# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>General Application</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>LISP References</td>
<td>3</td>
</tr>
<tr>
<td>3.1</td>
<td>ATTRIBCOPY.LSP</td>
<td>3</td>
</tr>
<tr>
<td>3.2</td>
<td>BSP.LSP</td>
<td>3</td>
</tr>
<tr>
<td>3.3</td>
<td>BUILDING.LSP</td>
<td>3</td>
</tr>
<tr>
<td>3.4</td>
<td>BUPDATE.LSP</td>
<td>4</td>
</tr>
<tr>
<td>3.5</td>
<td>CALLOUTS.LSP</td>
<td>4</td>
</tr>
<tr>
<td>3.6</td>
<td>CHE.LSP</td>
<td>5</td>
</tr>
<tr>
<td>3.7</td>
<td>CHGALL.LSP</td>
<td>5</td>
</tr>
<tr>
<td>3.8</td>
<td>DETAIL_BOX.LSP</td>
<td>5</td>
</tr>
<tr>
<td>3.9</td>
<td>ENTITY_SWITCH.LSP</td>
<td>6</td>
</tr>
<tr>
<td>3.10</td>
<td>EXISTING_CONDUIT.LSP</td>
<td>6</td>
</tr>
<tr>
<td>3.11</td>
<td>FENCE.LSP</td>
<td>6</td>
</tr>
<tr>
<td>3.12</td>
<td>GL.LSP</td>
<td>7</td>
</tr>
<tr>
<td>3.13</td>
<td>GUARD.LSP</td>
<td>7</td>
</tr>
<tr>
<td>3.14</td>
<td>IDB.LSP</td>
<td>7</td>
</tr>
<tr>
<td>3.15</td>
<td>LAYOFF.LSP</td>
<td>8</td>
</tr>
<tr>
<td>3.16</td>
<td>MATCH.LSP</td>
<td>8</td>
</tr>
<tr>
<td>3.17</td>
<td>PJOIN.LSP</td>
<td>9</td>
</tr>
<tr>
<td>3.18</td>
<td>PVC.LSP</td>
<td>9</td>
</tr>
<tr>
<td>3.19</td>
<td>PWIDTH.LSP</td>
<td>9</td>
</tr>
<tr>
<td>3.20</td>
<td>RB.LSP</td>
<td>10</td>
</tr>
<tr>
<td>3.21</td>
<td>RL.LSP</td>
<td>10</td>
</tr>
<tr>
<td>3.22</td>
<td>ROAD.LSP</td>
<td>10</td>
</tr>
<tr>
<td>3.23</td>
<td>SLOPE.LSP</td>
<td>11</td>
</tr>
<tr>
<td>3.24</td>
<td>TE.LSP</td>
<td>11</td>
</tr>
<tr>
<td>3.25</td>
<td>TERMINATE.LSP</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>References</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Version History</td>
<td>12</td>
</tr>
</tbody>
</table>
2 General Application

This manual is meant to provide LISP references for routine activities that allows you to automate tasks in AutoCAD.

3 LISP References

3.1 ATTRIBCOPY.LSP

Description:
This program copies text from one entity to another.

How to use:
Follow Command Line prompts and use common sense.
Type AC at the command line, choose text to copy, Next either choose the text to be replaced or press the enter button. If you press enter you can change multiple text entities.

Required actions:
There are no requirements for using this routine.

Errors:
No known errors.

3.2 BSP.LSP

Description:
This program inserts blocks at the correct spacing to depict Trench and Placed BSP

How to use:
Follow Command Line prompts and use common sense.
Type BSP at the command line.
The user will select the lower magenta line for block placement.

Requirements:
Must have ZIG.DWG in preference path.
Must have CABLE layer created in drawing.
Proper “REP” command must be loaded and previously ran.

Errors:
If blocks are inserted upside-down user must reverse the direction of the polyline. Polyline direction must be from left to right. If you miss the line you will need to start over.

3.3 BUILDING.LSP

Description:
Draws a building to Qwest CAD standards.

How to use:
Follow Command Line prompts and use common sense.
Type **BLD1** for Top building at the command line.
Type **BLD2** for Bottom building at the command line.
Type **BLDC** for a Corner building at the command line. Not working yet
User selects two points and program draws a building.
Fix the placed text when done.

**Requirements:**
Must have **OBJECT, TEXT, & GUIDELINES** layer created in drawing.
Proper **"REP"** command must be loaded and previously ran.

**Errors:**
Hatches may need to be redone due to interfering lines
and text.
The user might have chosen points in the wrong order.

### 3.4 BUPDATE.LSP

**Description:**
This program will replace a block with a
different or new version of same block.
This will update all blocks in the current
drawing.

**How to use:**
Follow Command Line prompts and use common sense.
Type **BUPDATE** at the command line.
Hit enter, then select block to change. In dialog
box select new block.

**Requirements:**
There are no requirements for using this routine

**Errors:**
If you type the block name in you will get an error.
Must manually select block to replace. This program will
keep the name of the current block for new inserted blocks.
For example, if you replace all **HHH.DWG's** with **HH.DWG's** when
you list the new **HH.DWG's** it will be called **HHH.DWG**

### 3.5 CALLOUTS.LSP

**Description:**
Places block to callout the object it relates to.

**How to use:**
Follow Command Line prompts and use common sense.
Type **STA** at the command line for a top callout.
Type **SBA** at the command line for a bottom callout.
Type **RRSTA** at the command line for a top railroad callout.
Type **RRSBA** at the command line for a bottom railroad callout.
Pick callout point and rotation.
Then fill out the callout information.
Finally select the object you are calling out.

**Requirements:**
Must have **STATXT_T.DWG, STATXT_B.DWG, STA_LDR.DWG, RRSTAT.DWG, & RRSTAB.DWG** in preference path.
Must have **TEXT, & GUIDELINES** layers created in drawing.
Proper “REP” command must be loaded and previously ran.

Errors:
No errors found yet.

3.6 CHE.LSP

Description:
Change Element - Change objects properties to match a selected entity.

How to use:
Follow Command Line prompts and use common sense. 
Type CHE at the command line. 
Select the object or objects to modify, then select the object with the properties you want. 
A dialog box will appear with the available properties you can change on all objects that were selected. Dialog box will change depending on what type of object you choose.

Requirements:
Must have CHELEMNT.DCL in preference path.

Errors:
If you cancel out of command your HIGHLIGHT variable will be set to 0.

3.7 CHGALL.LSP

Description:
Changes the Color, Linetype, and layer of selected object or objects to match different object.

How to use:
Follow Command Line prompts and use common sense. 
Type CGA at the command line. 
Select object or objects to modify, then select object with the properties you want.

Requirements:
There are no requirements for using this routine.

Errors:
No known errors.

3.8 DETAIL_BOX.LSP

Description:
This program changes a selected rectangle to depict a detail box.

How to use:
Follow Command Line prompts and use common sense. 
Type DETB at the command line.

Requirements:
Must have HIDDEN linetype in current drawing
Errors:
No known errors.

3.9 ENTITY_SWITCH.LSP

Description:
This program switches the properties of two entities.
This switches the color, linetype, and layer of an entity.

How to use:
Follow Command Line prompts and use common sense.
Type ES at the command line.
Select an object, then select another object.

Requirements:
There are no requirements for using this routine.

Errors:
No known errors.

3.10 EXISTING_CONDUIT.LSP

Description:
This program changes the selected line to depict an existing conduit.

How to use:
Follow Command Line prompts and use common sense.
Type EC at the command line.

Requirements:
Must have HIDDEN linetype in current drawing

Errors:
No known errors.

3.11 FENCE.LSP

Description:
This program inserts blocks at the correct spacing to depict a fence line

How to use:
Follow Command Line prompts and use common sense.
Type FEN at the command line.
The user will select the fence line for block placement.

Requirements:
Must have FENCE.DWG in preference path.
Must have FENCE layer created in drawing.
Proper “REP” command must be loaded and previously ran.

Errors:
If blocks are inserted upside-down user must reverse the direction of the polyline. Polyline direction must be from left to right. If you miss the line you will need to start over
3.12 GL.LSP

**Description:**
This program draws a line from callout to corresponding object.

**How to use:**
Follow Command Line prompts and use common sense.
Type `GL` at the command line.
Select INSERTION point of callout, then select INSERTION point of corresponding object.

**Requirements:**
Must have **GUIDELINES** layer created in drawing.
**QWEST_UTILS.LSP** must be loaded and previously ran.

**Errors:**
No known errors.

3.13 GUARD.LSP

**Description:**
This program inserts blocks at the correct spacing to depict a guardrail.

**How to use:**
Follow Command Line prompts and use common sense.
Type `GRD-B` at the command line.
Type `GRD-T` at the command line.
The user will select the guardrail line for block placement.

**Requirements:**
Must have **GRD-DWN.DWG** in preference path.
Must have **GRD-TOP.DWG** in preference path.
Must have **ROAD** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

**Errors:**
If blocks are inserted upside-down user must reverse the direction of the polyline. Polyline direction must be from left to right. If you miss the line you will need to start over.

3.14 IDB.LSP

**Description:**
Trims Directional Bore and inserts LABEL block with DB for the text.

**How to use:**
Follow Command Line prompts and use common sense.
Type `IDB` at the command line.
Select Directional Bore line.

**Requirements:**
Must have **LABEL.DWG** in preference path.
Must have **CABLE** layer created in drawing.
Proper "REP" command must be loaded and previously ran.
Errors:
If you receive an error that says "error: bad argument type: 2D/3D point: nil:"
then zoom out and try again.
If you select the line and text comes in crooked make sure there are no other lines near that will interfere.
If you cancel out of the command, you will need to reset the following variables.
UCS PREVIOUS SETTING
OSNAPS PREVIOUS SETTING
APERTURE PREVIOUS SETTING
PICKBOX PREVIOUS SETTING
LAYER PREVIOUS SETTING
CMDECHO 1

3.15 LAYOFF.LSP

Description:
LO turns selected layer off. You can choose multiple, but the must be chosen one at a time. The order you shut them off is remembered. So, when you use ON they turn back on in the order they were shut off.

How to use:
Follow Command Line prompts and use common sense.
Type LO at the command line.
Type ON at the command line.
Type LO then select an object with the layer you want shut off. Select more if done hit enter. To turn back on Type ON they will cycle back on.

Requirements:
There are no requirements for using this routine

Errors:
No known errors.

3.16 MATCH.LSP

Description:
This program inserts blocks at the correct spacing to depict your baseline

How to use:
Follow Command Line prompts and use common sense.
Type ML at the command line.
The user will select the baseline for block placement.

Requirements:
Must have ML.DWG in preference path.
Must have BASELINE layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:
If blocks are inserted upside-down user must reverse
the direction of the polyline. Polyline direction must be from left to right. If you miss the line you will need to start over.

3.17 PJOIN.LSP

Description:
This joins Lines, Arrows, Polylines, and LwPolylines together.

How to use:
Follow Command Line prompts and use common sense. Type PJ at the command line. Select line entity that you want to join. Then select other lines to join with the first one.

Requirements:
There are no requirements for using this routine.

Errors:
End points of lines are not exact. Solution: Grip one end point to the other.

3.18 PVC.LSP

Description:
Trims PVC on the HDPE line.

How to use:
Follow Command Line prompts and use common sense. Type PVC at the command line. Select the cable line in between the magenta lines.

Requirements:
Must have CABLE layer created in drawing. Proper "REP" command must be loaded and previously ran.

Errors:
If you receive an error that says " error: bad argument type: 2D/3D point: nil:" then zoom out and try again.
If you select the line and text comes in crooked make sure there are no other lines near that will interfere.
If you cancel out of the command, you will need to reset the following variables.
UCS  PREVIOUS SETTING
OSNAPS  PREVIOUS SETTING
APERTURE  PREVIOUS SETTING
PICKBOX  PREVIOUS SETTING
LAYER  PREVIOUS SETTING
CMDECHO 1

3.19 PWIDTH.LSP

Description:
This changes the width of Lines, Arrows, Polylines, and LwPolylines.
How to use:
Follow Command Line prompts and use common sense.
Type PW at the command line.
Select line entity that you want to change the width of, then enter your width.

Requirements:
There are no requirements for using this routine.

Errors:
No known errors.

3.20 RB.LSP

Description:
This program draws a centerline and places the break line and text for a perpendicular road of sidewalk.

How to use:
Follow Command Line prompts and use common sense.
Type RB at the command line.
Type SB at the command line.
Pick left road line, then right road line.
If you want test pick a point for it and type the name of the road.
If you choose not to place text hit enter twice and it will finish the program.

Requirements:
Must have BREAK.DWG in preference path.
Must have ROAD layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:
If road is not properly drawn then reselect the lines.

3.21 RL.LSP

Description:
This program rotates a leader to match its corresponding guideline.

How to use:
Follow Command Line prompts and use common sense.
Type RL at the command line.
Select Leader then select corresponding guideline.

Requirements:
There are no requirements for using this routine.

Errors:
No known errors.

3.22 ROAD.LSP

Description:
This program drafts a road. Including centerline, break line, and text.

How to use:
Follow Command Line prompts and use common sense.
Type RTOP at the command line.
Type RBTM at the command line.
When drafting a drawing from scratch a VEE block is placed at the Begin and End station of a road.
The user will select the left/top VEE then select the right/bottom VEE and the program will draw two lines from those points and place text, centerline, and a break line. Make sure your UCS is set to WORLD prior to running program.

Requirements:
Must have BREAK.DWG in preference path.
Must have ROAD layer created in drawing.
Proper ‘REP’ command must be loaded and previously ran.

Errors:
No known errors.

3.23 SLOPE.LSP

Description:
This program inserts blocks at the correct spacing for a slope line to be depicted.

How to use:
Follow Command Line prompts and use common sense.
Type TOP-DWN at the command line.
Type TOP at the command line.
Type TOE-UP at the command line.
Type TOE at the command line.
The user will select the line they want to depict as the slope.

Requirements:
Must have TOP-DWN.DWG, TOP.DWG, TOE-UP.DWG, TOE.DWG & in preference path.
Must have SLOPE layer created in drawing.
Proper ‘REP’ command must be loaded and previously ran.

Errors:
If blocks are inserted upside-down user must reverse the direction of the polyline. Polyline direction must be from left to right. If you miss the line you will need to start over.

3.24 TE.LSP

Description:
Text Edit - Edits Text, Mtext, Attributes, Attdefs and Dimensions.
Multiple Text Edit - Edits text entities in order of selection.

How to use:
Follow Command Line prompts and use common sense.
Type TE at the command line.
Type MTE at the command line.
Requirements:
There are no requirements for using this routine

Errors:
No known errors.

3.25 TERMINATE.LSP

Description:
This program inserts an AHD block to represent a terminating line.

How to use:
Follow Command Line prompts and use common sense.
Type TER at the command line.
Pick END point of line to terminate.
Pick NEAREST point on line to terminate.

Requirements:
Must have AHD.DWG in preference path.
Proper "REP" command must be loaded and previously ran.

Errors:
No known errors.

4 References

<table>
<thead>
<tr>
<th>Reference</th>
<th>Link</th>
<th>Description</th>
</tr>
</thead>
</table>

5 Version History

The latest version of this document can be found at: https://portals.level3.com/sites/GFS/DocumentStore/LISP%20Programs%20Reference%20Manual.docx

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<table>
<thead>
<tr>
<th>Version</th>
<th>Date Published</th>
<th>Business Process Owner (Region)</th>
<th>Document Writer</th>
<th>Summary of Changes</th>
</tr>
</thead>
<tbody>
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