

CAMDEN MUNICIPAL COUNCIL

PURSUANT TO THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979
(AS AMENDED)

SECTION 94 CONTRIBUTIONS PLAN NO. 5

TRUNK DRAINAGE :
CATHERINE FIELD (PRECINCT 3)

ADOPTED BY COUNCIL : 22 / 2 / 93
FILE NO : TC / 3423 / 1

1. PURPOSE OF THE PLAN

The purpose of this Plan is to provide for the construction of a drainage system within a tributary of Rileys Creek at Catherine Fields, the upgrading of the culvert beneath Deepfields Road, Catherine Fields to cater for the additional flow generated by development and the provision of a water quality control facility at confluence of this tributary and Rileys Creek from monetary contributions levied pursuant to Section 94 of the Environmental Planning and Assessment Act.

2. OBJECTIVES OF THE PLAN

The objectives of this Plan are to:

Provide flood mitigation by ensuring that existing and proposed urban development within the catchment does not cause any increase in the runoff rate above that generated in the pre-development (rural) condition;

Ensure that existing and proposed urban development within the catchment does not cause any increase in pollutant load discharging to South Creek;

Provide a cost effective stormwater management scheme which satisfies all current statutory and Council requirements;

Facilitate the provision of residential land and the opportunity for open space corridors;

Provide a funding mechanism to allow for the proportional cost of construction associated with the increased runoff due to development;

Provide for the timely construction of the necessary components of the scheme; and

Ensure effective and efficient achievement of Council's responsibilities pursuant to S.94.

3. AREA TO WHICH THE PLAN APPLIES

This Plan applies to the area shown as Maps A and B in Appendix I.

4. RELATIONSHIP BETWEEN THIS PLAN AND EXISTING PLANS AND POLICIES

This Plan relates to

Camden Local Environmental Plan No. 48⁽¹⁾
Development Control Plan No. 6⁽²⁾
Draft Residential Development Control Plan No. 58⁽³⁾
Section 94 Contributions Plans Manual⁽⁴⁾
Pollution Control Manual for Urban Stormwater⁽⁵⁾
Draft Regional Environmental Plan - South Creek Valley⁽⁶⁾
Section 94 Contributions Plan No. 1⁽⁷⁾

5. ESTABLISHMENT OF NEXUS

5.1 Determination of Anticipated Development

5.1.1 Regional Planning

Macarthur Regional Environmental Study

The Macarthur Regional Environmental Study⁽⁸⁾ was published in 1986 and identified several large areas which were capable of urban development. One of these areas was the Badgery's Creek/Bringelly area of which the Catherine Fields area forms the southern extremity.

Draft Regional Environmental Plan - South Creek Valley

In 1991 the Department of Planning issued Draft Regional Environmental Plan - South Creek Valley. This plan was to ensure sufficient stock of "attractive and affordable residential land" to help supply the Sydney market for the next 20 years. The Catherine Fields area falls within the area encompassed by the R.E.P.

Metropolitan Strategy for the Sydney Region

The Metropolitan Strategy for the Sydney Region⁽⁹⁾ was published in 1988 and provides a planning framework for the development of the Sydney Region. It reaffirms the Bringelly sector as an area for future urban expansion.

5.1.2 Local Planning

Local Environmental Plan No. 22

In 1973 Council commenced investigation relating to the potential rezoning within the proposed village of Catherine Field.

In 1982 the Department of Environment and Planning issued its concurrence to Council proceeding to prepare a Draft Local Environmental Plan (LEP). Council at its meeting on October 11th, 1982 resolved to prepare a Draft LEP for the Catherine Fields Village Area. This plan became LEP No. 22⁽¹⁰⁾ and was gazetted on September 30, 1983. It rezoned the area for minimum lot sizes of 4000m².

Development Control Plan No. 6

In March 1984, Council engaged consultants Scott & Furphy Engineers Pty. Ltd. to prepare a "drainage design and compatible road network" for the area covered by LEP No. 22. This report⁽¹¹⁾ formed the basis of the road and drainage layout for Development Control Plan (DCP) No. 6.

The Scott & Furphy report identified three distinct drainage catchments.

Two of these catchments have been the subject of later DCP's, Nos 24⁽¹²⁾ and 44⁽¹³⁾ which have been known as Catherine Fields Precincts 1 and 2 respectively.

This Plan relates to the third drainage catchment and is known as Catherine Fields Precinct 3.

Local Environmental Plan No. 48

In 1991 Council proceeded to amalgamate several LEP's into a single document. LEP No. 22 was one of these plans and has now been superseded by the amalgamated LEP No. 48.

5.2 Assessment of Required Facilities and Services

Urbanisation of drainage catchments

The Catherine Fields Village Area encompasses several drainage catchments; the Catherine Fields (Precinct 3) catchment (the subject of this Plan) is a sub-catchment of the Rileys Creek catchment which in turn, is a sub-catchment of the South Creek catchment.

The planning of a "greenfields" site such as the Catherine Fields Village require a number of critical studies to be completed prior to subdivision and development taking place. This requirement is embodied in S.90 of the Environmental Planning and Assessment Act and includes community facility provision, traffic management and detailed drainage design studies for example.

Urbanisation of a drainage catchment has a significant impact on the surface and sub surface water flow. Much of the land is covered by impervious areas such as buildings and roads interconnected by a formal drainage system of pipes and channels. The percentage of rainfall that becomes surface run-off increases in urban areas and because of the hydraulic efficiency of pipes and channels, exacerbates the rapid removal of stormwater from its source. Large flood peaks can carry high silt loads and high concentrates of coliforms, nutrients and petroleum hydrocarbons downstream.

Trunk Drainage Philosophy

In recognition of the problems described above, Council adopted a trunk drainage philosophy that aims to:

- manage stormwater excess flows within a catchment such that minor floods are fully controlled and the effects of major floods are mitigated;
- regulate outflows from a catchment to levels which approximate those of its pre-development state; and
- integrate large scale trunk drainage into overall urban development proposals with multiple use of land for drainage, recreation or transportation.

Trunk Drainage Reports

In March 1984, Council engaged consultants, Scott & Furphy Engineers Pty. Ltd., to carry out investigations and recommend on drainage and compatible road layout for the newly rezoned Catherine Fields Village Area. These recommendations formed the basis for DCP No. 6.

The report proposed a series of floodways and pipes to cater for the 1 in 10 year storm event, however it did not provide any detail as to the shape or size of floodways to cater for the anticipated flows.

As a result of pressure to subdivide, Council's Engineering Department undertook analysis of the catchment to more accurately define the flows, and therefore the sizing of the components within the Trunk Drainage System.

The analysis of the catchment was carried out using the R.A.F.T.S.⁽¹⁴⁾ hydrological model. Calibration of the model was carried out having regard to the model calibration determined by the Water Resources Department in their South Creek Flood Study⁽¹⁵⁾ of which this catchment forms part.

The latter analysis differs from the Scott & Furphy report in the design approach relating to the quantity of flow to be catered for in the piped component of the drainage system.

The Scott & Furphy report allowed for a piped system to cater for the 1 in 10 year storm event with flows above this level to be by roadway or floodway flow.

The Council analysis adopted a system with road drainage to cater for the 1 in 10 year storm event and a low flow pipe to cater for 2/3 of a 1 in 1 year storm event with the remainder of the 1 in 100 year flow conveyed in a grassed floodway.

This latter approach is in keeping with current industry practice and greatly reduced the size of the pipe system with a small increase in the floodway flow and yields a more cost effective drainage system.

The Council analysis allows for water quality structures to meet the criteria set out in the Pollution Control Manual for Urban Stormwater and the principles as set out in the South Creek Floodplain Management Study⁽¹⁶⁾. Such water quality considerations had not formed part of the Scott & Furphy report.

This latter analysis forms the basis for works as set out in the Schedule of Works (Table A in Appendix 2).

The above documents should be referred to in the context of this Plan.

Schedule of Works

The Schedule of Works to implement the recommendations of the above reports, meets the requirements of the Environmental Protection Authority, complies with the requirements of other Statutory Authorities, Acts and Regulations and meets the requirements of D.C.P. No. 6. It is shown in Table B of Appendix No. 2.

Due to the fragmented ownership of land within the area covered by this Plan and no defined program for development such as land-pooling, a time frame of 12 years from 1992 to 2004 has been selected to enable completion of the works.

This Plan allows costings within the Schedule of Works to be varied to a maximum of 10% without the need for Council to publicly re-exhibit or re-approve the Plan pursuant to Clause 41K(1) of the Regulation.

Where a developer requests Council in writing to advance an item in the Schedule of Works to facilitate their development program, and makes satisfactory arrangements to provide the necessary funds to finance those works then Council may advance those works in the Schedule to meet such program. Variation to the Schedule of Works as a result of this condition shall not constitute grounds for re-exhibition or re-approval of the Plan pursuant to Clause 41K(1) of the Regulation.

6. CALCULATION OF CONTRIBUTIONS

6.1 Apportionment

Contributions under this Plan have been determined on the following basis:

- the developer is required to accept the proportional cost of works, identified as items 1.1 to 1.5 in Table A of Appendix 2, which are downstream of the proposed development and will be required to drain the increased runoff resulting from the proposed development when compared to the total runoff conveyed by that item of work. These proportional costs are shown as column D of Table B in Appendix 2.
- the developer is required to accept the proportional cost of upgrading the culvert beneath Deepfields Road from a 20 year ARI rural flow capacity to a 20 year ARI developed flow capacity as identified as item 1.6 in Table A of Appendix 2 on an areal basis. Council is required to accept costs associated with any upgrading to achieve the 20 year ARI rural flow capacity. These proportional costs are shown as column R of Table B in Appendix 2.

- the developer is required to accept the proportion of cost on an areal basis for the provision of water quality controls downstream of Deepfields Road as identified in item 1.7 of Table A, Appendix 2. These proportional costs are shown as column Q of Table B in Appendix 2.
- In applying this apportionment Council accepts liability for the proportional reimbursement of costs associated with the requirement to cater for the increased flow through an area created by development or future development upstream of the proposed development. This cost will be recouped from developers contributing to this flow as a condition of development consent. These proportional reimbursements are shown as column U in Table B of Appendix 2.

In applying these contributions Council will impose a condition of development consent that:

- the developer accept the full cost of works required to cater for the runoff from the area above the site, assuming the area to be in a rural state; and
- the developer accept the full cost of works required to drain the developed runoff from and within the proposed development.

6.2 Formula

Contributions under this Plan will be levied via a condition of Development Consent for all developments within the Plan area in accordance with the following formula:

$$C = D + R + Q - U$$

Where:

- C - is the monetary contribution required per existing lot rounded to the nearest dollar.
- D - is the proportional cost of downstream channel/pipe works as per Table B in Appendix 2.
- R - is the proportional cost of upgrading the culvert at Deepfields Road as per Table B in Appendix 2.
- Q - is the proportional cost of water quality works as per Table B in Appendix 2.
- U - is the proportional reimbursement of costs associated with drainage of increased flow from upstream development as per Table B in Appendix 2.

6.3 Contribution Rate

In accordance with the above formula, the contribution rate for each existing lot as at the September 1992 quarter, is indicated in Table B in Appendix 2.

6.4 Indexation

Contributions will be indexed quarterly to the Roads and Traffic Authority (RTA) Road Cost Index for Urban Arterials - Road Enhancement. It is reasoned that the constructing and costing of such works is closely aligned to the construction and costing of drainage works required under this Plan and the RTA index is therefore more appropriate than the other indices.

7. METHOD OF PAYMENT OF CONTRIBUTIONS

Contributions under this Plan will be in the form of full monetary payment made prior to release of subdivision linen plans.

Provision of works in kind in lieu of monetary contribution will be at the discretion and to the satisfaction of Council on the recommendation of the Municipal Engineer.

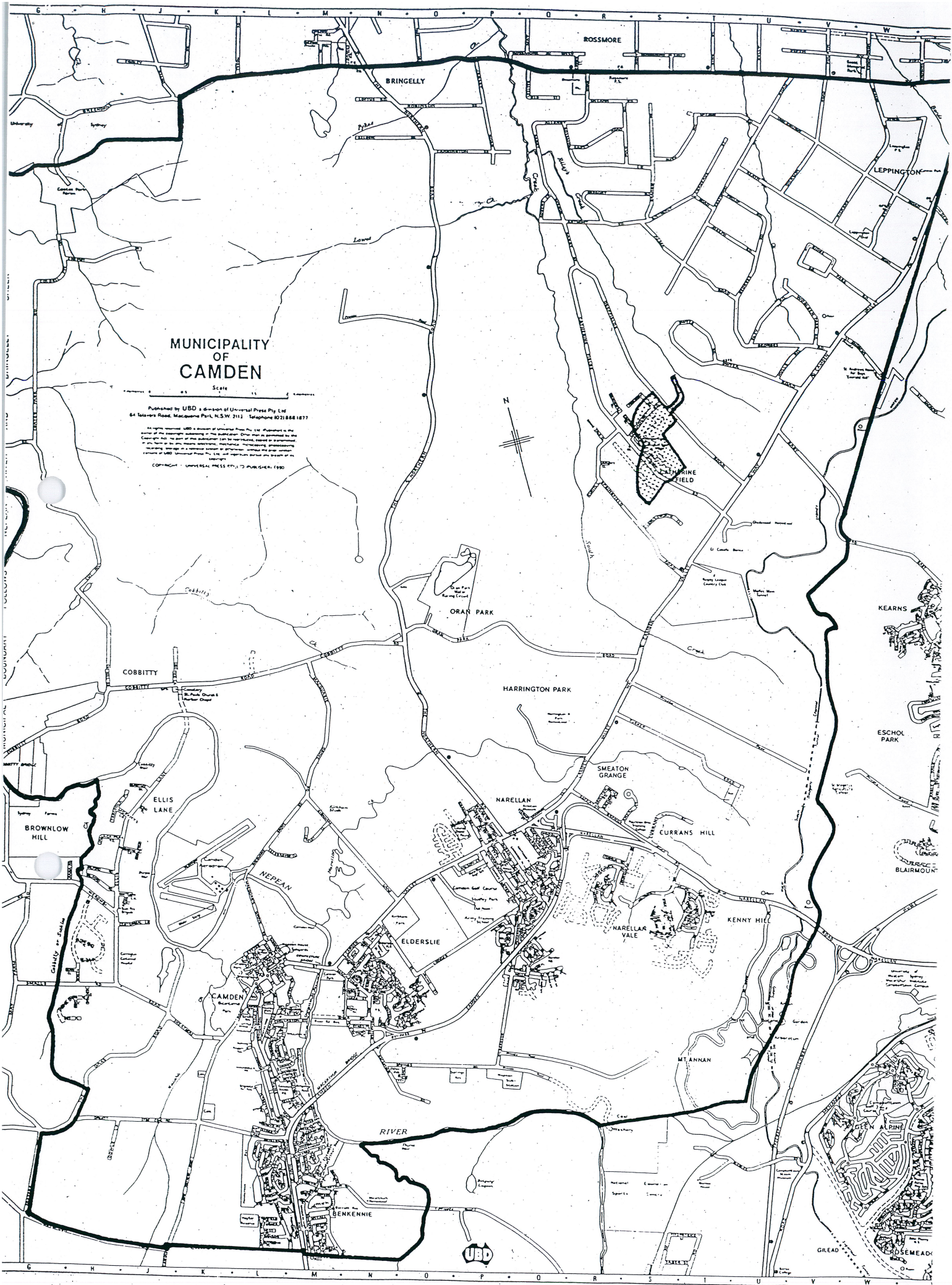
Deferred payment of the contribution levy or a Bank Guarantee in lieu of monetary payment will not be accepted due to the need to meet expenditure commitments in the time frame set by the Schedule of Works.

8. REVIEW OF THE PLAN

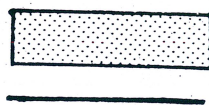
This Plan will be reviewed by Council at the end of each 4 year phase of the Schedule of Works or such lesser time as Council deems necessary.

APPENDIX 1

MAPS



MAP A: LOCALITY PLAN



PLAN AREA
 COUNCIL BOUNDARY

APPENDIX 2

TABLES

TABLE A SCHEDULE OF WORKS 1993 TO 2004

		1993-1996	1997-2000	2001-2004
	ITEM			
1.1	Works within Lot 2 DP794259 and Lot 93 DP 27602	\$1,883		
1.2	Construction of Channel Downstream of Deepfields Road			\$174,119
1.3	Works within Lots 91 & 100 DP 27602		\$8,586	
1.4	Works within Lots 101, 102 103 & 104 DP 27602		\$15,393	
1.5	Works within Lots 135, 134		\$537	
1.6	Upgrading of Culvert beneath Deepfields Road	\$26,117		
1.7	Water Quality Structures			\$150,376
TOTAL EXPENDITURE PER PHASE		\$28,000	\$24,515	\$324,495

TABLE B
CONTRIBUTION RATE FOR EXISTING LOTS
(SEPTEMBER QUARTER 1992)

Lot No	DP NUMBER	Contribution Downstream (D)	Contribution Culvert (R)	Water Quality (Q)	Re-imbursement (U)	Total (C)
1302	736633	\$2,907	\$1,014	\$5,837		\$9,758
131	27602	\$3,221	\$1,116	\$6,428		\$10,765
132	27602	\$3,050	\$1,056	\$6,080		\$10,186
133	27602	\$2,438	\$855	\$4,925		\$8,218
1342	801720	\$1,929	\$686	\$3,952		\$6,567
135	27602	\$1,572	\$560	\$3,222	\$537	\$4,817
136	27602	\$1,195	\$422	\$2,432		\$4,049
137	27602	\$476	\$169	\$973		\$1,618
108	27602	\$974	\$1,094	\$6,300		\$8,368
1072	749912	\$933	\$1,018	\$5,860		\$7,811
106	27602	\$986	\$1,131	\$6,511		\$8,628
1052	740269	\$1,053	\$1,069	\$6,152		\$8,274
104	27602	\$1,000	\$1,136	\$6,540	\$939	\$7,737
103	27602	\$1,002	\$1,116	\$6,425	\$4,818	\$3,725
102	27602	\$1,012	\$1,119	\$6,444	\$4,818	\$3,757
101	27602	\$1,134	\$1,123	\$6,463	\$4,818	\$3,902
100	27602	\$267	\$1,129	\$6,502	\$6,236	\$1,662
2	711248	\$339	\$1,094	\$6,297		\$7,730
2	733513	\$230	\$1,127	\$6,490		\$7,847
96	27602	\$217	\$1,076	\$6,194		\$7,487
95	27602	\$206	\$1,076	\$6,194		\$7,476
2	812966	\$148	\$1,053	\$6,061		\$7,262
91	27602	\$53	\$1,074	\$6,185	\$2,350	\$4,962
93	27602	\$23	\$1,076	\$6,194	\$1,053	\$6,240
2	794259	\$0	\$1,074	\$6,186	\$829	\$6,431
2192		\$32	\$137	\$790		\$959
218	27602	\$0	\$163	\$941		\$1,104
217	27602	\$0	\$181	\$1,040		\$1,221
216	27602	\$0	\$273	\$1,573		\$1,846
215	27602	\$0	\$392	\$2,256		\$2,648
214	27602	\$0	\$508	\$2,928		\$3,436

APPENDIX 3

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