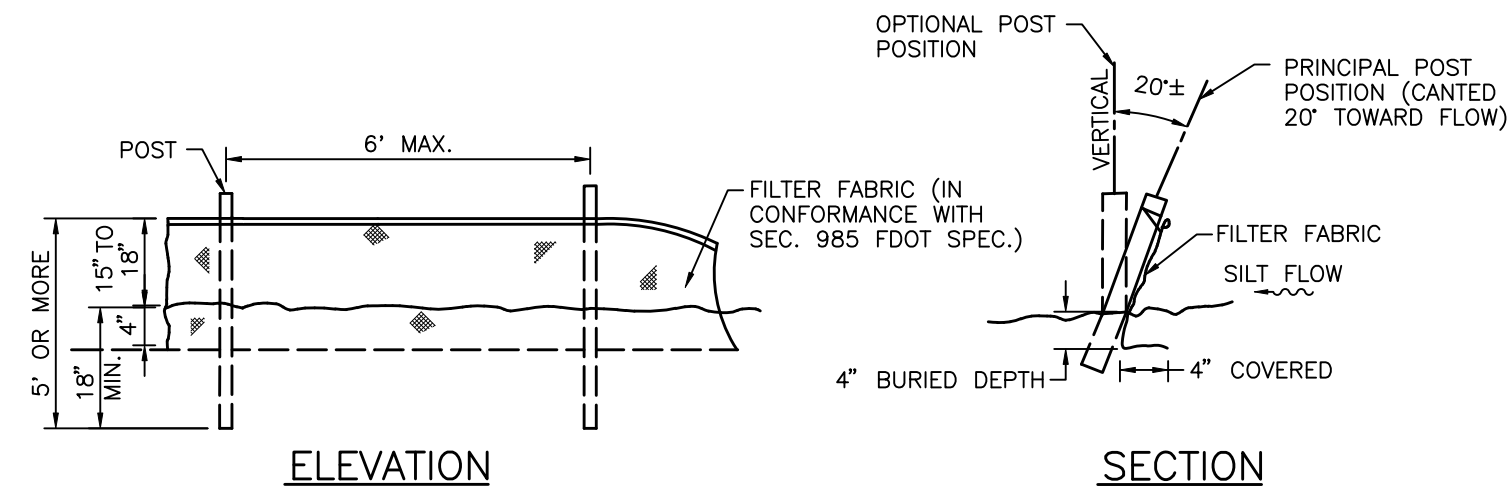
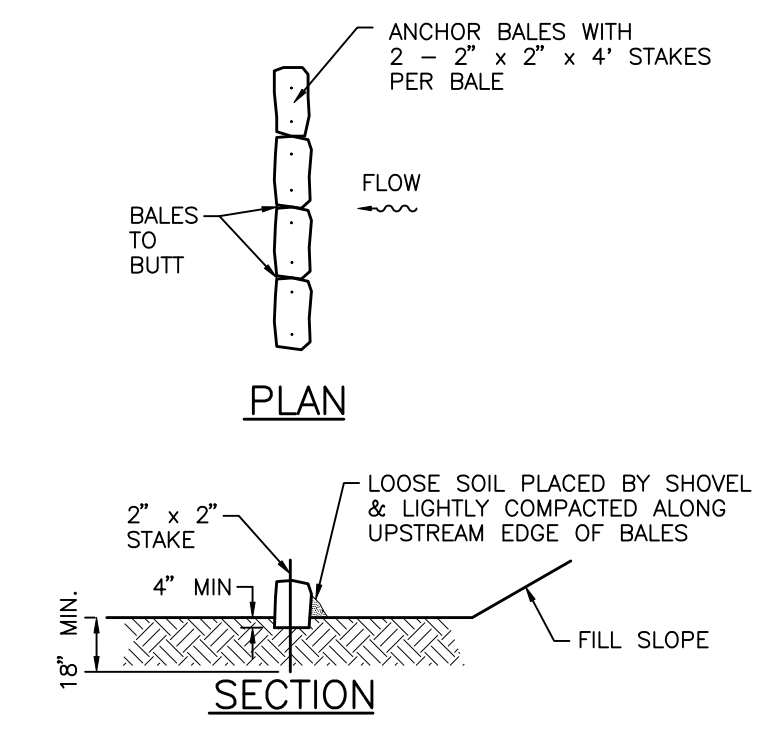


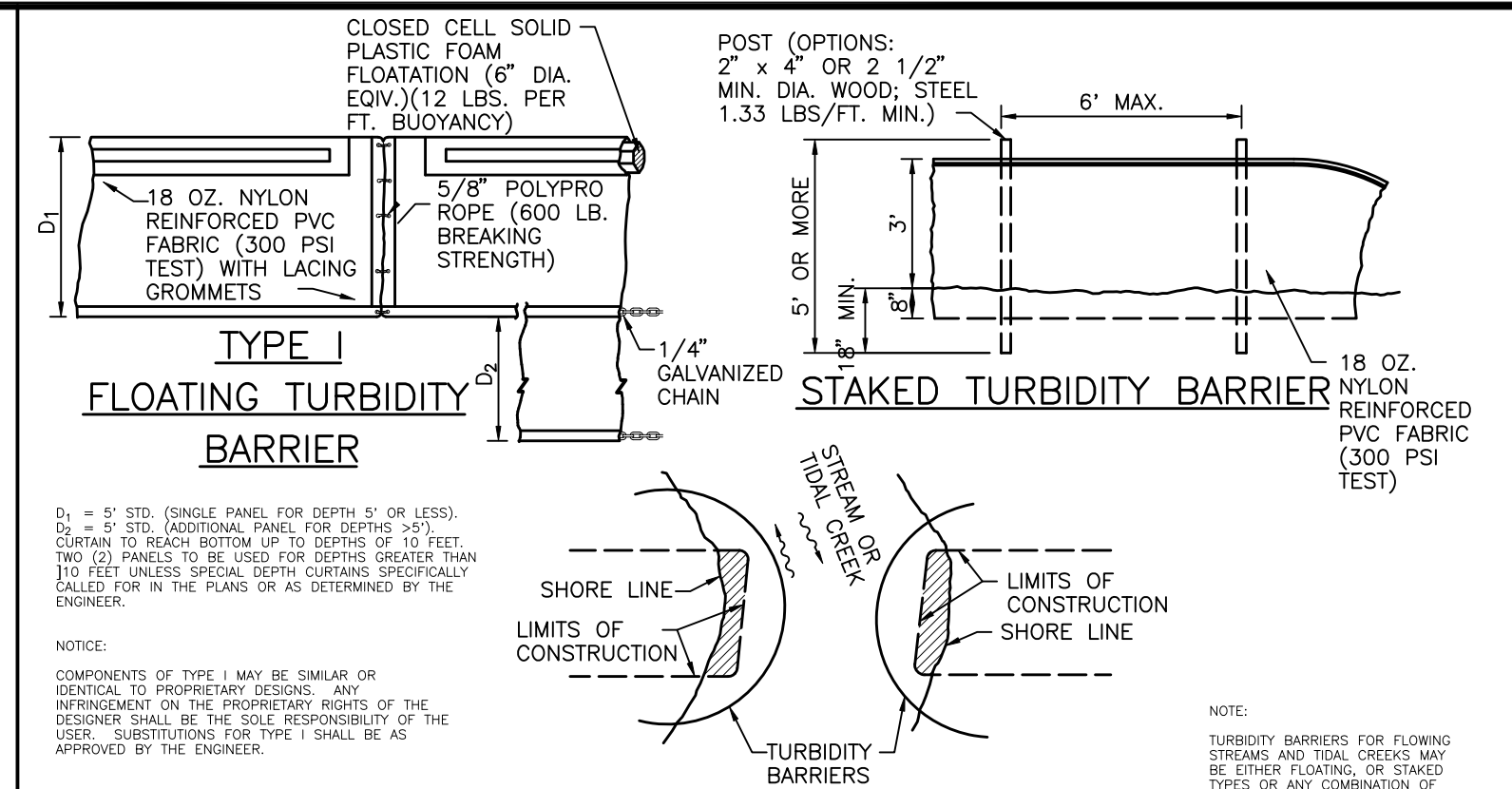
WETLAND BUFFER
N.T.S.
FIGURE 1



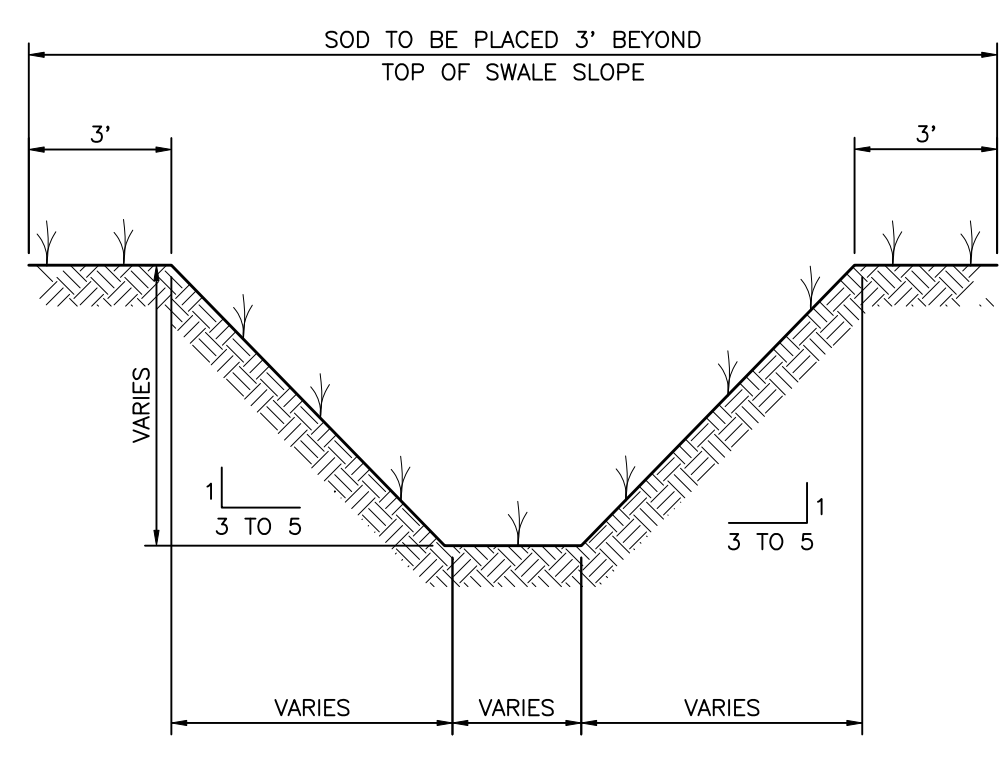
TYPICAL SILT FENCE
N.T.S.
FIGURE 2



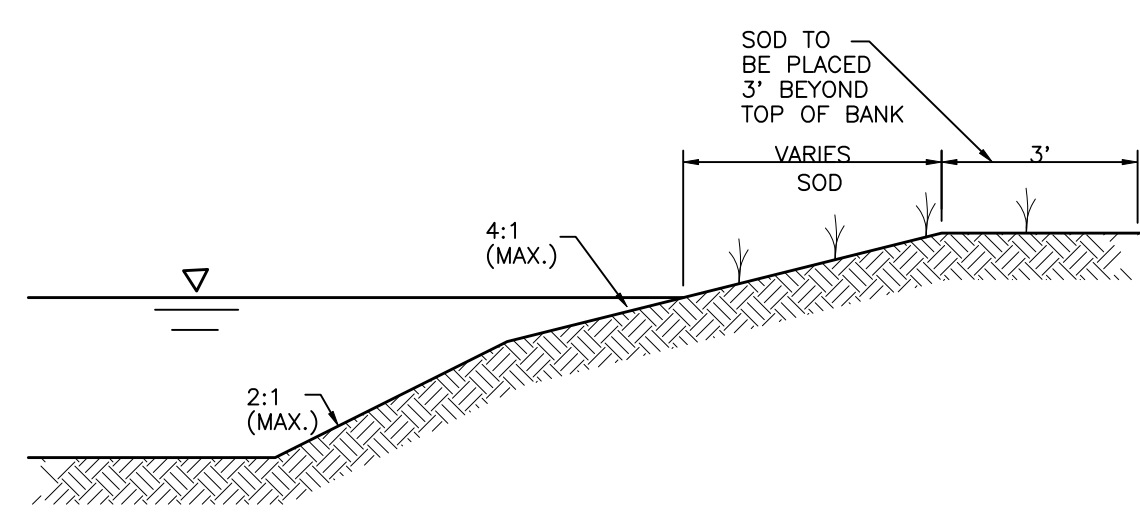
TYPICAL BALE SILT BARRIER
N.T.S.
FIGURE 3



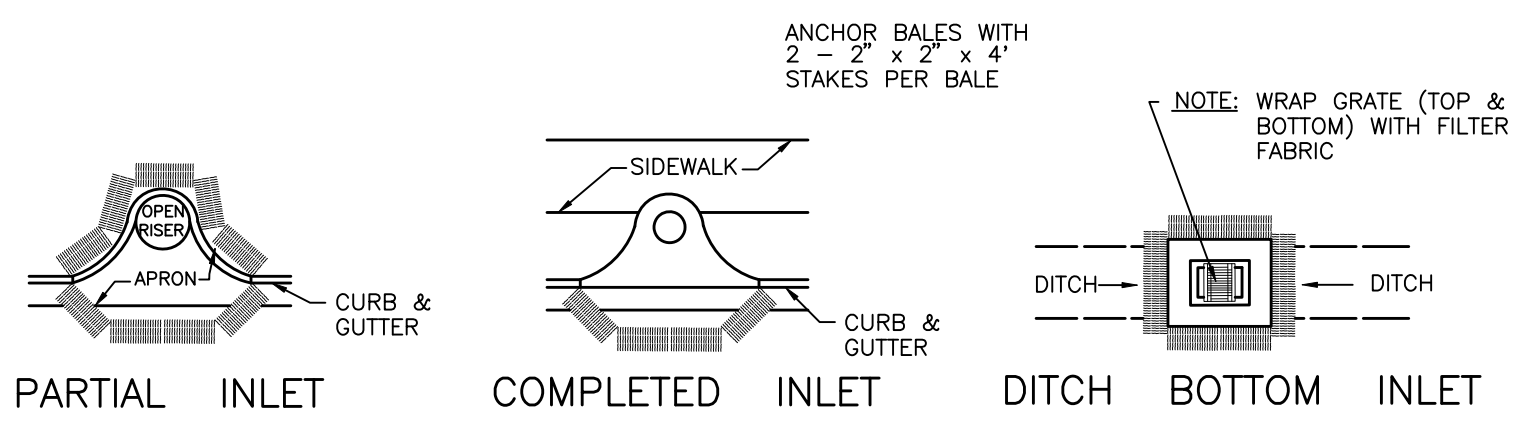
TURBIDITY BARRIER APPLICATIONS
N.T.S.
FIGURE 4



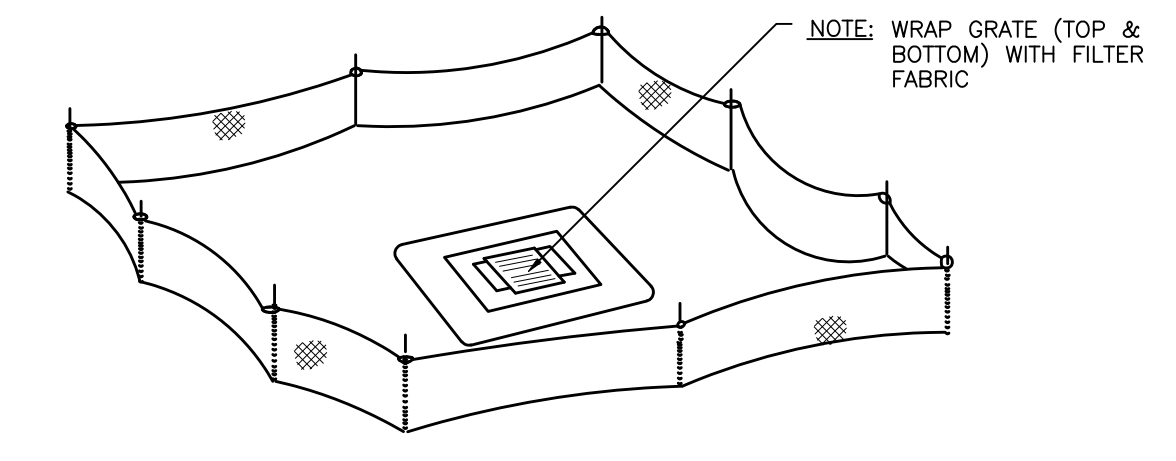
TYPICAL SWALE SECTION
N.T.S.
FIGURE 5



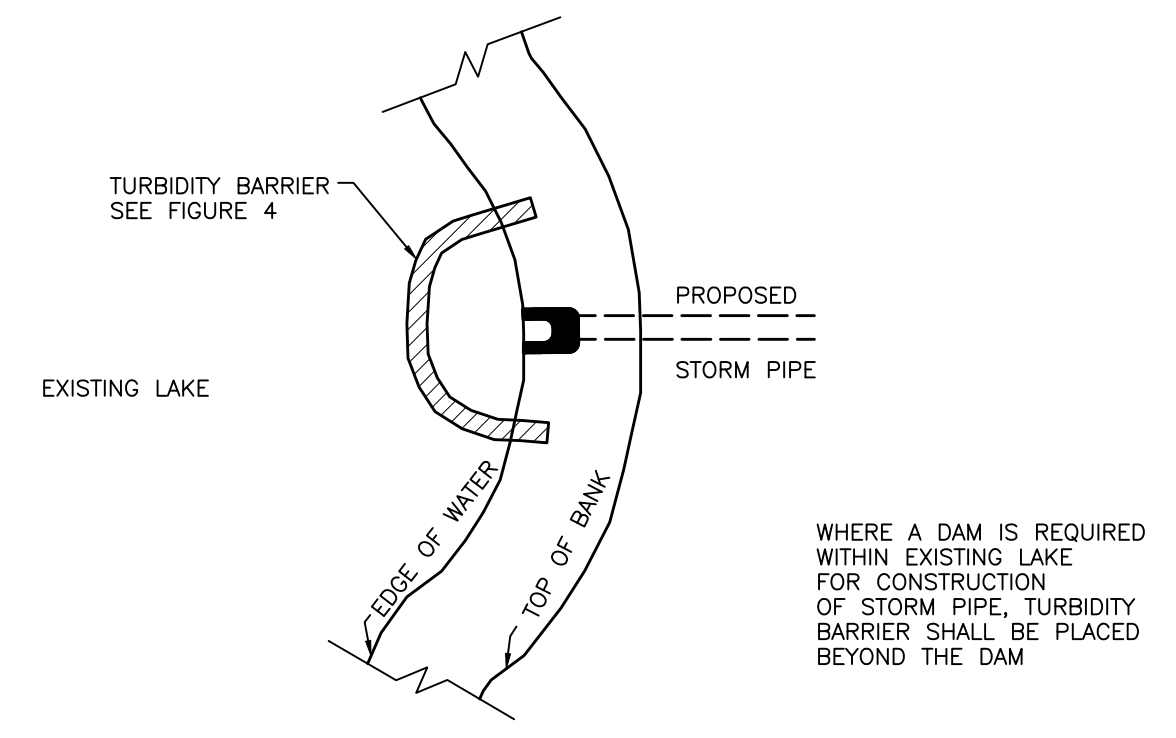
TYPICAL RETENTION/DETENTION POND SECTION
N.T.S.
FIGURE 6



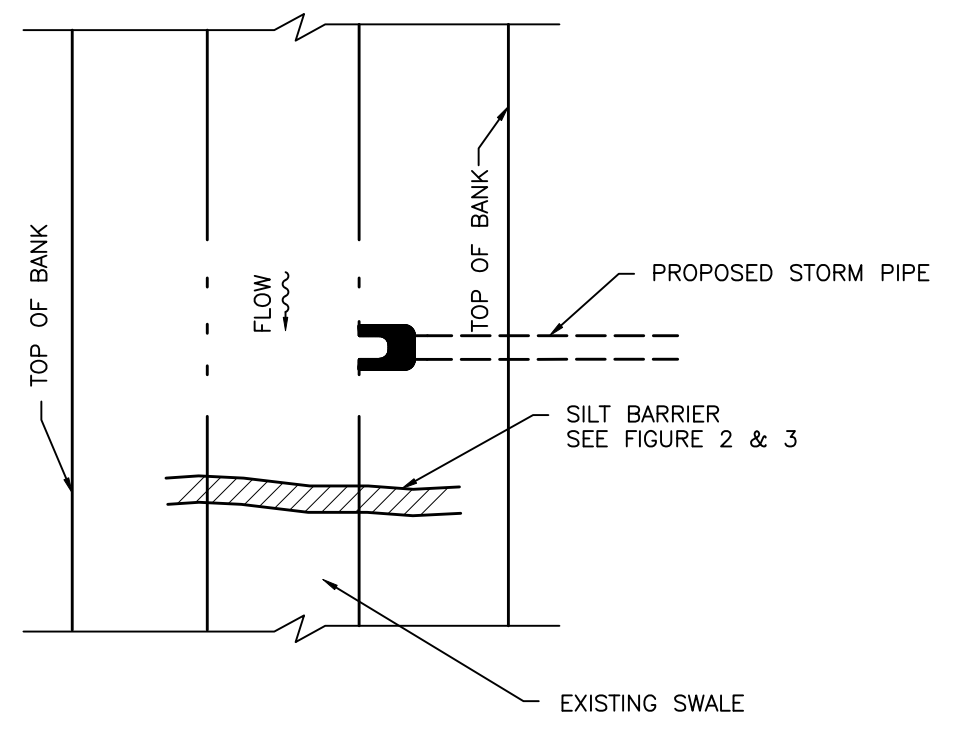
PROTECTION AROUND INLETS OR SIMILAR STRUCTURES
N.T.S.
FIGURE 7



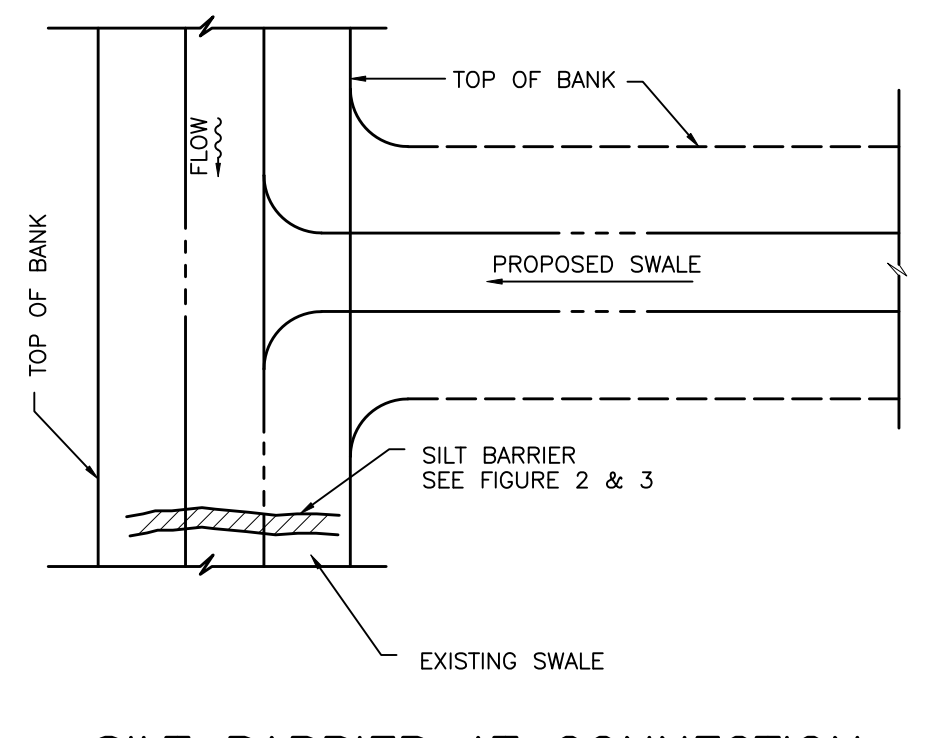
STAKED SILT BARRIER OR SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS
N.T.S.
FIGURE 8



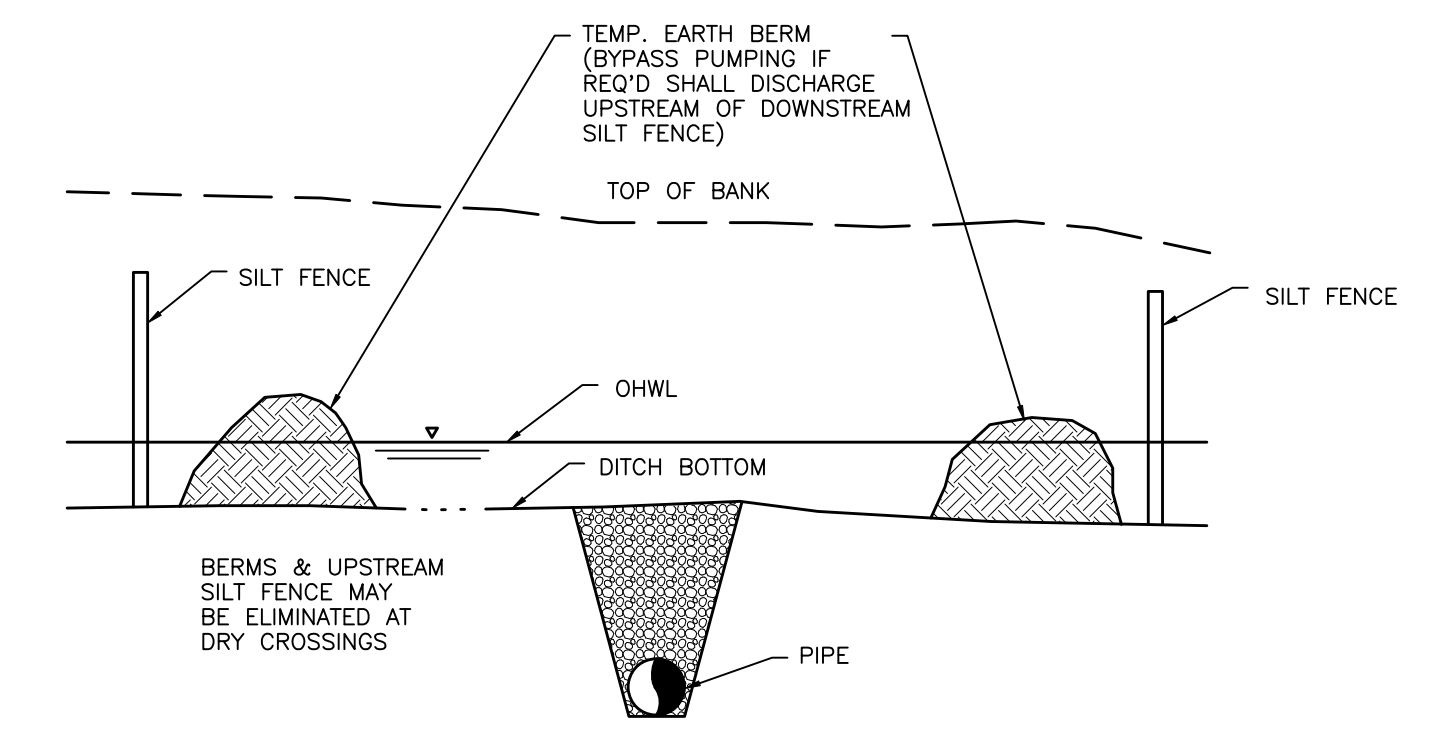
TURBIDITY BARRIER AT CONNECTION OF STORM PIPE TO EXISTING LAKE
N.T.S.
FIGURE 9



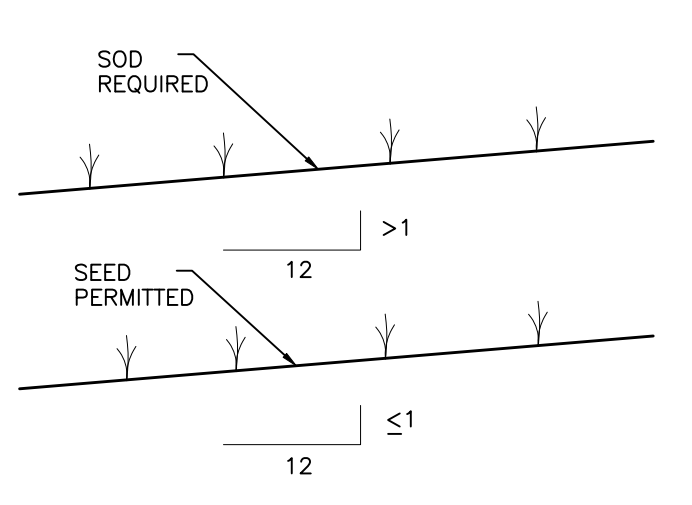
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE
N.T.S.
FIGURE 10



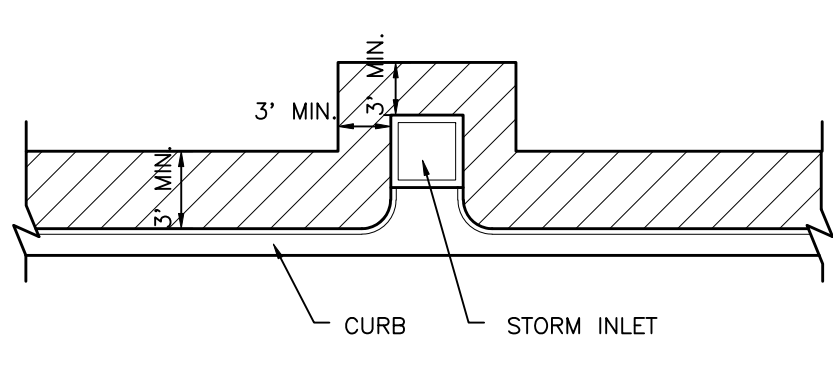
SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE
N.T.S.
FIGURE 11



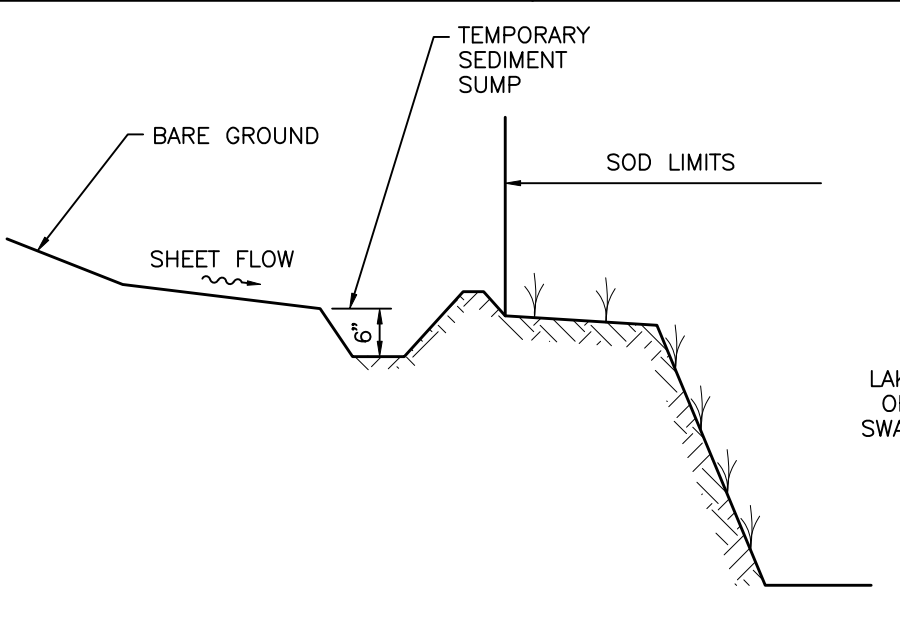
UNDERGROUND PIPE CROSSING
N.T.S.
FIGURE 12



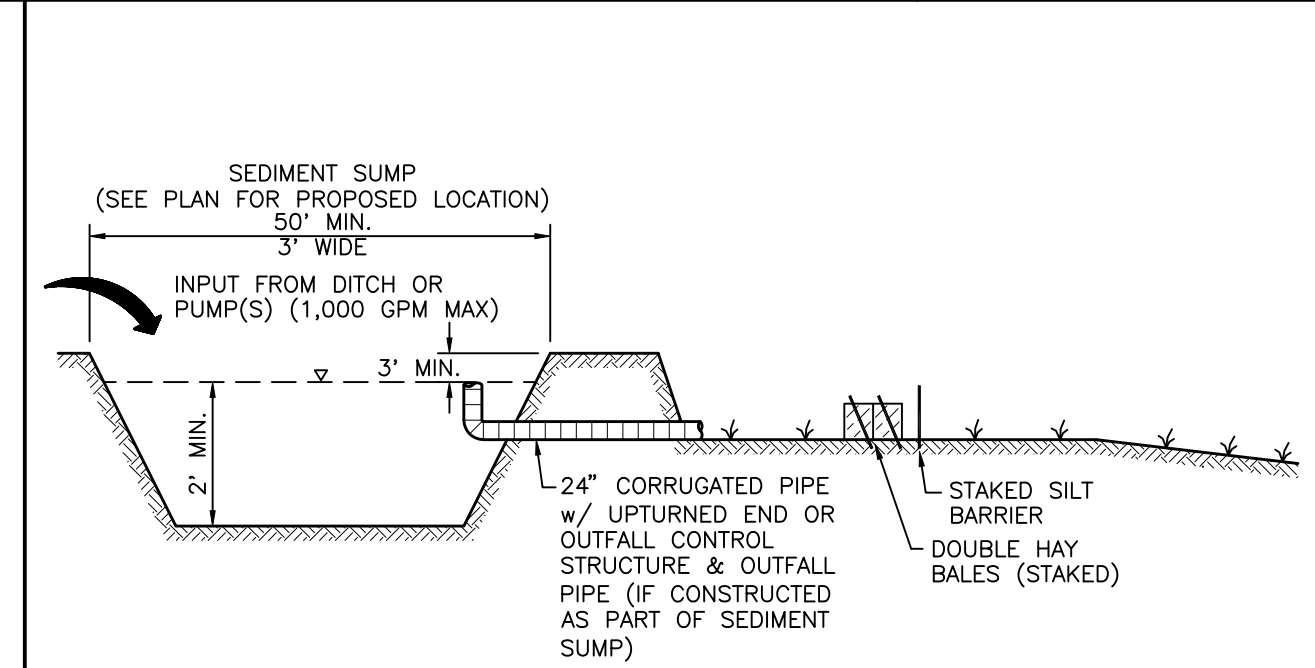
GRASS SLOPES
N.T.S.
FIGURE 13



SOD ALONG CURB AND AROUND INLET
N.T.S.
FIGURE 14



TEMPORARY SEDIMENT SUMP
N.T.S.
FIGURE 15



SEDIMENT SUMP SECTION
N.T.S.
FIGURE 16

CONSTRUCTION SURFACE WATER MANAGEMENT PLAN (CSWMP) CERTIFICATION

OWNER/APPLICANT SIGNATURE _____ DATE _____

OWNER: CHARLIE BISHOP
TITLE: DIRECTOR
COMPANY: MANATEE COUNTY PROPERTY MANAGEMENT DEPARTMENT

REV. NO.	REVISION	DATE	DRAWN BY / EMP. NO.	CHECKED BY / EMP. NO.	WM APPROVED BY:	ACTIVITY	INITIALS/EMP. NO.	DATE
						DESIGNED BY:		
						DRAWN BY:	ATO/89520	11/17/11
						CHECKED BY:		
						CONTRACT ADMIN. BY:		

Wilson Miller Stantec

6900 Professional Parkway East, Sarasota, FL 34240
Phone: 941-907-6500 • Fax: 941-907-6910
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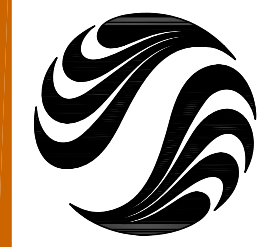
CLIENT: MANATEE BOARD OF COUNTY COMMISSIONERS

PROJECT: FT. HAMER PARK, PHASE II

DATE: NOVEMBER 2011
HORIZONTAL SCALE: AS SHOWN
VERTICAL SCALE: AS SHOWN

TITLE: BEST MANAGEMENT PRACTICES DETAILS

DRAWN BY: DANIEL J. BOND, P.E.
FLORIDA LICENSE NO. 57869
INDEX NUMBER: D-215610582-013
SHEET NUMBER: 13 OF 13



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Notes

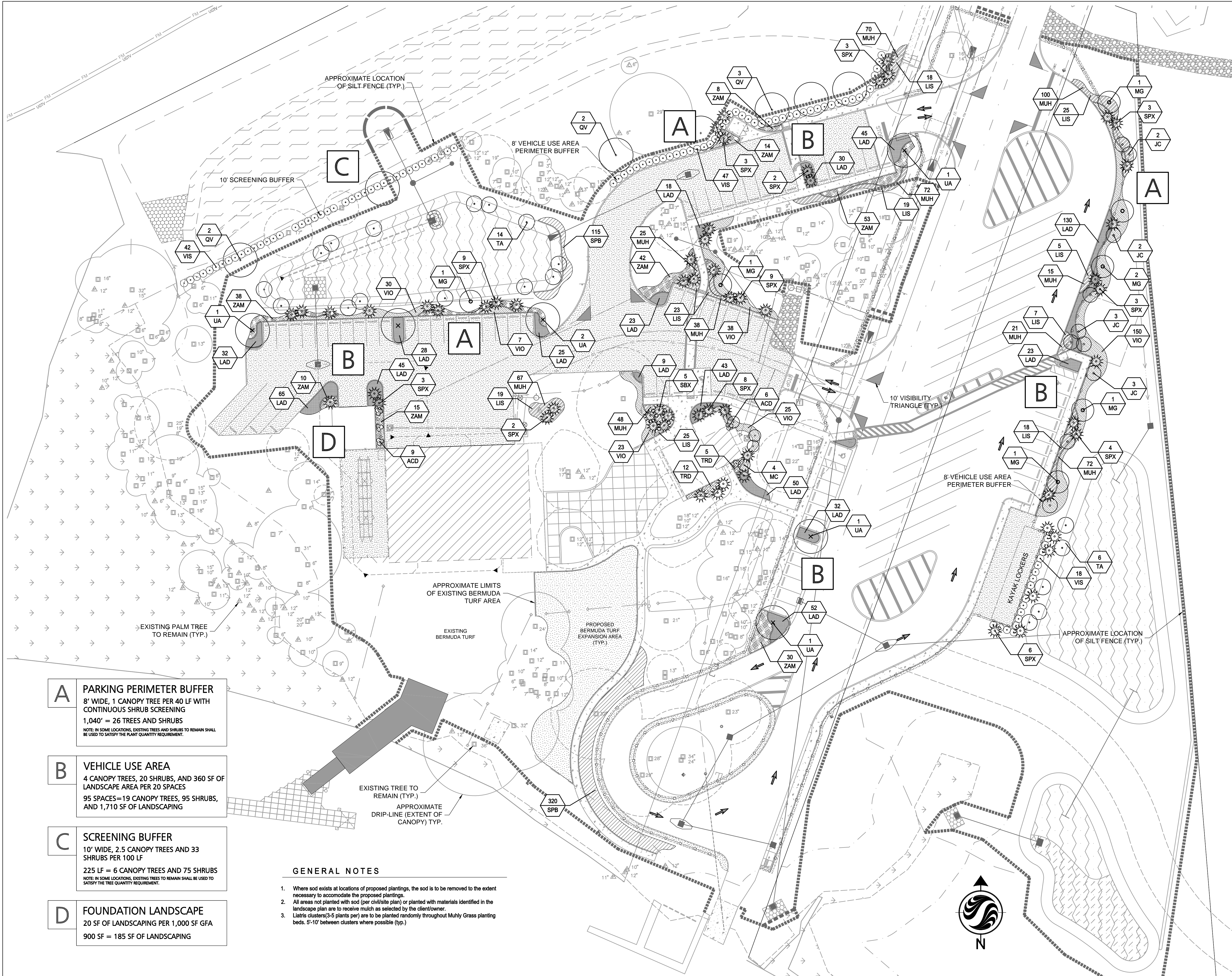
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A	Added Visibility Triangles	ASM	SAB	2012.10.19
Revision		By	Appd.	YY.MM.DD
D				
C				
B				
A				
Issued		By	Appd.	YY.MM.DD
File Name:	ASM	MLH	SAB	2012.02.03
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Client/Project
Manatee County Board of County Commissioners

Fort Hamer Park
Phase II
Manatee County, Florida

Title
LANDSCAPE
PLANTING PLAN

Project No.	215610582	Scale	15 30 45 75
Drawing No.	LP-101	Sheet	of
		Revision	0



A PARKING PERIMETER BUFFER
8' WIDE, 1 CANOPY TREE PER 40 LF WITH CONTINUOUS SHRUB SCREENING
1,040' = 26 TREES AND SHRUBS
NOTE: IN SOME LOCATIONS, EXISTING TREES AND SHRUBS TO REMAIN SHALL BE USED TO SATISFY THE PLANT QUANTITY REQUIREMENT.

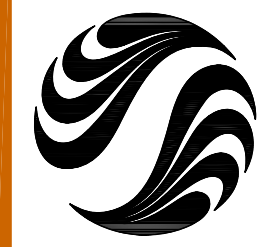
B VEHICLE USE AREA
4 CANOPY TREES, 20 SHRUBS, AND 360 SF OF LANDSCAPE AREA PER 20 SPACES
95 SPACES = 19 CANOPY TREES, 95 SHRUBS, AND 1,710 SF OF LANDSCAPING

C SCREENING BUFFER
10' WIDE, 2.5 CANOPY TREES AND 33 SHRUBS PER 100 LF
225 LF = 6 CANOPY TREES AND 75 SHRUBS
NOTE: IN SOME LOCATIONS, EXISTING TREES TO REMAIN SHALL BE USED TO SATISFY THE TREE QUANTITY REQUIREMENT.

D FOUNDATION LANDSCAPE
20 SF OF LANDSCAPING PER 1,000 SF GFA
900 SF = 185 SF OF LANDSCAPING

- GENERAL NOTES**
- Where sod exists at locations of proposed plantings, the sod is to be removed to the extent necessary to accommodate the proposed plantings.
 - All areas not planted with sod (per civil/site plan) or planted with materials identified in the landscape plan are to receive mulch as selected by the client/owner.
 - Liatris clusters (3-5 plants per) are to be planted randomly throughout Muhly Grass planting beds. 5'-10' between clusters where possible (typ.)

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 2012/09/09 5:22 PM By: Barot, Don



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Notes

B	Rev Ex Tree Canopy, Barricade, & Rem Sch	ATO	SAB	2013.01.09
Revision		By	Appd.	YY.MM.DD

1.		By	Appd.	YY.MM.DD
Issued				

File Name:	ASM	MLH	SAB	2012.02.03
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

SCOTT A. BUTTAR, L.A.
FLORIDA LICENSE NO. 906178

Client/Project
Manatee County Board of County Commissioners

Fort Hamer Park
Phase II

Manatee County, Florida

Title
LANDSCAPE
TREE REMOVAL / CONSERVATION PLAN

Project No.	215610582	Scale	15 30 45 75
Drawing No.	Sheet	Revision	

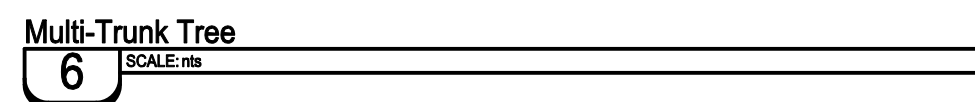
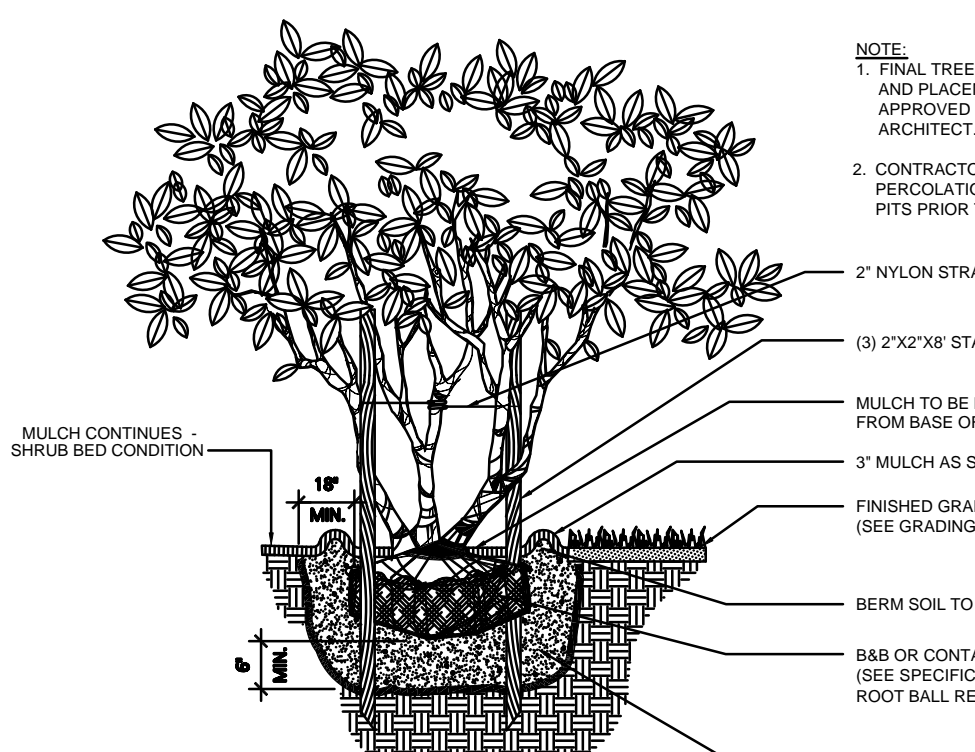
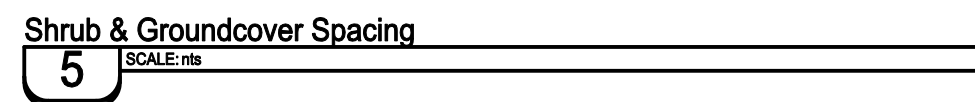
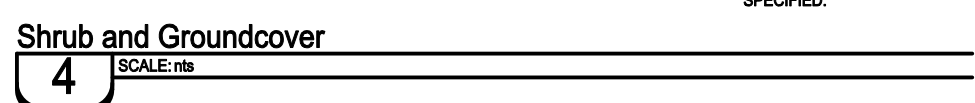
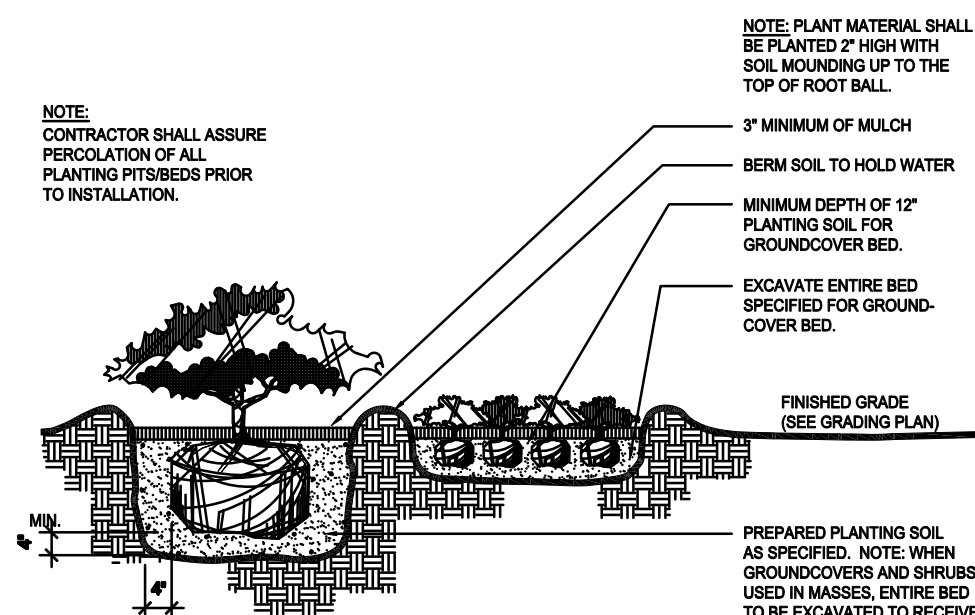
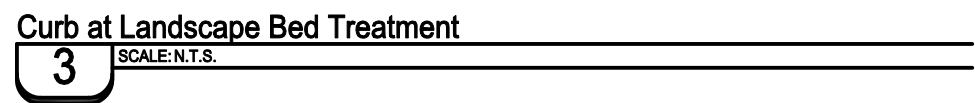
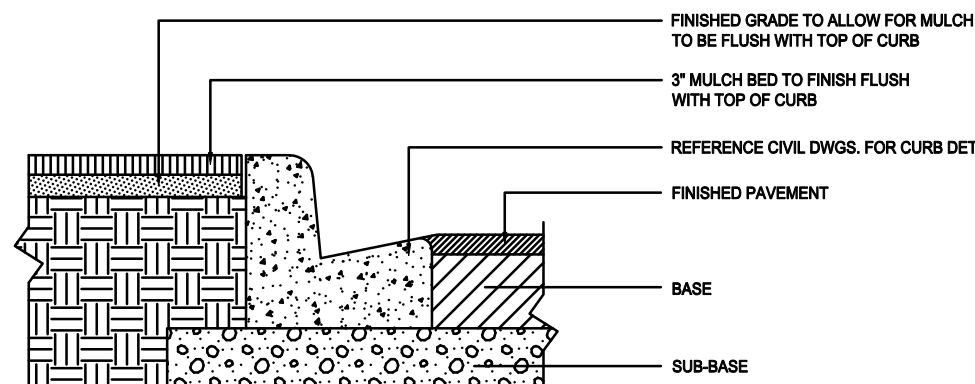
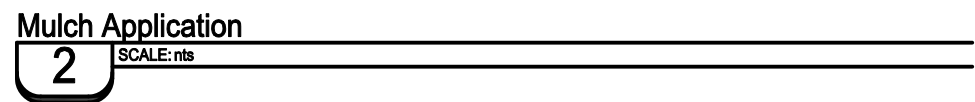
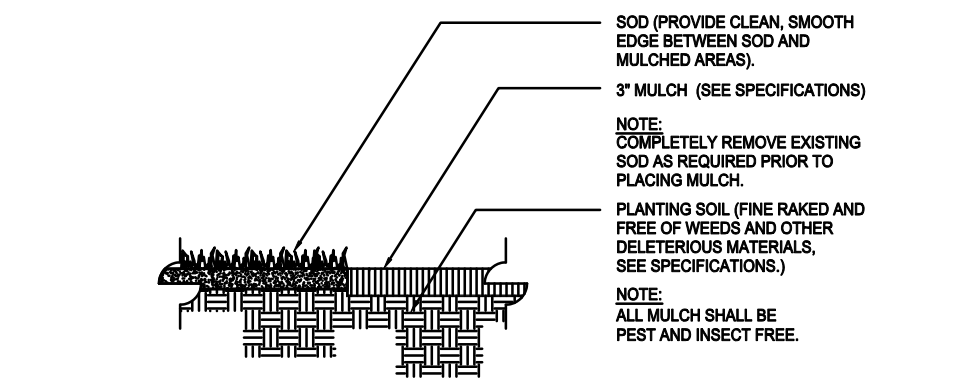
LP-401 of 0



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2012/09/09 5:23 PM By: Biorci, Dan

LANDSCAPE NOTES

- 1. CONTRACTOR SHALL FIELD VERIFY ALL INFORMATION PRIOR TO INITIATING PLANTING INSTALLATION.
2. CONTRACTOR SHALL NOTIFY ALL PERTINENT UTILITY COMPANIES 48 HOURS MINIMUM PRIOR TO DIGGING FOR VERIFICATION OF ALL UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL BECOME COMPLETELY FAMILIAR WITH EXISTING SITE CONDITIONS PRIOR TO BEGINNING INSTALLATION.
4. UNLESS OTHERWISE NOTED, THE LIMITS OF CONSTRUCTION ARE THE CLEARING LIMITS NOTED ON THE PLANS.
5. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.
6. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH RELATED CONTRACTORS AND WITH THE GENERAL CONSTRUCTION OF THE PROJECT IN ORDER TO NOT IMPEDE THE PROGRESS OF WORK OF OTHERS OR THE CONTRACTOR'S OWN WORK.
7. CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ALL EXISTING GROUND COVERS FOR ALL NEW PLANTING BEDS BY APPROVED MEANS PRIOR TO PLANTING INSTALLATION.
8. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH SOIL TESTING AND SOIL AMENDMENTS AS REQUIRED AS A RESULT OF THE SOIL TESTING LABORATORY'S RECOMMENDATIONS.
9. ALL PLANT CONTAINER SIZES NOTED ON THE PLANT LIST/MATERIAL SCHEDULE ARE MINIMUM. INCREASE SIZE OF CONTAINERS IF NECESSARY TO CONFORM TO THE PLANT SIZE AND SPECIFICATIONS.
10. EROSION CONTROL MATERIAL SHALL BE INSTALLED IN ALL SHRUB AND GROUND COVER PLANTING AREAS AS PER THE DETAILS AND/OR SPECIFICATIONS FOR ALL SLOPES THAT ARE GREATER THAN 3:1.
11. SHRUB AND GROUND COVER PLANTINGS ARE TYPICALLY SHOWN ON THE PLANS IN MASS PLANTING BEDS. PLANTS SHALL BE SET IN A TRIANGULAR SPACING PATTERN (STAGGERED SPACING).
12. LANDSCAPE CONTRACTOR SHALL FIELD ADJUST THE LOCATION OF PLANT MATERIAL AS NECESSARY TO AVOID DAMAGE TO EXISTING TREES AND UNDERSTORY VEGETATION TO REMAIN, UNDERGROUND AND ABOVE GROUND UTILITIES AND ALL OTHER ABOVE GROUND ELEMENTS.
13. WHEN NECESSARY, PLANTING WITHIN THE DRIPLINE/CANOPY OF EXISTING TREES SHOULD BE DONE IN THE MOST SENSITIVE MANNER POSSIBLE IN ORDER TO AVOID ROOT DAMAGE.
14. ANY SUBSTITUTIONS TO PLANT MATERIAL SIZE OR TYPE MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AS REQUIRED TO MAINTAIN AND ESTABLISH ALL PLANTING (NEW, EXISTING TO BE RELOCATED, AND EXISTING PLANTINGS TO REMAIN WHILE IRRIGATION SYSTEM IS BEING INSTALLED OR REPAIRED).
16. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, IN FULL, ALL PLANTING AREAS (INCLUDING WATERING, SPRAYING, MULCHING, MOWING, FERTILIZING, AND WEEDING, ETC.) UNTIL THE JOB IS ACCEPTED.
17. CONTRACTOR SHALL ASSURE DRAINAGE AND PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION OF PLANT MATERIAL.
18. CONTRACTOR SHALL CLEAN THE WORK AREAS AT THE END OF EACH WORKING DAY.
19. CONTRACTOR SHALL RE-GRADE ALL AREAS DISTURBED BY PLANT REMOVAL, RELOCATION, AND/OR FROM INSTALLATION WORK.
20. EXISTING TREES OR OTHER PLANT MATERIAL INDICATED ON THE PLANS TO BE RELOCATED SHALL BE HANDLED, CARED FOR, AND MAINTAINED AS NEW PLANTINGS.
21. THE CONTRACTOR SHALL REFER TO THE LANDSCAPE PLANTING DETAILS, SPECIFICATIONS, PLANT LIST AND PLANS FOR FURTHER AND COMPLETE PLANTING INSTALLATION INSTRUCTIONS.
22. LANDSCAPE CONTRACTOR SHALL FULLY FAMILIARIZE HIMSELF / HERSELF WITH THE PROJECT PRIOR TO BIDDING THE WORK.
23. FOR SITE GRADING AND CONTOUR INFORMATION, EXISTING VEGETATION TO REMAIN, BUILDINGS AND OTHER SITE FEATURE LOCATIONS AND THE LOCATION OF ALL ABOVE AND BELOW GROUND UTILITIES SEE THE MOST CURRENT AND UP TO DATE ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL AND MECHANICAL ENGINEERING DRAWINGS AS PROVIDED BY THE OWNER OR OWNER'S REPRESENTATIVE.
24. LANDSCAPE CONTRACTOR SHALL FIELD STAKE THE LOCATION OF ALL PLANT MATERIAL AND EDGES OF PLANTING BEDS FOR THE REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INITIATING ANY INSTALLATION OF THE LANDSCAPE PLANTINGS.
25. LANDSCAPE CONTRACTOR SHALL COORDINATE WORK WITH THE IRRIGATION CONTRACTOR AND ALL OTHER TRADES AS REQUIRED.
26. THE CONTRACTOR SHALL REQUEST INSPECTION OF THE PROJECT IN WRITING A MINIMUM OF THREE (3) DAYS PRIOR TO DESIRED INSPECTION DATE.
27. GUYING/STAKING PRACTICES SHALL NOT PERMIT NAILS, SCREWS, WIRES, ETC., TO PENETRATE OUTER SURFACE OF THE TREE OR PALM.
28. ALL PLANT MATERIAL SHALL BE FLORIDA NO.1 OR BETTER AT TIME OF INSTALLATION AND SHALL BE MAINTAINED IN THIS SAME CONDITION UNTIL FINAL ACCEPTANCE.
29. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.



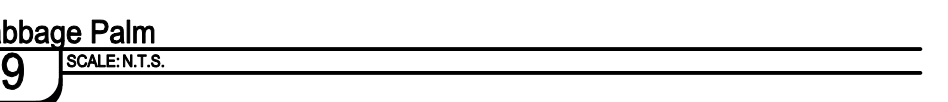
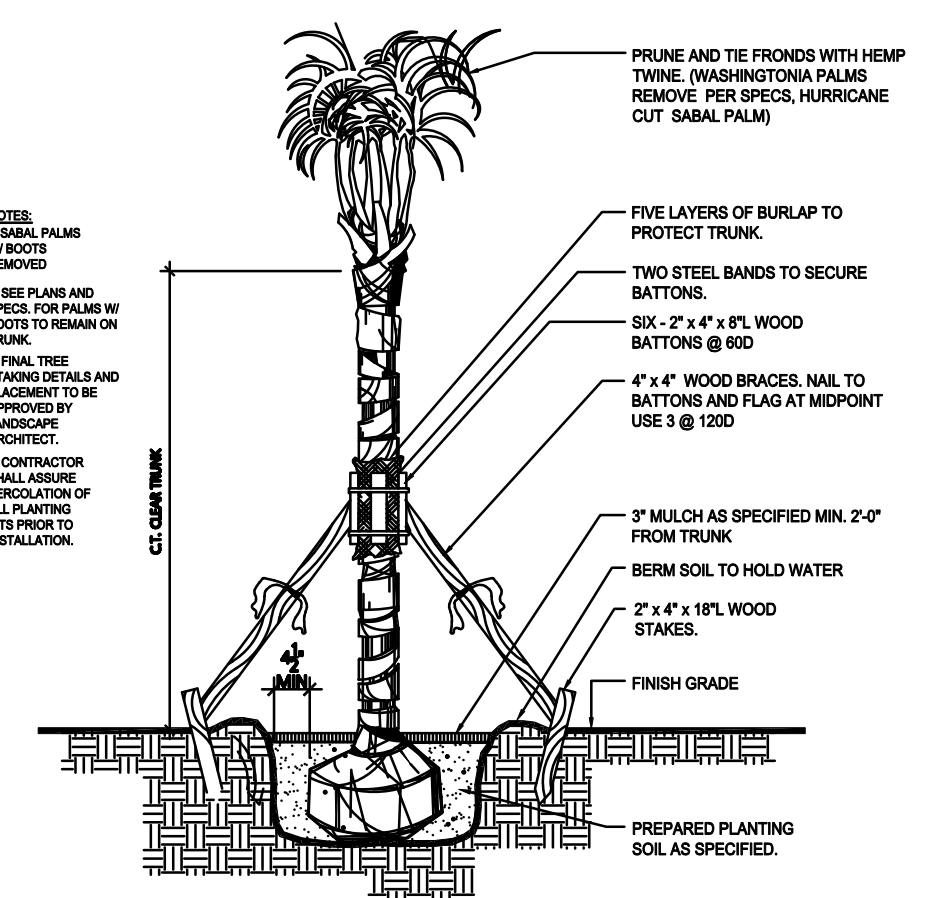
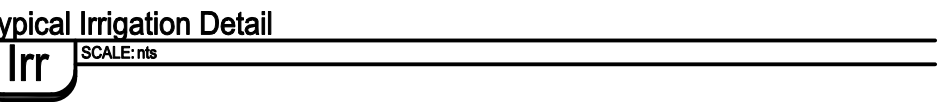
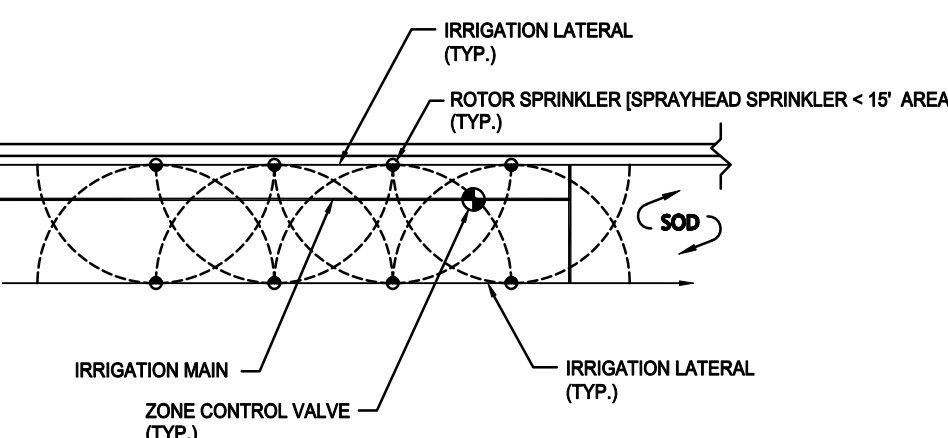
PLANT SCHEDULE

Table with columns: Scientific Name, Common Name, Specification, Qty. Includes trees like Juniperus virginiana, Myrica cerifera, Magnolia grandiflora, and palms like Sabal palmetto.

All areas not receiving sod/seed per the civil/site plan are to receive mulch as chosen by the client/owner. Liatris clusters (3-5 plants per) are to be planted randomly throughout Muhly Grass planting beds.

IRRIGATION NOTES

- 1. ALL PROPOSED LANDSCAPING TO BE IRRIGATED BY A 100% AUTOMATIC SYSTEM.
2. IRRIGATION SYSTEM SHALL NOT BE INSTALLED THROUGH EXISTING PLANT COMMUNITIES.
3. IRRIGATION SPRINKLER ZONES TO BE SEPARATE FOR HIGH AND LOW WATER REQUIREMENT PLANT AREAS.
4. IRRIGATION OVERTHROW TO NON-PERVIOUS AND NATURAL AREAS TO BE MINIMIZED.
5. A RAIN SENSOR IS TO BE INSTALLED WITH THE IRRIGATION SYSTEM CONTROLLER.
6. IRRIGATION PIPING TO BE LOCATED WITHIN PLANTING OR SODE AREAS WHEREVER FEASIBLE.
7. ALL TREE, SHRUB, AND GROUND COVER AREAS ARE TO BE FULLY IRRIGATED WITH DRIP / MICRO IRRIGATION.
8. A Y" TYPE FILTER SHALL BE INSTALLED AT THE HEAD END OF LOW VOLUME LINES AND IN-LINE PRESSURE REGULATORS TO REDUCE PRESSURE NO MORE THAN 15 PSI SHALL BE UTILIZED.
9. NON-POTABLE IRRIGATION LINES TO BE PURPLE IN COLOR.



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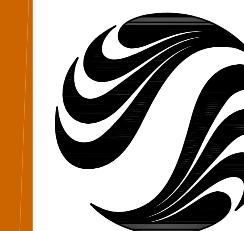
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Legend

Notes

Revision table with columns: Rev, Description, Author, Date. Includes entries for Plant Schedule and Revision.

Client/Project: Manatee County Board of County Commissioners, Fort Hamer Park Phase II, Manatee County, Florida. Title: LANDSCAPE PLANTING NOTES & DETAILS. Project No: 215610582, Drawing No: LP-601. Scale: 15, 30, 45, 75. Sheet: 9 of 9.



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Contract # 1501082-03 - Phase I/II/III/IV/05/06/07/08/09/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100

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Notes

Revision	By	Appd.	YY.MM.DD
B Update Ex Tree Canopy; Rev Techline	ATO	SAB	2013.01.09
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Issued			
File Name:	ASM	MLH	SAB
	Dwn.	Chkd.	Dsgn.
			2012.02.03
			YY.MM.DD

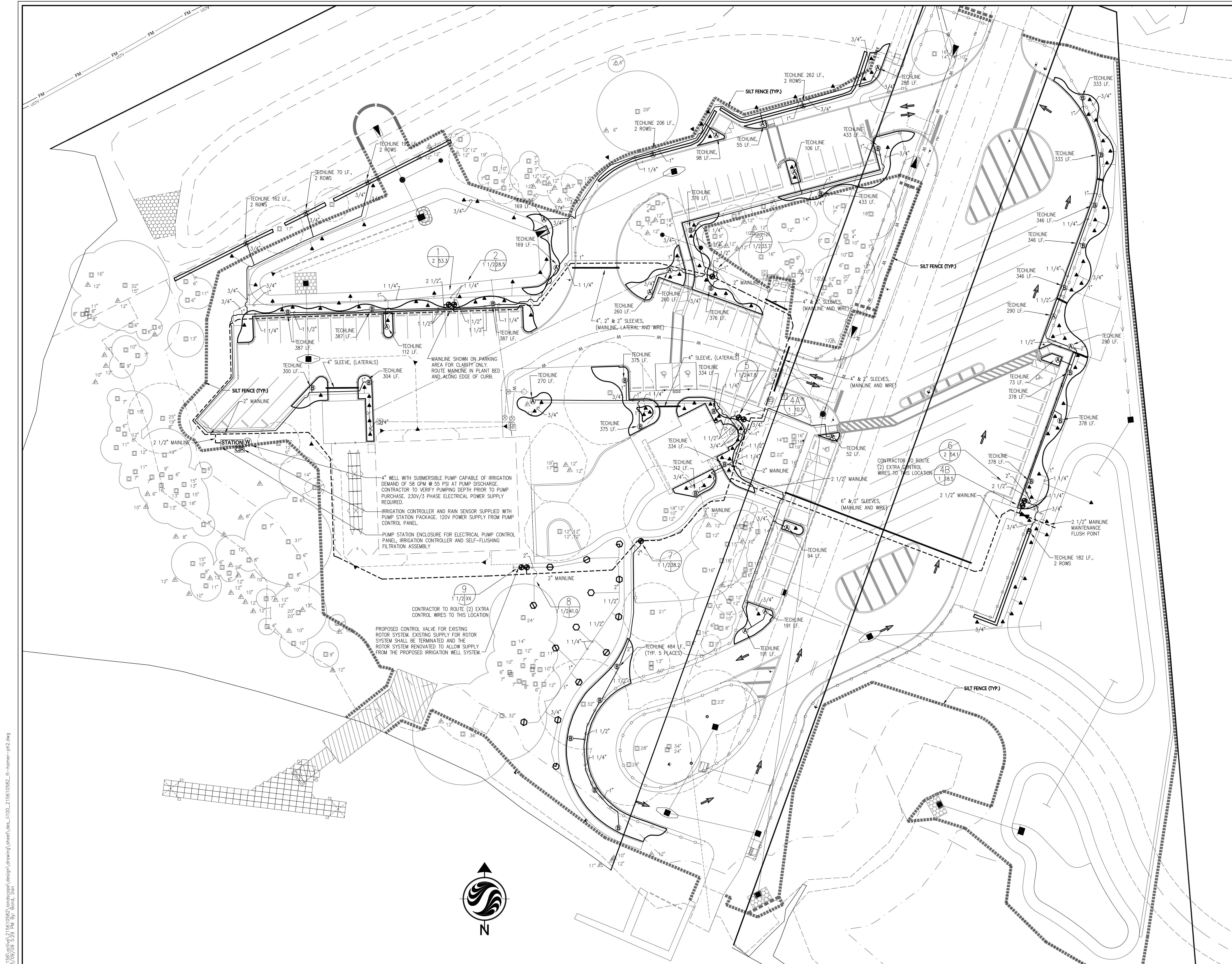
SCOTT A. BUTTARI, L.A.
 FLORIDA LICENSE NO. 0601796

Client/Project
 Manatee County Board of County Commissioners

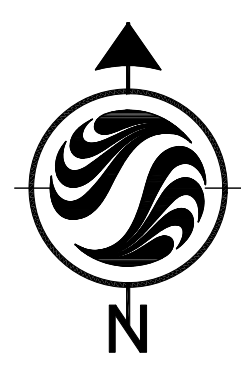
Fort Hamer Park
 Phase II
 Manatee County, Florida

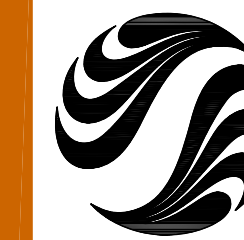
Title
LANDSCAPE IRRIGATION PLAN

Project No. 215610582
 Drawing No. LI-101
 Scale 15 30 45 75
 Sheet 75
 Revision 0



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 2013/05/09 5:29 PM By: Boris_Don





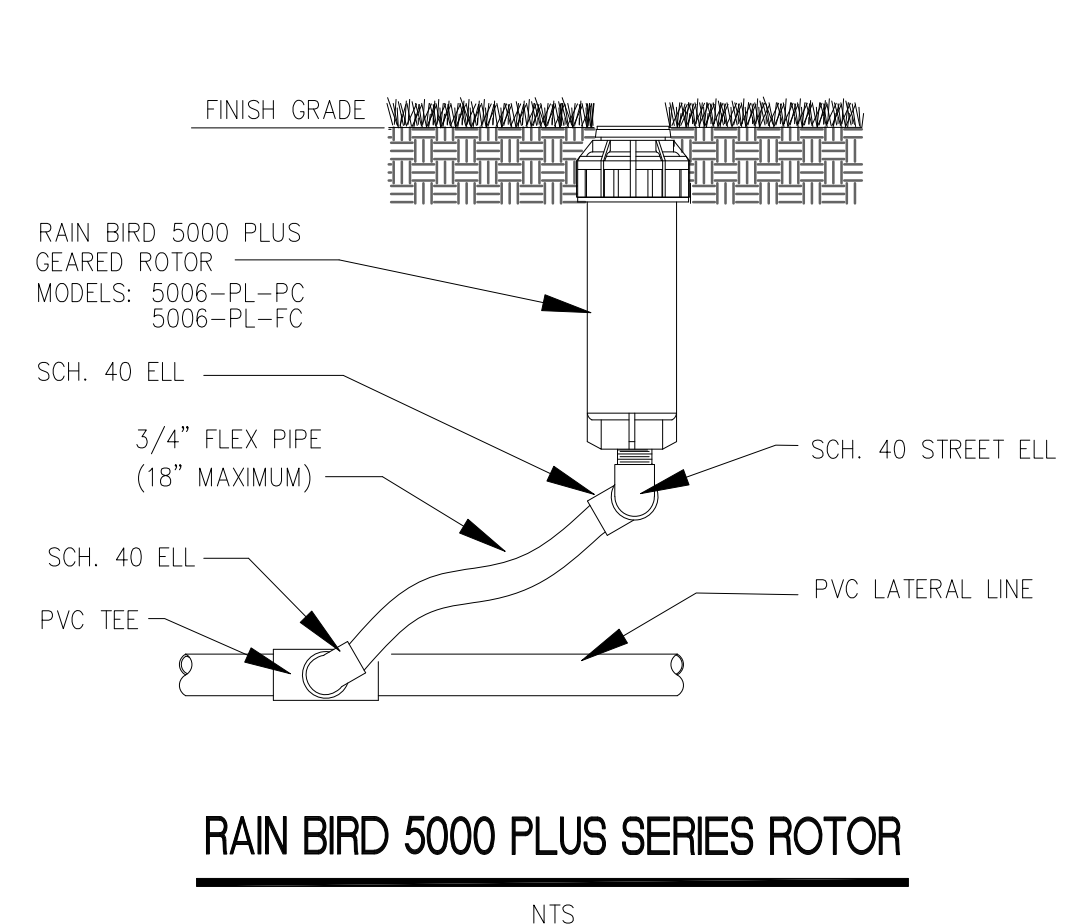
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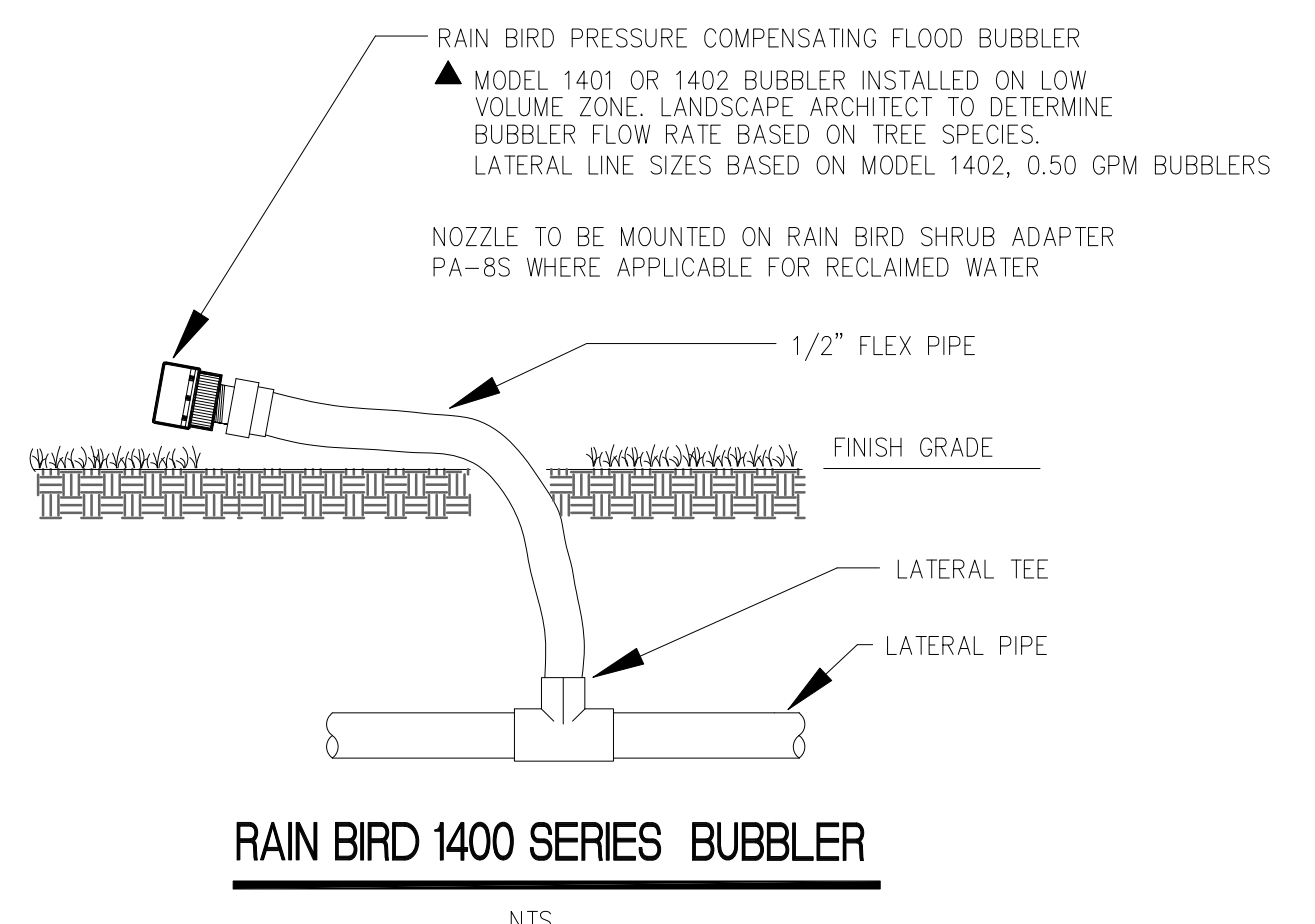
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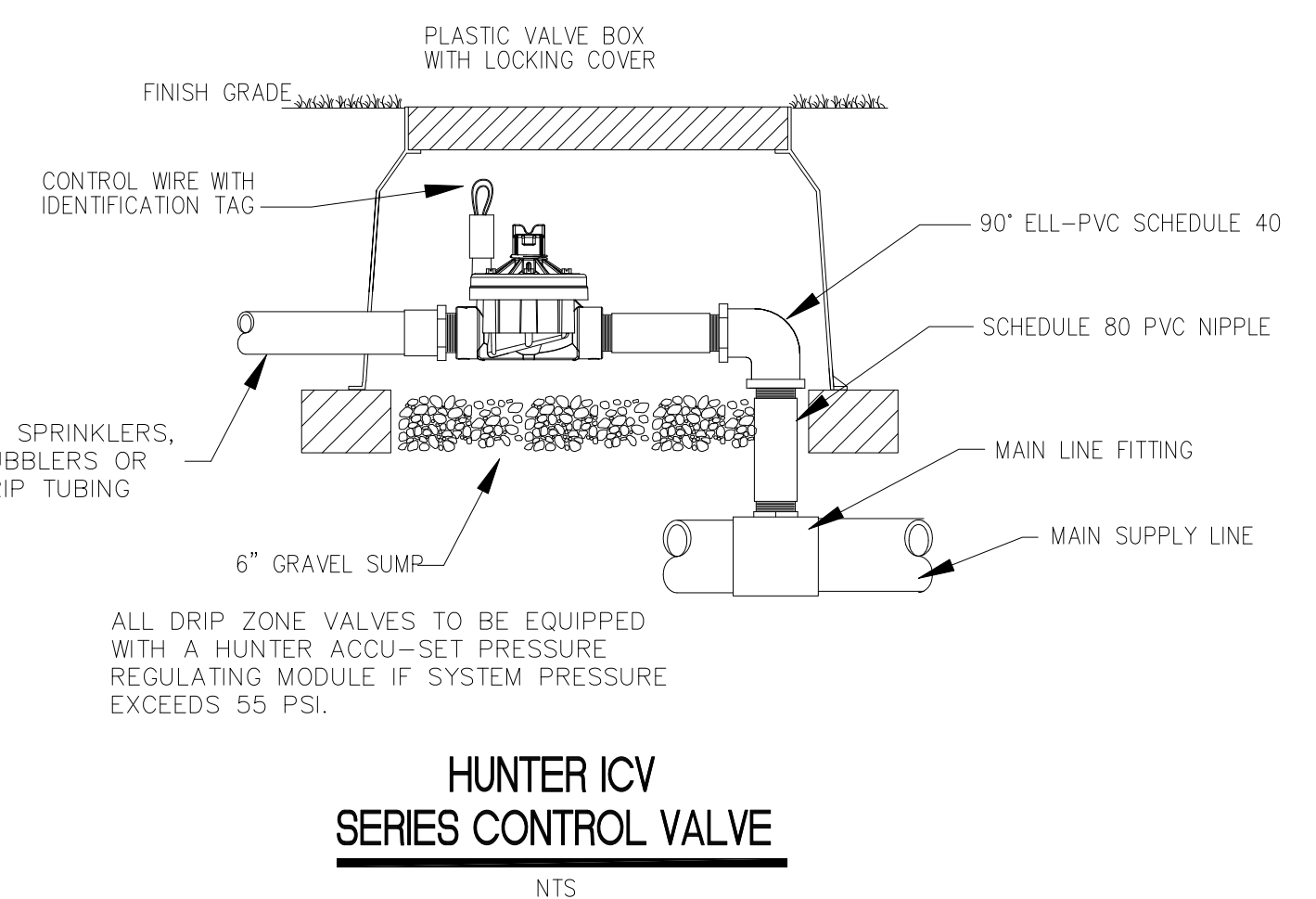
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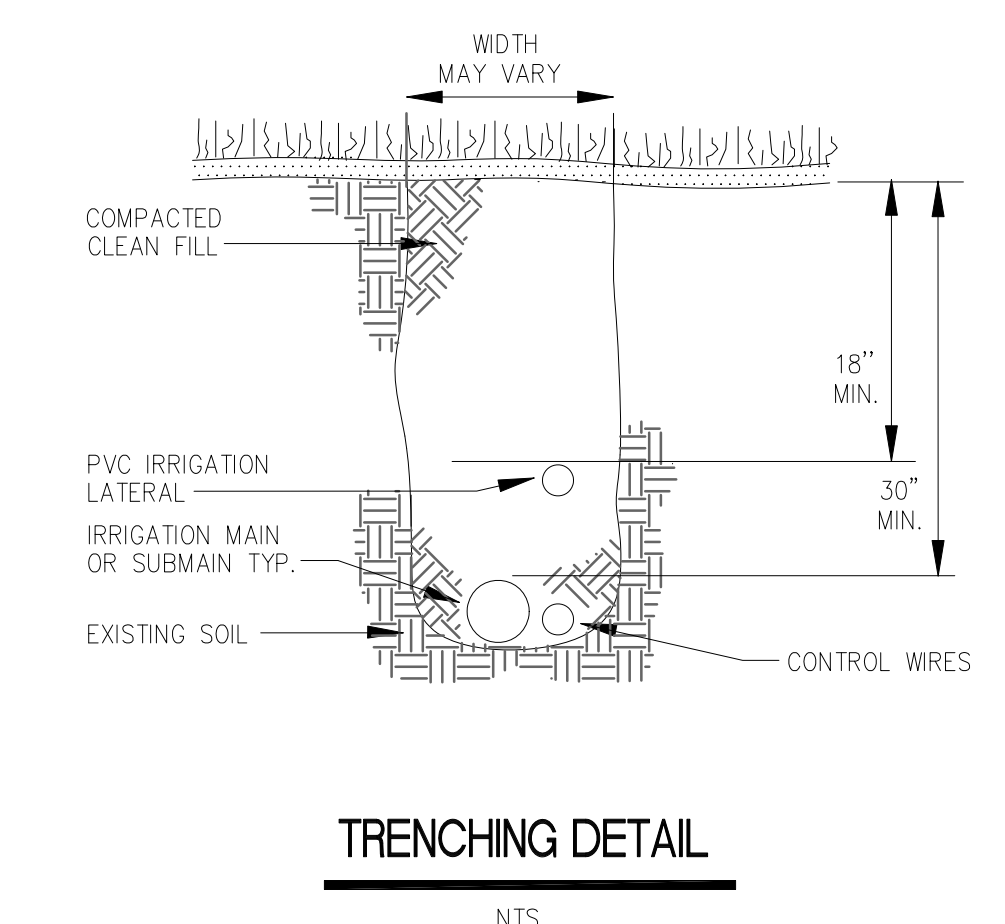
RAIN BIRD 5000 PLUS SERIES ROTOR
NTS



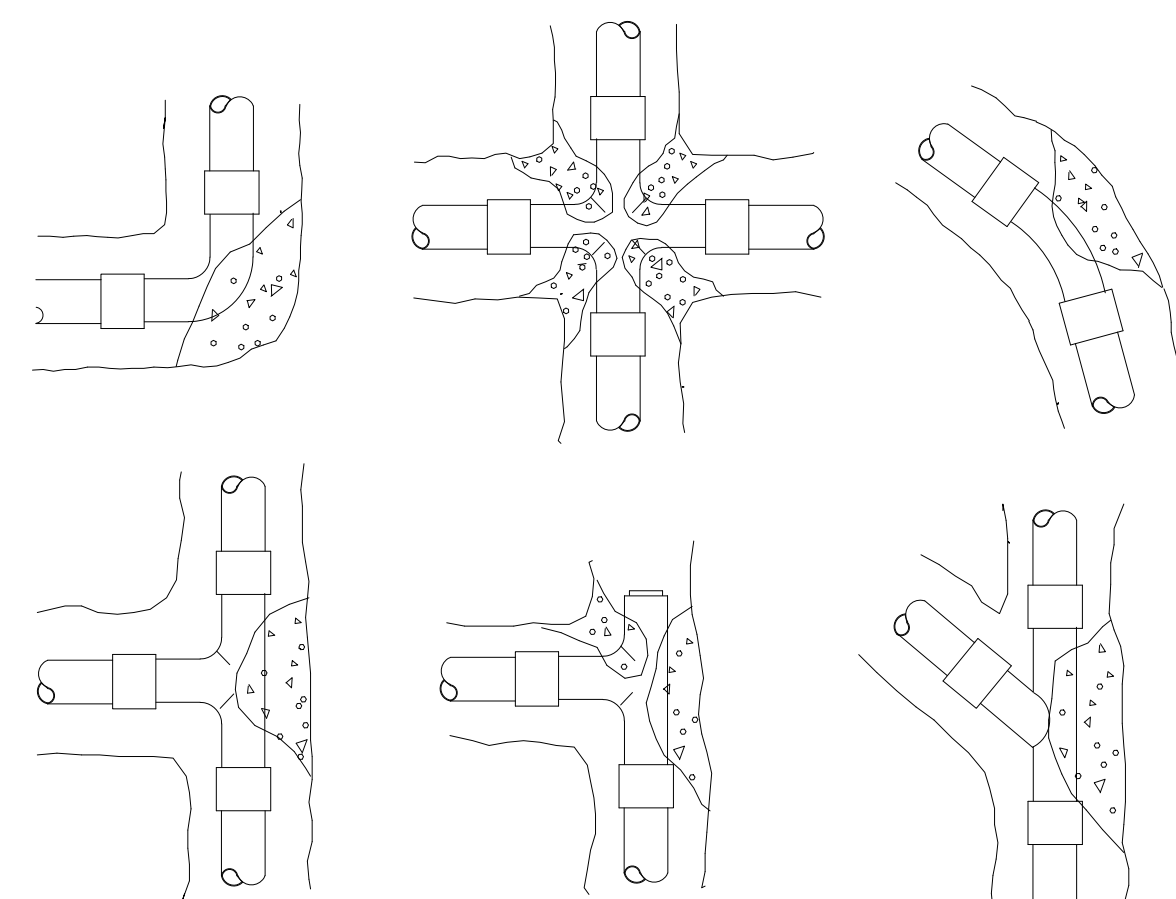
RAIN BIRD 1400 SERIES BUBBLER
NTS



HUNTER ICV SERIES CONTROL VALVE
NTS



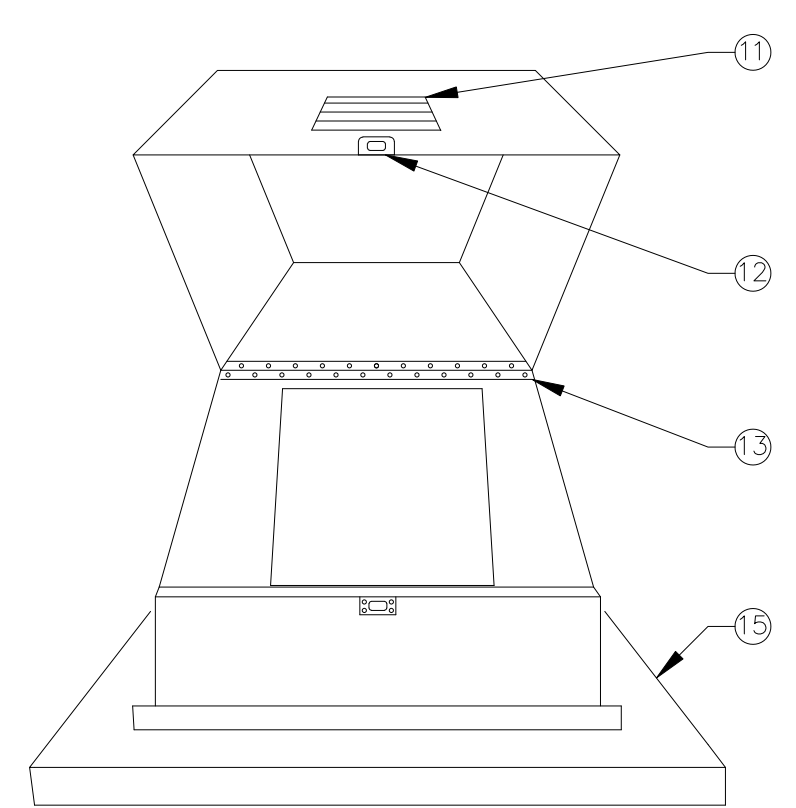
TRENCHING DETAIL
NTS



INSTALLATION NOTES

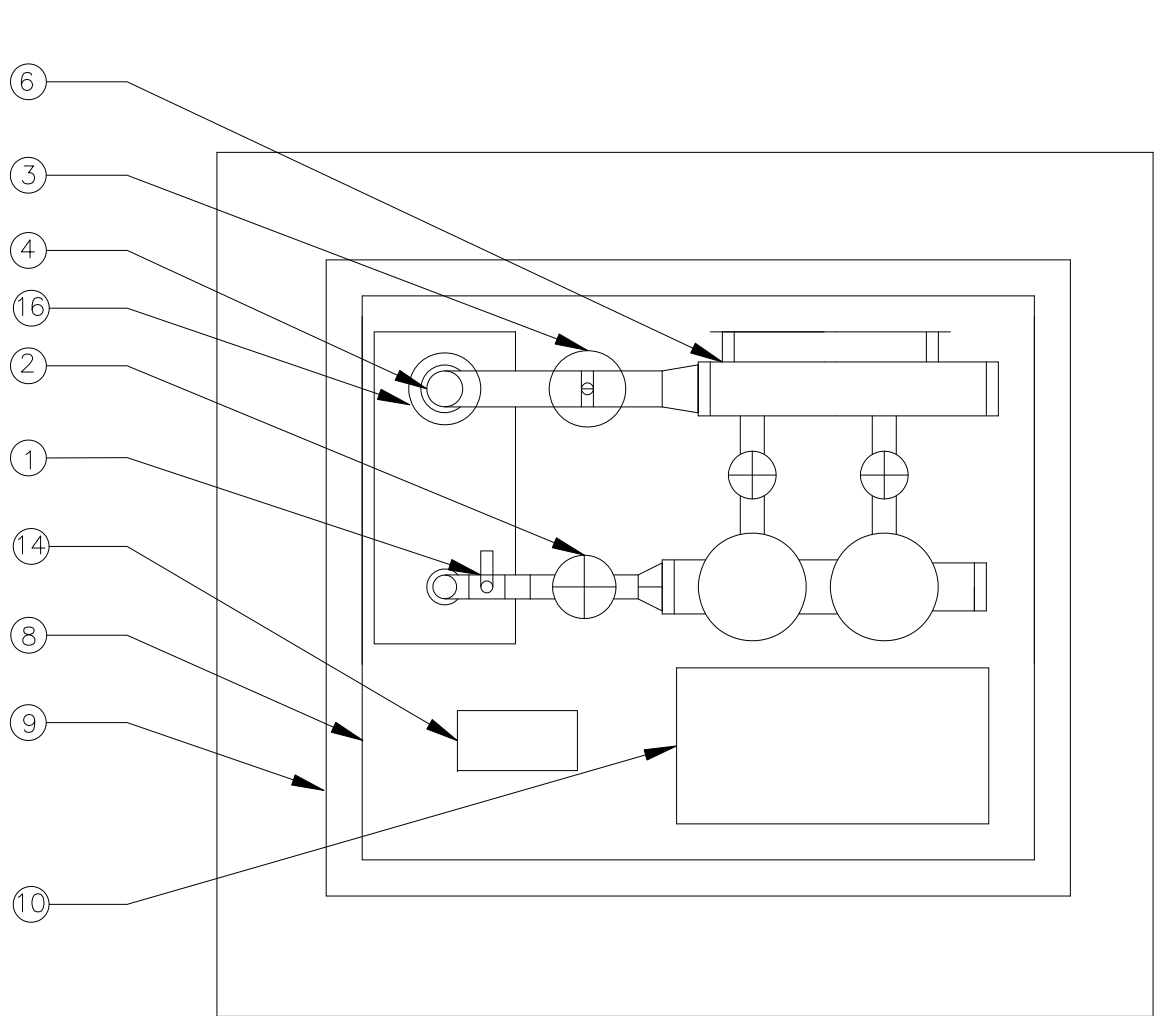
- 3000 PSI CONCRETE OR BETTER IS TO BE USED FOR THRUST BLOCKS.
 - FOR 45°/90° FITTINGS, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED.
 - FOR 22 1/2° FITTINGS, MINIMUM OF 0.5 CUBIC FEET OF CONCRETE TO BE USED.
 - FOR TEES, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED.
- THRUST BLOCKS REQUIRED FOR IRRIGATION MAINLINE 2" AND LARGER.

THRUST BLOCK REINFORCEMENT
NTS



NOTE: Fiberglass Reinforced Enclosure with Forest Green Chemical & Ultraviolet Grade Gelcoat Finish. Maintain 3' clearance from all sides of pumpstation.

- DISCHARGE ISOLATION VALVE
- METER/ MAIN VALVE W/ PULSE OUTPUT
- 2 GALLON PRESSURE TANK
- ROLL GROOVE MANIFOLD
- CHECK VALVE (SET IN WELL)
- DISCHARGE FILTERS WITH 120 MESH W/ AUTOMATIC FLUSH CONTROLLER
- 7.5 HP SUBMERSIBLE PUMP (60 GPM @ 55 PSI) SET IN WELL
- 47"W X 56"L X 45"H FOREST GREEN FIBERGLASS FLIP TOP COVER
- 62"W X 62"L WELDED ALUMINUM FRAME
- UL LISTED CONTROL PANEL W/ VFD CONTROLS IN A FIBERGLASS ENCLOSURE WITH FAULT RESET/DETECTION VIA HUNTER CONTROLLER, LOSS OF PRIME, LOW & HIGH PRESSURE, AND TRANSIENT SURGE PROTECTION
- 8" X 16" VENT (FRONT AND REAR)
- STAINLESS STEEL LOCKABLE HASP
- STAINLESS STEEL HINGE AND HARDWARE
- HUNTER PRO-C CONTROLLER W/ HUNTER MINI CLIK
- 5'W X 7'L X 4"T CONCRETE SLAB
- PROPOSED 4" WELL



NOTE: DISCHARGE PIPES & HEADER TO IRRIGATION MAIN SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE WITH GALV. ROLL GROOVE FITTINGS. PUMP DROP PIPE SHALL BE HDPE HEAT FUSED OR EQUAL AS APPROVED BY OWNER. SET PUMP 80" ON REQUIRED SIZED PIPE AS DICTATED BY PUMP OUTLET SIZE. INSTALL MOTOR CABLE SPICE BETWEEN MOTOR AND CONTROL PANEL IN NEMA 4X JUNCTION BOX ADJACENT TO WELL IN ACCORDANCE WITH ELECTRICAL CODES. WELL DRILLER SHALL NOTIFY THE PUMP SYSTEM MANUFACTURER IN WRITING WITHIN 24 HOURS OF DEVELOPING THE WELL IF THE WELL PUMPING LEVEL IS GREATER THAN 25' BELOW FINISHED GRADE AFTER 8 HOURS OF CONTINUOUS PUMPING AT 125% OF THE DESIGN FLOW BELOW. PROVIDE MINIMUM OF 4" CLEARANCE ON ALL SIDES OF PUMP SYSTEM.

PUMP PERFORMANCE
60 GPM @ 55 PSI
230 VOLT 3 PHASE 30 AMP.

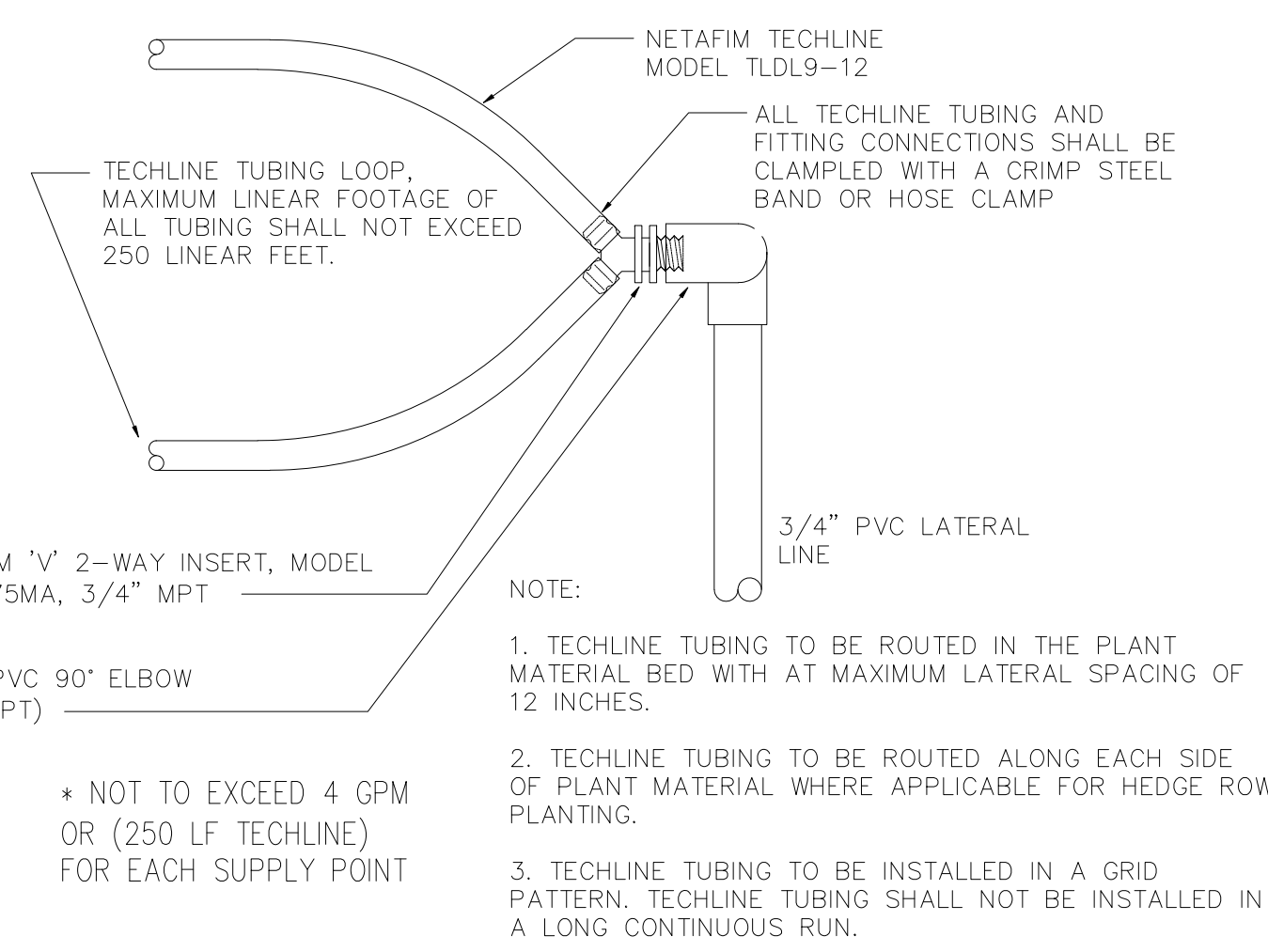
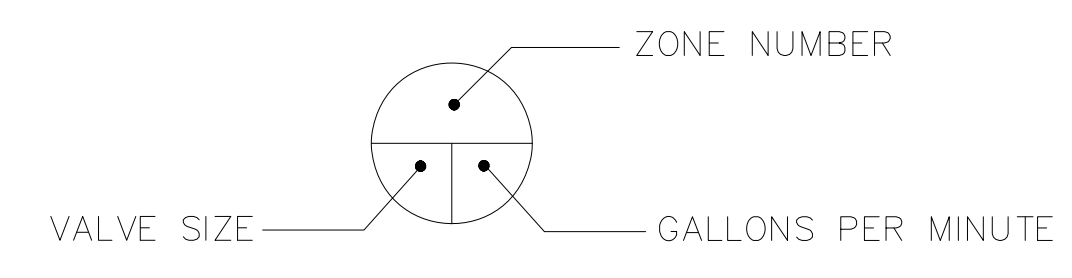
NAPLES ELECTRIC MOTOR WORKS, INC.
2088 J&C BLVD
NAPLES, FL 34109

MODEL # VFD-NETA-SUB-7.5-230-3

PUMP STATION DETAIL
NTS

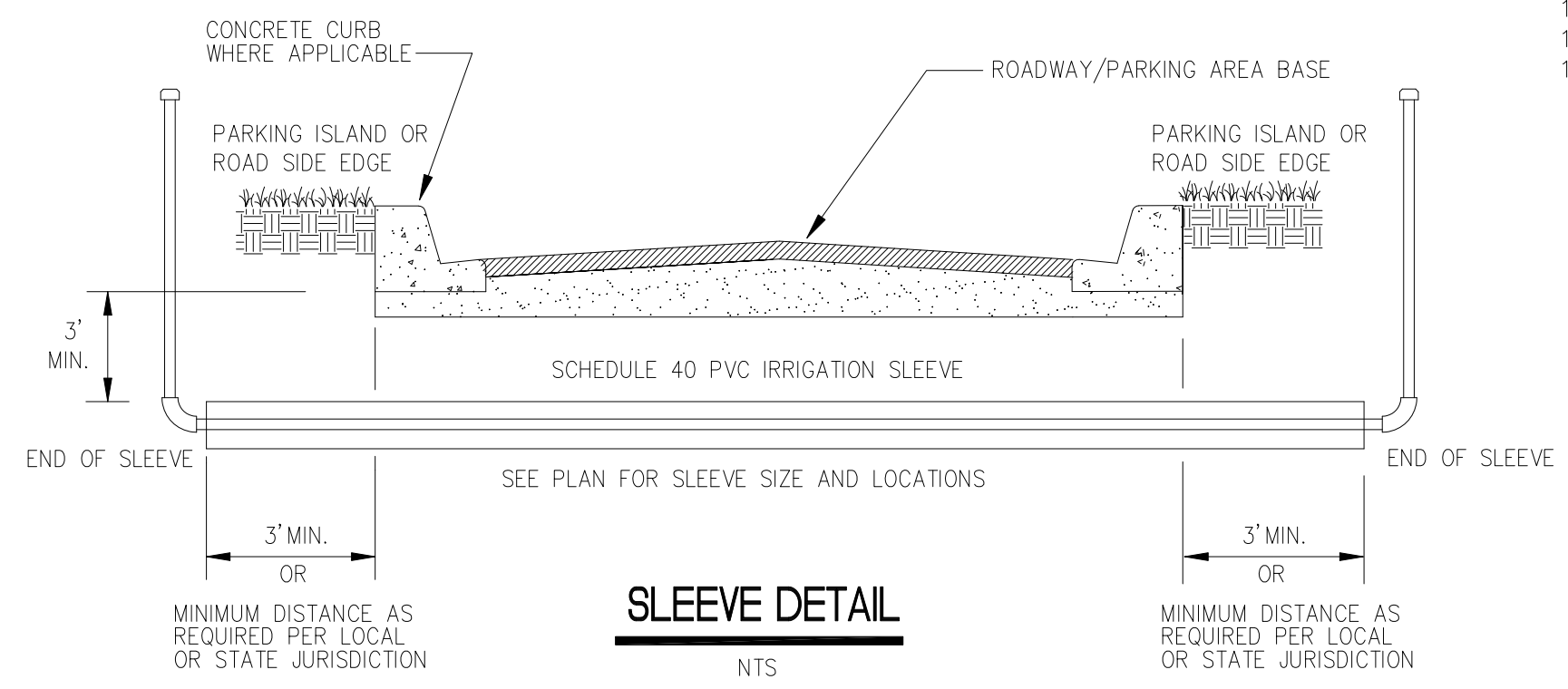
CONTROLLER SCHEDULE

ZONE	GPM	VALVE SIZE	TYPE
1	53.3	2"	DRIP
2	28.5	1 1/2"	BUBBLER
3	33.7	1 1/2"	DRIP
4A	10.5	1"	BUBBLER
4B	18.5	1"	BUBBLER
	29.0		
5	47.8	1 1/2"	DRIP
6	54.1	2"	DRIP
7	38.2	1 1/2"	DRIP
8	41.0	1 1/2"	ROTOR
9	XX	1 1/2"	ROTOR



- NOTE:
- TECHLINE TUBING TO BE ROUTED IN THE PLANT MATERIAL BED WITH AT MAXIMUM LATERAL SPACING OF 12 INCHES.
 - TECHLINE TUBING TO BE ROUTED ALONG EACH SIDE OF PLANT MATERIAL WHERE APPLICABLE FOR HEDGE ROW PLANTING.
 - TECHLINE TUBING TO BE INSTALLED IN A GRID PATTERN. TECHLINE TUBING SHALL NOT BE INSTALLED IN A LONG CONTINUOUS RUN.
- * NOT TO EXCEED 4 GPM (250 LF TECHLINE) FOR EACH SUPPLY POINT

NETAFIM TECHLINE CONNECTION POINT "A" END FEED HEDGE ROW
NTS



SLEEVE DETAIL
NTS

File Name:	ASM	MLH	SAB	2012.02.03
	Desn.	Chkd.	Desgn.	YY.MM.DD

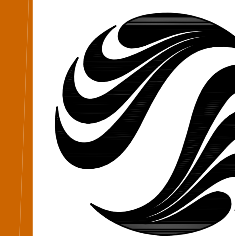
Client/Project
Manatee County Board of County Commissioners

Fort Hamer Park
Phase II
Manatee County, Florida

Title
LANDSCAPE IRRIGATION DETAILS

Project No. 215610582	Scale 15 30 45 75
Drawing No.	Sheet Revision

V:\215610582\landscape\design\sheet\sheet.dwg 2/15/12 5:30 PM By: Board, Don



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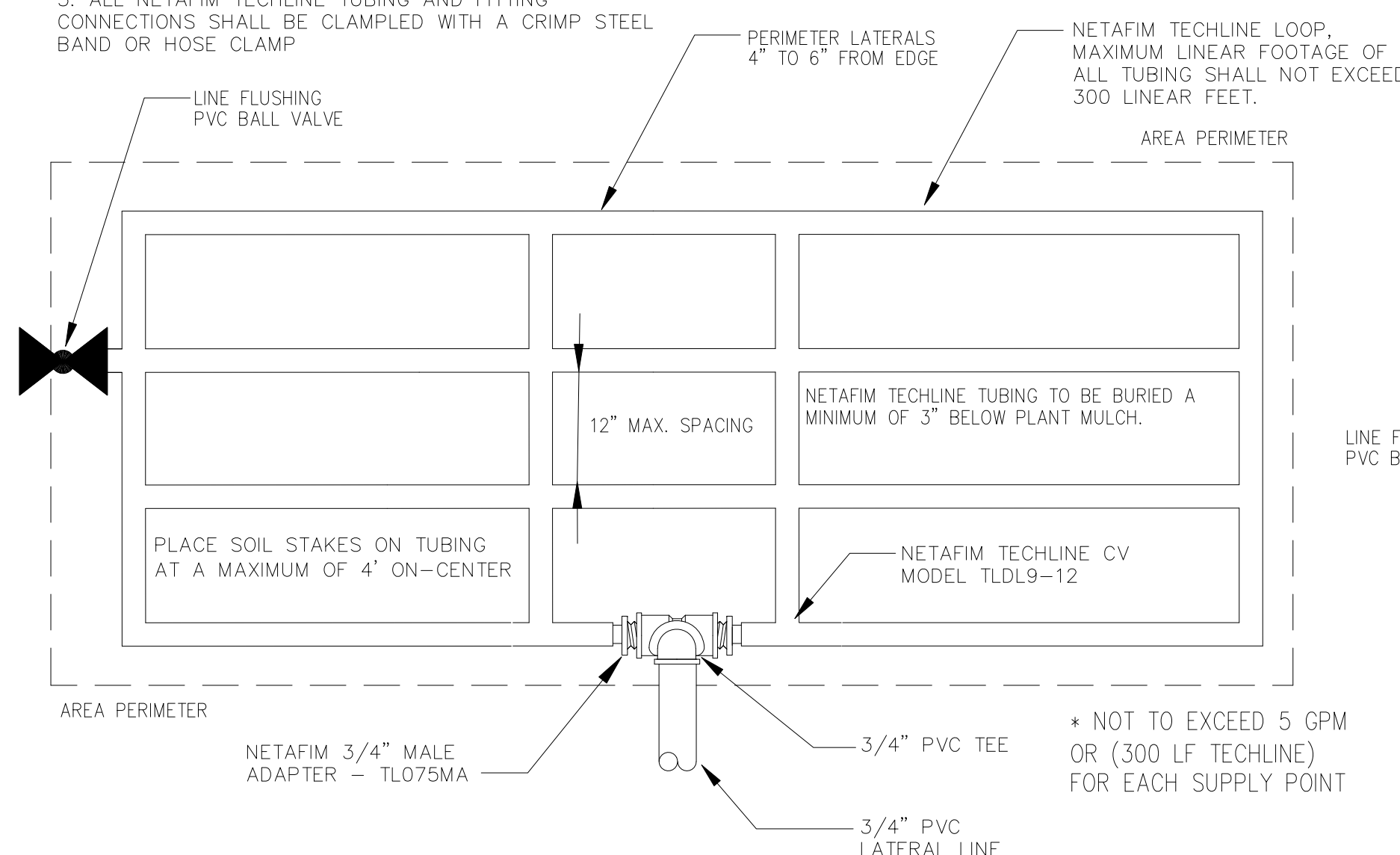
Consultants

Legend

Notes

NOTE:

1. NETAFIM TECHLINE TUBING TO BE ROUTED IN THE PLANT MATERIAL BED WITH AT MAXIMUM LATERAL SPACING OF 12 INCHES.
2. NETAFIM TECHLINE TUBING TO BE INSTALLED IN A GRID PATTERN. NETAFIM TECHLINE TUBING SHALL NOT BE INSTALLED IN A LONG CONTINUOUS RUN.
3. ALL NETAFIM TECHLINE TUBING AND FITTING CONNECTIONS SHALL BE CLAMPED WITH A CRIMP STEEL BAND OR HOSE CLAMP

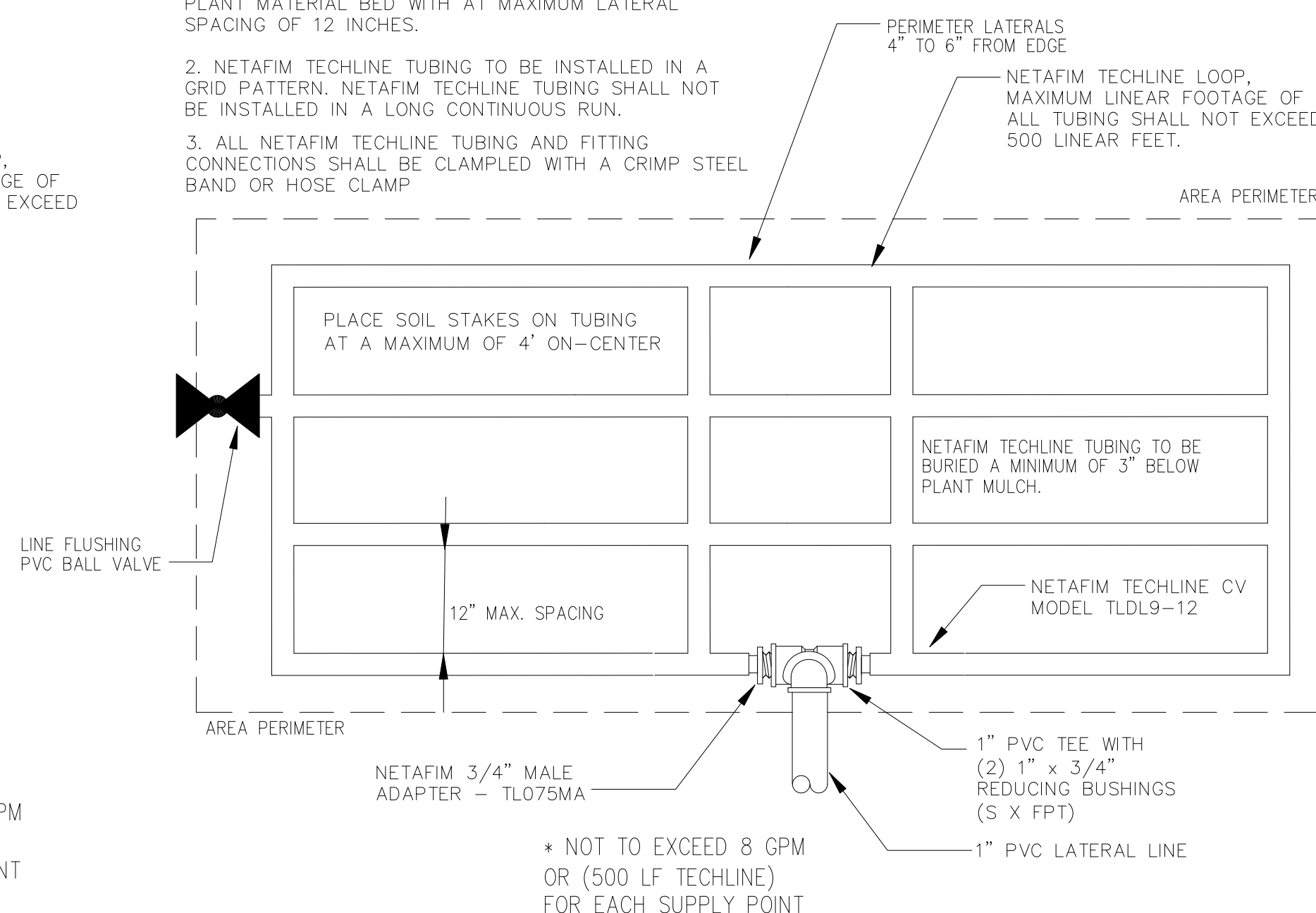


NETAFIM TECHLINE CONNECTION POINT "A"

NTS

NOTE:

1. NETAFIM TECHLINE TUBING TO BE ROUTED IN THE PLANT MATERIAL BED WITH AT MAXIMUM LATERAL SPACING OF 12 INCHES.
2. NETAFIM TECHLINE TUBING TO BE INSTALLED IN A GRID PATTERN. NETAFIM TECHLINE TUBING SHALL NOT BE INSTALLED IN A LONG CONTINUOUS RUN.
3. ALL NETAFIM TECHLINE TUBING AND FITTING CONNECTIONS SHALL BE CLAMPED WITH A CRIMP STEEL BAND OR HOSE CLAMP



NETAFIM TECHLINE CONNECTION POINT "B"

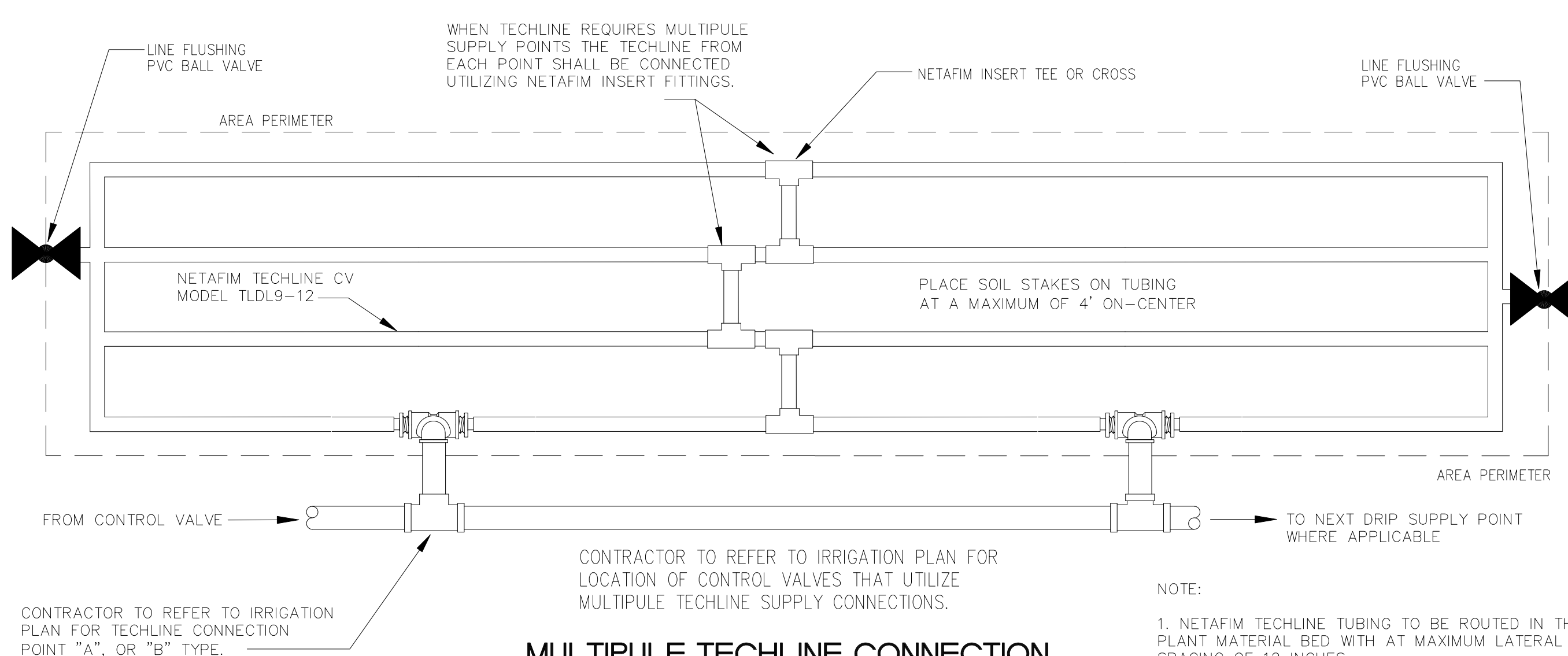
NTS

IRRIGATION LEGEND

- ▲ RAIN BIRD 1400 PC SERIES BUBBLER
- ⊕ RAIN BIRD 5000 PLUS ROTOR, 5006-PL-PC-2.0 NOZZLE, 90° ADJUSTABLE
- ⊖ RAIN BIRD 5000 PLUS ROTOR, 5006-PL-PC-3.0 NOZZLE, 180° ADJUSTABLE
- RAIN BIRD 5000 PLUS ROTOR, 5006-PL-FC-6.0 NOZZLE, 360° FULL CIRCLE
- HUNTER PRO-C SERIES CONTROLLER MODEL PC-900, CONTROLLER SUPPLIED WITH PUMP STATION PACKAGE
- ⊞ HUNTER MINI-CLIK RAIN SENSOR, SUPPLIED WITH PUMP STATION PACKAGE
- ⊞ HUNTER ICV SERIES ELECTRIC CONTROL VALVE
- Ⓐ NETAFIM TECHLINE SUPPLY POINT OF CONNECTION 'A'
- Ⓑ NETAFIM TECHLINE SUPPLY POINT OF CONNECTION 'B'
- NETAFIM TECHLINE, MODEL TLDL9-1210
- Ⓜ 4" WELL WITH SUBMERSIBLE PUMP TO MEET IRRIGATION DEMAND OF 60 GPM AT 55 PSI DISCHARGE
- ⊞ GATE VALVE PER LINE SIZE
- CLASS 200 PVC MAINLINE, SOLVENT WELD
- CLASS 200 PVC LATERAL LINE, SOLVENT WELD
- SCHEDULE 40 PVC SLEEVE

IRRIGATION NOTES

- 1) VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. MAINLINE SHALL NOT BE LOCATED WITHOUT PRIOR APPROVAL OF THE PROJECT MANAGER AND THE LANDSCAPE ARCHITECT. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS-CONTRACTOR SHALL VERIFY.
- 2) ALL PRESSURE MAINLINES UNDER ASPHALT PAVEMENT SHALL BE WITHIN SLEEVES AS NOTED. IRRIGATION COMMUNICATION CABLE SHALL HAVE ITS OWN SEPARATE SLEEVE. LATERAL LINES THEY SHALL BE CONTAINED WITHIN THEIR OWN SLEEVE WHERE SHOWN ON THE PLAN.
- 3) ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR, WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF EACH SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS.
- 4) MAINLINE AND VALVES ARE SHOWN IN SCHEMATIC FORM. LOCATE AS NOTED ON PLANS.
- 5) LOCATE ALL VALVES A MINIMUM OF 24" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.
- 6) ALL UNSIZED PIPE SHALL BE 3/4" UNLESS OTHERWISE NOTED.
- 7) THE HEAD LAYOUT HAS BEEN DESIGNED TO PROVIDE 100% COVERAGE. ANY CHANGES MADE IN THE HEAD LAYOUT DUE TO FIELD CONDITIONS SHALL BE IN ACCORDANCE WITH THESE STANDARDS.
- 8) SET SPRAY HEADS 3" AND ROTORS 6" IN FROM BACK OF CURB OR 12" IF PAVEMENT HAS NO CURB.
- 9) ALL VALVES SHALL BE INSTALLED IN A CARSON VALVE BOX WITH LOCKING LID.
- 10) IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE HIGHWAY JURISDICTION.
- 11) VERIFY WELL STATION LOCATION, CONTROLLER LOCATION AND ELECTRICAL POWER LOCATION AT PROJECT SITE WITH OWNER.
- 12) ELECTRICAL SERVICE TO THE PUMP STATION PANEL SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
- 13) ALL 24 VAC WIRING SHALL BE OF DIRECT BURIAL COPPER WIRE AS FOLLOWS:
CONTROL WIRES - #14-1 RED
COMMON WIRE - #14-1 WHITE
- 14) DURING INSTALLATION AND UPON COMPLETION OF THE IRRIGATION SYSTEM, VALVES SHALL BE WIRED TO THE CONTROLLER STATION AS PER THE IRRIGATION ZONE NUMBERS.
- 15) INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON THE SITE.



MULTIPLE TECHLINE CONNECTION SUPPLIES FROM SINGLE CONTROL VALVE

NTS

NOTE:

1. NETAFIM TECHLINE TUBING TO BE ROUTED IN THE PLANT MATERIAL BED WITH AT MAXIMUM LATERAL SPACING OF 12 INCHES.
2. NETAFIM TECHLINE TUBING TO BE INSTALLED IN A GRID PATTERN. NETAFIM TECHLINE TUBING SHALL NOT BE INSTALLED IN A LONG CONTINUOUS RUN.
3. ALL NETAFIM TECHLINE TUBING AND FITTING CONNECTIONS SHALL BE CLAMPED WITH A CRIMP STEEL BAND OR HOSE CLAMP

File Name:	ASM	MLH	SAB	2012.02.03
	Desn.	Chkd.	Desn.	YY.MM.DD

Client/Project

Manatee County Board of County Commissioners

Fort Hamer Park Phase II

Manatee County, Florida

Title

LANDSCAPE IRRIGATION DETAILS & NOTES

Project No. 215610582

Scale 15 30 45 75

Sheet Revision

LI-502

of

0

REMARKS	LOAD SERVING										LOAD SERVING										REMARKS
	POLES AND		VOLT AMPS				VOLT AMPS				POLES AND		VOLT AMPS								
	AMPS	OKT.	A	B	WIRE SIZE	OKT. NO.	WIRE SIZE	A	B	AMPS	OKT.	A	B	WIRE SIZE	OKT. NO.	WIRE SIZE					
EX. RECEPT	1	20/1				12	1	2	12	1500							20/1	2	EX. HI-BAYS		
EX. HI-BAYS	3	20/1	1260	1500		12	3	4	12	1500							20/1	4	EX. HI-BAYS		
EX. HI-BAYS	5	20/1	1500			12	5	6	12	900							20/1	6	EX. LIGHTS		
EX. EXTERIOR LIGHTS	7	20/1		900		12	7	8	8								20/2 (*)	8	SITE LIGHTING		
SITE LIGHTING	9	20/2 (*)	770			10	9	10	8	495							20/1	10			
SITE LIGHTING	11			770		10	11	12	12								20/1 (*)	12	SITE LIGHTING		
SITE LIGHTING	13	20/2 (*)	550			10	13	14	12	40							20/1 (*)	14	RELAY PANEL		
SITE LIGHTING	15			550		10	15	16									20/1	16	EX. SPARE		
EXTERIOR LIGHTS	17	20/1 (*)	548			12	17	18									20/1	18	EX. SPARE		
EX. SPARE	19	20/1				12	19	20									20/1	20	EX. SPARE		
EX. SPARE	21	20/1				12	21	22									20/1	22	EX. SPARE		
EX. SPARE	23	20/1				12	23	24									20/1	24	EX. SPARE		
EX. SPARE	25	20/1				12	25	26									20/1	26	EX. SPARE		
EX. SPARE	27	20/1				12	27	28									20/1	28	EX. SPARE		
EX. SPARE	29	20/1				12	29	30									20/1	30	EX. SPARE		
EX. SPARE	31	20/1				12	31	32									20/1	32	EX. SPARE		
EX. SPARE	33	20/1				12	33	34									20/1	34	EX. SPARE		
EX. SPARE	35	20/1				12	35	36									20/1	36	EX. SPARE		
EX. SPARE	37	20/1				12	37	38									20/1	38	EX. SPARE		
EX. SPARE	39	20/1				12	39	40									20/1	40	EX. SPARE		
EX. SPARE	41	20/1				12	41	42									20/1	42	EX. SPARE		
TOTAL			3368	1260	3720	0				2895	40	2171	0								

REMARKS:
 PROVIDE NEW TYPE WRITTEN DIRECTORY.
 PROVIDE NEW BREAKERS FOR CIRCUITS DESIGNATED WITH AN ASTERICKS (*). UTILIZE SPARE BREAKERS WHERE AVAILABLE.
 EXISTING PANEL: A
 MOUNTING: SURFACE
 WIRE: 120/240, 1PH, 3W
 MAIN SIZE: 200 AMPS
 MAIN TYPE: MLO
 BRACING: MATCH EXISTING KMC
 EMI JOB #12-0470

NOTE: ALL CONDUCTORS ARE #12 AWG UNLESS OTHERWISE NOTED HERE IN OR ON RISER DIAGRAM OR AS NOTED IN THE SPECIFICATIONS FOR VOLTAGE DROP. PROVIDE A DEDICATED NEUTRAL FOR EACH FLUORESCENT LIGHTING CIRCUIT. CONDUCTORS SERVING 20 AMP BRANCH CIRCUITS SHALL BE #10 AWG UNLESS OTHERWISE NOTED. THE CIRCUIT BREAKER FEEDING THE SPD DEVICE SHALL BE INSTALLED AS CLOSE TO THE SPD DEVICES AS POSSIBLE TO MINIMIZE THE LEAD LENGTH. RELOCATE CIRCUIT BREAKERS AS REQUIRED.

CALCULATIONS					
CONV.	LOAD	DESIGN	LOAD		
KVA	AMPS	FACTOR	KVA	AMPS	
LIGHTING	12.2	50.6	1.25	15.2	63.3
CONV. OUTLETS	0.0	0.0	-	0.0	0.0
MOTORS	0.0	0.0	1	0.0	0.0
MISC	1.3	5.4	1	1.3	5.4
EMER	0.0	0.0	1	0.0	0.0
KITCHEN EQ	0.0	0.0	0.65	0.0	0.0
SPARE	0.0	0.0	1	0.0	0.0
SPACE ONLY	0.0	0.0	1	0.0	0.0
TOTAL	13.5	56.1	15.5	68.7	

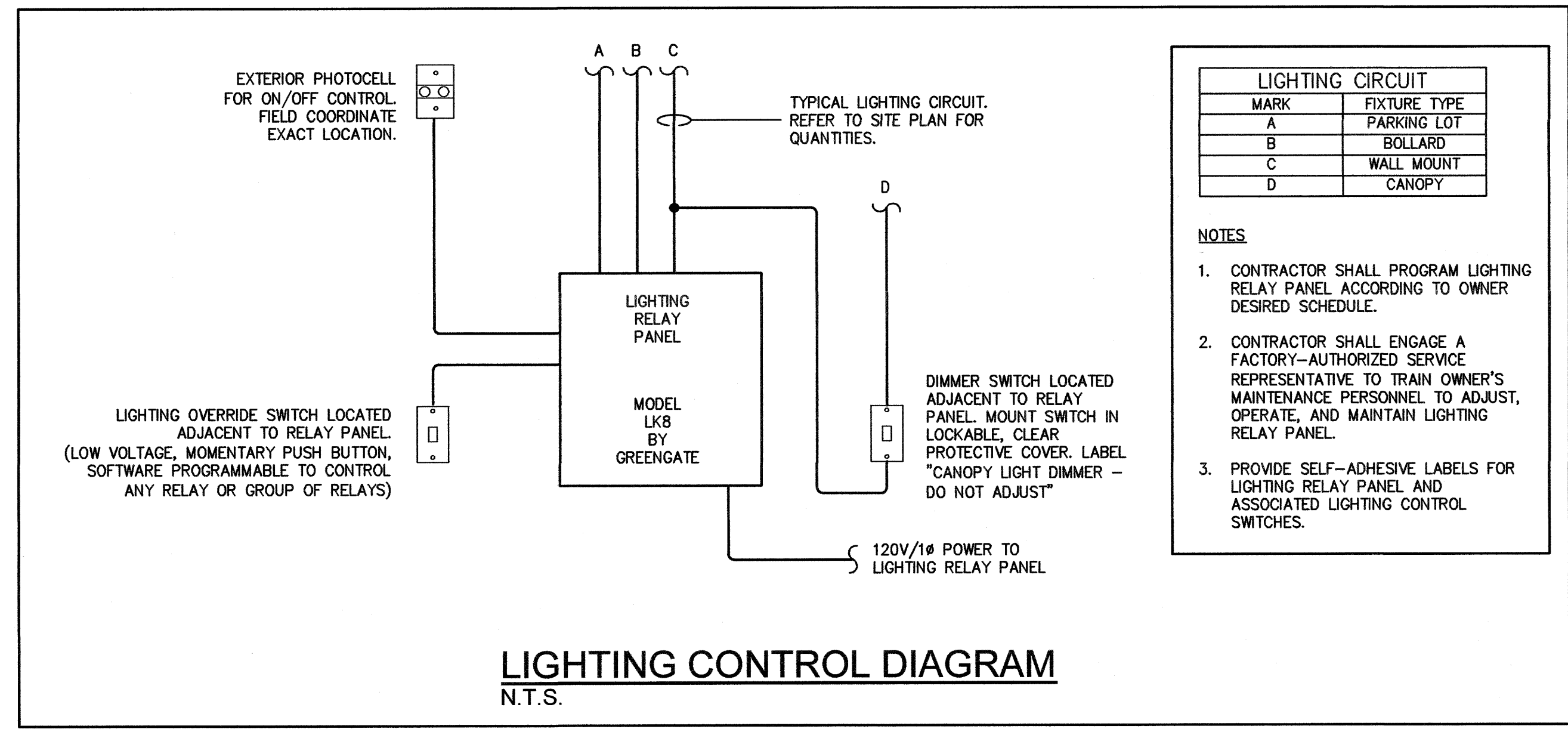
PHASE LOADS	
A	7563
B	5891

- ### GENERAL NOTES ELECTRICAL
- DO NOT SCALE FROM THESE DRAWINGS.
 - ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
 - ELECTRICAL CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES TO ASSURE PROPER CLEARANCES FOR EQUIPMENT AND TO KEEP THE JOB PROGRESSING.
 - ALL EXTERIOR WIRING DEVICES TO BE WEATHERPROOF AND SHALL BE G.F.I. TYPE.
 - CONDUIT RUNS SHOWN ARE DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR SIZING AND LOCATING PULL BOXES PER NEC AND FOR COORDINATION WITH OTHER DISCIPLINES.
 - ALL H.I.D. AND FLUORESCENT LIGHT FIXTURES SHALL BE FURNISHED WITH INTEGRAL FUSING.
 - COORDINATE EXACT LOCATIONS OF ALL ITEMS INSTALLED ON SITE WITH CIVIL ENGINEER.
 - USE 10 AWG CU. CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET, UNLESS OTHERWISE NOTED ON SITE PLAN. USE 10 AWG CU. CONDUCTORS FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS LONGER THAN 200 FEET, UNLESS OTHERWISE NOTED ON SITE PLAN.
 - ALL SITE LIGHTING POLES AND POLE BASES SHALL BE CAPABLE OF SUPPORTING THE ENTIRE WEIGHT AND WIND LOADS OF THE ENTIRE LIGHTING SYSTEM. SHOP DRAWINGS MUST INCLUDE DRAWINGS OF THE ENTIRE ASSEMBLY FOR EACH OF THE MOUNTING CONFIGURATIONS USED. DRAWINGS MUST BE SIGNED AND SEALED BY A FLORIDA REGISTERED STRUCTURAL ENGINEER AND DESIGNED TO THE FLORIDA BUILDING CODE WIND LOAD REQUIREMENTS FOR THE PROJECT SITE.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	MOUNTING AND NOTES
	TYPICAL LIGHTING SYMBOL NOTES: 1. UPPER CASE LETTER DENOTES FIXTURE TYPE. SEE FIXTURE SCHEDULE 2. LOWER CASE LETTER DENOTES SWITCHED LEG 3. SHADED FIXTURE SYMBOL INDICATES EMERGENCY FIXTURE 4. 'NL' DENOTES NIGHT LIGHT CIRCUIT	
	POLE MOUNTED LIGHT FIXTURE. REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.	SEE FIXTURE SCHEDULE
	WALL MOUNTED LIGHT FIXTURE. REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.	SEE FIXTURE SCHEDULE
	SURFACE MOUNTED LIGHT FIXTURE. REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.	SEE FIXTURE SCHEDULE
	TYPICAL RECEPTACLE, OUTLET AND JUNCTION BOX SUFFIX LEGEND: WP = WEATHERPROOF GFI = GROUND FAULT INTERRUPTER UP = UP (CONDUIT) DN = DOWN (CONDUIT) E = EXISTING	
	DUPLEX RECEPTACLE (20A, 120V).	M.H. 16" AFF U.O.N.
	JUNCTION OR OUTLET BOX, 4" SQUARE BOX U.O.N.	AS NOTED
	PANELBOARD, 120/240V, 1 PH., 3W	6"-6" AFF MIN. TO TOP
	RACEWAY RISER, UP OR DOWN AS NOTED.	SEE SPECIFICATIONS
	RACEWAY CONCEALED UNDER FLOOR, IN SLAB OR BELOW GRADE	SEE SPECIFICATIONS
	RACEWAY CONCEALED IN WALL OR CEILING	SEE SPECIFICATIONS
	HOMERUN TO PANEL, LETTERS INDICATE PANEL, NUMBERS INDICATE CIRCUITS.	SEE SPECIFICATIONS

NOTE: NOT ALL SYMBOLS SHOWN IN THIS LEGEND MAY NECESSARILY APPEAR IN THESE DOCUMENTS. ADDITIONAL SYMBOLS MAY BE DEFINED ELSEWHERE IN SPECIFIC DRAWINGS.



ENGINEERING MATRIX, INC.
 CONSULTING ENGINEERS
 1200 S. PALM BLVD., SUITE 200
 FT. PIERCE, FLORIDA 34947
 PAPER NO. 120470-1770-0000
 DATE: 01/14/2013
 CLIENT: MANATEE COUNTY, FLORIDA

DRAWING TITLE:
FINAL SITE PLAN

CONSTRUCTION DOCUMENTS

ISSUE DATE: 01.14.2013 EMI JOB NO. 12-0470

DRAWING REVISIONS:

REV	DATE	DESCRIPTION

SEAL:

DRAWING TITLE:
ELECTRICAL LEGEND, NOTES, & PANEL SCHEDULE

SCALE: AS NOTED NORTH:

DRAWING NUMBER:
E0.0

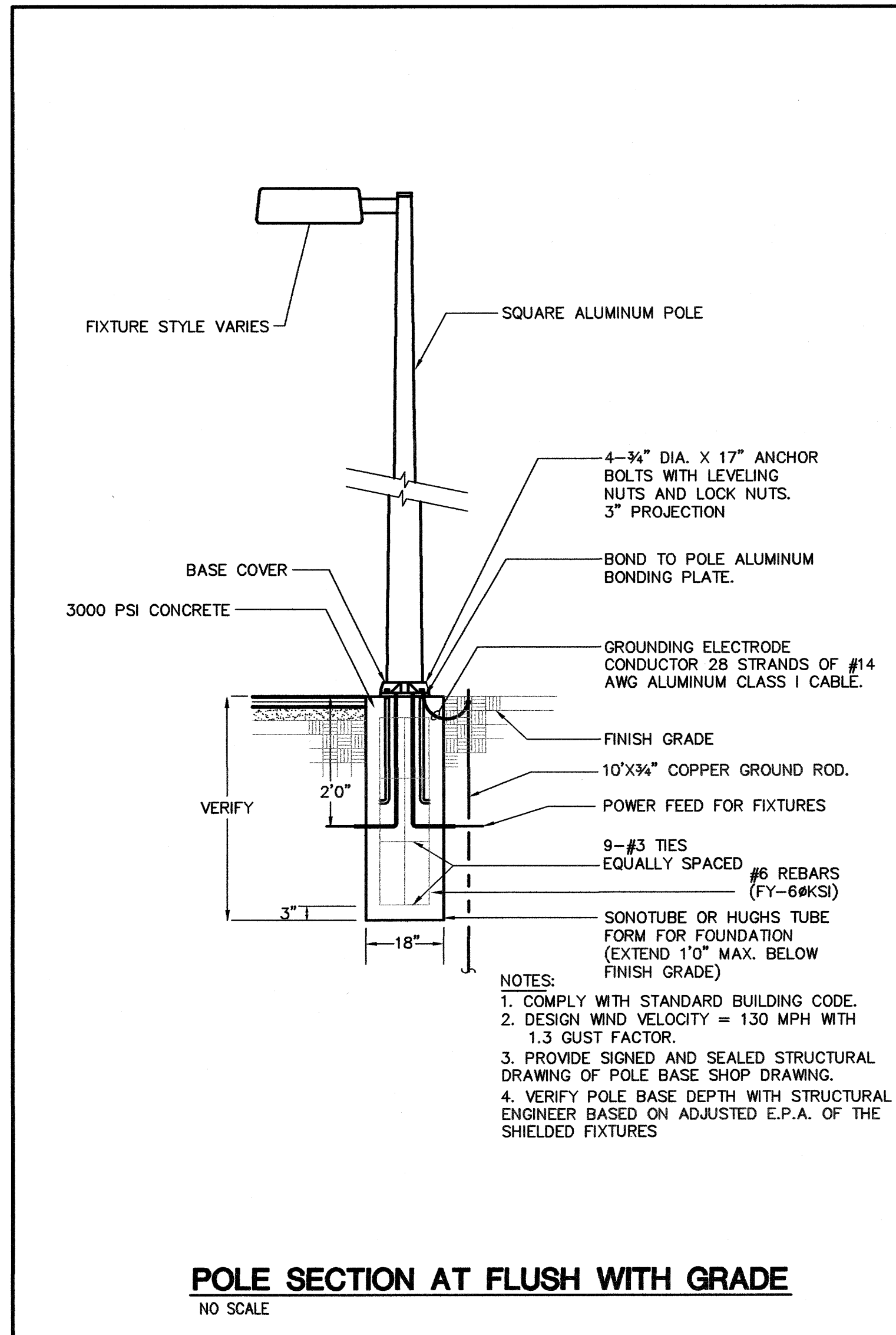
FORT HAMER PARK
PHASE II
 PART OF SECTION 17, TOWNSHIP 34 SOUTH, RANGE 19 EAST
 MANATEE COUNTY, FLORIDA

ELECTRICAL LEGEND, NOTES, AND PANEL SCHEDULE

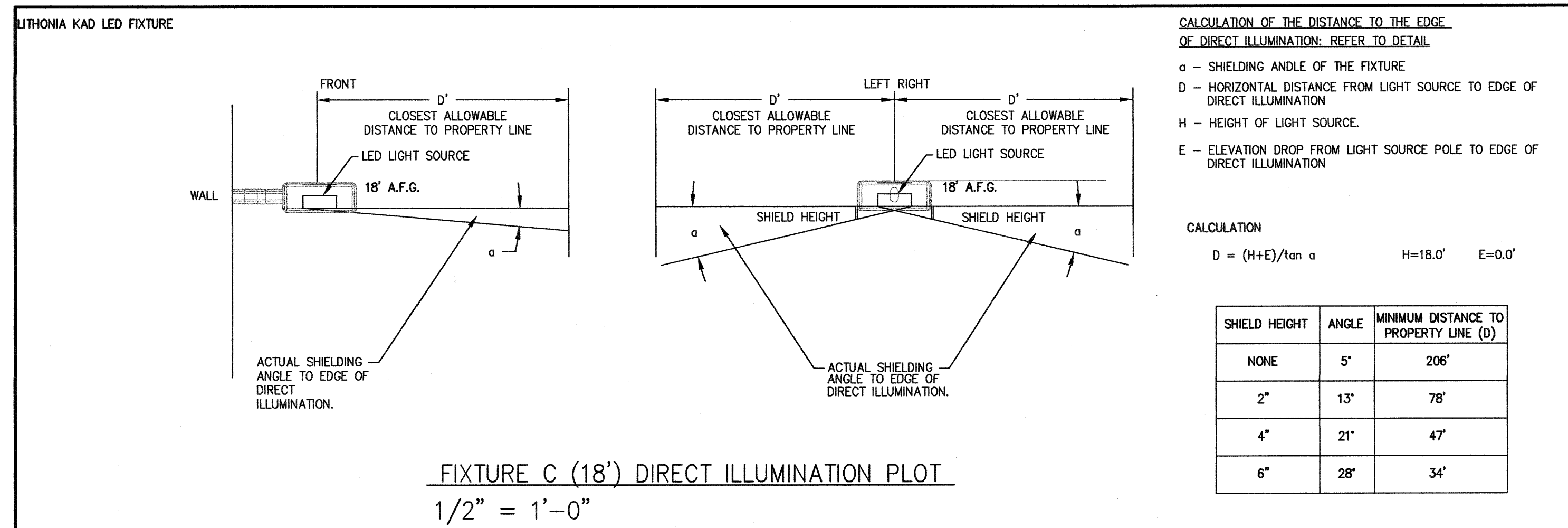
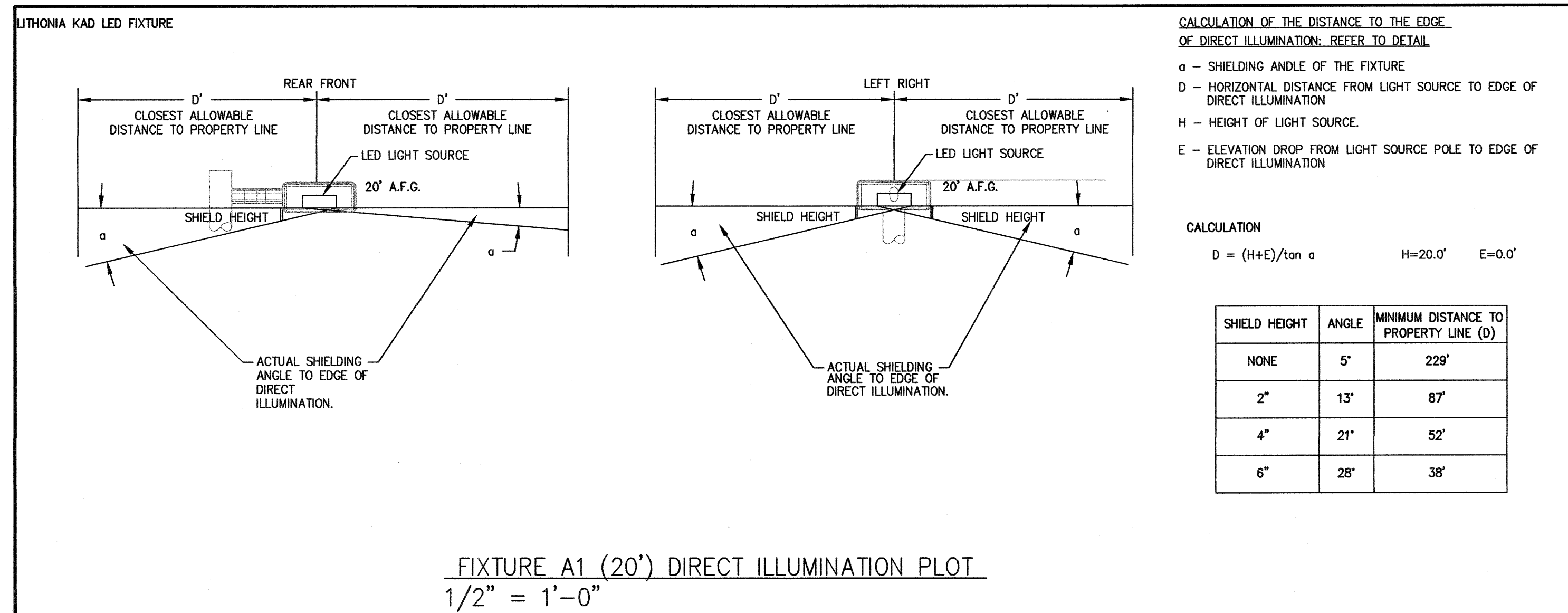
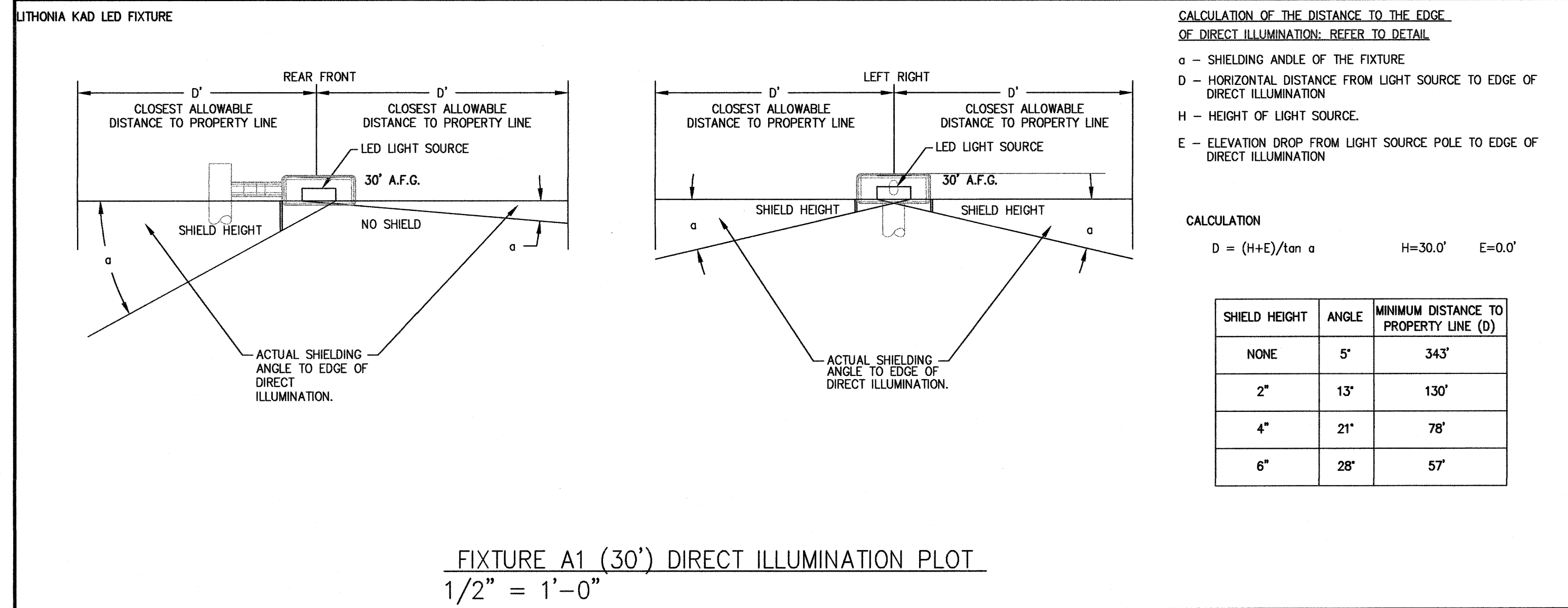
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LIGHT FIXTURE SCHEDULE

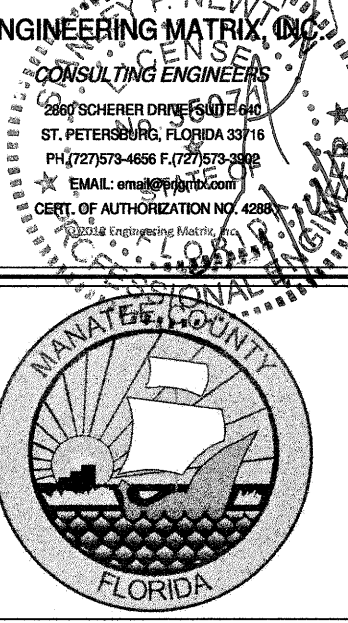
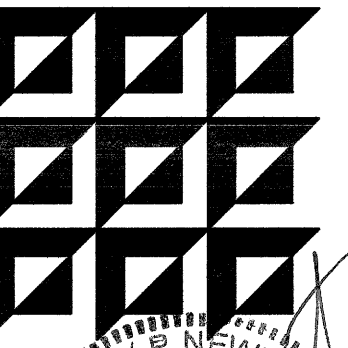
TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS		VOLTS	MOUNTING	REMARKS
			QTY	TYPE			
POLE 1	HAPCO OR EQUAL	SSA30F6-4-BM				CONCRETE BASE	30' SQUARE STRAIGHT ALUMINUM POLE WITH .25" WALL THICKNESS AND DARK BRONZE POWDER COAT FINISH. PROVIDE HOLES FOR PARKING LOT LIGHTS AS REQUIRED. PROVIDE ALL COMPONENTS FOR MOUNTING FIXTURES. REFER TO POLE BASE DETAIL FOR MORE INFORMATION.
POLE 2	HAPCO OR EQUAL	SSA20F4-4-BM				CONCRETE BASE	20' SQUARE STRAIGHT ALUMINUM POLE WITH .25" WALL THICKNESS AND DARK BRONZE POWDER COAT FINISH. PROVIDE HOLES FOR PARKING LOT LIGHTS AS REQUIRED. PROVIDE ALL COMPONENTS FOR MOUNTING FIXTURES. REFER TO POLE BASE DETAIL FOR MORE INFORMATION.
A1	LITHONIA	KAD-LED-1-63B350-40K-SR3-MVOLT-SPD-SF-DBBXD	63	LED 4000K 8988 LM 110 W	240V	4" ARM MOUNT TO 30' POLE	DIE-CAST CONTOURED ALUMINUM LED FIXTURE WITH TYPE 3 DISTRIBUTION AND DARK BRONZE FINISH. PROVIDE 4" SQUARE POLE MOUNTING ARM AND FUSING. PROVIDE SHIELDS AS NOTED ON PLAN.
A2	LITHONIA	KAD-LED-1-63B350-40K-SR3-MVOLT-SPD-SF-DBBXD	63	LED 4000K 6661 LM 74 W	240V	4" ARM MOUNT TO 20' POLE	DIE-CAST CONTOURED ALUMINUM LED FIXTURE WITH TYPE 3 DISTRIBUTION AND DARK BRONZE FINISH. PROVIDE 4" SQUARE POLE MOUNTING ARM AND FUSING. PROVIDE SHIELDS AS NOTED ON PLAN.
B	STONELIGHT	8" SQUARE GRANADA CAP - COLOR "WHEAT"	1	LED 8 W	120V	CONCRETE BASE	CONCRETE BOLLARD WITH 8 WATT LED FIXTURE AND INTEGRAL DRIVER. PROVIDE FUSING. PROVIDE CONCRETE BASE PER MANUFACTURER'S REQUIREMENTS.
C	LITHONIA	KAD-LED-1-63B350-40K-SR4-MVOLT-WBD-SF-DBBXD	63	LED 4000K 6661 LM 74 W	120V	9" ARM AND BRACKET MOUNTED TO WALL AT 18' AFG	DIE-CAST CONTOURED ALUMINUM LED FIXTURE WITH TYPE 3 DISTRIBUTION AND DARK BRONZE FINISH. PROVIDE WALL BRACKET AND FUSING. PROVIDE SHIELDS AS NOTED ON PLAN.
D	LITHONIA	KACM-LED-1-49B350-40K-SR4-MVOLT-SF-DMC-VG-DBBXD	49	LED 4000K 4762 LM 59 W	120V	SURFACE MOUNT TO UNDERSIDE OF CANOPY	DIE-CAST ALUMINUM OUTDOOR LED FIXTURE WITH TYPE 4 DISTRIBUTION AND DARK BRONZE FINISH. PROVIDE DIMMING DRIVER, VANDAL GUARD, AND FUSING. PROVIDE SHIELDS AS NOTED ON PLAN.



POLE SECTION AT FLUSH WITH GRADE
NO SCALE



ELECTRICAL DETAILS
NO SCALE



DRAWING PHASE:
FINAL SITE PLAN
CONSTRUCTION DOCUMENTS
ISSUE DATE: 01.14.2013 EMI JOB NO. 12-0470

DRAWING REVISIONS:

REV	DATE	DESCRIPTION

FORT HAMER PARK
PHASE II
PART OF SECTION 17, TOWNSHIP 34 SOUTH, RANGE 19 EAST
MANATEE COUNTY, FLORIDA

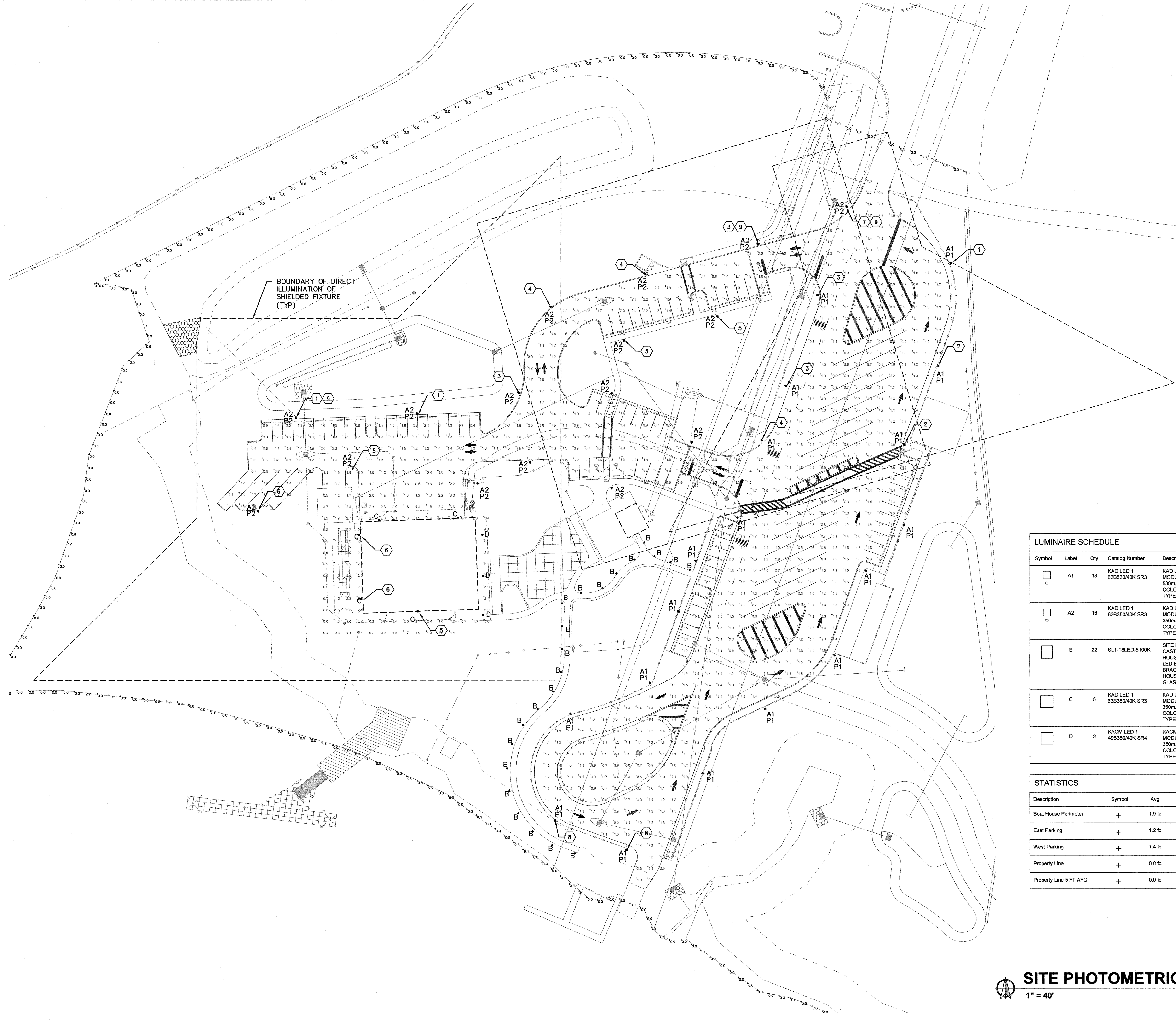
SEAL:

DRAWING TITLE:
ELECTRICAL DETAILS

SCALE: AS NOTED NORTH:

DRAWING NUMBER:
E0.1

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GENERAL NOTES

- DIRECT ILLUMINATION PLOTS SHOWN ONLY FOR WORST-CASE FIXTURES FOR CLARITY. REFER TO CALCULATION DETAILS FOR ADDITIONAL INFORMATION.
- PROPERTY LINE LOCATION AND ROUTING BASED UPON CIVIL PLANS. REFER TO CIVIL PLANS FOR ADDITIONAL PROPERTY LINE INFORMATION.

KEYED NOTES

- PROVIDE 2" HOUSE SIDE SHIELD AND 2" LEFT SIDE SHIELD.
- PROVIDE 2" LEFT SIDE SHIELD AND 2" FRONT SIDE SHIELD.
- PROVIDE 2" HOUSE SIDE SHIELD AND 2" RIGHT SIDE SHIELD.
- PROVIDE 2" HOUSE SIDE SHIELD.
- PROVIDE 2" FRONT SIDE SHIELD.
- PROVIDE 2" RIGHT SIDE SHIELD.
- PROVIDE 2" HOUSE SIDE SHIELD, 2" LEFT SIDE SHIELD, AND 2" RIGHT SIDE SHIELD.
- PROVIDE 6" HOUSE SIDE SHIELD.
- DIRECT ILLUMINATION PLOT SHOWN FOR THIS FIXTURE.

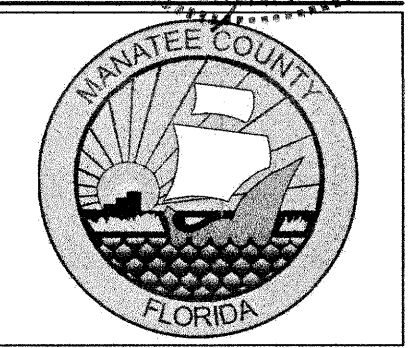
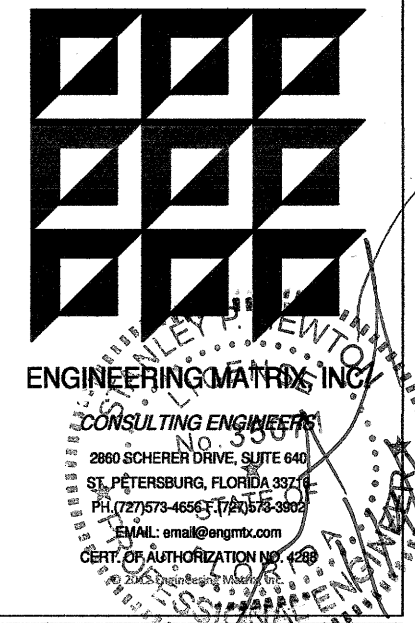
LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
□	A1	18	KAD LED 1 63B350/40K SR3	KAD LED WITH HLM MODULE, 63 LED'S, 350mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 3 LENS	ONE 110-WATT LED, DOWNLIGHTPOS.	KAD_LED_1_6_3B350_40K_S R3.ies	Absolute	0.81	110.9
□	A2	16	KAD LED 1 63B350/40K SR3	KAD LED WITH HLM MODULE, 63 LED'S, 350mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 3 LENS	ONE 74-WATT LED, DOWNLIGHTPOS.	KAD_LED_1_6_3B350_40K_S R3.ies	Absolute	0.81	74.5
□	B	22	SL1-18LED-5100K	SITE LITEFORM LED DIE CAST ALUMINUM UPPER HOUSING AND RISER, LED BOARDS AND BRACKETS MOUNTED IN HOUSING, CLEAR FLAT GLASS LENS	18 CONSTANT CURRENT DIODES, 5100K	sl1-185K.ies	Absolute	0.81	19.6
□	C	5	KAD LED 1 63B350/40K SR3	KAD LED WITH HLM MODULE, 63 LED'S, 350mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 3 LENS	ONE 74-WATT LED, DOWNLIGHTPOS.	KAD_LED_1_6_3B350_40K_S R3.ies	Absolute	0.81	74.5
□	D	3	KACM LED 1 49B350/40K SR4	KACM LED WITH HLM MODULE, 49 LED'S, 350mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 4 LENS	ONE 58-WATT HLM LED, DOWNLIGHTPOS.	KACM_LED_1_49B350_40K_S R4.ies	Absolute	0.81	59.04

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min
Boat House Perimeter	+	1.9 fc	6.8 fc	0.2 fc	34.0:1
East Parking	+	1.2 fc	2.3 fc	0.3 fc	7.7:1
West Parking	+	1.4 fc	2.4 fc	0.2 fc	12.0:1
Property Line	+	0.0 fc	0.1 fc	0.0 fc	N/A
Property Line 5 FT AFG	+	0.0 fc	0.1 fc	0.0 fc	N/A

SITE PHOTOMETRIC PLAN - FC VALUES AT 0' AFG
1" = 40'



DRAWING PHASE:
FINAL SITE PLAN

CONSTRUCTION DOCUMENTS

ISSUE DATE: 01.14.2013 EMI JOB NO. 12-0470

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REV	DATE	DESCRIPTION

FORT HAMER PARK
PHASE II
PART OF SECTION 17, TOWNSHIP 34 SOUTH, RANGE 19 EAST
MANATEE COUNTY, FLORIDA

SEAL:

DRAWING TITLE:
ELECTRICAL SITE PLAN

SCALE:
AS NOTED

NORTH:

DRAWING NUMBER:
E1.1

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- GENERAL NOTES**
- DIRECT ILLUMINATION PLOTS SHOWN ONLY FOR WORST-CASE FIXTURES FOR CLARITY. REFER TO CALCULATION DETAILS FOR ADDITIONAL INFORMATION.
 - PROPERTY LINE LOCATION AND ROUTING BASED UPON CIVIL PLANS. REFER TO CIVIL PLANS FOR ADDITIONAL PROPERTY LINE INFORMATION.

- KEYED NOTES**
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 - PROVIDE 2" LEFT SIDE SHIELD AND 2" FRONT SIDE SHIELD.
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 - PROVIDE 2" HOUSE SIDE SHIELD.
 - PROVIDE 2" FRONT SIDE SHIELD.
 - PROVIDE 2" RIGHT SIDE SHIELD.
 - PROVIDE 2" HOUSE SIDE SHIELD, 2" LEFT SIDE SHIELD, AND 2" RIGHT SIDE SHIELD.
 - PROVIDE 6" HOUSE SIDE SHIELD.
 - DIRECT ILLUMINATION PLOT SHOWN FOR THIS FIXTURE.

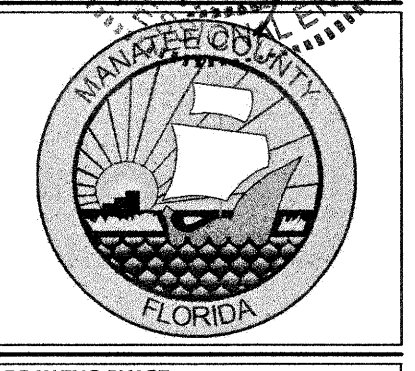
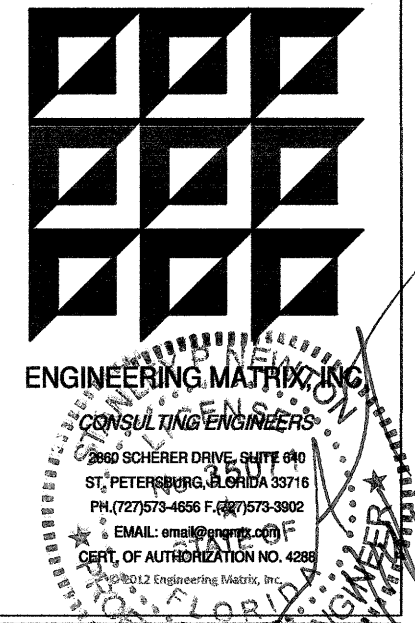
LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
□	A1	18	KAD LED 1 63B35040K SR3	KAD LED WITH HLM MODULE, 63 LED'S, 530ma DRIVER, 4000K COLOR TEMPERATURE, TYPE 3 LENS	ONE 110-WATT LED, DOWNLIGHTPOS.	KAD_LED_1_6_3B350_40K_S R3.ies	Absolute	0.81	110.9
□	A2	16	KAD LED 1 63B35040K SR3	KAD LED WITH HLM MODULE, 63 LED'S, 350ma DRIVER, 4000K COLOR TEMPERATURE, TYPE 3 LENS	ONE 74-WATT LED, DOWNLIGHTPOS.	KAD_LED_1_6_3B350_40K_S R3.ies	Absolute	0.81	74.5
□	B	22	SL-18LED-5100K	SITE LITEFORM LED DIE CAST ALUMINUM UPPER HOUSING AND RISER, LED BOARDS AND BRACKETS MOUNTED IN HOUSING, CLEAR FLAT GLASS LENS	18 CONSTANT CURRENT DIODES, 5100K	sl1-18Sk.ies	Absolute	0.81	19.6
□	C	5	KAD LED 1 63B35040K SR3	KAD LED WITH HLM MODULE, 63 LED'S, 350ma DRIVER, 4000K COLOR TEMPERATURE, TYPE 3 LENS	ONE 74-WATT LED, DOWNLIGHTPOS.	KAD_LED_1_6_3B350_40K_S R3.ies	Absolute	0.81	74.5
□	D	3	KACM LED 1 49B35040K SR4	KACM LED WITH HLM MODULE, 49 LED'S, 350ma DRIVER, 4000K COLOR TEMPERATURE, TYPE 4 LENS	ONE 59-WATT HLM LED, DOWNLIGHTPOS.	KACM_LED_1_49B350_40K_SR4.ies	Absolute	0.81	59.04

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min
Boat House Perimeter	+	1.9 fc	6.8 fc	0.2 fc	34.0:1
East Parking	+	1.2 fc	2.3 fc	0.3 fc	7.7:1
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Property Line	+	0.0 fc	0.1 fc	0.0 fc	N/A
Property Line 5 FT AFG	+	0.0 fc	0.1 fc	0.0 fc	N/A

SITE PHOTOMETRIC PLAN - FC VALUES AT 5' AFG
1" = 40'



DRAWING PHASE:
FINAL SITE PLAN

CONSTRUCTION DOCUMENTS

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REV	DATE	DESCRIPTION

FORT HAMER PARK
PHASE II
PART OF SECTION 17, TOWNSHIP 34 SOUTH, RANGE 19 EAST
MANATEE COUNTY, FLORIDA

SEAL:

DRAWING TITLE:
ELECTRICAL SITE PLAN

SCALE: AS NOTED NORTH:

DRAWING NUMBER:
E1.2

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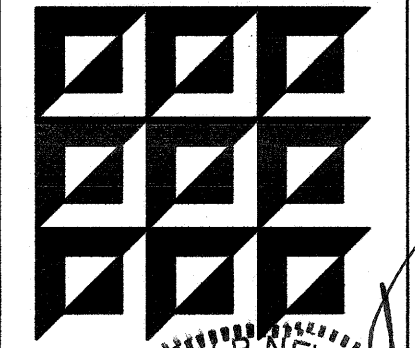


GENERAL NOTES

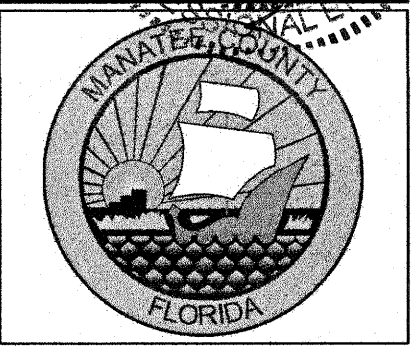
1. ROUTING OF CONDUIT SHOWN ON ELECTRICAL SITE PLAN IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND SHALL COORDINATE ALL NEW WORK AND CONDUIT ROUTING ACCORDINGLY TO AVOID CONFLICTS.
2. CONTRACTOR SHALL FIELD COORDINATE LIGHT POLE LOCATIONS WITH SITE CONDITIONS, INCLUDING LANDSCAPING, TREES, SIDEWALKS, ETC. PRIOR TO ROUGH-IN. NOTIFY OWNER/ENGINEER OF ANY CONFLICTS WITH THE LIGHTING LAYOUT SHOWN.
3. ANY LANDSCAPING, SIDEWALKS, ETC. DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO MATCH ITS ORIGINAL CONDITION.
4. ALL SITE CONDUIT SHALL BE A MINIMUM OF 1" UNLESS OTHERWISE NOTED.
5. NEW, ABOVE GROUND CONDUIT RUNS SHALL BE CONCEALED WITHIN THE EXISTING BOAT HOUSE WALLS AND/OR ABOVE SOFFITS. EXPOSED PIPING WILL NOT BE ACCEPTED UNLESS PRIOR APPROVAL FROM OWNER/ENGINEER.

KEYED NOTES

- ① ROUTE CIRCUIT THROUGH LIGHTING RELAY PANEL. CONTINUE CIRCUIT TO DESIGNATED SPACE IN EXISTING PANEL 'A'. REFER TO LIGHTING CONTROL DETAIL FOR ADDITIONAL INFORMATION.
- ② PROVIDE DIMMER SWITCH FOR CANOPY LIGHT FIXTURES. MOUNT DIMMER IN LOCKABLE, CLEAR PROTECTIVE COVER AND LOCATE ADJACENT TO THE LIGHTING RELAY PANEL. CONTRACTOR SHALL FIELD ADJUST CANOPY LIGHT LEVEL TO OWNER ACCEPTABLE LEVEL. REFER TO LIGHTING CONTROL DETAIL FOR ADDITIONAL INFORMATION.
- ③ LIGHTING RELAY PANEL, LITEKEEPER MODEL LK8 AS MANUFACTURED BY GREENGATE. PROVIDE TWO POLE RELAY CARD AS REQUIRED FOR 240V/1Ø CIRCUITS. PROVIDE JUNCTION BOX WITH 120V POWER FOR LIGHTING RELAY PANEL.



ENGINEERING MATRIX INC.
CONSULTING ENGINEERS
1101 W. UNIVERSITY BLVD., SUITE 200
TALLAHASSEE, FLORIDA 32310
TEL: 904.209.1111
FAX: 904.209.1112
www.matrixinc.com



DRAWING PHASE:
FINAL SITE PLAN

CONSTRUCTION DOCUMENTS

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**FORT HAMER PARK
PHASE II**
PART OF SECTION 17, TOWNSHIP 34 SOUTH, RANGE 19 EAST
MANATEE COUNTY, FLORIDA

SEAL:

DRAWING TITLE:
**ELECTRICAL
SITE PLAN**

SCALE: AS NOTED NORTH:

DRAWING NUMBER:

E1.3

SITE PLAN - ELECTRICAL
1" = 40'