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# **CES SUSTAINABLE TRANSPORT SERVICES**

## **DOCUMENTUM:**

**FILE PATH:** Transport and Infrastructure/ Transport Planning/TPU General Admin & Offices Procedures/Documentum/Ruth Stephenson/York Central

**FILE NAME:** Transport Report for Stage 2 Appendix C 2003

**YORK CENTRAL**  
TRANSPORT REPORT FOR STAGE 2 MASTERPLAN

APPENDIX C  
SATURN MODELLING  
STAGE 2

Prepared for  
YORK CENTRAL STEERING  
GROUP

**ALAN BAXTER AND ASSOCIATES**

FEBRUARY 2003

# FAX SHEET

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EMAIL: aba@alanbaxter.co.uk

Job Title: York Central	Job No: 1218/70	Date: 8/10/02
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To: Paul Emmerson - TRL	Fax No: 01344 770643	Time Sent:	By Post:
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Copies To: Tony Whale - York Central Michael Cheesbrough - Edaw Stuart Dalglish - CYC	Fax No: 01494 680336 7700 9599 01904 551 340	Time Sent:	By Post:
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## MESSAGE

Paul

### Stage 2 Saturn Modelling

We have just been advised by the client to proceed with some of the stage 2 Saturn Modelling. You should proceed with looking at the AM Peak only at this stage.

We have agreed with CYC to model the development at year 5 (effectively 2012) once 1470 residential dwellings and 42900 sq.m of office have been built. The modelling should look at scenarios 5, 6 and 8. The attached sketches shows how the development is distributed around the road network.

### Assumptions

Global traffic will need to be inflated by an additional 4% . i.e. total of 8 % on existing levels to account for a further 5 years growth.

### Trip Rates

#### Office

AM Peak		PM Peak	
In	Out	In	Out
0.75	0.09	T.B.C	T.B.C

(Rates per 100 M<sup>2</sup> gross)

TOTAL NUMBER OF PAGES SENT (INCLUDING THIS PAGE)..... PLEASE TELEPHONE THE ABOVE NUMBER IF THIS FAX IS ILLEGIBLE OR INCOMPLETE	FROM: _____ SIGNED: _____ FOR ALAN BAXTER & ASSOCIATES
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## Residential

AM Peak		PM Peak	
In	Out	In	Out
0.06	0.27	0.24	0.13

(Trip rate per dwelling)

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## Origin/Destination Matrices

Stuart Dalgleish CYC has generated these and will be emailing them to you separately. They are based on averaging a number of existing residential and office dominated zones within the Saturn model. He is using them for a separate commission which CYC are undertaking. I understand he has already set up two new zones in the model , one for residential and one for office development.

Please note that the trip rates for the office development have been developed assuming that 50% of trips go and park at York Central and 50% go to the Park and Ride. This needs to be reflected in the modelling with, as I understand, half of the trips going into matrix 1 and half going to matrices 3,4 and 5. Attached is also a copy of an email from Stuart Dalgleish explaining what needs doing to the model to update it. I'd be grateful if you would liaise with Stuart to get the appropriate matrices and sketches.

We have agreed initially an 85% capacity acceptance threshold with CYC for links and junctions. We will need to take a view on those junctions which are currently at capacity and discuss them with CYC. For now we just need to get on with the modelling and see what comes out from it.

### **Outputs**

I will advise you shortly of the outputs we will need but the format will be similar to stage 1.

### **Programme**

We need this complete asap. It would be good to have this done by next Monday or Tuesday. Please ring and let me know what is possible.

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Regards

FIGS

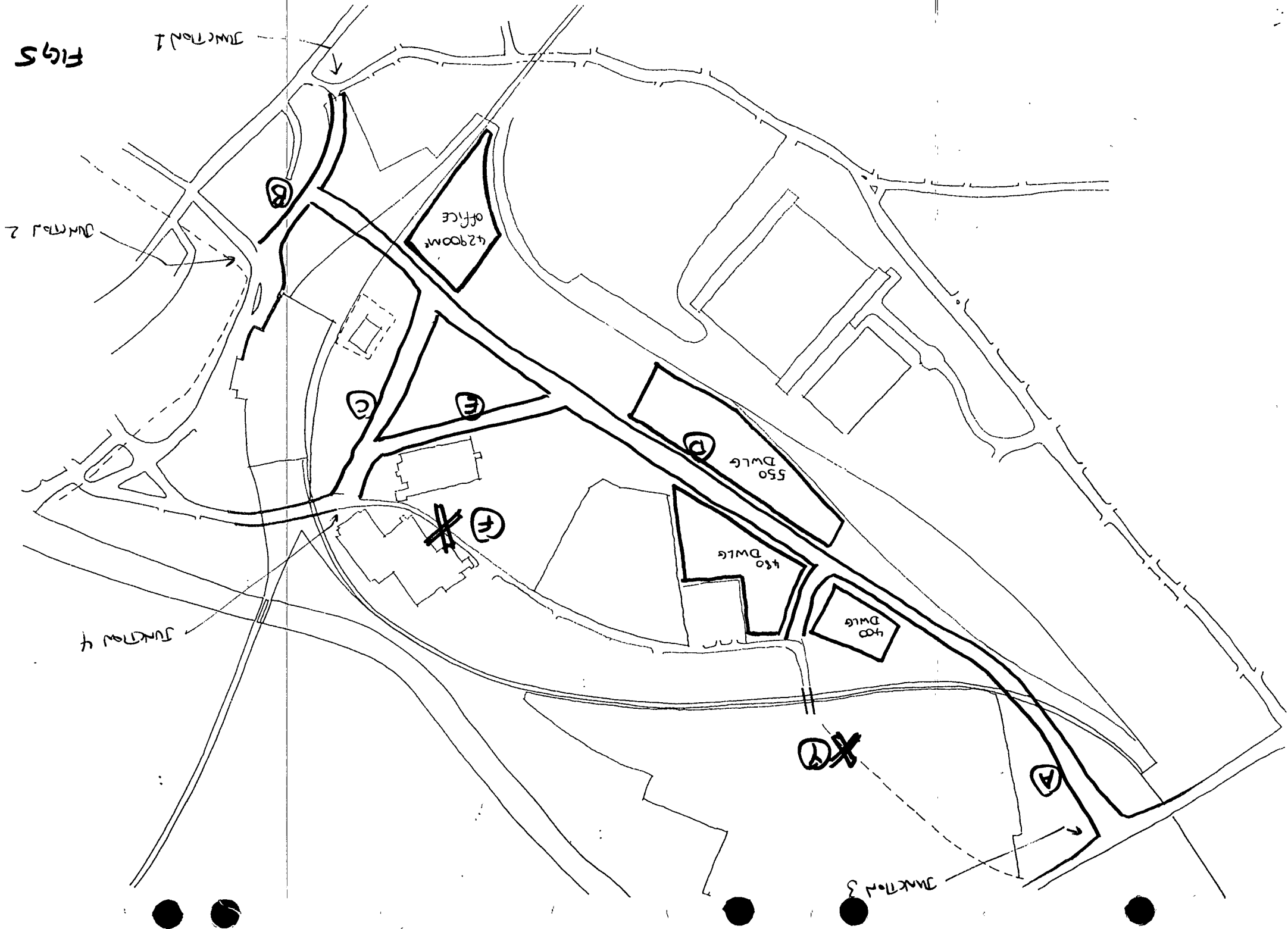
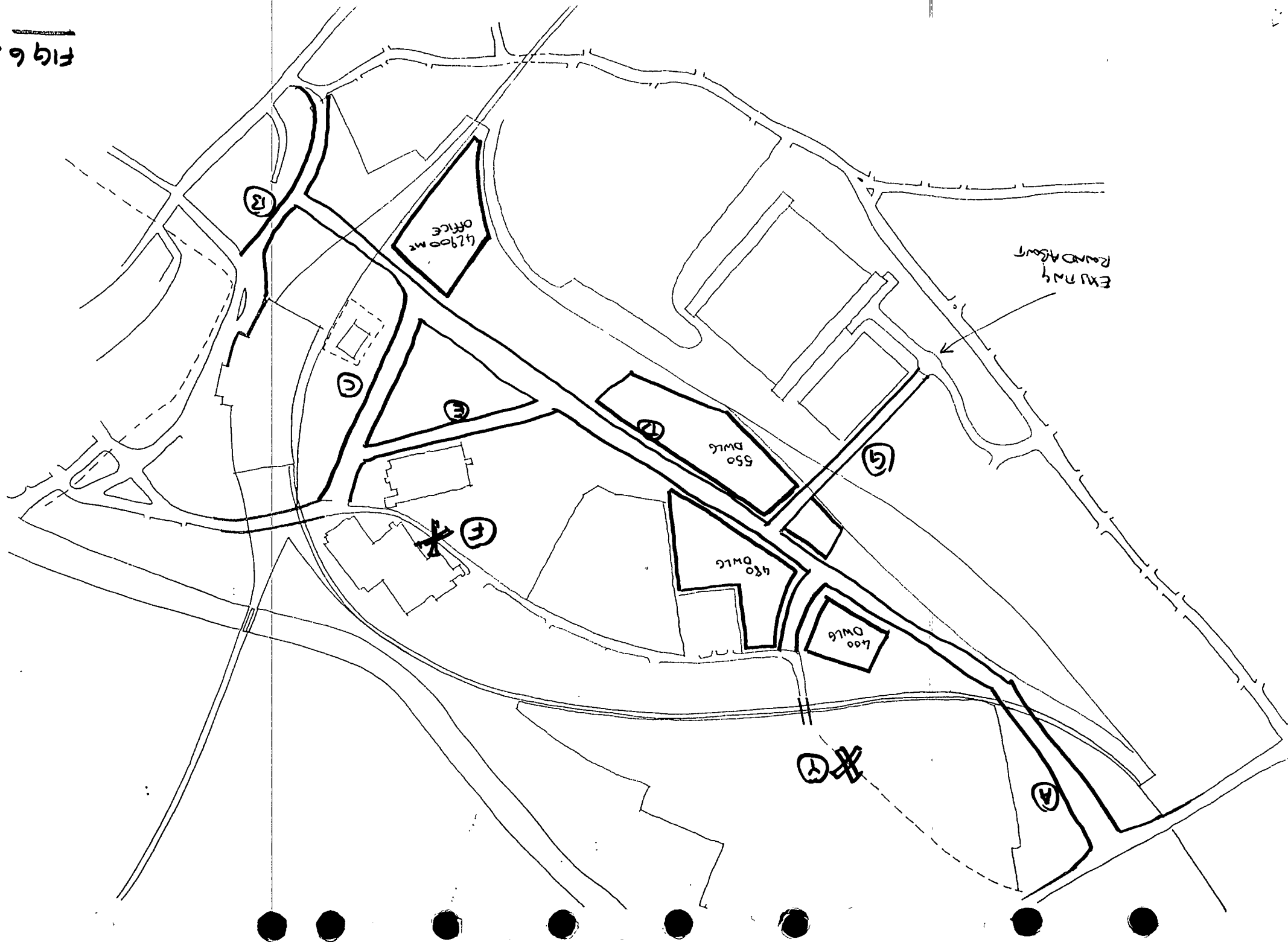


Fig 6.



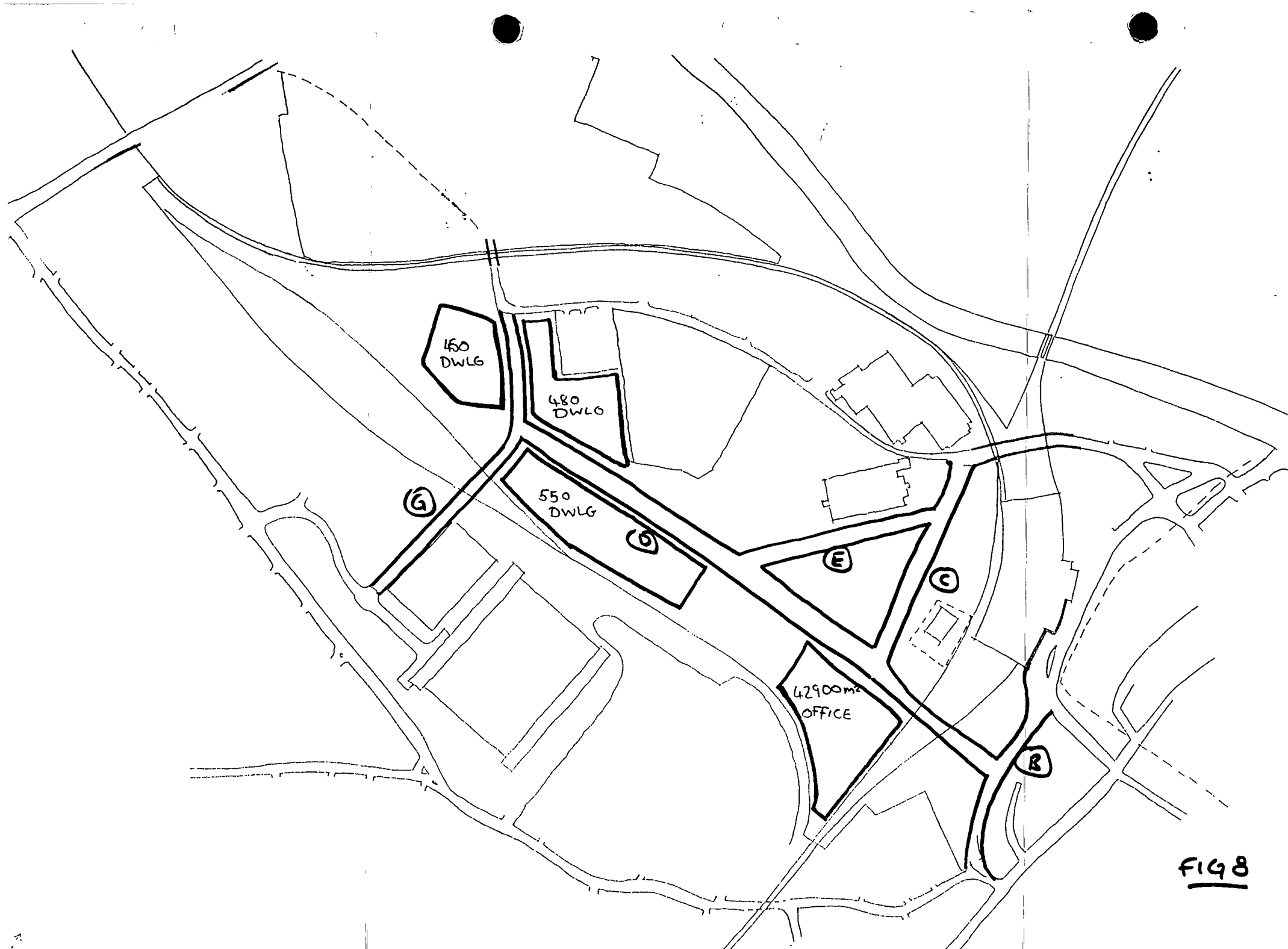
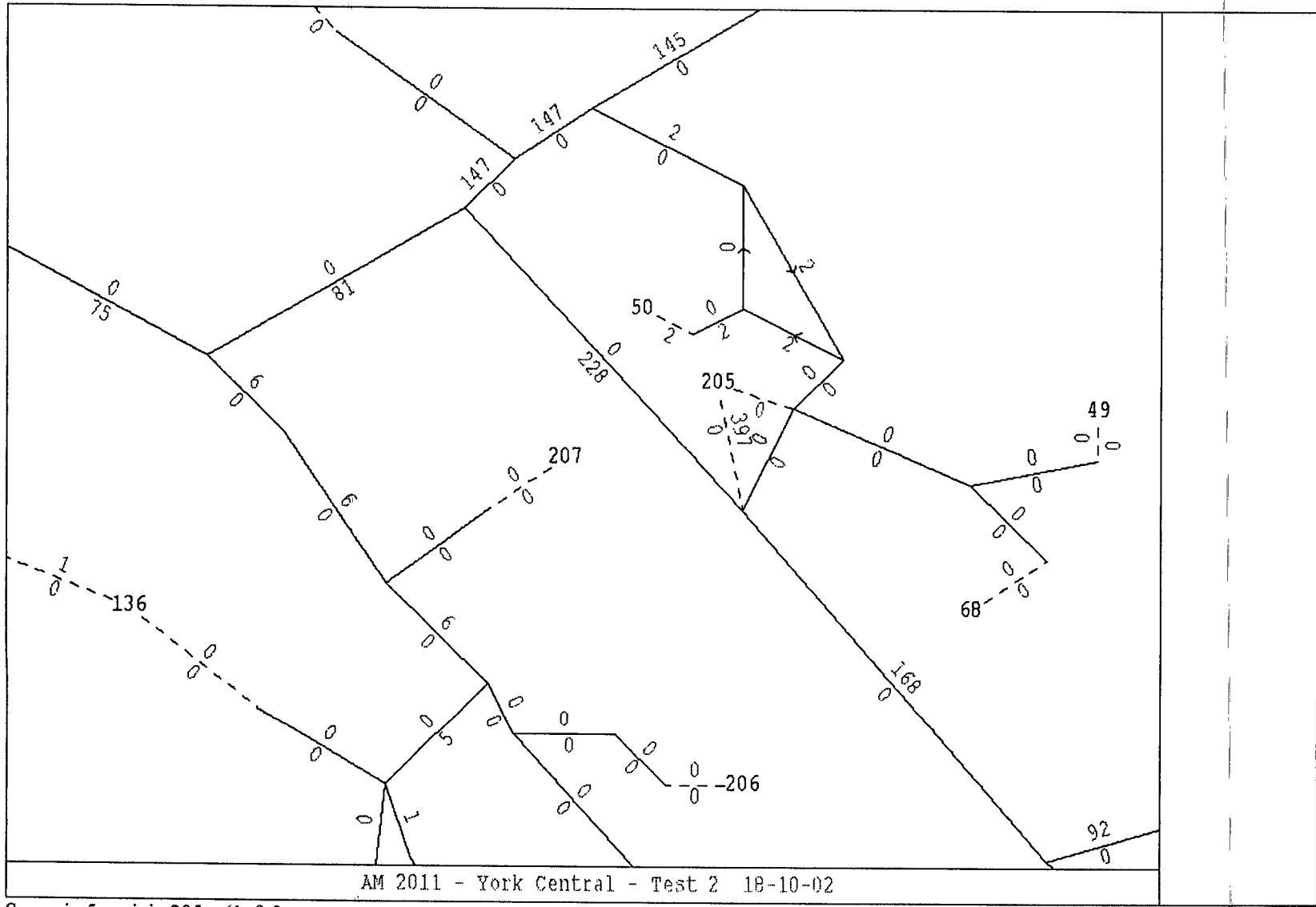


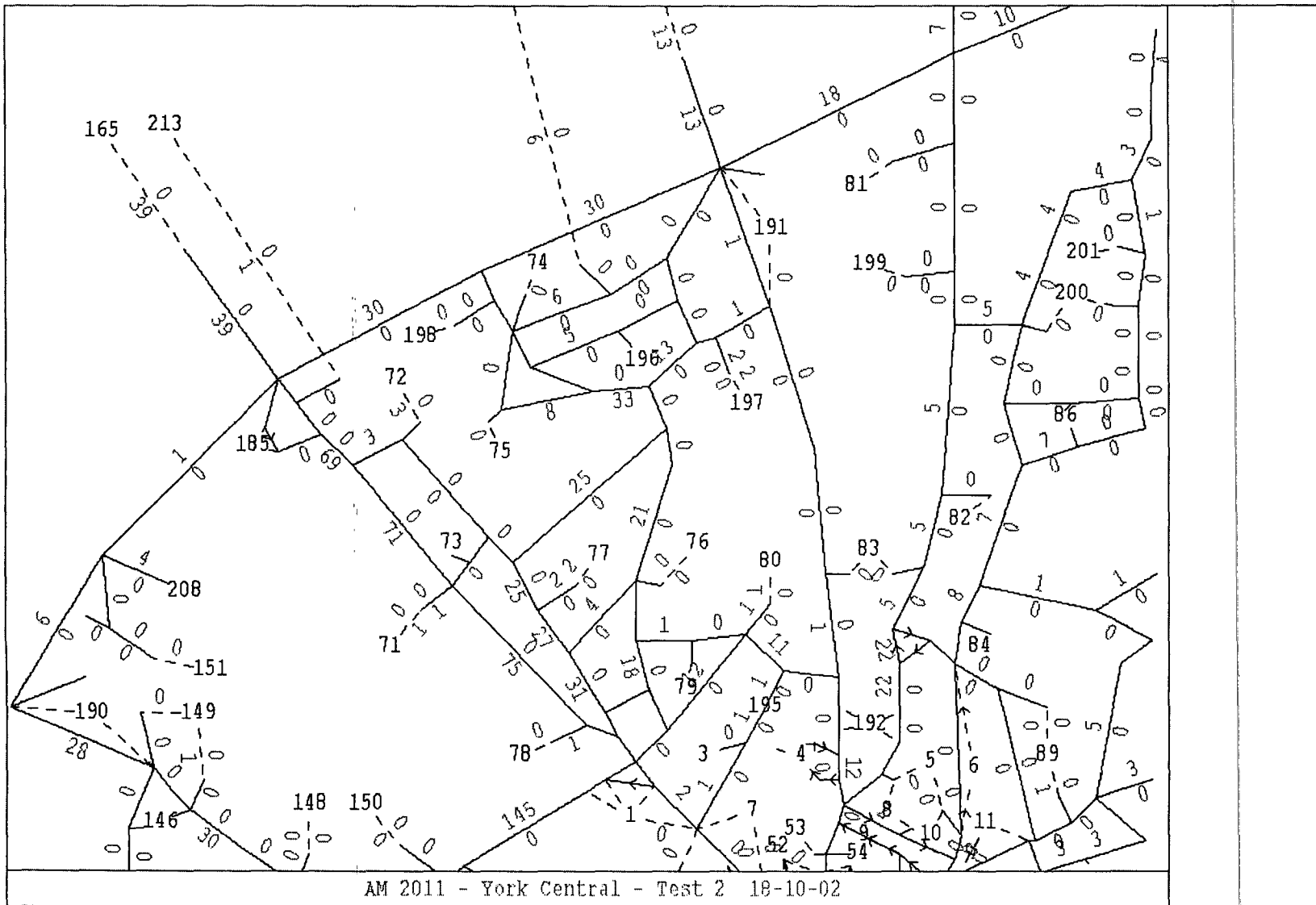
FIG 8



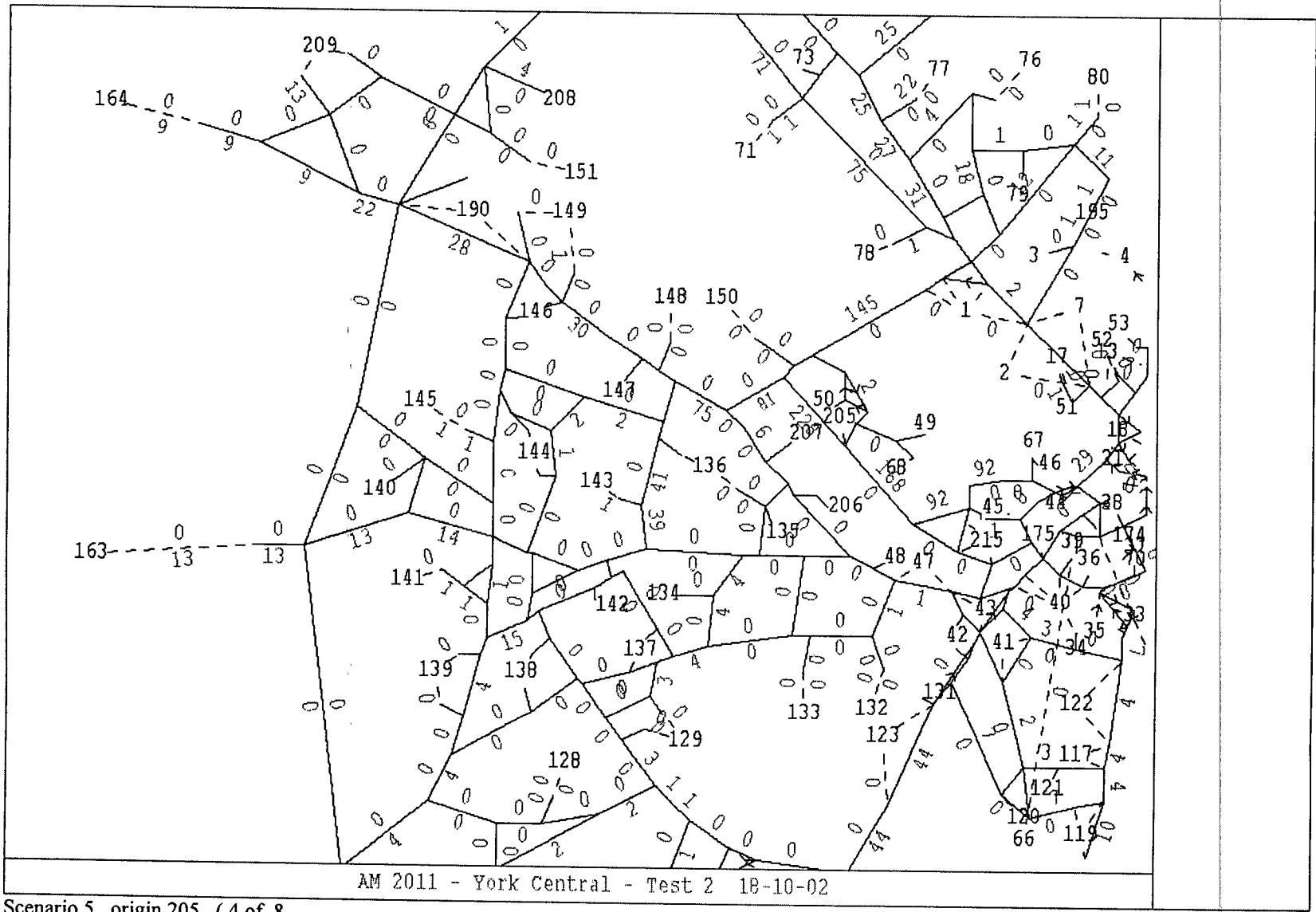
Scenario 5 , origin 205 , (1of 8

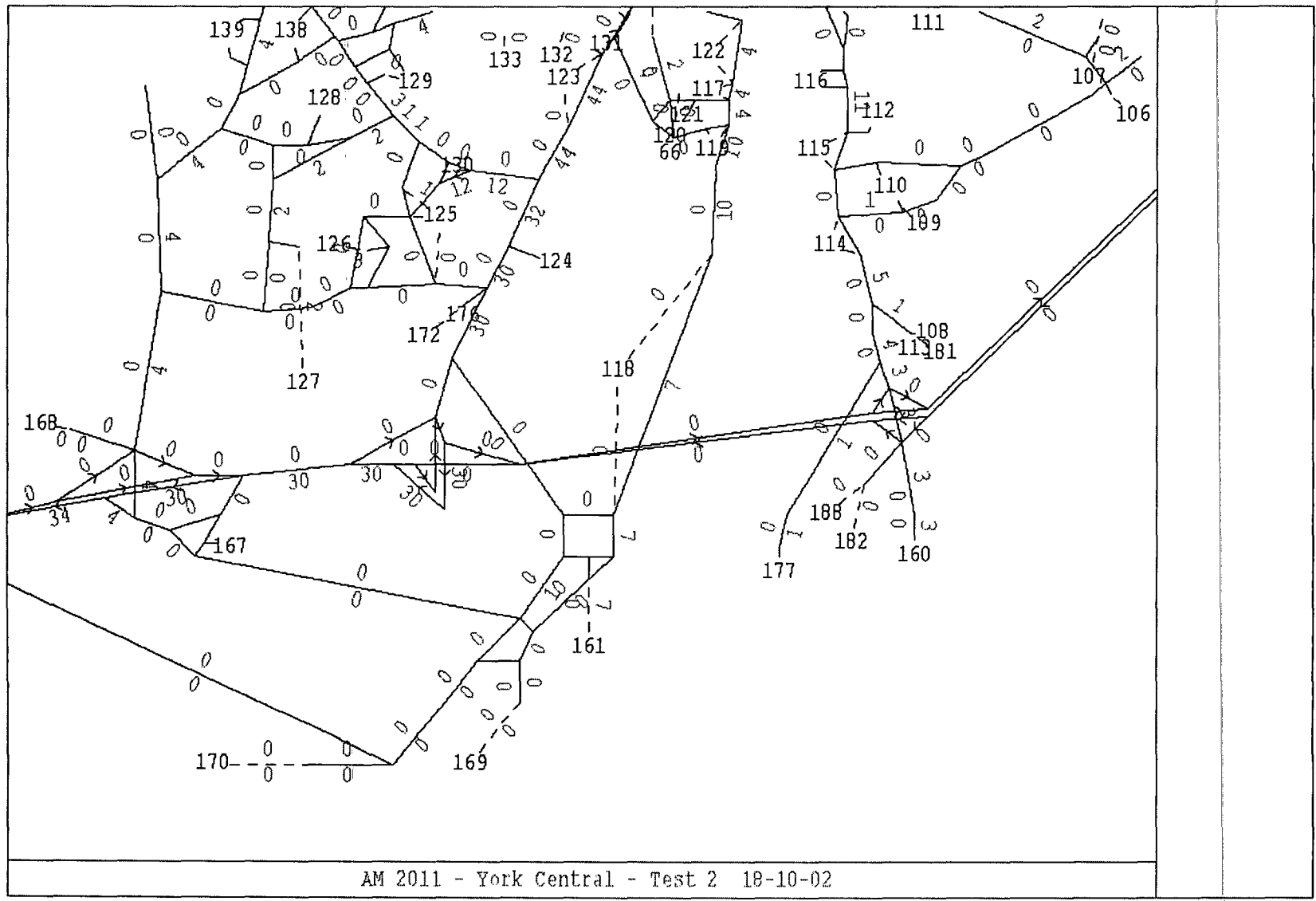




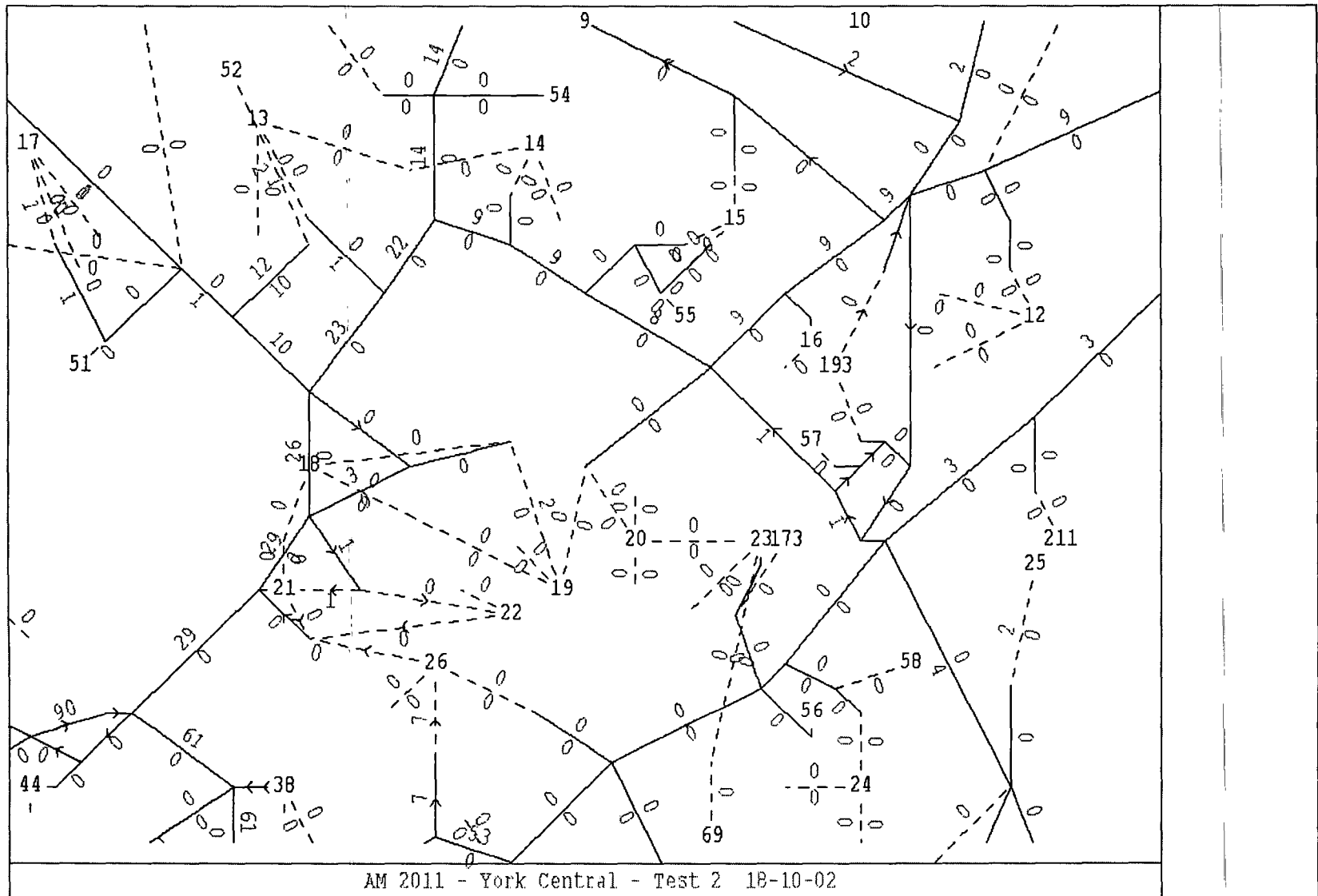


Scenario 5, origin 205, (3 of 8)



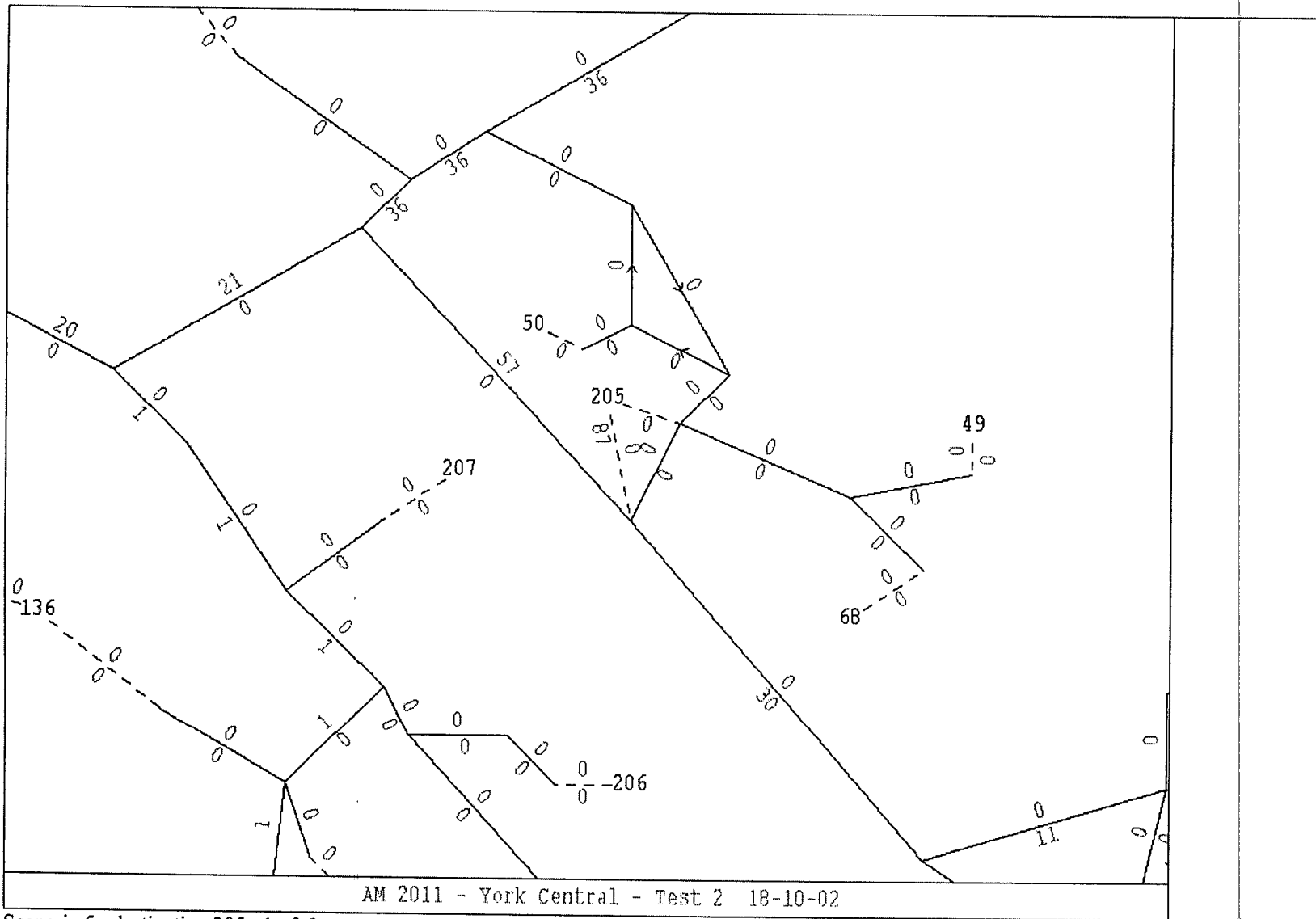






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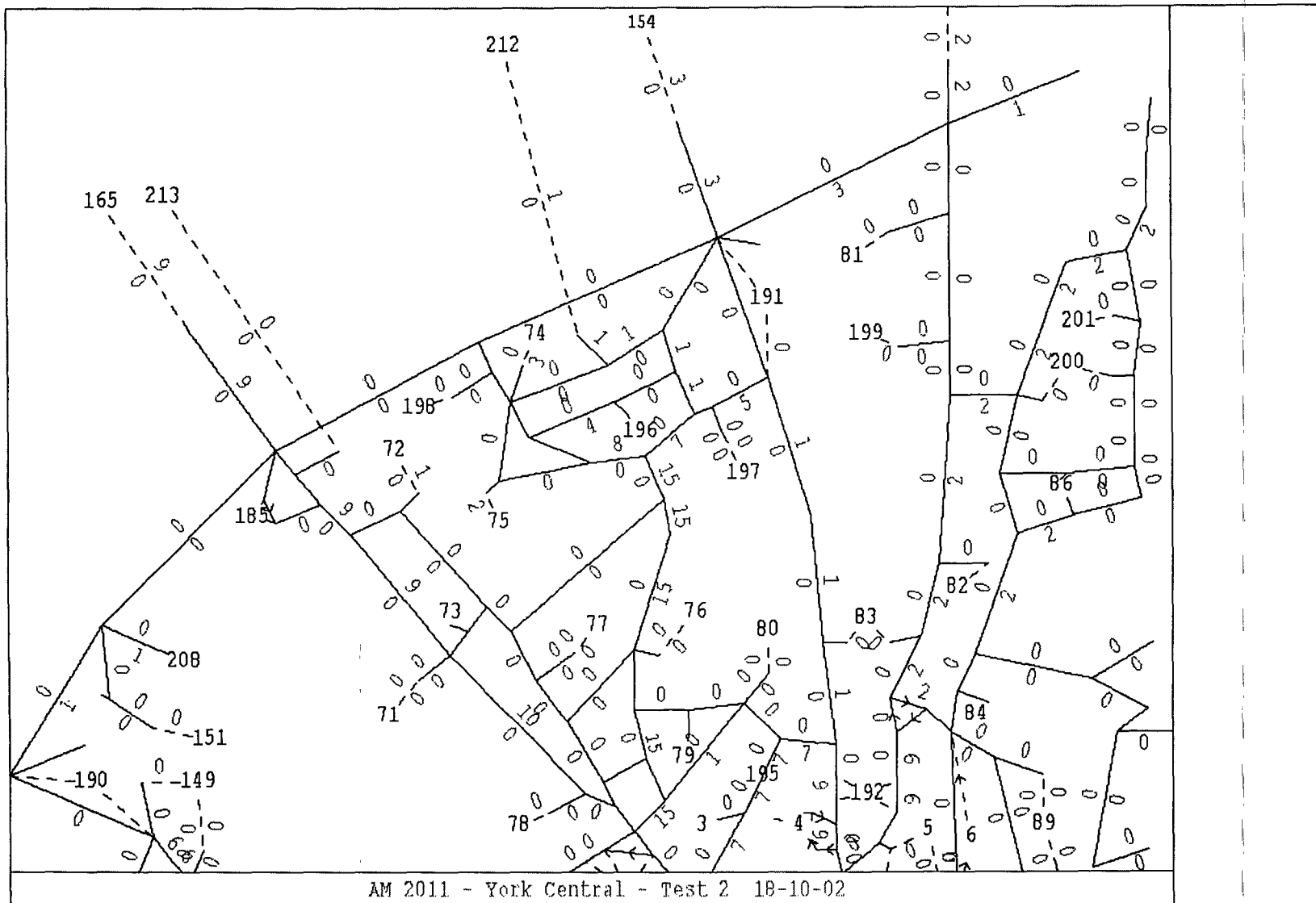




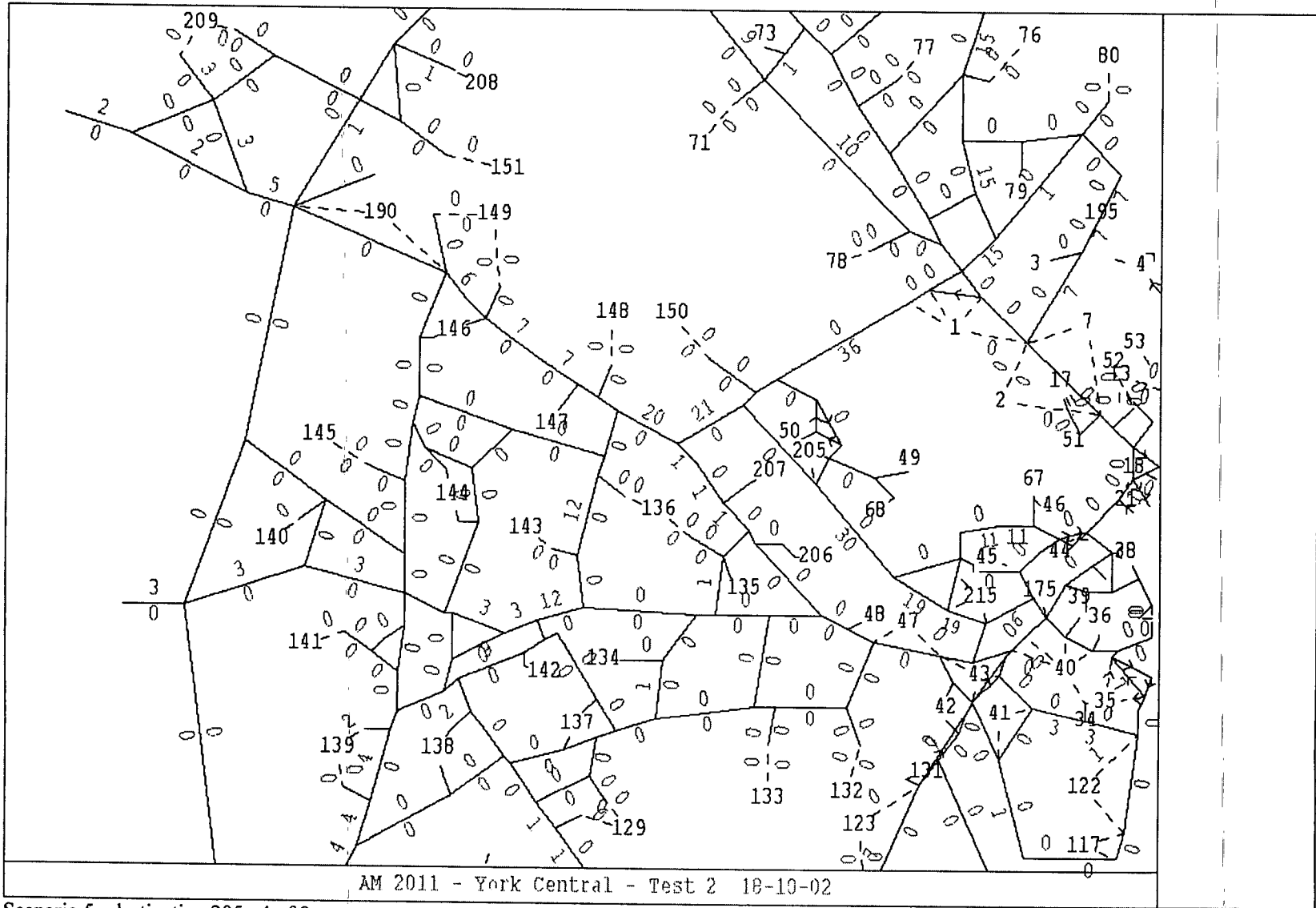
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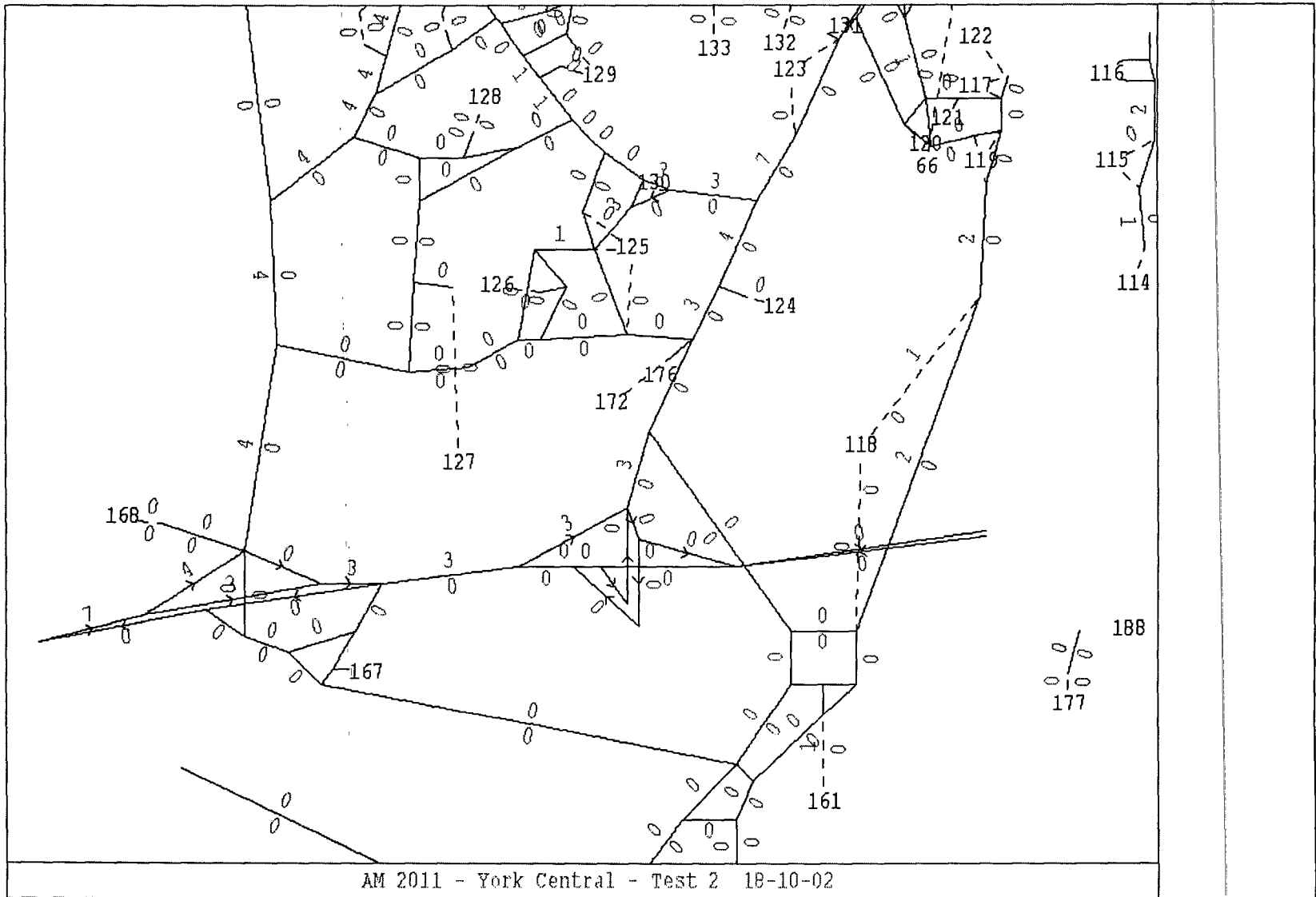




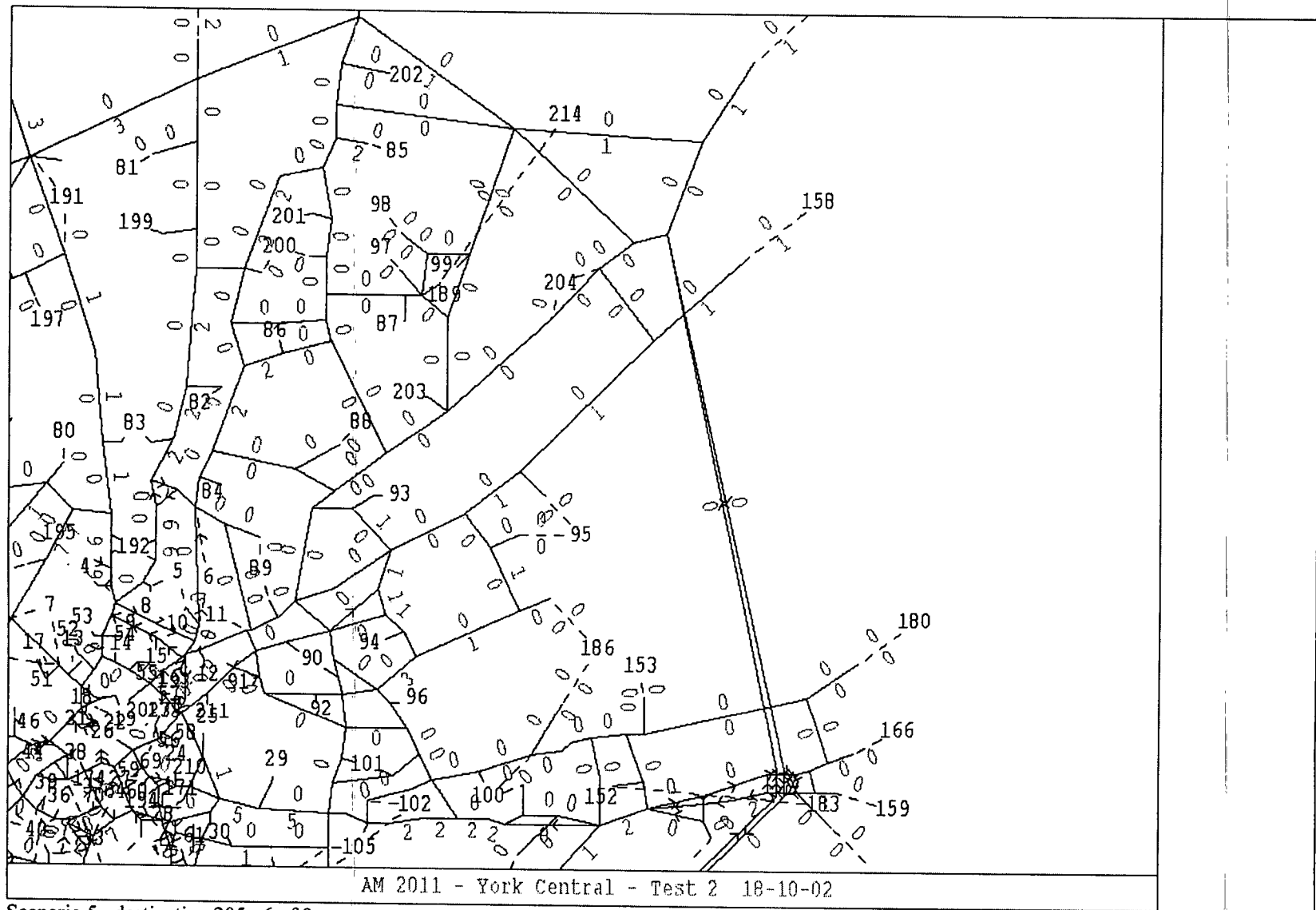
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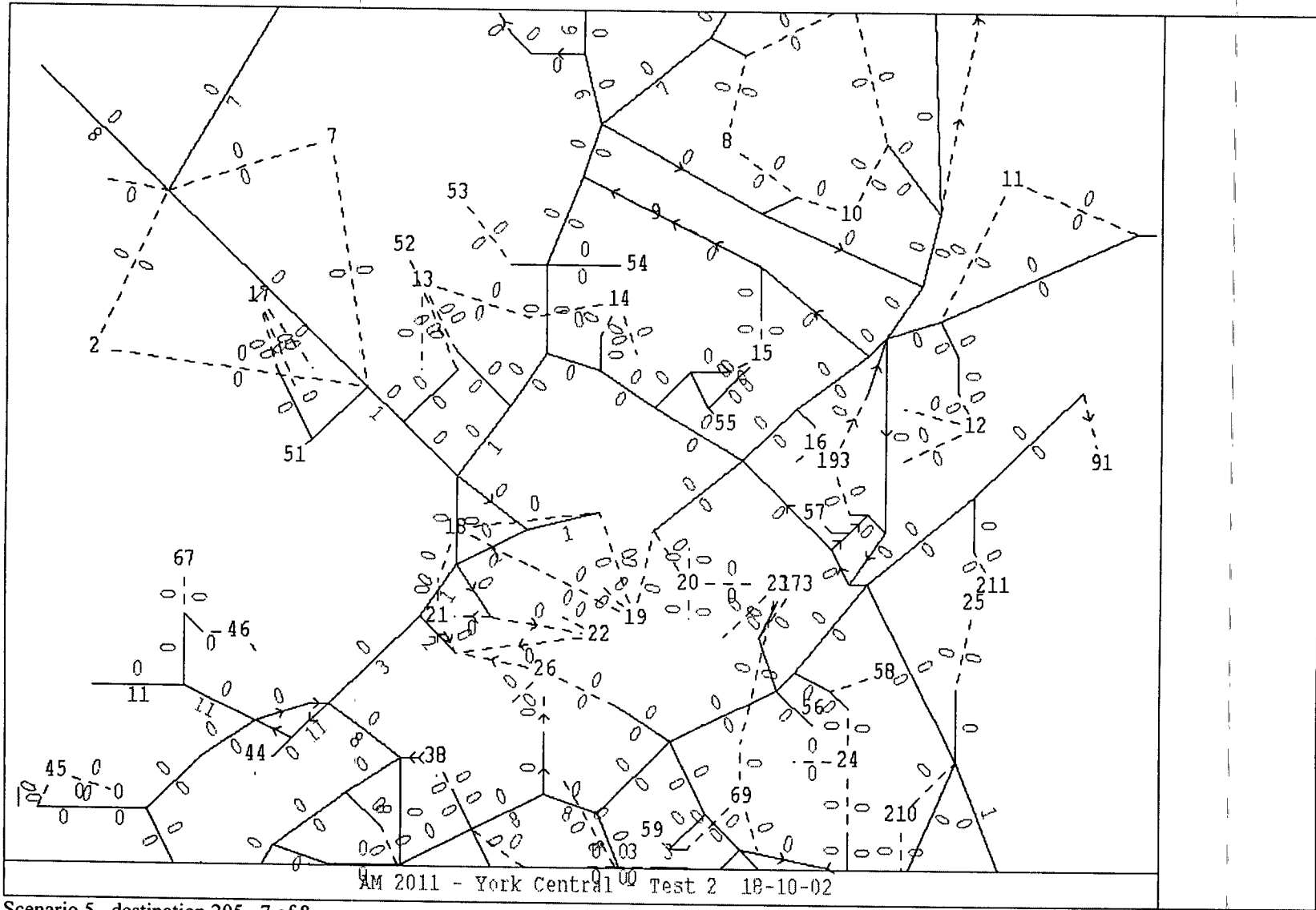


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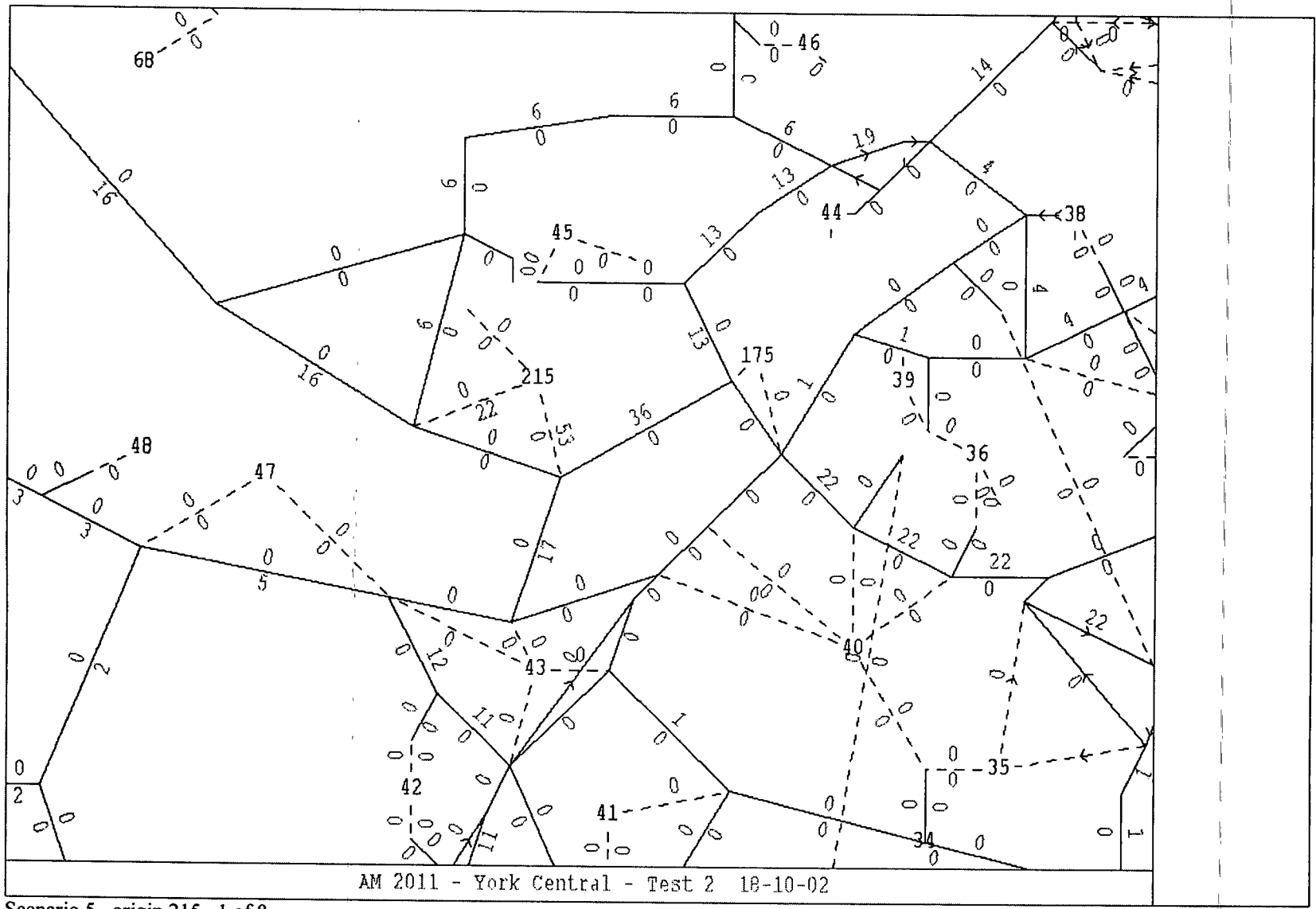
Scenario 5, destination 205, 5 of 8





Scenario 5, destination 205, 7 of 8

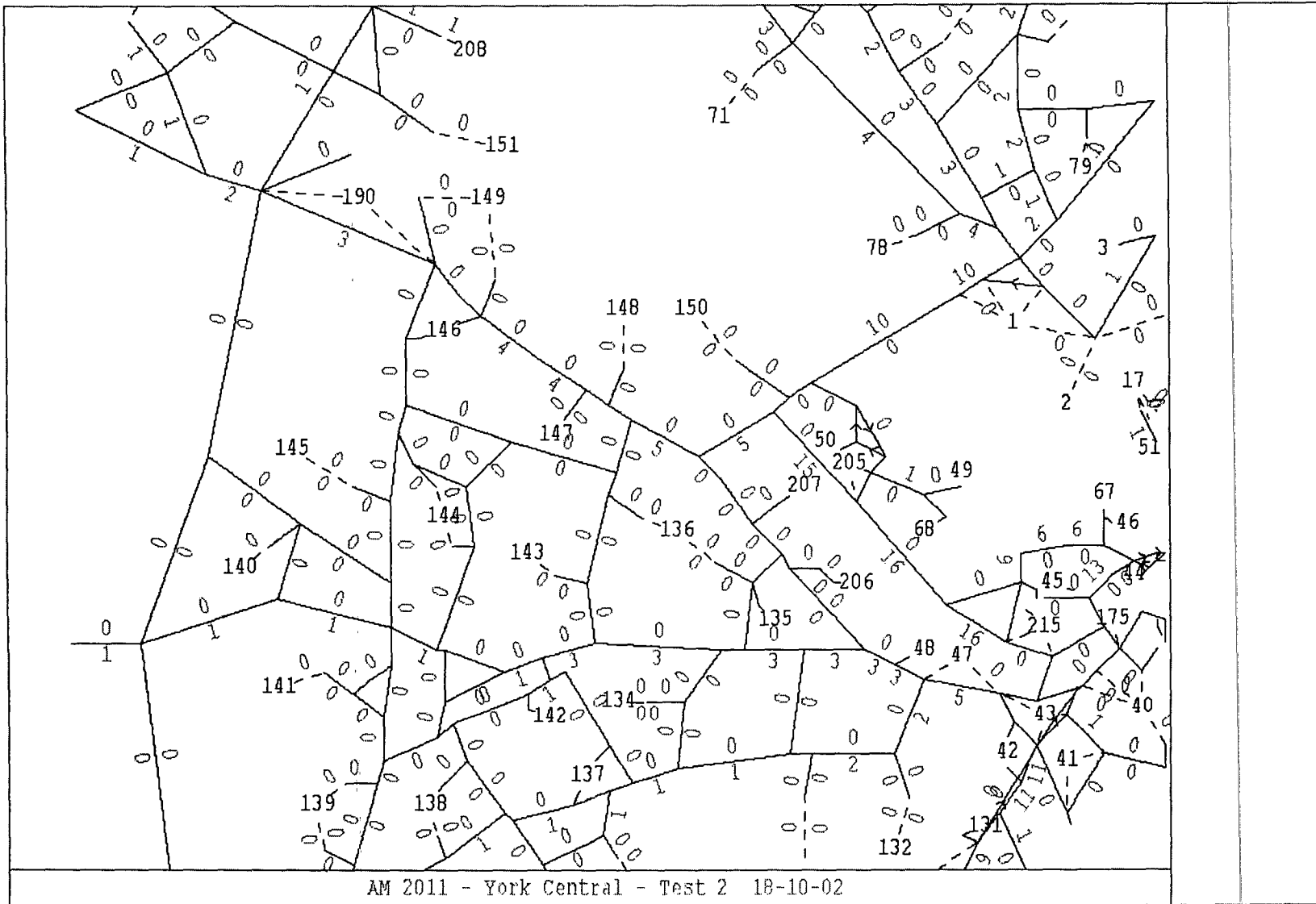




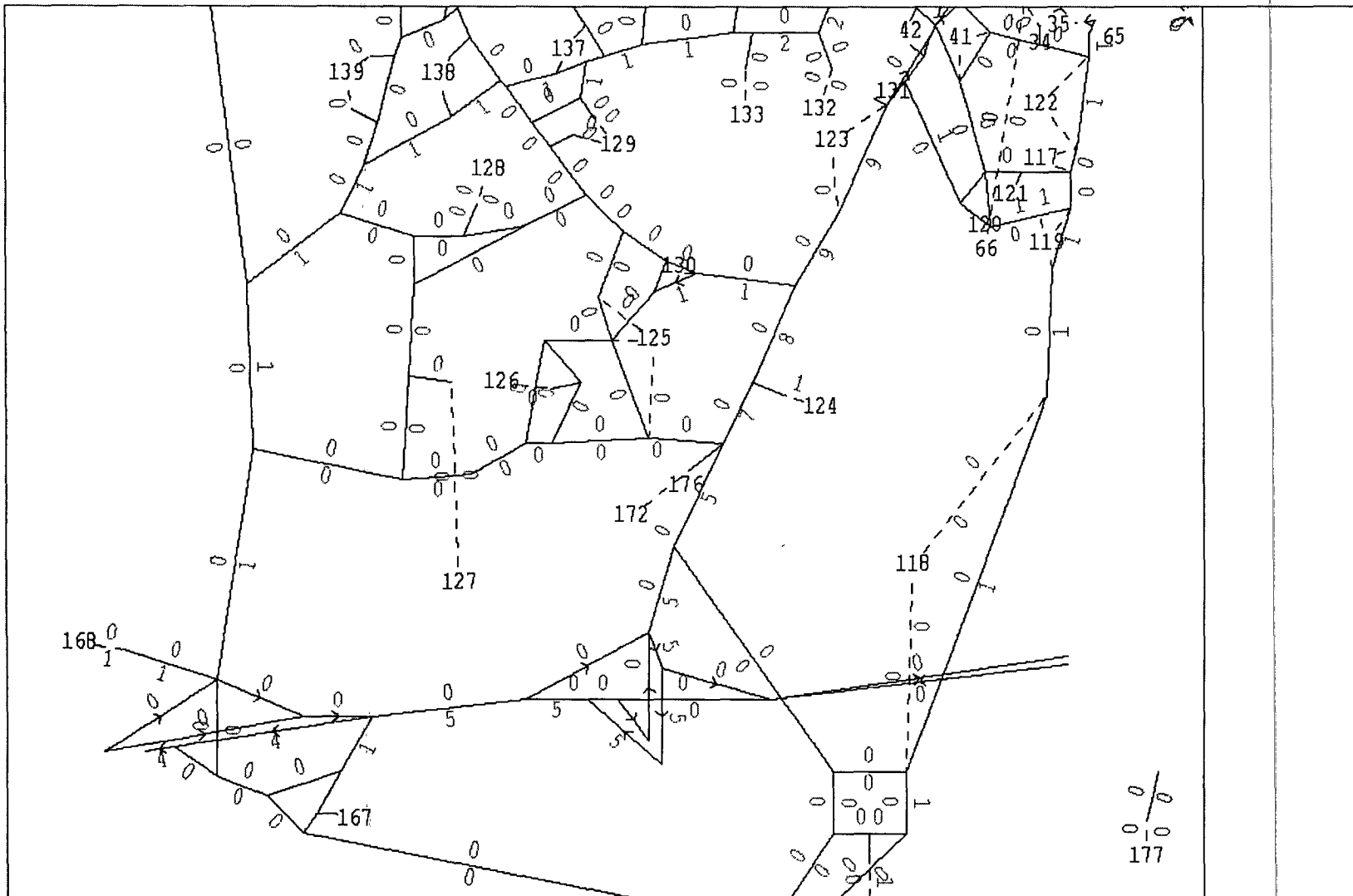




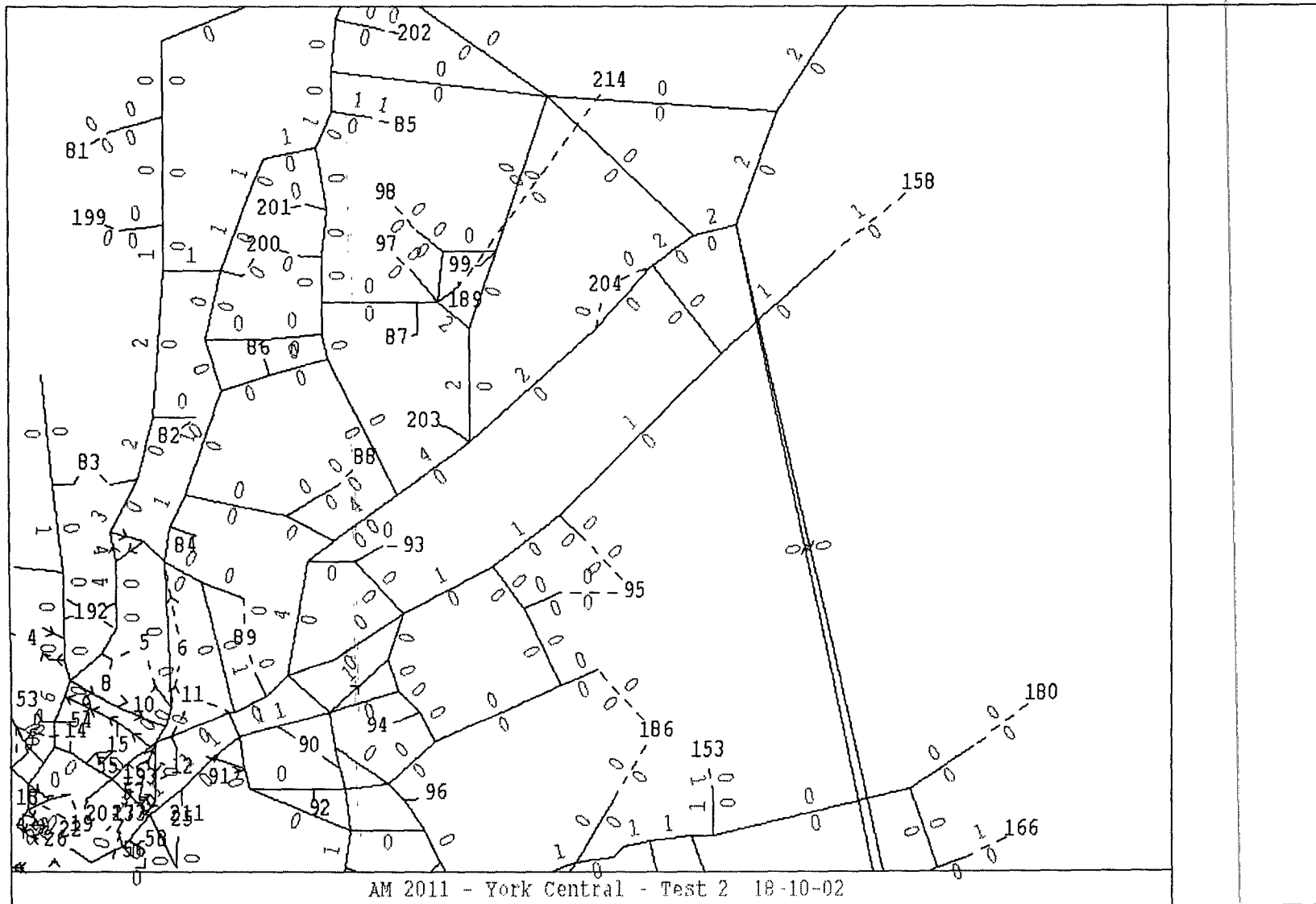




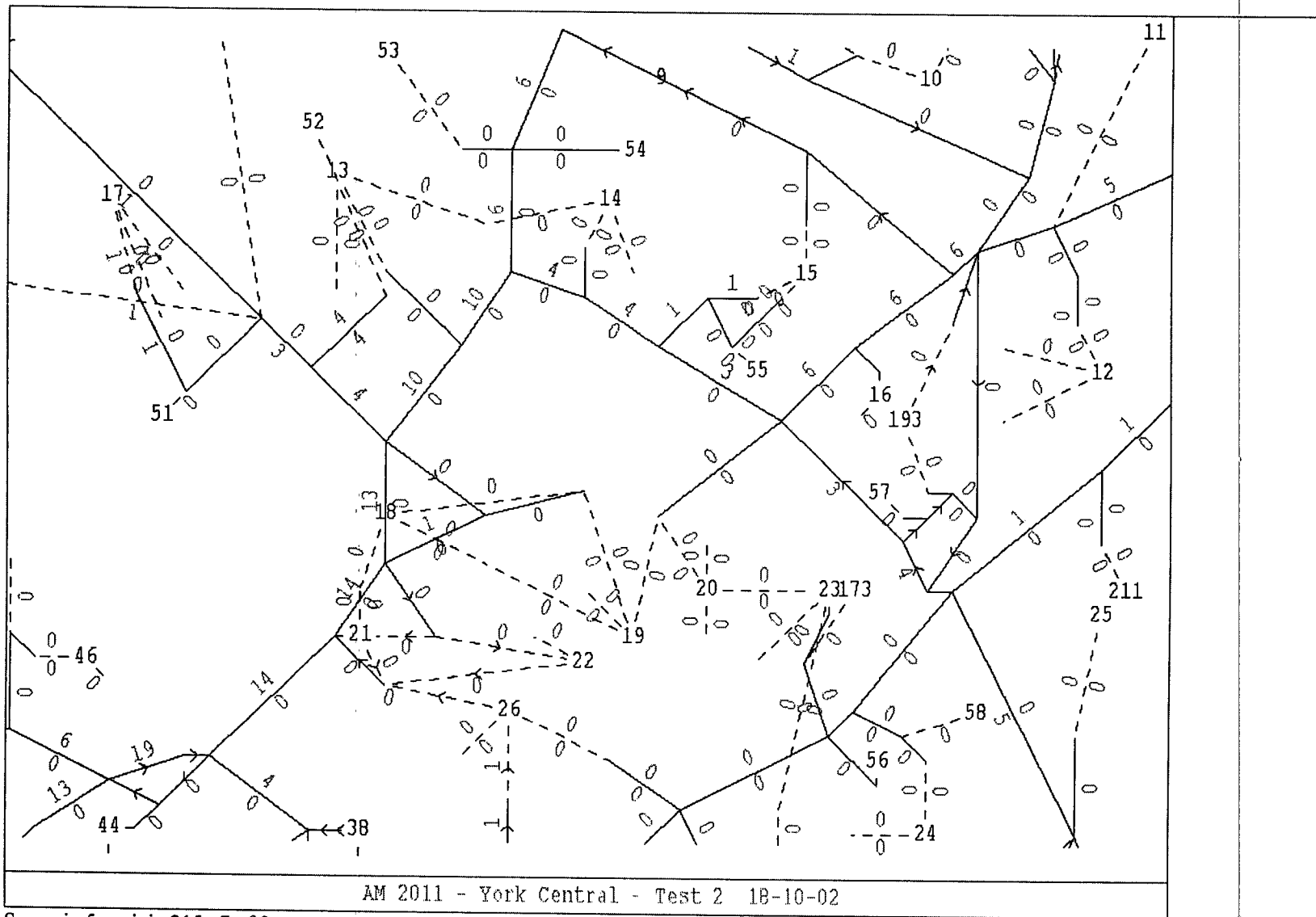
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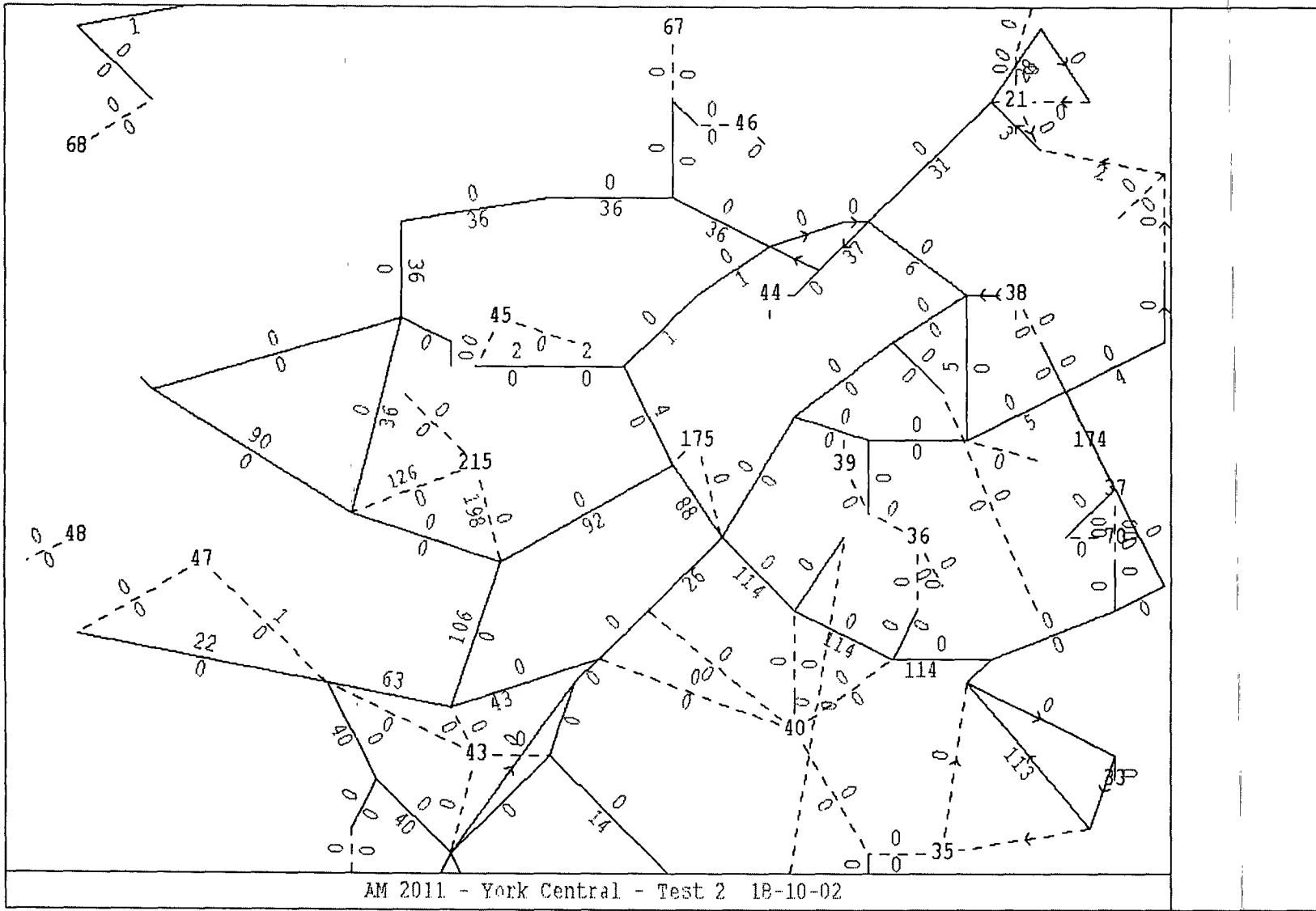


Scenario 5, origin 215, 6 of 8



Scenario 5, origin 215, 7 of 8

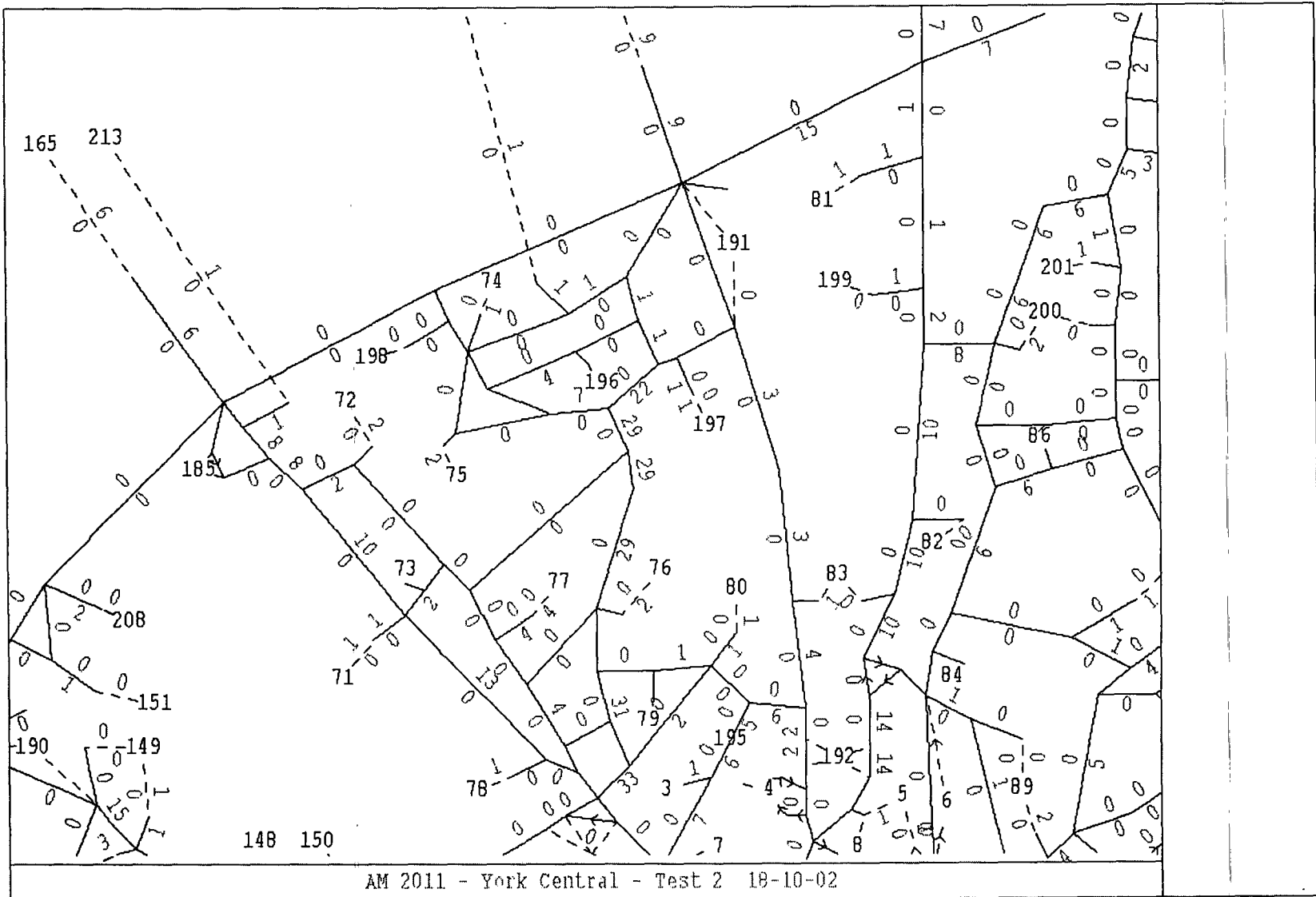


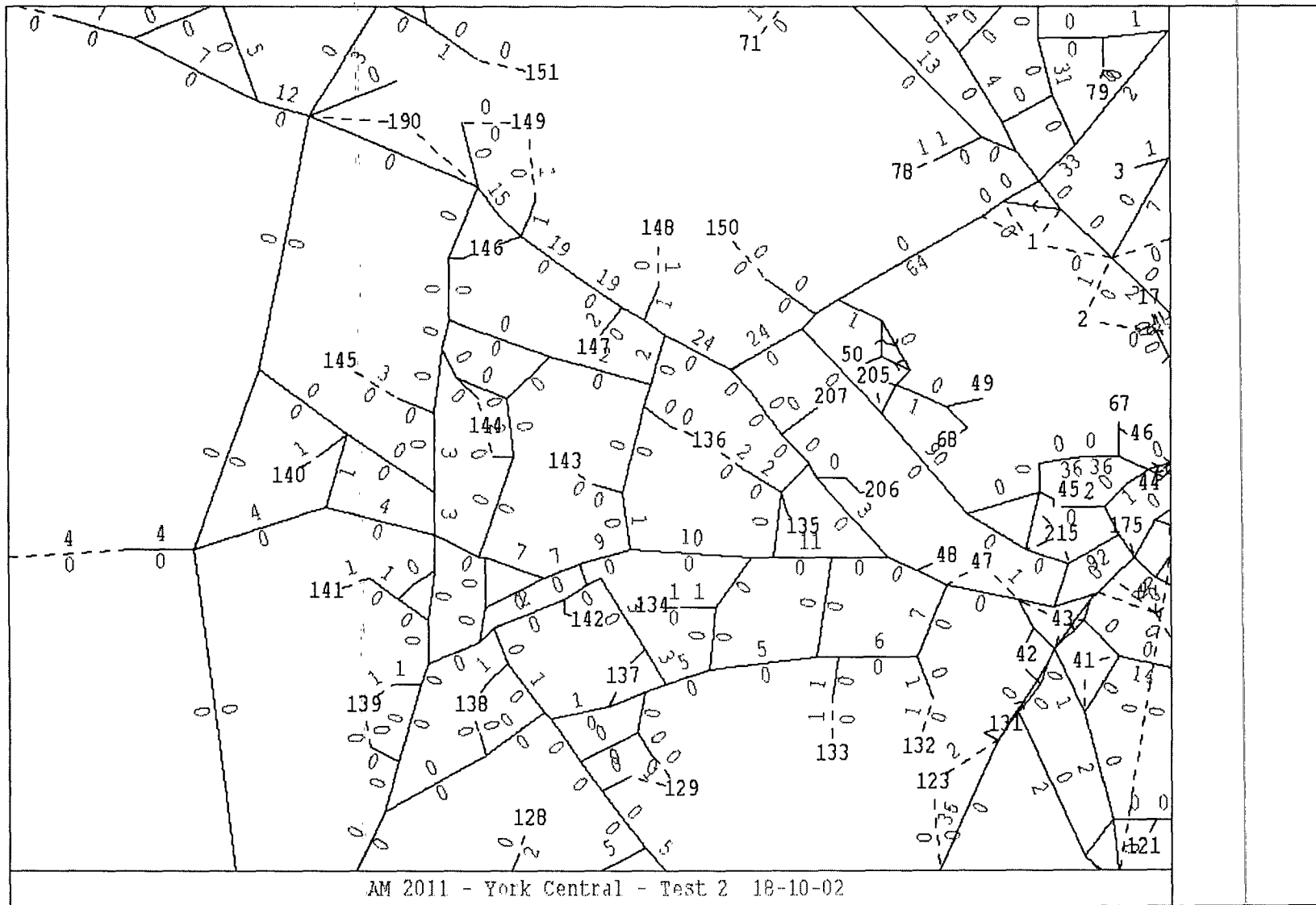


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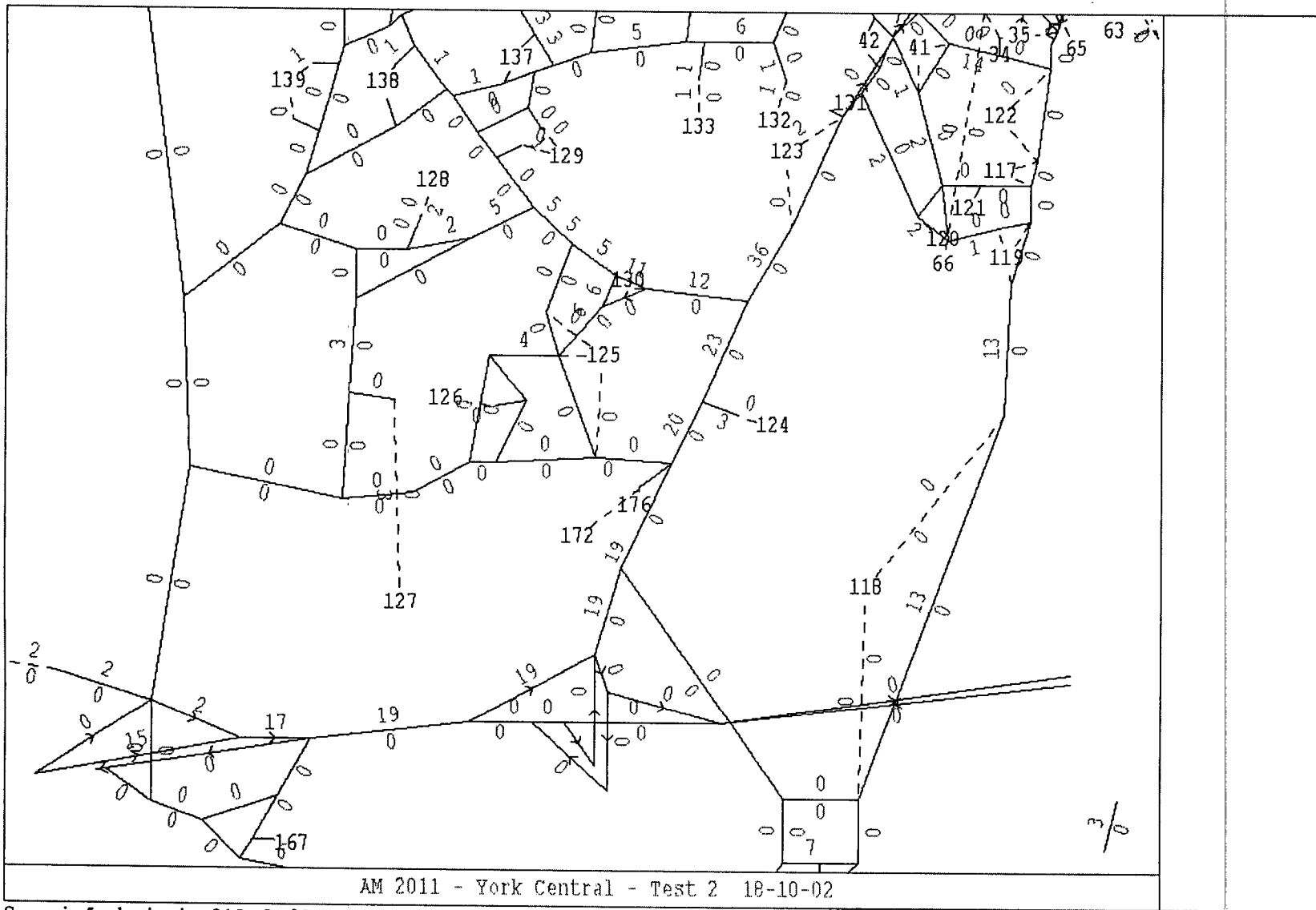




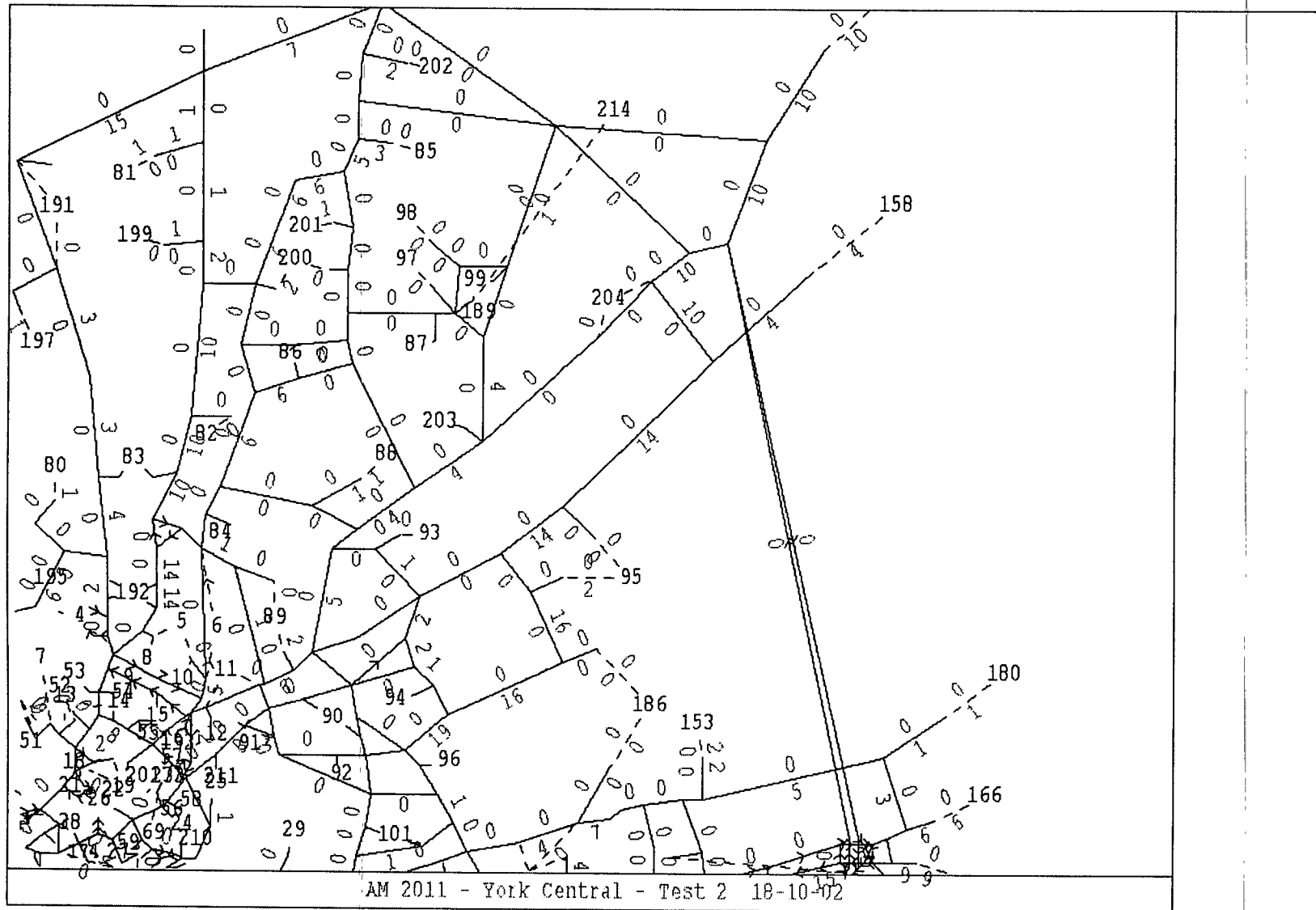




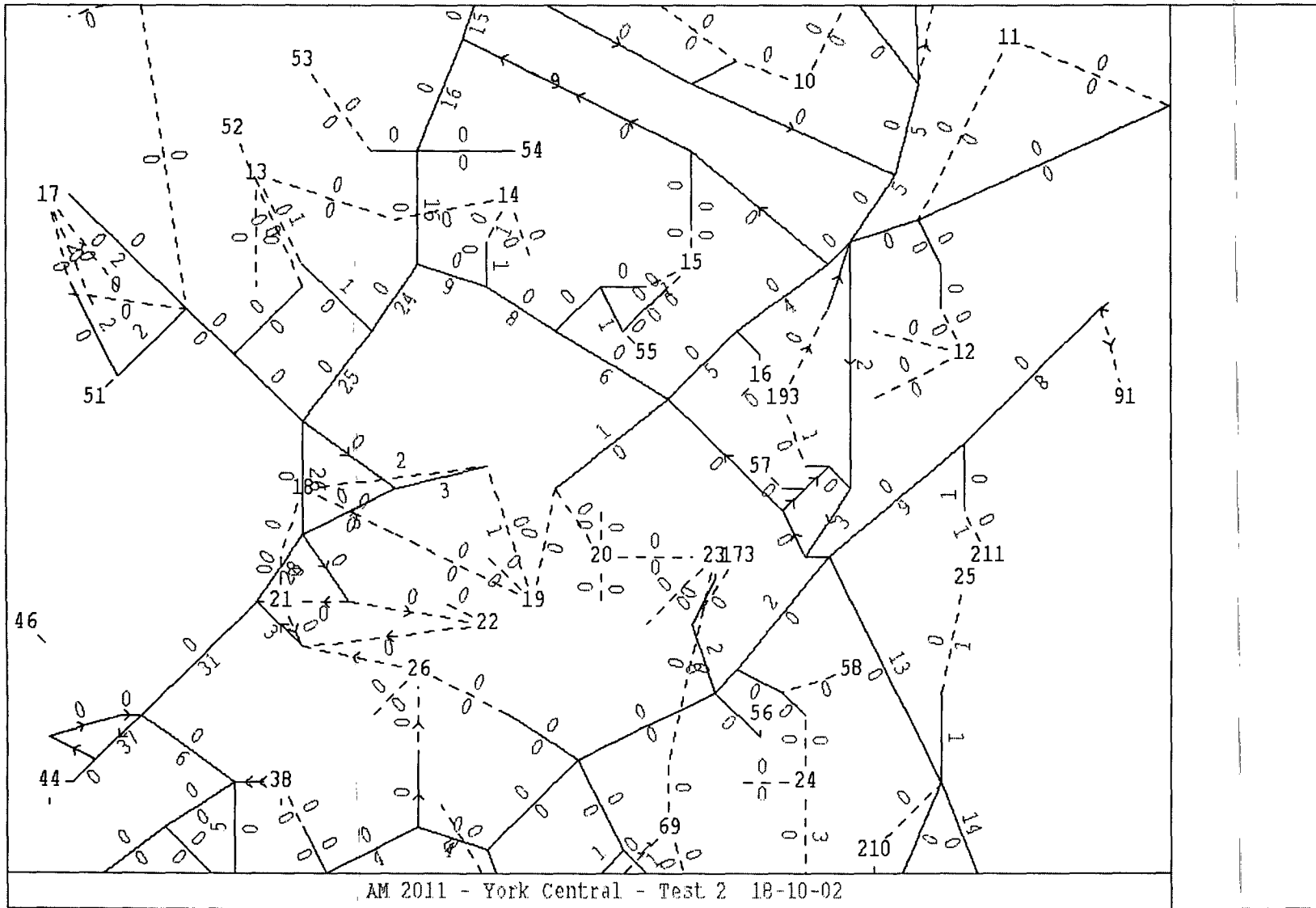
Scenario 5, destination 215, 4 of 8



Scenario 5, destination 215, 5 of 8



Scenario 5, destination 215, 6 of 8

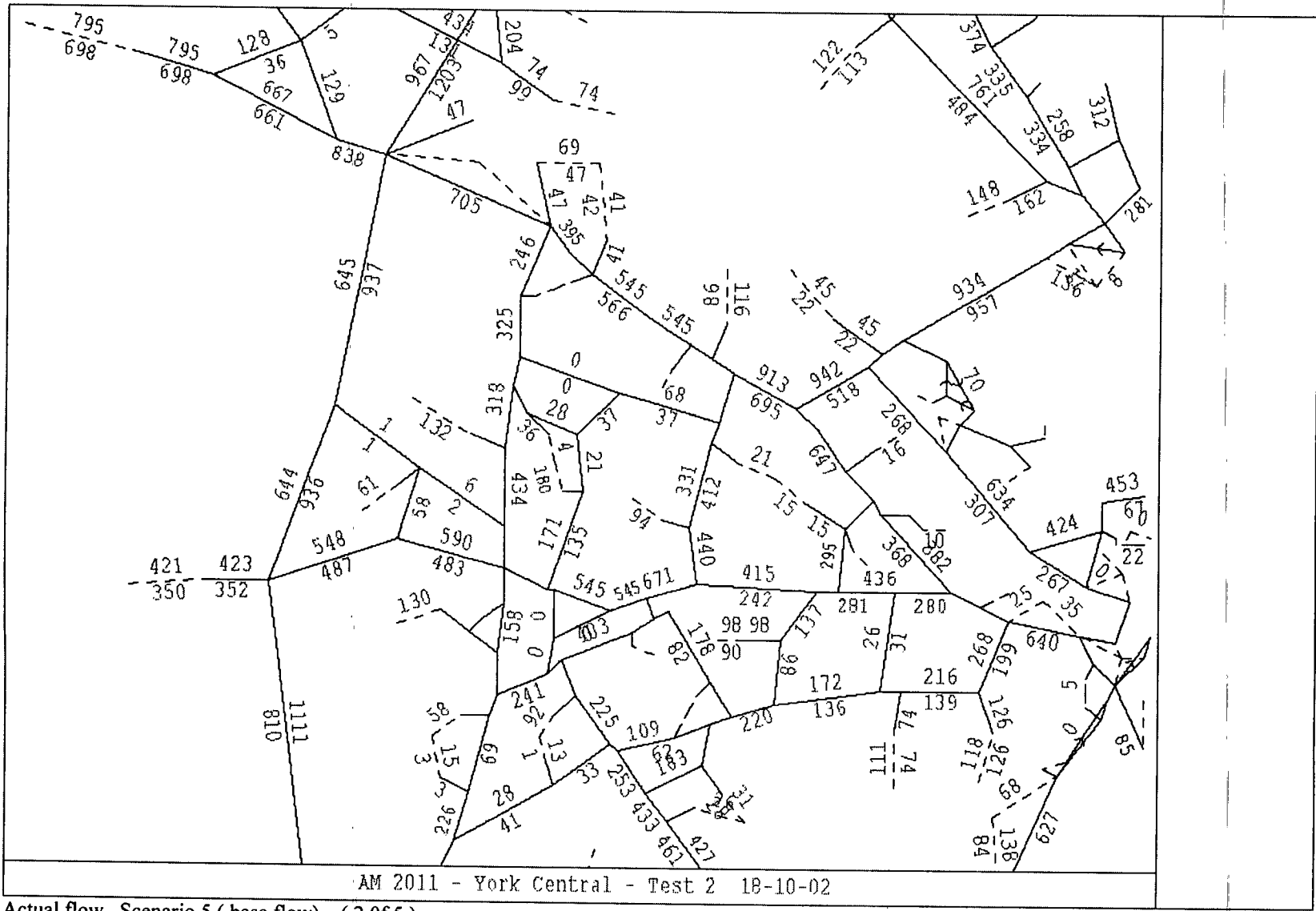


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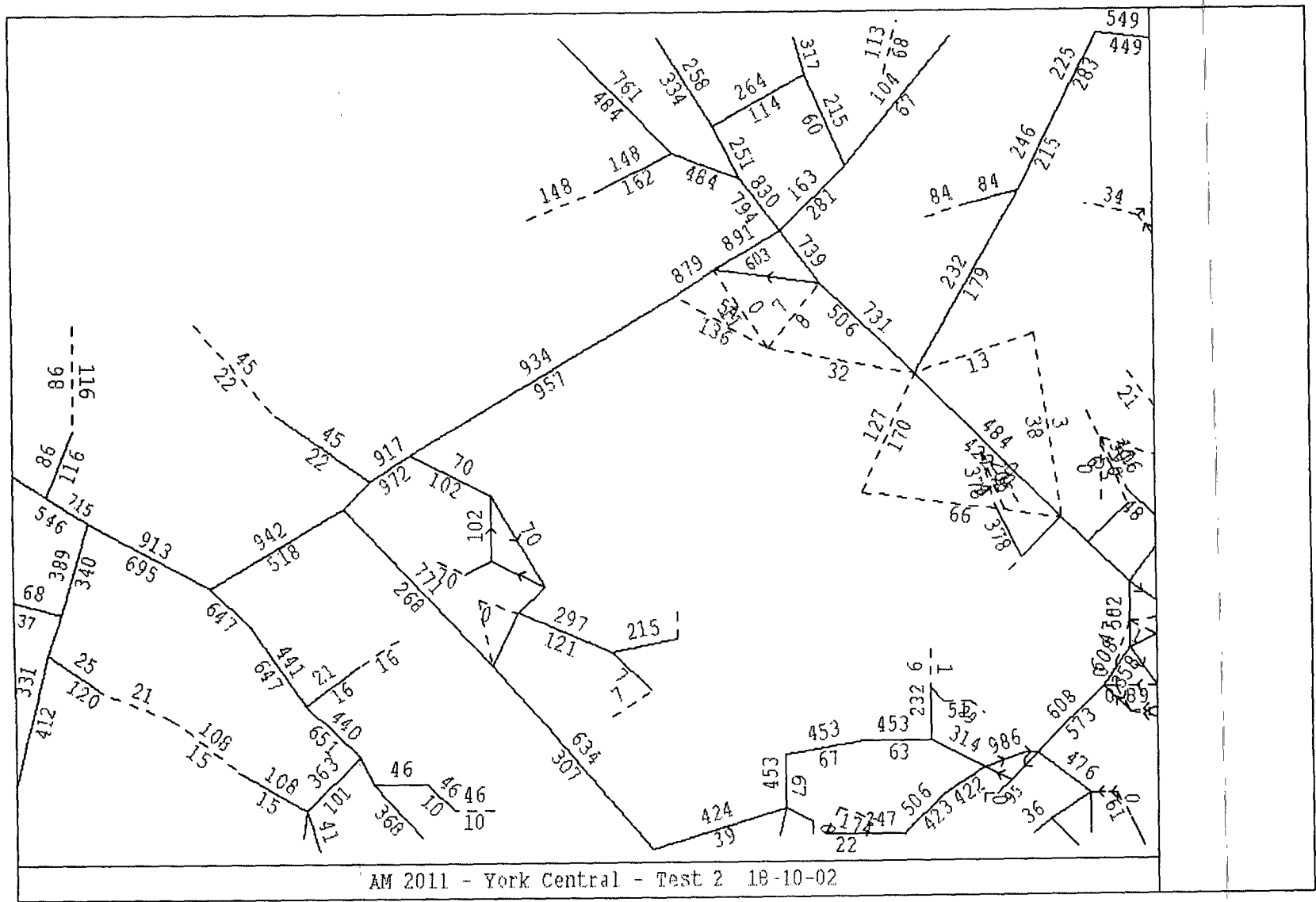






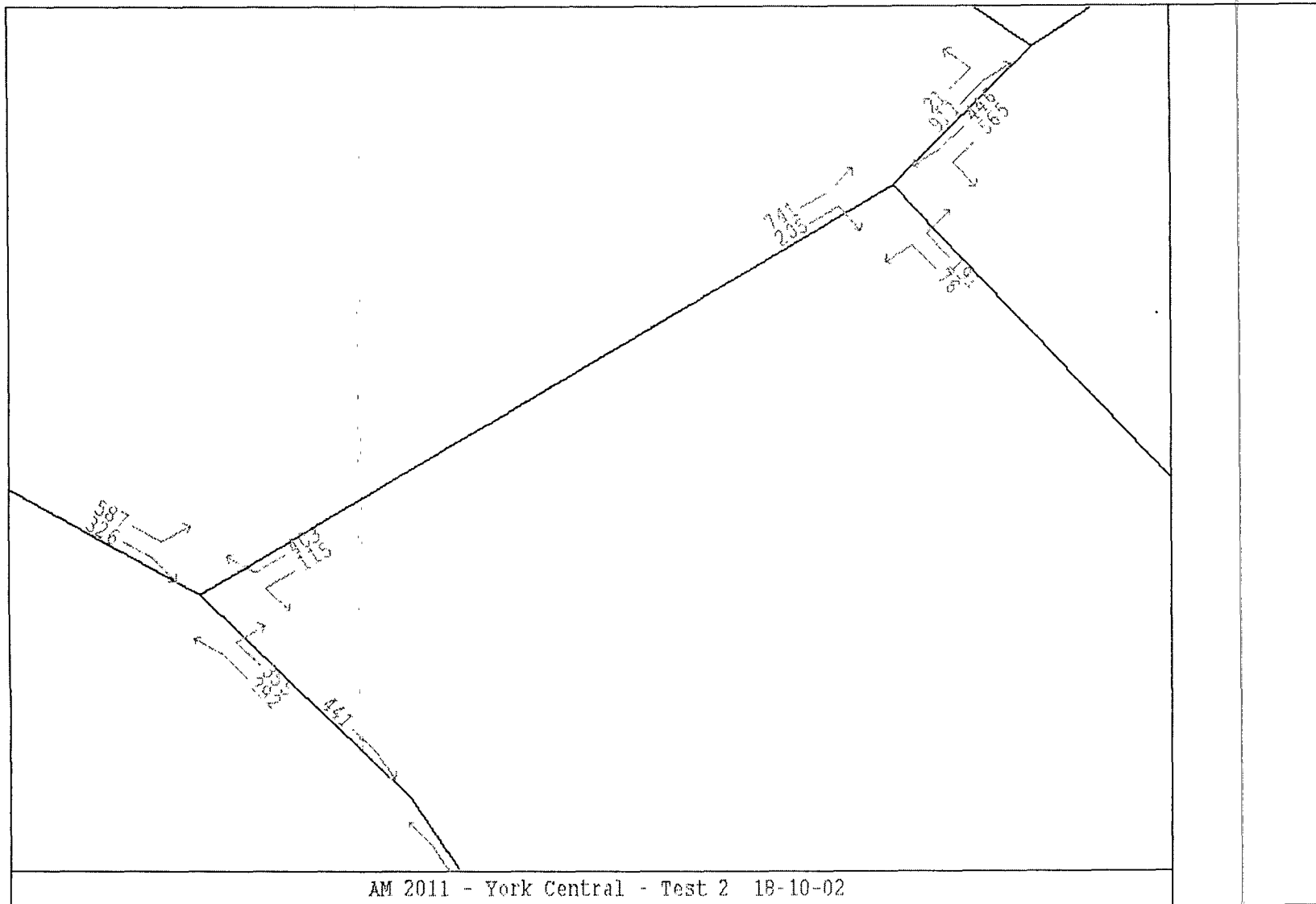




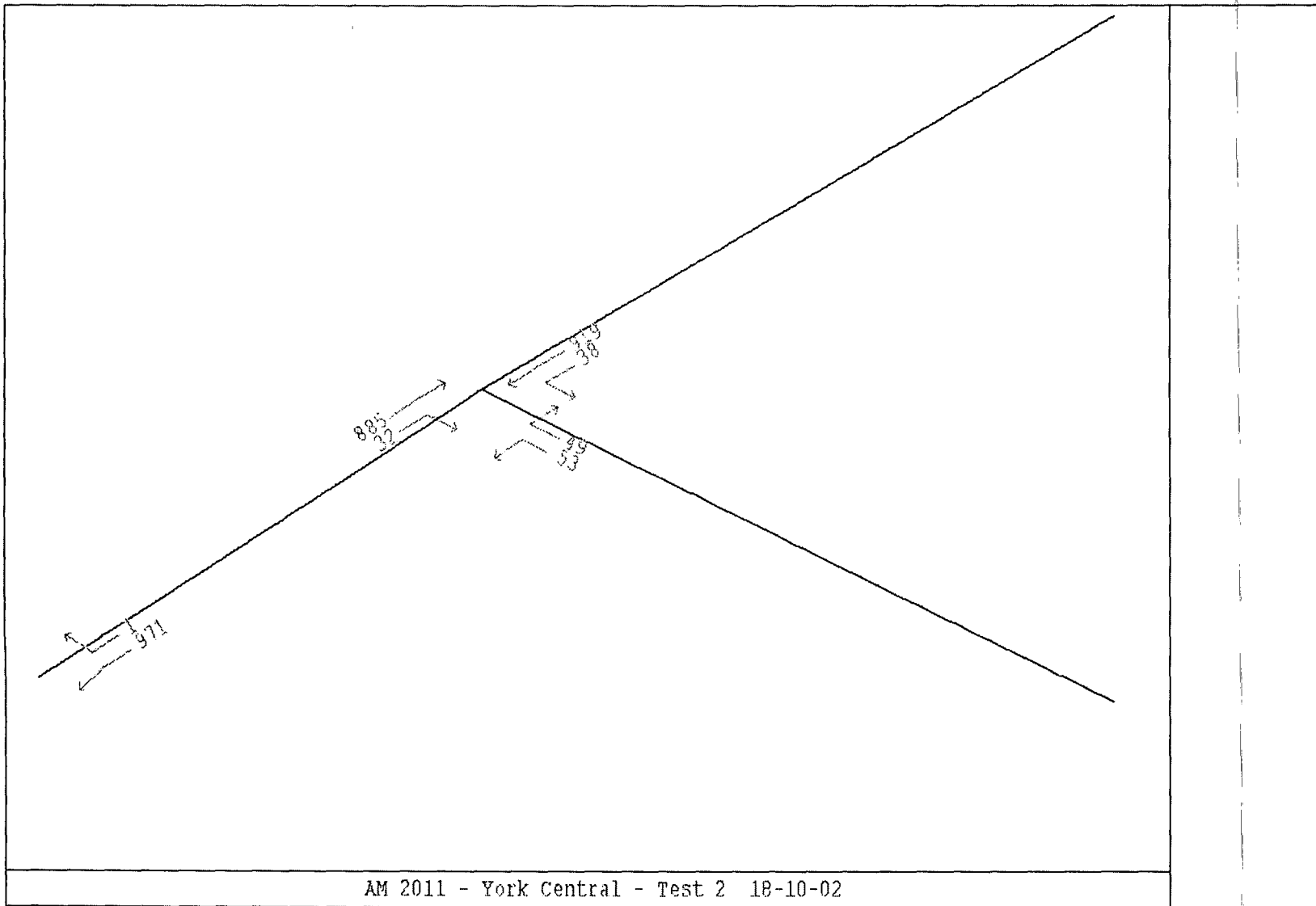


Actual flow, Scenario 5 (base flow), (4 of 5)

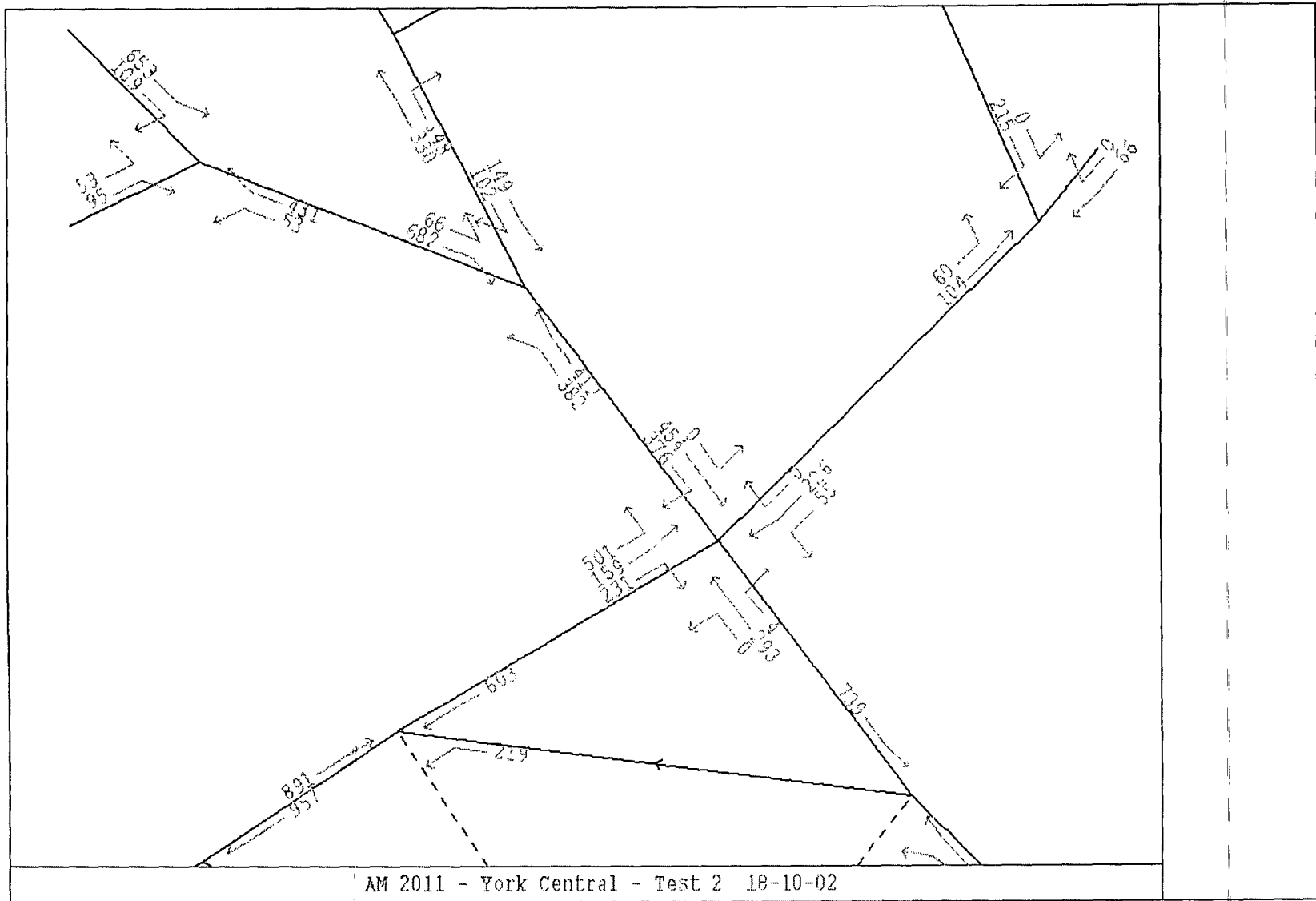




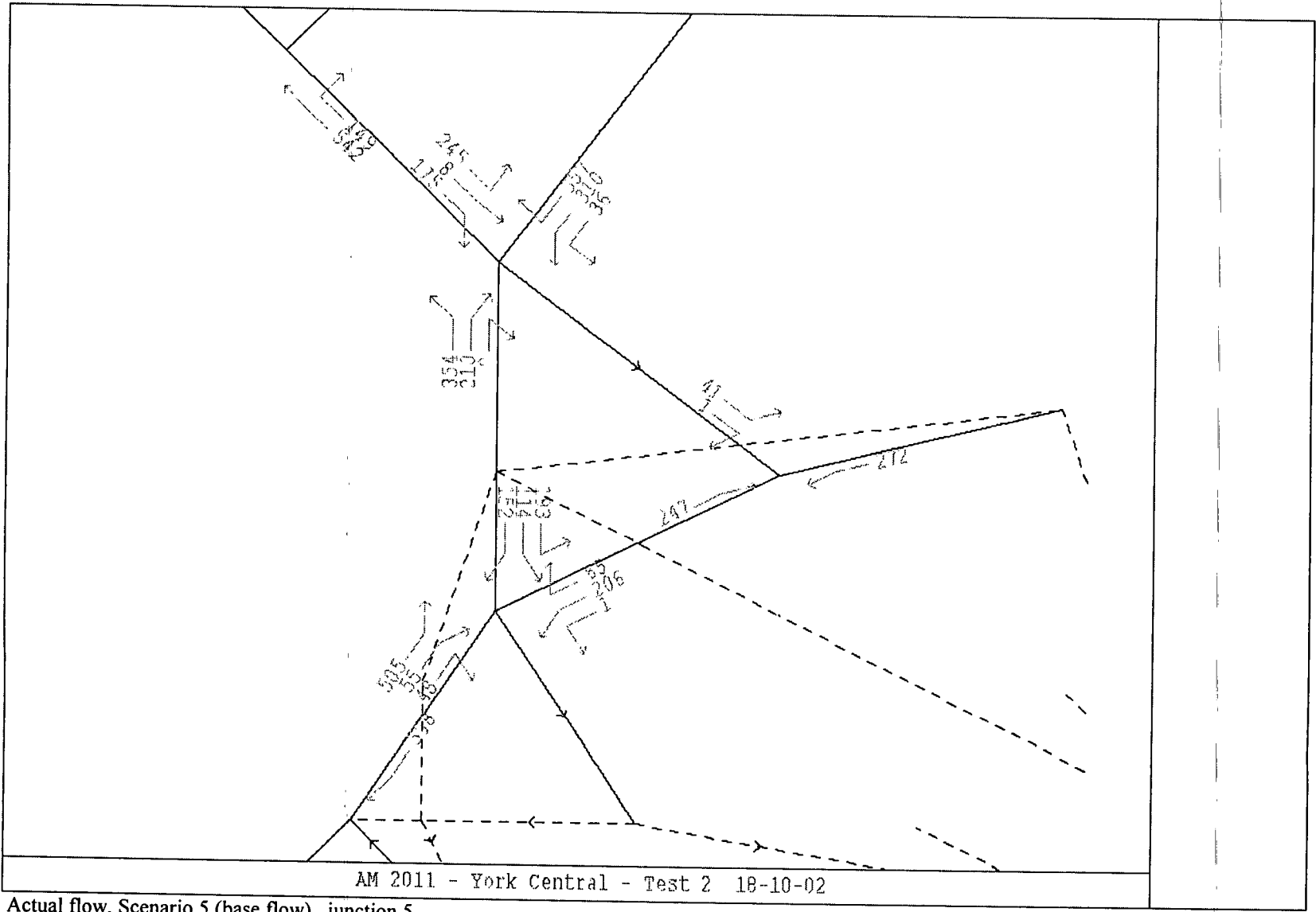
Actual flow, Scenario 5 (base flow), junction 1 & 2



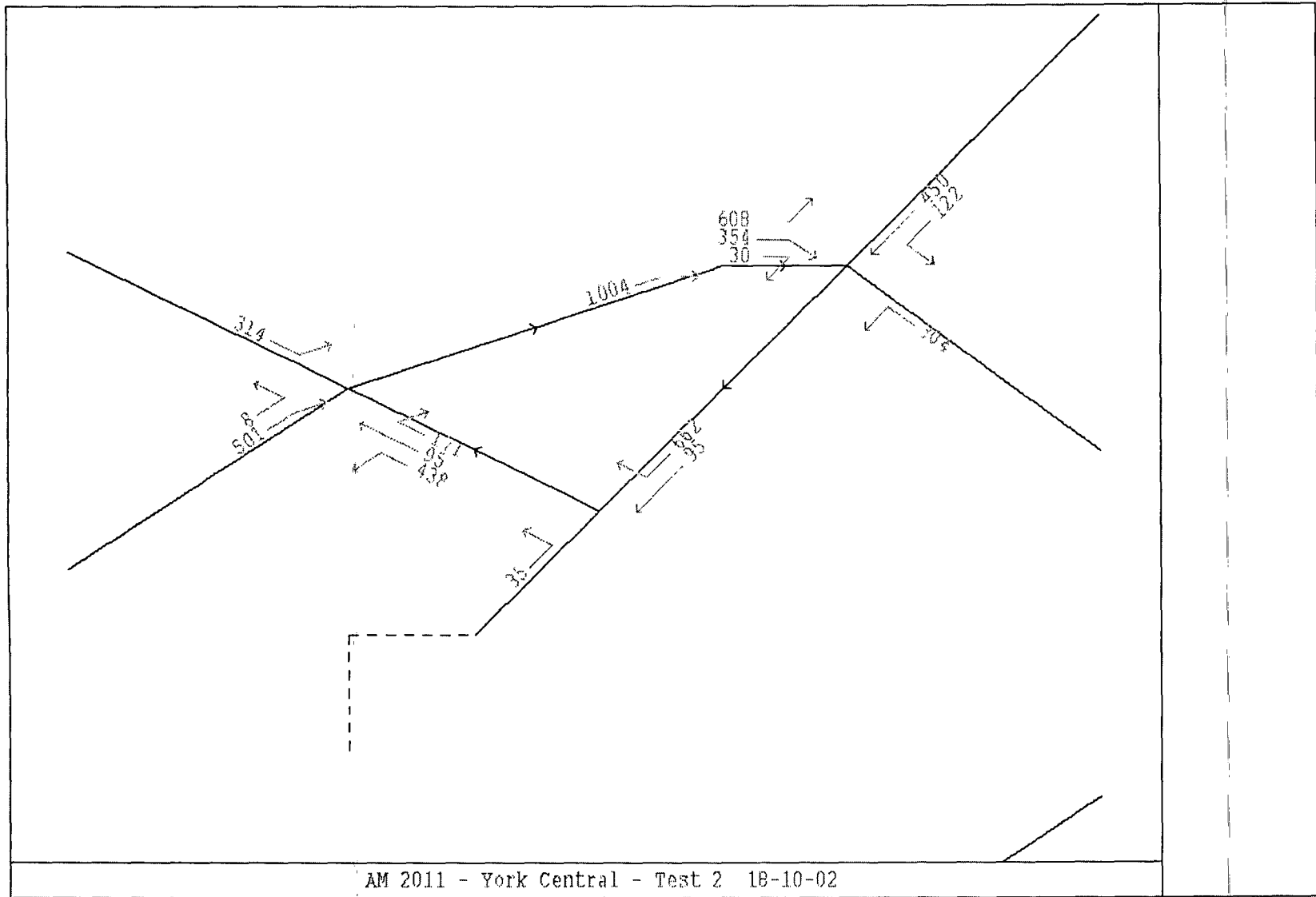
Actual flow, Scenario 5 (base flow), junction 3



Actual flow, Scenario 5 (base flow), junction 4

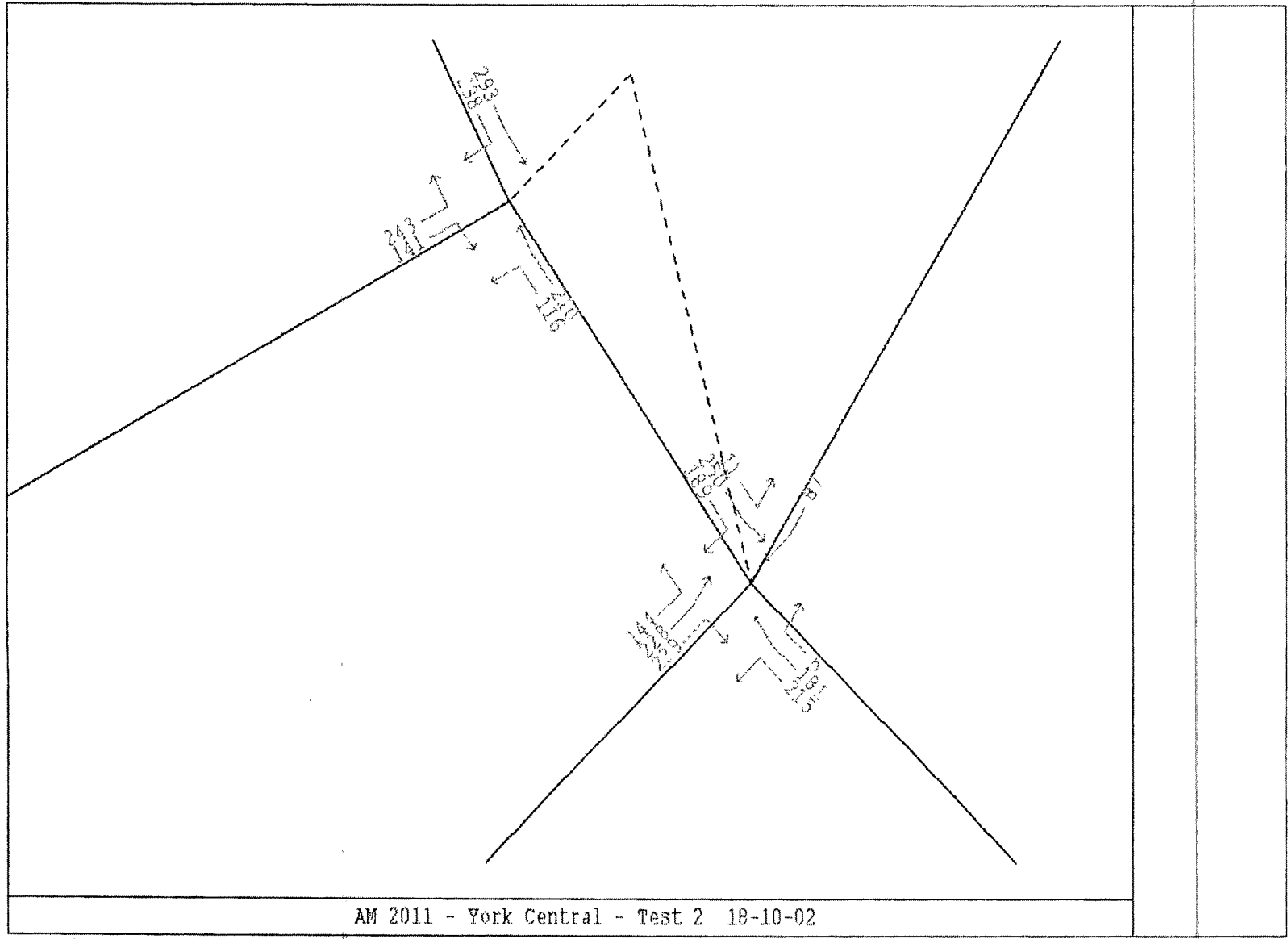




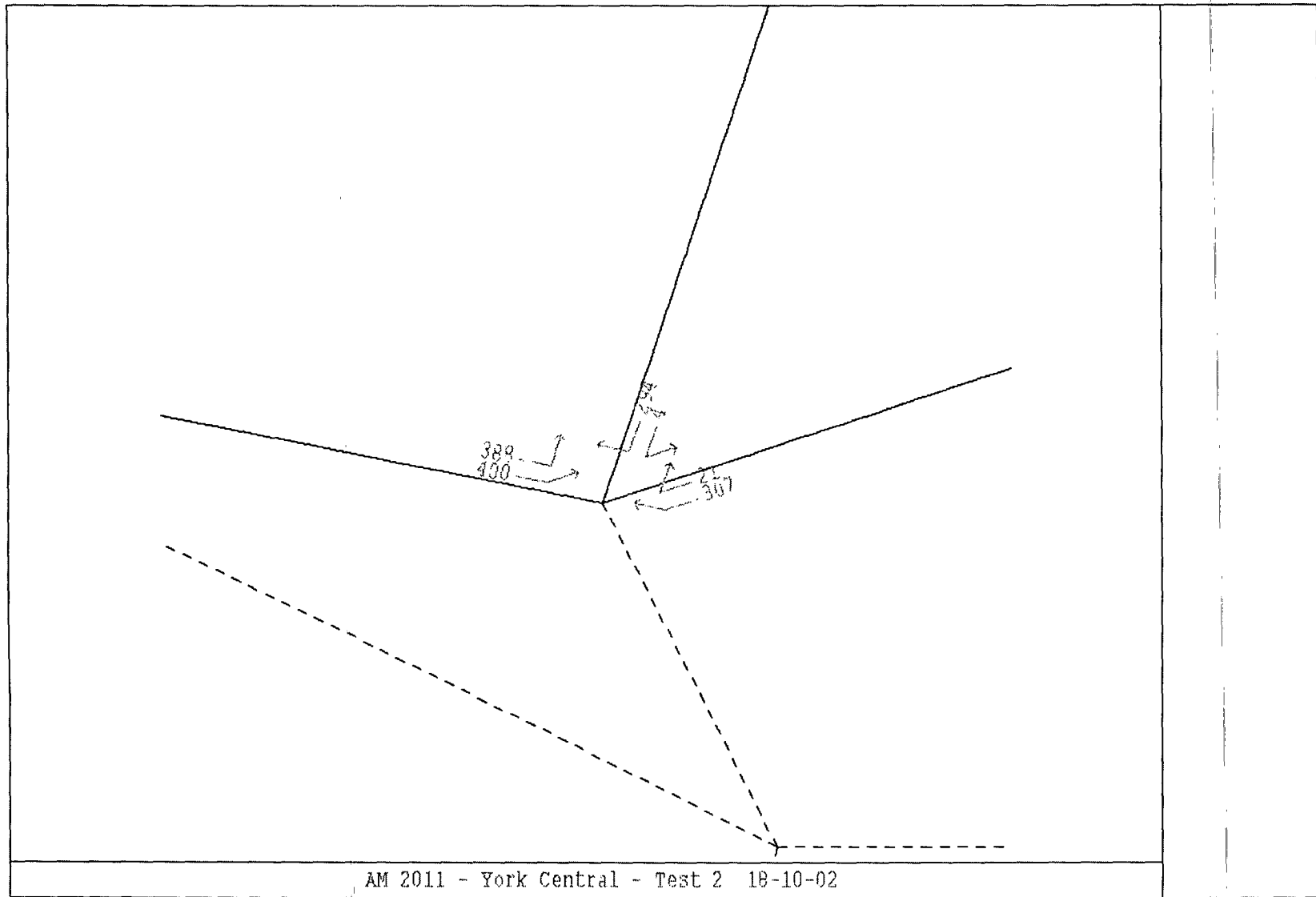


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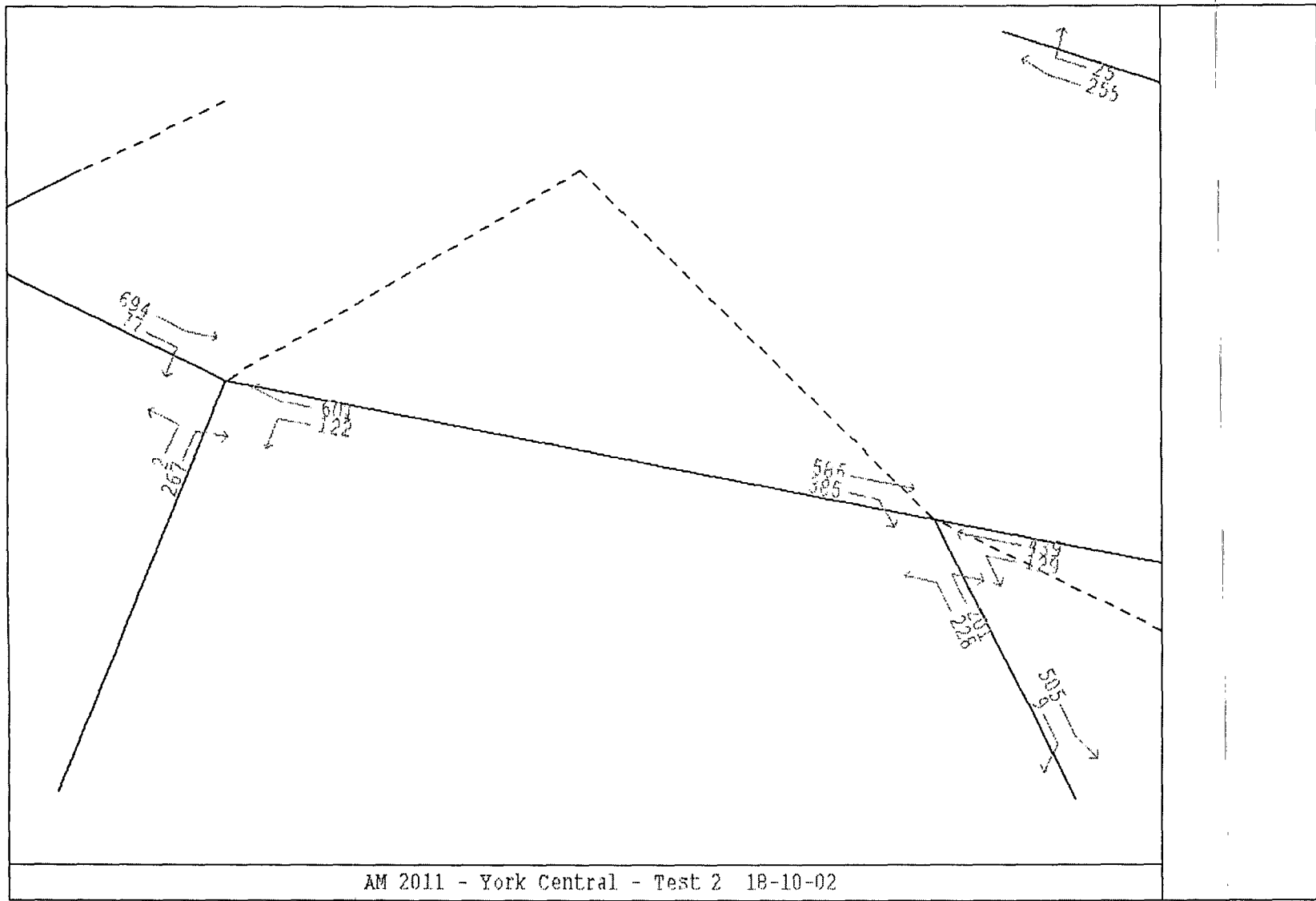
Actual flow, Scenario 5 (base flow), junction 6



Actual flow, Scenario 5 (base flow), junction 7 & 8

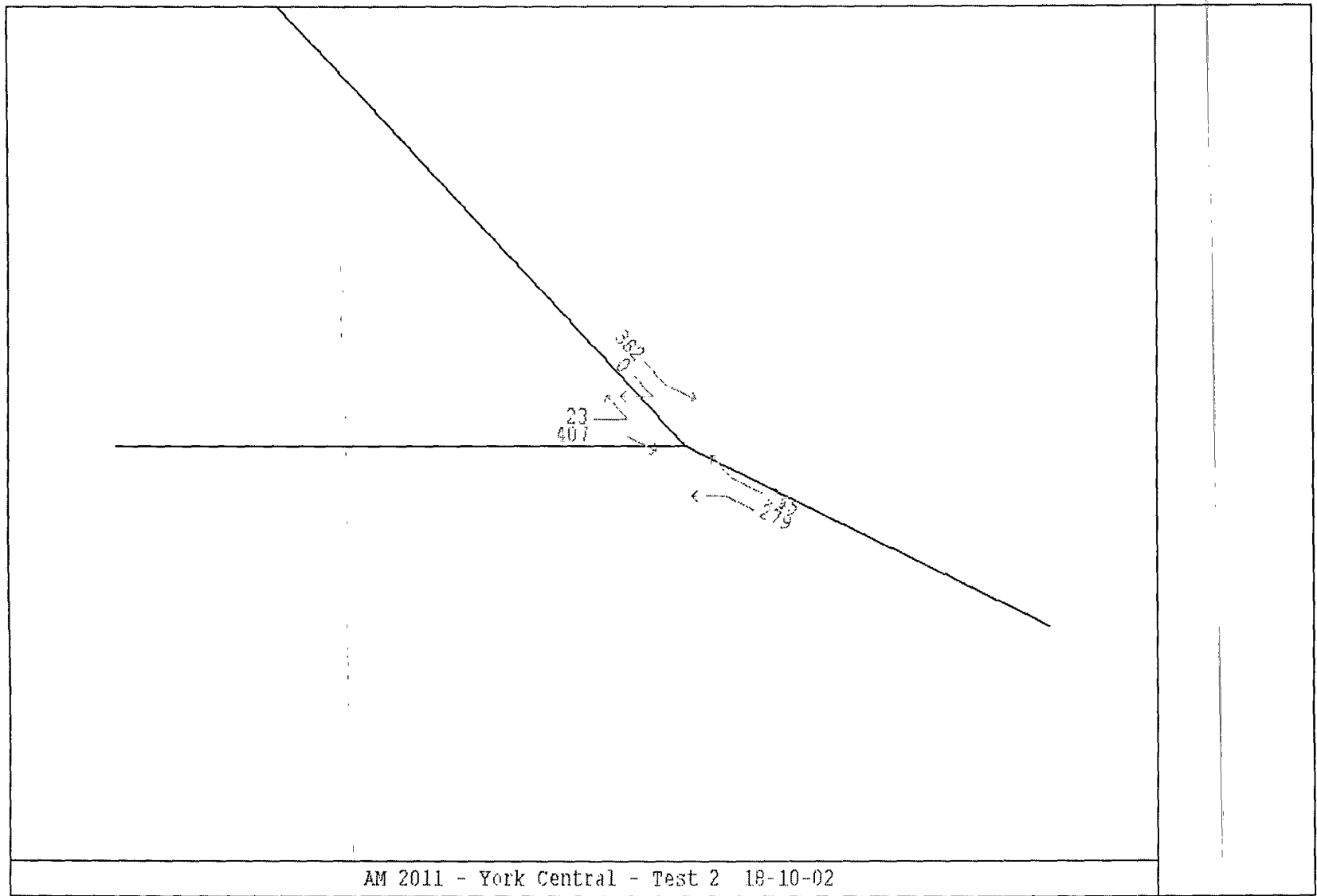


Actual flow, Scenario 5 (base flow), junction 9

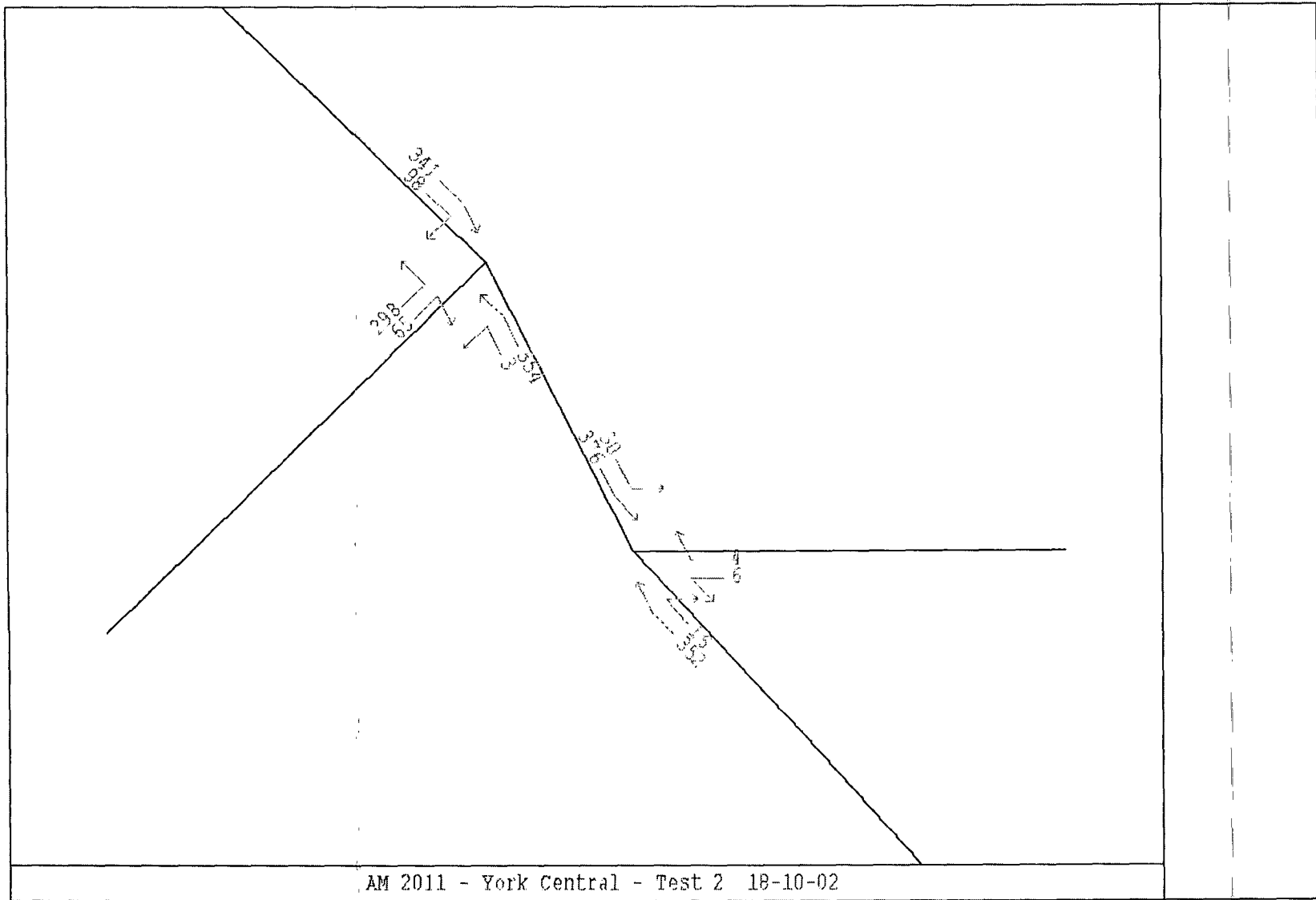


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Actual flow, Scenario 5 (base flow), junction 10 & 11

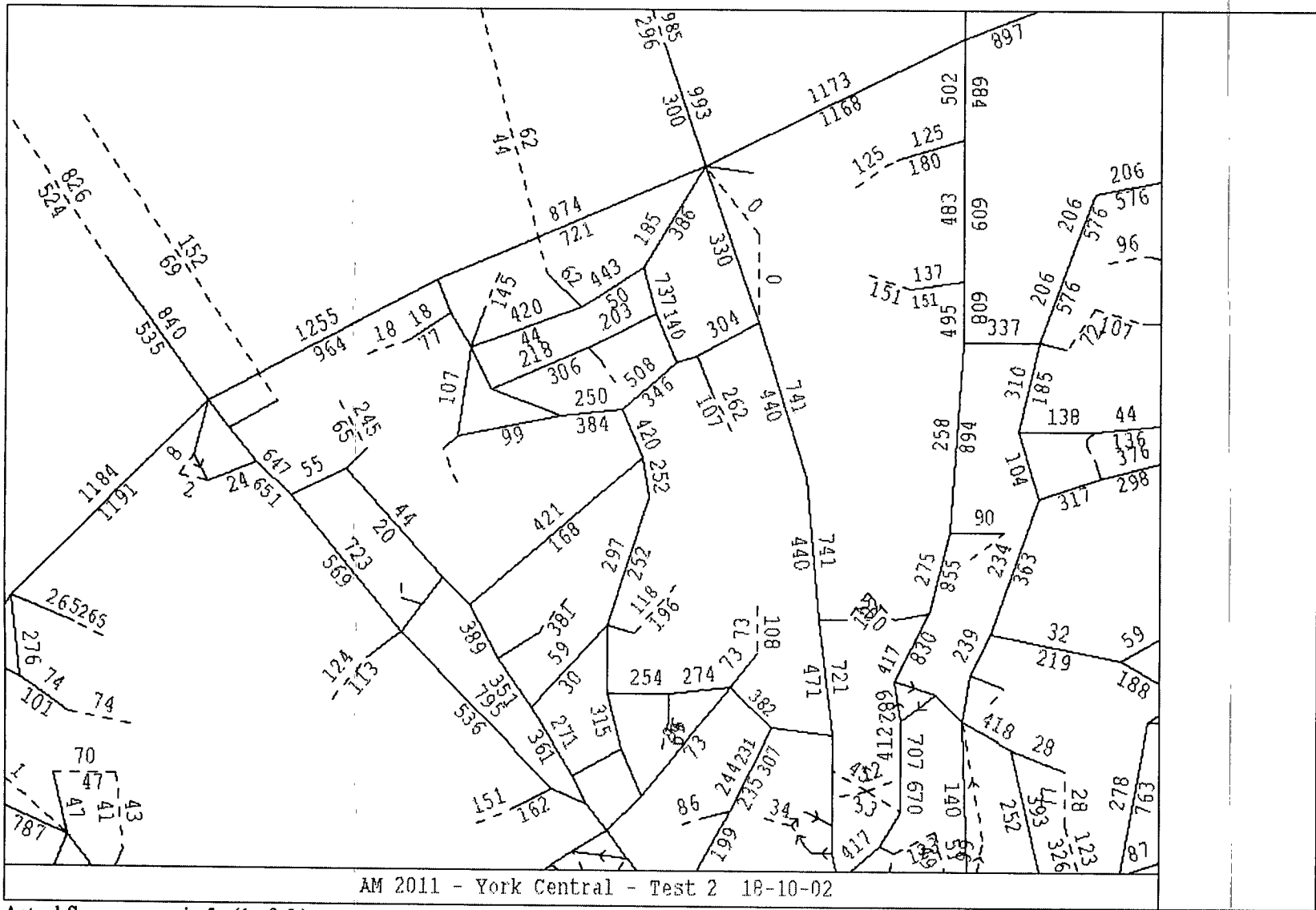


Actual flow, Scenario 5 (base flow), Junction 12

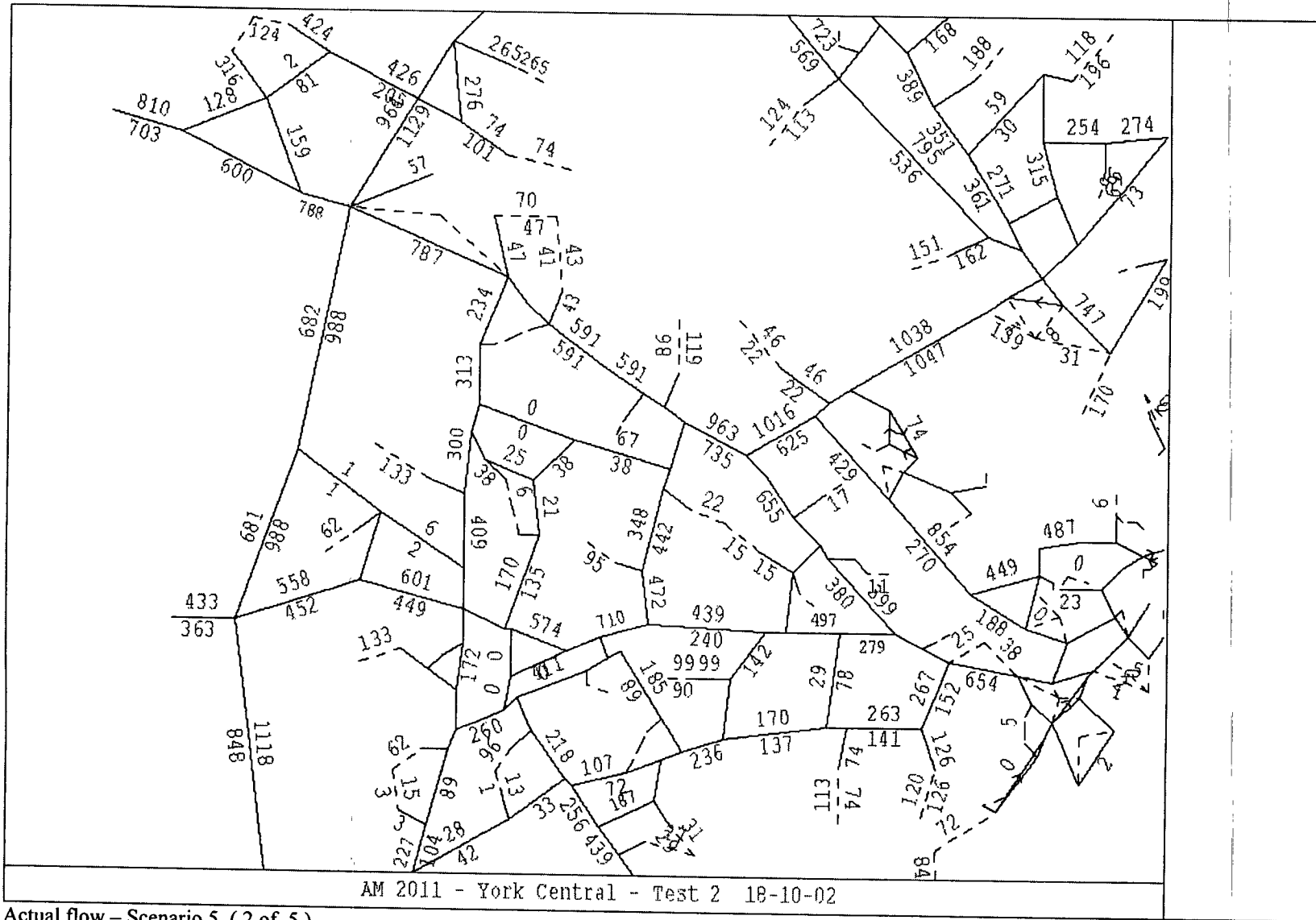


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Actual flow, Scenario 5 (base flow), junction 13 & 14

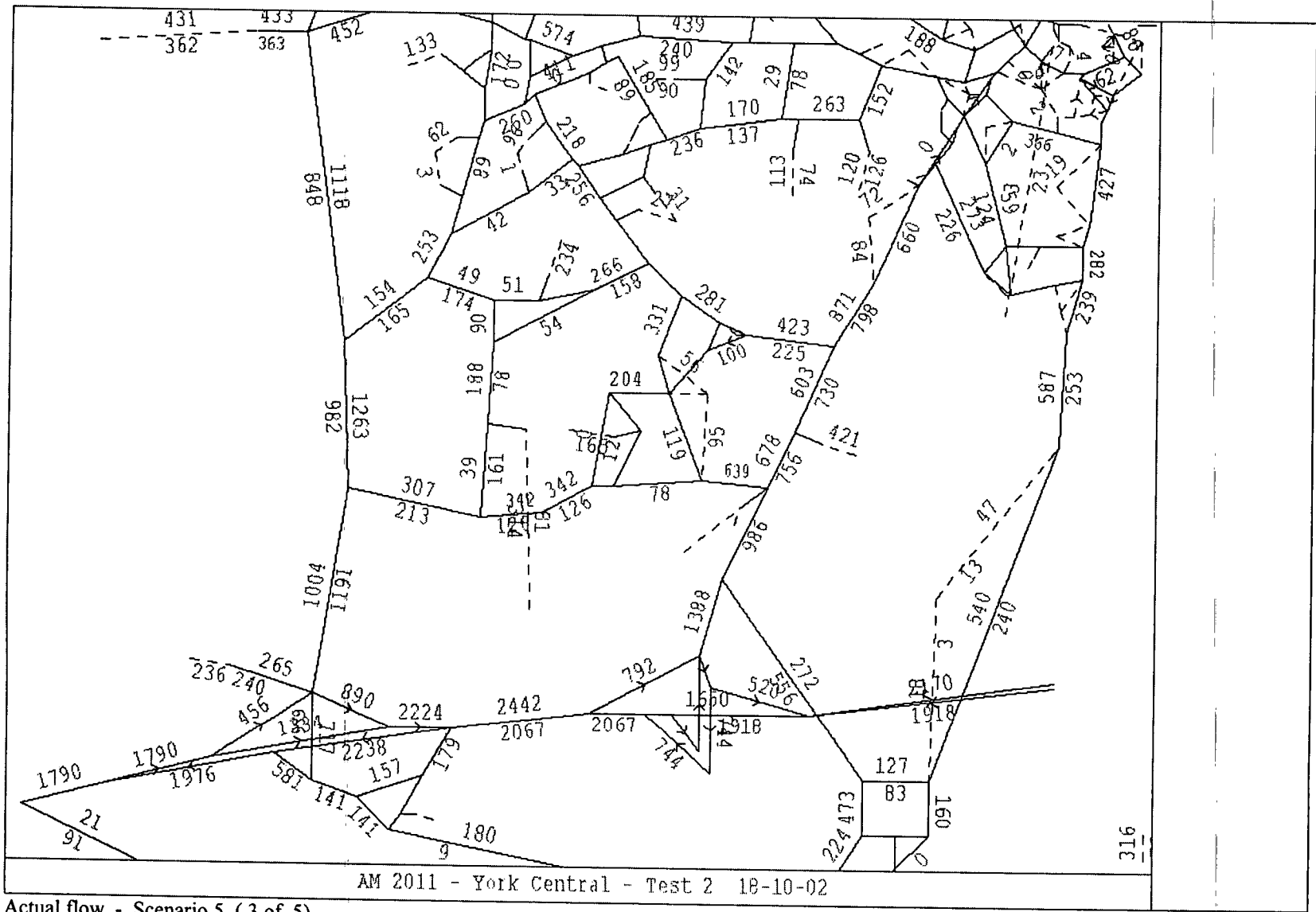


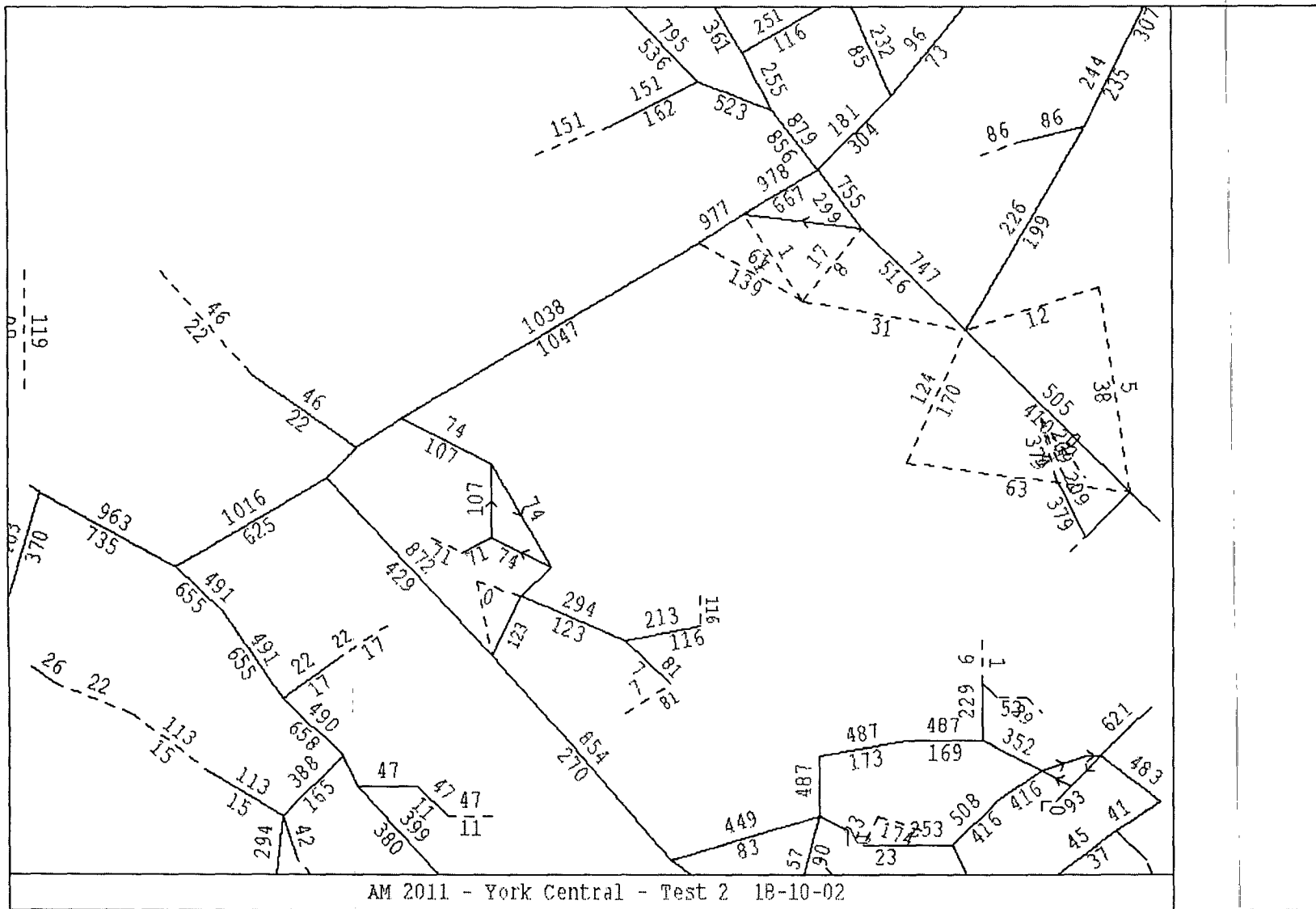
Actual flow - scenario 5 (1 of 5)



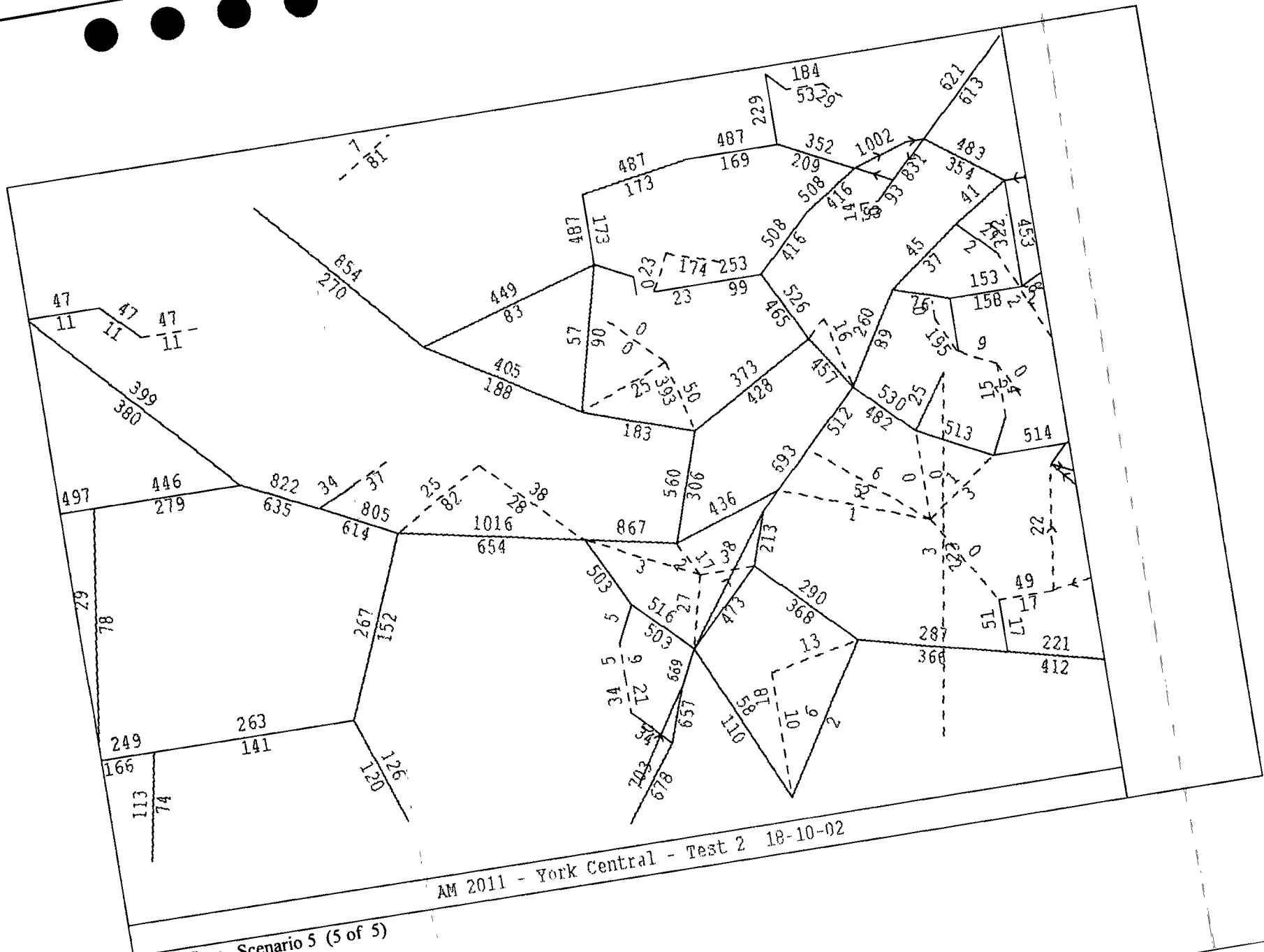
Actual flow - Scenario 5 (2 of 5)





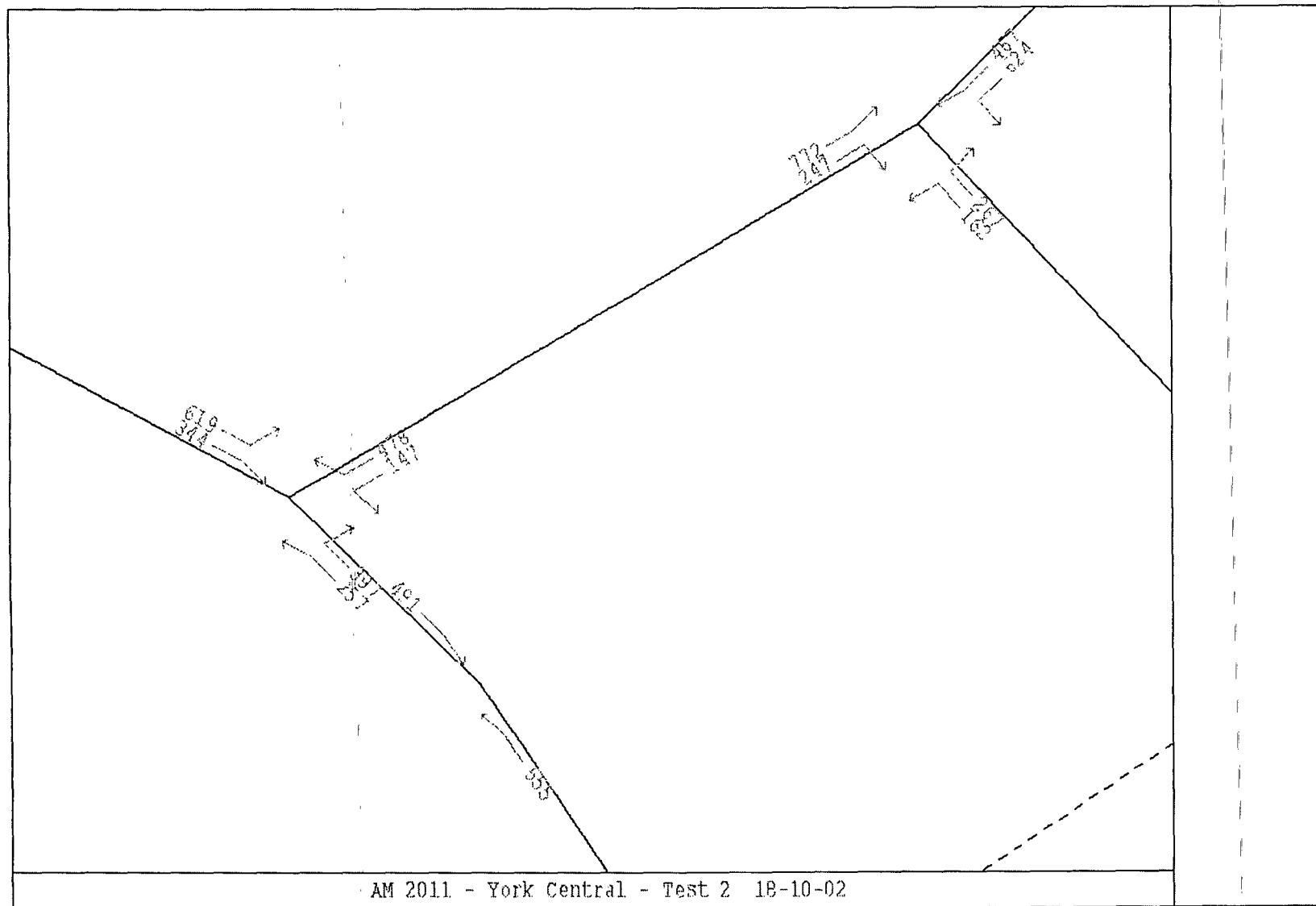


Actual flow - Scenario 5 (4 of 5)

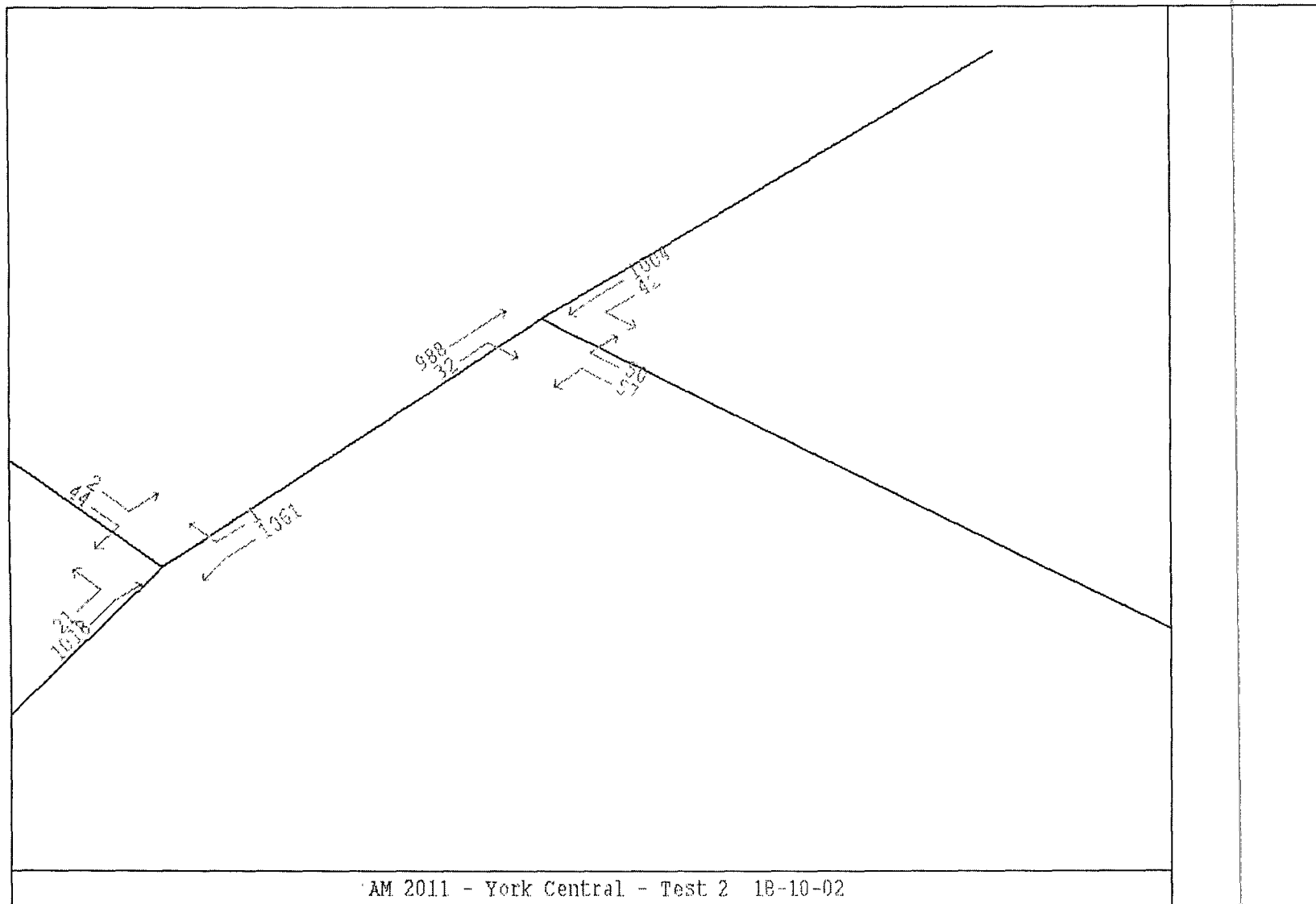


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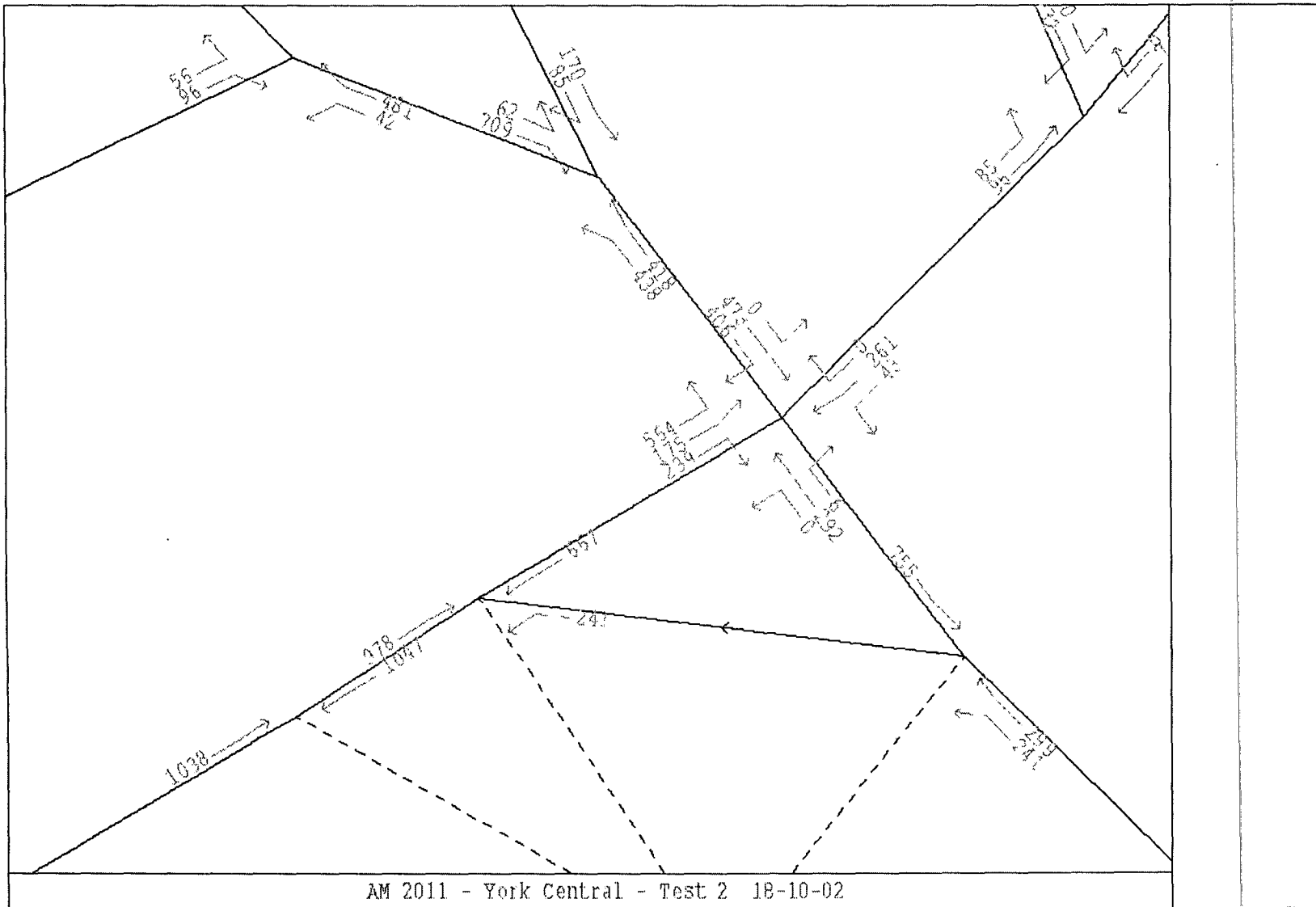
Actual flow -Scenario 5 (5 of 5)



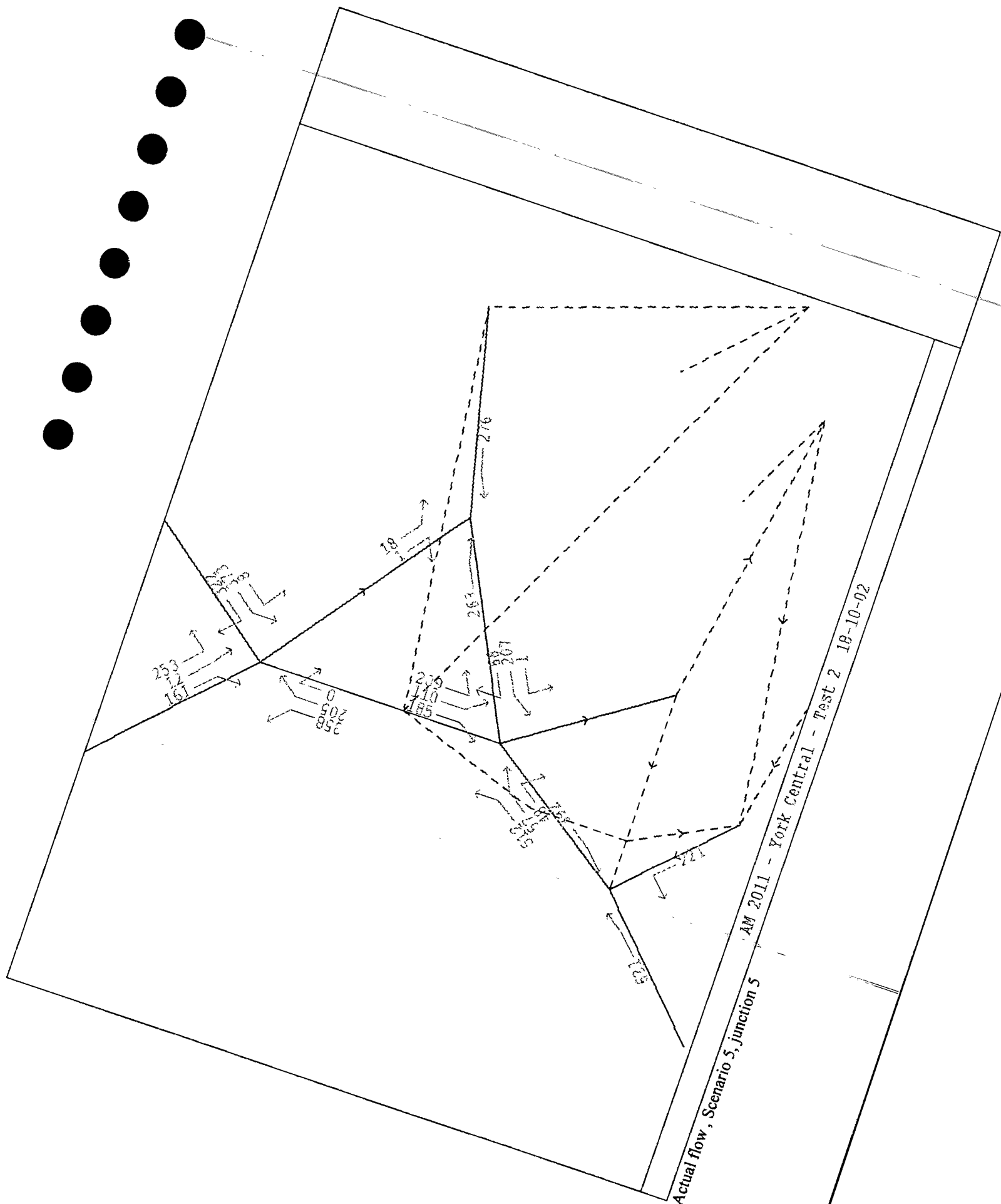
Actual flow - Scenario 5 , Junction 1 & 2



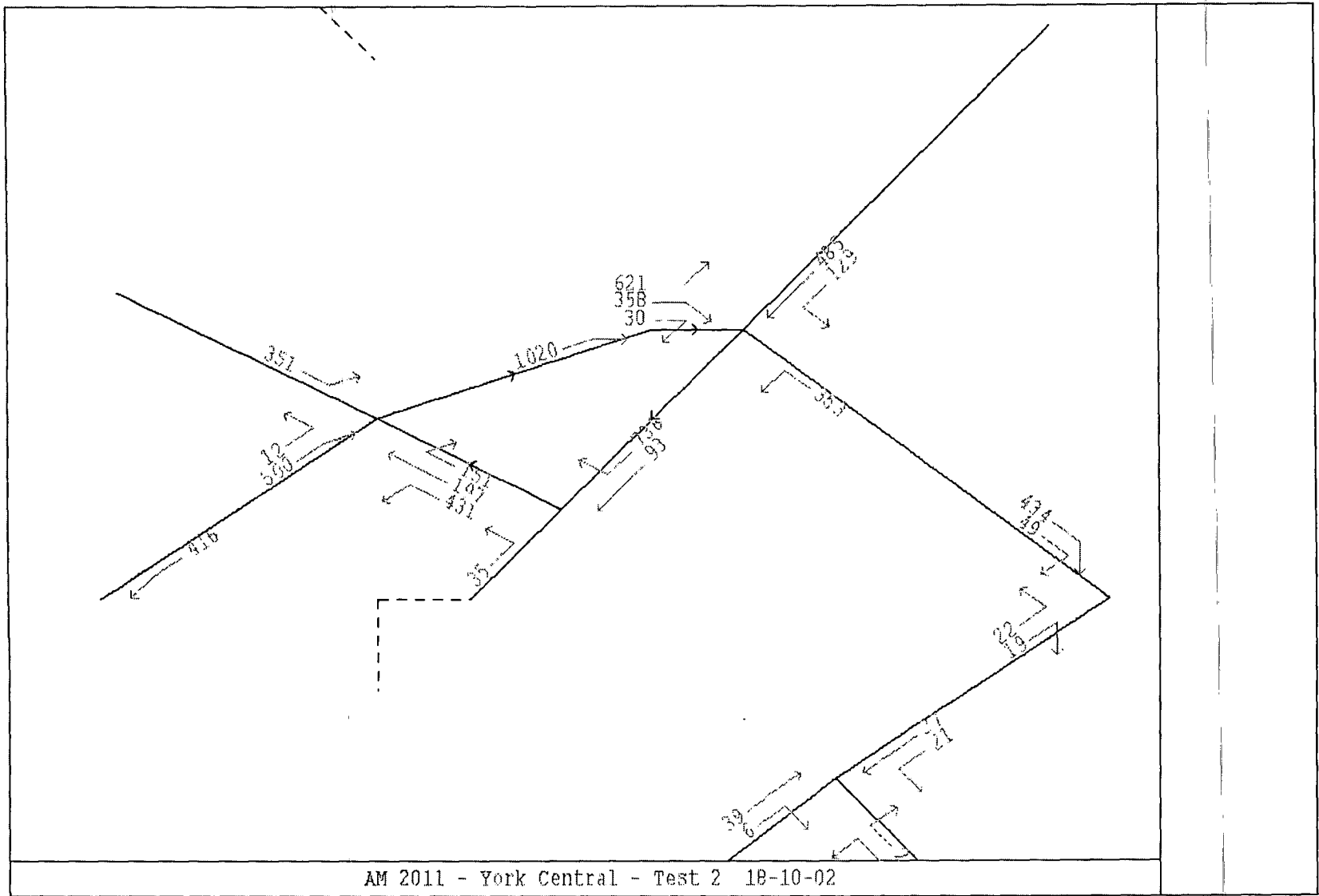
Actual flow - Scenario 5 , junction 3



Actual flow - Scenario 5, junction 4



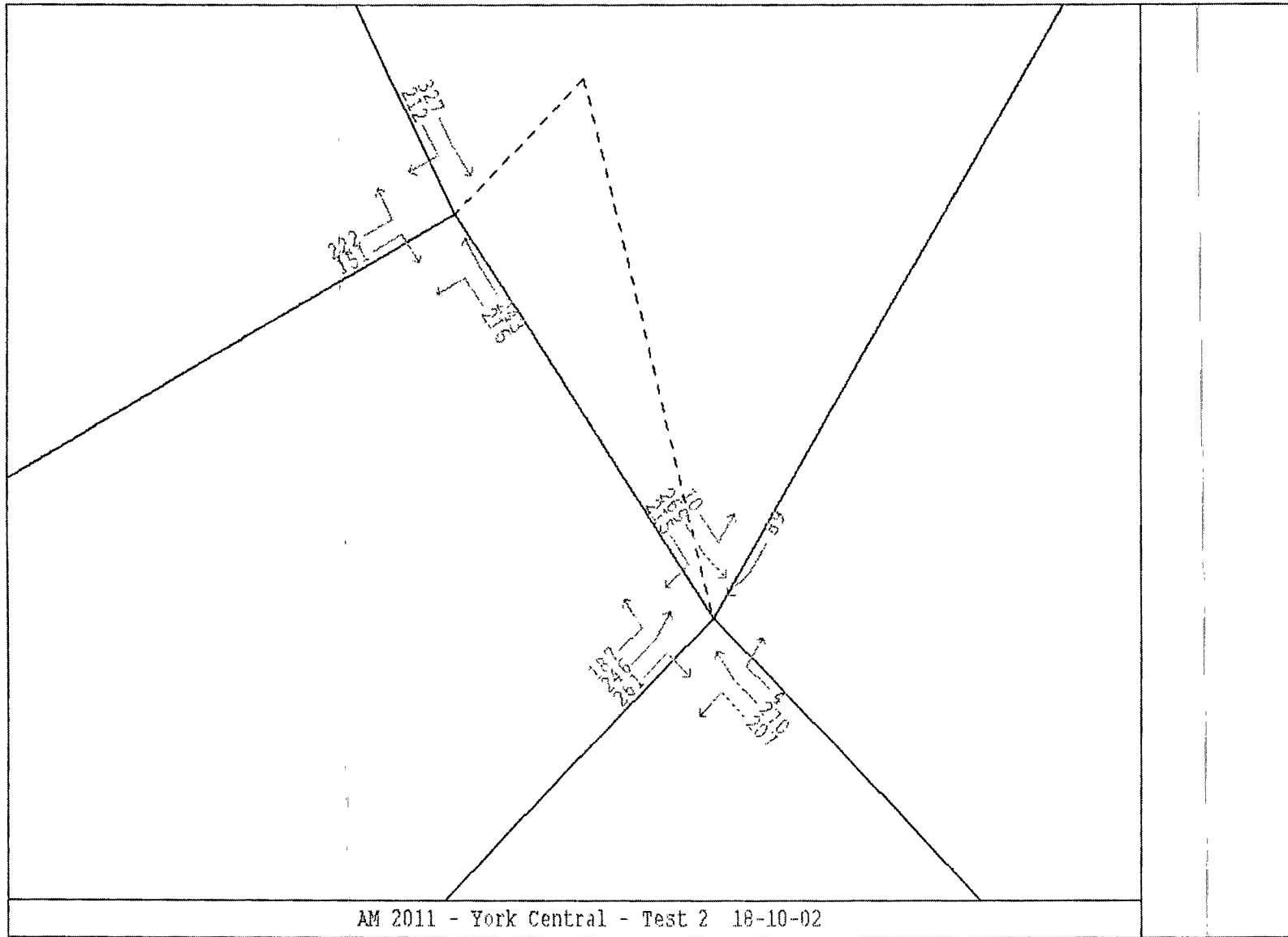
Actual flow , Scenario 5, Junction 5  
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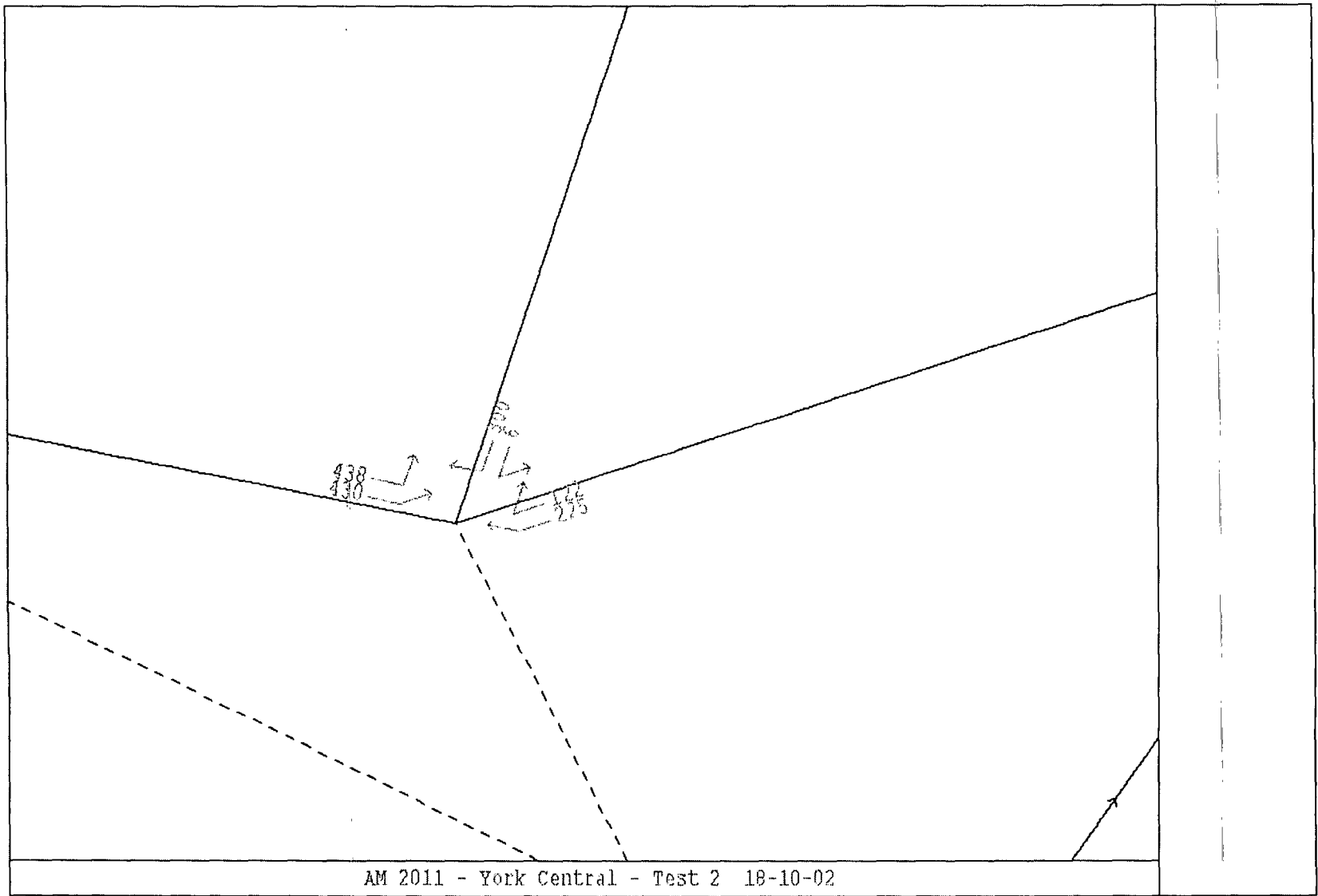
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Actual flow, Scenario 5, junction 6

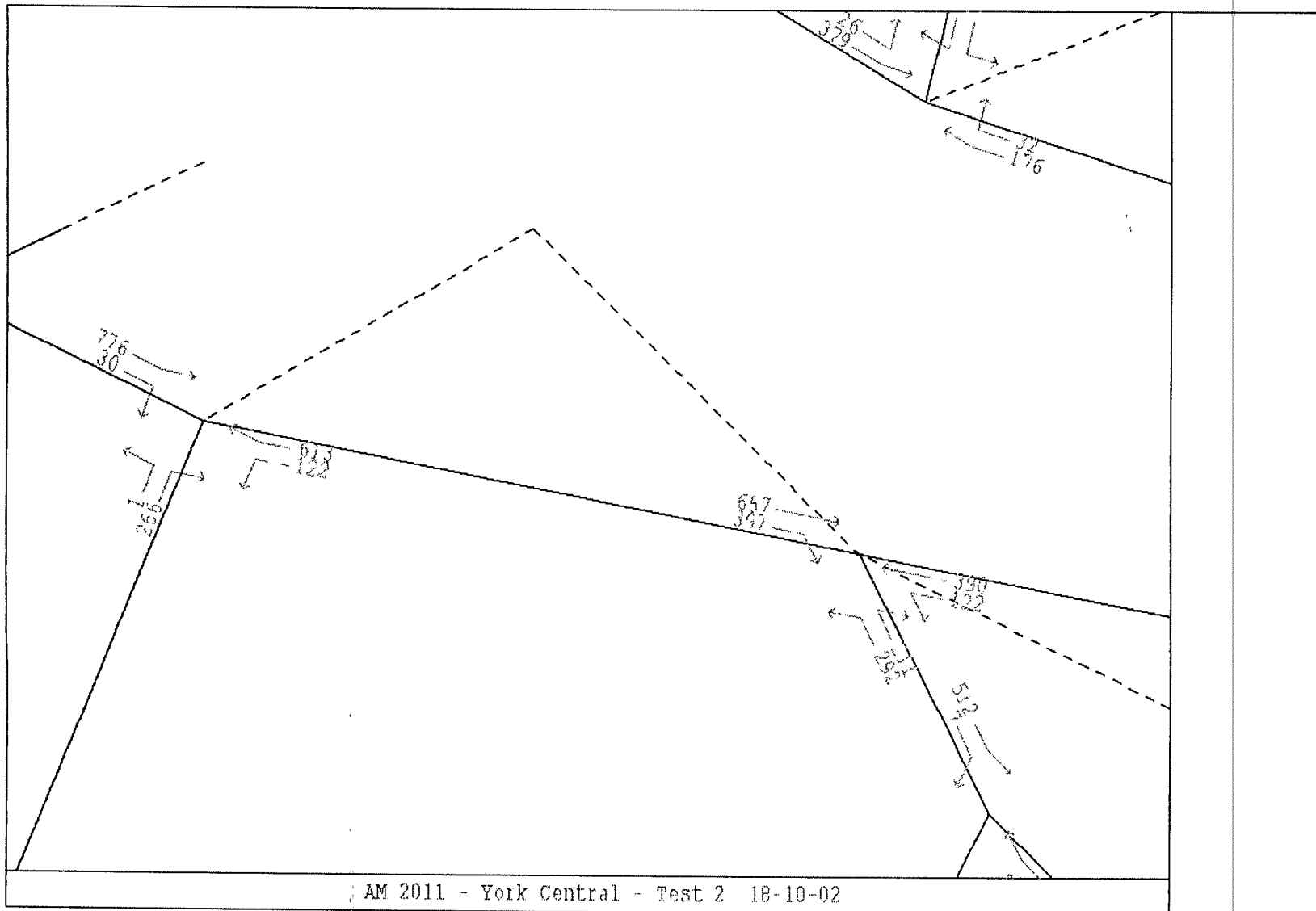




Actual flow, scenario 5, junction 7 & 8

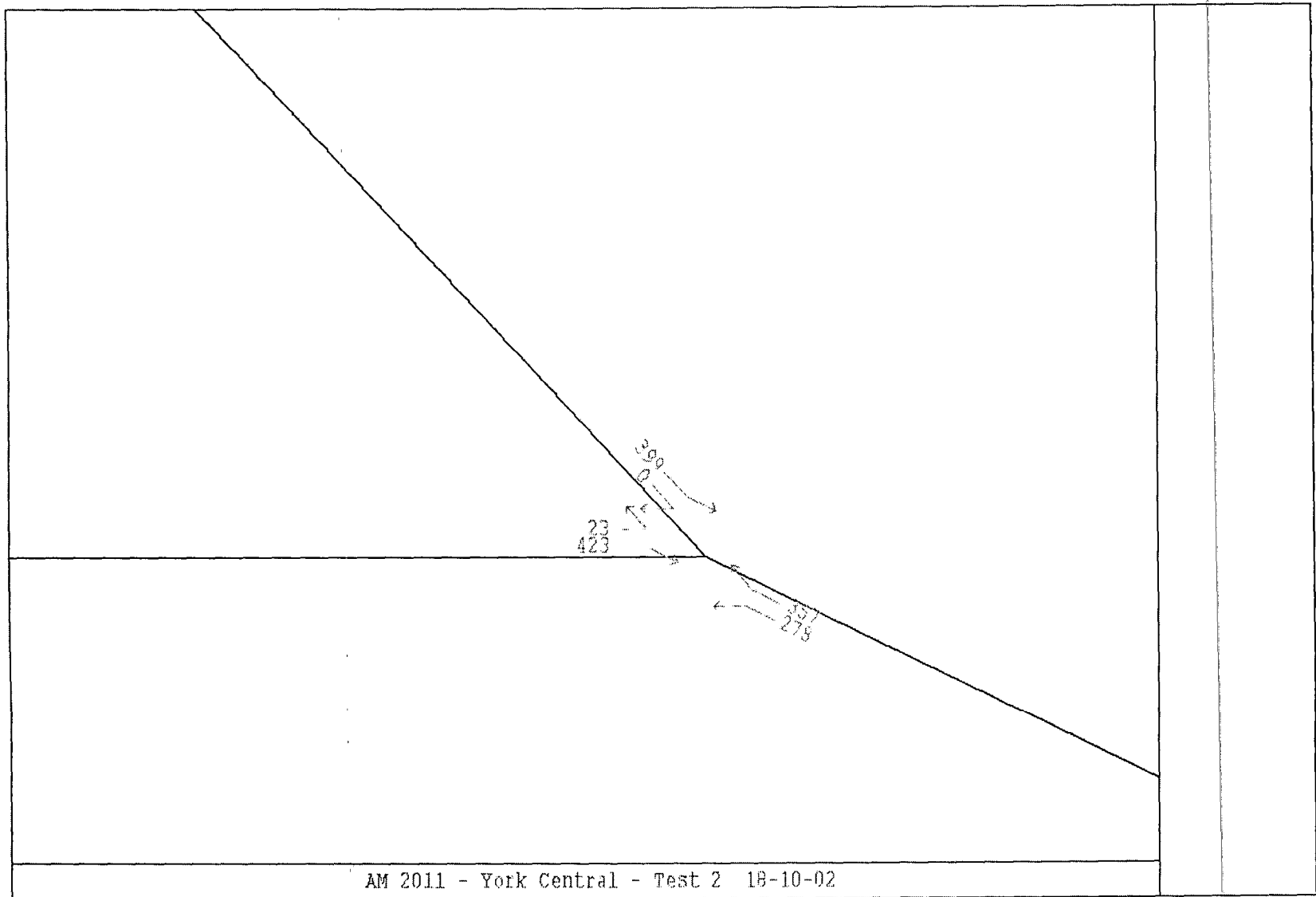


Actual flow, Scenario 5, junction 9



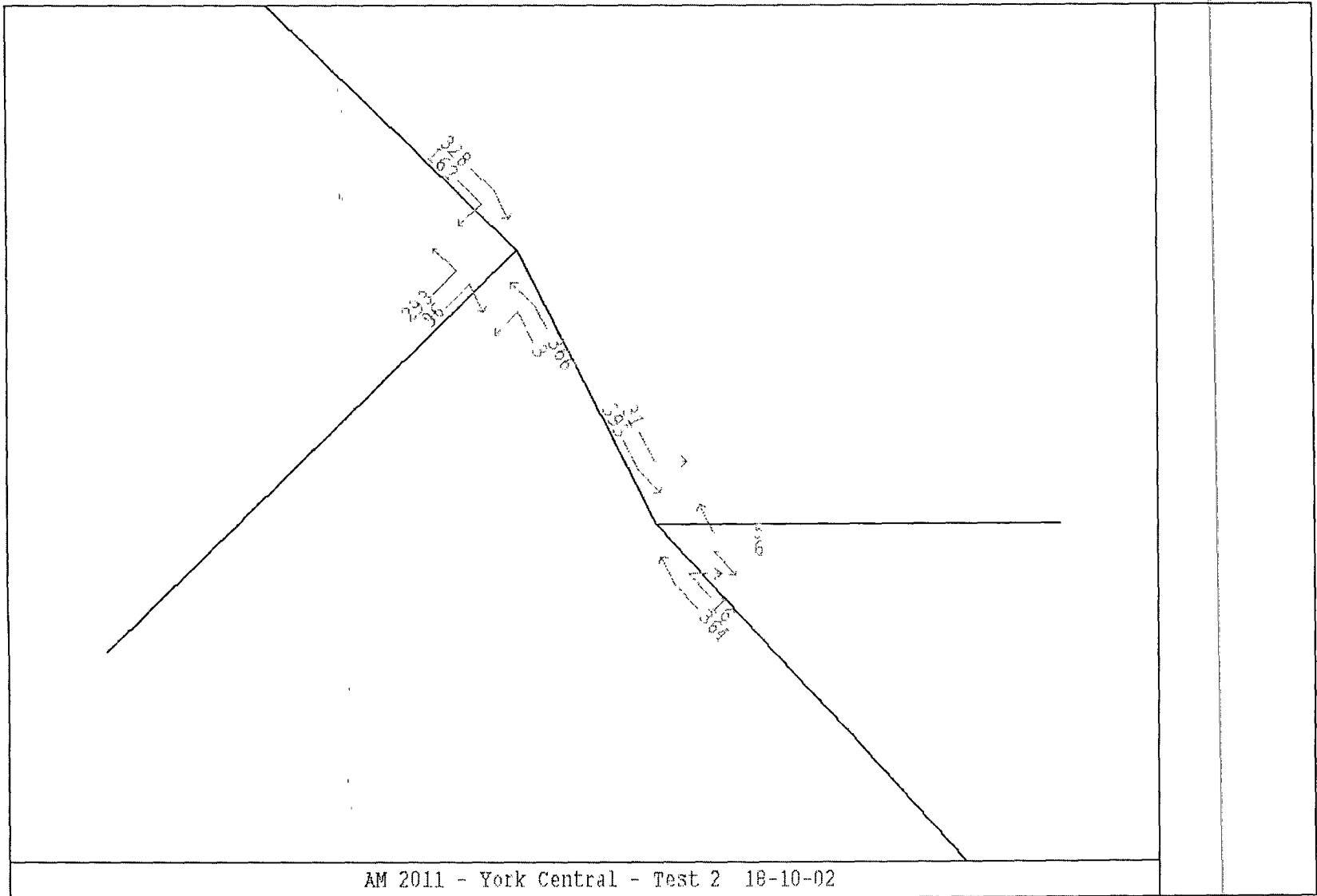
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Actual flow, Scenario 5, junction 10 & 11



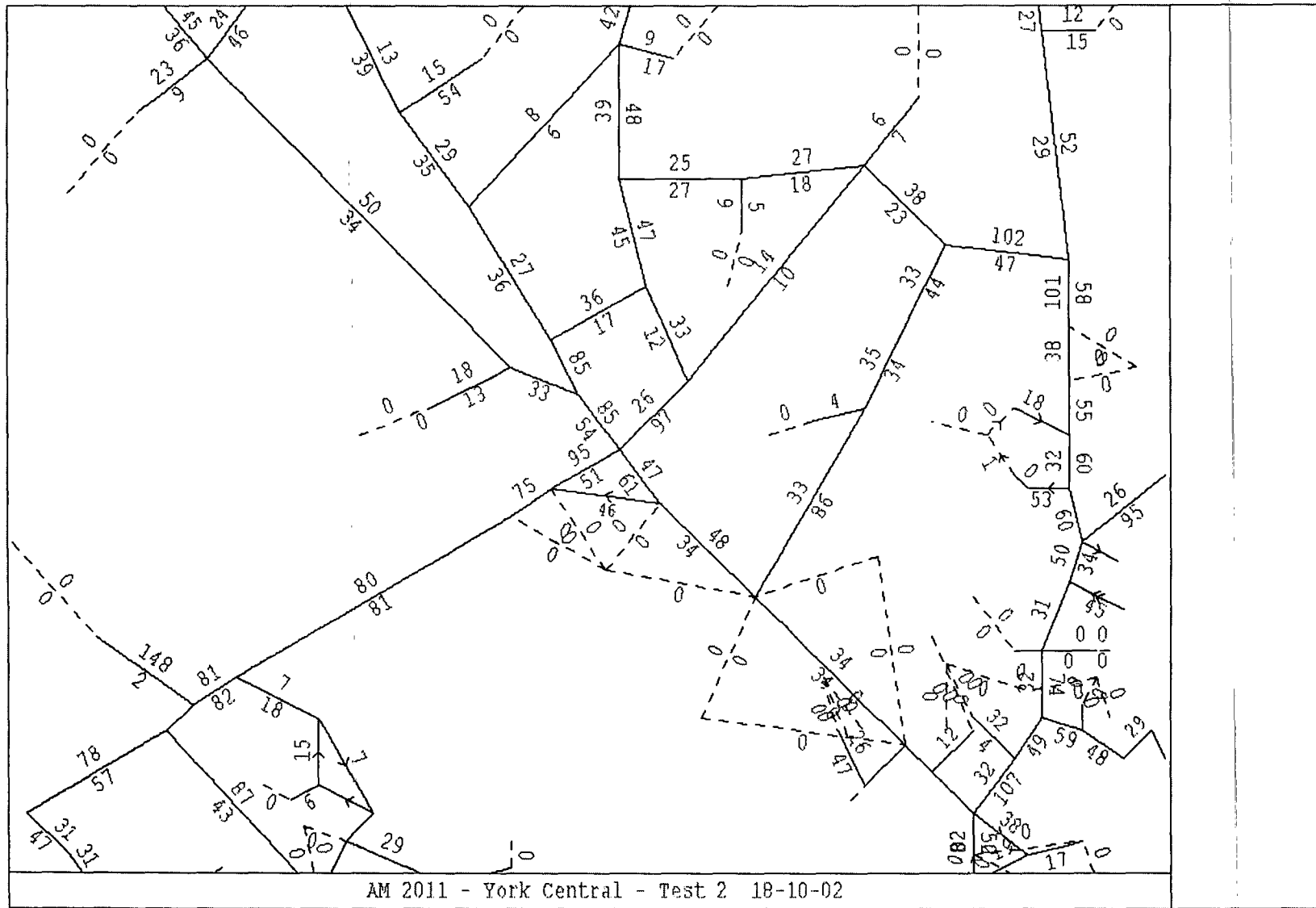
Actual flow, scenario 5, junction 12

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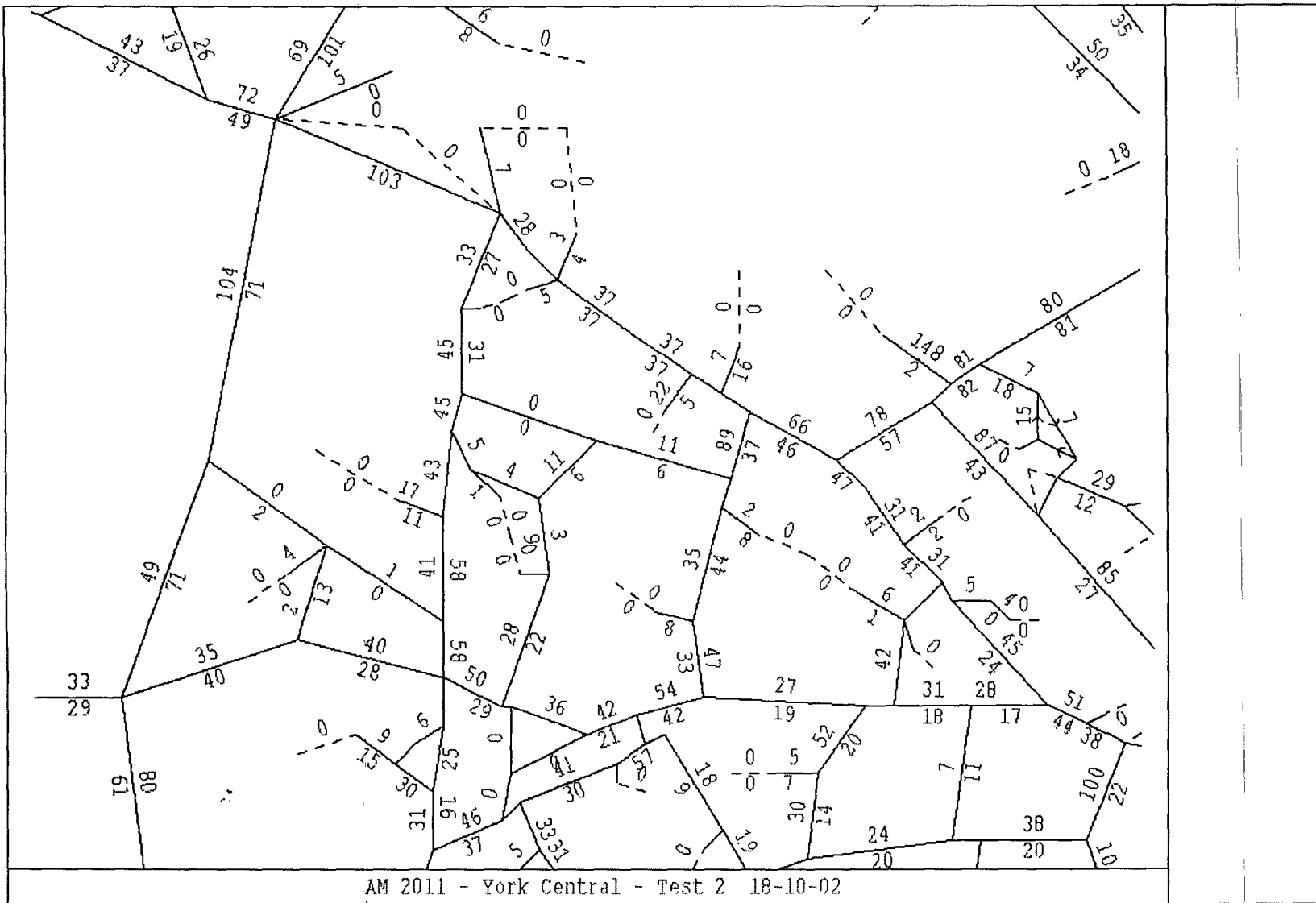


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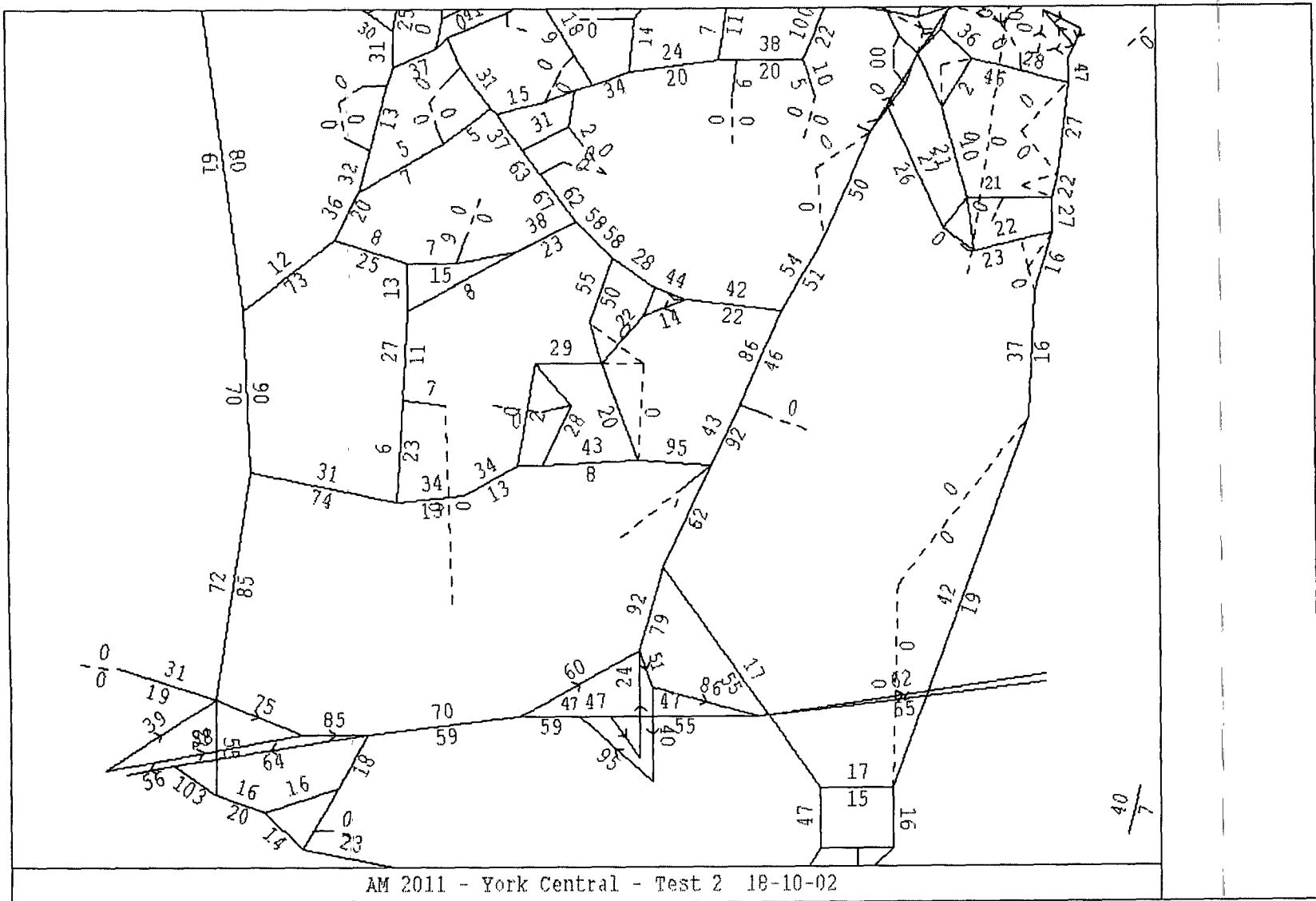
Actual flow, scenario 5, junction 13 & 14



V/C (per cent) Scenario 5 (1 of 4)

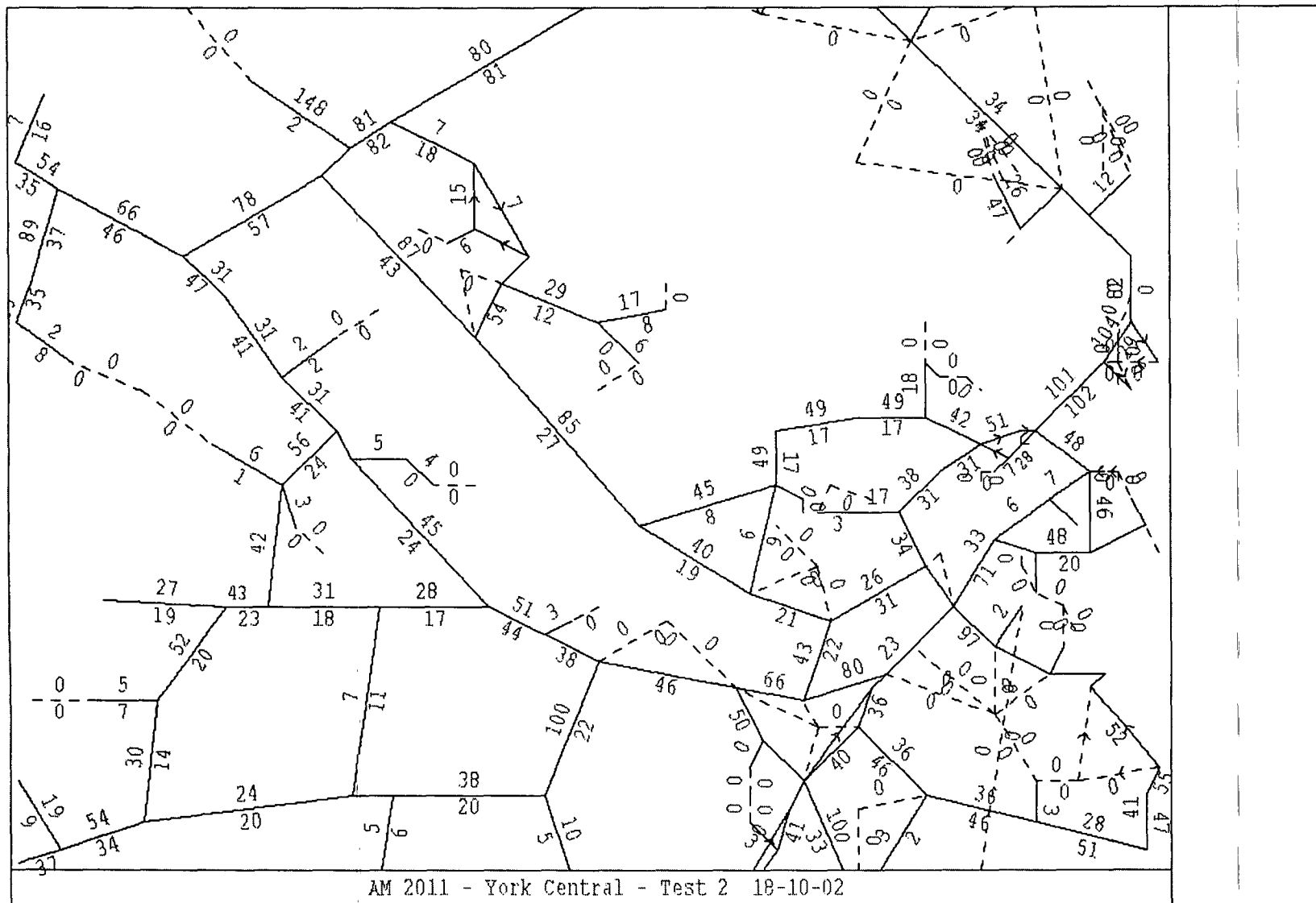


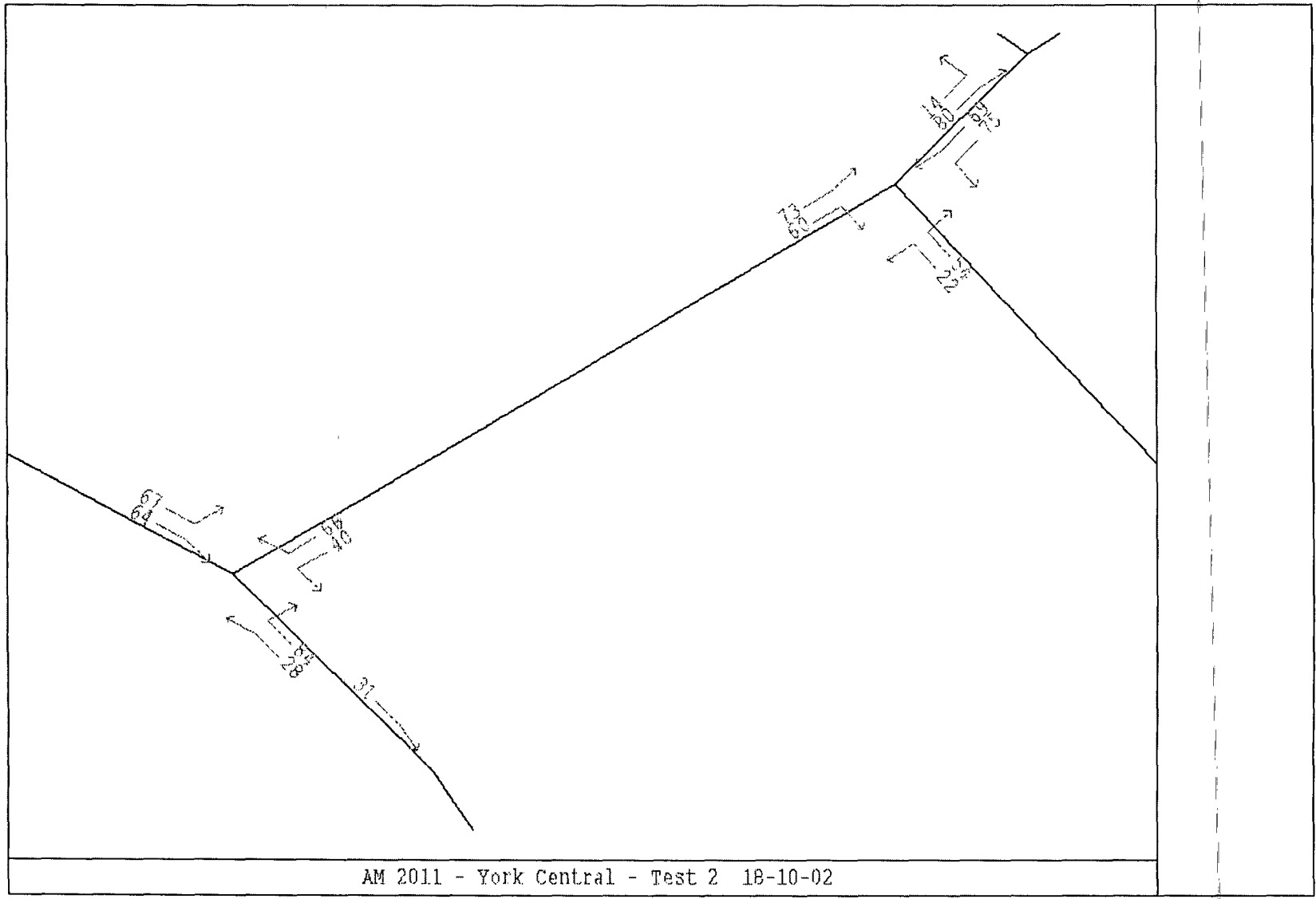
V/C (per cent) Scenario 5, (2 of 4)



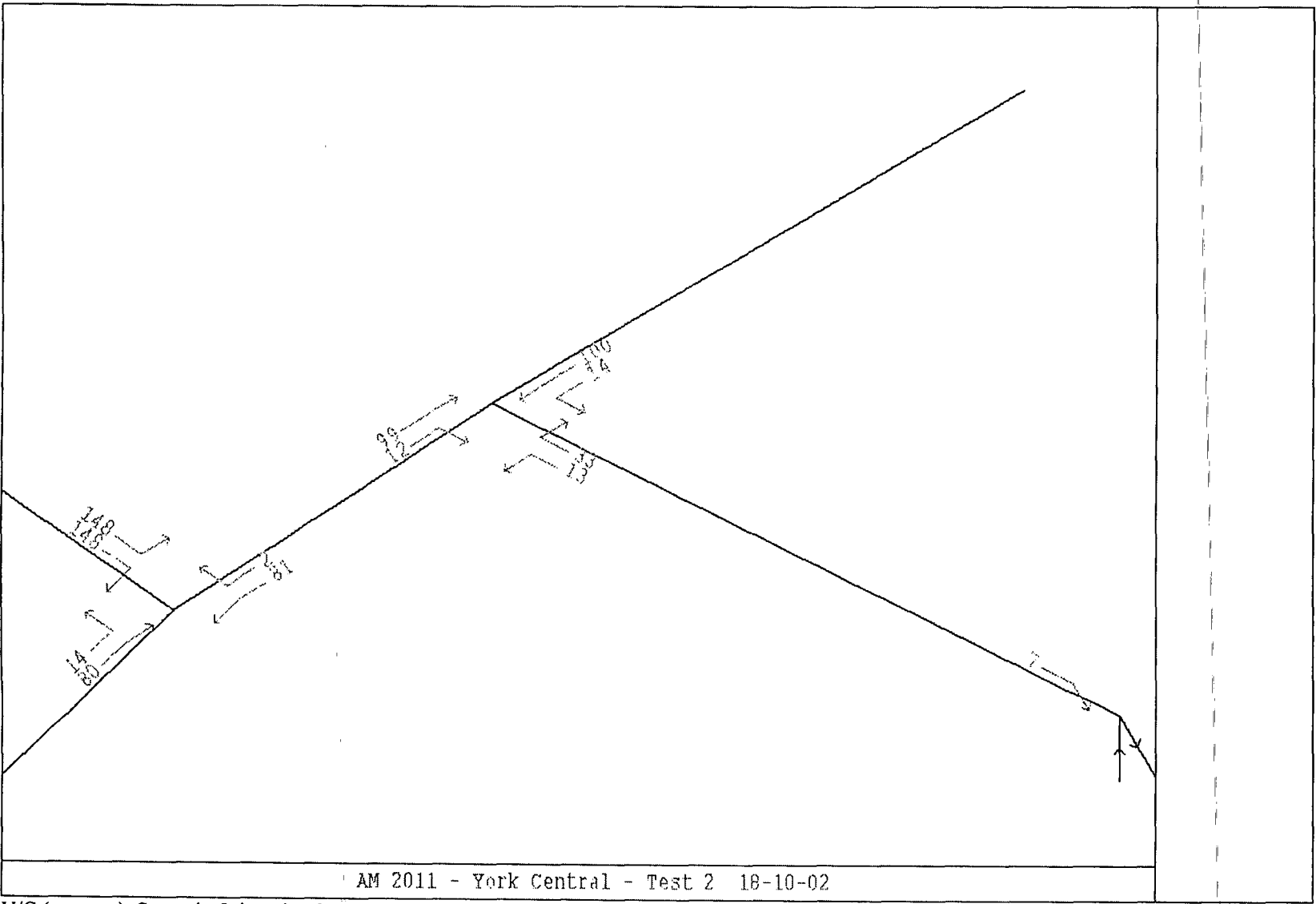
V/C (per cent) , Scenario 5, (3 of 4)





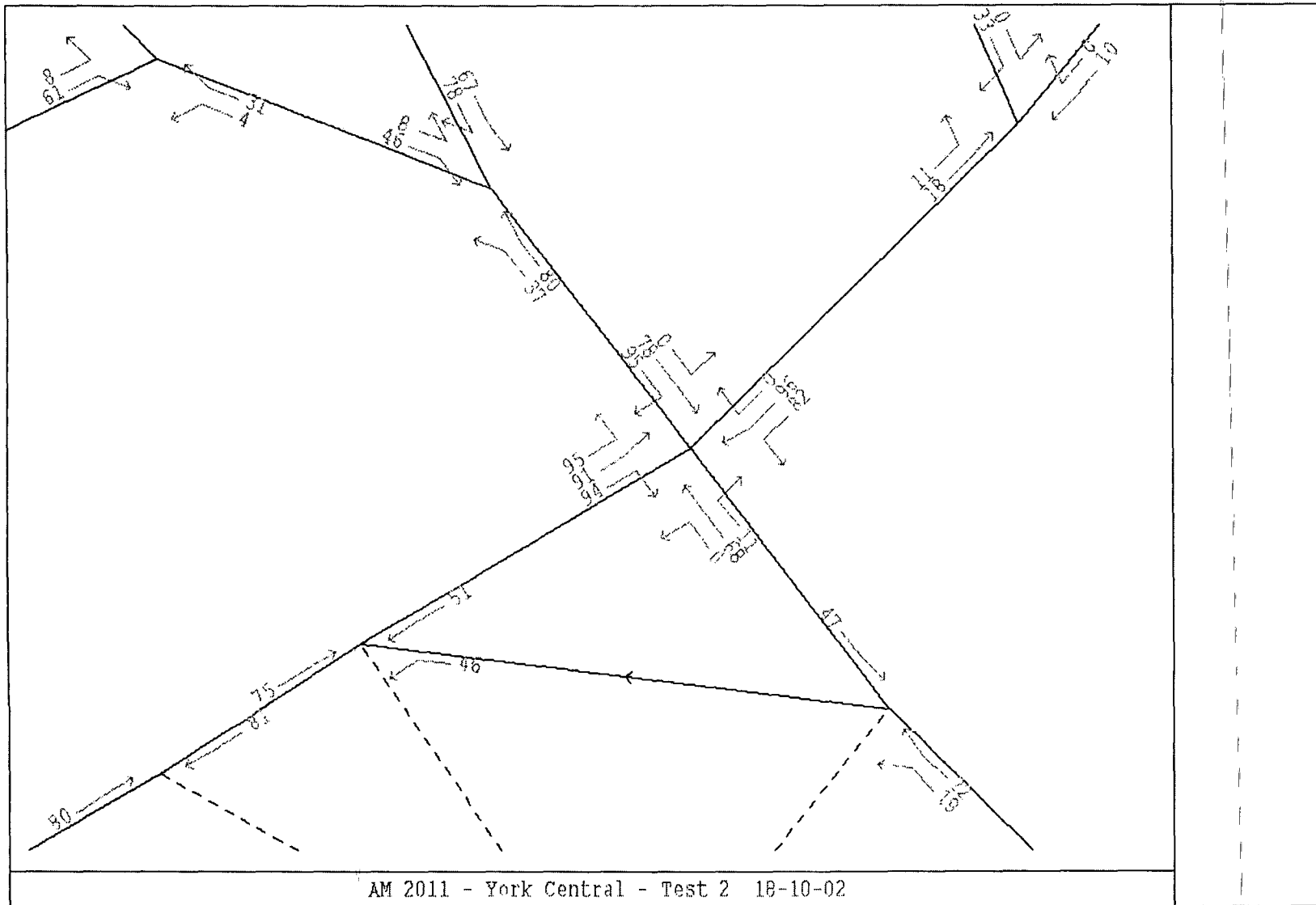


V/C (per cent), Scenario 5, junction 1 & 2

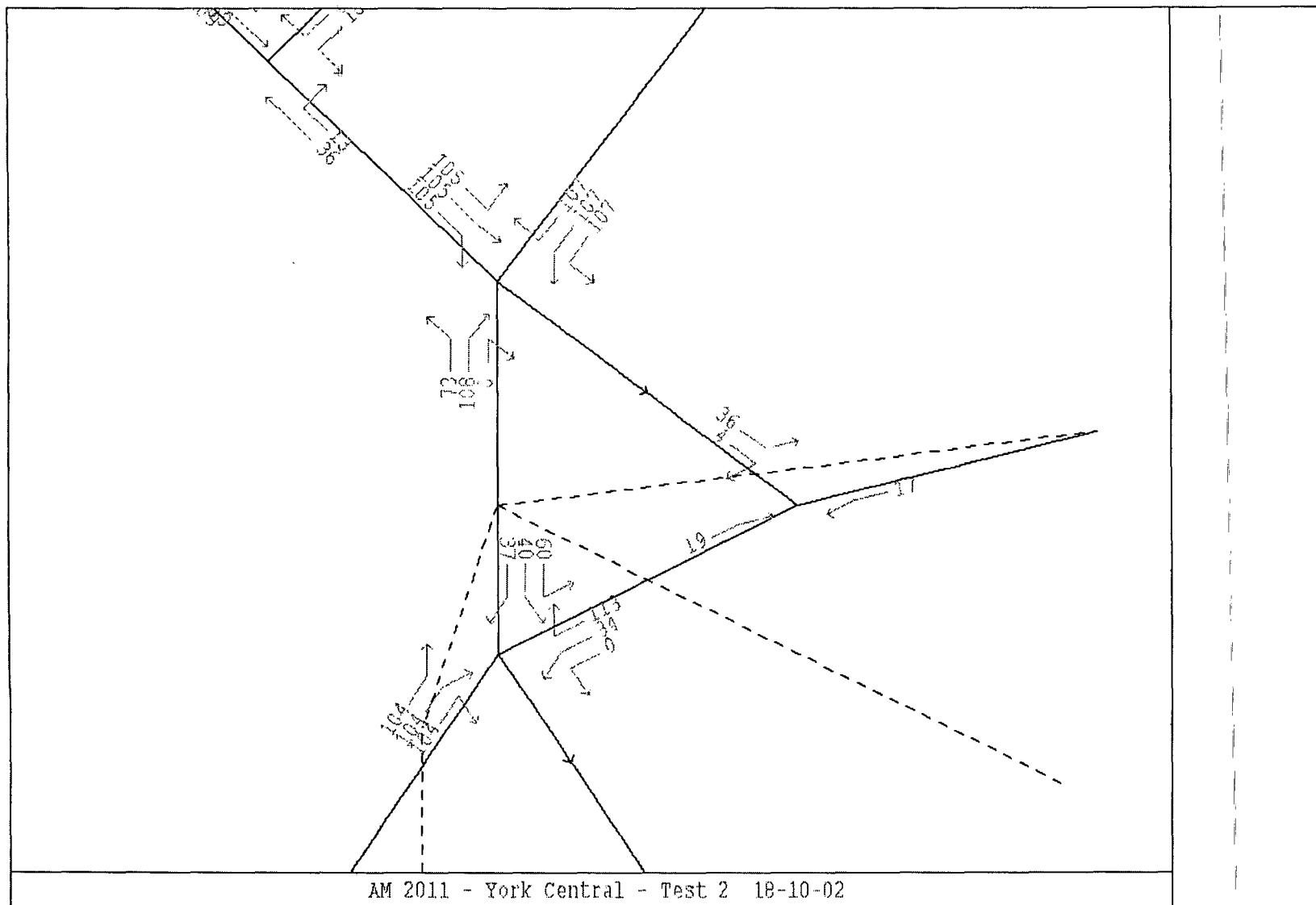


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V/C (per cent), Scenario 5, junction 3

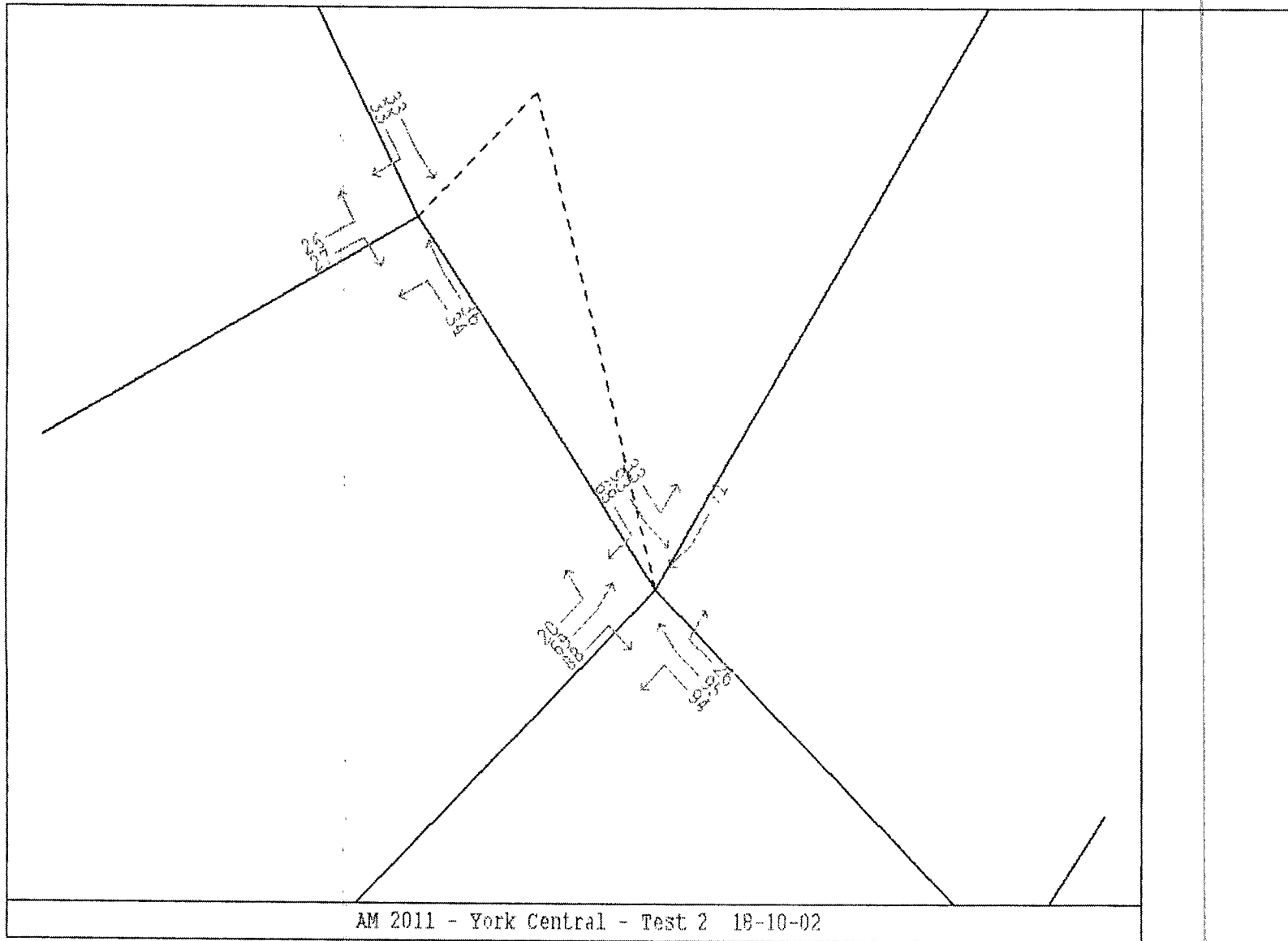


V/C (per cent), Scenario 5, Junction 4



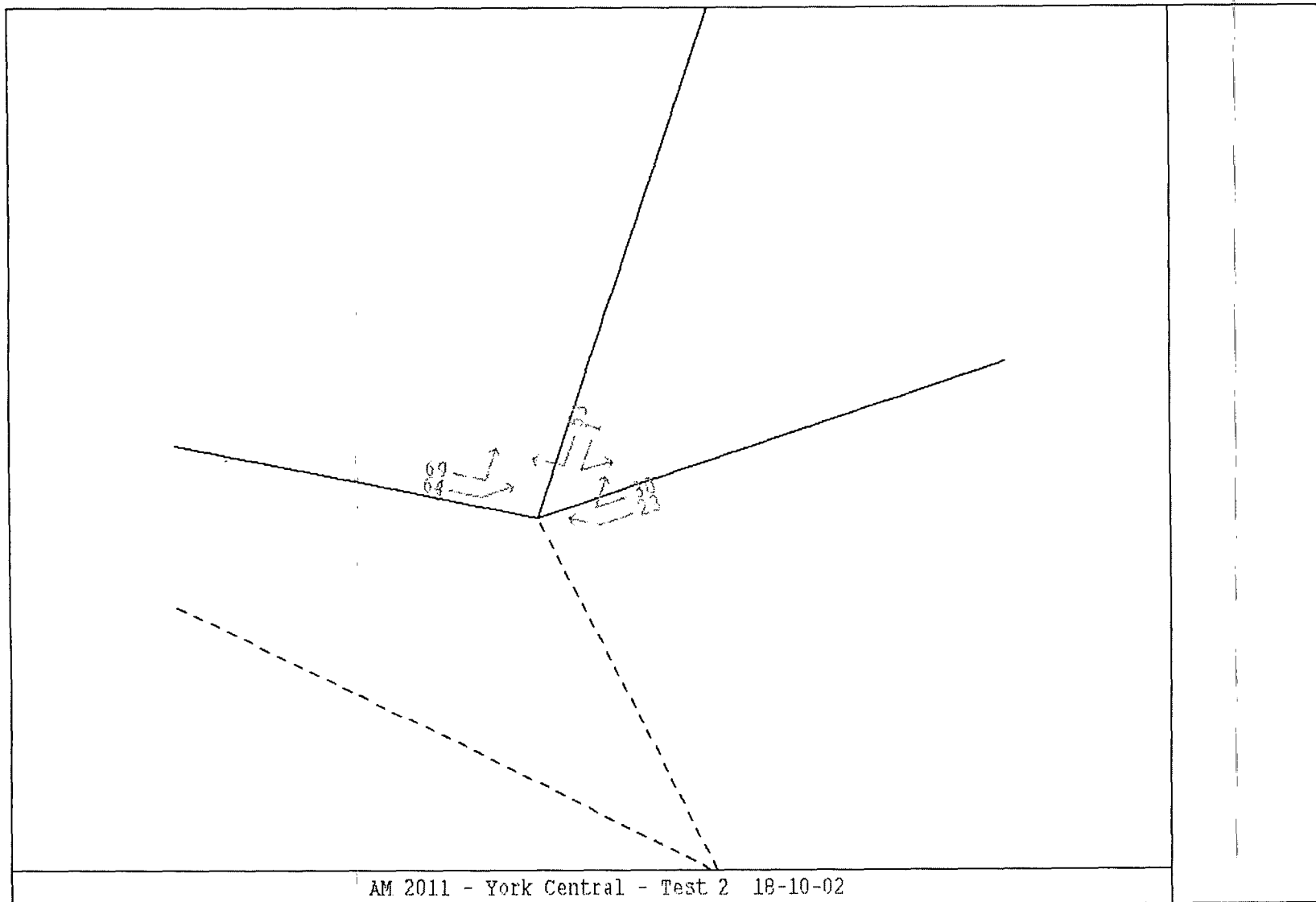
V/C (per cent), Scenario 5, Junction 5





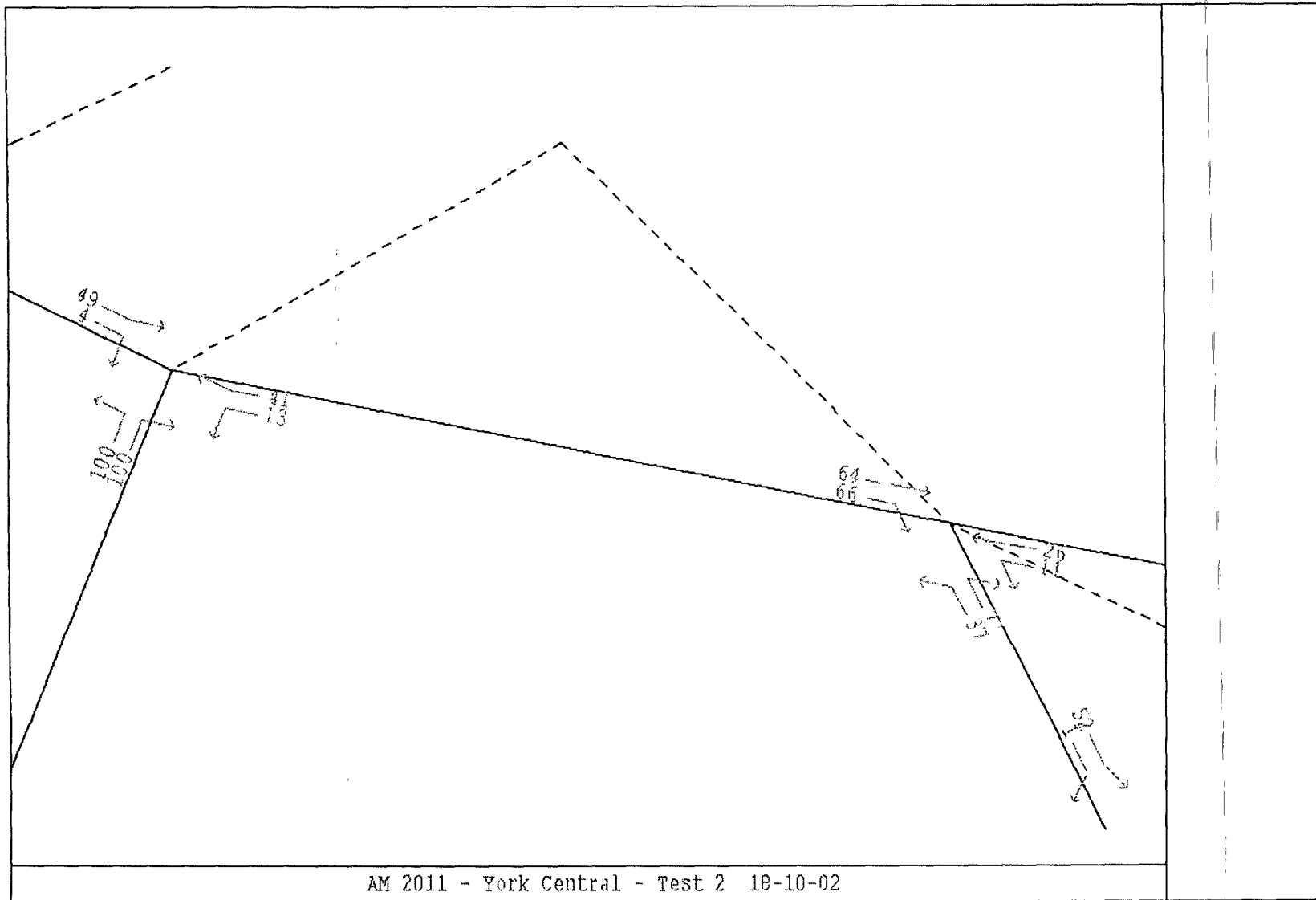
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V/C (per cent), Scenario 5, junction 7 & 8

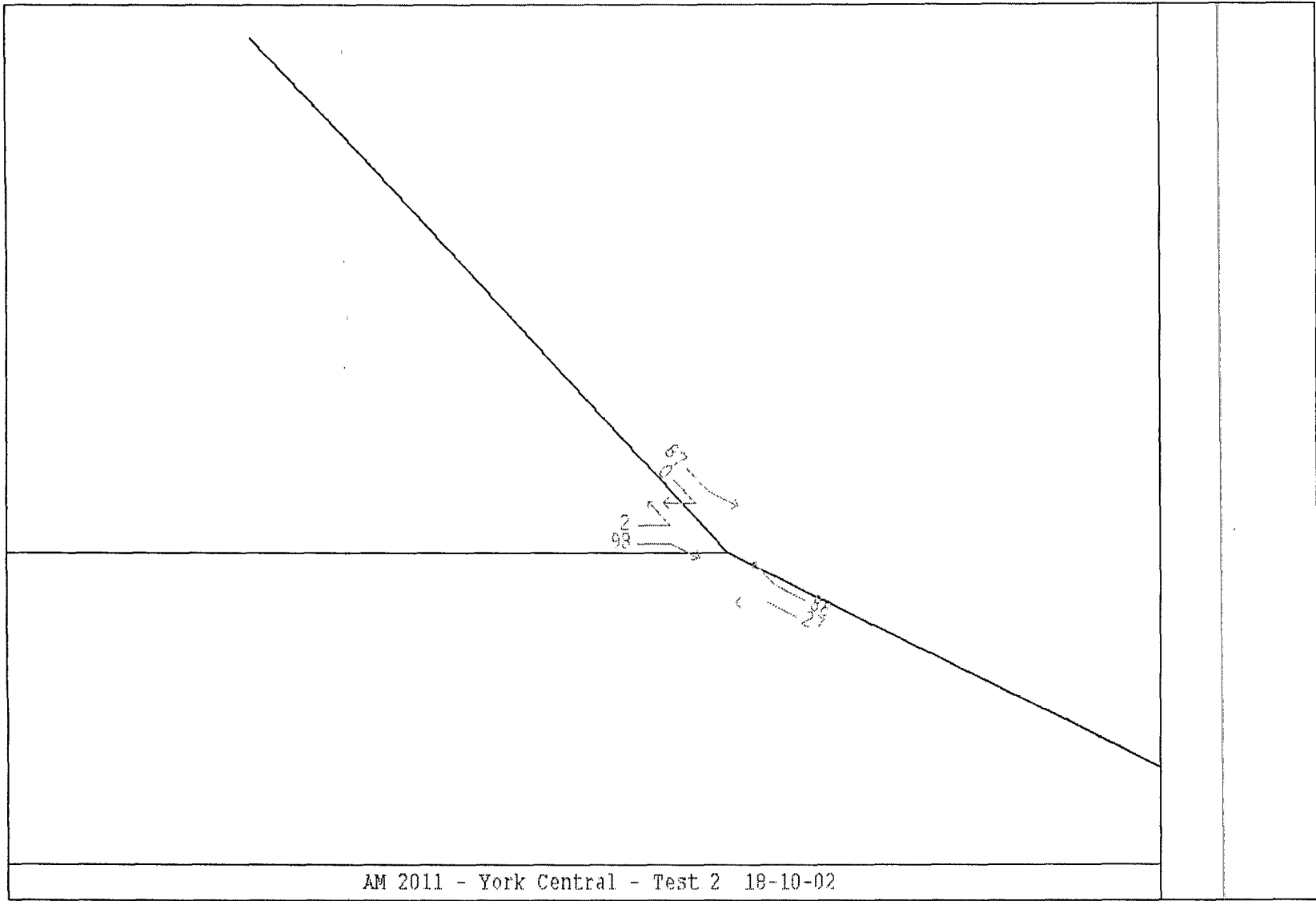


V/C (per cent), Scenario 5, junction 9



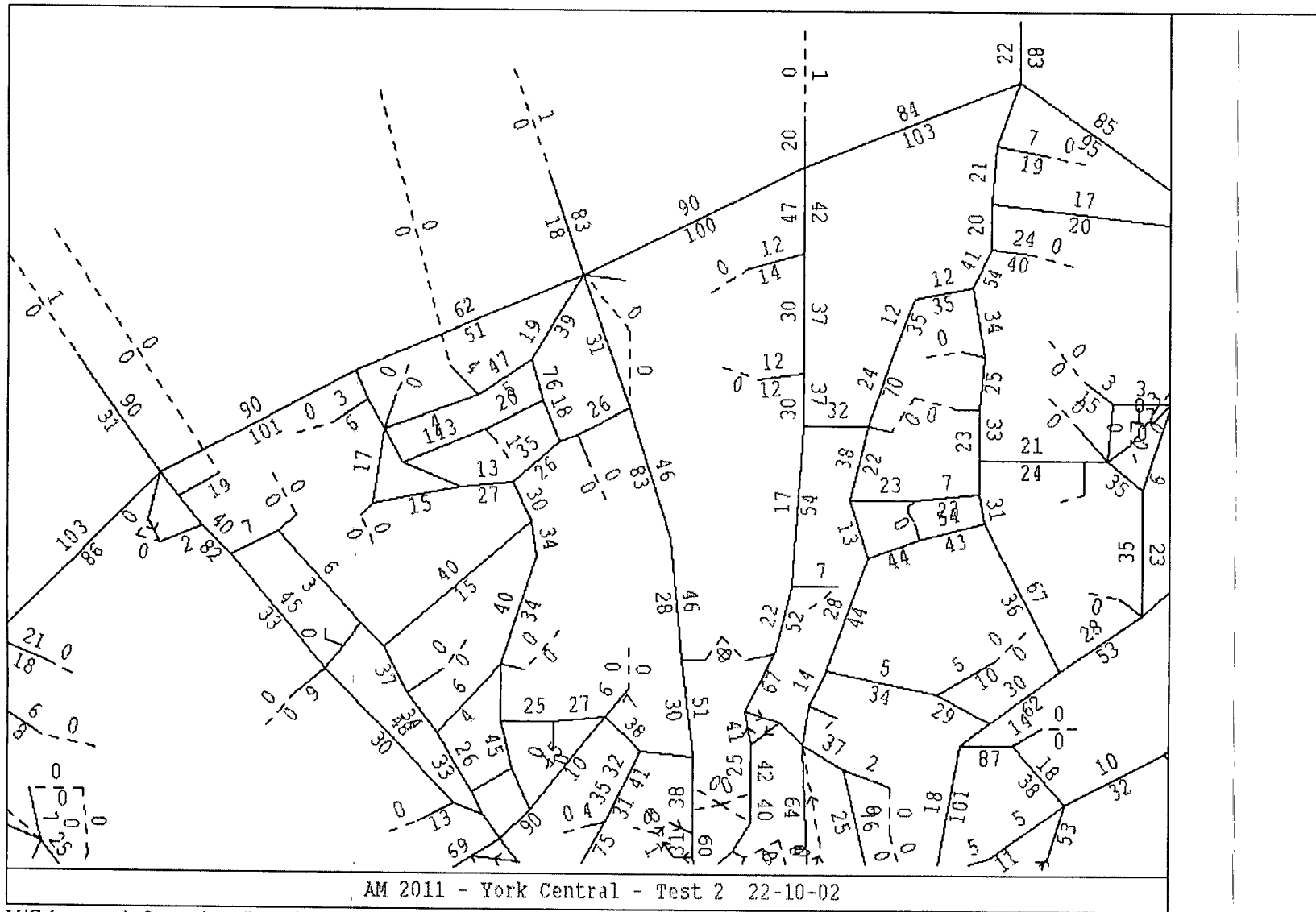


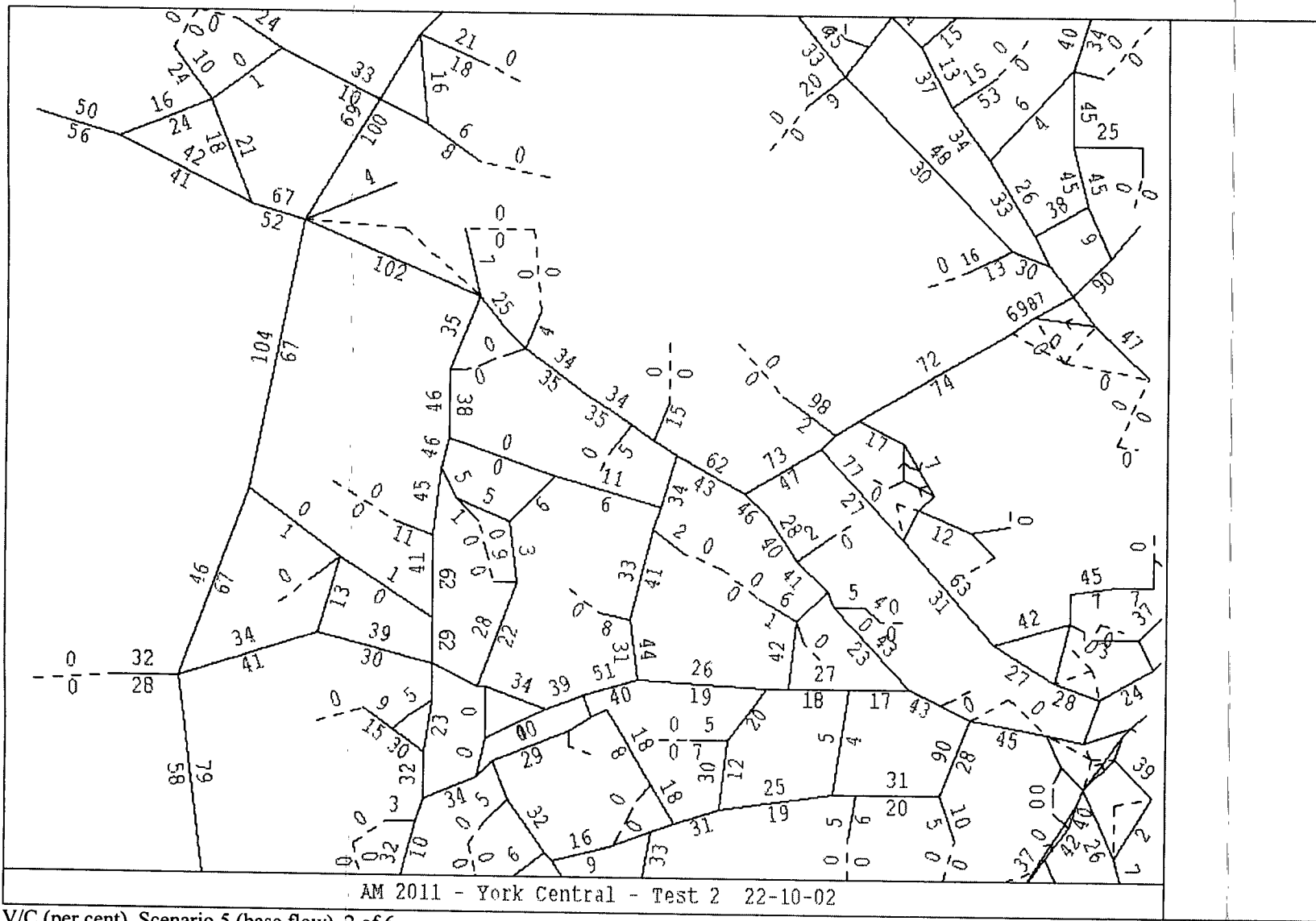
V/C (per cent), Scenario 5, junction 10 & 11



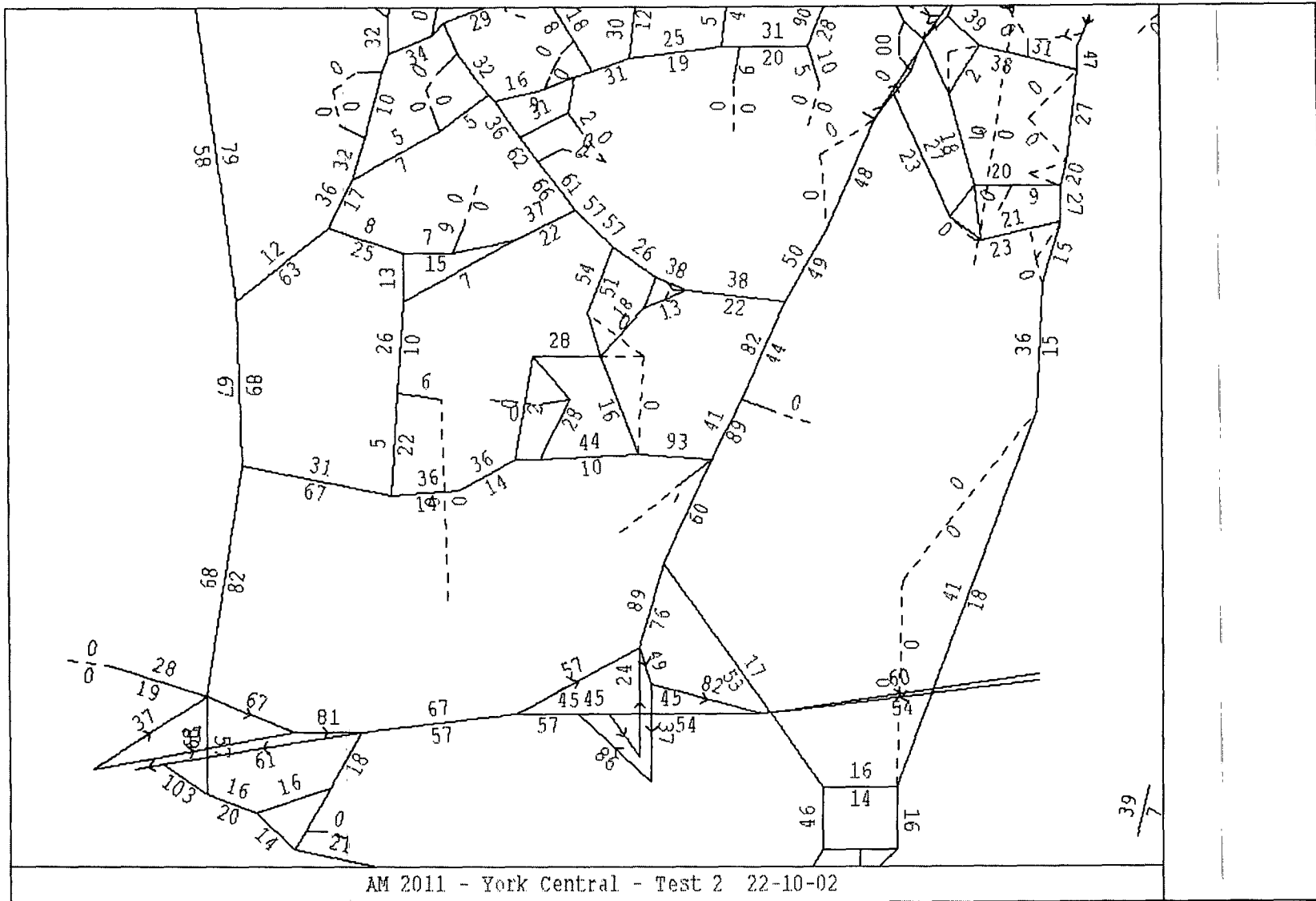
V/C (per cent), Scenario 5, junction 12

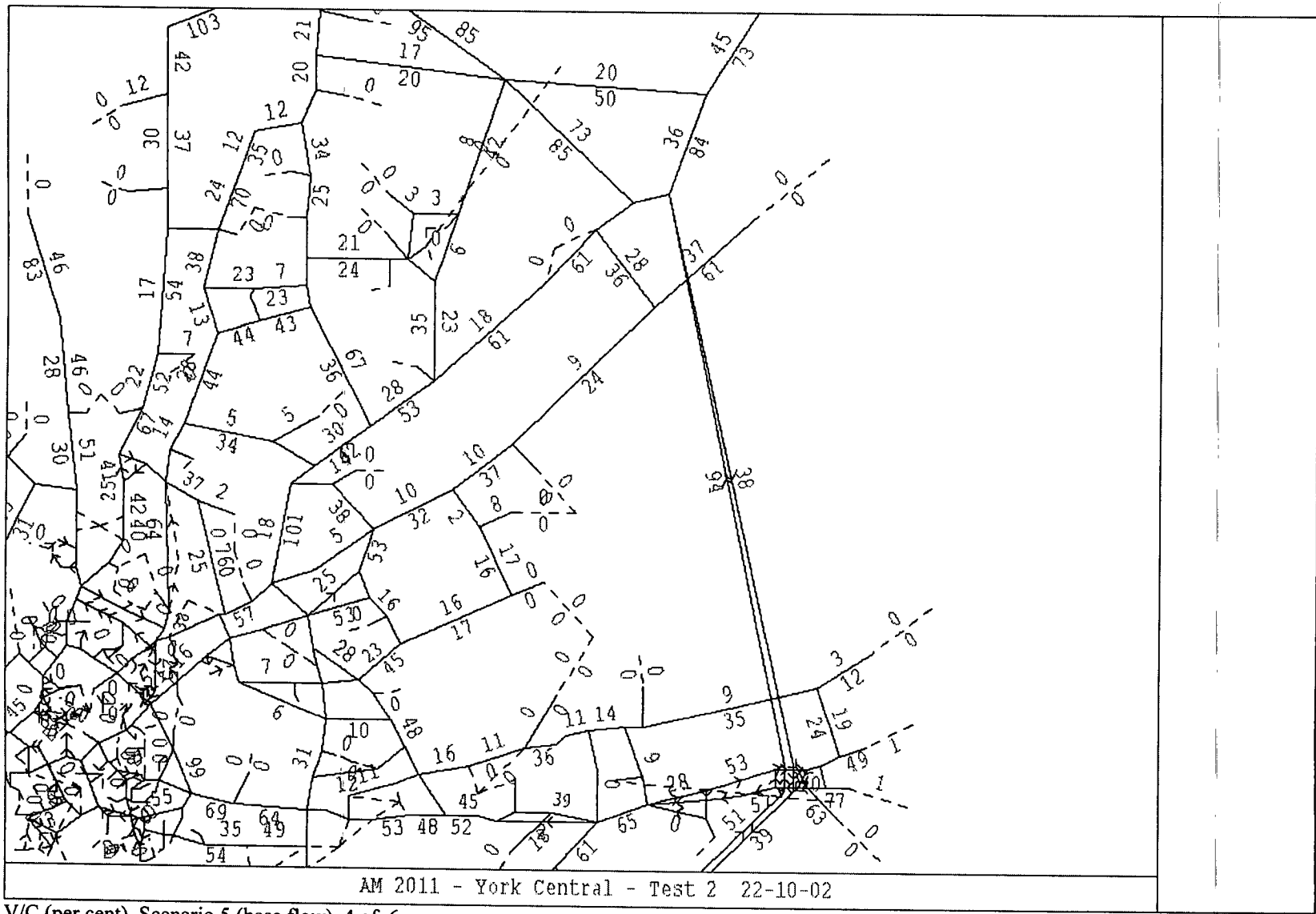






V/C (per cent), Scenario 5 (base flow), 2 of 6

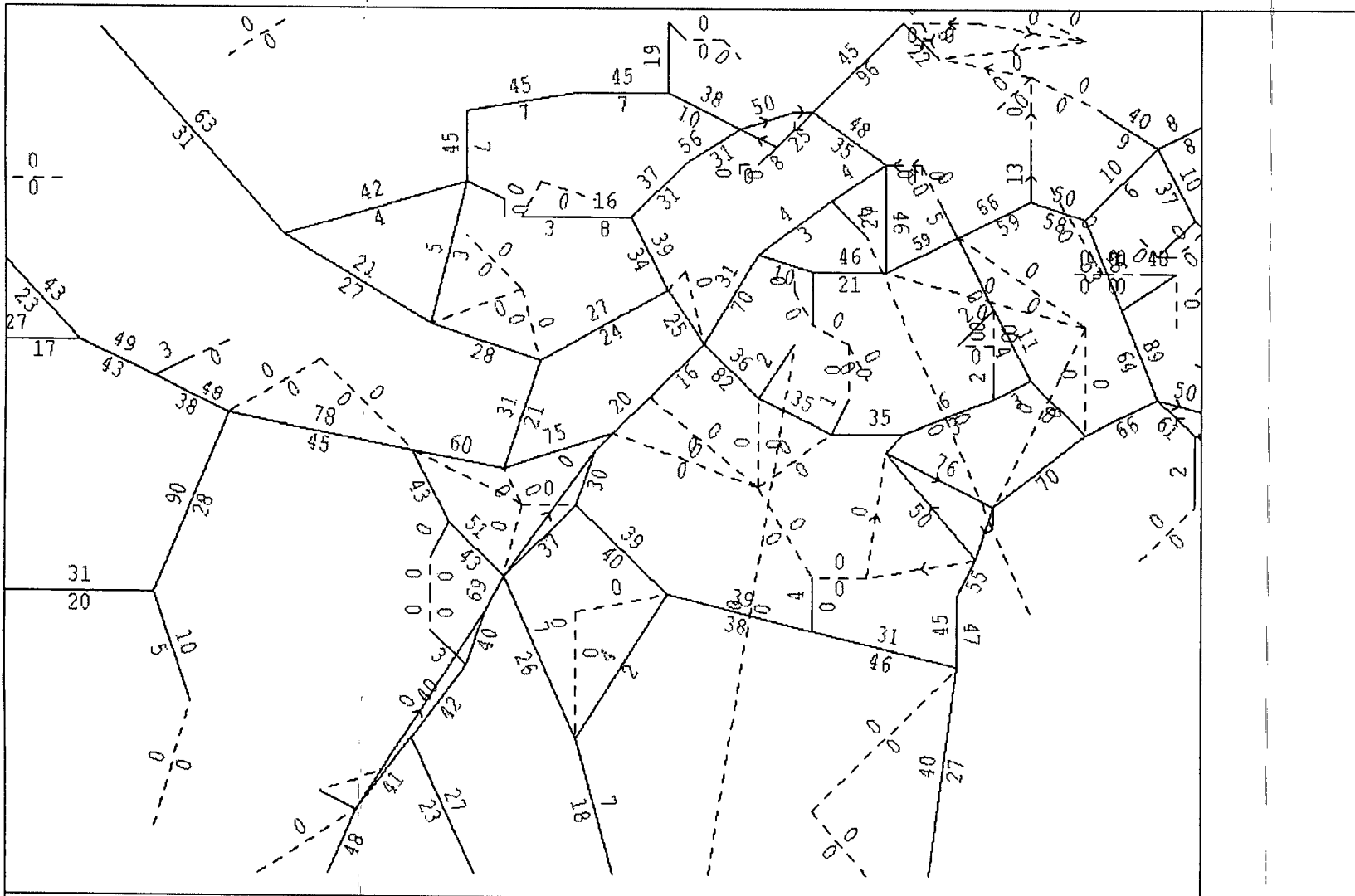




V/C (per cent), Scenario 5 (base flow), 4 of 6

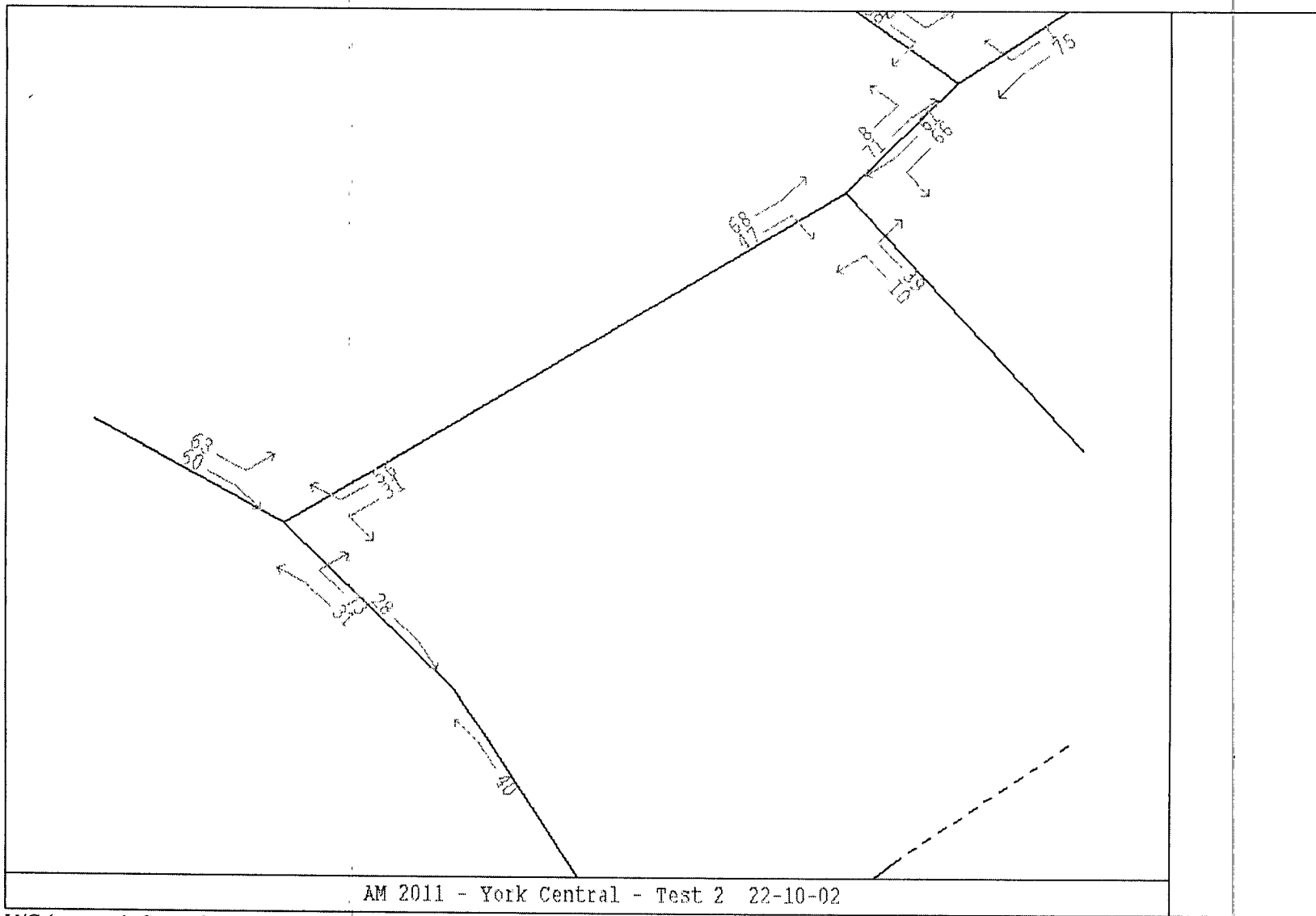




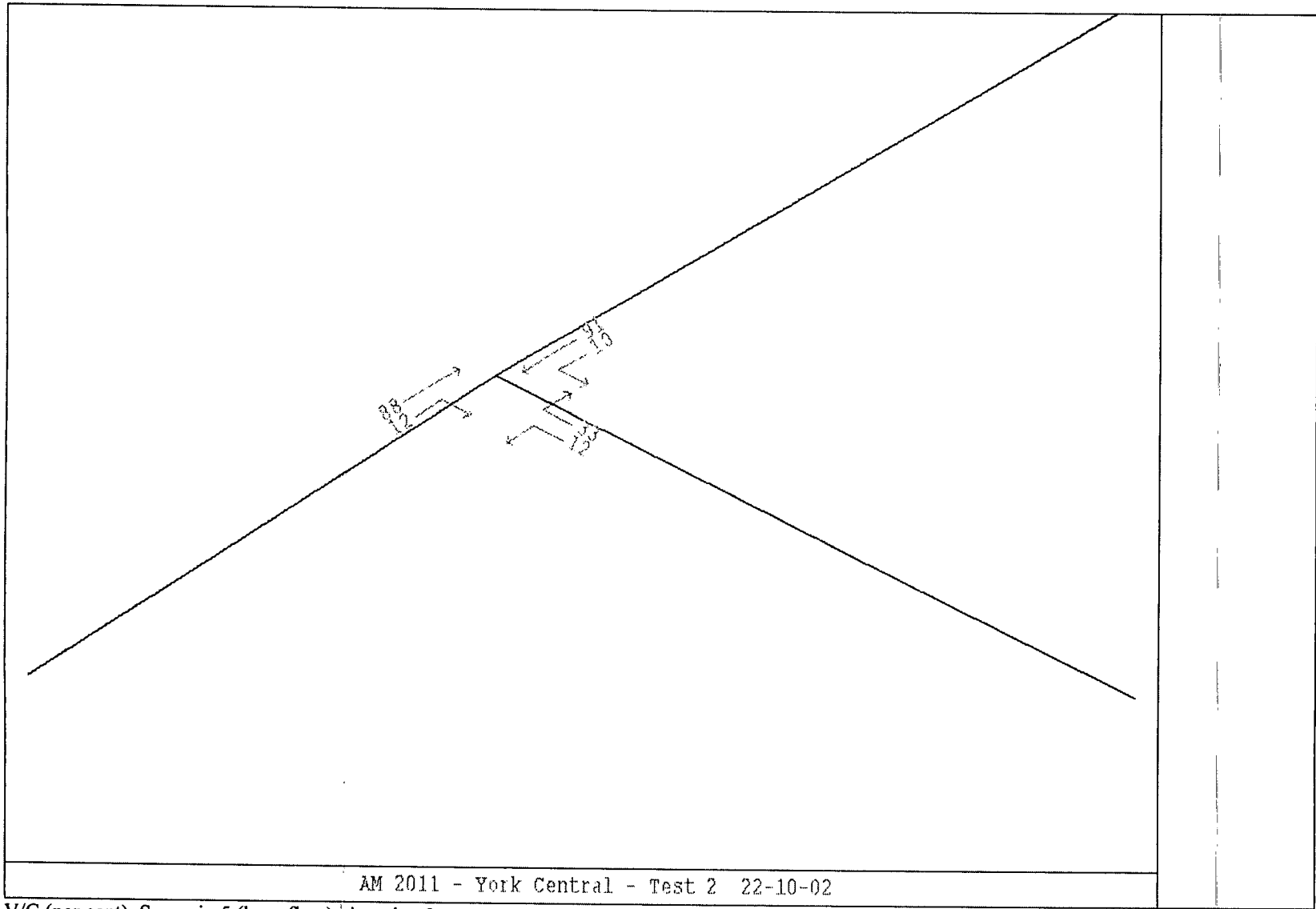


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V/C (per cent), Scenario 5 (base flow), 6 of 6

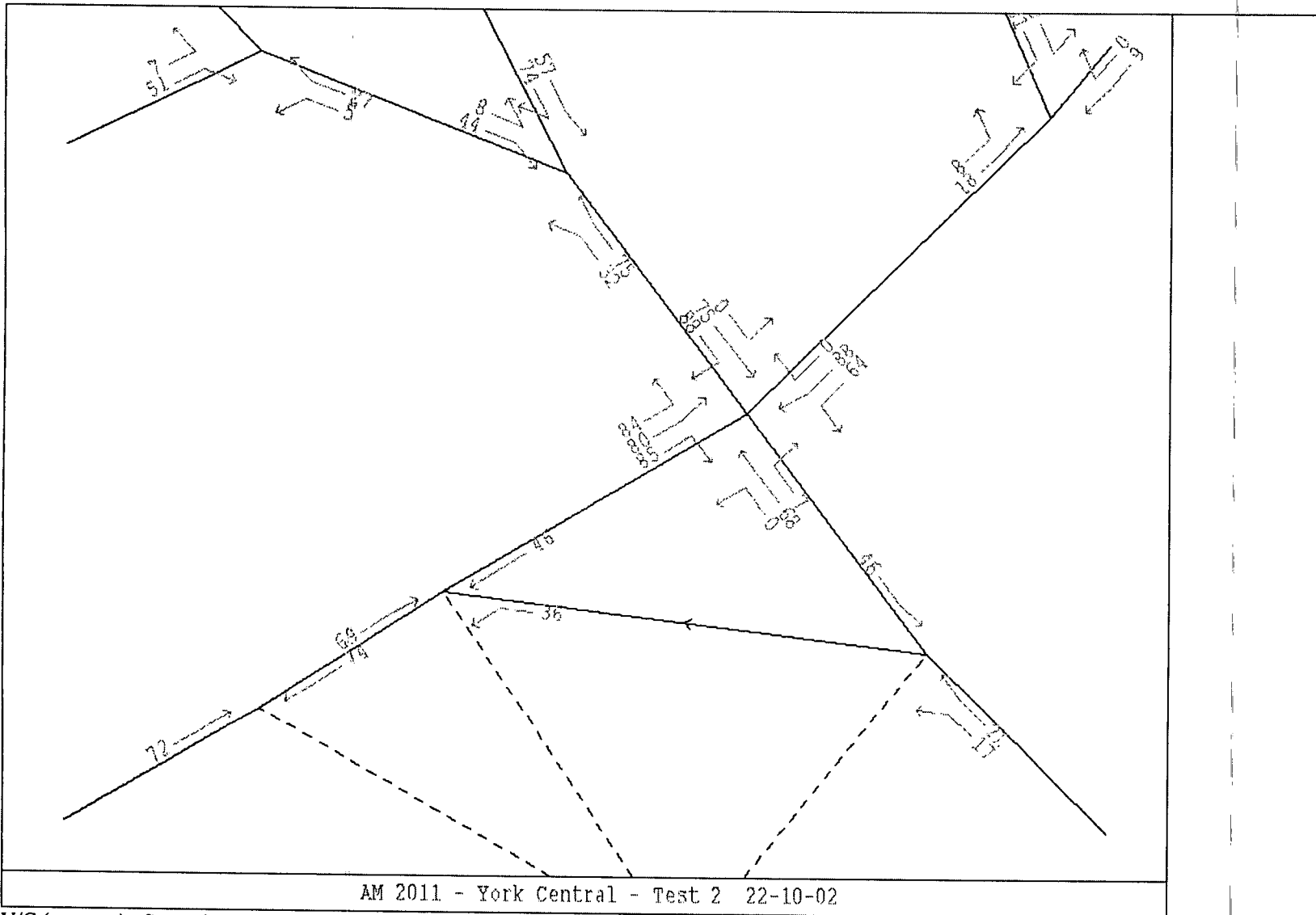


V/C (per cent), Scenario 5 (base flow), junction 1 & 2

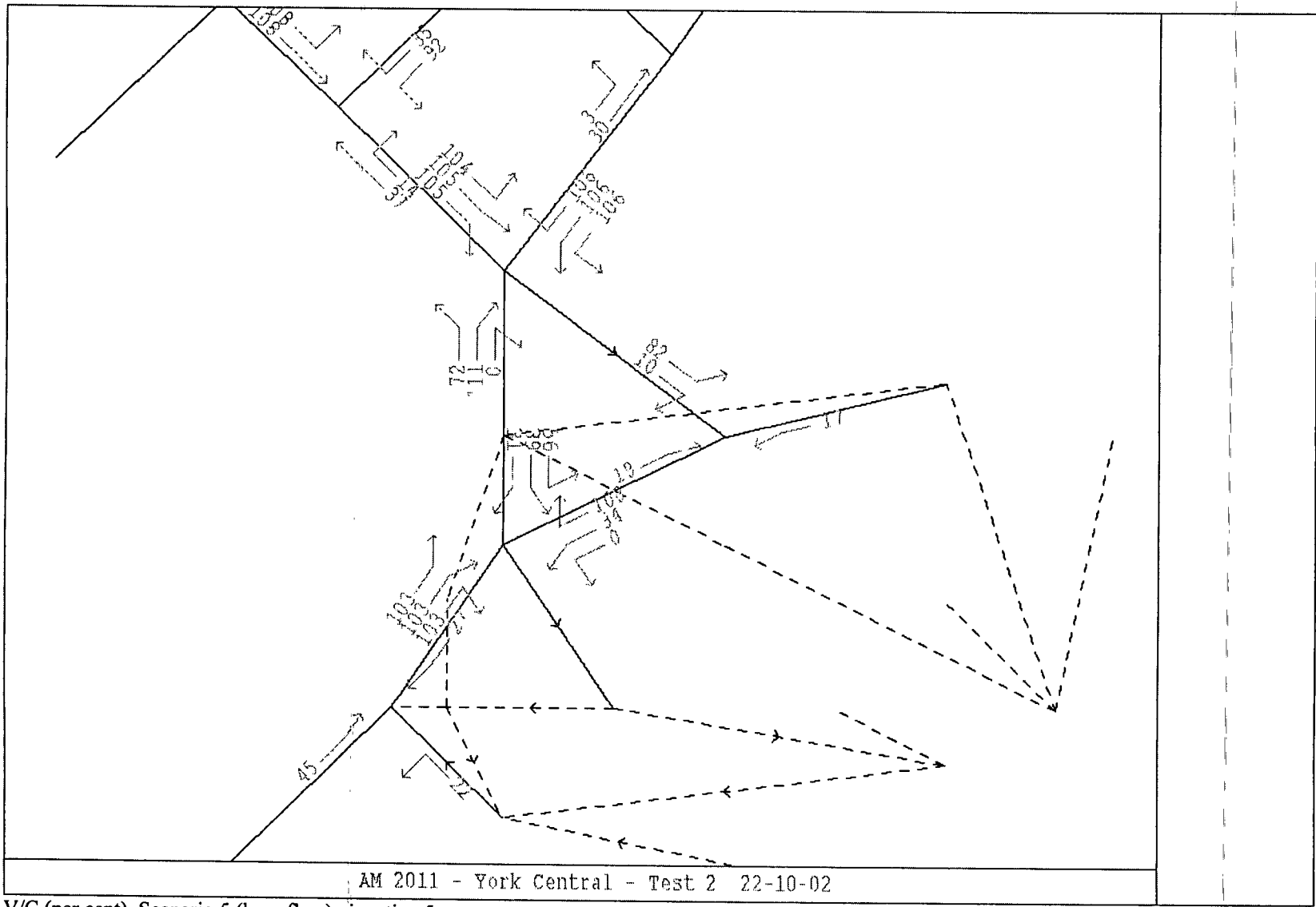


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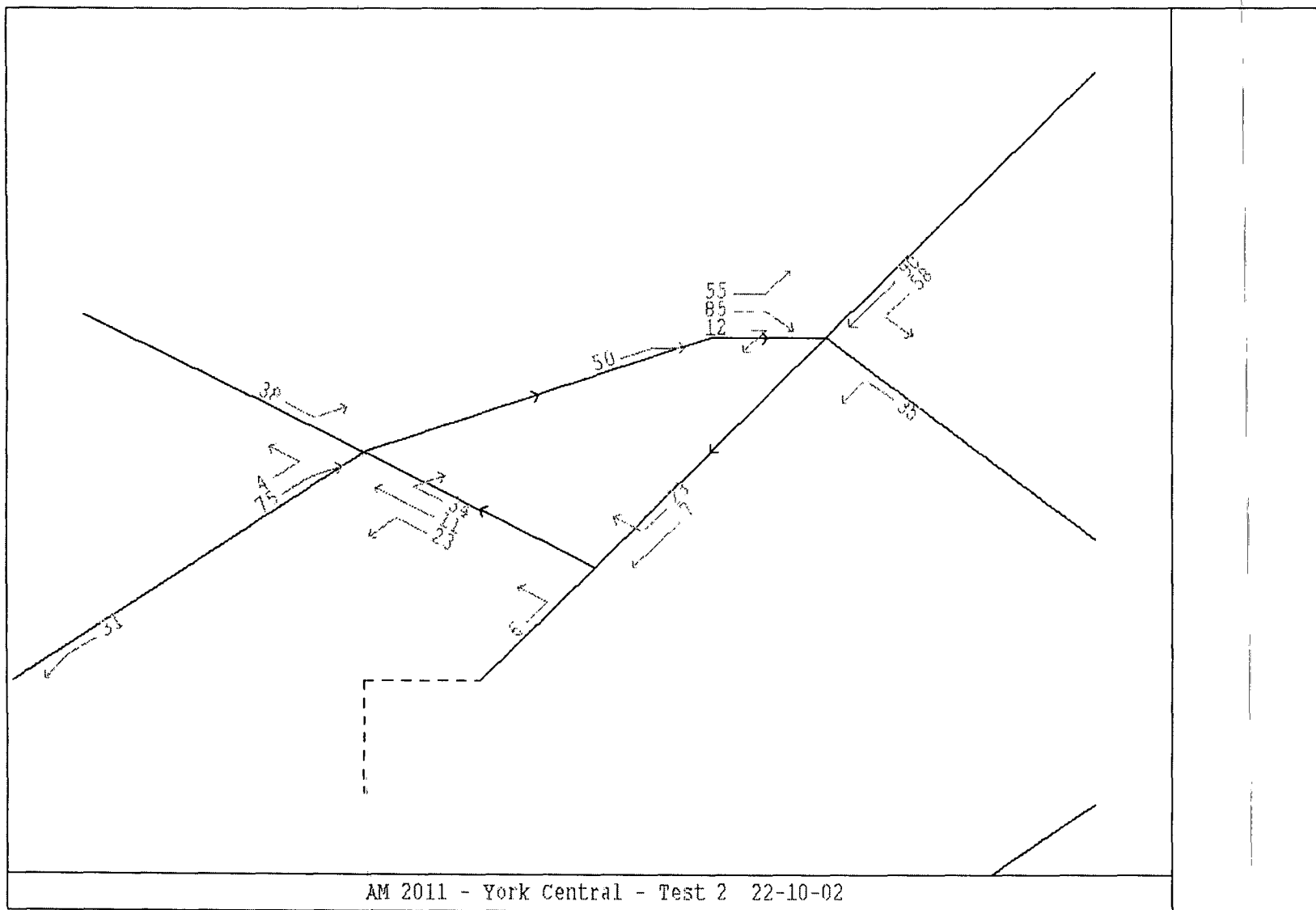
V/C (per cent), Scenario 5 (base flow), junction 3



V/C (per cent), Scenario 5 (base flow), junction 4

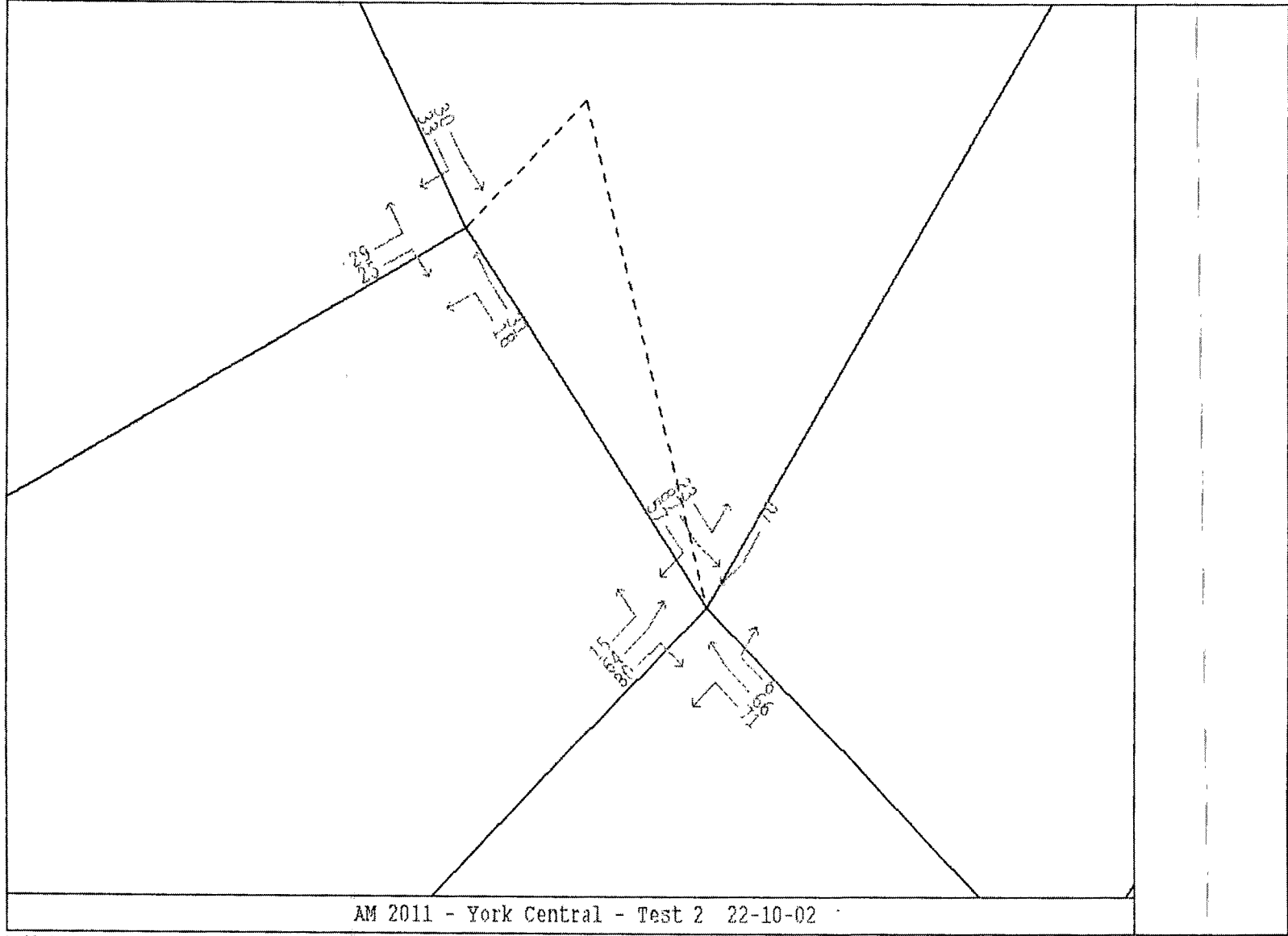


V/C (per cent), Scenario 5 (base flow), junction 5



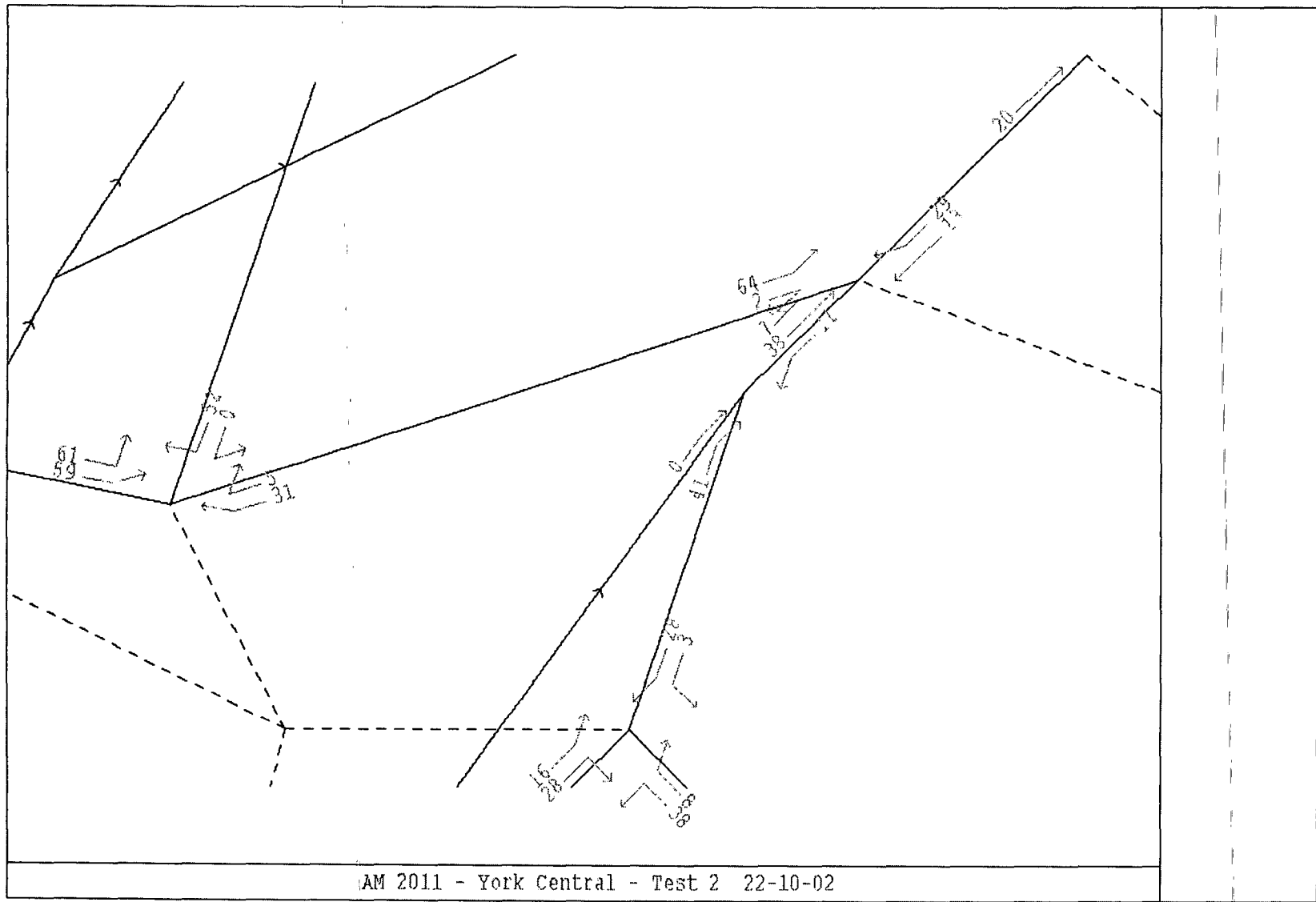
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V/C (per cent), Scenario 5 (base flow), junction 6



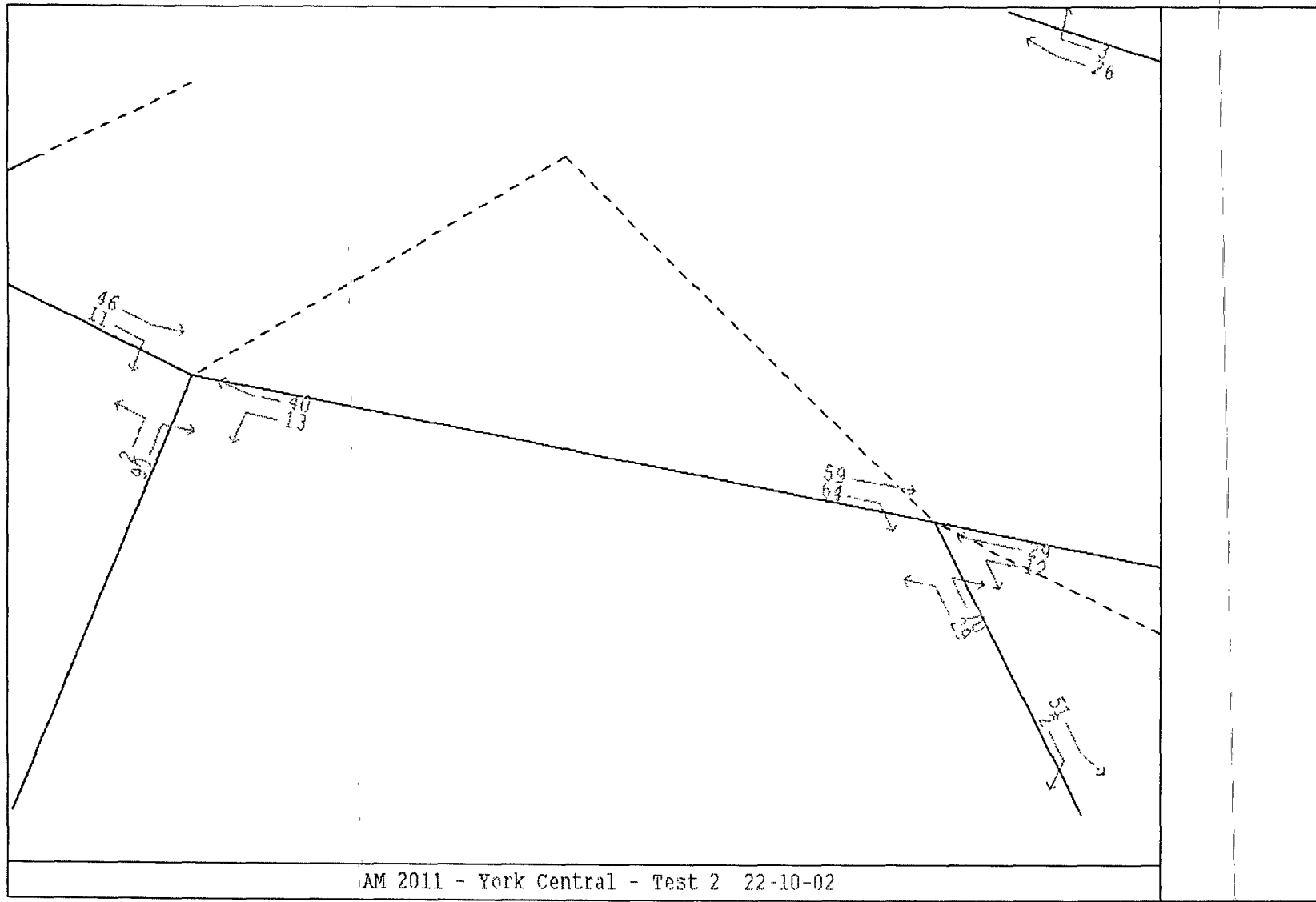
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V/C (per cent), Scenario 5 (base flow), unction 7 & 8

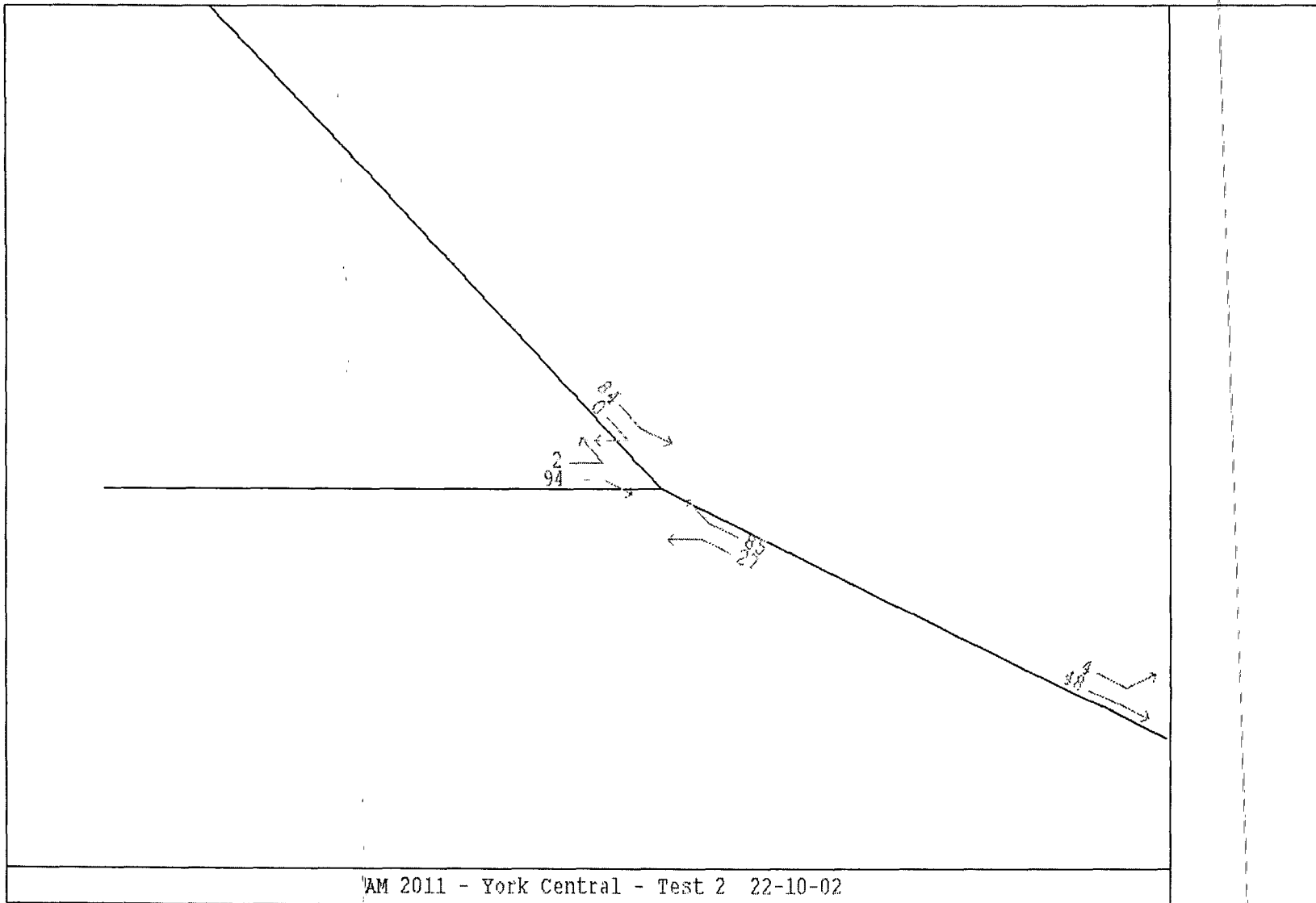


V/C (per cent), Scenario 5 (base flow), junction 9



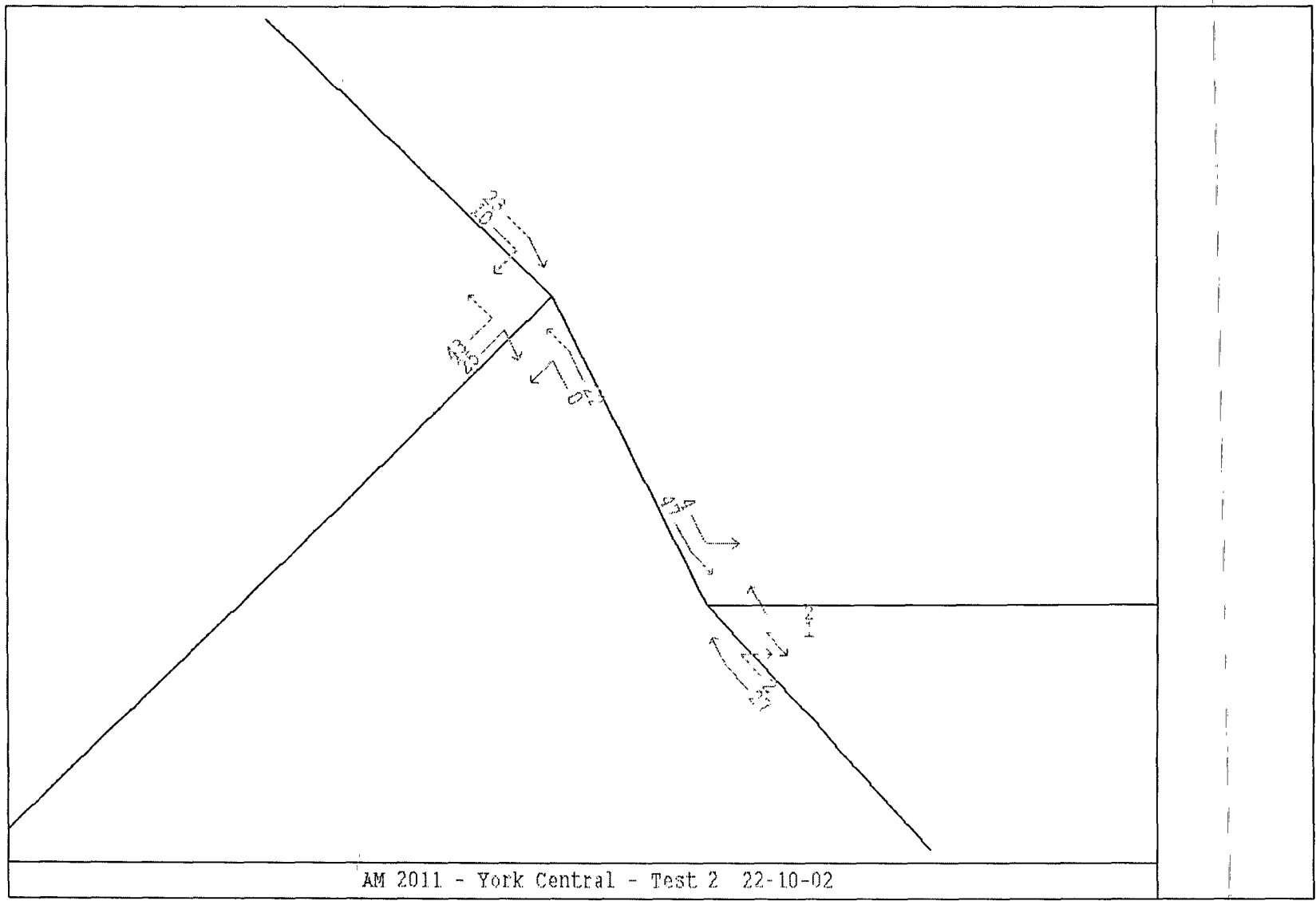


V/C (per cent), Scenario 5 (base flow), junction 10 & 11

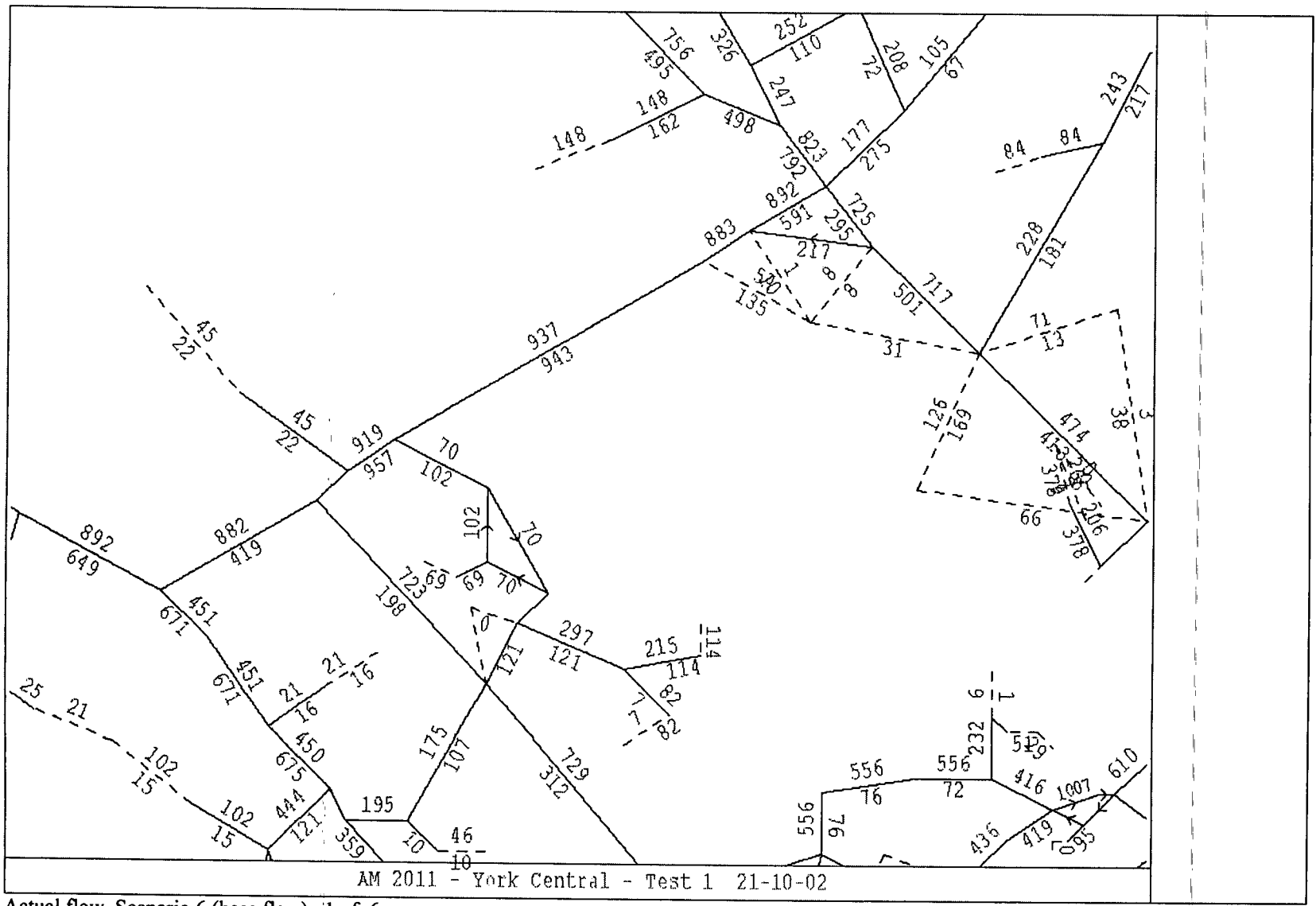


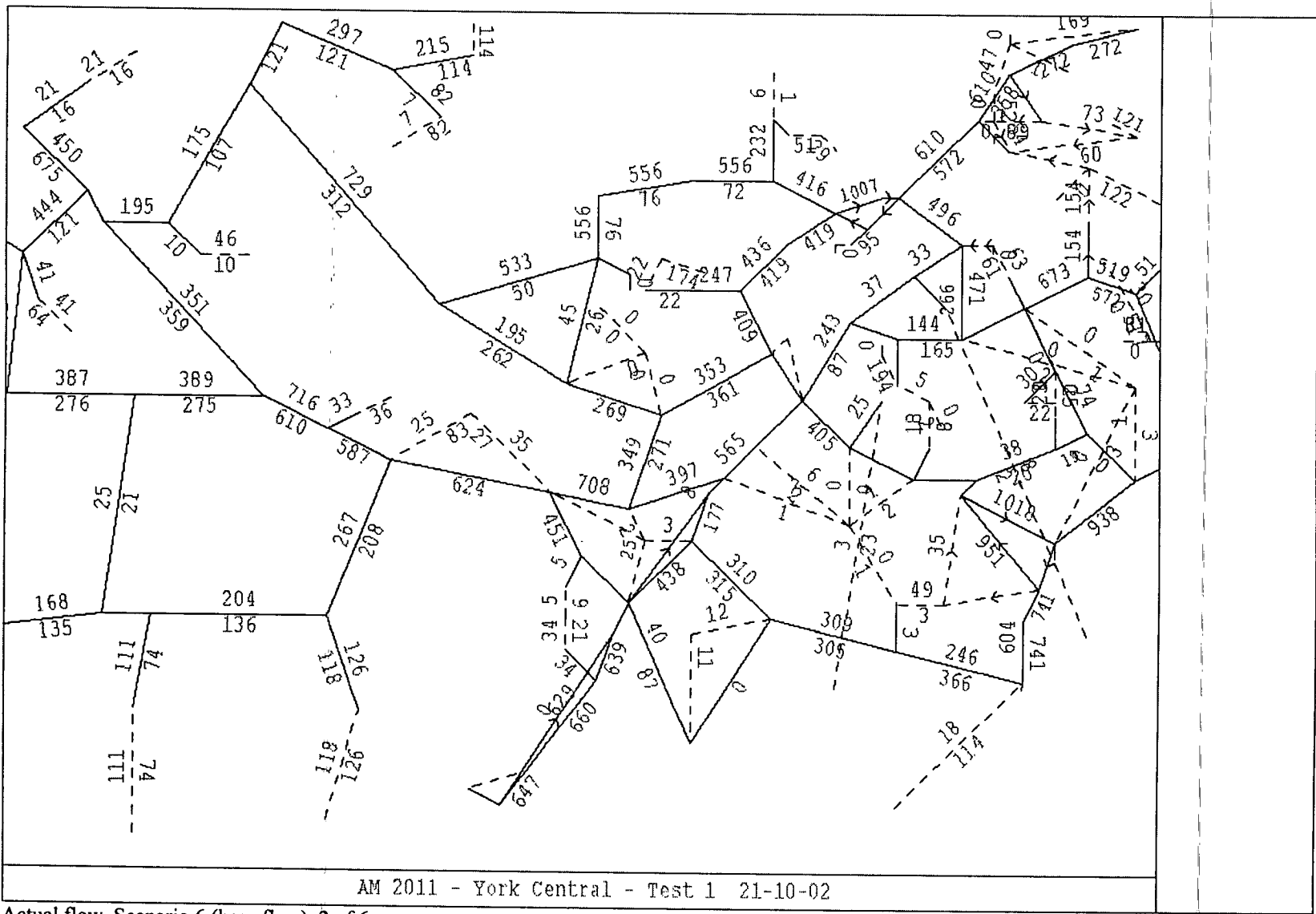
AM 2011 - York Central - Test 2 22-10-02

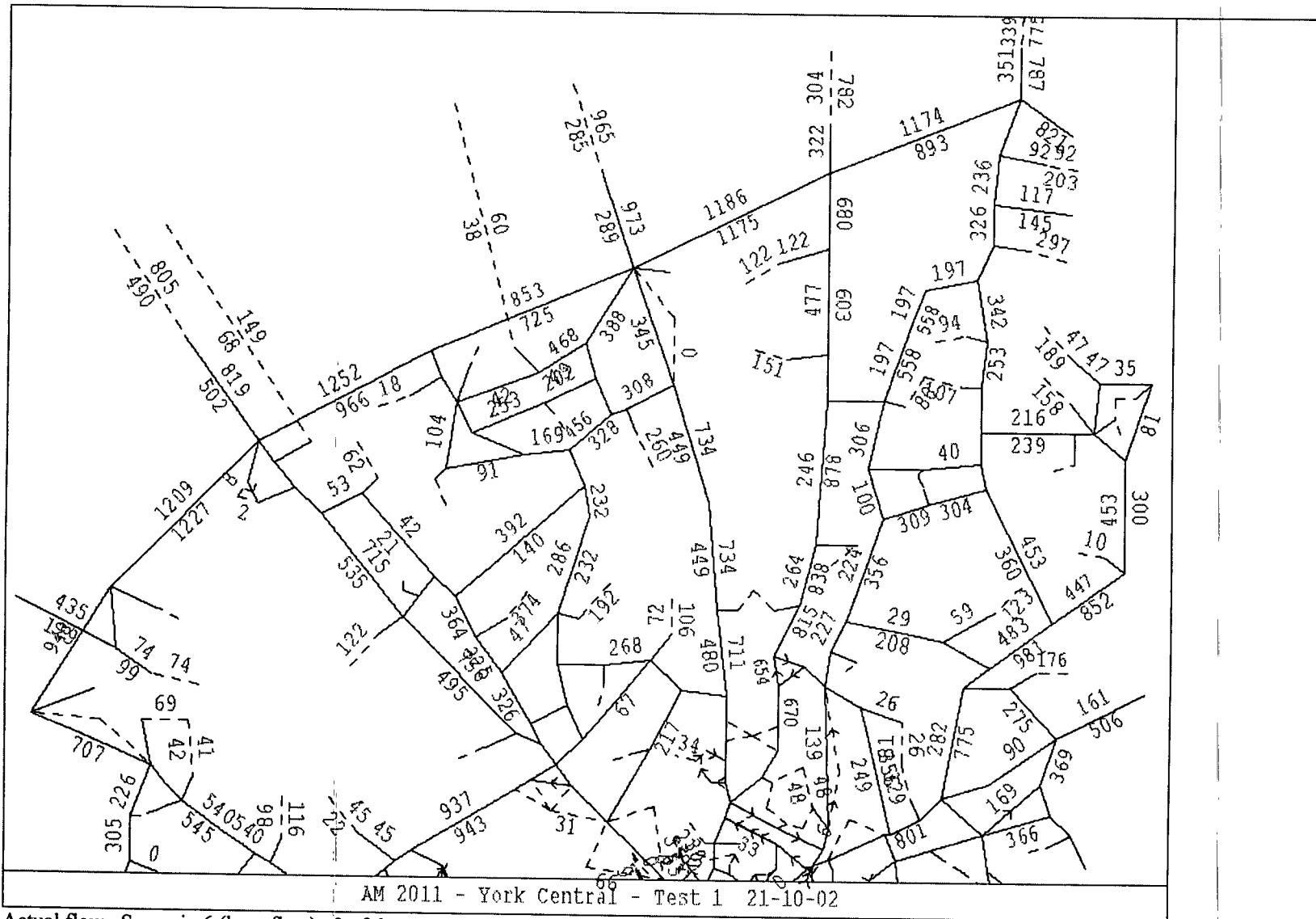
V/C (per cent), Scenario 5 (base flow), junction 12



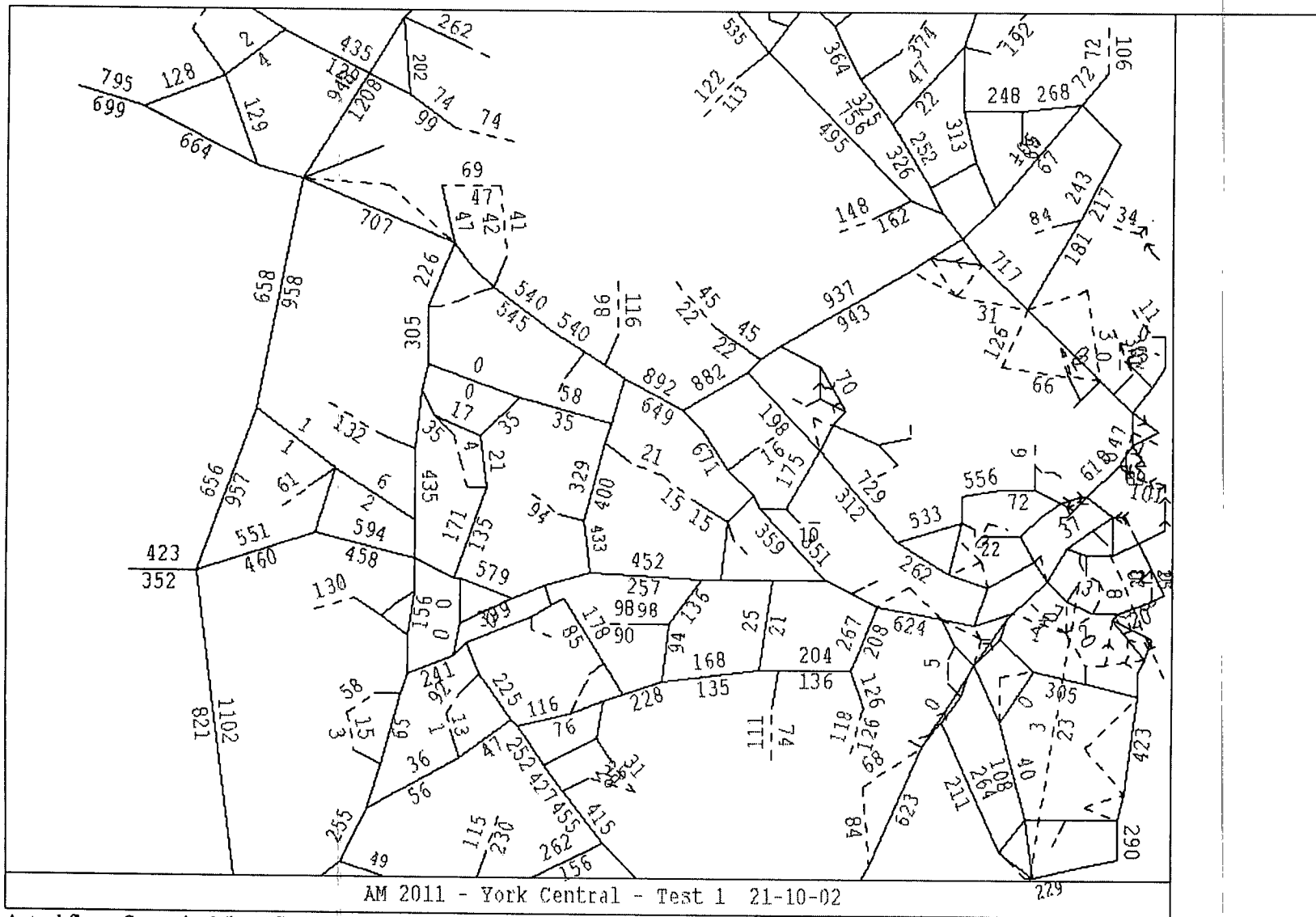
V/C (per cent), Scenario 5 (base flow), junction 13 & 14



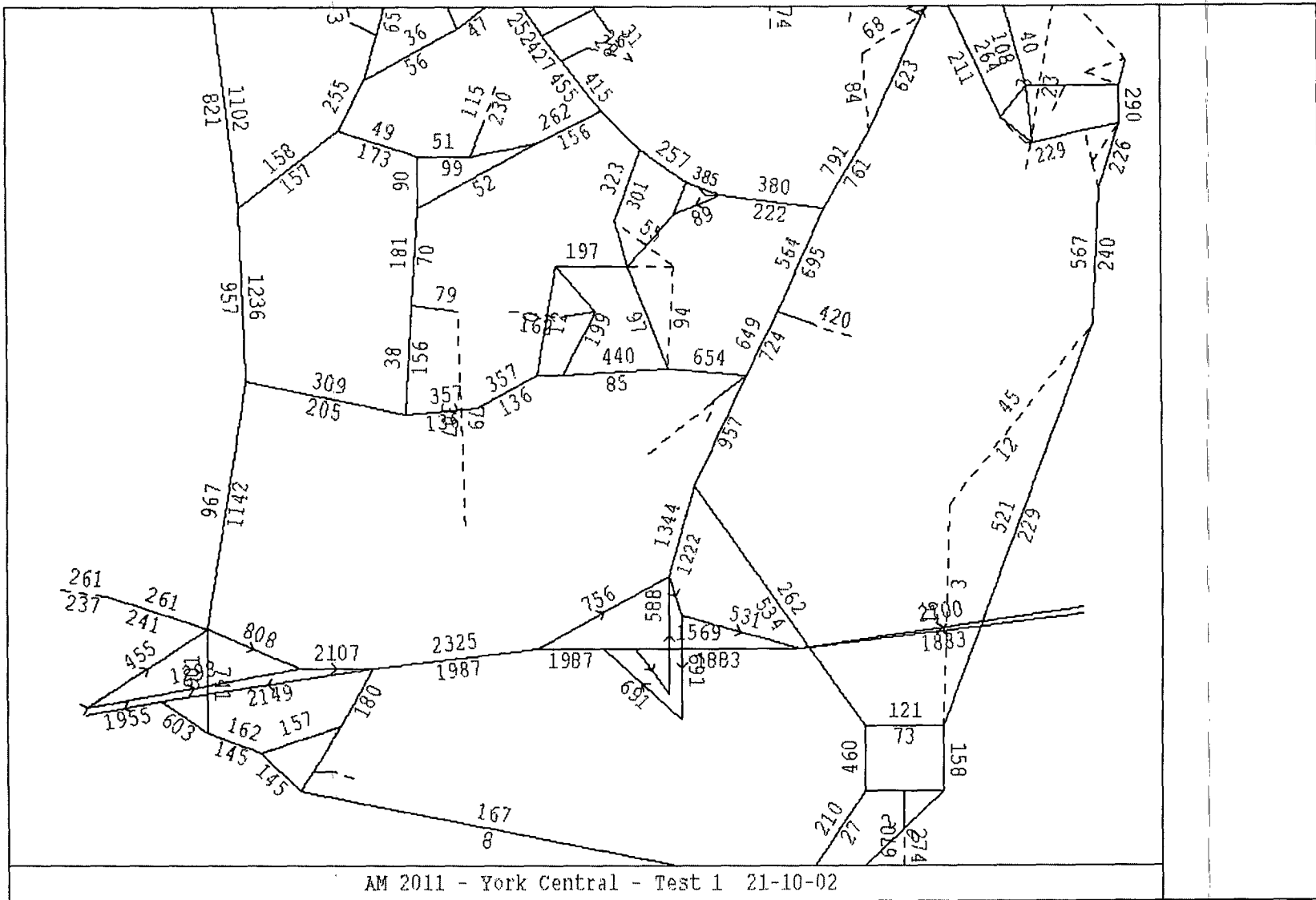




Actual flow, Scenario 6 (base flow), 3 of 6



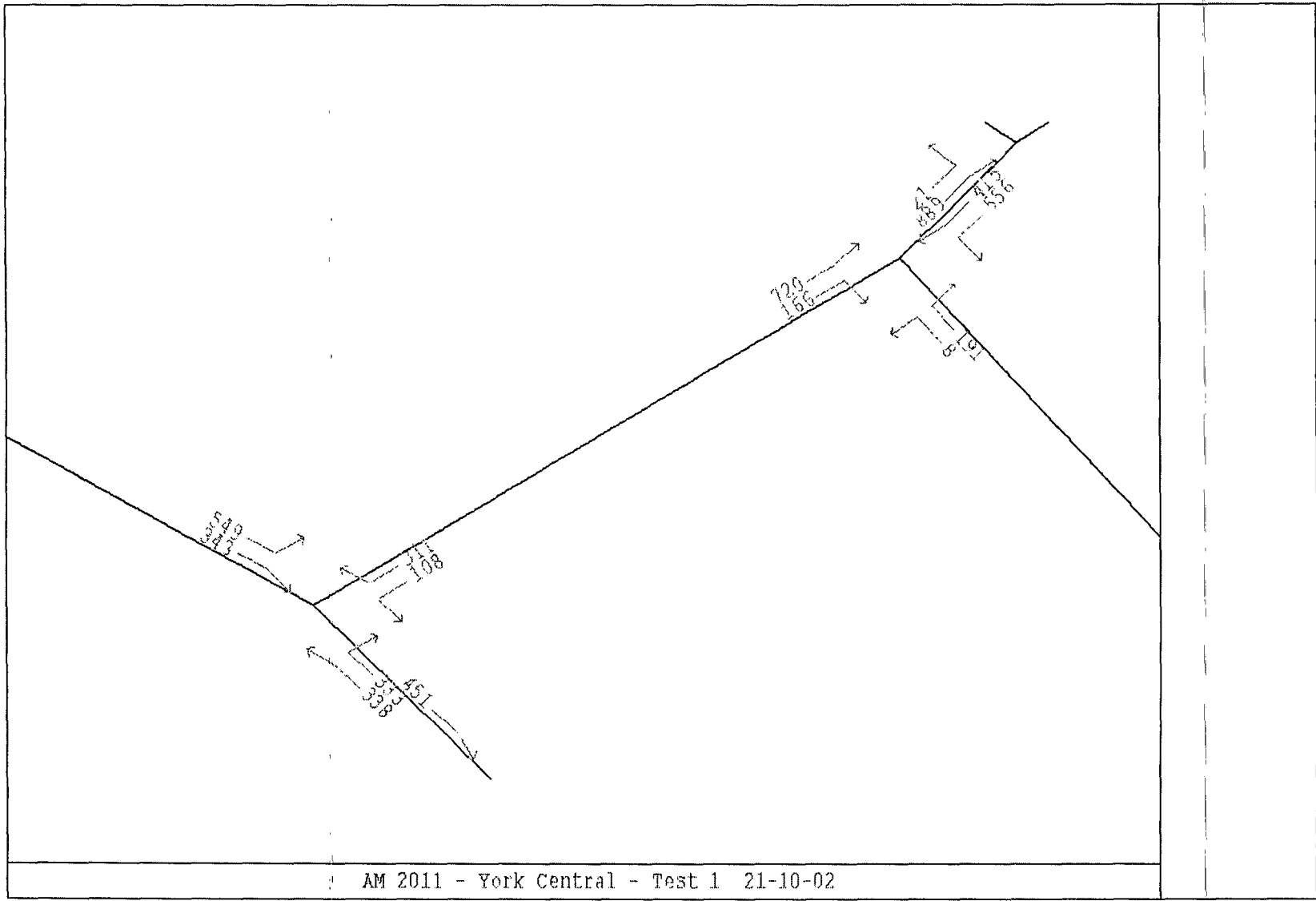
Actual flow, Scenario 6 (base flow), 4 of 6



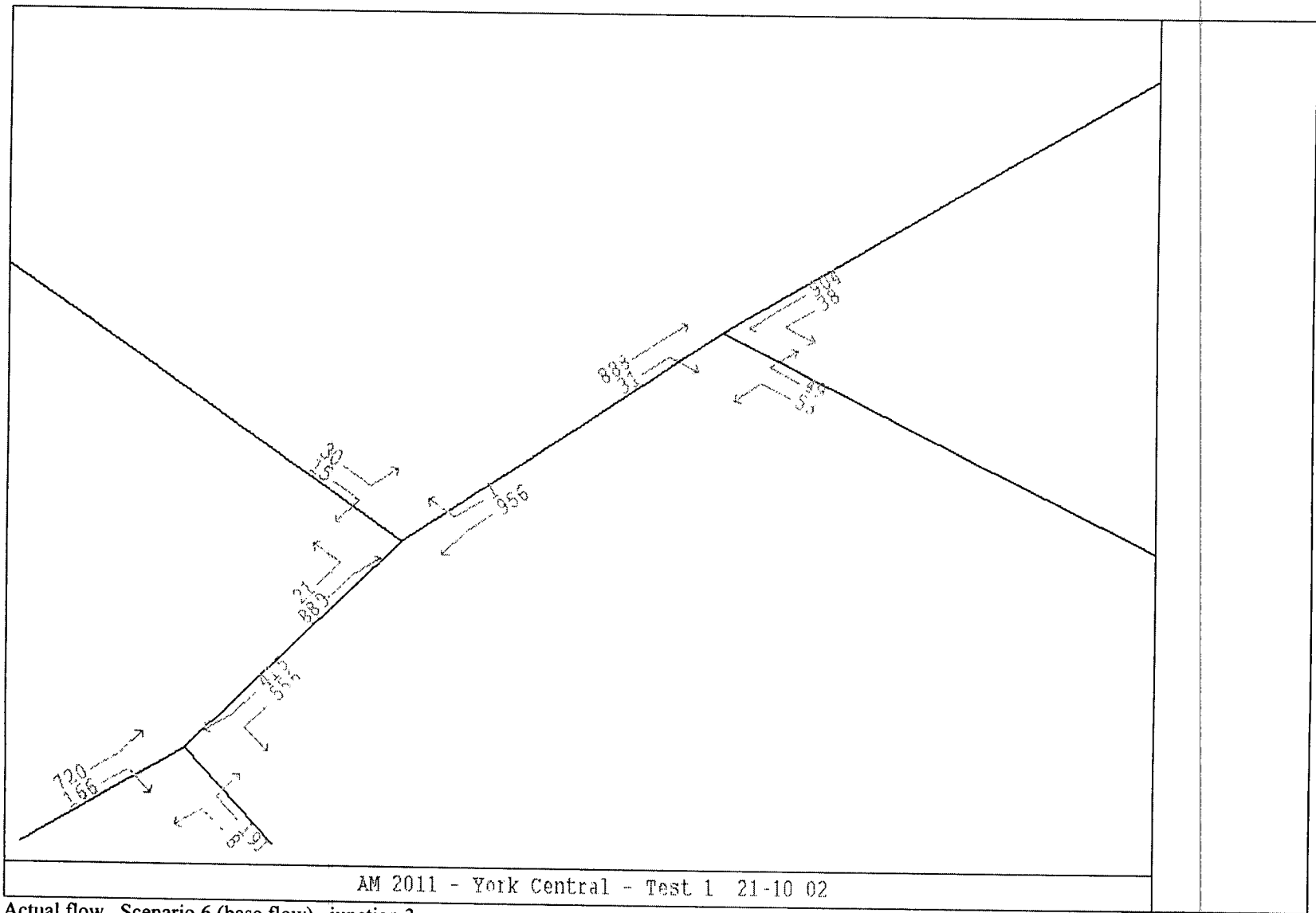
Actual flow, Scenario 6 (base flow), 5 of 6



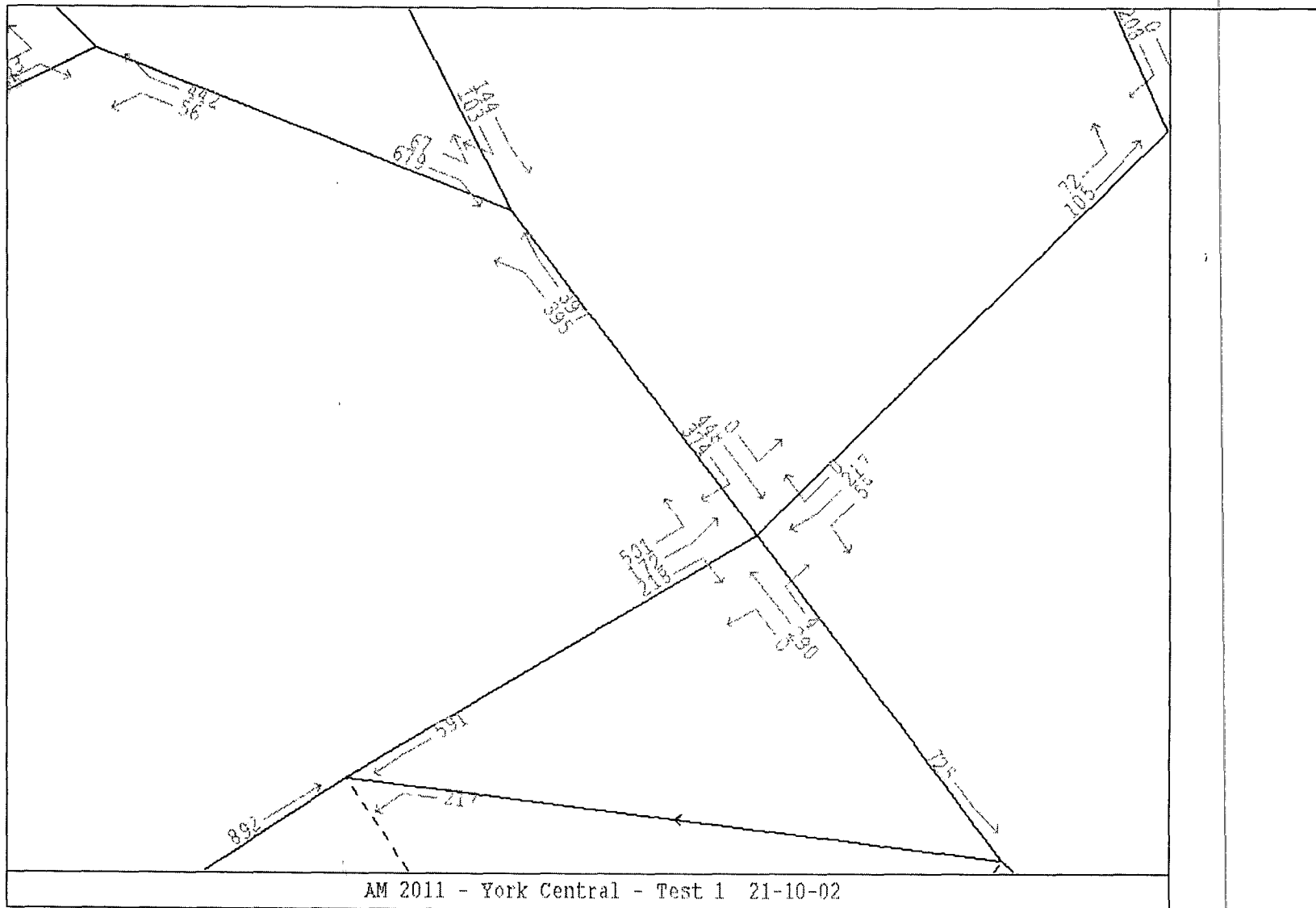




Actual flow, Scenario 6(base flow), junction 1 & 2

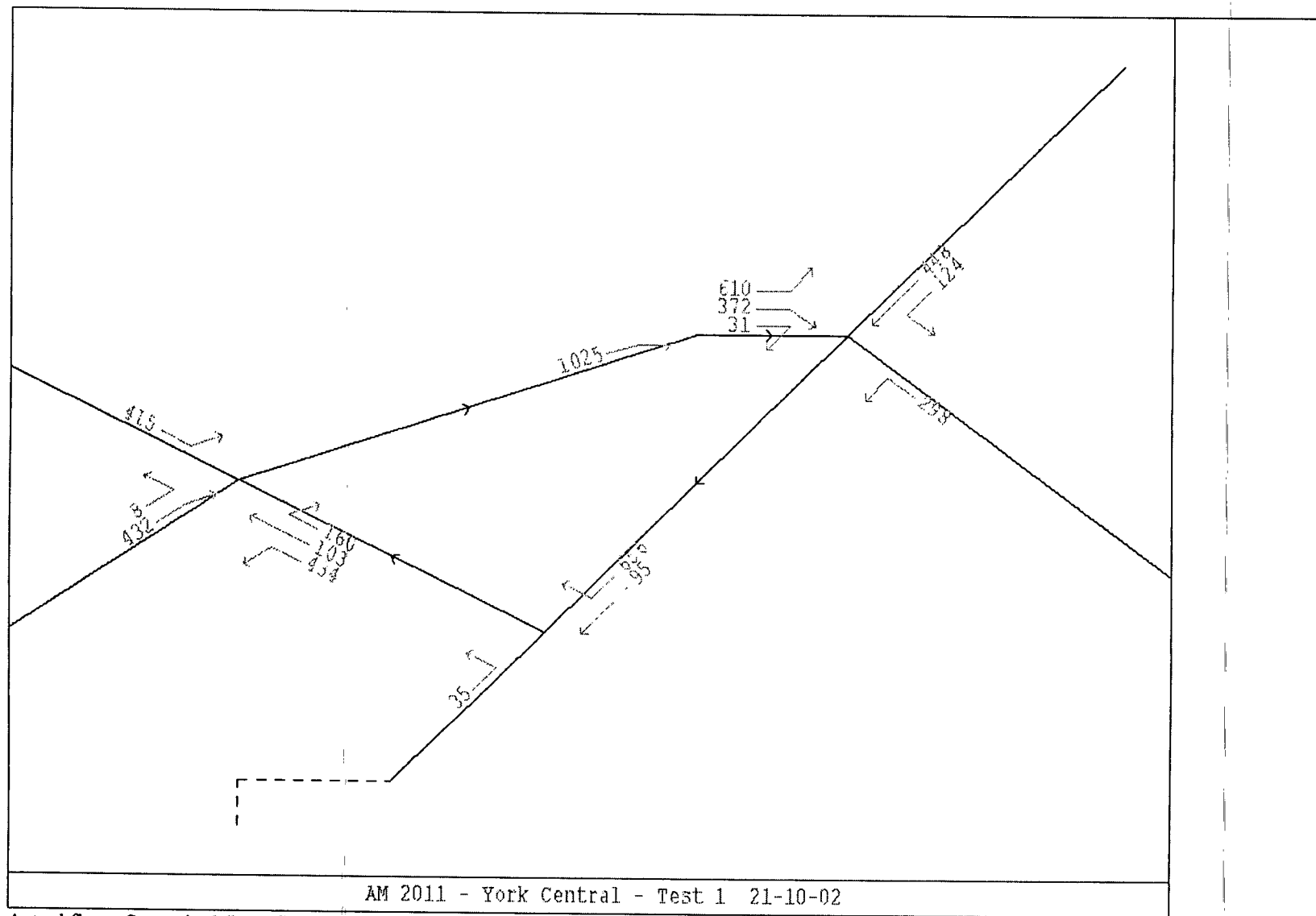


Actual flow, Scenario 6 (base flow), junction 3

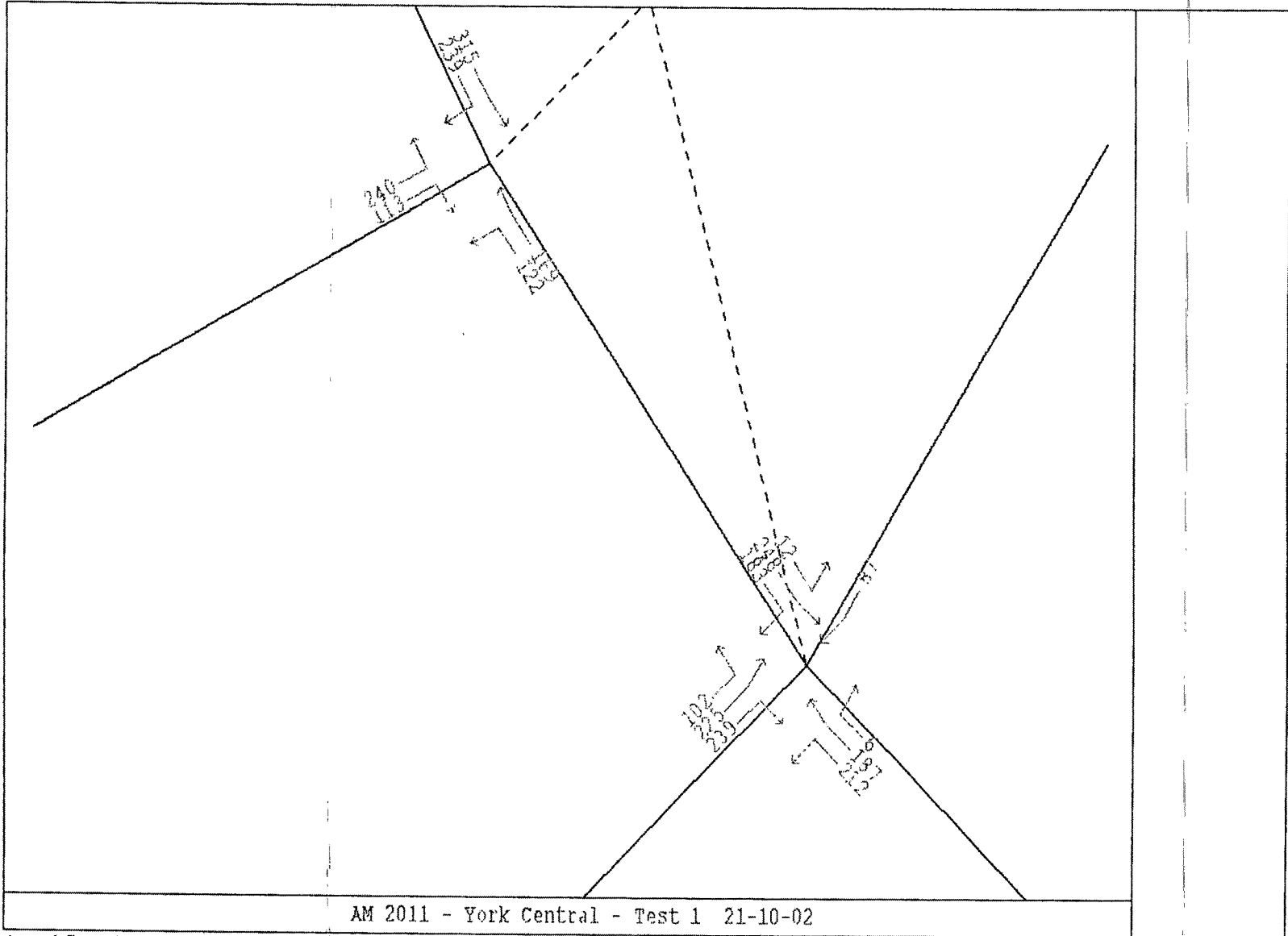


Actual flow, Scenario 6 (base flow), junction 4



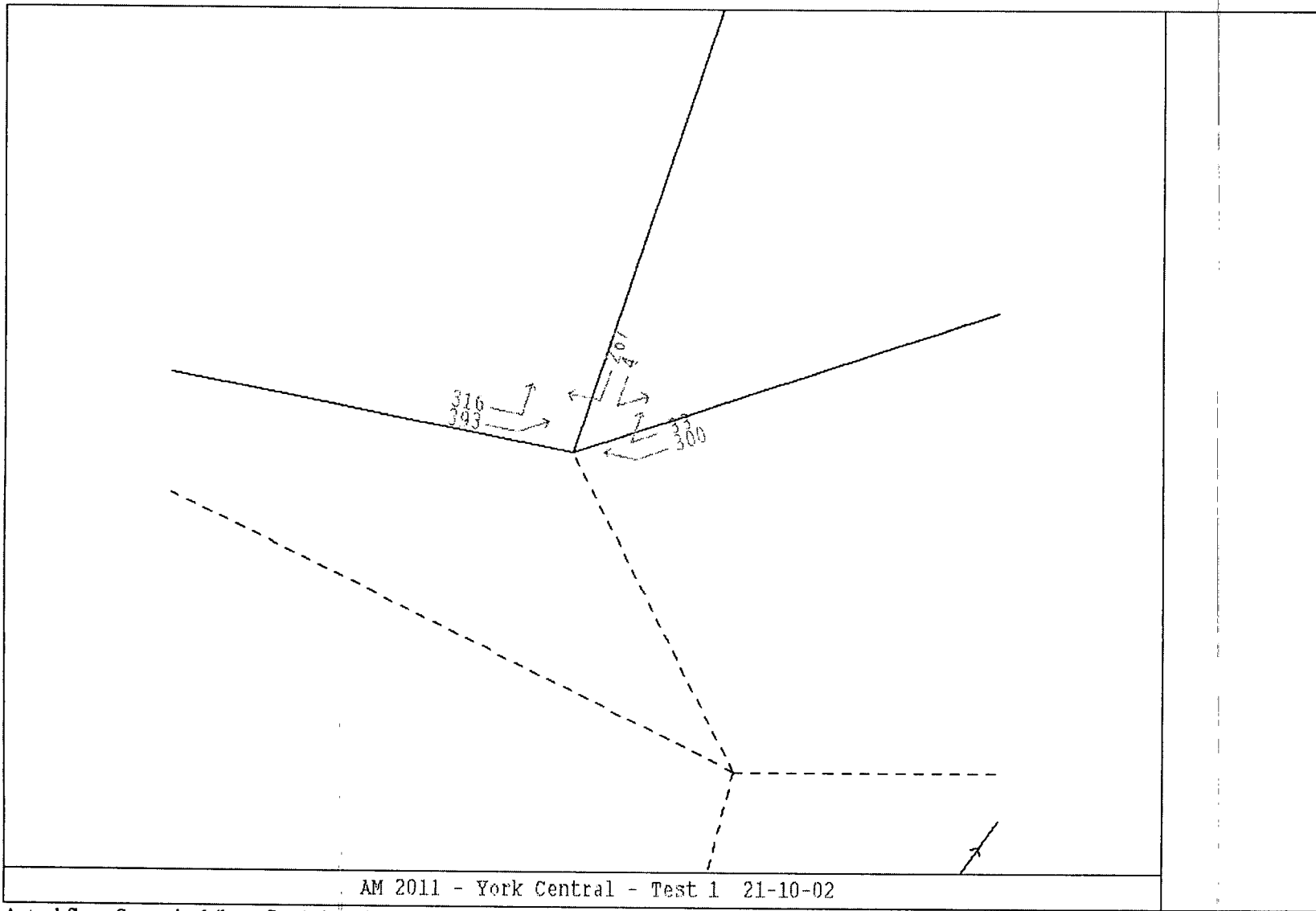


Actual flow, Scenario 6 (base flow), junction 6



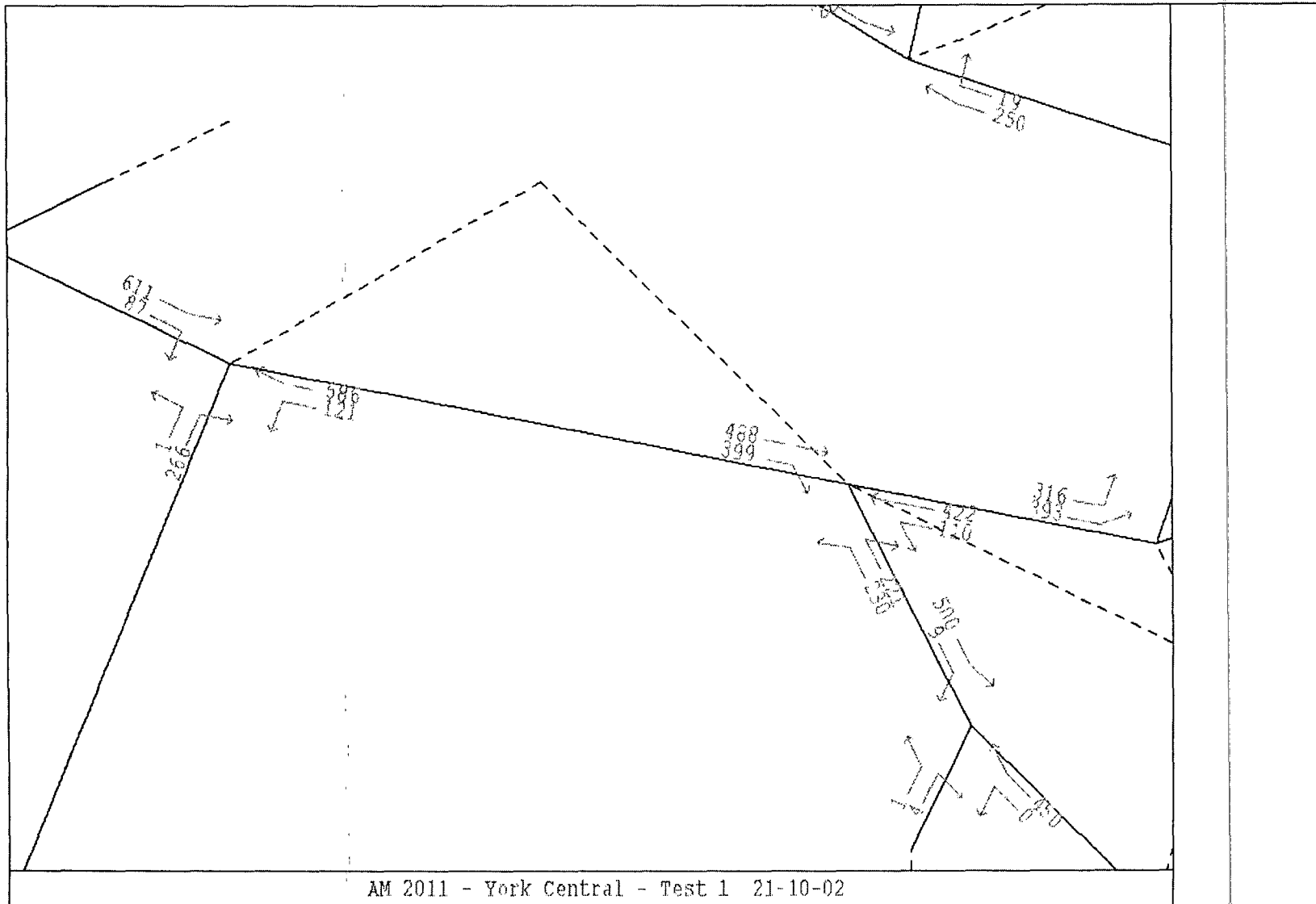
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Actual flow, Scenario 6 (base flow), junction 7 & 8

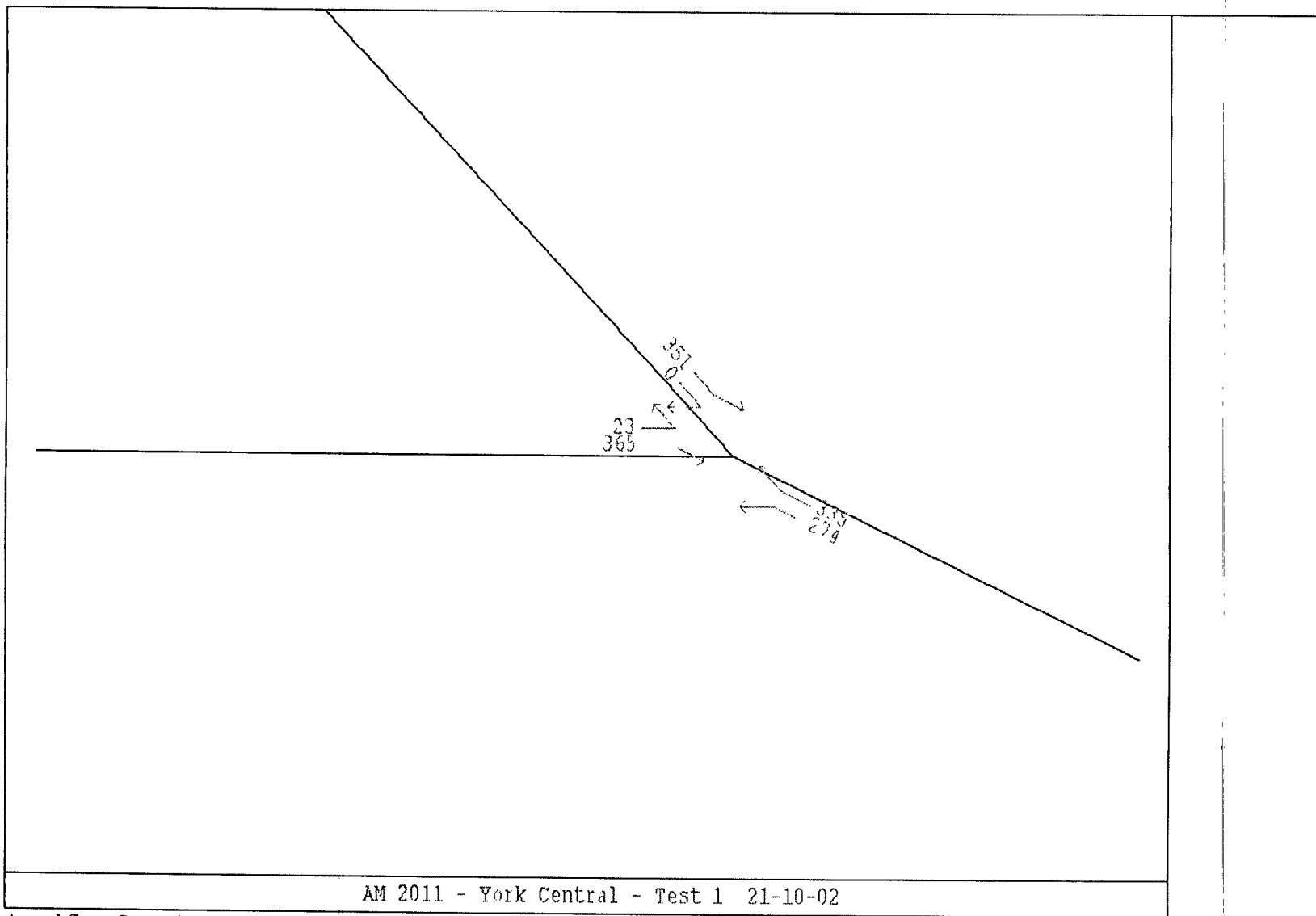


Actual flow, Scenario 6 (base flow), junction 9



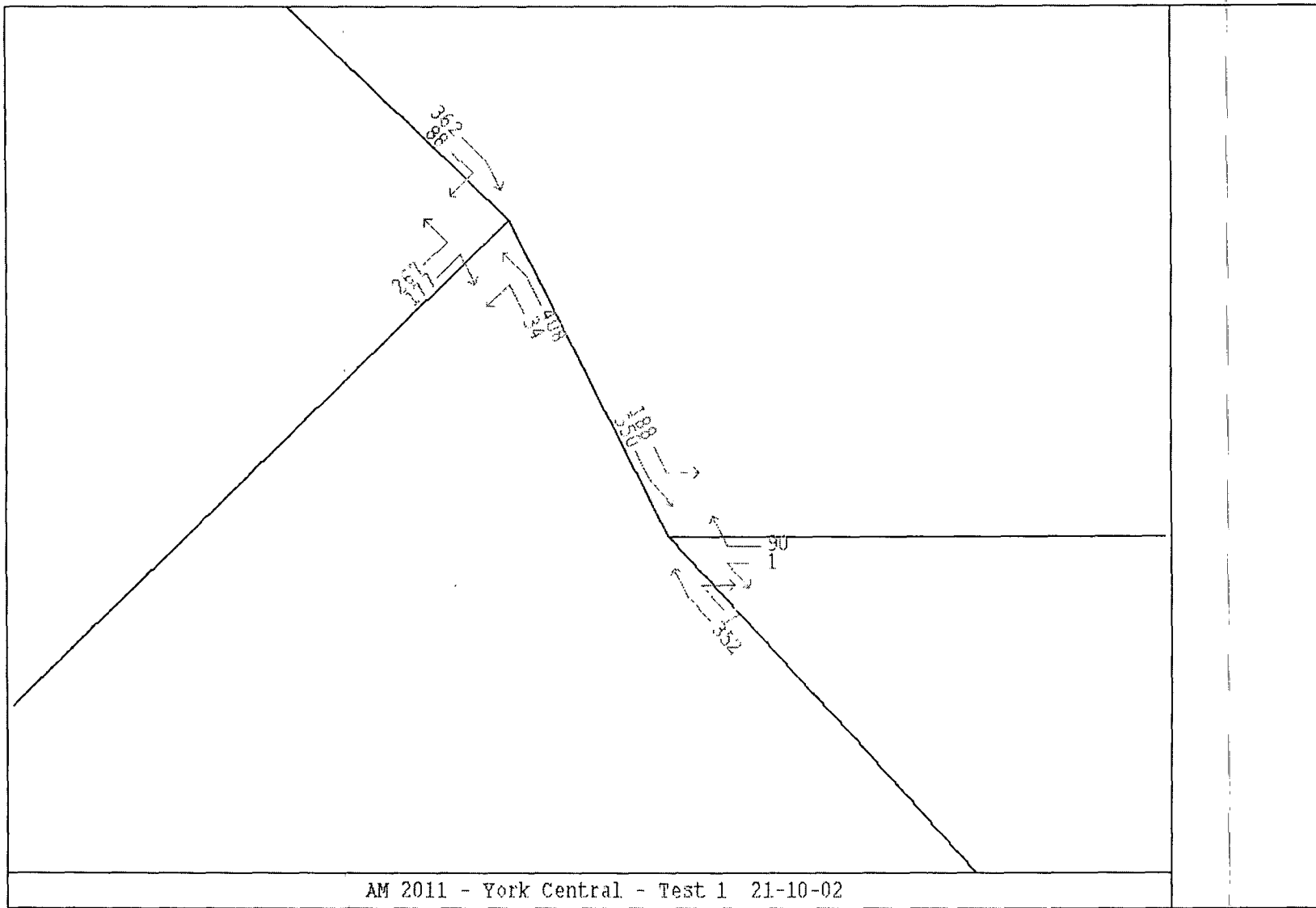


Actual flow, Scenario 6 (base flow), junction 10 & 11



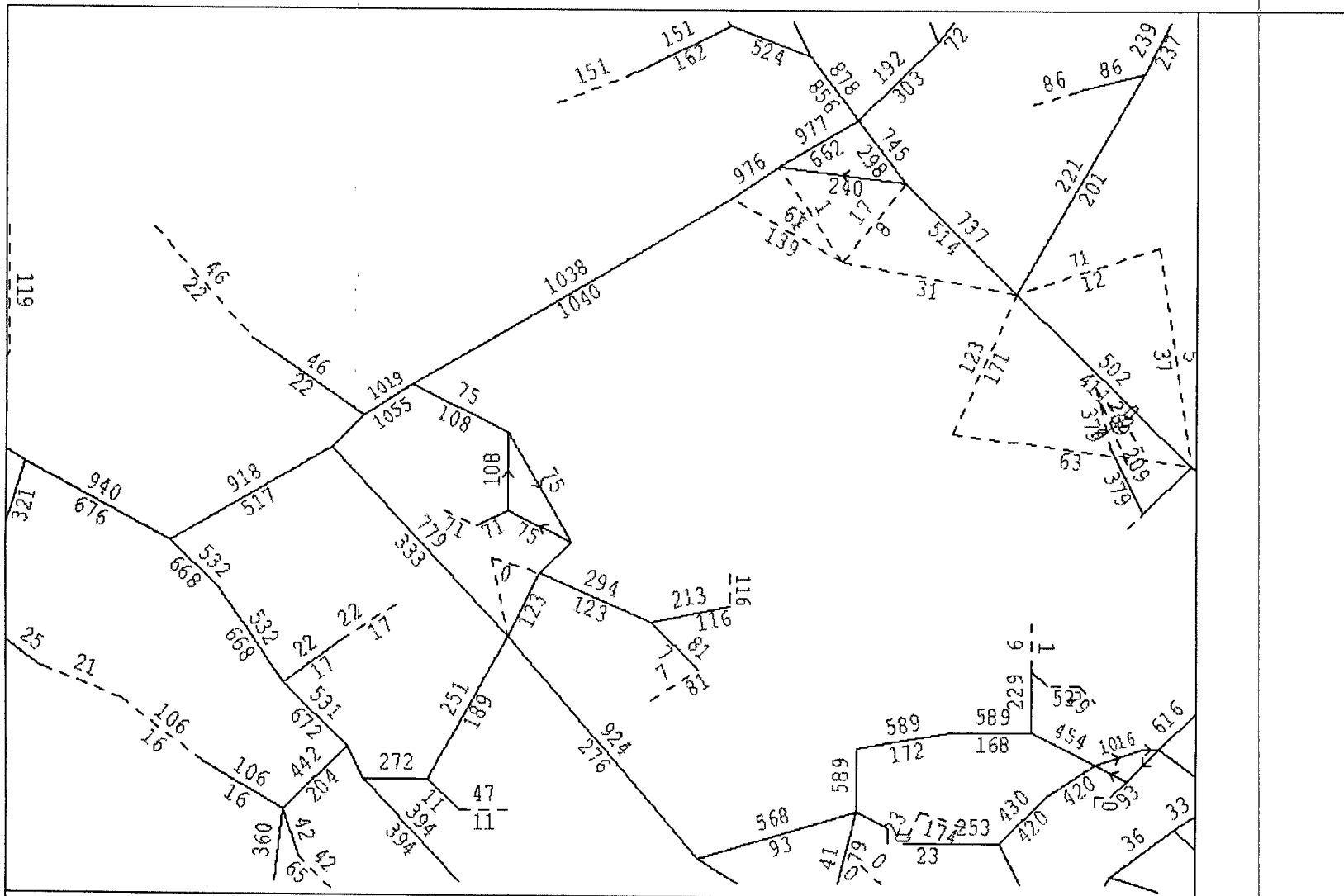
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Actual flow, Scenario 6 (base flow), junction 12



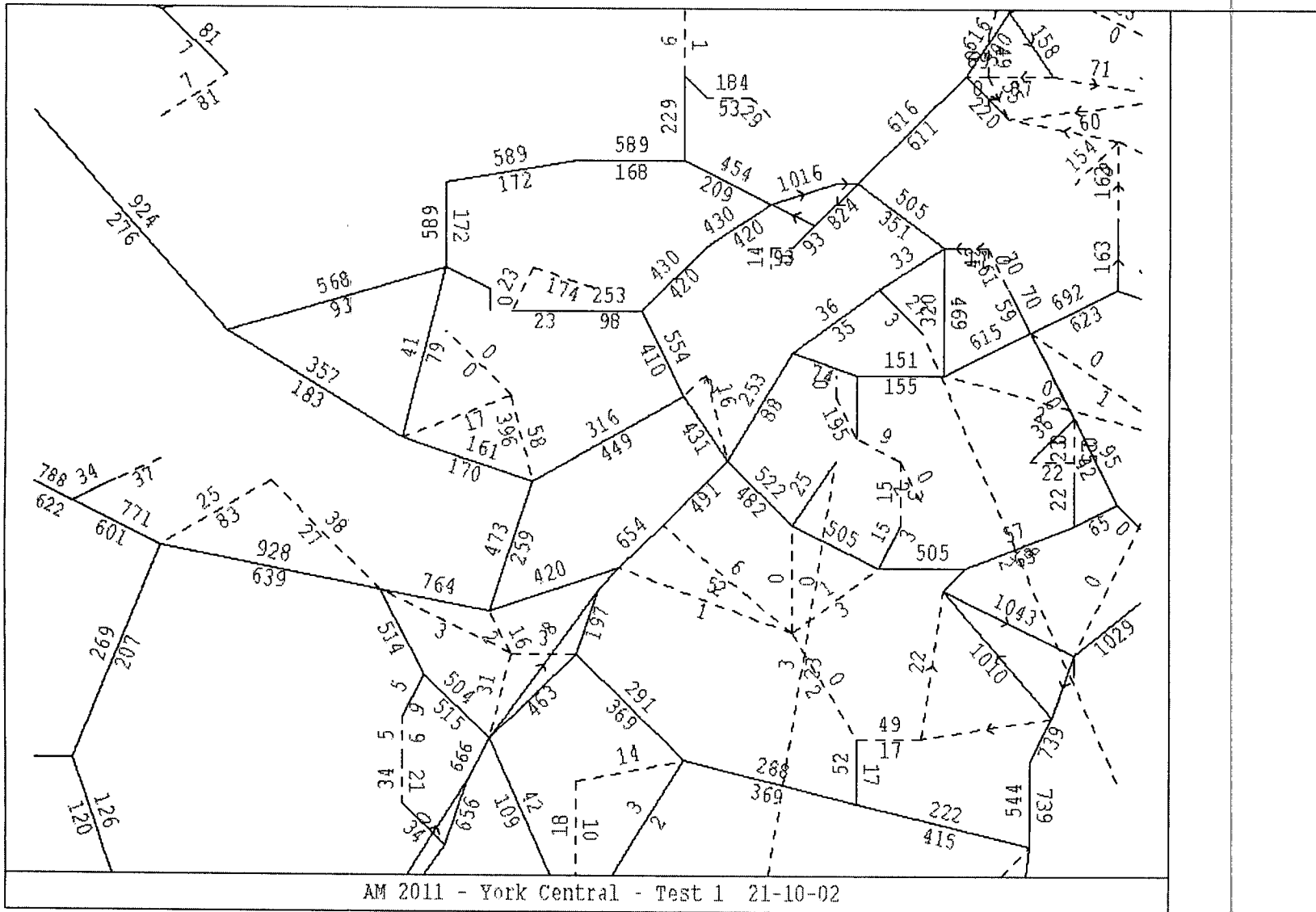
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Actual flow, Scenario 6 (base flow), junction 13 & 14

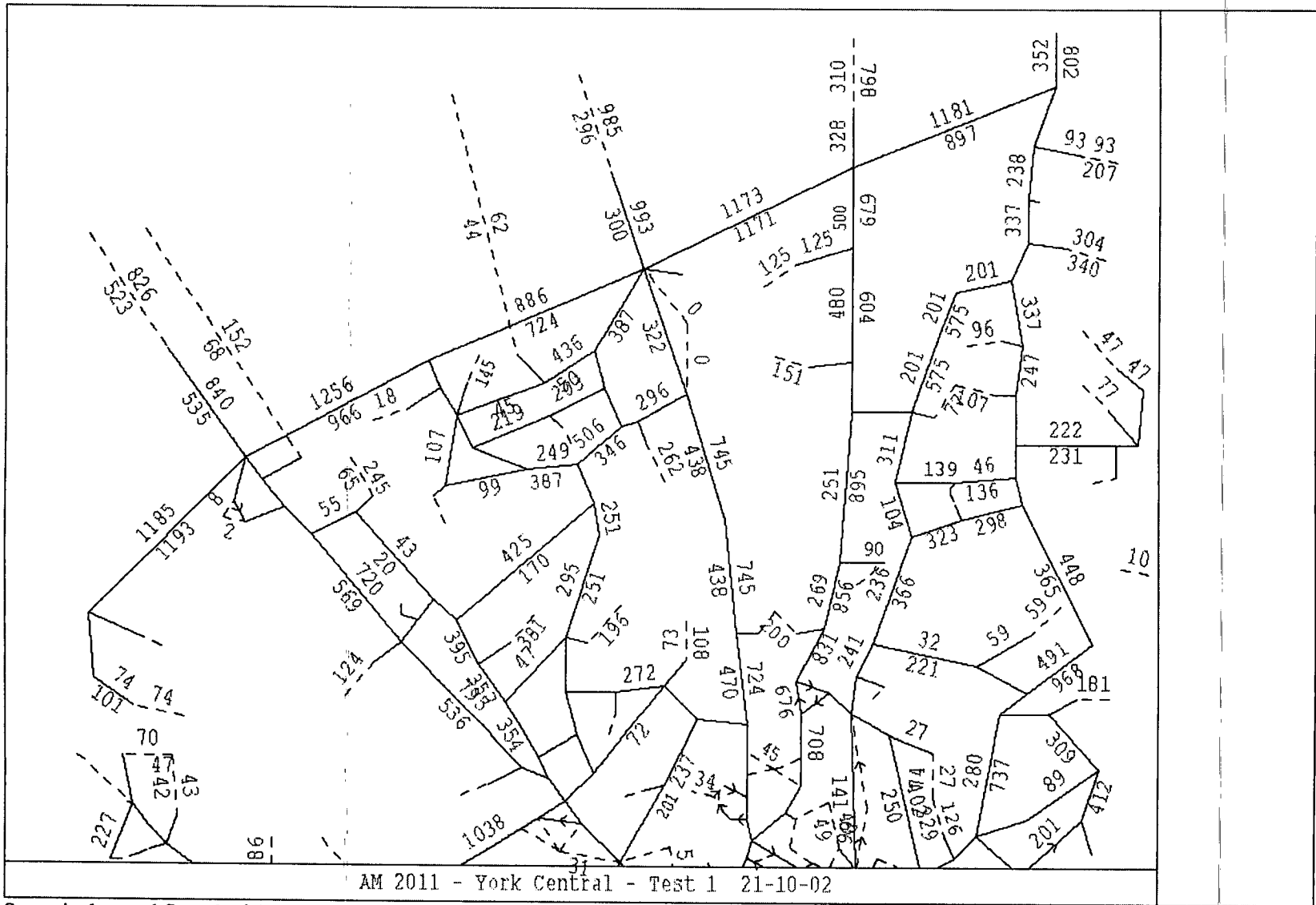


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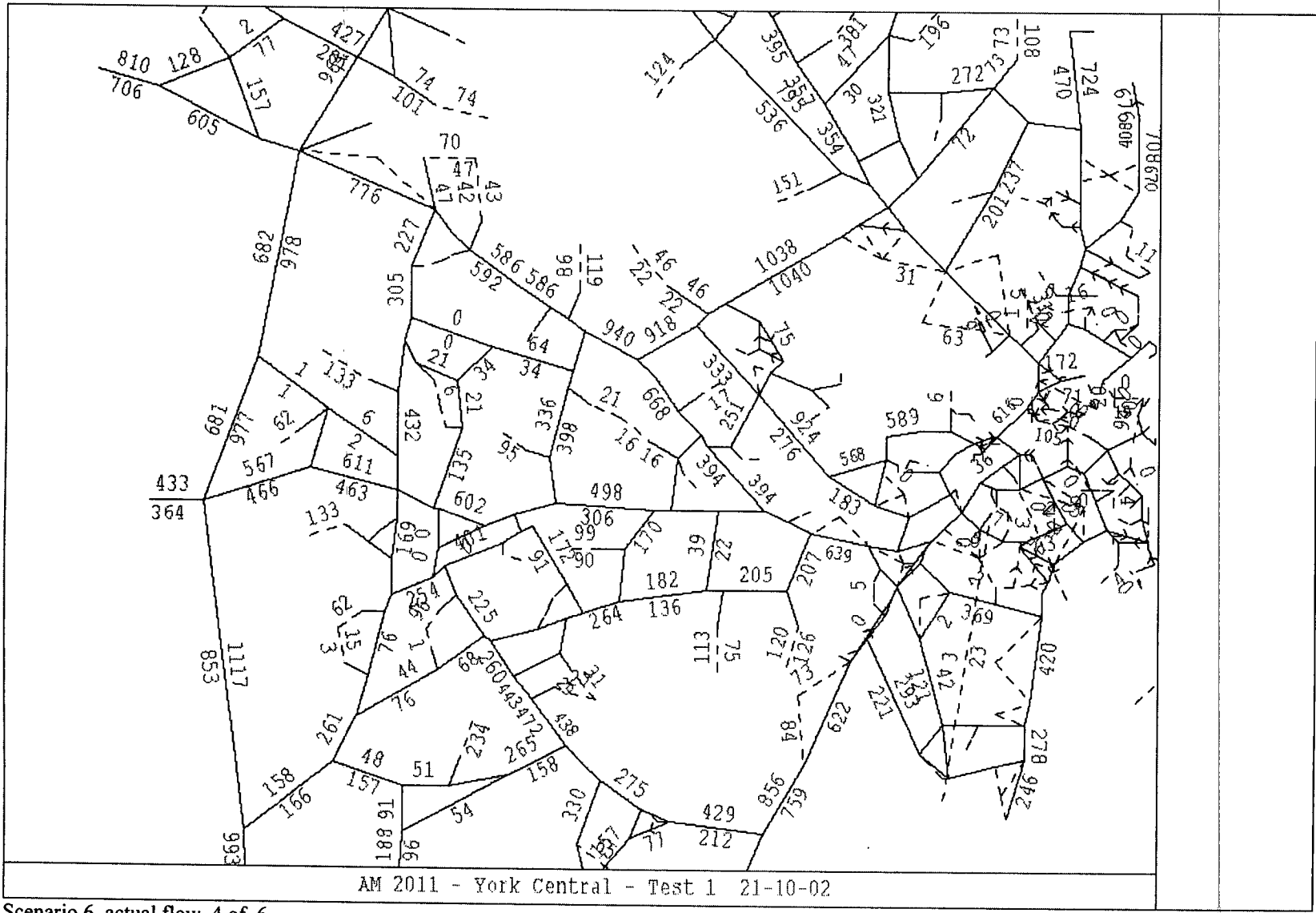
Scenario 6, actual flow, 1 of 6



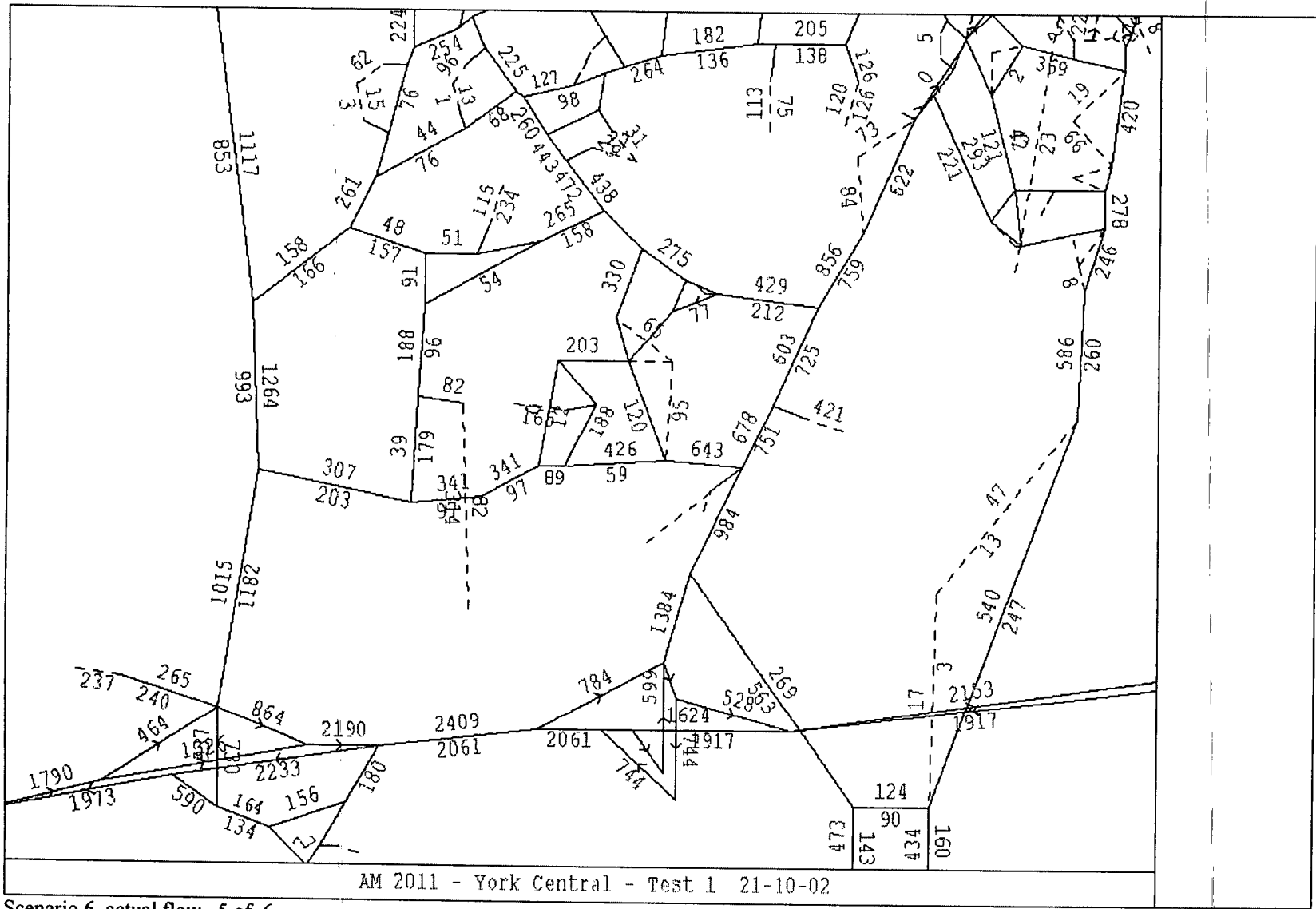
Scenario 6, Actual flow, 2 of 6



Scenario 6, actual flow, 3 of 6

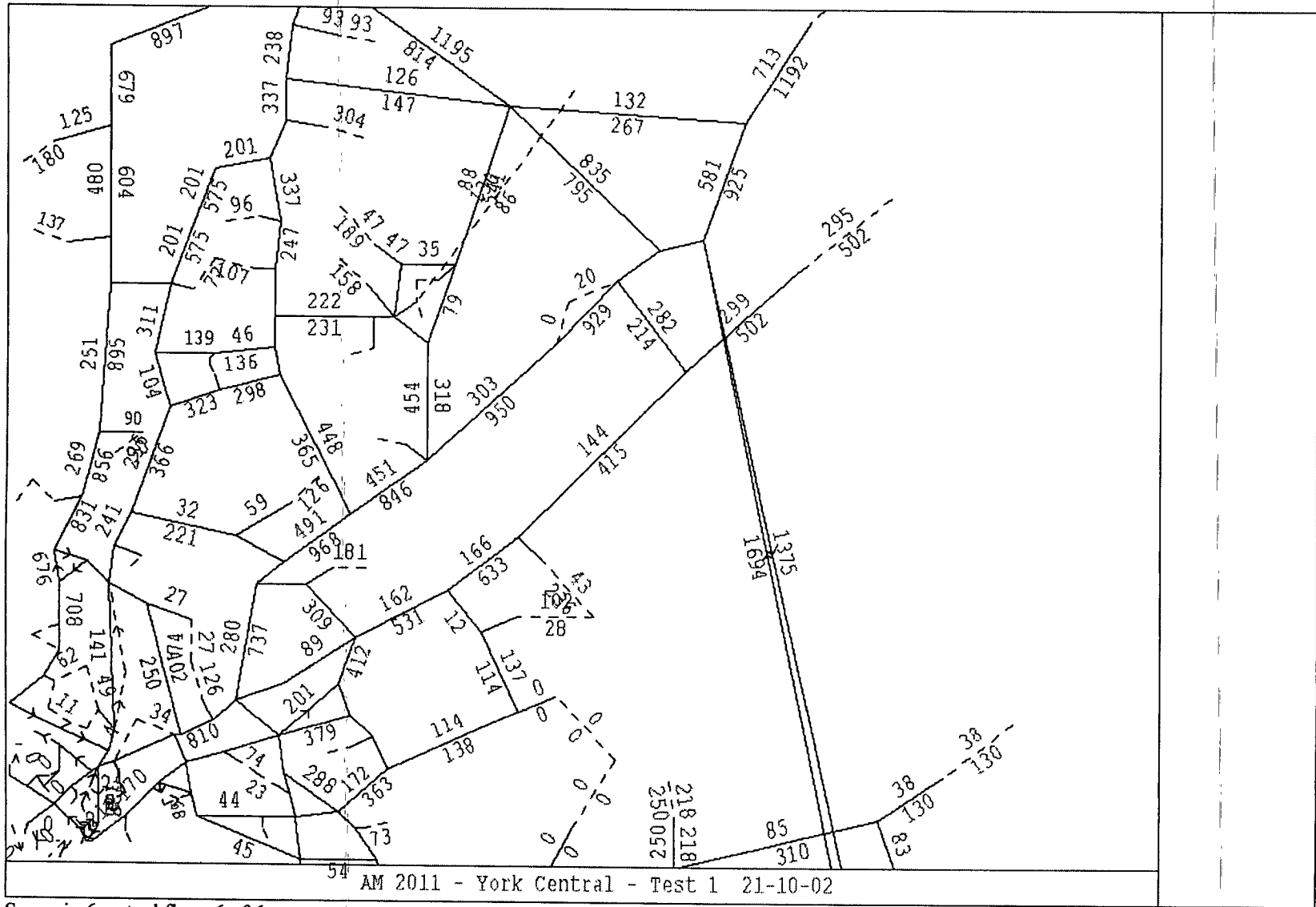


Scenario 6, actual flow, 4 of 6

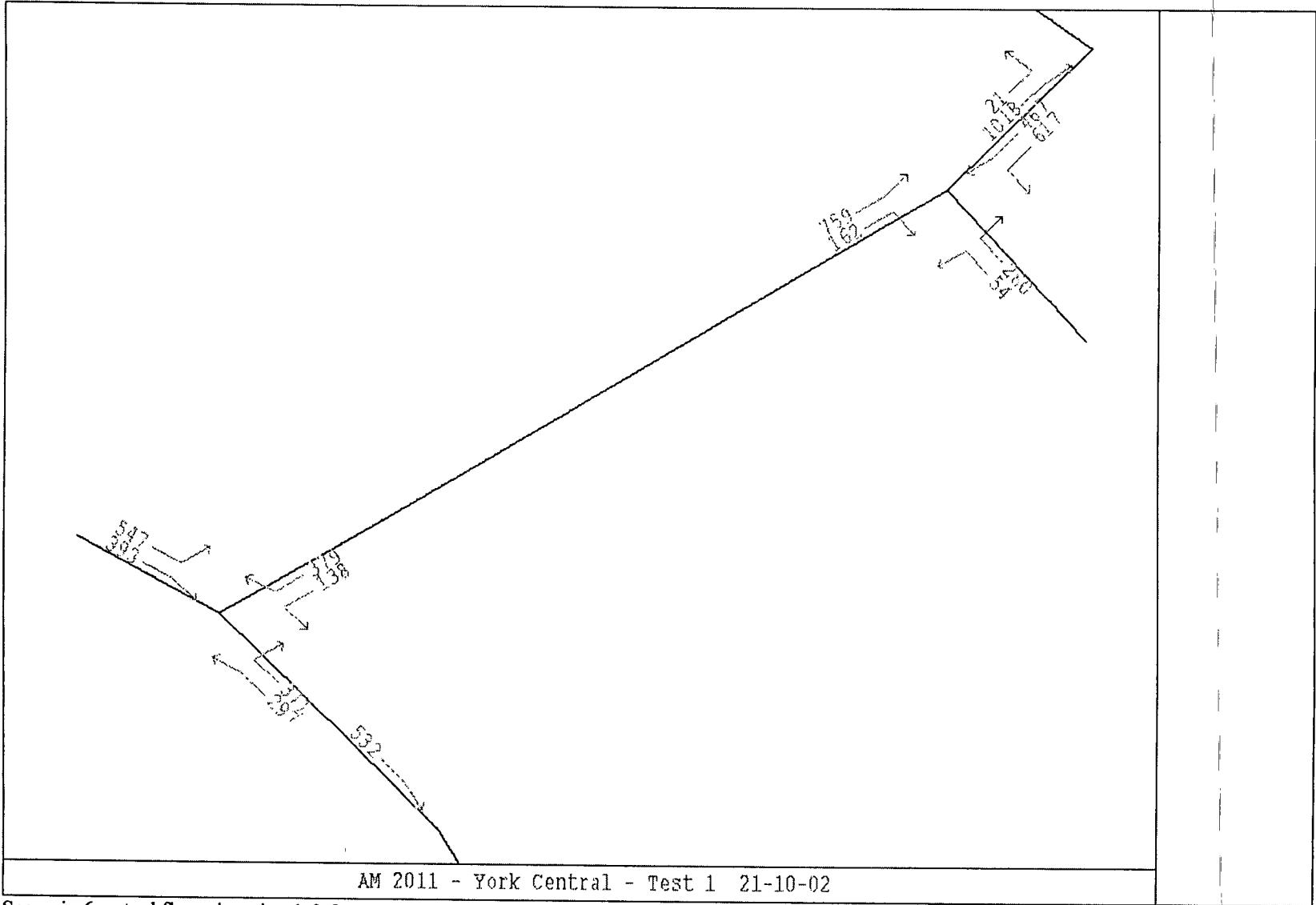


Scenario 6, actual flow, 5 of 6

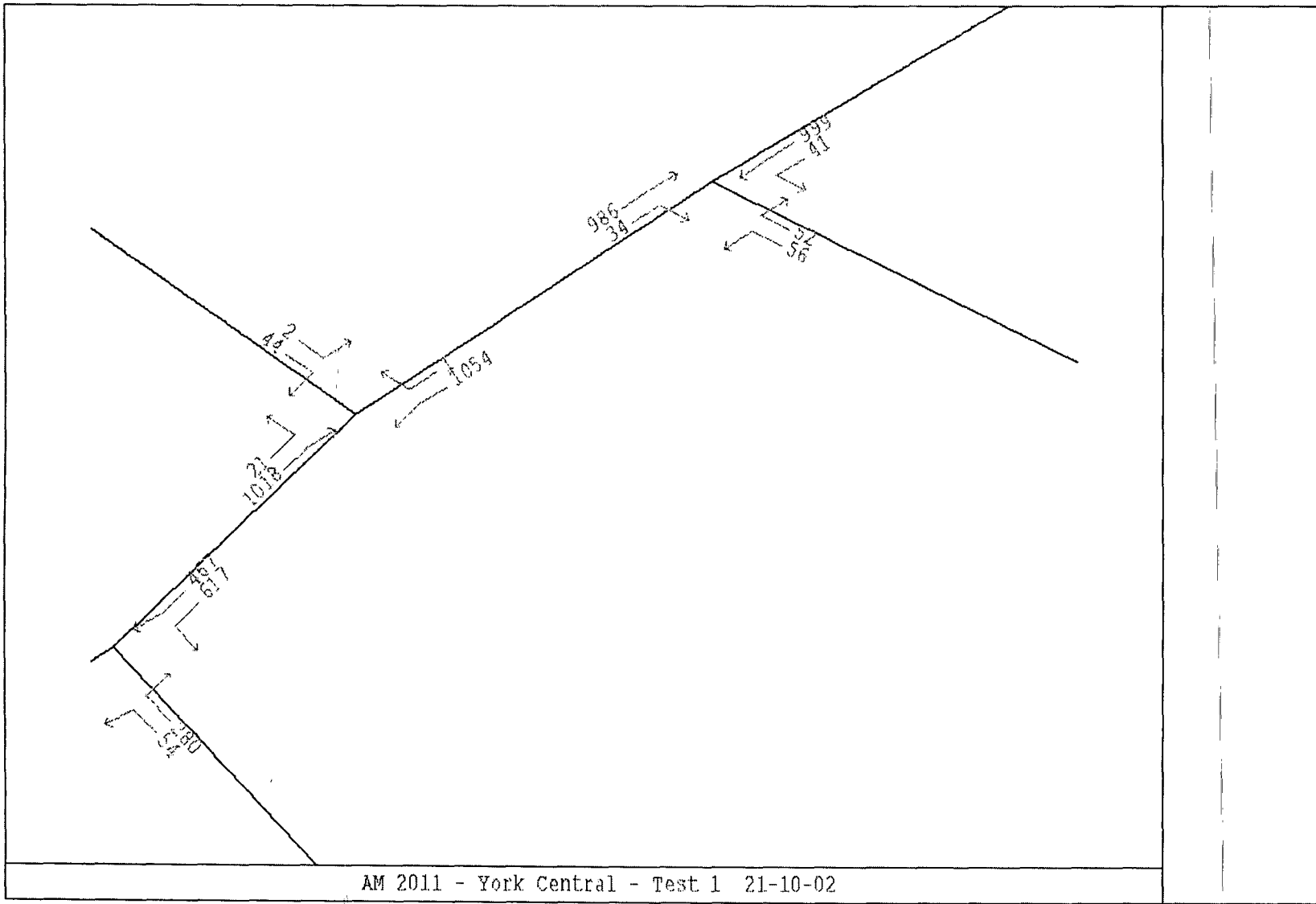




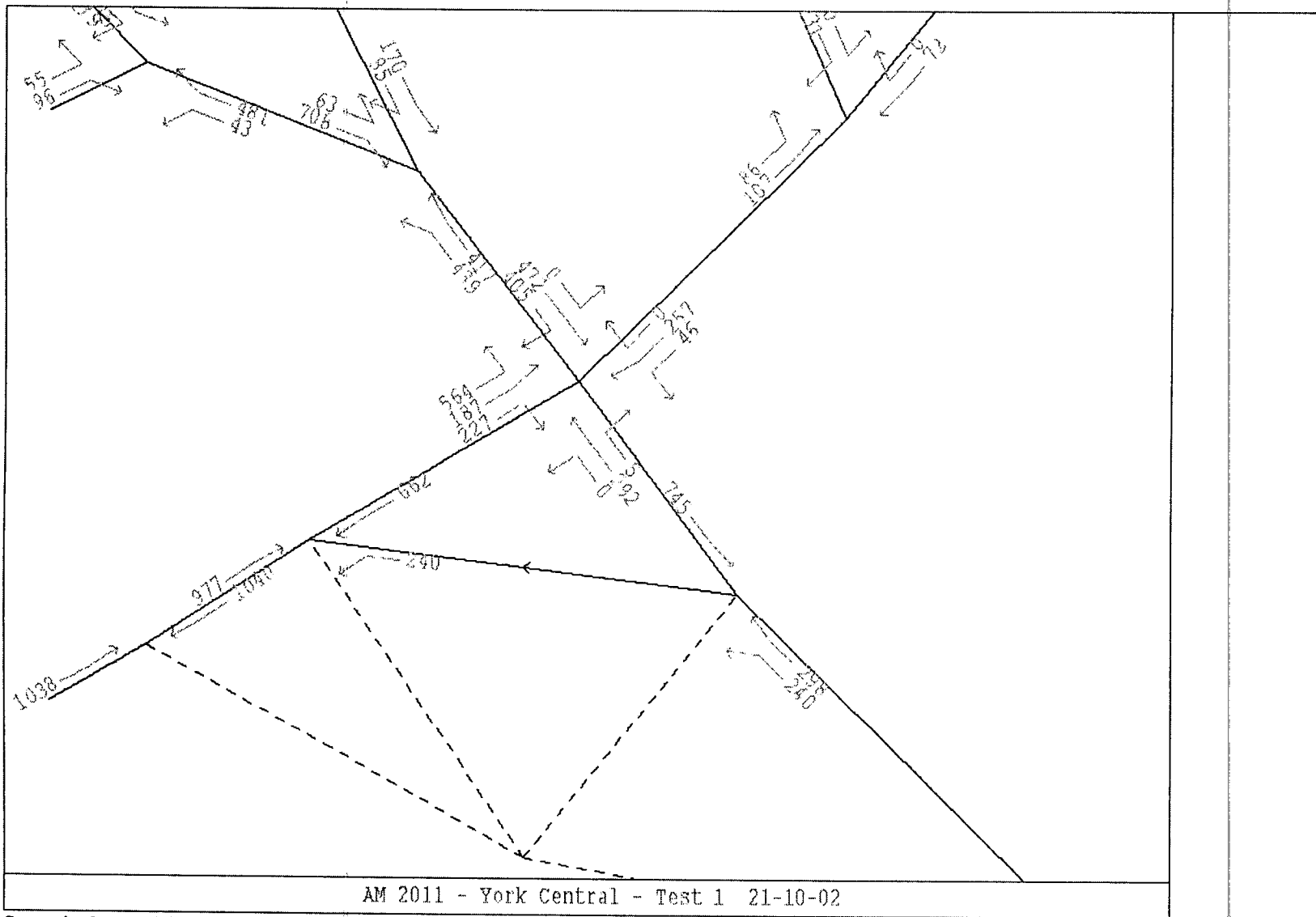
Scenario 6, actual flow, 6 of 6



Scenario 6, actual flow, junction 1 & 2

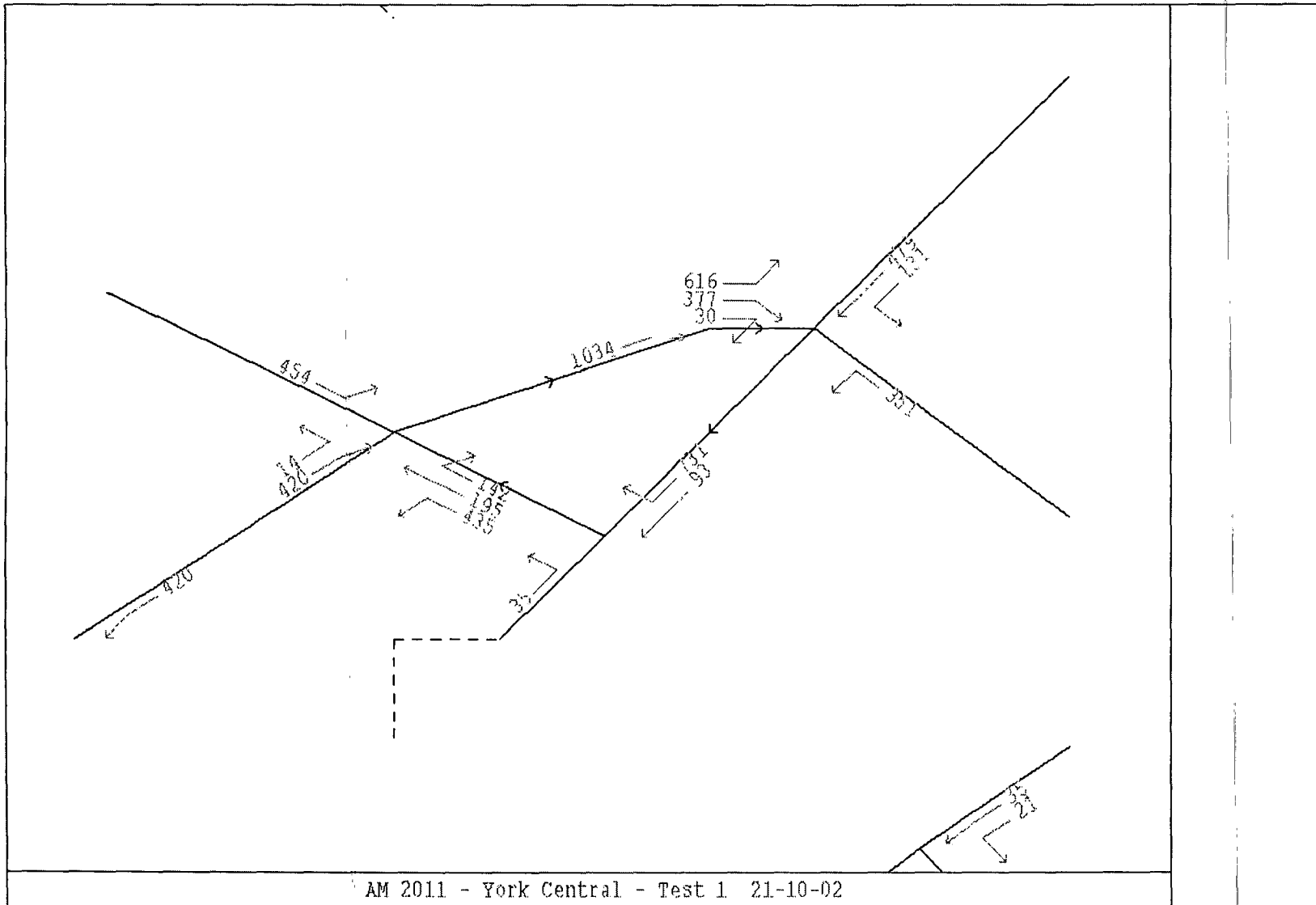


Scenario 6, actual flow, junction 3

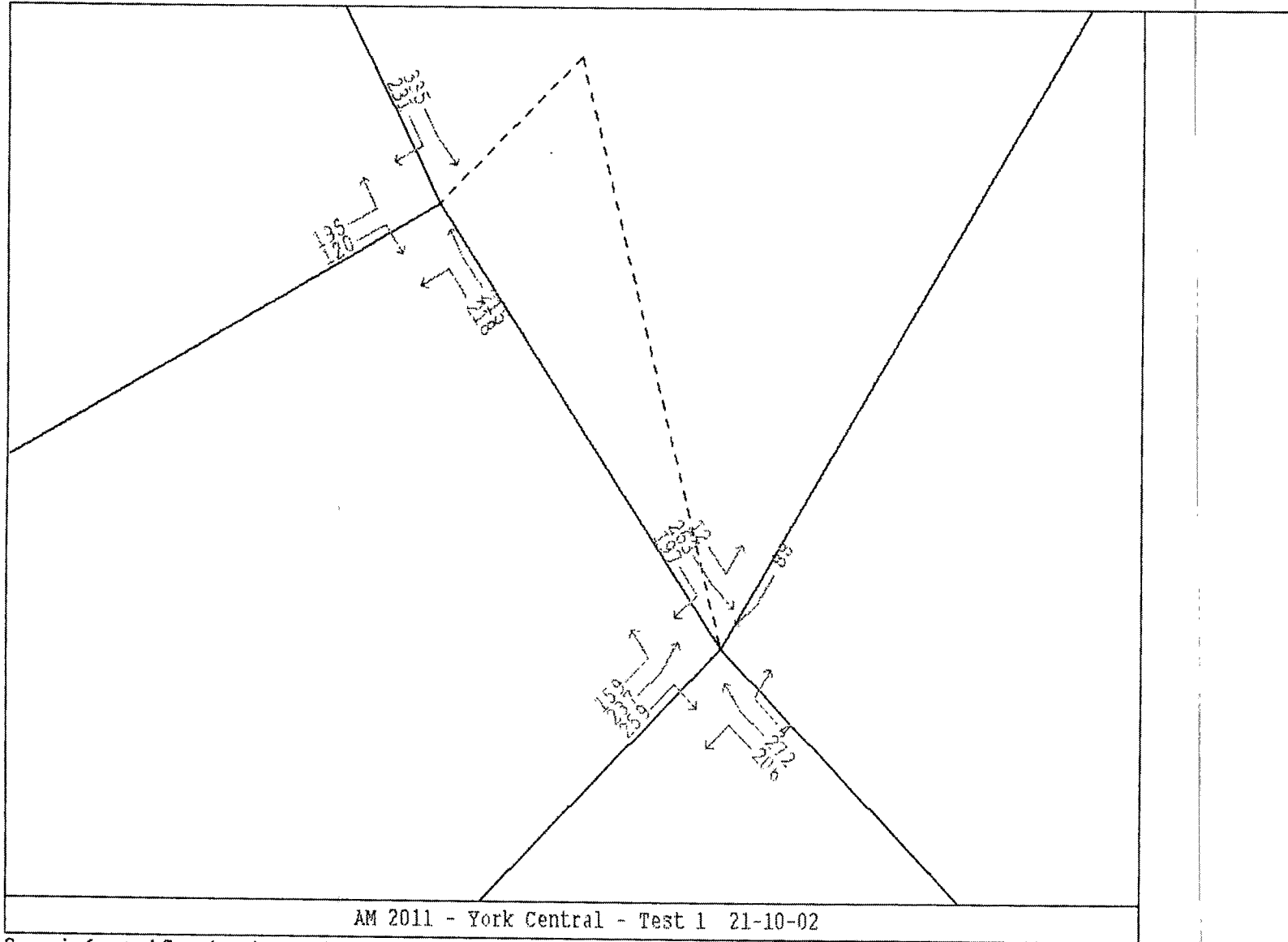


Scenario 6, actual flow, junction 4

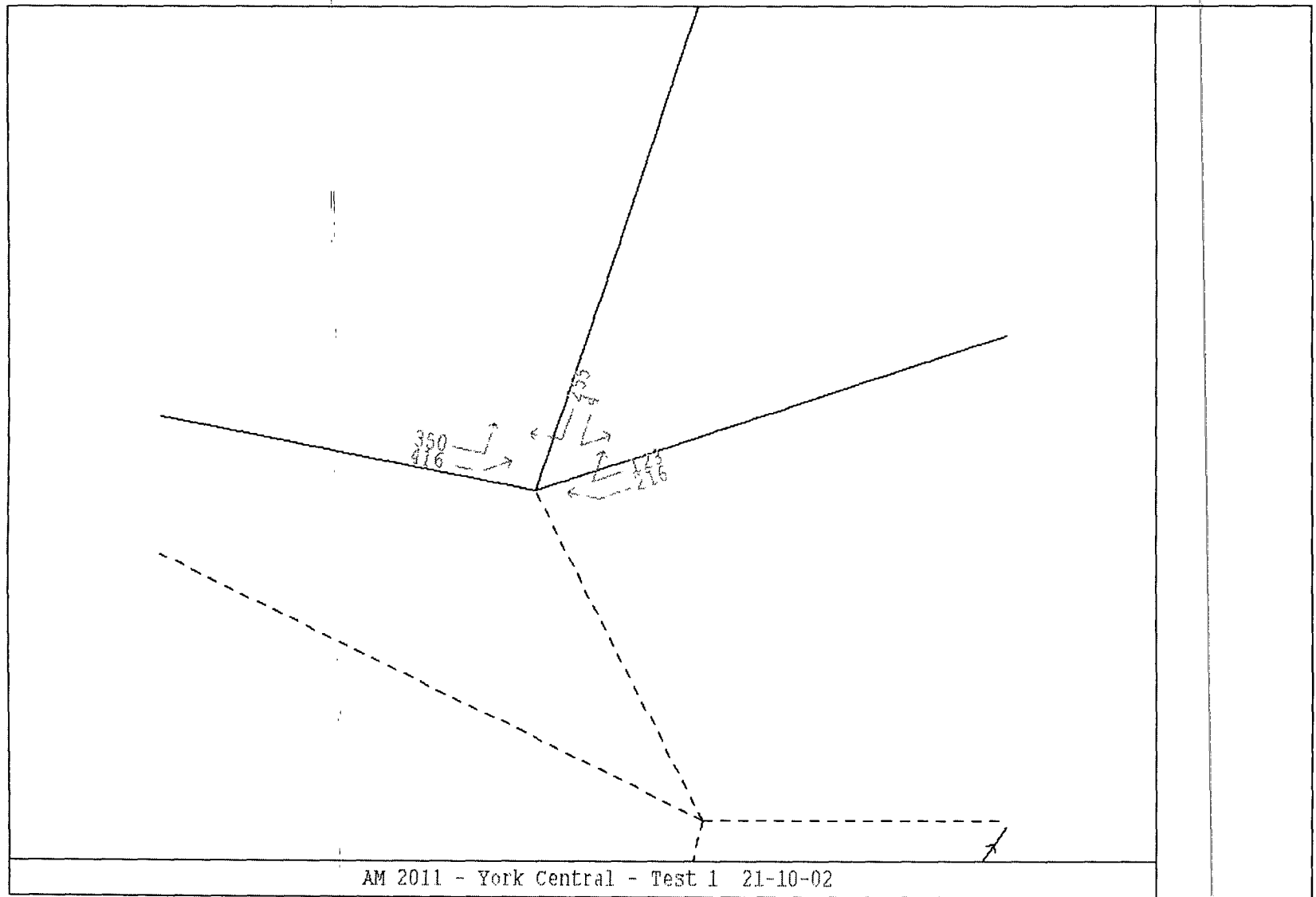




Scenario 6, actual flow, junction 6



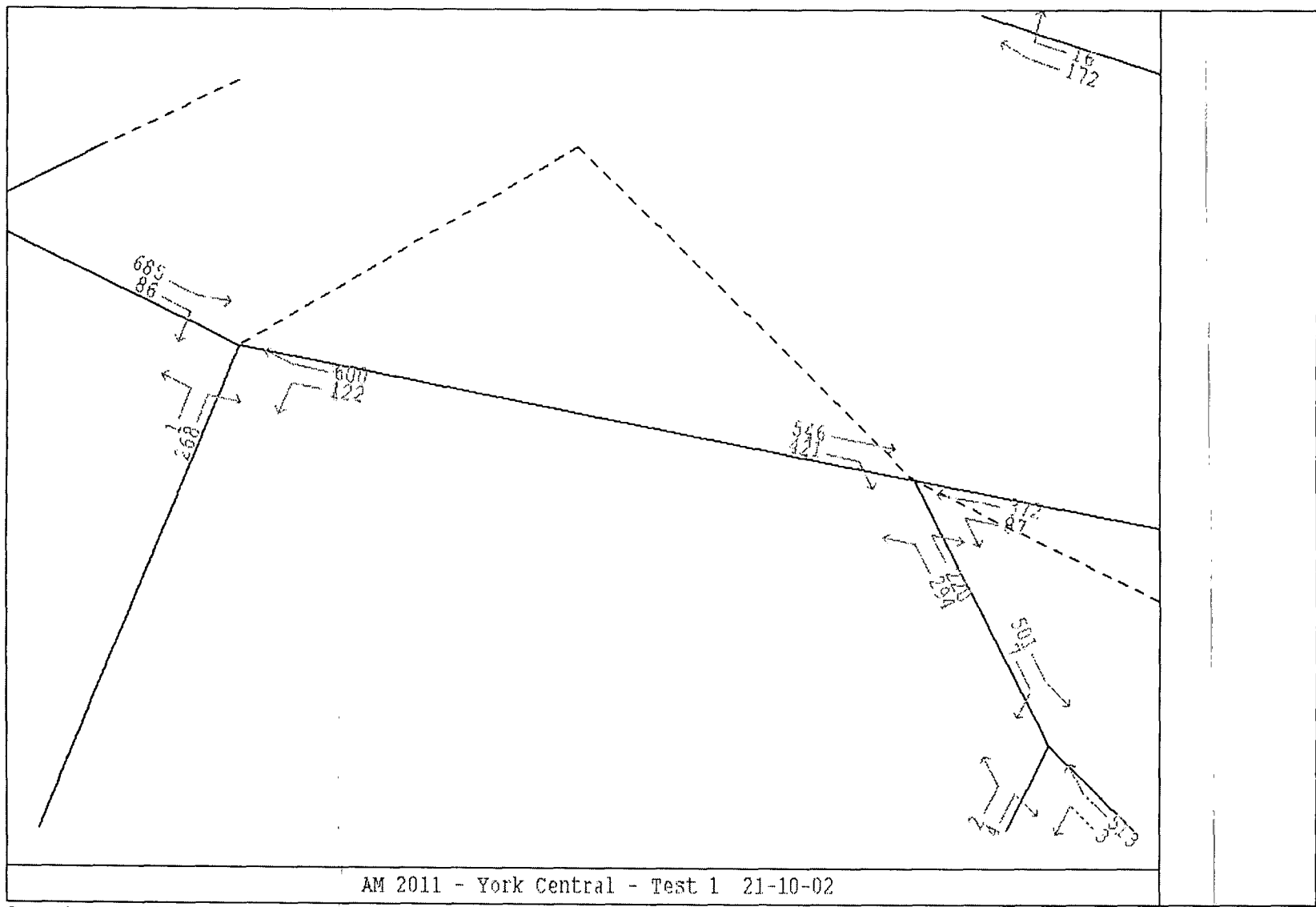
Scenario 6, actual flow, junction 7 & 8



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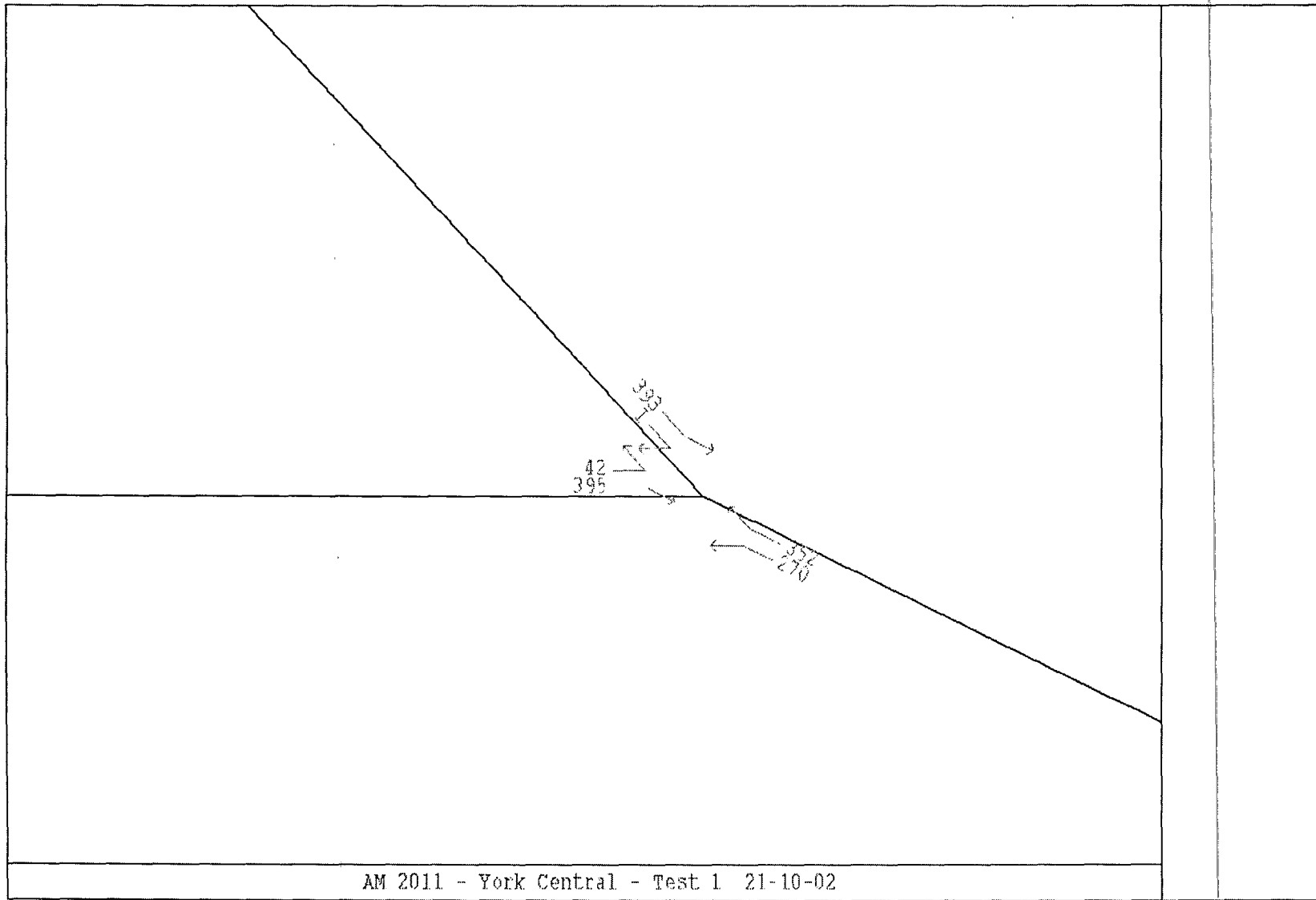
Scenario 6, actual flow, junction 9



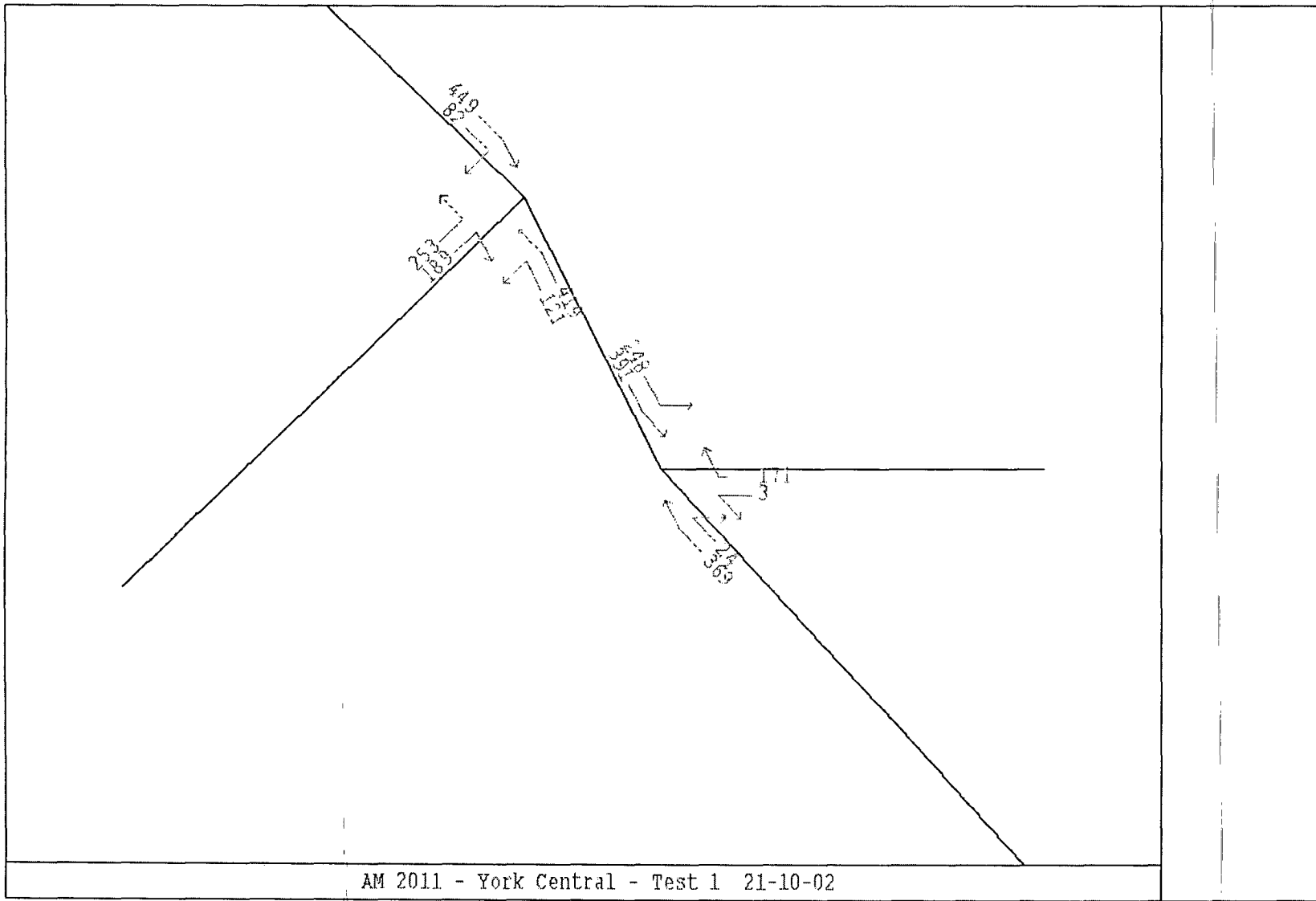


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Scenario 6, actual flow, junction 10 & 11

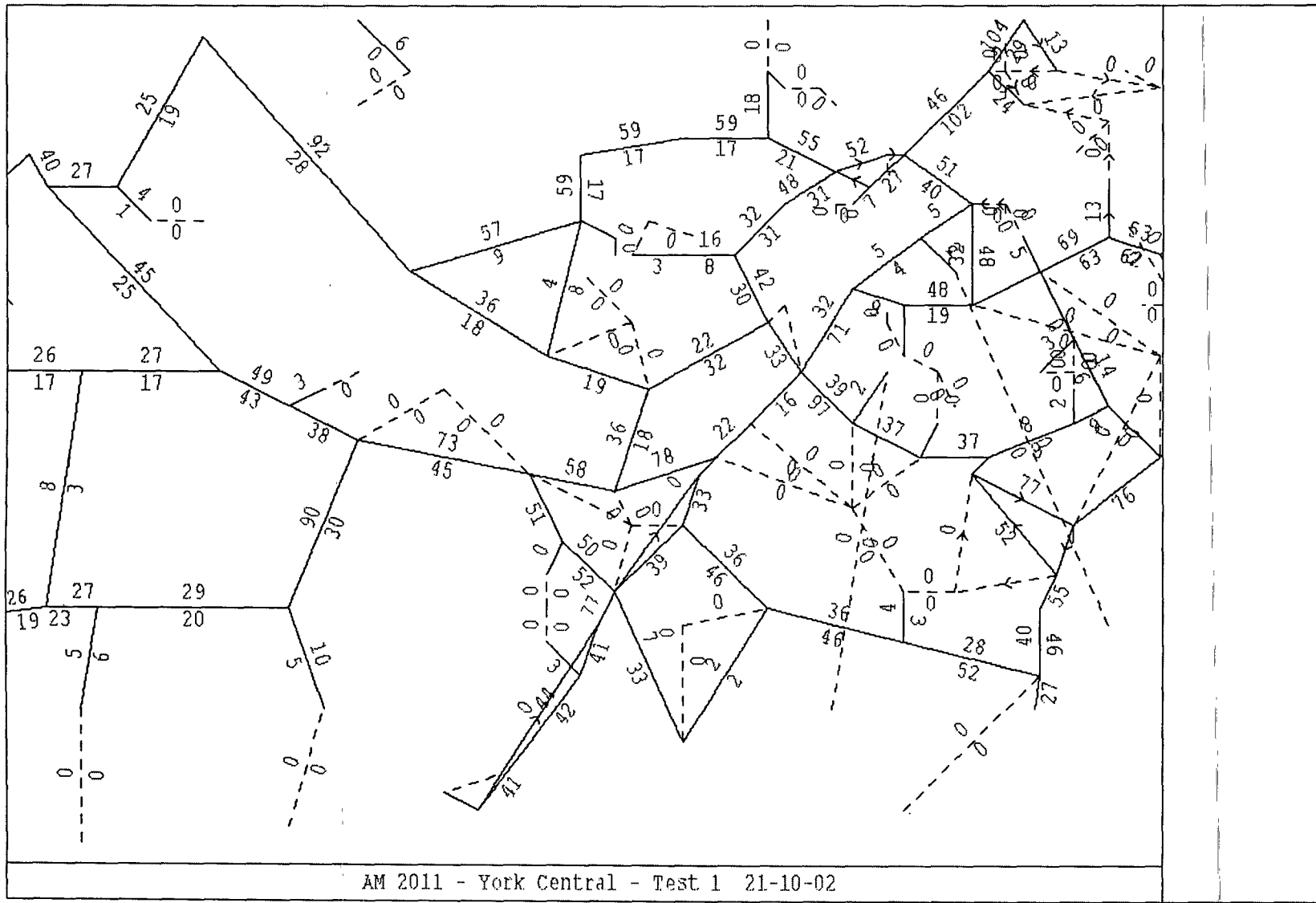


Scenario 6, actual flow, junction 12

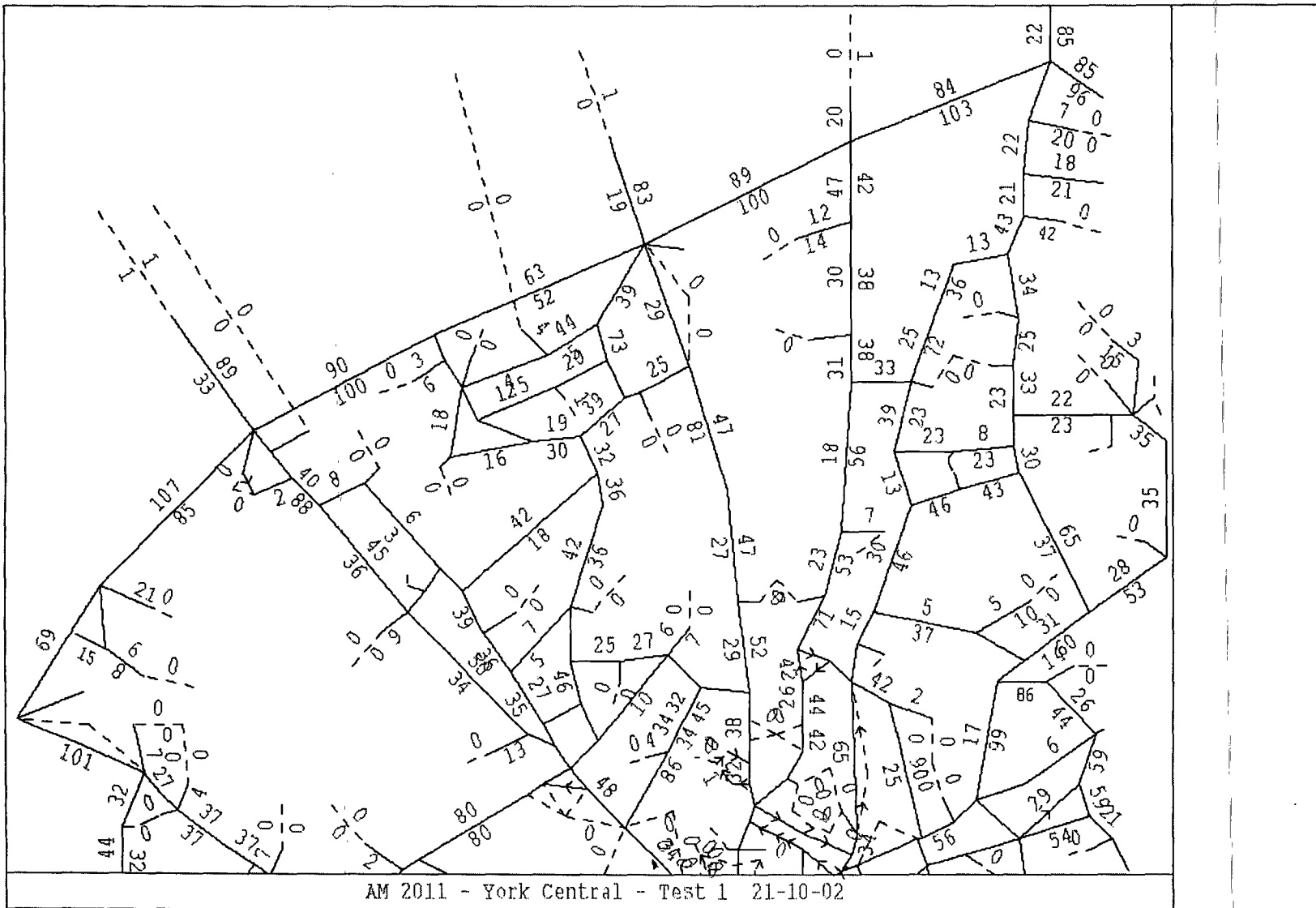


Scenario 6, actual flow, junction 13 & 14

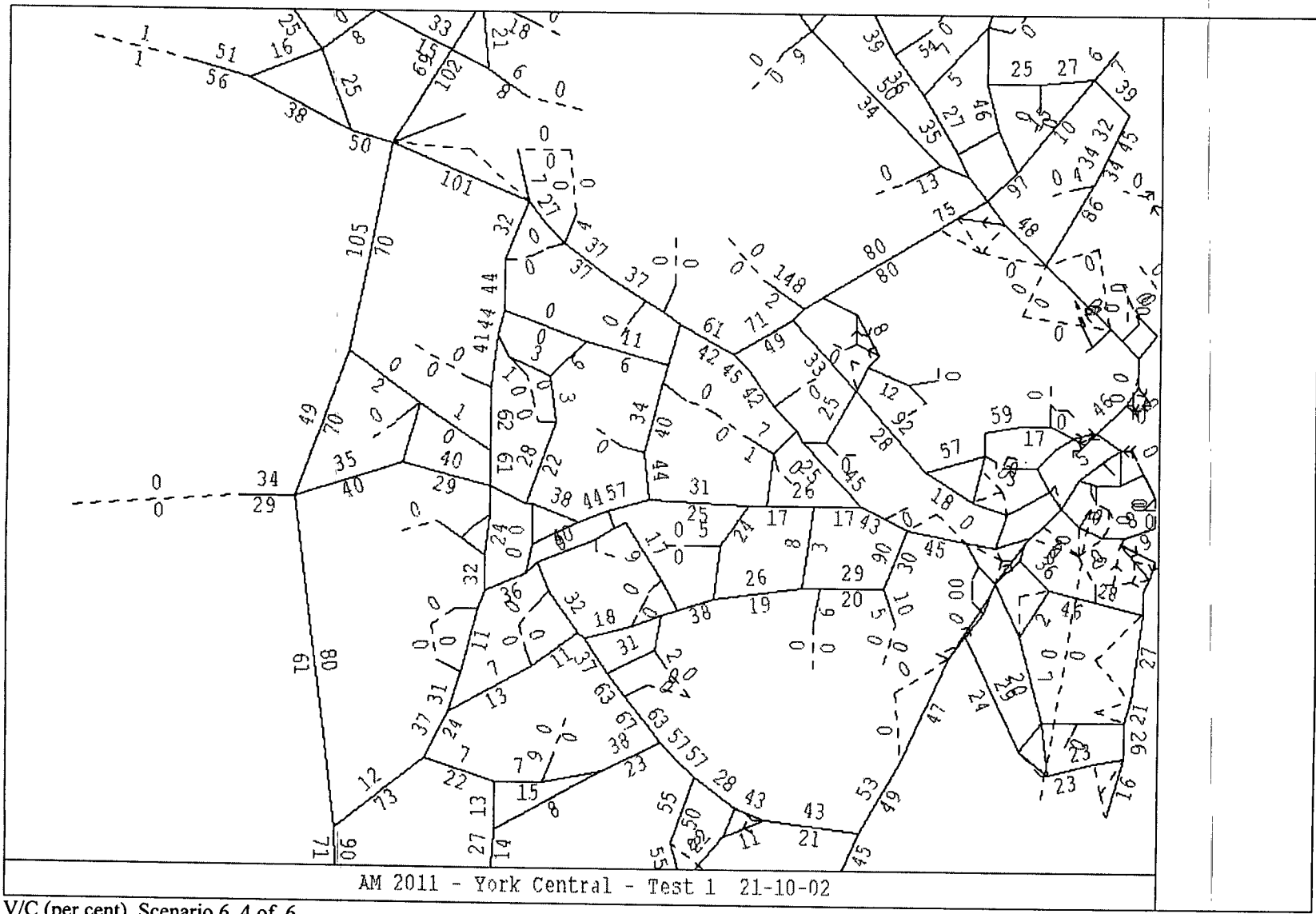




V/C (per cent), Scenario 6, 2 of 6

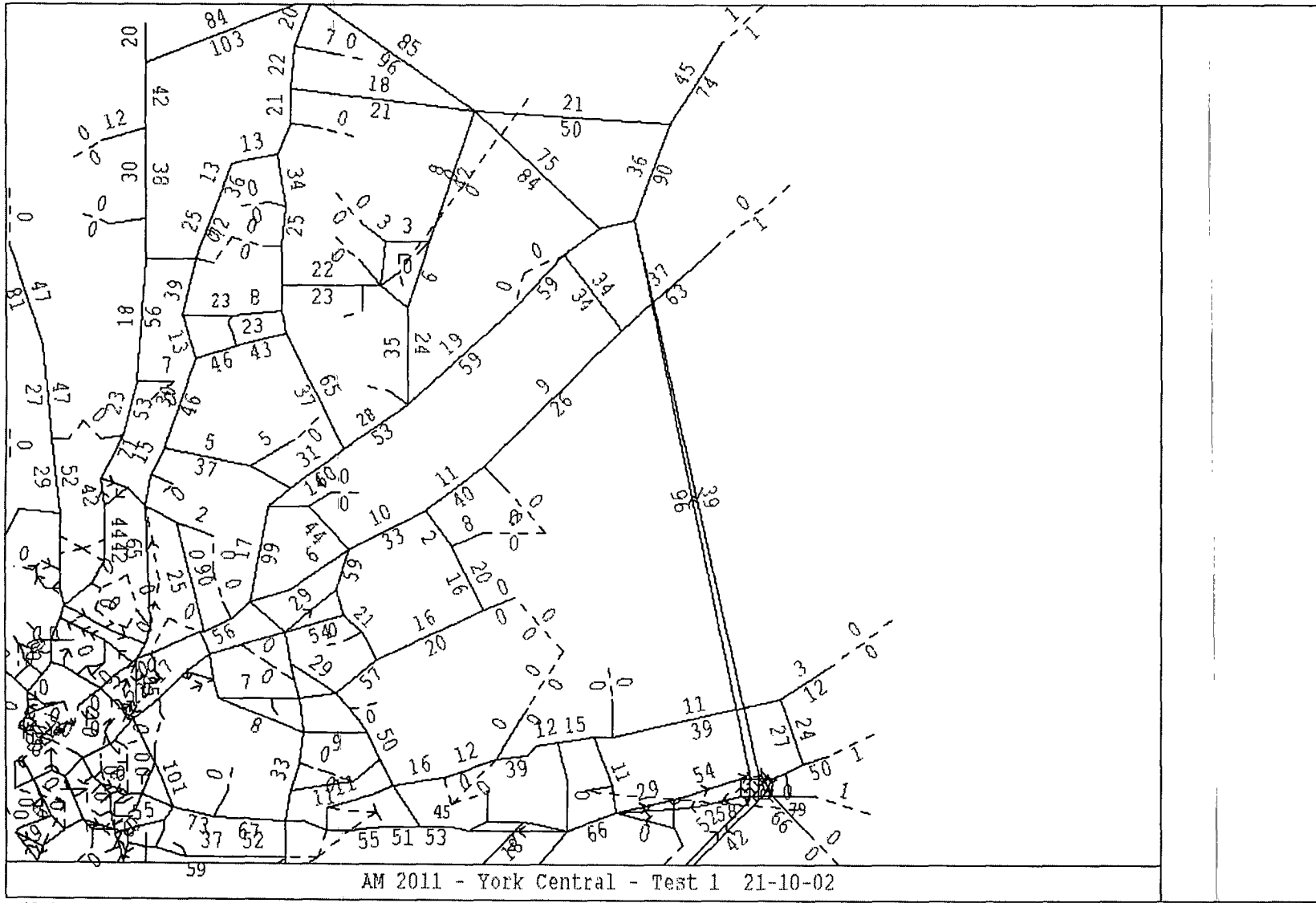


V/C (per cent), Scenario 6, 3 of 6

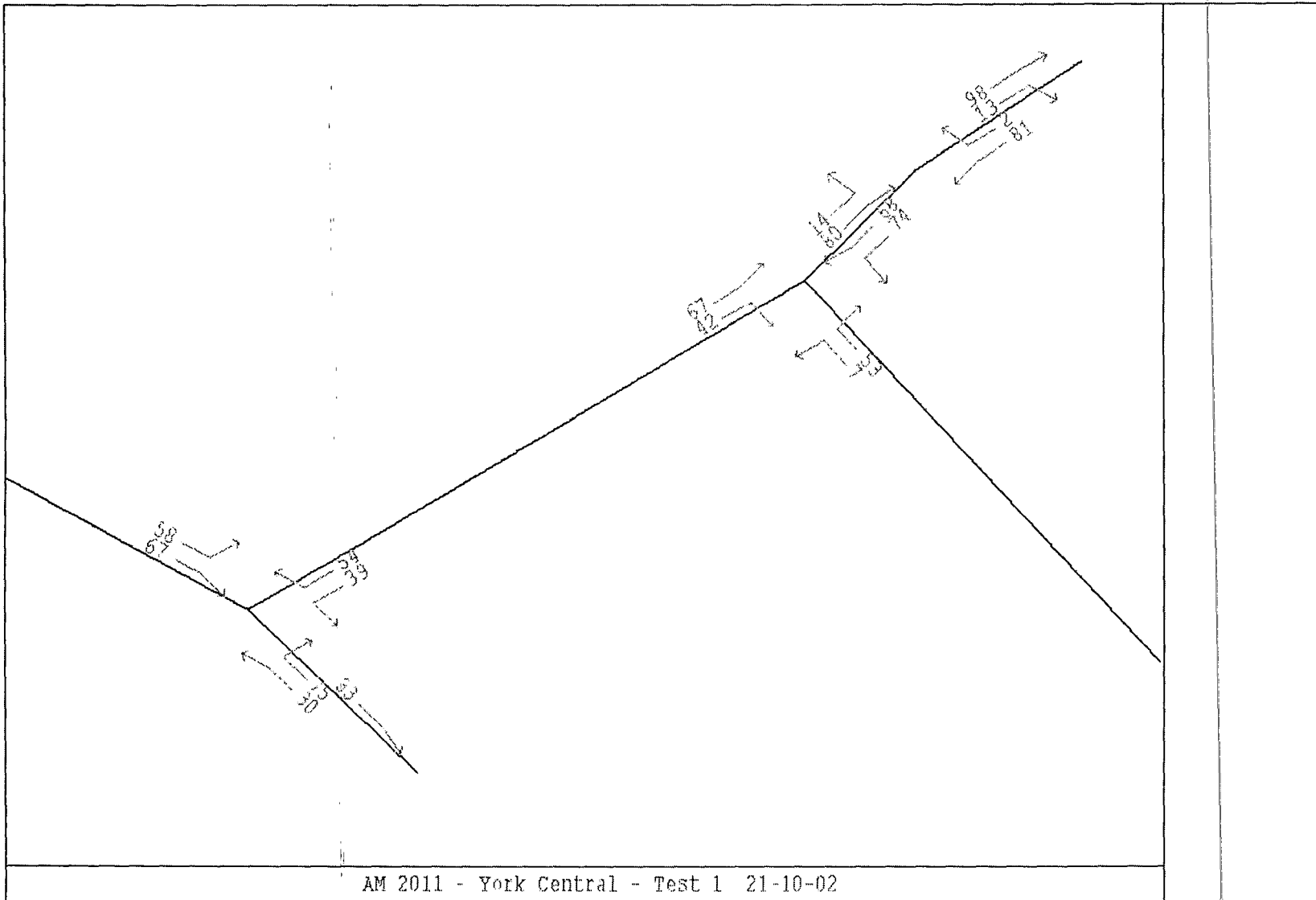






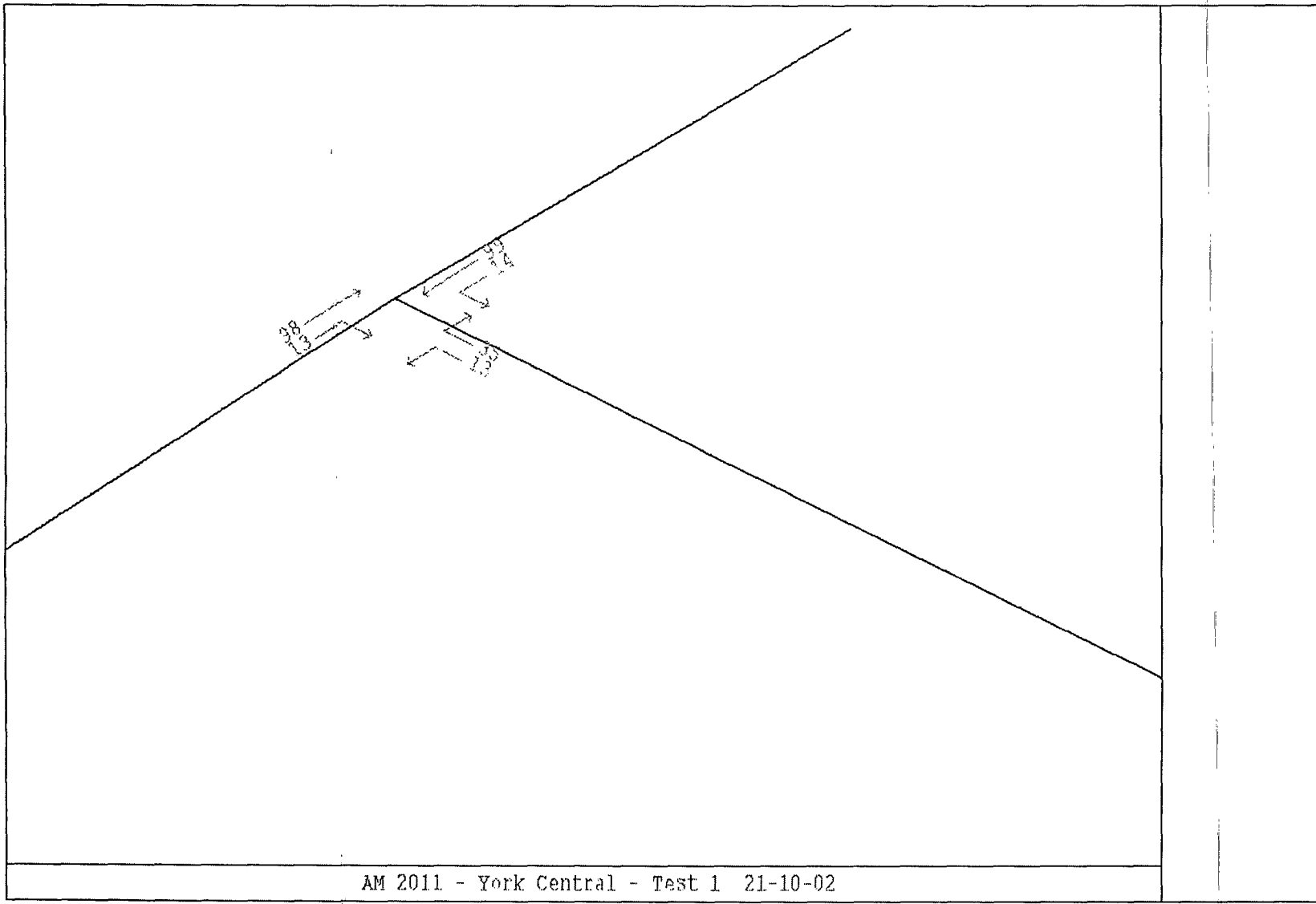


V/C (per cent), Scenario 6, 6 of 6



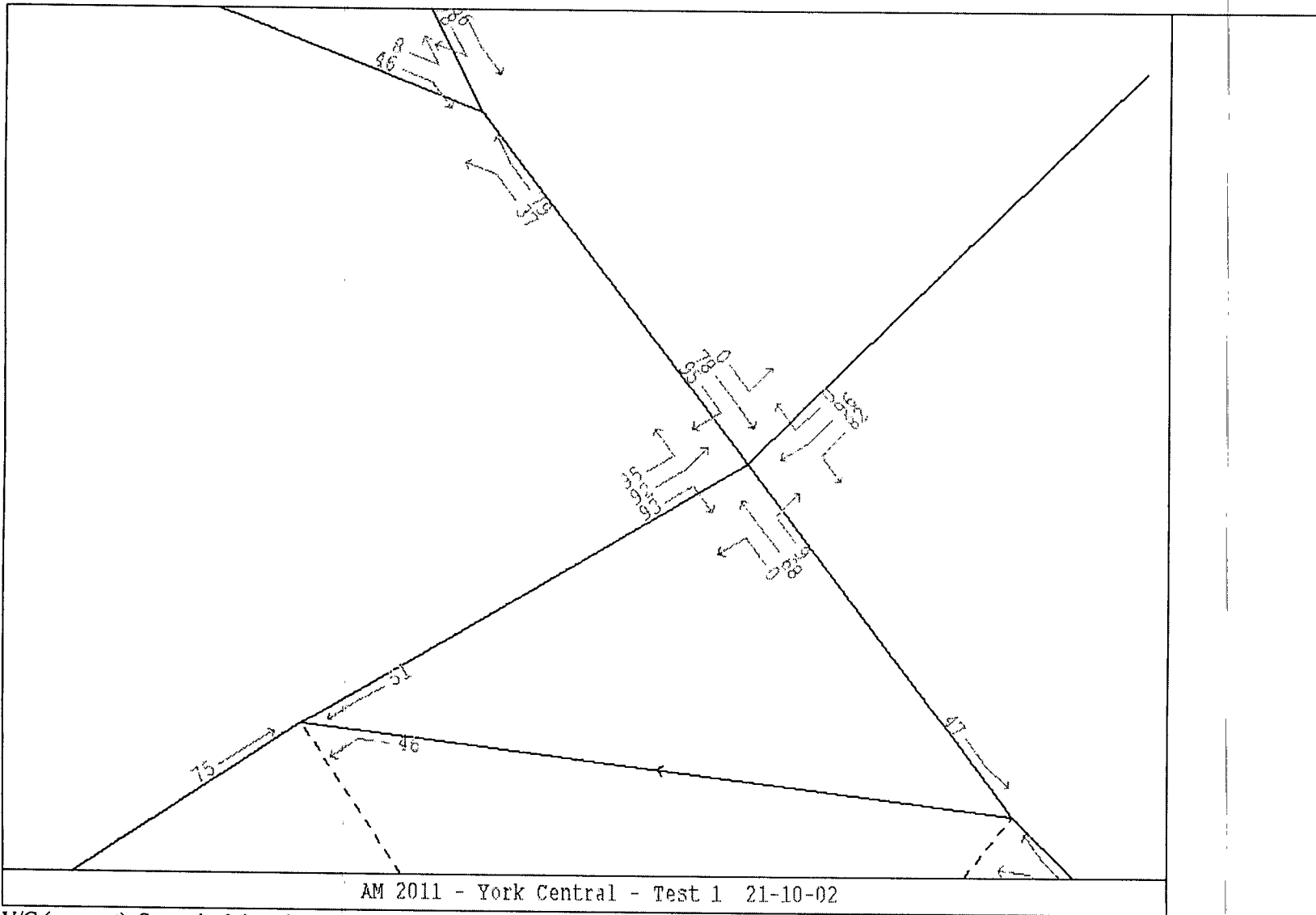
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V/C (per cent), actual flow, junction 1& 2



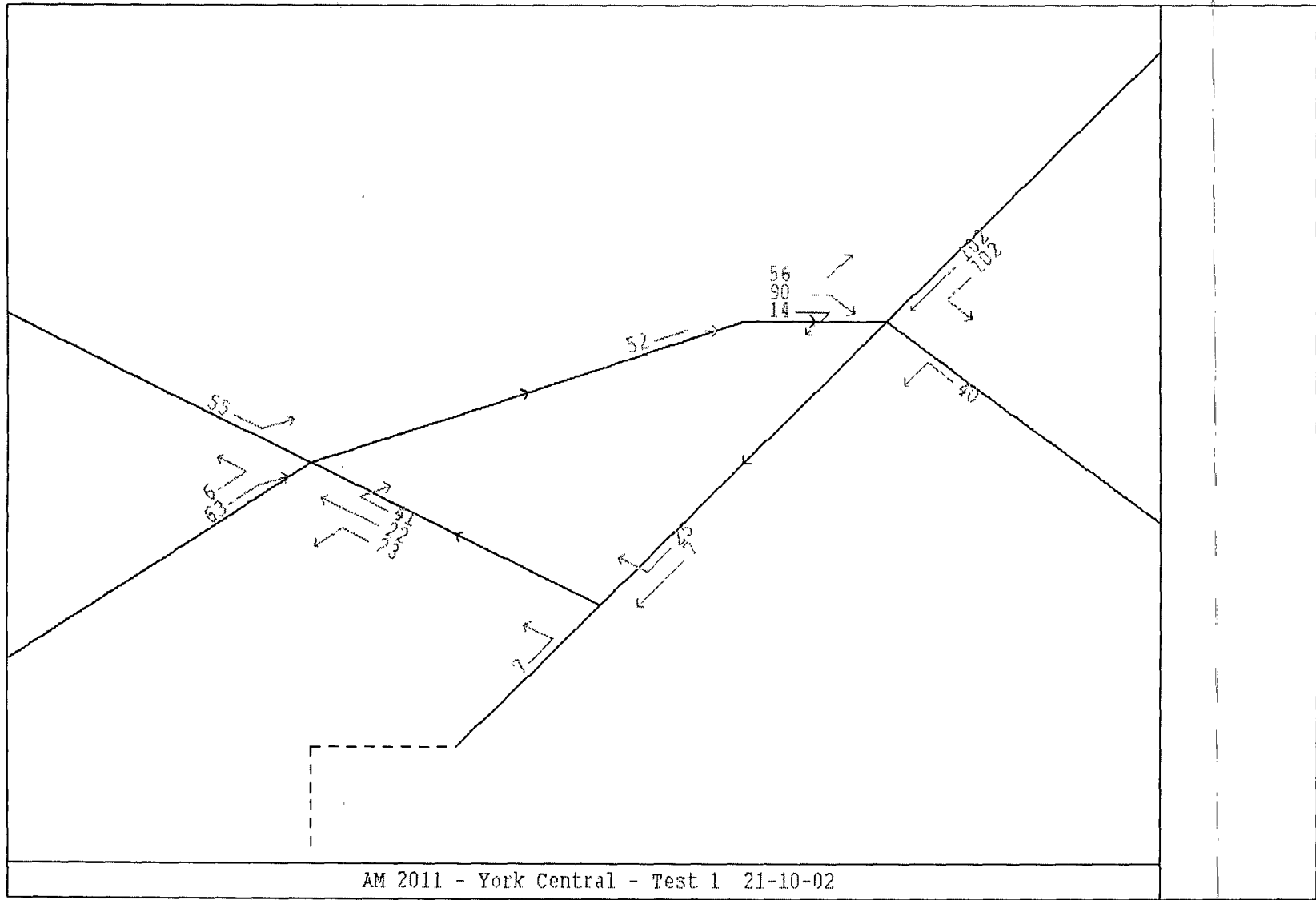
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V/C (per cent), Scenario 6, junction 3

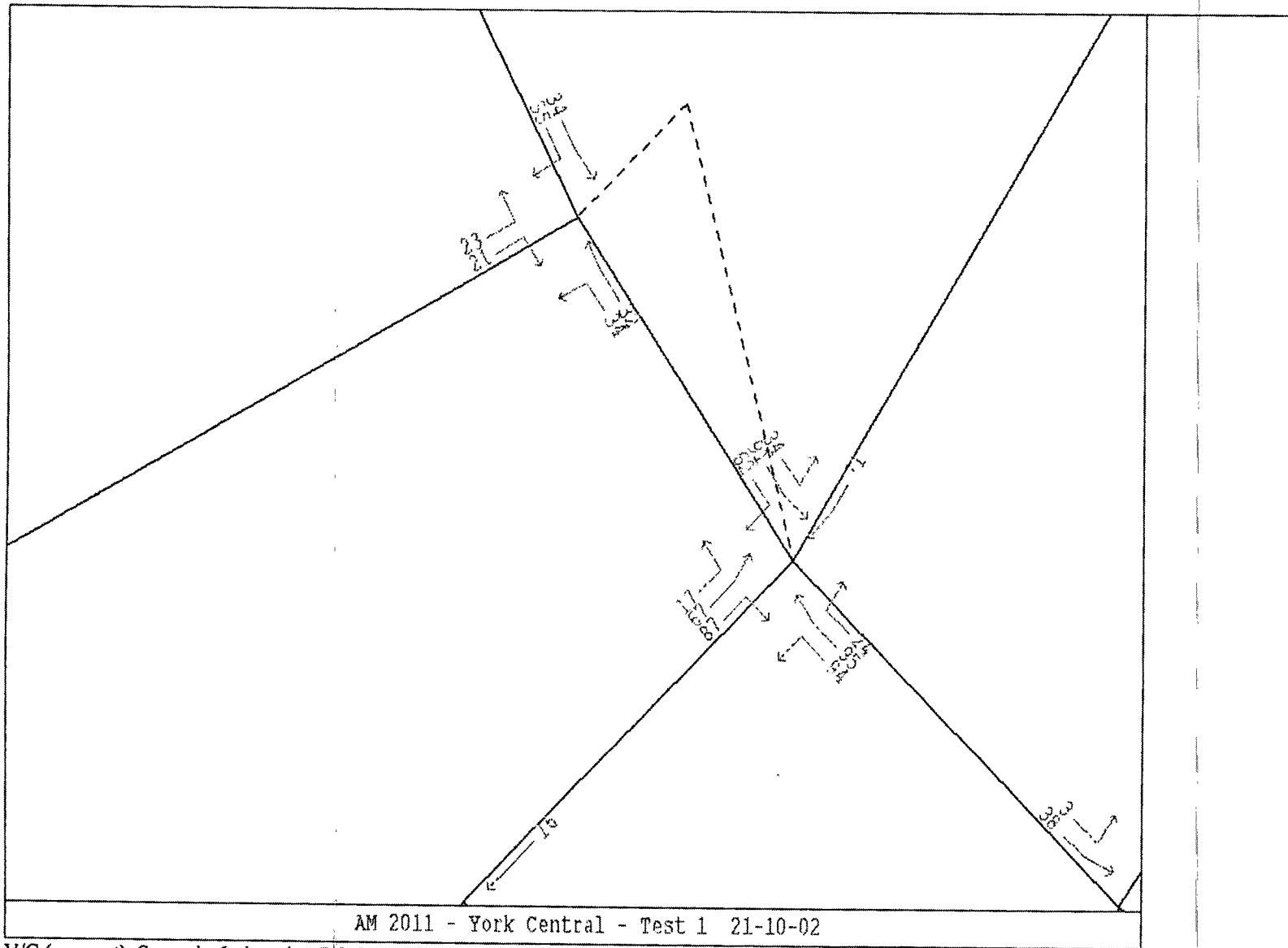


V/C (per cent), Scenario 6, junction 4

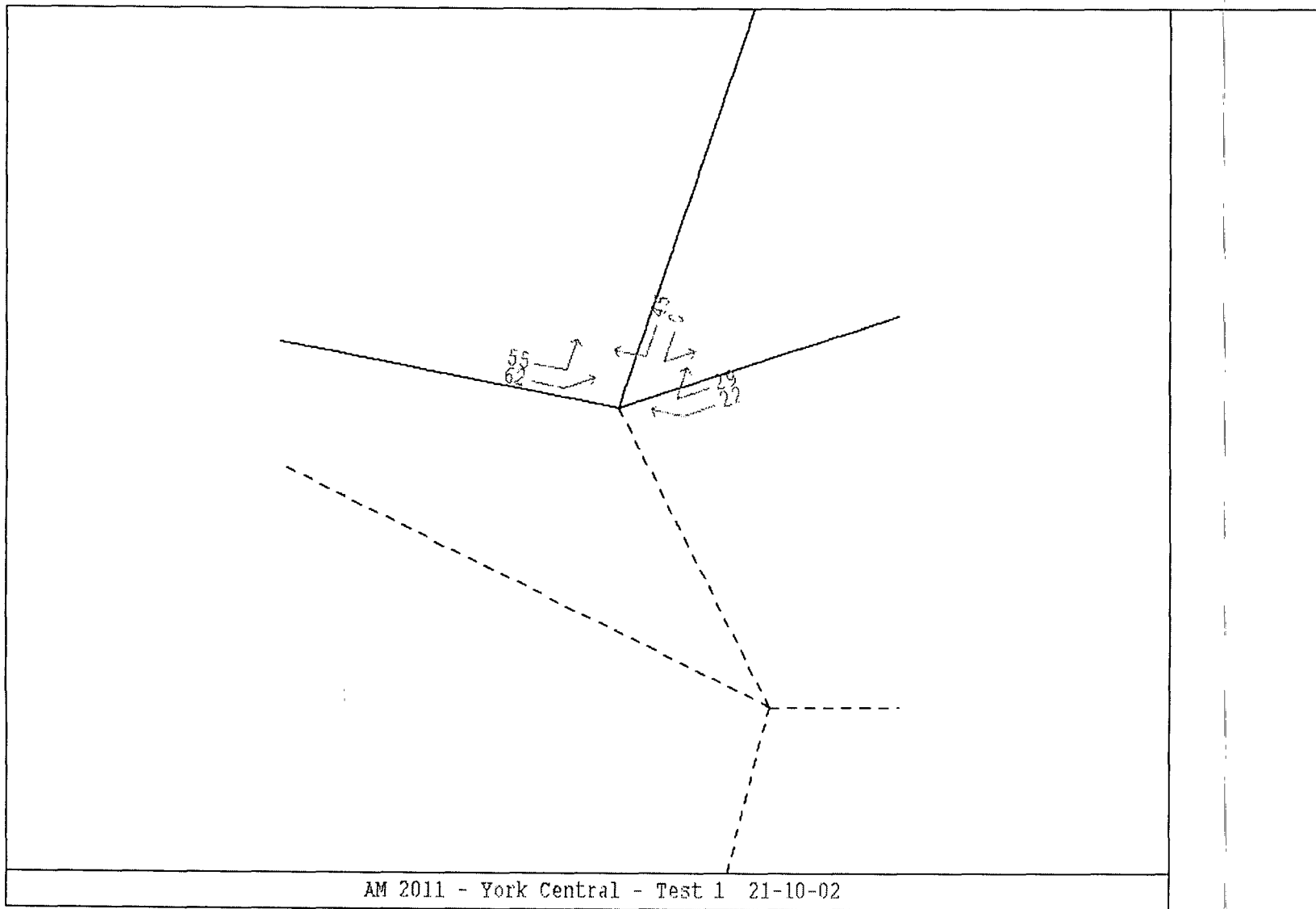




V/C (per cent), Scenario 6, junction 6

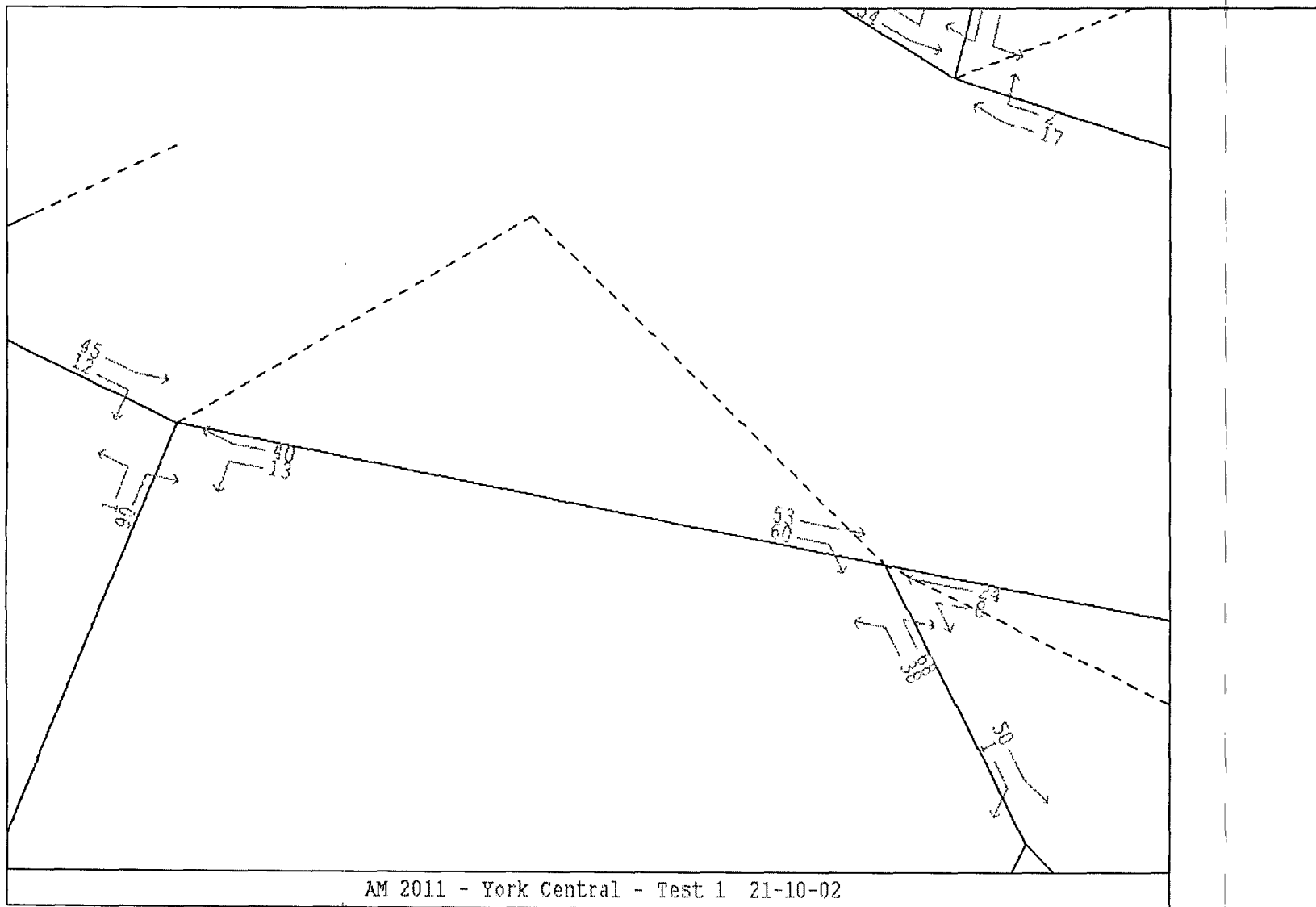


V/C (per cent), Scenario 6, junction 7 & 8



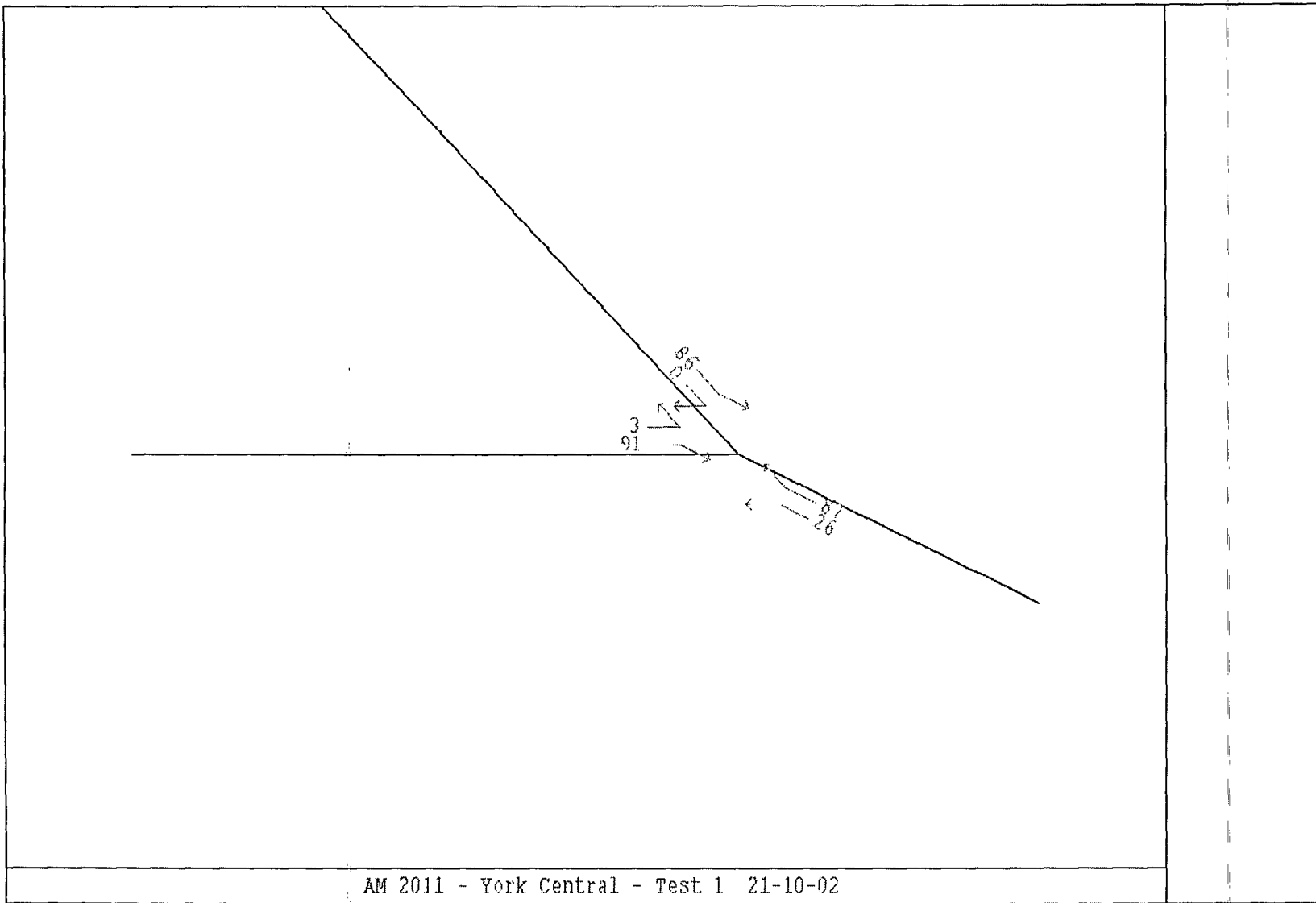
V/C (per cent), Scenario 6, junction 9





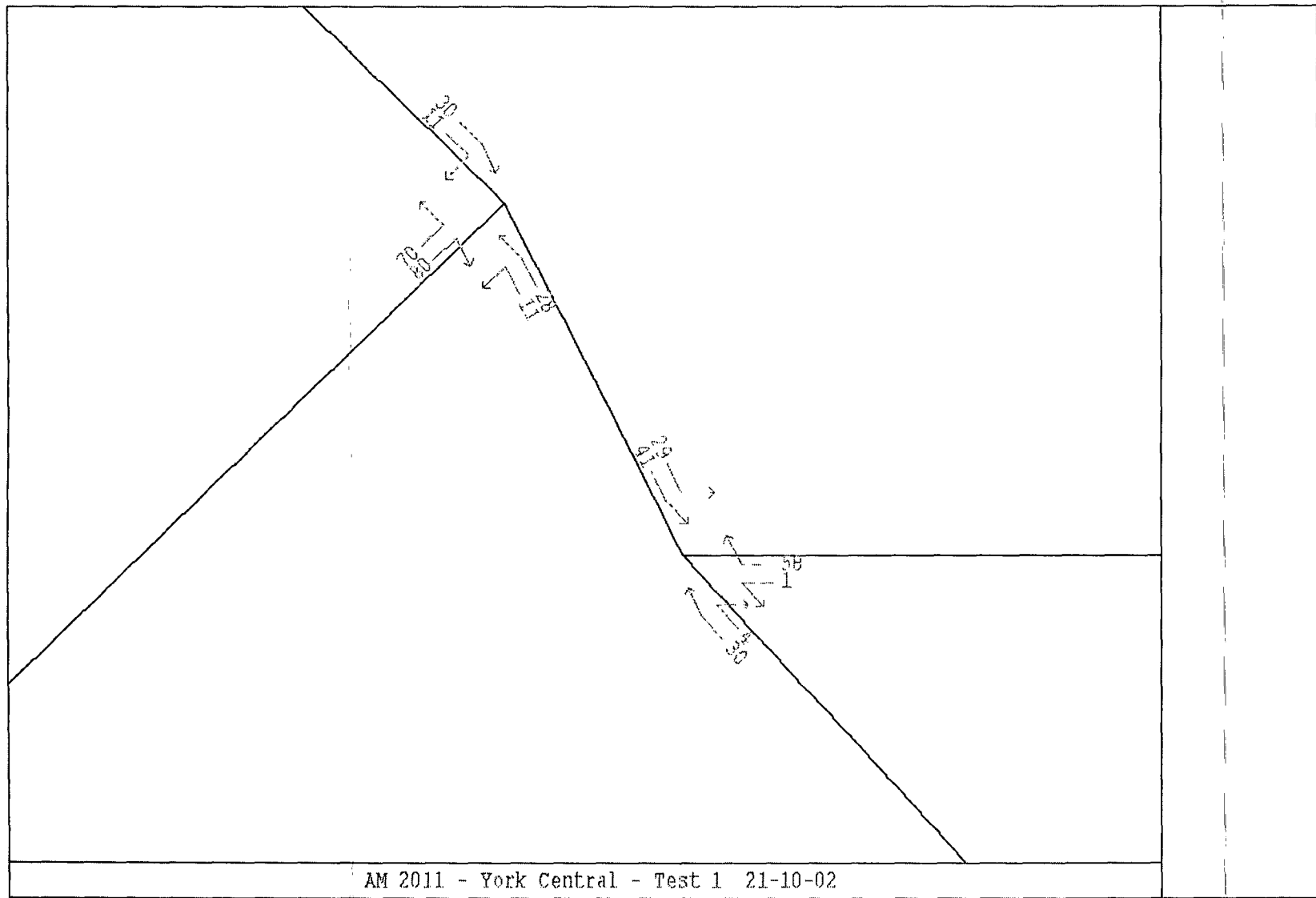
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V/C (per cent), Scenario 6, junction 10 & 11

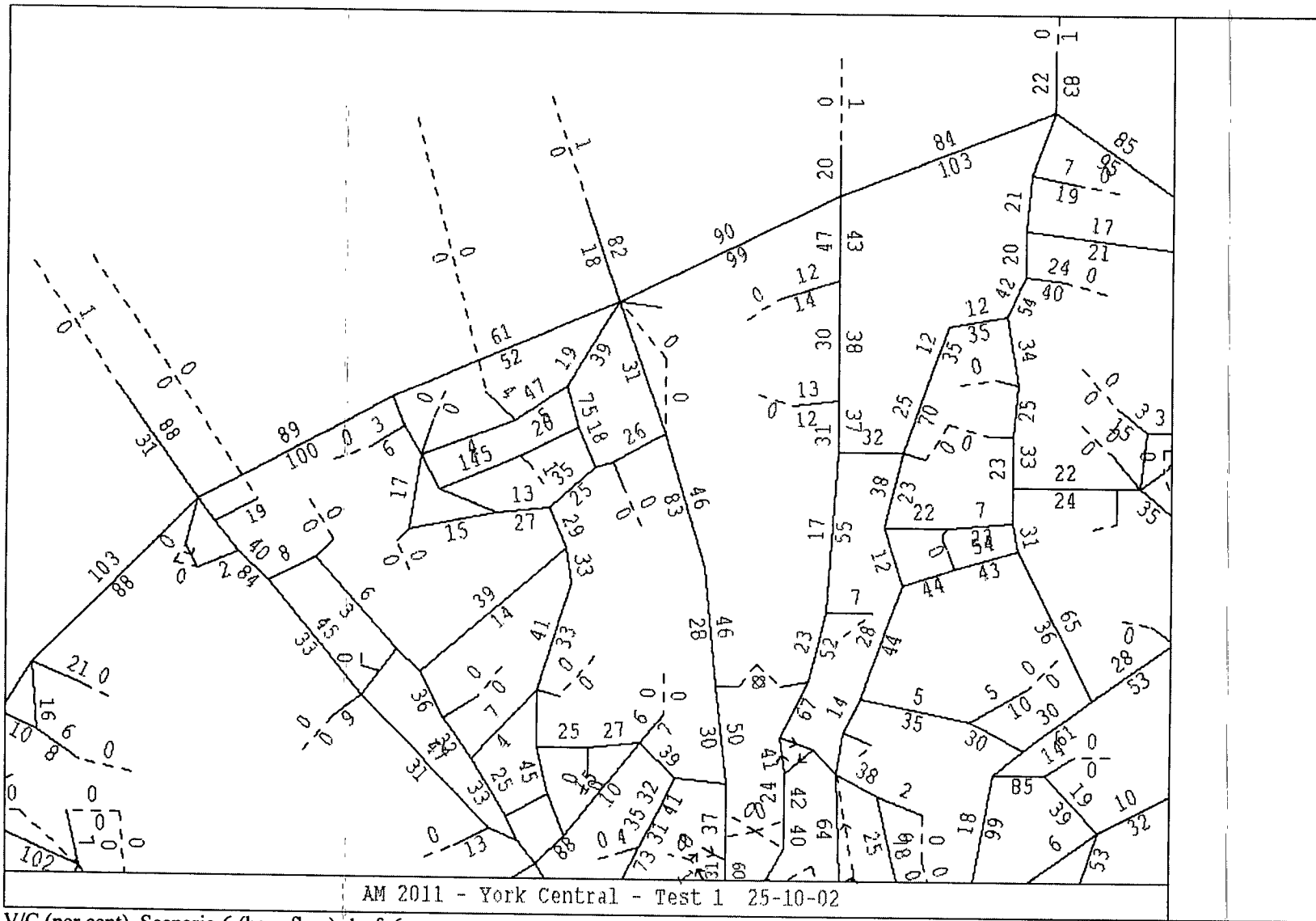


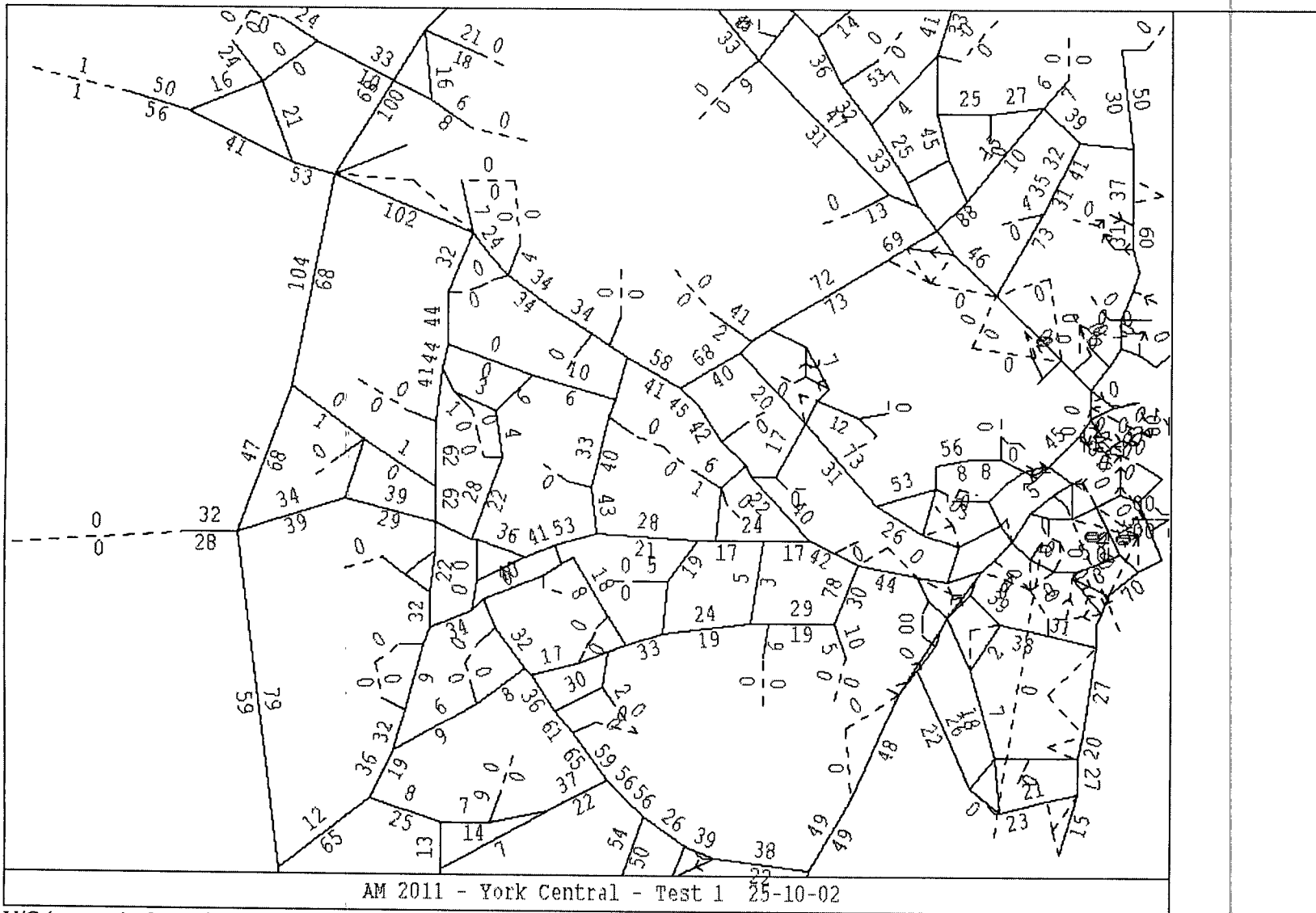
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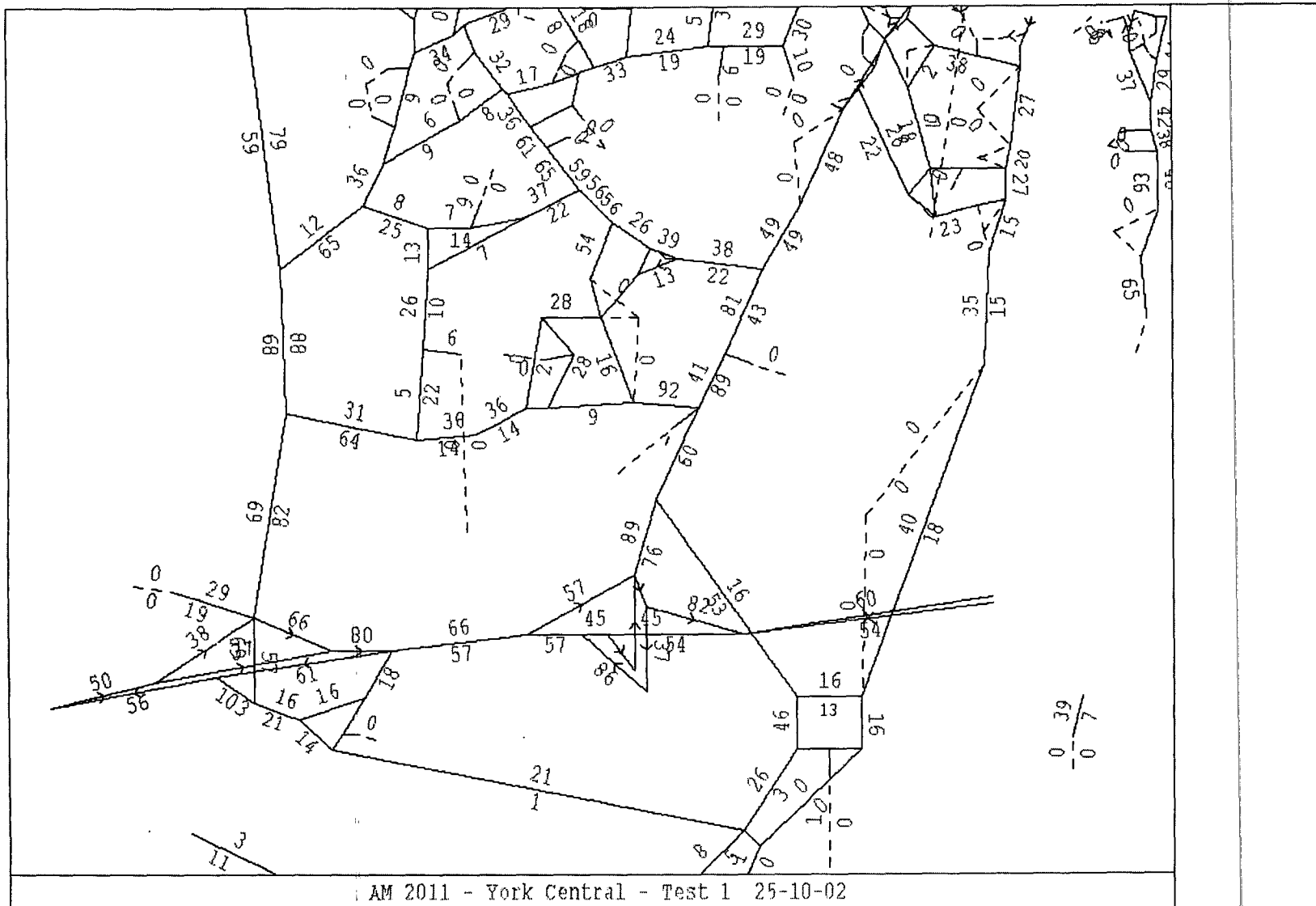
V/C (per cnet), Scenario 6, junction 12



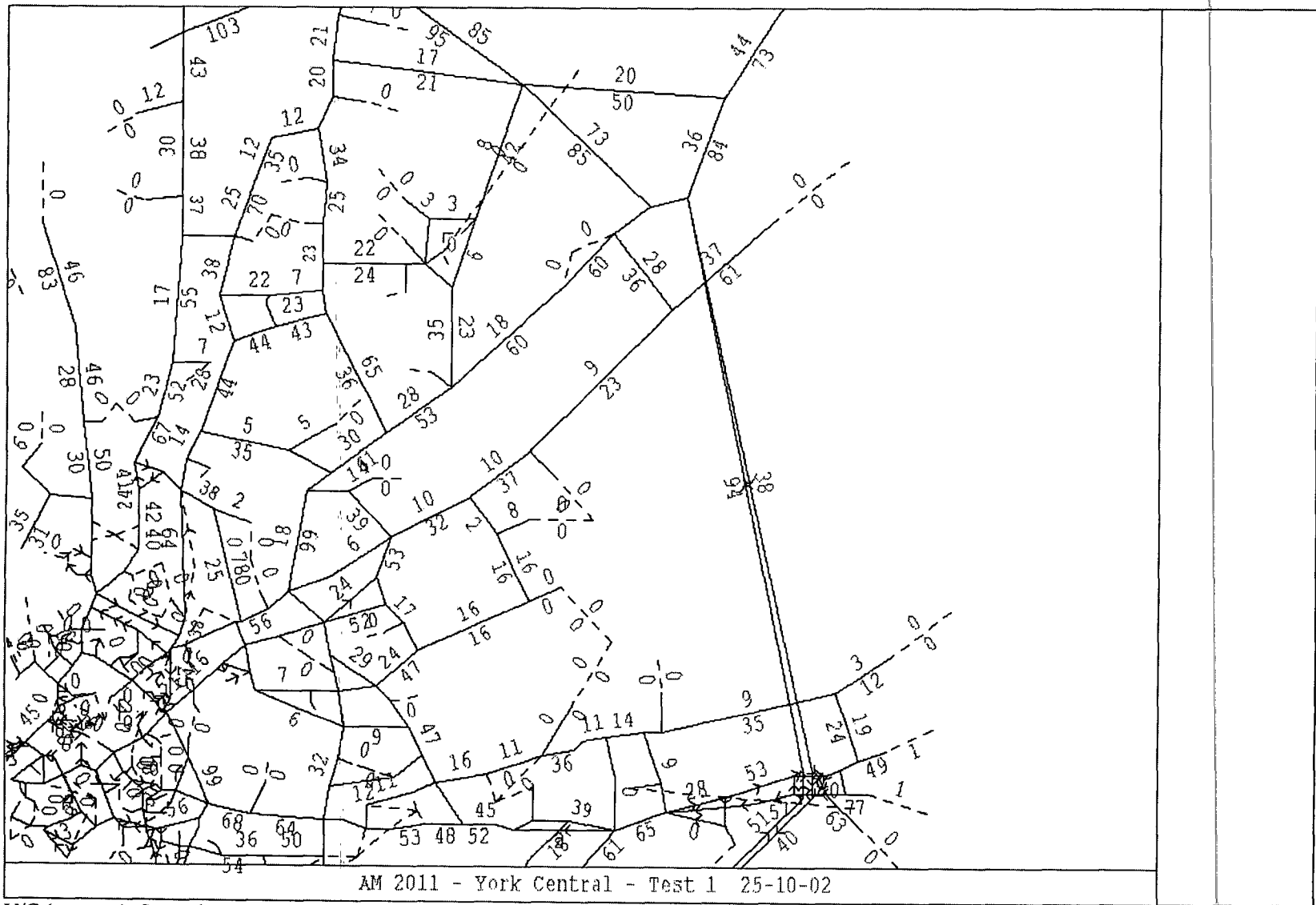
V/C (per cent), Scenario 6, junction 13 & 14

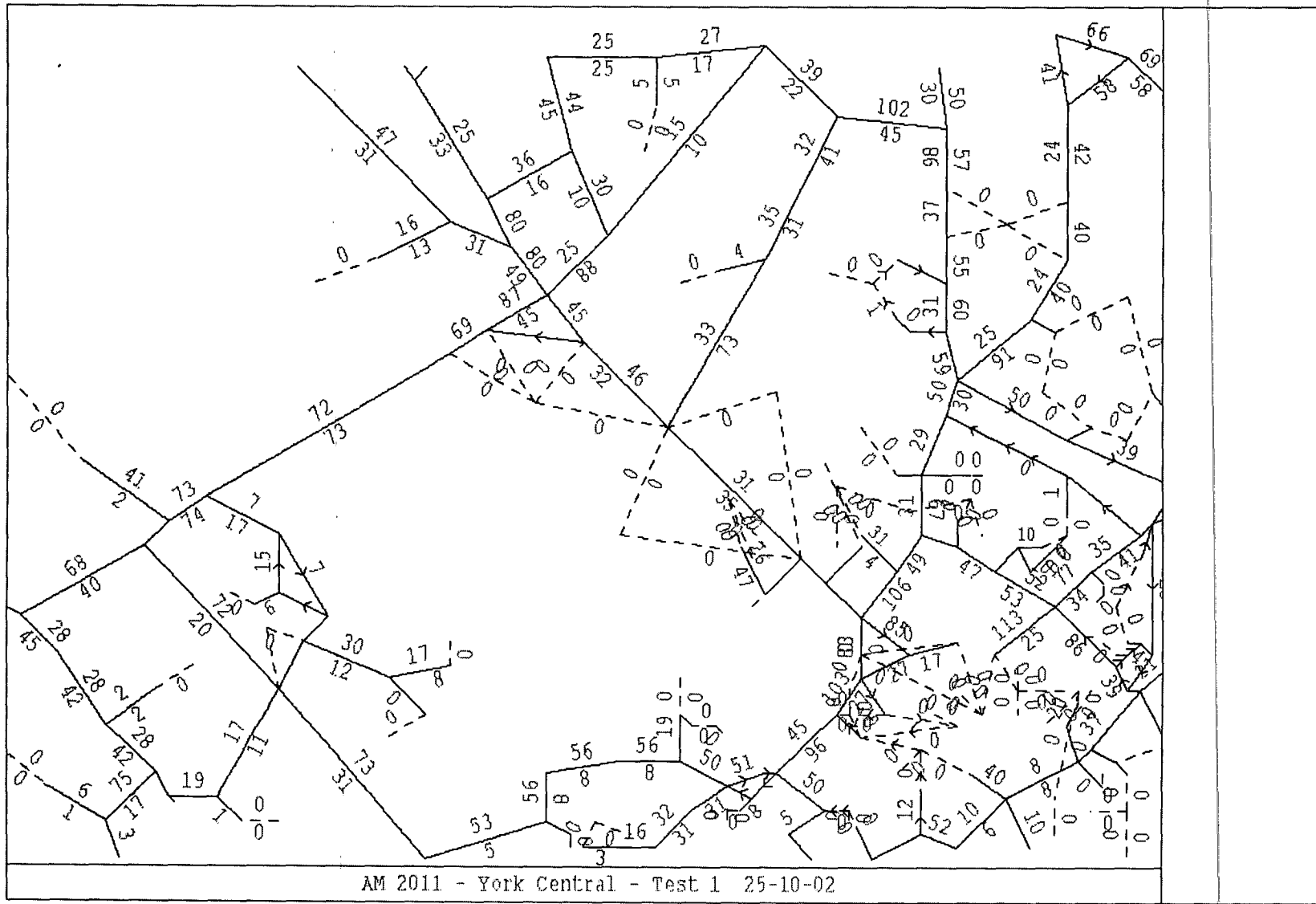






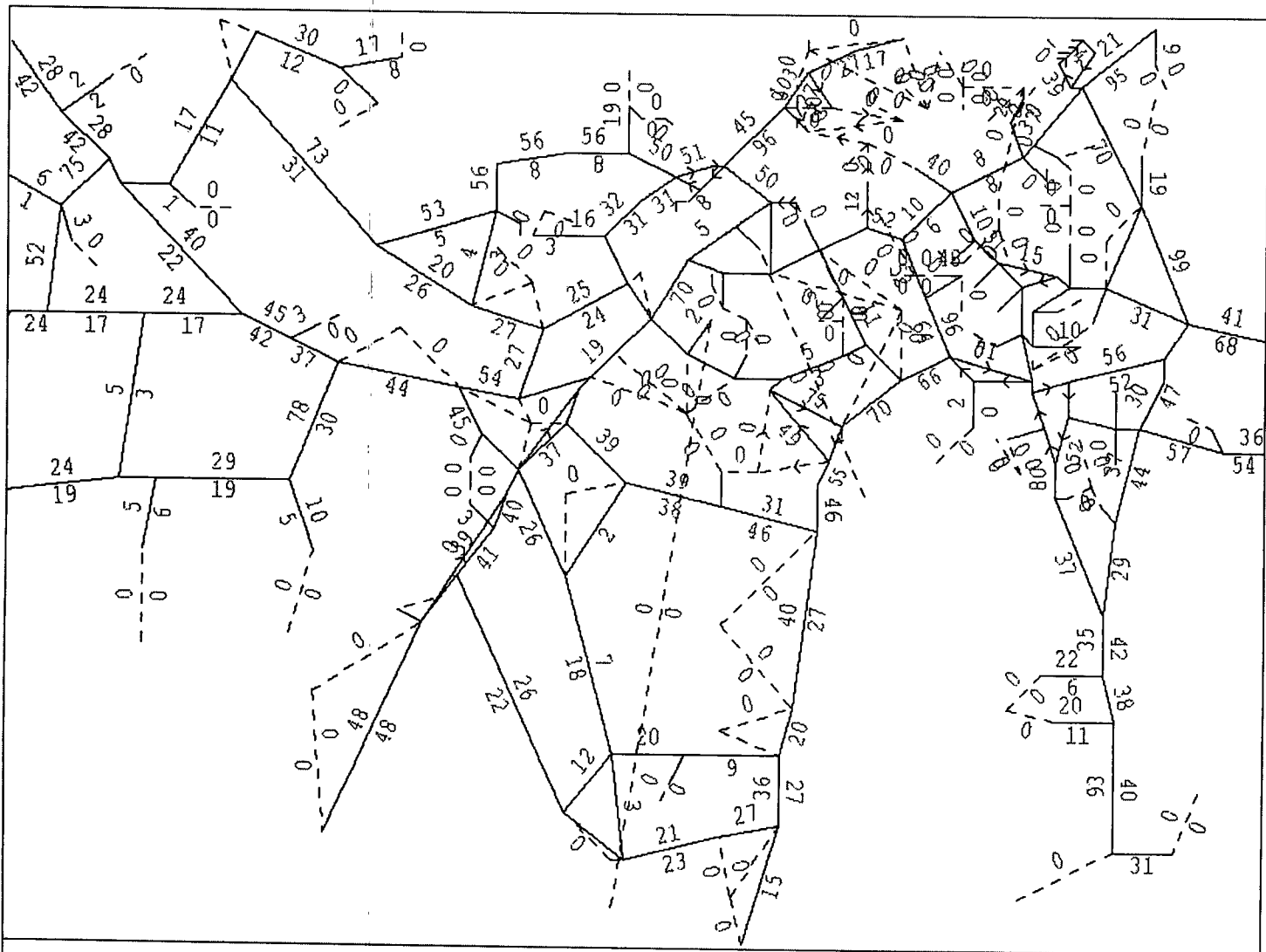
V/C (per cent), Scenario 6 (base flow), 3 of 6





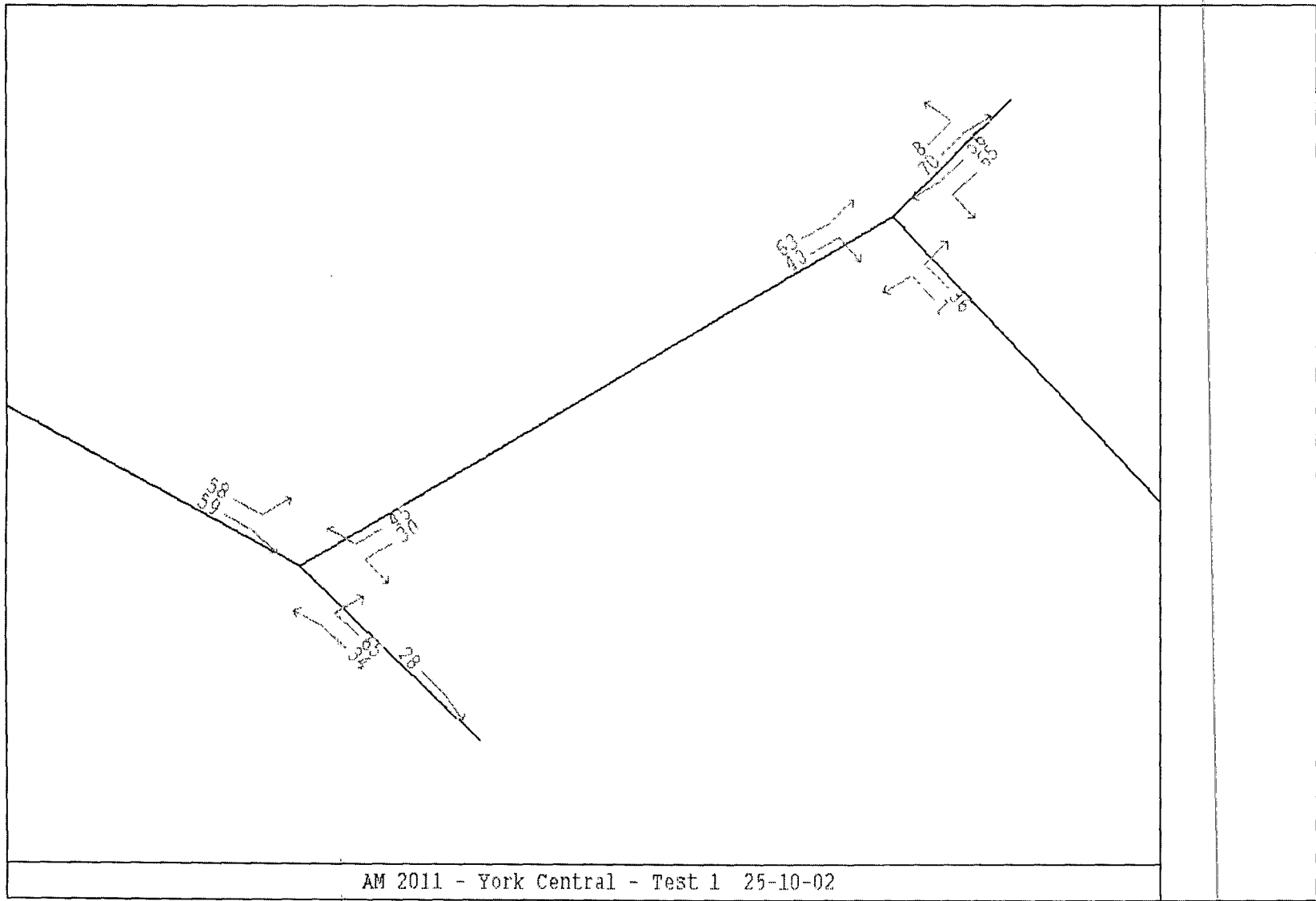
V/C (per cent), Scenario 6 (base flow), 5 of 6



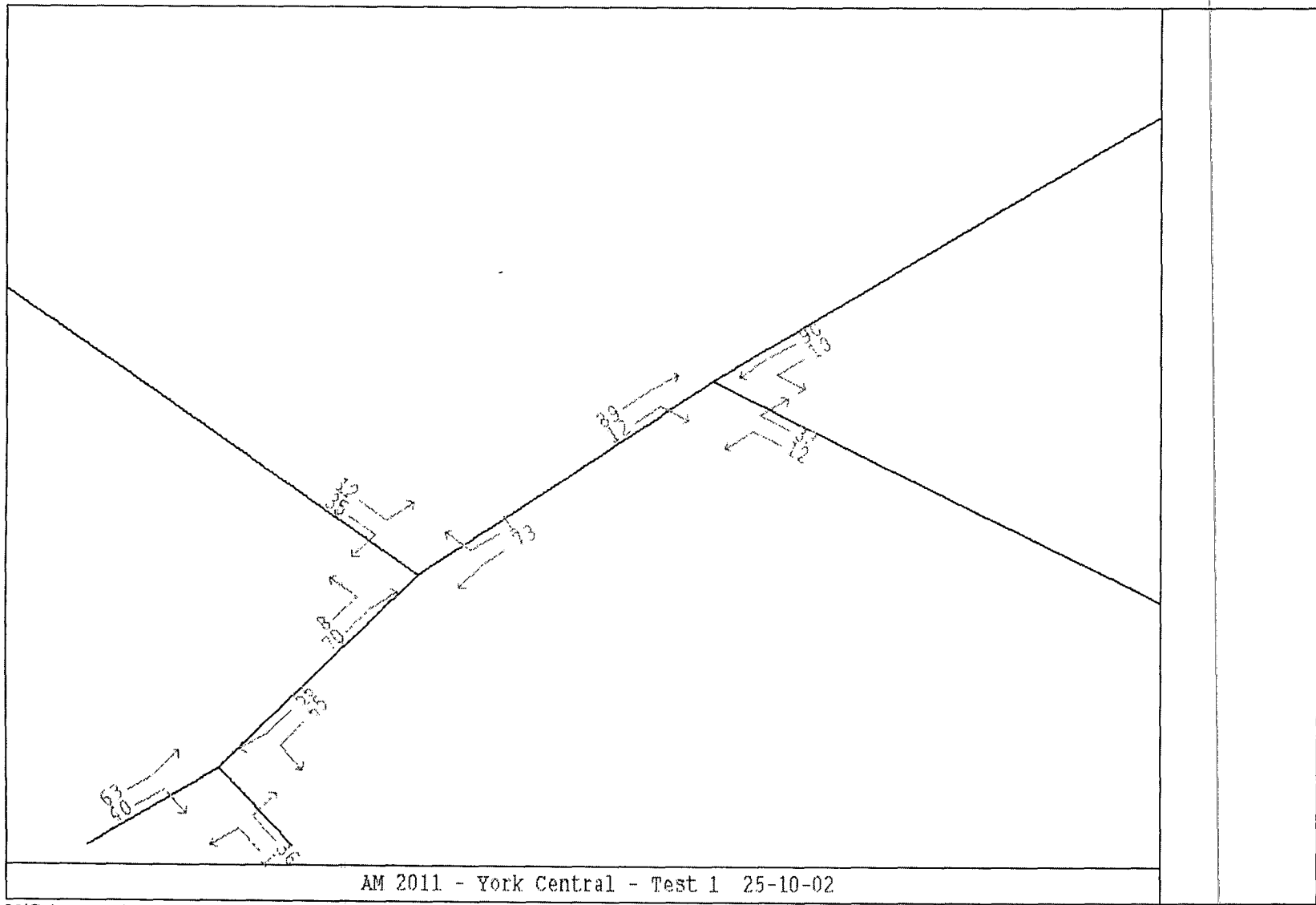


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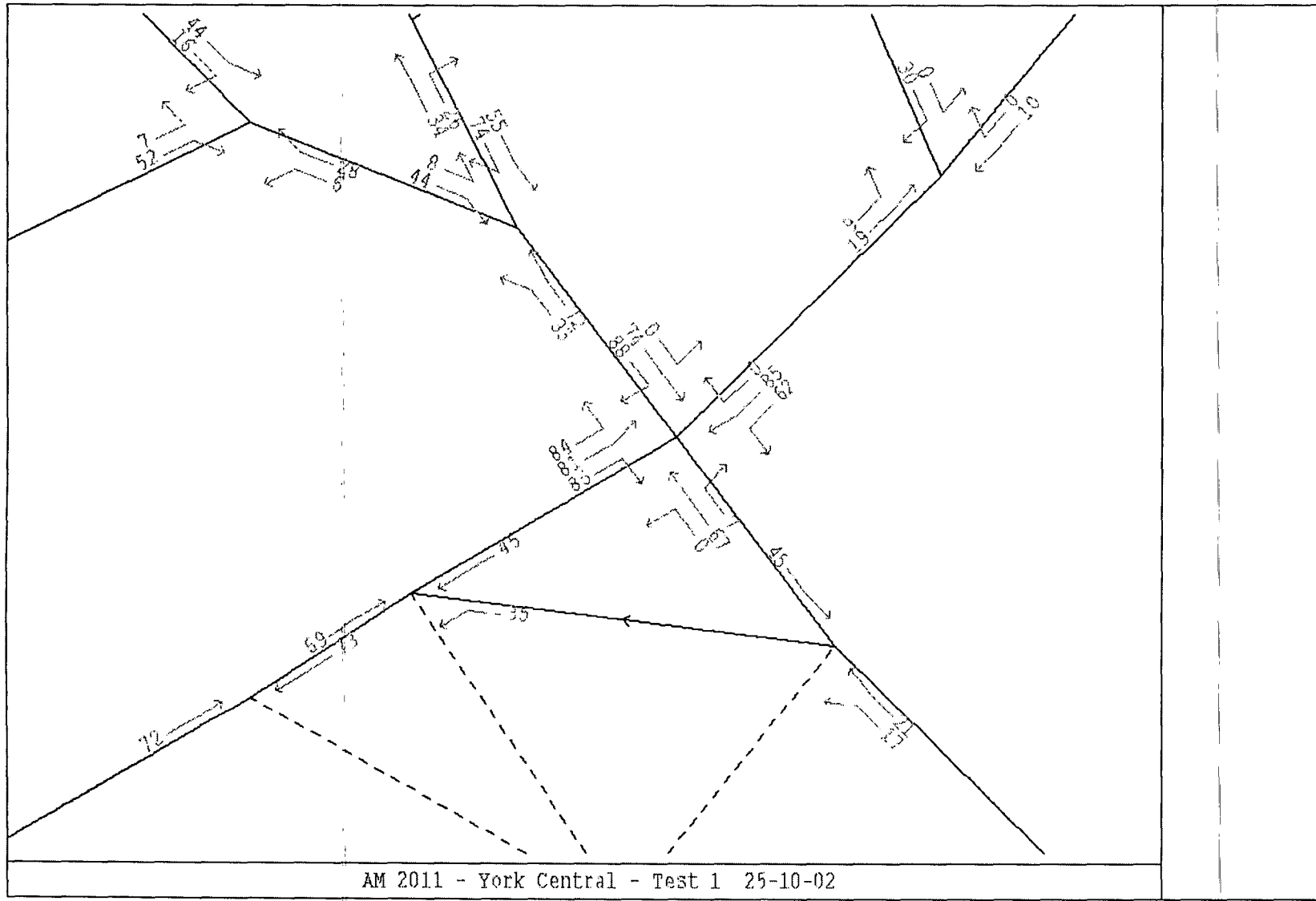
V/C (per cent), Scenario 6 (base flow), 6 of 6



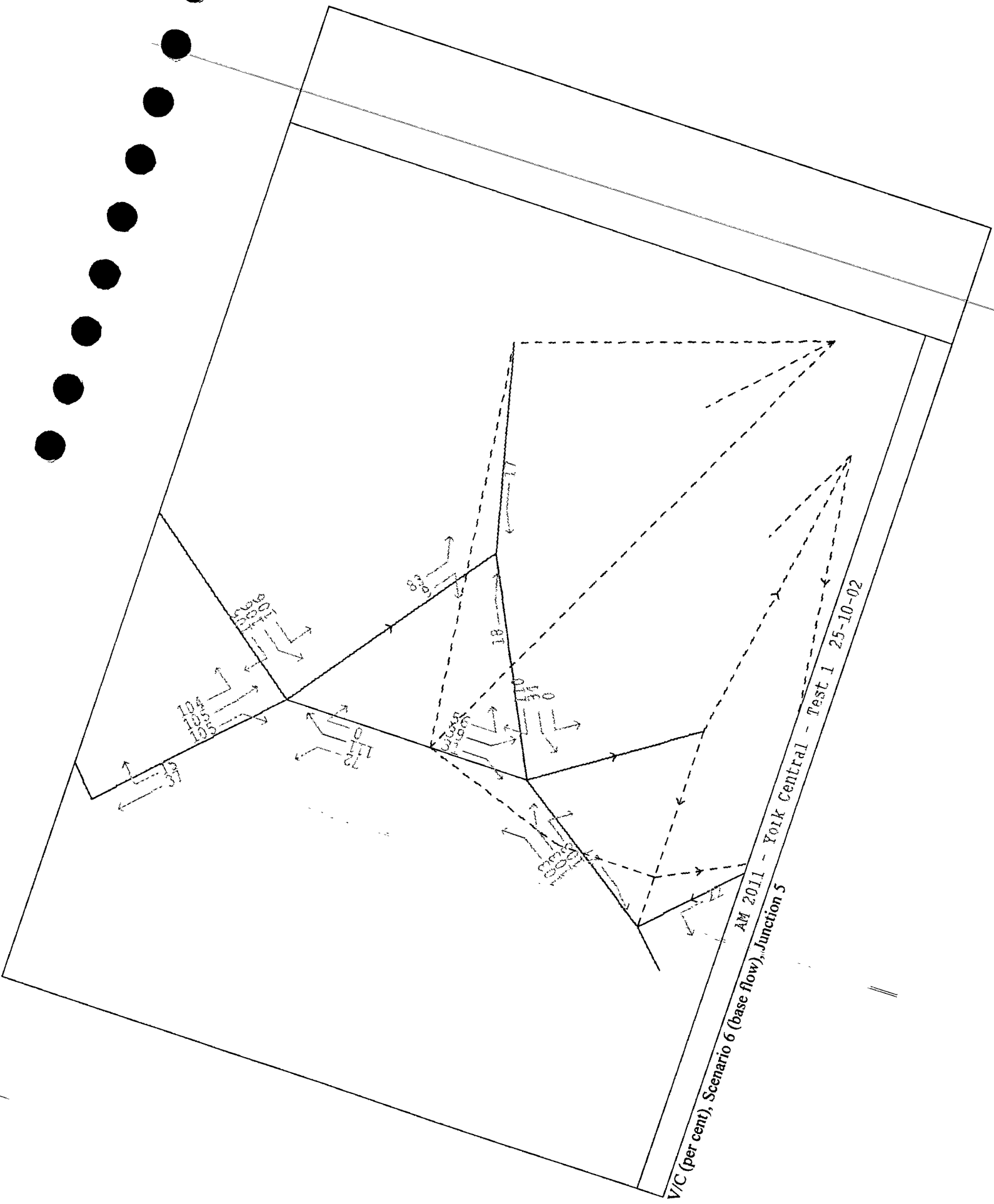
V/C (per cent), Scenario 6 (base flow), junction 1 & 2



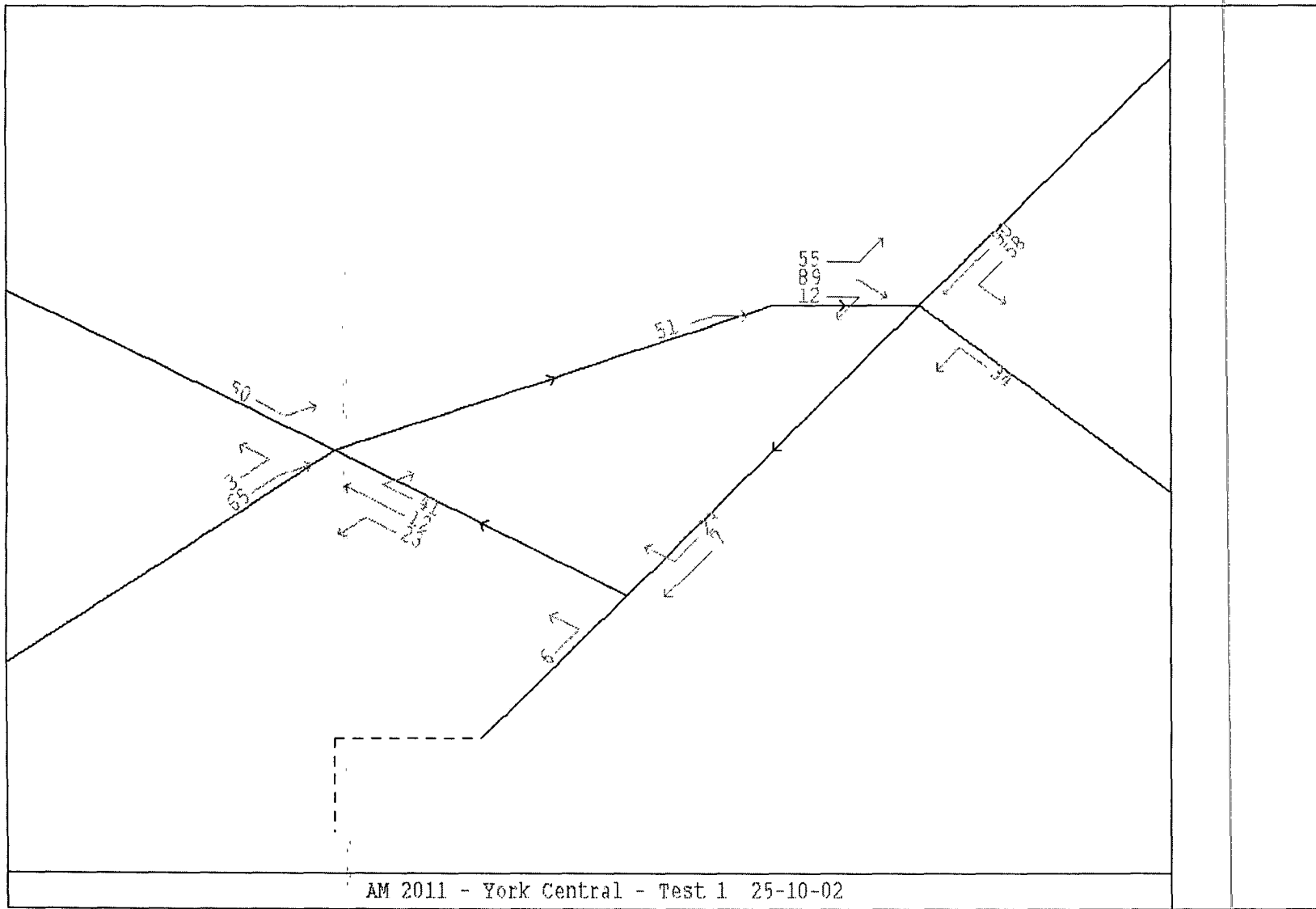
V/C (per cent), scenario 6 (base flow), junction 3



V/C (per cent), Scenario 6 (base flow), junction 4

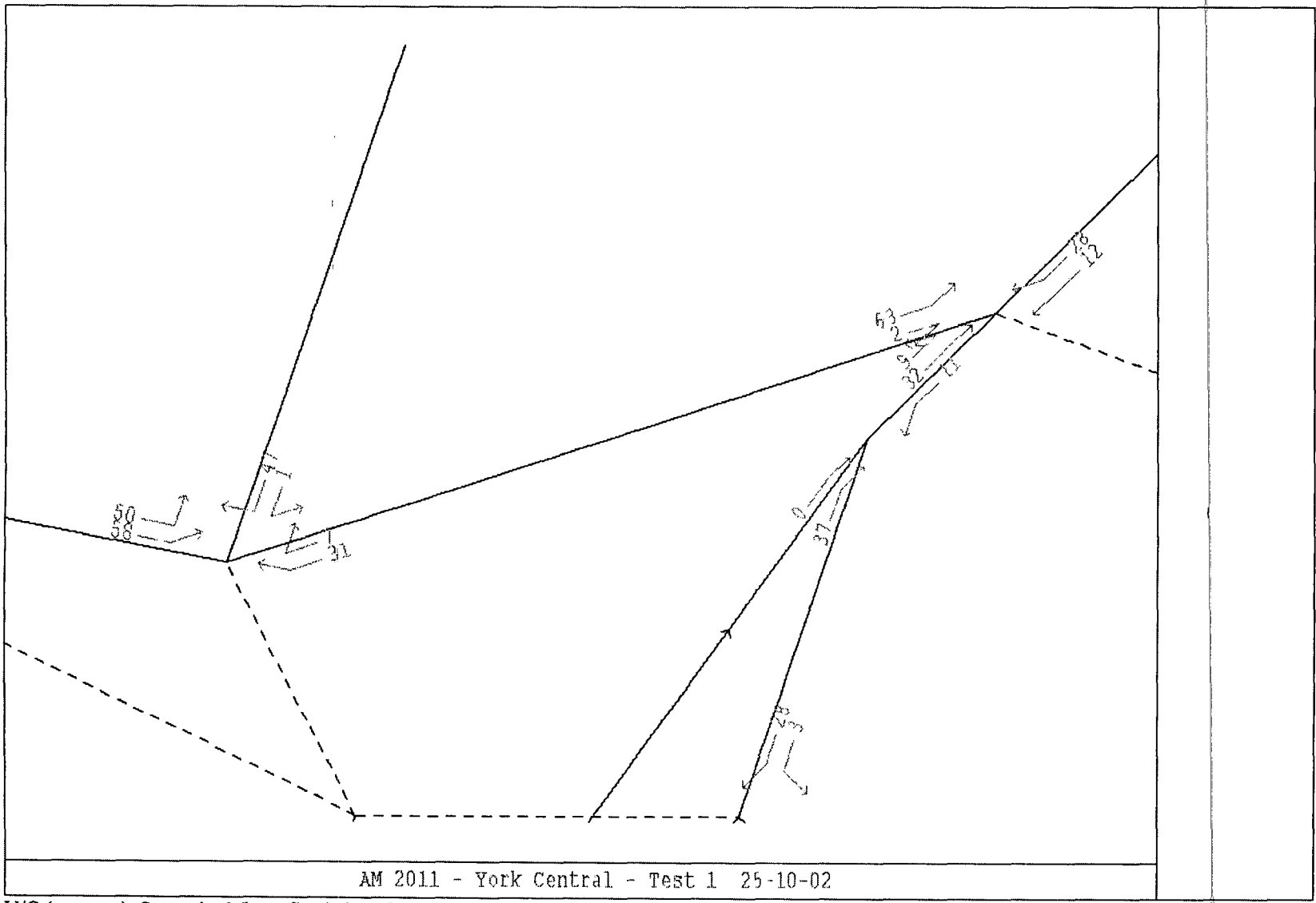


V/C (per cent), Scenario 6 (base flow), Junction 5  
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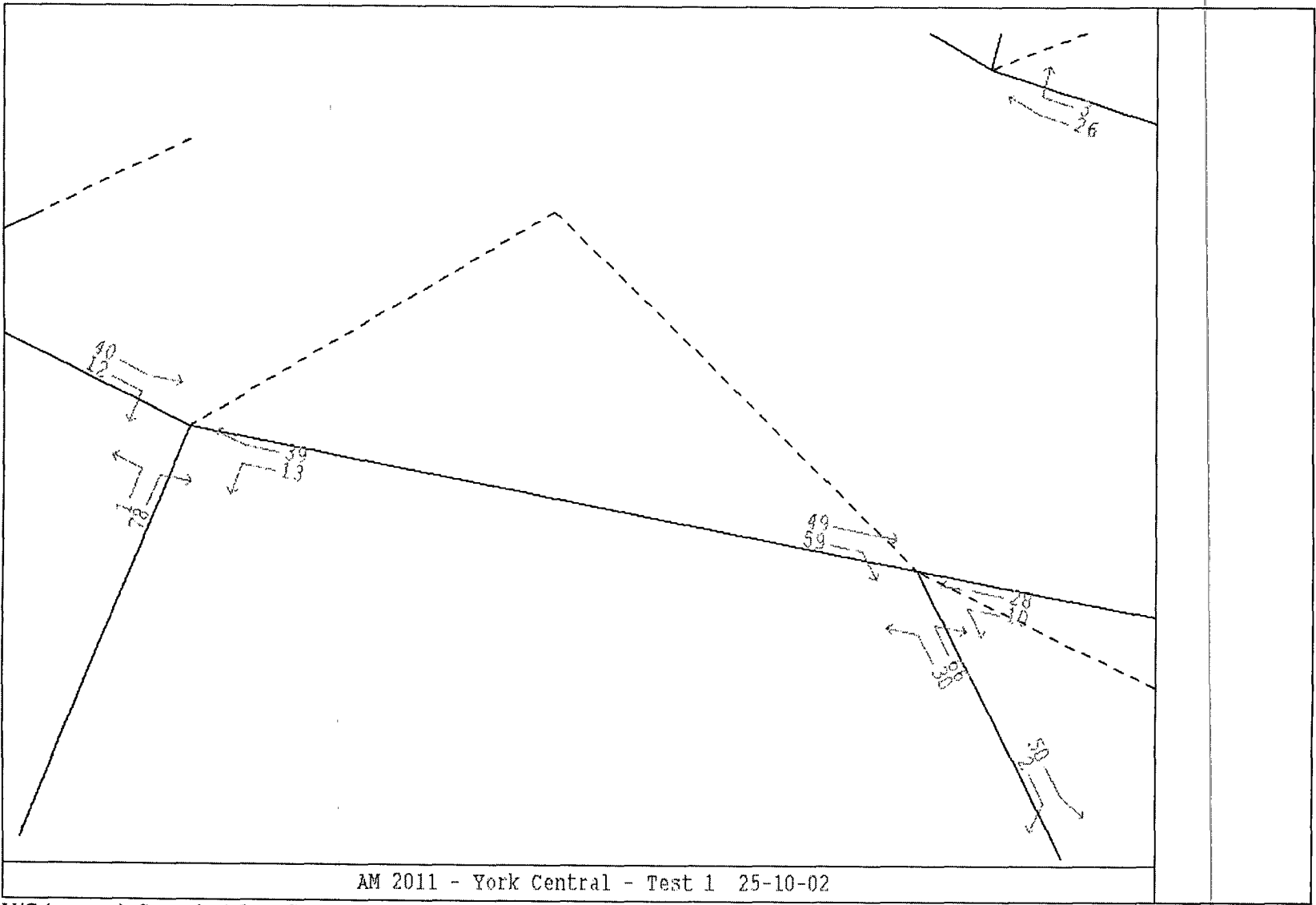
V/C (per cent), Scenario 6 (base flow), junction 6





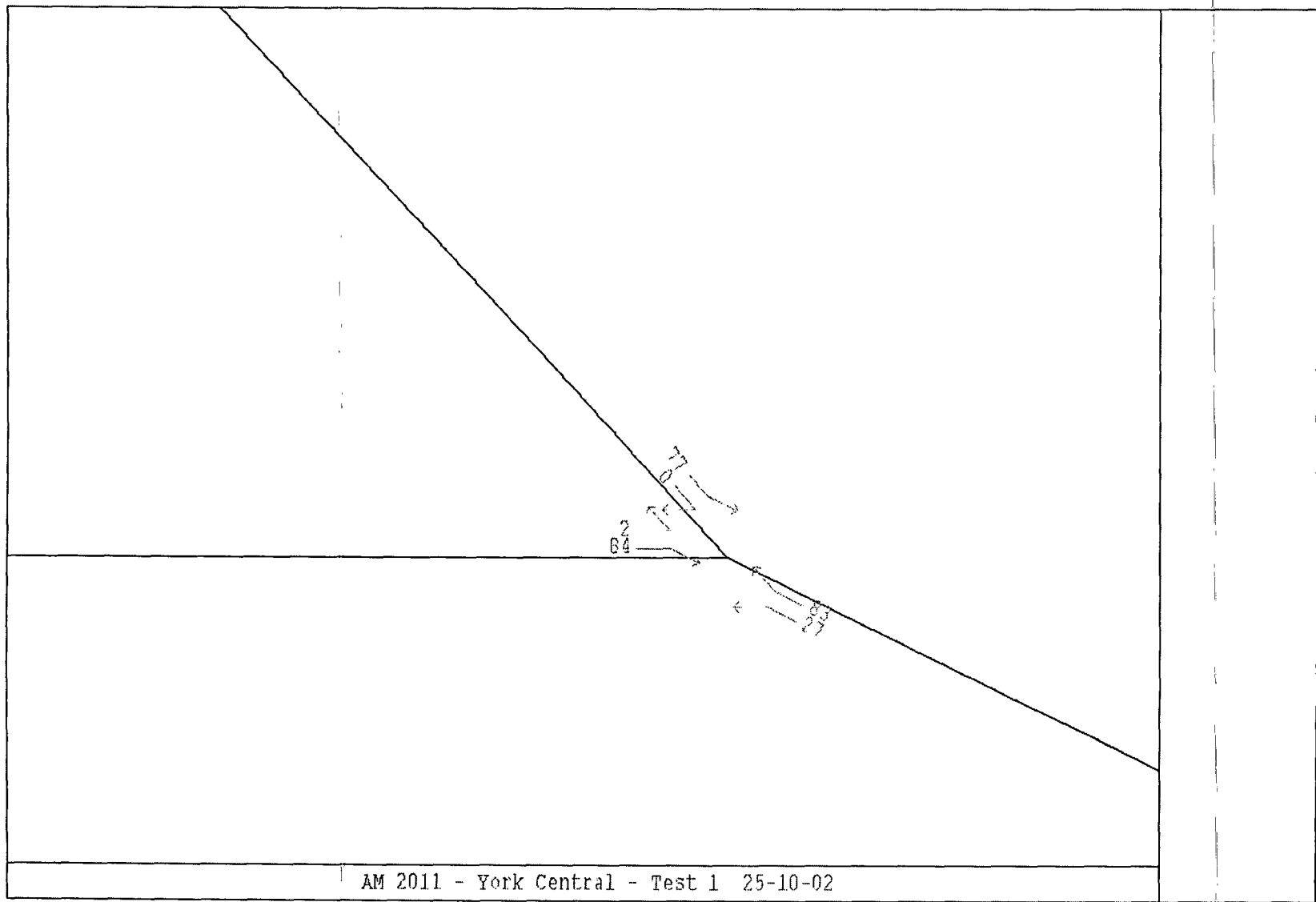
V/C (per cent), Scenario 6 (base flow), junction 9



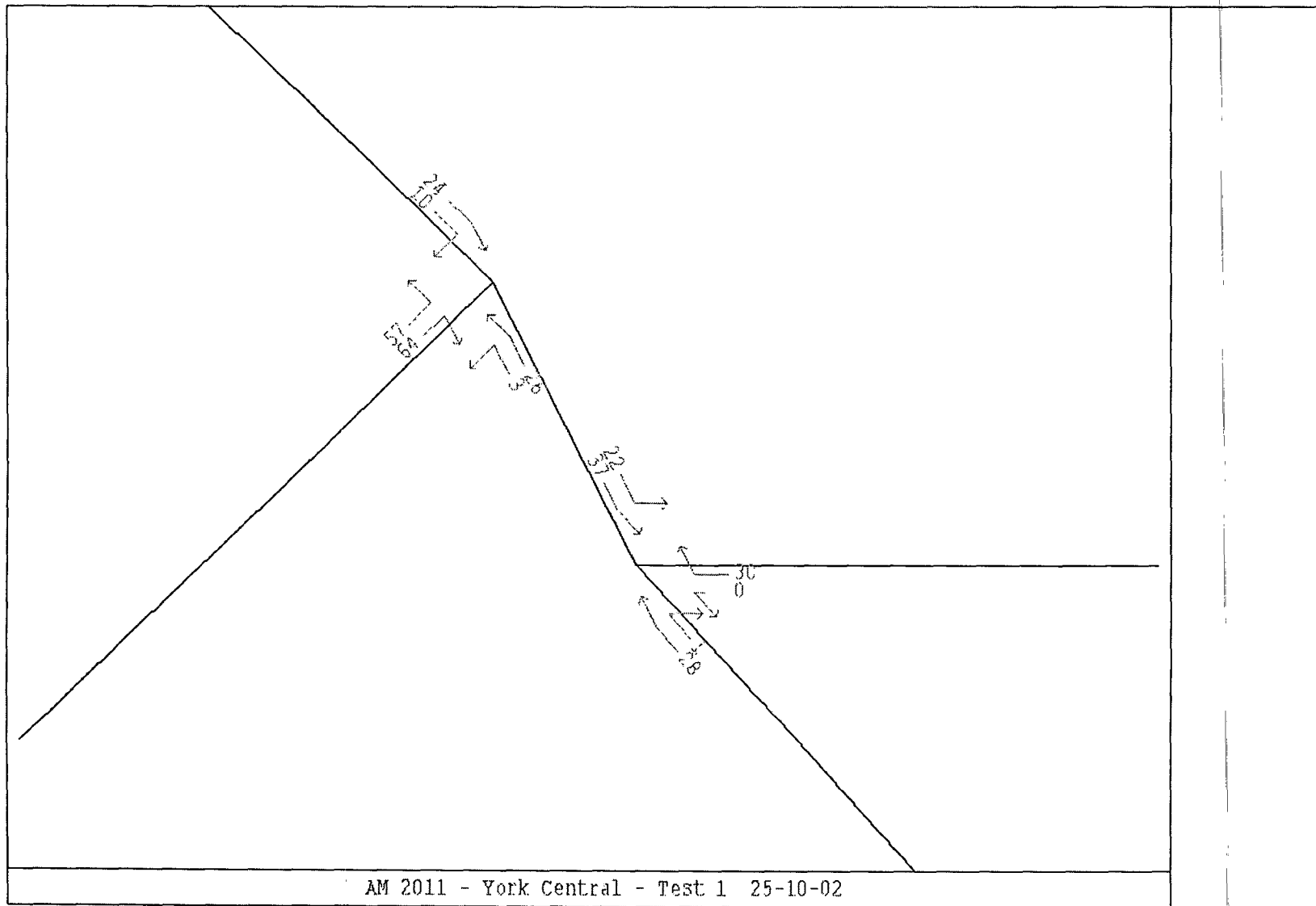


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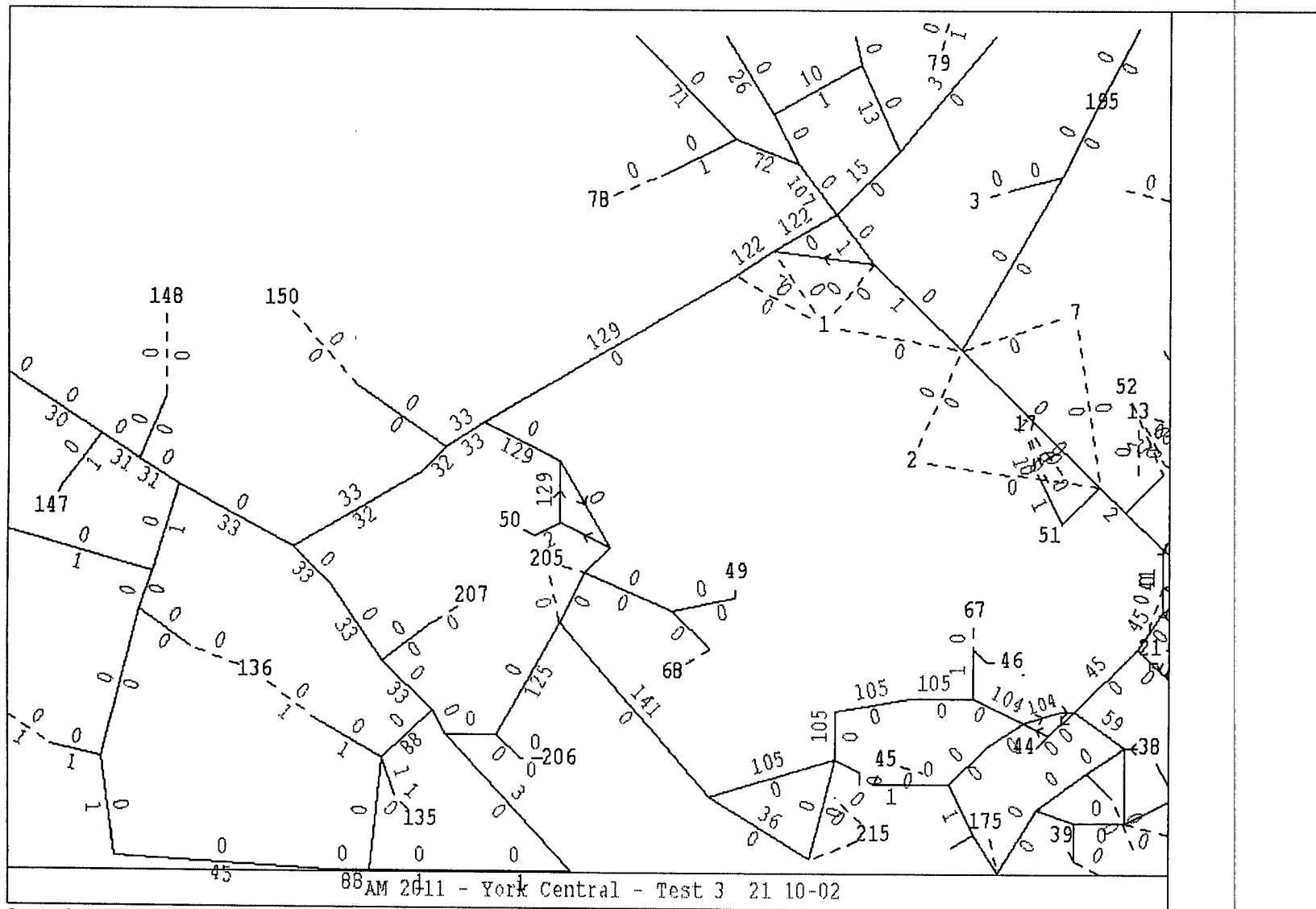
V/C (per cent), Scenario 6 (base flow), junction 10 & 11



V/C (per cent), Scenario 6 (base flow), junction 12

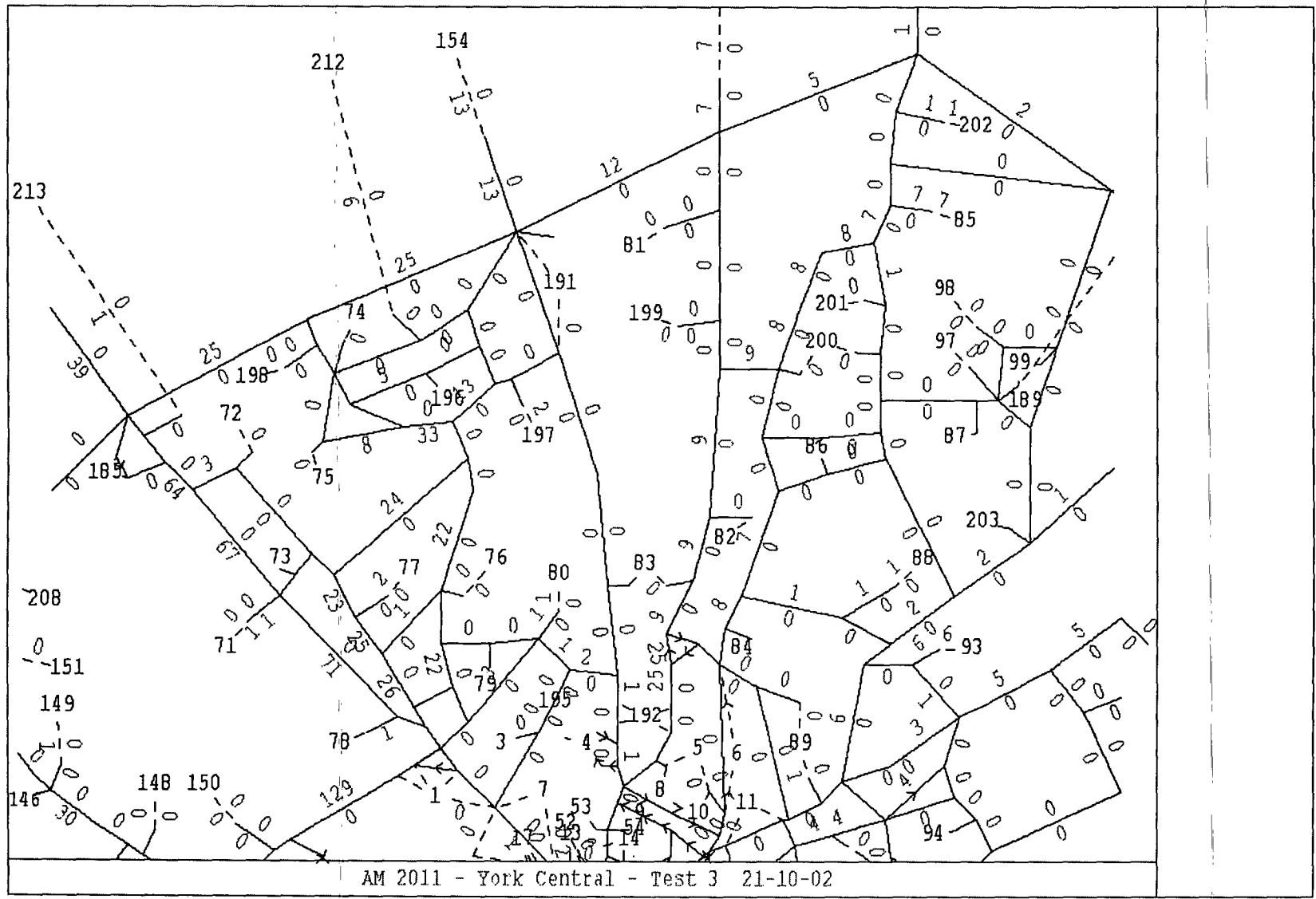


V/C (per cent), Scenario 6 (base flow), junction 13 & 14

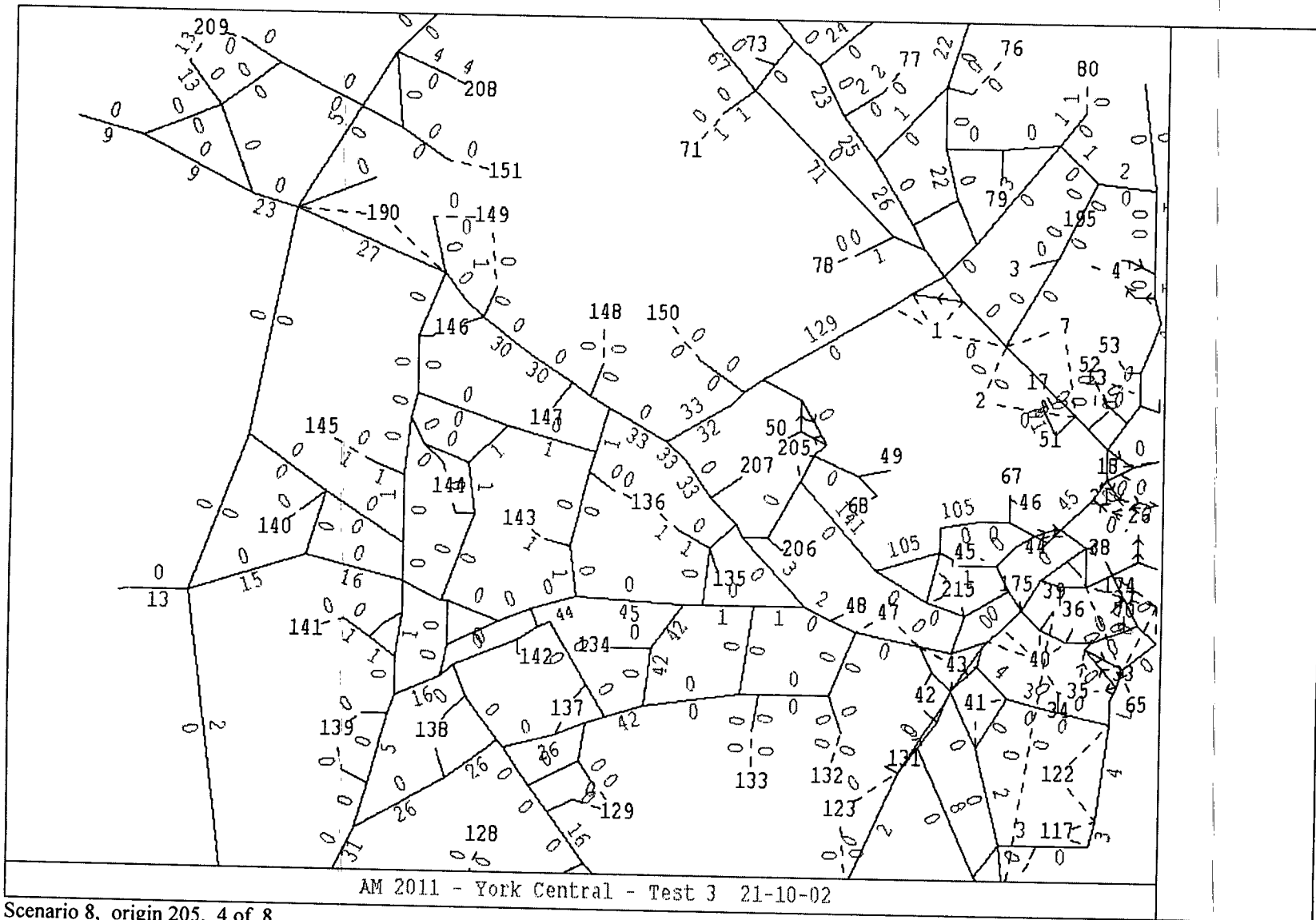


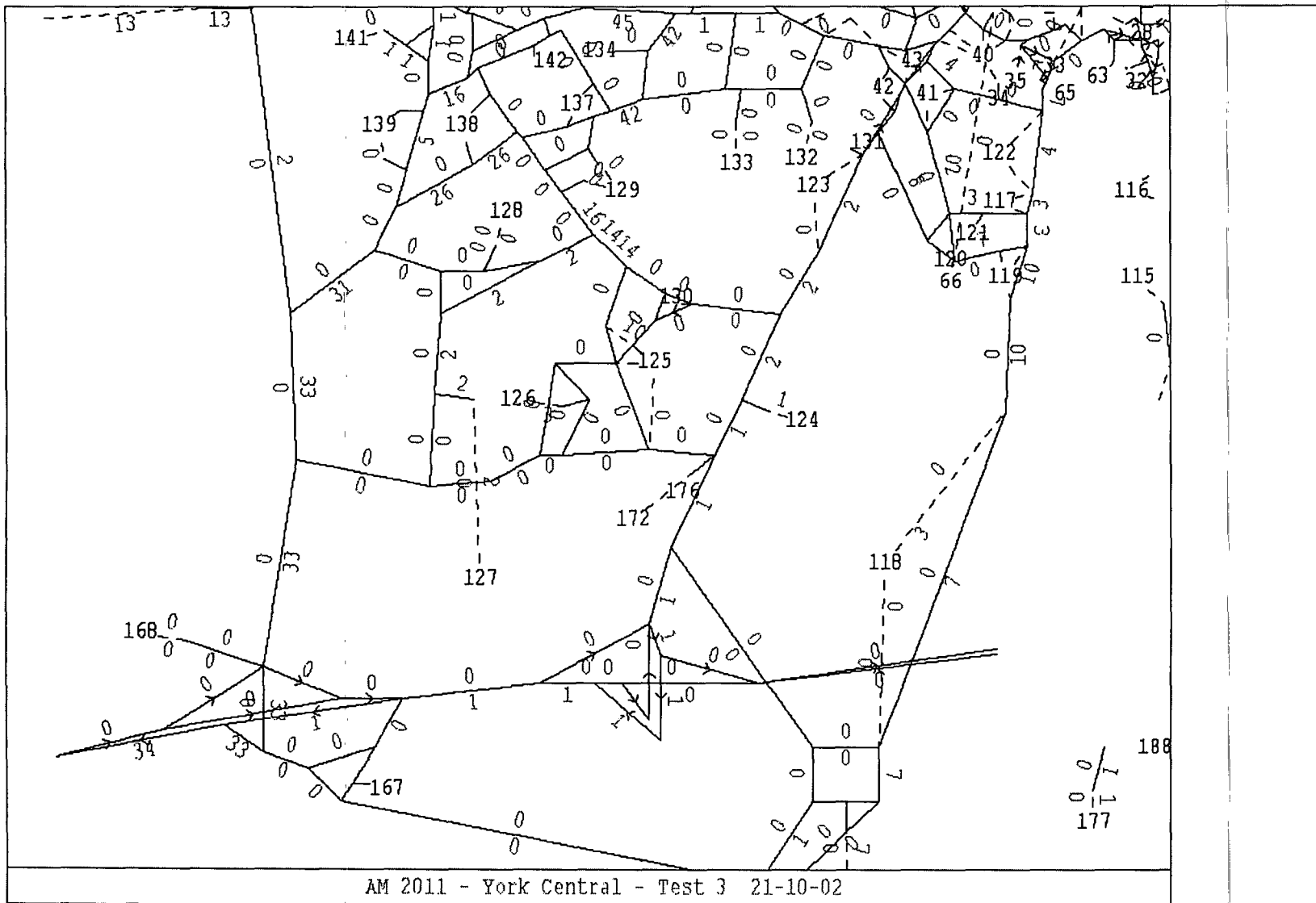
Scenario 8, origin 205, 1 of 8





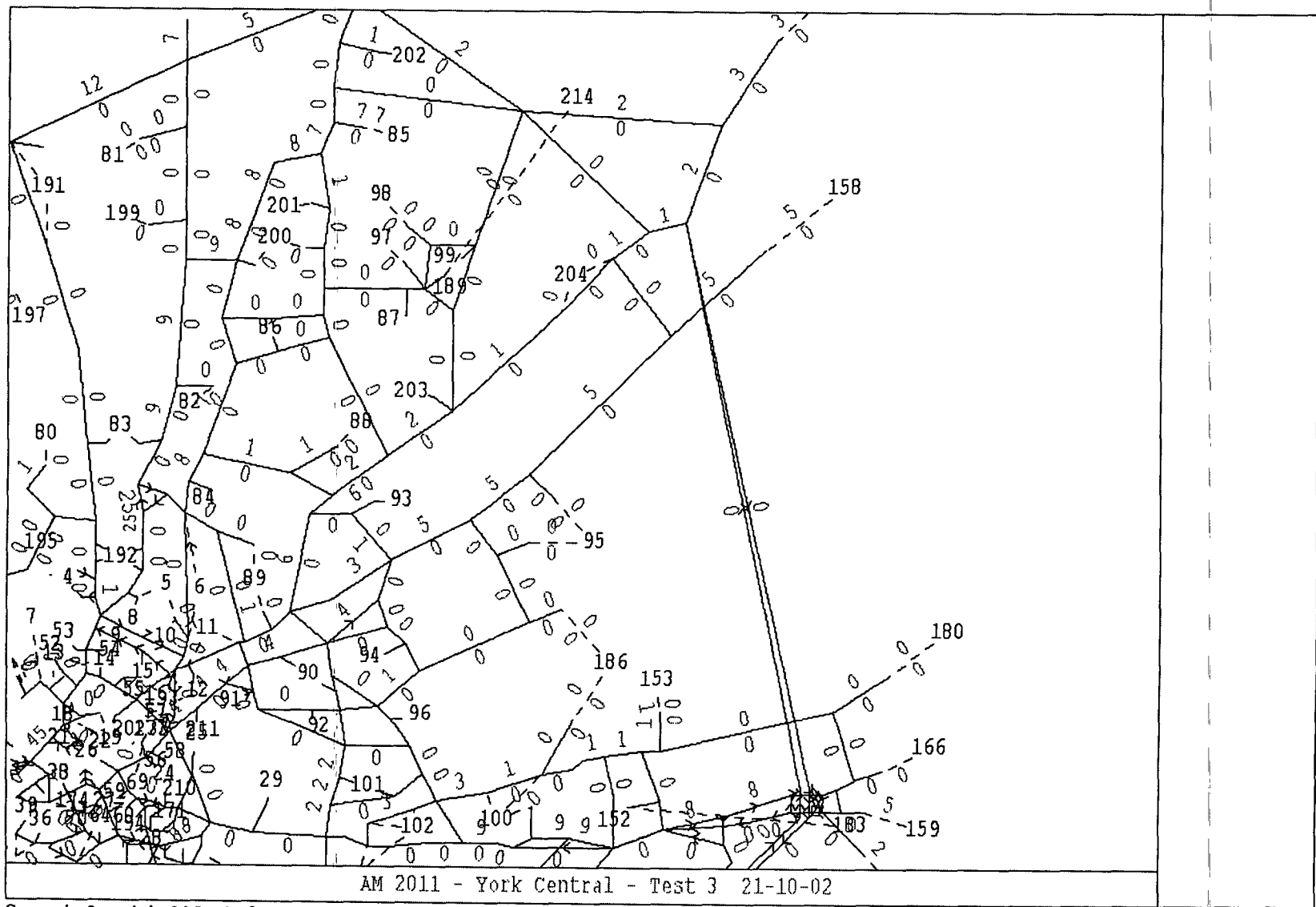
Scenario 8, origin 205, 3 of 8



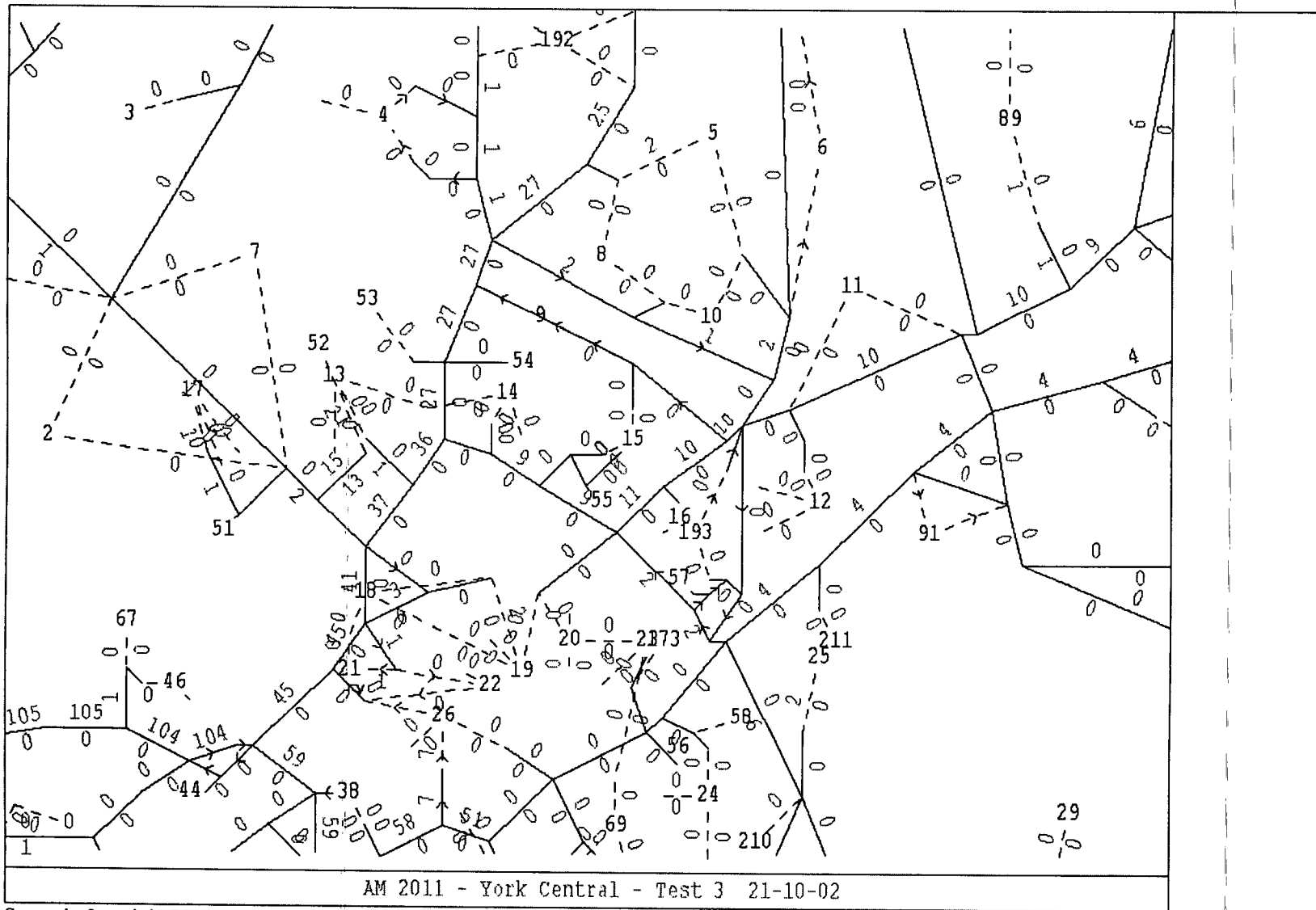


Scenario 8, origin 205, 5 of 8

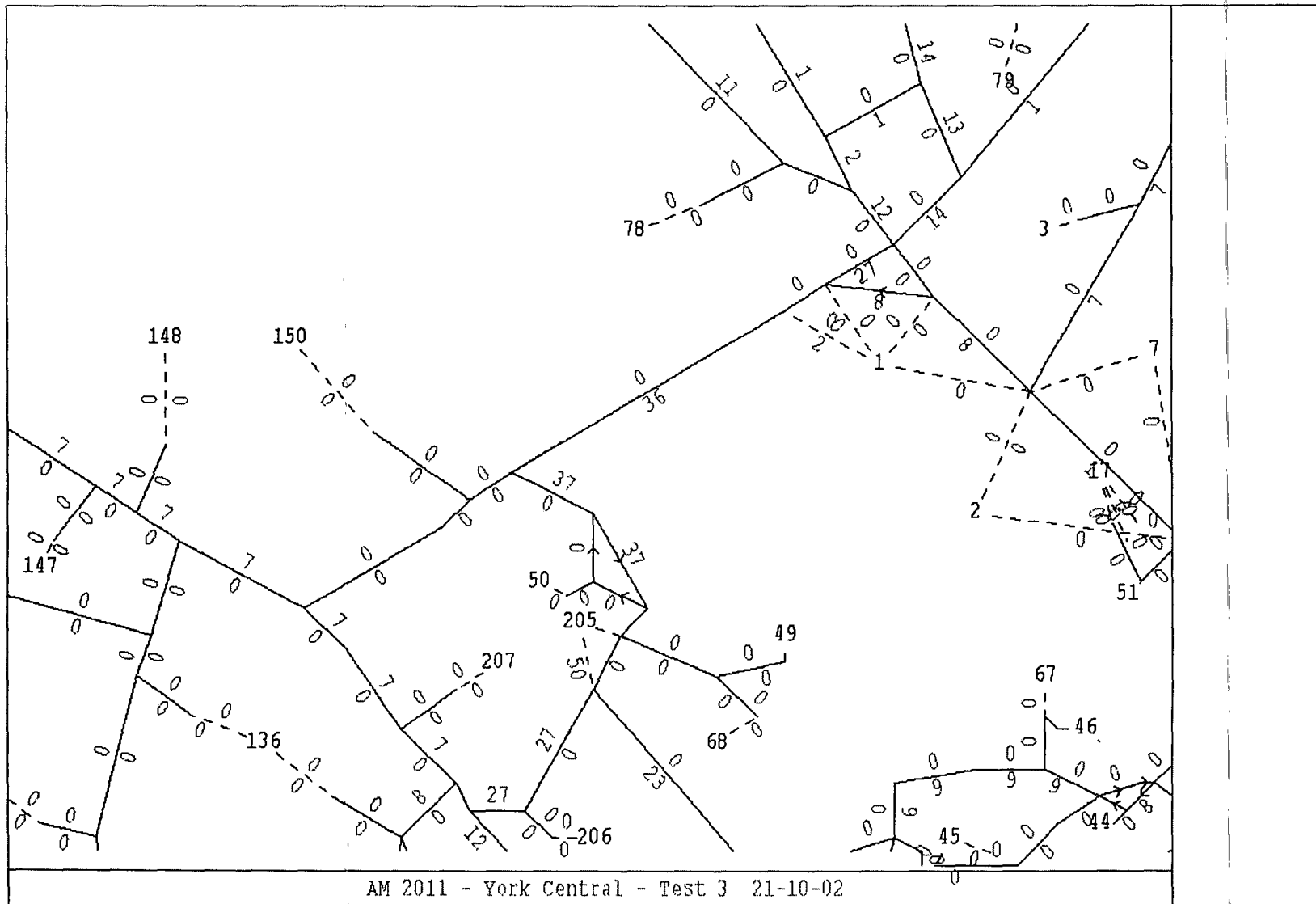




Scenario 8, origin 205, 6 of 8

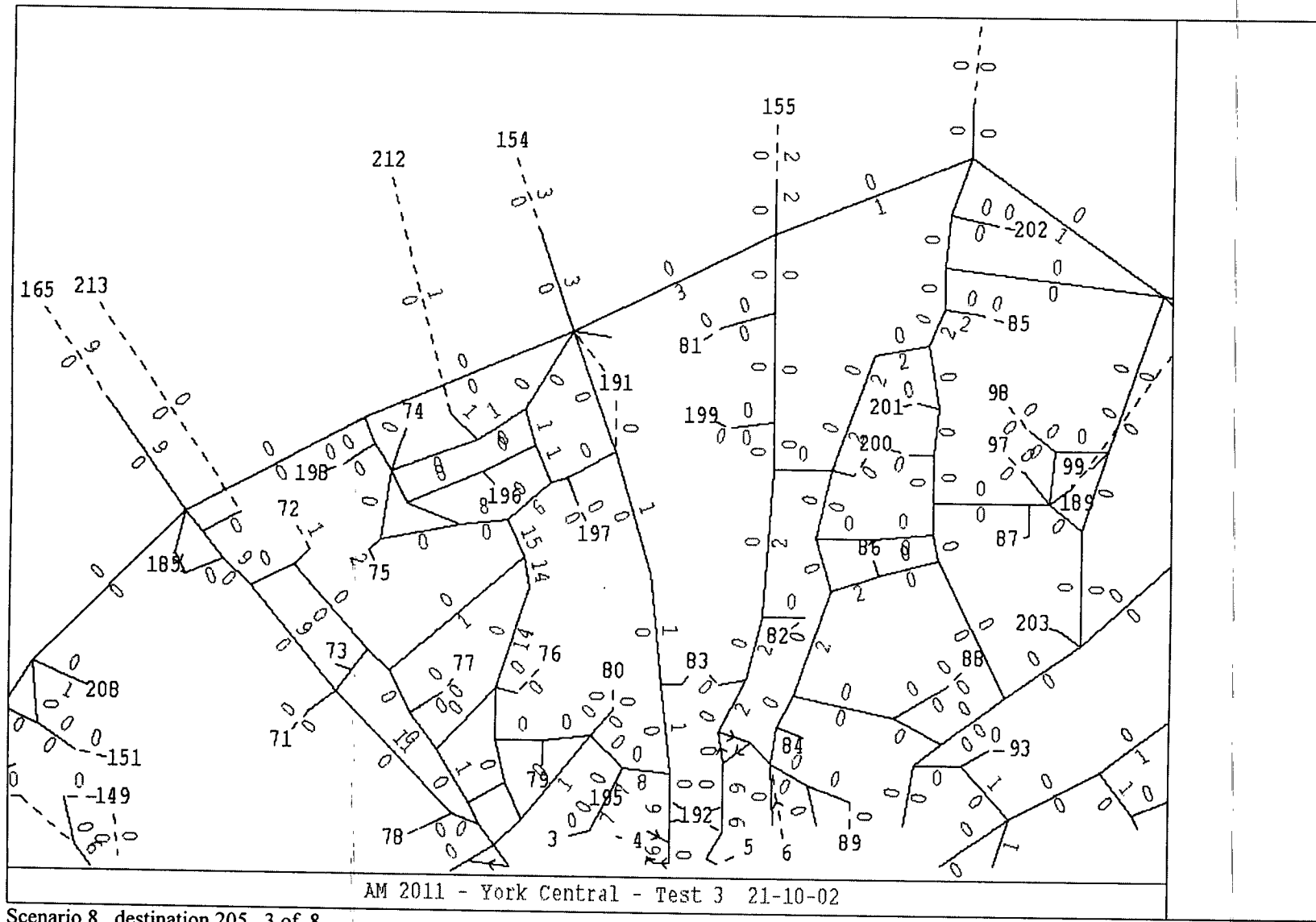


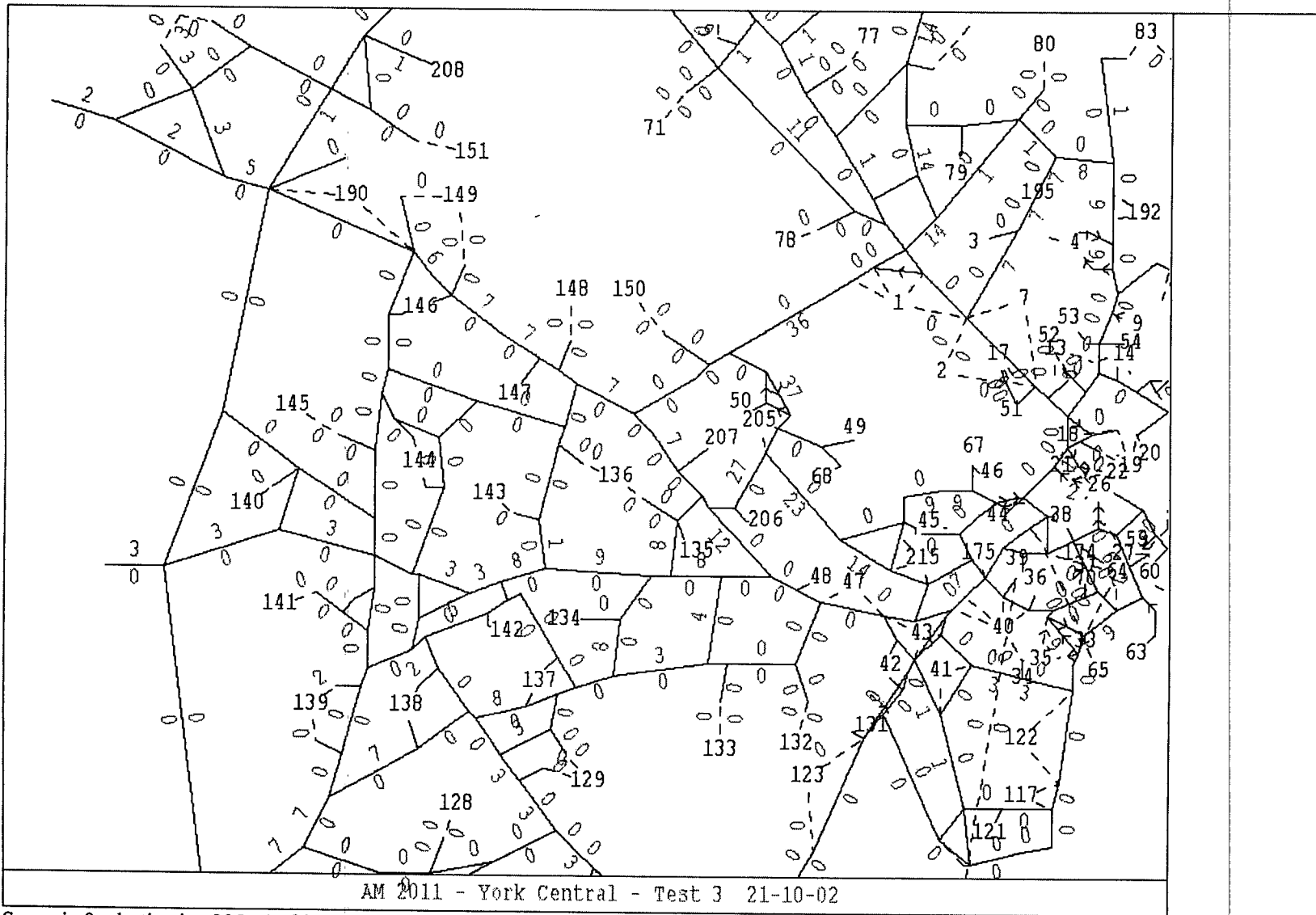




Scenario 8, destination 205, 1 of 8



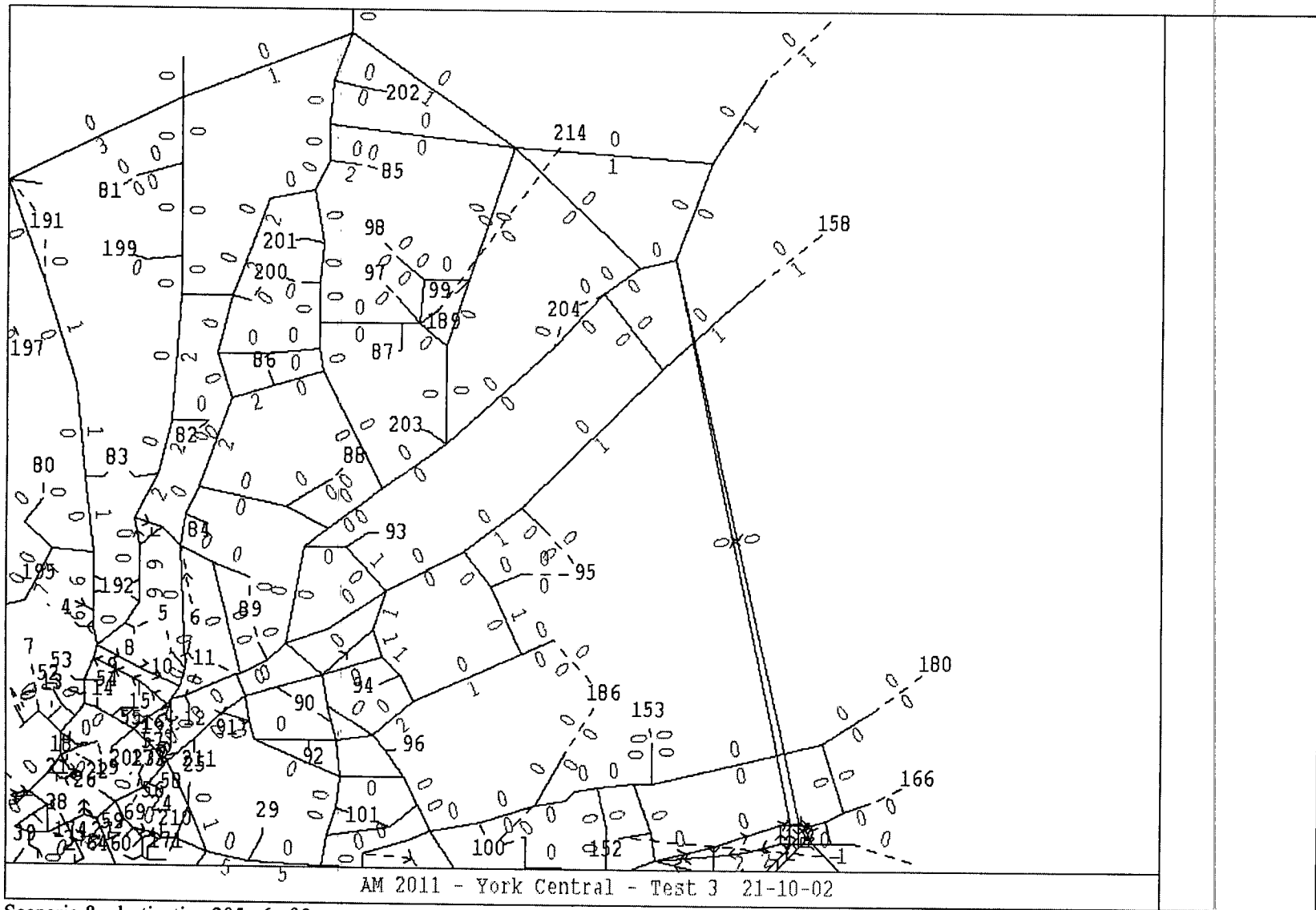




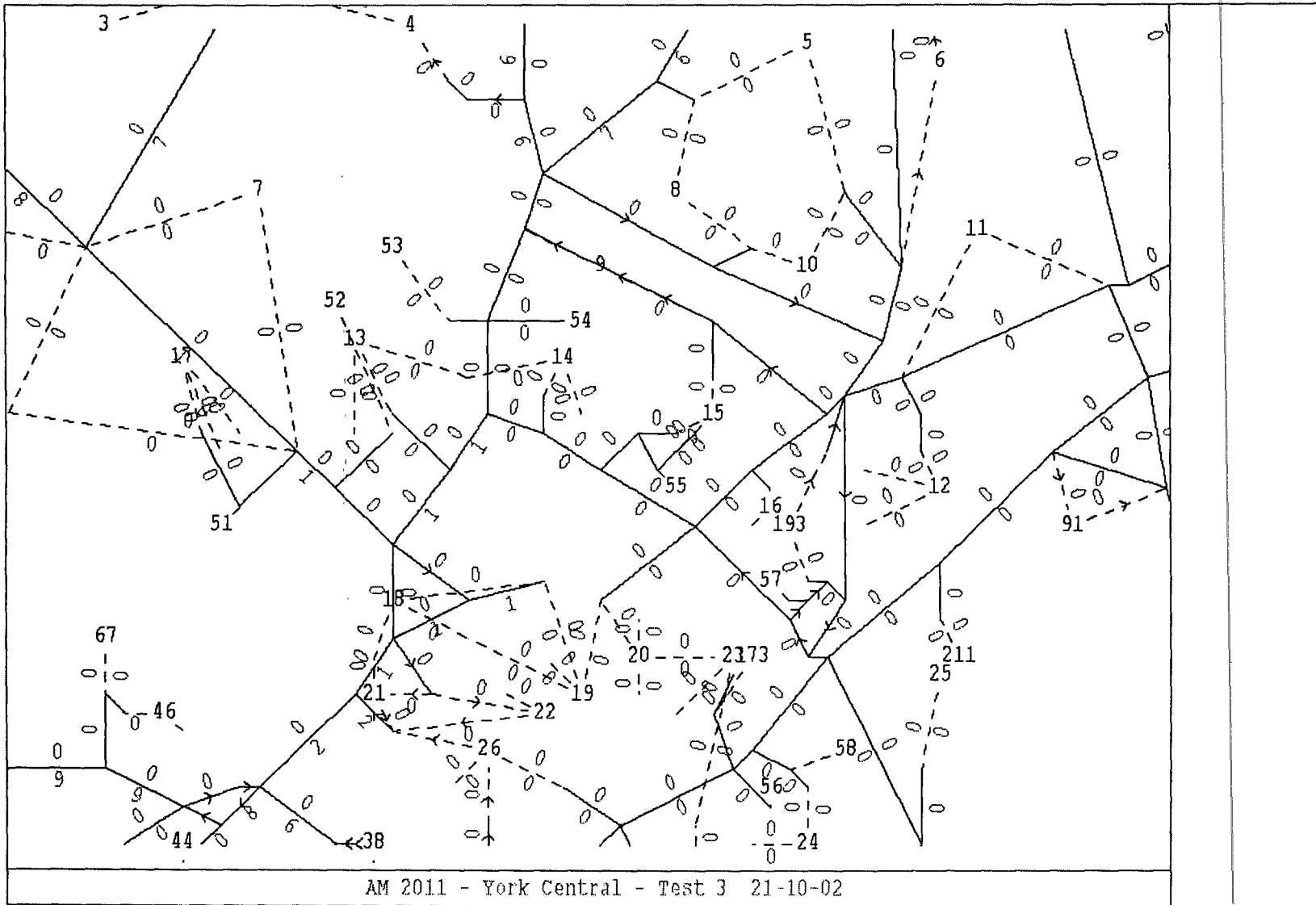
Scenario 8, destination 205, 4 of 8



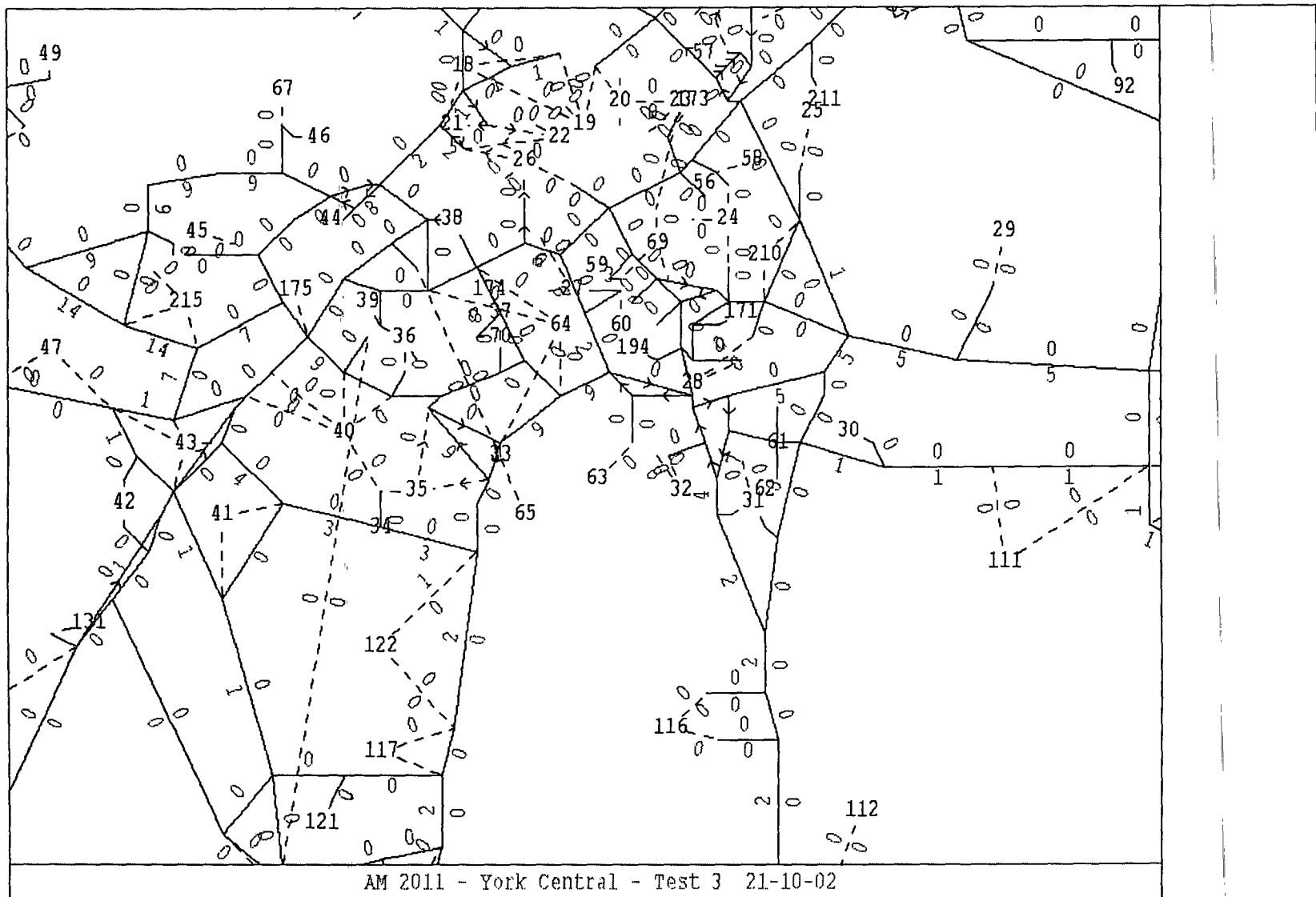




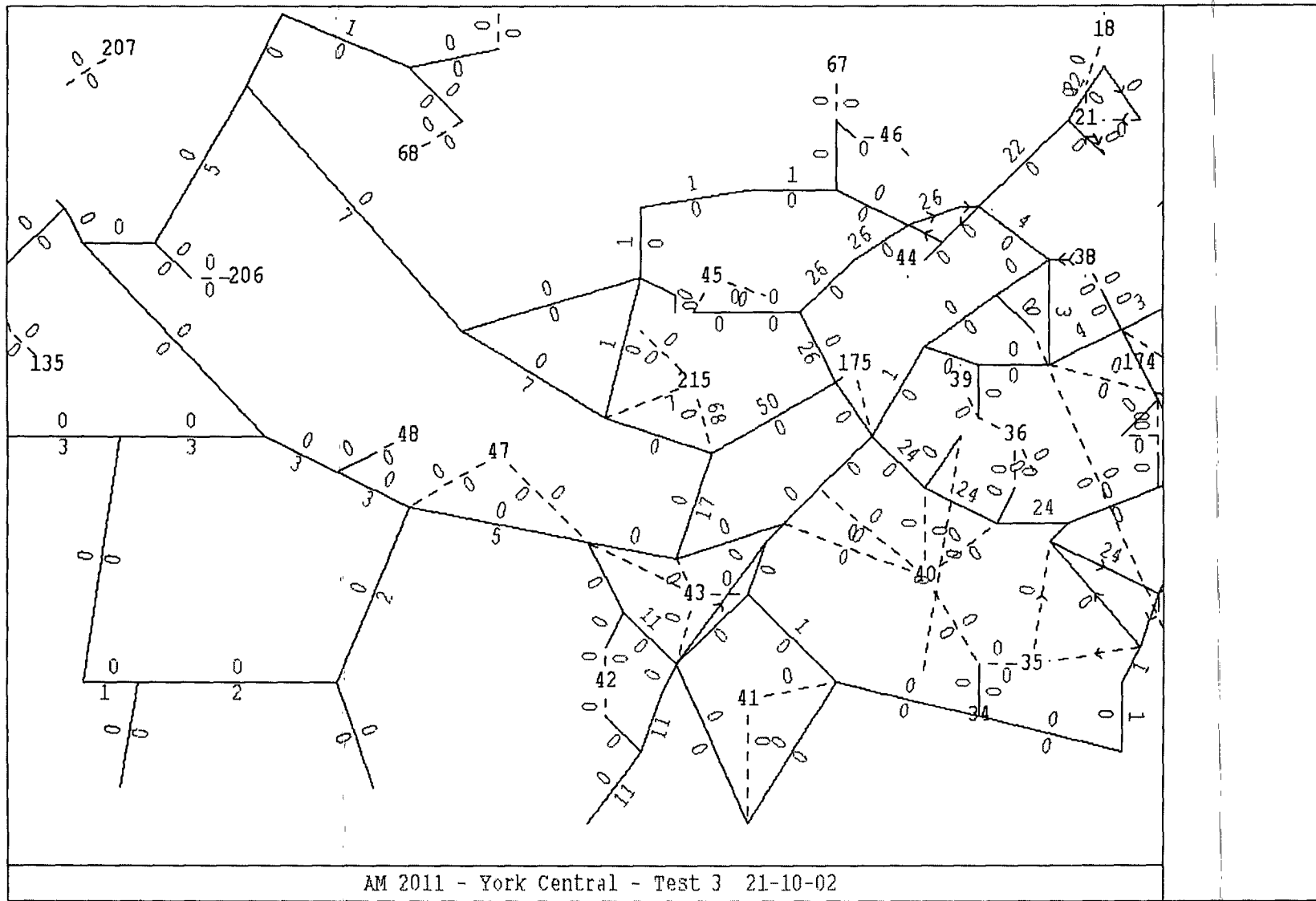
Scenario 8, destination 205, 6 of 8



Scenario 8, destination 205, 7 of 8

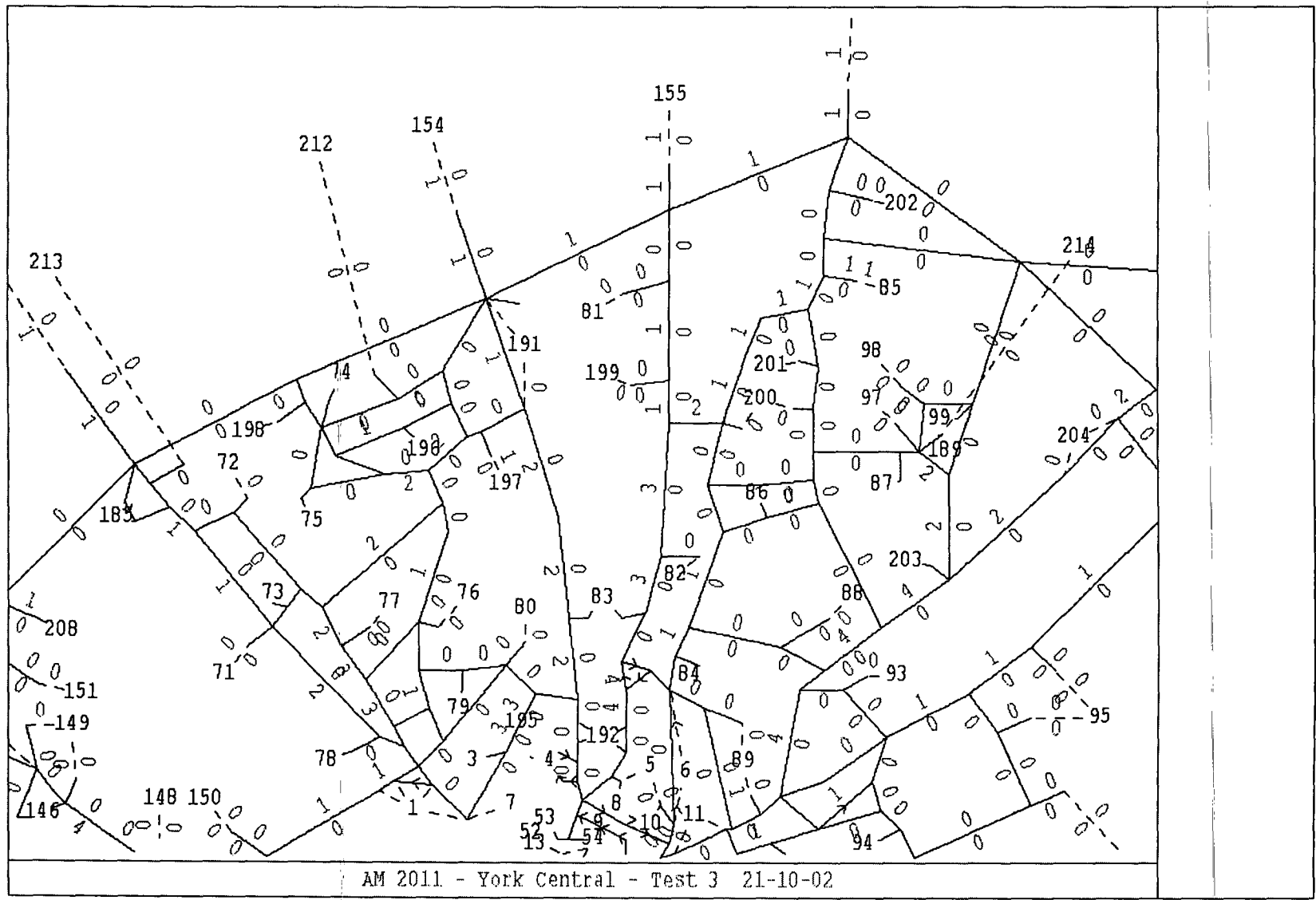


Scenario 8, destination 205, 8 of 8

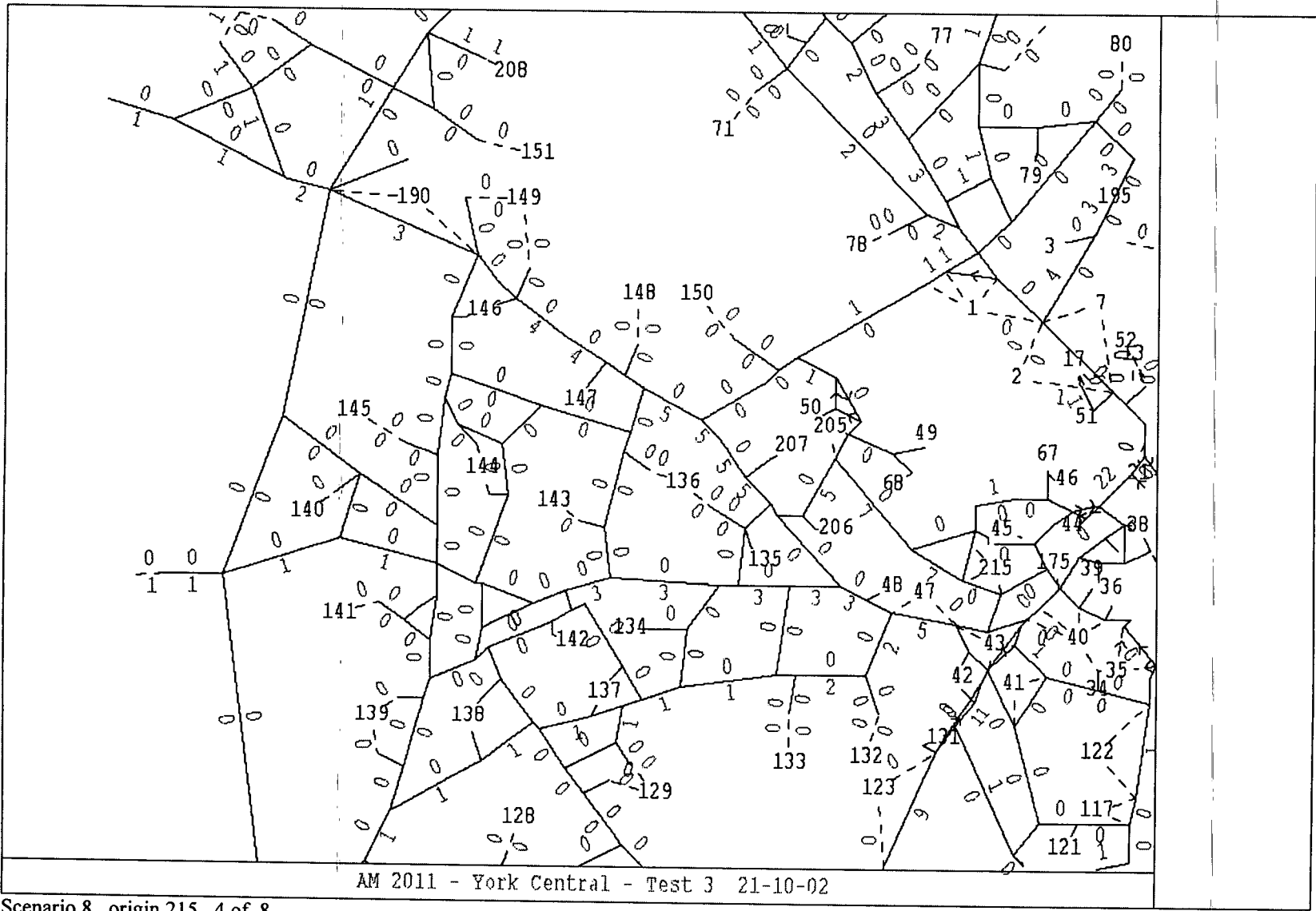


Scenario 8, origin 215, 1 of 8

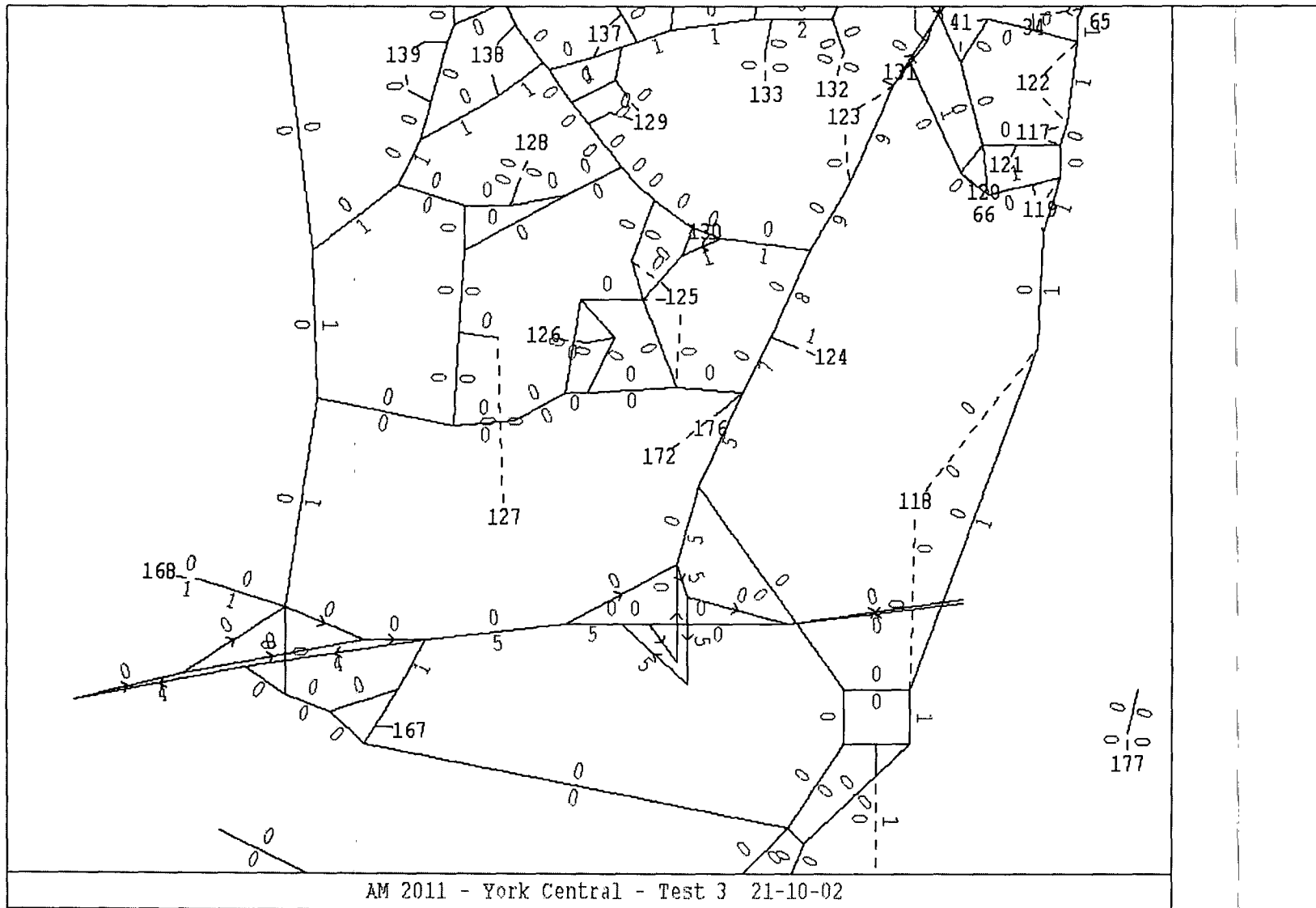




Scenario 8, origin 215, 3 of 8

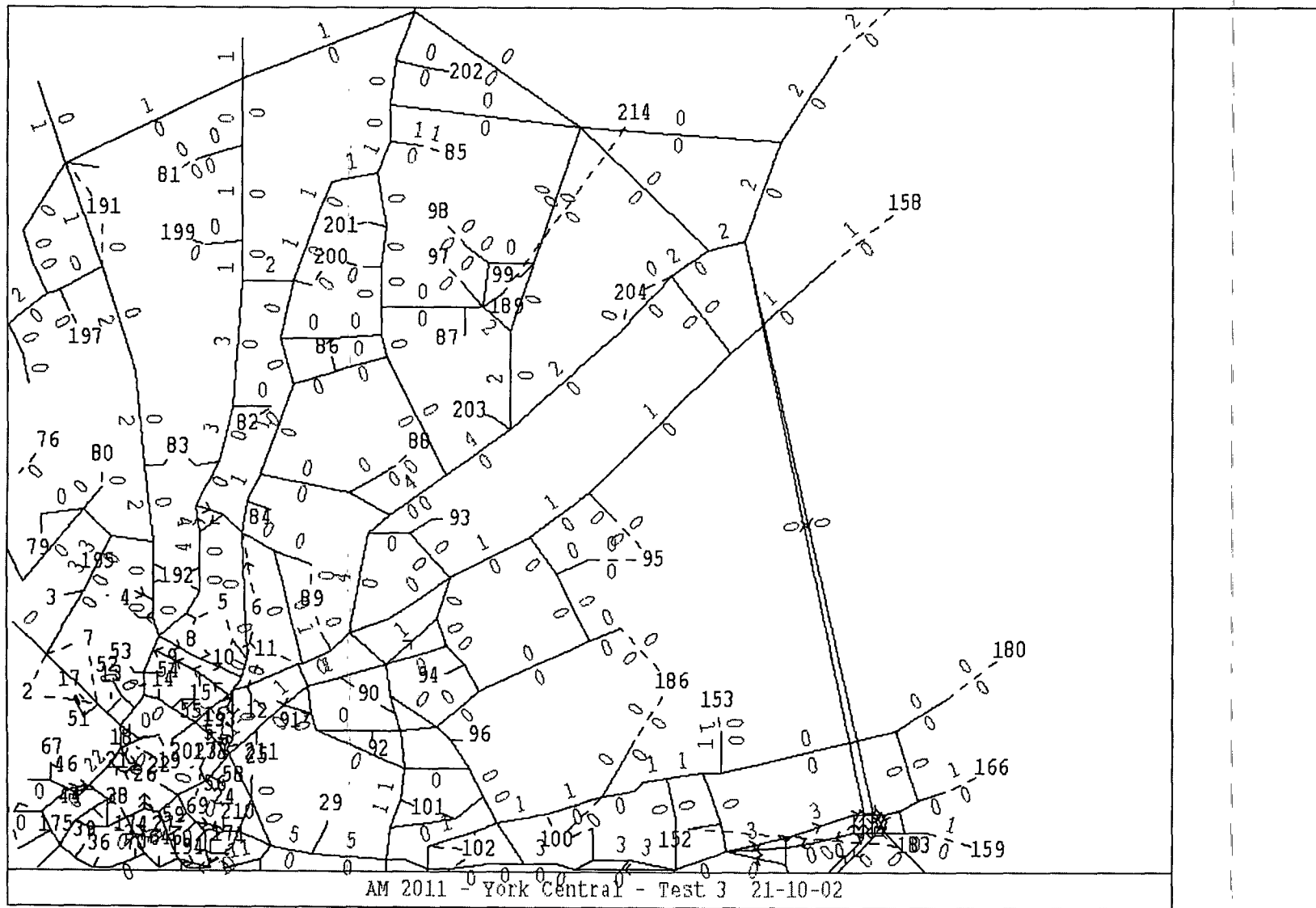


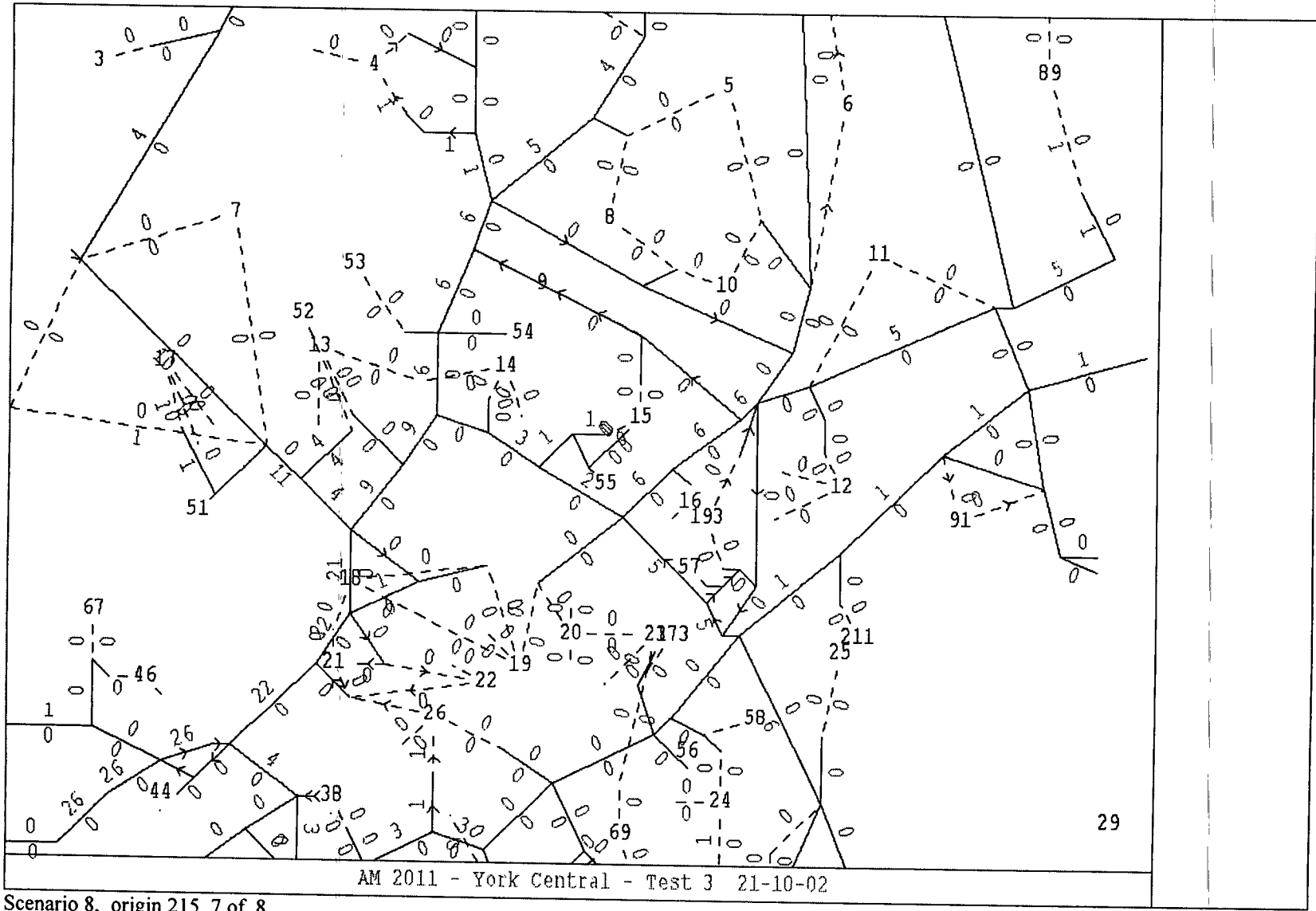
Scenario 8, origin 215, 4 of 8

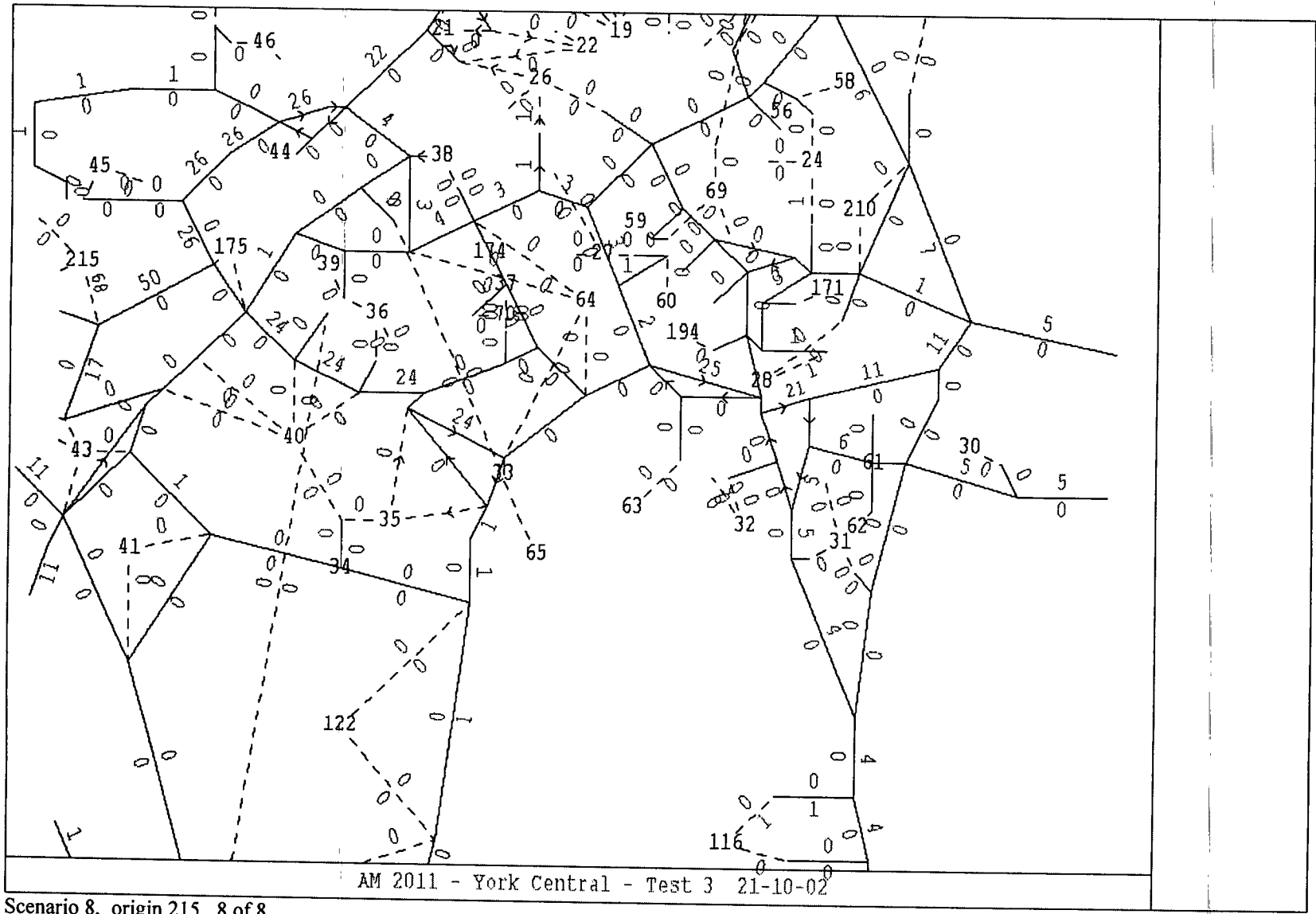


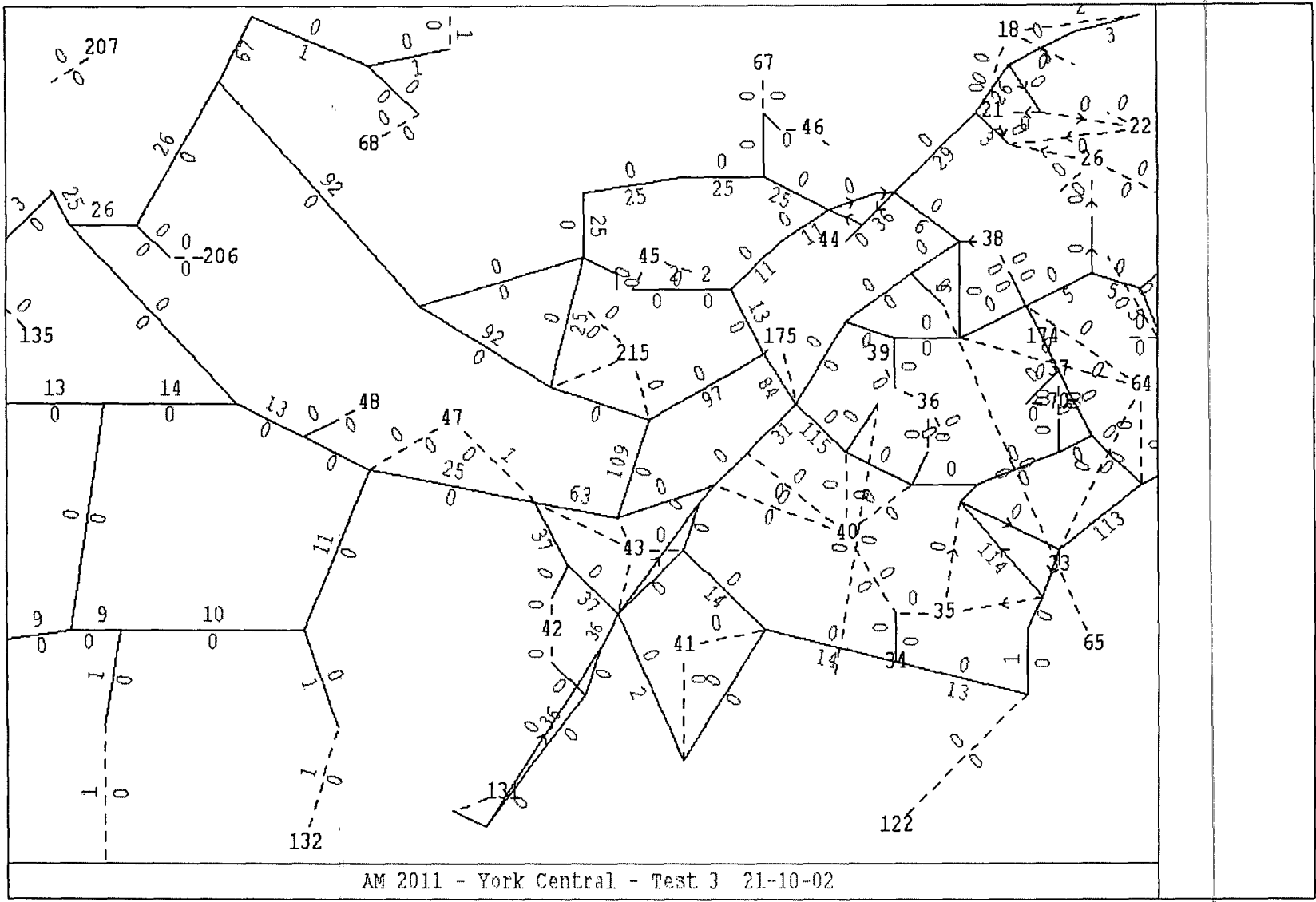
Scenario 8, origin 215, 5 of 8





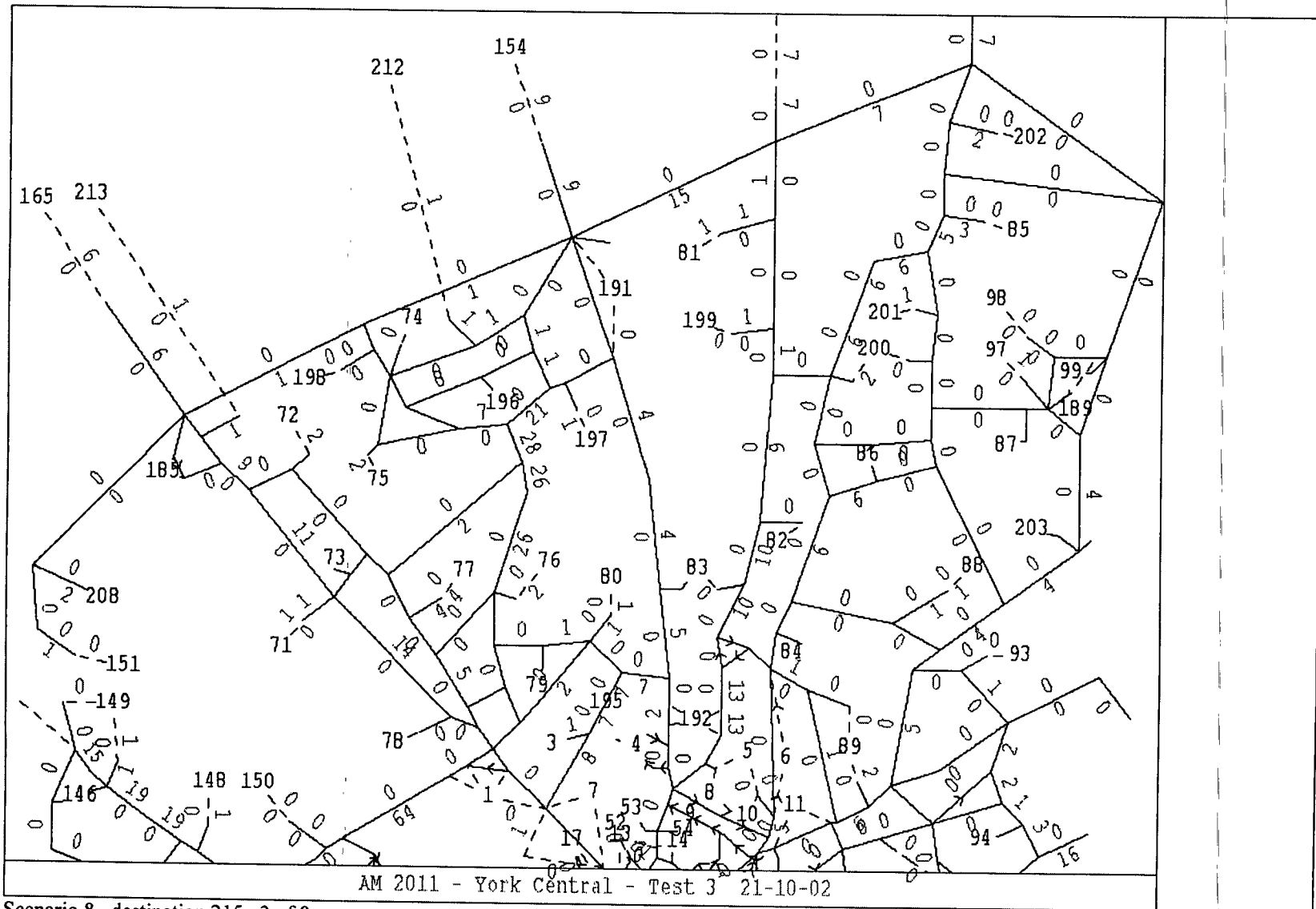


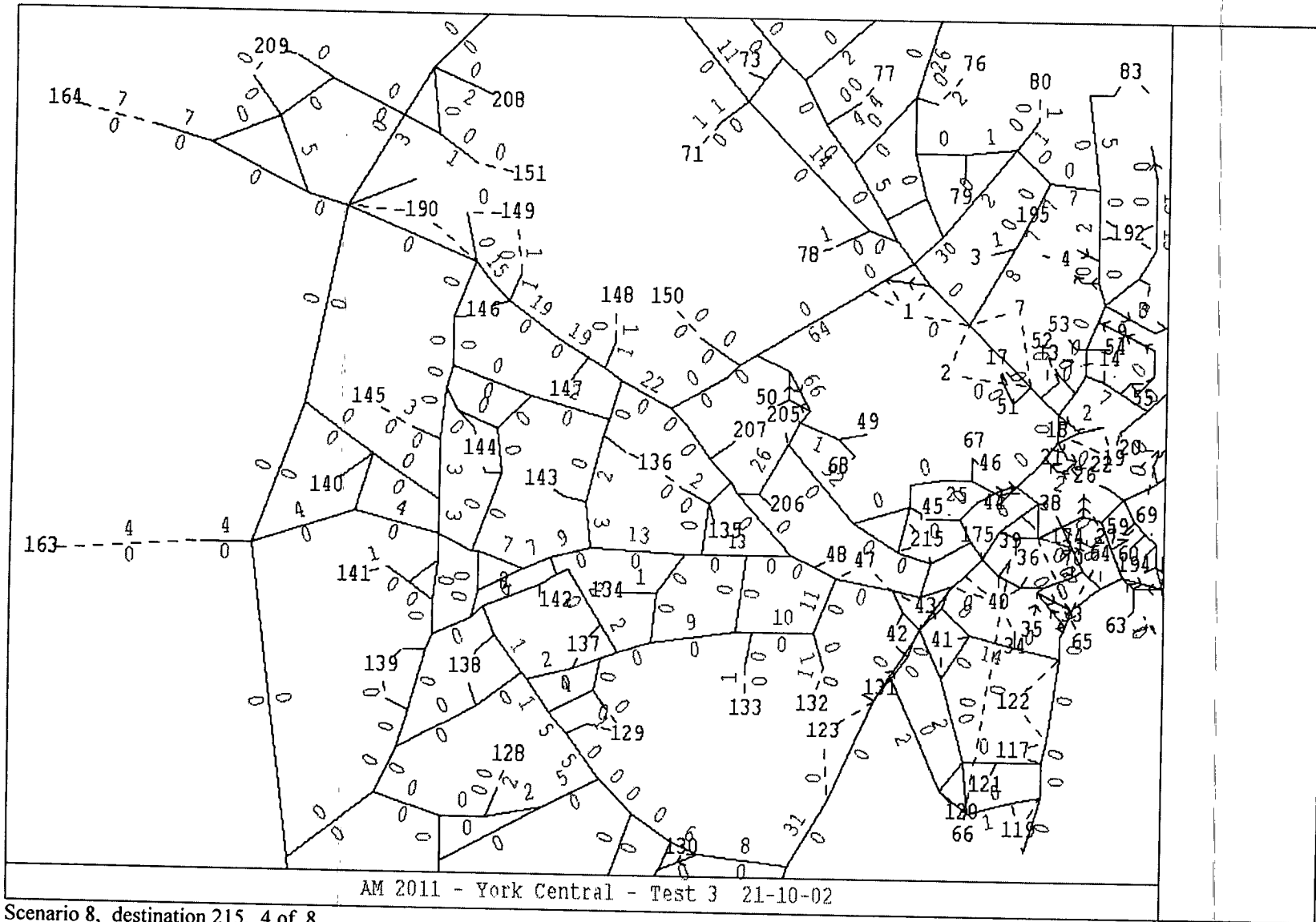


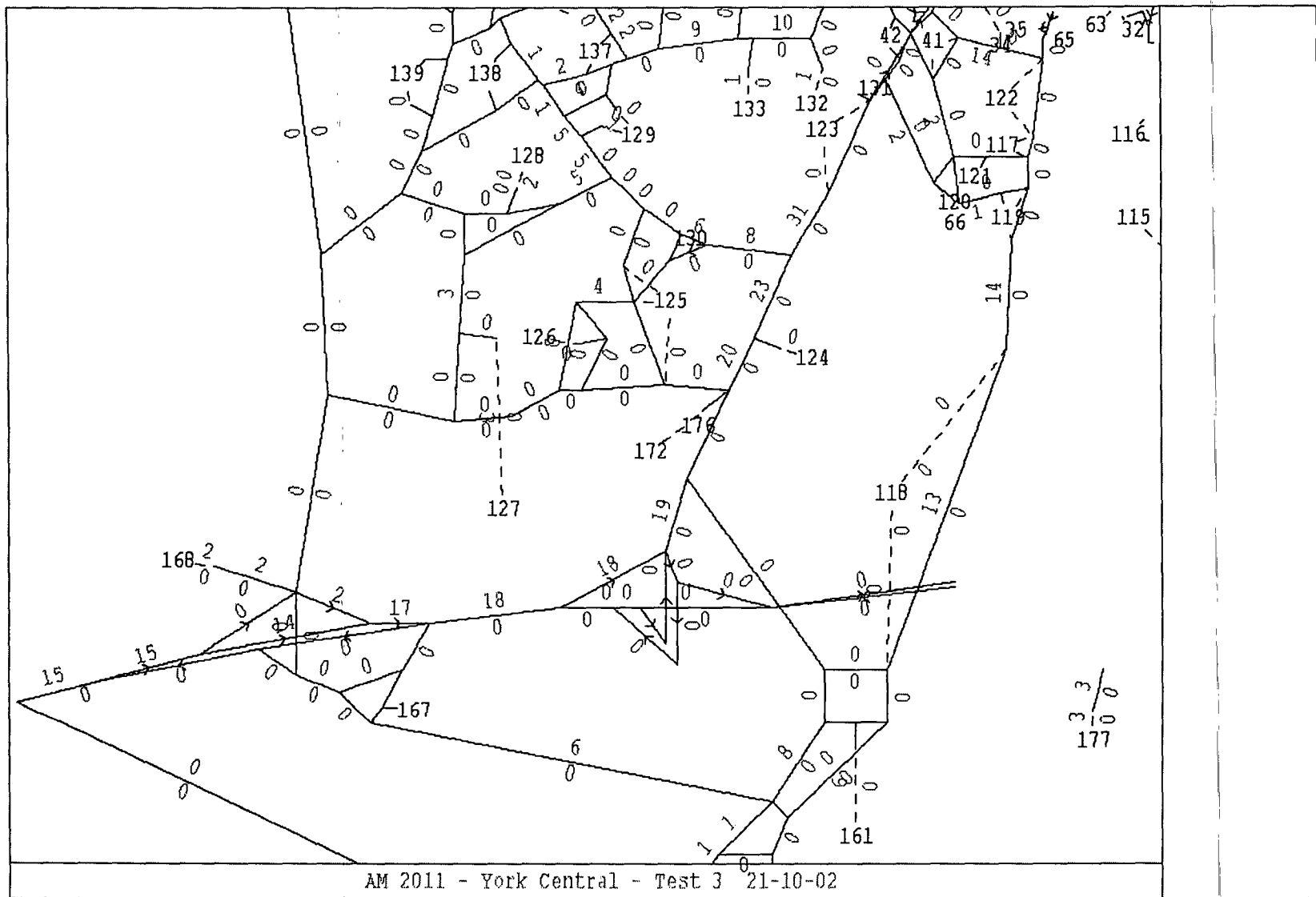


Scenario 8, destination 215, 1 of 8





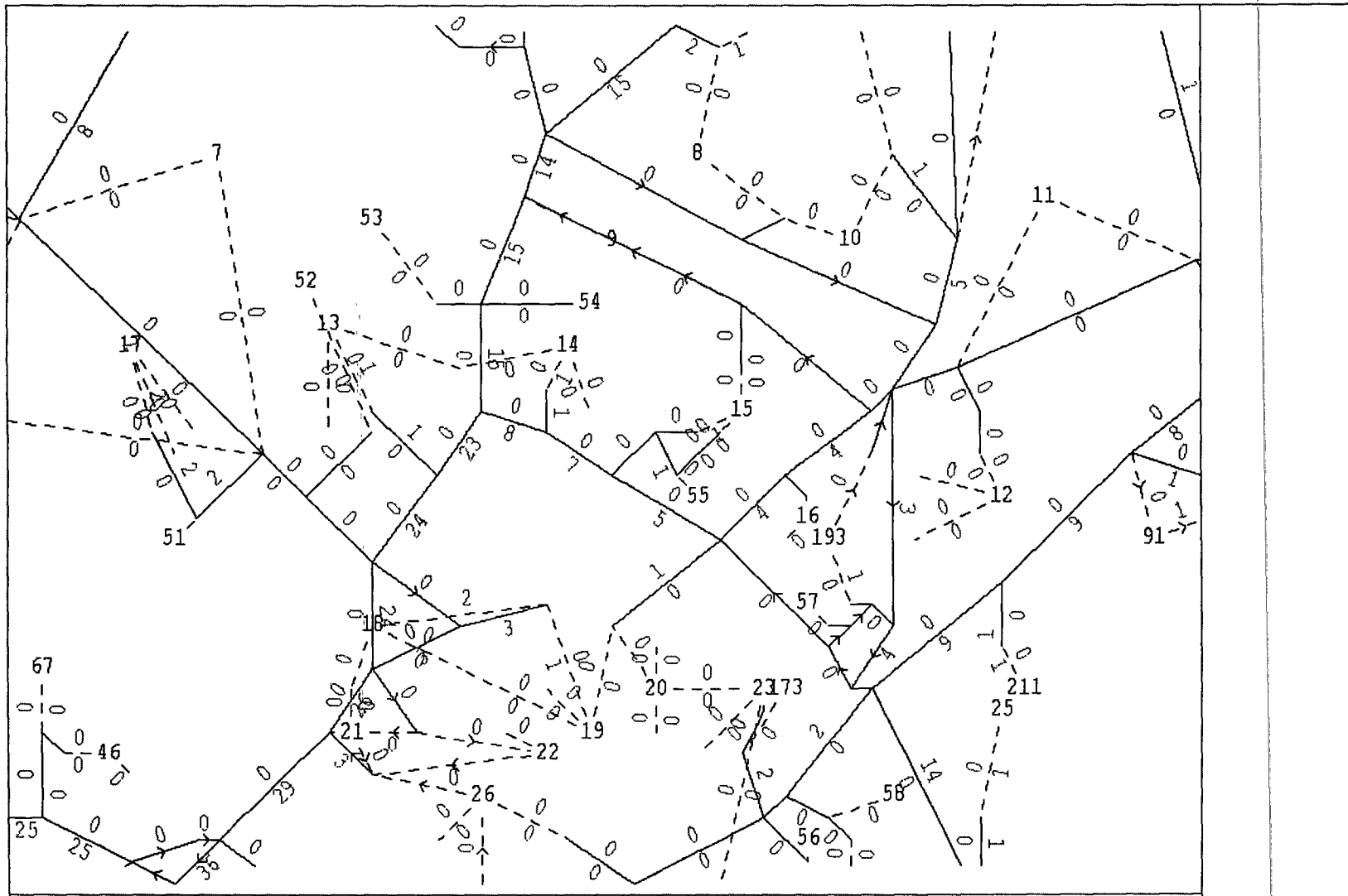




Scenario 8, destination 215, 5 of 8



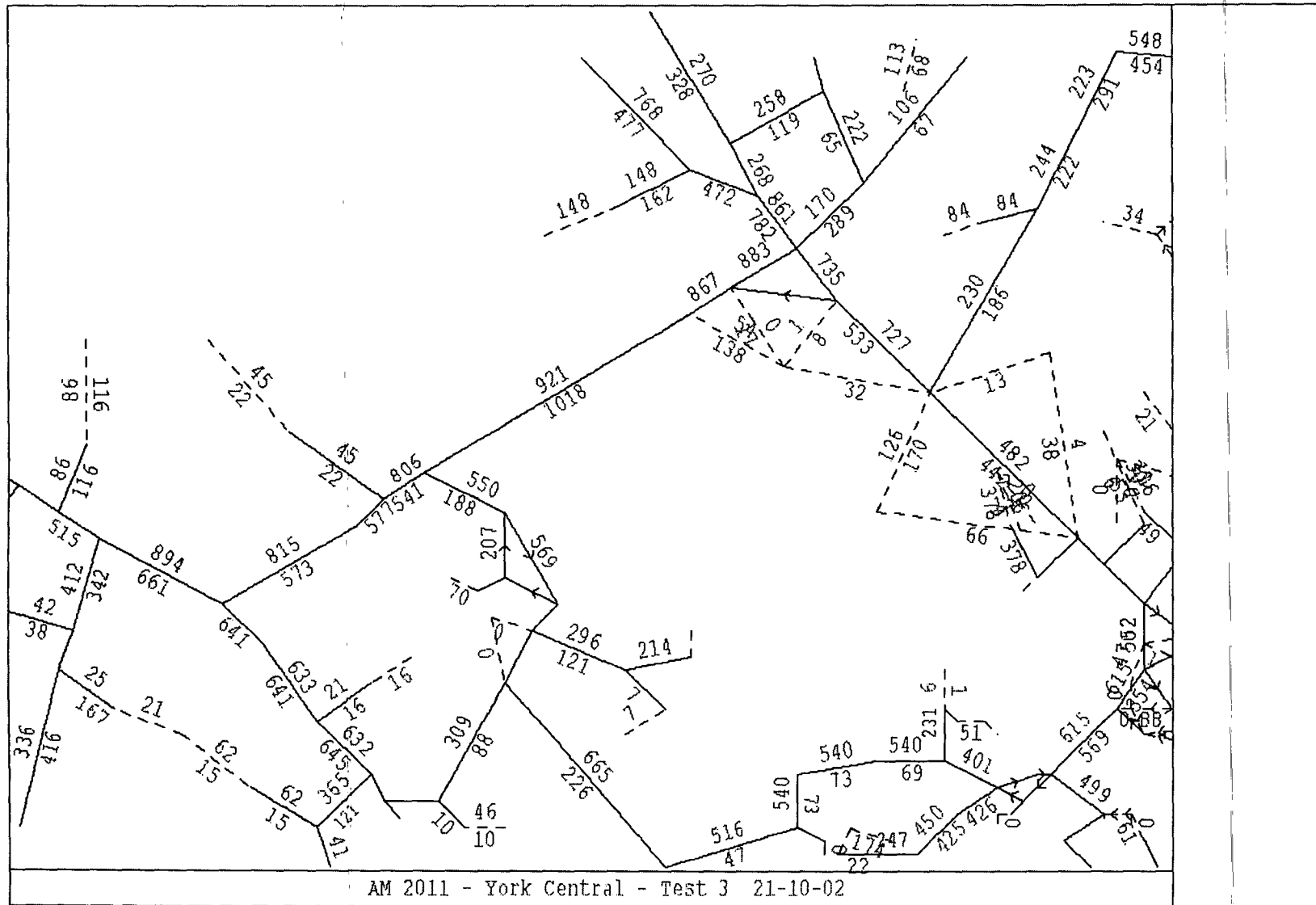




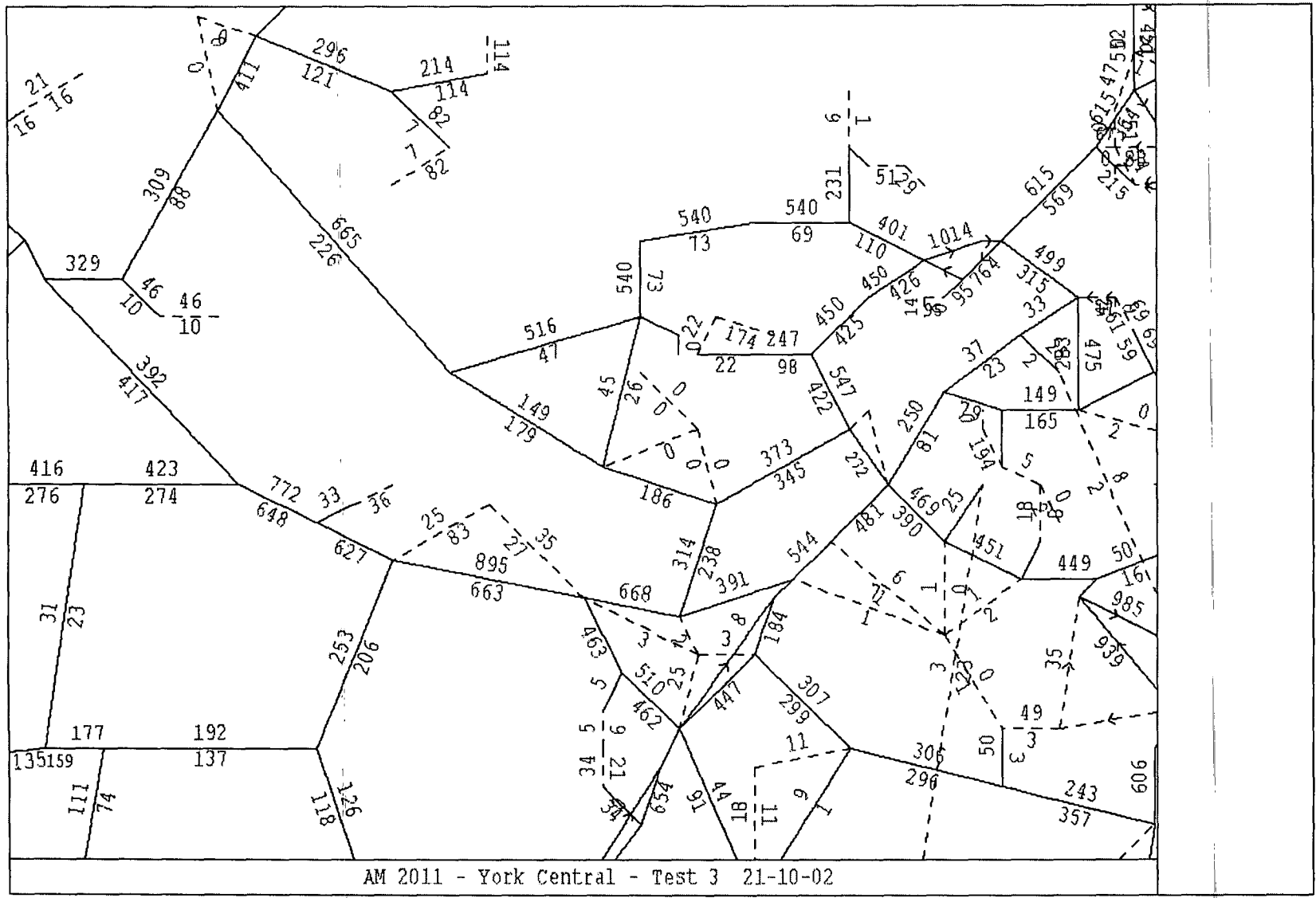
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Scenario 8, destination 215, 7 of 8

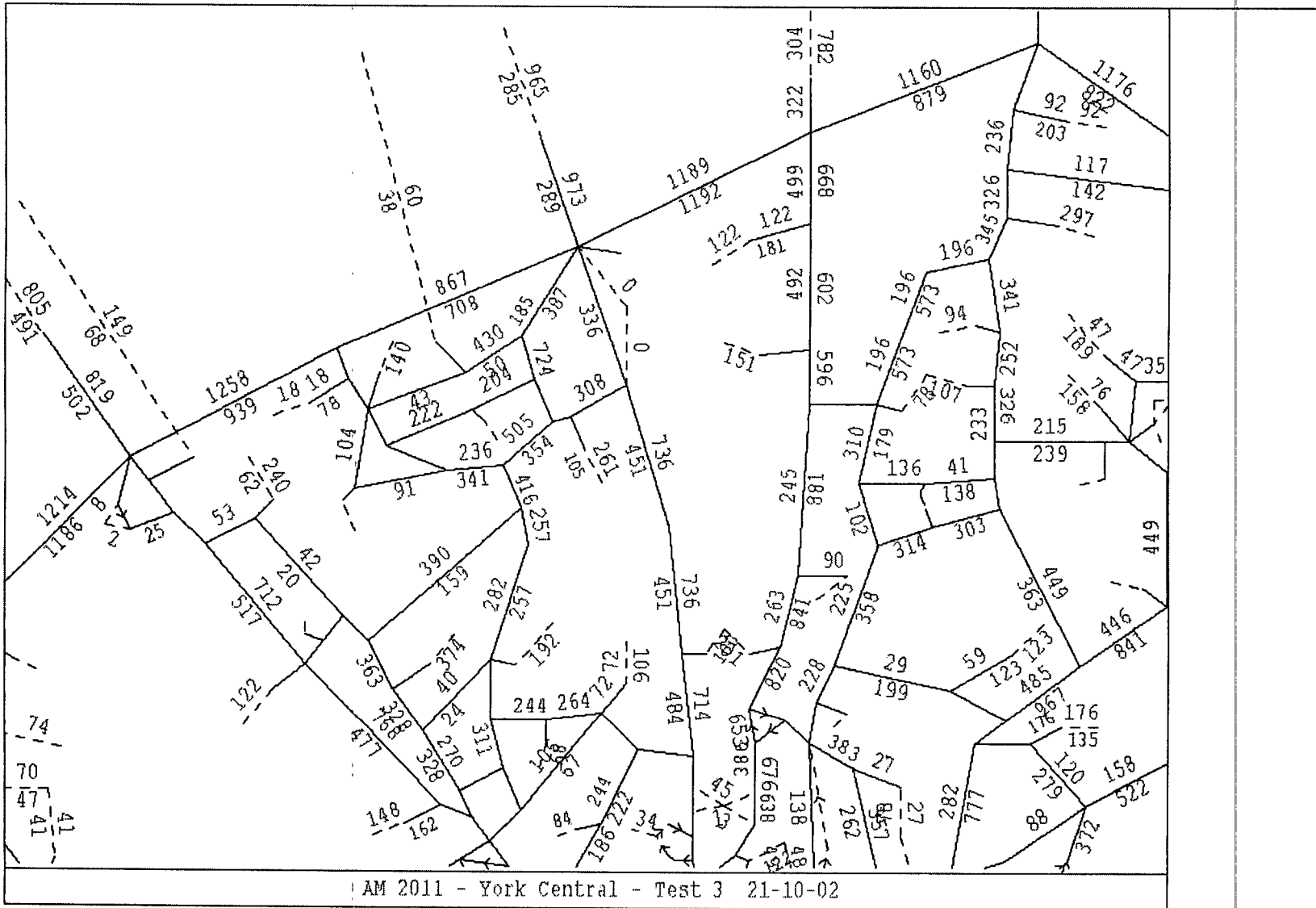




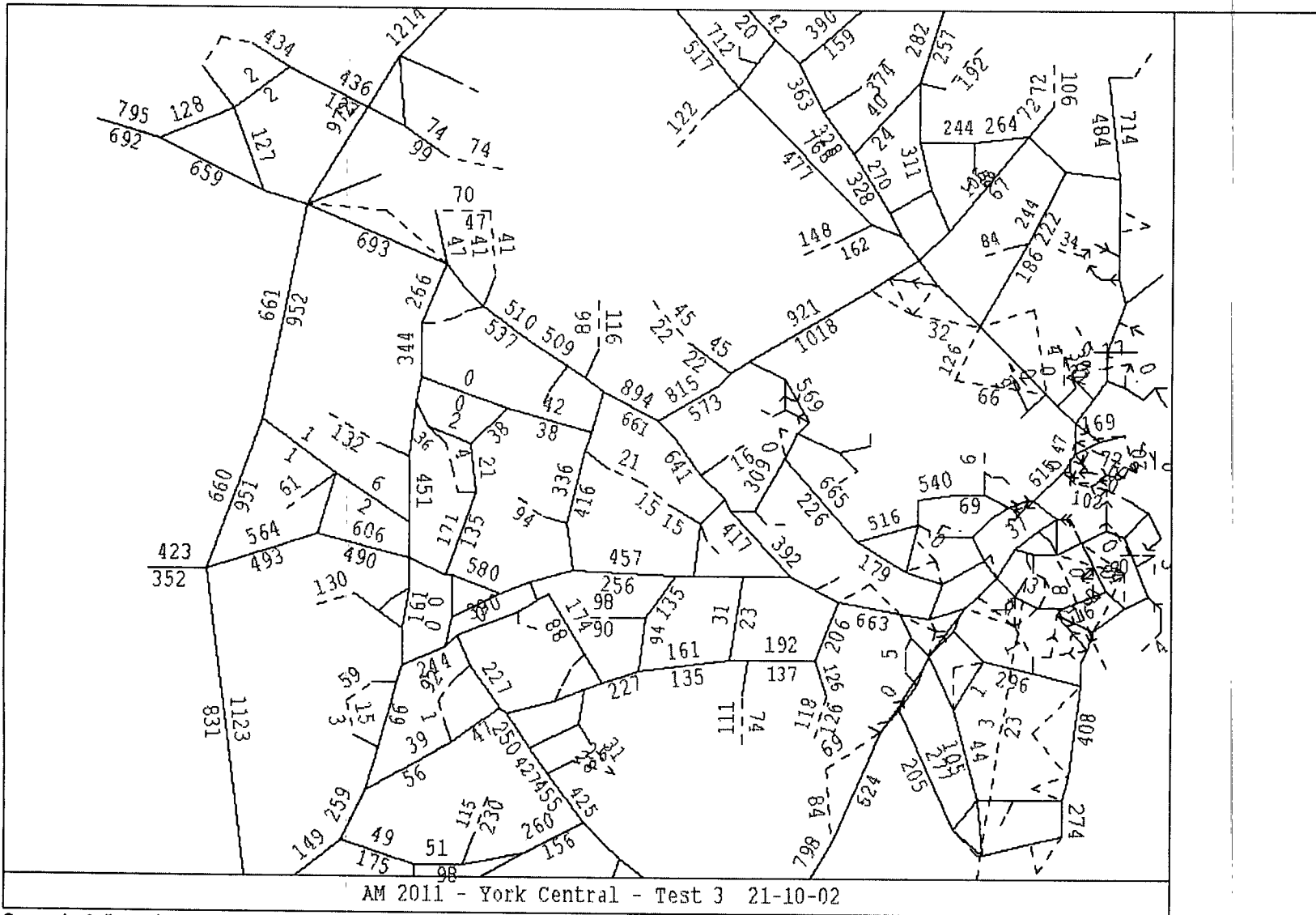
Scenario 8 (base flow), actual flow, 1 of 6



Scenario 8 (base flow), actual flow, 2 of 6



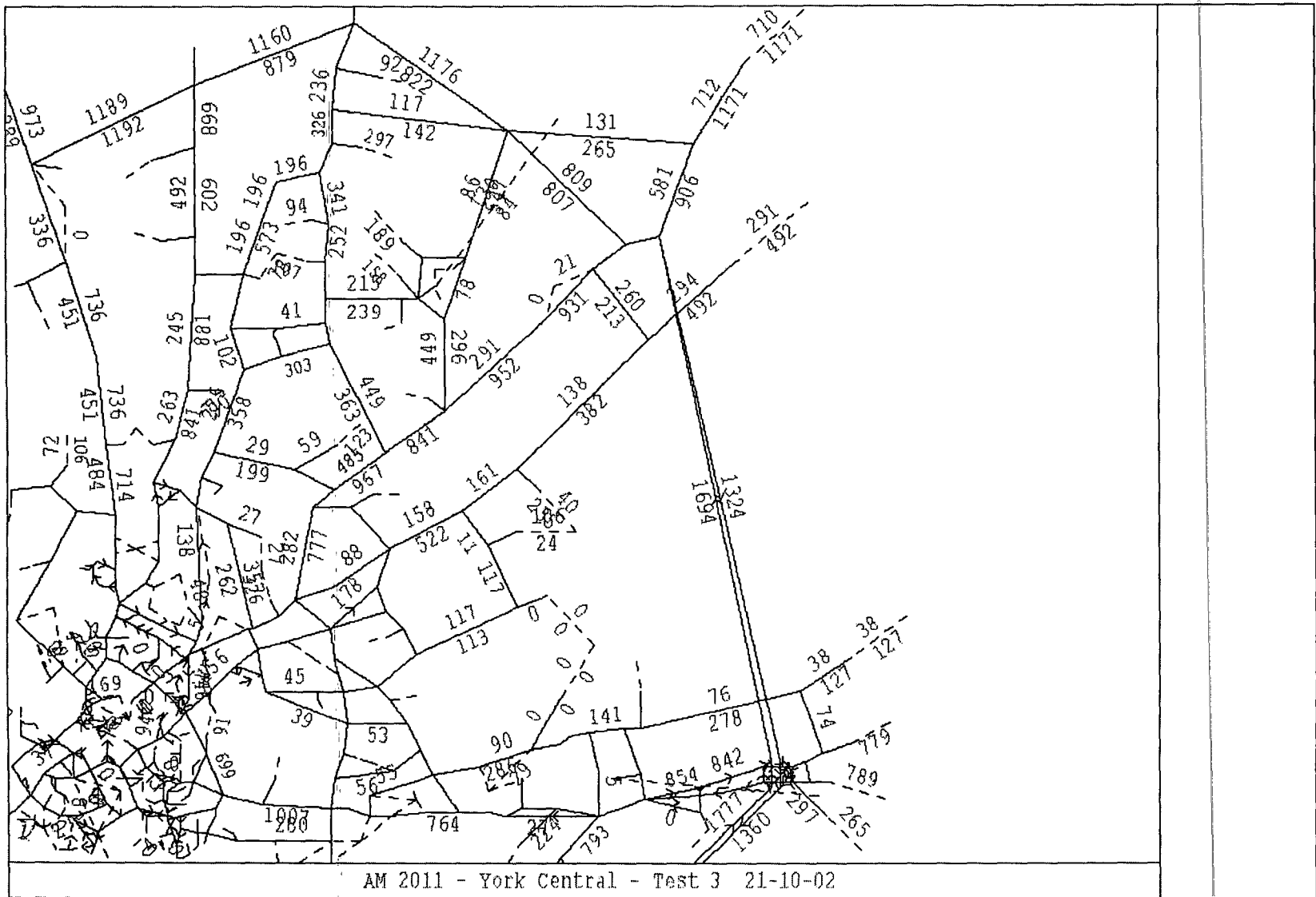
Scenario 8 (base flow), actual flow, 3 of 6

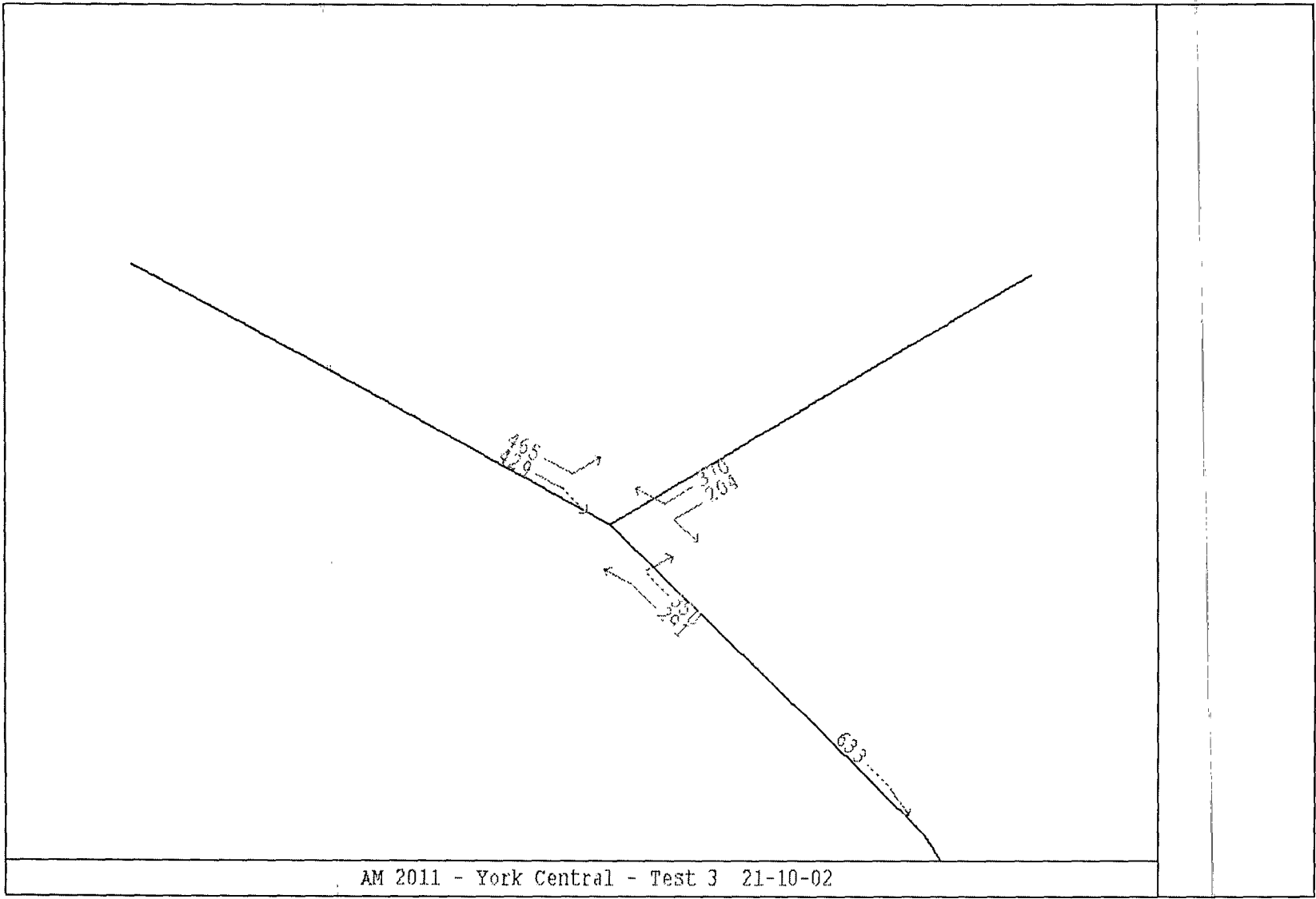


Scenario 8 (base flow), actual flow, 4 of 6



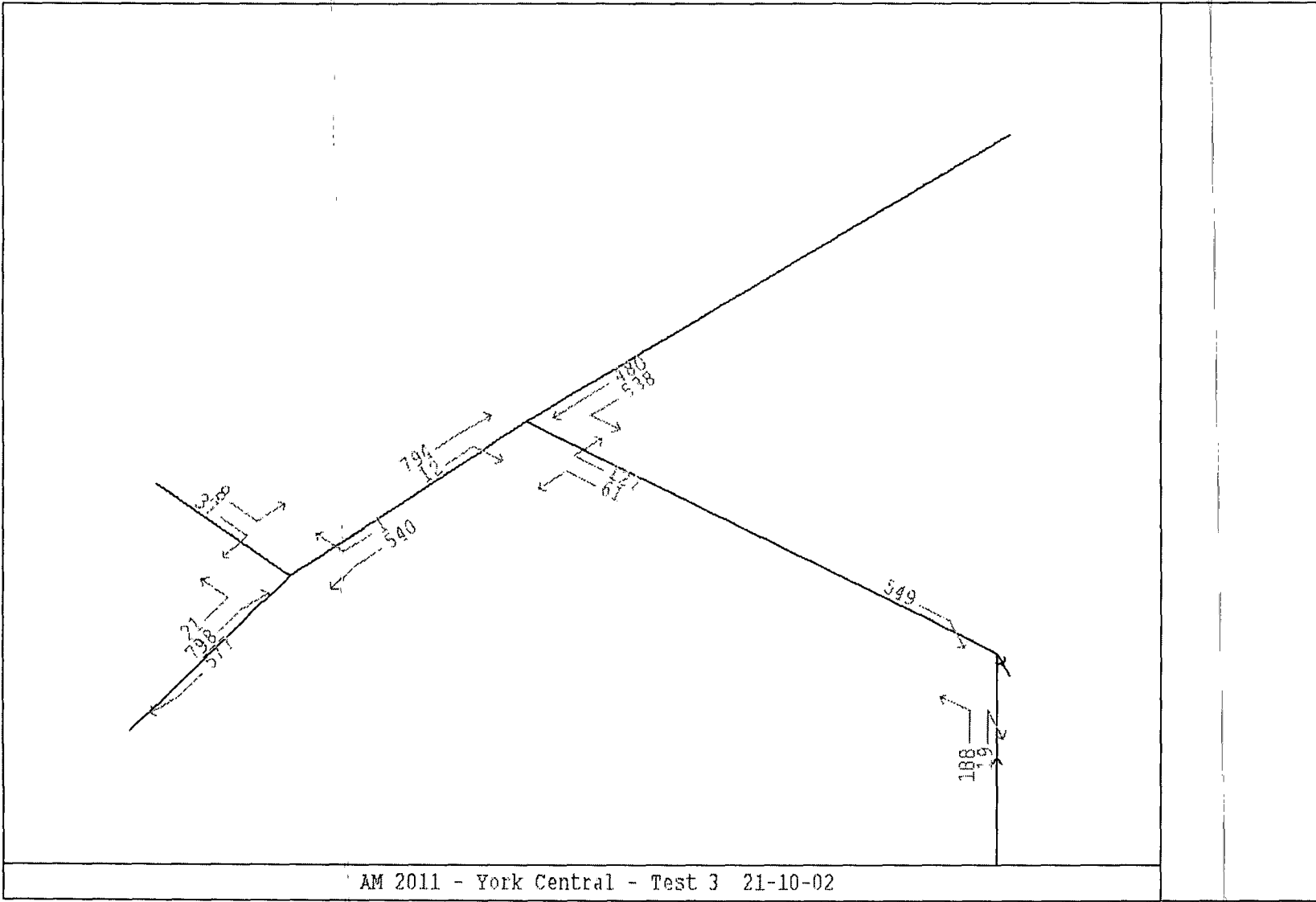




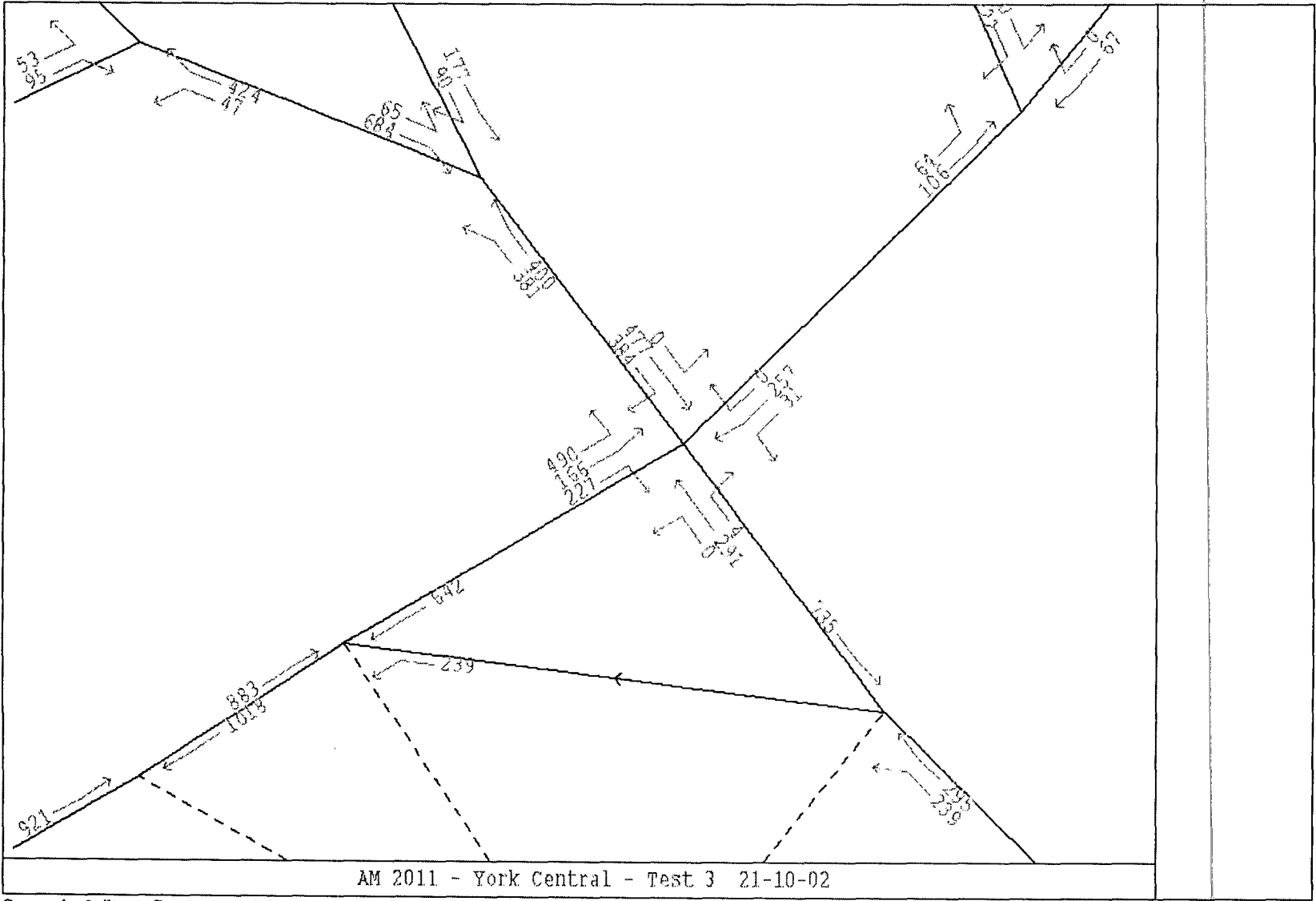


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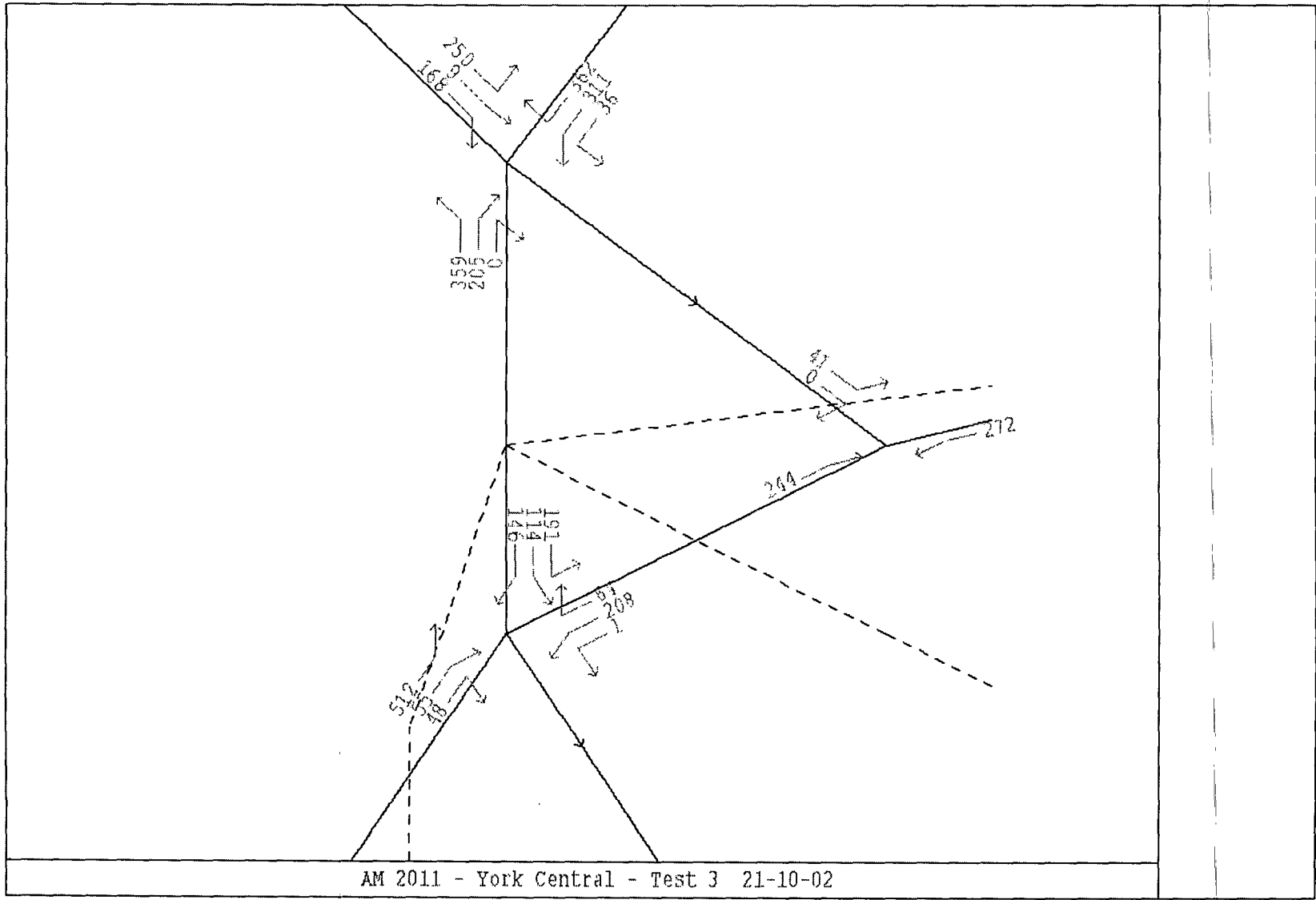
Scenario 8 (base flow), actual flow, junction 1



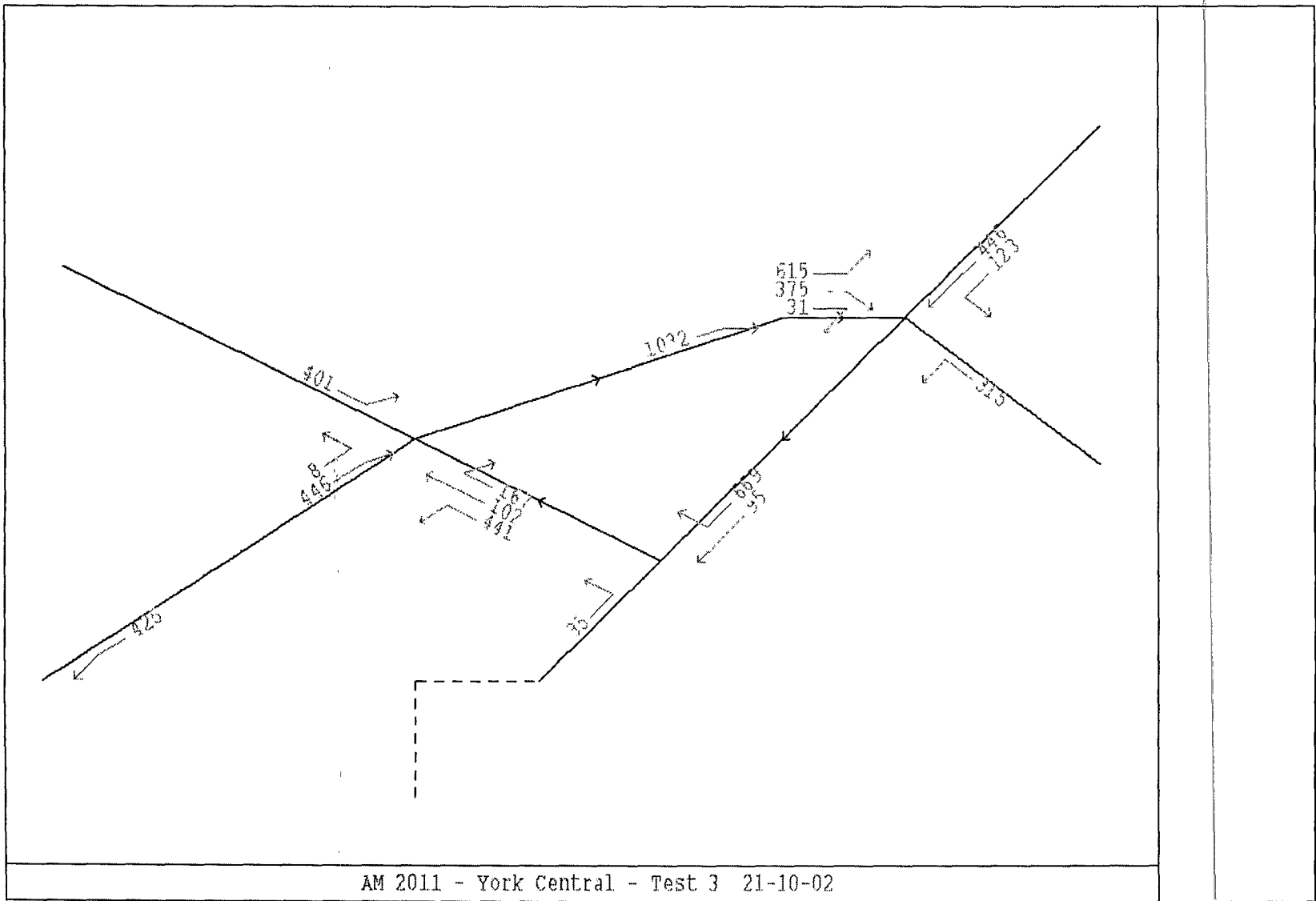
Scenario 8 (base flow), actual flow, junction 3



Scenario 8 (base flow), actual flow, junction 4

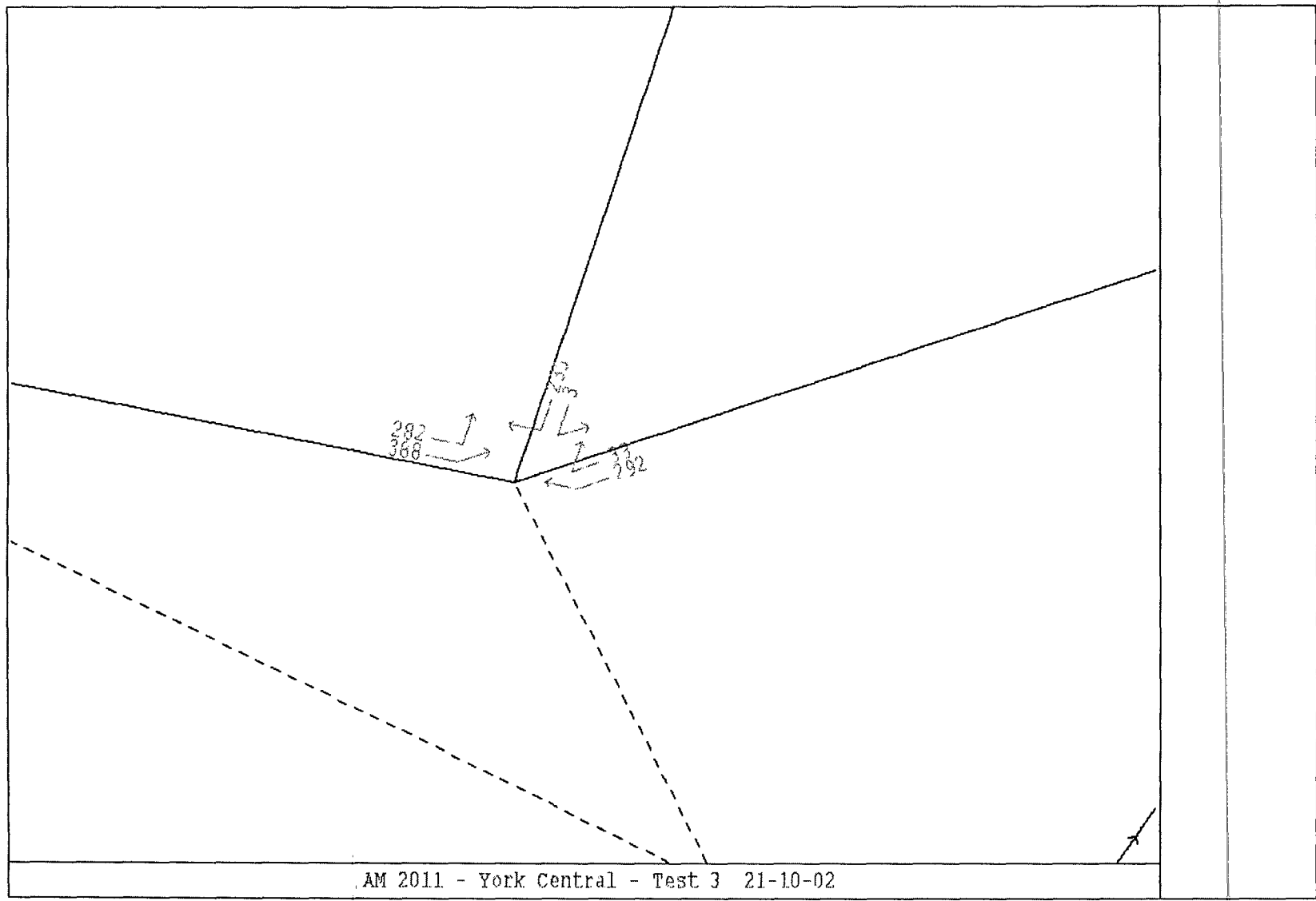


Scenario 8 (base flow), actual flow, junction 5



Scenario 8 (base flow), actual flow, junction 6

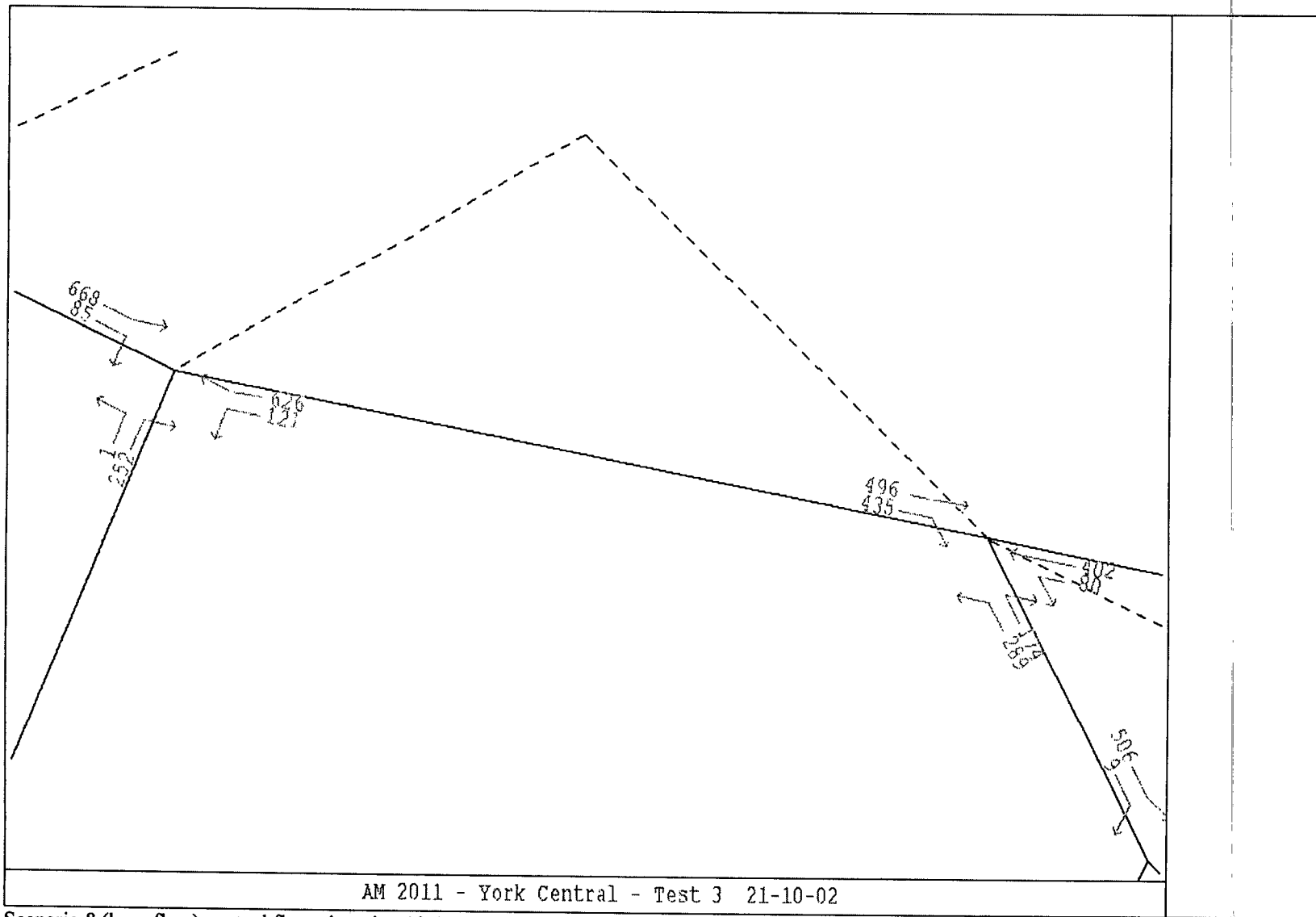




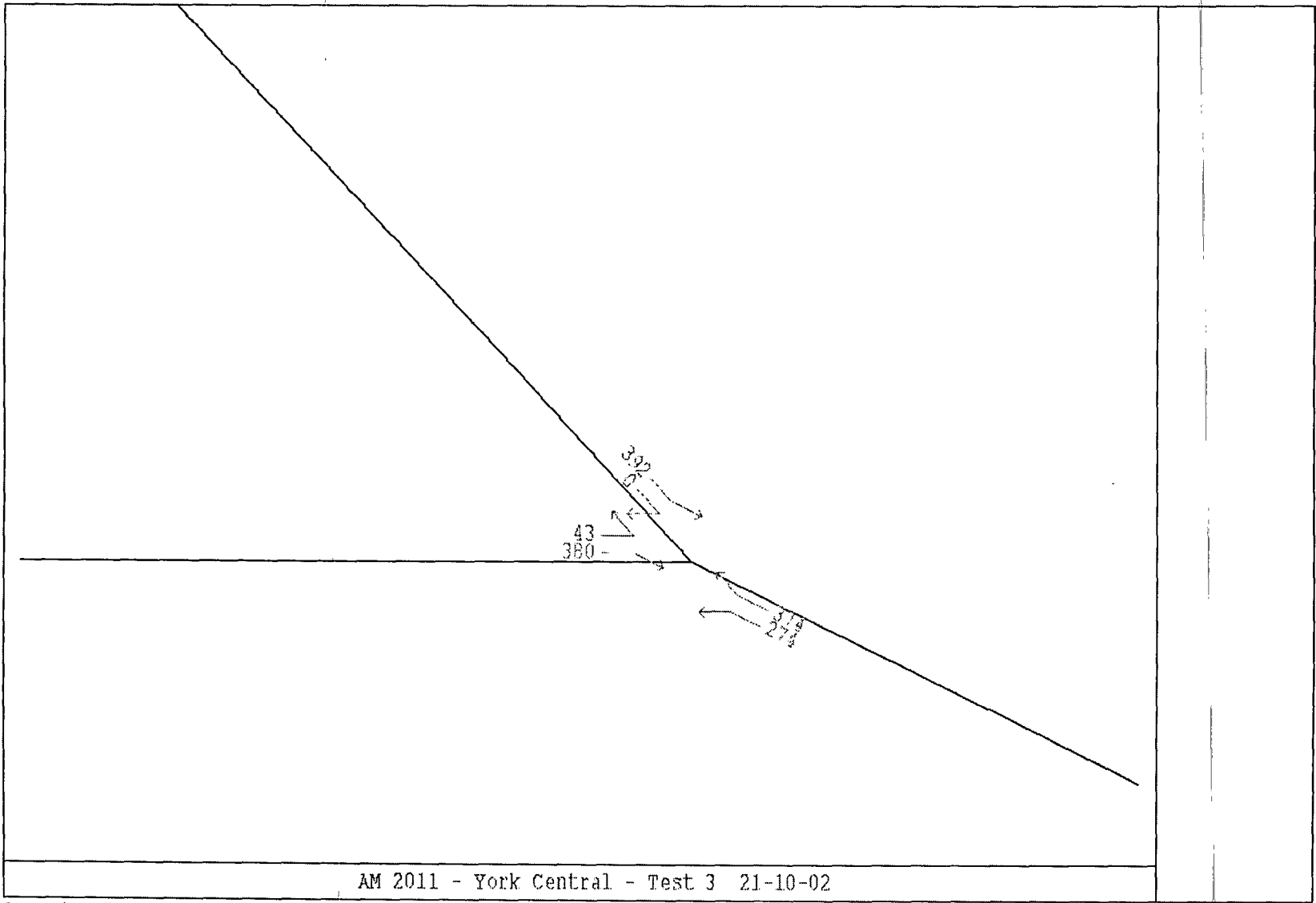
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Scenario 8 (base flow), actual flow, junction 9



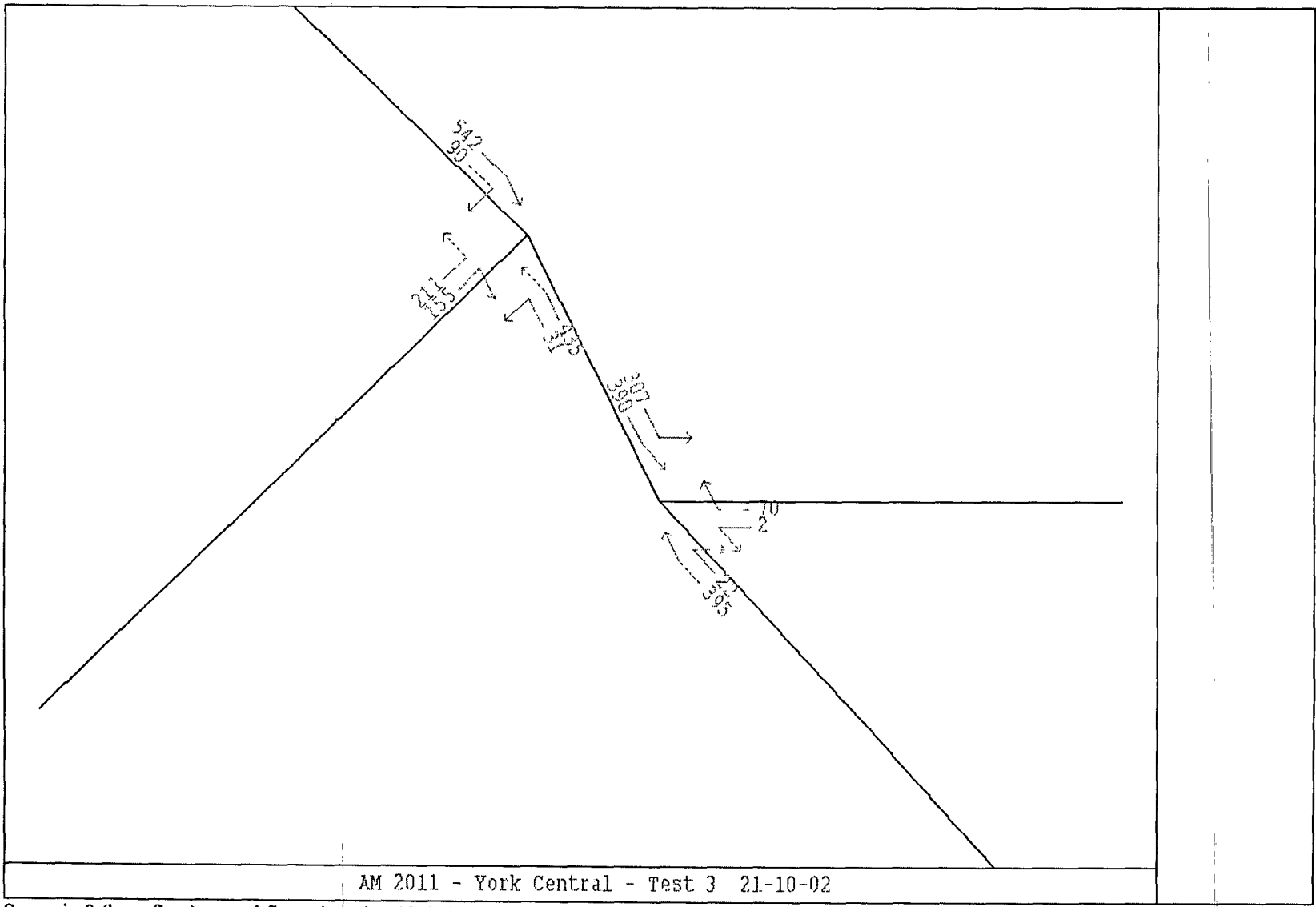


Scenario 8 (base flow), actual flow, junction 10 & 11



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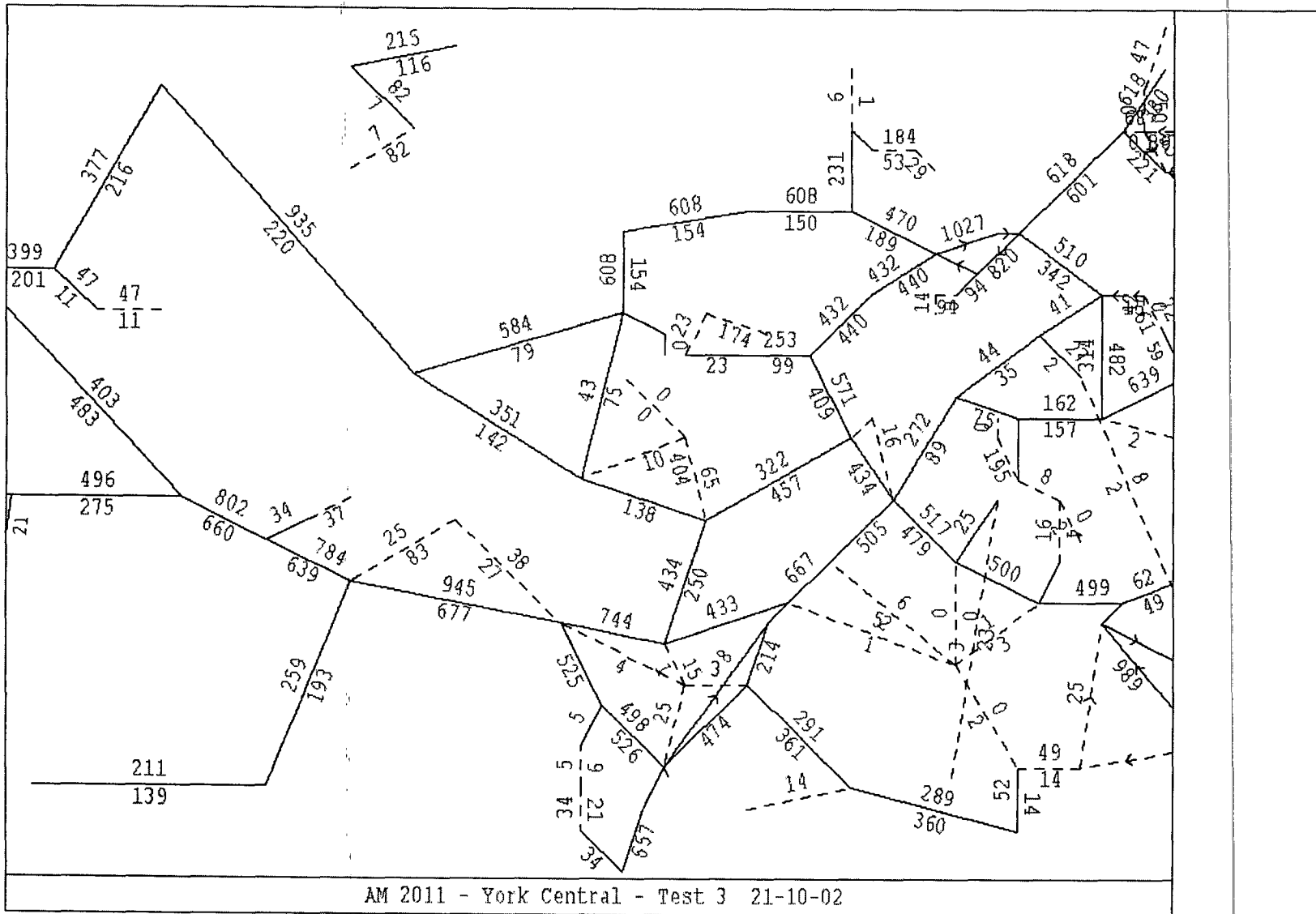
Scenario 8 (base flow), actual flow, junction 12



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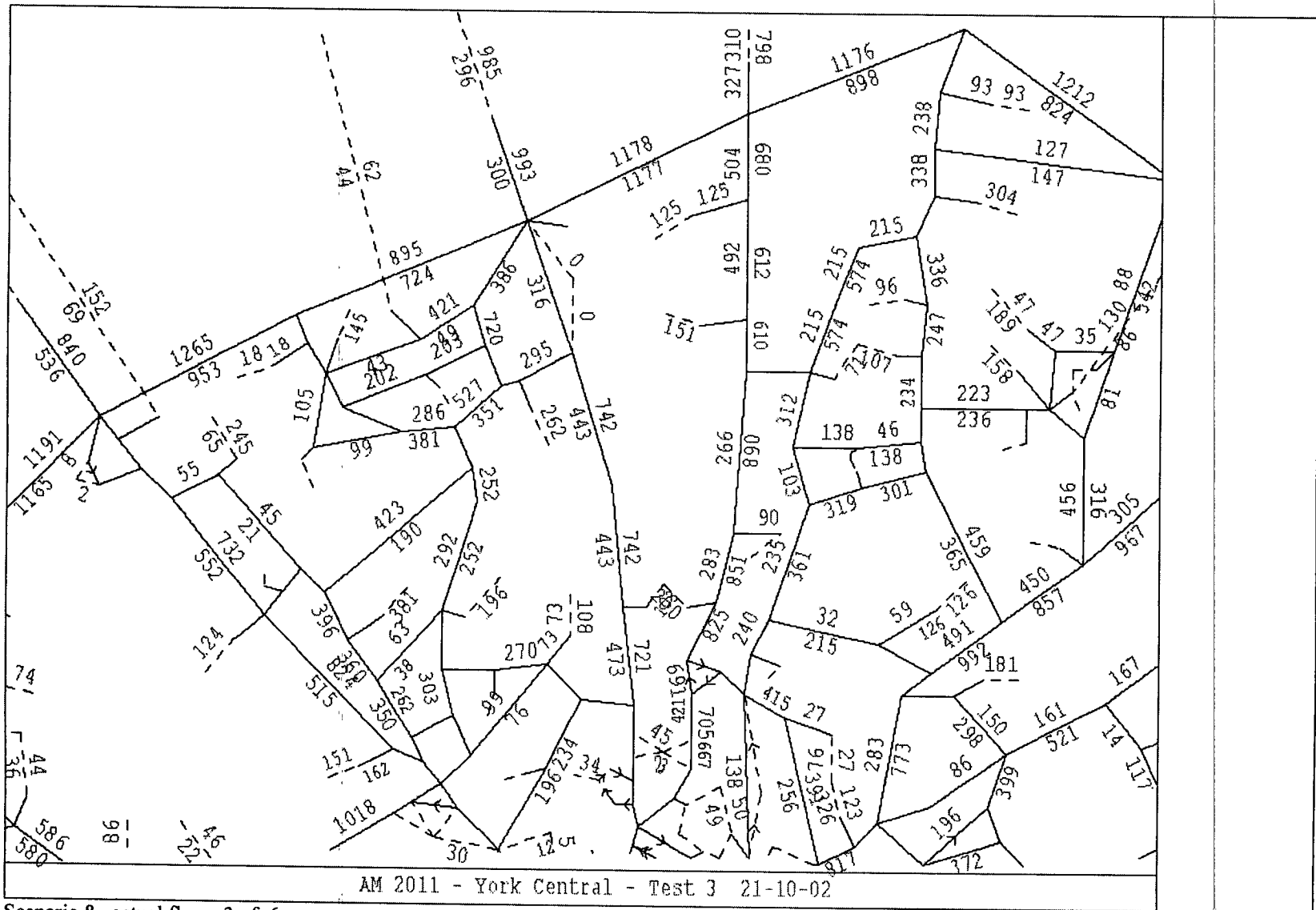
Scenario 8 (base flow), actual flow, junction 13 & 14

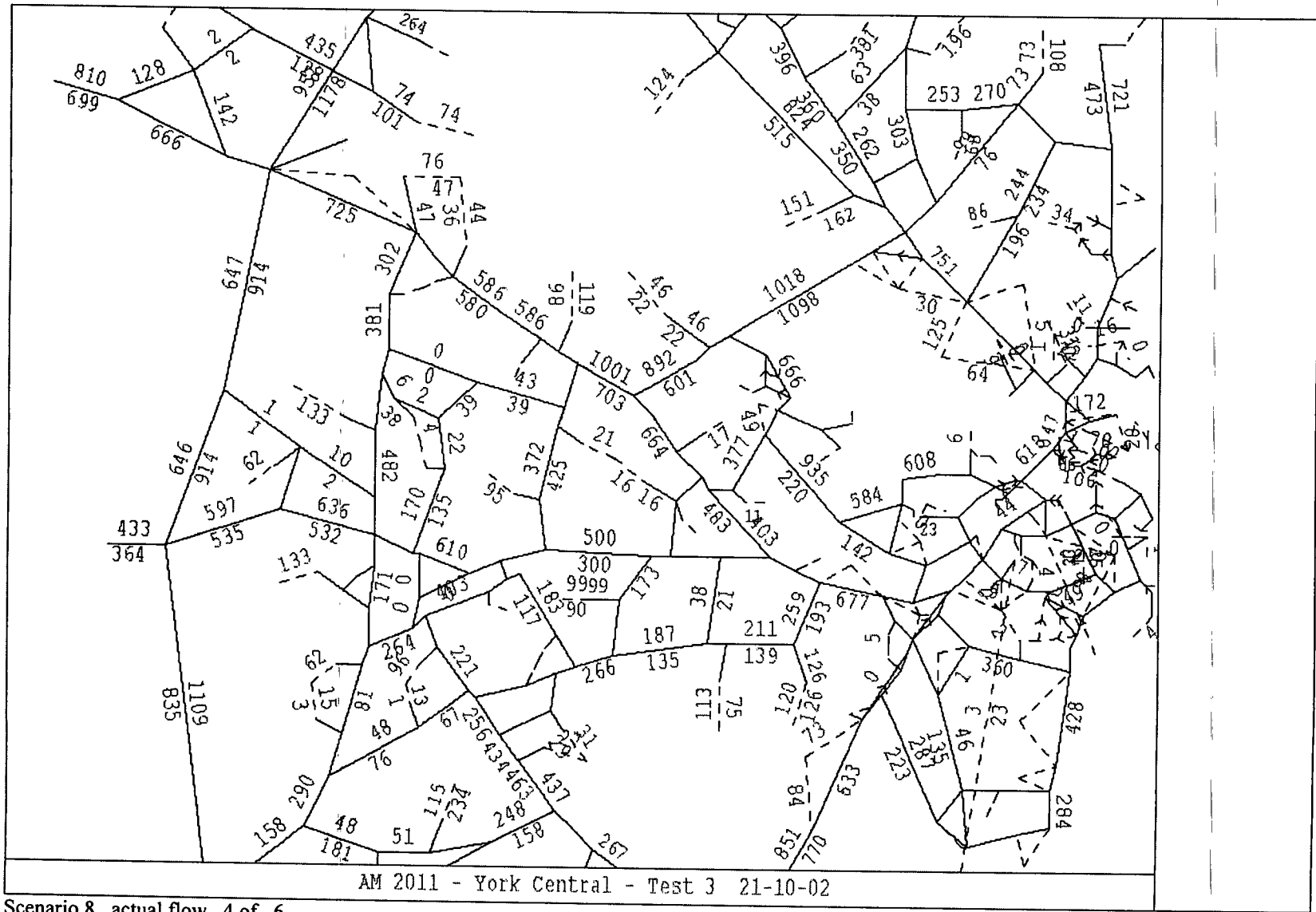




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Scenario 8, actual flow, 2 of 6



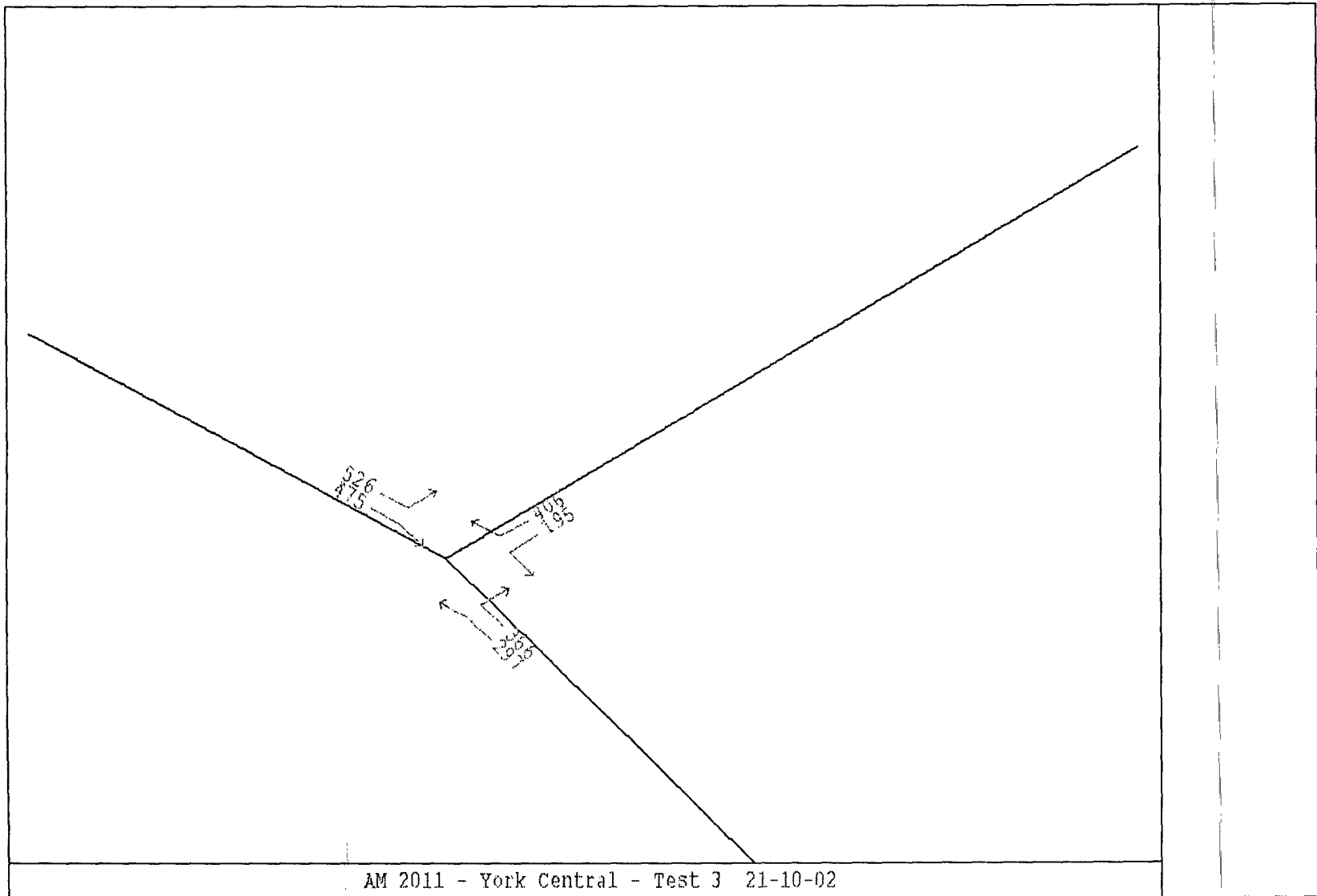


Scenario 8, actual flow, 4 of 6

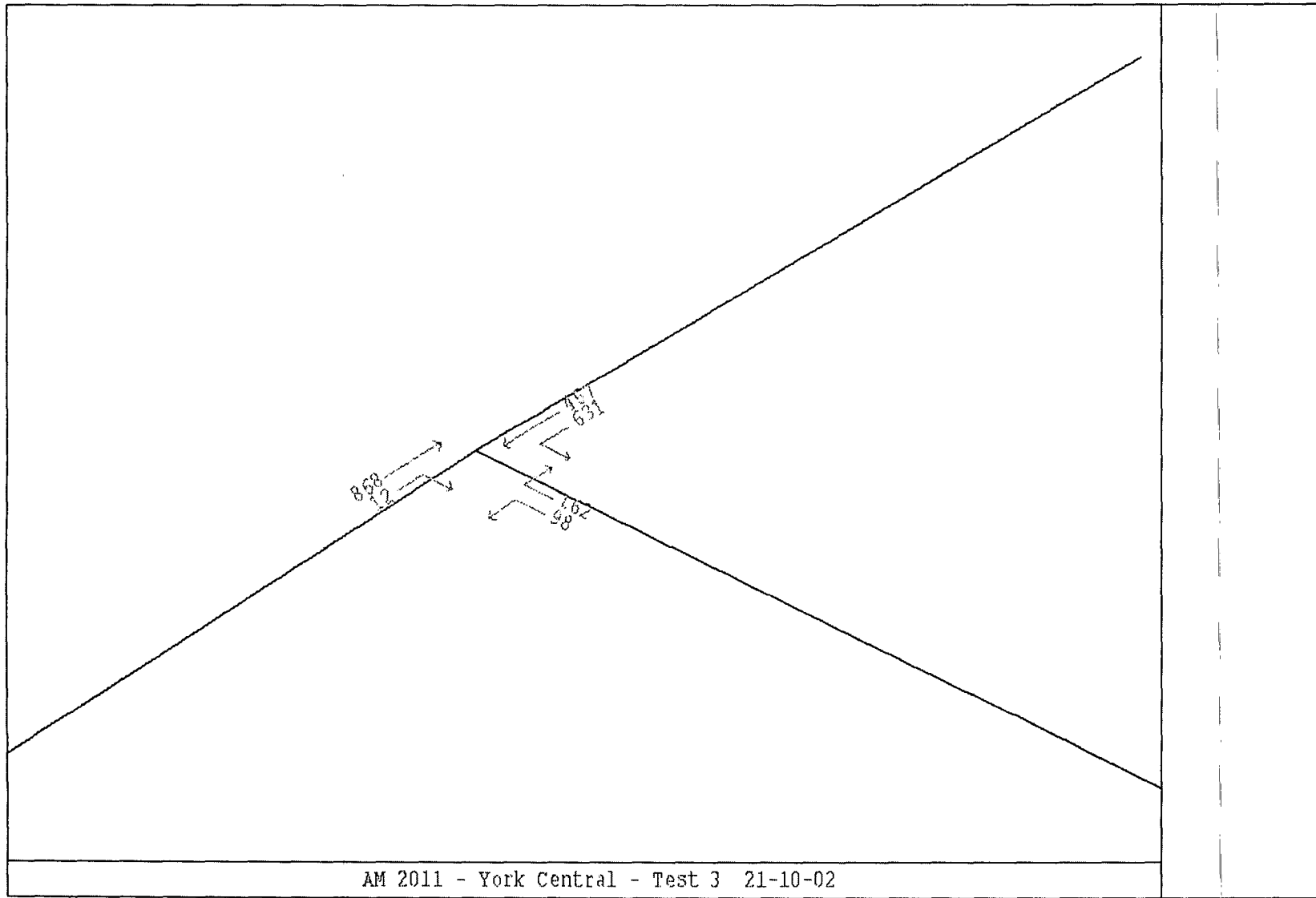




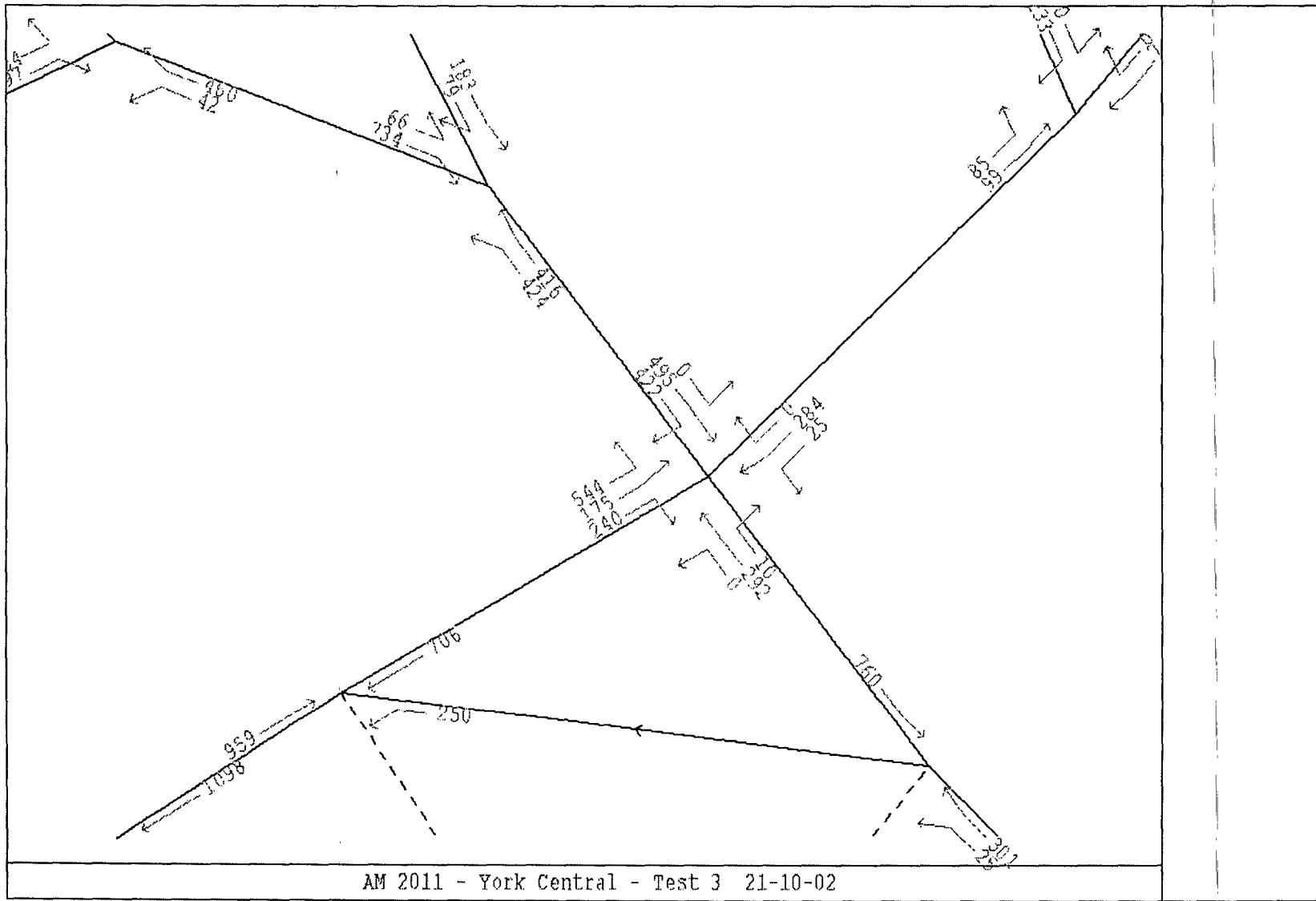




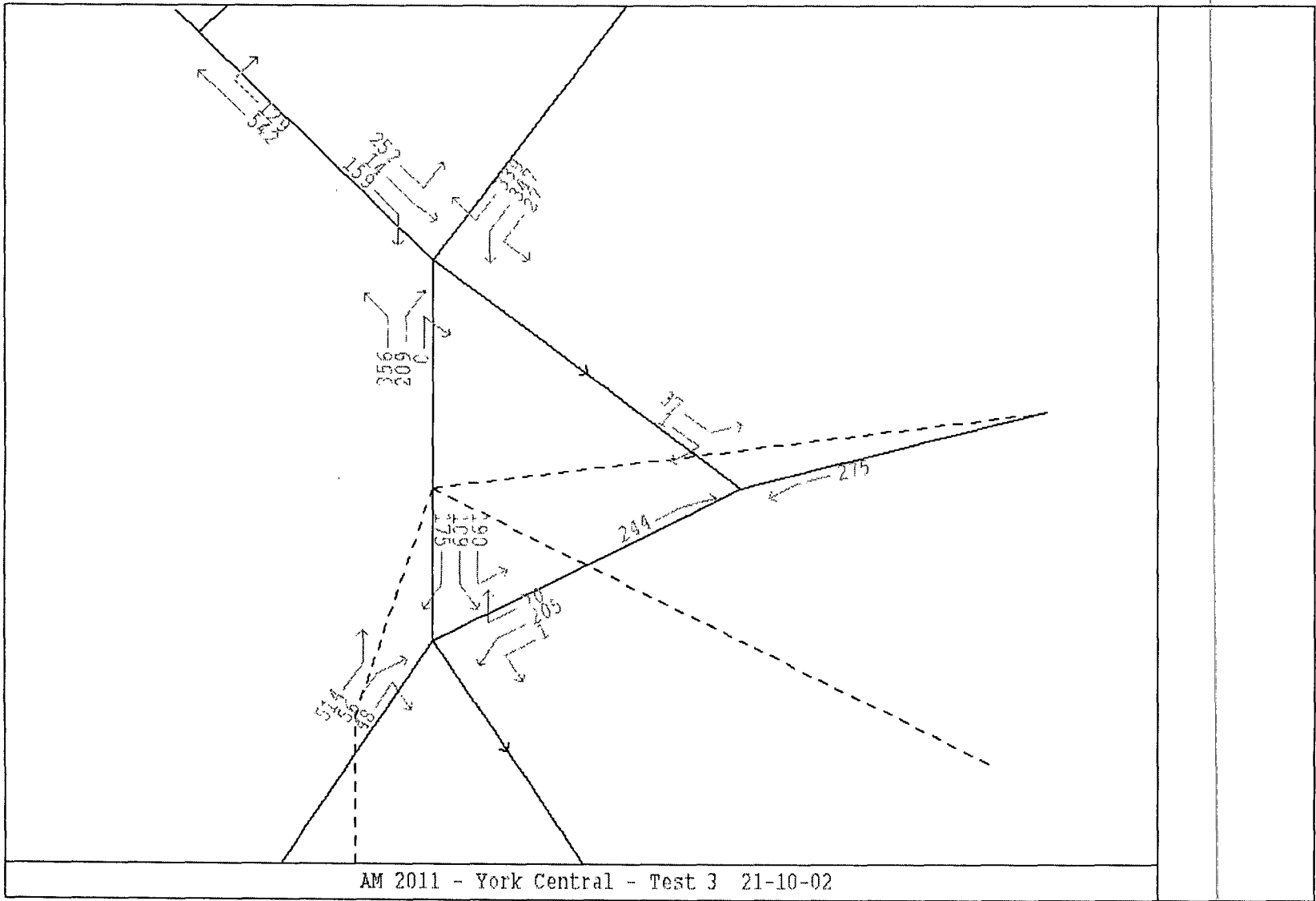
Scenario 8, actual flow, junction 1



Scenario 8, actual flow, junction 3

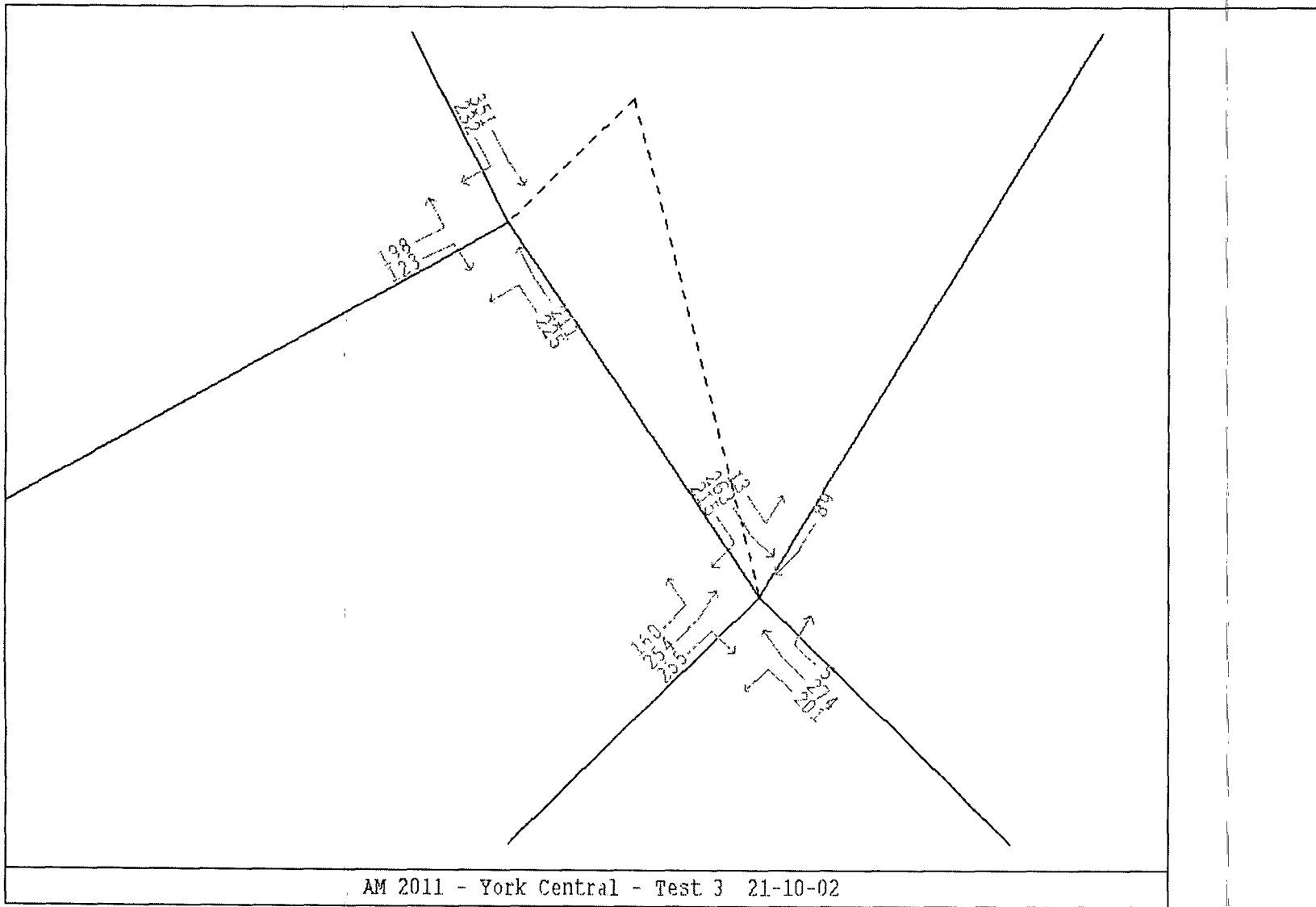


Scenario 8, actual flow, junction 4

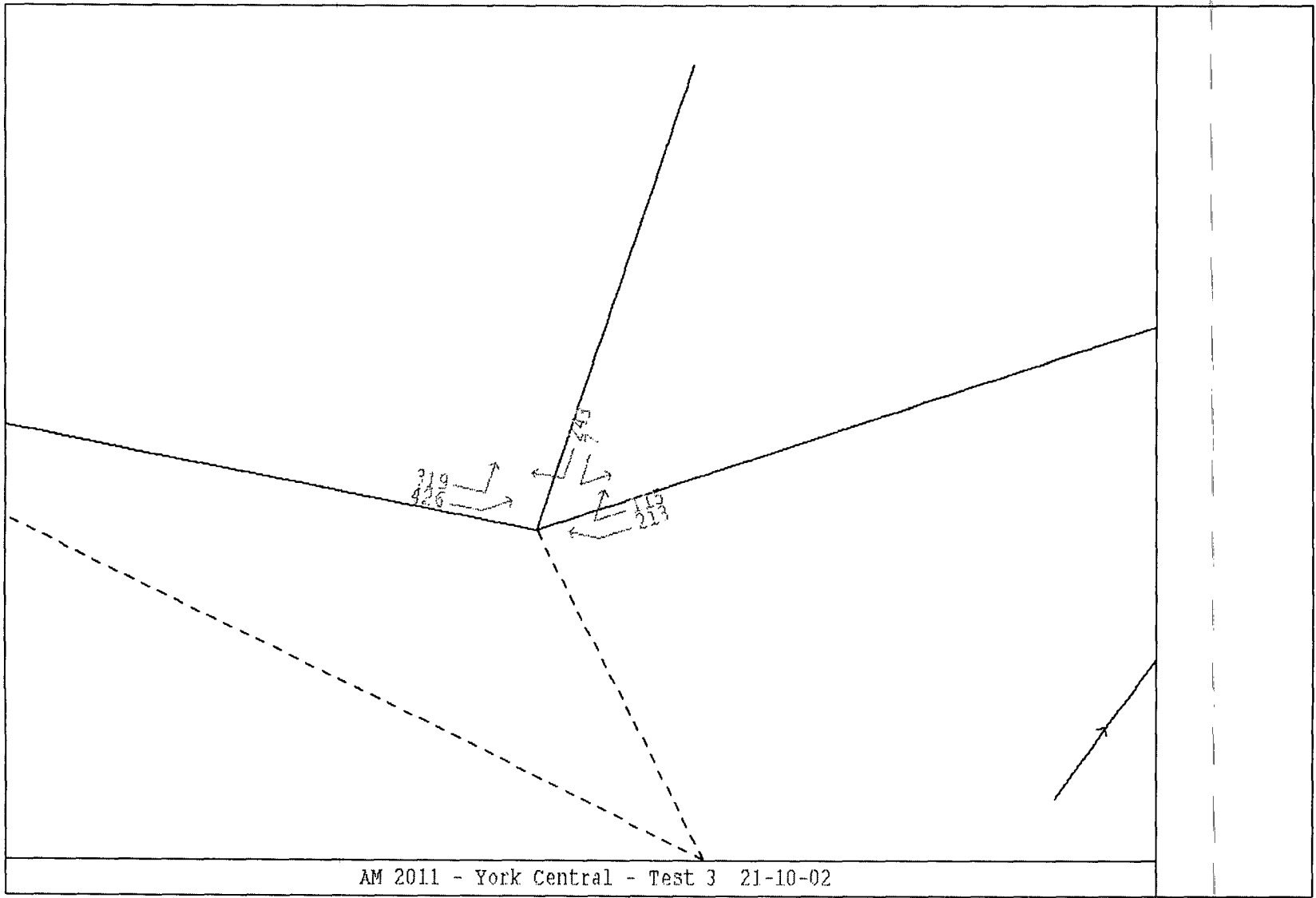


Scenario 8, actual flow, junction 5



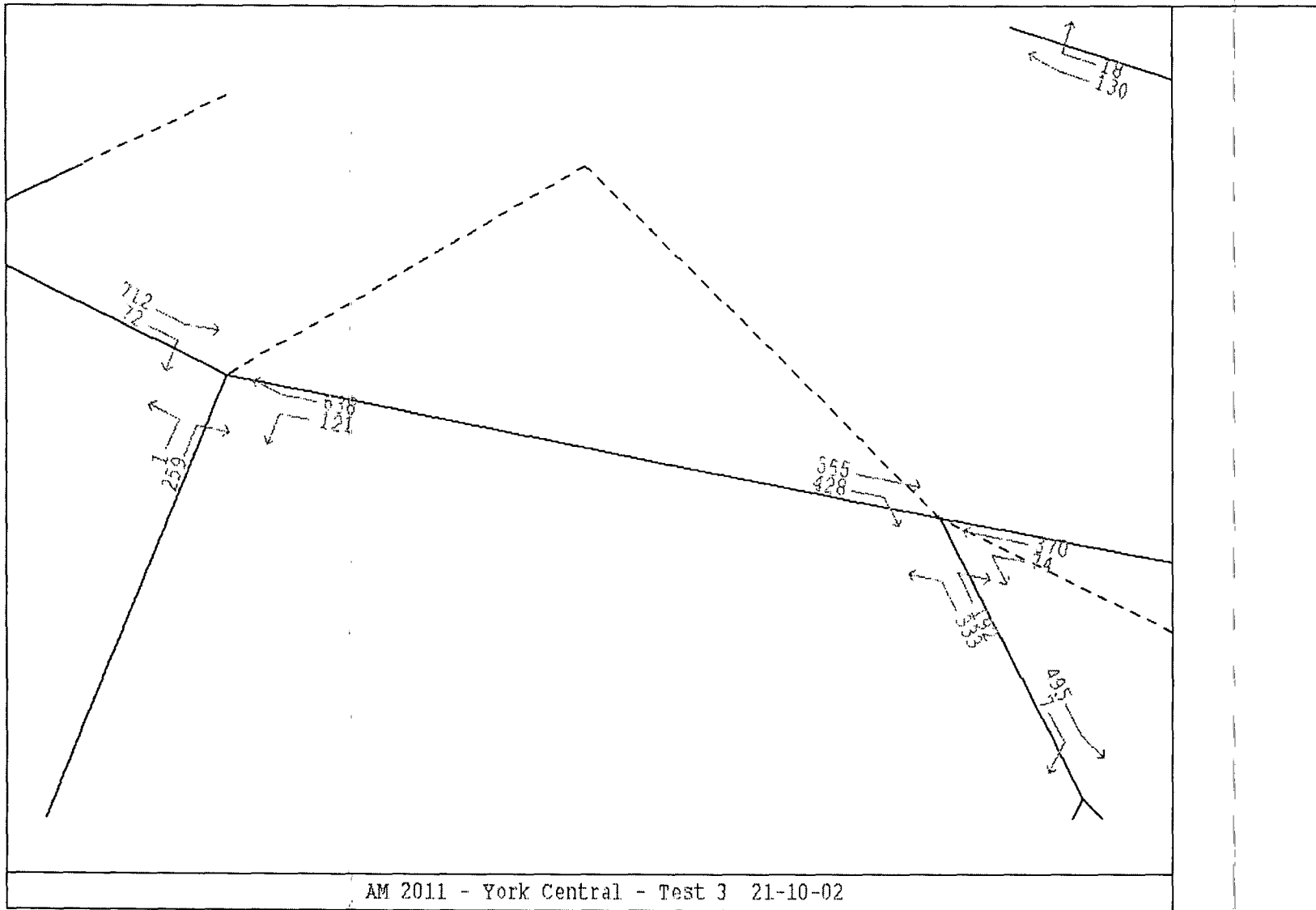


Scenario 8, actual flow, junction 7 & 8



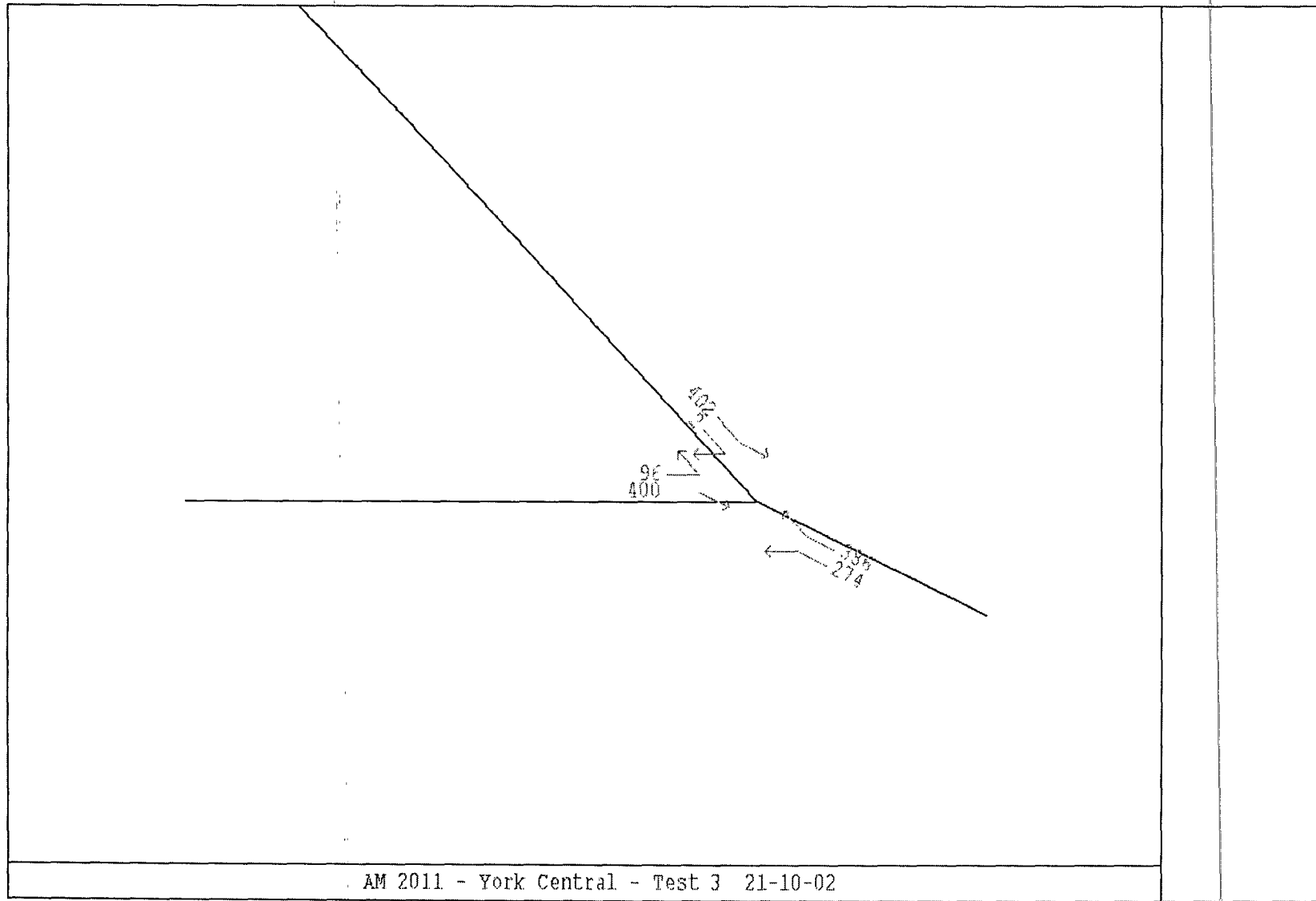
Scenario 8, actual flow, junction 9



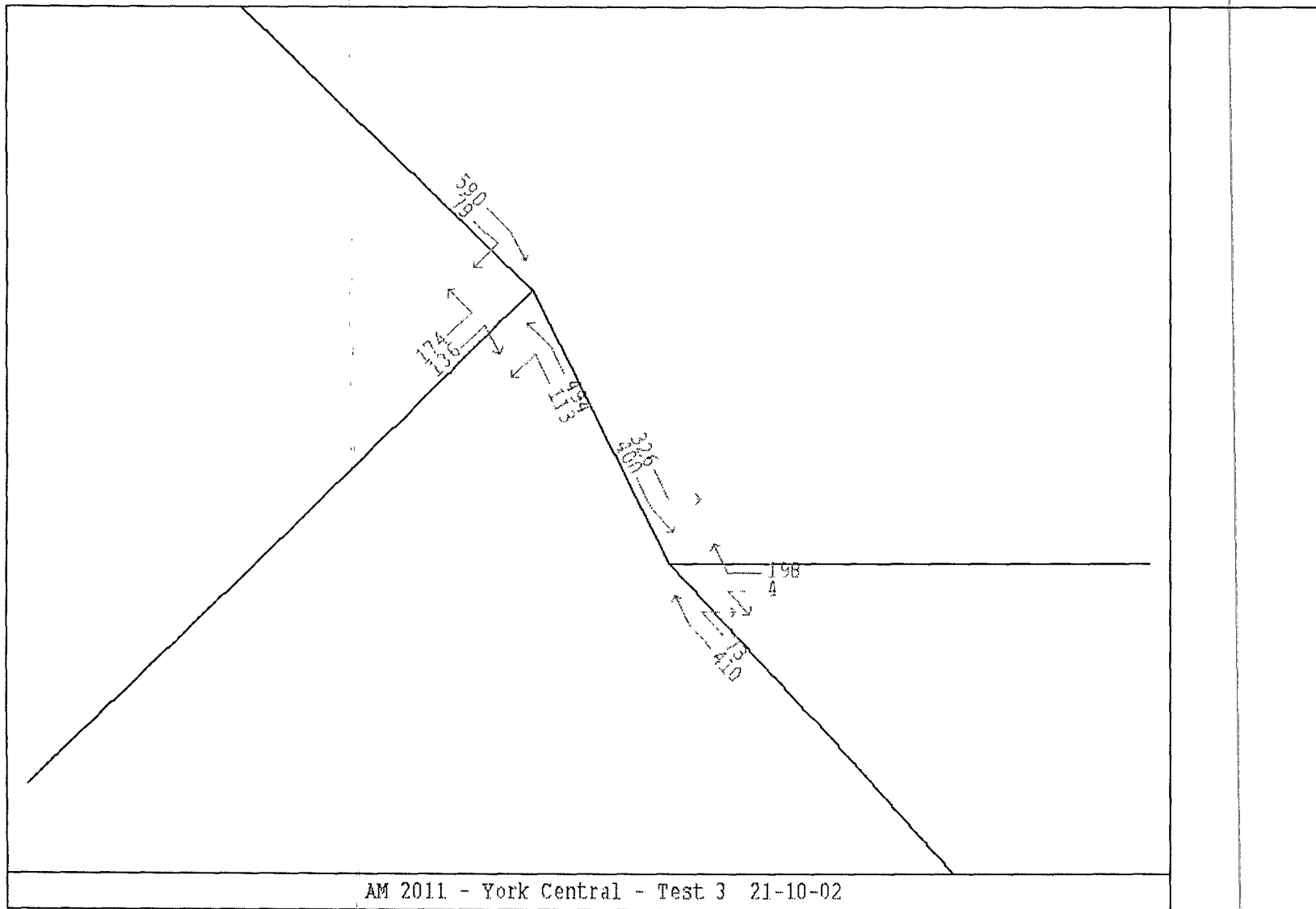


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Scenario 8, actual flow, junction 10 & 11



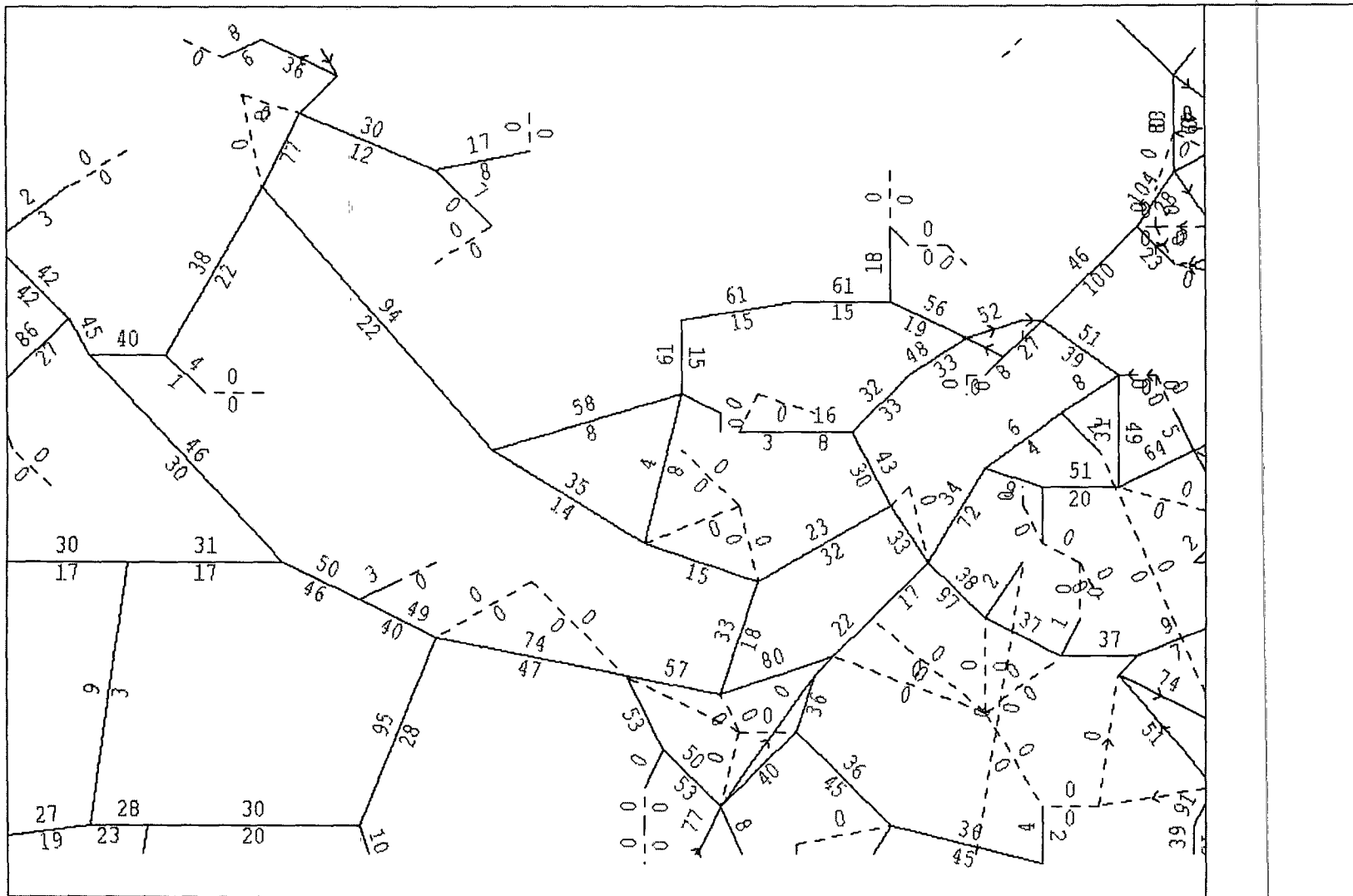
Scenario 8, actual flow, junction 12



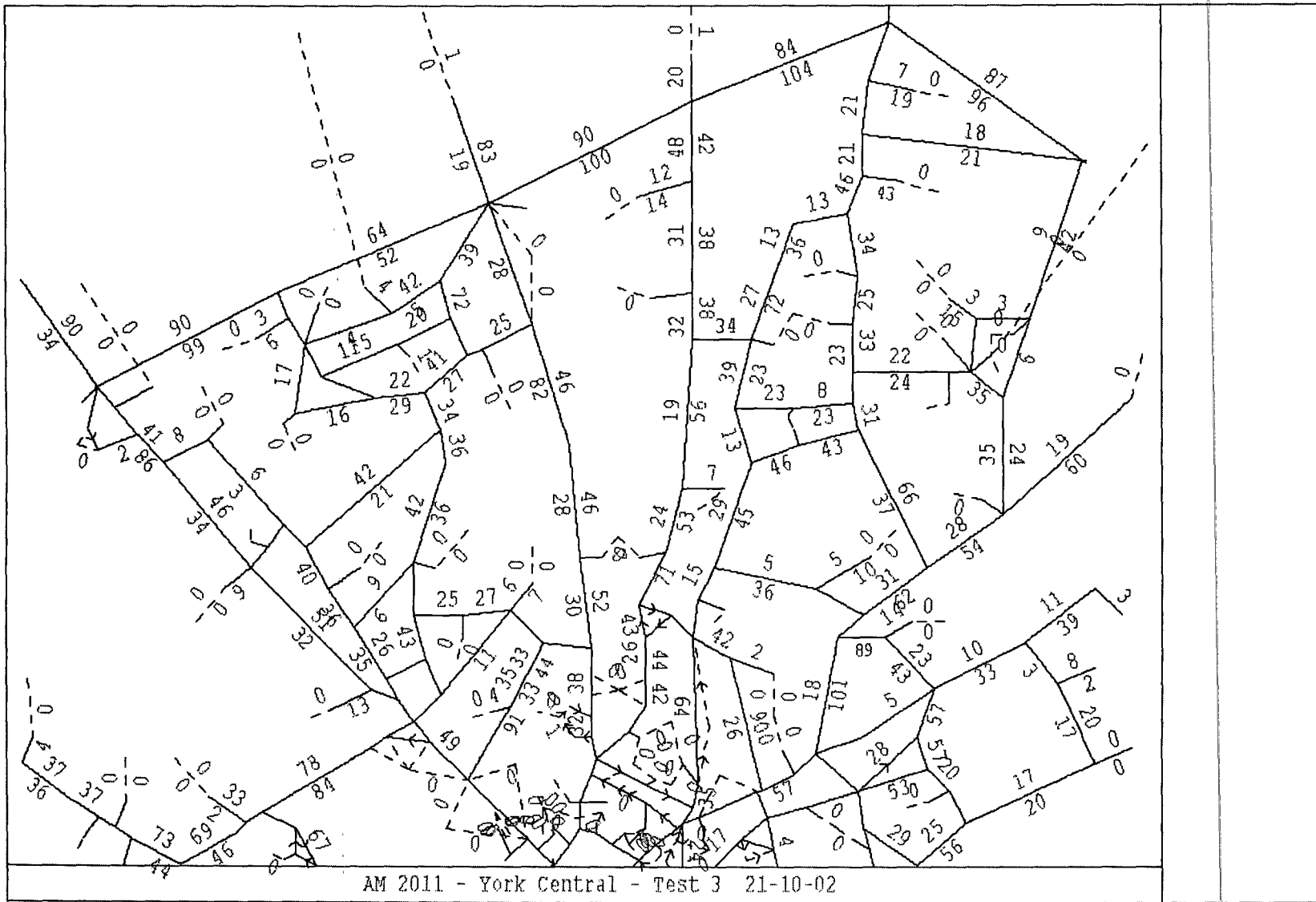
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Scenario 8, actual flow, junction 13 & 14

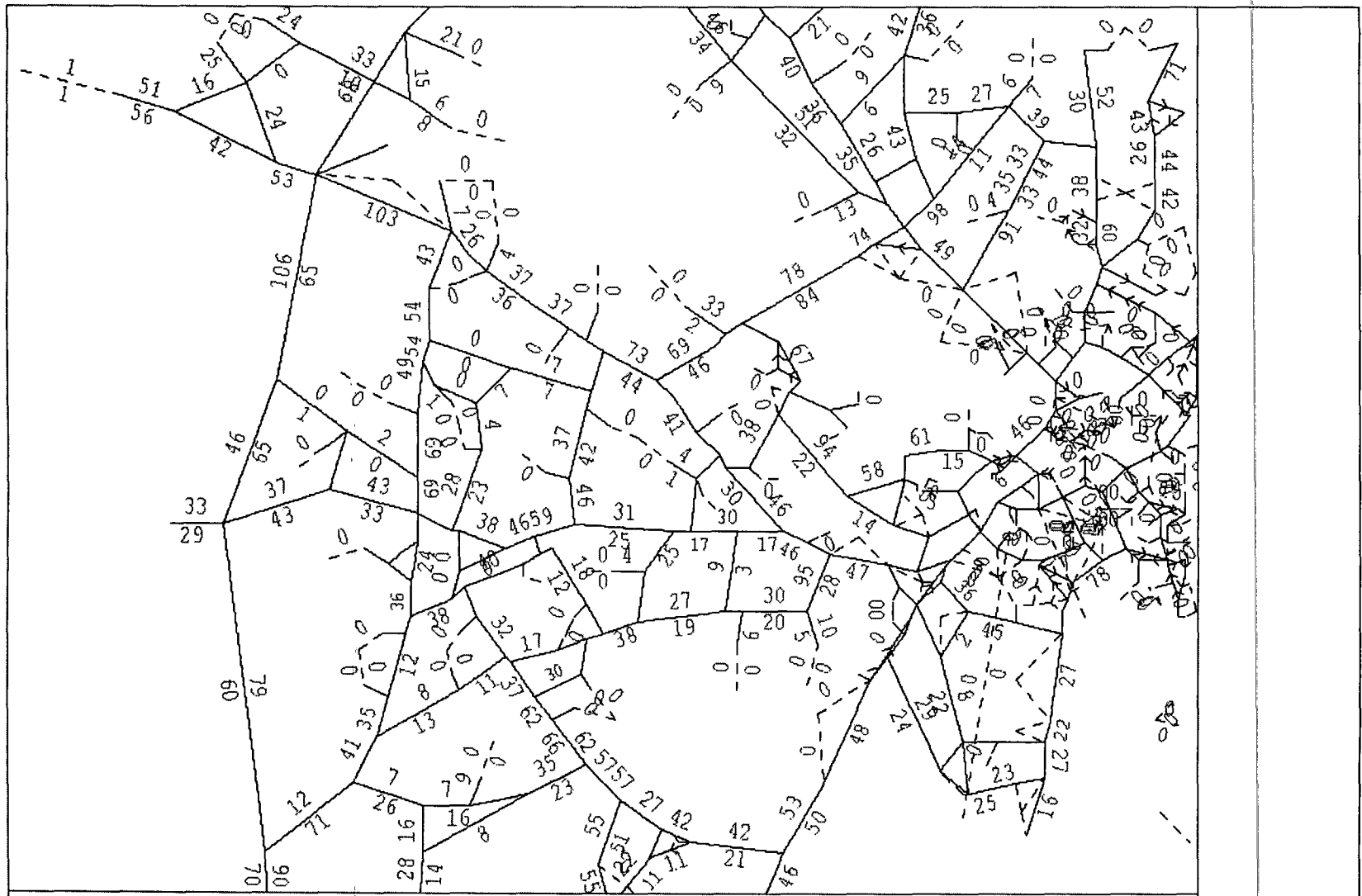




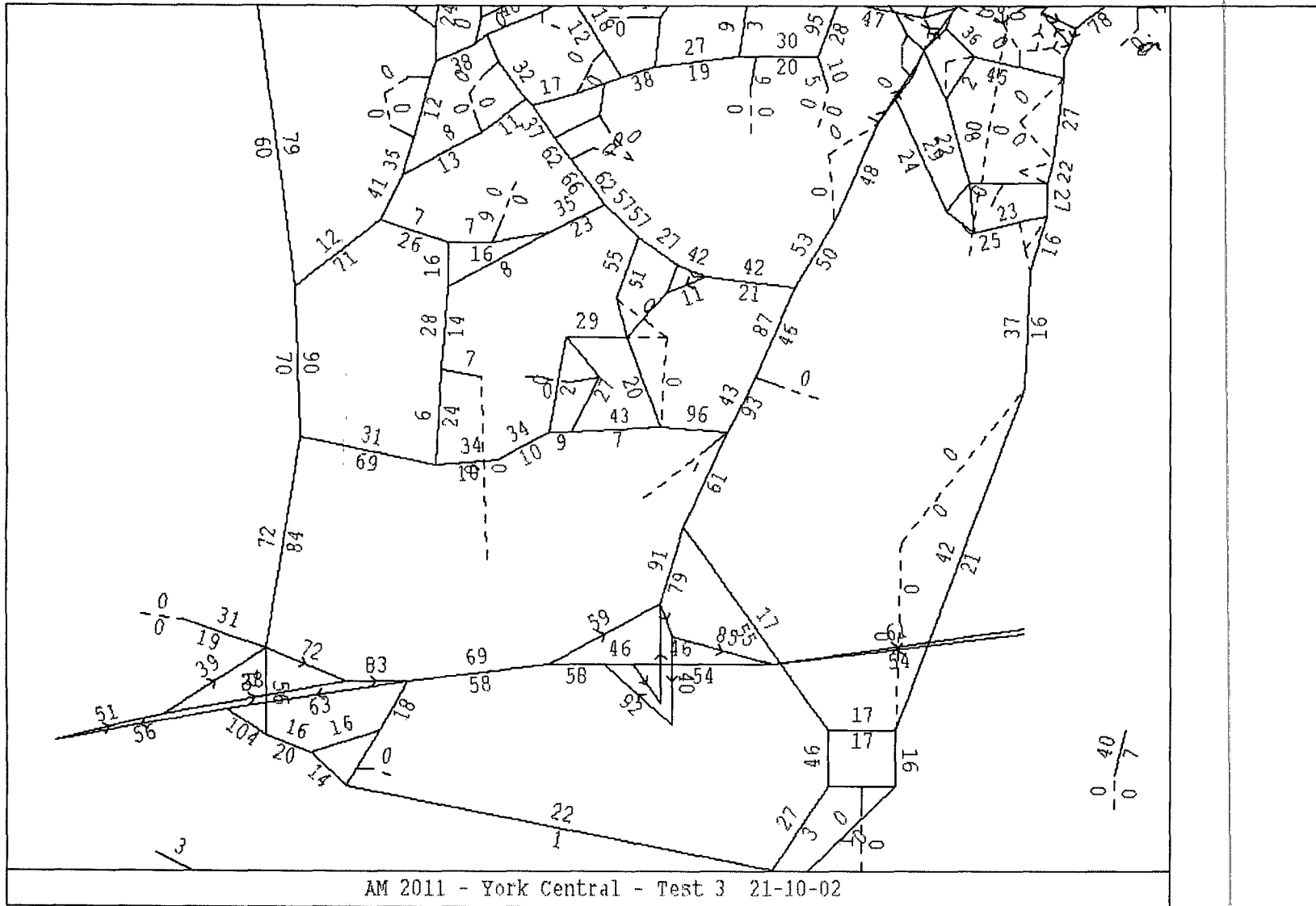
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V/C (per cent), Scenario 8, 3 of 6

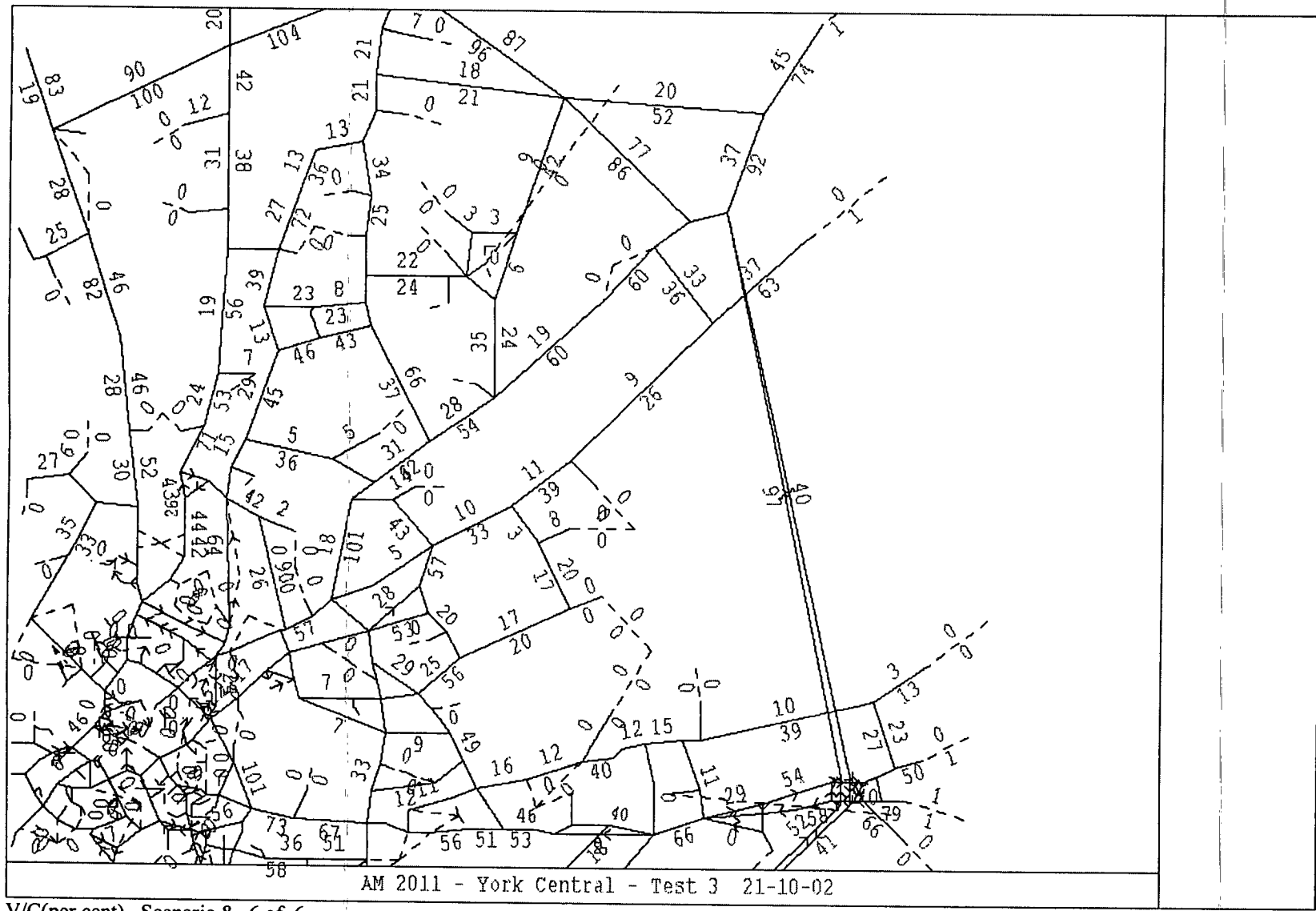


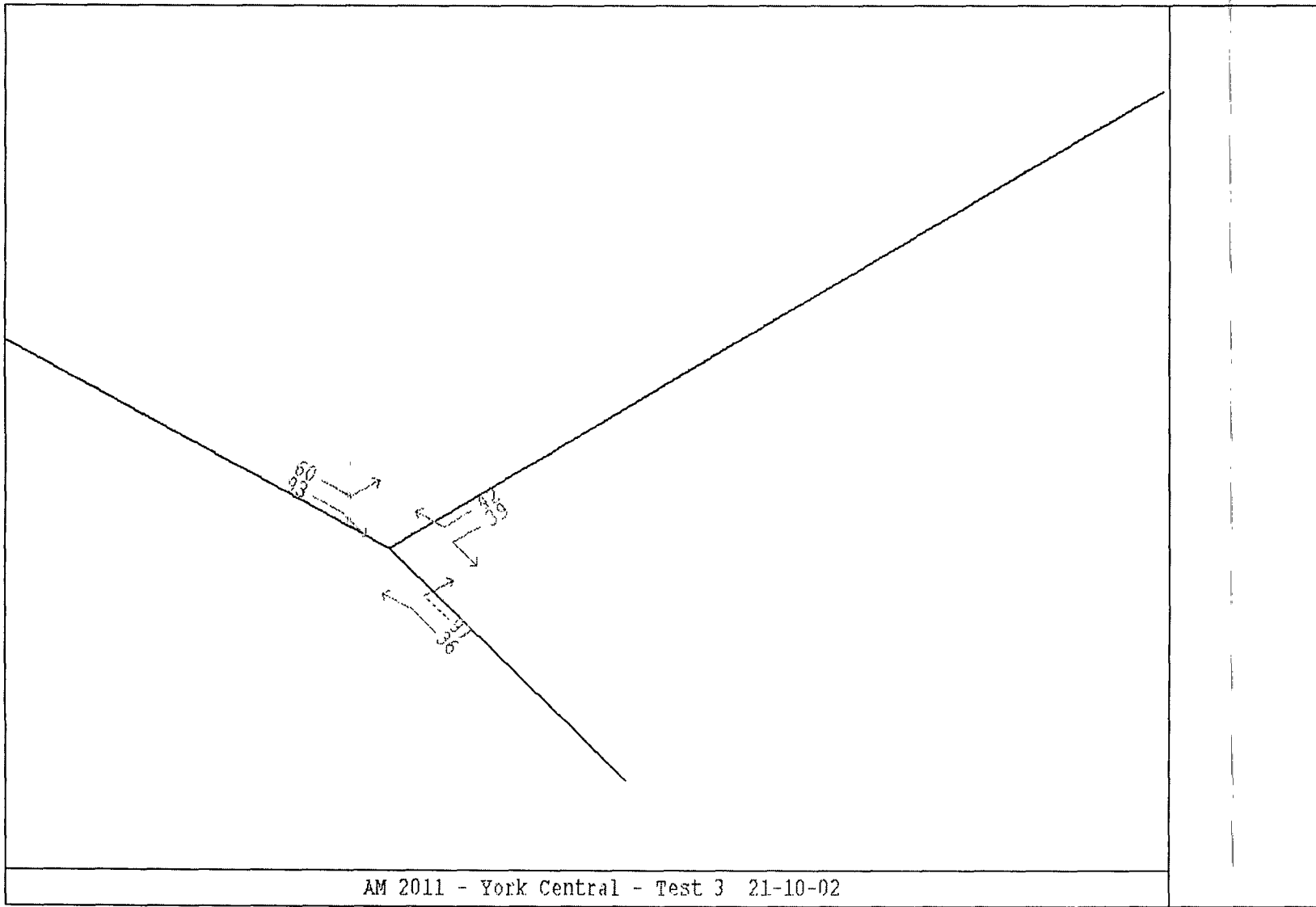
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V/C (per cent), Scenario 8, 5 of 6



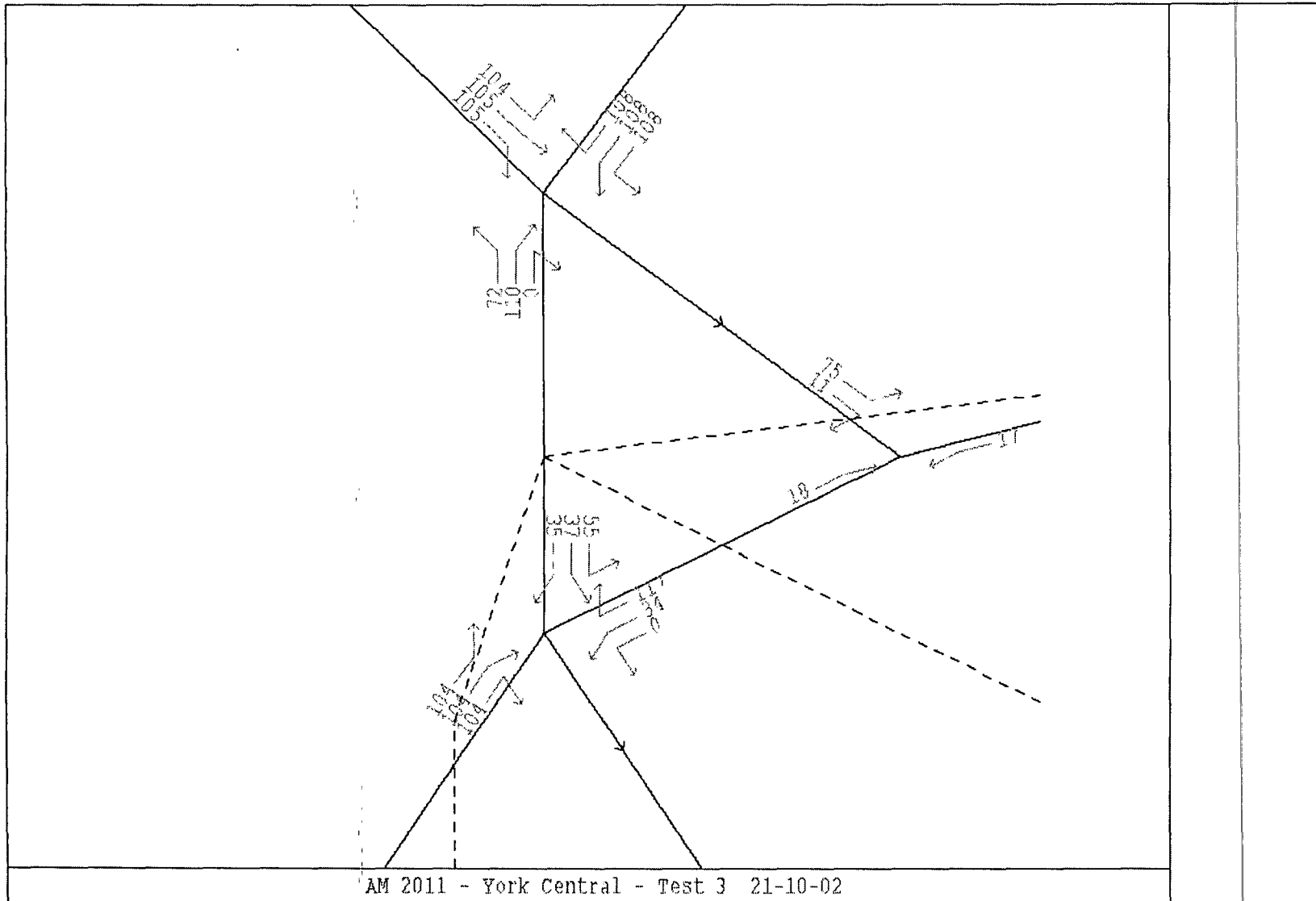




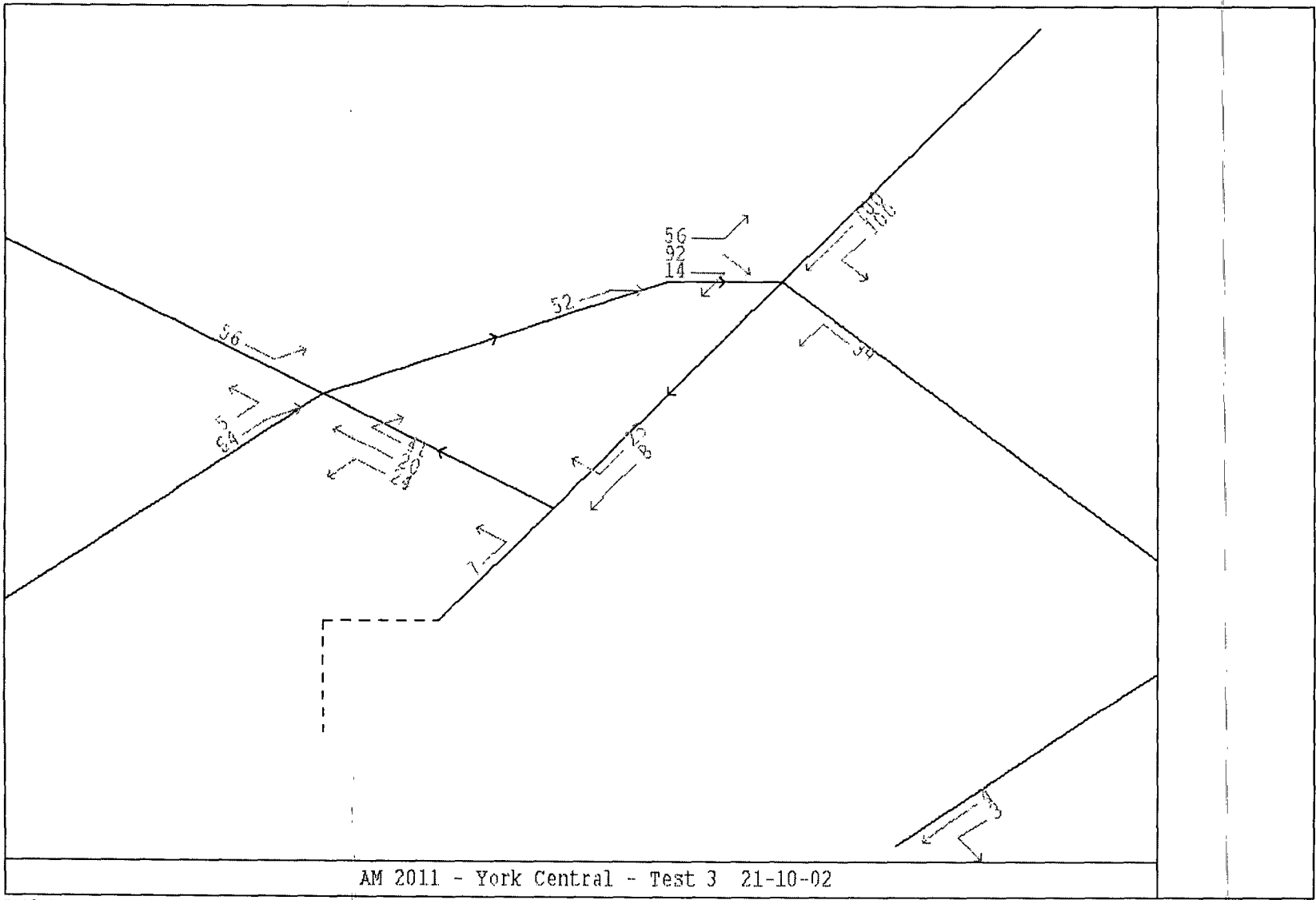
V/C (per cent), Scenario 8, junction 1



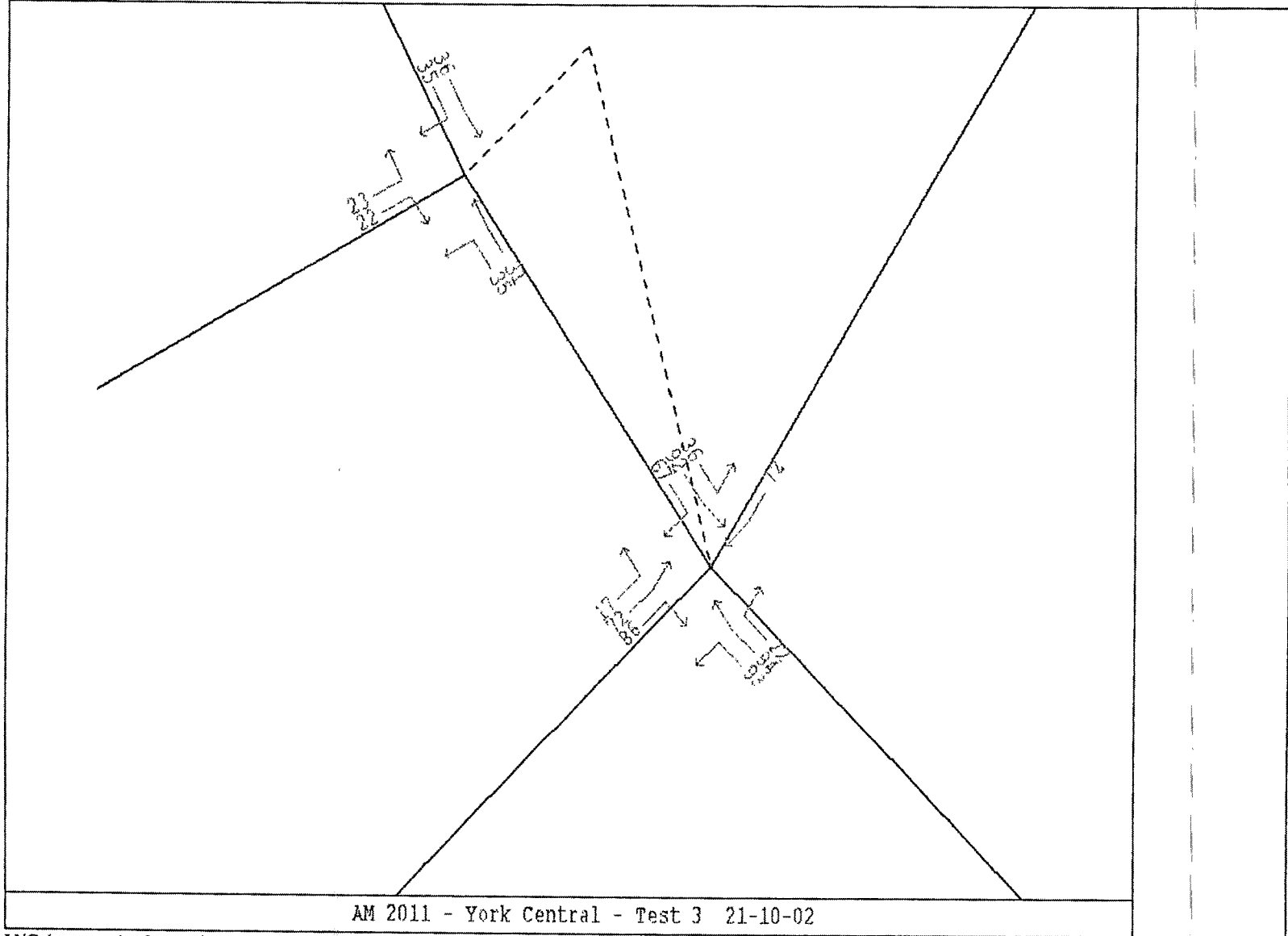




V/C (per cent), Scenario 8, junction 5

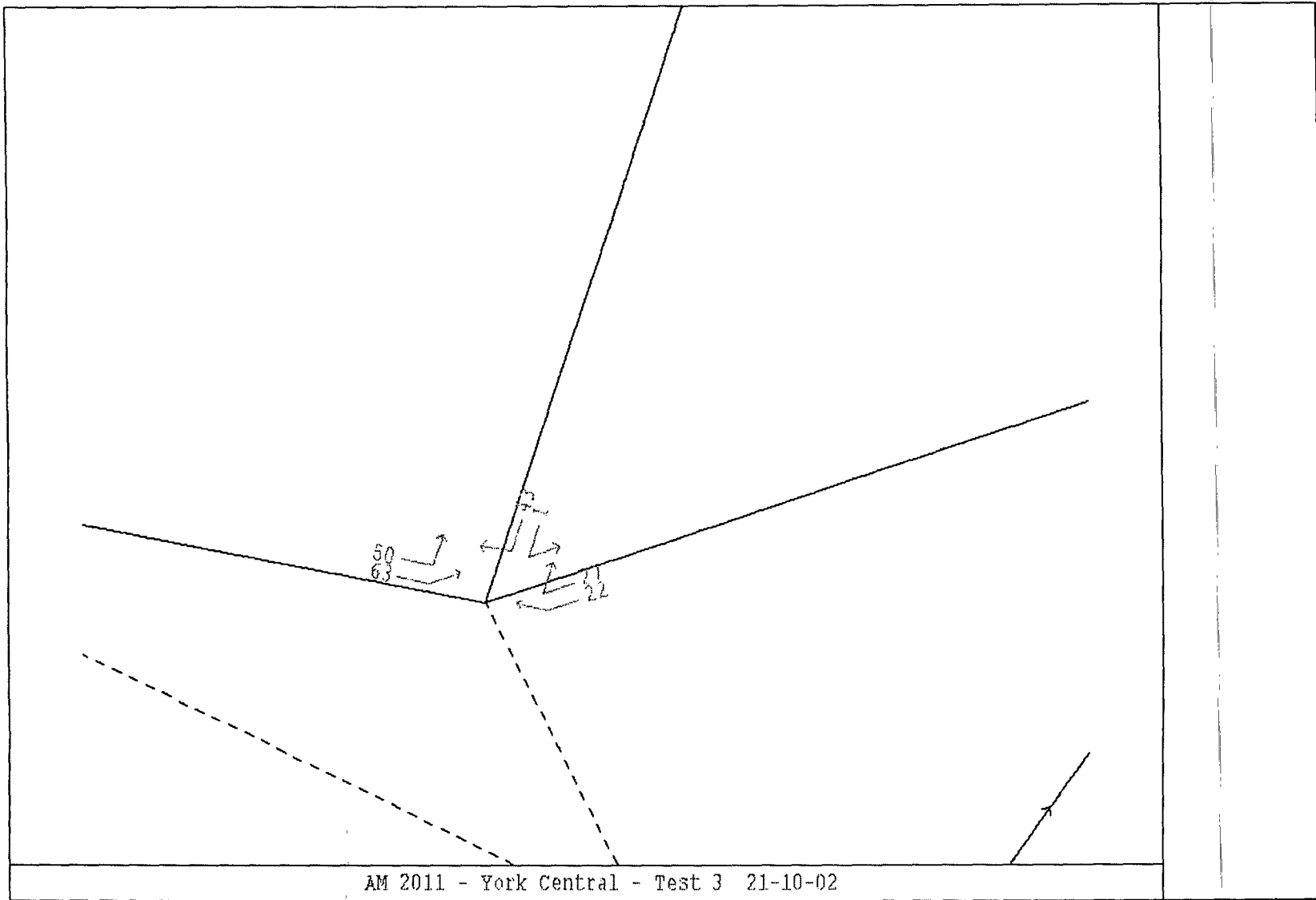


V/C (per cent), Scenario 8, junction 6



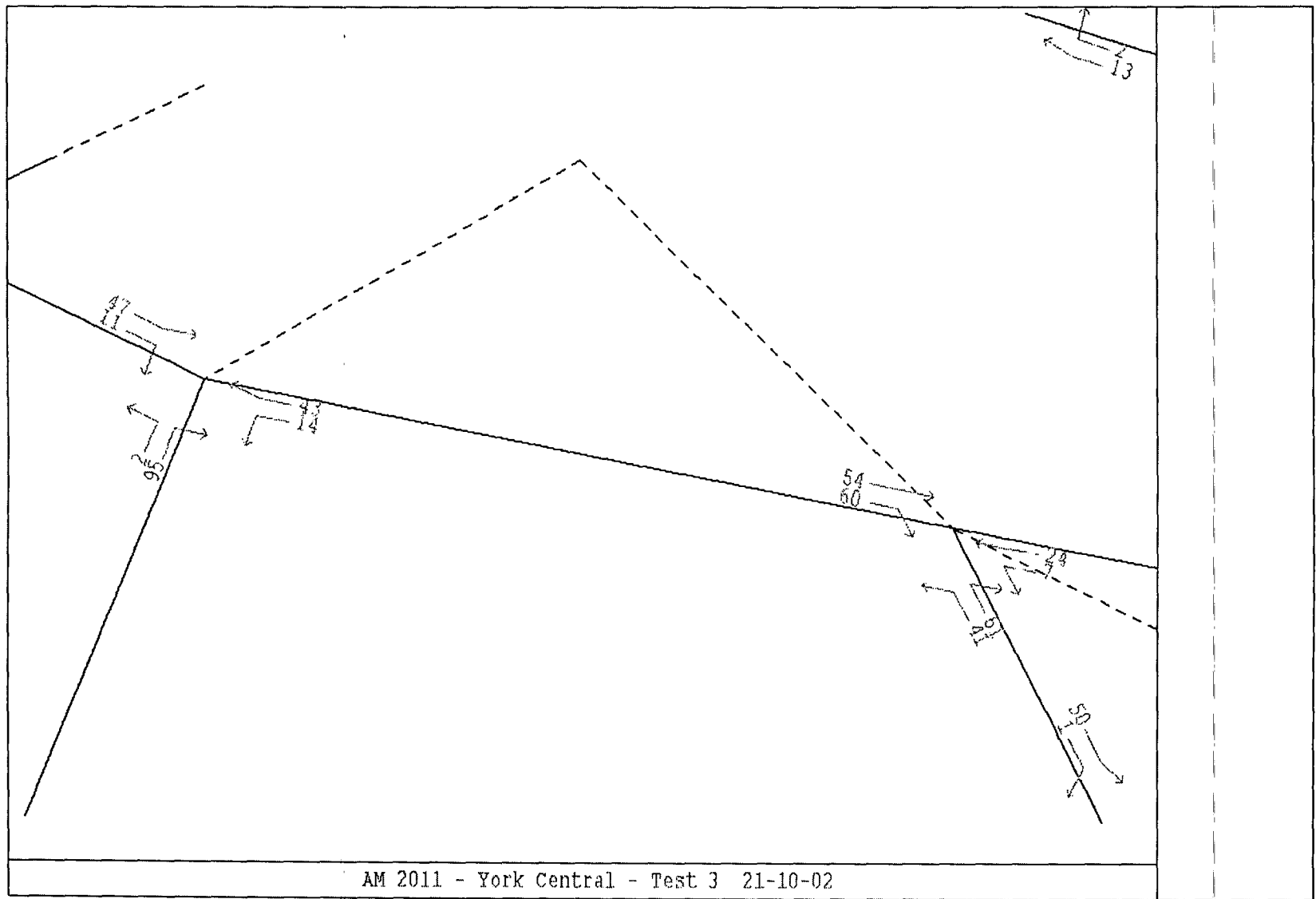
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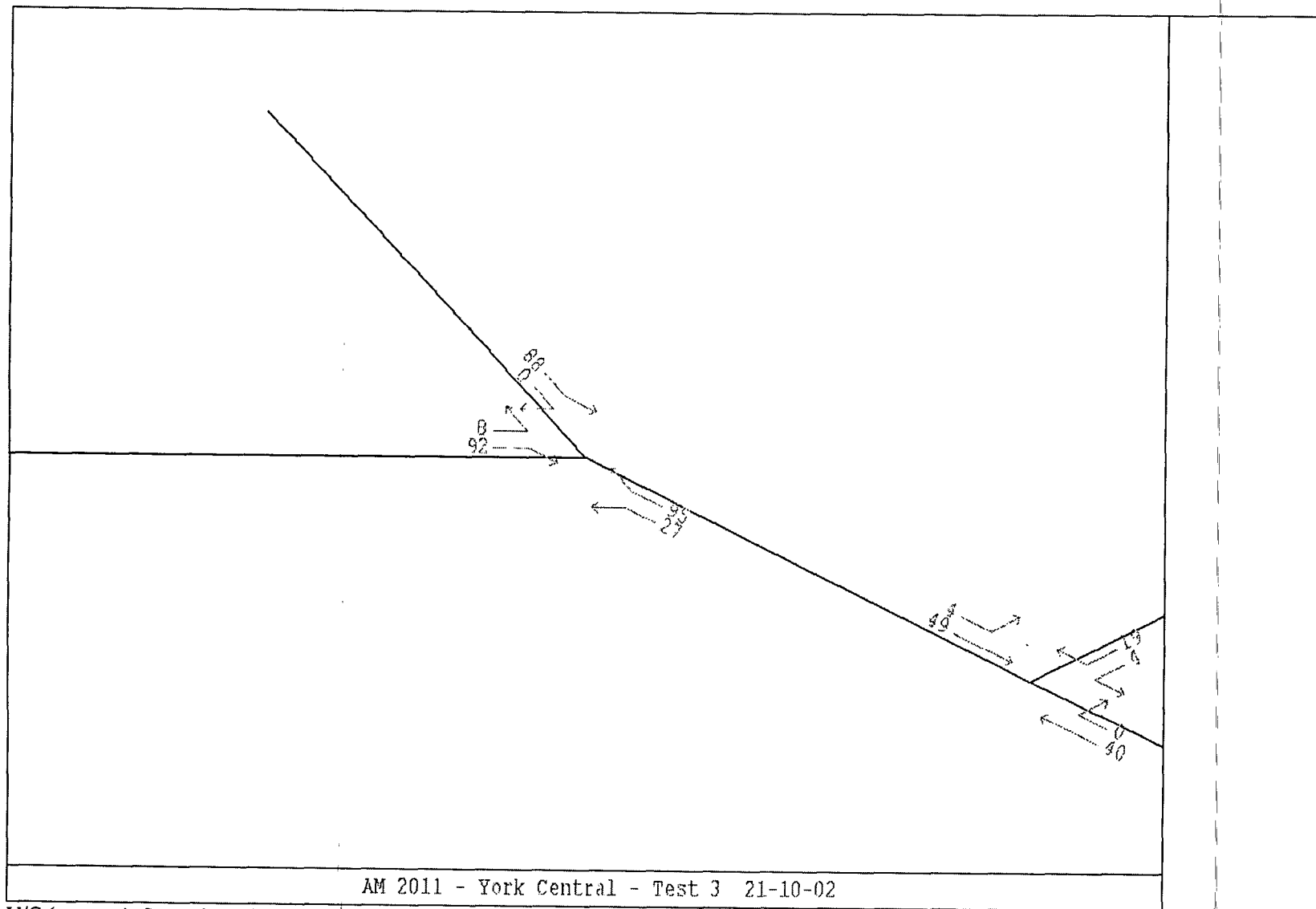
V/C (per cent), Scenario 8, junction 7 & 8



V/C (per cent), Scenario 8, junction 9

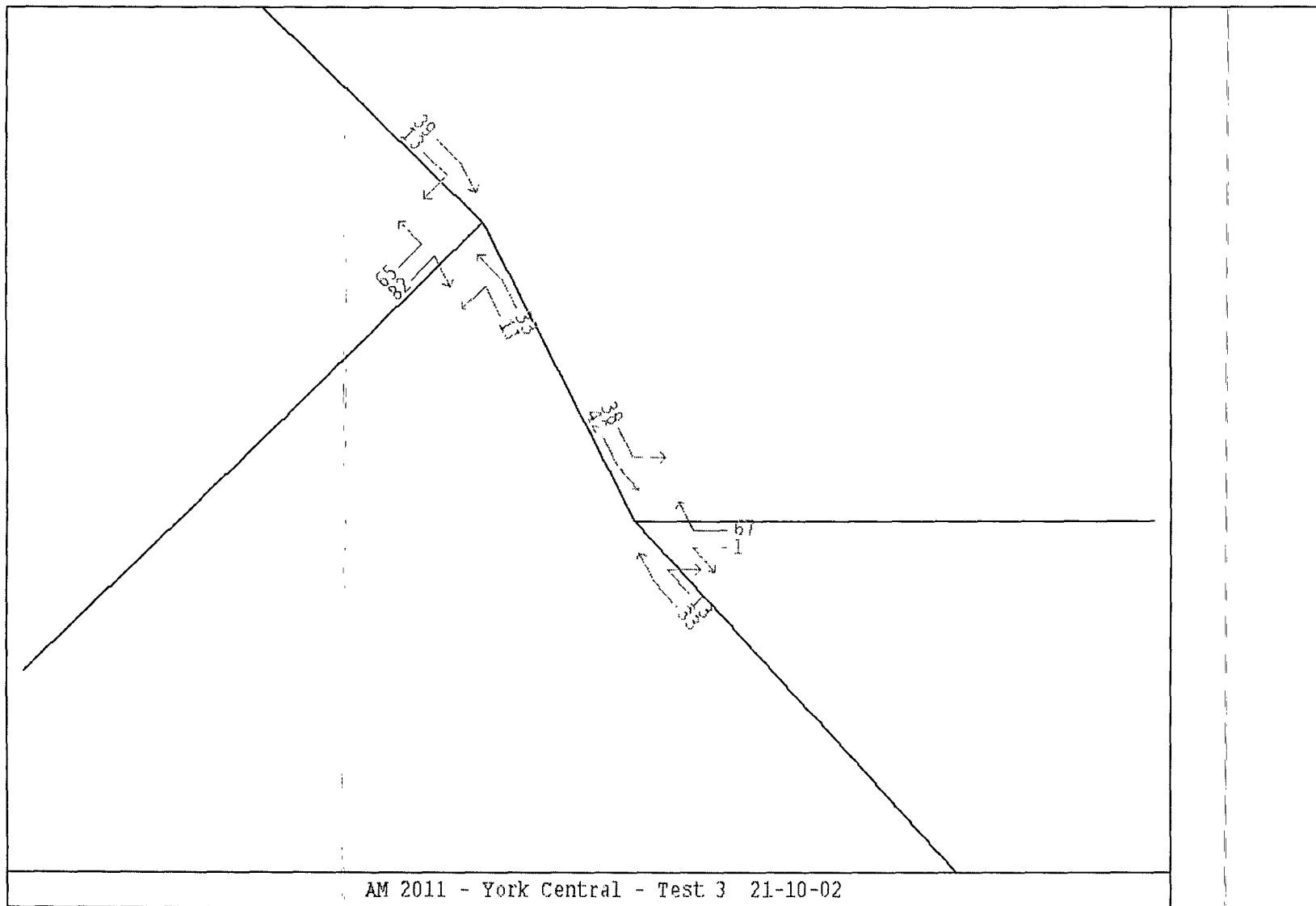






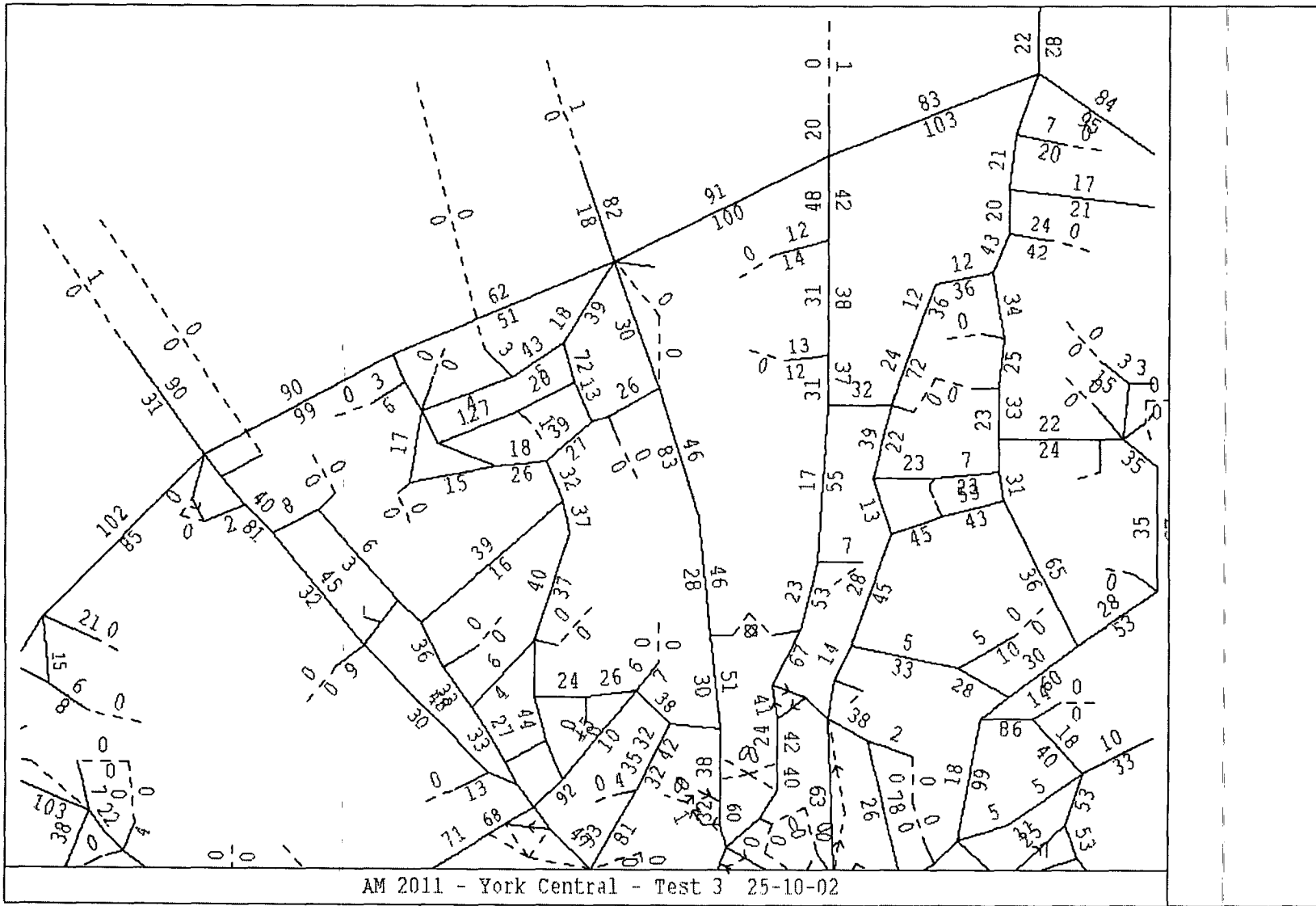
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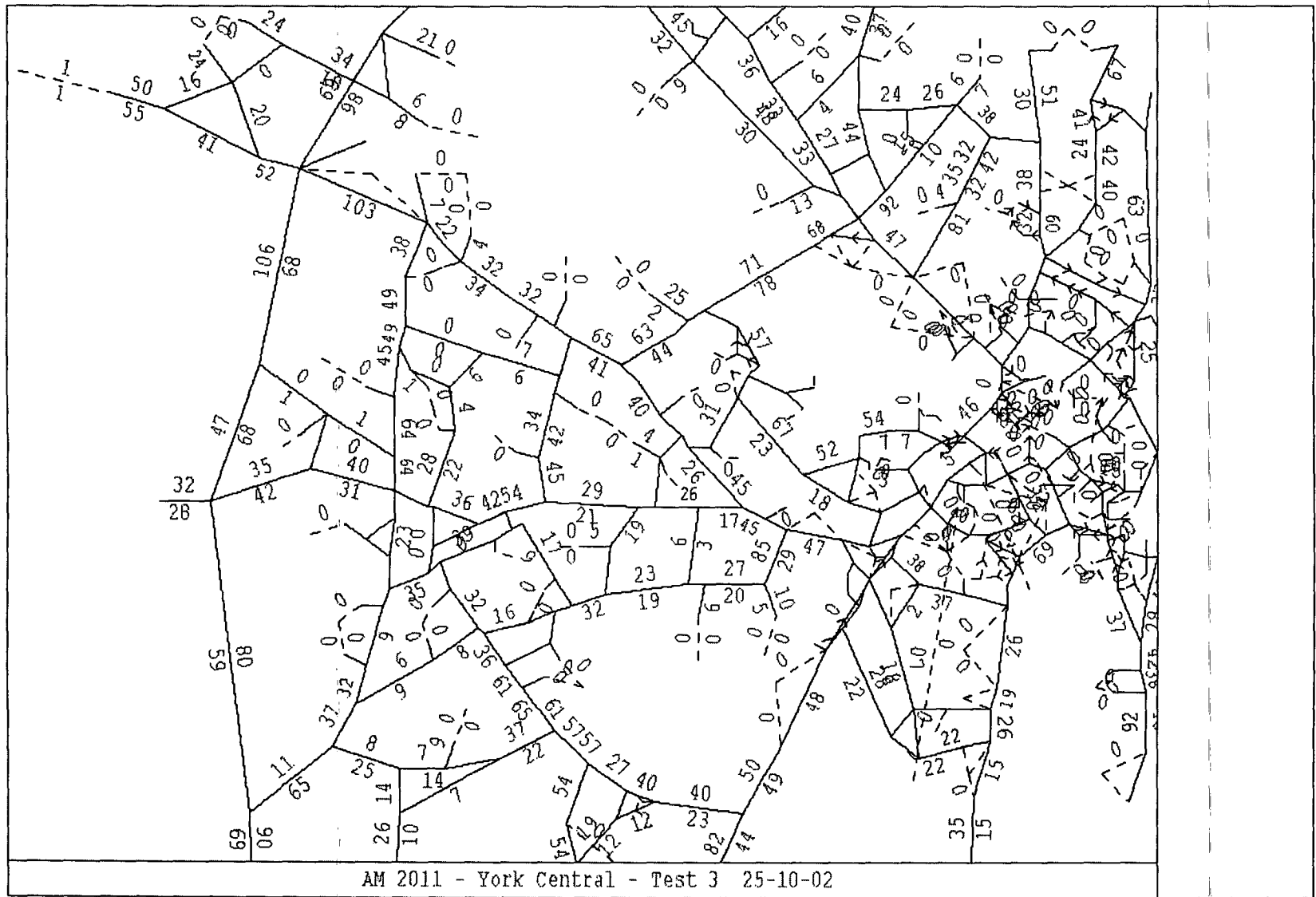
V/C (per cent), Scenario 8, junction 12



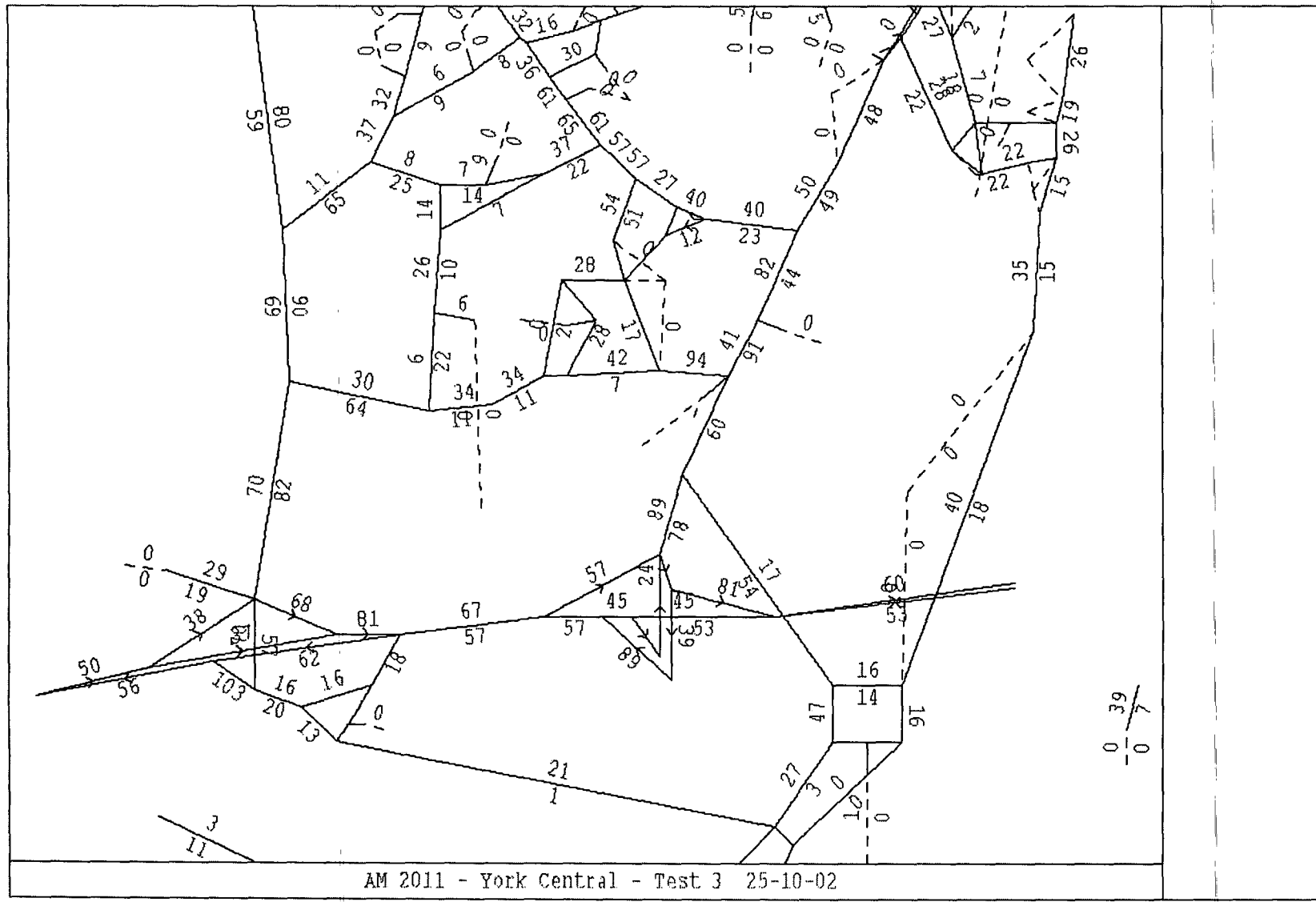
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V/C (per cent), Scenario 8, junction 13 & 14

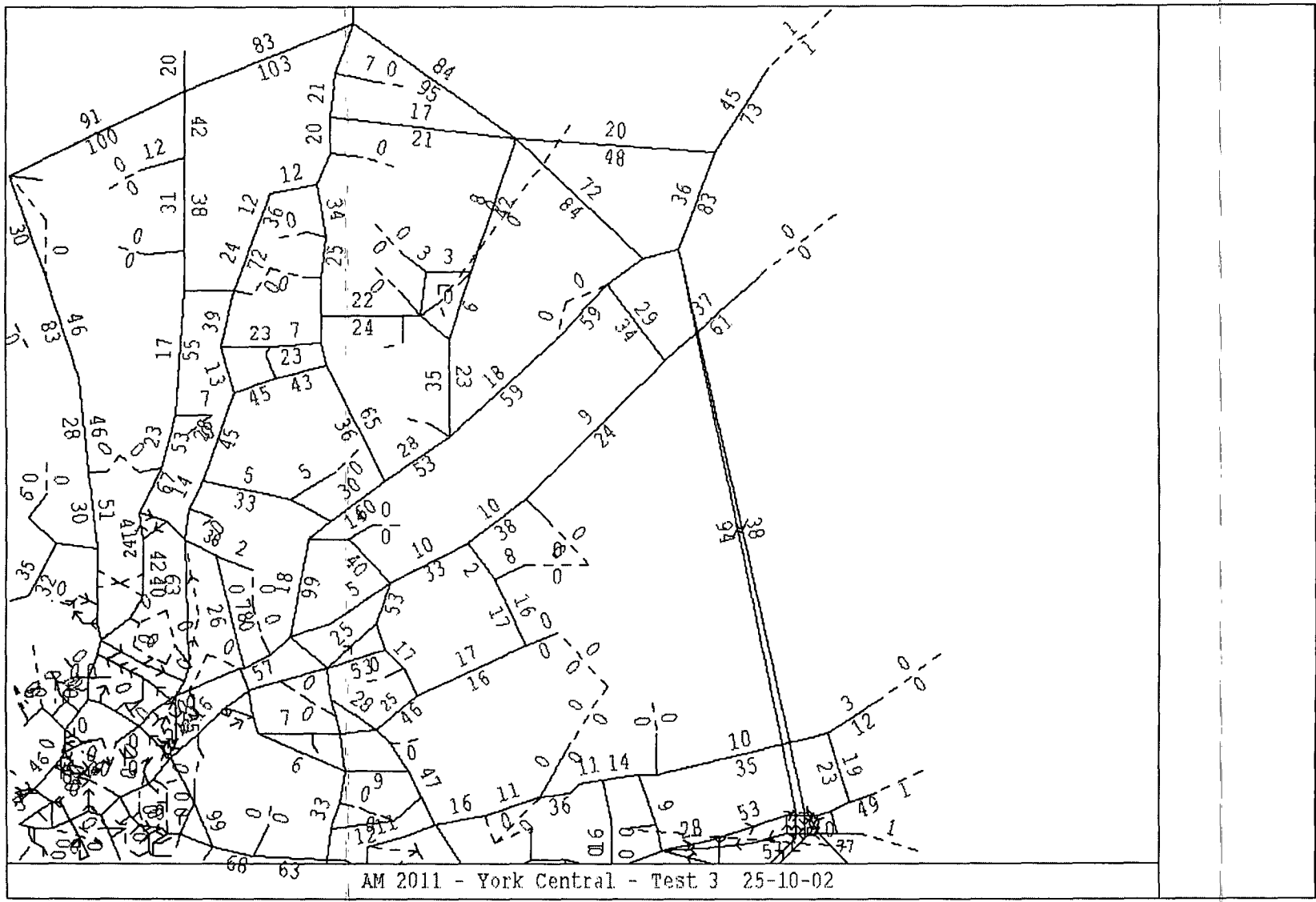




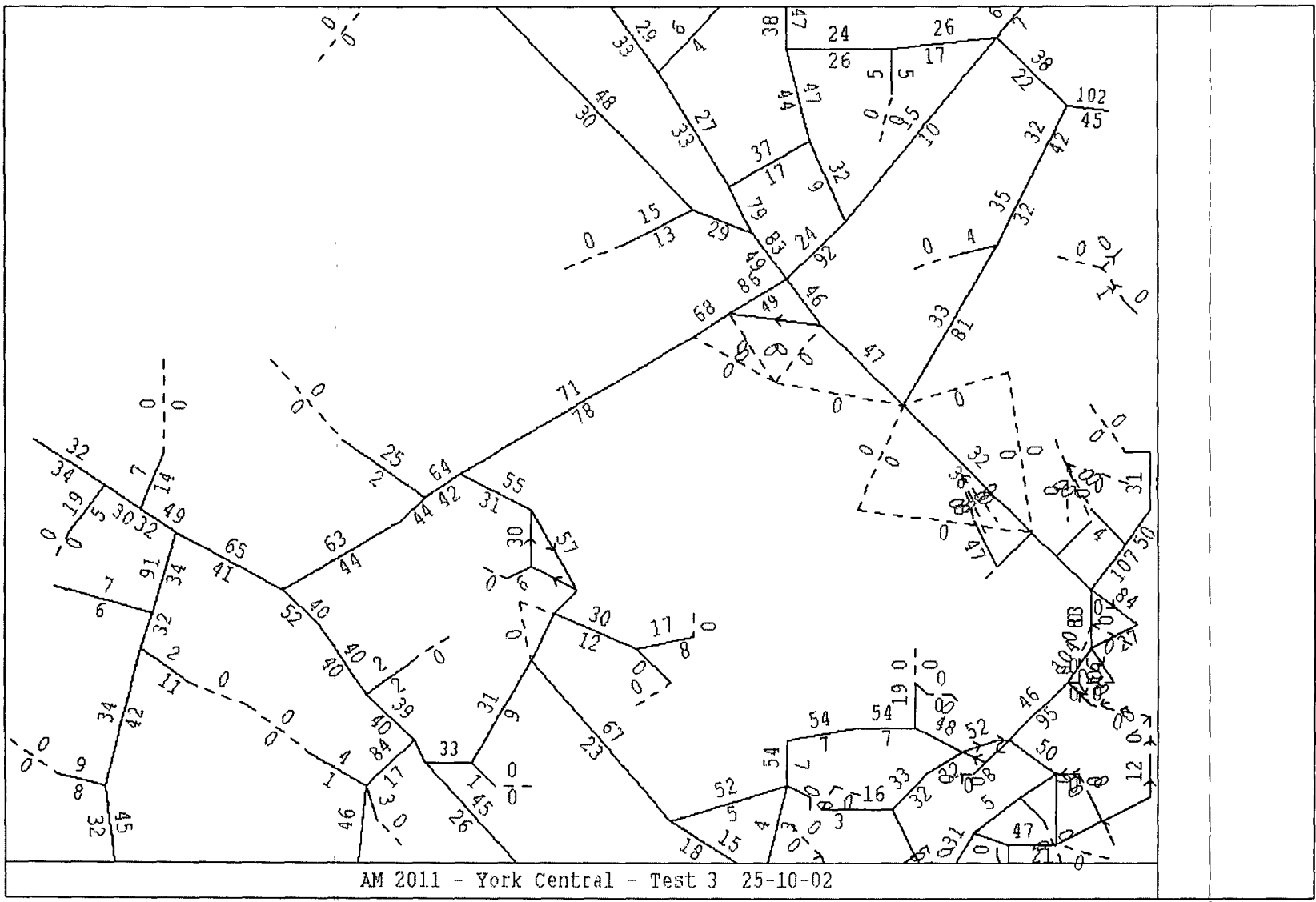
V/C (per cent), Scenario 8 (base flow), 2 of 6



V/C (per cent), Scenario 8 (base flow), 3 of 6

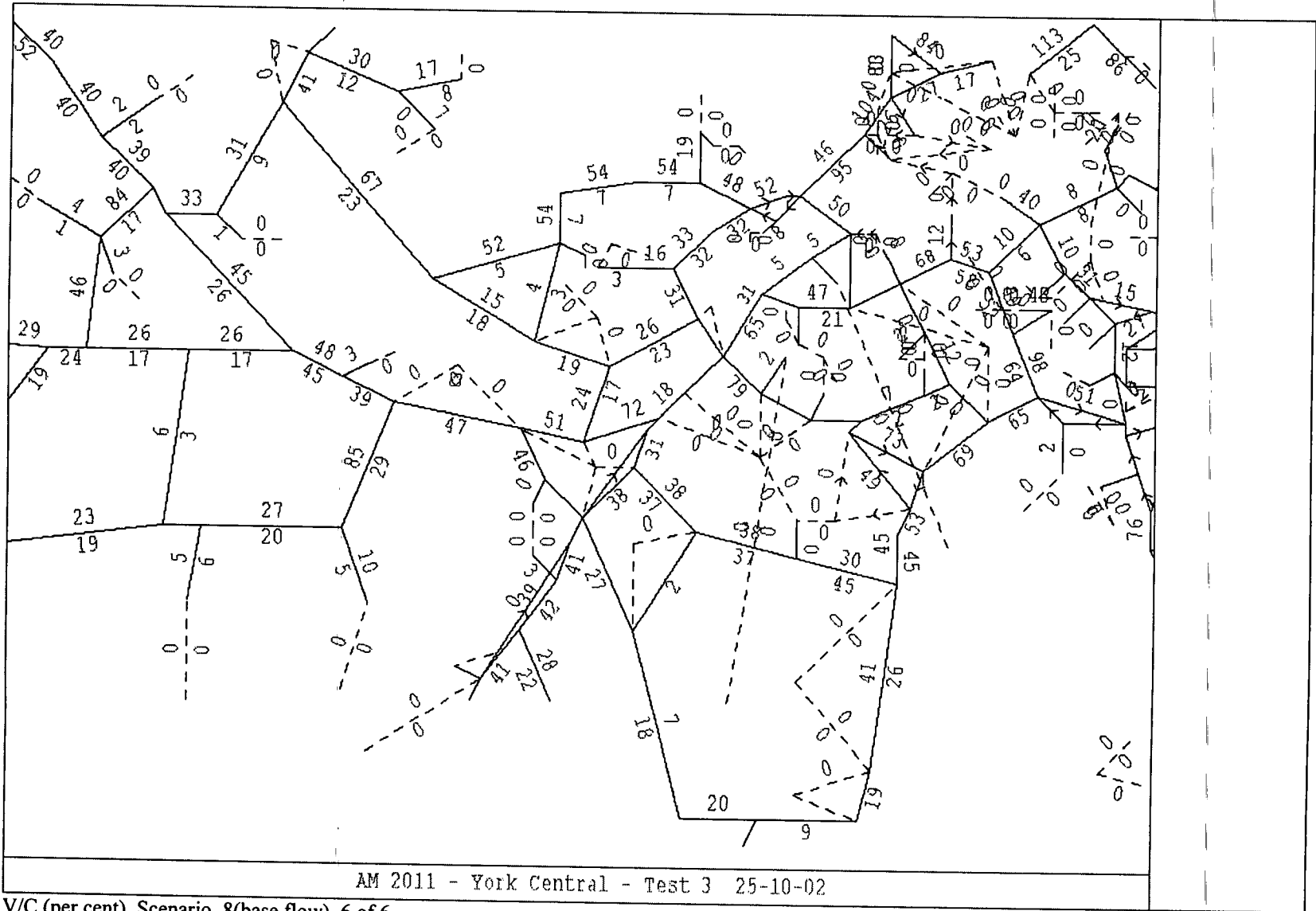


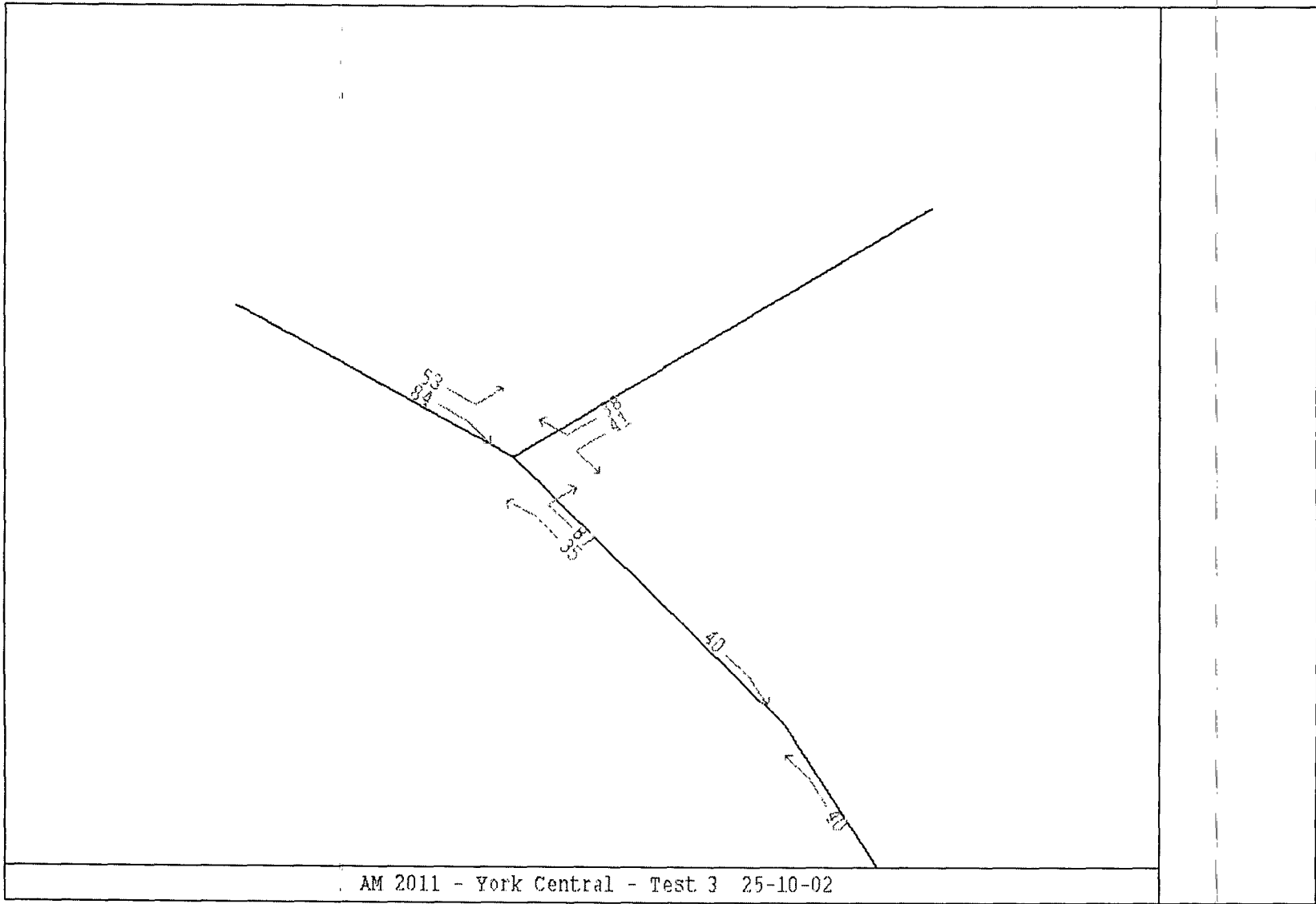
V/C (per cent), Scenario 8(base flow), 4 of 6



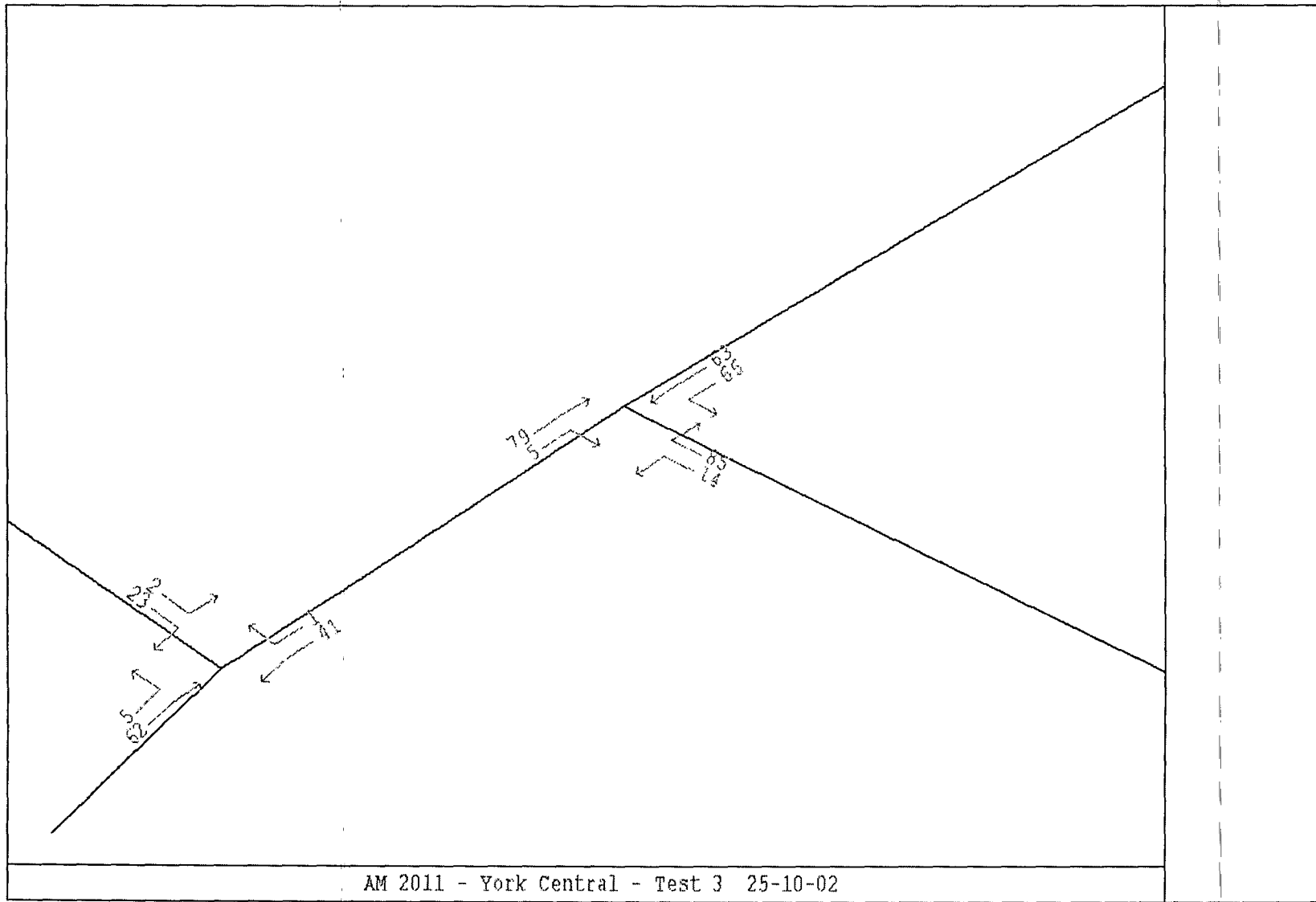
V/C (per cent), Scenario 8 (base flow), 5 of 6



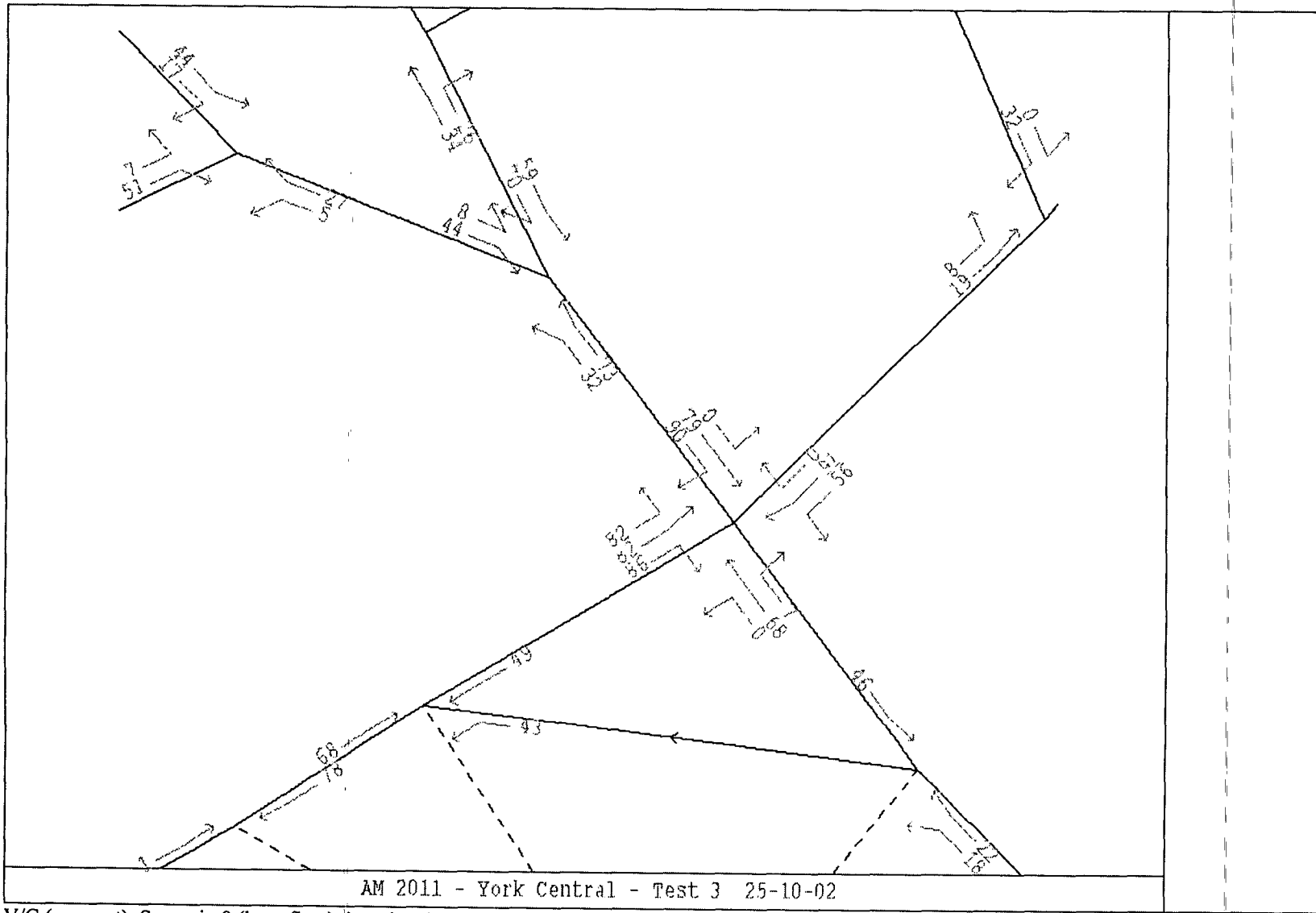


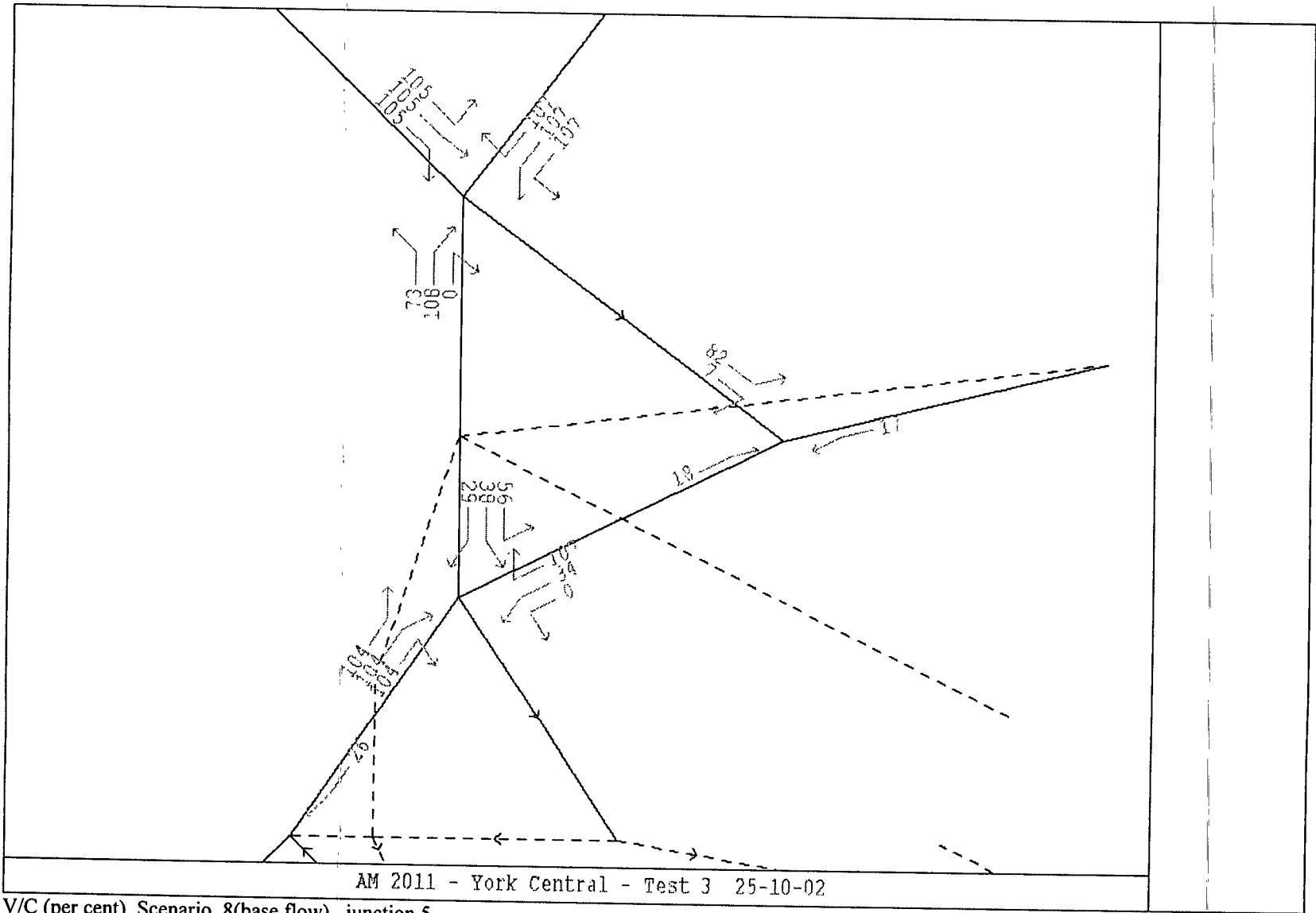


V/C (per cent), Scenario 8 (base flow), junction I

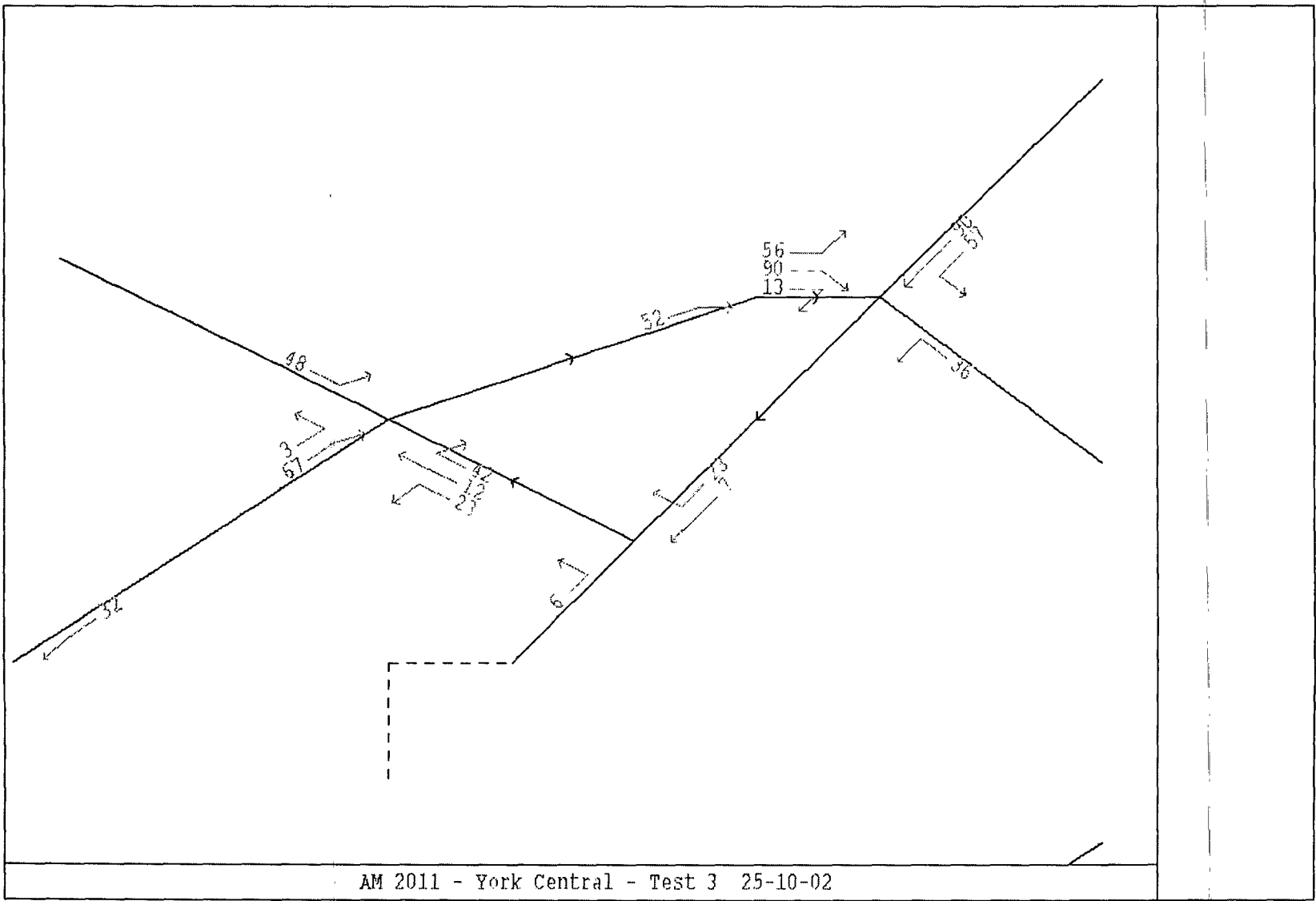


V/C (per cent), Scenario 8 (base flow), junction 3



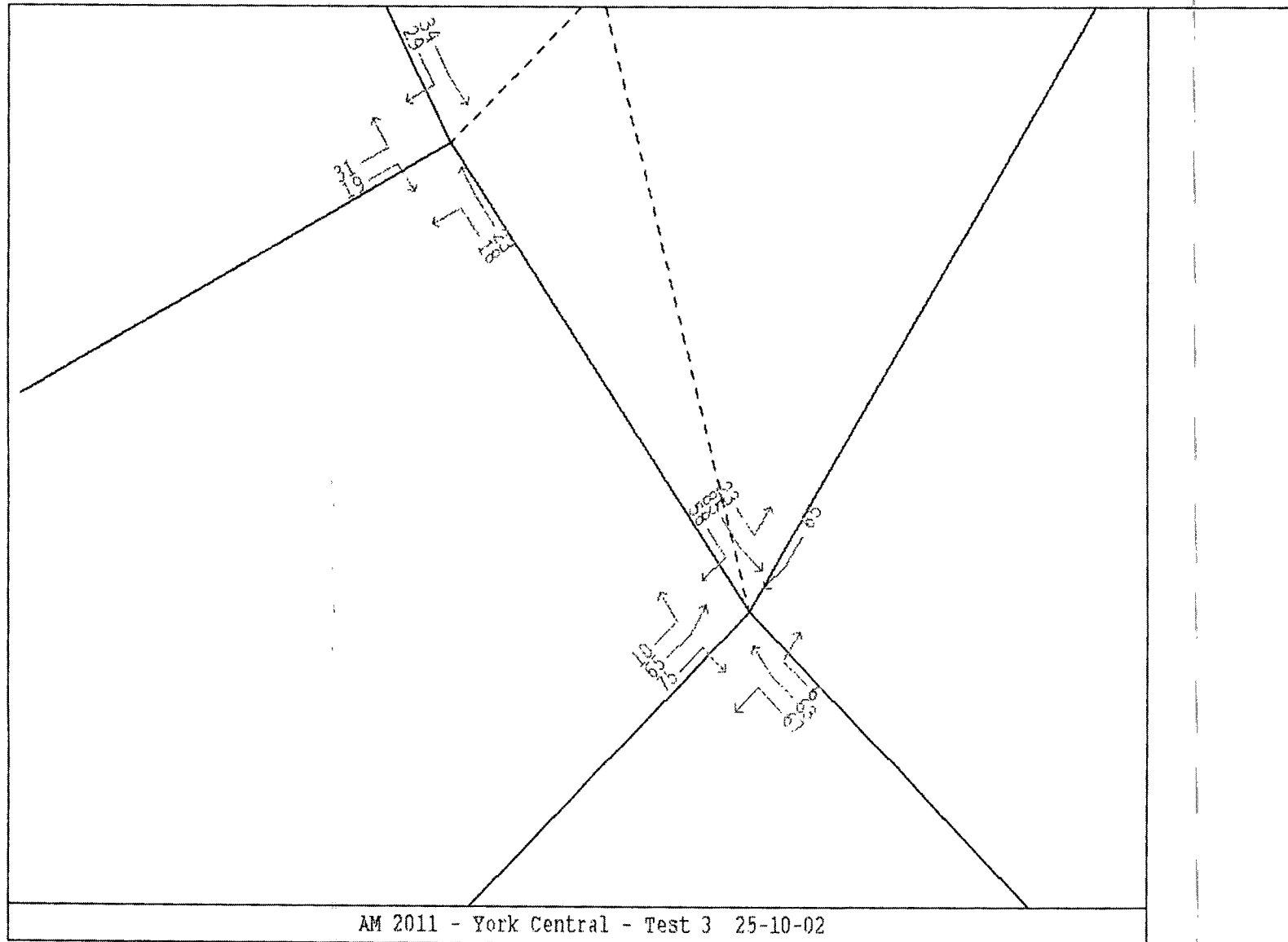


V/C (per cent), Scenario 8(base flow), junction 5



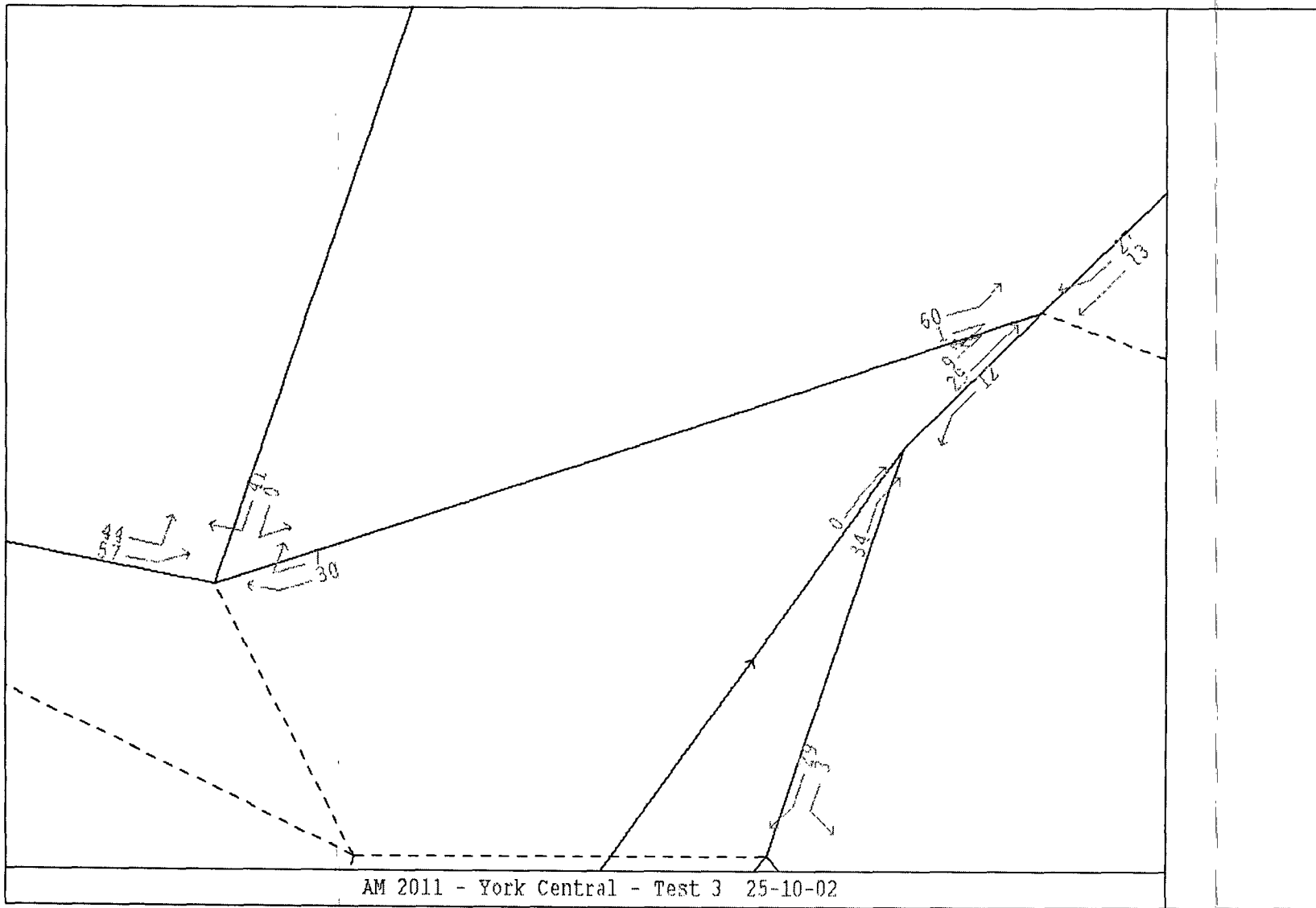
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V/C (per cent), Scenario 8 (base flow), junction 6



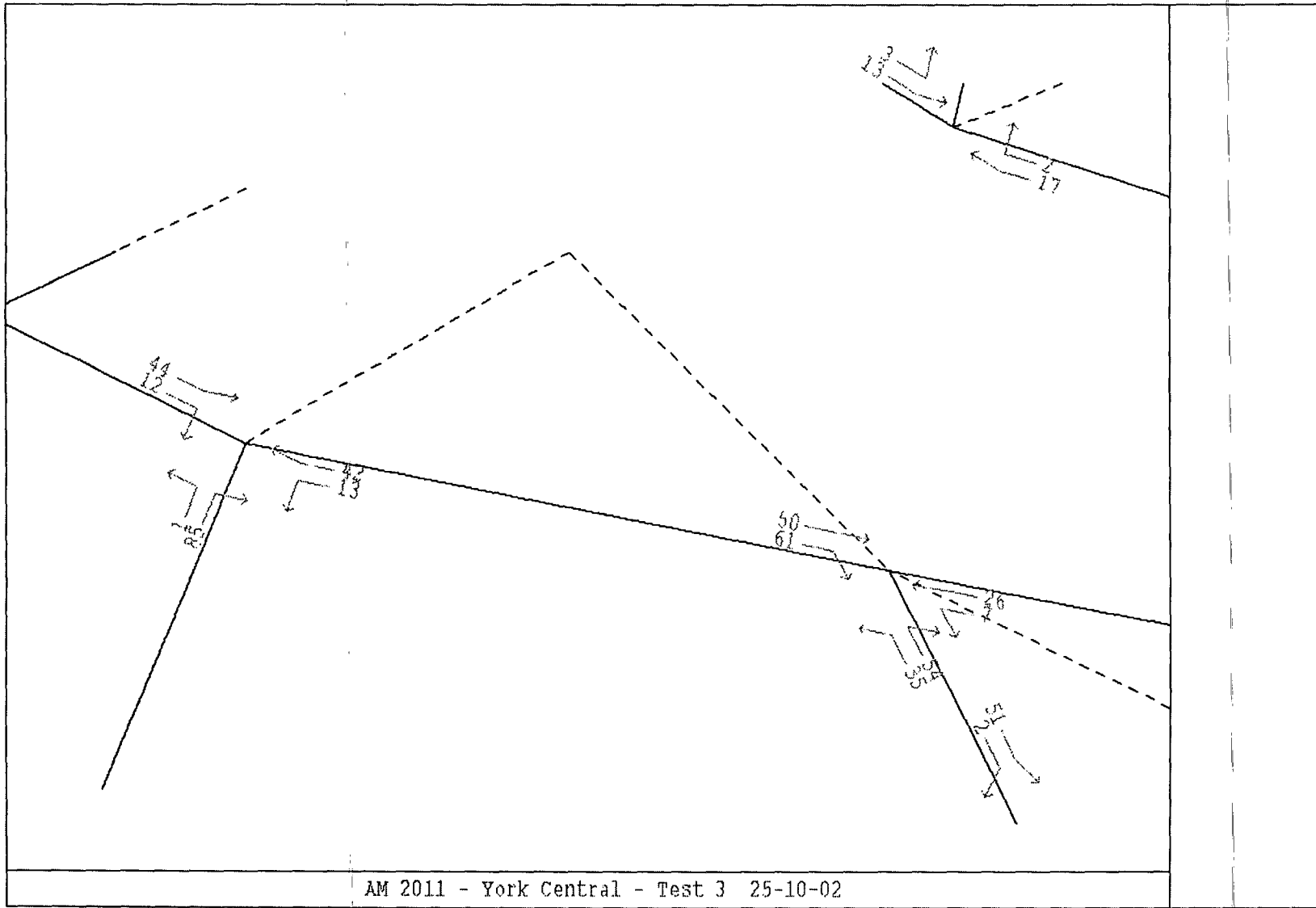
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V/C 9per cent), Scenario 8 (base flow), junction 7 & 8

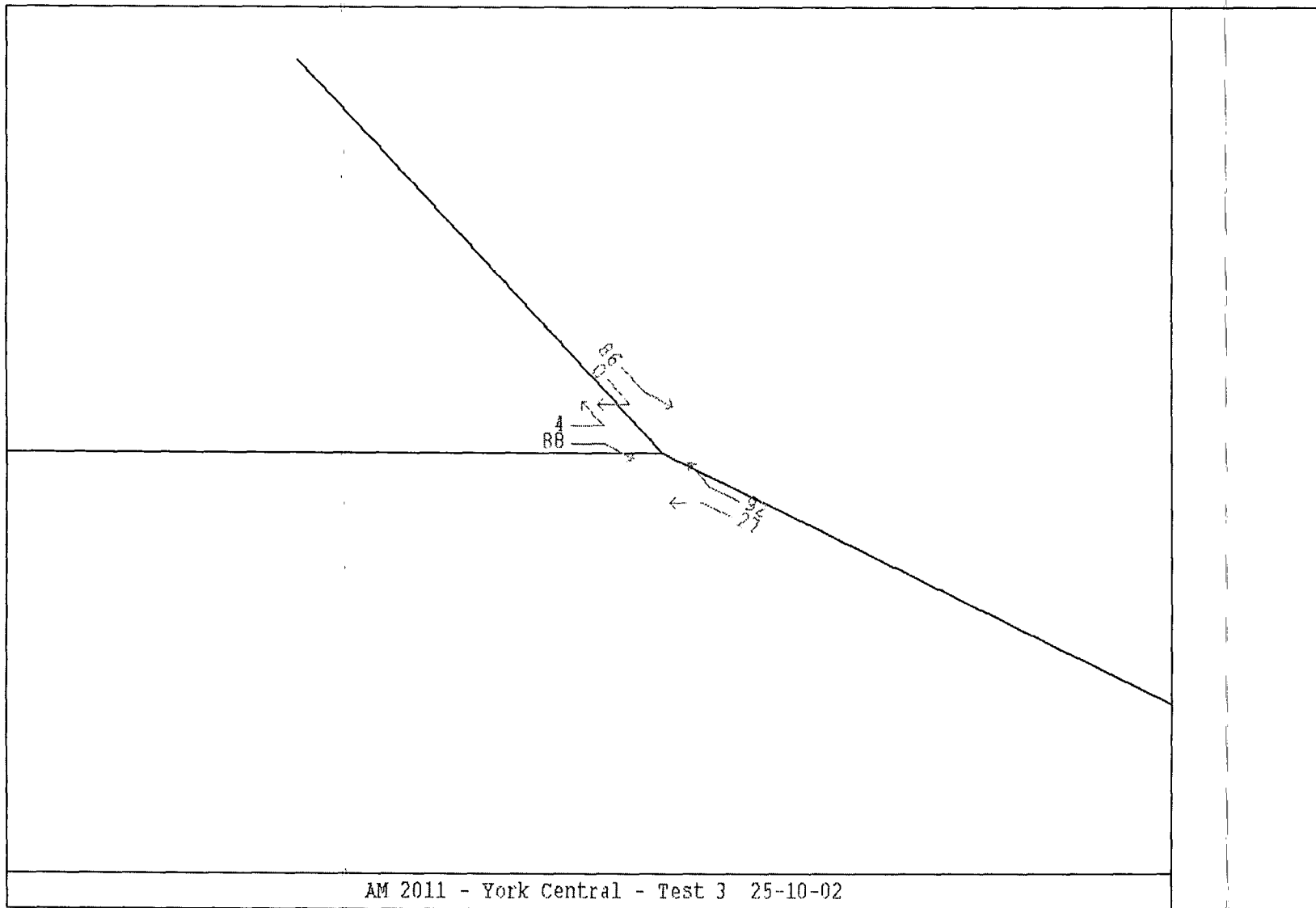


V/C (per cent), Scenario 8 (base flow), junction 9



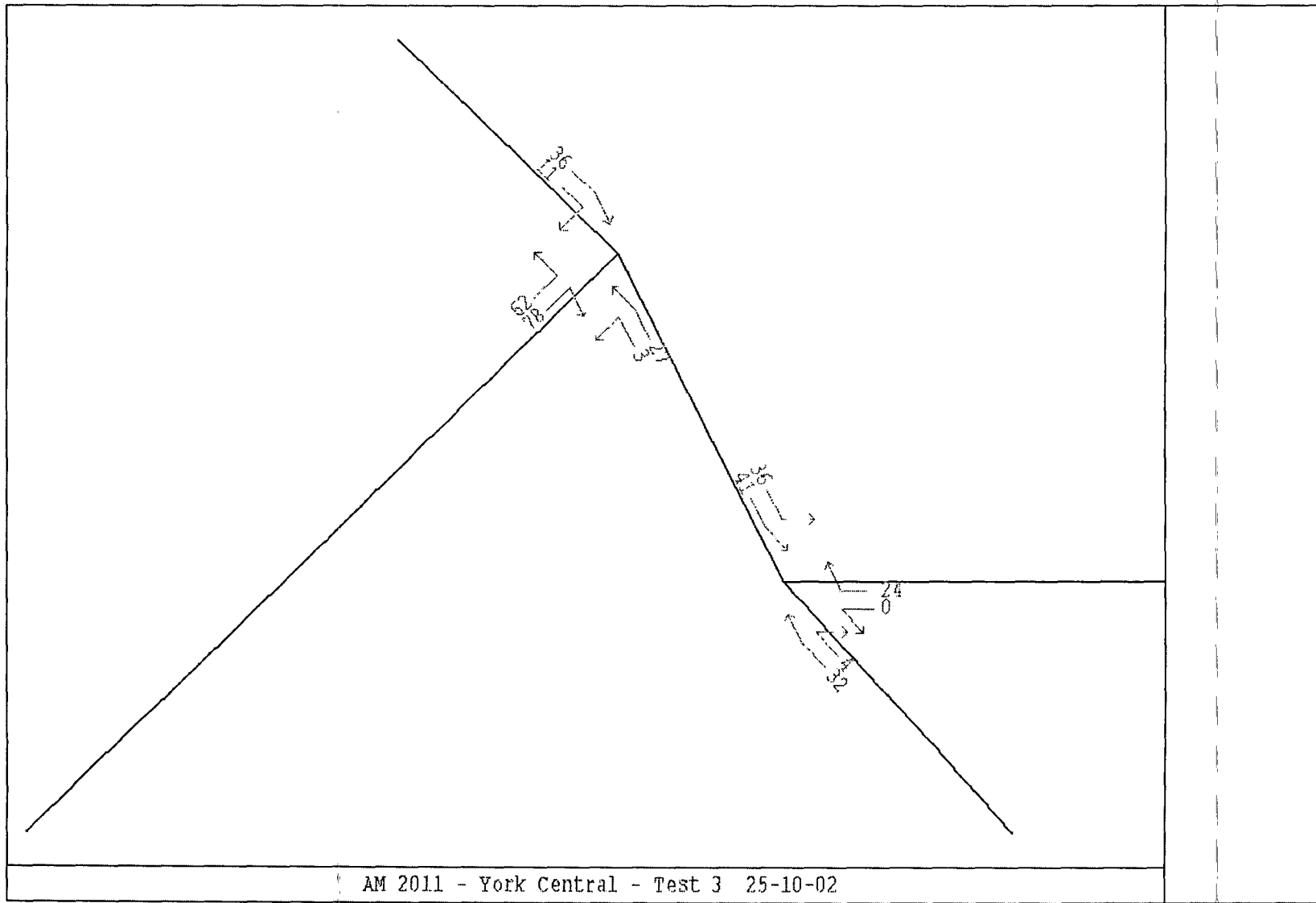


V/C (per cent), Scenario 8 (base flow), junction 10 & 11



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V/C (per cent), Scenario 8 (base flow), junction 12



V/C (per cent), Scenario 8 (base flow), junction 13 & 14