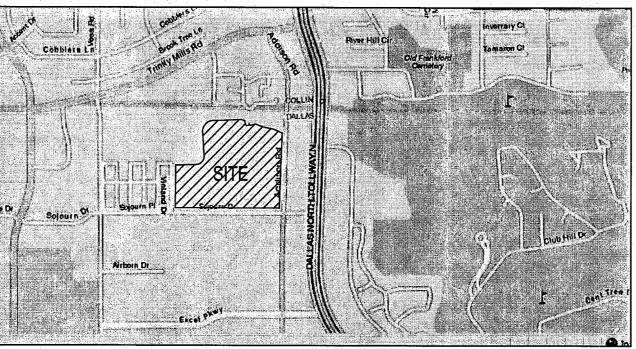
CONSTRUCTION PLANS FOR

TRINITY CHRISTIAN ACADEMY DRAINAGE & DRIVE IMPROVEMENTS NEAR THE UPPERSCHOOL (FIELD CHANGE TO PERFORMING ARTS CENTER)

PW#2006-13

17001 ADDISON ROAD TOWN OF ADDISON, TEXAS





LOCATION MAP - TRINITY CHRISTIAN ACADEMY

TABLE OF CONTENTS TRINITY CHRISTIAN ACADEMY

COVER SHEET DEMOLITION PLAN SITE PLAN **GRADING PLAN** S.W.P.P.P PLAN S.W.P.P.P. DETAILS S.W.P.P.P. DETAILS DRAINAGE AREA MAP DRAINAGE CALCULATIONS STORM SEWER PLAN & PROFILE STORM SEWER DETAILS PAVING PLAN PRIVATE PAVING DETAILS TXDOT BARRIER FREE RAMP DETAILS

> TXDOT BARRIER FREE RAMP DETAILS TXDOT TYPE "A" HEADWALL DETAILS

GENERAL NOTE:

CONTRACTOR TO UTILIZE CITY APPROVED CONSTRUCTION PLANS FOR CONSTRUCTION OF ALL CIVIL RELATED FACILITIES. CONTRACTOR TO NOTIFY ARCHITECT/ENGINEER IMMEDIATELY OF ANY COST DISCREPANCIES BETWEEN THE CITY APPROVED SET AND BID SET WITH LATEST ADDENDUMS. OWNER

TRINITY CHRISTIAN ACADEMY 17001 ADDISON ROAD ADDISON, TEXAS 75001-5096 (972) 931 - 8325

ENGINEER

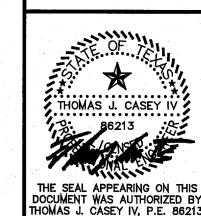
GLENN ENGINEERING 105 DECKER COURT, SUITE 910 **IRVING, TEXAS 75062** (972) 717-5151

APPROVED FOR CONSTRUCTION Town of Addison Public Works Departmen APPROVED BY: CAN BARNET DATE: 7-8-2010

All responsibility for the adequacy of these plans remains with the Engineer who prepared them. In approving these plans, the Town of Addison makes no representation of adequacy of the work of the Design Engineer.



OVER S S

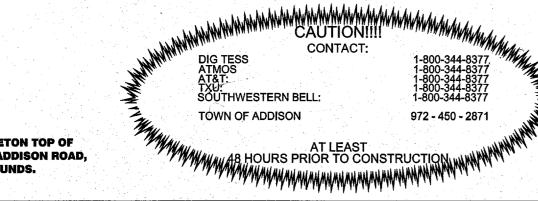


Issue Dates: Review: June 23, 2010 Comments: June 30, 2010 Comments: July 2, 2010 Comments: July 8, 2010

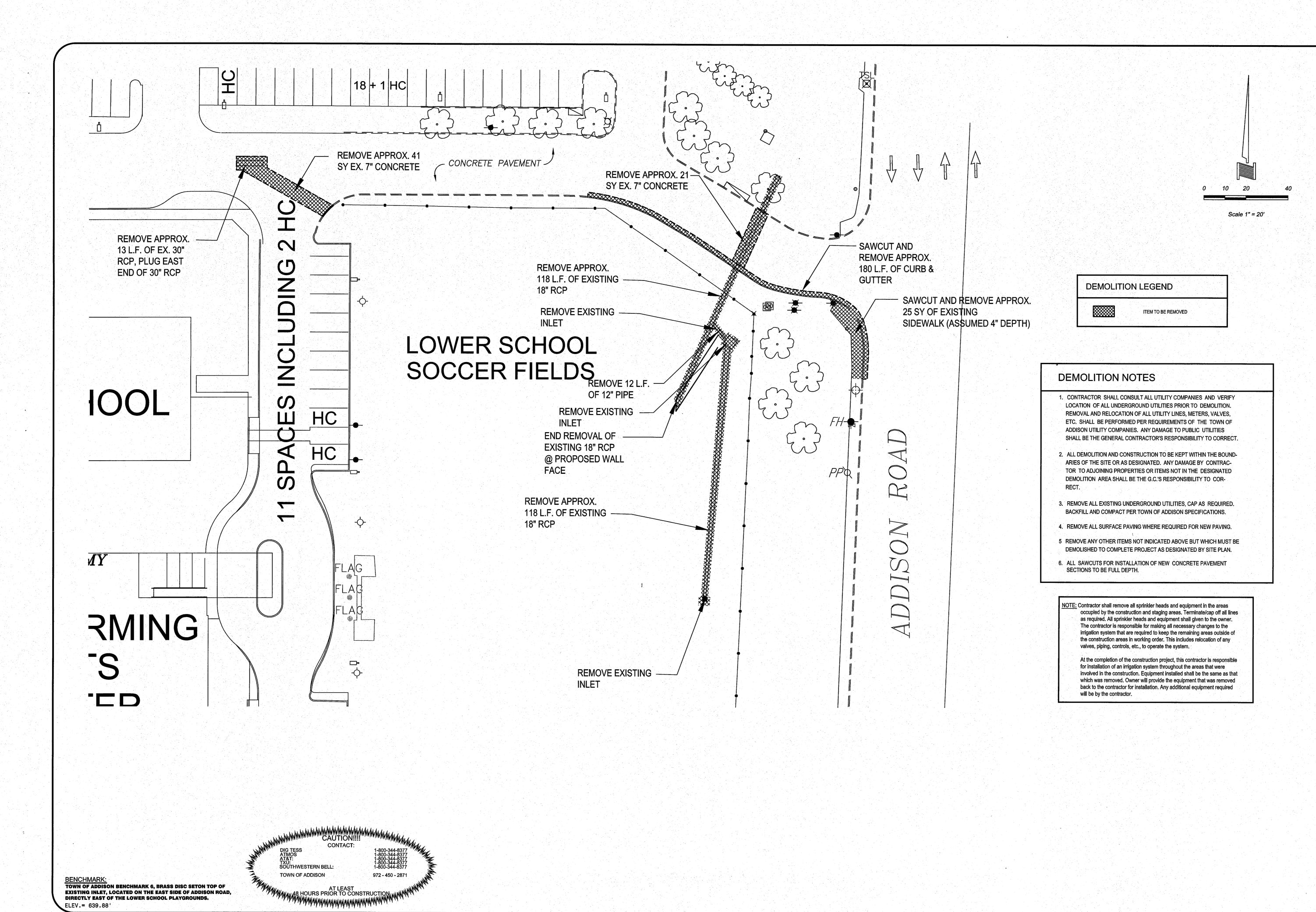
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Checked By:	CM
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BENCHMARK:
TOWN OF ADDISON BENCHMARK 6, BRASS DISC SETON TOP OF EXISTING INLET, LOCATED ON THE EAST SIDE OF ADDISON ROAD. DIRECTLY EAST OF THE LOWER SCHOOL PLAYGROUNDS.



FAX 972-717-2176

LENN NGINEER

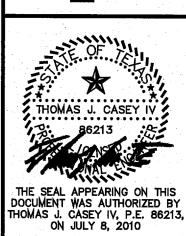
E. FIRM PHONE

T.B.P.E. FIRM # F - 303

T.B.P.E.

RAINAGE & DRIVE ROVEMENTS NEAI E UPPER SCHOOL

DEMOLITION PLAN

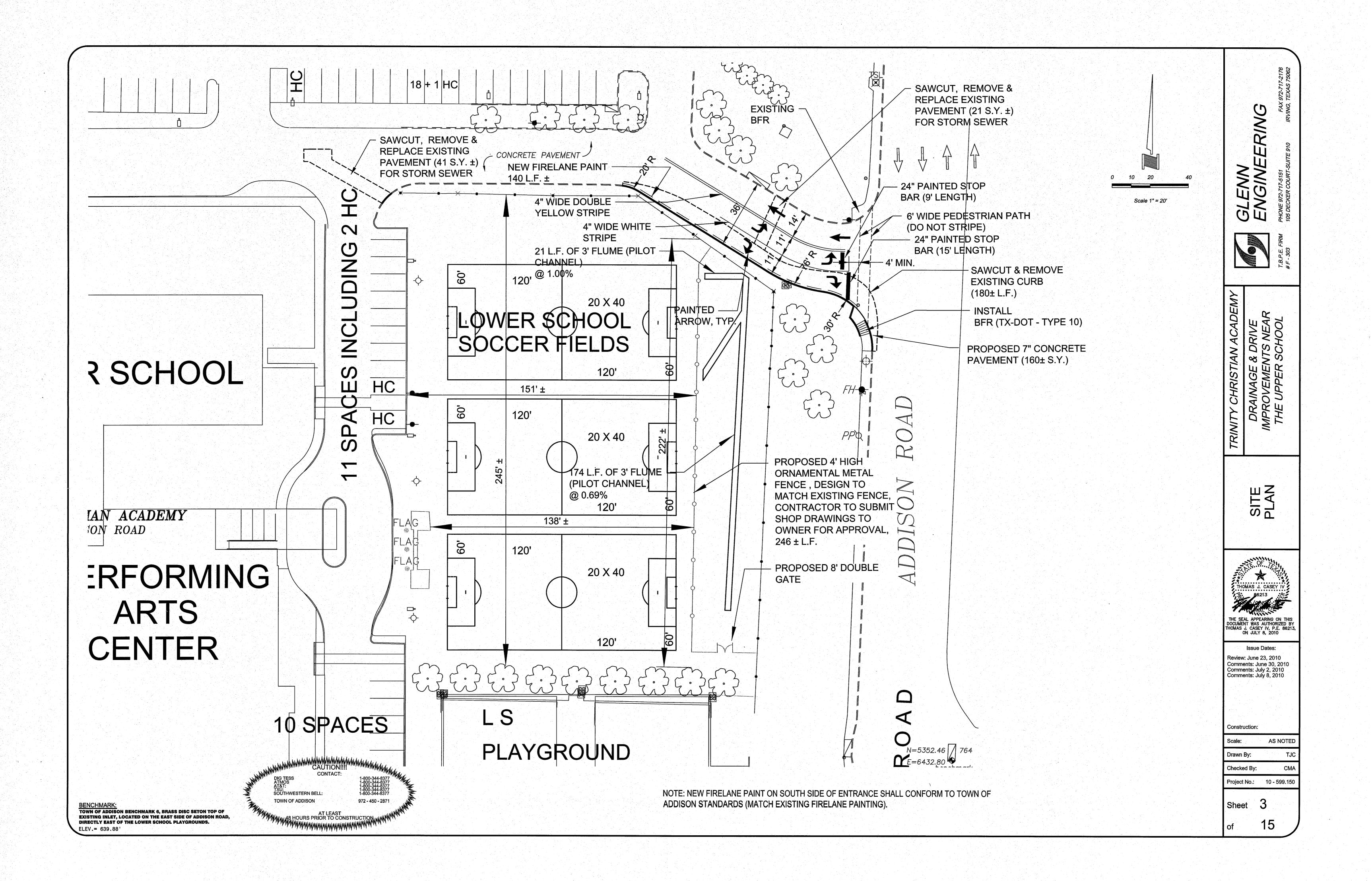


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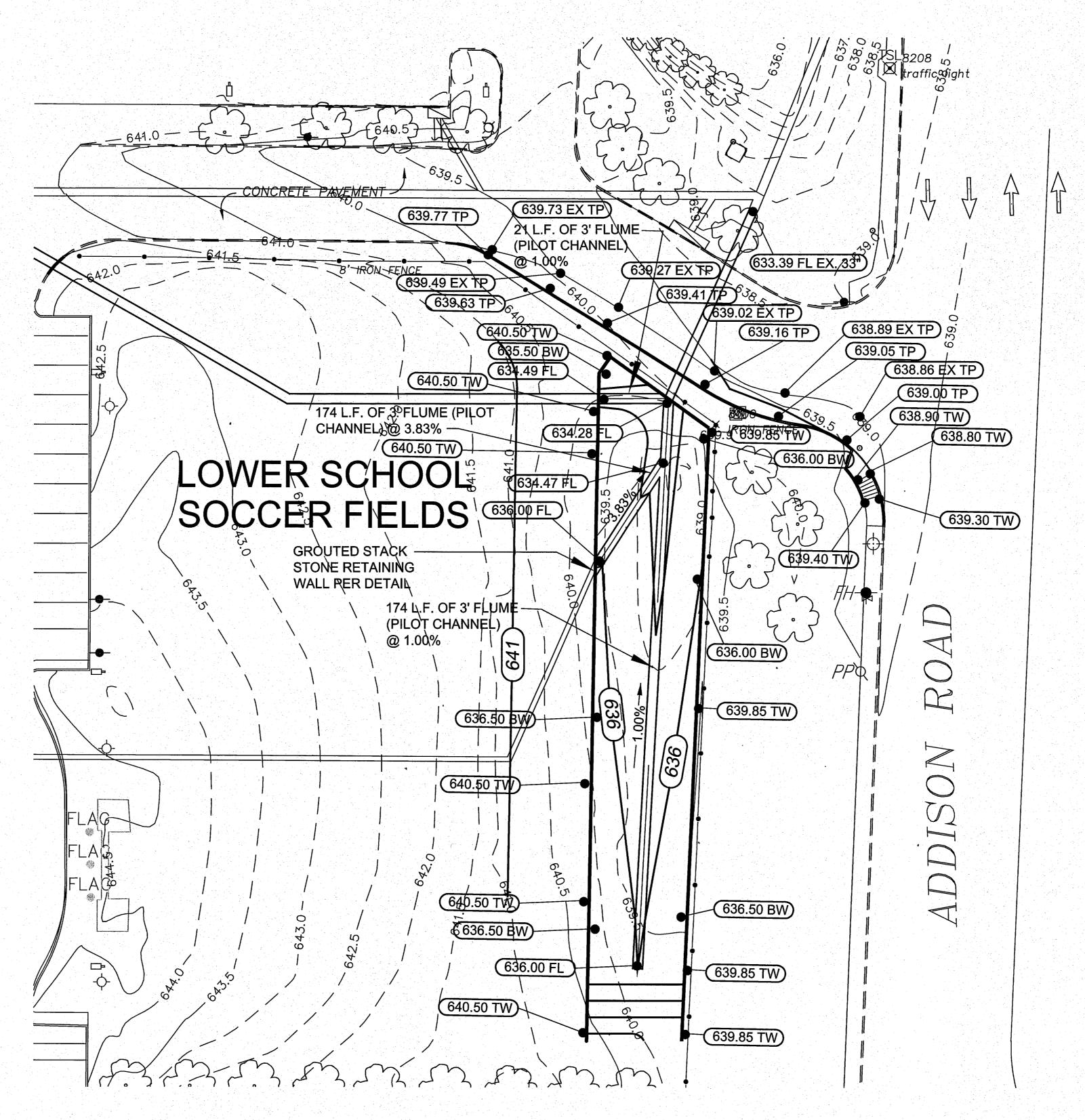
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Checked By:	CMA
Project No.:	10 - 599.150

Sheet 2

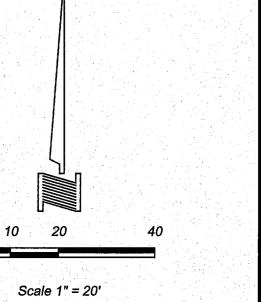


GENERAL GRADING AND DRAINAGE NOTES

- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THESE PLANS AND TOWN OF ADDISON
- PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL MAKE CERTAIN THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FA-BRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY RE-VIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICA-TIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
- IN THE EVENT AN ITEM IS NOT COVERED IN THE TOWN OF ADDISON SPECIFICATIONS, THE TOWN OF ADDISON ENGINEER'S DECISION SHALL APPLY.
- BARRICADING, TRAFFIC CONTROL, AND PROJECT SIGNS SHALL CONFORM TO "STATE DE-PARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION BARRICADING AND CONSTRUC-
- THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL VERIFY THE SUITABI-LITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMEN-SIONS BEFORE COMMENCEMENT OF ANY CONSTRUCTION, IN THE EVENT OF ANY CON-FLICT AND PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, IMMEDIATELY NOTIFY EN-GINEER, MINOR ADJUSTMENTS OF FINISH GRADE TO ACCOMPLISH SPOT DRAINAGE ARE ACCEPTABLE, IF NECESSARY, UPON PRIOR APPROVAL OF ENGINEER. PAVING INSTALLED SHALL 'FLUSH OUT' AT ANY JUNCTURE WITH EXISTING PAVING.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR UTILI-TIES PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ALL EXISTING INVERTS AND RIM ELEVATIONS PRIOR TO CON-
- ALL PROPOSED CONTOURS ARE APPROXIMATE, PROPOSED SPOT ELEVATIONS AND DESI-GNATED GRADIENT ARE TO BE USED IN THE EVENT OF ANY DISCREPANCIES.
- 10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND/OR ESTABLISH A BENCHMARK (BASE UPON EXISTING CONDITION SHOWN ON THIS PLAN) PRIOR TO CONSTRUCTION.

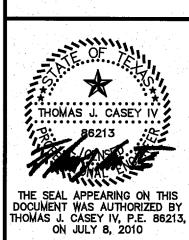


NOTE: SLOPE PROPOSED TURN LANE 2% TOWARDS EXISTING PAVEMENT AS INDICATED BY SPOT ELEVATIONS.





GRADING PLAN



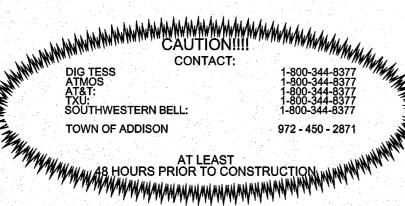
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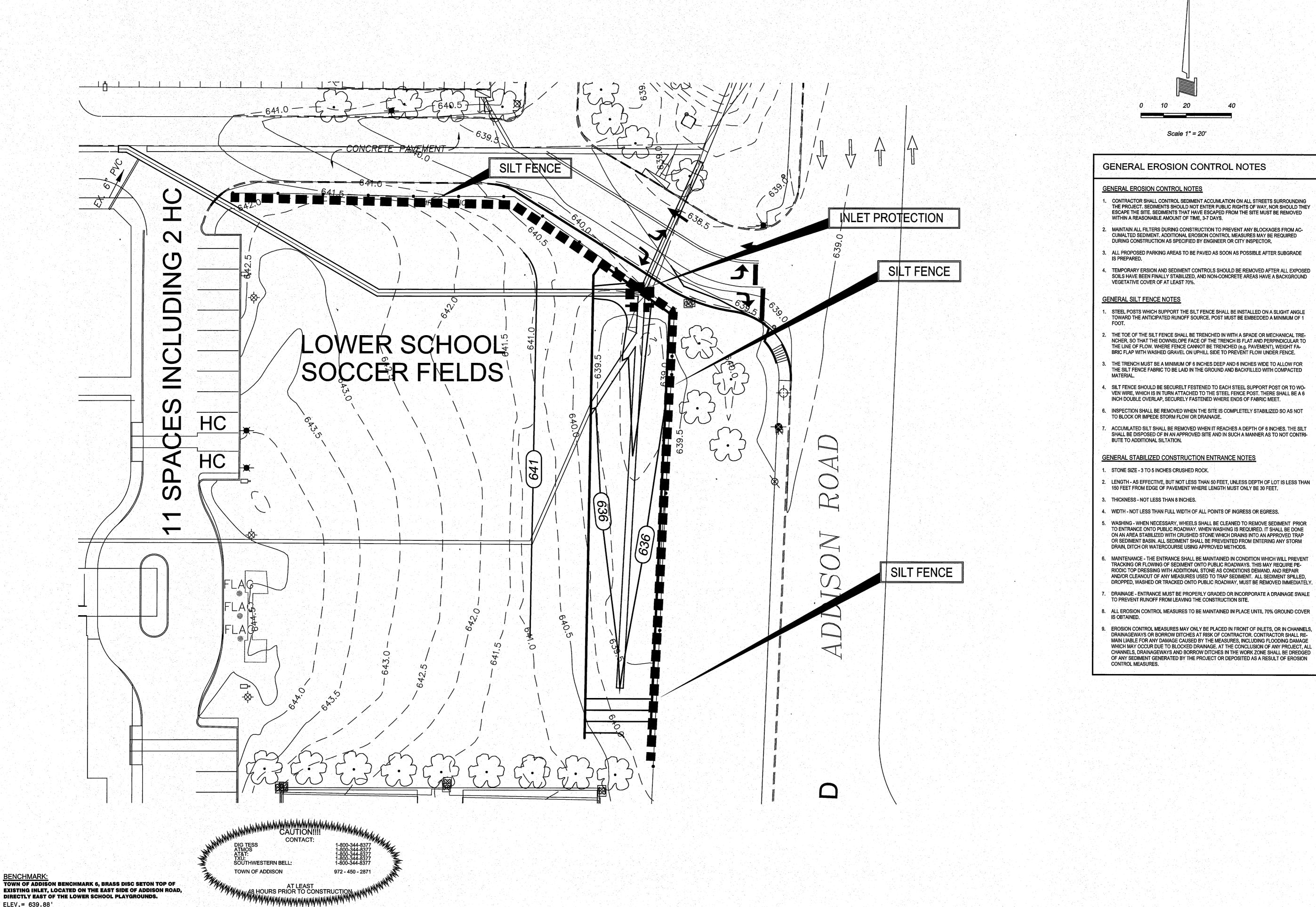
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Project No.: 10 - 599.150

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BENCHMARK:
TOWN OF ADDISON BENCHMARK 6, BRASS DISC SETON TOP OF EXISTING INLET, LOCATED ON THE EAST SIDE OF ADDISON ROAD, DIRECTLY EAST OF THE LOWER SCHOOL PLAYGROUNDS. ELEV.= 639.88'

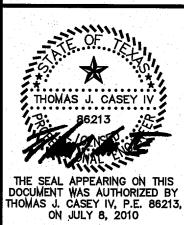


ELEV.= 639.88'

- CONTRACTOR SHALL CONTROL SEDIMENT ACCUMLATION ON ALL STREETS SURROUNDING THE PROJECT, SEDIMENTS SHOULD NOT ENTER PUBLIC RIGHTS OF WAY, NOR SHOULD THEY ESCAPE THE SITE. SEDIMENTS THAT HAVE ESCAPED FROM THE SITE MUST BE REMOVED
- MAINTAIN ALL FILTERS DURING CONSTRUCTION TO PREVENT ANY BLOCKAGES FROM AC-CUMALTED SEDIMENT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DURING CONSTRUCTION AS SPECIFIED BY ENGINEER OR CITY INSPECTOR.
- TEMPORARY ERSION AND SEDIMENT CONTROLS SHOULD BE REMOVED AFTER ALL EXPOSED SOILS HAVE BEEN FINALLY STABILIZED, AND NON-CONCRETE AREAS HAVE A BACKGROUND
- STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1
- THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPINDICULAR TO THE LINE OF FLOW. WHERE FACE CANNOT BE TRENCHED (e.g. PAVEMENT), WEIGHT FA-

- ACCUMLATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES, THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRI-
- 4. WIDTH NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- 5. WASHING WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED. IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM
- MAINTENANCE THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PE-RIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT, ALL SEDIMENT SPILLED. DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY, MUST BE REMOVED IMMEDIATELY
- DRAINAGE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE
- 8. ALL EROSION CONTROL MEASURES TO BE MAINTAINED IN PLACE UNTIL 70% GROUND COVER
- EROSION CONTROL MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS. DRAINAGEWAYS OR BORROW DITCHES AT RISK OF CONTRACTOR. CONTRACTOR SHALL RE-MAIN LIABLE FOR ANY DAMAGE CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGEWAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT OR DEPOSITED AS A RESULT OF EROSION



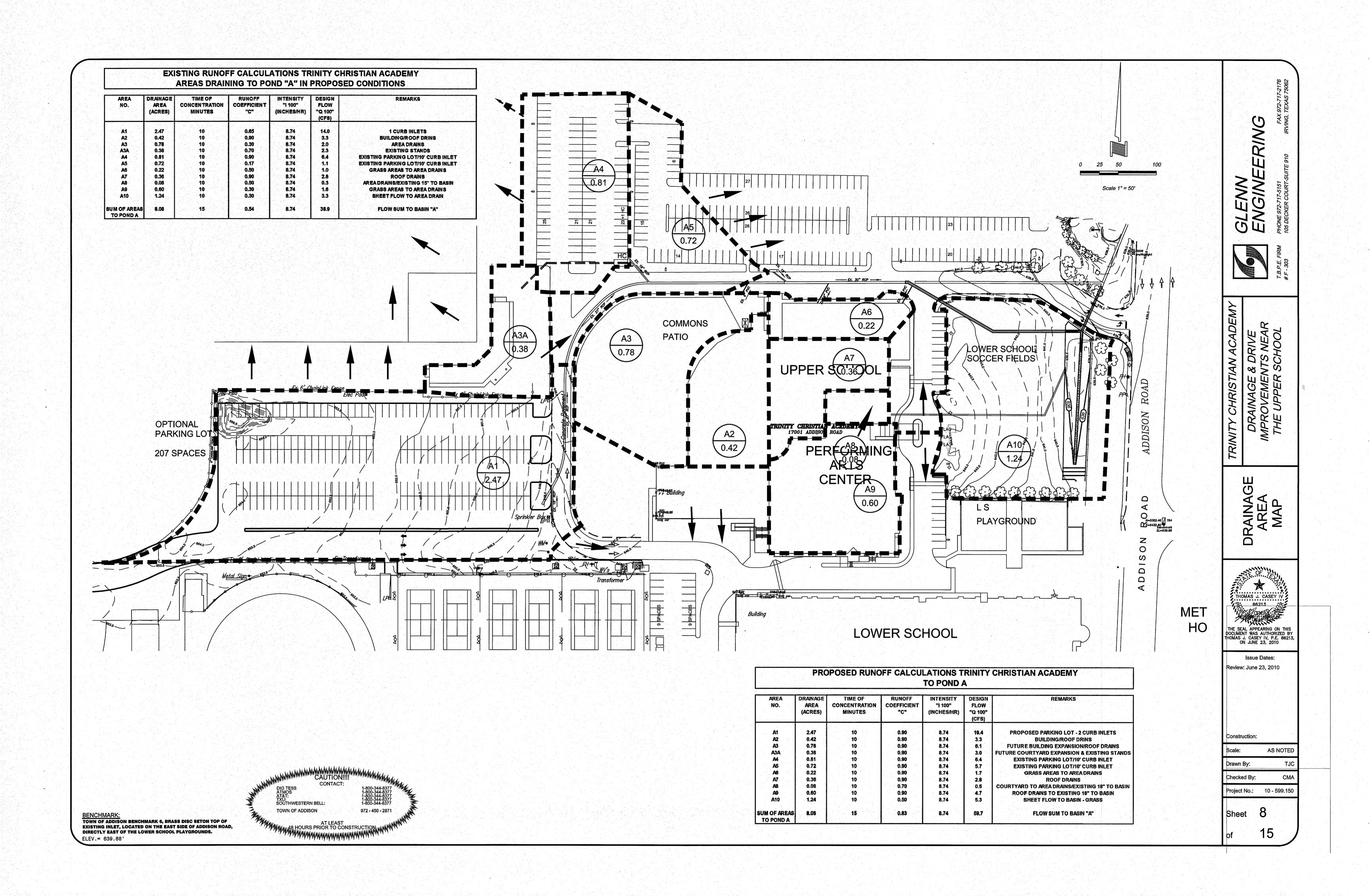


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Project No.:	10 - 599.150
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Drawn By:	TJC
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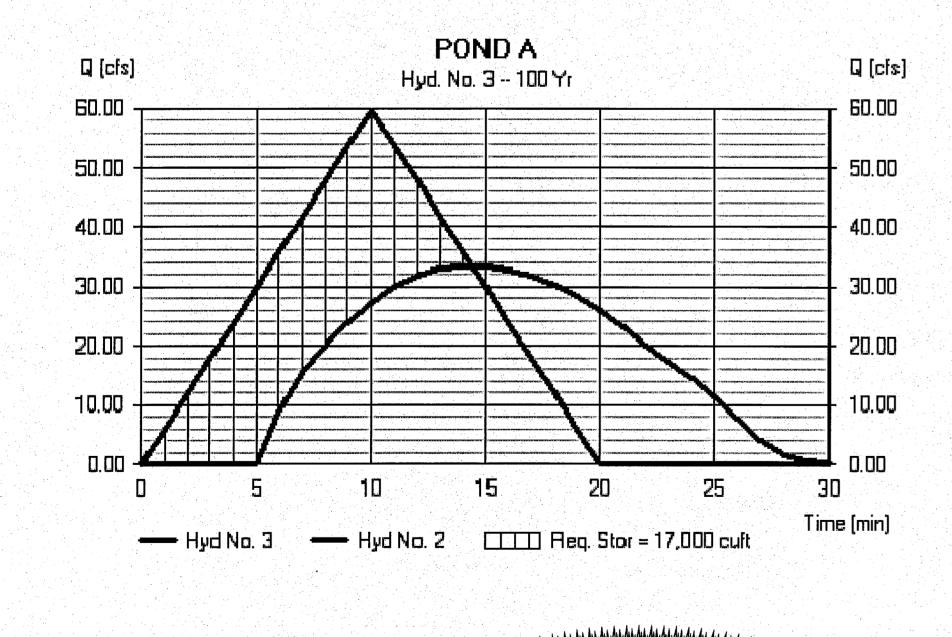
HYDRAULIC COMPUTATIONS FOR STORM DRAINS

	STORM DRAIN HYDRAULIC CALCULATIONS TABLE BASED ON CITY OF DALLAS DETENTION METHOD WITH STARTING W.S. ELEV. = 638.95																															
FROM	TO	Pipe	Drainage Area		Runoff	Incr. T	otal Time	e Of Con	centration	5-year	100-year	Q-5	Q-100	Inlet	Q	Pipe M	anning's		Н	GL		H	EAD LOS	S CALC	ULATIC	ONS		Design	Invert Elev		T/C	
		Length	Incremental	Total	"C"	CA	CA Inlet	Travel	Total	Intensity	Intensity	Runoff	Runoff	Bypass	pipe S	Size	n	Sf	D/\$	U/S	V1 (in)	V2 (out)	V1′2/2G	V2/2/2G	K	KjV1'2/2G	Hk	HGL	FROM	ТО	ELEV.	다 아름다고 하는 학교를 맞고 있다면서 보고를 하다.
		feet	No.	Area Area			min.	min.	min.	in/hr	in/hr	cfs	cfs	cfs	cfs	in		ft/ft	Elev.	Elev.	ft/sec	ft/sec	Ħ	ft	<u> </u>	ft	ft	Elev.	ft	ft.	ft.	COMMENTS
1	2	3	4	5 6	7	8	9 10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
LINE"A" PRIVATE NAME NAME NAME NO DESCRIPTION OF A DESCRI																																
653	1014	361.0	Al	2.47 2.47	0.90	2.22 2	.22 10.00	NA	10,00	5.74	8.74	12.8	19.4	0.0	19.4	27	0.013	0.0039	645,19	646.60	NA	4.86	NA	0.37	1.25	0.46	0.46	647.06	640.88	642,32	647.7 +/-	FUTURE CURB INLET TC = 647.7 +/-
520.0	653.0	133.0	A3A & A4	1.19 3.66	0.90	3.29 3	.29 10.00	NA	10.00	5.74	8.74	18.9	28.8	0.0	28.8			0.0086					0.81	1.43	0.75	0.61	Sport in Section 2 and Section 2	644.73	Accessed the production of the	640.88	NA NA	
470.0	520.0			1.20 4.86					10.00	5.74	8.74	25.1	38.2	0.0	38.2	27	0.013	0.0152	642.01	642.77	9.61	8.94	1.43	1.24	0.75	1.08	0.17	642.77	638.06	639.01	NA	BRANCH LINE EXISTING INLET TC = 645.8+/-
313.1	470.0			0.72 5.58	and the state of t	Acceptable to the second	transmitted the second section of the second section is a second section of the second section of the second section is a second section of the section of the second section of the section of the second section of the sectio	A CONTRACTOR OF THE PARTY OF TH	10.00	5.74	8.74	28.8	43.9	0.0	43.9	30	0.013	0.0114	640.05	641.84	8.94	5.03	1.24	0.39	NA	NA	-0.42	641.84	635.81	638.06	NA	FROM CITY OF DALLAS HL = V2/2/4G - V1/2/4G
181.0	313.1		A6 & A7	0.58 6.16				-	10.00	5.74	8.74	31.8	48.4	0.0	48.4	42	0.013	0.0023	640.17	640.47	5.03	5.03	0.39	0.39	0.25	0.10	0.29	640.47	635.06	635.81	NA	
85.7	181.0	95,3	NA	NA 6.16	NA	NA I	VA 10.00	NA	10.00	5.74	8.74	31.8	48.4	0.0	48.4	42	0.013	0.0023	639.85	640.07	5.03	NA	0.39	NA	0.25	0.10	0.10	640.07		635.06	NA	
64.0	85.7	21.7	The state of the s	1.92 8.08	0.67	1.29 6	.83 10.00	NA	10.00	5.74	8.74	39.2	59.7	0.0	59.7	42	0.013	0.0000	639.85	639.85	NA	NA	NA	NA	NA	NA	NA	639.85	634.28	634,50	NA	
0.0	64.0	64.0		NA 8.08	NA	NA I	VA 10.00	NA	10.00	5.74	8.74	22.3	36.4	0.0	36.4	30	0.013	0.0035	636.72	639.85	10.03	5.3	1.56	0.44	0.23	0.36	NA	639.85	633.64	634.28	NA	
			DETENTION BASIN																		Mark State											

HYDRAFLOW HYDROGRAPHS INFORMATION (IF 26.5" ORIFICE PLATE WAS REMOVED)

EXECUTIVE SUMMARY - POND "A" - 100 YEAR STORM

Name and Address of the Owner o	BASIN ANALYSIS METHOD	QMAX TO PROPOSED BASIN (CFS)	QMAX EXISTING (CFS)	QMAX OUT OF BASIN (ROUTED) (CFS)	MAX. 100 YR WATER SURFACE ELEVATION	MAX. STORAGE C.F.
	TAILWATER ANALYSIS, ELEV. 636.72	59.7	38.9	33.4	638.71	17,000
	NO TAILWATER ANALYSIS	59.7	38.9	36.3	637.91	12,226



TOWN OF ADDISON

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BENCHMARK:
TOWN OF ADDISON BENCHMARK 6, BRASS DISC SETON TOP OF

EXISTING INLET, LOCATED ON THE EAST SIDE OF ADDISON ROAD, DIRECTLY EAST OF THE LOWER SCHOOL PLAYGROUNDS.

1-800-344-837 1-800-344-837 1-800-344-837 1-800-344-837 1-800-344-837

972 - 450 - 2871

OUTLET RATING - NO TAILWATER - 26.5" ORIFICE PLATE (DALLAS METHOD)

 $Q = C^*A^*\sqrt{2^*G^*H}$

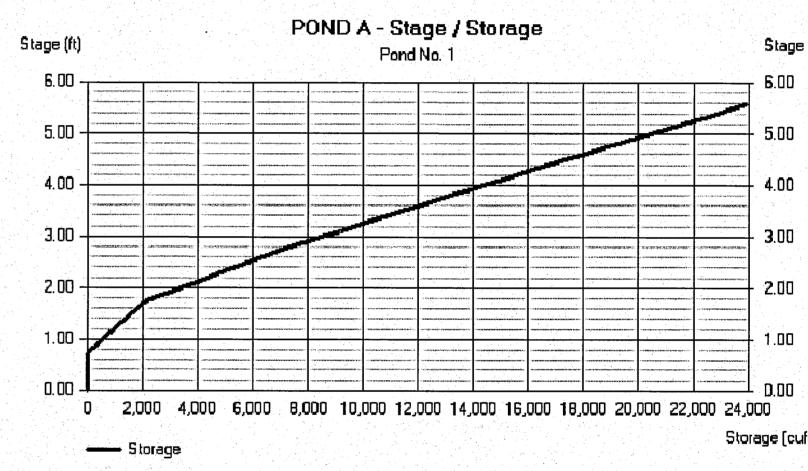
WHERE:

C = 0.60 A = 3.82 S.F.

H = 4.47 FT (MAX. ELEV. ABOVE CENTERLINE)

G = 32.2 FPS/S Q = 38.9 CFS

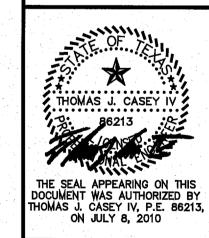
POND A STAGE STORAGE INFORMATION STAGE 0 = ELEVATION 634.28 (COMMON TO BOTH DESIGN METHODS)



DALLAS METHOD DETENTION BASIN VOLUME CALCULATIONS TRINITY CHRISTIAN ACADEMY

		Rainfall						
DURATION		Intensity	Inflow Rate	nflow Rate Inflow Volume		Outflow Volume	Inflow - Outflow	
Hours)	(Minutes)	(in/hr)	(cfs)	(cf)	(cfs)	(cf)	Volume	
							(cf)	
0.17	10	8.74	59.7	35820	38.9	23310	12480	
0.25	15	7.52	51.4	46230	38.9	29175	17055	
0.33	20	6.80	46.4	55738	38.9	35010	20728	
0.50	30	5.74	39.2	70574	38.9	46680	23894	
0.67	40	4.94	33.7	80984	38.9	58350	22634	
0.83	50	4.37	29.9	89550	38.9	70020	19530	
1.00	60	3.90	26.6	95903	38.9	81690	14213	
1.17	70	3.65	24.9	104714	38.9	93360	11354	
1.33	80	3.35	22.9	109837	38.9	105030	4807	
1.50	90	3.08	21.0	113608	38.9	116700	-3092	
1.67	100	2.87	19.6	117624	38.9	128370	-10746	
1.83	110	2.70	18,4	121722	38.9	140040	-18318	
2.00	120	2.53	17.3	124427	38.9	151710	-27283	
	1, 15, 61							





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