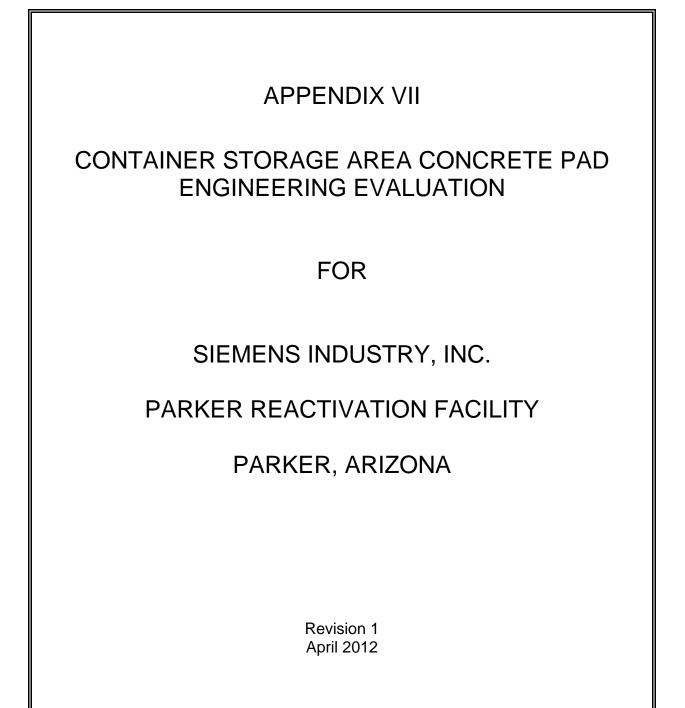
PERMIT ATTACHMENT
APPENDIX VII
CONTAINER STORAGE AREA CONCRETE PAD ENGINEERING EVALUATION
This document was not altered from the April 2016 Application.
September 2018



SIEMENS WATER TECHNOLOGIES CORP. PARKER, AZ

WAREHOUSE CONTAINMENT INDOORS

<u>5" HIGH WALL (CONTAINMENT WALL & FOUNDATION WALL)</u></u>

				VOLUME	VOLUME
AREAS:	L	W	н	CF	GALLONS
	73.5	4 42.17	0.42	1292	9,665
	51.5	0 9.33	0.42	200	1,498
	51.5	0 26.00	0.42	558	4,173
	21.5	4 13.00	0.42	117	873
			TOTAL:	2167	16,208

PYRAMIDAL VOLUMES:

(SEE DRAWING D100601-S-3V, Rev "B") FLOOR SLOPES TO DRAIN: FLOOR SLOPE = 1/8" IN 12" OVER APPR. 19.375' FLOOR DEPTH AT TOP OF TRENCH = 2.375" = 0.2' TRENCH VOLUME NOT INCLUDED.

CONSIDER EACH SLOPED END AS 1/2 OF A PYRAMID, (BASE UP) 1 END PARTIALLY COVERED WITH WALL. PYRAMID 2.375" HIGH, WITH BASES 38.75' ON A SIDE. ESTIMATE AT 1.5 PYRAMIDAL VOLUMES, V= 1/3 AH

QUAN	1/3	L	Н	CF	GALLONS
1.5	0.33		0.20	150	1,123

BETWEEN PYRAMIDAL ENDS:

40' + 32' (APPROX.) = 72' OF A TRIANGULAR SHAPED VOLUME 2.275" HIGH TRIAGULAR AREA WITH A 38.75' WIDE BASE V= 1/2 WHL

QUAN (L)	1/2	W	Н	CF	GALLONS
72	0.50	38.75	0.20		2,087

TOTAL CONTAINMENT VOLUME, GALLONS:	19,418
REQUIRED VOLUME, GALLONS:	10,000

LuMar Engineering

Memorandum

To: Mike Troup From: J. Dunlea

16 January, 1994

<u>Subject: Westates Carbon Inc.</u> <u>Carbon Reactivation Facility. Parker. AZ.</u> Part B Certification.

The followings items are statements and notes required for the application. The items numbers reference your "Regulatory completeness checklist".

PART D - PROCESS INFORMATION

Warehouse Storage Area:

D-1a(1): Basic Design Parameters.

Base design and materials of construction:

The warehouse slab-on-grade is designed for secondary containment. The construction is 5" thick reinforced concrete (3000 psi) slab on 2" sand on 6 mil visqueen vapor barrier on 4" compacted gravel base. All construction and control joints in the slab are sealed with a sealant.

Eng. evaluation of structural integrity of base:

The slab is designed for warehouse storage use and light forklift traffic.

D-la(2): Description of how design promotes drainage.....:

Grading of base:

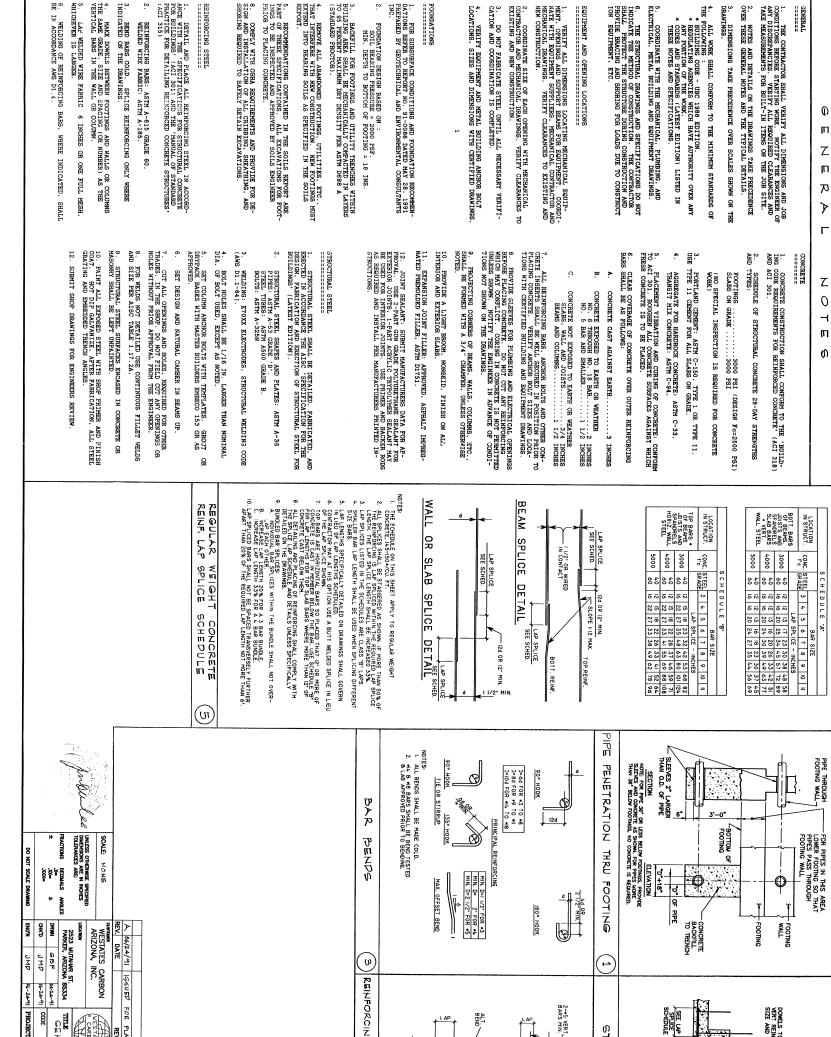
The slab is sloped 1/8"/ft. to trench drains.

Drainage design and removal system:

The slab slope is from the perimeter to the interior trench drains (1' X 1' min.). The trench drains slope to a sump (3' X 3' X 3') for removal. Any spills within the containment area will drain to the sump. In addition a 5" high curb is provided continuously around the entire building.

THIS DRAWNG IS THE P OF SIEMENS AND CANN REPRODUCED OR DELIV OTHERS WITHOUT THE I WRITTEN PERMISSION O INDUSTRY, INC. PLOT SCALE: 1"=40 DO NOT SCALE D

THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER WAROUS PROVISONS OF RORA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF RECEIV ONLY, AND THEY ARE NOT INTERDED TO BECOME RECLUATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.



4. MAKE DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS THE SAME GRADE, SIZE AND SPACING (OR NUMBER) AS THE VERTICAL BARS IN THE WALL OR COLUMN. (VCI 312) 1. DELVIT WO FIVE VIT BEINGORING SIERT IN VCORP-NOR MILTINGS. (VCI 301) VND LE .NWANY OF RINGARD SAVALUE NO FILLE NUMBER OF A CONCRETE 1. DELVIT WO FILLE VITAGENER OF A CONCRETE VITA DE CONCRETE VITA DE CONCRETE STRUCTURES VITA DE 6. COMPLY WITH OSHA REQUIREMENTS AND PROVIDE FOR DE-SIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING, AND SHORING REQUIRED TO SAFELY RETAIN EXCAVATIONS. 5. RECOMMENDATIONS CONTAINED IN THE SOILS REPORT ARE NART OF THESE SPECIFICATIONS. ALL EXCAVATIONS FOR FOOT-INGS TO BE INFERENCED AND APPROVED BY SOILS ENGINEER FAIOR TO PLACING CONCRETE. 3. BACKFILL FOR FOOTINGS AND UTILITY TRENCHES WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LATERS TO 65 FERCENT MAXIMUM DRY DENSITY FER ASTM D686 A (STANDARD FROCTOR). 1. FOR SUBSURFACE CONDITIONS AND FOUNDATION RECOMMEN-DATIONS REFER TO REFORT NO. 91-0086 DATED MAY 28. 1991 FREPARED BY GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS INC. 3. BEND BARS COLD. SPLICE REINFORCING ONLY WHERE INDICATED ON THE DRAWINGS. THAT I EXTENI REPORT e. THE STRUCTURAL DRAWINGS AND SECTIFICATIONS DO NOT INDICATE THE AFFIDOD OF CONSTRUCTION THE CONSTRUCTION SMALL FRONTER THE STRUCTURE DURING CONSTRUCTION AND FROUTE BRACING AND SHORING FOR LAADS DUE TO CONSTRUCT TON SCUTTMENT, ETC. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING :

 BUILDING CODE - UBC 1986 EDITION.
 REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY ANY PORTION OF THE WORK.
 CODES AND STANDARDS (LATEST EDITION) LISTED IN THESE NOTES AND SPECIFICATIONS.

 REINFORCING STEEL FOUNDATIONS 3. DO NOT FABRICATE STEEL UNTIL ALL NECESSARY VERIFI-CATION AND COORDINATION IS COMPLETED. 4. VERIFY EQUIPMENT AND METAL BUILDING ANCHOR BOLT LOCATIONS, SIZES AND DIMENSIONS WITH CERTIFIED DRAWINGS. 2. COORDINATE SIZE OF EACH OPENING WITH MECHANICAL CONTRACTOR AND MECHANICAL DRAWINGS. VERIFY CLEARANCES TO EXISTING AND NEW CONSTRUCTION. 1. VERITY ALL DIMENSIONS LOCATING MECHANICAL EQUIP-MENT. OPENINGS AND SUPPORT BEAMS FOR EQUIPMENT. COORDI-NATE WITH EQUIPMENT SUPPLIERS. MECHANICAL CONTRACTOR AND MECHANICAL DEAMINGS. VERIFY CLEARANCES TO EXISTING AND NEW CONSTRUCTION. 5. COORDINATE WITH THE MECHANICAL, PLUMBING, AND ELECTRICAL, METAL BUILDING AND EQUIPMENT DRAWINGS. QUIPMENT AND OPENING LOCATIONS REINFORCING BARS: ASTM A-615 GRADE 60. WELDED WIRE FABRIC: ASTM A-185. REMOVE ALL ABANDONED FOOTINGS, UTILITIES, ETC., INTERFERE WITH NEW CONSTRUCTION. NEW FOOTINGS MUST D INTO BEARING SOILS AS SPECIFIED IN THE SOILS FOUNDATION DESIGN BASED ON : SOIL BEARING FRESSURE = 2000 PSF. MIN. DEFTH TO BOTTOM OF FOOTING = 18 INS.

GENERAL

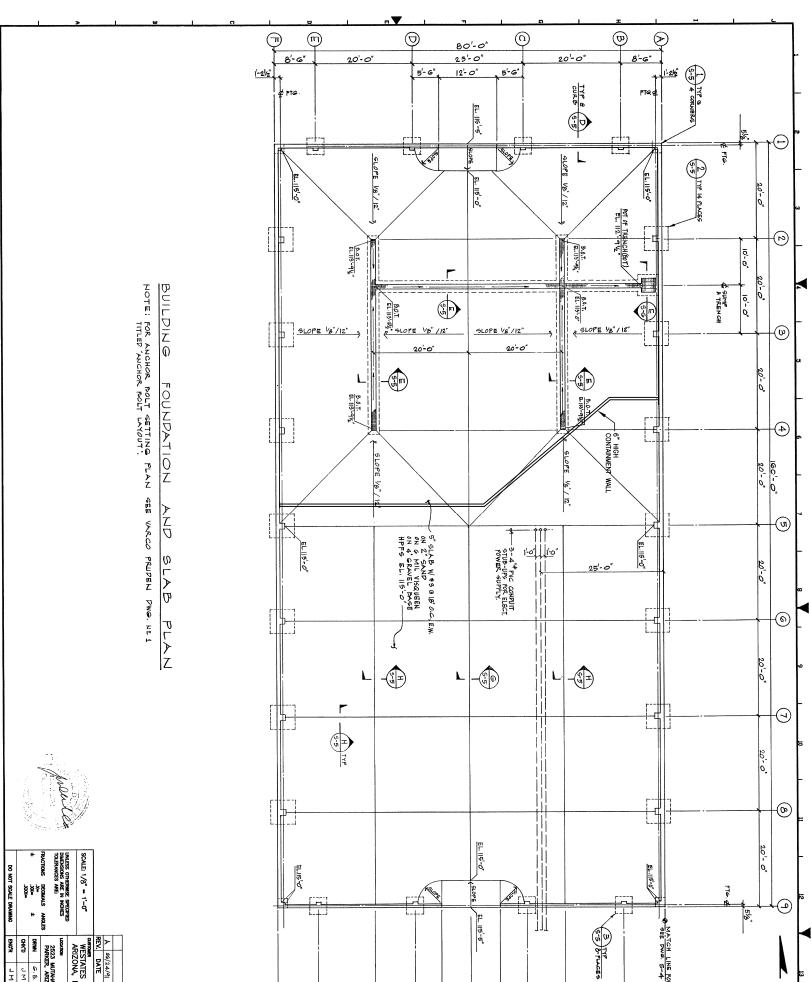
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5. LAP WELDED WIRE FABRIC 6 INCHES OR ONE FULL MESH. WHICHEVER IS LARGER.

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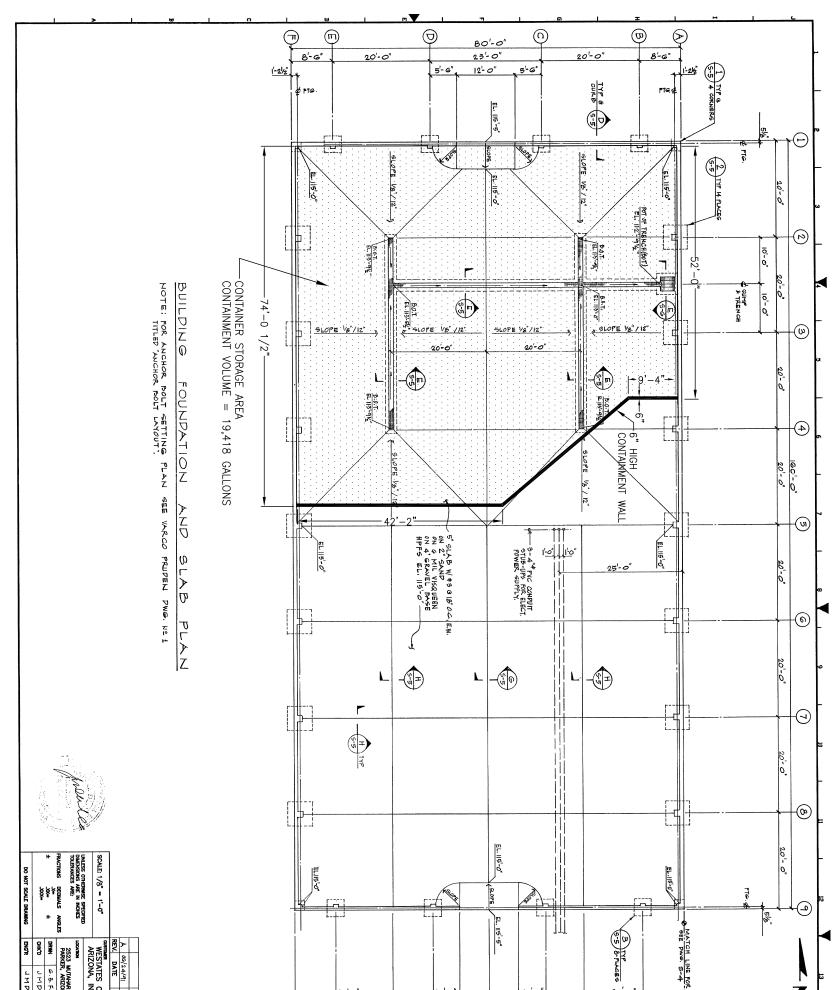
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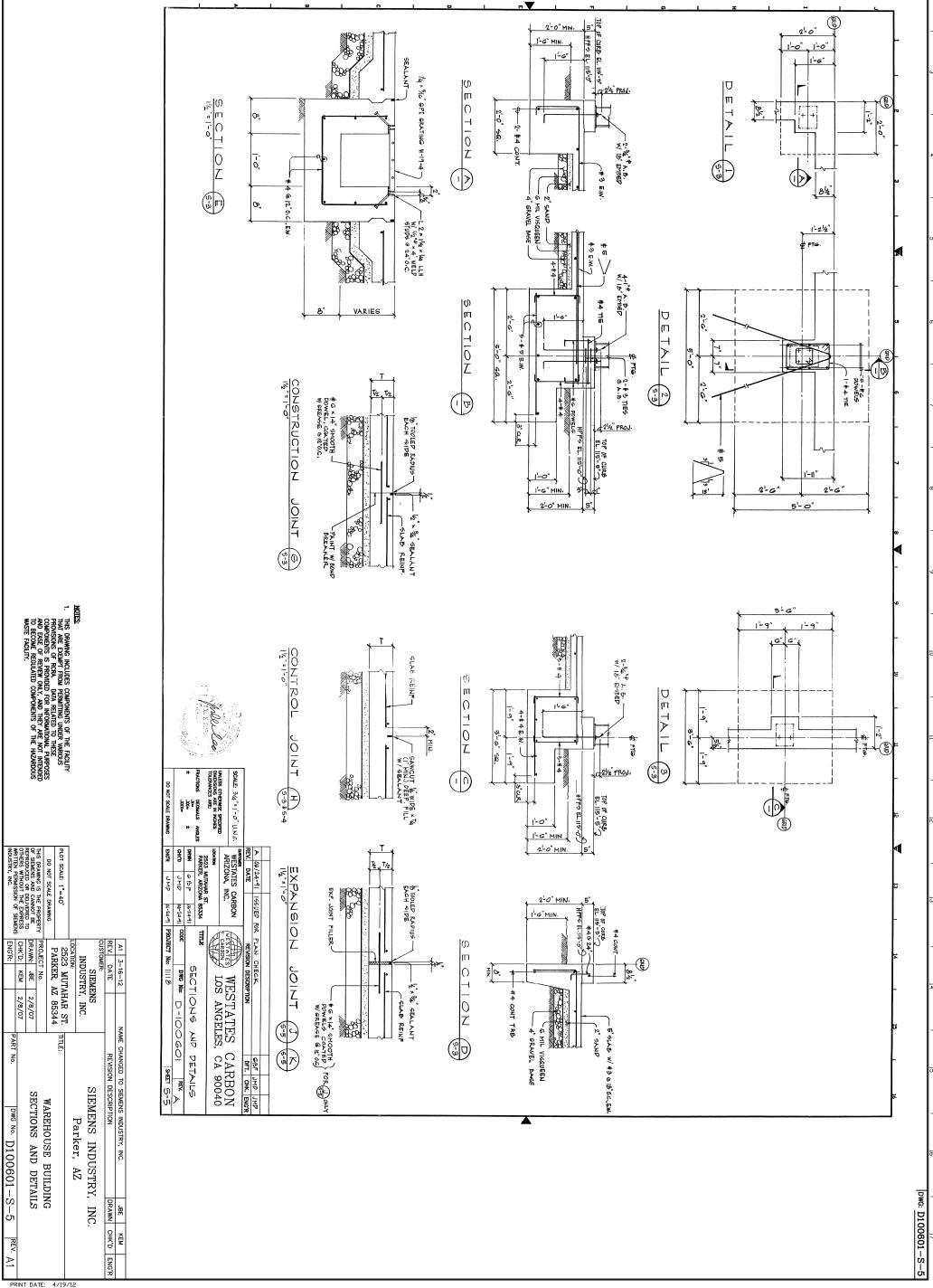


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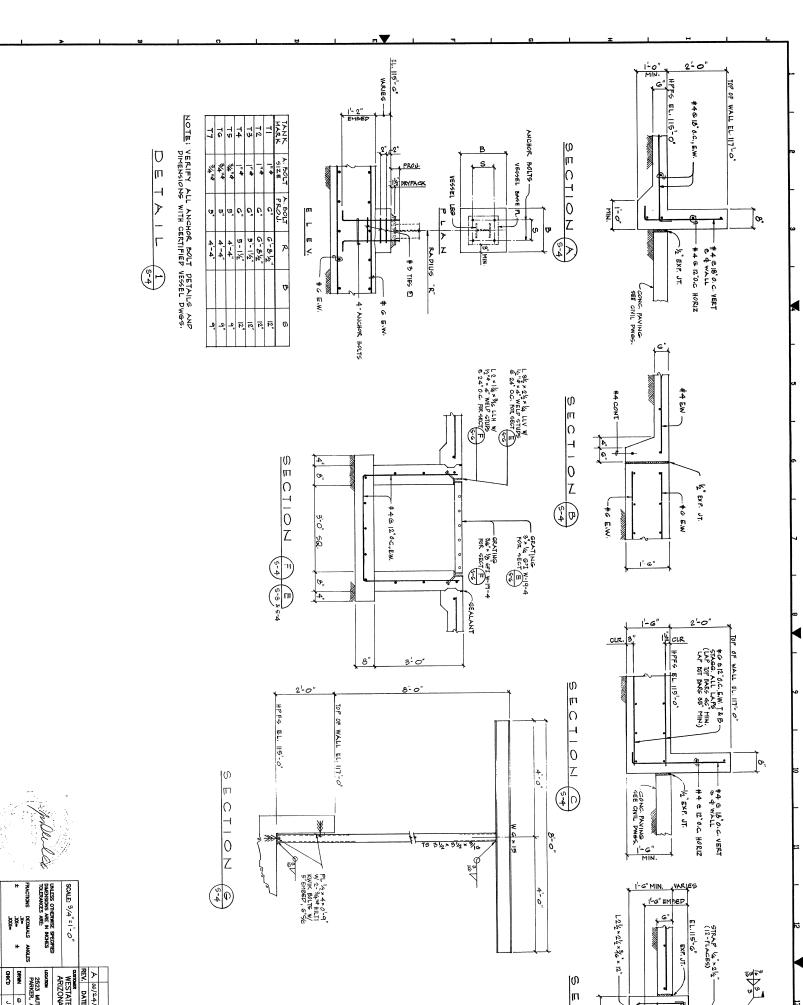






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