In the Matter of the Review of:
Unbundled Loop and Switching Rates; the Deaveraged Zone Rate Structure; and Unbundled Network Elements, Transport, and Termination (Recurring Costs)

DOCKET NO. UT-023003

24th, 27th, & 28thSUPPLEMENTAL ORDERs
VERIZON'S RESPONSE TO VzCost CHECKLIST DOCUMENTATION

PURPOSE OF DOCUMENT:

This checklist represents Verizon's response to the WA Commission's requests in its 24th, 27th, and 28th Supplemental Orders. In its Order, the Commission required Verizon to provide additional VzCost documentation and a checklist that included items described in Attachment A in its 24th Order. Verizon also attempts to cross reference steps where each area crosses over into other areas of VzCost in order. The order of the checklist is assigned, as follows: (A) VzLoop Investments Process Checklist, (B) IOF Investments Process Checklist, (C) SS7 Process Checklist, (D) Switching Investment Process Checklist, (E) Expense Factor Process Checklist, and (F) Cost Production Process Checklist.

HELPFUL HINTS:

It is suggested that whenever possible, to copy the existing filing(s), as opposed to creating a new filing. When performing the steps below, as a note regarding naming conventions for BCs, data tables, templates and filings when going through the steps below, the recommendation would be to keep the names the same or as close to the original names as possible. If name changes occur, templates would need to be edited and rerun against filings. Also, this checklist takes into account that the user has a general knowledge of VzCost and/or access to the VzCost manuals. It is intended solely as a checklist of the flow after Loop preprocessing has been performed and not as a "how-to" document. The steps used to develop templates, studies, etc. can be found within the VzCost User Manuals that have been provided with the filing, itself and in Response to various bench requests, in particular, Bench Request No. 22 - DR6-005.

Additionally, the information included in the sections below that references file names, EDTs or manuals, can be found on the CDs provided with this filing. For the June 2003 and January 2004 filing, CDs containing back-up information and user manuals were provided with each filing. These CDs should be used while proceeding through this checklist, as a reference, where noted.

VzCOST PROCESS CHECKLIST

Section A – VzLoop – VzCost Process Checklist

Overview –

The steps detailed in this section describe the development of the "per-unit" outside plant investments used in the production of the loop cost studies. This section also includes the steps involved in the creation of the "per-unit" fiber related outside plant investments used in the production of IOF and HiCap investments, the production of the "total" loop related investments used in the FLC calculation, and the development of density cell maps.

In order to produce the investments (by Basic Component), two VzLoop Element Calculator Runs are required. The first run produces a preliminary set of results that are used to develop a set of "per-unit" placement values. These placement values are added to a data table and used in the second run. The second run performs an economic cross-over evaluation to determine if a copper cable or fiber cable/DLC equipment feeder configuration would be more appropriate. The appropriate feeder configuration is selected and the second run produces a set of "total" loop investment elements.

The "total" loop investment elements generated by the second VzLoop Element Calculator Run are used to produce a Loop Element Loading Run. In the Element Loading Run, EF&I factors are applied to specific investment elements to develop fully installed investment elements. These investment elements are then used in a variety of BC Runs to produce loop investments in several formats, including the "per-unit" loop investments used in cost studies.

Note – this checklist assumes that the user has been able to download the VzLoop related Master, Material, Placement and Options "input" tables from VzCost, modify inputs, and upload the modified versions of these tables into VzCost for use in alternative Loop Calculator Runs. Instructions on editing "input" (or data) tables can be found in the Data Management portion of Section 12 of the VzCost Users Manual.[1]

Step A1 – Perform Loop Calculator Run 1

Purpose – perform an intermediate Loop Calculator Run to develop ECF Placement values (for the copper/fiber feeder economic cross-over analysis) used in the second and final Loop Calculator Run.

Note – A Loop Calculator Run frequently requires several hours of processing time. Instructions on how to perform a Loop Calculator Run can be found in Section 5 of the VzCost Users Manual (Exhibit RP-16). The user can readily produce a list of the data tables used in a Loop Calculator

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[1]   Exh. No. 216.

Run by identifying that Loop Calculator Run in VzCost (found on the Home Page under Element Calculator Runs), initiating the "View" function and then initiating the "Make Printable" function.

Note – see footnote at the end of Section A for instructions on how to set the copper/fiber cross-over point at a specific distance.

Element Calculator – LOOP_INV_CALC_07

Input Tables -

Input Table Name (Data Table)	Description
LOOP_DEMAND	Includes terminal specific demand information, product of pre-processing
Master	Includes information and inputs at the wire center level
Material	Includes material per unit prices
Network	Includes terminal specific information, product of pre-processing
Options	Includes information and inputs at the jurisdiction level
Placement	Includes placement per unit rates for up to 20 labor rate groups, ECF values are 0 for Loop Calculator Run 1.

Output Tables –

Output Table Name (Data Table)	Description
Arc	Includes a detailed listing and information on the various network segments by wire center
Elements	Includes a detailed listing (by wire center) of the various investment elements produced by the Loop Calculator Run
Fill	Includes fill information (by wire center) resulting from the Loop Calculator Run

	Includes a detailed listing (by wire center) of the various investments produced by the Loop Calculator Run
Inventory	
LOOPSS_ELMNTS	Includes information used in the development of the ECF values
LOOP_CONSTANTS_VALUE	Includes demand information by wire center, not used in the current WA Loop Studies

Step A2 – Perform ECF Calculation (using ECF Calculation Report)

Purpose – to develop the ECF values used in the Placement Table used in second and final Loop Calculator Run. The Placement Table used in the second Loop Calculator Run is referred to as the Placement ECF Table.

Run the ECF Report "Loop_ECF_Calc_v07.rpt" (Date Created – 6/28/2004) to collect ECF values produced by Loop Calculator Run 1. Enter the name of the Loop Calculator Run 1 created in Step A1 in response to the requests for the "Element Calculator Run" and the "Loop SS_Element Version".

Transform the Placement Table used in Loop Calculator Run 1 into the Placement ECF Table by adding ECF values to the first 9 rows of the table for each utilized Labor Rate group as noted below.

LABOR_TYPE   Value

ECFCU   enter 0
ECFCUA   from ECF Report, enter "Revised Total" value under COPAER
ECFCUB   from ECF Report, enter "Revised Total" value under COPBUR
ECFCUU   from ECF Report, enter "Revised Total" value under COPUG
ECFDLC   from ECF Report, enter the last Composite value under EFILOAD
ECFFI   enter 0
ECFFIA   from ECF Report, enter value labeled ECFFIA
ECFFIB   from ECF Report, enter value labeled ECFFIB
ECFFIU   from ECF Report, enter value labeled ECFFIU

Upload the Placement ECF Table into VzCost.

Input Table Name (Data Table)	Description
Placement	Includes placement per unit rates for up to 20 labor rate groups, ECF values are now populated as noted

Step A3 – Perform Loop Calculator Run 2

Purpose – perform the second and final Loop Calculator Run to produce the investments (by wire center) that will be used for the Loop BC Runs and cost studies. When selecting data versions, select the Placement ECF Table (created in Step 2A) as the Placement Table.

Element Calculator – LOOP_INV_CALC_07

Input Tables -

Input Table Name (Data Table)	Description
LOOP_DEMAND	Includes terminal specific demand information, product of pre-processing
Master	Includes information and inputs at the wire center level
Material	Includes material per unit prices
Network	Includes terminal specific information, product of pre-processing
Options	Includes information and inputs at the jurisdiction level
Placement	Includes placement per unit rates for up to 20 labor rate groups, ECF values are now populated as noted in Step 2

Output Tables –

Output Table Name (Data Table)	Description
Arc	Includes a detailed listing and information on the various network segments by wire center

Elements	Includes a detailed listing (by wire center) of the various investment elements produced by the Loop Calculator Run
Fill	Includes fill information (by wire center) resulting from the Loop Calculator Run
Inventory	Includes a detailed listing (by wire center) of the various investments produced by the Loop Calculator Run
LOOPSS_ELMNTS	Includes information used in the development of the ECF values
LOOP_CONSTANTS_VALUE	Includes demand information by wire center, not used in the current WA Loop Studies

Note – once this step is completed, the status of Loop Calculator Run 2 should be upgraded to Approved. The user should then go into Data Management and also upgrade the status of the resulting Elements Table to Approved.

Step A4 – Create Loop Constants Table (using Loop Constants Report)

Purpose – to create a table with certain key values (resulting from Loop Calculator Run 2) that will be needed for Loop BC Runs and cost studies.

The Loop Constants Tables can be found under the "IOF_CONSTANTS_VALUE" table in Data Management and/or Data Browser. The user can identify the Loop Constants Table associated with any BC Run by identifying that BC Run and initiating the "View" function.

In order to create a Loop Constants Table that includes the values associated with the Loop Calculator Run 2 created in Step 3A, the user must first run the Loop Constants Report "Loop_Constant_Table.rpt" (Date Created 8/13/2004) to collect fiber strand-feet values produced by Loop Calculator Run 2. These values should be entered into the "VALUE" column associated with the following "ITEM_KEY" items –
AERIAL_FIBER_FEET
BURIED_FIBER_FEET
UG_FIBER_FEET

The Loop Constants Report will also produce the % of lines with NIDs. This value was not used in the Loop Constants Table associated with the studies filed in this proceeding.

Second, copy the Fill Table (called FILLDATA) produced by Loop Calculator Run 2 into your hard drive. Sum "DLCLOOPS" and "CULOOPS" columns (they are the last two columns) and develop Fiber/DLC feeder % and Copper feeder %. The two %'s should total 100%. These values

should be entered into the "VALUE" column associated with the following "ITEM_KEY" items – COPPER_FEEDER_PERCENT, and DLC_FEEDER_PERCENT.

Third, IDLC / UDLC %'s are user determined inputs. These values should be entered into the "VALUE" column associated with the following "ITEM_KEY" items – TR303_PERCENT, and TR08_PERCENT, UNIV_PERCENT.

Finally, create a Loop Constants Table by copying one from VzCost (under "IOF_CONSTANTS_VALUE), replacing the values as noted above, deleting the "ITEM_NAME" column, deleting the first row (with the titles), and uploading the new Loop Constants Table as an "IOF_CONSTANTS_VALUE" Table.

Input Table Name (Data Table)	Description
IOF_CONSTANTS_VALUE_	Includes certain values (resulting from Loop Calculator Run 2) that are used in Loop BC Runs and cost studies.

Step A5 – Perform Loop Element Loading Run

Purpose – to develop fully installed total loop investments by applying EF&I factors to the DLC (circuit equipment) investments produced by Loop Calculator Run 2.

Element Loadings – LOOP_1224

Input Tables -

Input Table Name (Data Table)	Description
Base_Elements	Lists all the investments elements used and determines the loading applications
Efiload	Includes EF&I loadings applied to material prices to produce fully installed investments
Elements	Includes a detailed listing (by wire center) of the various investment elements produced by the Loop Calculator Run
Master	Includes information and inputs at the wire center level

Output Table –

Output Table Name

(Data Table)	Description
LoopInvest	Includes fully installed, total loop investment elements by wire center

Note – after the Loop Element Loading Run is completed, the status should be upgraded to Approved.

Step A6 – Create Loop Misc Materials Element Loading Run

Purpose – to develop fully installed per unit investments (including plug-ins) to be used in Loop BC Runs. These investments supplement the total investments produced in Step A5.

Element Loadings – LOOP_MISC_MAT_0908

Input Tables -

Input Table Name (Data Table)	Description
Efiload	Includes EF&I loadings applied to material prices to produce fully installed investments
LOOP_MISC_MAT_BASE_ ELEMENT	Lists all the investments elements used and determines the loading applications
LOOP_MISC_MAT_ELMNT S	Includes per unit material prices for investment elements (primarily plug-ins) not developed by VzLoop
Master	Includes information and inputs at the wire center level

Output Table –

Output Table Name (Data Table)	Description
LoopInvest	Includes fully installed, per unit loop investment elements

Note – after the Loop Misc. Materials Element Loading Run is completed, the status should be upgraded to Approved.

Step A7 – Produce Two "Feeder Loop" BC Runs (one for IOF, one for HiCap)

Purpose – to provide per unit outside plant investments to the IOF/HiCap team for use in downstream BC Runs

BC Families – IOF_OSP_V7, HICAP_OSP_V7

Input Items -

Input Item Name (Element Loading and Data Table)	Description
LOOP_1224	The Loop Element Loading Run produced in Step A5
IOF_CONSTANTS_VALUE	The Loop Constants Table produced in Step A4

Output Items -

Output Item Name (BC Family)	Description
IOF_OSP_V7	A list of per unit outside plant investment values (on a per fiber foot basis) for use in IOF BC Runs and cost studies
HICAP_OSP_V7	A list of per unit outside plant investment values (on a per fiber foot basis) for use in HiCap BC Runs and cost studies

Step A8 – Produce Jurisdiction Demand BC Run

Purpose – to produce jurisdiction demand by COS (Class of service) needed for FLC LOOP BC Run.

BC Family – Jur_Demand_FLC_Dev_V7

Input Table –

Input Table Name (Data Table)	Description

	Includes demands counts by Class of Service (COS) by wire center, product of pre-processing
Demand	

Output Item -

Output Item Name (BC Family)	Description
Jur_Demand_FLC_Dev_V7	Lists demand counts by Class of Service (COS) by jurisdiction

Step A9 – Produce FLC Loop BC Run

Purpose – to produce total forward-looking Loop investments and total forward-looking outside plant IOF / HiCap investments for use in the FLC calculation.

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BC Family – FLC_LOOP_BIC_V7

Input Items -

Input Item Name (Element Loading, Data Table, BC Family)	Description
Jur_Demand_FLC_Dev_V7	The BC Run produced in Step A8
LOOP_1224	The Loop Element Loading Run produced in Step A5
LOOP_MISC_MAT_0908	The Loop Misc Materials Element Loading Run produced in Step A6
IOF_CONSTANTS_VALUE	The Loop Constants Table produced in Step A 4

Output Item -

Output Item Name (BC Family)	Description
FLC_LOOP_BIC_V7	Includes total Loop investments and total outside plant IOF/HiCap investments for use in the FLC calculation

Step A10 – Produce 2W, 4W and DS1 Loop BC Runs (Jurisdiction Level)

Purpose – to develop per-unit loop investments (at the jurisdiction level) for cost studies

BC Families – NAL_2W_VZ_BIC_V7, NAL_4W_VZ_BIC_V7, NAL_DS1_VZ_BIC_V7

Input Items -

Input Item Name (Element Loading, Data Table, BC Family)	Description
Demand	Includes demand counts by Class of Service (COS) by wire center, product of pre-processing
LOOP_1224	The Loop Element Loading Run produced in Step A5
LOOP_MISC_MAT_0908	The Loop Misc Materials Element Loading Run produced in Step A6
IOF_CONSTANTS_VALUE	The Loop Constants Table produced in Step A4

Output Items -

Output Item Name (BC Family)	Description
NAL_2W_VZ_BIC_V7	Includes per unit 2 Wire Loop investments (by component, at the jurisdiction level) for use in BC Runs and cost studies
NAL_4W_VZ_BIC_V7	Includes per unit 4 Wire Loop investments (by component, at the jurisdiction level) for use in BC Runs and cost studies
NAL_DS1_VZ_BIC_V7	Includes per unit DS1 Loop investments (by component, at the jurisdiction level) for use in BC Runs and cost studies

Notes –
It is suggested that the user consider including "JUR" in the BC Run name to distinguish this BC Run as a jurisdiction level run.

Step A11 – Produce 2W, 4W and DS1 Loop BC Runs (Density Cell Level)

Purpose – to develop per-unit loop investments (at the Density Cell level) for cost studies

Running Instructions -
A density cell level run is performed in a manner similar to a jurisdiction level run. The user would select "Jurisdiction" as the "Geography Level" selection. However, to perform a density cell level run, the user would then initiate the "Group By" function, select the 'Density Cell Mapping" option, and select the appropriate density cell mapping from those listed in the drop down box.

BC Families – NAL_2W_VZ_BIC_V7, NAL_4W_VZ_BIC_V7, NAL_DS1_VZ_BIC_V7

Density Cell Mapping – TBD

Input Items -

Input Item Name (Element Loading, Data Table, BC Family)	Description

	Includes demands counts by Class of Service (COS) by wire center, product of pre-processing
Demand	
LOOP_1224	The Loop Element Loading Run produced in Step A5
LOOP_MISC_MAT_0908	The Loop Misc Materials Element Loading Run produced in Step A6
IOF_CONSTANTS_VALUE	The Loop Constants Table produced in Step A4

Output Items -

Output Item Name (BC Family)	Description
NAL_2W_VZ_BIC_V7	Includes per unit 2 Wire Loop investments (by component, at the density cell level) for use in BC Runs and cost studies
NAL_4W_VZ_BIC_V7	Includes per unit 4 Wire Loop investments (by component, at the density cell level) for use in BC Runs and cost studies
NAL_DS1_VZ_BIC_V7	Includes per unit DS1 Loop investments (by component, at the density level) for use in BC Runs and cost studies

Notes –
It is suggested that the user consider including "DC" in the BC Run name to distinguish this BC Run as a density cell level run.

Step A12 – Produce 2W, 4W and DS1 Loop BC Runs (Wire Center Level), if needed

Purpose – to develop per-unit loop investments (at the Wire Center level) for cost studies and density cell mapping purposes. Typically, just a 2W Loop BC Run is performed for density cell mapping purposes.

BC Families – NAL_2W_VZ_BIC_V7, NAL_4W_VZ_BIC_V7, NAL_DS1_VZ_BIC_V7

Running Instructions –
The settings for this BC Run are almost identical to the settings used for the jurisdiction level run described in Step A10. The one difference is the "Geography Level" selection – the user would select "Wire Center" for this BC Run.

Input Items -

Input Item Name (Element Loading, Data Table, BC Family)	Description
Demand	Includes demand counts by Class of Service (COS) by wire center, product of pre-processing
LOOP_1224	The Loop Element Loading Run produced in Step A5
LOOP_MISC_MAT_0908	The Loop Misc Materials Element Loading Run produced in Step A6
IOF_CONSTANTS_VALUE	The Loop Constants Table produced in Step A4

Output Items -

Output Item Name (BC Family)	Description
NAL_2W_VZ_BIC_V7	Includes per unit 2 Wire Loop investments (by component, at the wire center level) for use in BC Runs and cost studies. These investments can also be used to determine density cell mappings.
NAL_4W_VZ_BIC_V7	Includes per unit 4 Wire Loop investments (by component, at the wire center level) for use in BC Runs and cost studies
NAL_DS1_VZ_BIC_V7	Includes per unit DS1 Loop investments (by component, at the wire center level) for use in BC Runs and cost studies

Notes –
It is suggested that the user consider including "WC" in the BC Run name to distinguish this BC Run as a wire center level run.

Step A13 – Load alternative density cell map, if needed

Purpose – to be used for density cell level BC Runs that reflect the user's desired density cell mapping

Steps –

1. Access an existing density cell map for the desired state in VzCost. Density Cell Maps can be found in the Table "Density_Cell_Map" using either Data Browser or Data Management.
2. Download a copy of the existing density cell map. The downloaded file will include 2 columns – GROUP_KEY (the density cell designation) and GEOGRAPHY_KEY (the wire center CLLI code).
3. Edit the information in the GROUP_KEY column to create the desired density cell mapping.
4. To prepare the new density cell mapping file for upload into VzCost, rearrange the columns so that GEOGRAPHY_KEY is the first column and GROUP_KEY is the second column. Also delete the row with the column titles. The file must be in csv format in order to upload it into VzCost.
5. Upload the new file into VzCost using Data Management. Note – the user must have Data Management rights for the Density_Cell_Map Table to perform this step.
6. Once the new file (a data version) has been uploaded into VzCost, the user must approve the new data version using Data Management.

The user can now use this new density cell mapping to create density cell level Loop BC Runs and cost studies. When running a Loop BC Run at the density cell level, the user must select "Jurisdiction" as the Geography Level, then initiate the Group By function. The user can then select the desired density cell mapping to be used for the Loop BC Run.

Input Table Name (Data Table)	Description
Density_Cell_Map_	Includes a list of wire centers with density cell designations determined by the user.

Footnote –

A user can disable VzLoop's economic cross-over feature and simply establish the copper/fiber cross-over point at a specific distance by adding an arbitrarily high ECFDLC value and setting the other ECF values to 0 in the Placement Table used for the first Loop Calculator Run. For example, the user could enter values of 0 for the fiber related ECF inputs (ECFFIA, ECFFIB, and ECFFIU), values of 0 for the copper related ECF inputs (ECFCUA, ECFCUB, and ECFCUU) and a value of 10 for ECFDLC in the Placement Table used for the first Loop Calculator Run. This would effectively make copper feeder cable the more economic alternative for all distribution areas within the cross-over distance that is determined, on a wire center basis, by the CU_FI_CROSSOVER value entered in the Master Table.

In this case, the second Loop Calculator Run will not be necessary. The first Loop Calculator Run will be the final run that is used in the processing of the Loop Constants Table and Loop Element Loading Run. Use of this approach will eliminate the need to complete Steps A2 and A3. The first Loop Calculator Run would be used in Steps A4 and A5. It is suggested that the user names

this first Loop Calculator Run "Loop Calculator Run 2" as Loop Calculator Run 2 is typically the final run.

Section B - IOF / HiCap Study Checklist

Overview –

The steps detailed in this section describe the development of the "per-unit" Interoffice Facilities (IOF) and High Capacity (HiCap) investments used in the productions of IOF and HiCap cost studies.

In order to develop a "per-unit" investment there are six basic steps. The first is the updating of the supporting EXCEL files with the jurisdictional specific data. The files listed in Step B1 are included on the External CD that was provided by Verizon with the filing (either CD No. 2 or CD No. 10). These files are set up such that the comma delimited files are easily created in order that the down stream steps can be easily completed. In the second step, the comma delimited files are loaded into either the Element Development Tool (EDT) or into VzCost that are used in the processes within each of these two applications. The last four steps are importing data into the VzCost system, running the Basic Components (BC's) and changing the status of those BC runs in order for the values to be used in the final cost development. Note – this checklist assumes that the user has a familiarity with the documentation for the EDT and VzCost manuals that have been provided previously. The file that will require changes, depends on the item that is desired to be changed by the user. Most all changes change can be made in the Master Inputs file. If individual "What Ifs" are desired without a rerun of the entire filing, then changes should be made using the "Data Management" capabilities of the VzCost application (Please refer to the VzCost User Manual for further details).

Step B1 – Update/Input into EXCEL for loading into EDT Application

      Support and Backup Files (Engineering data and support):

Generally, the support and backup files are used to consolidate data and facilitate the formatting of the data into a comma delimited file (*.csv) that are imported into the Element Development Tool (EDT), previously called the Container Program, and the VzCost Application data tables that are identified in Step B2 and Step B3 of this Checklist.

General File Name	Description	
Misc. Equipment	Vendor prices for miscellaneous equipment (non add-drop multiplexing equipment). Usually updated once a year to reflect current contract prices.	
IOF Design Factors	Percentage of each of the various circuit designs by complexity. Usually updated once a year to reflect current Engineering inputs.	
IOF VCAM	Detailed circuit designs of the IOF and HiCap Loop. Usually updated once a year to reflect the current Engineering inputs.	

IOF Inputs	State specific items such as, but not limited to, vendor deployment percentage and complexity design percentages. Usually updated once a year to reflect the current Engineering inputs.	
Vendor Price Inputs	Vendor prices for add-drop multiplexing equipment. Usually updated once a year to reflect current contract prices.	

Input Files:

General File Name	**Description**	
Master File Input Table	Three tabbed: Global Input, Constant Input, and FLC Demand. Consolidates state specific from above files	
Master Inputs	Master file for facilitating format into *.csv files to importing into EDT and VzCost databases.	

Output Files:

The input data discussed above uses formulas in the "Master Input" file to map input values into the required investment elements. The following tab names are saved as comma delimited (*.csv) files using names that should be identified by the user for future use, e.g. Master Input Values Update for Util% 062205. These OUTPUT comma delimited files are used as EDT or VzCost Input files. The files are loaded into the VzCost application tables using the Data Management function in the Data Section of VzCost.

Master Inputs Tab Name	**Description**	
Master Input Values	DS0 per unit values of the items included in the designed circuits. Input to the EDT applications program.	
Master Input HC Fills	Percent equipment average and relief fills for the HiCap loop designed circuits.	
Master Input IOF Fills	Percent equipment average and relief fills for the IOF designed circuits.	
Master Input Constants	File used as the input into the VzCost application to create the IOF_CONSTANTS_VALUE table. The values in this table are factors, percentage, ratios, etc. that are applied to the investments in the BC formulas. They include, but are not limited to things like	

	the number of DS0 per DS3, feet per mile, percentage of occurrence of high complexity design circuits. NOTE: Once this file is imported into the VzCost application, changes to the values can be made by either 1.) Recreating this file or 2.) By editing the IOF_CONSTANTS_VALUE table from within VzCost depending on the quantity of changes being made.	
Master Input FL Demand	File used as the input into the VzCost application to create the IOF FLC Demand Version Table.	
Combined 'X' Chart	File used as the input to the VzCost application to create the IOF BASE ELEMENT Table. The IOF_BASE_ELEMENT file uses 'X' as a toggle indicator to instruct the VzCost application to apply proper EF&I loadings to the raw investments.	

Step B2 – Update/Input Element Development Tool (EDT) Application:

Note that the EDT application needs to be installed on the users PC. The user needs administrative capabilities in order to properly load the application. Once the EDT applications is installed and the EDT User Manual is understood, Step B2 can continue.

Within the EDT, select the appropriate menu items to:

- Import Master Input Values into database
- Import Master Input Fills either HC or IOF
- Recompile database
- Process database
- Create unloaded investment *Transfer file*

Output File:

General File Name	**Description**	
Transfer File for IOF	Summary of the Investment Elements in a comma delimited file(*.csv) for IOF. This file is used as the input into the VzCost application to create the IOF_ELEMENT_LOADING table.	
Transfer File for HiCap	Summary of the Investment Elements in a comma delimited file(*.csv) for HiCap.	

	This file is used as the input into the VzCost application to create the IOF_ELEMENT_LOADING table.	

Step B3 – Import Comma Delimited Files into VzCost Application:

In Data Management of VzCost application:

General File Name	Description	
IOF Base Element Table	Create by importing the *Combined 'X' Chart* file into VzCost application. This step should only be required once for each filing.	
IOF Constants Table	Created by importing the *Master Input Constants* file into VzCost application.	
IOF Elements Table	Created by importing the ETD *Transfer File* into VzCost application. There will be one for IOF and one for HiCap Loop.	
IOF FLC Demand Table	Created by importing the *Master Input FL Demand* file into VzCost application.	

Step B4 – Create Loading Investments:

In Element Loading Runs of VzCost application:

General File Name	Description	
IOF Element Loading Table	This step takes the investments created in Step B3 and loads (adds) the appropriate EF&I (and other) factors (investments) on those investments based on the IOF Base Element Table. There will be one for IOF and one for HiCap Loop.	

Step B5 – Run Basic Components (BCs):

Note: This step requires that Step A7 of the VzLoop Check List be completed first.

- In BC Families of VzCost application, create the following BC Runs. Change the Status of the BC runs to "Completed" at least in order for the BC runs to be viewed and used by downstream (feeder) BC runs (another group of BC's depend on these BC's, e.g., SS7). It should be noted that some of the BC runs may not be used in the final filing depending upon rate elements that are included in the filing. Also, for those BC families that begin with IOF, the IOF Element Loading run must be used, for BC families that do not begin with IOF, the HiCap Element Loading run must be used.

BC Family		Feeder BC
IOF_DS0_MT		
IOF_DS0_PL_WOC		
IOF_DS0_PL_WC		Yes
IOF_DS1		Yes
IOF_DS3		
IOF_STS1		
IOF_OC3		
IOF_OC12		
IOF_OC48		
CAR_R_DS3		
CAR_R_STS1		
CAR_R_OC3		
CAR_R_OC12		
EF_R_DS3		
EF_R_STS1		
EF_R_OC3		
EF_R_OC12		
Dark_Fiber		Yes
D4_Plugins		
IOF_SUPP_EQPT		Yes
HiCap_and_EF_Without_OSP_FLC		Yes
IOF_Total_FLC_Without_OSP		Yes

Section C - SS7 Study Process Checklist

Overview –

The steps detailed in this section describe the development of unitized SS7 plant investments used in the production of the SS7 cost studies. The total SS7 investment elements are used to produce a SS7 Element Loading Run. In the Element Loading Run, EF&I factors are applied automatically by VzCost to specific investment elements to develop fully installed investment elements. These investment elements are then used in SS7 BC Runs along with the demand and constant table inputs to produce per unit SS7 investments which are used in cost studies.

Step C1 – Import Comma Delimited Files into VzCost Application:

Purpose – upload investment elements, demand items and constant items for downstream Element Loading Run (Step C2) and Basic Component Runs (Step C3).

The files to be uploaded are on CD No. 3 – VZCost DataTables CD. To upload properly the following revisions need to be made:

WA_SS7_Base_Element_05_13_03.csv   Completely delete row 1 and save file.
WA_SS7_Constants_05_13_03.csv   Completely delete row 1 and column B and save file.

WA_SS7_Demand_05_29_2003	Completely delete row 1 and column B and save file.
LIDB_Expense_v05212003.csv	Move column E to the immediate left of column D. The values that were column E should now be in column D and the values that were column D should now be column E. Completely delete row 1 and column B and save file.
LIDB_Expense_CNAM_06_09_03.csv	Move column E to the immediate left of column D. The values that were column E should now be in column D and the values that were column D should now be column E. Completely delete row 1 and column B and save file.
WA_SS7_Elements_05_15_2003.csv	Completely delete row 1 and save file.

In Data Management of the VzCost application the following tables are loaded:

Input Table Name	Description	
WA_SS7_Base_Element_05_13_03.csv	SS7 Base Element - Includes investment elements list, plant account and loading factors to be applied.	
WA_SS7_Constants_05_13_03.csv	SS7 Constants – Includes SS7 Network Engineering parameters.	
WA_SS7_Demand_05_29_2003	SS7 Demand -- State specific demand items.	
LIDB_Expense_v05212003.csv	LIDB Expense -- State specific LIDB expense / demand items.	
LIDB_Expense_CNAM_06_09_03.csv	LIDB Expense - Expenses associated with CNAM queries external to VZ LIDB databases	
WA_SS7_Elements_05_15_2003.csv	SS7 Elements -- State specific unloaded (material only) investment elements	

Once loaded, the table versions need to be in "Approved" status to be used in Element Loading Runs or BC Runs.

Step C2 – Create Loading Investments:

Purpose – This step loads the investments with appropriate EF&I and power factors based on the SS7_BASE_ELEMENT Table information loaded in Step C1.

In the Elements Loading Runs of the VzCost application the following Element Loading Run is created:

Loading Run	Description	
SS7_ELEMENT_LOADINGS	State specific loaded investment elements	
Element Loadings	Element Loading Template	

Input Tables:	Description	
EFIload	Contains loading factors by plant account	
Master	Includes wire center list	
SS7_BASE_ELEMENT	Includes investment elements list, plant account and loading factors to be applied.	
SS7_ELEMENTS	State specific unloaded (material only) investment elements	

The SS7_ELEMENTS_LOADING run needs to be in "Completed" or "Approved" status to be used in BC Runs.

Step C3 – Run Basic Components (BCs):

Purpose – This step creates the Basic Components (BCs) for input to the Cost Studies.

Note: This step requires that Step B5 of the IOF / HiCap Study Check List be completed first.

In BC Runs of VzCost application the following SS7 BC runs are created using the indicated BC Families and the element loading run created in Step C2 and Demand, Constants, and LIDB Expense table versions loaded in Step C1.

Create BC run for CNAM Access Expense WA BC family. When selecting versions of the data sources, use the data versions of LIDB_CNAM_Expense, SS7 constants table and SS7 Demand table created in Step C1.

The BC Runs need to be completed in the order listed. Change the Status of the BC runs to "Completed" or "Approved" in order for the BC runs to be viewed and used by downstream BC runs.

BC Family Name	Description	BC Run
WA_SS7_BC_V050104_Local_STP	Basic Components of SS7 Network	WA_SS7_V031005_Local_STP
CNAM Access Expense WA	Expenses associated with CNAM queries external to VZ LIDB databases.	CNAM Expense WA
SS7_CNAM v04222004	Basic Component for CNAM query	SS7_CNAM v03102005 WA

SS7_CLASS v04222004	Basic Component for CLASS query	SS7_CLASS v03102005 WA

Section D - Switching Investment Study Process Checklist

This section of the document describes the process used to modify or update switching investments. The steps begin with the revision to any supporting Excel files. Then the Excel-based switching investment engineering data and weighting models may be updated to bring in the support data and may accommodate additional changes to inputs such as switch discount, mix of IDLC line terminations, fill factors, etc. After the Excel models have been updated the ".csv" files may be created and loaded into VzCost. This section then describes the upload of the tables, the conduct of an element loading run and the list of Basic Components ("BCs") that may be run to develop switching investments.

The overall switching investment work flow process can be found on CD#2 – UNE Proprietary CD\5. Cost Study Support Files\Switching & Common Transport\Switching Cost Methodology Manual.

Step D1 – Update miscellaneous inputs and engineering data for loading into Switch Weighting Model (note, all file passwords are "nm").

Purpose - Update inputs and engineering data for input to the switching investment development model. Make any preferred or recommended revisions to these files to change the inputs listed in the respective descriptions. These files may all be found on CD#2 – UNE Proprietary CD\5. Cost Study Support Files\Switching & Common Transport\Switch Cost Study Support Files.

Input Files (Miscellaneous Inputs) –

Generic Input Filename	Description	Version File Name
BHAR Analysis per ALS.xls	This file includes the calculations to derive the Busy Hour to Annual Ratio (BHAR). To make changes to the BHAR update the information in this file and copy the result to the "XX Specific Study Data.xls" file, tab named "Specific Demands," cell labeled "BHAR."	WA BHAR Analysis per ALS.xls
MDF.xls	This file develops the investments associated with the Main Distributing Frame (MDF). To change the MDF investments update this file and copy results to the "XX Weighting Model.xls" file, tab labeled "Wholesale IE Table," cells labeled "MDF_xx_Copper_Pair_Term_Inv_D/S."	WA MDF.xls
Mileage_eo_tdm.xls	This file is the source of the detailed circuit	WA mileage eo_tdm.xls

	information used to calculate the average mileage between VZ end offices and tandems. This data is used as input to the calculation of common transport costs. The output of this calculation is linked to the "XX Specific Study Data.xls" file, tab named "Specific Demands," cell labeled "End Office to Tandem Miles."	
UNE Features Weighting Model.xls	This file enumerates the feature hardware investment by switch type then develops the statewide weighted average investment per line based on access line counts by switch type. These results are input to the "Weighting Model.xls" file, tab labeled "Wholesale IE table."	WA UNE Features Weighting Model.xls
Switching Source Document.xls	This file provides detailed information regarding the sources for every item in the Switch Elements, Switch Demand and Switch Constants tables. It should be used as a cross-reference in determining source information for all switching inputs	

Input Files (Engineering Data and Switching Investments) -

Generic Input File Name	**Description**	**Version File Name**
Specific Study Data.xls	This file compiles the switch engineering data for the state under study, accumulating the total access lines, Busy Hour CCS/Calls per line/trunk, etc. and assigns each end office in the study jurisdiction to a representative model office. The output of this file is linked to the "Weighting Model.xls" file and to the individual investment models by switch type (5ESS Model, DMS Model, GTD5 Model).	WA Specific Study Data.xls
Investment Models by Switch Type (5ESS Model, DMS Model, GTD5 Model)	These files store the SCIS and COSTMOD investment output for each of the representative model offices. Matching the network construct of the study jurisdiction – as derived by and imported from the "Specific Study Data.xls" file – to the representative model offices, these files calculate the total and unit switching investments by switch component. The output of these files is linked to the "Weighting Model.xls" file for	WA 5ESS Model.xls WA DMS Model.xls WA GTD5 Model.xls

| | compilation with other inputs and investments and ultimately the creation of the Switch Elements and Switch Demand tables for VzCost. | |

Step D2 – Update Switch Weighting Model and Tandem_TOPS Weighting Model

Purpose – Update the switching investments for end office, tandem and TOPS based on any changes to the engineering data, investment primitives or miscellaneous inputs made in Step D1.

Open the following files in the order presented (password "nm"), click yes to update links, close and save the changes: "TDM-TOPS Weighting Model.xls" and "Weighting Model.xls." These actions will incorporate any changes made in Step D1 and revise the switch investment and demand items accordingly. Alternatively, changes may be hard-coded directly in the "TDM-TOPS Weighting Model.xls" and "Weighting Model.xls" files. At this point new csv files containing the revised switching investment elements (IE table) and demands (Switch Demand table) can be created to load into VzCost.

Creation of Switch Elements file output file: This file is a comma delimited file (*.csv) that is used as an input into the VzCost application to create the SWITCH_ELEMENT_TABLE. From the CDs provided in Verizon's filing, open "CD No. 3 – VzCost DataTables CD" and open the file named "WA_Jurisdiction_Switch_IE_Wholesale_061303." In the "WA UNE Weighting Model.xls" file open the Wholesale IE Table tab. Copy the Element names from column A (starting on line 3) of the Wholesale IE Table tab to column B of "WA_Jurisdiction_Switch_IE_Wholesale_061303" (Copy, "Paste Special," values only). Copy the Dir_Shared indicators from column B (starting on line 3) of the Wholesale IE Table tab to column C of "WA_Jurisdiction_Switch_IE_Wholesale_061303" (Copy, "Paste Special," values only). Copy the Investment amounts from column C of the Wholesale IE Table tab to column E of "WA_Jurisdiction_Switch_IE_Wholesale_061303" (Copy, "Paste Special," values only). Cut Columns G, H, I & J in "WA_Jurisdiction_Switch_IE_Wholesale_061303" (labeled "AFH," "Jurisdiction," "Lvl" and "Level Info") and "insert, cut cells" (position cursor in col A, then, from excel toolbar, use "Insert, cut cells") to the left of column A. Delete the header row and the row immediately after the last row of data in the template (a row that appears blank in Excel). Save "WA_Jurisdiction_Switch_IE_Wholesale_061303" with a new filename and a csv file extension. This will be the input to the new version of the Switch Elements table.

Creation of the Switch Demand file output file: This file is a comma delimited file (*.csv) that is used as an input into the VzCost application to create the SWITCH_DEMAND_TABLE. In the "WA UNE Weighting Model.xls" file open the State Specific Demands tab. From the CDs provided in Verizon's filing, open "CD No. 3 – VzCost DataTables CD" and open the file named "WA_Jurisdictional_SWITCH_DEMAND_06_04_03." Delete Column B of this file (labeled "Item_Name"). Copy the demand item names from column B (line 2 to line 218) of the "State Specfic Demand tab" workbook to column A of "WA_Jurisdictional_SWITCH_DEMAND_06_04_03" (Copy, "Paste Special," values only). Copy the demand item values from column C (line 2 to line 218) of the State Specific Demands tab to column C of "WA_Jurisdictional_SWITCH_DEMAND_06_04_03" (Copy, "Paste Special,"

values only). **Please note - there are several items at the bottom of the State Specific Demands tab listed under a heading "Not part of VzCost Switch Demand Table" that should not be copied into the demand table template.** Delete the header row and the row immediately after the last row of data in "WA_Jurisdictional_SWITCH_DEMAND_06_04_03" (a row that appears blank in Excel). Save "WA_Jurisdictional_SWITCH_DEMAND_06_04_03" with a different file name with a csv file extension. This will be the input to the new version of the Switch Demand table.

Input Files -

Generic Input File Name	Description	Version File Name
Switching Weighting Model.xls	Compiles switching investment primitive and engineering data to create unit and total end office switching investments for study jurisdiction.	WA UNE Weighting Model.xls
TDMS-TOPS Weighting Model.xls	Compiles switching investment primitive and engineering data to create unit and total tandem and TOPS switching investments for study jurisdiction.	WA TDM-TOPS Weighting Model.xls

Output Files –

Generic Output File Name	Description	Version File Name
SWITCH ELEMENTS.csv	Table of all switching investment element values before application of EFI and Power loadings.	WA Jurisdiction Switch IE Wholesale 06 13 03
SWITCH DEMAND VALUE.csv	Table of switch demand values used in Basic Component and Cost templates.	WA Jurisdictional Switch Demand 06 04 03

Step D3 – Import Comma Delimited Files into VzCost

Purpose – Load the SWITCH_ELEMENTS_TABLE, SWITCH_BASE_ELEMENTS_TABLE and SWITCH_DEMAND_VALUE tables into VzCost

In *Data Management* section of VzCost application:

General instructions on how to import CSV files into VzCost can be found in Section 12.1.1 of the VzCost User Guide.

- Create the SWITCH_BASE_ELEMENT Table. This step is required only once for each filing. Any sensitivities or analyses can be conducted against the existing SWITCH_BASE_ELEMENT table provided with the filing for the study jurisdiction and this step may be skipped.

- Create the SWITCH_DEMAND_VALUE Table by importing the *Switch Demand* file created in Step D2, above.

- Create the SWITCH_ELEMENTS Table by importing the *Switch Elements* file created in Step D2, above.

Input Files –

Generic Input File Name	Description	Version File Name
SWITCH BASE ELEMENT.csv	Mapping of investment elements to direct/shared categorization, plant account identifier and application of EFI and power factors.	WA Jurisdictional Switch Base Elements 06 04 03
SWITCH ELEMENTS.csv	Comma delimited file with switching investment element values before application of EFI and Power loadings.	WA Jurisdiction Switch IE Wholesale 06 13 03
SWITCH DEMAND VALUE.csv	Comma delimited file with switch demand values used in Basic Component and Cost Templates.	WA Jurisdictional Switch Demand 06 04 03
SWITCH CONSTANTS VALUE.csv	Comma delimited file with switch constants values used in Basic Components and Cost Templates.	WA Jurisdictional Switch Constants 06 04 03

Output Data Tables -

Generic Table Name	Description	Version Table Name
SWITCH ELEMENTS	Table of all switching investment element values before application of EFI and Power loadings.	WA Jurisdiction Switch IE Wholesale 06 13 03
SWITCH BASE ELEMENTS	Mapping of investment elements to direct/shared categorization, plant account identifier and application of EFI and power factors.	WA Jurisdictional Switch Base Elements 06 04 03
SWITCH DEMAND VALUE	Table of all switching demand item values.	WA Jurisdictional Switch Demand 06 04 03
SWITCH CONSTANTS VALUE	Table of switching constants items.	WA Jurisdictional Switch Constants 06 04 03

Step D4 – Create Element Loading runs in VzCost

Purpose – Apply EFI and Power loadings, as defined in the SWITCH_BASE_ELEMENTS table to the material investments uploaded into VzCost in the SWITCH_ELEMENTS table.

In *Element Loading Runs* section of VzCost application:

- Create a SWITCH_ELEMENTS_LOADING using the SWITCH_ELEMENTS Table created in Step D3. This step loads the investments with appropriate EF&I and Power factors based on the SWITCH_BASE_ELEMENT Table information loaded in Step D3. As mentioned in Step D3, there is no need to adjust the SWITCH_BASE_ELEMENTS table and the table provided with the filing may be used.

Output Data Tables -

Generic Table Name	Description	Version Table Name
SWITCH ELEMENT LOADINGS	Result of the element loading run, which applies EFI and Power factors, as defined in the SWITCH BASE ELEMENTS table, to the material investments in the SWITCH ELEMENTS table.	WA Switch Loadings Wholesale 06 13 03

Step D5 – Create Basic Component (BC) runs in VzCost

Purpose – Associate values in the updated SWITCH ELEMENT LOADING run and SWITCH DEMAND TABLE with the Basic Component templates.

In *BC Families* section of VzCost application:

- Create BC runs for Switching. When selecting versions of the data sources, use the versions of the Switch_0915 and Switch Demand table created in Steps D3 and D4, above.
- Change the Status of the BC runs to "Completed" or "Approved" in order for the BC runs to be viewed and used by downstream BC runs.

Output BC Family Runs -

Generic BC Family Name	Description	Version BC Run Name
CO_Line and Trunk Ports_0326	Basic Components for line and trunk switch termination investments.	WA UNE CO Line and Trunk Ports 061303
Central Office Investments 0326	Basic Components for usage-related switching investments.	WA UNE Central Office Investments 061303
CENTREX Features 042203	Basic Components for Centrex/Centranet features switching investments.	WA UNE CTX 06 16 03
ISDN Features 060903	Basic Components for ISDN features switching investments.	WA ISDNFeatures 061603
ISDN Missing Features 0326	Basic Components for additional ISDN features switching investments.	WA UNE ISDN Missing Features 061303
Jurisdictional Demand	Basic Components for demand-related items required in switching rate element	WA Jurisdictional Demand 060403

cost templates.

Main Distributing Frame (MDF) 042803	Basic Components for the vertical and horizontal sides of the MDF. This BC family feeds switching port element and IOF/Loop element cost templates.	WA UNE MDF 06 16 03
ResBus Features Final 042203	Basic Components for POTS (residence/business) features switching investments.	WA ResBusFtrs Wholesale
FLC Investments Switching	Basic Components that accumulate the total forward-looking investment in the switching network. This BC family feeds the total FLC BC Family.	WA Switch FLC Investments 0616

Section E - Capital and Expense Factors Process Checklist

Overview –
The steps detailed in this section describe the processes for performing capital factor runs, which develop capital cost factors (depreciation, return, income tax) for downstream expense factor and cost study runs. They also cover the processes for performing expense factor runs, which develop the expense factors (Expense/Investments or ACFs) and expense loadings (marketing, other marketing support, common overhead) for the downstream cost study runs.

In addition, they describe the development of the forward-looking calibration (FLC) factor used in the expense factor runs, and the development of ABC costs, Gross Revenue Loadings, RTU factors, and the EF&I and Power Loading factors.

The steps here describe how to reproduce the capital and expense factors Performing any what-if changes to any tables listed in the following steps will cause a change to cost study results.

Step E1 – Capital Factor Run
Purpose – develop capital cost factors (depreciation, return, income tax) for downstream expense factor runs (see step E3) and cost study runs.

Run Variables

Variable	Description
Name	Name of the Capital Factor Run
Description	Description of the Capital Factor Run
Expense Factor Template	Algorithm used to perform calculation on input tables to produce outputs
Jurisdiction	Jurisdiction of study. Selecting a jurisdiction will restrict input table

selection.

Assumptions

Assumption	Description
Asset Life Scenario	"GAAP" or "FCC"
	When investment is placed in service; either "MID_YEAR" or
Investment Placement	"BEGINNING_OF_YEAR".

Input Tables

Input Table Name (Data Table)	Description
Cost_of_Money	Includes components of COM obtained from COM Witness
Future_net_salvage	Future Net Salvage values by account obtained from Capital Recovery Witness
Macrs_rate	MACRS IRS tax depreciation rates for each service life
Macrs_recovery	MACRS IRS recovery life for each investment account
Property_Taxes	Property tax rate by account obtained from the Tax Department
Service_life	Service Lives by account obtained from Capital Recovery Witness
Tax_Rates	Statutory Federal Income Tax and State Income Tax rates

Output Table –

Output Table Name (Data Table)	Description
Capital_Factors	VzCost results from the WA 9.98 COM UT023003 Final 2-11-05 Capital Factor Run.

The Capital Factor Run is completed and approved by the person performing the study. The *Capital_Factors* output table must be approved for use in subsequent steps.

Step E2 – Perform FLC Factor Calculation Using Excel Spreadsheet
Purpose – The Forward Looking Calibration (FLC) factor is loaded into the Investment_Calibration_Indices table with the FL_Calibration item key. **If no changes to the FLC are desired, this step can be skipped.**

However, if it is desirable to change the value of the FLC in the Investment_Calibration_Indices table, the best method is to download the values from the table (see version name below), change the values, and re-load the values into VZCost. Instructions for performing these steps can be found in Section 12.1 of the VZCost Users Manual.

Also, see related instructions on "How to Change the FLC" script provided in Bench Request 16 and "Instructions to Determine the FLC" provided in Bench Request 30.

Backup for the FLC detail calculations from the January 2004 refiling can be found on CD No.2 – UNE Proprietary CD \ 6. Factors Support Files \ Expense Factor & Loading \ WA 2001 Revised Expense Factor and Loading Documentation 1-12-04.pdf, Workpaper 3.4 – FLC Calculation.

Step E3 – Expense Factor Run
Purpose – develop expense factors (Expense/Investments or ACFs) and expense loadings (marketing, other marketing support, common overhead) for downstream cost study runs.

Note: Any changes to any capital input (Step E1) or the FLC (Step E2) must be completed prior to Step E3 as Steps E1 and E2 produce inputs to Step E3.

Run Variables

Variable	Description
Name	Name of the Expense Factor Run
Description	Description of the Expense Factor Run
Expense Factor Template	Algorithm used to perform calculation on input tables to produce outputs
Jurisdiction	Jurisdiction of study. Selecting a jurisdiction will restrict input table selection.

Assumptions

Assumption	Description
Data Vintage	Vintage year of Booked Expense and Booked Investment data – used to calculate inflation.
Expense Type	"CURRENT", "EMBEDDED" OR "FORWARD_LOOKING". This assumption dicates whether or not inflation is calculated on expense and which Investment Calibration Index is used.
First Year of Study	First year of study period. This value is used to calculate the Inflation to Current Factor.
Product Type	"WHOLESALE", "RETAIL", OR "ACCESS"

	Length of the study period. Used for calculating the Planning Period Inflation Factor.
Study Period	

Input Tables -

Input Table Name (Data Table)	Description
Account_Inflation	Maps relevant inflation and productivity indexes to the accounts
Booked_Expenses	Base-year book expenses
Booked_Investments	Base-year book investments
Capital_Factors	VzCost results from the Capital Factor Run - see step 1
Cost_of_Money	Includes components of COM obtained from COM Witness
Cost _Pool_Allocations	Percent distribution of expenses to the various network, marketing and common cost pools
EEL_To_OSP	Percentage of outside plant repairs to total repairs (OSP and COE)
Expense_Account_D_S_Map	Maps operating expenses and general support asset capital carrying costs to a direct or shared category type (network, support, marketing, L&B support, product specific)
Expense_ADJUST	Percent adjustment to expense amounts for non-recurring costs, product specific costs, account eliminations, normalizations, retail-avoidable costs, ABC costs, collocation, etc.
Inflation_Indices	Inflation and productivity indices based on information from the Bureau of Labor Statistics
INVESTMENT_ADJUST	Percent adjustment to investment amounts for normalizations, collocation, account eliminations and classifications as revenue-producing (network) or support asset

Investment_Calibration_Indices	Calibration of book investments to cost study type (i.e., forward-looking)
INVEST_COST_POOL_MAP	Maps each revenue-producing investment account to the appropriate cost pool
Property_Taxes	Property tax rate by account obtained from the Tax Department

Output Tables –

Output Table Name (Data Table)	Description
Expense_Factors	VzCost results from the Expense Factor Run. Stores the calculated network related Expense/Investment factors by account.
Expense_Results	VzCost results from the Expense Factor Run. Stores the calculated expense loadings for marketing, other marketing support, and common overhead.

The Expense Factor Run is completed, approved and published by the person performing the study. The resulting *Expense_Factors* and *Expense_Results* output tables must be approved for use in downstream cost study runs.

Step E4 – Load the ABC Costs, Gross Revenue Loadings and RTU Factors into VzCost
Purpose – The ABC Costs, Gross Revenue Loadings and RTU Factors tables include values needed for cost studies but developed outside of VZCost. These tables have been loaded into VZCost for the filing. However, if it is desirable to change the values in any of these tables, the best method is to download the values from any or all table(s), change the values, and re-load the values into VZCost. Instructions for performing these steps can be found in Section 12.1 of the VZCost Users Manual. If no changes to these tables is desired, this step can be skipped.

Each of the tables is described below

ABC costs – includes white page directory listings from the June 2003 filing, on CD No.2 – UNE Proprietary CD (Rev 072903 – 081803) \ 6. Factors Support Files \ Expense Factor & Loading \ Washington 2001 UNE Expense Factor and Loading Documentation .pdf, Section 4 Other Special Studies, Verizon White Page Directory Listings Study. Also includes product specific costs (informational only) from the June 2003 filing, on CD No.2 – UNE Proprietary CD (Rev 072903 – 081803) \ 6. Factors Support Files \ Expense Factor & Loading \ Washington 2001 UNE Expense Factor and Loading Documentation .pdf, Section 3, Workpapers 1.2 – 1.2.3.

Gross Revenue Loadings – includes costs associated with regulatory assessments, uncollectibles, and gross receipts tax. These values are from the June 2003 filing, on CD No.2 – UNE Proprietary CD (Rev 072903 – 081803) \ 6. Factors Support Files \ Expense Factor & Loading \ Washington 2001 UNE Expense Factor and Loading Documentation .pdf, Section 3, Workpaper 9 – Gross Revenue Loading (GRL) Calculations.

RTU factors – includes the software costs that equipment manufactures charge Verizon for the operation of and/or feature functionality associated with their equipment. This factor is based on the ratio of annual RTU software costs to total investment associated with either switching (Accounts 2212 and 2220) or digital circuit equipment (Accounts 2232 and 2362).

Step E5 – Load the EF&I and Power Loadings into VzCost

Purpose – The Efiload table includes values for use in Element Loader runs but developed outside of VZCost. These tables have been loaded into VZCost for the filing. However, if it is desirable to change the values in any of these tables, the best method is to download the values from the table, change the values, and re-load the values into VZCost. Instructions for performing these steps can be found in Section 12.1 of the VZCost Users Manual. If no changes to this table are desired, this step can be skipped.

EF&I factors – translate material only investment into installed investment by accounting for items such as vendor engineering, Verizon engineering, transportation, warehousing, vendor installation, and Verizon installation. Power Loading - represents the relationship between the investment in power equipment necessary to run installed central office equipment and facilities and the installed investment in the equipment itself. These values are calculated in the June 2003 filing, on CD No.2 – UNE Proprietary CD (Rev 072903 – 081803) \ 6. Factors Support Files \ Investment Loading \ VZ-WA Investment Loading Factor Study 061203.pdf. The calculated values for the EF&I factors and Power Loading should then be loaded into the VzCost *Efiload* data table using the data management function.

Step E6 – Post Capital and Expense Factor Data Tables to the Filings Control Sheet

The capital and expense factor data tables listed below were posted to the Filings Control Sheet in order to perform the cost study run. The same tables would have to be posted to a cost study's control sheets to

- Duplicate the results of the Filing, or to
- Perform sensitivity analyses on changes to inputs of cost studies, other than Section E changes.

If any of the Section E inputs are changed, the tables listed below would change when posting to the filings control sheet.

Table Name	Process Step –	

Data Table)	Cross Reference	
ABC_COST	Step E4	
Account_Inflation	Step E3	
Capital_Factors	Step E1	
Expense_Factors	Step E3	
Expense_Results	Step E3	
Inflation_Indices	Step E3	
Loading_Factors	Step E4	
Property_Taxes	Steps E 1, 3	
RTU_Factor	Step E4	

Section F: Cost Production Process Checklist

Overview:

The Cost Production process involves developing cost studies either on a standalone basis or associated with a filing. If the user chooses to create or modify cost studies on a standalone basis, they will have to run each individual cost study to derive the results. If the user chooses to create or modify cost studies and associate them with a filing, he has the ability to re-run all cost studies within the filing. if multiple changes are being made to multiple studies, the suggestion would be to copy the existing filing and associate the changes within the filing. This will save the user time and ensure consistency. Additional details regarding running cost studies on a standalone basis can be found in Section 9.2.8 of the VzCost User's Guide

The process outlined in the following section describes the necessary steps to create or modify filings containing multiple cost studies. Additionally, it incorporates output of processes identified in Sections A through E, above.

Step F1 - Create New or Copy/Modify Existing Filing

a. Select "Filings" from the "Coster" module on the VzCost Home Page.
   A listing of the filings will appear.

b. To create a new filing, select "New" at the bottom of the Filings screen. Populate the information on the "New Filing" screen as explained in Section 9.1.1 of the VzCost User Guide. This step is recommended if the user only wants to make changes to a subset of studies within an existing filing.

c. To copy an existing filing, select the appropriate filing and select "Copy" at the bottom of the Filings screen. Select "Analyst Filing Copy" from the Select Copy Filing Method screen. (Note: This copy functionality will copy the filing, control sheets, cost studies and results.). Select "Copy" at the bottom of the screen. This step is recommended when the user wants to make changes to all studies within a filing.

d. After selecting "copy", the Message Center will appear displaying the processing status of the copy of the filing. (Generally, a filing will copy in less than 10 minutes).

e. Once the filing is copied, return to the Home Page. Select "Filings" from the "Coster" module. A copy of the filing will be listed with the words "copy of" in the filing name. However, a user does have the ability to change the name. The recommendation would be to keep the naming conventions similar to the original name.

Step F2 - Remove Modified BC Runs from Filing

Prior to posting new BCs, it is strongly recommended that the user remove the BC Runs that have been modified.

a. Select the copied filing and then select "BC Runs" at the bottom of the Filings screen.

b. From the "BC Runs for Filing" screen, select the BC Run(s) to be deleted and click "Remove". (Note: The removal process requires the user to select one BC run at a time for removal). A dialog box will appear indicating the number of studies the BC Run is used in and that the study results will be deleted. The associated cost templates will not be deleted. Click "Ok". Follow this procedure for each BC Run to be removed. When finished removing BC Runs, select "Save". From the "Filings" screen, select "Home"

Step F3 - Post New BC Runs to Filing Control Sheet(s)

This section describes how the BCs identified in the Steps A thru E above can be posted to a filing control sheet. The control sheets contain a subset of products, assumptions and data versions required to create a filing. The majority of filings have multiple control sheets. This allows the user to categorize products with similar global assumptions. Generally, there are three separate control sheets:

1) Monthly – used for cost results derived on a monthly basis, including statewide average loop costs
2) NonMonthly – used for cost results derived on a non-monthly or unit basis (i.e., per query, per minute of use, non-recurring)
3) Density Cell – used for monthly cost results derived on a deaveraged basis (i.e., loop costs by density cell).

a. From the VzCost "Home Page", Select "BC Runs" in the "Basic Components (BC)" module. A listing of all BC Runs developed in Steps A7 thru A12; Step B5, Step C3 and Step D5 above will appear. The filters on the left-hand side of the screen will allow the user to narrow the search for the specific BC Run. BC Runs must be selected on a run-by-run basis by following steps b thru f below.

b. Select the BC Run to be posted and select "Post to Filing".

c. Select the Filing to which the BC Run will be posted.

d. Select the Control Sheet to which the BC Run will be posted. *(Note: It is critical that the BC be posted to the correct control sheet in order for the cost study to be run and accurate results achieved).*

e. Select "Post to Filing" at the bottom of the screen.

f. Some BC Runs must be posted to multiple control sheets if they are used in more than one type of cost study (i.e., monthly, non-monthly or density). Repeat Steps b thru d to post the same BC Run to another control sheet.

g. When finished posting all BC Runs, select "Home" and select "Filings" in the Coster Module.

h. To ensure all the BC Runs have been posted, select the filing and select "BC Runs". A listing of the BC Runs posted will appear. If the user posted a BC Run in error, the user can select the BC Run and select "Remove" from this screen and then click "Save". This will remove the erroneous BC Run from the filing.

Step F4 – Select New Data Versions to the Filing Control Sheet(s)

a. From the "Coster" Module on the VzCost Home Page, select "Filings".

b. Select the Filing for which the new Data Versions will be included.

c. Select "Data Versions" at the bottom of the Filing screen. A dialog box will appear indicating that editing data versions of the control sheet will delete all dependent study results, reports and documents. The user should click "Ok".

d. Select the Control Sheet(s) to which the data versions will be posted. If a filing contains multiple control sheets, data versions must be posted to each applicable control sheet. This process is similar to the BC Run posting process outlined in Step F3 above.

e. By clicking on the down arrow in the field for each of the data tables, select the appropriate Data Table Version. The data table versions are identified in Section E6 above.

f. When finished selecting the data versions, click "Save".

g. If more than one control sheet is associated with the filing, repeat Steps d thru e above.

Step F5 – Rerunning Cost Studies

Once Steps F1 thru F4, are completed, the user is ready to rerun the cost studies with the revised BC Runs and Data Versions. All templates must be run at least once against a filing if changes have been made in order for the below steps to be completed.

a.   Select "Filings" from the VzCost Home Page and select the appropriate filing from the list of filings.

b.   Click "Edit" at the bottom of the screen.

c.   From the "Edit Filing" screen, select the "Cost Studies" tab and select "Re-Run". A dialog box will appear indicating that rerunning cost studies will save the current filing. Click "Ok".

d.   The Message Center will appear to indicate that the cost study processing has begun.

Step F6 – Viewing Detailed Results/Running Summary Reports

Once all the cost studies have been processed (or run) through the Message Center, the user can either review the detailed results of an individual study or run a report providing the summary results of all studies processed.

View Detailed Results

a.   From the VzCost Home Page, select "Cost Studies" in the "Coster Module". A listing of all the cost studies run for the filing will appear.

b.   Select the cost study to review and select "View Results" at the bottom of the screen. The user will see the underlying algorithms in the cost study as well as the final results.

c.   To view the assumptions and data sources included in the cost study, click on "Show Details" at the top right-hand corner of the Cost Study Results screen.

d.   The user also has the option of printing the cost study results by selecting "Make Printable" at the top right-hand corner of the Cost Study Results screen. The viewable screen will then be formatted for printing. Right click on the screen and select print. (Note some screen may require landscape orientation).

e.   The user also has the option of downloading the cost study results by selecting "Download" at the bottom of the Cost Study Results screen. This will download the results into a .csv file.

Run a Summary Level Report

a.   From the VzCost Home Page, select "Reports" under the "Analysis" module. A listing of the reports associated with the filing will appear.

b.   Select the "Filing_TotalRecurringCostSummaryDirShare_062003.rpt" and select "Run". This is the suggested report to run, however, there are other more detailed reports available.

c. The user will then be asked to select which filing the report should be run against. Choose the appropriate filing from the drop-down box and select "Run".

d. A report will be generated (in pdf format) and the user will have the option of viewing the report or downloading it.