

HELFRICH GOLF COURSE

EVANSVILLE, IN

IRRIGATION PLANS

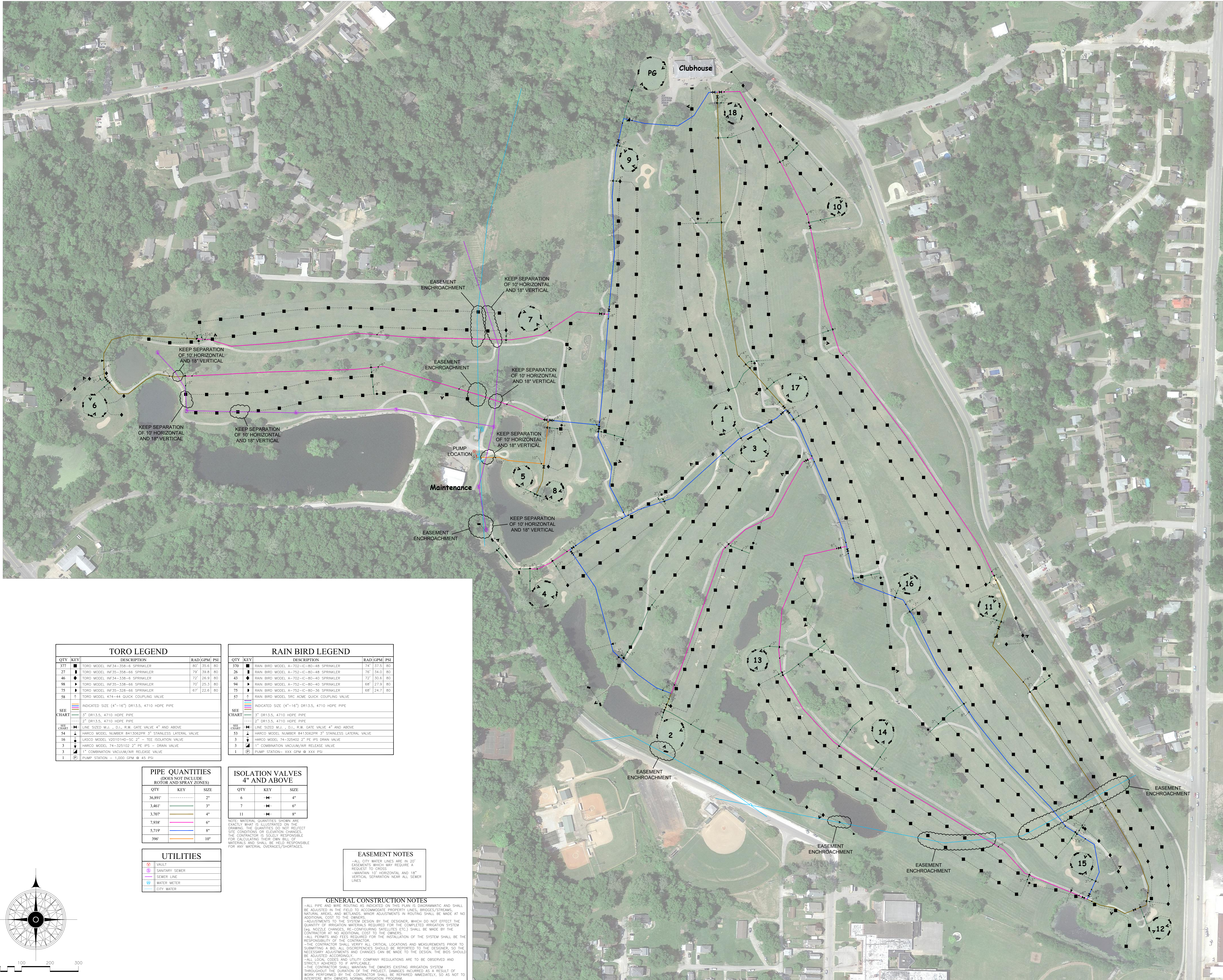
SHEET KEY

SHEET 1: MECHANICAL PLAN

SHEET 2: TORO ELECTRICAL PLAN

SHEET 3: RAIN BIRD ELECTRICAL PLAN

SHEET 4: IRRIGATION DETAILS



TORO LEGEND			
QTY	KEY	DESCRIPTION	RAD GPM PSI
377	■	TORO MODEL INF34-358-6 SPRINKLER	80' 25.6 80
27	■	TORO MODEL INF35-358-66 SPRINKLER	79' 39.8 80
46	■	TORO MODEL INF34-358-6 SPRINKLER	72' 26.9 80
98	■	TORO MODEL INF35-358-66 SPRINKLER	70' 25.3 80
75	■	TORO MODEL INF35-358-66 SPRINKLER	67' 22.6 80
58	■	TORO MODEL 474-44 QUICK COUPLING VALVE	
SEE CHART			
INDICATED SIZE (4"-16") DR13.5, 4710 HDPE PIPE			
3" DR13.5, 4710 HDPE PIPE			
2" DR13.5, 4710 HDPE PIPE			
SEE CHART			
LINE SIZED M.V., D.I., R.W. GATE VALVE 4" AND ABOVE			
54	▲	HARCO MODEL NUMBER 8413062PR 3" STAINLESS LATERAL VALVE	
16	▲	LASCO MODEL V20101HD-SC 2" TEE ISOLATION VALVE	
3	▲	HARCO MODEL 74-325102 2" PE IPS - DRAIN VALVE	
3	▲	1" COMBINATION VACUUM/AIR RELEASE VALVE	
1	⊗	PUMP STATION - 1,000 GPM @ 45 PSI	

PIPE QUANTITIES (DOES NOT INCLUDE ROTOR AND SPRAY ZONES)		
QTY	KEY	SIZE
36,891'	—	2"
3,461'	—	3"
3,707'	—	4"
7,938'	—	6"
5,719'	—	8"
396'	—	10"

UTILITIES	
—	WALL
—	SANITARY SEWER
—	SEWER LINE
—	WATER METER
—	CITY WATER

RAIN BIRD LEGEND			
QTY	KEY	DESCRIPTION	RAD GPM PSI
376	■	RAIN BIRD MODEL A-702-IC-80-48 SPRINKLER	74' 157.5 80
26	■	RAIN BIRD MODEL A-702-IC-80-48 SPRINKLER	70' 30.0 80
43	■	RAIN BIRD MODEL A-702-IC-80-48 SPRINKLER	72' 30.6 80
94	■	RAIN BIRD MODEL A-702-IC-80-48 SPRINKLER	68' 27.9 80
75	■	RAIN BIRD MODEL A-702-IC-80-36 SPRINKLER	68' 24.7 80
57	■	RAIN BIRD MODEL SRC ADME QUICK COUPLING VALVE	
SEE CHART			
INDICATED SIZE (4"-16") DR13.5, 4710 HDPE PIPE			
3" DR13.5, 4710 HDPE PIPE			
2" DR13.5, 4710 HDPE PIPE			
SEE CHART			
LINE SIZED M.V., D.I., R.W. GATE VALVE 4" AND ABOVE			
53	▲	HARCO MODEL NUMBER 8413062PR 3" STAINLESS LATERAL VALVE	
3	▲	HARCO MODEL 74-325402 2" PE IPS DRAIN VALVE	
3	▲	1" COMBINATION VACUUM/AIR RELEASE VALVE	
1	⊗	PUMP STATION- XXX GPM @ XXX PSI	

ISOLATION VALVES 4" AND ABOVE		
QTY	KEY	SIZE
6	—	4"
7	—	6"
11	—	8"

NOTE: MATERIAL QUANTITIES SHOWN ARE EXACTLY WHAT IS ILLUSTRATED ON THE DRAWING. THE QUANTITIES DO NOT REFLECT SITE CONDITIONS OR ELEVATION CHANGES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CALCULATING THEIR OWN BILL OF MATERIALS AND SHALL BE HELD RESPONSIBLE FOR ANY MATERIAL OVERAGES/SHORTAGES.

EASEMENT NOTES	
—	ALL CITY WATER LINES ARE IN 20' EASEMENTS WHICH MAY REQUIRE A REQUEST TO CROSS
—	MAINTAIN 10' HORIZONTAL AND 18" VERTICAL SEPARATION NEAR ALL SEWER LINES

GENERAL CONSTRUCTION NOTES

—ALL PIPE AND WIRE ROUTING AS INDICATED ON THIS PLAN IS DIAGRAMMATIC AND SHALL BE ADJUSTED IN THE FIELD TO ACCOMMODATE PROPERTY LINES, DROVES/STREAMS, NATURAL AREAS, AND WETLANDS. MINOR ADJUSTMENTS IN ROUTING SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

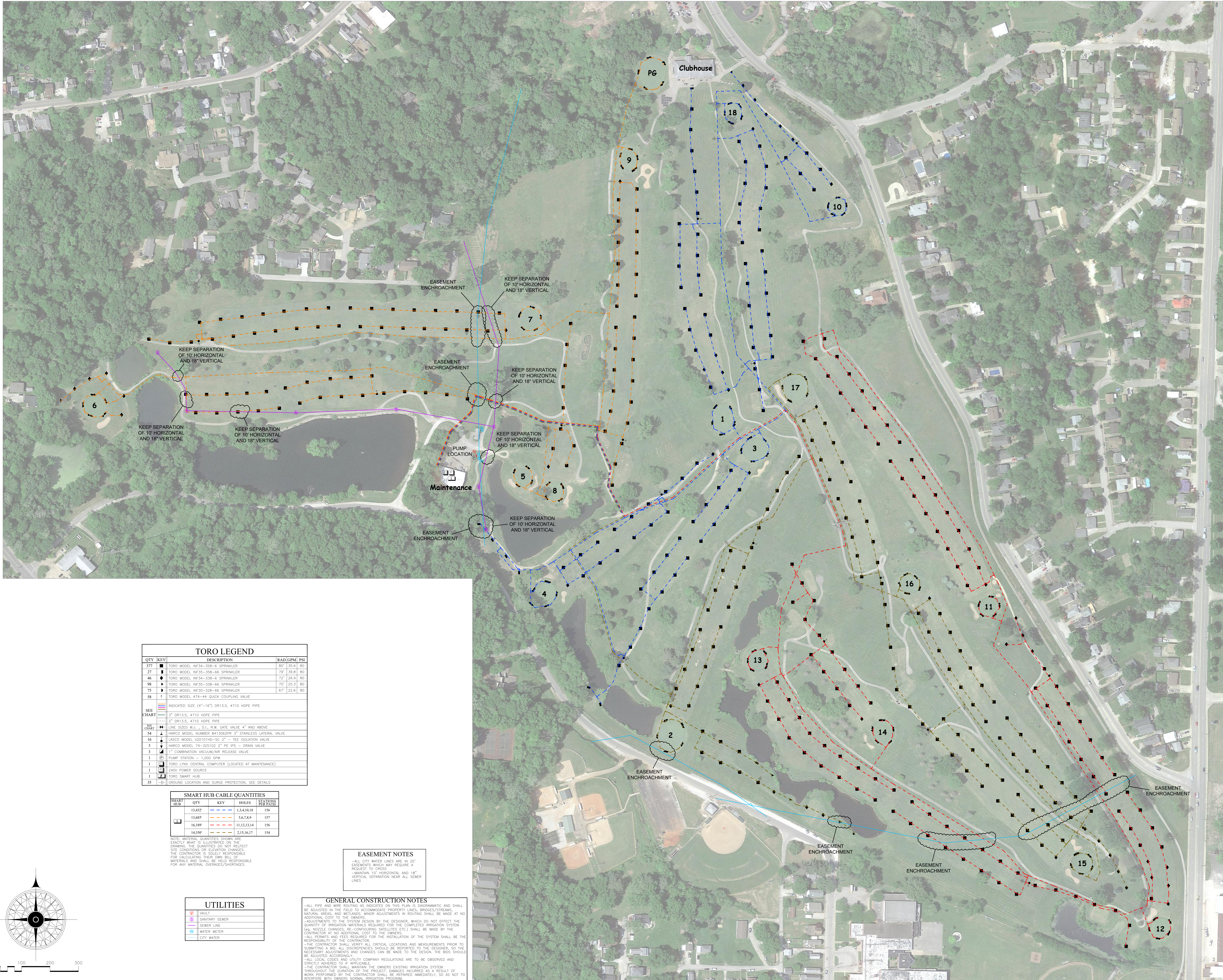
—ADJUSTMENTS TO THE SYSTEM DESIGN BY THE DESIGNER, WHICH DO NOT EFFECT THE QUANTITY OF IRRIGATION MATERIALS REQUIRED FOR THE COMPLETED IRRIGATION SYSTEM (e.g. NOZZLE CHANGES, RE-CONFIGURING SATLLITES ETC.) SHALL BE MADE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

—ALL PERMITS AND FEES REQUIRED FOR THE INSTALLATION OF THE SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

—THE CONTRACTOR SHALL VERIFY ALL CRITICAL LOCATIONS AND MEASUREMENTS PRIOR TO SUBMITTING A BID. ALL DISCREPANCIES SHOULD BE REPORTED TO THE DESIGNER, SO THE NECESSARY ADJUSTMENTS AND CHANGES CAN BE MADE TO THE DESIGN. THE BIDS SHOULD BE ADJUSTED ACCORDINGLY.

—ALL LOCAL CODES AND UTILITY COMPANY REGULATIONS ARE TO BE OBSERVED AND STRICTLY ADHERED TO IF APPLICABLE.

—THE CONTRACTOR SHALL MAINTAIN THE OWNER'S EXISTING IRRIGATION SYSTEM THROUGHOUT THE DURATION OF THE PROJECT. DAMAGES INCURRED AS A RESULT OF WORK PERFORMED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY, SO AS NOT TO INTERFERE WITH OWNER'S NORMAL IRRIGATION PROGRAM.



TORO LEGEND				
QTY	KEY	DESCRIPTION	RAD	GPM PSI
377	■	TORO MODEL NF34-358-6 SPRINKLER	80"	35.4 80
27	■	TORO MODEL NF35-358-66 SPRINKLER	79"	39.8 80
46	◆	TORO MODEL NF34-358-6 SPRINKLER	72"	26.9 80
98	▶	TORO MODEL NF35-358-66 SPRINKLER	70"	25.3 80
75	▶	TORO MODEL NF35-358-66 SPRINKLER	67"	22.6 80
58	1	TORO MODEL 474-44 QUICK COUPLING VALVE		
SEE CHART				
INDICATED SIZE (4"-16") DR13.5, 4710 HDPE PIPE				
3" DR13.5, 4710 HDPE PIPE				
2" DR13.5, 4710 HDPE PIPE				
SEE CHART				
LINE SIZED M.J. ... D.I. R.W. GATE VALVE 4" AND ABOVE				
54	▲	HARCO MODEL NUMBER 8413062PR 3" STAINLESS LATERAL VALVE		
16	▲	LASCO MODEL V2010HD-SC 2" - TEE ISOLATION VALVE		
3	▼	HARCO MODEL 74-325102 2" PE IPS - DRAIN VALVE		
3	▲	1" COMBINATION VACUUM/AIR RELEASE VALVE		
1	■	PUMP STATION - 1,000 GPM		
1	■	TORO LYNX CENTRAL COMPUTER (LOCATED AT MAINTENANCE)		
1	■	240V POWER SOURCE		
1	■	TORO SMART HUB		
35	—	GROUND LOCATION AND SURGE PROTECTION; SEE DETAILS		

SMART HUB CABLE QUANTITIES				
SMART HUB	QTY	KEY	HOLES	STATIONS PER HOLE
E	13,412	—	1,34,10,18	156
	13,687	—	5,6,7,8,9	157
	16,189	—	11,12,13,14	156
	14,359	—	2,15,16,17	154

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UTILITIES	
VAULT	—
SANITARY SEWER	—
SEWER LINE	—
WATER METER	—
CITY WATER	—

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