



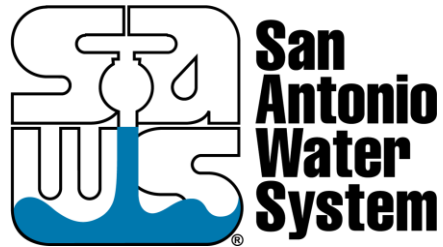
BIG APPROACH TO SMALL DIAMETER SEWER REPAIRS

*Implementing Consent Decree Remedial Measures on the
SAWS BPC Central Small Diameter Package 4 Project*

Principal-in-charge - Mary Portillo, PE

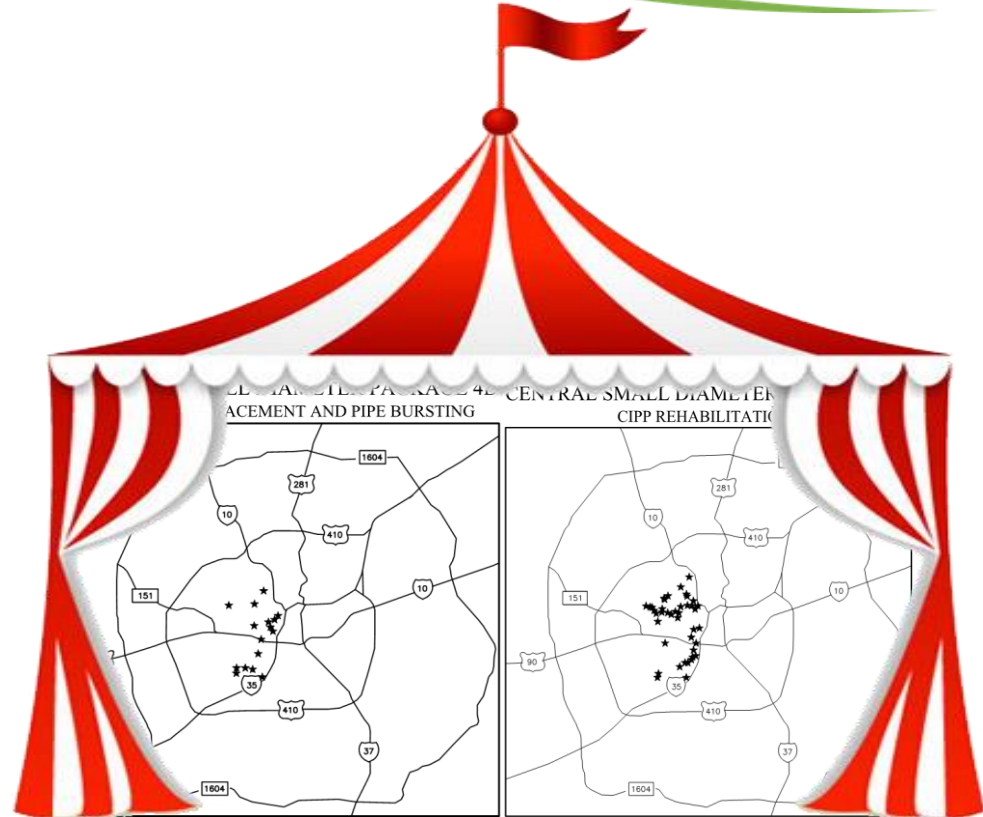
Project Manager - Mari Jimenez, PE

PLUMMER





- *Setting the Scene*
 - History
 - Today's Project
- *A Look Behind the Curtain*
 - Directors notes
 - Act 1 – 30% Design Validation
 - Act 2 – 60% Design
 - Lessons Learned
- *Showtime*
 - Schedule
 - Quality
 - Next Steps



SETTING THE SCENE



SAWS
Consent Decree

~\$1.2B Capital
Program

SSORP
HDR team
(CPY & PD)

Basin Planning
Consultants

~500M Capital

FNI Team
&
MWH Team
(KHA, BMB, GDA)

Package 4

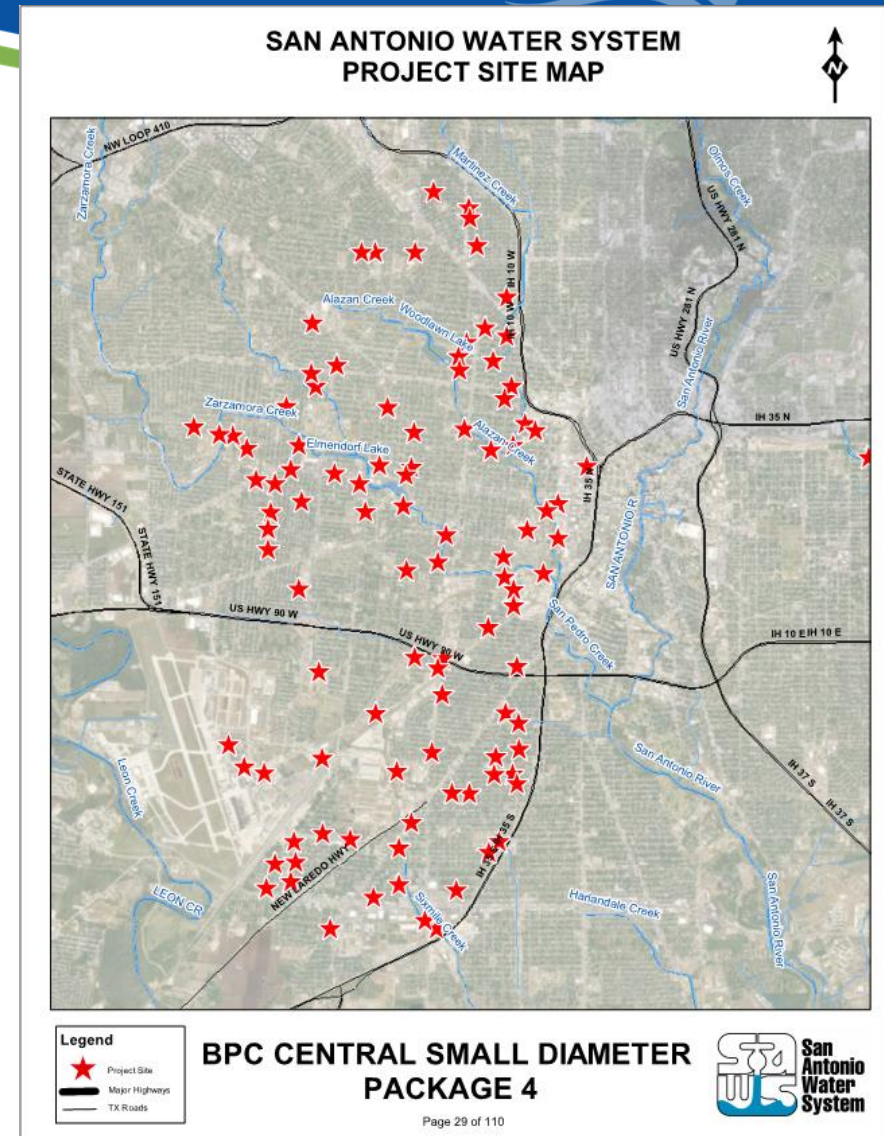
~\$6M Project

Plummer Team
7 subs
(Mendez, BMB, Rios,
MCI, JQ, HVJ,
Blanton)

PKG 4 PROJECT OVERVIEW



- 81 assets at 61 sites - 22,657 LF (~4 miles)
- 6" to 21"-diameter
- Rehabilitation methods (assets):
 - CIPP(45) → Construction Package 4A
 - Pipe Burst (7) → Construction Package 4B
 - Replace Open-Cut (29) → Construction Package 4B
- OPCC: \$6M
- Design: July 2019 – June 2020 (11 months)
- Construction: Dec. 2020 – Dec. 2021 (12 months)



A LOOK BEHIND THE CURTAIN

Design, Management, Subs

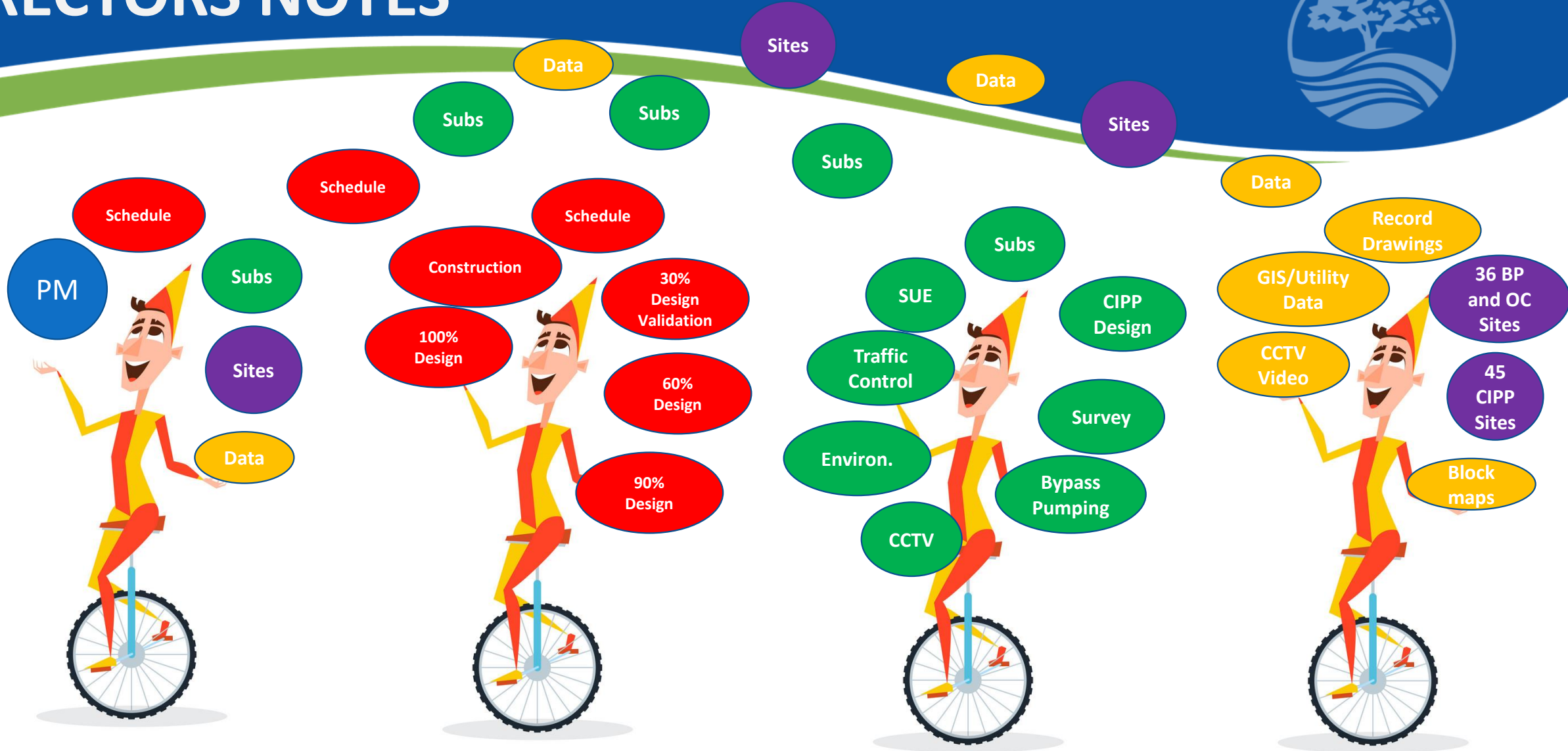


DIRECTORS NOTES



*Project Manager
Mari Jimenez*

DIRECTORS NOTES



Project Manager
Mari Jimenez

PIC
Mary Portillo

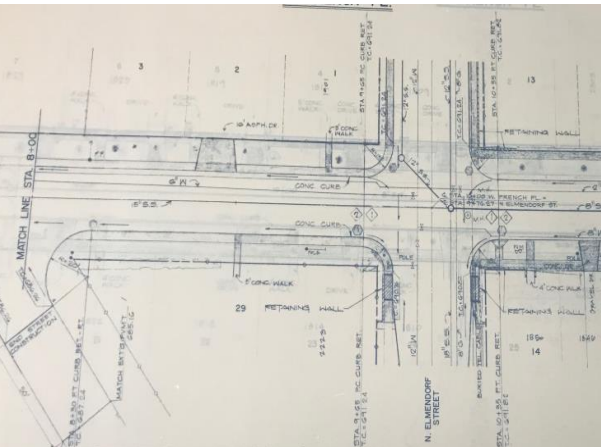
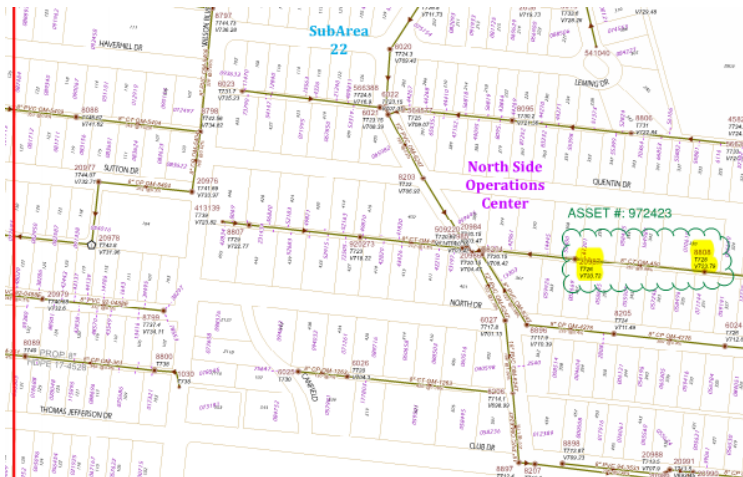
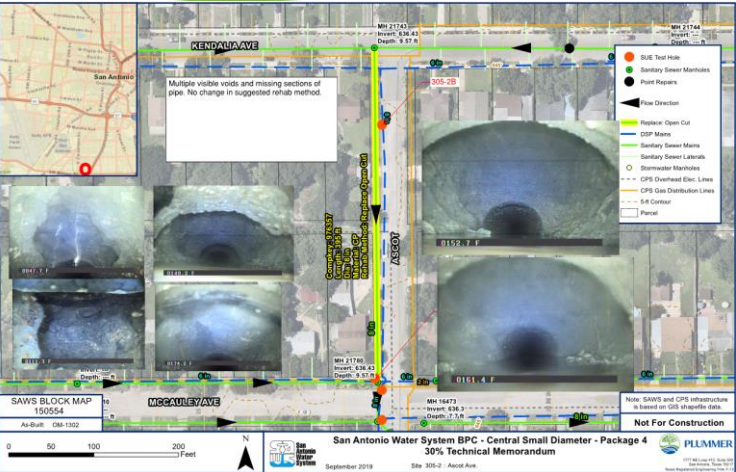
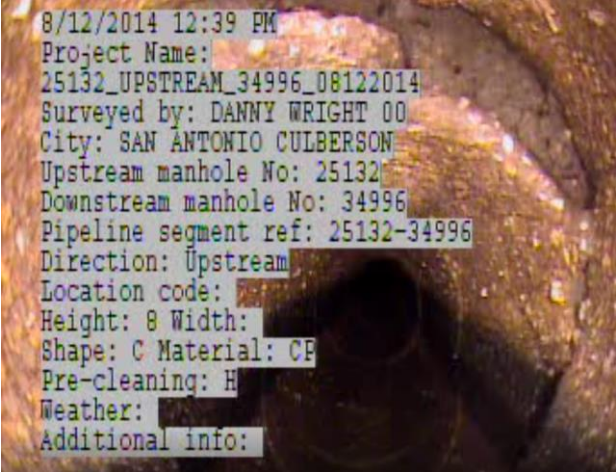
Subs Management
Travis Ramos

Project Engineer
Juve Zamora

ACT 1: 30% VALIDATION



- Data Review
 - Pipe Condition
 - Site Constraints



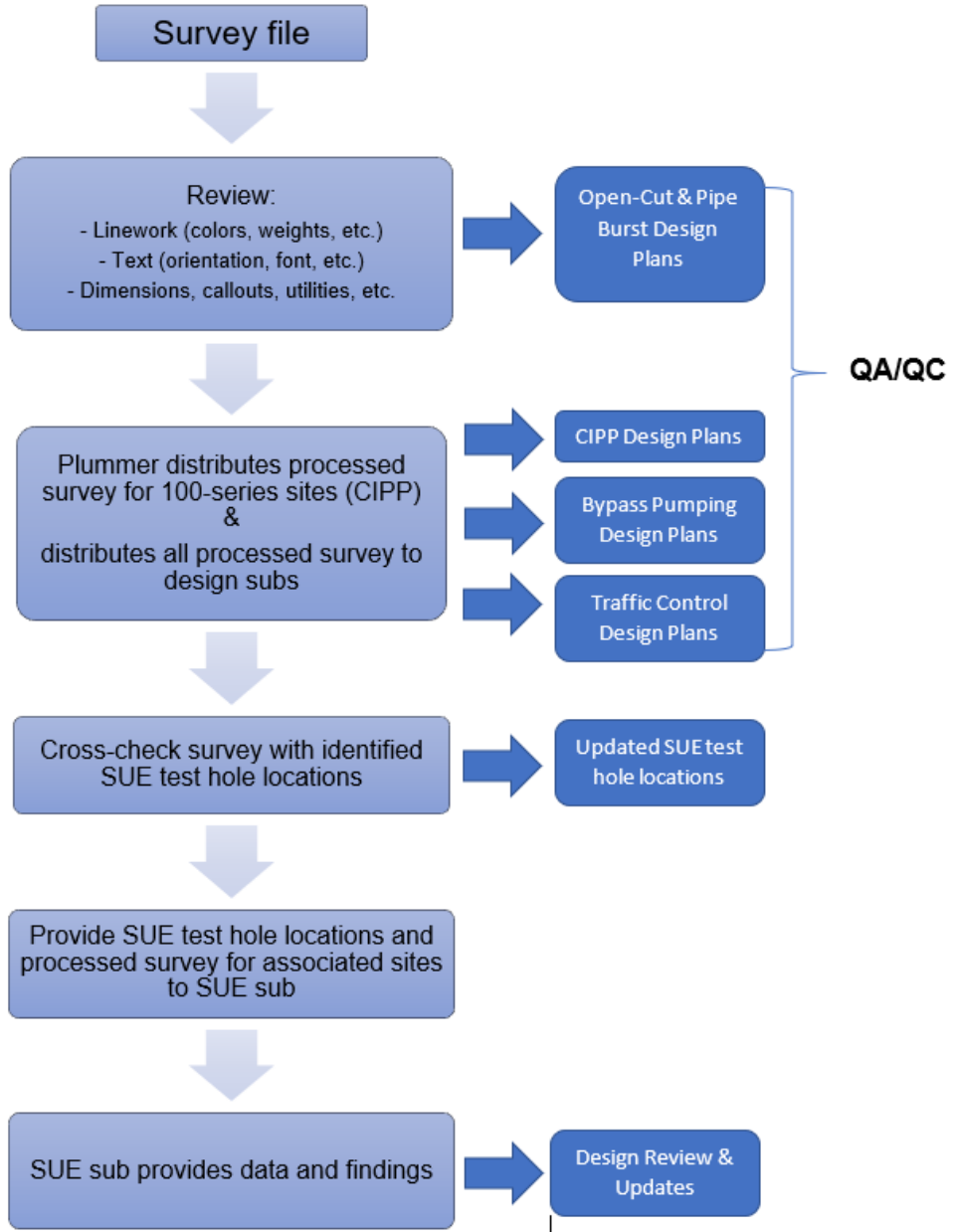


- Method Based Considerations
 - **CIPP** - lowest cost, use when ever possible, minimal surface disturbance, limited by pipe condition, doesn't address line sags and grade issues
 - **Pipe Burst** – avoid gas line crossings, remember connections require surface work, avoid on shallow lines
 - **Open Cut** – most expensive, choice when the other methods won't work, limited cover, shallow and minimal surface features and connections, use this when adjacent pipe needs to be open cut
- Site specific considerations
 - Soccer field
 - Dry pipe – what's connected to this anyway?
 - Grade Issues – water flows uphill sometimes???
 - Suspected contaminated soils
 - Hwy crossing with no casing
 - This pipe is oversized...even 50 years after installation
 - Line under the house, pool, barn?
- **Make recommendations for 60% Design**

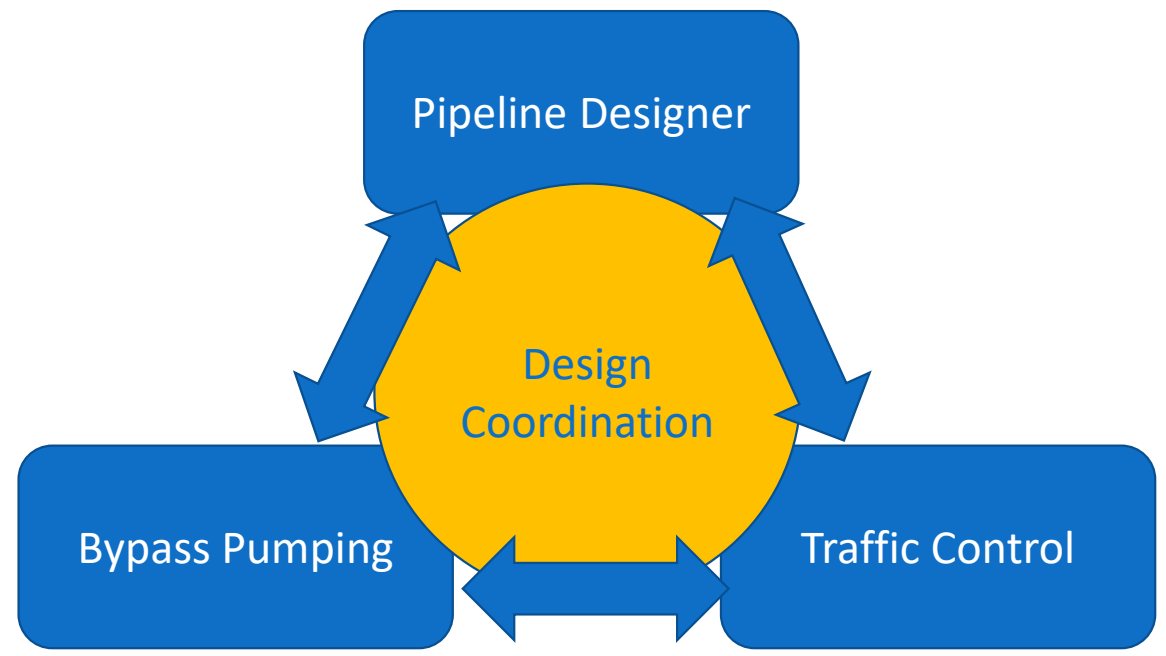
ACT 2: 60% DESIGN – ITS ALL ABOUT SEQUENCING



Survey & SUE



Designers



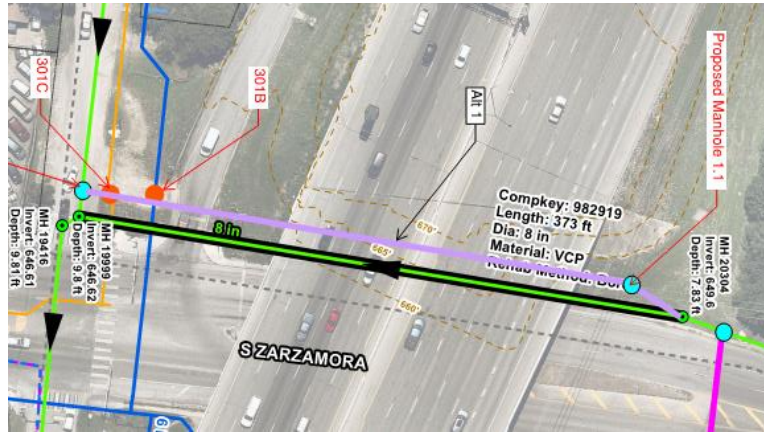
60% FIELD WORK - COMPLICATIONS



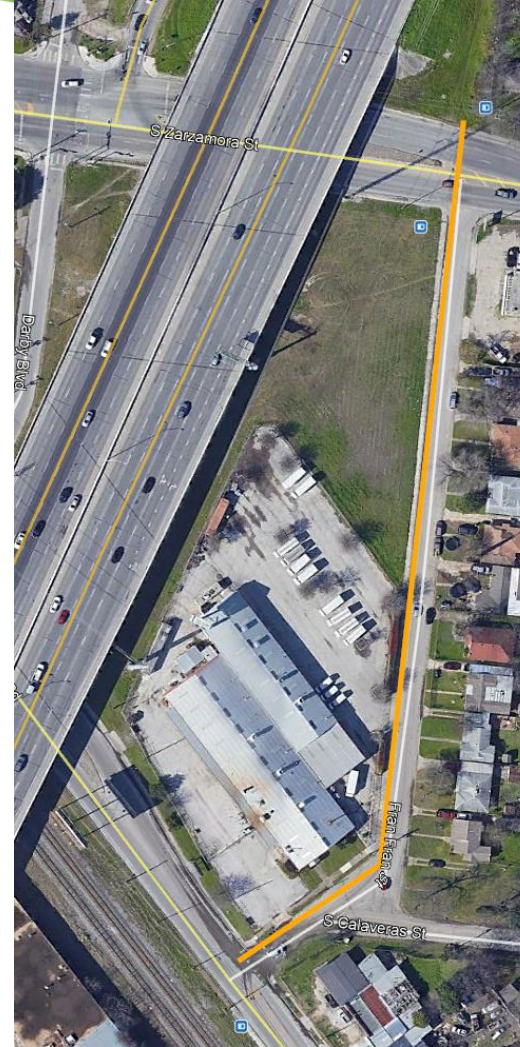
- ROE/Easements
- Survey
- Pavement Condition Index
- Added assets
- SUE
- Environmental



HWY CROSSING WITH NO CASING – YIKES!



- Sewer reroute down a side street
 - Reduced permitting
 - Improved flow path



PROJECT MANAGEMENT

- Collaboration is key!
 - Microsoft Teams - accountability
 - Microsoft SharePoint – numerous and large file sharing
- Technology keeps us connected

SharePoint Search this library

SC SAWS Central Small Diameter - Package 4 Private group

Documents > Subs

Name	Modified	Modified By
Bain Medina Bain (Survey + OPCC)	October 9, 2019	Ramos, Travis
Blanton & Associates (Env.)	October 9, 2019	Ramos, Travis
DFW (Cond. Assess.)	October 9, 2019	Ramos, Travis
For All Subs	October 9, 2019	Ramos, Travis
HV/SCTX (Geotech)	October 9, 2019	Ramos, Travis
JQ (Bypass)	October 9, 2019	Ramos, Travis
MCI (Traffic Control)	October 9, 2019	Ramos, Travis
Mendez (CIPP)	October 9, 2019	Ramos, Travis
The RIOS Group (SUE)	October 9, 2019	Ramos, Travis
Subs Progress Table.xlsx	July 15, 2019	Portillo, Mary

Subs Posts Files Notes

File Home Insert Draw View Help Open in browser

Calibri Light 20 B I U

SSORP BCP Central SC Pkg 4 - Scope & Fee Development Notebook

- Subs - JQ, MCI, Mendez
- Subs - BMB and RIOS ...
- Subs - Blanton

20191015 - Mendez

20191022 - Mendez

20191029 - MCI

20191029 - Mendez

20191104 - MCI

20191105 - JQ

20191105 - Mendez

20191112 - JQ

20191112 - MCI

20191112 - Mendez

20191119

20191126

20191203

20191210

20191217

20191231

20200107

20200114

20200121

20200121

Tuesday, January 14, 2020 1:14 PM

Action No.	Action Item	Sub	Person Responsible	Due Date/Complete
6	Provide PCI to Mendez as they come (missing 7 CIPP sites)	<input type="checkbox"/> JQ <input type="checkbox"/> MCI <input checked="" type="checkbox"/> Mendez	TR	<input type="checkbox"/> 11/25
34	Send quantities table to Plummer	<input type="checkbox"/> JQ <input type="checkbox"/> MCI <input checked="" type="checkbox"/> Mendez	Mendez	<input checked="" type="checkbox"/> 1/14
35	Upload updated 60% sheets and comment log, markups	<input type="checkbox"/> JQ <input type="checkbox"/> MCI <input checked="" type="checkbox"/> Mendez	Mendez	<input checked="" type="checkbox"/> 1/14
36	Upload updated 60% sheets	<input type="checkbox"/> JQ <input type="checkbox"/> MCI <input checked="" type="checkbox"/> Mendez	MCI	<input checked="" type="checkbox"/> 1/15
37	Submit list with sites of concern for field visit	<input checked="" type="checkbox"/> JQ <input checked="" type="checkbox"/> MCI <input type="checkbox"/> Mendez	JQ/MCI	<input checked="" type="checkbox"/> 1/20
38	Site visit comments to be forwarded when SAWS returns them	<input type="checkbox"/> JQ <input type="checkbox"/> MCI <input type="checkbox"/> Mendez	TR	<input type="checkbox"/> 2/2/20
39	Send out link to ROE	<input type="checkbox"/> JQ <input type="checkbox"/> MCI <input type="checkbox"/> Mendez	TAG	<input type="checkbox"/> 1/21/2020

Notes:

JQ:

- Updates?
- Sites 304-1 to 304-6 and 102 are problematic sites for bypass to be discussed in field visit.

Mendez:

- Meeting Plummer (Juve Zamora) and SAWS (Tyler Ybarra) at Site 116-Pasadena St & Brad Ave., 8am Thursday 1/23/2020
- Come plans-in-hand with concerns identified ahead of time
- Follow schedule

LESSONS LEARNED...SO FAR



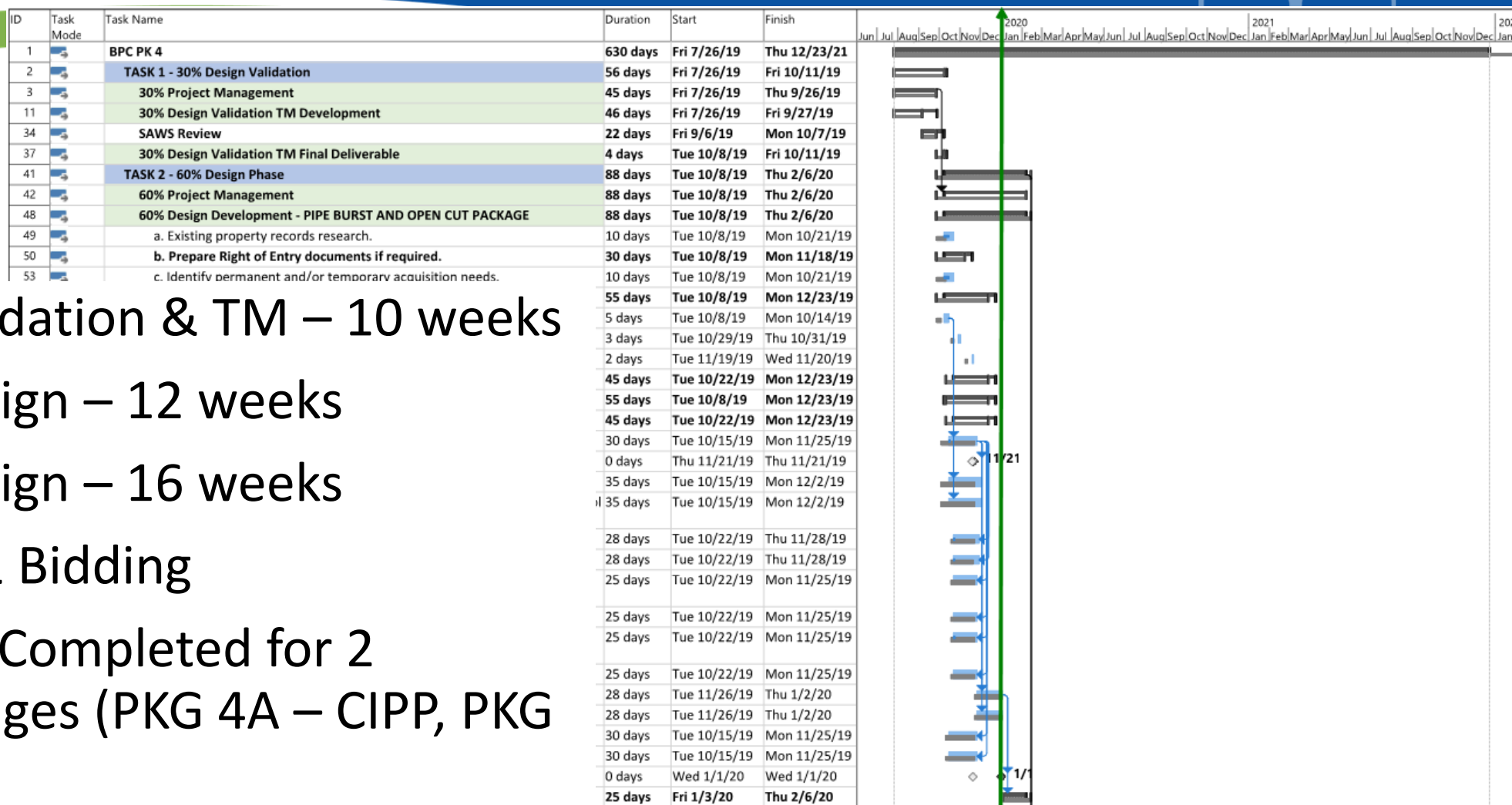
- Kick-off is critical – People need to know their roles and responsibilities.
- Data collection and analysis task can get away from you if you're not careful.
- You want a team that will stick together to the end.
- Rights of entry needs to be valid for 120 days, not 30.
- When someone says they have moved their car...they may not have done it. Ask Owner PM to call security.
- Sub management is a full-time job for a month or so. Your sub manager will know all the assets by heart.

FRESH TOMATOES/ROTTEN TOMATOES – CRITICAL SUCCESS FACTORS

- Schedule
- Quality



SCHEDULE – 60% DESIGN DELIVERED 2 WEEKS AGO



- Act 1: 30% Validation & TM – 10 weeks
- Act 2: 60% Design – 12 weeks
- Act 3: 90% Design – 16 weeks
- 100% Design & Bidding
- Construction - Completed for 2 separate packages (PKG 4A – CIPP, PKG 4B – PB & OC)

Project: SSORP Pkg 4_OB and P
Date: Thu 1/2/20

Early Finish		Project Summary		External Tasks		Baseline	
Task		Inactive Task		External Milestone		Baseline Milestone	
Split		Inactive Milestone		Deadline		Baseline Summary	
Milestone		Inactive Summary		Critical		Progress Summary	
Summary		Manual Task		Critical Split		Manual Progress	

Page 1
SAWS BPC PKG 4 Central Small | PLUMMER

QMP - QAQC



PLUMMER QA/QC Review Comments Log

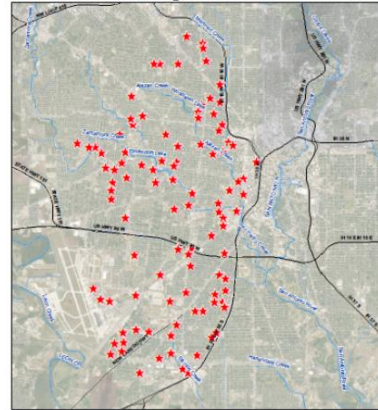
Client: San Antonio Water System
Project: SAWS BPC Central Small Diameter Package 4
Document: DRAFT 30% Validation TM
Review Date: 9/5/2019
Discipline: Civil
Reviewer: David Koberlein
Job No.: 0535-015-01

INSTRUCTIONS: Review to provide comments. Originator to respond to comments. Reviewer to back-check and approve resolved comments by Originator.

Comments							
Cmnt #	Critical Issue	Reference Dwg, Spec, Page, Sec, Det, etc	Reviewer	Originator	Resolution		Back-Checked & Approved
			Review Comments / Questions	Resolution / Response	Date	Name	
ALL COMMENTS MUST BE ADDRESSED							
Report							
1	No	TM Cover Page	Change "Plummer" to "TBPE".	Changed.	9/7/2019	TTR	DK
2	No	TOC	Recheck TOC after revision.	Updated.	9/7/2019	TTR	DK
3	No	Executive Summary (ES)	Capitalize the "P" in "project".	Corrected.	9/7/2019	TTR	DK
4	No	Table ES-1	Fill blank cell.	Corrected.	9/7/2019	TTR	DK
5	No	Table ES-1	Dark line.	Dark line is separator, left in.	9/7/2019	TTR	DK
6	No	General	Add Page #'s	Added.	9/7/2019	TTR	DK
7	No	Table ES-1	Repeat Table header on next pages.	Added.	9/7/2019	TTR	DK
8	No	Table ES-1	Compeky 1060286: "If we can't string it, we can't line it."	Specified as CIPP, video shows obstruction and have to make recommendation based on existing video.	9/7/2019	TTR	DK
9	No	Table ES-1	Compeky 1048616: "Improvise"?	Corrected to "improve".	9/7/2019	TTR	DK
10	No	Table ES-1	Delete -s between number and length unit.	Deleted and updated.	9/7/2019	TTR	DK
11	No	Table ES-1	Compeky 978337: "Can't line it if we can't string it"	Left as CIPP & PR, will be PR'd and same justification as comment 8.	9/7/2019	TTR	DK
12	No	1. Introduction	Change "Comission" to "Consultant".	Corrected throughout report.	9/7/2019	TTR	DK
13	No	1. Introduction	Show Thomas Jefferson High School on map in Figure 1.	Left as is for DRAFT	9/7/2019	TTR	DK
14	No	Figure 1	Too small to read.	Expanded to fit on own page	9/7/2019	TTR	DK
15	No	1.1 CIPP	Delete "drive to" and replace with "require"	Updated.	9/7/2019	TTR	DK

SANITARY SEWER OVERFLOW AND REDUCTION PROGRAM – Package 4

Project Quality Control/ Management Plan



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PRINCIPAL-IN-CHARGE

MARY PORTILLO, PE

PROJECT MANAGER

MARIDEL JIMENEZ, PE

QA/QC

MARY PORTILLO, PE
PROJECT QUALITY OFFICER (PQO)

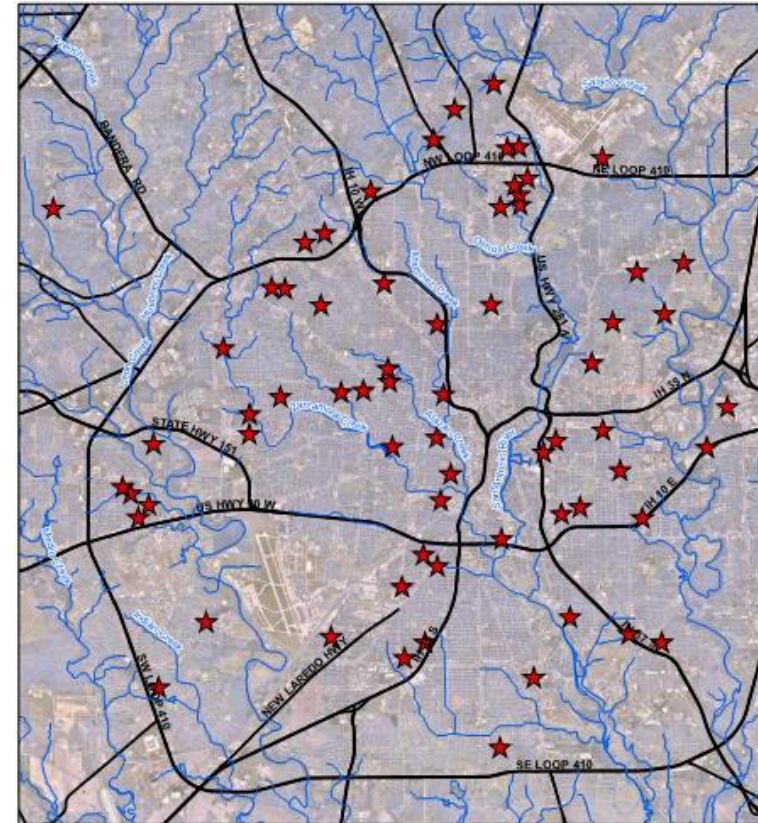
CLETE MARTIN, PE
PIPELINE DESIGN

BRIAN BEACH, PE
CONSTRUCTABILITY

NEXT STEPS



- Act 3: 90% Design → Tree protection review by COSA
- Bid 2 Construction Packages
- Learn and repeat for PKG 17!



Legend
★ Project Site
— Major Highways

MULTIPLE SEWERSHED PACKAGE 17

Page 35 of 109



QUESTIONS





PLUMMER

QUESTIONS?

Mari Jimenez, PE, Senior PM

Corpus Christi, TX

mjimenez@plummer.com

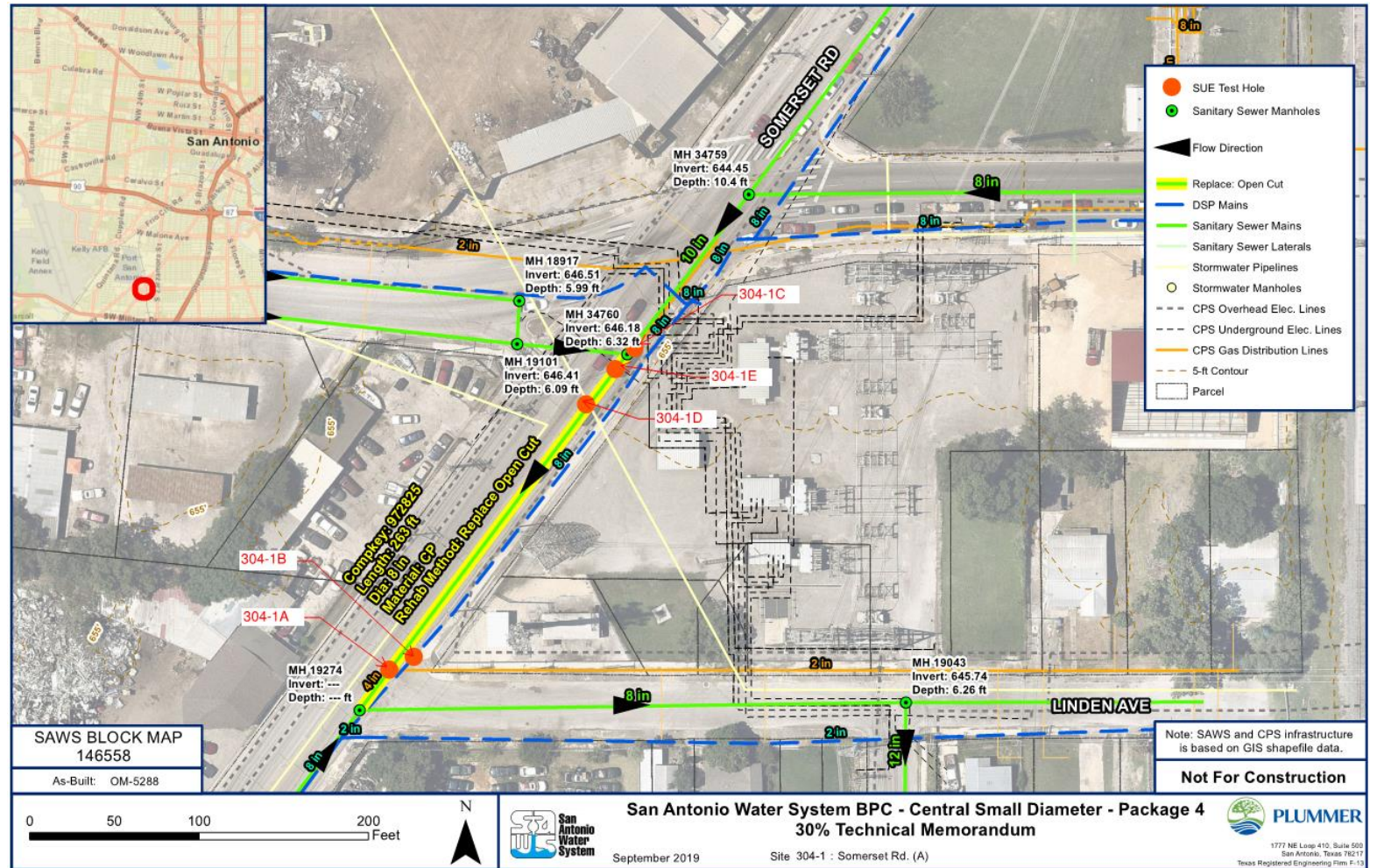
GIS MAPBOOK FOR SCOPED ASSETS @ 30%



- Asset (by rehab method)
- SUE locations
- Utility Conflicts
- Preliminary data from SAWS
- Accompanied by TM



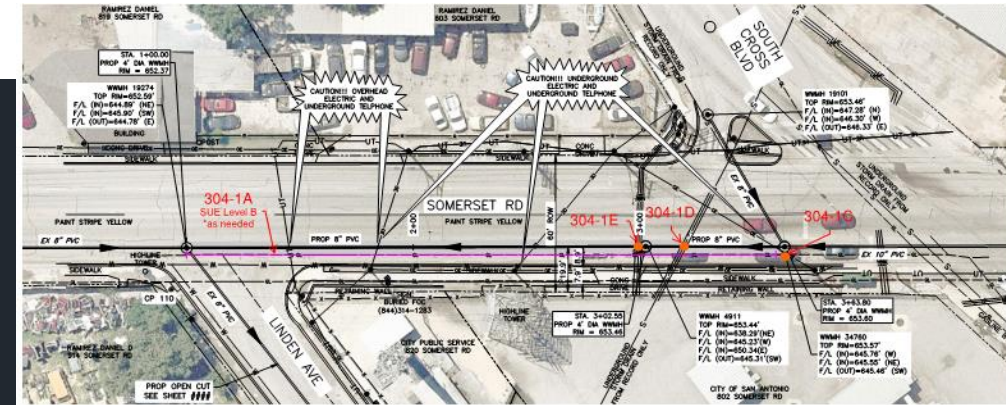
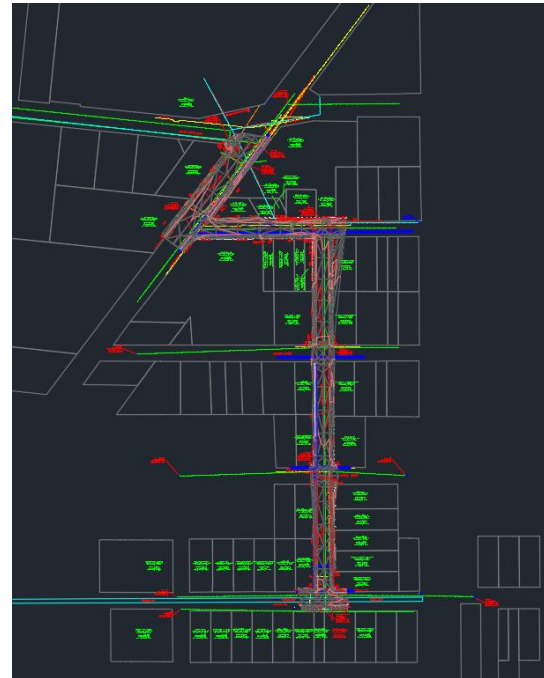
- *Based on GIS data provided by SAWS



60% DESIGN WORK



- ROE
- Easements
 - Temporary and Permanent
- Survey
 - Superseded GIS
- SUE
 - Major utility crossings
- Environmental
 - Groundwater contamination from Kelly AFB
- Geotechnical Engineering
 - Site 316 – new alignment



SUBCONSULTANTS



Survey & OPCC

- Bain Median Bain



Bypass Pumping

- JQ Engineering



Design Support (CIPP)

- Mendez Engineering



Environmental

- Blanton & Associates



Traffic Control

- Moreno Cardenas Engineering



Geotechnical

- HVJ – South Central Texas



THE RIOS GROUP

SUE

- The RIOS Group