5 10	.00	6.74	21.3	41.7	67.3							
	.00	21.0	42.0	63.0	84.0							
	.00	21.0	42.0	63.0	84.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
73 8 10	.00	22.8	64.5	118.5	182.5	255.0	335.2	422.4				
73 8 10	.00	22.8	64.5	118.5	182.5	255.0	335.2	422.4				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	.00	30.0	60.0	90.0	120.0	150.0	180.0	210.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
74 5 10	.00	12.6	39.7	77.9	125.5							
74 5 10	.00	12.6	39.7	77.9	125.5							
	.00	52.5	105.0	157.5	210.0							
	.00	52.5	105.0	157.5	210.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
75 8 10	.00	7.60	21.5	39.5	60.8	85.0	111.7	140.8				
75 8 10	.00	7.60	21.5	39.5	60.8	85.0	111.7	140.8				
	.00	10.0	20.0	30.0	40.0	50.0	60.0	70.0				
	.00	10.0	20.0	30.0	40.0	50.0	60.0	70.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
76 8 10	.00	5.77	18.2	35.8	57.7	83.5	113.0	146.0				
76 8 10	.00	5.77	18.2	35.8	57.7	83.5	113.0	146.0				
	.00	10.0	20.0	30.0	40.0	50.0	60.0	70.0				
	.00	10.0	20.0	30.0	40.0	50.0	60.0	70.0				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
	8.00	8.20	8.40	8.60	8.80	9.00	9.20	9.40				
77 9 10	.00	30.0	108.5	222.2	365.9	536.8	732.7	952.1	1194.			
77 9 10	.00	30.0	108.5	222.2	365.9	536.8	732.7	952.1	1194.			
	.00	81.6	177.6	273.6	369.6	465.6	561.6	657.6	753.6			
	.00	81.6	177.6	273.6	369.6	465.6	561.6	657.6	753.6			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
	4.82	5.12	5.42	5.72	6.02	6.32	6.62	6.92	7.22			
78 5 10	.00	6.78	21.4	42.0	67.7							
78 5 10	.00	6.78	21.4	42.0	67.7							
	.00	15.0	30.0	45.0	60.0							
	.00	15.0	30.0	45.0	60.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
79 5 10	.00	6.78	21.4	42.0	67.7							
79 5 10	.00	6.78	21.4	42.0	67.7							
	.00	15.0	30.0	45.0	60.0							
	.00	15.0	30.0	45.0	60.0							
	8.00	8.30	8.60	8.90	9.20							
	8.00	8.30	8.60	8.90	9.20							
8010 10	.00	.42	2.45	6.26	12.0	19.5	28.4	38.8	50.4	63.2		
8010 10	.00	.42	2.45	6.26	12.0	19.5	28.4	38.8	50.4	63.2		
	.00	6.40	22.2	42.1	65.8	89.8	113.8	137.8	161.8	185.8		
	.00	6.40	22.2	42.1	65.8	89.8	113.8	137.8	161.8	185.8		
	3.50	3.90	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10		
	3.50	3.90	4.30	4.70	5.10	5.50	5.90	6.30	6.70	7.10		
8112 10	.00	3.10	9.30	12.0	21.6	26.4	30.0	43.7	69.0	101.2	139.4	181.8
8112 10	.00	3.10	9.30	12.0	21.6	26.4	30.0	43.7	69.0	101.2	139.4	181.8
	.00	5.7	7.2	7.2	7.2	7.2	7.2	14.8	25.7	36.7	47.6	58.6
	.00	5.7	7.2	7.2	7.2	7.2	7.2	14.8	25.7	36.7	47.6	58.6
	2.05	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	2.05	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
82 1 10	.00											
82 1 10	.00											
	.00											
	.00											
	8.00											
	8.00											
8312 10	.00	10.5	38.2	86.0	153.1	237.4	337.5	452.0	580.1	720.9	873.9	1039.
8312 10	.00	10.5	38.2	86.0	153.1	237.4	337.5	452.0	580.1	720.9	873.9	1039.
	.00	11.8	28.1	49.9	72.9	96.7	120.6	144.5	168.5	192.4	216.4	240.4
	.00	11.8	28.1	49.9	72.9	96.7	120.6	144.5	168.5	192.4	216.4	240.4
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50
	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50

```
 40   1
1.0      .0 .025 21  1  1
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  -4.000    95.0 0.950E+02 0.380E+04
  -3.500    95.0 0.143E+03 0.747E+04
  -3.000    95.0 0.190E+03 0.121E+05
  -2.500    95.0 0.238E+03 0.175E+05
  -2.000    95.0 0.285E+03 0.237E+05
  -1.500    95.0 0.333E+03 0.307E+05
  -1.000    95.0 0.380E+03 0.383E+05
   -.500    95.0 0.428E+03 0.466E+05
    .000    95.0 0.475E+03 0.556E+05
    .500    95.0 0.523E+03 0.651E+05
   1.000    95.0 0.570E+03 0.753E+05
   1.500    95.0 0.618E+03 0.860E+05
   2.000    95.0 0.665E+03 0.973E+05
   2.500    95.0 0.713E+03 0.109E+06
   3.000    95.0 0.760E+03 0.122E+06
   3.500    95.0 0.808E+03 0.135E+06
   4.000    95.0 0.855E+03 0.148E+06
   4.500    95.0 0.903E+03 0.162E+06
   5.000    95.0 0.950E+03 0.176E+06
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     .500     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
    1.000     .0 0.000E+00 0.000E+00           14.3 0.607E+01 0.137E+03             .0 0.000E+00 0.000E+00
    1.500     .0 0.000E+00 0.000E+00           18.5 0.143E+02 0.476E+03             .0 0.000E+00 0.000E+00
    2.000     .0 0.000E+00 0.000E+00           41.0 0.283E+02 0.877E+03             .0 0.000E+00 0.000E+00
    2.500    29.0 0.131E+02 0.170E+03          41.0 0.488E+02 0.218E+04          15.6 0.391E+01 0.155E+02
    3.000    29.0 0.276E+02 0.592E+03          41.0 0.693E+02 0.391E+04          25.0 0.150E+02 0.107E+03
    3.500    29.0 0.421E+02 0.120E+04          41.0 0.898E+02 0.602E+04          25.0 0.275E+02 0.293E+03
    4.000    29.0 0.566E+02 0.196E+04          41.0 0.110E+03 0.849E+04          25.0 0.400E+02 0.547E+03
    4.500    29.0 0.711E+02 0.287E+04          41.0 0.131E+03 0.113E+05          25.0 0.525E+02 0.861E+03
    5.000    29.0 0.856E+02 0.391E+04          41.0 0.151E+03 0.144E+05          25.0 0.650E+02 0.123E+04
3.0      .0 .025 13  2  3
        -1.000                    .035          -1.000                    .035
  -1.000     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   -.500     .5 0.125E+00 0.113E+01            9.0 0.450E+01 0.113E+03             .5 0.125E+00 0.113E+01
    .000    1.0 0.500E+00 0.714E+01            9.0 0.900E+01 0.360E+03            8.1 0.819E+00 0.490E+01
    .500    1.5 0.113E+01 0.211E+02            9.0 0.135E+02 0.708E+03           11.4 0.569E+01 0.971E+02
   1.000    2.0 0.200E+01 0.454E+02            9.0 0.180E+02 0.114E+04           15.5 0.122E+02 0.282E+03
   1.500    2.5 0.313E+01 0.823E+02            9.0 0.225E+02 0.166E+04           26.6 0.227E+02 0.562E+03
   2.000    3.0 0.450E+01 0.134E+03            9.0 0.270E+02 0.225E+04           36.5 0.385E+02 0.110E+04
   2.500    3.5 0.613E+01 0.202E+03            9.0 0.315E+02 0.290E+04           48.7 0.596E+02 0.189E+04
   3.000   35.5 0.138E+02 0.204E+03            9.0 0.360E+02 0.363E+04           62.6 0.874E+02 0.304E+04
   3.500   50.1 0.368E+02 0.835E+03            9.0 0.405E+02 0.442E+04           73.4 0.121E+03 0.471E+04
   4.000   56.1 0.635E+02 0.192E+04            9.0 0.450E+02 0.526E+04           85.0 0.161E+03 0.688E+04
   4.500   56.1 0.915E+02 0.354E+04            9.0 0.495E+02 0.617E+04           85.0 0.203E+03 0.102E+05
   5.000   56.1 0.120E+03 0.552E+04            9.0 0.540E+02 0.713E+04           85.0 0.246E+03 0.139E+05
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    .000    .0 0.000E+00 0.000E+00            3.0 0.484E+00 0.703E+01             .0 0.000E+00 0.000E+00
    .500    .0 0.000E+00 0.000E+00            7.2 0.315E+01 0.893E+02             .1 0.650E-02 0.252E-01
   1.000    .4 0.923E-01 0.875E+00            7.5 0.690E+01 0.321E+03             .8 0.234E+00 0.299E+01
   1.500    .9 0.421E+00 0.663E+01            7.5 0.106E+02 0.663E+03            7.2 0.224E+01 0.333E+02
   2.000   10.0 0.177E+01 0.179E+02           7.5 0.144E+02 0.110E+04           10.7 0.672E+01 0.161E+03
   2.500   34.5 0.129E+02 0.221E+03           7.5 0.182E+02 0.161E+04           14.2 0.129E+02 0.399E+03
   3.000   59.0 0.363E+02 0.869E+03           7.5 0.219E+02 0.220E+04           17.5 0.209E+02 0.772E+03
   3.500   64.4 0.682E+02 0.235E+04           7.5 0.257E+02 0.287E+04           17.5 0.296E+02 0.138E+04
   4.000   64.4 0.100E+03 0.447E+04           7.5 0.294E+02 0.360E+04           17.5 0.384E+02 0.213E+04
   4.500   64.4 0.133E+03 0.711E+04           7.5 0.332E+02 0.440E+04           17.5 0.471E+02 0.300E+04
   5.000   64.4 0.165E+03 0.102E+05           7.5 0.369E+02 0.526E+04           17.5 0.559E+02 0.398E+04
5.0      .0 .020 13  2  3
         .300                    .030          .600                    .030
  -1.100     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   -.500     .0 0.000E+00 0.000E+00            2.3 0.684E+00 0.141E+02             .0 0.000E+00 0.000E+00
    .000     .0 0.000E+00 0.000E+00            4.2 0.230E+01 0.711E+02             .0 0.000E+00 0.000E+00
    .500     .2 0.243E-01 0.147E+00            5.7 0.483E+01 0.199E+03             .0 0.000E+00 0.000E+00
   1.000     .9 0.298E+00 0.415E+01            5.9 0.777E+01 0.430E+03            1.1 0.220E+00 0.241E+01
   1.500    1.5 0.876E+00 0.175E+02            5.9 0.107E+02 0.736E+03           24.0 0.447E+01 0.486E+02
   2.000    2.1 0.176E+01 0.442E+02            5.9 0.137E+02 0.110E+04           75.0 0.308E+02 0.568E+03
   2.500    2.7 0.294E+01 0.880E+02            5.9 0.166E+02 0.153E+04           98.5 0.742E+02 0.205E+04
   3.000    9.1 0.493E+01 0.102E+03            5.9 0.196E+02 0.201E+04          122.1 0.129E+03 0.448E+04
   3.500    9.1 0.948E+01 0.305E+03            5.9 0.225E+02 0.254E+04          145.6 0.196E+03 0.798E+04
   4.000    9.1 0.140E+02 0.586E+03            5.9 0.255E+02 0.311E+04          155.0 0.273E+03 0.133E+05
   4.500    9.1 0.186E+02 0.935E+03            5.9 0.284E+02 0.374E+04          155.0 0.350E+03 0.201E+05
   5.000    9.1 0.231E+02 0.135E+04            5.9 0.314E+02 0.441E+04          155.0 0.428E+03 0.280E+05
6.0      .0 .025 13  2  3
         .500                    .035          .500                    .035
    .150     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
    .500     .0 0.000E+00 0.000E+00            8.0 0.140E+01 0.175E+02             .0 0.000E+00 0.000E+00
   1.000     .5 0.125E+00 0.113E+01            8.0 0.540E+01 0.166E+03             .4 0.109E+00 0.940E+00
   1.500    1.0 0.500E+00 0.715E+01            8.0 0.940E+01 0.418E+03             .9 0.438E+00 0.597E+01
   2.000    1.5 0.113E+01 0.211E+02            8.0 0.134E+02 0.754E+03            2.7 0.101E+01 0.128E+02
   2.500   12.3 0.487E+01 0.722E+02            8.0 0.174E+02 0.117E+04           10.9 0.520E+01 0.867E+02
   3.000   20.7 0.131E+02 0.271E+03            8.0 0.214E+02 0.165E+04           15.2 0.117E+02 0.273E+03
   3.500   27.6 0.256E+02 0.682E+03            8.0 0.254E+02 0.219E+04           19.4 0.204E+02 0.584E+03
   4.000   27.6 0.394E+02 0.140E+04            8.0 0.294E+02 0.279E+04           19.4 0.301E+02 0.112E+04
   4.500   27.6 0.532E+02 0.231E+04            8.0 0.334E+02 0.346E+04           19.4 0.398E+02 0.178E+04
   5.000   27.6 0.670E+02 0.340E+04            8.0 0.374E+02 0.417E+04           19.4 0.495E+02 0.257E+04
   5.500   27.6 0.808E+02 0.464E+04            8.0 0.414E+02 0.494E+04           19.4 0.592E+02 0.346E+04
   6.000   27.6 0.946E+02 0.604E+04            8.0 0.454E+02 0.576E+04           19.4 0.689E+02 0.445E+04
7.0      .0 .100 19  2  3
         3.870                    .030          3.620                    .025
   -.900     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   -.500     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00            3.9 0.780E+00 0.105E+02
   0.000     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00            6.8 0.344E+01 0.858E+02
    .500     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00            8.7 0.731E+01 0.251E+03
   1.000     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00           10.3 0.121E+02 0.513E+03
   1.500   14.0 0.675E+01 0.136E+03             .0 0.000E+00 0.000E+00           11.7 0.176E+02 0.871E+03
   2.000   15.0 0.140E+02 0.430E+03             .0 0.000E+00 0.000E+00           13.0 0.238E+02 0.132E+04
   2.500   37.7 0.261E+02 0.667E+03             .0 0.000E+00 0.000E+00           14.7 0.306E+02 0.185E+04
   3.000   54.0 0.486E+02 0.149E+04             .0 0.000E+00 0.000E+00           17.3 0.386E+02 0.246E+04
   3.500   75.4 0.809E+02 0.280E+04             .0 0.000E+00 0.000E+00           19.8 0.479E+02 0.322E+04
   4.000   82.0 0.121E+03 0.519E+04          125.0 0.197E+02 0.577E+02           20.0 0.579E+02 0.438E+04
   4.500   82.0 0.162E+03 0.844E+04          125.0 0.822E+02 0.622E+03           20.0 0.679E+02 0.572E+04
   5.000   82.0 0.203E+03 0.123E+05          125.0 0.145E+03 0.160E+04           20.0 0.779E+02 0.719E+04
   5.500   82.0 0.244E+03 0.167E+05          125.0 0.207E+03 0.290E+04           20.0 0.879E+02 0.879E+04
   6.000   82.0 0.285E+03 0.216E+05          125.0 0.270E+03 0.450E+04           20.0 0.979E+02 0.105E+05
   6.500   82.0 0.326E+03 0.271E+05          125.0 0.332E+03 0.637E+04           20.0 0.108E+03 0.124E+05
   7.000   82.0 0.367E+03 0.330E+05          125.0 0.395E+03 0.850E+04           20.0 0.118E+03 0.143E+05
   7.500   82.0 0.408E+03 0.393E+05          125.0 0.457E+03 0.109E+05           20.0 0.128E+03 0.164E+05
   8.000   82.0 0.449E+03 0.461E+05          125.0 0.520E+03 0.134E+05           20.0 0.138E+03 0.186E+05
8.0      .0 .020 15  2  3
        1.000                    .030          1.000                    .030
   1.000     .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00             .0 0.000E+00 0.000E+00
   1.500     .5 0.125E+00 0.131E+01            9.0 0.450E+01 0.142E+03             .5 0.125E+00 0.131E+01
   2.000    1.0 0.500E+00 0.834E+01            9.0 0.900E+01 0.450E+03            1.0 0.500E+00 0.834E+01
   2.500    6.7 0.149E+01 0.172E+02            9.0 0.135E+02 0.885E+03            1.9 0.113E+01 0.221E+02
   3.000    6.7 0.483E+01 0.117E+03            9.0 0.180E+02 0.143E+04            3.7 0.280E+01 0.632E+02
   3.500    6.7 0.818E+01 0.270E+03            9.0 0.225E+02 0.207E+04            3.7 0.466E+01 0.139E+03
   4.000    6.7 0.115E+02 0.460E+03            9.0 0.270E+02 0.281E+04            3.8 0.654E+01 0.231E+03
   4.500    6.7 0.149E+02 0.679E+03            9.0 0.315E+02 0.363E+04            3.8 0.841E+01 0.333E+03
   5.000    6.7 0.183E+02 0.920E+03            9.0 0.360E+02 0.454E+04            3.8 0.103E+02 0.444E+03
   5.500    6.7 0.216E+02 0.118E+04            9.0 0.405E+02 0.552E+04            3.8 0.122E+02 0.561E+03
   6.000    6.7 0.250E+02 0.146E+04            9.0 0.450E+02 0.658E+04            3.8 0.141E+02 0.683E+03
   6.500    6.8 0.284E+02 0.174E+04            9.0 0.495E+02 0.771E+04            3.8 0.160E+02 0.810E+03
   7.000    6.8 0.317E+02 0.205E+04            9.0 0.540E+02 0.892E+04            3.8 0.179E+02 0.941E+03
   7.500    6.8 0.351E+02 0.236E+04            9.0 0.585E+02 0.102E+05            3.8 0.198E+02 0.107E+04
   8.000    6.8 0.385E+02 0.267E+04            9.0 0.630E+02 0.115E+05            3.8 0.217E+02 0.121E+04
```

```
 9.0    .0 .030 17  2  3
        2.800                     .200      2.230                  .200
    .700    .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   1.200    .0 0.000E+00 0.000E+00            16.0 0.763E+01 0.153E+03          .0 0.000E+00 0.000E+00
   1.700    .0 0.000E+00 0.000E+00            17.5 0.160E+02 0.491E+03          .0 0.000E+00 0.000E+00
   2.200    .0 0.000E+00 0.000E+00            19.0 0.252E+02 0.979E+03          .0 0.000E+00 0.000E+00
   2.700    .0 0.000E+00 0.000E+00            19.9 0.349E+02 0.164E+04        11.1 0.455E+01 0.126E+02
   3.200    .1 0.139E-01 0.729E-02            20.0 0.449E+02 0.248E+04        11.1 0.101E+02 0.474E+02
   3.700    .2 0.702E-01 0.634E-01            20.0 0.549E+02 0.346E+04        11.1 0.157E+02 0.984E+02
   4.200    .2 0.170E+00 0.206E+00            20.0 0.649E+02 0.458E+04        11.1 0.212E+02 0.163E+03
   4.700    .3 0.313E+00 0.465E+00            20.0 0.749E+02 0.581E+04        11.1 0.268E+02 0.240E+03
   5.200    .4 0.499E+00 0.867E+00            20.0 0.849E+02 0.716E+04        11.1 0.323E+02 0.329E+03
   5.700    .5 0.729E+00 0.144E+01            20.0 0.949E+02 0.862E+04        11.1 0.379E+02 0.429E+03
   6.200    .6 0.100E+01 0.220E+01            20.0 0.105E+03 0.102E+05        11.1 0.434E+02 0.539E+03
   6.700    .7 0.132E+01 0.316E+01            20.0 0.115E+03 0.119E+05        11.1 0.490E+02 0.658E+03
   7.200    .8 0.168E+01 0.437E+01            20.0 0.125E+03 0.136E+05        11.1 0.545E+02 0.787E+03
   7.700    .8 0.208E+01 0.582E+01            20.0 0.135E+03 0.155E+05        11.1 0.601E+02 0.925E+03
   8.200  48.9 0.121E+02 0.226E+02            20.0 0.145E+03 0.175E+05        11.1 0.656E+02 0.107E+04
   8.700  48.9 0.366E+02 0.142E+03            20.0 0.155E+03 0.195E+05        11.1 0.712E+02 0.123E+04
10.0    .0 .030 19  2  3
        4.500                     .100      4.500                  .100
    .000    .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    .500    .0 0.000E+00 0.000E+00             7.3 0.340E+01 0.657E+02          .0 0.000E+00 0.000E+00
   1.000    .0 0.000E+00 0.000E+00             8.3 0.730E+01 0.210E+03          .0 0.000E+00 0.000E+00
   1.500    .0 0.000E+00 0.000E+00             9.3 0.117E+02 0.418E+03          .0 0.000E+00 0.000E+00
   2.000    .0 0.000E+00 0.000E+00            10.3 0.166E+02 0.689E+03          .0 0.000E+00 0.000E+00
   2.500    .0 0.000E+00 0.000E+00            11.3 0.220E+02 0.102E+04          .0 0.000E+00 0.000E+00
   3.000    .0 0.000E+00 0.000E+00            12.2 0.279E+02 0.142E+04          .0 0.000E+00 0.000E+00
   3.500    .0 0.000E+00 0.000E+00            13.1 0.342E+02 0.188E+04          .0 0.000E+00 0.000E+00
   4.000    .0 0.000E+00 0.000E+00            14.0 0.409E+02 0.241E+04          .0 0.000E+00 0.000E+00
   4.500  11.0 0.183E+01 0.545E+01            14.9 0.482E+02 0.301E+04         4.1 0.288E+00 0.480E+00
   5.000  11.1 0.736E+01 0.539E+02            14.9 0.556E+02 0.382E+04         4.2 0.237E+01 0.149E+02
   5.500  11.2 0.129E+02 0.134E+03            14.9 0.631E+02 0.472E+04         4.3 0.448E+01 0.402E+02
   6.000  11.2 0.185E+02 0.238E+03            14.9 0.705E+02 0.568E+04         4.3 0.662E+01 0.727E+02
   6.500  11.3 0.242E+02 0.360E+03            14.9 0.780E+02 0.672E+04         4.4 0.880E+01 0.110E+03
   7.000  11.4 0.298E+02 0.500E+03            14.9 0.854E+02 0.782E+04         4.5 0.110E+02 0.152E+03
   7.500  11.4 0.355E+02 0.653E+03            14.9 0.929E+02 0.899E+04         4.5 0.133E+02 0.198E+03
   8.000  11.5 0.413E+02 0.818E+03            14.9 0.100E+03 0.102E+05         4.6 0.156E+02 0.247E+03
   8.500  41.0 0.618E+02 0.771E+03            14.9 0.108E+03 0.115E+05        54.1 0.426E+02 0.350E+03
   9.000  41.0 0.823E+02 0.124E+04            14.9 0.115E+03 0.129E+05        54.1 0.697E+02 0.794E+03
11.0    .0 .030 19  2  3
        3.700                     .030      3.310                  .030
    .000    .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    .500   9.9 0.496E+01 0.977E+02              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   1.000   9.9 0.993E+01 0.293E+03             2.3 0.751E+00 0.111E+02          .0 0.000E+00 0.000E+00
   1.500  10.0 0.149E+02 0.547E+03             3.8 0.225E+01 0.483E+02          .0 0.000E+00 0.000E+00
   2.000  10.0 0.199E+02 0.842E+03             8.6 0.581E+01 0.140E+03          .0 0.000E+00 0.000E+00
   2.500  10.0 0.249E+02 0.117E+04            10.4 0.105E+02 0.333E+03          .0 0.000E+00 0.000E+00
   3.000  10.0 0.299E+02 0.152E+04            12.1 0.162E+02 0.608E+03          .0 0.000E+00 0.000E+00
   3.500  10.1 0.350E+02 0.189E+04            13.5 0.226E+02 0.988E+03         1.0 0.202E+00 0.202E+01
   4.000  65.1 0.438E+02 0.104E+04            13.8 0.295E+02 0.151E+04        41.8 0.105E+02 0.138E+03
   4.500  86.4 0.859E+02 0.269E+04            13.8 0.364E+02 0.215E+04        48.4 0.335E+02 0.856E+03
   5.000  86.4 0.129E+03 0.529E+04            13.8 0.432E+02 0.287E+04        52.8 0.588E+02 0.204E+04
   5.500  86.4 0.172E+03 0.856E+04            13.8 0.501E+02 0.367E+04        57.1 0.863E+02 0.364E+04
   6.000  86.4 0.215E+03 0.124E+05            13.8 0.570E+02 0.454E+04        59.8 0.116E+03 0.571E+04
   6.500  86.4 0.259E+03 0.169E+05            13.8 0.639E+02 0.549E+04        59.8 0.146E+03 0.829E+04
   7.000  86.4 0.302E+03 0.218E+05            13.8 0.708E+02 0.652E+04        59.9 0.176E+03 0.112E+05
   7.500  86.4 0.345E+03 0.272E+05            13.8 0.777E+02 0.761E+04        59.9 0.206E+03 0.144E+05
   8.000  86.4 0.388E+03 0.332E+05            13.8 0.846E+02 0.876E+04        60.0 0.236E+03 0.179E+05
   8.500  86.4 0.431E+03 0.395E+05            13.8 0.915E+02 0.998E+04       112.9 0.292E+03 0.175E+05
   9.000  86.4 0.475E+03 0.463E+05            13.8 0.983E+02 0.113E+05       112.9 0.348E+03 0.235E+05
12.0    .0 .030 18  2  3
        3.860                     .035      3.170                  .035
    .560    .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   1.000    .0 0.000E+00 0.000E+00             2.1 0.621E+00 0.855E+01          .0 0.000E+00 0.000E+00
   1.500    .0 0.000E+00 0.000E+00             3.6 0.203E+01 0.421E+02          .0 0.000E+00 0.000E+00
   2.000    .0 0.000E+00 0.000E+00             8.4 0.530E+01 0.122E+03          .0 0.000E+00 0.000E+00
   2.500    .0 0.000E+00 0.000E+00            10.1 0.993E+01 0.305E+03          .0 0.000E+00 0.000E+00
   3.000    .0 0.000E+00 0.000E+00            11.9 0.154E+02 0.570E+03          .0 0.000E+00 0.000E+00
   3.500    .0 0.000E+00 0.000E+00            13.0 0.217E+02 0.947E+03         6.0 0.101E+01 0.882E+01
   4.000   3.3 0.303E+00 0.176E+01            14.5 0.288E+02 0.141E+04        14.7 0.618E+01 0.989E+02
   4.500  69.2 0.243E+02 0.346E+03            14.5 0.360E+02 0.205E+04        21.7 0.153E+02 0.345E+03
   5.000  97.8 0.689E+02 0.156E+04            14.5 0.433E+02 0.279E+04        28.7 0.279E+02 0.781E+03
   5.500  97.8 0.118E+03 0.381E+04            14.5 0.505E+02 0.361E+04        35.7 0.440E+02 0.144E+04
   6.000  97.8 0.167E+03 0.680E+04            14.5 0.578E+02 0.451E+04        35.7 0.619E+02 0.255E+04
   6.500  97.8 0.216E+03 0.104E+05            14.5 0.650E+02 0.549E+04        35.7 0.797E+02 0.388E+04
   7.000  97.8 0.265E+03 0.147E+05            14.5 0.723E+02 0.655E+04        35.7 0.976E+02 0.544E+04
   7.500  97.8 0.313E+03 0.195E+05            14.5 0.795E+02 0.768E+04        35.7 0.115E+03 0.720E+04
   8.000  97.8 0.362E+03 0.248E+05            14.5 0.868E+02 0.889E+04        35.7 0.133E+03 0.915E+04
   8.500  97.8 0.411E+03 0.306E+05            14.5 0.940E+02 0.102E+05        35.7 0.151E+03 0.113E+05
   9.000  97.8 0.460E+03 0.369E+05            14.5 0.101E+03 0.115E+05        35.7 0.169E+03 0.136E+05
13.0    .0 .035 17  2  3
        4.000                     .200      3.930                  .100
   1.100    .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   1.500    .0 0.000E+00 0.000E+00             5.2 0.144E+01 0.173E+02          .0 0.000E+00 0.000E+00
   2.000    .0 0.000E+00 0.000E+00             9.2 0.504E+01 0.949E+02          .0 0.000E+00 0.000E+00
   2.500    .0 0.000E+00 0.000E+00            13.2 0.106E+02 0.259E+03          .0 0.000E+00 0.000E+00
   3.000    .0 0.000E+00 0.000E+00            17.2 0.182E+02 0.532E+03          .0 0.000E+00 0.000E+00
   3.500    .0 0.000E+00 0.000E+00            21.2 0.278E+02 0.936E+03          .0 0.000E+00 0.000E+00
   4.000    .0 0.000E+00 0.000E+00            24.9 0.394E+02 0.150E+04         5.1 0.180E+00 0.192E+00
   4.500  53.1 0.133E+02 0.264E+02            24.9 0.519E+02 0.237E+04        41.8 0.119E+02 0.516E+02
   5.000  85.0 0.510E+02 0.181E+03            24.9 0.643E+02 0.339E+04        78.4 0.420E+02 0.277E+03
   5.500  85.0 0.935E+02 0.498E+03            24.9 0.768E+02 0.456E+04        93.1 0.870E+02 0.832E+03
   6.000  85.0 0.136E+03 0.930E+03            24.9 0.892E+02 0.586E+04        93.1 0.134E+03 0.170E+04
   6.500  85.0 0.179E+03 0.146E+04            24.9 0.102E+03 0.728E+04        93.1 0.180E+03 0.280E+04
   7.000  85.0 0.221E+03 0.209E+04            24.9 0.114E+03 0.883E+04        93.1 0.227E+03 0.410E+04
   7.500  85.0 0.264E+03 0.280E+04            24.9 0.127E+03 0.105E+05        93.1 0.273E+03 0.560E+04
   8.000  85.0 0.306E+03 0.359E+04            24.9 0.139E+03 0.123E+05        93.1 0.320E+03 0.728E+04
   8.500  85.0 0.349E+03 0.446E+04            24.9 0.151E+03 0.142E+05        93.1 0.366E+03 0.913E+04
   9.000  85.0 0.391E+03 0.541E+04            24.9 0.164E+03 0.161E+05        93.1 0.413E+03 0.111E+05
14.0    .0 .100 10  2  3
        6.000                     .100      6.000                  .100
   5.200    .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   5.500  30.0 0.450E+01 0.127E+02              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   6.000  80.0 0.320E+02 0.174E+03              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   6.500  80.0 0.720E+02 0.671E+03             2.8 0.688E+00 0.262E+01        52.0 0.260E+02 0.164E+03
   7.000  80.0 0.112E+03 0.140E+04             5.5 0.275E+01 0.166E+02        52.0 0.520E+02 0.520E+03
   7.500  80.0 0.152E+03 0.233E+04             8.3 0.619E+01 0.490E+02        52.0 0.780E+02 0.102E+04
   8.000  80.0 0.192E+03 0.344E+04            11.0 0.110E+02 0.106E+03        52.0 0.104E+03 0.165E+04
   8.500  80.0 0.232E+03 0.472E+04            17.5 0.181E+02 0.180E+03        52.0 0.130E+03 0.239E+04
   9.000  80.0 0.272E+03 0.615E+04            24.0 0.285E+02 0.311E+03        52.0 0.156E+03 0.324E+04
   9.500  80.0 0.312E+03 0.773E+04            30.5 0.421E+02 0.511E+03        52.0 0.182E+03 0.420E+04
15.0    .0 .060 17  2  3
        4.000                     .035      6.000                  .100
   1.800    .0 0.000E+00 0.000E+00              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   2.000   3.3 0.529E+00 0.441E+01              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   2.500   6.5 0.298E+01 0.494E+02              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   3.000   9.7 0.704E+01 0.158E+03              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   3.500  12.9 0.127E+02 0.349E+03              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   4.000  16.2 0.200E+02 0.639E+03              .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
   4.500  85.0 0.561E+02 0.121E+04            30.0 0.750E+01 0.496E+02          .0 0.000E+00 0.000E+00
   5.000  90.0 0.998E+02 0.304E+04            60.0 0.300E+02 0.315E+03          .0 0.000E+00 0.000E+00
   5.500  90.0 0.145E+03 0.565E+04            90.0 0.675E+02 0.929E+03          .0 0.000E+00 0.000E+00
   6.000  90.0 0.190E+03 0.887E+04           120.0 0.120E+03 0.200E+04          .0 0.000E+00 0.000E+00
   6.500  90.0 0.235E+03 0.126E+05           120.0 0.180E+03 0.393E+04       134.3 0.666E+02 0.417E+03
   7.000  90.0 0.280E+03 0.169E+05           120.0 0.240E+03 0.635E+04       136.7 0.134E+03 0.133E+04
   7.500  90.0 0.325E+03 0.217E+05           120.0 0.300E+03 0.921E+04       139.0 0.203E+03 0.262E+04
   8.000  90.0 0.370E+03 0.269E+05           120.0 0.360E+03 0.125E+05       139.0 0.273E+03 0.427E+04
   8.500  90.0 0.415E+03 0.326E+05           120.0 0.420E+03 0.161E+05       139.0 0.342E+03 0.624E+04
   9.000  90.0 0.460E+03 0.387E+05           120.0 0.480E+03 0.202E+05       139.0 0.412E+03 0.849E+04
   9.500  90.0 0.505E+03 0.453E+05           120.0 0.540E+03 0.245E+05       139.0 0.481E+03 0.110E+05
16.0    .0 .030 19  2  3
        3.740                     .035      3.660                  .035
```

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     .740      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    1.000      .0 0.000E+00 0.000E+00         1.5 0.297E+00 0.310E+01          .0 0.000E+00 0.000E+00
    1.500      .0 0.000E+00 0.000E+00         3.0 0.144E+01 0.265E+02          .0 0.000E+00 0.000E+00
    2.000      .0 0.000E+00 0.000E+00         4.5 0.333E+01 0.814E+02          .0 0.000E+00 0.000E+00
    2.500      .0 0.000E+00 0.000E+00         9.3 0.648E+01 0.159E+03          .0 0.000E+00 0.000E+00
    3.000      .0 0.000E+00 0.000E+00        11.1 0.116E+02 0.369E+03          .0 0.000E+00 0.000E+00
    3.500      .0 0.000E+00 0.000E+00        13.0 0.176E+02 0.668E+03          .0 0.000E+00 0.000E+00
    4.000     2.6 0.235E+00 0.134E+01        13.7 0.244E+02 0.111E+04        24.7 0.409E+01 0.352E+02
    4.500    91.6 0.164E+02 0.150E+03        13.7 0.312E+02 0.167E+04        42.2 0.208E+02 0.371E+03
    5.000    91.6 0.623E+02 0.137E+04        13.7 0.381E+02 0.233E+04        59.7 0.463E+02 0.112E+04
    5.500    91.6 0.108E+03 0.345E+04        13.7 0.449E+02 0.307E+04        59.7 0.761E+02 0.256E+04
    6.000    91.6 0.154E+03 0.621E+04        13.7 0.518E+02 0.389E+04        59.7 0.106E+03 0.444E+04
    6.500    91.6 0.200E+03 0.959E+04        13.7 0.586E+02 0.478E+04        59.7 0.136E+03 0.671E+04
    7.000    91.6 0.245E+03 0.135E+05        13.7 0.655E+02 0.575E+04        59.7 0.166E+03 0.935E+04
    7.500    91.6 0.291E+03 0.180E+05        13.7 0.723E+02 0.678E+04        59.7 0.196E+03 0.123E+05
    8.000    91.6 0.337E+03 0.230E+05        13.7 0.792E+02 0.789E+04        59.7 0.225E+03 0.156E+05
    8.500    91.6 0.383E+03 0.284E+05        13.7 0.860E+02 0.905E+04        59.7 0.255E+03 0.192E+05
    9.000    91.6 0.429E+03 0.343E+05        13.7 0.929E+02 0.103E+05        59.7 0.285E+03 0.231E+05
    9.500    91.6 0.475E+03 0.406E+05        13.7 0.997E+02 0.116E+05        59.7 0.315E+03 0.273E+05
17.0     .0 .100 16  2  3
          2.500                .100       2.500                .100
    2.500      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.000    25.0 0.125E+02 0.787E+02        10.0 0.500E+01 0.315E+02        20.0 0.100E+02 0.630E+02
    3.500    25.0 0.250E+02 0.250E+03        10.0 0.100E+02 0.100E+03        20.0 0.200E+02 0.200E+03
    4.000    25.0 0.375E+02 0.491E+03        10.0 0.150E+02 0.197E+03        20.0 0.300E+02 0.393E+03
    4.500    25.0 0.500E+02 0.794E+03        10.0 0.200E+02 0.318E+03        20.0 0.400E+02 0.635E+03
    5.000    25.0 0.625E+02 0.115E+04        10.0 0.250E+02 0.461E+03        20.0 0.500E+02 0.921E+03
    5.500    25.0 0.750E+02 0.156E+04        10.0 0.300E+02 0.624E+03        20.0 0.600E+02 0.125E+04
    6.000    25.0 0.875E+02 0.202E+04        10.0 0.350E+02 0.807E+03        20.0 0.700E+02 0.161E+04
    6.500    25.0 0.100E+03 0.252E+04        10.0 0.400E+02 0.101E+04        20.0 0.800E+02 0.202E+04
    7.000    25.0 0.113E+03 0.307E+04        10.0 0.450E+02 0.123E+04        20.0 0.900E+02 0.245E+04
    7.500    25.0 0.125E+03 0.366E+04        10.0 0.500E+02 0.146E+04        20.0 0.100E+03 0.292E+04
    8.000    25.0 0.138E+03 0.428E+04        10.0 0.550E+02 0.171E+04        20.0 0.110E+03 0.343E+04
    8.500    25.0 0.150E+03 0.495E+04        10.0 0.600E+02 0.198E+04        20.0 0.120E+03 0.396E+04
    9.000    25.0 0.163E+03 0.566E+04        10.0 0.650E+02 0.226E+04        20.0 0.130E+03 0.453E+04
    9.500    25.0 0.175E+03 0.640E+04        10.0 0.700E+02 0.256E+04        20.0 0.140E+03 0.512E+04
   10.000    25.0 0.188E+03 0.718E+04        10.0 0.750E+02 0.287E+04        20.0 0.150E+03 0.575E+04
18.0     .0 .045 16  2  3
          3.450                .100       8.000                .045
    1.780      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    2.000      .0 0.000E+00 0.000E+00        15.3 0.323E+01 0.253E+02         3.6 0.362E+00 0.173E+01
    2.500      .0 0.000E+00 0.000E+00        18.3 0.116E+02 0.189E+03         6.2 0.280E+01 0.358E+02
    3.000      .0 0.000E+00 0.000E+00        21.3 0.215E+02 0.476E+03         8.8 0.653E+01 0.116E+03
    3.500    10.0 0.780E+00 0.141E+01        24.1 0.329E+02 0.886E+03        11.3 0.116E+02 0.252E+03
    4.000    10.0 0.579E+01 0.386E+02        25.6 0.454E+02 0.145E+04        16.7 0.181E+02 0.413E+03
    4.500    10.0 0.108E+02 0.106E+03        26.5 0.585E+02 0.216E+04        17.5 0.267E+02 0.747E+03
    5.000    10.0 0.158E+02 0.194E+03        26.6 0.718E+02 0.300E+04        18.4 0.357E+02 0.116E+04
    5.500    10.0 0.208E+02 0.299E+03        26.7 0.851E+02 0.393E+04        19.2 0.451E+02 0.164E+04
    6.000    10.1 0.259E+02 0.417E+03        26.7 0.985E+02 0.495E+04        20.1 0.549E+02 0.218E+04
    6.500    10.1 0.309E+02 0.547E+03        26.8 0.112E+03 0.605E+04        20.9 0.651E+02 0.280E+04
    7.000    10.1 0.359E+02 0.686E+03        26.9 0.125E+03 0.723E+04        21.8 0.758E+02 0.348E+04
    7.500    10.1 0.410E+02 0.833E+03        26.9 0.139E+03 0.847E+04        22.6 0.869E+02 0.422E+04
    8.000    10.1 0.460E+02 0.988E+03        27.0 0.152E+03 0.978E+04        23.5 0.985E+02 0.503E+04
    8.500   102.0 0.970E+02 0.912E+03        65.0 0.185E+03 0.792E+04        66.0 0.131E+03 0.442E+04
    9.000   102.0 0.148E+03 0.184E+04        65.0 0.217E+03 0.104E+05        66.0 0.164E+03 0.641E+04
19.0     .0 .100  3  2  2
          8.000                .100       8.000                .100
    8.000      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    8.500  132.0 0.660E+02 0.416E+03          .0 0.000E+00 0.000E+00
    9.000  132.0 0.132E+03 0.132E+04          .0 0.000E+00 0.000E+00
20.0     .0 .013  8  2  3
          4.090                .060       4.090                .060
    3.640      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    4.000      .0 0.000E+00 0.000E+00         1.9 0.346E+00 0.812E+01          .0 0.000E+00 0.000E+00
    4.500     3.1 0.632E+00 0.364E+01         2.4 0.153E+01 0.830E+02         4.2 0.955E+00 0.595E+01
    5.000     6.8 0.311E+01 0.305E+02         2.4 0.273E+01 0.218E+03         8.6 0.415E+01 0.423E+02
    5.500    10.6 0.747E+01 0.981E+02         2.4 0.393E+01 0.401E+03        12.0 0.950E+01 0.135E+03
    6.000    10.6 0.128E+02 0.240E+03         2.4 0.513E+01 0.626E+03        12.0 0.155E+02 0.305E+03
    6.500    10.6 0.181E+02 0.427E+03         2.4 0.633E+01 0.889E+03        12.0 0.215E+02 0.527E+03
    7.000    10.6 0.234E+02 0.656E+03         2.4 0.753E+01 0.119E+04        12.0 0.275E+02 0.794E+03
21.0     .0 .013  6  2  3
          4.760                .100       4.760                .100
    4.530      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    5.000      .6 0.770E-01 0.179E+00         2.0 0.711E+00 0.269E+02          .5 0.580E-01 0.131E+00
    5.500     2.0 0.732E+00 0.361E+01         2.0 0.171E+01 0.117E+03         1.5 0.551E+00 0.264E+01
    6.000     3.3 0.206E+01 0.143E+02         2.0 0.271E+01 0.251E+03         6.0 0.157E+01 0.618E+01
    6.500     4.7 0.405E+01 0.353E+02         2.0 0.371E+01 0.424E+03        21.0 0.106E+02 0.665E+02
    7.000     5.0 0.653E+01 0.746E+02         2.0 0.471E+01 0.631E+03        21.0 0.211E+02 0.209E+03
22.0     .0 .045 15  2  3
          3.740                .045       4.750                .100
    2.220      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    2.500      .0 0.000E+00 0.000E+00        13.7 0.359E+01 0.326E+02          .0 0.000E+00 0.000E+00
    3.000      .0 0.000E+00 0.000E+00        16.7 0.112E+02 0.188E+03          .0 0.000E+00 0.000E+00
    3.500      .0 0.000E+00 0.000E+00        19.6 0.202E+02 0.453E+03          .0 0.000E+00 0.000E+00
    4.000      .8 0.113E+00 0.657E+00        21.8 0.307E+02 0.843E+03          .0 0.000E+00 0.000E+00
    4.500     2.2 0.860E+00 0.985E+01        23.4 0.420E+02 0.136E+04          .0 0.000E+00 0.000E+00
    5.000     3.6 0.230E+01 0.366E+02        24.1 0.540E+02 0.202E+04         0.0 0.193E-02 0.755E-03
    5.500    18.1 0.556E+01 0.557E+02        24.1 0.660E+02 0.282E+04         0.0 0.174E-01 0.141E-01
    6.000    24.5 0.176E+02 0.310E+03        24.1 0.781E+02 0.373E+04          .1 0.403E-01 0.552E-01
    6.500    24.5 0.298E+02 0.749E+03        24.1 0.901E+02 0.474E+04          .1 0.947E-01 0.135E+00
    7.000    24.5 0.421E+02 0.133E+04        24.1 0.102E+03 0.584E+04          .1 0.157E+00 0.264E+00
    7.500    24.5 0.543E+02 0.204E+04        24.1 0.114E+03 0.703E+04          .2 0.234E+00 0.452E+00
    8.000    24.5 0.666E+02 0.286E+04        24.1 0.126E+03 0.831E+04          .2 0.327E+00 0.705E+00
    8.500    24.5 0.788E+02 0.379E+04        24.1 0.138E+03 0.968E+04        69.4 0.350E+02 0.216E+03
    9.000    24.5 0.911E+02 0.482E+04        24.1 0.150E+03 0.111E+05        69.4 0.697E+02 0.680E+03
23.0     .0 .045 16  1  2
          5.060                .045       4.310                .100
    2.290      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    2.500    13.3 0.265E+01 0.201E+02          .0 0.000E+00 0.000E+00
    3.000    16.3 0.101E+02 0.160E+03          .0 0.000E+00 0.000E+00
    3.500    19.1 0.189E+02 0.411E+03          .0 0.000E+00 0.000E+00
    4.000    22.1 0.292E+02 0.770E+03          .0 0.000E+00 0.000E+00
    4.500    24.5 0.410E+02 0.126E+04          .4 0.796E-01 0.208E+00
    5.000    25.9 0.536E+02 0.189E+04          .5 0.322E+00 0.142E+01
    5.500    26.1 0.666E+02 0.271E+04          .6 0.612E+00 0.321E+01
    6.000    26.1 0.797E+02 0.365E+04          .7 0.949E+00 0.555E+01
    6.500    26.1 0.927E+02 0.470E+04          .8 0.133E+01 0.848E+01
    7.000    26.1 0.106E+03 0.585E+04          .9 0.177E+01 0.120E+02
    7.500    26.1 0.119E+03 0.711E+04         1.0 0.225E+01 0.163E+02
    8.000    26.1 0.132E+03 0.846E+04         1.1 0.277E+01 0.212E+02
    8.500    26.1 0.145E+03 0.990E+04        34.1 0.198E+02 0.130E+03
    9.000    26.1 0.158E+03 0.114E+05        34.1 0.369E+02 0.367E+03
    9.500    26.1 0.171E+03 0.130E+05        34.1 0.539E+02 0.691E+03
24.0     .0 .045 16  1  2
          4.820                .045       4.140                .100
    2.350      .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    2.500    12.9 0.187E+01 0.114E+02          .0 0.000E+00 0.000E+00
    3.000    15.4 0.903E+01 0.139E+03          .0 0.000E+00 0.000E+00
    3.500    17.4 0.172E+02 0.372E+03          .0 0.000E+00 0.000E+00
    4.000    19.4 0.264E+02 0.701E+03          .0 0.000E+00 0.000E+00
    4.500    20.2 0.364E+02 0.115E+04         1.0 0.328E+00 0.131E+01
    5.000    20.5 0.466E+02 0.172E+04         1.0 0.842E+00 0.509E+01
    5.500    20.5 0.569E+02 0.239E+04         1.1 0.137E+01 0.972E+01
    6.000    20.5 0.671E+02 0.316E+04         1.1 0.191E+01 0.148E+02
    6.500    20.5 0.774E+02 0.400E+04         1.1 0.247E+01 0.203E+02
    7.000    20.5 0.876E+02 0.492E+04         1.1 0.303E+01 0.261E+02
    7.500    20.5 0.979E+02 0.592E+04         1.2 0.362E+01 0.322E+02
    8.000    20.5 0.108E+03 0.698E+04         1.2 0.421E+01 0.386E+02
    8.500    20.5 0.118E+03 0.812E+04        34.6 0.215E+02 0.147E+03
    9.000    20.5 0.129E+03 0.933E+04        34.6 0.388E+02 0.392E+03
    9.500    20.5 0.139E+03 0.106E+05        34.6 0.561E+02 0.725E+03
25.0     .0 .100 16  2  3
          4.000                .060       7.430                .100
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    2.400     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    2.500     4.4 0.387E+00 0.126E+01         .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.000     9.0 0.394E+01 0.373E+02         .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.500    11.0 0.894E+01 0.126E+03         .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    4.000    12.9 0.149E+02 0.263E+03         .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    4.500    12.9 0.213E+02 0.479E+03         0.0 0.628E-02 0.339E-02         .0 0.000E+00 0.000E+00
    5.000    12.9 0.278E+02 0.743E+03         .1 0.251E-01 0.215E-01          .0 0.000E+00 0.000E+00
    5.500    12.9 0.343E+02 0.105E+04         .1 0.565E-01 0.635E-01          .0 0.000E+00 0.000E+00
    6.000    12.9 0.407E+02 0.140E+04         .1 0.101E+00 0.137E+00          .0 0.000E+00 0.000E+00
    6.500    12.9 0.472E+02 0.179E+04         .1 0.157E+00 0.248E+00          .0 0.000E+00 0.000E+00
    7.000    12.9 0.536E+02 0.222E+04         .2 0.226E+00 0.403E+00          .0 0.000E+00 0.000E+00
    7.500    12.9 0.601E+02 0.268E+04         .7 0.325E+00 0.610E+00          .8 0.277E-01 0.296E-01
    8.000    12.9 0.665E+02 0.318E+04        4.2 0.154E+01 0.513E+01         6.4 0.184E+01 0.794E+01
    8.500    12.9 0.730E+02 0.371E+04        9.6 0.634E+01 0.384E+02        12.1 0.647E+01 0.426E+02
    9.000    12.9 0.794E+02 0.428E+04        9.6 0.111E+02 0.983E+02        17.8 0.139E+02 0.118E+03
    9.500    12.9 0.859E+02 0.487E+04        9.6 0.159E+02 0.179E+03        23.4 0.242E+02 0.247E+03
26.0      .0 .045 15  2  3
         3.120                    .100   3.200                    .100
    2.100     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    2.500     .0 0.000E+00 0.000E+00        16.0 0.592E+01 0.675E+02          .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00        19.0 0.147E+02 0.272E+03          .0 0.000E+00 0.000E+00
    3.500     .3 0.518E-01 0.119E+00        20.0 0.246E+02 0.621E+03         5.6 0.839E+00 0.237E+01
    4.000     .6 0.278E+00 0.112E+01        20.0 0.346E+02 0.110E+04        14.9 0.597E+01 0.324E+02
    4.500    1.0 0.683E+00 0.372E+01        20.0 0.446E+02 0.167E+04        23.5 0.157E+02 0.120E+03
    5.000    1.3 0.127E+01 0.849E+01        20.0 0.546E+02 0.234E+04        23.6 0.275E+02 0.301E+03
    5.500    1.7 0.203E+01 0.159E+02        20.0 0.646E+02 0.310E+04        23.6 0.393E+02 0.538E+03
    6.000    2.1 0.298E+01 0.265E+02        20.0 0.746E+02 0.394E+04        23.7 0.512E+02 0.823E+03
    6.500    2.4 0.410E+01 0.406E+02        20.0 0.846E+02 0.486E+04        23.8 0.630E+02 0.115E+04
    7.000    2.8 0.540E+01 0.586E+02        20.0 0.946E+02 0.586E+04        23.9 0.750E+02 0.151E+04
    7.500    3.1 0.688E+01 0.810E+02        20.0 0.105E+03 0.693E+04        23.9 0.869E+02 0.191E+04
    8.000    3.5 0.854E+01 0.108E+03        20.0 0.115E+03 0.806E+04        24.0 0.989E+02 0.234E+04
    8.500   79.5 0.483E+02 0.339E+03        20.0 0.125E+03 0.927E+04        48.5 0.123E+03 0.220E+04
    9.000   79.5 0.881E+02 0.923E+03        20.0 0.135E+03 0.105E+05        48.5 0.147E+03 0.297E+04
27.0      .0 .045 15  2  3
         4.970                    .100   4.530                    .100
    2.150     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    2.500     .0 0.000E+00 0.000E+00        15.9 0.523E+01 0.551E+02          .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00        18.6 0.139E+02 0.250E+03          .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00        21.3 0.238E+02 0.562E+03          .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00        24.0 0.352E+02 0.990E+03          .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00        26.7 0.479E+02 0.154E+04          .0 0.000E+00 0.000E+00
    5.000     .1 0.113E-02 0.652E-03        28.2 0.616E+02 0.226E+04         0.0 0.640E-02 0.364E-02
    5.500     .6 0.249E+00 0.103E+01        28.2 0.757E+02 0.318E+04          .1 0.273E-01 0.252E-01
    6.000     .7 0.569E+00 0.307E+01        28.2 0.898E+02 0.423E+04          .1 0.626E-01 0.762E-01
    6.500     .7 0.907E+00 0.547E+01        28.2 0.104E+03 0.539E+04          .1 0.112E+00 0.166E+00
    7.000     .7 0.126E+01 0.814E+01        28.2 0.118E+03 0.667E+04          .1 0.177E+00 0.304E+00
    7.500     .8 0.164E+01 0.111E+02        28.2 0.132E+03 0.805E+04          .2 0.255E+00 0.497E+00
    8.000     .8 0.203E+01 0.143E+02        28.2 0.146E+03 0.953E+04          .2 0.349E+00 0.753E+00
    8.500   57.6 0.308E+02 0.197E+03        28.2 0.160E+03 0.111E+05          .2 0.449E+00 0.115E+01
    9.000   57.6 0.596E+02 0.592E+03        28.2 0.174E+03 0.128E+05          .2 0.550E+00 0.161E+01
28.0      .0 .045 15  2  3
         5.430                    .100   5.460                    .060
    2.730     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00         5.5 0.132E+01 0.112E+02          .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00         7.3 0.452E+01 0.704E+02          .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00         9.2 0.865E+01 0.177E+03          .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00        11.0 0.137E+02 0.334E+03          .0 0.000E+00 0.000E+00
    5.000     .0 0.000E+00 0.000E+00        12.9 0.197E+02 0.548E+03          .0 0.000E+00 0.000E+00
    5.500     .8 0.134E+00 0.143E+00        14.5 0.265E+02 0.831E+03        17.5 0.166E+01 0.577E+01
    6.000    12.0 0.553E+01 0.323E+02       14.5 0.338E+02 0.124E+04        17.5 0.104E+02 0.123E+03
    6.500    12.1 0.116E+02 0.108E+03       14.5 0.411E+02 0.172E+04        17.5 0.192E+02 0.339E+03
    7.000    12.1 0.176E+02 0.212E+03       14.5 0.483E+02 0.225E+04        17.5 0.279E+02 0.635E+03
    7.500    12.2 0.237E+02 0.338E+03       14.5 0.556E+02 0.285E+04        17.5 0.367E+02 0.100E+04
    8.000    12.2 0.298E+02 0.484E+03       14.5 0.628E+02 0.349E+04        17.5 0.454E+02 0.143E+04
    8.500    18.0 0.388E+02 0.599E+03       14.5 0.701E+02 0.419E+04        17.5 0.542E+02 0.192E+04
    9.000    18.0 0.478E+02 0.849E+03       14.5 0.773E+02 0.494E+04        17.5 0.629E+02 0.246E+04
    9.500    18.0 0.568E+02 0.113E+04       14.5 0.846E+02 0.573E+04        17.5 0.717E+02 0.306E+04
29.0      .0 .045 15  2  3
         4.650                    .100   5.520                    .060
    2.890     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00         4.6 0.471E+00 0.229E+01          .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00         7.1 0.338E+01 0.448E+02          .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00         9.6 0.754E+01 0.138E+03          .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00        12.1 0.130E+02 0.291E+03          .0 0.000E+00 0.000E+00
    5.000    4.8 0.839E+00 0.262E+01        13.5 0.194E+02 0.530E+03         2.5 0.614E-01 0.875E-01
    5.500   11.5 0.495E+01 0.281E+02        14.5 0.264E+02 0.843E+03        27.0 0.743E+01 0.523E+02
    6.000   11.5 0.107E+02 0.990E+02        14.5 0.337E+02 0.126E+04        28.0 0.214E+02 0.298E+03
    6.500   11.6 0.165E+02 0.198E+03        14.5 0.409E+02 0.174E+04        28.0 0.354E+02 0.690E+03
    7.000   11.6 0.223E+02 0.319E+03        14.5 0.482E+02 0.229E+04        28.0 0.494E+02 0.120E+04
    7.500   11.7 0.281E+02 0.457E+03        14.5 0.554E+02 0.289E+04        28.0 0.634E+02 0.182E+04
    8.000   11.7 0.340E+02 0.611E+03        14.5 0.627E+02 0.355E+04        28.0 0.774E+02 0.254E+04
    8.500   17.5 0.427E+02 0.712E+03        14.5 0.699E+02 0.426E+04        28.0 0.914E+02 0.335E+04
    9.000   17.5 0.515E+02 0.971E+03        14.5 0.772E+02 0.502E+04        28.0 0.105E+03 0.425E+04
    9.500   17.5 0.602E+02 0.126E+04        14.5 0.844E+02 0.583E+04        28.0 0.119E+03 0.523E+04
30.0      .0 .045 14  2  3
         4.730                    .100   4.980                    .060
    2.920     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00         2.0 0.794E-01 0.205E+00          .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00         6.1 0.260E+01 0.317E+02          .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00         7.7 0.606E+01 0.109E+03          .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00         9.2 0.103E+02 0.231E+03          .0 0.000E+00 0.000E+00
    5.000    7.0 0.941E+00 0.247E+01        10.4 0.153E+02 0.410E+03         1.1 0.109E-01 0.846E-02
    5.500   14.0 0.684E+01 0.421E+02        10.4 0.205E+02 0.668E+03        26.8 0.737E+01 0.519E+02
    6.000   14.1 0.139E+02 0.133E+03        10.4 0.257E+02 0.974E+03        26.8 0.208E+02 0.292E+03
    6.500   14.1 0.209E+02 0.258E+03        10.4 0.309E+02 0.133E+04        26.8 0.342E+02 0.670E+03
    7.000   14.1 0.279E+02 0.411E+03        10.4 0.361E+02 0.172E+04        26.8 0.476E+02 0.116E+04
    7.500   14.2 0.350E+02 0.586E+03        10.4 0.413E+02 0.215E+04        26.8 0.610E+02 0.176E+04
    8.000   14.2 0.421E+02 0.780E+03        10.4 0.465E+02 0.262E+04        26.8 0.744E+02 0.245E+04
    8.500   47.8 0.660E+02 0.791E+03        10.4 0.517E+02 0.313E+04        26.8 0.878E+02 0.323E+04
    9.000   47.8 0.899E+02 0.132E+04        10.4 0.569E+02 0.367E+04        26.8 0.101E+03 0.409E+04
31.0      .0 .045 13  2  3
         4.490                    .100   4.670                    .100
    3.110     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00         5.2 0.145E+01 0.136E+02          .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00         7.2 0.454E+01 0.716E+02          .0 0.000E+00 0.000E+00
    4.500     .2 0.121E-02 0.353E-03         9.2 0.863E+01 0.176E+03          .0 0.000E+00 0.000E+00
    5.000   14.7 0.353E+01 0.136E+02         9.6 0.134E+02 0.356E+03        26.0 0.547E+01 0.193E+02
    5.500   14.7 0.109E+02 0.869E+02         9.6 0.182E+02 0.592E+03        26.0 0.185E+02 0.147E+03
    6.000   14.8 0.183E+02 0.201E+03         9.6 0.230E+02 0.875E+03        26.0 0.315E+02 0.358E+03
    6.500   14.8 0.257E+02 0.348E+03         9.6 0.278E+02 0.120E+04        26.0 0.445E+02 0.637E+03
    7.000   14.8 0.331E+02 0.520E+03         9.6 0.326E+02 0.157E+04        26.0 0.575E+02 0.976E+03
    7.500   14.9 0.405E+02 0.715E+03         9.6 0.374E+02 0.197E+04        26.0 0.705E+02 0.137E+04
    8.000   14.9 0.479E+02 0.929E+03         9.6 0.422E+02 0.241E+04        26.0 0.836E+02 0.182E+04
    8.500   42.1 0.690E+02 0.918E+03         9.6 0.470E+02 0.288E+04        26.0 0.966E+02 0.231E+04
    9.000   42.1 0.901E+02 0.143E+04         9.6 0.518E+02 0.339E+04        26.0 0.110E+03 0.286E+04
32.0      .0 .030 13  2  3
         4.650                    .100   4.550                    .100
    3.200     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00         4.5 0.100E+01 0.120E+02          .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00         6.6 0.378E+01 0.838E+02          .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00         8.7 0.762E+01 0.222E+03          .0 0.000E+00 0.000E+00
    5.000   14.5 0.319E+01 0.116E+02         9.1 0.121E+02 0.469E+03        25.8 0.955E+01 0.492E+02
    5.500   14.5 0.104E+02 0.817E+02         9.1 0.167E+02 0.797E+03        25.8 0.224E+02 0.205E+03
    6.000   14.5 0.177E+02 0.193E+03         9.1 0.212E+02 0.119E+04        25.8 0.353E+02 0.436E+03
    6.500   14.6 0.250E+02 0.335E+03         9.1 0.258E+02 0.165E+04        25.8 0.482E+02 0.732E+03
    7.000   14.6 0.323E+02 0.503E+03         9.1 0.304E+02 0.216E+04        25.8 0.611E+02 0.109E+04
    7.500   14.6 0.396E+02 0.692E+03         9.1 0.349E+02 0.273E+04        25.8 0.740E+02 0.150E+04
    8.000   14.6 0.468E+02 0.900E+03         9.1 0.395E+02 0.334E+04        25.8 0.869E+02 0.195E+04
    8.500   14.6 0.542E+02 0.115E+04         9.1 0.440E+02 0.401E+04        25.8 0.998E+02 0.246E+04
    9.000   14.6 0.615E+02 0.141E+04         9.1 0.486E+02 0.472E+04        25.8 0.113E+03 0.301E+04
33.0      .0 .030 13  2  3
         5.160                    .100   4.650                    .100
    3.180     .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00          .0 0.000E+00 0.000E+00
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    3.500     .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00
    5.000     .0 0.000E+00 0.000E+00
    5.500    13.4 0.395E+01 0.173E+02
    6.000    13.4 0.107E+02 0.883E+02
    6.500    13.4 0.174E+02 0.195E+03
    7.000    13.5 0.241E+02 0.329E+03
    7.500    13.5 0.308E+02 0.485E+03
    8.000    13.5 0.376E+02 0.660E+03
    8.500    13.5 0.443E+02 0.869E+03
    9.000    13.5 0.511E+02 0.110E+04
34.0     .0 .020 27  2  3
         1.000                .030
    1.000     .0 0.000E+00 0.000E+00
    1.300     .3 0.450E-01 0.336E+00
    1.600     .6 0.180E+00 0.214E+01
    1.900     .9 0.405E+00 0.630E+01
    2.200    1.2 0.720E+00 0.136E+02
    2.500    1.5 0.113E+01 0.246E+02
    2.800    1.8 0.162E+01 0.400E+02
    3.100    2.1 0.221E+01 0.603E+02
    3.400    2.3 0.288E+01 0.866E+02
    3.700    2.3 0.357E+01 0.117E+03
    4.000    2.3 0.426E+01 0.149E+03
    4.300    2.3 0.495E+01 0.183E+03
    4.600    2.3 0.564E+01 0.217E+03
    4.900  113.9 0.123E+02 0.918E+02
    5.200  113.9 0.465E+02 0.840E+03
    5.500  113.9 0.806E+02 0.210E+04
    5.800  113.9 0.115E+03 0.379E+04
    6.100  113.9 0.149E+03 0.585E+04
    6.400  113.9 0.183E+03 0.826E+04
    6.700  113.9 0.217E+03 0.110E+05
    7.000  113.9 0.251E+03 0.140E+05
    7.300  113.9 0.286E+03 0.173E+05
    7.600  113.9 0.320E+03 0.209E+05
    7.900  113.9 0.354E+03 0.248E+05
    8.200  113.9 0.388E+03 0.289E+05
    8.500  113.9 0.422E+03 0.332E+05
    8.800  113.9 0.456E+03 0.378E+05
35.0     .0 .030 15  2  3
         4.560                .200
    2.030     .0 0.000E+00 0.000E+00
    2.500     .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00
    5.000     0.0 0.568E-02 0.156E-02
    5.500     .1 0.259E-01 0.118E-01
    6.000     .1 0.609E-01 0.369E-01
    6.500     .1 0.110E+00 0.817E-01
    7.000     .1 0.175E+00 0.151E+00
    7.500     .2 0.254E+00 0.248E+00
    8.000     .2 0.347E+00 0.376E+00
    8.500    81.0 0.408E+02 0.126E+03
    9.000    81.0 0.814E+02 0.397E+03
36.0     .0 .030 15  2  3
         4.980                .200
    2.180     .0 0.000E+00 0.000E+00
    2.500     .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00
    4.500     .0 0.000E+00 0.000E+00
    5.000     0.0 0.233E-03 0.181E-04
    5.500     0.0 0.622E-02 0.145E-02
    6.000     0.0 0.203E-01 0.700E-02
    6.500     .1 0.425E-01 0.187E-01
    7.000     .1 0.727E-01 0.384E-01
    7.500     .1 0.111E+00 0.675E-01
    8.000     .1 0.158E+00 0.108E+00
    8.500    53.3 0.268E+02 0.817E+02
    9.000    53.3 0.535E+02 0.258E+03
37.0     .0 .030 14  2  3
         3.050                .100
    2.820     .0 0.000E+00 0.000E+00
    3.000     .0 0.000E+00 0.000E+00
    3.500     .6 0.127E+00 0.397E+00
    4.000    1.2 0.564E+00 0.291E+01
    4.500    1.8 0.131E+01 0.900E+01
    5.000    8.8 0.298E+01 0.138E+02
    5.500   16.2 0.998E+01 0.699E+02
    6.000   16.3 0.181E+02 0.185E+03
    6.500   16.3 0.262E+02 0.337E+03
    7.000   16.3 0.344E+02 0.520E+03
    7.500   16.4 0.426E+02 0.728E+03
    8.000   16.4 0.508E+02 0.960E+03
    8.500   50.0 0.758E+02 0.960E+03
    9.000   50.0 0.101E+03 0.154E+04
38.0     .0 .030 13  2  3
         4.480                .100
    3.210     .0 0.000E+00 0.000E+00
    3.500     .0 0.000E+00 0.000E+00
    4.000     .0 0.000E+00 0.000E+00
    4.500     .6 0.581E-02 0.269E-02
    5.000   15.0 0.452E+01 0.201E+02
    5.500   15.0 0.120E+02 0.101E+03
    6.000   15.1 0.196E+02 0.222E+03
    6.500   15.1 0.271E+02 0.374E+03
    7.000   15.1 0.347E+02 0.553E+03
    7.500   15.2 0.423E+02 0.754E+03
    8.000   15.2 0.498E+02 0.975E+03
    8.500   40.2 0.699E+02 0.964E+03
    9.000   40.2 0.901E+02 0.147E+04
39.0     .0 .030 17  2  3
         1.000                .100
    1.000     .0 0.000E+00 0.000E+00
    1.500     .5 0.125E+00 0.394E+00
    2.000    1.0 0.500E+00 0.250E+01
    2.500    1.5 0.113E+01 0.737E+01
    3.000    2.0 0.200E+01 0.159E+02
    3.500    2.5 0.313E+01 0.288E+02
    4.000    3.0 0.450E+01 0.468E+02
    4.500    3.5 0.613E+01 0.706E+02
    5.000   10.3 0.113E+02 0.107E+03
    5.500   10.4 0.165E+02 0.195E+03
    6.000   10.4 0.216E+02 0.300E+03
    6.500   10.4 0.268E+02 0.419E+03
    7.000   10.4 0.321E+02 0.550E+03
    7.500   10.5 0.373E+02 0.692E+03
    8.000   10.5 0.425E+02 0.843E+03
    8.500  159.5 0.122E+03 0.100E+04
    9.000  159.5 0.202E+03 0.232E+04
40.0     .0 .030 15  2  3
         2.600                .100
    1.000     .0 0.000E+00 0.000E+00
    1.500     .0 0.000E+00 0.000E+00
    2.000     .0 0.000E+00 0.000E+00
    2.500    56.1 0.505E+01 0.101E+02
    3.000    85.6 0.419E+02 0.260E+03
    3.500   166.0 0.115E+03 0.894E+03

    4.8 0.126E+01 0.167E+02
    6.3 0.403E+01 0.953E+02
    7.7 0.753E+01 0.231E+03
    8.7 0.117E+02 0.441E+03
    8.9 0.161E+02 0.739E+03
    8.9 0.206E+02 0.111E+04
    8.9 0.250E+02 0.154E+04
    8.9 0.295E+02 0.202E+04
    8.9 0.339E+02 0.256E+04
    8.9 0.384E+02 0.314E+04
    8.9 0.428E+02 0.377E+04
    8.9 0.473E+02 0.445E+04
1.000                .030
     .0 0.000E+00 0.000E+00
    9.4 0.282E+01 0.632E+02
    9.4 0.564E+01 0.201E+03
    9.4 0.846E+01 0.394E+03
    9.4 0.113E+02 0.637E+03
    9.4 0.141E+02 0.924E+03
    9.4 0.169E+02 0.125E+04
    9.4 0.197E+02 0.162E+04
    9.4 0.226E+02 0.202E+04
    9.4 0.254E+02 0.246E+04
    9.4 0.282E+02 0.293E+04
    9.4 0.310E+02 0.344E+04
    9.4 0.338E+02 0.397E+04
    9.4 0.367E+02 0.454E+04
    9.4 0.395E+02 0.514E+04
    9.4 0.423E+02 0.577E+04
    9.4 0.451E+02 0.642E+04
    9.4 0.479E+02 0.710E+04
    9.4 0.508E+02 0.781E+04
    9.4 0.536E+02 0.855E+04
    9.4 0.564E+02 0.931E+04
    9.4 0.592E+02 0.101E+05
    9.4 0.620E+02 0.109E+05
    9.4 0.649E+02 0.118E+05
    9.4 0.677E+02 0.126E+05
    9.4 0.705E+02 0.135E+05
    9.4 0.733E+02 0.144E+05
3.830                .200
     .0 0.000E+00 0.000E+00
   16.8 0.724E+01 0.137E+03
   19.8 0.164E+02 0.477E+03
   22.8 0.271E+02 0.997E+03
   25.3 0.392E+02 0.172E+04
   26.8 0.522E+02 0.267E+04
   27.0 0.657E+02 0.390E+04
   27.0 0.792E+02 0.532E+04
   27.0 0.927E+02 0.692E+04
   27.0 0.106E+03 0.867E+04
   27.0 0.120E+03 0.106E+05
   27.0 0.133E+03 0.127E+05
   27.0 0.147E+03 0.149E+05
   27.0 0.160E+03 0.172E+05
   27.0 0.174E+03 0.197E+05
5.380                .200
     .0 0.000E+00 0.000E+00
   15.4 0.470E+01 0.707E+02
   17.5 0.129E+02 0.347E+03
   19.7 0.222E+02 0.789E+03
   21.9 0.326E+02 0.139E+04
   24.0 0.441E+02 0.214E+04
   25.9 0.567E+02 0.308E+04
   26.7 0.699E+02 0.428E+04
   26.7 0.832E+02 0.573E+04
   26.7 0.966E+02 0.735E+04
   26.7 0.110E+03 0.911E+04
   26.7 0.123E+03 0.110E+05
   26.7 0.137E+03 0.131E+05
   26.7 0.150E+03 0.153E+05
   26.7 0.163E+03 0.176E+05
5.130                .060
     .0 0.000E+00 0.000E+00
    4.2 0.382E+00 0.254E+01
    6.1 0.321E+01 0.684E+02
    6.8 0.643E+01 0.199E+03
    7.5 0.100E+02 0.386E+03
    8.2 0.139E+02 0.625E+03
    8.4 0.181E+02 0.953E+03
    8.4 0.223E+02 0.135E+04
    8.4 0.265E+02 0.180E+04
    8.4 0.307E+02 0.230E+04
    8.4 0.349E+02 0.285E+04
    8.4 0.391E+02 0.344E+04
    8.4 0.433E+02 0.408E+04
    8.4 0.475E+02 0.476E+04
4.510                .060
     .0 0.000E+00 0.000E+00
    4.4 0.910E+00 0.104E+02
    6.8 0.371E+01 0.802E+02
    9.2 0.771E+01 0.221E+03
    9.2 0.123E+02 0.481E+03
    9.2 0.169E+02 0.816E+03
    9.2 0.215E+02 0.122E+04
    9.2 0.261E+02 0.168E+04
    9.2 0.307E+02 0.221E+04
    9.2 0.353E+02 0.278E+04
    9.2 0.399E+02 0.341E+04
    9.2 0.445E+02 0.409E+04
    9.2 0.491E+02 0.482E+04
1.000                .100
     .0 0.000E+00 0.000E+00
   13.0 0.650E+01 0.137E+03
   13.0 0.130E+02 0.439E+03
   13.0 0.195E+02 0.852E+03
   13.0 0.260E+02 0.138E+04
   13.0 0.325E+02 0.200E+04
   13.0 0.390E+02 0.270E+04
   13.0 0.455E+02 0.350E+04
   13.0 0.520E+02 0.437E+04
   13.0 0.585E+02 0.532E+04
   13.0 0.650E+02 0.634E+04
   13.0 0.715E+02 0.743E+04
   13.0 0.780E+02 0.859E+04
   13.0 0.845E+02 0.981E+04
   13.0 0.910E+02 0.111E+05
   13.0 0.975E+02 0.125E+05
   13.0 0.104E+03 0.139E+05
2.590                .100
     .0 0.000E+00 0.000E+00
   16.0 0.775E+01 0.157E+03
   17.0 0.160E+02 0.496E+03
   18.0 0.248E+02 0.976E+03
   18.2 0.339E+02 0.163E+04
   18.2 0.430E+02 0.242E+04

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    7.8 0.144E+01 0.467E+01
    7.8 0.535E+01 0.398E+02
    7.8 0.926E+01 0.956E+02
    7.9 0.132E+02 0.166E+03
    7.9 0.171E+02 0.248E+03
    7.9 0.211E+02 0.338E+03
    7.9 0.250E+02 0.437E+03
    7.9 0.289E+02 0.558E+03
    7.9 0.329E+02 0.690E+03

     .0 0.000E+00 0.000E+00
     .3 0.450E-01 0.336E+00
     .6 0.180E+00 0.214E+01
     .9 0.405E+00 0.630E+01
    1.2 0.720E+00 0.136E+02
    1.5 0.113E+01 0.246E+02
    1.8 0.162E+01 0.400E+02
    2.1 0.221E+01 0.603E+02
    2.3 0.288E+01 0.866E+02
    2.3 0.357E+01 0.117E+03
    2.3 0.426E+01 0.149E+03
    2.3 0.495E+01 0.183E+03
    2.3 0.564E+01 0.217E+03
   16.7 0.749E+01 0.133E+03
   16.7 0.125E+02 0.313E+03
   16.7 0.175E+02 0.549E+03
   16.7 0.226E+02 0.835E+03
   16.7 0.276E+02 0.117E+04
   16.7 0.326E+02 0.154E+04
   16.7 0.376E+02 0.196E+04
   16.7 0.426E+02 0.241E+04
   16.7 0.476E+02 0.291E+04
   16.7 0.527E+02 0.344E+04
   16.7 0.577E+02 0.400E+04
   16.7 0.627E+02 0.459E+04
   16.7 0.677E+02 0.522E+04
   16.7 0.727E+02 0.588E+04

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
   15.0 0.375E+01 0.734E+01
   15.0 0.113E+02 0.449E+02
   15.1 0.188E+02 0.103E+03
   15.1 0.263E+02 0.177E+03
   15.1 0.339E+02 0.265E+03
   15.1 0.414E+02 0.363E+03
   15.2 0.490E+02 0.472E+03
   15.2 0.566E+02 0.589E+03
   15.2 0.642E+02 0.714E+03
  217.0 0.173E+03 0.732E+03
  217.0 0.281E+03 0.165E+04

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
   0.0 0.552E-03 0.763E-04
   0.0 0.147E-01 0.609E-02
    .1 0.481E-01 0.295E-01
    .1 0.101E+00 0.788E-01
    .2 0.172E+00 0.161E+00
    .2 0.263E+00 0.284E+00
    .2 0.364E+00 0.487E+00
    .2 0.464E+00 0.731E+00

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    5.0 0.923E+00 0.499E+01
    8.9 0.481E+01 0.530E+02
    8.9 0.926E+01 0.158E+03
    8.9 0.137E+02 0.304E+03
    8.9 0.182E+02 0.486E+03
    8.9 0.226E+02 0.700E+03
    8.9 0.271E+02 0.945E+03
    8.9 0.315E+02 0.122E+04

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
   31.8 0.138E+02 0.132E+03
   31.8 0.297E+02 0.474E+03
   31.8 0.456E+02 0.968E+03
   31.8 0.615E+02 0.159E+04
   31.8 0.774E+02 0.234E+04
   31.8 0.933E+02 0.319E+04
   31.8 0.109E+03 0.414E+04
   31.8 0.125E+03 0.520E+04
   31.8 0.141E+03 0.635E+04

     .0 0.000E+00 0.000E+00
     .5 0.125E+00 0.394E+00
    1.0 0.500E+00 0.250E+01
    1.5 0.113E+01 0.737E+01
    2.0 0.200E+01 0.159E+02
    2.5 0.313E+01 0.288E+02
    3.0 0.450E+01 0.468E+02
    3.5 0.613E+01 0.706E+02
    3.5 0.788E+01 0.101E+03
    3.6 0.966E+01 0.133E+03
    3.6 0.114E+02 0.168E+03
    3.6 0.132E+02 0.203E+03
    3.6 0.151E+02 0.241E+03
    3.7 0.169E+02 0.279E+03
    3.7 0.187E+02 0.318E+03
   12.5 0.250E+02 0.320E+03
   12.5 0.312E+02 0.464E+03

     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
     .0 0.000E+00 0.000E+00
    1.1 0.269E-01 0.223E-01
   20.6 0.505E+01 0.194E+02
   26.6 0.179E+02 0.134E+03
```

4.000	166.0	0.198E+03	0.222E+04	18.2	0.521E+02	0.334E+04	26.7	0.313E+02	0.335E+03
4.500	166.0	0.281E+03	0.398E+04	18.2	0.612E+02	0.436E+04	26.7	0.446E+02	0.599E+03
5.000	166.0	0.364E+03	0.613E+04	18.2	0.703E+02	0.550E+04	26.7	0.579E+02	0.916E+03
5.500	166.0	0.447E+03	0.864E+04	18.2	0.794E+02	0.674E+04	26.7	0.713E+02	0.128E+04
6.000	166.0	0.530E+03	0.115E+05	18.2	0.885E+02	0.807E+04	26.7	0.847E+02	0.168E+04
6.500	166.0	0.613E+03	0.146E+05	18.2	0.976E+02	0.951E+04	26.7	0.980E+02	0.213E+04
7.000	166.0	0.696E+03	0.181E+05	18.2	0.107E+03	0.110E+05	26.8	0.111E+03	0.260E+04
7.500	166.0	0.779E+03	0.218E+05	18.2	0.116E+03	0.126E+05	26.8	0.125E+03	0.311E+04
8.000	166.0	0.862E+03	0.258E+05	18.2	0.125E+03	0.143E+05	26.8	0.138E+03	0.365E+04

1

S1	NEERA ROAD							
	5.67	5.17	2	4	00	0	60	
	6.09	5.59	2	4	00	0	58	
	4.195	3.80	2	4	15	0	54	
	4.225	3.83	2	4	30	0	52	
	4.03	3.53	2	4	50	0	50	
	4.44	3.94	2	4	70	0	48	
	4.565	4.07	2	4	80	0	46	
	4.37	3.87	2	4	95	0	44	
	4.37	3.87	2	4	110	0	42	
	4.69	4.19	2	4	125	0	40	
	4.945	4.45	2	4	140	0	38	
	4.24	3.74	2	4	160	0	36	
	4.335	3.84	2	4	175	0	34	
	4.825	4.33	2	4	180	0	32	
	5.075	4.58	2	4	190	0	30	
	4.945	4.45	2	4	205	0	28	
	4.413	3.91	2	4	225	0	26	
	4.435	3.94	2	4	240	0	24	
	3.785	3.29	2	4	255	0	22	
	4.05	3.55	2	4	270	0	20	
	4.02	3.52	2	4	285	0	18	
	4.195	3.70	2	4	300	0	16	
	4.20	3.70	2	4	315	0	14	
	4.165	3.67	2	4	330	0	12	
	4.21	3.71	2	4	345	0	10	
	4.14	3.64	2	4	360	0	8	
	4.306	3.81	2	4	380	0	6	
	3.99	3.49	2	4	940	0	4	
	3.825	3.33	2	4	955	0	2	
S1	COWPER ROAD							
	4.30	3.80	2	4	1125	0	1	
	3.97	3.47	2	4	1110	0	3	
	4.32	3.82	2	4	1090	0	5	
	4.55	4.05	2	4	1070	0	7	
	6.38	5.88	2	4	1055	0	9	
	4.41	3.91	1	4	1045	0	11	
	4.37	3.87	2	4	1035	0	13	
	3.96	3.46	2	4	1020	0	15	
	3.95	3.45	2	4	1005	0	17	
	4.53	4.03	2	4	995	0	19	
	4.39	3.89	2	4	980	0	21	
	4.64	4.14	2	4	965	0	23	
S1	LAKEVIEW PARADE							
	6.28	5.78	2	4	415	0	24	
	6.29	5.79	2	4	425	0	22	
	6.19	5.69	2	4	440	0	20	
	6.33	5.83	2	4	450	0	18	
	5.78	5.28	2	4	465	0	16	
	6.38	5.88	2	4	475	0	14	
	5.72	5.22	2	4	490	0	12	
	5.58	5.08	2	4	500	0	10	
	5.34	4.84	2	4	515	0	8	
	5.85	5.35	2	4	525	0	6	
	5.47	4.97	2	4	535	0	4	
	5.74	5.24	2	4	550	0	2	
S1	KAHIBAH ROAD							
	7.20	6.70	2	4	585	0	2	
	5.89	5.39	2	4	600	0	4	
	5.39	4.89	2	4	610	0	6	
	6.16	5.66	2	4	620	0	8	
	6.	5.5	2	4	635	0	10	
	5.85	5.35	2	4	645	0	12	
	5.98	5.48	2	4	660	0	14	
	5.42	4.92	2	4	670	0	16	
	5.62	5.12	2	4	680	0	18	
	4.91	4.41	2	4	710	0	22	
	5.33	4.83	2	4	720	0	24	
	5.59	5.09	2	4	735	0	26	
	5.24	4.74	2	4	745	0	28	
	4.65	4.15	1	4	755	0	30 - FLAT 1	
	4.65	4.15	1	0	755	0	30 - FLAT 2	
	4.65	4.15	1	0	755	0	30 - FLAT 3	
	4.61	4.11	1	4	770	0	32 - FLAT 1	
	4.61	4.11	1	0	770	0	32 - FLAT 2	
	4.61	4.11	1	0	770	0	32 - FLAT 3	
	4.74	4.24	2	4	780	0	34	
	4.78	4.28	2	4	795	0	36	
	5.01	4.51	2	4	805	0	38	
	5.12	4.62	2	4	820	0	40	
	5.12	4.62	1	4	820	0	40 - GRANNY FLAT	
	4.94	4.44	2	4	830	0	42	
	4.53	4.03	2	4	840	0	44	
S1	BERRIMA CRESCENT							
	3.95	3.45	2	4	3195	0	2	
	3.39	2.89	2	4	3205	0	3	
	4.26	3.76	2	4	3215	0	4	
	3.99	3.49	2	4	3225	0	5	
	3.52	3.02	2	4	3235	0	6	
	3.48	2.98	2	4	3255	0	7	
	2.91	2.41	2	4	3265	0	8	
S1	MONASH ROAD							
	5.02	4.52	2	4	7200	0	1 - FLAT 1	
	5.02	4.52	2	0	7200	0	1 - FLAT 2	
	5.02	4.52	2	0	7200	0	1 - FLAT 3	
	5.09	4.59	2	4	7300	0	4	
	5.00	4.50	2	4	7300	0	6	
	4.93	4.43	2	4	7300	0	8	
	4.97	4.47	2	4	7200	0	3	
	4.84	4.34	2	4	7200	0	5	
	4.81	4.31	2	4	7200	0	7	
	4.86	4.36	2	4	7200	0	9	
	5.01	4.51	2	4	7200	0	11	
	4.91	4.41	2	4	7200	0	13	
	4.55	5.05	1	4	7200	0	15	
	4.96	4.46	2	4	7200	0	17	
	4.98	4.48	2	4	7200	0	19	
S1	YARRABIN ROAD							
	4.57	4.07	2	4	1665	0	66	
	4.72	4.22	2	4	7300	0	15	
	4.88	4.38	2	4	1650	0	64	
	4.79	4.29	2	4	7300	0	13	
	4.37	3.87	2	4	1635	0	62	
	4.93	4.43	2	4	7300	0	11	
	4.66	4.16	2	4	1620	0	60	
	4.84	4.34	2	4	7300	0	9	
	4.39	3.89	2	4	1605	0	58	
	4.48	3.98	2	4	7300	0	7	
	4.69	4.19	2	4	1590	0	56	
	4.63	4.13	2	4	1575	0	54	
	4.91	4.41	2	4	7300	0	3	
	4.23	3.73	2	4	1565	0	52	
	4.92	4.42	2	4	7300	0	1	
	4.41	3.50	2	4	1545	0	50	
	4.44	4.30	2	4	1545	0	48	
	4.98	4.20	2	4	1535	0	46	
	4.99	4.20	2	4	1525	0	44	
	4.46	4.10	2	4	1510	0	42	
	4.62	4.00	2	4	1495	0	40	
	4.45	4.00	2	4	1480	0	38	
	4.44	3.94	2	4	1445	0	36	
	4.41	3.91	2	4	1430	0	34	

S1	KALLAROO ROAD						
	5.92	5.42	2	4	7300	0	41
	5.90	5.40	2	4	7300	0	43
	4.29	3.79	2	4	7300	0	39
	4.72	4.50	1	4	1917	0	33
	4.68	4.50	2	4	1907	0	31
	4.93	4.50	1	4	1897	0	29
S1	ILUKA ROAD						
	4.76	4.26	2	4	2050	0	8
	4.44	3.94	2	4	7400	0	1
S1	STELLA ROAD						
	4.46	4.00	2	4	7400	0	3
	4.60	4.00	2	4	7400	0	5
	4.77	4.27	2	4	7400	0	7
	4.45	3.95	2	4	7400	0	9
	5.02	4.52	2	4	7400	0	11
	5.21	4.71	2	4	7400	0	13
	5.33	4.83	2	4	7400	0	15
	5.03	4.53	2	4	7400	0	17
	5.34	4.84	2	4	7400	0	19
	5.31	4.81	2	4	7400	0	21
	5.44	4.94	2	4	7400	0	23
	5.75	5.25	2	4	7400	0	25
S1	DORA ROAD						
	4.96	4.50	2	4	1880	0	14
	4.47	4.50	1	4	1790	0	6
S1	WILKS AVENUE						
	4.89	4.39	2	4	2167	0	19
	4.69	4.19	2	4	2167	0	17
	4.88	4.38	2	4	2230	0	15
	4.99	4.49	2	4	2323	0	13
	5.38	4.88	2	4	2323	0	11
	5.40	4.90	2	4	2323	0	9
S1	SYLVAN PLACE						
	4.94	4.40	2	4	7500	0	15
	4.69	4.40	2	4	7500	0	17
	4.91	4.40	2	4	7500	0	19
	5.01	4.40	2	4	7500	0	21
	5.04	4.40	2	4	7500	0	22
S1	MT ETTALONG ROAD						
	4.28	3.78	2	4	4605	0	96
	4.47	3.97	2	4	4620	0	98
	4.46	3.96	2	4	4630	0	100
	4.47	3.97	2	4	2600	0	102
	3.83	3.33	2	4	2600	0	104
	4.47	3.97	2	4	2600	0	106
	4.43	3.93	2	4	2600	0	108
	4.32	3.82	3	4	2643	0	112
	4.45	3.95	2	4	2655	0	114
	4.59	4.09	2	4	2670	0	116
	4.23	3.73	2	4	2680	0	118
	4.36	3.86	2	4	2700	0	122
	4.41	3.50	2	4	3535	0	65
	3.70	3.20	2	4	3535	0	63
	4.07	3.57	2	4	3535	0	61
	3.93	3.43	2	4	3535	0	59
	4.50	3.20	2	4	3550	0	57
	4.91	3.20	1	4	3565	0	55
	4.80	3.50	1	4	3575	0	53
	4.46	3.50	2	4	3585	0	51
S1	ELANORA ROAD						
	4.53	4.00	2	4	5000	0	6
	4.72	4.10	2	4	5015	0	8
	4.58	4.20	2	4	5030	0	10
	4.60	3.70	2	4	5045	0	12
	4.08	3.58	2	4	5110	0	34
	3.97	3.47	2	4	5130	0	31
	4.52	3.50	1	4	5160	0	29
	4.83	3.50	1	4	5170	0	27
	5.11	4.00	2	4	5185	0	25
	4.61	4.00	1	4	5200	0	23
	4.67	3.90	2	4	5225	0	19
	4.55	3.90	1	4	5240	0	17
	5.37	4.50	2	4	5250	0	15
	4.69	4.50	2	4	5275	0	11
S1	ALBANY STREET						
	5.05	4.50	2	4	5215	0	34
	5.05	4.40	1	4	5225	0	36
	5.19	4.40	2	4	5240	0	38
	5.00	4.40	1	4	5250	0	40
	5.30	4.40	1	4	5265	0	42
	5.29	4.60	2	4	5275	0	44
	5.20	4.40	2	4	5290	0	46
	5.05	4.60	2	4	5310	0	48
	5.12	4.30	1	4	5330	0	50
	4.48	4.30	2	4	5255	0	52
S1	BENA ROAD						
	4.49	3.90	2	4	5295	0	17
	4.33	3.90	1	4	5320	0	15
	5.20	3.80	1	4	5360	0	26
	5.48	4.80	2	4	5365	0	24
	4.98	4.50	1	4	5370	0	22
	5.00	4.70	2	4	5375	0	20
S1	CALYPTA ROAD						
	4.23	3.50	2	4	5460	0	27
	4.17	3.30	2	4	5450	0	25
	4.19	3.20	2	4	5445	0	23
	4.86	3.50	1	4	5440	0	19
S1	EITA ROAD						
	4.56	3.70	2	4	5060	0	1
	4.77	3.90	1	4	5060	0	3
S1	JOPSON CLOSE						
	5.97	5.47	2	4	6400	0	11
S1	GREENHAVEN DRIVE						
	5.63	5.13	2	4	6345	0	70
	5.07	4.57	2	4	6330	0	68
	4.84	4.34	2	4	6310	0	66
	5.23	4.73	2	4	6295	0	64
	4.80	4.30	2	4	6280	0	62
	4.90	4.40	2	4	6260	0	60
	4.71	4.21	2	4	6245	0	58
	4.73	4.23	2	4	6220	0	56
	4.80	4.30	2	4	6205	0	54
	4.94	4.44	2	4	6185	0	52
	5.14	4.64	2	4	6165	0	50
	4.70	4.20	2	4	6150	0	48
	4.86	4.36	2	4	6130	0	46
	5.59	5.09	2	4	6110	0	44
	5.27	4.77	2	4	6090	0	42
	5.26	4.76	2	4	6070	0	40
S1	BRISBANE AVENUE						
	4.93	4.43	2	4	7500	0	134
	4.98	4.48	2	4	7500	0	132
	5.12	4.62	2	4	7500	0	130
	5.26	4.76	2	4	7500	0	128
	5.48	4.98	2	4	5875	0	108
	5.94	5.44	2	4	5912	0	115
S1	NOWACK AVENUE						
	5.71	5.21	2	4	6610	0	98
	5.71	5.21	2	4	6660	0	103
S1	MCEVOY AVENUE						
	6.05	5.55	2	4	6715	0	102
	5.61	5.11	2	4	6760	0	103

S1	PRIESTMAN AVENUE						
	5.86	5.36	2	4	6835	0	104
	5.83	5.33	2	4	6880	0	111
S1	MT ETTALONG ROAD						
	4.02	3.52	2	4	4140	0	18
	3.76	3.26	2	4	4140	0	20
	3.53	3.03	2	4	4140	0	22
	3.95	3.45	2	4	4140	0	24
	3.71	3.21	2	4	4140	0	26
	4.05	3.55	2	4	4140	0	28
	3.98	3.48	2	4	4140	0	30
	3.78	3.28	2	4	4140	0	32
	3.88	3.38	2	4	4140	0	34
	3.94	3.44	2	4	4140	0	36
	3.53	3.03	2	4	4140	0	38

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T1 KAHIBAH CREEK FLOOD FILE - EXISTING CONDITIONS
R1    12    20.0
R2     1       0        NEERA RD
R2     2     400        LAKEVIEW PDE
R2     3    1075        COWPER RD
R2     4    1525        ILUKA CK
R2     5    2500        DS MT ET RD
R2     6    3500        N LOOP ET CK
R2     7    5000        KAHIBAH CK W
R2     8    6500        KAHIBAH CK E
R2     9    7200        CELL 33
R2    10    7300        CELL 34
R2    11    7400        CELL 35
R2    12    7500        CELL 45
F1     4
F1     1     5.05% AEP FLOOD EXISTING
F1     2     2.02% AEP FLOOD EXISTING
F1     3     1.01% AEP FLOOD EXISTING
F1     3    0.01EXTREME FLOOD EXISTING
F2   1.0       0   4.275   4.378   4.512   4.917
F2   2.0      40   4.193   4.291   4.438   4.871
F2   3.0     180   3.968   4.116   4.275   4.733
F2   4.0     320   3.839   4.013   4.123   4.604
F2   5.0     360   3.828   4.004   4.113   4.591
F2   6.0     392   3.826   4.002   4.111   4.587
F2  10.0     400   3.984   4.219   4.366   4.914
F2  11.0     550   3.932   4.185   4.316   4.795
F2  12.0     685   3.887   4.144   4.258   4.668
F2  13.0     862   3.842   4.034   4.139   4.597
F2  14.0     940   3.826   4.002   4.111   4.587
F2  20.0    1075   3.820   3.997   4.106   4.576
F2  21.0    1220   3.814   3.992   4.101   4.573
F2  22.0    1330   3.804   3.982   4.093   4.567
F2  23.0    1445   3.799   3.978   4.089   4.566
F2  30.0    1525   3.796   3.975   4.087   4.566
F2  31.0    1570   3.798   3.977   4.089   4.571
F2  32.0    1665   3.800   3.979   4.091   4.575
F2  33.0    1752   3.832   4.005   4.112   4.597
F2  34.0    1850   3.837   4.009   4.115   4.601
F2  35.0    1947   3.867   4.043   4.159   4.731
F2  36.0    2000   3.867   4.043   4.159   4.731
F2  37.0    2052   3.874   4.049   4.166   4.740
F2  38.0    2167   3.880   4.055   4.172   4.749
F2  39.0    2230   3.882   4.057   4.174   4.754
F2  40.0    2323   3.883   4.058   4.175   4.758
F2  50.0    2500   3.790   3.970   4.082   4.562
F2  51.0    2535   3.782   3.962   4.076   4.557
F2  52.0    2570   3.782   3.962   4.076   4.557
F2  52.1    2571   2.838   2.988   3.079   3.688
F2  53.0    2600   2.838   2.988   3.079   3.688
F2  54.0    2623   2.808   2.956   3.048   3.666
F2  55.0    2643   2.737   2.887   2.982   3.623
F2  56.0    2730   2.457   2.617   2.728   3.456
F2  57.0    2803   2.358   2.516   2.643   3.397
F2  58.0    2877   2.316   2.474   2.606   3.371
F2  59.0    2955   2.265   2.416   2.545   3.306
F2  60.0    3060   2.156   2.293   2.415   3.169
F2  61.0    3150   2.054   2.175   2.285   2.925
F2  62.0    3235   1.897   1.996   2.087   2.560
F2  63.0    3300   1.897   1.996   2.087   2.560
F2  70.0    3500   3.790   3.970   4.082   4.562
F2  71.0    3535   3.782   3.962   4.076   4.557
F2  72.0    3605   3.782   3.962   4.076   4.554
F2  73.0    3700   3.781   3.962   4.075   4.550
F2  74.0    3797   3.774   3.957   4.072   4.548
F2  75.0    4018   3.767   3.952   4.068   4.546
F2  76.0    4070   3.767   3.952   4.068   4.546
F2  76.1    4071   3.363   3.414   3.431   3.776
F2  77.0    4140   3.363   3.414   3.431   3.776
F2  78.0    4385   3.363   3.414   3.431   3.776
F2  78.1    4386   2.845   2.982   3.070   3.710
F2  79.0    4465   2.845   2.982   3.070   3.710
F2  80.0    4565   2.845   2.985   3.075   3.699
F2  81.0    4640   2.838   2.988   3.079   3.688
F2  90.0    5000   3.800   3.979   4.091   4.575
F2  91.0    5085   3.817   3.992   4.102   4.587
F2  92.0    5230   3.837   4.009   4.115   4.602
F2  93.0    5425   3.889   4.047   4.141   4.623
F2  94.0    5453   3.889   4.047   4.141   4.623
F2  95.0    5492   3.894   4.051   4.145   4.630
F2  96.0    5600   3.898   4.055   4.149   4.638
F2  97.0    5740   3.924   4.079   4.172   4.680
F2  98.0    5772   3.935   4.089   4.181   4.697
F2  99.0    5808   3.935   4.089   4.181   4.697
F2  99.1    5809   4.061   4.227   4.326   5.030
F2 100.0    5875   4.061   4.227   4.326   5.030
F2 101.0    5912   4.132   4.293   4.393   5.111
F2 102.0    6012   4.226   4.376   4.475   5.196
F2 103.0    6123   4.287   4.438   4.535   5.238
F2 104.0    6210   4.320   4.471   4.569   5.258
F2 105.0    6297   4.372   4.524   4.623   5.276
F2 106.0    6360   4.407   4.560   4.659   5.287
F2 107.0    6432   4.412   4.565   4.664   5.289
F2 108.0    6480   4.422   4.574   4.671   5.292
F2 110.0    6500   4.061   4.227   4.326   5.030
F2 111.0    6545   4.061   4.227   4.326   5.030
F2 111.1    6546   4.102   4.266   4.362   5.137
F2 112.0    6567   4.102   4.266   4.362   5.137
F2 113.0    6592   4.103   4.276   4.363   5.139
F2 114.0    6635   4.113   4.285   4.364   5.140
F2 115.0    6682   4.132   4.299   4.366   5.142
F2 116.0    6705   4.150   4.312   4.368   5.144
F2 117.0    6730   4.150   4.312   4.368   5.144
F2 117.1    6731   4.377   4.568   4.613   5.277
F2 118.0    6757   4.377   4.568   4.613   5.277
F2 119.0    6782   4.400   4.585   4.629   5.279
F2 120.0    6835   4.419   4.600   4.642   5.281
F2 121.0    6890   4.454   4.624   4.664   5.283
F2 122.0    6917   4.483   4.643   4.682   5.284
F2 123.0    6942   4.483   4.643   4.682   5.284
F2 123.1    6943   4.665   4.786   4.826   5.294
F2 124.0    6967   4.665   4.786   4.826   5.294
F2 125.0    6990   4.676   4.796   4.838   5.294
F2 126.0    7060   4.698   4.817   4.862   5.295
F2 127.0    7120   4.727   4.848   4.903   5.301
F2 130.0    7200   3.880   3.984   4.096   4.573
F2 140.0    7300   3.837   4.009   4.115   4.600
F2 150.0    7400   3.867   4.043   4.159   4.731
F2 160.0    7500   3.898   4.055   4.149   4.638
F2 -9999
D1     3      4
D2     1       DIRECT
D2     2       INDIRECT
D2     3       CLEAN UP
D3     1       RESIDENTIAL - V.SMALL
D4     0     0       0       0
D4   0.1  2000     300     500
D4   0.6  6000     900    1000
D4   1.5 14000    2100    1300
D4   2.0 18000    2700    1400
D4   3.5 18000    2700    1600
D3     2       RESIDENTIAL - SMALL-MED
D4     0     0       0       0
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D4    0.1    4000     600     500
D4    0.6   11000    1600    1000
D4    1.5   15000    2300    1300
D4    2.0   19000    2900    1400
D4    3.5   19000    2900    1600
D3      3          RESIDENTIAL - LARGE
D4      0        0       0       0
D4    0.1    9000    1400     500
D4    0.6   20000    3000    1000
D4    1.5   26000    3900    1300
D4    2.0   30000    5500    1400
D4    3.5   30000    5500    1600
D3      4          EXTERNAL
D4      0        0       0       0
D4    0.6     660       0       0
D4    1.0    3300       0       0
D4    2.0    6600       0       0
D4    3.0    6600       0       0
D4    4.0    6600       0       0
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T1 KAHIBAH CREEK FLOOD FILE - PART 1
R1    12    20.0
R2     1       0        NEERA RD
R2     2     400        LAKEVIEW PDE
R2     3    1075        COWPER RD
R2     4    1525        ILUKA CK
R2     5    2500        DS MT ET RD
R2     6    3500        N LOOP ET CK
R2     7    5000        KAHIBAH CK W
R2     8    6500        KAHIBAH CK E
R2     9    7200        CELL 33
R2    10    7300        CELL 34
R2    11    7400        CELL 35
R2    12    7500        CELL 45
F1     4
F1     1     5.05% AEP FLOOD EXISTING
F1     2     2.02% AEP FLOOD EXISTING
F1     3     1.01% AEP FLOOD EXISTING
F1     3    0.01EXTREME FLOOD EXISTING
F2   1.0       0   3.280   3.472   3.635   4.240
F2   2.0      40   3.260   3.454   3.617   4.226
F2   3.0     180   3.194   3.391   3.555   4.175
F2   4.0     320   3.163   3.363   3.524   4.142
F2   5.0     360   3.152   3.353   3.512   4.130
F2   6.0     392   3.146   3.348   3.506   4.127
F2  10.0     400   3.717   3.921   4.085   4.871
F2  11.0     550   3.485   3.700   3.876   4.729
F2  12.0     685   3.235   3.465   3.655   4.570
F2  13.0     862   3.165   3.376   3.543   4.250
F2  14.0     940   3.146   3.348   3.506   4.127
F2  20.0    1075   3.128   3.331   3.487   4.115
F2  21.0    1220   3.063   3.257   3.402   4.039
F2  22.0    1330   2.968   3.150   3.277   3.928
F2  23.0    1445   2.928   3.107   3.230   3.869
F2  30.0    1525   2.902   3.079   3.199   3.832
F2  31.0    1570   2.920   3.097   3.227   3.847
F2  32.0    1665   2.939   3.115   3.255   3.862
F2  33.0    1752   3.440   3.575   3.653   4.094
F2  34.0    1850   3.574   3.698   3.761   4.153
F2  35.0    1947   3.660   3.806   3.887   4.426
F2  36.0    2000   3.660   3.806   3.887   4.426
F2  37.0    2052   3.687   3.833   3.915   4.457
F2  38.0    2167   3.713   3.859   3.943   4.487
F2  39.0    2230   3.720   3.866   3.951   4.501
F2  40.0    2323   3.726   3.873   3.959   4.514
F2  50.0    2500   2.876   3.059   3.183   3.821
F2  51.0    2535   2.857   3.045   3.172   3.814
F2  52.0    2570   2.796   2.981   3.105   3.724
F2  52.1    2571   2.796   2.981   3.105   3.724
F2  53.0    2600   2.734   2.916   3.033   3.633
F2  54.0    2623   2.726   2.905   3.021   3.611
F2  55.0    2643   2.681   2.854   2.963   3.533
F2  56.0    2730   2.489   2.646   2.733   3.260
F2  57.0    2803   2.449   2.604   2.689   3.210
F2  58.0    2877   2.430   2.583   2.668   3.187
F2  59.0    2955   2.387   2.529   2.611   3.121
F2  60.0    3060   2.294   2.415   2.492   2.983
F2  61.0    3150   2.277   2.391   2.463   2.923
F2  62.0    3235   2.246   2.348   2.412   2.828
F2  63.0    3300   2.246   2.348   2.412   2.828
F2  70.0    3500   2.876   3.059   3.183   3.821
F2  71.0    3535   2.857   3.045   3.172   3.814
F2  72.0    3605   2.858   3.045   3.177   3.817
F2  73.0    3700   2.858   3.045   3.177   3.819
F2  74.0    3797   2.835   3.019   3.164   3.814
F2  75.0    4018   2.811   2.993   3.150   3.809
F2  76.0    4070   2.811   2.993   3.150   3.809
F2  76.1    4071   2.807   2.986   3.128   3.658
F2  77.0    4140   2.807   2.986   3.128   3.658
F2  78.0    4385   2.807   2.986   3.128   3.658
F2  78.1    4386   2.716   2.890   3.006   3.597
F2  79.0    4465   2.716   2.890   3.006   3.597
F2  80.0    4565   2.725   2.903   3.019   3.615
F2  81.0    4640   2.734   2.916   3.033   3.633
F2  90.0    5000   2.939   3.115   3.255   3.862
F2  91.0    5085   3.188   3.344   3.454   3.978
F2  92.0    5230   3.574   3.698   3.761   4.153
F2  93.0    5425   3.636   3.763   3.827   4.192
F2  94.0    5453   3.698   3.827   3.893   4.230
F2  95.0    5492   3.715   3.844   3.911   4.253
F2  96.0    5600   3.733   3.863   3.930   4.277
F2  97.0    5740   3.807   3.944   4.013   4.382
F2  98.0    5772   3.846   3.985   4.055   4.434
F2  99.0    5808   3.846   3.985   4.055   4.434
F2  99.1    5809   4.060   4.227   4.316   5.074
F2 100.0    5875   4.060   4.227   4.316   5.074
F2 101.0    5912   4.082   4.248   4.341   5.099
F2 102.0    6012   4.102   4.268   4.364   5.121
F2 103.0    6123   4.128   4.295   4.395   5.147
F2 104.0    6210   4.140   4.307   4.409   5.159
F2 105.0    6297   4.158   4.326   4.431   5.173
F2 106.0    6360   4.169   4.337   4.443   5.181
F2 107.0    6432   4.174   4.342   4.447   5.183
F2 108.0    6480   4.183   4.351   4.455   5.186
F2 110.0    6500   4.060   4.227   4.316   5.074
F2 111.0    6545   4.060   4.227   4.316   5.074
F2 111.1    6546   4.198   4.350   4.420   5.117
F2 112.0    6567   4.198   4.350   4.420   5.117
F2 113.0    6592   4.209   4.357   4.424   5.118
F2 114.0    6635   4.217   4.363   4.428   5.118
F2 115.0    6682   4.231   4.372   4.433   5.119
F2 116.0    6705   4.243   4.380   4.438   5.119
F2 117.0    6730   4.243   4.380   4.438   5.119
F2 117.1    6731   4.428   4.583   4.613   5.180
F2 118.0    6757   4.428   4.583   4.613   5.180
F2 119.0    6782   4.444   4.597   4.629   5.181
F2 120.0    6835   4.457   4.609   4.642   5.181
F2 121.0    6890   4.483   4.629   4.664   5.182
F2 122.0    6917   4.505   4.646   4.682   5.183
F2 123.0    6942   4.505   4.646   4.682   5.183
F2 123.1    6943   4.668   4.786   4.826   5.196
F2 124.0    6967   4.668   4.786   4.826   5.196
F2 125.0    6990   4.678   4.796   4.838   5.197
F2 126.0    7060   4.699   4.817   4.862   5.199
F2 127.0    7120   4.728   4.848   4.903   5.221
F2 130.0    7200   3.880   3.880   3.880   4.045
F2 140.0    7300   3.574   3.698   3.760   4.152
F2 150.0    7400   3.660   3.806   3.887   4.426
F2 160.0    7500   3.742   3.863   3.930   4.277
F2 -9999
D1     3      4
D2     1       DIRECT
D2     2       INDIRECT
D2     3       CLEAN UP
D3     1       RESIDENTIAL - V.SMALL
D4     0       0       0       0
D4   0.1    2000     300     500
D4   0.6    6000     900    1000
D4   1.5   14000    2100    1300
D4   2.0   18000    2700    1400
D4   3.5   18000    2700    1600
D3     2       RESIDENTIAL - SMALL-MED
D4     0       0       0       0
```

D4	0.1	4000	600	500
D4	0.6	11000	1600	1000
D4	1.5	15000	2300	1300
D4	2.0	19000	2900	1400
D4	3.5	19000	2900	1600
D3	3	RESIDENTIAL - LARGE		
D4	0	0	0	0
D4	0.1	9000	1400	500
D4	0.6	20000	3000	1000
D4	1.5	26000	3900	1300
D4	2.0	30000	5500	1400
D4	3.5	30000	5500	1600
D3	4	EXTERNAL		
D4	0	0	0	0
D4	0.6	660	0	0
D4	1.0	3300	0	0
D4	2.0	6600	0	0
D4	3.0	6600	0	0
D4	4.0	6600	0	0

```
T1 KAHIBAH CREEK FLOOD FILE - EXISTING CONDITIONS
R1    12    20.0
R2     1       0        NEERA RD
R2     2     400        LAKEVIEW PDE
R2     3    1075        COWPER RD
R2     4    1525        ILUKA CK
R2     5    2500        DS MT ET RD
R2     6    3500        N LOOP ET CK
R2     7    5000        KAHIBAH CK W
R2     8    6500        KAHIBAH CK E
R2     9    7200        CELL 33
R2    10    7300        CELL 34
R2    11    7400        CELL 35
R2    12    7500        CELL 45
F1     4
f1     1     5.05% AEP FLOOD EXISTING
F1     2     2.02% AEP FLOOD EXISTING
f1     3     1.01% AEP FLOOD EXISTING
F1     3    0.01EXTREME FLOOD EXISTING
F2   1.0       0   3.468   3.664   3.839   4.539
F2   2.0      40   3.457   3.655   3.828   4.534
F2   3.0     180   3.413   3.617   3.784   4.514
F2   4.0     320   3.394   3.599   3.761   4.501
F2   5.0     360   3.387   3.593   3.753   4.496
F2   6.0     392   3.383   3.590   3.749   4.493
F2  10.0     400   3.792   4.020   4.217   4.887
F2  11.0     550   3.631   3.877   4.102   4.754
F2  12.0     685   3.457   3.722   3.977   4.618
F2  13.0     862   3.402   3.628   3.816   4.528
F2  14.0     940   3.383   3.590   3.749   4.493
F2  20.0    1075   3.372   3.580   3.736   4.485
F2  21.0    1220   3.323   3.523   3.674   4.405
F2  22.0    1330   3.247   3.434   3.575   4.278
F2  23.0    1445   3.216   3.401   3.539   4.235
F2  30.0    1525   3.194   3.378   3.513   4.206
F2  31.0    1570   3.211   3.394   3.529   4.228
F2  32.0    1665   3.227   3.409   3.545   4.249
F2  33.0    1752   3.502   3.665   3.801   4.490
F2  34.0    1850   3.573   3.730   3.866   4.552
F2  35.0    1947   3.675   3.838   3.983   4.838
F2  36.0    2000   3.675   3.838   3.983   4.838
F2  37.0    2052   3.697   3.861   4.005   4.863
F2  38.0    2167   3.728   3.884   4.027   4.888
F2  39.0    2230   3.734   3.891   4.033   4.898
F2  40.0    2323   3.740   3.897   4.039   4.907
F2  50.0    2500   3.102   3.287   3.418   4.097
F2  51.0    2535   3.048   3.233   3.362   4.034
F2  52.0    2570   2.987   3.168   3.292   3.940
F2  52.1    2571   2.987   3.168   3.292   3.940
F2  53.0    2600   2.926   3.103   3.222   3.845
F2  54.0    2623   2.916   3.091   3.208   3.821
F2  55.0    2643   2.864   3.033   3.145   3.738
F2  56.0    2730   2.646   2.796   2.898   3.453
F2  57.0    2803   2.603   2.750   2.850   3.401
F2  58.0    2877   2.583   2.728   2.828   3.377
F2  59.0    2955   2.529   2.670   2.767   3.309
F2  60.0    3060   2.415   2.547   2.639   3.169
F2  61.0    3150   2.391   2.514   2.600   3.097
F2  62.0    3235   2.348   2.459   2.537   2.983
F2  63.0    3300   2.348   2.459   2.537   2.983
F2  70.0    3500   3.102   3.287   3.418   4.097
F2  71.0    3535   3.048   3.233   3.362   4.034
F2  72.0    3605   3.071   3.256   3.394   4.079
F2  73.0    3700   3.094   3.288   3.426   4.123
F2  74.0    3797   3.097   3.288   3.426   4.122
F2  75.0    4018   3.099   3.288   3.425   4.120
F2  76.0    4070   3.099   3.288   3.425   4.120
F2  76.1    4071   3.112   3.291   3.422   4.001
F2  77.0    4140   3.112   3.291   3.422   4.001
F2  78.0    4385   3.112   3.291   3.422   4.001
F2  78.1    4386   2.949   3.124   3.243   3.854
F2  79.0    4465   2.949   3.124   3.243   3.854
F2  80.0    4565   2.938   3.114   3.233   3.850
F2  81.0    4640   2.926   3.103   3.222   3.845
F2  90.0    5000   3.227   3.409   3.545   4.249
F2  91.0    5085   3.396   3.567   3.694   4.398
F2  92.0    5230   3.712   3.839   3.931   4.646
F2  93.0    5425   3.787   3.925   3.968   4.733
F2  94.0    5453   3.861   4.011   4.105   4.820
F2  95.0    5492   3.907   4.057   4.156   4.880
F2  96.0    5600   3.962   4.114   4.216   4.956
F2  97.0    5740   4.026   4.180   4.286   5.046
F2  98.0    5772   4.055   4.210   4.318   5.089
F2  99.0    5808   4.055   4.210   4.318   5.089
F2  99.1    5809   4.199   4.378   4.509   5.404
F2 100.0    5875   4.199   4.378   4.509   5.404
F2 101.0    5912   4.219   4.400   4.532   5.433
F2 102.0    6012   4.237   4.419   4.553   5.458
F2 103.0    6123   4.262   4.446   4.581   5.492
F2 104.0    6210   4.274   4.458   4.593   5.507
F2 105.0    6297   4.291   4.476   4.612   5.532
F2 106.0    6360   4.301   4.487   4.624   5.546
F2 107.0    6432   4.314   4.501   4.637   5.563
F2 108.0    6480   4.336   4.524   4.659   5.592
F2 110.0    6500   4.199   4.378   4.509   5.404
F2 111.0    6545   4.199   4.378   4.509   5.404
F2 111.1    6546   4.594   4.818   5.024   5.724
F2 112.0    6567   4.594   4.818   5.024   5.724
F2 113.0    6592   4.609   4.832   5.036   5.737
F2 114.0    6635   4.621   4.842   5.045   5.748
F2 115.0    6682   4.637   4.855   5.057   5.758
F2 116.0    6705   4.650   4.312   5.067   5.767
F2 117.0    6730   4.650   4.312   5.067   5.767
F2 117.1    6731   4.838   5.056   5.211   5.873
F2 118.0    6757   4.838   5.056   5.211   5.873
F2 119.0    6782   4.851   5.067   5.221   5.883
F2 120.0    6835   4.861   5.076   5.229   5.892
F2 121.0    6890   4.875   5.087   5.239   5.902
F2 122.0    6917   4.886   5.096   5.247   5.911
F2 123.0    6942   4.886   5.096   5.247   5.911
F2 123.1    6943   5.022   5.174   5.308   5.954
F2 124.0    6967   5.022   5.174   5.308   5.954
F2 125.0    6990   5.025   5.177   5.310   5.957
F2 126.0    7060   5.031   5.182   5.315   5.962
F2 127.0    7120   5.067   5.212   5.343   5.992
F2 130.0    7200   3.880   3.880   3.880   4.501
F2 140.0    7300   3.140   3.140   3.140   3.502
F2 150.0    7400   3.340   3.340   3.340   4.106
F2 160.0    7500   3.710   3.710   3.710   3.710
F2 -9999
D1     3       4
D2     1         DIRECT
D2     2         INDIRECT
D2     3         CLEAN UP
D3     1         RESIDENTIAL - V.SMALL
D4     0       0       0       0
D4   0.1    2000     300     500
D4   0.6    6000     900    1000
D4   1.5   14000    2100    1300
D4   2.0   18000    2700    1400
D4   3.5   18000    2700    1600
D3     2         RESIDENTIAL - SMALL-MED
D4     0       0       0       0
```

```
D4    0.1    4000     600     500
D4    0.6   11000    1600    1000
D4    1.5   15000    2300    1300
D4    2.0   19000    2900    1400
D4    3.5   19000    2900    1600
D3      3          RESIDENTIAL - LARGE
D4      0       0       0       0
D4    0.1    9000    1400     500
D4    0.6   20000    3000    1000
D4    1.5   26000    3900    1300
D4    2.0   30000    5500    1400
D4    3.5   30000    5500    1600
D3      4          EXTERNAL
D4      0       0       0       0
D4    0.6     660       0       0
D4    1.0    3300       0       0
D4    2.0    6600       0       0
D4    3.0    6600       0       0
D4    4.0    6600       0       0
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End of Report