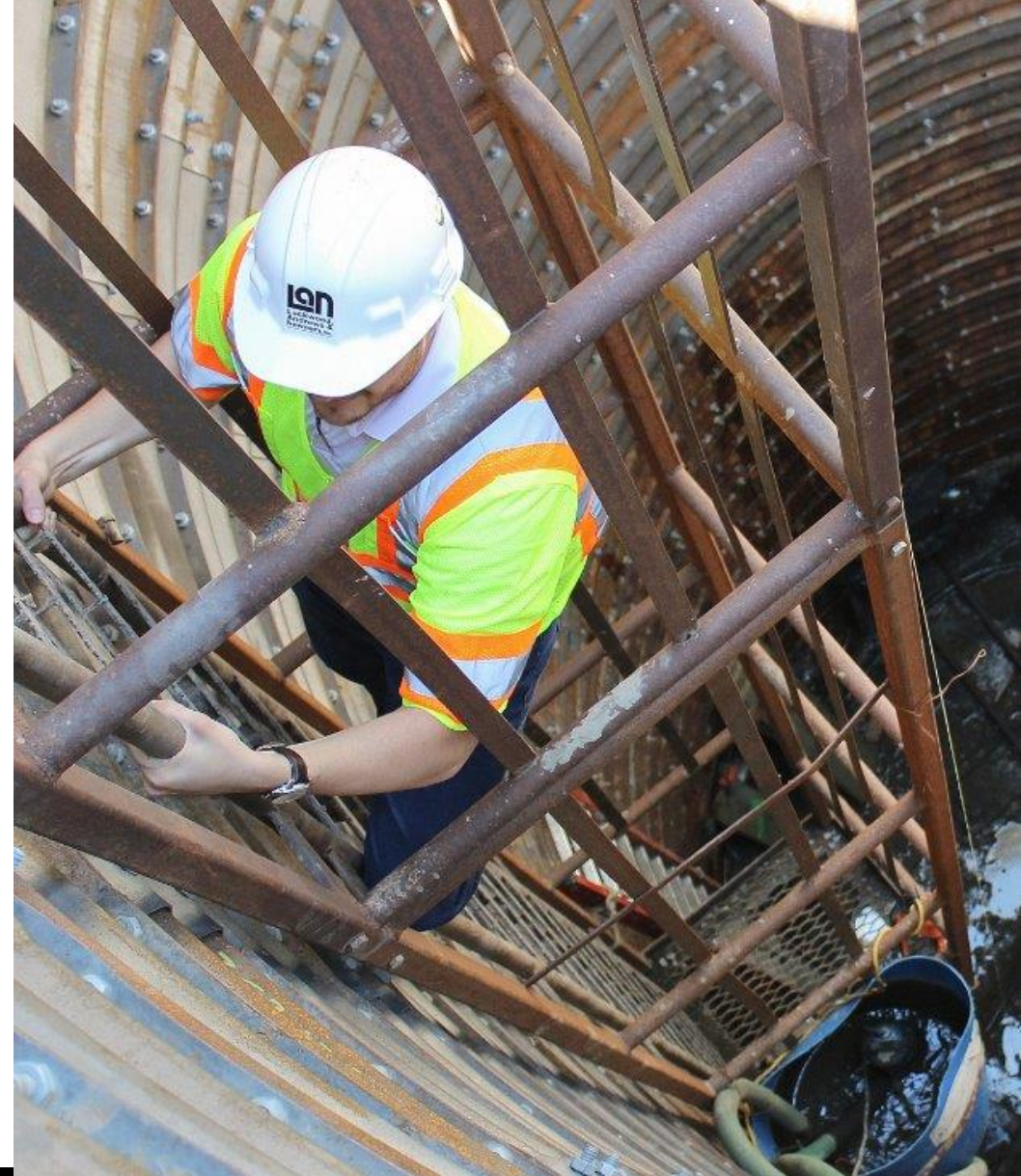


Avoiding Headaches in Construction Phase and Post Construction Phase Services



AGENDA

- As-built Challenges
- As-built Startup
- Review
- Examples
- Contract Changes
- Final Compilation



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AS-BUILT Challenges

- Visibility
- Readability

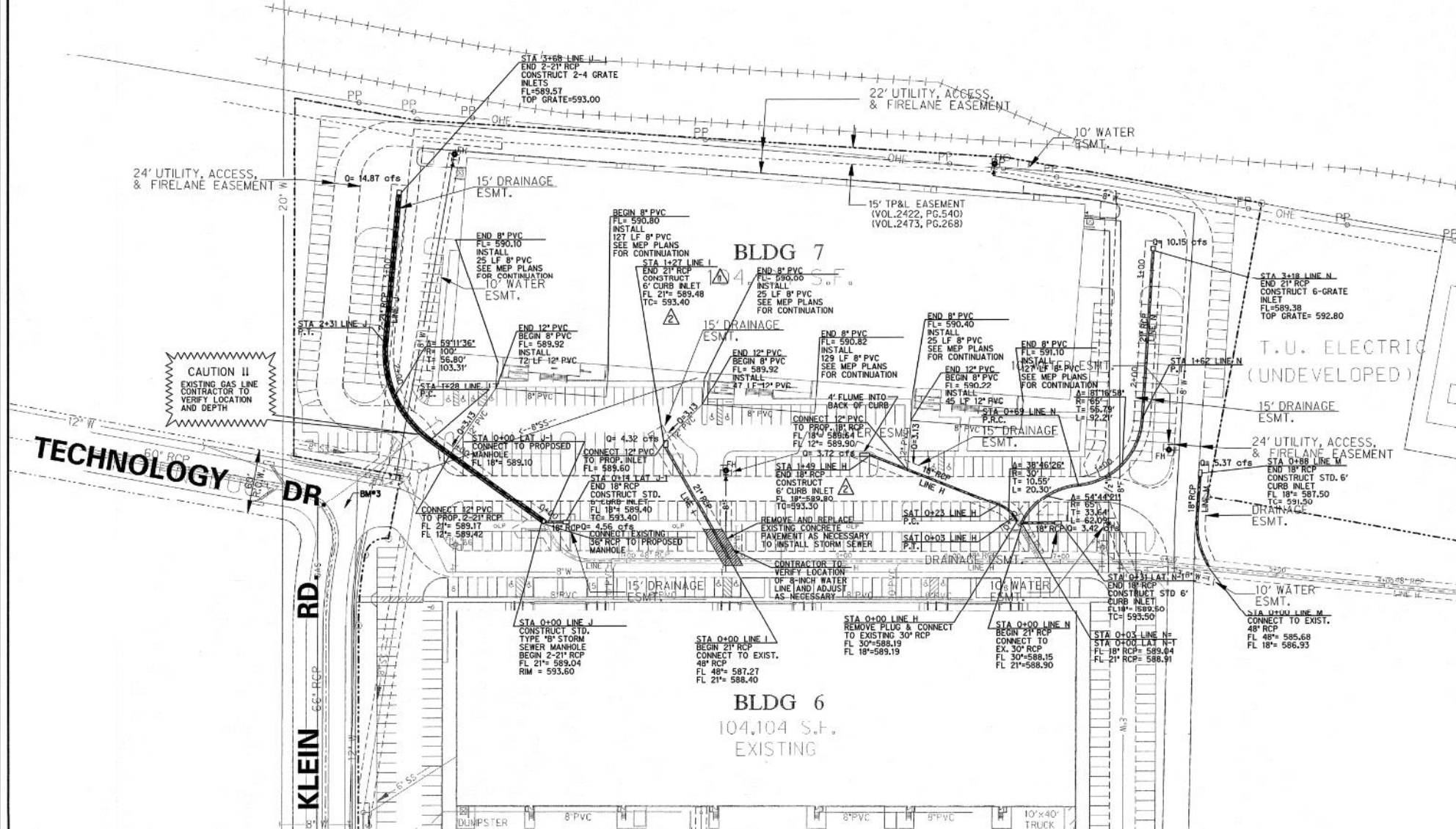


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LEGEND

EXISTING PROPERTY LINE	---
EXISTING EASEMENT LINE	---
EXISTING CONTOUR LINE	--- 714 ---
EXISTING WATER LINE	6"W
EXISTING SANITARY SEWER	10"SS
EXISTING STORM SEWER	72" RCP
EXISTING GAS LINE	3" G
EXISTING POWER POLE	Ø
EXISTING WATER VALVE	T
EXISTING FIRE HYDRANT	Ø
PROPOSED CONTOUR LINE	712
PROPOSED WATER LINE	6"W
PROPOSED SANITARY SEWER LINE	6"SS
PROPOSED STORM SEWER	24" RCP
PROPOSED FIRE HYDRANT	Ø
PROPOSED WATER VALVE	T
PROPOSED SAN SEWER MANHOLE	Ø

BENCHMARKS:

- BM #1 TOP OF EXISTING 14 FT STORM SEWER CURB INLET ALONG THE NORTH LINE OF PLANO PKWY APPROX 600 FT SOUTHWEST OF THE PLANO PKWY/SHILOH RD INTERSECTION ELEV = 588.69
- BM #2 'CROWS FOOT' FOUND @ THE CENTERLINE INTERSECTION OF KLEIN RD. & SUMMIT AVE. N489660.40 E255039.43 ELEV = 593.10
- BM #3 'X-CUT' FOUND @ THE CENTERLINE INTERSECTION OF KLEIN RD. & TECHNOLOGY DR. N490421.01 E255057.31 ELEV = 595.17

GENERAL NOTES

- ALL EXISTING UTILITIES ARE SHOWN SCHEMATICALLY AND ARE FOR THE CONTRACTORS GUIDANCE ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH, SIZE AND MATERIAL OF ALL UTILITIES AFFECTED BY CONSTRUCTION PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONTACT ALL AFFECTED UTILITIES 48 HRS PRIOR TO CONSTRUCTION.
- ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH CITY OF PLANO STANDARD SPECIFICATIONS AND GENERAL DESIGN STANDARDS.
- USE 4" JOINTS WITH REVELED ENDS, IF RADIUS OF STORM SEWER IS LESS THAN 100'.

ASBUILT PLAN BASED ON CONTRACTORS RECORD DRAWINGS

- REVISED FOR ADDITION OF PARKING 10-13-00 AND CURB INLETS
- REVISED LENGTH OF LINE I 8-18-00



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AS-BUILT START UP

- What information is required?
- Intervals Expected
- Review Timeline
- Coordination Processes



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REQUIRED INFORMATION

Data Format

- Excel
- CAD
- GIS
- Redlines



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REQUIRED INFORMATION

- Information: flowlines, top of pipe, northing/eastings, labels, photos
- Data Intervals (50', 100', etc)



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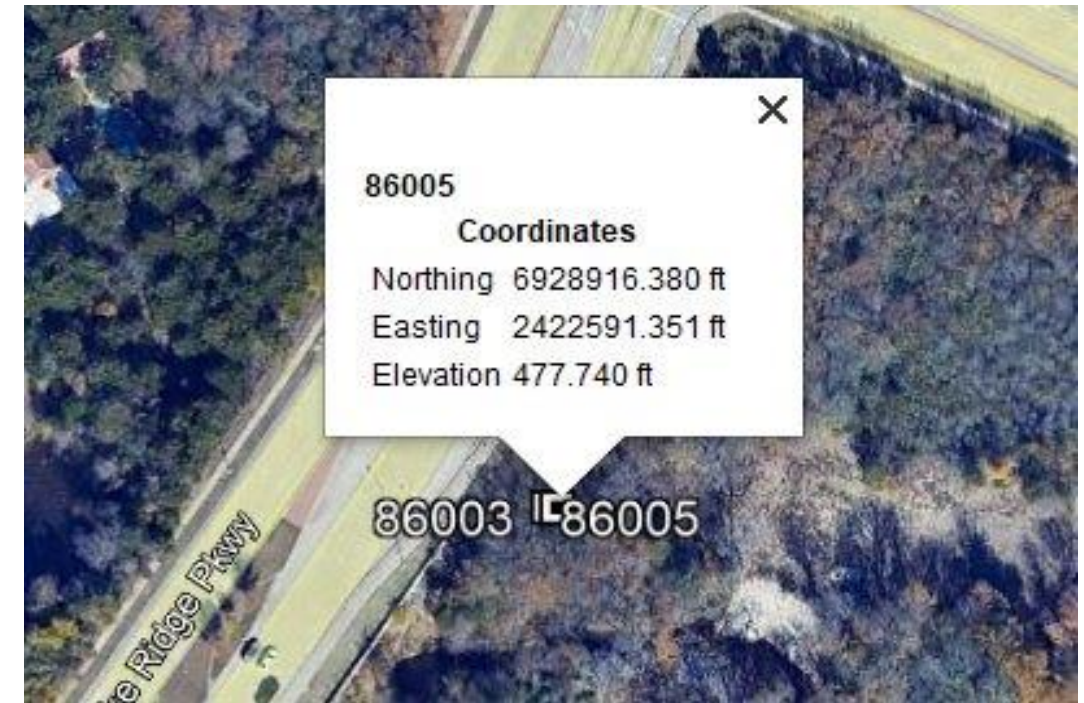
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86003	6928916.41	2422585.678	477.75
86005	6928916.38	2422591.351	477.74

TOP OF 12" PVC AT BEGINNING OF 48" PIPE
TOP OF 12" PVC / AWAY FROM 48" PIPE ENTRANCE

J22								
	A	B	C	D	E	F	G	H
1	41000	6928822	2423494	461.96	22+62.56 FL PIPE			
2	41001	6928554	2422403	463.56	34+75.16 FL LINER			
3	70009	6927853	2420577	497.51	BM /TOP OF TRA MANHOLE RIM			
4	70101	6928971	2423785	460.69	19+14.63 FL LINER			
5	70105	6928976	2423783	461.32	BM /INSIDE HOLE			
6	70109	6929381	2424005	460.21	13+94.49 FL PIPE			
7	70114	6929820	2424017	486.24	SSMH FL=459.44			
8	70116	6929272	2424012	460.47	15+04.25 FL PIPE			
9	70120	6929164	2424017	460.55	16+12.51 FL PIPE			
10	70124	6929134	2423985	460.69	16+56.64 FL PIPE @ CREEK			
11	70200	6927874	2420839	499.14	BM /HUB 52+47.39 C-31.59 TO ELEV. 467.59			
12	70201	6927897	2420863	467.58	52+19.12 FL 72" PIPE			
13	70497	6928866	2422770	463.3	29+89.74 FL 45" PIPE			
14	70498	6928865	2422775	463.3	29+85.69 FL 27" PIPE			
15	70499	6928865	2422781	463.3	29+81.83 FL 48" PIPE			
16	70500	6928844	2422807	490.96	BM /HUB 490.98 ON LATH			
17	70501	6928833	2422744	457.06	30+30.49 FL 48" PIPE			



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TRACKING, TIMELINE AND COORDINATION

- As-built submission tracking system
- Expected turnaround time
- Who reviews what?
- Coordination channels and strategies



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EXAMPLE TRACKER

SECTION NO. <input type="text"/>	MONTH NO. <input type="text"/>	<input type="text"/>	DATE RECEIVED <input type="text"/>	STATUS <input type="text"/>	SECTION <input type="text"/>
00 72 13	1	General Conditions Construction Schedule	10/15/2024	AR	Section 12.08
02 21 13	1	Surveying Construction Loop Verifications	10/31/2024	AR	Section 1.3
02 21 13	1	Surveying Elevation Flowline and Grade Status and As-Builts		Outstanding	Section 1.3
00 72 13	2	General Conditions Construction Schedule	11/1/2024	AR	Section 12.08
02 21 13	2	Surveying Construction Loop Verifications		Outstanding	Section 1.3



REVIEW

The FASTER the BETTER

Engineer review based on project type

- Slope Conformance
- Capacity
- Velocity



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ARE CHANGES NEEDED?

Request for Information (RFI)



Contractor's Modification Request (CMR)



Field Orders (FO)



Change Orders (CO)



ARE CHANGES NEEDED?

Request for Information (RFI) - to obtain clarification of the Contract Documents



ARE CHANGES NEEDED?

Request for Information (RFI)



Contractor's Modification Request (CMR)



Field Orders (FO)



Change Orders (CO)



ARE CHANGES NEEDED?

Contractor's Modification Request (CMR) -
for any change in the Contract Documents or
approval of any deviations from the Contract
Documents



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ARE CHANGES NEEDED?

Request for Information (RFI)



Contractor's Modification Request (CMR)



Field Orders (FO)



Change Orders (CO)



ARE CHANGES NEEDED?

Field Orders (FO) - a minor Change in the Work consistent with the overall intent of the Contract Documents without change in Contract Sum or Contract Time.



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ARE CHANGES NEEDED?

Request for Information (RFI)



Contractor's Modification Request (CMR)



Field Orders (FO)



Change Orders (CO)



ARE CHANGES NEEDED?

Change Orders (CO)-a Change in the Work consistent with the overall intent of the Contract Documents with change in Contract Sum or Contract Time.



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ARE CHANGES NEEDED?

Request for Information (RFI)



Contractor's Modification Request (CMR)



Field Orders (FO)



Change Orders (CO)



IMPLEMENT INTO THE CONTRACT DOCUMENTS!



Field Orders (FO)



Change Orders (CO)



FINAL AS-BUILTS

- Final Format Requested: GIS, CAD Edits, Final PDF
- Redlines
- Recordkeeping
- Asset Management



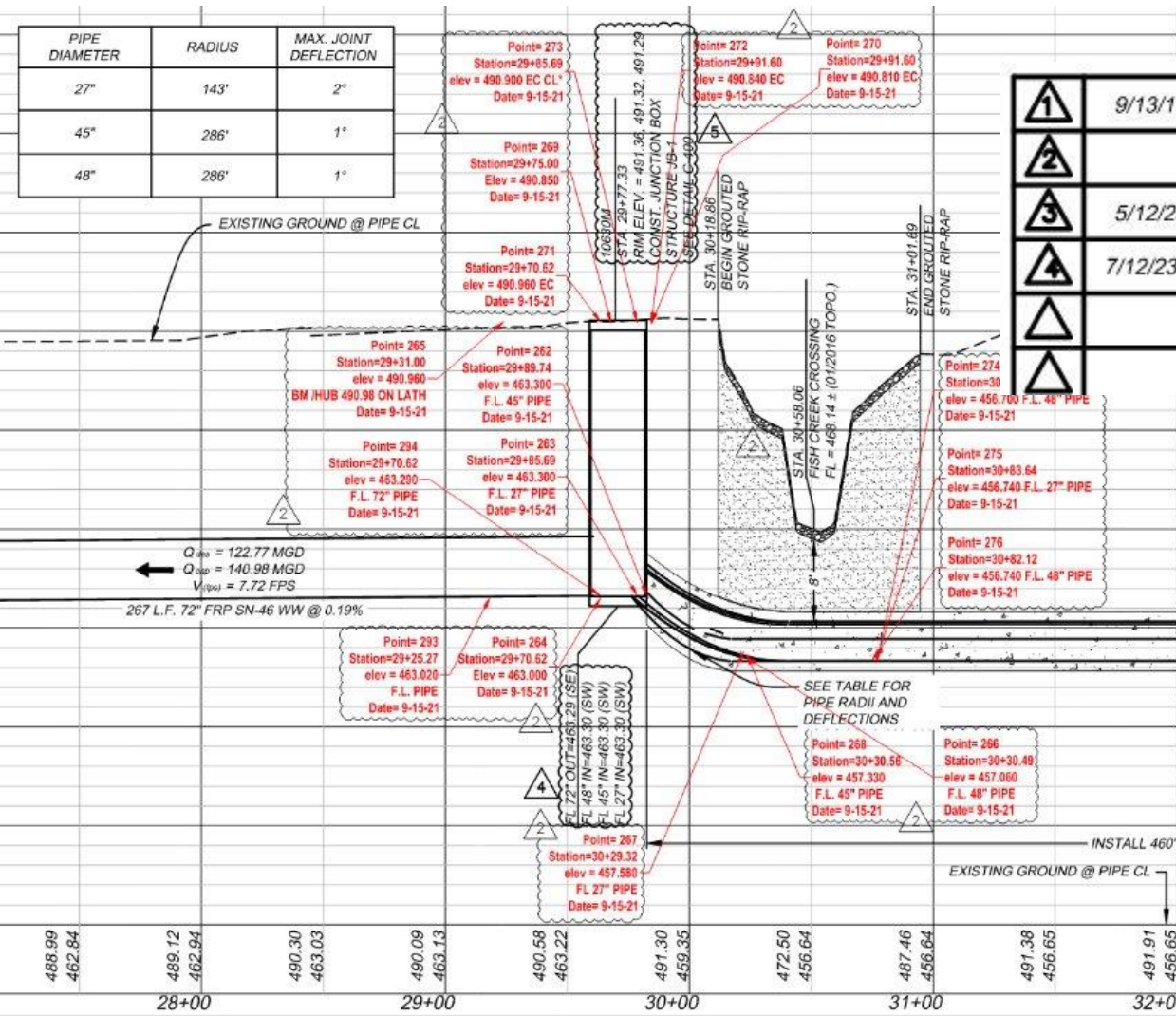
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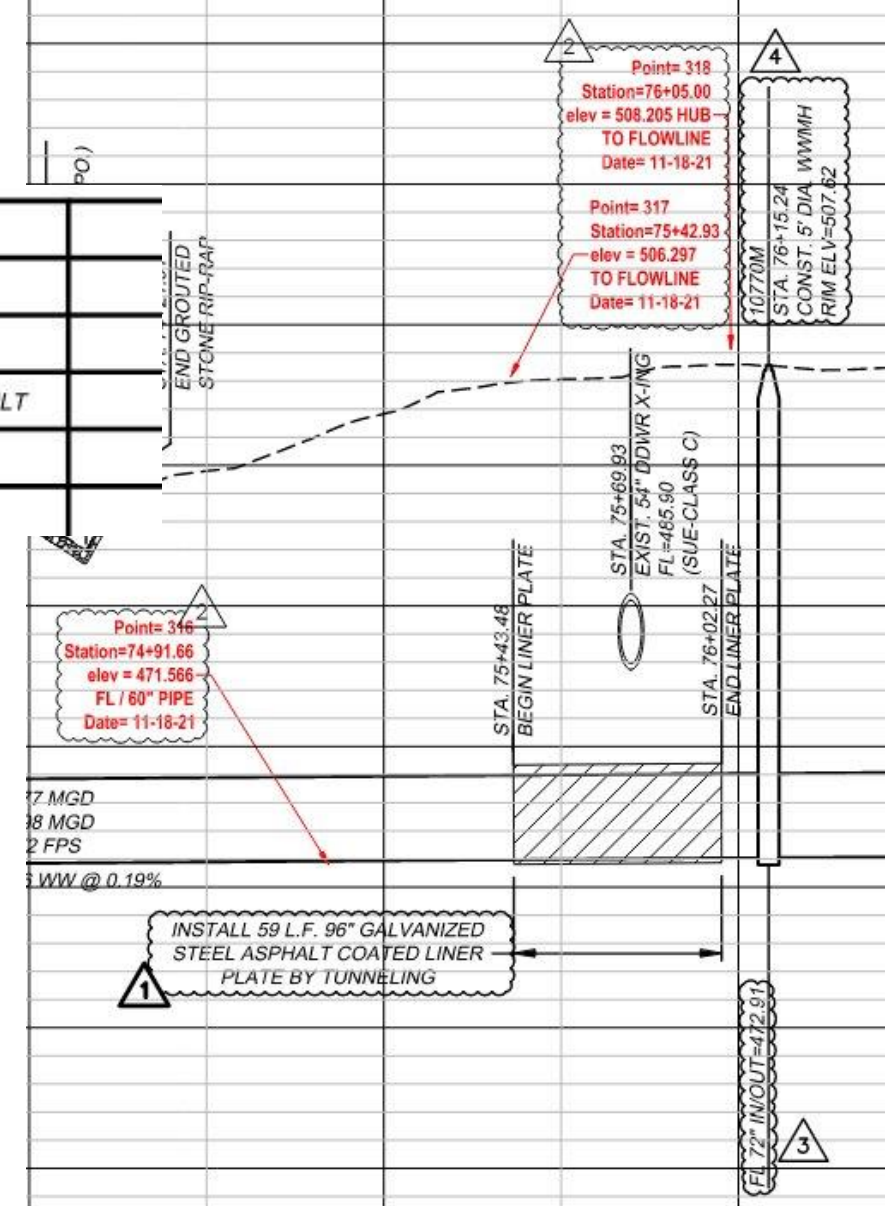
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EXAMPLE REDLINE



1	9/13/19	ADDENDUM NO. 1
2		CONSTRUCTION SURVEY
3	5/12/23	CONSTRUCTION SURVEY
4	7/12/23	FINAL CONSTRUCTION AS BUILT
5		
6		



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Questions



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