Managing Future Demands

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Wilson Cutting Road Reinstatement
- Not Just a Low Volume Road
Background:

- Central Hawke’s Bay District Council (CHBDC) has a network of over 1200km, approximately 2/3 is sealed.
- Rating base of approximately 6,000-7,000 residents, population is 12,900
- Site is approximately 26 km west of Waipukurau
Background:

- Wilson Cutting Road carries 29 vpd, (latest estimate) @ Northern road end,
- Generally single lane access with tight geometry
- A routine bridge inspection undertaken in March 2014 discovered a large undercut approximately 15m long, extending from bridge abutment, its approximately 6m to the stream
- Client notified, minor remedial works, with road remaining open
- Drop out quickly worsened resulting in road closure
Initial slip: Road Remained open

Further failures: Road closed
Location:
- Ashley Clinton – Volunteer Fire Brigade,
- Sherwood Area Local school
- Black Road is a dead end

Reasonable alternative route, approximately 3.4km longer
The Problem:
• The road linked two halves of a family farm.
• It linked the volunteer fire station with the responders.
• Tight alignment prevents large vehicles from U-turning, including maintenance plant.
• Initial estimate of works was deemed uneconomic by NZTA.
Considered Options:

1. Formally closing the road
   - Consultation required, long process anticipated with plenty of opposition
2. Provide pedestrian access only,
   - Looses road function, pedestrian only access in worthless in rural areas
3. Reinstate the road
   - High cost, potentially 100% funded by CHBDC

   - CHBDC Councillors elected to undertake further work with regard to option 3.
What did we investigate:

Establishing fundability:

• Investigated the impact on land value of severance and access loss
• Investigated the dis-benefits of road closure
• Roughly quantified costs associated with delayed emergency service responses

Establishing construction practicalities and costs:

• Ground Investigations using excavator mounted auger
• Survey
• Identify specialist local contractor to work along side
• The results:
  • Established fundability with a budget of $232,000.
    • Delays $179,000 (40yr life TTC and VOC)
    • Loss of land value $100,000
    • Increased costs for emergency responses $83,000
  • Estimated costs of approximately $235,000.
    • Column drains on upslope side
    • Mechanically anchored sheet pile wall
    • Ongoing monitoring for additional toe scour
      – design relies on toe support, additional row of anchors installed if required in future.
• The end result
• Why was this a success:
  • Client, consultant, and contractor collaborated to find a solution that worked with NZTA a willing participant
  • Client worked with the community to determine what was important
  • Demonstrated CHBDC are at arms length to the community
  • A problem that deserved to be solved, and
  • Perfect example of the positive impact on the users of the work of Engineers and our clients
Before and After