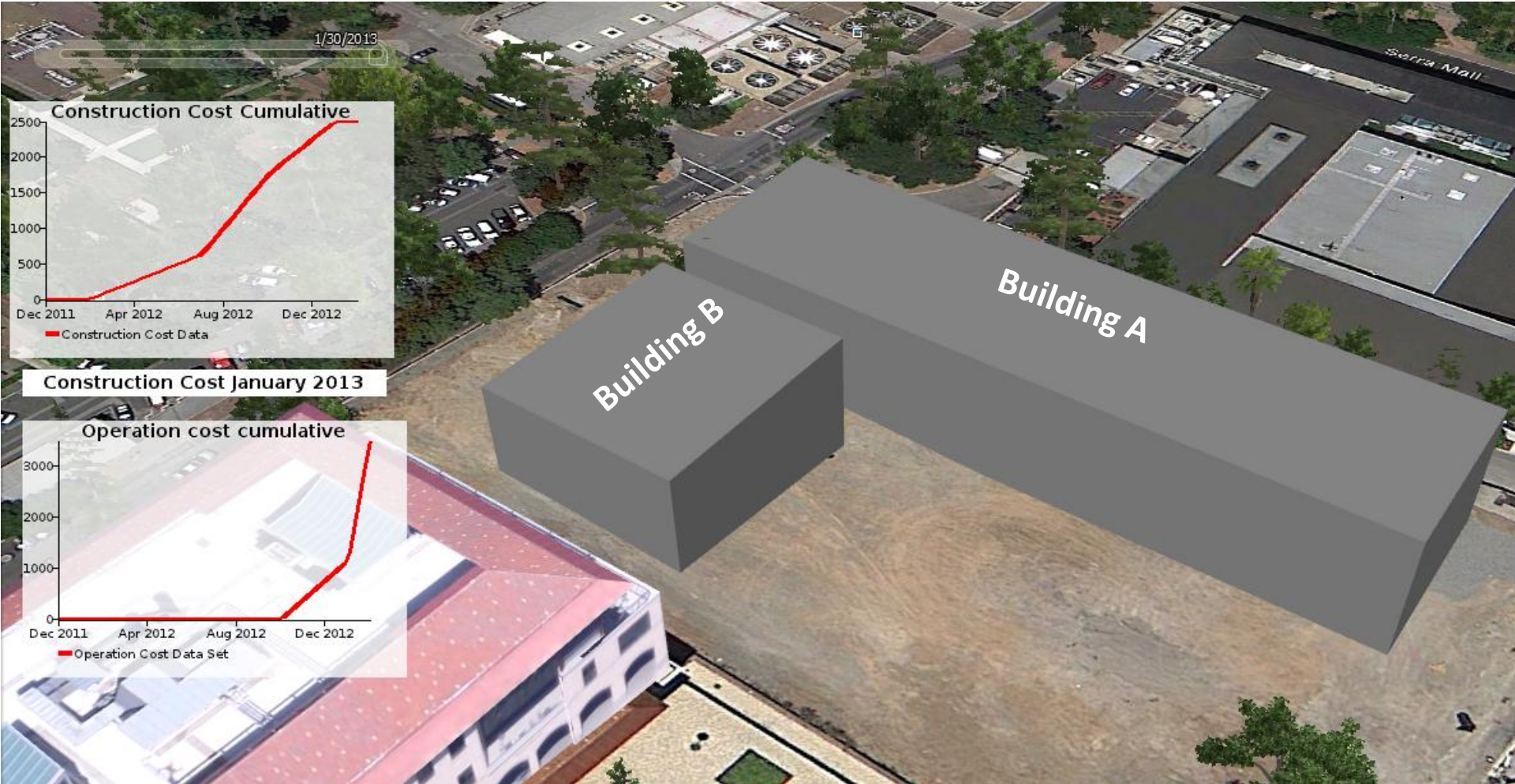


# **UNDERSTANDING THE BASICS OF DSS**



**Phases:** Construction, Operation

**Facility Types:** Building

**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

STANFORD  
UNIVERSITY

CENTER FOR INTEGRATED  
FACILITY ENGINEERING

CIFE Home

Development Strategy Simulator

User: Irischmo  
Password: dsstest

# Models

- [211-Example 01](#)
- [211-Example 01a](#)
- [211-Example 02](#)
- [211Lab1](#)
- [Charts Parking](#)
- [Charts Parking Construction](#)
- [Gulfport](#)
- [Gulfport 2](#)
- [NSH-LPCH](#)
- [STANFORD MEDICAL](#)
- [Stanford Med old](#)
- [Test](#)

[Add Model...](#)



# 211-Example 01a Model

Name	211-Example 01a				
Description					
Phases	Name	Order	Visible	Color	Transparency
	+				
Facility Types	Name				
	+				
Facility Properties	Name	Description	Default		
	+				
Metrics	Name	Precision	Cumulative	Description	
	+				
Projects	Name	Start Date	End Date	Description	
	+				

[Edit](#) | [Delete](#)

**Phases:** Construction, Operation

**Facility Types:** Building

**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

## New Phase

Name:	<input type="text" value="Construction"/>
Order:	<input type="text" value="0"/>
Visible:	<input checked="" type="checkbox"/>
Color:	<input type="text" value="blue"/>
Transparency:	<input type="text" value="0.0"/>
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

# 211-Example 01a Model

Name	211-Example 01a					
Description						
Phases	Name	Order	Visible	Color	Transparency	<input type="button" value="+"/>
Facility Types	Name					<input type="button" value="+"/>
Facility Properties	Name	Description	Default			
Metrics	Name	Precision	Cumulative	Description		
Projects	Name	Start Date	End Date	Description		

Edit | Delete

**Phases:** Construction, Operation

**Facility Types:** Building

**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

# 211-Example 01a Model

Name	211-Example 01a				
Description					
Phases	Name	Order	Visible	Color	Transparency
	Construction	0	✓	blue	0.0
	Operation	0	✓	gray	0.0
+					
Facility Types	Name				
	+				
Facility Properties	Name	Description	Default		
	+				
Metrics	Name	Precision	Cumulative	Description	
	+				
Projects	Name	Start Date	End Date	Description	
	+				

[Edit](#) | [Delete](#)

**Phases:** Construction, Operation

**Facility Types:** Building





**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

# 211-Example 01a Model

## New Facility Type

Name:

Name	211-Example 01a					
Description						
Phases	Name	Order	Visible	Color	Transparency	
	Construction	0	✓	blue	0.0	 
	Operation	0	✓	gray	0.0	 
+						
Facility Types	Name					
		+				
Facility Properties	Name	Description	Default			
					+	
Metrics	Name	Precision	Cumulative	Description		
Projects	Name	Start Date	End Date	Description		

[Edit](#) | [Delete](#)














**Phases:** Construction, Operation

**Facility Types:** Building

**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

# 211-Example 01a Model

Name	211-Example 01a					
Description						
Phases	Name	Order	Visible	Color	Transparency	
	Construction	0	✓	blue	0.0	 
	Operation	0	✓	gray	0.0	 
						
Facility Types	Name					
	Building					 
	Road					 
						
Facility Properties	Name	Description	Default			
						
Metrics	Name	Precision	Cumulative	Description		
						
Projects	Name	Start Date	End Date	Description		
						

[Edit](#) | [Delete](#)

**Phases:** Construction, Operation

**Facility Types:** Building









**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

# 211-Example 01a Model

## New Facility Property

Name:	Construction Cost
Description:	Total building construction cost
Default:	0.0
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

Name	211-Example 01a					
Description						
Phases	Name	Order	Visible	Color	Transparency	
	Construction	0	✓	blue	0.0	 
	Operation	0	✓	gray	0.0	 
+						
Facility Types	Name					
	Building	 				
	Road	 				
+						
Facility Properties	Name	Description	Default			
	+					
Metrics	Name	Precision	Cumulative	Active	Description	
	+					
Projects	Name	Start Date	End Date	Description		
	+					

Edit | Delete

**Phases:** Construction, Operation

**Facility Types:** Building

**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

# 211-Example 01a Model

Name	211-Example 01a				
Description					
Phases	Name	Order	Visible	Color	Transparency
	Construction	0	✓	blue	0.0
	Operation	0	✓	gray	0.0
	+				
Facility Types	Name				
	Building				
	Road				
	+				
Facility Properties	Name	Description	Default		
	Construction Cost		0.0		
	Construction Operation		0.0		
	+				
Metrics	Name	Precision	Cumulative	Description	
	+				
Projects	Name	Start Date	End Date	Description	
	+				

[Edit](#) | [Delete](#)

**Phases:** Construction, Operation

**Facility Types:** Building

**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

# Construction Cost Metric Metric

Name	Construction Cost Metric				
Model	211-Example 01a				
Precision	0				
Cumulative	True				
Description					
Data Set	<table border="1"> <thead> <tr><th>Name</th><th>Description</th></tr> </thead> <tbody> <tr><td></td><td></td></tr> </tbody> </table>	Name	Description		
Name	Description				

5

Edit | Delete

# New Data Series

Name: Construction Cost Data

Description:

6

Save Cancel

# New Metric

Name: Construction Cost Metric

Precision: 0

Cumulative:

Description:

3

4

Save Cancel

Facility Properties

Name	Description	Default	
Construction Cost		0.0	
Construction Operation		0.0	

Metrics

Name	Precision	Cumulative	Description

2

Projects

Name	Start Date	End Date	Description

1

Edit | Delete

**Phases:** Construction, Operation

**Facility Types:** Building

**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

# Construction Cost Data Set Data Series

Name	Construction Cost Data Set			
Metric	Construction Cost Metric			
Description				
Coefficients	Phase	Type	Property	Value

Edit | Delete

# New Data Series

Name: Construction Cost Data Set

Description:

Save Cancel

## New Coefficient

Phase: Construction

Type: Building

Property: Construction Cost

Value: 1.0

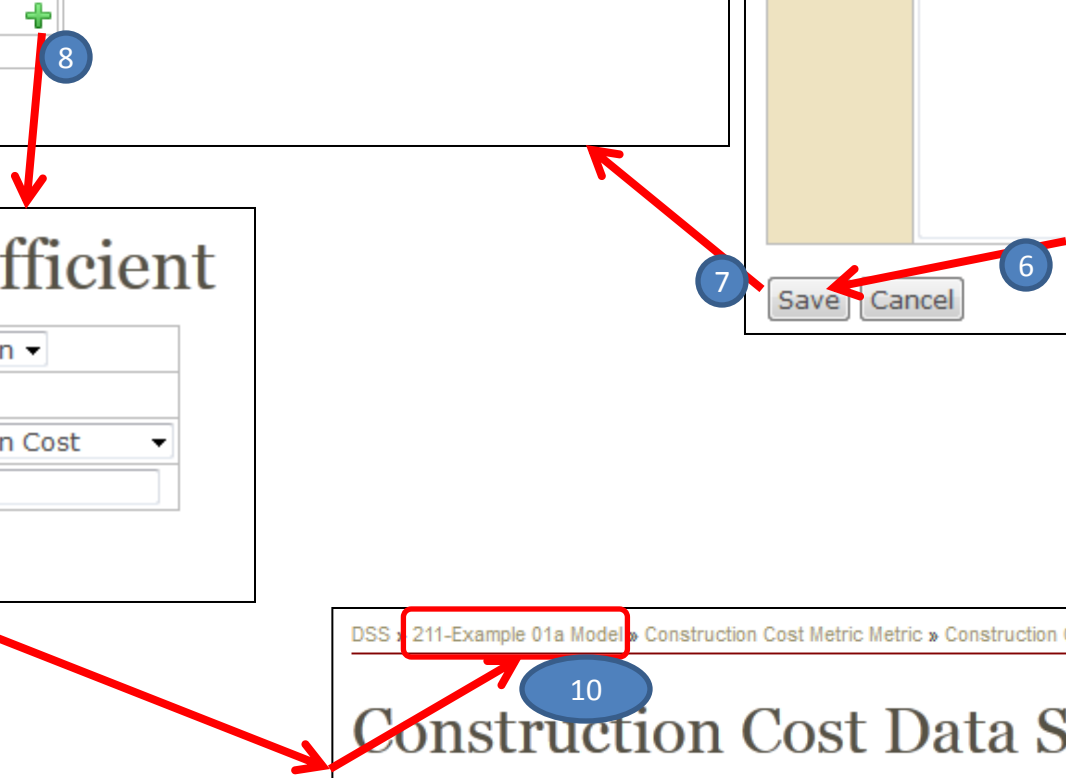
Save Cancel

DSS » 211-Example 01a Model » Construction Cost Metric Metric » Construction Cost Data Set Data Series
























# Construction Cost Data Set Data Series

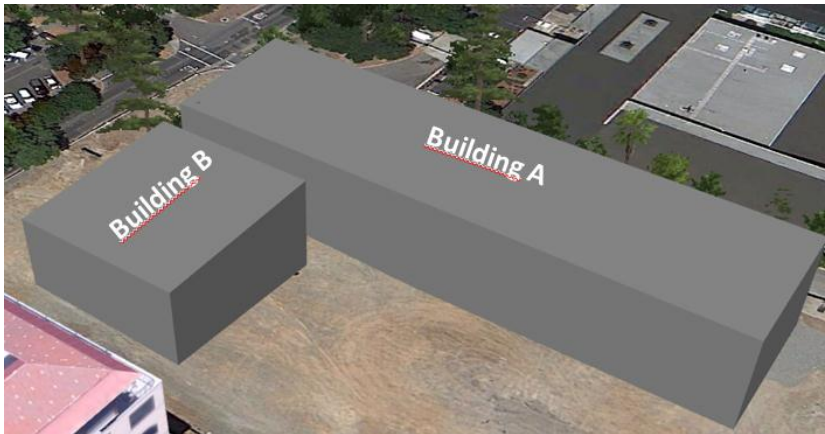
Name	Construction Cost Data Set			
Metric	Construction Cost Metric			
Description				
Coefficients	Phase	Type	Property	Value
	Construction	Building	Construction Cost	1.0

Edit | Delete



# 211-Example 01a Model

Name	211-Example 01a					
Description						
Phases	Name	Order	Visible	Color	Transparency	
	Construction	0	✓	blue	0.0	 
	Operation	0	✓	gray	0.0	 
						
Facility Types	Name					
	Building	 				
	Road	 				
						
Facility Properties	Name	Description	Default			
	Construction Cost		0.0	 		
	Construction Operation		0.0	 		
						
Metrics	Name	Precision	Cumulative	Description		
	Construction Cost Metric	0	False		  	
	Operation Cost Metric	0	True		  	
						
Projects	Name	Start Date	End Date	Description		
						



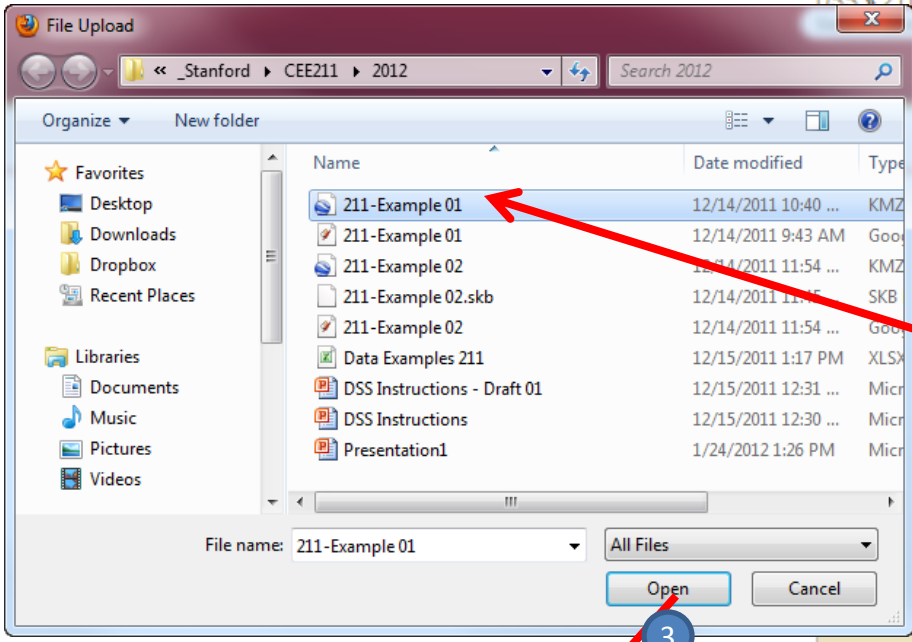
**Phases:** Construction, Operation

**Facility Types:** Building

**Facility Properties:** Construction Cost, Operation Cost

**Metrics:** Construction Cost Cumulative, Operation Cost Cumulative

# -Example 01a Model



211-Example 01a

Name	Order	Visible	Color	Transparency
Construction	0	✓	blue	0.0

**New Project**

Name: Example - By Building

Google earth model:  **2** Browse...

Start date: 2012-01-24

End date: 2013-01-24

Description:

Save Cancel

**New Project**

Name: Example - By Building

Google earth model: F:\Data\\_Stanford\CEE21  Browse...

Start date: 2012-01-24

End date: 2013-01-24

Description:

**4**

Save Cancel

Facility Properties

**Metrics**













Name	Precision	Cumulative	Description
Construction Cost Metric	0	False	
Operation Cost Metric	0	True	

**1**

**Projects**

Name	Start Date	End Date	Description

# Example - By Building Project

Name	Example - By Building			
Model	211-Example 01a			
Google earth model	211-Example 01.kmz			
Start date	2012-01-24			
End date	2013-01-24			
Description				
Facilities	Name	Type	Description	
	Building A	None	  	
	Building B	None	  	
	Susan	None	  	
				
Schedule	Facility	Phase	Start Date	
	End Date			
				
Visualizations	Name	Project	Google Earth	
				

[Edit](#) | [Delete](#)

# Adding Data

## Example - By Building Project

Name	Building A				
Project	Example - By Building				
Type	None				
Description					
Facility Property Values	<table border="1"><thead><tr><th>Property</th><th>Value</th></tr></thead><tbody><tr><td></td><td></td></tr></tbody></table>	Property	Value		
Property	Value				

Edit | Delete

Name	Example - By Building																
Model	211-Example 01a																
Google earth model	211-Example 01.kmz																
Start date	2012-01-24																
End date	2013-01-24																
Description																	
Facilities	<table border="1"><thead><tr><th>Name</th><th>Type</th><th>Description</th><th></th></tr></thead><tbody><tr><td>Building A</td><td>None</td><td></td><td></td></tr><tr><td>Building B</td><td>None</td><td></td><td></td></tr><tr><td>Susan</td><td>None</td><td></td><td></td></tr></tbody></table>	Name	Type	Description		Building A	None			Building B	None			Susan	None		
Name	Type	Description															
Building A	None																
Building B	None																
Susan	None																
Schedule	<table border="1"><thead><tr><th>Facility</th><th>Phase</th><th>Start Date</th><th>End Date</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td></tr></tbody></table>	Facility	Phase	Start Date	End Date												
Facility	Phase	Start Date	End Date														
Visualizations	<table border="1"><thead><tr><th>Name</th><th>Project</th><th>Google Earth</th></tr></thead><tbody><tr><td></td><td></td><td></td></tr></tbody></table>	Name	Project	Google Earth													
Name	Project	Google Earth															

5 Repeat for Building B with Construction Cost \$ 1000

### Edit Facility

Name: Building A

Type: Building

Description:

Save Cancel

DSS » 211-Example 01a Model » Example - By Building Project » Building A Facility

Name	Building A				
Project	Example - By Building				
Type	Building				
Description					
Facility Property Values	<table border="1"><thead><tr><th>Property</th><th>Value</th></tr></thead><tbody><tr><td>Construction Cost</td><td>1000.0</td></tr></tbody></table>	Property	Value	Construction Cost	1000.0
Property	Value				
Construction Cost	1000.0				

Edit | Delete

### New Facility Property Value

Property: Construction Cost

Value: 500

Save Cancel

Adding Data

### Building A Facility

Name	Building A				
Project	Example - By Building				
Type	None				
Description					
Facility Property Values	<table border="1"><thead><tr><th>Property</th><th>Value</th></tr></thead><tbody><tr><td></td><td></td></tr></tbody></table>	Property	Value		
Property	Value				

Edit | Delete

### Edit Facility

Name: Building A

Type: Building

Description:

Save Cancel

### Building A Facility

Name	Building A				
Project	Example - By Building				
Type	Building				
Description					
Facility Property Values	<table border="1"><thead><tr><th>Property</th><th>Value</th></tr></thead><tbody><tr><td>Construction Cost</td><td>1000.0</td></tr></tbody></table>	Property	Value	Construction Cost	1000.0
Property	Value				
Construction Cost	1000.0				

Edit | Delete












### New Facility Property Value

Property: Construction Cost

Value: 500

Save Cancel

# Example - By Building Project

Name	Example - By Building		
Model	211-Example 01a		
Google earth model	211-Example 01.kmz		
Start date	2012-01-24		
End date	2013-01-24		
Description			
Facilities	<b>Name</b>	<b>Type</b>	<b>Description</b>
	Building A	Building	  
	Building B	Building	  
	Susan	None	  
Schedule	<b>Facility</b>	<b>Phase</b>	<b>Start Date</b>
			<b>End Date</b>
			
Visualizations	<b>Name</b>	<b>Project</b>	<b>Google Earth</b>
			

[Edit](#) | [Delete](#)

# New Schedule Item

Facility:    
 Phase:    
 Start date:    
 End date:

2

# Example - By Building Project

Name	Example - By Building																						
Model	211-Example 01a																						
Google earth model	211-Example 01.kmz																						
Start date	2012-01-24																						
End date	2013-01-24																						
Description																							
Facilities	<table border="1"> <thead> <tr><th>Name</th><th>Type</th><th>Description</th><th></th></tr> </thead> <tbody> <tr><td>Building A</td><td>Building</td><td></td><td></td></tr> <tr><td>Building B</td><td>Building</td><td></td><td></td></tr> <tr><td>Susan</td><td>None</td><td></td><td></td></tr> <tr><td colspan="3"></td><td></td></tr> </tbody> </table>			Name	Type	Description		Building A	Building			Building B	Building			Susan	None						
Name	Type	Description																					
Building A	Building																						
Building B	Building																						
Susan	None																						
Schedule	<table border="1"> <thead> <tr><th>Facility</th><th>Phase</th><th>Start Date</th><th>End Date</th><th></th></tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>			Facility	Phase	Start Date	End Date																
Facility	Phase	Start Date	End Date																				
Visualizations	<table border="1"> <thead> <tr><th>Name</th><th>Project</th><th>Google Earth</th><th></th></tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td></tr> </tbody> </table>			Name	Project	Google Earth																	
Name	Project	Google Earth																					

1

# Example - By Building Project

Name	Example - By Building																																	
Model	211-Example 01a																																	
Google earth model	211-Example 01.kmz																																	
Start date	2012-01-24																																	
End date	2013-01-24																																	
Description																																		
Facilities	<table border="1"> <thead> <tr><th>Name</th><th>Type</th><th>Description</th><th></th></tr> </thead> <tbody> <tr><td>Building A</td><td>Building</td><td></td><td></td></tr> <tr><td>Building B</td><td>Building</td><td></td><td></td></tr> <tr><td>Susan</td><td>None</td><td></td><td></td></tr> <tr><td colspan="3"></td><td></td></tr> </tbody> </table>				Name	Type	Description		Building A	Building			Building B	Building			Susan	None																
Name	Type	Description																																
Building A	Building																																	
Building B	Building																																	
Susan	None																																	
Schedule	<table border="1"> <thead> <tr><th>Facility</th><th>Phase</th><th>Start Date</th><th>End Date</th><th></th></tr> </thead> <tbody> <tr><td>Building A</td><td>Construction</td><td>2012-01-24</td><td>2012-09-24</td><td></td></tr> <tr><td>Building B</td><td>Construction</td><td>2012-04-24</td><td>2012-10-24</td><td></td></tr> <tr><td>Building A</td><td>Operation</td><td>2012-09-25</td><td>2013-01-24</td><td></td></tr> <tr><td>Building B</td><td>Operation</td><td>2012-10-25</td><td>2013-01-24</td><td></td></tr> <tr><td colspan="4"></td><td></td></tr> </tbody> </table>				Facility	Phase	Start Date	End Date		Building A	Construction	2012-01-24	2012-09-24		Building B	Construction	2012-04-24	2012-10-24		Building A	Operation	2012-09-25	2013-01-24		Building B	Operation	2012-10-25	2013-01-24						
Facility	Phase	Start Date	End Date																															
Building A	Construction	2012-01-24	2012-09-24																															
Building B	Construction	2012-04-24	2012-10-24																															
Building A	Operation	2012-09-25	2013-01-24																															
Building B	Operation	2012-10-25	2013-01-24																															
Visualizations	<table border="1"> <thead> <tr><th>Name</th><th>Project</th><th>Google Earth</th><th></th></tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td></tr> </tbody> </table>				Name	Project	Google Earth																											
Name	Project	Google Earth																																

Edit | Delete

3

Repeat 1 and 2 until complete as shown

**Adding Schedule**

Edit | Delete

# 4D plus chart Visualization

Download file

Name	4D plus chart												
Project	Example - By Building												
Title	4D plus chart												
Title date	month												
Title x	400												
Title y	10												
Google earth	None												
Description													
Charts	<table border="1"> <thead> <tr> <th>Metric</th> <th>Width</th> <th>Height</th> <th>X</th> <th>Y</th> <th>Show Legend</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Metric	Width	Height	X	Y	Show Legend						
Metric	Width	Height	X	Y	Show Legend								

3

# Example - By Building Project

### New Chart

Metric:	Construction Cost Metric
Width:	300
Height:	200
X:	10
Y:	100
Show legend:	bottom

4

## New Visualization

Name:	4D plus chart
Title:	4D plus chart
Title date:	month
Title x:	400
Title y:	10
Description:	

2

Name	Mode	Google	Start	End d	Descr	Facilit	Description
Building A	Building						
Building B	Building						
Susan	None						
Schedule							
Facility	Phase	Start Date	End Date				
Building A	Construction	2012-01-24	2012-09-24				
Building B	Construction	2012-04-24	2012-10-24				
Building A	Operation	2012-09-25	2013-01-24				
Building B	Operation	2012-10-25	2013-01-24				
Visualizations							
Name	Project	Google	th				

1

Edit | Delete

**Creating 4D model and Charts**

### New Chart




Metric:	Construction Cost Metric ▾
Width:	300
Height:	200
X:	10
Y:	100
Show legend:	bottom ▾

Save Cancel

DSS » 211-Example 01a Model » Example - By Building Project » 4D plus chart Visualization

## 4D plus chart Visualization


Download file Update

Name	4D plus chart						
Project	Example - By Building						
Title	4D plus chart						
Title date	month						
Title x	400						
Title y	10						
Google earth	None						
Description							
Charts	Metric	Width	Height	X	Y	Show Legend	
	Construction Cost Metric	300	200	10	100	bottom	 
							

Edit Delete

Opening 4D plus chart.kmz

You have chosen to open

 **4D plus chart.kmz**  
 which is a: kmz File (161 KB)  
 from: http://cife-host.stanford.edu

What should Firefox do with this file?

Open with

Save File

Do this automatically for files like this from now on.

OK Cancel

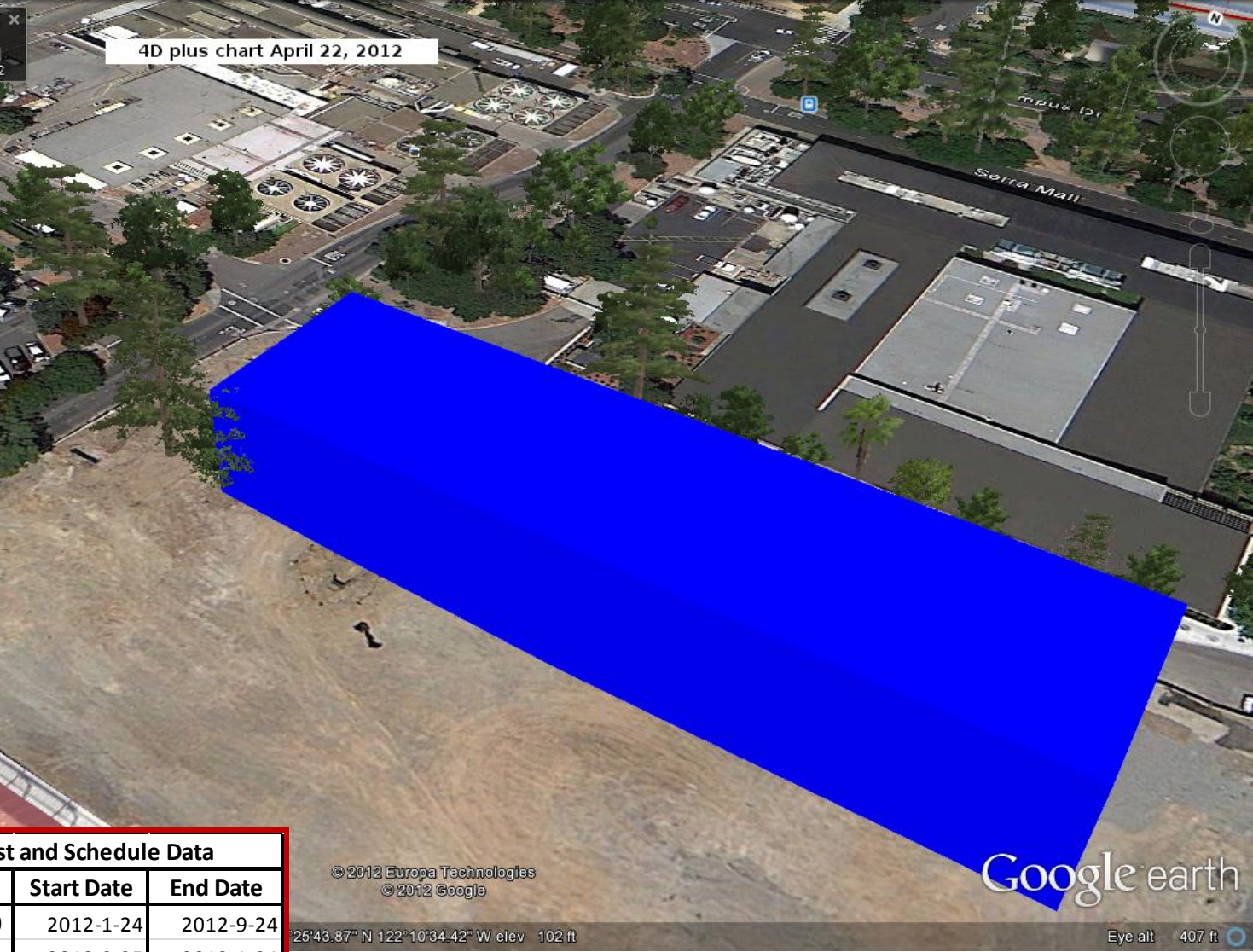
4

6

5

7

4D plus chart April 22, 2012



		Cost and Schedule Data		
		\$	Start Date	End Date
Bldg. A	Construction	500	2012-1-24	2012-9-24
	Operation		2012-9-25	2013-1-24
Bldg. B	Construction	1,000	2012-4-24	2012-10-24
	Operation		2012-10-25	2012-1-24
<b>Total:</b>		<b>1,500</b>		

© 2012 Europa Technologies  
 © 2012 Google

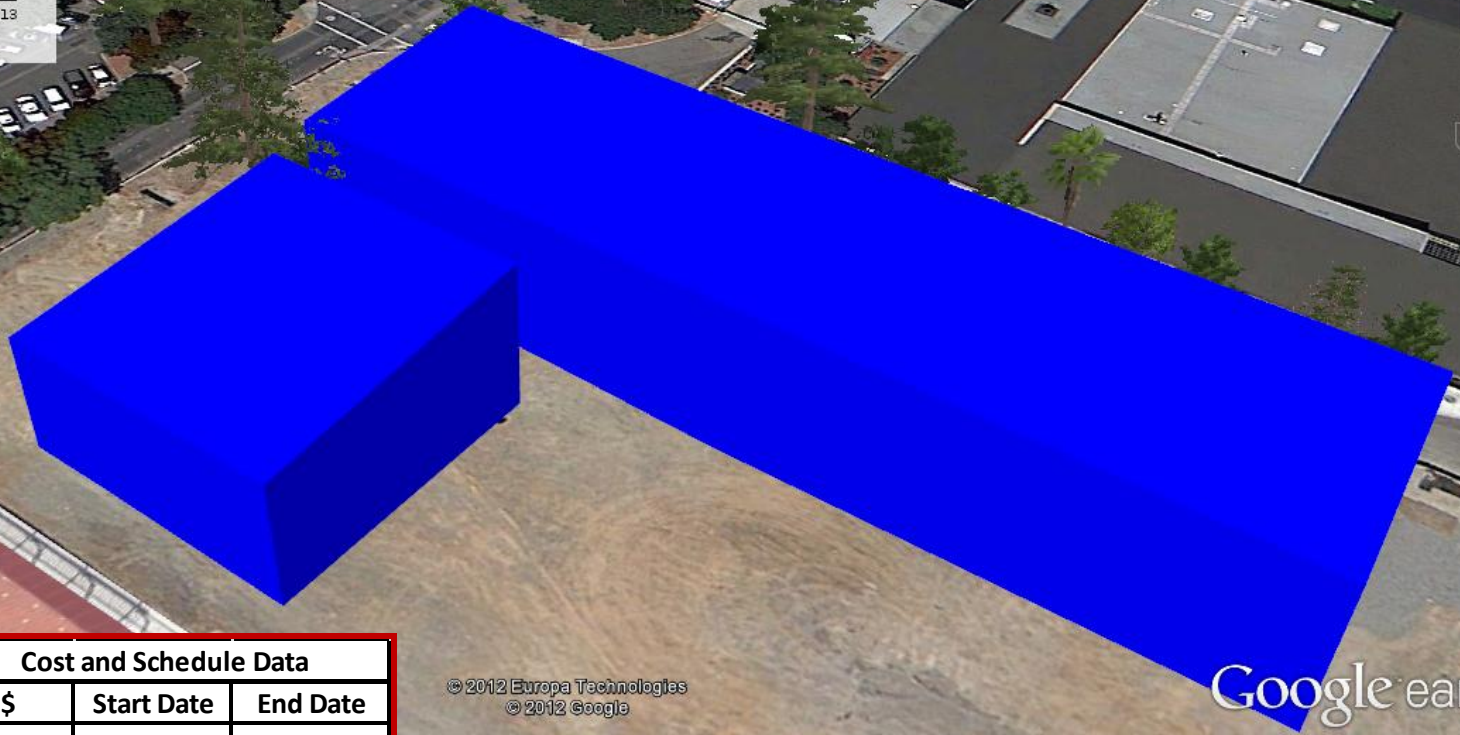
25°43.87' N 122°10'34.42' W elev 102 ft

Google earth

Eye all 407 ft

4/24/2012 5:06 am  
 4/21/2012 4/28/2012

4D plus chart April 22, 2012



		Cost and Schedule Data		
		\$	Start Date	End Date
Bldg. A	Construction	500	2012-1-24	2012-9-24
	Operation		2012-9-25	2013-1-24
Bldg. B	Construction	1,000	2012-4-24	2012-10-24
	Operation		2012-10-25	2012-1-24
<b>Total:</b>		<b>1,500</b>		

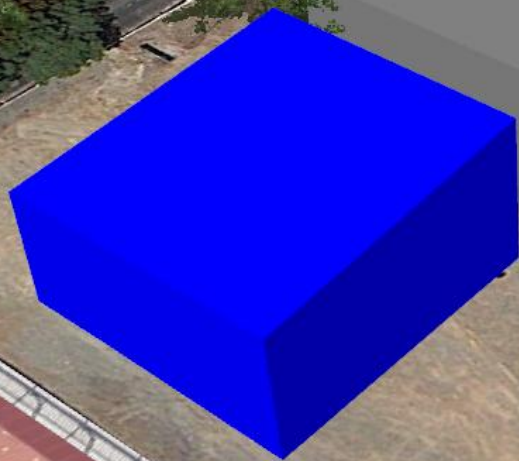
© 2012 Europa Technologies  
 © 2012 Google

25°46.76" N 122°10'38.50" W elev 106 ft

Eye alt 407 ft

9/25/2012 4:41am  
 9/25/2012 10/20/2012

4D plus chart September 23, 2012



		Cost and Schedule Data		
		\$	Start Date	End Date
Bldg. A	Construction	500	2012-1-24	2012-9-24
	Operation		2012-9-25	2013-1-24
Bldg. B	Construction	1,000	2012-4-24	2012-10-24
	Operation		2012-10-25	2012-1-24
<b>Total:</b>		<b>1,500</b>		

© 2012 Europa Technologies  
 © 2012 Google

25°46.69' N 122°10'37.69' W elev 105 ft

Google earth

Eye all 407 ft

10/25/2012 9 am

4D plus chart October 21, 2012



		Cost and Schedule Data		
		\$	Start Date	End Date
Bldg. A	Construction	500	2012-1-24	2012-9-24
	Operation		2012-9-25	2013-1-24
Bldg. B	Construction	1,000	2012-4-24	2012-10-24
	Operation		2012-10-25	2013-1-24
<b>Total:</b>		<b>1,500</b>		

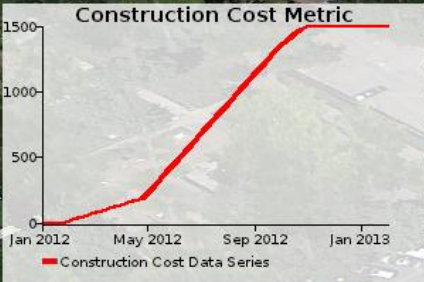
© 2012 Europa Technologies  
© 2012 Google

Google earth

25°46.68' N 122°10'38.39' W elev 106 ft

Eye alt 407 ft

4D plus chart January 27, 2013



		Cost and Schedule Data		
		\$	Start Date	End Date
Bldg. A	Construction	500	2012-1-24	2012-9-24
	Operation		2012-9-25	2013-1-24
Bldg. B	Construction	1,000	2012-4-24	2012-10-24
	Operation		2012-10-25	2012-1-24
<b>Total:</b>		<b>1,500</b>		

© 2012 Europa Technologies  
© 2012 Google

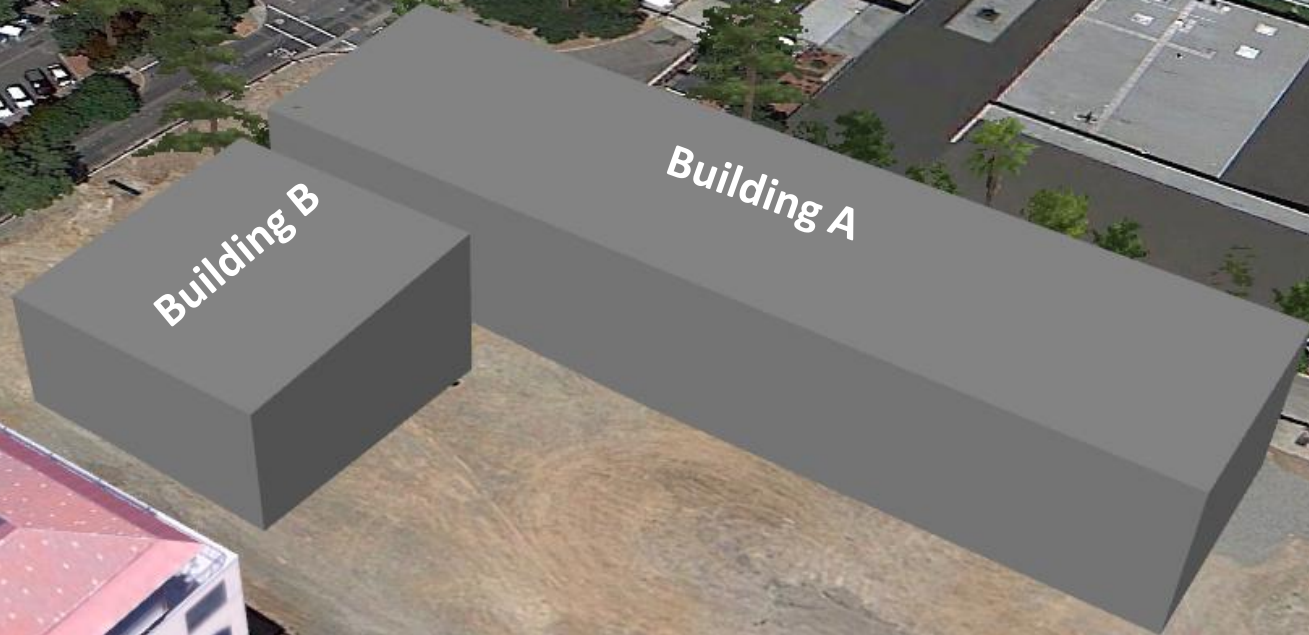
25°44.79" N 122°10'31.69" W elev 81 ft

Eye alt 407 ft

1/30/2013



Construction Cost January 2013



Instead of Facility

Phases: Construction, Operation

Element Types: Building

Element Properties: Construction Cost, Operation Cost

Metrics: Construction Cost Cumulative, Operation Cost Cumulative