


Public-Private Partnerships:
2015 American Society of Highway Engineers (ASHE)


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RBR Project: Legislative Authorization

- Act 88 of 2012 authorizes public private transportation projects in Pennsylvania.
- Pennsylvania Structurally Deficient Bridges
 - 6363 SD
 - 4126 state owned,
 - 2237 locally-owned
 - Approximately 300 bridges become SD each year
 - Bridge work increasing proportionate to Act 89
- September 2013 - P3 Board approved The Rapid Bridge Replacement Project.
 - at least 500 geographically disbursed structurally deficient bridges
 - Commonwealth wide distribution

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2

RBR Project: PennDOT Expectations

- Design/Build/Finance/Operate/Maintain
 - Term will be 25 years
- Economies of Scale in Design and Construction
 - Construction of structures between 2015-2018
 - Similar type, size, scope, fabrication, and construction
- Local Designers and Contractors support to be incorporated
- PennDOT keeps Routine Maintenance (snow removal, etc.)
 - Development Entity responsible for preventative and corrective measures that affect durability of the bridges.
- Reasonable Handback Elements and Expectations
- High Quality expected to meet Handback Requirements

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3

RBR Project: Bridge Construction Categories

- **Early Completion Bridges**

- Construction start expected in 2015
- Similar to Design/Build, we provide TS&L, H&H, NEPA, ROW, Utility Clearance, and Permits
- Development Entity performs final design



- **Remaining Eligible Bridges**

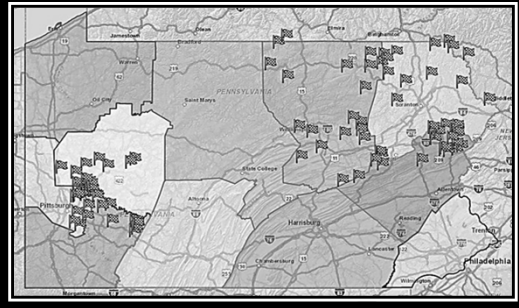
- PennDOT provides: Scoping documents, Min Bridge width, detour or staged, and 2 borings per bridge
- Development entity performs: NEPA, TS&L, H&H, survey, ROW Plan, Permits, and Final Design

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4

RBR Project: Early Completion Bridges

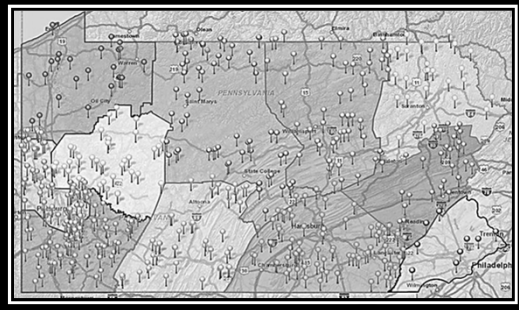


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5

RBR Project: Statewide Map of Bridges



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6

RBR Project: PennDOT Responsibilities

- Single Point of Contact for Development Entity Submissions
- Project Management
- Design Reviews
- Bridge Substitution Determination
- Approve Management Plans
- Approve Schedule
- Audit Quality Processes
- Independent Assurance
 - Random visits, sampling & testing

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7

RBR Project: Development Entity's Responsibilities

- Must follow Department's Manuals and normal policies and procedures
- Develop a Project Management Plan – 19 different plans
 - Comprehensive Environmental Protection Plan
 - Context Sensitive Design and Aesthetics Master Plan
 - Quality Management Plan
 - Design Quality Management Plan
 - Construction Quality Management Plan
 - Maintenance Management Plan
- Employ a Environmental Compliance Manager during the D&C phase of the project
- NBIS inspections

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8

RBR Project: Development Entity's Responsibilities

- Construction Quality
 - Quality Control – DE
 - (as is typically the contractor's responsibility)
 - Quality Assurance – DE
 - to ensure that their Quality Processes are followed (which must include Department requirements)
 - Quality Acceptance – Independent Construction Quality Acceptance Firm (CQAF)
 - Reports to PennDOT and the DE
 - Certifies to both that requirements were met
 - Reports and data entry – our systems
 - PennDOT acceptance based on these outputs, and:
 - Independent Assurance – Department
 - Random visits, sampling, testing, auditing, analysis, QA the CQAF, etc.
 - Additional FHWA and Finance Team roles

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9

RBR Project: Noncompliance System

- Noncompliance point system created to incentivize Development Entity Compliance with Contractual Documents
 - Noncompliance points for each occurrence
 - Cure Period
 - Interval of Recurrence
 - Financial impact, and point accrual
 - Deduction of funds per point
 - Points can lead to default
 - Liquidated Damages
 - Unavailability Events – financial deductions
 - Calendar, Detour, Lane Closure



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10

RBR Project: Handback Requirements

- Punchlist at “Final Acceptance”
 - Department takes over maintenance of signs, delineators, line painting, vegetation, etc.
- Early Handback
 - seeding after growth established 1 year
 - Flexible pavements handed back in 5 years
 - Must meet our 5 year warranty conditions
- Handback at end of Term
 - Condition rating of 7 throughout the Term
 - Condition 7 for 98% at end / at least 6 for remainder



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11

RBR Project: FHWA Coordination

- FHWA/USDOT approvals
 - **Private Activity Bonds (PABs)**- FHWA allocated **up to \$1.2B** of PAB Authority to the Pennsylvania Economic Development Financing Authority on June 27, 2014.
 - **Special Experimental Project No. 15 (SEP-15)** - PennDOT’s SEP-15 application was approved on 7/31/14. This allowed the Development Entity (DE) to create and submit for approval the NEPA document for each of the bridges. DE will also be responsible for Public Outreach.
 - **RFP Contract documents approved** – FHWA approved the Public-Private Partnership Agreement (PPA), Instruction to Proposers (ITP) and Technical Provisions (TP)

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12

RBR Project: Schedule Updates (con't)

- **Proposer Submittals Received** – from 4 shortlisted teams - 9/29/2014
- **Development Entity Selected** – Plenary Walsh Keystone Partners (PWKP) - 10/24/2014
- **Commercial Close Date** – January 9, 2015
- **NPT 1** – January 30, 2015
- **Financial Close Date** – March 18, 2015
- **Project Management Consultant** – URS (AECOM) Team
- **Design Reviews** – Gannett Fleming Team
- **ROW** – Percheron Acquisitions Team






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13

RBR Project: PWKP TEAM

- **Development Entity** – Plenary Walsh Keystone Partners
- **Lead Engineering Firm**–HDR
- **Lead Contractor** – Walsh/Granite JV
- **Lead Maintenance Firm**–Walsh Infrastructure Management (WIM)
- **Construction Quality Acceptance Firm**–TRC

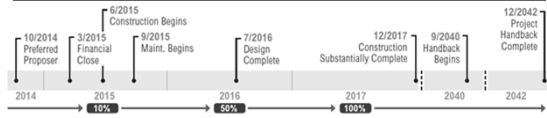






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14

RBR Project: Timeline



Completing Construction Early

- Cooperation and Coordination
- Quality is Key to Durability

Early Handback

- 12 months vegetation growth
- 5 year flexible pavement (warranty)


Handback

- NBIS and Condition Assessment
- Routine Maintenance and Renewal Work

Useful Life

- 25 year term
- Into future

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15

RBR Project: Approach

- What's different?
 - Best Value Selection
 - One-on-One meetings
 - Alternative Technical Concepts (ATC's)
 - Design Reviews
 - Over The Shoulder Reviews
 - Construction Involvement
 - Maintenance Responsibilities
 - Handback
 - Useful Life
 - Noncompliance Regime
 - Payment


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16

LIFE CYCLE EXAMPLE – POLYESTER POLYMER CONCRETE OVERLAY




- More expensive initial construction – BUT lower life-cycle cost
 - Instead of multiple epoxy seal applications
 - 30-year proven technology
- 30-year bridge deck solution
 - Extremely low permeability – preserving riding surface AND superstructure
 - Much less susceptible to roadway salting operations
- Less impact to traveling public
 - Can be used by traffic in 2 hours
 - Limiting impacts to public from future overlay or deck repairs

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Plenary Walsh Keystone Partners
Proven Performance. Local Presence.

17


RBR Project: PWKP Approach – Design/Permitting

- Goal is 30+ Bridges Released For Construction (RFC) per Month Beginning April 2015
 - Over 200 Designers anticipated at peak (including numerous sub-consultants)
 - 300+ Integral Abutment Bridges
 - 100+ Box Culverts
 - 100+ Cantilever Abutment Bridges
 - Bridges are Primarily Spread Box Beam Superstructure
 - Roadway Work is Limited to Bridge to Roadway Transition
- Design and Program Standardization will be Coordinated with Construction Joint Venture through weekly or bi-weekly Technical Working Groups (TWG):

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18

RBR Project: PWKP Approach – Design/Permitting

- 11 Standard Designs will be used:
 - SM Rail Standard
 - Abutment Standard
 - Vertical Battier Standard
 - Bridge Approach Slab Standard
 - Bridge Bearing Standard
 - Precast Box Culvert Standard
 - Foundation Design Parameters and Model Assumptions Standards
 - Roadway Special Details Standard
 - Spread Box Beam Standard
 - Flume Detail Standard

RBR Project: PWKP Approach – Design/Permitting

- Technical Work Groups (TWG)
 - Bridges/Design Standardization
 - Geotechnical
 - MPT/Civil/Roadway
 - Utilities
 - Permitting
 - Hydraulics & Hydrology
 - Schedule/Logistics




Schedule

Bridges by Year


	2015	2016	2017	Grand Total
District 1		8	16	24
District 2		24	40	64
District 3	20	18	11	49
District 4	10	16	3	29
District 5	18	16	6	40
District 6		4	5	9
District 8		38	53	91
District 9		29	19	48
District 10	8	12	18	38
District 11	12	42	31	85
District 12	9	42	30	81
Grand Total	77	249	232	558


RBR Project: PWKP Approach – Construction

- Material Management
 - Major Materials will be sourced by CJV in lieu of individual subs
 - Design Input
 - Economies of Scale
 - Less Administration
 - More Efficient Quality Control




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22

RBR Project: PWKP Approach – Public Info



- Public Information
 - Website → parapidbridges.com
 - NEPA Public Meetings / other Public Meetings
 - Public Officials Meetings
 - Bridge Signs





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23

Questions/Comments

Questions/Comments?

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24

8