

NJTPA 2014 Local Concept Development Study Hudson & Essex Counties Clay Street Bridge over the Passaic River



Community Stakeholders Meeting



March 24, 2014



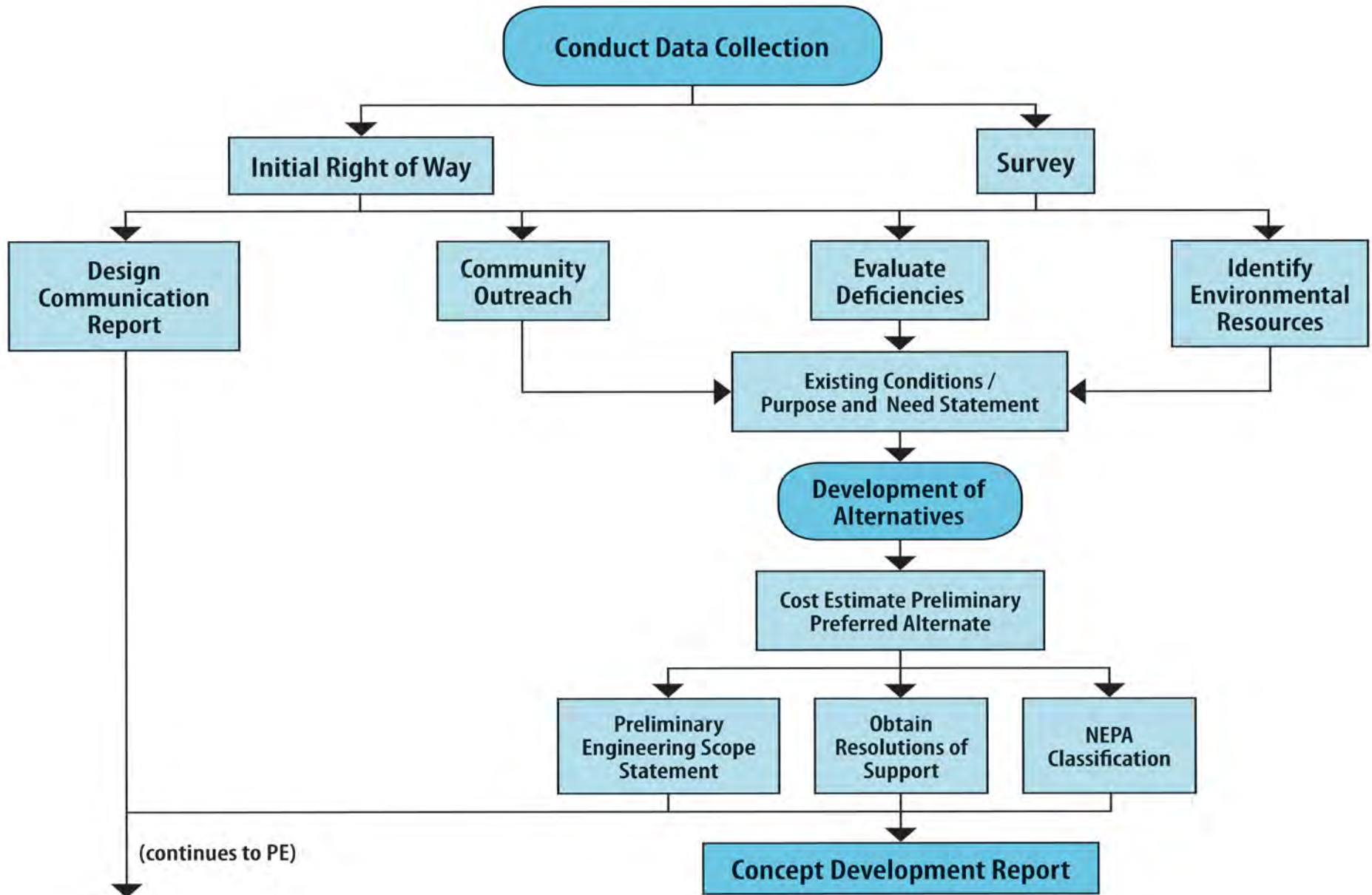
Project Overview and Background

- Clay Street Bridge was built in 1908.
- Bridge is in need of major rehabilitation or replacement.
- Routine maintenance can no longer address deficiencies.
- NJTPA/Hudson & Essex County Local Concept Development (LCD) Study initiated January 2014.
- New program provides opportunity to advance this project with public input and agency collaboration.

Local Project Delivery Process

Local Concept Development	Local Preliminary Engineering	Final Design/ Right of Way Acquisition	Construction
Purpose and Need Statement	Approved Design Exception Report	Construction Contract Documents and PS&E package	Completed Construction
Date Collection and Environmental Screening Report	Cost Estimates (Final Design, ROW and Construction)	Environmental Reevaluations	As-Built
Selection of Preliminary Preferred Alternative	Approved Environmental Document	Environmental Permits	Update and Finalize Design Communications Report
NEPA Classification	Approved Project Plan	Acquisition on ROW	Close-out Documentation
Concept Development Report	Preliminary Engineering Report	Update Design Communications Report	
Create Design Communications Report	Update Design Communications Report		

Local Concept Development Process



Environmental Process

- Federally funded projects require NEPA (National Environmental Policy Act) documentation
- Identify environmental resources and concerns
- Avoid, minimize and or mitigate environmental impacts
- Coordination with permitting agencies
- Process includes public input and community development

Clay Street Bridge Data

- Spans the Passaic River connecting the City of Newark and the Borough of East Newark
- Year Built: 1908 (rehab. 1942, 1958, 1975, 1992, & 1997)
- Bridge type: 3 spans- riveted Warren truss rim-bearing swing center span (236 ft), west approach riveted deck girder (42 ft) and east approach pre-stressed concrete box beam (41 ft)
- Overall Length: 326 feet
- Bridge Roadway Width: 36' – 8"
- Bridge Clearance in closed position: 8.2 feet (at MHW)

Existing Bridge Condition

- Bridge in serious overall condition and is Structurally Deficient – 2012 Bridge Re-evaluation Report)
- Sufficiency Rating = 33.0 (out of 100)
- Superstructure in poor condition: Rating = 3 out of 10 (localized advanced material losses to steel truss members and to girders & floor beams in swing span)
- Bridge may soon need to be load posted due to advancing deterioration of steel support members

Existing Bridge Condition (continued)

- Substructure in fair condition – Rating = 5 out 10
- Bridge is Scour Critical
- Bridge railings are substandard
- Bridge operating machinery in overall fair condition but has no span lock system as required by AASHTO
- Bridge electrical system in overall fair condition with many obsolete components (ex. manually operated barrier gates)
- Bridge opening duration (10 minutes) does not meet AASHTO standards (1 minute to both open and close)
- Needs approx. **\$ 6M** in remedial repairs

Existing Bridge Condition



Photo 1: Bridge Approach Roadway Looking East – note substandard angle point



Photo 2: Looking west from bridge – note substandard outside shoulder width

Existing Bridge Condition



Photo 3: East approach to bridge looking west, substandard vertical curb



Photo 4: Looking east from bridge – substandard curb height on north side

Existing Bridge Condition



Photo 5: Looking south from top of bridge



Photo 6: South Elevation

Existing Bridge Condition



Photo 7: Looking north from bridge



Photo 8: Substandard bridge railing

Existing Bridge Condition



Photo 9: South truss bottom chord , severe deterioration to gusset plate, heavy rust throughout connection



Photo 10: South truss gusset plate, severe rust with section loss

Existing Bridge Condition



Photo 11: South truss connection, material loss to member angles connection plates, and lacing bars



Photo 12: North truss; section loss in angle leg of member

Existing Bridge Condition



Photo 13: Localized rusting and material loss to top chords and diagonal truss members



Photo 14: Bottom chord of south truss –severe rusting and localized section loss

Existing Bridge Condition



Photo 15: Severe rusting and hole in bottom flange angle leg of floor beam (FB12) of swing span

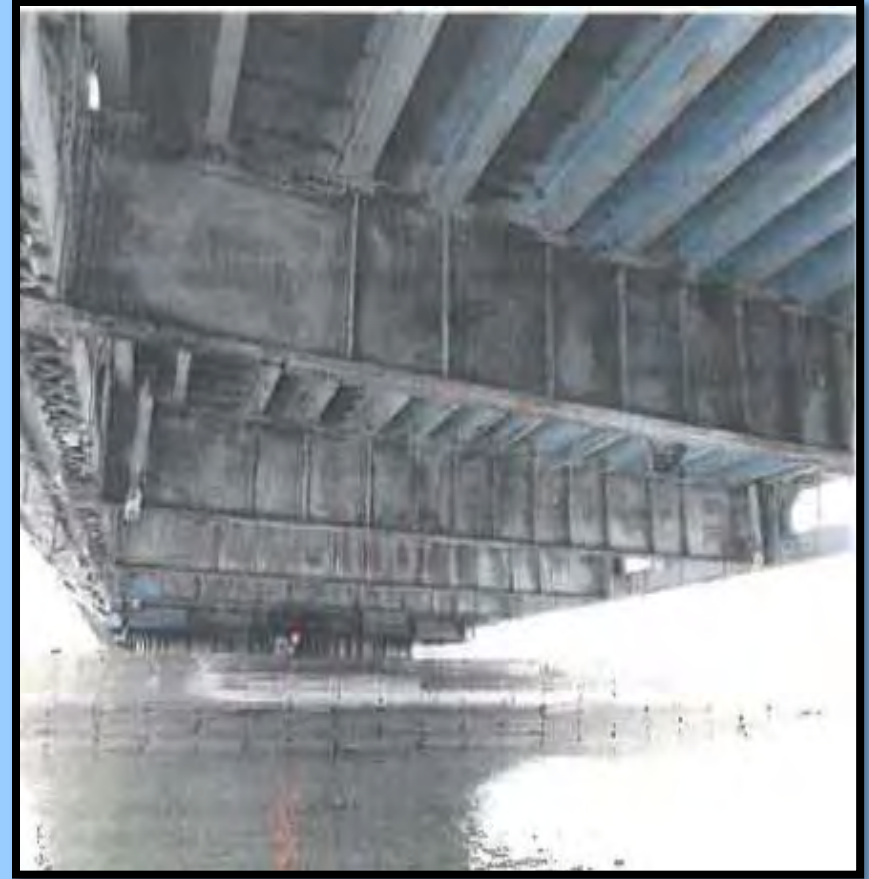


Photo 16: Floor beams in west half of swing span – corrosion and localized section losses

Existing Bridge Condition



Photo 17: Section loss in bottom of support girder in swing span



Photo 18: Severe rusting and localized section loss of steel stringers supporting sidewalk in swing span

Existing Bridge Condition



Photo 19: Hole in exterior girder of west approach span



Photo 20: Rusting and localized section loss in girders and floor beams of west approach span

Existing Bridge Condition



Photo 21: East approach span and east abutment



Photo 22: East approach span superstructure (pre-stressed concrete box beam)

Existing Bridge Condition



Photo 23: Northwest approach embankment undermining



Photo 24: Undermining of south interior girder at west abutment

Existing Bridge Condition



Photo 25: Rim bearing assembly of swing span – fair condition with corrosion build on exposed surfaces



Photo 26: Swing span drum girders and machinery radial support beams, moderate rusting

Environmental Constraints

- Draft Environmental Screening Report Status & Constraints Map (Amy S. Greene)
- Draft Cultural Resources Report & Map (Richard Grubb & Associates)

Project Status

- Work began January 2014
- Data Collection Nearly Complete
 1. Project Mapping & Field Survey
 2. Environmental Screening
 3. Verification of Utilities
 4. Obtain Bridge Inspection Reports, Traffic Data, Crash Data
 5. Identify Existing Substandard Design Elements
 6. Local Officials, Stakeholders and Public Outreach & Input
 7. Project Fact Sheet
 8. Develop Project Purpose and Need

Project Schedule

- 18 to 21 month completion schedule
- Major Milestones
 1. Project Purpose and Need – August 2014
 2. Development of Conceptual Alternatives – November 2014
 3. Determine Preliminary Preferred Alternative – April 2015
 4. Submit Draft Concept Development Report – June 2015
 5. Completion of Concept Development Phase – October 2015

Community Involvement

- Community Involvement Schedule
 1. Local Officials Briefings: Project Purpose & Need - January 29, 2014 (Borough of East Newark); February 26, City of Newark
 2. Stakeholders Meeting No. 1: Purpose & Need - March 24, 2014
 3. Public Information Center Meetings (No. 1): Project Purpose & Need - April 7, 2014; 2 to 4 PM (Borough of East Newark) and 6 to 8 PM (City of Newark)
 4. Stakeholders Meeting No. 2: Input on Alternatives – November 2014
 5. Local Officials Briefings (No. 2): Input on Alternatives & Determine Preliminary Preferred Alternative – Feb 2015

Community Involvement (continued)

6. Public Information Center Meetings (No. 2): Input on Alternatives & Determine Preliminary Preferred Alternative – March/April 2 2015 (Borough of East Newark & City of Newark)
7. Local Officials Briefings (No. 3): Resolution of Support for Preliminary Preferred Alternative (Borough of East Newark & City of Newark)

Local Officials Briefing (1/29/14)

Comments from Local Officials Briefing (Borough of East Newark), January 29, 2014

- Clay and Bridge Street Bridges cannot be closed at the same time – severe traffic impacts
- Need better access to Clay Street for redevelopment opportunities
- Need to maintain and improve pedestrian and bicycle access and connectivity

Local Officials Briefing (2/26/14)

Comments from Local Officials Briefing (City of Newark), February 26, 2014

- Need wider bridge to improve circulation and bicycle mobility
- Consider fixed bridge if it must be replaced to improve traffic operations; there is not much marine traffic or river activity
- Need improved waterfront access
- Need bridge lighting to match with new streetscape design in area



FY 2014 HUDSON COUNTY AND UNION COUNTY LOCAL CONCEPT DEVELOPMENT STUDIES

ORGANIZATION CHART



NJTPA PROGRAM MANAGEMENT / PROJECT SPONSOR



NJDOT LOCAL AID

PRINCIPAL-IN-CHARGE
Glen Schetelich, PE

CONSTRUCTABILITY REVIEWS
Brendan O'Shea, PE

PROJECT MANAGER
Bruce Riegel, PE

QUALITY ASSURANCE / QUALITY CONTROL
Tom Faranda, PE

TRAFFIC ENGINEERING TEAM LEADER
Lauren Dimiceli, PE

TRAFFIC DATA COLLECTION & CRASH ANALYSIS
Lauren Dimiceli, PE
Daniel Peterson, PE, PTOE

TRAFFIC MANAGEMENT STUDIES & OPERATIONAL ANALYSIS
Lauren Dimiceli, PE

HIGHWAY LIGHTING ANALYSIS
Robyn Eisensmith, PE

UTILITY ENGINEERING TEAM LEADER
Ronald Rotunno, PE (N)

UTILITY DISCOVERY & COORDINATION
Ronald Rotunno, PE (N)

STRUCTURAL DESIGN TEAM LEADER
David Gerber, PE

STRUCTURAL ALTERNATIVES
David Gerber, PE
Joseph Solis, PE
Robert Supino, PE

STRUCTURAL EVALUATIONS
David Gerber, PE
George Nickels, PE

MECHANICAL / ELECTRICAL DESIGNS
*Robert Moses, PE**

MECHANICAL ENGINEERING
Craig Johnson, PE

ELECTRICAL ENGINEERING
Alec Noble, PE

GEOTECHNICAL TEAM LEADER
Raymond Mankbadi, PE

SUBSURFACE INVESTIGATIONS
Raymond Mankbadi, PE
Yuanzhi Lin, PhD
TEST BORING DRILLER

ROADWAY DESIGN TEAM LEADER
Michael Swietanski, PE

GEOMETRICS / ROADWAY ALTERNATIVES
Michael Swietanski, PE
Anthony DiMaggio, PE (MTA)

MAINTENANCE & PROTECTION OF TRAFFIC
Michael Swietanski, PE
Jun Liu

HYDRAULICS AND HYDROLOGY TEAM LEADER
Lee Adams, PE

DRAINAGE & STORMWATER MANAGEMENT
Lee Adams, PE
Nabil Hourani, PE (MTA)

BRIDGE SCOUR ANALYSIS
Lee Adams, PE
Nabil Hourani, PE (MTA)

SURVEYING / ROW ENGINEERING TEAM LEADER
Richard Baron, PLS (N)

ENVIRONMENTAL SCIENCE TEAM LEADER
William Romaine (ASGEI)

ENVIRONMENTAL SCREENING
Robert Piel (ASGEI)
William Romaine, PW (ASGEI)

WETLANDS DELINEATION
William Romaine, PW (ASGEI)

CULTURAL RESOURCES
Glenn Modica, MA (RGA)

ENVIRONMENTAL CONSTRAINTS AND DOCUMENTATION
William Romaine, PW (ASGEI)

PUBLIC OUTREACH
Martine Culbertson (MC)*

COMMUNITY INVOLVEMENT
Martine Culbertson (MC)
Brenda Hunter (SCG)

TECHNICAL SUPPORT SERVICES

Interactive Communications - Cost Estimation - Primavera Scheduling - MicroStation CADD - Value Engineering

SUBCONSULTANT KEY

- McCormick Taylor (MTA)
- Stokes Creative Group (SCG)
- Naik Consulting Group (N)
- Martine A Culbertson (MC)
- Amy Greene Environmental (ASGEI)
- Richard Grubb & Assoc., Inc. (RGA)

Project Contact Information

- Joe Glembocki, Hudson County Project Manager,
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- Luis Rodriguez, Essex County Project Manager,
lrodriguez@essexcounty.nj.org, (973) 226-8500
- Clay Street Bridge Project Web Site address:
- **www.claystbridge.com**

The Power Point Presentation will be posted on the Project Web Site

- Social Media (Twitter)
- Written comments towards Project Purpose & Need will be received until Friday, May 9, 2014



Questions & Comments

