# Supplementary Material: Convolutional Recurrent Network for Road Boundary Extraction

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## 1. Outline

In Sec. 2 of this supplementary material, we showcase the deep features obtained by our network in Figures 1,2,3 and 4. In Sec. 3 we visualize the structured polyline predictions and the corresponding ground truth road boundaries in Figures 5, 6 and 7. Please also refer to a video we have attached for more visualizations.

## 2. Deep Features

Here we visualize the inputs to our deep features model (lidar, camera, elevation gradient) and its output (detection map, end points, direction map).

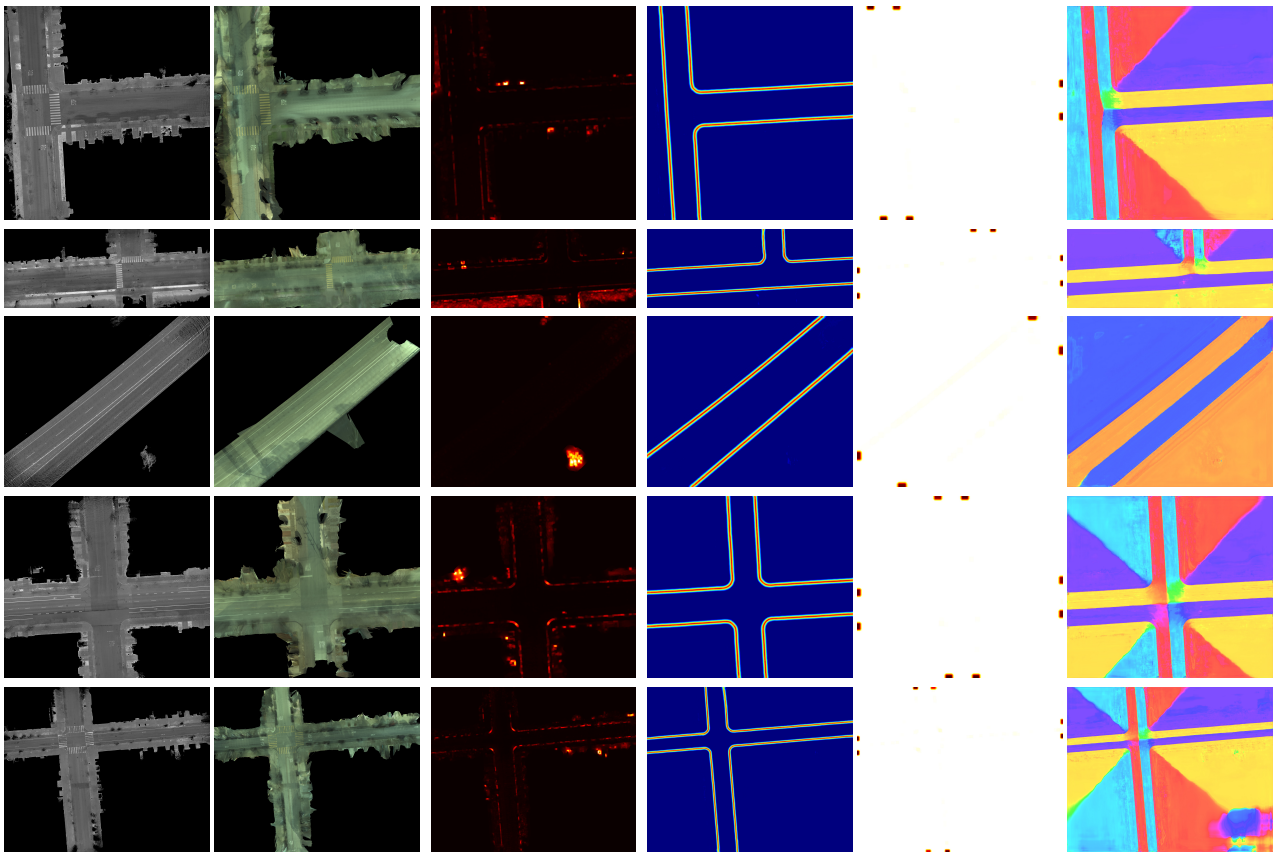



Figure 1. Deep Features: Columns **(1-3)** correspond to the inputs and columns **(4-6)** correspond to the deep feature maps. The direction map shown here as a flow field [1].

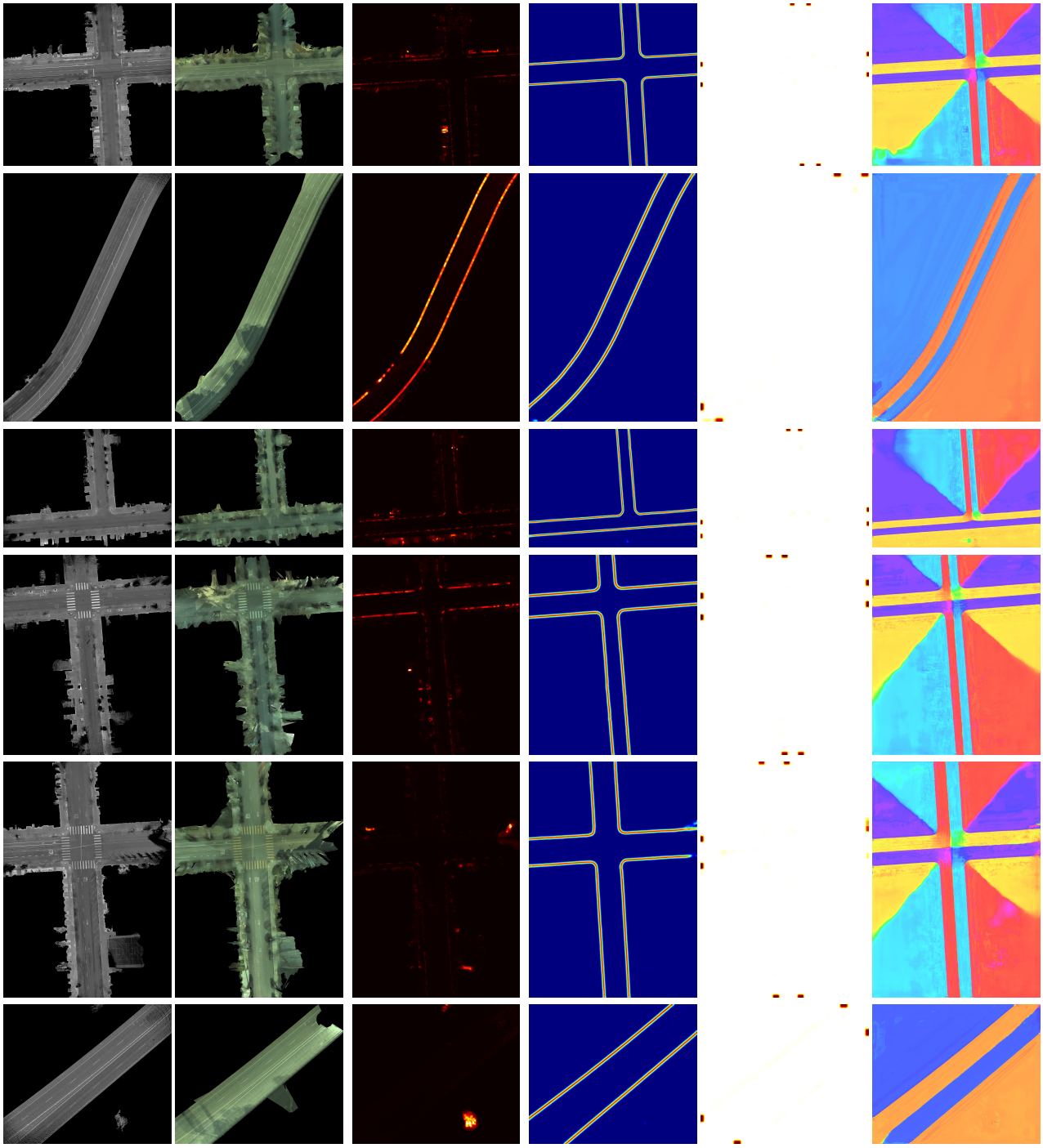



Figure 2. Deep Features: Columns **(1-3)** correspond to the inputs and columns **(4-6)** correspond to the deep feature maps. The direction map shown here as a flow field [1].

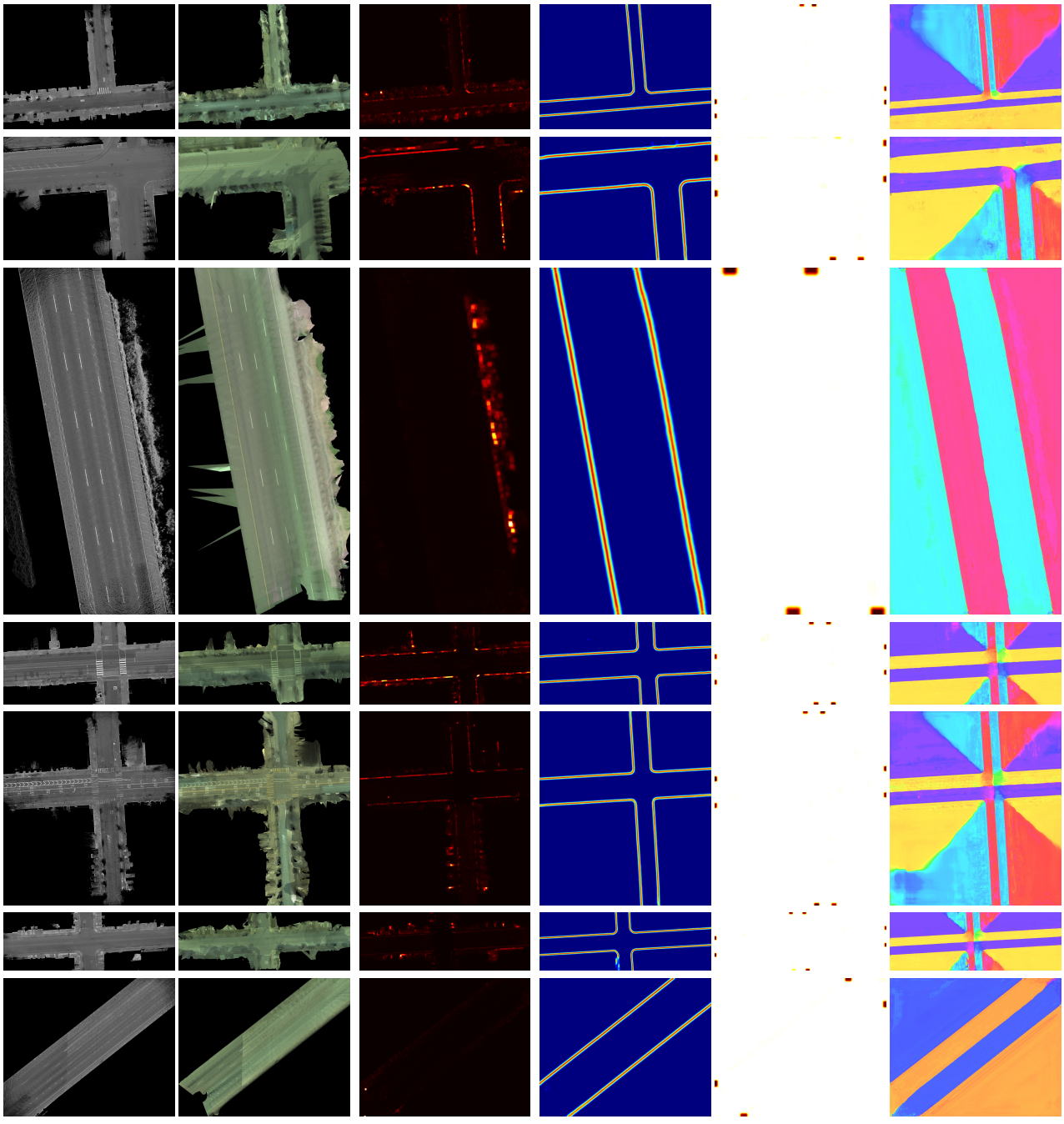



Figure 3. Deep Features: Columns **(1-3)** correspond to the inputs and columns **(4-6)** correspond to the deep feature maps. The direction map shown here as a flow field [1].

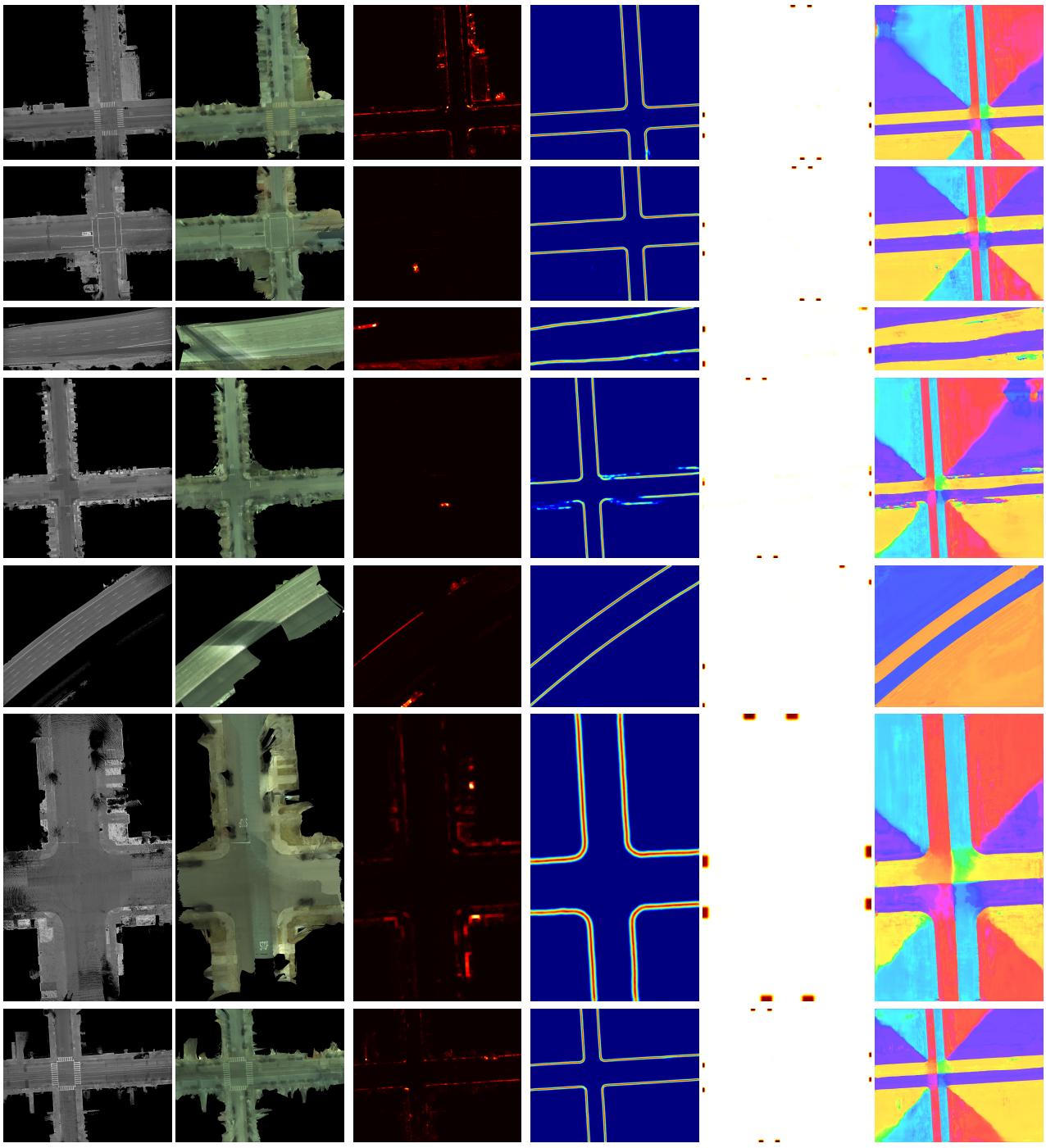
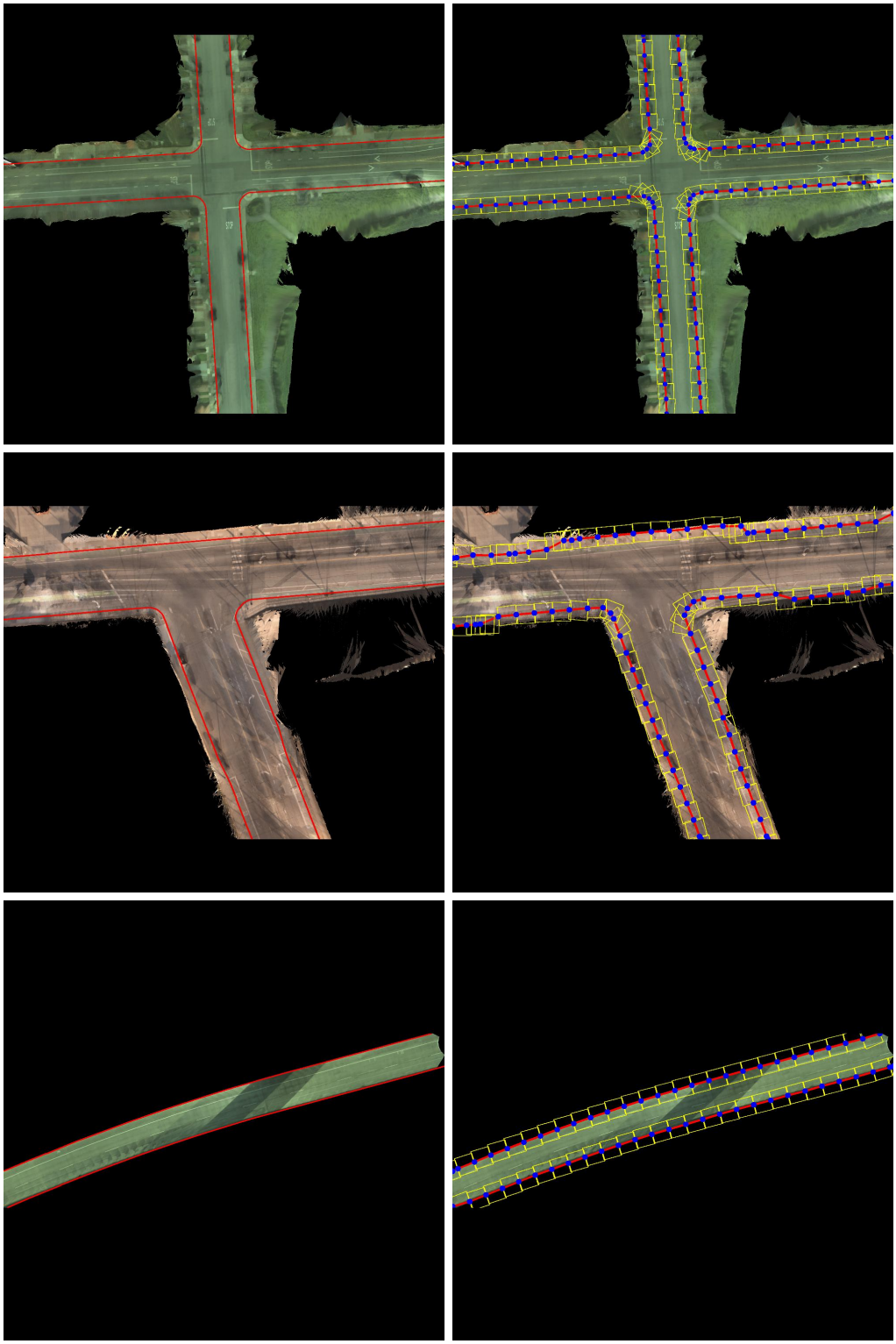



Figure 4. Deep Features: Columns **(1-3)** correspond to the inputs and columns **(4-6)** correspond to the deep feature maps. The direction map shown here as a flow field [1].

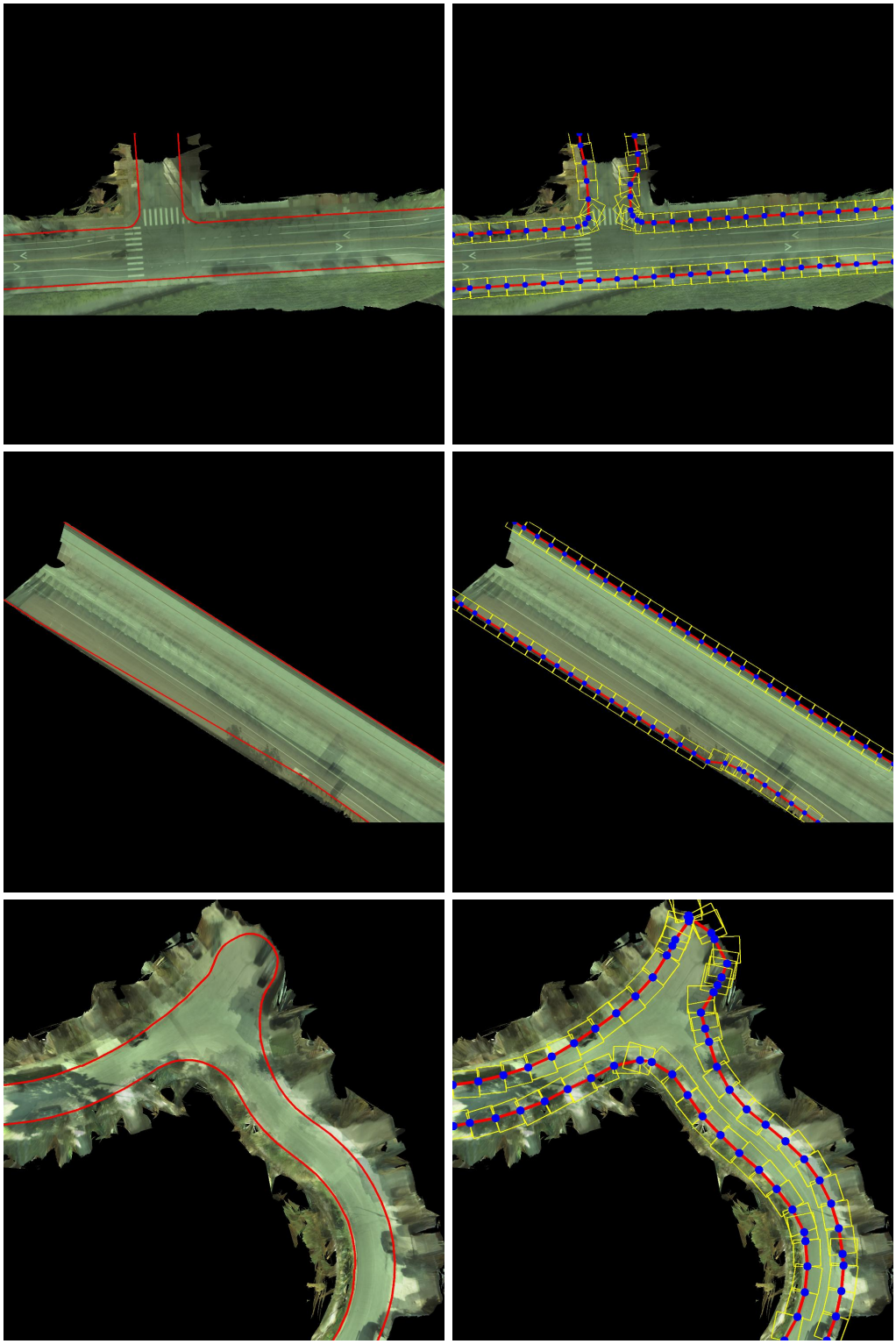
## 3. Results

Here we visualize the the ground truth boundaries (left column) and our corresponding predictions (right column). Our predicted polyline vertices are highlighted in blue dots and the yellow squares correspond to the rotated ROIs that our cSnake attends.



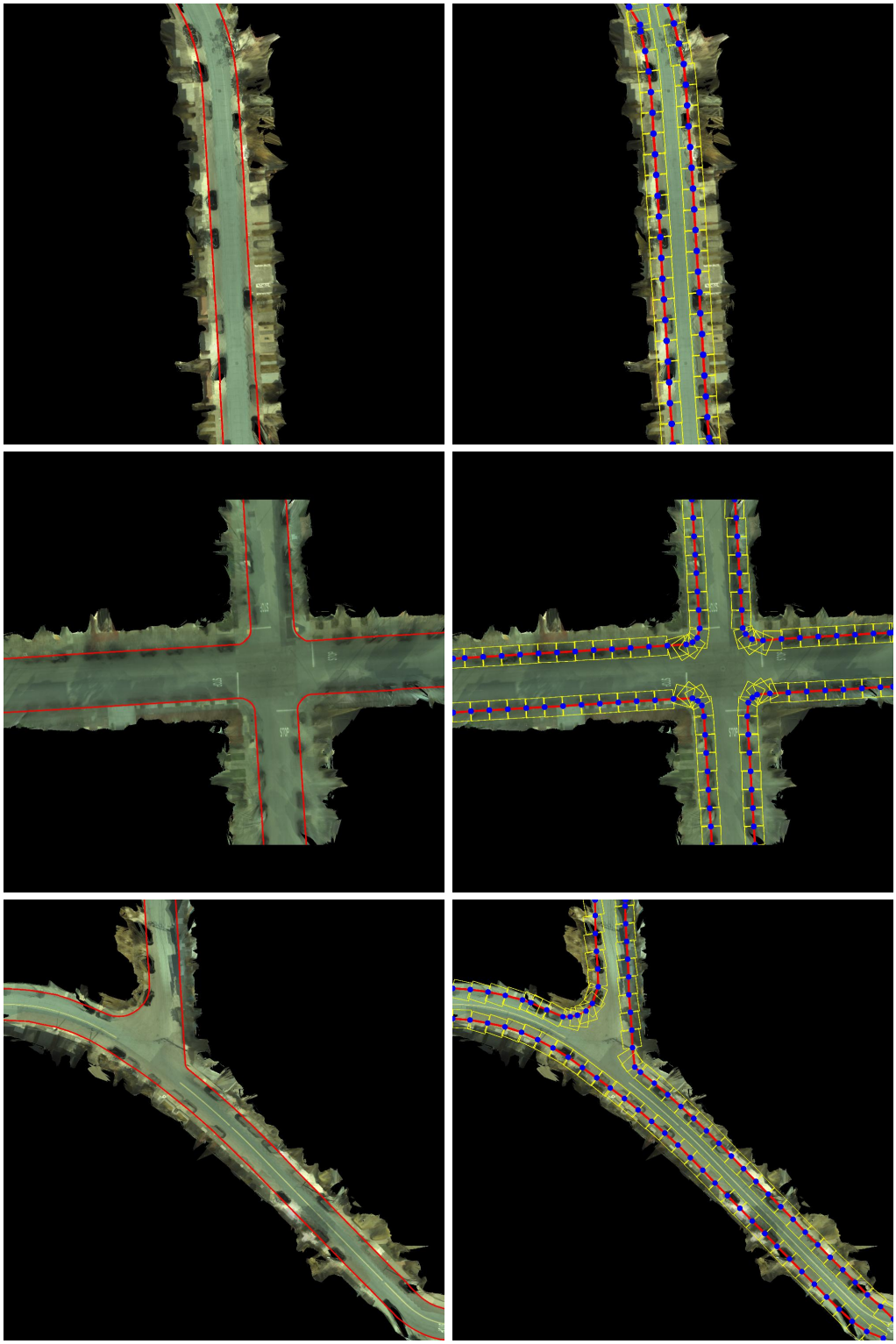
(Ground Truth) (Prediction)

Figure 5. Results: Column **1** corresponds to the ground truth boundaries and column **2** are our predicted boundaries.



(Ground Truth) (Prediction)

Figure 6. Results: Column **1** corresponds to the ground truth boundaries and column **2** are our predicted boundaries.



(Ground Truth) (Prediction)

Figure 7. Results: Column **1** corresponds to the ground truth boundaries and column **2** are our predicted boundaries.

## References

[1] S. Baker, D. Scharstein, J. P. Lewis, S. Roth, M. J. Black, and Sz. A database and evaluation methodology for optical flow. *International Journal of Computer Vision*, 92, 2011. 1, 2, 3, 4