W. O. HEYN
256 Woodbine Place
Barrington, IL 60010
Phone 708-381-6743

July 7, 1992

Safety Kleen Corp.
129 S. Kentucky Avenue
Suite 701
Lakeland, FL 33801

Attention: Victor San Agustin

Subject: Safety-Kleen Corp. FLD984167791
Medley Branch Construction Certification
Part B Permit HC-13-175466

Dear Mr. San Agustin:

The attached certification report is an update of the report submitted by the writer on June 8, 1992. Also included are updated as-built prints which were prepared after the earlier submittal.

Only minor changes were made in the report such as changing some statements from *will be* to *are* and a paragraph was added to page 5 describing the outside dock pad rainwater control. No other changes were made in the report.

Sincerely,

W. O. Heyn, P.E.
Florida Cert. N. 45516

WOH: rlh

Enclosure: One set of full-size as built prints

cc: Jack Krivec - SK Atlanta Regional Office
Cindy Norton - ERM South

Professional Engineers Certification Report

of

Construction of the Safety-Kleen Medley, Florida

Branch Service Center

By W. O. Heyn P.E.
Florida Certificate
No. 45516

CERTIFICATION

Florida Dept. of Environmental Regulation

Facility Name SAFETY-KLEEN CORP., MEDLEY, FLORIDA
FDER Site Code FLD984167791
Construction Permit Requiring Certification HC-13-175466
Permit Issuance Date March 1, 1991

The Hazardous Waste Facilities have been constructed and tested in accordance with the specifications in the Part B construction permit with the exceptions noted in the attached report. Documentation that the construction was in accordance with the permit is contained in the enclosed report.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of imprisonment for knowing violations.

Glenn Casbourne
Signature of Owner/Operator

Glenn R. Casbourne, Vice-President, Engineering
Name and Title

William O. Heyn
Signature of Registered P.E.

William O. Heyn, 45516
Name of Registered P.E. and Florida P.E. No.

7-7-92
Date

(P.E. Seal)

Construction Documentation Report for Construction of Hazardous Waste Facilities at the Safety-Kleen Corp. Branch Service Center Located at 8755 N.W. 95th Street, Medley, Florida

Introduction

Safety-Kleen Corp. constructed an office, warehouse building and tank farm with ancillary equipment in Medley, Florida in accordance with the requirements of the Part B construction permit that was issued by the Florida DER on March 1, 1991 and amended on December 9, 1991 and May 15, 1992 with deviations from the permit indicated in this report. Figure 11A.4(b)-3 indicates Sanford whereas it should be Medley. Also the tank farm as-built is in the "Future" location which is consistent with the rest of the permit.

Regulatory Requirements:

40CFR264.192(a)

The tanks for storage of hazardous waste were constructed in accordance with Underwriters Laboratories Inc., "Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids." The tank shell thickness is 1/4" from 0 to 18 feet, and 3/16" from 18 to 24 feet. The tank bottom is 1/4" thick and the tank top is 3/16" thick steel. The waste ethylene glycol and waste mineral spirits tanks are identical.

All tanks are coated with white acrylic base paint. All pipes and threads are painted to protect them from corrosion. Each tank is protected by a high level alarm which will sound and activate an alarm and a strobe light when the tank level reaches 95% of capacity. The alarm on the waste solvent tank will also deactivate the waste solvent pump at the return and fill. The high level alarm system was changed from a float activated switch to a sonar based tank gauge and high level alarm system called "Level Devil" provided by Electronic Sensors, Inc. of Wichita, Kansas.

All connections to the tanks are equipped with a spring loaded safety valve held in the open position by a fusible link that will melt and allow the valve to close in the event of a fire.

40CFR 264.192(b)

Each tank was inspected after installation for weld breaks, punctures, scrapes of protective coatings, cracks, corrosion and other structural damage or inadequate construction/installation.

All discrepancies found were corrected and the tanks are suitable for use.

40CFR264.192(c) Not applicable

40CFR264.192(d)

The tanks, after installation, were filled over 95% of full with water and observed for 5 hours for leaks. No leaks were observed and the tanks are certified tight. All ancillary equipment was tested in conjunction with the tank tests and certified tight.

40CFR264.192(e)

All ancillary equipment has been properly mounted and installed. All lengths of piping are supported no less than every eight running feet.

40CFR264.192(f) Not applicable

40CFR264.192(g) See Certification Statement

40CFR264.193(a-e)

Tank secondary containment in the form of an open concrete dike vault has been constructed in accordance with prints No. 316301-5002-00 Sheet No. 8 and 316301-5015-00 Sheet No. 9. The floor and dike walls of the tank containment system contain no cracks. The slab has been sloped to drain all liquids that accumulate inside the containment system to a

stainless steel sump which can be readily pumped out to a holding tank to remove the accumulated liquids. The sump is located adjacent to the south wall of the vault per Figure II C2-1.

The interior of the dike walls and slab are coated with an epoxy material (Semstone 140) to prevent permeation through the concrete.

40CFR264.193(f)

Some piping inside the dike vault is threaded. Secondary containment for this piping is provided by the vault. All piping outside the concrete dike vault has fully welded connections. The clean solvent pump has been installed inside the concrete dike vault as is the spill container for hookup to tank trucks. Note: Although the permit specified that six tanks would be installed in the tank farm, only 3 tanks have been installed: one dirty mineral spirits tank, one clean mineral spirits tank and one waste glycol tank. The two waste oil tanks and the perchloroethylene tank were not installed but may be at a later date. Also the permit showed the tank truck connections outside the diked area and a change was made to move them inside the diked area. Refer to print No. 316301-2000-00 sheet No. 45.

With reference to Fig. II C.2-1 Tank Farm; The location of the tanks was changed to accommodate the use of one truck connection container. As-built, the used mineral spirits tank is located in the southwest corner of the vault whereas the permit shows it in the southeast corner of the vault. The fresh mineral spirits tank as-built is located in the northwest corner of the vault vs. the northeast location per the permit. The used ethylene glycol tank as-built is located in the south central position of the tank farm vs. the permit location in the northwest position. The tanks were mounted on stainless steel sheets, 13 ft. 8 in. by 13 ft. 8 in. which were bolted to the concrete housekeeping pads.

The dimensions of the vault, as-built, varies from the permit dimensions as follows; length 58 ft. 0 in. vs. 56 ft. 0 in. in the permit, width 40 ft. 0 in. vs. 40 ft. 0 in. in the permit. The height of the dike wall varies from 36-1/4 in. to 38 in. due to the sloped floor of the vault

vs. 36 in. in the permit. Three monitoring wells have been installed about 10 ft. from the north, east and west sides of the vault.

Tank Truck Loading Area

The permit application shows an 80 ft. by 25 ft. tank truck loading area constructed of 6 in. thick reinforced concrete sloping 2 inches to a 2 ft. diameter by 2 ft. deep stainless steel sump with no outlet. A change was made to increase the slope to 9 inches to increase the containment capacity of the pad to 2917 gallons. Refer to print No. 316301-5003-00 sheet No. 10. The containment volume of the truck loading area was measured by filling with water. The actual volume measured was 2432 gallons which is significantly less than the design volume.

Tank Farm Shelter

Provisions were made during construction to provide foundations for a proposed tank farm shelter which will be installed at a later date. This proposed shelter will cover the entire tank farm and tank truck loading pad with an overhang of 10 ft. at each end of the tank farm (east and west) and a 2 ft. overhang on the front and rear (south and north) of the tank farm and tank truck loading slab. This shelter will prevent a major portion of rainfall from entering the containment areas. No side walls will be installed so that access for fire fighting is not impaired. Refer to print Sheet No. ST-1 Tank Farm Canopy.

Warehouse Containment Area

The Warehouse containment area was constructed in accordance with print 316301-7005-00 Sheet No. 26. The sloped floor containment area is free of cracks and has been sealed with an epoxy sealant (Semstone 245) that is chemically resistant to the products to be stored in the warehouse. The sloped floors of the warehouse drain into a 12 ft. x 2 ft. stainless steel sump that has no outlet. Any spills collected in the sump will be pumped out and properly disposed. The containment volume of the warehouse was measured by filling with water. The actual

volumetric measure was 2996 gallons which is equal to or greater than the design volume of 2940 gallons.

With reference to Fig. II B.1-1 Container Storage Location; The rollup door and personnel door in the northeast location in the east wall of the warehouse were moved to a southeast location in the east wall. A personnel door was added to the north wall. The security fence in the warehouse was relocated and two 6 ft. wide by 8 ft. high sliding gates were added to the fence.

The truck loading dock will contain one dock leveler and provisions for a second leveler and is covered by a metal roof. Any spills that occur on the loading dock will be collected in a 24 ft. x 2 ft. stainless steel trench located at the foot of the dock. This trench, covered by a steel grating, has no outlet and any spills must be pumped out by use of a portable pump.

Rainwater which falls on the outside truck loading pad is collected in a sump which drains into the stormwater system. A small ~~brem~~ CURB separates this sump from the stainless steel spill collecting sump at the foot of the dock to prevent rainwater from entering the stainless steel sump.

Return and Fill

The return and fill containment is made up of concrete floors sloped to two 2 ft. diameter by 2 ft. deep stainless steel sumps that have no outlets. The concrete containment areas are sealed by an epoxy sealant (Semstone 140) that is compatible with and resistant to the solvents that will be handled in the facility. The steel loading dock, sized to handle 8 trucks, is covered by heavy duty grating that can support all anticipated loads including forklifts. Openings in the gratings contain two drum washers for dumping and washing solvent drums. The dock is equipped with dock plates to provide safe access to the trucks. Hose trees are located at the edge of the dock to provide valves and hose mountings for filling drums.

Two as-built, wet dumpster/barrel washers were installed adjacent to each other near the positions indicated in Fig. II C.7-3 Return and Fill Shelter.

The containment volume of the return and fill area was measured by filling with water that was used in the hydrostatic test of the tanks. The actual volume measured was 3693 gallons which compares favorably with the design volume of 3680 gallons. After the test the

water was pumped into the storm sewer.

The permit application showed a single 20 ft. by 2 ft. rectangular stainless steel sump in the return and fill. A change was made to two round sumps with changes in the floor slopes to accommodate them and to achieve the same overall containment volume. Refer to print no. 316301-7004-00 sheet No. 24.

Fire Suppression System

The fire sprinkler system for the warehouse, Return and Fill area and the office area has been designed and installed by Kannapolis Fire Sprinklers. The piping system with sprinkler heads for the warehouse and Return and Fill areas have been completed and are operational. The available water flow has been tested by the City of Medley. The available flow has been found to be inadequate as required by NFPA for a water system. Flow *is* adequate for a foam system which has been installed. The foam bladder tank has been installed in the southeast corner of the warehouse with the required controls. The foam sprinkler system has been tested by the installer and approved by the Medley Fire Department prior to issuance of the Certificate of Occupancy.

Other Emergency Equipment

Fire Extinguishers - The warehouse and Return and Fill are equipped with eight 20 lb. ABC fire extinguishers wall bracket mounted and labeled in accordance with the approved design.

Eye Washer/Showers - one eyewash/shower is located on the west wall of the warehouse adjacent to the doorway to the Return and Fill. A second eyewash/shower is located on the west side of the steel loading dock in the Return and Fill area. A third eyewash/shower is located adjacent to the tank farm.

Exit Signs - All doorways opening to the outside are identified by a lighted "Exit" sign.

Personal Protective Equipment - All employees working in the Warehouse and the Return and Fill will be required to wear safety glasses with side shields, hard hats and safety shoes.

Branch Security

The working areas of the Medley facility are enclosed by a 6 foot high chain link fence with a one foot extension containing 3 strands of barbed wire. Access and exit is through two 30 ft. sliding gates which are motor operated. Entrance is achieved by a keypunch pad located adjacent to the entrance drive. The gate opening can also be achieved by a push button located in the office. Gate closing is controlled by a timer and an electric eye. All gates are required to be kept closed at all times except for passage of vehicles.

Access into the office is controlled by a door equipped with an electrically operated lock activated from inside the office. Two doors exiting from the office area will be equipped with an emergency bar on the inside. These doors can only be opened from inside the building.

Signs designating "no smoking", "fire extinguisher", etc. have been mounted in locations shown on drawing No. 316301-9000-00 Sheet No. 28.

Site Storm Water Control

The City of Medley has no stormwater drainage system available for this site. In order to provide for stormwater control and disposal, the areas to be paved have been equipped with 6 catch basins each of which are connected to an underground collection system. The collection system consists of 15 in. diameter perforated corrugated metal pipes laid horizontally 3 ft. underground in 15 ft. deep by 36 in. wide trenches filled with pervious material. The capacity of these structures is adequate to store a rainfall of 6.7 inches over a 1 hour period. The water collected in the structure will drain by seepage into the surrounding soil.

Electrical

All electrically operated equipment was tested with a temporary electrical supply. Florida Power and Light will hook up permanent power after the Certificate of Occupancy is issued by the City of Medley.

Strategy for measuring volume of Containment Areas and Testing Tanks and Piping Systems

Since the tanks are to be tested by filling with water and observing for leaks, 20,000 gallons of water will be available for filling the various containment systems, i.e: Return and Fill (3680 gal. reqd.) and the warehouse (2940 gal. reqd.) and the tank truck loading/unloading pad (2917 gal. reqd.)

One option to determine volumes is to measure the physical dimensions of each containment area and calculate the actual volume each would contain.

A second option would be to fill each containment volume with water from the tank test and measure the amount of water used by means of the tank gauge after the tanks are tested.

The high level alarms for the tanks should be operational when the tanks are filled to provide a test of the high level alarm system for each tank.

At the completion of the tests the water will be drained into the stormwater drainage system onsite.

Procedure

1. Fill used Mineral Spirits tank with water from the domestic supply until the high level alarm sounds. Record the number of gallons indicated by the tank gauge. Continue to fill an additional 500 gal. taking care *not* to overfill the tank. Observe the tank system for 5 hours for leaks. Note any leakage that must be repaired before placing tank in service.

2. Hook up an auxiliary pump to the drain line of the used Mineral Spirits tank and connect the discharge to the fill line of the Used Glycol Tank. Transfer the water to the Used Glycol tank. Note: The residual water in the bottom of the used Mineral Spirits tank is not available for this part of the test. Add additional water to the Used Ethylene Glycol of 500 gallons over the point at which the high level alarm sounds. Record the tank gauge reading when the high level alarm sounds. After the tank is filled observe the tank system for 5 hours and note any points of leakage. Repair all leaks before terminating the tests on both tanks.

3. Fill out certification forms indicating tanks and ancillary piping are tight.

4. Drain water from the filled tank into the truck loading area. Note gauge readings on the tank gauge before filling and at the point that the loading area is completely filled. Record gallons. Pump the water from the truck loading area into the storm drain.

5. Drain water from the filled tank into the warehouse containment area. Note tank gauge readings before and at the point the containment area is completely filled. Record gallons. Pump the water from the containment area into the storm drain.

6. Repeat the above procedure for the return and fill containment area.

7. Fill out certification forms for all 3 areas.

8. Drain remaining water from the filled tank into the storm drain. Note: each tank tested will contain several hundred gallons of water in the bottom of the dish that cannot be pumped out through the discharge ports. To remove this residual water, remove one 4" plug at the bottom of the tank and siphon or pump the residual water from the bottom of the dish. After draining replace plug using approved thread sealer.

W. O. Heyn
2010 Imperial G.C. Boulevard
Naples, FL 33942
813-566-2326

TEST CERTIFICATION FORM

Date 6-6-92

Project SAFETY-KLEEN CORP

Location MEDLEY, FLORIDA

System TANK #1 WASTE MINERAL SPIRITS

Type of Test _____ (Hydrostatic)

_____ Air

_____ Other _____

Test Pressure ATMOSPHERIC

Duration of Test 5 HOURS

Test Witnessed By [signature]

Test Supervised By W.O. HEYN

RESULTS - TANK AND ANCILLARY EQUIPMENT TIGHT

By: [signature]

Title: PE FLORIDA CERT. 45516

Date: 6-6-92

W. O. Heyn
2010 Imperial G.C. Boulevard
Naples, FL 33942
813-566-2326

TEST CERTIFICATION FORM

Date 6-6-92

Project SAFETY-KLEEN CORP.

Location MEDLEY, FLORIDA

System TANK #3 WASTE ETHYLENE GLYCOL

Type of Test _____ (Hydrostatic)

_____ Air

_____ Other _____

Test Pressure ATMOSPHERIC

Duration of Test 5 HOURS

Test Witnessed By Jackie Jones

Test Supervised By W.O. HEYN

RESULTS - TANK AND ANCILLARY EQUIPMENT TIGHT

By: W. O. Heyn

Title: PE FLORIDA CERT 45516

Date: 6-6-92

II.B.1-1
Container Storage Location
Safety-Kleen Corp. Facility
Medley, Florida

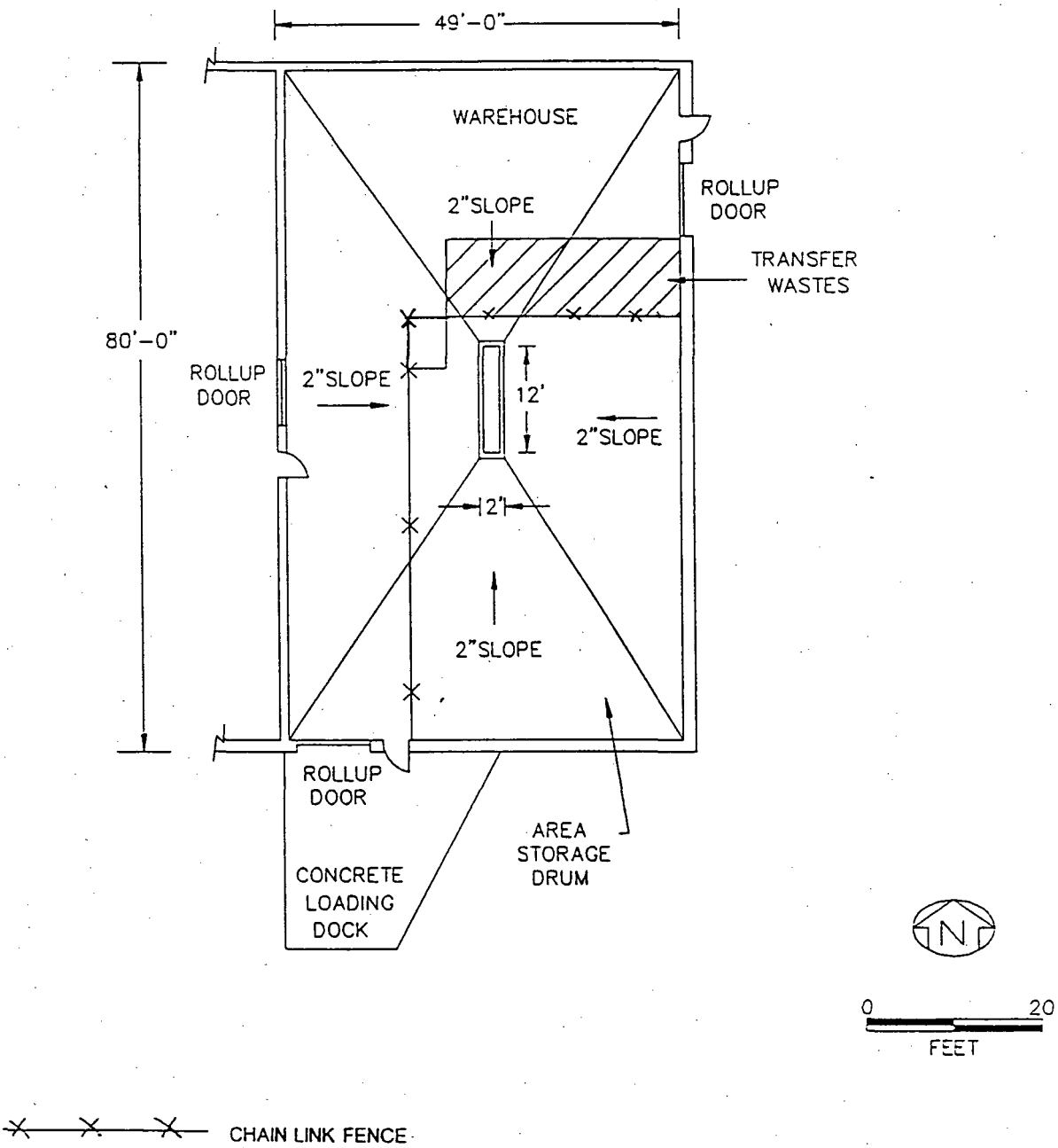
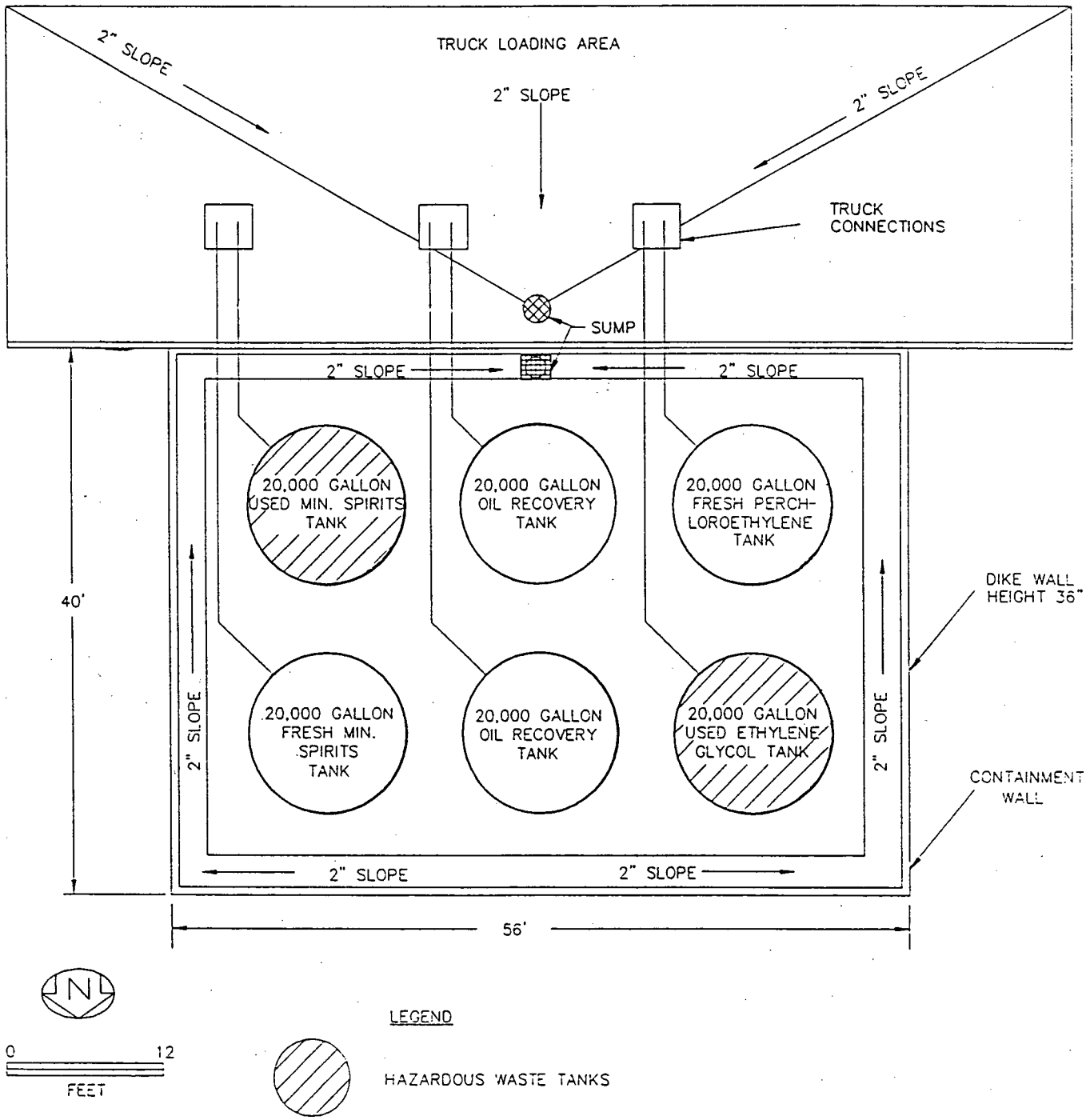


Figure II.C.2-1
Tank Farm
Safety-Kleen Corp. Facility
Medley, Florida

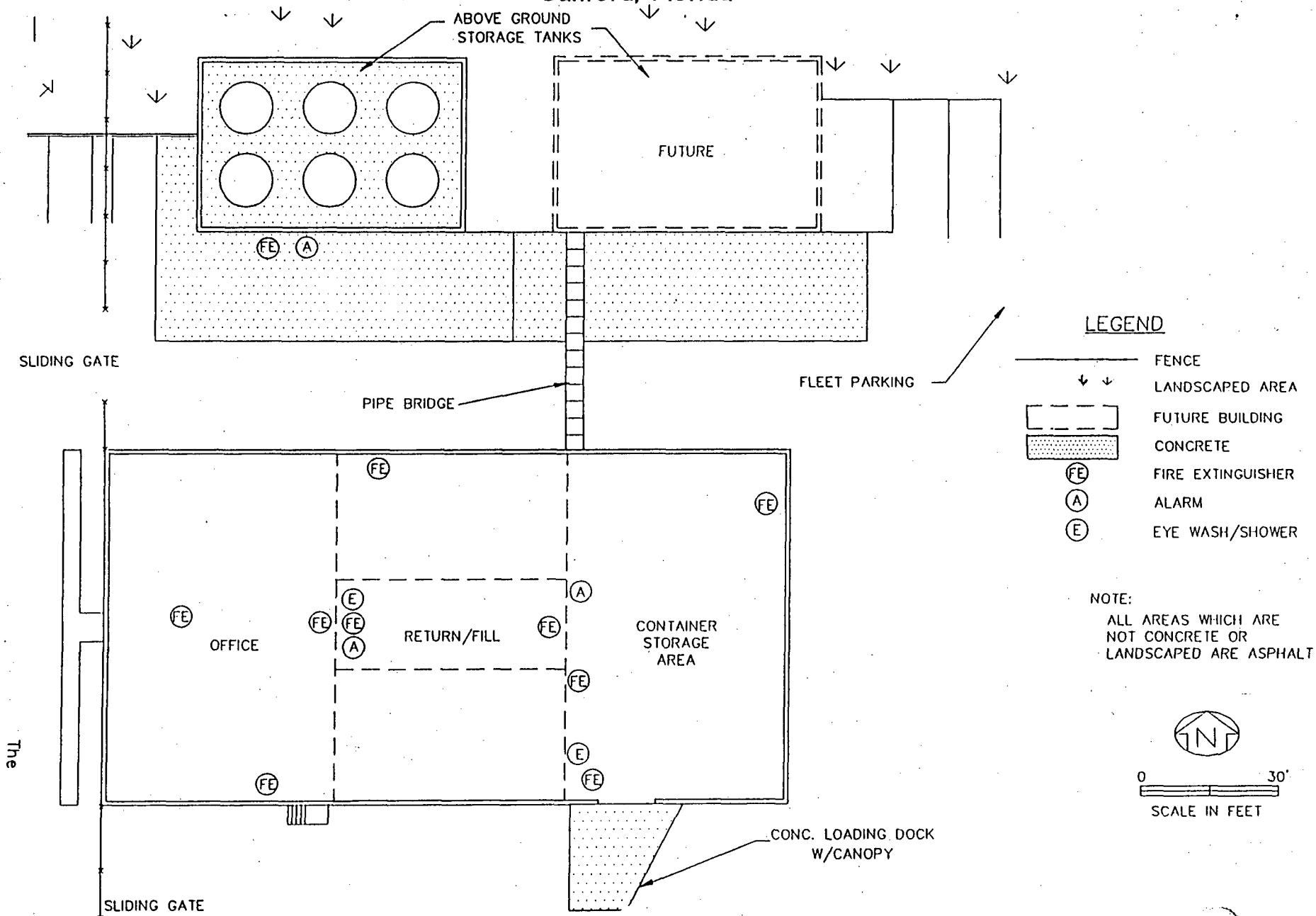


NOTE: ENTIRE AREA IS CONCRETE

The ERM Group

13112.22/31122LEE/061491

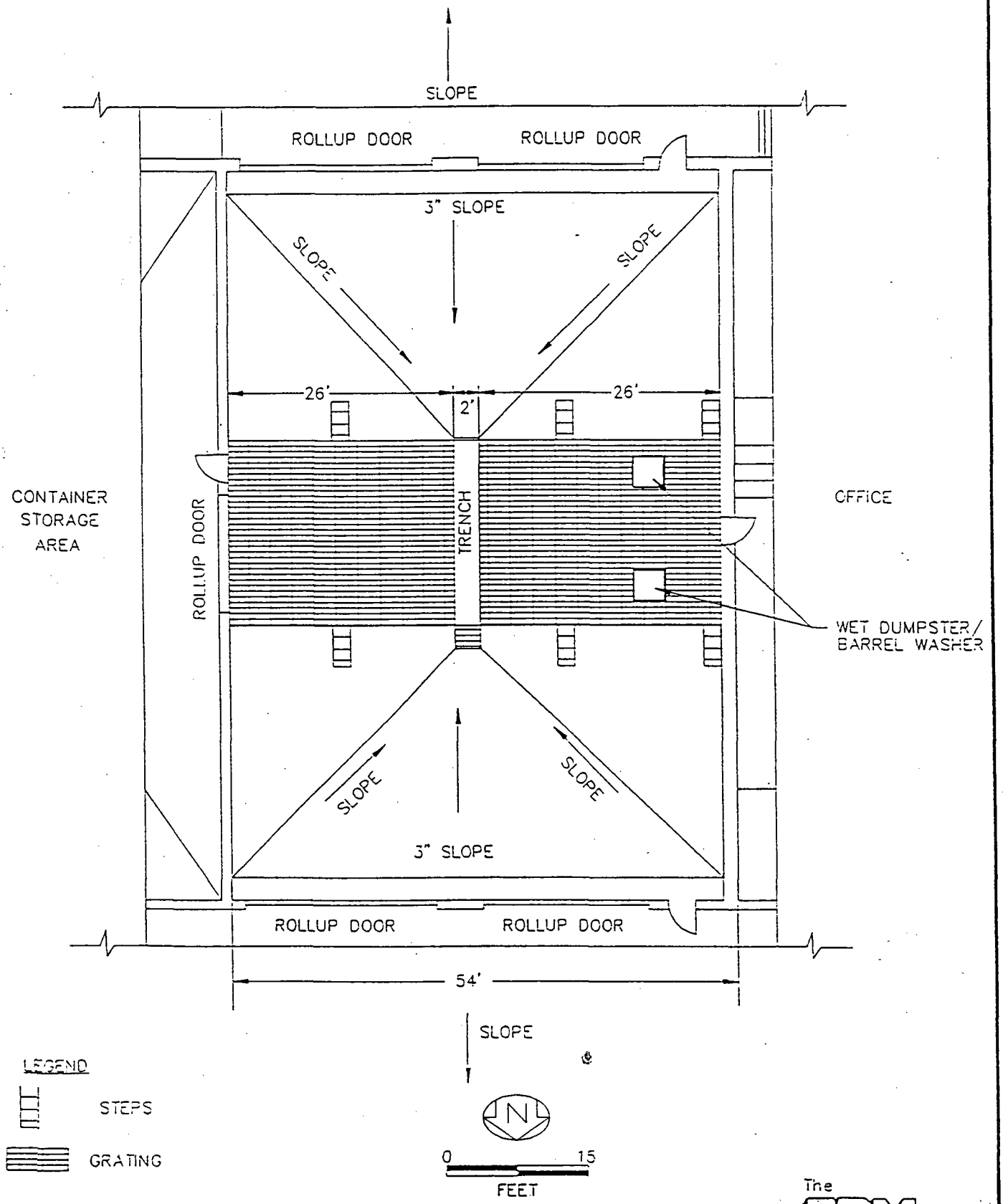
Figure II.A.4(b)-3
Location of Emergency Equipment
Safety-Kleen Corp. Facility
Sanford, Florida

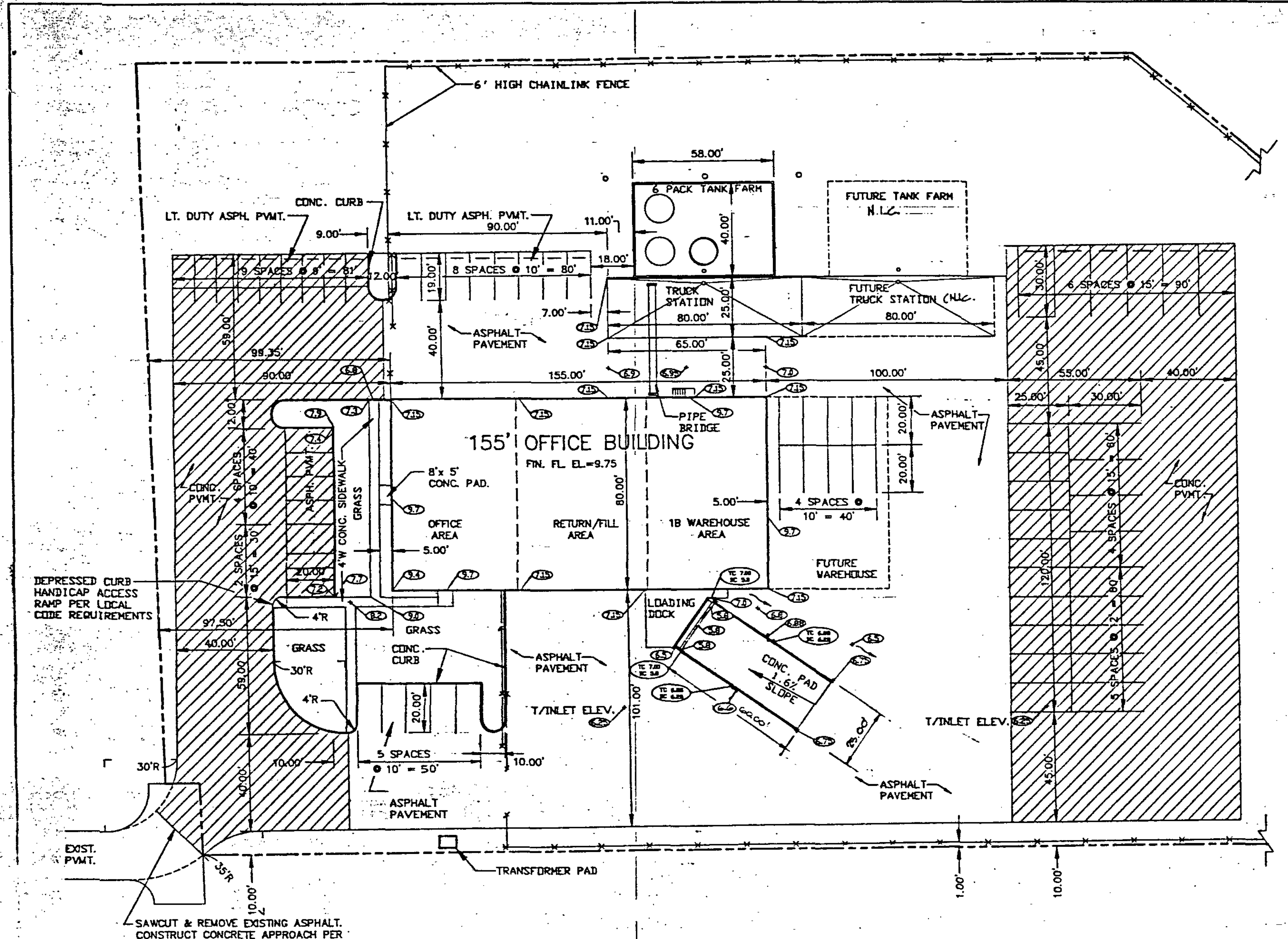


II.A.4(b)-11A

The ERM Group

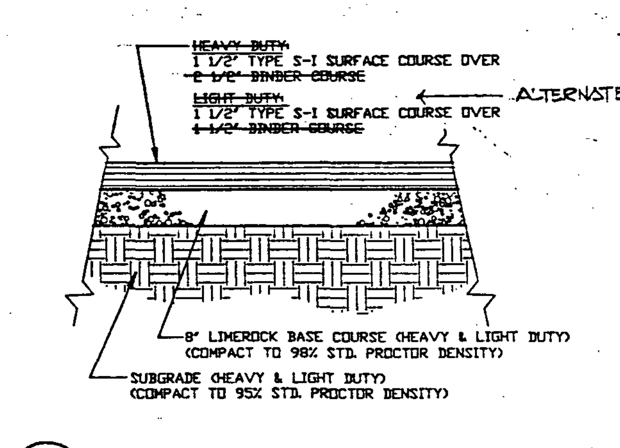
Figure II. C.7-3
Return/Fill Shelter
Safety-Kleen Corp. Facility
Medley, Florida



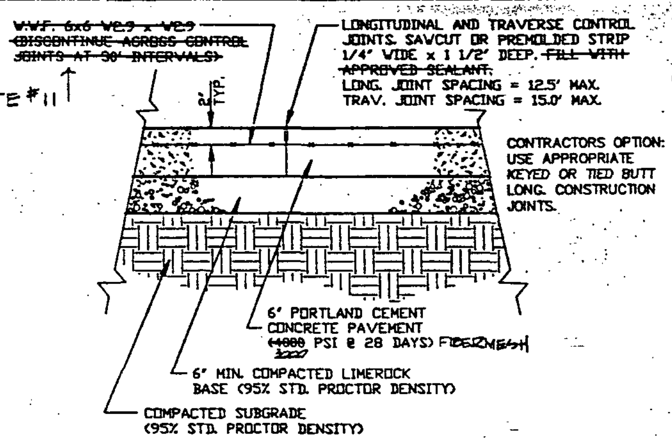


SITE PAVING PLAN

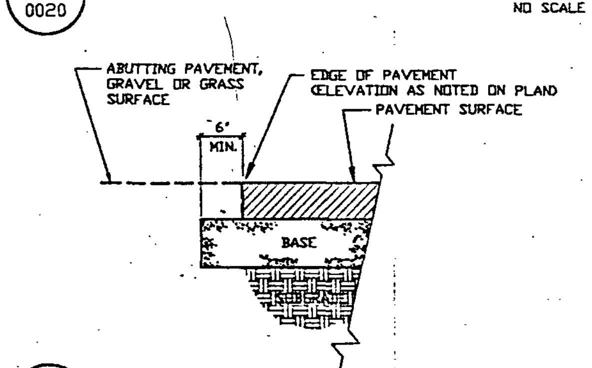
SCALE: 1" = 30'-0"



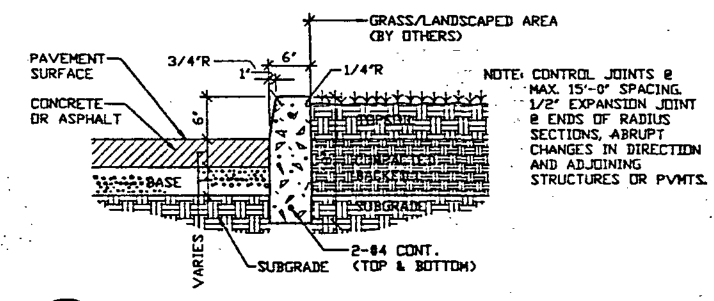
1 ASPHALT PAVEMENT DETAIL 0020 — NO SCALE



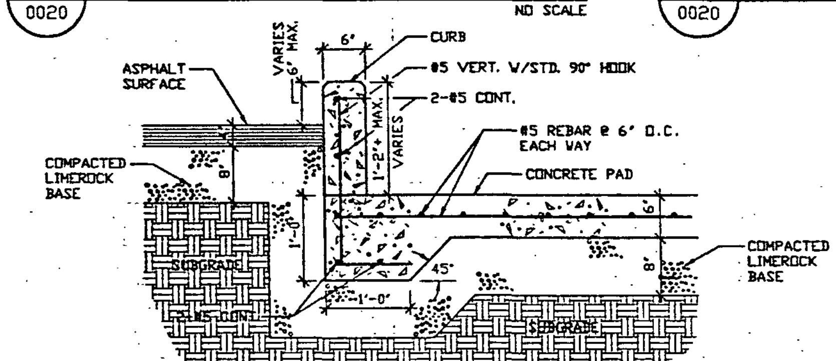
2 CONCRETE PAVEMENT DETAIL 0020 — NO SCALE



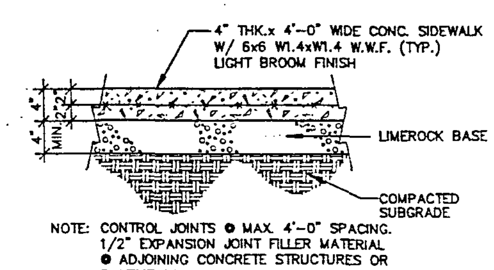
3 ASPHALT/CONCRETE EDGE DETAIL 0020 — NO SCALE



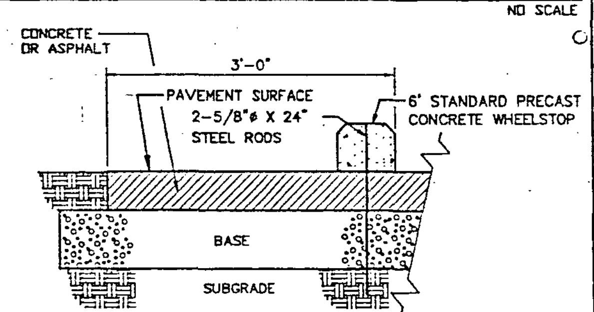
4 CONCRETE BARRIER CURB DETAIL 0020 — NO SCALE



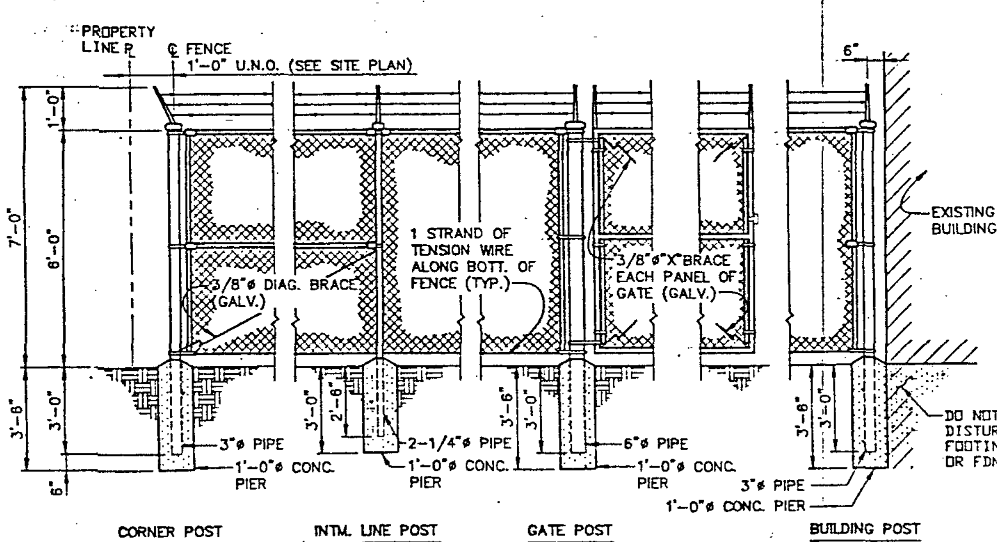
5 CONCRETE PAD DETAIL (@ EXT. LOADING DOCK) 0020 — NO SCALE



6 CONCRETE SIDEWALK DETAIL 0020 — NO SCALE



7 WHEELSTOP DETAIL 0020 — NO SCALE

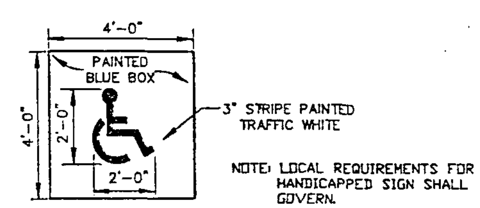


8 FENCE DETAILS 0020 — NO SCALE

FENCING NOTES:

SPECIFICATIONS FOR SUPPORTING MEMBERS ARE AS FOLLOWS:

1. ALL MEMBERS SHALL BE FABRICATED FROM HOT DIPPED GALV.SCH. 40 PIPE, NEW MATERIAL ONLY.
2. POST SPACING SHALL NOT EXCEED 10'-0" O.C.
3. MEMBERS SHALL BE SIZED AS FOLLOWS:
   - CORNER POSTS 3"ø O.D.
   - INTM. POSTS 2 1/4"ø O.D.
   - GATE POSTS 6"ø O.D.
   - BUILDING POSTS 3"ø O.D.
   - TOP RAIL 1 5/8"ø O.D.
   - GATE FRAMES 2 1/4"ø O.D.
4. WOVEN WIRE FABRIC SHALL BE 9 GA. STEEL 2" MESH AND HOT DIPPED GALV. AFTER WEAVING.
5. BARBED WIRE SHALL BE 9 GA. 3-STRAND GALV. STEEL.
6. TENSION WIRE SHALL BE 7 GA. GALV. STEEL.
7. CONCRETE SHALL BE 3000 PSI AND CURED 5 DAYS BEFORE FENCING IS ERECTED.
8. INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL CODES AND THE STATE HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS.
9. GATES SHALL BE LOCKED BY CHAIN AND LOCK PROVIDE 5/16" HARDENED STEEL CHAIN. LOCK BY S-K.
10. SEE SITE PLAN BY E.R. BROWNELL & ASSOCIATES, INC. FOR LOCATION OF FENCING.



9 HANDICAPPED PARKING SIGN DETAIL 0020 — NO SCALE

GENERAL NOTES

1. REFER TO SITE DRAWINGS BY E.R. BROWNELL AND ASSOCIATES, INC. FOR ADDITIONAL INFORMATION.
2. REFER TO SOILS REPORT BY SCHWEBKE-SHISKIN AND ASSOCIATES, INC. DATED 9/10/91 FOR RECOMMENDATIONS AND SPECIFICATIONS REGARDING LIMEROCK BASE AND ASPHALTIC CONCRETE PAVEMENT.
3. ALL ASPHALT AND CONCRETE PAVEMENT WORK SHALL BE IN CONFORMANCE WITH FLORIDA D.O.T. AND DADE CO. PUBLIC WORKS STANDARDS AND SPECIFICATIONS.
4. PROVIDE PRECAST CONCRETE WHEEL STOPS, 3500 PSI CONCRETE STRENGTH, FULLY REINFORCED, AS MANUFACTURED BY SAF-T-PARK COMPANY, COMPLETE WITH ANCHOR PINS, AS INDICATED ON THE DRAWINGS.
5. ALL FINISHED GRADE ELEVATIONS AT THE BUILDING AND SURROUNDING PAVEMENTS NOTED ON THIS DRAWING SHALL SUPERCEDE ELEVATIONS SHOWN ON THE PAVING AND DRAINAGE PLAN BY E.R. BROWNELL AND ASSOCIATES, INC.

QUESTEC CONSULTING ENGINEERS
4812 Santana Circle • Columbia • MO 65203 • (314) 875-0250

C-1

NO.	DESCRIPTION	BY	CHK	APPR	DATE
1	ADD 1 PKG SPACE, MOVE SIDEWALK TO OFFICE AREA.	GS			4/1/92

REVISIONS

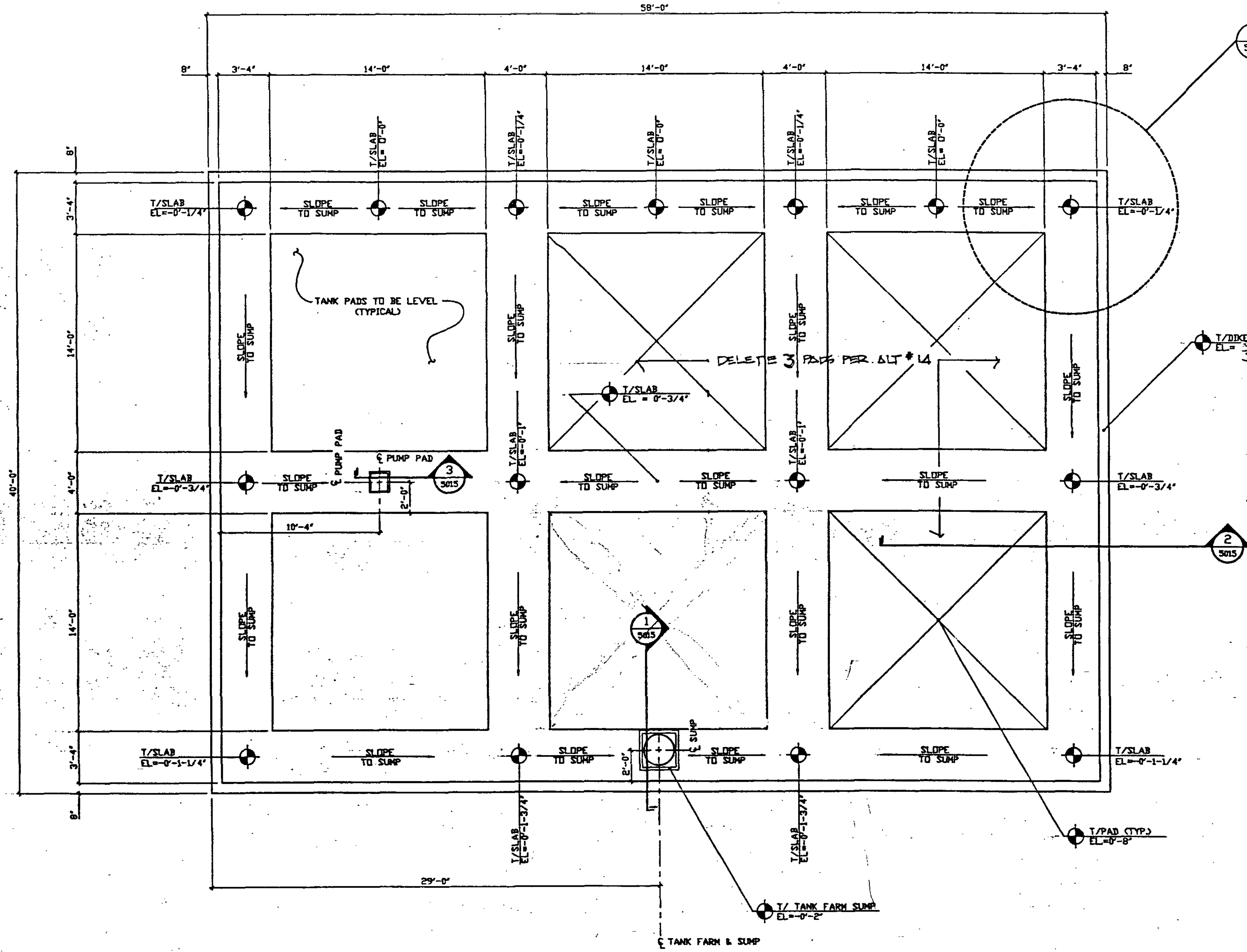
TITLE: SITE PAVING PLAN AND DETAILS

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
AS SHOWN	QuesTec				9-27-91

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
MEDLEY, FL	316301-0020-00	2a

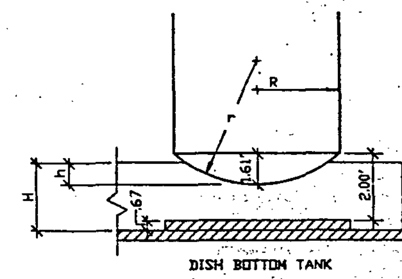
10-18-91 3:30pm 0020-0.DWG



TANK FARM PLAN

SCALE: 1/4" = 1'-0"

CONTAINMENT CALCULATIONS



DISH BOTTOM TANK

TANK FARM (20,000 GAL DISH BOTTOM VERTICAL STORAGE TANK) -

NOTE: SUMP AND SLOPED CONCRETE SLAB CONTAINMENT NEGLIGIBLE

FORMULAS USED:

[(1/3)(PI)(h²)(3r–h)](7.48 GAL/CF)(# OF UNITS) = TANK DISPLACEMENT VOLUME (GAL)
(L)(W)(H)(7.48 GAL/CF)(# OF UNITS) = OTHER DISPLACEMENT VOLUMES (GAL)
(L)(W)(H)(7.48 GAL/CF) = DIKE CONTAINMENT VOLUME (GAL)

R (TANK RADIUS) = 6.00 FT
L (DIKE LENGTH) = 56.67 FT
W (DIKE WIDTH) = 38.67 FT
H (DIKE HEIGHT) = 2.75 FT
r (DISH RADIUS) = 12.00 FT
h (DISH HEIGHT) = 1.69 FT
PI = 3.141

DIKE CONTAINMENT VOLUME: (56.67)(38.67)(2.75)(7.48 GAL/CF)	= 45,078 GAL (+)
VOLUME OF LARGEST TANK WITHIN DIKED AREA:	= 20,000 GAL (-)
TANK PAD DISPLACEMENT VOLUME: (14.00²)(0.67)(7.48 GAL/CF)(6 PADS)	= 5,894 GAL (-)
TANK DISPLACEMENT VOLUME: [(1/3)(PI)(1.69²)((3)(12.00)-1.69)](7.48 GAL/CF)(5 TANKS)	= 3,838 GAL (-)
LOCAL RAINFALL ALLOWANCE: 25 YEAR FREQUENCY/24 HOUR DURATION RAINFALL = 11 INCHES (56.67)(38.67)(11/12)(7.48 GAL/CF)	= 15,026 GAL (-)
TOTAL DISPLACEMENT VOLUME: (20,000 + 5,894 + 3,838 + 15,026)	= 44,758 GAL (-)
NET CONTAINMENT (EXCESS CAPACITY): (45,078 – 44,758)	= 320 GAL

GENERAL NOTES

1. REFER TO APPLICABLE GENERAL NOTES ON DRAWING 5011.
2. CONTRACTOR SHALL INSTALL OWNER FURNISHED S.S. FRAME AND LINER DESIGNATED FOR THE SUMP.
3. SLOPE CONCRETE SLAB TO SUMP AS SHOWN ON PLAN. TANK PADS MUST BE PERFECTLY LEVEL.
4. ALL REBAR SHALL BE GRADE 60 BILLET STEEL CONFORMING TO ASTM A-615. ALL REBAR SHALL BE EPOXY COATED.
5. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 3" FOR CONCRETE CAST AGAINST SOIL AND 2" FOR CONCRETE EXPOSED TO WEATHER.
6. TOP OF ALL EXPOSED CONCRETE WALLS SHALL BE SCREEDED AND FINISHED PERFECTLY LEVEL FOR PROPER ARCHITECTURAL APPEARANCE.
7. TANK FARM ELEVATIONS ARE RELATIVE. FINAL NGVD ELEVATIONS TO BE COORDINATED WITH SITE DRAWINGS BY E.R. BROWNELL AND ASSOCIATES, INC.

QUESTEC CORPORATION
CONSULTING ENGINEERS

MP-1

NO.	DESCRIPTION	BY	CHK	APPR	DATE

REVISIONS

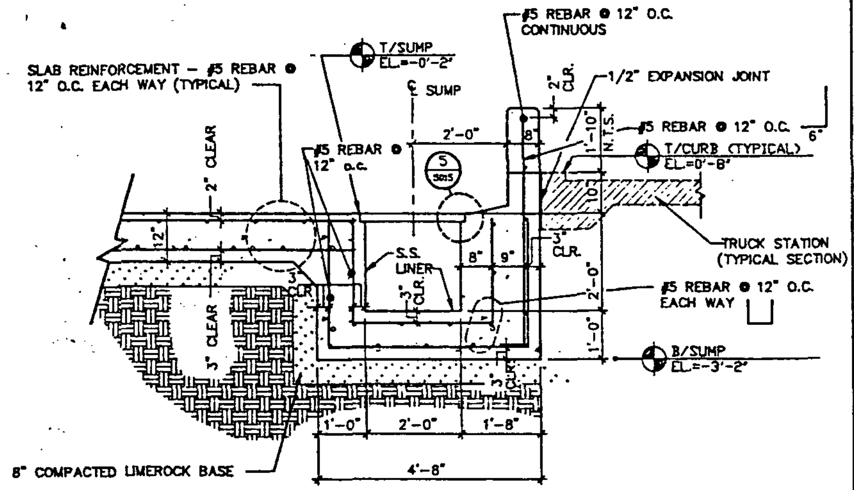
TITLE
TANK FARM FOUNDATION PLAN

SAFETY-KLEEN CORP.

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
1/4" = 1'-0"	QuesTec				9-27-91

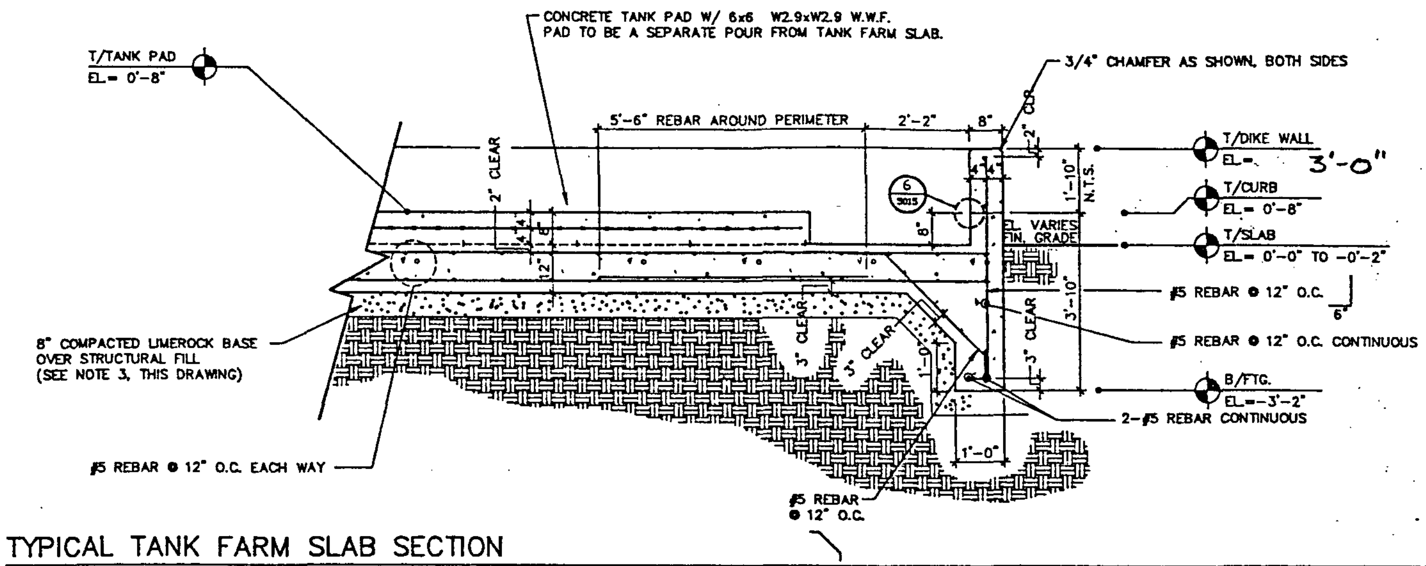
SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
MEDLEY, FL	316301-5002-00	8

10-9-91 11:00am 5002-0.DWG



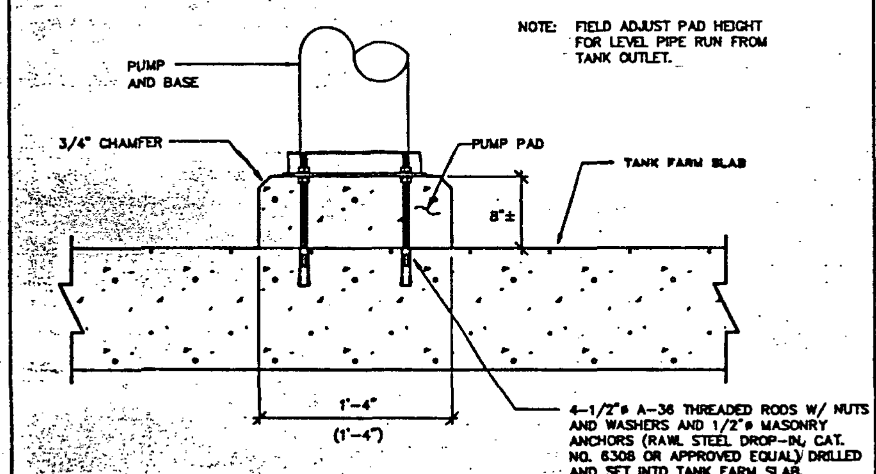
1 5015 TANK FARM SUMP SECTION

SCALE: 1/2" = 1'-0"



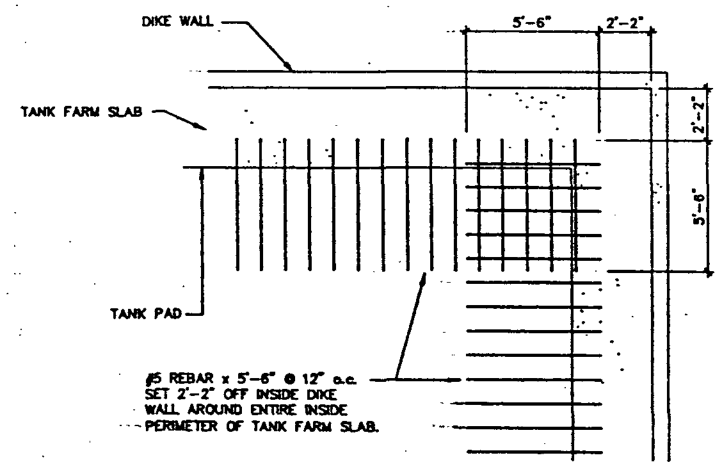
2 5015 TYPICAL TANK FARM SLAB SECTION

SCALE: 1/2" = 1'-0"



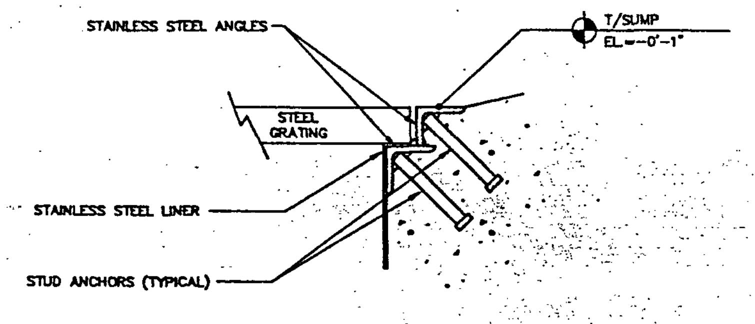
3 5015 TANK FARM PUMP PAD DETAIL

SCALE: NONE



4 5015 TANK FARM REINFORCEMENT DETAIL

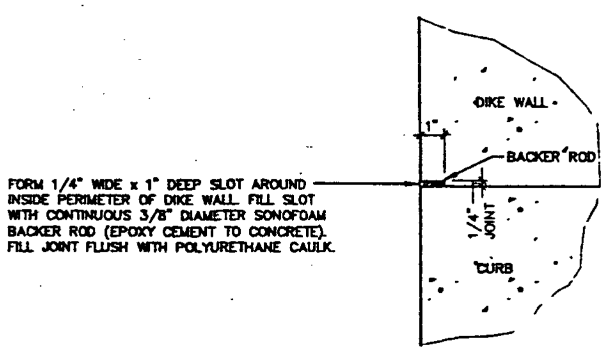
SCALE: 1/4" = 1'-0"



NOTE: SUMP RIM ASSEMBLY INCLUDING GRATING IS SUPPLIED BY S-K; COMPLETELY FABRICATED, ASSEMBLED AND READY FOR INSTALLATION. WELDS ARE SHOWN FOR INFORMATION PURPOSES ONLY. FORM IN CONCRETE SUMP AS SHOWN.

5 5015 TANK FARM SUMP RIM DETAIL

SCALE: 3" = 1'-0"



6 5015 DIKE WALL HORIZONTAL JOINT DETAIL

SCALE: 3" = 1'-0"

GENERAL NOTES

1. REFER TO APPLICABLE GENERAL NOTES ON DRAWINGS 5011 AND 5002.
2. TANK FARM ELEVATIONS ARE RELATIVE. FINAL NGVD ELEVATIONS TO BE COORDINATED WITH SITE DRAWINGS BY E.R. BROWNELL AND ASSOCIATES, INC.
3. REFER TO SOILS REPORT BY SCHWEBKE-SHISKIN AND ASSOCIATES, INC. DATED 9/10/91 FOR RECOMMENDATIONS AND SPECIFICATIONS REGARDING STRUCTURAL FILL AND LIMEROCK BASE.

QUESTEC CONSULTING ENGINEERS

MP-2

NO.	DESCRIPTION	BY	CHK	APPR	DATE

REVISIONS

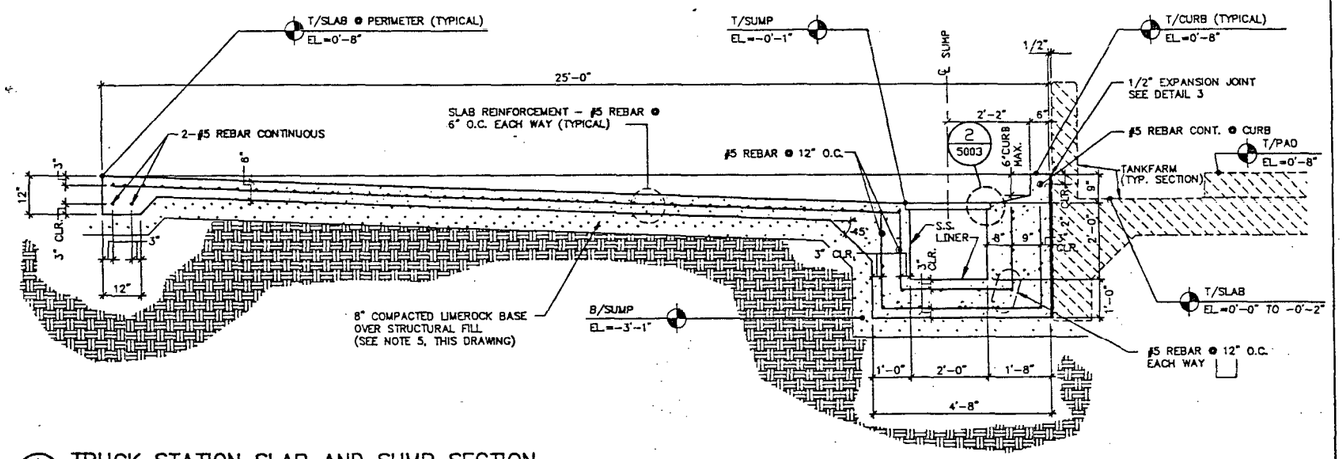
TITLE: TANK FARM FOUNDATION SECTIONS & DETAILS

SAFETY-KLEEN CORP.

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
AS SHOWN	QuesTec				9-27-91

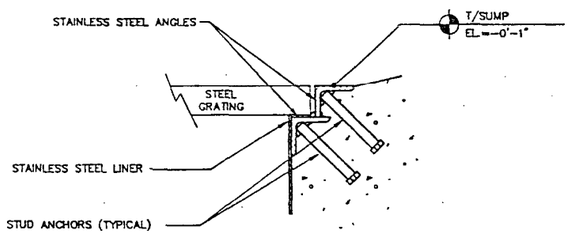
SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
MEDLEY, FL	316301-5015-00	9

10-8-91 11:45am 5015-0.DWG



1 / 5003 TRUCK STATION SLAB AND SUMP SECTION

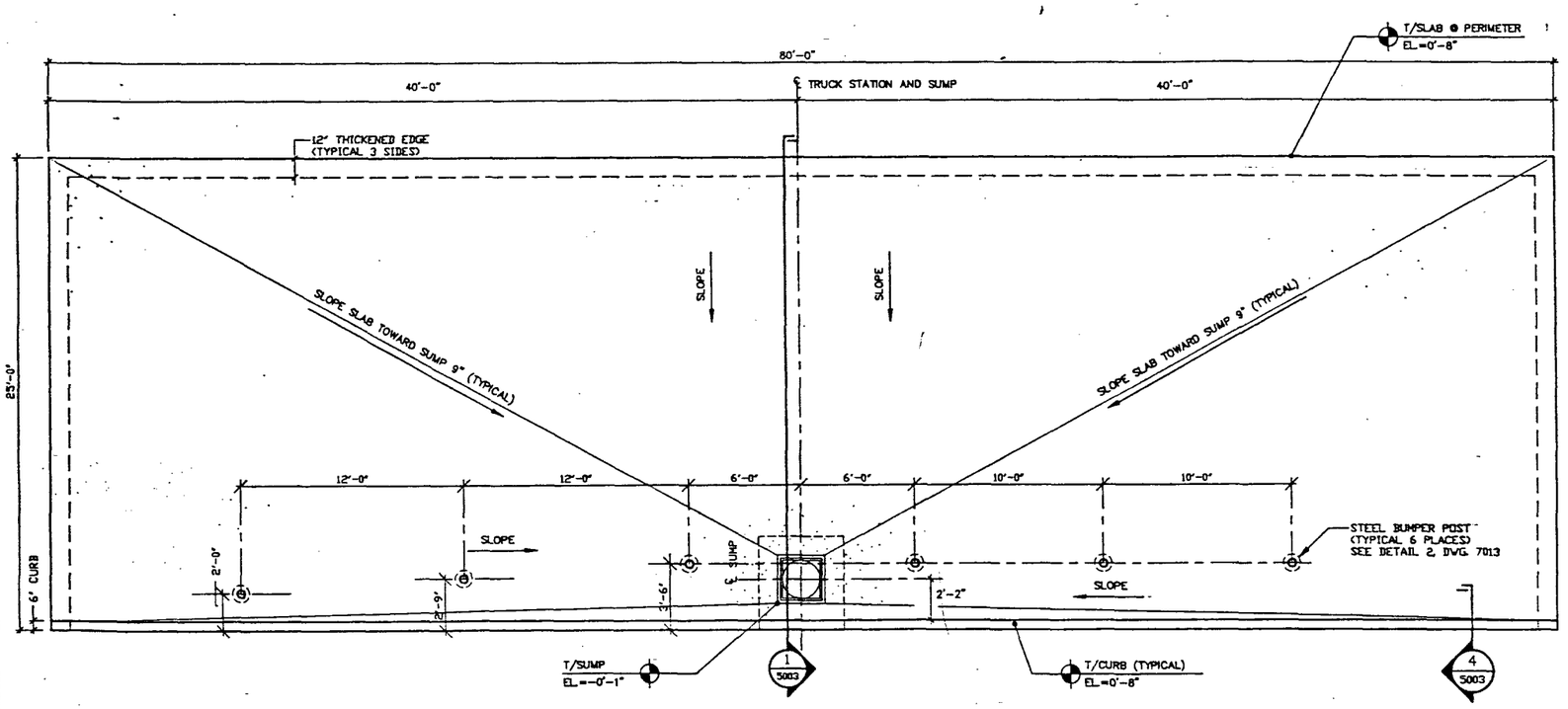
SCALE: 1/2" = 1'-0"



NOTE: SUMP RIM ASSEMBLY INCLUDING GRATING IS SUPPLIED BY S-K; COMPLETELY FABRICATED, ASSEMBLED AND READY FOR INSTALLATION. WELDS ARE SHOWN FOR INFORMATION PURPOSES ONLY. FORM IN CONCRETE SUMP AS SHOWN.

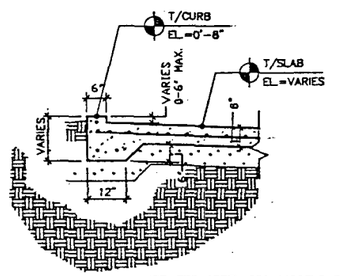
2 / 5003 TRUCK STATION SUMP RIM DETAIL

SCALE: 3" = 1'-0"



TRUCK STATION PLAN

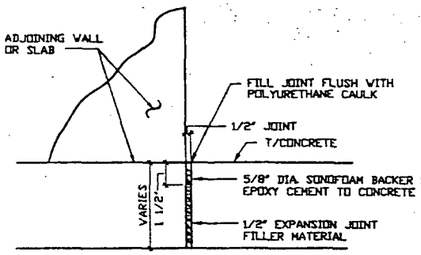
SCALE: 1/4" = 1'-0"



NOTE: FOR STEEL REINFORCEMENT SEE SECTION 1, THIS DWG.

4 / 5003 TRUCK STATION CURB DETAIL

1/2" = 1'-0"



3 / 5003 EXPANSION JOINT DETAIL

NO SCALE

GENERAL NOTES

1. REFER TO APPLICABLE GENERAL NOTES ON DRAWINGS 5011 AND 5002.
2. CONTRACTOR SHALL INSTALL OWNER FURNISHED S.S. FRAME AND LINER DESIGNATED FOR THE SUMP.
3. SLOPE CONCRETE SLAB TO SUMP AS SHOWN ON PLAN.
4. TRUCK STATION ELEVATIONS ARE RELATIVE. FINAL NGVD ELEVATIONS TO BE COORDINATED WITH SITE DRAWINGS BY E.R. BROWNELL AND ASSOCIATES, INC.
5. REFER TO SOILS REPORT BY SCHWEBKE-SHISKIN AND ASSOCIATES, INC. DATED 9/10/91 FOR RECOMMENDATIONS AND SPECIFICATIONS REGARDING STRUCTURAL FILL AND LIMEROCK BASE.

CONTAINMENT CALCULATIONS

TRUCK STATION (SLOPED CONCRETE SLAB)-

NOTE: SUMP CONTAINMENT NEGLIGIBLE

FORMULA USED:
(1/3)(L)(W)(H)(7.48 GALLONS/CUBIC FOOT)

L = 80'-0"
W = 19'-6"
H = 0'-9"

TOTAL CONTAINMENT:
(1/3)(80.0)(19.5)(.75)(7.48 GAL/CF) = 2917 GAL

QUESTEC CONSULTING ENGINEERS
4812 Sentinel Circle - Columbia - MO 65203 - (314) 875-0280

MP-3

NO.	DESCRIPTION	BY	CHK	APPR	DATE
	REVISIONS				

TITLE
TRUCK STATION / FOUNDATION PLAN, SECTIONS AND DETAILS

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR.	OP. APPR	DATE
AS SHOWN	QuesTec				9-27-91

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
MEDLEY, FL	316301-5003-00	10

10-8-91 11:30am 5003-Q.DWG

80'-0"
30'-0" | 20'-0" (OUT TO OUT MIDDOCK) | 30'-0"
1B WAREHOUSE AREA
36'-0" | 8'-0" | 1'-4" | 3'-4" | 31'-4"

DOCK PLATE (TYP. OF 8)
SEE DWG. 2001 & 6502

REMOVABLE GRATING (TYP)

STEEL BUMPER POST (TYP. 8 PLACES)
SEE DETAIL 2 DWG. 7013

2" DIAMETER SUMP (TYP. 2 PLACES)
SEE DETAIL 6 DWG. 7013

RETURN/FILL AREA

GENERAL NOTE 2.
CONTRACTOR TO MOUNT 8 SETS OF DOCK/TRUCK BUMPER PADS ON FRONT EDGE OF STEEL DOCK. COORDINATE LOCATION W/ OWNER. SUPPLIED BY SAFETY KLEEN.

WELDED STEEL BAR GRATING

METAL STAIRS W/ HANDRAIL (TYP. 4 PLACES)

41'-0" | 3'-4" | 33'-8"

OFFICE AREA

RETURN/FILL AREA/FLOOR PLAN

SCALE: 1/4" = 1'-0"

GENERAL NOTES

THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO SAFETY-KLEEN CORPORATION. ANY REPRODUCTION, DISCLOSURE OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED EXCEPT BY SAFETY-KLEEN OR AS SAFETY-KLEEN MAY AGREE IN WRITING.

1. DIMENSIONING ON ALL PLANS IS TO FACE OF STUD, ACTUAL WIDTH, FACE OF MASONRY, NOMINAL WIDTH, OR FACE OF ROUGH OPENING.

QUESTEC CONSULTING ENGINEERS
4812 Sunbeam Circle • Columbia • MD 65203 • (314) 875-0280

A-7

NO.	DESCRIPTION	BY	CHK	APPR	DATE
	REVISIONS				

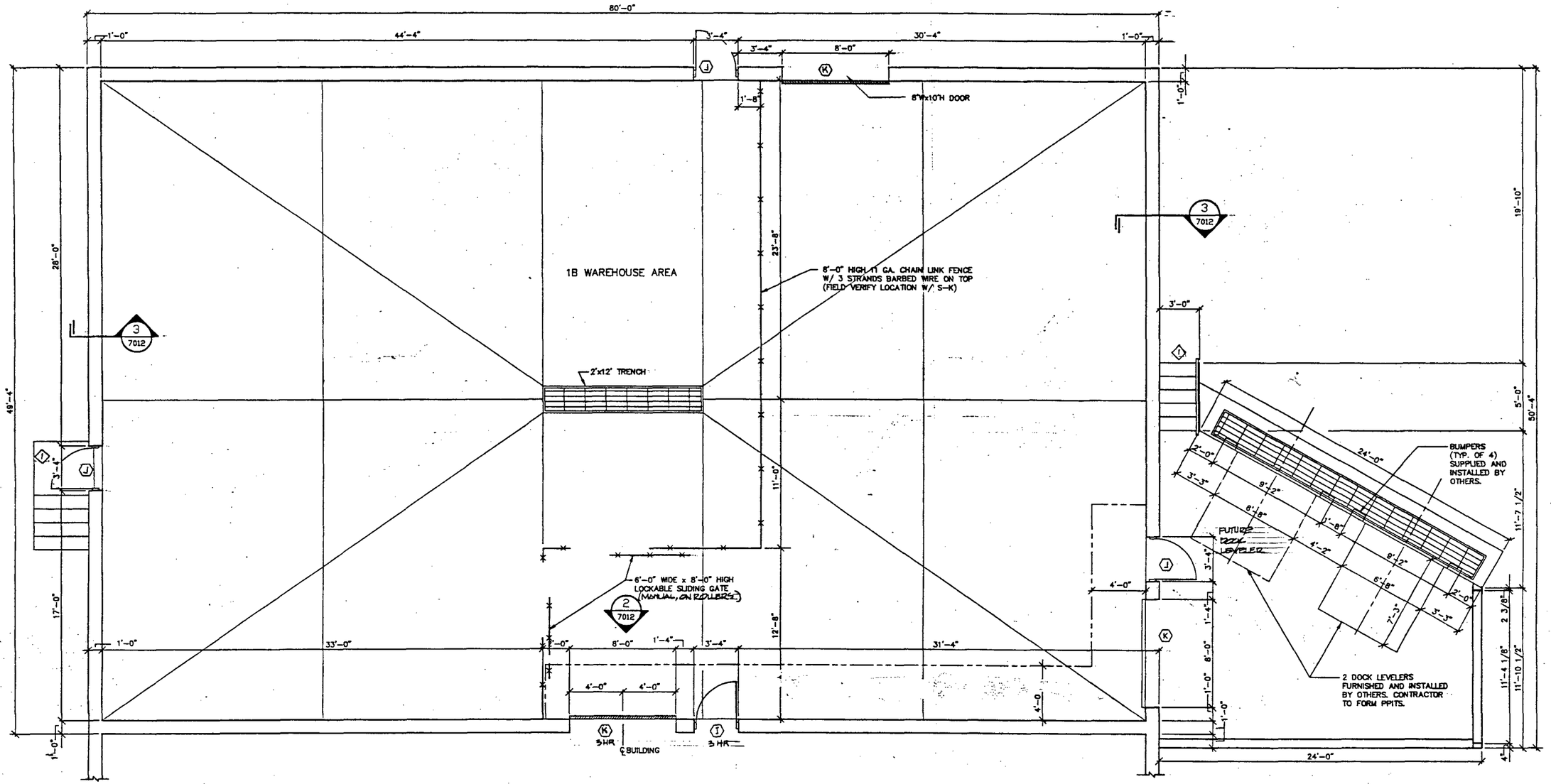
TITLE
RETURN/FILL AREA
FLOOR PLAN

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
1/4" = 1'-0"	QuesTec				9-27-91

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
MEDLEY, FL	316301-7004-00	24

10-7-91 8:00pm 7004-Q.DWG



RETURN/FILL AREA

GENERAL NOTES

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1. DIMENSIONING ON ALL PLANS IS TO FACE OF STUD, ACTUAL WIDTH, FACE OF MASONRY, NOMINAL WIDTH, OR FACE OF ROUGH OPENING.

QUESTEC CONSULTING ENGINEERS
4812 Sawtooth Circle • Columbia • MO 65203 • (314) 875-0280

A-8

NORTH

1B WAREHOUSE AREA FLOOR PLAN

SCALE: 1/4" = 1'-0"

NO.	DESCRIPTION	BY	CHK	APPR	DATE
1	ADDED STOOP & REVISED STAIRS	CF	SD		102191

REVISIONS

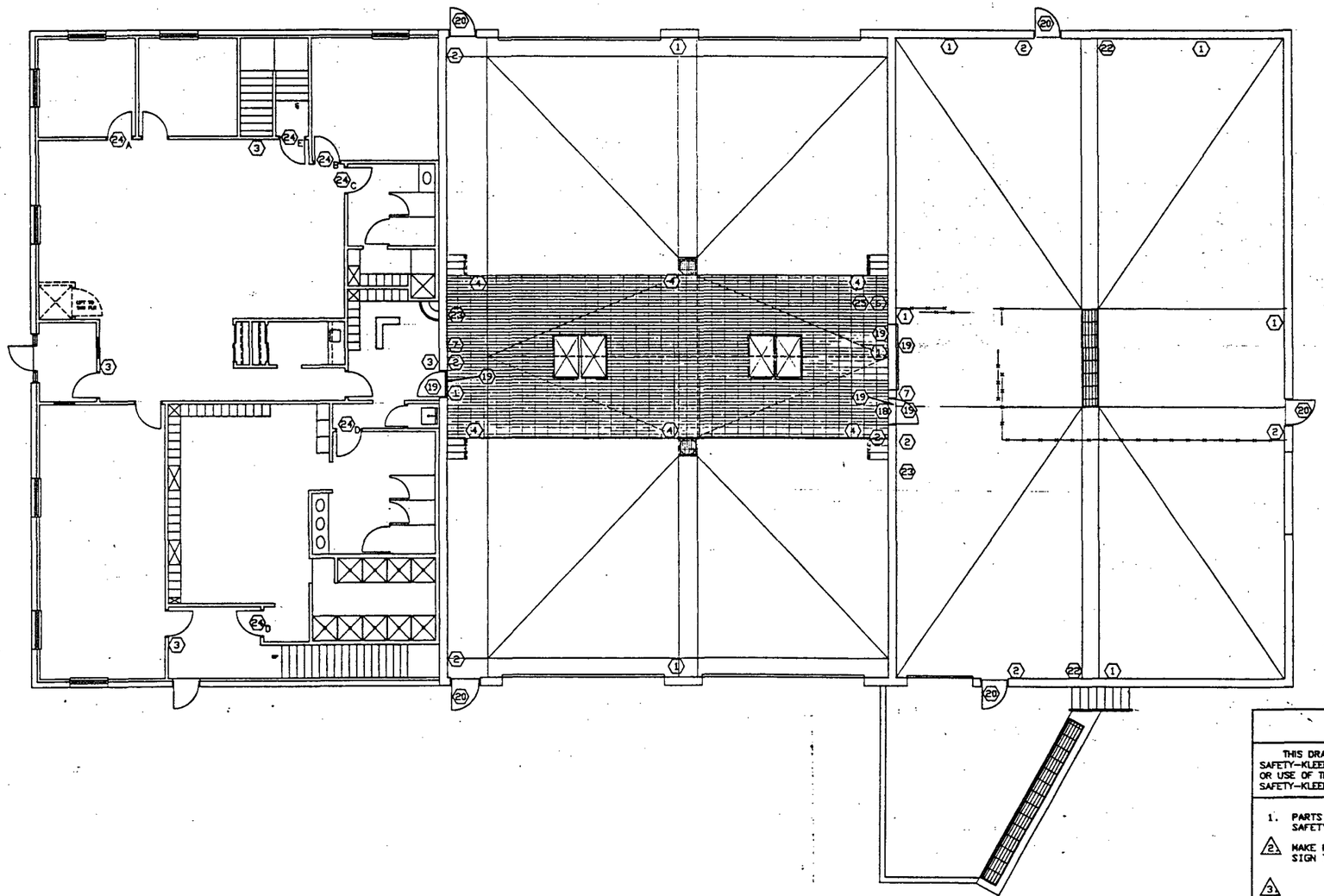
TITLE
1B WAREHOUSE AREA FLOOR PLAN

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
1/4" = 1'-0"	QuesTec				9-30-91

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
MEDLEY, FL	316301-7005-00	26

10-21-91 8:00am 7005-0.DWG



155' BUILDING SIGN LOCATION PLAN

SCALE: 1/8" = 1'-0"

SIGN SCHEDULE

MARK NO.	DESCRIPTION	DETAIL	NUMBER REQUIRED △4	LOCATION	REMARKS
(1)	NO SMOKING	A	8	10' A.F.F.	* DENOTES 10' ABOVE T/DOCK
(2)	"FIRE EXTINGUISHER"	B	7	6' ABOVE EXTINGUISHER	COORDINATE LOCATIONS W/ FIRE PROTECTION CONTR.
(3)	"FIRE EXTINGUISHER"	C	2	6' ABOVE EXTINGUISHER	COORDINATE LOCATIONS W/ FIRE PROTECTION CONTR.
(4)	"105" SOLVENT"	D	3		MOUNT TO SOLVENT TREE ANGLE UPRIGHT △2
(6)	"USED SOLVENT PUMP JOG SWITCH	D	1	3' ABOVE JOG SWITCH	
(7)	"LIGHT & VENTILATION FAN"	D	4	3' ABOVE SWITCH	
(9)	NFPA DESCRIPTION		2/ TANK	11' A.F.F.	S.K.# 2452 △3
(10)	~~"WASTE OIL"~~ GLYCOL	U	2/ WASTE OIL TANK	13' A.F.F.	
(12)	"105 SOLVENT"	W	2/ 105" SOLVENT TANK	13' A.F.F.	
(13)	"WASTE SOLVENT"	X	2/ WASTE SOLVENT TANK	13' A.F.F.	
(14)	"COMBUSTIBLE LIQUID"	Y	2/ TANK	15' A.F.F.	
(15)	"HAZARDOUS WASTE"	Z	2/ WASTE SOLVENT TANK	13' A.F.F.	S.K.# 1257
(16)	~~"TANK CAPACITY"~~ (19,000 GAL)	K	1/ TANK	17' A.F.F.	
(17)	PIPELINE IDENTIFICATION	L	VARIES SEE DWG. 9005	6' ABOVE CONTAINER PENETRATION	SEE TANK ACCESS CONTAINER
(18)	OPEN DOOR SLOWLY	M	2	5 1/2' A.F.F.	
(19)	FIRE DOOR	N	4	6 1/2' A.F.F.	
(20)	NO ADMITTANCE	P	6	5 1/2' A.F.F.	
(22)	FLAMMABLE	R	2	6' A.F.F.	
(23)	EYE WASH	S		6' A.F.F.	
(24)	DOOR	T	SEE DWG. 9002	5 1/2' A.F.F.	A - BRANCH MANAGER B - CONFERENCE C - WOMEN D - MEN E - STAIRWAY
(25)	EMERGENCY SHUT-OFF WASTE SOLVENT	D	1	3' ABOVE DISCONNECT	
(26)	EMERGENCY SHUT-OFF 105° SOLVENT PUMP	D	1	3' ABOVE DISCONNECT	LOCATED AT TANKFARM

GENERAL NOTES

1. PARTS W/ S-K PART #'S ARE SUPPLIED BY SAFETY KLEEN AND INSTALLED BY CONTRACTOR.

△2 MAKE MOUNTING BRACKET AS REQUIRED. MOUNT SIGN TO BE VISABLE FROM DOCK.

△3
- WASTE SOLVENT
- WASTE OIL
- 105° SOLVENT
- WASTE ETHYLENE GLYCOL

△4 CONTRACTOR TO VERIFY ALL QUANTITIES REQUIRED.

NO.	DESCRIPTION	BY	CHK	APPR	DATE

REVISIONS

QUESTEC CORPORATION
CONSULTING ENGINEERS
4812 Bantam Circle • Columbus • MO 65203 • (314) 875-0280

A-11

TITLE

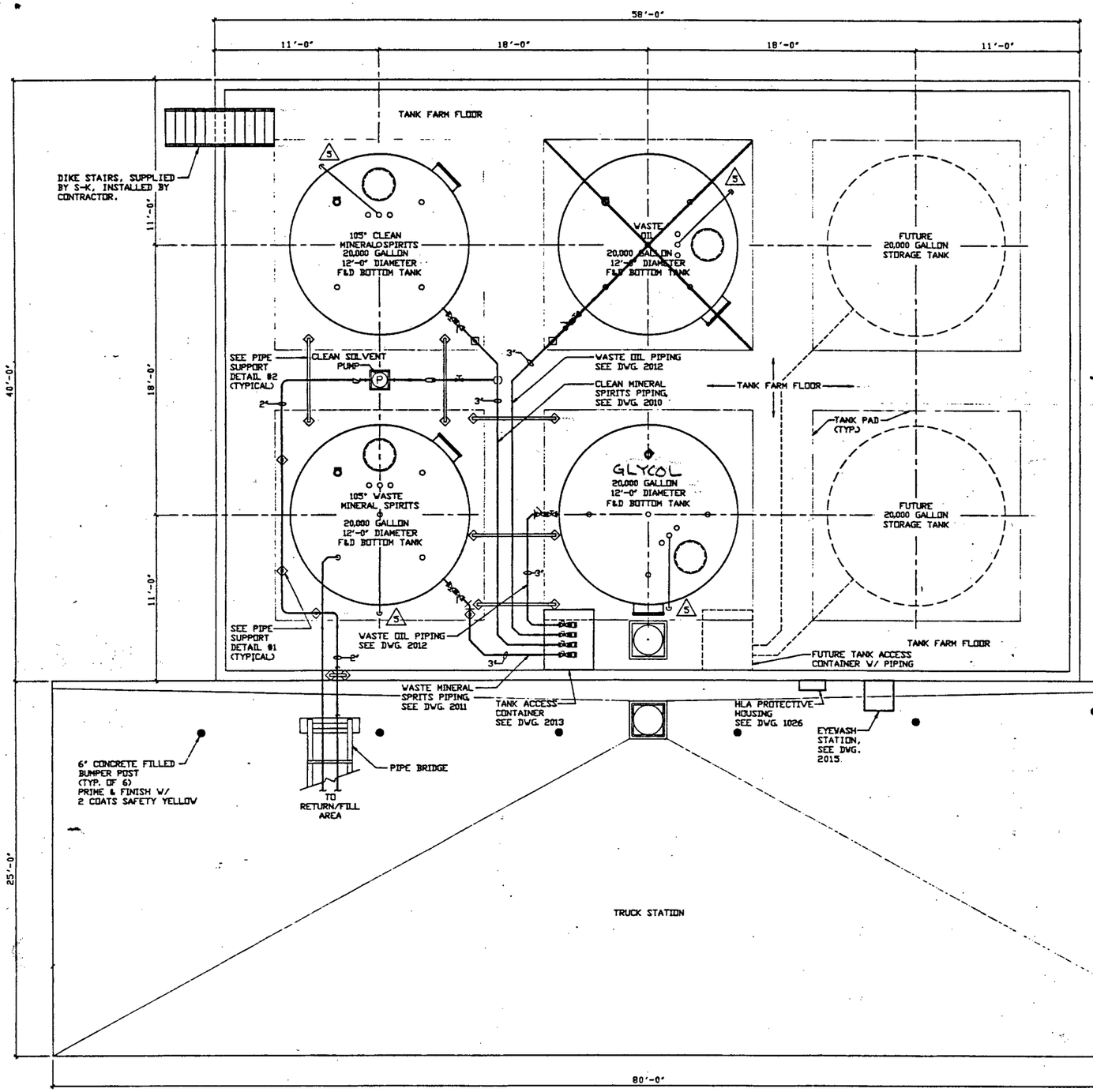
155' BUILDING SIGN LOCATION PLAN

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
1/8" = 1'-0"	QuesTec				9-27-91

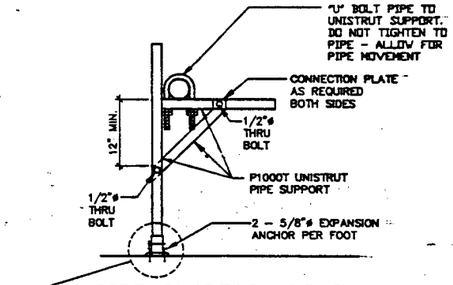
SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
MEDLEY, FL	316301-9000-00	28

10-7-91 12:00pm 9000-0.DWG



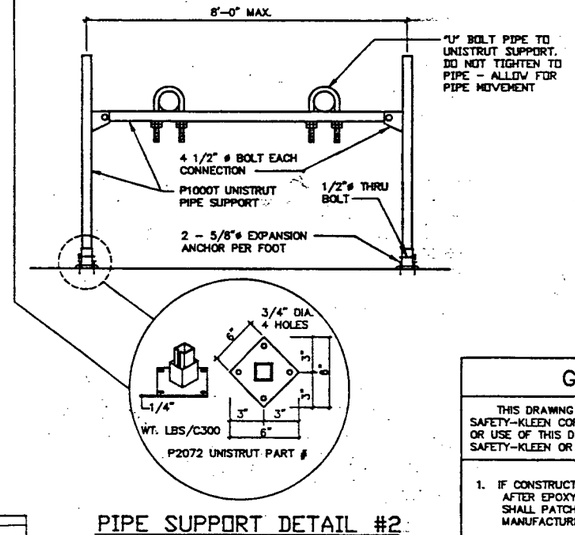
TANK FARM PIPING PLAN

SCALE: 1/4" = 1'-0"



PIPE SUPPORT DETAIL #1

SCALE: 3/4" = 1'-0"



PIPE SUPPORT DETAIL #2

SCALE: 3/4" = 1'-0"

GENERAL NOTES

THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO SAFETY-KLEEN CORPORATION. ANY REPRODUCTION, DISCLOSURE OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED EXCEPT BY SAFETY-KLEEN OR AS SAFETY-KLEEN MAY AGREE IN WRITING.

1. IF CONSTRUCTION REQUIRES CONC. PENETRATIONS AFTER EPOXY COATING IS APPLIED - CONTRACTOR SHALL PATCH & REPAIR EPOXY COATING AS PER MANUFACTURERS RECOMMENDATIONS & REQUIREMENTS.
2. SHIM ACCESS CONTAINER & EYEWASH STAND AS REQUIRED, WITH STEEL OR LEAD PLATES, TO LEVEL.
3. CONC. PENETRATIONS WILL NOT BE ALLOWED ON TANKFARM FLOOR.
4. ALL CHANGES IN DIRECTION OF WASTE PIPING SHALL BE MADE USING 2-45° ELBOWS OR LONG RADIUS 90'S.
5. "VERIC" TANK GAUGE, SEE DRAWING 2025.
6. RUN PROCESS PIPE LEVEL FROM TANK, CHANGE ELEVATION, ONLY AS REQUIRED, FOR ENTRANCE INTO TANK ACCESS CONTAINER.
7. WELD PIPE SUPPORT TO TOP OF TANK. FIELD FABRICATE PIPE SADDLE AS REQUIRED.
8. SUPPORT PIPE APPROXIMATELY AS SHOWN, BUT NOT MORE THAN 8'-0" O.C. UNLESS OTHERVISE NOTED.
9. ALL PROCESS PIPE FITTINGS TO BE WELDED.

QUESTEC CONSULTING ENGINEERS

MP5

NO.	DESCRIPTION	BY	CHK	APPR	DATE
	REVISIONS				

TITLE

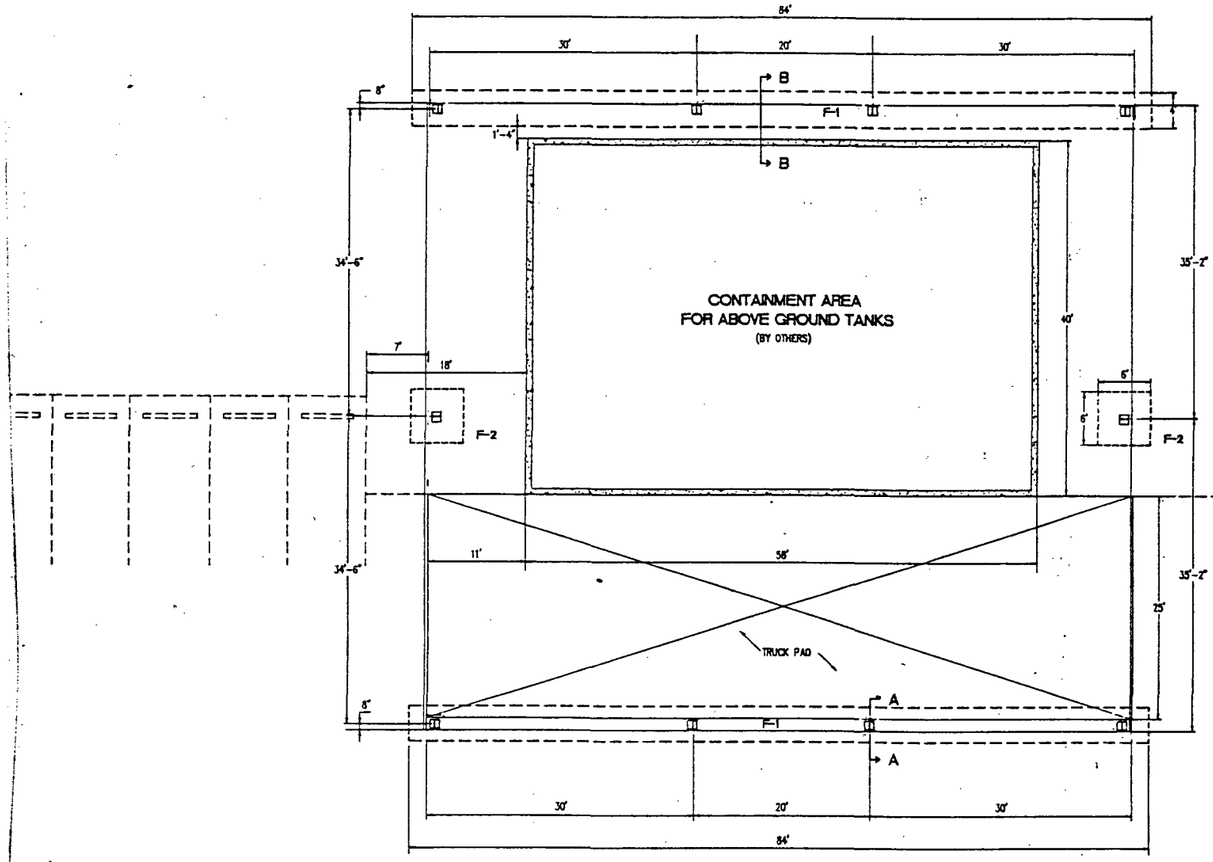
TANK FARM PIPING PLAN

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
1/4" = 1'-0"	QuesTec				9-27-91
SERVICE CENTER LOCATION		SC-DWG-REV NO.			SHEET NO.
MEDLEY, FL		316301-2000-00			45

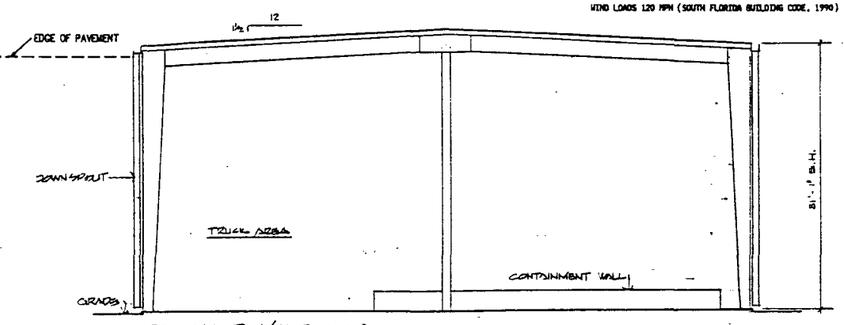
10-8-91 8:15pm 2000-0.DWG

NF 49579

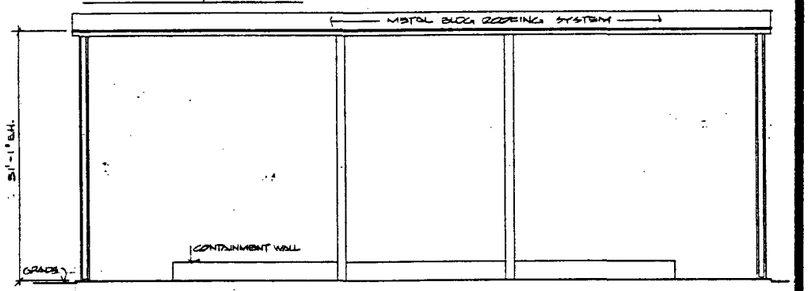


FOUNDATION PLAN

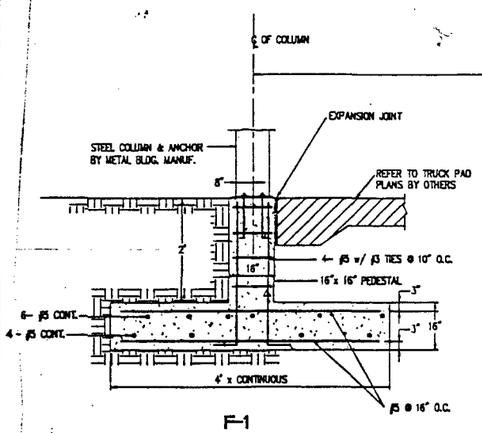
SCALE: 1/8" = 1'-0"



EAST ELEVATION (WEST SIMILAR)



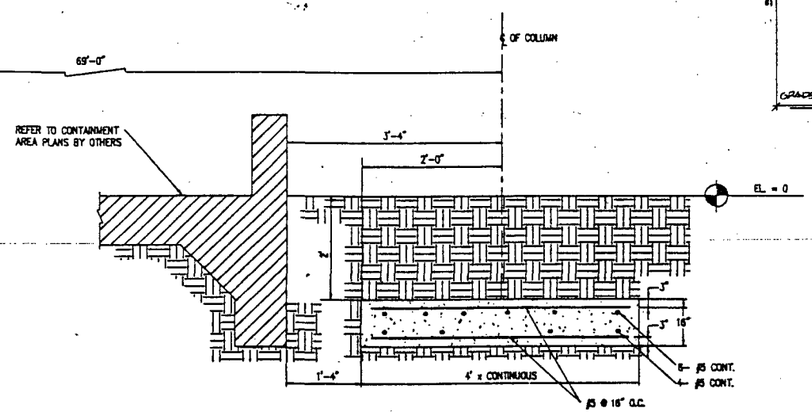
SOUTH ELEVATION (NORTH SIMILAR)



F-1

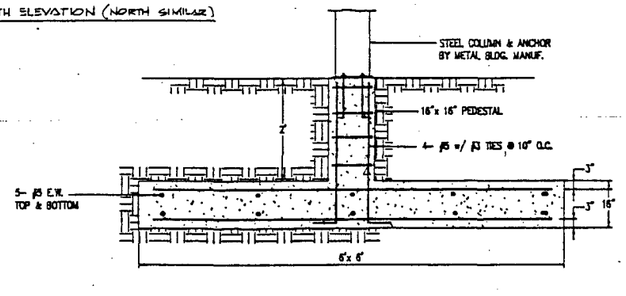
SECTION "A-A"

N.T.S.



SECTION "B-B"

N.T.S.



F-2

N.T.S.

FOUNDATIONS

1. THE SUBSURFACE INFORMATION AND FOUNDATION DESIGN ARE BASED ON A REPORT PREPARED BY SCHWEBKE - SHISKIN & ASSOCIATES REPORT NUMBER 49491. SOIL TO HAVE A 3,000 PSF BEARING CAPACITY. THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION, AND PREPARATION OF THE SUBGRADE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
2. FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT, SHALL BE REPORTED TO THE STRUCTURAL ENGINEER AND THE GEOTECHNICAL ENGINEER BEFORE PROCEEDING.

GENERAL

1. PRE-ENGINEERED METAL BUILDING COMPONENTS SHALL BE DESIGNED FOR ALL LOADS PRESCRIBED BY THE SOUTH FLORIDA BUILDING CODE, LATEST EFFECTIVE EDITION. SHOP DRAWINGS SIGNED AND SEALED BY A FLORIDA REGISTERED ENGINEER SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION OR ERECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL ANCHOR BOLT AND FOOTING LOCATIONS WITH METAL BUILDING MANUFACTURER'S SHOP DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
3. DESIGN LOADS:

   ROOF LIVE LOAD = 30 PSF

   ROOF DEAD LOAD = STEEL LOAD + 3 PSF ADDITIONAL

   WIND LOADS 120 MPH (SOUTH FLORIDA BUILDING CODE, 1990)

Revisions	Date	By
Issue		

Developers Choice, Inc.

Commercial • Industrial • Architecture • Civil Engineering • Land Planning • Design Feasibility

SAFETY KLEEN
MEDLEY FLORIDA.

TANK FARM CANOPY

Drawn	GS
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Date	6-18-92
Scale	AS NOTED
Job No.	3291

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