

## Official Height Standard Change

From 1 July 2024, Auckland Council adopts the official height standard for New Zealand called New Zealand Vertical Datum 2016 (NZVD2016).

This model was carried out prior to the height standard change.

**All levels included in this modelling report are in Auckland Vertical Datum 1946 (AUK1946/AVD1946).**

Levels in this report can be transformed from Auckland Vertical Datum 1946 into New Zealand Vertical Datum 2016 by applying an offset value of **0.283 m**.

For example:

$$H_{NZVD2016} = H_{AVD1946} - \text{Offset Value}$$

A single offset value for the catchment has been taken from the Land Information New Zealand (LINZ) Auckland 1946 to NZVD2016 Conversion Raster therefore this offset should be taken as an approximation only for the catchment.

A more accurate height transformation value can be derived by downloading the conversion raster available on the LINZ website below:

<https://data.linz.govt.nz/layer/103953-auckland-1946-to-nzvd2016-conversion-raster/>

**IMPORTANT!!**

**This document contains three PDFs:**

- 1. Main Report**
- 2. Appendix H Floodplain Maps**
- 3. Appendix H Floodplain Maps**
- 4. Appendix H Flood Hazard Map**

## **2. Appendix H Floodplain Maps**

# Oratia Flood Hazard Modelling

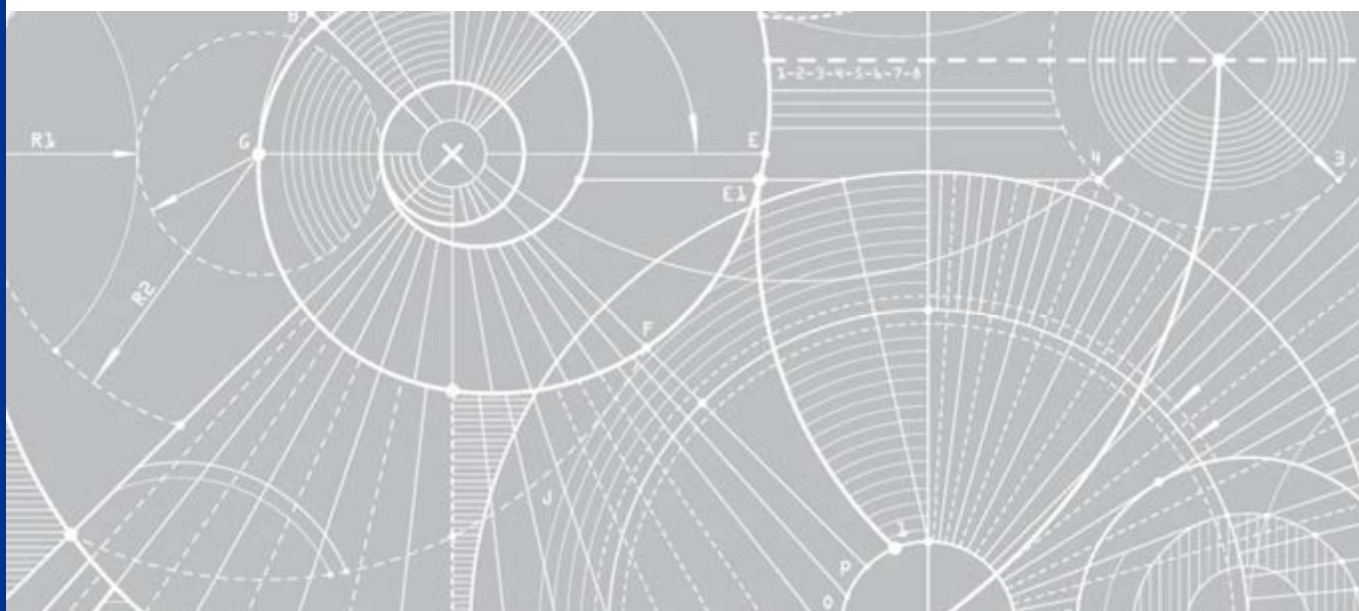
AUCKLAND COUNCIL

Model Build and System Performance Report

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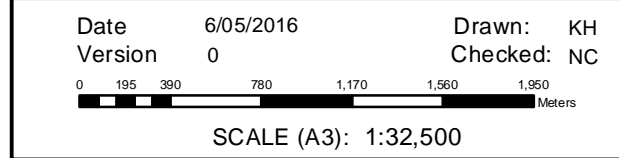
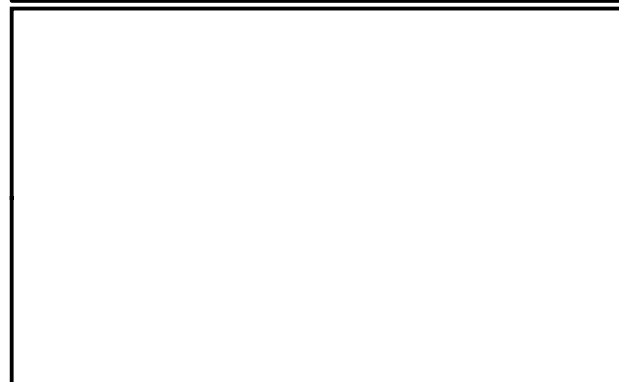
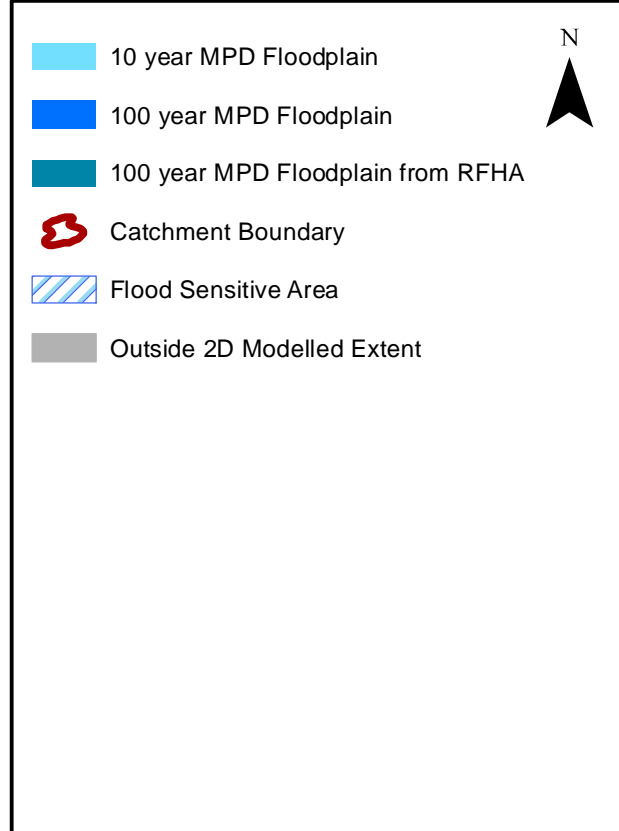
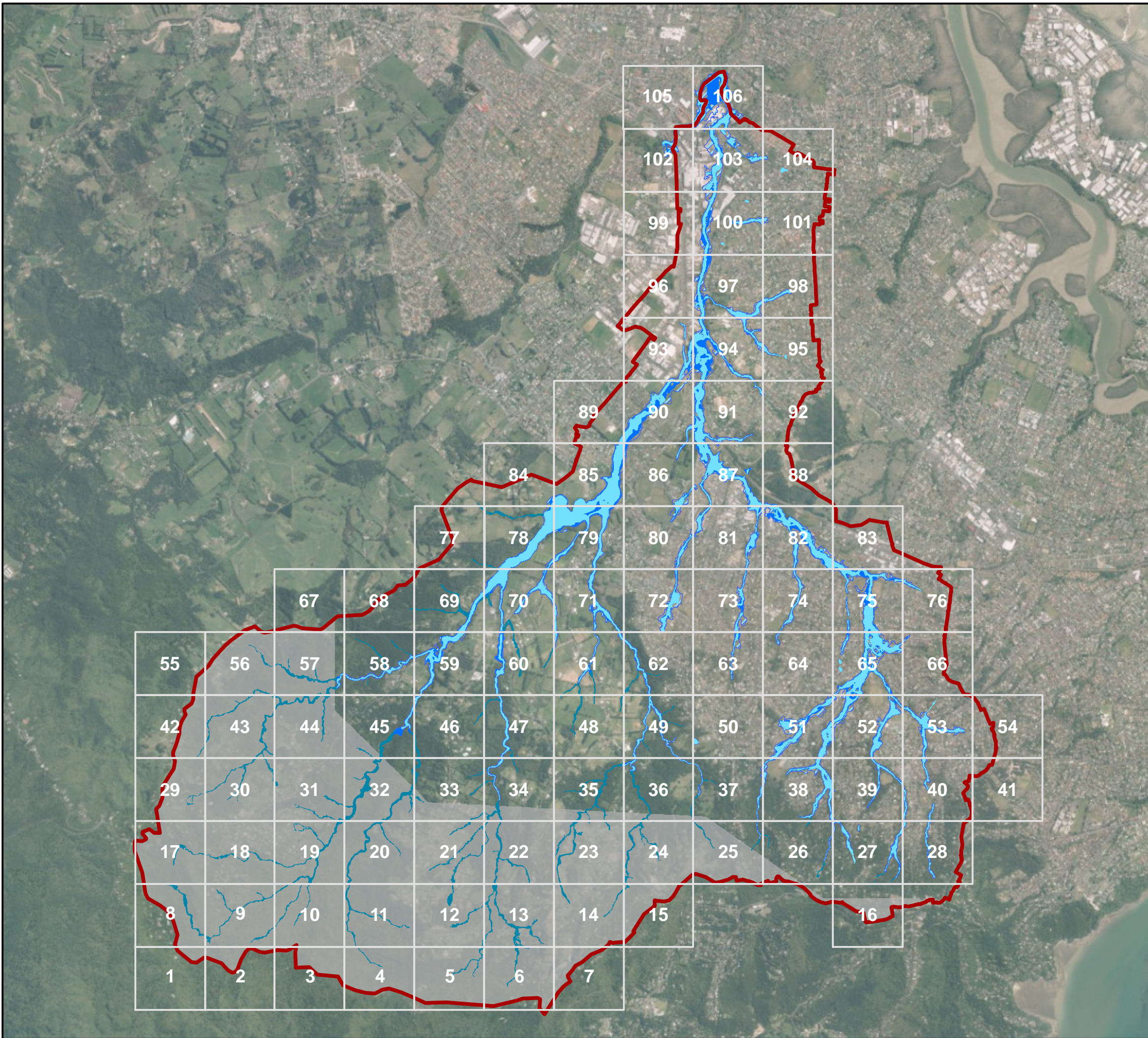
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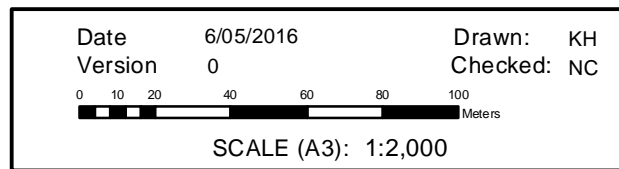
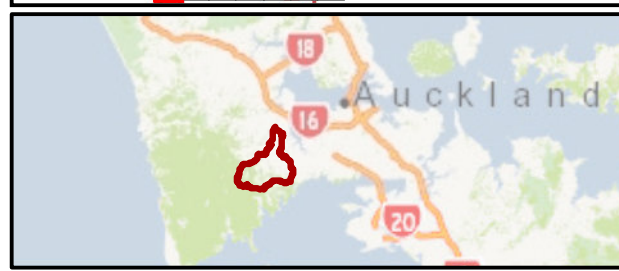
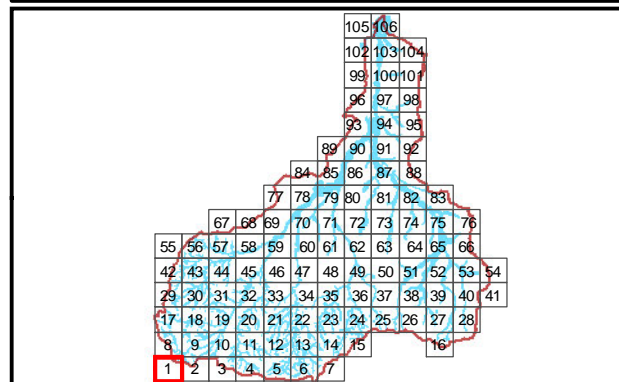
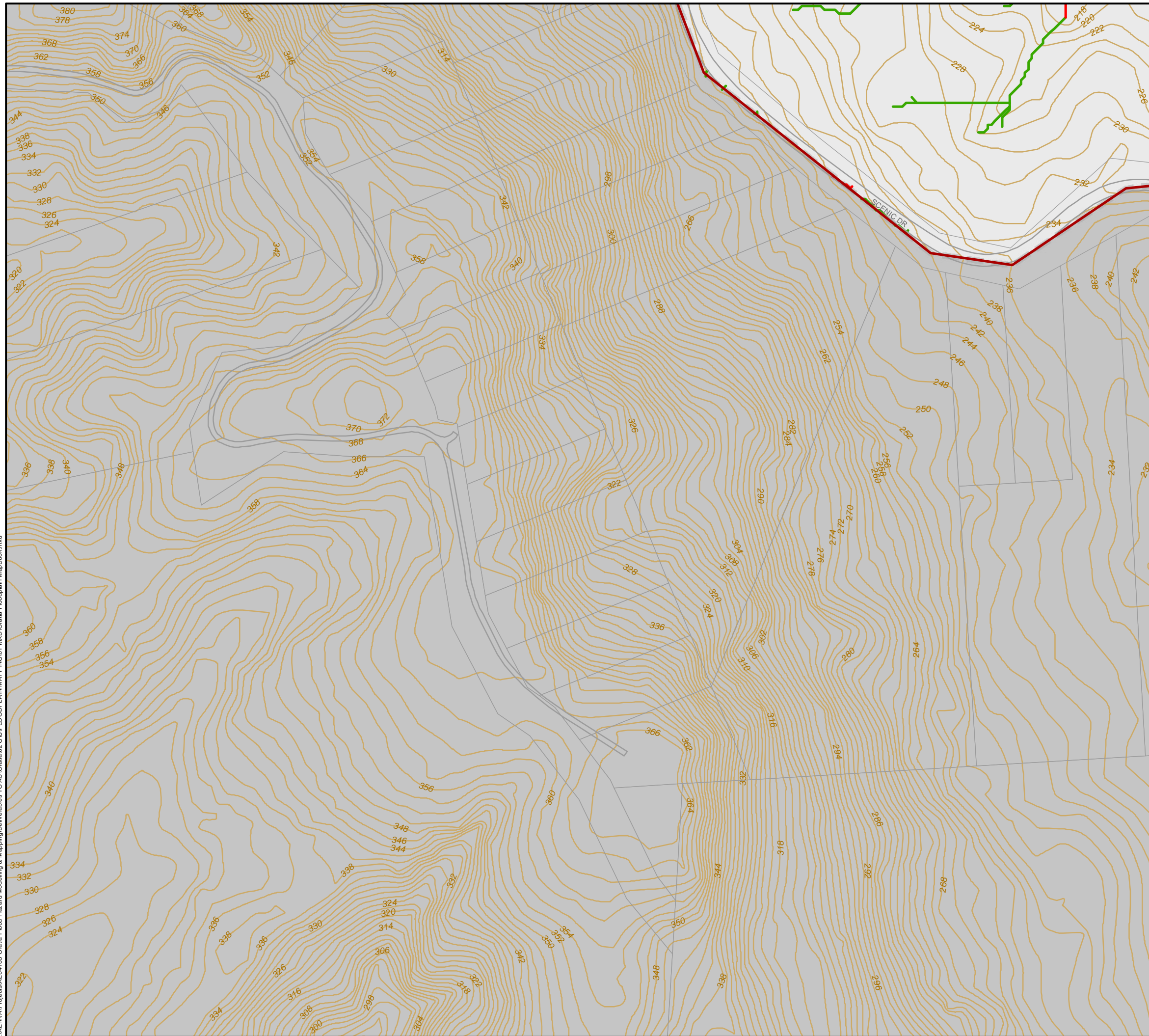
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Index Map

Figure H.1 Floodplain Map (MPD Scenario)

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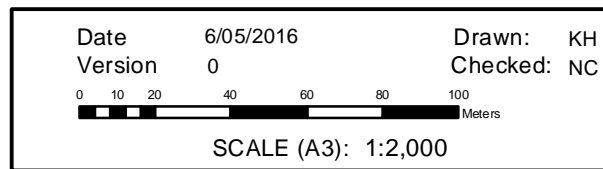
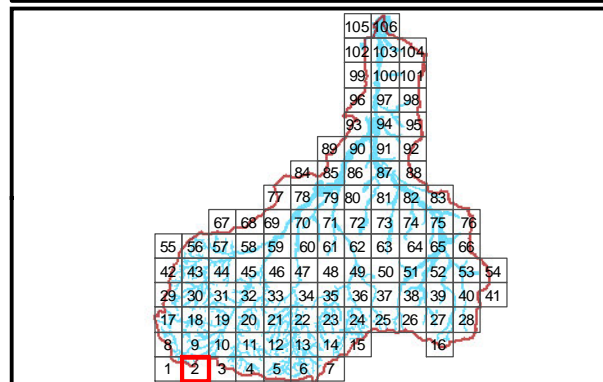
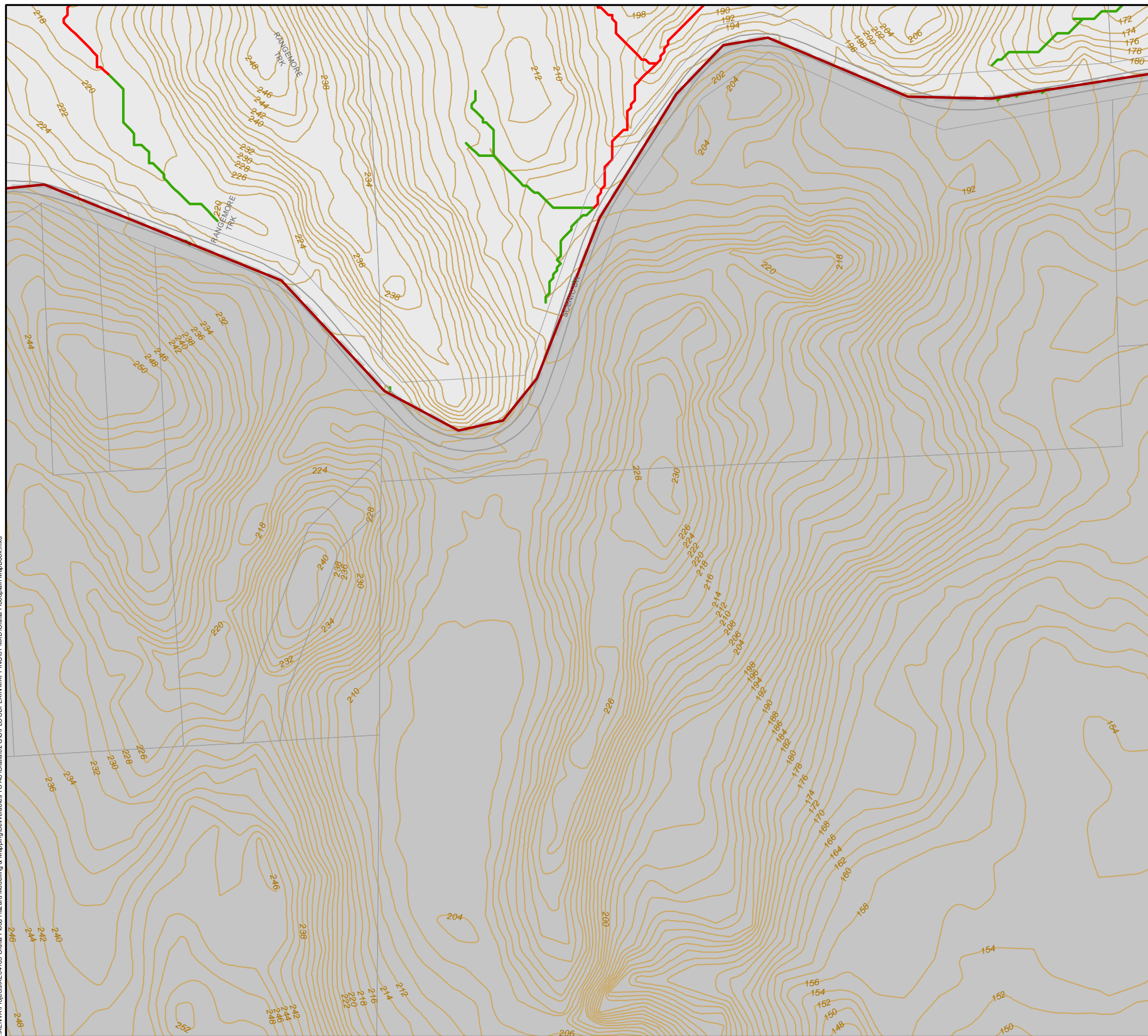
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Sheet 1 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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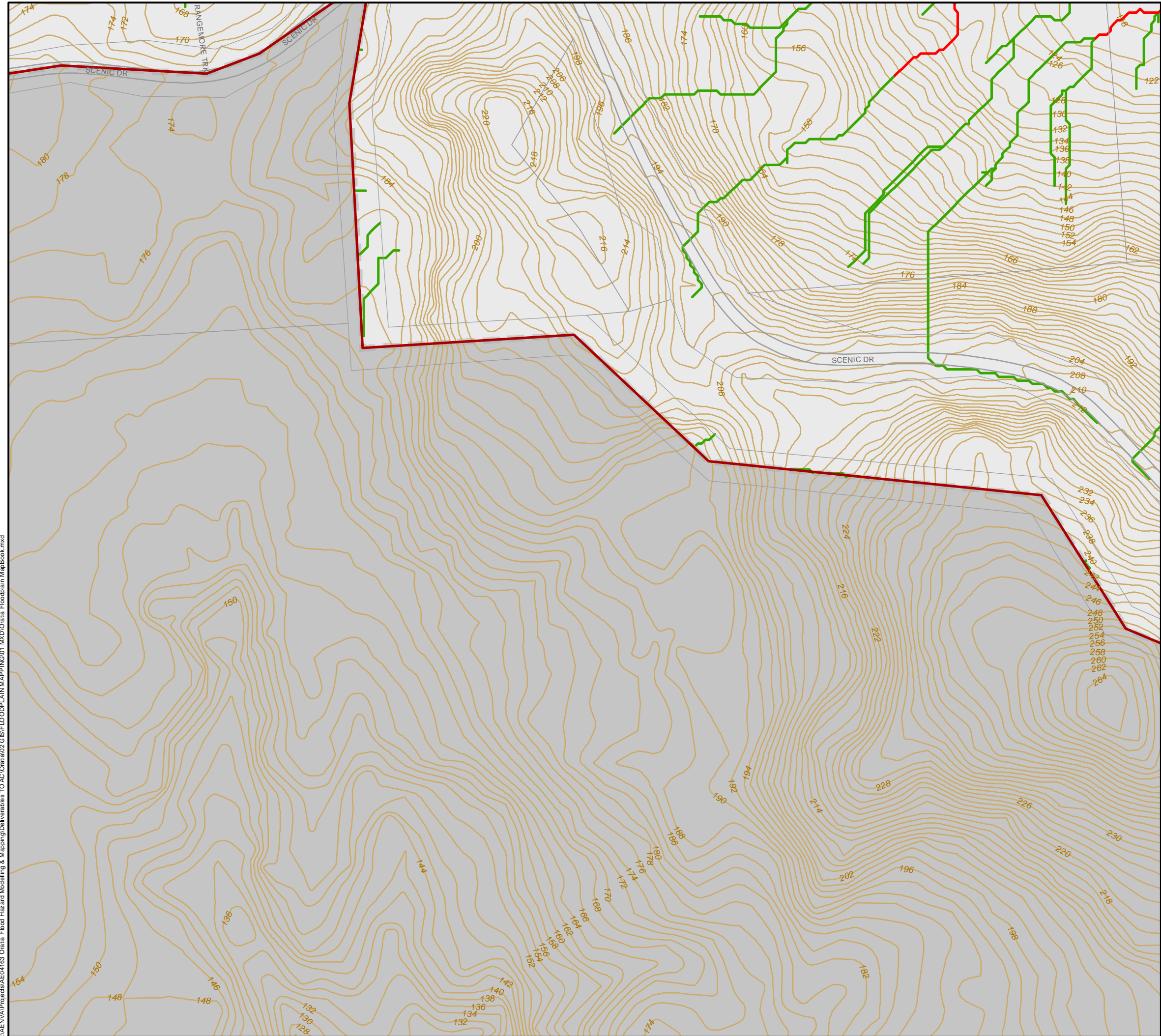


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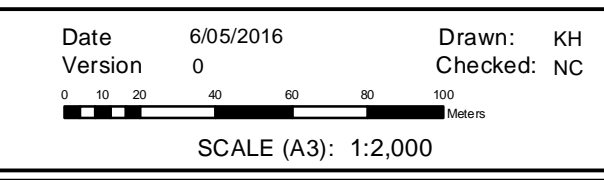
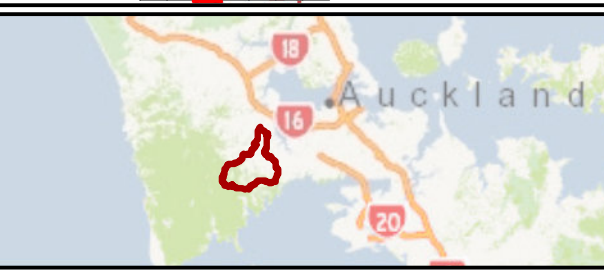
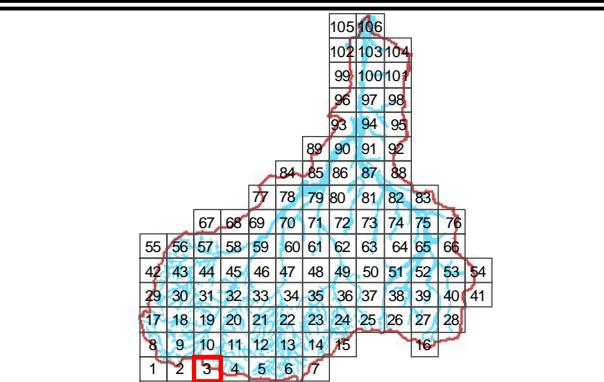
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Sheet 2 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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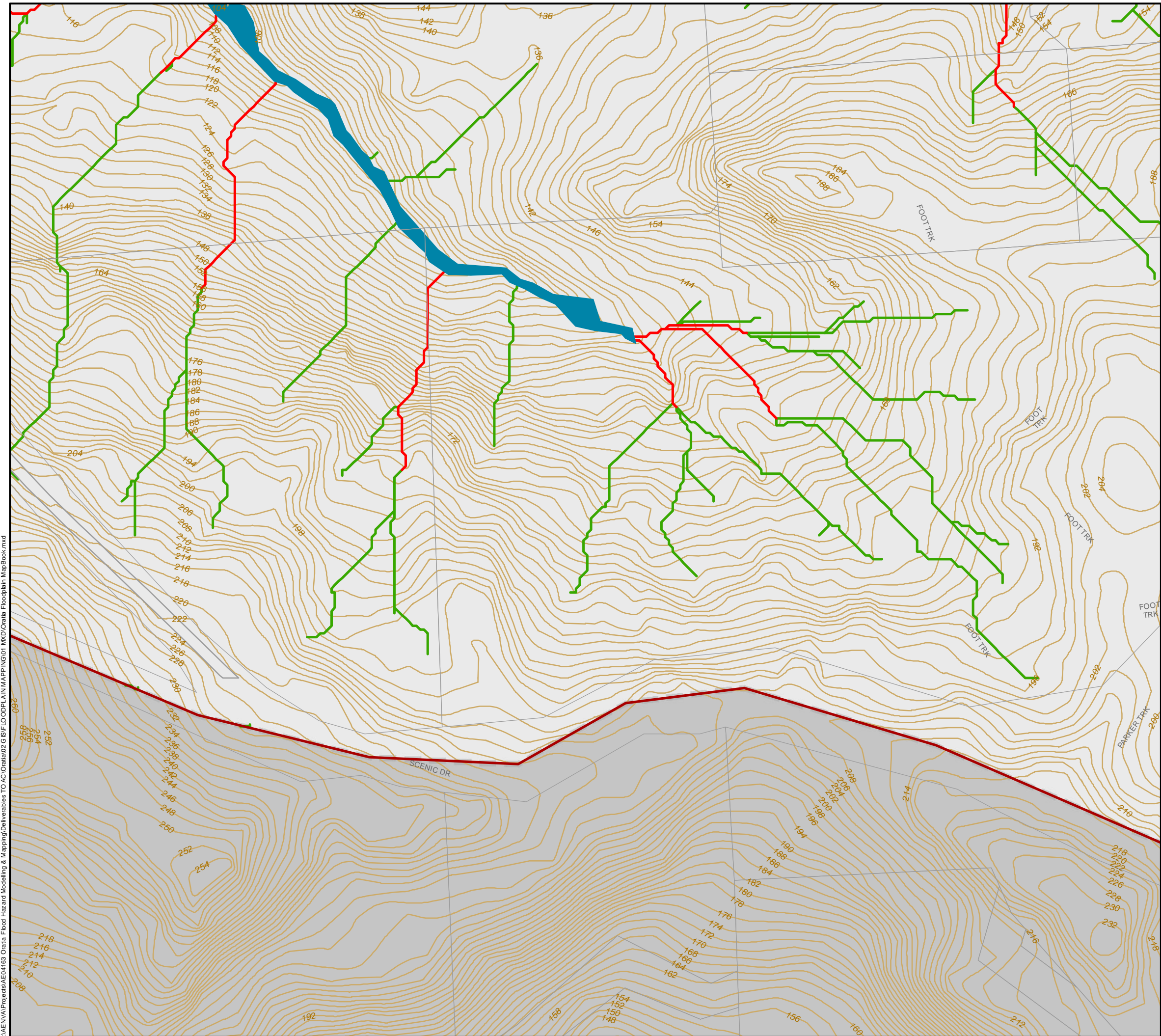


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SYSTEM PERFORMANCE ASSESSMENT

Sheet 3 of 106

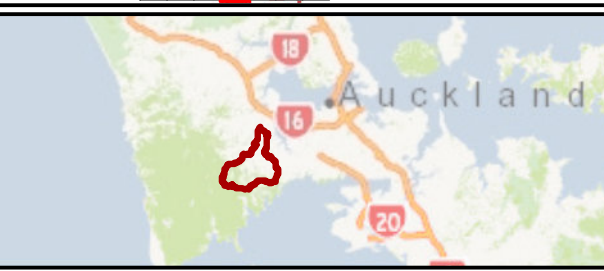
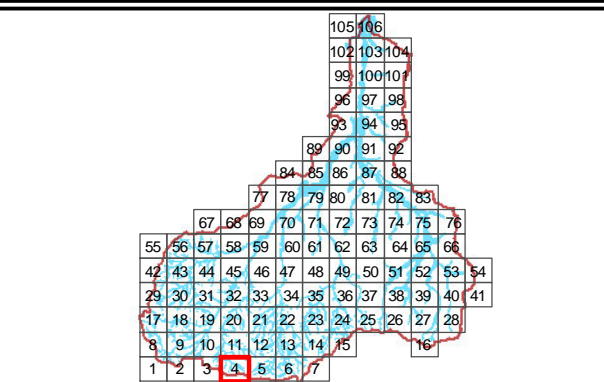
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--- Section with Levels

- Habitable floor under flood: 100yr MPD
- Non habitable floor under flood: 100yr MPD
- Habitable floor within 500mm: 100yr MPD
- Habitable floor above 500mm: 100yr MPD
- Building floor not surveyed
- ~ Modelled Stream Network
- Modelled Stormwater Nodes
- - - Modelled Pipe Network
- 10 year MPD Floodplain
- 100 year MPD Floodplain
- 100 year MPD Floodplain from RFHA
- Flood Sensitive Area
- ~ 100yr Overland Flow (<0.5 m3/s)
- ~ 100yr Overland Flow (0.5 - 2.0 m3/s)
- ~ Contours
- Outside 2D model extent
- Catchment Boundary
- Outside catchment



Date 6/05/2016 Drawn: KH  
 Version 0 Checked: NC

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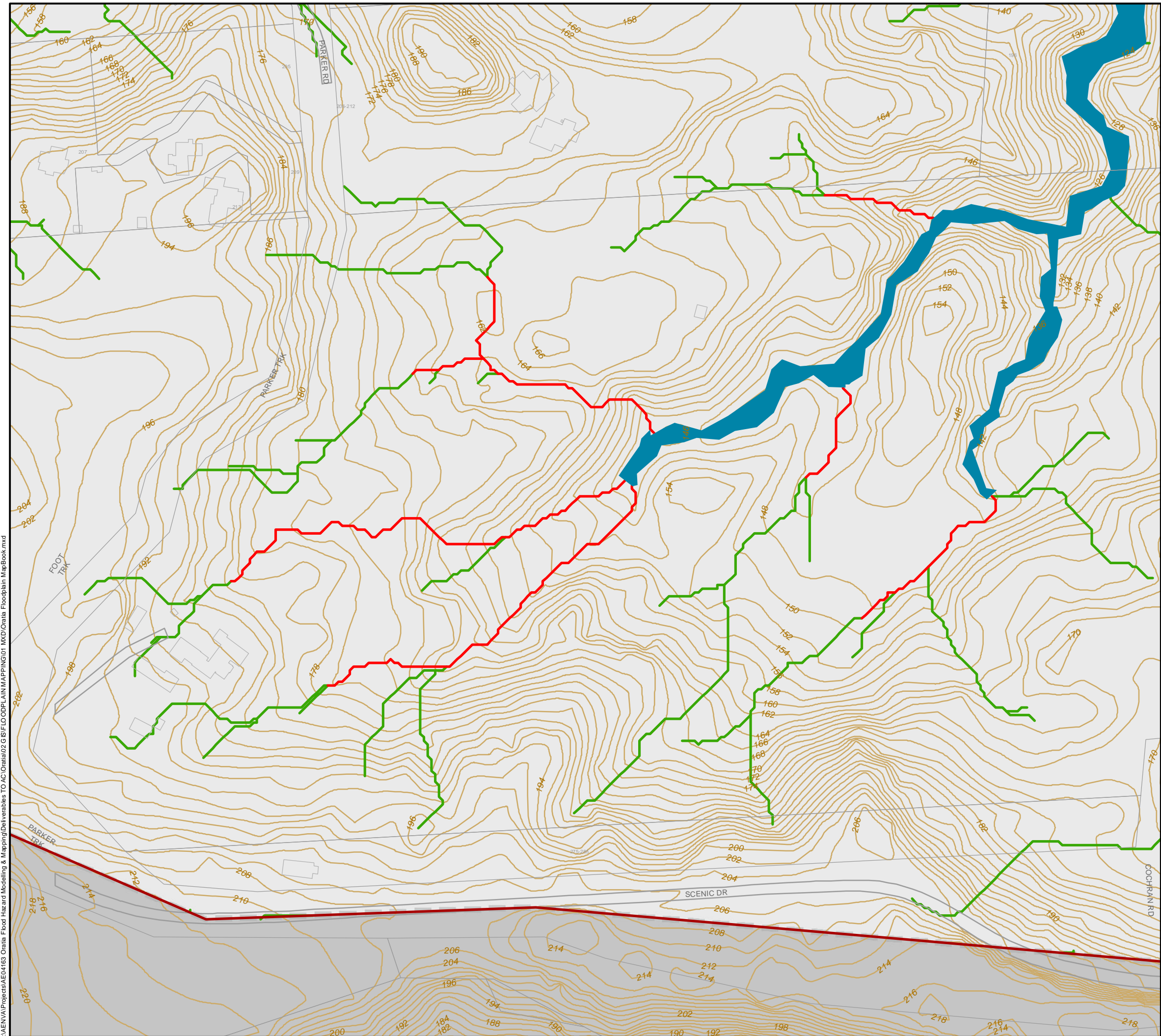
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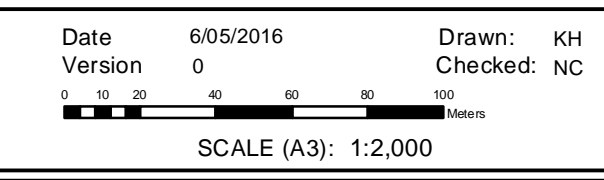
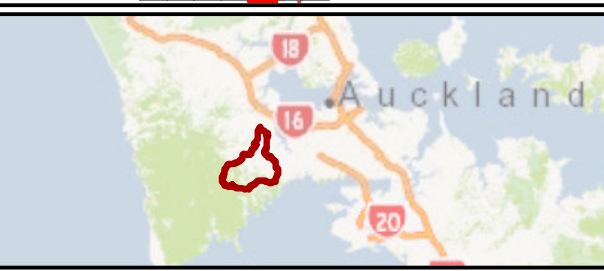
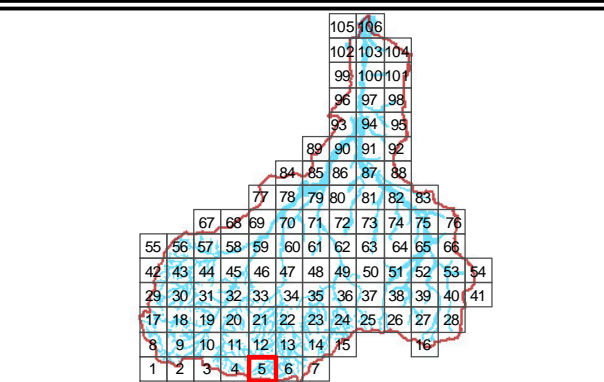
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SYSTEM PERFORMANCE ASSESSMENT

Sheet 4 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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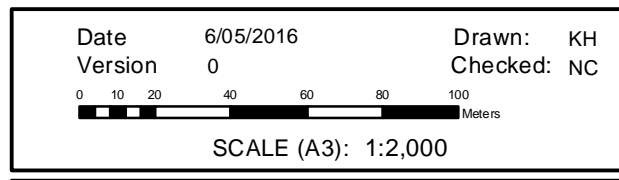
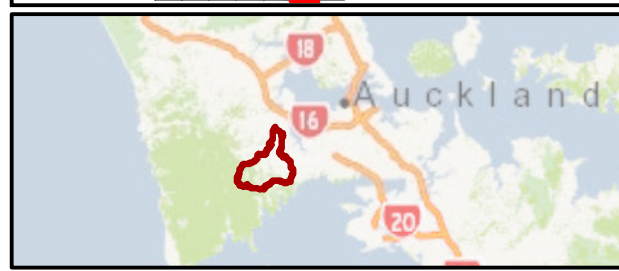
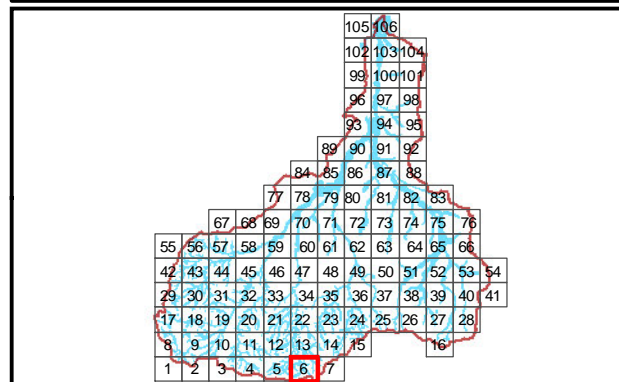
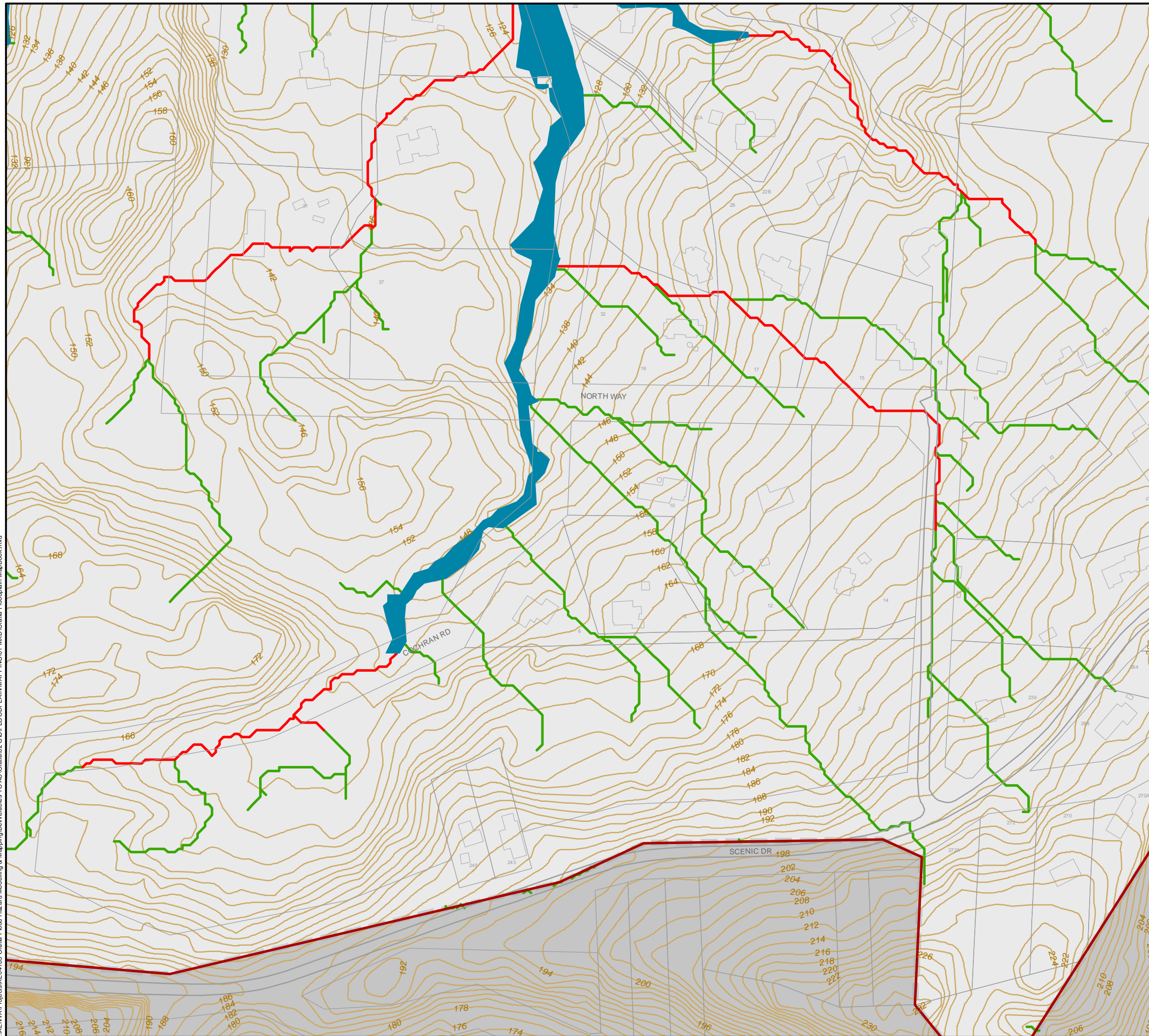
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SYSTEM PERFORMANCE ASSESSMENT

Sheet 5 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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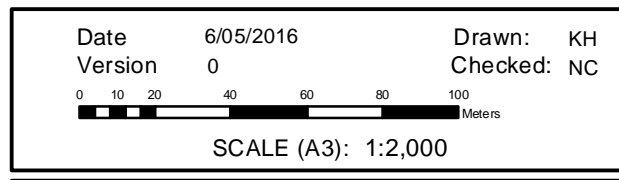
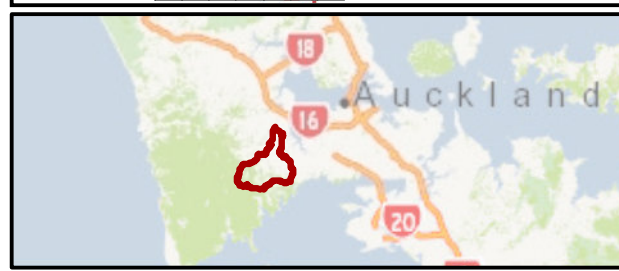
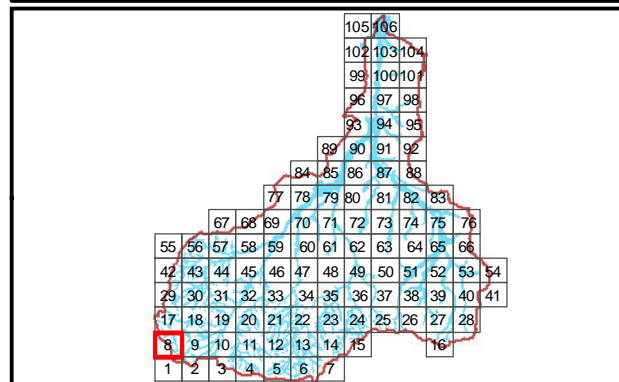
ORATIA  
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Sheet 6 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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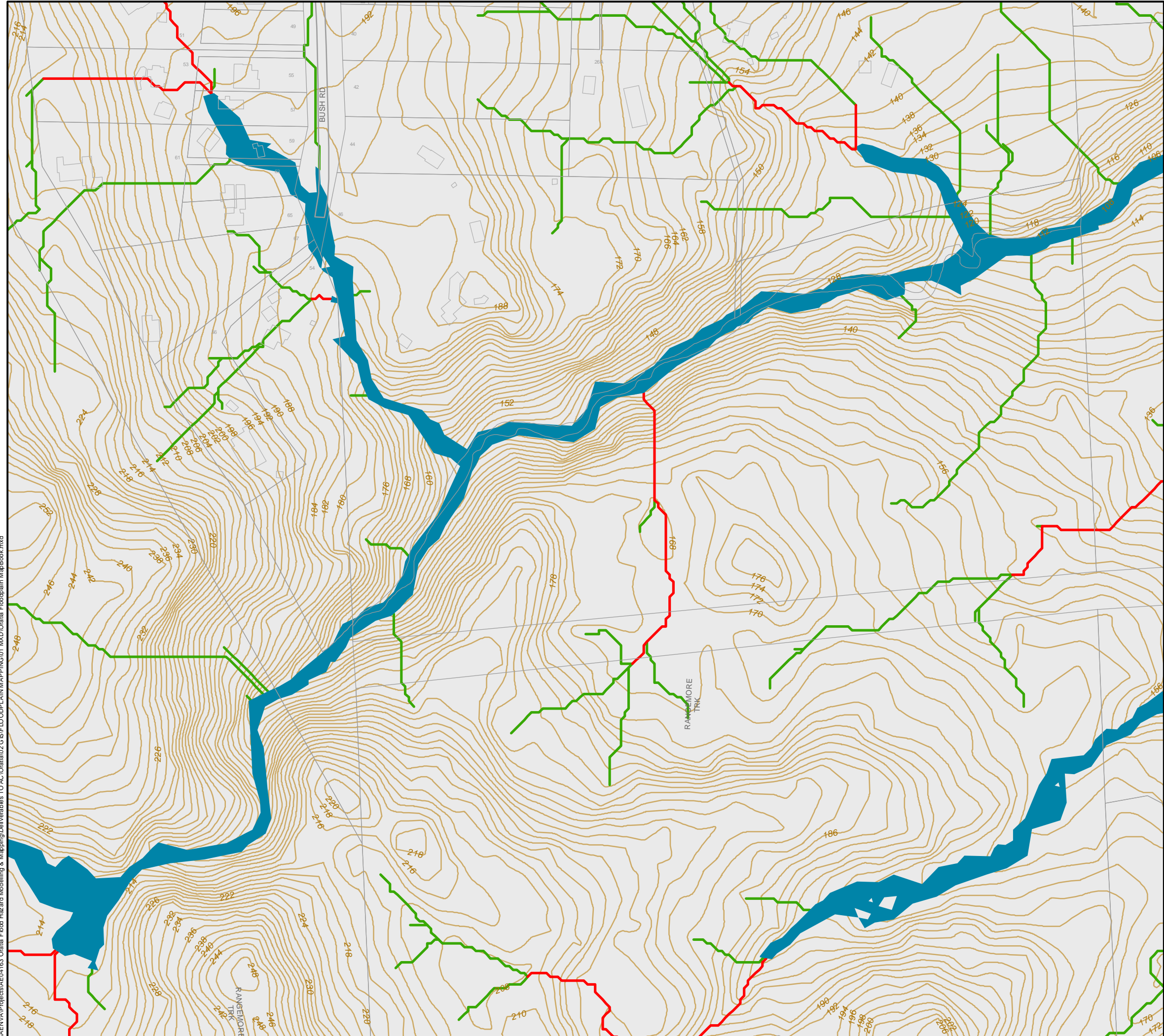


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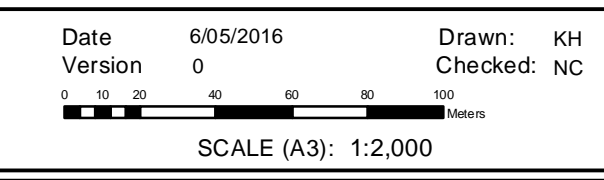
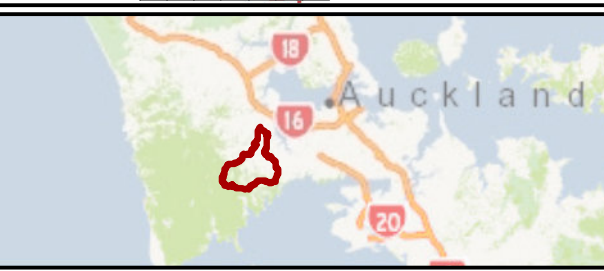
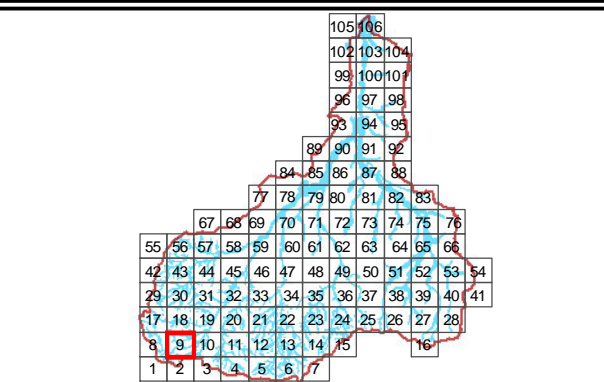
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Sheet 8 of 106

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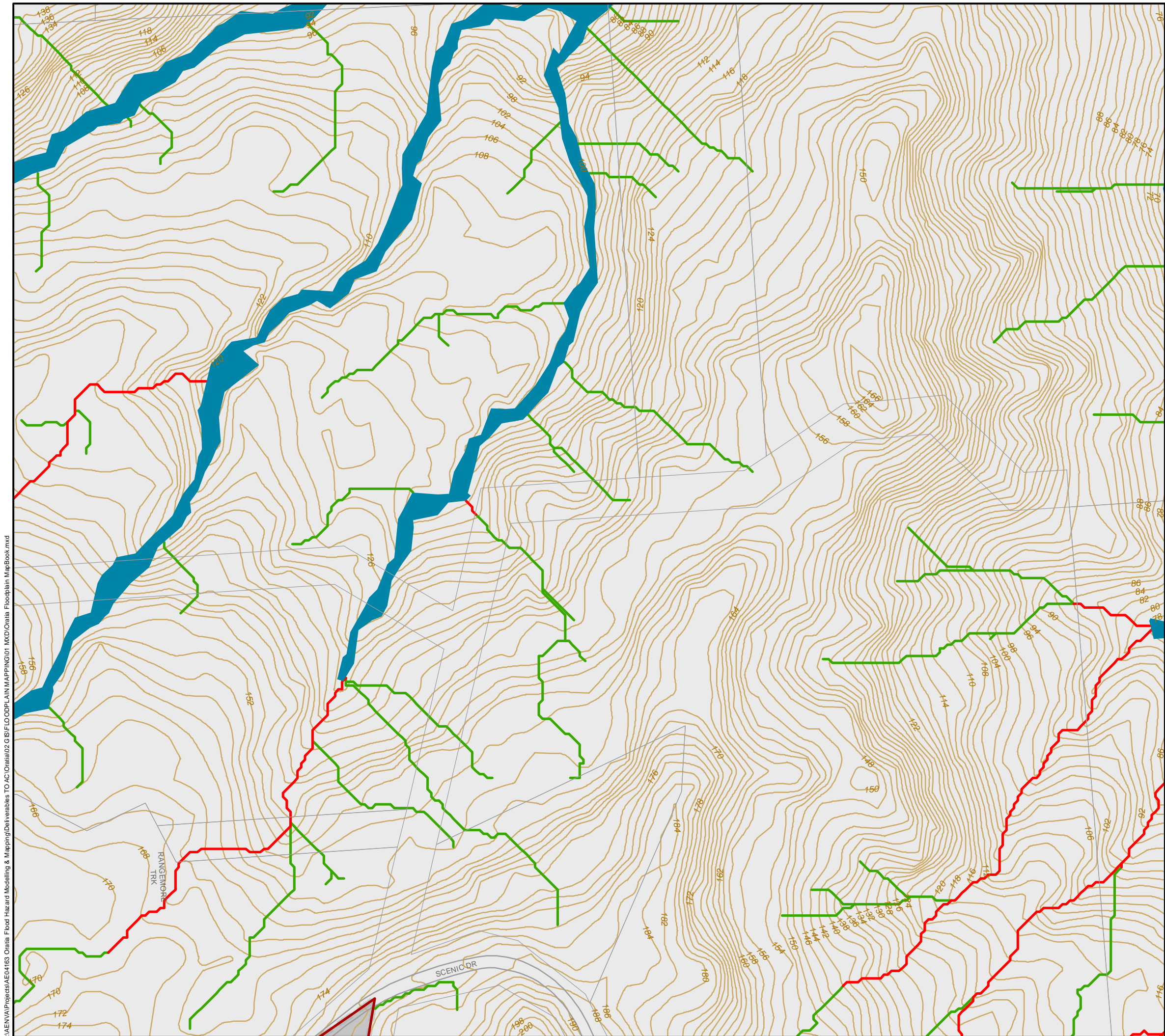


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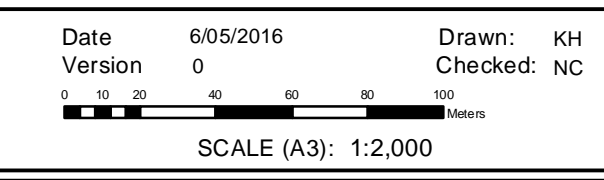
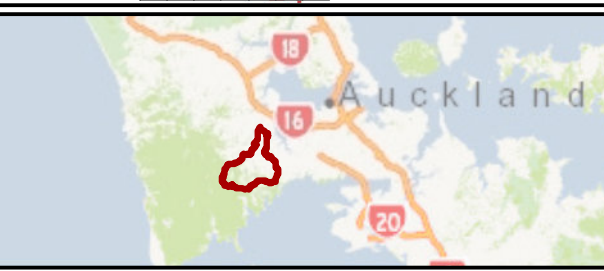
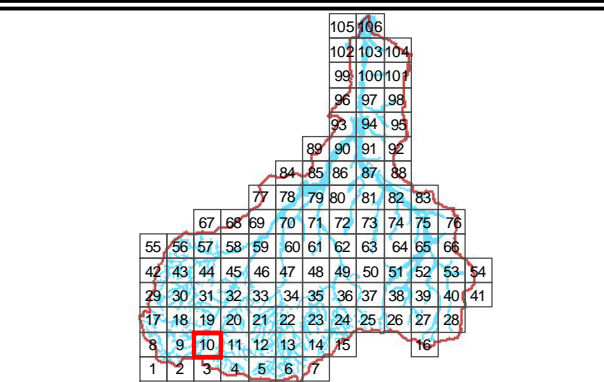
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Sheet 9 of 106

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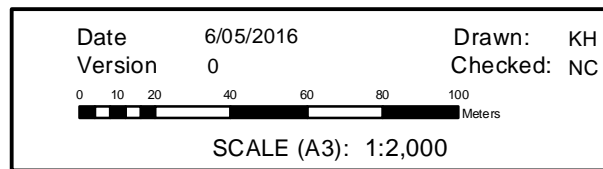
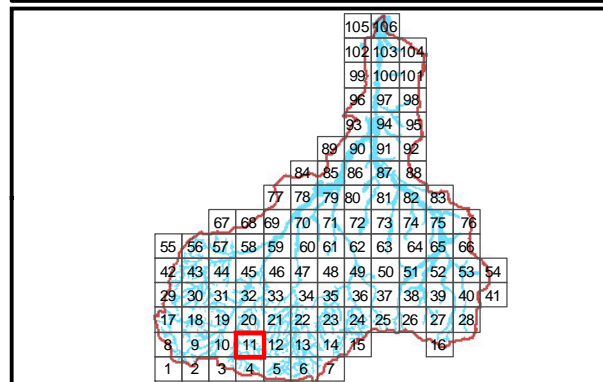
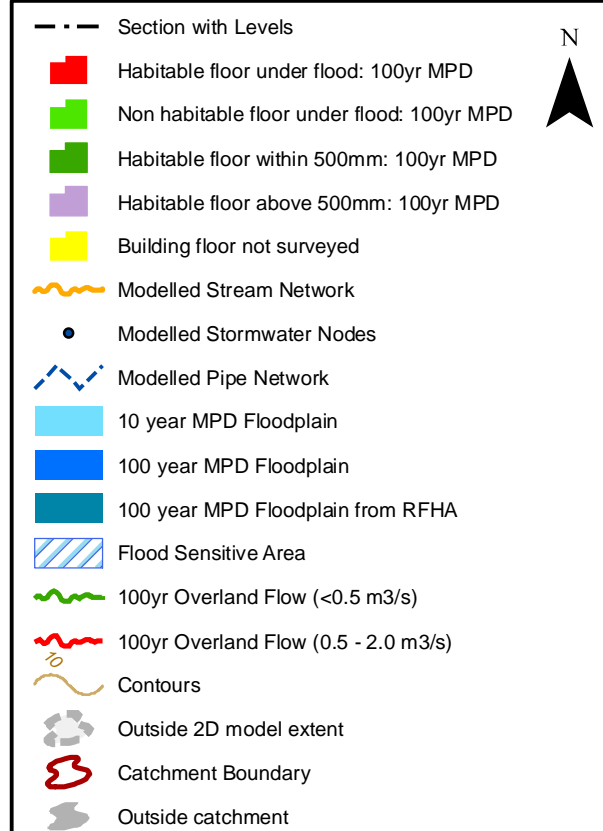
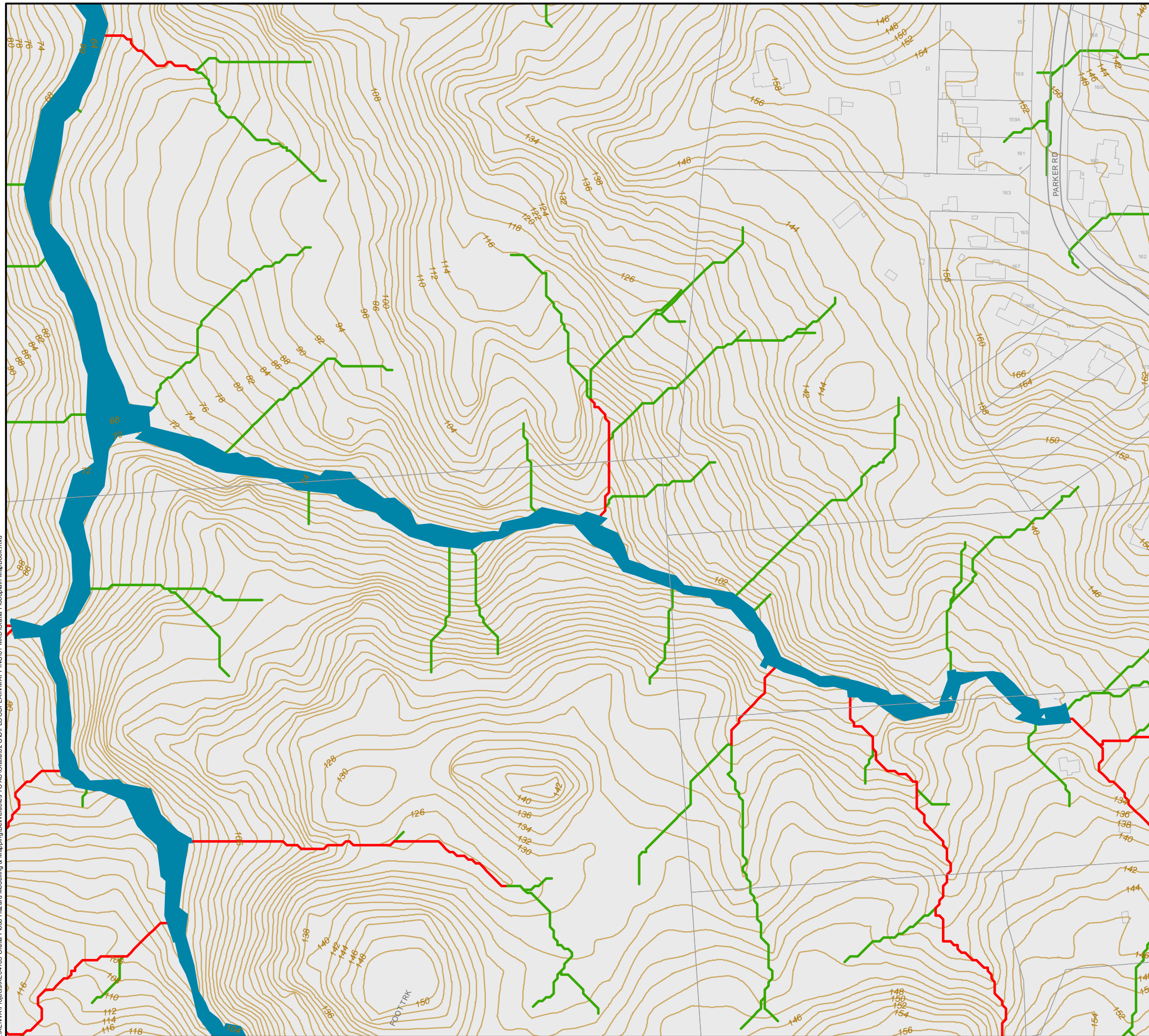


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 SYSTEM PERFORMANCE ASSESSMENT

Sheet 10 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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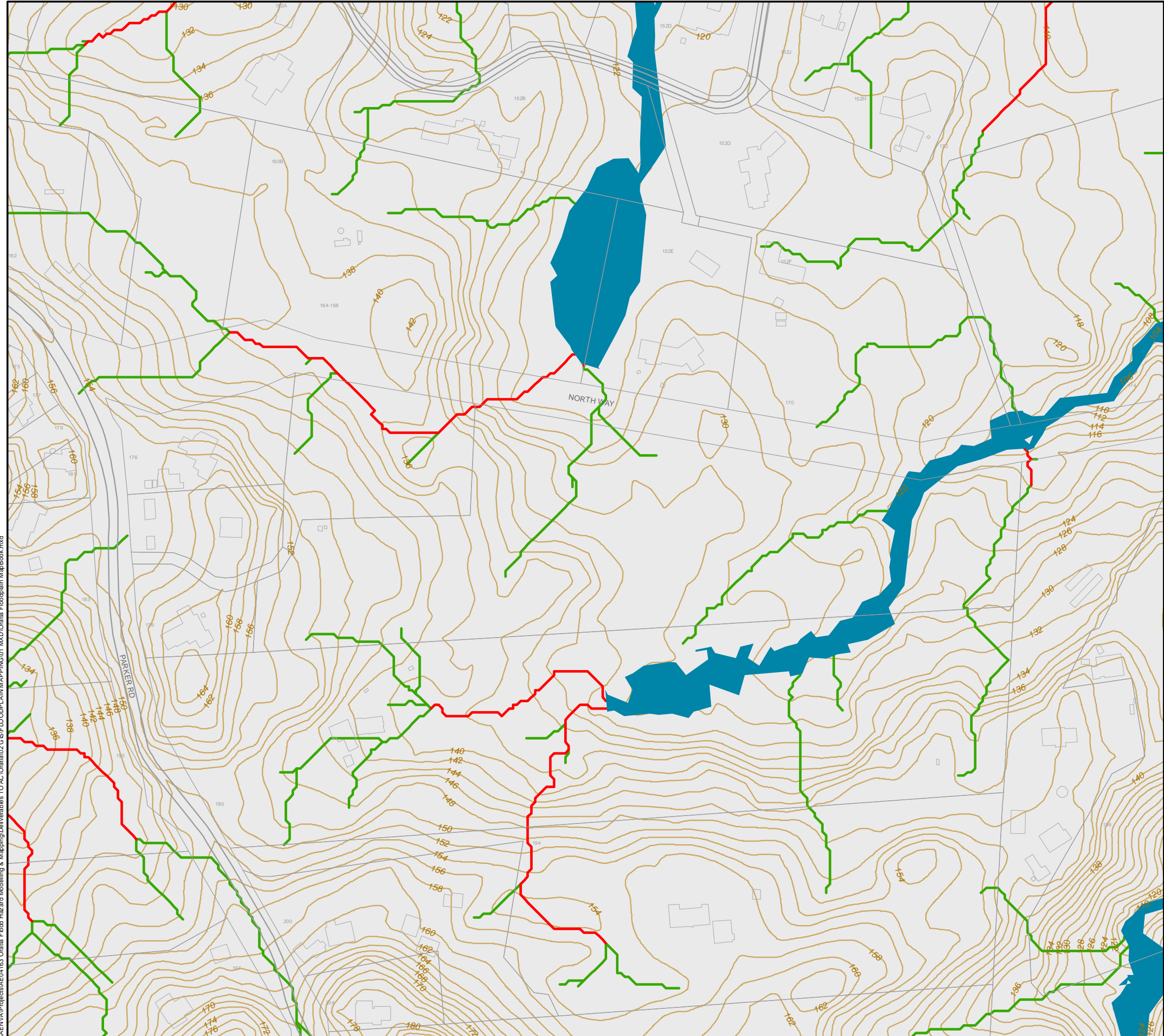


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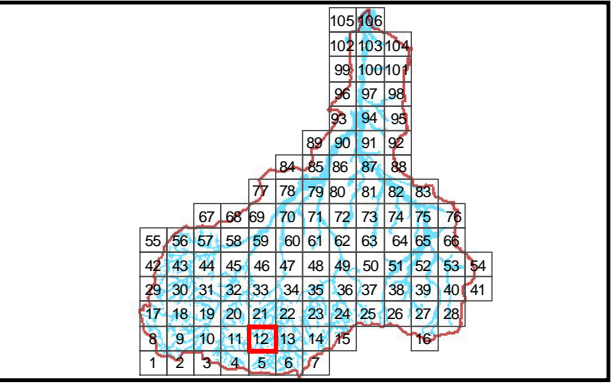
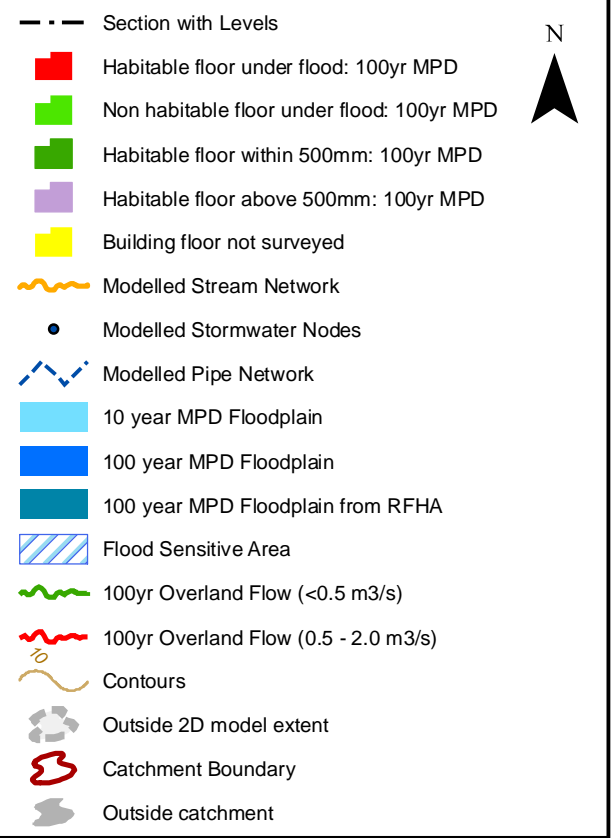
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Sheet 11 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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Date 6/05/2016 Drawn: KH  
 Version 0 Checked: NC

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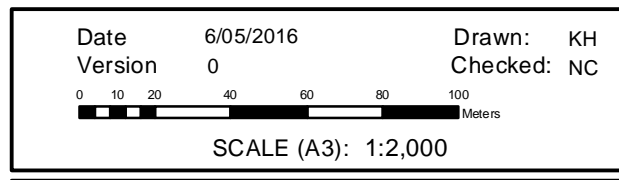
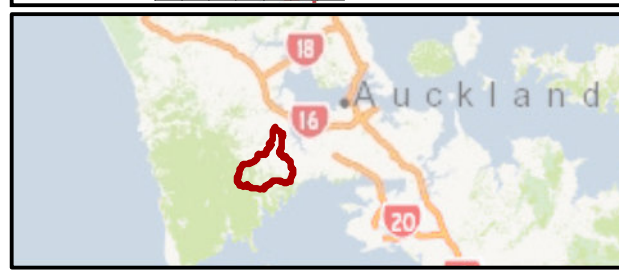
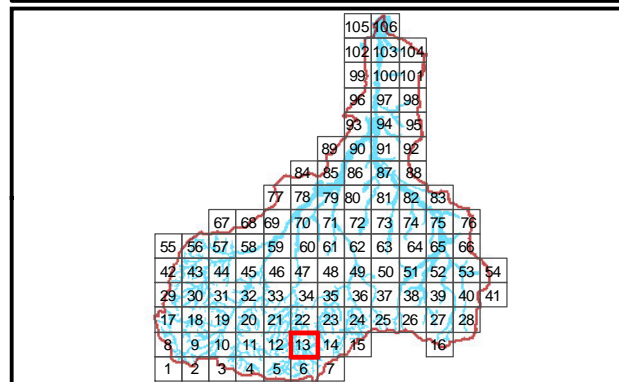
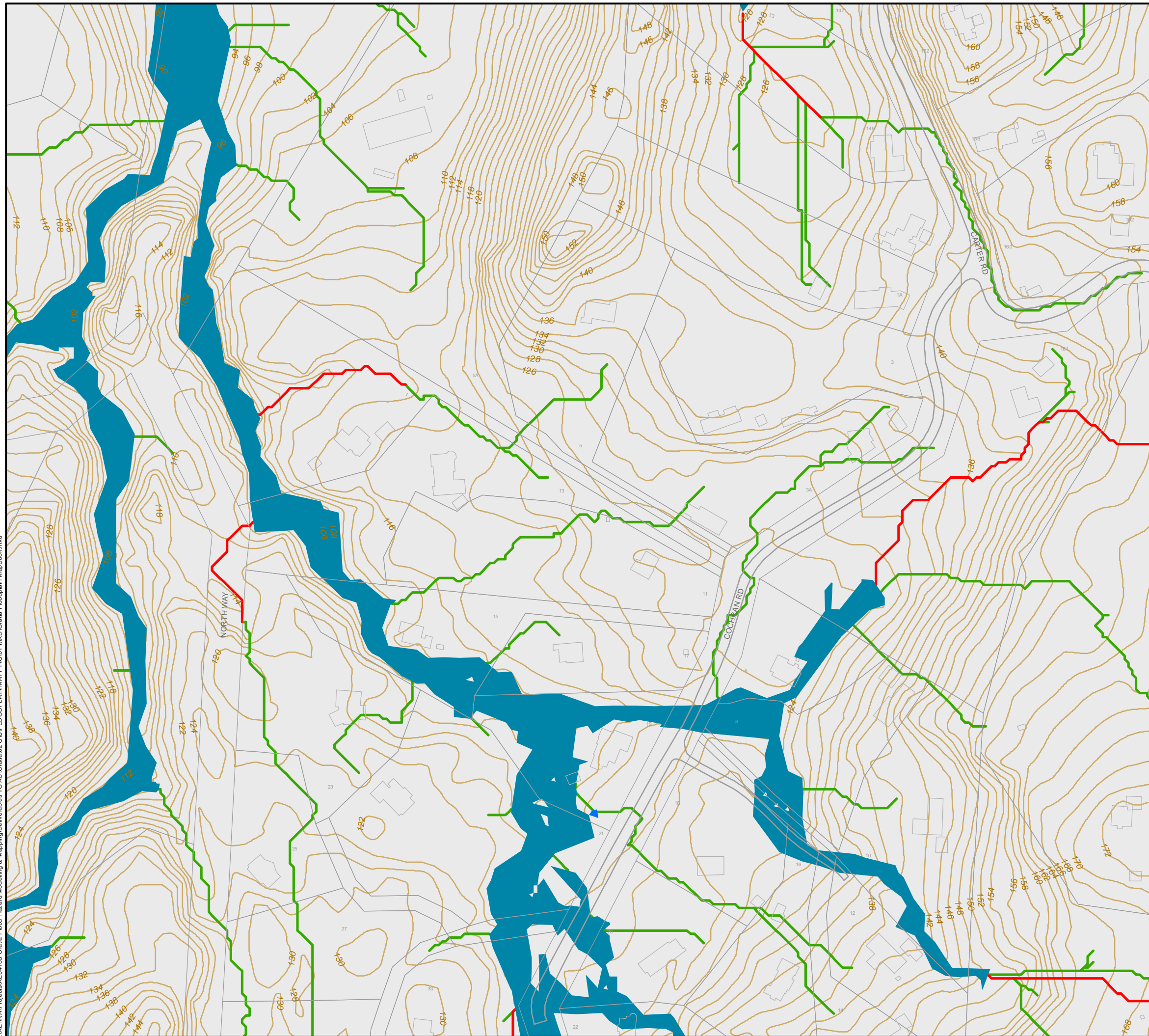
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Sheet 12 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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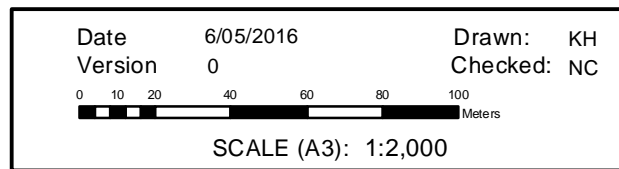
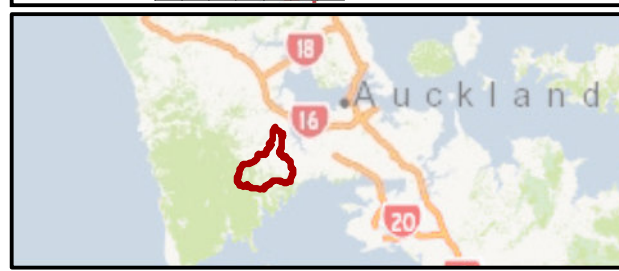
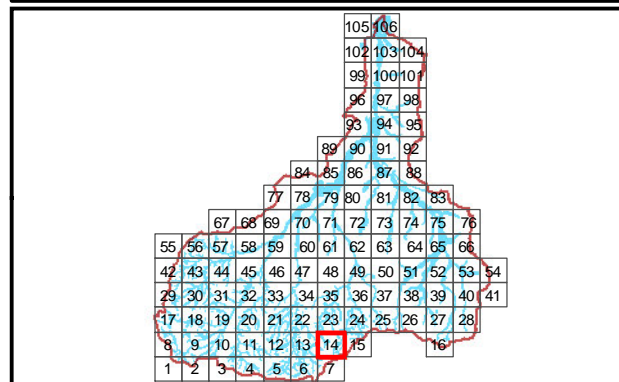
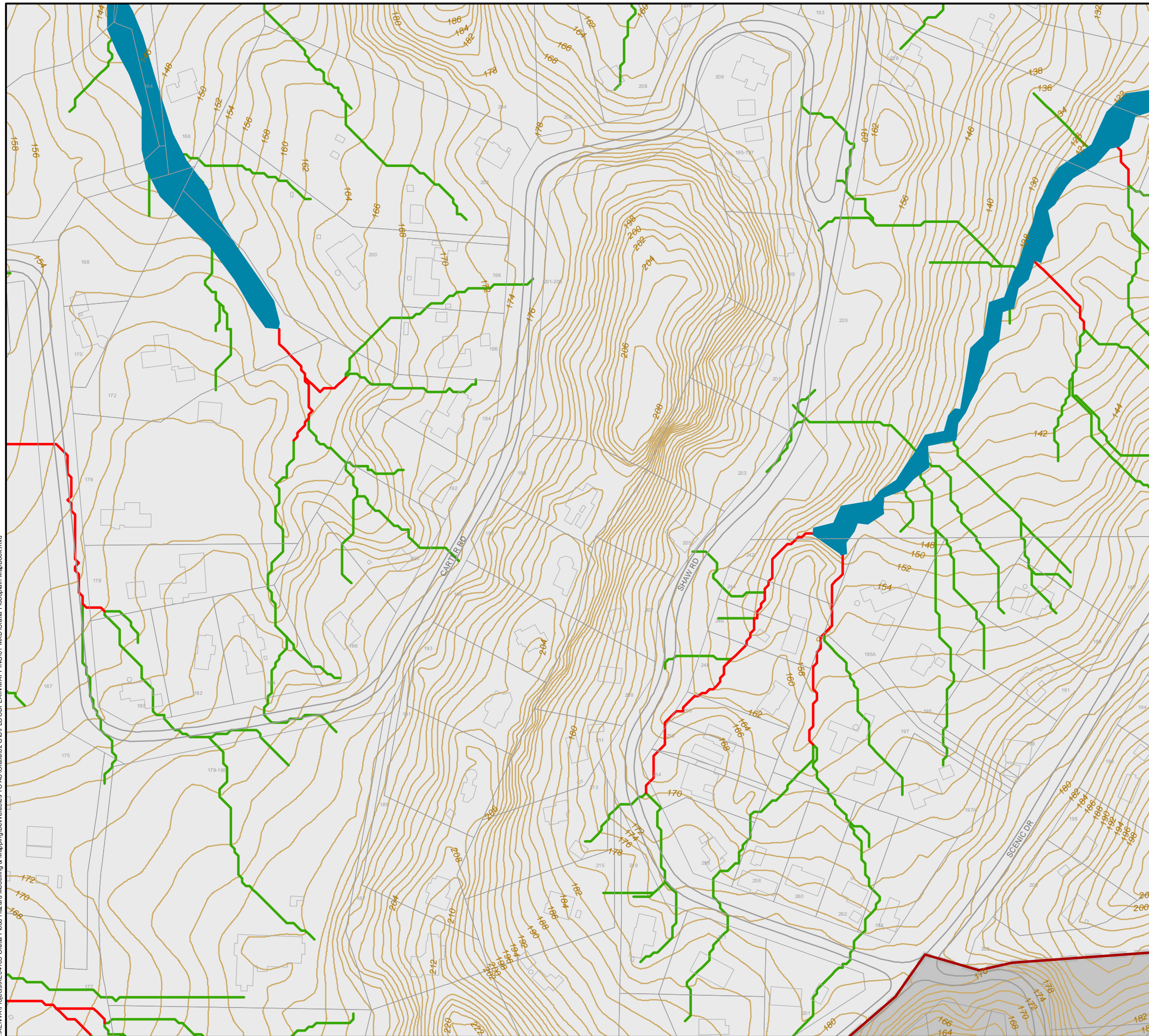
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Sheet 13 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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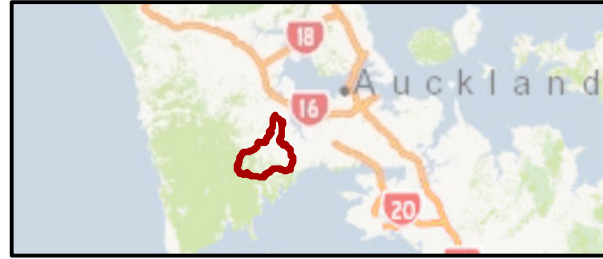
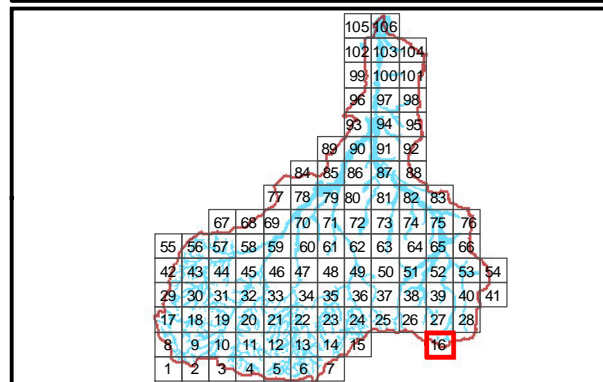
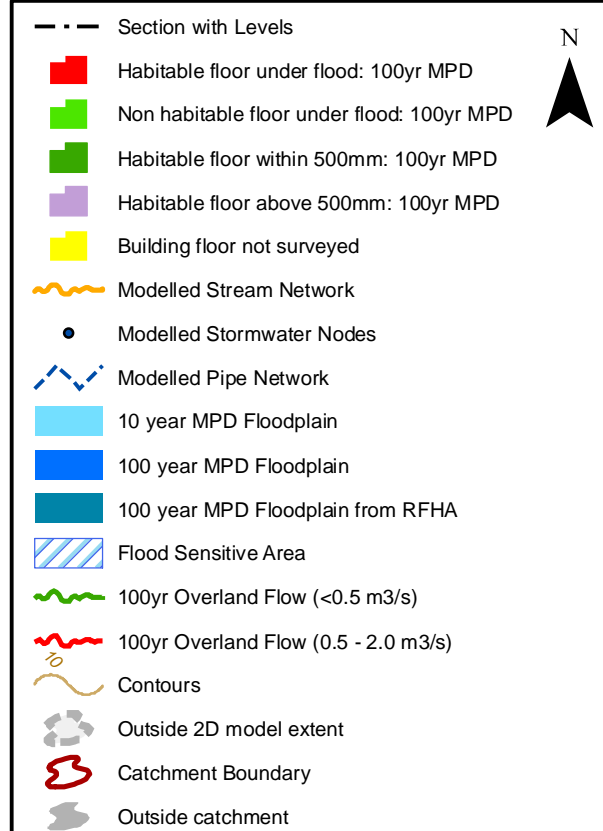
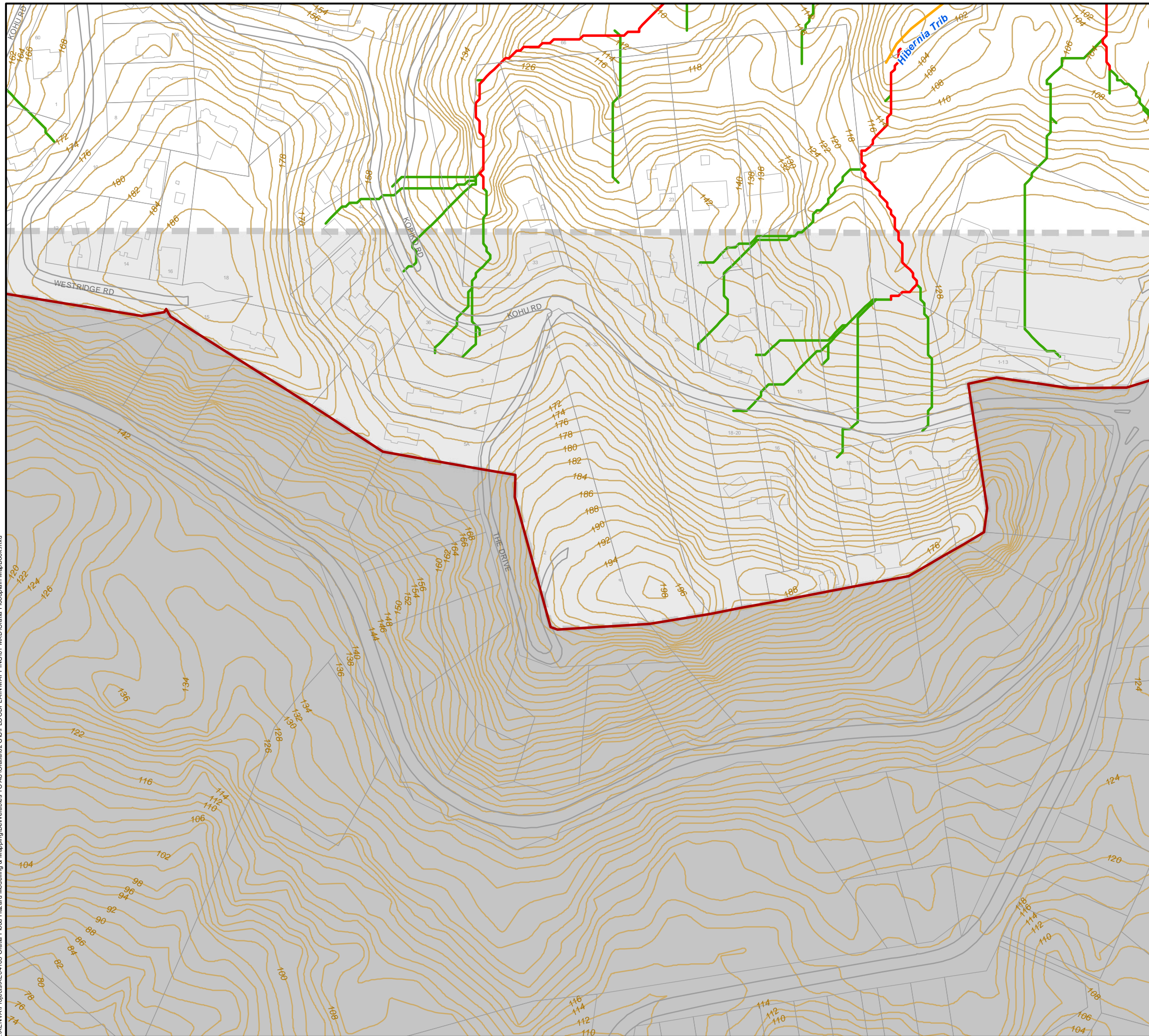
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SYSTEM PERFORMANCE ASSESSMENT

Sheet 14 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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Date 6/05/2016 Drawn: KH  
 Version 0 Checked: NC

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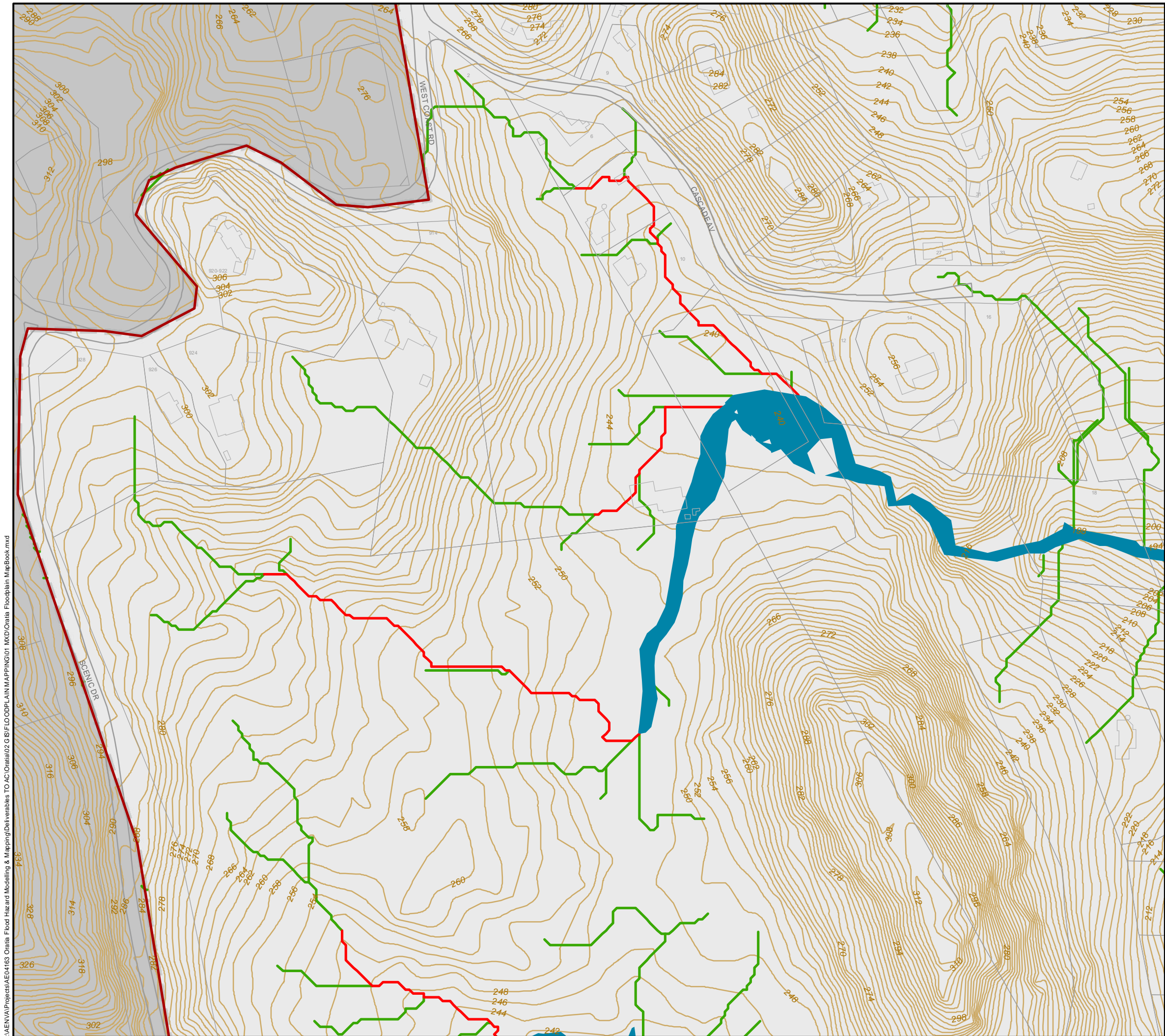
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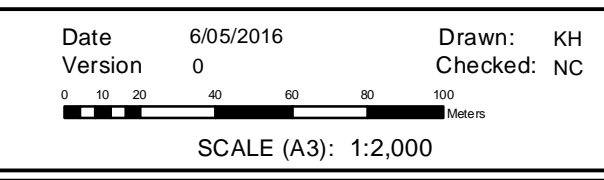
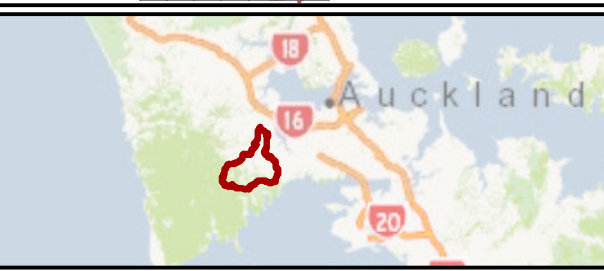
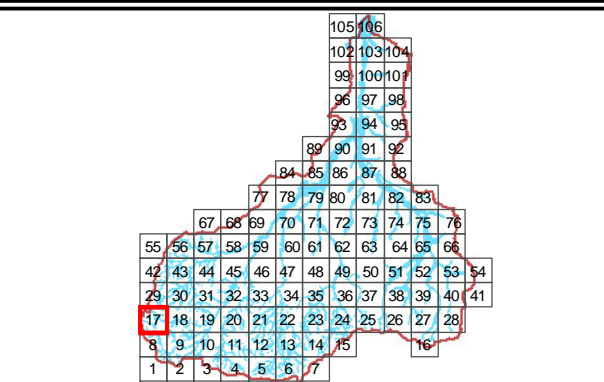
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Sheet 16 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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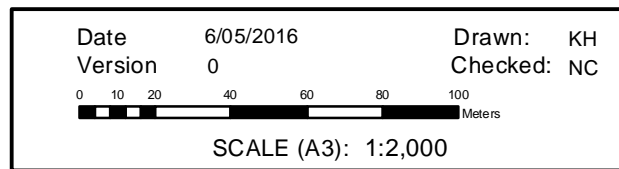
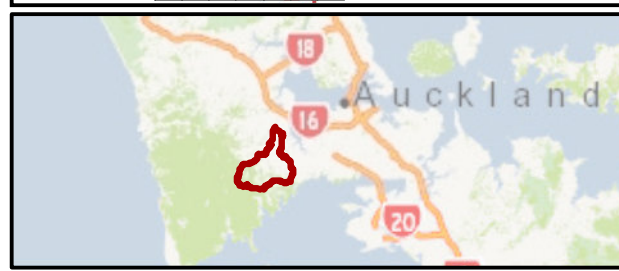
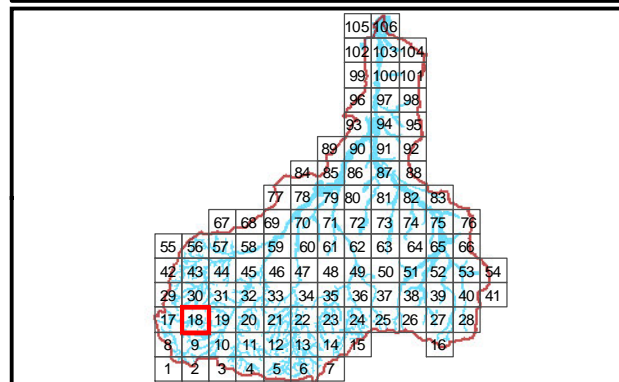
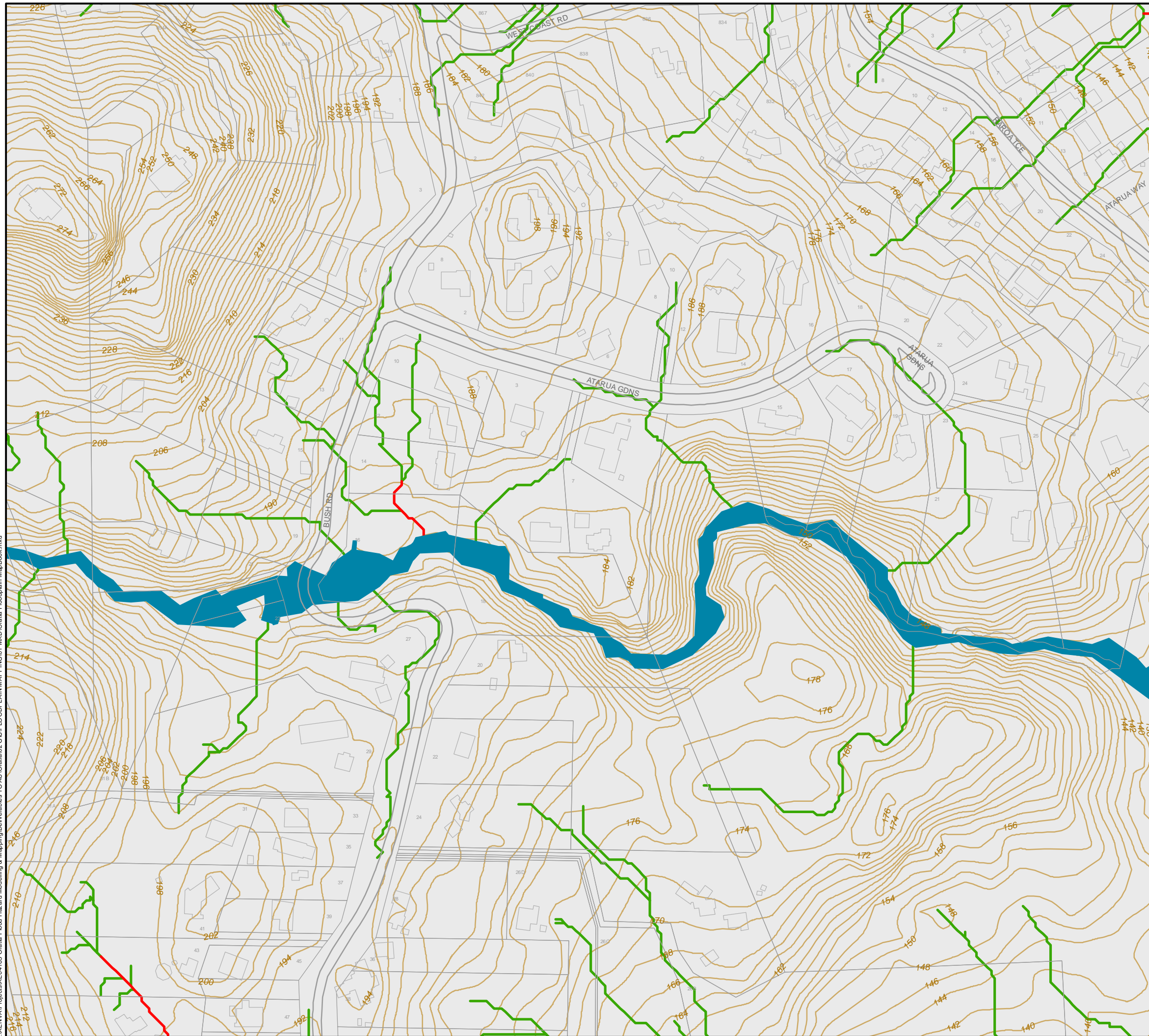
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Sheet 17 of 106

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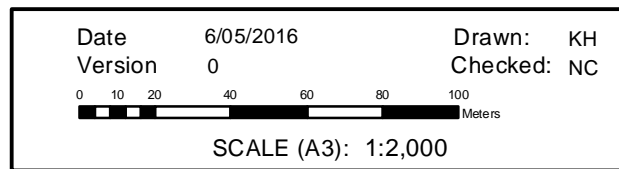
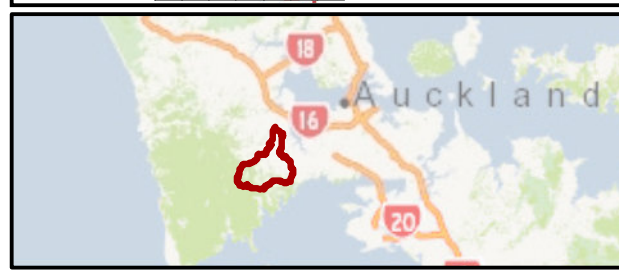
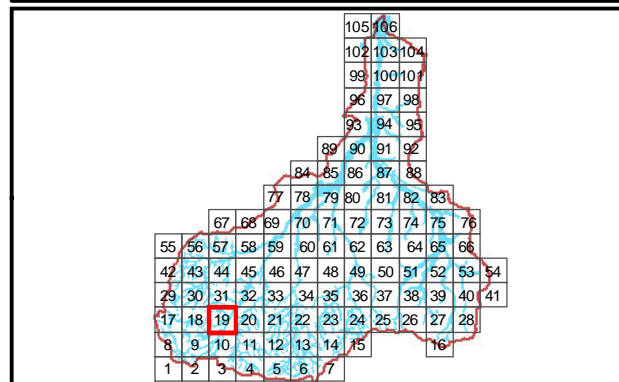
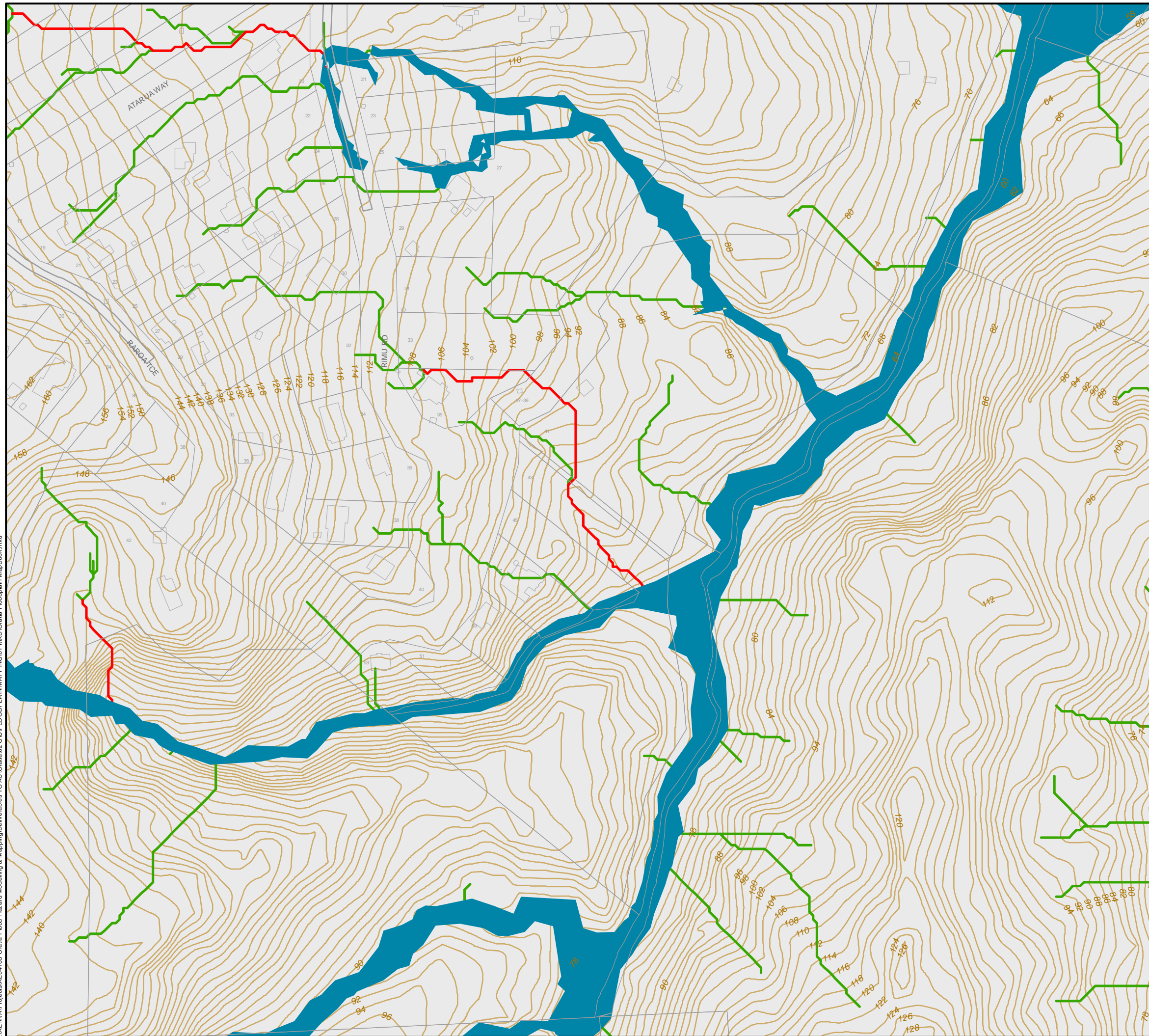
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Sheet 18 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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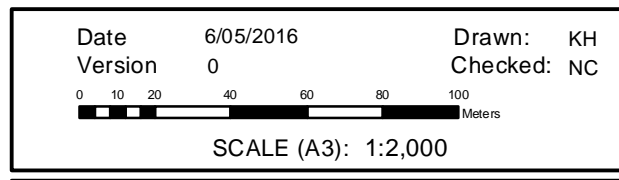
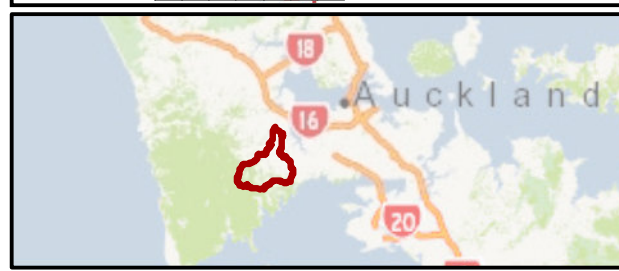
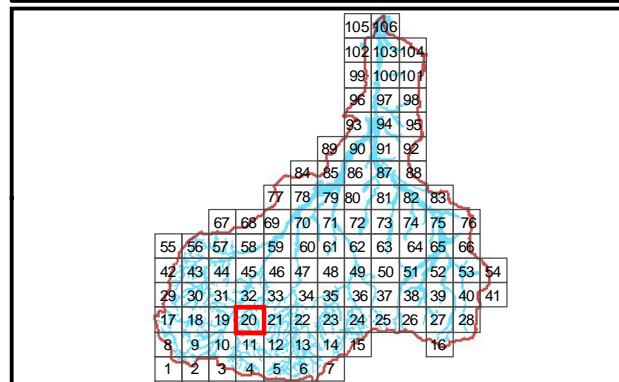
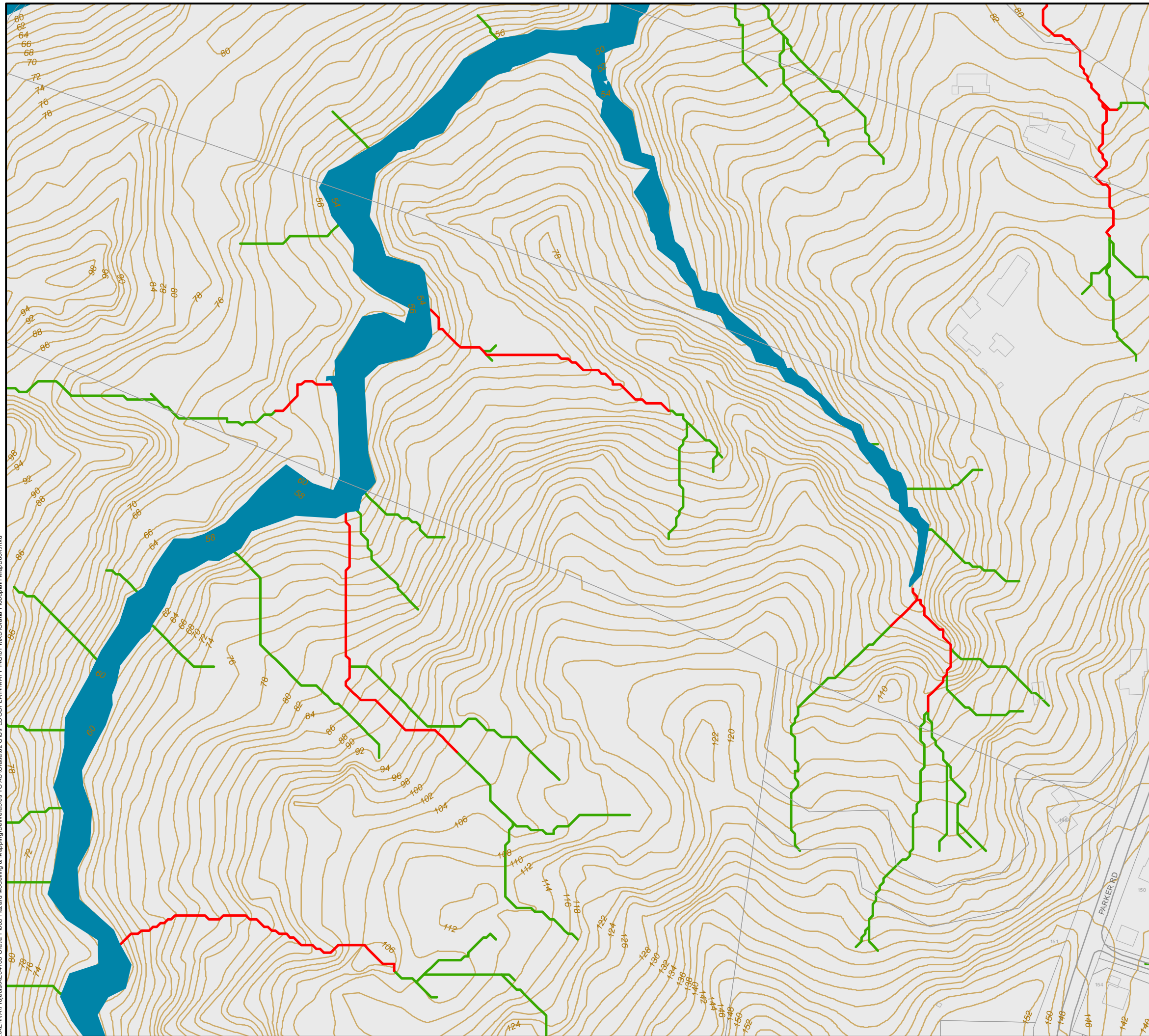
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Sheet 19 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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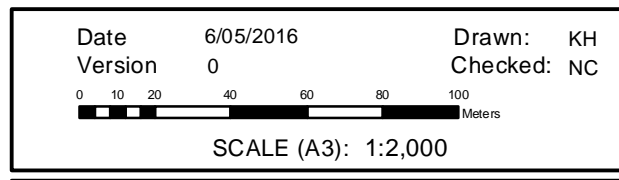
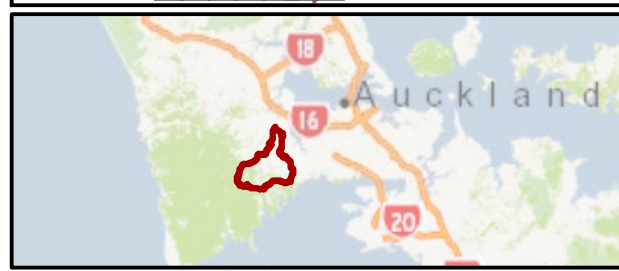
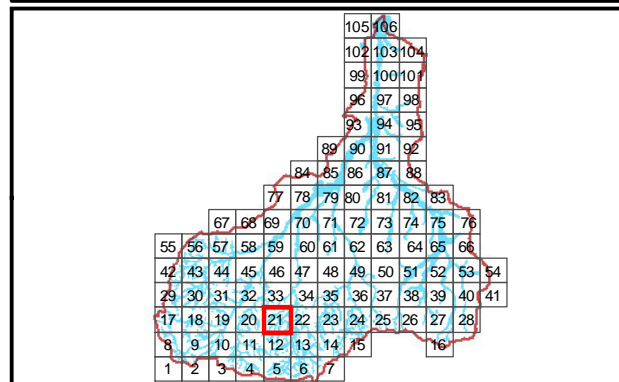
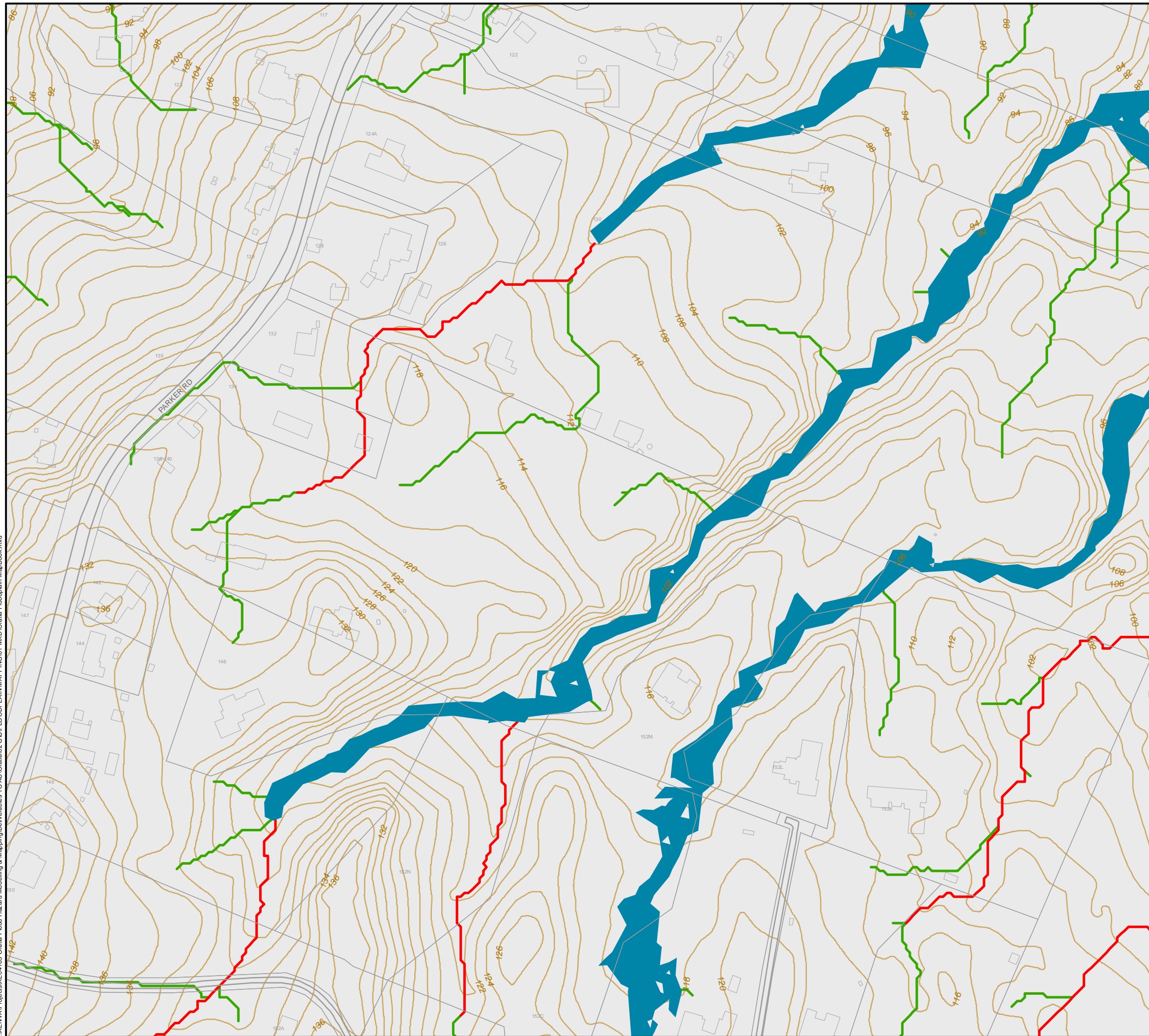
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Sheet 20 of 106

Figure H.1    Floodplain Map (MPD Scenario)

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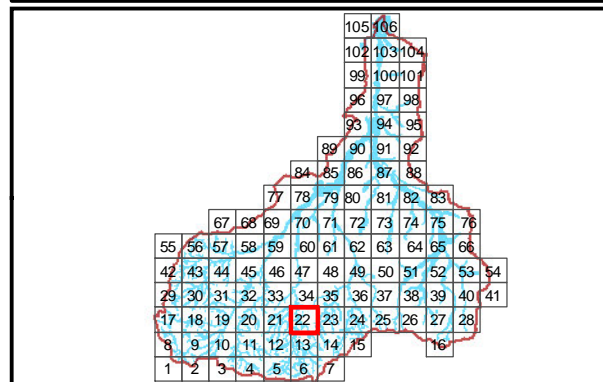
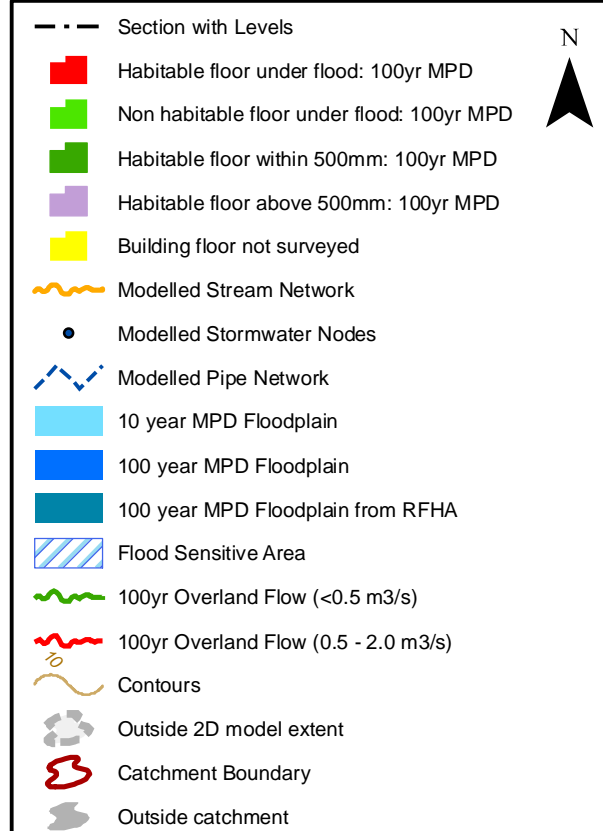
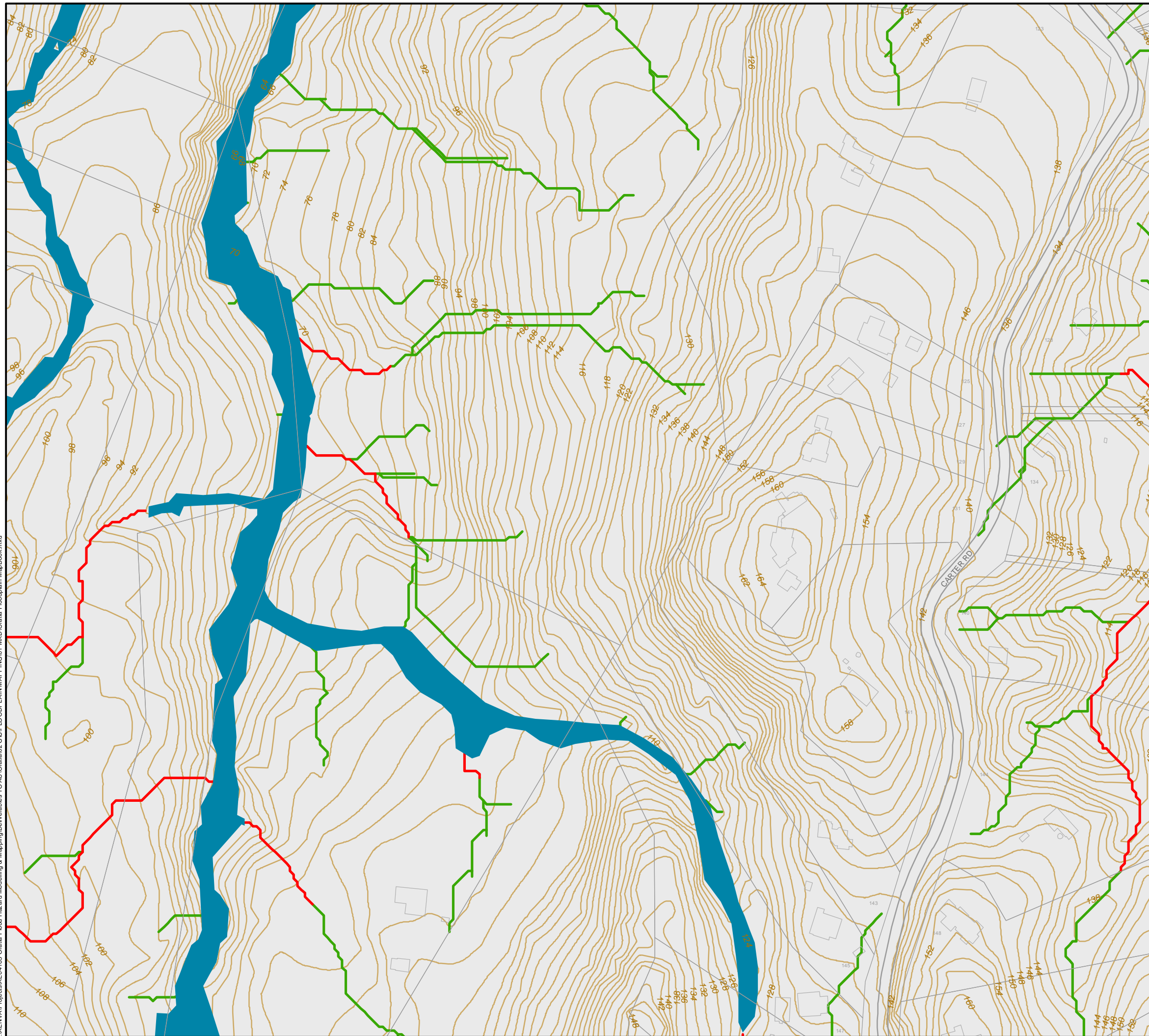
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Sheet 21 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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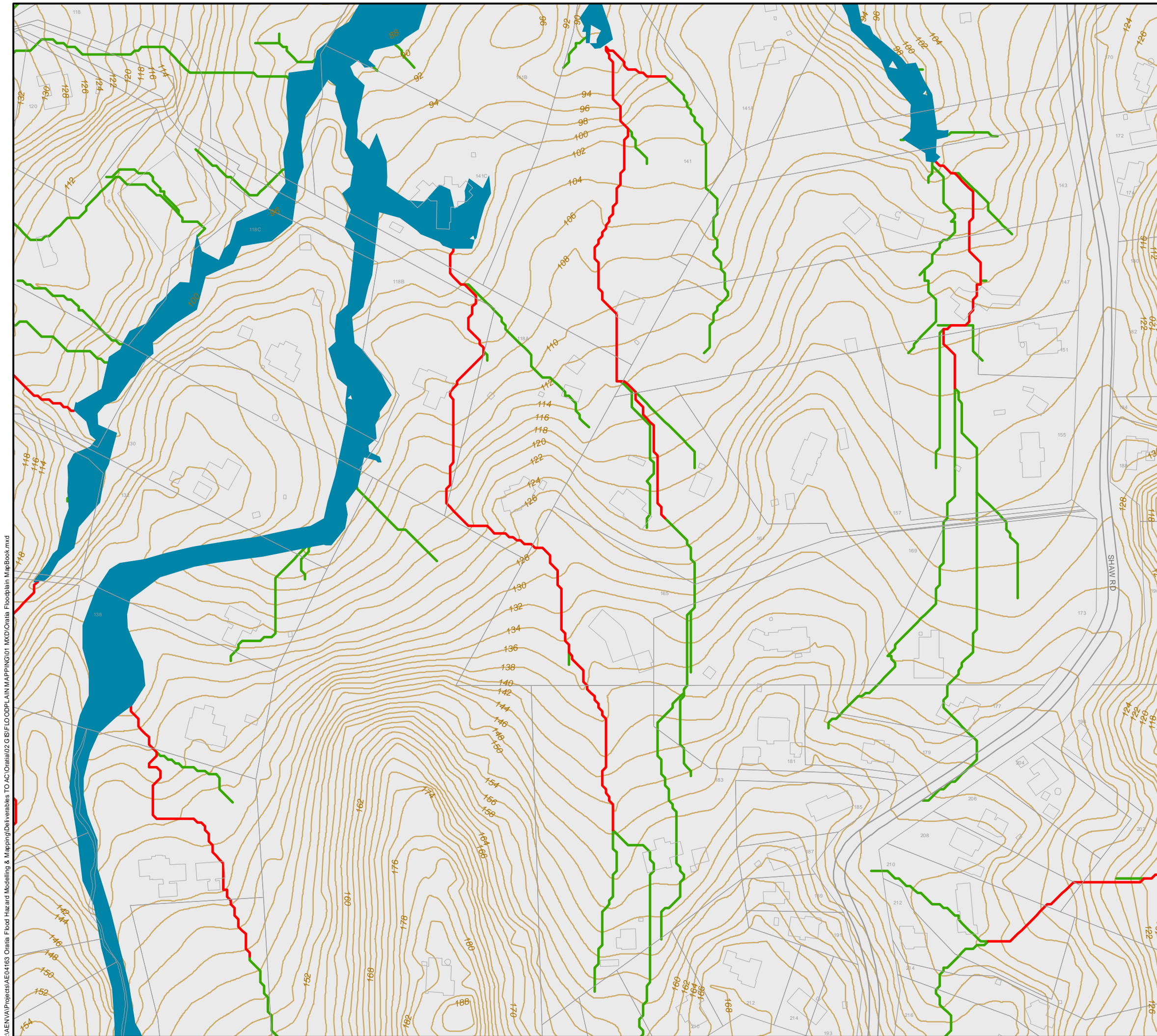
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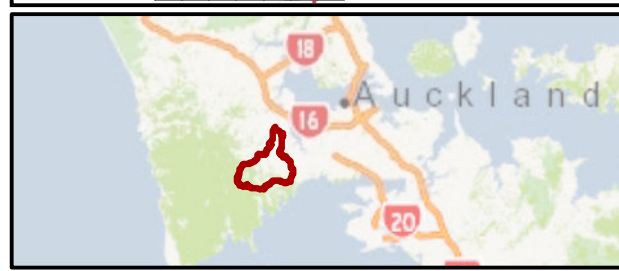
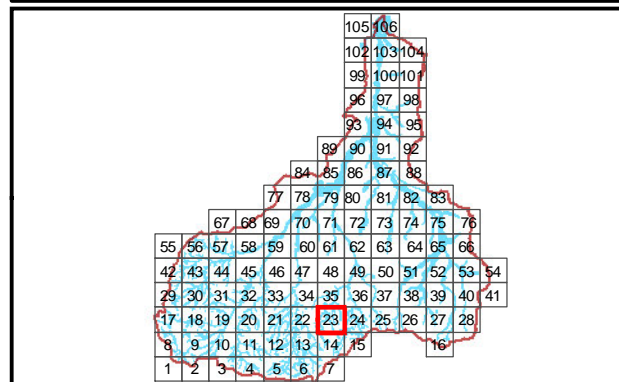
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Sheet 22 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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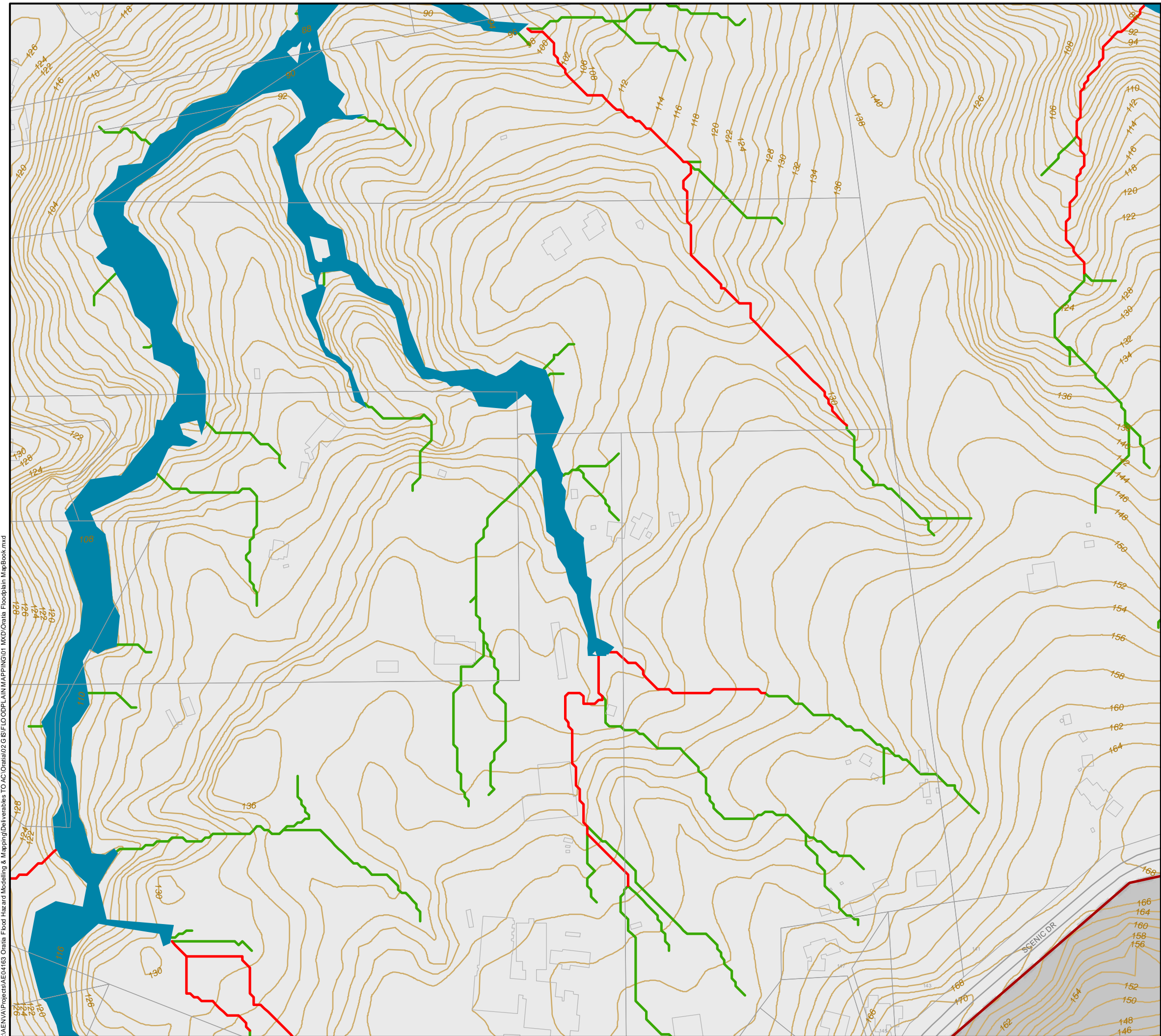
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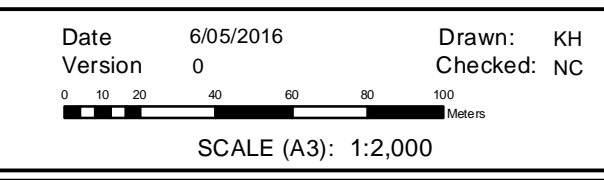
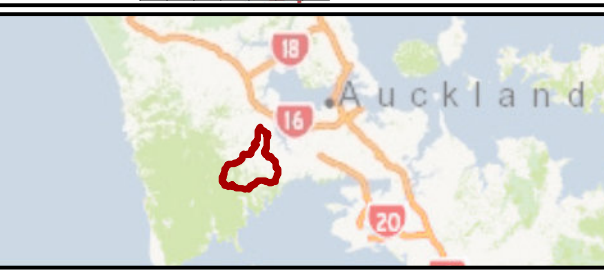
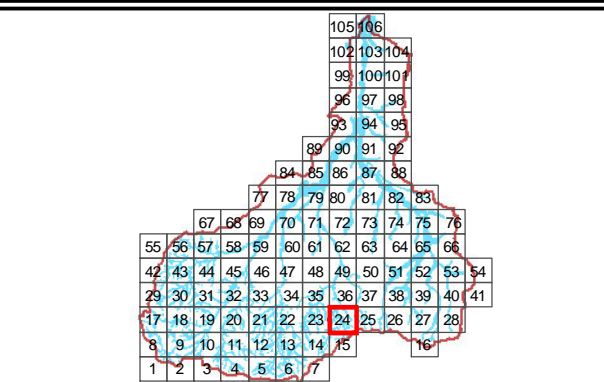
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Sheet 23 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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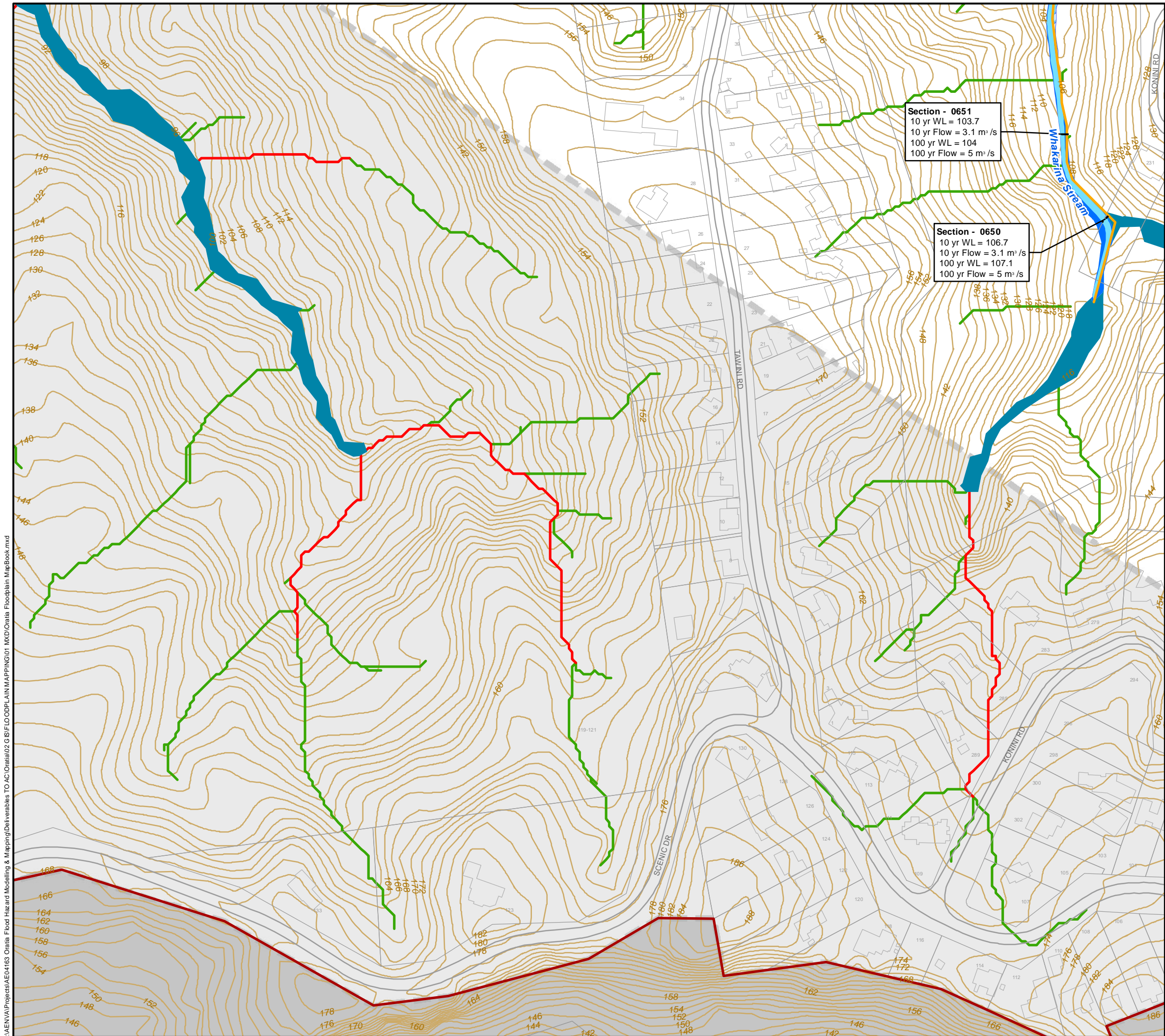


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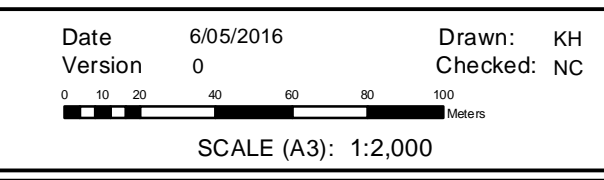
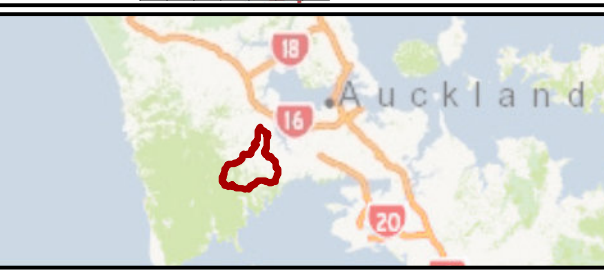
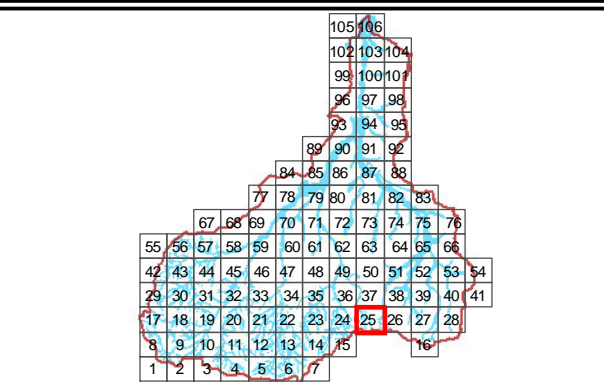
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Sheet 24 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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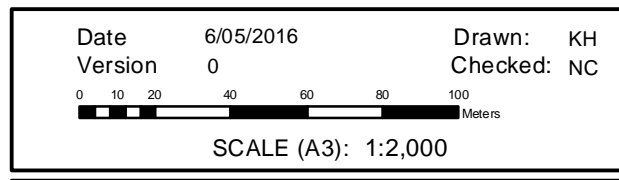
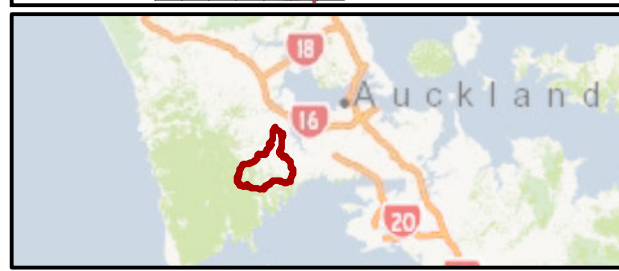
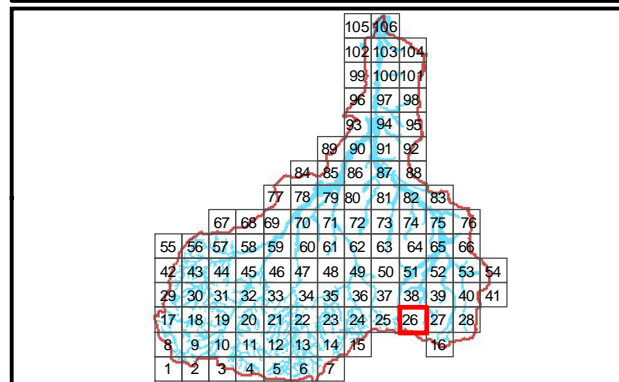
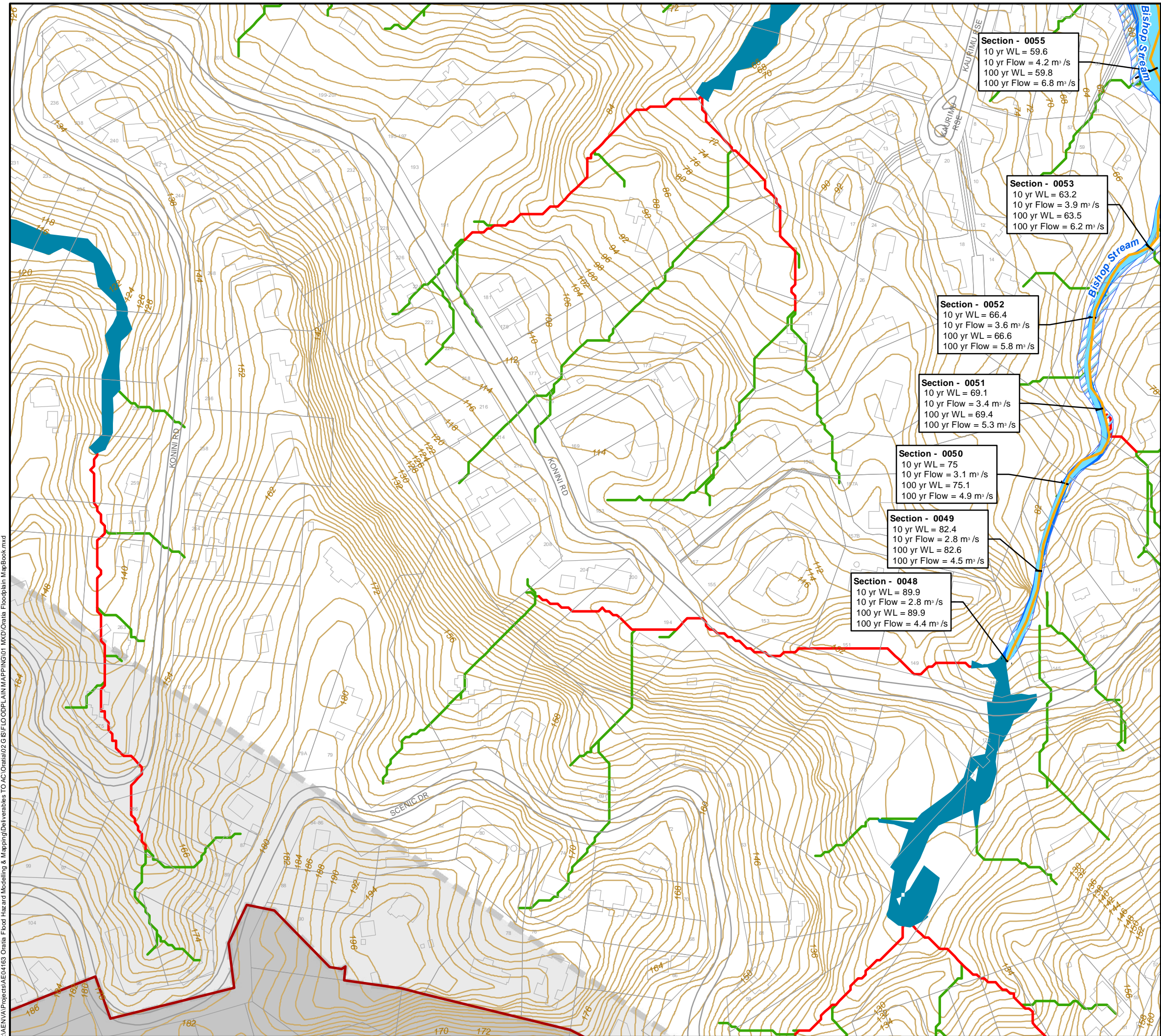


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Sheet 25 of 106

Figure H.1 Floodplain Map (MPD Scenario)



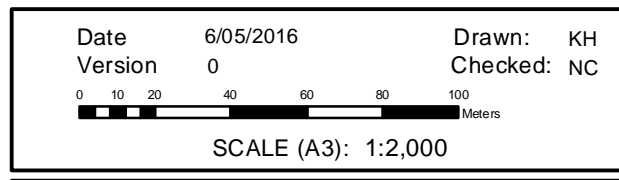
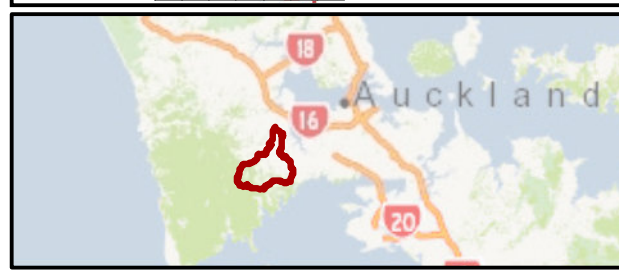
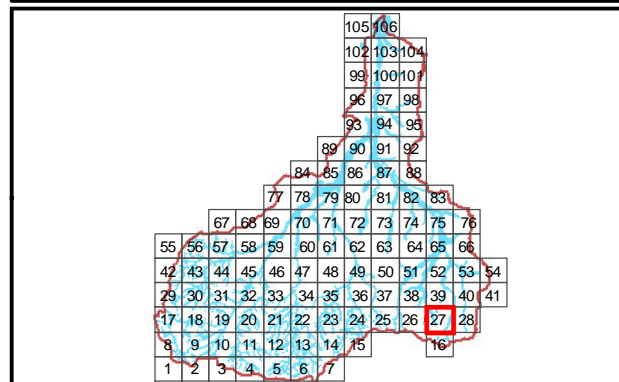
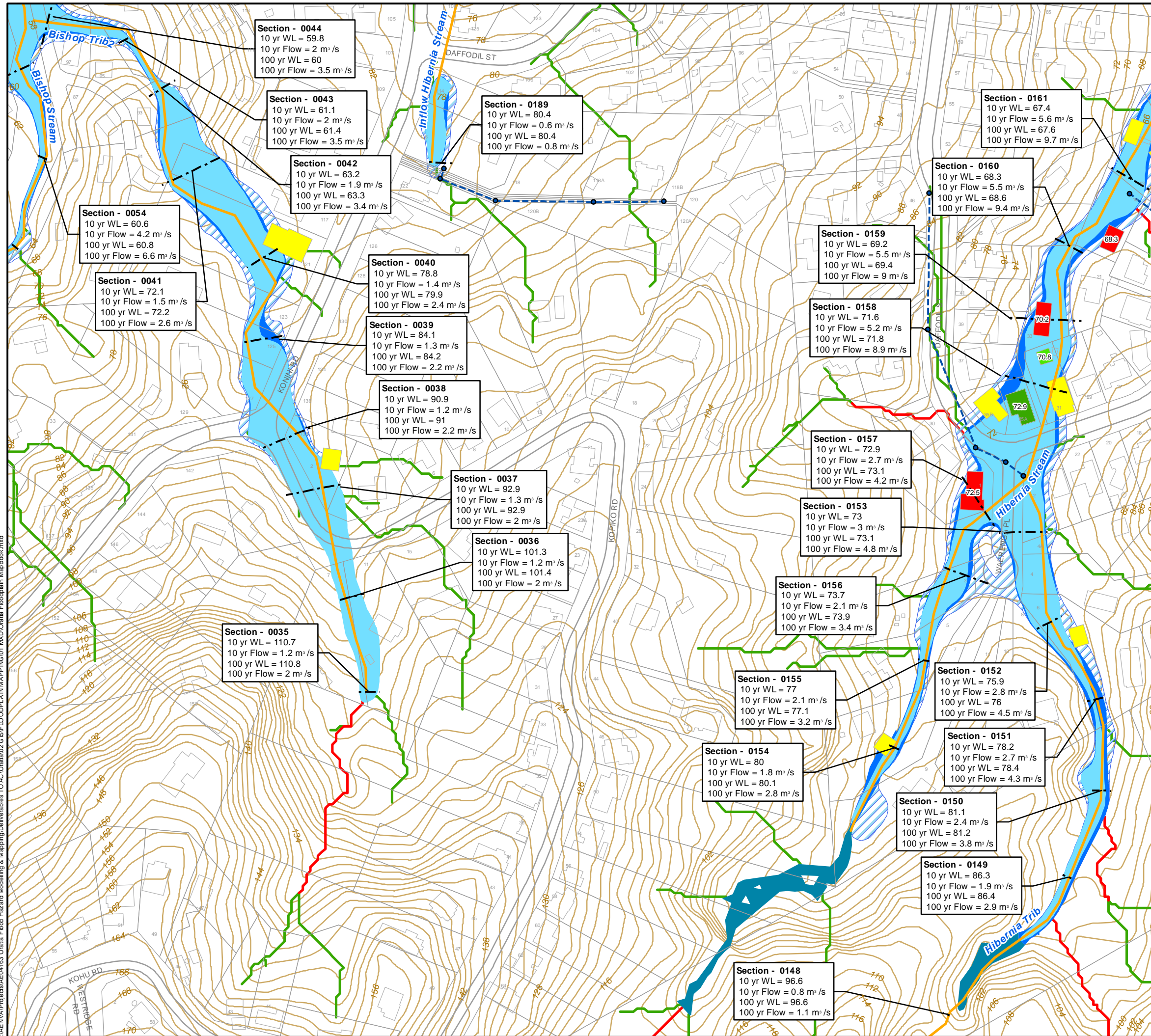
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Sheet 26 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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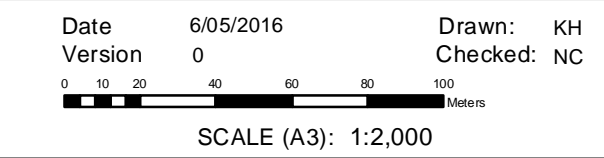
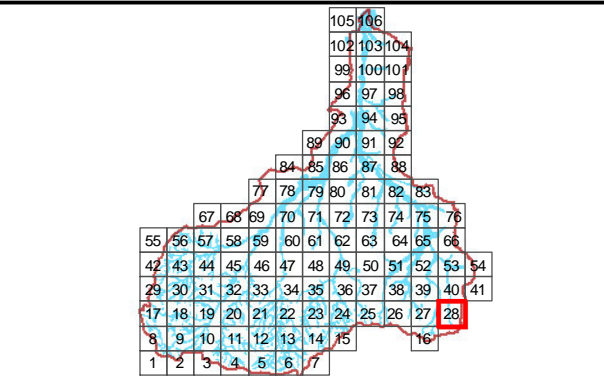
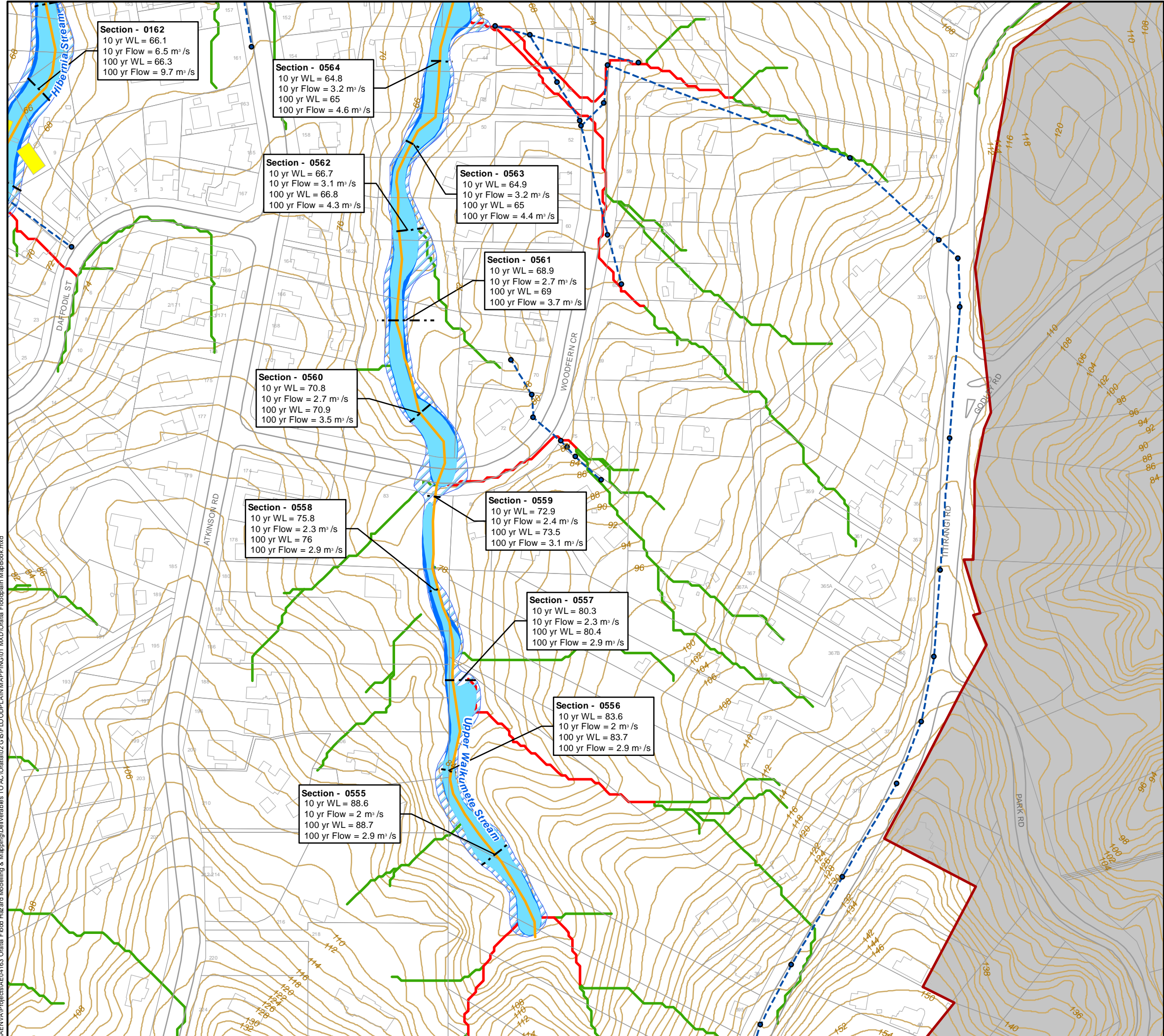
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Sheet 27 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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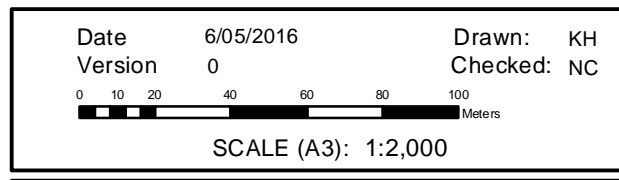
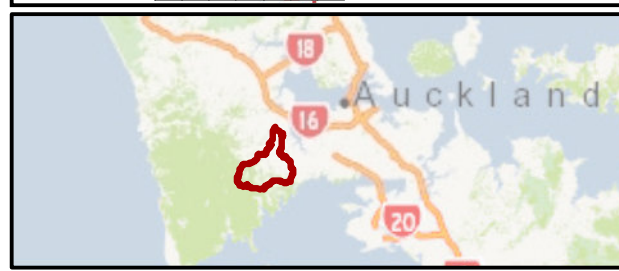
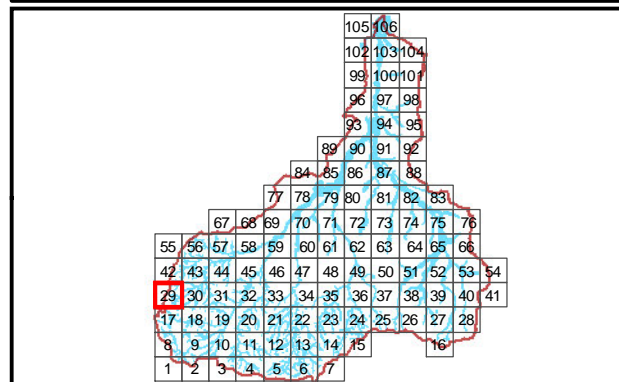
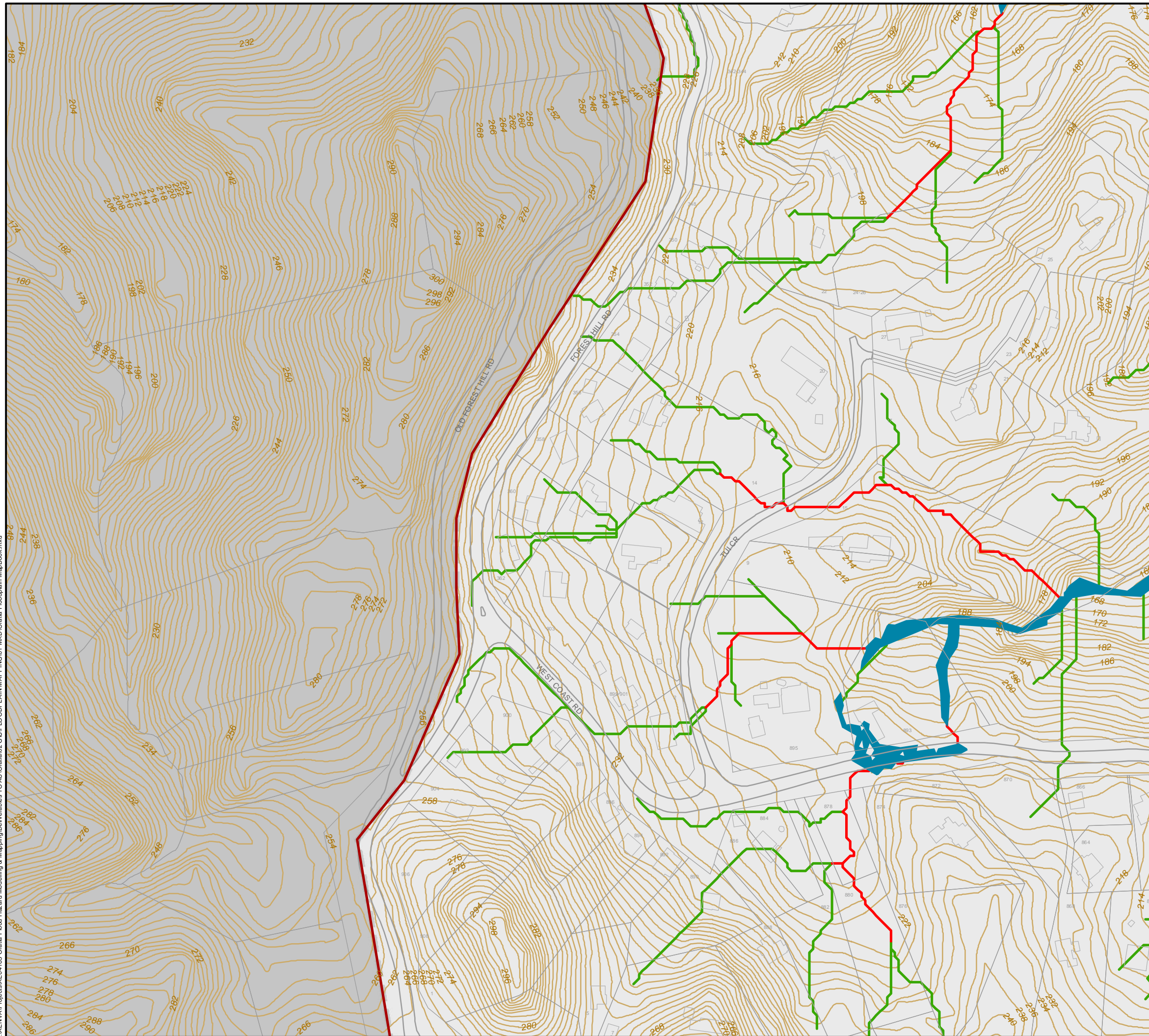
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Sheet 28 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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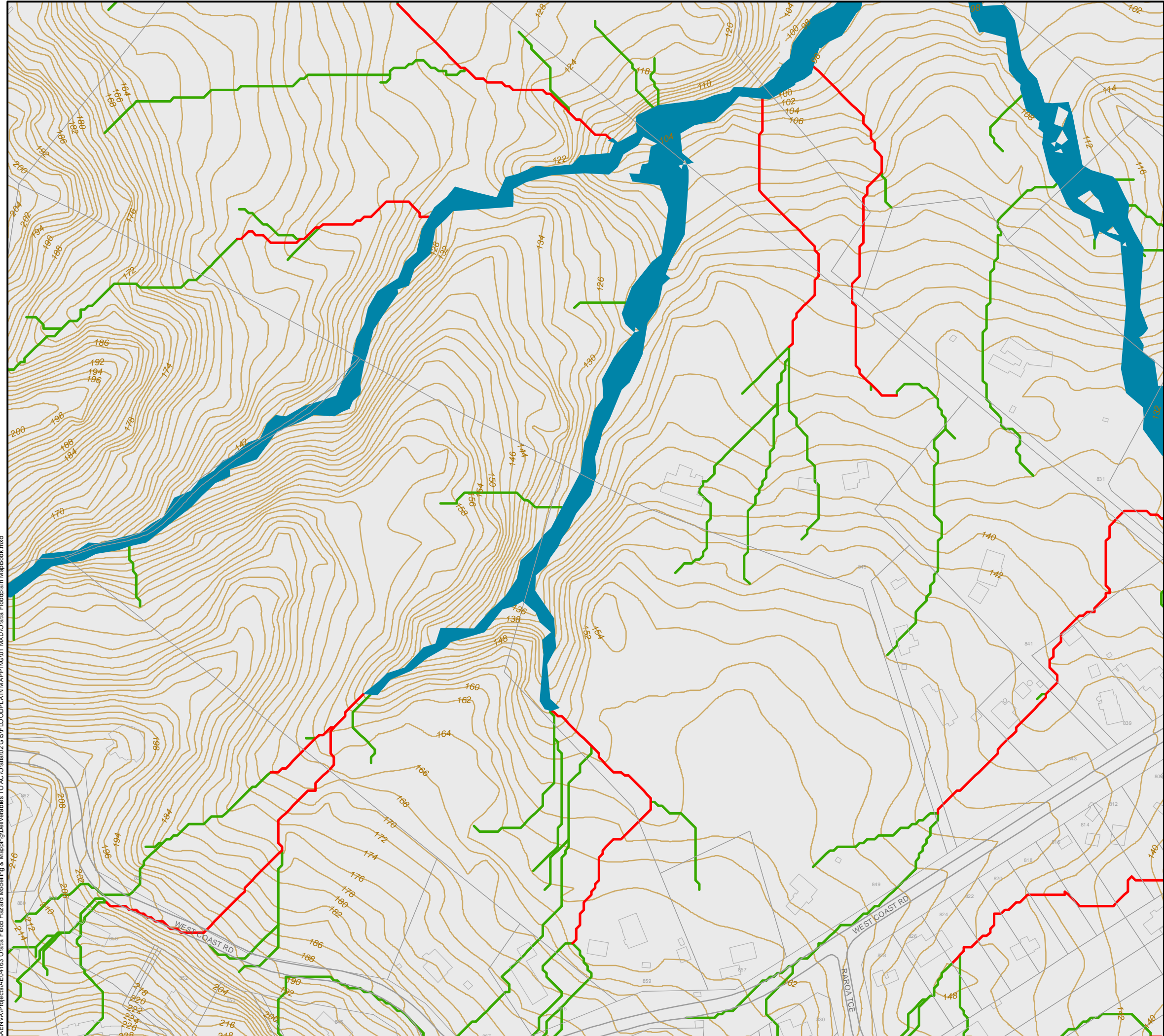


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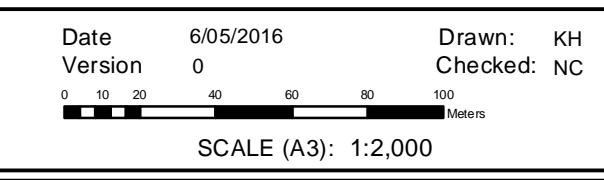
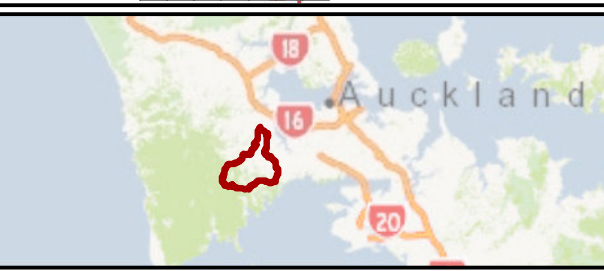
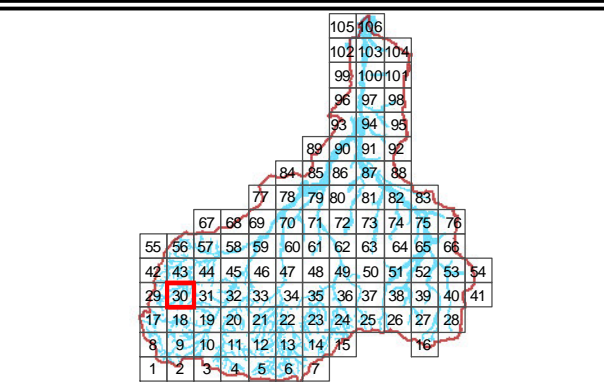
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Sheet 29 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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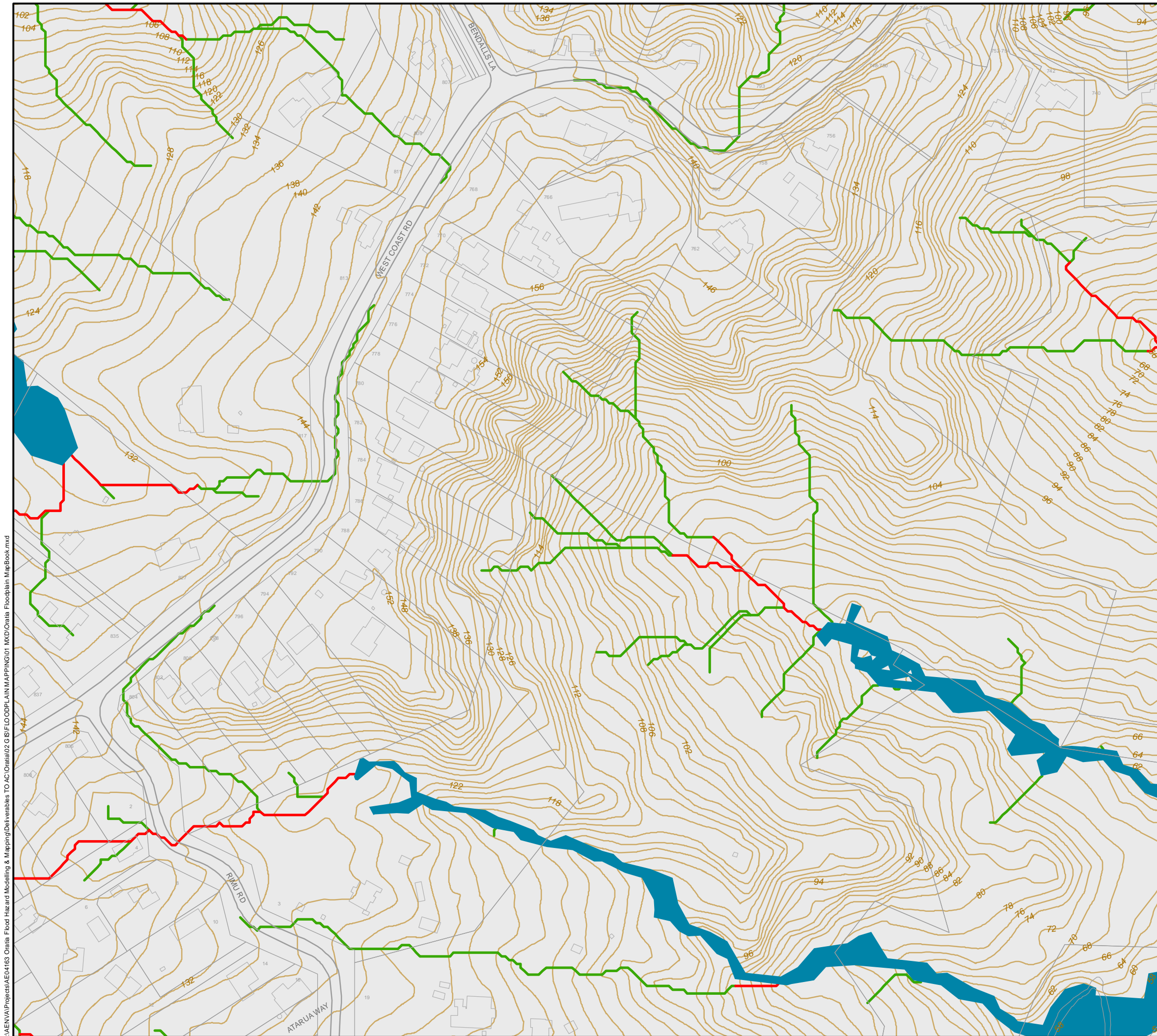


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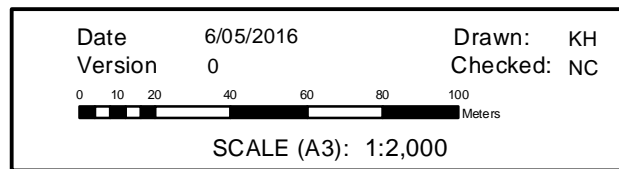
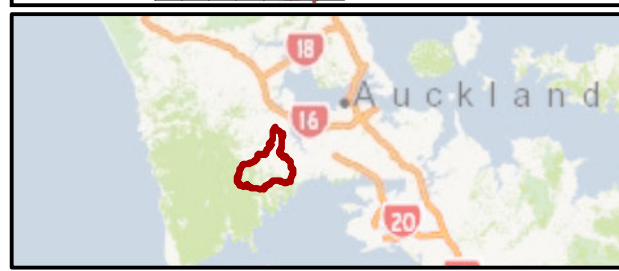
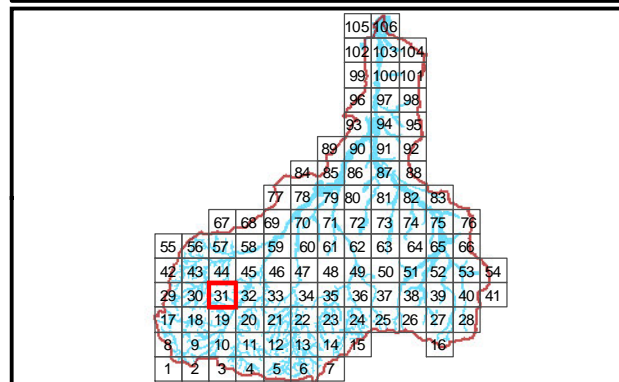
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Sheet 30 of 106

Figure H.1 Floodplain Map (MPD Scenario)



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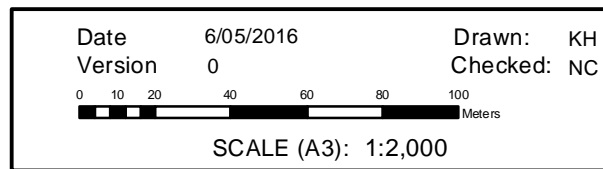
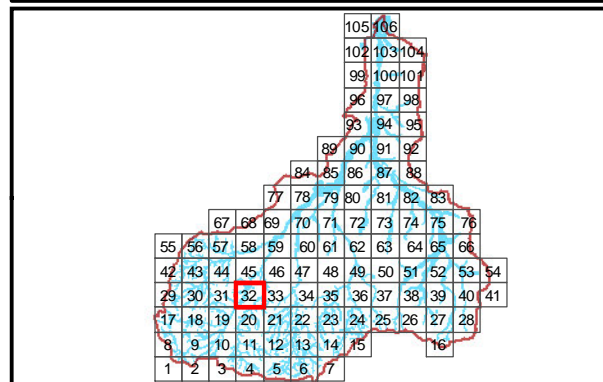
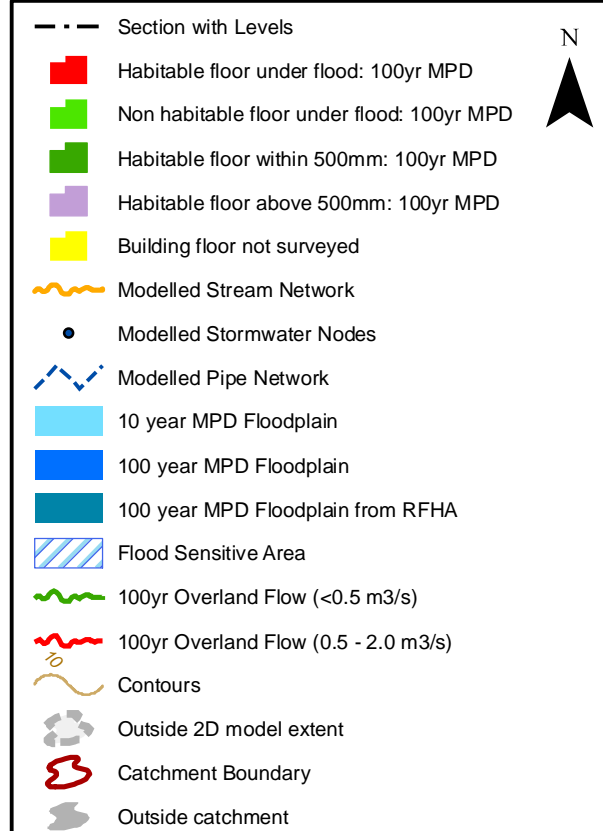
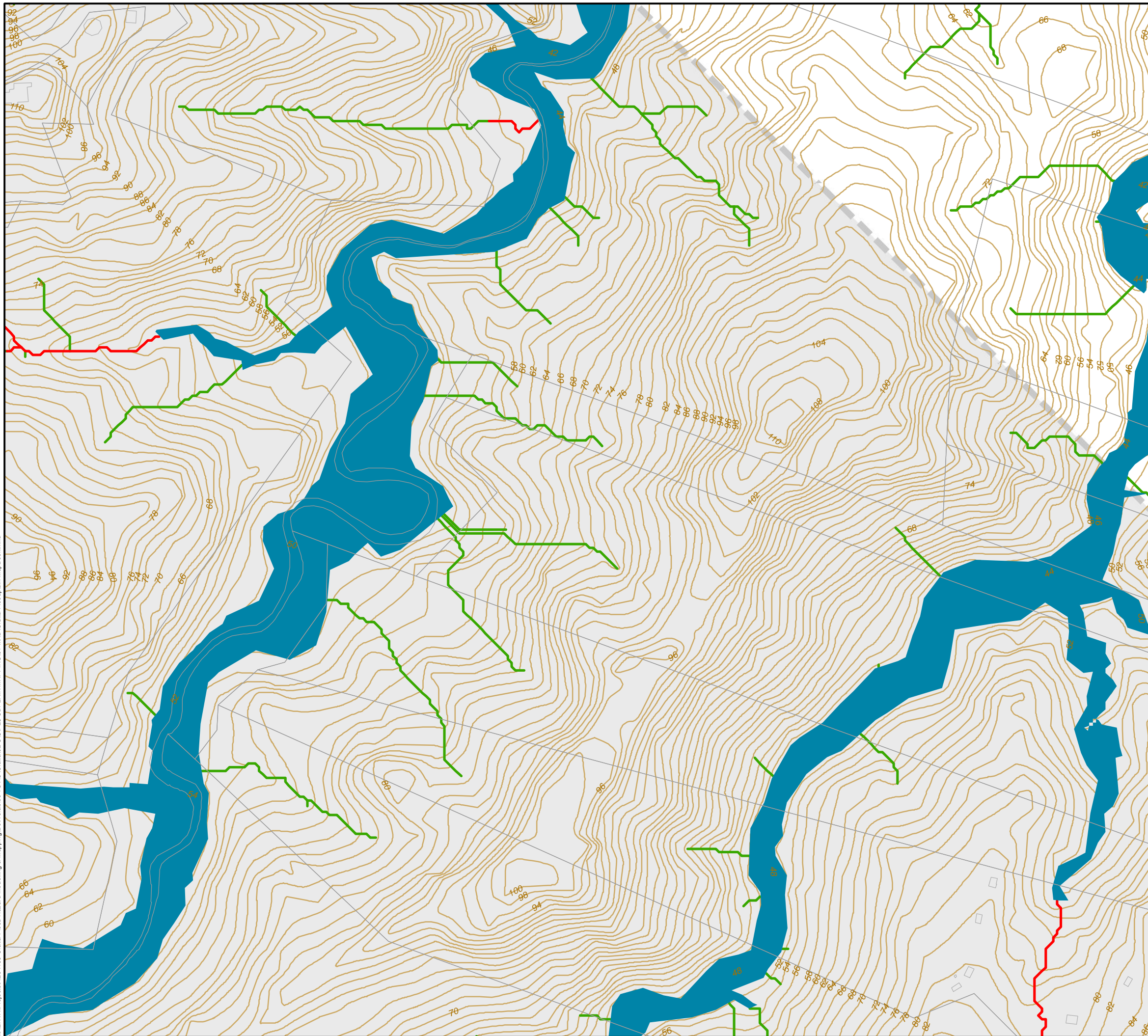
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Sheet 31 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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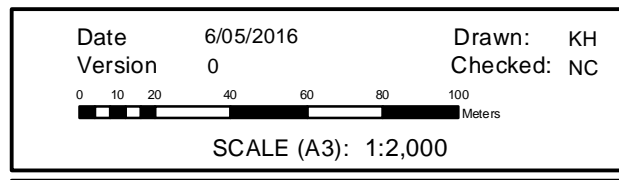
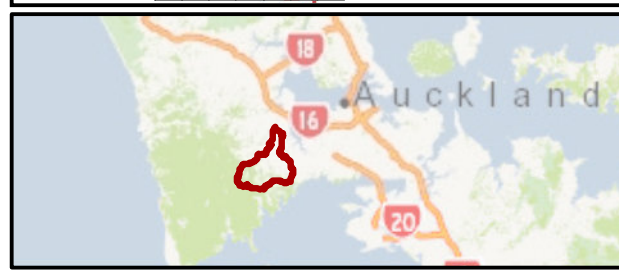
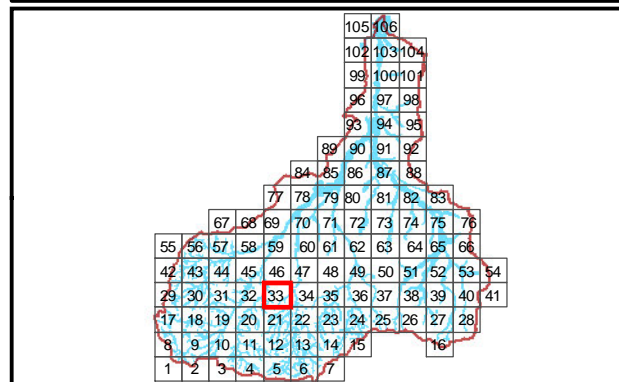
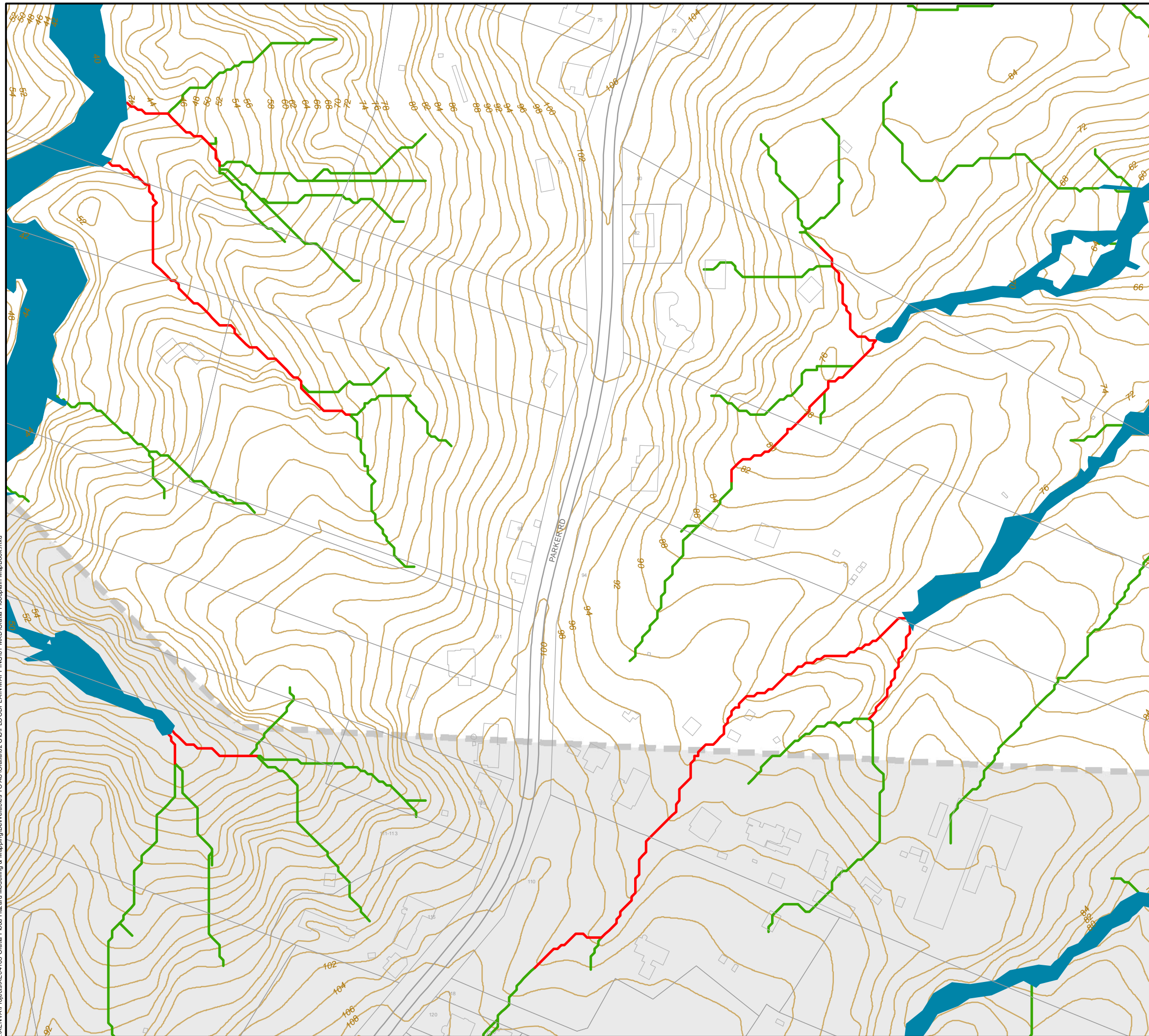
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Sheet 32 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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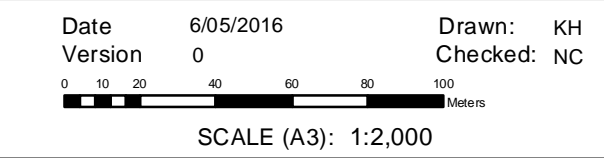
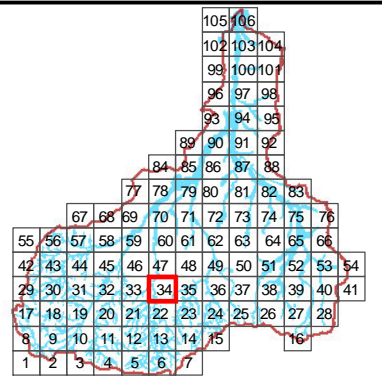
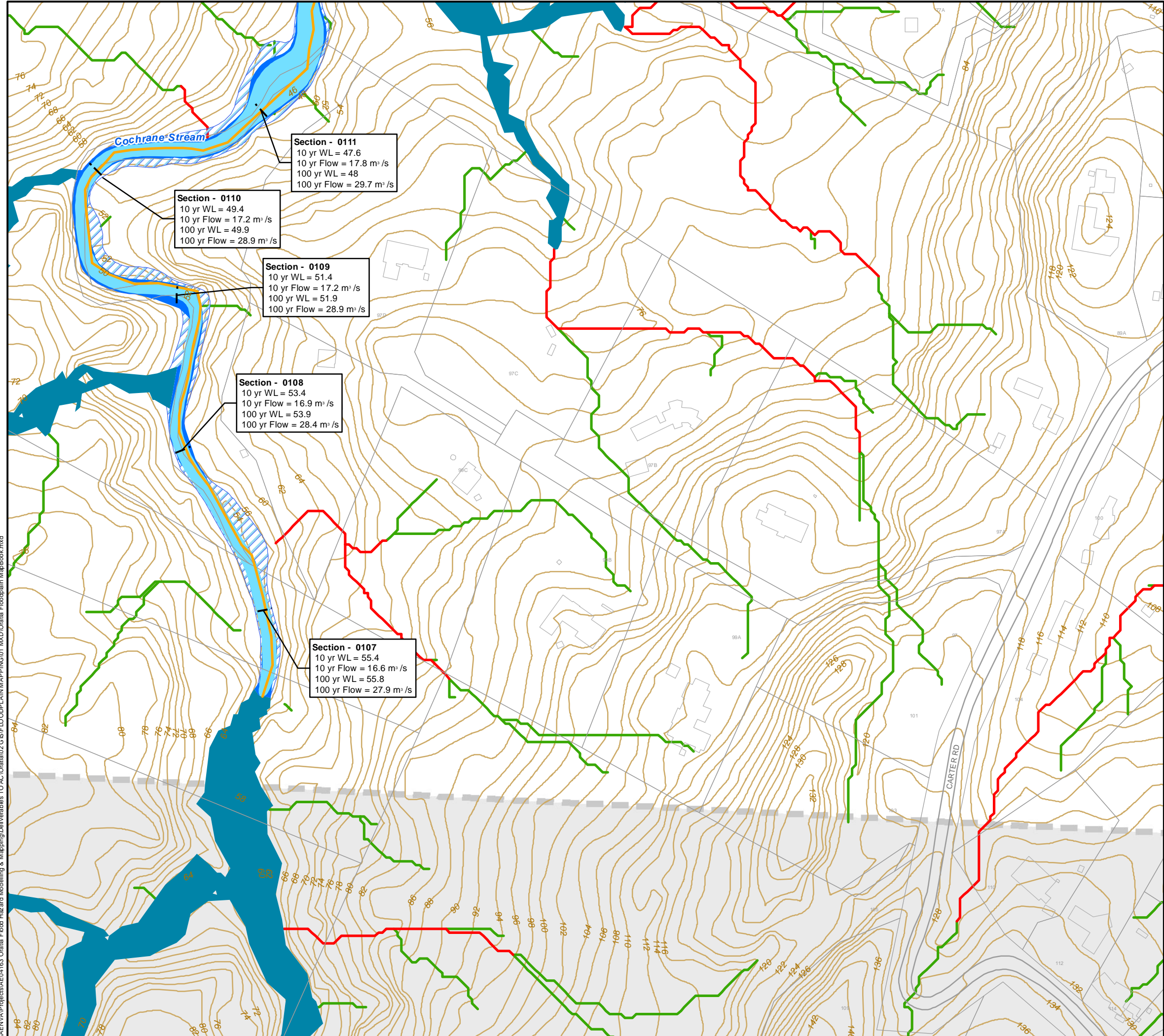


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Sheet 33 of 106

Figure H.1 Floodplain Map (MPD Scenario)



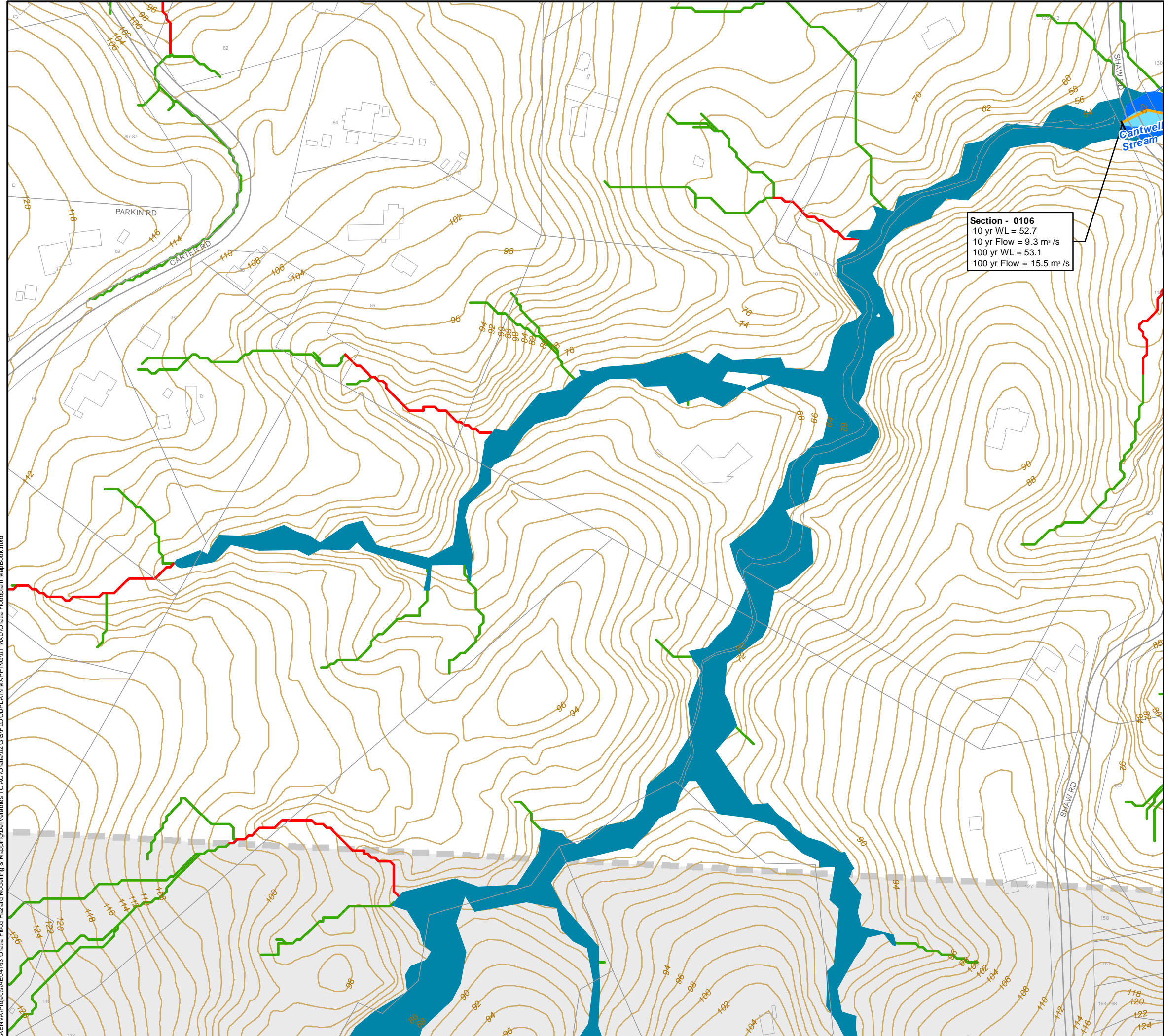
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Sheet 34 of 106

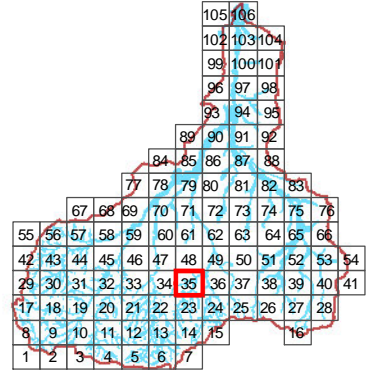
Figure H.1 Floodplain Map (MPD Scenario)

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**Section - 0106**  
 10 yr WL = 52.7  
 10 yr Flow = 9.3 m<sup>3</sup>/s  
 100 yr WL = 53.1  
 100 yr Flow = 15.5 m<sup>3</sup>/s

- Section with Levels
- Habitable floor under flood: 100yr MPD
- Non habitable floor under flood: 100yr MPD
- Habitable floor within 500mm: 100yr MPD
- Habitable floor above 500mm: 100yr MPD
- Building floor not surveyed
- ~ Modelled Stream Network
- Modelled Stormwater Nodes
- - - Modelled Pipe Network
- 10 year MPD Floodplain
- 100 year MPD Floodplain
- 100 year MPD Floodplain from RFHA
- Flood Sensitive Area
- ~ 100yr Overland Flow (<0.5 m<sup>3</sup>/s)
- ~ 100yr Overland Flow (0.5 - 2.0 m<sup>3</sup>/s)
- ~ Contours
- Outside 2D model extent
- Catchment Boundary
- Outside catchment



Date: 6/05/2016  
 Version: 0  
 Drawn: KH  
 Checked: NC

0 10 20 40 60 80 100 Meters

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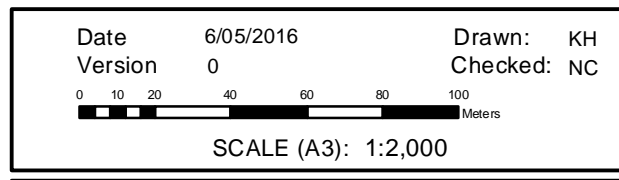
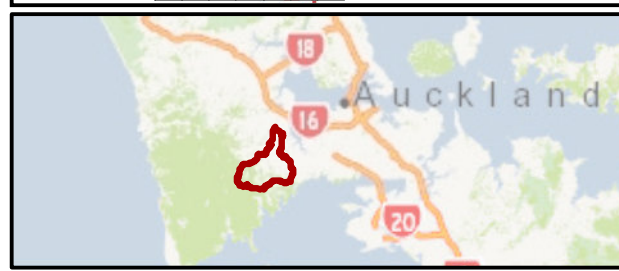
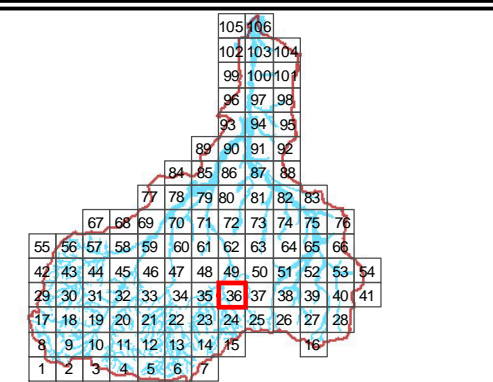
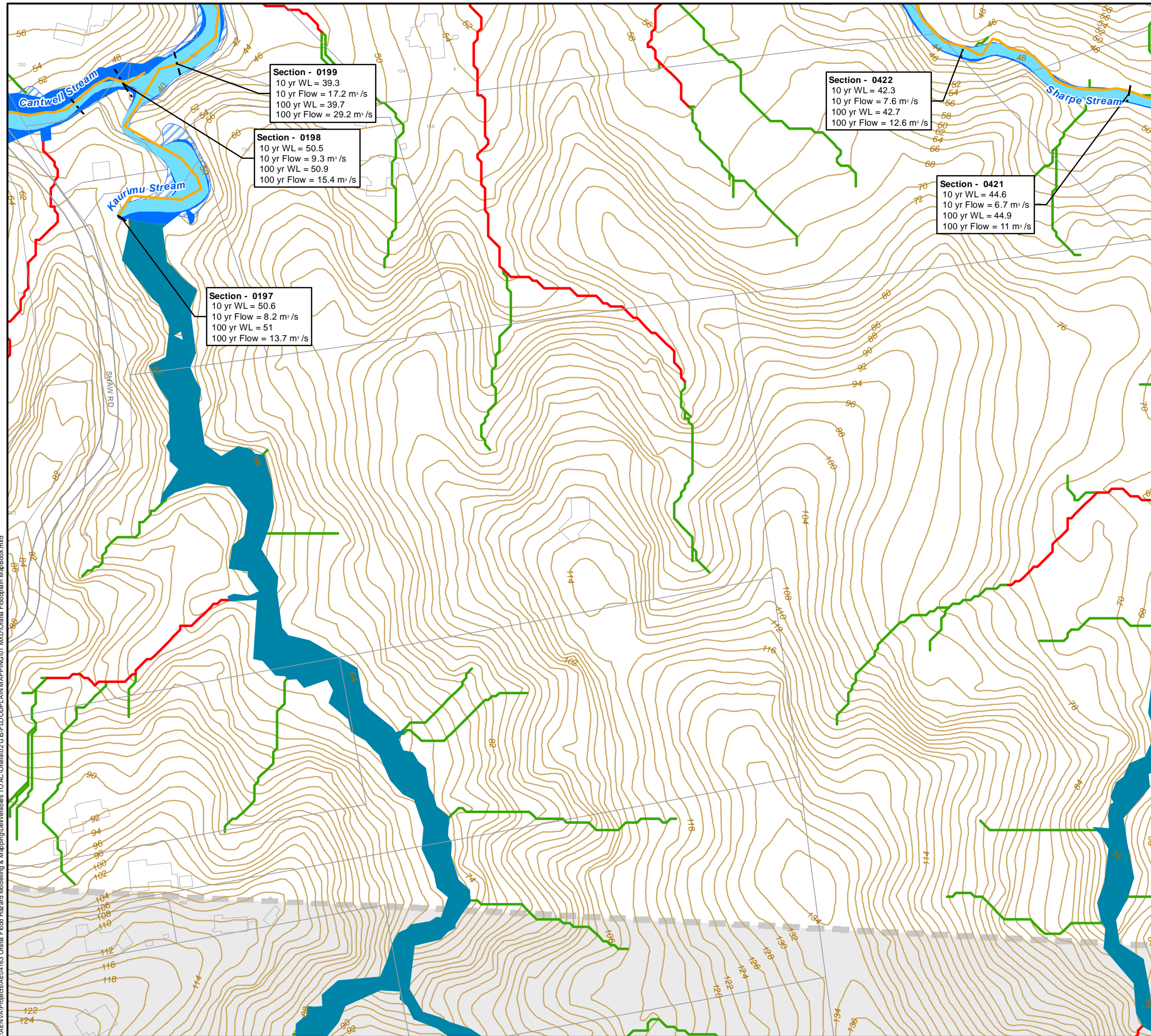
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Sheet 35 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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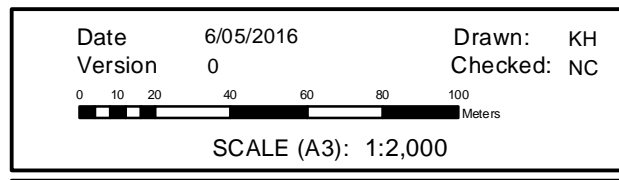
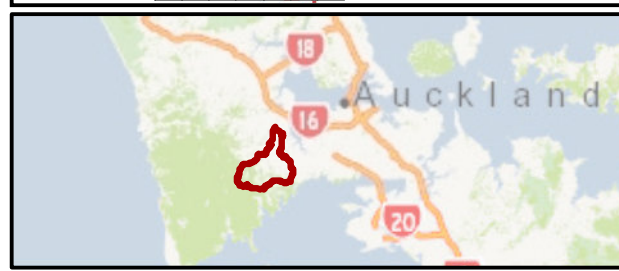
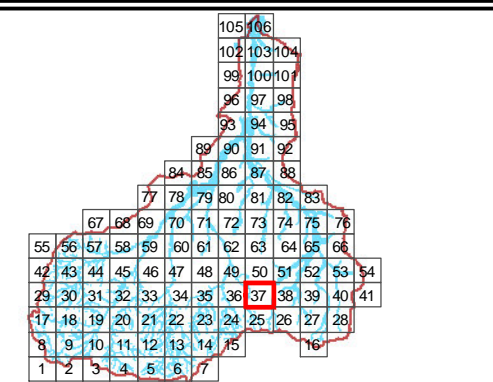
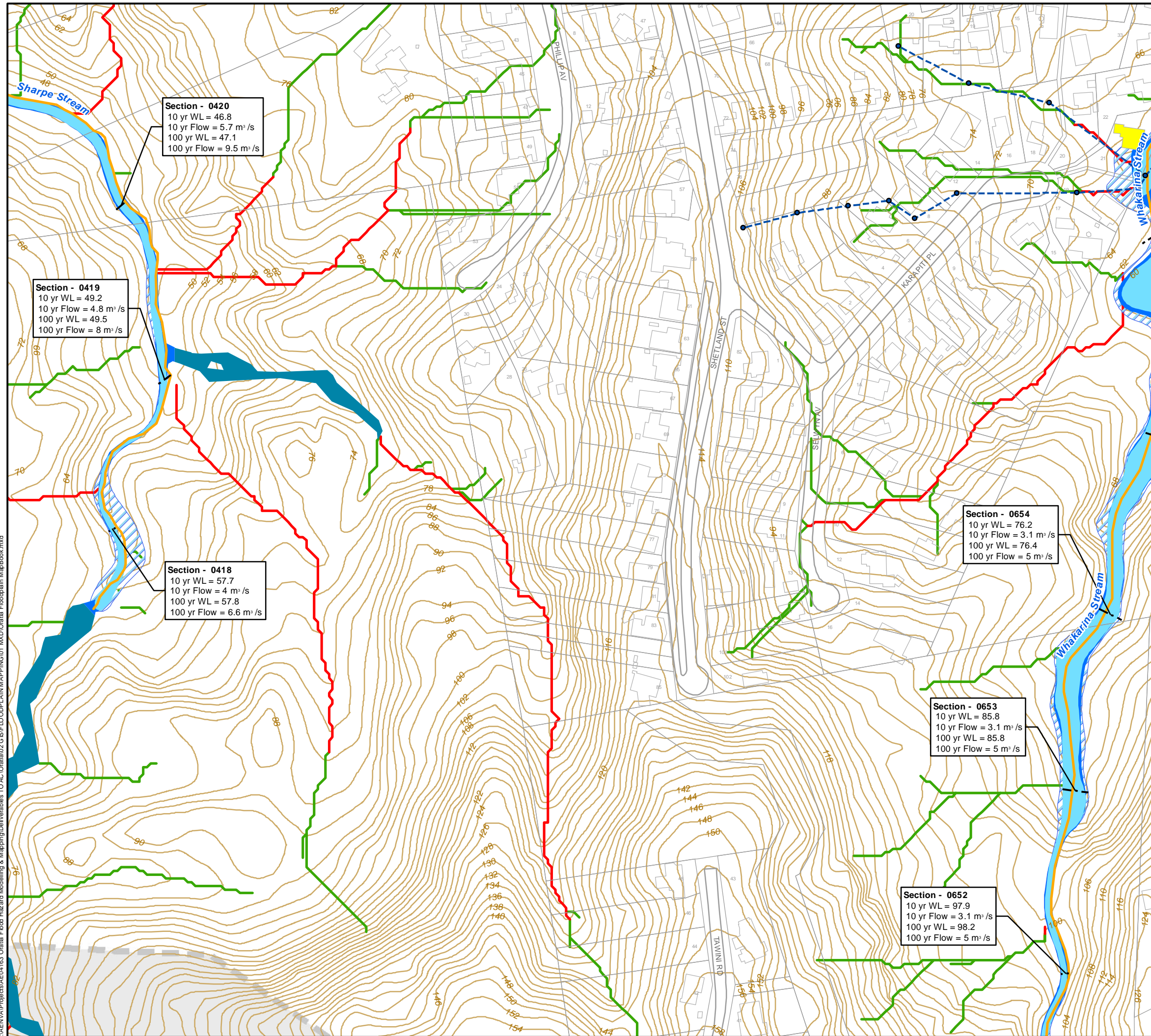
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Sheet 36 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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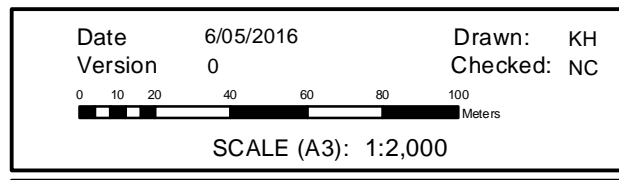
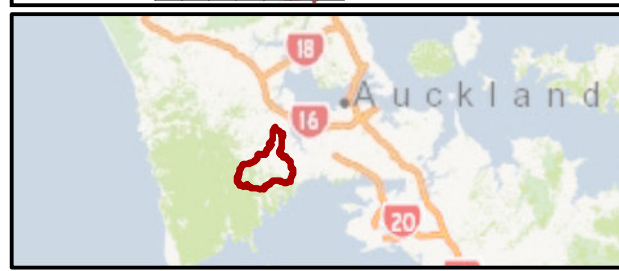
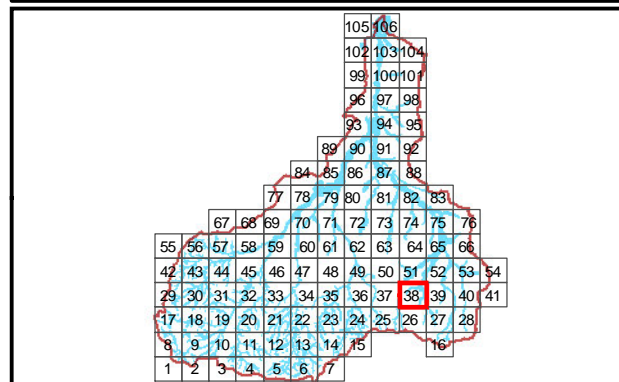
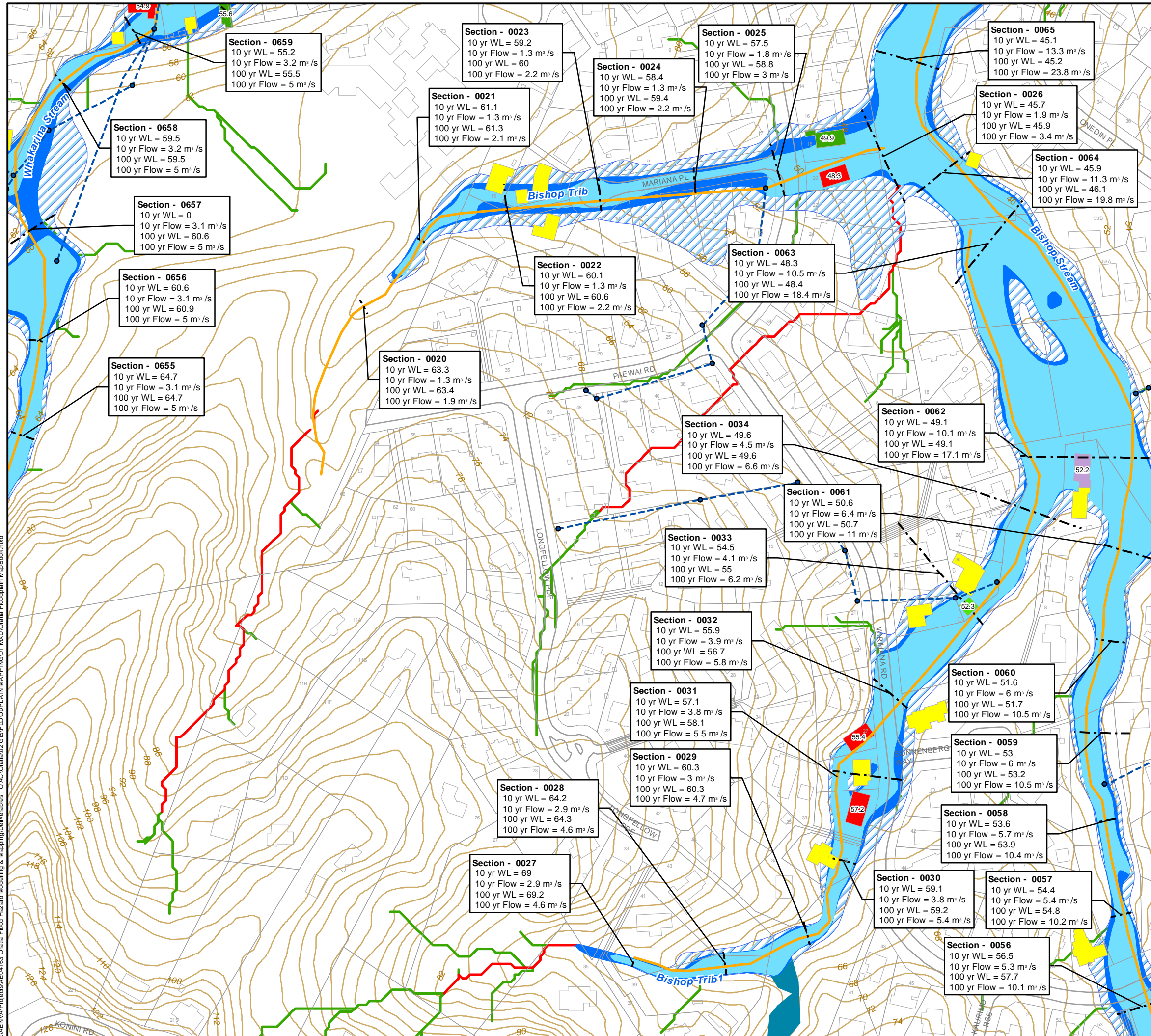
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Sheet 37 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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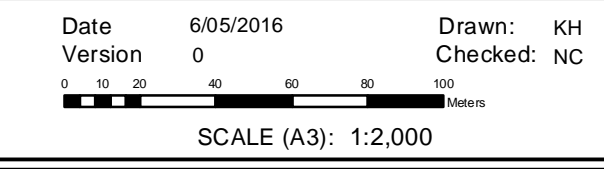
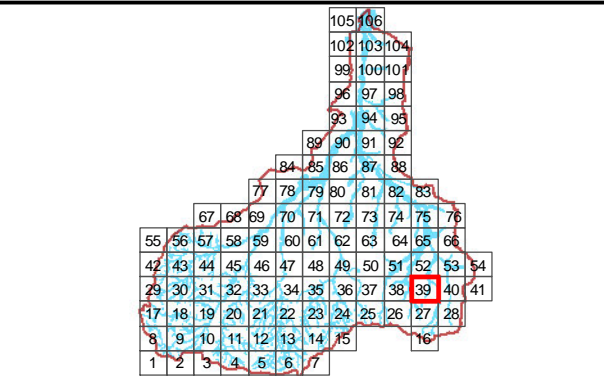
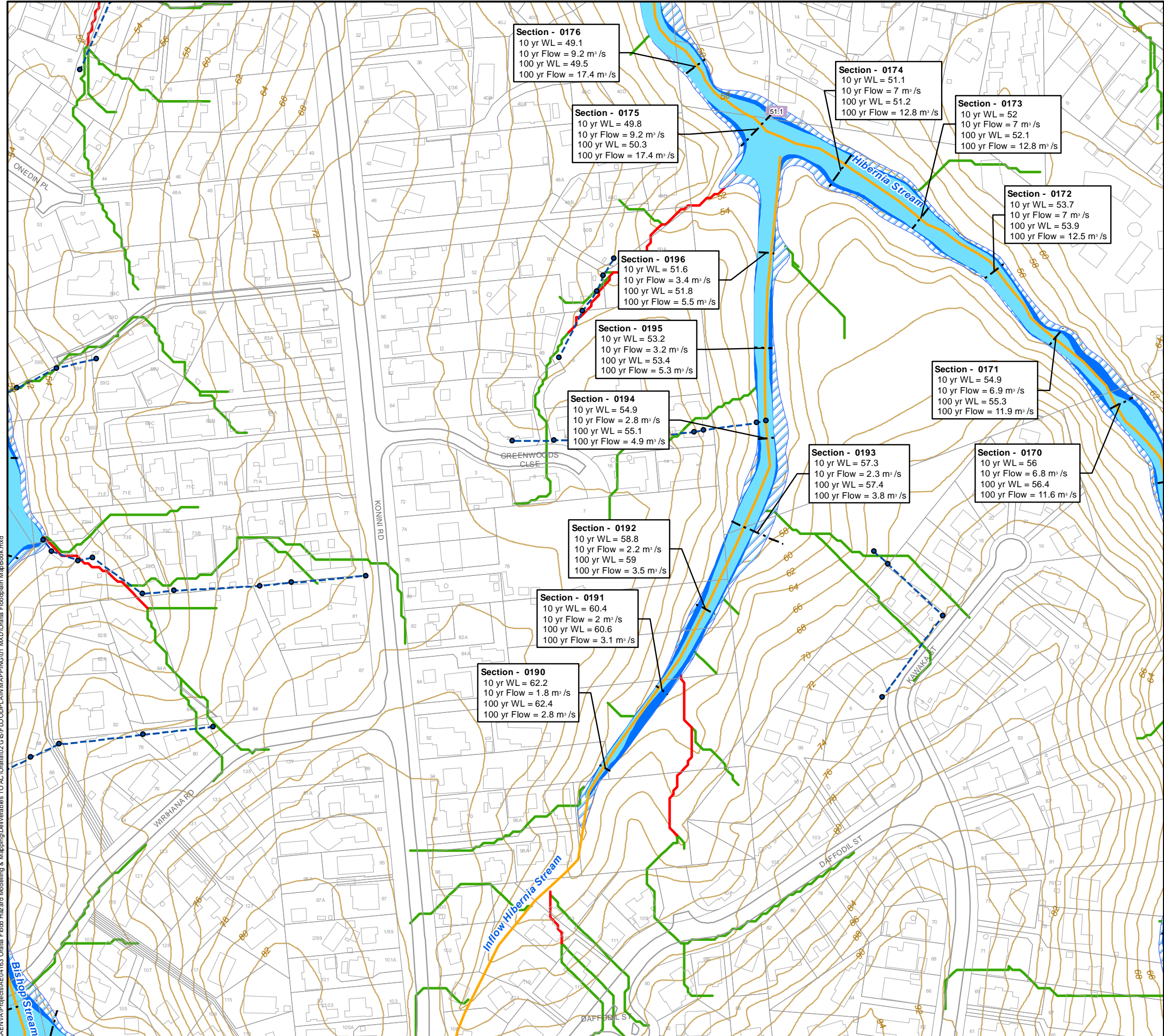
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Sheet 38 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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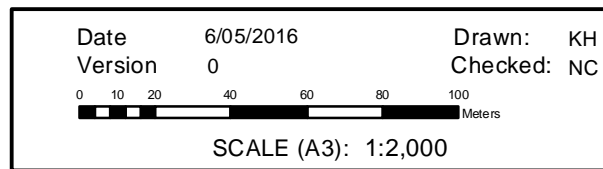
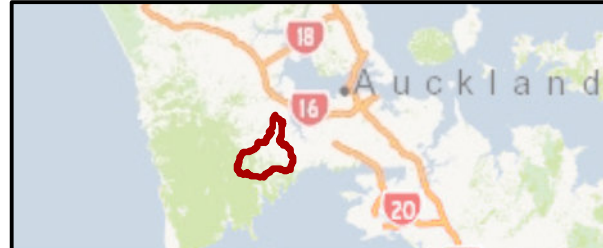
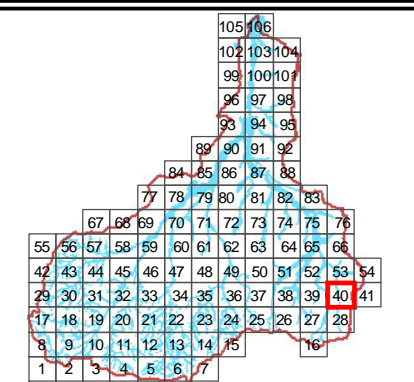
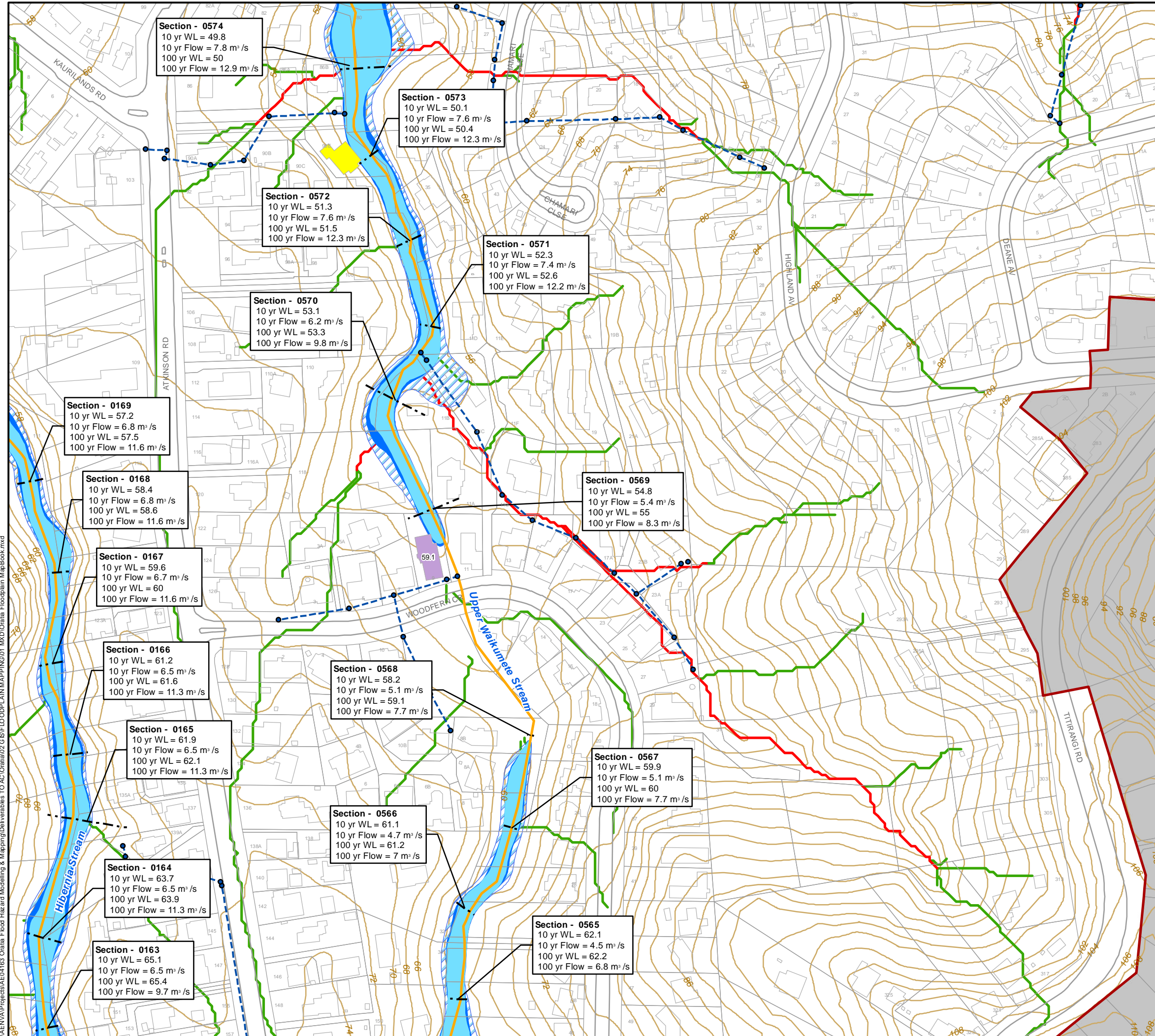
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Sheet 39 of 106

Figure H.1 Floodplain Map (MPD Scenario)

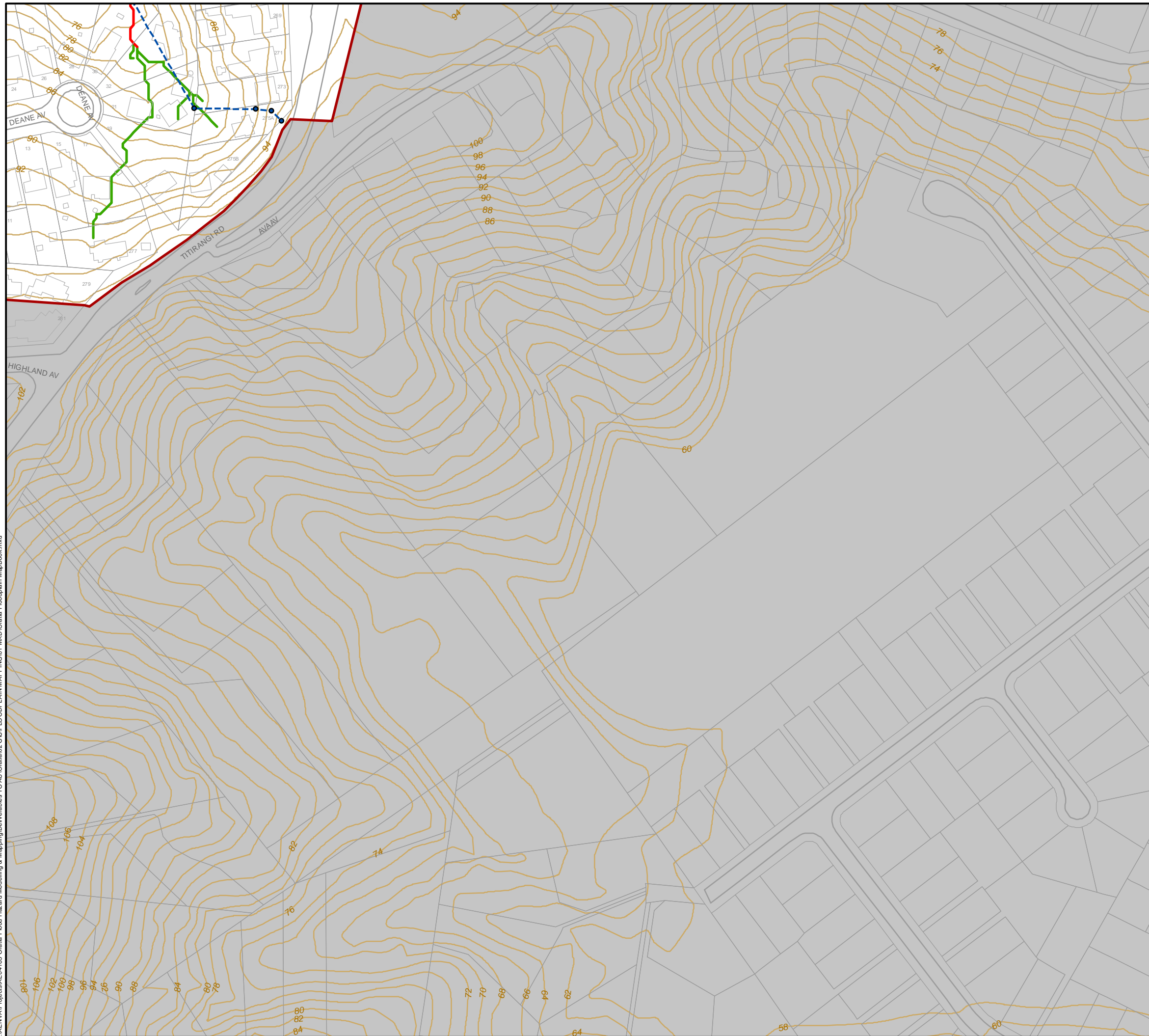
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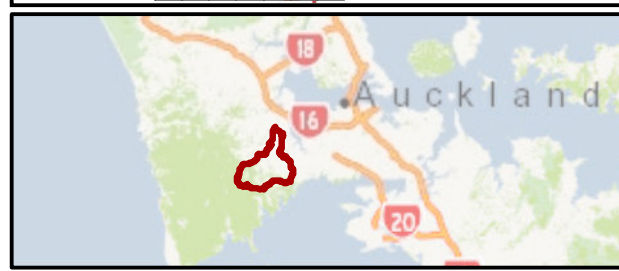
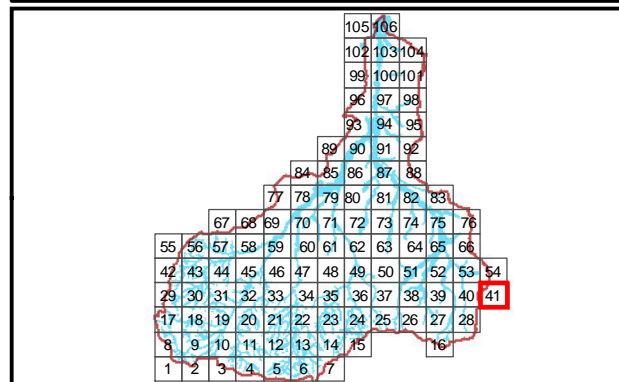
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Sheet 40 of 106  
Figure H.1 Floodplain Map (MPD Scenario)

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- Section with Levels
- Habitable floor under flood: 100yr MPD
- Non habitable floor under flood: 100yr MPD
- Habitable floor within 500mm: 100yr MPD
- Habitable floor above 500mm: 100yr MPD
- Building floor not surveyed
- Modelled Stream Network
- Modelled Stormwater Nodes
- Modelled Pipe Network
- 10 year MPD Floodplain
- 100 year MPD Floodplain
- 100 year MPD Floodplain from RFHA
- Flood Sensitive Area
- 100yr Overland Flow (<0.5 m3/s)
- 100yr Overland Flow (0.5 - 2.0 m3/s)
- Contours
- Outside 2D model extent
- Catchment Boundary
- Outside catchment



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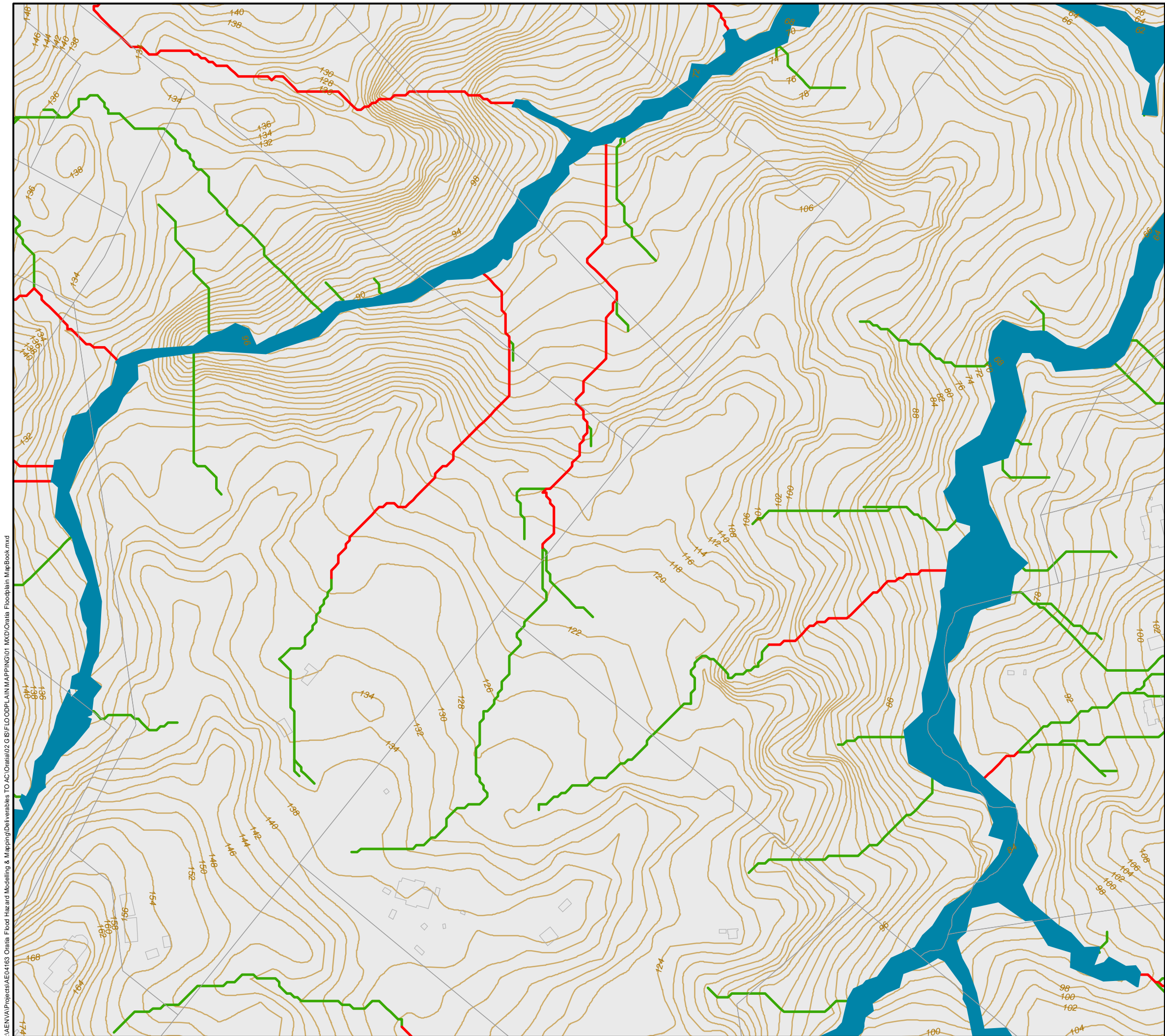
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Sheet 41 of 106

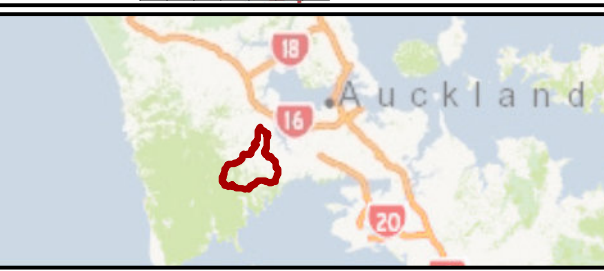
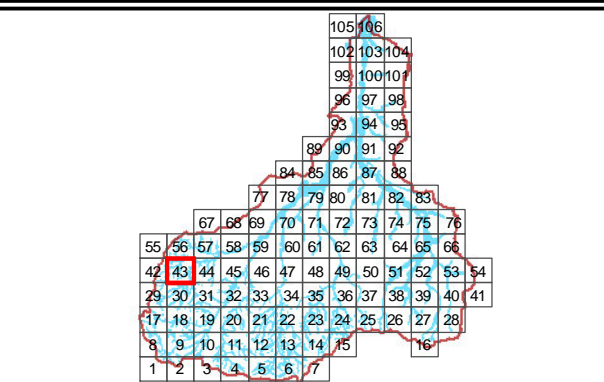
Figure H.1 Floodplain Map (MPD Scenario)





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- Section with Levels
- Habitable floor under flood: 100yr MPD
- Non habitable floor under flood: 100yr MPD
- Habitable floor within 500mm: 100yr MPD
- Habitable floor above 500mm: 100yr MPD
- Building floor not surveyed
- Modelled Stream Network
- Modelled Stormwater Nodes
- Modelled Pipe Network
- 10 year MPD Floodplain
- 100 year MPD Floodplain
- 100 year MPD Floodplain from RFHA
- Flood Sensitive Area
- 100yr Overland Flow (<0.5 m3/s)
- 100yr Overland Flow (0.5 - 2.0 m3/s)
- Contours
- Outside 2D model extent
- Catchment Boundary
- Outside catchment



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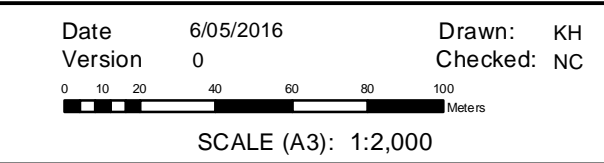
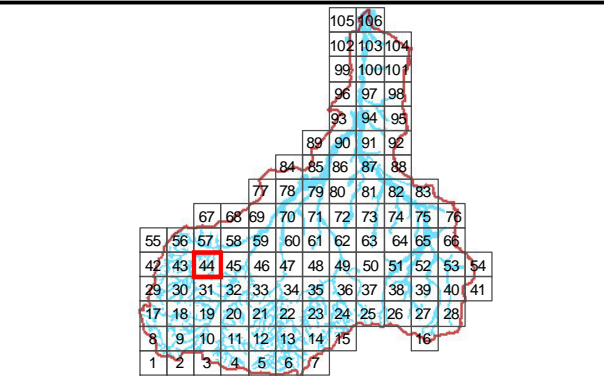
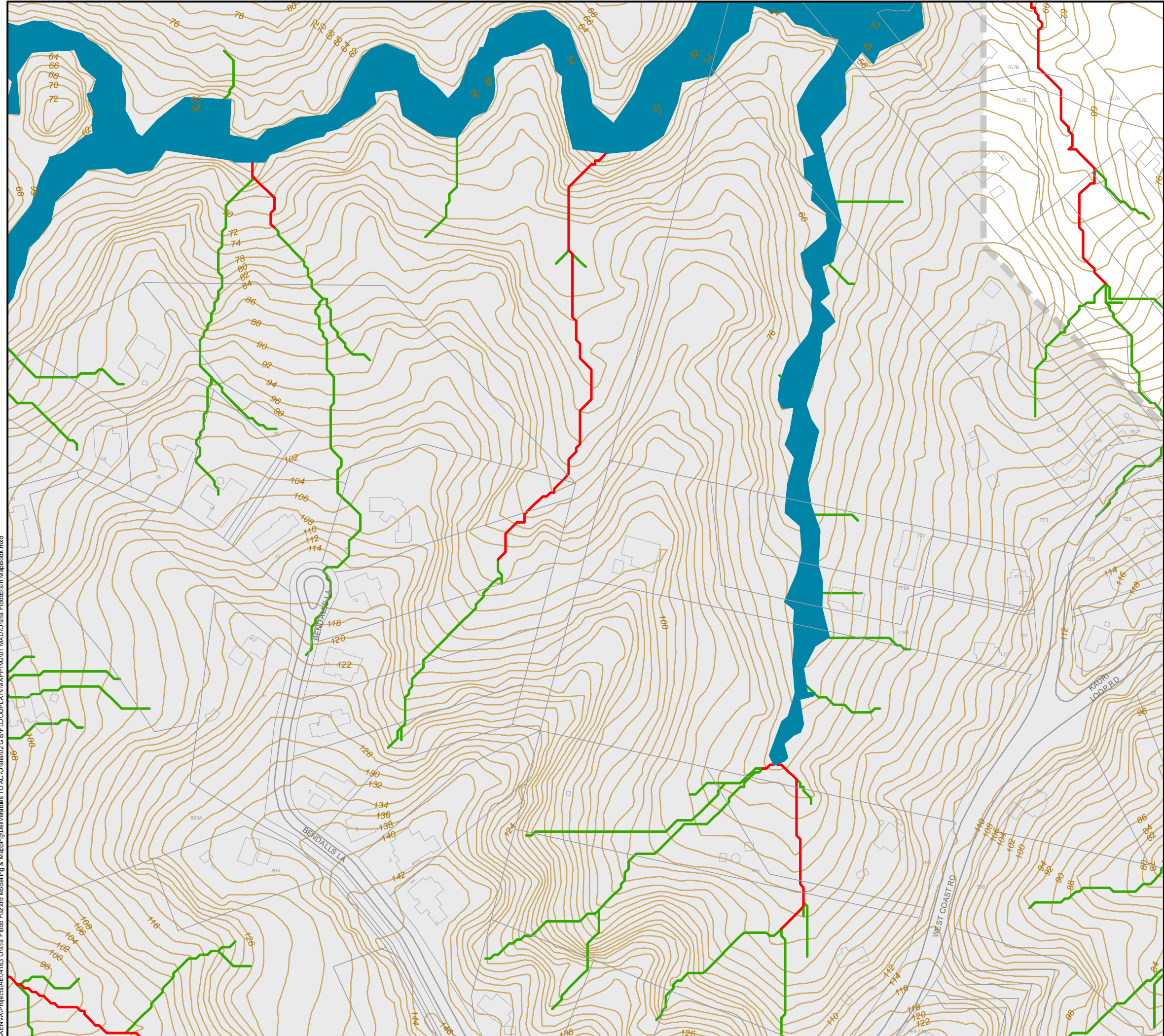
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Sheet 43 of 106

Figure H.1 Floodplain Map (MPD Scenario)



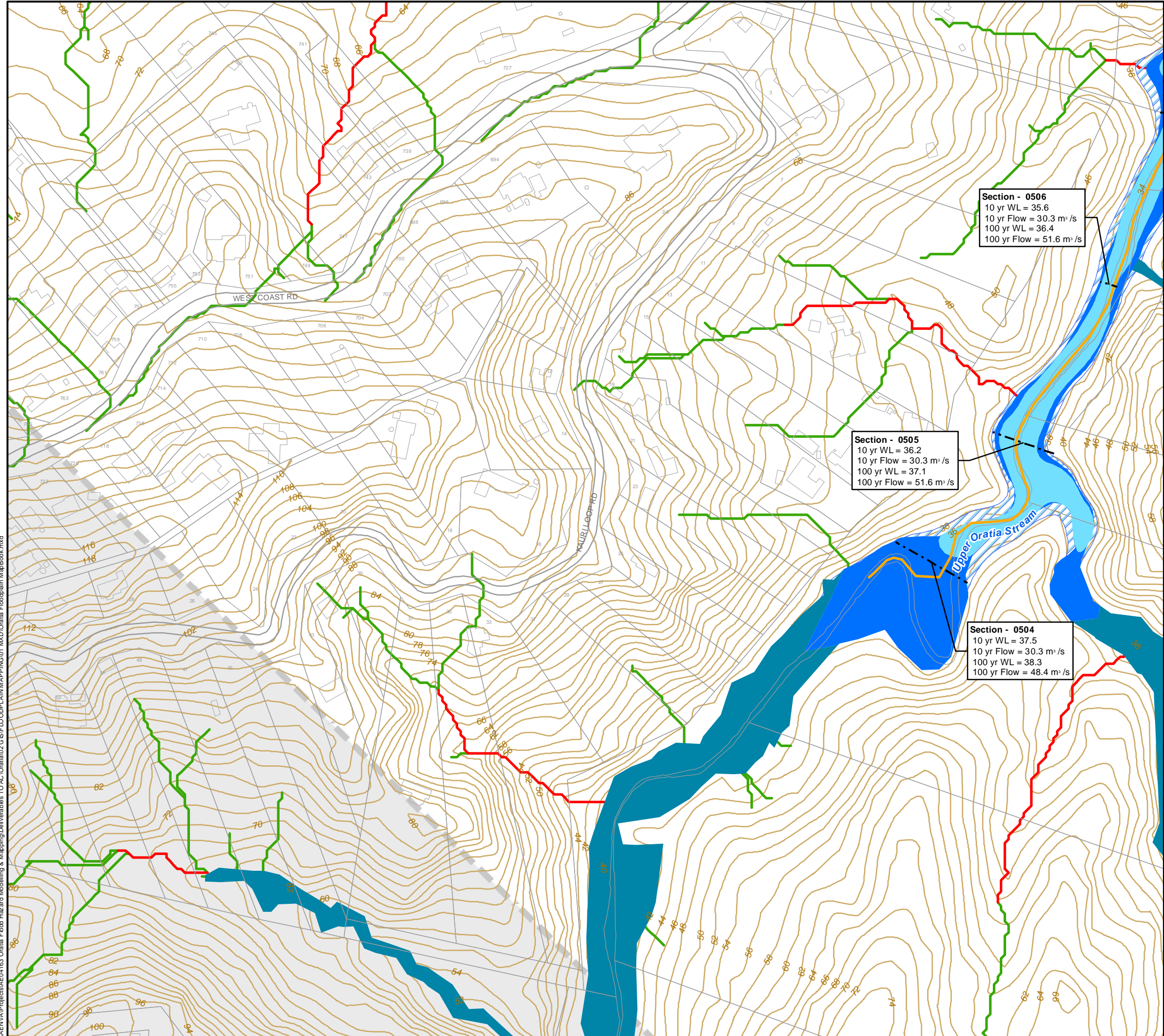
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Sheet 44 of 106

Figure H.1 Floodplain Map (MPD Scenario)

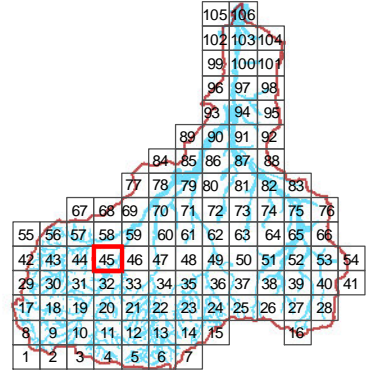
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**Section - 0506**  
 10 yr WL = 35.6  
 10 yr Flow = 30.3 m<sup>3</sup>/s  
 100 yr WL = 36.4  
 100 yr Flow = 51.6 m<sup>3</sup>/s

**Section - 0505**  
 10 yr WL = 36.2  
 10 yr Flow = 30.3 m<sup>3</sup>/s  
 100 yr WL = 37.1  
 100 yr Flow = 51.6 m<sup>3</sup>/s

**Section - 0504**  
 10 yr WL = 37.5  
 10 yr Flow = 30.3 m<sup>3</sup>/s  
 100 yr WL = 38.3  
 100 yr Flow = 48.4 m<sup>3</sup>/s



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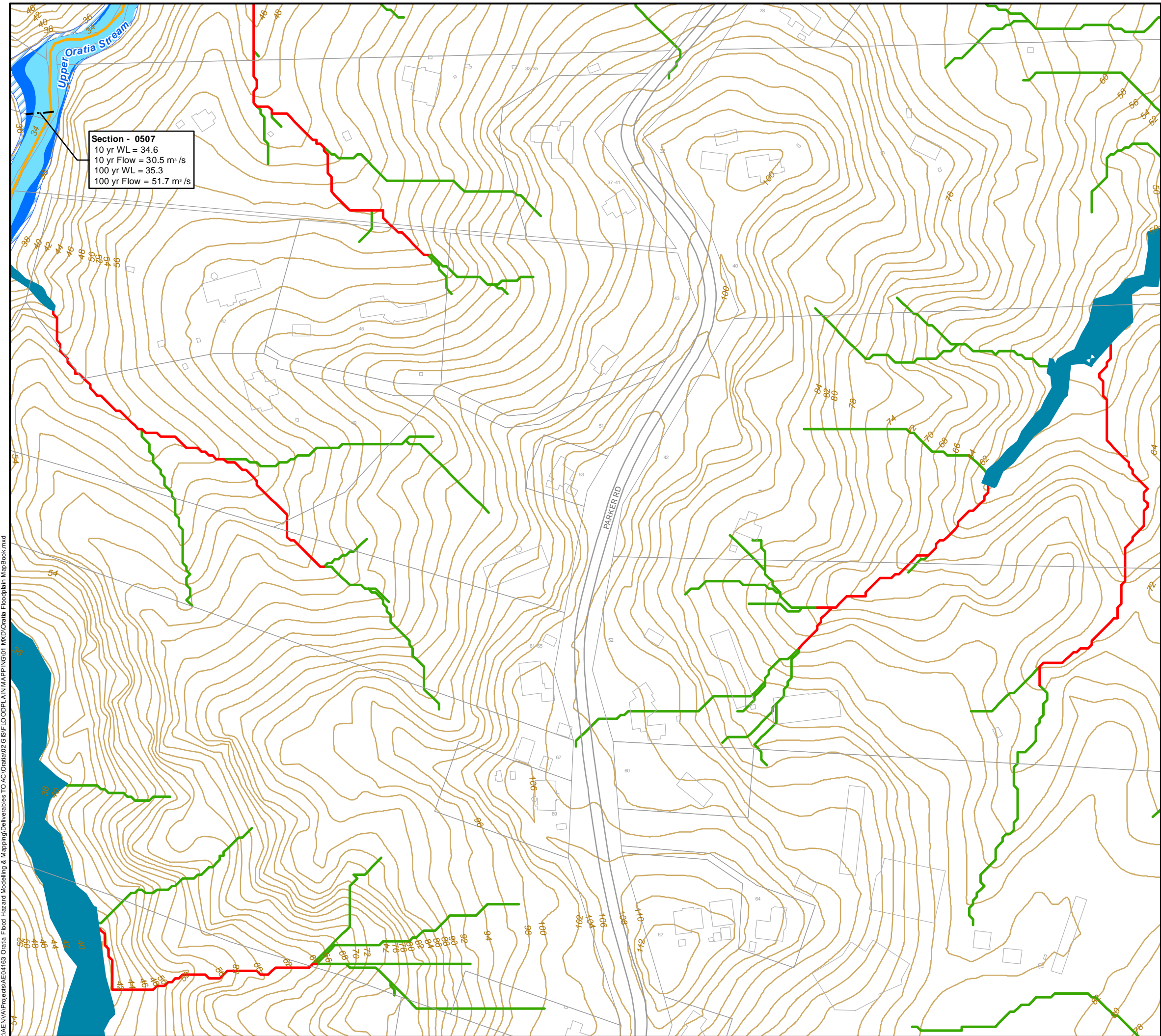
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Sheet 45 of 106

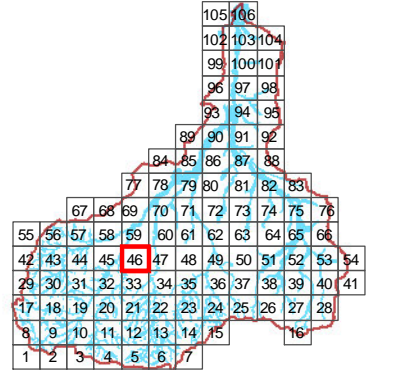
Figure H.1 Floodplain Map (MPD Scenario)

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Section - 0507  
 10 yr WL = 34.6  
 10 yr Flow = 30.5 m<sup>3</sup>/s  
 100 yr WL = 35.3  
 100 yr Flow = 51.7 m<sup>3</sup>/s

- Section with Levels
- █ Habitable floor under flood: 100yr MPD
- █ Non habitable floor under flood: 100yr MPD
- █ Habitable floor within 500mm: 100yr MPD
- █ Habitable floor above 500mm: 100yr MPD
- █ Building floor not surveyed
- ~ Modelled Stream Network
- Modelled Stormwater Nodes
- ~ Modelled Pipe Network
- █ 10 year MPD Floodplain
- █ 100 year MPD Floodplain
- █ 100 year MPD Floodplain from RFHA
- █ Flood Sensitive Area
- ~ 100yr Overland Flow (<0.5 m<sup>3</sup>/s)
- ~ 100yr Overland Flow (0.5 - 2.0 m<sup>3</sup>/s)
- ~ Contours
- █ Outside 2D model extent
- █ Catchment Boundary
- █ Outside catchment



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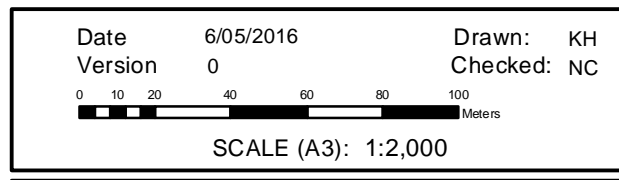
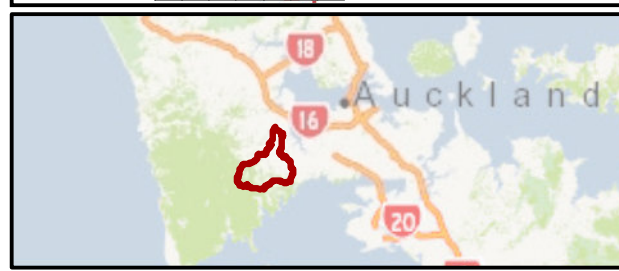
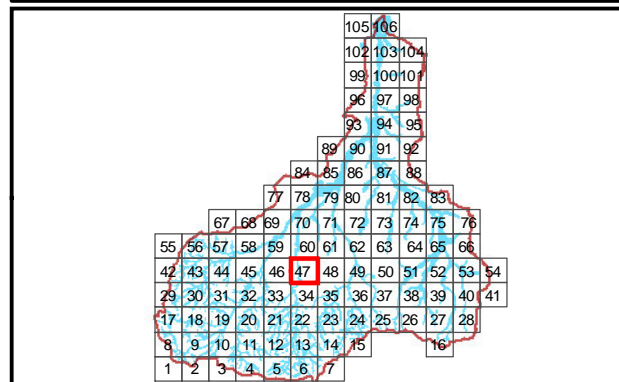
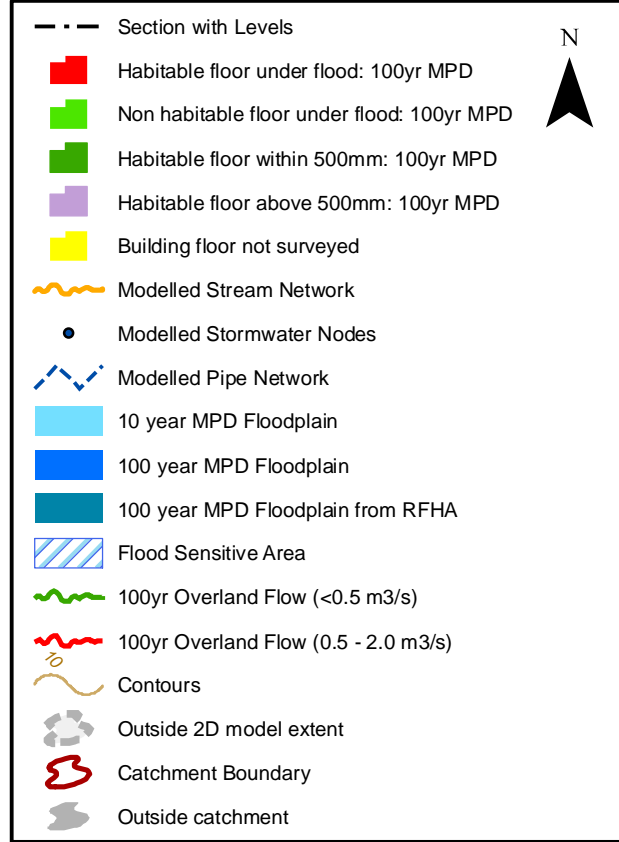
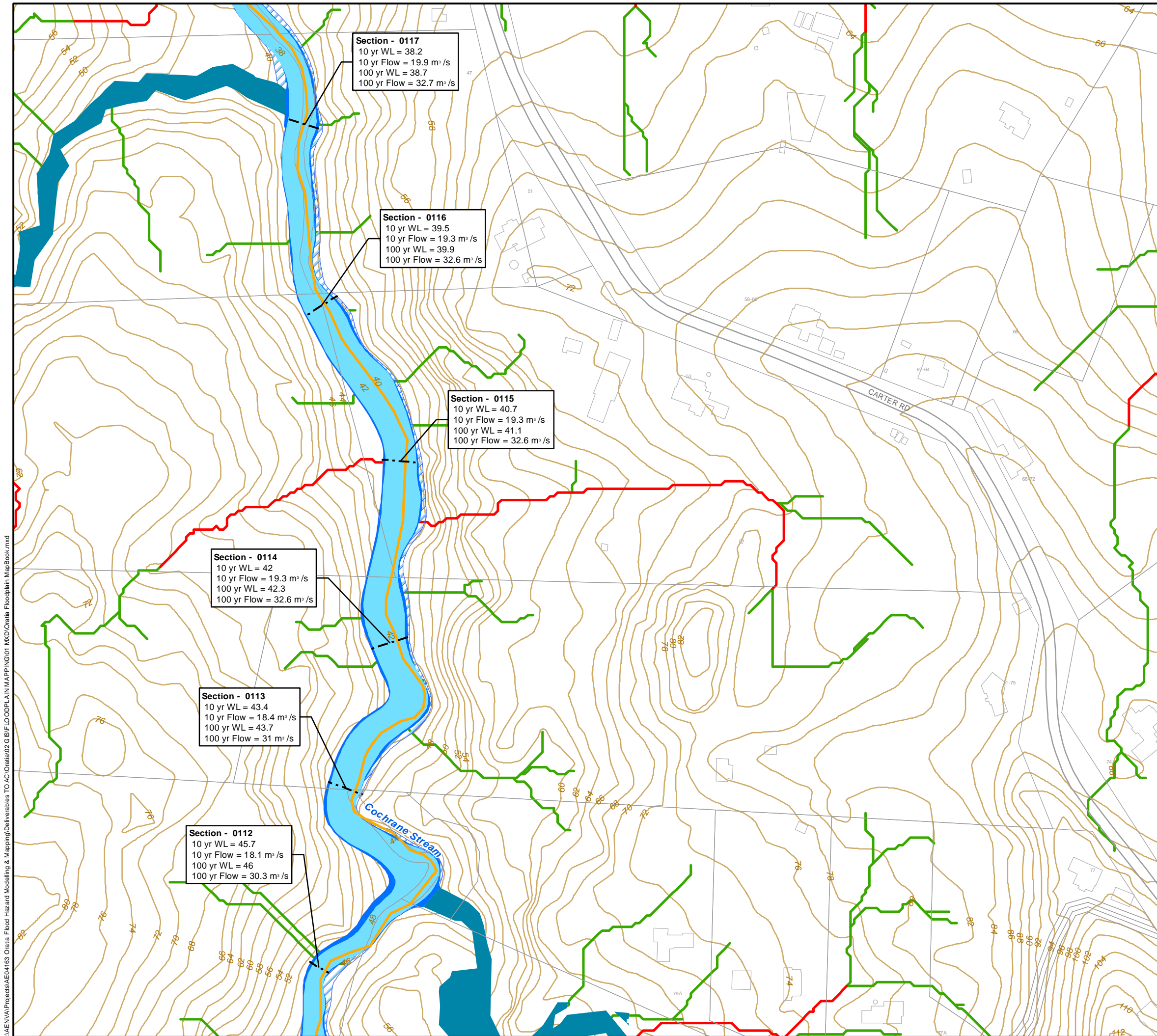
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Sheet 46 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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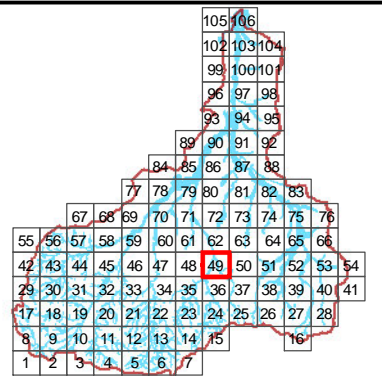
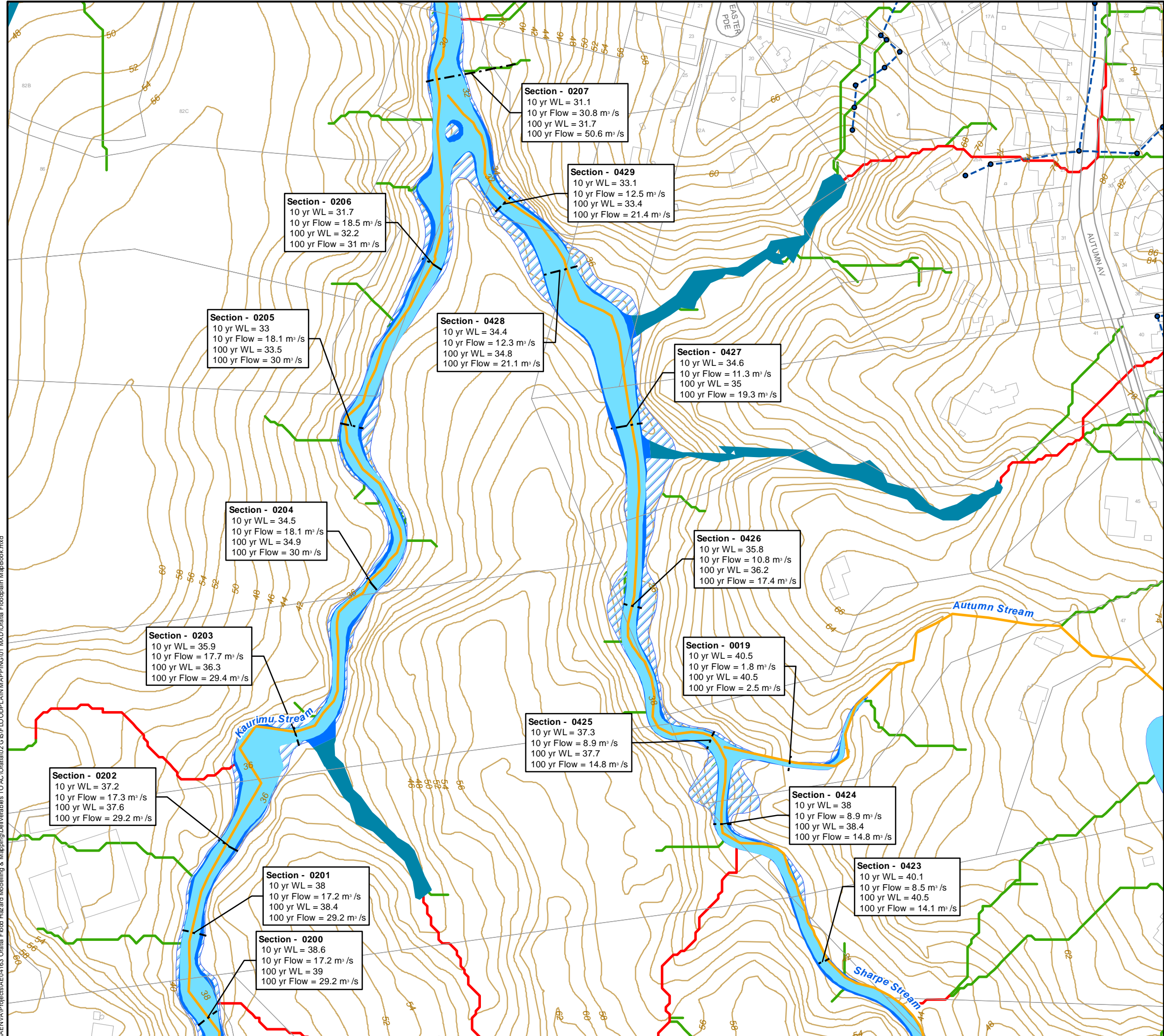
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Sheet 47 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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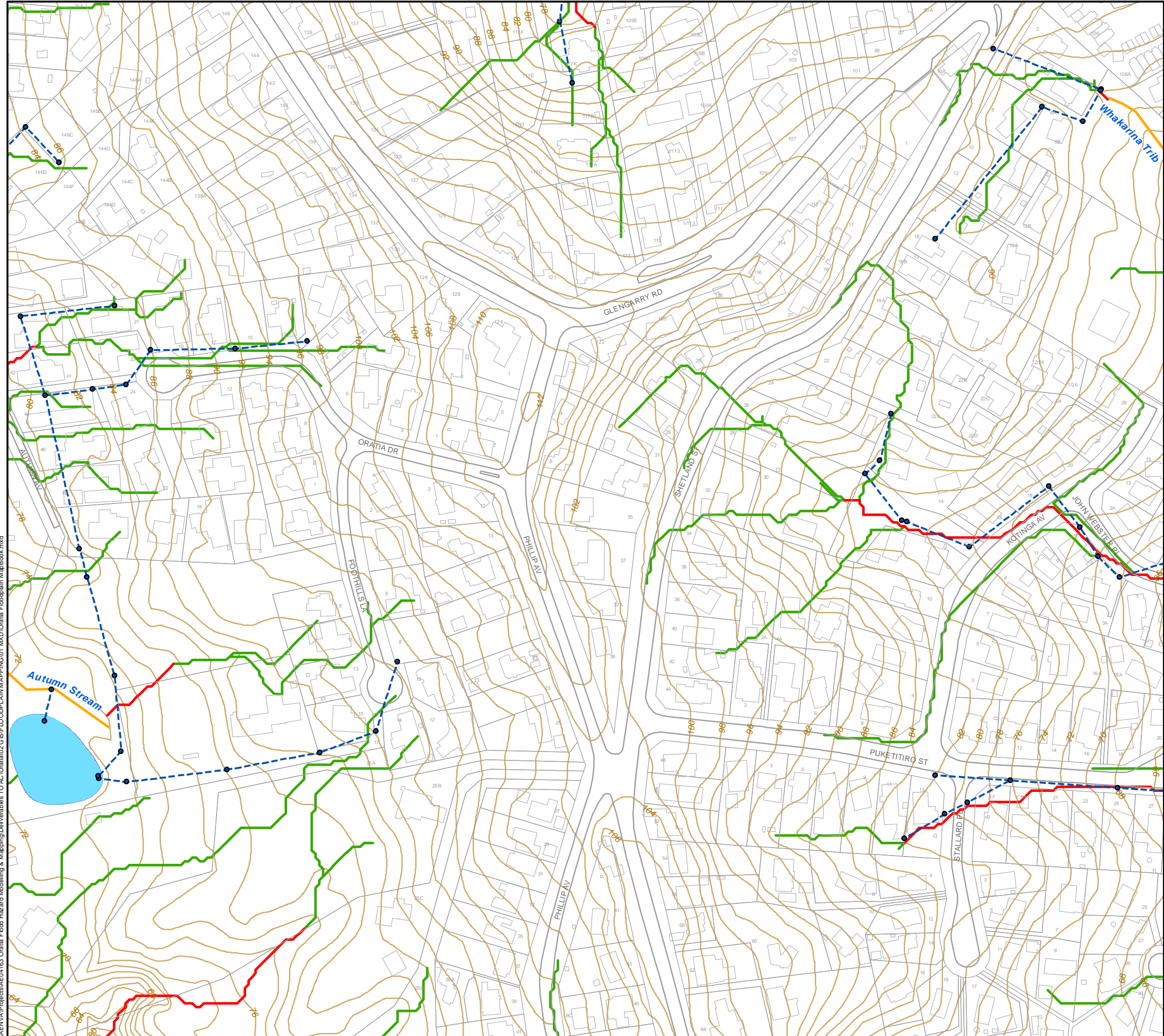
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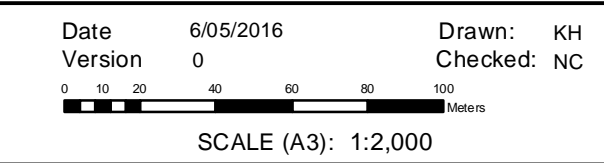
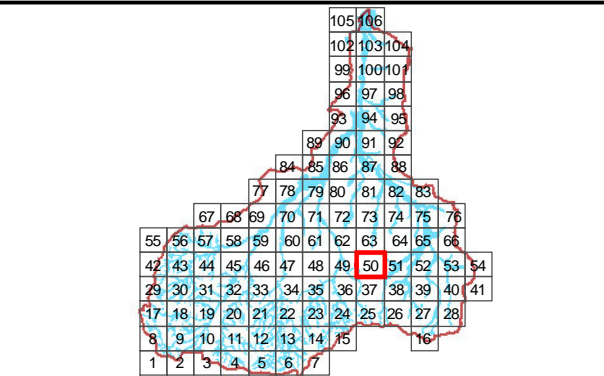
Sheet 49 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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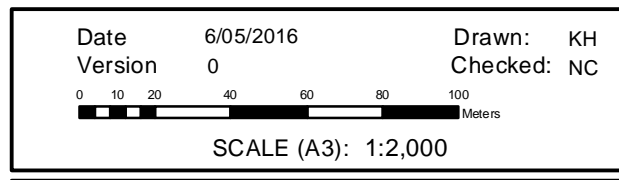
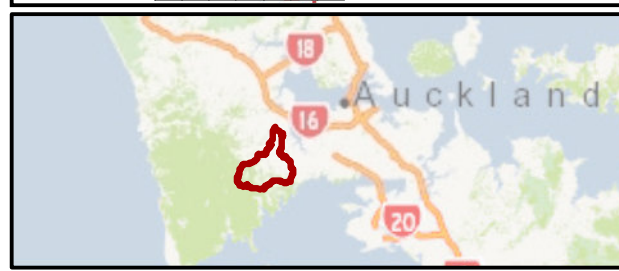
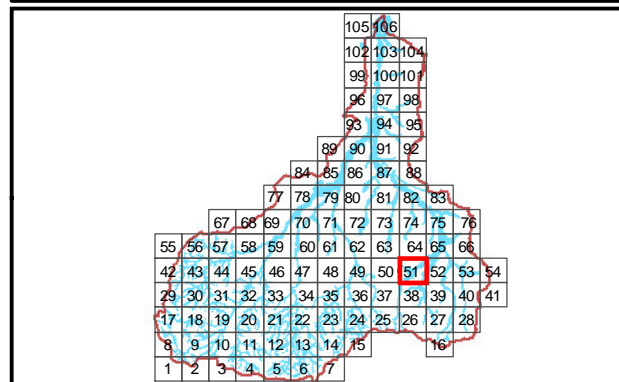
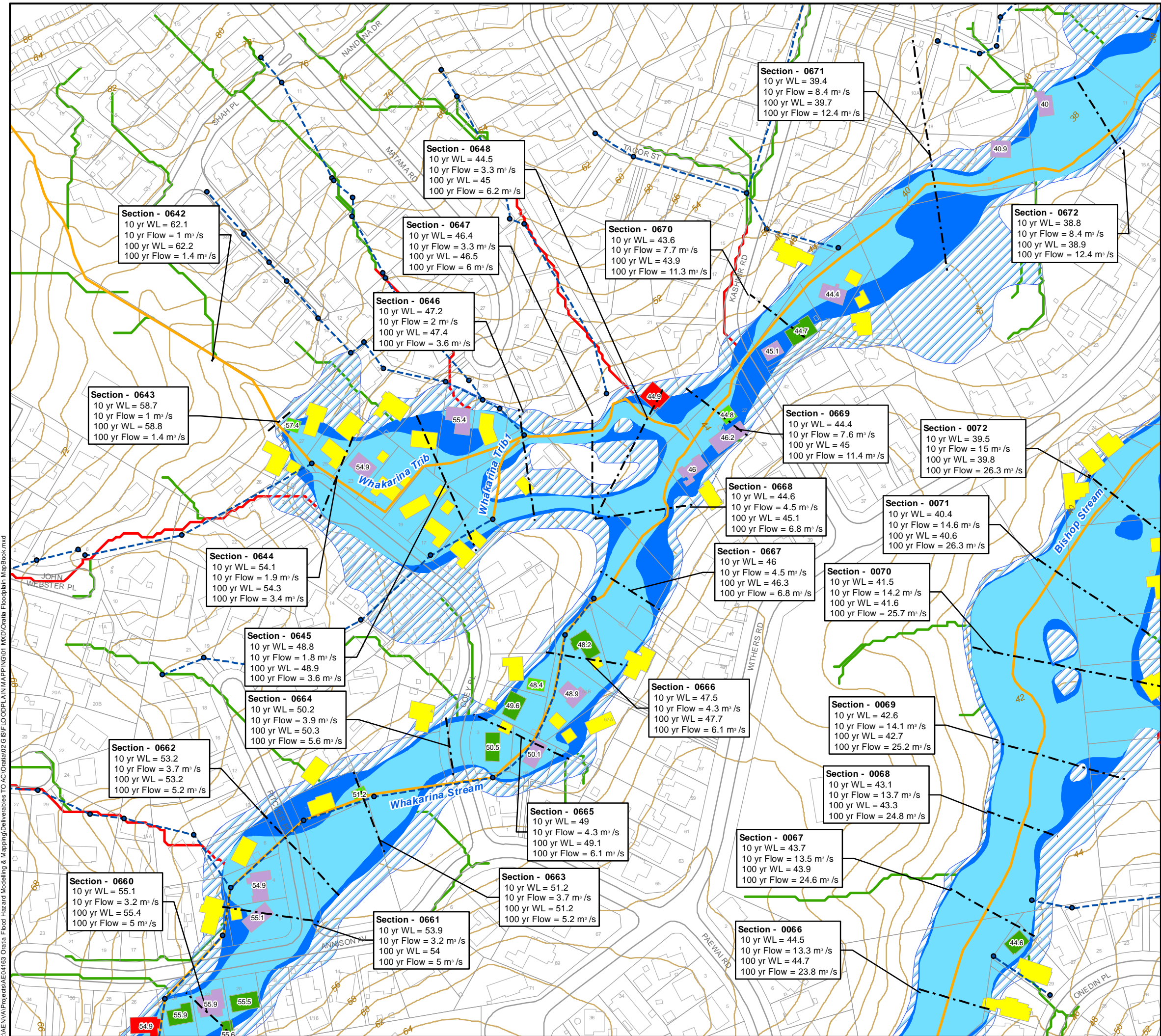


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 Sheet 50 of 106

Figure H.1 Floodplain Map (MPD Scenario)



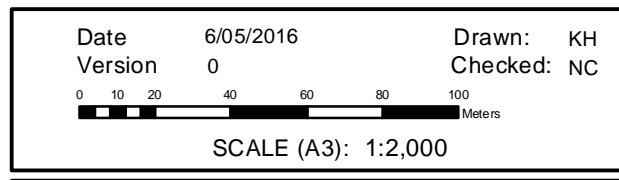
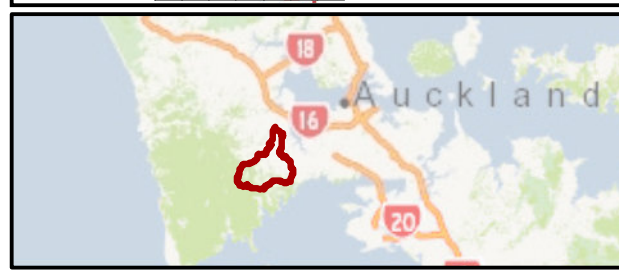
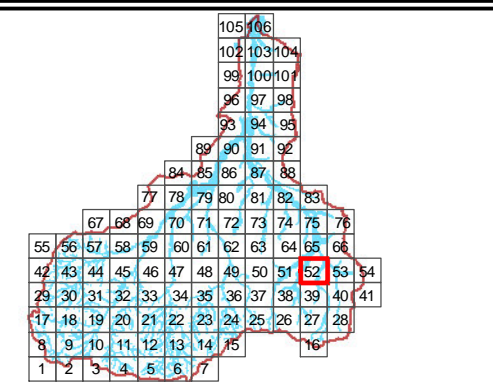
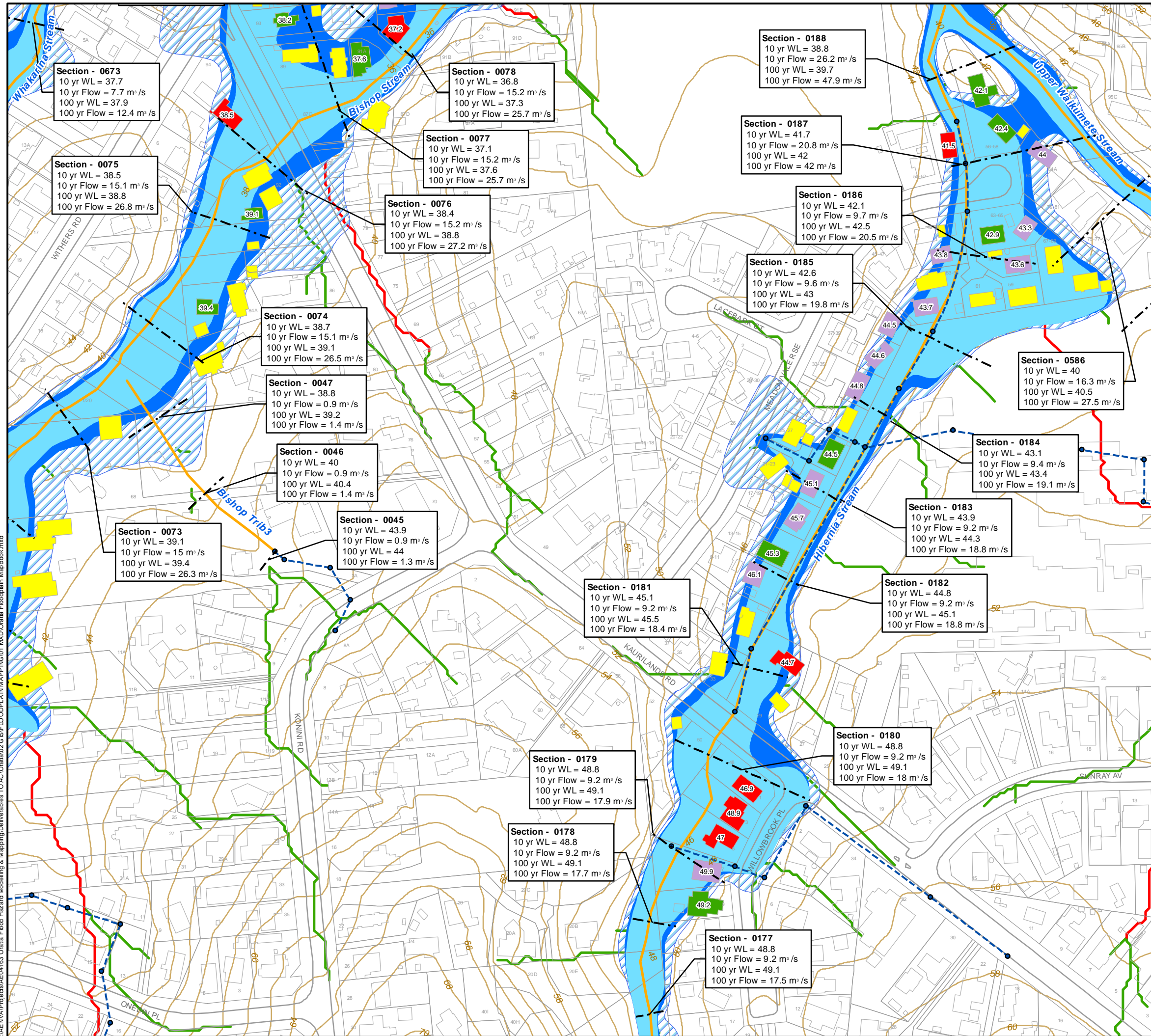
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Sheet 51 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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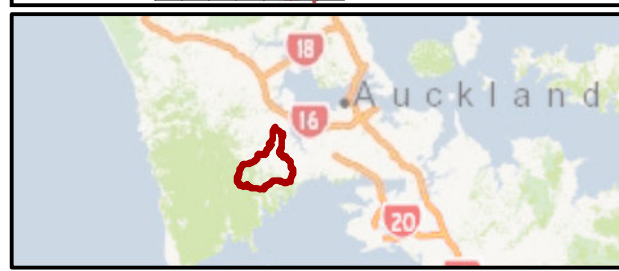
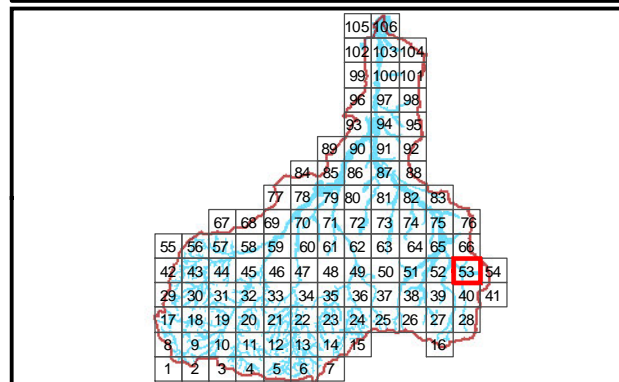
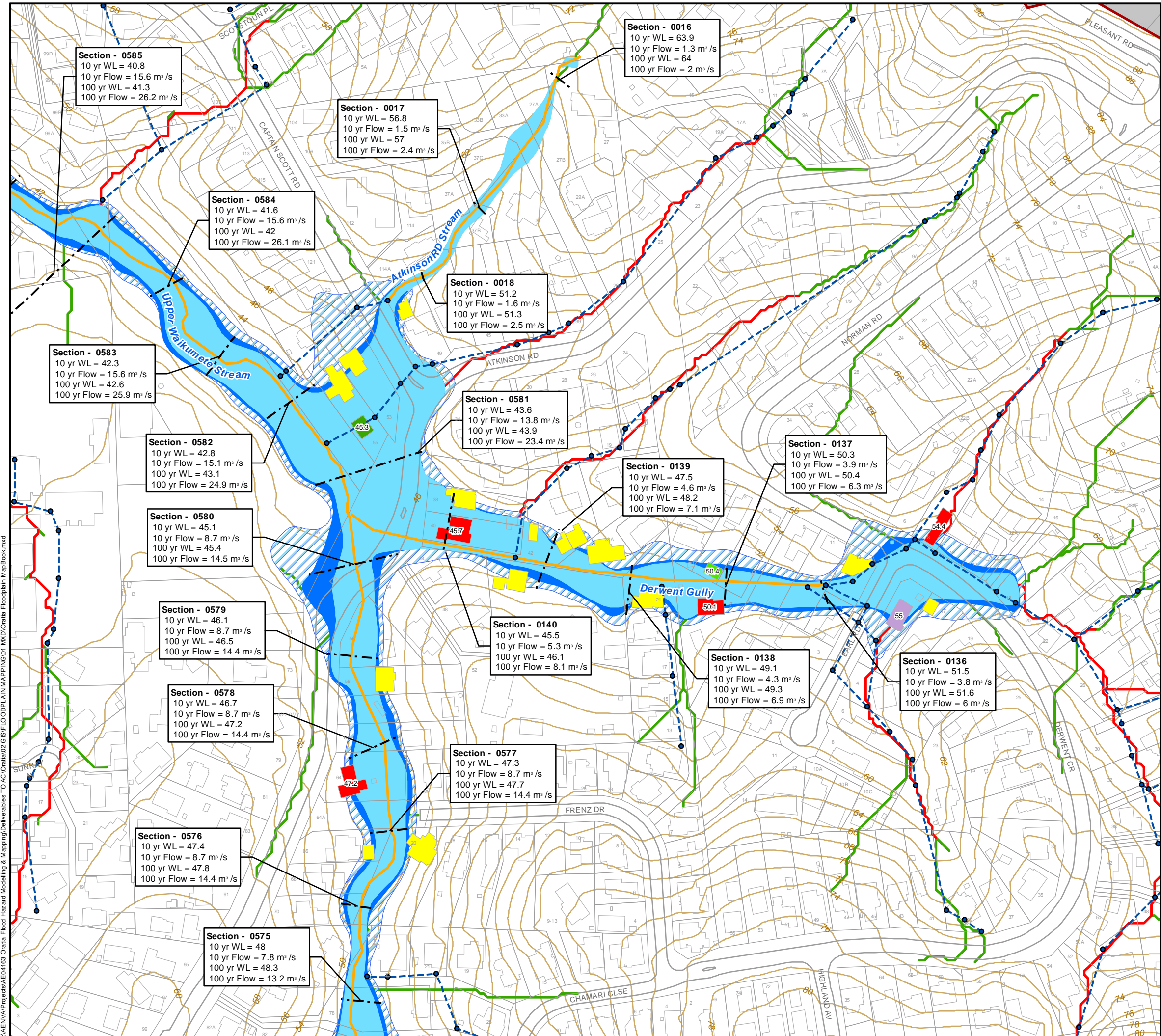
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Sheet 52 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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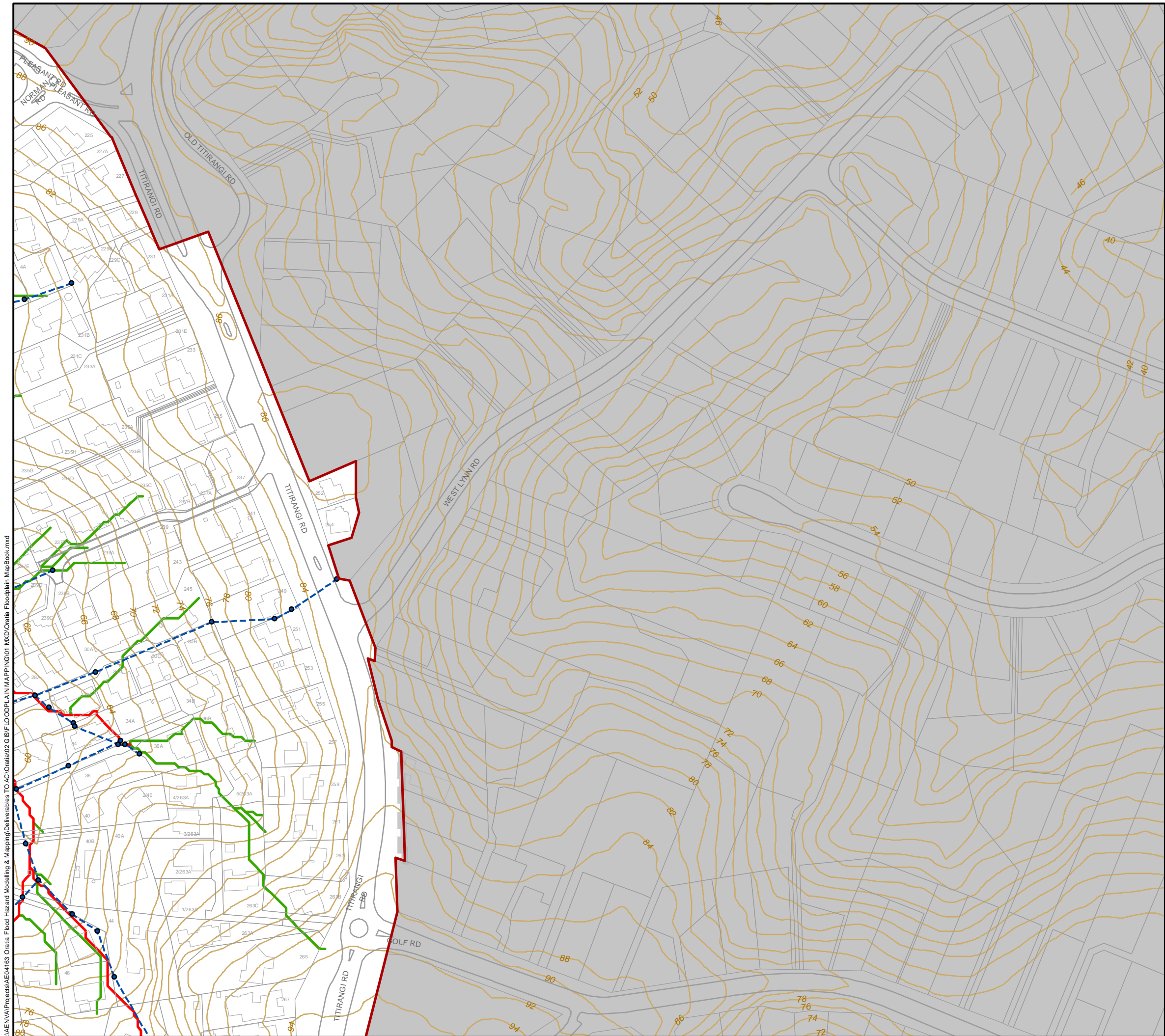
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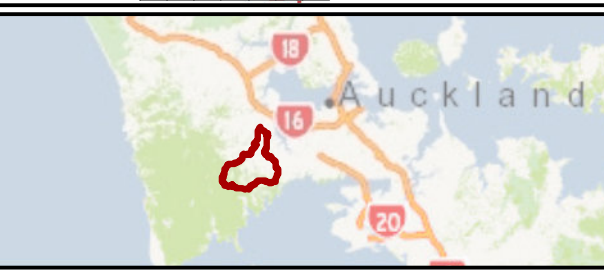
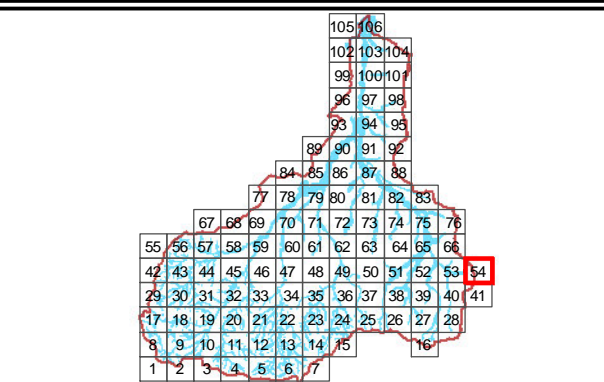
Sheet 53 of 106

Figure H.1 Floodplain Map (MPD Scenario)

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SCALE (A3): 1:2,000

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Sheet 54 of 106

Figure H.1 Floodplain Map (MPD Scenario)