# Value Engineering Annual Report FY 2017/2018

# Table of Contents

# Executive Summary

## Value Engineering During Project Development

The districts conducted 17 studies or 74% of the original number of studies scheduled for fiscal year 2017/2018. The original work plan had 23 studies scheduled for the year and the target was to complete 75% or 17 of the planned studies. Due to the dynamics of the department's work program, 8 of the 17 scheduled studies (47%) were either dropped from the work plan altogether or rescheduled for the 2017/2018 fiscal year, while 4 of the conducted studies were added to the original work plan.

During this same period, the districts acted on 191 recommendations, approving 101 for a 53% adoption rate. Sixty-six of the approved recommendations resulted in $213.8 million in project cost avoidance/savings. The remaining 35 approved recommendations were value added recommendations that increased project performance, while adding $39.8 million to the project cost. Therefore, the total value of the approved recommendations, including the value added recommendations, produced **$174.1 million in project cost avoidance/savings.**

The approved recommendations resulted in a 5.46% project saved, 5.74% program saved and a Return on Investment (ROI) of $153.8 to $1. The percent project saved is calculated by dividing the value of all approved recommendations by the total costs of the projects studied, while the percent program saved is calculated by dividing the value of all approved recommendations by the average project cost of three fiscal year lettings. The ROI is calculated by dividing the value of all approved recommendations by the cost of administering the program.

There were 66 pending recommendations totaling $861.4 million in potential cost avoidance/ savings at the end of the 2017/2018 fiscal year. This is a 16% decrease in the total number of pending recommendations and a 5.9% decrease in the amount of pending dollars from the 4th quarter of last year. Fifty-eight of the 66 recommendations have been pending for more than 12 months, which is 88% of the total number of pending recommendations. Since the VE Study is a 'snapshot' of the project at some point in time of project development and projects are continuously moving forward in development, this is a concern. The longer recommendations are unresolved and in a pending status the less likely that they will be adopted because the development of the project has advanced.

## Cost Savings Initiatives During Construction

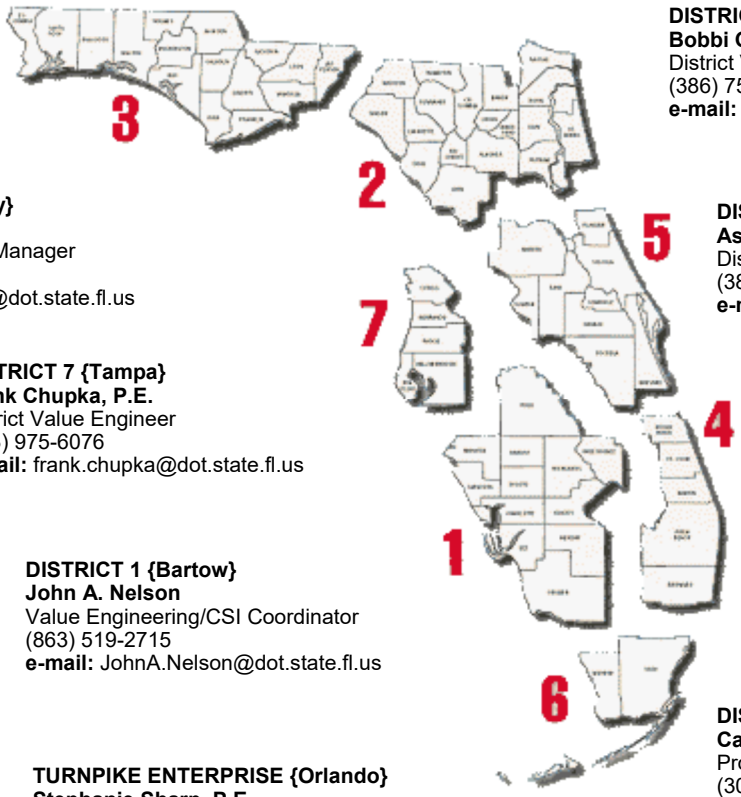
Eighteen Cost Savings Initiative (CSI)'s) Proposals were submitted during fiscal year 2017/2018. During this same period, the districts approved 21 proposals totaling more than $8.49 million in savings. The approved CSI proposals resulted in a 0.51% project saved and a 0.23% program saved. There are currently 6 pending CSI's totaling $1.46 million in potential project savings.

# Program Organization

**Mission:** Administer the Florida Department of Transportation Value Engineering and Cost Savings Initiative Programs, satisfying the needs of the stakeholders.

**Vision:** Value Engineering . . . providing an effective support function which maximizes project and process value for the transportation systems in the State of Florida.

**CENTRAL OFFICE {Tallahassee}**
**Kurt Lieblong, P.E., CVS**
State Value Engineer
(850) 414-4787
**e-mail:** kurt.lieblong@dot.state.fl.us




**DISTRICT 2 {Lake City}**
**Bobbi Goss**
District Value Engineering Coordinator
(386) 758-3769
**e-mail:** bobbi.goss@dot.state.fl.us

**DISTRICT 3 {Chipley}**
**Keith Hinson, P.E.**
District VE Program Manager
(850) 330-1547
**e-mail:** keith.hinson@dot.state.fl.us

**DISTRICT 5 {Deland}**
**Ashraf Elmaghraby, P.E.**
District Value Administrator
(386) 943-5645
**e-mail:** ashraf.elmaghraby@dot.state.fl.us

**DISTRICT 7 {Tampa}**
**Frank Chupka, P.E.**
District Value Engineer
(813) 975-6076
**e-mail:** frank.chupka@dot.state.fl.us

**DISTRICT 4 {Ft. Lauderdale}**
**Eugene Khashper**
District Utilities Administrator
(954) 777-4128
**e-mail:** eugene.khashper@dot.state.fl.us

**DISTRICT 1 {Bartow}**
**John A. Nelson**
Value Engineering/CSI Coordinator
(863) 519-2715
**e-mail:** JohnA.Nelson@dot.state.fl.us

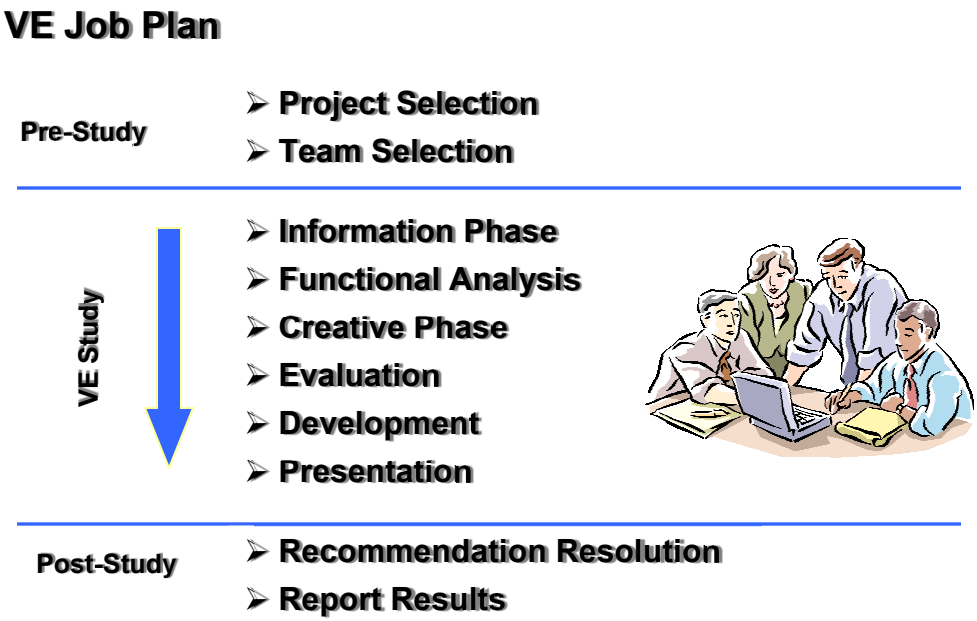
**DISTRICT 6 {Miami}**
**Calvin Mason, P.E.**
Project Development Engineer
(305) 470-5386
**e-mail:** calvin.mason@dot.state.fl.us

**TURNPIKE ENTERPRISE {Orlando}**
**Stephanie Sharp, P.E.**
Roadway Design Engineer
(407) 264-3038
**e-mail:** stephanie.sharp@dot.state.fl.us

# Value Engineering Overview

## What is Value Engineering

Value Engineering (VE) is the formal application of a proven and effective tool used to improve the value of a project, product or service. VE strives to optimize the use of allocated funds without reducing the quality or performance. A multi-disciplined team is assembled and the six phases of the VE Job Plan (Information, Functional Analysis, Creative, Evaluation, Development and Presentation) are used to guide the team through the process.




The administration of the VE Program can be broken down into the following key processes.

| Pre-Study | Study | Post Study |
|---|---|---|
| Project Selection | Conduct VE Study | Recommendation Resolution |
| Team Selection | | Report Results |

# Value Engineering Overview

## Performance Measures

The VE Program and the Cost Savings Initiative (CSI) Program are managed through the use of the Process Control Systems found in Appendix B. Each process has a set of Quality and In-Process measures that are used to evaluate the performance of the program. The Quality Measures for the overall VE program are defined below.

| VE Program | |
|---|---|
| **Quality Measure** | **Calculation** |
| Q1: Approved Cost Avoidance Recommendations | Sum of all approved cost avoidance/ savings recommendations |
| Q2: Approved Value Added Recommendations | Sum of all approved value added recommendations |
| Q3: Adoption Rate | $\frac{\text{\# of Approved Recommendations}}{\text{\# of Proposed Recommendations}}$ |
| Q4: Percent Project Saved | $\frac{\text{Value of Approved Recommendations}}{\text{Total Project Costs}}$ |
| Q5: Percent Program Saved | $\frac{\text{Value of Approved Recommendations}}{\text{3 Year Monthly Average Lettings}}$ |
| Q6: Return on Investment (only reported annually) | $\frac{\text{Value of Approved Recommendations}}{\text{Total cost of VE Program}}$ |

# Cost Savings Initiative Overview

## What is Cost Savings Initiative

The Cost Savings Initiative Program offers an opportunity for the contractor to propose cost savings ideas prior to work beginning and as work progresses on a project. Contractors can demonstrate their innovation and ingenuity by proposing ideas that contribute to the cost effectiveness of the project. The contractors are then rewarded for this ingenuity and innovation by sharing in any project savings generated from an approved Cost Savings Initiative (CSI) proposal.

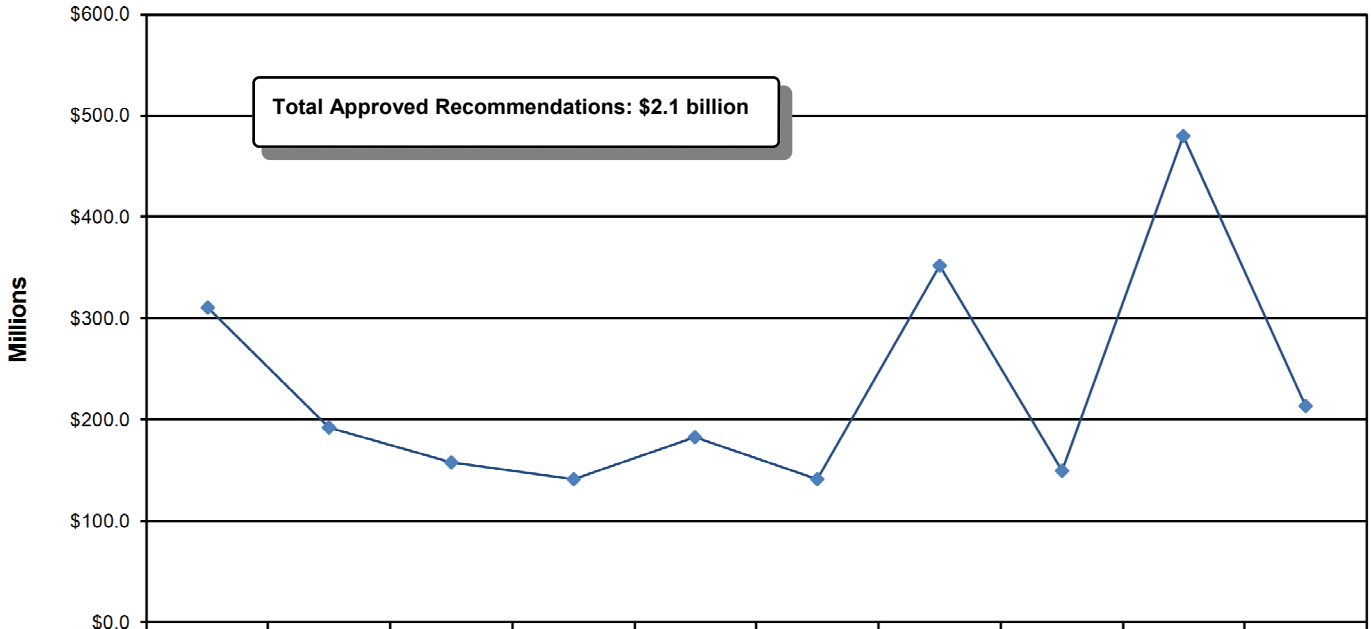
## Performance Measures

| CSI Program | |
|---|---|
| Q1: Number of CSI's | Sum of all CSI's |
| Q2: Approved Cost Savings | Sum of all approved CSI savings |
| Q3: Percent Project Saved | $\frac{\text{Value of Approved Proposals}}{\text{Total Project Costs}}$ |
| Q4: Percent Program Saved | $\frac{\text{Value of Approved Recommendations}}{\text{3 Year Monthly Average Lettings}}$ |

# Fiscal Year 2017/2018
# Value Engineering
# Performance Measures

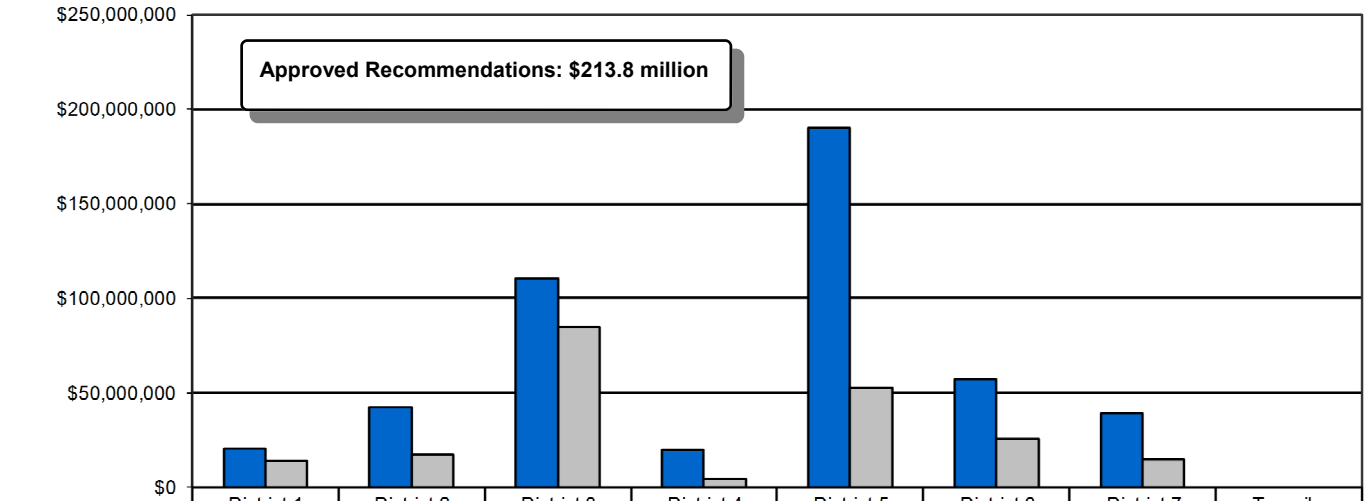
# Adopted Recommendations

## Q1: Annual Approved Cost Avoidance/Savings



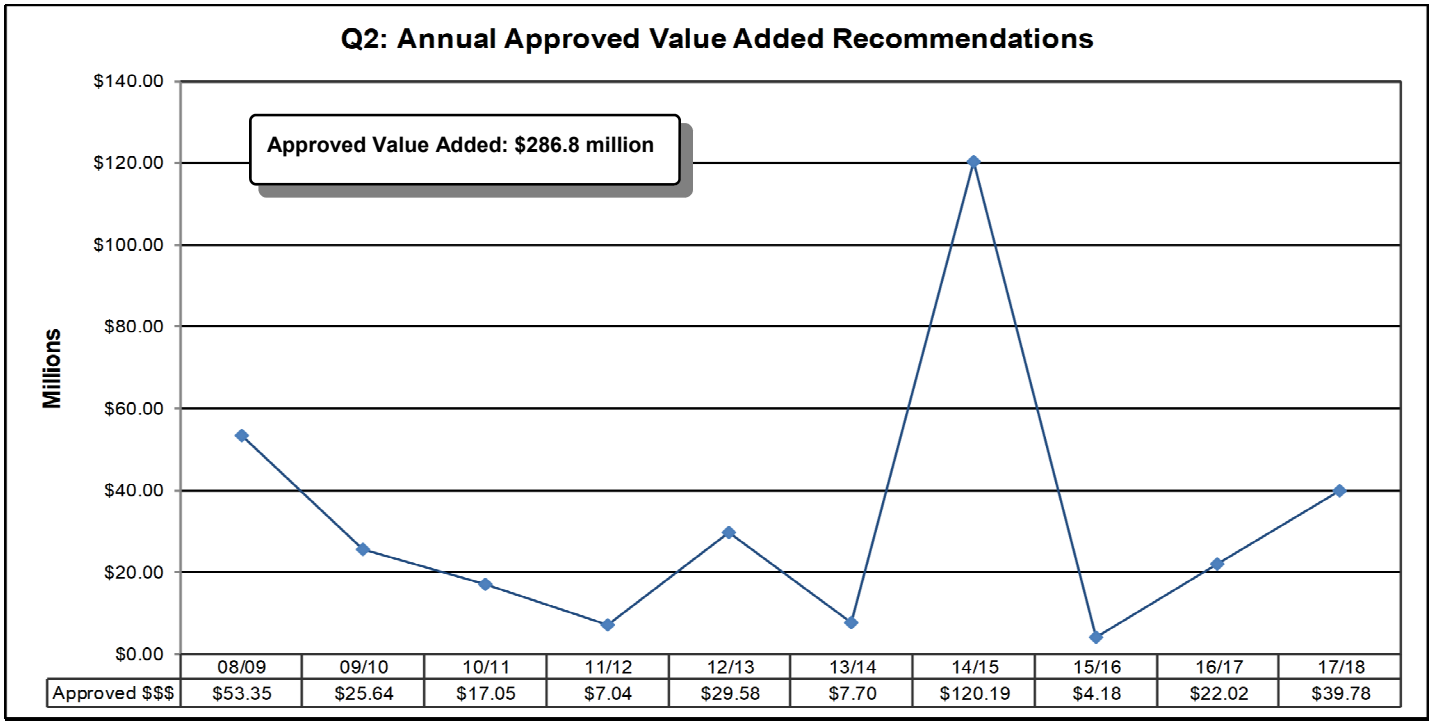

| | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 | 15/16 | 16/17 | 17/18 |
|---|---|---|---|---|---|---|---|---|---|---|
| Approved $$$ | $310.4 | $192.4 | $158.0 | $140.7 | $182.2 | $140.9 | $351.6 | $148.9 | $480.3 | $213.8 |

## Q1: Cost Avoidance Recommendations
### Annual Report FY 2017/2018

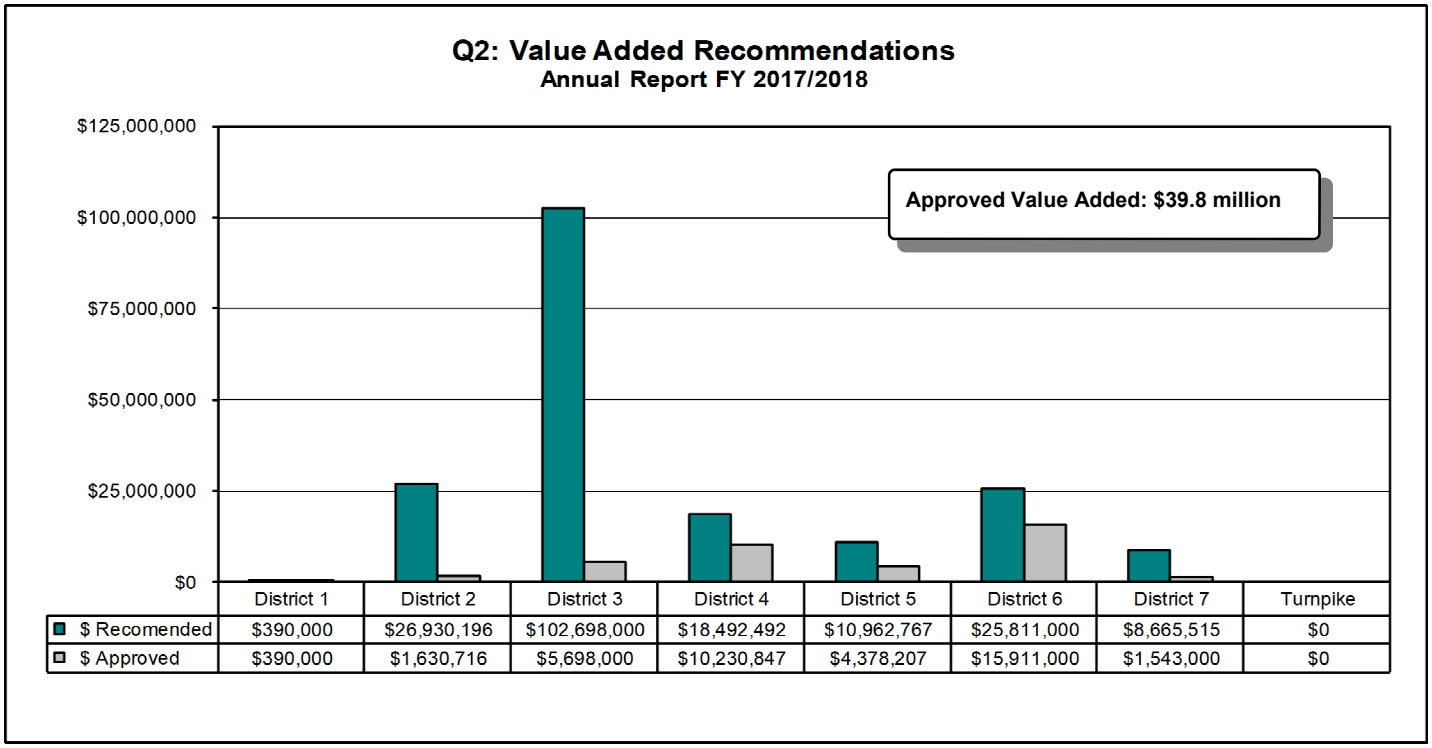



| | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 | Turnpike |
|---|---|---|---|---|---|---|---|---|
| $ Recommended | $20,645,674 | $42,508,185 | $110,570,755 | $19,529,913 | $190,317,000 | $57,130,000 | $38,838,745 | $0 |
| $ Approved | $13,902,719 | $17,568,598 | $85,002,173 | $4,542,165 | $52,884,900 | $25,440,000 | $14,492,904 | $0 |

# Adopted Recommendations



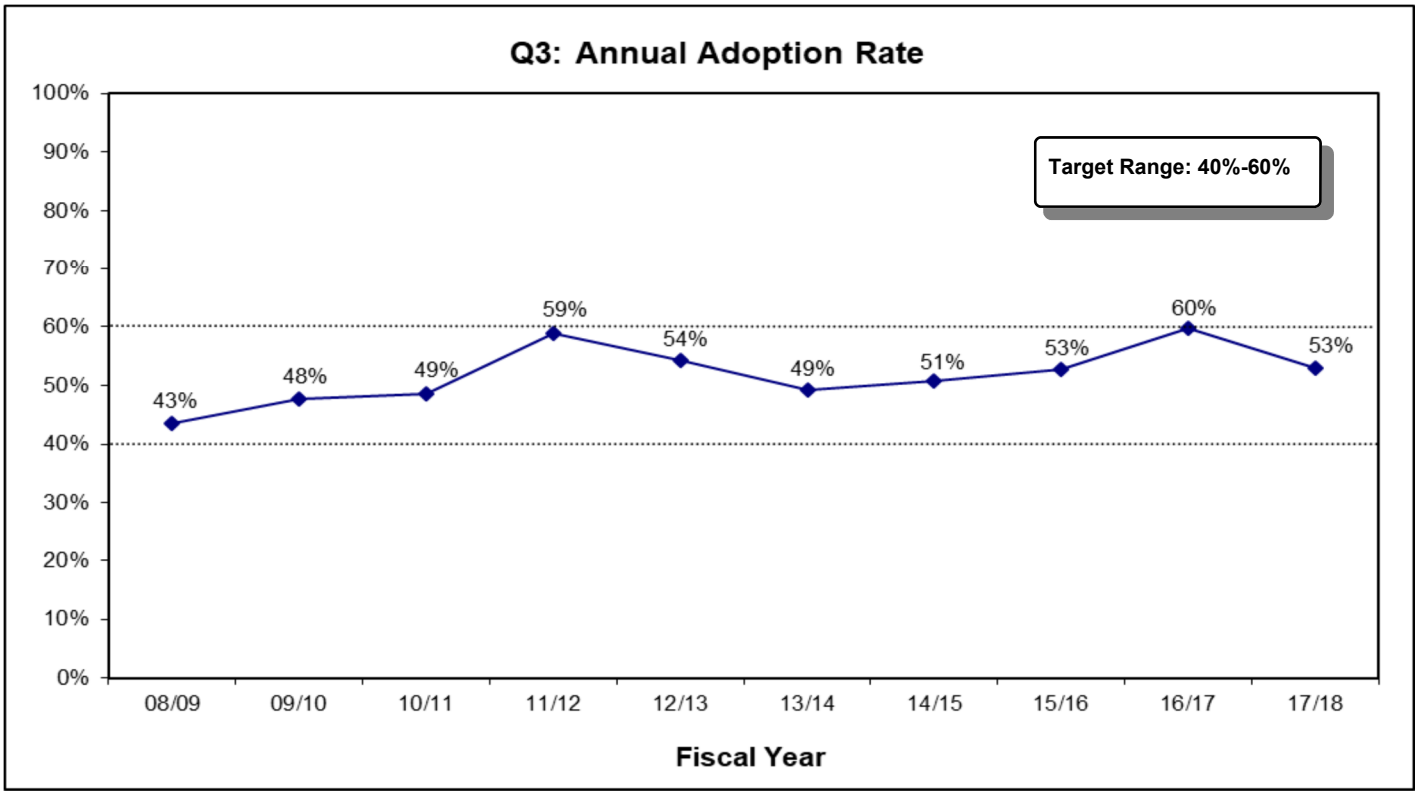

| | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 | 15/16 | 16/17 | 17/18 |
|---|---|---|---|---|---|---|---|---|---|---|
| Approved $$$ | $53.35 | $25.64 | $17.05 | $7.04 | $29.58 | $7.70 | $120.19 | $4.18 | $22.02 | $39.78 |

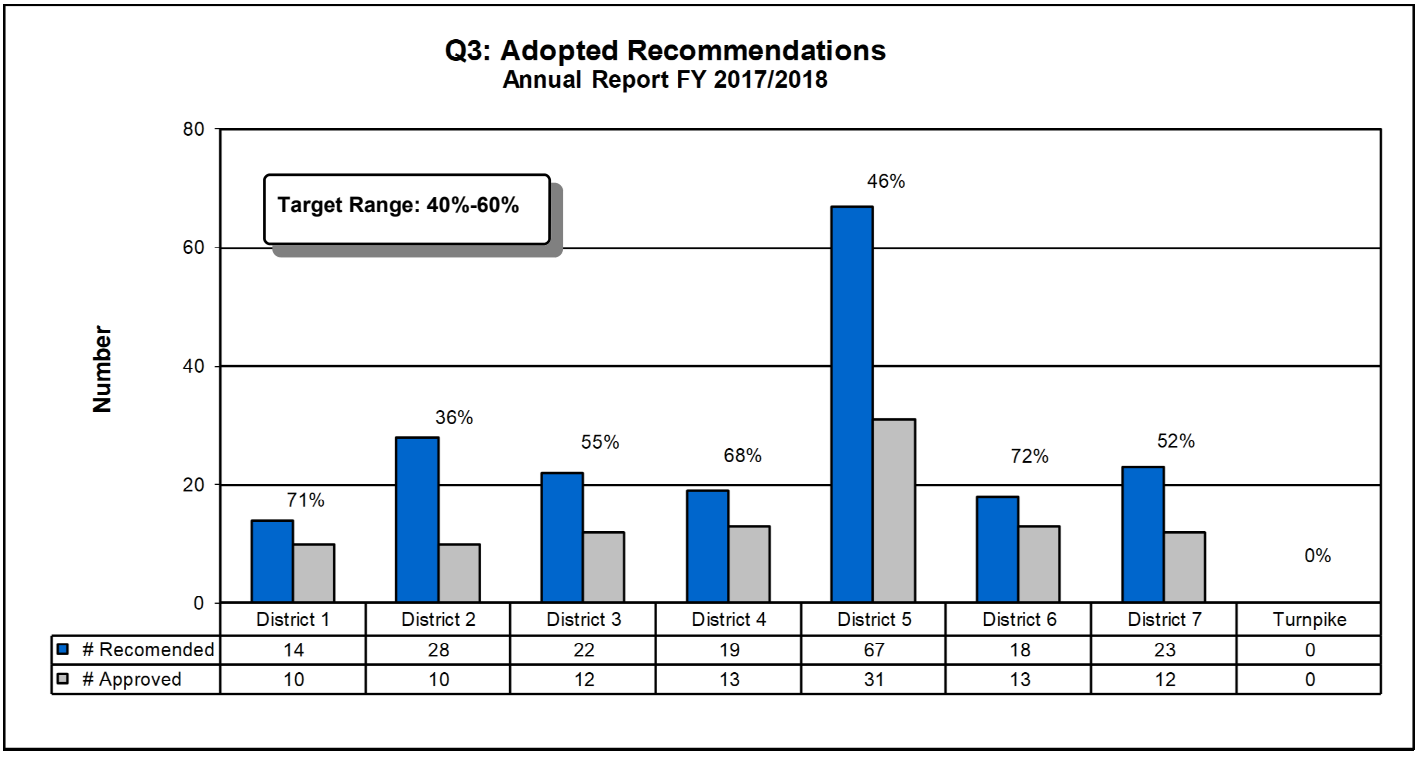



| | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 | Turnpike |
|---|---|---|---|---|---|---|---|---|
| $ Recomended | $390,000 | $26,930,196 | $102,698,000 | $18,492,492 | $10,962,767 | $25,811,000 | $8,665,515 | $0 |
| $ Approved | $390,000 | $1,630,716 | $5,698,000 | $10,230,847 | $4,378,207 | $15,911,000 | $1,543,000 | $0 |

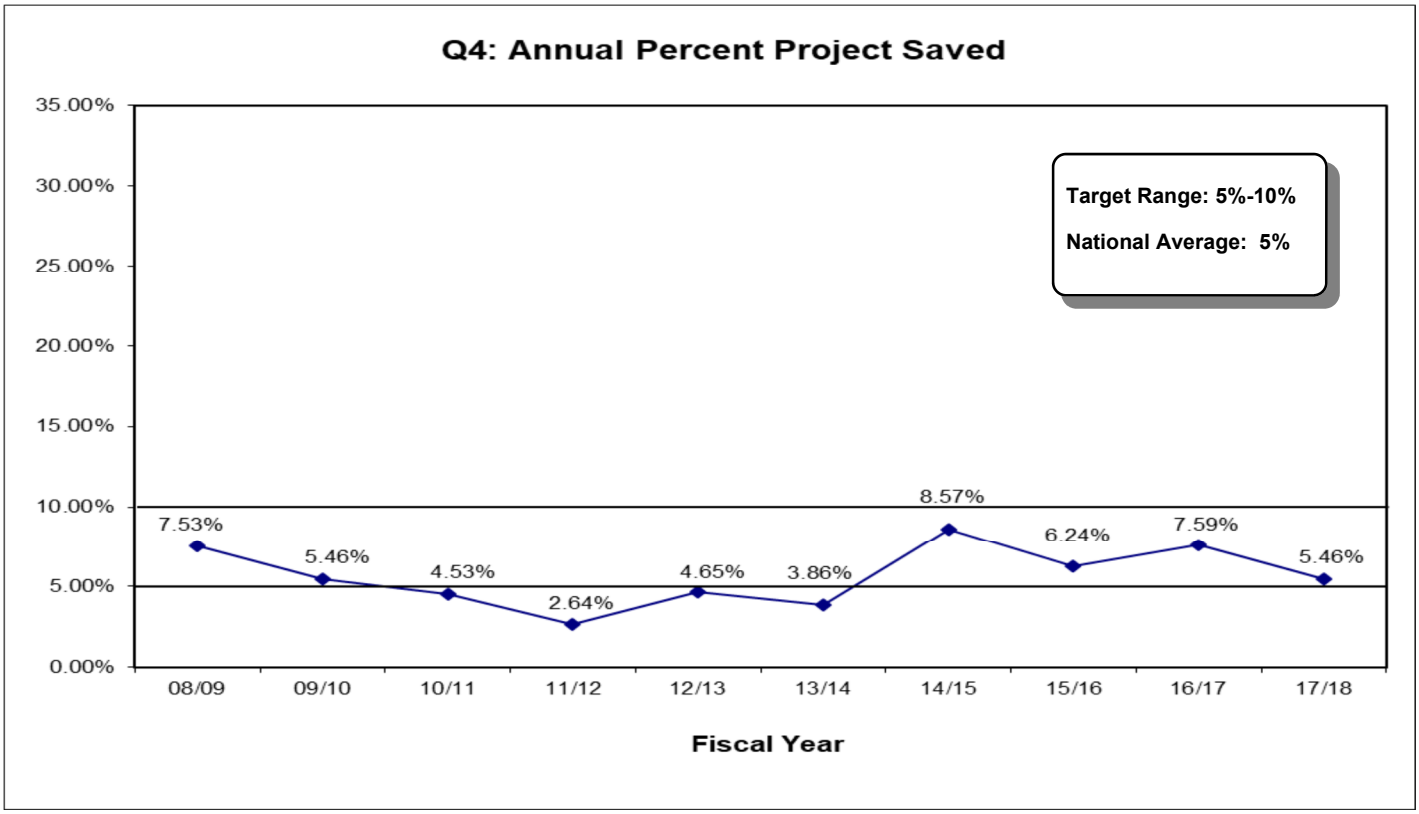
* A Value Added Recommendation significantly increases the performance of a function while also increasing the cost.

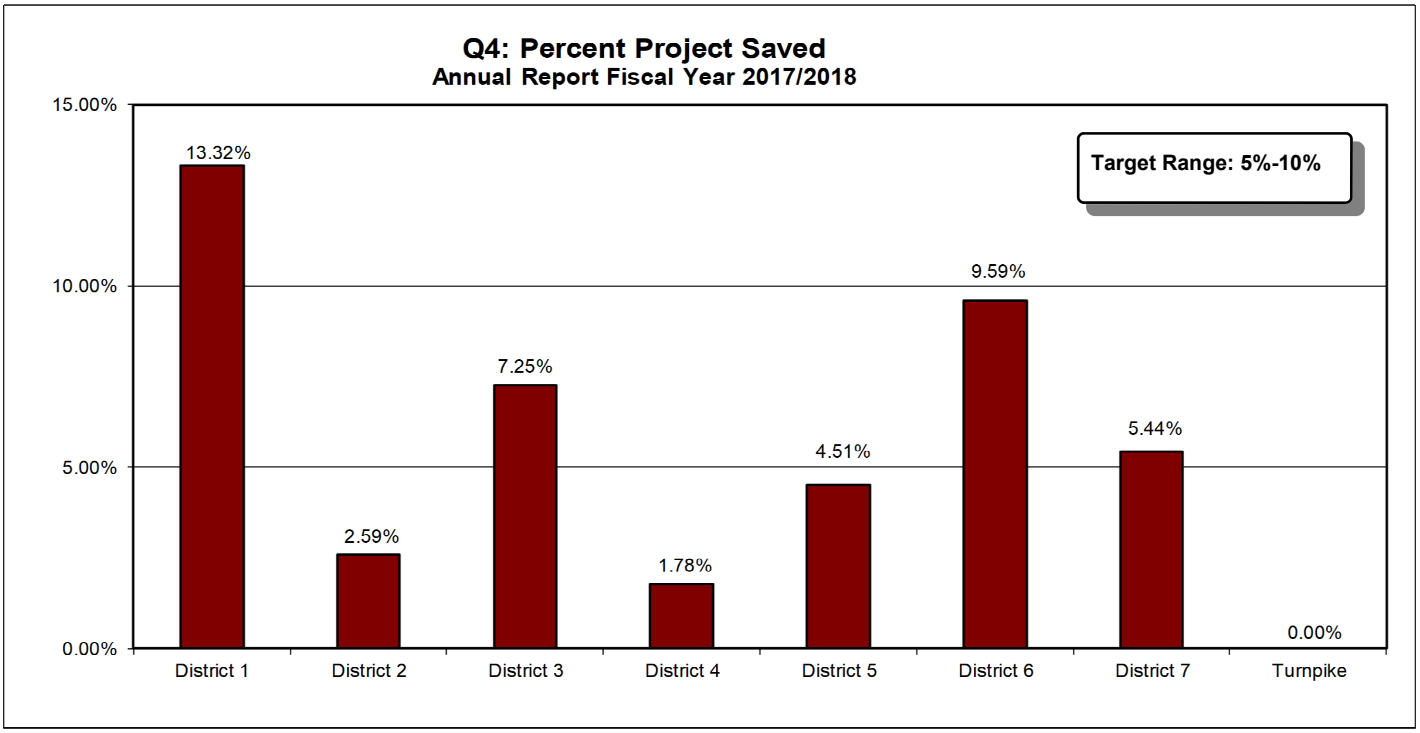
# Adoption Rates



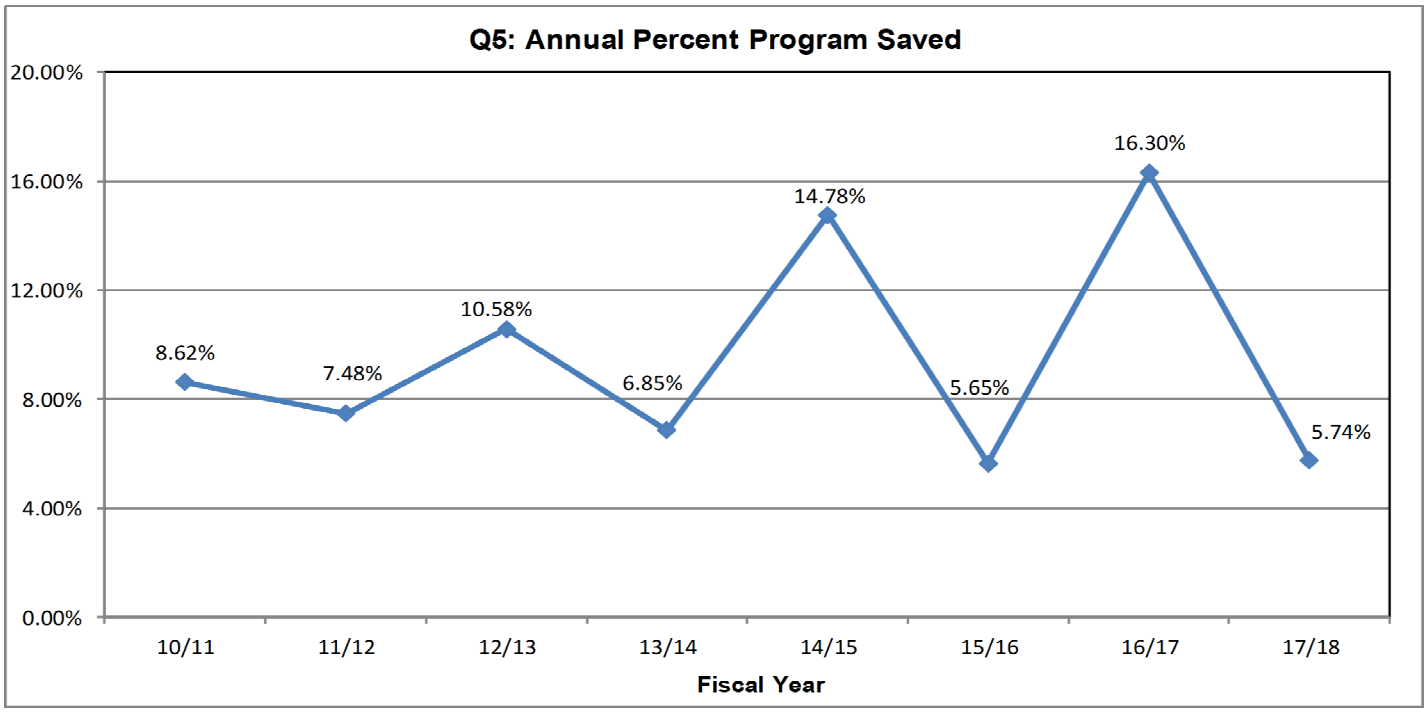
# Percent Project Saved

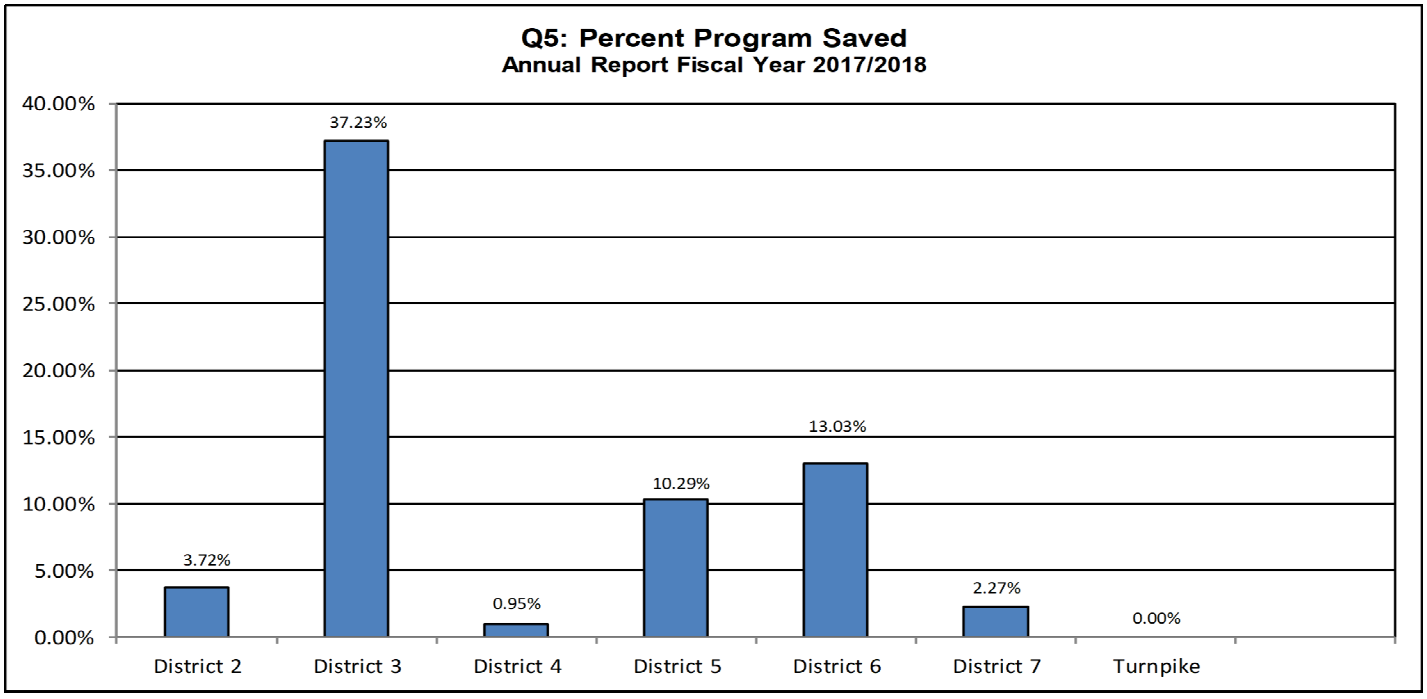


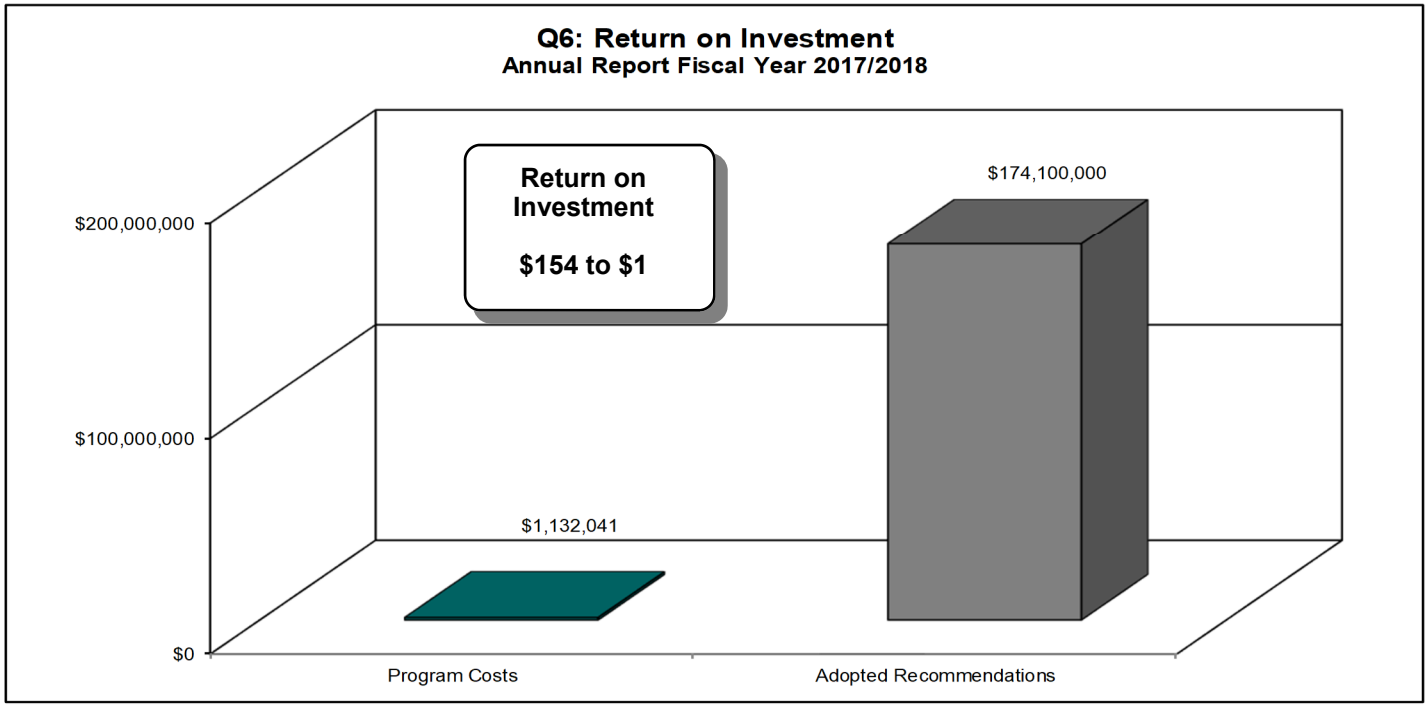
# Percent Program Saved

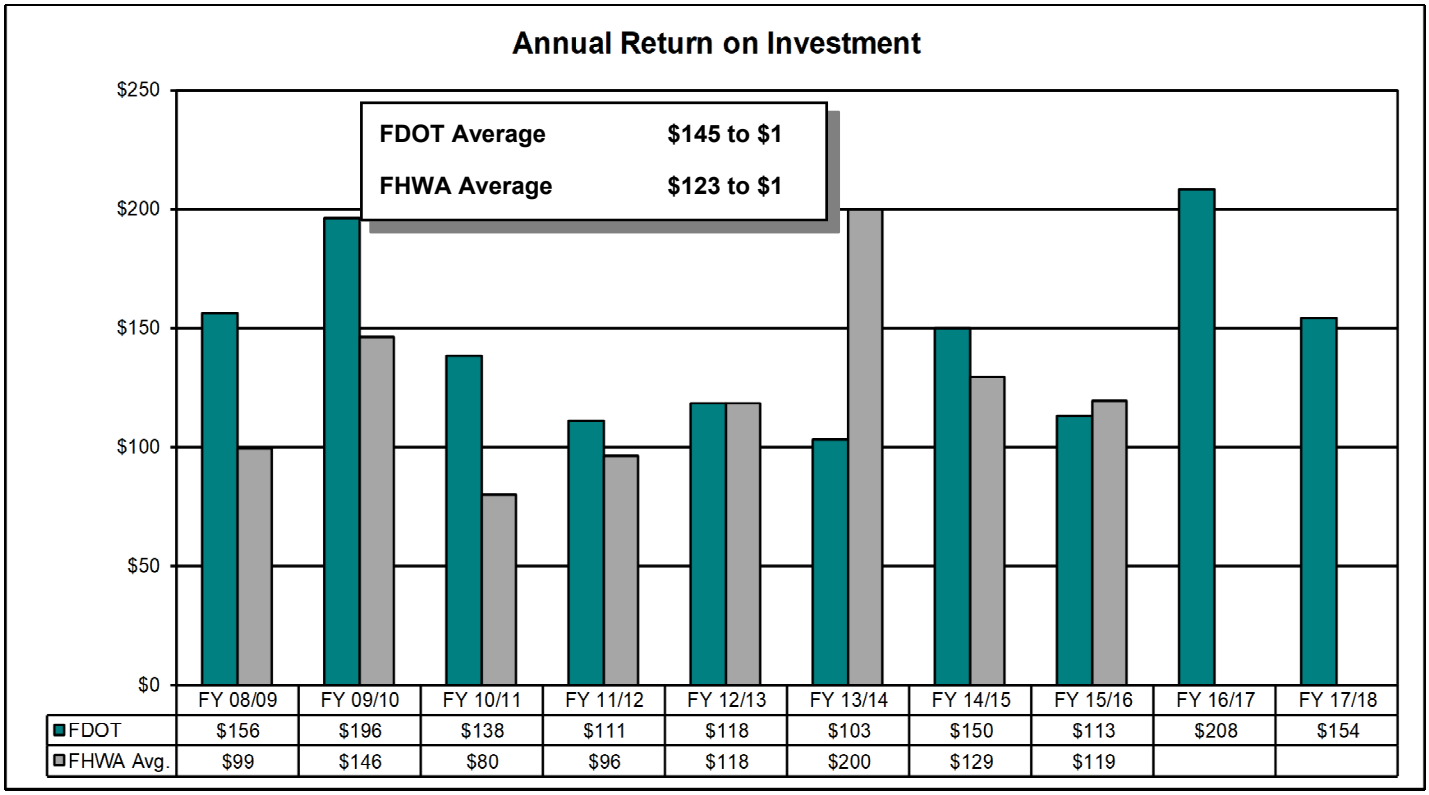
The intent of the Percent Program Saved measure is to compare the cost avoidance/savings to the overall work program. The measure is calculated by dividing the three year average monthly lettings into the overall cost avoidance/savings.



# Return on Investment



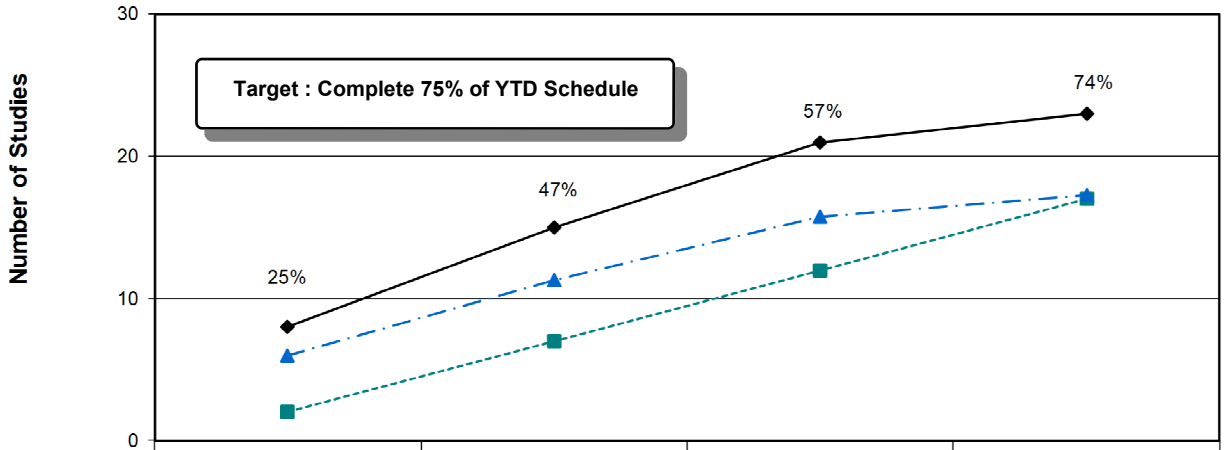




| | FY 08/09 | FY 09/10 | FY 10/11 | FY 11/12 | FY 12/13 | FY 13/14 | FY 14/15 | FY 15/16 | FY 16/17 | FY 17/18 |
|---|---|---|---|---|---|---|---|---|---|---|
| FDOT | $156 | $196 | $138 | $111 | $118 | $103 | $150 | $113 | $208 | $154 |
| FHWA Avg. | $99 | $146 | $80 | $96 | $118 | $200 | $129 | $119 | | |

* FHWA data for fiscal year 2016/2017 and 2017/2018 was not available at time of publication.

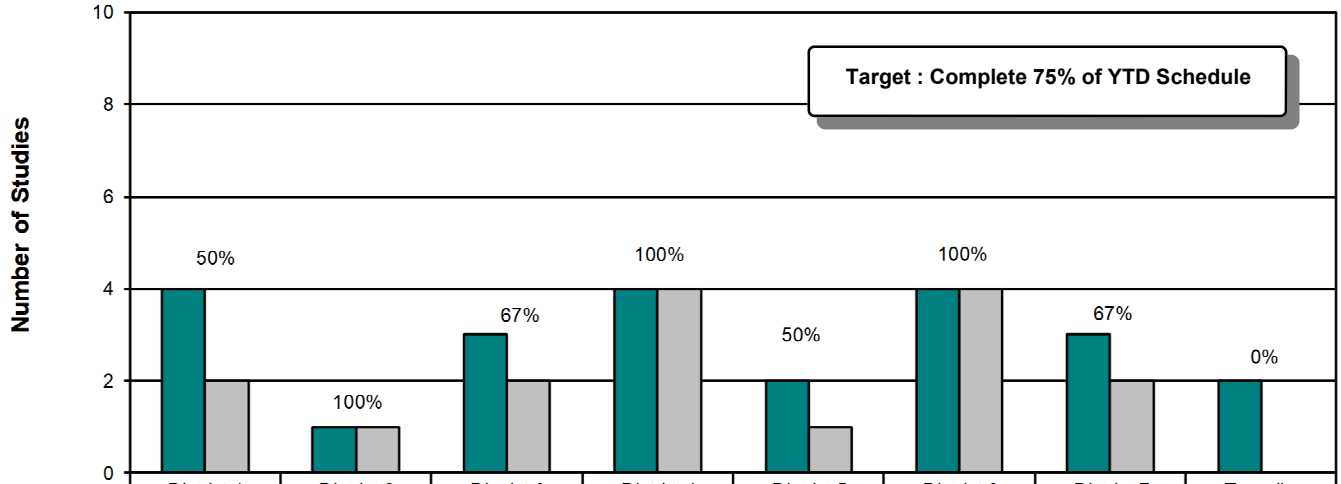
# Work Plan Completion

## P1: VE Studies Scheduled vs. Completed
### Annual Report FY 2017/2018




| | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr |
|---|---|---|---|---|
| Scheduled | 8 | 15 | 21 | 23 |
| Conducted | 2 | 7 | 12 | 17 |
| Target (75%) | 6 | 11 | 16 | 17 |

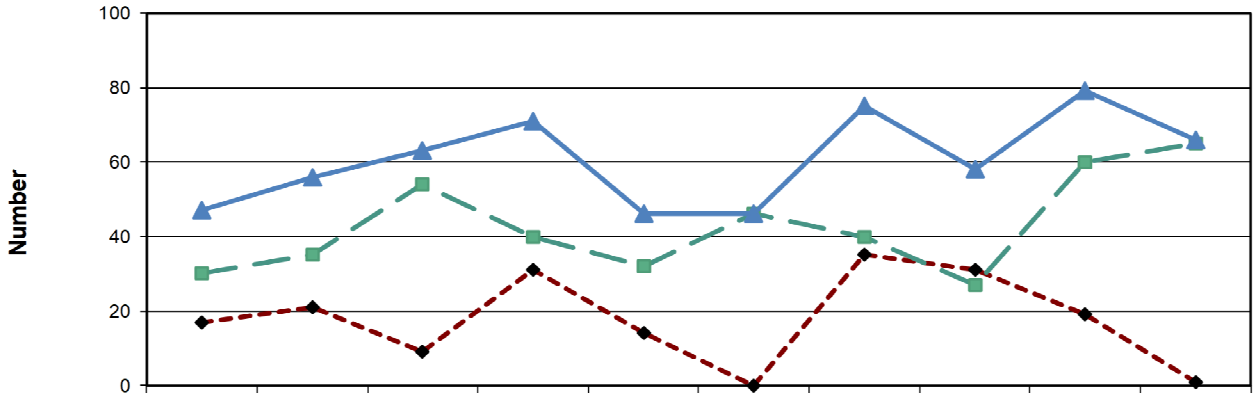
## P1: VE Studies Scheduled vs Completed
### Annual Report FY 2017/2018




| | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 | Turnpike |
|---|---|---|---|---|---|---|---|---|
| # Scheduled | 4 | 1 | 3 | 4 | 2 | 4 | 3 | 2 |
| # Conducted | 2 | 1 | 2 | 4 | 1 | 4 | 2 | 0 |

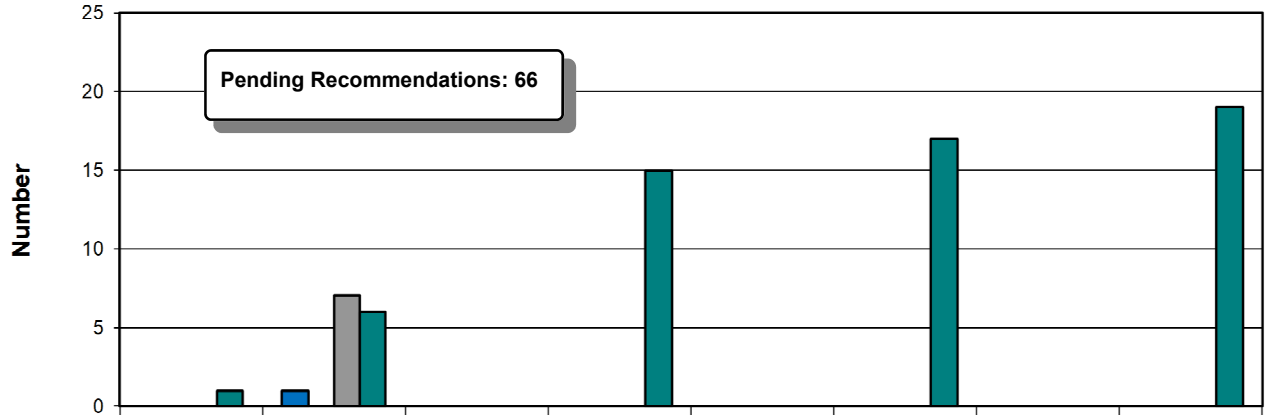
# Pending Recommendations

## P2: Annual # Pending Recommendations
**Annual Report FY 2017/2018**




| | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 | 15/16 | 16/17 | 17/18 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 6 Months | 17 | 21 | 9 | 31 | 14 | 0 | 35 | 31 | 19 | 1 |
| > 7 Months | 30 | 35 | 54 | 40 | 32 | 46 | 40 | 27 | 60 | 65 |
| Total | 47 | 56 | 63 | 71 | 46 | 46 | 75 | 58 | 79 | 66 |

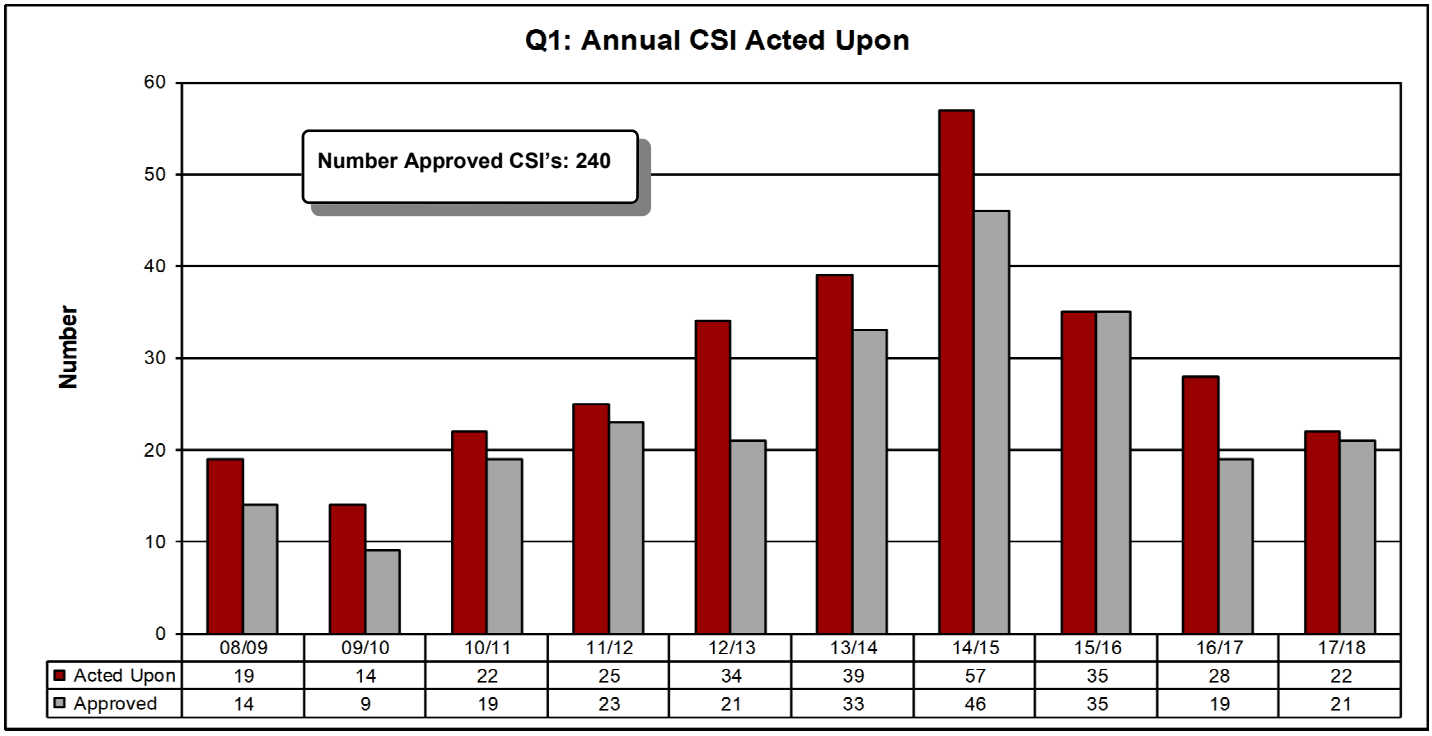
## P2: # Pending Recommendations
**Annual Quarter Report FY 2017/2018**



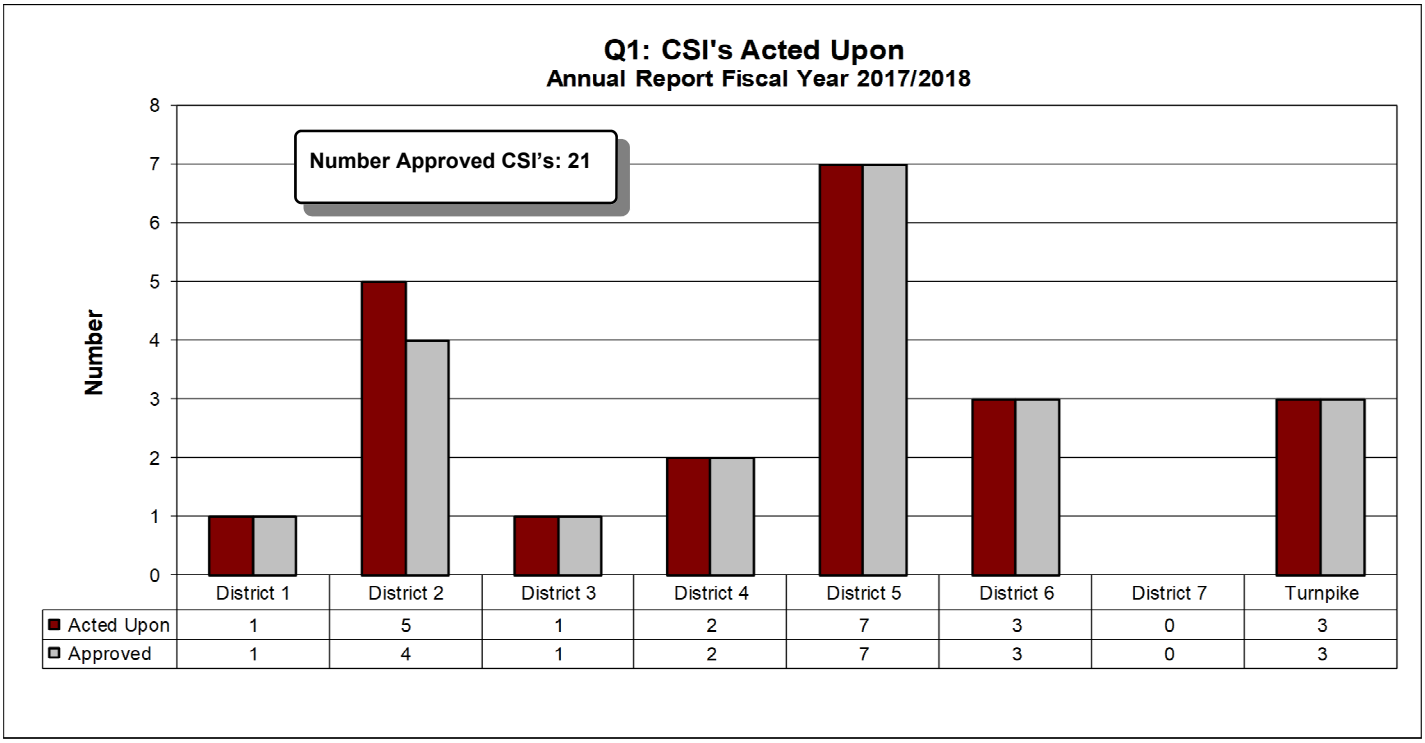

| | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 | Turnpike |
|---|---|---|---|---|---|---|---|---|
| 0 - 3 Months | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 - 6 Months | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 - 12 Months | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| > 12 Months | 1 | 6 | 0 | 15 | 0 | 17 | 0 | 19 |

# Fiscal Year 2017/2018
# Cost Savings Initiative
# Performance Measures

# CSI Summary



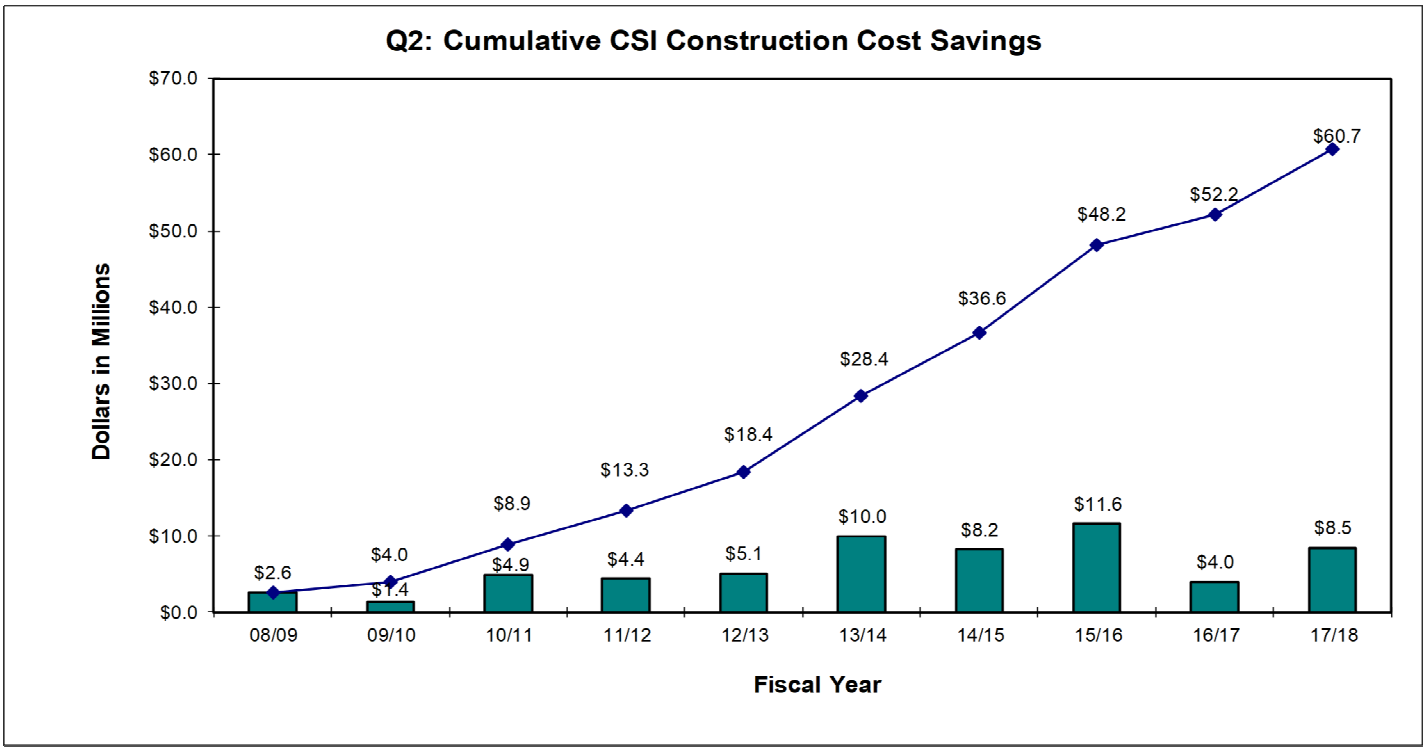

| | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 | 15/16 | 16/17 | 17/18 |
|---|---|---|---|---|---|---|---|---|---|---|
| Acted Upon | 19 | 14 | 22 | 25 | 34 | 39 | 57 | 35 | 28 | 22 |
| Approved | 14 | 9 | 19 | 23 | 21 | 33 | 46 | 35 | 19 | 21 |

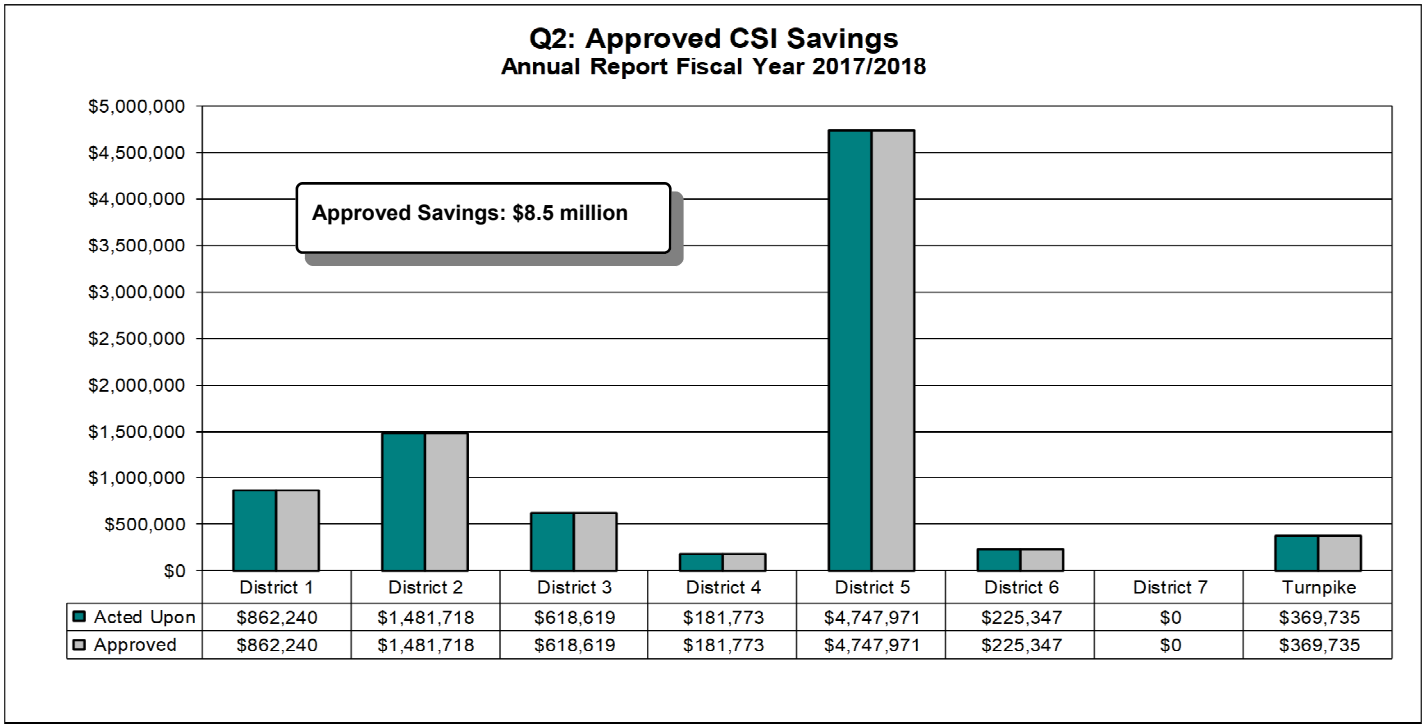



| | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 | Turnpike |
|---|---|---|---|---|---|---|---|---|
| Acted Upon | 1 | 5 | 1 | 2 | 7 | 3 | 0 | 3 |
| Approved | 1 | 4 | 1 | 2 | 7 | 3 | 0 | 3 |

* Prior to fiscal year 2010/2011, Cost savings Initiatives (CSI) were formerly referred to as Value Engineering Change Proposals (VECP's).

# CSI Approved Savings

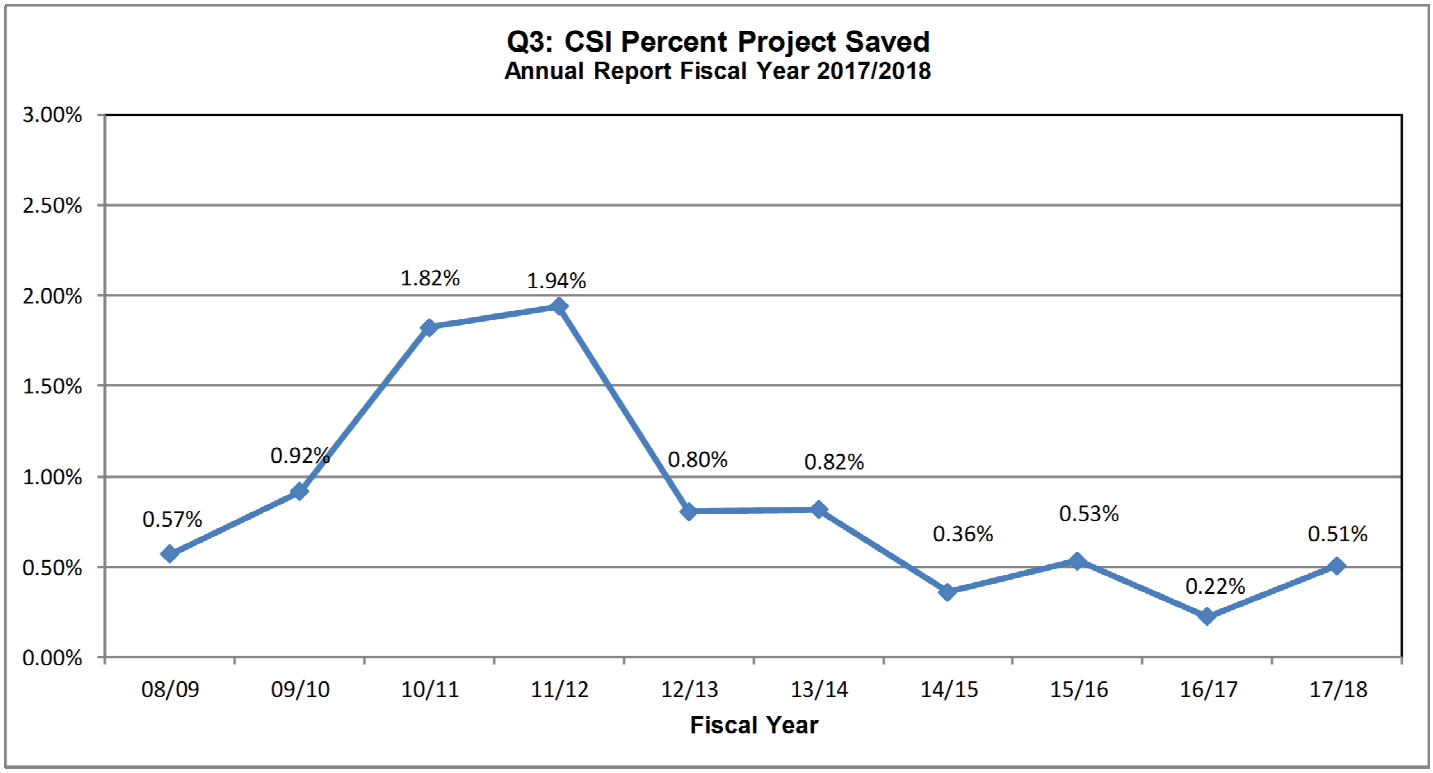


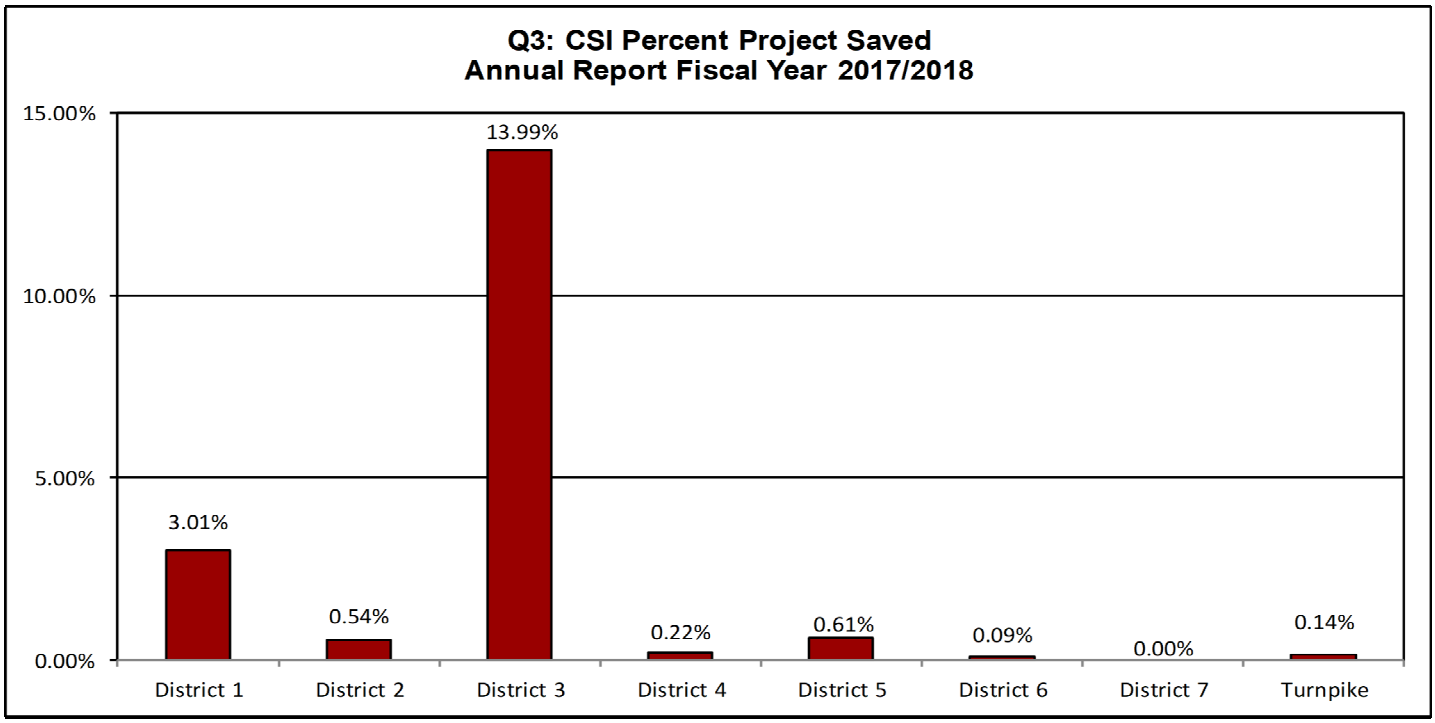




| | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 | Turnpike |
|---|---|---|---|---|---|---|---|---|
| Acted Upon | $862,240 | $1,481,718 | $618,619 | $181,773 | $4,747,971 | $225,347 | $0 | $369,735 |
| Approved | $862,240 | $1,481,718 | $618,619 | $181,773 | $4,747,971 | $225,347 | $0 | $369,735 |

* Prior to fiscal year 2010/2011, Cost savings Initiatives (CSI) were formerly referred to as Value Engineering Change Proposals (VECP's).

# CSI Percent Project Saved

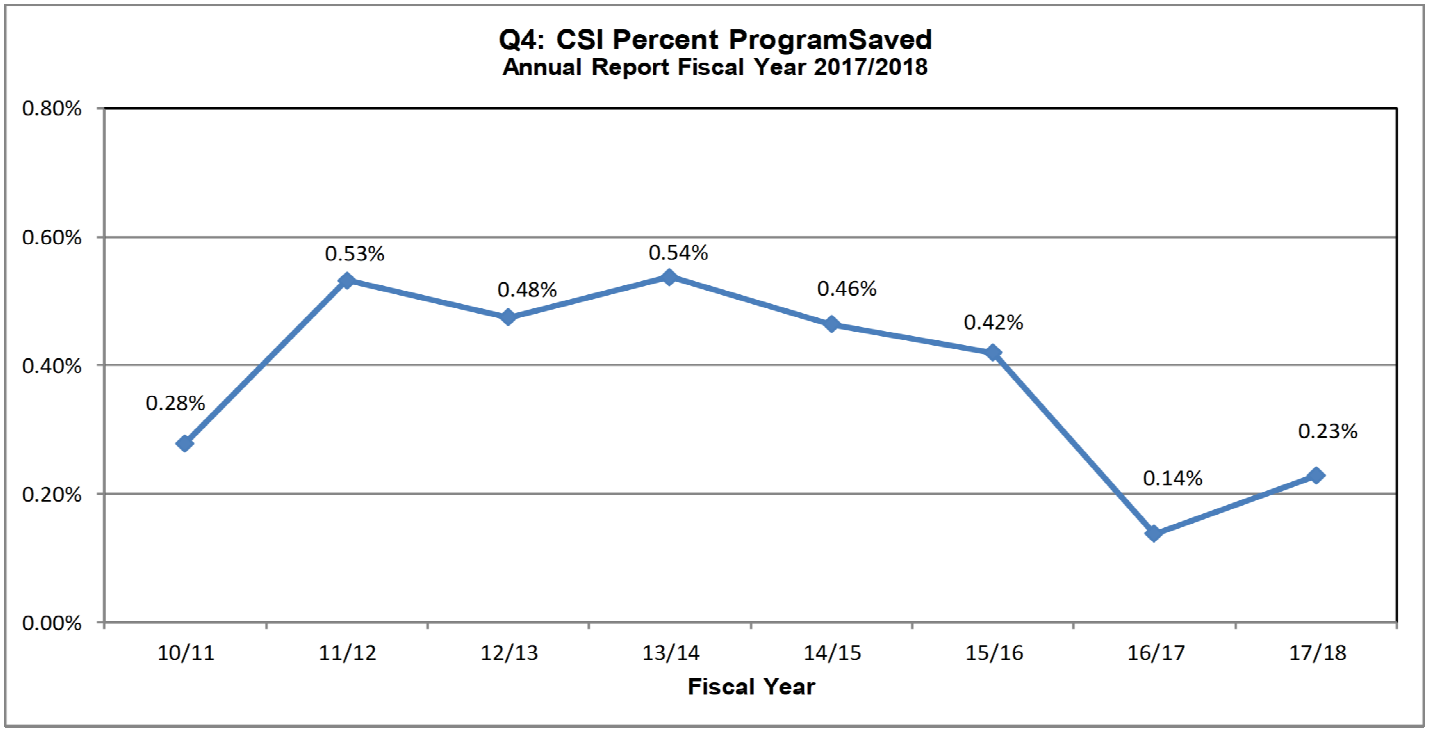


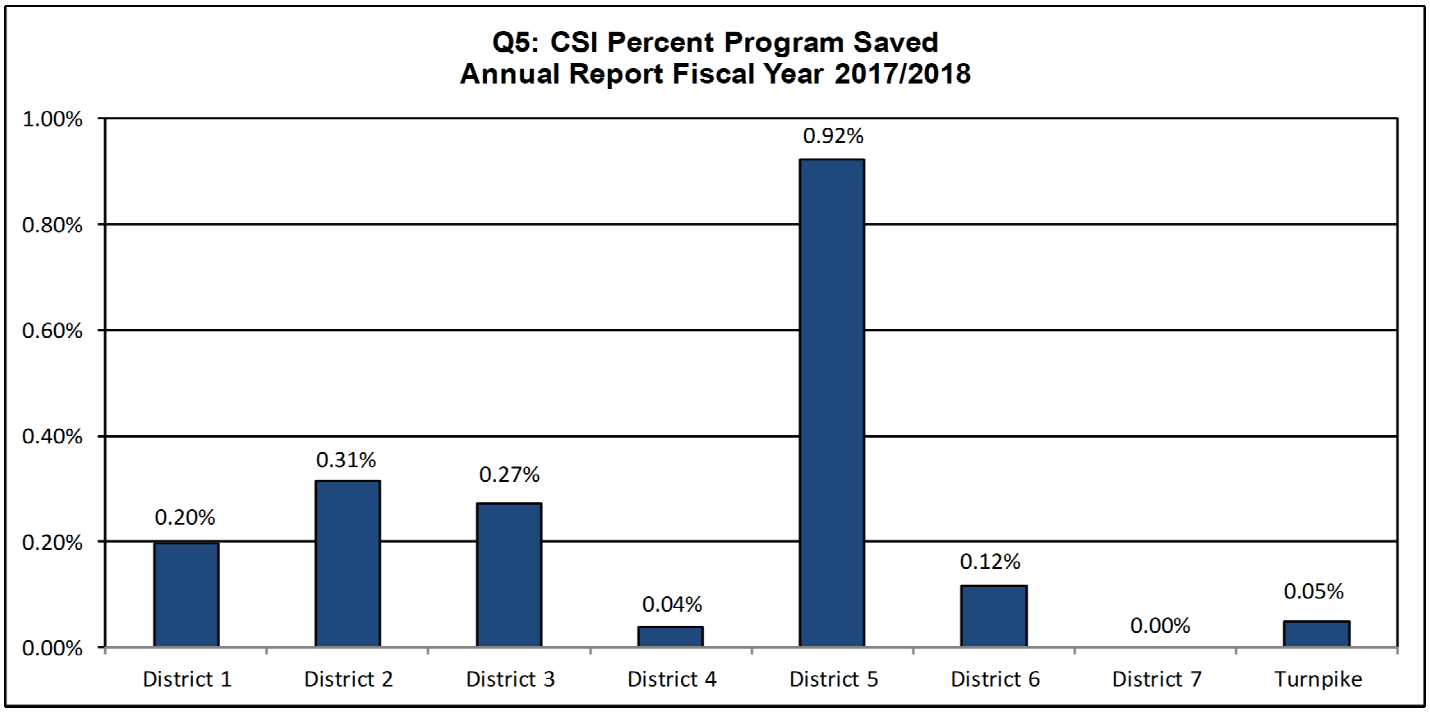




* Prior to fiscal year 2010/2011, Cost savings Initiatives (CSI) were formerly referred to as Value Engineering Change Proposals (VECP's).

# CSI Percent Program Saved

The Percent Program Saved is a new measure. The intent is to compare the cost avoidance/ savings to the overall work program. The measure is calculated by dividing the three year average monthly lettings into the overall cost avoidance/savings.



# Appendix
# Process Control Systems

# Process Control System

**Process Name:** Value Engineering Program

**Product/Service:** Perform Value Engineering analysis on selected projects and document findings

**Primary Customers:** Management

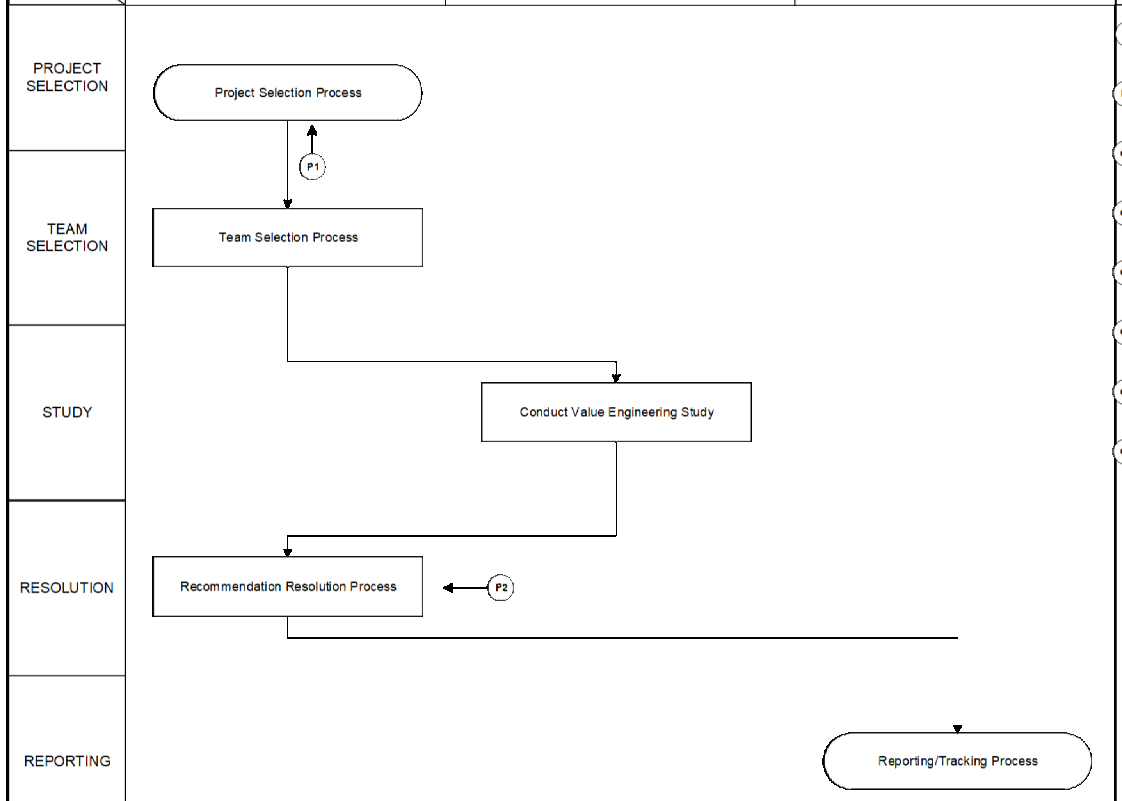
**Regulators:** FHWA

**Customer's Valid Requirement(s):** Effective use of resources to produce a quality transportation system.

**Regulator's Valid Requirement(s):** Projects that meet the requirements of 23 CFR 627 have a VE Analysis conducted in accordance with 23 CFR 627.

**Input(s):** Projects
**Supplier(s):** Work Program

## Flow Chart




| Process Measures And Quality Measures | Control Limits Specs / Targets | Checking Item: What is to be checked? | Timeframe (Frequency): When to check? | Respon-sibility: Who will check? | QAR: Date of Last Review |
|---|---|---|---|---|---|
| P1 % scheduled studies completed | 75% | VER & Work Plan | Monthly | SVE | D1: 1/2009 C |
| P2 # of pending rec. per time perio | | VER | Monthly | SVE | |
| Q1 $$$ Saved per time period | | VER | Monthly | SVE | D2: 11/2015 C |
| Q2 Value Added $$$ per time period | | VER | Monthly | SVE | D3: 1/2009 C |
| Q3 Adoption Rate | 40%-60% | VER | Monthly | SVE | |
| Q4 Percent Project Saved | 5% | VER | Monthly | SVE | D4:112015 C |
| Q5 Percent Program Saved | 2% | VER | Monthly | SVE | D5: 1/2009 C |
| Q6 Return on Investment | $130 to $1 | VER | Annual | SVE | D6: 12/2015 C |
| | | | | | D7:1/2009 C |
| | | | | | TPK: 1/2016 C |

**Miscellaneous Information**

- Abbreviations
- Procedure Reference
- Notes, etc.

Federal Regulation 23 CFR 627

VE Procedure 625-030-002

AASHTO Guidelines for VE

NCHRP Synthesis 352 – Value Engineering Applications in Transportation

CODES:

C- Compliance
NC – Noncompliant
BP Best Practice

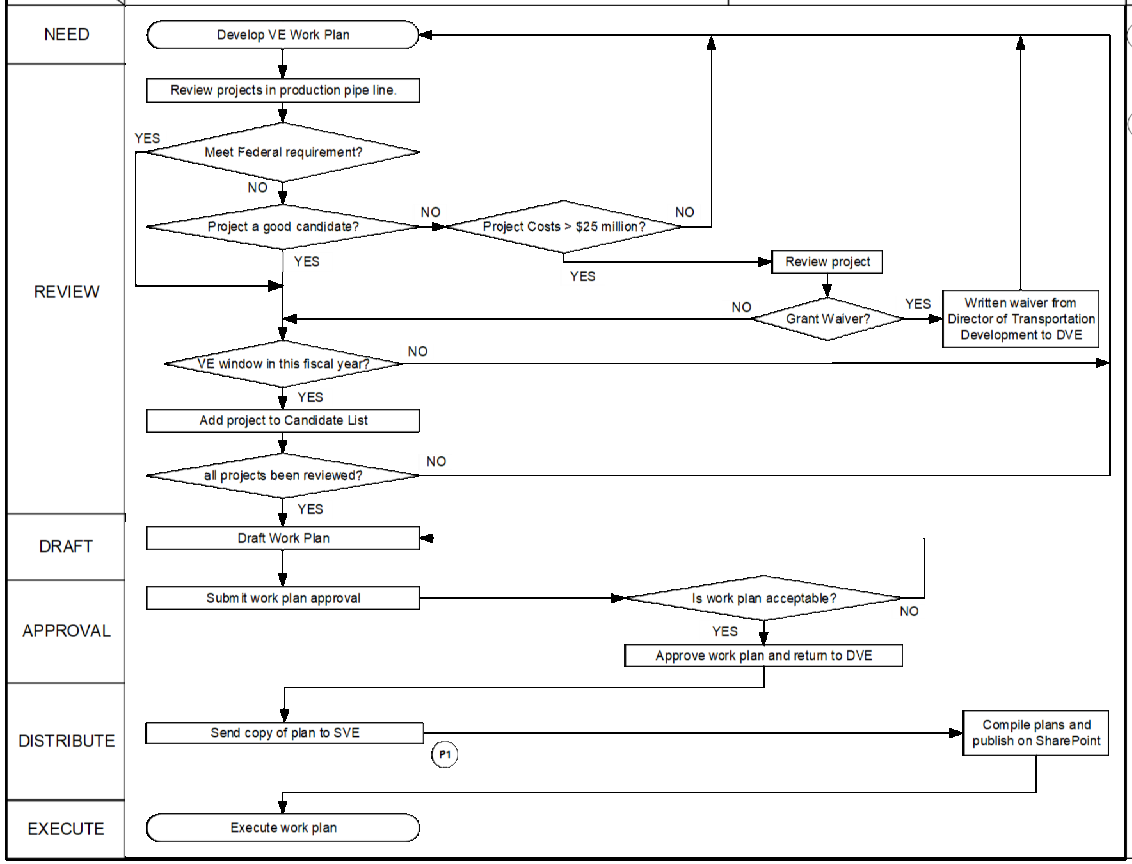
**Approved:** _____ **Date:** _____ **Process Owner:** State Value Engineer **Rev #:** 1.6 **Rev Date:** 3/2016

# Process Control System

| | | | | |
|---|---|---|---|---|
| **Process Name:** Value Engineering Project Selection | **Product/Service:** Develop a Value Engineering Work Plan by July 1 of each fiscal year. | **Primary Customers:** District Management, State Value Engineer.<br>**Partners:** FHWA | **Valid Requirement(s):** All projects with the most potential for improvement have a VE Analysis. | **Regulator's Valid Requirement(s):** All projects on the NHS system with estimated total costs > $25 million have a VE analysis |

**Input(s):** Projects
**Supplier(s):** Work Program

## Flow Chart




| Process and Quality Indicators | | Checking / Indicator Monitoring | | | | Miscellaneous Information |
|---|---|---|---|---|---|---|
| Process Indicators And Quality Indicators | Control Limits Specs / Targets | Checking Item<br>What is to be checked? | Timeframe (Frequency)<br>When to check? | Respon-sibility<br>Who will check? | QAR<br>Date of Last Review | - Abbreviations<br>- Procedure Reference<br>- Notes, etc. |
| P1 % work plans approved by July 1 | 100% | Work Plan Received | Annual | SVE | D1: 1/2009 C | Federal Regulation 23 CFR 627 |
| Q1 % scheduled studies completed | 75% | VER & Work Plan | Quarterly | SVE | D2: 11/2015 C<br>D3: 1/2009 C<br>D4:11/2015 C<br>D5: 1/2009 C<br>D6: 12/2015 C<br>D7:1/2009 C<br>TPK: 1/2016 C | VE Procedure 625-030-002<br>AASHTO Guidelines for VE<br>NCHRP Synthesis 352 – Value Engineering Applications in Transportation |

CODES:
C- Compliance
NC – Noncompliant
BP Best Practice

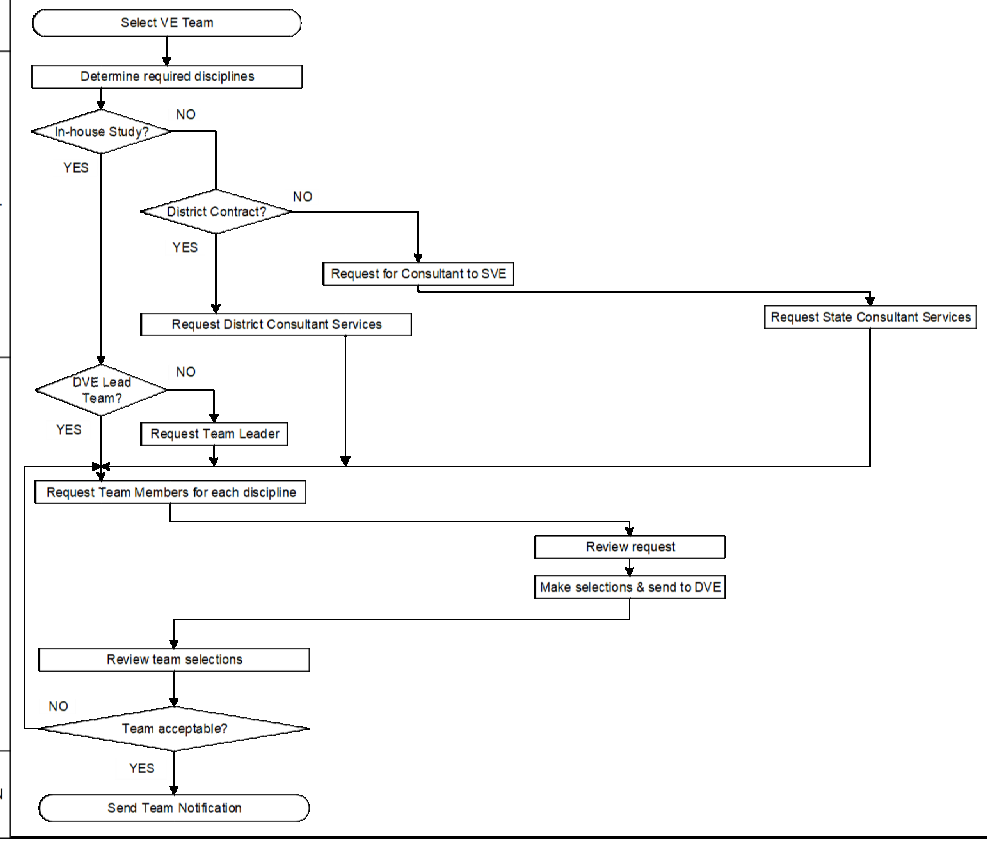
**Approved:** _____ **Date:** _____ **Process Owner:** District Value Engineer **Rev #:** 1.6 **Rev Date:** 3/2016

# Process Control System

| | | | | |
|---|---|---|---|---|
| **Process Name:** Value Engineering Team Selection | **Product/Service:** Team with the necessary skills and experience to conduct a value engineering analysis | **Primary Customers:** Team Leaders & Team Members<br>**Partner:** FHWA & Project Manager | **Valid Requirement(s):** Team makeup has the required disciplines, leadership skills and VE experience to study the selected project . | **Regulator's Valid Requirement(s):** Mulit-disciplined team of individuals not personally involved in the design of the project |

**Input(s):** Project disciplines
**Supplier(s):** Department Heads, Consultants

## Flow Chart




| Process and Quality Indicators | | | Checking / Indicator Monitoring | | | | Miscellaneous Information |
|---|---|---|---|---|---|---|---|
| Process Indicators And Quality Indicators | Control Limits Specs / Targets | Checking Item What is to be checked? | Timeframe (Frequency) When to check? | Respon-sibility Who will check? | QAR Date of Last Review | |
| Q1 # of teams missing required disciplines | 0 | VER & VE Study Report | Annual | SVE | D1: 11/2006 C | - Abbreviations<br>- Procedure Reference<br>- Notes, etc. |
| Q2 # of teams with more than 2 untrained teammembers serving as primary team member | 0 | VER & VE Study Report | Annual | SVE | D2: 11/2015 C | Federal Regulation 23 CFR 627<br><br>VE Procedure 625-030-002<br><br>AASHTO Guidelines for VE<br><br>NCHRP Synthesis 352 – Value Engineering Applications in Transportation |
| Q3 # of team leaders not meeting qualifications | 0 | VER, VE study report, SAVE, FLPE, TRESS | Annual | SVE | D3: 12/2006 C<br>D4:11/2015 C<br>D5: 1/2007 C<br>D6: 12/2015 C<br>D7:11/2006 C<br>TPK: 1/2016 C | |

CODES:

C- Compliance
NC – Noncompliant
BP Best Practice

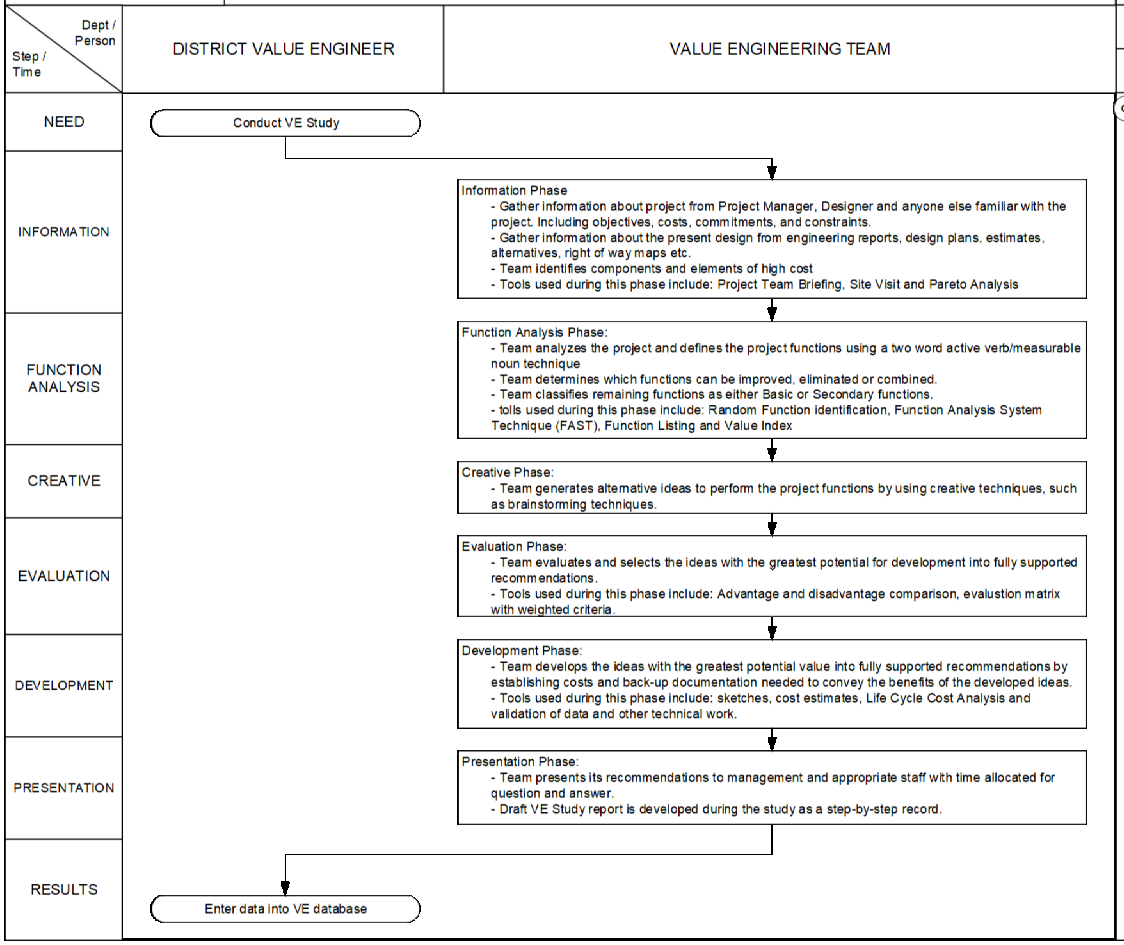
**Approved:** _____ **Date:** _____ **Process Owner:** District Value Engineer **Rev #:** 1.5 **Rev Date:** 3/2016

# Process Control System

| | | | | |
|---|---|---|---|---|
| **Process Name:** Conduct Value Engineering Study | **Product/Service:** Completed VE Analysis with a report documenting the findings of the team. | **Primary Customers:** Management & DVE.<br>**Partners:** FHWA, State Value Engineer | **Customer's Valid Requirement(s):** Follow the VE Job Plan to produce quality recommendations that can be implemented. | **Regulator's Valid Requirement(s):** Follow widely recognized systematic problem solving process that is used throughout private industry and government agencies. |

**Input(s):** Recommendations
**Supplier(s):** VE Team

## Flow Chart




### Process and Quality Indicators / Checking / Indicator Monitoring / Miscellaneous Information

| Process Indicators And Quality Indicators | Control Limits Specs / Targets | Checking Item What is to be checked? | Timeframe (Frequency) When to check? | Respon-sibility Who will check? | QAR Date of Last Review | Miscellaneous Information |
|---|---|---|---|---|---|---|
| Q1 Adoption Rate | 40%-60% | VER | Monthly | SVE | D1: 11/2006 C<br>D2: 11/2015 C<br>D3: 12/2006 C<br>D4:11/2015 C<br>D5: 1/2007 C<br>D6: 12/2015 C<br>D7:11/2006 C<br>TPK: 1/2016 C | - Abbreviations<br>- Procedure Reference<br>- Notes, etc. |

Federal Regulation 23 CFR 627

VE Procedure 625-030-002

1999 AASHTO Guidelines for VE

NCHRP Synthesis 352 – Value Engineering Applications in Transportation

CODES:

C- Compliance
NC – Noncompliant
BP Best Practice

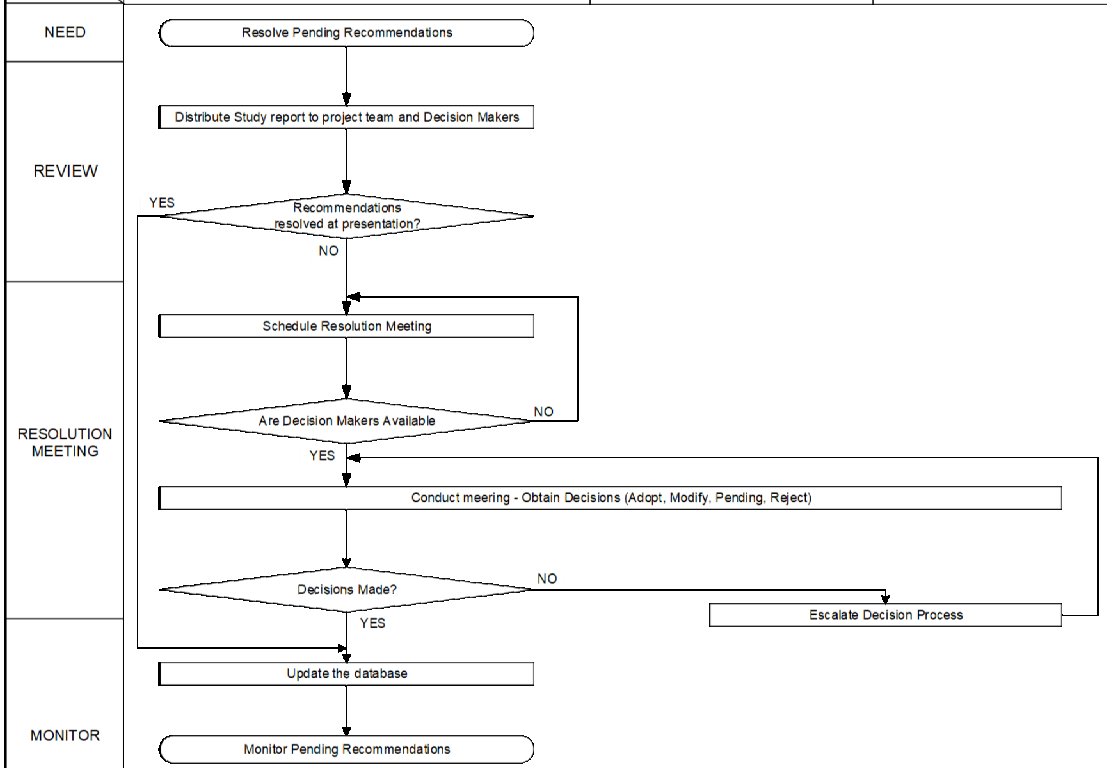
**Approved:** _____ **Date:** _____ **Process Owner:** District Value Engineer **Rev #:** 1.6 **Rev Date:** 3/2016

# Process Control System

| | | | | |
|---|---|---|---|---|
| **Process Name:** Value Engineering Recommendation Resolution Process. | **Product/Service:** Resolution of VE Team Recommendations | **Primary Customers:** Project Manager, SVE<br>**Partners:** FHWA | **Customer's Valid Requirement(s):** Recommendations are acted upon ina timely manner, but that a recommendation is acted upon based on information and not time. | **Regulator's Valid Requirement(s):** Process to approve or reject recommendations to ensure the prompt review of VE recommendations |

**Input(s):** Recommendations
**Supplier(s):** VE Team

## Flow Chart




| Process and Quality Indicators | | Checking / Indicator Monitoring | | | | Miscellaneous Information |
|---|---|---|---|---|---|---|
| Process Indicators And Quality Indicators | Control Limits Specs / Targets | Checking Item What is to be checked? | Timeframe (Frequency) When to check? | Respon-sibility Who will check? | QAR Date of Last Review | |
| Q1 Adoption Rate | 40%-60% | VER | Monthly | SVE | D1: 11/2006 C | - Abbreviations<br>- Procedure Reference<br>- Notes, etc. |
| Q2 # of pending rec. per time period | | VER | Monthly | SVE | D2: 11/2015 C | Federal Regulation 23 CFR 627<br><br>VE Procedure 625-030-002<br><br>1999 AASHTO Guidelines for VE<br><br>NCHRP Synthesis 352 – Value Engineering Applications in Transportation |
| | | | | | D3: 12/2006 C | |
| | | | | | D4:11/2015 C | |
| | | | | | D5: 1/2007 C | |
| | | | | | D6: 12/2015 C | |
| | | | | | D7:11/2006 C | |
| | | | | | TPK: 1/2016 C | |
| | | | | | CODES:<br><br>C- Compliance<br>NC – Noncompliant<br>BP Best Practice | |

**Approved:** _____ **Date:** _____ **Process Owner:** District Value Engineer **Rev #:** 1.6 **Rev Date:** 03/2016

# Process Control System

**Process Name:** Value Engineering Reporting Process.

**Product/Service:** Report detailing the results of the Value Engineering Program

**Primary Customers:** Management.

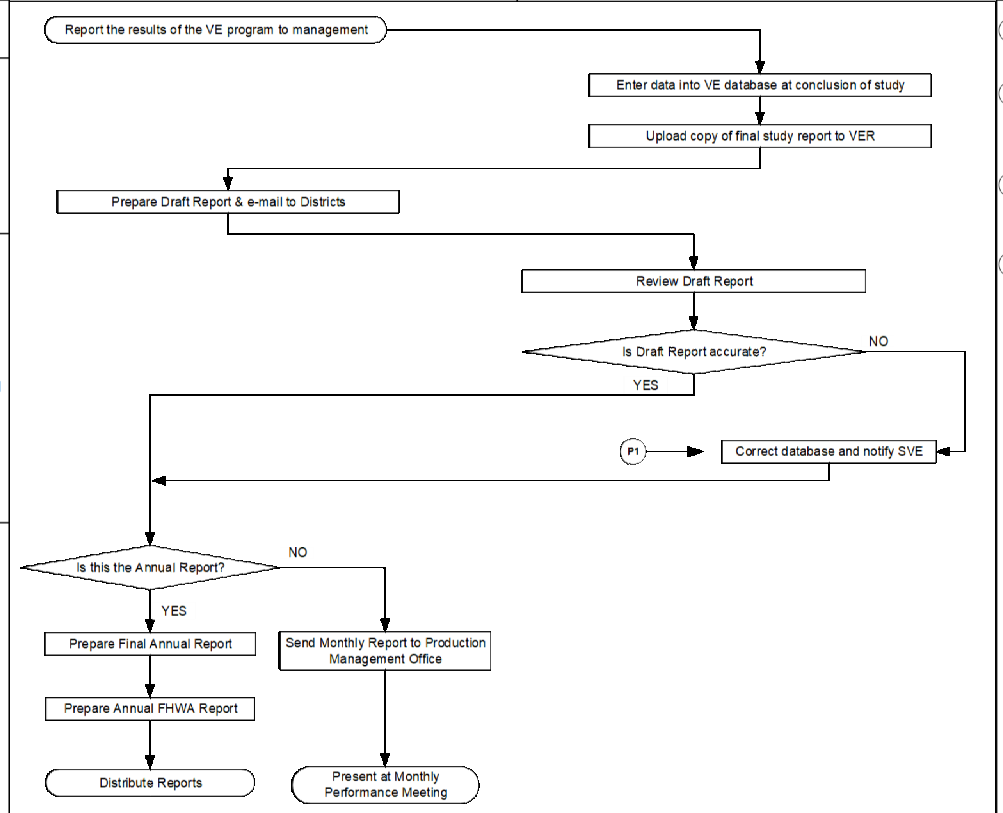
**Partners:** FHWA

**Customer's Valid Requirement(s):** Prepare accurate and reliable reports

**Regulator's Valid Requirement(s):** Report accurate results of the Value Engineering Program

**Input(s):** Study Results
**Supplier(s):** DVE

## Flow Chart




| Process Indicators And Quality Indicators | Control Limits Specs / Targets | Checking Item: What is to be checked? | Timeframe (Frequency): When to check? | Respon-sibility: Who will check? | QAR: Date of Last Review |
|---|---|---|---|---|---|
| P1 # of corrections | | | Monthly | SVE | D1: 11/2006 C |
| Q1 Monthly Report complete by Production Management Due Date | | | Monthly | SVE | D2: 11/2015 C |
| Q2 Annual Report complete by July 30th | | | Annual | SVE | D3: 12/2006 C |
| Q3 FHWA Annual Report to Division Office by Requested date | | | Annual | SVE | D4:11/2015 C |
| | | | | | D5: 1/2007 C |
| | | | | | D6: 12/2015 C |
| | | | | | D7:11/2006 C |
| | | | | | TPK: 01/2016 C |

CODES:

C- Compliance
NC – Noncompliant
BP Best Practice

**Miscellaneous Information**

- Abbreviations
- Procedure Reference
- Notes, etc.

Federal Regulation 23 CFR 627

VE Procedure 625-030-002

1999 AASHTO Guidelines for VE

NCHRP Synthesis 352 – Value Engineering Applications in Transportation

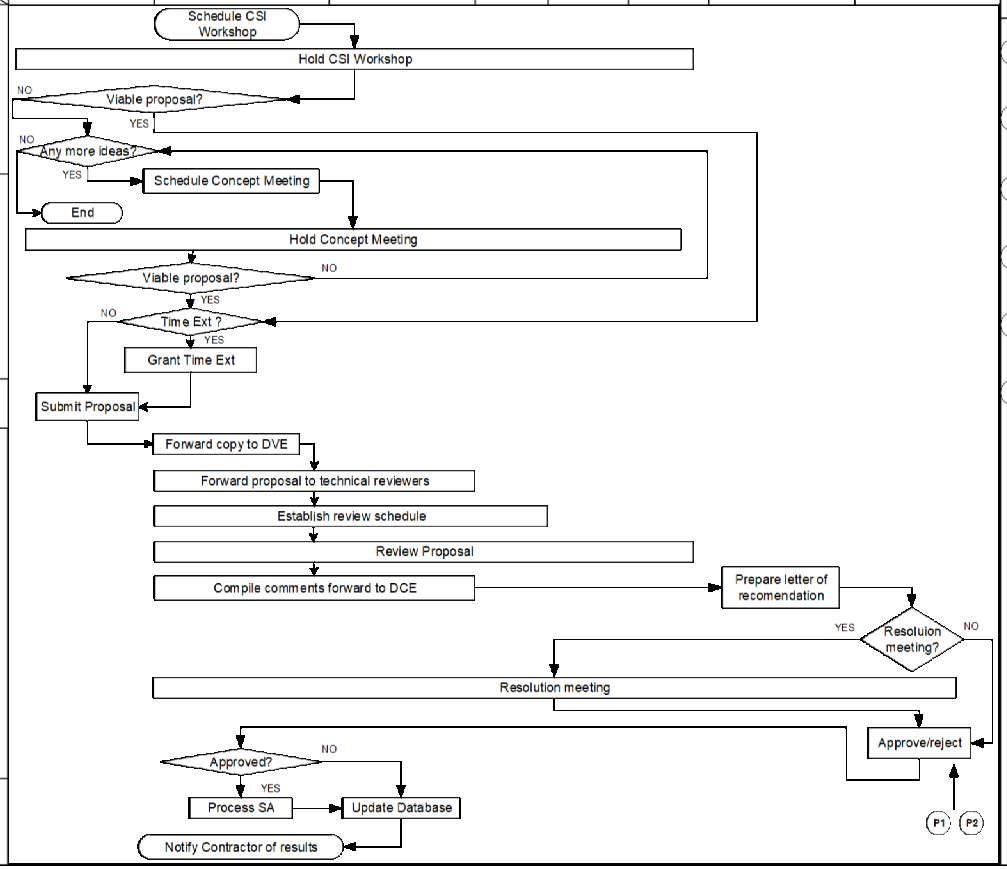
**Approved:** _____ **Date:** _____ **Process Owner:** State Value Engineer **Rev #:** 1.6 **Rev Date:** 03/2016

# Process Control System

| | | | | |
|---|---|---|---|---|
| **Process Name:** Value Engineering Change Proposal | **Product/Service:** Resolution on submitted VECP by the contractor | **Primary Customers:** Management, Contractor<br>**Partners:** FHWA | **Customer's Valid Requirement(s):** Review and either approve or reject the VECP in a timely manner. | **Regulator's Valid Requirement(s):** Program that encourages the use and resolution of VECP's during construction. |

**Input(s):** Contractor Submittal
**Supplier(s):** Contractor

## Flow Chart




| Process and Quality Indicators | | Checking / Indicator Monitoring | | | | Miscellaneous Information |
|---|---|---|---|---|---|---|
| Process Indicators And Quality Indicators | Control Limits Specs / Targets | Checking Item<br>What is to be checked? | Timeframe (Frequency)<br>When to check? | Respon-sibility<br>Who will check? | QAR<br>Date of Last Review | - Abbreviations<br>- Procedure Reference<br>- Notes, etc. |
| P1 # pending | | VER | Quarterly | DVE/SVE | D1: 11/2006 C | Federal Regulation 23 CFR 627 |
| P2 $$$ pending | | VER | Quarterly | DVE/SVE | | |
| Q1 # acted upon | | VER | Monthly | SVE | D2: 12/2006 C | |
| Q2 $$$ saved | | VER | Monthly | SVE | D3: 12/2006 C | |
| Q3 % Project Saved | | VER | Monthly | SVE | | |
| Q4 % Program Saved | | VER | Monthly | SVE | D4: 5/2007 C | |
| | | | | | D5: 1/2007 C | |
| | | | | | D6: 5/2007 C | |
| | | | | | D7: 11/2006 C | |
| | | | | | TPK: 1/2007 C | |

**CODES:**

**C - Compliance**
**NC- Noncompliant**
**BP- Best Practices**

**Approved:** _____ **Date:** _____ **Process Owner:** District Value Engineer **Rev #:** 1.6 **Rev Date:** 03/2016