June 3, 2025
AVO 37449.004

Ms. Ramie Hammonds
Development Services Director/Building Official
City of Sanger
201 Bolivar Street
P.O. Box 1729
Sanger, Texas 76266

Re: **Lois Road Estates Phase 3 Final Plat - Review #1**

Dear Ms. Hammonds,

Halff was requested by the City of Sanger to review the Final Plat for the Lois Road Estates Subdivision. The submittal was prepared by Atwell and was received on May 20, 2025.

We have completed our review and offer the following comments:

Final Plat

1. Provide the owner's name per § 10.104(d)(10)(W).
2. Provide closure report per § 10.104(d)(10)(B).
3. Show the plat type ("Final") on all sheets / title blocks per § 10.104(d)(10)(O)(i).
4. Clarify if the owner is JST Holdins 04 Business LLC or Kalter Capital.
5. Show / identify the centerline of existing street. Dimensions from centerline to edges of existing and proposed right-of-way on both sides of the centerline per §10.104(d)(10)(H)(iv).
6. According to the legend, the open circle refers to found iron rods. Correct and check all sheets for consistency.
7. Confirm the shading of Lois Rd, Jack St, and Bexar St. represent granted ROW per the Phase 1 submittal.
8. Show setback limits set forth in PD in each lot or typical lot layouts.
9. Provide 3" x 3" recording box at the lower right-hand corner per §10.104(d)(10)(N) on all plat sheets.

Notes

10. Confirm manholes are to be 1' above ground in non-pavement areas.

Street Sections

11. Update reference sheet #'s (Typical)
12. Provide pavement thickness, bar sizes / spacing, and concrete strength. Confirm that design meets §10.106(b) Street Paving - Concrete requirements.

13. Per § 5.701(c) and the FH Detail 4120 on Sheet 71, a minimum of 3' is required between the back of curb and the FH. Correct this detail or modify the FH detail accordingly.

Overall Utility Plans Area-01

14. Show sewer and water services to individual lots. (Typical)

Overall Grading Area-01

15. Clarity what these circled letter symbols are supposed to represent. If they are Block Numbers, they don't match the plat. (Typical)
16. Update Phase 3 grading based on Phase 1 and 2 updated grading.
17. Ensure grading does not exceed 4:1 (Typical).

Overall Grading Area-02

18. Show "existing" contours from Phase 1.

Steet Plan & Profiles – Austin Ln

19. Please revise and update K-value and curve length per Table 4-12: Minimum K and L as a Function of A of the TxDOT Roadway Design Manual. (Typical)
20. Provide passing spaces, 60 inches by 60 inches, every 200 feet along 4' sidewalks per PROWAG R302.3. (Typical)

Utility Profiles

21. Provide flow lines every 50ft on all utility profiles (Typical)

Construction Details – Water Details

22. Confirm min. placement with typical section note
23. Provide embedment details for water, sewer, and storm pipes

If you have any questions or need additional information, please do not hesitate to call me at (817) 764-7468.

Sincerely,

Keith L. Freeman

Keith Freeman, PE
HALFF
Firm No. 0312

LOIS ROAD ESTATES SUBDIVISION PLAT FILING NO. 3

BEING 45.25 ACRES OF LAND
OUT OF THE REUBEN BEBEE SURVEY, ABSTRACT NUMBER 29
IN THE CITY OF SANGER, DENTON COUNTY, TEXAS

CERTIFICATION OF OWNERSHIP:

STATE OF TEXAS
COUNTY OF DENTON

I (WE), THE UNDERSIGNED, OWNER(S) OF THE LAND SHOWN ON THIS PLAT WITHIN THE AREA DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

LEGAL DESCRIPTION:

BEING A 46.82 (2,039,586 SQUARE FEET) ACRE TRACT OF LAND SITUATED IN THE REUBEN BEBEE SURVEY, ABSTRACT NO. 29, SITUATED IN THE CITY OF SANGER, DENTON COUNTY, TEXAS, AND BEING DESCRIBED IN A GENERAL WARRANTY DEED TO JST HOLDINGS 04 BUSINESS LLC, A NEW MEXICO LIMITED LIABILITY COMPANY, RECORDED IN DOCUMENT NO. 2024–74411 OF THE OFFICIAL RECORDS OF DENTON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET IN THE NORTHERN LINE OF SAID JST HOLDINGS TRACT OF LAND, BEING IN THE SOUTHERN RIGHT–OF–WAY LINE OF LOIS ROAD EAST (40' RIGHT–OF–WAY); FOR THE NORTHWESTERN CORNER AND THE POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE COMMON BOUNDARY OF THE SOUTHERN RIGHT–OF–WAY LINE OF SAID LOIS ROAD EAST, SAME BEING THE NORTHERN LINE OF SAID JST HOLDINGS TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:
1. S 89°22'38" E, A DISTANCE OF 712.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
2. S 89°07'42" E, A DISTANCE OF 453.04 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET IN THE SOUTHERN RIGHT–OF–WAY LINE OF SAID LOIS ROAD EAST, FOR THE NORTHEASTERN CORNER OF SAID JST HOLDINGS TRACT, FOR A NORTHWESTERN CORNER OF A CALLED 15.00 ACRE TRACT CONVEYED TO MILDRED E. HUNT RECORDED IN DOCUMENT NO. 2019–5766, OFFICIAL RECORDS OF DENTON COUNTY, TEXAS, AND FOR THE FOR THE NORTHEASTERN CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE WITH THE EASTERN LINE OF SAID JST HOLDINGS TRACT, SAME BEING THE WESTERN LINE OF SAID 15.00 ACRE TRACT, S 01°11'12" W, A DISTANCE OF 1,373.07 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET IN THE WESTERN LINE OF SAID JST HOLDINGS TRACT, SAME BEING IN THE WESTERN LINE OF SAID 15.00 ACRE TRACT, AND FOR THE SOUTHEASTERN CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE OVER AND ACROSS SAID JST HOLDINGS TRACT, THE FOLLOWING TWENTY–SEVEN (27) COURSES AND DISTANCES:
1. N 88°48'48" W, A DISTANCE OF 125.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
2. S 01°11'12" W, A DISTANCE OF 2.29 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
3. N 88°48'48" W, A DISTANCE OF 50.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
4. N 43°48'48" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
5. N 88°48'48" W, A DISTANCE OF 214.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
6. S 46°11'12" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
7. N 88°48'48" W, A DISTANCE OF 50.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
8. N 43°48'48" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
9. N 88°48'48" W, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
10. S 01°11'12" W, A DISTANCE OF 510.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
11. N 88°48'48" W, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
12. S 01°11'12" W, A DISTANCE OF 50.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
13. S 46°11'12" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
14. S 01°11'12" W, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
15. N 88°48'48" W, A DISTANCE OF 125.50 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET AND FOR THE POINT OF BEGINNING TO A CURVE TO THE RIGHT;
16. WITH A CURVE TO THE RIGHT AND HAVING A RADIUS OF 500.00 FEET, A ARC LENGTH OF 244.22 FEET, AND A CHORD BEARING AND CHORD DISTANCE OF N 74°49'13" W, A DISTANCE OF 241.80 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
17. N 60°49'38" W, A DISTANCE OF 266.04 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
18. N 29°10'22" E, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
19. N 74°10'22" E, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
20. N 29°10'22" E, A DISTANCE OF 50.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC" SET;
21. N 60°49'38" W, A DISTANCE OF 230.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
22. N 15°49'38" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
23. N 29°10'22" E, A DISTANCE OF 51.40 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET AND FOR THE POINT OF BEGINNING TO A CURVE TO THE LEFT;
24. WITH A CURVE TO THE LEFT AND HAVING A RADIUS OF 925.00 FEET, AN ARC LENGTH OF 252.99 FEET, AND A CHORD BEARING AND CHORD DISTANCE OF N 21°20'15" E, A DISTANCE OF 252.21 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
25. S 88°48'48" E, A DISTANCE OF 122.49 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET AND FOR THE POINT OF BEGINNING TO A CURVE TO THE LEFT;
26. WITH A CURVE TO THE LEFT AND HAVING A RADIUS OF 1045.00 FEET, AN ARC LENGTH OF 198.49 FEET, AND A CHORD BEARING AND CHORD DISTANCE OF N 06°37'41" E, A DISTANCE OF 198.19 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
27. N 01°11'12" E, A DISTANCE OF 302.71 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
28. N 88°48'48" W, A DISTANCE OF 120.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
29. N 01°11'12" E, A DISTANCE OF 12.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
30. N 46°11'12" E, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
31. S 88°48'48" E, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
32. N 01°11'12" E, A DISTANCE OF 772.88 FEET TO THE POINT OF BEGINNING;

SAVE AND EXCEPT ANY PORTIONS OF JACK STREET AND BEXAR STREET DEDICATED AS PUBLIC RIGHT OF WAY ON LOIS ROAD ESTATES SUBDIVISION, FILING NO. 1 RECEPTION NO. _____.

CONTAINING 45.25 ACRES OR 1,971,323 SQUARE FEET, MORE OR LESS.

Provide the owner's name per § 10.104(d)(10)(W)

NOW, THEREFORE, KNOW ALL PERSONS BY THESE PRESENTS: THAT, ACTING HEREIN BY AND THROUGH ITS DULY AUTHORIZED OFFICER, DOES HEREBY ADOPT THIS PLAT DESIGNATING THE HEREIN ABOVE DESCRIBED PROPERTY AS LOIS ROAD ESTATES SUBDIVISION PLAT FILING NO. 3, AN ADDITION TO THE CITY OF SANGER, TEXAS, AND DOES HEREBY DEDICATE TO THE PUBLIC USE FOREVER BY FEE SIMPLE TITLE, FREE AND CLEAR OF ALL LIENS AND ENCUMBRANCES, ALL STREETS, THOROUGHFARES, ALLEYS, FIRE LANES, DRIVE AISLES, PARKS, AND WATERCOURSES, AND TO THE PUBLIC USE FOREVER EASEMENTS FOR SIDEWALKS, STORM DRAINAGE FACILITIES, UTILITIES AND ANY OTHER PROPERTY NECESSARY TO SERVE THE PLAT AND TO IMPLEMENT THE REQUIREMENTS OF THE SUBDIVISION REGULATIONS AND OTHER CITY CODES AND DO HEREBY BIND OURSELVES, OUR HEIRS, SUCCESSORS AND ASSIGNS TO WARRANT AND TO FOREVER DEFEND THE TITLE ON THE LAND SO DEDICATED. FURTHER, THE UNDERSIGNED COVENANTS AND AGREES THAT HE/SHE SHALL MAINTAIN ALL EASEMENTS AND FACILITIES IN A STATE OF GOOD REPAIR AND FUNCTIONAL CONDITION AT ALL TIMES IN ACCORDANCE WITH CITY CODES AND REGULATIONS. NO BUILDINGS, FENCES, TREES, SHRUBS, OR OTHER IMPROVEMENTS OR GROWTHS SHALL BE CONSTRUCTED OR PLACED UPON, OVER, OR ACROSS THE EASEMENTS AS SHOWN, EXCEPT THAT LANDSCAPE IMPROVEMENTS MAY BE INSTALLED, IF APPROVED BY THE CITY OF SANGER. THE CITY OF SANGER AND PUBLIC UTILITY ENTITIES SHALL HAVE THE RIGHT TO ACCESS AND MAINTAIN ALL RESPECTIVE EASEMENTS WITHOUT THE NECESSITY AT ANY TIME OF PROCURING PERMISSION FROM ANYONE.

WITNESS MY HAND THIS DAY OF _____, 20_____.

_____, OWNER

_____, TITLE AND COMPANY

STATE OF TEXAS
COUNTY OF DENTON

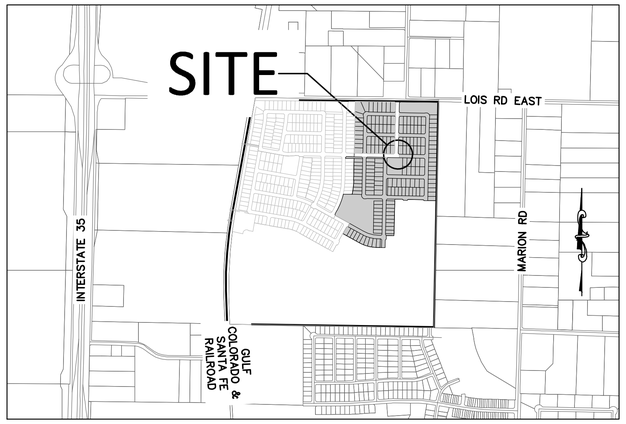
BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE/SHE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS_____ DAY OF_____, 20 _____.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

_____
TYPE OR PRINT NOTARY'S NAME

MY COMMISSION EXPIRES_____.



VICINITY MAP
NTS

BENCHMARKS AND CONTROLS:

NO. 1 – AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS–OF–WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

NO. 2 – AN MAG NAIL IN ASPHALT LOCATED IN THE NORTHWEST INTERSECTION OF LOIS ROAD EAST AND MELTON ROAD, HAVING AN ELEVATION OF 693.8 FEET, A NORTHING COORDINATE VALUE OF 7,192,151.4, AND AN EASTING COORDINATE VALUE OF 2,376,790.5.

BASIS OF BEARING:

BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.

GENERAL NOTES

1. ALL LOTS COMPLY WITH THE MINIMUM SIZE REQUIREMENTS OF THE PLANNED DEVELOPMENT.
2. THIS PROPERTY MAY BE SUBJECT TO CHARGES RELATED TO IMPACT FEES AND THE APPLICANT SHOULD CONTACT THE CITY REGARDING ANY APPLICABLE FEES DUE.
3. ALL COMMON AREAS, DRAINAGE EASEMENTS, AND DETENTION FACILITIES WILL BE OWNED AND MAINTAINED BY THE HOA/POA. ANY COMMON AREA WITHIN THE CITY'S RIGHT–OF–WAY WILL REQUIRE A FACILITIES AGREEMENT, TO BE REVIEWED AND APPROVED BY THE CITY.
4. NOTICE – SELLING A PORTION OF THIS BY METES AND BOUNDS IS A VIOLATION OF CITY ORDINANCE AND STATE LAW AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.
5. THIS PLAT DOES NOT ALTER OR REMOVE EXISTING DEED RESTRICTIONS, IF ANY, ON THIS PROPERTY.
6. MINIMUM FINISHED FLOOR ELEVATIONS ARE AT LEAST 2 FEET ABOVE THE 100 YEAR FLOOD PLAIN.
7. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A 100 – YEAR FLOODPLAIN ACCORDING TO COMMUNITY PANEL NO. 48121C0070G, DATED APRIL 18, 2011, OF THE NATIONAL FLOOD INSURANCE RATE MAPS FOR DENTON COUNTY, TEXAS.
8. THE PURPOSE OF THIS PLAT IS TO CREATE NEW FOR SALE SINGLE–FAMILY LOTS.
9. BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, TEXAS NORTH CENTRAL ZONE (4202), NORTH AMERICAN DATUM OF 1983 (NAD 83)
10. UTILITIES SERVICE PROVIDED BY
    CITY OF SANGER – WATER & SANITARY SEWER
    ADDRESS: P.O. BOX 1729, SANGER, TEXAS 76266
    CONTACT: JIM BOLZ
    PHONE NUMBER: (940) 458–2571

    COSERV – ELECTRIC AND GAS
    ADDRESS: 202 RAILROAD AVE, SANGER, TEXAS 76266
    PHONE NUMBER: (800) 274–4014

Provide closure report per § 10.104(d)(10)(B).

Show the plat type ("Final") on all sheets / title blocks per § 10.104(d)(10)(O)(i).

Clarify if the owner is JST Holdins 04 Business LLC or Kalter Capital.

Provide 3" x 3" recording box at the lower right-hand corner per §10.104(d)(10)(N) on all plat sheets.

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
01	COVER SHEET
02	OVERALL PLAT
03	FINAL PLAT
04	FINAL PLAT
05	FINAL PLAT
06	LINE & CURVE TABLES

PROJECT TEAM

OWNER/DEVELOPER/APPLICANT:
KALTER CAPITAL
10268 W, CENTENNIAL RD., UNIT 200 F
LITTLETON, CO 80127
CONTACT: LEE EISENHEIM
PH: 303.324.1771
LEE.EISENHEIM@KALTERCAPITAL.COM

ENGINEERING & SURVEY:
ATWELL, LLC
143 UNION BOULEVARD SUITE 700
LAKEWOOD, CO 80228
CONTACT: KEVIN BLUMHARDT
PH: 303.842.9191
KBLUMHARDT@ATWELL.COM

RESIDENTIAL LOT INFORMAITON	
LOT SIZE	NUMBER OF LOTS
50'	114
60'	62
TOTAL	176

AREA TABLE				
TRACT NAME	AREA (SF)	AREA (AC)	LAND USE	OWNER/MAINTENANCE
TRACT A	17852.44	0.41	OPEN SPACE, UTILITIES	OWNER/HOA
TRACT B	85248.98	1.96	OPEN SPACE	OWNER/HOA
TRACT C	5831.00	0.13	OPEN SPACE	OWNER/HOA
TRACT D	4151.00	0.10	OPEN SPACE	OWNER/HOA
TRACT E	52151.00	1.20	OPEN SPACE	OWNER/HOA
TRACT F	4151.00	0.10	OPEN SPACE	OWNER/HOA
TRACT G	217207.74	4.99	PARK, OPEN SPACE & AMENITY CENTER	OWNER/HOA
TRACT H	2915.50	0.07	OPEN SPACE	OWNER/HOA
TRACT I	2915.50	0.07	OPEN SPACE	OWNER/HOA
TRACT J	2315.50	0.05	OPEN SPACE	OWNER/HOA
TOTAL	**394,739**	**12.15**		

OWNER: JST HOLDINS 04 BUSINESS LLC
HOA: LOIS ROAD ESTATES

SURVEYOR CERTIFICATE

I, RANDALL R. HAGER, A DULY LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS FINAL PLAT REPRESENTS THE RESULT OF A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION AND COMPLETED ACCORDING TO APPLICABLE STATE OF TEXAS REQUIREMENTS.

_____
RANDALL R. HAGER, RPLS NO. 6471
FOR AND ON BEHALF OF ATWELL, LLC

APPROVED AND ACCEPTED

_____ _____
CHAIRMAN, PLANNING & ZONING COMMISSION — DATE
CITY OF SANGER, TX

_____ _____
MAYOR — DATE
CITY OF SANGER, TX

ATTESTED BY

_____ _____
CITY SECRETARY — DATE
CITY OF SANGER, TX

RECORDING BOX

ATWELL
866.850.4200 www.atwell.com

OWNER/DEVELOPER/APPLICANT
JST HOLDINGS 04 BUSINESS LLC
10268 W. CENTENNIAL RD. UNIT 200 F
LITTLETON, CO
303–324–1771
LEE EISENHEIM

PLAT FILING NO. 3
LOIS ROAD ESTATES SUBDIVISION
176 RESIDENTIAL LOTS - 10 HOA LOTS
REUBEN BEBEE SURVEY, ABST. NO. 29
45.25 ACRES - 8.54 ACRES ROW
CITY OF SANGER, DENTON COUNTY TEXAS

DATE 02/28/2025

REVISIONS	
A	1ST SUBMITTAL TO CITY OF SANGER xxxxxxxx – XX

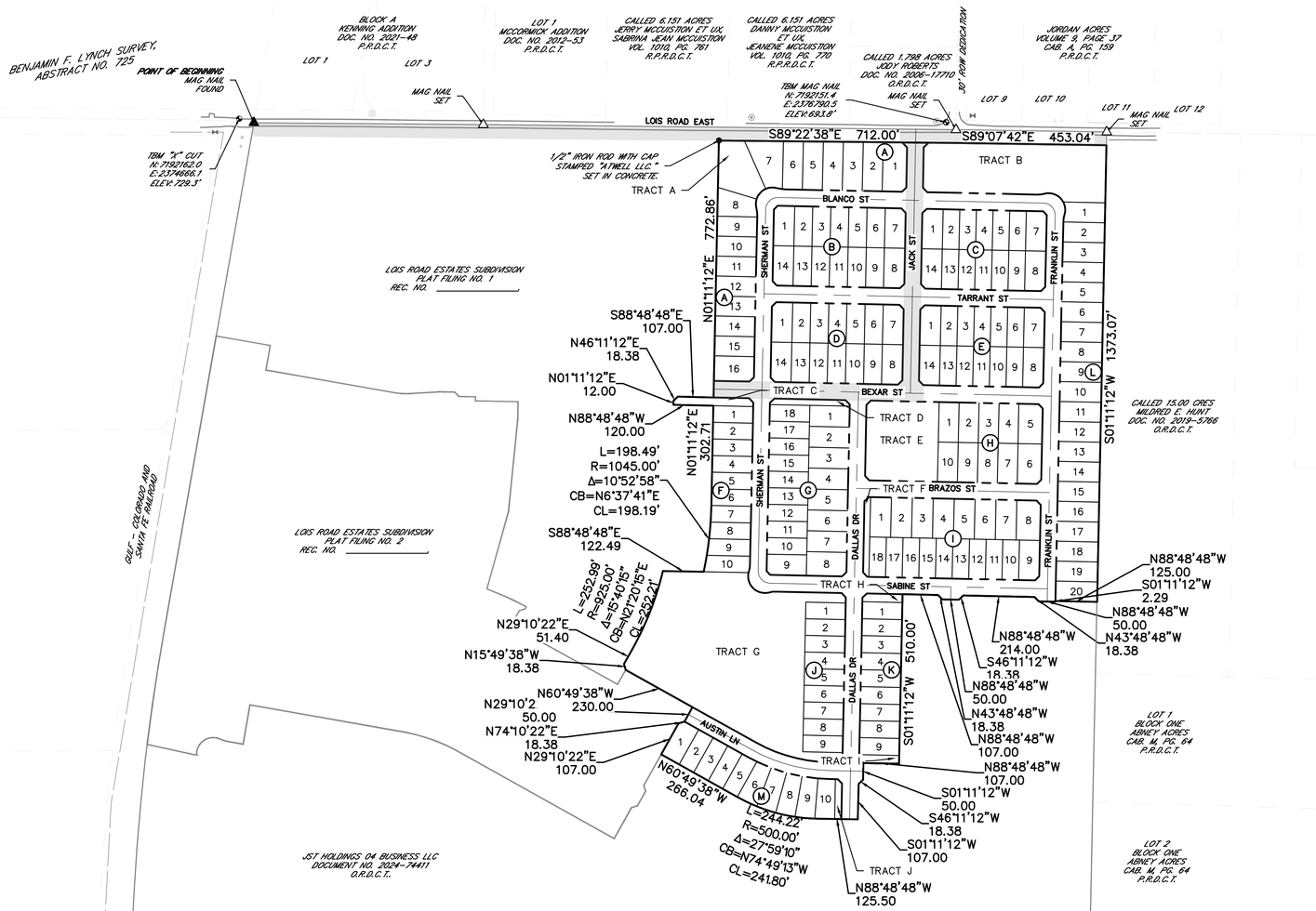
DR. RF | CH. JS
P.M. RH
JOB 24007256

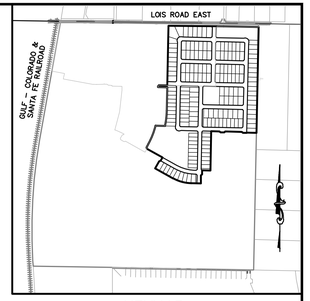
SHEET 01 OF 06

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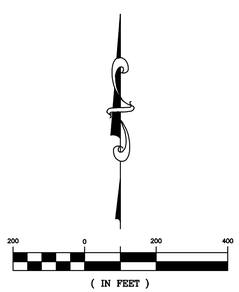
LOIS ROAD ESTATES SUBDIVISION PLAT FILING NO. 3

BEING 45.25 ACRES OF LAND
OUT OF THE REUBEN BEBEE SURVEY, ABSTRACT NUMBER 29
IN THE CITY OF SANGER, DENTON COUNTY, TEXAS





KEYMAP
1"=750'



(IN FEET)
1 inch = 200 ft.

LEGEND

○	FOUND 1/2" IRON ROD WITH PLASTIC CAP STAMPED "ATWELL LLC"
●	SET 1/2" IRON ROD WITH PLASTIC CAP STAMPED "ATWELL LLC"
▲	MAG NAIL FOUND
△	MAG NAIL SET
✦	SECTION CORNER, AS NOTED
1	LOT NUMBER
Ⓤ	BLOCK LETTER
D.E.	DRAINAGE EASEMENT
U.E.	UTILITY EASEMENT
———	SUBJECT PARCEL BOUNDARY LINE
— — —	SECTION LINE
———	SUBDIVISION LOT LINE
———	ADJACENT PROPERTY LINE
– – – –	EASEMENT LINE, AS NOTED
— · — · —	R.O.W. (RIGHT-OF-WAY LINE)
- - - - -	OFFSET / TIE LINE
	** GRANTED, RIGHTS-OF-WAY PER LOIS ROAD ESTATES SUBDIVISION,PHASE 1 FINAL PLAT REC. NO. _____

ATWELL
866.850.4200 www.atwell.com

OWNER/DEVELOPER/APPLICANT
JST HOLDINGS 04 BUSINESS LLC
10268 W. CENTENNIAL RD. UNIT 200 F
LITTLETON, CO
303-324-1771
LEE EISENHEIM

PLAT FILING NO. 3
LOIS ROAD ESTATES SUBDIVISION
176 RESIDENTIAL LOTS - 10 HOA LOTS
REUBEN BEBEE SURVEY, ABST. NO. 29
45.25 ACRES - 8.54 ACRES ROW
CITY OF SANGER, DENTON COUNTY TEXAS

DATE 02/28/2025

A	1st SUBMITTAL TO CITY OF SANGER xxxxxxxx - KB

REVISIONS

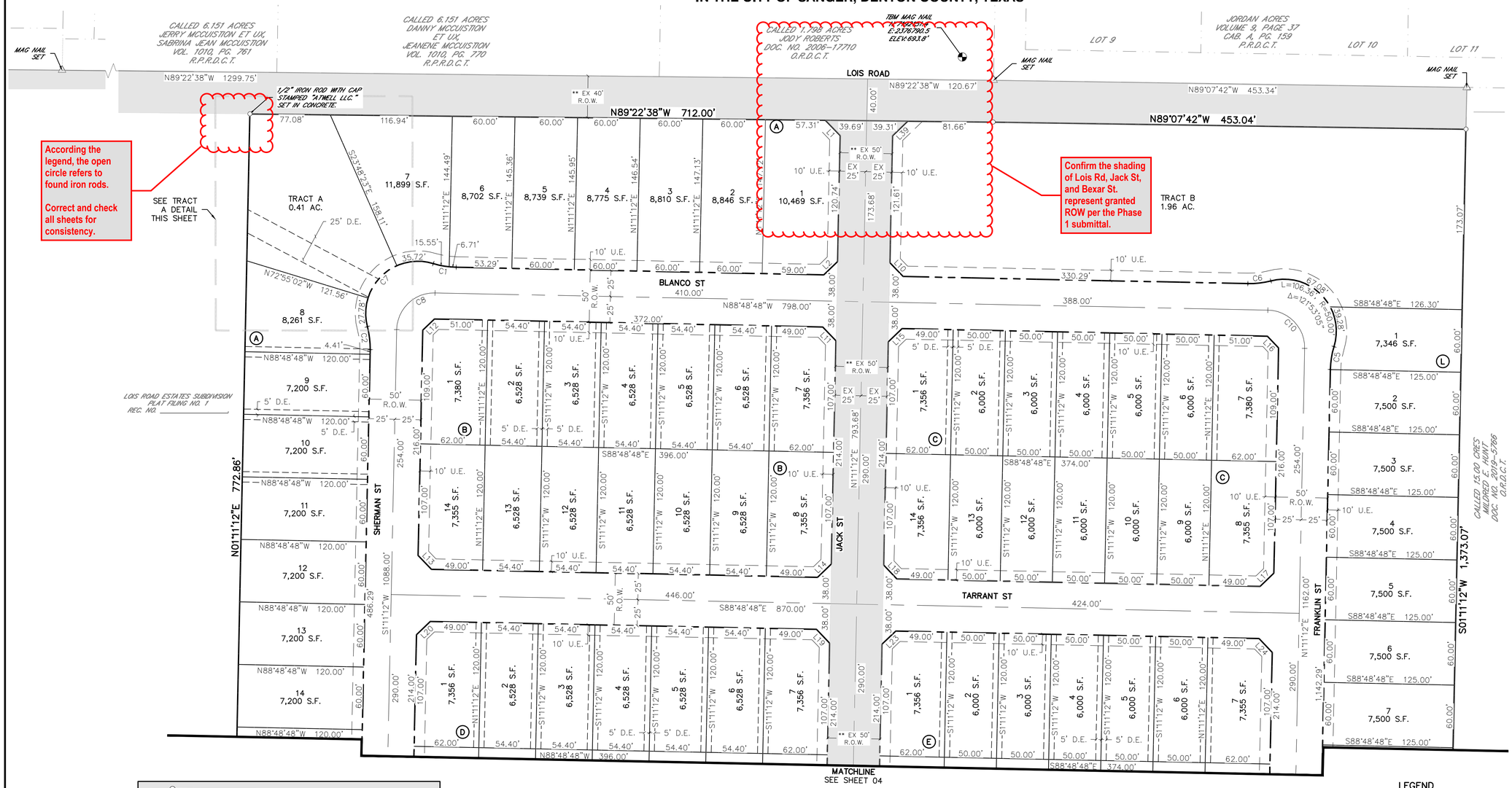
DR. RF	CH. JS
P.M. RH	
JOB 24007256	

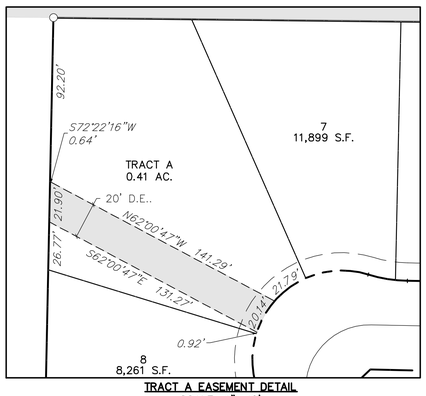
SHEET OF 06

K:\DAL\24007256\DWG\SHEETS\FINAL PLAT\PHASE 2\24007256-PH2-PLAT-OVERALL FINAL 2/14/2025 3:00 PM ROXANNE FOSTER

LOIS ROAD ESTATES SUBDIVISION PLAT FILING NO. 3

BEING 45.25 ACRES OF LAND
OUT OF THE REUBEN BEBEE SURVEY, ABSTRACT NUMBER 29
IN THE CITY OF SANGER, DENTON COUNTY, TEXAS





TRACT A EASEMENT DETAIL
SCALE: 1"=40'

Show setback limits set forth in PD in each lot or typical lot layouts.

50 0 50 100
(IN FEET)
1 inch = 50 ft.

LEGEND

- FOUND 1/2" IRON ROD WITH PLASTIC CAP STAMPED "ATWELL LLC"
- SET 1/2" IRON ROD WITH PLASTIC CAP STAMPED "ATWELL LLC"
- MAG NAIL FOUND
- MAG NAIL SET
- SECTION CORNER, AS NOTED
- 1 LOT NUMBER
- (U) BLOCK LETTER
- D.E. DRAINAGE EASEMENT
- U.E. UTILITY EASEMENT
- SUBJECT PARCEL BOUNDARY LINE
- SECTION LINE
- SUBDIVISION LOT LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE, AS NOTED
- R.O.W. (RIGHT-OF-WAY LINE)
- OFFSET / TIE LINE
- ** GRANTED, RIGHTS-OF-WAY PER LOIS ROAD ESTATES SUBDIVISION,PHASE 1 FINAL PLAT REC. NO. _____,

ATWELL
866.850.4200 www.atwell.com

OWNER/DEVELOPER/APPLICANT
JST HOLDINGS 04 BUSINESS LLC
10268 W. CENTENNIAL RD. UNIT 200 F
LITTLETON, CO
303-324-1771
LEE EISENHEIM

PLAT FILING NO. 3
LOIS ROAD ESTATES SUBDIVISION
176 RESIDENTIAL LOTS - 10 HOA LOTS
REUBEN BEBEE SURVEY, ABST. NO. 29
45.25 ACRES - 8.54 ACRES ROW
CITY OF SANGER, DENTON COUNTY TEXAS

DATE 02/28/2025

A	1st SUBMITTAL TO CITY OF SANGER XX/XX/XXXX - KB

REVISIONS

DR. RF | CH. JS
P.M. RH
JOB 24007256

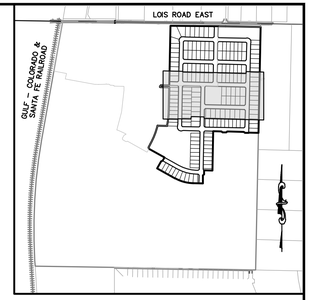
SHEET 03 OF 06

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LOIS ROAD ESTATES SUBDIVISION PLAT FILING NO. 3

BEING 45.25 ACRES OF LAND
OUT OF THE REUBEN BEBEE SURVEY, ABSTRACT NUMBER 29
IN THE CITY OF SANGER, DENTON COUNTY, TEXAS





KEYMAP
1"=750'

LEGEND

○	FOUND 1/2" IRON ROD WITH PLASTIC CAP STAMPED "ATWELL LLC"
●	SET 1/2" IRON ROD WITH PLASTIC CAP STAMPED "ATWELL LLC"
▲	MAG NAIL FOUND
△	MAG NAIL SET
✦	SECTION CORNER, AS NOTED
1	LOT NUMBER
Ⓤ	BLOCK LETTER
D.E.	DRAINAGE EASEMENT
U.E.	UTILITY EASEMENT
———	SUBJECT PARCEL BOUNDARY LINE
— — —	SECTION LINE
———	SUBDIVISION LOT LINE
———	ADJACENT PROPERTY LINE
— — — —	EASEMENT LINE, AS NOTED
— · — · —	R.O.W. (RIGHT-OF-WAY LINE)
- - - - -	OFFSET / TIE LINE
	** GRANTED, RIGHTS-OF-WAY PER LOIS ROAD ESTATES SUBDIVISION,PHASE 1 FINAL PLAT REC. NO. _____

50 0 50 100
(IN FEET)
1 inch = 50 ft.

ATWELL
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JST HOLDINGS 04 BUSINESS LLC
10268 W. CENTENNIAL RD. UNIT 200 F
LITTLETON, CO
303-324-1771
LEE EISENHEIM

PLAT FILING NO. 3
LOIS ROAD ESTATES SUBDIVISION
176 RESIDENTIAL LOTS - 10 HOA LOTS
REUBEN BEBEE SURVEY, ABST. NO. 29
45.25 ACRES - 8.54 ACRES ROW
CITY OF SANGER, DENTON COUNTY TEXAS

DATE 02/28/2025

A	1st SUBMITTAL TO CITY OF SANGER XXXXXXXX - XX

REVISIONS

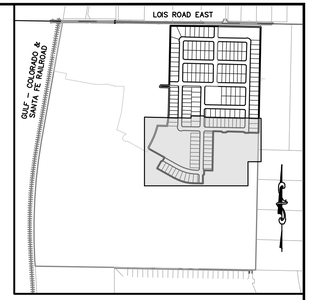
DR. RF | CH. JS
P.M. RH
JOB 24007256

SHEET 04 OF 06

K:\2400\7256\pw\SURVEY\FINAL PLAT\PHASE 2\24007256-PH2-FINAL PLAT.DWG 3/14/2025 3:08 PM ROMANIC FISHER

LOIS ROAD ESTATES SUBDIVISION PLAT FILING NO. 3

BEING 45.25 ACRES OF LAND
OUT OF THE REUBEN BEBEE SURVEY, ABSTRACT NUMBER 29
IN THE CITY OF SANGER, DENTON COUNTY, TEXAS



KEYMAP
1"=750'

MATCHLINE
SEE SHEET 04

LOIS ROAD ESTATES SUBDIVISION PLAT FILING NO. 1 REC. NO. _____

S88°48'48"E 122.49'

1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET IN CONCRETE.

L=198.49'
R=1045.00'
Δ=10°52'58"
CB=N6°37'41"E
CL=198.19'

L=252.99'
R=925.00'
Δ=15°40'15"
CB=N2°12'15"E
CL=252.21'

N29°10'22"E 51.40'

N60°49'38"W 230.00'

N29°10'22"E 50.00'

N74°10'22"E 18.38'

N29°10'22"E 107.00'

TRACT G
4.99 AC.

SABINE ST

DALLAS DR

AUSTIN LN

FRANKLIN ST

TRACT H
0.07 AC.

TRACT I
0.07 AC.

TRACT J
0.05 AC.

1 7,355 S.F.
2 6,000 S.F.
3 6,000 S.F.
4 6,000 S.F.
5 6,011 S.F.
6 6,879 S.F.
7 6,689 S.F.
8 6,691 S.F.
9 6,596 S.F.
10 6,723 S.F.

(F) 9 6,364 S.F.; 10 6,685 S.F.
(G) 10 6,000 S.F.; 9 7,380 S.F.; 8 8,555 S.F.; 7 7,542 S.F.
(I) 18 6,000 S.F.; 17 6,000 S.F.; 16 6,000 S.F.; 15 6,000 S.F.; 14 6,000 S.F.; 13 6,000 S.F.; 12 6,000 S.F.; 11 6,000 S.F.; 10 6,000 S.F.; 9 7,356 S.F.
(J) 1 6,000 S.F.; 2 6,000 S.F.; 3 6,000 S.F.; 4 6,000 S.F.; 5 6,000 S.F.; 6 6,000 S.F.; 7 6,000 S.F.; 8 6,000 S.F.; 9 6,000 S.F.
(K) 1 6,134 S.F.; 2 6,133 S.F.; 3 6,133 S.F.; 4 6,133 S.F.; 5 6,133 S.F.; 6 6,133 S.F.; 7 6,133 S.F.; 8 6,133 S.F.; 9 6,133 S.F.
(M) 1 7,355 S.F.; 2 6,000 S.F.; 3 6,000 S.F.; 4 6,000 S.F.; 5 6,011 S.F.; 6 6,879 S.F.; 7 6,689 S.F.; 8 6,691 S.F.; 9 6,596 S.F.; 10 6,723 S.F.

18 7,500 S.F.; 19 7,500 S.F.; 20 7,500 S.F.

S01°11'12"W 1,373.07'

S01°11'12"W 510.00'

CALLED 15.00 CRES
MILDRED E. HUNT
DOC. NO. 2019-3766
O.R.D.C.T.

JST HOLDINGS 04 BUSINESS LLC
DOCUMENT NO. 2024-74411
O.R.D.C.T.

LOIS ROAD ESTATES SUBDIVISION PLAT FILING NO. 2 REC. NO. _____

JST HOLDINGS 04 BUSINESS LLC
DOCUMENT NO. 2024-74411
O.R.D.C.T.

N88°48'48"W 125.50'

S01°11'12"W 107.00'

S01°11'12"W 50.00'

S46°11'12"W 18.38'

N88°48'48"W 107.00'

N43°48'48"W 18.38'

N88°48'48"W 50.00'

S46°11'12"W 18.38'

N88°48'48"W 214.00'

N43°48'48"W 18.38'

N88°48'48"W 50.00'

N88°48'48"W 125.00'

S01°11'12"W 2.29'

L=244.22' R=500.00' Δ=27°59'10" CB=N74°49'13"W CL=241.80'

LEGEND

○	FOUND 1/2" IRON ROD WITH PLASTIC CAP STAMPED "ATWELL LLC"
●	SET 1/2" IRON ROD WITH PLASTIC CAP STAMPED "ATWELL LLC"
▲	MAG NAIL FOUND
△	MAG NAIL SET
✦	SECTION CORNER, AS NOTED
1	LOT NUMBER
(U)	BLOCK LETTER
D.E.	DRAINAGE EASEMENT
U.E.	UTILITY EASEMENT
———	SUBJECT PARCEL BOUNDARY LINE
— — —	SECTION LINE
———	SUBDIVISION LOT LINE
———	ADJACENT PROPERTY LINE
— — —	EASEMENT LINE, AS NOTED
—·—·—	R.O.W. (RIGHT-OF-WAY LINE)
———	OFFSET / TIE LINE
	** GRANTED, RIGHTS-OF-WAY PER LOIS ROAD ESTATES SUBDIVISION,PHASE 1 FINAL PLAT REC. NO. _____.

50 0 50 100
(IN FEET)
1 inch = 50 ft.

ATWELL
866.850.4200 www.atwell.com

OWNER/DEVELOPER/APPLICANT
JST HOLDINGS 04 BUSINESS LLC
10268 W. CENTENNIAL RD. UNIT F
200 F
LITTLETON, CO
303-324-1771
LEE EISENHEIM

PLAT FILING NO. 3
LOIS ROAD ESTATES SUBDIVISION
176 RESIDENTIAL LOTS - 10 HOA LOTS
REUBEN BEBEE SURVEY, ABST. NO. 29
45.25 ACRES - 8.54 ACRES ROW
CITY OF SANGER, DENTON COUNTY TEXAS

DATE 02/28/2025

A	1st SUBMITTAL TO CITY OF SANGER XXXXXXXX - KB

REVISIONS

DR. RF | CH. JS
P.M. RH
JOB 24007256

SHEET 05 OF 06

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LOIS ROAD ESTATES SUBDIVISION PLAT FILING NO. 3

BEING 45.25 ACRES OF LAND
OUT OF THE REUBEN BEBEE SURVEY, ABSTRACT NUMBER 29
IN THE CITY OF SANGER, DENTON COUNTY, TEXAS

LINE TABLE		
LINE	LENGTH	BEARING
L1	20.68'	N44°05'43"W
L2	18.38'	S46°11'12"W
L3	18.38'	S46°11'12"W
L4	18.38'	N43°48'48"W
L5	18.38'	N43°48'48"W
L6	18.38'	N46°11'12"E
L7	18.38'	S43°48'48"E
L8	18.38'	N43°48'48"W
L9	18.38'	N46°11'12"E
L10	18.38'	S43°48'48"E
L11	18.38'	S43°48'48"E
L12	15.56'	N46°11'12"E
L13	18.38'	N43°48'48"W
L14	18.38'	S46°11'12"W
L15	18.38'	N46°11'12"E
L16	15.56'	S43°48'48"E
L17	18.38'	S46°11'12"W
L18	18.38'	N43°48'48"W
L19	18.38'	N43°48'48"W
L20	18.38'	S46°11'12"W
L21	18.38'	S43°48'48"E
L22	18.38'	N46°11'12"E
L23	18.38'	N46°11'12"E
L24	18.38'	S43°48'48"E
L25	18.38'	S46°11'12"W
L26	18.38'	N43°48'48"W
L27	18.38'	N46°11'12"E
L28	15.56'	N43°48'48"W
L29	18.38'	S46°11'12"W
L30	18.38'	S43°48'48"E
L31	18.38'	S46°11'12"W
L32	18.38'	N43°48'48"W
L33	18.38'	N46°11'12"E
L34	18.38'	S43°48'48"E
L35	18.38'	N46°11'12"E
L36	18.38'	S43°48'48"E
L37	18.38'	S46°11'12"W
L38	18.38'	N43°48'48"W
L39	20.33'	N45°54'17"E
L40	38.00'	N01°11'12"E
L41	18.38'	N15°49'38"W

Curve Table					
CURVE #	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	22.26'	80.00'	15°56'33"	S80°50'31"E	22.19'
C2	22.26'	80.00'	15°56'33"	N6°47'04"W	22.19'
C3	22.26'	80.00'	15°56'33"	N9°09'29"E	22.19'
C4	22.26'	80.00'	15°56'33"	S83°12'56"W	22.19'
C5	22.26'	80.00'	15°56'33"	S9°09'29"W	22.19'
C6	22.26'	80.00'	15°56'33"	N83°12'56"E	22.19'
C7	106.36'	50.00'	121°53'05"	S46°11'12"W	87.41'
C8	56.55'	36.00'	90°00'00"	S46°11'12"W	50.91'
C9	56.55'	36.00'	90°00'00"	S43°48'48"E	50.91'
C10	56.55'	36.00'	90°00'00"	N43°48'48"W	50.91'

ATWELL
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LEE EISENHEIM

PLAT FILING NO. 3

LOIS ROAD ESTATES SUBDIVISION
176 RESIDENTIAL LOTS - 10 HOA LOTS
REUBEN BEBEE SURVEY, ABST. NO. 29
45.25 ACRES - 8.54 ACRES ROW
CITY OF SANGER, DENTON COUNTY TEXAS

DATE 02/28/2025

A	1st SUBMITTAL TO CITY OF SANGER	XXXXXXXX – XX

REVISIONS

DR. RF | CH. JS
P.M. RH
JOB 24007256

SHEET 06 OF 06

K:\24007256\DWG\SHEETS\FINAL PLAT\PHASE 2\24007256-PH2-PLAT.DWG 4154 2/14/2025 3:01 PM ROXANE TISTER

LOIS ROAD ESTATES - FILING NO. 3

SITUATED IN THE
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

CONSTRUCTION PLANS

LEGAL DESCRIPTION:

BEING A 46.82 (2,039,586 SQUARE FEET) ACRE TRACT OF LAND SITUATED IN THE REUBEN BEBEE SURVEY, ABSTRACT NO. 29, SITUATED IN THE CITY OF SANGER, DENTON COUNTY, TEXAS, AND BEING DESCRIBED IN A GENERAL WARRANTY DEED TO JST HOLDINGS 04 BUSINESS LLC, A NEW MEXICO LIMITED LIABILITY COMPANY, RECORDED IN DOCUMENT NO. 2024-74411 OF THE OFFICIAL RECORDS OF DENTON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET IN THE NORTHERN LINE OF SAID JST HOLDINGS TRACT OF LAND, BEING IN THE SOUTHERN RIGHT-OF-WAY LINE OF LOIS ROAD EAST (40' RIGHT-OF-WAY); FOR THE NORTHWESTERN CORNER AND THE POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE COMMON BOUNDARY OF THE SOUTHERN RIGHT-OF-WAY LINE OF SAID LOIS ROAD EAST, SAME BEING THE NORTHERN LINE OF SAID JST HOLDINGS TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:
1. S 89°22'38" E, A DISTANCE OF 712.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
2. S 89°07'42" E, A DISTANCE OF 453.04 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET IN THE SOUTHERN RIGHT-OF-WAY LINE OF SAID LOIS ROAD EAST, FOR THE NORTHEASTERN CORNER OF SAID JST HOLDINGS TRACT, FOR A NORTHWESTERN CORNER OF A CALLED 15.00 ACRE TRACT CONVEYED TO MILDRED E. HUNT RECORDED IN DOCUMENT NO. 2019-5766, OFFICIAL RECORDS OF DENTON COUNTY, TEXAS, AND FOR THE FOR THE NORTHEASTERN CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE WITH THE EASTERN LINE OF SAID JST HOLDINGS TRACT, SAME BEING THE WESTERN LINE OF SAID 15.00 ACRE TRACT, S 01°11'12" W, A DISTANCE OF 1,373.07 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET IN THE WESTERN LINE OF SAID JST HOLDINGS TRACT, SAME BEING IN THE WESTERN LINE OF SAID 15.00 ACRE TRACT, AND FOR THE SOUTHEASTERN CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE OVER AND ACROSS SAID JST HOLDINGS TRACT, THE FOLLOWING TWENTY-SEVEN (27) COURSES AND DISTANCES:
1. N 88°48'48" W, A DISTANCE OF 125.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
2. S 01°11'12" W, A DISTANCE OF 2.29 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
3. N 88°48'48" W, A DISTANCE OF 50.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
4. N 43°48'48" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
5. N 88°48'48" W, A DISTANCE OF 214.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
6. S 46°11'12" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
7. N 88°48'48" W, A DISTANCE OF 50.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
8. N 43°48'48" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
9. N 88°48'48" W, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
10. S 01°11'12" W, A DISTANCE OF 510.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
11. N 88°48'48" W, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
12. S 01°11'12" W, A DISTANCE OF 50.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
13. S 46°11'12" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
14. S 01°11'12" W, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
15. N 88°48'48" W, A DISTANCE OF 125.50 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET AND FOR THE POINT OF BEGINNING TO A CURVE TO THE RIGHT;
16. WITH A CURVE TO THE RIGHT AND HAVING A RADIUS OF 500.00 FEET, A ARC LENGTH OF 244.22 FEET, AND A CHORD BEARING AND CHORD DISTANCE OF N 74°49'13" W, A DISTANCE OF 241.80 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
17. N 60°49'38" W, A DISTANCE OF 266.04 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
18. N 29°10'22" E, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
19. N 74°10'22" E, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
20. N 29°10'22" E, A DISTANCE OF 50.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC" SET;
21. N 60°49'38" W, A DISTANCE OF 230.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
22. N 15°49'38" W, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
23. N 29°10'22" E, A DISTANCE OF 51.40 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET AND FOR THE POINT OF BEGINNING TO A CURVE TO THE LEFT;
24. WITH A CURVE TO THE LEFT AND HAVING A RADIUS OF 925.00 FEET, AN ARC LENGTH OF 252.99 FEET, AND A CHORD BEARING AND CHORD DISTANCE OF N 21°20'15" E, A DISTANCE OF 252.21 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
25. S 88°48'48" E, A DISTANCE OF 122.49 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET AND FOR THE POINT OF BEGINNING TO A CURVE TO THE LEFT;
26. WITH A CURVE TO THE LEFT AND HAVING A RADIUS OF 1045.00 FEET, AN ARC LENGTH OF 198.49 FEET, AND A CHORD BEARING AND CHORD DISTANCE OF N 06°37'41" E, A DISTANCE OF 198.19 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
27. N 01°11'12" E, A DISTANCE OF 302.71 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
28. N 88°48'48" W, A DISTANCE OF 120.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
29. N 01°11'12" E, A DISTANCE OF 12.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
30. N 46°11'12" E, A DISTANCE OF 18.38 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
31. S 88°48'48" E, A DISTANCE OF 107.00 FEET TO A 1/2" IRON ROD WITH CAP STAMPED "ATWELL LLC." SET;
32. N 01°11'12" E, A DISTANCE OF 772.88 FEET TO THE POINT OF BEGINNING;

SAVE AND EXCEPT ANY PORTIONS OF JACK STREET AND BEXAR STREET DEDICATED AS PUBLIC RIGHT OF WAY ON LOIS ROAD ESTATES SUBDIVISION, FILING NO. 1 RECEPTION NO. _____.

CONTAINING 45.25 ACRES OR 1,971,323 SQUARE FEET, MORE OR LESS.

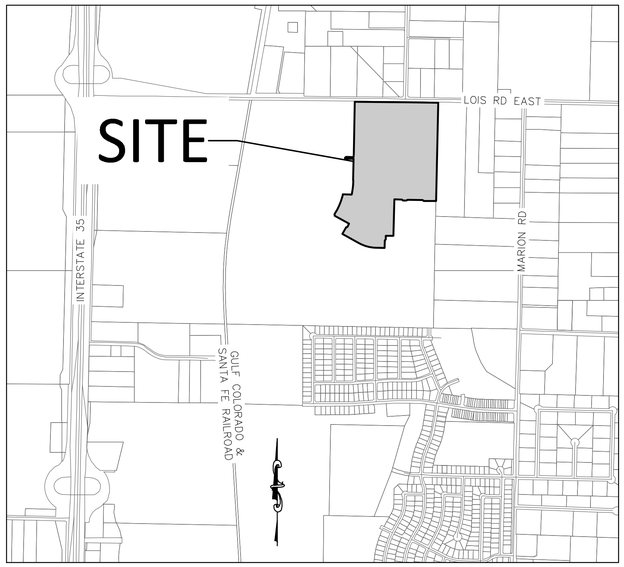
BENCHMARKS AND CONTROLS:

NO. 1 – AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

NO. 2 – AN MAG NAIL IN ASPHALT LOCATED IN THE NORTHWEST INTERSECTION OF LOIS ROAD EAST AND MELTON ROAD, HAVING AN ELEVATION OF 693.8 FEET, A NORTHING COORDINATE VALUE OF 7,192,151.4, AND AN EASTING COORDINATE VALUE OF 2,376,790.5.

BASIS OF BEARING:

BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.



VICINITY MAP
SCALE 1"=1,000'

PROJECT TEAM

OWNER/DEVELOPER/APPLICANT:
KALTER CAPITAL
10268 W. CENTENNIAL RD. UNIT 200 F
LITTLETON, CO 80127
CONTACT: LEE EISENHEIM
PH: 303.324.1771
LEE.EISENHEIM@KALTERCAPITAL.COM

ENGINEERING & SURVEY:
ATWELL, LLC
143 UNION BOULEVARD SUITE 700
LAKEWOOD, CO 80228
CONTACT: KEVIN BLUMHARDT
PH: 303.842.9191
KBLUMHARDT@ATWELL-GROUP.COM

LANDSCAPE ARCHITECT & PLANNER:
NORRIS DESIGN
208 NORTH MARKET STREET
SUITE 250
DALLAS, TX 75202
CONTACT: JONATHAN WEST, PLA
PH. 972.232.4181
JWEST@NORRIS-DESIGN.COM

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
GENERAL NOTES & PLANS	
01	COVER
02	NOTES
03	STREET SECTIONS
04	EXISTING CONDITIONS
OVERALL UTILTIY PLANS	
05	OVERALL
06	AREA-01
07	AREA-02
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09	AREA-04
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OVERALL GRADING	
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STREET PLAN & PROFILES	
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19	AUSTIN LN
20	BLANCO ST
21	TARRANT ST
22	SHERMAN ST
23	SABINE ST
24	DALLAS DR
25	DALLAS DR
26	BRAZOS ST
27	FRANKLIN ST
28	KNUCKLE BLANCO ST – FRANKLIN ST
29	KNUCKLES SHERMAN ST – BLANCO ST & SABINE ST – SHERMAN ST
SANITARY SEWER PLAN & PROFILES	
30	RUN 1-1
31	RUN 1-2
32	RUN 2-1
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34	RUN 3-1
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39	RUN 7
40	RUN 8
41	RUN 9-1
42	RUN 9-2
43	RUN 10
44	RUN 11
45	FORCEMAIN RUN 1-1
46	FORCEMAIN RUN 1-2

STORM SEWER PLAN & PROFILES	
47	RUN 1
48	RUN 2
49	RUN 3-1
50	RUN 3-2
51	RUN 4
52	RUN 5
53	RUN 6
54	RUN 7
55	EXISTING RUN 2-1
56	LATERALS 01
57	LATERALS 02
POND PLAN & DETAILS	
58	PROPOSED DRAINAGE MAP
59	EXISTING DRAIANGE MAP
60	POND D
61	POND D CROSS SECTONS
62	RATIONAL CALCS
63	INLET CALCS 1
64	HGL CALCS
CONSTRUCTION DETAILS	
65	STREET DETAILS
66	STREET DETAILS
67	SANITARY DETAILS
68	STORM DETAILS
69	STORM DETAILS
70	WATER DETAILS
71	WATER DETAILS
72	WATER DETAILS
STORM WATER POLLUTION PREVENTION PLAN	
73	SWPPP-1
74	SWPPP-2
75	SWPPP-3
76	SWPPP-4
77	SWPPP-5
78	SWPPP DETAILS
79	SWPPP DETAILS

BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.

811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON,
STATE OF TEXAS

GENERAL NOTES & PLANS
COVER

DATE 4/7/2025

REVISIONS

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 01

CAD FILE: 24007256-PH2-COVR.DWG

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GENERAL NOTES:

1. SITE TOPOGRAPHIC INFORMATION WAS TAKEN FROM A SURVEY PREPARED BY EAGLE SURVEYING, LLC, DATED 05/01/2024.
2. THE PLANS SHOW SUBSURFACE STRUCTURES, ABOVE GROUND STRUCTURES AND/OR UTILITIES FROM FIELD LOCATION AND RECORD MAPPING, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE DIFFERENT FROM THAT SHOWN OR MAY NOT BE SHOWN, AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL, OR BLAST, CALL TEXAS 811.
3. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE ENGINEER.
4. THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
5. THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD A CONDITION AS BEFORE BEING DISTURBED AS DETERMINED BY THE ENGINEER. ANY DAMAGED TREES, SHRUBS, AND/OR HEDGES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
6. PRIOR TO COMMENCEMENT OF STORM AND/OR SANITARY SEWER CONSTRUCTION, CONTRACTOR IS TO VERIFY BOTH HORIZONTAL AND VERTICAL POSITION OF EXISTING SEWER AT CONNECTION POINT. CONTRACTOR IS TO CONSTRUCT GRAVITY LINES PROGRESSIVELY FROM DOWNSTREAM TO UPSTREAM; ANY EXCEPTIONS TO THIS MUST BE APPROVED BY THE ENGINEER. ANY GRADE DISCREPANCIES MUST BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF AL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES, ETC. AND SHALL COMPLY WITH ALL REQUIRED PERMITS.
8. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS.
9. ALL PROPOSED UTILITIES AND APPURTENANCES TO BE CONSTRUCTED IN COMPLIANCE WITH THE LOCAL MUNICIPALITIES' CODES AND REGULATIONS GOVERNING THE INSTALLATION OF SUCH UTILITIES.
10. ALL PLANS SHALL COMPLY WITH LOCAL AND/OR NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION), OR BEST PRACTICES.
11. FIELD VERIFICATION AND ADJUSTMENTS ARE PERMISSIBLE WITH THE ENGINEER'S WRITTEN APPROVAL.
12. THE ENGINEER RESERVES THE RIGHT TO EXAMINE ANY WORK DONE ON THIS PROJECT AT ANY TIME TO DETERMINE THE CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OF THIS PROJECT, AS INTENDED AND INTERPRETED BY THE ENGINEER.
13. MISCELLANEOUS WORK NOT SPECIFICALLY SHOWN ON THE CONTRACT DRAWINGS SUCH AS PATCHING, BLOCKING TRIMMING, ETC., SHALL BE PERFORMED AS REQUIRED TO MAKE THE WORK COMPLETE.
14. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A TEXAS LICENSED LAND SURVEYOR.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND COORDINATE WORK WITH ALL OTHER CONTRACTS FOR THE SITE.
16. THE CONTRACTOR SHALL:
    A. VERIFY ALL CONDITIONS IN THE FIELD PRIOR TO COMMENCEMENT OF WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
    B. EXAMINE THE SITE AND INCLUDE IN HIS WORK THE EFFECT OF ALL EXISTING CONDITIONS ON THE WORK.
    C. PROVIDE AND INSTALL ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH RECOGNIZED GOOD STANDARD PRACTICE.
    D. HOLD THE OWNER HARMLESS AGAINST AND AND ALL CLAIMS ARISING FROM WORK DONE BY THE CONTRACTOR ON THE SITE.
17. ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST REVISIONS OF OSHA REGULATIONS FOR CONSTRUCTION. SHEET PILING SHALL BE DESIGNED AND SEALED BY A LICENSED TEXAS PROFESSIONAL ENGINEER.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK AND SHALL SUBMIT A DEWATERING PLAN DESIGNED AND SEALED BY A LICENSED TEXAS PROFESSIONAL ENGINEER. CONTRACTOR SHALL MAINTAIN EXISTING SITE DRAINAGE PATTERNS THROUGHOUT CONSTRUCTION UNLESS OTHERWISE SHOWN ON PLANS.
19. ALL UTILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE UTILITY OWNER. NOTIFY THE UTILITY OWNER 72 HOURS BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEMS IS MADE.
20. CONSTRUCTION OF ALL PROPOSED UTILITIES MUST BEGIN AT ITS POINT OF CONNECTION TO THE EXISTING UTILITY OR AT THE LOWEST POINT IN THE SYSTEM. RIMS, GRATES, INVERTS, CLEARANCES, AND LOCATION AT CROSSINGS MUST BE VERIFIED PRIOR TO THE BEGINNING OF CONSTRUCTION.
21. MAINTAIN FLOW FOR ALL EXISTING UTILITIES.
22. ALL FRAMES/COVERS WITHIN PAVED AREAS SHALL HAVE THE TOPS SET FLUSH WITH THE EXISTING PAVEMENT GRADE. IN LANDSCAPED AREAS, ALL FRAMES SHALL BE 0.1' ABOVE GRADE.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE CONTRACTOR SHALL TAKE TIES TO ALL UTILITY CONNECTIONS AND PROVIDE MARKED-UP AS-BUILT PLANS FOR ALL UTILITIES SHOWING TIES TO CONNECTIONS, BENDS, VALVES, LENGTHS OF LINES, AND INVERTS. AS-BUILT PLANS SHOWING ALL UNDERGROUND UTILITIES INSTALLED OR ENCOUNTERED SHALL BE REVIEWED BY THE OWNER AND HIS REPRESENTATIVES. THE CONTRACTOR SHALL PROVIDE ANY CORRECTION OR ADMISSIONS TO THE SATISFACTION OF THE OWNER AND HIS REPRESENTATIVES BEFORE UTILITIES WILL BE ACCEPTED.
24. TEMPORARY PAVEMENT SHALL BE PLACED WITHIN 48HRS OF COMPLETION OF EXCAVATION AND BACKFILL OPERATIONS WITHIN THE EXISTING PAVEMENT LIMITS.
25. CONTRACTOR SHALL MAINTAIN ALL TRAFFIC IN ALL AREAS IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
26. ALL EXCAVATIONS SHALL BE BACKFILLED TO EXISTING GRADE AT THE END OF EACH WORK DAY.
27. CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO EXISTING UTILITES. DAMAGED UTILITIES SHALL BE IMMEDIATELY REPAIRED BY CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION NOTES:

1. BUILDING SILL ELEVATIONS AND SEWER INVERTS ARE APPROXIMATE AND SHOULD BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK.
2. THE MINIMUM SLOPE FOR SANITARY SEWER LATERALS SHALL BE 0.010 FT/FT
3. PROGRESSION OF WORK: IN GENERAL WORK SHALL PROCEED FROM THE DOWNSTREAM END OF A SEWER LINE SEGMENT TO THE UPSTREAM END OF THE SEGMENT.
4. THE MAXIMUM LENGTH OF OPEN TRENCH SHALL BE LIMITED TO NO MORE THAN THREE PIPE LENGTHS IN A SEWER SEGMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE NO LESS THAN 24 INCHES OR ONE FOOT GREATER THAN OUTSIDE DIAMETER OF THE PIPE, WHICHEVER IS GREATER.
6. THE MINIMUM DEPTH OF COVER ABOVE THE TOP OF PIPE FOR WATER LINE INSTALLATIONS SHALL BE 4 FEET.
7. WATER MAINS AND SERVICES: LOCATIONS SHOWN ARE APPROXIMATE AND ARE INDICATED FOR GENERAL REFERENCE ONLY UNLESS OTHERWISE NOTED.
8. ALL EXISTING UNDERGROUND FEATURES SUCH AS SEPTIC TANKS, LEACH FIELDS, SANITARY SEWERS, ETC. ARE APPROXIMATE ONLY AND ARE INDICATED FOR GENERAL REFERENCE AND DESIGN UNLESS OTHERWISE NOTED.
9. WORK IN PRIVATE PROPERTY: THE CONTRACTOR SHALL OBTAIN WRITTEN AUTHORIZATION FROM THE OWNER PRIOR TO BEGINNING WORK IN ANY PRIVATELY OWNED AREAS WITH CHILL REQUIRE EASEMENTS FOR CONSTRUCTION.

SOIL PREPARATION AND GRADING NOTES:

1. THE SOIL BENEATH THE PAVEMENT SHALL BE TREATED AS FOLLOWS:
    A. REMOVE ALL VEGETATION, ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIALS.
    B. PERFORM ANY CUT OPERATIONS AS NEEDED AND PROOF ROLL THE PAVEMENT AREAS WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK. ANY AREAS WHICH RUT EXCESSIVELY OR PUMP SHALL BE UNDERCUT AND REPLACED WITH COMPACT FILL.
    C. PERFORM ALL FILL OPERATIONS. ALL FILL SHALL BE INSTALLED IN MAXIMUM 8 INCH LIFTS AND COMPACTED TO AT LEAST 93% OF THE MAXIMUM DENSITY AND AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR), AND TO AT LEAST +3 PERCENTAGE POINTS OF ITS OPTIMUM MOISTURE CONTENT.
    D. DO NOT USE ANY SAND AS FILL UNDER THE PAVEMENT.
    E. ANY IMPORTED FILL SHALL BE SIMILAR TO THE ON SITE SOILS AND APPROVED BY THE ENGINEER.
2. SITE SHALL BE GRADED TO ASSURE DRAINAGE OF SURFACE WATER FROM BUILDINGS.
3. REMOVE EXCESS SOILS FROM THE SITE AND LEGALLY DISPOSE OF THE SOILS.
4. GRADES NOT OTHERWISE INDICATED ON THESE PLANS SHALL BE UNIFORM LEVELS OR SLOPES BETWEEN POINTS WERE ELEVATIONS ARE GIVEN. ABRUPT CHANGES IN SLOPES SHALL BE WELL ROUNDED. THE CONTRACTOR IS RESPONSIBLE FOR POSITIVE SITE DRAINAGE.
5. ALL SITE EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED EXCAVATION.
6. THE EXISTING GRADES AND CONTOURS SHOWN IN THESE PLANS REPRESENT THE ELEVATIONS AS INDICATED ON THE TOPOGRAPHIC SURVEY BY ATWELL, LLC ON 10/01/2024. DUE TO MANY FACTORS INCLUDING POSSIBLE DISTURBANCE OF THE SOIL OR BENCHMARKS BY OTHER PARTIES AND THE EXPANSIVE/SHRINKAGE NATURE OF THE SOIL, THE ELEVATIONS MAY BE SIGNIFICANTLY DIFFERENT IN THE FUTURE (INCLUDING THE BENCHMARKS). NORMAL EQUIPMENT AND MEASUREMENT ACCURACIES SHOULD BE TAKEN INTO ACCOUNT WHEN USING THESE ELEVATIONS. REFER TO THE GEOTECHNICAL INVESTIGATION FOR THE GEOTECHNICAL RAMIFICATIONS.
7. ALL SLOPES IN UNPAVED AREAS SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
8. REFER TO THE GEOTECHNICAL REPORT FOR COMPLETE INFORMATION ON SOIL CHARACTERISTICS AND ANY OTHER RECOMMENDATIONS NOT CONTAINED HEREIN.

PAVING NOTES:

1. REFER TO GRADING PLAN FOR SOIL PREPARATION SPECIFICATIONS UNDER PAVEMENT.
2. CONCRETE FOR THE CONCRETE PAVEMENT SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 4,000 PSI, A MINIMUM OF 5.5 SACKS OF 5.5 SACKS OF PORTLAND CEMENT PER CUBIC YARD, 20% CLASS C FLYASH, 4% TO 6% AIR CONTENT USING AIR ENTRAINING AGENT AS REQUIRED, MID RANGE WATER REDUCING AGENT AND A 5-6" SLUMP.
3. CONCRETE FOR PRIVATE SIDEWALKS, CURBS, GUTTERS, AND DRAINAGE STRUCTURES SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 3,000 PSI, A MINIMUM OF 5 SACKS OF CEMENT PER CUBIC YARD, 4% TO 6% AIR CONTENT USING AIR ENTRAINING AGENT AS REQUIRED, 20% CLASS C FLYASH AND A 5-6" SLUMP.
4. THE MID RANGE WATER REDUCING AGENT ADMIXTURE CONFORMING TO ASTMC-494, TYPE A OR D SHALL BE CHOSEN FROM ONE OF THE FOLLOWING (OR APPROVED EQUAL):
    EUCON X-20 OR EUCON MR BY EUCLID
    SIKAMENT NL BY SIKA
    PLASTIMIX MR BY PROMIX TECHNOLOGIES
    MIRA 85 BY W.R.GRACE AND CO.
    POLYHEED 1020 BY DEGUSSA ADMIXTURES

    THE AMOUNT OF MID RANGE WATER REDUCER SHALL BE AS RECOMMENDED BY THE ADMIXTURE SUPPLIER TO INCREASE THE SLUMP OF THE CONCRETE BY 50 PERCENT OVER THE SLUMP WITHOUT THE ADMIXTURE. THE SLUMP GIVEN IN CONCRETE NOTES ARE AT THE POINT OF DISCHARGE.
5. IF THE AIR TEMPERATURE IS GREATER THAN 90 DEGREES WITHIN 24 HOURS AFTER PLACEMENT, HOT WEATHER CONCRETE PROCEDURE SHALL BE USED. THE CONTRACTOR SHALL SUBMIT A PROCEDURE TO THE ENGINEER FOR APPROVAL. THESE PROCEDURES MAY INCLUDE THE FOLLOWING:
    A. PLACING THE CONCRETE IN THE EARLY MORNING HOURS.
    B. THE USE OF EVAPORATION REDUCER (SEE BELOW)
    C. THE USE OF MISTING AS A CURING METHOD
    D. THE USE OF WET BLANKETS AS A CURING METHOD
    E. THE USE OF A RETARDING ADMIXTURE (NOT PREFERABLE)
6. ANY CONCRETE TO BE PLACED FURTHER THAN 16 FEET FROM THE END OF A CONCRETE TRUCK SHALL BE PUMPED WITH A COMMERCIAL CONCRETE PUMPING TRUCK OR OTHER PLACEMENT METHOD APPROVED BY THE ENGINEER. THE CONCRETE TRUCK SHALL NOT BE ALLOWED TO DRIVE OVER THE SUBGRADE OR THE PAVEMENT REINFORCEMENT UNLESS APPROVED BY THE ENGINEER.
7. REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-615 GRADE 60.
8. REINFORCING BARS, BAR SUPPORTS, AND SPACERS SHALL BE DETAILED AND PROVIDED IN ACCORDANCE WITH THE A.C.I. DETAILING MANUAL. CHAIRS SHALL NOT BE PLACED FURTHER THAN 4 FEET APART. BAR SUPPORTS SHALL BE DAYTON/RICHMOND PRODUCTS (80-745-3703) OR EQUAL:
    A. AT CONCRETE PAVEMENT: (CONCRETE THICKNESS MINUS 1 1/2 INCHES) HIGH, TYPE R21, OR TYPE BBP.
9. MASTER BUILDS CONFILM OR EUCOBAR EVAPORATION REDUCERS SHALL BE USED AFTER EACH FINISHING OPERATION ON THE CAST-IN-PLACE CONCRETE PAVEMENT UNLESS PRIOR APPROVAL FROM THE ENGINEER HAS BEEN OBTAINED TO NOT USED THIS PRODUCT.
10. SAWCUTS IN CONCRETE PAVEMENT SHALL BE MADE AS SOON AS THE CONCRETE IS OF SUFFICIENT STRENGTH TO SAW WITHOUT RAVELING THE AGGREGATE. ANY TIME LAPSE GREATER THAN 8 HOURS AFTER PLACING THE CONCRETE SHALL BE PERMITTED ONLY IF APPROVED BY THE ENGINEER.
11. NO PIPING OR CONDUITS SHALL BE INSTALLED IN ANY CONCRETE WITHOUT THE APPROVAL OF THE ENGINEER.
12. PAVING CONTRACTOR IS RESPONSIBLE FOR ALL LAY DOWN CURBS AT INTERSECTIONS WHERE BARRIER FREE RAMPS ARE TO BE CONSTRUCTED.
13. THE CONTRACTOR SHALL PROVIDE, CONSTRUCT AND MAINTAIN BARRICADES AND SIGNS IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
14. SAWCUTS SHALL HAVE A MAXIMUM SPACING OF 15' EACH WAY.
15. EXPANSION JOINTS SHALL BE SMOOTH DOWEL JOINTS WITH THE PAVEMENT THICKNESS INCREASED BY 25%. ONE END OF DOWELS TO BE GREASED AND CAPPED AND USE 1" EXPANSION JOINT MATERIAL IN THE JOINT. REDWOOD OR OTHER RIGID MATERIAL SHOULD BE AVOIDED. SPACE EXPANSION JOINTS BETWEEN 80' AND 100' APART AND ALL LOCATIONS IN WHICH LARGE PAVEMENT SECTIONS INTERSECT SMALLER SECTIONS.
16. ALL JOINTS & SAWCUTS MUST BE SEALED WITH A BITUMINOUS JOINT SEALANT OR APPROVED EQUAL.
17. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO ACQUIRE ALL NECESSARY PERMITS FROM THE CITY OF SANGER AND TXDOT BEFORE CONSTRUCTION WITHIN CITY RIGHT-OF-WAY.
18. ALL DIMENSIONS ARE TO BACK OF CURB, UNLESS OTHERWISE NOTED.
19. GREASE TRAPS, MANHOLES, AND VALVE COVERS IN PAVED AREAS SHALL BE TRAFFIC BEARING AND RIM ELEVATIONS SHALL MATCH FINAL PAVING ELEVATION.

SITE UTILITY NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO EXCAVATING. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON THE INFORMATION AND DATA FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD.THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA; AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK, THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
2. ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF SANGER PUBLIC WORKS SPECIFICATIONS AND/OR NCTCOG STANDARDS.
3. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL THE MATERIALS AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION OF UTILITIES. ALL PIPE AND FITTINGS SHALL BE INSPECTED BY THE CITY INSPECTOR PRIOR TO BEING COVERED.
4. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS AND REQUIREMENTS.
5. THE SITE UTILITY CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE UTILITY OWNER FOR THE CONNECTIONS TO THE EXISTING WATER MAIN.
6. THE CONTRACTOR SHALL ADJUST THE LOCATION OF THE PROPOSED WATER LINES AS REQUIRED TO AVOID CONFLICTS WITH THE OTHER UTILITIES.
7. THRUST BLOCKS SHALL BE PROVIDED AT ALL TEES, ELBOWS, AND BENDS, AND WILL BE OF SUFFICIENT SIZE TO COMPLY WITH CITY STANDARDS FOR EXISTING SOIL CONDITIONS.
8. ALL FIRE PROTECTIONS MATERIAL SHALL BE U.L. LISTED, FACTORY MUTUAL APPROVED, AND NFPA STANDARDS, UNLESS OTHERWISE DIRECTED BY THE PROJECT MANAGER.
9. THE LOCATION (HORIZONTAL & VERTICAL) OF ALL UTILITY LEAD-INS TO THE BUILDINGS SHALL BE VERIFIED WITH THE BUILDING MECHANICAL PLANS.
10. MATCH ALL MANHOLES AND VAULTS WITH PROPOSED GROUND ELEVATIONS.
11. UNDERGROUND TELEPHONE LINE SHALL BE WITHIN 3" OF CONDUIT, BURIED A MINIMUM OF 24", AND TERMINATING AT RIGHT-OF-WAY WITH PULL STRING AND FLAG.
12. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
13. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
14. WATER & SANITARY SEWER UTILITIES SHALL BE KEPT 10' APART (PARALLEL) OR WHEN CROSSING 24" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE, UNLESS OTHERWISE NOTED.)
15. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED, AND APPROVED BEFORE BACKFILLING.
16. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE ONE FOOT ABOVE FINISHED GROUND WITH WATER TIGHT LIDS.
17. ALL CONCRETE FOR ENCASEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSION STRENGTH AT 3,000 P.S.I.
18. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 48" COVER BELOW FINISHED GRADE ON ALL WATERLINES.
19. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE IN POSSESSION BEFORE THE FINAL CONNECTION OF SERVICE.
20. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
21. IN THE EVENT OF VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES, AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10' ON BOTH SIDES OF CROSSING. THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 24" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR A21.11 (AWWA C-151) (CLASS 50).
22. OWNER/CONTRACTOR SHALL COORDINATE WITH THE CITY FIRE MARSHALL TO PROVIDE ANY ADDITIONAL FIRE SAFETY FEATURES, INCLUDING FIRE HYDRANTS, NOT SHOWN AND NOTIFY ENGINEER OF CHANGES.

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO EXCAVATING. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON THE INFORMATION AND DATA FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA; AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK, THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
2. EROSION CONTROL MEASURES MAY ONLY BE PLACES IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGEWAYS OR BORROW DITCHES AT RISK OF CONTRACTOR. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGE CAUSED BY THE MEASURES INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGEWAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT OR DEPOSITED AS A RESULT OF EROSION CONTROL MEASURES.
3. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES (INCLUDING STORM WATER POLLUTION PREVENTION PLAN.) THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE APPROVED TPDES SWPPP DRAWINGS DURING CONSTRUCTION OPERATIONS.
4. PRIOR TO COMMENCING ANY CONSTRUCTION, A CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE SHALL BE INSTALLED AT THE LOCATIONS SHOWN, OR AS DESCRIBED IN THE SWPPP.
5. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL THE EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION, THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES OR THE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORM WATER DISCHARGE FROM THE SITE DOES NOT EXCEED TOLERANCES ESTABLISHED BY ANY OF THE JURISDICTIONAL AUTHORITIES.
6. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
7. AS INLETS ARE COMPLETED, TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED.
8. AT THE COMPLETION OF THE PAVING AND FINAL GRADING, THE DISTURBED AREA(S) SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE SWPPP.
9. THE SPECIFIC PLANT MATERIALS PROPOSED TO PROTECT FILL AND EXCAVATED SLOPES SHALL BE AS INDICATED WITHIN THE SWPPP. PLANT MATERIALS MUST BE SUITABLE FOR USE UNDER LOCAL CLIMATE AND SOIL CONDITIONS. IN GENERAL, HYDROSEEDING OR SODDING BERMUDA GRASS IS ACCEPTABLE DURING THE SUMMER MONTHS (MAY 1 TO AUGUST 30). WINTER RYE OR FESCUE GRASS MAY BE PLANTED DURING TIMES OTHER THAN THE SUMMER MONTHS AS A TEMPORARY MEASURE UNTIL SUCHTIME AS THE PERMANENT PLANTING CAN BE MADE.
10. SILT FENCE AND INLET SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL RE-VEGETATION HAS BEEN COMPLETED.
11. DISTURBED AREAS THAT ARE SEEDED OR SODDED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RESEEDED OF RESODDED, IF NECESSARY. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
12. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASIN BEFORE IT IS 50% FULL, IF IMPLEMENTED BY THE SWPPP.
13. FREQUENT INSPECTIONS OF THE SILT FENCE SHALL BE MADE. ALL REPAIRS OR REPLACEMENTS SHALL BE MADE IMMEDIATELY.
14. THE CONTRACTOR SHALL INSPECT HIS STABILIZATION AND EROSION CONTROL MEASURES AT MINIMUM OF ONCE EVERY 14 DAYS, AND WITHIN 24 HOURS OF ANY STORM EVENT GREATER THAN 0.5 INCHES. THE CONTRACTOR SHALL REPAIR INADEQUACIES REVEALED BY THE INSPECTION BEFORE THE NEXT STORM EVENT AND SHALL MODIFY HIS SWP3 WITHIN 7 DAYS OF THE INSPECTION. ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF WHEN IT REACHES A DEPTH OF SIX (6) INCHES.
15. CONTRACTOR SHOULD ATTAIN A 75% BERMUDA COVERING BY SEEDING OR SODDING OVER ALL AFFECTED CONSTRUCTION AREAS BEFORE EROSION CONTROL CAN BE REMOVED.
16. CONTRACTOR IS RESPONSIBLE FOR PREPARING, FILING, & MAINTAINING THE SWPPP & THE NOI.
17. WHERE THE SILT FENCE CAN NOT BE USED, THE CONTRACTOR MAY SUBSTITUTE WITH THE FOLLOWING:
    -TRIANGULAR SEDIMENT FILTER DIKE PER NCTCOG SPEC 1050A
    -"TEXAS POWER MULCH" MULCH FILLED FILTER SOCK
18. THE CONTRACTOR SHALL REFER TO EROSION CONTROL NARRATIVE AND SWPPP COORDINATION/INVESTIGATION DOCUMENTATION PROVIDED BY OTHERS FOR APPROPRIATE EROSION CONTROL MEASURES AND PROCEDURES FOR THIS PROJECT.

Confirm manholes are to be 1' above ground in non-pavement areas.

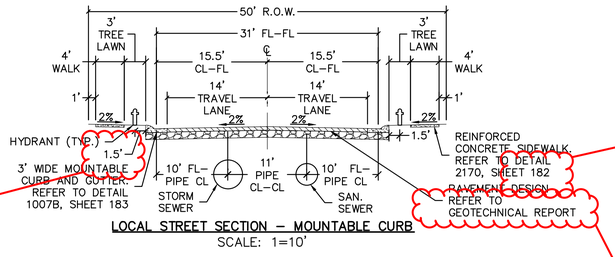
BENCHMARK:

AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.

Know what's below. Call before you dig.

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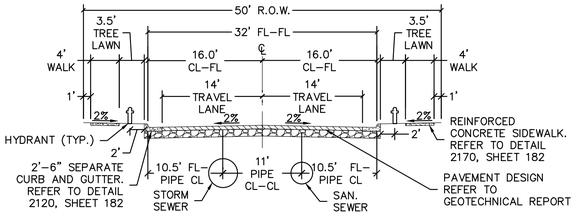
LOCAL STREET SECTION – MOUNTABLE CURB
SCALE: 1=10'

Per § 5.701(c) and the FH Detail 4120 on Sheet 71, a minimum of 3' is required between the back of curb and the FH.

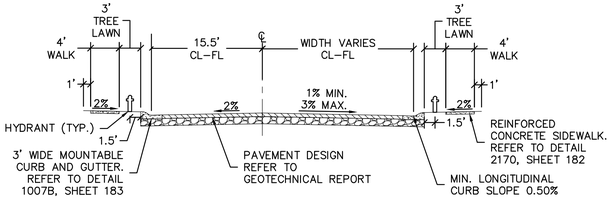
Correct this detail or modify the FH detail accordingly.

Update reference sheet #'s (Typical)

Provide pavement thickness, bar sizes / spacing, and concrete strength. Confirm that design meets §10.106(b) Street Paving - Concrete requirements.



LOCAL STREET SECTION – VERTICAL CURB
SCALE: 1=10'



TYPICAL KNUCKLE SECTION
SCALE: 1=10'

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MICHAEL PRYOR

CLIENT
KALTER CAPITAL
LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
GENERAL NOTES & PLANS
STREET SECTIONS

DATE 4/7/2025

	REVISIONS
A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 03

CAD FILE: 24007256-PH2-NOTES.DWG

LOIS ROAD EAST

EX. 20' COSERV ELECTRIC EASEMENT
(DOC. NO. 2022-68384
R.P.R.D.C.T.)

PROPERTY BOUNDARY

EXISTING FIBER OPTIC TO BE RELOCATED

EX. WIRE FENCE TO BE REMOVED

PROPERTY BOUNDARY

PROPERTIES LLC

REUBEN BEBEE SURVEY,
ABSTRACT NO. 29

CALLED 15.00 ACRES
MILDRED E. HUNT
DOC. NO. 2019-5766
O.R.D.C.T.

BNSF RAILROAD

LC

202.45 ACRES
8,818,876 SQ. FT.

EX. POND TO BE REMOVED

CALLED 202.69 ACRES
STC GROUP MILLER, LLC
DOC. NO. 2021-185695
O.R.D.C.T.

LOT 1
BLOCK ONE
ABNEY ACRES
CAB. M, PG. 64
P.R.D.C.T.

PROPERTY BOUNDARY

LOT 2
BLOCK ONE
ABNEY ACRES
CAB. M, PG. 64
P.R.D.C.T.

EX. WIRE FENCE TO BE REMOVED

EX. WIRE FENCE TO BE REMOVED

LOT 3
BLOCK ONE
ABNEY ACRES
CAB. M, PG. 64
P.R.D.C.T.

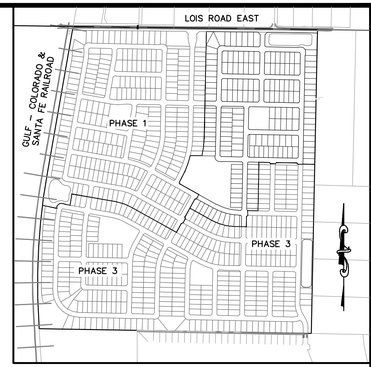
EX. POND TO BE REMOVED

LOT 4
BLOCK ONE
ABNEY ACRES
CAB. M, PG. 64
P.R.D.C.T.

PROPERTY BOUNDARY

STONE RETAINING WALL

SANGER ESTATES



KEYMAP
1"=750'

150 0 150 300
(IN FEET)
1 inch = 150 ft.

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MICHAEL PRYOR

CLIENT

KALTER CAPITAL
LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
GENERAL NOTES & PLANS
EXISTING CONDITIONS

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 04

CAD FILE: 24007256-PHP-EXST-CNDTNS.DWG

C:\ACCDocs\ATWELL\07-PROJECTS\24007256-KALTER-LOIS ROAD ESTATES\Project Plans\Sheets\24007256-PHP-EXST-CNDTNS.dwg

SHEET 06

SHEET 07

SHEET 08

SHEET 09

SHEET 10

EXISTING 12" WL

LOIS ROAD ESTATES FILING 1

LOIS ROAD ESTATES FILING 2

LOIS ROAD ESTATES FILING 4

GULF - COLORADO AND SANTA FE RAILROAD

WOOD LN

POTTER ST

YOAKUM ST

MARTIN ST

TRAMS DR

BEXAR ST

TERRELL ST

HUNTER DR

AUSTIN LN

BASTROP ST

COLLIN DR

POND A

POND B

POND D

BLANCO ST

SHERMAN ST

TARRANT ST

DALLAS DR

BRAZOS ST

SABINE ST

OUTFALL WEIR

CALLED 15.00 CRES
MILDRED E. HUNT
DOC. NO. 2019-5766
O.R.D.C.T.

LOT 1
BLOCK ONE
ABNEY ACRES
CAB. M, PG. 64
P.R.D.C.T.

LOT 2
BLOCK ONE
ABNEY ACRES
CAB. M, PG. 64
P.R.D.C.T.

LOT 3
BLOCK ONE
ABNEY ACRES
CAB. M, PG. 64
P.R.D.C.T.

LOT 4
BLOCK ONE
ABNEY ACRES
CAB. M, PG. 64
P.R.D.C.T.

CALLED 25.35 ACRES
CITY OF SANGER
VOL. 1125, PG. 943
D.R.D.C.T.

LOT 14 | LOT 15 | LOT 16 | LOT 17 | LOT 18 | LOT 19 | LOT 20 | LOT 21 | LOT 22 | LOT 23 | LOT 24 | LOT 25 | LOT 26 | LOT 27 | LOT 28 | LOT 29 | LOT 30 | LOT 31 | LOT 32 | LOT 33 | LOT 34 | LOT 35 | LOT 36 | LOT 37 | LOT 38 | LOT 39

15' PUBLIC UTILITY EASEMENT
DOC. NO. 2022-1904

CALLED 223.35 ACRES
SANGER LAND
DEVELOPMENT, LLC
DOC. NO. 2019-16167
R.P.R.D.C.T.

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATER
- EXISTING WATER
- PROPOSED HYDRANT
- PROPOSED WATER VALVE

150 0 150 300

(IN FEET)
1 inch = 150 ft.

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KALTER CAPITAL
LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
OVERALL UTILTIY PLANS
OVERALL

CLIENT

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 05

CAD FILE: 24007256-PHP-UTIL-OVALL.DWG

C:\USERS\DESKTOP\ATWELL\DESKTOP\PROJECTS\24007256 SANGER\CAD\PHP\24007256-PHP-UTIL-OVALL.DWG, 5/14/2025 3:14 PM, DESKTOP

Show sewer and water services to individual lots. (Typical)

LOT 1
MCCORMICK ADDITION
DOC. NO. 2012-53
P.R.D.C.T.

CALLED 6.151 ACRES
JERRY MCCUISTION ET UX,
SABRINA JEAN MCCUISTION
VOL. 1010, PG. 761
R.P.R.D.C.T.

CALLED 6.151 ACRES
DANNY MCCUISTION
ET UX,
JEANENE MCCUISTION
VOL. 1010, PG. 770
R.P.R.D.C.T.

CALLED 1.798 ACRES
JODY ROBERTS
DOC. NO. 2006-17710
O.R.D.C.T.

PROPERTY LINE

LOIS ROAD EAST
(ROW VARIES)

FILING 3 BOUNDARY

TRACT A

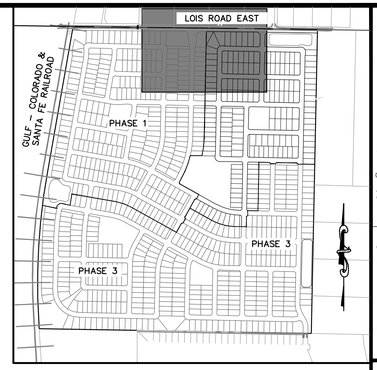
1-8"X6" TEE
1-FH ASSEMBLY
1-8" 45° BEND
20' UTIL ESMT
224.8'~8" WAT
1-8" 45° BEND
24" STM
8" SAN
272.5'~8" WAT
SHERMAN ST
50' R.O.W.
31' FL-FL
10' UTIL ESMT
1-8" TEE
3-8" VALVES
1-8"X6" TEE
1-FH ASSEMBLY
334.0'~8" WAT
8" SAN
10' UTIL ESMT
1-8"X6" TEE
1-FH ASSEMBLY
1-8" VALVE
878.9'~8" WAT
8" SAN
BLANCO ST
10' UTIL ESMT
912.0'~8" WAT
TARRANT ST
50' R.O.W.
31' FL-FL
JACK ST
50' R.O.W.
31' FL-FL
AREA-02
SEE SHEET 07

WARTON ST

TRAVIS DR

LOIS ROAD ESTATES
FILING 1

AREA-03
SEE SHEET 08



KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATER
- EXISTING WATER
- PROPOSED HYDRANT
- PROPOSED WATER VALVE

50 0 50 100
(IN FEET)
1 inch = 50 ft.

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303.801.7333
MICHAEL PRYOR

CLIENT: KALTER CAPITAL

LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

OVERALL UTILTIY PLANS
AREA-01

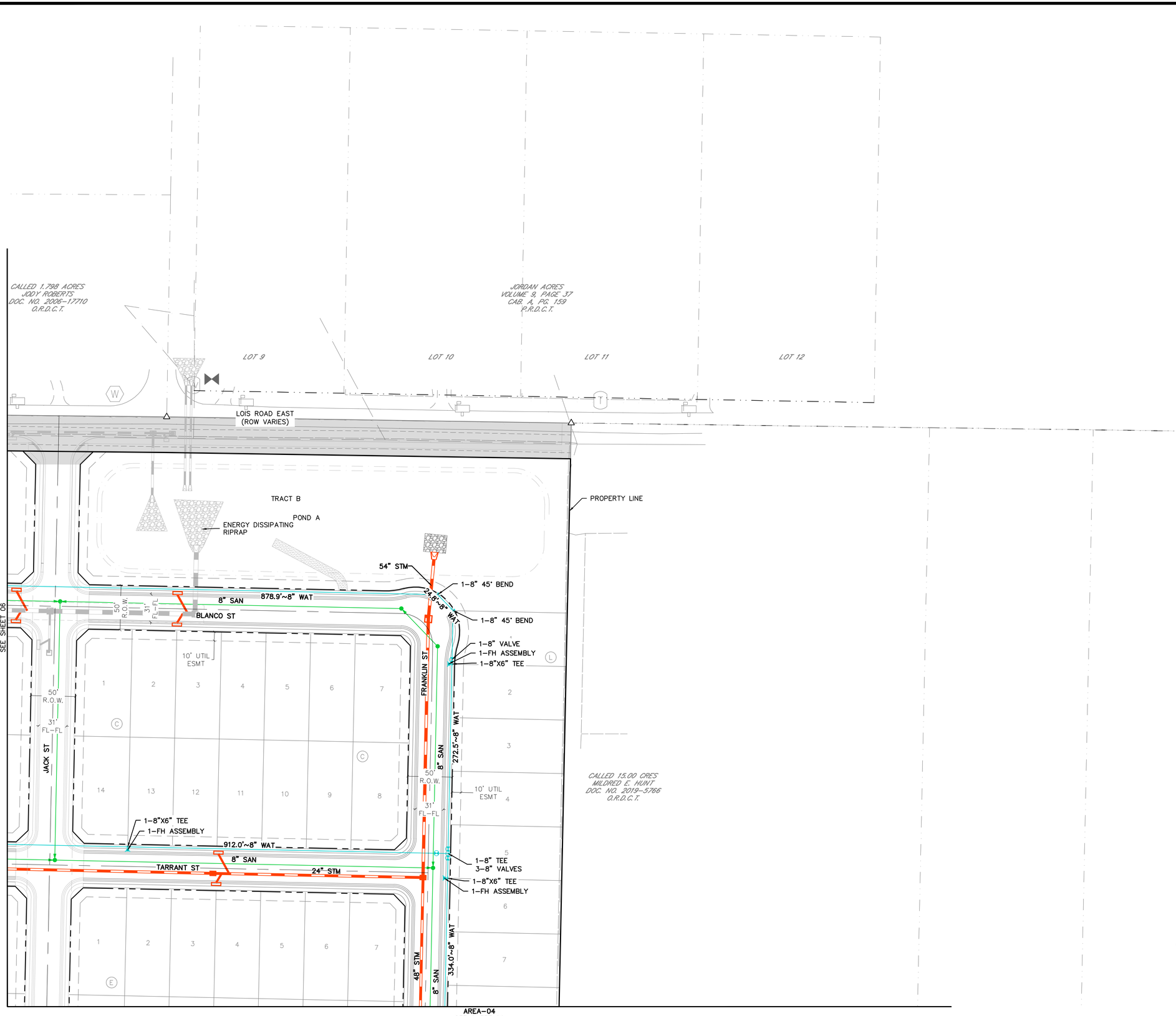
DATE 4/7/2025

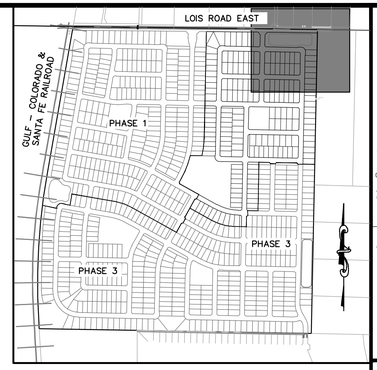
A	1st SUBMITTAL TO JURISDICTION 4/7/2025 — KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 — KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 06

CAD FILE: 24007256-PH2-UTILDWG





KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATER
- EXISTING WATER
- PROPOSED HYDRANT
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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
OVERALL UTILITIY PLANS
AREA-02

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/2/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

50 0 50 100
(IN FEET)
1 inch = 50 ft.

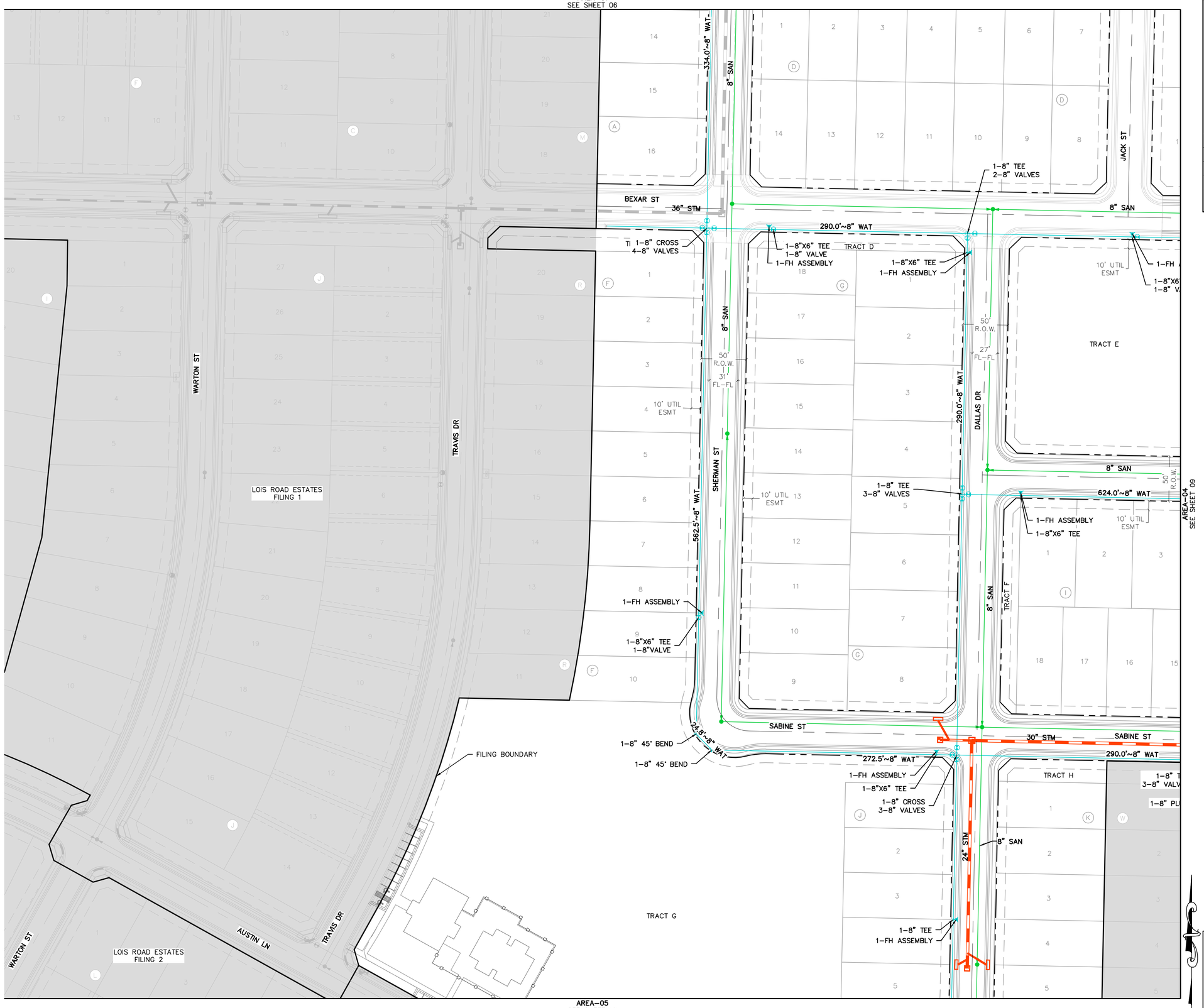
BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.

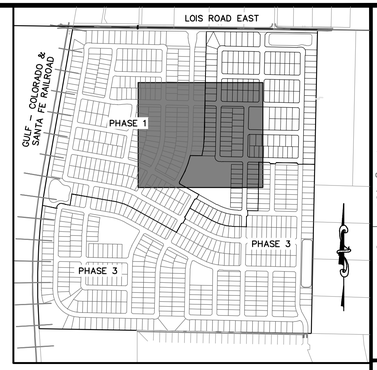
DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 07

CAD FILE: 24007256-PH2-UTIL.DWG
LAST SAVED BY: KMB 5/14/2025 3:15 PM

AREA–01
SEE SHEET 06



AREA–05
SEE SHEET 10



KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATER
- EXISTING WATER
- PROPOSED HYDRANT
- PROPOSED WATER VALVE

(IN FEET)
1 inch = 50 ft.

BENCHMARK:
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MICHAEL PRYOR

CLIENT
KALTER CAPITAL
LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
OVERALL UTILTIY PLANS
AREA–03

DATE 4/7/2025

REVISIONS
A 1ST SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B 2ND SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 08

CAD FILE: 24007256-PH2-UTILDWG
LAYOUT: 08 PLOT DATE: 5/14/2025 3:14 PM PLOT BY: KEVIN

AREA–02
SEE SHEET 07

AREA–03
SEE SHEET 08

JACK ST

BEXAR ST

BRAZOS ST

SABINE ST

FRANKLIN ST

TRACT E

PROPERTY LINE

CALLED 15.00 CRES
MILDRED E. HUNT
DOC. NO. 2019–5766
O.R.D.C.T.

8" SAN

624.0'~8" WAT

334.0'~8" WAT

290.0'~8" WAT

26.0'~8" WAT

48" STM

42" STM

24" STM

10' UTIL ESMT

50' R.O.W.

31' FL–FL

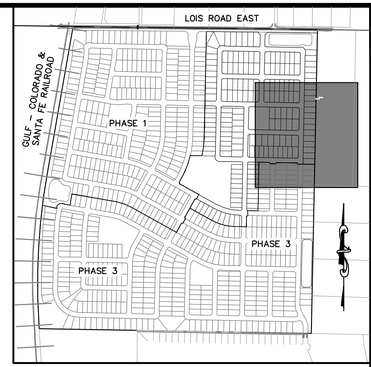
1–8" TEE
2–8" VALVES

1–FH ASSEMBLY
1–8"X6" TEE
1–8" VALVE

1–8"X6" TEE

1–8" TEE
3–8" VALVES

1–8" PLUG



KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER
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- PROPOSED HYDRANT
- PROPOSED WATER VALVE

(IN FEET)
1 inch = 50 ft.

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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

OVERALL UTILITY PLANS AREA–04

DATE 4/7/2025

	REVISIONS
A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 09

CAD FILE: 24007256–PH2–UTIL.DWG

AREA–03
SEE SHEET 08

TRACT G

1–8" TEE
1–FH ASSEMBLY

REMOVE 8" PLUG
CONNECT TO 8" WATER
FILING 2

232.9'~8" WAT

50' R.O.W.
31' FL–FL

10' UTIL ESMT

FORCE MAIN

233.5'~8" W/L
R=478.00

1–8" TEE
3–8" VALVES

1–8" TEE

1–FH ASSEMBLY

516.0'~8" WAT

DALLAS DR

8" SAN

10' UTIL ESMT

1–8" PLUG

TRACT I

70.0'~8" WAT

AUSTIN LN

8" SAN

8" SAN

8" SAN

8" SAN

8" SAN

FORCE MAIN

PROPOSED LIFT STATION

TRACT J

50' R.O.W.
31' FL–FL

LOIS ROAD ESTATES
FUTURE FILING

LOIS ROAD EAST

GULF – COLORADO & SANTA FE RAILROAD

PHASE 1

PHASE 3

PHASE 3

KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATER
- EXISTING WATER
- PROPOSED HYDRANT
- PROPOSED WATER VALVE

50 0 50 100
(IN FEET)
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CLIENT: KALTER CAPITAL

LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON,
STATE OF TEXAS

OVERALL UTILTIY PLANS
AREA–05

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 10

CAD FILE: 24007256-PH2-UTILDWG

I:\2400\24007256\Civil\Construction Plans\Sheets\24007256-PH2-UTILDWG 5/14/2025 3:13 PM KMB



LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED CATCH CURB & GUTTER
- PROPOSED SPILL CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- EXISTING SECTION LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED CONTOURS
- EXISTING CONTOURS

150 0 150 300

(IN FEET)
1 inch = 150 ft.

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KALTER CAPITAL
LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
OVERALL GRADING
GRAD–OVAL

DATE 4/7/2025

REVISIONS
A 1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B 2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 11

CAD FILE: 24007256–PH2–GRAD–OVAL.DWG

Ensure grading does not exceed 4:1 (Typical)

BLANCO ST

TARRANT ST

SHERMAN ST

JACK ST

10' UTIL ESMT

50' R.O.W.

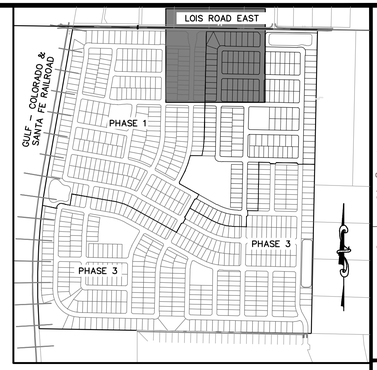
30' FL-FL

AREA-02
SEE SHEET 13

AREA-03
SEE SHEET 14

Clarity what these circled letter symbols are supposed to represent.

If they are Block Numbers, they don't match the plat. (Typical)



KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED CATCH CURB & GUTTER
- PROPOSED SPILL CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- EXISTING SECTION LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED CONTOURS
- EXISTING CONTOURS

40 0 40 80
(IN FEET)
1 inch = 40 ft.

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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
OVERALL GRADING AREA-01

DATE 4/7/2025

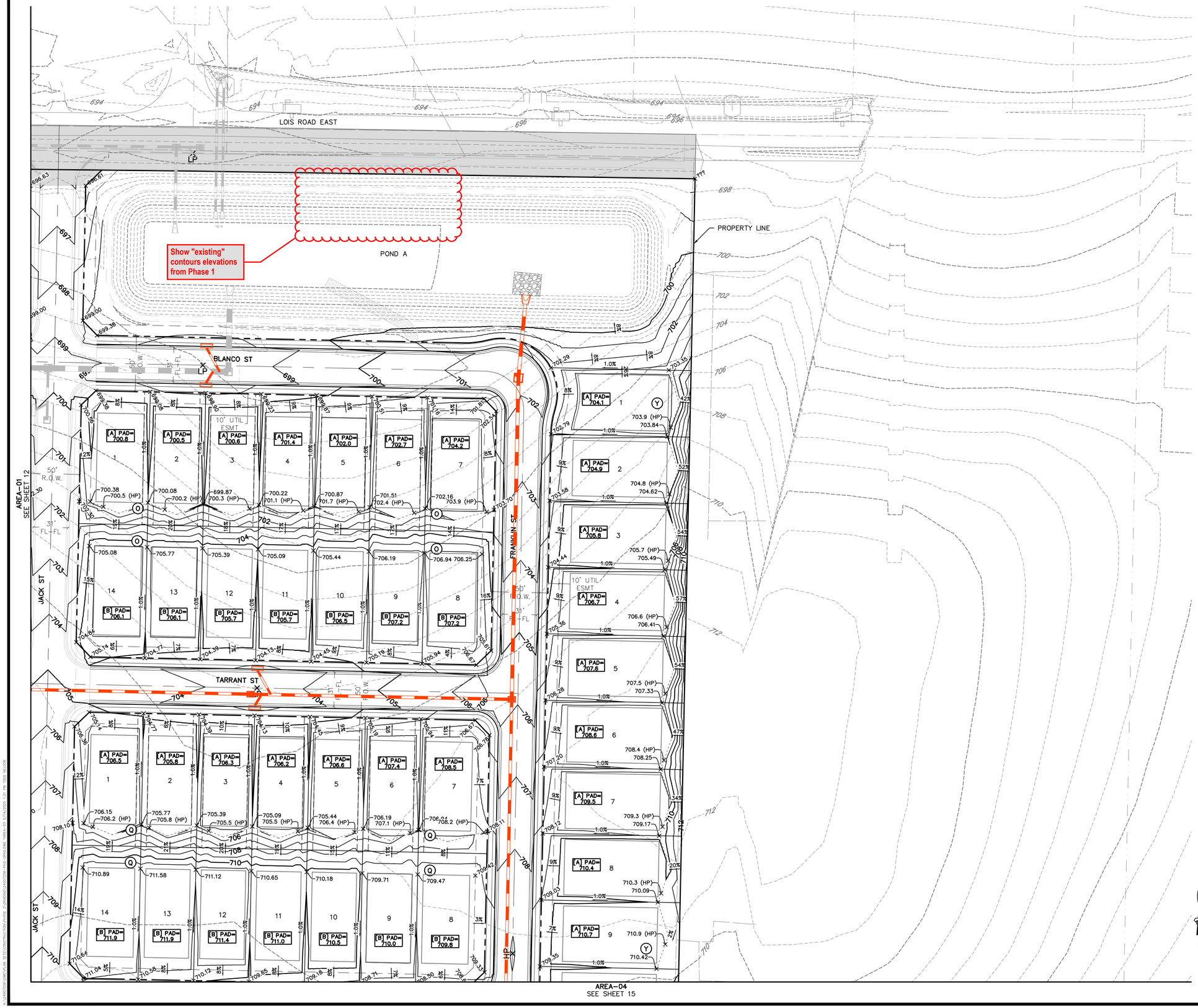
A	1st SUBMITTAL TO JURISDICTION 4/7/2025 — KMB
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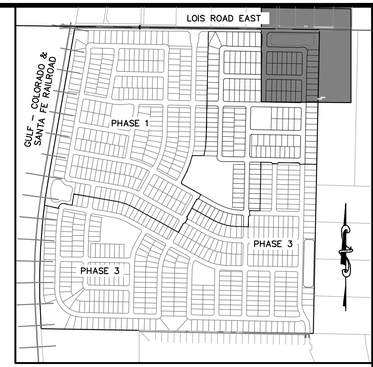
REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 12

CAD FILE: 24007256-PH2-GRAD.DWG

U:\2024\24007256\CAD\Civil\24007256-PH2-GRAD.DWG, 5/14/2025 1:21 PM, TERRY NELSON





KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED CATCH CURB & GUTTER
- PROPOSED SPILL CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- EXISTING SECTION LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
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- EXISTING CONTOURS

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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

OVERALL GRADING
AREA-02

DATE 4/7/2025

REVISIONS
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B 2nd SUBMITTAL TO JURISDICTION 5/14/2025 — KMB

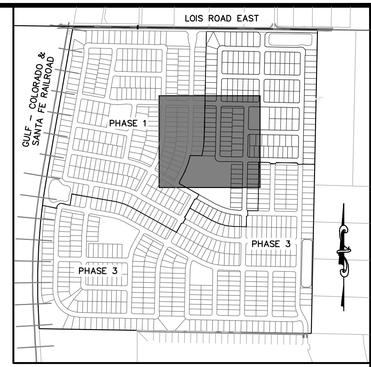
DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 13

CAD FILE: 24007256-PHG-GRAD.DWG

AREA–01
SEE SHEET 12

AREA–04
SEE SHEET 15

AREA–05
SEE SHEET 16



KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED CATCH CURB & GUTTER
- PROPOSED SPILL CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- EXISTING SECTION LINE
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MICHAEL PRYOR

LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
OVERALL GRADING
AREA–03

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 14

CAD FILE: 24007256-PHG-GRAD.DWG

CONSTRUCTION DESIGNS/DRAWINGS/PHASE 3 GRADING/SHEETS/24007256-PHG-GRAD.DWG, 5/14/2025 11:11 PM, JACOB MCCAIN

AREA–02
SEE SHEET 13

AREA–03
SEE SHEET 14

BEXAR ST

BRAZOS ST

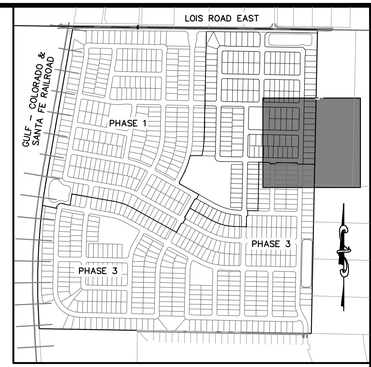
SABINE ST

(FUTURE) FRANKLIN ST

50' R.O.W.
31' F-F/L

10' UTIL ESMT

PROPERTY LINE



KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED CATCH CURB & GUTTER
- PROPOSED SPILL CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- EXISTING SECTION LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED CONTOURS
- EXISTING CONTOURS

40 0 40 80
(IN FEET)
1 inch = 40 ft.

BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS–OF–WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.

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MICHAEL PRYOR

CLIENT
KALTER CAPITAL
LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
OVERALL GRADING
AREA–04

DATE 4/7/2025

REVISIONS
A 1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
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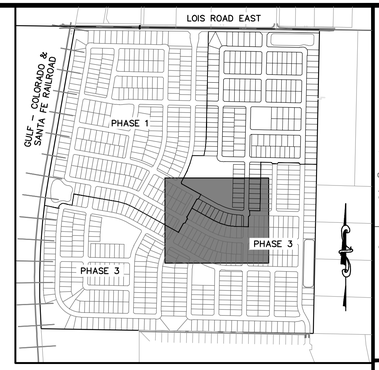
DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 15

CAD FILE: 24007256-PHG-GRAD.DWG

AREA–03
SEE SHEET 14

AREA–04
SEE SHEET 15





KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED CATCH CURB & GUTTER
- PROPOSED SPILL CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- EXISTING SECTION LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED CONTOURS
- EXISTING CONTOURS

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(IN FEET)
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MICHAEL PRYOR

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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
OVERALL GRADING
AREA–05

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 16

CAD FILE: 24007256-PHZ-GRAD.DWG

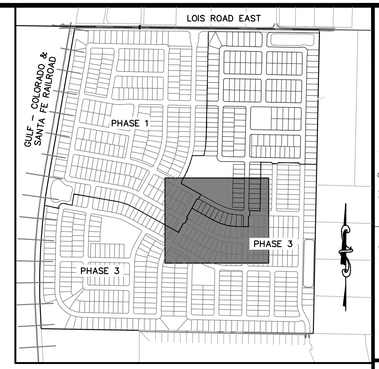
AREA–04
SEE SHEET 15

AREA–05
SEE SHEET 16

(FUTURE) FRANKLIN ST

PROPERTY LINE

POND D
SEE SHEET 60
FOR POND DETAILS



KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED CATCH CURB & GUTTER
- PROPOSED SPILL CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPOSED SIDEWALK
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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

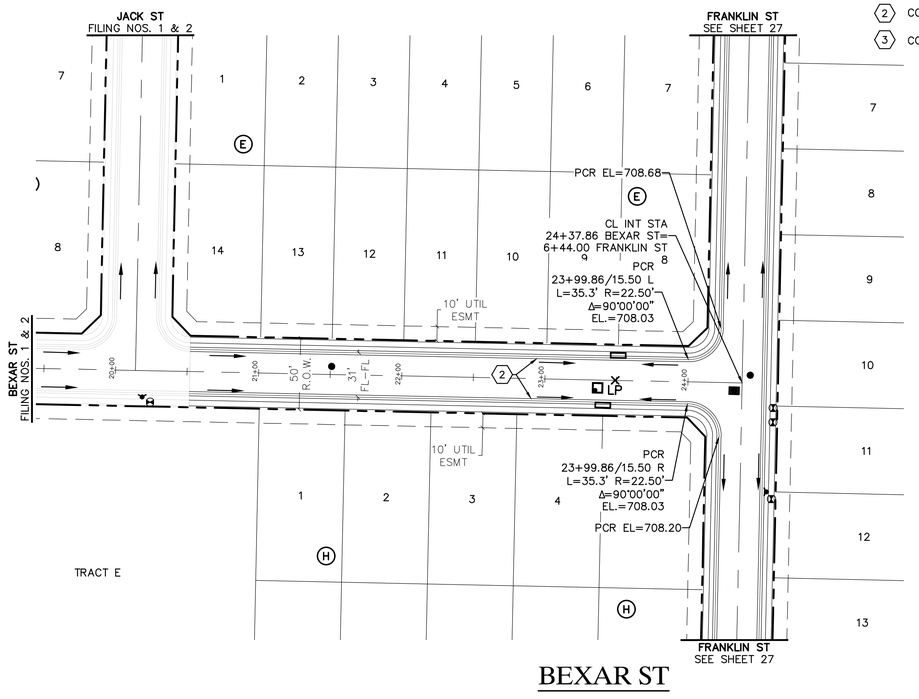
OVERALL GRADING
AREA–06

DATE 4/7/2025

REVISIONS
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B 2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 17

CAD FILE: 24007256-PHP-GRAD.DWG

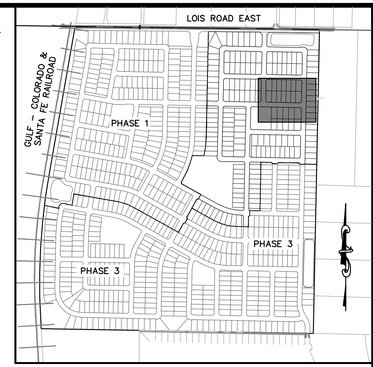


BEXAR ST

ROADWAY CONSTRUCTION NOTES

1. CONSTRUCT SEPARATE CURB & GUTTER. SEE DETAIL 2120, SHEET 65.
2. CONSTRUCT MOUNTABLE CURB AND GUTTER. SEE DETAIL 1007B, SHEET 66.
3. CONSTRUCT 10' CURB TRANSITION.

Provide passing spaces, 60 inches by 60 inches, every 200 feet along 4' sidewalks per PROWAG R302.3. (Typical)



KEYMAP
1"=750'

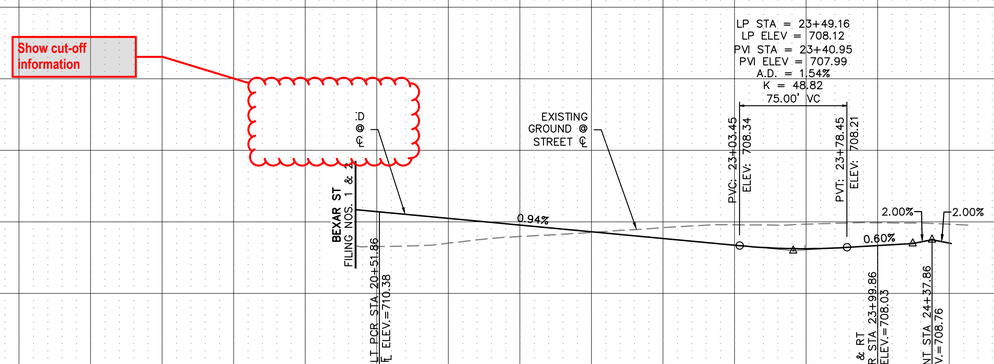
50 0 50 100
(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

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DESIGN SPEED=25 MPH

Show cut-off information



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STREET PLAN & PROFILES
BEXAR ST

DATE 4/7/2025

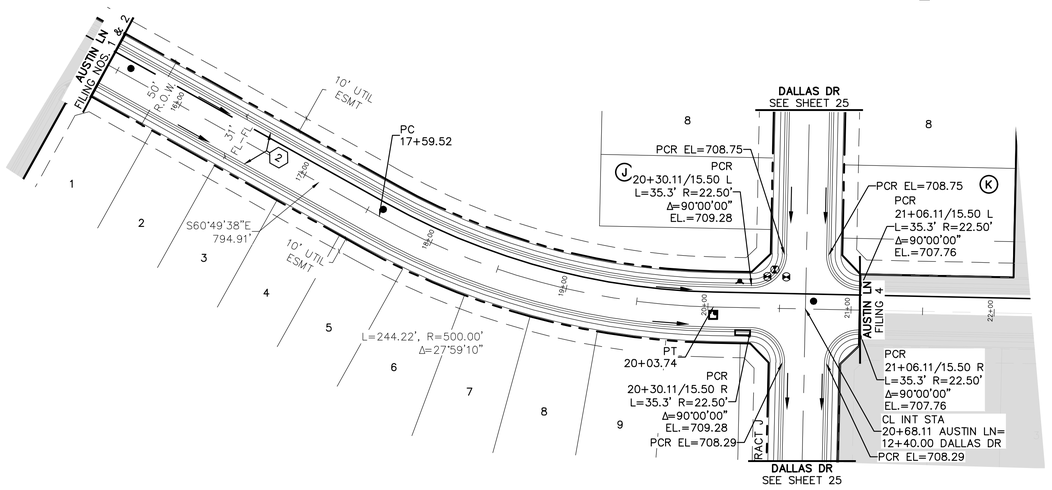
REVISIONS
A 1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B 2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

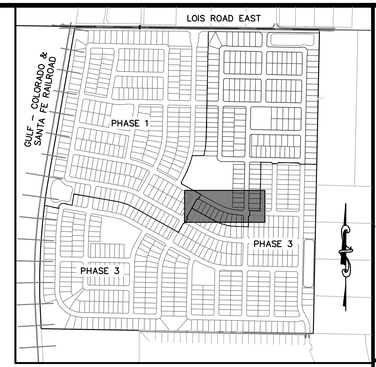
DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 18

CAD FILE: 24007256-PH2-STRT-P&P-02-1.DWG

ROADWAY CONSTRUCTION NOTES

1. CONSTRUCT SEPARATE CURB & GUTTER. SEE DETAIL 2120, SHEET 65.
2. CONSTRUCT MOUNTABLE CURB AND GUTTER. SEE DETAIL 1007B, SHEET 66.
3. CONSTRUCT 10' CURB TRANSITION.





KEYMAP
1"=750'

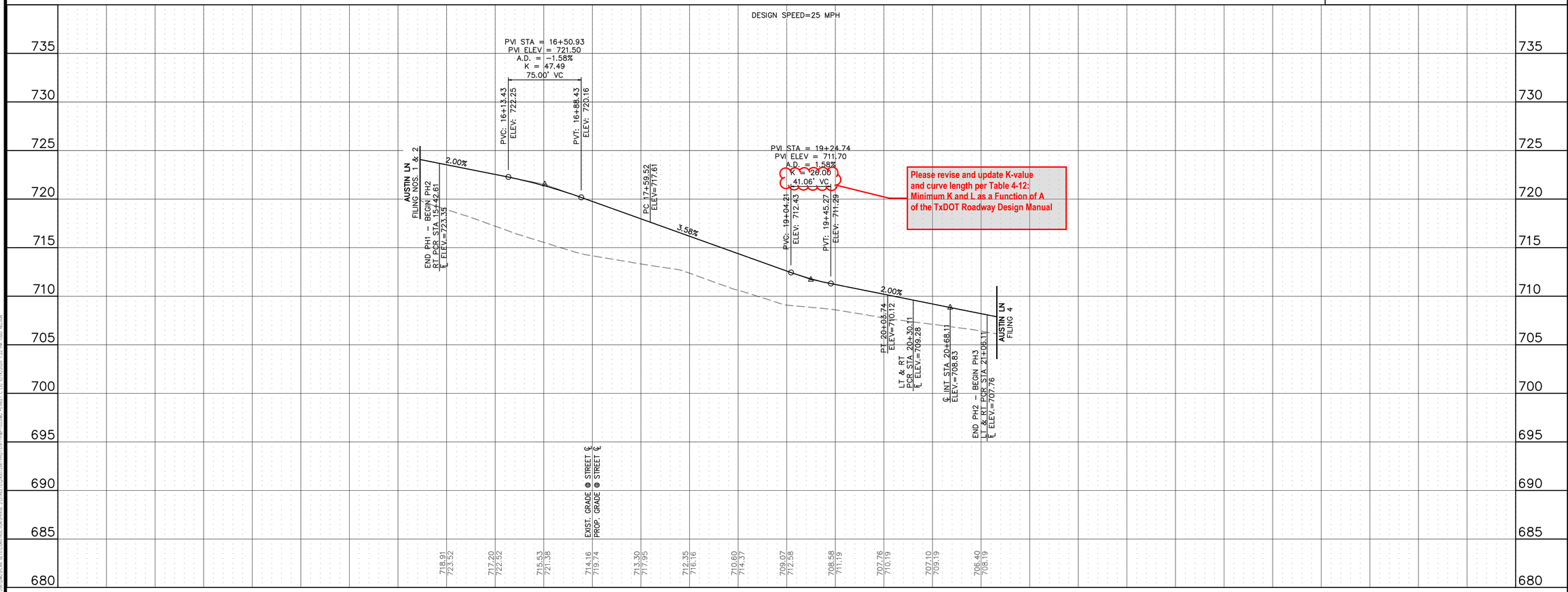
50 0 50 100
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AUSTIN LN

DESIGN SPEED=25 MPH



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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

STREET PLAN & PROFILES
AUSTIN LN

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

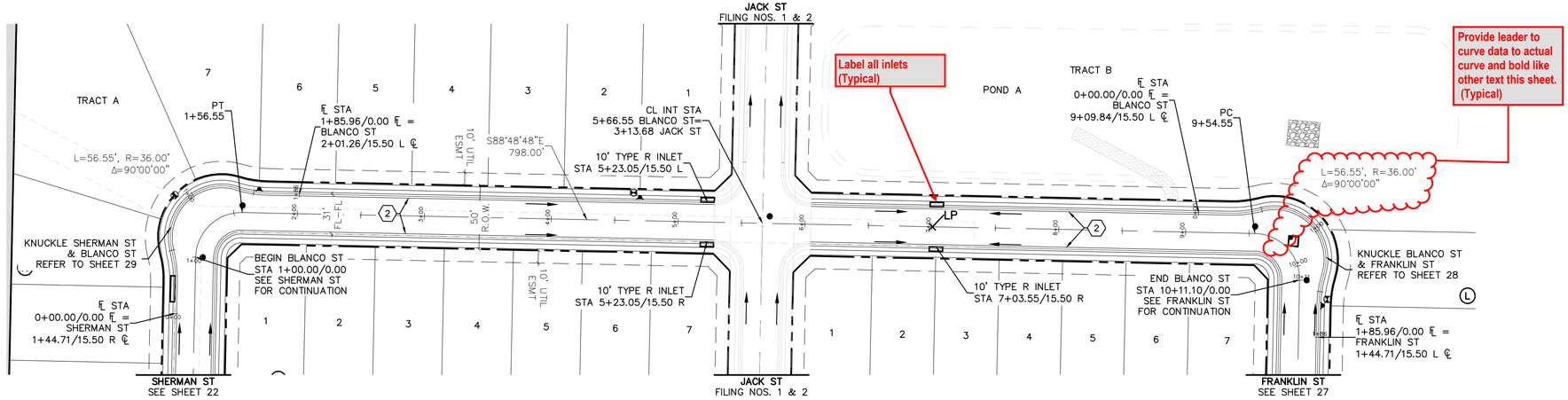
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P.M. JF
JOB 24007256
SHEET NO. 19

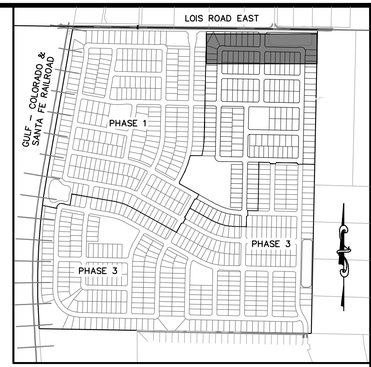
CAD FILE: 24007256-PH2-STRT-P&P-03.DWG

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ROADWAY CONSTRUCTION NOTES

1. CONSTRUCT SEPARATE CURB & GUTTER. SEE DETAIL 2120, SHEET 65.
2. CONSTRUCT MOUNTABLE CURB AND GUTTER. SEE DETAIL 1007B, SHEET 66.
3. CONSTRUCT 10' CURB TRANSITION.





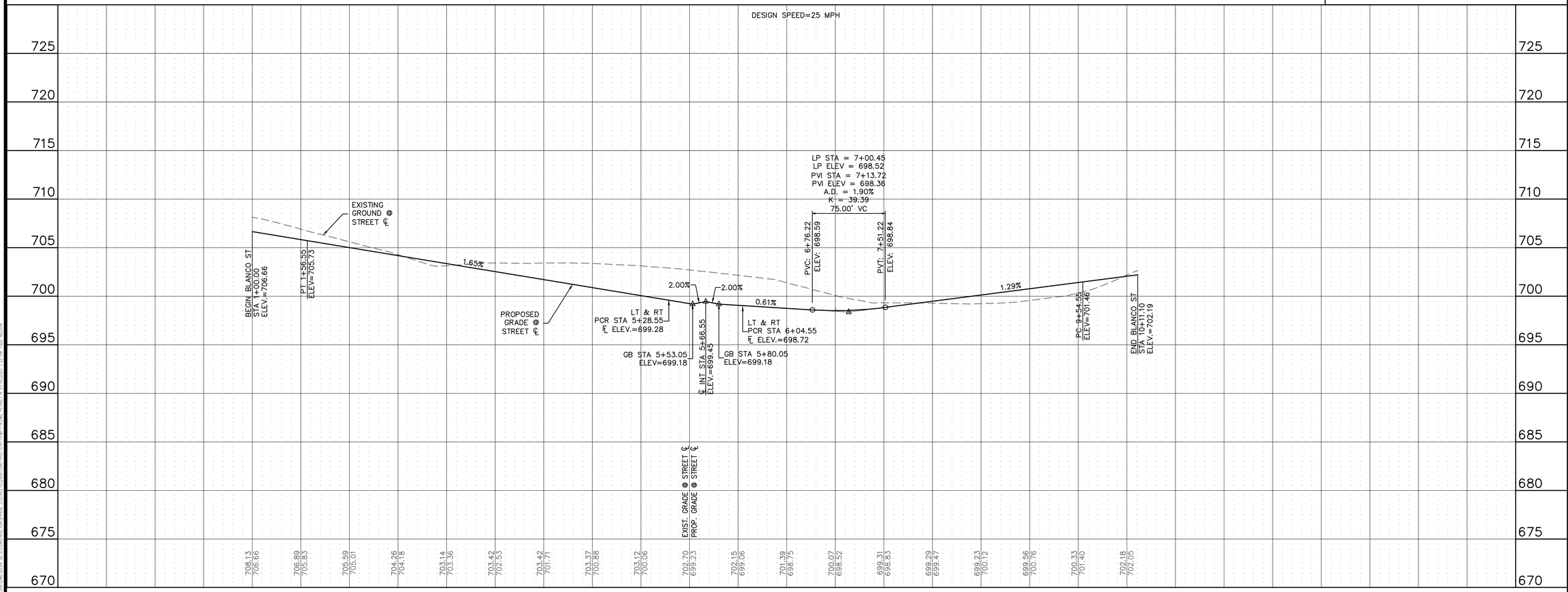
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BLANCO ST



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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

STREET PLAN & PROFILES BLANCO ST

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 — KMB
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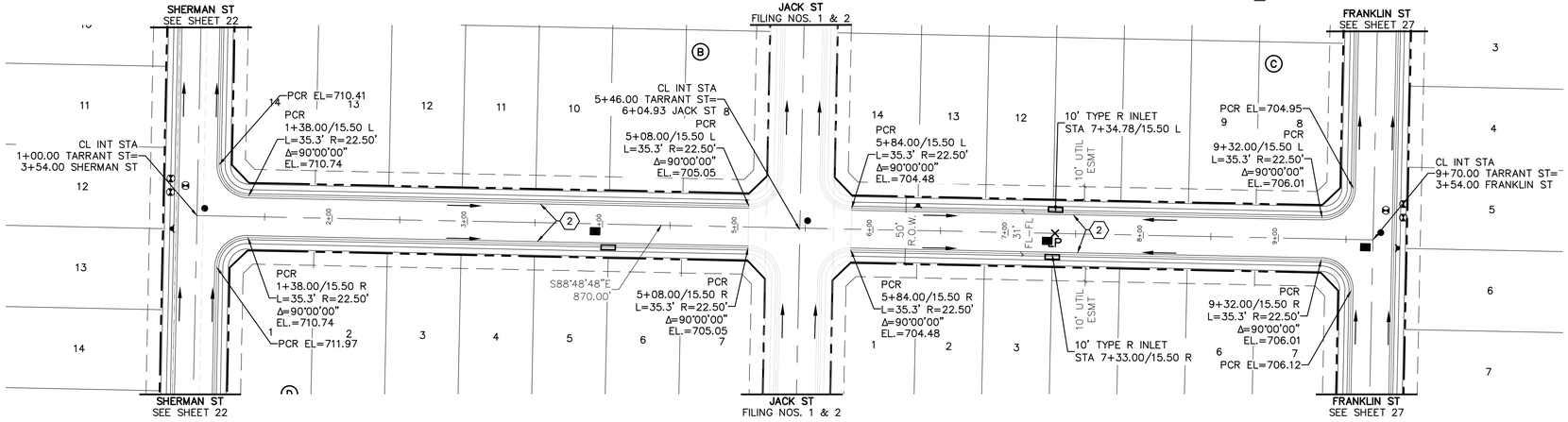
REVISIONS

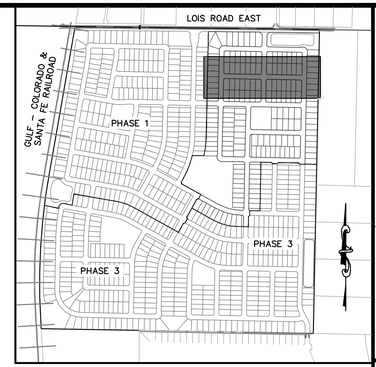
DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 20

CAD FILE: 24007256-PH2-STRT-P&P-14.DWG

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1. CONSTRUCT SEPARATE CURB & GUTTER. SEE DETAIL 2120, SHEET 65.
2. CONSTRUCT MOUNTABLE CURB AND GUTTER. SEE DETAIL 1007B, SHEET 66.
3. CONSTRUCT 10' CURB TRANSITION.





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50 0 50 100
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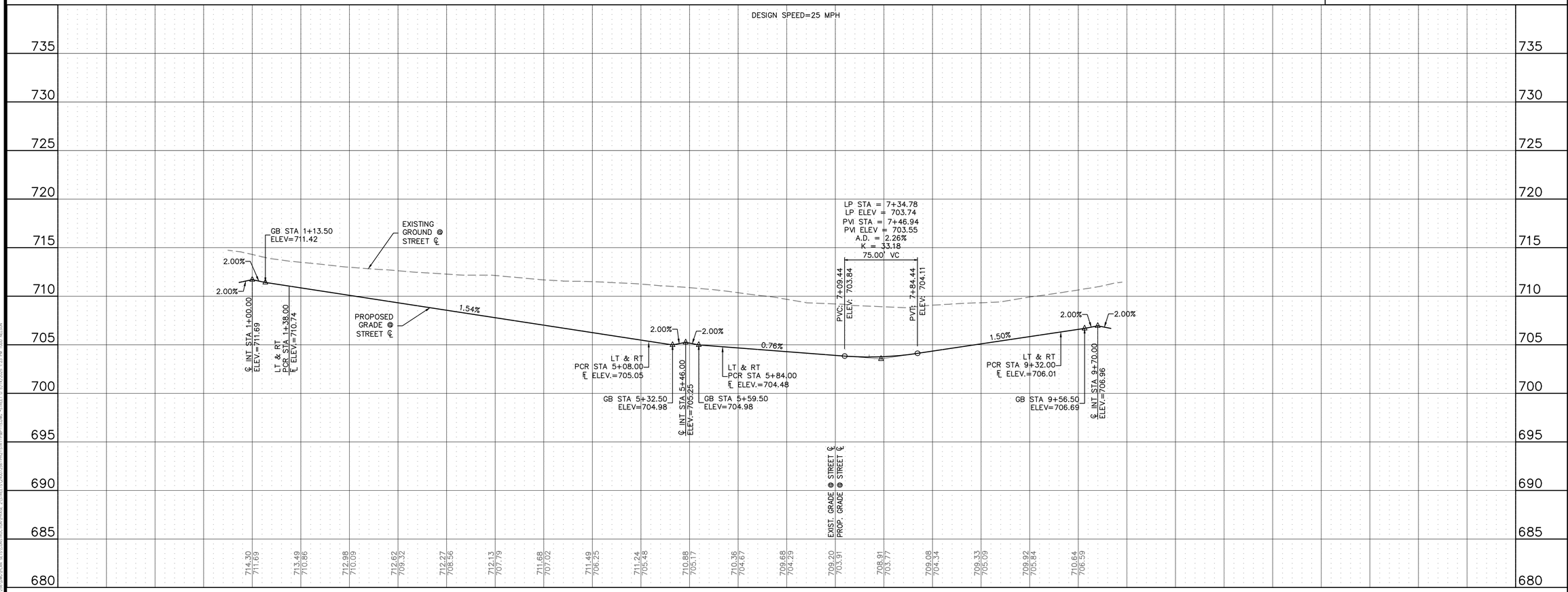
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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

STREET PLAN & PROFILES
TARRANT ST

DATE 4/7/2025

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B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

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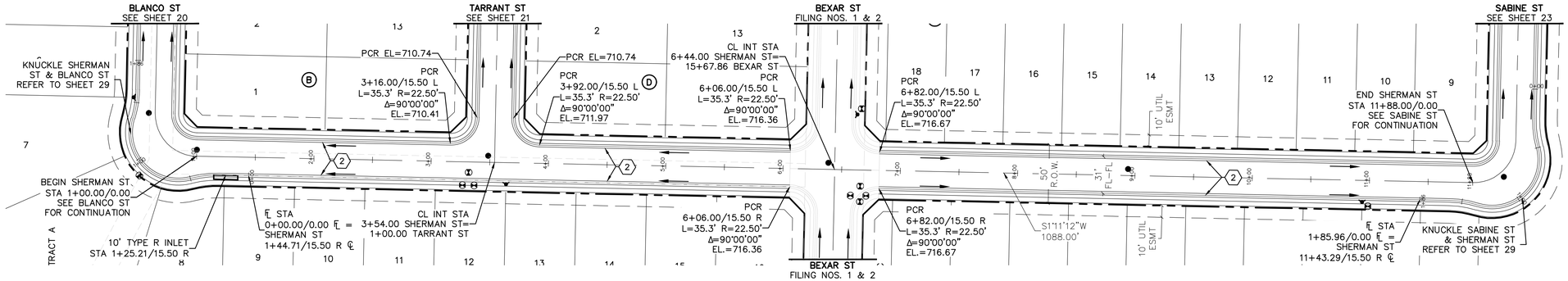
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JOB 24007256
SHEET NO. 21

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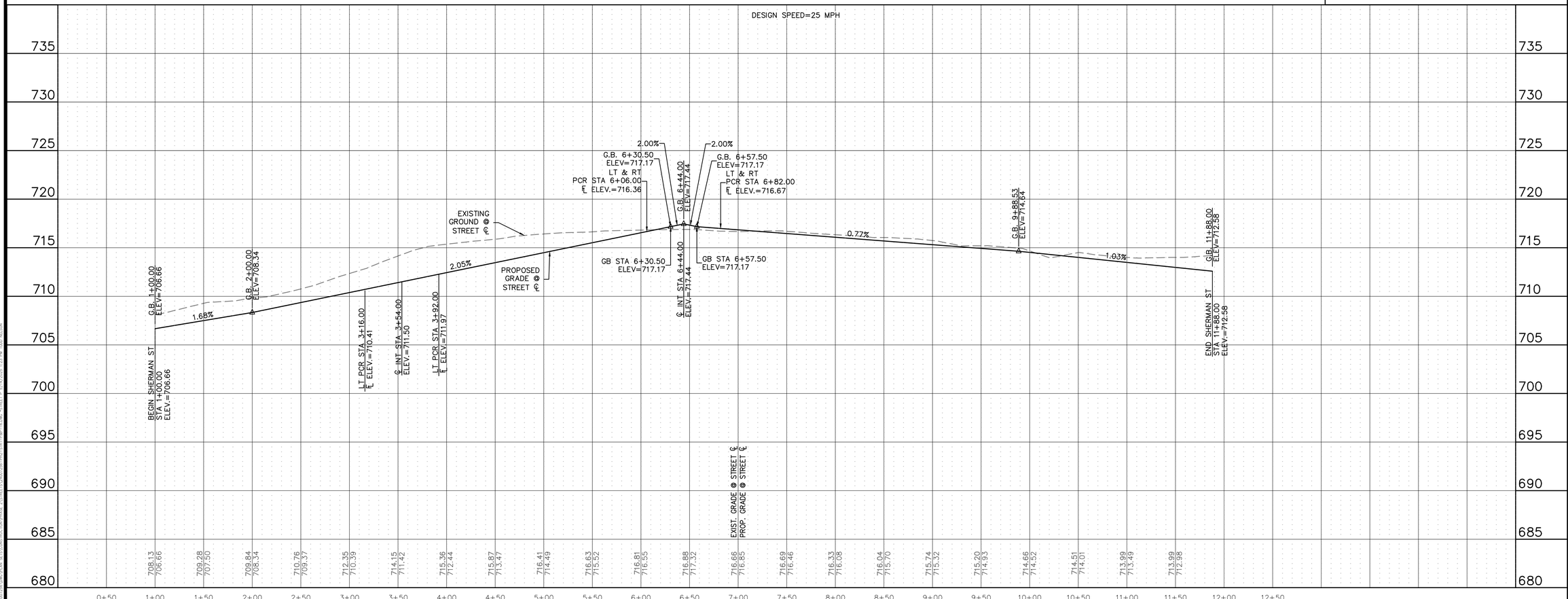
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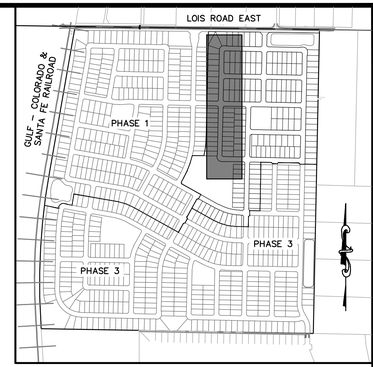
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2. CONSTRUCT MOUNTABLE CURB AND GUTTER. SEE DETAIL 1007B, SHEET 66.
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SHERMAN ST





KEYMAP
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50 0 50 100
(IN FEET)
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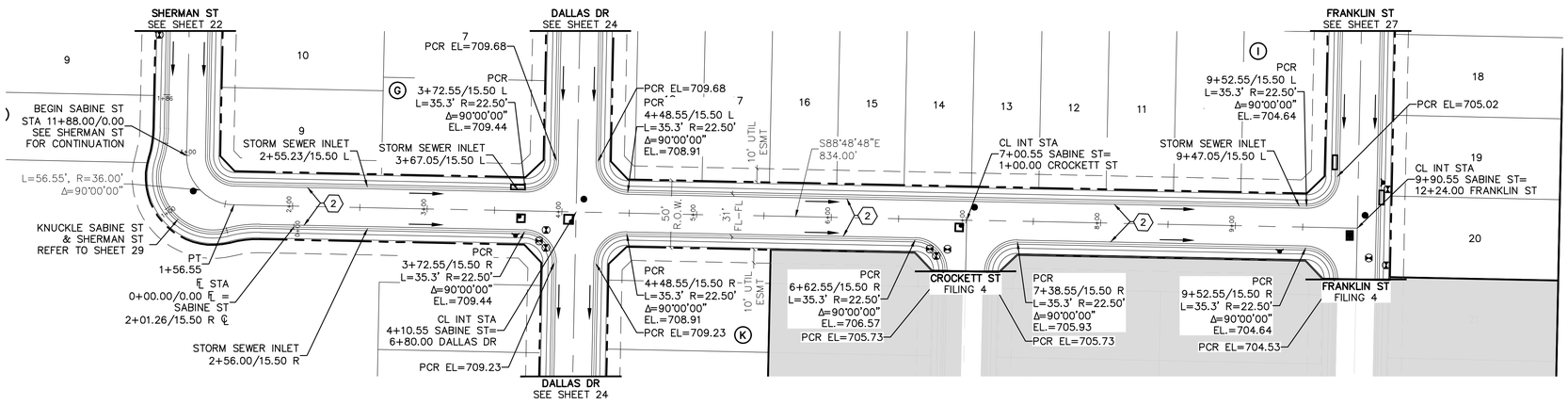
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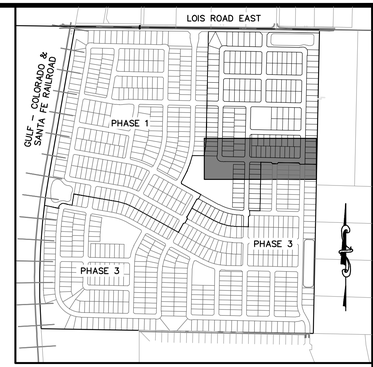
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JOB 24007256
SHEET NO. 22

CAD FILE: 24007256-PH2-STRT-P&P-16.DWG

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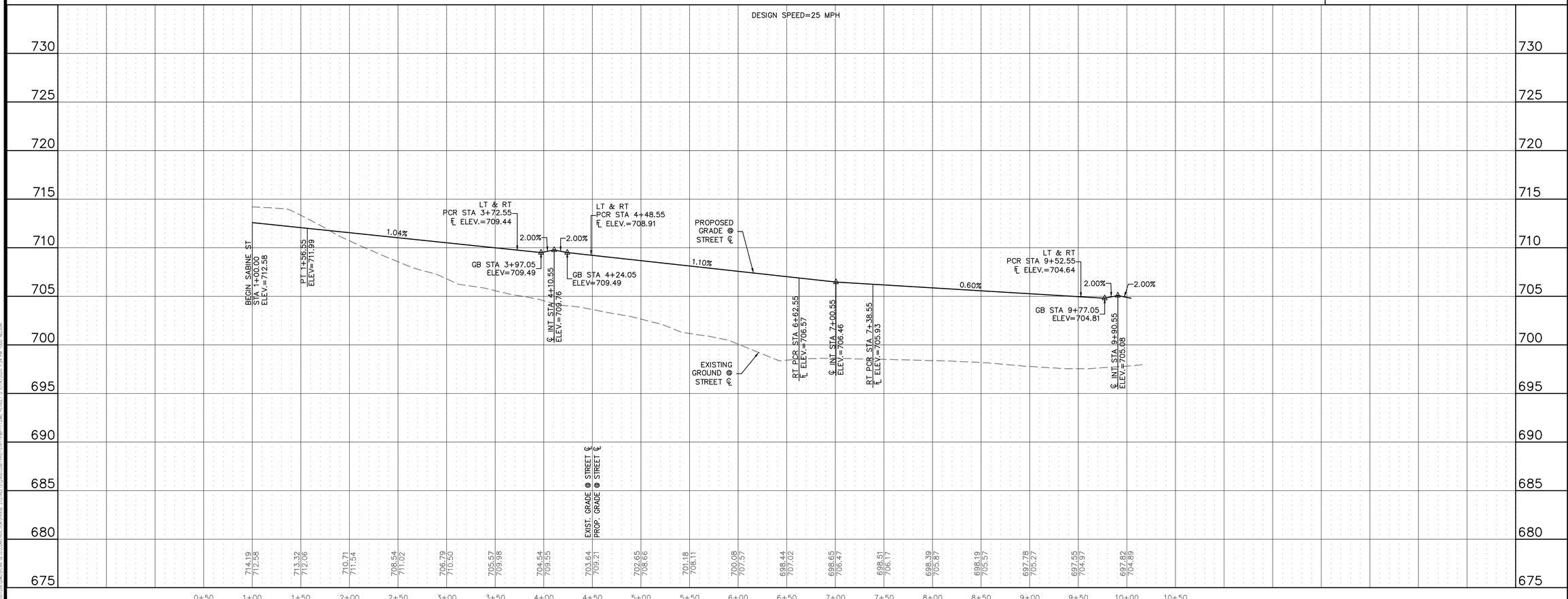
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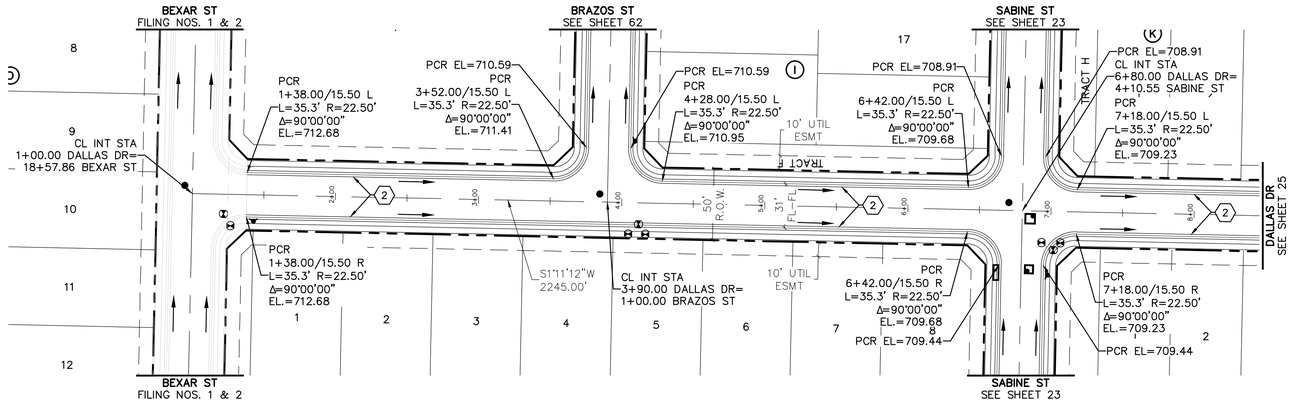
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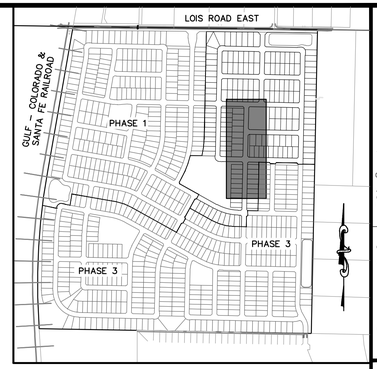
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SHEET NO. 23

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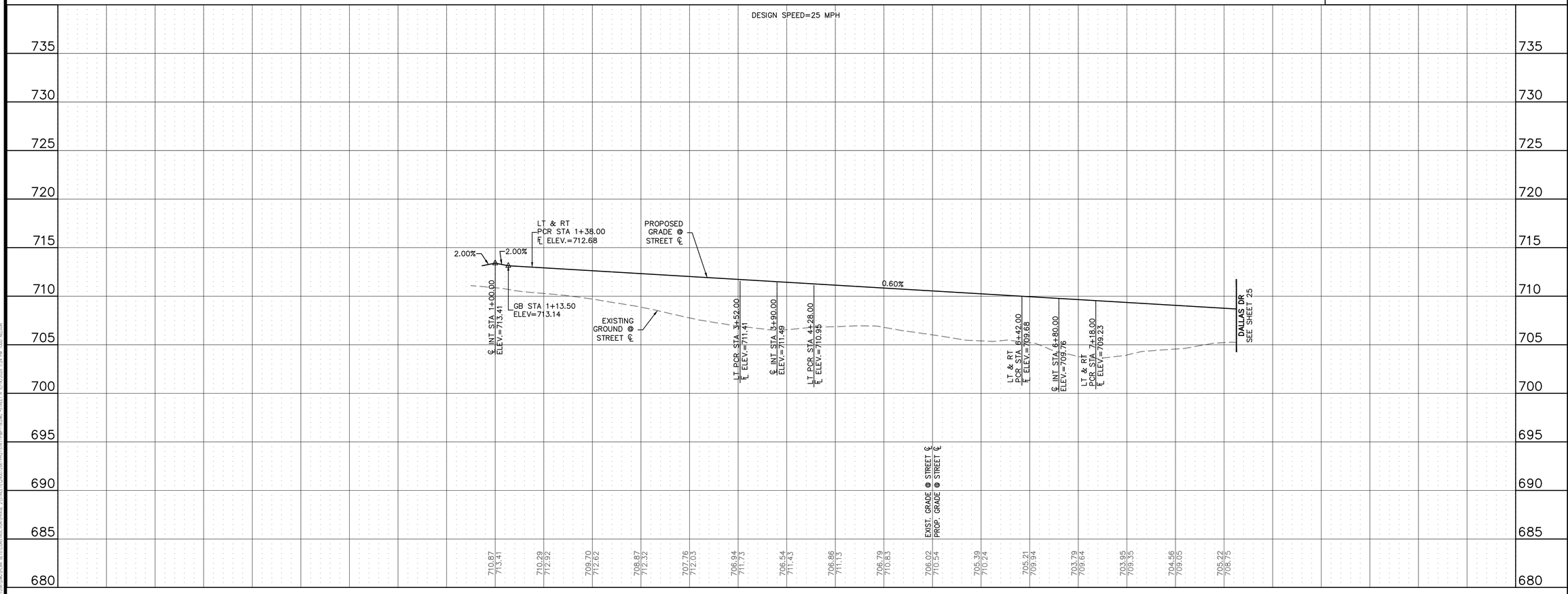
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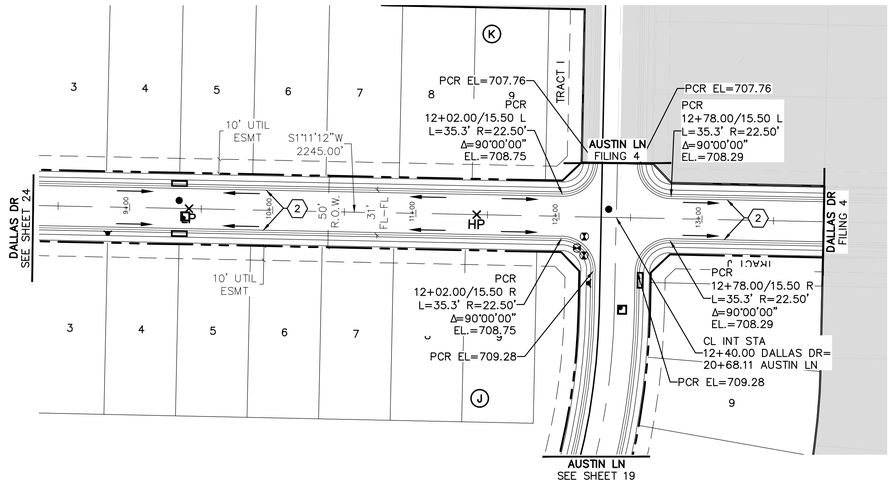
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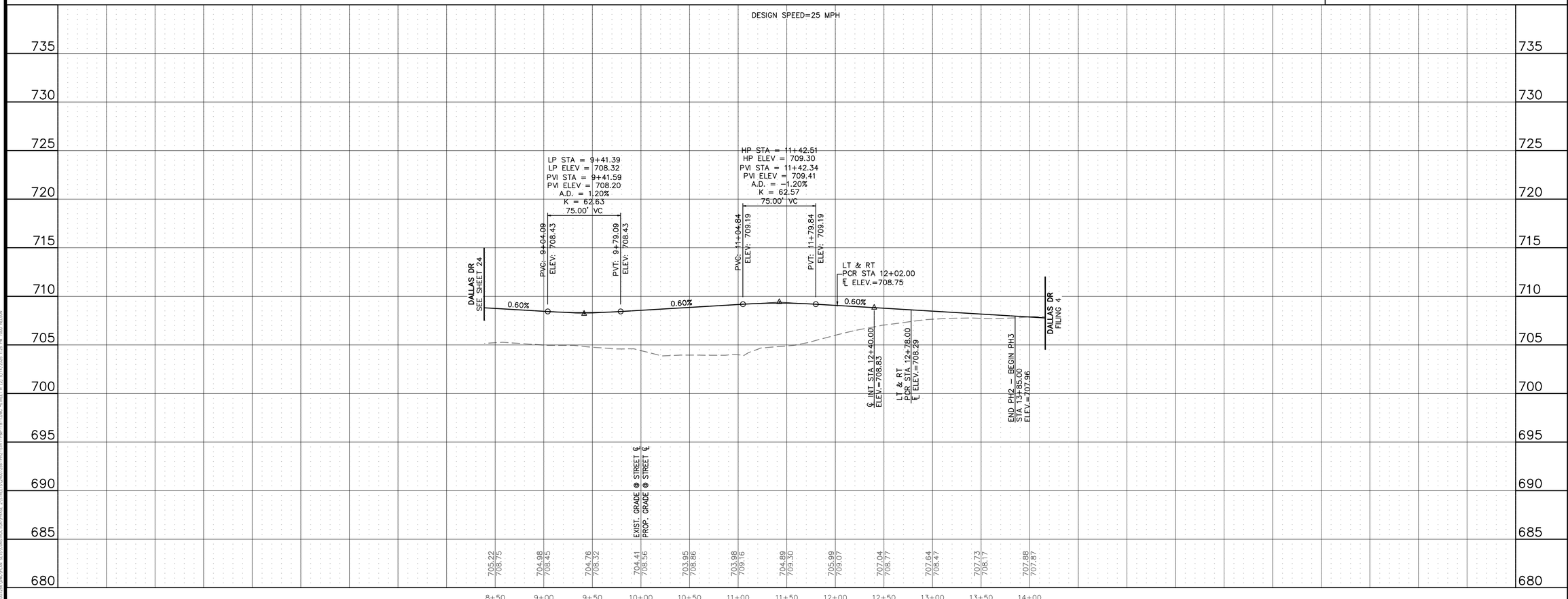
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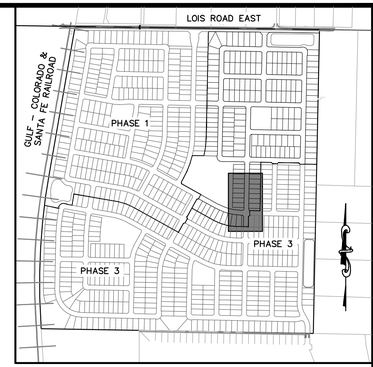
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DALLAS DR





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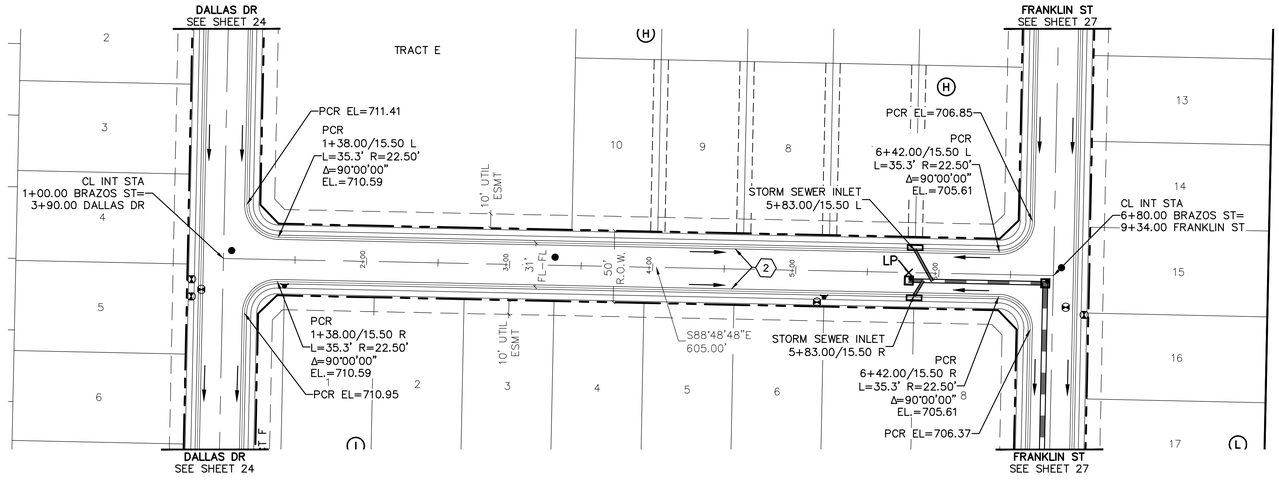
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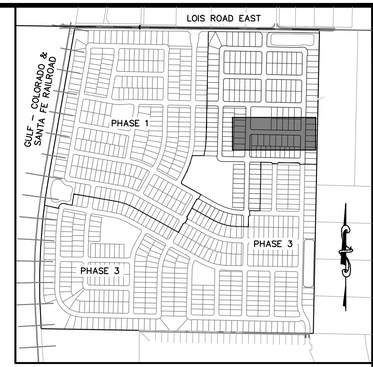
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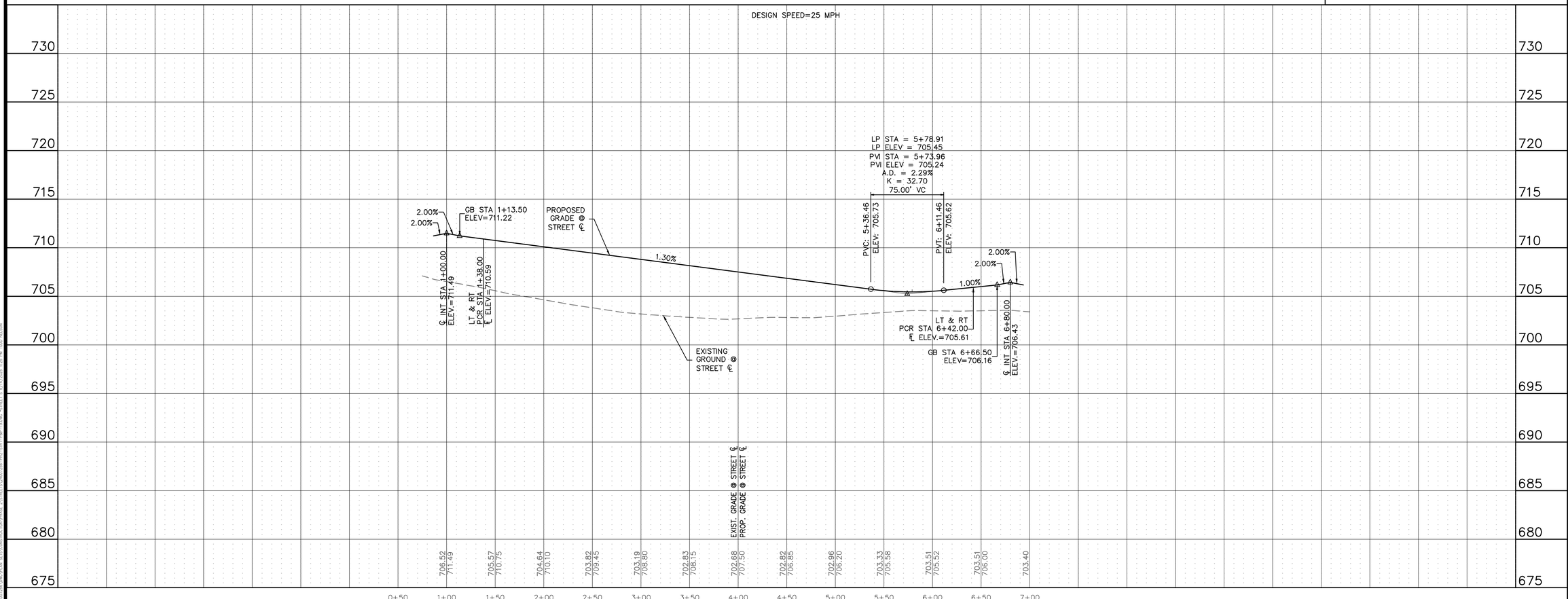
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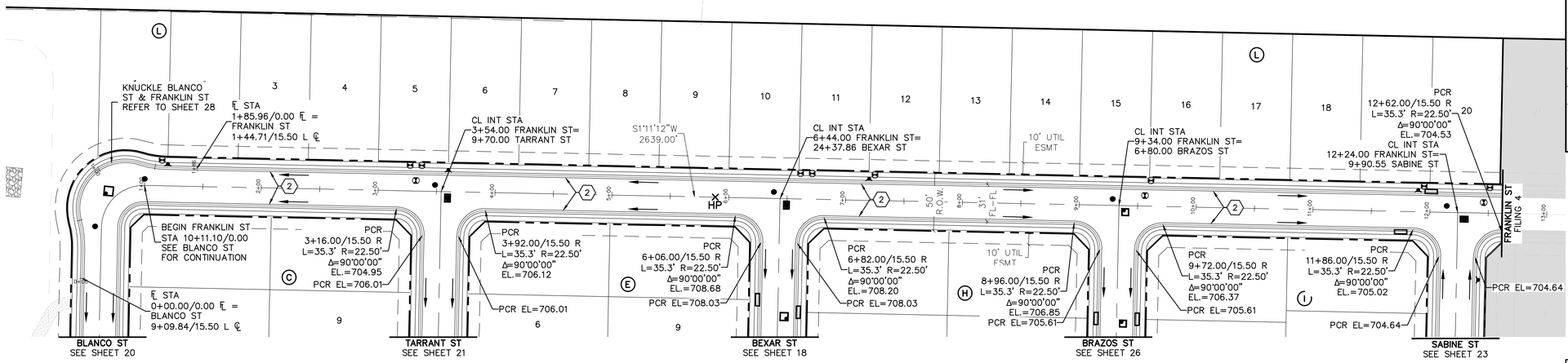
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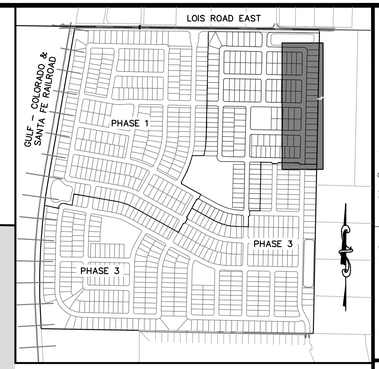
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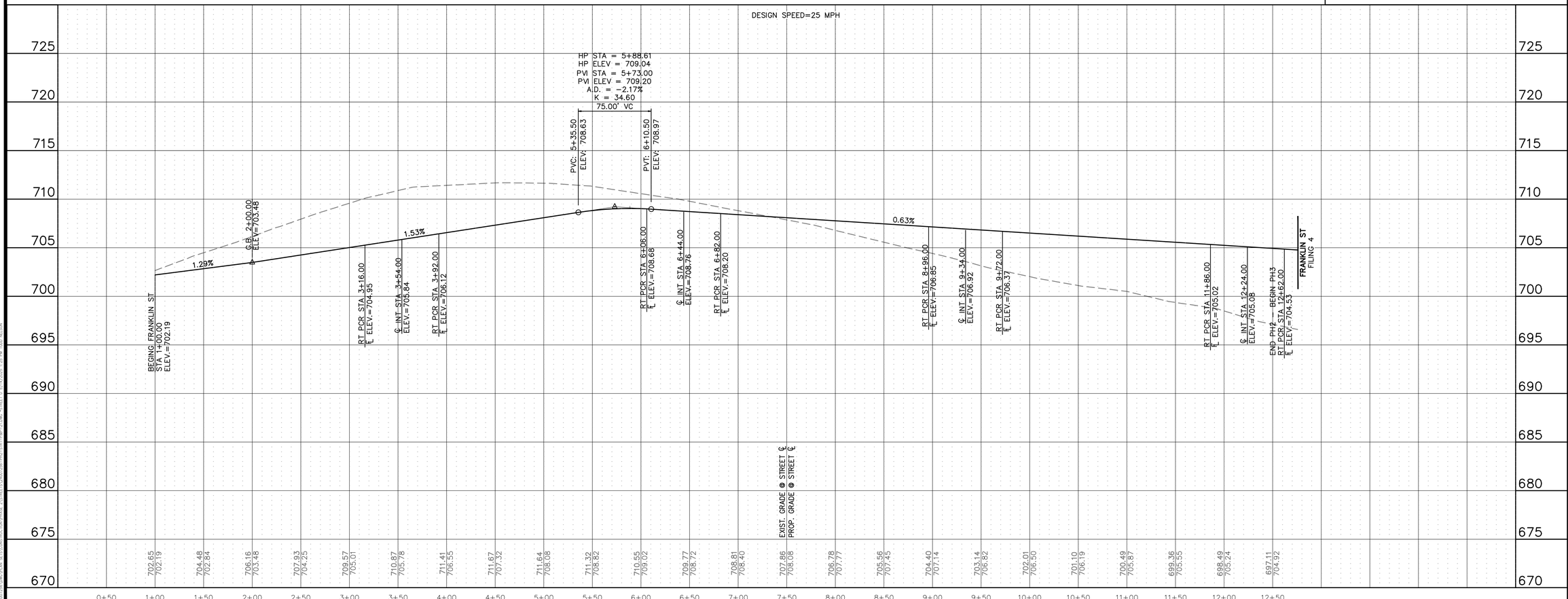
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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

STREET PLAN & PROFILES FRANKLIN ST

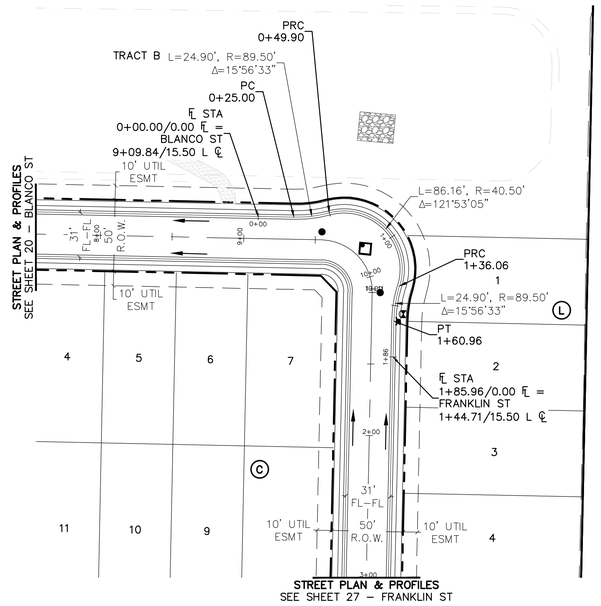
DATE 4/7/2025

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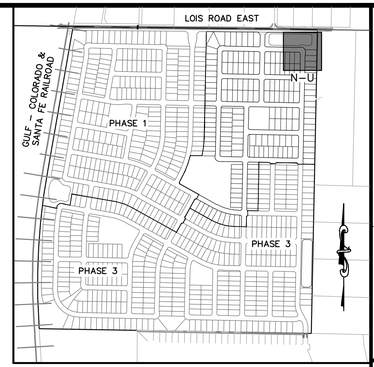
REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 27

CAD FILE: 24007256-PH2-STRT-PRF-21.DWG



KNUCKLE
BLANCO ST - FRANKLIN ST

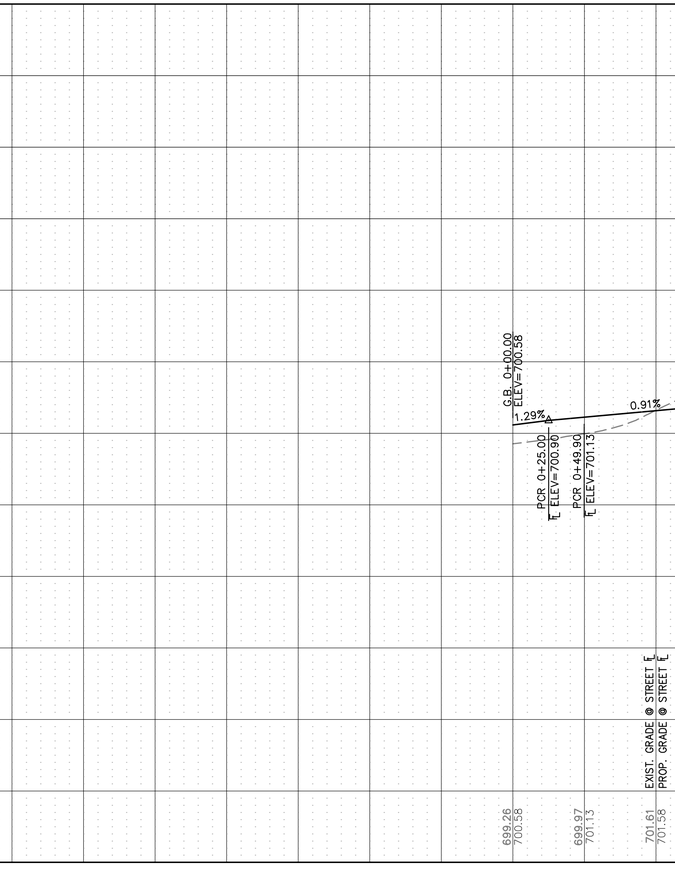


KEYMAP
1"=750'

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(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

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KALTER CAPITAL

LOIS ROAD ESTATES
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
STREET PLAN & PROFILES
KNUCKLE BLANCO ST – FRANKLIN ST

DATE 4/7/2025

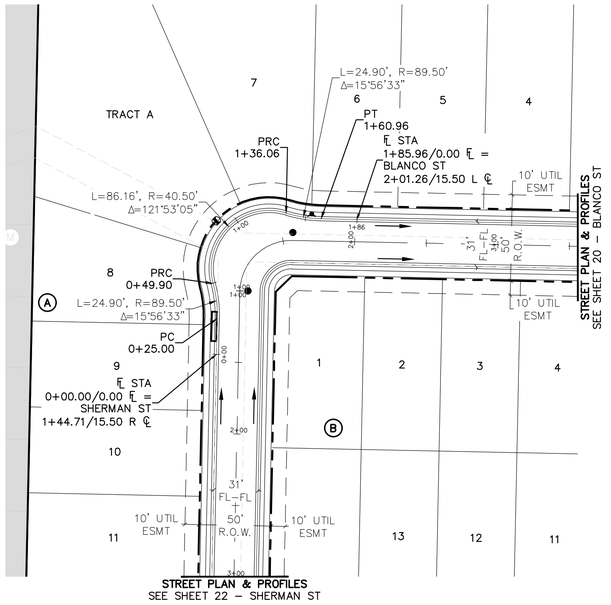
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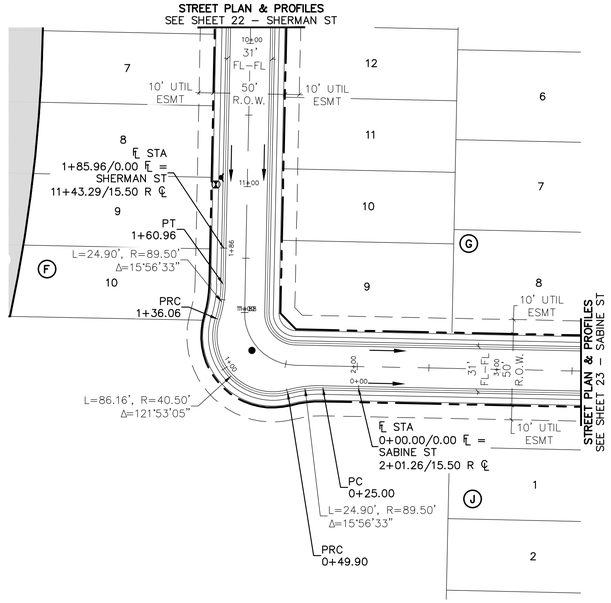
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JOB 24007256
SHEET NO. 28

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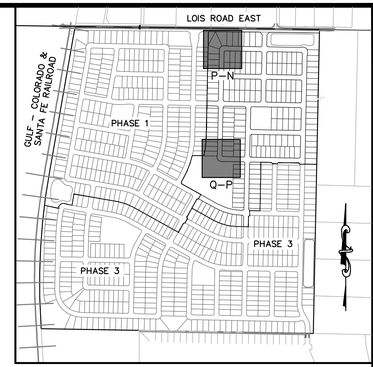
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KNUCKLE
SHERMAN ST - BLANCO ST



KNUCKLE
SABINE ST - SHERMAN ST



KEYMAP
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50 0 50 100
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STREET PLAN & PROFILES
KNUCKLES SHERMAN ST – BLANCO ST & SABINE ST – SHERMAN ST

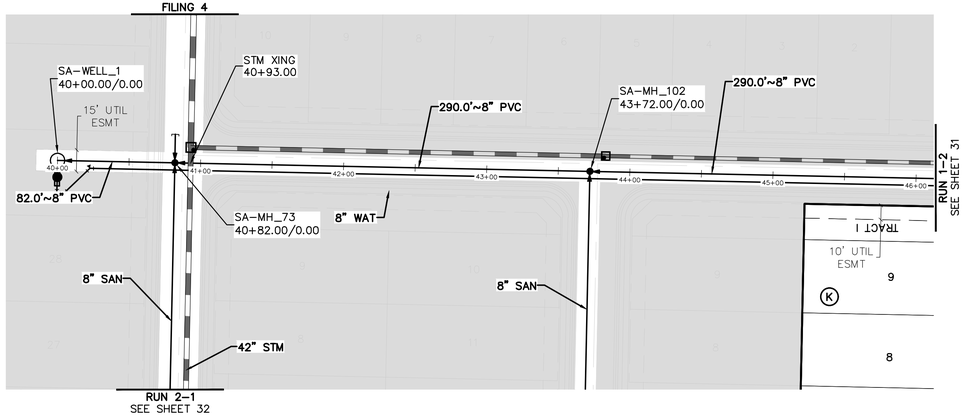
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B 2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

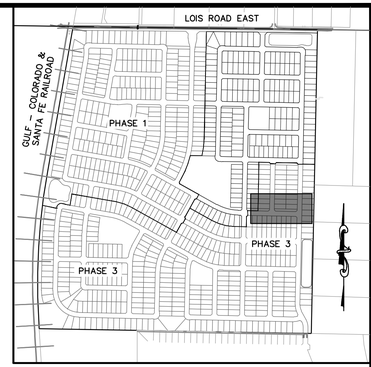
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JOB 24007256
SHEET NO. 29

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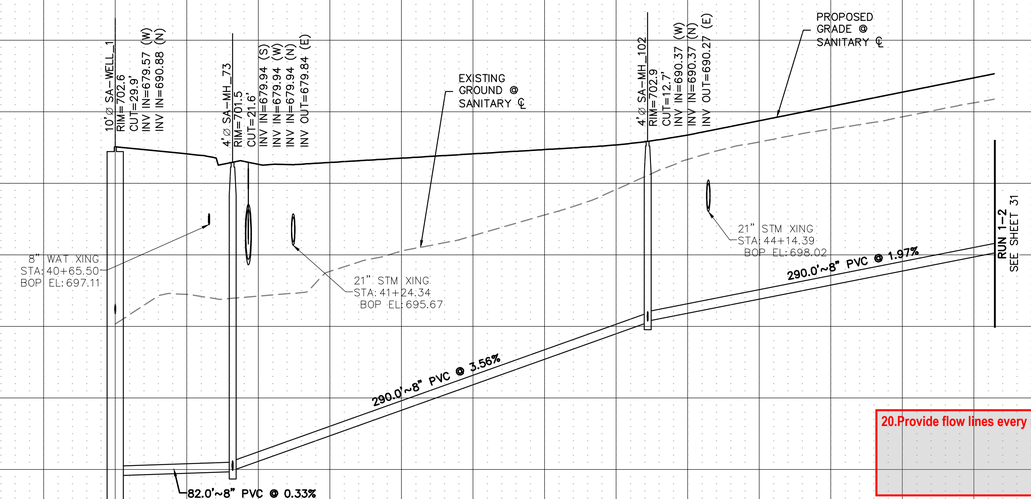


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20.Provide flow lines every 50ft on all utility profiles (Typical)

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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
SANITARY SEWER PLAN & PROFILES
RUN 1-1

DATE 4/7/2025

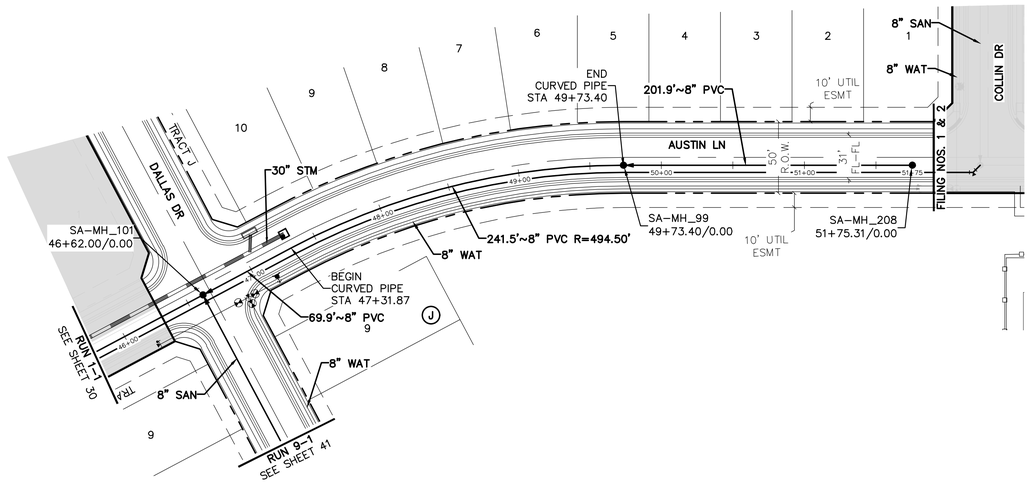
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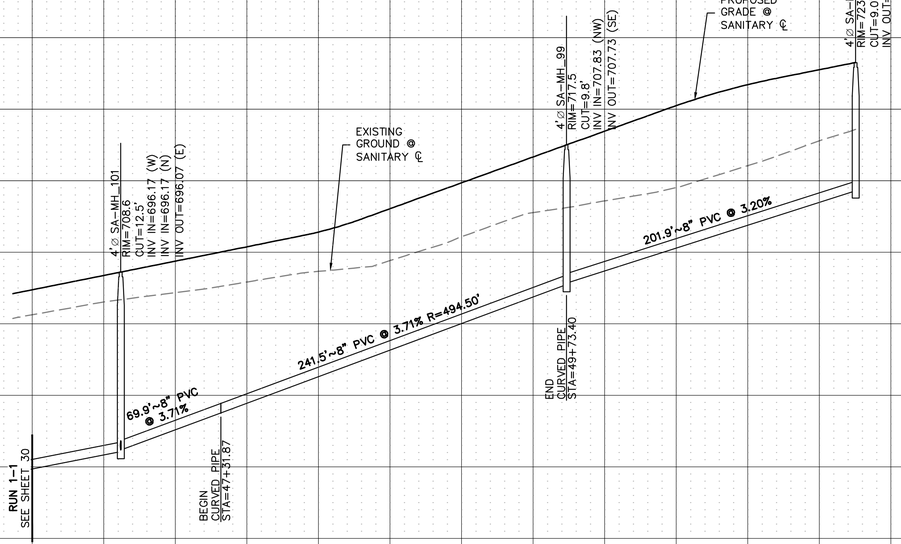
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JOB 24007256
SHEET NO. 30

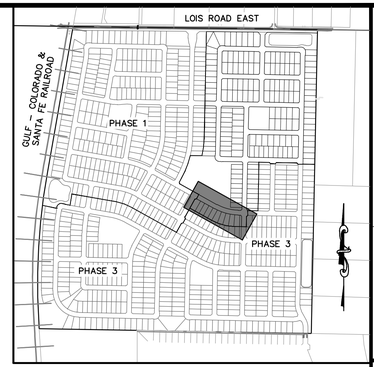
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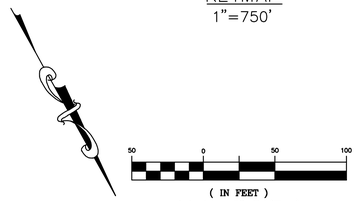


RUN 1-2





KEYMAP
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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

SANITARY SEWER PLAN & PROFILES
RUN 1-2

DATE 4/7/2025

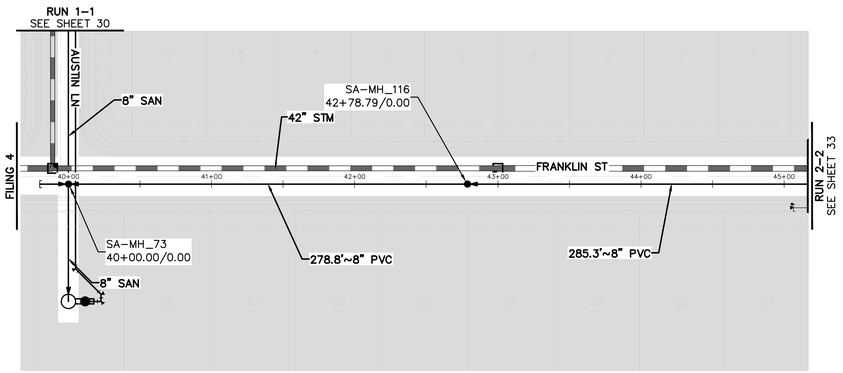
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REVISIONS

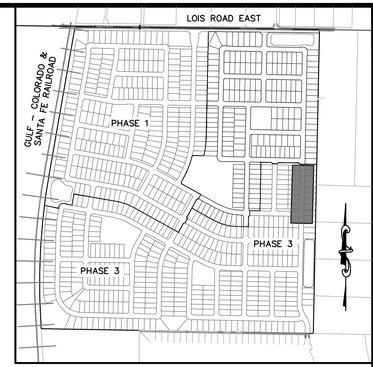
DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 31

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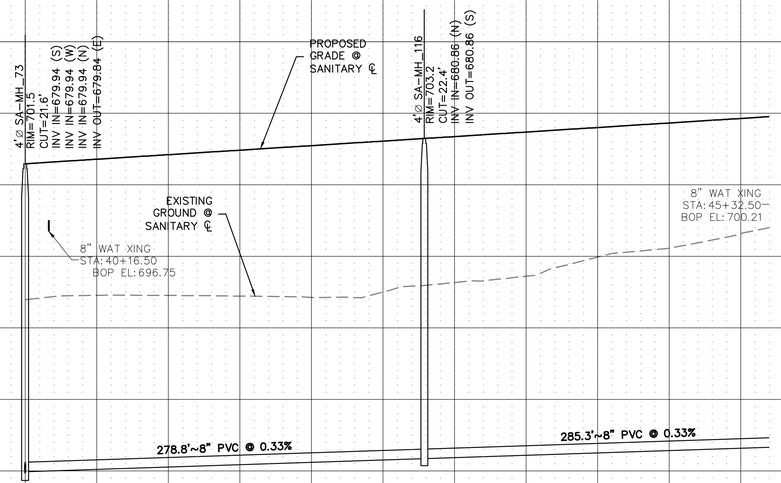
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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

SANITARY SEWER PLAN & PROFILES
RUN 2-1

DATE 4/7/2025

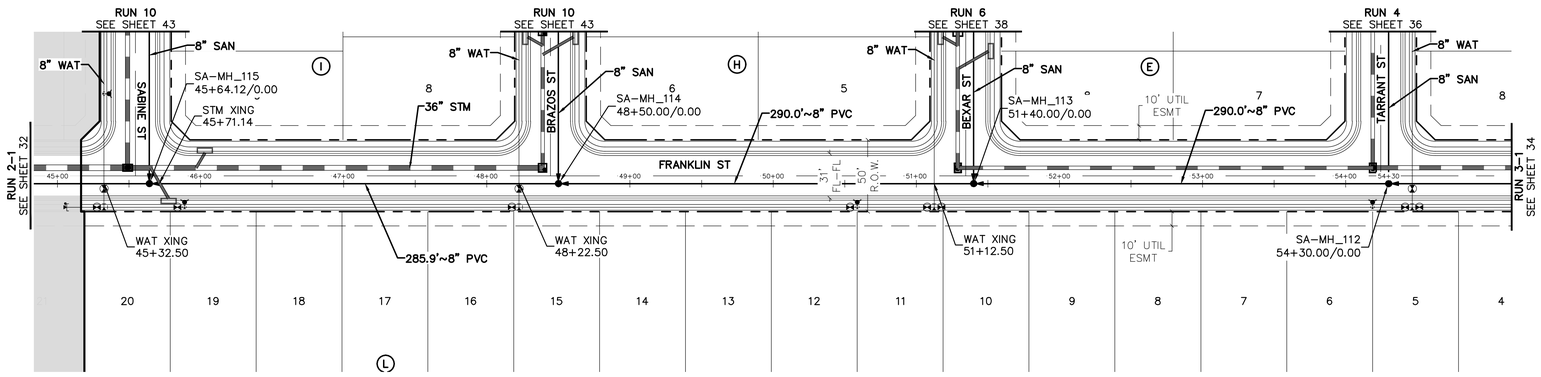
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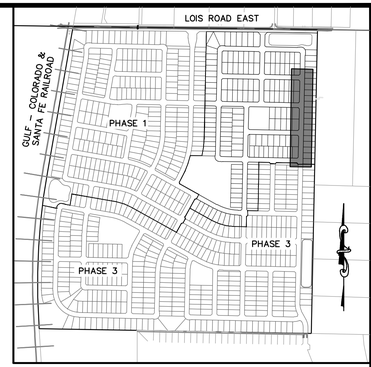
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JOB 24007256
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RUN 2-2



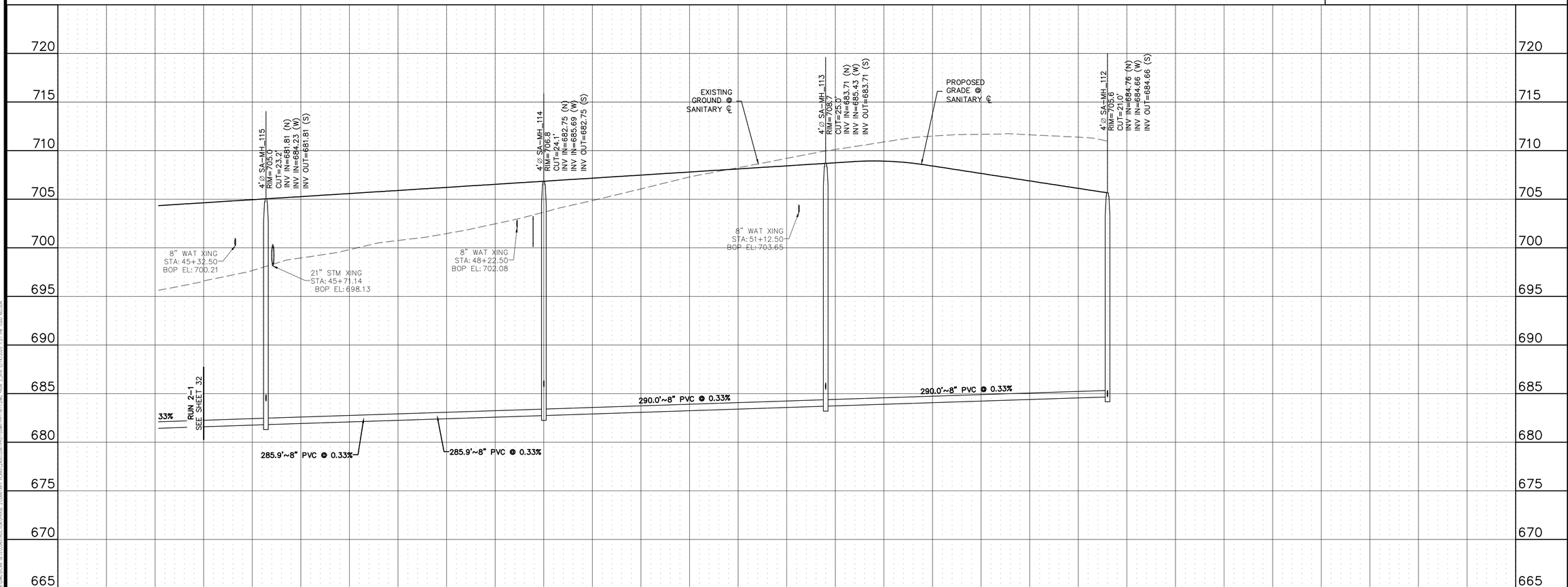
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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

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RUN 2-2

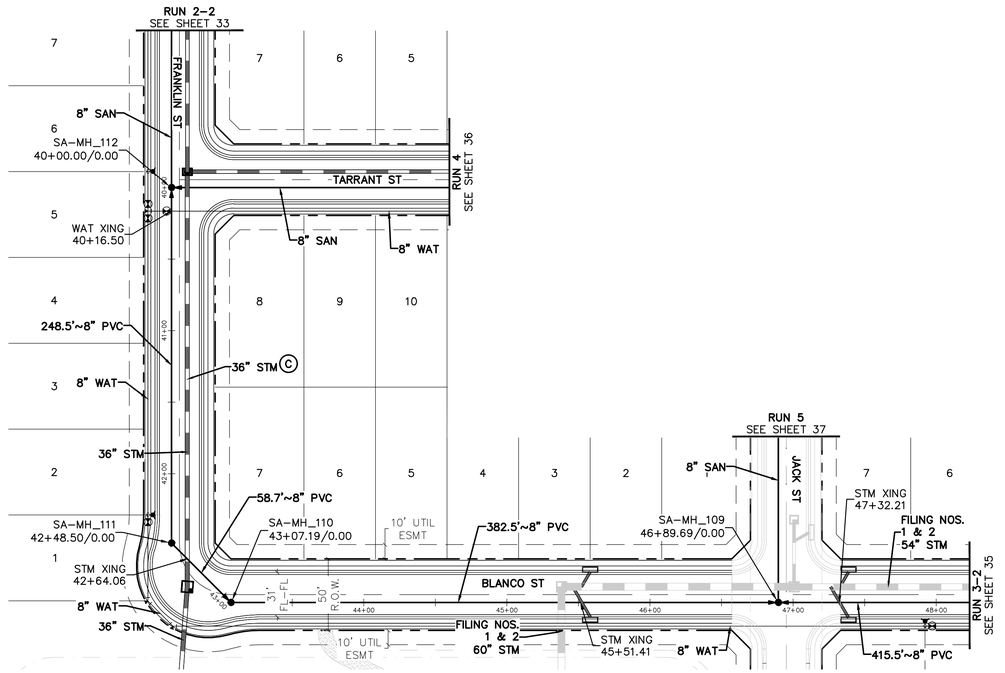
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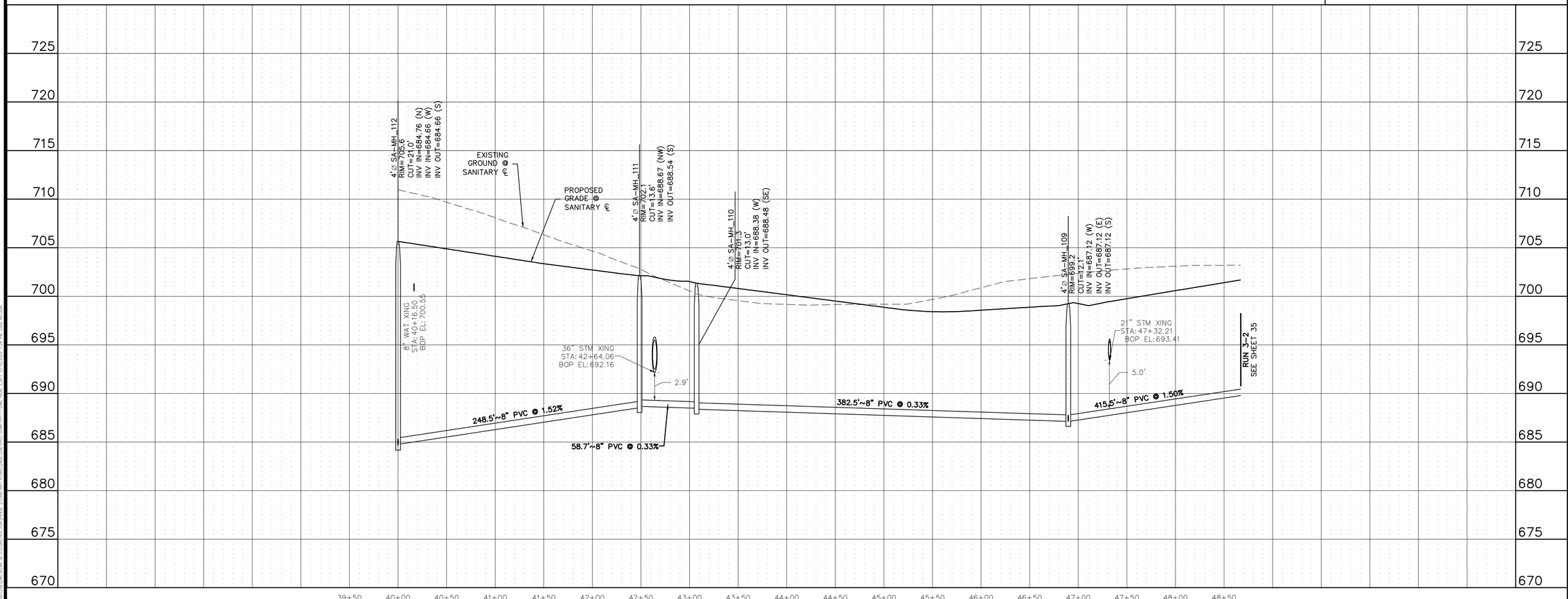
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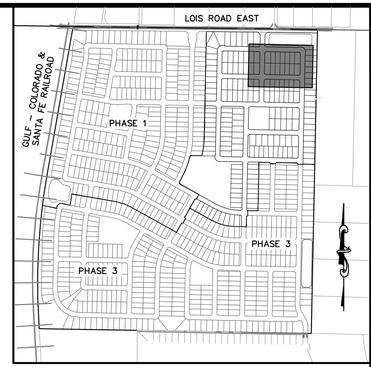
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RUN 3-1





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BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS–OF–WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.

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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

SANITARY SEWER PLAN & PROFILES
RUN 3–1

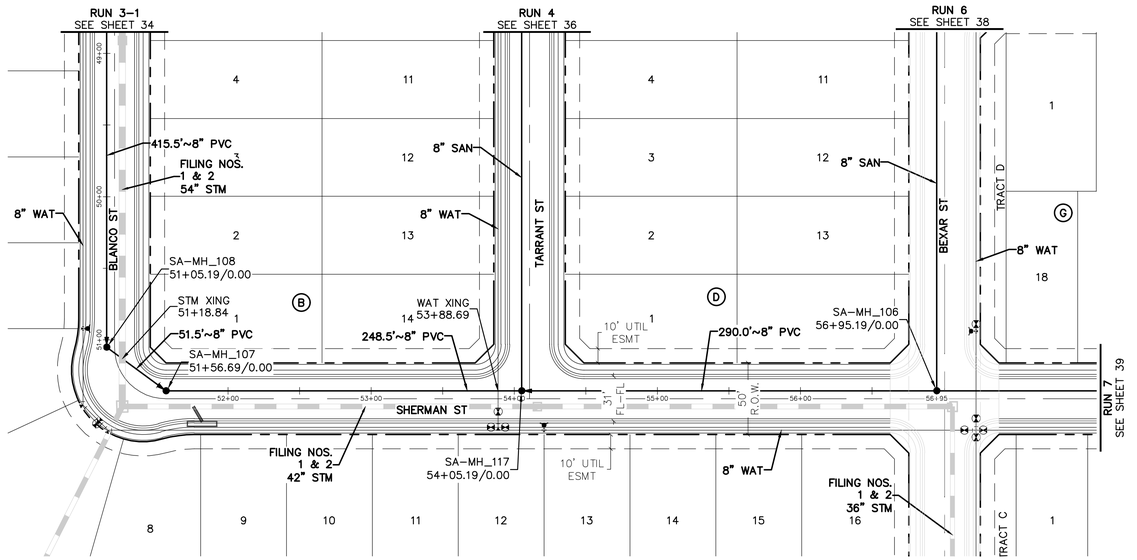
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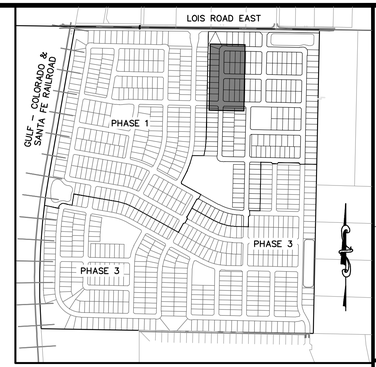
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P.M. JF
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SHEET NO. 34

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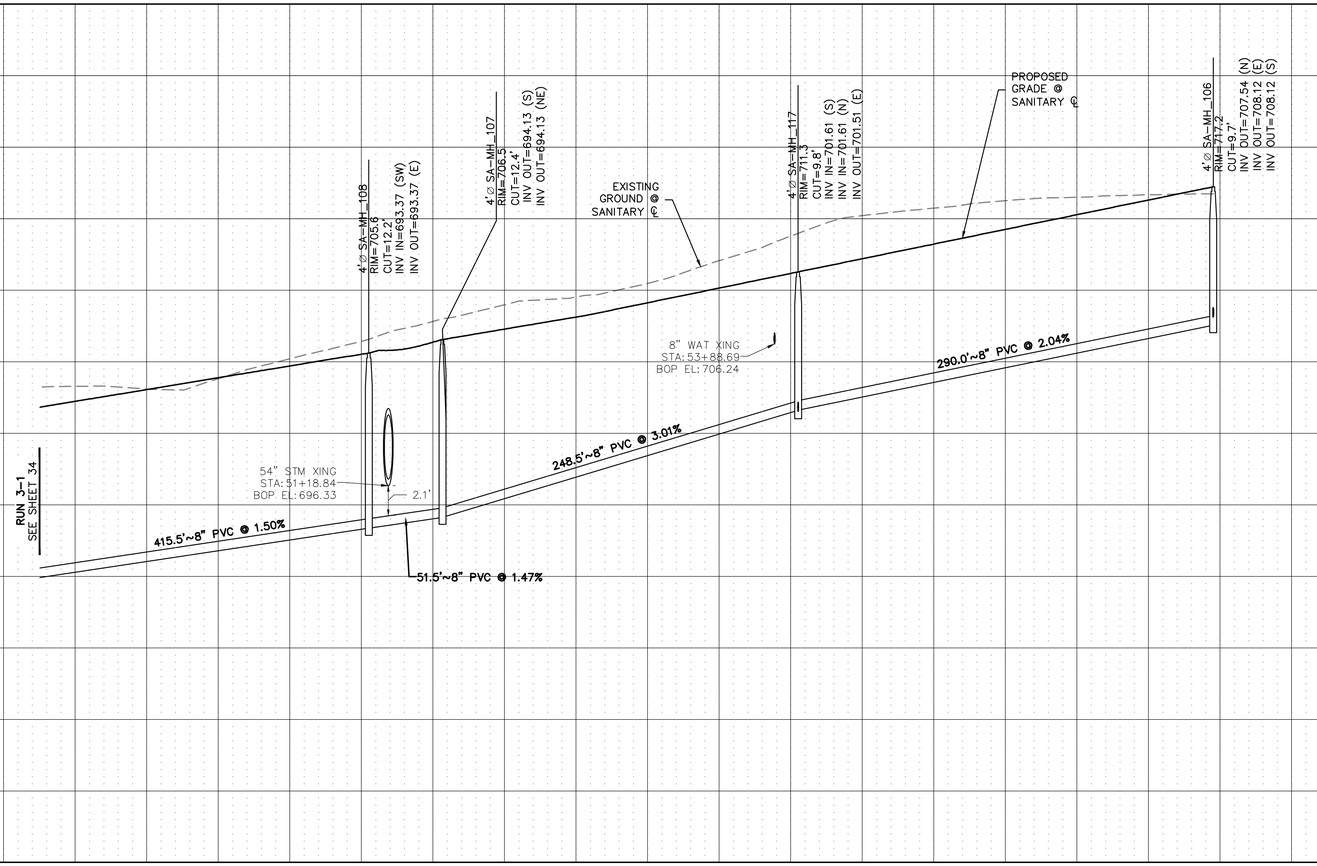
KEYMAP
1"=750'

50 0 50 100
(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

BENCHMARK:
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RUN 3-2



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RUN 3-2

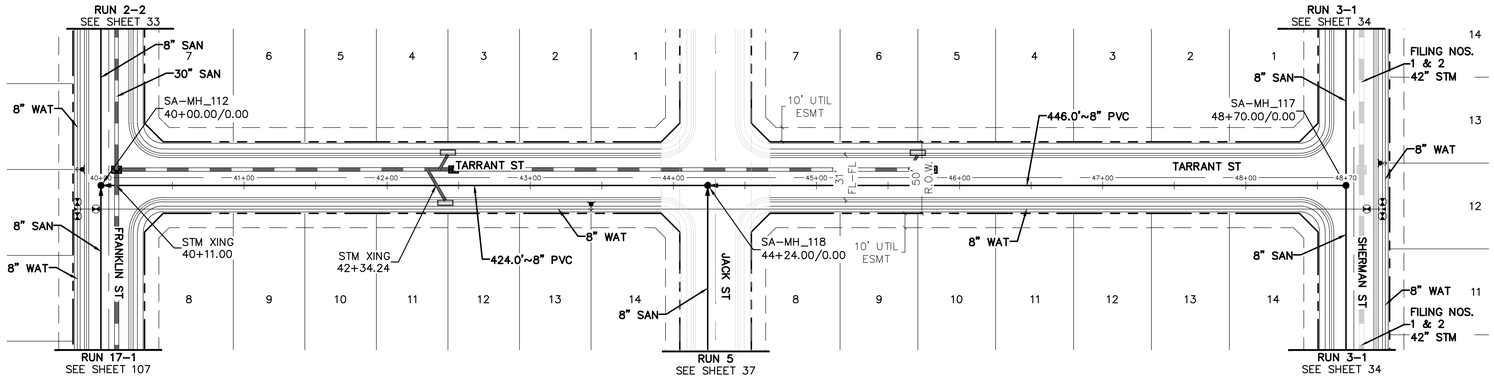
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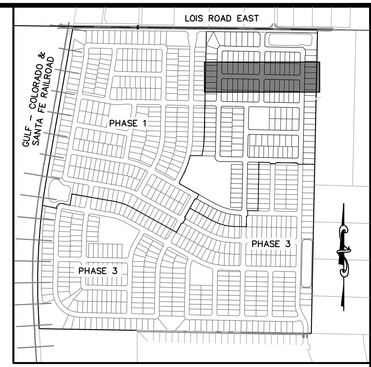
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RUN 4

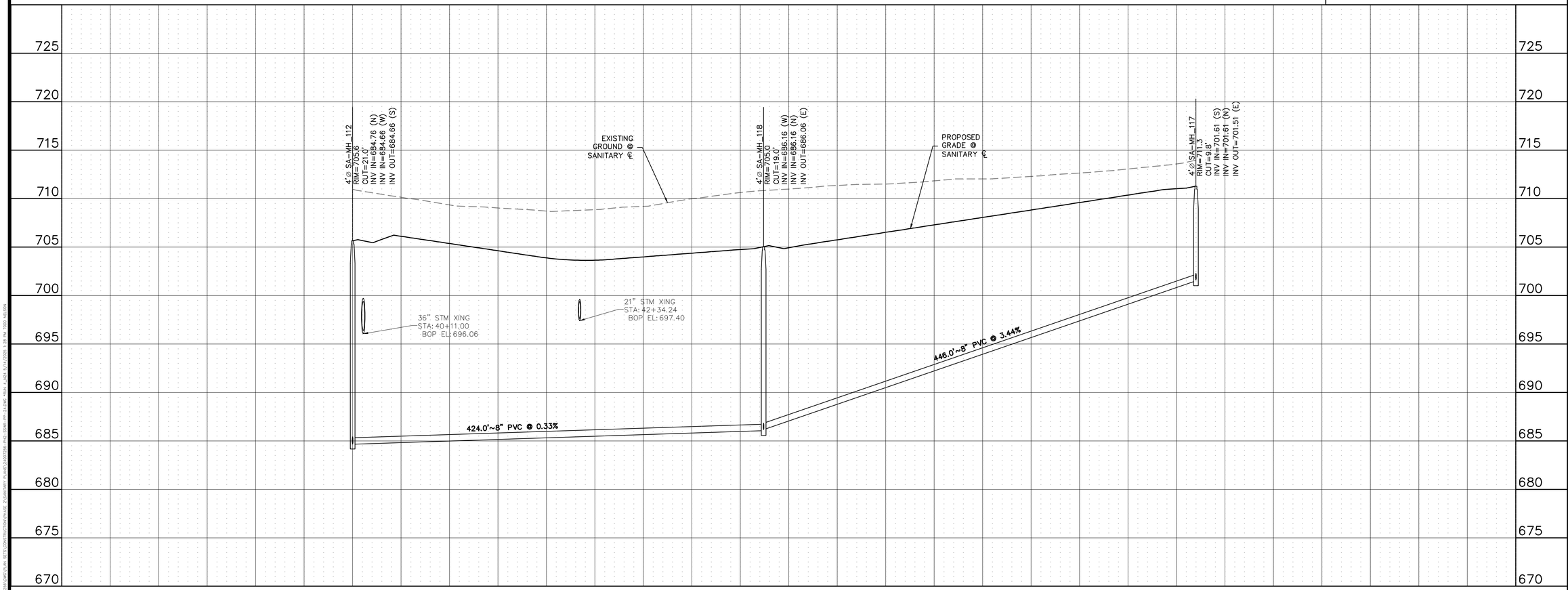


KEYMAP
1"=750'

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(IN FEET)
1 inch = 50 ft. (Horz)
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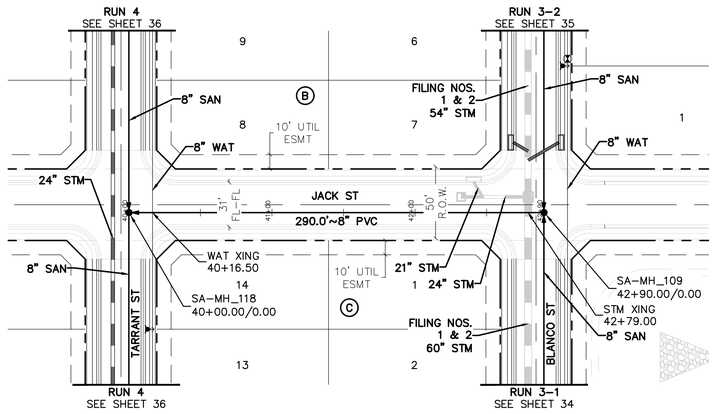
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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
SANITARY SEWER PLAN & PROFILES
RUN 4

DATE 4/7/2025

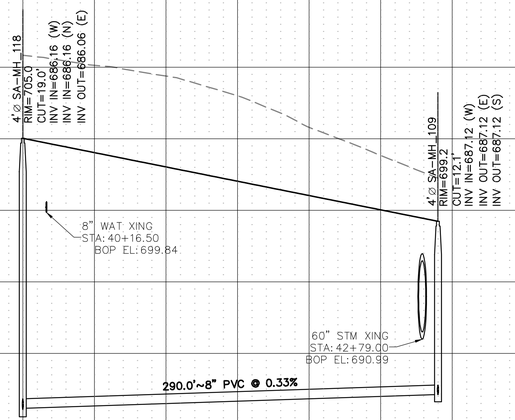
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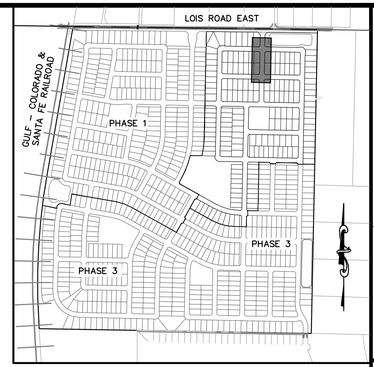
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JOB 24007256
SHEET NO. 36

CAD FILE: 24007256-PH2-SSWR-PPP-24.DWG



RUN 5





KEYMAP
1"=750'

50 0 50 100

(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

BENCHMARK:
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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
SANITARY SEWER PLAN & PROFILES
RUN 5

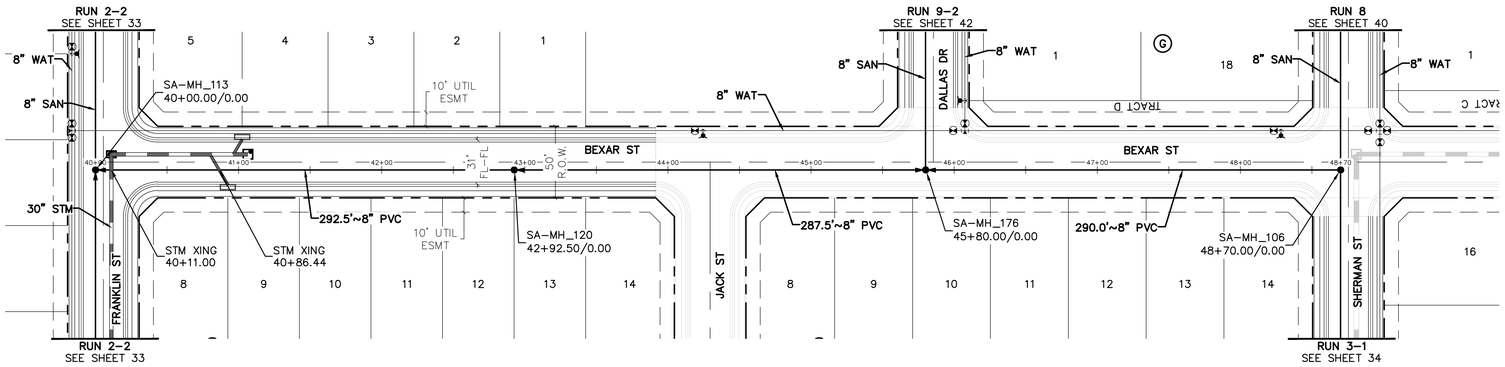
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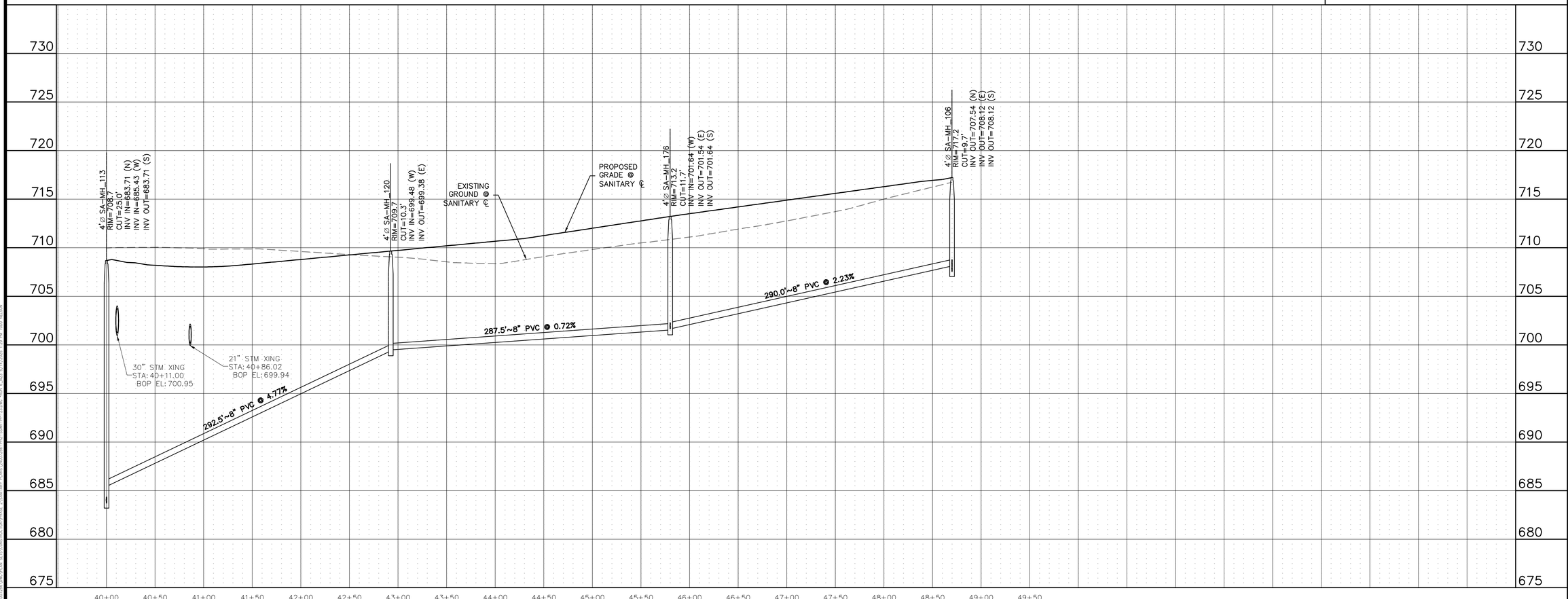
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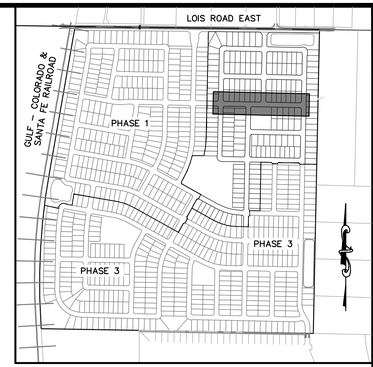
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JOB 24007256
SHEET NO. 37

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RUN 6





KEYMAP
1"=750'

50 0 50 100
(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

BENCHMARK:
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SANITARY SEWER PLAN & PROFILES
RUN 6

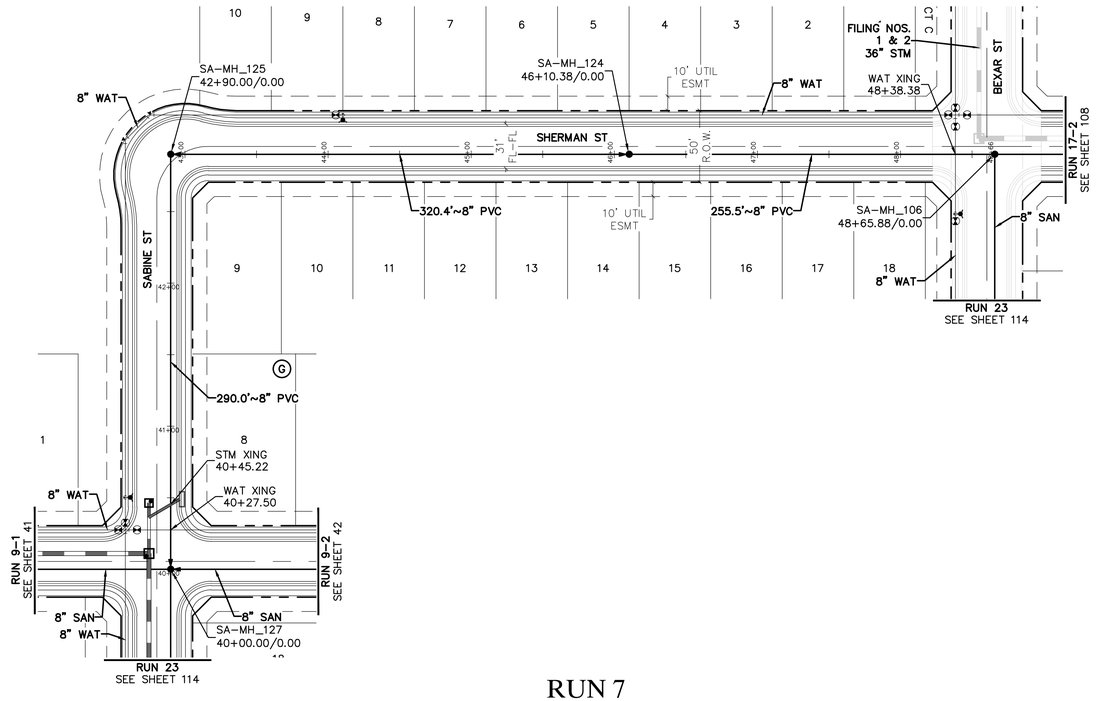
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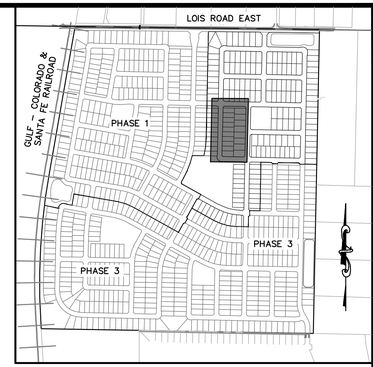
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JOB 24007256
SHEET NO. 38

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RUN 7



KEYMAP
1"=750'

50 0 50 100
(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

BENCHMARK:
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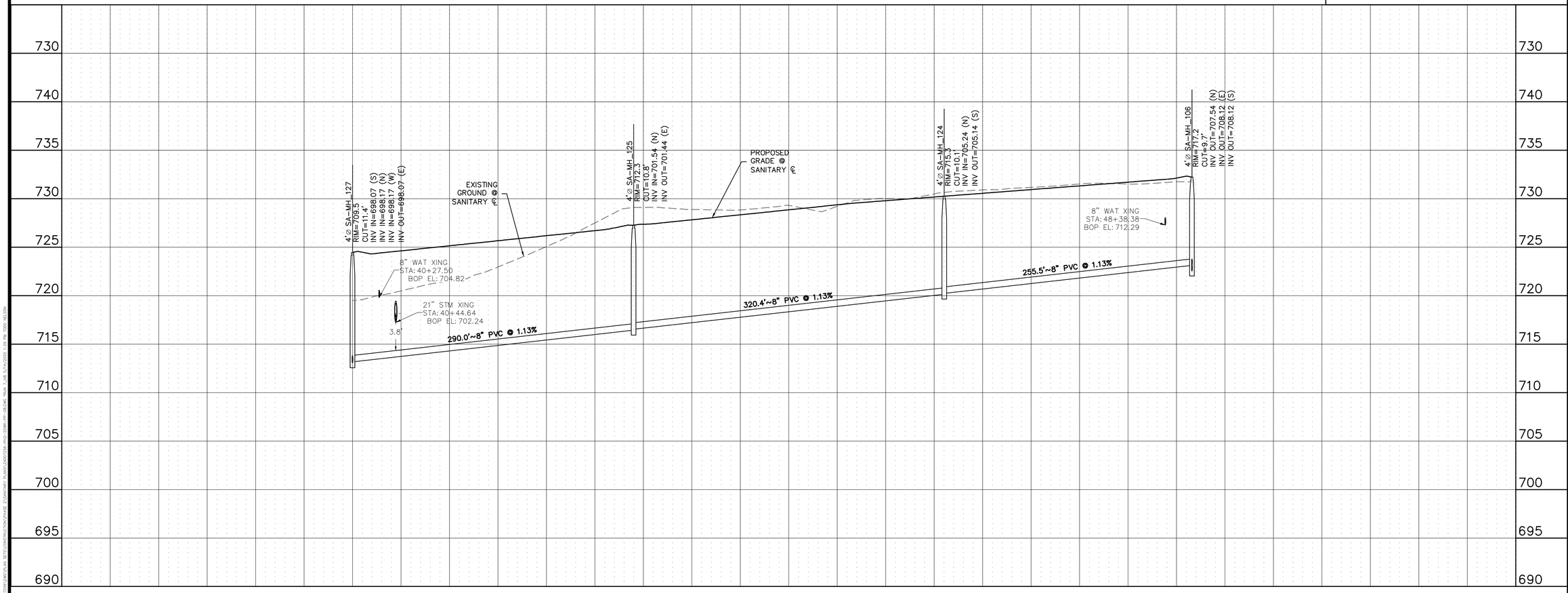
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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

SANITARY SEWER PLAN & PROFILES
RUN 7

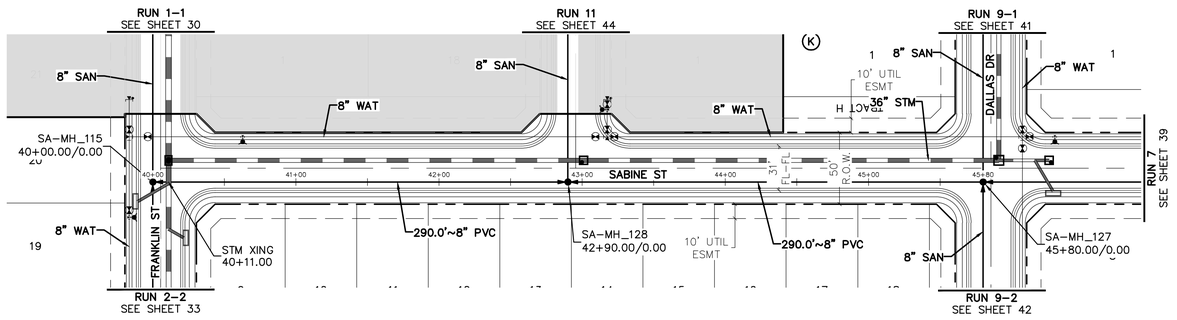
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B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

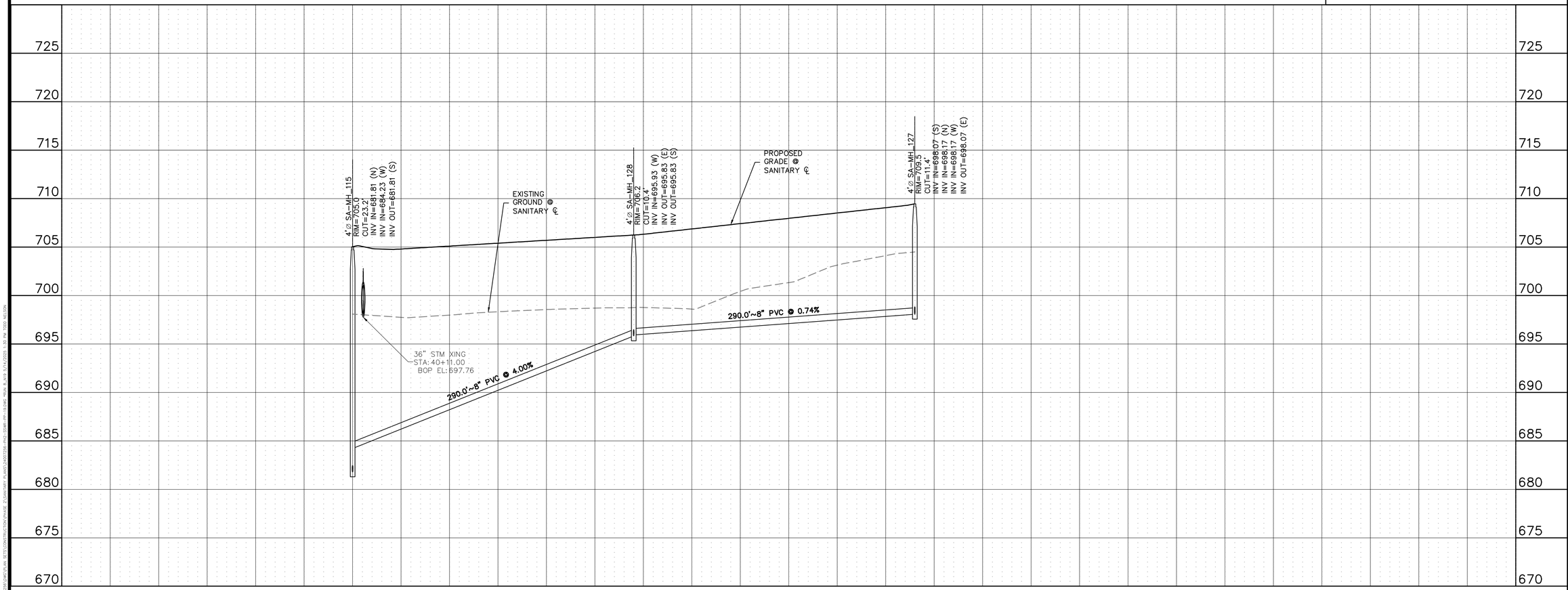
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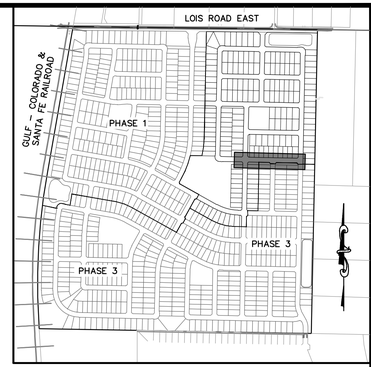
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JOB 24007256
SHEET NO. 39

CAD FILE: 24007256-PH2-SSWR-PPP-08.DWG



RUN 8





KEYMAP
1"=750'

50 0 50 100
(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

BENCHMARK:
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RUN 8

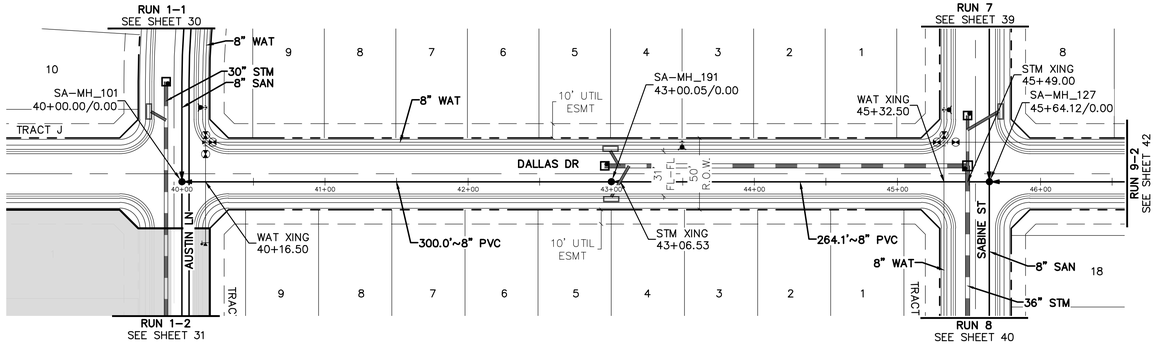
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B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

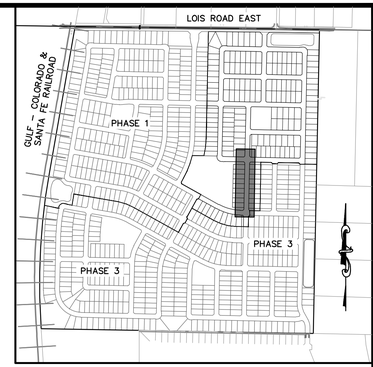
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RUN 9-1



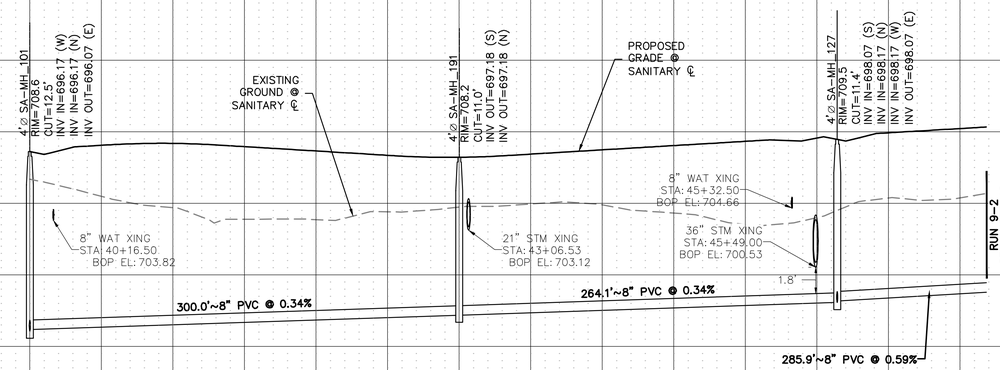
KEYMAP
1"=750'

50 0 50 100

(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

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BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.



730 725 720 715 710 705 700 695 690 685 680 675

39+50 40+00 40+50 41+00 41+50 42+00 42+50 43+00 43+50 44+00 44+50 45+00 45+50 46+00 46+50

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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

SANITARY SEWER PLAN & PROFILES
RUN 9–1

DATE 4/7/2025

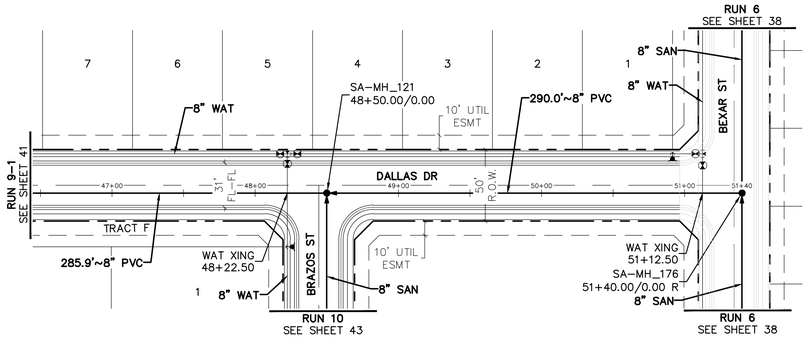
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B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

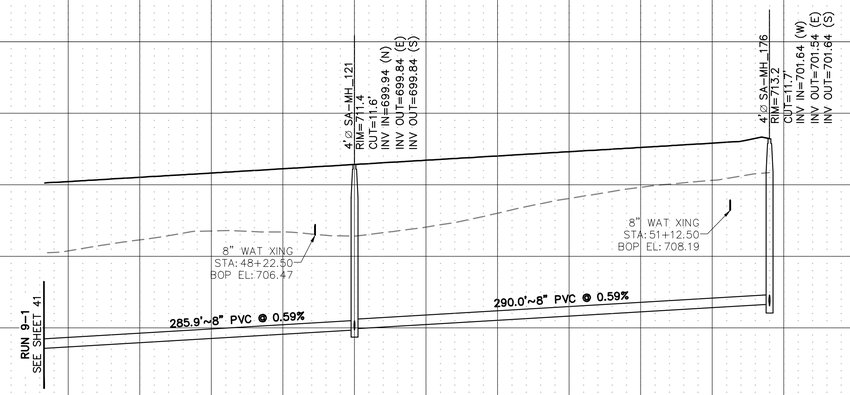
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SHEET NO. 41

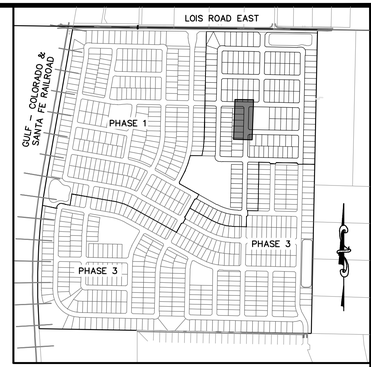
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RUN 9-2





KEYMAP
1"=750'

50 0 50 100
(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

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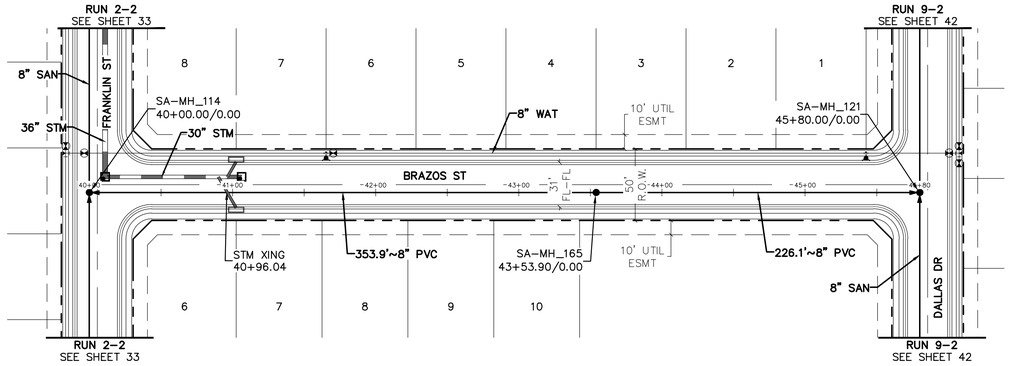
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RUN 9–2

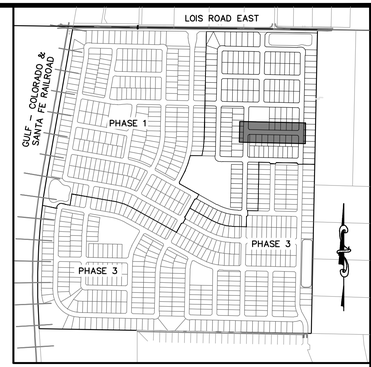
DATE 4/7/2025

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KEYMAP
1"=750'

50 0 50 100
(IN FEET)
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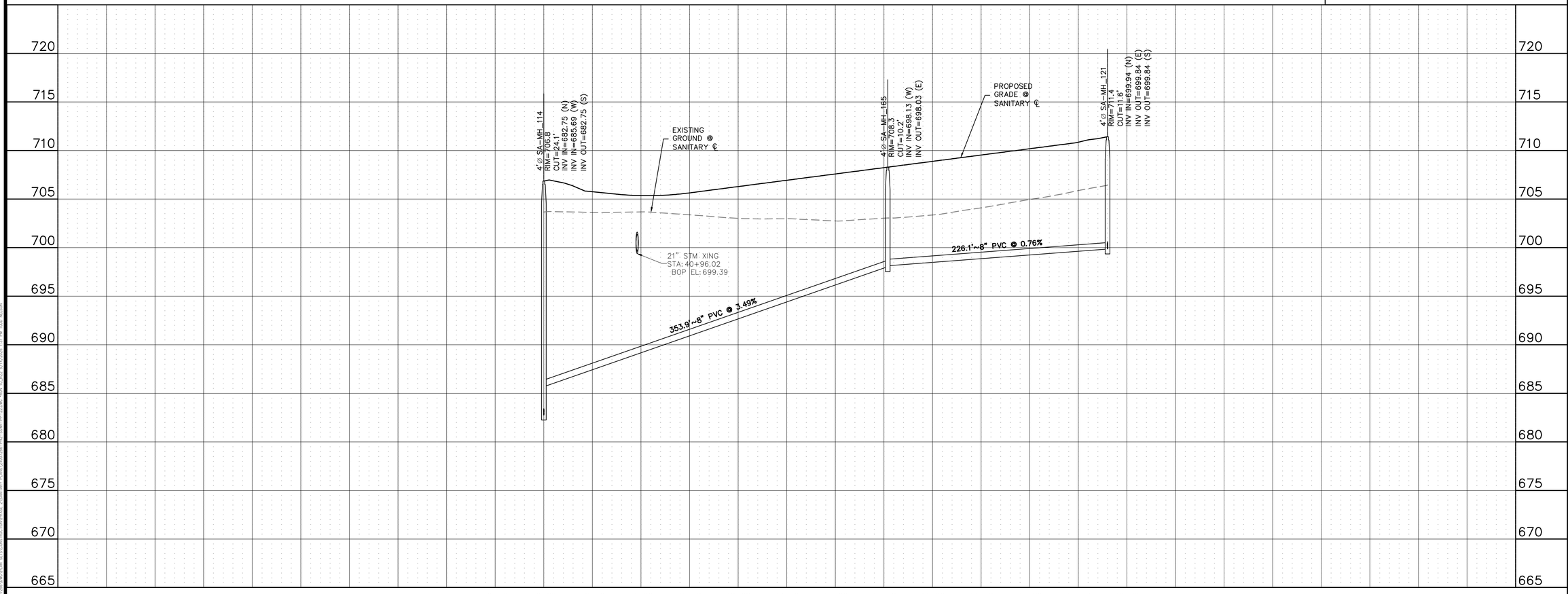
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RUN 10



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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

SANITARY SEWER PLAN & PROFILES
RUN 10

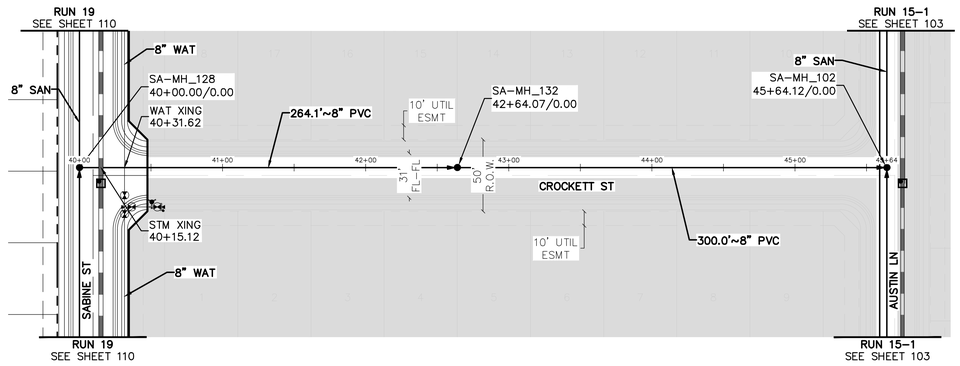
DATE 4/7/2025

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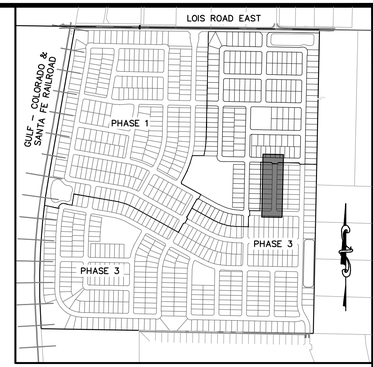
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RUN 11



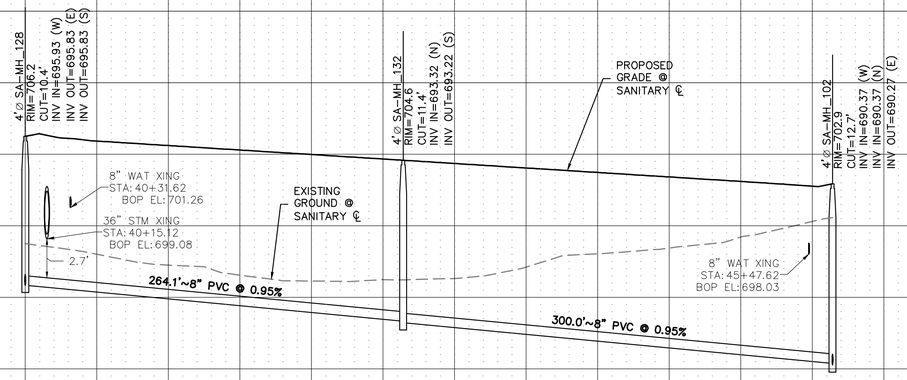
KEYMAP
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720 715 710 705 700 695 690 685 680 675 670 665

39+50 40+00 40+50 41+00 41+50 42+00 42+50 43+00 43+50 44+00 44+50 45+00 45+50 46+00 46+50

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RUN 11

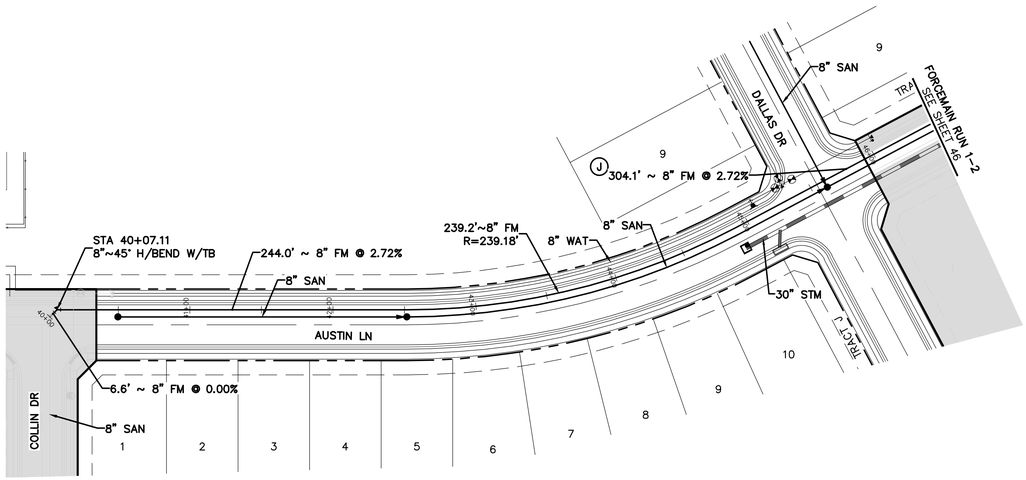
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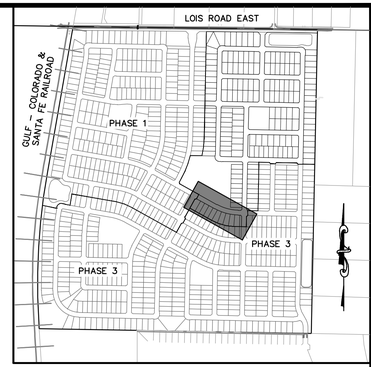
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FORCEMAIN RUN 1-1



KEYMAP
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50 0 50 100
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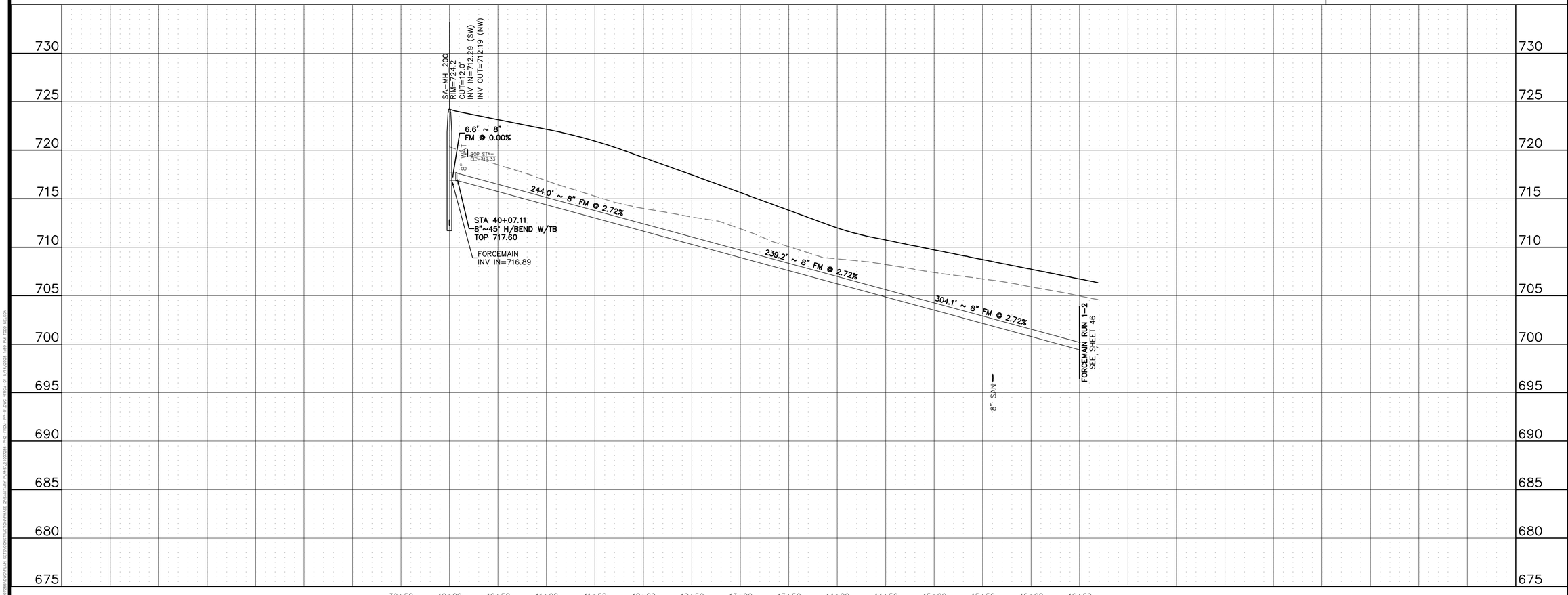
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FORCEMAIN RUN 1-1

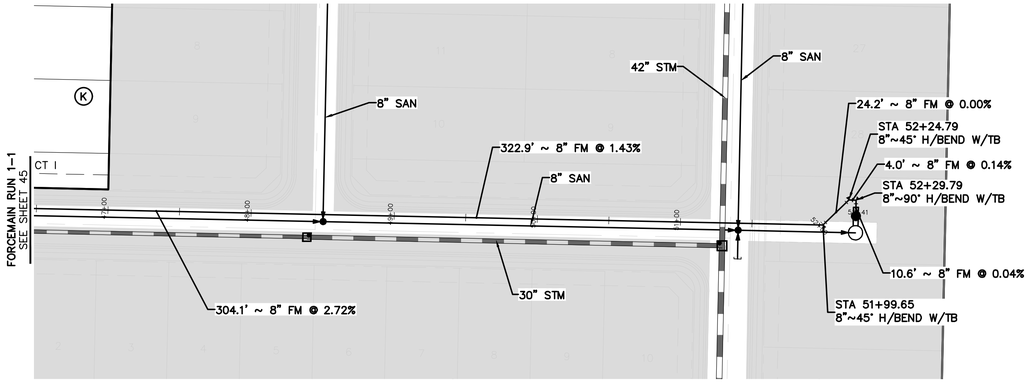
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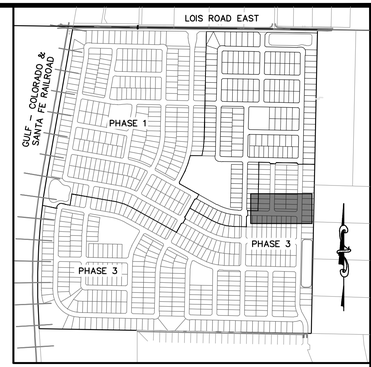
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SHEET NO. 45

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FORCEMAIN RUN 1-2

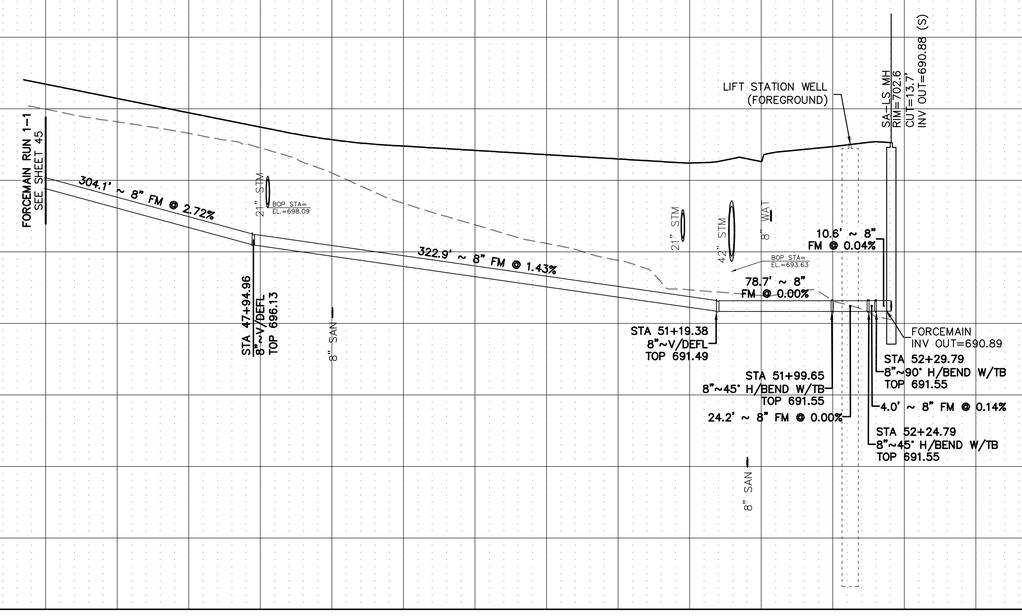


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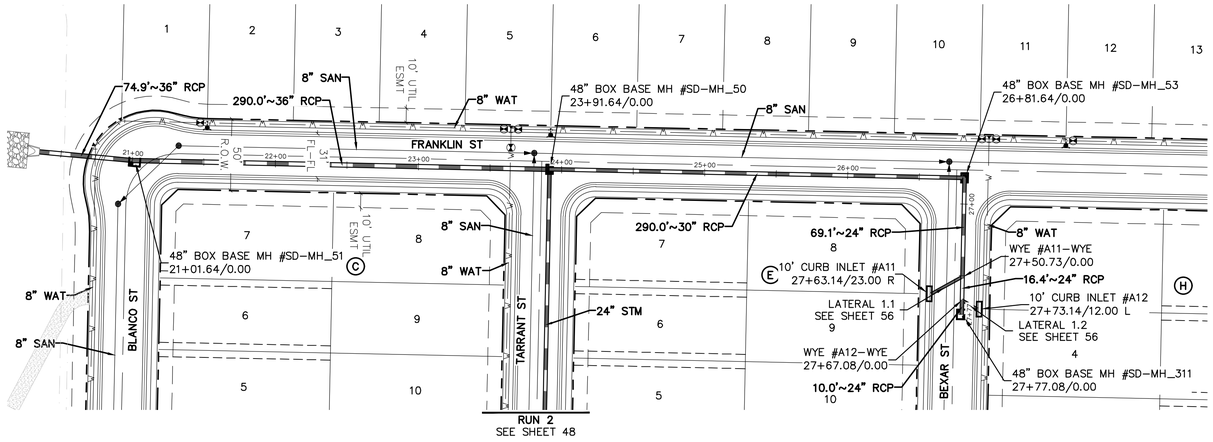
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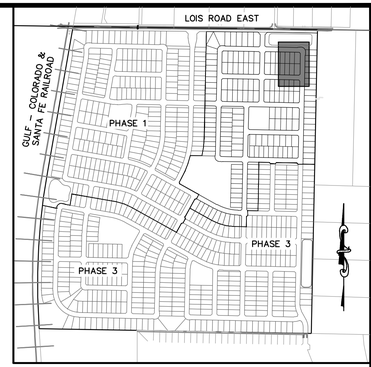
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SHEET NO. 46

CAD FILE: 24007256-PH2-FROM-PPI-01.DWG



RUN 1



KEYMAP
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50 0 50 100
(IN FEET)
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1 inch = 6 ft. (Vert)

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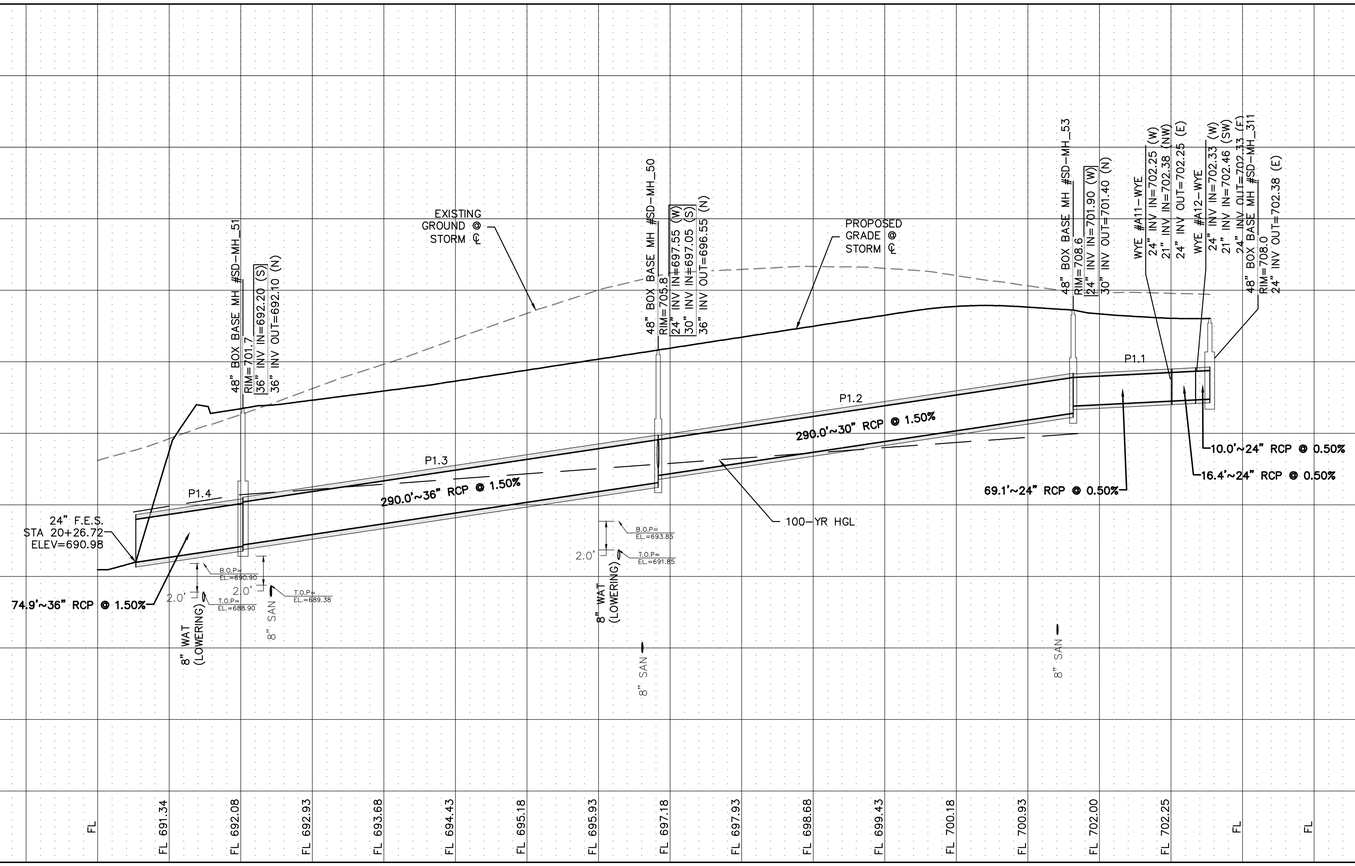
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PIPE NUMBER	LINE RESULTS		HGL	
P1.1	Q_{CAP} 16.04 cfs		IN	704.94
	Q_{100} 24.9 cfs			
	V 7.93 fps		OUT	703.66
	S_f 0.012 ft/ft			
P1.2	Q_{CAP} 50.23 cfs		IN	703.1
	Q_{200} 24.96 cfs			
	V 10.22 fps		OUT	702.35
	S_f 0.004 ft/ft			
P1.3	Q_{CAP} 50.23 cfs		IN	701.94
	Q_{100} 48.34 cfs			
	V 9.85 fps		OUT	697.91
	S_f 0.014 ft/ft			
P1.4	Q_{CAP} 50.1 cfs		IN	697.53
	Q_{400} 48.34 cfs			
	V 9.85 fps		OUT	696.49
	S_f 0.014 ft/ft			



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STORM SEWER PLAN & PROFILES
RUN 1

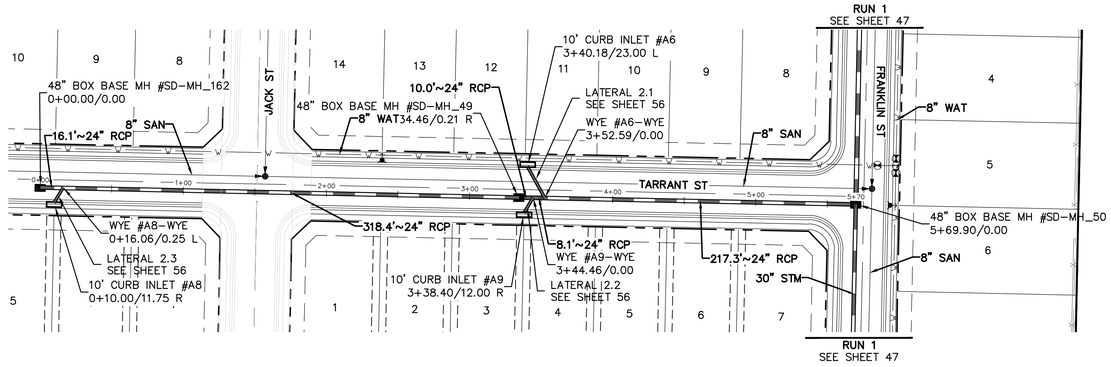
DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 — KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 — KMB

REVISIONS

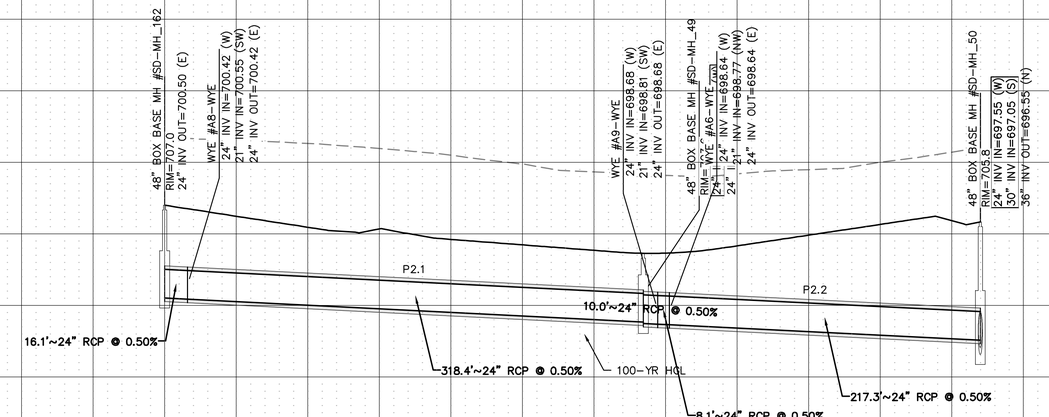
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P.M. JF
JOB 24007256
SHEET NO. 47

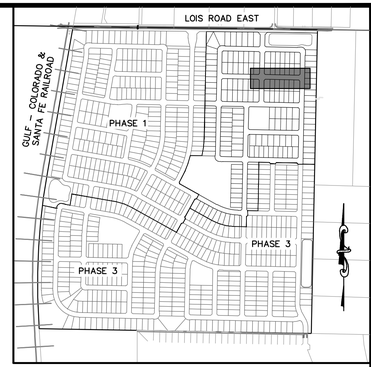
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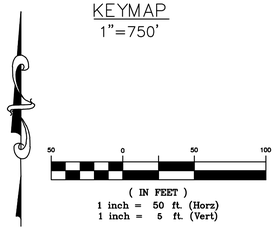
RUN 2

PIPE NUMBER	LINE RESULTS			HGL	
P2.1	Q_{CAP}	20.73	cfs	IN	704.42
	Q_{100}	8.54	cfs		
	V	2.72	fps	OUT	704.22
	S_f	0.001	ft/ft		
P2.2	Q_{CAP}	14.89	cfs	IN	704.19
	Q_{100}	8.54	cfs		
	V	2.72	fps	OUT	703.82
	S_f	0.001	ft/ft		





KEYMAP
1"=750'



BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

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LOIS ROAD ESTATES
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
STORM SEWER PLAN & PROFILES
RUN 2

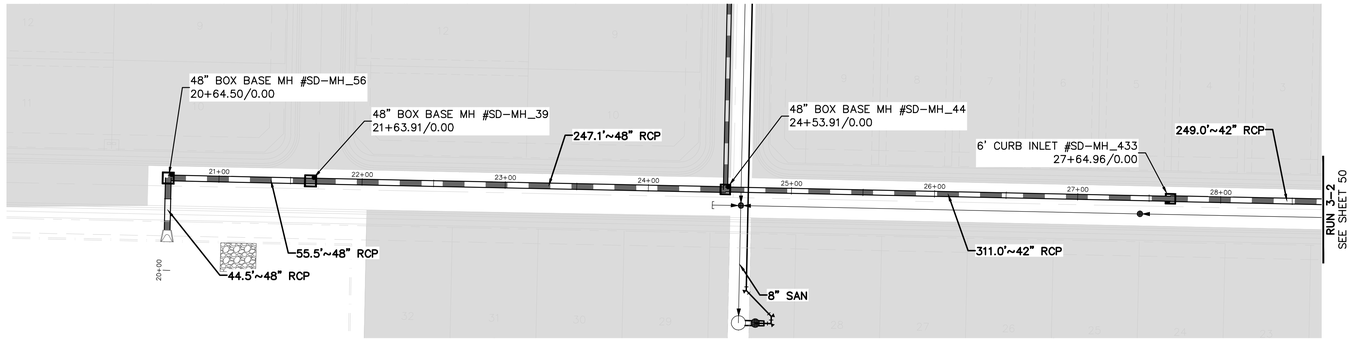
DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

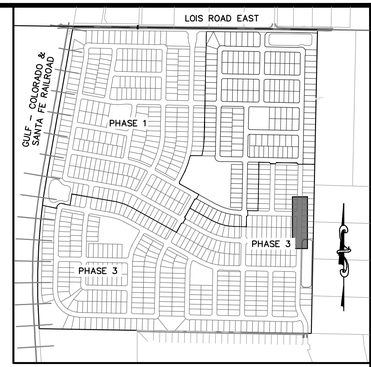
REVISIONS

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P.M. JF
JOB 24007256
SHEET NO. 48

CAD FILE: 24007256-PH2-STRM-P&P-14-1.DWG



RUN 3-1



KEYMAP
1"=750'

50 0 50 100
(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

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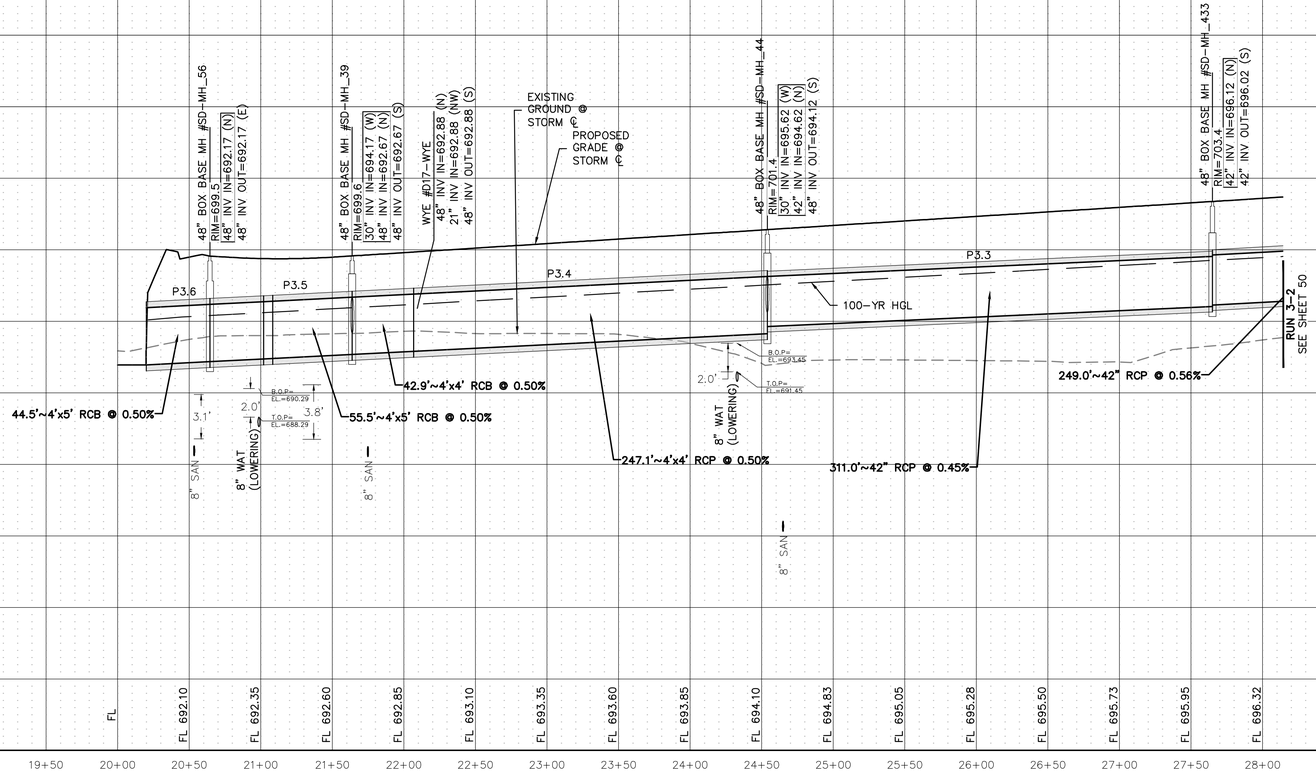
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P3.1	Q_{CAP}	47.16	cfs	IN	704.16
	Q_{100}	20.44	cfs		
	V	2.89	fps	OUT	703.89
	S_f	0.001	ft/ft		
P3.2	Q_{CAP}	71.14	cfs	IN	703.76
	Q_{200}	86.86	cfs		
	V	9.03	fps	OUT	701.67
	S_f	0.007	ft/ft		
P3.3	Q_{CAP}	101.56	cfs	IN	701.61
	Q_{300}	86.86	cfs		
	V	6.91	fps	OUT	700.59
	S_f	0.004	ft/ft		
P3.4	Q_{CAP}	129.32	cfs	IN	700.47
	Q_{400}	141.75	cfs		
	V	8.86	fps	OUT	698.73
	S_f	0.006	ft/ft		



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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

STORM SEWER PLAN & PROFILES
RUN 3-1

DATE 4/7/2025

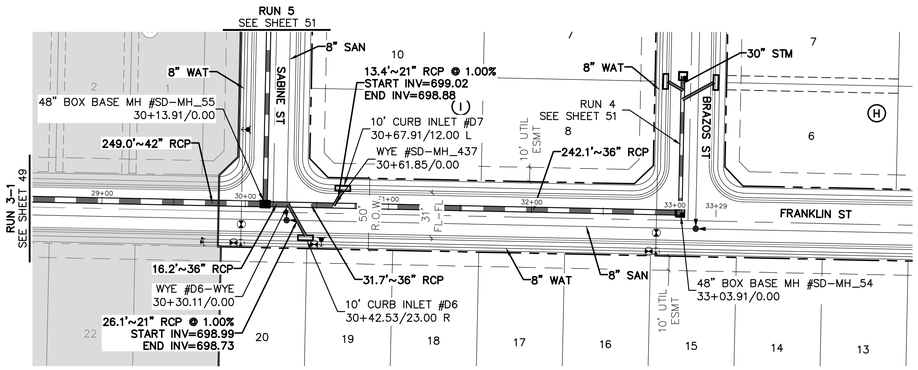
A	1st SUBMITTAL TO JURISDICTION 4/7/2025 — KMB
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REVISIONS

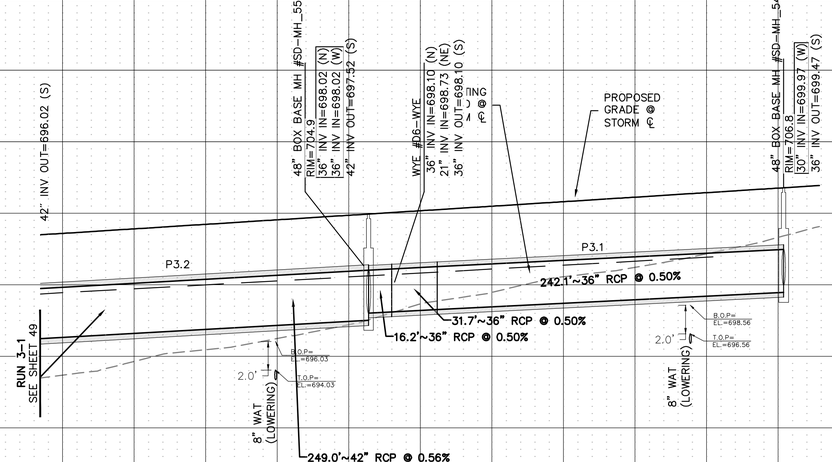
DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 49

CAD FILE: 24007256-PH2-STRM-P&P-1.7.DWG

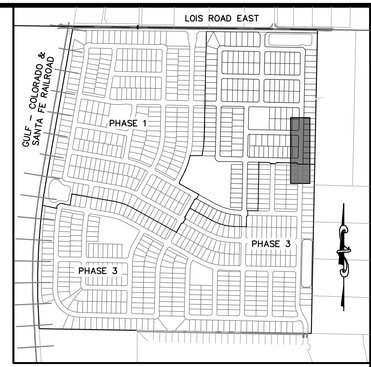
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RUN 3-2



P3.5	Q_{CAP}	246.7	cfs	IN	698.59
	Q_{101}	196.95	cfs		
	V	9.85	fps	OUT	698.27
	S_f	0.006	ft/ft		
P3.6	Q_{CAP}	166.77	cfs	IN	697
	Q_{101}	206.95	cfs		
	V	10.35	fps	OUT	696.32
	S_f	0.006	ft/ft		



KEYMAP
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50 0 50 100
(IN FEET)
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STORM SEWER PLAN & PROFILES RUN 3-2

DATE 4/7/2025

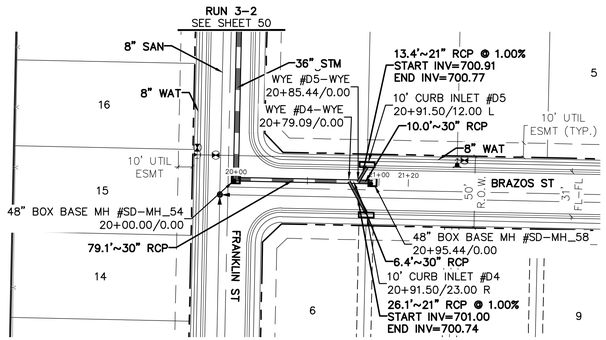
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P.M. JF
JOB 24007256
SHEET NO. 50

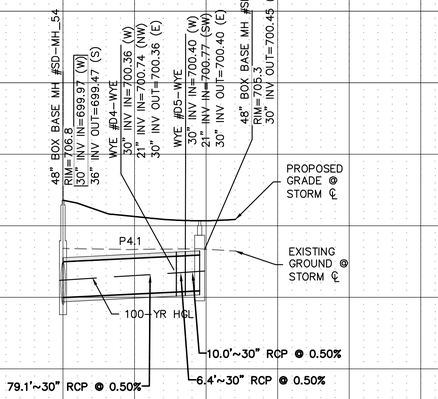
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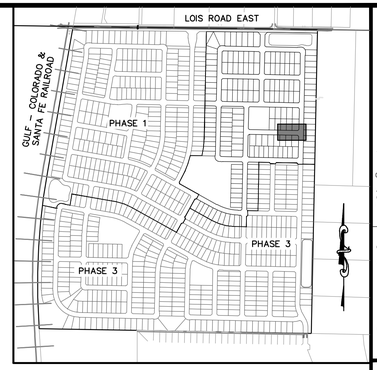
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RUN 4

PIPE NUMBER	LINE RESULTS		HGL	
P4.1	Q_{CAP}	29.09 cfs	IN	704.51
	Q_{100}	20.44 cfs		
	V	4.16 fps	OUT	704.27
	S_f	0.002 ft/ft		





KEYMAP
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50 0 50 100
(IN FEET)
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1 inch = 5 ft. (Vert)

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RUN 4

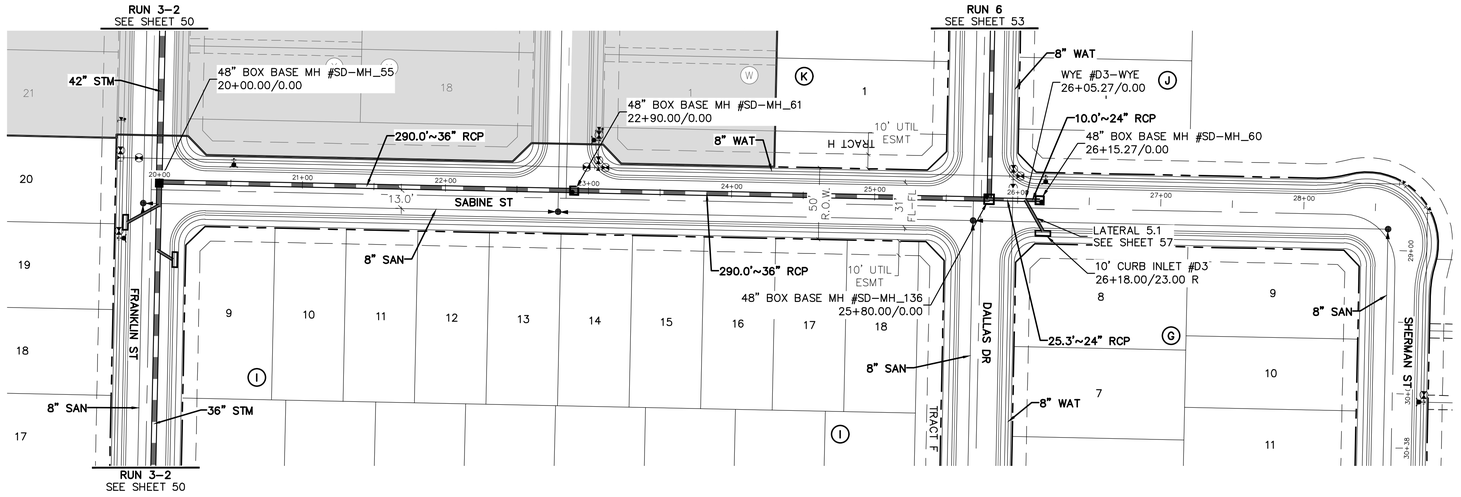
DATE 4/7/2025

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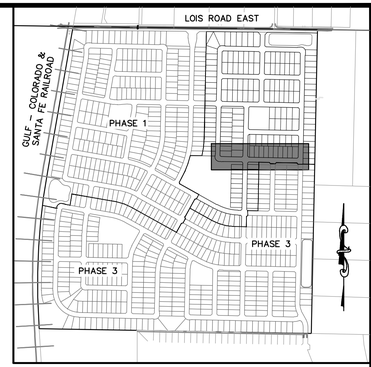
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P.M. JF
JOB 24007256
SHEET NO. 51

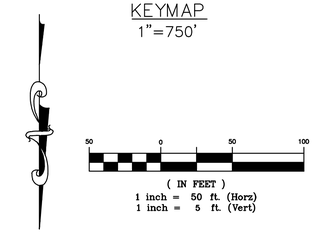
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RUN 5



KEYMAP
1"=750'



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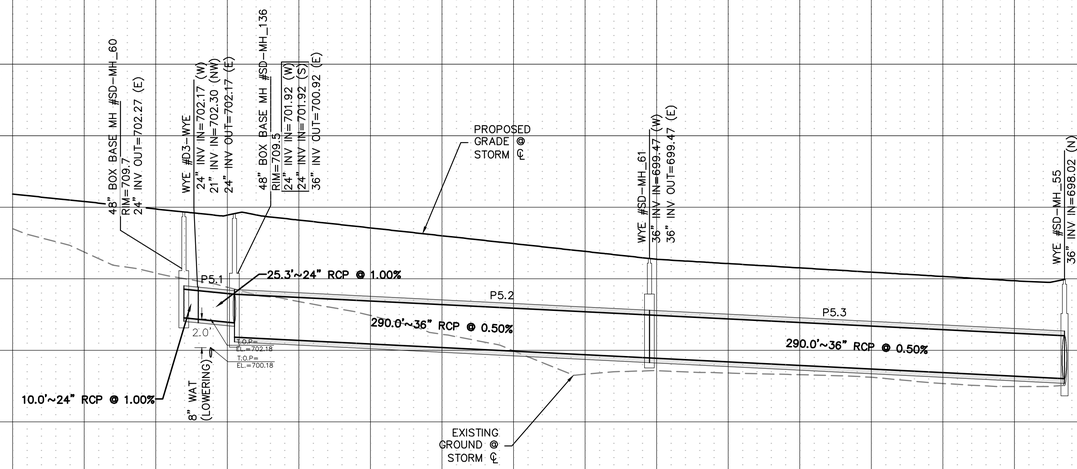
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PIPE NUMBER	LINE RESULTS			HGL	
P5.1	Q_{CAP}	38.05	cfs	IN	706.62
	Q_{100}	19.5	cfs		
	V	3.97	fps	OUT	706.48
	S_f	0.002	ft/ft		
P5.2	Q_{CAP}	47.16	cfs	IN	706.39
	Q_{100}	46.66	cfs		
	V	6.6	fps	OUT	704.97
	S_f	0.005	ft/ft		
P5.3	Q_{CAP}	71.14	cfs	IN	704.94
	Q_{100}	46.66	cfs		
	V	4.85	fps	OUT	704.32



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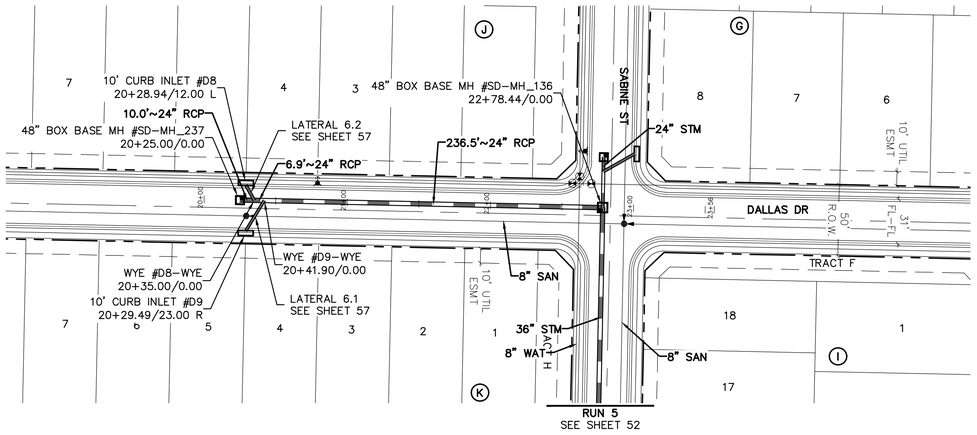
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REVISIONS

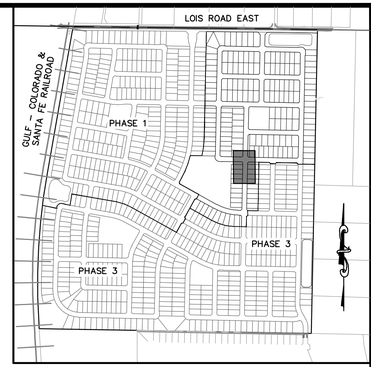
DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 52

CAD FILE: 24007256-PH2-STRM-PP&P-15.DWG

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RUN 6



KEYMAP
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50 0 50 100
(IN FEET)
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1 inch = 5 ft. (Vert)

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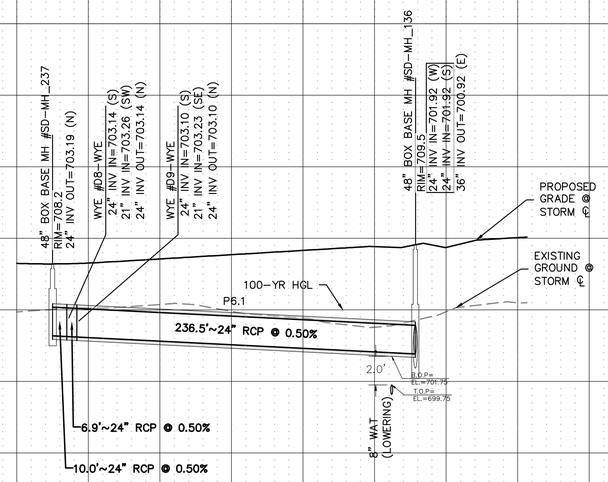
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PIPE NUMBER	LINE RESULTS		HGL	
P6.1	Q_{CAP}	47.21 cfs	IN	707.52
	Q_{100}	27.16 cfs		
	V	3.84 fps	OUT	707.1
	S_f	0.002 ft/ft		



735 730 725 720 715 710 705 700 695 690 685 680

FL 704.85 FL 705.12 FL 705.37 FL 704.90 FL 704.43 FL 703.78 FL 704.87 FL 705.49 FL

19+50 20+00 20+50 21+00 21+50 22+00 22+50 23+00 23+50 24+00

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LITTLETON, COLORADO 80127
303.801.7333
MICHAEL PRYOR

CLIENT: KALTER CAPITAL

LOIS ROAD ESTATES
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

STORM SEWER PLAN & PROFILES
RUN 6

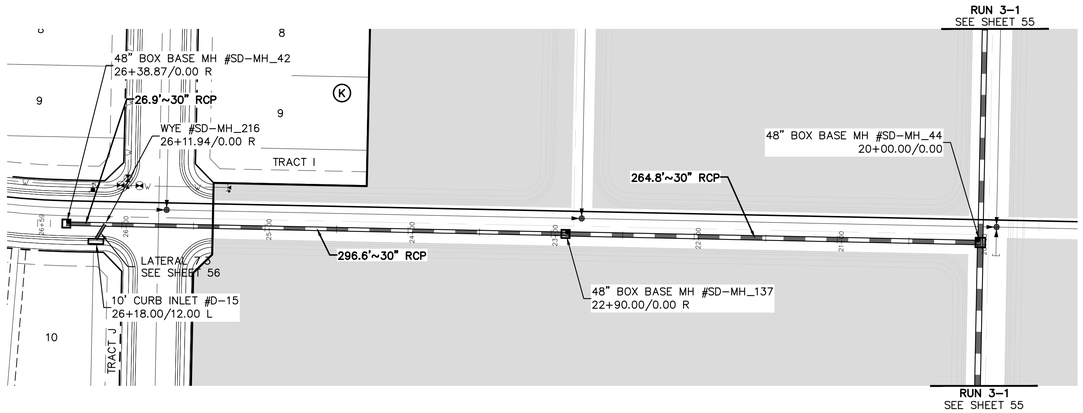
DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 — KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 — KMB

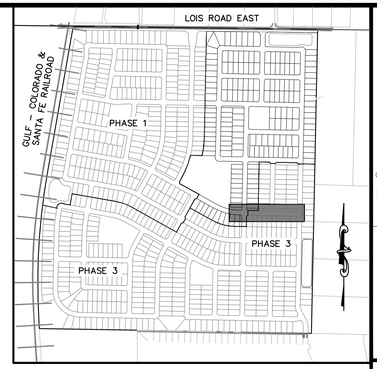
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P.M. JF
JOB 24007256
SHEET NO. 53

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RUN 7



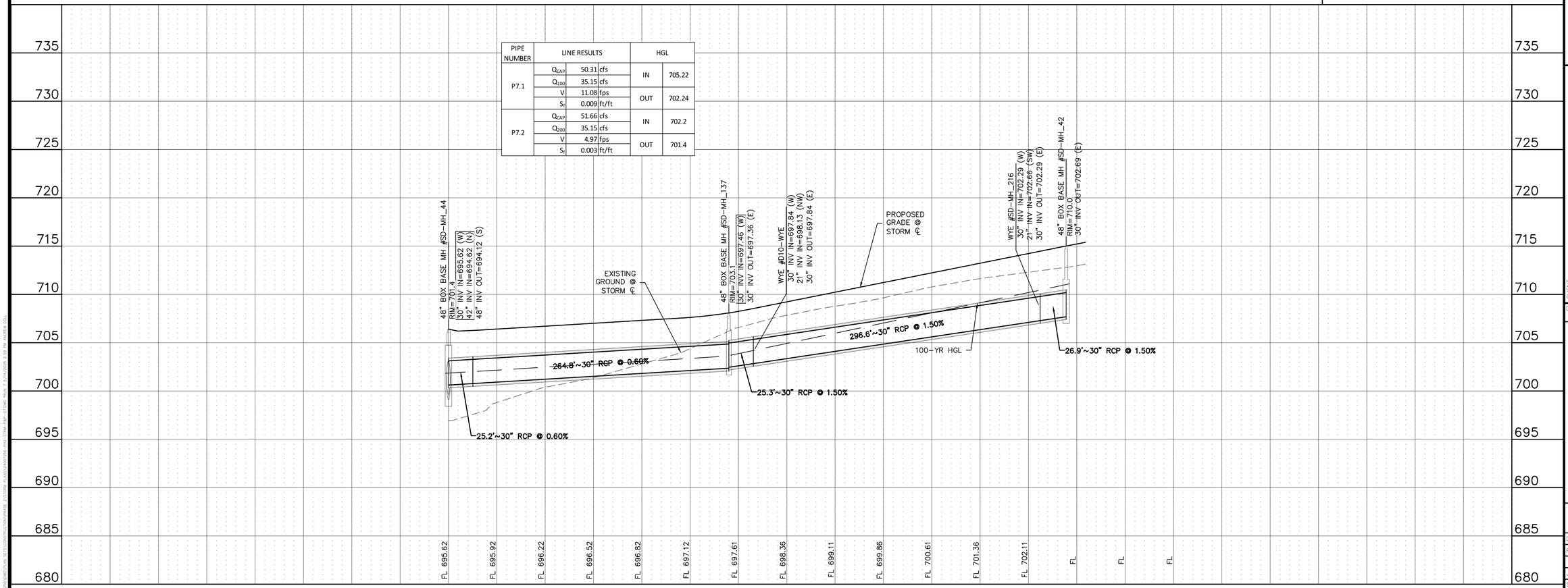
KEYMAP
1"=750'

50 0 50 100
(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.

PIPE NUMBER	LINE RESULTS		HGL	
P7.1	Q_{CAP}	50.31 cfs	IN	705.22
	Q_{100}	35.15 cfs		
	V	11.08 fps	OUT	702.24
	S_f	0.009 ft/ft		
P7.2	Q_{CAP}	51.66 cfs	IN	702.2
	Q_{200}	35.15 cfs		
	V	4.97 fps	OUT	701.4
	S_f	0.003 ft/ft		



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LOIS ROAD ESTATES
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
STORM SEWER PLAN & PROFILES
RUN 7

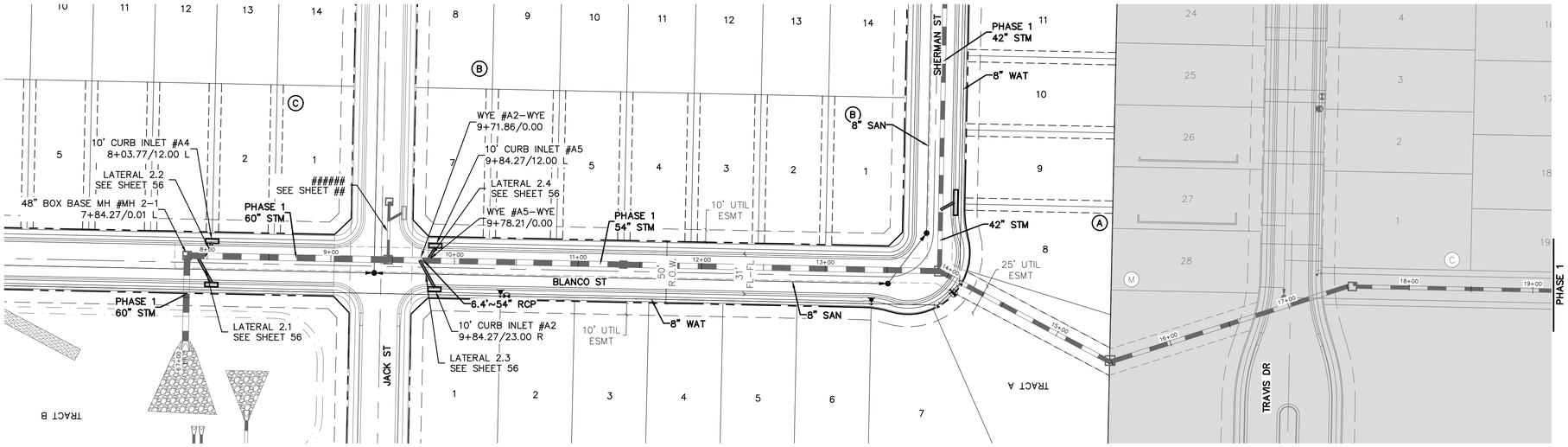
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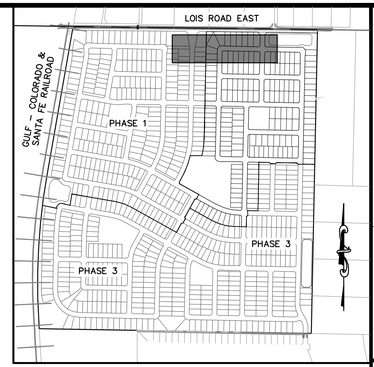
A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
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REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 54

CAD FILE: 24007256-PH2-STRM-P&P-07.DWG





KEYMAP
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50 0 50 100
(IN FEET)
1 inch = 50 ft. (Horz)
1 inch = 5 ft. (Vert)

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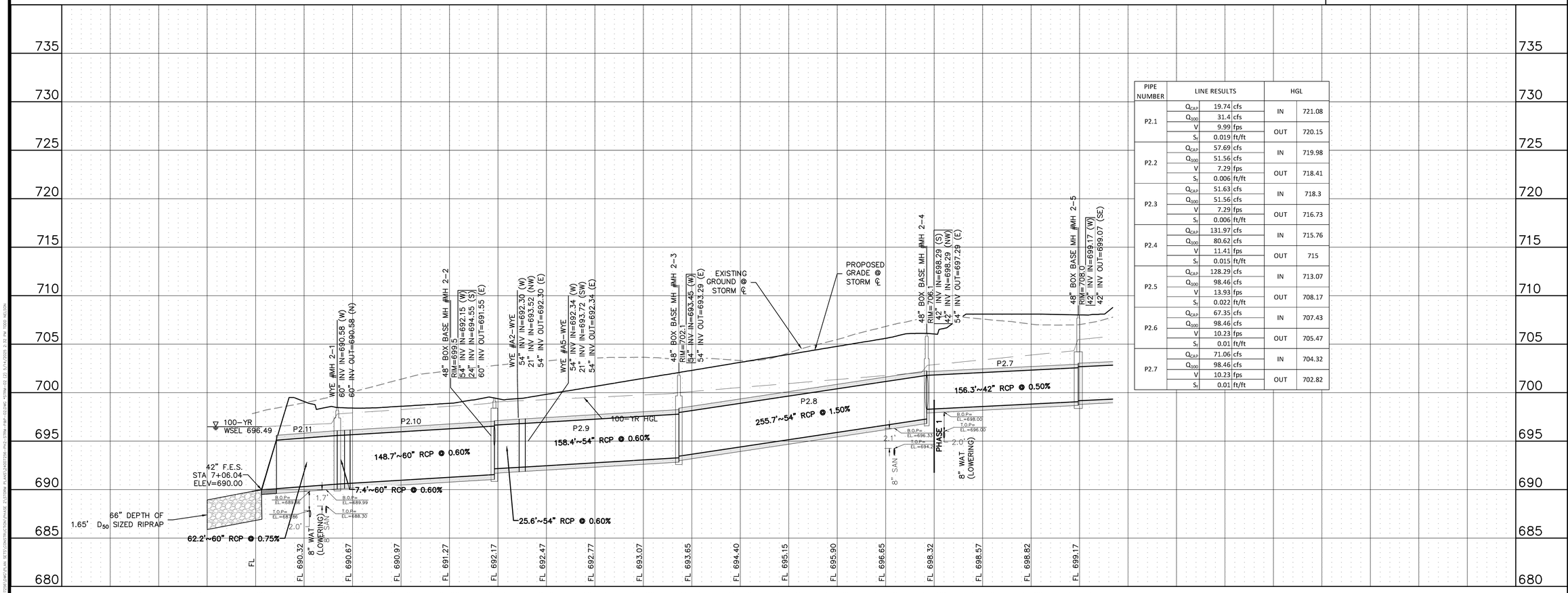
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EXISTING RUN 2-1



PIPE NUMBER	LINE RESULTS			HGL	
P2.1	Q_{CAP}	19.74	cfs	IN	721.08
	Q_{100}	31.4	cfs		
	V	9.99	fps	OUT	720.15
	S_f	0.019	ft/ft		
P2.2	Q_{CAP}	57.69	cfs	IN	719.98
	Q_{100}	51.56	cfs		
	V	7.29	fps	OUT	718.41
	S_f	0.006	ft/ft		
P2.3	Q_{CAP}	51.63	cfs	IN	718.3
	Q_{100}	51.56	cfs		
	V	7.29	fps	OUT	716.73
	S_f	0.006	ft/ft		
P2.4	Q_{CAP}	131.97	cfs	IN	715.76
	Q_{100}	80.62	cfs		
	V	11.41	fps	OUT	715
	S_f	0.015	ft/ft		
P2.5	Q_{CAP}	128.29	cfs	IN	713.07
	Q_{100}	98.46	cfs		
	V	13.93	fps	OUT	708.17
	S_f	0.022	ft/ft		
P2.6	Q_{CAP}	67.35	cfs	IN	707.43
	Q_{100}	98.46	cfs		
	V	10.23	fps	OUT	705.47
	S_f	0.01	ft/ft		
P2.7	Q_{CAP}	71.06	cfs	IN	704.32
	Q_{100}	98.46	cfs		
	V	10.23	fps	OUT	702.82
	S_f	0.01	ft/ft		

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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
STORM SEWER PLAN & PROFILES
EXISTING RUN 2-1

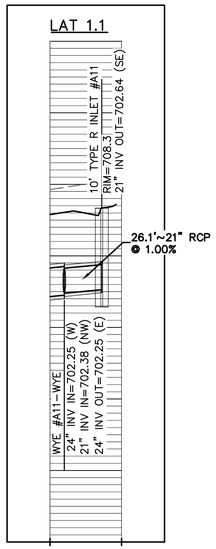
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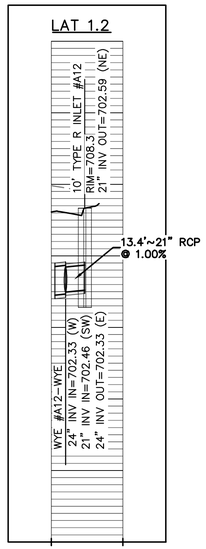
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B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 — KMB

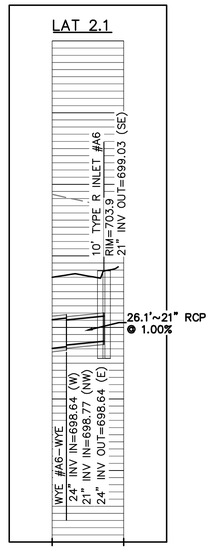
REVISIONS

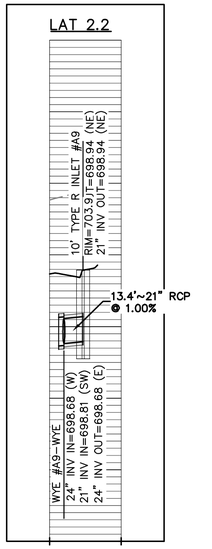
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P.M. JF
JOB 24007256
SHEET NO. 55

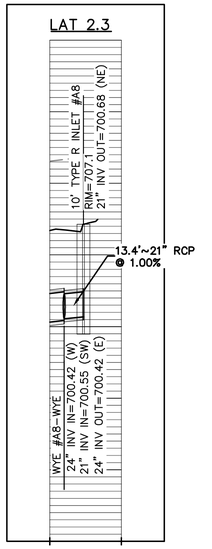
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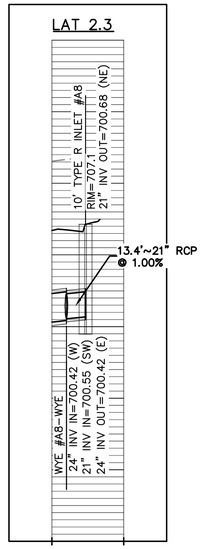


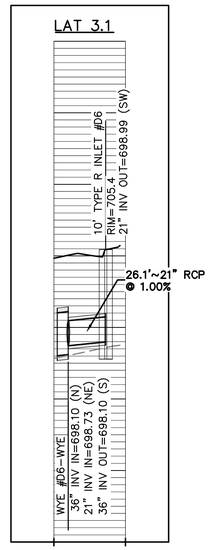


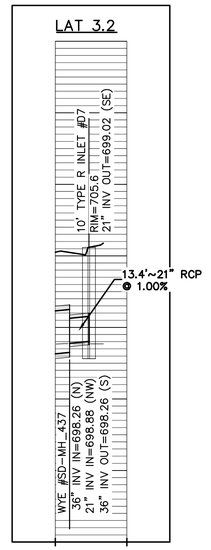


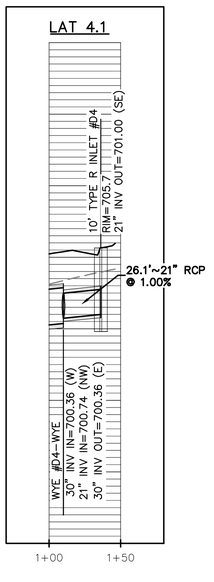


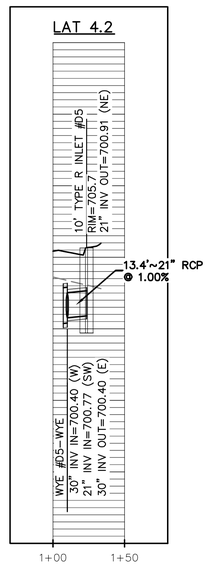


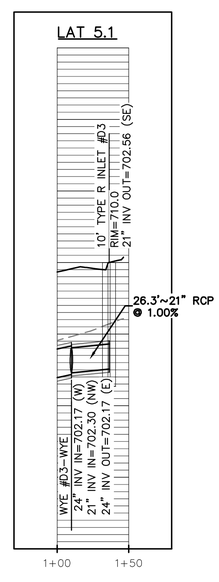


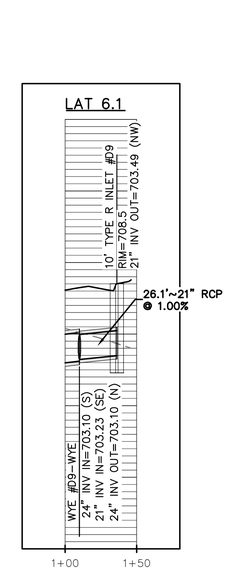


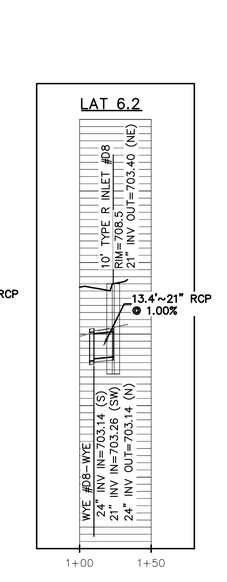


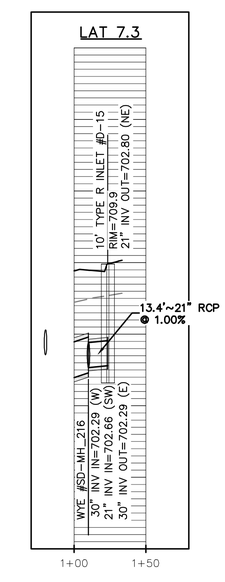












BENCHMARK:

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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS

STORM SEWER PLAN & PROFILES
LATERALS 01

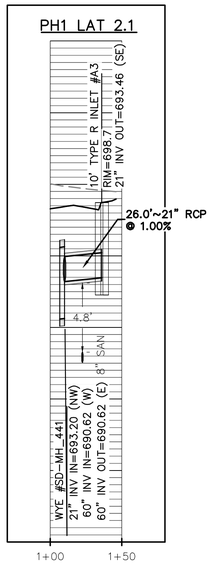
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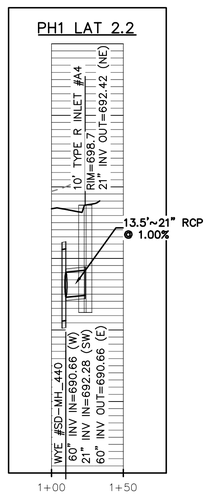
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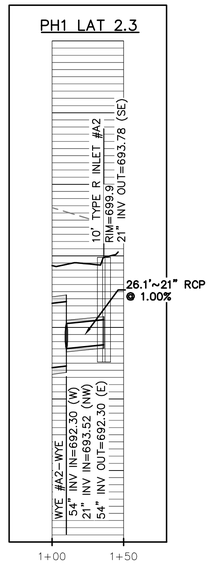
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JOB 24007256
SHEET NO. 56

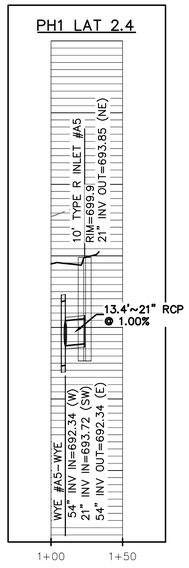
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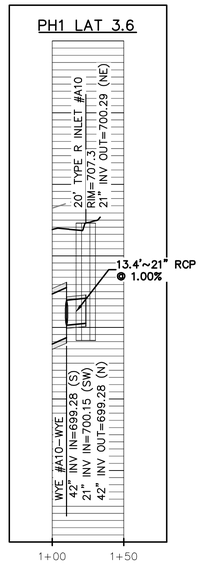
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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON,
STATE OF TEXAS

STORM SEWER PLAN & PROFILES
LATERALS 02

DATE 4/7/2025

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B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 57

CAD FILE: 24007256-PH2-STRM-LAT-01.DWG

C:\USERS\TNGUYEN\ATWELL\DENTON\DOCUMENTS\24007256 LOIS ROAD ESTATES\CAD\PLANS\SHEETS\24007256-PH2-STRM-LAT-01.DWG 5/14/2025 2:14:14 PM TNGUYEN

S89°32'19"E 640.40'

S89°22'38"E 1420.42'

S89°07'4 453.34'

COSERV ELECTRIC EASEMENT DOC. NO. 2022-1883 R.P.R.D.C.T.

PROPERTIES LLC

N00°00'51"E 1543.58'

BNSF RAILROAD

PROPERTY LINE

LC

L=1577.09' R=6737.93'
Δ=13°24'39"
CB=N3°15'27"E
CL=1573.49'

N3°27'32"W 68.42'

N89°01'56"W 1026.10'

PROPERTY LINE

RETAINING WALL

N88°57'52"W 1826.11'

15' PUBLIC UTILITY EASEMENT DOC. NO. 2022-190

CALLED 15.00 ACRES MILDRED E. HUNT DOC. NO. 2019-5766 O.R.D.C.T.

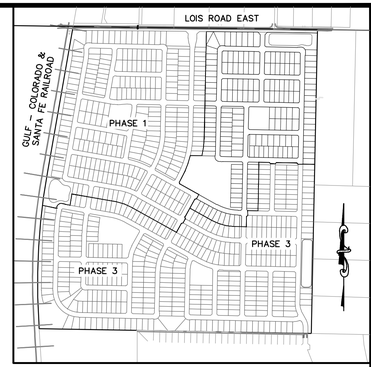
N11°12'W 318'7.36'

PROPERTY LINE BLOCK ONE ABNEY ACRES CAB. M, PG. 64 P.R.D.C.T.

LOT 2 BLOCK ONE ABNEY ACRES CAB. M, PG. 64 P.R.D.C.T.

LOT 3 BLOCK ONE ABNEY ACRES CAB. M, PG. 64 P.R.D.C.T.

LOT 4 BLOCK ONE ABNEY ACRES CAB. M, PG. 64 P.R.D.C.T.



KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED CATCH CURB & GUTTER
- PROPOSED SPILL CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- EXISTING SECTION LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED CONTOURS
- EXISTING CONTOURS

A = BASIN DESIGNATION
B = AREA IN ACRES

1 DESIGN POINT

150 0 150 300
(IN FEET)
1 inch = 150 ft.

BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
POND PLAN & DETAILS
PROPOSED DRAINAGE MAP

DATE 4/7/2025

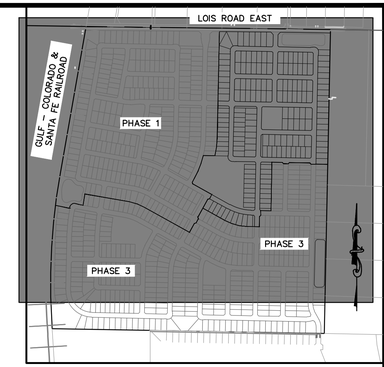
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REVISIONS

DR. TN CH. KB
P.M. JF
JOB 24007256
SHEET NO. 58

CAD FILE: 24007256-PH2-PROPOSED DRAINAGE MAP.DWG





KEYMAP
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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON,
STATE OF TEXAS

POND PLAN & DETAILS
EXISTING DRAIANGE MAP

DATE 4/7/2025

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REVISIONS

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P.M. JF
JOB 24007256
SHEET NO. 59

CAD FILE: 24007256-PH2-EXISTING DRAINAGE MAP.DWG

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Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024 — Saturday, 03 / 22 / 2025

Pond No. 4 - Pond D

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 691.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	691.00	14	0	0
1.00	692.00	23,748	11,881	11,881
2.00	693.00	39,769	31,759	43,640
3.00	694.00	39,769	39,769	83,409
4.00	695.00	39,769	39,769	123,178
5.00	696.00	39,769	39,769	162,947
6.00	697.00	39,769	39,769	202,716

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

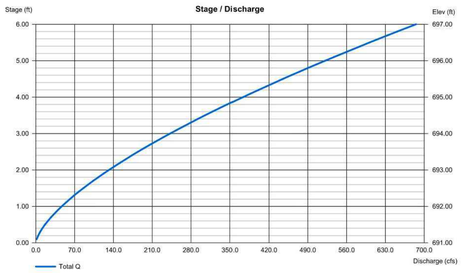
Weir Structures

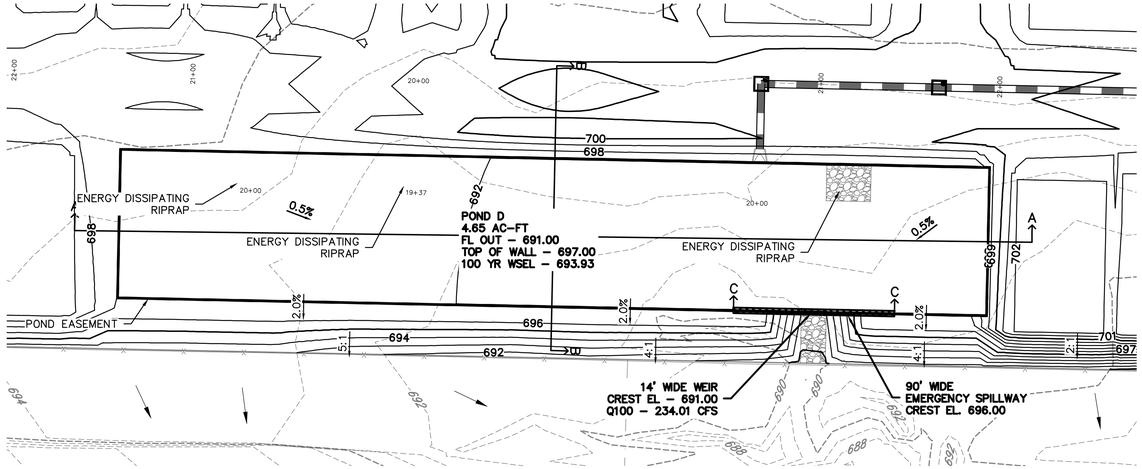
	[A]	[B]	[C]	[D]
Crest Len (ft)	= 14.00	0.00	0.00	0.00
Crest El. (ft)	= 691.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

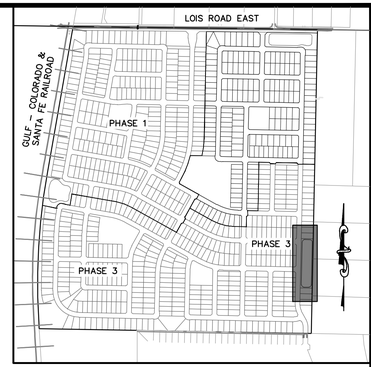
TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (vc) and submergence (sc).

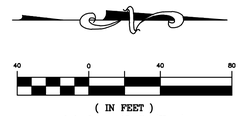




POND D



KEYMAP
1"=750'



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024 — Saturday, 03 / 22 / 2025

Hyd. No. 13

Ex Pond D

Hydrograph type	= Rational	Peak discharge	= 234.84 cfs
Storm frequency	= 100 yrs	Time to peak	= 0.25 hrs
Time interval	= 1 min	Hyd. volume	= 211,354 cuft
Drainage area	= 100.300 ac	Runoff coeff.	= 0.3
Intensity	= 7.805 in/hr	Tc by User	= 15.00 min
IDF Curve	= Sanger IDF.IDF	Asc/Rec limb fact	= 1/1

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024 — Saturday, 03 / 22 / 2025

Hyd. No. 14

Prop Pond D

Hydrograph type	= Mod. Rational	Peak discharge	= 243.07 cfs
Storm frequency	= 100 yrs	Time to peak	= 0.25 hrs
Time interval	= 1 min	Hyd. volume	= 409,083 cuft
Drainage area	= 78.240 ac	Runoff coeff.	= 0.55
Intensity	= 5.649 in/hr	Tc by User	= 15.00 min
IDF Curve	= Sanger IDF.IDF	Storm duration	= 1.9 x Tc
Target Q	=234.84 cfs	Est. Req'd Storage	=102,424 cuft

Hydrograph Report

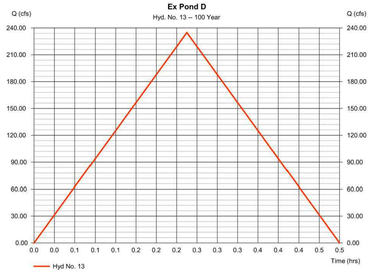
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024 — Saturday, 03 / 22 / 2025

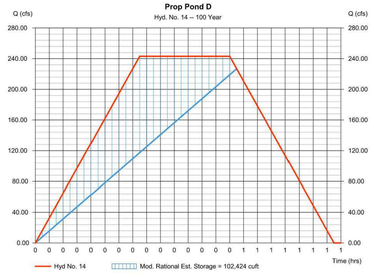
Hyd. No. 15

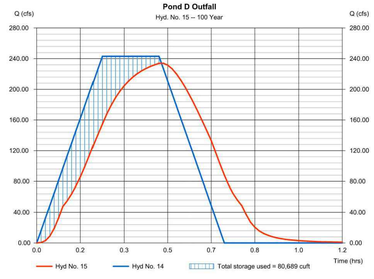
Pond D Outfall

Hydrograph type	= Reservoir	Peak discharge	= 234.01 cfs
Storm frequency	= 100 yrs	Time to peak	= 0.48 hrs
Time interval	= 1 min	Hyd. volume	= 408,353 cuft
Inflow hyd. No.	= 14 - Prop Pond D	Max. Elevation	= 693.93 ft
Reservoir name	= Pond D	Max. Storage	= 80,689 cuft

Storage Indication method used.







EMERGENCY SPILLWAY CALCULATIONS

Discharge:	243.07	cfs	Headwater Height Above Crest:	0.97 ft
Headwater Elevation:	696.97	ft	Tailwater Height Above Crest:	-696.00 ft
Crest Elevation:	696.00	ft	Weir Coefficient:	2.82 ft^(1/2)/s
Tailwater Elevation:	0.00	ft	Submergence Factor:	1.000
Crest Surface Type:	Gravel		Adjusted Weir Coefficient:	2.82 ft^(1/2)/s
Crest Breadth:	11.00	ft	Flow Area:	87.4 ft²
Crest Length:	90.0	ft	Velocity:	2.78 ft/s
			Wetted Perimeter:	91.9 ft
			Top Width:	90.00 ft

100-YR OUTFALL VELOCITY CALCULATIONS

Discharge:	234.01	cfs	Headwater Height Above Crest:	2.93 ft
Headwater Elevation:	693.93	ft	Tailwater Height Above Crest:	-691.00 ft
Crest Elevation:	691.00	ft	Flow Area:	41.0 ft²
Tailwater Elevation:	0.00	ft	Velocity:	5.70 ft/s
Weir Coefficient:	3.33	ft^(1/2)/s	Wetted Perimeter:	19.9 ft
Crest Length:	14.0	ft	Top Width:	14.00 ft
Number Of Contractions:	0			

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POND PLAN & DETAILS
POND D

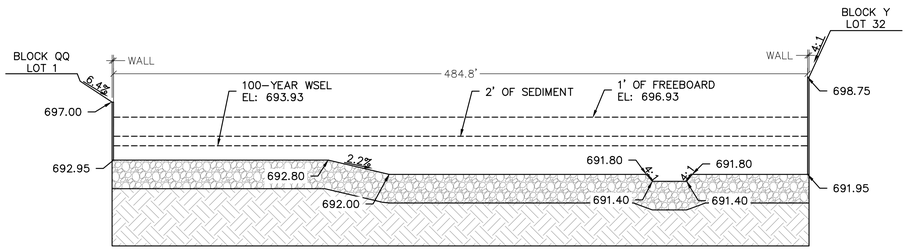
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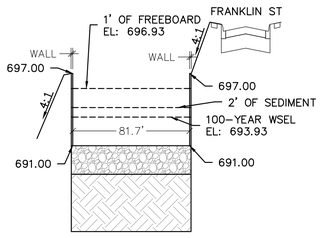
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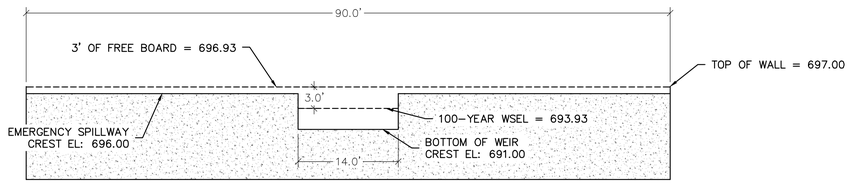
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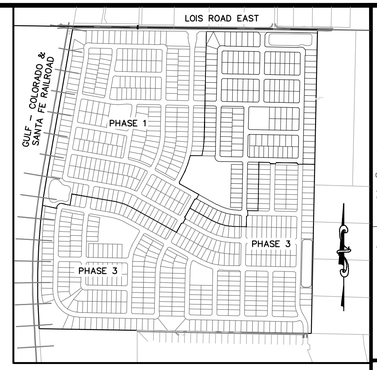
SECTION A-A
SCALE: 1"=50' HORZ, 1"=5' VERT



SECTION B-B
SCALE: 1"=50' HORZ, 1"=5' VERT



SECTION C-C
SCALE: 1"=10'



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CITY OF SANGER, COUNTY OF DENTON,
STATE OF TEXAS

POND PLAN & DETAILS
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EXISTING DRAINAGE AREA CALCULATIONS

Rational Method Q=CIA

AREA	ACRES	C	Tc (min)	I_{10} (In/Hr)	I_{100} (In/Hr)	Q_{10} (cfs)	Q_{100} (cfs)	COMMENTS
EX-1	9.24	0.30	15	6.6	9.6	18.30	26.61	
EX-2	13.19	0.30	15	6.6	9.6	26.12	37.99	
EX-3	14.81	0.30	15	6.6	9.6	29.32	42.65	
EX-4	38.10	0.30	15	6.6	9.6	75.44	109.73	
EX-5	27.62	0.30	15	6.6	9.6	54.69	79.55	
EX-6	56.22	0.30	15	6.6	9.6	111.32	161.91	
EX-7	43.21	0.30	15	6.6	9.6	85.56	124.44	

Rational Method Q=CIA

AREA	SF	ACRES	C	Tc (min)	I_{10} (In/Hr)	I_{100} (In/Hr)	Q_{10} (cfs)	Q_{100} (cfs)	COMMENTS
A	**2,861,874**	**65.70**	**0.55**	**15**	**6.6**	**9.60**	**238.49**	**346.89**	**MAJOR BASIN A**
POND A	**77327**	**1.78**	0.55	15	6.60	9.60	6.44	9.37	**POND A**
A1	165794	**3.81**	0.55	15	6.60	9.60	13.82	20.10	
A2	64539	**1.48**	0.55	15	6.60	9.60	5.38	7.82	
A3	79757	**1.83**	0.55	15	6.60	9.60	6.65	9.67	
A4	67340	**1.55**	0.55	15	6.60	9.60	5.61	8.16	
A5	64418	**1.48**	0.55	15	6.60	9.60	5.37	7.81	
A6	55179	**1.27**	0.55	15	6.60	9.60	4.60	6.69	
A7	64593	**1.48**	0.55	15	6.60	9.60	5.38	7.83	
A8	70471	**1.62**	0.55	15	6.60	9.60	5.87	8.54	
A9	67252	**1.54**	0.55	15	6.60	9.60	5.60	8.15	
A10	92029	**2.11**	0.55	15	6.60	9.60	7.67	11.16	
A11	114553	**2.63**	0.55	15	6.60	9.60	9.55	13.89	
A12	91368	**2.10**	0.55	15	6.60	9.60	7.61	11.07	
A15	164058	**3.77**	0.55	15	6.60	9.60	13.67	19.89	
A17	79303	**1.82**	0.55	15	6.60	9.60	6.61	9.61	
A18	67028	**1.54**	0.55	15	6.60	9.60	5.59	8.12	
A18.1	65467	**1.50**	0.55	15	6.60	9.60	5.46	7.94	
A19	43485	**1.00**	0.55	15	6.60	9.60	3.62	5.27	
A20	84400	**1.94**	0.55	15	6.60	9.60	7.03	10.23	
A21	117246	**2.69**	0.55	15	6.60	9.60	9.77	14.21	
A22	113015	**2.59**	0.55	15	6.60	9.60	9.42	13.70	
A23	111693	**2.56**	0.55	15	6.60	9.60	9.31	13.54	
A24	106905	**2.45**	0.55	15	6.60	9.60	8.91	12.96	
A25	72270	**1.66**	0.55	15	6.60	9.60	6.02	8.76	
A26	49923	**1.15**	0.55	15	6.60	9.60	4.16	6.05	
A27	89179	**2.05**	0.55	15	6.60	9.60	7.43	10.81	
A29	152919	**3.51**	0.55	15	6.60	9.60	12.74	18.54	
A30	106061	**2.43**	0.55	15	6.60	9.60	8.84	12.86	
A31	77148	**1.77**	0.55	15	6.60	9.60	6.43	9.35	
A32	145867	**3.35**	0.55	15	6.60	9.60	12.16	17.68	
A-37	29258	**0.67**	0.55	15	6.60	9.60	2.44	3.55	
A-40	61048	**1.40**	0.55	15	6.60	9.60	5.09	7.40	
						TOTAL=	**220.27**	**329.77**	
B	**931879**	**21.39**	**0.55**	**15**	**6.6**	**9.60**	**77.66**	**112.96**	**MAJOR BASIN B**
POND B	**42462**	**0.97**	**0.55**	**15**	**6.6**	**9.60**	**3.54**	**5.15**	**POND B**
B1	104521	2.40	0.55	15	6.60	9.60	8.71	12.67	
B2	37164	0.85	0.55	15	6.60	9.60	3.10	4.50	
B3	82222	1.89	0.55	15	6.60	9.60	6.85	9.97	
B4	197396	4.53	0.55	15	6.60	9.60	16.45	23.93	
B5	113836	2.61	0.55	15	6.60	9.60	9.49	13.80	
B6	78007	1.79	0.55	15	6.60	9.60	6.50	9.46	
B7	99045	2.27	0.55	15	6.60	9.60	8.25	12.01	
B10	100017	2.30	0.55	15	6.60	9.60	8.33	12.12	
B11	22567	0.52	0.55	15	6.60	9.60	1.88	2.74	
						TOTAL=	**69.56**	**101.18**	
C		**0.00**	**0.55**	**15**	**6.6**	**9.60**	**0.00**	**0.00**	**MAJOR BASIN C**
POND C	**53919**	**1.24**	**0.55**	**15**	**6.6**	**9.60**	**4.49**	**6.54**	**POND C**
C1	114468	2.63	0.55	15	6.60	9.60	9.54	13.87	
C3	119825	2.75	0.55	15	6.60	9.60	9.99	14.52	
C5	43266	0.99	0.55	15	6.60	9.60	3.61	5.24	
C6	56052	1.29	0.55	15	6.60	9.60	4.67	6.79	
C7	120709	2.77	0.55	15	6.60	9.60	10.06	14.63	
C9	107682	2.47	0.55	15	6.60	9.60	8.97	13.05	
C10	102843	2.36	0.55	15	6.60	9.60	8.57	12.47	
C11	140646	3.23	0.55	15	6.60	9.60	11.72	17.05	
C13	74001	1.70	0.55	15	6.60	9.60	6.17	8.97	
C14	84638	1.94	0.55	15	6.60	9.60	7.05	10.26	
C15	56074	1.29	0.55	15	6.60	9.60	4.67	6.80	
C16	82542	1.89	0.55	15	6.60	9.60	6.88	10.01	
C17	143589	3.30	0.55	15	6.60	9.60	11.97	17.40	
C19	142386	3.27	0.55	15	6.60	9.60	11.87	17.26	
						TOTAL=	**115.73**	**168.33**	
D			**0.55**	**15**	**6.6**	**9.6**	**0.00**	**0.00**	**MAJOR BASIN D**
POND D			**0.55**	**15**	**6.6**	**9.6**	**0.00**	**0.00**	**POND D**
D3	160863	3.69	0.55	15	6.60	9.60	13.41	19.50	
D4	91285	2.10	0.55	15	6.60	9.60	7.61	11.06	
D5	77384	1.78	0.55	15	6.60	9.60	6.45	9.38	
D6	72137	1.66	0.55	15	6.60	9.60	6.01	8.74	
D7	90920	2.09	0.55	15	6.60	9.60	7.58	11.02	
D8	161804	3.71	0.55	15	6.60	9.60	13.48	19.61	
D9	62324	1.43	0.55	15	6.60	9.60	5.19	7.55	
D10	146449	3.36	0.55	15	6.60	9.60	12.20	17.75	
D11	162882	3.74	0.55	15	6.60	9.60	13.57	19.74	
D13	104629	2.40	0.55	15	6.60	9.60	8.72	12.68	
D15	143551	3.30	0.55	15	6.60	9.60	11.96	17.40	
D17	83731	1.92	0.55	15	6.60	9.60	6.98	10.15	
D18	143652	3.30	0.55	15	6.60	9.60	11.97	17.41	
D20	84646	1.94	0.55	15	6.60	9.60	7.05	10.26	
D22	140917	3.24	0.55	15	6.60	9.60	11.74	17.08	
D24	143359	3.29	0.55	15	6.60	9.60	11.95	17.38	
D25	66434	1.53	0.55	15	6.60	9.60	5.54	8.05	
D26	82466	1.89	0.55	15	6.60	9.60	6.87	10.00	
D27	85335	1.96	0.55	15	6.60	9.60	7.11	10.34	
D28	137975	3.17	0.55	15	6.60	9.60	11.50	16.72	
D29	95923	2.20	0.55	15	6.60	9.60	7.99	11.63	
D30	112040	2.57	0.55	15	6.60	9.60	9.34	13.58	
D32	137575	3.16	0.55	15	6.60	9.60	11.46	16.68	
D34	118915	2.73	0.55	15	6.60	9.60	9.91	14.41	
D35	137176	3.15	0.55	15	6.60	9.60	11.43	16.63	
D37	56826	1.30	0.55	15	6.60	9.60	4.74	6.89	
D38	148846	3.42	0.55	15	6.60	9.60	12.40	18.04	
D40	62752	1.44	0.55	15	6.60	9.60	5.23	7.61	
						TOTAL=	**259.40**	**377.31**	
OS1	34171	0.78	0.55	15	6.60	9.60	2.85	4.14	
OS2	49046	1.13	0.55	15	6.60	9.60	4.09	5.94	
OS3	61108	1.40	0.55	15	6.60	9.60	5.09	7.41	
OS4	23931	0.55	0.55	15	6.60	9.60	1.99	2.90	
OS5	17747	0.41	0.55	15	6.60	9.60	1.48	2.15	
OS6	18252	0.42	0.55	15	6.60	9.60	1.52	2.21	
OS7	24049	0.55	0.55	15	6.60	9.60	2.00	2.92	
						TOTAL=	**14.02**	**20.39**	

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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
POND PLAN & DETAILS
RATIONAL CALCS

DATE 4/7/2025

REVISIONS

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/12/2025 – KMB

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 62

CAD FILE: 24007256-PH2-DRAINAGE CALC SHEETS.DWG

C:\USERS\KBOYDA\DESKTOP\24007256-PH2 PLAN & DETAILS\24007256-PH2-DRAINAGE CALC SHEETS.DWG 5/12/2025 3:53:14 PM KBOYDA

BASIN	INLET	AREA (AC)	SUMP/ON-GRADE	100-YR FLOW (CFS)	100-YR CARRYOVER FLOW (CFS)	CARRY OVER FROM INLET	100-YR TOTAL FLOW (CFS)	MAX GUTTER FLOW DEPTH (FT)	DEPTH OF DEPRESSION	LENGTH OF OPENING REQUIRED	LENGTH OF OPENING PROVIDED (FT)	MAX INLET CAPACITY (CFS)	100-YR PERCENT CAPTURED (%)	100-YR BYPASS FLOW (CFS)
1	2	3	4	5	6		7	11	12	13	14	16	17	18
A2	A2	1.48	SUMP	7.82	0.0		7.82	0.5	0.5	5.8	10	13.4	100.00	0.00
A3	A3	1.83	SUMP	9.67	0.0		9.67	0.5	0.5	7.2	10	13.4	100.00	0.00
A4	A4	1.55	SUMP	8.16	0.0		8.16	0.5	0.5	6.1	10	13.4	100.00	0.00
A5	A5	1.48	SUMP	7.81	0.0		7.81	0.5	0.5	5.8	10	13.4	100.00	0.00
A6	A6	1.27	SUMP	6.69	0.0		6.69	0.5	0.5	5.0	5	6.7	100.00	0.00
A7	A7	1.48	SUMP	7.83	0.0		7.83	0.5	0.5	5.8	10	13.4	100.00	0.00
A9	A9	2.08	SUMP	10.99	1.3	A8	12.31	0.5	0.5	9.2	10	13.4	100.00	0.00
A11	A11	2.63	SUMP	13.89	0.0		13.89	0.5	0.5	10.3	15	20.2	100.00	0.00
A12	A12	2.10	SUMP	11.07	0.0		11.07	0.5	0.5	8.2	10	13.4	100.00	0.00
D3	D3	3.69	SUMP	19.50	0.0		19.50	0.5	0.5	14.5	15	20.2	100.00	0.00
D4	D4	2.10	SUMP	11.06	0.0		11.06	0.5	0.5	8.2	10	13.4	100.00	0.00
D5	D5	1.78	SUMP	9.38	0.0		9.38	0.5	0.5	7.0	10	13.4	100.00	0.00
D8	D8	3.71	SUMP	19.61	0.0		19.61	0.5	0.5	14.6	15	20.2	100.00	0.00
D9	D9	1.43	SUMP	7.55	0.0		7.55	0.5	0.5	5.6	10	13.4	100.00	0.00
D15	D15	3.30	SUMP	17.40	0.0		17.40	0.5	0.5	12.9	15	20.2	100.00	0.00

BASIN	INLET	AREA (AC)	SUMP/ON-GRADE	100-YR FLOW (CFS)	100-YR CARRYOVER FLOW (CFS)	CARRY OVER FROM INLET	100-YR TOTAL FLOW (CFS)	LONG SLOPE (FT/FT)	PAVEMENT CROSS SLOPE (FT/FT)	GUTTER CROSS SLOPE (FT/FT)	DEPTH OF FLOW (FT)	SPREAD OF FLOW (FT)	CROSS SLOPE (FT/FT)	MANNINGS COEFF "N"	REQUIRED LENGTH ON OF INLET	LENGTH PROVIDED	L/Lt	EFFICIENCY "E"	INLET CAPACITY	100-YR PERCENT CAPTURED (%)	100-YR BYPASS FLOW (CFS)
1	2	3	4	5	6		7														
A8	A8	1.09	ON-GRADE	5.73	0		5.73	0.01	0.02	0.2	0.5	15.5	0.02	0.013	11.16	10	0.90	0.98	4.41	77.0	1.32
A10	A10	2.11	ON-GRADE	11.16	0		11.16	0.0168	0.02	0.2	0.5	15.5	0.02	0.013	17.25	20	1.16	1.00	15.87	100.0	0.00

STREET SECTION MODELED FOR
WORST CASE SCENARIO IN A SUMP

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Monday, May 12 2025

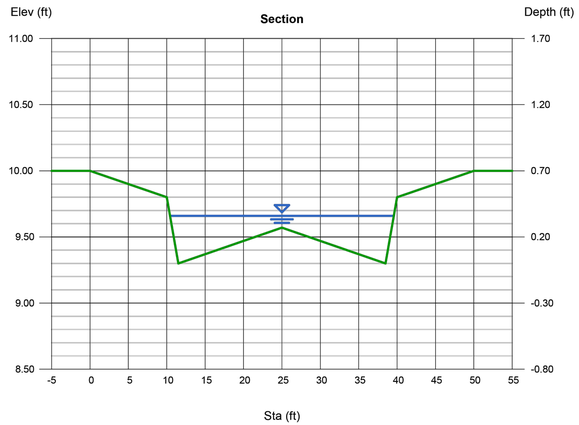
Typical Street Section

User-defined
Invert Elev (ft) = 9.30
Slope (%) = 0.60
N-Value = 0.013

Calculations
Compute by: Known Q
Known Q (cfs) = 20.10

Highlighted
Depth (ft) = 0.36
Q (cfs) = 20.10
Area (sqft) = 6.46
Velocity (ft/s) = 3.11
Wetted Perim (ft) = 29.28
Crit Depth, Yc (ft) = 0.39
Top Width (ft) = 29.16
EGL (ft) = 0.51

(Sta, El, n)-(Sta, El, n)...
(0.00, 10.00)-(10.00, 9.80, 0.013)-(11.50, 9.30, 0.013)-(25.00, 9.57, 0.013)-(38.50, 9.30, 0.013)-(40.00, 9.80, 0.013)-(50.00, 10.00, 0.013)



BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

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KALTER CAPITAL
LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
POND PLAN & DETAILS
INLET CALCS 1

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/12/2025 – KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 63

CAD FILE: 24007256-PH2-DRAINAGE CALC SHEETS.DWG

C:\USERS\TNGUYEN\DESKTOP\WORK FOLDER\24007256-PH2-DRAINAGE CALC SHEETS.DWG 5/12/2025 3:15 PM TNGUYEN

PIPE	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Flow (cfs)	Length (3D) (ft)	Slope (ft/ft)	Diameter (in)	Manning's n	Friction Slope f.(ft/ft)	Velocity (ft/s)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line	Energy Grade Line	Headloss(ft)
RUN 1																	
P1.1	PH 2 - MH 1.4	PH 2 - MH 1.3	702.38	701.9	24.9	95.4	0.005	24	0.013	0.012	7.93	16.04	704.94	703.66	705.92	704.78	0.48
P1.2	PH 2 - MH 1.3	PH 2 - MH 1.2	701.4	697.05	24.96	290	0.015	30	0.013	0.004	10.22	50.23	703.1	702.35	703.87	702.75	0.41
P1.3	PH 2 - MH 1.2	PH 2 - MH 1.1	696.55	692.2	48.34	290	0.015	30	0.013	0.014	9.85	50.23	701.94	697.91	703.44	699.42	0.38
P1.4	PH 2 - MH 1.1	O-2	692.1	690.98	48.34	74.9	0.015	30	0.013	0.014	9.85	50.1	697.53	696.49	699.04	698	(N/A)
RUN 2																	
P2.1	PH 2 - MH 2.2	PH 2 - MH 2.1	699.99	698.78	8.54	144.1	0.008	24	0.013	0.001	2.72	20.73	704.42	704.22	704.54	704.33	0.03
P2.2	PH 2 - MH 2.1	PH 2 - MH 1.2	698.68	697.55	8.54	260.8	0.004	24	0.013	0.001	2.72	14.89	704.19	703.82	704.3	703.93	1.88
RUN 3																	
P3.1	PH2- MH 3.6	PH 2 - MH 3.5	700.47	699.02	20.44	290	0.005	36	0.013	0.001	2.89	47.16	704.16	703.89	704.29	704.02	0.13
P3.2	PH 2 - MH 3.5	PH 2 - MH 3.4	698.02	696.62	86.86	280	0.005	42	0.013	0.007	9.03	71.14	703.76	701.67	705.02	702.94	0.06
P3.3	PH 2 - MH 3.4	PH 2 - MH 3.3	696.52	695.12	86.86	280	0.005	48	0.013	0.004	6.91	101.56	701.61	700.59	702.35	701.33	0.11
P3.4	PH 2 - MH 3.3	PH 2 - MH 3.2	694.62	693.17	141.75	290	0.005		0.013	0.006	8.86	129.32	700.47	698.73	701.69	699.95	0.14
P3.5	PH 2 - MH 3.2	PH 2 - MH 3.1	692.67	692.17	196.95	87.1	0.01		0.013	0.006	9.85	246.7	698.59	698.27	700.1	699.78	1.28
P3.6	PH 2 - MH 3.1	O-4	692.17	691.95	206.95	47.6	0.005		0.013	0.006	10.35	166.77	697	696.32	698.78	698.5	(N/A)
RUN 4																	
P4.1	PH 2 - MH 4.1	PH2- MH 3.6	701.45	700.97	20.44	95.4	0.005	30	0.013	0.002	4.16	29.09	704.51	704.27	704.78	704.54	0.11
RUN 5																	
P5.1	PH 2 - MH 5.3	PH 2 - MH 5.2	702.77	702.24	19.5	61.6	0.009	30	0.013	0.002	3.97	38.05	706.62	706.48	706.86	706.72	0.08
P5.2	PH 2 - MH 5.2	PH 2 - MH 5.1	701.42	699.97	46.66	290	0.005	36	0.013	0.005	6.6	47.16	706.39	704.97	707.07	705.65	0.04
P5.3	PH 2 - MH 5.1	PH 2 - MH 3.5	699.97	698.52	46.66	290	0.005	42	0.013	0.002	4.85	71.14	704.94	704.32	705.3	704.68	0.56
RUN 6																	
P6.1	PH 2 - MH 6.1	PH 2 - MH 5.2	703.69	702.42	27.16	253.4	0.005	36	0.013	0.002	3.84	47.21	707.52	707.1	707.75	707.33	0.7
RUN 7																	
P7.1	PH 2 - MH 7.2	PH2 - MH 7.1	703.21	697.96	35.15	348.9	0.015	30	0.013	0.009	11.08	50.31	705.22	702.24	706.29	703.04	0.04
P7.2	PH2 - MH 7.1	PH 2 - MH 3.3	697.86	696.12	35.15	290	0.006	36	0.013	0.003	4.97	51.66	702.2	701.4	702.59	701.78	1.14

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303.801.7333
MICHAEL PRYOR

CLIENT: KALTER CAPITAL

LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON,
STATE OF TEXAS

POND PLAN & DETAILS
HGL CALCS

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/12/2025 – KMB

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JOB 24007256
SHEET NO. 64

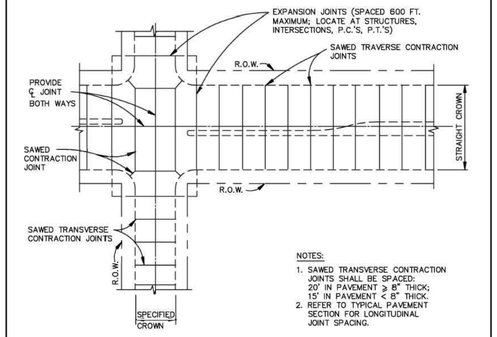
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GENERAL NOTES:

1. REINFORCED CONCRETE PAVEMENT:
   - A. ALL CURBS SHALL BE PLACED INTEGRAL WITH PAVEMENT UNLESS OTHERWISE APPROVED BY THE OWNER.
   - B. CURBS SHALL MEET THE SAME COMPRESSIVE STRENGTH AS SPECIFIED FOR THE PAVEMENT.
   - C. BAR LAPS SHALL BE 30 DIAMETERS.
   - D. REINFORCING BARS SHALL BE SUPPORTED BY CHAIRS OR OTHER DEVICES APPROVED BY THE OWNER.
2. SUBGRADE: (UNLESS OTHERWISE SPECIFIED BY OWNER)
   - A. SUBGRADE UNDER ALL PAVEMENTS SHALL BE STABILIZED TO A MINIMUM DEPTH OF 6" WITH HYDRATED LIME OR CEMENT WHEN THE P.I. OF THE INPLACE MATERIAL IS GREATER THAN 15. LABORATORY TESTS MUST BE PERFORMED TO DETERMINE THE AMOUNT OF LIME OR CEMENT REQUIRED TO LOWER THE P.I. TO 15 OR BELOW. SATURATION P.I. (PH ≥ 12.4) WILL BE THE LIMIT WHEN A SOIL'S P.I. CANNOT BE BROUGHT TO 15 OR LOWER.
   - B. WHERE THE INPLACE MATERIAL HAS A P.I. OF LESS THAN 15, THE SUBGRADE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6" AND RECOMPACTED.
3. IF THE ROADWAY IS A DESIGNATED BIKE ROUTE OR BIKE USAGE IS ANTICIPATED, REFER TO NCTCOG'S REGIONAL BICYCLE AND PEDESTRIAN FACILITIES DESIGN MANUAL FOR DESIGN GUIDANCE.

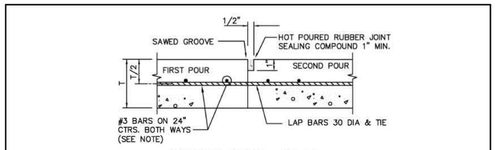
PAVEMENT SYSTEMS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 302,303
GENERAL NOTES		DATE: OCT. '04 / STANDARD DRAWING NO.: 2190



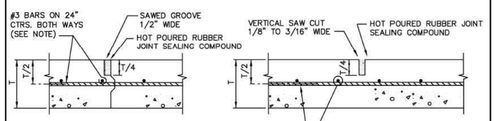
NOTES:
1. SAWED TRANSVERSE CONTRACTION JOINTS SHALL BE SPACED: 20' IN PAVEMENT ≥ 8" THICK; 15' IN PAVEMENT < 8" THICK.
2. REFER TO TYPICAL PAVEMENT SECTION FOR LONGITUDINAL JOINT SPACING.

SPACING DIAGRAM FOR TRANSVERSE JOINTS
N.T.S.

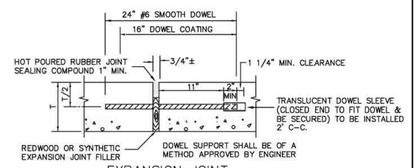
REINFORCED CONCRETE PAVEMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 303.5.4.
TRANSVERSE JOINT SPACING		DATE: OCT. '04 / STANDARD DRAWING NO.: 2060



CONSTRUCTION JOINT
N.T.S.

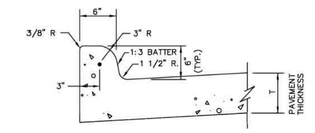


NOTE:
ALTERNATE REINFORCEMENT #4 BARS ON 30" CTRS. BOTH WAYS.

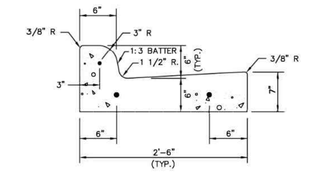


EXPANSION JOINT
(SPACED 600 FT. MAXIMUM; LOCATE AT STRUCTURES AND AT INTERSECTION P.C.'S & P.T.'S)
N.T.S.

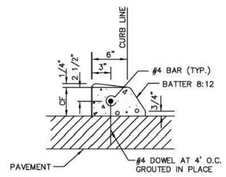
REINFORCED CONCRETE PAVEMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 303.5.4.
JOINTS		DATE: OCT. '04 / STANDARD DRAWING NO.: 2050



INTEGRAL CURB & GUTTER
N.T.S.



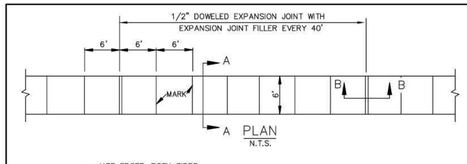
SEPARATE CURB & GUTTER
N.T.S.

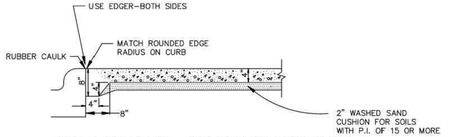


DOWELED CURB
N.T.S.

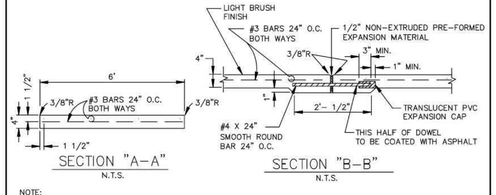
NOTES:
1. REINFORCEMENT SHALL BE NO. 4 BARS, UNLESS OTHERWISE SPECIFIED.
2. CONCRETE SHALL BE CLASS "C" OR "PC".
3. "CF" IS 6" UNLESS OTHERWISE SPECIFIED.
4. ALL CURBS ARE CONSTRUCTED OF PORTLAND CEMENT CONCRETE UNLESS OTHERWISE SHOWN.
5. GRADE SHALL BE MEASURED AT BACK OF CURB.

CONCRETE CURB & GUTTER	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 305.1
INTEGRAL, SEPARATE, & DOWELED		DATE: OCT. '04 / STANDARD DRAWING NO.: 2120



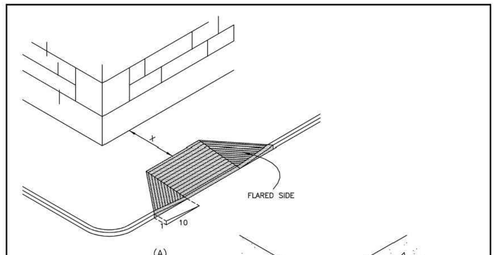


JOINT LUG DETAIL FOR MEDIAN PAVEMENT OR SIDEWALK ADJACENT TO CURB
N.T.S.



NOTE:
1. REFER TO STANDARD SPECIFICATION ITEM 305.2 FOR ALTERNATE REINFORCEMENT.
2. CROSS SLOPE OF SIDEWALK SHALL BE ± 1/4" PER FT. MIN. TO ± 3/8" PER FT. MAX.
3. OTHER THAN 6'-0" SIDEWALK WIDTH MAY BE SPECIFIED BY OWNER.
4. SIDEWALK SHALL BE CLASS "A" CONCRETE UNLESS OTHERWISE SPECIFIED BY OWNER.
5. ALL HONEYCOMB IN BACK OF CURB TO BE TROWEL-PLASTERED BEFORE POURING SIDEWALK.
6. LUG MAY BE FORMED BY SHAPING SUBGRADE TO APPROXIMATE DIMENSIONS SHOWN.

REINFORCED CONCRETE SIDEWALKS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 305.2
JOINTS AND SPACING		DATE: OCT. '04 / STANDARD DRAWING NO.: 2170



(A)
FLARED SIDES

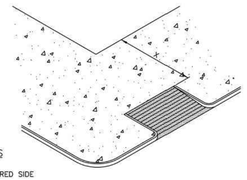


FIGURE 1
PARKWAY CURB RAMPS
IF "X" IS LESS THAN 48" THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 1:12.

(B)
RETURNED CURB

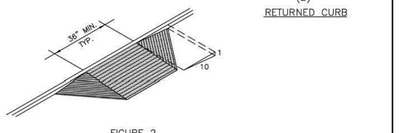


FIGURE 2
BUILT-UP CURB RAMP

CURB RAMPS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE
		DATE: OCT. '04 / STANDARD DRAWING NO.: 2125A

CURB RAMPS NOTES:

GENERAL REQUIREMENTS
CURB RAMPS SHALL BE CONSTRUCTED AS PER THE REQUIREMENTS AND SPECIFICATIONS OF THE TEXAS ACCESSIBILITY STANDARDS AND THE ADA & ABA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES. (FEDERAL REGISTER/ VOL. 69, NO. 141, FRIDAY, JULY 23, 2004)

LOCATION:
CURB RAMPS UNDER THESE PROVISIONS, SHALL BE WHEREVER AN ACCESSIBLE ROUTE CROSSES A CURB.

SLOPE:
SLOPES ON CURB RAMPS SHALL BE MEASURED AS FOLLOWS: (Y:X = VERTICAL:HORIZONTAL)
A) TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
B) MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
C) THE LEAST POSSIBLE SLOPE SHALL BE USED FOR ANY RAMP. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION SHALL BE 1:12. THE MAXIMUM RISE FOR ANY RUN SHALL BE 30" (760 MM). CURB RAMPS AND RAMPS TO BE CONSTRUCTED ON EXISTING SITES OR IN EXISTING BUILDINGS OR FACILITIES MAY HAVE SLOPES AND RISES IF SPACE LIMITATIONS PROHIBIT THE USE OF A 1:12 SLOPE OR LESS, AS FOLLOWS:
   1. A SLOPE BETWEEN 1:10 AND 1:12 IS ALLOWED FOR A MAXIMUM RISE OF 6".
   2. A SLOPE BETWEEN 1:8 AND 1:10 IS ALLOWED FOR A MAXIMUM OF 3" A SLOPE STEEPER THAN 1:8 IS NOT ALLOWED.

RAMP WIDTH:
THE MINIMUM WIDTH OF A CURB RAMP SHALL BE 36" EXCLUSIVE OF FLARED SIDES.

SURFACE:
SURFACES OF CURB RAMPS, SHALL BE STABLE FIRM, AND SLIP RESISTANT. SURFACE TEXTURES SHALL CONSIST OF EXPOSED CRUSHED STONE AGGREGATE, ROUGHENED CONCRETE, RUBBER, RAISED ABRASIVE STRIPS, OR GROOVES. EXTENDING THE FULL WIDTH AND DEPTH OF THE CURB RAMP. SURFACES THAT ARE RAISED, ETCHED, OR GROOVED IN A WAY THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED. FOR PURPOSES OF WARNING, THE FULL WIDTH AND DEPTH OF CURB RAMPS SHALL HAVE A LIGHT REFLECTIVE VALUE AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES.

SIDES OF CURB RAMPS:
IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, IT SHALL HAVE FLARED SIDES. THE MAXIMUM SLOPE OF THE FLARE SHALL BE 1:10 (SEE FIG. 1 (A)) CURB RAMPS WITH RETURNED CURBS MAY BE USED WHERE PEDESTRIANS WOULD NOT WALK ACROSS THE RAMP. (SEE FIG. 1 (B))

BUILT-UP RAMPS:
BUILT-UP CURB RAMPS SHALL BE LOCATED SO THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES (SEE FIG. 2)

OBSTRUCTIONS:
CURB RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES.

LOCATION AT MARKED CROSSINGS:
CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.

DIAGONAL CURB RAMPS:
IF DIAGONAL (OR CORNER TYPE) CURB RAMPS HAVE RETURNED CURBS OR OTHER WELL DEFINED EDGES, SUCH EDGES SHALL BE PARALLEL TO THE DIRECTION OF PEDESTRIAN FLOW. THE BOTTOM OF DIAGONAL CURB RAMPS SHALL HAVE 48" (1220 MM) MINIMUM. IF DIAGONAL CURB RAMPS ARE PROVIDED AT MARKED CROSSINGS, THE 48" (1220 MM) CLEAR SPACE SHALL BE WITHIN THE MARKINGS. IF DIAGONAL CURB RAMPS HAVE FLARED SIDES, THEY SHALL ALSO HAVE AT LEAST A 24" (610 MM) LONG SEGMENT OF STRAIGHT CURB LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING. ANY RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR HAVE CURB RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 48" (1220 MM) LONG BETWEEN THE CURB RAMPS IN THE PART OF THE ISLAND INTERSECTED BY THE CROSSINGS.

CONSTRUCTION
(A.) THE CONTRACTOR SHALL SAWCUT, REMOVE AND DISPOSE OFF-SITE THE REQUIRED EXISTING CONCRETE SIDEWALK, CURB AND GUTTER, TO CONSTRUCT THE PROPOSED RAMPS.
(B.) CONCRETE SIDEWALKS AND RAMPS SHALL BE MINIMUM 4" THICK, 4000 PSI, 5 SACK CONCRETE, REINFORCED WITH #3 BARS AT 14" CENTERS BOTH WAYS, PLACED OVER A 2" THICK SAND CUSHION EMBEDMENT.
(C.) THE CONTRACTOR SHALL USE 1" PREMOLDED EXPANSION JOINT MATERIAL BETWEEN THE PROPOSED SIDEWALKS AND RAMPS AT THE BACK OF CURBS, AND AT JOINTS AT NO EXTRA PAY.
(D.) DUMMY JOINT REQUIRED EVERY 4' IN 4' WIDE SIDEWALKS AND EVERY 5' IN 6' WIDE SIDEWALK.

CURB RAMPS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE
		DATE: OCT. '04 / STANDARD DRAWING NO.: 2125B

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NOTICE:
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CONSTRUCTION DETAILS
STREET DETAILS

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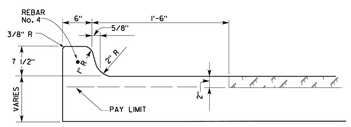
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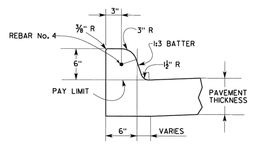
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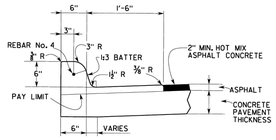
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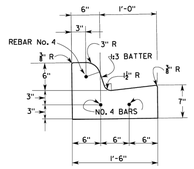
SPECIAL CURB & GUTTER



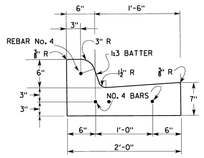
INTEGRAL CURB



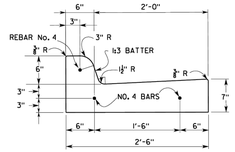
INTEGRAL CURB & GUTTER



1'-6" SEPARATE CURB AND GUTTER



2'-0" SEPARATE CURB AND GUTTER

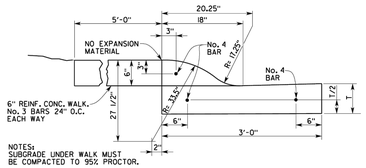


2'-6" SEPARATE CURB AND GUTTER

NOTES:

1. ALL REINFORCEMENT STEEL SHALL BE MINIMUM No. 4 BARS. EXCEPT FOR CBD AS SHOWN ON SHEET No. 1008A.
2. SEPARATE CURB WITH 12" OR 18" GUTTER SHALL BE USED ONLY AS REPLACEMENT TO MATCH EXISTING CONDITIONS.
3. FOR CONNECTING SEPARATE CURB AND GUTTER TO AN EXISTING CONCRETE STREET, No.4 BARS MUST BE PLACED EVERY 24" WITH NO SEPARATE PAY ITEM.

•SEE GENERAL NOTES ON SHEET No. 1007A FOR FURTHER INFORMATION.



NOTES:
SUBGRADE UNDER WALK MUST BE COMPACTED TO 95% PROCTOR.

MOUNTABLE CURB AND GUTTER DETAILS
REINF. CONC. WALK DETAILS

PAVING DETAILS	
CURB AND GUTTER DETAILS	
DEPARTMENT OF PUBLIC WORKS CITY OF DALLAS, TEXAS	
DRAWINGS NOT TO SCALE REVISED: DECEMBER 2021	SHEET No. 1007B

Consider crossing out details / sections not used on this project. (Typical)

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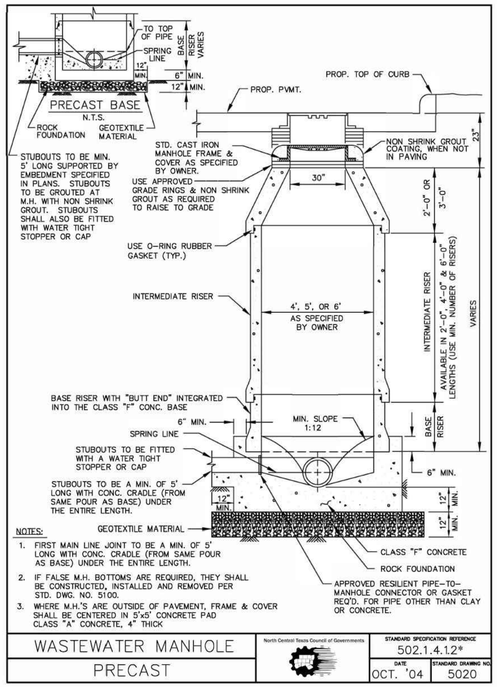
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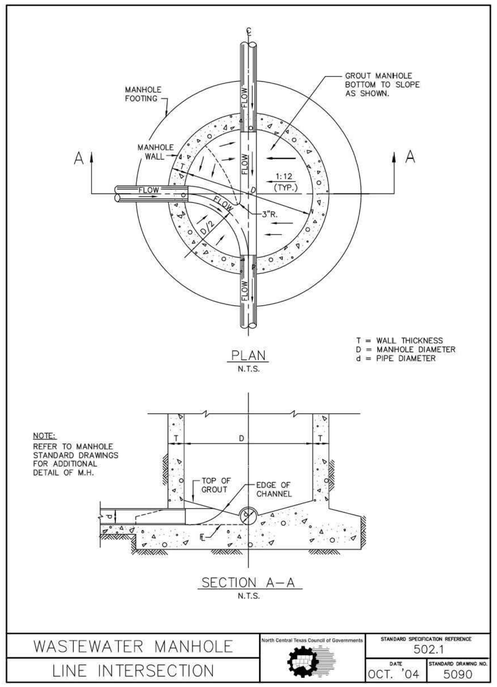


WASTEWATER MANHOLE
PRECAST

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.1.4.1.2*
DATE OCT. '04
STANDARD DRAWING NO. 5020

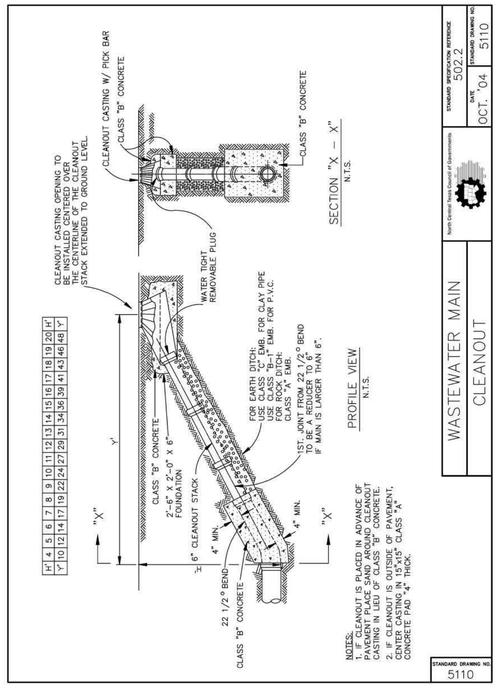
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WASTEWATER MANHOLE
LINE INTERSECTION

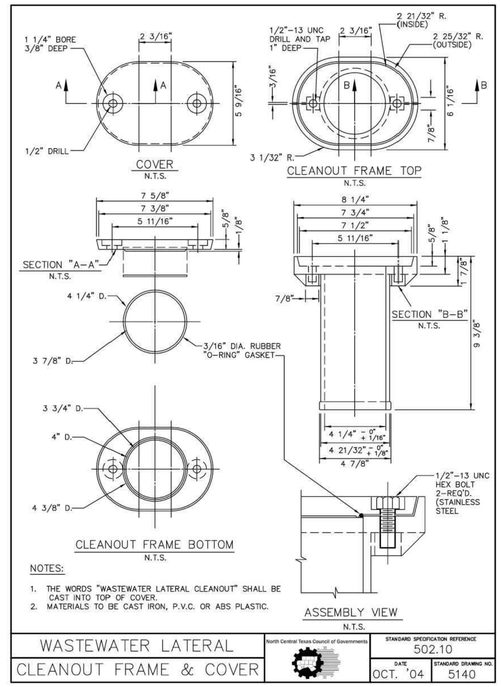
North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.1
DATE OCT. '04
STANDARD DRAWING NO. 5090



WASTEWATER MAIN
CLEANOUT

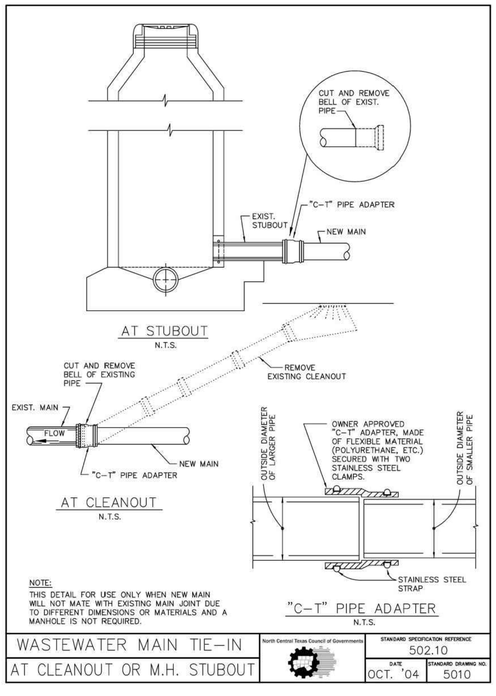
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STANDARD DRAWING NO. 5110
DATE OCT. '04
North Central Texas Council of Governments
STANDARD DRAWING NO. 5110



WASTEWATER LATERAL
CLEANOUT FRAME & COVER

North Central Texas Council of Governments

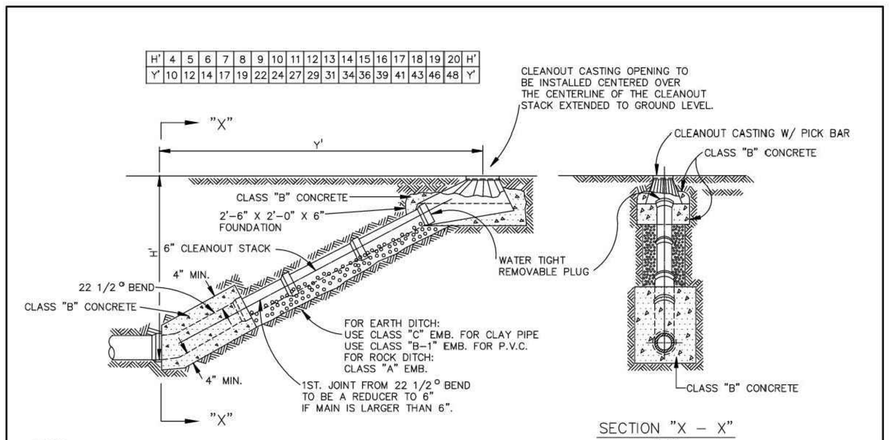
STANDARD SPECIFICATION REFERENCE 502.10
DATE OCT. '04
STANDARD DRAWING NO. 5140



WASTEWATER MAIN TIE-IN
AT CLEANOUT OR M.H. STUBOUT

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.10
DATE OCT. '04
STANDARD DRAWING NO. 5010



STANDARD DRAWING NO. 5110

WASTEWATER MAIN
CLEANOUT

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.2
DATE OCT. '04
STANDARD DRAWING NO. 5110

811 Know what's below. Call before you dig.

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NOTICE:
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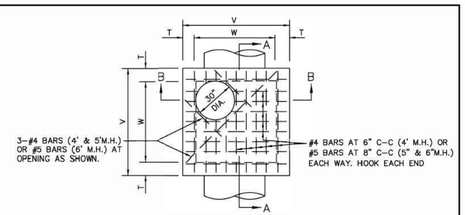
DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 67

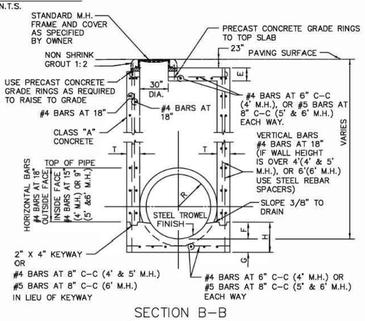
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PLAN
N.T.S.

M.H. SIZE(W)	V	T	E	F	G	H
4'	5'-4"	8"	6"	9"	6"	1'-3"
5'	6'-4"	8"	6"	12"	8"	1'-8"
6'	7'-6"	9"	9"	16"	10"	2'-2"

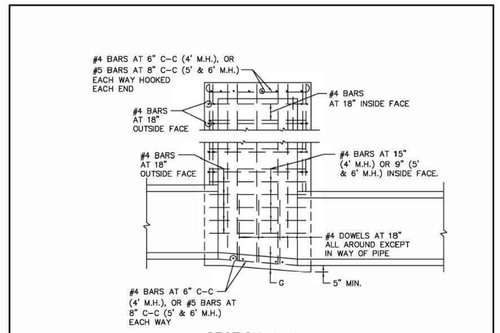
TABLE OF DIMENSIONS
N.T.S.



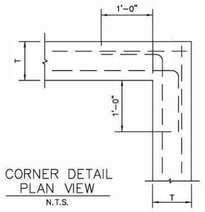
SECTION B-B
N.T.S.

STORM WATER MANHOLE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1.4.1*	
4', 5', OR 6' SQUARE		DATE OCT. '04	STANDARD DRAWING NO. 6010A

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*



SECTION A-A
N.T.S.

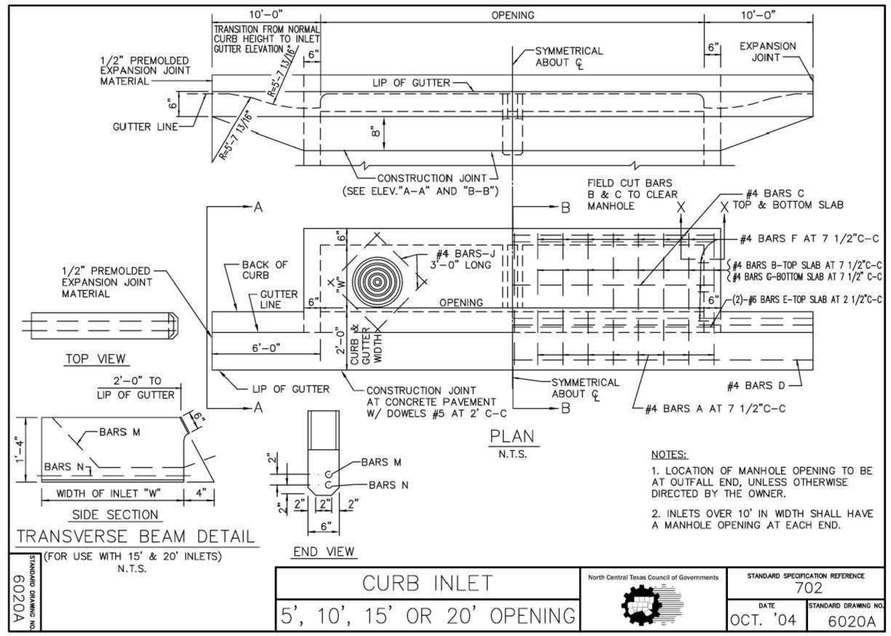


CORNER DETAIL
PLAN VIEW
N.T.S.

NOTES:
1. SLOPE INVERT OF MANHOLE AS INDICATED ON PLAN-PROFILE SHEET.
2. LAYERS OF REINFORCING STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACE SHALL HAVE A COVER OF 2" TO THE CENTER OF BARS, UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL BE CLASS "A".

STORM WATER MANHOLE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1.4.1*	
4', 5', OR 6' SQUARE		DATE OCT. '04	STANDARD DRAWING NO. 6010B

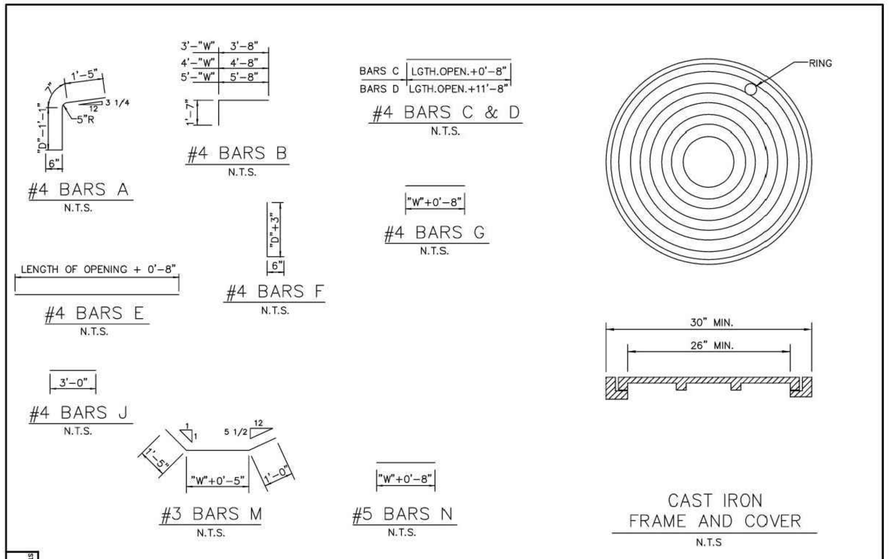
*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*



TRANSVERSE BEAM DETAIL
(FOR USE WITH 15' & 20' INLETS)
N.T.S.

NOTES:
1. LOCATION OF MANHOLE OPENING TO BE AT OUTFALL END, UNLESS OTHERWISE DIRECTED BY THE OWNER.
2. INLETS OVER 10' IN WIDTH SHALL HAVE A MANHOLE OPENING AT EACH END.

STANDARD DRAWING NO. 6020A ON CURVED GUTTERS	CURB INLET 5', 10', 15' OR 20' OPENING	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702	
			DATE OCT. '04	STANDARD DRAWING NO. 6020A



N.T.S.

STANDARD DRAWING NO. 6020C	CURB INLET REBAR & M.H. FRAME & COVER	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702	
			DATE OCT. '04	STANDARD DRAWING NO. 6020C

BILL OF REINFORCING STEEL

DEPTH "D"	ALL AND	WIDTHS LENGTHS			OPENING LENGTH "L" = 5ft Widths "W" 3ft						OPENING LENGTH "L" = 10ft Widths "W" 3ft						OPENING LENGTH "L" = 15 ft Widths "W" 3ft						OPENING LENGTH "L" = 20 ft Widths "W" 3ft							
	BARS C	BARS D	BARS E	BARS J	BARS F	BARS G	BARS A	BARS B	BARS A	BARS B	BARS G	BARS F	BARS A	BARS B	BARS A	BARS B	BARS G	BARS F	BARS A	BARS B	BARS C	BARS D	BARS M	BARS N	BARS F	BARS A	BARS B	BARS A	BARS B	BARS G	BARS F	BARS A	BARS B	BARS C	BARS D	BARS M	BARS N
3'-6"	17	3	2	4	20	24	28	10	10	20	28	32	36	18	18	28	36	40	44	26	26	36	2	2	44	48	52	34	34	44	2	2					
3'-9"	18	"	"	"	"	"	"	"	"	20	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	"	"	44	"	"					
4'-0"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"					
4'-3"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"					
4'-6"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"					
4'-9"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"					
5'-0"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"					
5'-3"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"					
5'-6"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"					
5'-9"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"					
6'-0"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"					
6'-3"	26	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"					
6'-6"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"					
6'-9"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"					
7'-0"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"					
7'-3"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"					
7'-6"	30	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"					
7'-9"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"					
8'-0"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"					
8'-3"	32	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"					
8'-6"	33	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"					
8'-9"	34	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"					
9'-0"	35	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"					
9'-3"	36	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"					
9'-6"	37	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"					
10'-0"	38	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"					

NOTE:
FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

STANDARD DRAWING NO. 6020D	CURB INLET BILL OF REINFORCING STEEL	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702	
			DATE OCT. '04	STANDARD DRAWING NO. 6020D

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CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
CONSTRUCTION DETAILS
STORM DETAILS

DATE 4/7/2025

A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

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SUMMARY OF QUANTITIES FOR CURB INLETS

DEPTH "D"	5'–0" OPENING						10'–0" OPENING						15'–0" OPENING						20'–0" OPENING					
	WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"		WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"		WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"		WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"	
	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.
3'–6"	2.62	306	2.95	332	3.28	373	4.12	479	4.64	521	5.20	564	5.69	667	6.40	721	7.10	775	7.20	846	8.11	909	9.03	976
3'–9"	2.70	309	3.04	341	3.39	373	4.25	494	4.78	536	5.34	579	5.87	687	6.58	741	7.30	796	7.42	874	8.34	937	9.27	1010
4'–0"	2.78	328	3.14	364	3.49	399	4.38	518	4.92	565	5.49	610	6.05	718	6.77	776	7.49	835	7.64	909	8.58	976	9.51	1046
4'–3"	2.87	334	3.23	370	3.59	406	4.51	526	5.06	573	5.64	619	6.22	729	6.95	787	7.69	847	7.87	922	8.81	990	9.75	1061
4'–6"	2.95	356	3.32	394	3.69	431	4.64	558	5.20	607	5.79	656	6.40	770	7.14	830	7.88	891	8.09	973	9.04	1043	9.99	1115
4'–9"	3.03	361	3.41	410	3.79	438	4.77	566	5.34	616	5.94	665	6.57	780	7.32	841	8.07	903	8.31	986	9.27	1056	10.23	1129
5'–0"	3.12	367	3.51	416	3.90	445	4.90	574	5.47	624	6.09	674	6.75	791	7.51	853	8.27	915	8.53	999	9.50	1070	10.47	1144
5'–3"	3.20	383	3.60	424	4.00	465	5.03	600	5.61	652	6.23	704	6.93	827	7.69	890	8.46	955	8.76	1044	9.73	1118	10.71	1194
5'–6"	3.28	389	3.69	430	4.10	472	5.16	608	5.75	661	6.38	713	7.11	837	7.88	901	8.66	967	8.98	1057	9.97	1131	10.95	1208
5'–9"	3.37	405	3.78	451	4.20	495	5.29	635	5.89	690	6.53	744	7.28	874	8.07	940	8.85	1007	9.20	1102	10.20	1178	11.19	1258
6'–0"	3.45	415	3.88	460	4.30	504	5.42	646	6.03	702	6.68	757	7.45	888	8.25	954	9.05	1022	9.42	1119	10.43	1196	11.43	1276
6'–3"	3.53	425	3.97	470	4.41	515	5.55	661	6.17	718	6.83	773	7.63	908	8.44	975	9.24	1044	9.64	1147	10.66	1223	11.67	1305
6'–6"	3.62	437	4.06	486	4.51	532	5.68	681	6.31	739	6.97	797	7.81	935	8.62	1005	9.43	1057	9.87	1178	10.89	1258	11.92	1340
6'–9"	3.70	441	4.15	490	4.61	537	5.81	688	6.45	747	7.12	806	7.98	945	8.81	1015	9.63	1066	10.09	1191	11.12	1272	12.15	1355
7'–0"	3.78	460	4.25	510	4.71	560	5.94	716	6.59	777	7.27	837	8.16	981	8.99	1053	9.82	1126	10.31	1237	11.35	1319	12.40	1404
7'–3"	3.86	465	4.34	516	4.81	567	6.07	724	6.72	785	7.42	846	8.33	992	9.18	1065	10.02	1138	10.53	1249	11.59	1333	12.64	1418
7'–6"	3.95	477	4.43	529	4.91	570	6.20	742	6.86	804	7.57	866	8.51	1016	9.36	1089	10.21	1163	10.75	1290	11.82	1365	12.88	1451
7'–9"	4.03	491	4.53	544	5.02	597	6.33	762	7.00	826	7.71	890	8.67	1040	9.55	1116	10.41	1193	10.98	1313	12.05	1399	13.12	1498
8'–0"	4.12	496	4.62	550	5.12	604	6.46	770	7.14	834	7.86	899	8.86	1051	9.73	1129	10.60	1205	11.20	1325	12.28	1412	13.36	1510
8'–3"	4.20	504	4.71	559	5.22	613	6.59	784	7.28	849	8.01	915	9.04	1069	9.92	1149	10.80	1228	11.42	1353	12.51	1440	13.60	1529
8'–6"	4.28	519	4.80	576	5.32	632	6.71	804	7.42	871	8.16	938	9.21	1107	10.10	1176	10.99	1257	11.64	1385	12.74	1474	13.84	1565
8'–9"	4.37	528	4.90	586	5.42	643	6.84	819	7.56	886	8.31	954	9.39	1119	10.29	1199	11.18	1280	11.87	1410	12.97	1500	14.08	1592
9'–0"	4.45	545	4.99	605	5.53	664	6.97	842	7.70	912	8.46	982	9.56	1148	10.47	1231	11.38	1313	12.09	1447	13.21	1539	14.32	1631
9'–3"	4.53	554	5.08	614	5.63	674	7.10	858	7.84	929	8.60	999	9.74	1169	10.66	1252	11.57	1335	12.31	1474	13.44	1563	14.56	1660
9'–6"	4.62	568	5.17	630	5.73	692	7.23	878	7.97	950	8.75	1022	9.92	1195	10.84	1280	11.77	1365	12.53	1505	13.67	1600	14.80	1696
10'–0"	4.78	582	5.36	645	5.93	708	7.49	900	8.11	974	9.05	1048	10.27	1227	11.21	1312	12.16	1399	12.98	1546	14.13	1642	15.29	1739

NOTE:
FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

STANDARD DRAWING NO. 6020E

CURB INLET
SUMMARY OF QUANTITIES

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702

DATE OCT. '04

STANDARD DRAWING NO. 6020E

811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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LITTLETON, COLORADO 80127
303.801.7333
MICHAEL PRYOR

CLIENT

LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON,
STATE OF TEXAS

CONSTRUCTION DETAILS
STORM DETAILS

DATE 4/7/2025

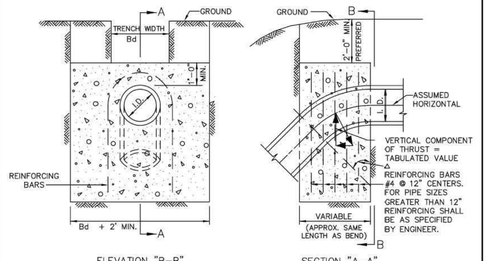
A	1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B	2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

REVISIONS

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 69

CAD FILE: 24007256-PH2-DTLS.DWG

C:\USERS\MICHAEL.PRYOR\DESKTOP\WORK FILES\LOIS\24007256-PH2-DTLS.DWG 4/7/2025 2:39 PM MICHAEL PRYOR



ELEVATION "B–B"
N.T.S.

SECTION "A–A"
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

Δ	11.25°		22.50°		30°		45°		67.50°		90°		Δ
I.D. (IN.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	I.D. (IN.)
4,6,8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4,6,8
10,12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10,12
16,18	5.0	2.5	9.7	4.9	12.7	6.4	18.0	9.0	23.5	11.8	25.5	12.7	16,18
20	6.1	3.1	12.0	6.0	15.7	7.9	22.2	11.1	29.2	14.5	31.4	15.7	20
24	8.2	4.4	17.3	8.7	22.6	11.3	32.0	16.0	41.8	20.9	45.2	22.6	24
30	10.5	5.2	20.3	10.1	26.5	13.3	37.5	18.8	49.0	24.5	53.1	26.5	30
36	14.9	7.5	29.2	14.6	38.2	19.1	54.0	27.0	70.5	35.3	76.4	38.2	36
42	20.3	10.1	39.8	19.9	52.0	26.0	73.5	36.7	96.0	48.0	104.0	52.0	42
48	26.5	13.2	51.9	26.0	67.9	33.9	96.0	48.0	126.0	62.7	136.0	67.9	48
54	33.5	16.8	65.7	32.9	85.9	42.9	122.0	60.7	159.0	79.4	172.0	85.9	54
60	41.4	20.7	81.2	40.6	106.0	53.0	150.0	75.0	196.0	98.0	212.0	106.0	60
66	50.1	25.0	98.2	49.1	128.0	64.2	182.0	90.7	237.0	119.0	257.0	128.0	66
72	59.6	29.8	117.0	58.4	153.0	76.3	216.0	108.0	282.0	141.0	305.0	153.0	72
78	69.9	35.0	137.0	68.6	179.0	90.0	254.0	127.0	331.0	166.0	358.0	179.0	78
84	81.1	40.5	159.0	79.5	208.0	104.0	294.0	147.0	384.0	192.0	416.0	208.0	84
90	93.1	46.5	183.0	91.3	239.0	119.0	337.0	169.0	441.0	221.0	477.0	239.0	90
96	106.0	53.0	208.0	104.0	272.0	136.0	384.0	192.0	502.0	251.0	543.0	272.0	96

VERTICAL THRUST BLOCK
AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.4
DATE OCT. '04
STANDARD DRAWING NO. 4030

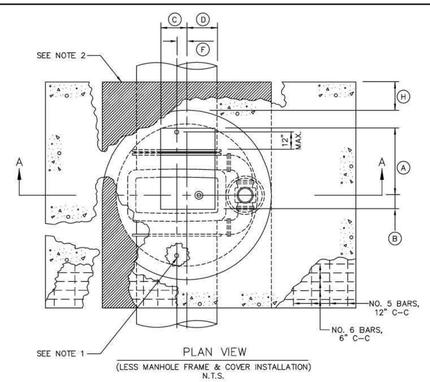
GENERAL NOTES FOR ALL THRUST BLOCKS:

1. CONCRETE FOR BLOCKING SHALL BE CLASS "B".
2. ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR DUCTILE IRON, P.V.C., AND 150 PSI FOR CONCRETE PIPE.
3. VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
4. WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
5. POUR CONCRETE FOR BLOCK AGAINST UNDISTURBED EARTH.
6. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
7. THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
8. USE POLYETHYLENE WRAP OR EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT THE CONCRETE FROM STICKING TO IT.
9. CONCRETE SHALL NOT EXTEND BEYOND JOINTS.

THRUST BLOCK
GENERAL NOTES

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.4
DATE OCT. '04
STANDARD DRAWING NO. 4040



PLAN VIEW
(LESS MANHOLE FRAME & COVER INSTALLATION)
N.T.S.

GATE VALVE SIZE	DIMENSION TABLE										
	A	B	C	D	E	F	G	H	J	K	L	M
16"	20"	20"	12"	12"	44 1/2"	1"	48"	12"	10"	24"	12"	16"
18"	20"	20"	12"	12"	51 3/8"	2"	48"	12"	12"	24"	12"	18"
20"	22"	18"	12"	12"	56 5/8"	1"	54"	12"	12"	24"	16"	20"
24"	26"	14"	12"	12"	64 3/8"	1"	60"	18"	14"	30"	18"	24"
30"	28"	12"	12"	12"	80 5/8"	3"	66"	18"	18"	30"	20"	30"
36"	32"	8"	12"	12"	90 1/16"	4"	72"	18"	18"	36"	24"	36"
42"	34"	6"	15"	9"	107 3/4"	5"	78"	24"	20"	36"	30"	42"
48"	36"	4"	14"	10"	121 5/8"	4"	90"	24"	26"	42"	36"	48"
54"	36"	4"	9"	15"	142 1/2"	3"	102"	24"	32"	46"	40"	54"

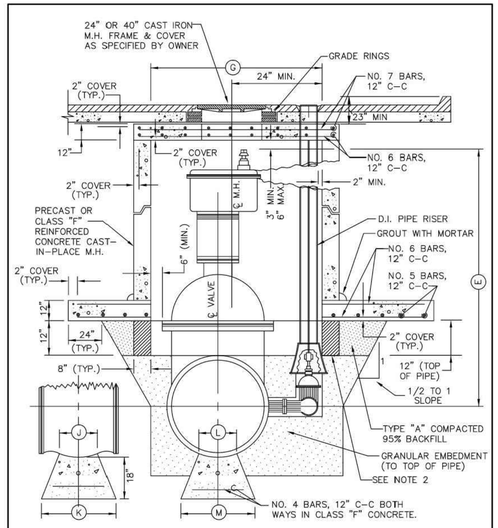
NOTES:
1. PROVIDE CORPORATION AND CURB STOPS A MAXIMUM OF 12" FROM EACH END OF GATE VALVE, AS SHOWN. CORPORATION AND CURB STOP SIZES SHALL BE 1" FOR 16", 20", AND 24" NOMINAL PIPE DIAMETERS, 2" FOR 30" AND LARGER DIAMETERS. 2" TAPS SHALL BE MADE AS A 2" FLANGED OUTLET WITH INSULATED ADAPTOR KIT. COPPER RISERS SHALL BE PROVIDED BETWEEN THE CORPORATION AND CURB STOPS. CURB STOPS SHALL BE INSTALLED AT AN ELEVATION 12" ABOVE THE TOP SURFACE OF VAULT BOTTOM SLAB.
2. POLYURETHANE CUSHION PAD.

VAULT CONSTRUCTION
VERTICAL GATE VALVE ≥ 16"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702.5 *
DATE OCT. '04
STANDARD DRAWING NO. 4070A

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*



SECTION "A–A"

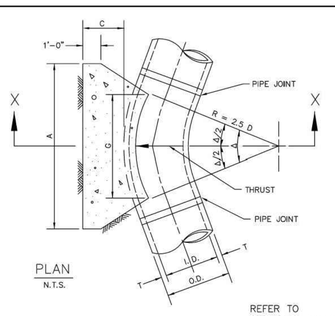
REFER TO STD. DWG. 4070A FOR DIMENSION TABLE AND GENERAL NOTES.

VAULT CONSTRUCTION
VERTICAL GATE VALVE ≥ 16"

North Central Texas Council of Governments

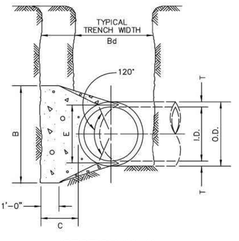
STANDARD SPECIFICATION REFERENCE 702.5 *
DATE OCT. '04
STANDARD DRAWING NO. 4070B

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*



PLAN
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

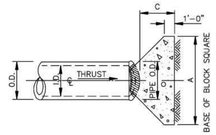


SECTION X–X
N.T.S.

HORIZONTAL THRUST BLOCK
AT PIPE BEND

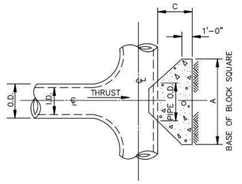
North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.4
DATE OCT. '04
STANDARD DRAWING NO. 4010A



PLAN OF PLUG THRUST BLOCK
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.



PLAN OF TEE THRUST BLOCK
N.T.S.

I.D. (IN.)	THRUST (TONS)	C (FT.)	EARTH A (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK VOL. (C.Y.)
4,6,8	5.1	1.5	2.5	0.3	2.0	0.2
10,12	11.3	1.5	3.5	0.6	2.5	0.3
16,18	25.5	2.0	5.5	1.6	4.0	0.9
20	31.5	2.0	6.0	1.9	4.0	0.9
24	45.2	2.5	7.0	3.1	5.0	1.7
30	53.0	3.0	7.5	4.1	5.5	2.4
36	76.3	4.0	9.0	7.3	6.5	4.2
42	104.0	4.5	10.5	11.0	7.5	6.2
48	136.0	5.0	12.0	15.6	8.5	8.7
54	172.0	5.5	13.5	21.4	9.5	11.9
60	212.0	6.0	15.0	28.4	10.5	15.7
66	257.0	6.5	16.5	36.8	11.5	20.5
72	305.0	7.5	17.5	47.2	12.5	27.2
78	358.0	8.0	19.0	58.9	13.5	33.7
84	416.0	8.5	20.5	72.3	14.5	41.2
90	477.0	9.0	22.0	87.7	15.5	49.7
96	543.0	9.5	23.5	104.8	16.5	61.0

HORIZONTAL THRUST BLOCK
AT TEES AND PLUGS

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.4
DATE OCT. '04
STANDARD DRAWING NO. 4020

I.D. (IN.)	T (IN.)	Δ = 11.25° C (FT.)	Δ = 22.50° C (FT.)	E (FT.)
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.3
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2

	Δ = 11.25°							Δ = 22.50°						
			EARTH			ROCK				EARTH			ROCK		
I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1
16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.0	0.4
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.5	6.0	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.3	72	6.6	119.1	11.0	11.0	17.6	7.5	8.0	9.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8

TABLES OF DIMENSIONS AND QUANTITIES

HORIZONTAL THRUST BLOCK
AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.4
DATE OCT. '04
STANDARD DRAWING NO. 4010B

	Δ = 30°							Δ = 45°						
			EARTH			ROCK				EARTH			ROCK		
I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4,6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4,6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4	16,18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	8.5	5.0	3.2	5.5	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	58.5	10.0	6.0	5.3	6.5	4.5	2.6
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	8.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.6
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5

	Δ = 67.50°							Δ = 90°						
			EARTH			ROCK				EARTH			ROCK		
I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4,6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4,6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5
16,18	4.7	28.3	7.5	4.0	1.9	5.5	3.0	0.9	16,18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.6	44.4	10.0	4.5	3.1	6.0	4.0	1.5
24	6.2	50.3	11.5	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	4.0	2.1
30	7.8	58.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.7	10.0	4.0	3.3
36	9.4	84.9	14.5	6.0	8.2	9.5	4.5	3.8	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5	5.3
42	10.9	115.5	17.0	7.0	12.8	11.0	5.5	6.3	42	13.9	147.0	21.0	7.0	17.8	14.0	5.5	8.7
48	12.5	150.9	19.0	8.0	18.4	13.0	6.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0	12.4
54	14.0	191.0	21.5	9.0	26.0	15.0	6.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0	18.1
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.6	60	19.9	299.8	30.0	10.0	50.3	20.0	7.5	24.0
66	17.1	285.3	26.0	11.0	46.0	18.0	9.0	23.0	66	21.8	362.8	33.0	11.0	66.2	22.0	8.5	32.5
72	18.7	339.5	28.5	12.0	57.8	19.0	9.0	28.4	72	23.8	431.8	36.0	12.0	85.6	24.0	9.0	41.0
78	20.2	398.5	31.0	13.0	75.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0	53.2
84	21.8	462.1	33.5	14.0	94.7	22.0	10.5	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5	64.8
90	23.3	530.5	35.5	15.0	114.4	24.5	11.0	58.2	90	29.0	674.6	45.0	15.0	164.9	30.0	11.5	81.2
96	24.9	603.6	38.0	16.0	138.9	25.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199.0	32.0	12.0	95.1

TABLES OF DIMENSIONS AND QUANTITIES

HORIZONTAL THRUST BLOCK
AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.4
DATE OCT. '04
STANDARD DRAWING NO. 4010C

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CONSTRUCTION DETAILS
WATER DETAILS

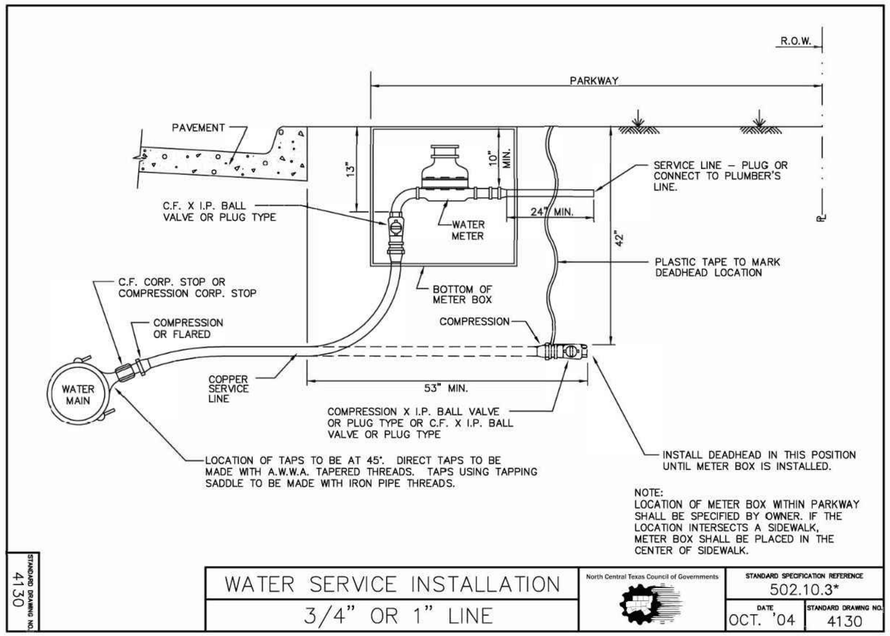
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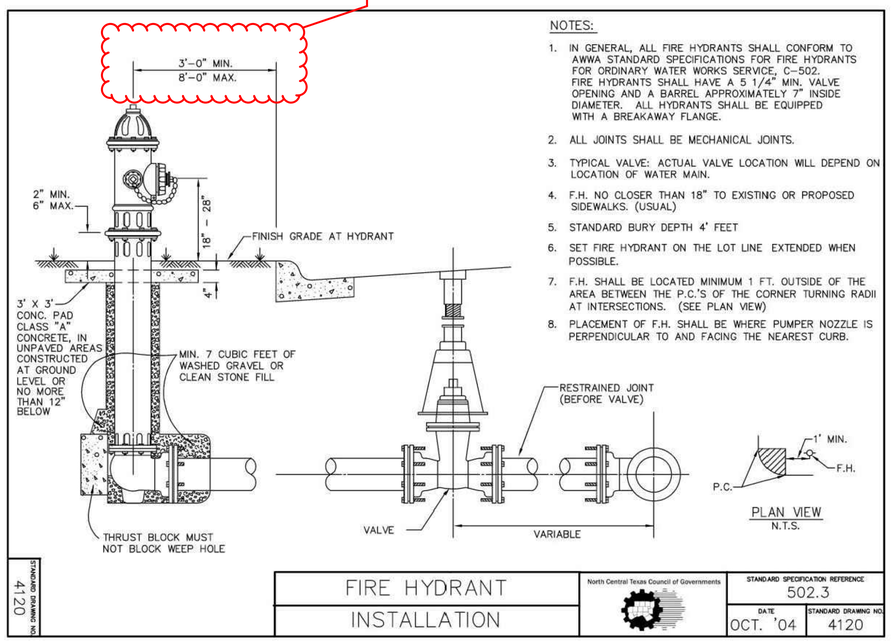
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STANDARD DRAWING NO. 4130

WATER SERVICE INSTALLATION 3/4" OR 1" LINE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10.3*	
		DATE OCT. '04	STANDARD DRAWING NO. 4130

Confirm min. placement with typical section note



NOTES:

1. IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, C–502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN. VALVE OPENING AND A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
2. ALL JOINTS SHALL BE MECHANICAL JOINTS.
3. TYPICAL VALVE: ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
4. F.H. NO CLOSER THAN 18" TO EXISTING OR PROPOSED SIDEWALKS. (USUAL)
5. STANDARD BURY DEPTH 4' FEET
6. SET FIRE HYDRANT ON THE LOT LINE EXTENDED WHEN POSSIBLE.
7. F.H. SHALL BE LOCATED MINIMUM 1 FT. OUTSIDE OF THE AREA BETWEEN THE P.C.'S OF THE CORNER TURNING RADII AT INTERSECTIONS. (SEE PLAN VIEW)
8. PLACEMENT OF F.H. SHALL BE WHERE PUMPER NOZZLE IS PERPENDICULAR TO AND FACING THE NEAREST CURB.

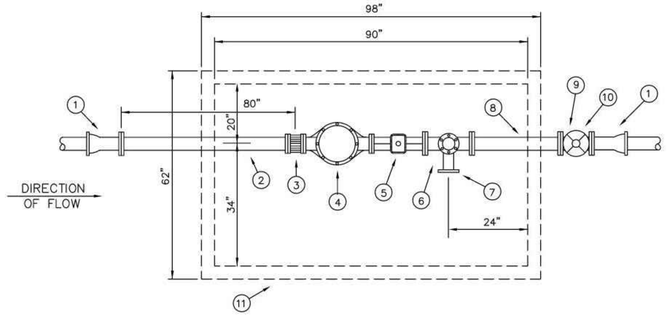
STANDARD DRAWING NO. 4120

FIRE HYDRANT INSTALLATION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.3	
		DATE OCT. '04	STANDARD DRAWING NO. 4120

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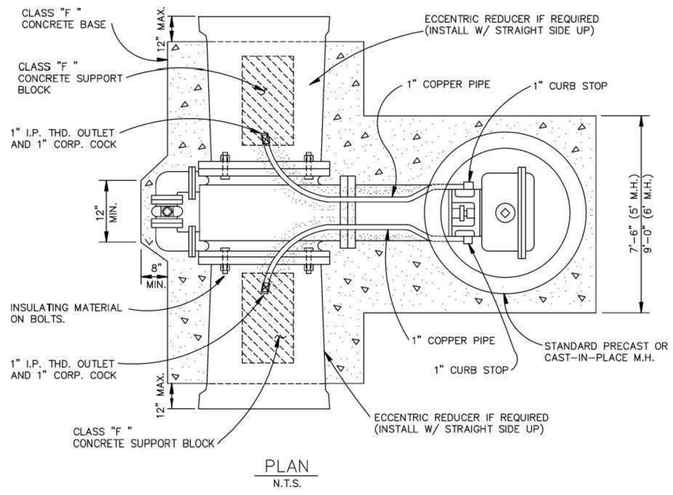
MATERIALS LIST		
PART NO.	QUANTITY	DESCRIPTION
①	2 EA.	8" X 12" D.I. NIPPLE M.J. X F.
②	1 EA.	8" X 36" D.I. NIPPLE F. X SLEEVE
③	1 EA.	8" FLANGED COUPLING ADAPTER
④	1 EA.	8" U.L. APPROVED (FOR TURBINE)
⑤	1 EA.	8" TURBINE METER
⑥	1 EA.	8" X 4" D.I. TEE F. X F. (TEST PT)
⑦	1 EA.	8" BLIND FLG F. X F.

MATERIALS LIST		
PART NO.	QUANTITY	DESCRIPTION
⑧	1 EA.	8" X 24" D.I. NIPPLE F X F.
⑨	1 EA.	8" GATE VALVE F. X F.
⑩	1 EA.	VALVE STACK RISER COVER & LID
⑪	1 EA.	PRECAST METER VAULT
	1 EA.	VAULT FLOOR (NOT SHOWN)
	1 EA.	ACCESS HATCH (NOT SHOWN)



STANDARD DRAWING NO. 4170

8" FIRE LINE STANDPIPE SERVICE WITH 8" METER	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10	
		DATE OCT. '04	STANDARD DRAWING NO. 4170



STANDARD DRAWING NO. 4060A

VAULT CONSTRUCTION HORIZONTAL GATE VALVE ≧ 16"	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702.5.8.8*	
		DATE OCT. '04	STANDARD DRAWING NO. 4060A

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*

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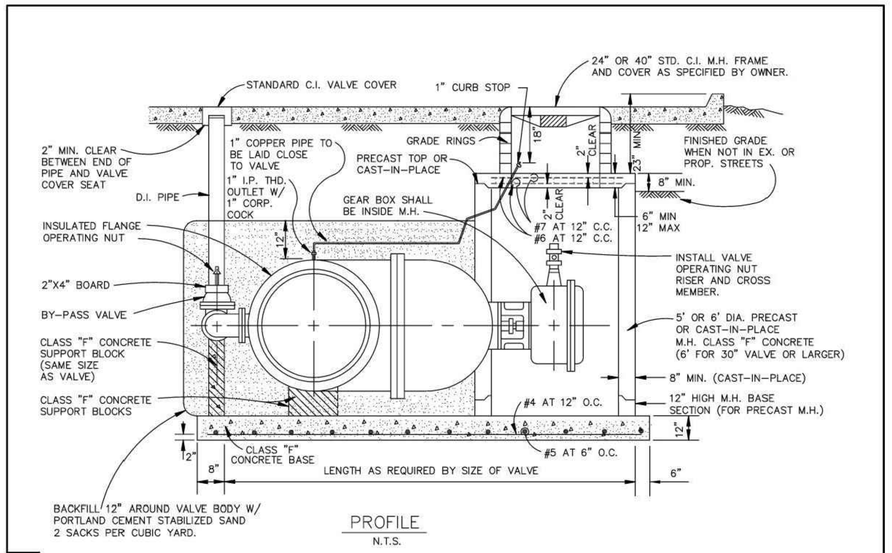
CONSTRUCTION DETAILS
WATER DETAILS

DATE 4/7/2025

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PROFILE
N.T.S.

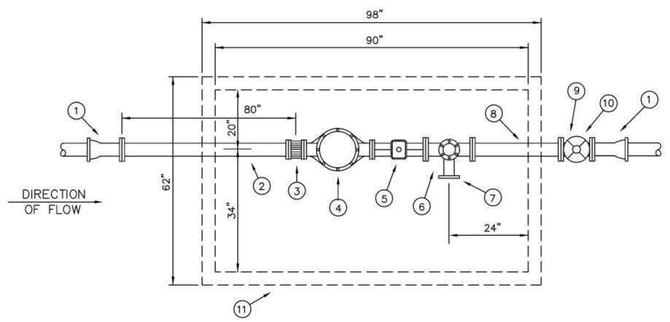
STANDARDS DRAWING NO. 4060B

VAULT CONSTRUCTION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702.5.8.8*	
HORIZONTAL GATE VALVE ≥ 16"		DATE OCT. '04	STANDARD DRAWING NO. 4060B

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*

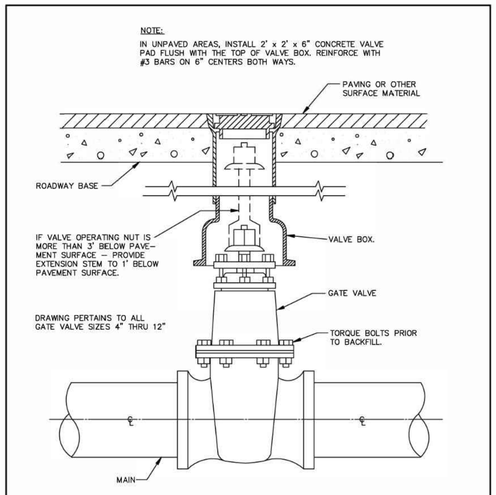
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③	1 EA.	8" FLANGED COUPLING ADAPTER
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⑪	1 EA.	PRECAST METER VAULT
	1 EA.	VAULT FLOOR (NOT SHOWN)
	1 EA.	ACCESS HATCH (NOT SHOWN)



STANDARDS DRAWING NO. 4170

8" FIRE LINE STANDPIPE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10	
SERVICE WITH 8" METER		DATE OCT. '04	STANDARD DRAWING NO. 4170



GATE VALVE BOX AND EXTENSION STEM
N.T.S.

GATE VALVE 4" TO 12" BOX & EXTENSION STEM	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.6.6*	
		DATE OCT. '04	STANDARD DRAWING NO. 4050

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*

Provide embedment details for water, sewer, and storm pipes

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CONSTRUCTION DETAILS
WATER DETAILS

DATE 4/7/2025

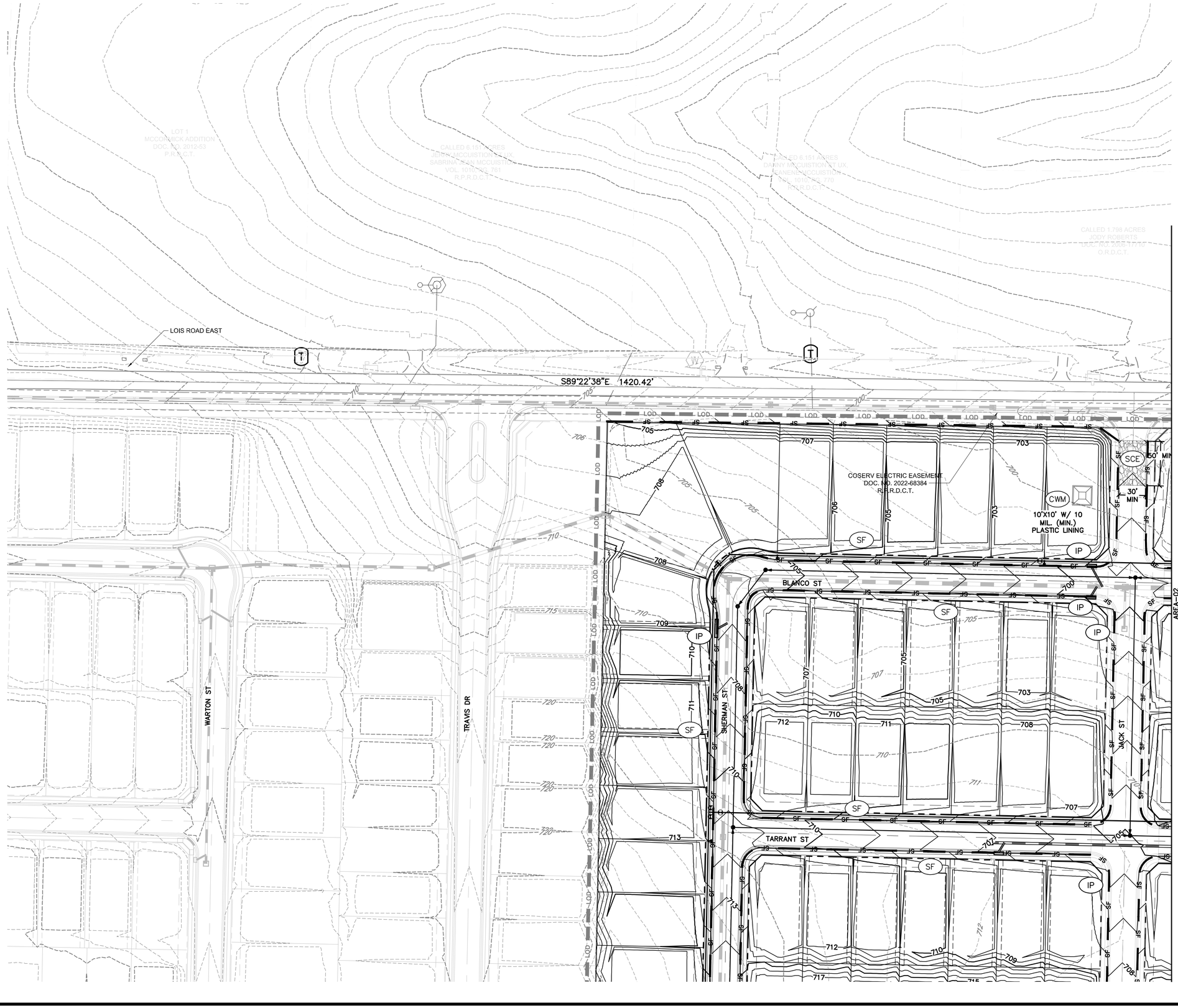
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SHEET NO. 72

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KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED CONTOURS
- EXISTING CONTOURS
- LOC — LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- DD — DIVERSION DITCH
- SP — STOCK PILE
- SB — SEDIMENT BASIN
- CWM — CONCRETE WASTE MANAGEMENT
- SCE — STABILIZED CONSTRUCTION EXIT
- ST — SEDIMENT TRAP
- IP — INLET PROTECTION

BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS-OF-WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON NAD 83 TEXAS STATE PLANE COORDINATES, NORTH CENTRAL ZONE, NAVD 88.

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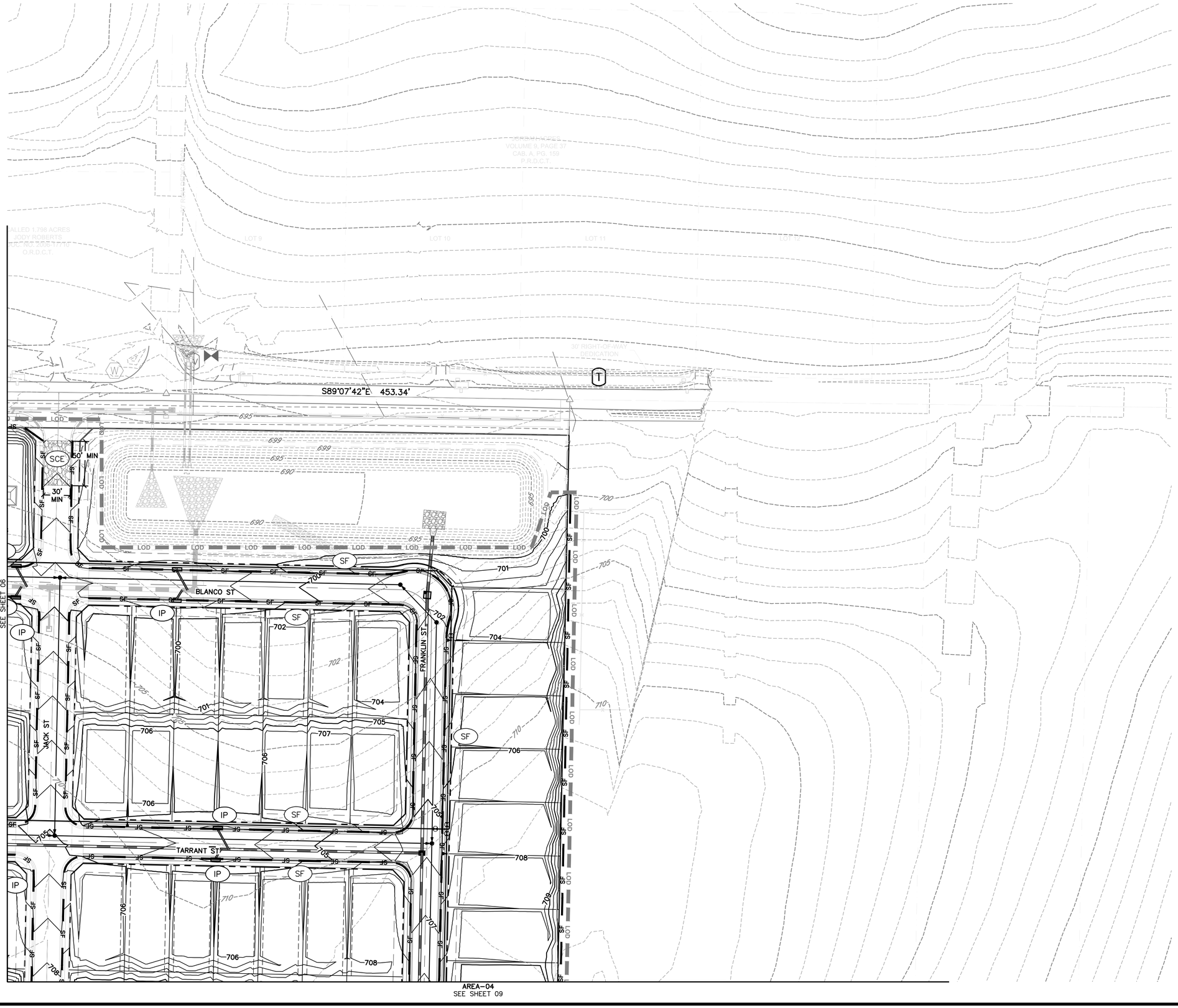
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STORM WATER POLLUTION PREVENTION PLAN
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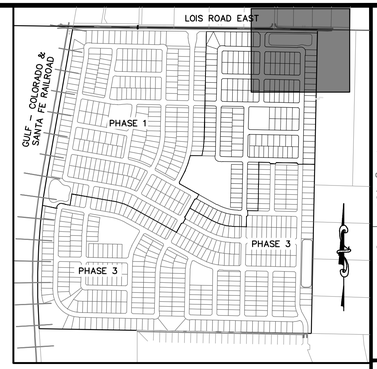
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LOIS ROAD ESTATES – FILING NO. 3
CITY OF SANGER, COUNTY OF DENTON, STATE OF TEXAS
STORM WATER POLLUTION PREVENTION PLAN SWPPP-2

DATE 4/7/2025

REVISIONS
A 1st SUBMITTAL TO JURISDICTION 4/7/2025 – KMB
B 2nd SUBMITTAL TO JURISDICTION 5/14/2025 – KMB

DR. TN | CH. KB
P.M. JF
JOB 24007256
SHEET NO. 74

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AREA–01
SEE SHEET 06

AREA–04
SEE SHEET 09

AREA–05
SEE SHEET 10

CALLED 202.49 ACRES
STC GROUP MILLER, LLC

202.45 ACRES
8,818,326 SQ.FT.

WARTON ST
TRAVIS DR
SHERMAN ST
DALLAS DR
JACK ST
BEXAR ST
SABINE ST
AUSTIN LN
TRAVIS DR
WARTON ST

LOIS ROAD EAST
GULF – COLORADO & SANTA FE RAILROAD
PHASE 1
PHASE 3
PHASE 3

KEYMAP
1"=750'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- EXISTING SECTION LINE
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- EXISTING EASEMENT
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- SCE — STABILIZED CONSTRUCTION EXIT
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BENCHMARK:
AN "X" CUT IN CONCRETE LOCATED WITHIN THE INTERSECTION OF LOIS ROAD EAST AND THE GULF COAST AND SANTA FE RAILROAD RIGHTS–OF–WAY, HAVING AN ELEVATION OF 729.3 FEET, A NORTHING COORDINATE VALUE OF 7,192,162.0, AND AN EASTING COORDINATE VALUE OF 2,374,666.1.

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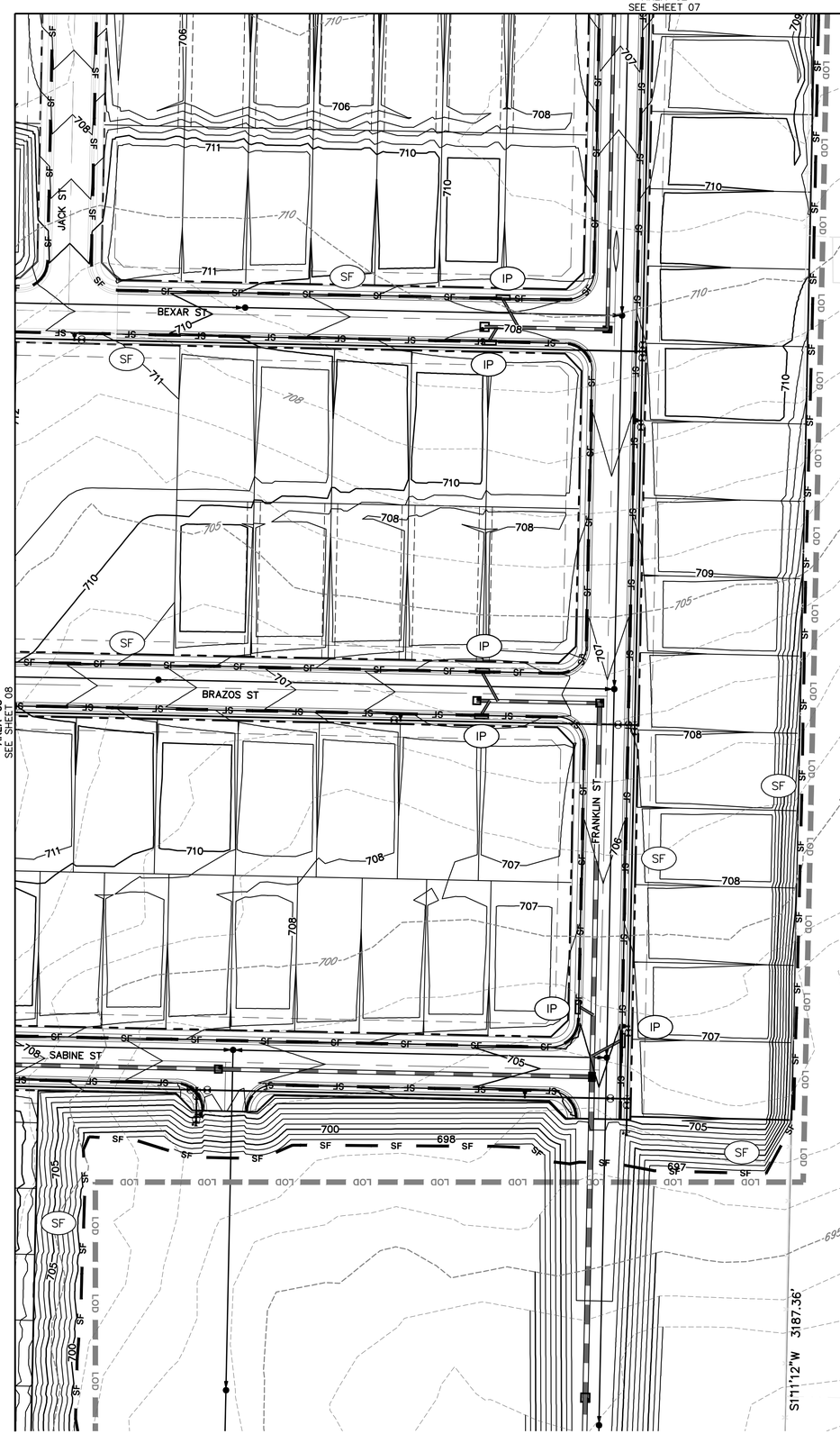
STORM WATER POLLUTION PREVENTION PLAN
SWPPP–3

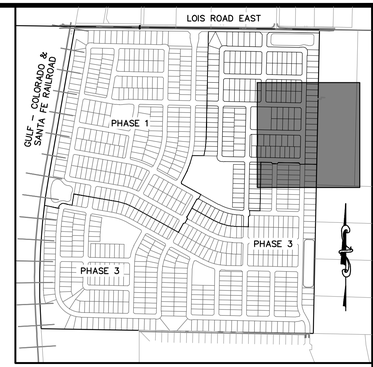
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KEYMAP
1"=750'

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50 0 50 100
(IN FEET)
1 inch = 50 ft.

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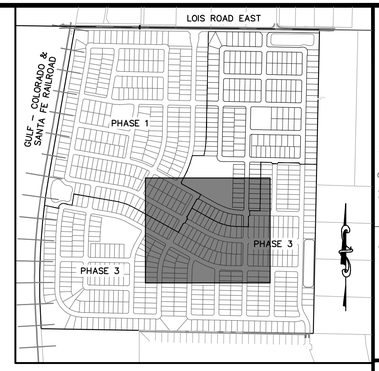
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AREA–03
SEE SHEET 08





KEYMAP
1"=750'

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SWPPP–5

DATE 4/7/2025

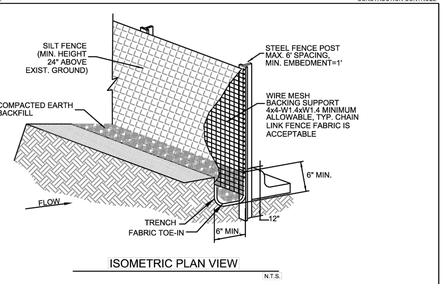
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P.M. JF
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SHEET NO. 77

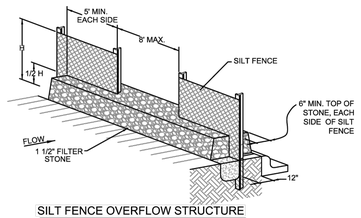
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REVISED IN 2018



ISOMETRIC PLAN VIEW

N.T.S.



SILT FENCE OVERFLOW STRUCTURE

N.T.S.

FIGURE 3.28 STANDARD CONSTRUCTION DETAIL - FOR SILT FENCE (1 OF 2)

SILT FENCE REVISED

REVISED IN 2018

SILT FENCE GENERAL NOTES:

1. DESIGN SHALL SHOW ON THE DRAWINGS THE LOCATIONS WHERE OVERFLOW STRUCTURES SHALL BE INSTALLED. OVERFLOW STRUCTURES ARE REQUIRED AT ALL LOW POINTS AND AT A SPACING OF APPROXIMATELY 300 FEET WHERE NO LOW POINT IS APPARENT.

2. DESIGNER SHALL SHOW ON THE DRAWINGS THE LOCATIONS WHERE SILT FENCE IS TO BE TURNED UPSLOPE AT THE ENDS. UPSLOPE LENGTHS SHALL BE A MINIMUM OF 10 FEET.

3. POST WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.

4. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

5. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

6. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WIRE BACKING, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

7. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

8. SILT FENCE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.

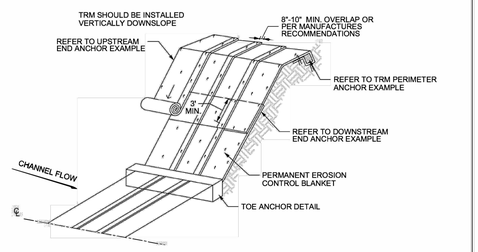
9. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

10. SEE NCTCOG STANDARD SPECIFICATIONS (2017), SECTION 202.5

FIGURE 3.28 NOTES FOR SILT FENCE (2 OF 2)

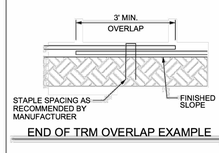
SILT FENCE REVISED

REVISED IN 2019



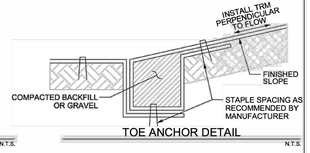
TRM HALF ISOMETRIC PLAN VIEW

N.T.S.



END OF TRM OVERLAP EXAMPLE

N.T.S.



TOE ANCHOR DETAIL

N.T.S.

TURF REINFORCEMENT MATS NOTES:

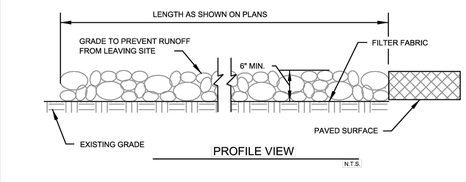
1. TURF REINFORCEMENT MATS SHALL BE INSTALLED VERTICALLY DOWN SLOPE AS SHOWN.

2. PRIOR TO THE INSTALLATION: ALL ROCKS, DIRT CLODS, STUMPS, ROOTS, TRASH AND ANY OTHER OBSTRUCTIONS THAT WOULD PREVENT THE MAT FROM DIRECT CONTACT WITH THE FINISHED SLOPE, SHALL BE REMOVED.

FIGURE 2.11 SCHEMATICS OF PERMANENT TURF REINFORCEMENT MATS (1 OF 3)

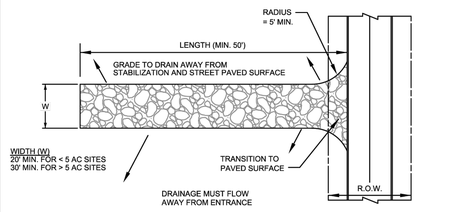
TURF REINFORCEMENT MATS REVISED

REVISED IN 2018



PROFILE VIEW

N.T.S.



PLAN VIEW

N.T.S.

ENTRACE MUST BE SLOPED SO THAT STORM WATER IS NOT ALLOWED TO LEAVE THE SITE AND ENTER ROADWAYS

FIGURE 3.29 STANDARD CONSTRUCTION DETAIL - STABILIZED CONSTRUCTION EXIT (1 OF 2)

STABILIZED CONSTRUCTION EXIT REVISED

REVISED IN 2018

STABILIZED CONSTRUCTION ENTRANCE GENERAL NOTES:

1. SEE NCTCOG STANDARD SPECIFICATIONS (2017), SECTION 202.11

2. THE THICKNESS SHALL NOT BE LESS THAN 6 INCHES.

3. STONE SHALL BE 3 TO 5 INCH DIAMETER COURSE AGGREGATE, NO CRUSHED PORTLAND CEMENT CONCRETE ALLOWED.

4. LENGTH SHALL BE SHOWN ON PLANS, WITH A MINIMUM LENGTH OF 50 FEET.

5. THE WIDTH SHALL BE NO LESS THAN 20' FOR SITES LESS THAN 5 AC, AND 30' FOR SITES GREATER THAN 5 AC, AT ALL POINTS OF INGRESS OR EGRESS.

6. WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PAVED SURFACES MUST BE REMOVED IMMEDIATELY.

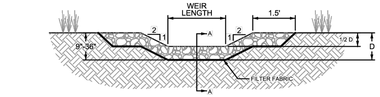
8. THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

9. INSPECTION SHALL BE SPECIFIED IN THE SWPPP.

FIGURE 3.29 NOTES FOR STABILIZED CONSTRUCTION EXIT (2 OF 2)

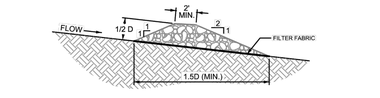
STABILIZED CONSTRUCTION EXIT REVISED

REVISED IN 2018



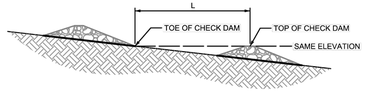
ROCK CHECK DAM VIEW LOOKING UPSTREAM

N.T.S.



CROSS SECTION A-A

N.T.S.



SPACE BETWEEN ROCK CHECK DAMS

N.T.S.

NOTES:
ACTUAL DIMENSIONS OF THE CHECK DAMS SHALL BE DESIGNED BASED ON FLOW CONDITIONS IN THE DRAINAGE SWALE OR DITCH. PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETERS USED TO DESIGN THE CHECK DAM.

-HEIGHT OF CHECK DAMS (D) BASED ON SWALE OR DITCH DIMENSIONS AND FLOW CONDITIONS

-SPACING OF CHECK DAMS BASED ON GRADE OF THE SWALE OR DITCH, TOP OF DOWNSTREAM DAM SHALL BE AT THE SAME ELEVATION AS TOE OF UPSTREAM DAM

FIGURE 2.1 STANDARD CONSTRUCTION DETAIL - ROCK CHECK DAMS (1 OF 2)

CHECK DAM REVISED

REVISED IN 2018

ROCK CHECK DAM GENERAL NOTES:

1. SEE NCTCOG STANDARD SPECIFICATIONS (2017), SECTION 202.9 CHECK DAM (ROCK).

2. STONE SHALL BE WELL GRADED WITH SIZE RANGE FROM 1 1/2 TO 3 1/2 INCHES IN DIAMETER DEPENDING ON EXPECTED FLOWS.

3. THE CHECK DAM SHALL BE INSPECTED AS SPECIFIED IN THE SWPPP AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD OF THE HEIGHT OF THE CHECK DAM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.

5. WHEN THE SITE HAS ACHIEVED FINAL STABILIZATION OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED, THE CHECK DAM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

FIGURE 2.1 NOTES ON ROCK CHECK DAM (2 OF 2)

CHECK DAM REVISED

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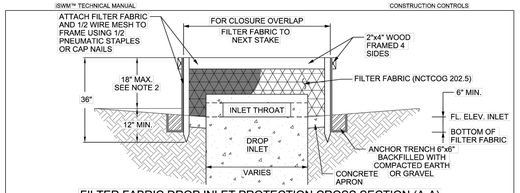
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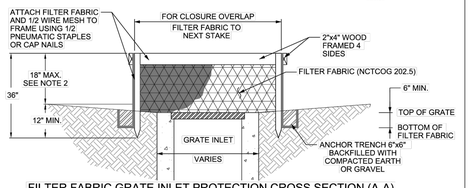
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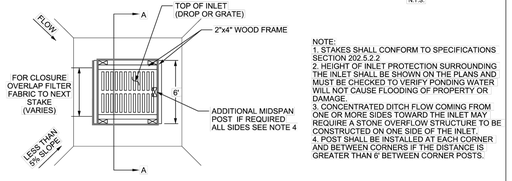
REVISED IN 2019



FILTER FABRIC DROP INLET PROTECTION CROSS SECTION (A-A)
N.T.S.



FILTER FABRIC GRATE INLET PROTECTION CROSS SECTION (A-A)
N.T.S.



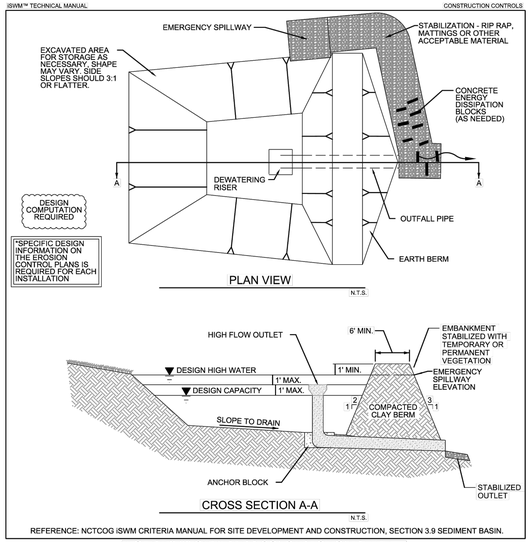
NOTE:
1. STAKES SHALL CONFORM TO SPECIFICATIONS SECTION 202.5.2.2
2. HEIGHT OF INLET PROTECTION SURROUNDING THE INLET SHALL BE SHOWN ON THE PLANS AND MUST BE CHECKED TO VERIFY PONDING WATER WILL NOT CAUSE FLOODING OF PROPERTY OR DAMAGE.
3. CONCENTRATED DITCH FLOW COMING FROM ONE OR MORE SIDES TOWARD THE INLET MAY REQUIRE A STONE OVERFLOW STRUCTURE TO BE CONSTRUCTED ON ONE SIDE OF THE INLET.
4. POST SHALL BE INSTALLED AT EACH CORNER AND BETWEEN CORNERS IF THE DISTANCE IS GREATER THAN 6' BETWEEN CORNER POSTS.

AREA INLET PROTECTION FILTER BARRIER PLAN VIEW
N.T.S.

FIGURE 3.10 SCHEMATICS OF FILTER FABRIC AREA INLET PROTECTION

INLET PROTECTION
REVISED

REVISED IN 2018



PLAN VIEW
N.T.S.

CROSS SECTION A-A
N.T.S.

REFERENCE: NCTCOG iSWM CRITERIA MANUAL FOR SITE DEVELOPMENT AND CONSTRUCTION, SECTION 3.9 SEDIMENT BASIN.

FIGURE 3.20 STANDARD CONSTRUCTION DETAIL - SEDIMENT BASIN WITH OVERFLOW RISER

SEDIMENT BASIN
REVISED

811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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CITY OF SANGER, COUNTY OF DENTON,
STATE OF TEXAS
STORM WATER POLLUTION PREVENTION PLAN
SWPPP DETAILS

DATE 4/7/2025

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