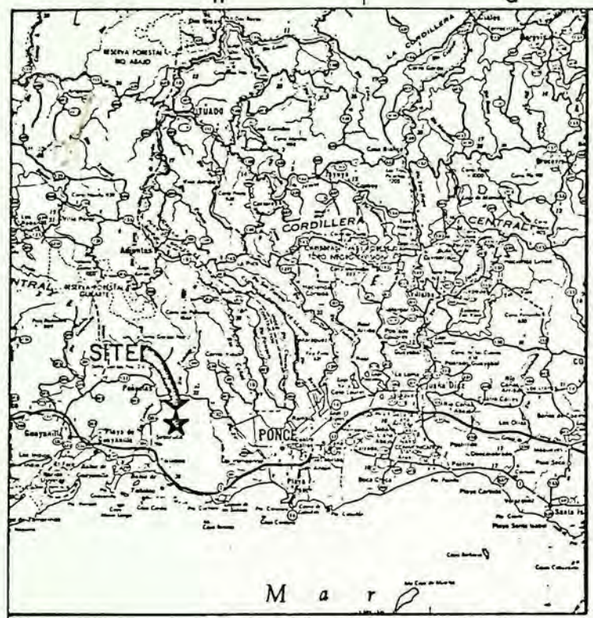


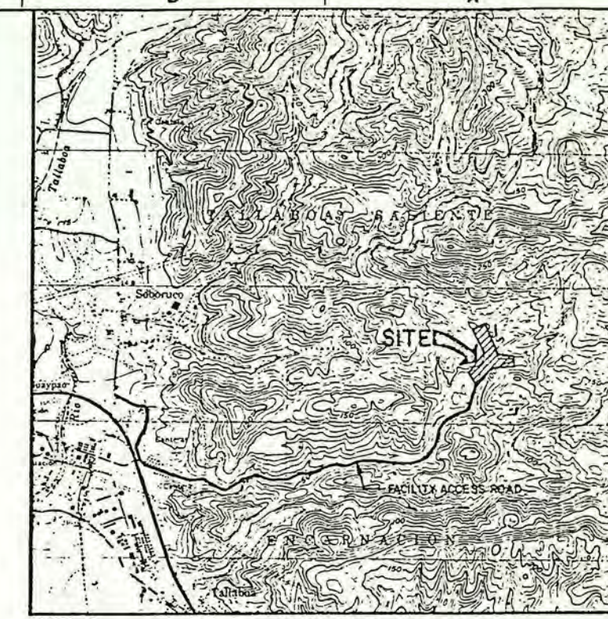
LOCATION MAP

REFERENCE:
PUERTO RICO ROAD MAP,
DATED 1979, SCALE: 1" = 4.6 MILES.

SCALE
0 4.6 9.2 13.8 MILES

LIST OF DRAWINGS

DRAWING NOS.	SERIES
B511 - C - G1	TITLE SHEET
△ B511 - C - SL3 THROUGH SL5, B511 - B - SL1 AND SL2	SITE LAYOUT
B511 - C - BL1 THROUGH BL3, B511 - B - BL1 THROUGH BL6	FACILITY LAYOUT AND DETAILS
B511 - B - T1 THROUGH T8, △ B511 - C - P1 AND P2, △	PIPING SCHEMATICS, LAYOUTS, SECTIONS AND DETAILS
B511 - C - S1 THROUGH S5, B511 - B - S1 THROUGH S6	STRUCTURAL PLANS, SECTIONS AND DETAILS
B511 - C - SB1 THROUGH SB7	STRUCTURAL BUILDING PLANS AND DETAILS
B511 - C - E1, C - E2, △ C - E5, C - E7, C - E8,	ELECTRICAL LAYOUT AND DETAILS
B511 - C - FP1 AND FP2	FIRE PROTECTION SYSTEM PLANS AND SCHEMATICS



REFERENCE:
PEÑUELAS, P.R.
N1800—W6637.5/7.5
1972
PHOTOREVISED 1982
DMA 1222 II NW—SERIES E635

VICINITY MAP

SCALE
0 2000 4000 6000 FEET

PREPARED FOR

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

PREPARED BY: Alan E. Briggs
ALAN E. BRIGGS
PROJECT ENGINEER

PENN CENTER WEST II
SUITE 106
PITTSBURGH, PA. 15276

APPROVED BY: G. R. Brown
GARY R. BROWN
PROFESSIONAL ENGINEER

PENN CENTER WEST II
SUITE 106
PITTSBURGH, PA. 15276

REV'S	DATE	DESCRIPTION	APP'D
△	1-31-86 EWH	REVISED AS NOTED	
△	EWH 5-18-85	TITLE REVISED AS NOTED	S.G.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

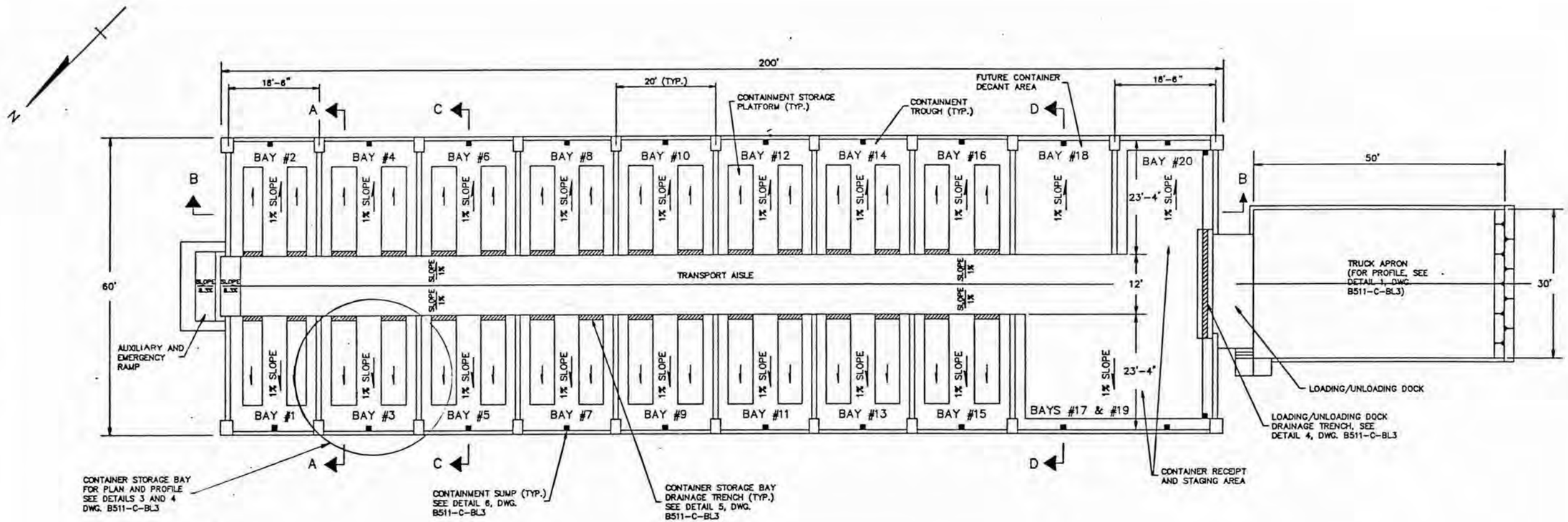
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRAWN JES	CHK'D B	APP'D
SCALE AS SHOWN		DATE 7-10-85

TANK FARM AND CONTAINER STORAGE BUILDING

TITLE SHEET

DRAWING NUMBER
B511-C-G1



CONTAINER STORAGE BUILDING PLAN

SCALE

0 10 20 30 FEET

CONTAINER STORAGE SCHEDULE
(ASSUMES 55 GALLON DRUMS ARE TO BE STORED)

STORAGE SCENARIO	NUMBER OF CONTAINERS PER BAY	NUMBER OF GALLONS** PER BAY (1)	CAPACITY CONTAINMENT AREA TYPICAL BAY (2)	CONTAINMENT TO MAX WASTE VOLUME (%) (2 ÷ 1)	CAPACITY OF FACILITY (18 BAYS TOTAL)	
					DRUMS	GALLONS
UNSTACKED (1 DRUM HIGH)	32	1760	1382	78	512	28,160
STACKED (2 DRUMS HIGH)*	64	3520	1382	39	1024	56,320
STACKED (3 DRUMS HIGH)*	96	5280	1382	26	1536	84,480

* DRUMS CONTAINING FLAMMABLE LIQUIDS TO BE UNSTACKED PER NFPA CODE; AN ESTIMATED MAXIMUM OF 50% OF THE BAYS (# 2, 4, 6, 8, 10, 12, 14, & 16) MAY CONTAIN FLAMMABLE LIQUIDS
** BASED ON WORST CASE ASSUMPTION THAT ALL CONTAINERS HOLD LIQUIDS.

NOTES:

1. FOR CONTAINER STORAGE AREA CROSS SECTIONS A-A, B-B, C-C, AND D-D, SEE DWG. B511-C-BL2.
2. FOR PLAN OF FIRE PROTECTION (SPRINKLER) SYSTEM, SEE DWG. B511-C-FP1.
3. FOR PLAN OF WATER SUPPLY PLUMBING AND DRAIN SYSTEMS, SEE DWG. B511-C-P1.
4. FOR PLAN, CROSS SECTIONS AND DETAILS OF BUILDING ROOF STRUCTURE, SEE DWGS. 81-3131-01 E1 THROUGH 81-3131-01 E6 (REVISION A).
5. FOR PLAN, CROSS SECTIONS AND DETAILS OF STRUCTURAL DESIGN OF BUILDING FLOOR AND FOUNDATION, SEE DWGS. B511-C-S1 THROUGH S5
6. THE TRUCK APRON IS SIZED TO CONTAIN 5610 GALLONS

REV #	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091015522
PENUELAS, PUERTO RICO

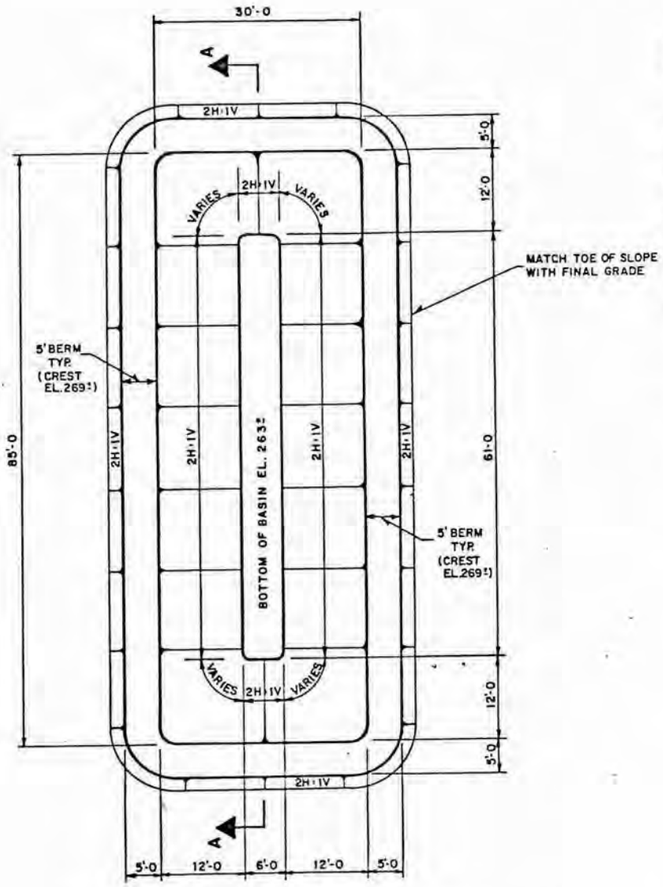
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	wfp	CHK'D JWH	APP'D
SCALE	AS SHOWN		DATE 8-13-85

CONTAINER STORAGE BUILDING

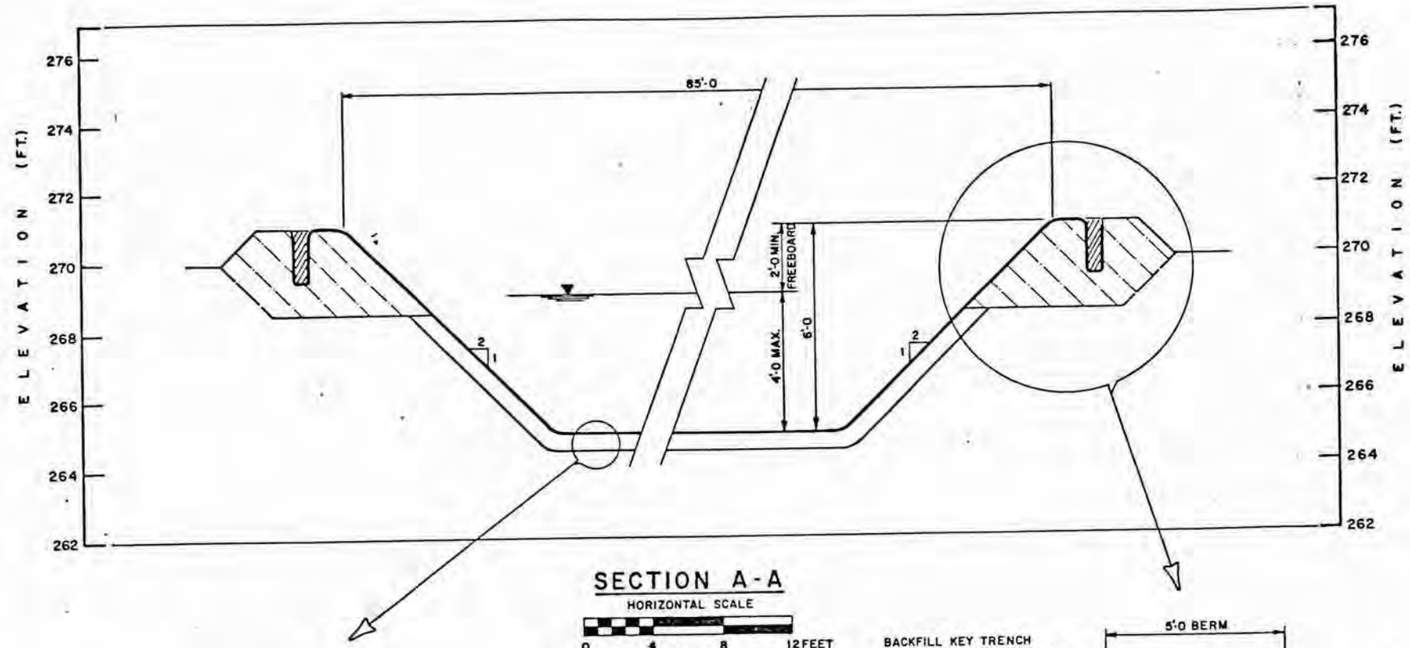
CONTAINER STORAGE BUILDING PLAN

DRAWING NUMBER B511-C-BL1



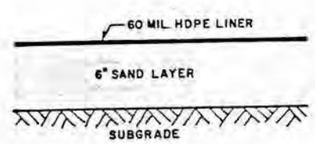
PLAN
STORM WATER RETENTION BASIN

SCALE
0 10 20 30 FEET

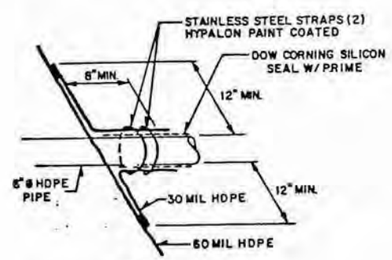


SECTION A-A

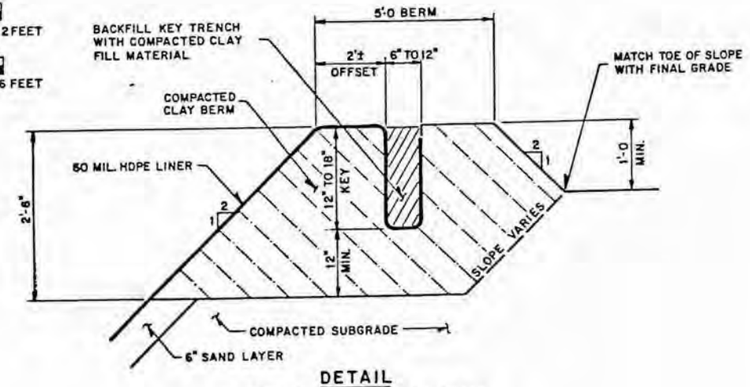
HORIZONTAL SCALE
0 4 8 12 FEET
VERTICAL SCALE
0 2 4 6 FEET



DETAIL
BASIN LINER
N.T.S.



DETAIL
PIPE PENETRATION
N.T.S.
(ANGLE AND ORIENTATION TO SUIT)



DETAIL
LINER KEY TRENCH

HORIZONTAL SCALE
0 2 4 6 FEET
VERTICAL SCALE
0 1 2 3 FEET

REV'S	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

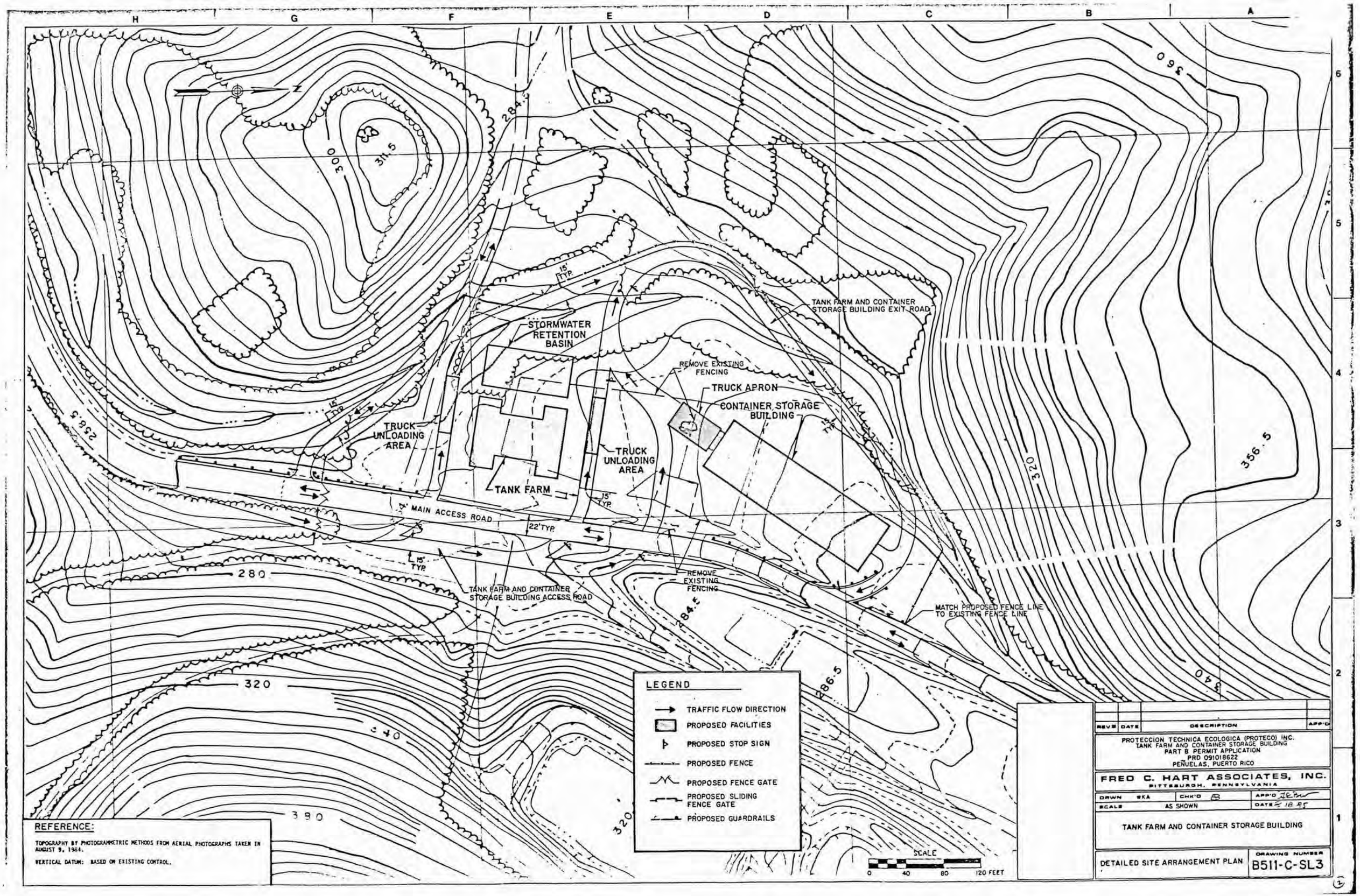
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	WKA	CHK'D	APP'D
SCALE	AS SHOWN		DATE

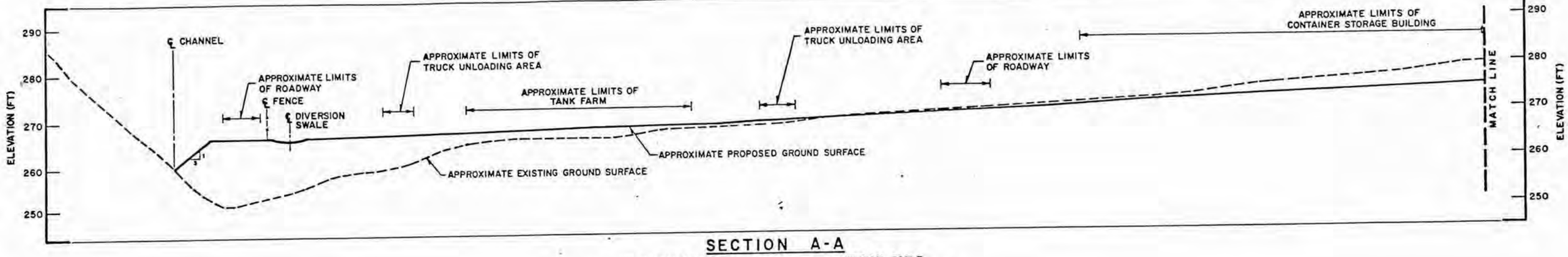
TANK FARM AND CONTAINER STORAGE BUILDING

STORM WATER RENTENTION BASIN PLAN, CROSS SECTION AND DETAILS

DRAWING NUMBER
B511-B-SL1


H
G
F
E
D
C
B
A
6
5
4
3
2
1
N
360
311.5
300
284.5
15' TYP.
STORMWATER RETENTION BASIN
TANK FARM AND CONTAINER STORAGE BUILDING EXIT ROAD
REMOVE EXISTING FENCING
TRUCK APRON
CONTAINER STORAGE BUILDING
TRUCK UNLOADING AREA
TRUCK UNLOADING AREA
TANK FARM
256.5
MAIN ACCESS ROAD
22' TYP.
15' TYP.
280
TANK FARM AND CONTAINER STORAGE BUILDING ACCESS ROAD
REMOVE EXISTING FENCING
284.5
MATCH PROPOSED FENCE LINE TO EXISTING FENCE LINE
320
340
380
320
286.5
320
356.5
340
LEGEND
TRAFFIC FLOW DIRECTION
PROPOSED FACILITIES
PROPOSED STOP SIGN
PROPOSED FENCE
PROPOSED FENCE GATE
PROPOSED SLIDING FENCE GATE
PROPOSED GUARDRAILS
SCALE
0 40 80 120 FEET
REFERENCE:
TOPOGRAPHY BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS TAKEN IN AUGUST 9, 1984.
VERTICAL DATUM: BASED ON EXISTING CONTROL.
REVS DATE DESCRIPTION APP'D
PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA
DRWN WKA
CHK'D
APP'D
SCALE AS SHOWN
DATE
TANK FARM AND CONTAINER STORAGE BUILDING
DETAILED SITE ARRANGEMENT PLAN
DRAWING NUMBER
B511-C-SL3

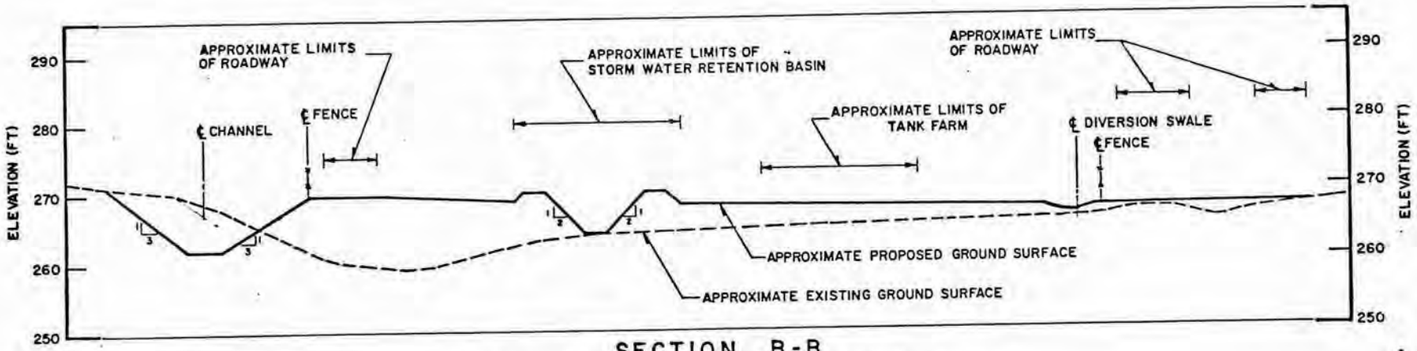
CONTRACT LIMIT
117" X 79" CSP PIPE ARCH, 16GAGE
3" X 1" CORRUGATIONS
CULVERT HEADWALL
INV. EL. 261.0
CONCRETE HEADWALL
SURFACE WATER DIVERSION CHANNEL, RIPRAPPED, D50 = 10"
CULVERT ENDWALL
INV. EL. 259.0
CONCRETE ENDWALL
48" Ø CMP, 18 GAGE
2 2/3" X 1/2" CORRUGATIONS
STORMWATER RETENTION BASIN
TRUCK UNLOADING AREA
TANK FARM
TRUCK APRON & DOCK
SLOPE VARIES
SURFACE WATER DIVERSION CHANNEL
RIPRAPPED, D50 = 5"
CONTAINER STORAGE BUILDING
12' BERM WIDTH (TYP)
EL. 276
CULVERT OUTLET
INV. EL. 244.0
(FLUTED CMP END SECTION)
CULVERT INLET
INV. EL. 266.0
(FLUTED CMP END SECTION)
NOTE:
FOR CROSS SECTIONS A-A, B-B, C-C AND D-D SEE DWG. B511-C-SL5
RIPRAP LINING LAYER THICKNESS = 2 X D50
MIN. 6" THICK LAYER BEDDING MATERIAL
SUBGRADE
CHANNEL LINING DETAIL
PLAN
FRONT ELEVATION
ENDWALL AND HEADWALL DETAIL
NOTE: REINFORCING DETAILS TO BE FURNISHED PRIOR TO CONSTRUCTION.
A — 11'-3"
B — 3'-2 1/2"
C — 11'-0"
E — 10'-9"
F — 13'-0"
J — 11'-10 1/2"
H — 23'-9"
T — 6"
Y — 3'-2"
W — 12"
LEGEND:
TOP OF SLOPE
TOE OF SLOPE
PROPOSED FINAL SITE CONTOUR
DIRECTION AND SLOPE OF ROAD
SURFACE WATER DIVERSION CHANNEL
SCALE
0 40 80 120 FEET
REFERENCE:
TOPOGRAPHY BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS TAKEN IN AUGUST 9, 1984.
VERTICAL DATUM: BASED ON EXISTING CONTROL.
REV'S DATE DESCRIPTION APP'D
PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA
DRWN WKA CHK'D AEB APP'D GRB
SCALE AS SHOWN DATE 8-18-85
TANK FARM AND CONTAINER STORAGE BUILDING
FACILITY AREA GRADING PLAN
DRAWING NUMBER
B511-C-SL4



SECTION A-A

HORIZONTAL SCALE 0 20 40 60 FEET

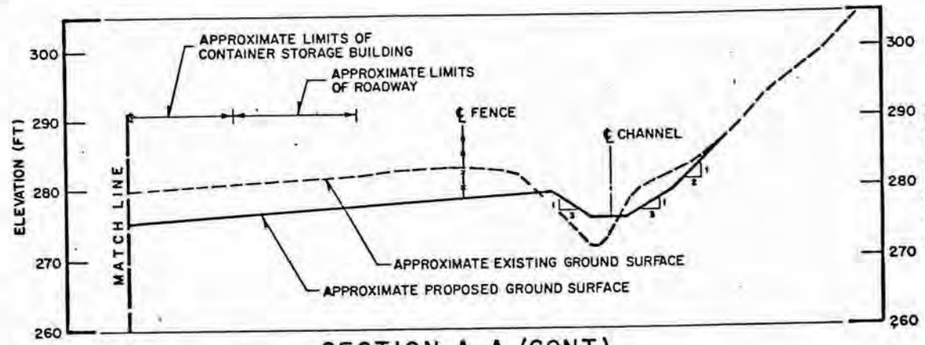
VERTICAL SCALE 0 10 20 30 FEET



SECTION B-B

HORIZONTAL SCALE 0 20 40 60 FEET

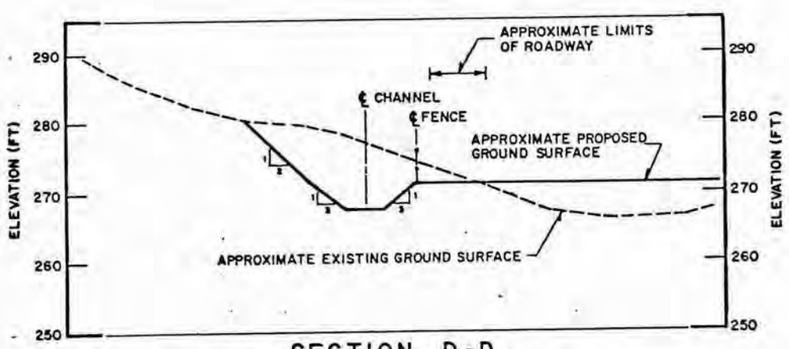
VERTICAL SCALE 0 10 20 30 FEET



SECTION A-A (CONT.)

HORIZONTAL SCALE 0 20 40 60 FEET

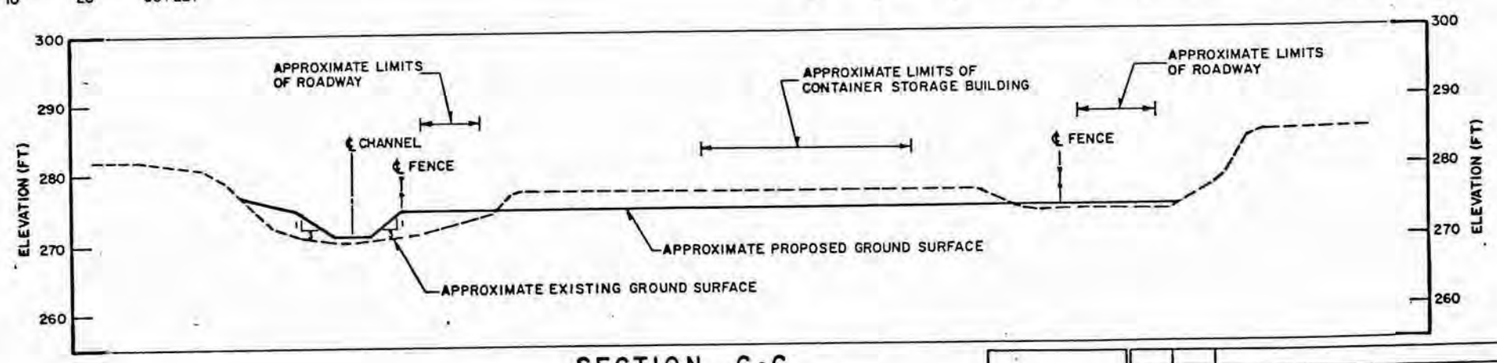
VERTICAL SCALE 0 10 20 30 FEET



SECTION D-D

HORIZONTAL SCALE 0 20 40 60 FEET

VERTICAL SCALE 0 10 20 30 FEET



SECTION C-C

HORIZONTAL SCALE 0 20 40 60 FEET

VERTICAL SCALE 0 10 20 30 FEET

REV'S	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

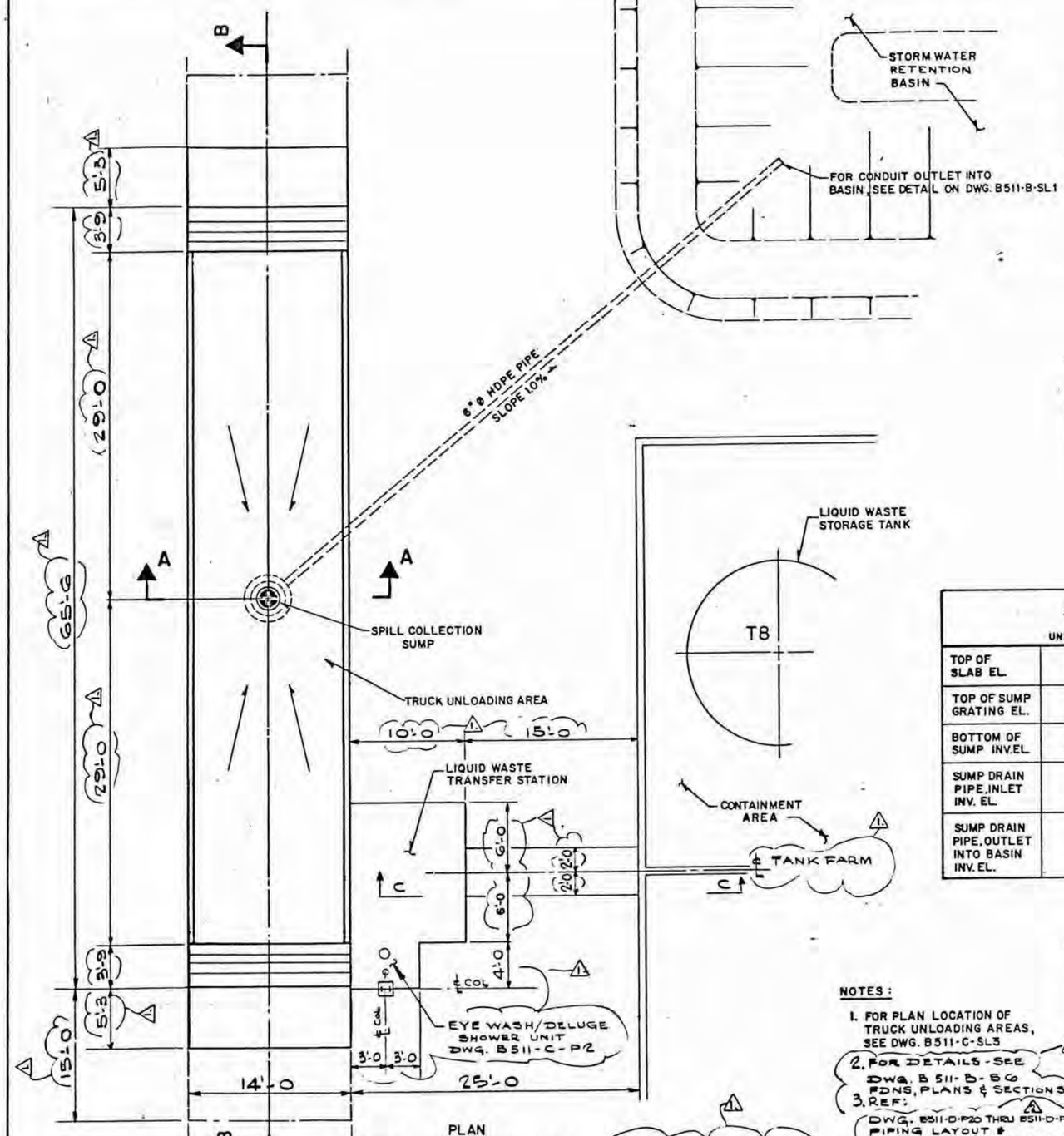
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	WKA	CHK'D	APP'D
SCALE	AS SHOWN		DATE 1 IA 85

TANK FARM AND CONTAINER STORAGE BUILDING

FACILITY AREA CROSS SECTIONS
A-A, B-B, C-C AND D-D

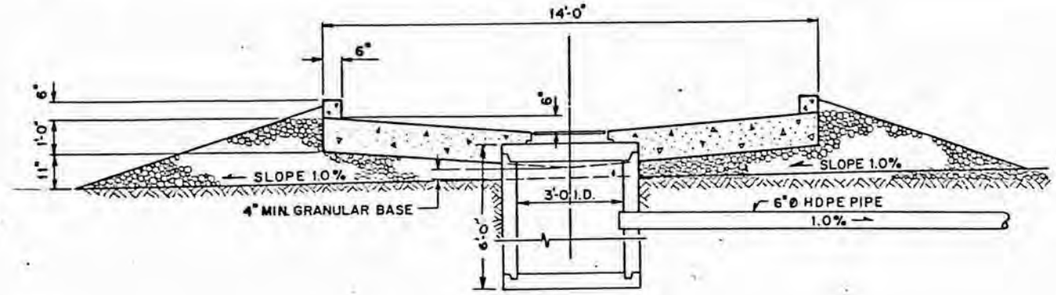
DRAWING NUMBER
B511-C-SL5



PLAN

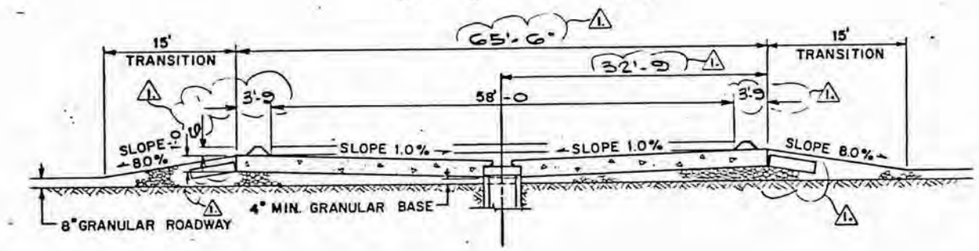
TRUCK UNLOADING AREA - SOUTH - AS SHOWN
- NORTH - OPP. HAND

SCALE 0 5 10 15 FEET



SECTION A-A

SCALE 0 2 4 6 FEET



SECTION B-B

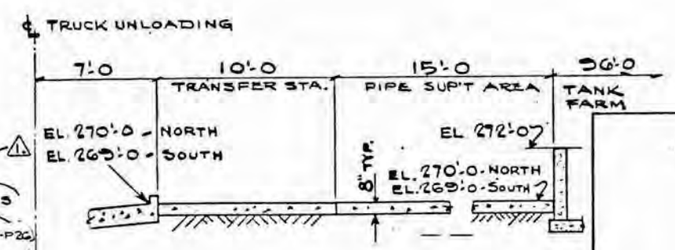
HORIZONTAL SCALE 0 8 16 24 FEET

VERTICAL SCALE 0 4 8 12 FEET

UNLOADING AREA SCHEDULE	SOUTHERN UNLOADING AREA	NORTHERN UNLOADING AREA
TOP OF SLAB EL.	269.0	270.0
TOP OF SUMP GRATING EL.	268.5	269.5
BOTTOM OF SUMP INV. EL.	262.67	263.67
SUMP DRAIN PIPE, INLET INV. EL.	266.6	267.6
SUMP DRAIN PIPE, OUTLET INTO BASIN INV. EL.	266.0	267.0

NOTES:

1. FOR PLAN LOCATION OF TRUCK UNLOADING AREAS, SEE DWG. B511-C-SL3
2. FOR DETAILS - SEE DWG. B511-B-S6 FDNS, PLANS & SECTIONS
3. REF: DWG. B511-D-P20 THRU B511-D-P26 PIPING LAYOUT & PIPING CROSS-SECTIONS DWG B511-B-SL1 TANK FARM PLAN



SECTION "CC"

SCALE 0 4 8 12 FT.

REV #	DATE	DESCRIPTION	APP'D
2	1-31-86 RWH	REVISED REF. PIPING DWG. NOS. AS NOTED	
1	AS 10-7-85	ADDED & CHG'D. DIMENSIONS IN PLAN & SECTION B-B & AS NOTED	S.G.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

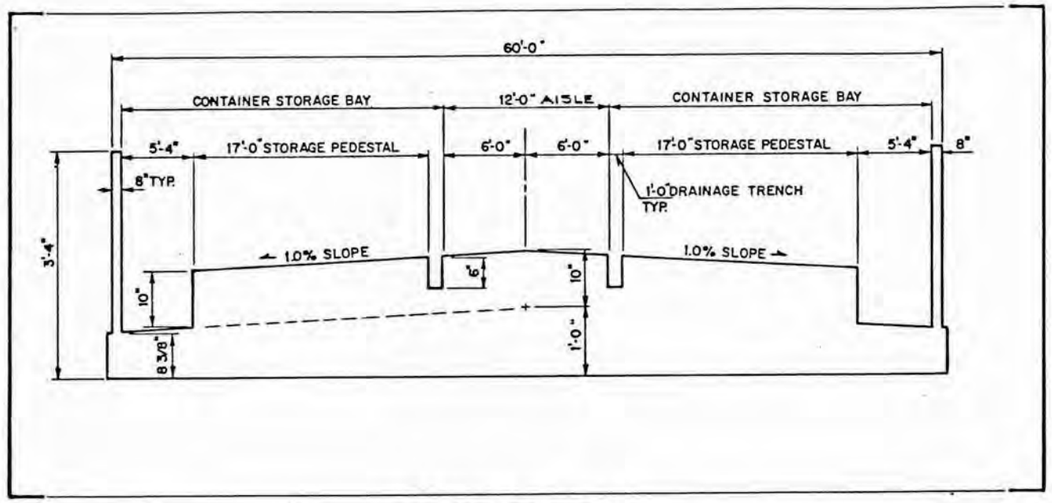
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN WKA | CHK'D A.L.B. | APP'D G.R.B.
SCALE AS SHOWN | DATE 8-18-85

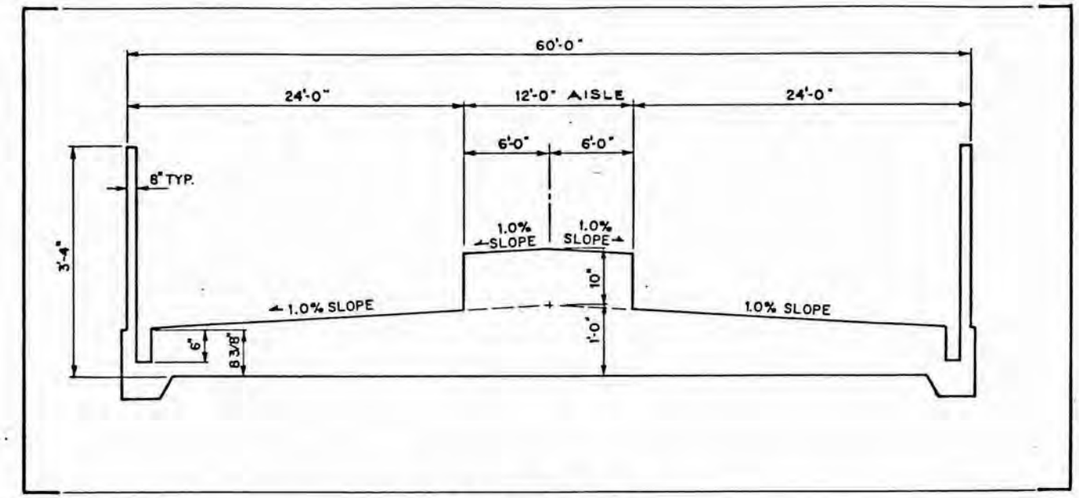
TANK FARM

TRUCK UNLOADING AREA PLAN, CROSS SECTIONS AND DETAILS

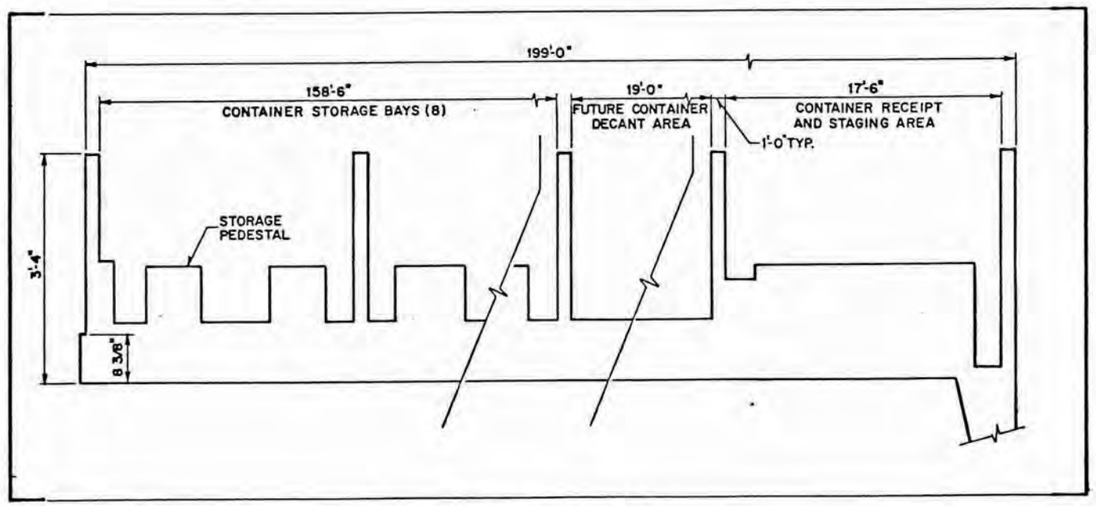
DRAWING NUMBER B511-B-SL2



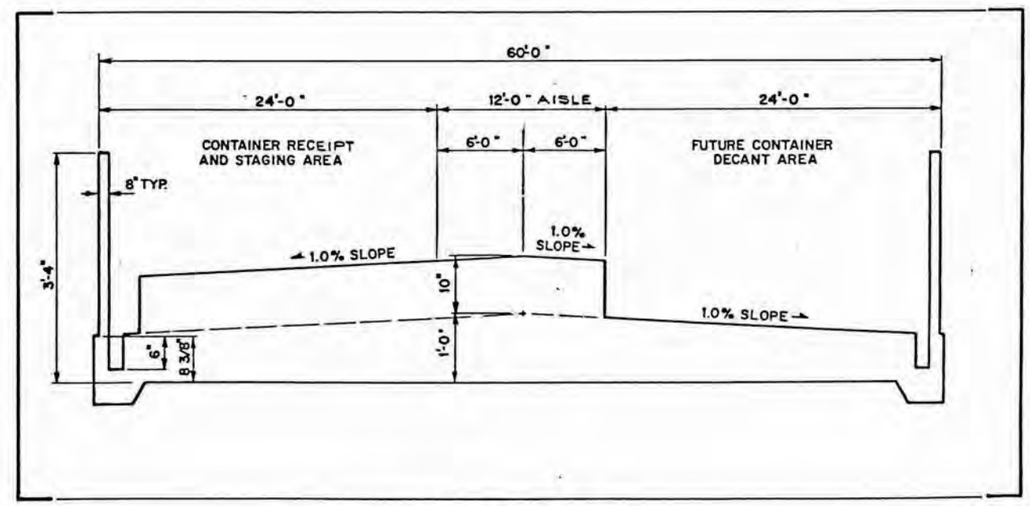
SECTION A-A



SECTION C-C



SECTION B-B



SECTION D-D

NOTE:

1. CROSS-SECTION LOCATIONS SHOWN ON DWG B511-C-BL1

HORIZONTAL SCALE
0 5 10 15 FEET
VERTICAL SCALE
0 1 2 3 FEET

REV'S	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

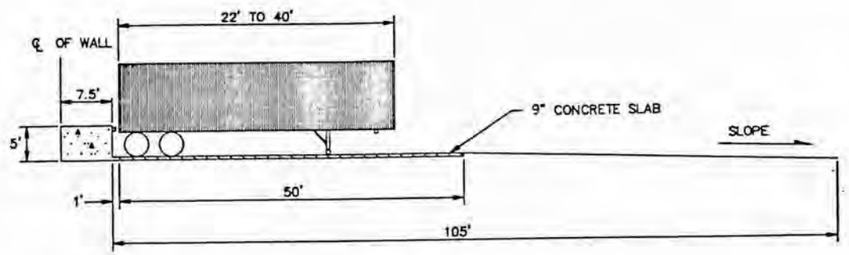
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN WKA	CHK'D JWH	APP'D GRB	
SCALE AS SHOWN		DATE 8-17-85	

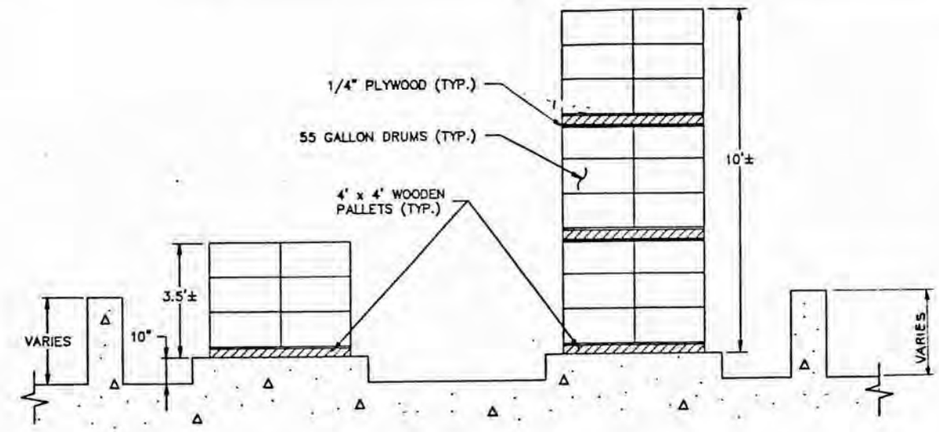
CONTAINER STORAGE BUILDING

CROSS SECTIONS A-A, B-B, C-C AND D-D

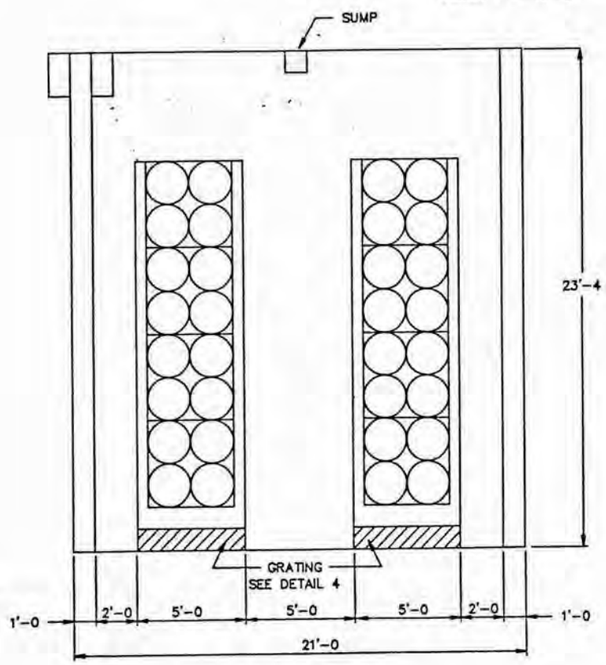
DRAWING NUMBER B511-C-BL2



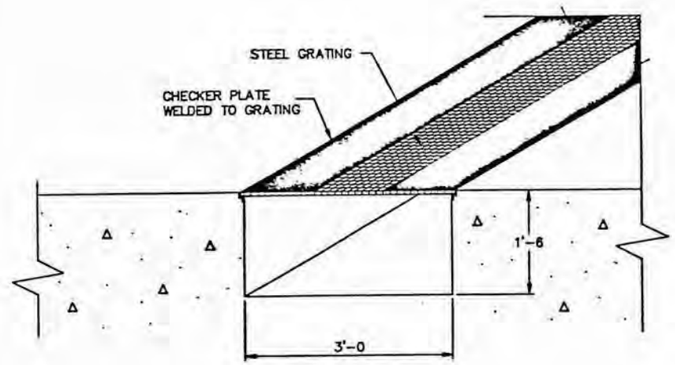
DETAIL 1
TRUCK APRON (IN USE) PROFILE
SCALE: 1" = 10'-0



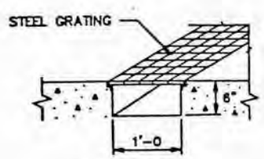
DETAIL 3
CONTAINER STORAGE BAY (IN USE) PROFILE
SCALE: 1" = 2'-0



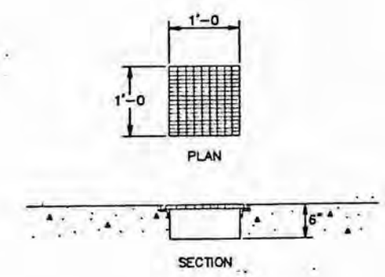
DETAIL 2
TYPICAL CONTAINER STORAGE BAY PLAN
NOT TO SCALE



DETAIL 4
LOADING/UNLOADING DOCK DRAINAGE TRENCH
SCALE: 1" = 1'-0



DETAIL 5
CONTAINER STORAGE BAY DRAINAGE TRENCH
SCALE: 1" = 1'-0



DETAIL 6
CONTAINMENT SUMP
SCALE: 1" = 1'-0

NOTES

1. FOR PLAN LOCATION OF BAYS, LOADING /UNLOADING DOCK, DRAINAGE TRENCHES AND SUMPS SEE DWG. B-511-C-BL 1.
2. REFER TO STRUCTURAL DWGS. B-511-C-S1 THRU. S5 FOR ADDITONAL SUMP; TRENCH AND GRATING DETAILS

REV #	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

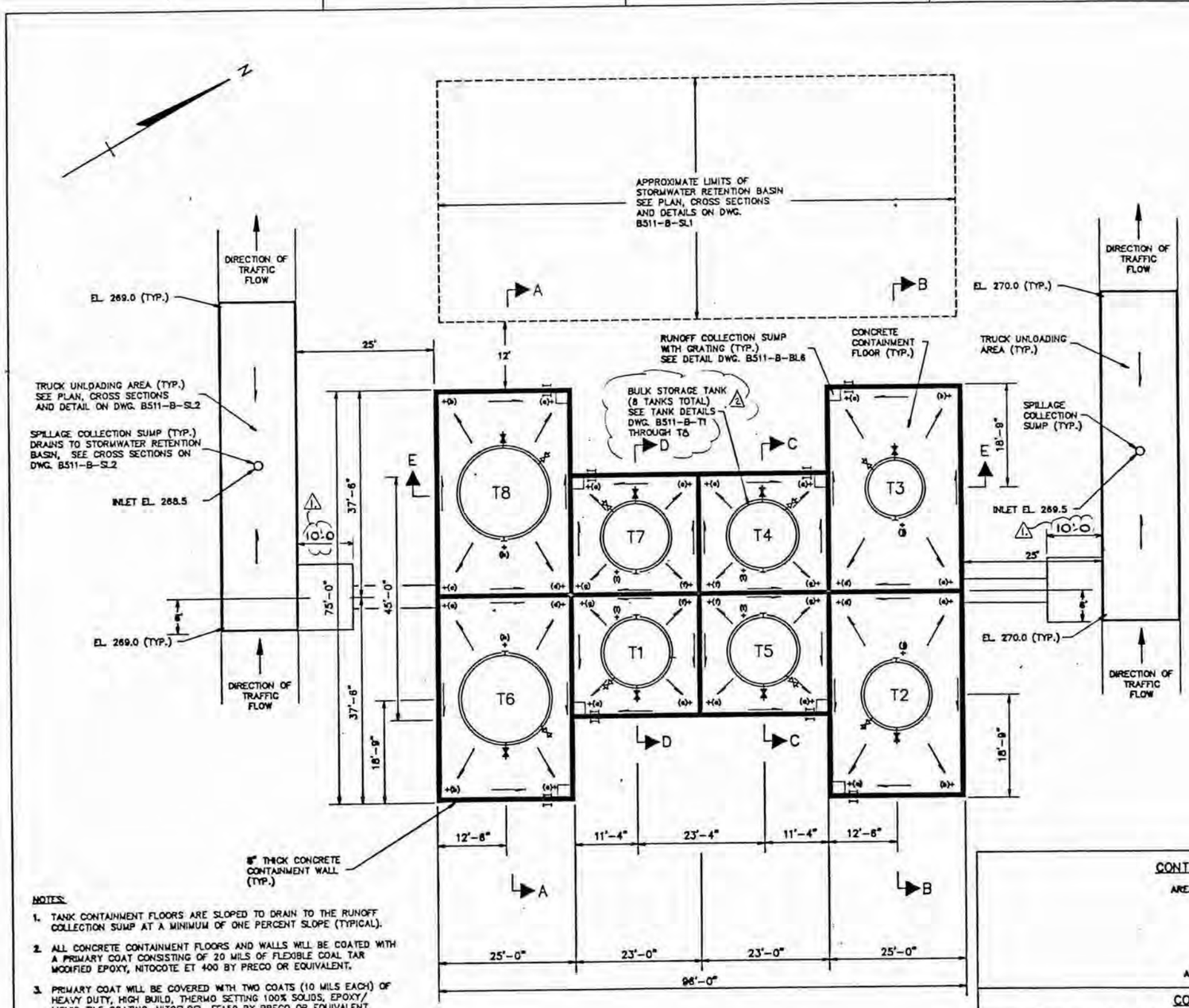
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	DWG	CHK'D J. W. H.	APP'D G. R. B.
SCALE	AS SHOWN		DATE 7-31-85

CONTAINER STORAGE BUILDING

CONTAINER STORAGE BLDG. DETAILS

DRAWING NUMBER
B511-C-BL3



TANK FARM PLAN

SCALE 0 10 20 30 FEET

TANK SCHEDULE

NUMBER	NAME	DESIGN FUNCTION	MATERIALS OF CONSTRUCTION	DIMENSIONS DIAMETER (ft.)	DIMENSIONS HEIGHT (ft.)	NOMINAL CAPACITY (gals.)
T1	CAUSTIC TANK	STORAGE OF HIGH pH (CAUSTIC) WASTE, s.g. 1.5 △1	CS	12	18'-9"	15,000
T2	ACID TANK	STORAGE OF ACID SOLUTIONS, s.g. 1.5 △1	FRP	12	36'-6"	30,000
T3	NEUTRALIZATION TANK	MIX OF ACIDS & CAUSTICS TO NEUTRALIZE WASTES, s.g. 1.5 △1	FRP △1	10.25	17'-4"	10,000
T4	SOLVENTS TANK	STORAGE OF POTENTIALLY IGNITABLE HALOGENATED SOLVENTS, s.g. 1.5 △1	SS △1	12	18'-9"	15,000
T5	SOLVENTS TANK	STORAGE OF POTENTIALLY IGNITABLE NON-HALOGENATED SOLVENTS, s.g. 1.5 △1	SS	12	18'-9"	15,000
T6	OIL SLUDGE TANK	STORAGE OF POTENTIALLY IGNITABLE OIL SLUDGES & POL WASTES, s.g. 1.5 △1	CS	16	21'-4"	30,000
T7	AQUEOUS WASTE TANK	STORAGE OF AQUEOUS WASTE SOLUTIONS, LINDANE CONCENTRATIONS, TYP. 1 PERCENT, s.g. 1.5 △1	CS	12	18'-9"	15,000
T8	△1 OILS TANK	STORAGE OF NON-HAZARDOUS RECYCLABLE POTENTIALLY IGNITABLE OILS, s.g. 1.5 △1	CS	16	21'-4" △1	30,000

CS= CARBON STEEL FRP= CONTACT MOLDED FIBERGLASS REINFORCED PLASTIC SS= 316L STAINLESS STEEL s.g.= SPECIFIC GRAVITY OF LIQUID

△1 NOTE: EARTHQUAKE ZONE 3

LEGEND

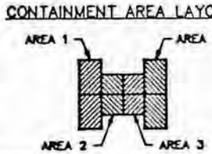
- DIRECTION OF SLOPE OF CONTAINMENT PAD
- RUNOFF COLLECTION SUMP WITH GRATING
- CONTAINMENT WALL (DIKE)
- HAZARDOUS LIQUID WASTE STORAGE TANK
- 3"ø DISCHARGE AND FILL VALVE
- 3"ø DRAIN VALVE
- 3"ø LEAK DETECTION VALVE
- LADDER

TOP OF GROUT ELEVATIONS

TOP OF GROUT DESIGNATION	ELEVATION
(a)	268.00
(b)	268.25
(c)	268.63
(d)	268.38
(e)	268.23
(f)	268.48
(g)	268.23
(h) *	268.73
(i) *	268.58
(j) *	268.83

* TOP OF GROUT ELEVATIONS ARE CONTINUOUS AROUND TANK PEDESTAL.

CONTAINMENT AREA LAYOUT



CONTAINMENT AREA SIZING

AREA NO.	NOMINAL CAPACITY (GALLONS) OF LARGEST TANK IN AREA	AREA VOLUME (CUBIC FEET)	AREA CAPACITY (GALLONS)	AREA CAPACITY / LARGEST TANK CAPACITY (%)
1	30,000	4891	36,600	122
2	15,000	2935	21,950	146
3	15,000	2935	21,950	146
4	30,000	5489	41,060	136

NOTES:

1. TANK CONTAINMENT FLOORS ARE SLOPED TO DRAIN TO THE RUNOFF COLLECTION SUMP AT A MINIMUM OF ONE PERCENT SLOPE (TYPICAL).
2. ALL CONCRETE CONTAINMENT FLOORS AND WALLS WILL BE COATED WITH A PRIMARY COAT CONSISTING OF 20 MILS OF FLEXIBLE COAL TAR MODIFIED EPOXY, NITOCOTE ET 400 BY PRECO OR EQUIVALENT.
3. PRIMARY COAT WILL BE COVERED WITH TWO COATS (10 MILS EACH) OF HEAVY DUTY, HIGH BUILD, THERMO SETTING 100% SOLIDS, EPOXY/LIQUID TILE COATING, NITOFLOR FC150 BY PRECO OR EQUIVALENT. △2
4. FOR TANK FARM CROSS SECTIONS A-A, B-B, C-C, D-D, AND E-E, SEE DWGS. B511-B-BL2 THROUGH B511-B-BL3.
5. FOR PLAN, SCHEMATIC AND CROSS SECTIONS OF TANK FARM PIPING, SEE DWGS. B511-D-P20 THROUGH B511-D-P26. △2
6. FOR PLAN, CROSS SECTIONS AND DETAILS OF STRUCTURAL DESIGN OF CONTAINMENT FLOORS, WALLS AND TANK PEDESTALS, SEE DWGS. B511-B-S1 THROUGH B511-B-S4.
7. FOR PROPOSED FINAL SITE GRADING CONTOURS, SEE DWG. B511-C-SL4.
8. TOP OF TANK PEDESTALS ARE 12 INCHES ABOVE TOP OF GROUTING.

REV #	DATE	DESCRIPTION	APP'D
△2	1-31-86 SDM	REVISED AS NOTED	JB
△1	7-18-85 RWW	T7 WASTE AQUEOUS WASTE, T8 WASTE OILS TANK. ALL S.G. CHANGED TO 1.5, T4 & T5 MATERIAL TO SS	S.G.

PROTECCION TECNICA ECOLOGICA, INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

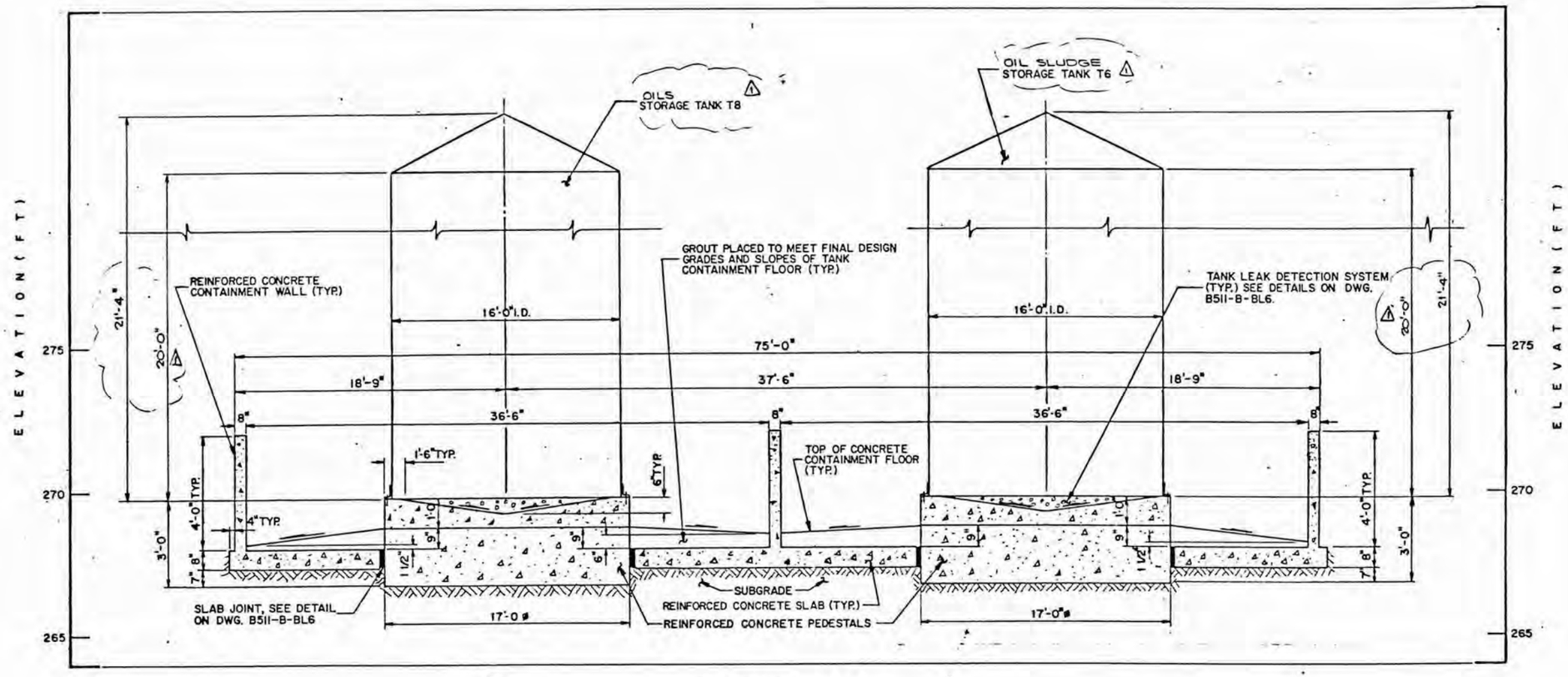
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN wfp/DWB	CHK'D BDG	APP'D GRB	
SCALE AS SHOWN		DATE 8-14-85	

TANK FARM

TANK FARM PLAN AND TANK SCHEDULE

DRAWING NUMBER B511-B-BL1



SECTION A-A

HORIZONTAL SCALE

0 4 8 12 FEET

VERTICAL SCALE

0 2 4 6 FEET

NOTES

1. FOR PLAN LOCATION OF CROSS SECTIONS, SEE DWG. B511-B-BL1

REV'S	DATE	DESCRIPTION	APP'D
1	RWH 10-23-85	REVISED AS NOTED	S.G.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
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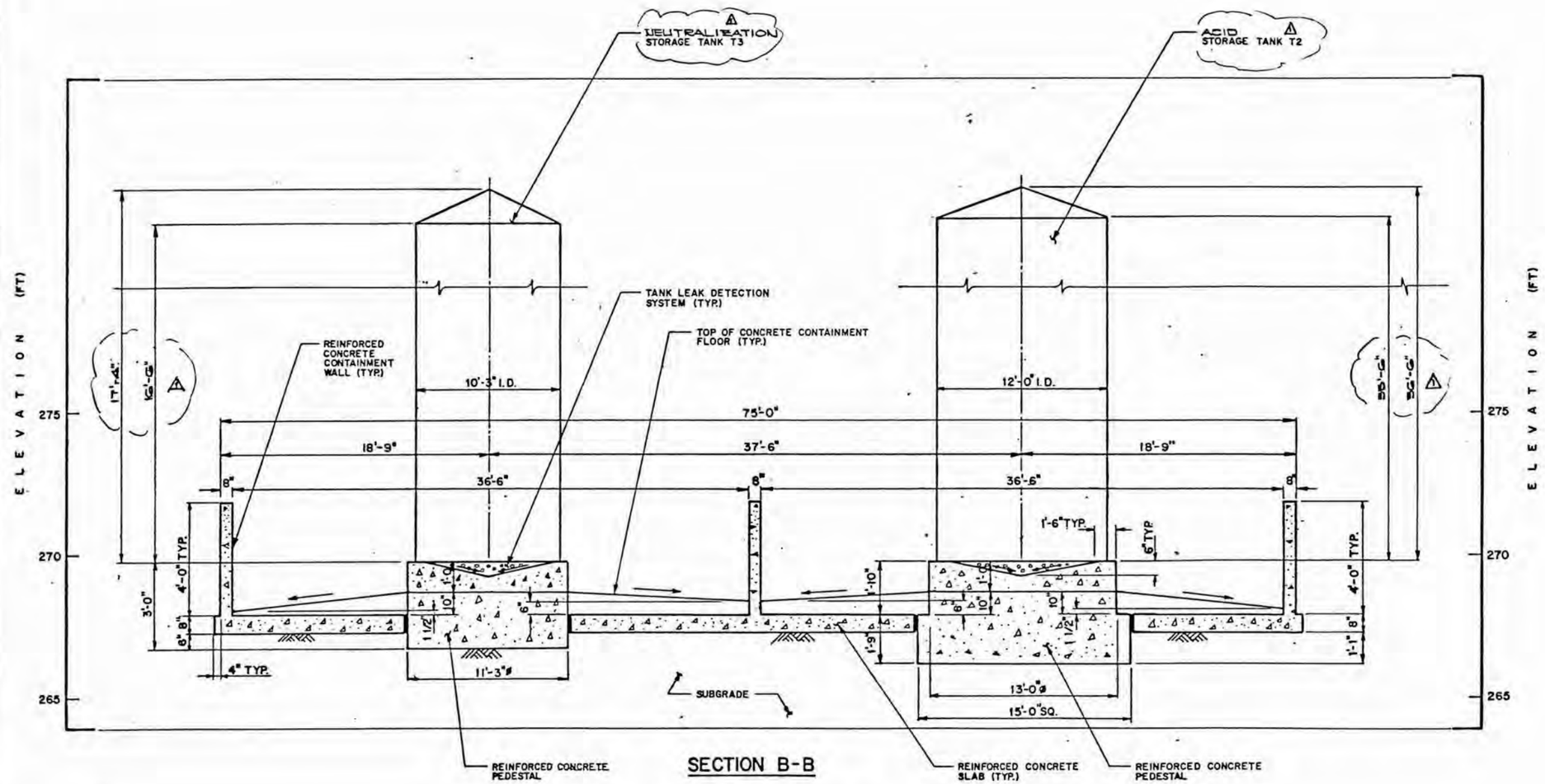
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN WKA	CHK'D BDG	APP'D GRB	
SCALE AS SHOWN		DATE	

TANK FARM

CROSS SECTION A-A

DRAWING NUMBER B511-B-BL2



SECTION B-B

HORIZONTAL SCALE
0 4 8 12

VERTICAL SCALE
0 2 4 6

REVS	DATE	DESCRIPTION	APP'D
1	[illegible]	REVISED AS NOTED	S.G.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

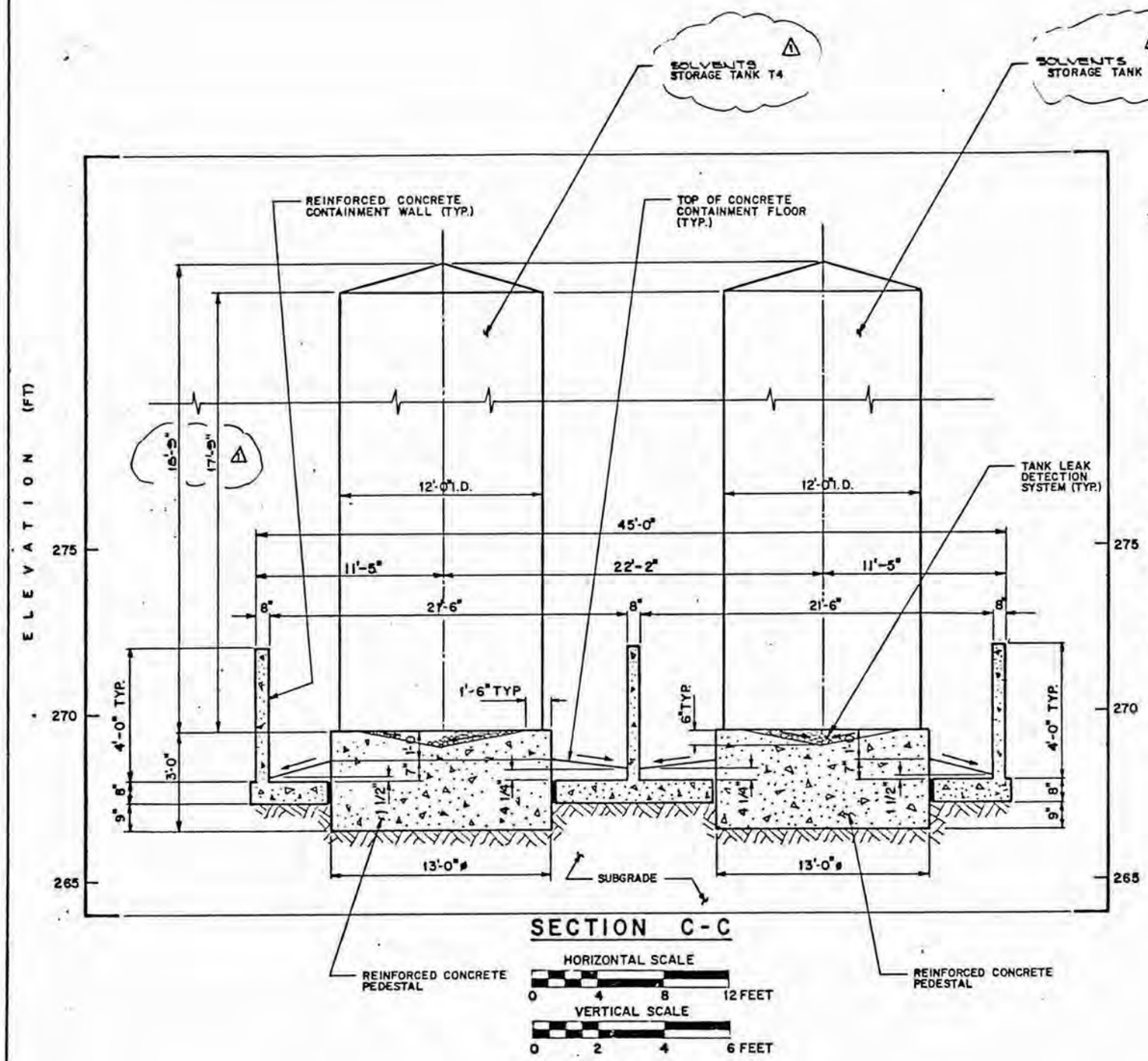
DRWN	R.H.	CHK'D	APP'D
SCALE	AS SHOWN		DATE 2 17 85

TANK FARM

CROSS SECTION B-B

DRAWING NUMBER B511-B-BL3

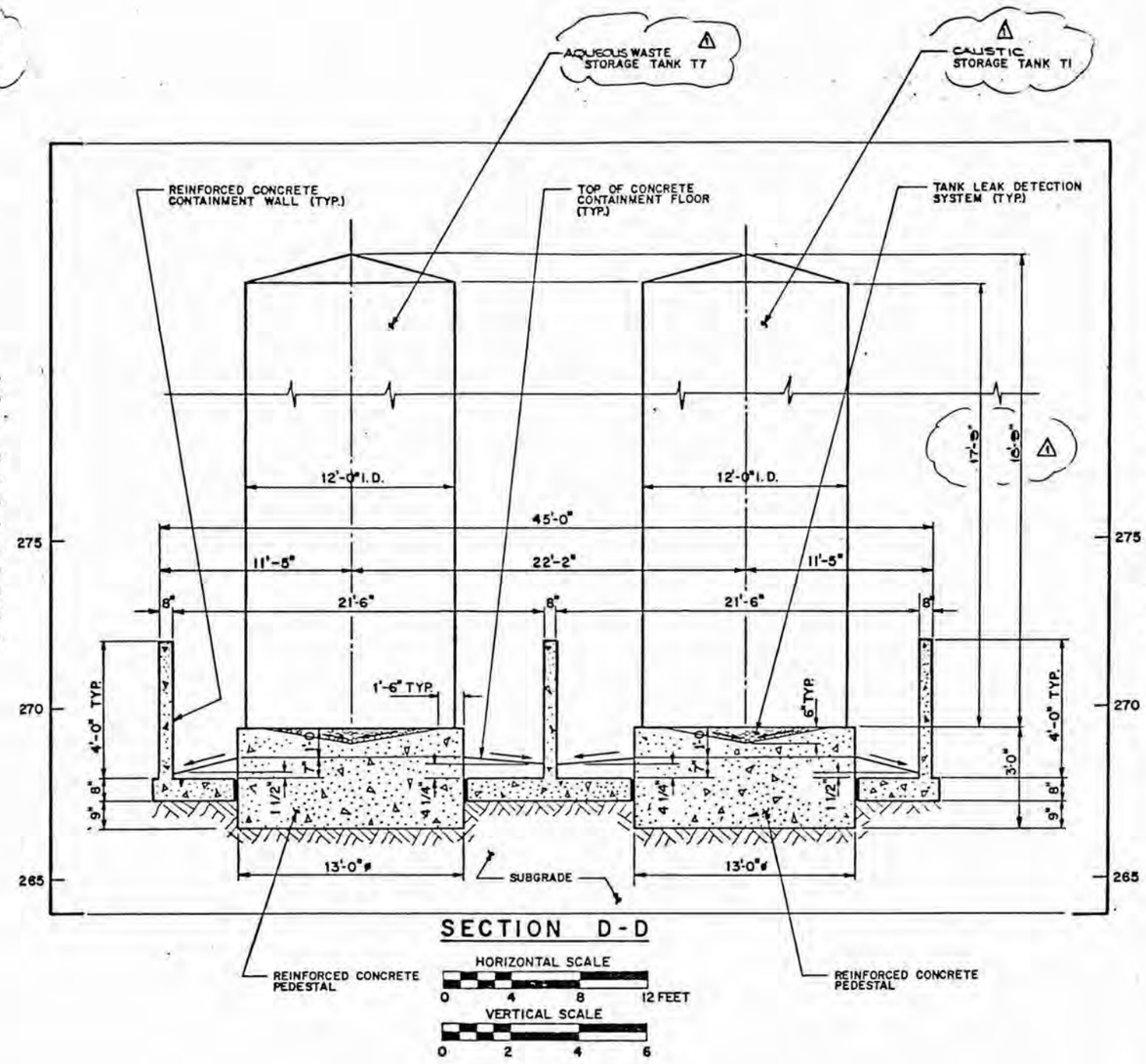
(12)



SECTION C-C

HORIZONTAL SCALE
0 4 8 12 FEET

VERTICAL SCALE
0 2 4 6 FEET



SECTION D-D

HORIZONTAL SCALE
0 4 8 12 FEET

VERTICAL SCALE
0 2 4 6

REV'S	DATE	DESCRIPTION	APP'D
1	10-3-85 RWH	REVISED AS NOTED	S.C.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

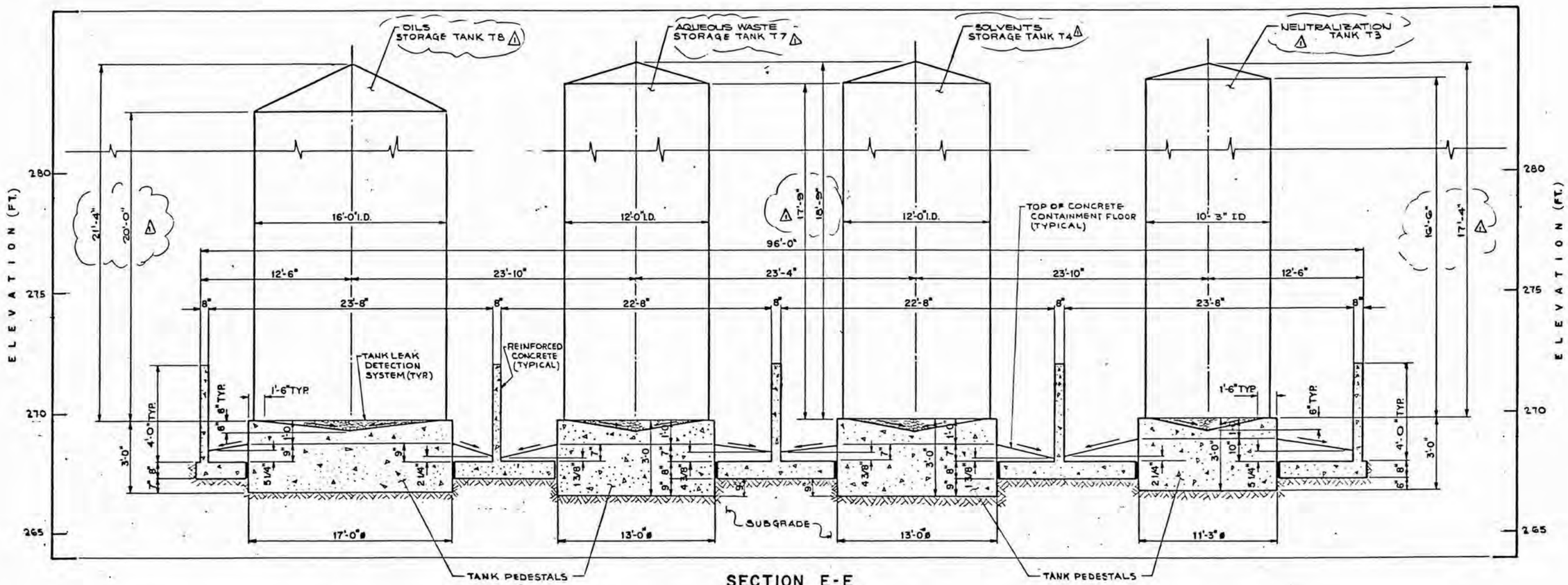
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN WKA	CHK'D BJG	APP'D [illegible]	
SCALE AS SHOWN		DATE [illegible]	

TANK FARM

CROSS SECTIONS C-C & D-D

DRAWING NUMBER B511 B-BL4



SECTION E-E

HORIZONTAL SCALE

0 4 8 12 FEET

VERTICAL SCALE

0 2 4 6 FEET

REVS	DATE	DESCRIPTION	APP'D
1	12-31-85 RWH	REVISED AS NOTED	S.G.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 090018622
PENUELAS, PUERTO RICO

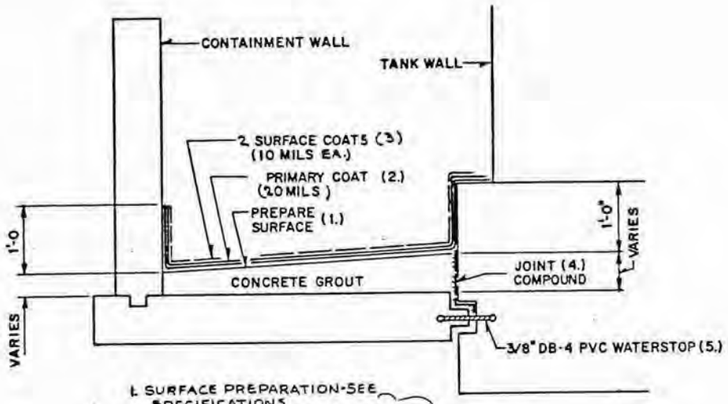
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN WKA	CHK'D BDG	APP'D
SCALE AS SHOWN		DATE 5 17 83

TANK FARM

CROSS SECTION E-E

DRAWING NUMBER B511-B-BL5

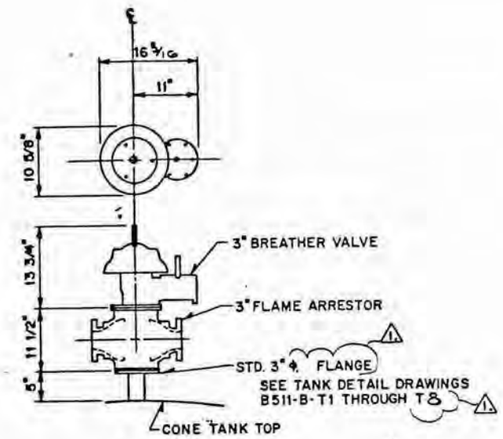


1. SURFACE PREPARATION-SEE SPECIFICATIONS
2. PRIMIARY COAT-COAL TAR MODIFIED EPOXY, NITOCOTE ET 400 BY PRECO OR EQUAL
3. SURFACE COATS-TWO COMPONENT EPOXY NITOFLOR FC 150 BY PRECO OR EQUAL
4. JOINT COMPOUND - TWO COMPONENT NITOSEAL 240 BY PRECO OR EQUAL
5. PVC WATERSTOP-GRACE OR EQUAL

DETAIL 1

CONTAINMENT FLOOR JOINT

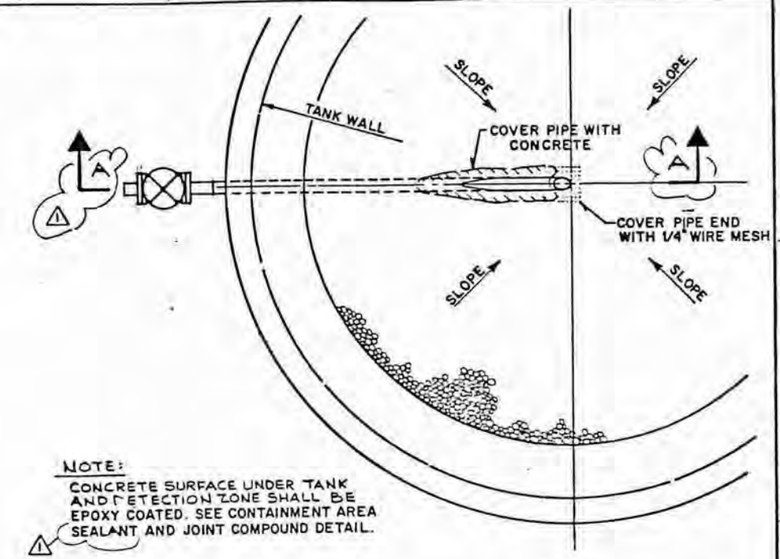
(NOT TO SCALE)



DETAIL 3

FLAME ARRESTOR & BREATHER VALVE

SCALE 1" = 1'-0"

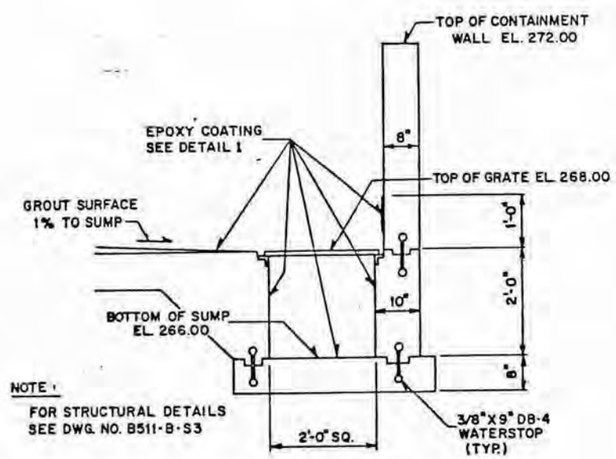


NOTE:
CONCRETE SURFACE UNDER TANK AND DETECTION ZONE SHALL BE EPOXY COATED. SEE CONTAINMENT AREA SEALANT AND JOINT COMPOUND DETAIL.

PLAN

LEAK DETECTION SYSTEM

SCALE 3/4" = 1'-0"

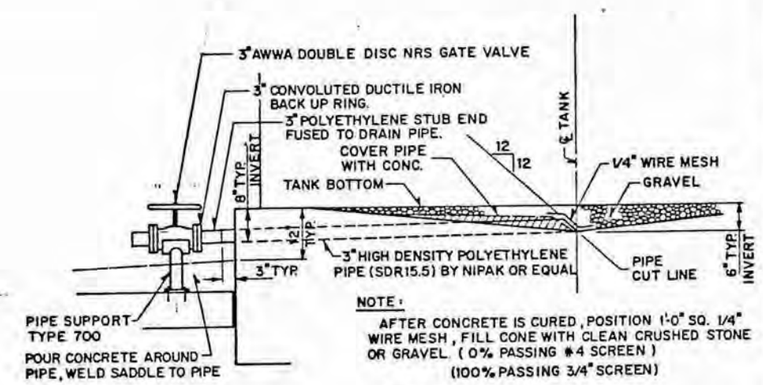


NOTE:
FOR STRUCTURAL DETAILS SEE DWG. NO. B511-B-S3

DETAIL 2

SUMP

SCALE 3/4" = 1'-0"



NOTE:
AFTER CONCRETE IS CURED, POSITION 1'-0" SQ. 1/4" WIRE MESH, FILL CONE WITH CLEAN CRUSHED STONE OR GRAVEL. (0% PASSING #4 SCREEN) (100% PASSING 3/4" SCREEN)

SECTION A-A

TYP. SECTION AT LEAK DETECTOR

SCALE 3/4" = 1'-0"

REV'N	DATE	DESCRIPTION	APP'D
1	10-11-85	REVISED AS NOTED.	S.G.

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
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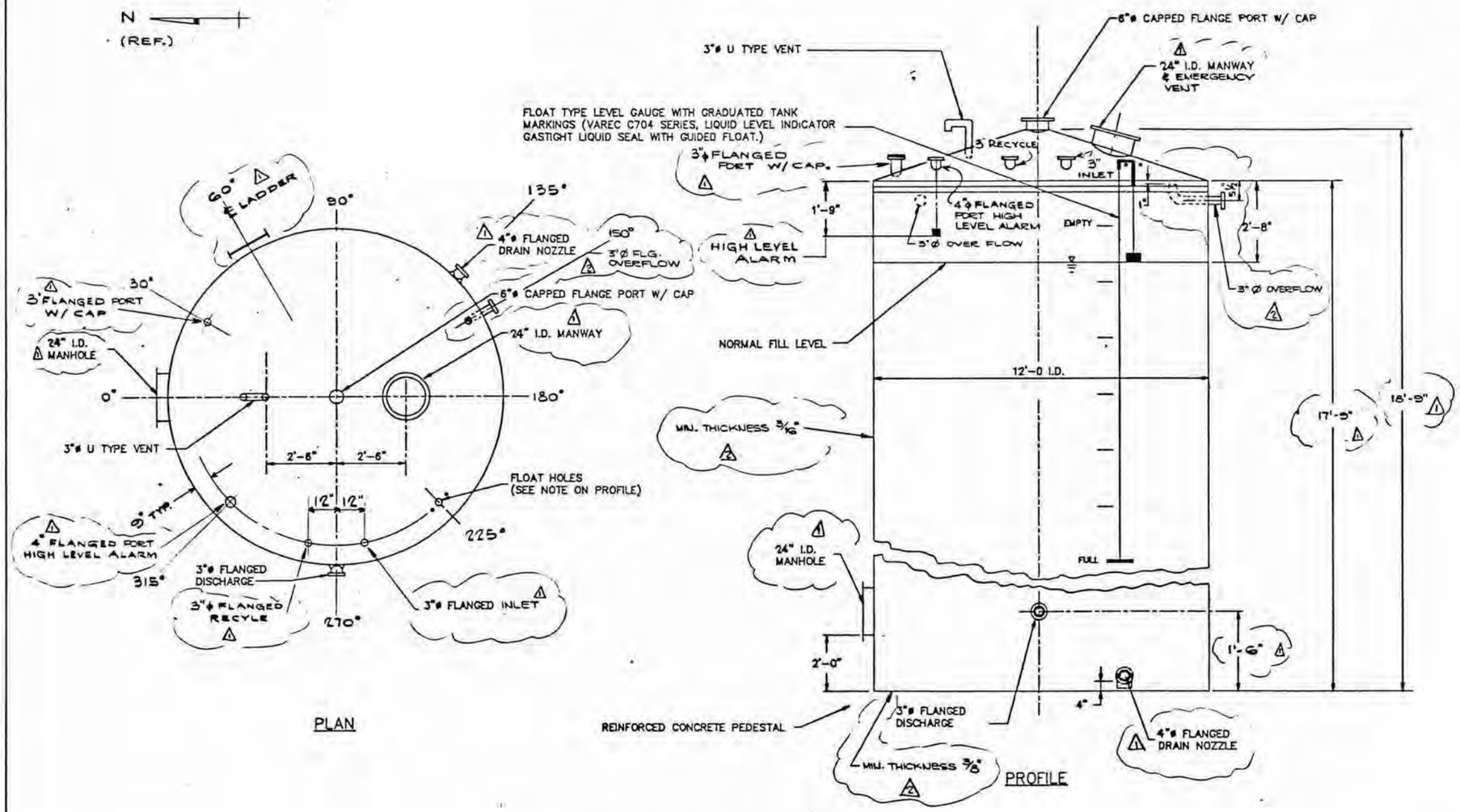
PITTSBURGH, PENNSYLVANIA

DRAWN WKA	CHK'D BDG	APP'D GRB
SCALE		DATE 8-13-85

TANK FARM

TANK FARM DETAILS

DRAWING NUMBER B511-B-BL6



DETAIL

TANK T1

CAUSTIC TANK

SCALE: 1" = 2'

15,000 GALLON
CARBON STEEL

NOTES:

1. TANK-T1 CONSTRUCTED OF A-285 GRADE C CARBON STEEL.
2. TANK TO BE CONSTRUCTED TO MEET API STANDARD 650 LATEST REVISION.
3. TANK THICKNESSES ARE MINIMUM ACCEPTABLE.
4. FLOORS OF TANK WILL BE COATED WITH NON-REACTIVE, NON-SKID MATERIAL MEETING GENERAL API REQUIREMENTS TO IMPROVE SAFETY DURING TANK CLEANING OPERATIONS.
5. OUTSIDE TANK WALLS TO BE SURFACE PREPARED PRIOR TO PAINTING IN CONFORMANCE WITH STEEL STRUCTURE PAINTING COUNCIL SPECS. (SSPC-PA1 LATEST REVISION).
6. THE OUTSIDE OF THE TANKS AND ALL EXTERIOR PIPING WILL BE PRIMED WITH ONE COAT OF ZINC CHROMATE, FOLLOWED BY TWO (2) FINISH COATS OF COLOR SPECIFIED BY OWNER.
7.
8. MANHOLE TO BE HINGED TYPE BOLTED TO FRAME.
9. NOZZLES, FLANGES AND FITTINGS TO BE ASA 150lb. STANDARD FLANGE FITTINGS.
10. FLOAT HIGH LEVEL DETECTION SYSTEM TO BE EQUIPPED WITH LOCALIZED LIGHTS AND AUDIBLE ALARMS. LEVEL SWITCH TYPE 31G SS FITTED WITH VAPOR TYPE COMPRESSION FITTING WITH O-RING BY DELTA CONTROLS OR EQUIVALENT.
11.
12. LIFTING LUGS AND HOLD DOWN REINFORCING RINGS TO BE SPECIFIED BY THE MANUFACTURER.
13. ALTERATIONS AND MODIFICATIONS TO THE TANK DESIGN MAY BE NECESSARY DEPENDING UPON FABRICATION TECHNIQUES OF SELECTED BIDDER. DESIGN MODIFICATIONS WILL BE SUBMITTED WITH SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
14. TANK ANCHOR SUPPORTS TO CONCRETE PEDESTALS WILL BE DESIGNED TO WITHSTAND A 35PSF WIND PRESSURE AND MEET REQUIREMENTS OF THE P.R. BUILDING CODE. LOCATION OF ANCHOR BOLTS TO CONFORM TO LOCATIONS SHOWN ON FOUNDATION ANCHOR BOLT PLAN, DWG. B511-B-S1. (P.R. BLDG. REGULATIONS NR 7 REV. 1988)
15. FOR SECTIONS OF TANK CONTAINMENT AREA, REFER TO DRAWING B511-B-BL4.
16. FOR PLAN LOCATION OF TANKS, REFER TO DRAWING B511-B-BL1.
17. FOR TANK FOUNDATION AND CONTAINMENT STRUCTURAL PLANS, CROSS SECTIONS AND DETAILS, SEE DWGS. B511-B-S1 THROUGH B511-B-S6.
18. FOR PLAN, SCHEMATIC, CROSS SECTIONS, AND DETAILS OF TANK PIPING, VALVES AND FITTINGS, SEE DWGS. B511-B-P1 THROUGH B511-B-P4.
19. TANK TO BE FURNISHED WITH LADDER AND TOP PERIMETER HANDRAIL.
20.
21. TANK IS TO BE COATED INTERNALLY WITH PLACITE #2570 FURNISHED BY THE WISCONSIN PROTECTIVE COATING CORP. TO BE APPLIED & CURED IN STRICT ACCORDANCE WITH THE MFR'S INSTRUCTIONS.

REV #	DATE	DESCRIPTION	APP'D
2	1-31-86 RWH	REVISED AS NOTED	
1	7-8-85 RWH	NOTE #12,13,15 REVISED, FLANGED DRAIN NOZZLE TO BE 4" DIA., 2.45 NOTED.	S.G.

PROTECCION TECNICA ECOLOGICA, INC.
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PART B PERMIT APPLICATION
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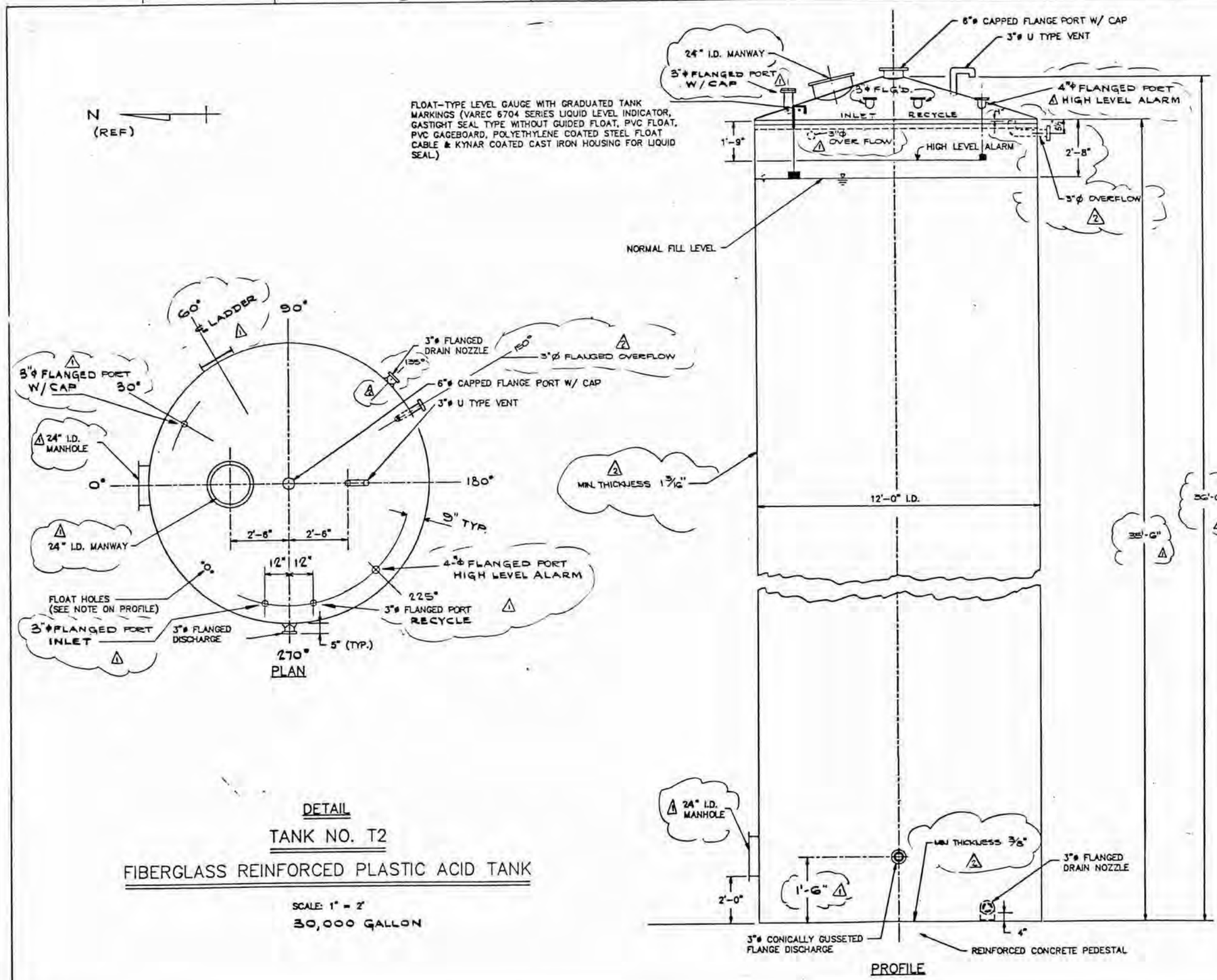
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	wfp/DNB	CHK'D	BDC
APP'D	GRB		
SCALE	AS NOTED	DATE	8-17-85

TANK FARM

TANK DETAILS – TANK T1

DRAWING NUMBER B511-B-T1



DETAIL

TANK NO. T2

FIBERGLASS REINFORCED PLASTIC ACID TANK

SCALE: 1" = 2'

30,000 GALLON

NOTES:

1. TANK CONSTRUCTED OF CONTACT MOLDED FIBERGLASS REINFORCED PLASTIC. ALL RESIN SHALL BE ATLAS 382 OR APPROVED EQUAL BIS PHENOL A FUMARATE. CONSTRUCTION SHALL BE PER ASTM D4097-82. TANK SHALL HAVE CORROSION BARRIER OF 10-15 MILL VEIL. TANK SHALL HAVE A MINIMUM OF 2 PLIES OF CHOPPED STRAND MAT EQUIVALENT TO A TOTAL OF 3-OUNCES/SQ FT. WALL MANUF. BY JONES & HUNT OR APPROVED EQUAL.
2.
3. TANK THICKNESSES ARE MINIMUM ACCEPTABLE
4.
5.
6.
7.
8. NOZZLES, FLANGES AND FITTINGS TO BE FRP ASA 150 LB. STANDARD FLG. FITTINGS
9.
10. HIGH LEVEL DETECTION SYSTEM TO BE EQUIPPED WITH LOCALIZED LIGHTS AND AUDIBLE ALARMS. DELTA MODEL 103-S2 DIELECTRIC SWITCH, SINGLE POINT ALARM, NEMA 7C, AND HASTELLOY C GROUNDING RING.
11. LIFTING LUGS AND HOLD DOWN REINFORCING RINGS TO BE SPECIFIED BY THE MANUFACTURER.
12. ALTERATIONS AND MODIFICATIONS TO THE TANK DESIGN MAY BE NECESSARY DEPENDING UPON FABRICATION TECHNIQUES OF SELECTED BIDDER. DESIGN MODIFICATIONS WILL BE SUBMITTED WITH SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
13. TANK ANCHOR SUPPORTS TO CONCRETE PEDESTALS WILL BE DESIGNED TO WITHSTAND A 35PSF WIND PRESSURE AND MEET REQUIREMENTS OF THE P.R. BUILDING CODE. LOCATION OF ANCHOR BOLTS TO CONFORM TO LOCATIONS SHOWN ON FOUNDATION ANCHOR BOLT PLAN, DWG. B511-B-S1. (P.R. BLDG. REGULATIONS UR 7 REV. 1988)
14. FOR SECTIONS OF TANK CONTAINMENT AREA, REFER TO DRAWING B511-B-BL3.
15. FOR PLAN LOCATION OF TANKS, REFER TO DWG. B511-B-BL1.
16. FOR TANK FOUNDATION AND CONTAINMENT STRUCTURAL PLANS, CROSS SECTIONS AND DETAILS, SEE DWGS. B511-B-S1 THROUGH B511-B-S8.
17. FOR PLAN, SCHEMATIC, CROSS SECTIONS, AND DETAILS OF TANK PIPING, VALVES AND FITTINGS, SEE DWGS. B511-B-P1 THROUGH B511-B-P4.
18. TANK TO BE FURNISHED WITH LADDER AND TOP PERIMETER HANDRAIL.
19.

REV #	DATE	DESCRIPTION	APP'D
2	12-21-87 RWH	REVISED AS NOTED	
1	5-15-85 RWH	NOTE 7 & 8 REVISED & AS NOTED	S.G.

PROTECCION TECNICA - ECOLOGICA, INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

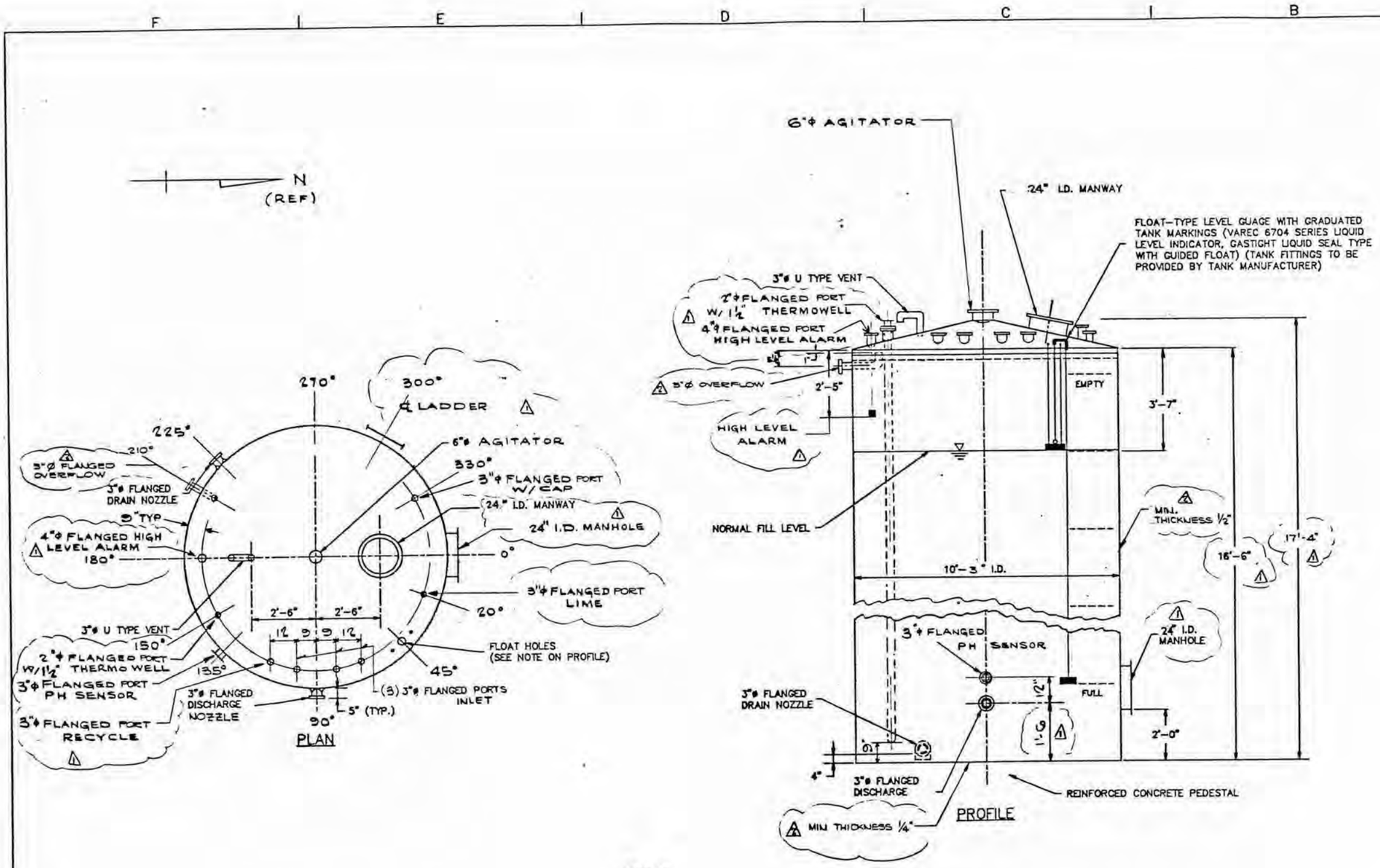
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRAWN	wfp/DWB	CHK'D BDG	APP'D GRB
SCALE	AS NOTED		DATE 8-18-85

TANK FARM

TANK DETAILS - TANK T2

DRAWING NUMBER B511-B-T2



DETAIL

TANK T3

NEUTRALIZATION TANK

SCALE: 1" = 2'

10,000 GALLON

FIBER GLASS REINFORCED PLASTIC

NOTES:

1. TANK CONSTRUCTED OF FIBERGLASS REINFORCED PLASTIC (FRP). ALL RESIN SHALL BE ATLAC 382 OR APPROVED EQUAL BIS PHENOL A FUMARATE. CONSTRUCTION SHALL BE PER ASTM D4097-82. TANK SHALL HAVE CORROSION BARRIER OF 10-20 MILS OF SYNTHETIC SURFACING MAT SUCH AS DYNEL. TANK SHALL HAVE A MINIMUM OF 2 PLIES OF CHOPPED STRAND MAT EQUIVALENT TO A TOTAL OF 3 OUNCES/SQ. FT MANUF. BY JONES & HUNT OR EQUAL.
2. TANK THICKNESSES ARE MINIMUM ACCEPTABLE
3.
4.
5. AGITATOR TO BE JONES & HUNT.
6. TANK ROOF DESIGN MUST BE SUITABLE FOR THE AGITATOR LOAD.
7.
8.
9. NOZZLES, FLANGES AND FITTINGS TO BE FRP ASA 150lb. STANDARD FLANGE FITTINGS.
10. HIGH LEVEL DETECTION SYSTEM TO BE EQUIPPED WITH LOCALIZED LIGHTS AND AUDIBLE ALARMS. DELTA MODEL 103-52 DIELECTRIC SWITCH SINGLE POINT ALARM NEMA 7C, AND HASTELLOY C GROUNDING RING.
11. TANKS TO BE VENTED AS PER API STANDARD 2000.
12. LIFTING & HOLD DOWN LUGS AND REINFORCING RINGS TO BE SPECIFIED BY THE MANUFACTURER.
13. ALTERATIONS AND MODIFICATIONS TO THE TANK DESIGN MAY BE NECESSARY DEPENDING UPON FABRICATION TECHNIQUES OF SELECTED BIDDER. DESIGN MODIFICATIONS WILL BE SUBMITTED WITH SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
14. TANK ANCHOR SUPPORTS TO CONCRETE PEDESTALS WILL BE DESIGNED TO WITHSTAND A 35PSF WIND PRESSURE AND MEET REQUIREMENTS OF THE P.R.E. BUILDING CODE. LOCATION OF ANCHOR BOLTS TO CONFORM TO LOCATIONS SHOWN ON FOUNDATION ANCHOR BOLT PLAN. DWG. B511-B-S1. (P.R. BLDG. [illegible])
15. FOR SECTIONS OF TANK CONTAINMENT AREA, REFER TO DWGS. B511-B-BL3 AND B511-B-BL5.
16. FOR PLAN LOCATION OF TANKS, REFER TO DWG. B511-B-BL1.
17. FOR TANK FOUNDATION AND CONTAINMENT STRUCTURAL PLANS, CROSS SECTIONS AND DETAILS, SEE DWGS. B511-B-S1 THROUGH B511-B-S8.
18. FOR PLAN, SCHEMATIC, CROSS SECTIONS, AND DETAILS OF TANK PIPING, VALVES AND FITTINGS, SEE DWGS. B511-B-P1 THROUGH B511-B-P4.
19. TANK TO BE FURNISHED WITH LADDER AND TOP PERIMETER HANDRAIL.
20.
21.

REV #	DATE	DESCRIPTION	APP'D
2	1-15-86 RWH	REVISED AS NOTED	
1	9-16-85 RWH	NOTE #2 REVISED AS NOTED	G.G

PROTECCION TECNICA ECOLOGICA, INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

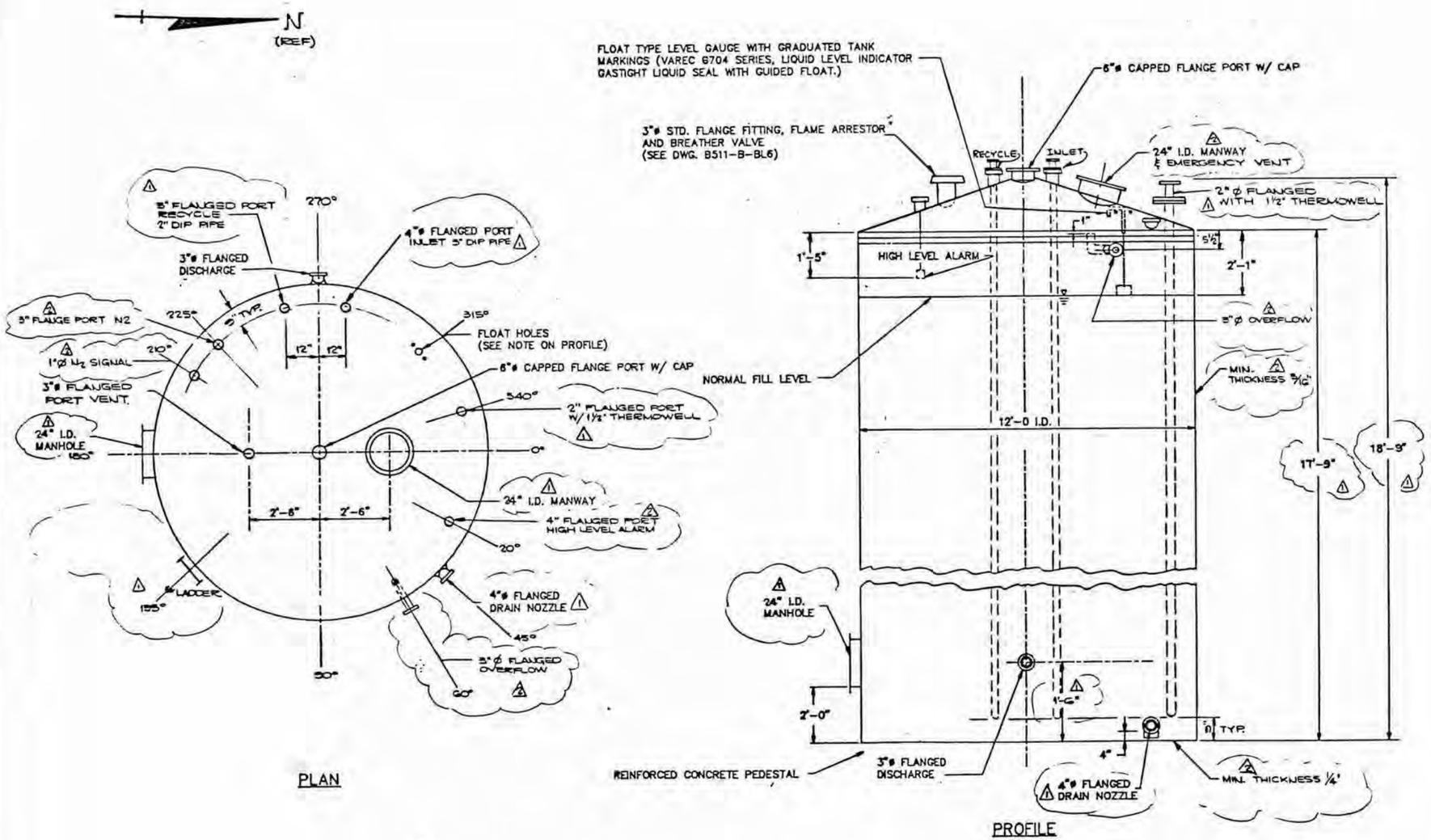
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	wfp	CHK'D BOG	APP'D CRB
SCALE	AS NOTED		DATE 8-15-85

TANK FARM

TANK T3 – TANK DETAILS

DRAWING NUMBER B511-B-T3



DETAIL

TANK T5 - SOLVENTS TANK

SCALE: 1" = 2'
15,000 GALLON
316L STA. STL.

NOTES:

1. TANK CONSTRUCTED OF STAINLESS STEEL AISI 316L
2. TANK TO BE CONSTRUCTED TO MEET API STANDARD 650 LATEST EDITION.
3. TANK THICKNESSES ARE MINIMUM ACCEPTABLE.
4. FLOORS OF TANK WILL BE COATED WITH NON-REACTIVE, NON-SKID MATERIAL MEETING GENERAL API REQUIREMENTS TO IMPROVE SAFETY DURING TANK CLEANING OPERATIONS.
5.
6.
7. EMERGENCY PRESSURE RELIEF COVER VENT TO BE PROTECTOSEAL SERIES Nº 55300 CAT #AXF5332A OR EQUIVALENT
8. NOZZLES, FLANGES AND FITTINGS TO BE ASA 150lb. STANDARD FLANGE FITTINGS. - 316L-SS.
10. FLOAT HIGH LEVEL DETECTION SYSTEM TO BE EQUIPPED WITH LOCALIZED LIGHTS AND AUDIBLE ALARMS. LEVEL SWITCH TYPE 316 SS FITTED WITH VAPOR TYPE COMPRESSION FITTING WITH O-RING BY DELTA CONTROLS OR EQUIVALENT.
11.
12. LIFTING LUGS AND HOLD DOWN REINFORCING RINGS TO BE SPECIFIED BY THE MANUFACTURER.
13. ALTERATIONS AND MODIFICATIONS TO THE TANK DESIGN MAY BE NECESSARY DEPENDING UPON FABRICATION TECHNIQUES OF SELECTED BIDDER. DESIGN MODIFICATIONS WILL BE SUBMITTED WITH SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
14. TANK ANCHOR SUPPORTS TO CONCRETE PEDESTALS WILL BE DESIGNED TO WITHSTAND A 35PSF WIND PRESSURE AND MEET REQUIREMENTS OF THE P.R. BUILDING CODE. LOCATION OF ANCHOR BOLTS TO CONFORM TO LOCATIONS SHOWN ON FOUNDATION ANCHOR BOLT PLAN, DWG. B511-B-S1. (P.R. BLDG. REGULATIONS NS.7 REV. 1986)
15. FOR SECTIONS OF TANK CONTAINMENT AREA, REFER TO DRAWING B511-B-BL5
16. FOR PLAN LOCATION OF TANKS, REFER TO DRAWING B511-B-BL1.
17. FOR TANK FOUNDATION AND CONTAINMENT STRUCTURAL PLANS, CROSS SECTIONS AND DETAILS, SEE DWGS. B511-B-S1 THROUGH B511-B-S6.
18. FOR PLAN, SCHEMATIC, CROSS SECTIONS, AND DETAILS OF TANK PIPING, VALVES AND FITTINGS, SEE DWGS. B511-B-P1 THROUGH B511-B-P4.
19. TANK TO BE FURNISHED WITH LADDER AND TOP PERIMETER HANDRAIL.
20.

REV #	DATE	DESCRIPTION	APP'D
1	1-31-86 BWH	REVISED AS NOTED	
1	2-6-85 BWH	NOTE #1/26 REVISED, FLANGED DRAIN NOZZLE TO BE 4" DIA. AS NOTED	S.G.

PROTECCION TECNICA ECOLOGICA, INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

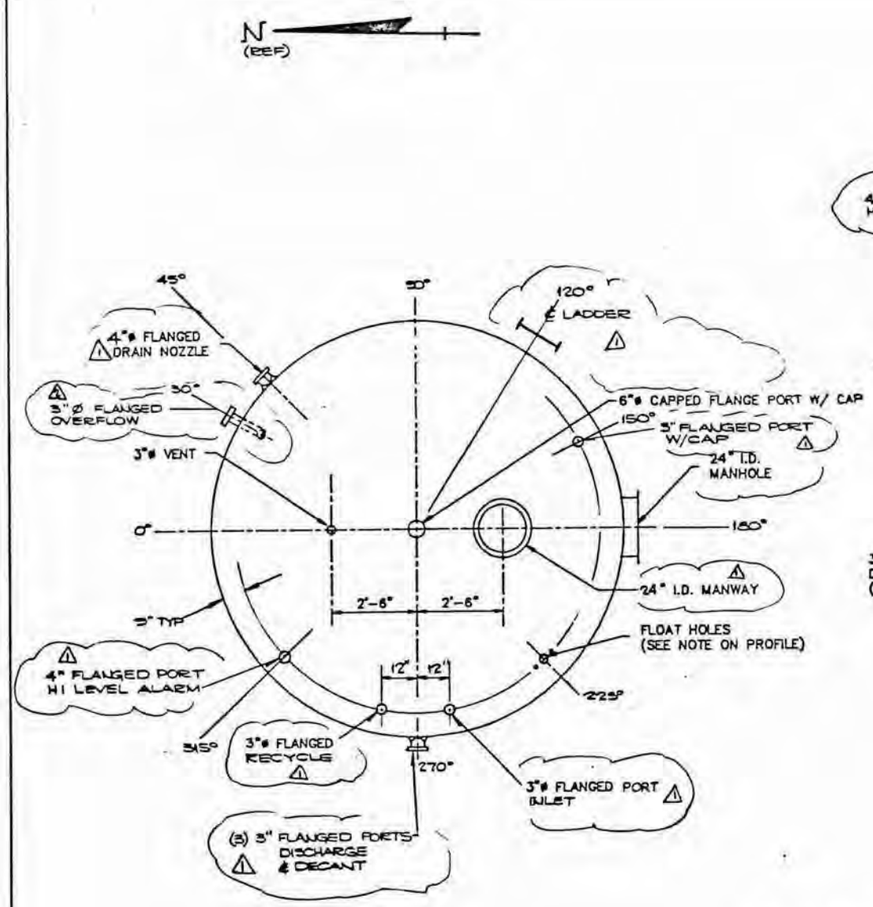
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	wfp/DWB	CHK'D	BOQ
APP'D	GRB		
SCALE	AS NOTED	DATE	8-17-85

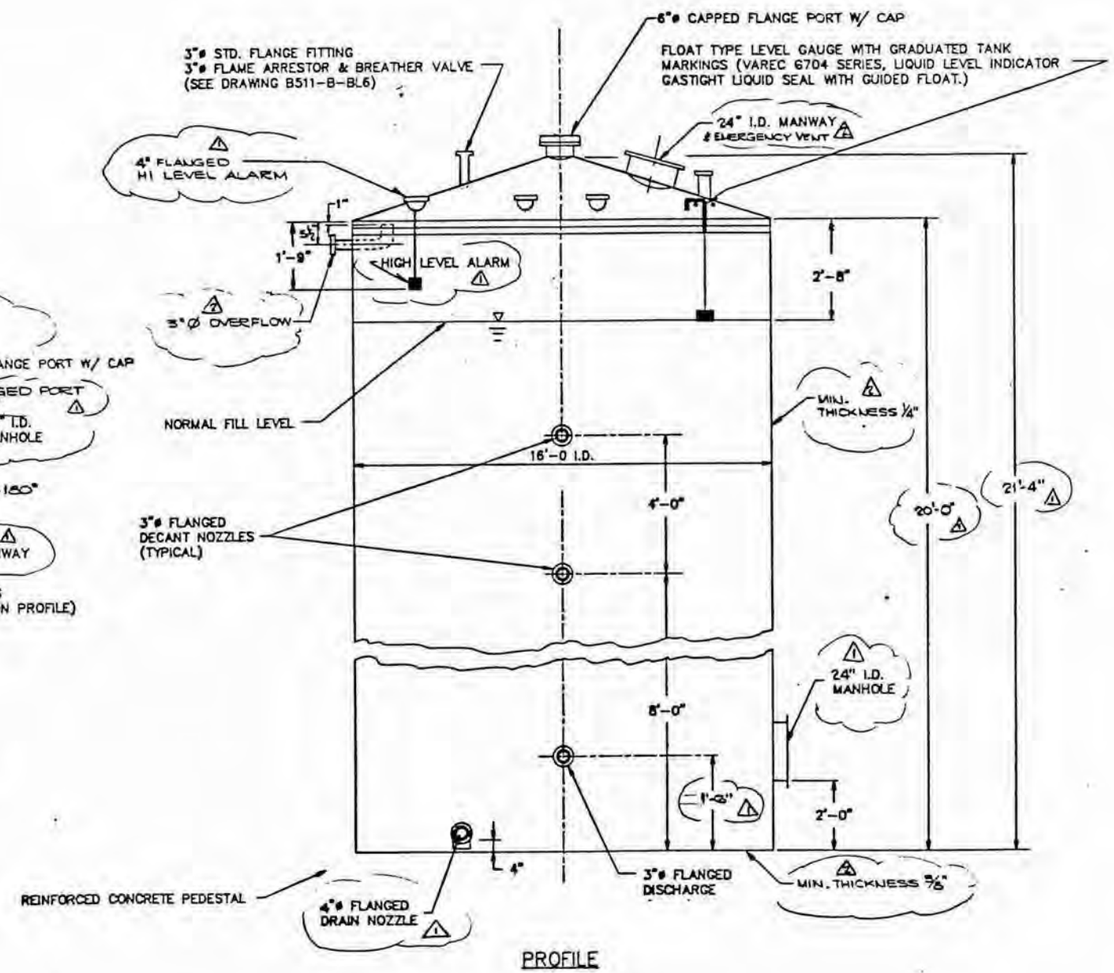
TANK FARM

TANK DETAILS - TANK T5

DRAWING NUMBER B511-B-T4



PLAN



PROFILE

NOTES:

1. TANK CONSTRUCTED OF A-285, GRADE C CARBON STEEL AS ALTERNATE MATERIAL MAY BE SELECTED WITH EQUIVALENT OR BETTER COMPATABILITY PROPERTIES.
2. TANK TO BE CONSTRUCTED TO MEET API STANDARD 650, LATEST EDITION.
3. TANK THICKNESSES ARE MINIMUM ACCEPTABLE
4. FLOORS OF TANK WILL BE COATED WITH NON-REACTIVE, NON-SKID MATERIAL MEETING GENERAL API REQUIREMENTS TO IMPROVE SAFETY DURING TANK CLEANING OPERATIONS.
5. OUTSIDE TANK WALLS TO BE SURFACE PREPARED PRIOR TO PAINTING IN CONFORMANCE WITH STEEL STRUCTURES PAINTING COUNCIL (SSPC) COMMERCIAL BLASTING.
6. THE OUTSIDE OF THE TANKS AND ALL EXTERIOR PIPING WILL BE PRIMED WITH ONE COAT OF ZINC CHROMATE, FOLLOWED BY TWO (2) FINISH COATS OF COLOR SPECIFIED BY OWNER.
7. MANWAY AND EMERGENCY PRESSURE RELIEF COVER VENT TO BE PROTECTOSEAL SERIES N° 55500 OR EQUAL 53324
8. MANHOLE TO BE HINGED TYPE BOLTED TO FRAME.
9. NOZZLES, FLANGES AND FITTINGS TO BE ASA 150lb. STANDARD FLANGE FITTINGS.
10. FLOAT HIGH LEVEL DETECTION SYSTEM TO BE EQUIPPED WITH LOCALIZED LIGHTS AND AUDIBLE ALARMS. LEVEL SWITCH TYPE 304 SS FITTED WITH VAPOR TYPE COMPRESSION FITTING WITH O-RING BY DELTA CONTROLS OR EQUIVALENT.
11.
12. LIFTING LUGS AND HOLD DOWN REINFORCING RINGS TO BE SPECIFIED BY THE MANUFACTURER.
13. ALTERATIONS AND MODIFICATIONS TO THE TANK DESIGN MAY BE NECESSARY DEPENDING UPON FABRICATION TECHNIQUES OF SELECTED BIDDER. DESIGN MODIFICATIONS WILL BE SUBMITTED WITH SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
14. TANK ANCHOR SUPPORTS TO CONCRETE PEDESTALS WILL BE DESIGNED TO WITHSTAND A 35PSF WIND PRESSURE AND MEET REQUIREMENTS OF THE PR. BUILDING CODE. LOCATION OF ANCHOR BOLTS TO CONFORM TO LOCATIONS SHOWN ON FOUNDATION ANCHOR BOLT PLAN, DWG. B511-B-S1. (PR. BLDG. REGULATIONS NET REV. 1986)
15. FOR SECTIONS OF TANK CONTAINMENT AREA, REFER TO DRAWING B511-B-BL2.
16. FOR PLAN LOCATION OF TANKS, REFER TO DRAWING B511-B-BL1.
17. FOR TANK FOUNDATION AND CONTAINMENT STRUCTURAL PLANS, CROSS SECTIONS AND DETAILS, SEE DWGS. B511-B-S1 THROUGH B511-B-S8.
18. FOR PLAN, SCHEMATIC, CROSS SECTIONS, AND DETAILS OF TANK PIPING, VALVES AND FITTINGS, SEE DWGS. B511-B-P1 THROUGH B511-B-P4.
19. TANK TO BE FURNISHED WITH LADDER AND TOP PERIMETER HANDRAIL.
20.

REV #	DATE	DESCRIPTION	APP'D
4	12-8-86 RWH	REVISED AS NOTED	
1	9-18-86 RWH	NOTE #2 REVISED, NOTE #5 DELETED FLANGED DRAIN NOZZLE TO BE 4" DIAM AS NOTED	S.G.

PROTECCION TECNICA ECOLOGICA, INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 000101862
PEÑUELAS, PUERTO RICO

FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	wfp/DWB	CHK'D BDG	APP'D GRB
SCALE	AS NOTED		DATE 8-17-85

TANK FARM

TANK DETAILS – TANK T6

DRAWING NUMBER B511-B-T5

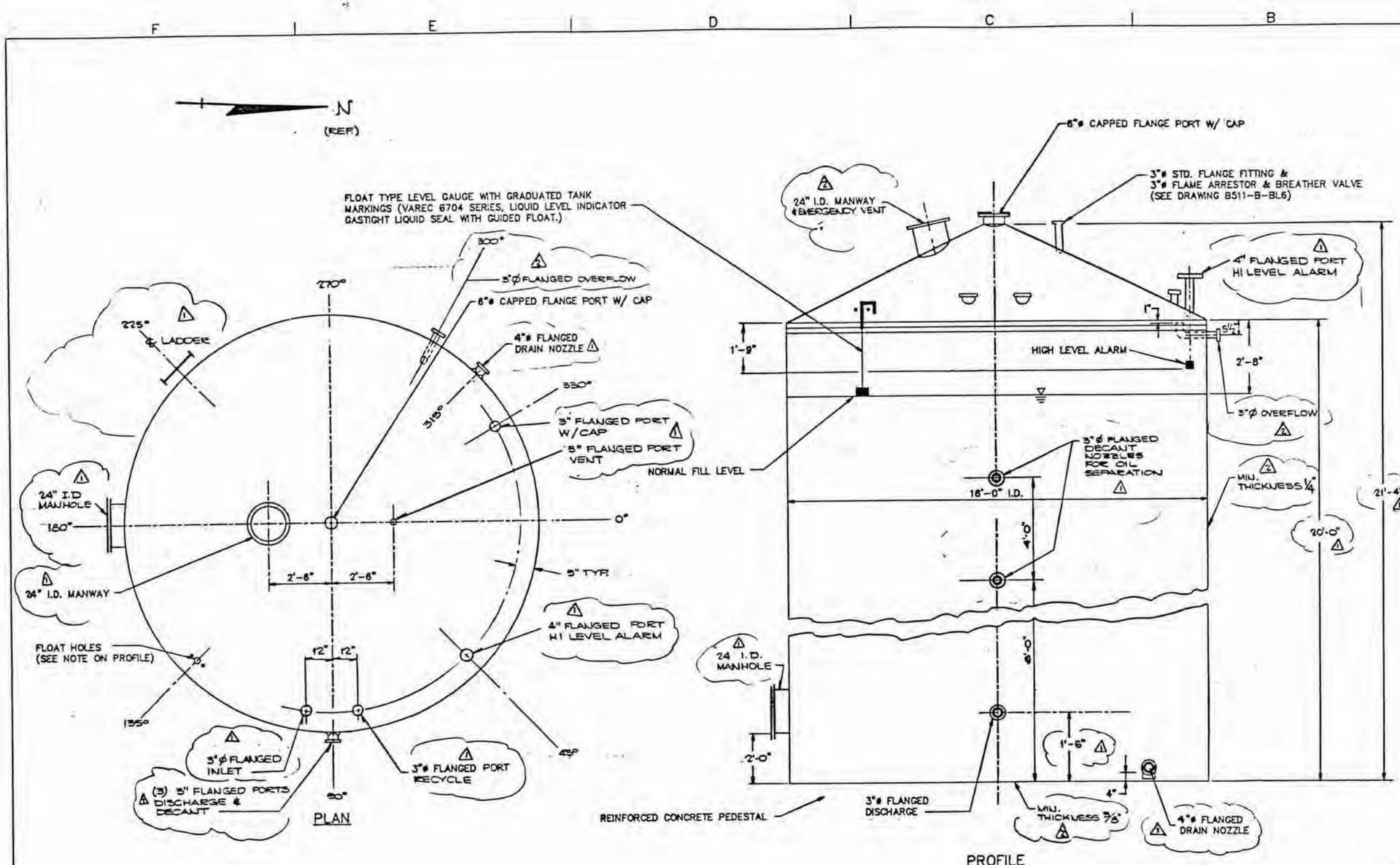
DETAIL

TANK T6

OIL SLUDGE TANK

SCALE: 1" = 2'

80,000 GALLON CARBON STEEL



NOTES:

1. TANK CONSTRUCTED OF A285 GRADE C CARBON STEEL.
2. TANK TO BE CONSTRUCTED TO MEET CODE AND API STANDARD 650 LATEST EDITION.
3. TANK THICKNESSES SHOWN ARE MINIMUM ACCEPTABLE.
4. FLOORS OF TANK WILL BE COATED WITH NON-REACTIVE, NON-SKID MATERIAL MEETING GENERAL API REQUIREMENTS TO IMPROVE SAFETY DURING TANK CLEANING OPERATIONS.
5. OUTSIDE TANK WALLS TO BE SURFACE PREPARED PRIOR TO PAINTING IN CONFORMANCE WITH STEEL STRUCTURE PAINTING COUNCIL - SPECS. COMMERCIAL BLASTING.
6. THE OUTSIDE OF THE TANKS AND ALL EXTERIOR PIPING WILL BE PRIMED WITH ONE COAT OF ZINC CHROMATE, FOLLOWED BY TWO (2) FINISH COATS OF COLOR SPECIFIED BY OWNER.
7. EMERGENCY PRESSURE RELIEF COVER VENT TO BE PROTECTOSEAL SERIES Nº 55500 CAT #KC55374.
8. MANHOLE TO BE HINGED TYPE BOLTED TO FRAME.
9. NOZZLES, FLANGES AND FITTINGS TO BE ASA 150lb. STANDARD FLANGE FITTINGS.
10. FLOAT HIGH LEVEL DETECTION SYSTEM TO BE EQUIPPED WITH LOCALIZED LIGHTS AND AUDIBLE ALARMS. LEVEL SWITCH TYPE 31G SS FITTED WITH VAPOR TYPE COMPRESSION FITTING WITH O-RING BY DELTA CONTROLS OR EQUIVALENT.
11.
12. LIFTING LUGS AND HOLD DOWN REINFORCING RINGS TO BE SPECIFIED BY THE MANUFACTURER.
13. ALTERATIONS AND MODIFICATIONS TO THE TANK DESIGN MAY BE NECESSARY DEPENDING UPON FABRICATION TECHNIQUES OF SELECTED BIDDER. DESIGN MODIFICATIONS WILL BE SUBMITTED WITH SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
14. TANK ANCHOR SUPPORTS TO CONCRETE PEDESTALS WILL BE DESIGNED TO WITHSTAND A 35PSF WIND PRESSURE AND MEET REQUIREMENTS OF THE P.R.R. BUILDING CODE. LOCATION OF ANCHOR BOLTS TO CONFORM TO LOCATIONS SHOWN ON FOUNDATION ANCHOR BOLT PLAN, DWG. B511-B-S1. (P.R. BLDG REGULATIONS Nº 7 REV. 1968)
15. FOR SECTIONS OF TANK CONTAINMENT AREA, REFER TO DRAWING B511-B-BL2.
16. FOR PLAN LOCATION OF TANKS, REFER TO DRAWING B511-B-BL1.
17. FOR TANK FOUNDATION AND CONTAINMENT STRUCTURAL PLANS, CROSS SECTIONS AND DETAILS, SEE DWGS. B511-B-S1 THROUGH B511-B-S8.
18. FOR PLAN, SCHEMATIC, CROSS SECTIONS, AND DETAILS OF TANK PIPING, VALVES AND FITTINGS, SEE DWGS. B511-B-P1 THROUGH B511-B-P4.
19. TANK TO BE FURNISHED WITH LADDER AND TOP PERIMETER HANDRAIL.
20.

DETAIL

TANK T8

OILS TANK

SCALE: 1" = 2'

30,000 GALLON

MAT'L. CARBON STL.

REV #	DATE	DESCRIPTION	APP'D
3	1-31-86 RWH	REVISED AS NOTED	
1	9-10-85 RWH	NOTE #2 REVISED. NOTE #9 DELETED FLANGED DRAIN NOZZLE TO BE 4" DIA & AS NOTED	S.G

PROTECCION TECNICA...ECOLOGICA, INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRO 091018622
PONUELAS, PUERTO RICO

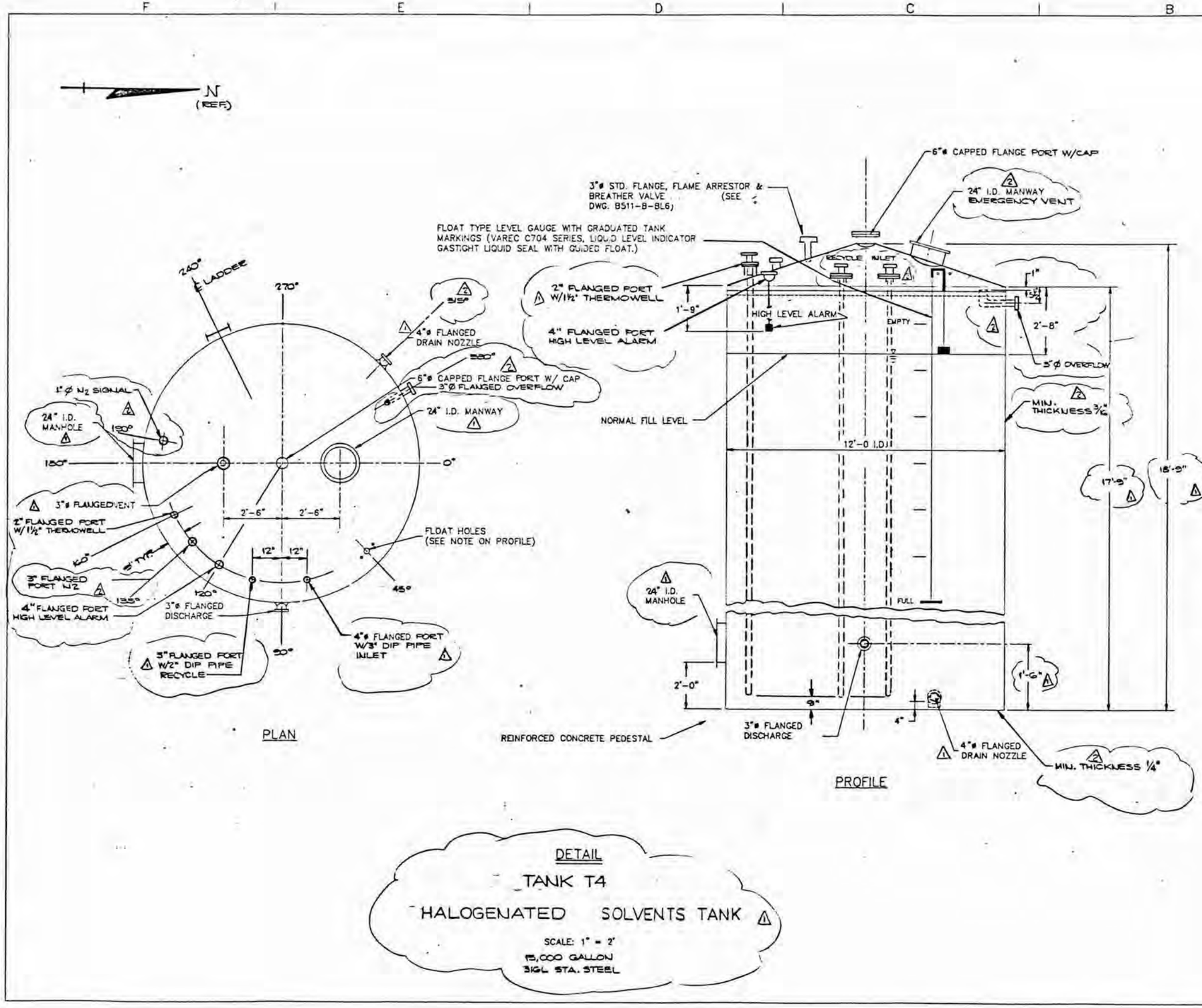
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN wtp/DWB	CHK'D BDG	APP'D GRB	
SCALE AS NOTED		DATE 8-17-85	

TANK FARM

TANK DETAILS - TANK T8

DRAWING NUMBER: B511-B-T6



DETAIL

TANK T4

HALOGENATED SOLVENTS TANK

SCALE: 1" = 2'

15,000 GALLON

316L STA. STEEL

NOTES:

1. TANK CONSTRUCTED OF STAINLESS STEEL AISI-316L.
2. TANK TO BE CONSTRUCTED TO MEET API STANDARD 650 LATEST EDITION
3. TANK THICKNESSES SHOWN ARE MINIMUM ACCEPTABLE.
4. FLOORS OF TANK WILL BE COATED WITH NON-REACTIVE, NON-SKID MATERIAL MEETING GENERAL API REQUIREMENTS TO IMPROVE SAFETY DURING TANK CLEANING OPERATIONS.
5.
6.
7. MANWAY AND EMERGENCY PRESSURE RELIEF COVER VENT TO BE PROTECTOSEAL SERIES N55300 OR EQUIVALENT.
8.
9. NOZZLES, FLANGES AND FITTINGS TO BE ASA 150lb. STANDARD FLANGE FITTINGS. - 316L-SS
10. FLOAT HIGH LEVEL DETECTION SYSTEM TO BE EQUIPPED WITH LOCALIZED LIGHTS AND AUDIBLE ALARMS. LEVEL SWITCH TYPE 316SS FITTED WITH VAPOR TYPE COMPRESSION FITTING WITH O-RING BY DELTA CONTROLS OR EQUIVALENT.
11.
12. LIFTING LUGS AND HOLD DOWN REINFORCING RINGS TO BE SPECIFIED BY THE MANUFACTURER.
13. ALTERATIONS AND MODIFICATIONS TO THE TANK DESIGN MAY BE NECESSARY DEPENDING UPON FABRICATION TECHNIQUES OF SELECTED BIDDER. DESIGN MODIFICATIONS WILL BE SUBMITTED WITH SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
14. TANK ANCHOR SUPPORTS TO CONCRETE PEDESTALS WILL BE DESIGNED TO WITHSTAND A 35PSF WIND PRESSURE AND MEET REQUIREMENTS OF THE P.R. BUILDING CODE. LOCATION OF ANCHOR BOLTS TO CONFORM TO LOCATIONS SHOWN ON FOUNDATION ANCHOR BOLT PLAN, DWG. B511-B-S1 (P.R. BLDG. REGULATIONS NO. 7 REV. 1968)
15. FOR SECTIONS OF TANK CONTAINMENT AREA, REFER TO DRAWING B511-B-BL4.
16. FOR PLAN LOCATION OF TANKS, REFER TO DRAWING B511-B-BL1.
17. FOR TANK FOUNDATION AND CONTAINMENT STRUCTURAL PLANS, CROSS SECTIONS AND DETAILS, SEE DWGS. B511-B-S1 THROUGH B511-B-S6.
18. FOR PLAN, SCHEMATIC, CROSS SECTIONS, AND DETAILS OF TANK PIPING, VALVES AND FITTINGS, SEE DWGS. B511-B-P1 THROUGH B511-B-P4.
19. TANK TO BE FURNISHED WITH LADDER AND TOP PERIMETER HANDRAIL.
20.

REV #	DATE	DESCRIPTION	APP'D
2	7-8-86 RWH	REVISED AS NOTED	
1	7-8-85 RWH	NOTE #12 REVISED, FLANGED DRAIN NOZZLE TO BE 4" DIA. & AS NOTED	S.G.

PROTECCION TECNICA ECOLOGICA, INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

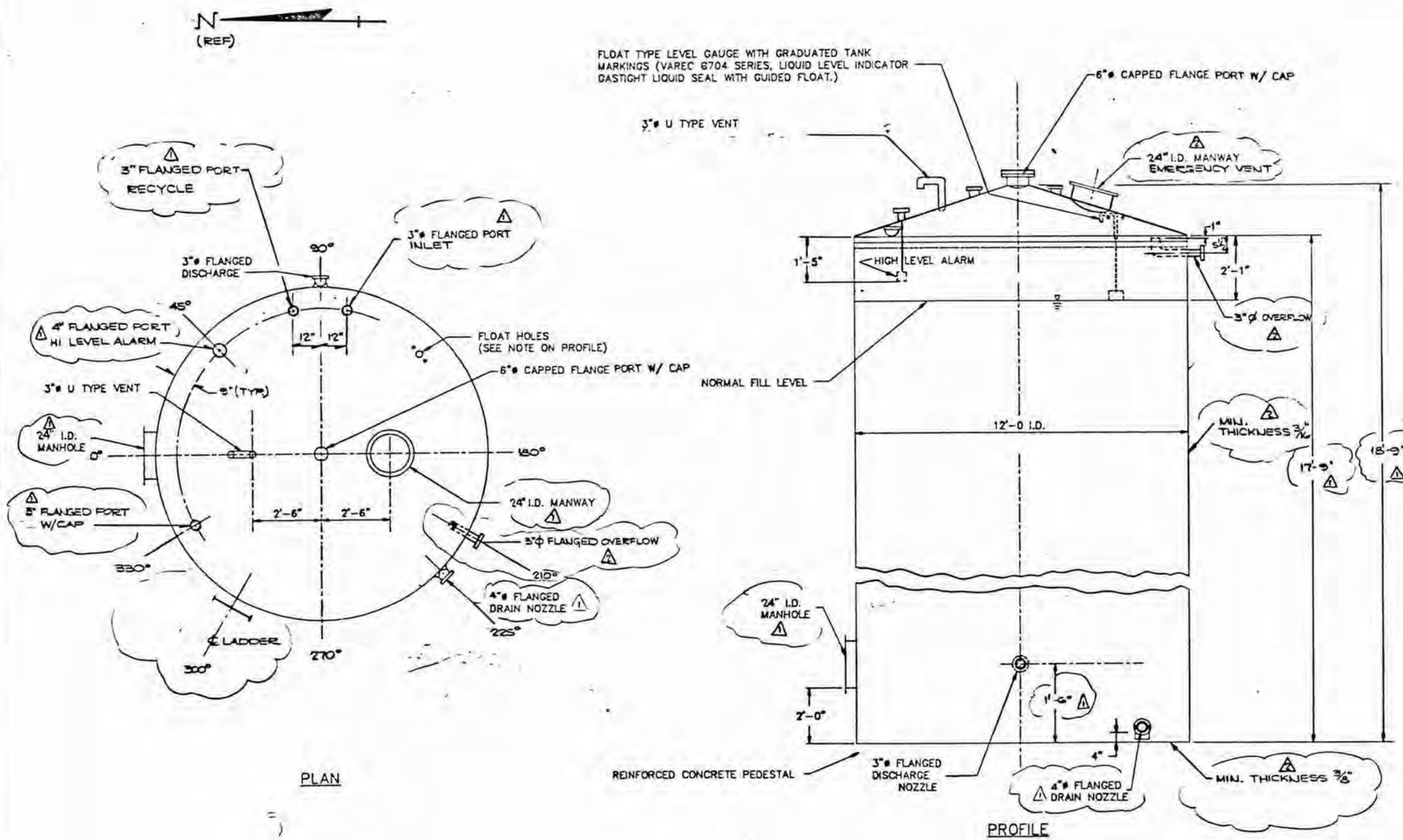
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRAWN	mp/DWB	CHK'D BDG	APP'D GRB
SCALE	AS NOTED		DATE 8-17-85

TANK FARM

TANKS DETAILS - TANK T4

DRAWING NUMBER B511-B-T7



DETAIL

TANK T7 - AQUEOUS WASTE TANK

SCALE: 1" = 2'
15,000 GALLON
CARBON STEEL

NOTES:

1. TANK CONSTRUCTED OF A-285 GRADE C CARBON STEEL.
2. TANK TO BE CONSTRUCTED TO MEET API STANDARD 650 LATEST EDITION
3. TANK THICKNESSES ARE MINIMUM ACCEPTABLE
4. FLOORS OF TANK WILL BE COATED WITH NON-REACTIVE, NON-SKID MATERIAL MEETING GENERAL API REQUIREMENTS TO IMPROVE SAFETY DURING TANK CLEANING OPERATIONS.
5. OUTSIDE TANK WALLS TO BE SURFACE PREPARED PRIOR TO PAINTING IN CONFORMANCE WITH STEEL STRUCTURES PAINTING COUNCIL (SSPC) (COMMERCIAL BLASTING).
6. THE OUTSIDE OF THE TANKS AND ALL EXTERIOR PIPING WILL BE PRIMED WITH ONE COAT OF ZINC CHROMATE, FOLLOWED BY TWO (2) FINISH COATS OF COLOR SPECIFIED BY OWNER.
7.
8. NOZZLES, FLANGES AND FITTINGS TO BE ASA 150lb. STANDARD FLANGE FITTINGS.
10. FLOAT HIGH LEVEL DETECTION SYSTEM TO BE EQUIPPED WITH LOCALIZED LIGHTS AND AUDIBLE ALARMS. LEVEL SWITCH TYPE 316 SS FITTED WITH VAPOR TYPE COMPRESSION FITTING WITH O-RING BY DELTA CONTROLS OR EQUIVALENT.
11.
12. LIFTING LUGS AND HOLD DOWN REINFORCING RINGS TO BE SPECIFIED BY THE MANUFACTURER.
13. ALTERATIONS AND MODIFICATIONS TO THE TANK DESIGN MAY BE NECESSARY DEPENDING UPON FABRICATION TECHNIQUES OF SELECTED BIDDER. DESIGN MODIFICATIONS WILL BE SUBMITTED WITH SHOP DRAWINGS TO THE ENGINEER OR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
14. TANK ANCHOR SUPPORTS TO CONCRETE PEDESTALS WILL BE DESIGNED TO WITHSTAND A 35PSF WIND PRESSURE AND MEET REQUIREMENTS OF THE P.R.R. BUILDING CODE. LOCATION OF ANCHOR BOLTS TO CONFORM TO LOCATIONS SHOWN ON FOUNDATION ANCHOR BOLT PLAN, DWG. B511-B-S1. (P.R.R. BLDG. REGULATIONS NO. 7 REV. 1962)
15. FOR SECTIONS OF TANK CONTAINMENT AREA, REFER TO DRAWING B511-B-BL5
16. FOR PLAN LOCATION OF TANKS, REFER TO DRAWING B511-B-BL1.
17. FOR TANK FOUNDATION AND CONTAINMENT STRUCTURAL PLANS, CROSS SECTIONS AND DETAILS, SEE DWGS. B511-B-S1 THROUGH B511-B-S8.
18. FOR PLAN, SCHEMATIC, CROSS SECTIONS, AND DETAILS OF TANK PIPING, VALVES AND FITTINGS, SEE DWGS. B511-B-P1 THROUGH B511-B-P4.
19. TANK TO BE FURNISHED WITH LADDER AND TOP PERIMETER HANDRAIL.
20.

REV #	DATE	DESCRIPTION	APP'D
4	11-21-85 RWH	REVISED AS NOTED	
3	7-10-85 RWH	NOTE 11 WAS REVISED, FLANGED DRAIN NOZZLE TO BE 4" DIA AS NOTED	S.G.

PROTECCION TECNICA ECOLOGICA, INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

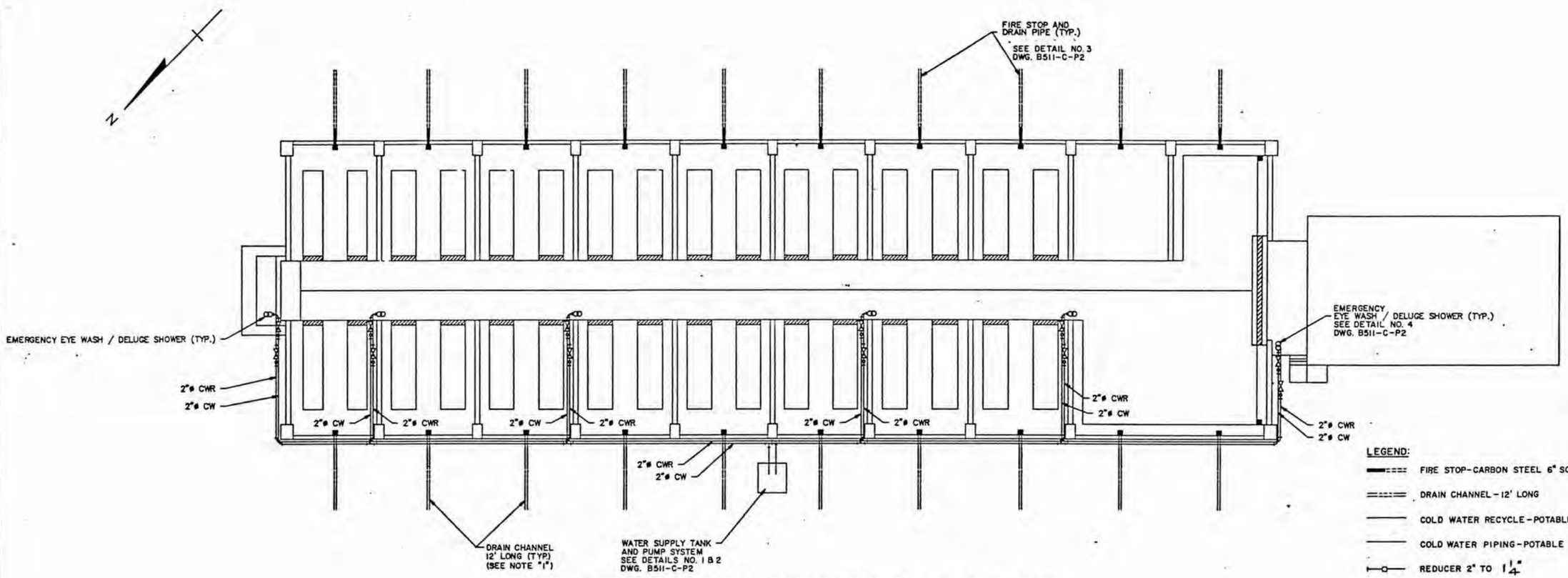
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN wfp/DWB	CHK'D BDG	APP'D GRB	
SCALE AS NOTED		DATE 8-17-85	

TANK FARM

TANK DETAILS - TANKS T7

DRAWING NUMBER B511-B-T8



CONTAINER STORAGE BUILDING PLUMBING AND DRAIN PLAN

SCALE

0 10 20 30 FEET

LEGEND:

- FIRE STOP-CARBON STEEL 6" SCH 20 PIPE
- DRAIN CHANNEL-12' LONG
- COLD WATER RECYCLE-POTABLE WATER PIPING
- COLD WATER PIPING-POTABLE WATER PIPING
- REDUCER 2" TO 1 1/4"
- TEE
- ELBOW
- GATE VALVE (1 1/4")

NOTES:

1. DRAINAGE CHANNEL TO BE VEE SHAPED, 8" DEEP, 4 INCH CONCRETE WITH WELDED WIRE FABRIC REINFORCING, 4 X 4-W4 X W4; SLOPE AT 1/8 INCH PER FOOT.
2. EYE WASH/SHOWER TO BE BRADLEY S1931 OR EQUAL.

REV #	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

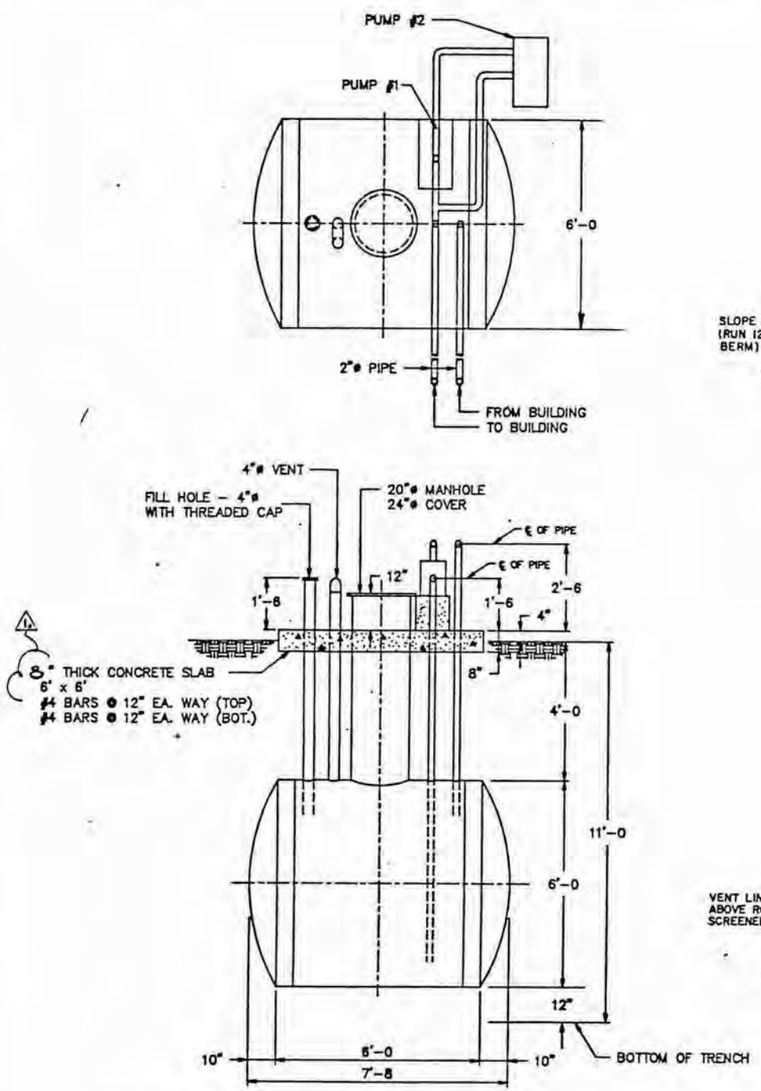
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	wfp	CHK'D JWH	APP'D GRB
SCALE	AS SHOWN		DATE 8-12-85

CONTAINER STORAGE BUILDING

CONTAINER STORAGE BUILDING PLUMBING AND DRAIN PLAN

DRAWING NUMBER B511-C-P1

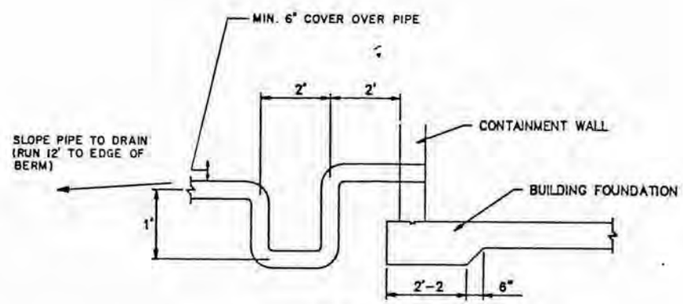


WARNER BELDING FRP TANK – MODEL NO. C-CCH-6
OR APPROVED EQUAL
1422 GALLONS (HEAT CURVED 4HRS., APPROVED FOR WATER SUPPLY

DETAIL Nº 1 △1

NOTES:

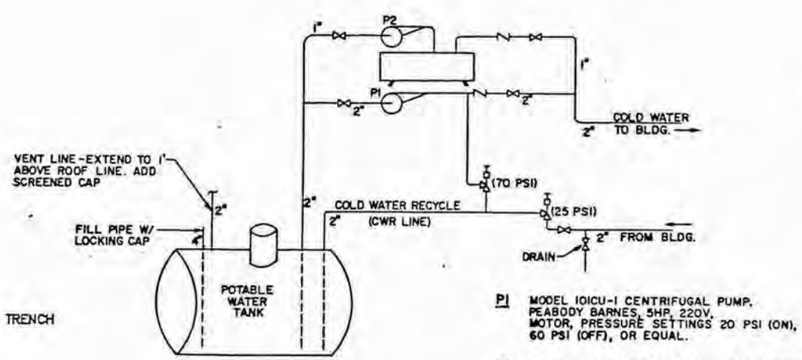
1. TANK IS TO BE PLACED 4' BELOW GROUND IN AND ON COMPACTED PEA RUN GRAVEL.
2. OVEREXCAVATE TRENCH 2' ON ALL SIDES (10'W x 11'-8L x 11'D)
3. BACKFILL WITH PEA RUN MATERIAL APPROVED BY ENGINEER. INSTALL PER MANUFACTURE'S SPECIFICATIONS.
4. DESIGN OF TANK MUST CONFORM TO UNDERWRITER'S LABORATORIES & ASTM STANDARDS FOR DESIGN AND CONSTRUCTION OF FRP TANKS



FIRE STOP
BUILDING DRAIN
6" O.D. CARBON STEEL SCHEDULE 20 PIPE

NOT TO SCALE

DETAIL Nº 3 △1

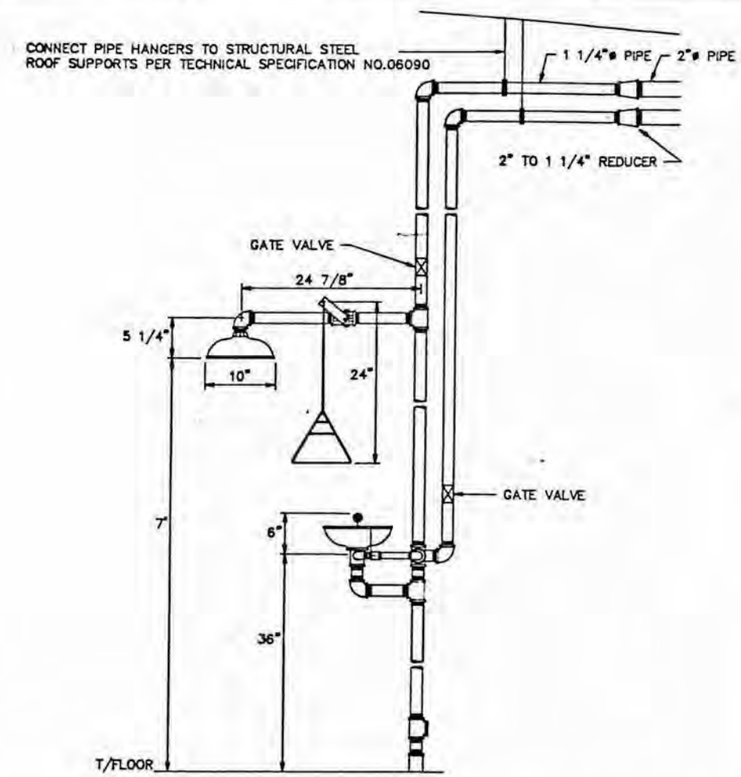


P1 MODEL 1010U-1 CENTRIFUGAL PUMP, PEABODY BARNES, 5HP, 220V, MOTOR, PRESSURE SETTINGS 20 PSI (ON), 60 PSI (OFF), OR EQUAL.

P2 1HP, 110/220V PACKAGE WATER SYSTEM (PUMP, PNEUMATIC TANK, AND PRESSURE SWITCH), PRESSURE SETTINGS 30 PSI (ON), 50 PSI (OFF)

POTABLE WATER SYSTEM
FLOW & PROCESS SCHEMATIC

DETAIL Nº 2 △1



BRADLEY S1931 OR APPROVED EQUAL
DETAIL OF COMBINATION EYE WASH/DELUGE SHOWER UNIT

NO SCALE

DETAIL Nº 4 △1

REV #	DATE	DESCRIPTION	APP'D
△1	AS 10-16-85	ADDED DETAIL Nº1, 2, 3, & 4	S.G.

PROTECCION TECNICA ECOLOGICA, INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

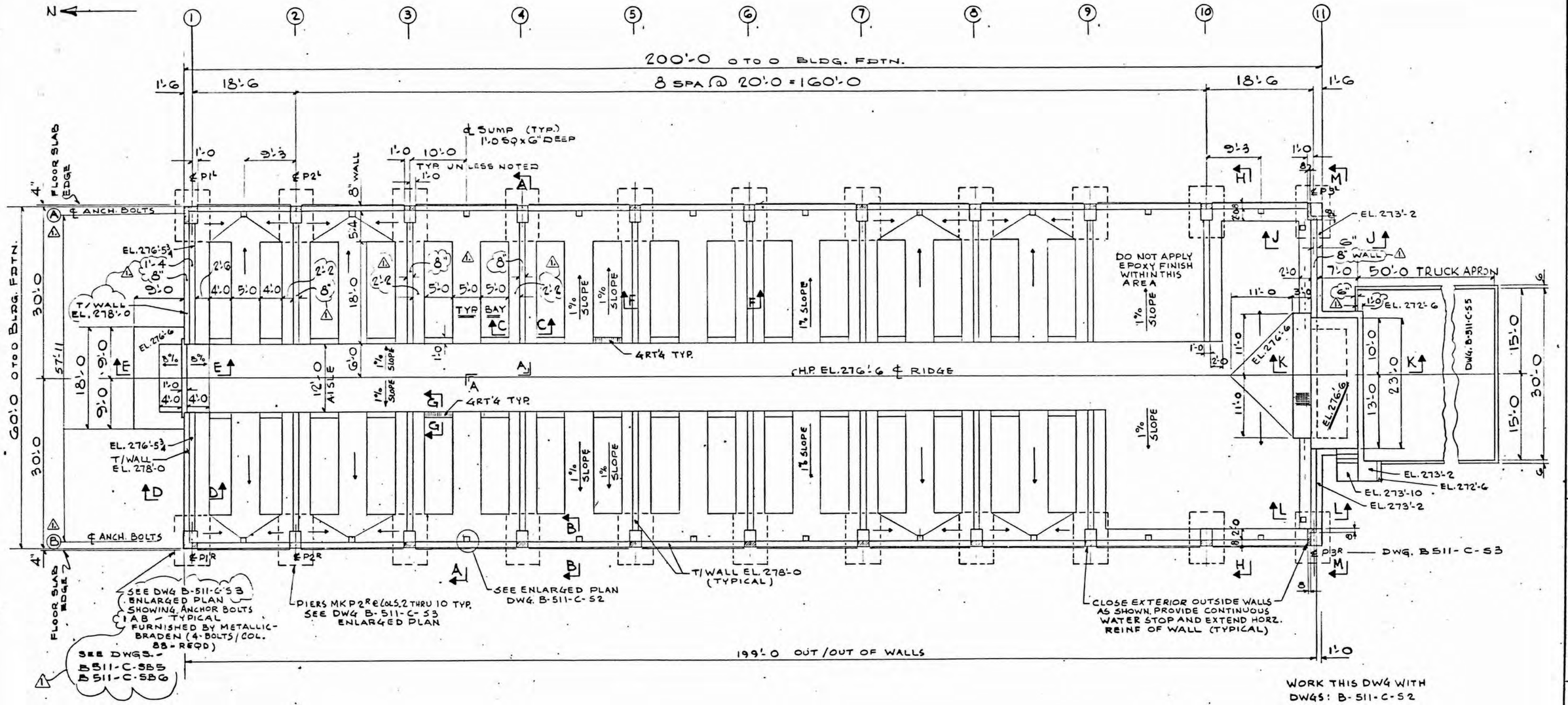
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRAWN	DVB	CHK'D GB	APP'D
SCALE	AS NOTED		DATE 8-18-85

CONTAINER STORAGE BUILDING

DETAILS

DRAWING NUMBER B511-C-P2



WORK THIS DWG WITH DWGS: B-511-C-S2
B-511-C-S3
B-511-C-S4
B-511-C-S5

PLAN - CONTAINER STORAGE BLDG.

NOTE
FOR GENERAL NOTES SEE DWG. B-511-B-S1

REV'S	DATE	DESCRIPTION	APP'D
1	10-3-86	CHG'D WALLS FROM 1'-0 TO 0'-8"	S.G.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018 6422
PENUELAS, PUERTO RICO

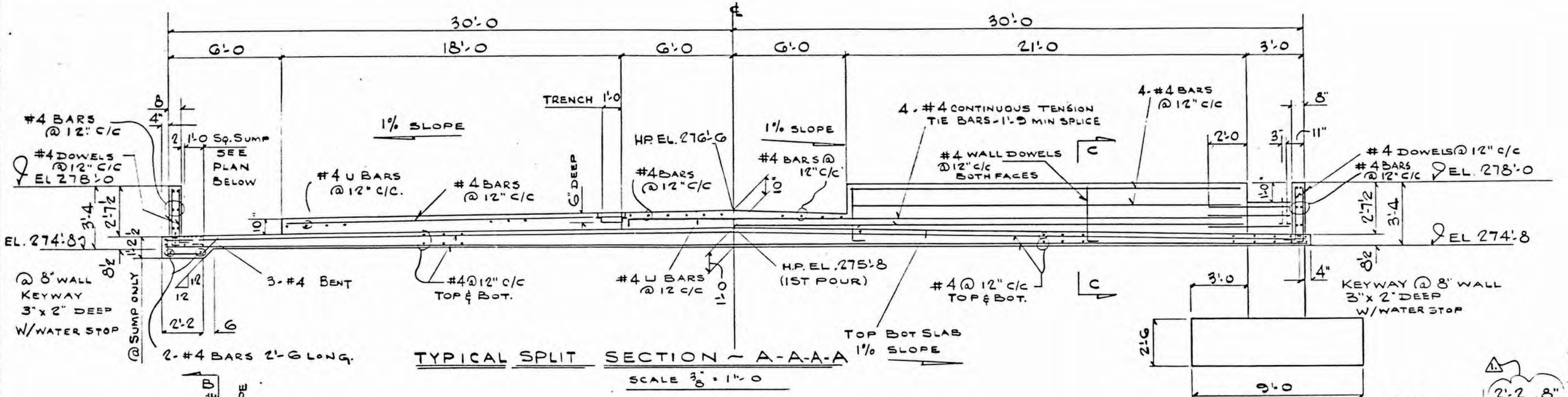
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN A.S. CHK'D J.Z. APP'D
SCALE 1/8" = 1'-0 DATE

CONTAINER STORAGE BUILDING

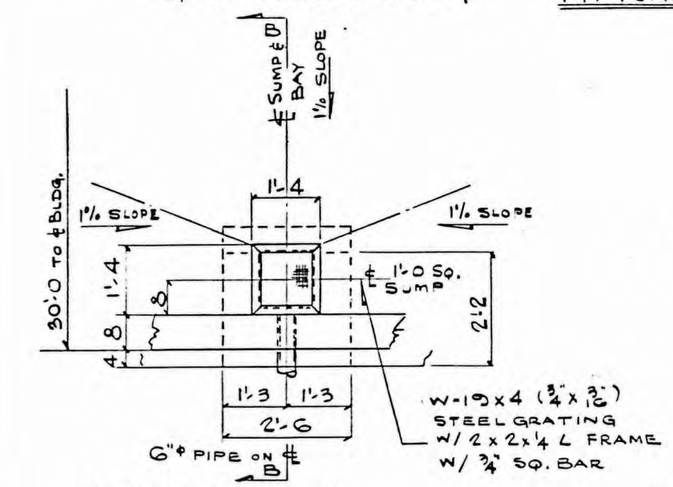
PLAN

DRAWING NUMBER B511-C-S1



TYPICAL SPLIT SECTION ~ A-A-A-A

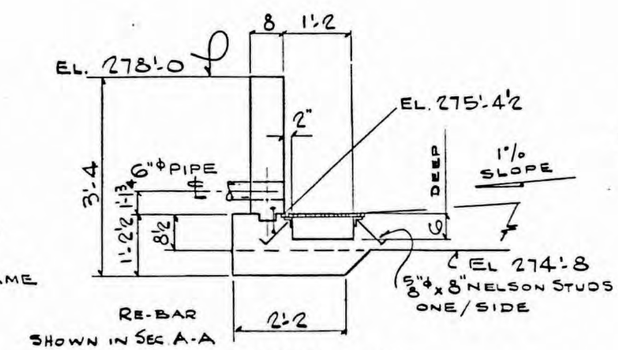
SCALE 3/8" = 1'-0



ENLARGED PLAN

TYP. SUMP @ ℄ OF BAYS

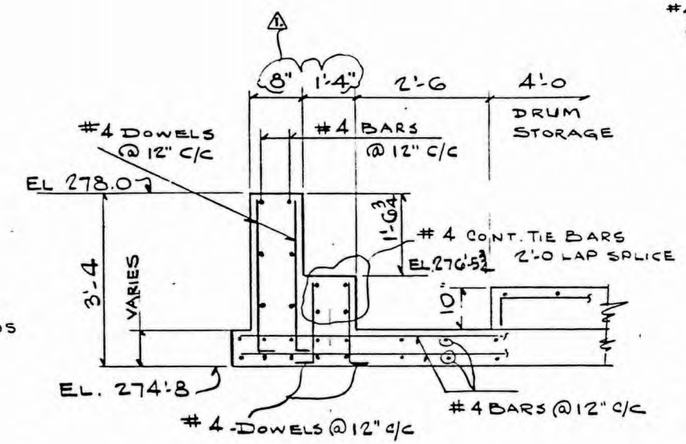
SCALE - 3/4" = 1'-0



SECTION - BB

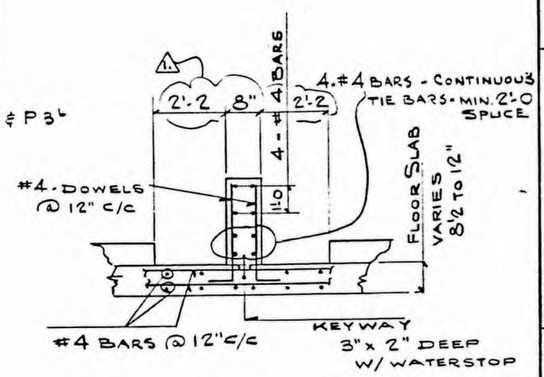
SCALE - 3/4" = 1'-0

TYP. - 1'-0 SQ. SUMP



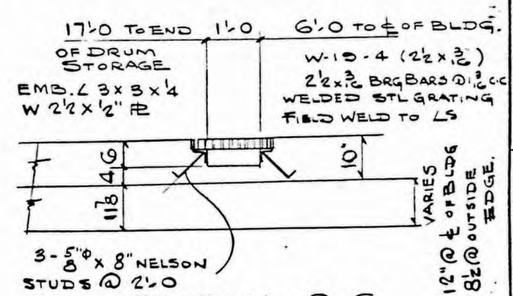
SECTION - D-D

SCALE 3/4" = 1'-0



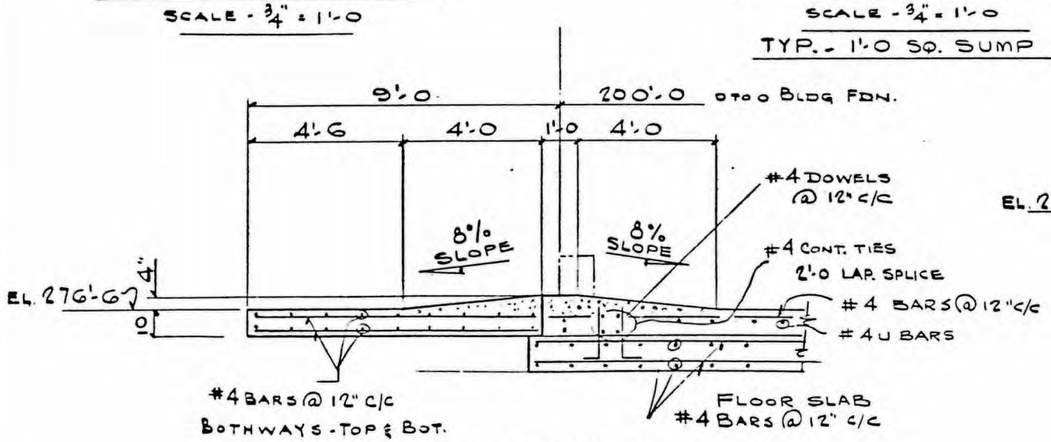
SECTION - C-C

SCALE 1/2" = 1'-0



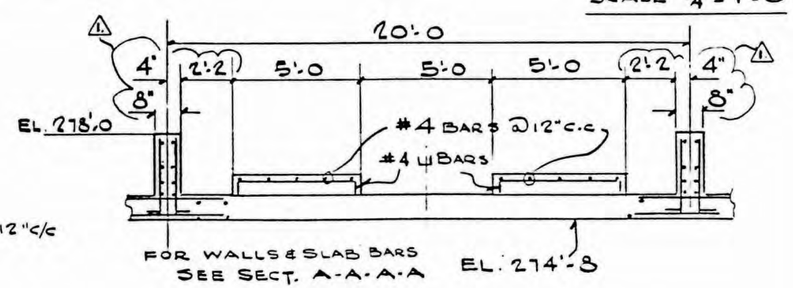
SECTION - G-G

WORK WITH DWG B511-C-S1



SECTION - E-E

SCALE - 1/2" = 1'-0



SECTION ~ F-F

TYP. FOR ALL CENTER BAYS

REV#	DATE	DESCRIPTION	APP'D
1	10-3-85	CHG'D WALLS FROM 1'-0 TO 0'-8"	S.G.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

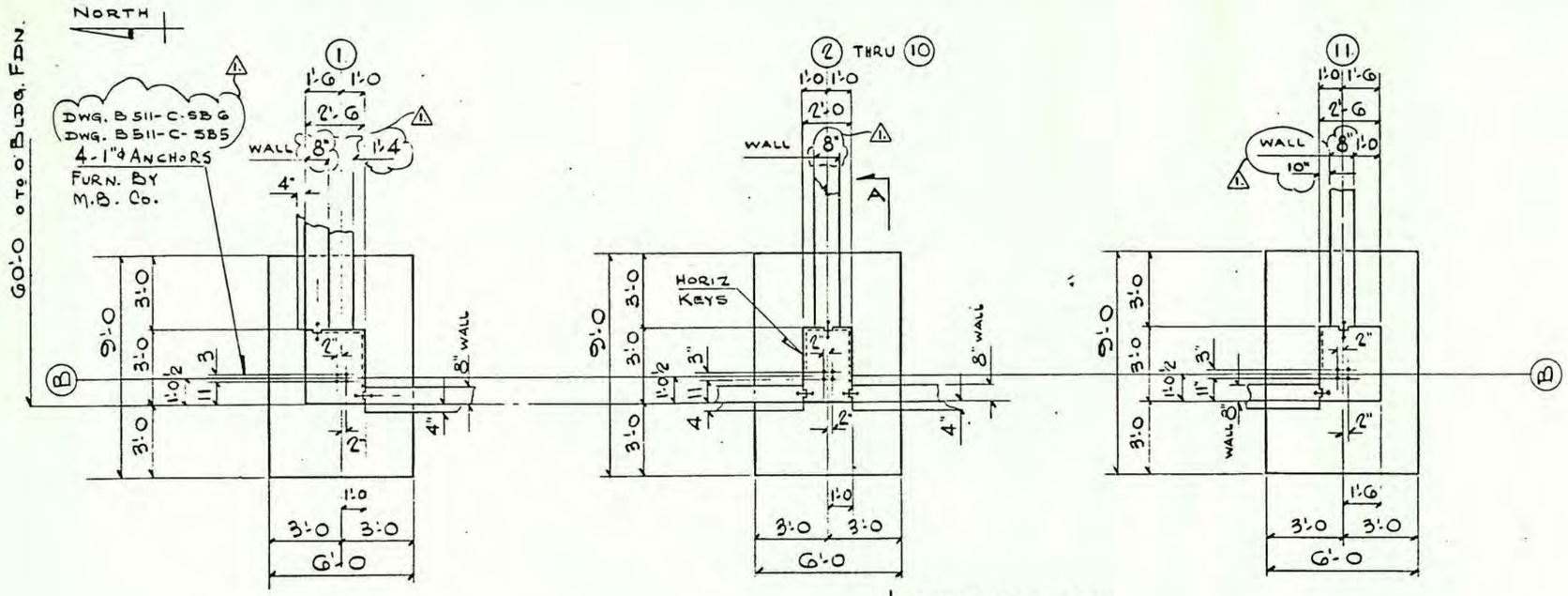
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN A.S. CHK'D J.Z. APP'D
SCALE 3/8", 1/2", & 3/4" = 1'-0 DATE 8-17-85

CONTAINER STORAGE BUILDING

FOUNDATION CROSS SECTIONS

DRAWING NUMBER B511-C-S2



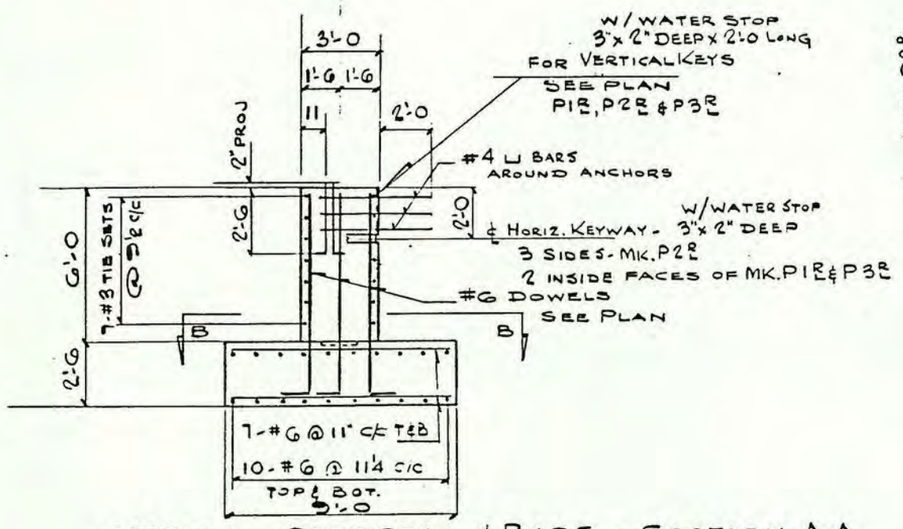
A TYPICAL-AS NOTED

ENLARGED PIER PLAN

ROW B - PIER - MK. P1R. AS SHOWN
ROW A - PIER - MK P1L - OPP. HAND

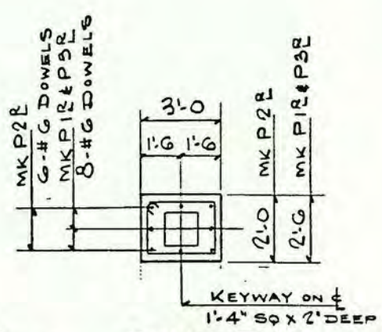
ROW B - PIER - MK P2R. AS SHOWN
ROW A - PIER - MK P2L - OPP. HAND

ROW B - PIER - MK P3R. AS SHOWN
ROW A - PIER - MK P3L - OPP. HAND.



TYPICAL PEDESTAL & BASE - SECTION A-A

AS SHOWN & NOTED - PIERS - MK. P1R, P2R & P3R



DOWEL PLAN

SECTION - B-B

WORK THIS DWG. WITH
DWG. B-511-C-S1

REV #	DATE	DESCRIPTION	APP'D
1	A.S. 9-3-85	CHG'D. WALL FROM 1'-0 TO 0'-8" - ADDED REF.	S.G.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
--- PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

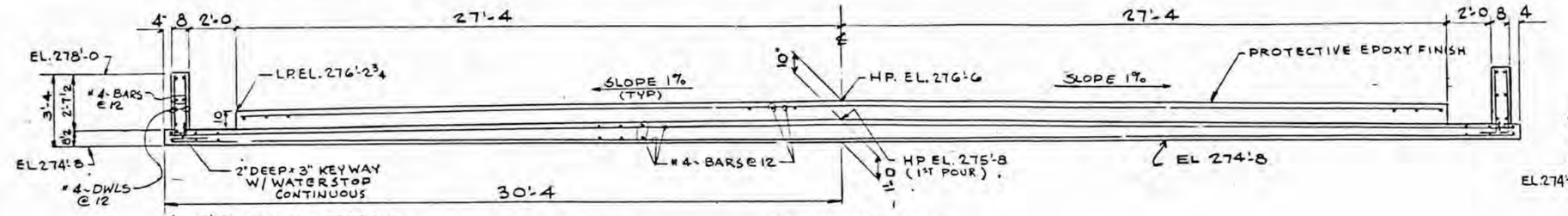
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN A.S.	CHK'D J.Z	APP'D
SCALE 3/8"=1'-0		DATE 5/17/85

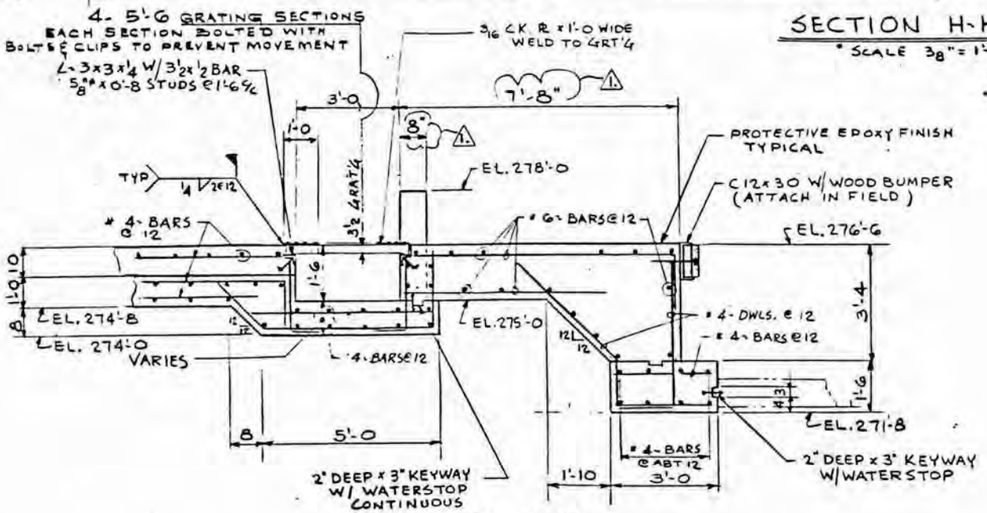
CONTAINER STORAGE BUILDING

FOUNDATIONS, ENLARGED PIER PLANS, TYP. PEDESTAL, & BASE SECTION

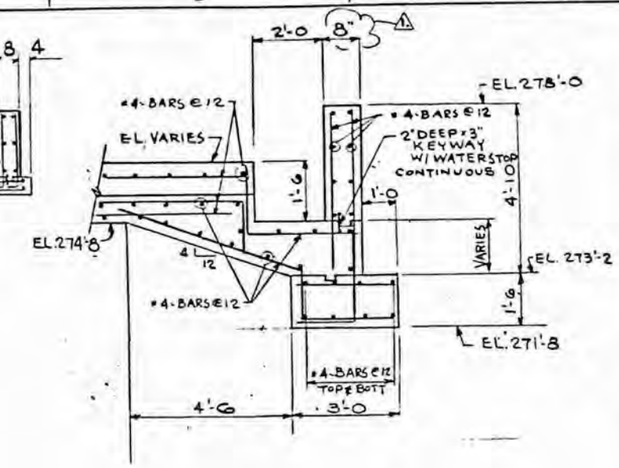
DRAWING NUMBER B511-C-S3



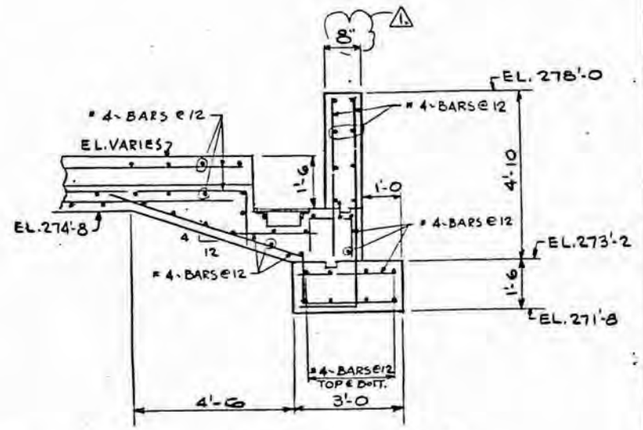
SECTION H-H
SCALE 3/8" = 1'-0



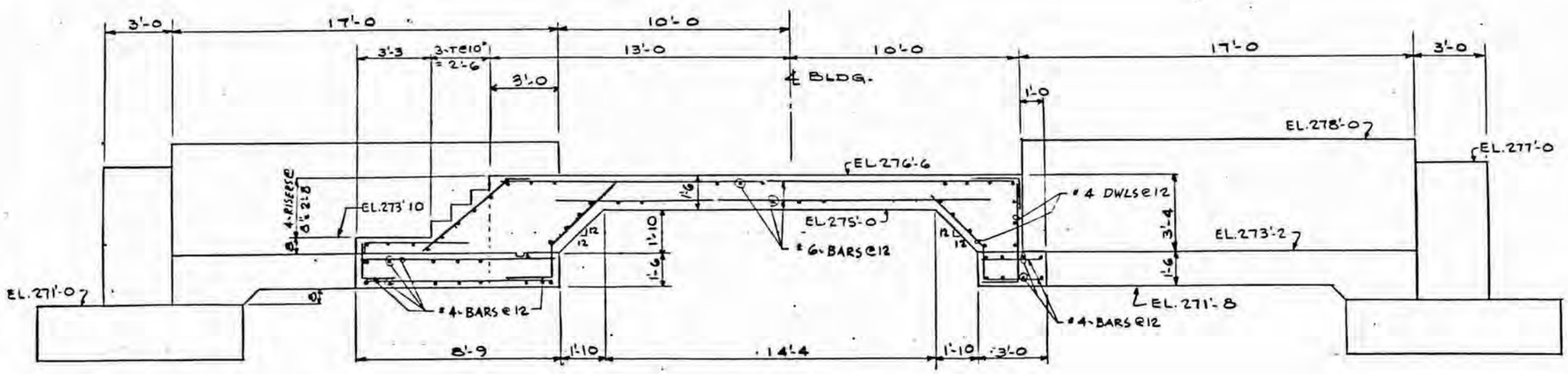
SECTION K-K
SCALE 1/2" = 1'-0



SECTION J-J
SCALE 1/2" = 1'-0



SECTION L-L
SCALE 1/2" = 1'-0



SECTION M-M
SCALE 3/8" = 1'-0

WORK THIS DWG. WITH DWG. B511-C-S1

REV'D	DATE	DESCRIPTION	APP'D
1	10-3-85	CHG'D WALL FROM 1'-0 TO 0'-8"	S.G.

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

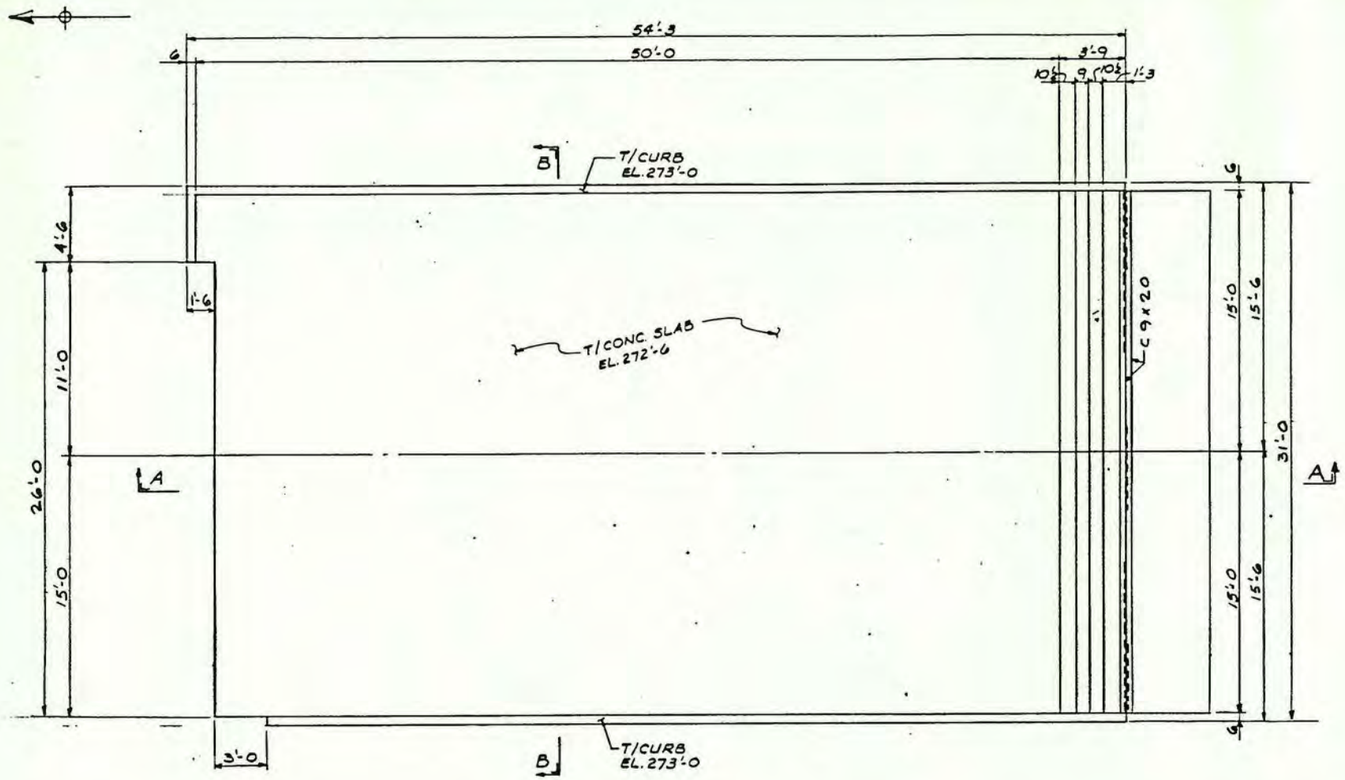
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRAWN JZ CHK'D AS APP'D
SCALE 3/8" & 1/2" = 1'-0 DATE 8-17-85

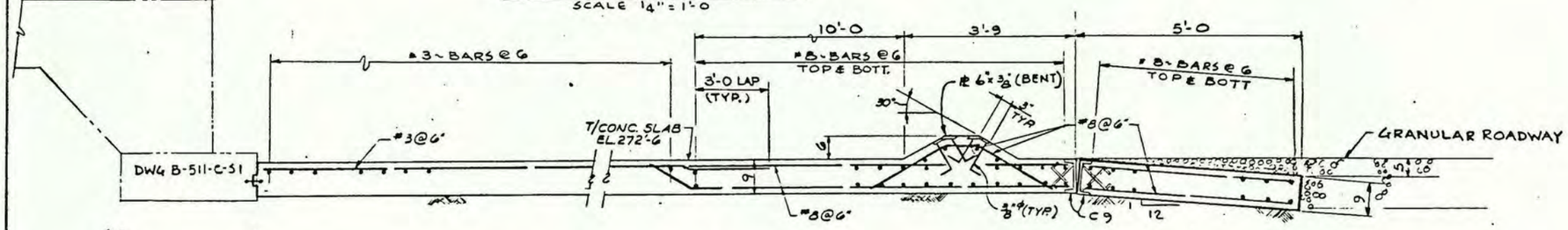
CONTAINER STORAGE BUILDING

FOUNDATION SECTIONS

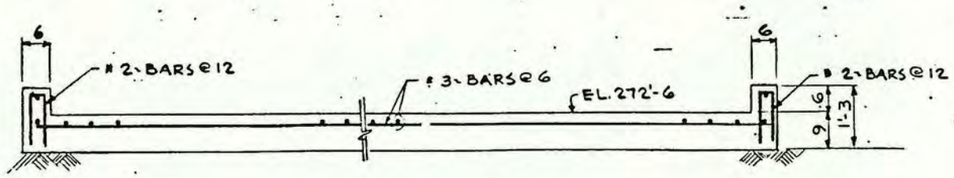
DRAWING NUMBER B511-C-S4



PLAN-TRUCK APRON
SCALE 1/4" = 1'-0



SECTION A-A



SECTION B-B

REV#	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

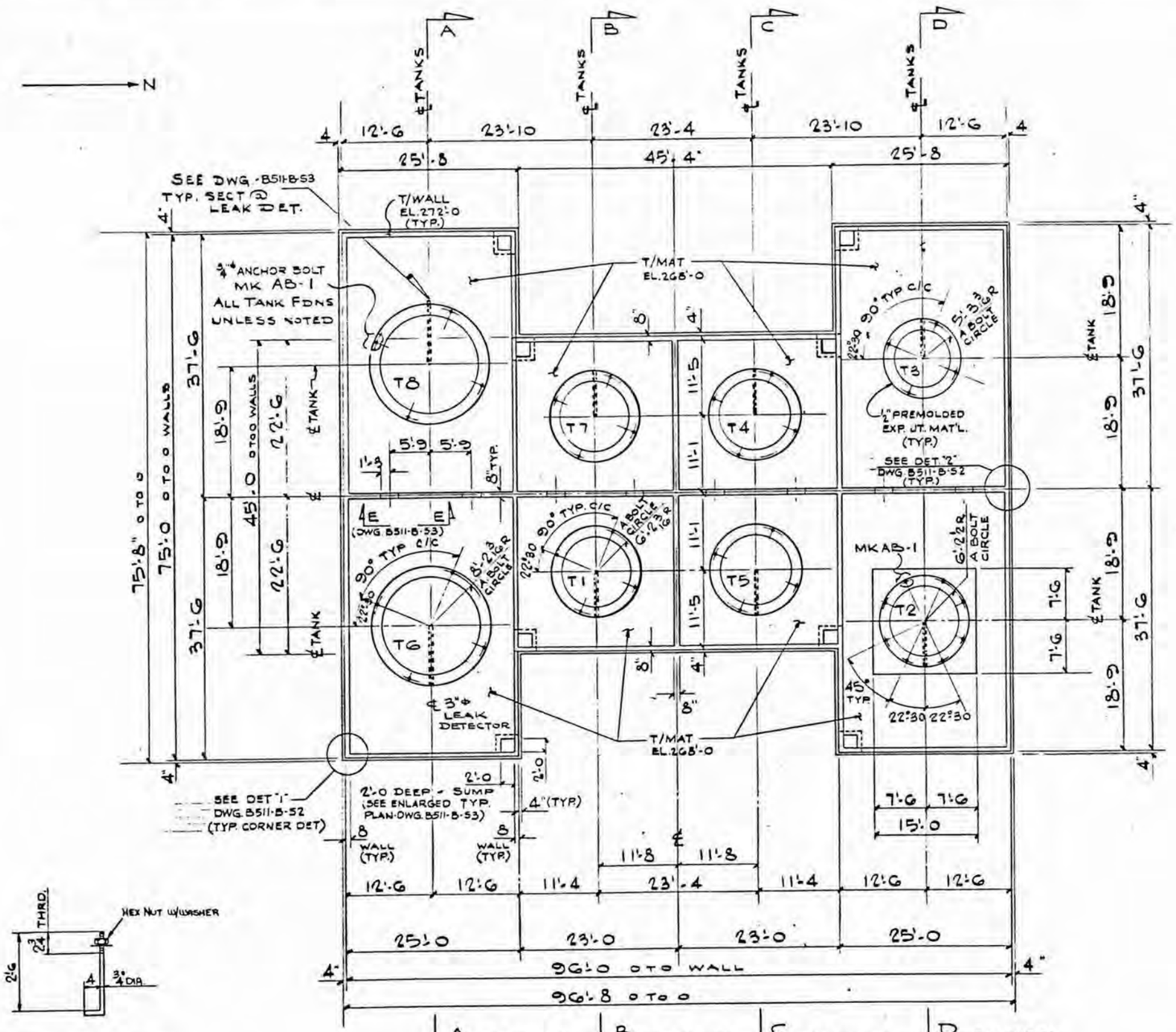
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN W.V. CHK'D A.S. APP'D
SCALE 3/8" = 1'-0 DATE 8-17-85

CONTAINER STORAGE BUILDING

TRUCK APRON & TRUCK DOCK

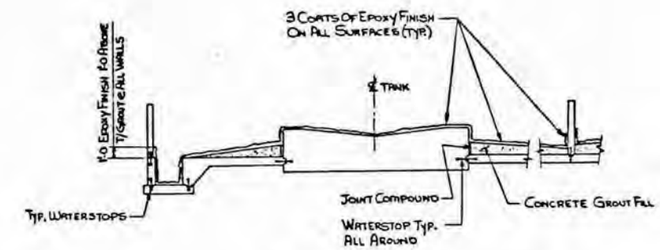
DRAWING NUMBER B511-C-S5



PLAN

SCALE 1/8" = 1'-0

ANCHORS - MK AB-1 (36 - REQD.)
(TANK SUPPLIER TO VERIFY)



TYPICAL CONCRETE PROTECTION

GENERAL NOTES:

1. MINIMUM BEARING CAPACITY OF SUBGRADE 3000 psf.
2. CONCRETE SHALL BE 3500 psi MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.
3. REINFORCED CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-83 AND ACI REPORT 350 LATEST EDITION.
4. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 60.
5. STRUCTURAL STEEL SHALL BE ASTM-A36.
6. ANCHOR BOLTS SHALL BE ASTM-307 3/4" DIAMETER UNLESS NOTED.
7. CONNECTION BOLTS SHALL BE ASTM-A325F 3/4" DIAMETER UNLESS NOTED.
8. FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AISC SPECIFICATION LATEST REVISION.
9. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 1982.
10. ALL STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED WITH 1 COAT RED IRON OXIDE PRIMER. FINISH COAT SHALL BE AS SPECIFIED BY OWNER.

REV'S	DATE	DESCRIPTION	APP'D

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

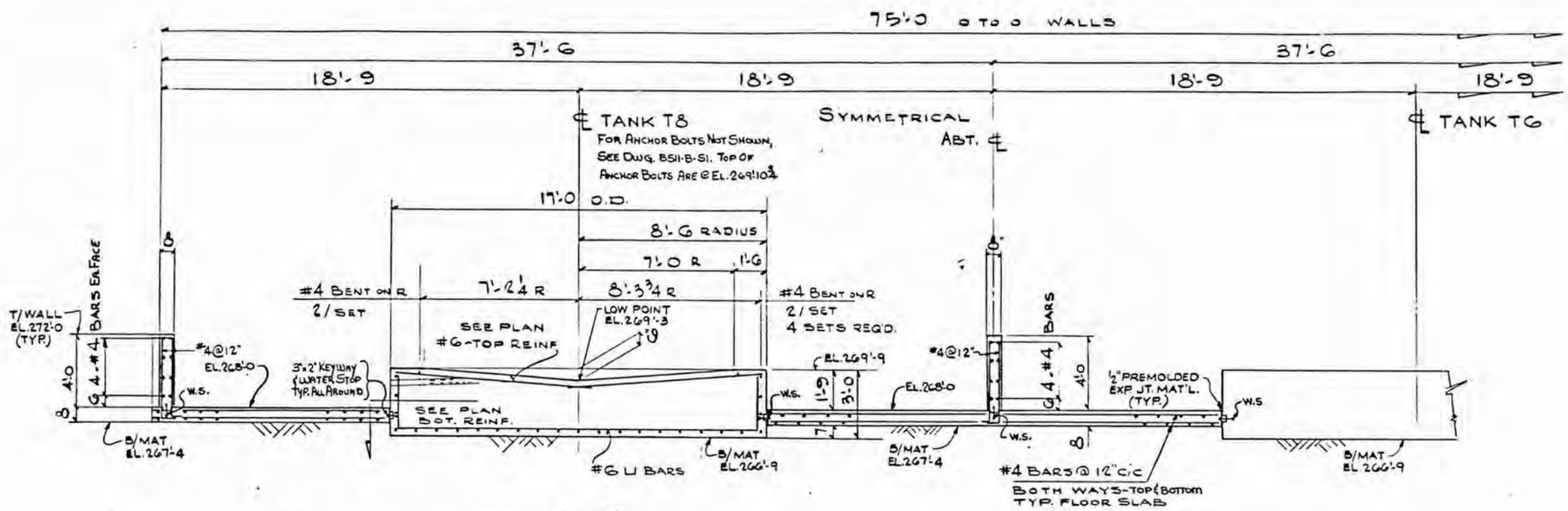
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRAWN A.S. CHK'D W.V. APP'D
SCALE 1/8"=1'-0 DATE

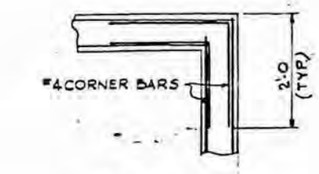
TANK FARM

FOUNDATION & ANCHOR BOLT PLAN

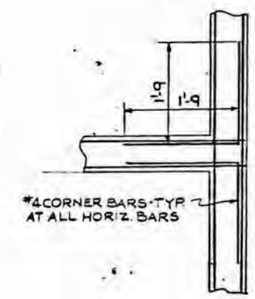
DRAWING NUMBER B511-B-S1



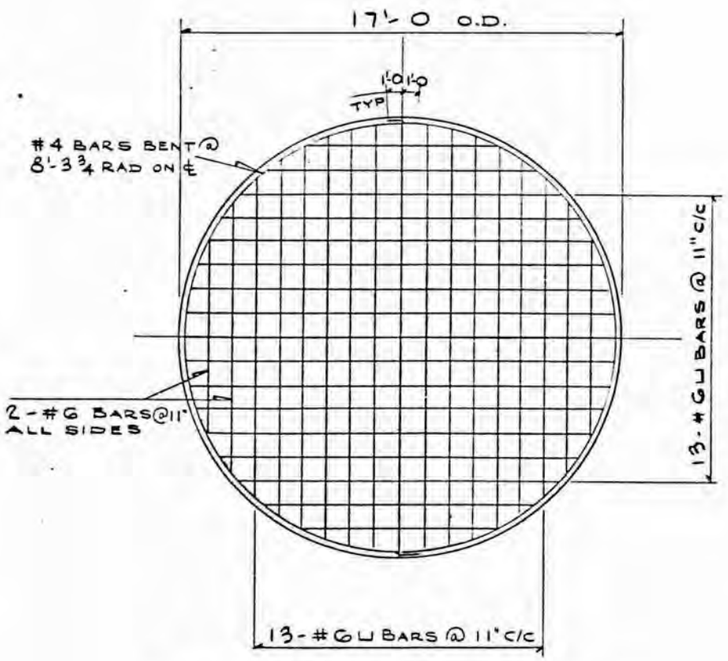
SECTION ~ A-A
(DWG. B511-B-S1)



DETAIL "1"
(TYP. CORNER DETAIL)
(DWG. B511-B-S1)

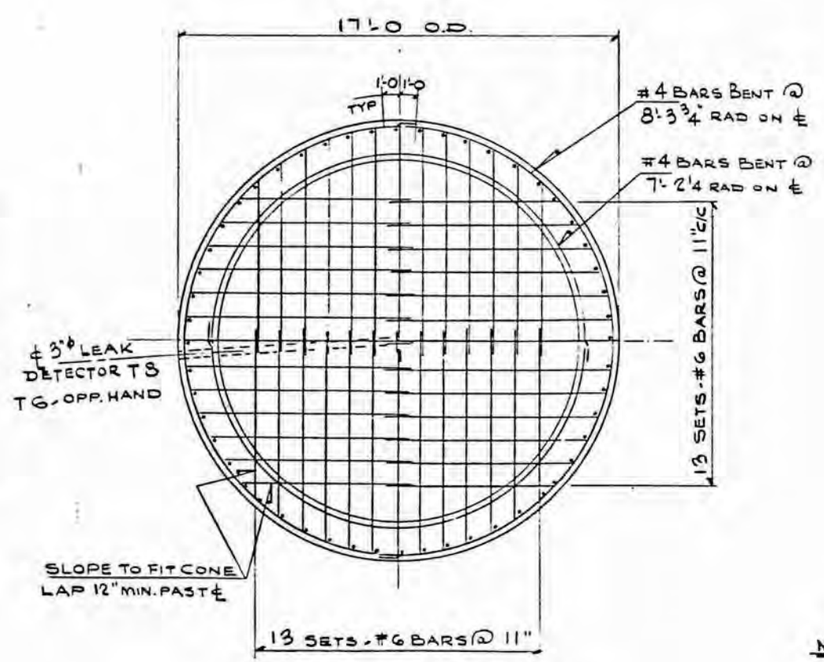


DETAIL "2"
(DWG. B511-B-S1)



BOTTOM REINFORCING PLAN

TANKS T6 & T8



REINFORCING @ TOP OF PEDESTAL

TANKS T6 & T8

NOTE:
FOR GENERAL NOTES SEE DWG. B511-B-S1

REV'S	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

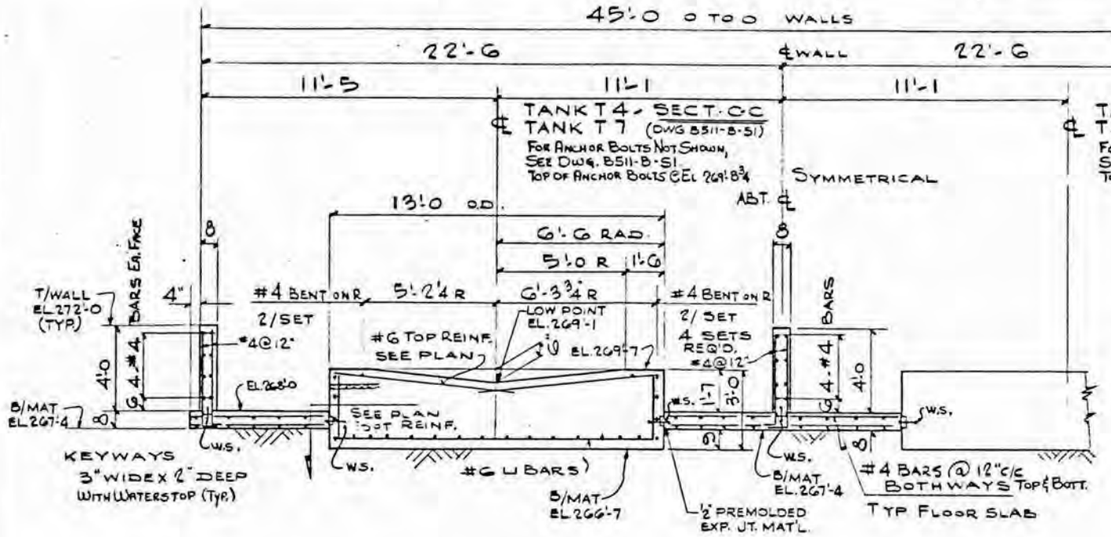
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN A.S | CHK'D W.V. | APP'D
SCALE 3/8"=1'-0 | DATE 3-17-89

TANK FARM

FOUNDATION SECTION A-A, AND REINFORCING DETAILS @ TANKS T6 & T8

DRAWING NUMBER B511-B-S2



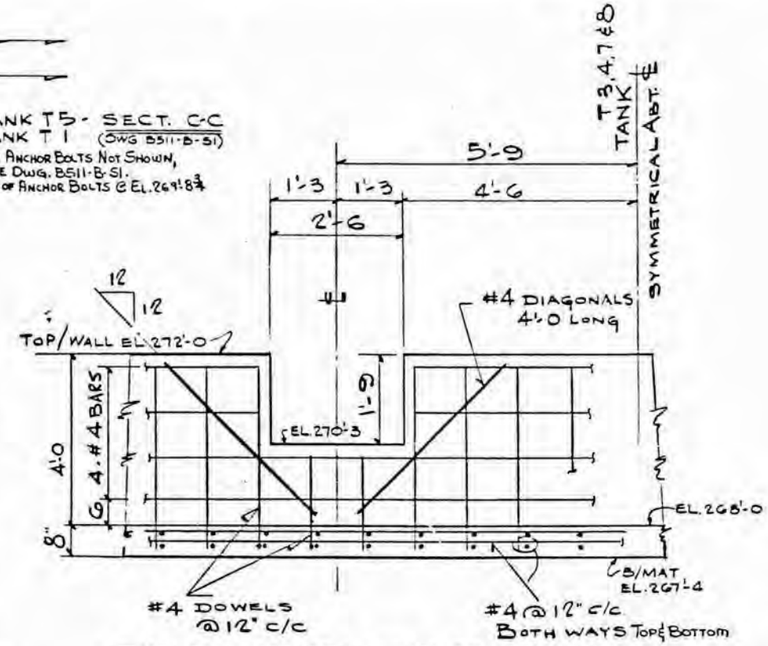
NOTE: SEE DWG. (B511-B-54)

FOR REINFORCING @ TOP OF PEDESTAL
FOR BOTTOM REINFORCING PLAN
} TYPICAL FOR TANKS T1, 4, 5 & 7

SECTION - B-B - AS SHOWN

SECTION - C-C - AS SHOWN & NOTED

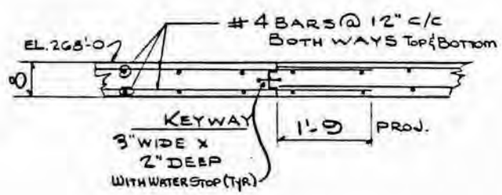
(DWG. B511-B-51)



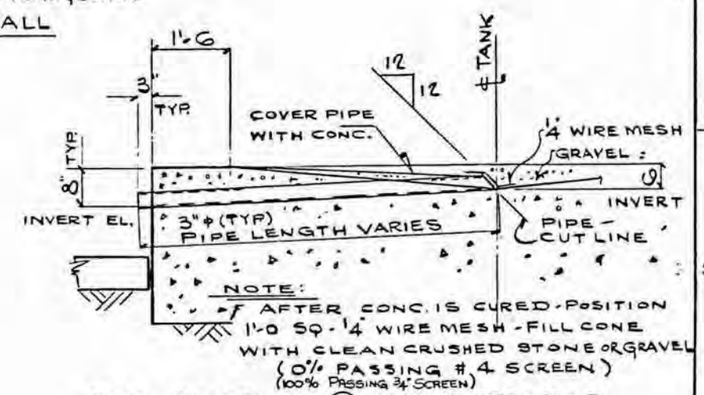
TYPICAL SECTION @ CENTER WALL

SECTION - E-E

(DWG. B511-B-51)

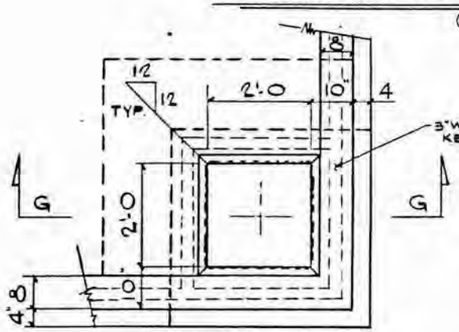


TYP. CONSTRUCTION JOINT



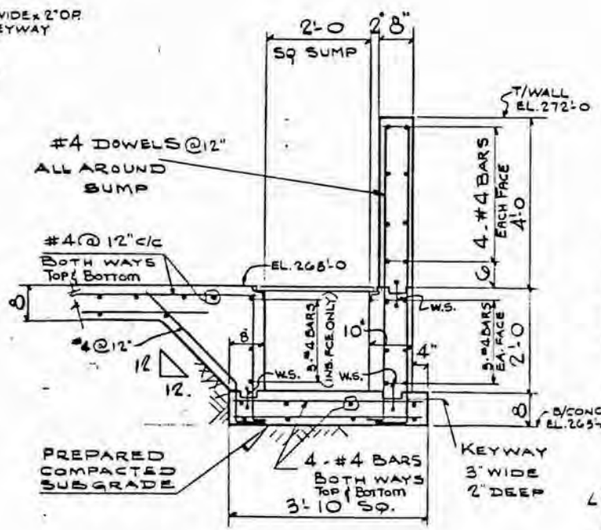
TYP. SECTION @ LEAK DETECTOR

(DWG. B511-B-51)

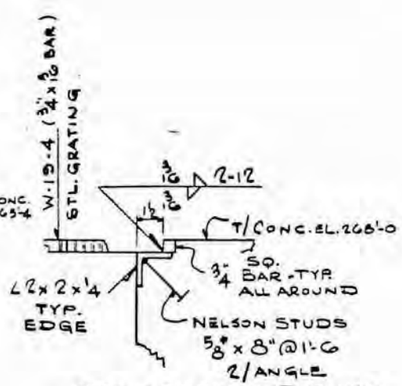


ENLARGED PLAN OF SUMP

(DWG. B511-B-51)



SECTION - G/G



TYP. SECTION @ SUMP GRATING SUPPORTS

NOTE:
FOR GENERAL NOTES SEE DWG. B511-B-51

REV'S	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRO 091018622
PENUELAS, PUERTO RICO

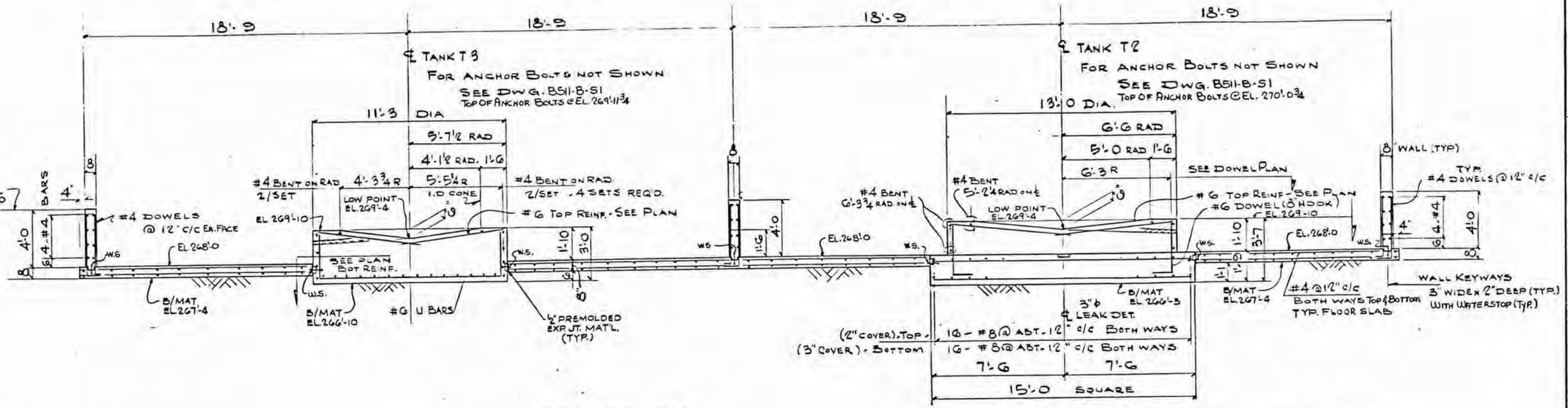
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

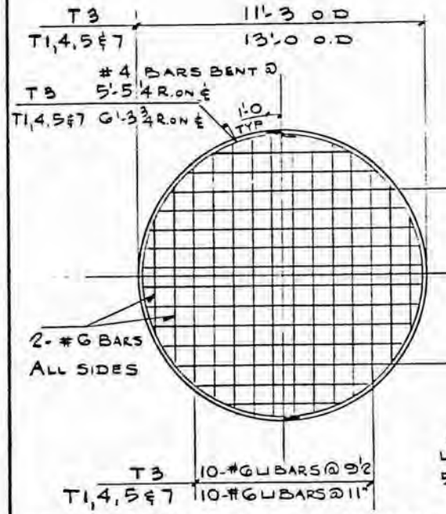
DRWN	A.S.	CHK'D W.V.	APP'D
SCALE	3/8, 3/4 = 1'-0		DATE 6 17 85

TANK FARM

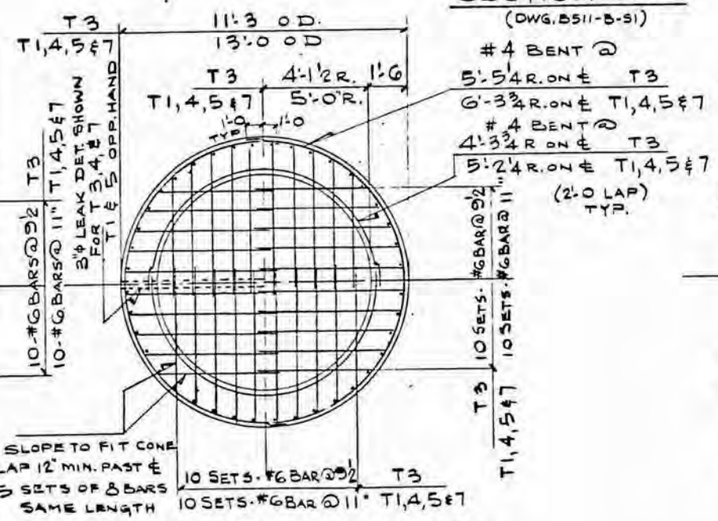
FOUNDATION SECTIONS B-B & C-C, AND TYPICAL SECTIONS

DRAWING NUMBER B511-B-S3



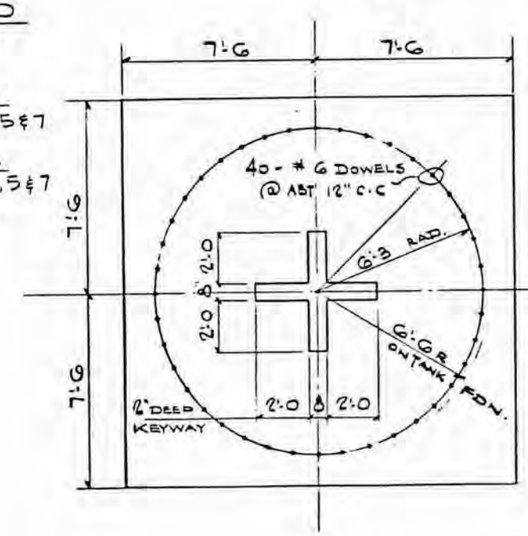


BOTTOM REINFORCING PLAN
TANK T3
TANKS T1,4,5 & 7

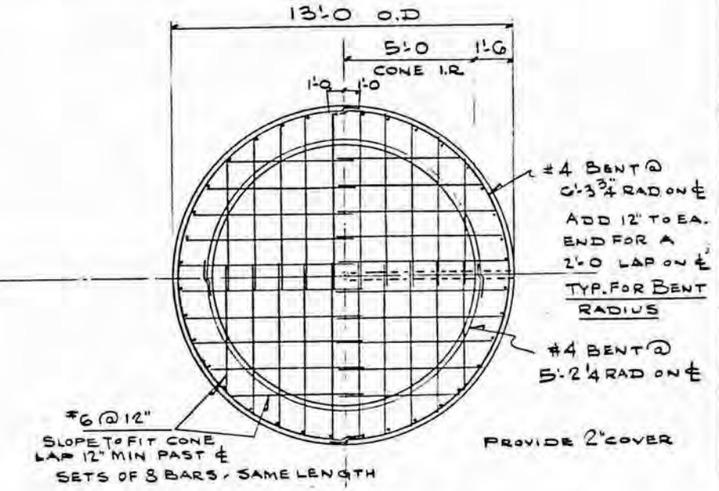


SECTION D-D
(DWG. B511-B-S1)

REINFORCING @ TOP OF PEDESTAL
TANK T3
TANKS T1,4,5 & 7
PROVIDE 2" COVER



DOWEL PLAN
TANK T2



REINFORCING @ TOP OF PEDESTAL
TANK T2

NOTE:
FOR GENERAL NOTES SEE DWG. B511-B-S1

REV #	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

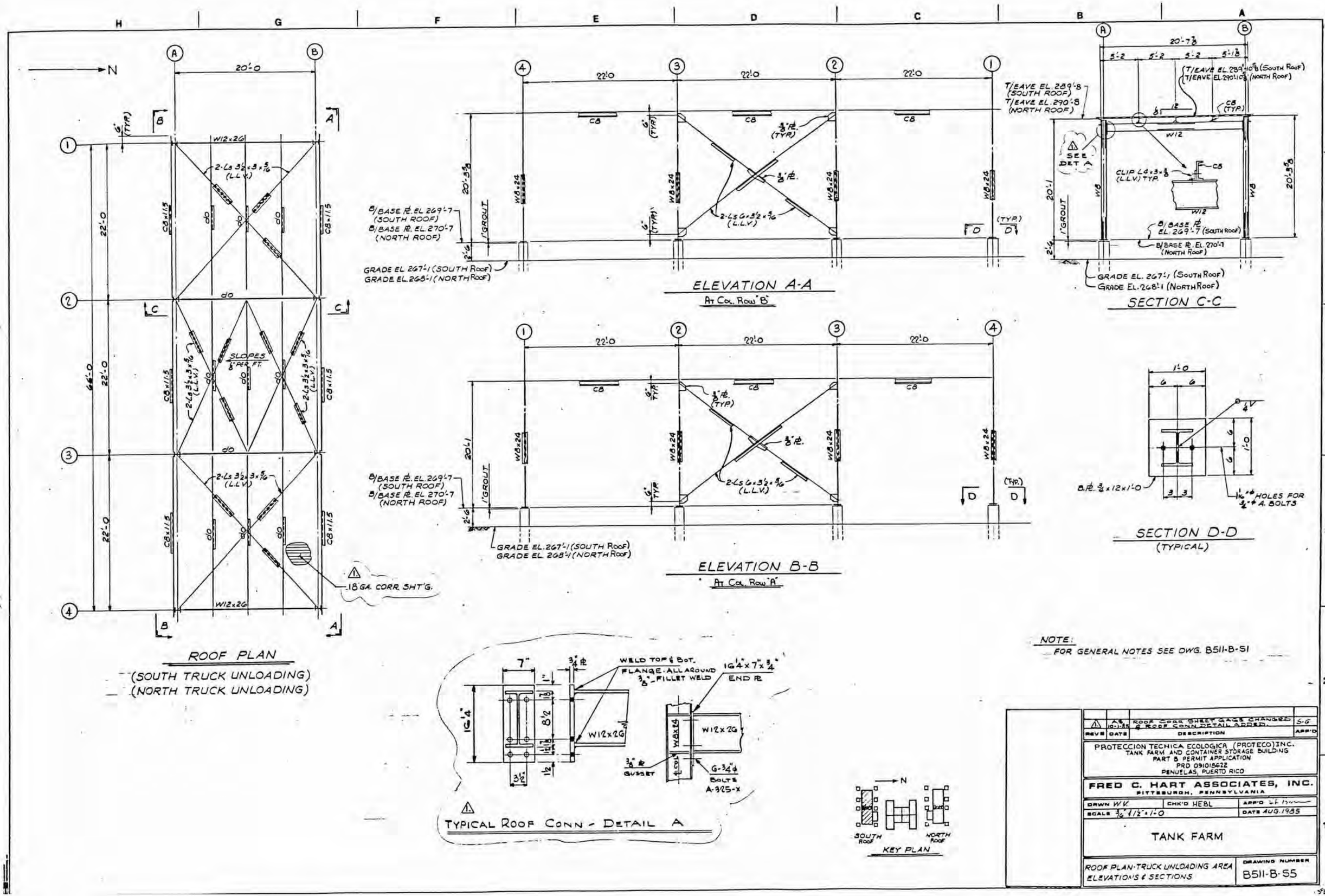
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	AS	CHK'D W.V	APP'D
SCALE 3/8" = 1'-0			DATE 8-17-85

TANK FARM

FOUNDATION SECTION D-D, DOWEL PLAN, AND REINFORCING DETAILS

DRAWING NUMBER B511-B-S4



NOTE:
FOR GENERAL NOTES SEE DWG. B511-B-S1

REV'S	DATE	DESCRIPTION	APP'D
1	AS 10-1-85	ROOF CORR SHEET GAGE CHANGED & ROOF CONN DETAIL ADDED.	S.G

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

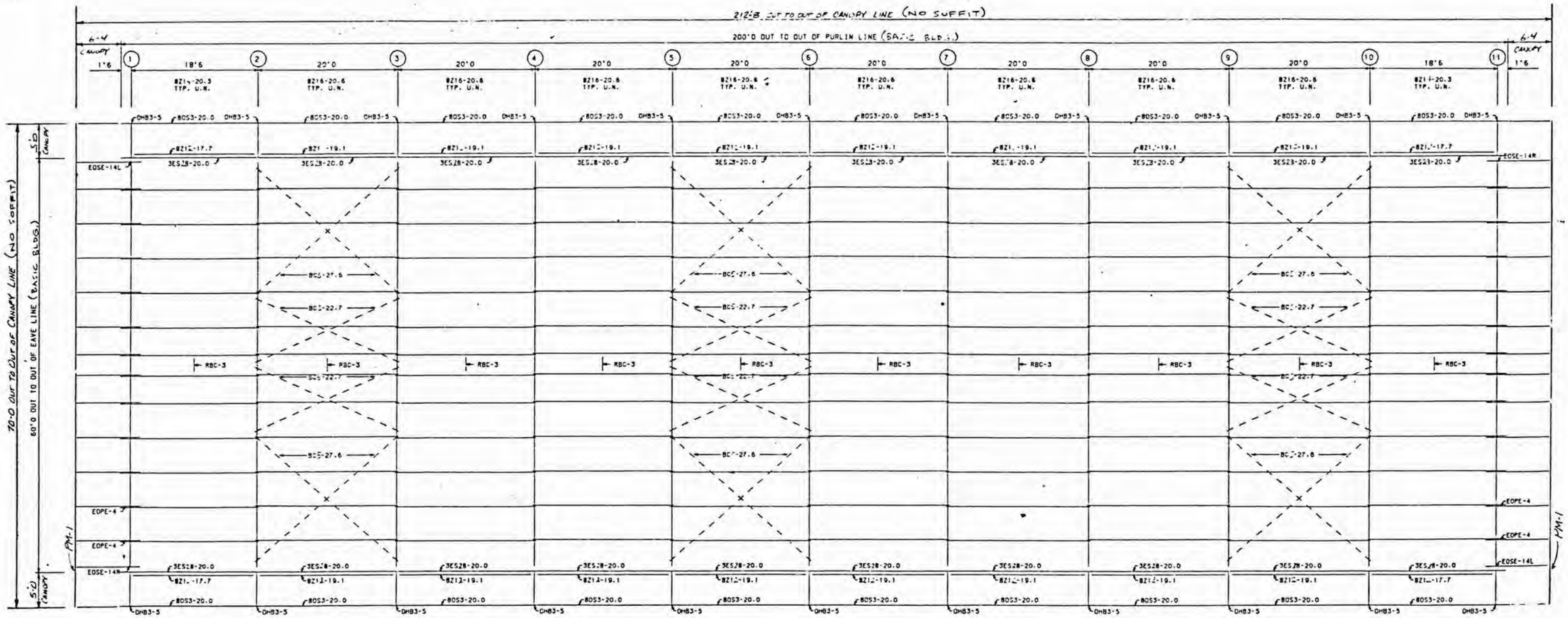
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN W.V. | CHK'D HEBL | APP'D [signature]
SCALE 3/16" & 1/2" = 1'-0 | DATE AUG. 1985

TANK FARM

ROOF PLAN-TRUCK UNLOADING AREA
ELEVATIONS & SECTIONS

DRAWING NUMBER B511-B-S5



ROOF FRAMING PLAN RF01

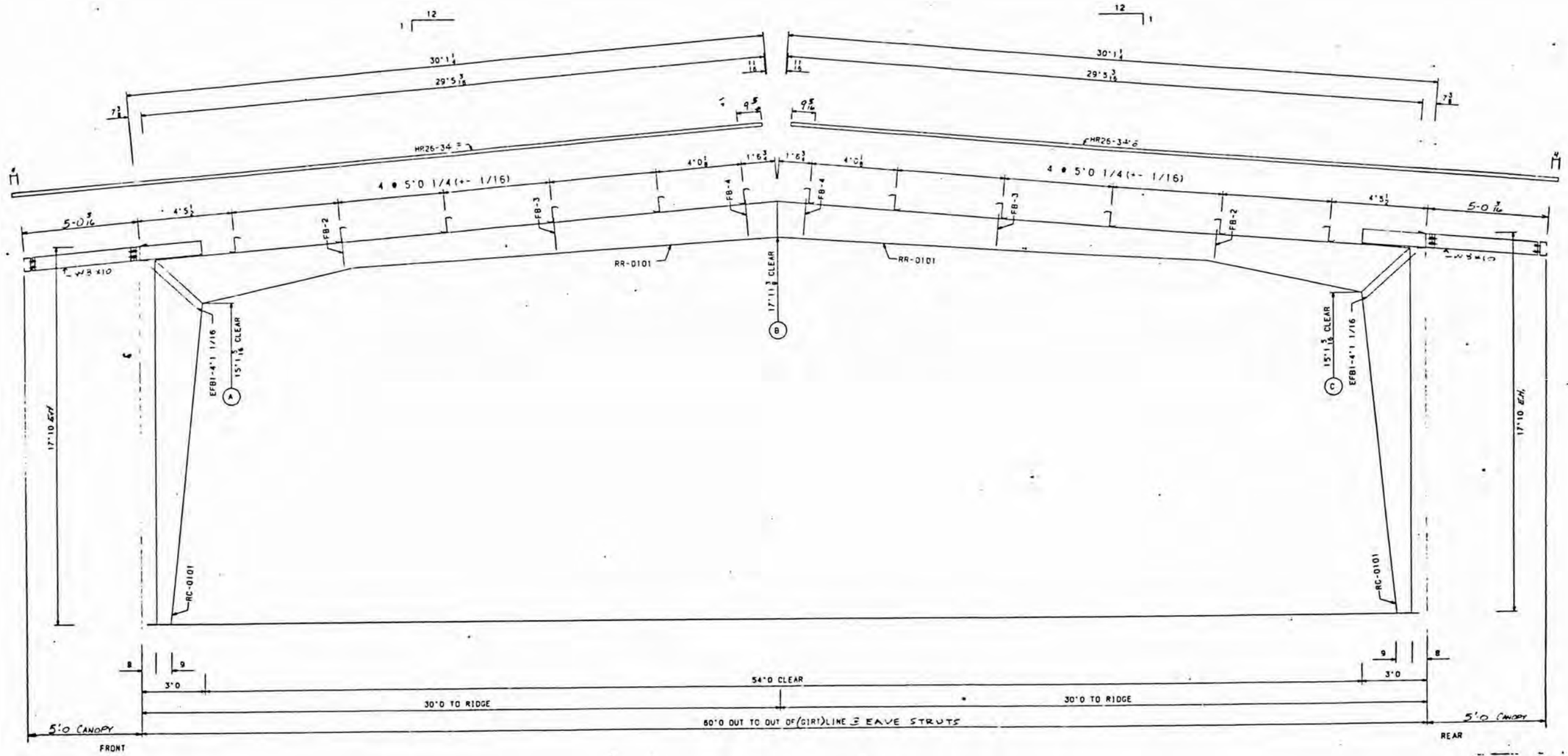
ONE VENT TO BE SHIPPED ASSEMBLED. BALANCE SHIPPED KNOCKED-DOWN FOR FIELD ASSEMBLY BY HART & ASSO.

!! NOTICE !!

This is a reproducible print of Metallic Building Company Original Tracing; and since additions or deletions may be made without our knowledge, any subsequent prints therefrom are not necessarily representative of what is furnished by Metallic Building Company.

BY [illegible] DATE 8-21-95

SCALE: NONE	DATE	ERECTION DRAWING PUERTO RICO.	METALLIC-BRADEN BUILDING COMPANY HOUSTON, TEXAS (713) 664-9492
DRAWN BY: [illegible]	[illegible]	FRED C. HART ASSOCIATES	DRAWING NUMBER: B511-C-581 / 81-3131-01 E-1 REV A
CHECKED BY: [illegible]	[illegible]		
DESIGN APPD. BY: [illegible]			



RIGID FRAME CROSS SECTION CS01

FRAME LINES 1-11

SPLICE BOLT TABLE			
SPLICE	QTY	SIZE	DEPTH
A	14	0 3/4 x 2 3/4	2'-3 11/16
B	10	0 3/4 x 2	1'-8 11/16
C	14	0 3/4 x 2 3/4	2'-3 11/16

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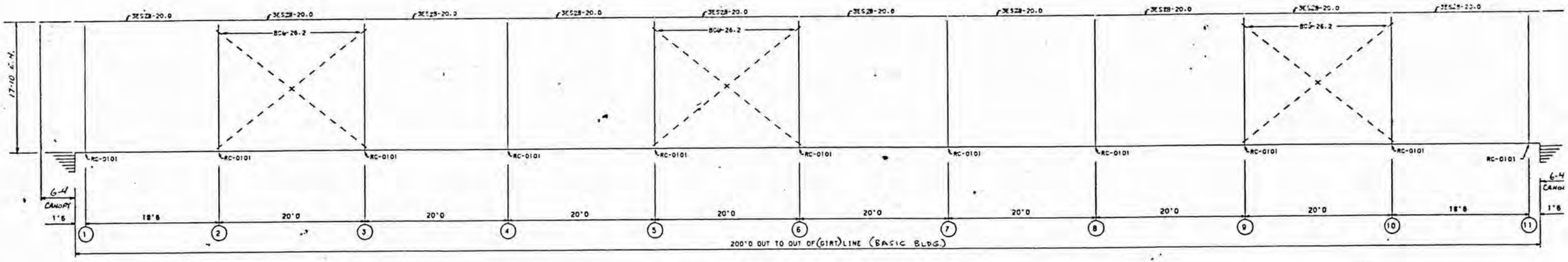
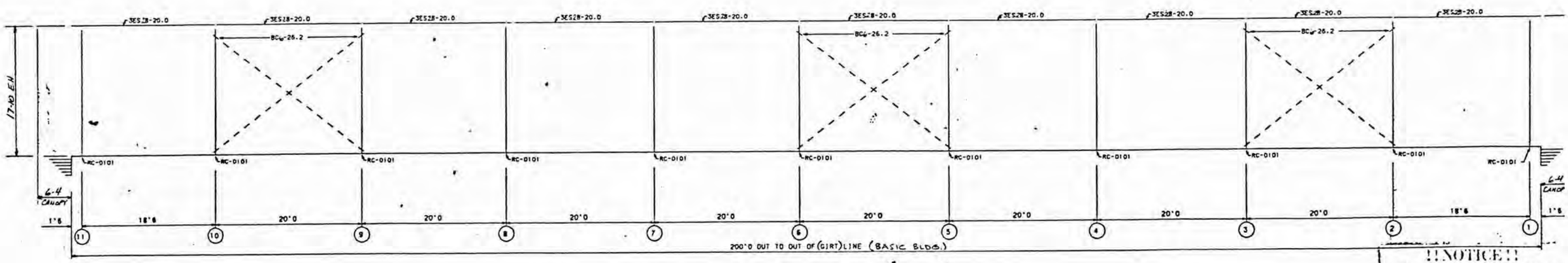
BY Morrison DATE 8-21-85

SCALE: NONE	DATE	ERECTION DRAWING PUERTO RICO.	METALLIC-BRADY BUILDING COMPANY HOUSTON, TEXAS (713) 664-9492
DRAWN BY:		FRED C. HART ASSOCIATES	
CHECKED BY:			
DESIGN APPD. BY:			DRAWING NUMBER: 8511-C-582 / 81-3131-01 E 2



SIDEWALL FRAMING ELEVATION SW01



SIDEWALL FRAMING ELEVATION SW02

(EAVE OVERHANG OMITTED FOR CLARITY) (TYP.)

!!NOTICE!!

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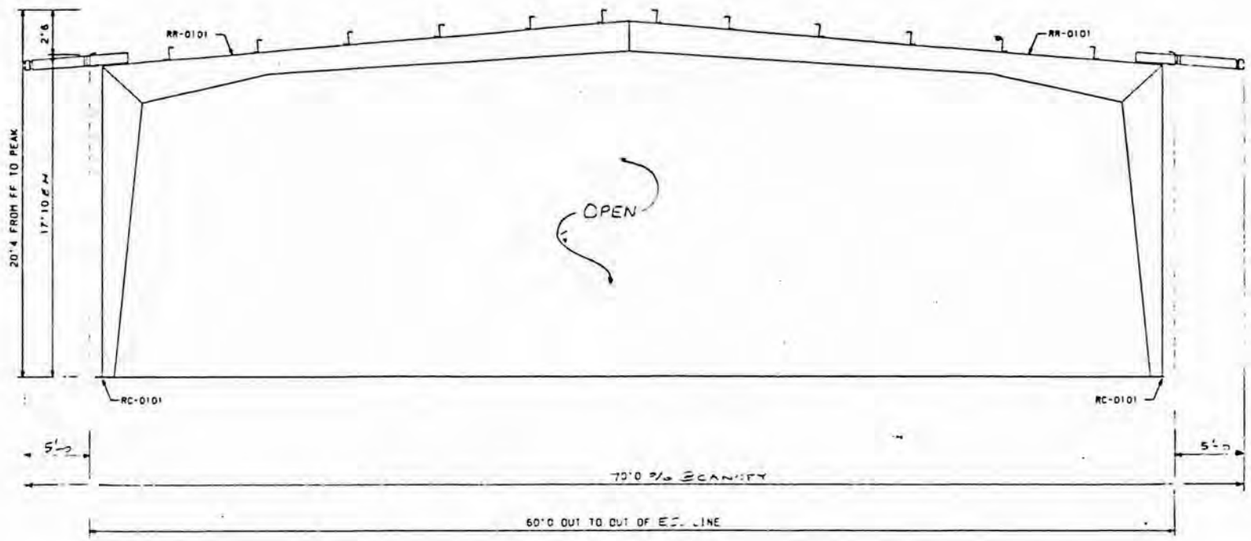
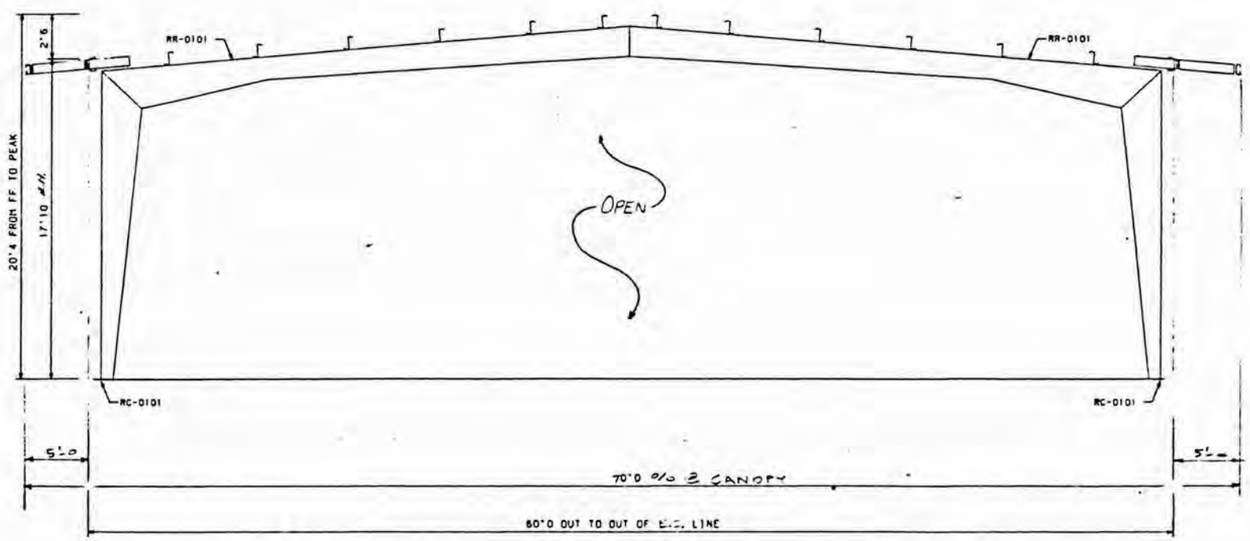
8-21-85

SCALE: NONE	DATE	ERECTION DRAWING PUERTO RICO.	METALLIC-BRAC BUILDING COMP HOUSTON, TEXAS (713) 664-9492
DRAWN BY:	8-7-85	FRED C. HART ASSOCIATES	
CHECKED BY:	8-7-85		
DESIGN APPD. BY:			DRAWING NUMBER: 351-C-583 81-3131-01 E-3



ENDWALL - ELEVATION AT FRAME LINE 1



ENDWALL - ELEVATION AT FRAME LINE 11

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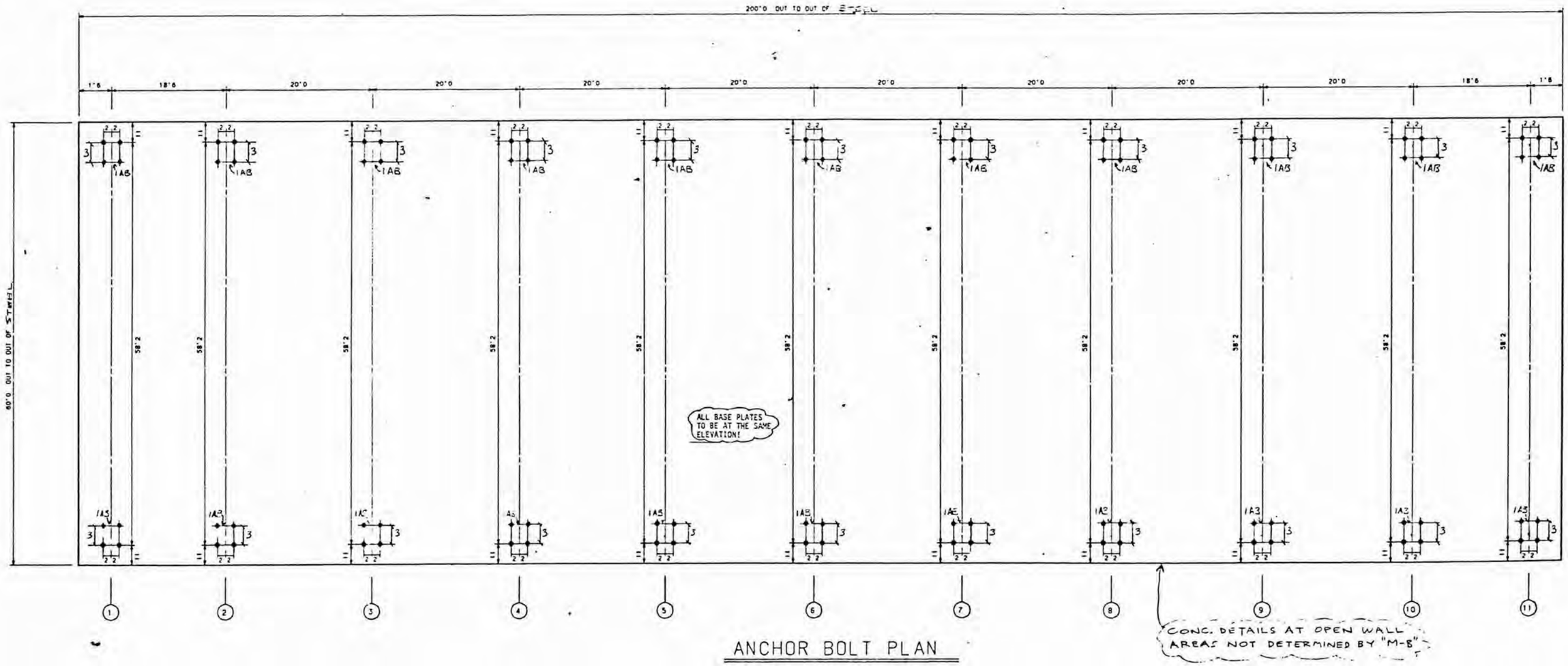
8-21-

SCALE: NONE	DATE	ERECTION DRAWING PUERTO RICO.	MB METALLIC-BRADEN BUILDING COMPANY HOUSTON, TEXAS (713) 664-9492
DRAWN BY: GD	7-75	FRED C. HART ASSOCIATES	
CHECKED BY:	7-75		
DESIGN APPD. BY:			DRAWING NUMBER: B511-C-SB4 81-3131-01 E-4 REV. A



ANCHOR BOLT PLAN

ANCHOR BOLTS ARE BY MBBC

!!NOTICE!!
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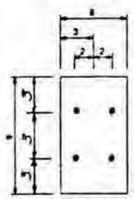
BY Merrison DATE 5-21

SCALE: NONE	DATE	ERECTION DRAWING PUERTO RICO.	METALLIC-BRADEN BUILDING COMPANY HOUSTON, TEXAS (713) 664-9492
DRAWN BY: LD	5-7-85	FRED C. HART ASSOCIATES	
CHECKED BY: -	5-7-85		
DESIGN APPD. BY: [illegible]			DRAWING NUMBER: B511-C-535 81-3131-01 E-5 REV A

REACTION SCHEMATICS

COL LINES: 1-11

REACTION TABLE KIPS					
LOAD DESC	WIND	A	B	C	D
LL+DL		8.2	-8.5	-8.2	19.8
WL+DL	L-R	-1.8	-12.5	9.3	-29.0
DL+1/2LL+WL	L-R	-1.2	-9.5	6.	-5.0
DL+1/2WL+LL	L-R	-1.	3.5	-2.	2.1



RIGID FRAME COLUMNS

COL LINES: 1-11

ANCHOR BOLT COUNT	
QT	SIZE
88	1" ø ANCHOR BOLT

1. THE BUILDING MANUFACTURER ASSUMES NO RESPONSIBILITY OR LIABILITY FOR FOUNDATION, FLOOR, OR SLAB DESIGN OR CONSTRUCTION.

2. THE FOUNDATION DESIGN SHOULD BE DONE WITH DUE REGARD TO THE SPECIFIC SOIL CONDITIONS PRESENT AT THE ACTUAL JOB SITE.

3. FOUNDATION MUST BE DESIGNED FOR THE APPLICABLE REACTIONS AS THEY APPLY TO A PARTICULAR BUILDING AND MUST BE ADEQUATE TO RESIST ALL CRITICAL COMBINATIONS FOR EACH OF THE VARIOUS LOADING CONDITIONS. THESE REACTIONS REPRESENT THE MAXIMUM DESIGN LOADS TO BE RESISTED BY THE FOUNDATION.

4. REINFORCING BARS, WIRE MESH, ANCHOR BOLT SHEAR ANGLES, TIE RODS, AND/OR HAIRPINS (HOOK BARS) SHOULD BE INCORPORATED AS REQUIRED INTO THE FOUNDATION DESIGN. COLUMN BASE HORIZONTAL THRUST ACTING IN CONJUNCTION WITH APPLICABLE VERTICAL REACTIONS, MUST BE SUSTAINED BY HAIRPIN, TIE ROD, BUTTRESSES, OR COMBINATIONS OF THESE OR OTHER DEPENDABLE MEANS.

5. FOOTING SHOULD EXTEND A MINIMUM OF 8 INCHES INTO NATURAL SOIL, OR WHERE FILL IS USED, THE FILL MUST BE PROPERLY COMPACTED AND THE FOOTING SHALL EXTEND TO NATURAL GRADE. IN ALL CASES THE FOOTING SHOULD EXTEND AT LEAST 8 INCHES BELOW THE LOCAL FROST LINE.

6. ALL BOLTS SHALL HAVE A 2 INCH PROJECTION (UNLESS NOTED) FROM THE FINISHED CONCRETE EXCEPT 1/2 INCH DIAMETER BOLTS AT DOORS WHICH SHOULD HAVE A PROJECTION OF 1 INCH. PROJECTING THREADS SHOULD BE SPREADED OR OTHERWISE PROTECTED UNTIL ERECTION.

7. THE TOP OF THE FOUNDATION OR FLOOR SHALL BE SQUARE, LEVEL AND SMOOTH. ANCHOR BOLTS SHALL BE ACCURATELY SET TO A TOLERANCE OF +- 1/16 INCH ON DIMENSIONS WITHIN THE GROUP SPACING FOR AN INDIVIDUAL COLUMN. ALL OTHER DIMENSIONS SHALL BE WITHIN +- 1/8 INCH.

8. COLUMN BASE PLATES ARE DESIGNED NOT TO EXCEED THE ALLOWABLE BEARING STRESS OF CONCRETE THAT HAS A MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS.

9. UNLESS EXPLICITLY NOTED OTHERWISE, ALL EMBEDDED STRUCTURAL STEEL (INCLUDING ANCHOR BOLTS), OTHER MATERIALS, AND LABOR SHALL BE SUPPLIED BY THE FOUNDATION CONTRACTOR.

10. ANCHOR BOLTS SHOULD BE AS SHOWN AND CALLED FOR, INCLUDING PROJECTION FROM CONCRETE, DIAMETER, AND QUANTITY.

11. BOLT LENGTHS SHOULD BE SUFFICIENT TO ALLOW ENOUGH EMBEDMENT INTO THE CONCRETE FOR THE BOND STRENGTH (WITH OR WITHOUT HOOKS) TO DEVELOP AT LEAST 75% OF THE ALLOWABLE TENSILE CAPACITY OF THE BOLT, AND IN NO CASE SHALL THE LENGTH BE LESS THAN 20 TIMES THE BOLT DIAMETER UNLESS OTHERWISE NOTED.

12. ALL ANCHOR BOLTS SHALL BE ASTM A307 OR EQUAL IN ORDER TO CONFORM TO THE BUILDING MANFACTURER'S DESIGN ASSUMPTIONS BASED ON ALLOWABLE STRESSES GIVEN IN THE MANUAL OF STEEL CONSTRUCTION, 8TH EDITION, A.I.S.C. 1980, SECTION 1.5.

DESIGN LOADS ARE:
1. METAL BUILDING DEAD LOAD (DL)
2. (20) PSF ROOF LIVE LOAD (LL)
3. (35) PSF WIND LOAD (WL)

DESIGN COMBINATIONS ARE:
1. DL + LL
2. DL + WL

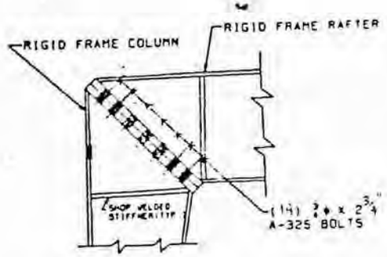
THESE DESIGN LOADS AND COMBINATIONS ARE APPLIED IN ACCORDANCE WITH THE P.R. CODE

This is a reproduction of the Metallic Building Company drawing and since additions or deletions may be made without our knowledge, any subsequent prints hereform will not necessarily reflect what is furnished by Metallic Building Company.
BY: [illegible] DATE: 8-21

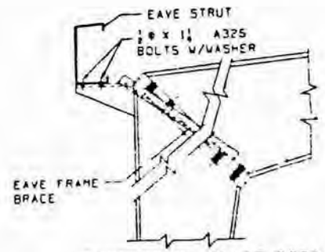
SCALE:	NONE	DATE	ERECTION DRAWING PUERTO RICO. FRED C. HART ASSOCIATES
DRAWN BY:	[illegible]	[illegible]	
CHECKED BY:	[illegible]	[illegible]	
DESIGN APPD. BY:	[illegible]		

METALLIC-BRACEN BUILDING COMPANY
HOUSTON, TEXAS
(713) 664-9492

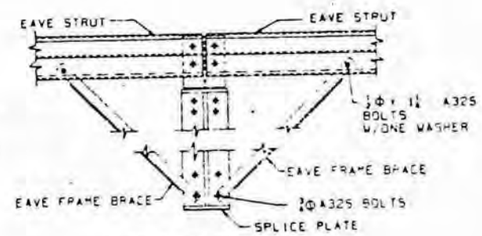
DRAWING NUMBER	BSV-C-586 81-3131-01	E-5A	REV NO A



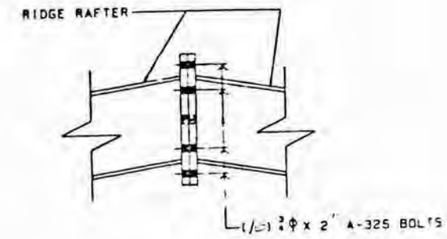
HAUNCH CONNECTION



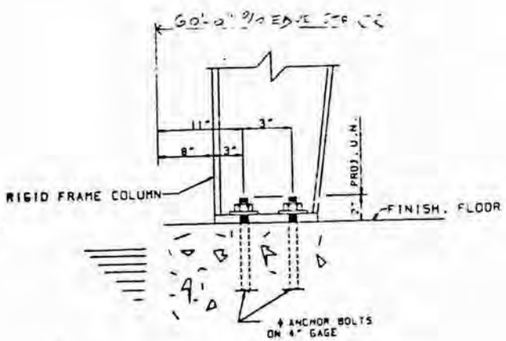
EAVE FRAME BRACE DETAIL



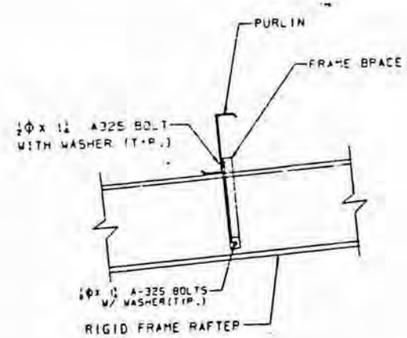
SECTION THRU HAUNCH AT EAVE FRAME BRACE



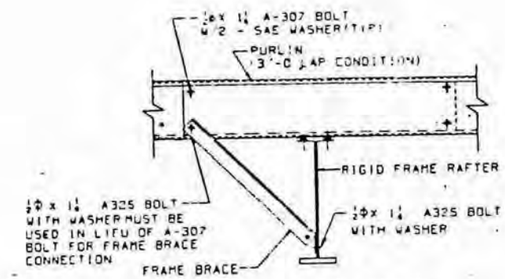
BOLTED RIDGE CONNECTION



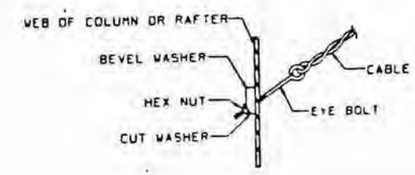
BASE DETAIL AT EXTERIOR COLUMN



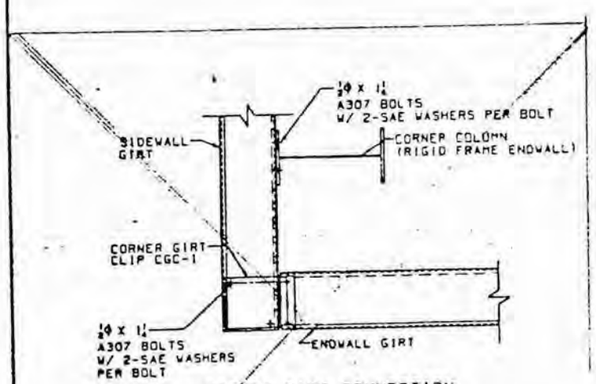
FRAME DETAIL AT FRAME BRACE



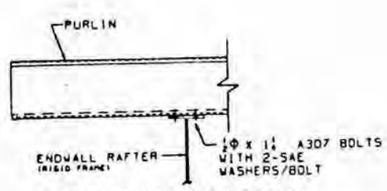
SECTION THRU FRAME AT FRAME BRACE



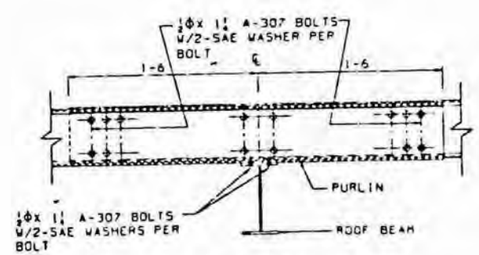
CABLE BRACE



CORNER GIRT CONNECTION



PURLIN CONNECTION DETAIL AT ENDWALL RAFTER



PURLIN CONNECTION 3-0 LAP AT FRAME LINE

VOID

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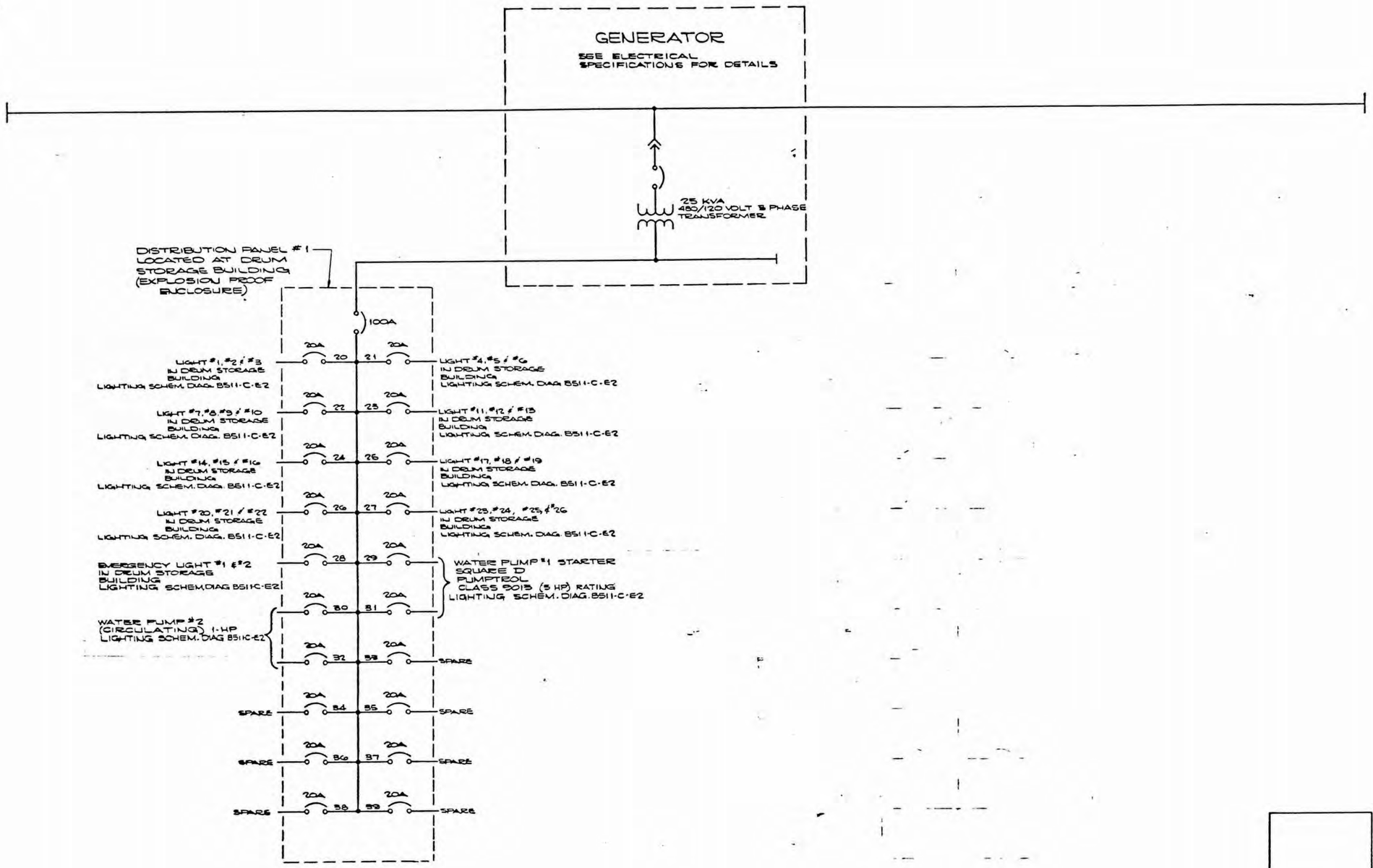
Morrison 8-31

SCALE: NONE	DATE	ERECTION DRAWINGS PLEASE RIGID	METALLIC-BRADEN BUILDING COMPANY HOUSTON, TEXAS (713) 644-9492
DRAWN BY:		PREC. HART ASSOCIATES	
CHECKED BY:			DRAWING NUMBER: 3511-C-5137 E-6 REV. A
DESIGN APPD BY:			



REV #	DATE	DESCRIPTION	APP'D
1	1-31-86 RWH	TANK FARM DIST. PNL DELETED	

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

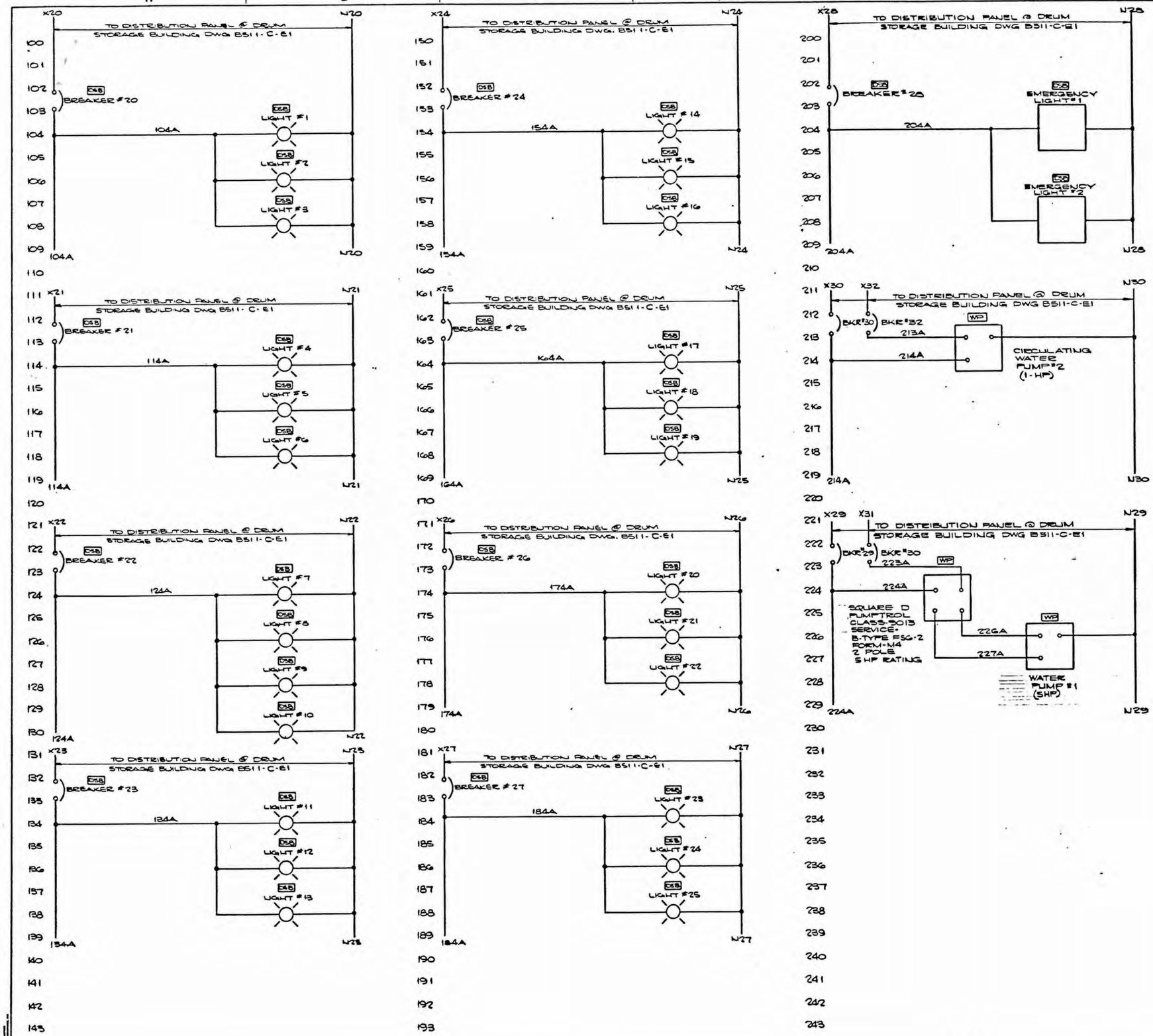
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN SRD	CHK'D RWH 8-6-85	APP'D 8-7-85
SCALE		DATE 8-6-85

TANK FARM AND CONTAINER STORAGE AREA

SINGLE LINE DIAGRAM

DRAWING NUMBER B511-C-E1



LEGEND:

DSB - DENOTES EQUIPMENT LOCATED AT DRUM STORAGE BUILDING

WP - DENOTES EQUIPMENT LOCATED AT WATER PUMP

REV #	DATE	DESCRIPTION	APP'D
1	1-31-86 RWH	TANK FARM ELEMENTARY SCHEM. DELETED	R

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B APPLICATION
PRD 091018622
PEÑUELAS PUERTO RICO

FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN SRD	CHK'D RWH 8-16-85	APP'D SRD 8-17-85
SCALE		DATE 8-3-85

TANK FARM AND CONTAINER STORAGE AREA

LIGHTING SCHEMATIC SHT #1

DRAWING NUMBER B511-C-E2

REVISION	CONDUIT (H) EMB COND	SIZE	EXP COND	SIZE	CABLE (G) NUMBER	N/C – SIZE TYPE	LENGTH	CKT VOLTS	CABLE TERMINATION AND ROUTING (F) FROM	VIA (E)	TO (UPPER SEQUENCE IPCEA METHOD I) / (LOWER SEQUENCE IPCEA METHOD IA/4)	CONDUCTOR COLOR CODING AND IDENTIFICATION (D, C, B) 1 BLACK / 1 BLACK	2 WHITE / 2 RED	3 RED / 3 BLUE	4 GREEN / 4 ORANGE	5 ORANGE / 5 YELLOW	6 BLUE / 6 BROWN	7 WHITE BLACK / 7 RED BLACK	8 RED BLACK / 8 BLUE BLACK	9 GREEN BLACK / 9 ORANGE BLACK	10 ORANGE BLACK / 10 YELLOW BLACK	11 BLUE BLACK / 11 BROWN BLACK	12 BLACK WHITE / 12 BLACK RED	13 RED WHITE / 13 BLUE RED	14 GREEN WHITE / 14 ORANGE RED	15 BLUE WHITE / 15 YELLOW RED	REMARKS (A)	REFERENCE DRAWING
	100	2"	100	2"	100	3-1/C #1 #1 GND 90°C THHN		120VAC CONTROL	GENERATOR		DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING	X1	N1	GND														
	—	—	101	1½", 1", ¾"	101	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING		LIGHT #10 IN DRUM STORAGE BUILDING (BAY #2)	124A	N22														CONTAINS CABLES 102 THRU 110	
	—	—	102	¾"	102	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #10 IN DRUM STORAGE BUILDING (BAY #2)	COND 101	LIGHT #9 IN DRUM STORAGE BUILDING (BAY #4)	124A	N22														CONTAINS CABLE 103	
	—	—	103	¾"	103	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #9 IN DRUM STORAGE BUILDING (BAY #4)	COND 102, COND 101	LIGHT #8 IN DRUM STORAGE BUILDING (BAY #6)	124A	N22														CONTAINS CABLE 104	
	—	—	104	¾"	104	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #8 IN DRUM STORAGE BUILDING (BAY #6)	COND 103, COND 101	LIGHT #7 IN DRUM STORAGE BUILDING (BAY #8)	124A	N22															
	—	—	105	¾"	105	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING	COND 101	LIGHT #6 IN DRUM STORAGE BUILDING (BAY #10)	114A	N21														CONTAINS CABLE 106	
	—	—	106	¾"	106	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #6 IN DRUM STORAGE BUILDING (BAY #10)	COND 105, COND 101	LIGHT #5 IN DRUM STORAGE BUILDING (BAY #12)	114A	N21														CONTAINS CABLE 107	
	—	—	107	¾"	107	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #5 IN DRUM STORAGE BUILDING (BAY #12)	COND 106, COND 101	LIGHT #4 IN DRUM STORAGE BUILDING (BAY #14)	114A	N21															
	—	—	108	¾"	108	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING	COND 101	LIGHT #3 IN DRUM STORAGE BUILDING (BAY #16)	104A	N20														CONTAINS CABLE 109	
	—	—	109	¾"	109	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #3 IN DRUM STORAGE BUILDING (BAY #16)	COND 108, COND 101	LIGHT #2 IN DRUM STORAGE BUILDING (BAY #18)	104A	N20														CONTAINS CABLE 110	
	—	—	110	¾"	110	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #2 IN DRUM STORAGE BUILDING (BAY #18)	COND 109, COND 101	LIGHT #1 IN DRUM STORAGE BUILDING (BAY #20)	104A	N20															
	—	—	111	1", ¾"	111	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING		LIGHT #16 IN DRUM STORAGE BUILDING	154A	N24														CONTAINS CABLES 112 THRU 118	
	—	—	112	¾"	112	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #16 IN DRUM STORAGE BUILDING	COND 111,	LIGHT #15 IN DRUM STORAGE BUILDING	154A	N24														CONTAINS CABLE 113	
	—	—	113	¾"	113	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #15 IN DRUM STORAGE BUILDING	COND 112, COND 111	LIGHT #14 IN DRUM STORAGE BUILDING	154A	N24															
	—	—	114	¾"	114	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING	COND 111	LIGHT #13 IN DRUM STORAGE BUILDING	134A	N23														CONTAINS CABLE 115	
	—	—	115	¾"	115	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #13 IN DRUM STORAGE BUILDING	COND 114, COND 111	LIGHT #12 IN DRUM STORAGE BUILDING	134A	N23														CONTAINS CABLE 116	
	—	—	116	¾"	116	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #12 IN DRUM STORAGE BUILDING	COND 115, COND 111	LIGHT #11 IN DRUM STORAGE BUILDING	134A	N23															
	—	—	117	¾"	117	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING	COND 111	EMERGENCY LIGHT #2 IN DRUM STORAGE BUILDING	204A	N28															
	—	—	118	¾"	118	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING	COND 111	EMERGENCY LIGHT #1 IN DRUM STORAGE BUILDING	204A	N28															
	—	—			119																							
	—	—			120																							
	—	—	121	1½", 1", ¾"	121	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING		LIGHT #25 IN DRUM STORAGE BUILDING (BAY #3)	184A	N27														COUTAINS CABLES 122 THRU 130	
	—	—	122	¾"	122	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #25 IN DRUM STORAGE BUILDING (BAY #3)	COND 121	LIGHT #24 IN DRUM STORAGE BUILDING (BAY #5)	184A	N27														CONTAINS CABLE 123	
	—	—	123	¾"	123	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #24 IN DRUM STORAGE BUILDING (BAY #5)	COND 122, COND 121	LIGHT #23 IN DRUM STORAGE BUILDING (BAY #7)	184A	N27														COUTAINS CABLE 130	
	—	—	124	¾"	124	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING	COND 121	LIGHT #22 IN DRUM STORAGE BUILDING (BAY #9)	174A	N26														CONTAINS CABLE 125	
	—	—	125	¾"	125	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #22 IN DRUM STORAGE BUILDING (BAY #9)	COND 124, COND 121	LIGHT #21 IN DRUM STORAGE BUILDING (BAY #11)	174A	N26														CONTAINS CABLE 126	
	—	—	126	¾"	126	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #21 IN DRUM STORAGE BUILDING (BAY #11)	COND 125, COND 121	LIGHT #20 IN DRUM STORAGE BUILDING (BAY #13)	174A	N26															
	—	—	127	¾"	127	2-1/C #12 90°C THHN		120VAC CONTROL	DISTRIBUTION PANEL #1 @ DRUM STORAGE BUILDING	COND 121	LIGHT #19 IN DRUM STORAGE BUILDING (BAY #15)	164A	N25														CONTAINS CABLE 128	
	—	—	128	¾"	128	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #19 IN DRUM STORAGE BUILDING (BAY #15)	COND 127, COND 121	LIGHT #18 IN DRUM STORAGE BUILDING (BAY #17)	164A	N25														CONTAINS CABLE 129	
	—	—	129	¾"	129	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #18 IN DRUM STORAGE BUILDING (BAY #17)	COND 128, COND 121	LIGHT #17 IN DRUM STORAGE BUILDING (BAY #19)	164A	N25															
	—	—	130	¾"	130	2-1/C #12 90°C THHN		120VAC CONTROL	LIGHT #26 IN DRUM STORAGE BUILDING (BAY #1)	COND 121, COND 123	LIGHT #23 IN DRUM STORAGE BUILDING (BAY #7)	184A	N27															
					131																							
					132																							
					133																							
					134																							
	135	2"	135	2"	135	4-1/C #12 #12 GND 90°C THHN		208 VAC CONTR. PWR	DISTRIBUTION PANEL #1 @ DRUM STORAGE BLDG		WATER PUMP #1 STARTER (PUMPTROL) WEST OF STORAGE BLDG	223A	224A	N29	GND												CONTAINS CABLE 136	
	—	—	136	1"	136	4-1/C #12 #12 GND 90°C THHN		208 VAC CONTR. PWR	DISTRIBUTION PANEL #1 @ DRUM STORAGE BLDG	COND 135	WATER PUMP #2 (CIRCULATING)	213A	214A	N30	GND													
					137																							
					138																							
					139																							

REV #	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRID 091018 6022
, FESUELAS, PUERTO RICO

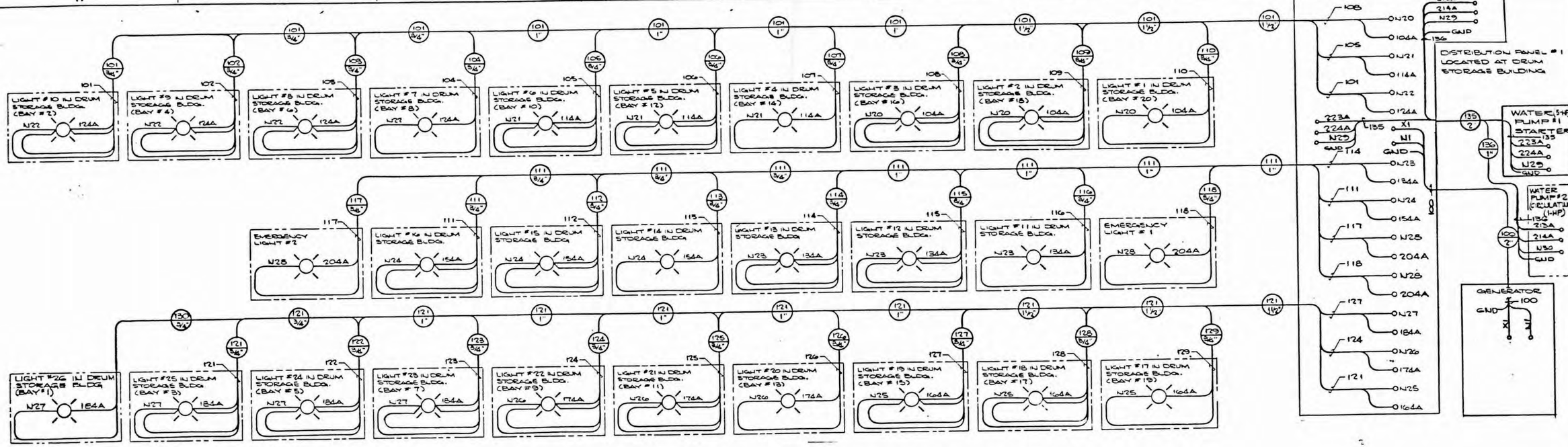
FRED C. HART ASSOCIATES, INC.

DRWN SRP	CHK'D RWH 5-16-85	APP'D GEB 8-12-85
SCALE NONE		DATE 8-10-85

TANK FARM AND CONTAINER STORAGE AREA

CONDUIT / CABLE SCHEDULE SHT #1

DRAWING NUMBER B511-C-E5



REV #	DATE	DESCRIPTION	APP'D
1	1-31-86 RWH	TANK FARM INTERCONN. DELETED	B

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS PUERTO RICO

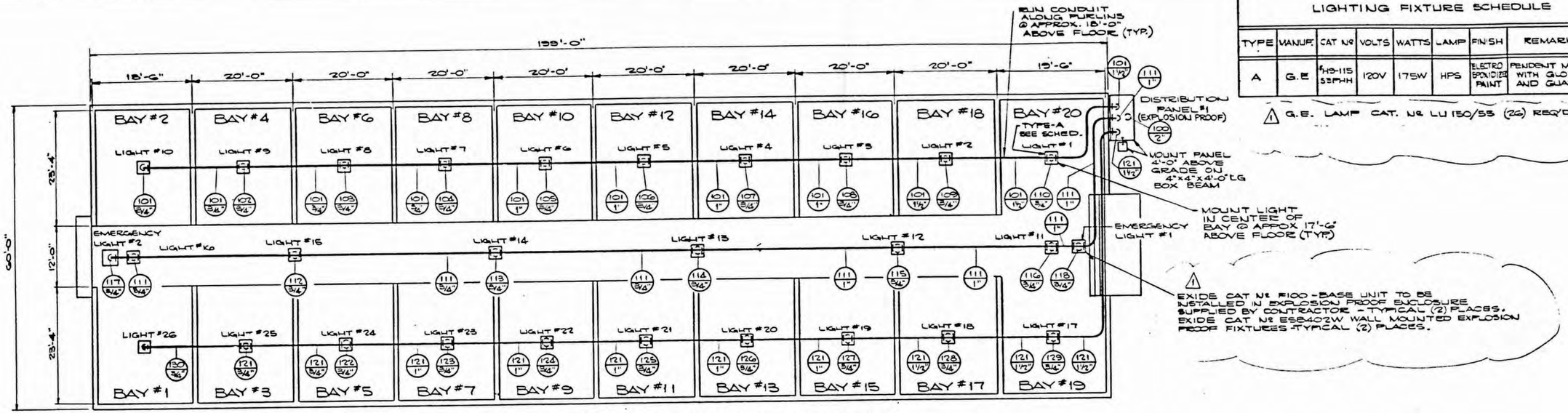
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN SRP	CHK'D RWH 8-16-85	APP'D JCS 8-17-85
SCALE		DATE 8-8-85

TANK FARM AND CONTAINER STORAGE AREA

INTERCONNECTION DIAGRAM

DRAWING NUMBER B511-C-E7



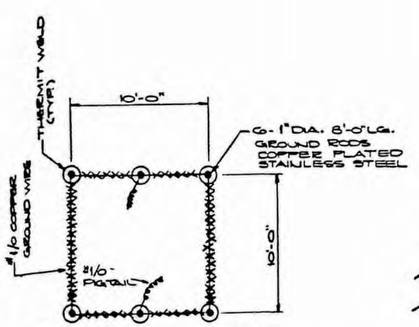
DRUM STORAGE BUILDING EXPOSED CONDUIT PLAN

SCALE 1" = 10'-0"

LIGHTING FIXTURE SCHEDULE

TYPE	MANUF.	CAT Nº	VOLTS	WATTS	LAMP	FINISH	REMARKS	REQ'D
A	G.E	#H9-115 S3PHH	120V	175W	HPS	ELECTRO SPONDIZED PAINT	PENDENT MOUNT WITH GLOBE AND GUARD	26

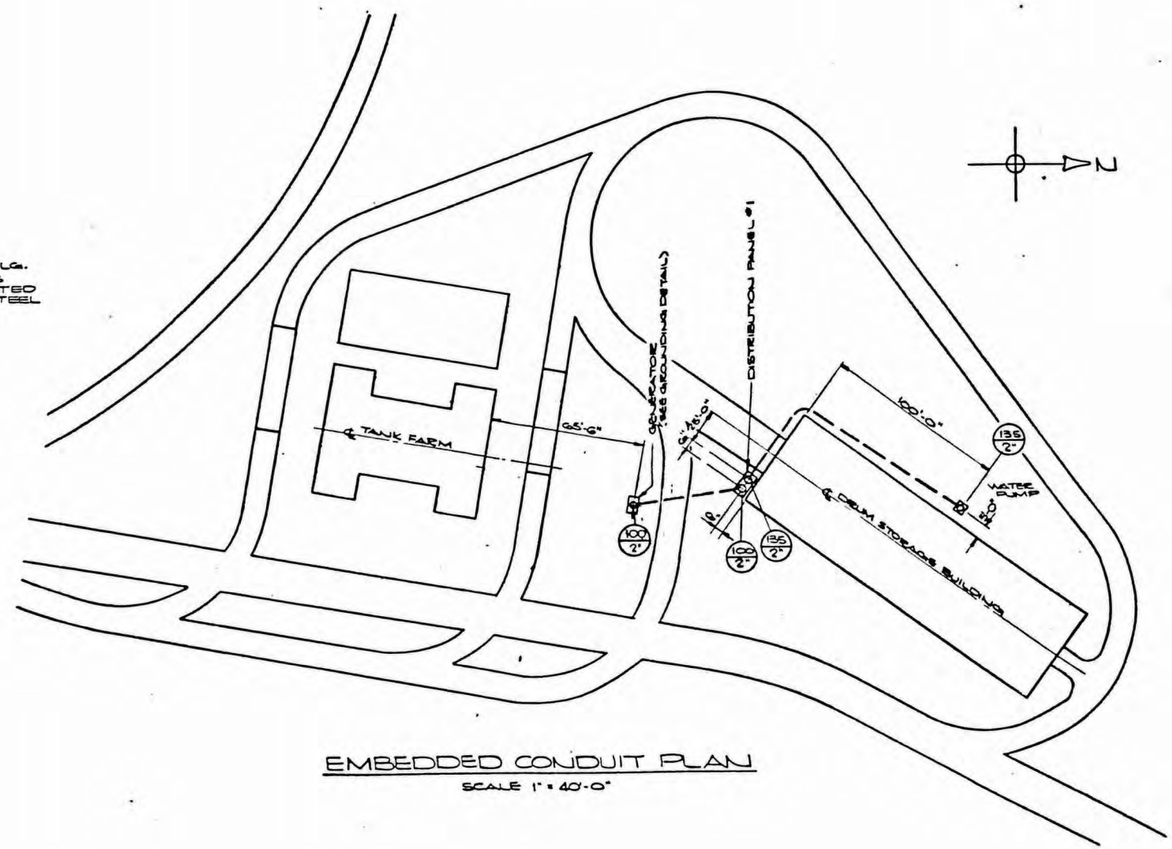
△1 G.E. LAMP CAT. Nº LU 150/55 (26) REQ'D.



GROUNDING DETAIL FOR GENERATOR

NOT TO SCALE

MINIMUM MEASURED RESISTANCE TO GROUND OF 10 OHMS



EMBEDDED CONDUIT PLAN

SCALE 1" = 40'-0"

NOTES:

1) DEVICES, CONDUIT AND ASSOCIATED EQUIPMENT ARE SHOWN DIAGRAMMATICALLY
2) CONDUIT BOXES TO BE LOCATED AND SUPPORTED TO SUIT
3) CONDUIT BOX SIZE TO BE DETERMINED BY SIZE OF CONDUIT ACCORDING TO J.I.C. STANDARDS
4) CONTRACTOR TO FURNISH ALL CONDUIT BOXES AND HARDWARE
5) WORK THIS DWG. WITH GENERAL ARRG'T. & PIPING DWG'S.
6) ALL CONDUITS TO BE BONDED AND GROUNDED
7) ALL EMBEDDED CONDUIT ELEVATIONS TO BE DETERMINED IN FIELD
8) ALL EMBEDDED CONDUIT TO STUB-UP A MINIMUM OF 3" ABOVE FINISHED CONCRETE OR GRADE ELEVATION AND TO BE PROTECTED WITH CAPPED BUSHINGS
9) USE RIGID GALVINIZED STEEL CONDUIT
10) SYSTEM REQUIRES EXPLOSION PROOF FITTINGS.

REV#	DATE	DESCRIPTION	APP'D
2	1-31-86 RWH	TANK FARM COND 140 DELETED	JB
1	9-18-85 RWH	ADDED EMERGENCY LIGHT NOTE & LAMP NOTE AS NOTED	GRB 9-19-85

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

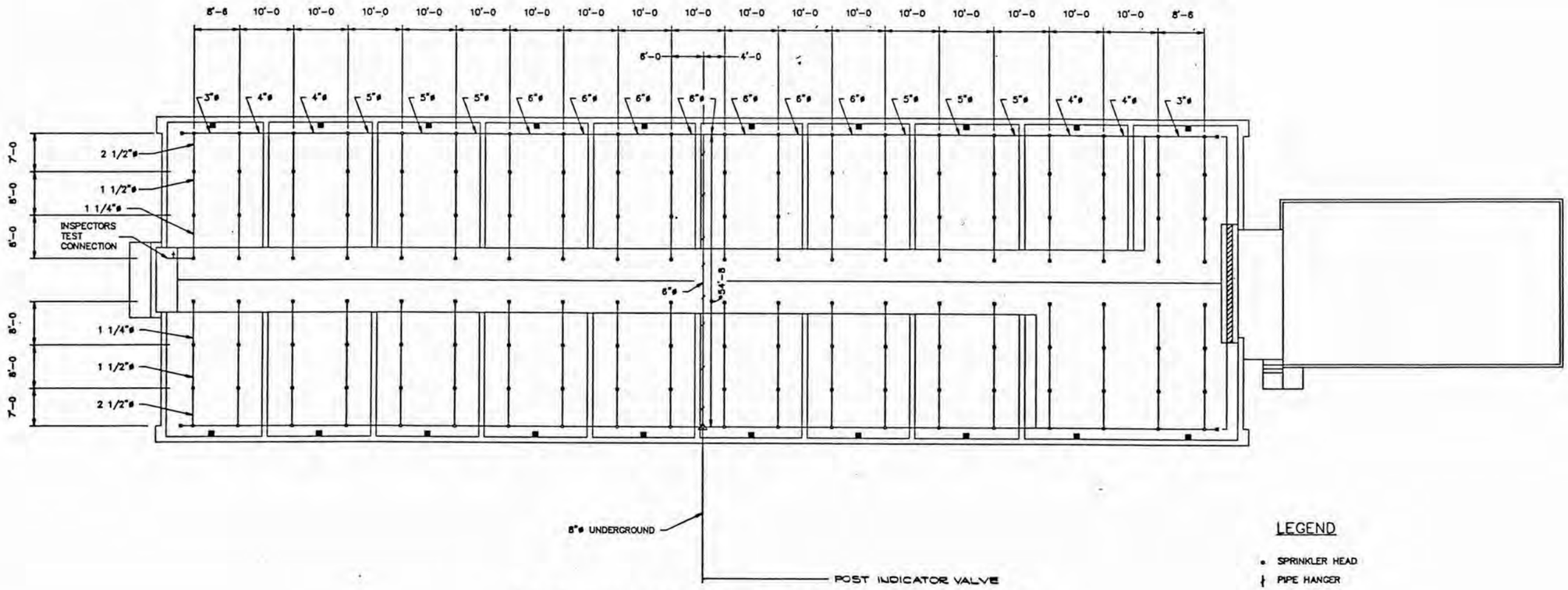
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN SRP	CHK'D RWH-8-16-85	APP'D GRB 8-17-85
SCALE AS NOTED		DATE 8-12-85

TANK FARM AND CONTAINER STORAGE AREA

EMBEDDED AND EXPOSED CONDUIT PLANS

DRAWING NUMBER B511-B-E8

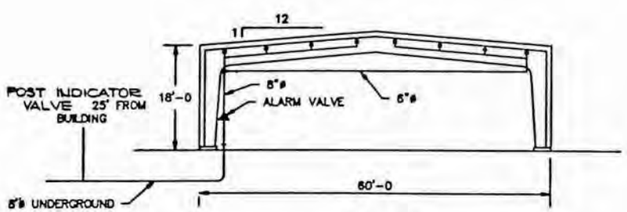


CONTAINER STORAGE BLDG FIRE PROTECTION PLAN

SCALE
0 10 20 30 FEET

LEGEND

- • SPRINKLER HEAD
- ⊢ PIPE HANGER
- ▲ ALARM VALVE



SECTION

N.T.S.

NOTES:

1. THE FIRE PROTECTION SYSTEM IS DESIGNED TO MEET NFPA 30, CLASS 1A FLAMMABLE LIQUIDS CRITERIA 0.06 GPM PER SQ. FT. OVER 5000 SQ. FT., WITH HIGH TEMPERATURE SPRINKLER).
2. SPRINKLER HEADS SHALL BE LARGE ORIFICE SPRINKLERS (17/32"ø).
3. ALL MATERIALS, EQUIPMENT, PIPING DESIGN etc. SHALL BE PER NFPA 13.
4. SPRINKLER BRANCHES TO BE RUN MINIMUM OF 5'-0" AWAY FROM ROOF BEAM.

REV #	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
EPA PRD 091018622
PENUELAS, PUERTO RICO

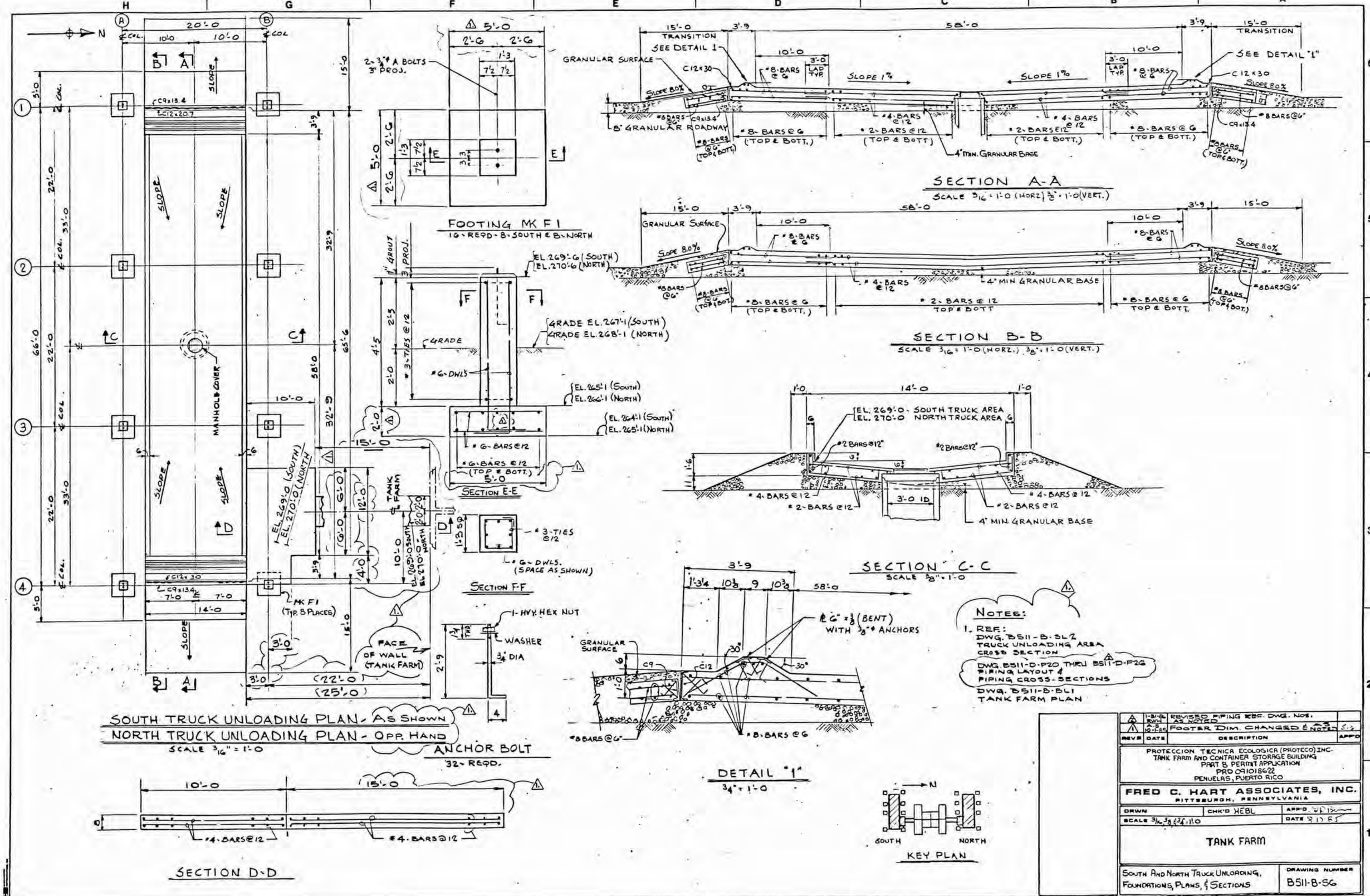
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

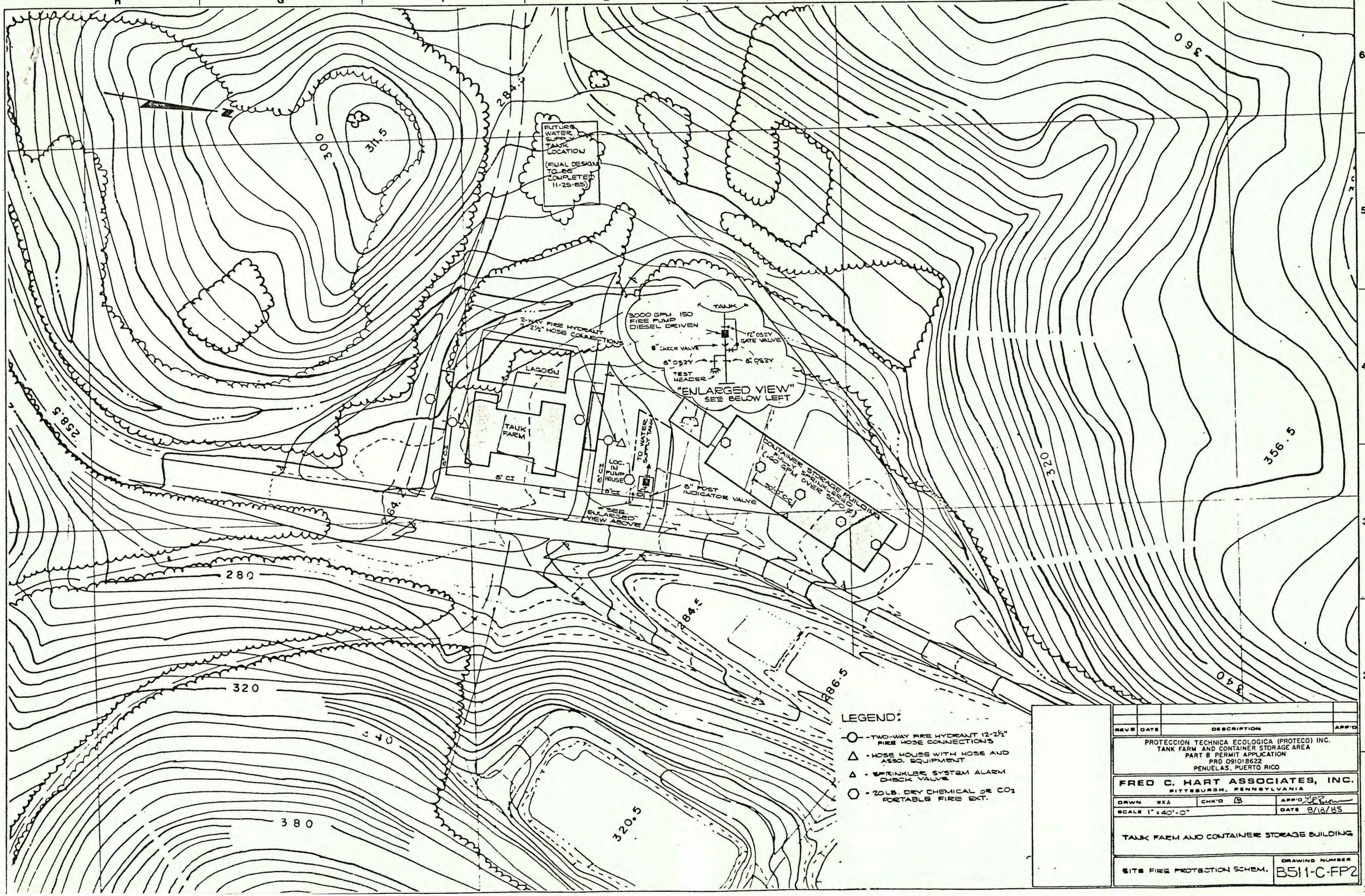
DRWN	wfp	CHK'D JWH	APP'D GRB
SCALE	AS SHOWN		DATE 8-11-85

CONTAINER STORAGE BLDG

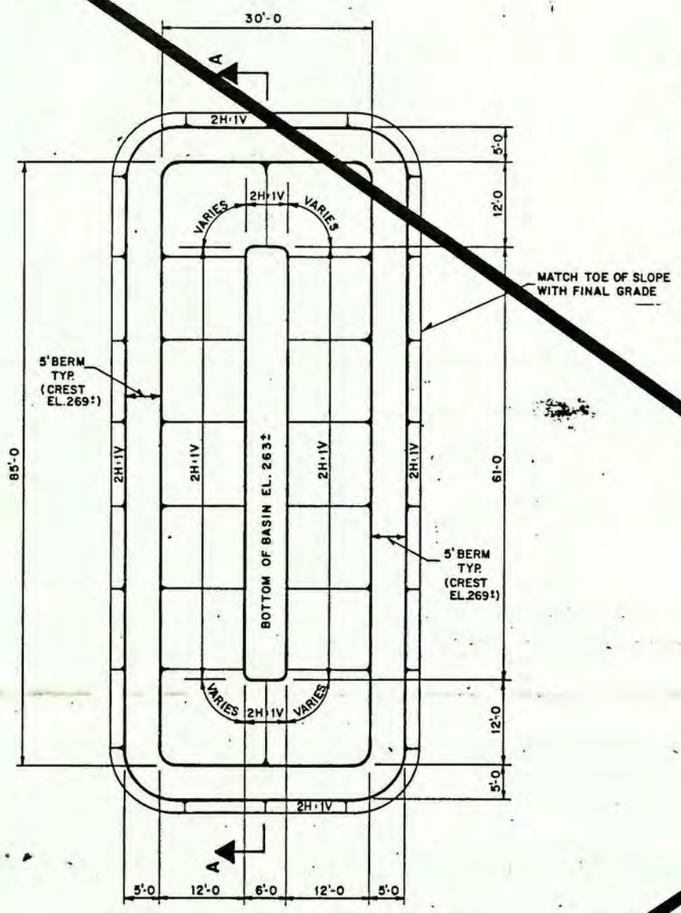
CONTAINER STORAGE BLDG FIRE PROTECTION PLAN

DRAWING NUMBER B511-C-FP1


SOUTH TRUCK UNLOADING PLAN - AS SHOWN
NORTH TRUCK UNLOADING PLAN - OPP. HAND
SCALE 3/16" = 1'-0
FOOTING MK F1
16-REQD-8-SOUTH & 8-NORTH
SECTION A-A
SCALE 3/16 = 1'-0 (HORZ) 3/8" = 1'-0 (VERT.)
SECTION B-B
SCALE 3/16 = 1'-0 (HORZ.) 3/8" = 1'-0 (VERT.)
SECTION C-C
SCALE 3/8" = 1'-0
SECTION D-D
SECTION E-E
SECTION F-F
DETAIL "1"
3/4" = 1'-0
ANCHOR BOLT
32-REQD.
KEY PLAN
SOUTH
NORTH
GRANULAR SURFACE
8" GRANULAR ROADWAY
4" MIN. GRANULAR BASE
SEE DETAIL 1
SEE DETAIL "1"
TRANSITION
SLOPE 1%
SLOPE 8.0%
MANHOLE COVER
TANK FARM
FACE OF WALL (TANK FARM)
MK F1 (TYP. 8 PLACES)
EL. 269'-0 - SOUTH TRUCK AREA
EL. 270'-0 NORTH TRUCK AREA
EL. 269'-6 (SOUTH)
EL. 270'-6 (NORTH)
GRADE EL. 267'-1 (SOUTH)
GRADE EL. 268'-1 (NORTH)
EL. 265'-1 (SOUTH)
EL. 266'-1 (NORTH)
EL. 264'-1 (SOUTH)
EL. 265'-1 (NORTH)
EL. 269'-0 (SOUTH)
EL. 270'-0 (NORTH)
EL. 268'-0 (SOUTH)
EL. 270'-0 (NORTH)
1-HVY. HEX NUT
WASHER
3/4" DIA
NOTES:
1. REF.:
DWG. B511-B-SL2
TRUCK UNLOADING AREA
CROSS SECTION
DWG. B511-D-P20 THRU B511-D-P26
PIPING LAYOUT &
PIPING CROSS-SECTIONS
DWG. B511-B-BL1
TANK FARM PLAN
REVISED PIPING REF. DWG. NOS. AS NOTED
FOOTER DIM. CHANGED & NOTED
REV'S DATE DESCRIPTION APP'D
PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA
DRWN
CHK'D HEBL
APP'D
SCALE 3/16, 3/8, 3/4, 1:0
DATE
TANK FARM
SOUTH AND NORTH TRUCK UNLOADING, FOUNDATIONS, PLANS, & SECTIONS
DRAWING NUMBER
B511-B-S6

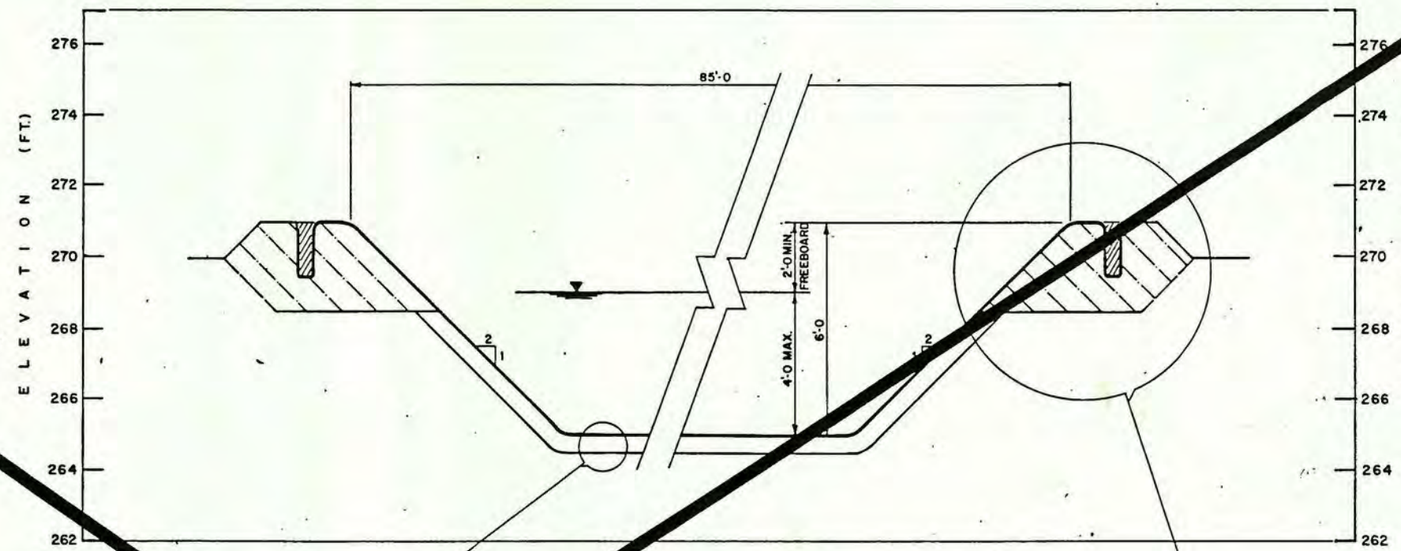


FUTURE WATER SUPPLY TANK LOCATION
(FINAL DESIGN TO BE COMPLETED 11-25-85)
2-WAY FIRE HYDRANT 2-2½" HOSE CONNECTIONS
3000 GPM 150 FIRE PUMP DIESEL DRIVEN
TANK
12" OS2Y GATE VALVE
8" CHECK VALVE
8" OS2Y
8" OS2Y
TEST HEADER
"ENLARGED VIEW" SEE BELOW LEFT
LAGOON
TANK FARM
8" CI
8" CI
8" CI
LOC. IN PUMP HOUSE
TO WATER SUPPLY TANK
8" POST INDICATOR VALVE
SEE ENLARGED VIEW ABOVE
CONTAINER STORAGE BUILDING FULLY SPRINKLERED (60 GPM OVER 5000 ft)
50'-0" C.C.
300
311.5
284.5
360
356.5
320
340
258.5
264.2
280
284.5
286.5
320
340
380
320.5
LEGEND:
-O- - TWO-WAY FIRE HYDRANT 12-2½" FIRE HOSE CONNECTIONS
△ - HOSE HOUSE WITH HOSE AND ASSO. EQUIPMENT
△ - SPRINKLER SYSTEM ALARM CHECK VALVE
○ - 20 LB. DRY CHEMICAL OR CO2 PORTABLE FIRE EXT.
REV'S
DATE
DESCRIPTION
APP'D
PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA
DRWN WKA
CHK'D
APP'D
SCALE 1" = 40'-0"
DATE 8/18/85
TANK FARM AND CONTAINER STORAGE BUILDING
SITE FIRE PROTECTION SCHEM.
DRAWING NUMBER
B511-C-FP2



PLAN
STORM WATER RETENTION BASIN

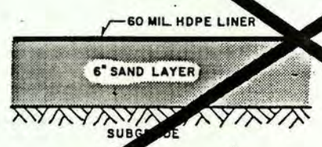
SCALE
0 10 20 30 FEET



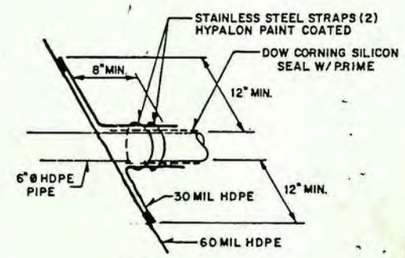
SECTION A-A

HORIZONTAL SCALE
0 4 8 12 FEET

VERTICAL SCALE
0 2 4 6 FEET

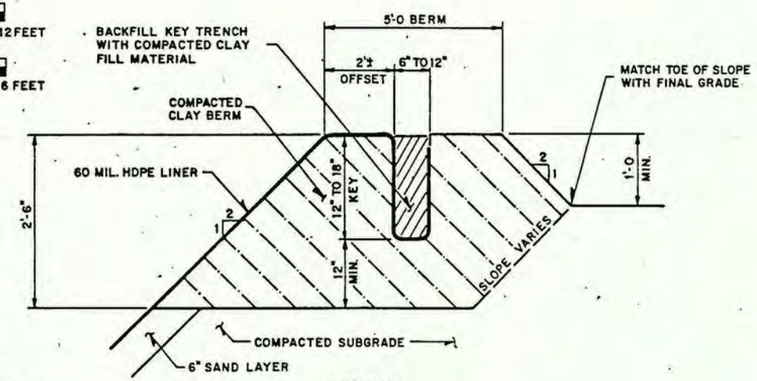


DETAIL
BASIN LINER
N.T.S.



DETAIL
PIPE PENETRATION
N.T.S.
(ANGLE AND ORIENTATION TO SUIT)

THIS DRAWING REPLACED BY DRAWING B511-B-SL1 DATED 3/86



DETAIL
LINER KEY TRENCH

HORIZONTAL SCALE
0 2 4 6 FEET

VERTICAL SCALE
0 1 2 3 FEET

REV#	DATE	DESCRIPTION	APP'D

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE AREA
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

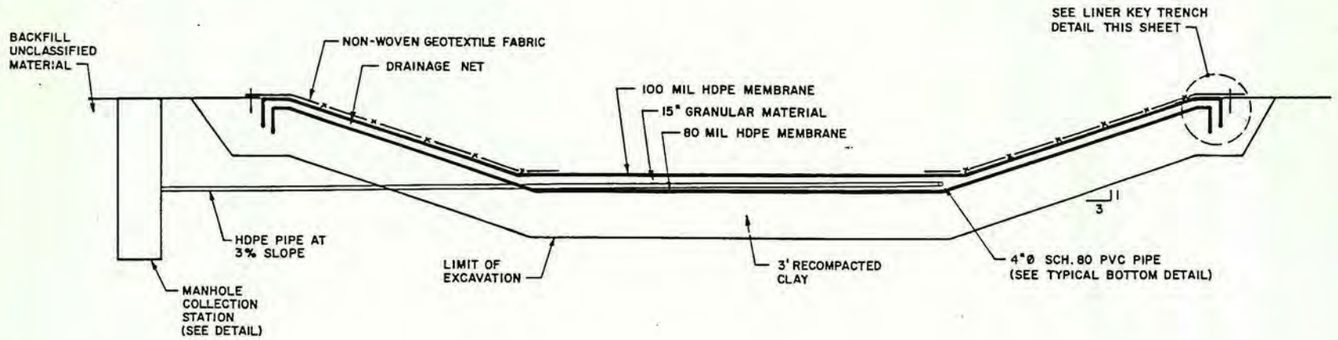
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	WKA	CHK'D	APP'D
SCALE	AS SHOWN		DATE 8 18 85

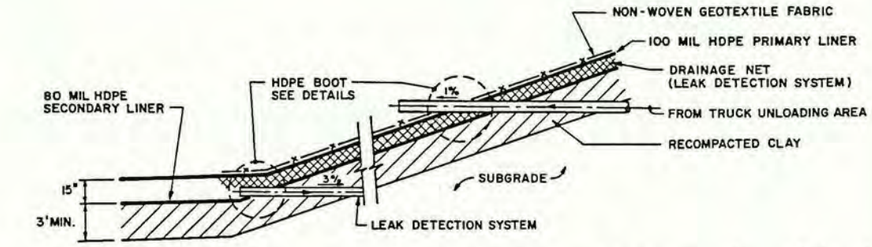
TANK FARM AND CONTAINER STORAGE BUILDING

STORM WATER RENTENTION BASIN PLAN, CROSS SECTION AND DETAILS

DRAWING NUMBER
B511-B-SL1



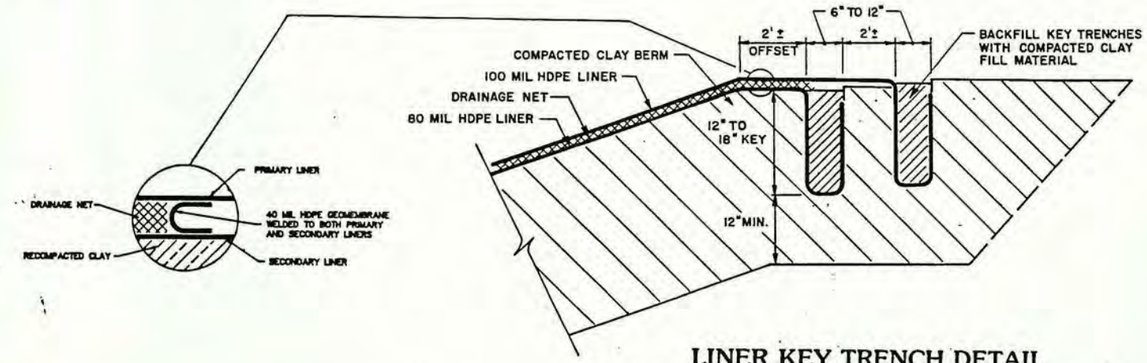
TYPICAL LAGOON SECTION A-A



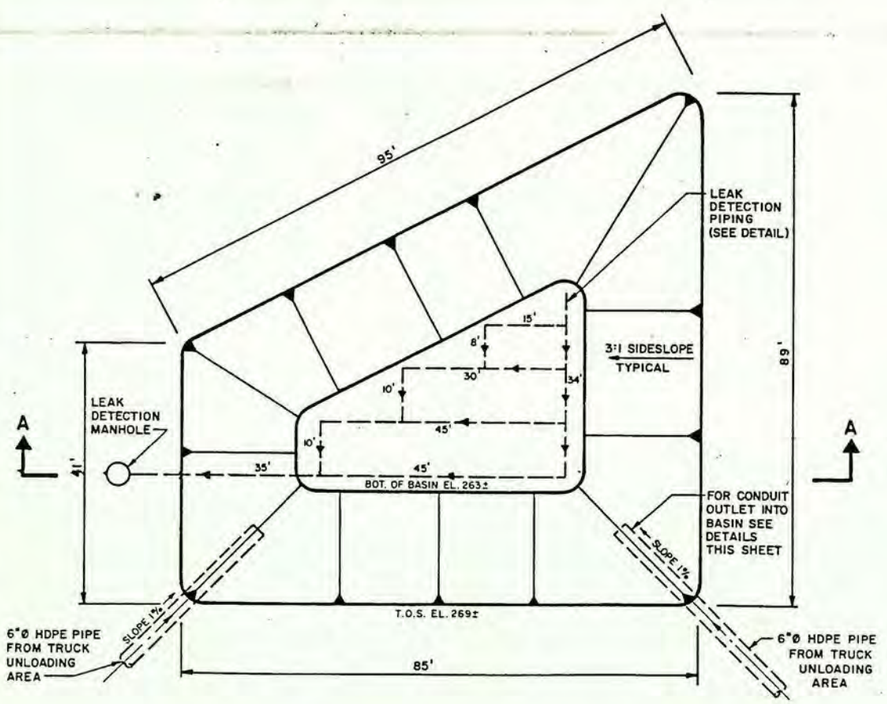
STORMWATER RETENTION BASIN PERIMETER BERM TOE AND SIDESLOPE DETAIL

NOTES:

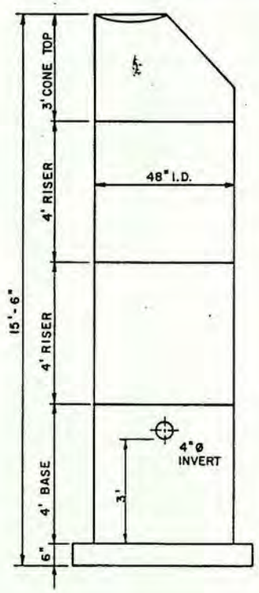
1. THE INNER SLOPE OF THE PERIMETER BERM SHALL HAVE COMPLETE COVERAGE WITH NON-WOVEN GEOTEXTILE FABRIC.
2. THE DRAINAGE NET SHALL EXTEND A MINIMUM OF FIVE FEET BEYOND THE TOE OF THE PERIMETER BERM.
3. FOR GRADATION OF COARSE GRANULAR MATERIAL SEE LANDFILL FACILITIES CONSTRUCTION SPECIFICATIONS.



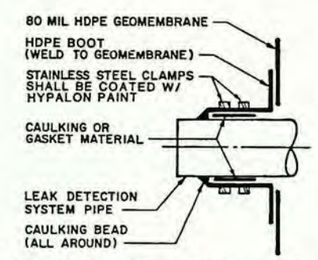
LINER KEY TRENCH DETAIL



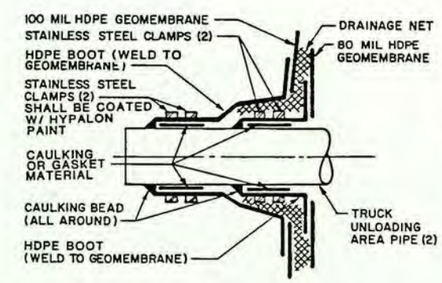
PLAN OF STORMWATER RETENTION BASIN



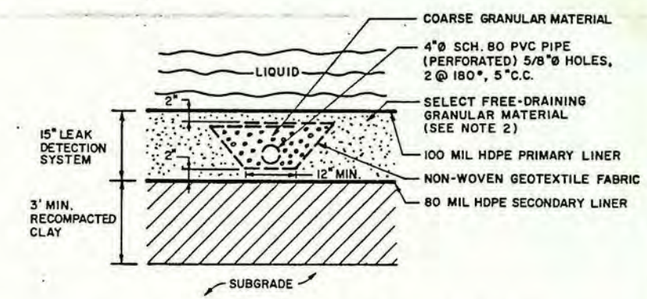
MANHOLE DETAIL



SINGLE LINER PENETRATION



DOUBLE LINER PENETRATION



STORMWATER RETENTION BASIN LINER AND LEAK DETECTION SYSTEM TYPICAL BOTTOM DETAIL

REV'S	DATE	DESCRIPTION	APP'D

PROTECCION TECNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PENUELAS, PUERTO RICO

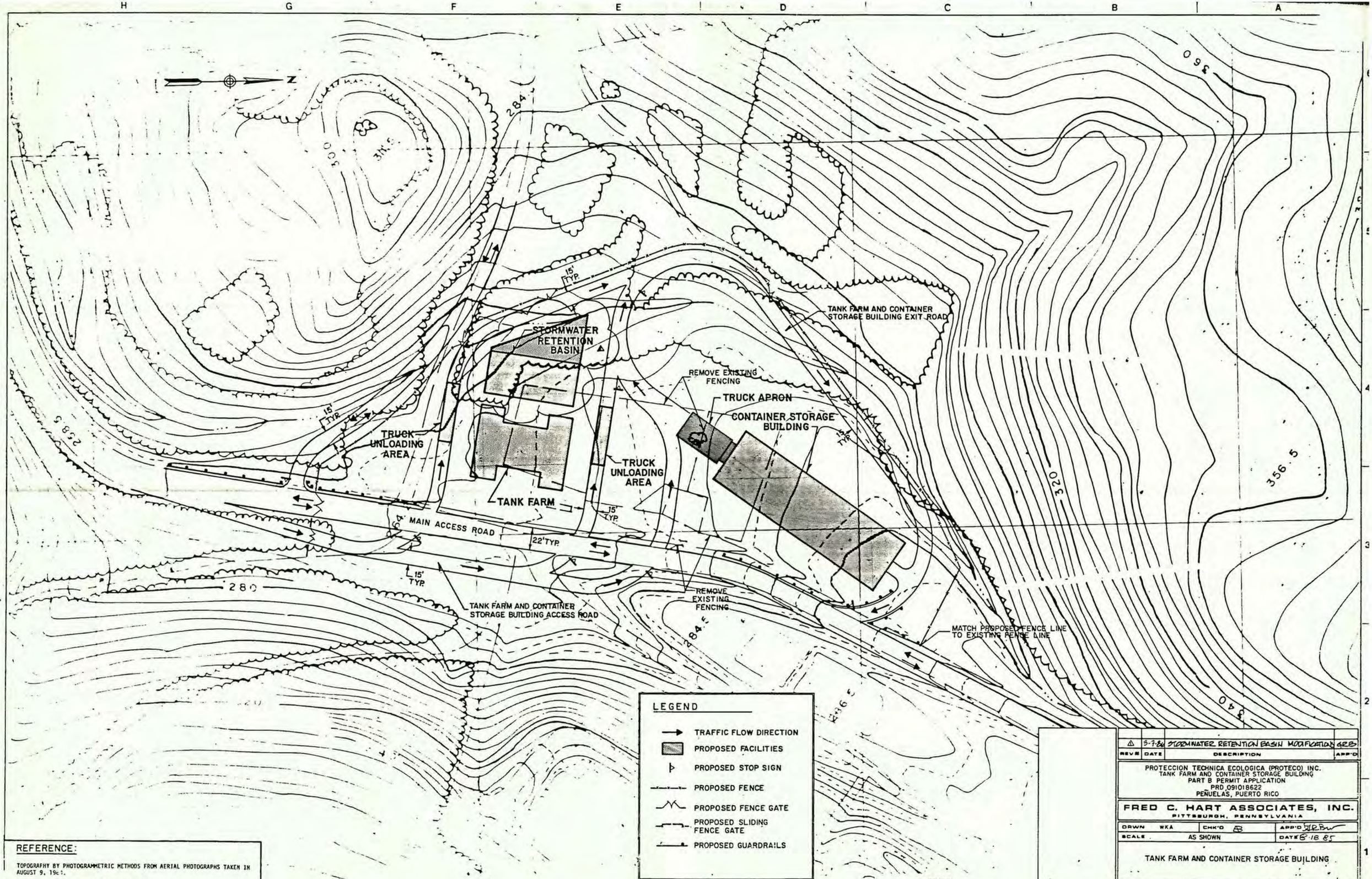
FRED C. HART ASSOCIATES, INC.
NEW YORK, NEW YORK

DRWN CS/BH	CHK'D AL	APP'D GRB
SCALE NONE		DATE 3-7-86

TANK FARM AND CONTAINER STORAGE BUILDING

STORMWATER RETENTION BASIN PLAN, CROSS SECTION AND DETAILS

DRAWING NUMBER B511-B-SL1



REFERENCE:

TOPOGRAPHY BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS TAKEN IN AUGUST 9, 19c1.

VERTICAL DATUM: BASED ON EXISTING CONTROL.

REVS	DATE	DESCRIPTION	APP'D
1	5-7-86	STORMWATER RETENTION BASIN MODIFICATION	GRB

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

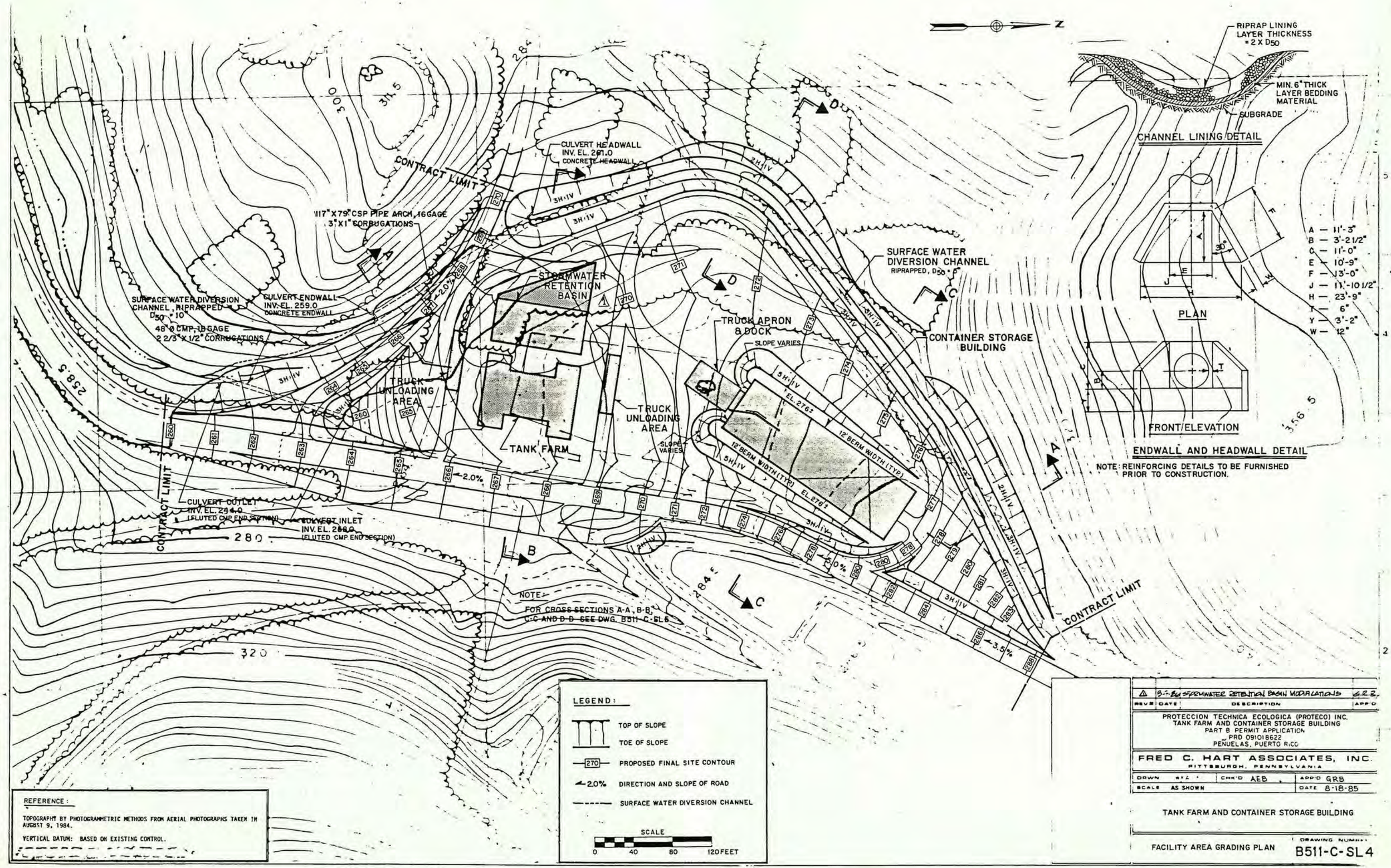
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN	WKA	CHK'D	APP'D
SCALE	AS SHOWN		DATE 8-18-85

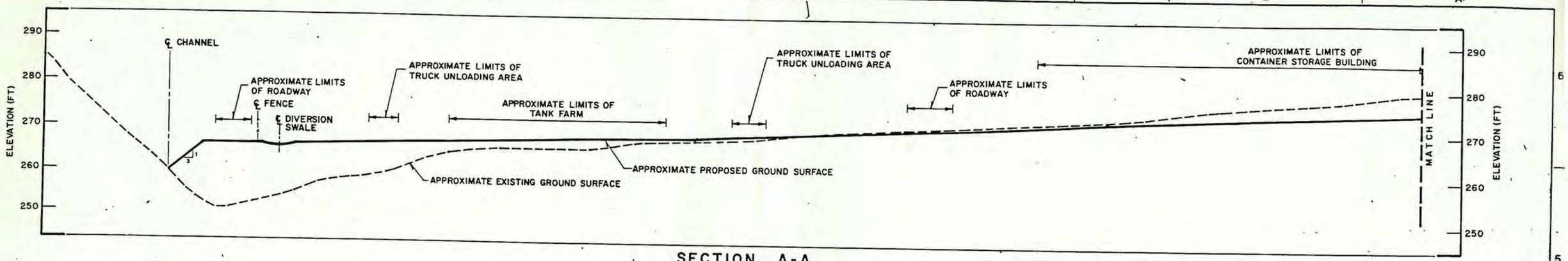
TANK FARM AND CONTAINER STORAGE BUILDING

DETAILED SITE ARRANGEMENT PLAN

DRAWING NUMBER B511-C-SL3



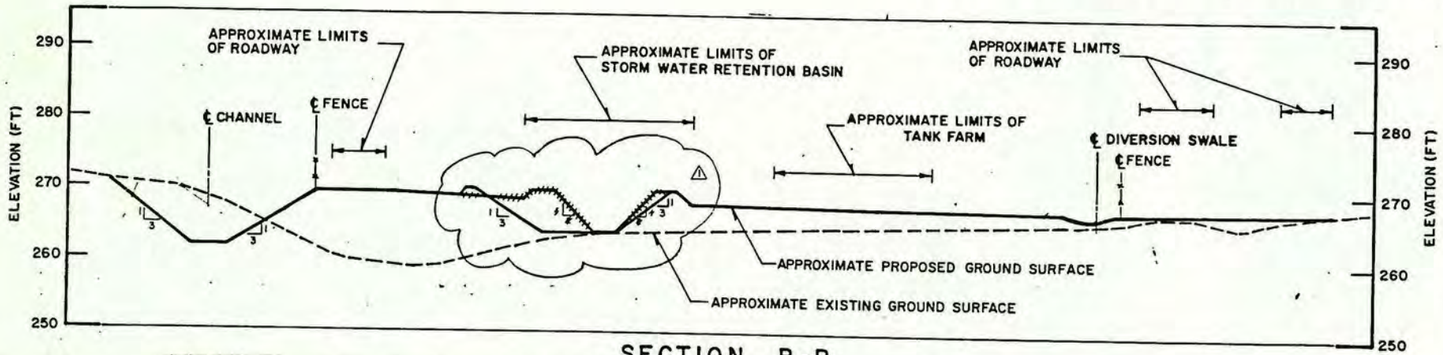
CONTRACT LIMIT
CULVERT HEADWALL
INV. EL. 261.0
CONCRETE HEADWALL
117" X 79" CSP PIPE ARCH, 16 GAGE
3" X 1" CORRUGATIONS
SURFACE WATER DIVERSION CHANNEL, RIPRAPPED
D50 = 10"
48" Ø CMP, 18 GAGE
2 2/3" X 1/2" CORRUGATIONS
CULVERT ENDWALL
INV. EL. 259.0
CONCRETE ENDWALL
STORMWATER RETENTION BASIN
TRUCK UNLOADING AREA
TANK FARM
TRUCK APRON & DOCK
SLOPE VARIES
SURFACE WATER DIVERSION CHANNEL
RIPRAPPED, D50 = 5"
CONTAINER STORAGE BUILDING
12' BERM WIDTH (TYP)
EL. 276±
CULVERT OUTLET
INV. EL. 244.0
(FLUTED CMP END SECTION)
CULVERT INLET
INV. EL. 268.0
(FLUTED CMP END SECTION)
NOTE:
FOR CROSS SECTIONS A-A, B-B, C-C AND D-D SEE DWG. B511-C-SL5
RIPRAP LINING LAYER THICKNESS = 2 X D50
MIN. 6" THICK LAYER BEDDING MATERIAL
SUBGRADE
CHANNEL LINING DETAIL
PLAN
FRONT ELEVATION
ENDWALL AND HEADWALL DETAIL
A — 11'-3"
B — 3'-2 1/2"
C — 11'-0"
E — 10'-9"
F — 13'-0"
J — 11'-10 1/2"
H — 23'-9"
T — 6"
Y — 3'-2"
W — 12"
NOTE: REINFORCING DETAILS TO BE FURNISHED PRIOR TO CONSTRUCTION.
LEGEND:
TOP OF SLOPE
TOE OF SLOPE
PROPOSED FINAL SITE CONTOUR
2.0% DIRECTION AND SLOPE OF ROAD
SURFACE WATER DIVERSION CHANNEL
SCALE
0 40 80 120 FEET
REFERENCE:
TOPOGRAPHY BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS TAKEN IN AUGUST 9, 1984.
VERTICAL DATUM: BASED ON EXISTING CONTROL.
STORMWATER RETENTION BASIN MODIFICATIONS
REV'D DATE DESCRIPTION APP'D
PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO
FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA
DRWN
CHK'D AEB
APP'D GRB
SCALE AS SHOWN
DATE 8-18-85
TANK FARM AND CONTAINER STORAGE BUILDING
FACILITY AREA GRADING PLAN
DRAWING NUMBER
B511-C-SL4



SECTION A-A

HORIZONTAL SCALE 0 20 40 60 FEET

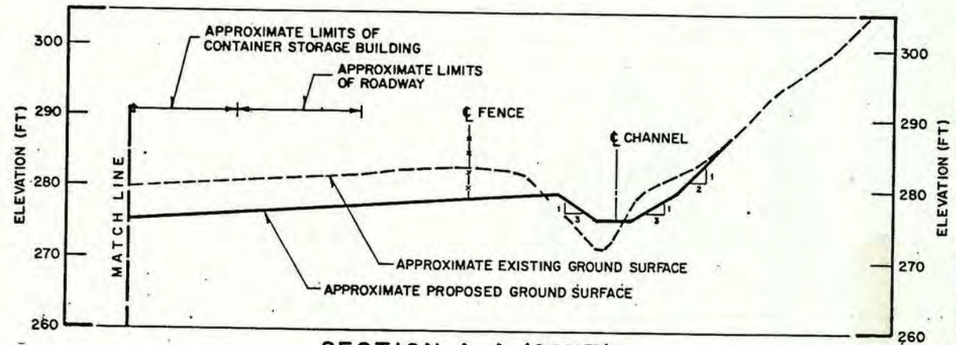
VERTICAL SCALE 0 10 20 30 FEET



SECTION B-B

HORIZONTAL SCALE 0 20 40 60 FEET

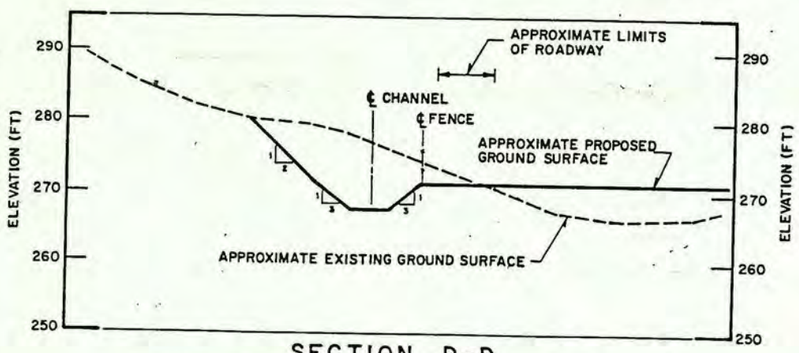
VERTICAL SCALE 0 10 20 30 FEET



SECTION A-A (CONT.)

HORIZONTAL SCALE 0 20 40 60 FEET

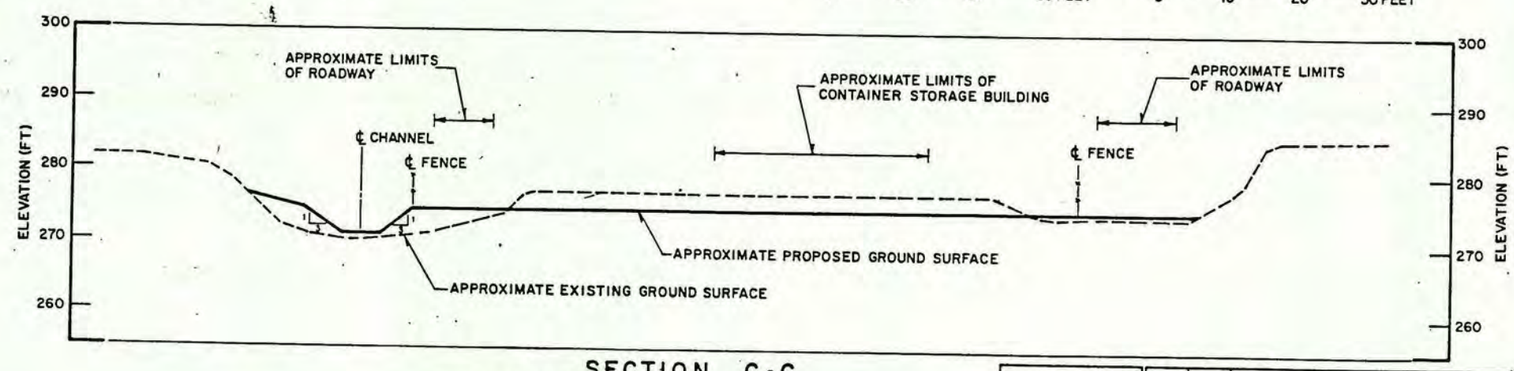
VERTICAL SCALE 0 10 20 30 FEET



SECTION D-D

HORIZONTAL SCALE 0 20 40 60 FEET

VERTICAL SCALE 0 10 20 30 FEET



SECTION C-C

HORIZONTAL SCALE 0 20 40 60 FEET

VERTICAL SCALE 0 10 20 30 FEET

REV'S	DATE	DESCRIPTION	APP'D
Δ	3-7-84	STORMWATER RETENTION BASIN MODIFICATIONS	GRB

PROTECCION TECHNICA ECOLOGICA (PROTECO) INC.
TANK FARM AND CONTAINER STORAGE BUILDING
PART B PERMIT APPLICATION
PRD 091018622
PEÑUELAS, PUERTO RICO

FRED C. HART ASSOCIATES, INC.
PITTSBURGH, PENNSYLVANIA

DRWN WKA	CHK'D	APP'D	
SCALE AS SHOWN		DATE 8-18-85	

TANK FARM AND CONTAINER STORAGE BUILDING

FACILITY AREA CROSS SECTIONS
A-A, B-B, C-C AND D-D

DRAWING NUMBER
B511-C-SL5