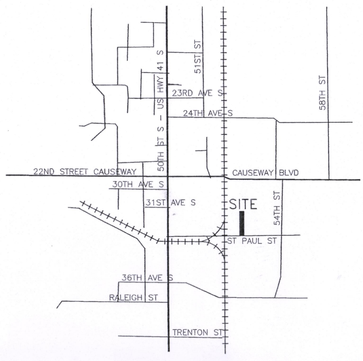
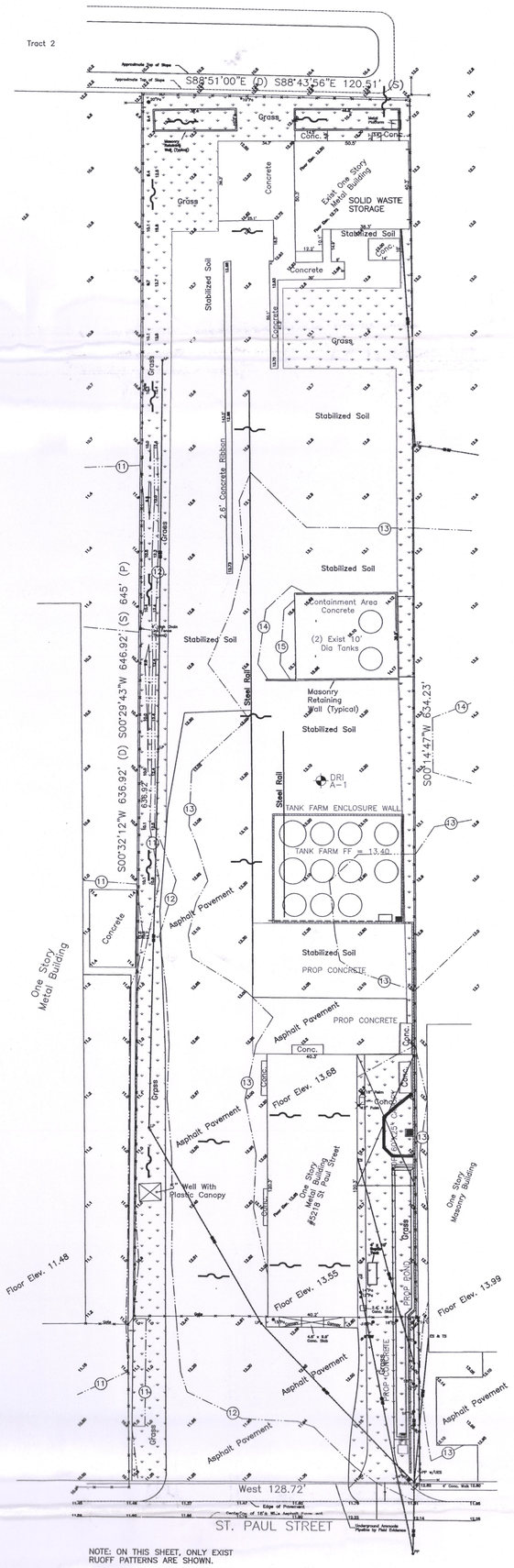
Section 34, Township 29 South, Range 19 East,
Hillsborough County, Florida.
North Latitude 27°55'10.9" West Longitude 82°23'45.6"
Folio 047081.0400



VICINITY MAP
NTS
NORTH

FLOOD & ELEVATION NOTES:
This Lot as described is in zone "B" or 500 year flood zone as defined by the National Flood Insurance Program.
(Community Panel No. 120112 0367 E, dated 8/15/89)
THIS PARCEL IS NOT WITHIN THE 100 YEAR FLOOD ZONE.
Elevations shown are in feet and refer to N.G.V.D. Mean Sea Level Datum.



NOTE: ON THIS SHEET, ONLY EXIST RUOFF PATTERNS ARE SHOWN.

LEGEND

29.81	EXISTING GRADE – FT NGVD
23.15	PROPOSED GRADE – FT NGVD
23.48 / 23.15	PROP TOP OF CURB / PROP EDGE OF PAVEMENT
22	EXIST CONTOUR – FT NGVD
	RUNOFF DIRECTION
15"RCP @0.6%	PROP 15" RCP @ 0.6% SLOPE, BED FOR H-20 LOADING.
DBI-C TOG 43.20 INV 39.00	PROP FDOT TYPE C DBI PER INDEX 232, WITH H.D. STEEL GRATE TOP OF GRATE ELEVATION = 43.20 INVERT = 39.00
ME 38.90	PROP MITERED ENDWALL, INVERT 38.90, PER FDOT INDEX 272
CP55	PROP 5' X 5' X 4" CONCRETE PAD
TBM 22.04	TEMPORARY BENCH MARK ELEV = 22.04 FT NGVD
TOB 23.0	TOP OF BANK ELEV = 23.0 FT NGVD
CO 32.69	CLEANOUT INV 32.69
DSCO•	DOWNSPOUT AND CLEAN OUT
DS•	DOWNSPOUT
	PROP 3' DOOR SWING
	PROP 6"X6"X6" CONC CURB STOP
	PROP 12'X18' HANDCAPPED SPACE W/SIGNAGE
R1-1	PROP STOP SIGN
14	(14) PROP 9'X18' (MIN) REGULAR PARKING SPACES
7	(7) PROP 8'X16' (MIN) COMPACT PARKING SPACES W/SIGNAGE
	PROP 3 GAL VIBRUNUM HEDGE 3' O.C. (OAE)
	PROP LIVE/LAUREL OAK TREE (OAE)
	PROP CREPE MYRTLE TREE (OAE)
RP1	PROP 5/8" WATER METER & REDUCED PRESSURE BACKFLOW ASSEMBLY
℄	PROPERTY LINE
℄	CENTER LINE
	EXIST LIGHT POLE
	EXIST UTILITY POLE
OHW	EXIST OVERHEAD WIRES
	EXIST TREE TO BE REMOVED
OAE	OR APPROVED EQUAL
6" CPE	6" CORRUGATED POLYETHYLENE PIPE ADS HIGHWAY GRADE O.A.E.
8" PCPE	8" PERFORATED CORRUGATED POLYETHYLENE PIPE W/O SOCK. ADS HIGHWAY GRADE O.A.E.
DUMP	6' HIGH DUMPSTER ENCLOSURE ON 10"X10"X6" 3000 PSI CONC PAD.
	EXIST FIRE HYDRANT
	EXIST WATER VALVE & BOX
DSSP	DOWNSPOUT & SPLASHPAD

LEGAL DESCRIPTION:
Tract 7 in the Northwest 1/4 of Section 34, Township 29 South, Range 19 East, SOUTH TAMPA SUBDIVISION, according to map or plat thereof as recorded in Plat Book 6, Page 3 of the Public Records of Hillsborough County, Florida, Less the following described part thereof: Beginning at the Northwest corner of said Tract 7, and running thence South 88°51'00" East, along the North boundary line of said Tract 7, 524.58 feet; thence South 00°32'12" West, 636.93 feet, to a point on the North right-of-way 516.24 feet; thence North 00°12'15" West, 647.43 feet, to the Point of Beginning; and also Less right-of-way for St. Paul Street of the South side thereof.

AUGER BORING A-1 & DRI-1 DATA
SEE TEST LAB REPORT 01-2220 OF 9/19/01

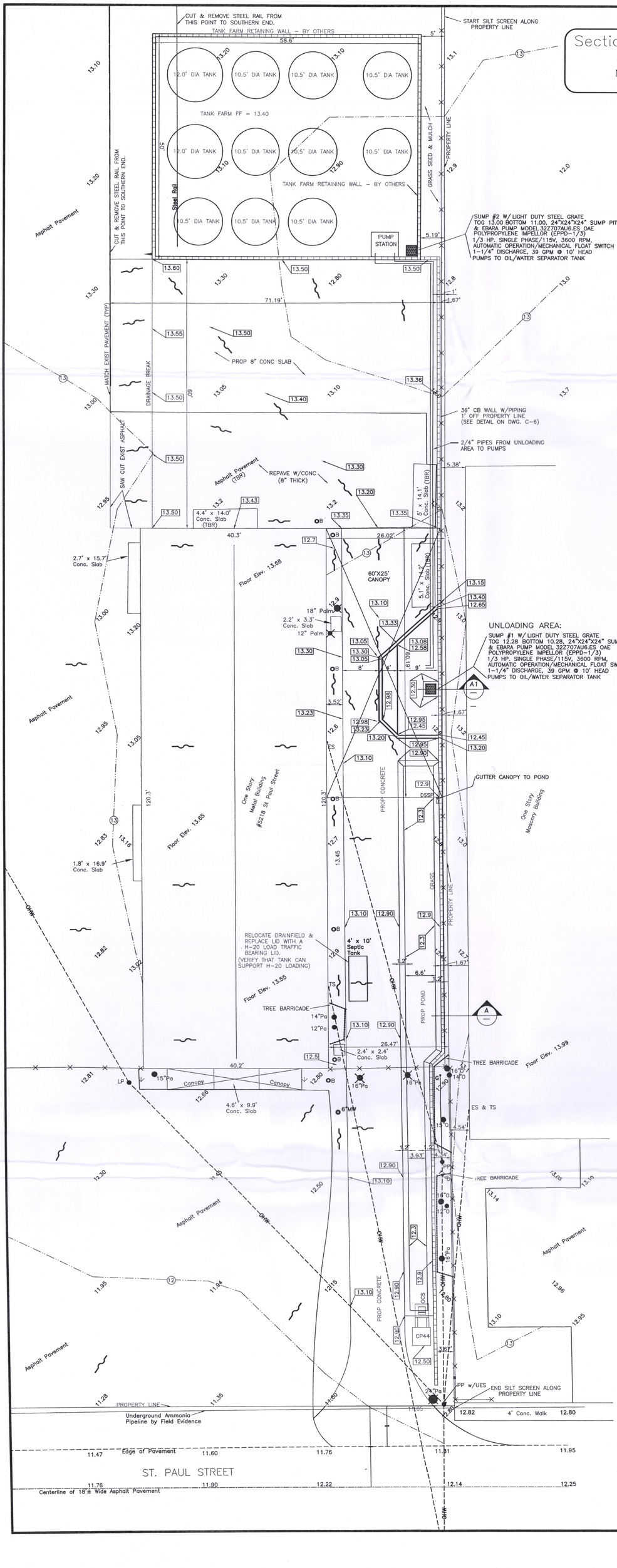
DEPTH	DESCRIPTION	SOIL CLASSIFICATION
0" TO 0'-6"	FILL-GRAY-BROWN SLIGHTLY SILTY FINE SAND W/TRACES OF ROOTS	SP-SM
0"-6" TO 0'-10"	FILL-LIMEROCK BASE COURSE MATERIAL	—
0'-10" TO 1'-7"	DARK GRAY-BLACK SLIGHTLY SILTY FINE SAND.	SP-SM
1'-7" TO 5'-0"	DARK GREY-BROWN FINE SAND	SP
5'-0"	BORING TERMINATED GROUND WATER ENCOUNTERED AT 1'-11"	

NOTES: 1) ASTM D 3385 DRI INFILTRATION RATE = 0.25 INCH/HOUR AT DRI-1 AT 11" BGS.
2) SOIL CLASSIFIED BASED UPON "UNIFIED SOILS CLASSIFICATION SYSTEM."
3) ESTIMATED SEASONAL HIGH WATER AT 1.75' BELOW EXISTING GRADE.

7/10/03

C. F. FERNANDEZ P. E. TAMPA, FLORIDA				
CLIFF BERRY, INC 5218 ST. PAULS STREET, TAMPA,FL				
TANK FARM ADDITION				
7/10/03	DRAWN	CHL	JOB NO:	DRAWING NO:
7/10/03	CHECKED	CFF	SCALE: 1" = 30'	C-1
7/10/03	APPROVED	CFF		

F:\Cliff Berry\cbi-Tanks C1.dwg Thu Jul 10 15:23:28 2003 C. F. Fernandez, P. E.



Section 34, Township 29 South, Range 19 East,
Hillsborough County, Florida.
North Latitude 27°55'10.9" West Longitude 82°23'45.6"
Folio 047081.0400

PROJECT AREA SITE PLAN

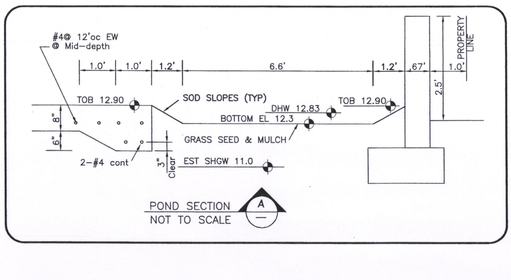
1" = 10.0'

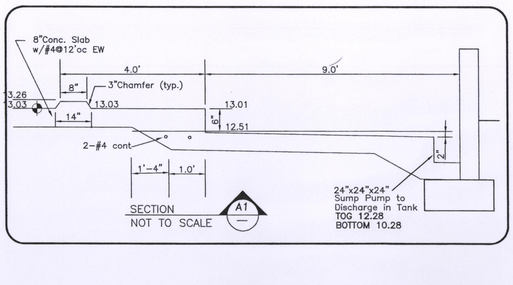
NORTH

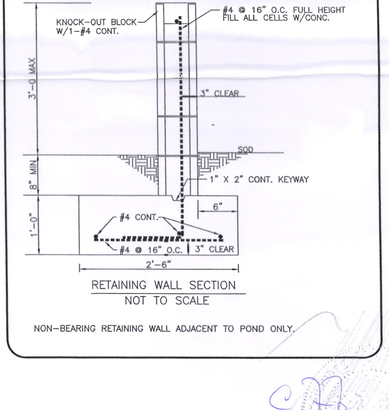
BEFORE YOU DIG
CALL SUNSHINE 1-800-432-4770
48 HOURS PRIOR TO ANY EXCAVATION

LEGEND

29.81	EXISTING GRADE – FT NGVD
23.15	PROPOSED GRADE – FT NGVD
23.48 / 23.15	PROP TOP OF CURB / PROP EDGE OF PAVEMENT
22	EXIST CONTOUR – FT NGVD
	RUNOFF DIRECTION
15"RCP @0.6%	PROP 15" RCP @ 0.6% SLOPE, BED FOR H-20 LOADING.
DBI-C TOG 43.20 INV 39.00	PROP FDOT TYPE C DBI PER INDEX 232, WITH H.D. STEEL GRATE TOP OF GRATE ELEVATION = 43.20 INVERT = 39.00
ME 38.90	PROP MITERED ENDWALL, INVERT 38.90, PER FDOT INDEX 272
CP55	PROP 5' X 5' X 4" CONCRETE PAD
TBM 22.04	TEMPORARY BENCH MARK ELEV = 22.04 FT NGVD
TOB 23.0	TOP OF BANK ELEV = 23.0 FT NGVD
CO 32.69	CLEANOUT INV 32.69
DSCO	DOWNSPOUT AND CLEAN OUT
DS	DOWNSPOUT
	PROP 3' DOOR SWING
	PROP 6"X6"X6" CONC CURB STOP
	PROP 12"X18' HANDCAPPED SPACE W/SIGNAGE
R1-1	PROP STOP SIGN
14	(14) PROP 9"X18' (MIN) REGULAR PARKING SPACES
7	(7) PROP 8'X16' (MIN) COMPACT PARKING SPACES W/SIGNAGE
	PROP 3 GAL VIBRUNUM HEDGE 3' O.C. (OAE)
	PROP LIVE/LAUREL OAK TREE (OAE)
	PROP CREPE MYRTLE TREE (OAE)
RP1	PROP 5/8" WATER METER & REDUCED PRESSURE BACKFLOW ASSEMBLY
℄	PROPERTY LINE
℄	CENTER LINE
	EXIST LIGHT POLE
	EXIST UTILITY POLE
OHW	EXIST OVERHEAD WIRES
	EXIST TREE TO BE REMOVED
OAE	OR APPROVED EQUAL
6" CPE	6" CORRUGATED POLYETHYLENE PIPE ADS HIGHWAY GRADE O.A.E.
8" PCPE	8" PERFORATED CORRUGATED POLYETHYLENE PIPE W/O SOCK. ADS HIGHWAY GRADE O.A.E.
DUMP	6' HIGH DUMPSTER ENCLOSURE ON 10'X10'X6" 3000 PSI CONC PAD.
	EXIST FIRE HYDRANT
	EXIST WATER VALVE & BOX
DSSP	DOWNSPOUT & SPLASHPAD







NON-BEARING RETAINING WALL ADJACENT TO POND ONLY.

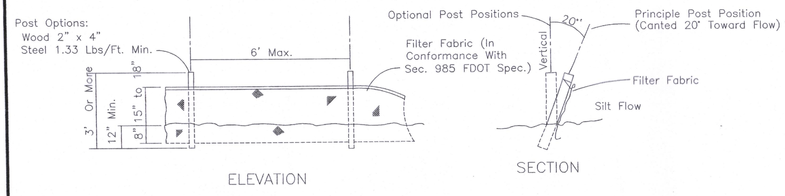
C. F. FERNANDEZ P. E.
TAMPA, FLORIDA

CLIFF BERRY, INC
5218 ST. PAULS STREET, TAMPA,FL

TANK FARM ADDITION

7/10/03	DRAWN	CHL	JOB NO:	DRAWING NO:
7/10/03	CHECKED	CFF	SCALE: 1" = 10'	C-2
7/10/03	APPROVED	CFF		

F:\Cliff Berry\cbi-tanks-2.dwg Thu Jul 10 16:35:40 2003 C. F. Fernandez, P. E.

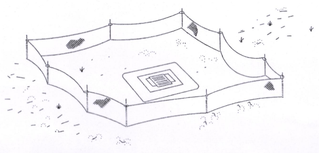


ELEVATION

SECTION

Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE ~~~ SILT FENCE



Type ~~~ Silt Fence Protection Around Ditch Bottom Inlets.

Note: Spacing for Type ~~~ Fence to be in accordance with Chart ~, Sheet 1 of 3 and ditch installations at drainage structures Sheet 2 of 3.

Type ~~~ Silt Fence

SILT FENCE APPLICATIONS

TEMPORARY EROSION CONTROL
FDOT INDEX #102

NOTE: INSTALL HAYBALES OR SILT SCREEN PRIOR TO COMMENCING ANY CONSTRUCTION.

Hillsborough County Minor Redevelopment Site
Cliff Berry Inc – Revised 9/02

	SqFt	Acre	
Total Site Area	79,193	1.8180	100.0%
Existing Roofed Area	7,223	0.1658	9.1%
Existing Asphalt Area	19,479	0.4472	24.6%
Existing Concrete Area	4,280	0.0983	5.4%
(includes 1,647 sqft containment area)			
Exist Asphalt & Concrete Area	23,759	0.5454	30.0%
Existing Stabilized Area	27,273	0.6261	34.4%
(includes shell, gravel and limerock stabilized areas)			
Existing Impervious Area	58,255	1.3374	73.6%
Existing Good Grass Area	20,938	0.4807	26.4%
Proposed Roofed Area	8,723	0.2003	11.0%
Proposed Asphalt Area	17,808	0.4088	22.5%
Proposed Concrete Area	13,096	0.3006	16.5%
(includes 1,647+2,925 sqft containment areas)			
Prop Asphalt & Concrete Area	30,904	0.7095	39.0%
Proposed Stabilized Area	21,975	0.5045	27.7%
(includes shell, gravel and limerock stabilized areas)			
Proposed Impervious Area	61,602	1.4142	77.8%
Proposed Good Grass Area	17,591	0.4038	22.2%
Total Project Area	11,469	0.2633	100.0%
(includes existing asphalt paved area to be resurfaced)			
Existing Roofed Area	0	0.0000	0.0%
Existing Asphalt Area	1,605	0.0368	14.0%
Existing Concrete Area	212	0.0049	1.8%
Existing Stabilized Area	5,274	0.1211	46.0%
Existing Good Grass Area	4,378	0.1005	38.2%
Proposed Roofed Area	8,723	0.2003	76.1%
Proposed Asphalt Area	0	0.0000	0.0%
Proposed Concrete Area	5,855	0.1344	51.1%
Proposed Stabilized Area	0	0.0000	0.0%
Proposed Good Grass Area	5,614	0.1289	48.9%
Total Area of Alteration	7,355	0.1688	
(includes existing good grass & stabilized areas)			
Alteration Area/Site Area			9.3%
Alteration Area/Green Area			35.1%

(Qualifies as a 3.2.B minor redevelopment <10,000 sqft)

The Project Area will be divided into two drainage basins. The north basin, will drain to the proposed tank farm. This runoff is considered "contact rainwater" and will be treated onsite via an oil/water separation tank. The tank effluent shall be free of any oily sheen and discharged to drain in the historic drainage pattern.
Please note: the truck unloading area, draining to sump #1 will be pumped to the oil./water separator.
The southern basin will drain to a grassed swale and percolate into the ground. This swale will treat the first 1/2" of runoff. and overflow south to St Paul Street.
The rest of the site will drain in the existing patterns.

	SqFt	Acre
The Southern basin area =	8,507	0.1953
First 1/2" runoff = 8,507/24 =	354	CuFt

Swale storage volume

Elev Ft NGVD	Area SqFt	Del Vol CuFt	Tot Vol CuFt
12.30	652	0	0
12.45	680	100	100
12.60	708	104	204
12.75	736	108	312
12.84	753	67	379
12.90	964		

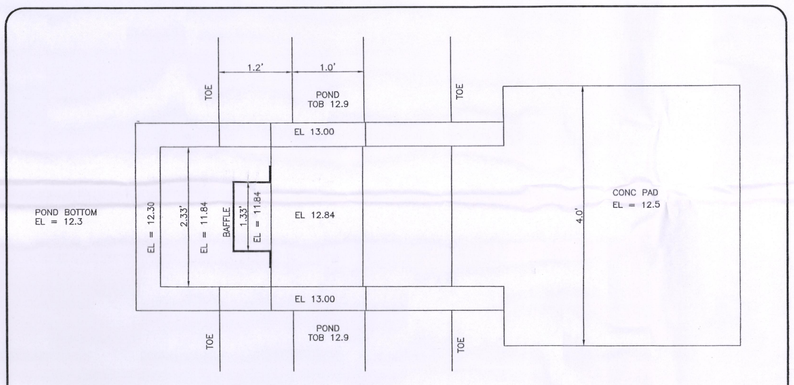
Avg Exist Grade at Swale = 12.74 Ft NGVD
Est SHGW EL = 11.0 Ft NGVD
DRI Perc Rate = 0.25 "/hr
Design Percolation Rate = 0.041 "/hr
Drawdwon time = 34 hrs <72 hrs

MUD TRACKING NOTE:

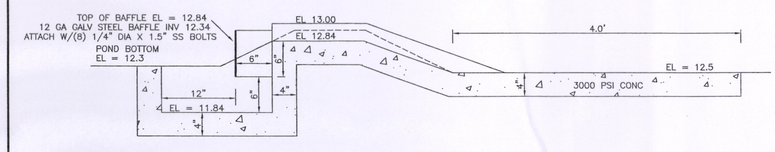
CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATIS-FACTION OF THE ENGINEER AND/OR LOCAL AUTHORITIES.

STORMWATER OPERATION AND MAINTAINCE NOTES

1) MAINTAIN ALL GUTTERS AND DOWNSPOUTS CLEAN, FREE OF DEBRIS AND IN PROPER WORKING ORDER. CLEAN AND INSPECT ALL GUTTERS AND DOWNSPOUTS EVERY 6 MONTHS.
2) MAINTAIN ALL FLUMES FREE OF DEBRIS/SILT AND IN PROPER WORKING ORDER. INSPECT INSPECT 6 MONTHS. REPAIR ALL EROSION AROUND RIPRAP WITH CONCRETE OR SOD.
3) MAINTAIN POND CLEAN AND FREE OR DEBRIS/SILT/EROSION. REPAIR ALL EROSION WITH SOD OR CONCRETE. MOW POND REGULARLY AND REMOVE GRASS CLIPPINGS. SCARIFY POND ANNUALLY. INSPECT POND EVERY 6 MONTHS.
4) MAINTAIN OUTFALL CONTROL STRUCTURE CLEAN, FREE OR DEBRIS/SILT AND IN PROPER WORKING ORDER. INSPECT AND CLEAN EVERY 6 MONTHS AND WHEN POND DRAWS DOWN IN GREATER THAN 36 HOURS OR POND OVERFLOWS.
5) AN ON SITE PORTABLE GENERATOR SHALL BE MAINTAINED IN "COLD UNIT STANDBY" CONDITION. THIS GENERATOR SHALL BE CAPABLE OF SUPPLYING POWER TO ALL THE ON SITE STORMWATER PUMPS.
6) WHEN THE STORMWATER SYSTEM IS MAINTAINED PROPERLY, IT WILL OPERATE PROPERLY. KEEP A COPY OF THESE PLANS ONSITE FOR REFERANCE. CALL THE ENGINEER WITH ANY AND ALL QUESTIONS. THE OWNER IS LEGALLY BOUND TO MAINTAIN THE SYSTEM.



OUTFALL CONTROL STRUCTURE PLAN VIEW
(NTS)



OUTFALL CONTROL STRUCTURE
(NTS)

C. F. FERNANDEZ P. E.
TAMPA, FLORIDA

CLIFF BERRY, INC
5218 ST. PAULS STREET, TAMPA,FL

TANK FARM ADDITION

7/10/03	DRAWN	CHL	JOB NO:	DRAWING NO:
7/10/03	CHECKED	CFF	SCALE: NONE	C-3
7/10/03	APPROVED	CFF		

F:\Cliff Berry\cb1-tanks-4.dwg Thu Jul 10 16:00:03 2003 C. F. Fernandez, P. E.

LANDSCAPE NOTES:

MINIMUM TREE REQUIREMENT = 6 PER GROSS ACRE = 2 TREES/1 SPECIES (BASED UPON HEAVY COMMERCIAL/INDUSTRIAL USE)
ALL LANDSCAPE MATERIALS & INSTALLATIONS SHALL MEET OR EXCEEDE THE REQUIREMENTS HILLSBOROUGH COUNTY LANDSCAPE REGULATIONS AND THE LDR 6.06.00 – 6.06.04
ALL PLANT MATERIALS SHALL BE FLORIDA GRADE #1 OR BETTER.
ALL PLANT MATERIALS SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES.
ALL TREES SHALL BE 6' HIGH MINIMUM AND 1" DBH AT PLANTING.
50% OF REQUIRED TREES SHALL BE NATIVE TREES.
75% OF REQUIRED TREES SHALL BE SHADE TREES.
ALL SHRUBS SHALL BE COLD TOLERANT, NON DECIDUOUS, 24" HIGH MINIMUM AND PLANTED 3' MAXIMUM ON CENTER.
ALL VINES SHALL HAVE A MINIMUM OF 3 RUNNERS EACH WITH A MINIMUM 1' LENGTH.
NO MORE THAN 50% OF THE LANDSCAPED AREA MAY BE PLANTED WITH SHALLOW ROOTED TURFGRASS VARIETIES. THESE TURFGRASS VARIETIES SHALL BE CONSOLIDATED IN AND LIMITED TO AREAS PROVIDED WITH A CENTRAL AUTOMATIC IRRIGATION SYSTEM. PLANT THE BALANCE WITH WATER CONSERVING VARIETIES OF TREES, SHRUBS, GROUND COVERS, TURFGRASS, AND/OR MULCHES. STORMWATER PONDS AND STEEP SLOPES ARE EXEMPT.
ALL LANDSCAPED AREA SHALL BE PROVIDED WITH 100% IRRIGATION COVERAGE. THE IRRIGATION SYSTEM SHALL USE THE LOWEST QUALITY WATER AVAILABLE AND BE A LOW VOLUME SYSTEM. (HOSE BIBBS SHALL BE INSTALLED WITHIN 50 FEET OF ALL REQUIRED LANDSCAPING.)
ALL SIDE SLOPES GREATER THAN 5:1 SHALL BE SODDED.
STAKE SOD ON ALL SLOPES GREATER THAN 2.5:1.
NO DEBRIS, SOLVENTS, FILL, EQUIPMENT, VEHICLES, ETC. SHALL BE PLACED WITHIN THE DRIP LINE OF A PROTECTED TREE.
EXISTING TREES TO REMAIN SHALL BE PROTECTED BY A 3 FOOT HIGH WOOD BARRICADE AS SHOWN. THE BARRICADE SHALL BE ATLEAST 4 UPRIGHT 2" X 2" WOOD POSTS AT 4 FOOT ON CENTER WITH 1"X4" HOROZONTAL STRINGERS. NO GROUND WITHIN THE BARRICADE SHALL BE DISTURBED.
ALL TREE PRUNING OF PROTECTED TREES SHALL BE IN ACCORDANCE WITH THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS.
ALL TREE ROOTS WITHIN PROPOSED IMPROVEMENT AREAS AND ORIGINATING FROM A PROTECTED TREE SHALL BE SEVERED CLEAN AT THE LIMITS OF THE PRESERVED AREA
NO TREES SHALL BE REMOVED EXCEPT AS INDICATED.
IF EXISTING TREES WILL BE TRANSPLANTED, A FIELD MEETING WITH LAL STAFF IS REQUIRED TO APPROVE THE TREES AND THE METHOD OF TRANSPLANTATION.

ALL REQUIREMENTS OF ORDINANCE 90-6 SHALL BE MET.
ALL PROPOSED TREES AND HEDGES SHALL BE MULCHED ALL AROUND.

GENERAL SITE NOTES:

1) CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING UTILITY LOCATIONS/INVERTS IN FIELD AND REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO STARTING ANY WORK.

2) PRIOR TO BEGINNING ANY CLEARING OR GRUBBING OF THE SITE, HAY BALES OR APPROVED SILT SCREEN SHALL BE STAKED TO THE GROUND AT ALL LOW AREAS TO PREVENT OFF SITE DEPOSITION OF ERODED SOILS BY STORMWATER RUNOFF. ADDITIONAL MEASURES SHALL BE TAKEN TO PREVENT THE DEPOSITION ON ADJACENT ROADWAYS OF SOILS FROM THE CONSTRUCTION SITE ON TIRES OF VEHICLES ENTERING AND LEAVING THE SITE.

3) THE RETENTION AND OR DETENTION POND SHALL BE EXCAVATED PRIOR TO PREFORMING ANY CONSTRUCTION ON THE SITE AND THE SITE SHALL BE GRADED SUCH THAT ALL STORMWATER RUNOFF IS DIRECTED TO THE POND DURING CONSTRUCTION. HAY BALES OR APPROVED SILT SCREEN SHALL BE STAKED AT ALL CATCH BASIN INLETS AND SWALE OUTLETS TO THE POND TO PREVENT ERODED SOILS AND CONSTRUCTION DEBRIS FROM CLOGGING THE STORMWATER SYSTEM. THE STORMWATER SYSTEM SHALL BE CLEAN AND FREE OF DEBRIS AT COMPLETION OF CONSTRUCTION.

4) WHERE FILL MATERIAL IS REQUIRED, THE EXISTING VEGETATION AND ROOTS SHALL BE REMOVED PRIOR TO PLACING ANY FILL MATERIAL. THE FILL SHALL BE PLACED IN NO GREATER THAT 12" LIFTS AS MEASURED LOOSE AND COMPACTED TO A UNIFORM DENSITY OF 95% MODIFIED PROCTOR UNDER AREAS TO BE PAVED AND 95% MODIFIED PROCTOR ELSEWHERE. FILL MATERIAL SHALL BE CLEAN COARSE SAND WITH LESS THAN 1% SILT, CLAY AND ORGANICS. THE COMPACTED FILL SHALL BE TESTED BY AN INDEPENDENT TESTING LABORATORY AND THE RESULTS SUPPLIED TO THE ENGINEER.

5) ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL OR BETTER THAN THE EXISTING CONDITION PRIOR TO CONSTRUCTION UNLESS SPECIFICALLY EXEMPTED BY THESE PLANS. RESTORATION SHALL BE INCIDENTAL TO CONSTRUCTION AND NO EXTRA COMPENSATION SHALL BE ALLOWED.

6) LEGAL DESCRIPTIONS, BOUNDARY SURVEYS, TOPOLOGICAL SURVEYS, TREE SURVEYS, OCCUPATIONAL SURVEYS, SOILS TESTING, EXISTING EASEMENTS AND RIGHT-OF-WAYS HAVE BEEN SUPPLIED TO THE ENGINEER BY OTHERS AND THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR CORRECTNESS OR ACCURACY. THE ENGINEER'S WORK SHOWN ON THE PLANS IS BASED UPON SURVEY INFORMATION PROVIDED BY OTHERS.

7) LOCATIONS OF ALL EXISTING UTILITY FACILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES TO MAKE ARRANGEMENTS FOR ANY RELOCATION OF THE EXISTING UTILITY FACILITIES. ALL UTILITY FACILITIES WHICH INTERFERE WITH THE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANY AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED THE CONTRACTOR BY THE RELOCATION OF VARIOUS UTILITY FACILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.

8) ALL WORK SHALL BE ACCOMPLISHED IN A PROFESSIONAL MANNER AND IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD BUILDING CODE, NFPA, HILLS COUNTY BUILDING CODE, ZONING ORDINANCE, LANDSCAPE ORDINANCE AND ALL OTHER RELEVANT CODES, REGULATIONS/STANDARDS.

9) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PREFORM ALL NECESSARY CONSTRUCTION STAKING REQUIRED TO INSTALL THE IMPROVEMENTS SHOWN ON THE PLANS. THE ENGINEER SHALL BE CONSULTED TO MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS. HOWEVER THIS IN NO WAY RELIEVES THE CONTRACTOR OF HIS RESPONSIBILITY FOR CONSTRUCTING THE IMPROVEMENTS TO ACCOMPLISH THE INTENT OF THE PLANS.

10) SUGGESTED ONSITE PAVEMENT SPECS:
1-1/2 INCH TYPE S-2 ASPHALT CONCRETE
6 INCH COMPACTED SHELL 98% MOD. PROC,
PRIME & TACK COAT.
6 INCH STABILIZED SUBGRADE, 95% MOD PROC, MIN LBR 40.
OR
6 INCH 3000 PSI CONCRETE W/ 10X10/6X6 WWF. 1/2 INCH BITUMOUS CONSTRUCTION JOINTS EVERY 640 SQFT MAX.
6 INCH STABILIZED SUBGRADE, 95% MOD PROC, MIN LBR 40.
NOTE: THESE SPECIFICATIONS MAY BE MODIFIED BY THE OWNER, BUT A HARD, DURABLE PAVED SURFACE MUST BE PROVIDED.

11) ONSITE SIDEWALKS SHALL BE 4" 3000 PSI CONCRETE WITH SAW CUT JOINT EVERY 4 FEET AND 1/2 INCH BITUMOUS CONSTRUCTION JOINTS EVERY 16 FEET. ALL SIDEWALKS ADJACENT TO PAVED AREA SHALL HAVE A BELL FOOTER. THE CONCRETE SHALL HAVE A BRUSH FINISH (OAE) PERPANDICULAR TO THE LENGTH. NOTE: THESE SPECIFICATIONS MAY BE MODIFIED BY THE OWNER, BUT A HARD, DURABLE NON-SKID PAVED SURFACE MUST BE PROVIDED.

12) ALL ONSITE PIPING SHALL BE PROPERLY BEDDED PER THE MANUFACTURER'S SPECIFICATIONS FOR H-20 LOADING.

HILLSBOROUGH COUNTY
PROTECTIVE BARRIER REQUIREMENT AND SPECIFICATIONS

PROTECTIVE BARRIES are used duing land alteration and construction activities to proctect trees and natural areas to be retained on a site.

PROTECTIVE BARRIERS must be erected arounds TREES to be retained within an area where land alteration and construction activities will occur as well along NATURAL AREAS where such areas are adjacant to permitted land alteration or construction activities.
A PROTECTIVE BARRIER must remain in place until the land alteration and construction activities are completed or until commencement of grade finishing and sodding. No ground disturbance must occur within the barricaded area. The following represents the County's minimum protection barrier specifications.

1. TREES– To restrict access into the area within the DRIPLINE of a tree, a physical structure not less than 3 feet in height, comprised of wood or other suitable material, is placed around the tree at the DRIPLINE, except where land alteration or construction activities are approved within the dripline.

   The DRIPLINE of a tree is the imaginary, vertical line that extends downward from the outermost tips of the tree's branches to the ground.
   Fig A.

   BARRIER SPECIFICATIONS FOR TREES:
   FOUR CORNER UPRIGHT STAKES OF NO LESS THAN 2"X2" lumber connected by horizontal members of no less than 1"x4" lumber; or upright stakes spaced at 5' intervals of no less than 2"x2" lumber connected by silt screen fabric or material of comparable durability. Fig B.

2. NATURAL AREAS– To restrict access into areas where land alteration and construction activities are not authorized, a physical structure not less than 3 feet in height is place along the perimeter of such area:

   BARRIER SPECIFICATIONS FOR NATURAL AREAS:
   Upright stakes of no less than 2"x2" lumber spaced not more than 25 feet apart and connected by twine flagged with plastic surveying tape at regular intervals of 5'-10', Fig C. Other methods of demarcation will be consideded depending upon the charcteristics of the site.

   WHY A BARRIER
   1. To protect all above groung portions of trees and other significant vegetation from mechanical damage.
   2. To protect root systems from compaction.
   3. To provide awareness of protected areas to equipment operators.

   WHY IT WORKS
   A tree's chance for survival is greatly enchanced if no construction material, heavy equipment or stockpiling of soil is allowed inside the tree barrier; only hand labor.

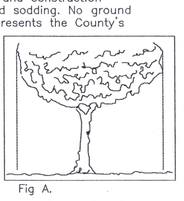


Fig A.

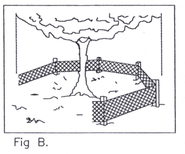


Fig B.

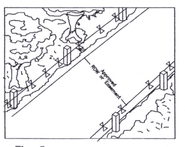
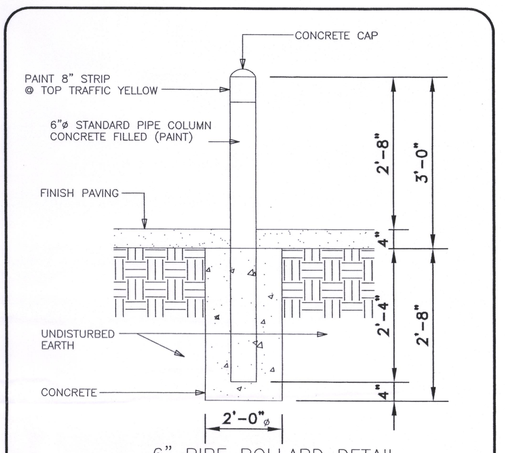


Fig C.

For additional information, contact Planing & Growth Management Department.
Telephone (813) 272 5920

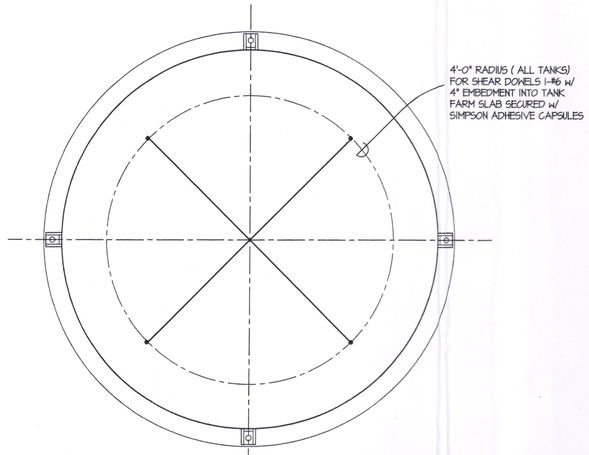


6" PIPE BOLLARD DETAIL
NOT TO SCALE
THIS DETAIL MAY BE CHANGED TO SUIT THE OWNER.
BOLLARD SHALL BE 30" MINIMUM FROM EDGE OF DRIVE

7/14/03

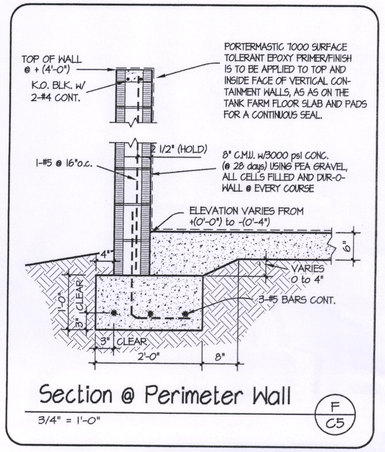
C. F. FERNANDEZ P. E. TAMPA, FLORIDA				
CLIFF BERRY, INC 5218 ST. PAULS STREET, TAMPA,FL				
TANK FARM ADDITION				
7/10/03	DRAWN	CHL	JOB NO:	DRAWING NO:
7/10/03	CHECKED	CFF	SCALE: NONE	C-4
7/10/03	APPROVED	CFF		

F:\Cliff Berry\cbi-tanks-3.dwg Thu Jul 10 15:40:33 2003 C. F. Fernandez, P. E.



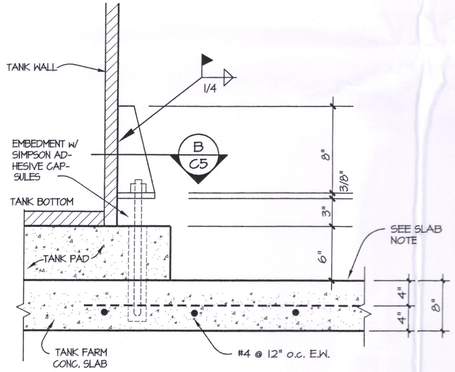
Tank Shear Anchor Plan (D / C5)

1/2" = 1'-0"



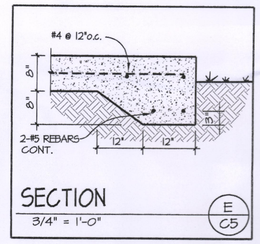
Section @ Perimeter Wall (F / C5)

3/4" = 1'-0"



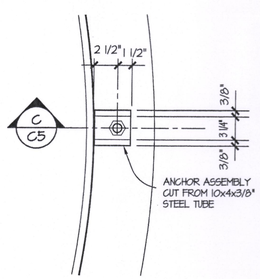
Tank Anchor Detail (C / C5)

1 1/2" = 1'-0"



SECTION (E / C5)

3/4" = 1'-0"



Tank Anchor Plan (B / C5)

1 1/2" = 1'-0"

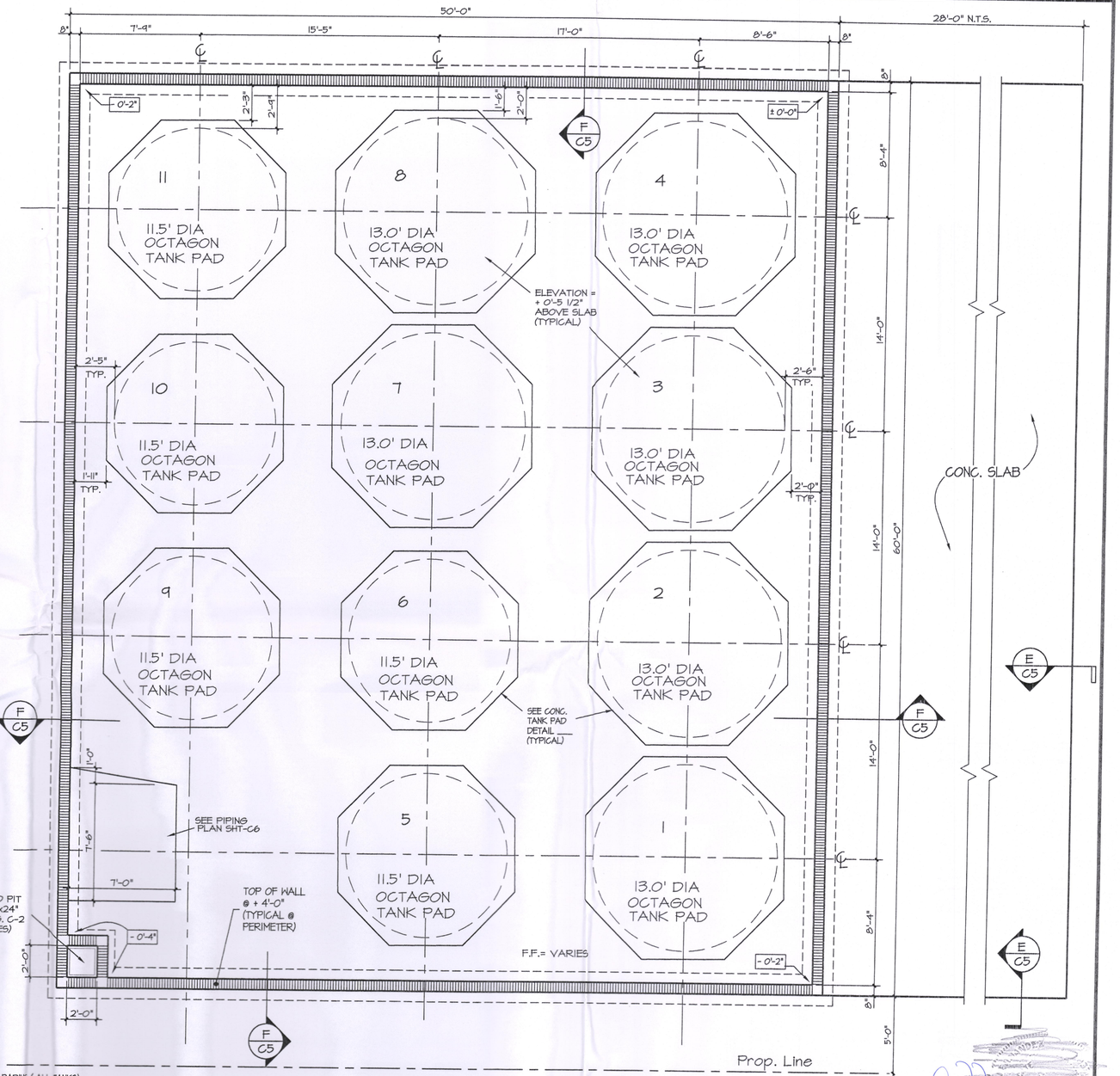
GENERAL NOTES

1. FLORIDA BLDG. CODE 2001 EDITION
2. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE

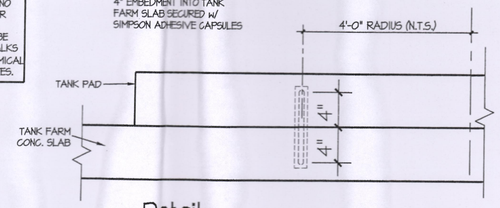
DESIGN CRITERIA	
WIND LOAD (3 SECOND GUST)	120mph Wind
IMPORTANCE FACTOR---I.0, EXPOSURE CATEGORY---"B" (RESIDENTIAL)	
CONCRETE (@ 28 DAYS)	f'_c = 3000 PSI
CONCRETE MAS. UNITS	ASTM C90 GRADE "N" TYPE II
MORTAR	TYPE 'M' OR 'S'
REINFORCING STEEL	ASTM-A615- GRADE 60
MIN. LAP FOR: #4 BARS = 24" #5 BARS = 30"	
SOIL PRESSURE (ASSUMED)	2,000 PSF
ALLOWABLE PRESSURE @ BOTTOM OF FOOTINGS. THIS IS TO BE FIELD VERIFIED PRIOR TO PLACEMENT OF ANY REINFORCING STEEL OR CONCRETE IN THE EXCAVATION BY A RECOGNIZED TESTING LABORATORY. COMPACTION TEST MUST HAVE A MINIMUM 95% MODIFIED PROCTOR DENSITY PER ASTM D 1557-78.	
DESIGN IS IN COMPLIANCE WITH SECTION 1606 OF CHAPTER 16 FOR WIND LOAD PER THE 2001 EDITION OF THE FLORIDA BUILDING CODE.	

SLAB NOTE

8" CONC. SLAB REINFORCED W/ FIBERFIL AND #4 REBARS AT 12"o.c. ON A 6 MIL VAPOR BARRIER ON CLEAN, POISONED FILL COMPACTED TO 98% MAXIMUM DENSITY (MODIFIED PROCTOR TEST) AT OPTIMUM MOISTURE CONTENT.
POISONING TO BE DONE NO LATER THAN 24hrs. PRIOR TO ANY POUR. ALL SOIL UNDER CONCRETE MUST BE POISONED, INCLUDING HALLKS AND DRIVES -- SEE CHEMICAL TERMITE TREATMENT NOTES.



4'-0" RADIUS (ALL TANKS) FOR SHEAR DOWELS 1-#6 W/ 4" EMBEDMENT INTO TANK FARM SLAB SECURED W/ SIMPSON ADHESIVE CAPSULES



Detail (A / C5)

1 1/2" = 1'-0"

TANK FARM CONTAINMENT STORAGE CAPACITY:

VOLUME AVAILABLE FROM TOP OF TANK PADS TO TANK FARM SLAB (6" DEPTH)

INSIDE TANK FARM FOOTPRINT = 48'-8" x 58'-8" = 2855.5 s.f. TANK PAD FOOTPRINT:
6 TANKS @ 13'-0" DIA. = (6) (132.7) = 796.0 s.f.
5 TANKS @ 11'-6" DIA. = (5) (103.8) = 519.0 s.f.
TOTAL AREA OF PADS = 1315.0 s.f.

AVAILABLE VOLUME USING 6" DEPTH (IGNORE TANK FARM SLAB SLOPE) =
2855.5 - 1315.0 = 1540.5 s.f. x 6" DEPTH = 770.2 c.f.

TANK FOOTPRINT:
6 TANKS @ 12'-0" DIA. = (6) (113.04) = 678.2 s.f.
5 TANKS @ 10'-6" DIA. = (5) (86.55) = 432.7 s.f.
TOTAL AREA OF TANKS = 1110.9 s.f.

REQUIRED STORAGE VOLUME = LARGEST TANK x 110% = (30,000 GAL) (1.1) / 7.48 = 4412.0 c.f.

REMAINING VOLUME REQUIRED = (4412.0 - 770.5) / 1110.9 = 3.28 ft
FROM TOP OF TANK PADS TO TOP OF CONTAINMENT WALL
USE 4'-0" FROM HIGHEST POINT OF TANK FARM SLAB (NORTHWEST CORNER) TO TOP OF CONTAINMENT WALL.

FOUNDATION PLAN

1/4" = 1'-0"

C. F. Fernandez 7/10/03

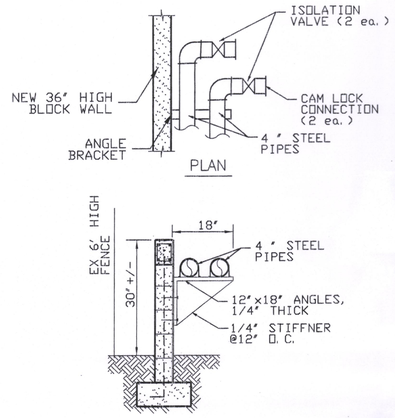
C. F. FERNANDEZ P. E.
TAMPA, FLORIDA

CLIFF BERRY, INC
5218 ST. PAULS STREET, TAMPA,FL

TANK FARM ADDITION

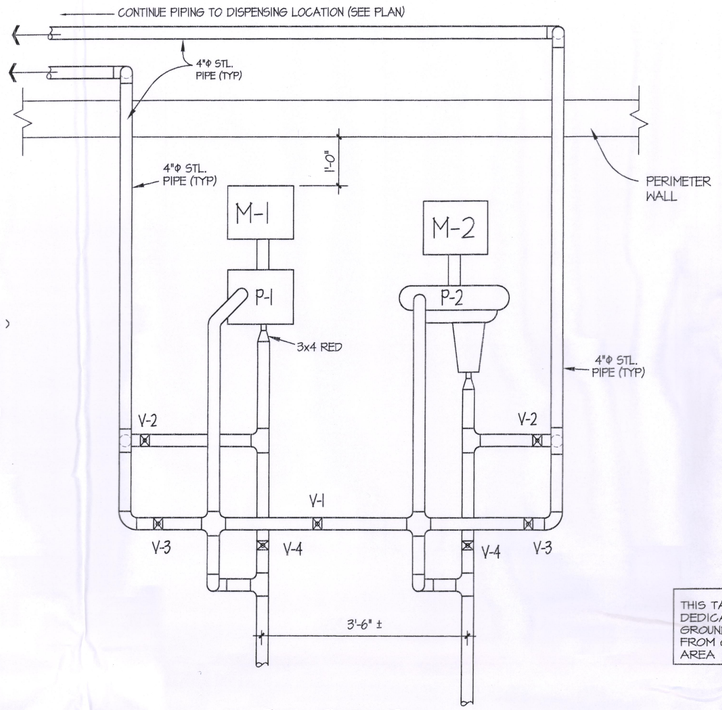
7/10/03	DRAWN	CHL	JOB NO:	DRAWING NO:
7/10/03	CHECKED	CFF	SCALE: 1" = 10'	C-5
7/10/03	APPROVED	CFF		

F:\Cliff Berry\W03027-C5.dwg Thu Jul 10 16:03:25 2003 C. F. Fernandez, P. E.



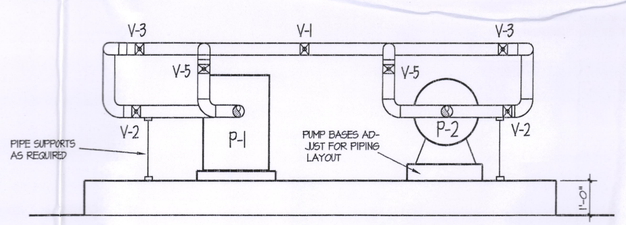
SECTION

PERIMETER WALL WITH ATTACHED OIL DISPENSING LINES



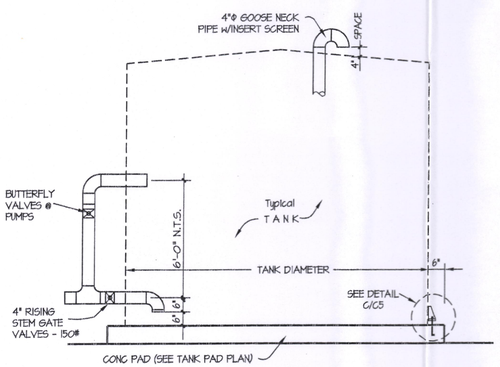
Pump Piping Plan

N.T.S.



Pump Piping Elevation

N.T.S.



Typical Tank Section

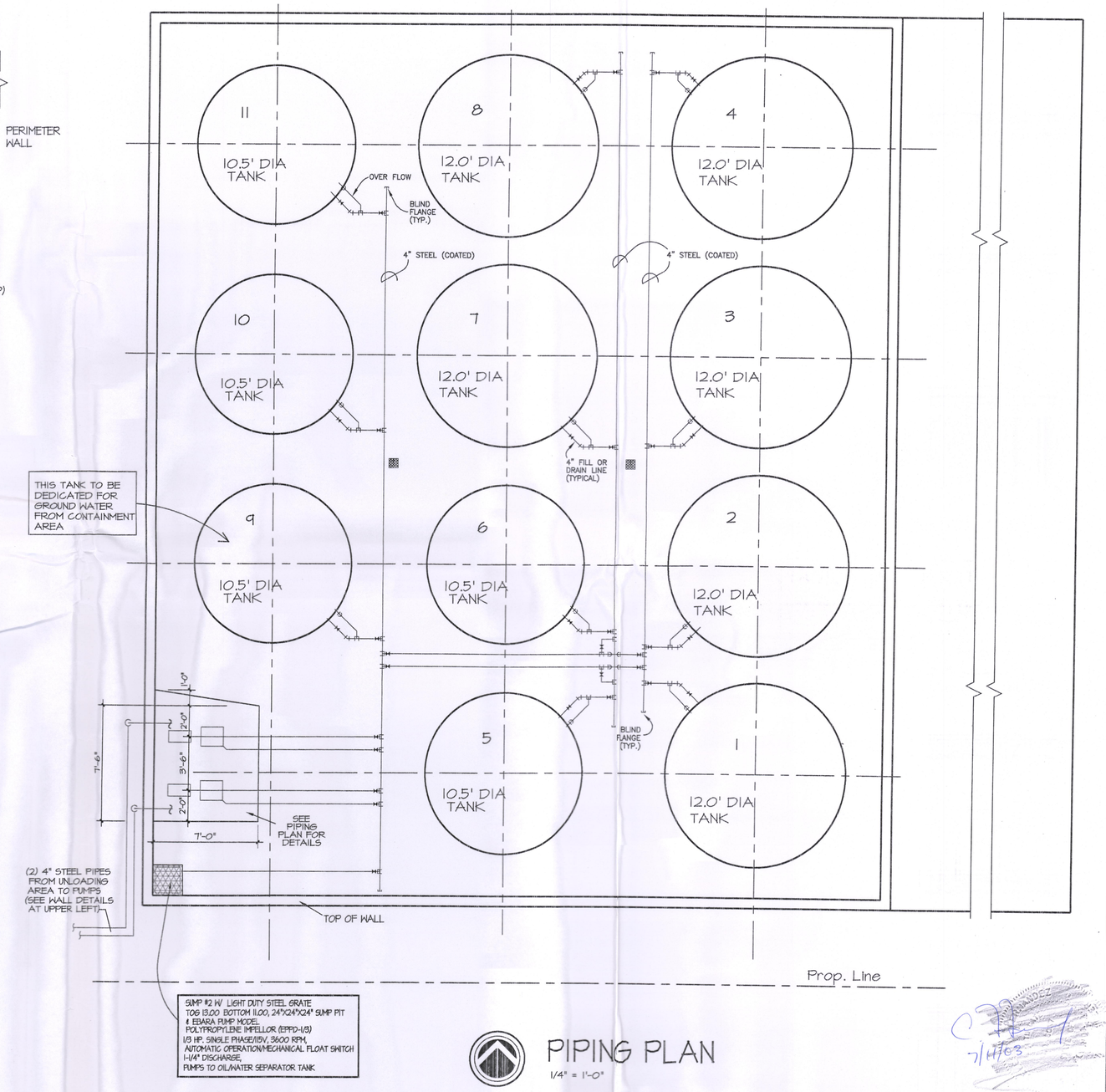
N.T.S.

A
C6

NOTES:

PUMP-1 - GORMAN RUPP 3x3
PUMP-2 - SCREW PUMP OPERATIONAL SEQUENCE
A) PUMPING TANKER TO STORAGE
V-1 CLOSED
V-2 OPEN
V-3 CLOSED
V-4 CLOSED
V-5 OPEN
B) PUMPING STORAGE TO TANKER
V-1 CLOSED
V-2 CLOSED
V-3 OPEN
V-4 OPEN
V-5 CLOSED

ALL PIPING SHALL BE BLK. STL., WELDED CONNECTIONS. VALVES ARE GATE, BALL OR BUTTERFLY TYPES @ OWNER'S DISCRETION



SUMP #2 W/ LIGHT DUTY STEEL GRATE TOG 13.00 BOTTOM 11.00, 24"X24"X24" SUMP PIT & EBARA PUMP MODEL POLYPROPYLENE IMPELLOR (EPPD-1/3) 1/3 HP, SINGLE PHASE/115V, 3600 RPM, AUTOMATIC OPERATION/MECHANICAL FLOAT SWITCH 1-1/4" DISCHARGE, PUMPS TO OIL/WATER SEPARATOR TANK

PIPING PLAN

1/4" = 1'-0"

C. F. FERNANDEZ P. E.
TAMPA, FLORIDA

CLIFF BERRY, INC
5218 ST. PAULS STREET, TAMPA,FL

TANK FARM ADDITION

7/10/03	DRAWN	CHL	JOB NO:	DRAWING NO:
7/10/03	CHECKED	CFF	SCALE: 1" = 10'	C-6
7/10/03	APPROVED	CFF		

F:\Cliff Berry\W83027-C6.dwg Thu Jul 10 16:13:36 2003 C. F. Fernandez, P. E.