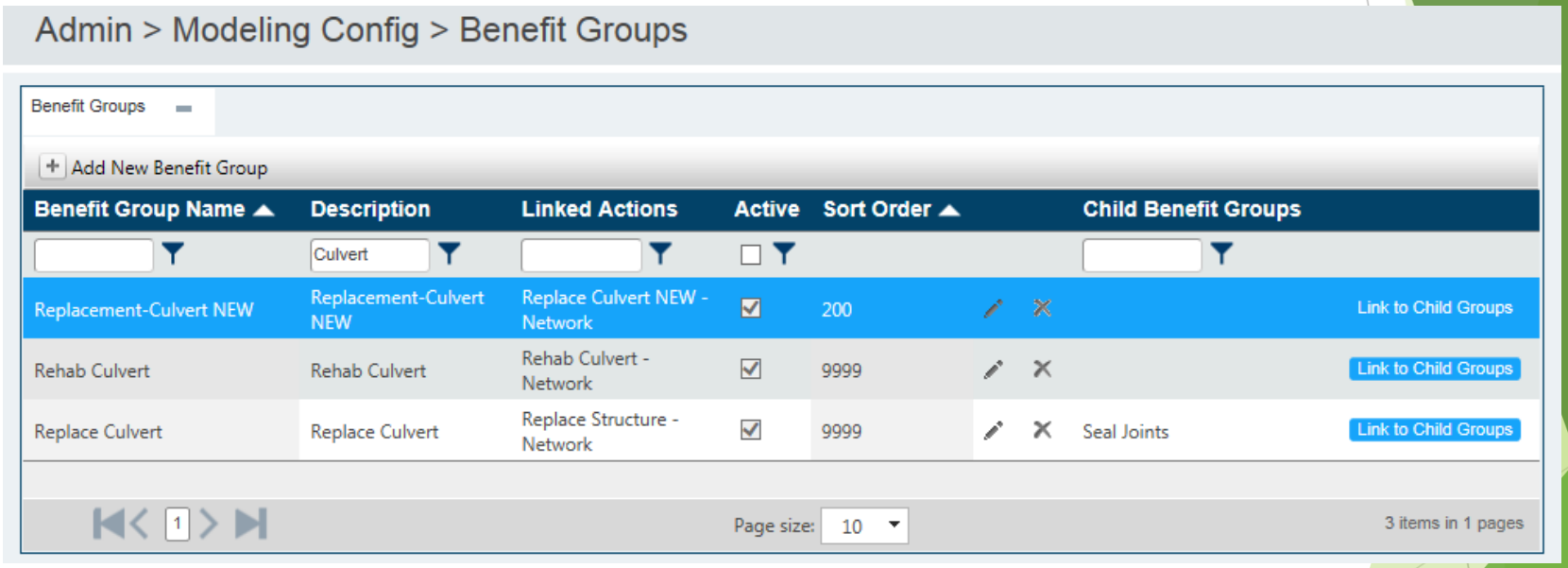
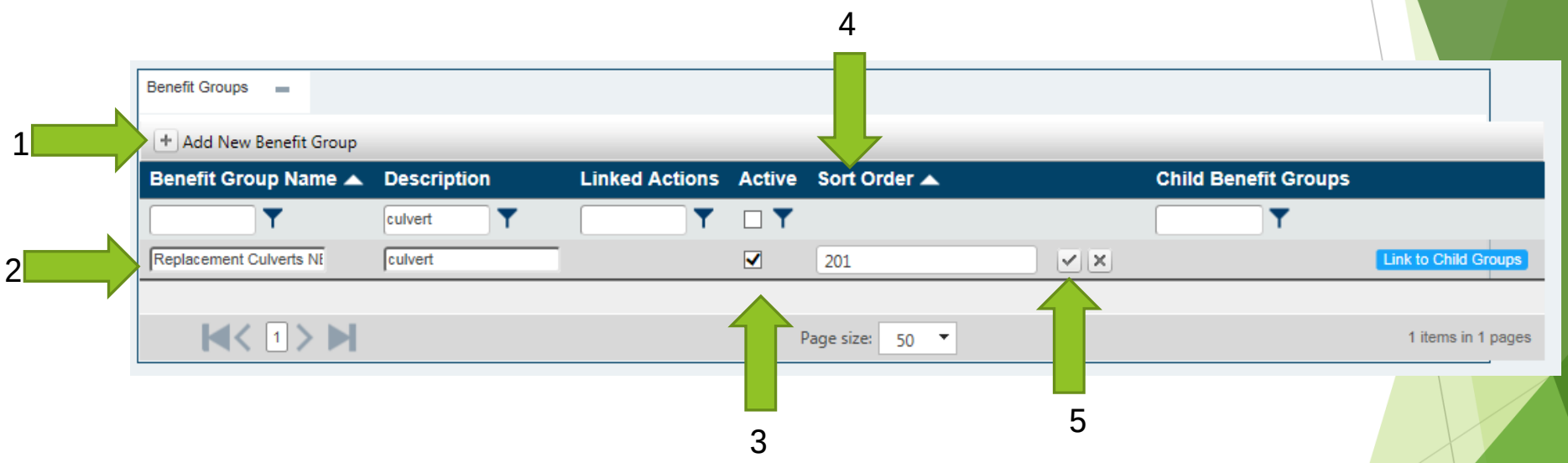
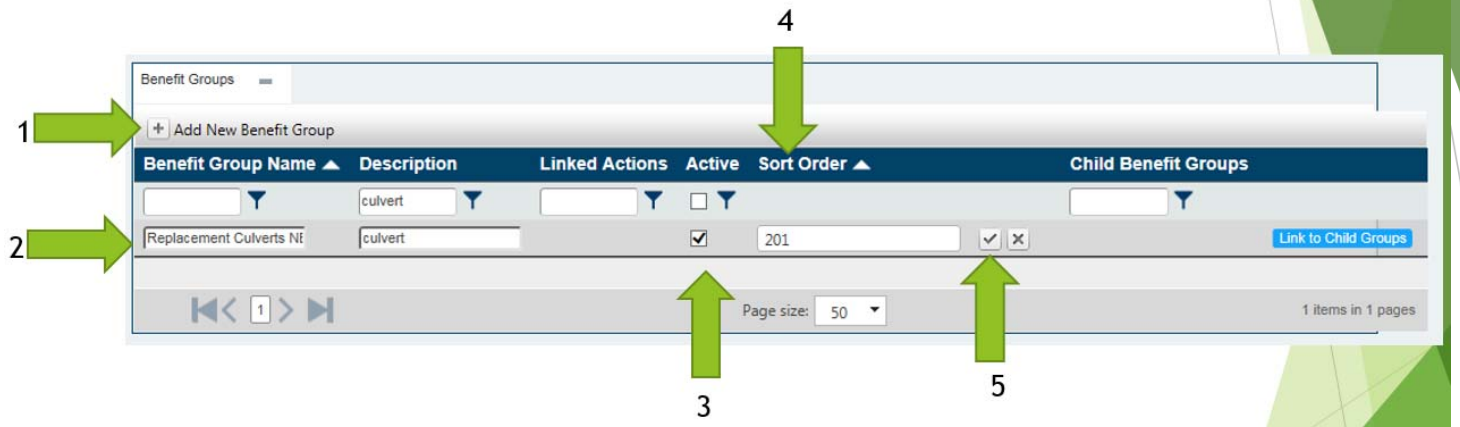
# Benefit Groups and Action Defs

Replacement of a Culvert

# Where to start



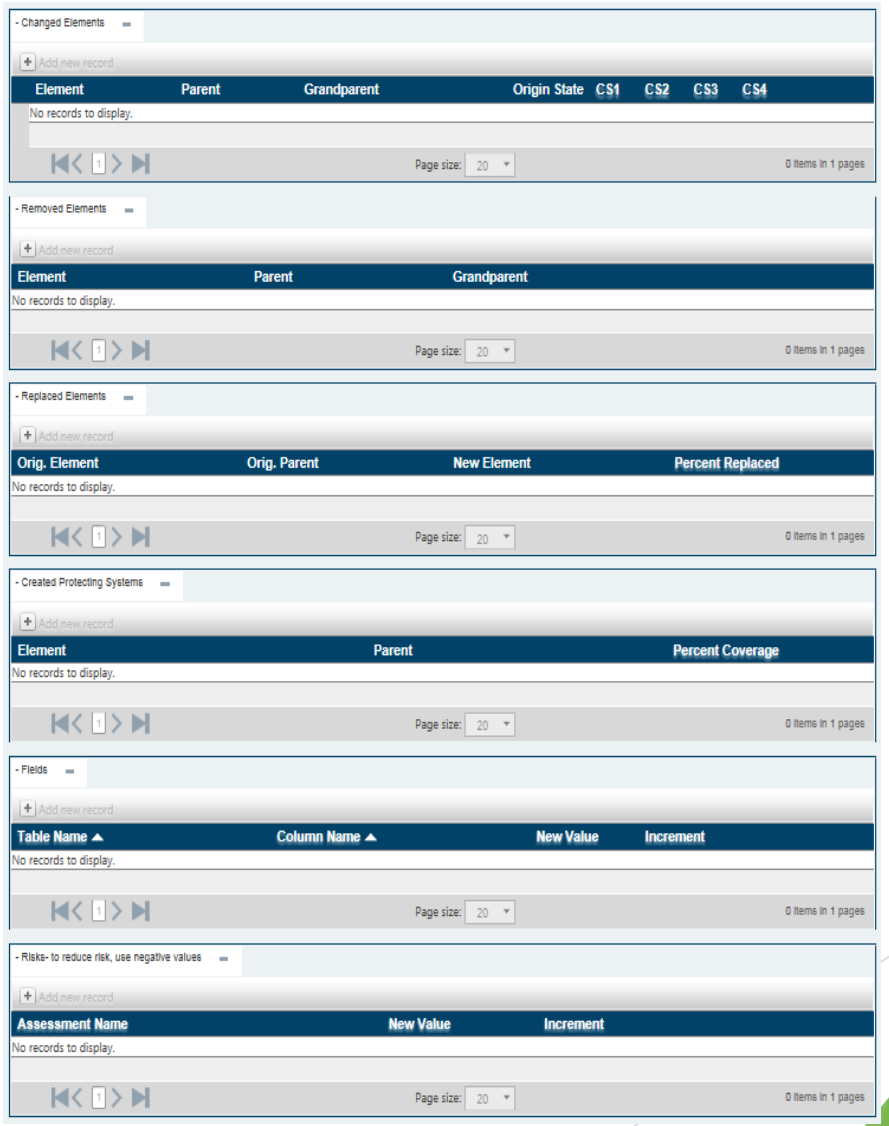

4
Benefit Groups
1
Add New Benefit Group
Benefit Group Name
Description
Linked Actions
Active
Sort Order
Child Benefit Groups
culvert
2
Replacement Culverts NE
culvert
201
Link to Child Groups
1
Page size:
50
1 items in 1 pages
3
5



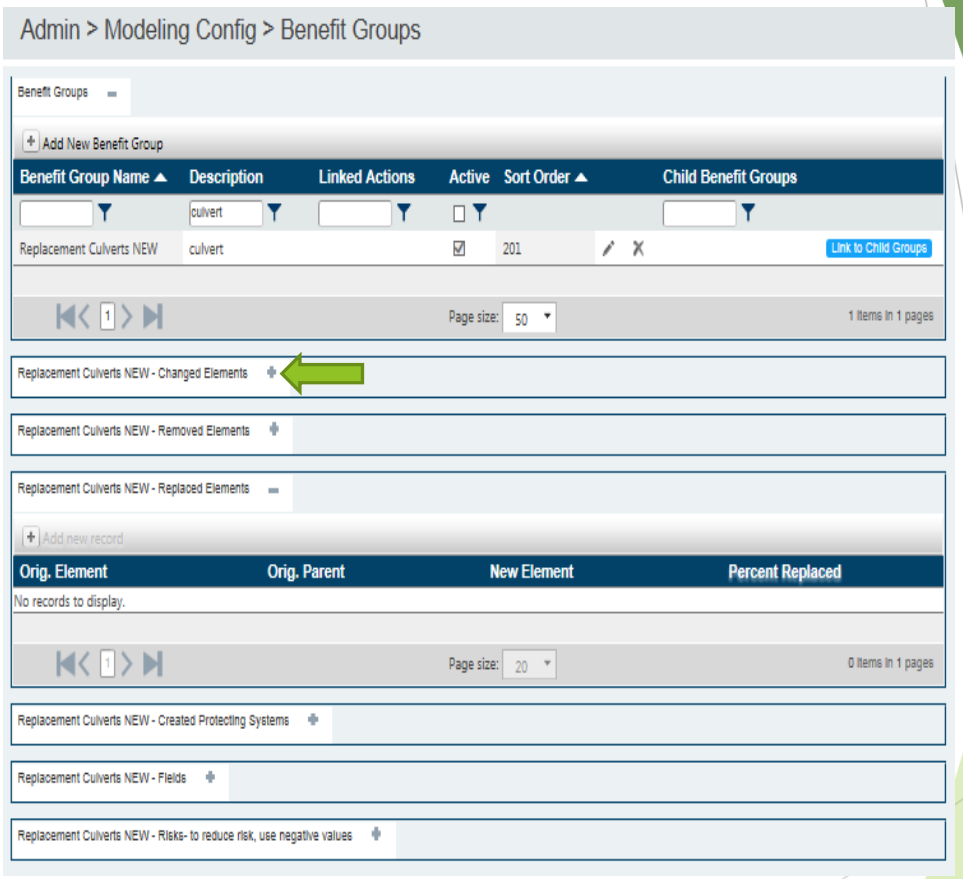

1) Add a new Benefit Group
2) Name you Group (Come up with a naming convention first)
3) Making it Active so it can be used in the Action Def's
4) Come up with a sort number that works for you ( all Culvert in the 200's or all replacements)
5) The check box to save … before you Save

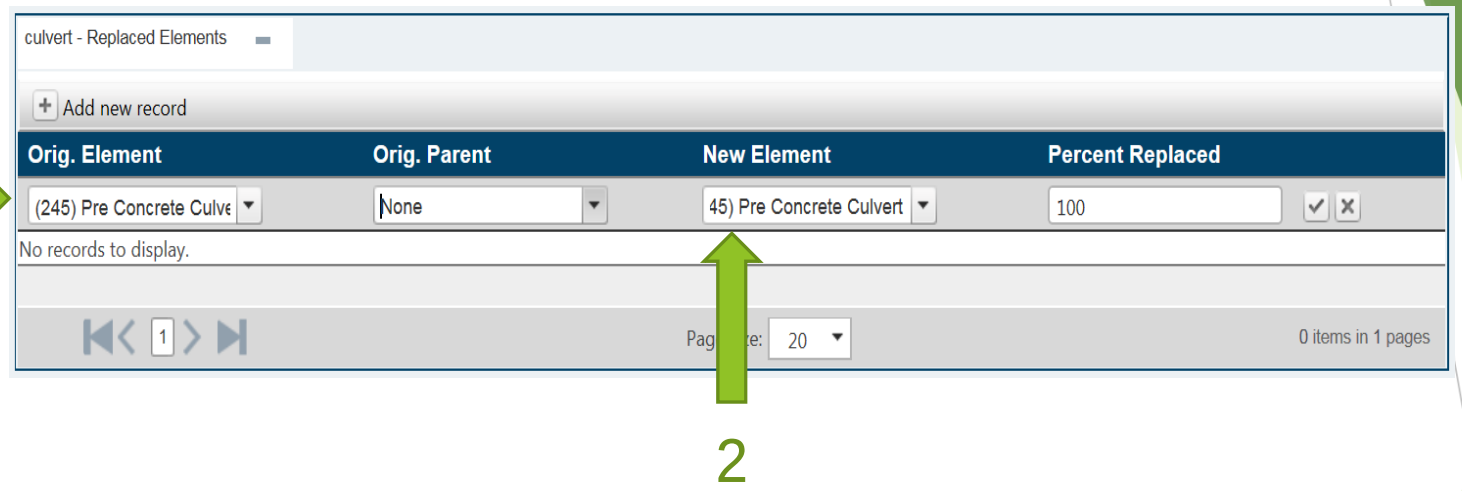
Now you the can add elements
Into the type of changes that you
are performing.

For complete replacement of a element using the "Replaced Element" is the easiest way.



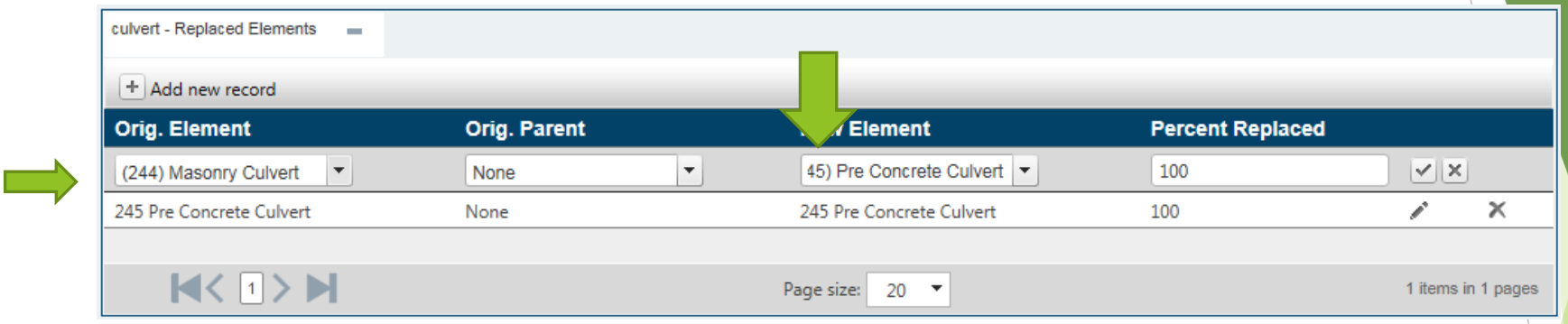
If you are not using a type of change, close or minimize them to make it easer to work





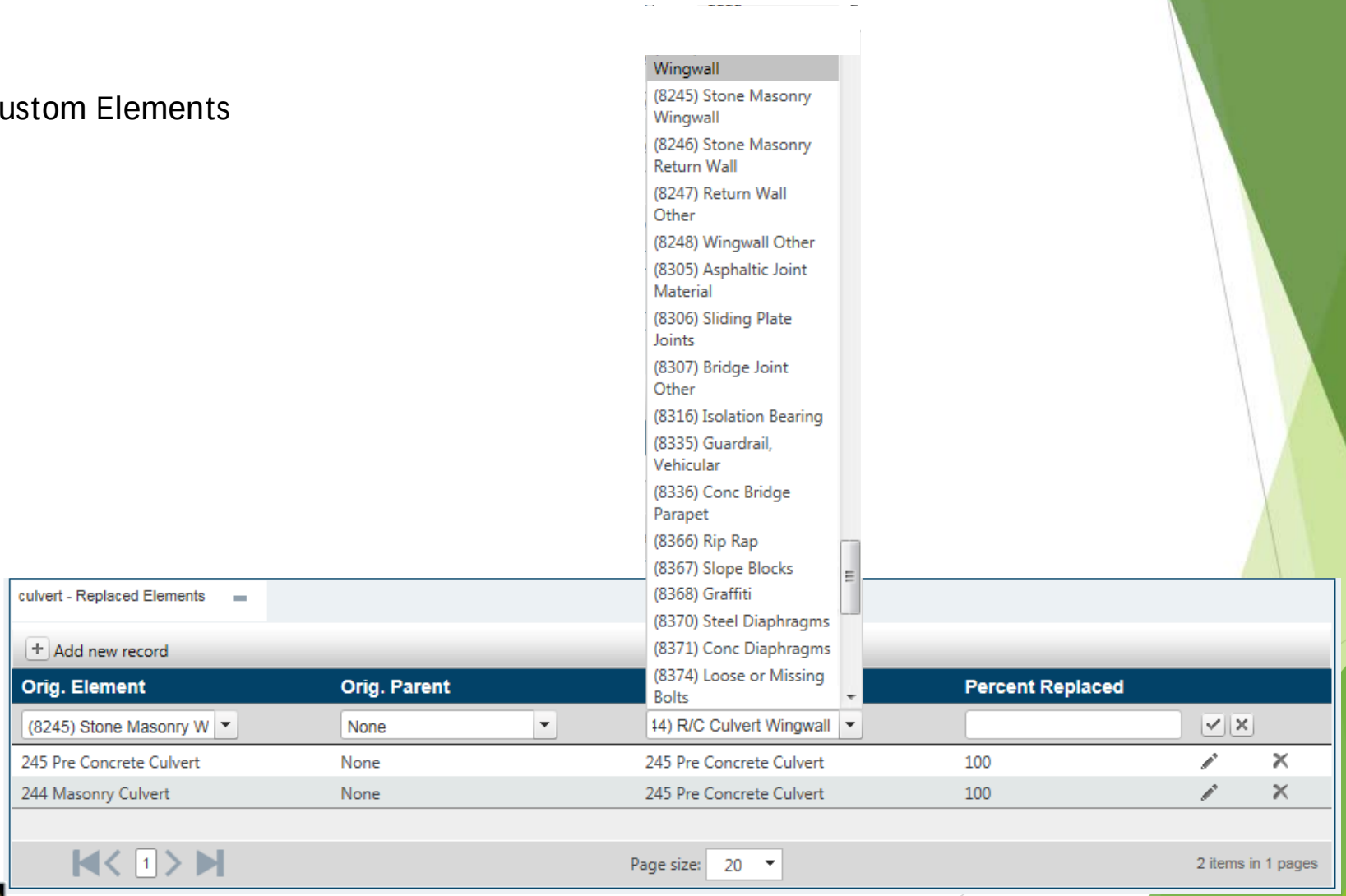

Replacing one element (1) with the same element (2)

## Different Element




Replace element 244 with element 245

# Custom Elements



Replacement-Culvert NEW - Replaced Elements

Add new record

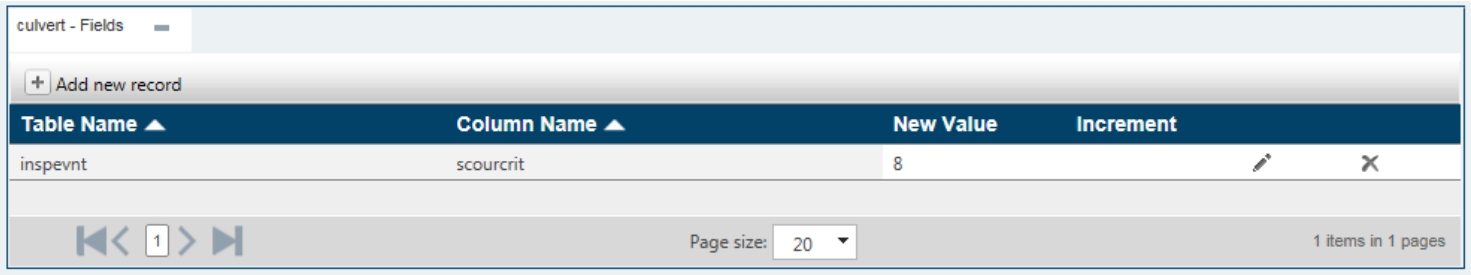
| Orig. Element | Orig. Parent | New Element | Percent Replaced | | |
|---|---|---|---|---|---|
| 240 Steel Culvert | None | 245 Pre Concrete Culvert | 100 | | |
| 241 Re Conc Culvert | None | 245 Pre Concrete Culvert | 100 | | |
| 243 Other Culvert | None | 245 Pre Concrete Culvert | 100 | | |
| 245 Pre Concrete Culvert | None | 245 Pre Concrete Culvert | 100 | | |
| 8212 R/C Headwall | None | 8212 R/C Headwall | 100 | | |
| 8510 Wearing Surfaces Arch -Culvert | None | 8510 Wearing Surfaces Arch -Culvert | 100 | | |
| 8245 Stone Masonry Wingwall | None | 8244 R/C Culvert Wingwall | 100 | | |
| 8246 Stone Masonry Return Wall | None | 8213 R/C Return Wall | 100 | | |
| 242 Timber Culvert | None | 245 Pre Concrete Culvert | 100 | | |
| 244 Masonry Culvert | None | 245 Pre Concrete Culvert | 100 | | |
| 8244 R/C Culvert Wingwall | None | 8244 R/C Culvert Wingwall | 100 | | |

1

Page size: 20

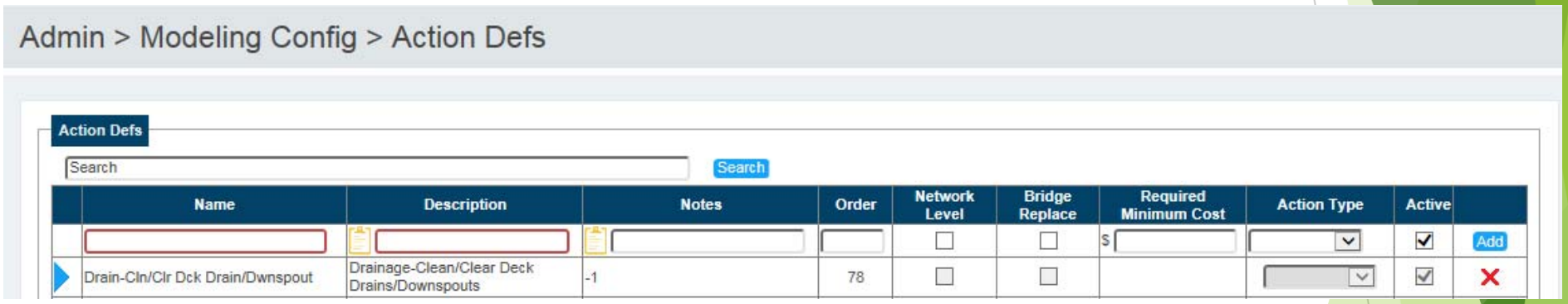
11 items in 1 pages

Change a field to show an non-element improvement

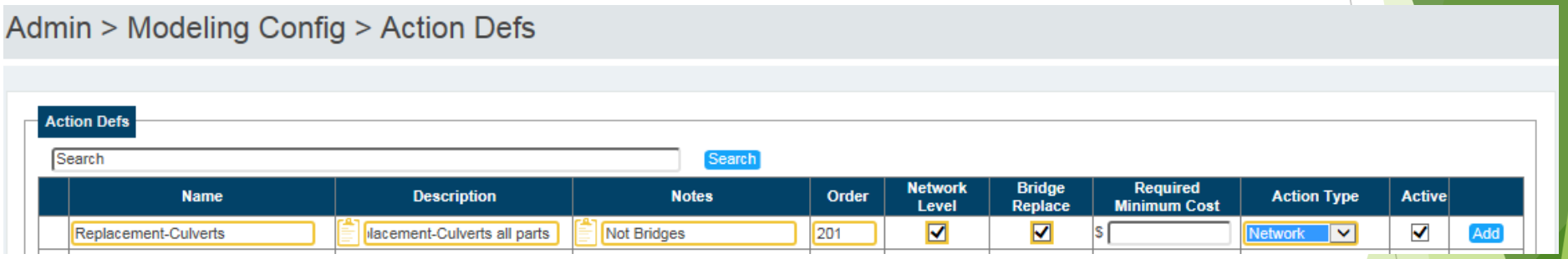


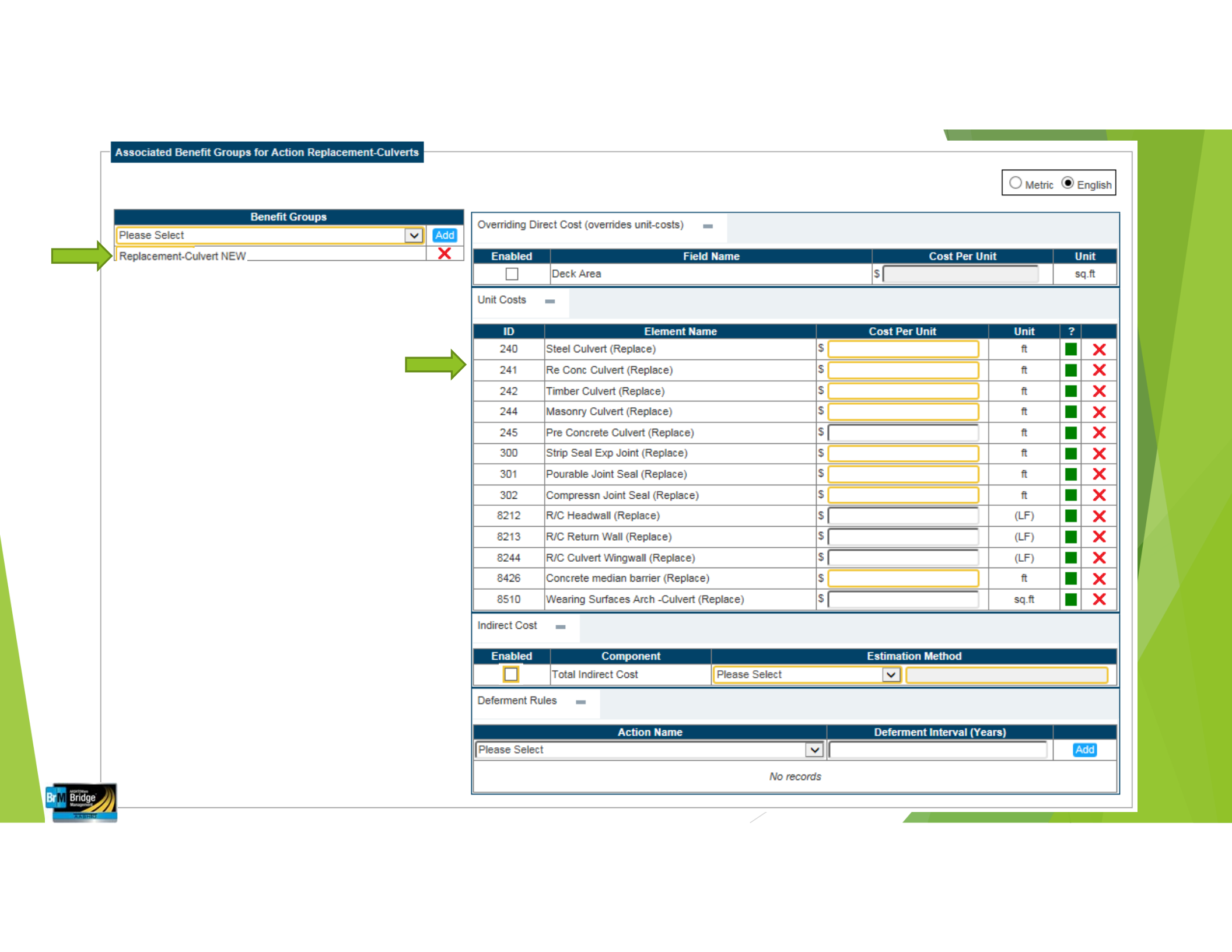
# Action Def…. Or what you put in a Program

Coming up with a naming convention



Name and fill-in all of the information




Associated Benefit Groups for Action Replacement-Culverts
Metric
English
Benefit Groups
Please Select
Add
Replacement-Culvert NEW
Overriding Direct Cost (overrides unit-costs)
Enabled
Field Name
Cost Per Unit
Unit
Deck Area
$
sq.ft
Unit Costs
ID
Element Name
Cost Per Unit
Unit
?
240 Steel Culvert (Replace) $ ft
241 Re Conc Culvert (Replace) $ ft
242 Timber Culvert (Replace) $ ft
244 Masonry Culvert (Replace) $ ft
245 Pre Concrete Culvert (Replace) $ ft
300 Strip Seal Exp Joint (Replace) $ ft
301 Pourable Joint Seal (Replace) $ ft
302 Compressn Joint Seal (Replace) $ ft
8212 R/C Headwall (Replace) $ (LF)
8213 R/C Return Wall (Replace) $ (LF)
8244 R/C Culvert Wingwall (Replace) $ (LF)
8426 Concrete median barrier (Replace) $ ft
8510 Wearing Surfaces Arch -Culvert (Replace) $ sq.ft
Indirect Cost
Enabled
Component
Estimation Method
Total Indirect Cost
Please Select
Deferment Rules
Action Name
Deferment Interval (Years)
Please Select
Add
No records

## Associated Benefit Groups for Action Replacement-Culverts

○ Metric ◉ English

| Benefit Groups | |
|---|---|
| Please Select | Add |
| Replacement-Culvert NEW | ✕ |

**Overriding Direct Cost (overrides unit-costs)**

| Enabled | Field Name | Cost Per Unit | Unit |
|---|---|---|---|
| ☐ | Deck Area | $ | sq.ft |

**Unit Costs**

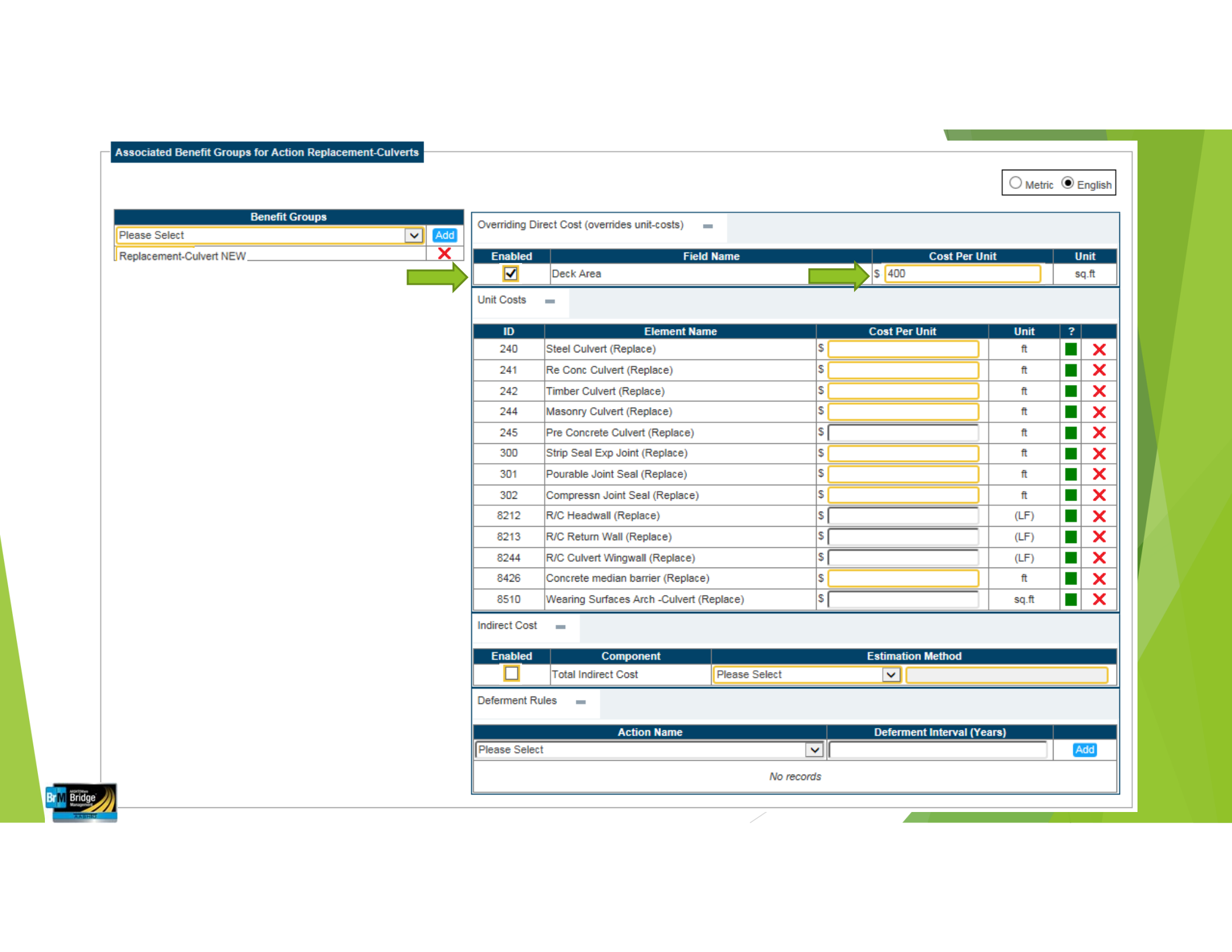
| ID | Element Name | Cost Per Unit | Unit | ? | |
|---|---|---|---|---|---|
| 240 | Steel Culvert (Replace) | $ 14000 | ft | ■ | ✕ |
| 241 | Re Conc Culvert (Replace) | $ 75 | ft | ■ | ✕ |
| 242 | Timber Culvert (Replace) | $ 75 | ft | ■ | ✕ |
| 244 | Masonry Culvert (Replace) | $ 100 | ft | ■ | ✕ |
| 245 | Pre Concrete Culvert (Replace) | $ 100 | ft | ■ | ✕ |
| 300 | Strip Seal Exp Joint (Replace) | $ 50 | ft | ■ | ✕ |
| 301 | Pourable Joint Seal (Replace) | $ 75 | ft | ■ | ✕ |
| 302 | Compressn Joint Seal (Replace) | $ 75 | ft | ■ | ✕ |
| 8212 | R/C Headwall (Replace) | $ 300 | (LF) | ■ | ✕ |
| 8213 | R/C Return Wall (Replace) | $ 300 | (LF) | ■ | ✕ |
| 8244 | R/C Culvert Wingwall (Replace) | $ 300 | (LF) | ■ | ✕ |
| 8426 | Concrete median barrier (Replace) | $ 200 | ft | ■ | ✕ |
| 8510 | Wearing Surfaces Arch -Culvert (Replace) | $ 200 | sq.ft | ■ | ✕ |

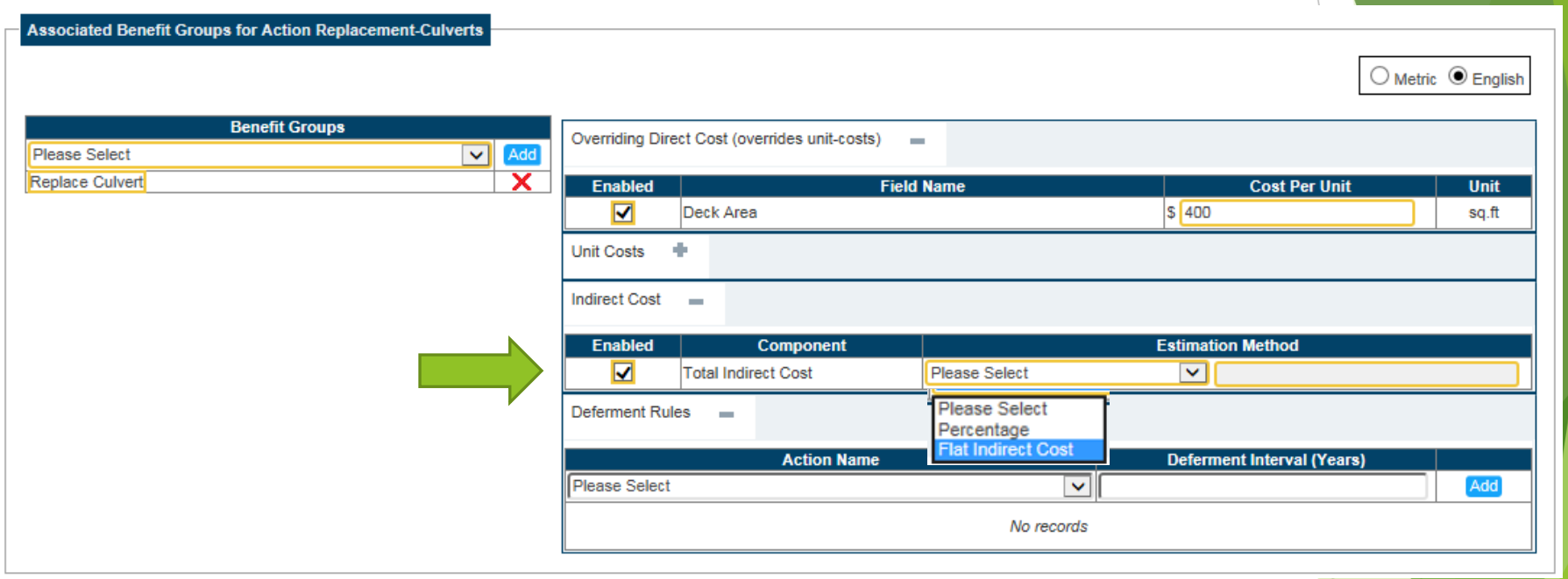
**Indirect Cost**

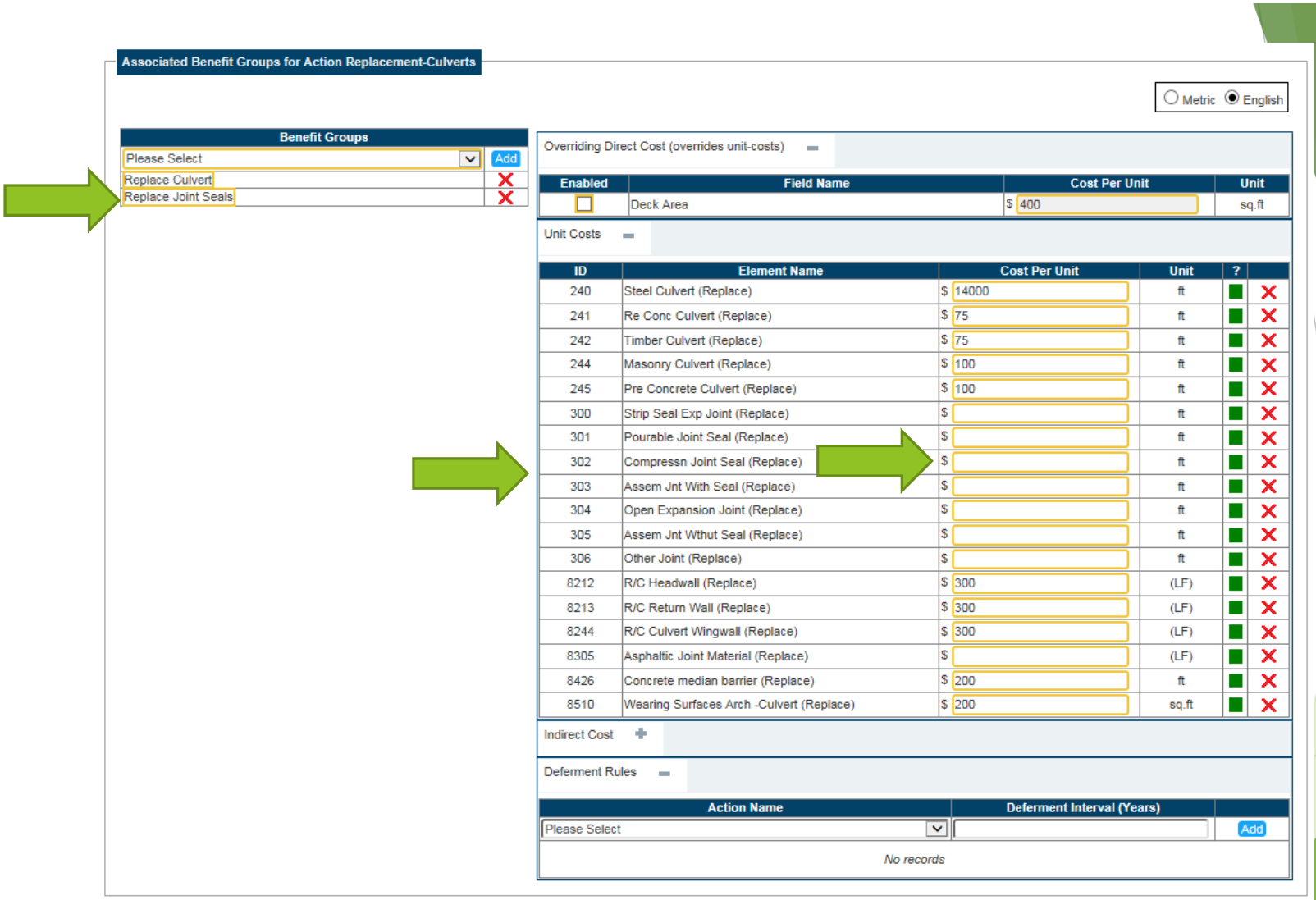
| Enabled | Component | Estimation Method | |
|---|---|---|---|
| ☐ | Total Indirect Cost | Please Select | |

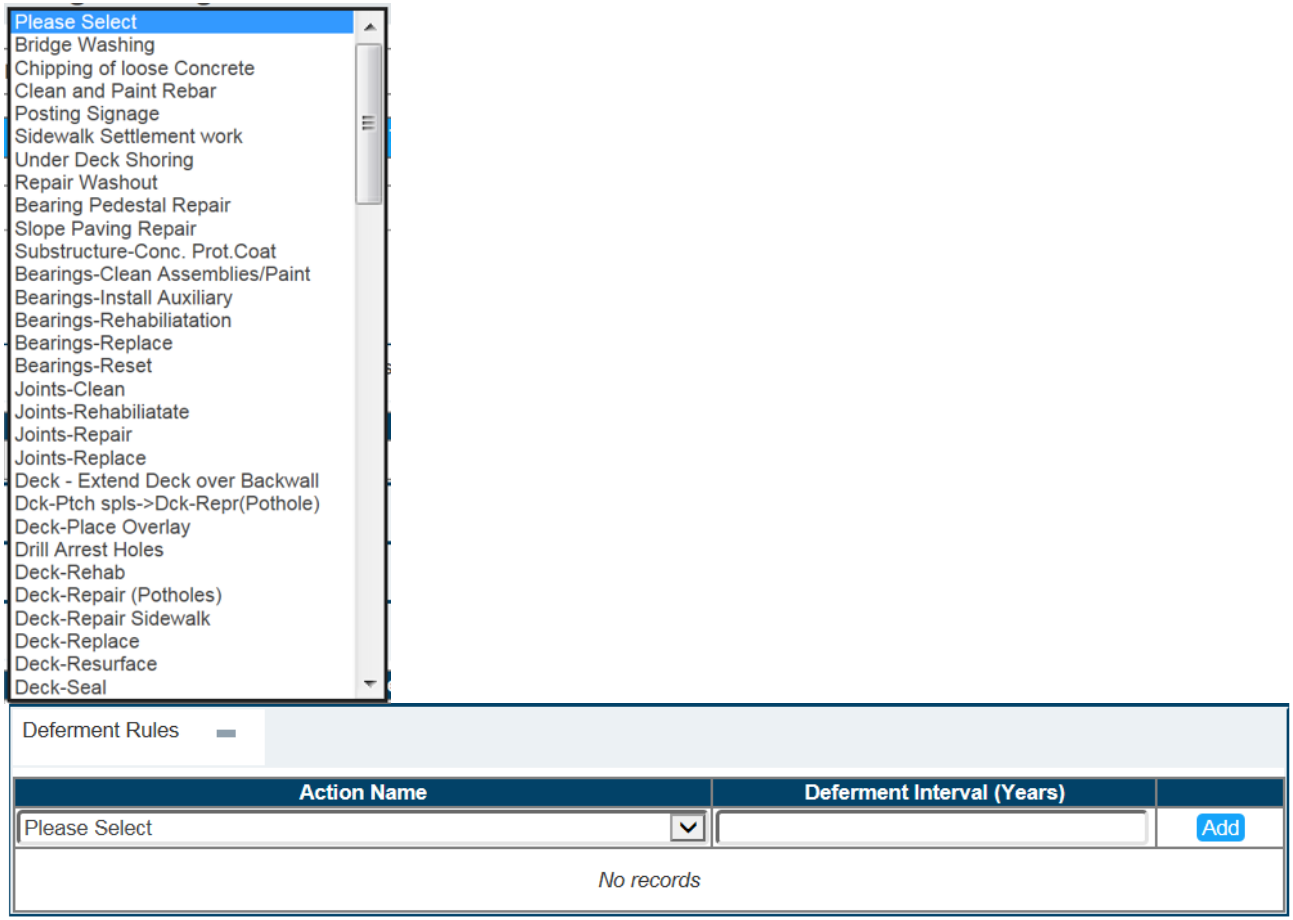
**Deferment Rules**

| Action Name | Deferment Interval (Years) | |
|---|---|---|
| Please Select | | Add |
| *No records* | | |


Associated Benefit Groups for Action Replacement-Culverts
Metric
English
Benefit Groups
Please Select
Add
Replacement-Culvert NEW
Overriding Direct Cost (overrides unit-costs)
Enabled
Field Name
Cost Per Unit
Unit
Deck Area
$ 400
sq.ft
Unit Costs
ID
Element Name
Cost Per Unit
Unit
?
240 Steel Culvert (Replace) $ ft
241 Re Conc Culvert (Replace) $ ft
242 Timber Culvert (Replace) $ ft
244 Masonry Culvert (Replace) $ ft
245 Pre Concrete Culvert (Replace) $ ft
300 Strip Seal Exp Joint (Replace) $ ft
301 Pourable Joint Seal (Replace) $ ft
302 Compressn Joint Seal (Replace) $ ft
8212 R/C Headwall (Replace) $ (LF)
8213 R/C Return Wall (Replace) $ (LF)
8244 R/C Culvert Wingwall (Replace) $ (LF)
8426 Concrete median barrier (Replace) $ ft
8510 Wearing Surfaces Arch -Culvert (Replace) $ sq.ft
Indirect Cost
Enabled
Component
Estimation Method
Total Indirect Cost
Please Select
Deferment Rules
Action Name
Deferment Interval (Years)
Please Select
Add
No records


Associated Benefit Groups for Action Replacement-Culverts
Metric
English
Benefit Groups
Please Select
Add
Replace Culvert
Overriding Direct Cost (overrides unit-costs)
Enabled
Field Name
Cost Per Unit
Unit
Deck Area
$ 400
sq.ft
Unit Costs
Indirect Cost
Enabled
Component
Estimation Method
Total Indirect Cost
Please Select
Please Select
Percentage
Flat Indirect Cost
Deferment Rules
Action Name
Deferment Interval (Years)
Please Select
Add
No records


Associated Benefit Groups for Action Replacement-Culverts
Metric
English
Benefit Groups
Please Select
Add
Replace Culvert
Replace Joint Seals
Overriding Direct Cost (overrides unit-costs)
Enabled
Field Name
Cost Per Unit
Unit
Deck Area
$ 400
sq.ft
Unit Costs
ID
Element Name
Cost Per Unit
Unit
?
240 Steel Culvert (Replace) $ 14000 ft
241 Re Conc Culvert (Replace) $ 75 ft
242 Timber Culvert (Replace) $ 75 ft
244 Masonry Culvert (Replace) $ 100 ft
245 Pre Concrete Culvert (Replace) $ 100 ft
300 Strip Seal Exp Joint (Replace) $ ft
301 Pourable Joint Seal (Replace) $ ft
302 Compressn Joint Seal (Replace) $ ft
303 Assem Jnt With Seal (Replace) $ ft
304 Open Expansion Joint (Replace) $ ft
305 Assem Jnt Wthut Seal (Replace) $ ft
306 Other Joint (Replace) $ ft
8212 R/C Headwall (Replace) $ 300 (LF)
8213 R/C Return Wall (Replace) $ 300 (LF)
8244 R/C Culvert Wingwall (Replace) $ 300 (LF)
8305 Asphaltic Joint Material (Replace) $ (LF)
8426 Concrete median barrier (Replace) $ 200 ft
8510 Wearing Surfaces Arch -Culvert (Replace) $ 200 sq.ft
Indirect Cost
Deferment Rules
Action Name
Deferment Interval (Years)
Please Select
Add
No records


Please Select
Bridge Washing
Chipping of loose Concrete
Clean and Paint Rebar
Posting Signage
Sidewalk Settlement work
Under Deck Shoring
Repair Washout
Bearing Pedestal Repair
Slope Paving Repair
Substructure-Conc. Prot.Coat
Bearings-Clean Assemblies/Paint
Bearings-Install Auxiliary
Bearings-Rehabiliatation
Bearings-Replace
Bearings-Reset
Joints-Clean
Joints-Rehabiliatate
Joints-Repair
Joints-Replace
Deck - Extend Deck over Backwall
Dck-Ptch spls->Dck-Repr(Pothole)
Deck-Place Overlay
Drill Arrest Holes
Deck-Rehab
Deck-Repair (Potholes)
Deck-Repair Sidewalk
Deck-Replace
Deck-Resurface
Deck-Seal
Deferment Rules
Action Name
Deferment Interval (Years)
Please Select
Add
No records

**From here I would be off to use this in a network policy**

*But that is another topic for another time*