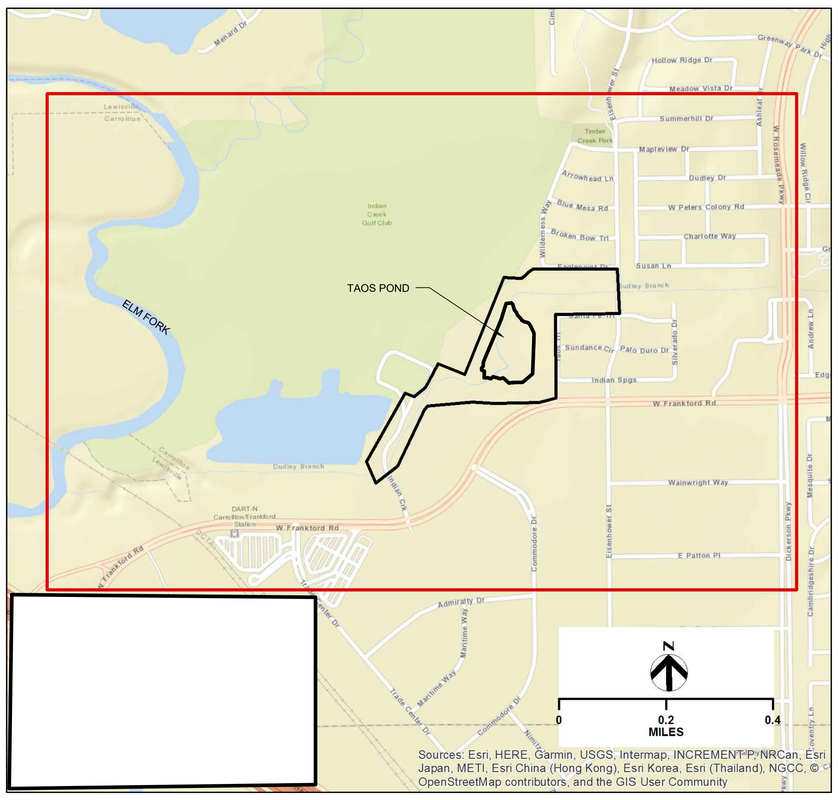
Texas P.E. Firm
Registration No. F-754

CARROLLTON
TEXAS



Contract Drawings For

Dudley Branch

Design & Permitting of Channel Improvements

Civil

70% CONSTRUCTION DRAWINGS

Project No.
10110387

FEBRUARY 2020

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF RODRIGO VIZCAINO TEXAS P.E. NO. 95939 DATE: FEBRUARY 14, 2020

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CITY COUNCIL

KEVIN FALCONER, MAYOR
FRANCES CRUZ, DEPUTY MAYOR PRO TEM
YOUNG SUNG, MAYOR PRO TEM
STEVE BABICK, COUNCILMEMBER
MIKE HENNEFER, COUNCILMEMBER
PAT COCHRAN, COUNCILMEMBER
GLEN BLANSCET, COUNCILMEMBER
JOHN SUTTER, COUNCILMEMBER

CITY MANAGER

ERIN RINEHART

DIRECTOR OF ENGINEERING

CESAR MOLINA

GENERAL NOTES

1. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL BE FAMILIAR WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE PLANS (INCLUDING ALL NOTES), THE CITY OF CARROLLTON SPECIFICATIONS AND ANY OTHER APPLICABLE STANDARDS OR SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BE FAMILIAR WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.

2. CONTRACTOR SHALL HAVE IN POSSESSION, PRIOR TO CONSTRUCTION, ALL NECESSARY PERMITS, AND LICENSES, ETC. CONTRACTOR SHALL HAVE A LEAST ONE SET OF APPROVED ENGINEERING PLANS AND SPECIFICATIONS ON-SITE AT ALL TIMES.

3. ALL WORK SHALL CONFORM TO THE CITY OF CARROLLTON SPECIFICATIONS AND STANDARDS.

4. CONSTRUCTION INSPECTION WILL BE PERFORMED BY REPRESENTATIVES OF THE CITY. UNRESTRICTED ACCESS SHALL BE PROVIDED TO THEM AT ALL TIMES. CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING AND SCHEDULING REQUIRED INSPECTIONS. TESTING SAMPLES SHALL BE COLLECTED AND PROCESSED BY CERTIFIED TECHNICIANS.

5. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS ONTO DEVELOPED OR UNDEVELOPED AREAS WILL BE ALLOWED. ANY DAMAGE RESULTING SHALL BE CONTRACTORS RESPONSIBILITY TO REPAIR.

6. IT WILL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO VERIFY AND PROTECT ALL EXISTING PUBLIC AND PRIVATE UTILITIES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES FOR LINE LOCATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL ASSUME FULL LIABILITY TO THOSE COMPANIES FOR ANY DAMAGES CAUSED TO THEIR FACILITIES.

7. TRENCH SAFETY DESIGN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL SUBMIT A TRENCH SAFETY DESIGN APPROVED BY A PROFESSIONAL ENGINEER TO THE CITY OF CARROLLTON ENGINEERING DEPARTMENT FOR REVIEW PRIOR TO THE START OF ANY UNDERGROUND UTILITY CONSTRUCTION.

8. THE CONTRACTOR SHALL CONTACT THE ENGINEER SHOULD ANY DISCREPANCIES BE FOUND IN THE CONSTRUCTION PLANS AND/OR THE SPECIAL PROVISIONS. THE CONTRACTOR WILL NOT BE COMPENSATED FOR ANY WORK NOT AUTHORIZED BY THE ENGINEER.

9. THE CONTRACTOR SHALL NOTIFY THE CITY OF CARROLLTON CONSTRUCTION INSPECTOR 24 HOURS BEFORE STARTING WORK, SO THAT PROPER JOB INSPECTION CAN BE SCHEDULED.

10. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXCESS CONSTRUCTION DEBRIS AND SURPLUS MATERIAL, AT NO COST TO THE OWNER.

11. THE CONTRACTOR MUST FURNISH AT LEAST TWO PHONE NUMBERS WHERE RESPONSIBLE PERSONNEL CAN BE REACHED IN CASE OF EMERGENCY DURING WORKING AND NON-WORKING HOURS. IF THERE ARE ANY CHANGES, THE INFORMATION MUST BE UPDATED IMMEDIATELY FOR THE DURATION OF THE PROJECT.

12. THE CONTRACTOR SHALL PROTECT ALL EXISTING FENCES, DRIVEWAYS, SIDEWALKS, PAVEMENT, CURBS, UTILITY PIPELINE, AND DRAINAGE STRUCTURES IN AND AROUND PROJECT AREA. ANY DAMAGES DUE TO CONTRACTORS ACTION SHALL BE REPAIRED AT HIS/HER EXPENSE.

CHANNEL ENVIRONMENTAL

1. NO TREES SHALL BE CUT EXCEPT FOR THE ONES SHOWN ON THE TREE REMOVAL PLAN SHEETS OF THE CONSTRUCTION PLANS AND UNDER THE SPECIFIC AUTHORITY OF THE ENGINEER. TREES SHOWN TO BE REMOVED IN THE PLANS SHALL BE CLEARLY MARKED WITH PAINT OR TAPE ONE WEEK PRIOR TO CONSTRUCTION. LOCATIONS OF TREES SHOWN TO BE REMOVED ARE APPROXIMATE. ANY ADDITIONAL TREE REMOVALS NECESSARY TO CONSTRUCT IMPROVEMENTS ARE TO BE REMOVED AT CONTRACTOR'S EXPENSE PENDING APPROVAL OF THE CITY ENGINEER. IN LOCATIONS WHERE EXCAVATION IS CLOSE TO TREE ROOTS, THE ROOTS SHALL BE SAW CUT.

2. TREES REMOVED WITH A DIAMETER OF LESS THAN 6 INCHES, LIMBS OVERHANGING THE BARRIER FREE RAMPS/SIDEWALK TRIMMED TO A HEIGHT OF 8 FEET FROM THE GROUND, AND SHAVING OF TREE ROOTS SHALL BE INCIDENTAL TO CLEARING AND GRUBBING ACTIVITIES.

3. THE CONTRACTOR SHALL EXTEND THE STORM DRAIN FACILITY THROUGH THE PROPOSED IMPROVEMENTS AS SHOWN ON SHEET 00C-18.

4. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND ALLEYS ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION AT ALL TIMES.

5. WATER DIVERSION AND SWPPP IMPLEMENTATION - THE CONTRACTOR MUST USE CONTROL MEASURES NECESSARY TO PREVENT AND CONTROL SOIL EROSION, SEDIMENTATION AND WATER POLLUTION. THESE CONTROL MEASURES SHALL BE COMPLETED BY THE CONTRACTOR. THE CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION TO ASSURE EFFECTIVE AND CONTINUOUS WATER POLLUTION CONTROL. THE CONTROLS MAY INCLUDE, BUT ARE NOT LIMITED TO: SILT FENCES, STRAW BALE DIKES, ROCK BERMS, DIVERSION DIKES, INTERCEPTOR SWALES, SEDIMENT TRAPS AND BASINS, PIPE SLOPE DRAINS, INLET PROTECTION, STABILIZED CONSTRUCTION ENTRANCES, SEEDING, SODDING, MULCHING, SOIL RETENTION BLANKETS, OR OTHER STRUCTURAL OR NON-STRUCTURAL STORM WATER POLLUTION CONTROLS. REFER TO THE EROSION CONTROL PLAN IN THIS PLAN SET FOR FURTHER DETAILS ON MEASURES AND LOCATIONS OF EROSION CONTROL. A SWPPP DOCUMENT WILL BE SUBMITTED AT THE BEGINNING OF THE PROJECT BY THE CONTRACTOR.

6. THE NOTICE OF INTENT SHALL BE POSTED IN A LOCATION VIEWABLE TO THE PUBLIC UNTIL CONSTRUCTION IS COMPLETE AND NOTICE OF TERMINATION (NOT) SUBMITTED. THE SWPPP SHALL BE READILY AVAILABLE FOR REVIEW BY FEDERAL, STATE, OR LOCAL OFFICIALS.

7. NO SOIL DISTURBING ACTIVITIES WILL OCCUR PRIOR TO THE SWPPP, ECP, AND ASSOCIATED BEST MANAGEMENT PRACTICES (BMP) BEING FULLY IMPLEMENTED, AND THEN INSPECTED BY THE CITY OF CARROLLTON'S PROJECT INSPECTOR.

8. THE CONTRACTOR SHALL COMPLY WITH THE CITY OF CARROLLTON'S STORM WATER ORDINANCE, THE TPDES GENERAL CONSTRUCTION PERMIT TXR150000 AND ANY OTHER STATE AND/OR LOCAL REGULATIONS. THIS PROJECT IS ALSO UNDER A U.S.A.C.E. SECTION 404 NATIONWIDE PERMIT 27. REFER TO THE ATTACHED U.S.A.C.E. LETTER OF APPROVAL (**TO BE ADDED WHEN RECEIVED**)

9. NATURAL DRAINAGE OF THE CREEK SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THIS INCLUDES A BYPASS WATER DIVERSION. CONTRACTOR WILL SUBMIT A WATER DIVERSION OPERATIONS PLAN AND A POND DEWATERING PLAN PRIOR TO BEGINNING CONSTRUCTION.

ROCK RIPRAP

1. THE ROCK RIPRAP TO BE USED THROUGHOUT THE PROJECT LIMITS SHALL CONFORM TO THE GRADATION TABLE IN THE PROJECT SPECIFICATIONS.

UTILITIES

1. EXISTING UTILITIES ARE SHOWN AT APPROXIMATE LOCATIONS AND DEPTHS BASED ON BEST AVAILABLE RECORDS AND LIMITED FIELD DATA. NOT ALL UTILITIES MAY BE SHOWN. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND DEPTHS OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THIS INCLUDES ALL STORMWATER LINES, SANITARY SEWER LINES AND WATER LINES. ANY DAMAGES TO UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.

2. LOCATION OF ALL UNDERGROUND UTILITIES AND STORM DRAINAGE FACILITIES IN THE AREA OF CHANNEL EXCAVATION AND OTHER AREAS OF POSSIBLE CONFLICT WILL BE UNCOVERED TO DETERMINE EXACT LOCATIONS PRIOR TO START OF CONSTRUCTION. THE ENGINEER'S DIRECT AUTHORIZATION TO PROCEED WITH CONSTRUCTION WILL BE REQUIRED AND IS NECESSARY BEFORE THE PAY ITEM CAN BE UTILIZED, WHEN A PAY ITEM IS PROVIDED. THE CONTRACTOR SHALL PROVIDE STATION AND ELEVATION INFORMATION FOR LOCATIONS THAT ARE UNCOVERED, IN ORDER TO BE PAID.

3. INSTALLATION OF HEADWALLS SHOULD FOLLOW TXDOT STANDARD PLANS. INSTALLATION OF STORM DRAIN PIPES SHOULD FOLLOW CITY OF CARROLLTON STANDARD PLANS.

4. PORTIONS OF THE PROJECT IMPACT THE CURRENT ONCOR EASEMENT AGREEMENT WITH THE CITY. THESE LIMITS ARE CLEARLY OUTLINED IN THESE PLANS. A PERMIT FROM ONCOR WAS GRANTED ON XX/XX/XXXX.

TRAILS

1. THE HIKE AND BIKE TRAIL DESIGN IS AN INDEPENDENT PROJECT AND SEPARATE CONSTRUCTION DOCUMENTS WILL BE SUBMITTED.

INDIAN CREEK DRIVE IMPROVEMENTS

1. THESE IMPROVEMENTS ARE INDEPENDENT PROJECTS AND SEPARATE CONSTRUCTION DOCUMENTS WILL BE SUBMITTED.

PROJECT PHASING

1. THE CONTRACTOR WILL NEED TO DICTATE THE PHASING OF THE PROJECT PER THE MEANS AND METHODS AS SPECIFIED IN THE SWPPP. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING THE SWPPP.

2. THE SWPPP LUMP SUM WILL ASSUME PHASING OF THE EROSION CONTROL PLAN.

EXCAVATION / BACKFILL

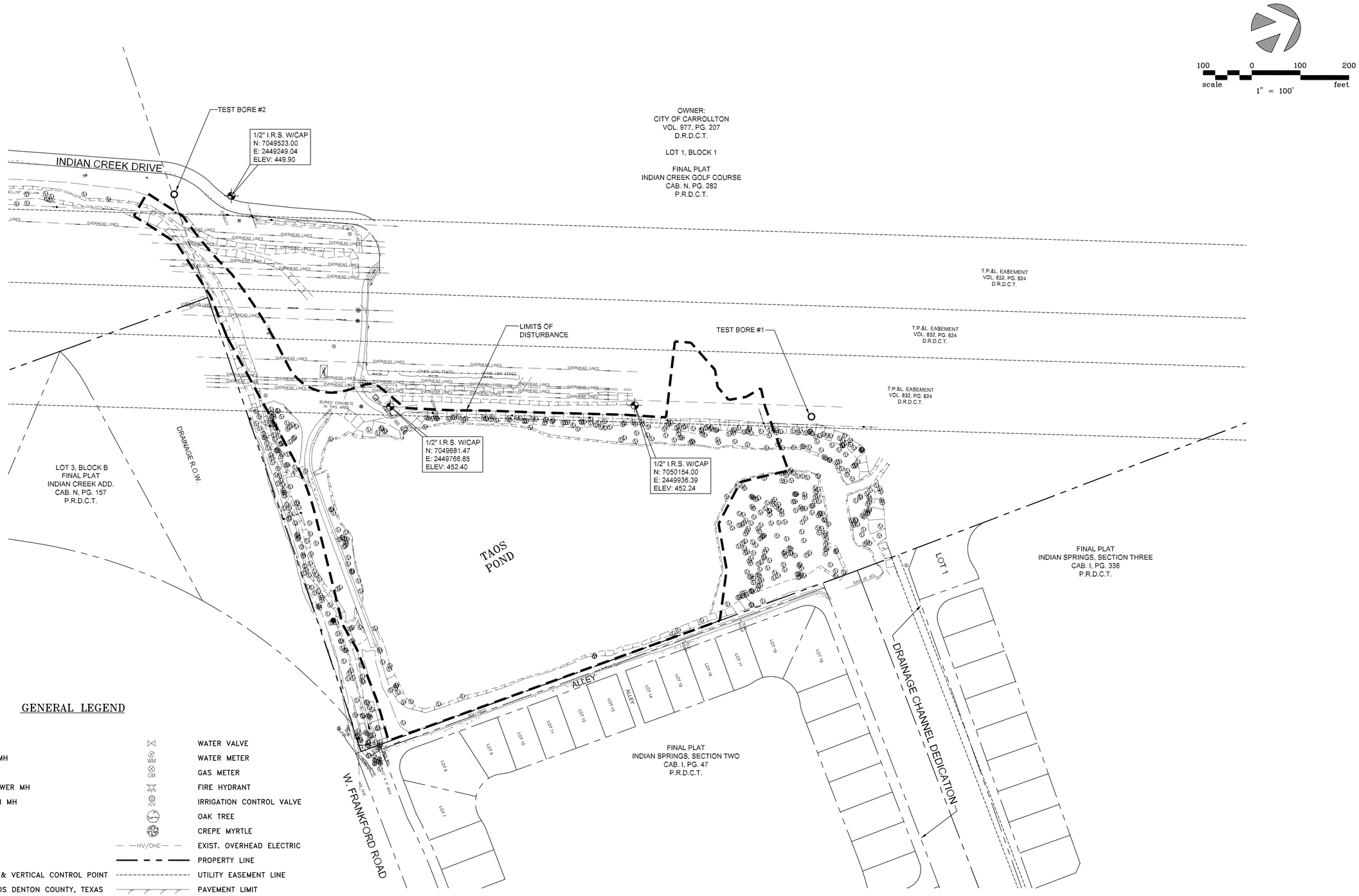
1. REFER TO EXCAVATION AND FILL SPECIFICATION.

2. THE CONTRACTOR SHALL REFER TO THE "GEOTECHNICAL EXPLORATION AND DATA COLLECTION REPORT" PREPARED BY GILES ENGINEERING ASSOCIATES AND DATED AUGUST 2018.

3. THE REPORT'S SOIL BORINGS ARE NOTED IN THE GRADING PLANS OF THIS SET. CONTRACTOR SHOULD REFER TO THIS SET OF PLANS AND SPECIFICATIONS FOR ANY DETAILS CONCERNING SUBGRADE PREPARATION.

4. THE CHANNEL AND WETLAND 12" DIVIDING BERM SHOULD BE FILLED WITH COHESIVE FILL MATERIAL AS SPECIFIED IN THE SPECIFICATIONS.

5. RECOMMENDED FILL MATERIAL AT TAOS POND SHOULD BE SELECT FILL MATERIAL FROM ONSITE AND/OR IMPORTED AS LONG AS IT MEETS THE GENERAL FILL CRITERIA STATED IN THE SPECIFICATIONS. THIS WILL GENERALLY INCLUDE NATURAL SOILS FREE OF ORGANICS, VEGETATION, DEBRIS, TRASH, COBBLES, AND BOULDERS.



GENERAL LEGEND

	CO		WATER VALVE
	TELEPHONE MH		WATER METER
	ELECTRIC MH		GAS METER
	SANITARY SEWER MH		FIRE HYDRANT
	STORM DRAIN MH		IRRIGATION CONTROL VALVE
	GAS MH		OAK TREE
	STREET SIGN		CREPE MYRTLE
	PP	HV/OHE	EXIST. OVERHEAD ELECTRIC
	LAMP POST		PROPERTY LINE
	HORIZONTAL & VERTICAL CONTROL POINT		UTILITY EASEMENT LINE
P.R.D.C.T.	PLAT RECORDS DENTON COUNTY, TEXAS		PAVEMENT LIMIT
D.R.D.C.T.	DEED RECORDS DENTON COUNTY, TEXAS		

DATE OF FINISHED SURVEY: AUGUST 2018

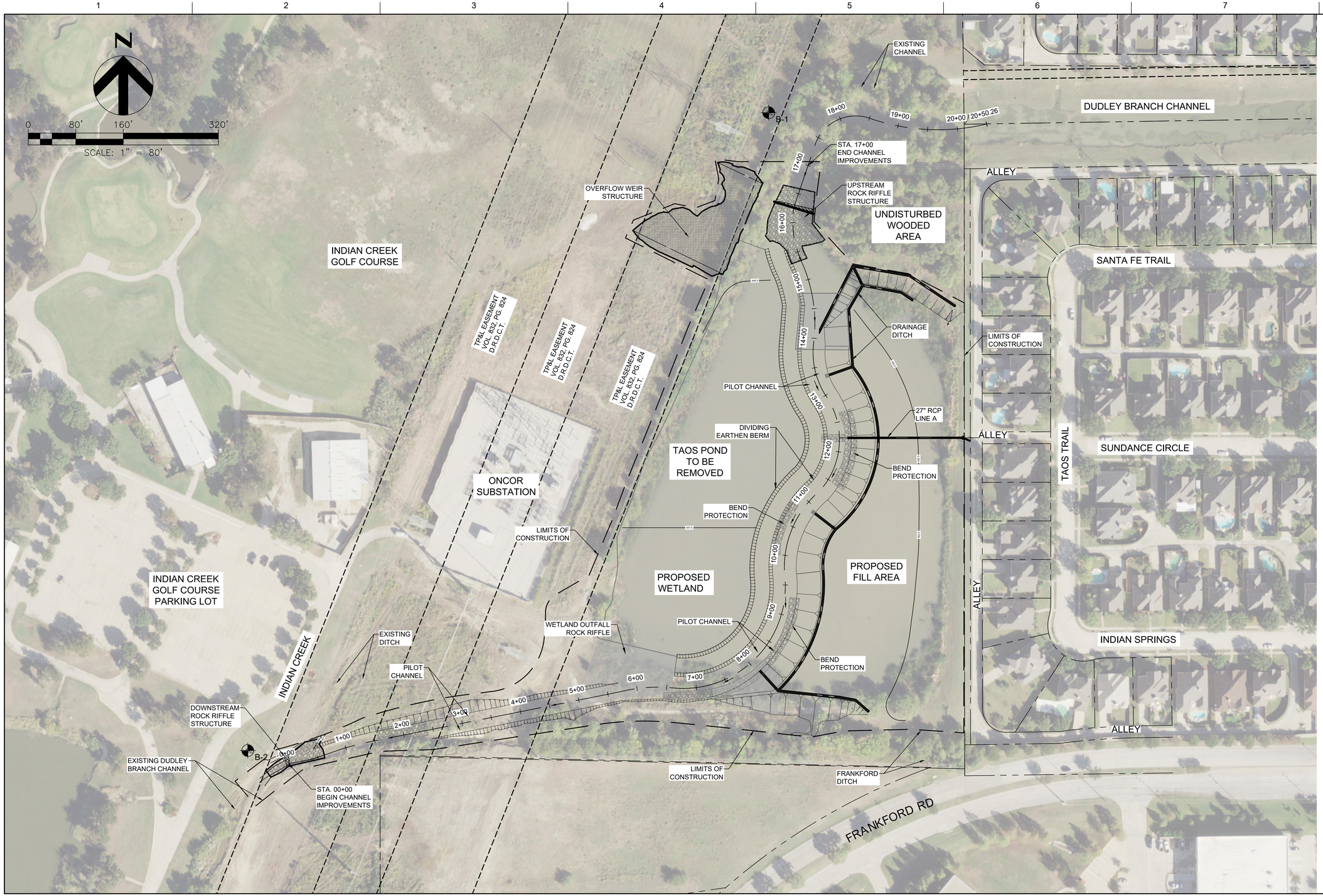
NO.	DATE	REVISION	REVIEWED
6			
5			
4			
3			
2			
1			

DRAWN: BW2
DESIGN: BW2
REVIEWED: BW2
SCALE: 1" = 100'
DATE: FEBRUARY 2020
DWG. NAME: 1872-EXHIBIT.DWG

BW2 ENGINEERS, INC.
1919 S. Shiloh Road
Suite 500, L.B. 27
Garland, Texas 75042
(972) 864-8200 (T) (972) 864-8220 (F)
Firm Registration No. F-5290

TOPOGRAPHIC SURVEY
DUDLEY BRANCH CHANNEL IMPROVEMENTS
HDR
CARROLLTON, TEXAS

SHEET NO. 1
OF 1 SHEETS
JOB NO. 18-1872



Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

PROJECT LAYOUT

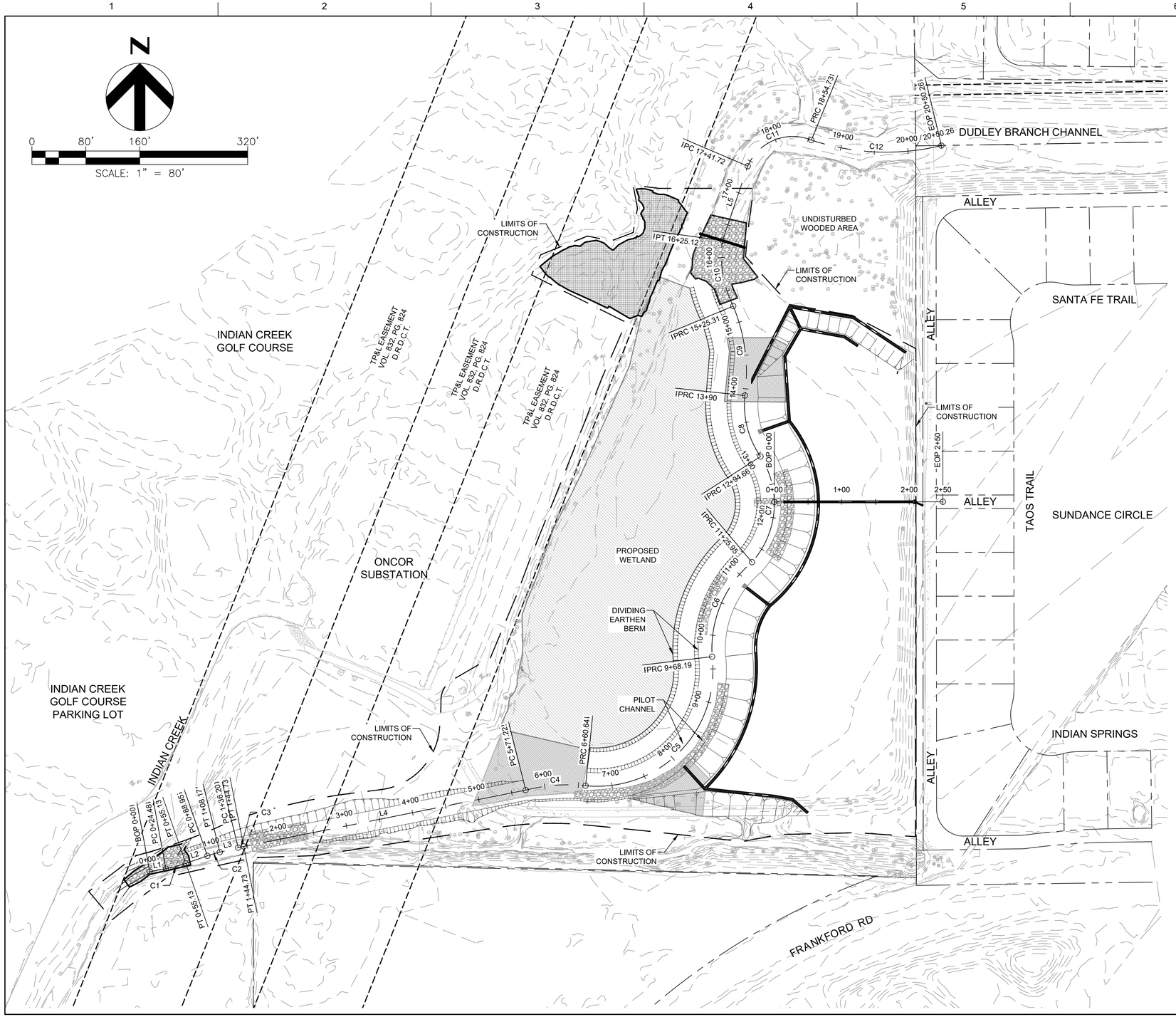
0 1" 2"

FILENAME

SCALE 1" = 80'

SHEET

00G-04



MAIN CHANNEL ℄ ALIGNMENT LINE TABLE				
LINE NO.	LENGTH	DIRECTION	START POINT (N,E)	END POINT (N,E)
L1	24.48	N79° 31' 55"E	(2449274.6764,7049391.7624)	(2449298.7512,7049396.2104)
L2	33.81	N70° 45' 06"E	(2449328.3470,7049404.0622)	(2449360.2699,7049415.2092)
L3	28.03	N76° 15' 35"E	(2449378.6990,7049420.6662)	(2449405.9240,7049427.3232)
L4	426.49	N78° 42' 10"E	(2449414.2484,7049429.1715)	(2449832.4782,7049512.7206)
L5	116.60	N18° 45' 46"E	(2450124.3101,7050327.2261)	(2450161.8157,7050437.6341)

MAIN CHANNEL ℄ ALIGNMENT CURVE TABLE							
CURVE NO.	PI STATION	Δ	RADIUS	TANGENT	LENGTH	CHORD DIRECTION	CHORD LENGTH
C1	0+39.84	008°46'49.69"	200.00'	15.35'	30.65'	N75°08'30.36"E	30.62'
C2	0+98.57	005°30'29.72"	200.00'	9.62'	19.23'	N73°30'20.38"E	19.22'
C3	1+40.46	002°26'34.93"	200.00'	4.26'	8.53'	N77°28'52.70"E	8.53'
C4	6+16.38	019°56'03.11"	257.00'	45.16'	89.42'	N85°48'40.06"E	88.97'
C5	8+75.10	102°38'54.72"	171.67'	214.47'	307.56'	N44°27'14.25"E	268.04'
C6	10+53.37	053°35'03.27"	168.69'	85.18'	157.76'	N22°51'53.85"E	152.07'
C7	12+24.67	074°36'42.70"	129.55'	98.71'	168.71'	N04°39'19.51"E	157.04'
C8	13+44.46	040°52'07.18"	133.66'	49.80'	95.34'	N14°22'26.54"W	93.33'
C9	14+59.26	030°11'52.93"	256.72'	69.26'	135.31'	N07°27'07.14"W	133.75'
C10	15+76.78	034°33'47.53"	165.46'	51.48'	99.81'	N09°19'43.94"W	98.31'
C11	18+13.31	089°12'44.95"	72.58'	71.59'	113.01'	N67°42'55.53"E	101.94'
C12	19+55.10	031°50'51.86"	351.77'	100.36'	195.53'	S87°34'24.04"E	193.02'

HDR
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Registration No. F-754

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

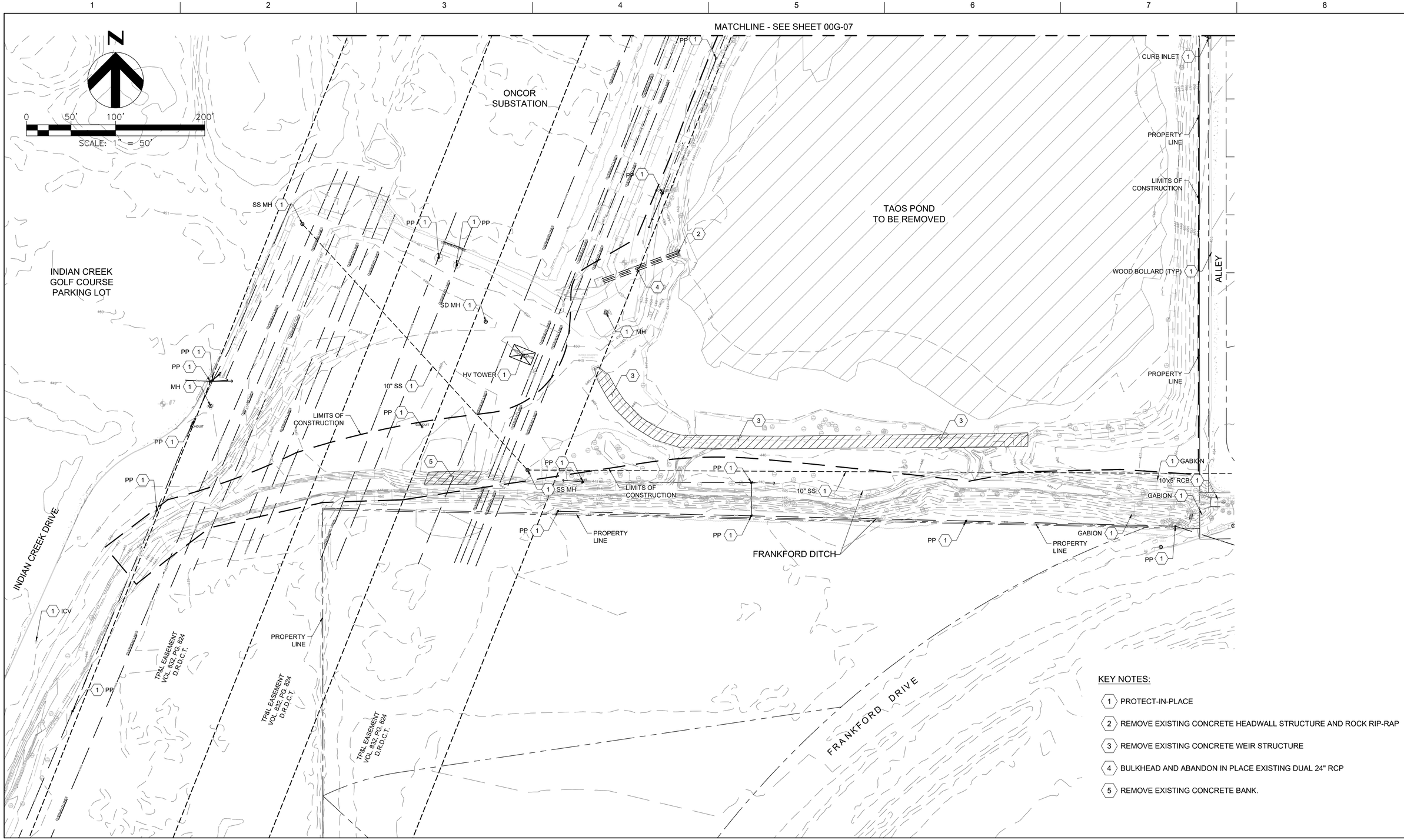
CHANNEL LAYOUT

0 1" 2"

FILENAME

SCALE 1" = 80'

SHEET **00G-05**



KEY NOTES:

1. PROTECT-IN-PLACE
2. REMOVE EXISTING CONCRETE HEADWALL STRUCTURE AND ROCK RIP-RAP
3. REMOVE EXISTING CONCRETE WEIR STRUCTURE
4. BULKHEAD AND ABANDON IN PLACE EXISTING DUAL 24" RCP
5. REMOVE EXISTING CONCRETE BANK.

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

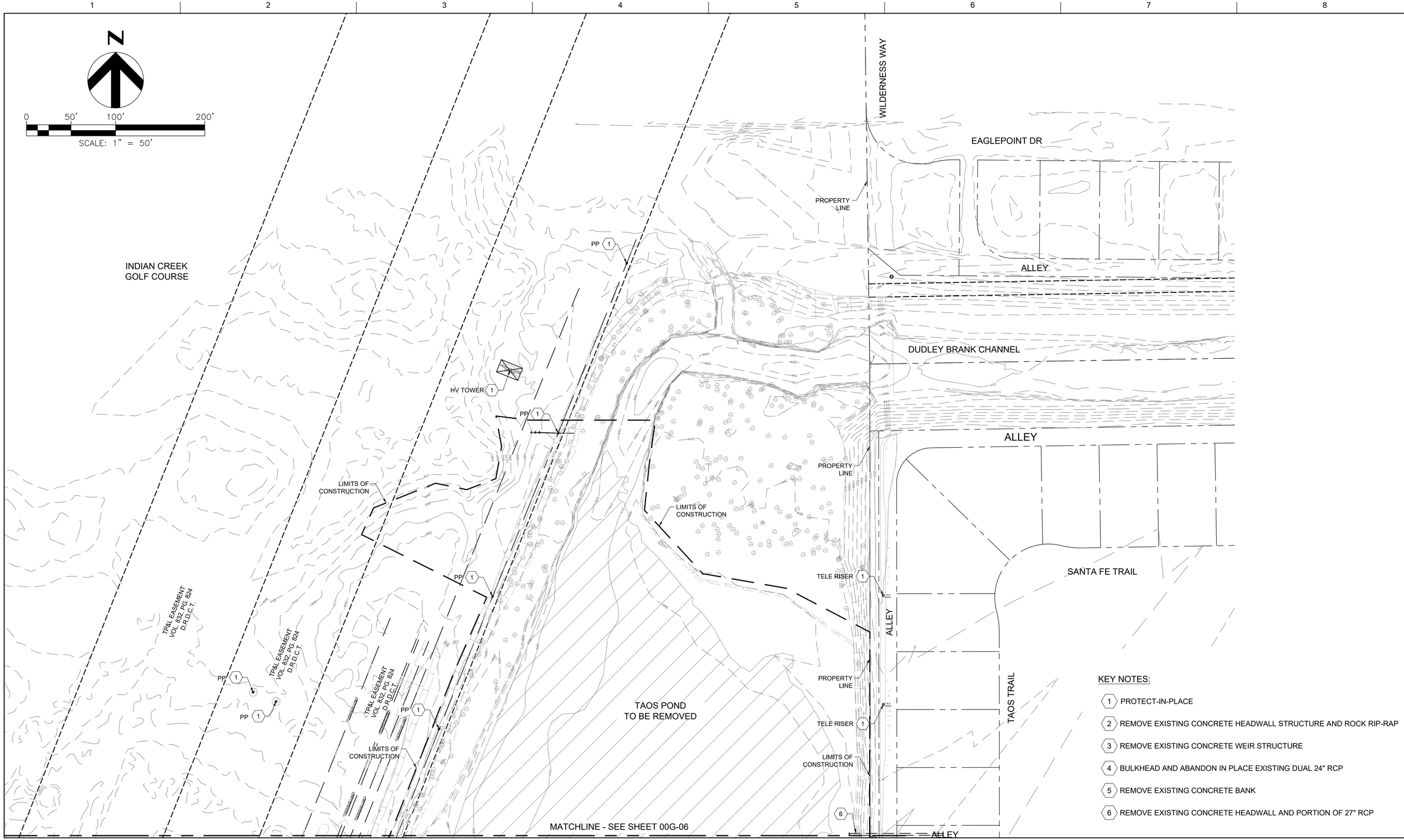
RIGHT OF WAY PREPARATION DEMOLITION PLAN I

0 1" 2"

FILENAME

SCALE 1" = 50'

SHEET 00G-06



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Design and Permitting of Channel Improvements for Dudley Branch

RIGHT OF WAY PREPARATION DEMOLITION PLAN II

0 1" 2"

FILENAME

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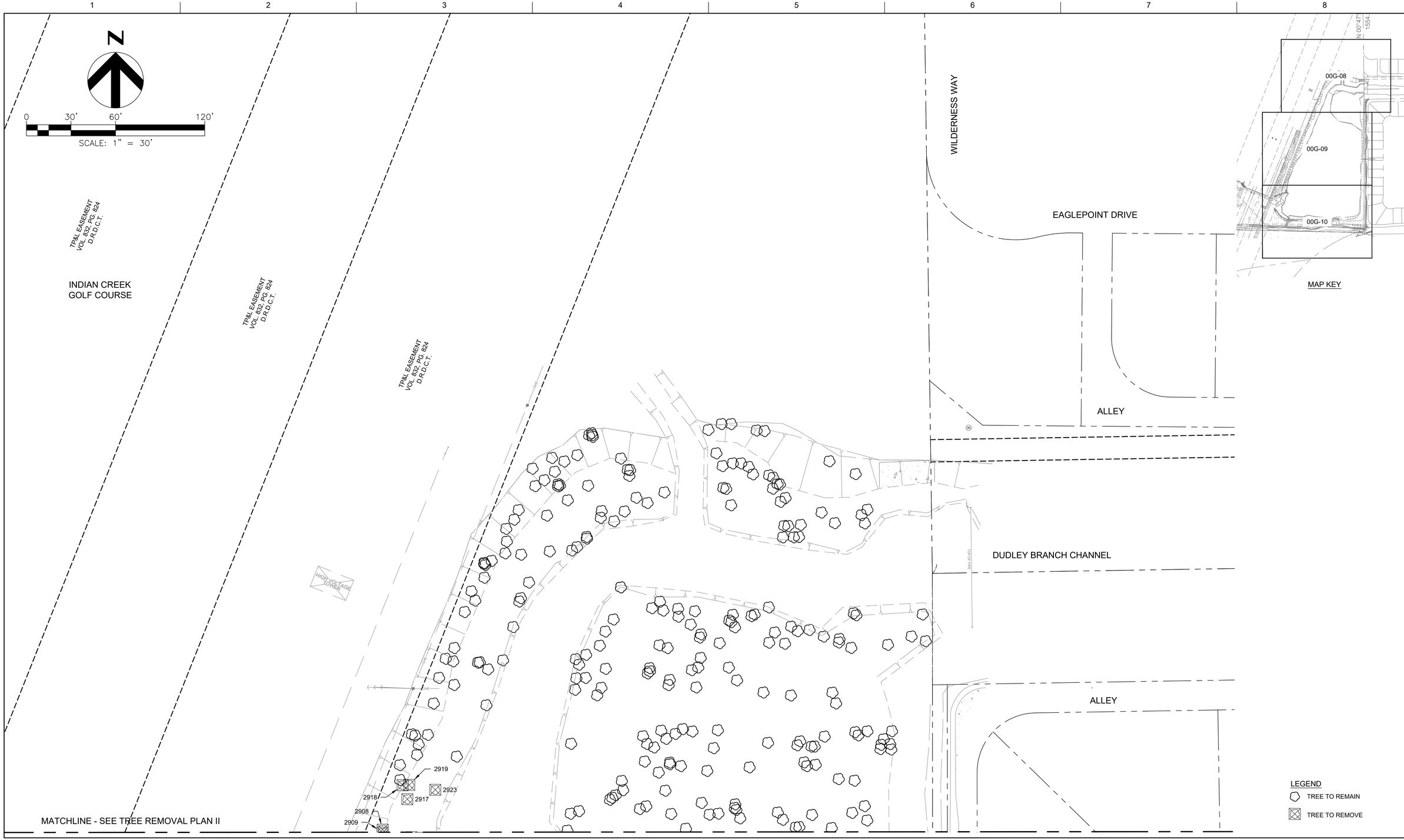
SHEET
00G-07



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TREE REMOVAL PLAN I

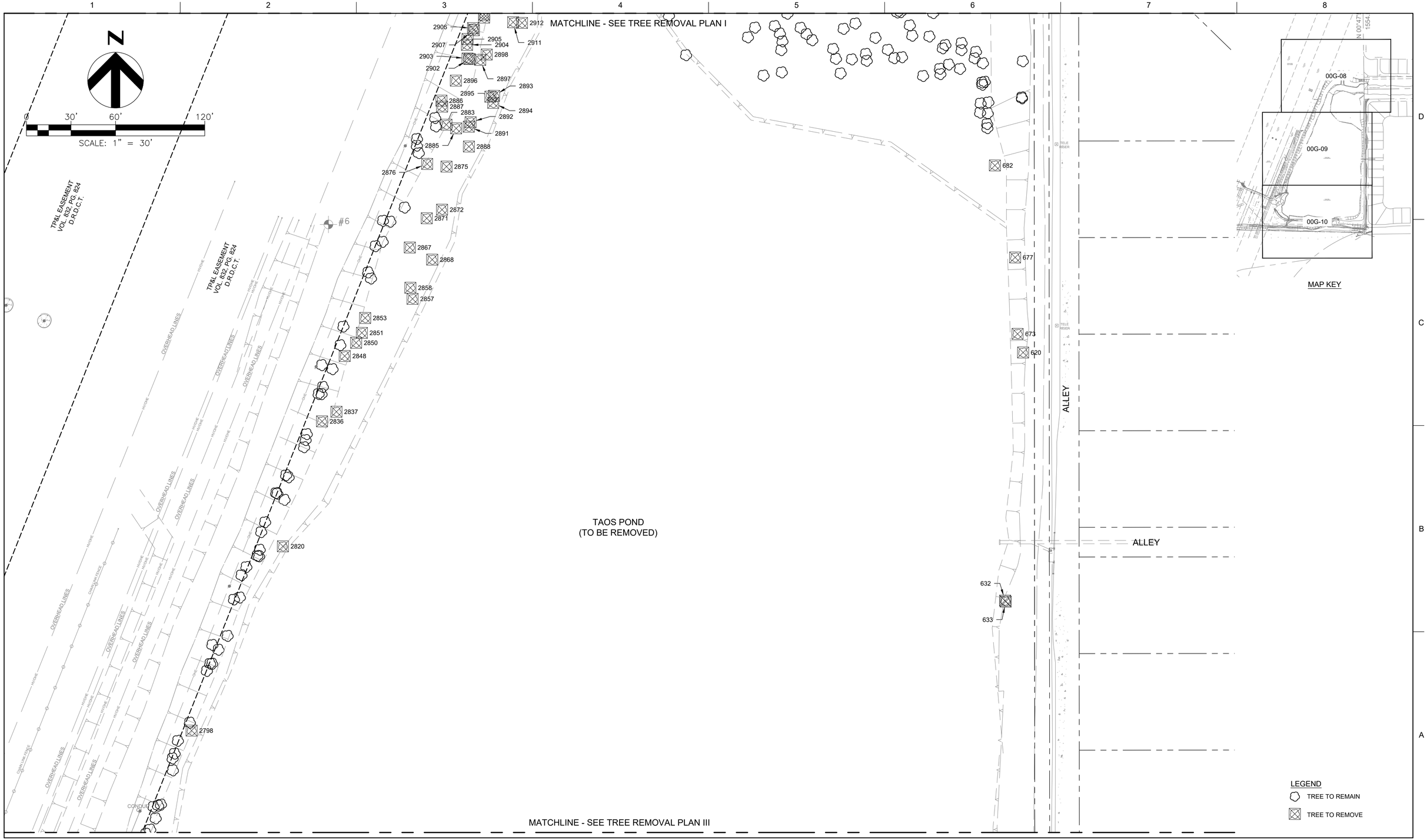
0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET

00G-08



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Design and Permitting of Channel Improvements for Dudley Branch

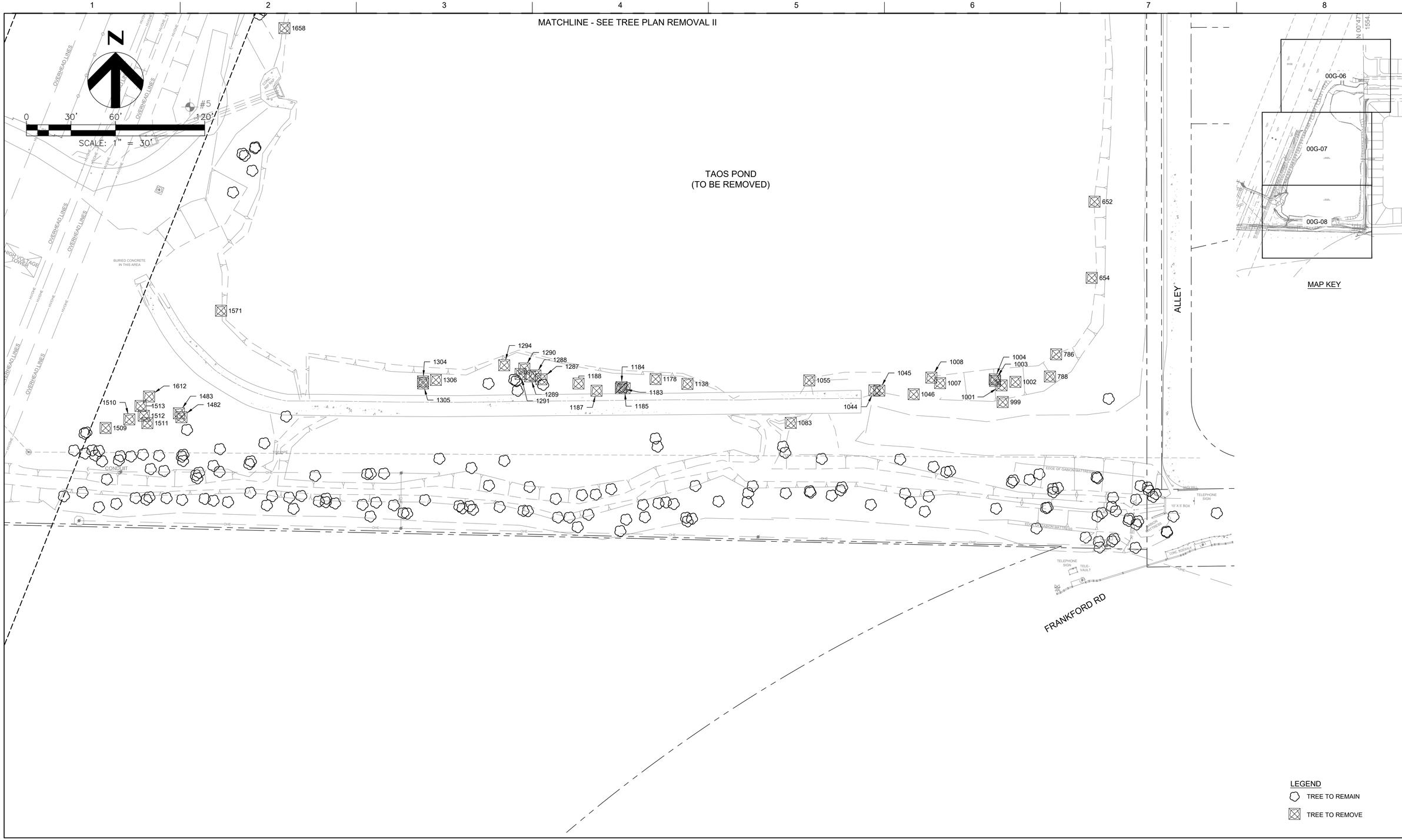
TREE REMOVAL PLAN II

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET **00G-09**



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CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

TREE REMOVAL PLAN III

0 1" 2"

FILENAME

SCALE 1" = 30'

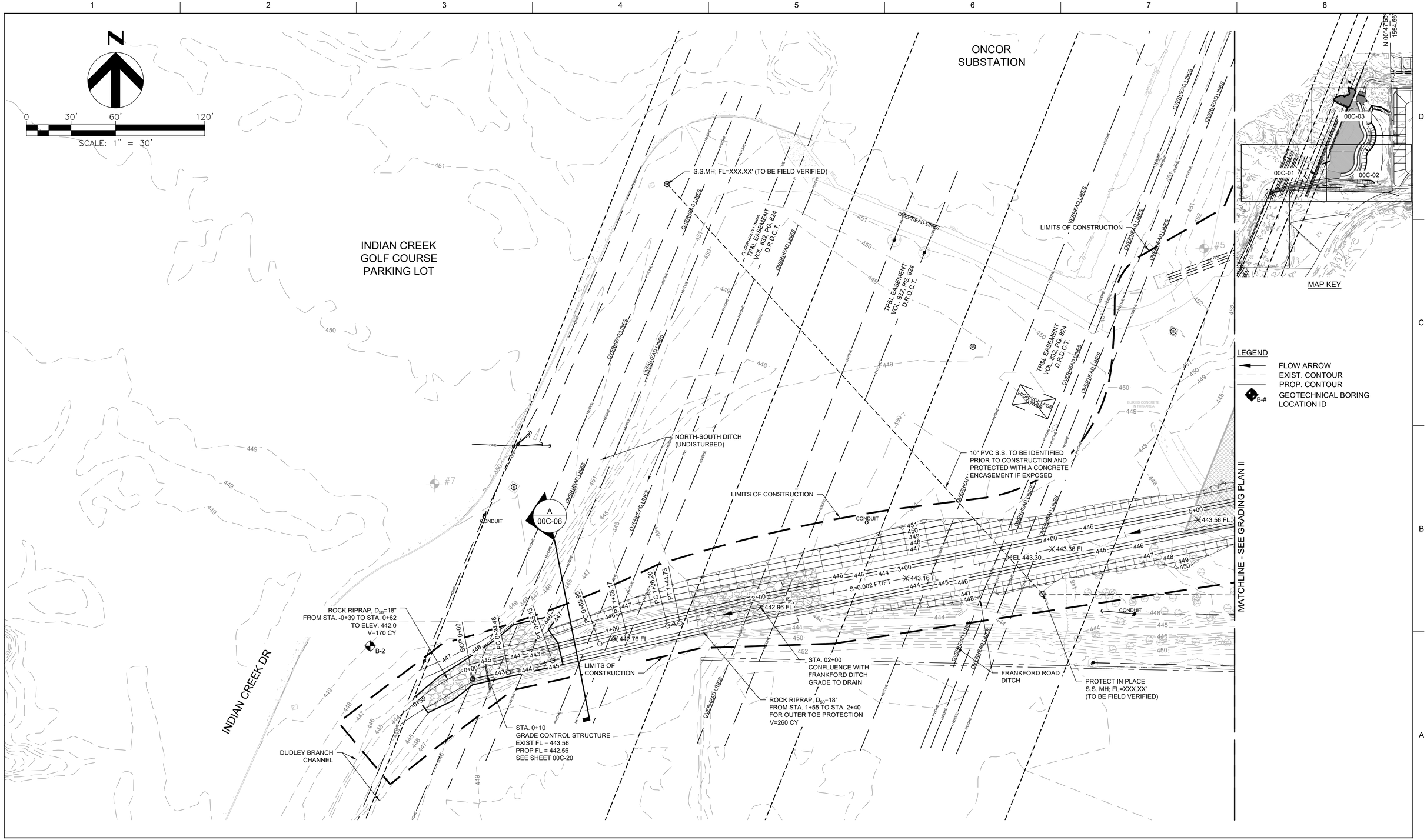
SHEET 00G-10

TREE REMOVAL TABLE

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
620	7050067.79	2450403.80	450.80	4" Willow
632	7049900.83	2450391.67	448.45	11" Box Elder
633	7049900.15	2450392.08	448.54	2-6" Box Elder
652	7049617.67	2450376.60	447.45	7" Chinaberry
654	7049566.30	2450374.70	447.19	2-7" Chinaberry
673	7050080.32	2450400.08	449.67	4-5" Hackberry
677	7050131.78	2450398.43	449.26	6" Hackberry
682	7050193.68	2450384.82	447.79	7" Ash
786	7049514.76	2450350.72	446.98	2-5" Ash
788	7049499.79	2450346.53	448.72	7" Hackberry
999	7049482.60	2450314.72	451.33	Unknown
1001	7049493.83	2450313.96	449.68	7" Mesquite
1002	7049496.18	2450323.25	449.85	2/7" Hackberry
1003	7049496.85	2450309.57	448.87	8" Mesquite
1004	7049497.89	2450309.28	448.63	2/8" Ash
1007	7049495.35	2450272.52	448.41	6" Chinaberry
1008	7049499.08	2450266.58	448.50	2/11" Ash
1044	7049490.50	2450228.22	449.88	2/10" Mesquite
1045	7049490.31	2450231.51	449.76	6" Mesquite
1046	7049487.84	2450254.69	450.34	10" Mesquite
1055	7049497.20	2450184.28	447.58	Unknown
1083	7049468.55	2450171.83	445.94	2-4" Chinaberry
1138	7049494.81	2450102.17	447.60	5" Chinaberry
1178	7049498.10	2450080.75	447.91	8" Chinaberry
1183	7049491.83	2450057.32	447.51	6" Box Elder
1184	7049492.74	2450057.78	447.57	4" Box Elder
1185	7049491.89	2450059.84	447.64	4" Box Elder
1187	7049490.21	2450040.89	447.62	4" Box Elder
1188	7049495.08	2450028.77	447.61	5" Box Elder
1287	7049497.98	2450003.77	447.60	5" Ash
1288	7049500.53	2449999.71	447.62	6" Box Elder
1289	7049499.91	2449996.12	447.74	7" Ash
1290	7049505.20	2449992.23	447.48	6" Chinaberry
1291	7049501.52	2449989.73	447.66	4" Box Elder
1294	7049507.40	2449978.69	447.81	11" Chinaberry
1304	7049496.47	2449923.92	447.88	8" Willow
1305	7049495.17	2449923.99	447.76	6" Willow
1482	7049472.35	2449761.12	449.48	4" Cedar Elm
1483	7049475.01	2449759.41	449.55	4" Cedar Elm
1509	7049465.12	2449710.00	448.57	15"
1510	7049470.96	2449725.96	448.88	7" American elm
1511	7049468.37	2449738.15	448.74	4" Cedar Elm
1512	7049473.39	2449735.72	449.11	4" Cedar Elm
1513	7049479.95	2449733.53	449.11	5" Cedar Elm
1571	7049544.14	2449787.81	447.74	8" Willow
1612	7049486.30	2449739.29	449.46	5" Cedar Elm
1658	7049734.66	2449830.53	447.91	3-4" Maple
2798	7049813.33	2449844.30	447.44	6" Bois d arc
2820	7049937.37	2449905.74	447.43	4" Ash

TREE REMOVAL TABLE

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
2836	7050021.44	2449932.06	447.89	2-8" Ash
2837	7050027.93	2449941.75	447.49	10" Chinaberry
2848	7050065.44	2449947.31	448.34	5-5" Ash
2850	7050074.36	2449955.00	447.75	2-6" Ash
2851	7050081.04	2449958.86	447.51	4" Ash
2853	7050091.04	2449961.07	447.96	11" Ash
2857	7050103.91	2449992.96	448.26	4" Chinaberry
2858	7050111.36	2449991.50	447.85	2-5" Box Elder
2867	7050138.49	2449991.11	447.86	21" Willow
2868	7050130.30	2450006.19	448.30	2-4" Box Elder
2871	7050158.12	2450002.53	448.22	12" Willow
2872	7050163.92	2450012.81	448.25	6" Chinaberry
2875	7050192.92	2450015.80	453.65	2-9" Maple
2876	7050194.74	2450002.78	448.35	4" Ash
2883	7050221.16	2450015.73	447.98	4" American elm
2885	7050218.65	2450022.33	448.11	6" American elm
2886	7050237.34	2450012.40	0.00	5" Cedar Elm
2887	7050233.32	2450012.88	448.75	7" Cedar Elm
2888	7050206.42	2450030.88	447.93	5" Box Elder
2891	7050219.78	2450030.82	448.03	7" Box Elder
2892	7050222.82	2450032.00	447.95	8" Box Elder
2893	7050240.58	2450047.80	447.80	8" Box Elder
2894	7050235.80	2450047.26	447.92	7" Catalpa
2895	7050239.95	2450045.34	447.88	5" Box Elder
2896	7050250.78	2450022.12	448.95	7" Cedar Elm
2897	7050264.76	2450038.52	447.64	4" Pistachio
2898	7050268.39	2450042.86	447.75	3-4" Maple
2902	7050265.34	2450031.33	448.40	11" Cedar Elm
2903	7050265.68	2450029.96	448.53	4" Cedar Elm
2904	7050274.84	2450029.62	448.53	5" Cedar Elm
2905	7050278.75	2450029.97	448.61	6" Cedar Elm
2906	7050286.13	2450033.66	449.35	7" Cedar Elm
2907	7050284.74	2450034.22	449.08	5" Mesquite
2908	7050295.19	2450041.16	449.26	2-7" Cedar Elm
2909	7050293.21	2450041.09	449.26	5" Cedar Elm
2911	7050290.11	2450060.63	448.54	22" Willow
2912	7050289.66	2450066.62	448.62	12" Willow
2917	7050315.73	2450057.76	448.24	4" Ash
2918	7050325.14	2450054.62	448.91	4" Chitumwood
2919	7050325.34	2450059.02	448.41	2-6" American elm
2923	7050322.04	2450076.54	447.86	10" 5' SOUTH



HDR

Texas P.E. Firm Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

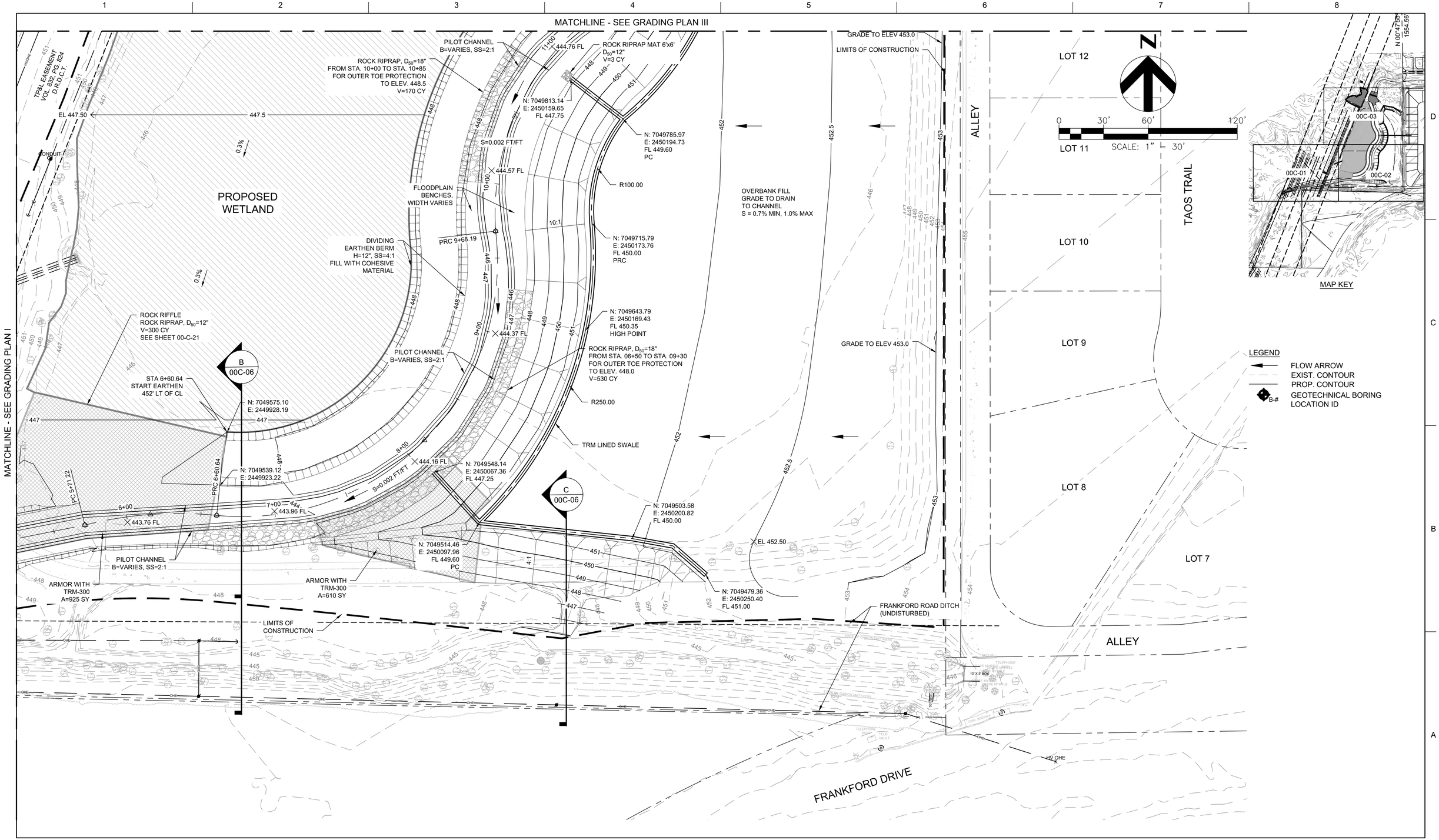
GRADING PLAN I

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET **00C-01**



Texas P.E. Firm Registration No. F-754

ISSUE	DATE	DESCRIPTION
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1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

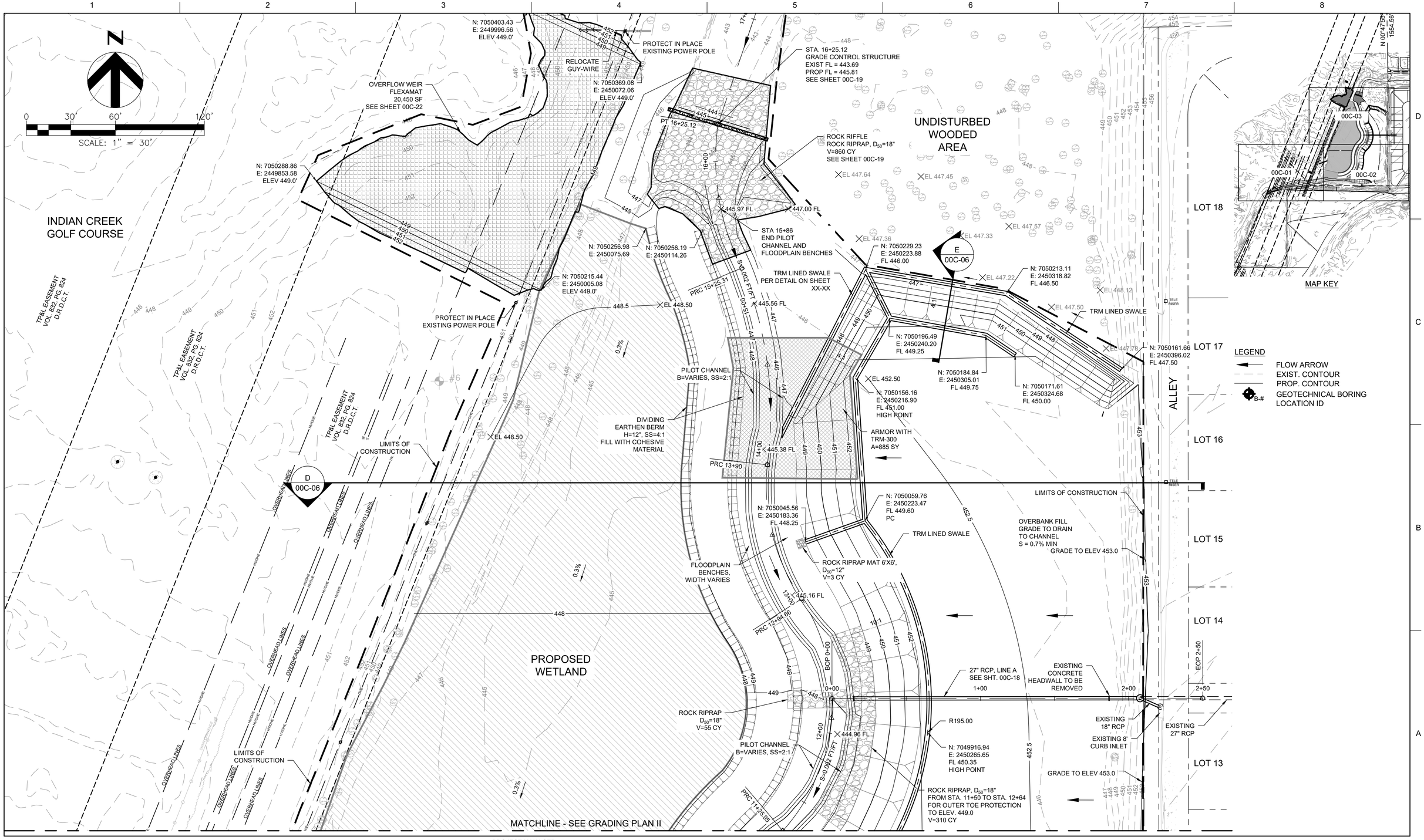
GRADING PLAN II

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET **00C-02**



Texas P.E. Firm Registration No. F-754

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1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

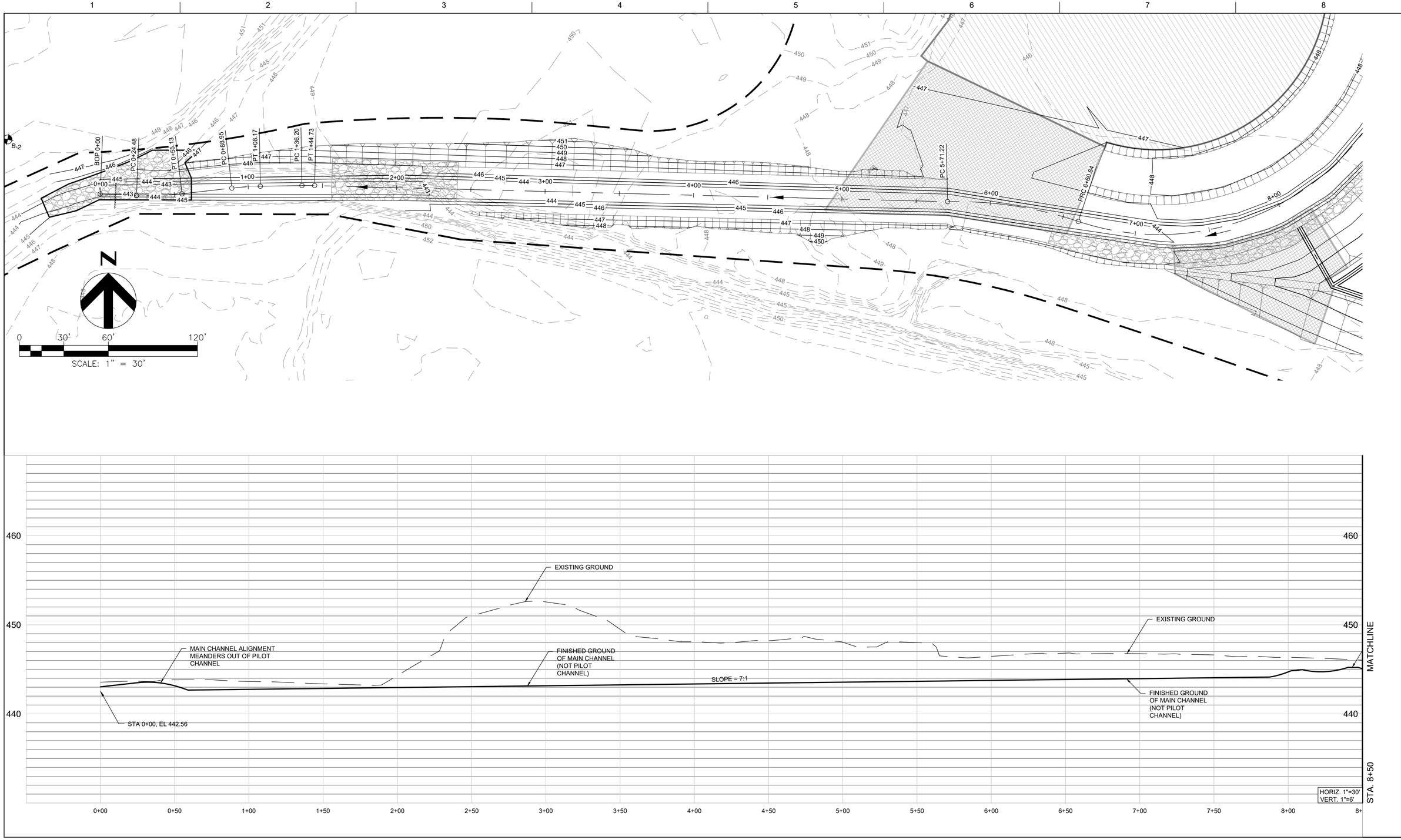
GRADING PLAN III

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET **00C-03**



Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	Ivy Xiong
DESIGNED BY	
DRAWN BY	Mark Branin
CHECKED BY	Eric Stewart
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

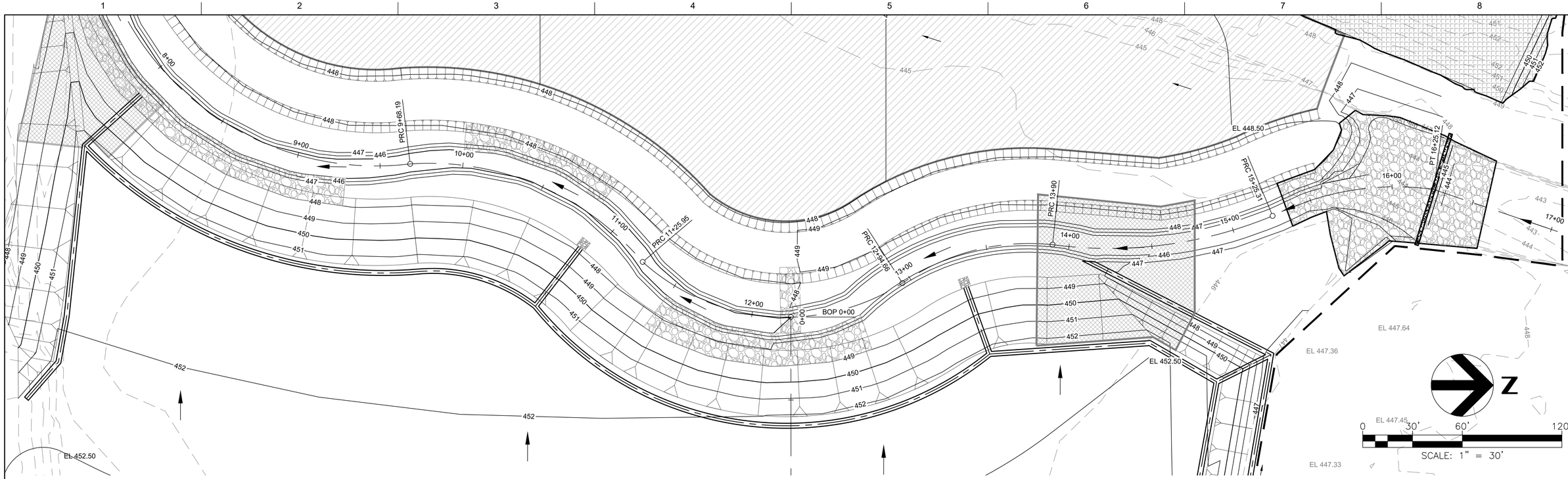
CHANNEL PLAN AND PROFILE STA. 00+00 TO 08+50

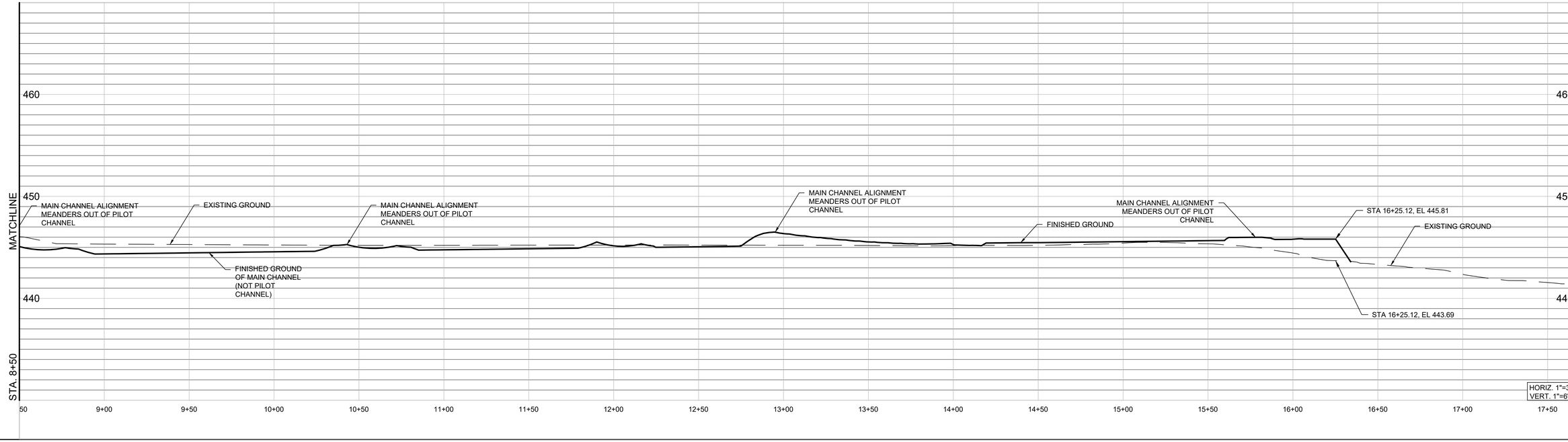
0 1" 2"

FILENAME -

SCALE AS NOTED

SHEET 00C-04





Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	Ivy Xiong
DESIGNED BY	
DRAWN BY	Mark Branin
CHECKED BY	Eric Stewart
PROJECT NUMBER	10110387

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Design and Permitting of Channel Improvements for Dudley Branch

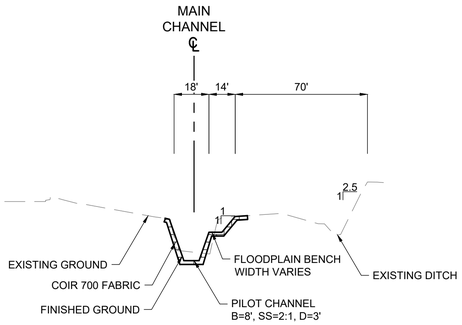
CHANNEL PLAN AND PROFILE STA. 08+50 TO 16+25

0 1" 2"

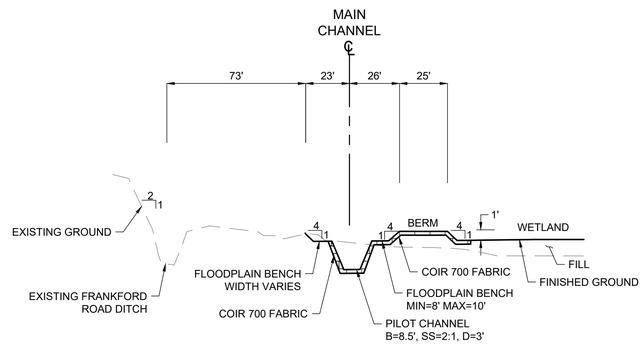
FILENAME -

SCALE AS NOTED

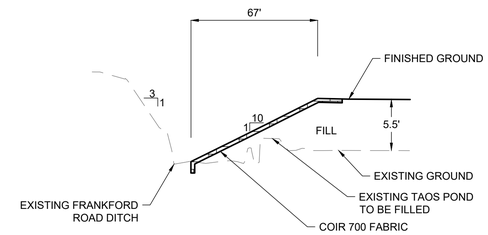
SHEET **00C-05**



SECTION A-A
H: 1"=40'
V: 1"=8'



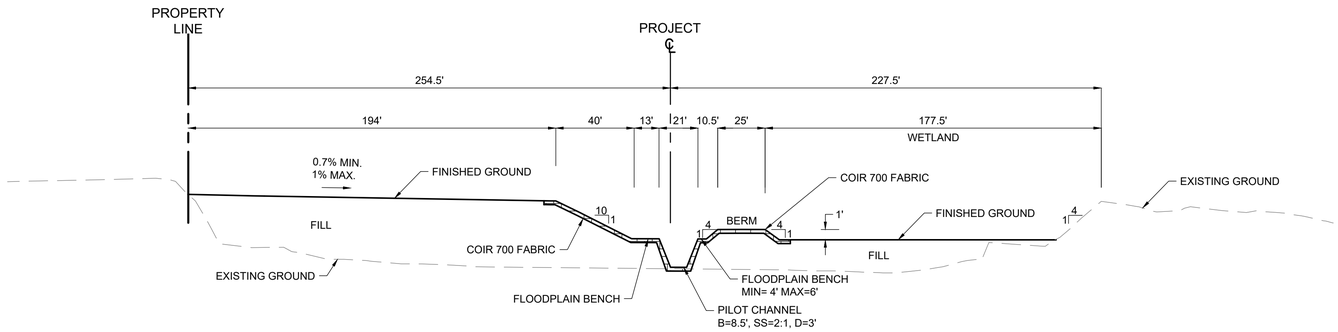
SECTION B-B
H: 1"=40'
V: 1"=8'



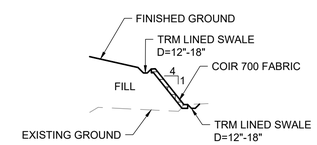
SECTION C-C
H: 1"=40'
V: 1"=8'

NOTES:

1. PILOT CHANNEL CENTERLINE VARIES THROUGHOUT THE PROJECT WITH RESPECT TO THE MAIN CHANNEL CENTERLINE.



SECTION D-D
H: 1"=40'
V: 1"=8'



SECTION E-E
H: 1"=40'
V: 1"=8'

HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

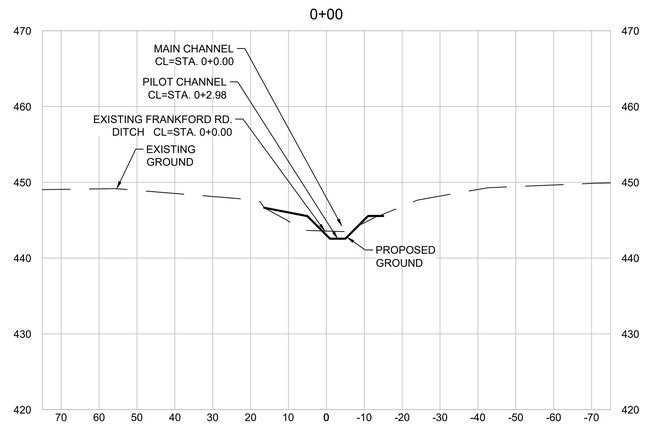
SECTION DETAILS

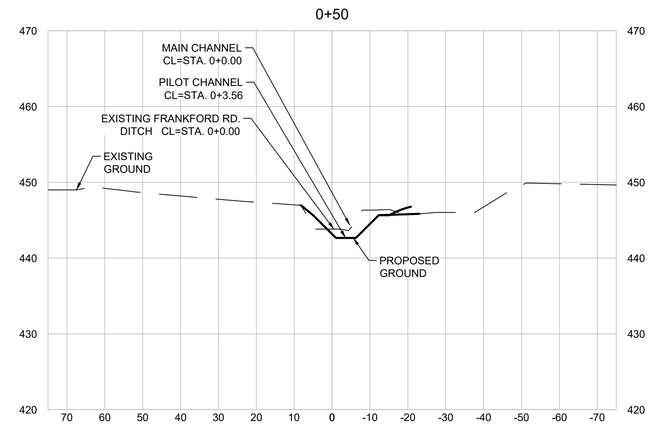
0 1" 2"

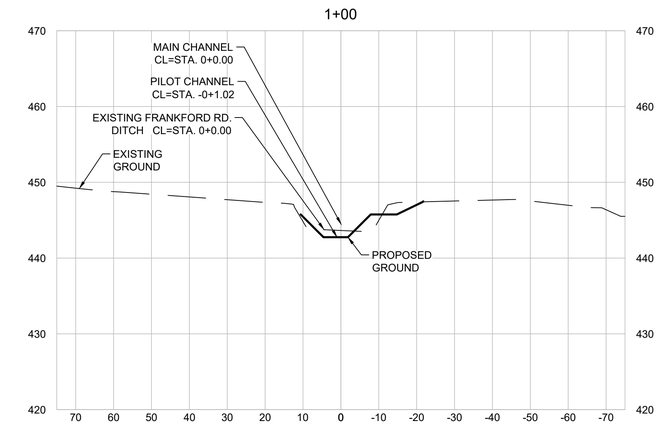
FILENAME

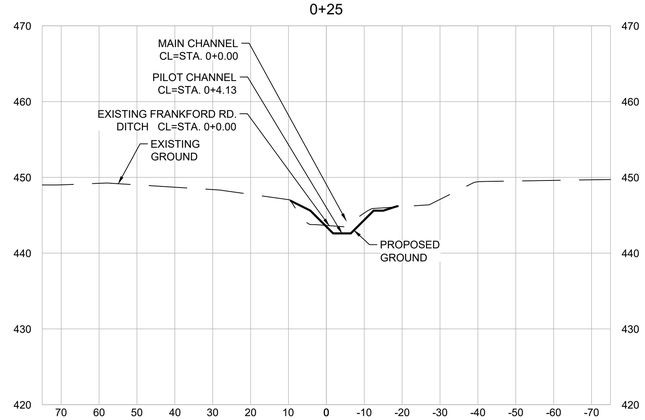
SCALE AS NOTED

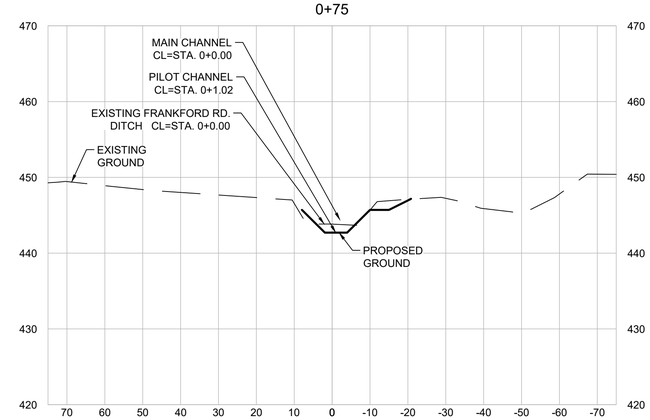
SHEET 00C-06

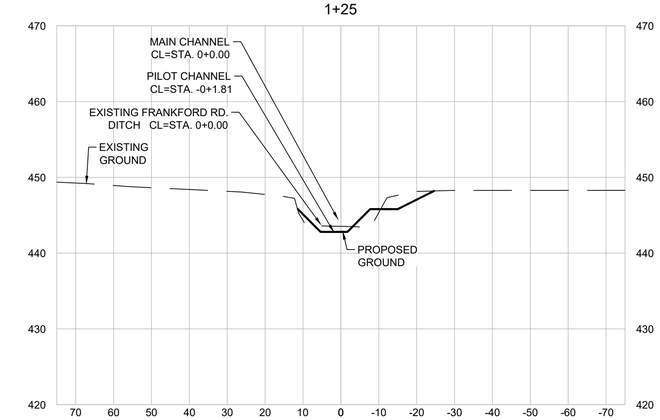












Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

CHANNEL SECTIONS STA. 00+00 TO 01+25

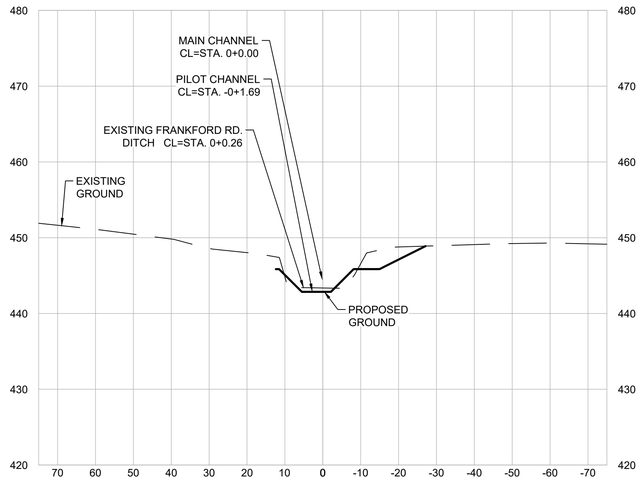
0 1" 2"

FILENAME

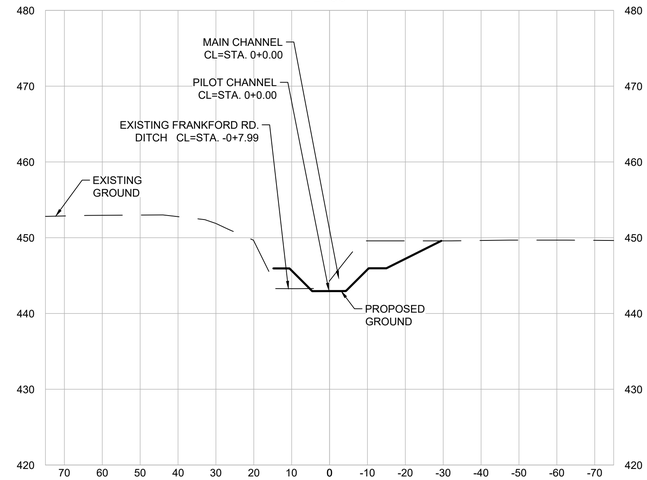
SCALE AS NOTED

SHEET **00C-07**

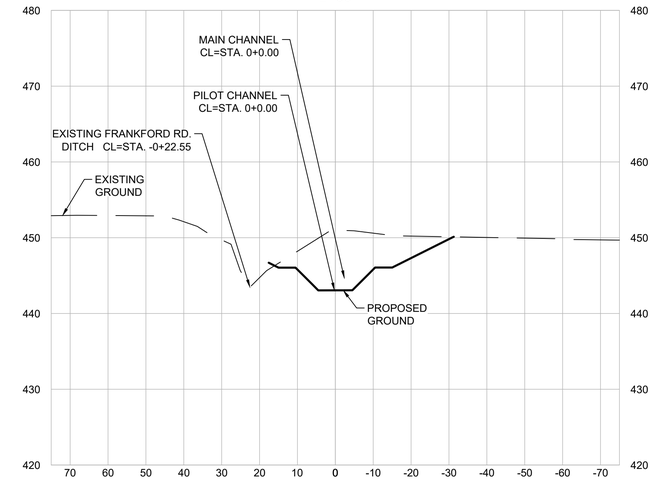
1+50



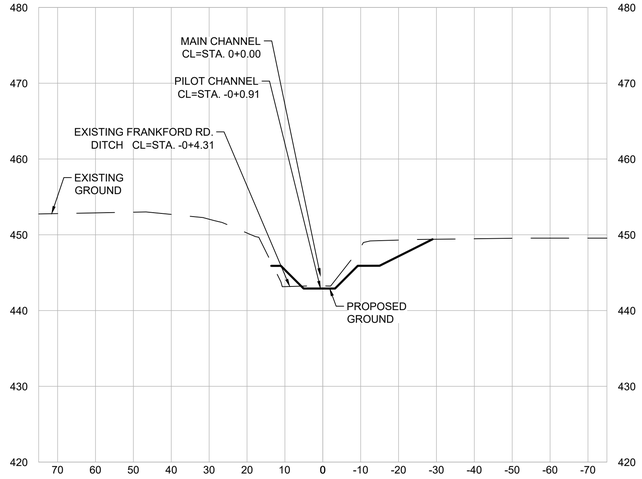
2+00



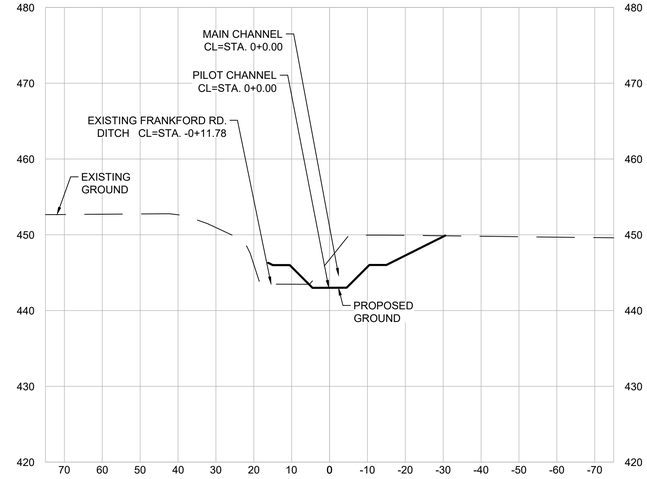
2+50



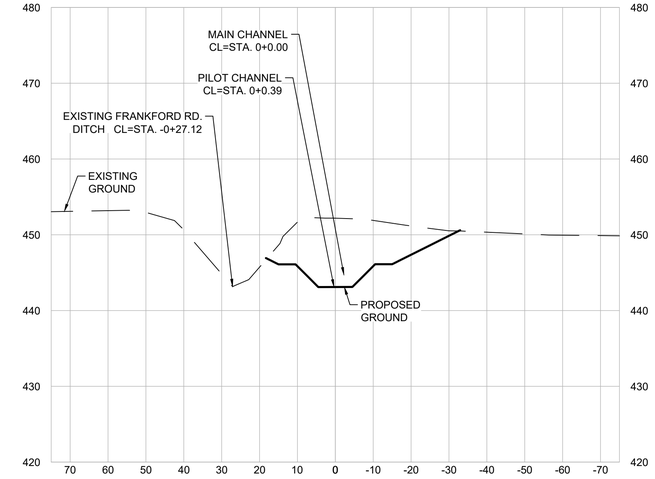
1+75



2+25



2+75



HDR

Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

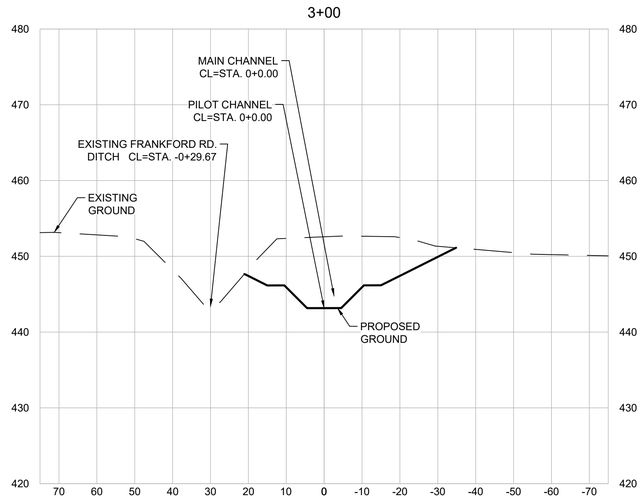
CHANNEL SECTIONS STA. 01+50 TO 02+75

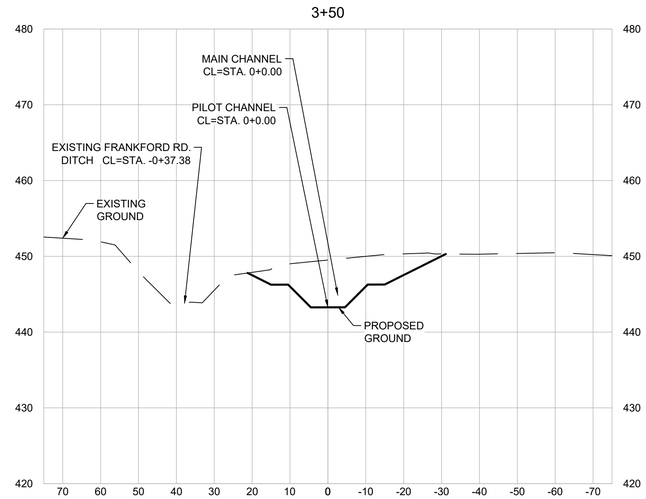
0 1" 2"

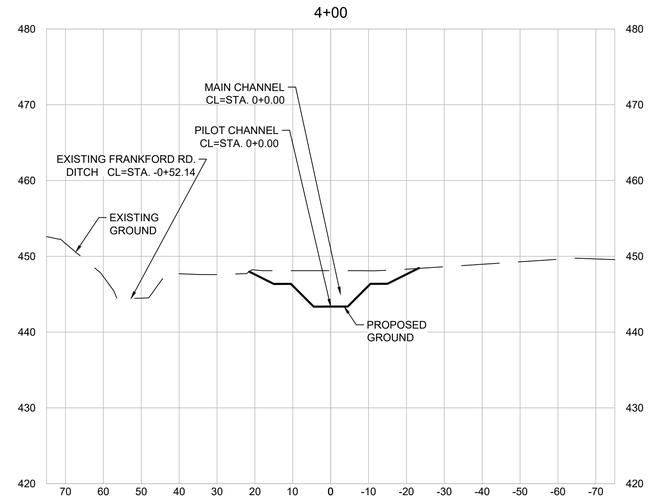
FILENAME

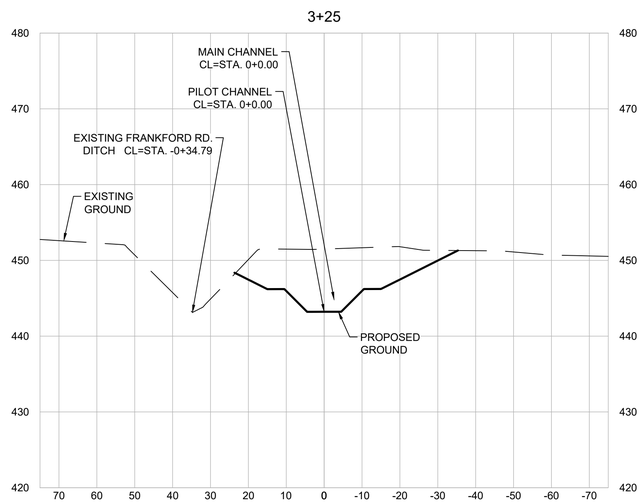
SCALE AS NOTED

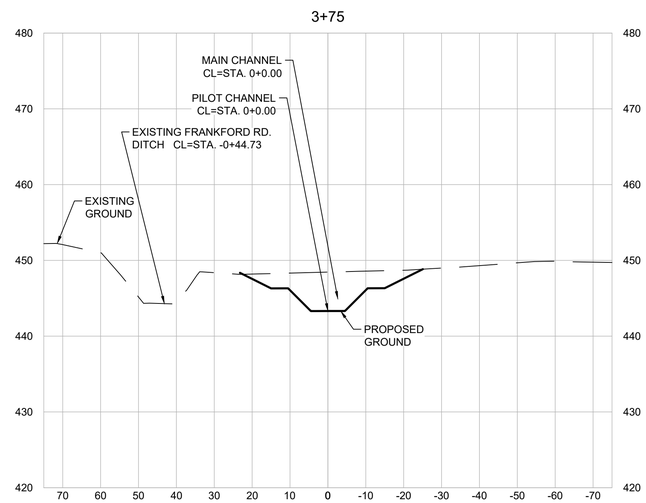
SHEET **00C-08**

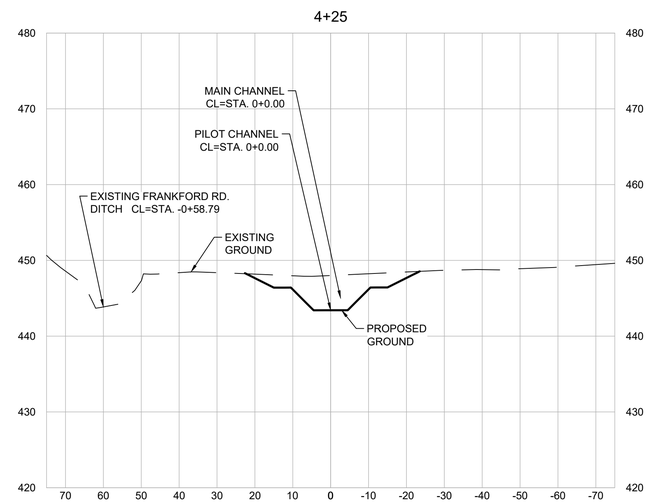












Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF RODRIGO VIZCAINO TEXAS P.E. NO. 95939 DATE: FEBRUARY 14, 2020

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

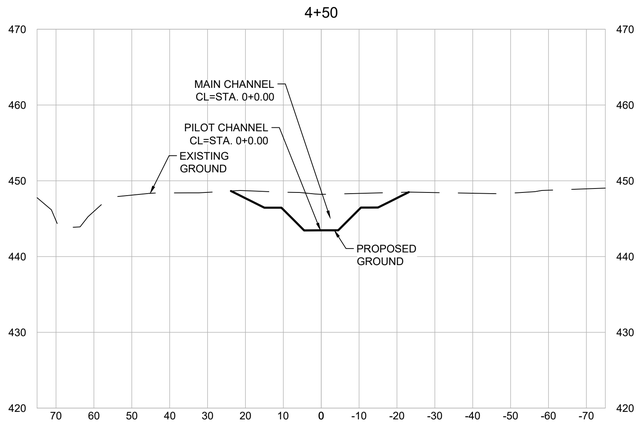
CHANNEL SECTIONS STA. 03+00 TO 04+25

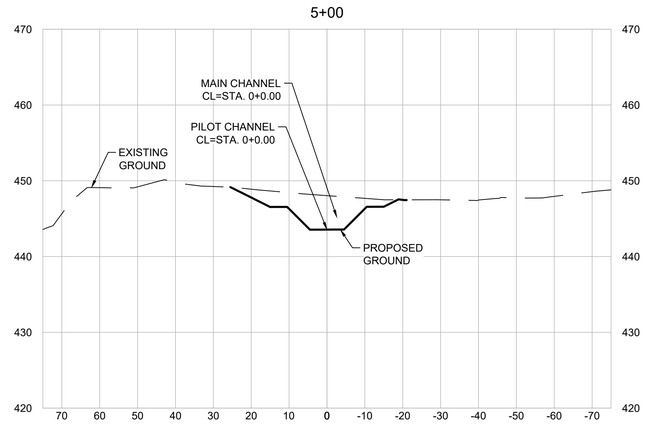
0 1" 2"

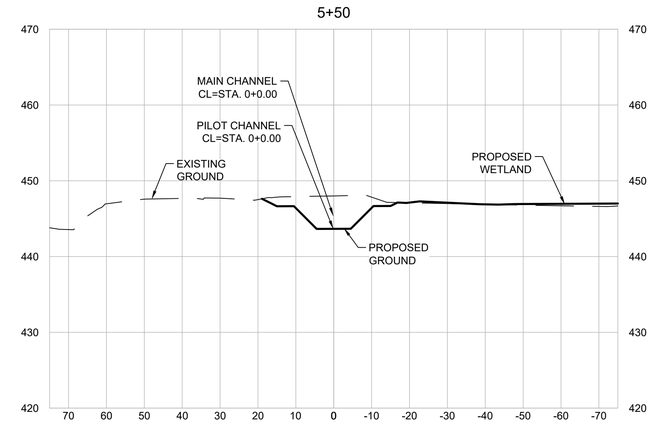
FILENAME

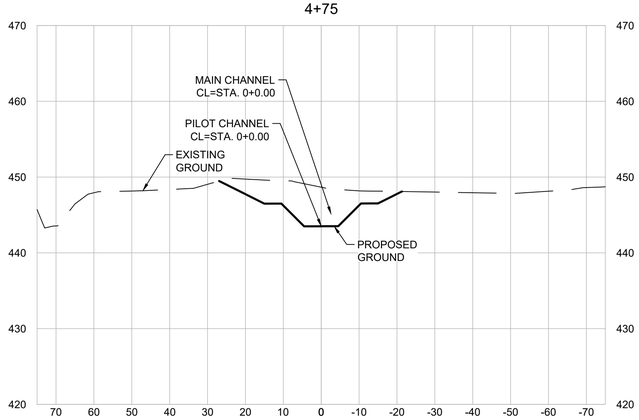
SCALE AS NOTED

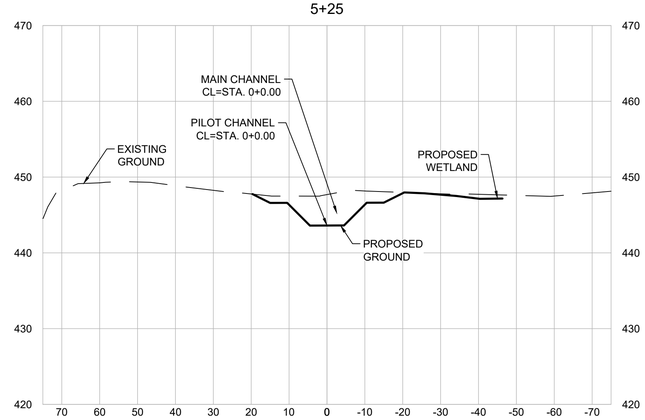
SHEET **00C-09**

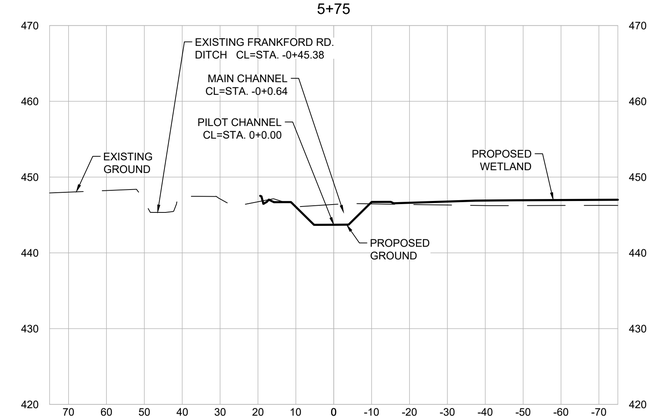












Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

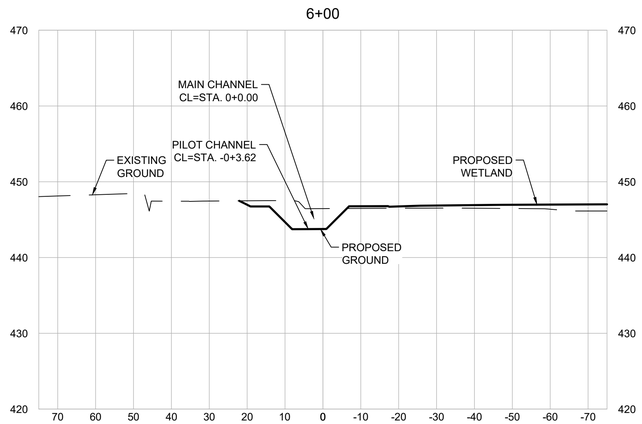
CHANNEL SECTIONS STA. 04+50 TO 05+75

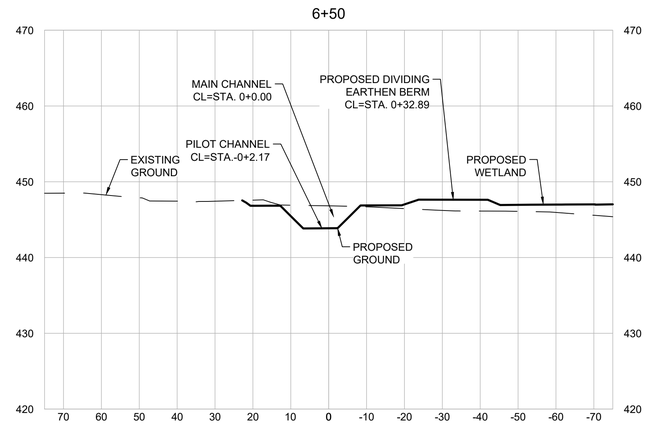
0 1" 2"

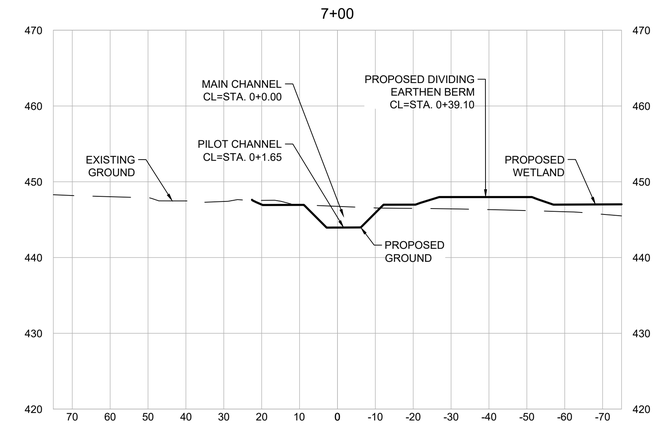
FILENAME

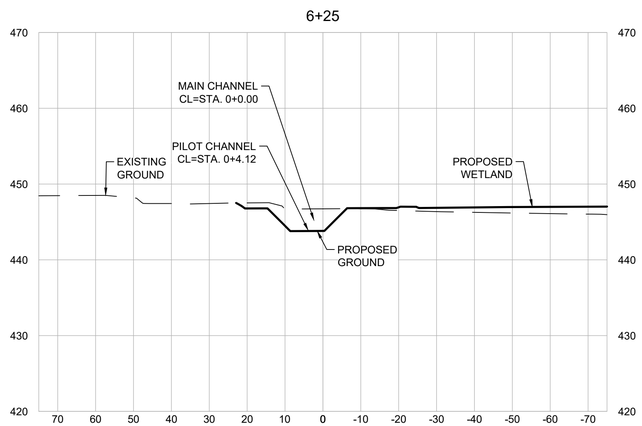
SCALE AS NOTED

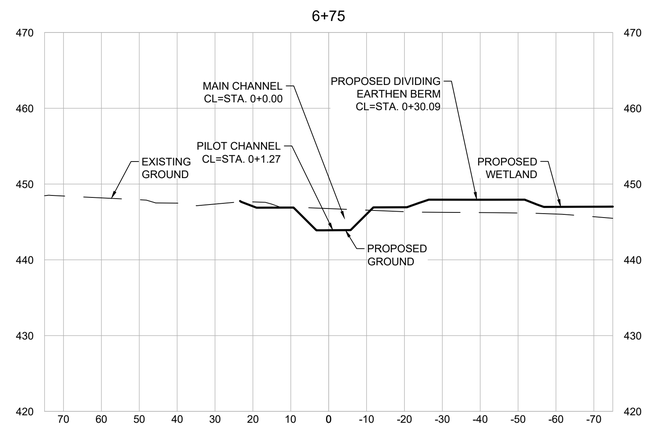
SHEET **00C-10**

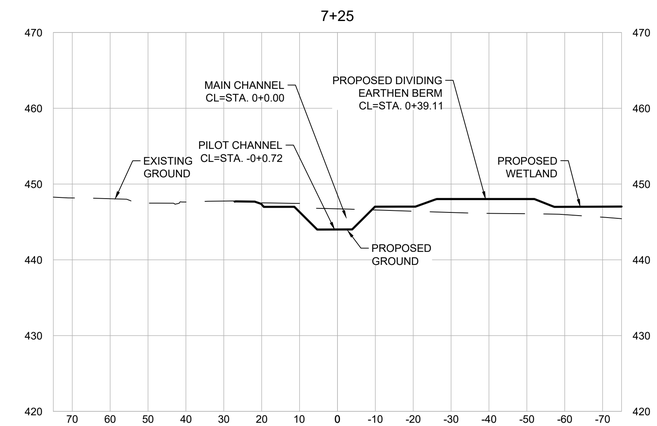












HDR

Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

CHANNEL SECTIONS STA. 06+00 TO 07+25

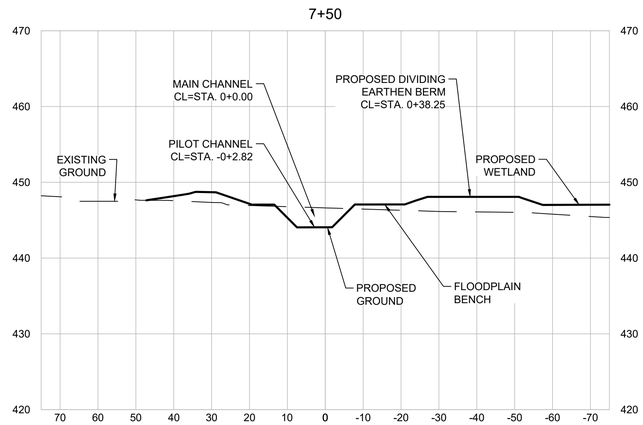
0 1" 2"

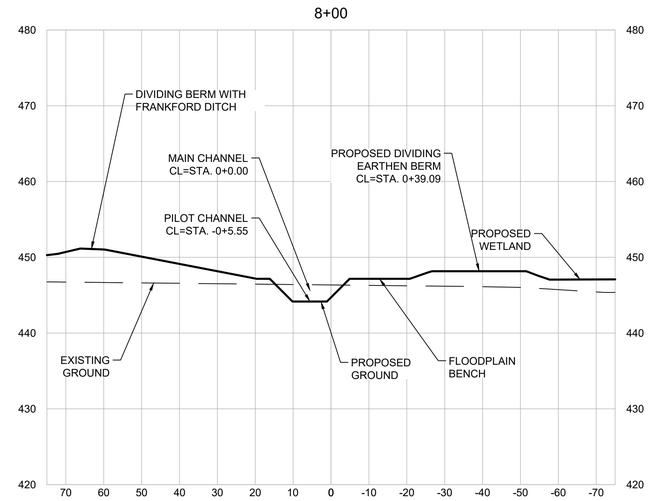
FILENAME

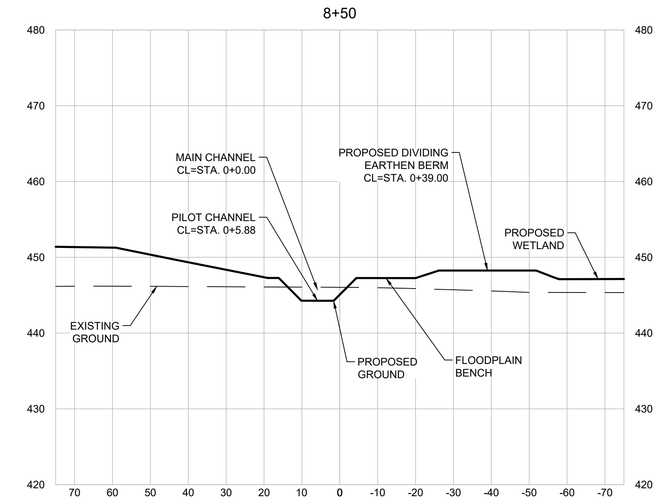
SCALE AS NOTED

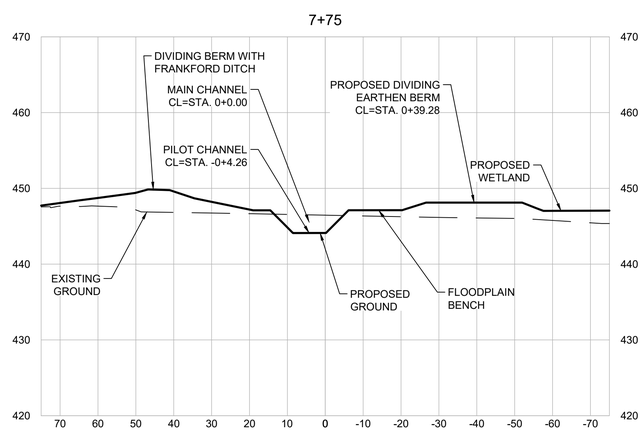
SHEET

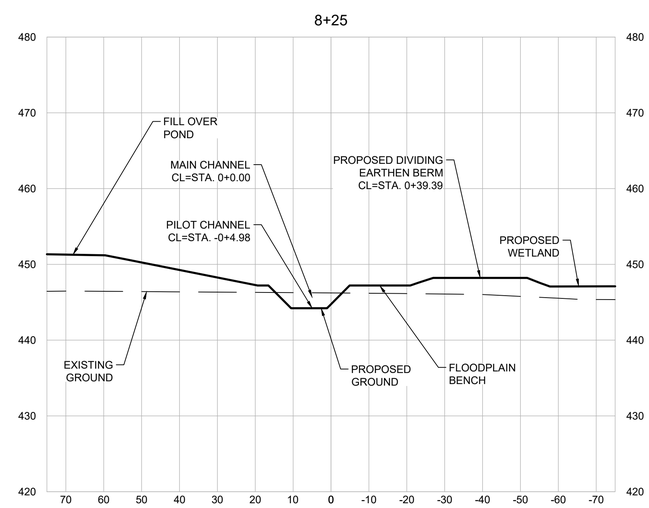
00C-11

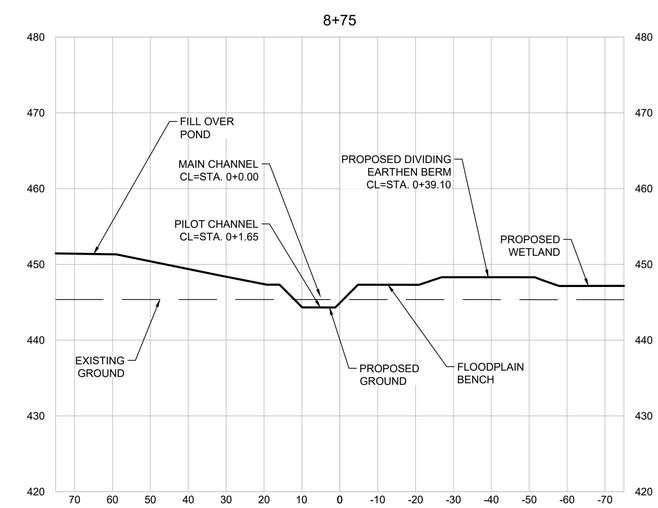












Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

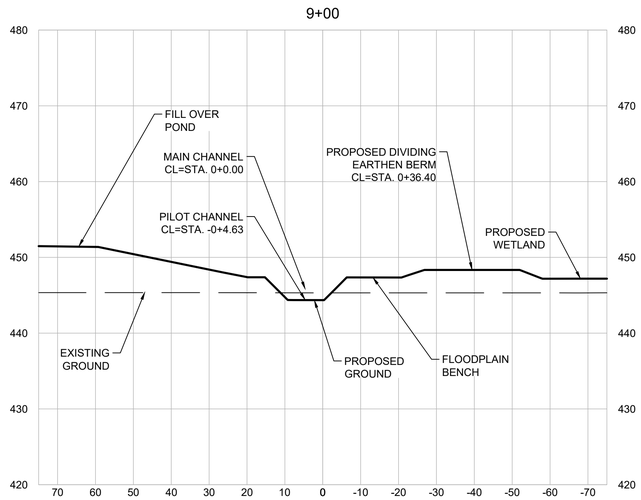
CHANNEL SECTIONS STA. 07+50 TO 08+75

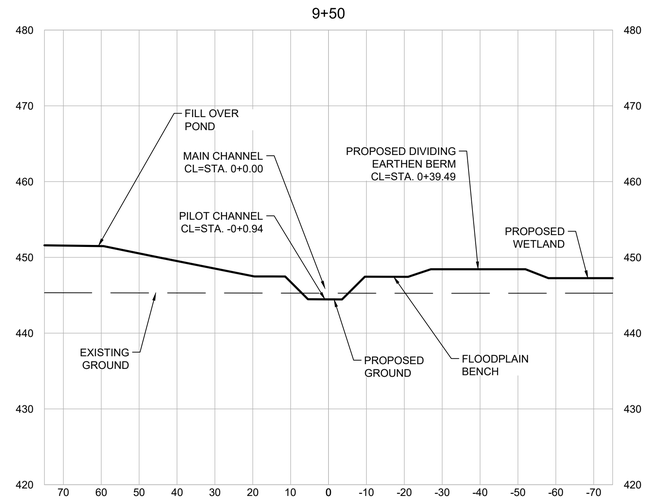
0 1" 2"

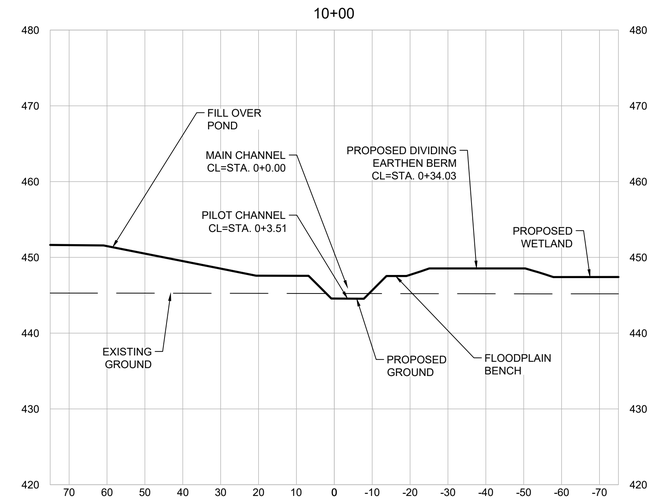
FILENAME

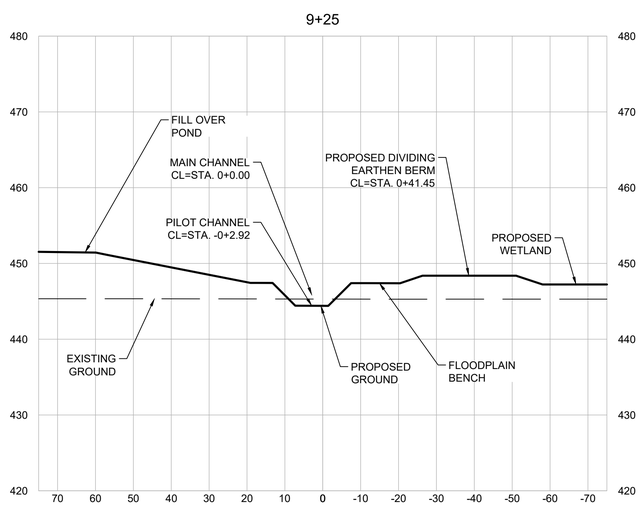
SCALE AS NOTED

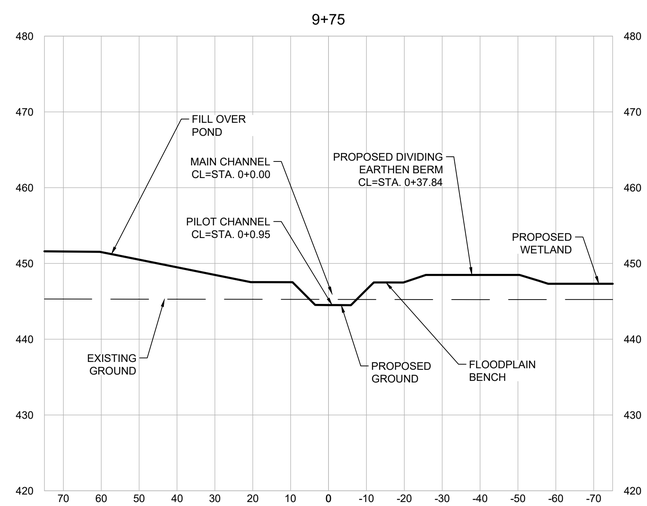
SHEET **00C-12**

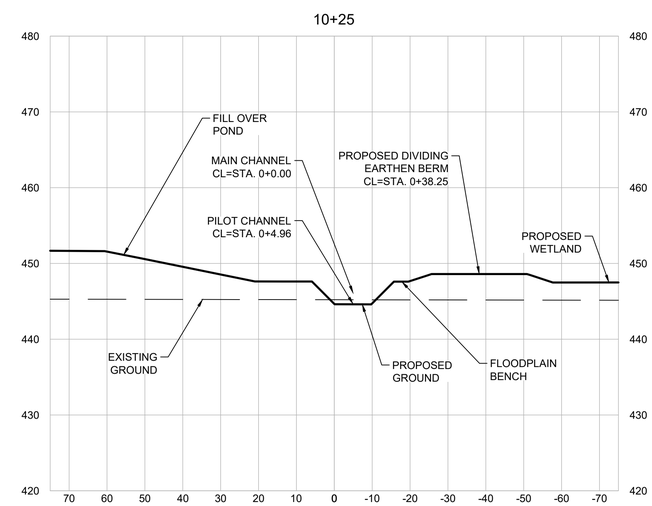












HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

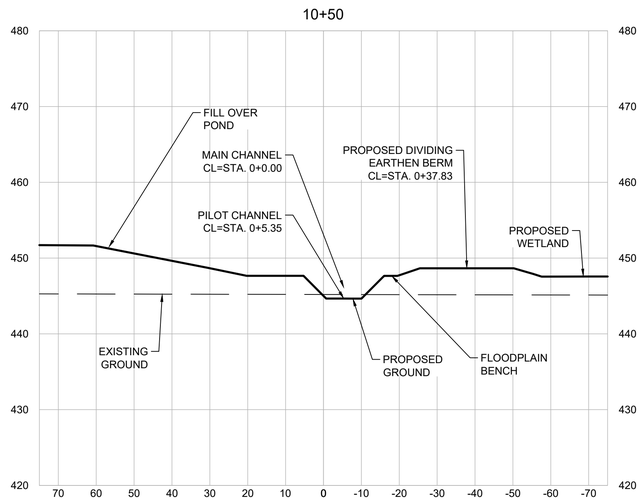
CHANNEL SECTIONS STA. 09+00 TO 10+25

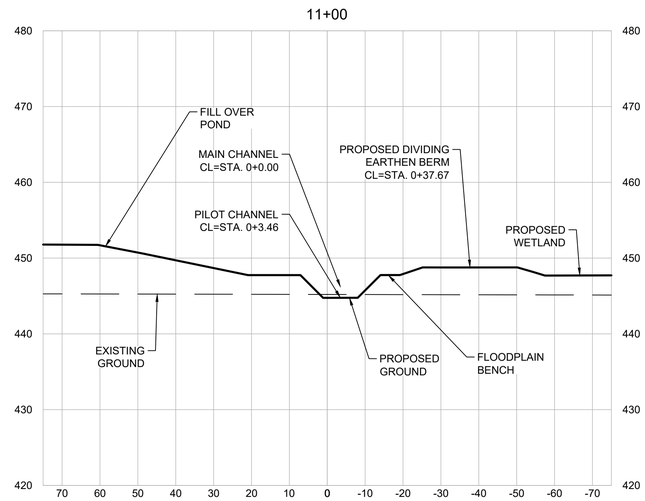
0 1" 2"

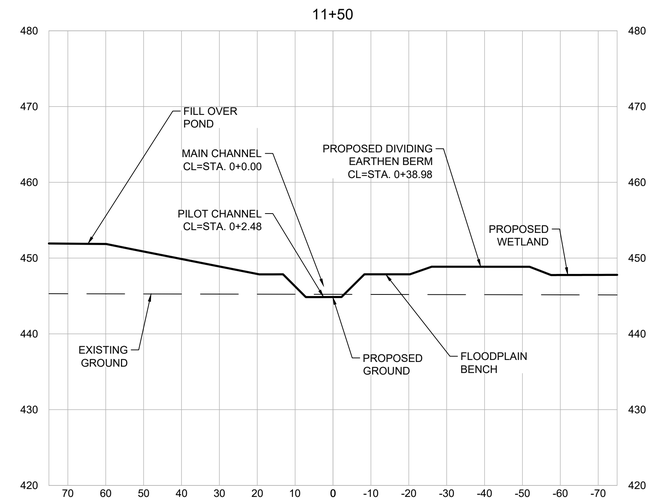
FILENAME

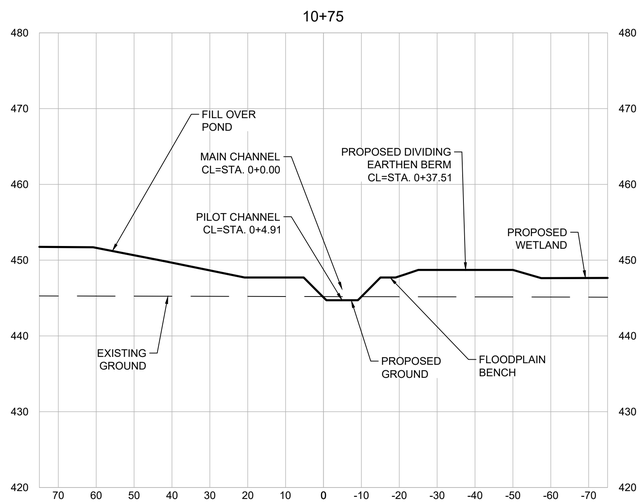
SCALE AS NOTED

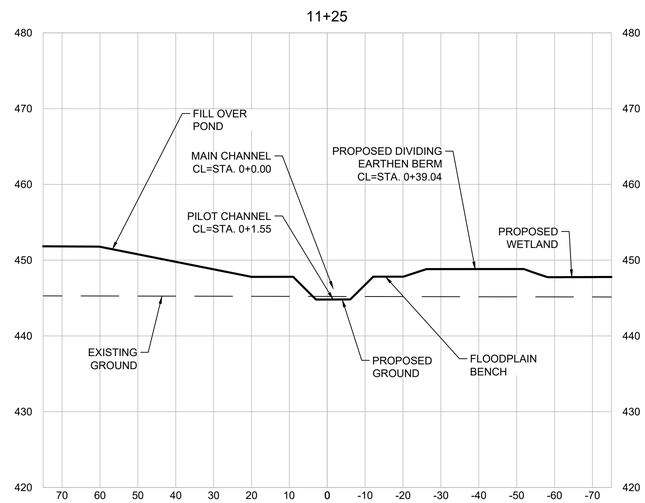
SHEET **00C-13**

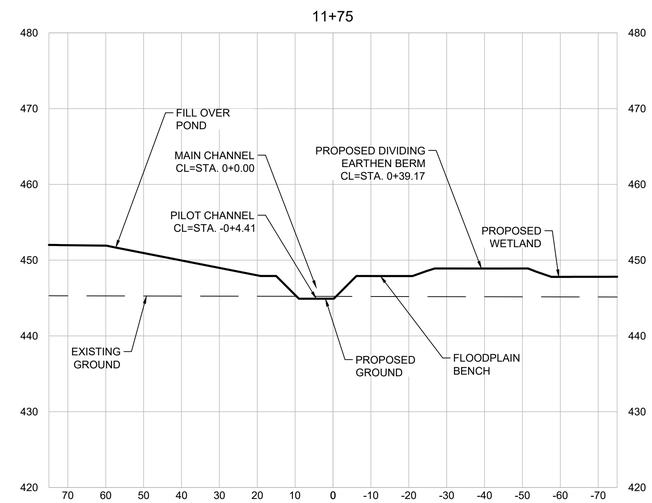












HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

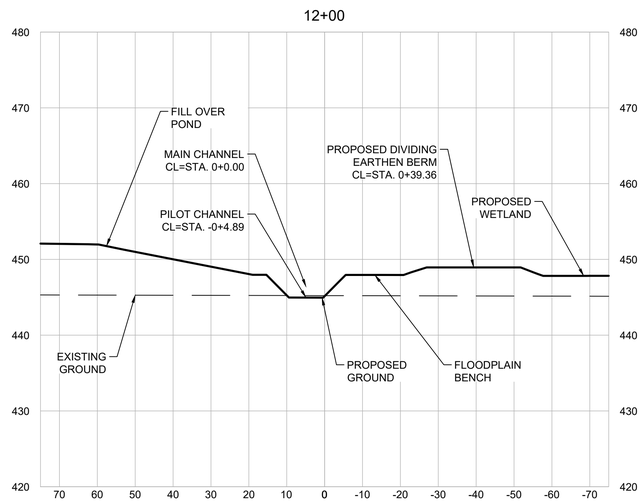
CHANNEL SECTIONS STA. 10+50 TO 11+75

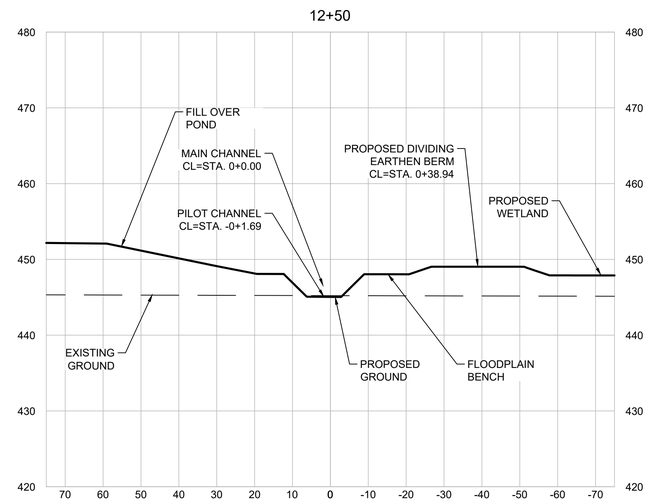
0 1" 2"

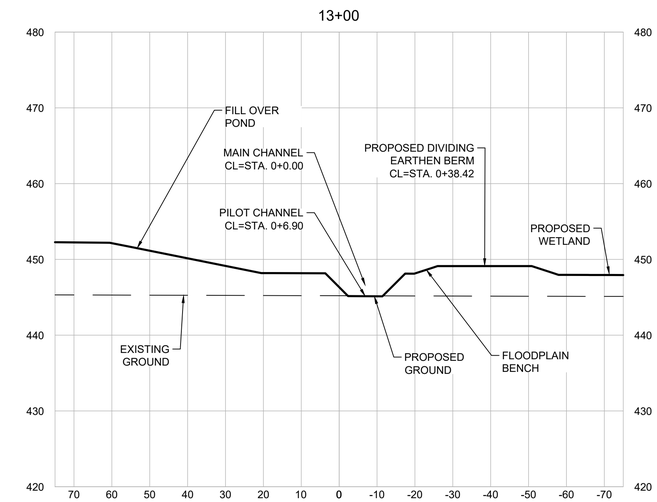
FILENAME

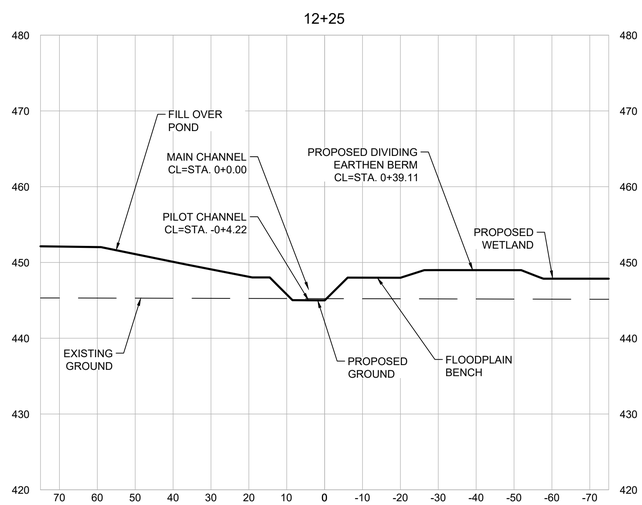
SCALE AS NOTED

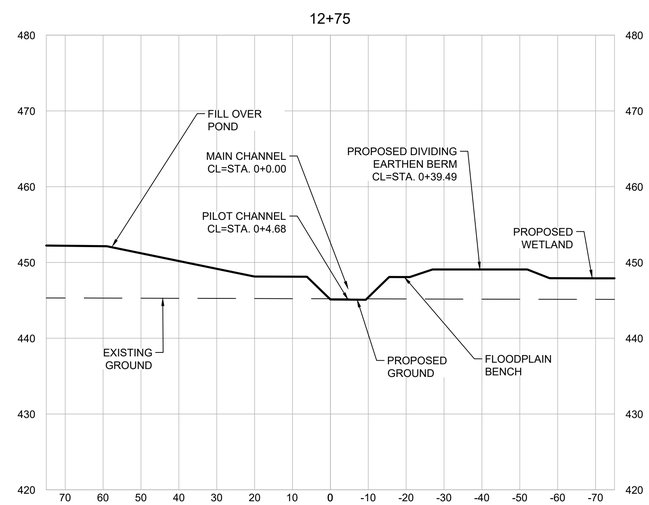
SHEET 00C-14

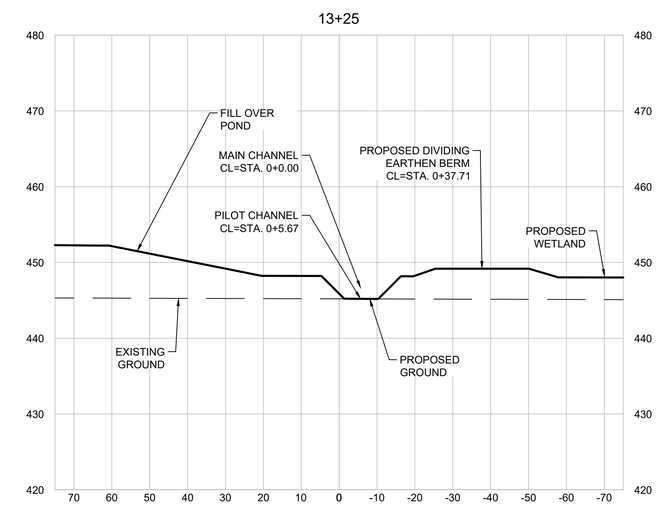












Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

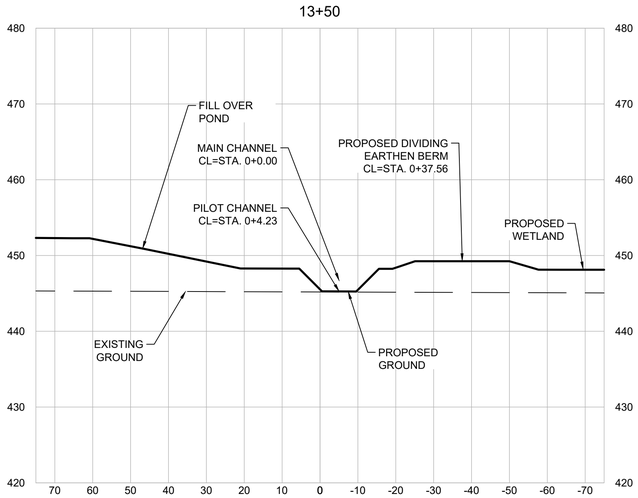
CHANNEL SECTIONS STA. 12+00 TO 13+75

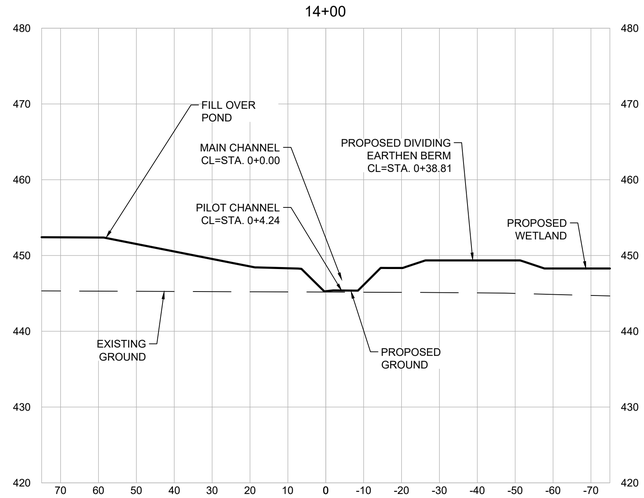
0 1" 2"

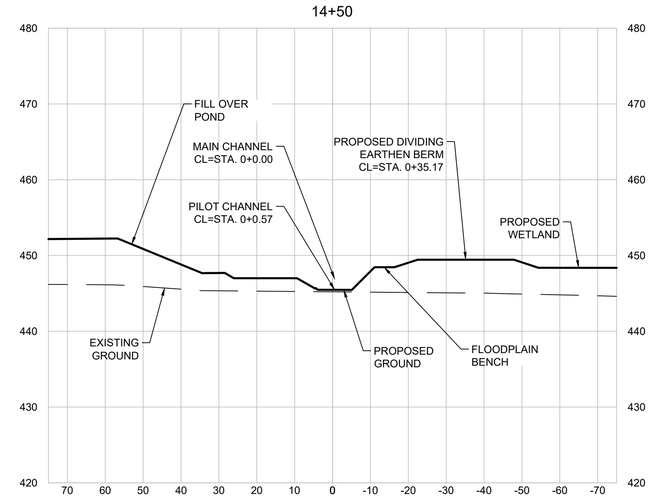
FILENAME

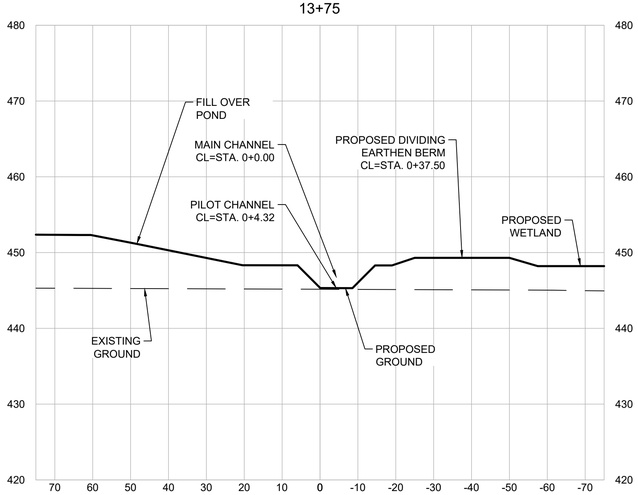
SCALE AS NOTED

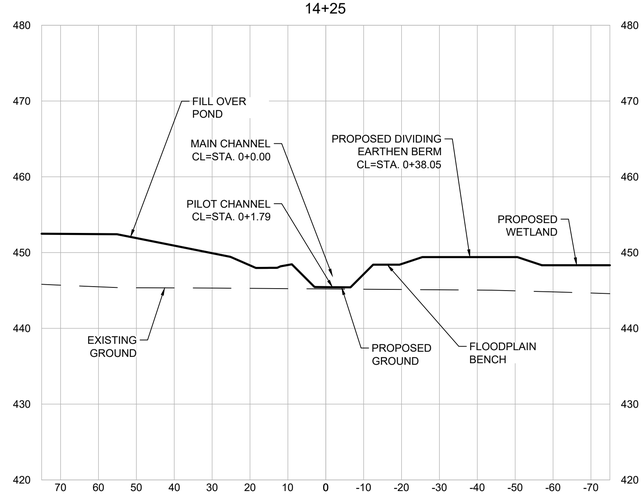
SHEET **00C-15**

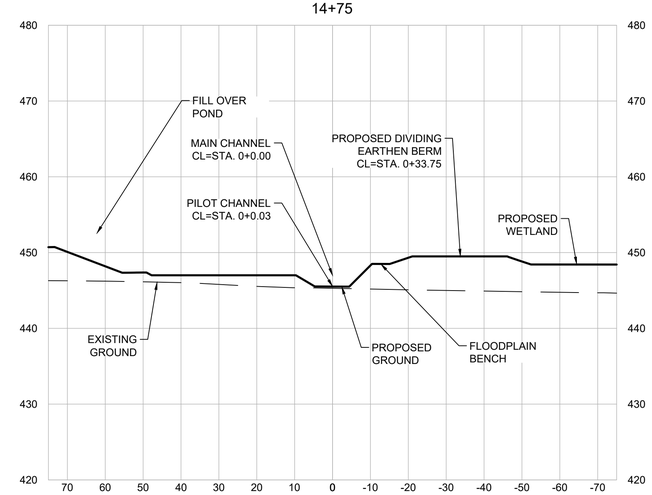












HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

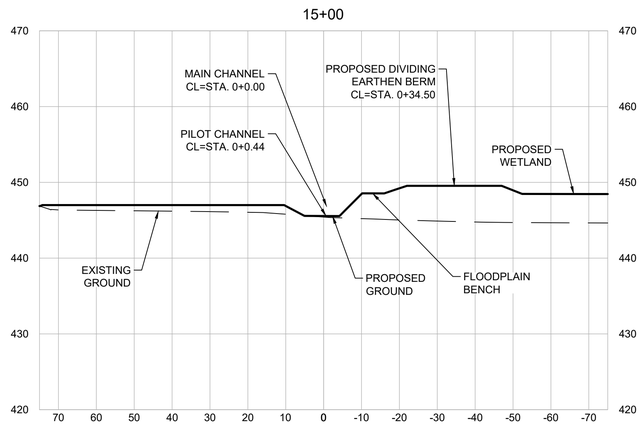
CHANNEL SECTIONS STA. 13+50 TO 14+75

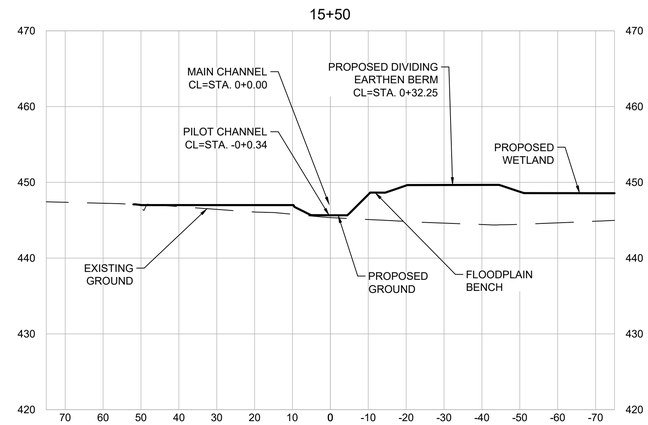
0 1" 2"

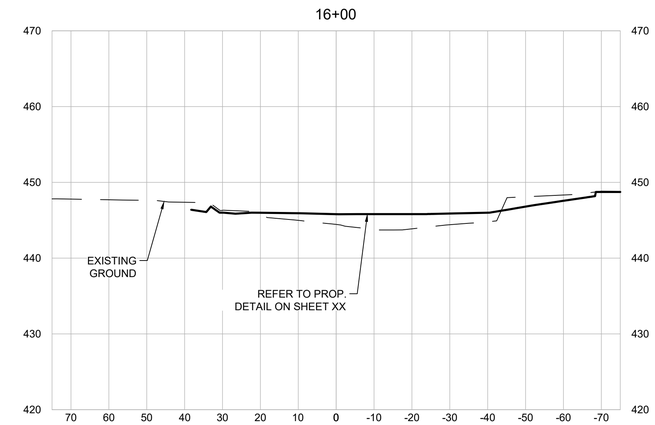
FILENAME

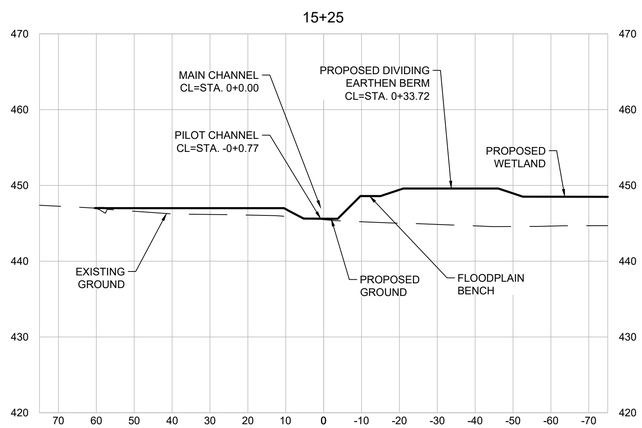
SCALE AS NOTED

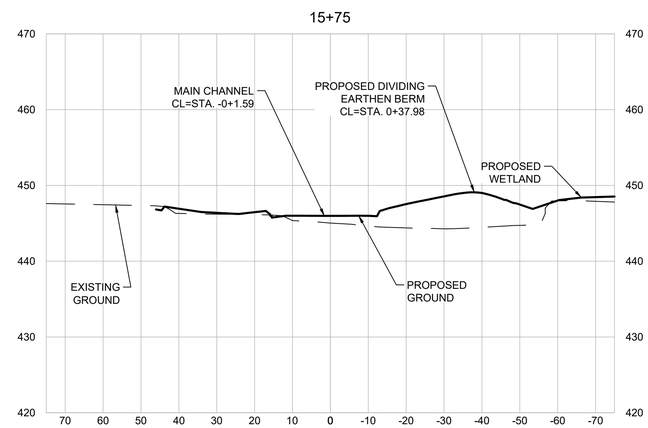
SHEET **00C-16**

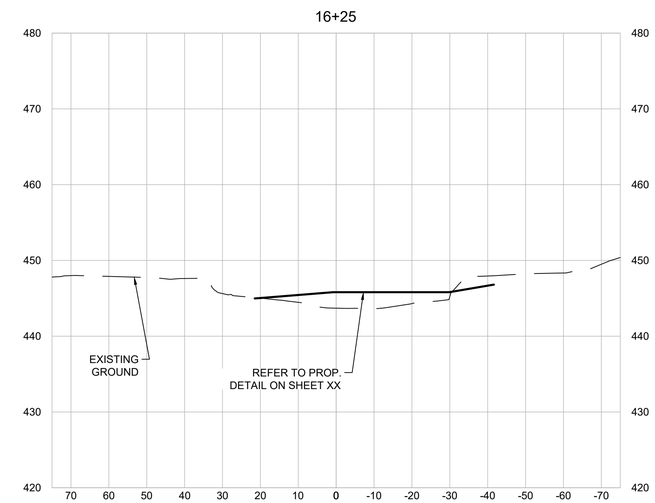












HDR

Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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CARROLLTON
TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

CHANNEL SECTIONS STA. 15+00 TO 16+25

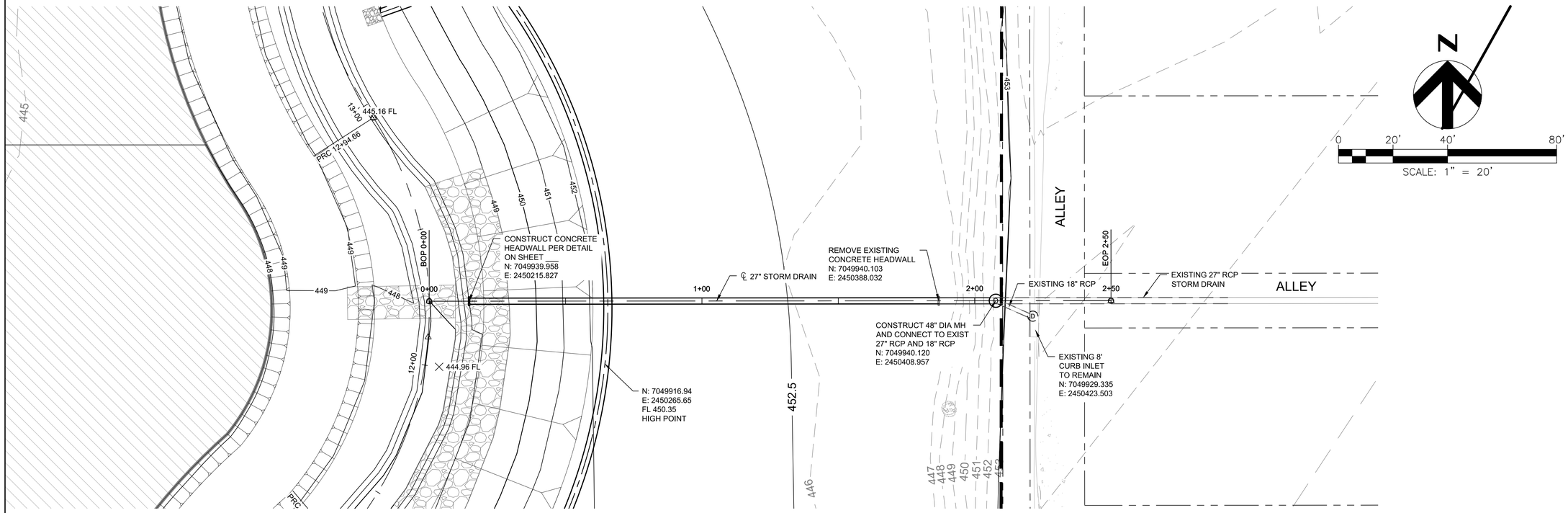
0 1" 2"

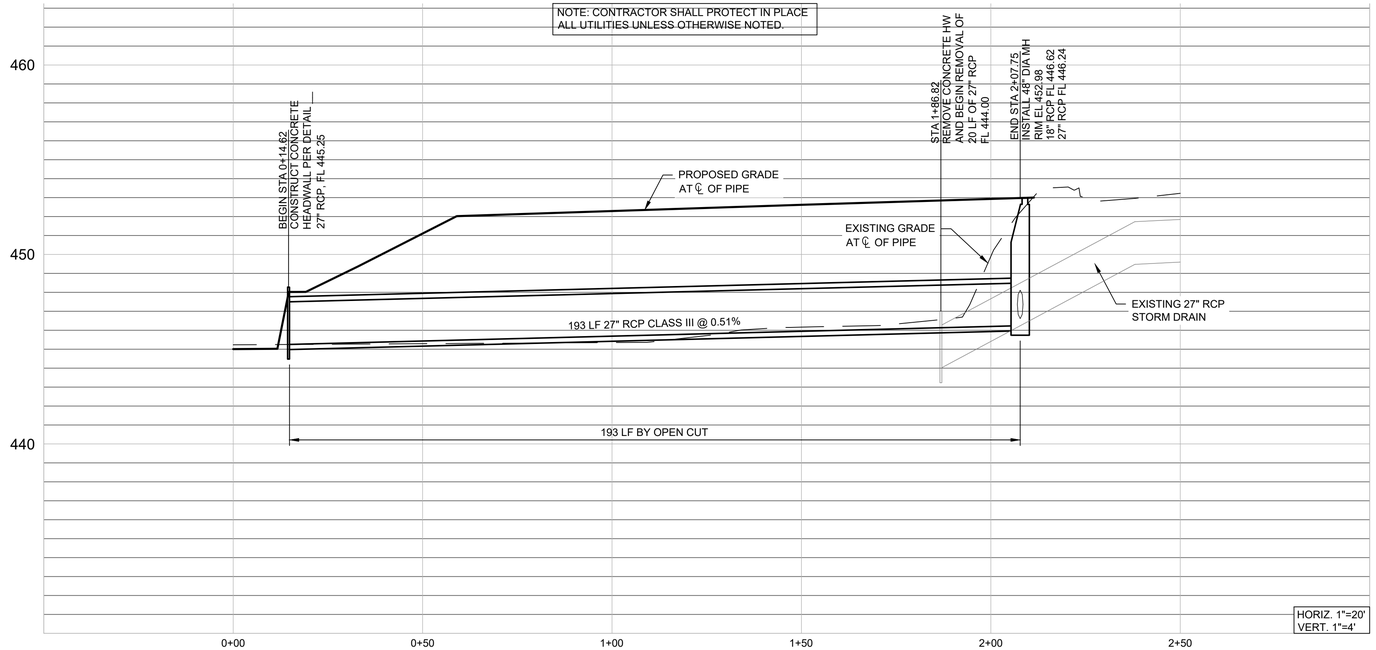
FILENAME

SCALE AS NOTED

SHEET

00C-17





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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

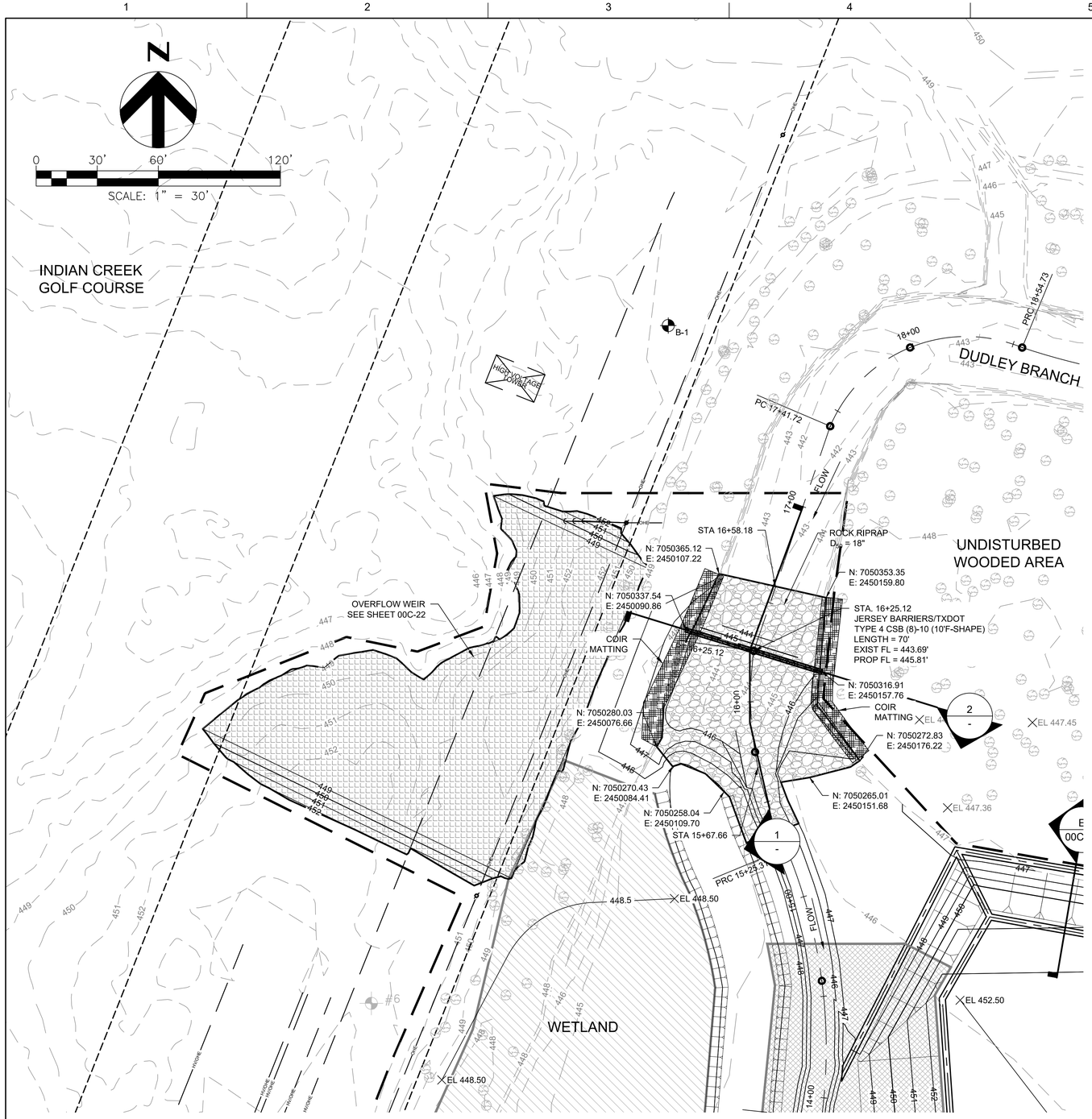
STORM DRAIN PLAN AND PROFILE LINE A

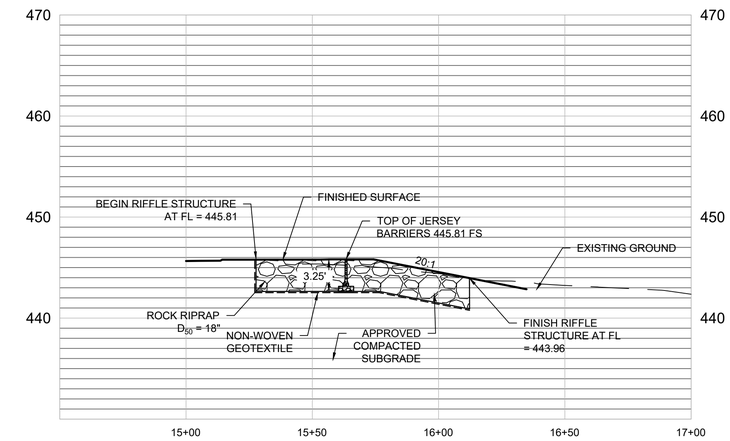
0 1" 2"

FILENAME

SCALE 1" = 20'

SHEET **00C-18**





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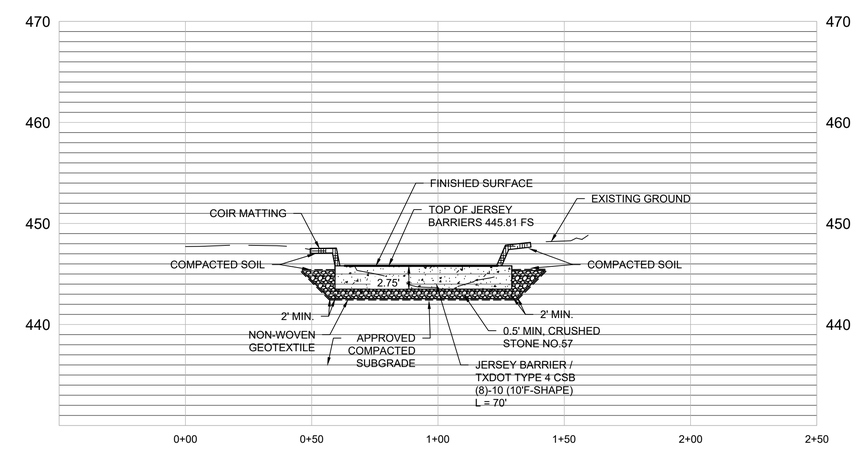
V: 1"=8'



SECTION 2
H: 1"=30'
V: 1"=8'

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CARROLLTON
TEXAS

Design and Permitting of
Channel Improvements
for Dudley Branch

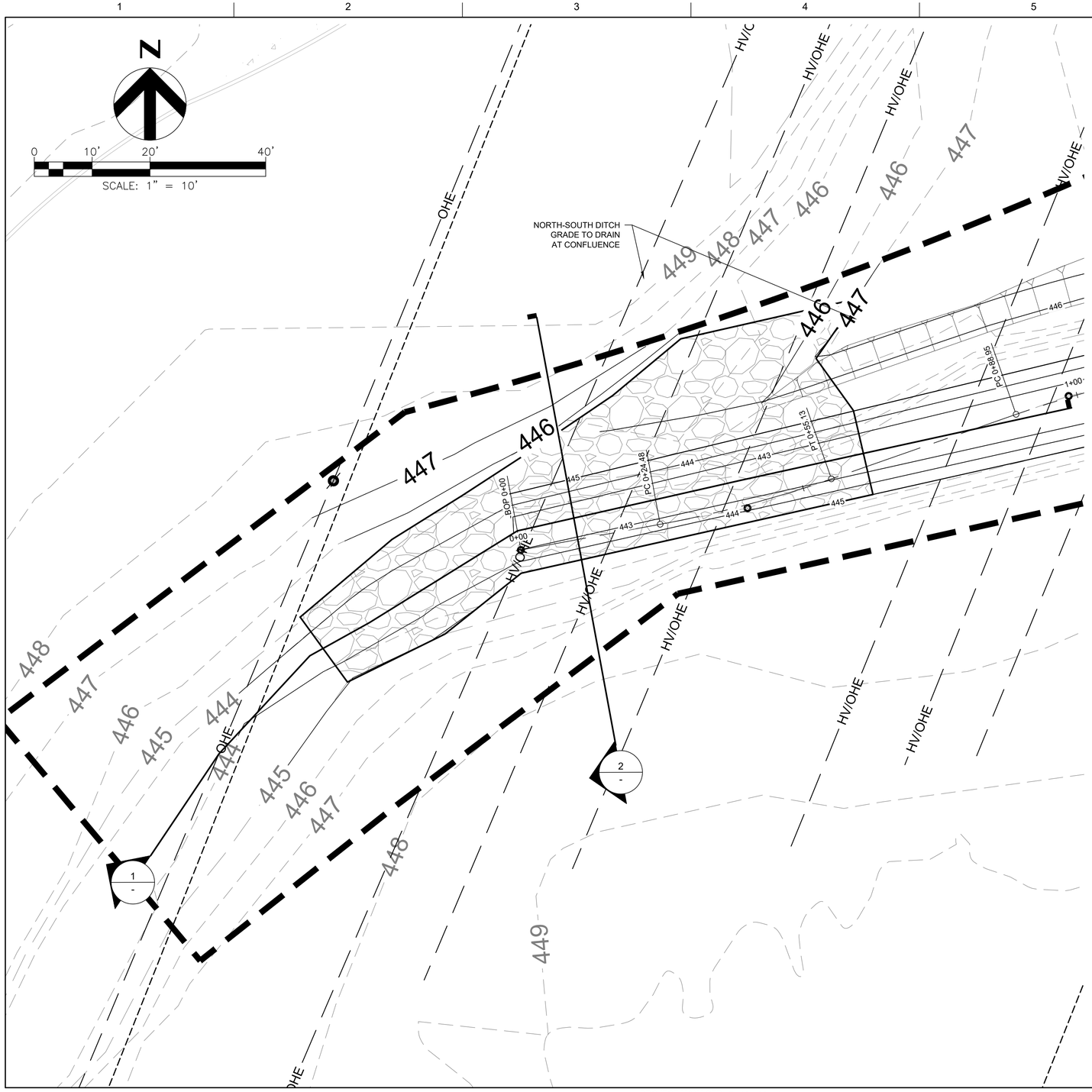
UPSTREAM ROCK RIFFLE

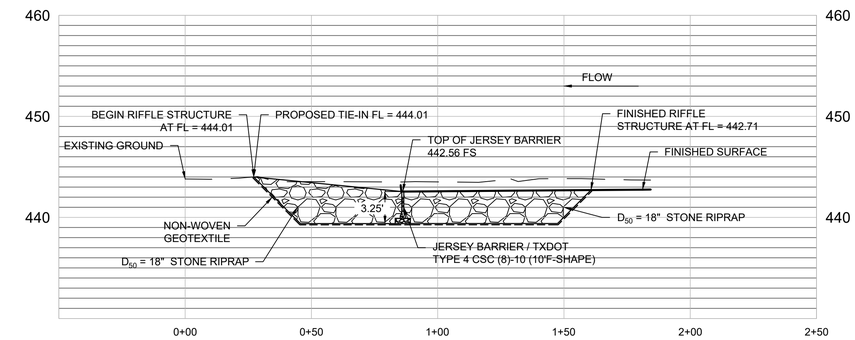
0 1" 2"

FILENAME

SCALE AS NOTED

SHEET
00C-19





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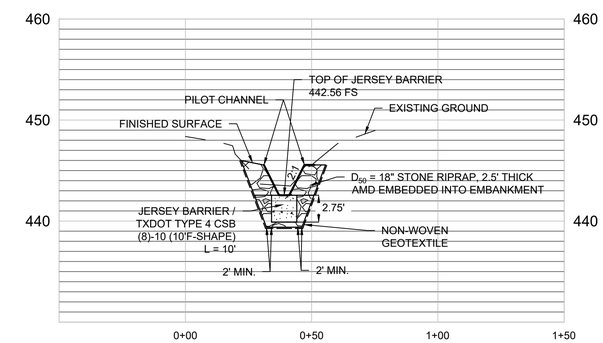
V: 1"=8'



SECTION 2
H: 1"=30'
V: 1"=8'

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

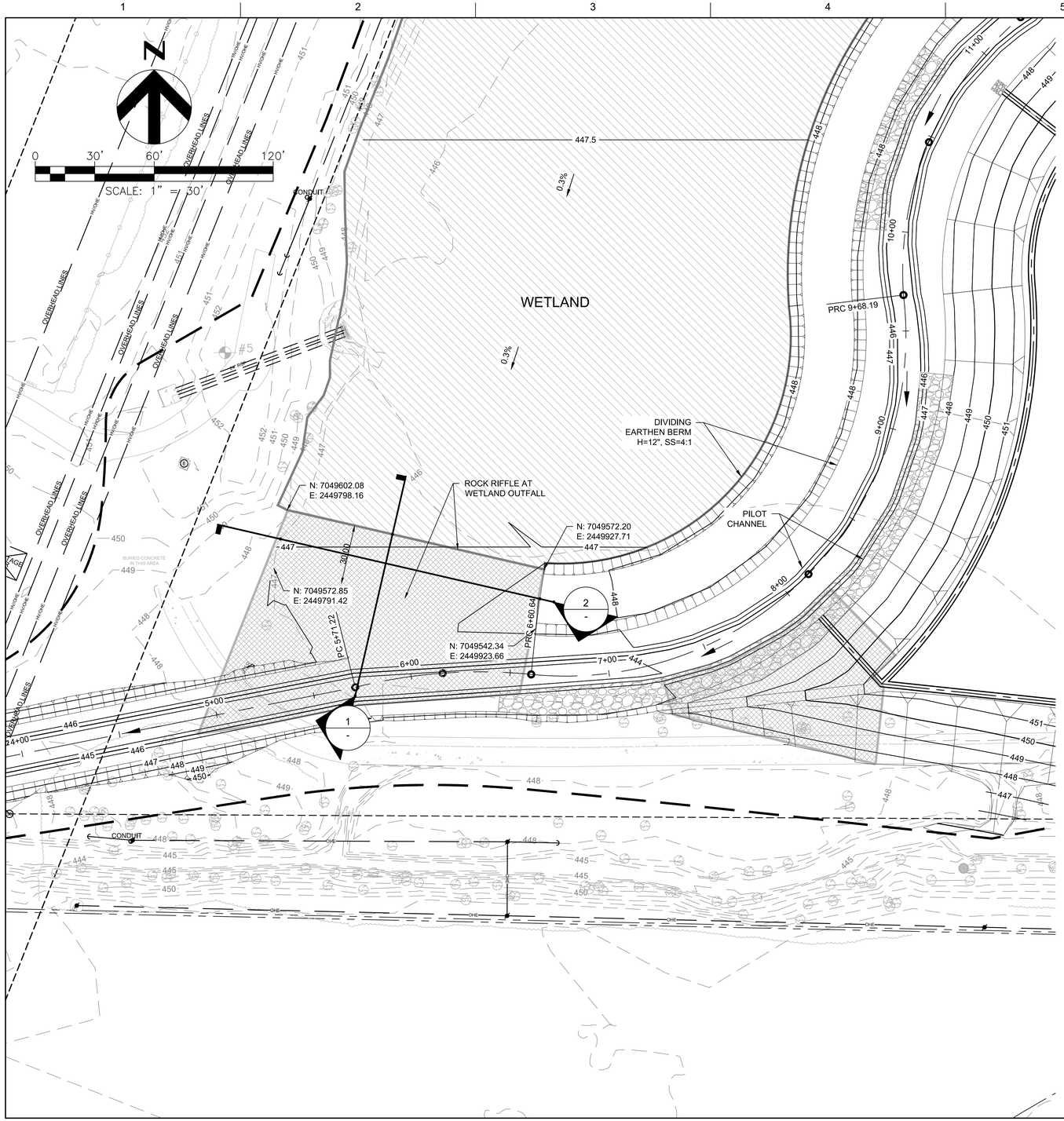
DOWNSTREAM ROCK RIFFLE

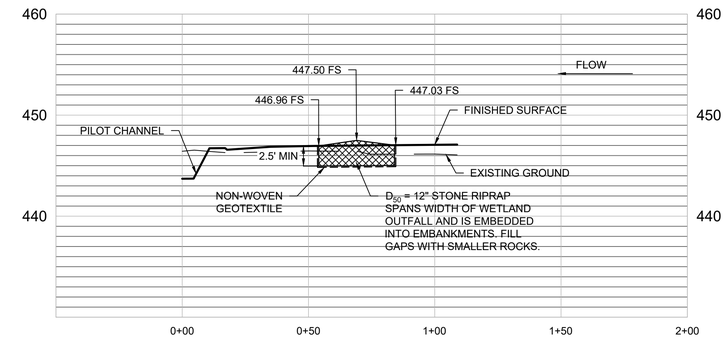
0 1" 2"

FILENAME

SCALE AS NOTED

SHEET 00C-20





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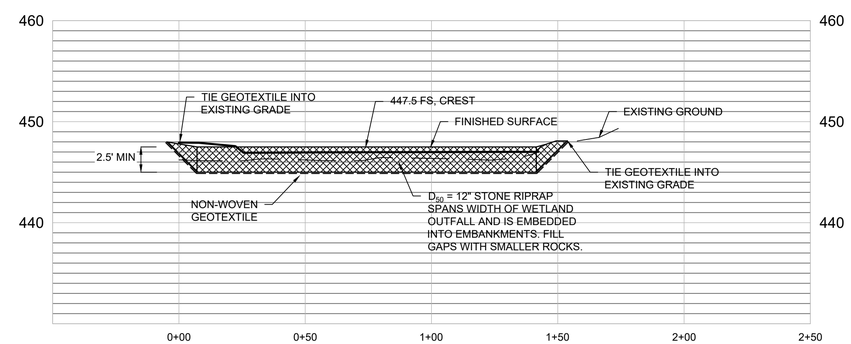

SECTION 2
H: 1"=30'
V: 1"=8'

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CARROLLTON
TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

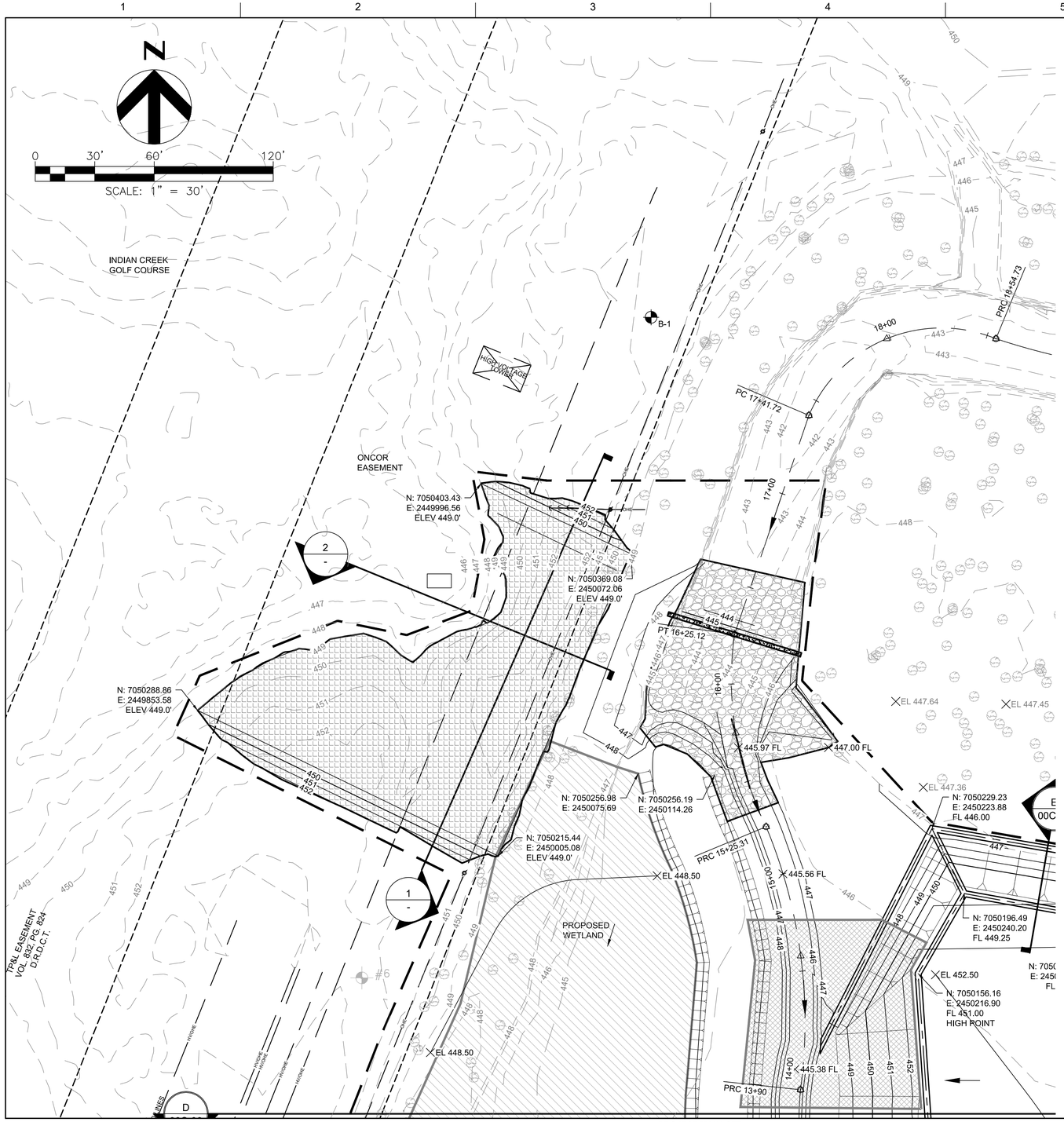
WETLAND ROCK RIFFLE

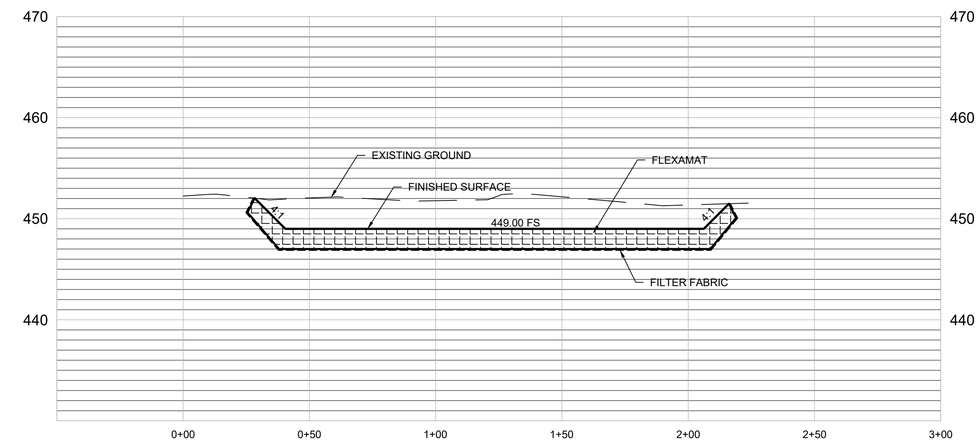
0 1" 2"

FILENAME

SCALE AS NOTED

SHEET
00C-21





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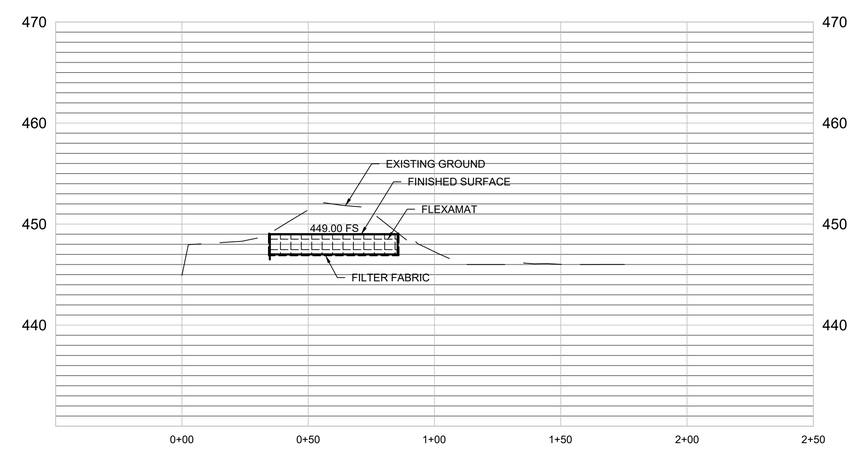

SECTION 2
H: 1"=30'
V: 1"=8'

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

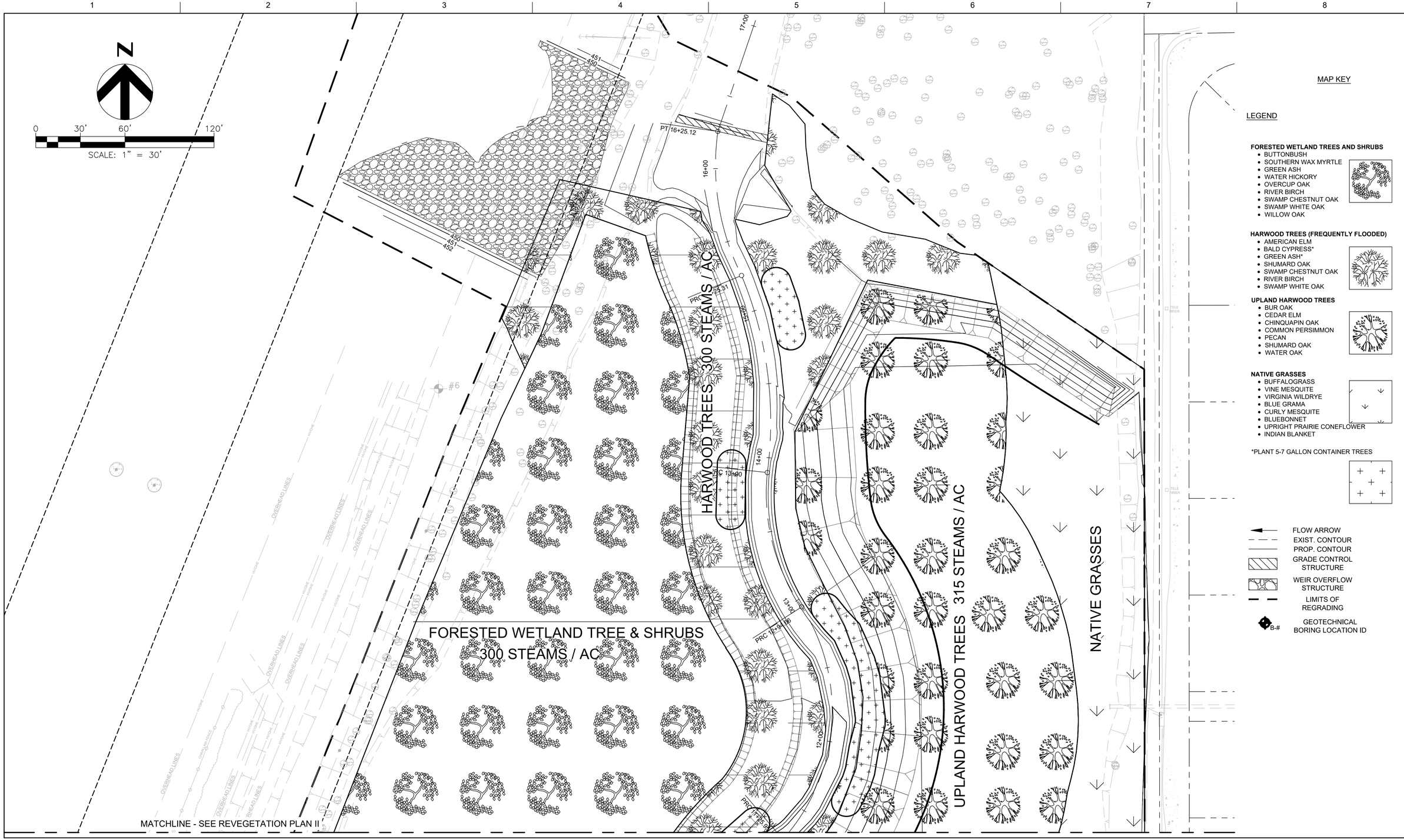
OVERFLOW WEIR DETAIL

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET **00C-22**



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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

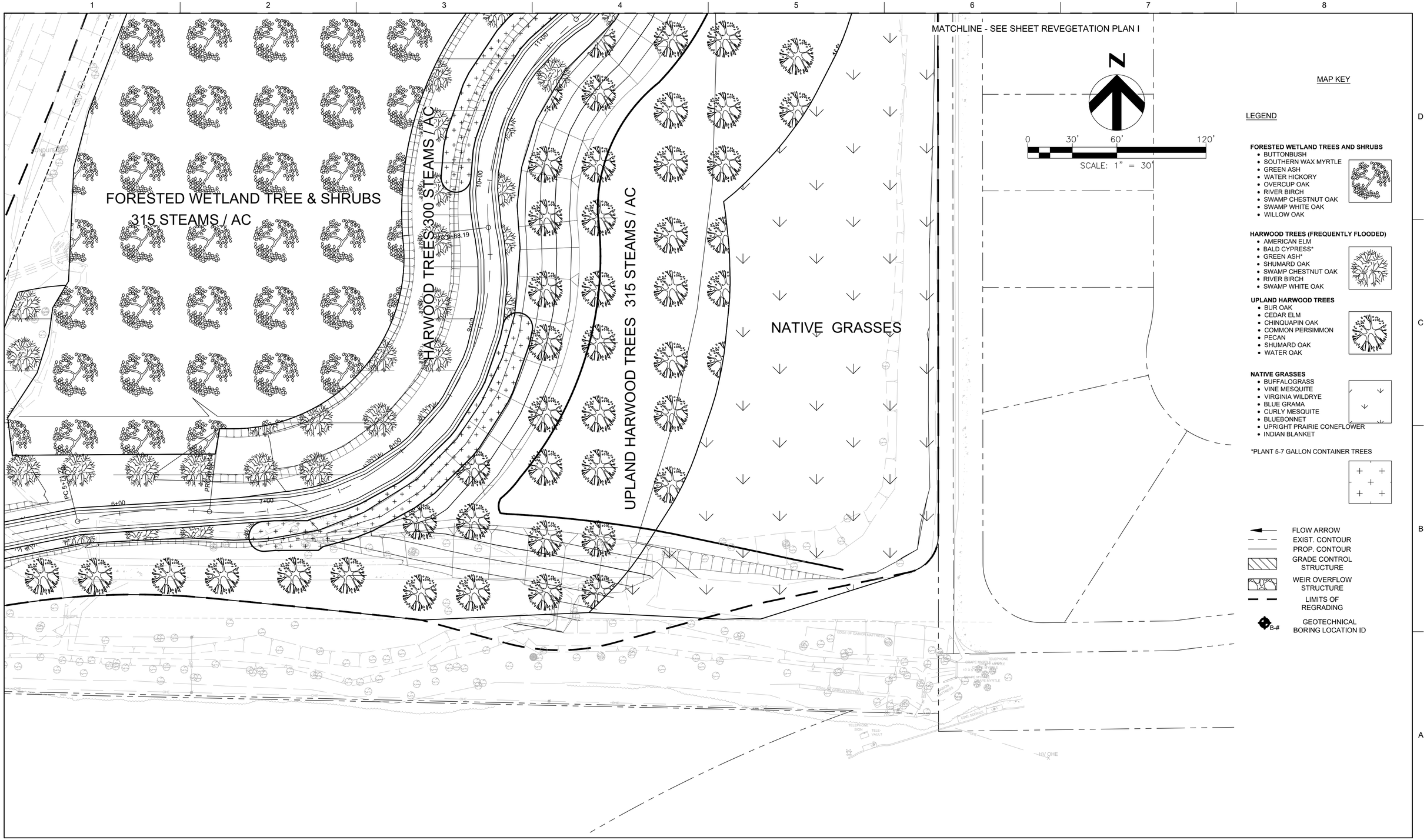
REVEGETATION / IRRIGATION PLAN

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET **00C-23**



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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

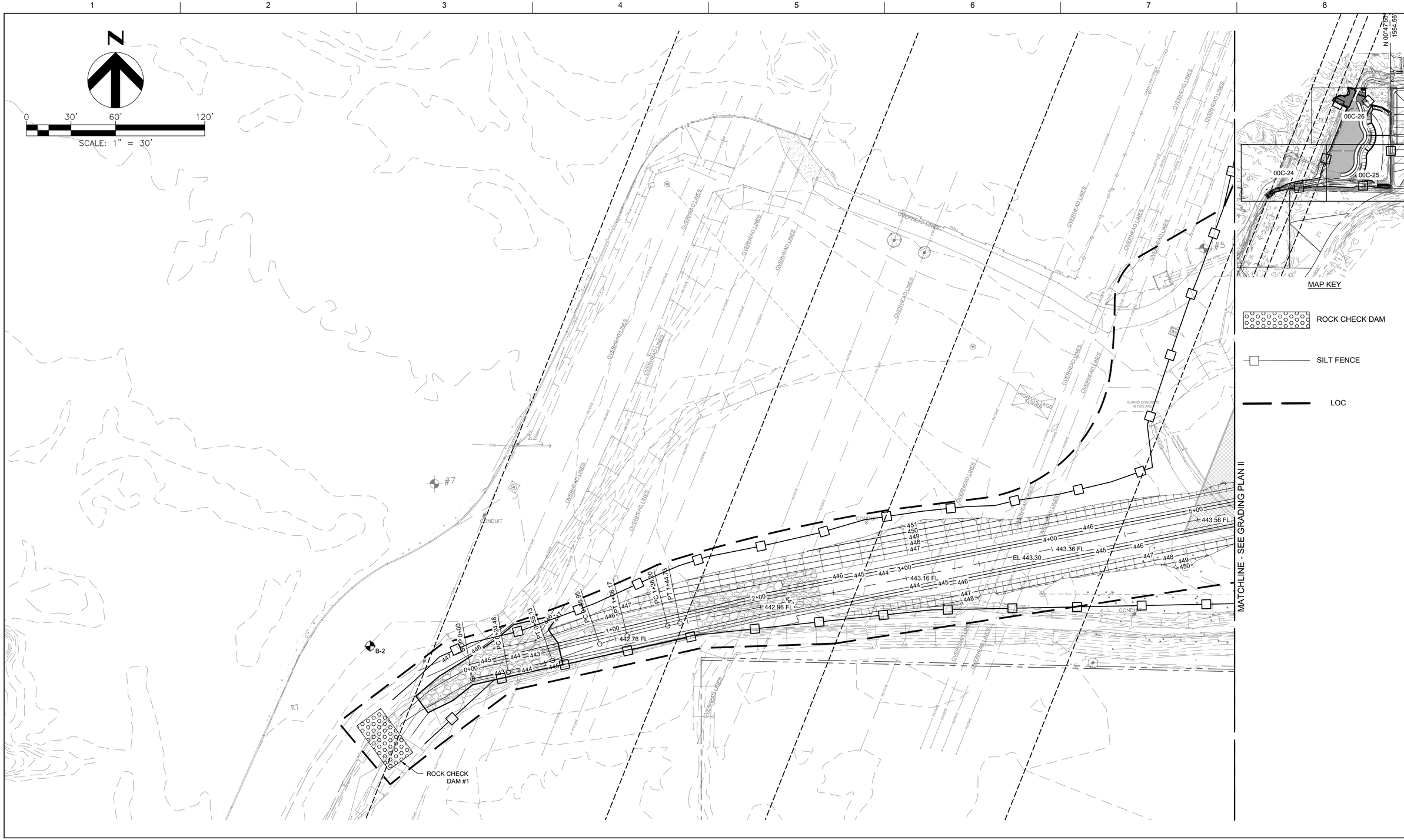
REVEGETATION / IRRIGATION PLAN II

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET 00C-24



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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

EROSION CONTROL PLAN I

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET **00C-25**

MATCHLINE - SEE GRADING PLAN III

MATCHLINE - SEE GRADING PLAN I

EL 447.50

447.5

444.76 FL

444.57 FL

PRC 9+68.19

444.37 FL

444.16 FL

PRC 6+60.64

443.96 FL

443.76 FL

EL 452.50

SUGGESTED CONSTRUCTION STAGING AREA

SCALE: 1" = 30'

0 30' 60' 120'

N

MAP KEY

00C-24

00C-25

00C-26

ROCK CHECK DAM

SILT FENCE

LOC

Texas P.E. Firm Registration No. F-754

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CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

EROSION CONTROL PLAN II

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET 00C-26

HDR

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Design and Permitting of Channel Improvements for Dudley Branch

EROSION CONTROL PLAN III

0 1" 2"

FILENAME

SCALE 1" = 30'

SHEET **00C-27**

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL DURING CONSTRUCTION AND FOR OBTAINING ANY REQUIRED CONSTRUCTION RELATED DRAINAGE PERMITS, OR MAKING ANY CONSTRUCTION RELATED NOTIFICATIONS. AN INSPECTION REPORT THAT SUMMARIES INSPECTION ACTIVITIES AND IMPLEMENTATION OF THE SWP3 SHALL BE PERFORMED AS REQUIRED BY THE PERMIT AND RETAINED BY THE CONTRACTOR AND MADE A PART OF THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL SWP3 DOCUMENTS INCLUDING, BUT NOT LIMITED TO INSPECTION RECORDS, ORIGINAL PLANS, AND MODIFIED PLANS TO THE OWNER AT CONTRACT CLOSE-OUT. DURING CONSTRUCTION THE CONTRACTOR SHALL PROVIDE COPIES OF THE INSPECTION REPORTS TO THE OWNER ON A MONTHLY BASIS.

2. TEMPORARY STORM DRAINAGE AND/OR EROSION CONTROL MATERIAL SHALL BE SUITABLE FOR THIS APPLICATION AND SHALL BE INSTALLED WITH THE PROPER TECHNIQUES BY THE CONTRACTOR AS REQUUIRED BY NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTURCTION. TEMPORARY STORM DRIANAGE AND/OR EROSION CONTROL MATERIAL SHALL BE REMOVED BY THE CONTRACTOR IN ADDITION TO ANY EXCAVATIONS BACKFILLED BY THE CONTRACTOR, IN ACCORDANCE WITH NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION WHEN TEMPORARY EROSION CONTROL DEVICES ARE NO LONGER NEEDED AS SPECIFIED IN THE PERMIT. MAINTENANCE OF THE PERMANENT EROSION CONTROL MEASURES AT THE SITE WILL BE ASSUMED BY THE OWNER AT CONTRACT CLOSE-OUT AND ACCEPTANCE OF THE WORK.

3. THE CONTRACTOR SHALL MAINTAIN HIS SWP3 IN ACCORDANCE WITH THE TCEQ PERMIT AND MAKE HIS SWP3 AVAILABLE UPON REQUEST TO THE TCEQ AND/OR OWNER.

4. THE CONTRACTOR MUST AMEND HIS SWP3 WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE SWP3, OR WHEN THE EXISTING SWP3 PROVES INEFFECTIVE. MODIFICATIONS SHALL NOT COMPROMISE THE INTENT OF THE REQUIREMENTS OF THE PERMIT. MODIFICATIONS INCLUDING DESIGN AND ALL ADDITIONAL MATERIALS AND WORK SHALL BE ACCOMPLISHED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

5. THE CONTRACTOR SHALL INSPECT HIS STABILIZATION AND EROSION CONTROL MEASURES AT A MINIMUM OF ONCE EVERY 14 DAYS, AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES, OR ONCE EVERY 7 DAYS. THE CONTRACTOR SHALL REPAIR INADEQUACIES REVEALED BY THE INSPECTION BEFORE THE NEXT SOTRM EVENT AND HE SHALL MODIFY HIS SWP3 WITHIN 7 DAYS OF THE INSPECTION.

6. THE CONTRACTOR SHALL ADOPT AND IMPLEMENT APPROPRIATE CONSTURCTION SITE MANAGEMENT PRACTICES TO PREVENT THE DISCHARGE OF OILS, GREASE, PAINTS, GASOLINE AND OTHER POLLUTANTS TO STORM WATER. APPROPRIATE PRACTICES SHALL INCLUDE, BUT NOT BE LIMITED TO: DESIGNATING AREAS FOR EQUIPMENT MAINTENANCE AND REPAIR, COLLECTING WASTES PERIODICALLY, MAINTAINING CONVENIENTLY LOCATED WASTE RECEPTACLES, AND DESIGNATING AND CONTROLLING EQUIPMENT WASHDOWN.

7. BORROW AREAS, IF EXCAVATED, SHALL BE PROTECTED AND STABILIZED BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE OWNER AND IN ACCORDANCE WITH PERMIT REQUIREMENTS.

8. ALL NON-PAVED AREAS SHALL BE SEEDED AND MULCHED WITH EROSION PROTECTION GRASS BY THE CONTRACTOR IMMEDIATELY UPON COMPLETION OF FINAL GRADING. THIS INCLUDES ALL DITCHES AND EMBANKMENTS. THE CONTRACTOR SHALL MAINTAIN FINAL GRADING, AND KEEP SEEDED AREAS WATERED UNTIL FULLY ESTABLISHED AND ACCEPTED BY OWNER.

9. THE CONTRACTOR SHALL CONSTRUCT A SILT FENCE AT LOCATIONS SUGGESTED ON PLANS AS APPROPRIATE OR AS MODIFIED IN HIS SWP3 TO FIT SITE CONDTIONS AT THE TIME OF PLACEMENT, AND ALL BORROW AND STOCK PILE ARES. THE SILT FENCE SHALL BE CONSTRUCTED AS DETAILED ON THIS PLAN. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN IT REACHES A DEPTH OF 1/3 THE HEIGHT OF THE SILT FENCE. THE CONTRACTOR SHALL DISPOSE OF THE REMOVED SILT IN A LOCATION APPROVED BY THE OWNER AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO EROSION AND SEDIMENTATION. THE CONTRACTOR SHALL REMOVE THE SILT FENCE WHEN THE SITE IS COMPLETELY STABILIZED IN ACCORDANCE WITH THE PERMIT.

10. THE CONTRACTOR SHALL DESIGNATE MATERIAL AND EQUIPMENT SOTRAGE AREAS MUTUALLY AGREED TO BY THE OWNER. THE STORAGE AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND THE SURFACE STABILIZED WITH A MINIMUM OF 2 INCHES OF COMPACTED FLEX BASE ON 6 INCHES OF SCARIFIED AND RECOMPACTED SUBGRADE BY THE CONTRACTOR. A SILT FENCE SHALL BE INSTALLED BY THE CONTRACTOR AROUND THE STORAGE ARES TO PREVENT ERODED MATERIAL FROM LEAVING THE SITE.

11. ALL INLETS (ONSITE AND OFFSITE) RECEIVING DRINAGE WATER FROM DISTURBED AREAS SHALL BE PROTECTED BY THE CONTRACTOR AS PER DETAILS SHWON OR OTHER OWNER APPROVED METHODS TO PREVENT ERODED MATERIAL FROM BEING TRANSPORTED INTO INLETS. THE INLET PROTECTION SHALL BE CONSTRUCTED AS SHOWN ON THESE PLANS.

12. THE NOTES AND DETAILS CONTAINED HERIN DO NOT RELIEVE THE CONTRACTOR AND OWNER OF MEETING AND IMPLEMENTING THE REQUIREMENTS OF THE PERMIT.

CONTRACTOR SHALL ADD TO THE SITE MAP, AT A MINIMUM, THE FOLLOWING AND SHALL ADD ADDITIONAL INFORMATION AS REQUIRED BY THE PERMIT:

1. OFF-SITE MATERIAL, WASTE, BORROW, FILL, OR EQUIPMENT
2. AREAS DISTRURBED/AREAS UNDISTURBED NOT SHOWN
3. CONCRETE STORAGE AREAS
4. EQUIPMENT STORAGE AREAS
5. ON-SITE WASTE AND TRASH STORAGE
6. SANITARY WASTE FACILITIES
7. FUELING AREA
8. CONRETE TRUCK WASHOUT LOCATION
9. REVISE PHASES SHOWN ABOVE AS APPROPRIATE FOR THIS OPERATION

NOTES:

1. THE TCEQ, TPDES PERMIT REQUIRES SEDIMENT BASINS WHERE FEASIBLE FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH TEN (10) OR MORE ACRES DISTURBED AT ONE TIME. SEE PART III.F.3(A) OF THE TCEQ, TPDES PERMIT FOR THE REQUIREMENTS.

2. THE CONTRACTOR SHALL USE THE EROSION CONTROLS SHOWN ON THIS EROSION CONTROL PLAN WITH THE PROVISION THAT HE, AS OPERATOR, IS RESPONSIBLE FOR IMPLEMENTATION AND CONTINUING MAINTENANCE OF THE EROSION CONTROLS IN ACCORDANCE WITH THE TCEQ, TPDES PERMIT.

3. CONTRACTOR MUST COMPLY WITH CITY GRADING PERMIT. CONTRACTOR SHALL RE-SUBMIT PLAN BEFORE CHANGES ARE IMPLEMENTED.

PHASE I	CLEARING & GRADING
PHASE II	UTILITIES & STORM DRAIN CONSTRUCTION
PHASE III	FURNEAUX MAIN STEM GRADING
PHASE IV	BIKE TRAIL GRADING
PHASE V	FINAL STABILIZATION

PHASE I:
-INSTALL EROSION CONTROLS

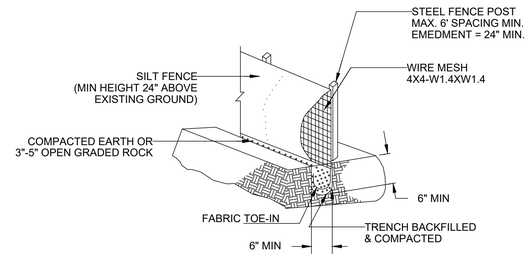
PHASE II:
-MAINTAIN EXISTING EROSION CONTROLS
-ADD ADITIONAL EROSION CONTROLS AS NEEDED

PHASE III, AND IV:
-MAINTAIN EXISTING EROSION CONTROLS
-ADD ADDITIONAL CONTROLS AS NEEDED FOR CONSTRUCTION ACTIVITIES

PHASE III, IV, AND V CONSTRUCTION:
-REVEGETATE ALL DISTURBED AREAS PER CITY REQUIREMENTS
-ESTABLISH MINIMUM COVER OF 70% OF THE NATIVE BACKGROUND COVER
-REMOVE EROSION CONTROLS WHEN 70% MINIMUM COVER HAS BEEN ESTABLISHED

LIMIT OF DISTURBANCE AREAS

DUDLEY MAIN STEM = 12.21 ACRES (532,036 SF)



SILT FENCE
N.T.S.

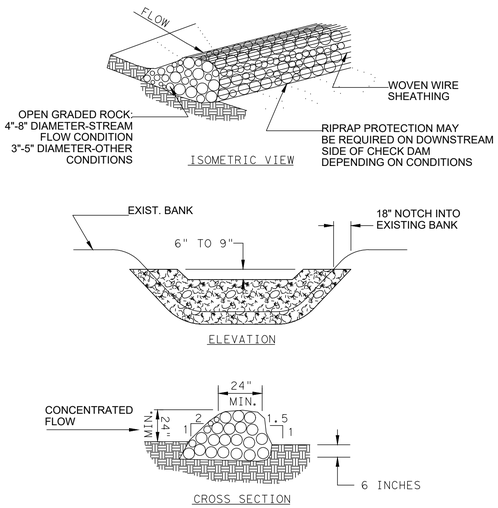
NOTES:

1. STEELPOSTS WHICH SUPPORT THE SILT FENCE SHALL BE GALVANIZED STEEL "T" POSTS AND SHALL BE INSTALLED WITH A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDED A MINIMUM OF TWO (2) FEET. THE WOVEN WIRE FOR THE SILT FENCE SHALL BE 4" X 4" W1.4 X W1.4 ZINCE COATED (GALVANIZED) STEEL WOVEN WIRE FABRIC CONFORMING TO ASTM A116. THE SILT FENCE FABRIC SHALL BE MIRAFI, INC. SILT FENCE OR AN OWNER APPROVED EQUAL.

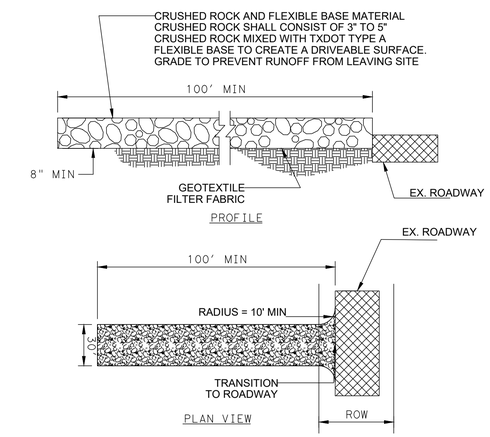
2. THE TOW OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER SO THAT THE DOWN SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT), WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE. 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 AS SHOWN ON THE SILT FENCE DETAIL.

3. SILT FENCE FABRIC SHALL BE SECURELY FASTENED TO THE WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3-FOOT OVERLAP OF SILT FENCE FABRIC AT JOINTS IN THE SILT FENCE FABRIC SECURELY FASTENED WHERE ENDS OF FABRIC MEET. THE SILT FENCE SHALL BE JOINED SUCH THAT NO BYPASS OR LEAKAGE OCCURS.

4. INSTALL SILT FENCE AT EDGE OF DISTURBED AREAS ADJACENT TO ALL STREETS.



ROCK CHECK DAM
N.T.S.



STABILIZED CONSTRUCTION EXIT
N.T.S.

Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF RODRIGO VIZCAINO TEXAS P.E. NO. 95939 DATE: FEBRUARY 14, 2020

IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.

CARROLLTON TEXAS

Design and Permitting of
Channel Improvements
for Dudley Branch

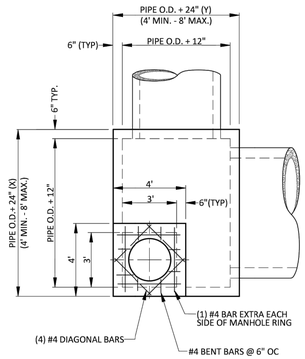
EROSION CONTROL NOTES

0 1" 2"

FILENAME

SCALE NTS

SHEET
00C-28



NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. ALL EXPOSED EDGES SHALL HAVE A ¾" CHAMFER. AN ALTERNATE DESIGN (BEARING THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER) WILL BE ACCEPTABLE FOR PRECAST CONSTRUCTION OF MANHOLES AND/OR EQUIVALENT STRUCTURAL DESIGN WITH THE APPROVAL OF THE DIRECTOR OF ENGINEERING.
2. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, BLOCKOUTS, PIPES, ANCHOR BOLTS OR OTHER REINFORCING STEEL, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE DESIGNING ENGINEER.
3. CONNECTING PIPES SHOULD ENTER WITHIN 10" OF NORMAL TO THE INLET WALL. IF NECESSARY, PIPE ELBOWS OR CURVED APPROACH ALIGNMENT SHOULD BE USED TO STAY WITHIN THIS LIMIT. PIPES MAY ENTER ANY OR ALL WALLS, EXCEPT AT CORNERS. THE MAXIMUM DIAMETER OF PIPE THAT CAN BE ACCOMMODATED IS 60". MORE THAN ONE PIPE MAY ENTER A SIDE, SUBJECT TO THE MAXIMUM BOX DIMENSIONS SHOWN. THE CLEAR DISTANCE BETWEEN ADJACENT PIPES SHOULD BE A MINIMUM OF 9".
4. MINIMUM REBAR LAP IS TO BE 30 BAR DIAMETERS (MINIMUM LENGTH OF 18"). ALL CONCRETE SHALL BE 4000 PSI.
5. MANHOLE LID SHALL BE 30" DIAMETER AND SHALL SAY "CARROLLTON" AND "STORM SEWER" ON IT.
6. MANHOLE STEPS, WHERE SHOWN AND NOT OBSTRUCTED BY PIPE OPENINGS, ARE TO BE CONTINUED TO WITHIN 12" OF FINISHED MANHOLE FLOOR. WHERE POSSIBLE, MANHOLE STEPS ARE TO BE LOCATED ON A WALL WHICH HAS NO OPENINGS. MANHOLE STEPS ARE TO BE COPOLYMER POLYPROPYLENE PLASTIC COATED STEEL OR CAST IRON REINFORCED STEPS CONFORMING TO ASTM C-478.

FILENAME: D-3_1-12.DWG

CARROLLTON TEXAS

GENERAL DESIGN STANDARDS
DRAINAGE DETAILS

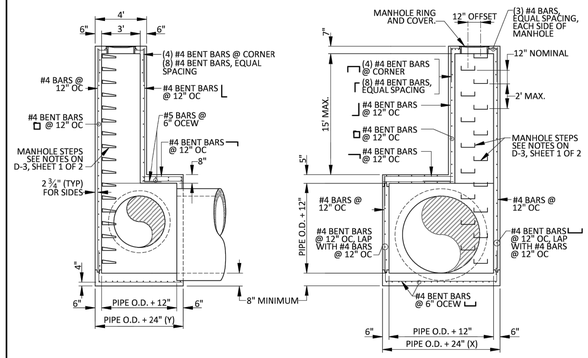
SCALE: NTS DATE: 01/2012
SHEET 1 OF 2

STORM DRAIN MANHOLE DETAILS

D-3

ENGINEERING DEPARTMENT

1945 E. JACKSON ROAD CARROLLTON, TEXAS 75006 WWW.CITYOFCARROLLTON.COM (972)466-3200



CROSS SECTION (UPSTREAM)

CROSS SECTION (DOWNSTREAM)

FILENAME: D-3_2-12.DWG

CARROLLTON TEXAS

GENERAL DESIGN STANDARDS
DRAINAGE DETAILS

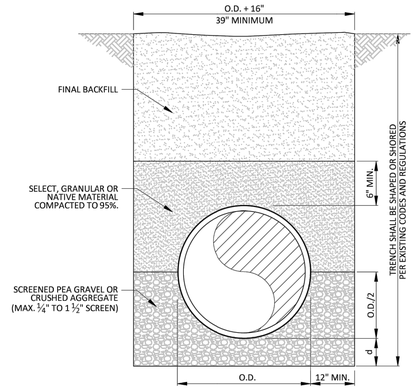
SCALE: NTS DATE: 06/2005
SHEET 2 OF 2

STORM DRAIN MANHOLE DETAILS

D-3

ENGINEERING DEPARTMENT

1945 E. JACKSON ROAD CARROLLTON, TEXAS 75006 WWW.CITYOFCARROLLTON.COM (972)466-3200



PIPE SIZE	d
<27"	3"
30" - 60"	4"
>66"	6"

NOTES:

1. FOR THE DEFINITION OF THE BACKFILL MATERIAL TERMS SEE N.C.T.C.O.G. SPECIFICATIONS ITEM 504.4.
2. FINAL BACKFILL SHALL CONSIST OF AND BE PLACED IN ACCORDANCE WITH N.C.T.C.O.G. SPECIFICATIONS ITEM 504.6.

FILENAME: D-4_1-11.DWG

CARROLLTON TEXAS

GENERAL DESIGN STANDARDS
DRAINAGE DETAILS

SCALE: NTS DATE: 02/2017
SHEET 1 OF 1

STORM DRAIN R.C.P. PIPE EMBEDMENT

D-4

ENGINEERING DEPARTMENT

1945 E. JACKSON ROAD CARROLLTON, TEXAS 75006 WWW.CITYOFCARROLLTON.COM (972)466-3200

HDR
Texas P.E. Firm Registration No. F-754

ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.

CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

STANDARD DETAILS I

0 1" 2"

FILENAME

SCALE NTS

SHEET **00C-29**

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

SLOPE	DIA. OF PIPE, D	Values for one Pipe: W	X	Y	L	Reinf (Lbs) (1)	Conc (CY) (1)	Values to be added for each add'l Pipe: X and W	Reinf (Lbs) (1)	Conc (CY) (1)
2:1	12"	4'- 7 1/2"	2'- 6"	2'-10"	3'- 3 1/4"	84	0.6	1'- 9"	20	0.2
	15"	5'- 5 3/4"	2'- 9 1/2"	3'- 4"	3'-10 1/4"	98	0.7	2'- 2"	24	0.3
	18"	6'- 4 1/4"	3'- 1"	3'-10"	4'- 5"	120	0.9	2'- 8"	32	0.3
	21"	7'- 2 3/4"	3'- 4 1/2"	4'- 4"	5'- 0"	137	1.1	3'- 1"	43	0.4
	24"	8'- 2 1/2"	3'- 9 1/2"	4'-10"	5'- 7"	158	1.3	3'- 7"	50	0.5
	27"	9'- 1"	4'- 1"	5'- 4"	6'- 2"	173	1.5	3'-11"	56	0.6
	30"	9'-11 1/2"	4'- 4 1/2"	5'-10"	6'- 8 3/4"	197	1.7	4'- 4"	65	0.8
	33"	10'-10"	4'- 8"	6'- 4"	7'- 3 3/4"	216	2.0	4'- 8"	71	0.9
	36"	11'- 8 1/4"	4'-11 1/2"	6'-10"	7'-10 3/4"	241	2.2	5'- 1"	81	1.0
	42"	13'- 5 1/4"	5'- 6 1/2"	7'-10"	9'- 0 1/2"	290	2.8	5'-10"	97	1.3
	48"	15'- 9"	6'- 1 1/2"	9'- 4"	10'- 9 1/4"	350	3.8	6'- 7"	117	1.7
	54"	17'- 5 3/4"	6'- 8 1/2"	10'- 4"	11'-11 1/4"	415	4.5	7'- 6"	151	2.1
	60"	19'- 2 3/4"	7'- 3 1/2"	11'- 4"	13'- 1"	469	5.3	8'- 3"	174	2.5
	66"	20'-11 1/2"	7'-10 1/2"	12'- 4"	14'- 3"	530	6.2	8'- 9"	194	2.9
	72"	22'- 8 1/2"	8'- 5 1/2"	13'- 4"	15'- 4 3/4"	587	7.1	9'- 4"	213	3.3
3:1	12"	6'- 3"	2'- 6"	4'- 3"	4'-11"	114	0.8	1'- 9"	22	0.2
	15"	7'- 5"	2'- 9 1/2"	5'- 0"	5'- 9 1/4"	133	1.1	2'- 2"	28	0.3
	18"	8'- 6 3/4"	3'- 1"	5'- 9"	6'- 7 3/4"	166	1.3	2'- 8"	37	0.5
	21"	9'- 8 3/4"	3'- 4 1/2"	6'- 6"	7'- 6"	189	1.6	3'- 1"	48	0.6
	24"	11'- 0"	3'- 9 1/2"	7'- 3"	8'- 4 1/2"	221	2.0	3'- 7"	58	0.7
	27"	12'- 2"	4'- 1"	8'- 0"	9'- 2 3/4"	245	2.3	3'-11"	67	0.8
	30"	13'- 4"	4'- 4 1/2"	8'- 9"	10'- 1 1/4"	287	2.7	4'- 4"	77	1.0
	33"	14'- 5 3/4"	4'- 8"	9'- 6"	10'-11 3/4"	310	3.1	4'- 8"	84	1.2
	36"	15'- 7 3/4"	4'-11 1/2"	10'- 3"	11'-10"	343	3.5	5'- 1"	96	1.4
	42"	17'-11 1/2"	5'- 6 1/2"	11'- 9"	13'- 6 3/4"	424	4.5	5'-10"	119	1.7
	48"	21'- 1 3/4"	6'- 1 1/2"	14'- 0"	16'- 2"	527	6.1	6'- 7"	146	2.3
	54"	23'- 5 1/2"	6'- 8 1/2"	15'- 6"	17'-10 3/4"	618	7.3	7'- 6"	186	2.9
	60"	25'- 9 1/4"	7'- 3 1/2"	17'- 0"	19'- 7 1/2"	707	8.7	8'- 3"	219	3.4
	66"	28'- 1"	7'-10 1/2"	18'- 6"	21'- 4 1/4"	791	10.1	8'- 9"	242	3.9
	72"	30'- 4 3/4"	8'- 5 1/2"	20'- 0"	23'- 1 1/4"	910	11.7	9'- 4"	272	4.4
4:1	12"	7'-10 3/4"	2'- 6"	5'- 8"	6'- 6 1/2"	144	1.1	1'- 9"	24	0.3
	15"	9'- 4"	2'- 9 1/2"	6'- 8"	7'- 8 1/2"	177	1.5	2'- 2"	32	0.4
	18"	10'- 9 1/2"	3'- 1"	7'- 8"	8'-10 1/2"	217	1.9	2'- 8"	42	0.5
	21"	12'- 2 3/4"	3'- 4 1/2"	8'- 8"	10'- 0"	254	2.3	3'- 1"	57	0.7
	24"	13'- 9 1/2"	3'- 9 1/2"	9'- 8"	11'- 2"	295	2.8	3'- 7"	67	0.9
	27"	15'- 3"	4'- 1"	10'- 8"	12'- 3 3/4"	328	3.3	3'-11"	77	1.0
	30"	16'- 8 1/4"	4'- 4 1/2"	11'- 8"	13'- 5 3/4"	379	3.8	4'- 4"	89	1.3
	33"	18'- 1 3/4"	4'- 8"	12'- 8"	14'- 7 1/2"	417	4.5	4'- 8"	101	1.4
	36"	19'- 7"	4'-11 1/2"	13'- 8"	15'- 9 1/4"	464	5.1	5'-1"	115	1.7
	42"	22'- 5 3/4"	5'- 6 1/2"	15'- 8"	18'- 1"	575	6.5	5'-10"	141	2.1
	48"	26'- 6 1/4"	6'- 1 1/2"	18'- 8"	21'- 6 3/4"	720	8.9	6'- 7"	175	2.8
	54"	29'- 5"	6'- 8 1/2"	20'- 8"	23'-10 1/4"	863	10.7	7'- 6"	226	3.6
	60"	32'- 3 3/4"	7'- 3 1/2"	22'- 8"	26'- 2"	984	12.7	8'- 3"	264	4.3
	66"	35'- 2 1/2"	7'-10 1/2"	24'- 8"	28'- 5 3/4"	1126	14.9	8'- 9"	300	4.9
	72"	38'- 1 1/4"	8'- 5 1/2"	26'- 8"	30'- 9 1/2"	1283	17.3	9'- 4"	334	5.6
6:1	12"	11'- 2"	2'- 6"	8'- 6"	9'- 9 3/4"	220	1.9	1'- 9"	28	0.4
	15"	13'- 2 1/4"	2'- 9 1/2"	10'- 0"	11'- 6 1/2"	264	2.5	2'- 2"	37	0.5
	18"	15'- 2 1/2"	3'- 1"	11'- 6"	13'- 3 1/4"	326	3.2	2'- 8"	50	0.7
	21"	17'- 2 3/4"	3'- 4 1/2"	13'- 0"	15'- 0 1/4"	381	3.9	3'- 1"	69	0.9
	24"	19'- 4 1/2"	3'- 9 1/2"	14'- 6"	16'- 9"	447	4.8	3'- 7"	80	1.2
	27"	21'- 4 3/4"	4'- 1"	16'- 0"	18'- 5 3/4"	506	5.7	3'-11"	96	1.4
	30"	23'- 5 1/4"	4'- 4 1/2"	17'- 6"	20'- 2 1/2"	587	6.7	4'- 4"	110	1.7
	33"	25'- 5 1/2"	4'- 8"	19'- 0"	21'-11 1/4"	667	7.8	4'- 8"	127	2.0
	36"	27'- 5 3/4"	4'-11 1/2"	20'- 6"	23'- 8"	727	9.0	5'- 1"	144	2.3
	42"	31'- 6 1/4"	5'- 6 1/2"	23'- 6"	27'- 1 1/2"	914	11.5	5'-10"	179	3.0
	48"	37'- 3 1/2"	6'- 1 1/2"	28'- 0"	32'- 4"	1181	15.9	6'- 7"	231	4.0
	54"	41'- 4 1/4"	6'- 8 1/2"	31'- 0"	35'- 9 1/2"	1412	19.2	7'- 6"	300	5.0
	60"	45'- 4 3/4"	7'- 3 1/2"	34'- 0"	39'- 3"	1619	22.9	8'- 3"	353	6.0

ELEVATION

Showing dimensions

1. Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.
2. For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
3. Provide a 1'-0" footing as shown where required to maintain 4" Min cover for pipes.
4. Quantities shown are for one structure end only (one headwall).
5. Min Length = 6" + 3" × $\left(\frac{12 \times H - 7}{12 \times L}\right)$

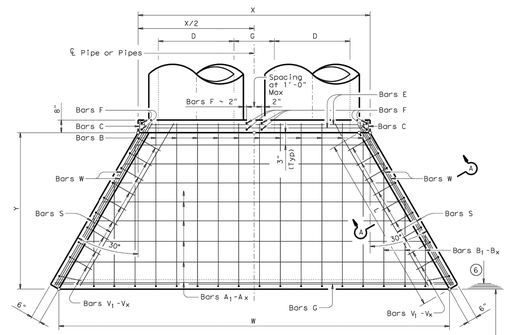
   Max Length = 12 × H − 3" × $\left(\frac{12 \times H - 7}{12 \times L}\right)$ − 1"
6. Lengths of wings based on SL:1 Slope along this line.

TABLE OF REINFORCING STEEL (4)

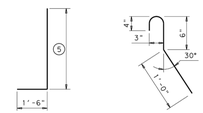
Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
C	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	~
G	# 3	~	2
S	# 4	~	6
V	# 4	1'-0"	~
W	# 5	~	4

TABLE OF CONSTANT DIMENSIONS

DIA. OF PIPE, D	G	K	H
12"	9"	1'- 0"	2'- 0"
15"	11"	1'- 0"	2'- 3"
18"	1'- 2"	1'- 0"	2'- 6"
21"	1'- 4"	1'- 0"	2'- 9"
24"	1'- 7"	1'- 0"	3'- 0"
27"	1'- 8"	1'- 0"	3'- 3"
30"	1'-10"	1'- 0"	3'- 6"
33"	1'-11"	1'- 0"	3'- 9"
36"	2'- 1"	1'- 0"	4'- 0"
42"	2'- 4"	1'- 0"	4'- 6"
48"	2'- 7"	1'- 3"	5'- 3"
54"	3'- 0"	1'- 3"	5'- 9"
60"	3'- 3"	1'- 3"	6'- 3"
66"	3'- 3"	1'- 3"	6'- 9"
72"	3'- 4"	1'- 3"	7'- 3"

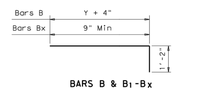


PLAN

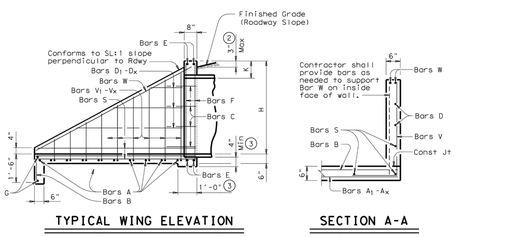


BARS V

BARS C
(2'-0" long)



BARS B & B1-Bx



TYPICAL WING ELEVATION

SECTION A-A

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

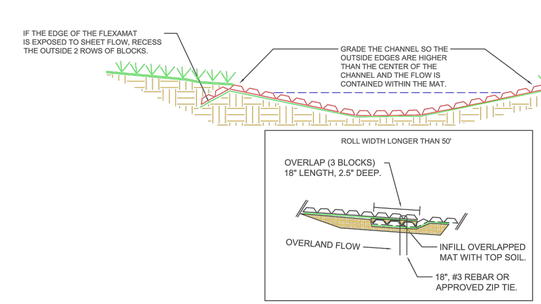
No bridge rails of any type may be mounted directly to these culvert headwalls.

Texas Department of Transportation — Bridge Division Standard

CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS

CH-FW-0

FILE: ch fw00se.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST		COUNTY	SHEET NO.



CONSTRUCTION NOTES:

1. AN ENGINEER OR MANUFACTURES REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
2. GRADE THE SITES SO THAT WATER WILL NOT FLOW ABOVE, BELOW, OR AROUND THE OUTSIDE OF THE AREA PROTECTED WITH FLEXAMAT. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
3. APPLY SITE SPECIFIC SEED, INCLUDING NATIVE GRASSES DIRECTLY TO THE PREPARED SOIL PRIOR TO FLEXAMAT INSTALLATION.
4. FLEXAMAT ROLLS ARE AVAILABLE IN WIDTHS OF 4', 5.5', 8', 10', 12', & 16'. IT IS THE MANUFACTURERS RECOMMENDATION TO UTILIZE THE WIDEST MATS POSSIBLE TO REDUCE AN ABUNDANCE OF SEAMS OR OVERLAPS.
   a. TO ACHIEVE WIDER WIDTHS, INSTALL MATS ADJACENT TO ONE ANOTHER. INSTALL ADDITIONAL UNDERLAYMENT UNDER ALL ADJOINING MATS. A MINIMUM OF 12" OF UNDERLAYMNET SHALL EXTEND UNDER EACH SIDE OF THE MAT AND DIRECTLY AGAINST THE SUBGRADE.
   b. INSTALL 18" #3 REBAR U-ANCHORS OR STAINLESS STEEL ZIP TIES IN 3' INCREMENTS THE LENGTH OF THE LONGITUDINAL SEAM.
5. AT THE BEGINNING OF THE FLEXAMAT, TRANSITION THE INITIAL LEADING EDGE PROPERLY WITH EROSION MATTING OR SOD. IF EXPOSED TO CONCENTRATED FLOWS EMBED 18" VERTICALLY INTO THE SUB GRADE TO SERVE AS AN ANCHOR TRENCH. THE TRENCH SHALL BE FILLED AND COMPACTED WITH SUITABLE FILL OR OTHER (AS SPECIFIED BY EOR).
6. FOR ADDITIONAL SECTIONS OF MAT, OVERLAP THE DOWNSTREAM SECTION 18" WITH UPSTREAM SECTION OF MAT. PRIOR TO INSTALLING OVERLAP, FLIP UPSTREAM MAT BACK 24". EXCAVATE 2.25" OF SOIL 18" FROM END OF UPSTREAM MAT. DOWNSTREAM SECTION IS LAID IN THE SHALLOW TRENCH. LIGHTLY SPREAD TOPSOIL, SEED AND FERTILIZER OVER INITIAL EDGE. FLIP END OF UPSTREAM MAT OVER THE SOIL COVERED INITIAL LEADING EDGE OF DOWNSTREAM MAT.
7. INSTALL 18" U-ANCHORS IN 3' INCREMENTS ACROSS THE OVERLAP. INSTALL ANCHORS DIRECTLY BEHIND BLOCKS. "U" ANCHORS CONSIST OF #3 REBAR "U" ANCHOR WITH 18" LEGS.
8. AT THE END OF THE ARMORED CHANNEL, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH SOIL (DETERMINED BY EOR).

FLEXAMAT INFORMATION

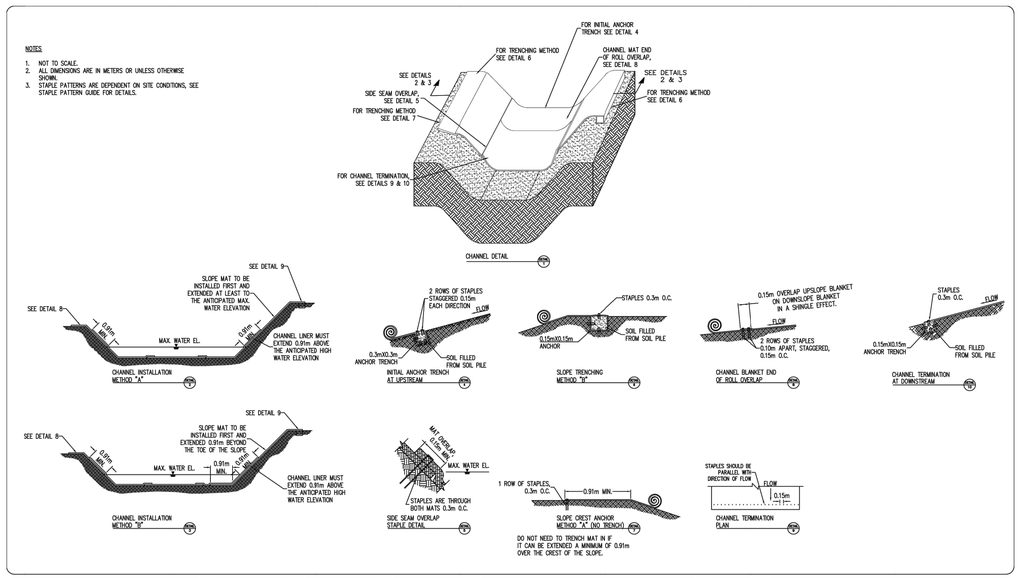
Manufacturer: Motz Enterprises, Inc.
Product Name: Flexamat
Address: 3153 Madison Road, Cincinnati, OH 45209
Telephone: 513-772-6689
Email: info@Flexamat.com
Website: www.Flexamat.com

FLEXAMAT STANDARD CHANNEL DETAIL NTS

Flexamat PERMANENT EROSION CONTROL

NOTES:

1. NOT TO SCALE.
2. ALL DIMENSIONS ARE IN METERS OR UNLESS OTHERWISE SHOWN.
3. STAPLE PATTERNS ARE DEPENDENT ON SITE CONDITIONS, SEE STAPLE PATTERN GUIDE FOR DETAILS.



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REVISIONS \ ISSUE

Project Number	
Date Drawn	06/13/2016
Scale	N.T.S.
Designed by	
Drawn by	
Checked by	

COIR MAT

TYPICAL CHANNEL APPLICATION DETAIL

Sheet Number 1 OF 1

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ISSUE	DATE	DESCRIPTION
2	02/07/2020	INTERNAL 70% REVIEW
1	06/18/2019	INTERNAL 30% REVIEW

PROJECT MANAGER	Rodrigo Vizcaino
DESIGNED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
PROJECT NUMBER	10110387

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IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.

CARROLLTON TEXAS

Design and Permitting of Channel Improvements for Dudley Branch

STANDARD DETAILS II

0 1" 2"

FILENAME

SCALE NTS

SHEET 00C-30