

# Conceptual Alternatives Development

## Design Factors

### Geometry

- Reduce curves to enable faster train speed.
- Consider existing NEC and NS's Port Road Route.

### Design Speed

- Consider 120 mph to 160 mph for intercity passenger trains.
- 160 mph preferred speed for intercity passenger trains.

### Bridge Spacing

- Minimize ROW impacts.
- Consider existing swing span.
- Consider constructibility.

### Navigational Clearances

- Accommodate marine traffic with fixed bridge.
- Horizontal clearance maintained or improved.

### Grades

- Higher fixed bridge requires steeper grades.
- Heavy freight trains require lower grades.

### Relationships to other projects

- Freight rail improvements.
- MARC Maintenance Facility and Penn Line extension.
- NEC Future Tier I EIS.
- Regional bicycle and pedestrian trails.