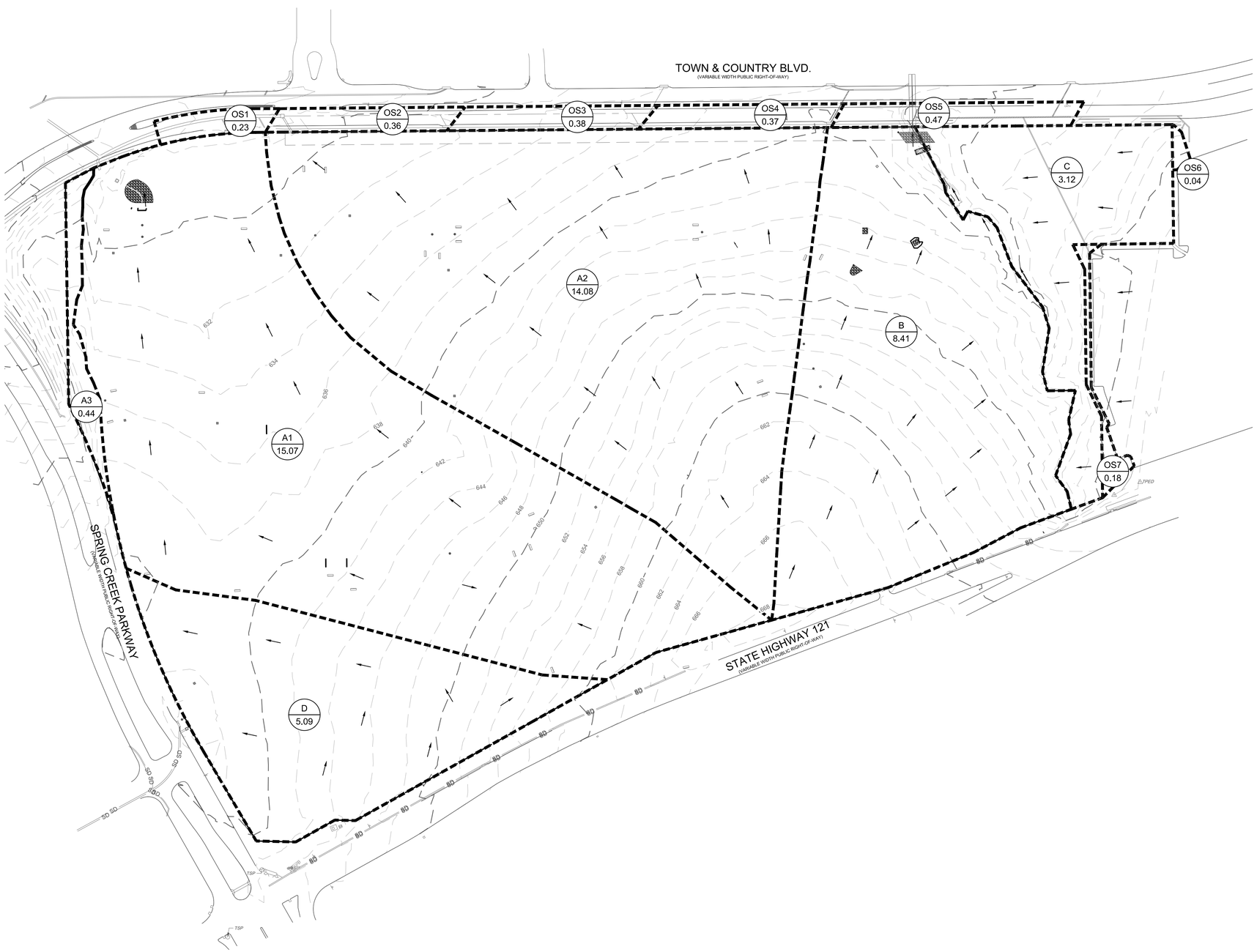

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0 50 100 200

SCALE 1" = 100'

EXISTING DRAINAGE AREA LEGEND

XXX	EXISTING CONTOUR
	EXISTING DRAINAGE AREA
	FLOW DIRECTION
X1 / 1.0	DRAINAGE AREA DESIGNATOR / DRAINAGE AREA ACREAGE

EXISTING DRAINAGE AREA CALCULATIONS

EXISTING DRAINAGE AREAS					
AREA	AC	C	Tc (min)	I_{100} (in/hr)	Q_{100} (in/hr)
A1	15.07	0.9	26.15	8.74	118.54
A2	14.08	0.9	26.15	8.74	110.75
B	8.41	0.9	26.16	8.74	66.15
C	3.12	0.9	10	8.74	24.54
D	5.09	0.9	20.46	8.74	40.04

NOTES:

- AREAS A AND A1 BASED ON DRAINAGE AREA MAP IN TOWN AND COUNTRY PLANS PREPARED BY COBB FENDLEY ENGINEERING DATED 01/2020.
- AREA C BASED ON DRAINAGE AREA MAP IN FRISCO 45 PARK PLANS PREPARED BY KFM ENGINEERING DATED 12/22/2020.
- AREA D BASED ON DRAINAGE AREA MAP IN SPRING CREEK PARKWAY PLANS PREPARED BY SPIARS ENGINEERING DATED 10/27/2003.
- AREAS ARE REFLECTED IN APPROVED STEWART DOWNSTREAM ASSESSMENT PREPARED BY KFM ENGINEERING AND DESIGN, DATED 7/17/2020

KFM
ENGINEERING & DESIGN
3501 OLYMPUS BLVD, SUITE 100
DALLAS, TEXAS 75019
PHONE: (817) 416-4536
WWW.KFM-LLC.COM
TBPE #: F-20821

ISSUE:	DESCRIPTION:	DATE:

DELTA:	DESCRIPTION:	DATE:

CLIENT
121 SPRING CREEK, LLC

PROJECT
FRISCO 45 INFRASTRUCTURE

SHEET TITLE
EXISTING DRAINAGE AREA MAP

PRELIMINARY
NOT FOR CONSTRUCTION
KFM ENGINEERING & DESIGN
ENGINEER: Joshua A. Millsap
P.E. No.: 100118 DATE: 7/9/21

PROJECT NUMBER:
010021003

DRAWN BY: GW/LL
DESIGNED BY: JDB/TT
CHECKED BY: JAM

DATE:
06/25/21

SHEET:
C4.00

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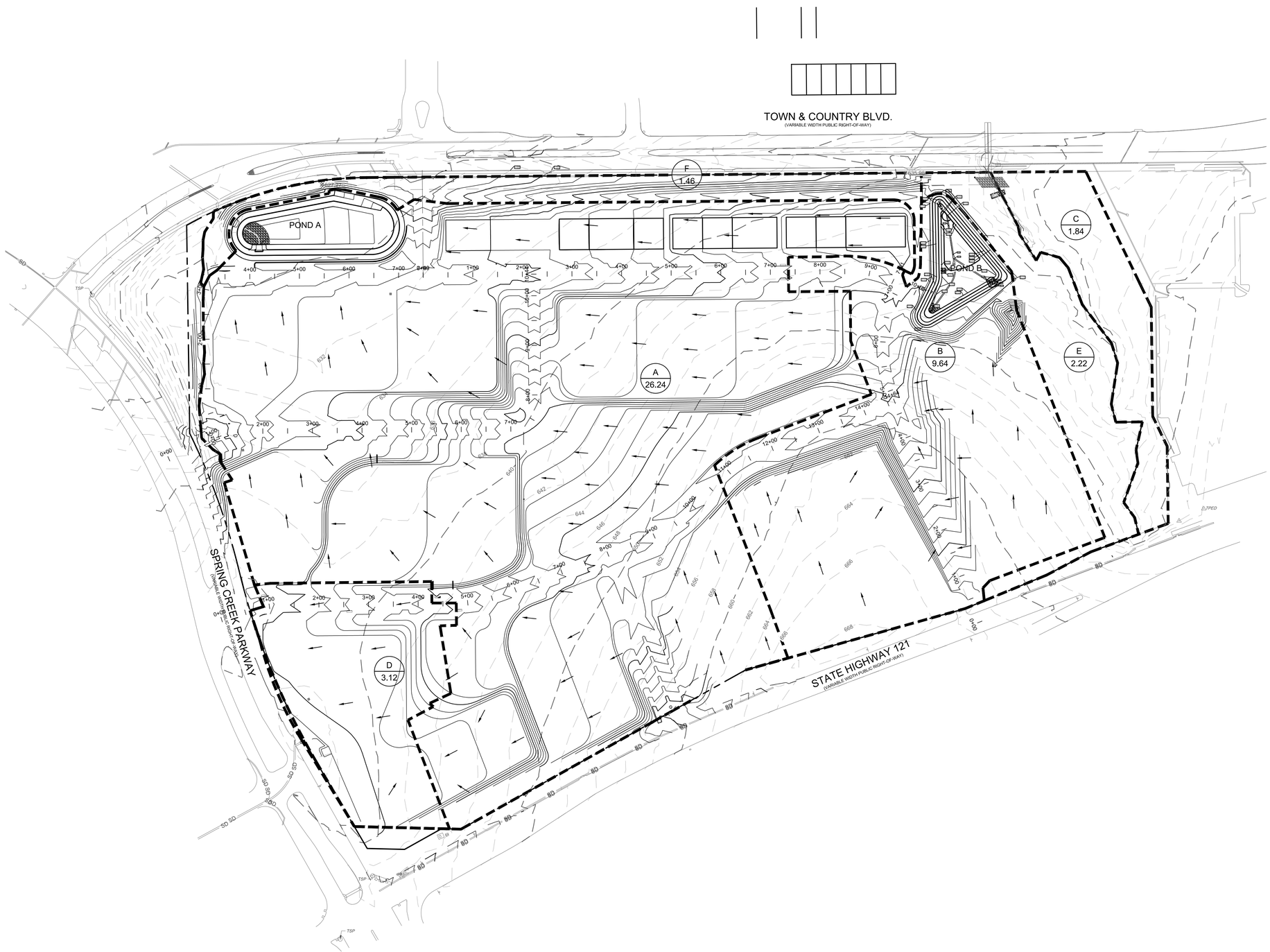

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SCALE 1" = 100'

PROPOSED DRAINAGE AREA LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED DRAINAGE AREA
- P1 / 1.0 — DRAINAGE AREA DESIGNATOR / DRAINAGE AREA ACREAGE

PROPOSED DRAINAGE A R E A S					
AREA	AC	C	Tc (min)	I_{100} (in/hr)	Q_{100} (in/hr)
A	26.24	0.9	10	8.74	206.4
B	9.64	0.9	10	8.74	75.83
C	1.84	0.9	10	8.74	14.47
D	3.12	0.9	10	8.74	24.54
E	2.22	0.9	10	8.74	17.46
F	1.46	0.9	10	8.74	11.48

Basin	Area (sq. mi)	Curve Number	TC (min.)	Lag Time (min.)
A	0.041	94	10	7.76
B	0.015	94	10	5.79
C	0.003	84	10	4.73
D	0.005	94	10	5.52
E	0.003	84	10	5.65
F	0.002	94	10	4.98

ENGINEERING NOTES

1. EXISTING DRAINAGE INFORMATION AND DRAINAGE CALCULATIONS ARE INCLUDED IN THE DOWNSTREAM ASSESSMENT PROVIDED BY KFM LLC DATED JULY 2020 .
2. PERMANENT BMP PROVIDED THROUGH ONSITE EXTENDED DETENTION BASINS A AND B.
3. ACCORDING TO FLOOD INSURANCE RATE MAP (FIRM) MAP NO. 48121C0580G DATED 04/18/2011 PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FOR DENTON COUNTY, TEXAS, THIS PROPERTY IS WITHIN ZONE "X" UNSHADED.
4. ON-SITE DETENTION LIMITING POST-DEVELOPMENT DISCHARGE TO A PRE-DEVELOPMENT RUNOFF RATE IS REQUIRED FOR ALL NEW CONSTRUCTION UNLESS A DOWNSTREAM ASSESSMENT HAS BEEN PROVIDED DEMONSTRATING THAT THE EXISTING STORM SYSTEM IS ADEQUATE TO HANDLE POST-DEVELOPMENT DISCHARGE RATES. IF REGIONAL DETENTION EXISTS FOR THIS PROJECT, PROVIDE A NOTE REFERENCING WHERE THE REGIONAL DETENTION WAS DESIGNED AND CONSTRUCTED.

!CAUTION!

CONTRACTOR TO CONTACT THE TEXAS ONE-CALL SYSTEM (1-800-344-8377) AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION. KFM IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES IN THE PROJECT AREA. IF FILED CONDITIONS DIFFER SIGNIFICANTLY FROM THE LOCATION SHOWN ON THE PLANS THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

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

BENCHMARKS

REFERENCE BENCHMARK

CITY OF FRISCO GEODETIC MONUMENT NUMBER 28.
REFERENCE ELEVATION = 623.36'

SITE BENCHMARK

CUT "X" SET AT THE NORTHEAST CORNER OF SPRING CREEK PARKWAY AND TOWN AND COUNTRY BOULEVARD.
ELEVATION = 614.03'

KFM ENGINEERING & DESIGN
3501 OLYMPUS BLVD, SUITE 100
DALLAS, TEXAS 75019
PHONE: (817) 416-4536
WWW.KFM-LLC.COM
TBPE #: F-20821

ISSUE: DESCRIPTION: DATE:

DELTA: DESCRIPTION: DATE:

CLIENT
121 SPRING CREEK, LLC

PROJECT
FRISCO 45 INFRASTRUCTURE

SHEET TITLE
PROPOSED POND DRAINAGE AREA MAP

PRELIMINARY
NOT FOR CONSTRUCTION
KFM ENGINEERING & DESIGN
ENGINEER: Joshua A. Millsap
P.E. No.: 100118 DATE: 7/9/21

PROJECT NUMBER: 010021003
DRAWN BY: GW/LL
DESIGNED BY: JDB/TT
CHECKED BY: JAM
DATE: 06/25/21
SHEET:

C4.01

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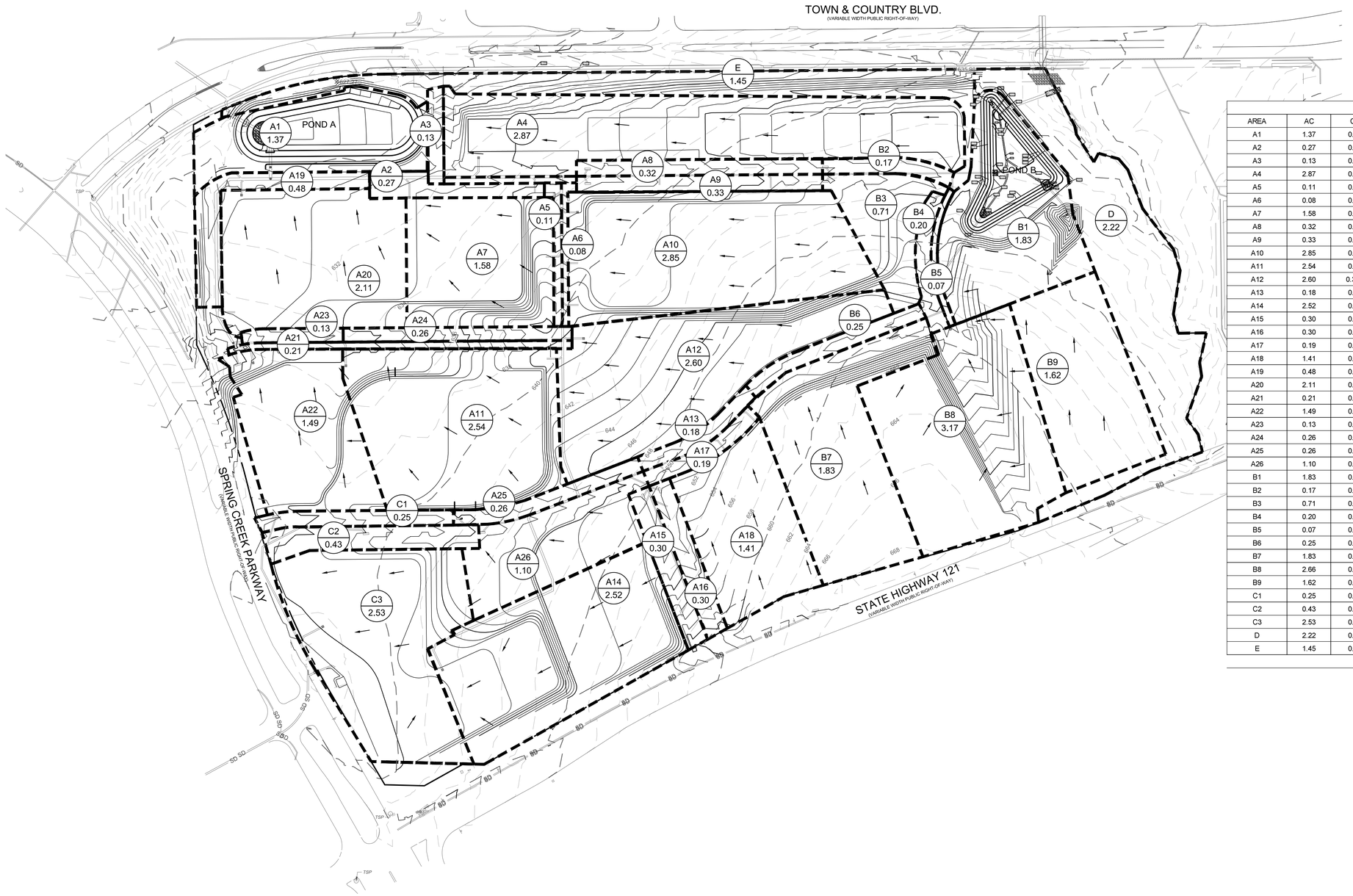

N

0 50 100 200

SCALE 1" = 100'

PROPOSED DRAINAGE AREA LEGEND

XXX	EXISTING CONTOUR
XXX	PROPOSED CONTOUR
	PROPOSED DRAINAGE AREA
P1 / 1.0	DRAINAGE AREA DESIGNATOR / DRAINAGE AREA ACREAGE

PROPOSED DRAINAGE AREAS

AREA	AC	C	Tc (min)	I_{100} (in/hr)	Q_{100} (in/hr)	NOTES
A1	1.37	0.3	10	8.74	3.59	SHEET FLOW TO POND A
A2	0.27	0.9	10	8.74	2.12	CURB INLET TO STORM A1
A3	0.13	0.9	10	8.74	1.02	CURB INLET TO STORM A1
A4	2.87	0.9	10	8.74	22.58	CURB INLET TO STORM A1
A5	0.11	0.9	10	8.74	0.87	CURB INLET TO STORM A1
A6	0.08	0.9	10	8.74	0.63	CURB INLET TO STORM A1
A7	1.58	0.9	10	8.74	12.43	WYE INLET TO STORM A1
A8	0.32	0.9	10	8.74	2.52	CURB INLET TO STORM A1
A9	0.33	0.9	10	8.74	2.6	CURB INLET TO STORM A1
A10	2.85	0.9	10	8.74	22.42	WYE INLET TO STORM A1
A11	2.54	0.9	15	8.74	19.98	WYE INLET TO STORM A1
A12	2.60	0.35	10	8.74	7.95	WYE INLET TO STORM A1
A13	0.18	0.9	10	8.74	1.42	CURB INLET TO STORM A1
A14	2.52	0.9	10	8.74	19.82	CURB INLET TO STORM A1
A15	0.30	0.9	10	8.74	2.36	CURB INLET TO STORM A1
A16	0.30	0.9	10	8.74	2.36	CURB INLET TO STORM A1
A17	0.19	0.9	10	8.74	1.49	CURB INLET TO STORM A1
A18	1.41	0.9	10	8.74	11.09	WYE INLET TO STORM A1
A19	0.48	0.9	10	8.74	3.78	CURB INLET TO STORM A2
A20	2.11	0.9	10	8.74	16.6	WYE INLET TO STORM A2
A21	0.21	0.9	10	8.74	1.65	CURB INLET TO STORM A2
A22	1.49	0.9	10	8.74	11.72	WYE INLET TO STORM A2
A23	0.13	0.9	10	8.74	1.02	CURB INLET TO STORM A2
A24	0.26	0.9	10	8.74	2.05	CURB INLET TO STORM A2
A25	0.26	0.9	10	8.74	2.05	CURB INLET TO STORM A2
A26	1.10	0.9	10	8.74	8.65	CURB INLET TO STORM A2
B1	1.83	0.3	10	8.74	4.8	HEADWALL TO POND B
B2	0.17	0.9	10	8.74	1.34	CURB INLET TO STORM B2
B3	0.71	0.9	10	8.74	5.58	CURB INLET TO STORM B2
B4	0.20	0.9	10	8.74	1.57	CURB INLET TO STORM B2
B5	0.07	0.9	10	8.74	0.55	CURB INLET TO STORM B2
B6	0.25	0.9	10	8.74	1.97	CURB INLET TO STORM B1
B7	1.83	0.9	10	8.74	14.39	CURB INLET TO STORM B1
B8	2.66	0.9	10	8.74	20.92	WYE INLET TO STORM B1
B9	1.62	0.9	10	8.74	12.74	HEADWALL TO POND B
C1	0.25	0.9	10	8.74	1.97	CURB INLET TO STORM C1
C2	0.43	0.9	10	8.74	3.38	CURB INLET TO STORM C1
C3	2.53	0.9	10	8.74	19.9	WYE INLET TO STORM C1
D	2.22	0.9	15	8.74	17.46	SHEET FLOW TO EX. DRAINAGE CHANNEL
E	1.45	0.9	15	8.74	11.41	WYE INLET TO EX. STORM
				TOTAL	302.75	

ENGINEERING NOTES

1. EXISTING DRAINAGE INFORMATION AND DRAINAGE CALCULATIONS ARE INCLUDED IN THE DOWNSTREAM ASSESSMENT PROVIDED BY KFM LLC DATED JULY 2020 .
2. PERMANENT BMP PROVIDED THROUGH ONSITE EXTENDED DETENTION BASINS A AND B.
3. ACCORDING TO FLOOD INSURANCE RATE MAP (FIRM) MAP NO. 48121C0580G DATED 04/18/2011 PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FOR DENTON COUNTY, TEXAS, THIS PROPERTY IS WITHIN ZONE "X" UNSHADED.
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!CAUTION!

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

BENCHMARKS

REFERENCE BENCHMARK

CITY OF FRISCO GEODETIC MONUMENT NUMBER 28.
REFERENCE ELEVATION = 623.36'

SITE BENCHMARK

CUT "X" SET AT THE NORTHEAST CORNER OF SPRING CREEK PARKWAY AND TOWN AND COUNTRY BOULEVARD.
ELEVATION = 614.03'

KFM ENGINEERING & DESIGN
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DALLAS, TEXAS 75019
PHONE: (817) 416-4536
WWW.KFM-LLC.COM
TBPE #: F-20821

ISSUE:	DESCRIPTION:	DATE:

DELTA:	DESCRIPTION:	DATE:

CLIENT
121 SPRING CREEK, LLC

PROJECT
FRISCO 45 INFRASTRUCTURE

SHEET TITLE
PROPOSED INTERIM DRAINAGE AREA MAP

PRELIMINARY
NOT FOR CONSTRUCTION
KFM ENGINEERING & DESIGN
ENGINEER: Joshua A. Millsap
P.E. No.: 100118 DATE: 7/9/21

PROJECT NUMBER: 010021003

DRAWN BY: GW/LL | DESIGNED BY: JDB/TT | CHECKED BY: JAM

DATE: 06/25/21

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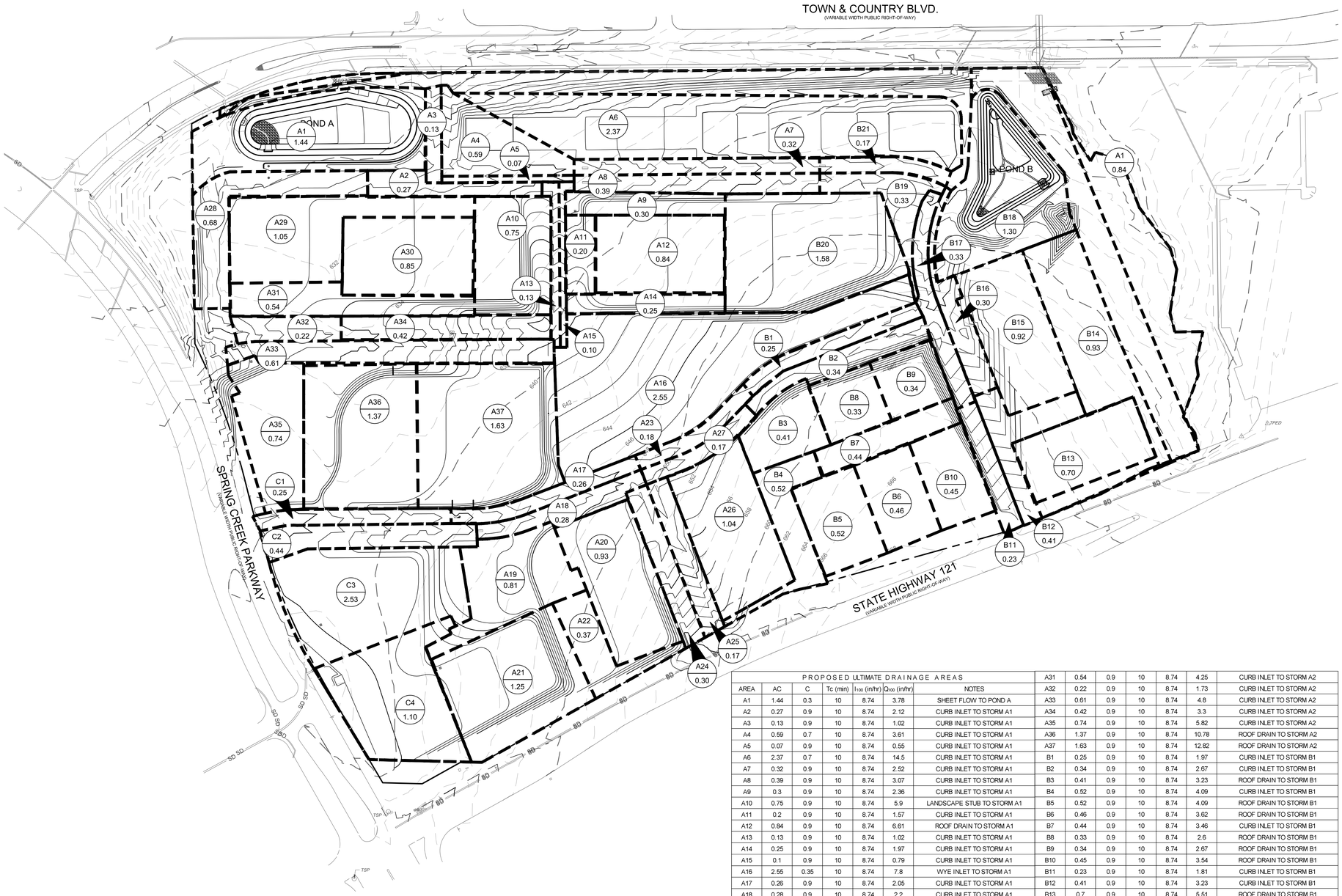

N

0 50 100 200

SCALE 1" = 100'

PROPOSED DRAINAGE AREA LEGEND

XXX	EXISTING CONTOUR
XXX	PROPOSED CONTOUR
	PROPOSED DRAINAGE AREA
P1 / 1.0	DRAINAGE AREA DESIGNATOR / DRAINAGE AREA ACREAGE

PROPOSED ULTIMATE DRAINAGE AREAS

AREA	AC	C	Tc (min)	I_{100} (in/hr)	Q_{100} (in/hr)	NOTES
A1	1.44	0.3	10	8.74	3.78	SHEET FLOW TO POND A
A2	0.27	0.9	10	8.74	2.12	CURB INLET TO STORM A1
A3	0.13	0.9	10	8.74	1.02	CURB INLET TO STORM A1
A4	0.59	0.7	10	8.74	3.61	CURB INLET TO STORM A1
A5	0.07	0.9	10	8.74	0.55	CURB INLET TO STORM A1
A6	2.37	0.7	10	8.74	14.5	CURB INLET TO STORM A1
A7	0.32	0.9	10	8.74	2.52	CURB INLET TO STORM A1
A8	0.39	0.9	10	8.74	3.07	CURB INLET TO STORM A1
A9	0.3	0.9	10	8.74	2.36	CURB INLET TO STORM A1
A10	0.75	0.9	10	8.74	5.9	LANDSCAPE STUB TO STORM A1
A11	0.2	0.9	10	8.74	1.57	CURB INLET TO STORM A1
A12	0.84	0.9	10	8.74	6.61	ROOF DRAIN TO STORM A1
A13	0.13	0.9	10	8.74	1.02	CURB INLET TO STORM A1
A14	0.25	0.9	10	8.74	1.97	CURB INLET TO STORM A1
A15	0.1	0.9	10	8.74	0.79	CURB INLET TO STORM A1
A16	2.55	0.35	10	8.74	7.8	WYE INLET TO STORM A1
A17	0.26	0.9	10	8.74	2.05	CURB INLET TO STORM A1
A18	0.28	0.9	10	8.74	2.2	CURB INLET TO STORM A1
A19	0.81	0.9	10	8.74	6.37	CURB INLET TO STORM A1
A20	0.93	0.9	10	8.74	7.32	ROOF DRAIN TO STORM A1
A21	1.25	0.9	10	8.74	9.83	ROOF DRAIN TO STORM A1
A22	0.37	0.9	10	8.74	2.91	CURB INLET TO STORM A1
A23	0.18	0.9	10	8.74	1.42	CURB INLET TO STORM A1
A24	0.3	0.9	10	8.74	2.36	CURB INLET TO STORM A1
A25	0.17	0.9	10	8.74	1.34	CURB INLET TO STORM A1
A26	1.04	0.9	10	8.74	8.18	ROOF DRAIN TO STORM A1
A27	0.17	0.9	10	8.74	1.34	CURB INLET TO STORM A1
A28	0.68	0.9	10	8.74	5.35	CURB INLET TO STORM A2
A29	1.05	0.9	10	8.74	8.26	CURB INLET TO STORM A2
A30	0.85	0.9	10	8.74	6.69	LANDSCAPE INLET TO STORM A1
A31	0.54	0.9	10	8.74	4.25	CURB INLET TO STORM A2
A32	0.22	0.9	10	8.74	1.73	CURB INLET TO STORM A2
A33	0.61	0.9	10	8.74	4.8	CURB INLET TO STORM A2
A34	0.42	0.9	10	8.74	3.3	CURB INLET TO STORM A2
A35	0.74	0.9	10	8.74	5.82	CURB INLET TO STORM A2
A36	1.37	0.9	10	8.74	10.78	ROOF DRAIN TO STORM A2
A37	1.63	0.9	10	8.74	12.82	ROOF DRAIN TO STORM A2
B1	0.25	0.9	10	8.74	1.97	CURB INLET TO STORM B1
B2	0.34	0.9	10	8.74	2.67	CURB INLET TO STORM B1
B3	0.41	0.9	10	8.74	3.23	ROOF DRAIN TO STORM B1
B4	0.52	0.9	10	8.74	4.09	CURB INLET TO STORM B1
B5	0.52	0.9	10	8.74	4.09	ROOF DRAIN TO STORM B1
B6	0.46	0.9	10	8.74	3.62	ROOF DRAIN TO STORM B1
B7	0.44	0.9	10	8.74	3.46	CURB INLET TO STORM B1
B8	0.33	0.9	10	8.74	2.6	ROOF DRAIN TO STORM B1
B9	0.34	0.9	10	8.74	2.67	ROOF DRAIN TO STORM B1
B10	0.45	0.9	10	8.74	3.54	ROOF DRAIN TO STORM B1
B11	0.23	0.9	10	8.74	1.81	CURB INLET TO STORM B1
B12	0.41	0.9	10	8.74	3.23	CURB INLET TO STORM B1
B13	0.7	0.9	10	8.74	5.51	ROOF DRAIN TO STORM B1
B14	0.93	0.9	10	8.74	7.32	HEADWALL TO POND B
B15	0.92	0.9	10	8.74	7.24	ROOF DRAIN TO STORM B1
B16	0.3	0.9	10	8.74	2.36	CURB INLET TO STORM B2
B17	0.33	0.9	10	8.74	2.6	CURB INLET TO STORM B2
B18	1.3	0.3	10	8.74	3.41	SHEET FLOW TO POND B
B19	0.33	0.9	10	8.74	2.6	CURB INLET TO STORM B2
B20	1.58	0.9	10	8.74	12.43	CURB INLET TO STORM B2
B21	0.17	0.9	10	8.74	1.34	CURB INLET TO STORM B2
C1	0.25	0.9	10	8.74	1.97	CURB INLET TO STORM C1
C2	0.44	0.9	10	8.74	3.46	CURB INLET TO STORM C1
C3	2.53	0.9	10	8.74	19.9	ROOF DRAIN TO C1
C4	1.1	0.9	10	8.74	8.65	CURB INLET TO STORM C1

ENGINEERING NOTES

1. EXISTING DRAINAGE INFORMATION AND DRAINAGE CALCULATIONS ARE INCLUDED IN THE DOWNSTREAM ASSESSMENT PROVIDED BY KFM LLC DATED JULY 2020 .
2. PERMANENT BMP PROVIDED THROUGH ONSITE EXTENDED DETENTION BASINS A AND B.
3. ACCORDING TO FLOOD INSURANCE RATE MAP (FIRM) MAP NO. 48121C0580G DATED 04/18/2011 PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FOR DENTON COUNTY, TEXAS, THIS PROPERTY IS WITHIN ZONE "X" UNSHADED.
4. ON-SITE DETENTION LIMITING POST-DEVELOPMENT DISCHARGE TO A PRE-DEVELOPMENT RUNOFF RATE IS REQUIRED FOR ALL NEW CONSTRUCTION UNLESS A DOWNSTREAM ASSESSMENT HAS BEEN PROVIDED DEMONSTRATING THAT THE EXISTING STORM SYSTEM IS ADEQUATE TO HANDLE POST-DEVELOPMENT DISCHARGE RATES. IF REGIONAL DETENTION EXISTS FOR THIS PROJECT, PROVIDE A NOTE REFERENCING WHERE THE REGIONAL DETENTION WAS DESIGNED AND CONSTRUCTED.
5. PROPOSED FINAL DRAINAGE AREAS ARE TENTATIVE AND MAY CHANGE DURING FINAL DESIGN OF EACH LOT.

!CAUTION!

CONTRACTOR TO CONTACT THE TEXAS ONE-CALL SYSTEM (1-800-344-8377) AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION. KFM IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES IN THE PROJECT AREA. IF FILED CONDITIONS DIFFER SIGNIFICANTLY FROM THE LOCATION SHOWN ON THE PLANS THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

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

BENCHMARKS

REFERENCE BENCHMARK

CITY OF FRISCO GEODETIC MONUMENT NUMBER 28.
REFERENCE ELEVATION = 623.36'

SITE BENCHMARK

CUT "X" SET AT THE NORTHEAST CORNER OF SPRING CREEK PARKWAY AND TOWN AND COUNTRY BOULEVARD.
ELEVATION = 614.03'

KFM ENGINEERING & DESIGN
3501 OLYMPUS BLVD, SUITE 100
DALLAS, TEXAS 75019
PHONE: (817) 416-4536
WWW.KFM-LLC.COM
TBPE #: F-20821

ISSUE:	DESCRIPTION:	DATE:

DELTA:	DESCRIPTION:	DATE:

CLIENT
121 SPRING CREEK, LLC

PROJECT
FRISCO 45 INFRASTRUCTURE

SHEET TITLE
PROPOSED ULTIMATE DRAINAGE AREA MAP

PRELIMINARY
NOT FOR CONSTRUCTION
KFM ENGINEERING & DESIGN
ENGINEER: Joshua A. Millsap
P.E. No.: 100118 DATE: 7/9/21

PROJECT NUMBER: 010021003

DRAWN BY: GW/LL | DESIGNED BY: JDB/TT | CHECKED BY: JAM

DATE: 06/25/21

SHEET:

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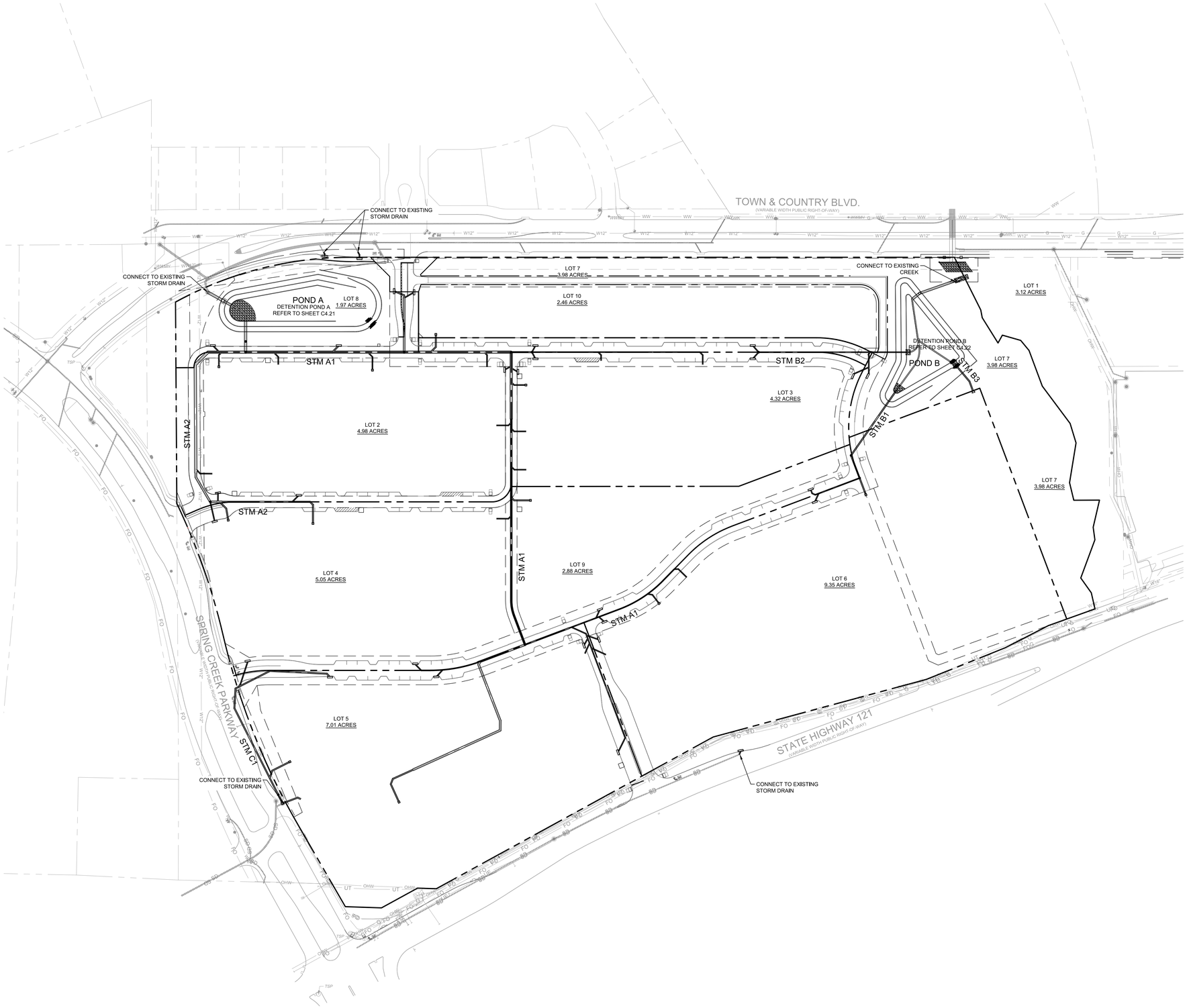

N

0 50 100 200

SCALE 1" = 100'

NOTES:

- REFER TO SHEET C0.04 FOR GENERAL CONSTRUCTION NOTES.
- REFER TO SHEET C6.90 FOR DRAINAGE DETAILS.
- ALL CONCRETE HEADWALLS AND WINGWALLS SHALL HAVE A STRONG VENEER FINISH UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF DEVELOPMENT

DRAINAGE NOTES

1. **GENERAL CONSTRUCTION NOTES:** REFER TO SHEET C0.04 - GENERAL CONSTRUCTION NOTES FOR THE GENERAL CONSTRUCTION NOTES FOR THE PROJECT.
2. **PROTECTION OF UTILITIES:** THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, FENCES, TREES, SHRUBS, GAS MAINS, TELEPHONE CABLES, ELECTRIC CABLES, DRAINAGE PIPES, UTILITY SERVICES, AND ALL OTHER UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW THE GROUND.
3. **PUBLIC STORM DRAIN PIPE:** UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL PIPE FOR PUBLIC STORM DRAIN IMPROVEMENTS SHALL BE REINFORCED CONCRETE PIPE (RCP), CLASS I.L.
4. **PRIVATE STORM DRAIN PIPE:** UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL PIPE FOR PRIVATE STORM DRAIN IMPROVEMENTS SHALL BE AS FOLLOWS:
   - 4-INCH THROUGH 12-INCH: POLYVINYL CHLORIDE PIPE (PVC), SDR - 35, OR HIGH DENSITY POLYETHYLENE PIPE (HDPE), N-12
   - 15-INCH THROUGH 36-INCH: REINFORCED CONCRETE PIPE (RCP), CLASS III OR HIGH DENSITY POLYETHYLENE PIPE (HDPE), N-12
   - GREATER THAN 36-INCH: REINFORCED CONCRETE PIPE (RCP), CLASS III
4. **RCP JOINT SEALANT:** ALL PUBLIC PIPE UNDER PAVING SHALL HAVE AN "O" RING GASKET INSTALLED AT EACH JOINT OF STORM SEWER PIPE. REINFORCED CONCRETE PIPE JOINTS SHALL BE SEALED WITH RAMNECK OR APPROVED EQUAL.
5. **GROUTING:** ALL PIPE ENTERING PUBLIC STORM DRAIN STRUCTURES SHALL BE GROUTED TO ASSURE WATERTIGHT CONNECTIONS.
7. **CONCRETE COLLARS:** CONCRETE COLLARS SHALL BE INSTALLED AT ALL CHANGES IN CONDUIT SIZE AND AT ALL JOINTS THAT ARE PULLED IN EXCESS OF THAT RECOMMENDED BY THE CONDUIT MANUFACTURER.
8. **ROOF DRAINS:** THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ROOF DRAIN LATERALS WITH BUILDING PLANS FOR DOWNSPOUT CONNECTIONS. END AND CAP ROOF DRAIN LATERALS FIVE (5) FEET FROM BUILDING AT ELEVATIONS SHOWN ON BUILDING PLANS.
9. **ADJUSTMENT OF STRUCTURES:** ALL STORM DRAIN STRUCTURES INCLUDING MANHOLES, INLETS AND CLEANOUTS MUST BE ADJUSTED TO PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO, AND AFTER, PLACEMENT OF PAVING AND GRASSING.
10. EXISTING DRAINAGE INFORMATION AND DRAINAGE CALCULATIONS ARE INCLUDED IN THE DOWNSTREAM ASSESSMENT PROVIDED BY KFM LLC DATED JULY 2020 .
11. PERMANENT BMP PROVIDED THROUGH ONSITE EXTENDED DETENTION BASINS A AND B.

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BENCHMARKS

REFERENCE BENCHMARK

CITY OF FRISCO GEODETIC MONUMENT NUMBER 28.
REFERENCE ELEVATION = 623.36'

SITE BENCHMARK

CUT "X" SET AT THE NORTHEAST CORNER OF SPRING CREEK PARKWAY AND TOWN AND COUNTRY BOULEVARD.
ELEVATION = 614.03'

KFM ENGINEERING & DESIGN
3501 OLYMPUS BLVD, SUITE 100
DALLAS, TEXAS 75019
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WWW.KFM-LLC.COM
TBPE #: F-20821

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CLIENT
121 SPRING CREEK, LLC

PROJECT
FRISCO 45 INFRASTRUCTURE

SHEET TITLE
STORM DRAIN OVERALL PLAN

PRELIMINARY
NOT FOR CONSTRUCTION
KFM ENGINEERING & DESIGN
ENGINEER: Joshua A. Millsap
P.E. No.: 100118 DATE: 7/9/21

PROJECT NUMBER: 010021003

DRAWN BY:	DESIGNED BY:	CHECKED BY:
GW/LL	JDB/TT	JAM

DATE: 06/25/21

SHEET:

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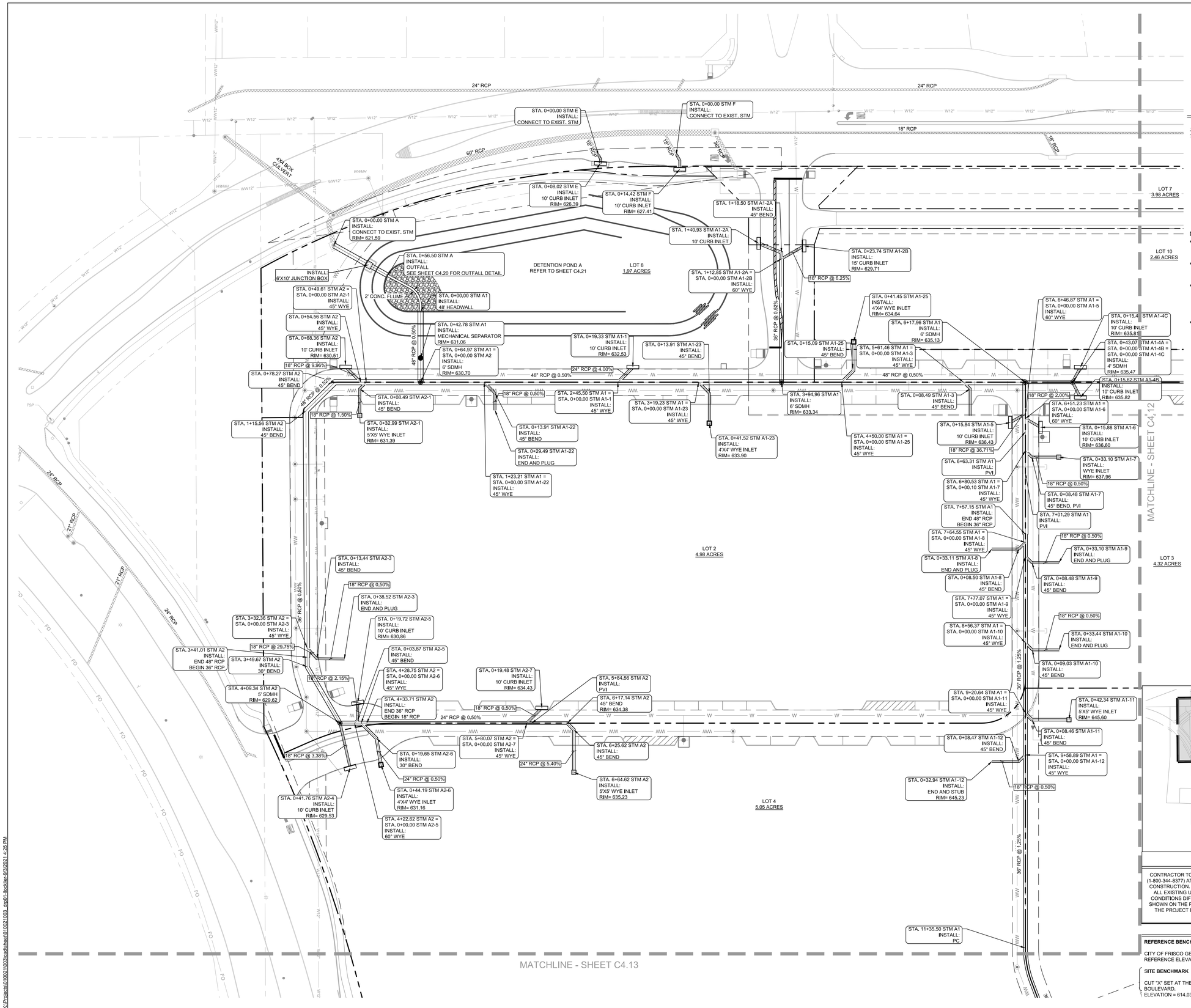

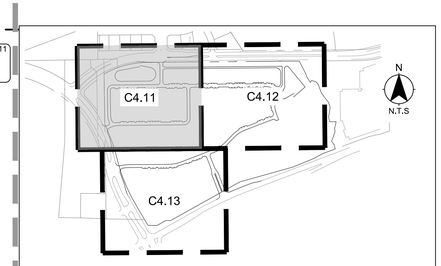

KEY MAP

DRAINAGE PLAN LEGEND

EXISTING	PROPOSED	
		STORM DRAIN
		STORM DRAIN MANHOLE
		STORM DRAIN CURB INLET
		STORM DRAIN GRATE INLET
		STORM DRAIN JUNCTION BOX
		STORM DRAIN WYE INLET
		STORM DRAIN AREA DRAIN
		STORM DRAIN HEADWALL
		STORM DRAIN SLOPED HEADWALL

NOTES:

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- ALL CONCRETE HEADWALLS AND WINGWALLS SHALL HAVE A STRONG VENEER FINISH UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF DEVELOPMENT
- SEE SHEET C4.23 AND C4.24 FOR RIPRAP, INLET, AND DRAINAGE CALCULATIONS

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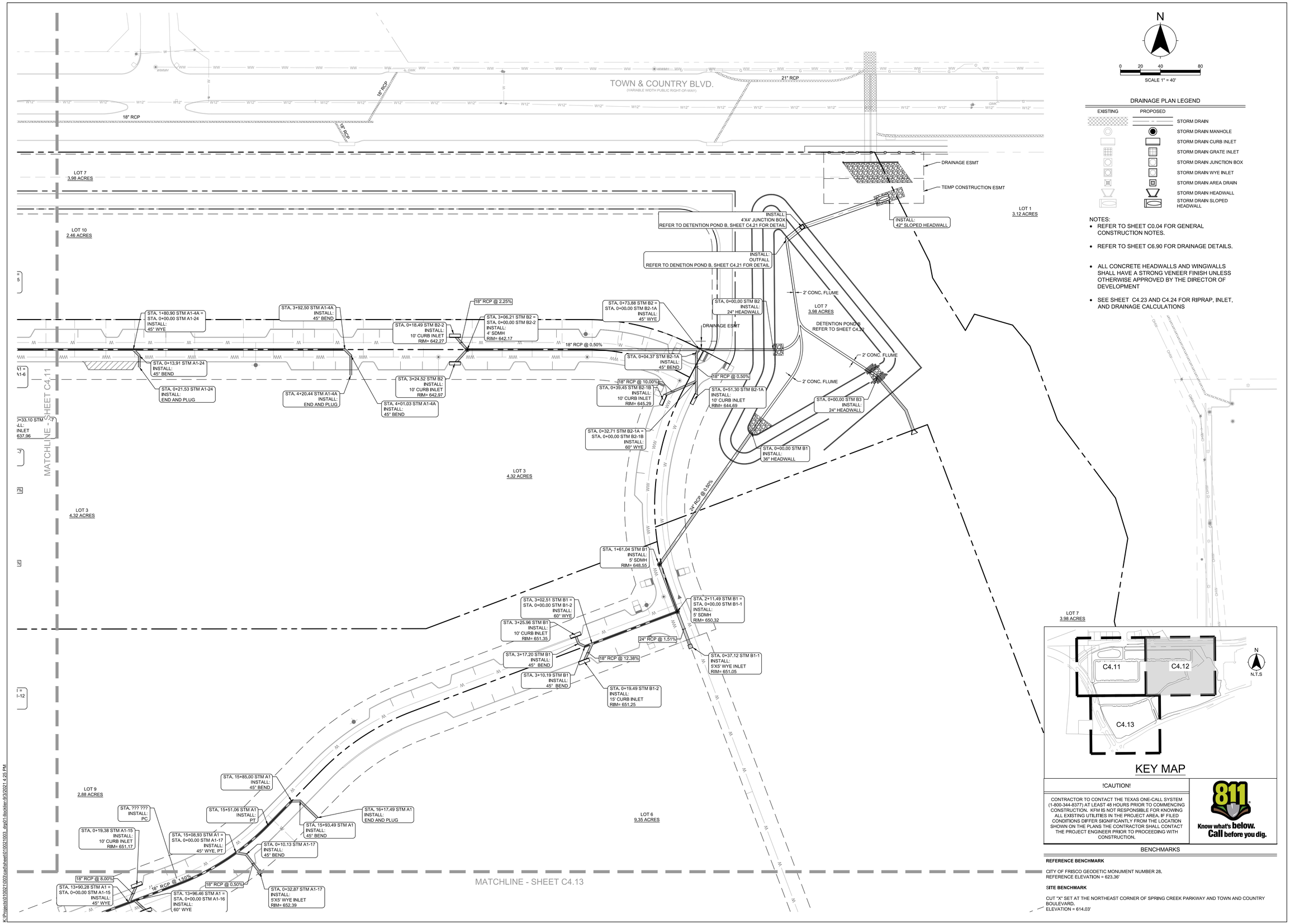

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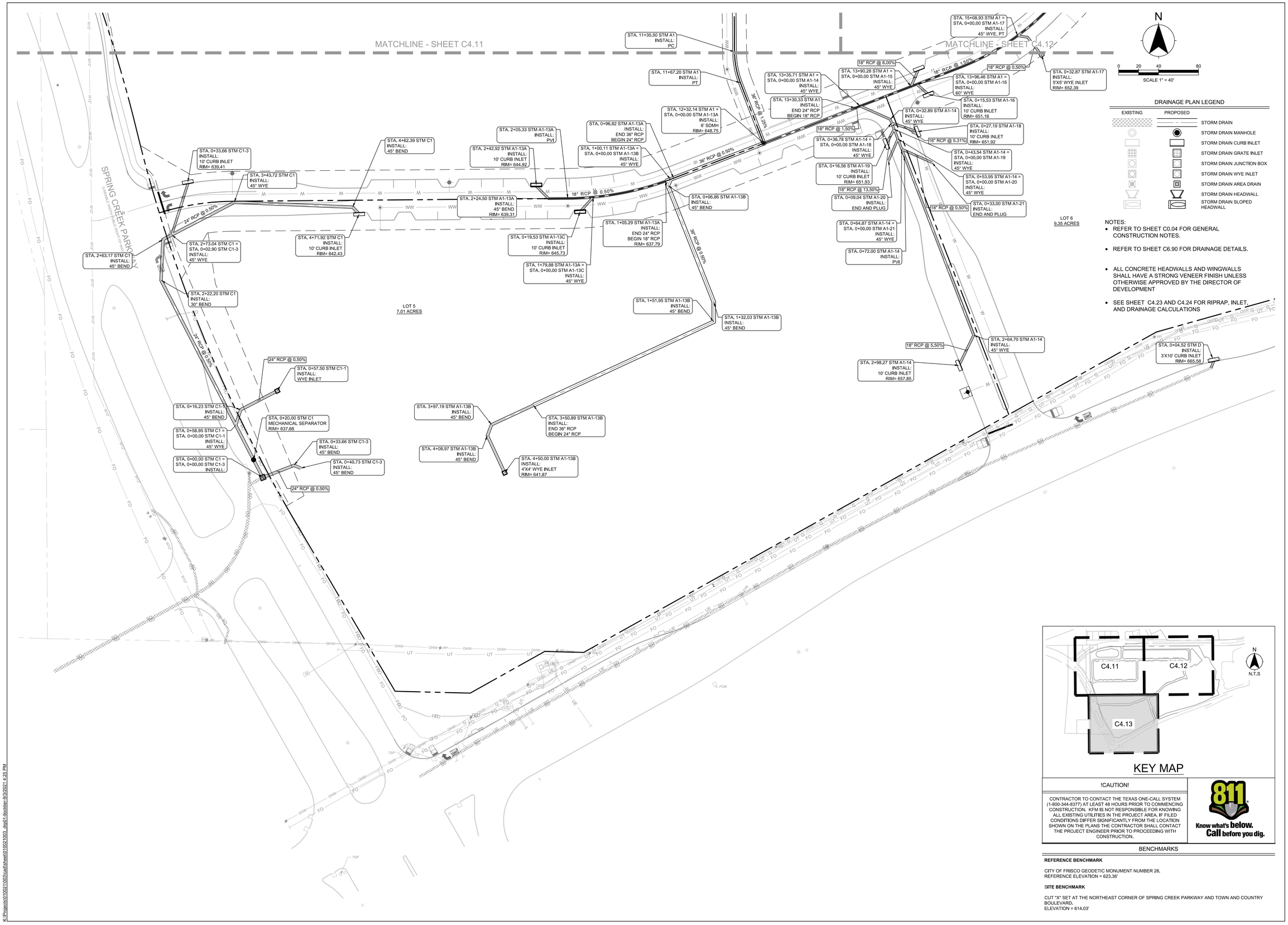

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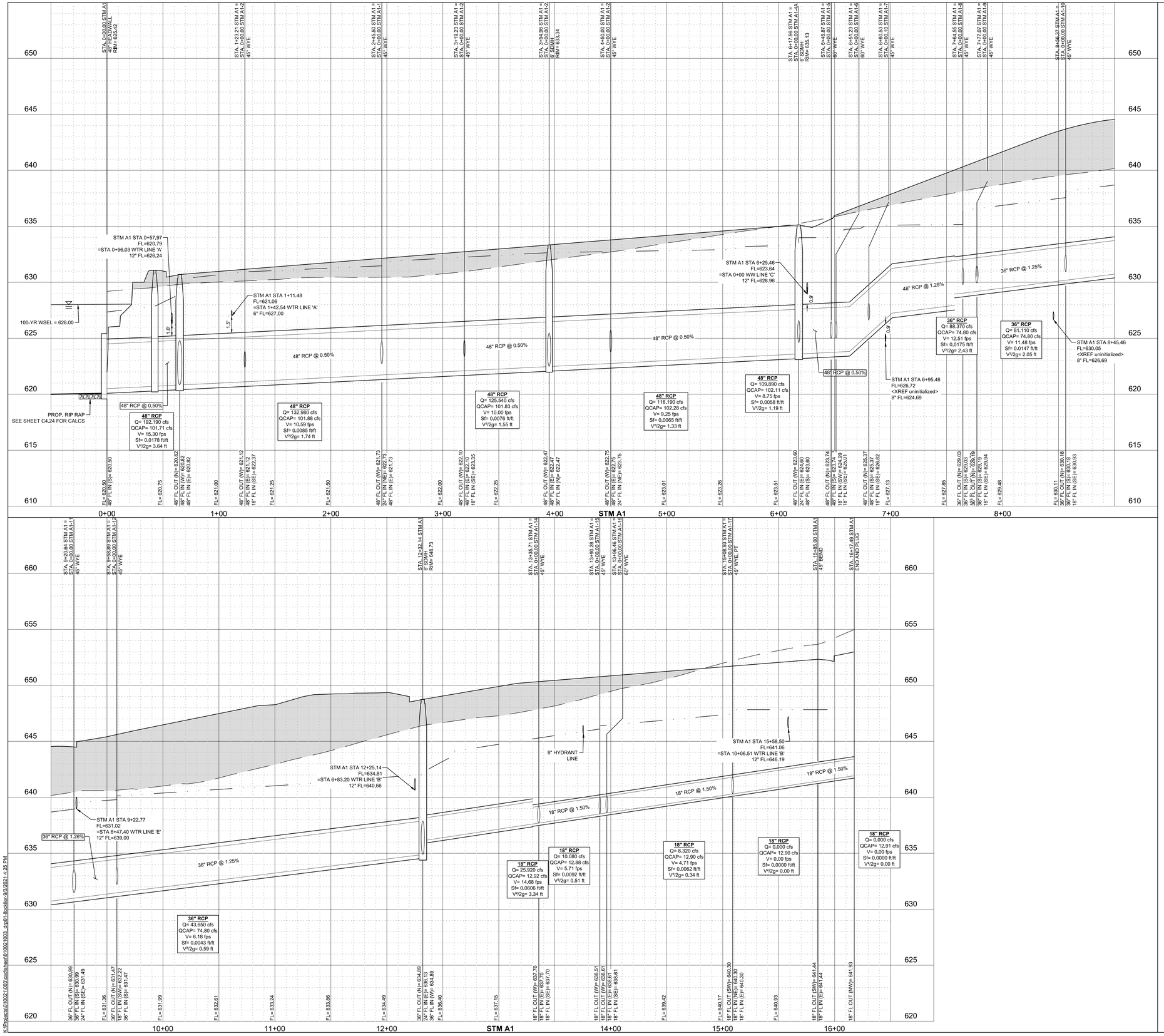

PROFILE SCALE
HORIZONTAL: 1' = 40'
VERTICAL: 1' = 10'

DRAINAGE PROFILE VIEW LEGEND

— — —	EXISTING GROUND AT CENTERLINE OF PIPE
FL	FLOWLINE
— · · —	HGL
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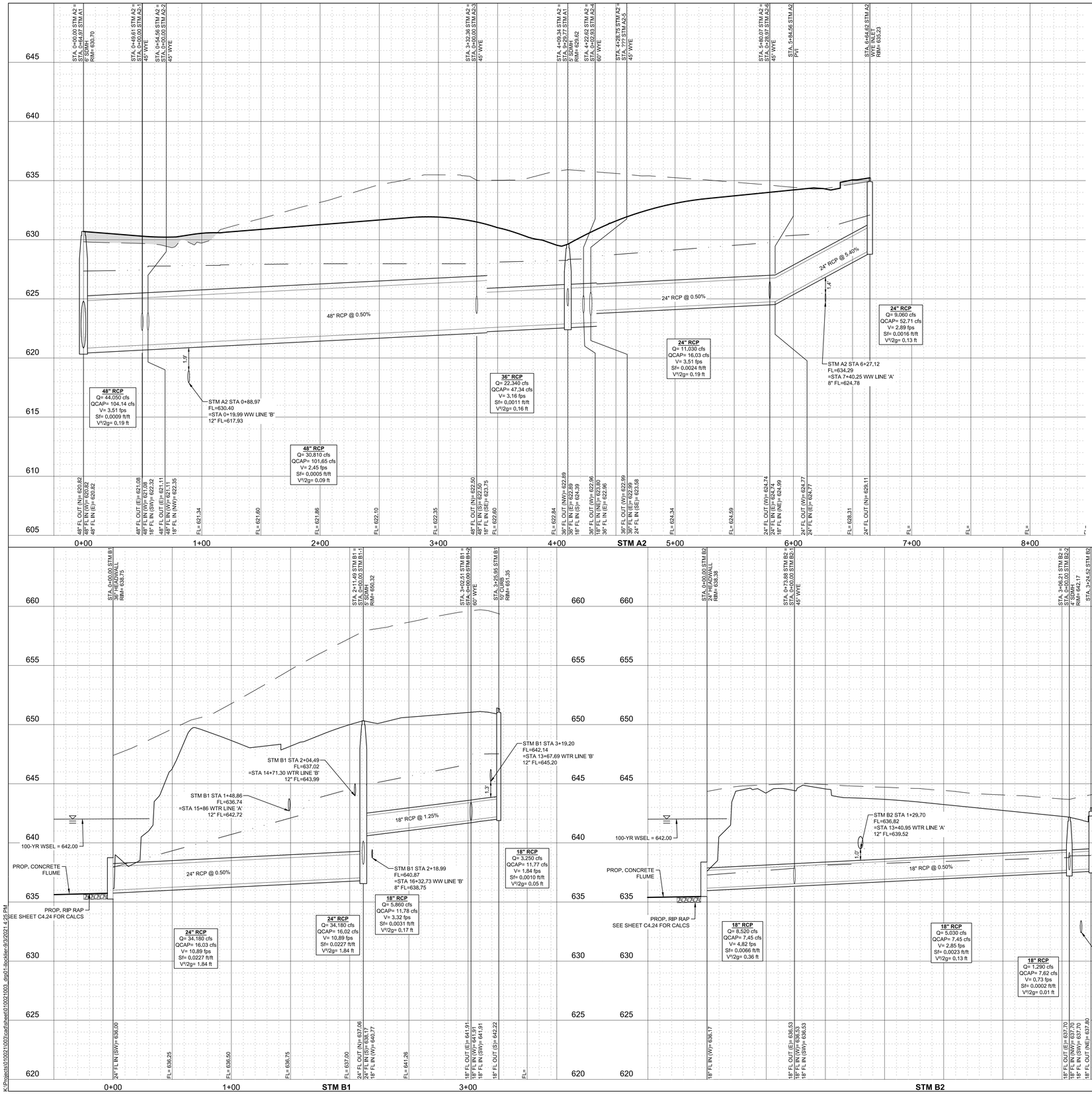

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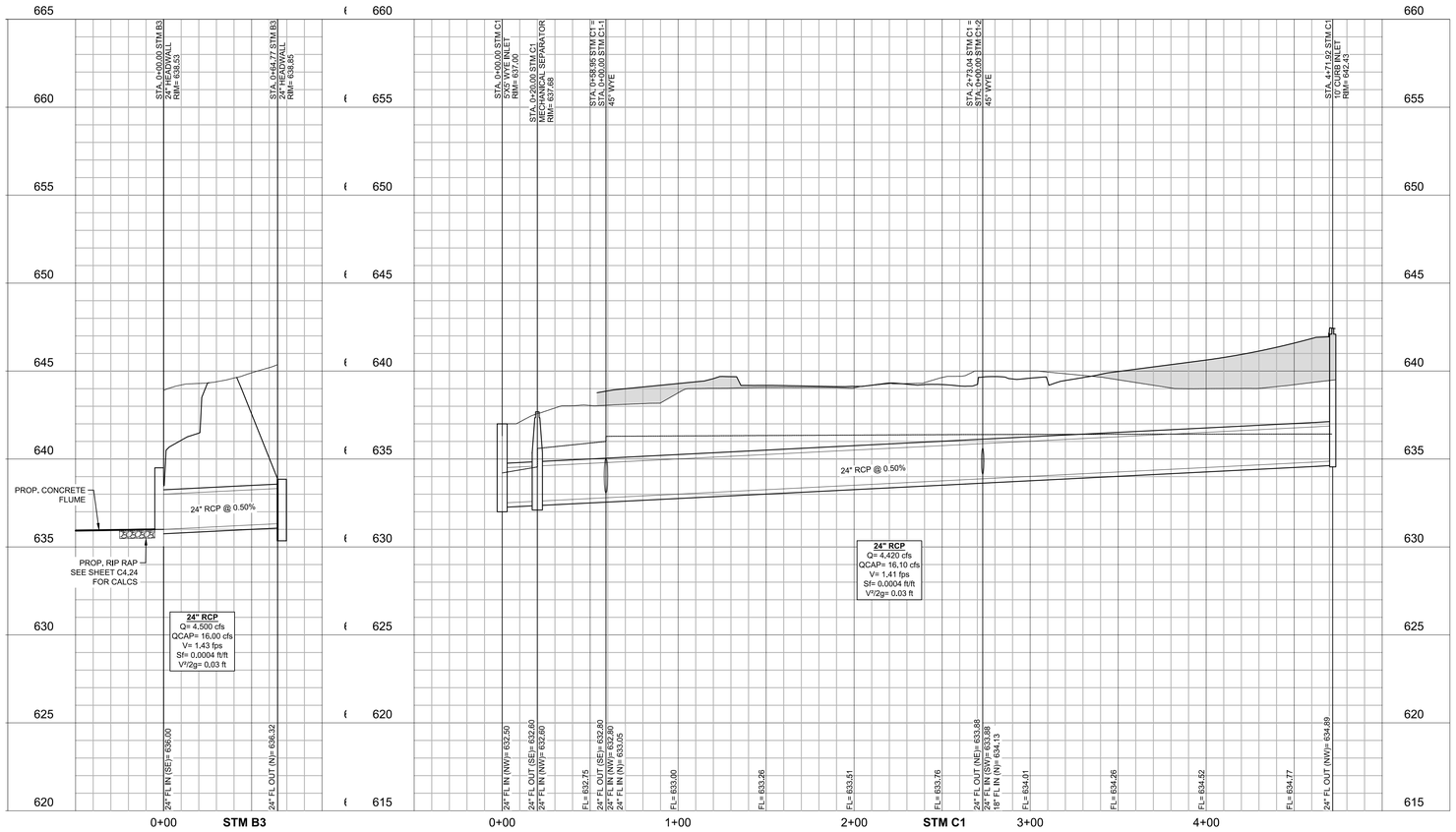

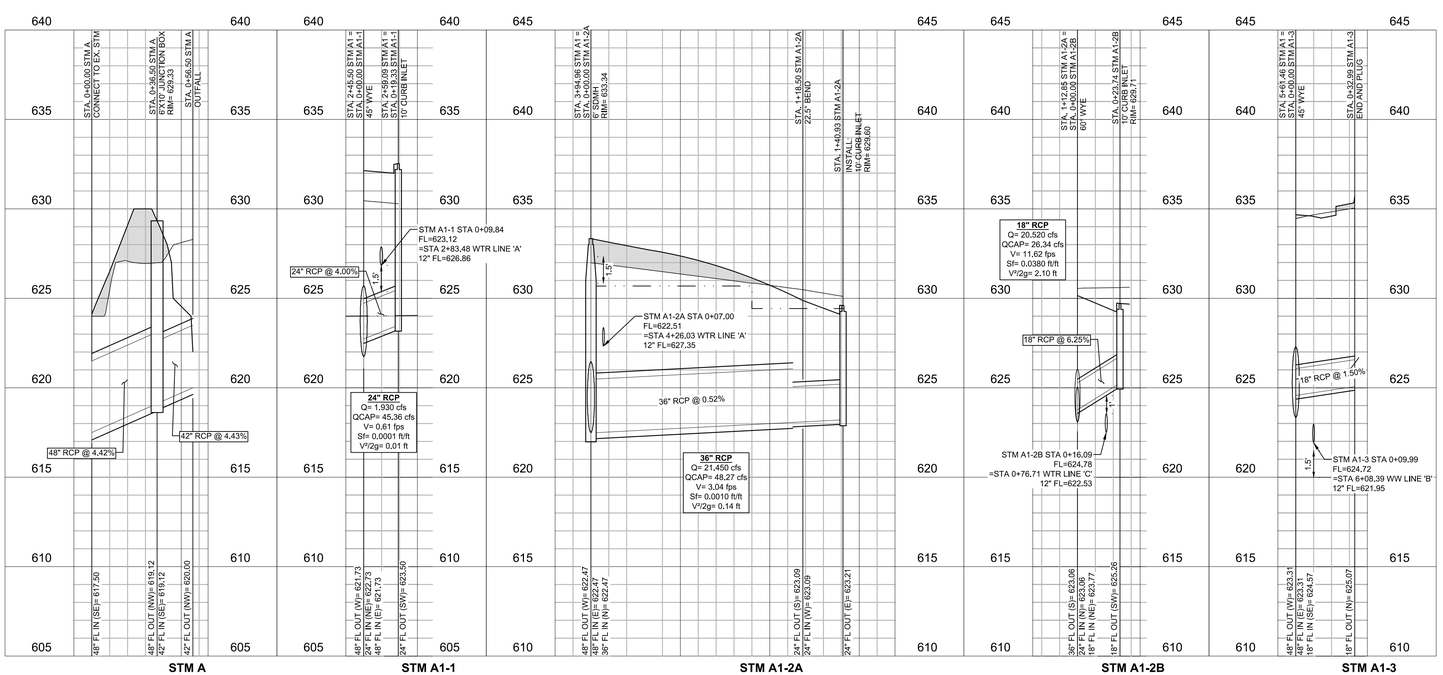

PROFILE SCALE
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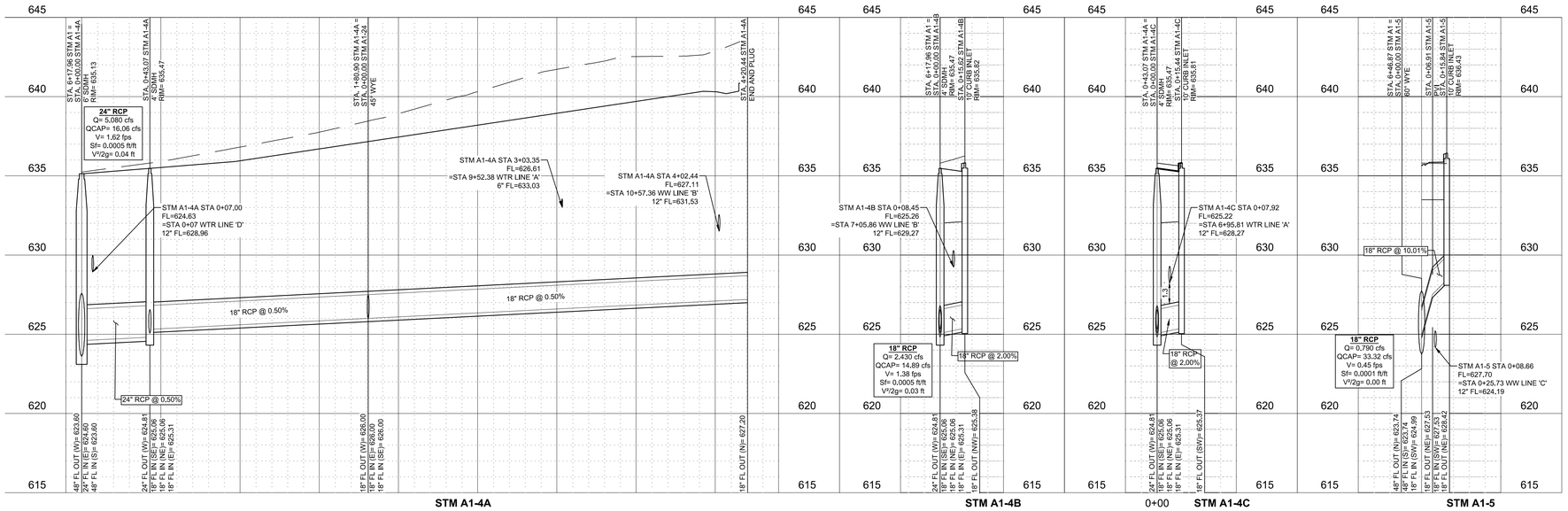

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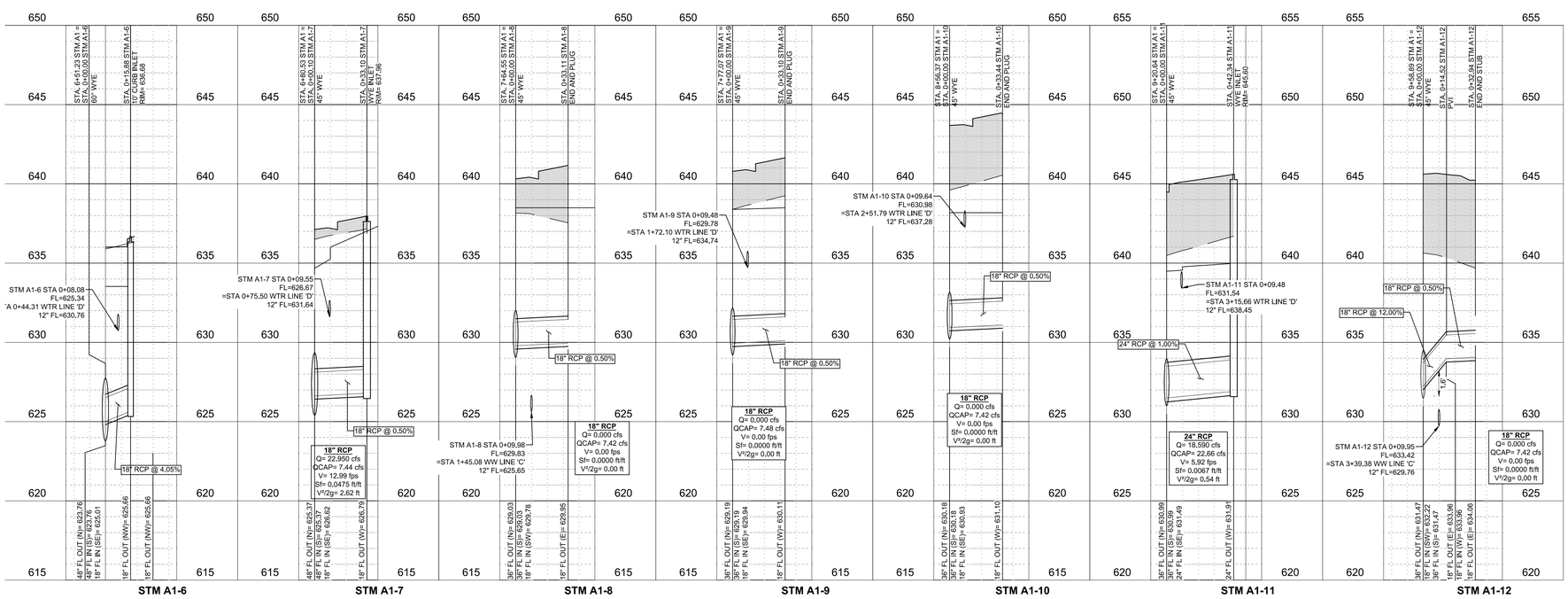

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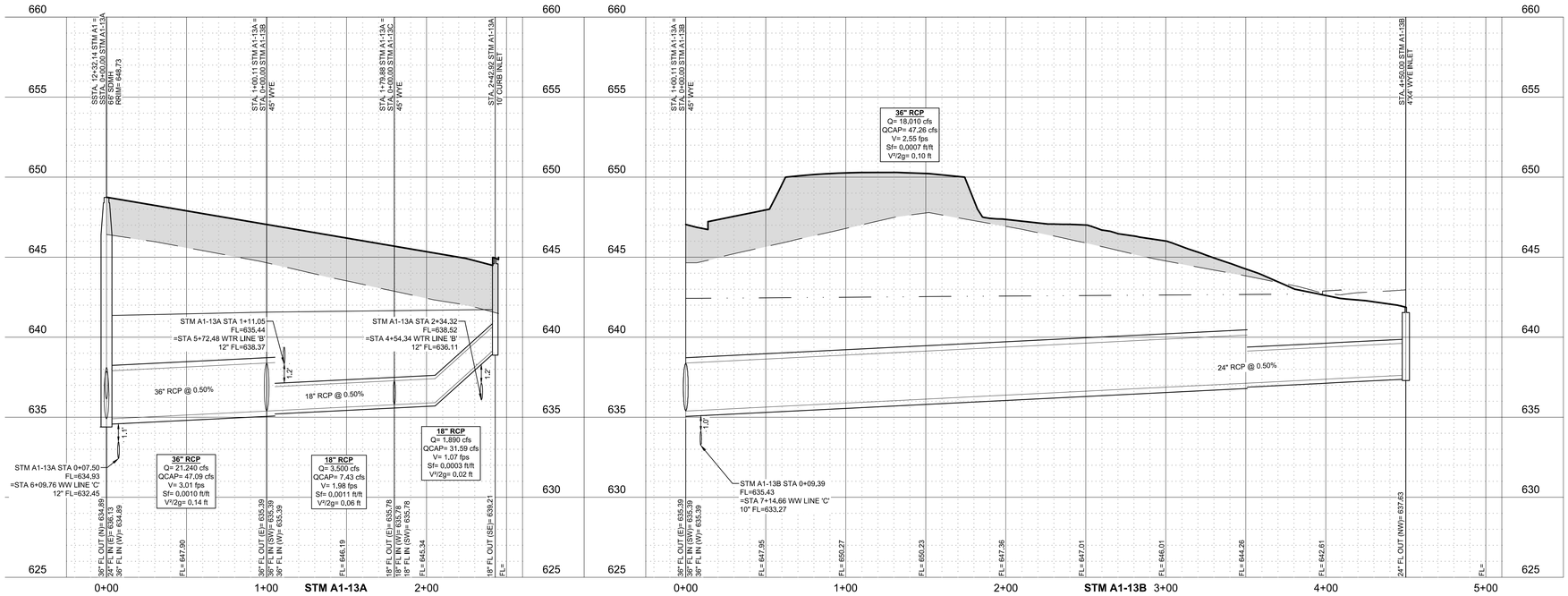

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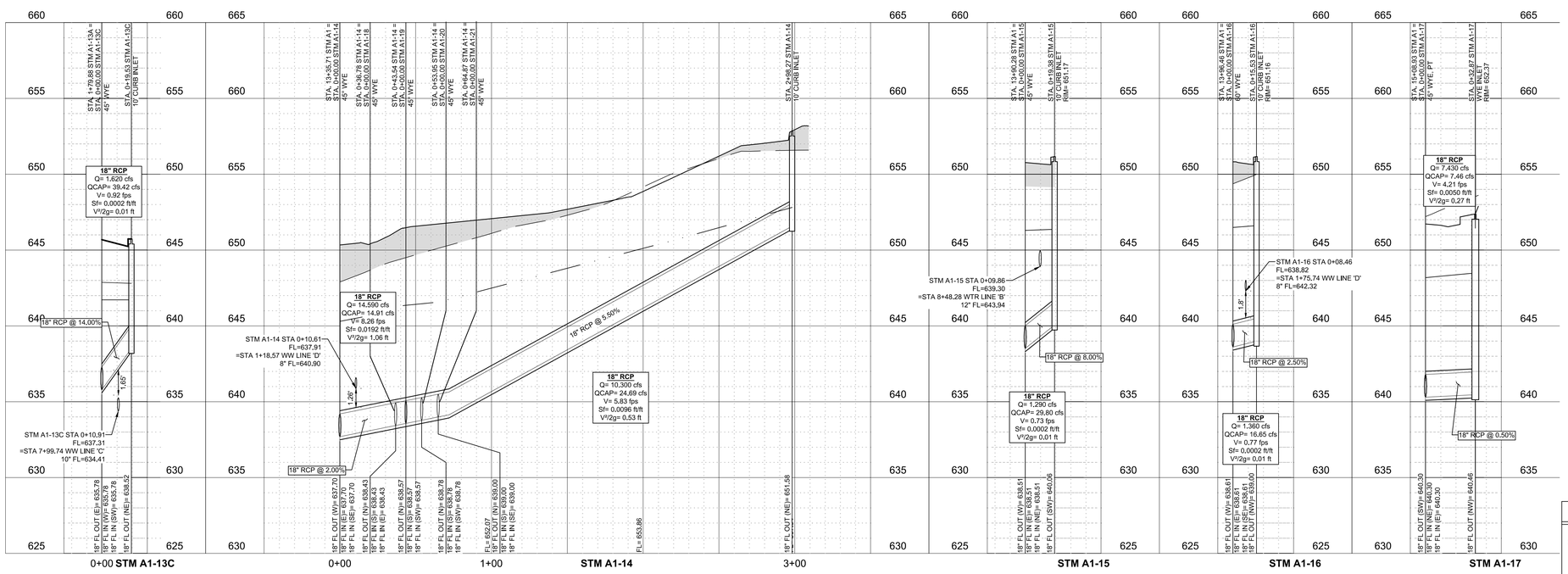

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811 Know what's below. Call before you dig.

BENCHMARKS

REFERENCE BENCHMARK

CITY OF FRISCO GEODETIC MONUMENT NUMBER 28.
REFERENCE ELEVATION = 623.36'

SITE BENCHMARK

CUT "X" SET AT THE NORTHEAST CORNER OF SPRING CREEK PARKWAY AND TOWN AND COUNTRY BOULEVARD.
ELEVATION = 614.03'

KFM ENGINEERING & DESIGN
3501 OLYMPUS BLVD, SUITE 100
DALLAS, TEXAS 75019
PHONE: (817) 416-4536
WWW.KFM-LLC.COM
TBPE #: F-20821

ISSUE:	DESCRIPTION:	DATE:

DELTA:	DESCRIPTION:	DATE:

CLIENT
121 SPRING CREEK, LLC

PROJECT
FRISCO 45 INFRASTRUCTURE

SHEET TITLE
STORM DRAIN PROFILE

PRELIMINARY
NOT FOR CONSTRUCTION
KFM ENGINEERING & DESIGN
ENGINEER: Joshua A. Millsap
P.E. No.: 100118 DATE: 7/9/21

PROJECT NUMBER: 010021003

DRAWN BY:	DESIGNED BY:	CHECKED BY:
GW/LL	JDB/TT	JAM

DATE: 06/25/21

SHEET:

C4.18

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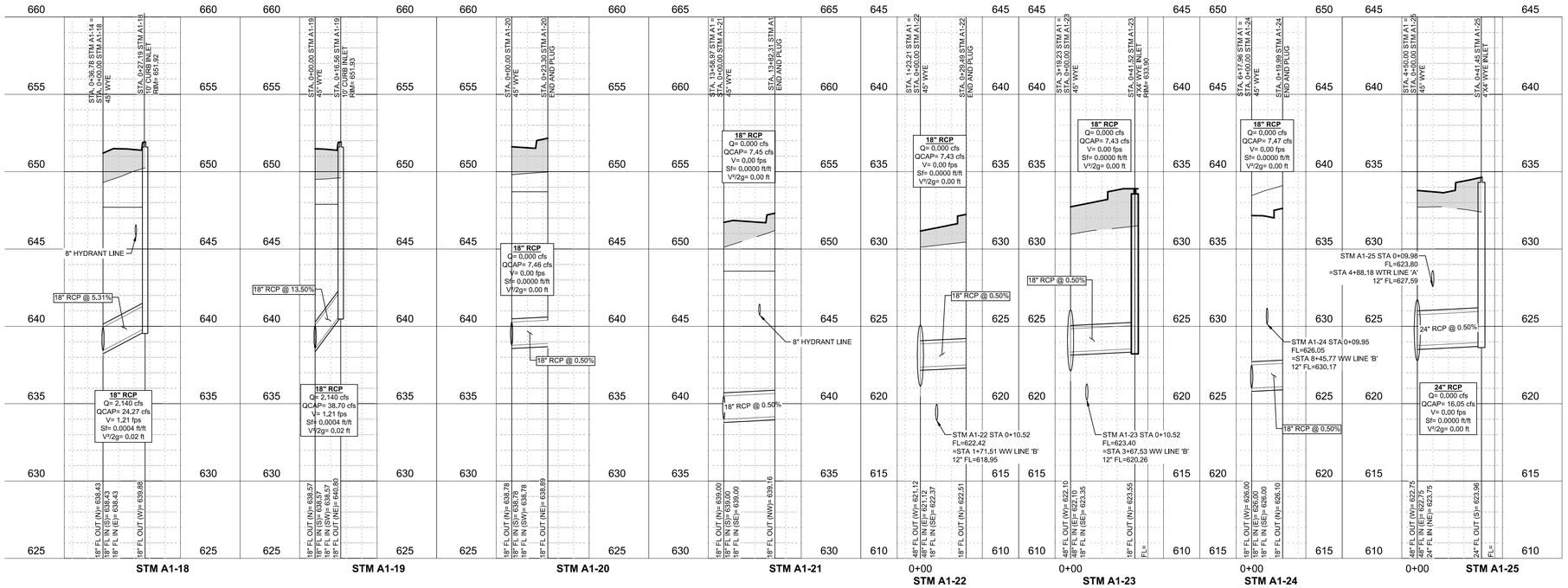

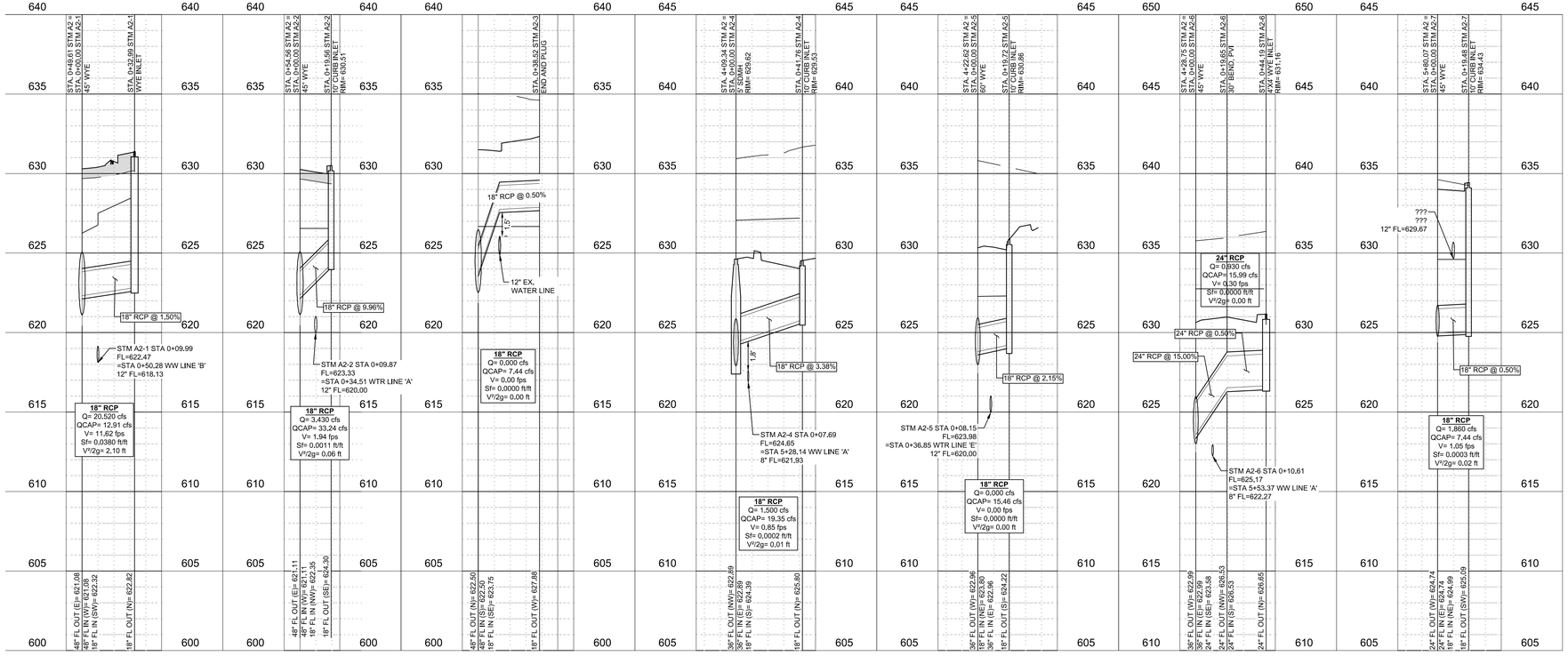

PROFILE SCALE
HORIZONTAL: 1' = 40'
VERTICAL: 1' = 10'

DRAINAGE PROFILE VIEW LEGEND

	EXISTING GROUND AT CENTERLINE OF PIPE
FL	FLOWLINE
	HGL
	PROPOSED GROUND AT CENTERLINE OF PIPE
STA.	STATION
	FILL TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY OR PER GEOTECH RECOMMENDATION

NOTES:
- REFER TO SHEET C0.04 FOR GENERAL CONSTRUCTION NOTES.
- REFER TO SHEET C6.90 FOR DRAINAGE DETAILS.

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KFM ENGINEERING & DESIGN
ENGINEER: Joshua A. Millsap
P.E. No.: 100118 DATE: 7/9/21

PROJECT NUMBER: 010021003

DRAWN BY:	DESIGNED BY:	CHECKED BY:
GW/LL	JDB/TT	JAM

DATE: 06/25/21

SHEET:

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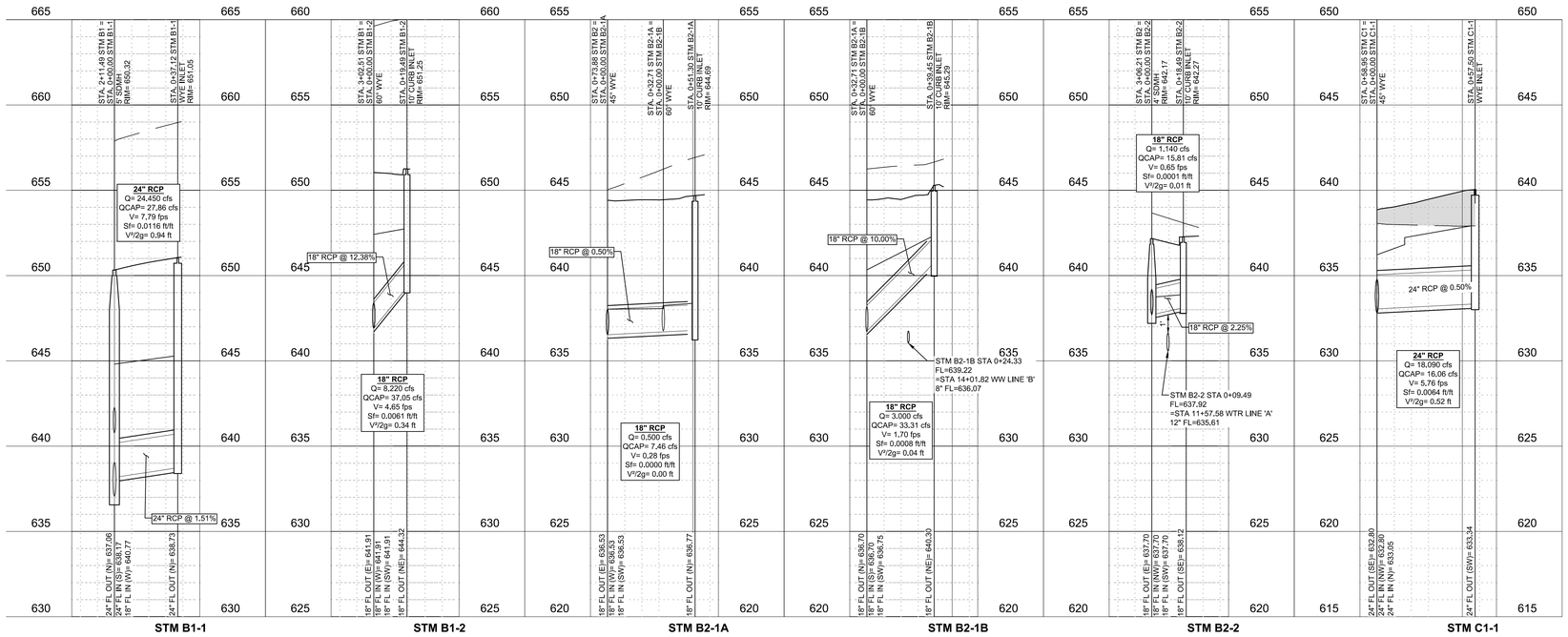

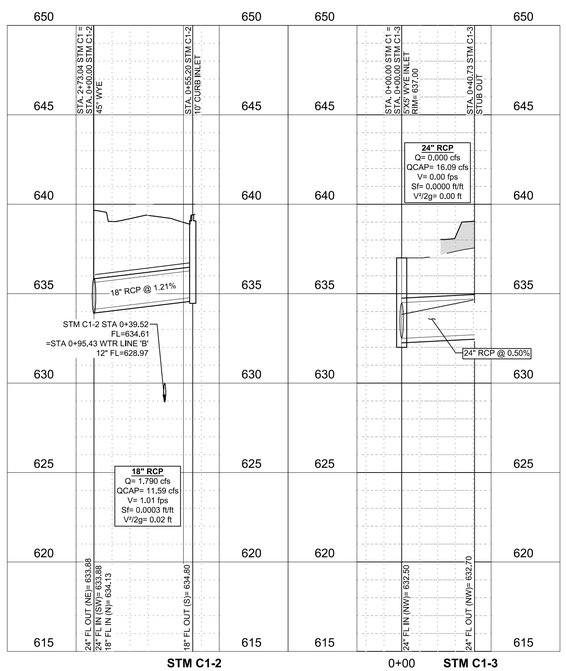

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