Veterans Bridge Access Improvements

Cooperative Planning Develops
Innovative Solution

2013 WVDOT/MPO/FHWA Planning Conference

September 18, 2013

Weirton, West Virginia

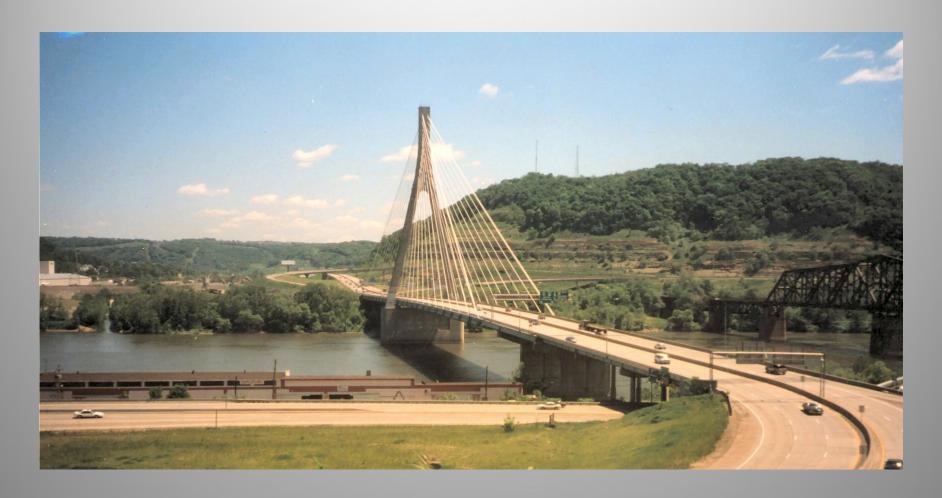
Dave Snelting, PE

Transportation Engineer - BHJ MPO

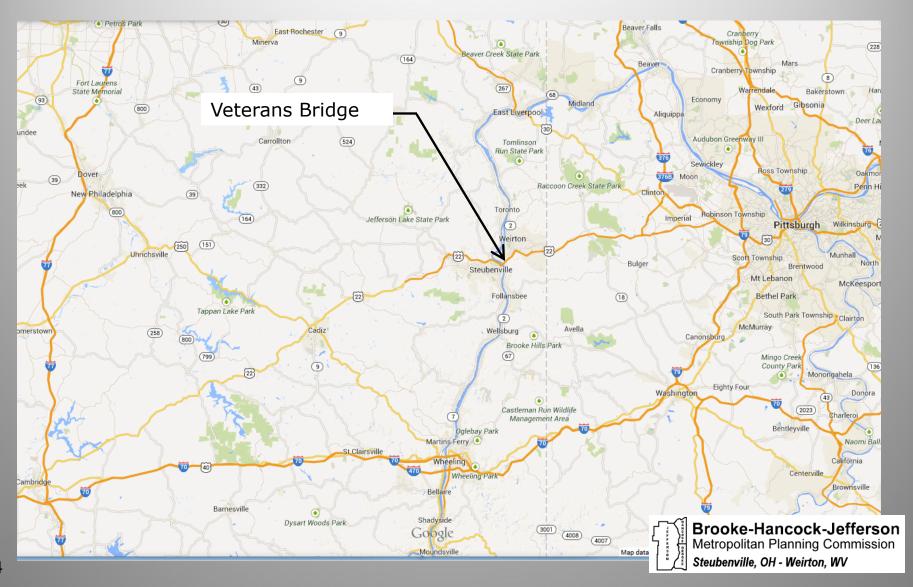


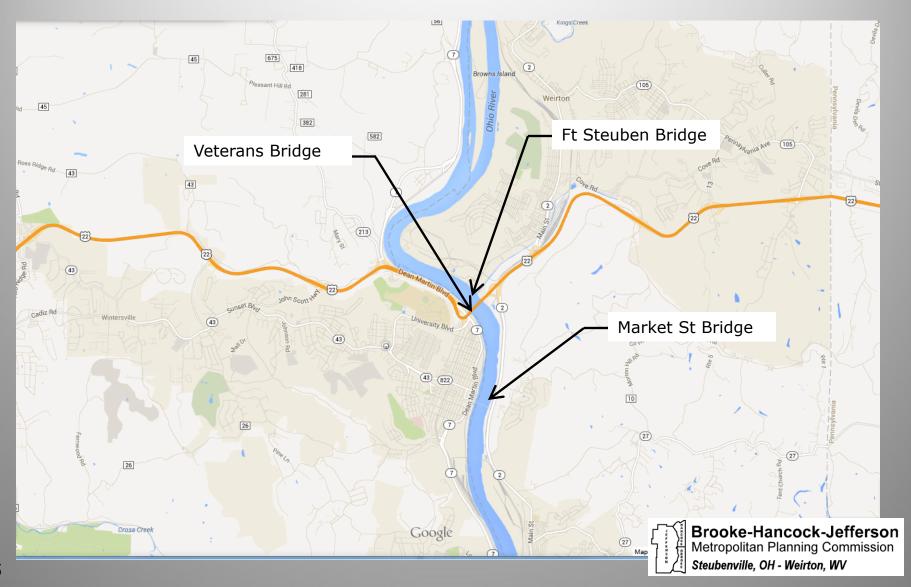
Veterans Bridge Access Improvements

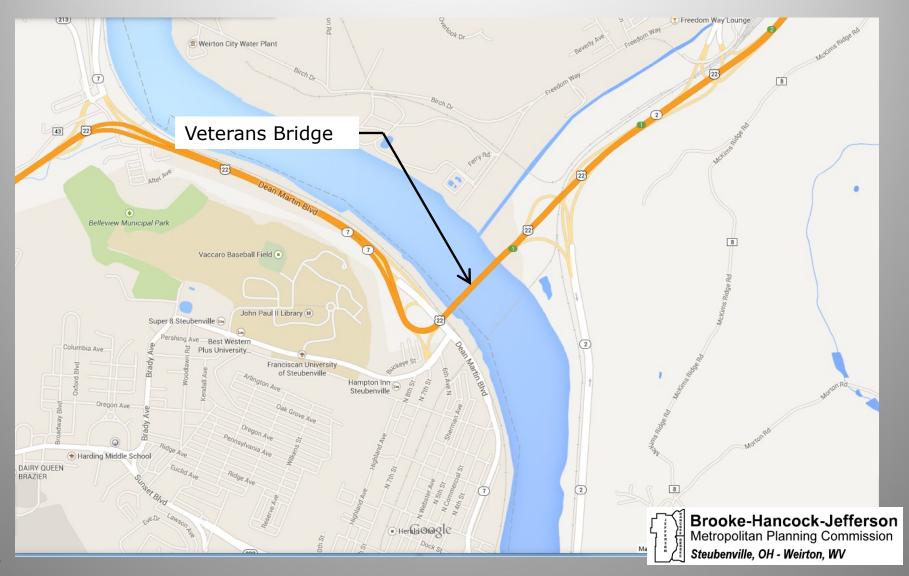
- Access issues to Veterans Bridge
- Number One transportation priority in BHJ Region
- Concerned businesses brought into the solution process
- ODOT, Steubenville & BHJ develop alternatives
- Innovative solution results











Brooke-Hancock-Jefferson Regional Bridge System Study

Phase II Final Report

Prepared For:

Brooke-Hancock-Jefferson Metropolitan Planning Commission

Prepared By:



5533 Fair Lane Cincinnati, OH 45227 513.272.5533

Subconsultant



Columbus, Ohio

September 2003

This project was funded through the cooperative effort of the
U.S. Federal Highway Administration, the Ohio Department of Transportation, and
the West Virginia Department of Transportation.

Ohio River Bridge Study

Phase II September 2003



First Priority

Construct roadway and intersection capacity improvements

- · Realign and improve Freedom Way/Birch Intersection.
- Improve alignment and widen the intersection of Freedom Way/WV 2 and related West Virginia approaches.
- Improvement of Freedom way including upgrade and/or widening of the existing three
- Improve and widen University/SR 7 intersection and related Ohio approaches.
- Provide safety improvements on Veterans Memorial Bridge ramps in Ohio.

Second Priority

Construct a new Ohio River Bridge, south of Wellsburg

• Prepare engineering and environmental studies to establish a specific location for the new Bridge and configuration of roadway connections to WV 2 and SR 7.

Third Priority

Construct a new Ohio River Bridge to connect WV 2 with Steubenville at **Washington Street**

• Prepare engineering and environmental studies to establish a specific alignment location and impact on WV 2, SR 7, and the existing street system in the Steubenville Central Business District.

The recommended projects are shown in Figure 14.

Ohio River **Bridge Study**

Phase II September 2003





Ohio River Bridge Study

- In 2003, three Ohio River Crossings exist in the study area
 - Veterans Memorial Bridge (20,000 vpd)
 - Fort Steuben Bridge (4,000 vpd)
 - Market Street Bridge (6,000 vpd)
- Fort Steuben Bridge is scheduled for demolition
- Market Street Bridge in need of major renovation could close at any time
- Access to Veterans Bridge (remaining bridge) high priority

Ft Steuben Bridge Closed – Jan 2009





Ft Steuben Bridge Demolished – Feb 2012





Ft Steuben Bridge Demolished – Feb 2012



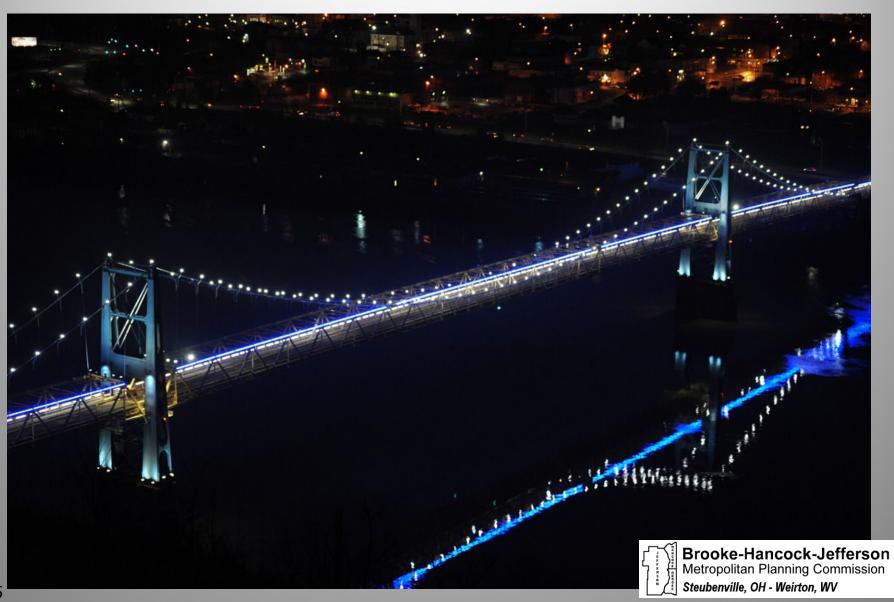


Market St Bridge Renovation Jan 2010 to Dec 2011





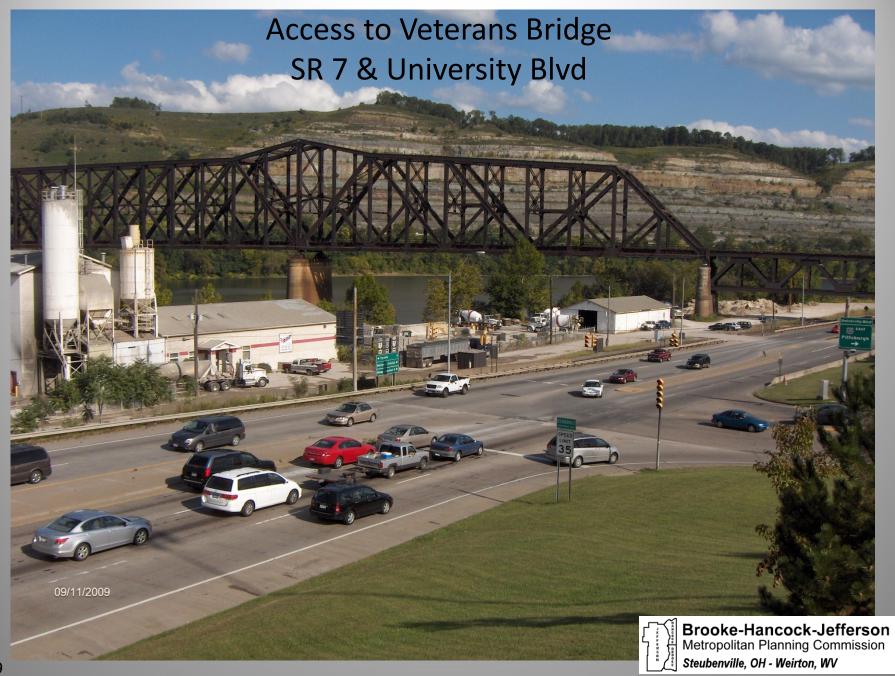
Market St Bridge Renovation – Opens Dec 2011











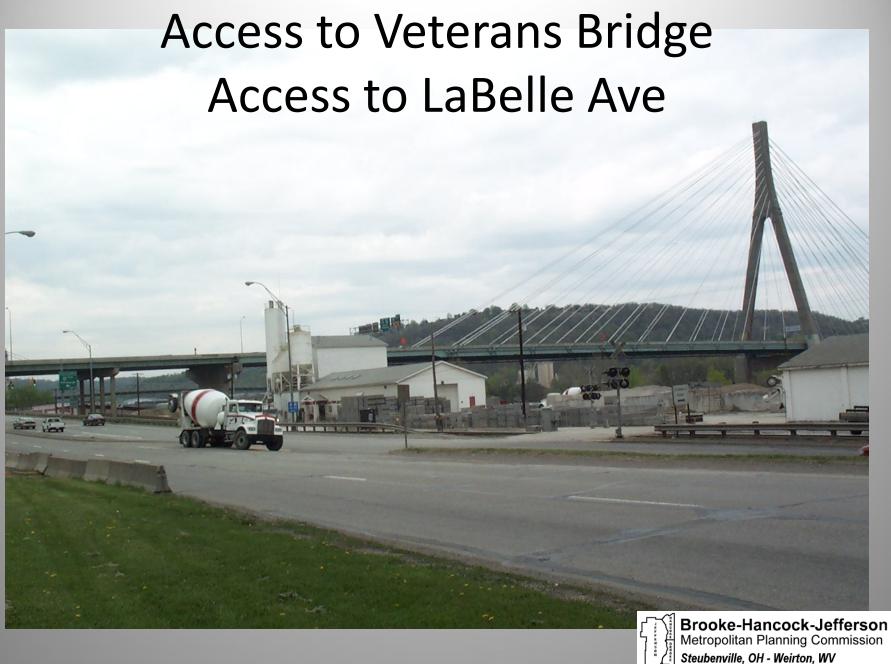


Brooke-Hancock-Jefferson Metropolitan Planning Commission Steubenville, OH - Weirton, WV















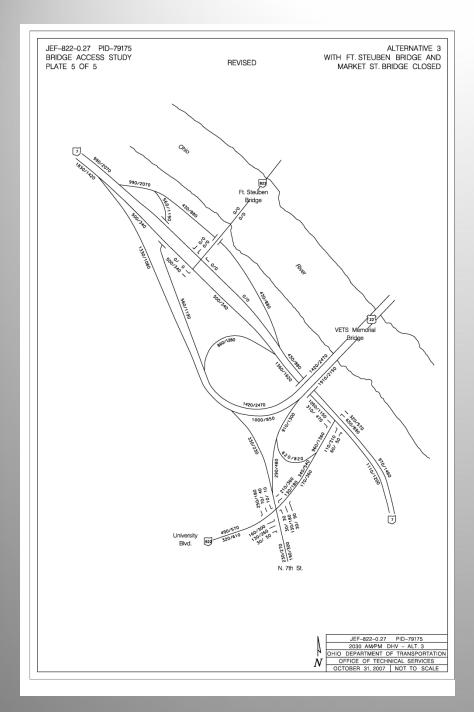






Project Constraints





Veterans Bridge Access

ODOT Certified Traffic

2030 AM/PM Peak Hours



A30/880 0-0 VETS Mémorial 1050-150 1420/2470 1000/850 1301260 University 822 Blvd. 230/210 N. 7th St.

Veterans Bridge Access

ODOT Certified Traffic

2030 AM/PM Peak

Hours



Veterans Bridge Access

Simtraffic 7 [©] Presentation – Existing Conditions

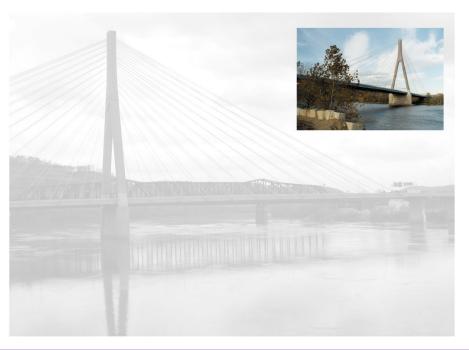


Consultant Study

Veterans Memorial Bridge Access Study

Draft Report

February 1, 2005





The Ohio Department of Transportation

Prepared by:





Brooke-Hancock-Jefferson Metropolitan Planning Commission Steubenville, OH - Weirton, WV Veterans Memorial Bridge Access Study Draft Report

VII. CONCLUSIONS AND RECOMMENDATIONS

A total of nine (9) basic alternates were evaluated as part of this Study. Six were eliminated from consideration by the technical committee. Three of the alternates were chosen for more detail analysis. They were:

Alternate 2 – No Build with Fort Steuben Bridge Closed;

Alternate 3 - Extend Northbound S. R. 7 Left-Turn Lane modified to Alternate 3A; and

Alternate 9 – Depressed Southbound Lanes on S. R. 7 modified to Alternate 9A.

Additional modifications were necessary for Alternates 3 and 9. Analysis of each of these alternates (3A and 9A) is contained in Section VI.

Alternate 2 does not meet the objectives of the Phase II BHJ Regional Bridge System Study Report. In addition, the intersection of University Boulevard and S. R. 7 fails with a Level of Service "F" in the year 2010 and 2030.

Alternate 3A provides acceptable traffic capacity and operations for 2010. However, unacceptable Level of Service results were found in 2030 and unstable conditions would most likely occur as a result of the weave on University Boulevard between S. R. 7 and Ramp D.

Alternate 9A provides acceptable traffic capacity and operations for 2010 and 2030. The improvements are significant and will provide long-range benefits.

Preliminary construction cost estimates, not including right-of-way, environmental impacts, utility relocation, engineering design, and cost of inflation are:

Alternate 3A - \$ 2,720,000.00; and

Alternate 9A - \$ 3,880,000.00.

Note that the cost estimate contains a 30 percent comingency factor since it is not based on accurate field mapping and preliminary design information. Thus, the above cost should be considered as approximate and for comparison only.

RECOMMENDATION

It is recommended that Alternate 9A be selected as the preferred alternate to continue with preliminary engineering and design

Consultant
Veterans
Bridge
Access
Study
Recommendations

Feb 2005

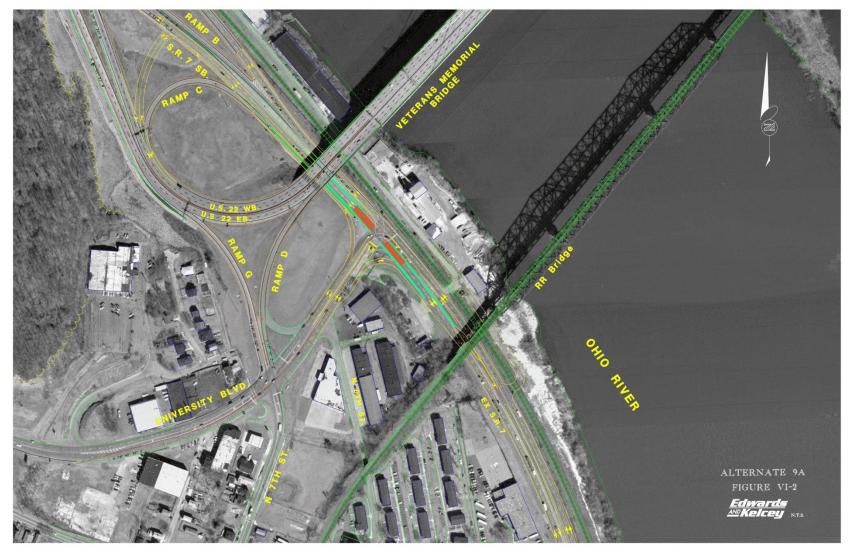


Brooke-Hancock-Jefferson Metropolitan Planning Commission Steubenville, OH - Weirton, WV

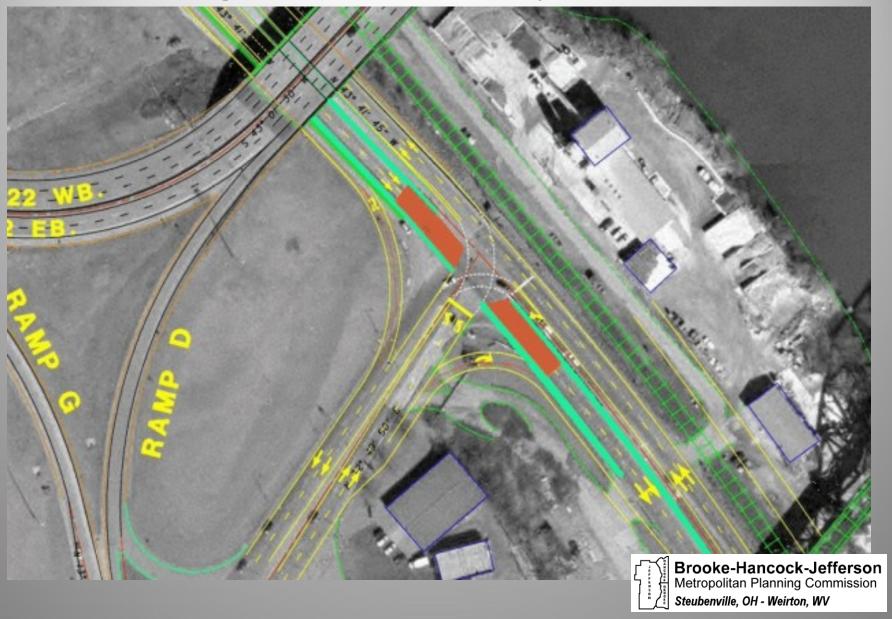
Bridge Access Study

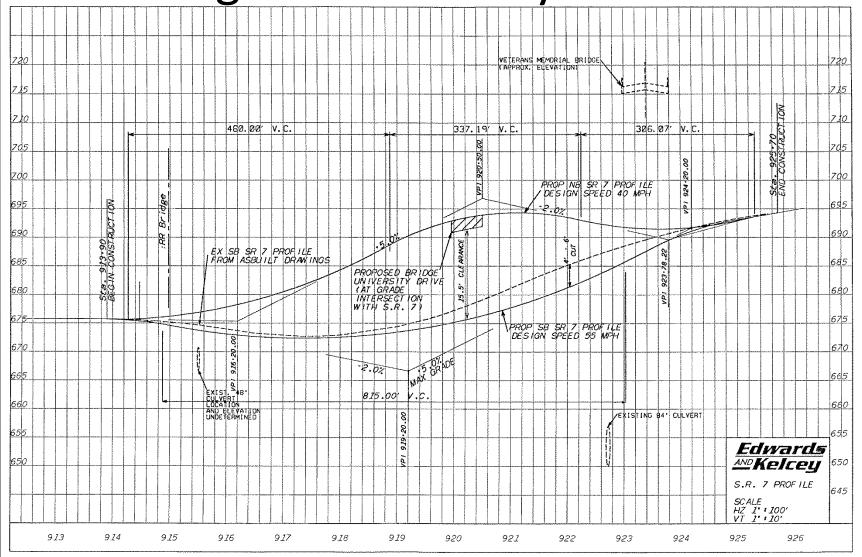
- Alternative 9A is recommended to be preferred alternative
- "Buildability" of Alternative 9A is questioned



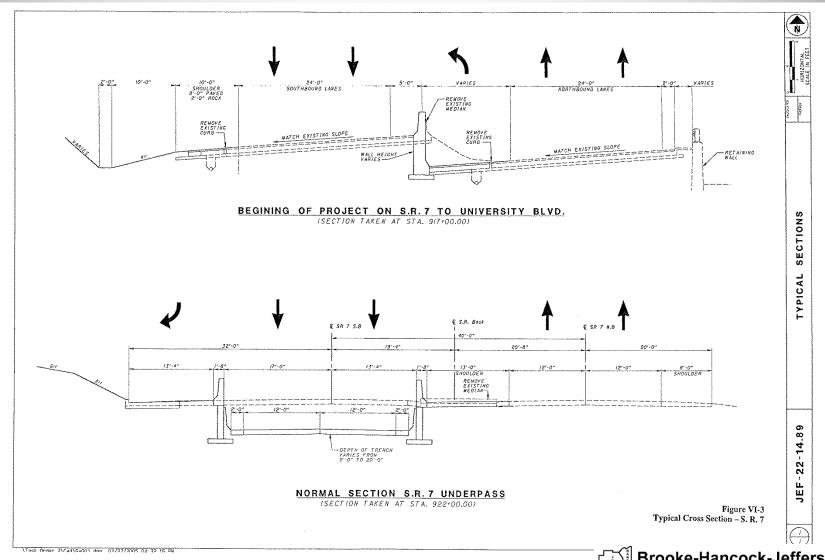












- After review by ODOT and Locals, none of the recommendations were found to be satisfactory
- Fall 2005-Bridge Access Sub-Committee of BHJ's TAC formed
 - ODOT D11, Steubenville, Weirton, BHJ
 - Businesses from Half Moon Industrial Park Area
 - Businesses from LaBelle Avenue Area
- Sub-Committee meets regularly to identify issues / solutions
- Fall 2006-Bridge subcommittee designates Technical Group for further design alternatives at SR 7 & University Blvd

- Technical Group Project Goals
 - Level of Service D or better at all study area intersections
 - Full movement access to LaBelle Avenue
 - US22 to remain limited access freeway
 - SR7 to remain limited access expressway
 - Signals are okay on University Blvd and also on SR7

Fall 2006 to August 2008

- Technical Group develops purpose and need statement
- Technical Group develops numerous alternatives
- BHJ develops exhibits
- BHJ develops Simtraffic[®] models to verify feasibility & capacity
- In the end, 32 alternatives were developed



- Technical group develops matrix to filter feasible alternatives
 - Matrix is based on
 - Constructability
 - Capacity
 - Safety
 - Environmental issues
 - River front access
 - Cost

Veterans Bridge Access Study

Jefferson County, Ohio / Brooke County, WV

Summary of Effort

August 2008

Revised March 2009



Brooke-Hancock-Jefferson Metropolitan Planning Commission Technical Advisory Committee in cooperation with the Ohio Department of Transportation District Eleven

Summary of Effort Published

August 2008



- Summary of all work completed by Technical Group
 - Background
 - Final alternatives
 - Purpose and need statement
 - Decision matrix
 - Tables showing disposition of all alternatives
 - ODOT Certified traffic
 - Sketches of each alternative
 - Description of feasible alternatives with pro & cons
 - Highway Capacity calculations for existing conditions & feasible alternatives

- Synchro/Simtrafiic[©] models were developed for later alternatives
- Synchro [©] models used for later alternative sketches

Purpose

To improve access to the Veterans Memorial Bridge at Steubenville through the realignment and widening of adjacent connecting thoroughfares of State Route 7 and University Boulevard.

Need

The intersection of State Route 7 and University Boulevard currently operates at level of service C/D and was identified on the Ohio Department of Transportation's top 200 traffic crash site locations in 2005. The intersection traffic signal currently operates with a split phase sequence on State Route 7 to address the identified crashes but is operationally undesirable. The West Virginia Division of Highways has indicated they will keep the Market Street bridge open until such time that the bridge deterioration requires its closure. The current deteriorated condition of the Market Street Bridge which is approximately one mile south of the study area is such that closure could occur at any time. Approximately 6300 vehicles per day cross the Market Street Bridge. Closure of this bridge will have a severe traffic impact on the only remaining Ohio River Bridge crossing, the Veterans Memorial Bridge, especially the roadways serving the bridge, State Route 7 and University Boulevard.



VETERANS BRIDGE ACCESS STUDY

Comprehensive List of Alternatives

Date: October 14, 2008

Overall		Study		
Number	Active?	Alt	Source	Description of Alternative
1	No	1	EK	No-build with Fort Steuben Bridge Open
2	No	2a	EK	No-build with Fort Steuben Bridge Closed / Market St Bridge Open
3	Yes	2b	Comm	No-build with Fort Steuben Bridge Closed / Market St Bridge Closed
4	No	2c	Comm	No-build with Fort Steuben Bridge Open / Market St Bridge Closed
5	No	3	EK	Extend SR7 NB Left Turn Lane and move LaBelle Access south of RR Bridge
6	No	3a	EK	Dual Extended SR7 NB Left Turn Lanes and move LaBelle Access south of RR Bridge
7	Yes	3b	Comm	Alt 3a with Ramp D widened to two lanes / traffic from 7th & University yields on Ramp D / EB US22 reduced to one lane
8	Yes	Зс	Comm	Alt 3b with relocated Ramps G & D, WB Univerisity traffic entering Ramp D controlled with trafifc signal / EB University left turn phase at 7th is protected only
9	No	4	EK	Continuous Flow Intersection
10	No	5	EK	New Fiyover Ramp
11	No	6	EK	Roundabout and move LaBelle Access south of RR Bridge
12	No	7	EK	New Ramp to Veterans Memoral Bridge / relocate SB SR7 and Ramp C
13	No	8	EK	New Signalized Intersection Configuration for Mainline US22
14	No	9	EK	Depressed Southbound Lanes on SR7 at University Blvd and move LaBelle Access south of RR Bridge
15	No	9a	EK	Depressed Southbound Lanes on SR7 at University Blvd, Signalized Ramp C at SR7 and move LaBelle Access south of RR Bridge
16	No	10a	BHJ	NB SR7 Left Turn relocated north to new left exit ramp tied into Ramp C with traffic signal / Extend SB SR7 left turn lane to LaBelle Access
17	No	10b	BHJ	NB SR7 Left Turn relocated north to new right exit ramp tied to Ramp C with traffic signal / NB SR7 relocated / Extend SB SR7 left turn lane to LaBelle Access
18	No	10c	BHJ	NB SR7 Left Turn relocated north to new right exit ramp tied to signalized intersection with Ramp C / NB SR7 relocated / Extend SB SR7 left turn lane to LaBelle Access
19	No	11	ODOT	Re-align NB/SB SR7 with new Signalized Intersection on mainline US22
20	No	12	ODOT	NB SR7 Left Turn relocated north opposite of realigned Ramp C, signalized intersection with SB SR7 and then routed to new ramp to EB US22
21	No	13	ODOT	NB SR7 Left Turn relocated north opposite of realigned Ramp C, signalized intersection with SB SR7 and then routed to right turn onto University Blvd
22	No	14a	BHJ	University Blvd realigned south and across from new LaBelle Access / NB SR7 left turn lane extended
23	No	14b	BHJ	University Blvd realigned south and across from new LaBelle Access / NB SR7 left turn lane widened to two lanes and extended
24	No	14c	BHJ	University Blvd realigned south and across from new LaBelle Access / NB SR7 left turn uses continuous flow treatment
25	No	14d	BHJ	University Blvd realigned south and across from new LaBelle Access / NB SR7 left turn uses continous flow treatment / dual SB SR7 right turn
26	No	14e	Comm	Alt 14d with dual NB left turn, dual NB lanes on frontage road, dual lane ramp D / traffic from 7th & University yields on Ramp D / EB US22 reduced to one lane
27	No	14f	Comm	Alt 14e with LaBelle Ave access moved south of railroad bridge
28	No	14g	BHJ	Alt 14f with single NB left turn lane / separate lanes on Ramp D to eliminate yield for traffic from 7th & University
29	No	14h	BHJ	Alt 14f with roundabout at 7th & University
30	Yes	14i	BHJ	Alt 14f with relocated Ramps G & D, WB Univerisity traffic entering Ramp D controlled with trafifc signal / EB University left turn phase at 7th is protected only
31	Yes	15	ODOT	NB SR7 relocated to align with EB US22 Ramp / SB SR7 redirected to US 22 Ramp G / SB SR7 left turn lane to LaBelle Access extended

Source Key

EK = Edwards and Kelcey Report

BHJ = BHJ Metro Planning Commission

Comm = Veterans Bridge Access Sub-Committee

ODOT = Ohio Dept of Transportation



VETERANS BRIDGE ACCESS STUDY

TECHNICAL DECISIONS OCTOBER 14, 2008

Transportation Planning Solutions Comparison Matrix

Evaluations Based on Design Year 2030

This matrix is for comparison purposes only. It is intended that the scale will evolve with each step within the Project Development Process to include quantification of impacts and improvements. The attached document further clarifies each category and specific evaluation criteria, and should be read a support to the project of the p

Good Lowest likely impacts, meets most criteria in the respective category.

Average Mid-range of impacts, meets some criteria in respective category.

Poor High likely impacts, does not meet criteria in the respective category.

		Constr	uctibility		A & B = G	C & D = Y	E&F=R	(Capacity (PM)			Safety		Environme	ntal Impacts	River Fro		Project Costs
Alternative	e Description	Constructible Geometrics	US 22 Freeway Preserved	Intersection Univer. Blvd. & New Intersection	Intersection SR 7 & Univ. Blvd.	Diverge Univ. Blvd. & Ramp D	Merge Ramp D & 7th St. Conn.	Merge Ramp D & US 22 EB	Intersection Univ. Blvd. & 7th St.	Merge Ramp C & SR 7 SB	Intersection Univ. Blvd. & SR 7	Univ. Blvd. & 7th St. Intersection ##	New Intersection	Impacts (Fatal Flaw)	Right of Way Issues	Travel Time Existing vs. Circuitries	Capacity SR 7 & LaBelle Avenue	Design ROW Construction
2b	No Build-Ft. Steuben Bridge & Market Street Bridge Closed	N/A	N/A		F R	G	?	G	Υ	?	R	G		N/A	N/A	G	R	N/A
3ь	SR7 NB dual left turn lanes. Move LaBelle south of R/R. Ramp D widened to 2 lanes, US22 EB 1 lane.	Υ	Υ		D Y	G	R	G	B G	?	Υ	Υ		Υ	Υ	G	F? R	Y
3с	Alternative 3b with relocated Ramps G&D. Univ. Blvd. WB traffic entering Ramp D with traffic signal.	Υ	Υ		D Y	G	NA	G	B G	?	Υ	G		Υ	Υ	G	F? R	Y
14i	SR7 NB continuous flow left turns. Move LaBelle south to intersection. Create new inters. with 7th St. & Ramp D & Univ. Blvd.	Υ	Υ	G	G	G	NA	G	G	G	G	G	G	Υ	Υ	G	G	R
15	Relocate intersection SR 7 & University Boulevard	Y	Y		C Y	NA	NA	G	G	G	G	G		Y	Y	G	Y	R



Summary of Effort – Active Alternatives

- Alternative 2b No Build
- Alternative 3c Dual lane NB SR7 left turn lane, dual lane ramp to EB US 22, reduce EB US22 to one lane, relocate access to LaBelle Ave
- Alternative 14i(j) Alternate 3c with continuous flow intersection at SR7 & University Blvd, relocate access to LaBelle Ave
- Alternative 15 Relocate NB SR7 to align with ramp to EB US22,
 SB SR7 re-routed to EB US22 off ramp to University Blvd

Map - Veterans Bridge Access Study Alternative 2b - 2030 - PM - FSM Closed



6/17/2008 BHJ Metro Planning Commission

Alternate 2b

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Alternative 2b No Build



Map - Veterans Bridge Access Study Alternative 3c - 2030 - PM - FSM Closed



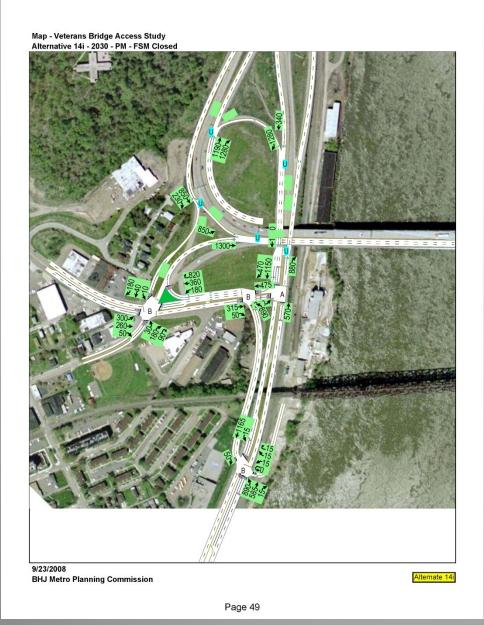
10/6/2008 BHJ Metro Planning Commission

Alternate 3c

Page 25

Alternative 3c

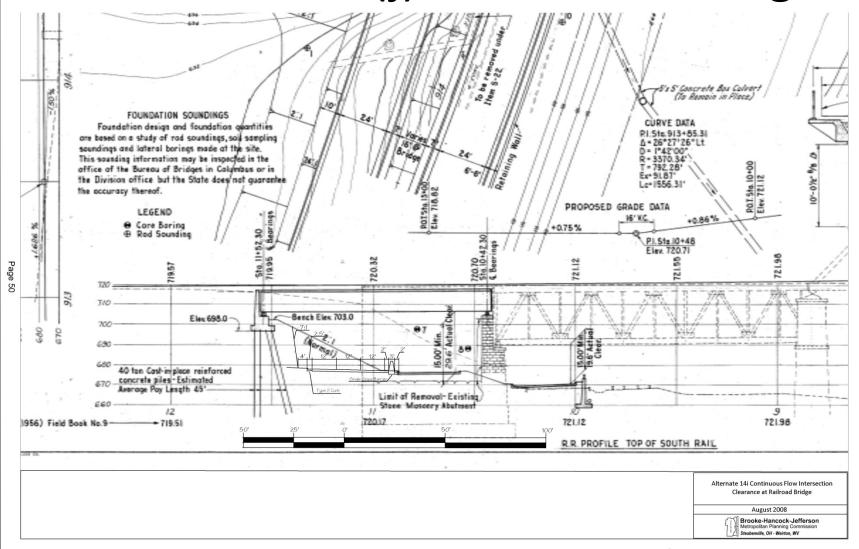




Alternative 14i(j) Continuous Flow Intersection **CFI**



Alternative 14i(j) – Check RR Bridge





Map - Veterans Bridge Access Study Alternative 15 - 2030 - PM - FSM Closed 6/17/2008 Alternate 15 **BHJ Metro Planning Commission**

Page 53

Alternative 15 Relocated SR7



Alternative Costs

Veterans Bridge Access Study

February 5, 2009

Summary of Estimated Costs (\$ millions)

Summary U	LStilliated	Estimateu Costs (5 millions)										
	PE (2009)				R/W (2011)			Const (2013)				
Alternate	Environ	Design	Total PE	R/W	R/W Acq	Total R/W	Const	МОТ	CE	Total Const	Project Total	
2b												
3b	\$0.33	\$1.16	\$1.49	\$1.43	\$0.14	\$1.58	\$12.41	\$1.22	\$1.36	\$14.99	\$18.06	
3c	\$0.33	\$1.24	\$1.57	\$1.71	\$0.17	\$1.88	\$13.33	\$1.34	\$1.47	\$16.13	\$19.59	
14i	\$0.33	\$1.81	\$2.14	\$3.64	\$0.36	\$4.00	\$18.86	\$2.43	\$2.13	\$23.43	\$29.57	
15	\$0.33	\$2.00	\$2.33	\$4.73	\$0.47	\$5.20	\$19.98	\$3.65	\$2.36	\$26.00	\$33.53	



CMAQ Fuel/Emissions Savings

Veterans Memorial Bridge Access Study

Summary of Travel Delay and Emission Benefits

February 3, 2009

Revised:

October 12, 2011

Data shown for SimTraffic© Analysis using ODOT Certified Traffic for Design Year 2030

		Altern	atives			Alternative 2b vs. 14i			lternative 2b vs. 1	.5	Alter	native 2b vs. 3b		
					PM	Peak Hr	Daily	Yearly	PM Peak H	r Daily	Yearly	PM Peak Hr	Daily	Yearly
MOE Parameter	2b	14i	15	3b		Change	Change	Change	Chang	e Change	Change	Change	Change	Change
	ı													
Travel time (hr) ¹	498.9	266.8	283.6	265.6										
Speed (mph) 1	14.1	27.6	26.0	28.0		13.5			11.	9	l	13.9		
Total Travel (mi) 1	7024	7365	7369	7297.6		341			34	5	l	273.6		
Total Delay (hr) 1	301.7	67.1	72.1	81.3		-234.6	-2346	-731952	-229.	5 -2296	-716352	-220.4	-2204	-687648
Total Stops ¹	12777	5027	5604	5545		-7750			-717	3		-7232		
Fuel Calc														
k1	0.055871	0.042898	0.044148	0.042597										
k2	0.7329	0.7329	0.7329	0.7329										
k3	0.001221	0.004678	0.004151	0.004815										
Calc'ed Fuel (gal)	629	389	401	397										

Notes 1. Generated from SimTraffic@ Report - "Total Network Performance" (average of 5 runs each)

Fuel Consumption Calculation (Ref: Synchro 7© User Manual, pgs 13-77+) Emissions Calculations (Ref: Synchro 7© User Manual, pg 13-78) CO = F * 69.9 g/gal F = (Total Travel * k1) + (Total Delay * k2) + (Total Stops * k3) $NO_x = F * 13.6 g/gal$ HC = F * 16.2 g/gal F = Fuel Consumption (gal) k₁ = 0.075283 - (0.0015892 * Speed) + (0.000015066 * Speed²) $k_2 = 0.7329$ CO = Carbon Monoxide Emissions (grams) $k_3 = 0.0000061411 * Speed^2$ NO_x = Nitrous Oxide Emissions (grams) Speed = Average Network Speed (mph) HC = Hydrocarbon Emissions (grams) Total Travel = Travel Distance (miles) F = Fuel Consumption (gal) Total Delay = Total Network Delay (hours) Total Stops = Total Stops (vehicles per hour) (Simplified rates are based on an unpublished letter to FHWA from Oak Ridge National Labs) (Above formulas used by TRANSYT 7-F)



CMAQ Fuel/Emissions Savings

Veterans Memorial Bridge Access Study

Summary of Travel Delay and Emission Benefits

February 3, 2009

Revised: October 12, 2011

Data shown for SimTraffic® Analysis using ODOT Certified Traffic for Design Year 2030

	Alternatives								
MOE Parameter	2b	14 i	15	3b					
Emissions									
HC (g)	10190	6302	6496	6431					
CO (g)	43967	27191	28030	27750					
NO_x (g)	8554	5290	5454	5399					
Total Delay (hrs)	301.7	67.1	72.1	81.3					

Altern	ative 2b vs. 14i		Alterr	native 2b vs. 15	
PM Peak Hr	Daily	Yearly	PM Peak Hr	Daily	Yearly
Change	Change	Change	Change	Change	Change
(g)	(kg)	(kg)	(g)	(kg)	(kg)
-3888	-38.88	-12131	-3694	-36.94	-11525
-16776	-167.76	-52341	-15937	-159.37	-49723
-3264	-32.64	-10184	-3100	-31	-9672
(hrs)	(hrs)	(hrs)	(hrs)	(hrs)	(hrs)
-234.6	-2346	-731952	-229.6	-2296	-716352
	PM Peak Hr Change (g) -3888 -16776 -3264 (hrs)	Change Change (g) (kg) -3888 -38.88 -16776 -167.76 -3264 -32.64 (hrs) (hrs)	PM Peak Hr Daily Yearly Change Change Change (g) (kg) (kg) (kg) -3888 -38.88 -12131 -16776 -167.76 -52341 -3264 -32.64 -10184 (hrs) (hrs) (hrs)	PM Peak Hr Change Daily Change Yearly Change PM Peak Hr Change (g) (kg) (kg) -3888 -38.88 -12131 -16776 -167.76 -52341 -15937 -3264 -32.64 -10184 -3100 (hrs) (hrs) (hrs) (hrs)	PM Peak Hr Change Daily Change Yearly Change PM Peak Hr Change Daily Change (g) (kg) (kg) (g) (kg) -3888 -38.88 -12131 -3694 -36.94 -16776 -167.76 -52341 -15937 -159.37 -3264 -32.64 -10184 -3100 -31 (hrs) (hrs) (hrs) (hrs) (hrs)

Alterr	Alternative 2b vs. 3b							
PM Peak Hr	Daily	Yearly						
Change	Change	Change						
(g)	(kg)	(kg)						
-3759	-37.59	-11728						
-16217	-162.17	-50597						
-3155	-31.55	-9844						
(hrs)	(hrs)	(hrs)						
-220.4	-2204	-687648						



U.S. Department of Transportation Federal Highway Administration Ohio Division

February 18, 2009

200 North High Street Room 328 Columbus, Ohio 43215 614-280-6896 614-280-6876 Fax Ohio.FHWA@fhwa.dot.gov

> In Reply Refer To: HPD-OH

Director Jolene M. Molitoris Ohio Department of Transportation 1980 West Broad Street Columbus, OH 43223

Subject: PID 81314 JEF-SR 7-17.61-Veterans Bridge Access CMAO Eligibility

Dear Director Molitoris:

A review of the Ohio Department of Transportation's request for Congestion Mitigation and Air Quality Improvement Program (CMAQ) eligibility determination for the Brooke-Hancock-Jefferson (Steubenville) MPO has been completed. The request, dated February 13, 2009, identified the following project:

PID 81314 - JEF-SR 7-17.61, CMAQ funds: \$1,490,000.00

Based upon our review, we find that the subject project is eligible for CMAQ funding, in accordance with the "Final Guidance on the CMAQ Improvement Program under the SAFETEA-LU" issued jointly by FHWA and FTA on October 20, 2008.

This finding of eligibility should not be construed as an authorization or commitment of CMAQ funding. Funds must be available and ODOT must request authorization of CMAQ funds from the FHWA Division office.

If you have any questions or comments, please contact Ms. Leigh Ocsterling, Air Quality Specialist, at (614) 280-6837, or leigh.oesterling@fhwa.dot.gov.

Sincerely,

For: Dennis A. Decker Division Administrator

AMERICAN ECONOMY

CMAQ Funding Approval Feb 2009

Environmental and Design Phases



Vets Bridge Access – Consultant Selection April 2009

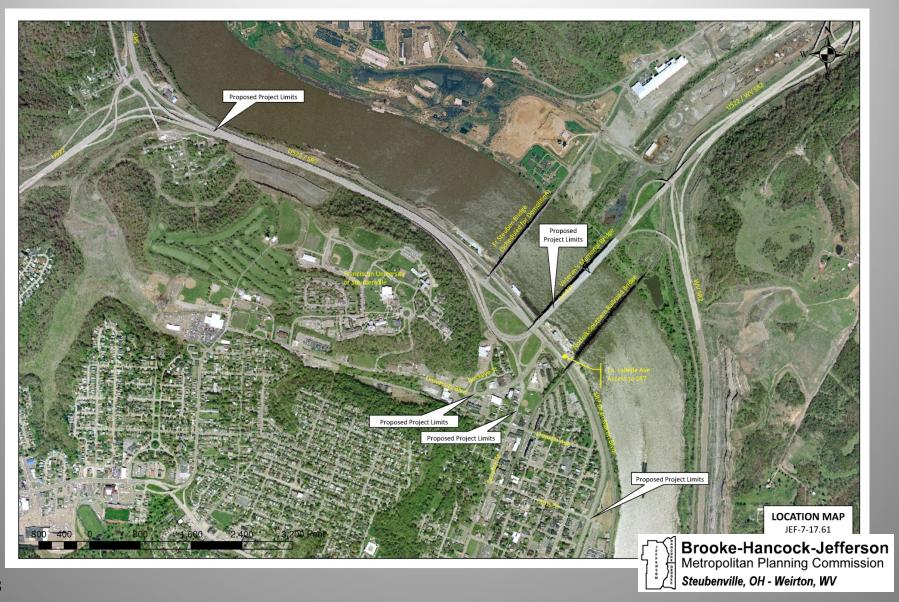
Programmatic Selection Notification Summary

Posting Date 4/13/2009 Response Due Date 5/4/2009

		Number of							oal
District	Region	Agreements	County	Route	Section	Project Type	PID	DBE	EDGE
1		1	HAN	224	11.81	Design	84557	10%	
1		1	VAR	D01	Ground Pentrg Radar	Task Order	25319		
2		1	LUC	475	03.15	Design	80695		
2		1	LUC	475	05.22 L&R/05.47 L&R	Design	80694		
4		1	SUM	271	02.33	Design	18710		15%
4		1	VAR	D04	Geotech Drilling	Task Order	84244		
6		1	FRA	023D	02.82	Design and Environmental	85277		
7		1	MOT	070	02.95 L&R	Design	85115		
7		1	MOT	070	03.44	Design	79535		
7		1	MOT	070	11.04	Design	76667	10%	
7		1	SHE	075	03.72 L&R	Design	83583		
8		1	HAM	074	3.54/3.95/4.31/4.95	Design	82961		25%
8		1	VAR	D08	Genl Eng Servs	Task Order	75835		
8		1	WARGRE	042	17.94/00.00	Design	81627		
0	1								
10		1	VAR	D10	Underwater Br Insp	Bridge Inspection	79947		
10		1	VAR		1		79947		1 70%
		1 1		D10	Underwater Br Insp	Design			70%
10		1 1 1 3	VAR	D10	12.62	Design Design	82/59		70%
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10 12 12 12 12 12		1	LAK LAK VAR	D10 002 090 D12 D12	12.62 03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs	Design Design Construction Inspection Task Order	82759 83489 86143	20%	
12 12 12 12 12 12 99		1 12	LAK LAK VAR VAR VAR	D10 002 090 D12 D12 STW	12.62 03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs Cons Insp No 2010-1	Design Design Construction Inspection Task Order Construction Inspection	82759 83489 86143 85734		
10 12 12 12 12 12 12 99		1 12	LAK LAK VAR VAR VAR VAR	D10 090 D12 D12 STW STW	12.62 03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs Cons Insp No 2010-1 Futures Pl Consensus	Design Design Construction Inspection Task Order Construction Inspection Task Order	82759 83489 86143 85734		
10 12 12 12 12 12 12 99 99		1 12	LAK LAK VAR VAR VAR VAR VAR	D10 090 D12 D12 STW STW STW	12.62 03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs Cons Insp No 2010-1 Futures Pl Consensus MOV Intermodal Study	Design Design Construction Inspection Task Order Construction Inspection Task Order Other	82759 83489 86143 85734 86057 86406	25%	
10 12 12 12 12 12 12 99 99 99		1 12 1 1 1	LAK LAK VAR VAR VAR VAR VAR VAR	D10 090 D12 D12 STW STW STW STW	03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs Cons Insp No 2010-1 Futures Pl Consensus MOV Intermodal Study Passngr Rail	Design Design Construction Inspection Task Order Construction Inspection Task Order Other Task Order	82/59 83489 86143 85734 86057 86406 85433	25%	
10 12 12 12 12 12 12 99 99 99		1 12 1 1 1	VAR LAK LAK VAR VAR VAR VAR VAR VAR VAR VAR	D10 090 D12 D12 STW STW STW STW STW	03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs Cons Insp No 2010-1 Futures Pl Consensus MOV Intermodal Study Passngr Rail Planning Services	Design Design Construction Inspection Task Order Construction Inspection Task Order Other Task Order Task Order Task Order Task Order	82/59 83489 86143 85734 86057 86406 85433 86273	25%	
10 12 12 12 12 12 99 99 99 99		1 12 1 1 1	VAR LAK LAK VAR	D10 002 090 D12 D12 STW STW STW STW STW STW STW	03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs Cons Insp No 2010-1 Futures Pl Consensus MOV Intermodal Study Passngr Rail Planning Services Radio Tower Servs	Design Design Construction Inspection Task Order Construction Inspection Task Order Other Task Order Task Order Task Order Task Order Task Order	82759 83489 86143 85734 86057 86406 85433 86273 86219	25%	
10 12 12 12 12 12 99 99 99 99 99		1 12 1 1 1 1 1 1	VAR LAK LAK VAR	D10 002 090 D12 D12 STW STW STW STW STW STW STW ST	12.02 03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs Cons Insp No 2010-1 Futures Pl Consensus MOV Intermodal Study Passngr Rail Planning Services Radio Tower Servs Signal Timing Servs	Design Design Construction Inspection Task Order Construction Inspection Task Order Other Task Order	82739 83489 86143 85734 86057 86406 85433 86273 86219 86290	25%	
10 12 12 12 12 12 99 99 99 99 99 99		1 12 1 1 1 1 1 1 1 1	LAK LAK VAR VAR VAR VAR VAR VAR VAR VAR VAR VAR	D10 002 090 D12 D12 STW STW STW STW STW STW STW ST	12.02 03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs Cons Insp No 2010-1 Futures PI Consensus MOV Intermodal Study Passngr Rail Planning Services Radio Tower Servs Signal Timing Servs State Rail Plan	Design Design Construction Inspection Task Order Construction Inspection Task Order Other Task Order	82759 83489 86143 85734 86057 86406 85433 86273 86219 86290 86474	25%	
10 12 12 12 12 12 99 99 99 99 99 99 99 99		1 12 1 1 1 1 1 1 1 1 1 1 2	LAK LAK VAR VAR VAR VAR VAR VAR VAR VAR VAR VAR	D10 002 090 D12 D12 STW STW STW STW STW STW STW ST	12.62 03.77 Cons Insp No. 2010-1 Subs Inv Pvmt Brs Cons Insp No 2010-1 Futures PI Consensus MOV Intermodal Study Passngr Rail Planning Services Radio Tower Servs Signal Timing Servs State Rail Plan Traffic Cnts 2010-1	Design Design Construction Inspection Task Order Construction Inspection Task Order Other Task Order	82759 83489 86143 85734 86057 86406 85433 86273 86219 86290 86474 86473	25%	



Vets Bridge Access – Consultant Selection





可尼亞 Project Application

	General Information								
Current Status	Proposed Status	ODOT PID	ODOT District	Primary County	Facility Name				
(Tier 1, Tier 2 or New)	(Tier 1 or Tier 2)			(3 char abrv)	(i.e. route, rail, terminal, or port name)				
New	Tier 1	81314	11	JEF	State Route 7				
Project Spor	nsoring Agend	су							
ODOT, Distri	ct 11								
Project Mana	ager (Contact	Person)			Phone Number				
Rodney Wilso	Rodney Wilson 330-308-3968								
Email Addre	ss								
Rodney Wilso	an@dot state c	h ue							

Project Description

Local Jurisdictions

(i.e. list all cities, counties and townships)

Jefferson County / City of Steubenville / Island Creek Twp

Description of Work

Improve access to US22 (Veteran's Memorial Ohio River Bridge) by rebuilding the intersection of SR7 & University Boulevard (SR822) as well as University Boulevard (SR822) with the US22 Interchange

Purpose and Need

Purpose - To improve access to US22 (Veteran's Memorial Bridge over the Ohio River) at Steubenville through the realignment and widening of adjacent connecting thoroughfares of SR7 and University Blvd (SR822).

Need - The intersection of State Route 7 and University Boulevard currently operates at a level of service C/D and was identified on the Ohio Department of Transportation's top 200 traffic crash site locations in 2005. The intersection traffic signal currently operates with a split phase sequence on State Route 7 to address the identified crashes but is operationally undesirable. The Ohio Department of Transportation closed the Fort Steuben Bridge over the Ohio River just north of the project site in early 2009 and is scheduled for complete demolition in 2010. Approximately 4000 vehicles per day crossed that bridge which now must use either the Veteran's Memorial Bridge or the Market Street Bridge approximately one mile south of the project site. While the West Virginia Division of Highways has indicated they will keep the Market Street bridge open until such time that the bridge deterioration requires its closure, the current deteriorated condition of the Market Street Bridge is such that a closure could occur at any time. Approximately 6300 vehicles per day cross the Market Street Bridge. Closure of this bridge will have a severe traffic impact on the only remaining Ohio River Bridge crossing, the Veterans Memorial Bridge, especially the roadways serving the bridge, State Route 7 and University Boulevard.

TRAC Application July 2009

Transportation
Review
Advisory
Council



Project Development							
Project Phase	Completed By (Agency Name)	Actual / Projected Completion Date (MM/DD/YYYY)					
Planning Study	BHJ-MPO	03/19/2009					
Interchange Modification Study	N/A						
Environmental (NEPA) Doc.	ODOT, D11	12/31/2010					
Detailed Design	ODOT, D11	06/30/2012					
Right of Way / Utilities	ODOT, D11	12/31/2013					

Sources of Other (Non-TRAC) Funding (If applicable)								
Project Phase	Source	Amount						
(PS, NEPA, DD, RW, CO)	(Agency name)	(In Millions)						
NEPA	BHJ-MPO Suballocated CMAQ	\$1.16						
DD	BHJ-MPO Suballocated CMAQ	\$0.33						
Additional Explanation of	Other Funding							

(Insert additional rows above "Additional Explanation of Other Funding" as needed – one row for each combination of project phase and source)

Note: Totals of Other funding entered above <u>MUST MATCH</u> totals in project funding table below by

Project Sponsor Investment Factors						
Creation of TIF or Other Innovative Financing Tool (Yes or No)	Percentage of Sponsoring Agency Investment (%)					
No						

Project Funding									
Project Phase	Fiscal Year (YYYY)	Other Funding (In Millions)	Previous TRAC (In Millions)	New TRAC (In Millions)	Total (In Millions)				
Planning Study (PS)	2009								
Environmental Doc. (NEPA)	2010	\$0.33							
Detailed Design (DD)	2010	\$1.16			\$1.1				
Right of Way /Utilities (RW)	2012				\$1.5				
Construction (CO)	2013				\$14.9				
	Total	\$1.49			\$18.0				

TRAC Application July 2009

Transportation Review **A**dvisory Council



Vets Bridge Access – Stakeholder Meeting

December 2010

- Stakeholders meeting scheduled
- Bring all stakeholders and interested parties up to date



Vets Bridge Access – Stakeholders

Government Representatives

Peter M. Clingan US Army Corps of Engineer's

Mr. Roger K. Wiebusch U.S. Coast Guard

Craig Webb, District Engineer Norfolk Southern Corporation

The Honorable Domenick Mucci, Jr. Steubenville Mayor

Ms Cathy Davison Steubenville City Manager

Mr. Mike Dolak, P.E. Steubenville City Engineer

The Honorable Mark Harris Weirton Mayor

Lt. Chris Johnson OSHP Wintersville Post

Mr. James Branagan, P.E., P.S. Jefferson County Engineer

Fred Abdalla Sheriff Jefferson County

BHJ Metro Planning Representatives

Dr. John Brown BHJ Metro Planning

Mike Paprocki BHJ Metro Planning

Dave Snelting, P.E. BHJ Metro Planning

Business Representatives

Howard Bowers L & J Bowers River Terminal

Frank Rose Dickey DW & Son, Inc.

Ed Looman, Director Progress Alliance

FHWA Representatives

Mr. Ron Garczewski, P.E., P.S. Transportation Engineer Federal Highway Administration

ODOT Representatives

Mr. Kevin Davis Office of Environmental Services Ohio Department of Transportation Mrs. Becky Giaugue Public Information Officer Ohio Department of Transportation

Mr. Tom Stratton
District 11 Environmental Coordinator
Ohio Department of Transportation

Ms. Roxanne Kane, P.E. District 11 MPO Liason Ohio Department of Transportation

Mr. Shane Locke, P.E. District 11 Acting Consultant Liaison Ohio Department of Transportation

Mr. Greg Gurney, P.E. District 11 Planning and Programs Administrator Ohio Department of Transportation Mr. Tom Corey Jefferson County Manager Ohio Department of Transportation

Mr. Rod Wilson, P.E. District 11 Traffic Engineer Ohio Department of Transportation

WVDOT Representatives

Mr. Robert W. Whipp, P.E. WVa DOT, District Six Engineer

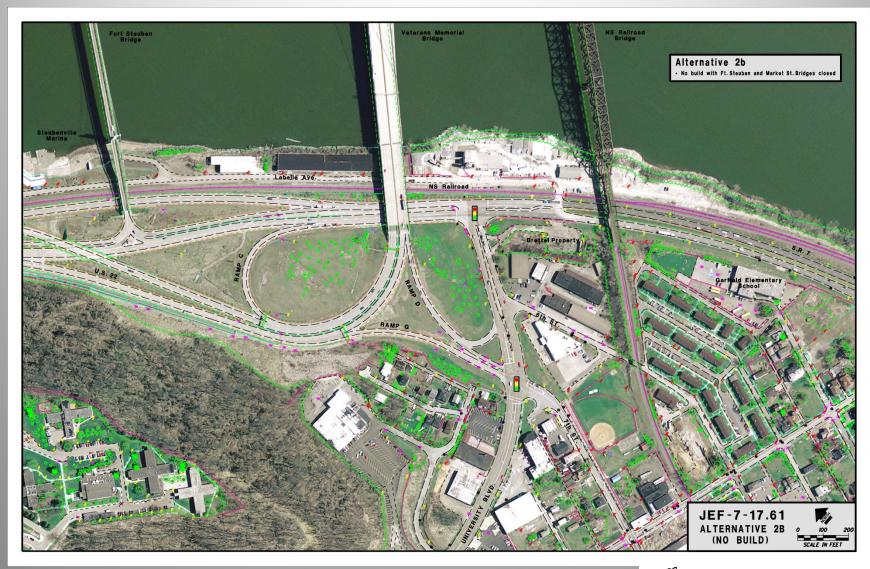


Vets Bridge Access – Public Open House Meeting

May 2012

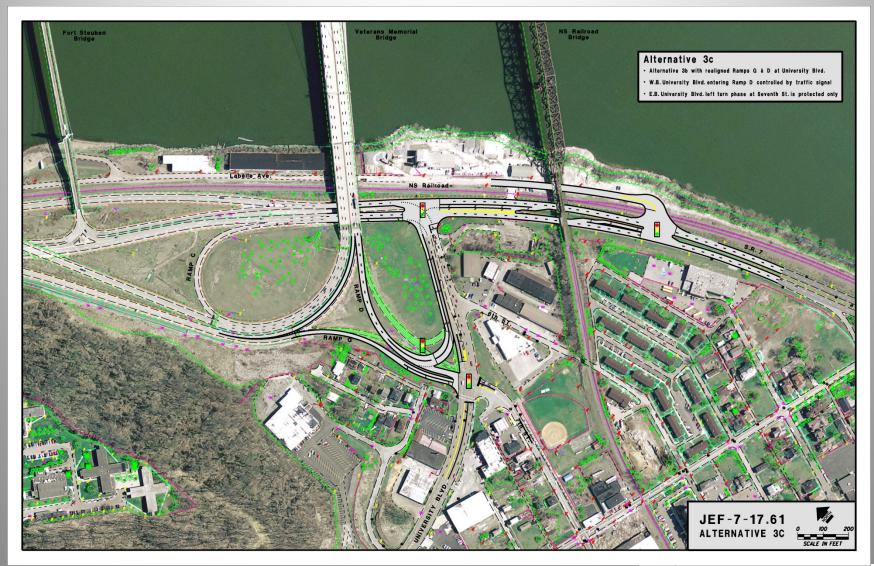
- Public Open House Meeting Scheduled
- Bring project to general public and all stakeholders
- ODOT District 11 secures \$7.5 million in funding

Public Open House Meeting – Alt 2b



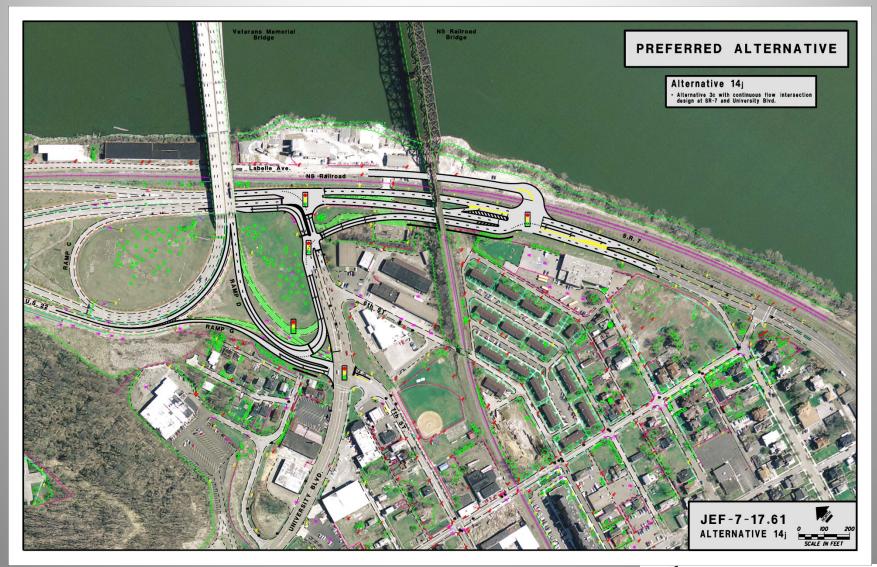


Public Open House Meeting – Alt 3c





Public Open House Meeting – Alt 14j





Veterans Memorial Bridge Access Improvement Project JEF-7-17.61 (PID 81314) Public Open House Meeting, May 2, 2012

Project Fact Sheet

Background:

- Ohio Department of Transportation (ODOT), in conjunction with the City of Steubenville and the Brooke-Hancock-Jefferson Metropolitan Planning Commission (BHJ), is undertaking this project to improve access to the Veterans Memorial Bridge.
- Current project builds on previous recommendations from the BHJ 2020 Regional Transportation Plan, The Upper Ohio Valley Bridge System Study, Phases I & II (2000, 2003) and The Veterans Memorial Bridge Access Study (2005, 2008, 2009).
- Removal of the Fort Steuben Bridge and limited service life of the Market Street Bridge have placed increased demands on the Veterans Memorial Bridge. Although the Veterans Memorial Bridge has ample capacity, there is immediate need for safe and efficient access to the bridge.
- Network demand, operational issues and safety issues demonstrate the need for improvement of adjacent connecting thoroughfares.

Purpose: To improve access to the Veterans Memorial Bridge through the redistribution of vehicular and truck traffic by improving adjacent connecting thoroughfares. The need for the project is based on the following elements:

Network Demand

Veterans Memorial Bridge is expected to be the only river crossing in the area in 2030

Capacity

 Level of Service of certain traffic movements and/or intersections are projected to fail in the absence of improvements

Safety

 SR-7/University Blvd. intersection was identified by ODOT's Highway Safety Program in 2005 as one of the top 200 collision locations in the state.

Project Limits: SR-7/US-22/SR-213 (north), SR-7/Franklin Street (south), Veterans Memorial Bridge (east), and Buckeye Street/University Boulevard (west). Also included within the project limits is Labelle Avenue along the east side of the railroad tracks adjacent to SR-7.

Preferred Alternative: Alternative14j (Est. Construction Cost - \$9.1 Million)

Schedule: Construction is scheduled for the summer of 2015

Public Open House Meeting

Fact Sheet Handout



JEF-7-17.61

Veterans Memorial Bridge Access

Table 1

	ALTERNATIV	Е СОМРАБ	RISON MATI	RIX		1	
	ALTERNATIVE FACTOR (See Table 2 for Description)	2B. No Build with Ft. Steuben Bridge and Market St. Bridge closed	3B. Widen SR-7 to provide NB data lieft turn lanes, widen Ramp D to provide hall into encrump, reduce EB US-22 to one lane between Ramp G and Ramp D, and reflocate access to Labelle Ave. south of the RP. bridge.	3C: Alternate 3B along with realigned Ramp G and Ramp D at University Blvd, weathound University Blvd urething Ramp D controlled by traffic signal, eathound University Blvd, left turn planse at Seventh St. is proceed only.	14]: Alternate 3C with Continuous Flow Intersection design at SR-7 and University Blvd.		
	Meets Purpose and Need	NO	YES	YES	YES		
	Intersection: SR-7 & University Blvd.	LOSF	LOS D	LOSD	LOS A	CAPACITY	
	Intersection: University Blvd. & Frontage Rd.	N/A	N/A	N/A	LOSB		
Ϋ́	Intersection: SR-7 & Labelle Ave.	LOSE	LOS C	LOS C	LOS C		
CAPACITY	Intersection: University Blvd. & 7th St.	LOS C	LOSB	LOS C	LOSC		
C	Intersection: University Blvd. & 6th St.	NC	NC	NC	NC	Ö	
	Diverge: WB University Blvd. to Ramp D	LOS A	LOS A	LOS A	LOS A		
	Merge: Ramp D & 7th St. Connector	LOS C	LOS F	LOS B	LOSB		
R/W	Right-of-Way Impacts (Commercial)	N/A	LOW	LOW	LOW	R/W	
R	Right-of-Way Impacts (Residential)	N/A	NONE	LOW	LOW	R	
RS	Route Continuity: US-22	NC	LOW	LOW	LOW	RS	
ACTO	Route Continuity: SR-7	NC	NONE	NONE	NONE	ACTO	
OTHER FACTORS	Labelle Ave. and Railroad Crossing Relocation Impacts	N/A	MEDIUM	MEDIUM	MEDIUM	OTHER FACTORS	
ОТ	Maintenance of Traffic Impacts	N/A	LOW	MEDIUM	MEDIUM	OT	
COST	Construction Cost	N/A	MEDIUM (\$4.6 M)	MEDIUM (\$5.4 M)	HIGH (\$9.1 M)	ST	
00	Right-of-Way Cost	N/A	LOW	LOW	MEDIUM	COST	
	Threatened and Endangered Species	N/A	LOW	LOW	LOW		
.VT	Ecological Concerns	N/A	NONE	NONE	NONE	,AL	
ENVIRONMENTAL	Hazardous Materials	N/A	LOW	LOW	LOW	MENT	
TRON	Cultural Resources	N/A	LOW	LOW	LOW	ENVIRONMENTAL	
EN	Residential/Business Impacts	N/A	LOW	LOW	LOW	ENV	
	Environmental Justice	N/A	LOW	LOW	LOW	1	

Public Open House Meeting

Decision Matrix

MATRIX KEY				
NONE	No likely impact; or meets criteria in category			
LOW	Low likely impact; or meets most criteria in category			
MEDIUM	Mid-range likely impact; or meets some criteria in category			
HIGH	High likely impact; or does not meet criteria in category			
N/A or NC	Not Applicable (N/A) or No Change (NC)			
"CAPACITY" NOMENCLATURE				
LOS A/B	Level of Service (LOS) A or B			
LOS C	Level of Service (LOS) C			
LOSD	Level of Service (LOS) D			
LOS E/F	Level of Service (LOS) E or F			
N/A	Not Applicable			



Veterans Bridge Access

Simtraffic 7 © Presentation – Alternative 14j



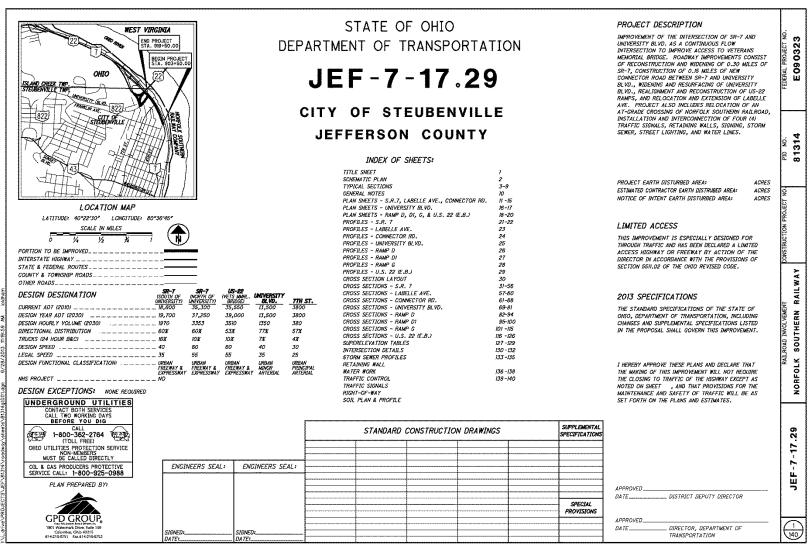
Vets Bridge Access – Public Open House Meeting

May 2012 Public Meeting Follow Up

- Alternative 14j selected for design
- Project is scheduled for construction in FY 2016



Stage 1 Plans – June 2013



BI Me Ste

Brooke-Hancock-Jefferson Metropolitan Planning Commission Steubenville, OH - Weirton, WV

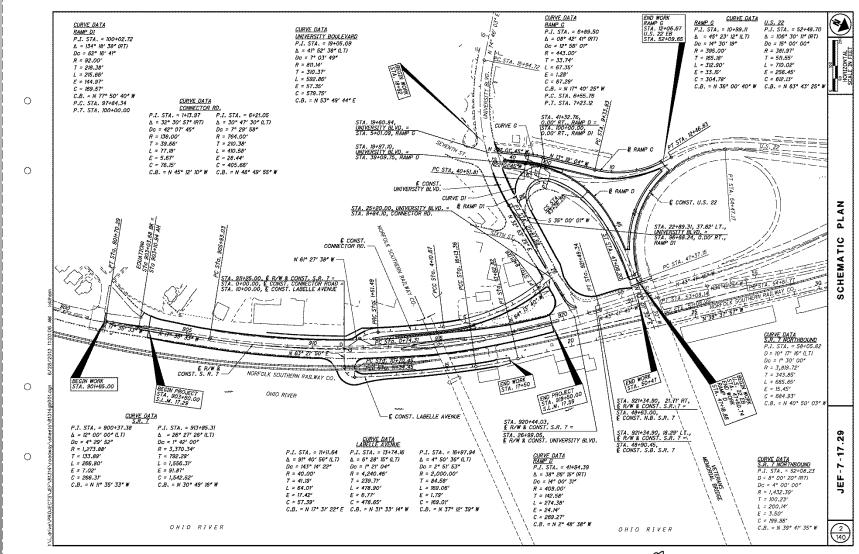
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Stage 1 Plans – June 2013



Stage 1 Plans – June 2013

Estimate JEF-7-17.29

Estimated Cost:\$8,205,080.45

Contingency: 17.00%

Estimated Total: \$9,599,944.13

Improvement of SR-7/University Blvd. as a continuous flow intersection to improve access to Veterans Memorial Bridge

Base Date: 01/01/16

Spec Year: 13

Unit System: E

Work Type: PORTLAND CEMENT CONCRETE PAVEMENT

Highway Type: WARRANTY PORTLAND CEMENT CONCRETE

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: JEFFERSON

Midpoint of Latitude: 402230

Midpoint of Longitude: 803645

District: 11

Federal/State Project Number: E090323

Estimate Type: Stage 1

Prepared by A. Mustafa on 06/17/13 Checked by K. Grathwol on 06/28/13



Vets Bridge Access Improvements Conclusions

- Involving affected businesses early gains project support
- Process was lengthy but necessary due to constraints
- Involving affected maintaining agencies throughout the process created natural buy-in
- ODOT District 11 in advocate role wins Central Office approval and \$7.5 million in funding
- Construction Scheduled for FY 2016

Veterans Bridge Access Improvements

Cooperative Planning Develops Innovative Solution

Questions?

Dave Snelting, PE
Transportation Engineer
BHJ Metropolitan Planning Commission
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Steubenville, OH 43052
740-282-3685 x 205
dsnelting@bhjmpc.org

