



CUUATS PROJECT ASSESSMENT GUIDELINES FOR ASSIGNMENT OF STP (U) FUNDS

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CUUATS PROJECT PRIORITY REVIEW SUBCOMMITTEE

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PREFACE

In 2001, the Project Priority Review (PPR) subcommittee recommended that an objective system should be created that would prioritize projects applying for Surface Transportation Program-Urban (STP-U) funds in a reproducible manner. Criteria for highway projects were developed and weighted according to a methodology created by CUUATS staff. In 2001, the mechanism focused on regional and local priorities and inclusion of safety analysis based on Selected Crash Intersection Locations (SCIL) criteria approved by the Champaign Urbana Traffic Engineering Committee (CUTEC).

In 2007, CUUATS undertook an extensive update of its priority request mechanism; substantial modifications have been made in the document according to new federal regulations (SAFETEA-LU). At this time, the main focus of the update is the integration of the Long Range Transportation Plan as part of the regional significance of a project, the inclusion of security as an independent factor, and a safety analysis consistent with the Illinois Department of Transportation (IDOT) Comprehensive Safety Highway Plan (CHSP). In addition to these elements, forecasted average daily traffic (ADT) figures using the newly created CUUATS Transportation Model was incorporated.

The revised project priority guidelines, including the new variables and weighting schemes, are expected to be approved by the PPR Subcommittee and CUUATS Technical and Policy Committees sometime in 2008.

Staff took these new criteria and developed a user-friendly spreadsheet system that would assign a raw score to each project using a zero- to 100-point ranking system. The final spreadsheet could be used by anyone that wished to know how their project, or a proposed project, ranked relative to any other. All of the particular ranking systems used are described below.

BACKGROUND

SAFETEA-LU provides federal funding, guidelines and requirements for all transportation projects seeking federal funding. SAFETEA-LU is comprised of various funding programs; CUUATS receives its federal transportation funding through the Surface Transportation Program (STP). Of the major federal-aid transportation programs in SAFETEA-LU, the Surface Transportation Program (STP) provides the most direct role for local governments. Municipalities and counties are responsible not only for project sponsorship, but also for project selection and programming. Each year CUUATS receives federal STP funds to be programmed by CUUATS for transportation projects within the urbanized area. Even though there has been a “Project Priority Subcommittee” in place to assign funds to CUUATS different projects, IDOT suggested implementing a more structured and formal process to meet SAFETEA-LU requirements regarding project selection for assignment of STP funds in the urbanized area.

CUUATS developed a set of project selection guidelines. These guidelines set the parameters by which CUUATS selects the projects submitted by CUUATS member agencies to receive federal STP funding. This Project Selection Procedure has been cooperatively developed by the CUUATS Project Priority Review Subcommittee that is composed of CUUATS Staff, IDOT representatives, and designated representatives from CUUATS member agencies. After CUUATS Technical and Policy Committees approve the Transportation Improvement Program (TIP), the document is submitted to IDOT, FHWA and FTA. The selected projects are then reviewed by the Illinois Department of Transportation, the Federal Highway Administration and the Federal Transit Administration in consultation with the Environmental Protection Agency to determine project eligibility under the STP program. After the approval of the TIP by these federal agencies, projects included therein are eligible to receive federal funds. Project sponsors work directly with the state department of transportation or federal agency to arrange for reimbursement of project expenses.

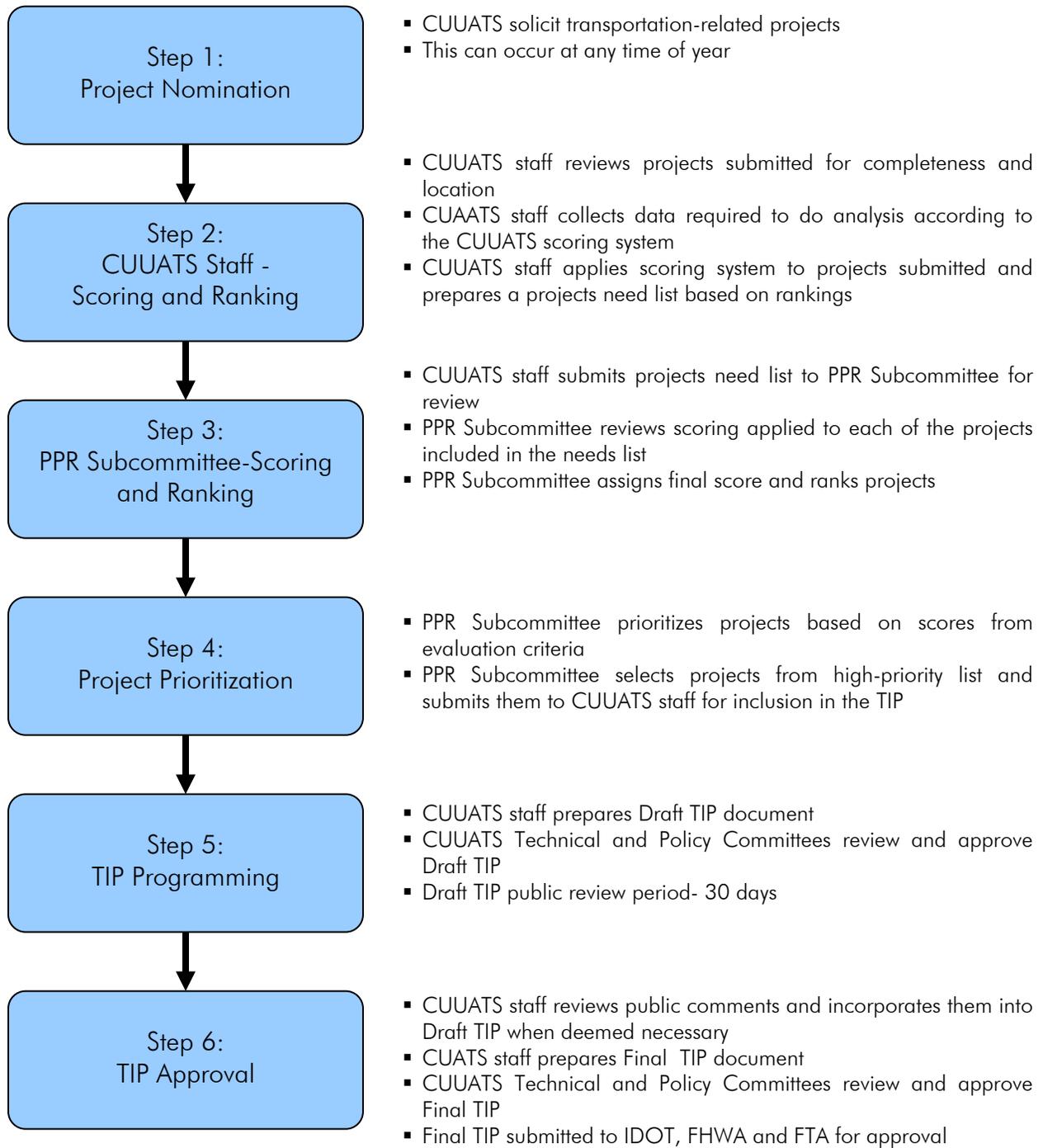
In general, the overall process requires the identification of candidate highway projects, the objective evaluation of the merits of each project, and selection of projects in accordance with a set of principles. At minimum, every project is required to meet the following three requirements:

- consistency with the Long Range Transportation Plan, local plans and the SAFETEA-LU mandated factors;
- identified financial sources; and
- project specific eligibility and technical justifications.

I. CUUATS Project Selection Process

For any transportation project located within the MPO Planning Area, CUUATS follows a process for assignment of Federal-Aid Surface Transportation Program Urban STP (U) funding. Eleven evaluation criteria are used to score the projects based on CUUATS procedures to select projects to receive STP (U) funding. The total possible score that any project can receive is 100 points. As part of this process, there is also an understanding among CUUATS member agencies that STP (U) funds are distributed equitably in the entire MPO planning area. The process starts with CUUATS member agencies contacting CUUATS staff and completing the appropriate application to apply for CUUATS STP (U) funds. CUUATS staff reviews each project proposal for completeness and verifies that the project is located within the MPO planning area. After this first review, CUUATS staff collects the data and prepares the required analysis for application of the scoring system to all projects submitted. After completion of the analysis and application of the scoring system, CUUATS staff prepares a need list with all the projects evaluated based on the ranking system. CUUATS staff then submits the “needs list” to the PPR Subcommittee for consideration. The PPR Subcommittee members review all complete project applications included in the “needs list” based on the points assigned to each of the projects and rank those projects as high, medium or low priority. The number of projects that will be placed on the list will be constrained by the amount of STP (U) funds projected to be available for CUUATS over a four year time period. CUUATS staff will set an annual PPR Subcommittee meeting at the end of February to review the needs list and discuss the list of projects to be included in the TIP. However, the PPR Subcommittee can meet more frequently as needed.

CUUATS Project Selection Process (Overview)



II. CUUATS Project Application

Agencies interested in proposing projects for consideration under the Surface Transportation Program - Urban Funds (STP-U) program should do so by submitting **an application to CUUATS staff by December 31st**.

Evaluation of individual projects will utilize information provided in all areas of the application. Please provide all information as completely as possible. Additional relevant project data may be attached and is encouraged. **If any of the information requested is unclear, incomplete, or missing, or if there are questions of applicability, contact CUUATS staff.** Staff will provide assistance upon request.

While agencies submitting projects are encouraged to provide as much additional relevant background information as they deem necessary, no project will be evaluated unless the submittal includes:

Completed project application (See Appendix 1)

Project location map

Detailed cost estimate

Project schedule

Certification of matching funds

Project Support Documentation should be addressed to:

Champaign County Regional Planning Commission

Attn: CUUATS Staff

1776 E. Washington St.

Urbana, IL. 61802

Consistency with LRTP and Other Adopted Plans	
Definition and Goals	
In order for projects to be eligible for federal funding, the project must be consistent with the Champaign-Urbana-Savoy-Bondville Long-Range Transportation Plan (LRTP). Also, if the proposed project is consistent with or is specifically included in any City Council or Board adopted plans such as a city, state, regional, or national comprehensive, land use, or transportation plan, the project will be rewarded points.	
Criteria and Requirements	
Sponsors are asked to submit page(s) from the plan illustrating the consistency and proof of the plan’s adoption. A project can match more than one category and can earn a maximum score of 20.	
Project Score	Category
16	Included in the LRTP as a high priority project
12	Included in the LRTP as a medium priority project
8	Included in the LRTP as a low priority project
4	Consistent with other comprehensive plans

Community Benefits	
Definition and Goals	
An activity center is defined as a business district, retail shopping area, a school, or a major destination like a park or tourist center, etc. Encourages economic development, accessibility and promotes neighborhood redevelopment.	
Criteria and Requirements	
<p>A transportation project is considered to provide community benefits if it satisfies one or more of the following:</p> <ul style="list-style-type: none"> ▪ Provides an important connection between two or more municipalities: <ul style="list-style-type: none"> Maximizing or increasing system capacity. Increasing the efficiency of one or more modes. Reducing congestion. ▪ Serves a regionally important employment center (North Prospect area, campus district): <ul style="list-style-type: none"> Improving or enhancing the movement of workers. Providing new access to jobs. Improving or enhancing the movement of freight and services. ▪ Serves a regionally important transportation facility: <ul style="list-style-type: none"> Improving access to terminals (air, freight or multimodal). ▪ Serves important public facilities: <ul style="list-style-type: none"> Improving access to such places as hospitals, schools, parks, etc. <p>A project can match only one category and can earn a maximum score of 20.</p>	
Project Score	Category
20	Provides a critical connection between two or more core areas (e.g., Downtown Champaign, Downtown Urbana, University District)
16	Serves a regionally significant employment center (e.g., Research Park, North Prospect, Philo Road, Lincoln Square Mall)
12	Serves a regionally significant transportation facility (e.g., Illinois Terminal, Transit Plaza, Willard Airport)
8	Serves other critical regional public facilities with significant activity (e.g., Crystal Lake Park, Dodds Park, Assembly Hall)
4	Benefits economic development or neighborhood revitalization (e.g., complete streets)

Mobility Benefits	
Definition and Goals	
Increasing mobility is a priority for CUUATS in the LRTP. The degree to which a project improves mobility is one of the criteria against which CUUATS measures and selects projects for the LRTP.	
Criteria and Requirements	
The provision of funding to improve mobility will yield tangible transportation and economic benefits. With respect to mobility, points will be awarded to those projects that improve the Level of Service (LOS) conditions on the roadway. Three scenarios are evaluated for a project; the Existing LOS, Future LOS (No Build) and the Future LOS (Build). Points are awarded to a project under each of the scenario. A project can earn a maximum score of 10 points for all the three scenarios combined.	
Project Score	Category
	<i>Existing LOS</i>
0	LOS 'C' or higher
2	LOS 'D' or 'E'
3	LOS 'F'
Project Score	Category
	<i>Future LOS -No Build</i>
0	LOS 'C' or higher
2	LOS 'D' or 'E'
3	LOS 'F'
Project Score	<i>Change in LOS (Future-No Build Vs. Future-Build)</i>
0	No Change in LOS
2	LOS increase by one letter (e.g. from LOS 'D' to LOS 'C')
4	LOS increase by two letters (e.g. from LOS 'E' to LOS 'C')

Multi-modal Characteristics	
Definition and Goals	
Providing facilities for alternative modes of transportation in order to decrease the number of vehicles on our roadways is a goal in the LRTP. Those projects that promote convenient intermodal connections between all elements of the transportation system to achieve a seamless travel network which incorporates transit, bike and pedestrian access as well as maintain efficient, balanced multimodal transportation systems within the urbanized area will be rewarded.	
Criteria and Requirements	
The performance measure that will be used to assign points to projects under this criterion will be the features available for transit, bicycle, pedestrian and freight. A project can match more than one category and can earn a maximum score of 10.	
Project Score	Category
3	Transit features included (e.g., Shelters, Bus pull offs, Signal priority, Access to bus stops)
3	Pedestrian features included (e.g., Sidewalks, Cross walks, Lighting, Median Refuge, Signs)
3	Bike features included (e.g., Exclusive bike paths, Bike racks, Lighting, Signs)
1	Freight features included (e.g., Loading/Unloading zones, parking for large trucks)

Safety Improvements (*)	
Definition and Goals	
SAFETEA-LU and the LRTP both place emphasis on ensuring the safety of all transportation system users. Because CUUATS believes that safety is one of the greatest concerns to be considered when planning the region’s transportation system, it is included as a project evaluation criterion.	
Criteria and Requirements	
This criterion is consistent with the procedure used to select crash intersection locations (SCIL) in the urbanized area. Therefore, all the variables considered to determine the priority rating for those locations will be used to assign points under this criterion. (See Appendix 1 for SCIL methodology). Highest score if project has significant immediate public safety benefit as identified in the Safety Analysis. The performance measure is the "Priority Level" according to SCIL methodology. A project can match only one category and can earn a maximum score of 10.	
Project Score	Category
10	Project site has a very high average crash frequency, very high average crash rate and high average crash severity. The project has safety improvement as its prime objective
8	Project site has a high average crash frequency, very high average crash rate and high average crash severity. The project has safety improvement as its prime objective
6	Project site has a high average crash frequency, high average crash rate and moderate average crash severity. The project has safety improvement as its prime objective
4	Project site has an above mean average crash frequency and above mean average crash rate. The project has safety improvement as a prime objective
2	Provides some improvement to road user safety. Safety improvement is stated in the objectives

(*) For a reconstruction or development project proposed for a roadway segment where significant safety improvements (e.g., widening shoulders, new surface to improve friction, adding TWLTL, rumble striping to avoid run-off road crashes) may be provided, crash frequency, rate and severity index per mile can be used as performance measures as well. Calculations should be almost similar. For new construction projects, where safety is a primary objective, a score of 10 points is awarded and for other new construction projects, where safety is a secondary benefit, a score of 6 is awarded.

Security Improvements	
Definition and Goals	
<p>In TEA-21, safety and security were dealt together as one factor, safety. But SAFETEA-LU requires that security be a stand alone factor. Security should be a stand-alone factor in transportation plans and also transportation system security, including public transit security will be a significant factor in project selection. Security deals with the prevention, protection, response and recovery of the transportation system and its users from criminal activity, terrorist events, and disasters including natural events.</p>	
Criteria and Requirements	
<p>Criteria for this category include protection, prevention, recovery and redundancy of the transportation infrastructure. Points will be assigned based on how the proposed project addresses the vulnerabilities of the transportation infrastructure and makes it more secure. A project can match more than one category and can earn a maximum score of 5.</p>	
Project Score	Category
1	Project improves access to the Strategic Highway Network (e.g. interchange)
1	Project is part of an emergency route (e.g. relieves congestion on an emergency route)
1	Project improves accessibility to emergency vehicles (e.g. widening of roads, shoulder, and turn radii)
1	Project improves the public information communication/dissemination system (e.g. variable message signs, emergency phones, and posted emergency response signs)
1	Project improves the transportation system surveillance/monitoring (e.g. CCTV), pedestrian security (e.g. lighting, shelter), access security (e.g. gates, locks) etc.

Vehicular Traffic Served	
Definition and Goals	
<p>This criterion rewards those projects that maximize the extent of vehicular traffic served by measuring the Average Daily Traffic (ADT) volumes.</p>	
Criteria and Requirements	
<p>Highest score will be awarded if the facility will be used by high number of vehicles measured by ADT. The ‘Long Range Transportation Plan’ time frame will be used for estimating ADT volumes. Future ADT volumes will be obtained from the CUUATS Transportation Model. Approval by the PPR Subcommittee of all new volumes must be obtained prior to the final ranking of the projects. A project can match only one category and can earn a maximum score of 5.</p>	
Project Score	Category
5	Estimated ADT of 30,000 or more vehicles
4	Estimated ADT in the range of 20,000 to 30,000 vehicles
3	Estimated ADT in the range of 10,000 to 20,000 vehicles
2	Estimated ADT in the range of 5,000 to 10,000 vehicles
1	Estimated ADT in the range of 2,000 to 5,000 vehicles

Roadway Functional Classification/Transit Route	
Definition and Goals	
The is an integral part of the transportation network defined in the LRTP and CUUATS transportation model	
Criteria and Requirements	
Project on a roadway with highest functional classification and is a transit route will receive highest score. A project can match more than one category and can earn a maximum score of 5.	
Project Score	Category
4	Identified as a Principal/Major Arterial
3	Identified as a Minor Arterial
2	Identified as a Collector
1	Identified as a Local Street
1	Identified as a Transit Route

Existing Facility Preservation	
Definition and Goals	
Preservation of the existing transportation system is a goal in the LRTP.	
Criteria and Requirements	
This criterion rewards those projects that propose preservation of existing transportation facilities to meet transportation needs by using existing transportation facilities more efficiently – priority is given to maintenance of the existing system and to reducing the need for costly future transportation infrastructure investments. Some ways that projects can increase efficiency of the existing system include traffic signal coordination programs, improved transit service, and traffic engineering improvements. The greater amount of miles preserved, the higher the points assigned to the project. A project can match only one category and can earn a maximum score of 5.	
Project Score	Category
5	100% of the total project mileage is preserved with clear, immediate need based on recommendations of appropriate staff
4	80% of the total project mileage is preserved with clear short term (3-5 year) need based on recommendations of appropriate staff
3	60% of the total project mileage is preserved with clear medium term (6-8 year) need based on recommendations of appropriate staff
2	40% of the total project mileage is preserved with clear long term (9-10 year) need based on recommendations of appropriate staff
1	Preserve some of the existing facilities

Support of Project	
Definition and Goals	
Projects must have a reasonable, demonstrated degree of political and community support including public, elected officials, affected stakeholders, and government agencies.	
Criteria and Requirements	
Applicants are asked to demonstrate broad based community support (letters of endorsement or petitions from associations, boards, citizens, businesses; outcome of public meetings for the project; etc.) for the proposed project. The goal of this criterion is to show support from the community beyond that of local government officials. Applicants are asked to submit the items of support with the application. A project can match more than one category and can earn a maximum score of 5.	
Project Score	Category
2	Majority support from general public (e.g., Residents, Employers)
1	Majority support from special interest groups (e.g., Developers, Pedestrian/Bike groups)
1	Majority support from elected officials (e.g., Board members)
1	Majority Support from other agencies (e.g., IDOT)

Coordination between Agencies	
Definition and Goals	
Applicants who do not coordinate with other affected agencies would receive negative points. For example, a project proposed on right of way owned by the Illinois Department of Transportation (IDOT) should include a letter from IDOT stating its approval and cooperation on the project. If evidence of the coordination is not included, negative points would be assigned.	
Criteria and Requirements	
Applicants are asked to demonstrate coordination between agencies affected by letters of support for the proposed project. The goal of this criterion is to show coordination among affected agencies. Applicants are asked to submit the letters of support with the application. A project can match only one category and can earn a maximum score of 5.	
Project Score	Category
5	Significant coordination among agencies affected
3	Moderate coordination among agencies affected
-3	No coordination demonstrated among agencies affected

APPENDIX 1: PROJECT APPLICATION

FY 200__-20__ TRANSPORTATION IMPROVEMENT PROGRAM
 SURFACE TRANSPORTATION PROGRAM – URBAN (STP-U) FUNDS

This process seeks to identify the urbanized area’s highest priority transportation projects for funding.

The following must be true for projects to be eligible for funding:

- Proposed Project is included in the most recent Long Range Transportation Plan for the CUUATS urbanized area
- Proposed Project will have an identified funding source
- Proposed projects will have a project implementation timeline and other details necessary to complete the Project Selection Process

PROJECT DESCRIPTION

Name of Project: _____ New: _____ Resubmitted: _____

Name of Sponsor: _____ Contact Person: _____

Unit of Government: _____ Place: _____

Project Description: (Maximum 200 words. Include site map.)

Brief Justification of the Project: (Maximum 50 words).

Road Classification: _____

Annual Daily Traffic: _____ Date of Last Count: _____

Terms of Project: _____

Cost Estimate of Project:	<u>Total</u>	<u>Sponsor’s Contribution</u>
Preliminary Engineering/Environmental:	\$ _____	\$ _____
Right-of-way Acquisition/Utilities:	\$ _____	\$ _____
Construction & Engineering:	\$ _____	\$ _____
Total Cost:	\$ _____	\$ _____

STP(U) Funds Requested: \$ _____

APPENDIX 2: SCIL METHODOLOGY

Intersection Type Classification

All crash intersections should be classified into two groups (Signalized and Unsignalized) based on existing traffic control types.

Volume Based Classification

Intersection Class	Daily Entering Traffic
A	≥20,000
B	10,000-19,999
C	5,000-9,999
D	2,000-4,999
E	≤1,999

Average Crash Frequency

The average crash frequency method should be applied to each volume class of signalized and unsignalized intersections. Crash data over a period of five years or more should be analyzed for determining average crash frequency of each intersection.

An intersection’s crash frequency should be termed as “very high”, “high”, or “above mean” as per the criteria shown in table below.

Crash Frequency Criteria

Intersection	Crash Frequency		
	Very High	High	Above Mean
Signalized	$\geq F_{savi} + 2S_{sfi}$	$\geq F_{savi} + S_{sfi}$	$> F_{savi}$
Unsignalized	$\geq F_{uavi} + 2S_{ufi}$	$\geq F_{uavi} + S_{ufi}$	$> F_{uavi}$

Where;

F_{savi} = Average Crash Frequency of all Signalized Intersections in Volume Class *i*.

S_{sfi} = Standard Deviation of Crash Frequency of all Signalized Intersections in Volume Class *i*.

F_{uavi} = Average Crash Frequency of all Unsignalized Intersections in Volume Class *i*.

S_{ufi} = Standard Deviation of Crash Frequency of all Unsignalized Intersections in Volume Class *i*.

Average Crash Rate

The average crash rate method should be applied to each volume class of signalized and unsignalized intersections. Crash data over a period of five years or more should be analyzed for determining average crash rate of each intersection. An intersection’s crash rate should be termed as “very high”, “high”, or “above mean” as per the criteria shown in the table below.

Crash Rate Criteria

Intersection	Crash Rate		
	Very High	High	Above Mean
Signalized	$\geq R_{savi} + 2S_{sri}$	$\geq R_{savi} + S_{sri}$	$> R_{savi}$
Unsignalized	$\geq R_{uavi} + 2S_{uri}$	$\geq R_{uavi} + S_{uri}$	$> R_{uavi}$

Where;

R_{savi} = Average Crash Rate of all Signalized Intersections in Volume Class i.

S_{sri} = Standard Deviation of Crash Rate of all Signalized Intersections in Volume Class i.

R_{uavi} = Average Crash Rate of all Unsignalized Intersections in Volume Class i.

S_{uri} = Standard Deviation of Crash Rate of all Unsignalized Intersections in Volume Class i.

EPDO Method

The equation shown below should be used to calculate EPDO values of crash intersections of each volume class of signalized and unsignalized intersections. Crash data over a period of five years or more should be analyzed for determining EPDO of each intersection.

IDOT’s EPDO calculation formula⁶ is as follows:

$$\frac{(50)*(\# \text{ of FA}) + 50*(\# \text{ of AA}) + (5)*(\# \text{ of BA}) + (2)*(\# \text{ of CA}) + (\# \text{ of PDO})}{\text{Total Crashes}}$$

Where,

FA=Fatal crashes

AA=Crash where most severe injury is an A injury

BA=Crash where most severe injury is a B injury

CA=Crash where most severe injury is a C injury

PDO=Property Damage Only Crash

An intersection’s EPDO should be termed as “high severity”, “moderate severity”, or “above mean” as per the criteria shown in the table below.

EPDO Criteria

Intersection	Crash Severity	
	High Severity	Moderate Severity
Signalized	$\geq EPDO_{savi} + S_{sei}$	$\geq EPDO_{savi}$
Unsignalized	$\geq EPDO_{uavi} + S_{uei}$	$\geq EPDO_{uavi}$

Where;

$EPDO_{savi}$ = Average EPDO of all Signalized Intersections in Volume Class *i*.

S_{sei} = Standard Deviation of EPDO of all Signalized Intersections in Volume Class *i*.

$EPDO_{uavi}$ = Average EPDO of all Unsignalized Intersections in Volume Class *i*.

S_{uei} = Standard Deviation of EPDO of all Unsignalized Intersections in Volume Class *i*.

All the intersections identified through the above mentioned procedures should be prioritized according to their crash frequency, crash rate, and crash severity levels according to the table shown below.

Priority Levels

Priority Level	Crash Frequency	Crash Rate	Crash Severity
Priority 1	Very High	Very High	High Severity
Priority 2	High	Very High	High Severity
Priority 3	High	High	Moderate Severity
Priority 4	Above Mean	Above Mean	N/A

TIP TIMELINE

	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July
Solicit Nominations	█								
CUUATS staff – Scoring and ranking			█						
CUUATS staff – Prepare needs list			█						
PPR Subcommittee – Scoring and ranking assigns scores				█					
Project prioritization				█					
Draft TIP Prepared and Approved by CUUATS					█				
Public Review –Draft TIP						█			
Final TIP Prepared and Approved by CUUATS							█		
Federal Approval – FHWA/FTA								█	