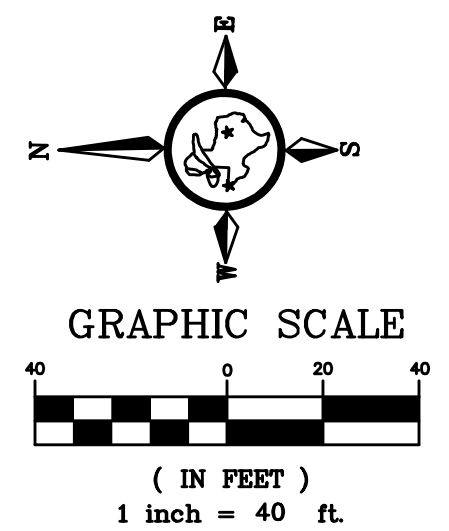
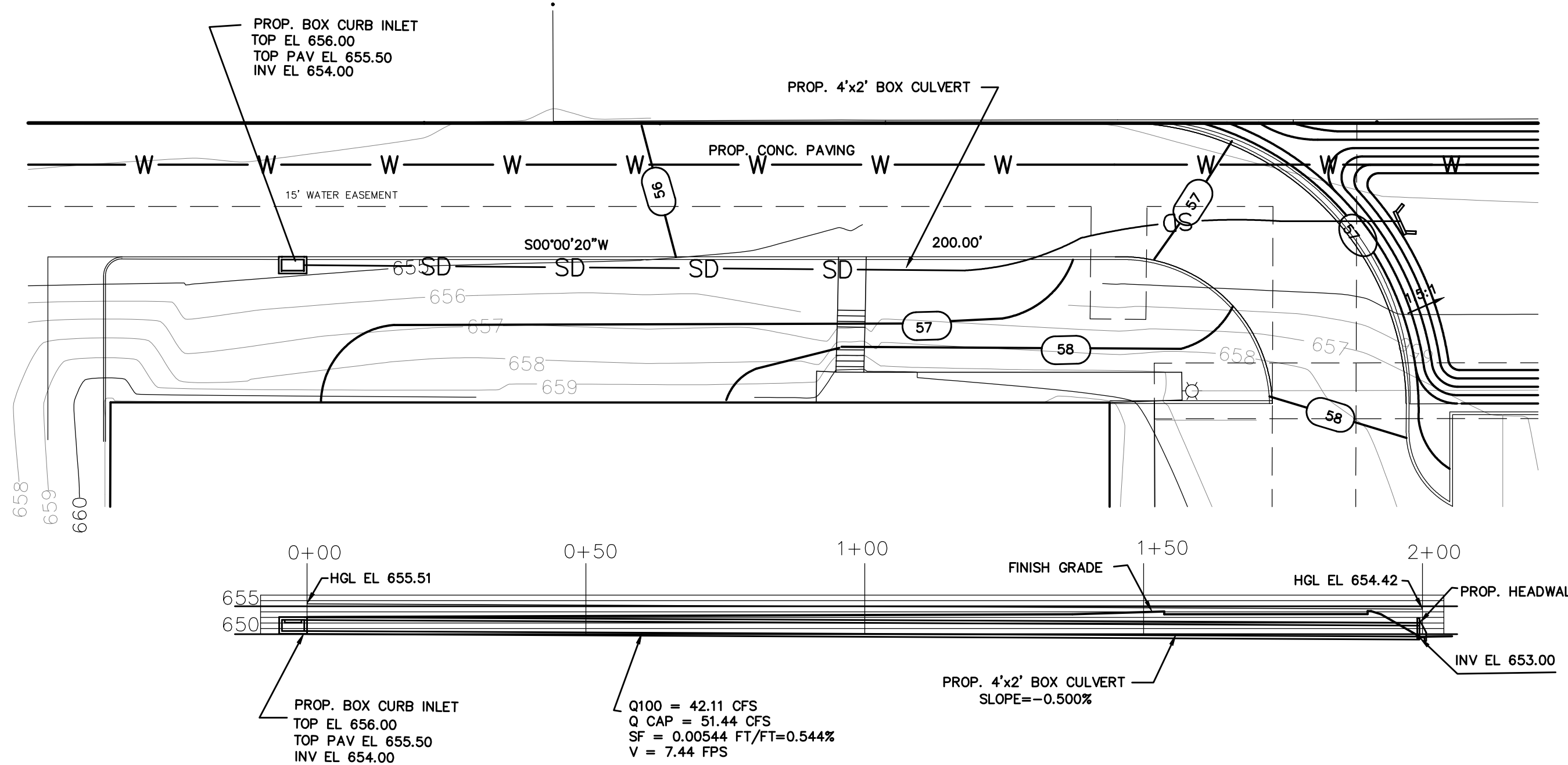


- LEGEND**
- CENTERLINE
 - CENTERLINE
 - PROPERTY LINE
 - - - EASEMENT
 - OHE OVERHEAD ELECTRIC LINES
 - SD STORM DRAIN SEWER
 - CONCRETE
 - H.C. HANDICAP PARKING
 - COVERED AREA
 - POWER POLE
 - WATER VALVE
 - WATER METER
 - IRRIGATION CONTROL VALVE
 - FIRE HYDRANT
 - SEWER MANHOLE
 - STORM DRAIN SEWER MANHOLE
 - SEWER CLEANOUT
 - GAS METER
 - LIGHTS
 - N.G. NATURAL GROUND
 - P.R.D.C.T. PLAT RECORDS OF DALLAS COUNTY, TEXAS
 - R.P.R.D.C.T. REAL PROPERTY RECORDS OF DALLAS COUNTY, TEXAS
 - EOC EDGE OF CONCRETE
 - BC BACK OF CURB
 - EP EDGE OF PAVEMENT
 - SW SIDEWALK
 - I.R.F. IRON ROD FOUND
 - I.R.S. IRON ROD SET
 - LIVE OAK (EXISTING)
 - OAK (EXISTING)
 - CEDAR (EXISTING)
 - PINE (EXISTING)
 - 12" TREE TRUNK
 - TOP OF FOOTING ELEV
 - TOR TOP OF RETAINING ELEV
 - TOW TOP OF WALL ELEV
 - 653.658C EXISTING BACK OF CURB ELEV
 - 55 FINISH CONTOUR LINE
 - 654 EXISTING CONTOUR LINE
 - EXISTING CONCRETE CURB



STORM DRAIN-PLAN & PROFILE

SCALE: 1"=40'

Best Press
Detention Basin Design
Modified Rational Method

Future Conditions (100 Year Storm)	
Area (acres)	6.2
C	0.77
Tc (min)	10
I (in/hr)	8.82
Q (cfs)	42.11

Present Conditions (100 Year Storm)	
Area (acres)	6.2
C	0.67
Tc (min)	10
I (in/hr)	8.82
Q (cfs)	36.64*

*Limited to 30.05 cfs which is maximum existing flow into Airborn Drive (per existing drainage plan)

Storm Duration (min)	I (in/hr)	Peak Q (cfs)	Inflow (cf)	Outflow (cf)	Storage Req. (cf)
5	10.50	50.13	15039	9015	6024
10	8.82	42.10	25280	18030	7230
15	7.52	35.90	32310	22538	9772
20	6.80	32.46	38952	27045	11907
25	6.20	29.60	44400	31552	12888
30	5.74	27.40	49320	36060	13260 (peak)
35	5.31	25.35	53235	40568	12667
40	4.95	23.63	56712	45075	11637

Pond Geometry		
Elevation	Area (sq ft)	Volume (cf)
653	6116	0
653.5	6446	3140
654	7114	9123
655	7460	13576
656	8161	21416

Maximum outflow from pond shall be 30.05 cfs
Maximum high water elevation is 654.95
Outlet structure shall be 2 -18" diameter pipes at 2% slope. Peak outflow shall be 30.15 cfs.

Culvert Calculator Report Worksheet-1			
Solve For: Headwater Elevation			
Culvert Summary			
Allowable HW Elevation	2.50 ft	Headwater Depth/ Height	1.55
Computed Headwater Elevation	655.71 ft	Discharge	30.05 cfs
Inlet Control HW Elev	655.71 ft	Tailwater Elevation	653.00 ft
Outlet Control HW Elev	655.62 ft	Control Type	Inlet Control
Grades			
Upstream Invert	653.00 ft	Downstream Invert	652.85 ft
Length	7.50 ft	Constructed Slope	0.020000 ft/ft
Hydraulic Profile			
Profile	S2	Depth, Downstream	1.25 ft
Slope Type	Normal	Normal Depth	1.05 ft
Flow Regime	Supercritical	Critical Depth	1.44 ft
Velocity Downstream	8.19 ft/s	Critical Slope	0.008975 ft/ft
Section			
Section Shape	Circular	Mannings Coefficient	0.013
Section Material	Concrete	Span	1.75 ft
Section Size	21 inch	Rise	1.75 ft
Number Sections	2		
Outlet Control Properties			
Outlet Control HW Elev	655.62 ft	Upstream Velocity Head	0.79 ft
Ke	0.50	Entrance Loss	0.39 ft
Inlet Control Properties			
Inlet Control HW Elev	655.71 ft	Flow Control	Submerged
Inlet Type	Square edge w/headwall	Area Full	4.8 ft ²
K	0.00980	HDS 5 Chart	1
M	2.00000	HDS 5 Scale	1
C	0.03980	Equation Form	1
Y	0.67000		

SURVEY CONTROL

CONTROL MONUMENT FOUND #COA-13
630' WEST FROM INTERSECTION OF
ADDISON ROAD & WESTGROVE DRIVE
THEN 15.7' SOUTH FROM BACK OF CURB,
5' FROM STREET SIGN & 8' SOUTH TO BACK
OF CURB OF WEST GROVE ROAD
US SURVEY FEET
NAVD 88 ELEVATION 642.09
MONUMENT: 2" BRASS DISK STAMPED "TXDOT
COA-13 GPS" STATE PLANE COORDINATES
NORTHING: 7042028.880
EASTING: 2479820.516
DALLAS COUNTY SCALE FACTOR: 1.000136506
ELEVATIONS ARE NAVD 88 BASED UPON
TXDOT VRS NETWORK



DATE:	REVISION DESCRIPTION
8/3/08	MISCELLANEOUS
11/4/08	MISCELLANEOUS
11/18/08	MISCELLANEOUS
12/23/08	MISCELLANEOUS
5/13/09	CULVERT CAL REPORT

DETENTION POND
BEING A REPLAT WESTGROVE AND AIRBORN
BEING A REPLAT OF BLOCK A, CARROLL ESTATES

TOWN OF ADDISON DALLAS COUNTY TEXAS

DATE: 6/16/08 SCALE: 1" = 20' FILE NUMBER: 4221AIR DATA FILE: MGB

K KISTENMACHER ENGINEERING COMPANY, INC.

CONSULTING ENGINEERING • LAND PLANNING • SURVEYING
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6336 GREENVILLE AVE, SUITE C • DALLAS, TEXAS 75206 • 214-234-0011

CHECKED BY: GGG SHEET 7 OF 14

AS BUILT
APRIL 30, 2010
REV:10/4/10