WELCOME

Richmond/Hampton Roads Passenger Rail Project

Virginia Department of Rail and Public Transportation

Tier I Draft Environmental Impact Statement

Open House and Public Hearing

January 2010

Purpose and Need

Purpose of the Richmond/Hampton Roads Passenger Rail Project

- Determine the best option to improve passenger rail service between Richmond and Hampton Roads
- Provide additional capacity to meet increased travel demand in a manner that is sensitive to and protective of Virginia's unique natural resources

Current and Projected Need: Key Factors

- Need to prepare for population growth
- Need to prepare for the increase in intercity travel demand
- Need to help mitigate the increase in travel delays due to growing congestion on Virginia's highways and at airports
- Need to help mitigate the negative effects on the economy, quality of life, and air quality in the Hampton Roads region from highway and airport congestion
- Need to support economic development
- Need to support emergency transportation plans

What is Higher Speed Rail?

- Intercity passenger trains that operate at speeds up to 110 miles per hour
- Tracks may be separated from roads and highways
- Proven technology
  - Incremental approach to high speed rail
  - Can operate on freight railroad tracks
  - Safe and reliable
  - Diesel-electric or turbine locomotives

Current intercity passenger trains in the US and internationally:

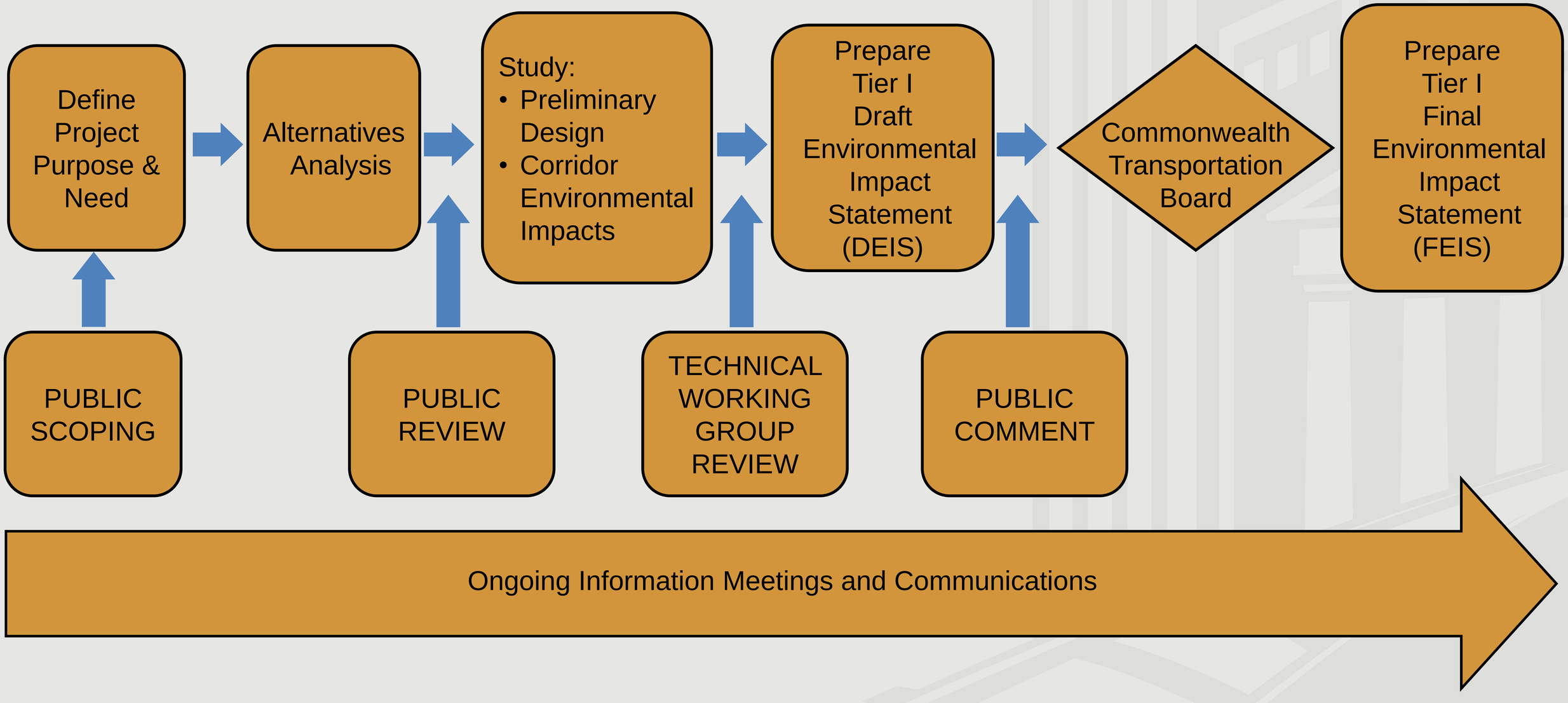
Pacific Northwest *Cascades* (Talgo)

Amtrak train 110 mph capability

Talgo higher speed train

Project Study Process

Richmond/Hampton Roads Passenger Rail Project
Tier 1 Draft Environmental Impact Statement



Evaluation Measures

- Ridership
- Capital and operating costs
- Travel time
- Natural environment impacts
- Cultural resource impacts
- Community impacts
- Agency and community support
- Feasibility

Alternatives Under Consideration

Alternative	Route	Route Miles	Trains	Maximum Authorized Speeds (MAS)
Status Quo	Peninsula/CSXT	73.9	2	79 mph
	Southside/NS	0	n/a	No train
No Action (Baseline)	Peninsula/CSXT	73.9	3	79 mph
	Southside/NS	0	n/a	No train
Alternative 1	Peninsula/CSXT	75.9	3	79 mph
	Southside/NS	101.0	6	90-110 mph
Alternative 2a	Peninsula/CSXT	75.9	6	90-110 mph
	Southside/NS	101.0	3	79 mph
Alternative 2b	Peninsula/CSXT	75.9	9	90-110 mph
	Southside/NS	0	n/a	No train

Grade Separations

Before

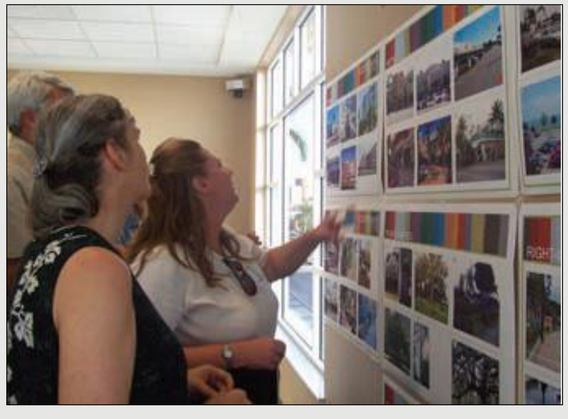
Typical Grade Separation

After

- Grade separations are underpasses or overpasses where highways cross railroad tracks.
- Grade separations improve safety and traffic congestion and noise.
- Higher speed passenger rail tracks are typically grade-separated from adjacent highways in some locations.

Environmental Review Process

The Environmental Review Process and planning activities associated with the National Environmental Policy Act (NEPA) include the following:



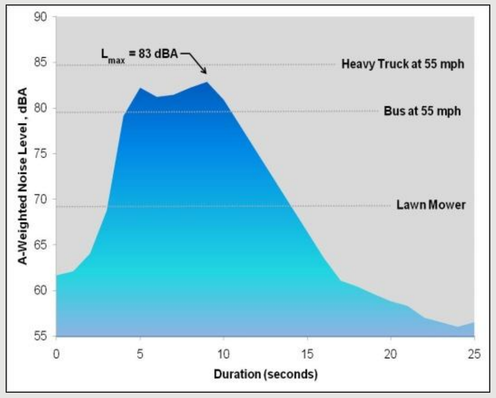
- **Identify** all environmental impacts
- **Evaluate** reasonable alternatives that could avoid or minimize environmental impacts
- **Develop** detailed mitigation plans (ways to reduce or avoid environmental impacts)
- **Provide** information for public review and comment
- **Disclose** to decision makers the impacts, mitigation strategies and public comments

Higher Speed Train Noise

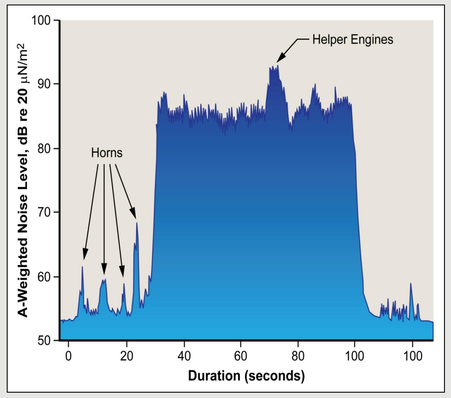
Higher speed train noise

Noise generated by a higher speed train pass-by consists of:

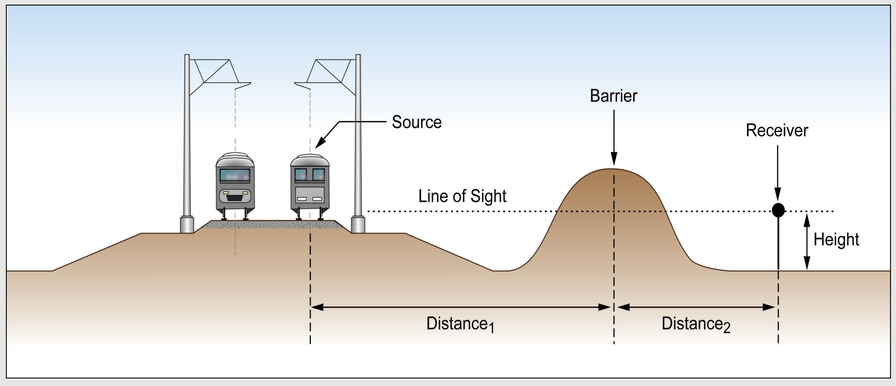
- Diesel-electric propulsion system
- Wheel/rail interactions, and
- Horn blowing at grade-crossings



Typical Amtrak train noise passing by at 60 mph, 82 feet from track (TGV in France)



Typical freight train noise passing by at 67 mph, 100 feet from track (Lancaster to Rosamond, CA)



Higher Speed Passenger Rail Noise Barrier Model

Mitigation Measures for higher speed passenger and freight train noise

Effective noise control measures for steel-wheeled rail passenger systems include:

- Installation of noise barriers such as wayside sound walls or earthen berms
- Federal approval of “quiet zones” at railroad grade crossings to eliminate warning horns
- Continuous-welded rail (CWR) track and low-vibration switches that eliminate rail gaps

Noise Barriers along Railways

Benefits of higher speed passenger rail operations

Although unique noise control measures are applied differently among systems and rail corridors, the following benefits are proposed as part of the Richmond/Hampton Roads Passenger Rail Project:

- “Quiet Zones” will be established at road grade crossings where warranted
- Nighttime train horns will be eliminated as a result of the quiet zones
- Noise barriers will block train noise and provide a visual screen for increased privacy
- New CWT track and switches eliminates joints in rail reducing wheel-rail noise
- Reduced sleep disturbance from warning horns.

Population and Employment in Station Areas

Population by Station	Year 2000		Year 2025		Percent Change	
	5 Mile	15 Mile	5 Mile	15 Mile	5 Mile	15 Mile
Richmond Main Street	249,115	740,651	275,553	974,650	10.6%	31.6%
Williamsburg	52,473	203,299	77,455	280,790	47.6%	38.1%
Newport News Amtrak	177,891	640,898	197,714	736,410	11.1%	14.9%
Newport News Downtown	118,528	755,955	116,408	858,511	-1.8%	13.6%
Petersburg	68,946	218,666	88,672	346,742	28.6%	58.6%
Bowers Hill	132,935	679,426	160,058	779,368	20.4%	14.7%
Norfolk Downtown	299,466	908,961	312,405	1,025,522	4.3%	12.8%

Employment by Station	Year 2000		Year 2025		Percent Change	
	5 Mile	15 Mile	5 Mile	15 Mile	5 Mile	15 Mile
Richmond Main Street	261,964	594,161	265,447	766,975	1.3%	29.1%
Williamsburg	55,336	117,174	68,618	158,658	24.0%	35.4%
Newport News Amtrak	121,849	414,469	145,317	467,571	19.2%	12.8%
Newport News Downtown	79,456	515,817	90,056	579,904	13.3%	12.4%
Petersburg	30,901	129,840	50,290	200,831	62.7%	54.7%
Bowers Hill	45,327	478,012	66,717	544,965	47.2%	14.0%
Norfolk Downtown	250,358	639,316	287,121	713,807	14.7%	11.7%

Key Comparisons Among Alternatives

Alternative	Total # Trains	Speed	Time to Richmond (hours)	Annual Ridership (high)	Capital Costs	Annual Operating Costs	Annualized Cost per Rider (high)
Status Quo: maintains existing service on the Peninsula	2 Peninsula	79 mph	1:25	262,300	$0	$16,900,000	$64.43
No Action: adds one Amtrak train on the Peninsula	3 Peninsula	79 mph	1:11	464,800	$0	$21,300,000	$45.83
Alternative 1: High speed rail on the Southside, conventional speed rail on the Peninsula	6 Southside (HSR), 3 Peninsula (79 mph)	90 mph	1:35	1,110,100	$475,400,000	$80,000,000	$106.03
		110 mph	1:27	1,162,200	$543,000,000	$81,400,000	$107.09
Alternative 2a: High speed rail on the Peninsula, conventional speed rail on the Southside	3 Southside (79 mph), 6 Peninsula (HSR)	90 mph	1:03	1,124,300	$742,300,000	$77,900,000	$121.64
		110 mph	0:57	1,161,400	$844,200,000	$79,400,000	$126.01
Alternative 2b: High speed rail on the Peninsula, no rail service on the Southside	9 Peninsula (HSR)	90 mph	1:03	1,101,100	$330,000,000	$71,700,000	$88.88
		110 mph	:57	1,147,000	$431,900,000	$72,400,000	$92.98

Notes:
Southside conventional train at 79 mph would take 1:38 to Richmond
HSR = High Speed Rail

Key Findings

- Status Quo and No Action Alternatives do not meet Purpose and Need.
- 90 mph is the optimum higher speed. Marginal ridership increases and minimal travel time savings at 110 mph require substantially more capital investment.
- Of the Build Alternatives:
  - Alternatives 1 and 2a serve the greatest population base with trains on both routes.
  - Alternatives 1 and 2a provide new passenger rail service to the Southside.
  - Alternatives 1 and 2a have the highest ridership.
  - Alternative 2b has the lowest capital and operating costs.
  - Alternative 2b is the most cost effective at $88.88 per rider at 90 mph.
  - Alternative 2b has the least potential for negative environmental effects of the Build alternatives because improvements would only occur along one route and primarily within that route's existing right of way.

Tell Us What You Think!

Public comment period closes February 11, 2010

Written Comments

- Fill out the online comment form at www.rich2hrrail.info
- Fill out a comment form at a public hearing
- Write to:
  Public Information Office
  Virginia Department of Rail & Public Transportation
  600 East Main Street, Suite 2102
  Richmond, VA 23219

Verbal Comments at Public Hearings

Tuesday, January 26, 5:30 - 8:00 p.m.

Department of Motor Vehicles
2300 W. Broad Street, First Floor
Richmond, VA 23269

Wednesday, January 27, 5:30 - 8:00 p.m.

Newport News City Center Conference Facilities
James and Warwick Rooms
700 Town Center Drive
Newport News, VA 23606

Thursday, January 28, 5:30 - 8:00 p.m.

Half Moone Cruise and Celebration Center
One Waterside Drive
Norfolk, VA 23510

For more information visit the project website:
http://www.rich2hrrail.info