



AGS Feasibility Study

PLT Meeting 7
November 14, 2012

Agenda

- ▶ Introduction to the Meeting
- ▶ Consultant Team's Review of Statements of Technology Information (SOTI)
- ▶ Review Selection of Technology Providers to Present at Technology Forum
- ▶ Break
- ▶ Planning for Technology Forum
- ▶ Update on Land Use & Station Criteria Meetings
- ▶ AGS/ICS/Co-Development Project Coordination
- ▶ Conclusion, Final Remarks and Next Steps

Introduction to the Meeting

- ▶ Meeting Objectives
 - Review Qualifications Screening of Technology Providers
 - Discuss Consultant Team's Review of SOTIs
 - Discuss Format for Technology Forum
 - Update on Land Use & Station Criteria
 - Update on AGS/ICS/Co-Development Project Coordination

Introduction to the Meeting

- ▶ Review and Approve Meeting Minutes from Last Meeting
- ▶ Review Action Items from Last Meeting
- ▶ Website Update
- ▶ Media Outreach

SOTI

- ▶ Statements of Technical Information (SOTI) were received October 10
- ▶ 18 Technology Providers submitted SOTIs

American Maglev Technology	Owen Transit Group
ET3	Personal Rapid Transit Consulting
FlightRail	Public Personal Rapid Transit Consortium
General Atomics	Roane Inventions (TriTrack)
Kestrel	SkyTran
MagneMotion	Swift Tram
Mediatrik/Techtronics	Talgo
MegaRail	Transrapid
Monobeam	Tubular Rail

Review of SOTIs

- ▶ Initial screening focused on 6 qualifying criteria
 - Qualification Criteria 1: Travel Time
 - Qualification Criteria 2: Grade
 - Qualification Criteria 3: Safety
 - Qualification Criteria 4: Weather/Wind
 - Qualification Criteria 5: Light Freight
 - Qualification Criteria 6: Technology Readiness (TRL)
- ▶ All six criteria had to be met to be qualified
- ▶ 11 Technology Providers were found to be qualified

Review of SOTIs – Unqualified Technology Providers

Technology Provider	QC 1 – Travel Time	QC 2 – Grade	QC 3 – Safety	QC 4 – Weather & Wind	QC 5 – Light Freight	QC 6 – TRL
ET3	Yes	Yes	No	Yes	Yes	No
Kestrel	No	No	No	No	No	No
Mediatrik/Techtronics	No	No	No	No	No	No
Monobeam	Yes	No	No	No	No	No
Personal Rapid Transit Consulting	No	Yes	Yes	Yes	Yes	Yes
Roane Inventions (TriTrack)	Yes	Yes	Yes	Yes	Yes	No
Tubular Rail	No	No	No	Yes	Yes	No

Review of SOTIs – Qualified Technology Providers

Technology Provider	QC 1 – Travel Time	QC 2 – Grade	QC 3 – Safety	QC 4 – Weather & Wind	QC 5 – Light Freight	QC 6 – TRL
American Maglev	Yes	Yes	Yes	Yes	Yes	Yes
FlightRail	Yes	Yes	Yes	Yes	Yes	Yes
General Atomics	Yes	Yes	Yes	Yes	Yes	Yes
MagneMotion	Yes	Yes	Yes	Yes	Yes	Yes
MegaRail	Yes	Yes	Yes	Yes	Yes	Yes
Owen Transit Group	Yes	Yes	Yes	Yes	Yes	Yes
PPRTC	Yes	Yes	Yes	Yes	Yes	Yes
SkyTran	Yes	Yes	Yes	Yes	Yes	Yes
Swift Tram	Yes	Yes	Yes	Yes	Yes	Yes
Talgo	Yes	Yes	Yes	Yes	Yes	Yes
Transrapid	Yes	Yes	Yes	Yes	Yes	Yes



Review of SOTIs

- ▶ Unqualified SOTIs were not reviewed further
- ▶ Remaining 11 qualified SOTIs were then reviewed by Consultant Review Team (CRT):
 - AZTEC
 - TYPASA
 - CA Group
 - O&V Consulting
 - Jacobs
 - Exponential Engineering
- ▶ Each CRT member reviewed specific criteria based on project role/expertise

Review of SOTIs

- ▶ Responses to 28 criteria were reviewed and scored
- ▶ Scores were assigned to each criteria
 - 5 – Excellent
 - 4 – Very Good
 - 3 – Good
 - 2 – Fair
 - 1 – Poor
 - 0 – No Response

Review of SOTIs

Technology Provider	Rank Order
American Maglev Technology	1st
Talgo	2nd
Transrapid	Tie - 3rd
Owen Transit Group	Tie - 3rd
MegaRail	Tie - 4th
Public Personal Rapid Transit Consortium	Tie - 4 th
General Atomics	Tie - 5 th
SkyTran	Tie - 5 th
Swift Tram	6 th
Flight Rail	7 th
MagneMotion	8 th

Selection of Technology Forum Presenters

- ▶ Developed by CRT & CDOT
- ▶ Five selected to provide good cross section of the various technologies

Technology Provider	Type of Technology	Technology Group (Alignment)
American Maglev Technology	Urban Maglev	In I-70 Right of Way
MegaRail	Rubber Tires in Enclosed WheelWay	In I-70 Right of Way
Owen Transit Group	Similar to Monorail	Hybrid Alignment
Talgo	Conventional HSR	Outside I-70 Right of Way
Transrapid	High Speed Maglev	Hybrid Alignment

American Maglev Technology



ADVANCED GUIDEWAY SYSTEM (AGS) FEASIBILITY STUDY



MegaRail



ADVANCED GUIDEWAY SYSTEM (AGS) FEASIBILITY STUDY



Owen Transit Group



ADVANCED GUIDEWAY SYSTEM (AGS) FEASIBILITY STUDY



Talgo



ADVANCED GUIDEWAY SYSTEM (AGS) FEASIBILITY STUDY



Transrapid



ADVANCED GUIDEWAY SYSTEM (AGS) FEASIBILITY STUDY



Technology Forum

- ▶ Thu. Dec. 13 (8–5) & Fri. Dec. 14 (8:30–3:30)
- ▶ Jefferson County Fairgrounds
15200 West 6th Avenue Service Road
Golden, CO 80401

Technology Forum

- ▶ 11 qualified technology providers invited to exhibit on Thursday 12/13
- ▶ 5 qualified technology providers invited to present on 12/13 & 12/14
 - 30 minute presentation
 - 80 minute Q&A (3-4 standard questions, then open)
 - 2 presentations on 12/13
 - 3 presentations on 12/14
- ▶ Presentations closed to public & media

Technology Forum

Presentation Room Requirements

- ▶ Attend prep meeting at 8 a.m. on Thu. 12/13
- ▶ Review panel includes CRT, Technical Committee, PLT and select CDOT staff
- ▶ Commitment to attend all 5 presentations
- ▶ All panelists must sign non-disclosure agreement

Update on Land Use & Station Coordination with Counties

- ▶ 1st round of meetings have been held with all counties
 - Summit County – September 10, 2012
 - Jefferson County – October 12, 2012
 - Clear Creek County – October 24, 2012
 - Eagle County – October 30, 2012



ADVANCED GUIDEWAY SYSTEM (AGS) FEASIBILITY STUDY



Station Elements Discussions with each County

- ▶ Platform
- ▶ Parking Facility
- ▶ Traffic Circulation
- ▶ Transit Interface
- ▶ Pedestrian Facilities
- ▶ Bicycle Facilities



Ridership and Origin/Destination Patterns will factor into Parking Demand at each Station

- ▶ Assumption is 15 acre site with 1000 foot platform



Station Siting Examples



Station Siting Examples



ADVANCED GUIDEWAY SYSTEM (AGS) FEASIBILITY STUDY



Station Siting Examples



ADVANCED GUIDEWAY SYSTEM (AGS) FEASIBILITY STUDY



Next Steps

- ▶ Individual working group sessions – November & December 2012
- ▶ Round 2 County Meetings – January & February 2013

AGS/ICS/Co-Development Coordination

- ▶ ICS Progress
 - East-West Alignments from ICS Level 1 Evaluation
 - Land Use & Operational Inputs to Modeling
 - ICS Project Leadership Team Meeting – tentative for first week of December
- ▶ AGS/ICS Project Managers regularly coordinate efforts
- ▶ AGS staff actively involved in ICS ridership model development
- ▶ Co-Development selection update at Collaborative Effort meeting on Friday 11/16

East/West Routes Through Denver (US 6)



East/West: I-70 ➤ US 6 ➤ CML/BrushLine ➤ 96th Ave ➤ DIA



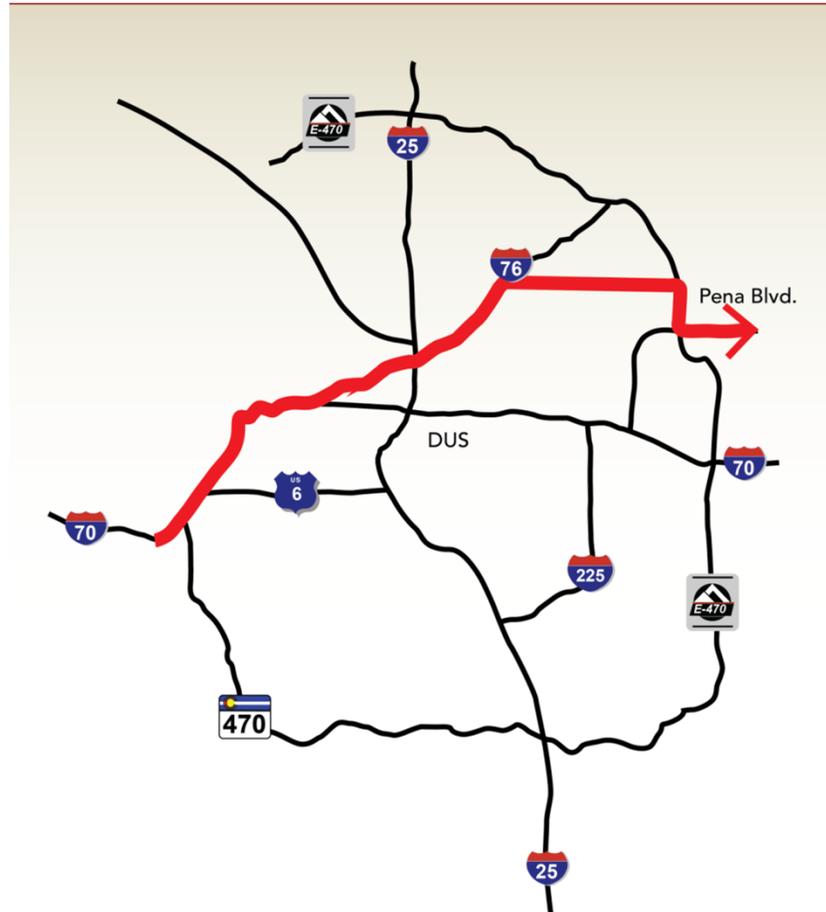
East/West Routes Through Denver (I-70)



East/West: I-70 ➤ New Stockyards Station ➤ I-70 ➤ DIA



East/West Routes Through Denver (I-76)



East/West: I-70 ▶ I-76 ▶ New North Metro Station ▶ 96th Ave ▶ DIA



East/West Routes Around Denver (Beltway)



East/West Around Denver: I-70 ➤ C-470 ➤ E-470 ➤ DIA

Conclusions, Final Remarks & Next Steps

- ▶ Discuss changes to PLT members
 - Denver Chamber of Commerce, Eagle County, I-70 Coalition, Colorado Environmental Coalition, Club 20
- ▶ Next PLT meetings
 - Technology Forum (12/13 & 12/14)
 - January 9, 2013 (Progress Meeting)