PullingCables.com

DEMO USER MANUAL

inovex

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1.0 INTRODUCTION

Welcome to PullingCables.com. Use this secure web-based cables installation management software to save you time and money. We are confident that you would really like it. Try it and give us your feedback. This is only the beginning. We have great plans for the future. Be sure to be with us on the cutting edge of cable management and we will save you a lot of time, effort and money. Our version1 (not true web-base) has been around since 2006 and has served very well in managing cable installations and commissioning at greenfield industrial site projects. Pullingcables.com, version 2 replaces version 1.

The name PullingCables came from the fact that on a large construction site, a major and very important part of the electrical installation is the pulling and termination of all the electrical cables. Tracking the status of cable installations in readiness for commissioning the various systems and eventually the entire plant can be very challenging without an effective cable management system. PullingCables.Com makes it easy for project managers, owners and authorized users to know at anytime and anywhere, the status of the cable installations on their projects.

After the project, owners can integrate PullingCables database into their plant maintenance management systems. Several features of PullingCables will facilitate the plant's cable maintenance management program.

The objectives of PullingCables.com are not limited to the following 10 key advantages that show why pullingcables.com will be a definite asset to organizations.

Quick Points on PullingCables.com:

- Is web-based so that managers and authorized users can access cable information and print reports at anytime and anywhere. It saves time for everyone
- Removes the tedious tasks of manipulating one or more spreadsheets (cable schedules) to retrieve cable information
- Facilitates searching for cables when there are more than one cable schedule for the project
- Gives contractors an effective and efficient tool that they can use to prepare their cable bundles when more than one cable is being pulled through the same raceway
- Gives project managers a tool that they can use to easily track cable waste when cables are cut-in to the electrical box for termination; a major cost savings on projects
- Facilitates progress payments for completed work, based on completed installed cables, for project managers and contractors
- Gives owners, project managers and contractors a quick at a glance status report of cables and systems (Turnover packages) where cable installations are complete and ready for commissioning
- Manage cables for unlimited projects simultaneously
- Allows unlimited users
- Provides users with Search and export features that save time in accessing, exporting and printing cable information. Users don't have to wait for cable information and cable installation status reports from others. They can quickly search for the information that they want and print it
- Generates equipment lists
- Provides date stamped comment space that can be used by Construction, Commissioning, Maintenance and Operations personnel to track cable issues, tasks performed and notes.

Cables are a very important asset for any organization and the features of PullingCables.com will help in the management of these cables. Updates will be an ongoing process in order to continually add value to your organization and help you manage your new and already installed cables.

A big advantage of PullingCables.com is the fact that it is simple to use.

After importing your cable schedules (spreadsheets) into pullingcables.com, you are ready to experience how this software facilitates your electrical installations on a construction site. The software is intended to enhance your approach to managing cable installations for your organization or your clients. Your managers and colleagues will be kept abreast with the status of installed cables with only a few key strokes. It takes only seconds. Your managers will marvel at the effectiveness and the efficiency of the cable installation and the management of the installations.

After the plant is commissioned, plant managers can integrate PullingCables.com into the plant's maintenance program. The integration allows them to easily track maintenance tasks, cable issues and follow-up actions using the comment sections for Maintenance and Operations.

2.0 GETTING STARTED

Although some users will begin to use PullingCables.com without taking the tutorial because of its user friendliness, the DEMO1 tutorial is available on the Inovex website. It will help you to quickly navigate through the features of PullingCables.com.

Please access the website to begin the demo "**Project Demo1**" by using the following instructions:

1. Get your user name and password by sending email info@inovex.ca
2. Go to http://dev.inovex.ca:5501/
3. PullingCables.com page is displayed
4. Log on.
5. Enter the email address and password assigned to you and click "Log in"

    i. Email: demo_user@inovex.ca (user name assigned)
    ii. Password: demo_password (password assigned)

Fig.1 Log in screen

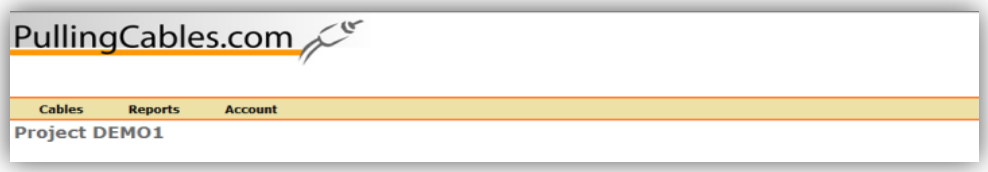


Fig.2 Display after Log in

Displayed in the menu bar after "log in" (Fig. 2) are "**Cables**", "**Reports**", "**Administration**" and "**Account**". In the demo version you will not be able to see or access "Administration". You can access "Accounts" and view your profile. There is only one project that is already selected in this demo. It is called "Demo1". Should your organization

decide to be a licenced user of this software, your administrator will be able to access “Administration” in order to set-up your organization, users’ accounts and projects. The administrator or designate will also be able to set-up users’ permissions and import cable schedule(s) for the project(s).

This demo is set-up and ready for you to explore the features of PullingCables.com, Version 2. It will help you to effectively and efficiently manage your cable installations. A demo cable schedule (spreadsheet) has already been imported into pullingcables.com software for your use.

3.0 CABLE SEARCH

Let's explore some of the important features of PullingCables.com.

Position your cursor over "Cables" in the menu bar at the top of the page and select "Search" from the drop-down menu. "Search for Cables" page (Fig. 3) is displayed. Note: In the Demo, you will not see the "import Cable file" in the drop down menu.

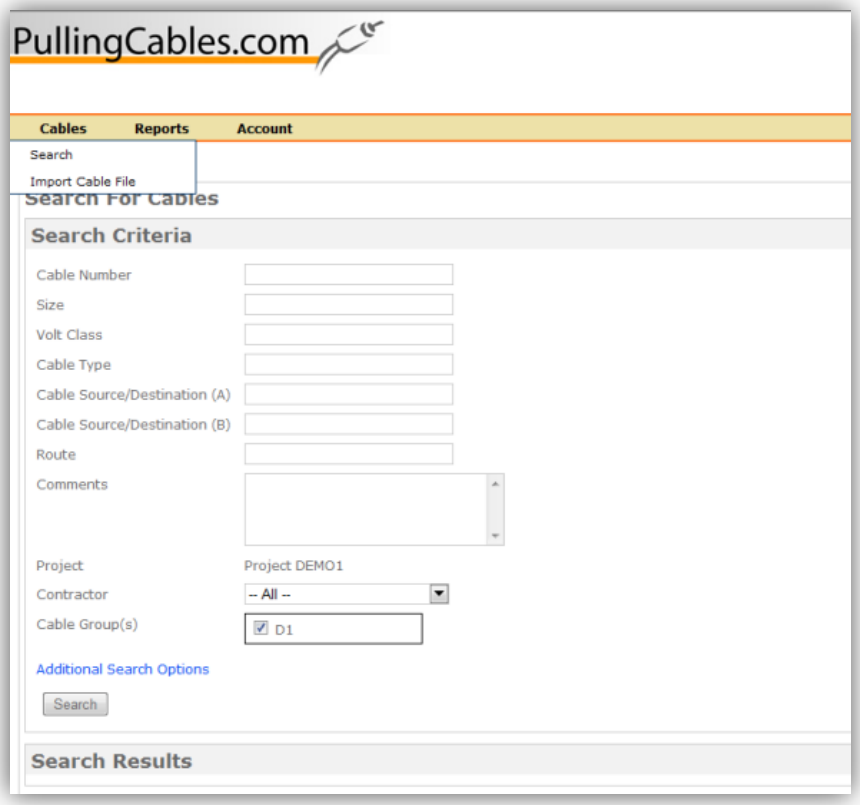


Fig.3 Search For Cables page

1. There are eight (8) fields that the user can use to search for cable information. They are the first eight fields in the "Search for Cables" page shown below (Fig.4).

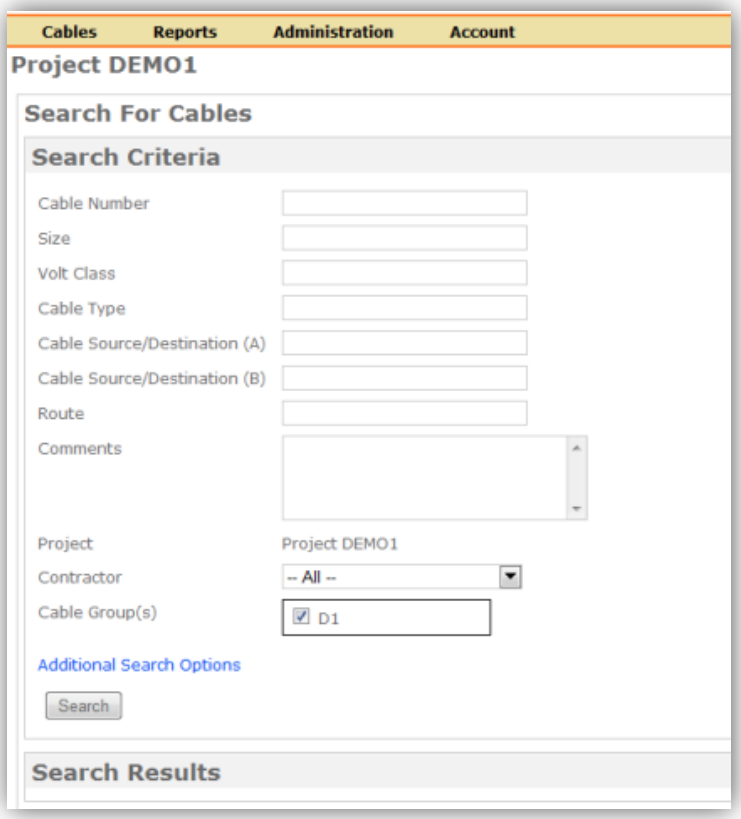


Fig.4 Part of Search for Cables page

2. The “Project” field shows the project name (Project DEMO1).
3. The “Contractor” field is a drop-down menu that selects the contractor and the assigned cables in his contract.
4. By selecting “All”, in the “Contractor” field drop-down menu, the user can search through “All” cable schedules on the project, regardless of the Contractor. Selecting “All” is recommended.
5. The “Cable Group” box is automatically selected (checked) by the software for all groups of cables in the database. Since there may be more than one cable schedule (Power, Control, Instrumentation etc.) on a project and more than one electrical contractor assigned to install cables, a grouping system is used to allow the selection of one or more of the schedules pertaining to the same contract. The same contractor may be awarded the contract for the installation of cables in more than one cable schedule. These cable schedules will be placed in the same cable Group in the database. In the demo, only one checked box is shown because only one cable schedule was imported.
6. At the outset of the project, the Administrator or user assigned to import cable schedules into pullingcables.com database will assign group numbers to the cable schedules based on contract assignments. In addition, the Administrator will list the electrical contractor(s) in the project set-up page (Fig. 5). This page is not available in the demo.

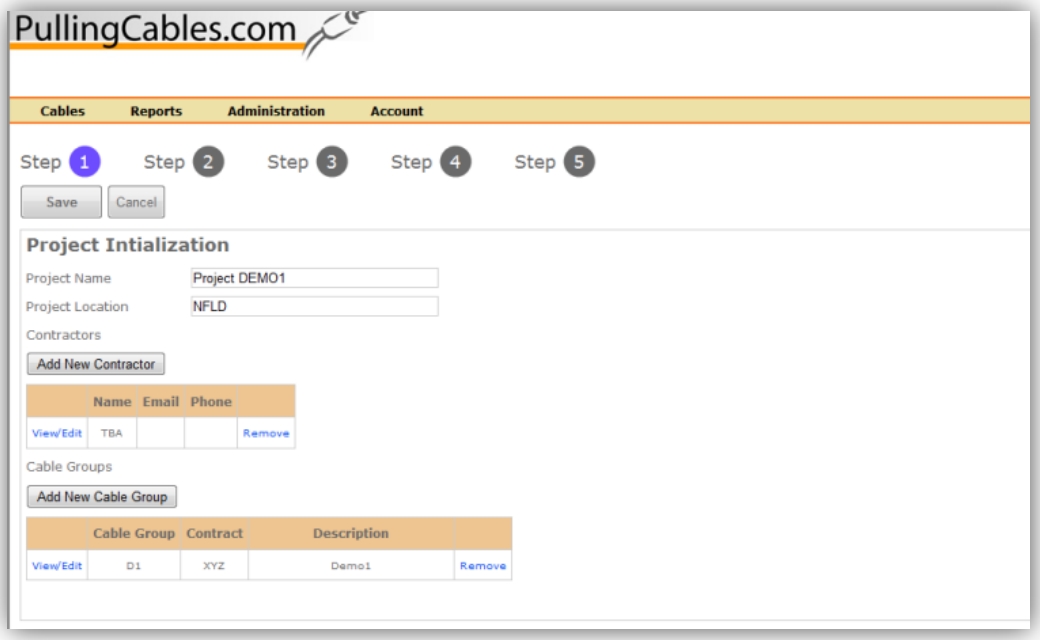


Fig.5 Project set-up page for adding new “Contractors” and “Cable Groups”

7. The user who is searching for cables has the option to un-check group box or boxes in the “Cable Group(s)” field (Fig. 6). This action narrows the cable search, down to the Group boxes that are checked. Demo1 shows one checked box for D1 cable group (described in the set-up as Control Cables).

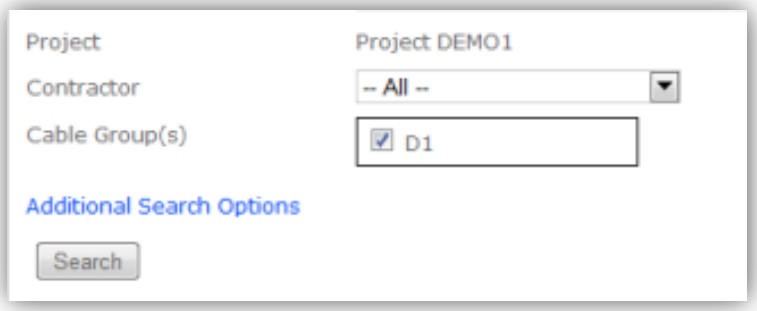


Fig.6 Project, Contractor and Group fields

8. The user will not be able to find cables in the database where Cable Group(s) (cable schedule) box is unchecked. When searching for cables on a project it is recommended to have all Cable Group boxes checked to gain the advantage of searching through the entire database (all cable schedules).
9. By leaving all the fields blank and executing “Search” using the “Search” button in the lower left hand corner of the “Search for Cables” page, all cables in the database will be displayed. In this demo, there are 250 cables in the database. First, check that there are no entries in any of the search fields on the page; then press the “Search” button. The Search results will show the displayed cables.

10. Continue to familiarize yourself with the "Search for Cables" page in the following steps.
11. The "Show Task Dates" box in Fig.7 is selected whenever you wish to see the tasks completion status of the cables in your search.

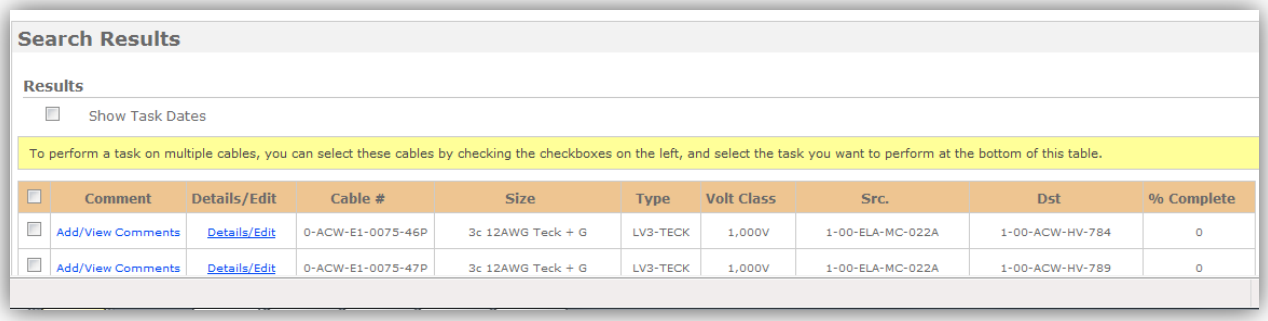


Fig. 7 "Show Task Dates" box unchecked

12. The expanded display shows the dates that the cables displayed were pulled and the % completion for each cable (Fig. 8).

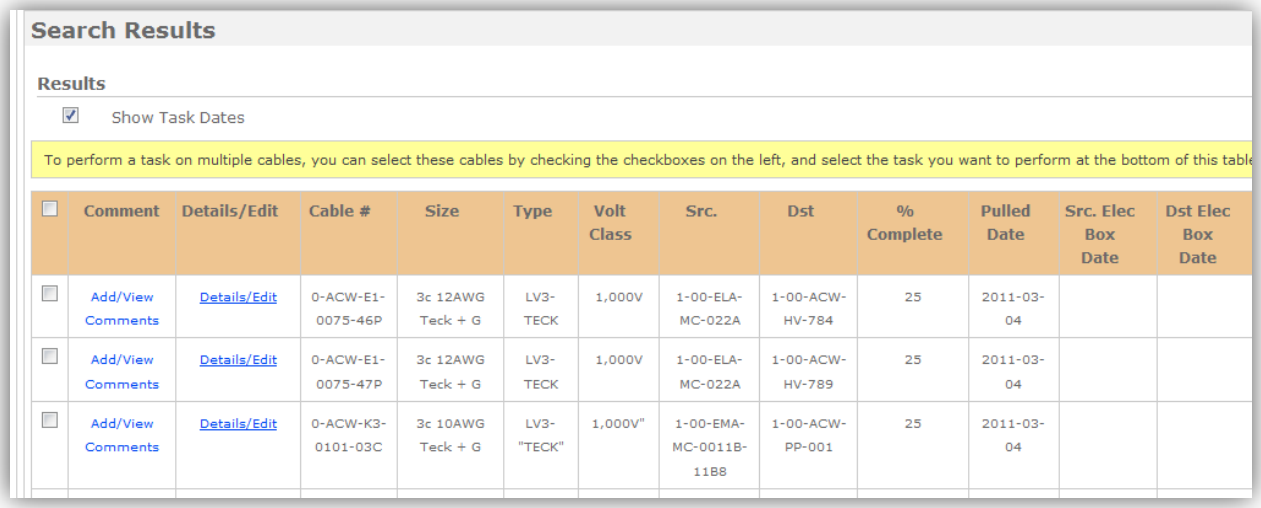


Fig. 8 "Show Task Dates" box checked (tasks columns are displayed) – Partial screen display

13. The % weighting of each task is an administration function. The project manager and the contractor may agree on the weighting for each task. The weight for each task is entered during the set-up before beginning to manage the cables. In this demo the % weighting assigned to each task has been pre-set as shown in the table (Fig.9). As the various tasks are completed, the % complete column is updated based on the assigned weighting entered for the project.

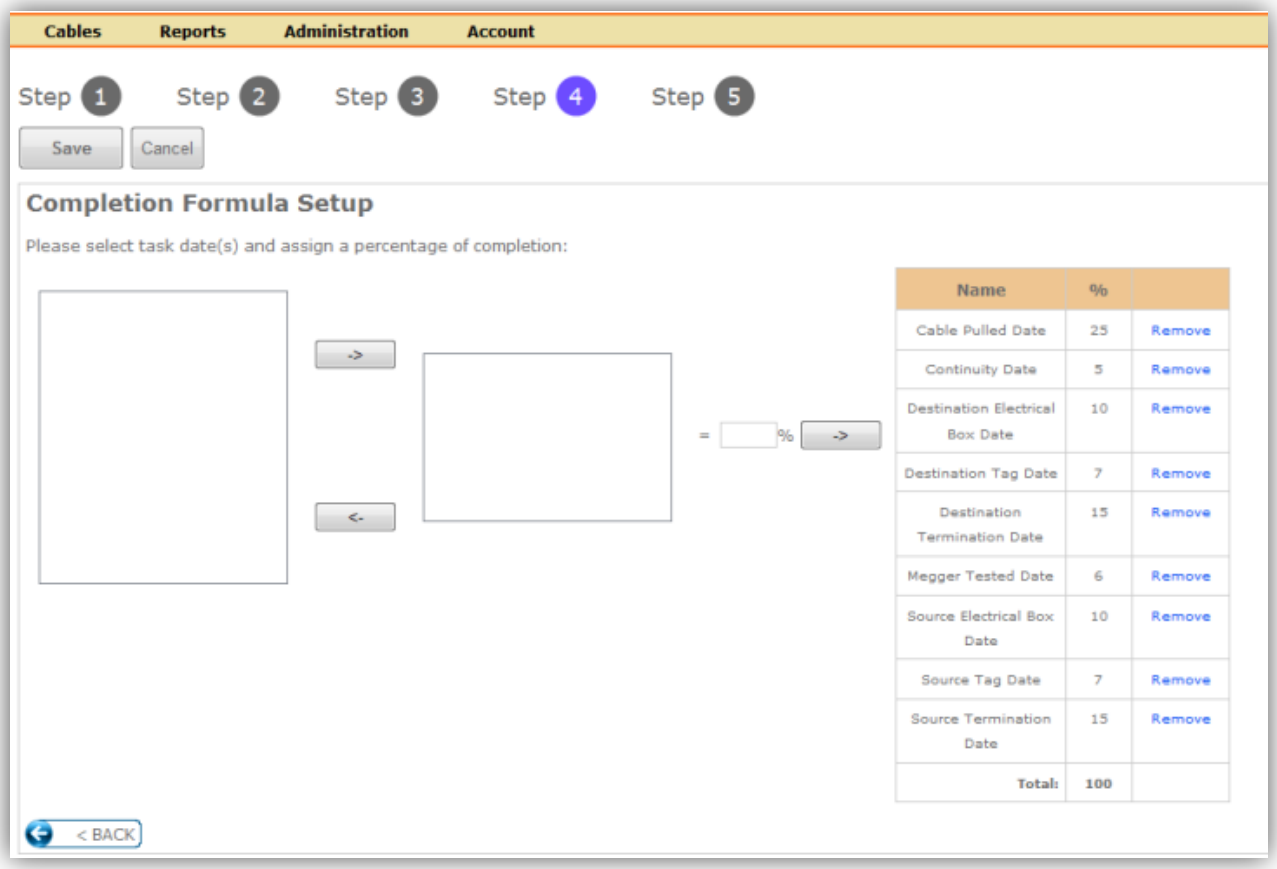


Fig.9 Assigned % weighting for each cable task

14. The highlighted “Has comment(s)” box in (Fig.10) tells you that comments exist for that cable whenever the cable displayed is highlighted.

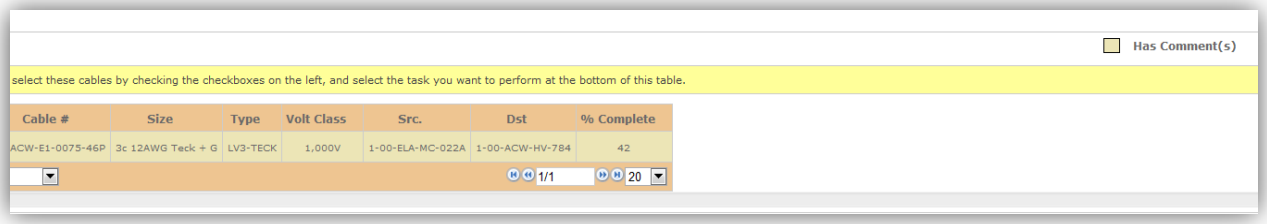


Fig.10 Highlighted cable

15. The yellow highlighted message bar at the top of the displayed cables (Fig.11) instructs you how to perform the same task for multiple cables. This is a great time saver especially when cable bundles containing several cables are pulled through conduit and the same task completion dates for several cables have to be entered.

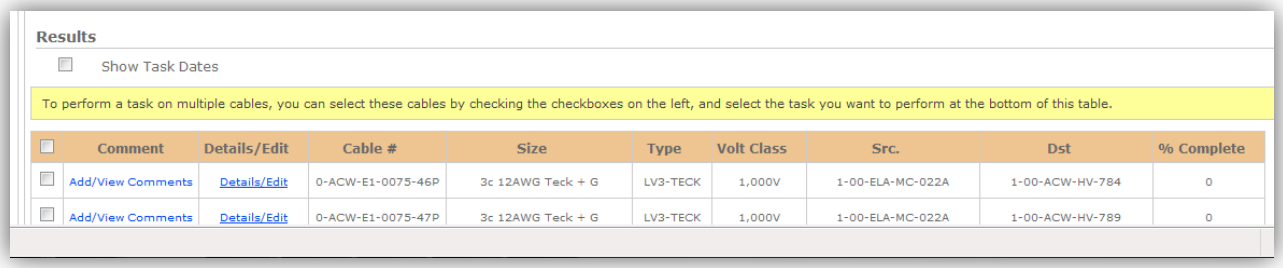


Fig.11 Yellow highlighted message

16. Let's assume for example that the electricians pulled 8 "ACW" cables (cables with ACW in the cable number) from Source (Src) to Destination (Dst) on a certain day and you want to quickly record this. Enter "ACW" in the Cable Number field and press "Search". The cables that contain "ACW" will be displayed (Fig. 12).

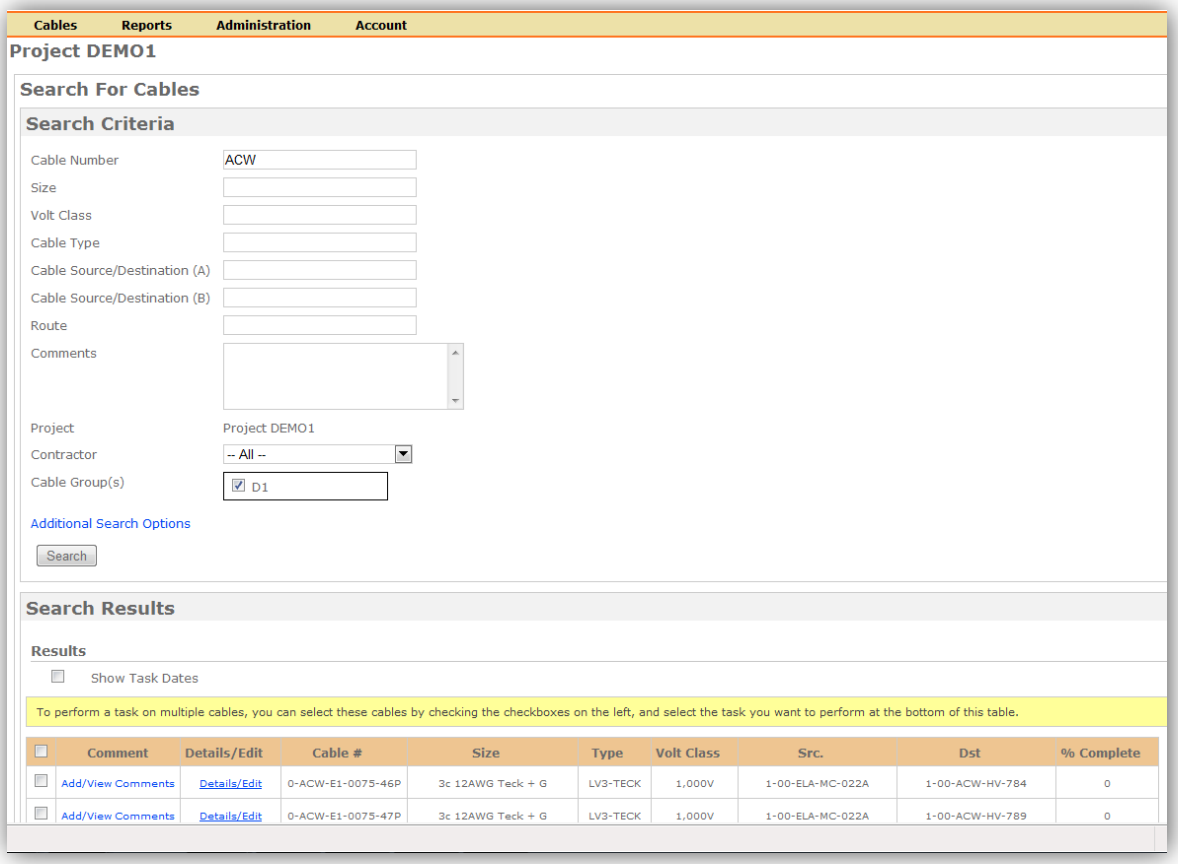


Fig.12 Partial Screen shot showing two of the eight cables displayed

17. Do the following in sequence:

i. Either check the box (Fig.13) for each cable individually or since you wish to record the same date for all cables, you can just check the box at the left hand side of the "comment" header and all cables will be selected
ii. Go to the task bar at the bottom of the page (Fig.13) and select from the drop down menu "Cable Pulled Date".
iii. Cable Pulled Date box (Fig.14) will be automatically displayed for you to select the date the cables were pulled.

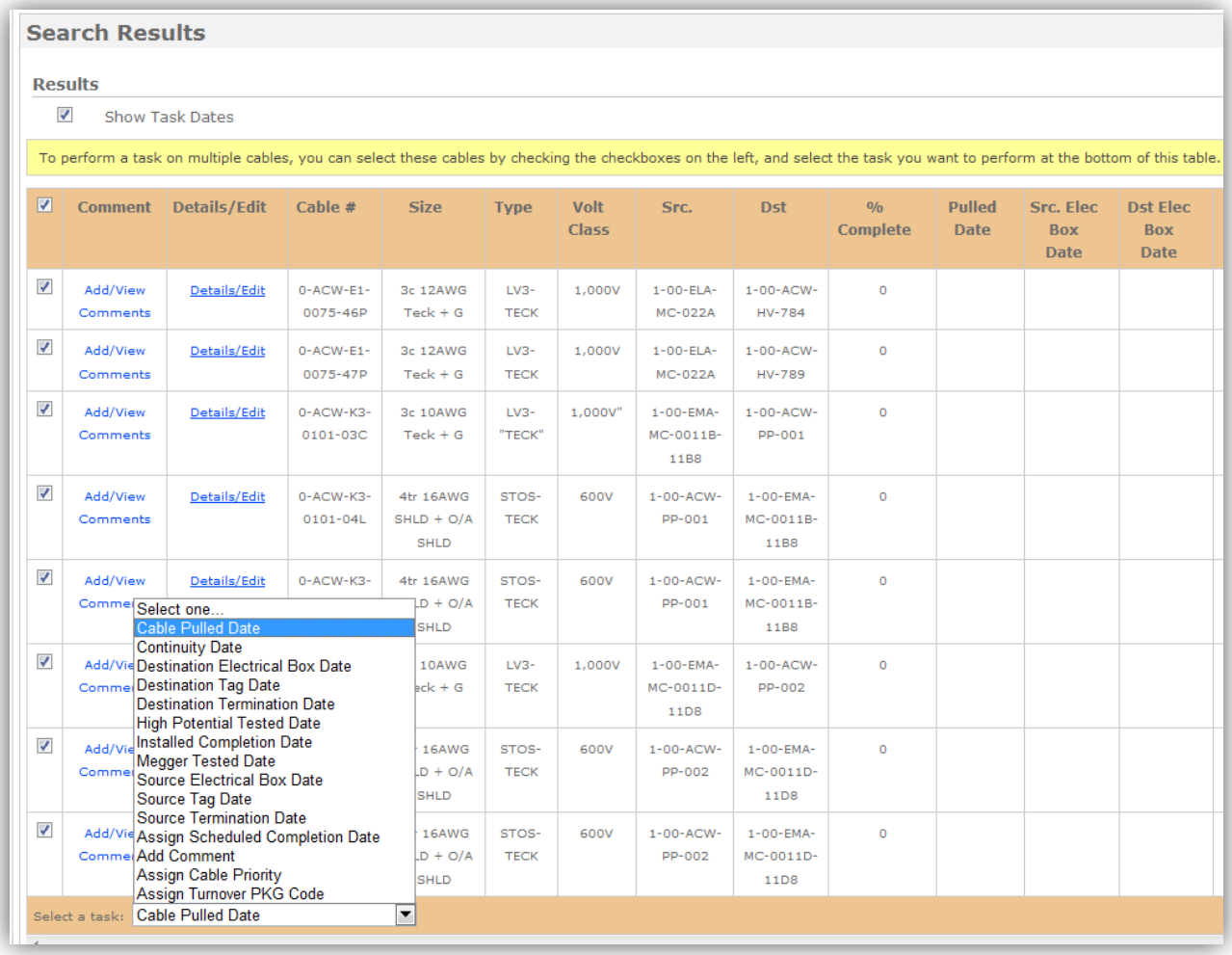


Fig.13 Checked boxes and tasks menu (partial screen – all columns not shown)

18. Position cursor in the field "Select a date" for "Cable Pulled Date" and click to display the calendar. Note: the highlighted date on the calendar (Fig.14) is the date that the entry was made.

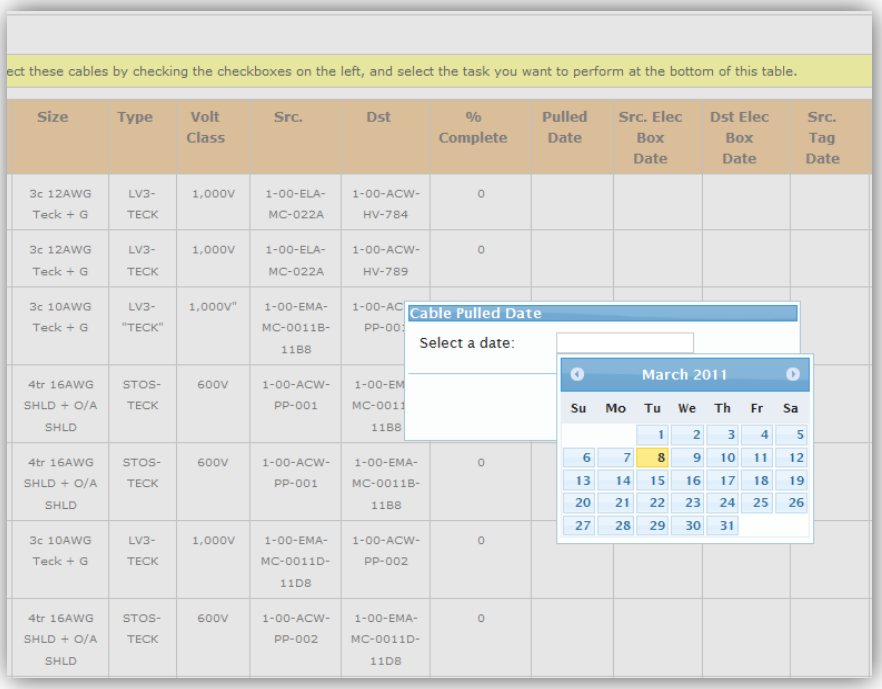


Fig.14 Selecting Cable Pulled Date (partial screen – all columns not shown)

19. Save "March 4th, 2011 as the "cable pulled date" (Fig.15)

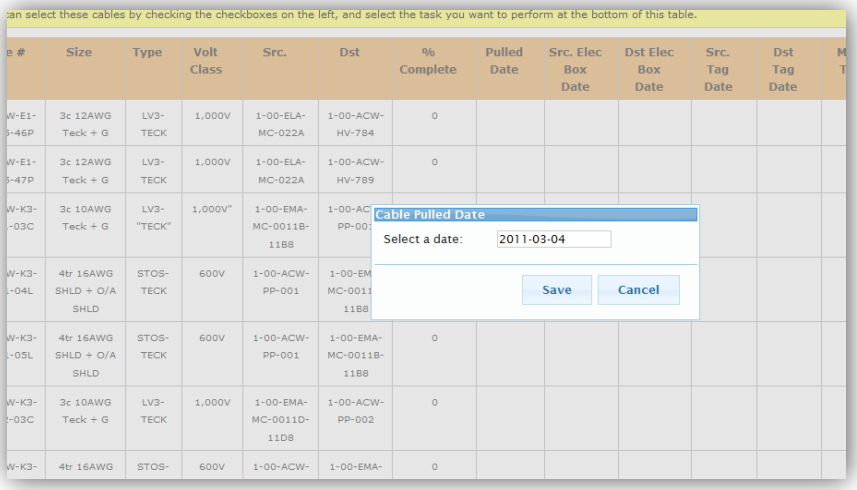
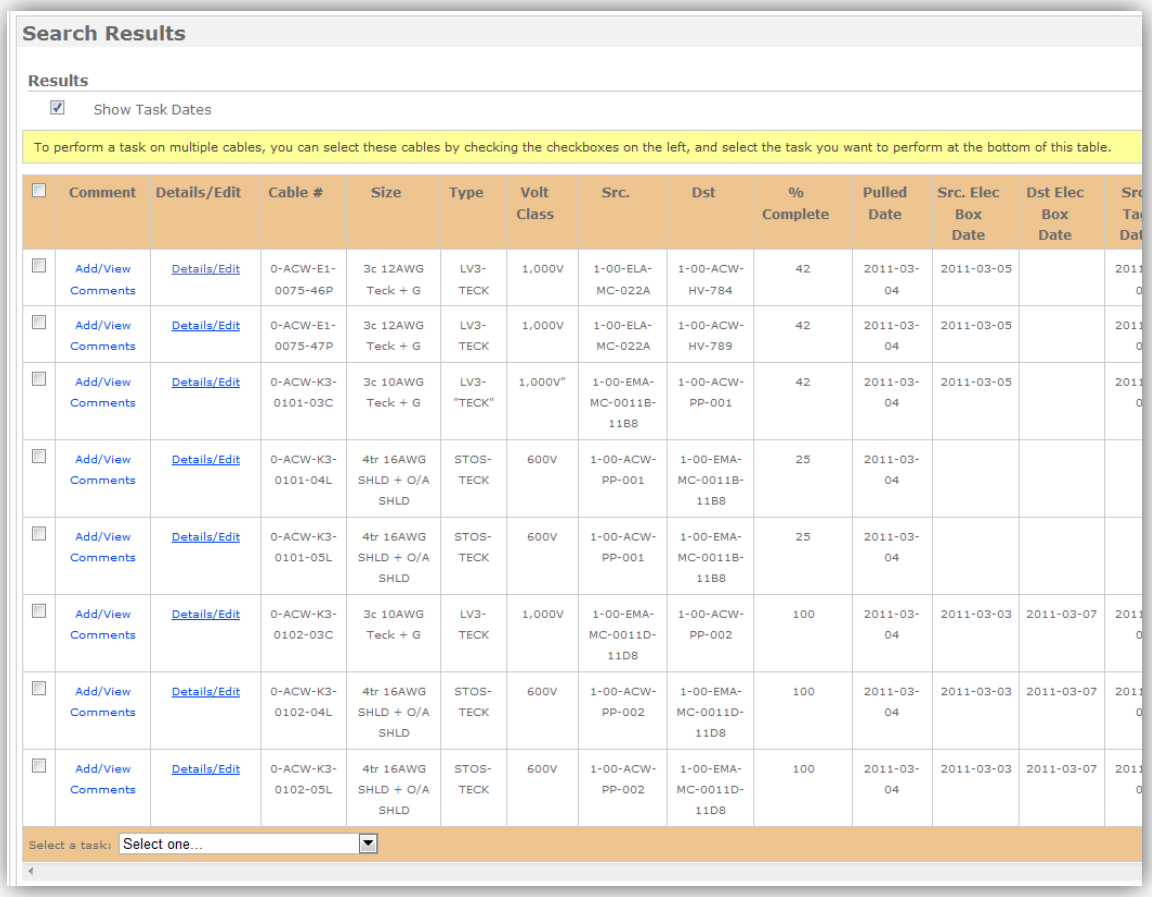


Fig.15 Saving Cable Pulled Date (partial screen – all columns not shown)

20. Populate the page by entering other task dates. Select other tasks as they are performed for these cables. Note: task date for individual cables or a group of cables may be selected. Observe that as the completion dates are entered, the cable installation completion (% completion) is automatically updated (Fig.16) based on the pre-determined weighting for each cable task (Fig. 9). When all tasks are completed for a cable (each task column for

that cable is populated with the task completion date), the "installation completed date" column will be automatically populated with the date of the last task completed. In addition, the % completion for that cable will show 100%.

Note: <u>If a task is selected from the drop down menu at the bottom of the page before cable boxes are checked, the calendar will not be displayed automatically.</u> Should this occur check the cable box(es) then select "select one" in the drop down menu and then reselect the task that you want



Search Results

Results

Show Task Dates

To perform a task on multiple cables, you can select these cables by checking the checkboxes on the left, and select the task you want to perform at the bottom of this table.

Comment	Details/Edit	Cable #	Size	Type	Volt Class	Src.	Dst	% Complete	Pulled Date	Src. Elec Box Date	Dst Elec Box Date	Src Ta Dat
Add/View Comments	Details/Edit	0-ACW-E1-0075-46P	3c 12AWG Teck + G	LV3-TECK	1,000V	1-00-ELA-MC-022A	1-00-ACW-HV-784	42	2011-03-04	2011-03-05		2011 0
Add/View Comments	Details/Edit	0-ACW-E1-0075-47P	3c 12AWG Teck + G	LV3-TECK	1,000V	1-00-ELA-MC-022A	1-00-ACW-HV-789	42	2011-03-04	2011-03-05		2011 0
Add/View Comments	Details/Edit	0-ACW-K3-0101-03C	3c 10AWG Teck + G	LV3-"TECK"	1,000V"	1-00-EMA-MC-0011B-11B8	1-00-ACW-PP-001	42	2011-03-04	2011-03-05		2011 0
Add/View Comments	Details/Edit	0-ACW-K3-0101-04L	4tr 16AWG SHLD + O/A SHLD	STOS-TECK	600V	1-00-ACW-PP-001	1-00-EMA-MC-0011B-11B8	25	2011-03-04			
Add/View Comments	Details/Edit	0-ACW-K3-0101-05L	4tr 16AWG SHLD + O/A SHLD	STOS-TECK	600V	1-00-ACW-PP-001	1-00-EMA-MC-0011B-11B8	25	2011-03-04			
Add/View Comments	Details/Edit	0-ACW-K3-0102-03C	3c 10AWG Teck + G	LV3-TECK	1,000V	1-00-EMA-MC-0011D-11D8	1-00-ACW-PP-002	100	2011-03-04	2011-03-03	2011-03-07	2011 0
Add/View Comments	Details/Edit	0-ACW-K3-0102-04L	4tr 16AWG SHLD + O/A SHLD	STOS-TECK	600V	1-00-ACW-PP-002	1-00-EMA-MC-0011D-11D8	100	2011-03-04	2011-03-03	2011-03-07	2011 0
Add/View Comments	Details/Edit	0-ACW-K3-0102-05L	4tr 16AWG SHLD + O/A SHLD	STOS-TECK	600V	1-00-ACW-PP-002	1-00-EMA-MC-0011D-11D8	100	2011-03-04	2011-03-03	2011-03-07	2011 0

Select a task: Select one...

Fig.16 Dates entered for several completed tasks (Partial screen – all columns are not shown)

21. There are two boxes at the bottom right hand corner of the displayed cables (Fig.17). The box to the right has a drop down display of numbers. These numbers represent the maximum lines of cable information per page that will be displayed. The user can select the number of lines of information per page. The box to the left displays page numbers.

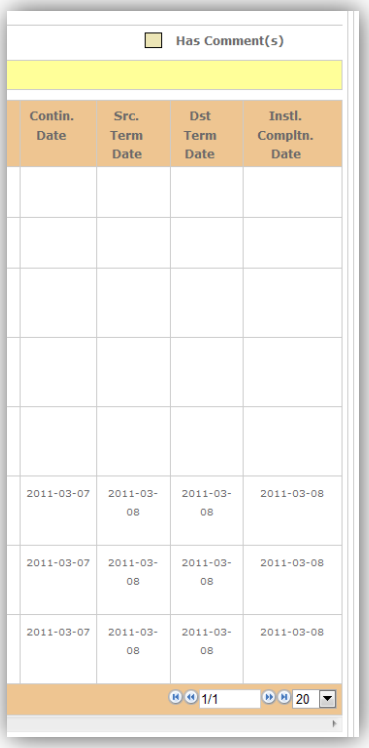


Fig.17 Partial Screen – Right hand side

22. The "Export Search Results" box at the top right hand corner of the Search page (Fig.18) is used to export your search results to an Excel spread sheet.

Fig.18 Export

23. After selecting the export to Excel, the page below is displayed. Before exporting your search results to Excel, you now have the option of selecting other fields (Fig.19) that were not displayed in the Search Results page. In this example we have checked four additional fields for export to Excel. They are: Cable "Route", Length, the length Unit and Cable Pulled Date. After this selection we can now "Export" to Excel (Fig.20).

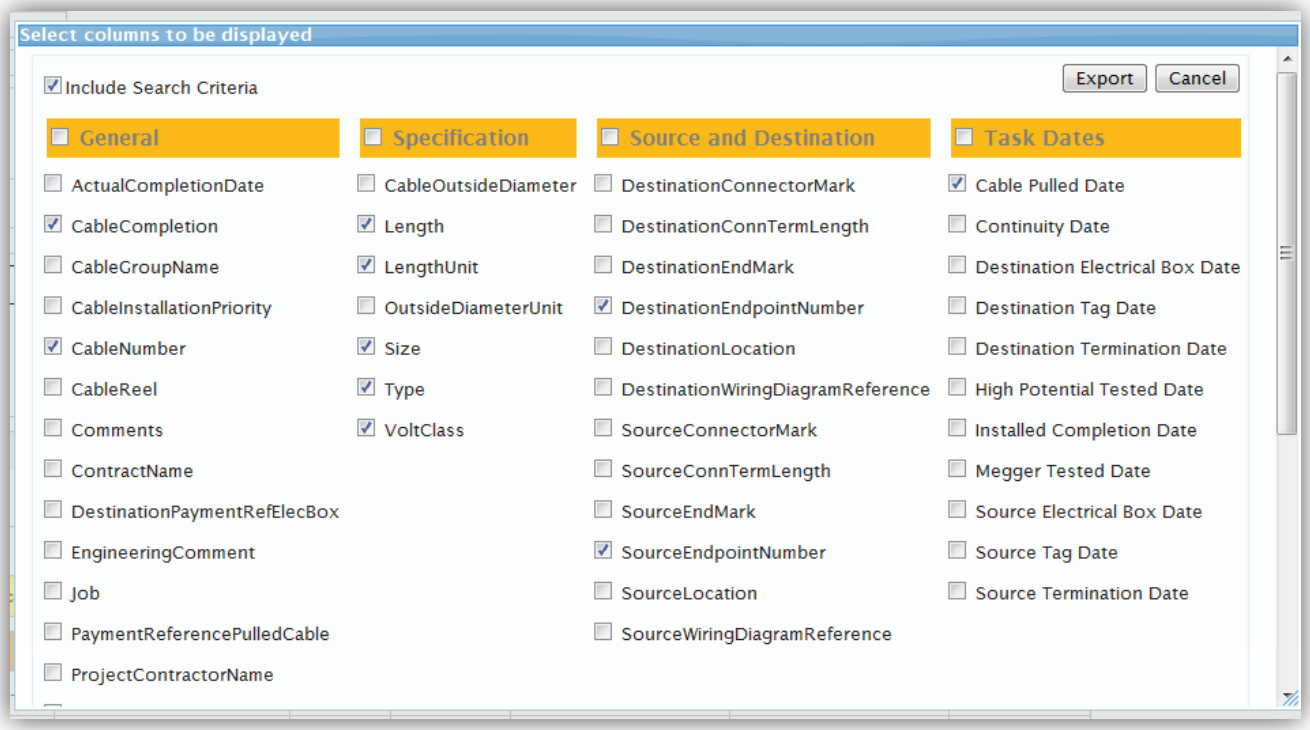


Fig.19 Selection of Additional Fields for Export – Checked fields are exported to Excel

	A	B	C	D	E	F	G	H	I	J
1	Search Criteria									
2	Cable Number	Project	Cable Group(s)							
3	ACW	Project DEMO1	D1							
4										
5	CableNumber	Size	Type	SourceEndpointNumber	DestinationEndpointNumber	Cable Completion	Route	Length	Length Unit	Cable Pulled Date
6	0-ACW-E1-0075-46P	3c 12AWG Teck + G	LV3-TECK	1-00-ELA-MC-022A	1-00-ACW-HV-784	42%	TP5538, Drop, DP7115, Drop, TP7562, Drop, Terminal End	108	m	04/03/2011
7	0-ACW-E1-0075-47P	3c 12AWG Teck + G	LV3-TECK	1-00-ELA-MC-022A	1-00-ACW-HV-789	42%	TP5538, Drop, DP7115, Drop, TP7562, Drop, Terminal End	112	m	04/03/2011
8	0-ACW-K3-0101-03C	3c 10AWG Teck + G	LV3-"TECK"	1-00-EMA-MC-0011B-11B8	1-00-ACW-PP-001	42%	TC5324, Drop, DC7111, Drop, TC7320, Drop, Terminal End	115	m	04/03/2011
9	0-ACW-K3-0101-04L	4tr 16AWG SHLD + O/A SHLD	STOS-TECK	1-00-ACW-PP-001	1-00-EMA-MC-0011B-11B8	25%	Terminal End, Drop, RL7103, Drop, TL7011, Drop, Terminal End	104.1	m	04/03/2011
10	0-ACW-K3-0101-05L	4tr 16AWG SHLD + O/A SHLD	STOS-TECK	1-00-ACW-PP-001	1-00-EMA-MC-0011B-11B8	25%	Terminal End, Drop, RL7103, Drop, TL7011, Drop, Terminal End	105.1	m	04/03/2011
11	0-ACW-K3-0102-03C	3c 10AWG Teck + G	LV3-TECK	1-00-EMA-MC-0011D-11D8	1-00-ACW-PP-002	100%	Terminal End, Drop, DC7111, Drop, TC7320, Drop, Terminal End	106	m	04/03/2011
12	0-ACW-K3-0102-04L	4tr 16AWG SHLD + O/A SHLD	STOS-TECK	1-00-ACW-PP-002	1-00-EMA-MC-0011D-11D8	100%	Terminal End, Drop, RL7104, Drop, TL7011, Drop, Terminal End	105.1	m	04/03/2011
13	0-ACW-K3-0102-05L	4tr 16AWG SHLD + O/A SHLD	STOS-TECK	1-00-ACW-PP-002	1-00-EMA-MC-0011D-11D8	100%	Terminal End, Drop, RL7104, Drop, TL7011, Drop, Terminal End	104.1	m	04/03/2011

Fig.20 Excel spreadsheet showing Fields Exported

Note: In Excel, you can change the column headings if you wish and insert the excel spreadsheet in a report.

24. There are four groupings in the "Select Columns to be Displayed" page shown above (Fig.19) They are:

- General
- Specifications
- Source and Destination

- Task Dates

These fields can be viewed in the database by selecting “Details/Edit” in the Search Results section of the Search page.

4.0 CABLE DETAILS AND EDITING

After executing a cable search, you may want to view information for a particular cable. Let's view information for cable# 0-ACW-K3-0101-03C. If we are unsure of the exact cable number, we do not have to enter the complete cable number in the search field.

1. You can search for a Cable # (e.g. 0-ACW-K3-0101-03C) or a string of characters in the Cable # (e.g. "ACW-K3") and then select the cable that you want from the list of cables with string "ACW-K3" that will be displayed. Let's search for the entire Cable # 0-ACW-K3-0101-03C. Results are displayed below (Fig.21):

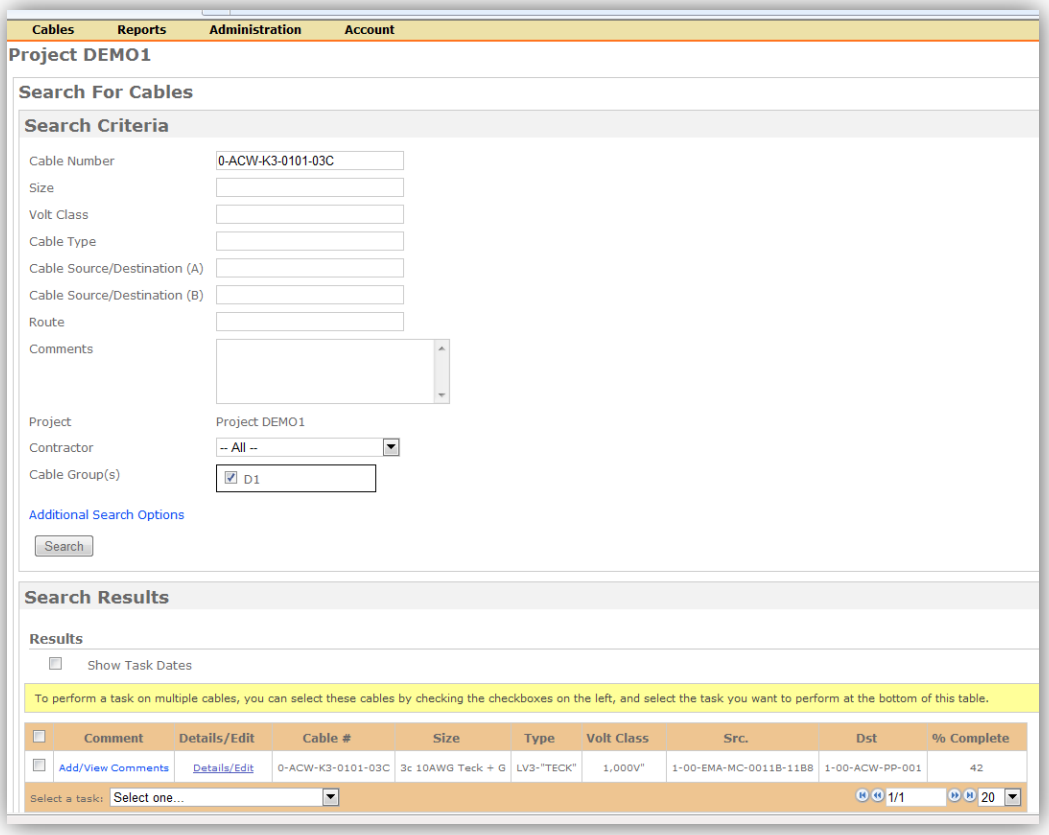


Fig.21 Search for cable "0-ACW-K3-0101-03C

2. Do a search for the string "ACW-K3"
3. Place cursor over "Details/Edit" and click the mouse.
4. **The "General"** tab is highlighted and the cable information in the "General" section of PullingCables database is displayed.

Note: In this section, the fields that were uploaded from the cable schedule (spreadsheet) cannot be edited in this page. Also, there are fields (Contractor, Cable Group # Contractor #, Schedule list, Project) that were set-up by the Administrator for the project that cannot be edited in this page.

The "actual completion date" field is automatically generated when all cable installation tasks are completed. If you want to edit that field, go to the "Task/Dates" tab and make the necessary changes. Remember, the software looks for the task with the latest completion date and generates that date as the actual completion date for that cable installation. You can enter/edit information for other fields. Fields that are currently not used in the demo are: Payment References, Work Code, Cable Reel and Job.

Remember to save any data entered or changed in the General section.

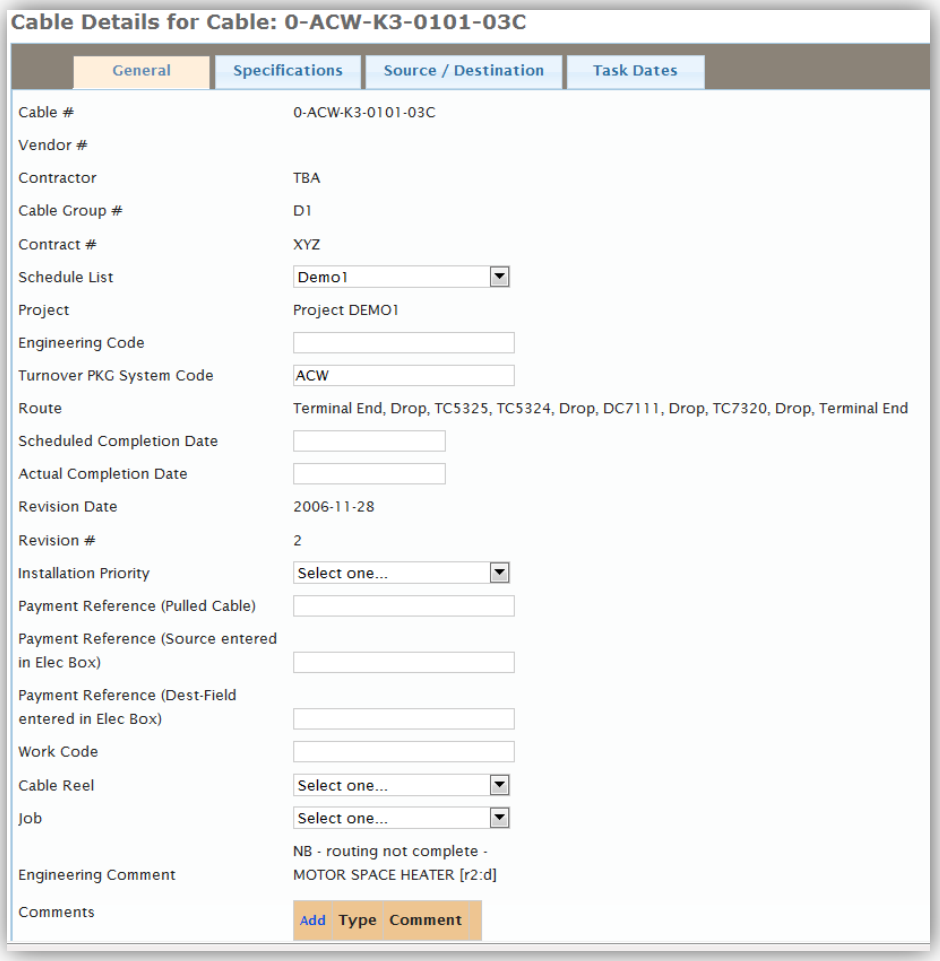


Fig. 22 Cable **General** Information:

5. Place cursor over the "Specification" tab and select it (Fig.23)
6. The **Specification** tab is highlighted and the cable specification is displayed. This information cannot be edited in this page. It can be viewed only. It is engineering information uploaded from the cable schedule (spreadsheet).

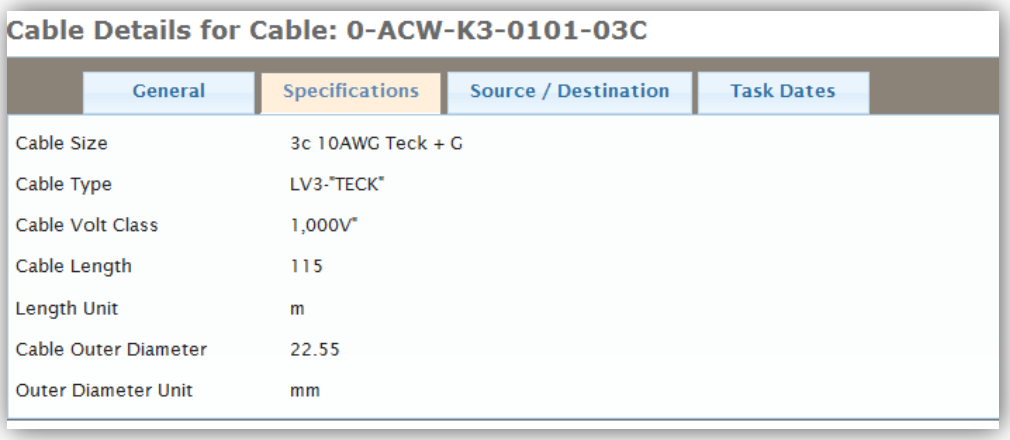


Fig.23 Cable **Specification**

7. Place cursor over the "Source and Destination" tab and select it (Fig.24)
8. **Source and Destination** – The Source and Destination fields show some information from the spreadsheet (cable schedule) that was uploaded. In addition, this page is for the contractor to enter cable meter marks and termination lengths. This data is important on projects where the contractor's progress payments are based on actual cable lengths pulled plus the predetermined waste allowance for cable terminations. Entering the cable markings and termination lengths by the contractor should be a contract requirement.

    a. The actual installed length of each cable is compared to the estimated engineering length to determine if there is a credit to the contractor or to the owner, after the completion of the total cable installation.

        For example, enter the following data for cable# 0-ACW-K3-0101-03C (See Fig.24 and Fig.25):

        Source End Mark - **Es** (enter 25) – the cable manufacturer meter mark stamped on the cable at source end where the cable is cut.

        Destination End Mark - **Ed** (enter 118) – the cable manufacturer meter mark stamped on the cable at the destination end where the cable is cut.

        Source Connector Mark – **Cs** (enter 31) – the cable manufacturer meter mark stamped on the cable at the cut-in connector (where the cable enters the electrical box)

        Destination Connector Mark - **Cd** (enter 112) – the cable manufacturer meter mark stamped on the cable at the cut-in connector (where the cable enters the electrical box)

        Source Conn-Wire Term Length - **Xs** (enter 2) – Estimated or actual measured cable length from the inside of the electrical box at the connector to the termination point.

        Destination Conn-Wire Term Length - **Xd** (enter 0.5) – Estimated or actual measured cable length from the inside of the electrical box at the connector to the termination point. The screen shot below shows actual values that were entered.

        Remember to save the data entered.

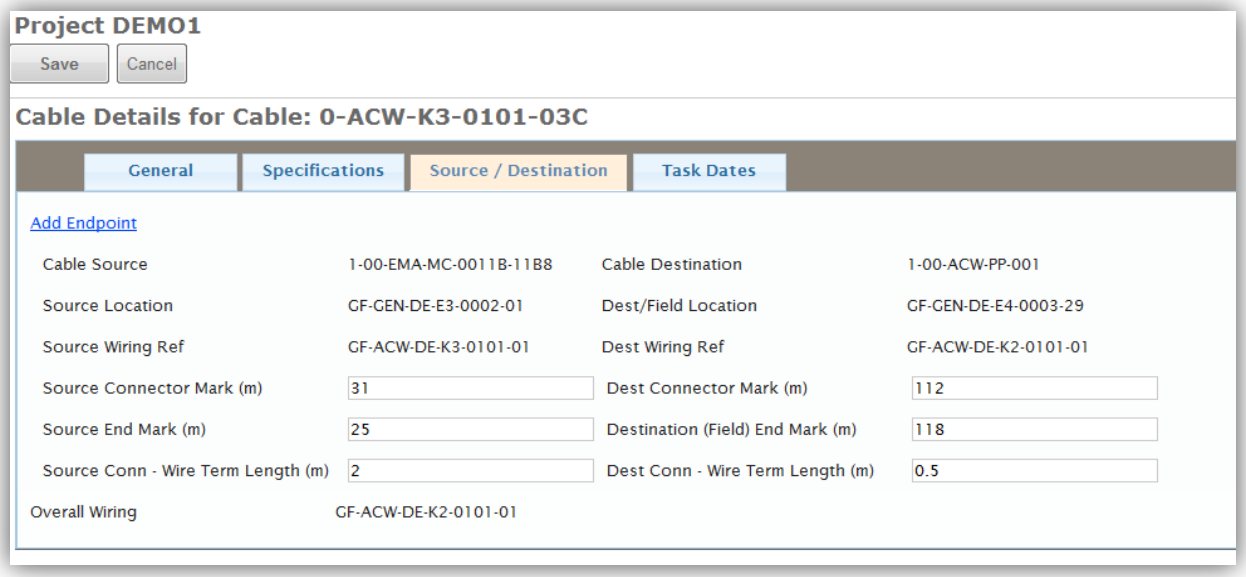
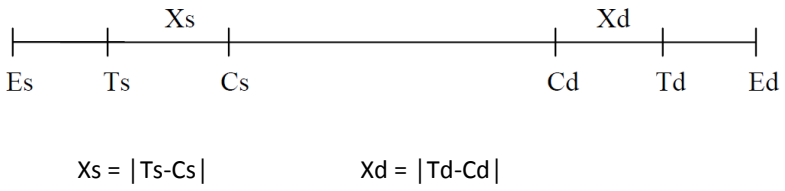


Fig.24 Cable **Source/Destination** information



Xs = |Ts-Cs| Xd = |Td-Cd|

Fig. 25 Cable Marking points and termination lengths (Xs and Xd)

9. Place cursor over the "Task Dates" tab and select it (Fig.26)
10. **Task Dates** – The "Task Dates" page shows the dates when cable tasks were completed. You can view and edit cable tasks completion dates on this page.

    If however, there are task dates to be entered or edited for several cables, it may be more efficient to go to the Search Results page, select "Show Task Dates" and enter the dates for the various tasks. Remember that the installation completion date is automatically entered and it will always be the same date as the last completed cable installation task. Remember to save your changes.

    View in Fig.26 task completion dates that were already entered for this cable.

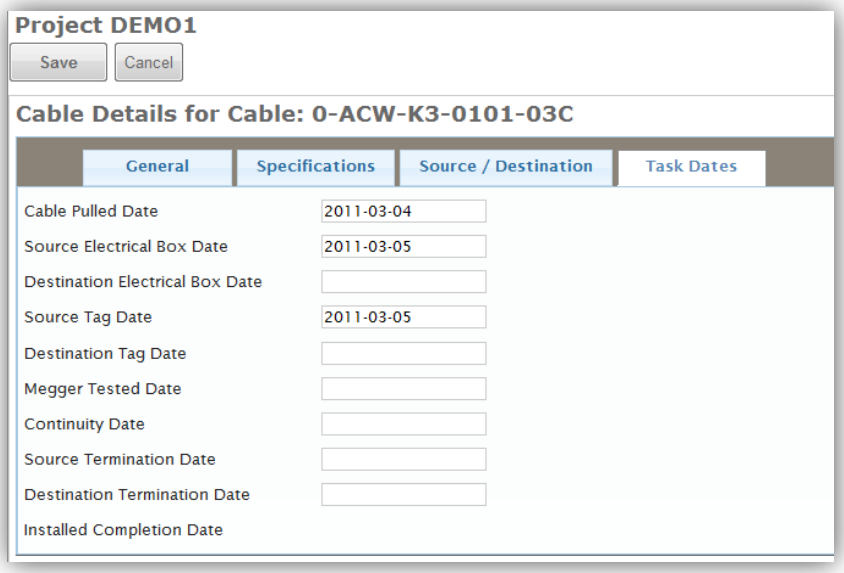


Fig.26 **Task Dates**

5.0 ADDITIONAL SEARCH OPTIONS:

At the bottom left hand corner of the "Search For Cables" page (Fig.27), you can select "Additional Search Options". Use this feature to determine the tasks that were completed in a specified date range. This is a useful check when the contractor is requesting payment for tasks completed in a specified period. It is useful also, when you want to determine quickly the cable tasks completed in a certain period. It is important to note here that the onus is on the contractor to enter the dates that tasks were completed as set forth in his contract; especially on contracts where payment for cables installed is based on this information. Please do the following:

1. Position the cursor on "Additional Search Options" and click your mouse.
2. View the date fields displayed for each of the cable tasks. Enter the period for the cable task that you wish to view completion status. For example, search for cables that were pulled from March 1st, 2011 to March 9th, 2011. The results show the cables pulled and their % completion (Fig.27).

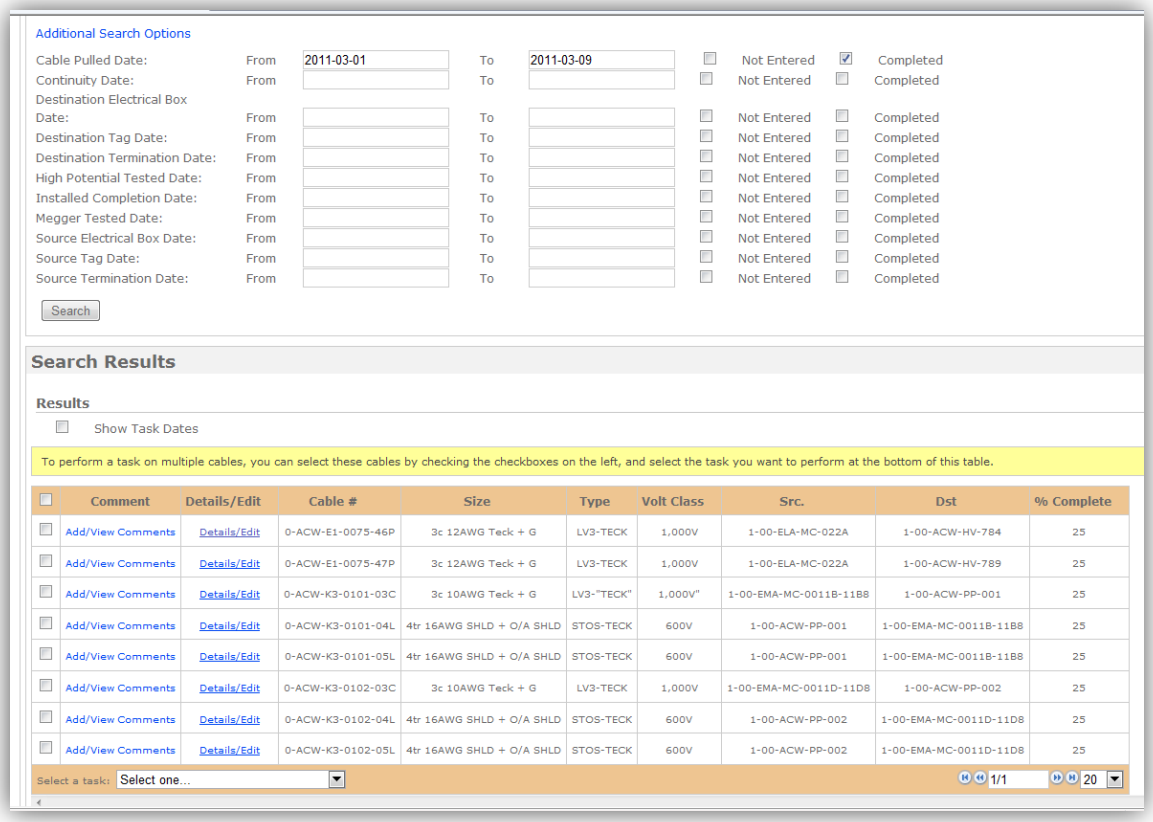


Fig.27 Additional Search Options – Cables pulled in date range entered are displayed

3. Proceed to check other date ranges for different cable tasks
4. Check the box "show all tasks" to view if there were any other tasks completed for the cables that were pulled in your date range selection

5. Remember: **Entering tasks completion dates is the contractor's responsibility. We recommend that this requirement be stated in the contractor's contract**. This page provides a means for the contractor to effectively communicate his cable installation completion status to project managers and the electrical lead on the project.
6. An update on cable installation status can be obtained at anytime and anywhere without you having to submit a request to the contractor. It facilitates your preparation for meetings with your contractor, management or readiness for auditing the project cable installations; especially if you are managing several projects.

6.0 SEARCH FOR CABLES PULLED FROM SOURCE TO DESTINATION:

1. Position cursor over “Cables” in the menu bar and select “Search” from the drop-down menu (Fig.3). “Search for Cables” screen is displayed.

   Let’s assume that we want a field check done in order to verify the status of all the cables that are scheduled to be installed from the Source, SG-001B (Switchgear 1B) to the Destination, CWS (Cooling Water System):

   a. In the “Cable Source/Destination” field (A) enter SG-001B
   b. In the “Cable Source/Destination” field (B) enter CWS
   c. Position cursor on “Search” and click.
   d. View the results (Fig.28)

   Results show that there are three cables for the search criteria.

   Note: although two of the CWS cables were entered in the source field and one of the CWS cables was entered in the destination field, in the cable schedule, this was picked up by PullingCables search feature.

   PullingCables searches both the source and destination fields for source and destination search criteria to capture entries that are flipped around.

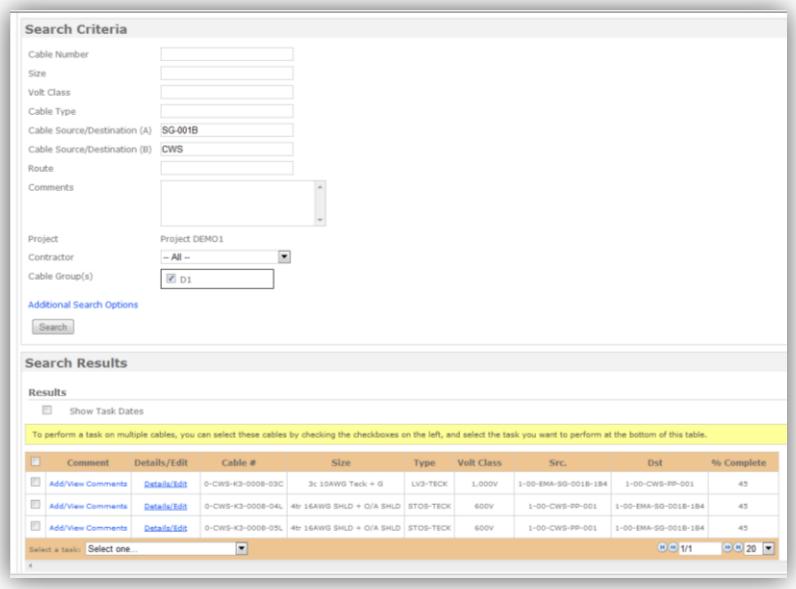


Fig.28 Searching for cable runs from Source to Destination

7.0 ADDING AND VIEWING COMMENTS:

There is a drop down menu for Construction, Commissioning, Maintenance and Operations comments (Fig.29).

During the construction and commissioning phases of a project, it may be required to record comments regarding the cable installation. For example, during a field check or an audit of the contractor's work, the construction or commissioning engineer may have noticed that a cable reported as complete was not tagged or the cable was damaged. This comment section can be used to add a quick note to be addressed later with the contractor.

After the completion of the project, the Maintenance and Operations staff may use this comment section to note any maintenance or trouble issues relating to the cable. For example, "cable was grounded". Note: whenever a comment is written, it is automatically date stamped and the name of the user that wrote the comment is recorded.

Try adding a construction comment for a cable:

1. Search for a cable number with characters "CRY" in the cable # string.
2. Select cable# 00-CRY-5040-FO1
3. Select Add/View Comment
4. Select "Construction" from the drop-down menu
5. Add New Comment: "Damaged fibre optic cable at CJP cabinet".
6. Place cursor over the "Add" button and press "Add" to add the comment. The comment is now saved.
7. Place cursor over "Hide Comments". Press "Hide "Comments" and return to "Add/View Comments"
8. Press "Add/View comments again for that cable to see the comment that you have just entered.

   Note that the comment is date stamped with the name of the user who logged in. It is important that you don't share your user name and password with anyone because if they logged in as you and added a comment to pullingcables.com, your name will be recorded.

9. You may export the spreadsheet to Excel. In order to view the comments (construction, commissioning, Maintenance and Operations) in your Excel report, select "Comments" as an additional column to be exported (see Fig.19). Please note that there is also an "EngineeringComment" field that can be selected to be exported. The engineering comment field is not editable in the pullingcables database because it was imported when the engineering cable schedule (spreadsheet) was uploaded. Note: the editing of any engineering spreadsheet information including engineering comments, has to be done by the engineering department or owner of the spreadsheet and then uploaded to pullingcables.com as a revision. This ensures controlled editing of information in engineering cable schedules.

   Note: Be careful when searching for cables with the letter "O" and the number "0". This is a common error made by some users. For example, if the user inadvertently enters "F01" instead of "FO1" to search for information on cable number 00-CRY-5040-FO1, the database will return a message that "No Record Found".

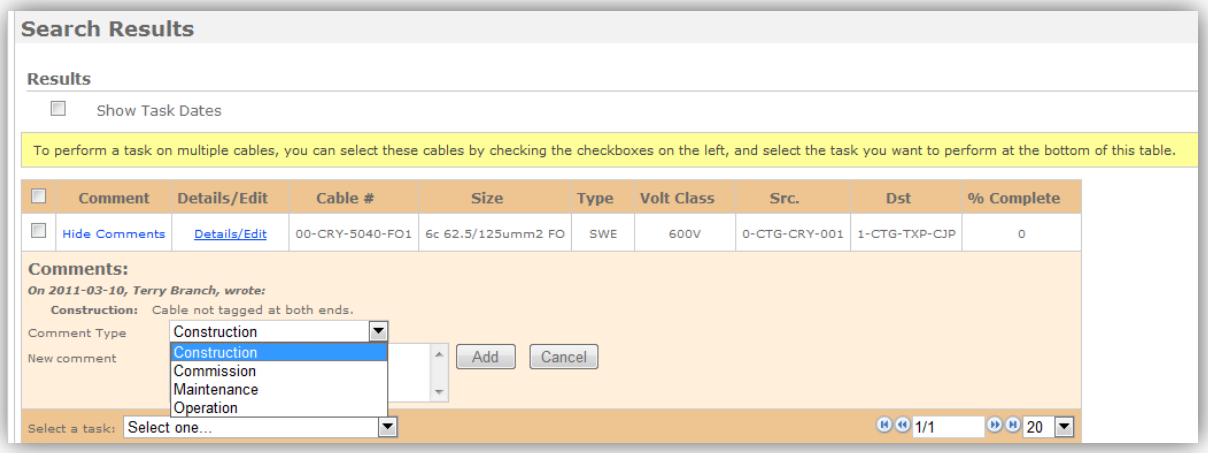


Fig.29 – Adding/Viewing Comments

8.0 REPORTS

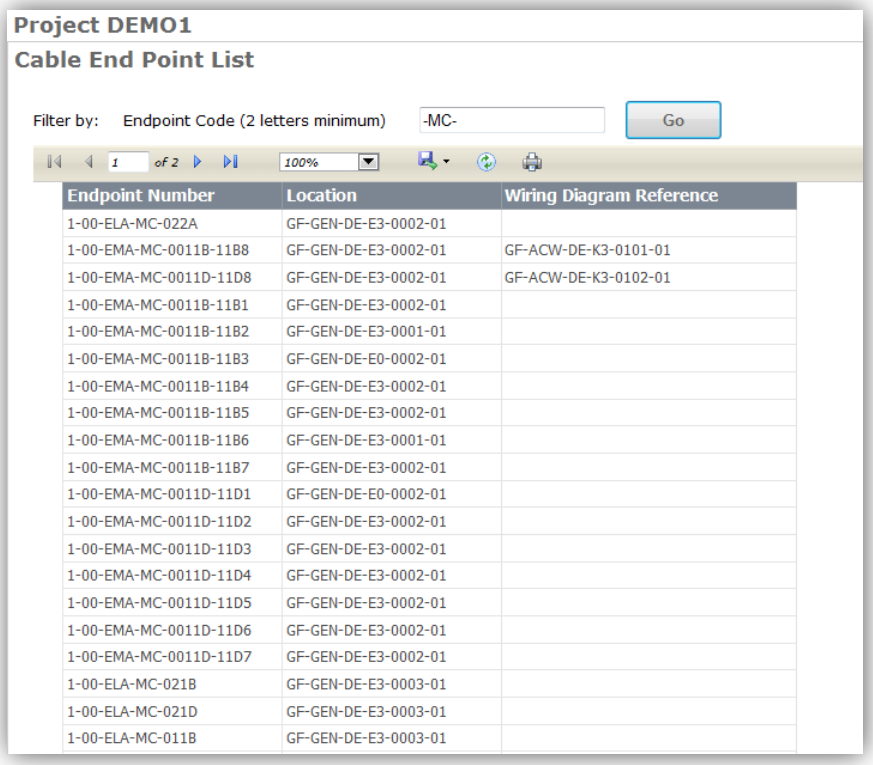
Besides being able to export search results to Excel, Pullingcables.com comes with standardized reports. Adding new standard reports is an ongoing process. In addition, licenced Organizations can order customized reports for a small development charge. The charge depends on the complexity of the report. In this demo, there are three standardized reports. They are:

- Cable End Point list
- Turnover status
- Turnover status chart

8.1 CABLE END POINT LIST REPORT

This list is a filtered list of all the endpoints (Electrical Equipment) to which cable ends (sources and destinations) are terminated. Users can use this report to quickly generate different equipment lists. For example, if a user wants a list of all the MCCs, it can be generated in seconds from the Endpoint list report. Let's do it.

1. Place cursor over "Reports" in the menu bar and select "Cable End Point List" from the drop-down menu.
2. In the "Filtered by" field, enter "-MC-". (MC stands for MCC) (that's how the engineer in this demo cable schedule differentiates MCCs from all other equipment in the cable schedule).
3. Press "Go" and view the MCC list displayed below (Fig.30).



Project DEMO1

Cable End Point List

Filter by: Endpoint Code (2 letters minimum) -MC- Go

1 of 2 100%

Endpoint Number	Location	Wiring Diagram Reference
1-00-ELA-MC-022A	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011B-11B8	GF-GEN-DE-E3-0002-01	GF-ACW-DE-K3-0101-01
1-00-EMA-MC-0011D-11D8	GF-GEN-DE-E3-0002-01	GF-ACW-DE-K3-0102-01
1-00-EMA-MC-0011B-11B1	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011B-11B2	GF-GEN-DE-E3-0001-01	
1-00-EMA-MC-0011B-11B3	GF-GEN-DE-E0-0002-01	
1-00-EMA-MC-0011B-11B4	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011B-11B5	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011B-11B6	GF-GEN-DE-E3-0001-01	
1-00-EMA-MC-0011B-11B7	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011D-11D1	GF-GEN-DE-E0-0002-01	
1-00-EMA-MC-0011D-11D2	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011D-11D3	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011D-11D4	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011D-11D5	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011D-11D6	GF-GEN-DE-E3-0002-01	
1-00-EMA-MC-0011D-11D7	GF-GEN-DE-E3-0002-01	
1-00-ELA-MC-021B	GF-GEN-DE-E3-0003-01	
1-00-ELA-MC-021D	GF-GEN-DE-E3-0003-01	
1-00-ELA-MC-011B	GF-GEN-DE-E3-0003-01	

Fig.30 MCC (MC) list generated

4. All the MCCs are displayed with their associated location drawings and wiring diagrams if the engineer included reference wiring diagrams in the cable schedule.
5. The user has an option to print the MCC list or save it to either:

   - An Excel document
   - PDF document
   - Word document

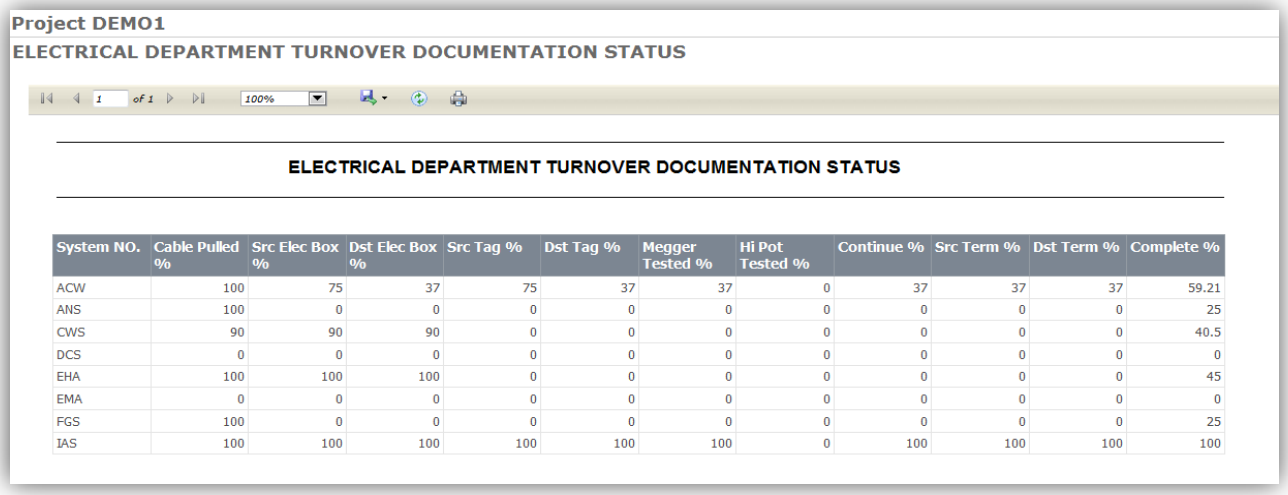
6. The user now has a working list of MCCs that he can edit or attach to reports or include in whatever maintenance programs that exists for the facility.

7. Try to generate other equipment lists: Junction Boxes (JB); Pump list (-PP-); Switchgear (-SG-)

8.2 TURNOVER STATUS REPORT

1. This report (Fig.31) shows the completion status of cable tasks in Systems or Turnover packages. Each cable is assigned a System or Turnover Package code. This code is necessary to group cables of the same system together to facilitate commissioning. As systems or Turnover packages are completed by the construction contractor, they are turned over to commissioning. The report shows the readiness of systems (Turn-Over-packages) for commissioning based on the % of installed cables in each system. A system is ready to be turned over to the commissioning group for electrical check-out when construction has completed the installation of 100% of the cables for that system.
2. Place cursor over Reports in the menu bar and select the "Turnover status" report from the drop-down menu. Displayed is the report: "Electrical Department Turnover Documentation Status". It shows the status completion of each cable task in the associated system. This report may be exported to Word or Excel or PDF format.

   Note: Some projects use the term "Systems" while others use the term "Turnover packages".



Project DEMO1

ELECTRICAL DEPARTMENT TURNOVER DOCUMENTATION STATUS

1 of 1 100%

ELECTRICAL DEPARTMENT TURNOVER DOCUMENTATION STATUS

System NO.	Cable Pulled %	Src Elec Box %	Dst Elec Box %	Src Tag %	Dst Tag %	Megger Tested %	Hi Pot Tested %	Continue %	Src Term %	Dst Term %	Complete %
ACW	100	75	37	75	37	37	0	37	37	37	59.21
ANS	100	0	0	0	0	0	0	0	0	0	25
CWS	90	90	90	0	0	0	0	0	0	0	40.5
DCS	0	0	0	0	0	0	0	0	0	0	0
EHA	100	100	100	0	0	0	0	0	0	0	45
EMA	0	0	0	0	0	0	0	0	0	0	0
FGS	100	0	0	0	0	0	0	0	0	0	25
IAS	100	100	100	100	100	100	0	100	100	100	100

Fig. 31 Turnover Status Report

3. The Exported Report to Word document is shown below (Fig. 32).

   Note: Changes to the report Title and column heading may be made in the Word or Excel document

ELECTRICAL CONSTRUCTION – CABLES TURNOVER PACKAGE STATUS

System NO.	Cable Pulled %	Src Elec Box %	Dst Elec Box %	Src Tag %	Dst Tag %	Megger Tested %	Hi Pot Tested %	Continue %	Src Term %	Dst Term %	Complete %
ACW	100	75	37	75	37	37	0	37	37	37	59.21
ANS	100	0	0	0	0	0	0	0	0	0	25
CWS	90	90	90	0	0	0	0	0	0	0	40.5
DCS	0	0	0	0	0	0	0	0	0	0	0
EHA	100	100	100	0	0	0	0	0	0	0	45
EMA	0	0	0	0	0	0	0	0	0	0	0
FGS	100	0	0	0	0	0	0	0	0	0	25
IAS	100	100	100	100	100	100	0	100	100	100	100

Fig.32 Turnover Status Report – (In Word Document)

4. The left hand column of the report shows the Systems or Turn-over- packages (TOP). The right hand column of the report shows the percentage completion of cable installation for each System (TOP). The other columns show the percentage completion of each cable task for each System (TOP).

8.3 SYSTEMS (TOP) CABLES STATUS CHART

1. This chart (Fig.33) provides an “At a Glance” look at the % status of installed cables in each system (Turnover Package). It is the chart of the Turnover Status report in the above table format (Fig.32). Use this chart to gauge when systems will be ready for electrical check-out and commissioning. It can be exported to Excel, Word or PDF format. The exported chart is shown in Fig.34.

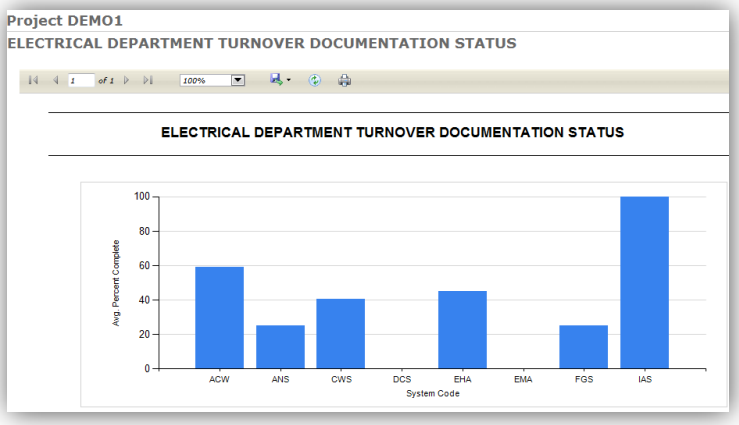


Fig.33 TOP or Systems Completion Status

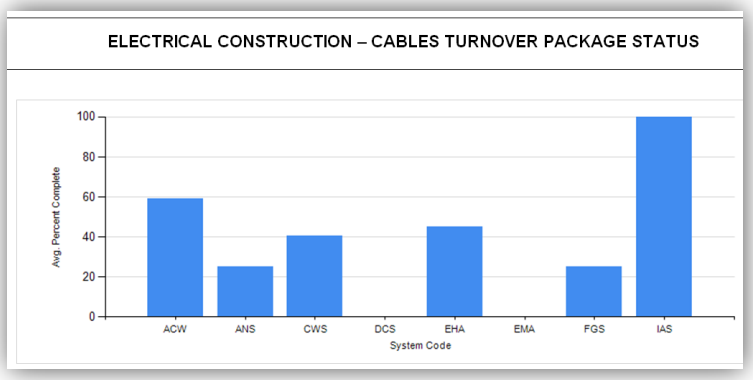


Fig.34 TOP or Systems Completion Status (In Word Document)

9.0 ADDITIONAL EXERCISES

1. There are several cables in this DEMO which are not yet assigned a System or Turnover package. Search for them and before adding the Turnover package code, select Details/Edit for one or more of the cable(s) and go to the "General" section of the database and confirm that the field "Turnover Pkg System Code" (the 9th fields from the top) is blank.
2. Add the Code, by going back to the "Search Results" screen and selecting "Assign Turnover Pkg Code" in the drop down menu, as shown before. After the TOP is assigned, select the cable(s) and return to "General" section of the database and check that the code was added. Note: in this exercise, the Turnover package (TOP) code that will be assigned to cables, form part of the cable number. For example, you will find "EDC" in several cable numbers. Search for these cables by entering EDC in the cable number field and assign the TOP code "EDC" to all of them. Assign TOP codes to cables that contain the following system codes in their cable numbers: ELA, EUP, FWS, PWS, BFW, etc. Note: on some projects it may be required to assign a system code to cables that do not have the code as part of the cable number. Engineering or the project manager may decide the system code assignment for the cables.
3. Populate some or all of the cables in the new systems (TOPs) that you added with completed task dates
4. View the "Turnover Status" report to see the status of TOP tasks
5. View the "Turnover Status" chart to get an at a glance update of Turnover package completion status
6. Export reports to Excel, Word or PDF formats