



Building Bridges: Capturing Engineering Workflows



CIVIC INFORMATION CHALLENGE
MARCH 2023



ISSUES AT HAND

STANDARDIZATION OF WORK PROCESSES

The Public Service Department is facing a critical need for a centralized project and workflow management system to:

- Standardize work processes
- Capture project engineer workflows
- Manage tasks

RUNNING OUT OF TIME

A high percentage of employees within the Engineering Division are expected to:

- Retire within the next three years, leaving a large amount of institutional knowledge that could be lost without a proper system in place.

A circular inset photograph in the top left corner shows a smiling baby in a red and black plaid shirt crawling on a green lawn. A woman's hands, wearing a gold watch and a ring, are reaching down towards the baby from above. In the background, other children are sitting on the grass.

VALUE OF THE CITY GOVERNMENT

WORK SMARTER NOT HARDER

5 minutes for 1 file

=

How many hours are you spending
in a week looking for files?



OUR GOALS

- Evaluate the Public Service Department's current filing system
- Develop actionable recommendations
- Improve and increase the filing efficiency
- Ensure information is properly categorized and easily accessible.

Methods

CONTEXTUAL INQUIRY

Our eighteen contextual inquiry interviews ultimately helped us uncover work models

- Behaviors
- Culture of the Public Service Department.



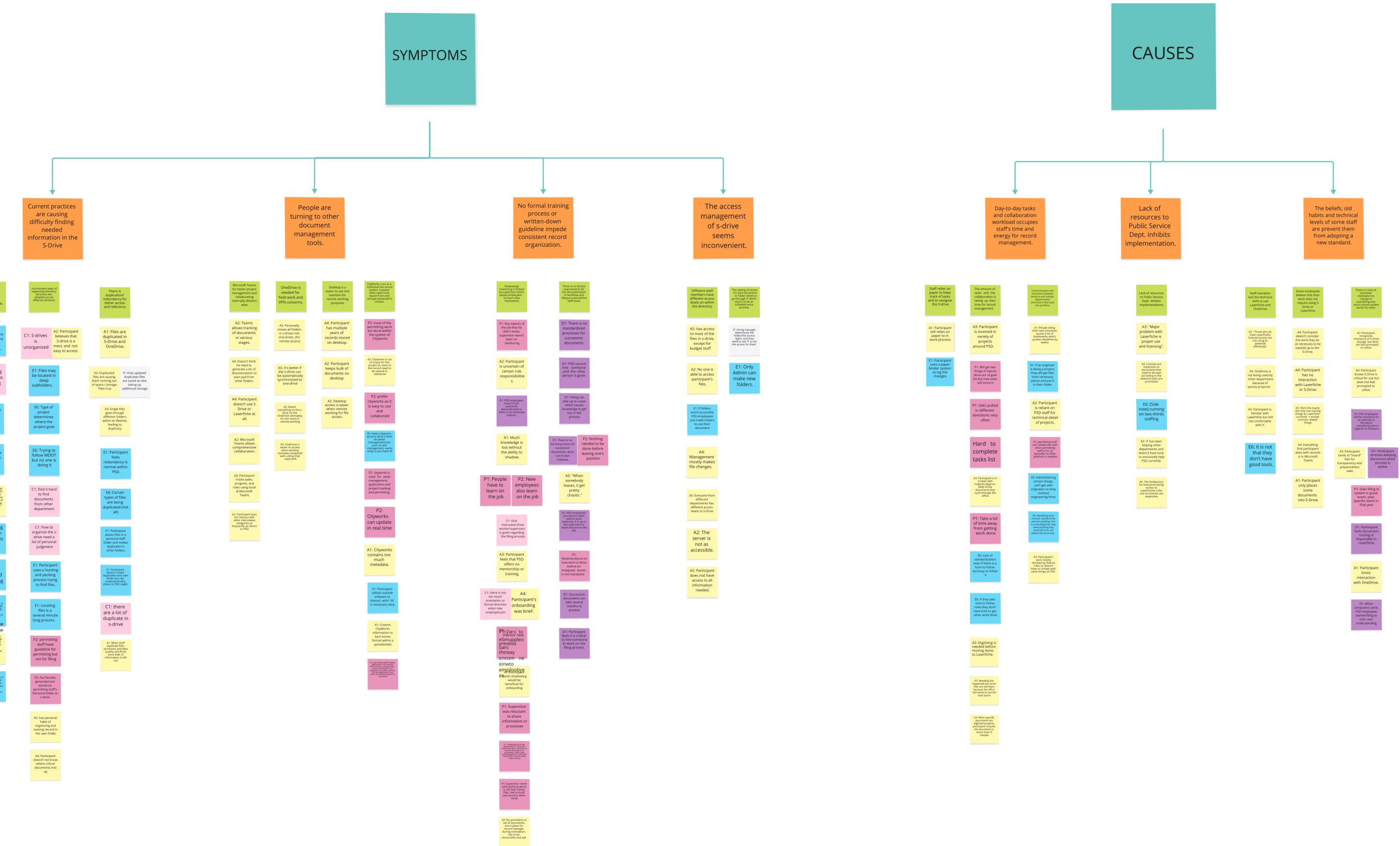
Data Interpretation

AFFINITY WALL

- From our eighteen CI interviews, quotes were compiled which were color-coded by division.
- From this, aligning quotes were grouped together, then placed under appropriate themes.
- These themes were finally broken into either causes or symptoms of workflow interruption.



AFFINITY WALL



Issues at Hand

WHAT STAFF HAS TO SAY

Filing system differs across different divisions.

There is no standardized naming convention department-wide.

There is duplication for better access and reference.

Staff's Recommendations

WHAT STAFF WOULD LIKE

A more direct guidance, such as a key,
on filing is needed.

Separate directories for active and
inactive/archived files.

Formal technical training for file
management software.

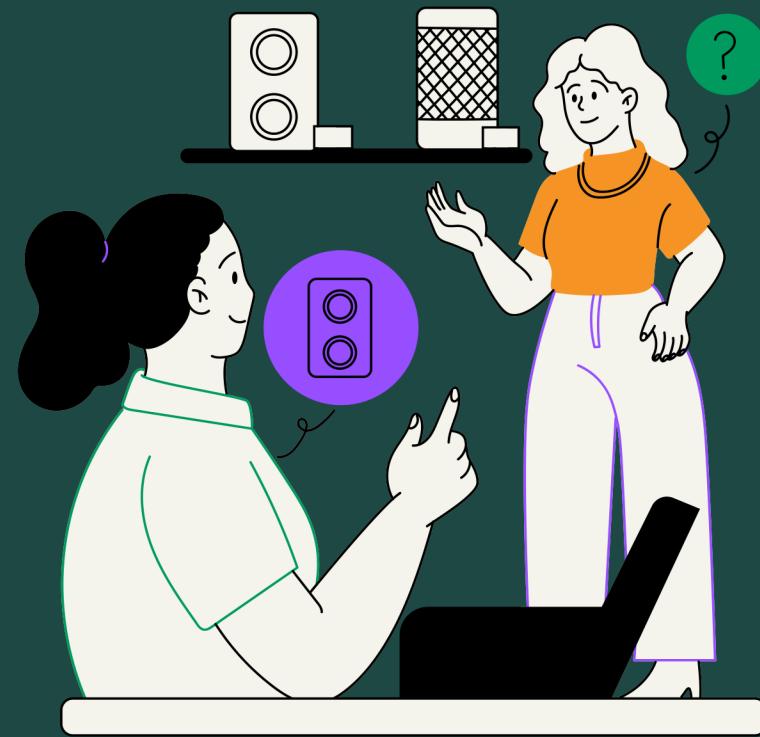
Tools for project management

Analysis



- Currently, the filing system is done based on personal intuition or personal habit.
- This has resulted in the currently inconsistent naming convention and folder structure that hinders efficiency.
- The issues surrounding succession planning hinder the passing of institutional knowledge about work flow including filing.
- The factors hindering employees from implementing a consistent filing system are COVID, time constraints, technical barriers and lack of resources.

RECOMMENDATIONS



- Standardized naming convention.
- Classification system for folder directory.
- A schedule for weeding and archiving inactive folders.
- Optimising current systems and tools.
(i.e. S-Drive, Laserfiche & Microsoft Suite)

STANDARDIZING NAMING CONVENTIONS

Abbott_CORR_PR008827_11-18-09_3_NeverSigned

Field 1 Condensed contractor name Field 2 Content code Ex. CO for Check Order CORR for Correlation Field 3 (Optional) identifying number Field 4 date start date/end date Field 5 (Optional) sequential number Field 6 description or status

BN30746_GravelStreetsDrainage_GasMap_ChilsonAve_ZipCode_PS#36_01-24-19_06-21-2021

Field 1 C: Claim #2998: the claim number Field 2.1 Project type Field 2.2 File purpose Field 2.3 Location Street_Zip_PS, at least one is needed Field 3 Start date yyyy-mm-dd Field 4 End date yyyy-mm-dd

ADVANTAGES :

- Streamline search and navigation experience
- File names are self-explanatory and identifies what the file is.
- Identify files for batch deletion or migration

CODE BOOK

	A	B	C	D	E	
1	Full Text	Recommended Abbreviation	Teams Using:			
2	Check Order	CO	Accounting			
3	Claim Number	C#	Accounting			
4	Correspondense	CORR	Accounting, Admin, Traffic			
5	Fiscal Year	FY	Accounting, All			
6	Invoice/ Invoice Number	INV	Accounting, All			
7	Property Damage	PD	Admin, All			
8	Public Service Department	PSD	All			
9	Board of Water and Light	BWL	Contractors			
10	Cadwell Brothers	CadBro	Contractors			
11	Christman Company	ChristCom	Contractors			
12	Hoffman Brothers	HoffmanB	Contractors			
13	Michigan State Industries	MSI	Contractors			
14	The Ferguson Group	FergusonG	Contractors			
15	Public Service Number	PS#	Engineering			
16	Bid Number	BN	Engineering, All			
17	Consumer Permit Large Jobs	CPLJ	Permits			
18	Special Conditions	SC	Permits, All			
19						
20						
21						
22						
23						
24						
25						
26						
	+ ⌂	Master ▾	Context ▾	Sequential Numbering ▾	Contractors/Projects ▾	Retention Policy Codes ▾

	A	B
1	Full Text	Recommended Abbreviation
2	Check Order	CO
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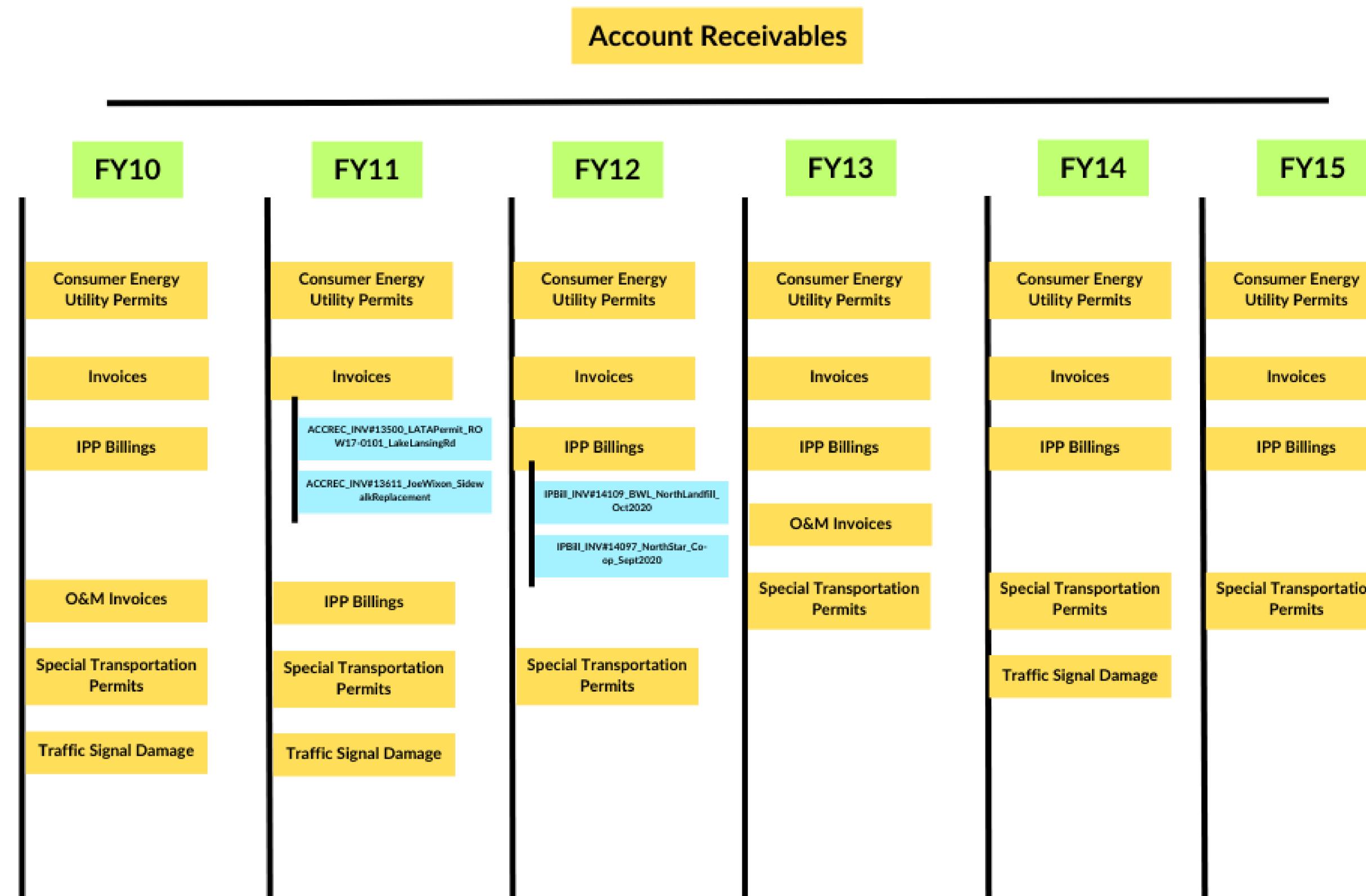
	A	B
1	Full Text	Recommended Abbreviation
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3	Cadwell Brothers	CadBro
4	Christman Company	ChristCom
5	Hoffman Brothers	HoffmanB
6	Michigan State Industries	MSI
7	The Ferguson Group	FergusonG
8		

	A	B	C
1	Full Text	Recommended Abbreviation	Notes
2	Bid Number	BN	To shorten the length of file names, be consistent in using month abbreviations.
3	Claim Number	C#	
4	Fiscal Year	FY	
5	Invoice/ Invoice Number	INV	
6	Public Service Number	PS#	
7	Months	Jan, Feb, Mar, Apr, etc...	Whichever format you end up following, standardize it to optimize your searching experience. It is best practice to put the year, followed by the month.
8	Year	yyyy-mm-dd yy-mm-dd	
9	Public Service Department	PSD	

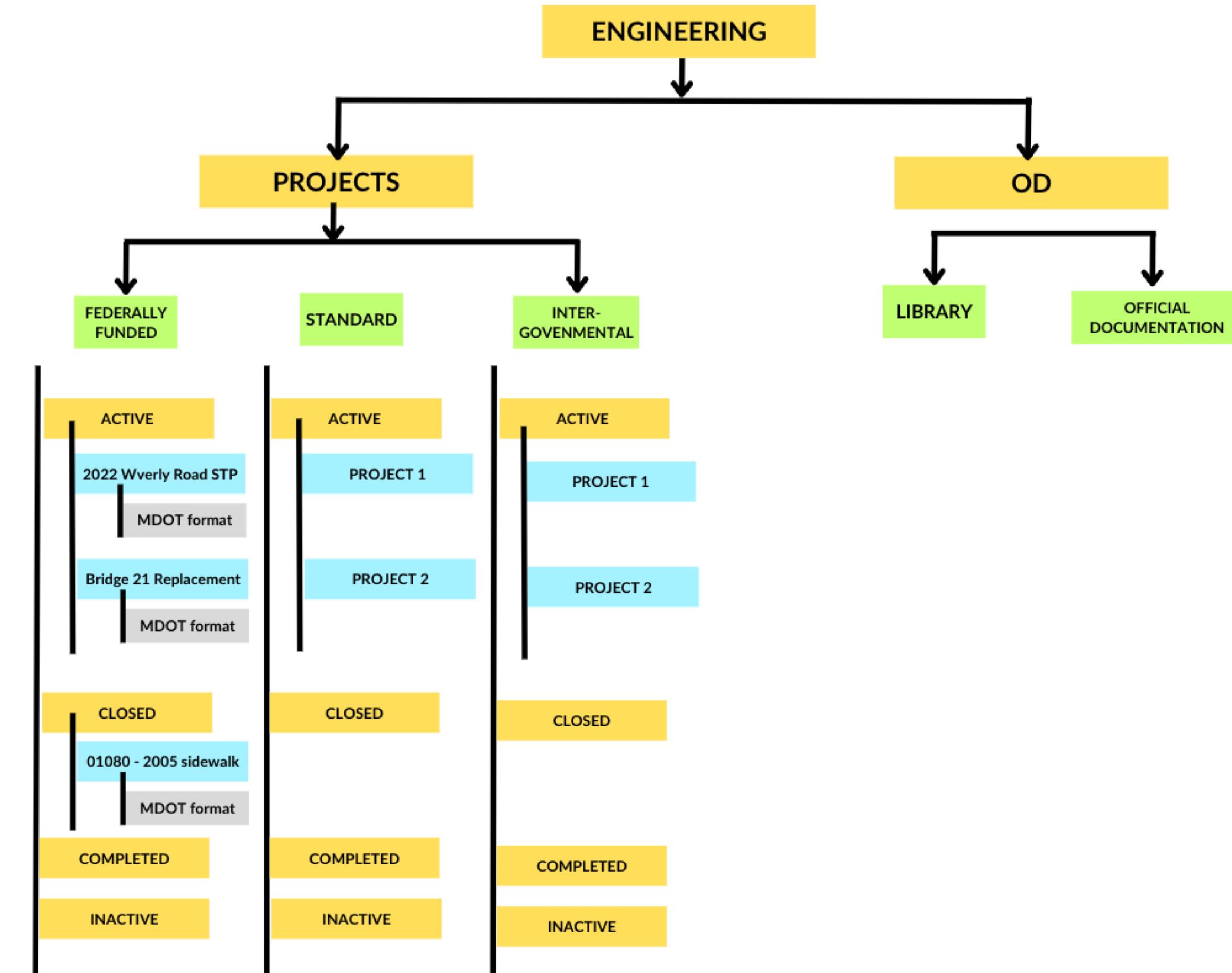
	A	B	C
1	File Type	Abbreviations/Codes	Abbreviation Meaning
2	Aerial Photos	PERM	Permanent
3	Benchmark Records	PERM	Permanent
4	Maps, Blueprints, Photos, Plans and Drawings	PERM	Permanent
5	Permits	EXP+2	Expiration Date + 2 years
6	Soil Erosion and Sedimentation Control Permits	CR+2	Creation date + 2 years
7	Centerline Descriptions	ACT+5	ACT = While utilized as an easement.
8	Act 51 Files	CR+7	Creation date + 7 years
9	Equipment Rental Reports	CR+3	Creation date + 3 years
10	Storm Sewer Construction Records	ACT	ACT = Life of sewer
11	Sewer Maintenance Records	CR+3	Creation date + 3 years
12	Combined Sewer Overflow—Structural Documents	ACT	ACT = Life of structure
13	Combined Sewer Overflow— Project Documents	ACT+10	ACT = End of project
14	Drains	ACT	ACT = Life of drain
15	Project Files—Structural Documents	ACT	ACT = Life of structure
16	Project Files—Project Documents	ACT+5	ACT = End of project
17	Wastewater Operational Data	CR+3	Creation date + 3 years
18	Monthly Wastewater Reports	CR+3	Creation date + 3 years
19	Refuse Bag and Sticker Inventory	FY+2	Fiscal Year + 2 years
20	Refuse Violations	CR+5	Creation date + 5 years
21	Citizen and Service Complaint Database	CR+5	Creation date + 5 years
22			

DEVELOPING A CLASSIFICATION SYSTEM

CLASSIFICATION EXAMPLE



CLASSIFICATION EXAMPLE 2



DEVELOPING A SCHEDULE FOR WEEDING AND ARCHIVING INACTIVE FOLDERS

WEEDING SCHEDULE TEMPLATE

UTILIZING MICROSOFT PLANNER FOR PROJECT MANAGEMENT

MICROSOFT PLANNER DEMO



**THANK YOU FOR JOINING!
ANY QUESTIONS?**