

## Appendix A

### Section 4(f) Data:

Coordination with CSU

Bridge Type Cost Estimates



# OHIO DEPARTMENT OF TRANSPORTATION

DISTRICT 12, 5500 TRANSPORTATION BLVD. GARFIELD HEIGHTS, OHIO 44125-5396 (216) 581-2100

September 12, 2007

Don Brown, Assistant Vice President, Facilities Operations  
Cleveland State University  
Facilities Operations  
2121 Euclid Avenue  
PS 235  
Cleveland, Ohio 44115-2214

**Subject: CUY – Cleveland Innerbelt Project (PID 77510)  
Section 4(f) *De Minimis* Concurrence  
Trail within the Chester Avenue Loop Ramp**

Dear Mr. Brown:

The Ohio Department of Transportation is proposing to improve the Innerbelt Corridor through downtown Cleveland. The purpose of the Cleveland Innerbelt project is to rehabilitate and reconstruct the Innerbelt Freeway system, and to address operational design, safety, and access shortcomings that severely impact the ability of the Innerbelt Freeway system to function. This is needed due to the deteriorating physical conditions of the bridges and pavements, poor operational performance (congestion), design features that do not meet current standards, and accident rates exceeding the statewide average for similar facilities. The Innerbelt Project will include a redesigned Chester Avenue Interchange with IR-90. The westbound exit ramp will connect to East 24<sup>th</sup> Street (existing) and directly to Chester Avenue (new) parallel to IR-90. The existing entrance loop ramp to IR-90 westbound will be shifted to the west. See the attached aerial photograph with the proposed range of ramp alternative locations in **Figure A**. A drawing of the existing loop ramp and pedestrian trail is attached in **Figure B**.

The improvements will impact the pedestrian trail and green space that Cleveland State University maintains within the loop ramp. It must be closed during construction for public safety. However, the trail and green space will be replaced within the loop ramp after construction is completed. The ramp property is held in easement by ODOT. The pedestrian trail and green space has been maintained by Cleveland State University, although an official maintenance agreement can not be found. Although the CSU pedestrian trail is located within highway right-of-way, FHWA has determined that Section 4(f) applies to this resource since the pedestrian trail has been operated as a public recreational opportunity for approximately 28 years.

On August 10, 2005, President Bush signed the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Section 6009(a) of this legislation amends the existing Section 4(f) legislation to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f) under your jurisdiction. In accordance with Section 6009(a), *de minimis* impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not "adversely affect the activities, features and attributes" of the eligible Section 4(f) resource.

**Section 4(f) Features on the Property** – Currently the area has an 8-foot wide, 930-foot (0.18 mile) asphalt pedestrian trail in the shape of an oval. Within the trail oval is landscaped open grass area. There are 29 trees/bushes within the trail oval and 26 trees/bushes outside of the trail oval. At one time there were circuit course facilities around the trail; however, CSU removed them in the late 1990's. CSU does not have plans to add additional recreational facilities to this site in the future. The green space and trail area is 1.8 acres in size.

**Access to Section 4(f) Property** – The walking trail and green space have limited access due to their location within the IR-90 loop ramp. There is no motor vehicle access to the site. There is no driveway or parking on the site. A sidewalk along Chester Avenue provides pedestrian and bicycle access. From the west or south, pedestrians must cross either Chester Avenue or East 24<sup>th</sup> Street, and then cross over the unsignalized loop ramp to get to the trail. From the east, pedestrians must cross East 27<sup>th</sup> Street and the IR-90 eastbound on ramp to access the trail. There is no direct access from the north.

**Current Use of the Section 4(f) Property** – There has been no monitoring to see how often the trail and green space is used; however, it is most often used around lunch time during the spring, summer, and fall by CSU students and people who work in the area. Typical uses are walking, jogging, and sitting to eat, talk, or read.

CSU does not formally schedule use the area for physical education courses, however, it is available for this purpose. An instructor may choose to use the area for physical education classes. It has been used in this manner for badminton, golf, running, and exercise classes offered by CSU.

Since there is no vehicular access to the site, the users predominantly come from nearby campus and work destinations.

**Similarly Used Lands in the Vicinity** – There are other green space areas on the CSU campus and in the downtown Cleveland area available for passive use by the public. None of these green spaces have a paved pedestrian trail.

There is an All-Purpose Trail on the north side of North Marginal Road between East 9<sup>th</sup> Street and Martin Luther King Jr. Drive that is used for jogging and walking throughout the daytime. It is located approximately 2 miles to the north of the Chester Avenue loop ramp. No other public outdoor walking trail has been identified within five miles of the Chester Avenue loop ramp. CSU has an indoor walking/running track at the Recreation Center located 300-feet south of the Chester Avenue loop ramp. However, only CSU students, alumni, and registered guests are allowed access to this track.

The City of Cleveland Sterling Recreation Center is located approximately 1 mile to the northeast on East 31<sup>st</sup> Street between St. Clair Avenue and Superior Avenue. It has an outdoor playground and baseball field. It also has a basketball court, community room and music room inside. It does not have a paved pedestrian trail. City Recreation Centers are open to all residents of the City of Cleveland.

CSU has a grass field area available for recreation on East 21<sup>st</sup> Street and Payne Avenue, approximately 0.25 mile to the west. This field is 2.9 acres in size and is open to the public. There are no enhancements or facilities on this grass field.

**Section 4(f) Ownership** – ODOT holds a transportation easement on the Chester Avenue loop ramp property. The City of Cleveland is the underlying fee owner. CSU maintains the pedestrian trail and green space landscaping. There is no formal agreement between ODOT, CSU, and the City of Cleveland for maintenance of the trail.

**Unusual Characteristics of Section 4(f) Property** - The only unusual characteristic of the pedestrian trail and green space within the Chester Avenue loop ramp that may reduce its value is that it does not have access for motor vehicles. Having no vehicular access to a public green space is common for dense urban areas like this.

**Primary use of Section 4(f) Property** - The primary use of this property is being the infield of an Interstate loop ramp. The ramp was built in 1958 with no walking trail or public access into the infield. To this point no documentation has been found that identifies when the pedestrian trail was constructed or who constructed the trail.

**De Minimis Section 4(f) Determination**

The Ohio Department of Transportation (ODOT), in consultation with the Federal Highway Administration (FHWA), Ohio Division, would like to apply the *de minimis* standard to the Chester Loop Ramp for the Innerbelt project. The *de minimis* impact finding is based on the degree or level of impact including any avoidance, minimization, and mitigation or enhancement measures that are included in the project to address the Section 4(f) use. The following measures will be used to minimize recreational disruption during construction:

- The area within the loop ramp including the walking trail will be closed for public safety while construction is taking place.
- The temporary closure of the trail will be shorter in duration than the overall Innerbelt Project. The pedestrian trail will be closed to the public for approximately 2 years or less during construction of the new interchange.
- The walking trail will be adjusted to fit within the new loop ramp alignment. The proposed trail will be approximately the same length as the existing (930 feet). See the proposed redesign of the pedestrian trail within the loop ramp in **Figure C**.
- The removal of trees will be limited to what is needed to construct the new Chester Avenue Interchange.
- The number of trees that are removed will be replaced within the new trail area, although not the same size.
- Seeding and mulching of the area will be done to return it to its existing condition.

Based upon the above information, the following assessment has been made with respect to the proposed project.

The pedestrian trail can be shifted to the west along with the ramp and reconstructed to approximately the same length as the existing pedestrian trail.

- The area will be restored to a condition equal to the existing facility.

- Any trees removed from within the loop ramp will be replaced with a new tree within the new trail area.


ODOT requests written concurrence from Cleveland State University that the project as proposed will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f). ODOT and FHWA intend to make *de minimis* Section 4(f) finding based upon the assessment of this letter and Cleveland State University's written concurrence. If Cleveland State University concurs, please sign and date the bottom of this letter and return to the ODOT-District 12 Planning Department.

If you have any questions regarding this project, please contact Mark Alan Carpenter, District 12 Environmental Engineer at (216) 584-2089 or by e-mail at [Mark.Carpenter@dot.state.oh.us](mailto:Mark.Carpenter@dot.state.oh.us).

Respectfully,

Dale A. Schiavoni, P.E.  
Planning Administrator

c: John J. Boyle, Vice President of Business & Finance, Cleveland State University  
PID 77510

  
Cleveland State University Concurrence  
VP Business Affairs & Finance

09/13/07  
Date

**Cost Comparisons for Potential Bridge Types and Span Lengths**

	Estimated Approximate Unit Costs (2006\$, No Contingency)			Structure Width 84'	Structure Length 2800'	200' Spans			400' Spans			800' Spans			Span Type	Average Cost by Span Type	Total Cost
	Approx Maximum Span Length					Number	Area	Cost	Number	Area	Cost	Number	Area	Cost			
	200'	400'	800'														
	(Approach Spans)	(River Crossing)	(River Crossing)														
Steel Plate Girder (Short Span)	\$ 300/SF <sup>1</sup>	\$ 474/SF <sup>1</sup>	n/a			12	201600	\$60,480,000	1	33600	\$15,926,400				Short		\$76,406,400
Concrete Box Girder (Short Span)	\$ 315/SF <sup>1</sup>	\$ 454/SF <sup>1</sup>	n/a			12	201600	\$63,504,000	1	33600	\$15,254,400				Short		\$78,758,400
Tied Arch (Medium Span)	n/a	\$ 767/SF <sup>1</sup>	n/a			12	201600	\$63,504,000	1	33600	\$25,771,200				Short		\$89,275,200
Deck Truss (Medium Span)	n/a	n/a	n/a														
Single Tower Cable Stay (Medium Span) <sup>7</sup>	n/a	\$ 651/SF <sup>1</sup>	n/a			10	168000	\$50,400,000	2	67200	\$43,747,200				Medium		\$94,147,200
Single Tower Cable Stay (Long Span) <sup>7</sup>	n/a	n/a	\$760/SF <sup>2</sup>			6	168000	\$50,400,000				2	134400	\$102,144,000	Long		\$152,544,000
Two-Tower Cable Stay (Medium Span) <sup>7</sup>	n/a	\$ 631/SF <sup>1</sup>	n/a			10	168000	\$50,400,000	2	67200	\$42,403,200				Medium		\$92,803,200
Two-Tower Cable Stay (Long Span) <sup>7</sup>	n/a	n/a	\$760/SF <sup>2</sup>			6	168000	\$50,400,000				2	134400	\$102,144,000	Long		\$152,544,000
Extradosed (Medium Span)	n/a	\$ 631/SF <sup>1</sup>	n/a						7	235200	\$148,411,200				Medium <sup>3</sup>		\$148,411,200
<b>Range (Low)</b>	<b>\$ 300/SF<sup>1</sup></b>	<b>\$ 454/SF<sup>1</sup></b>	<b>\$760/SF<sup>2</sup></b>												<b>Short<sup>4</sup></b>	<b>\$81,480,000</b>	
<b>Range (Avg)</b>	<b>\$ 308/SF<sup>1</sup></b>	<b>\$ 601/SF<sup>1</sup></b>	<b>\$760/SF<sup>2</sup></b>												<b>Medium<sup>5</sup></b>	<b>\$93,475,200</b>	
<b>Range (High)</b>	<b>\$ 315/SF<sup>1</sup></b>	<b>\$ 767/SF<sup>1</sup></b>	<b>\$760/SF<sup>2</sup></b>												<b>Long<sup>6</sup></b>	<b>\$152,544,000</b>	

n/a - not applicable for this span range or not investigated for other structural reasons

<sup>1</sup> - From Sept. 2006 estimate, based on site conditions, constructibility considerations, and approximate structural quantities

<sup>2</sup> - The long span (800') estimate was based only on historical bid prices for the Ironton Russell Bridge at \$760/SF in 2006

<sup>3</sup> - Extradosed not included in average for the medium bridge group

<sup>4</sup> -Short Span Group uses 200' spans, except over the river where it uses a 400' span

<sup>5</sup> - Medium Span Group uses 200' spans, except over the river where it uses two 400' spans

<sup>6</sup> - Long Span Group uses 200' spans, except over the river where it uses two 800' spans

<sup>7</sup> - Cable Stayed Bridges include flanking spans to counterbalance the mainspan, single towers use a single full length flanking span, two towers use a two half length flanking spans