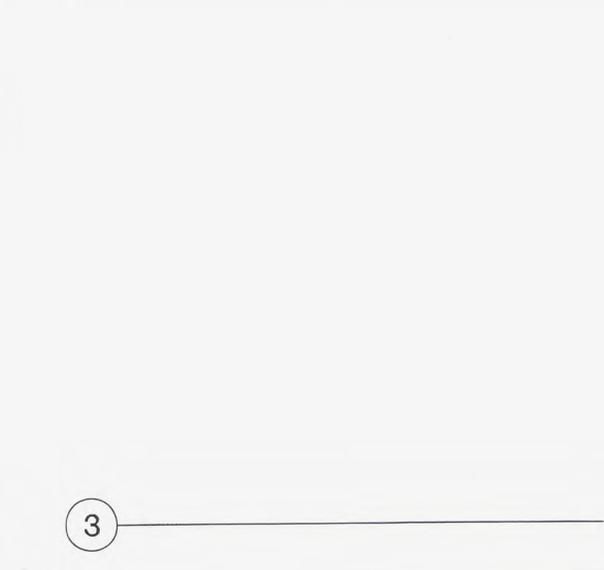
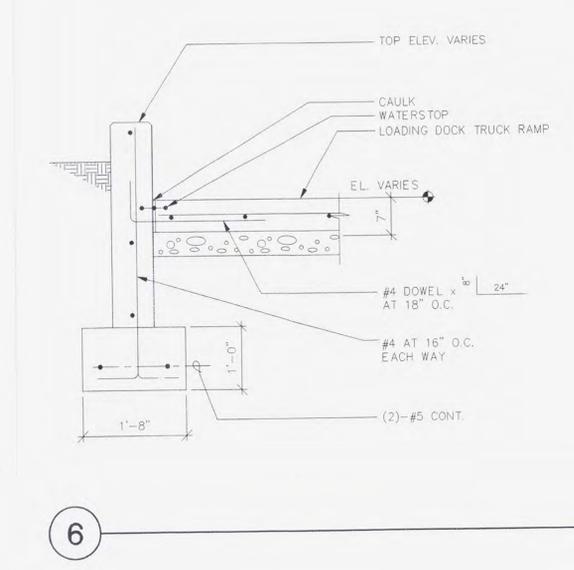
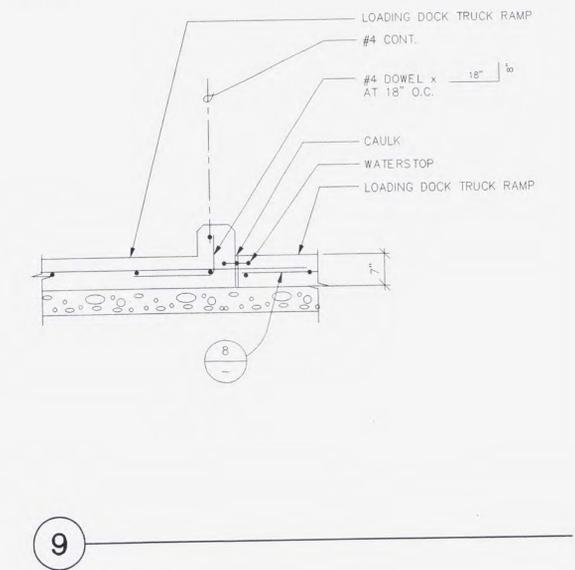
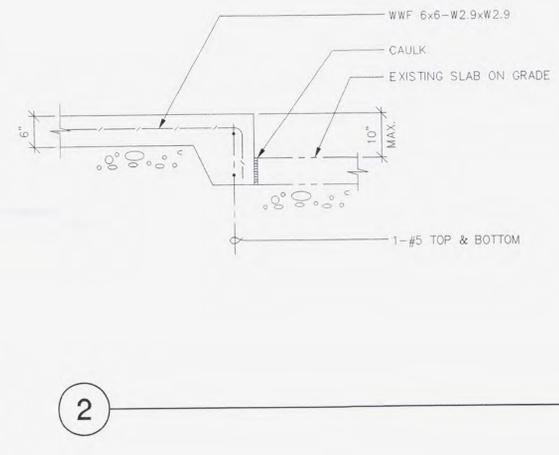
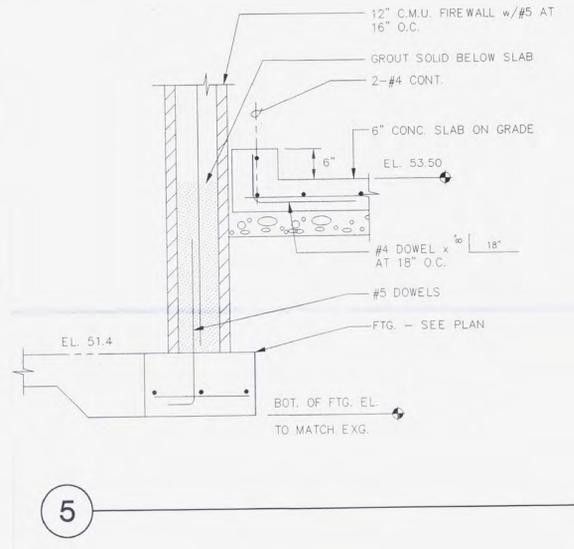
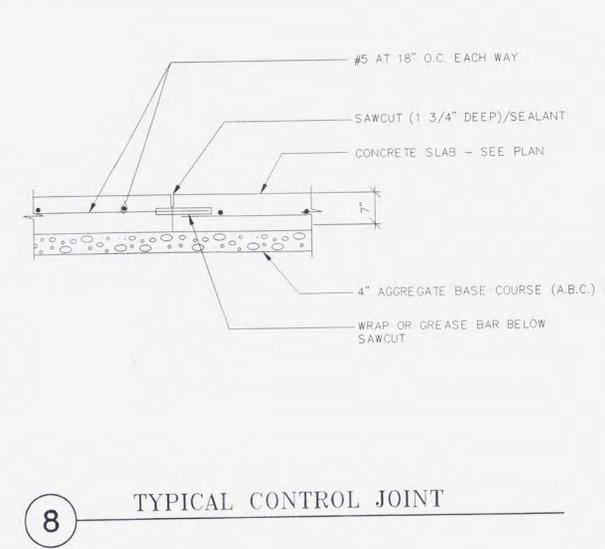
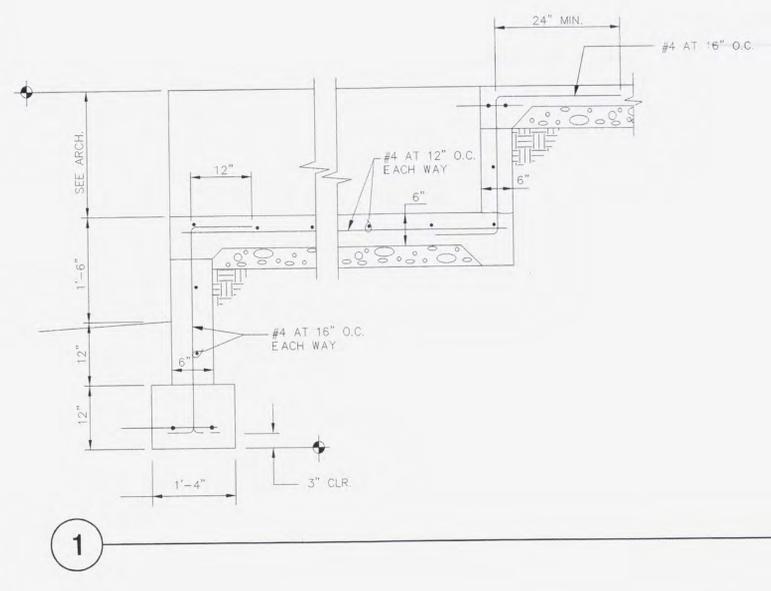
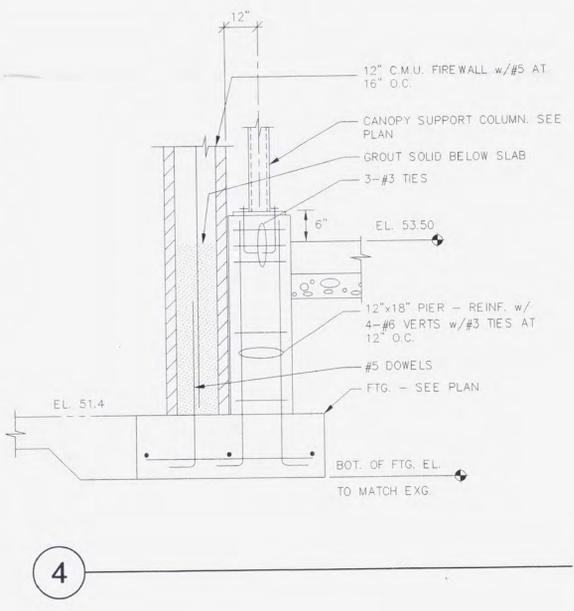
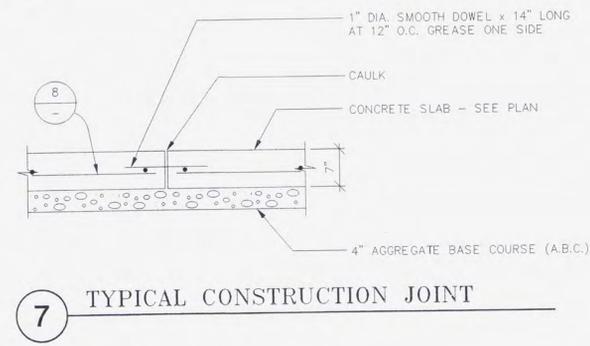
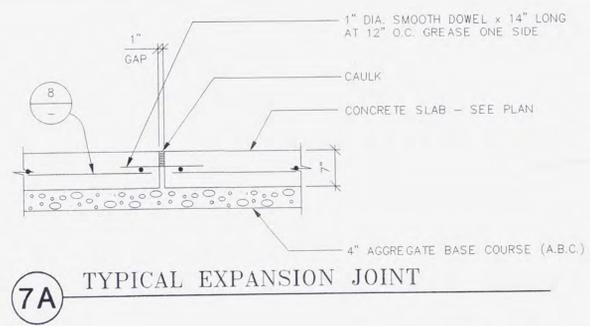


NO.	REVISION	DATE	BY
1	ISSUED FOR CONSTRUCTION	10-11-95	-
2	AS BUILT	7-18-96	OWL
3	AS BUILT	4-24-98	DEC
4	RECORD SET	12/13/06	WDS



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RECORD SET

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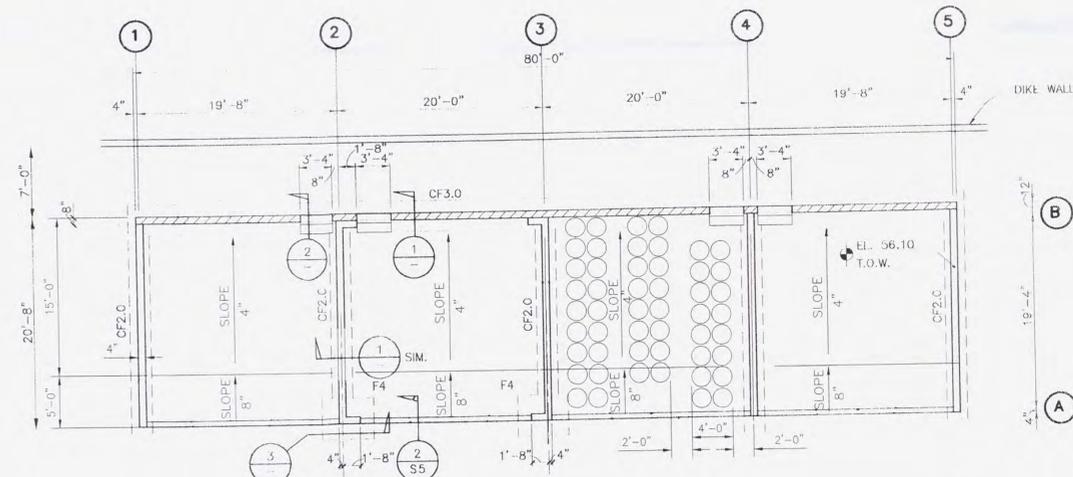
DETAILS

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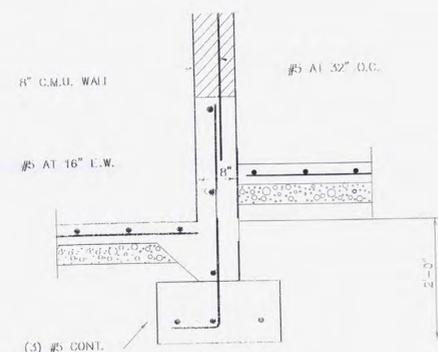
DRW. BY: RJG	DATE: 6-15-95	PROJECT NO: 3821
DSG. BY: EAP	DATE: 6-15-95	SHEET NO. 57
APP. BY: AVS	DATE: 6-15-95	DWG. NO.
SCALE: AS NOTED		581-CDA-108



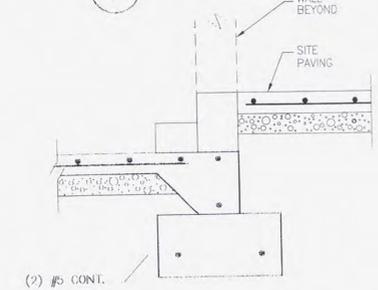
NO.	REVISION	DATE	BY
1	CITY COMMENTS	8/1/96	GWL
2	AS BUILT	1/24/98	DEL
3	RECORD SET	12/14/06	WDS



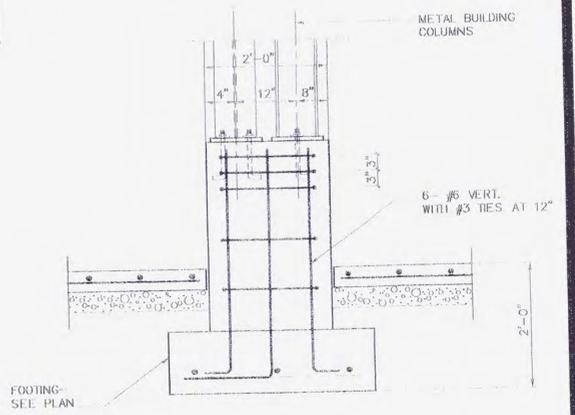
**FOUNDATION PLAN - WORKSTATIONS**  
1/8"=1'-0"



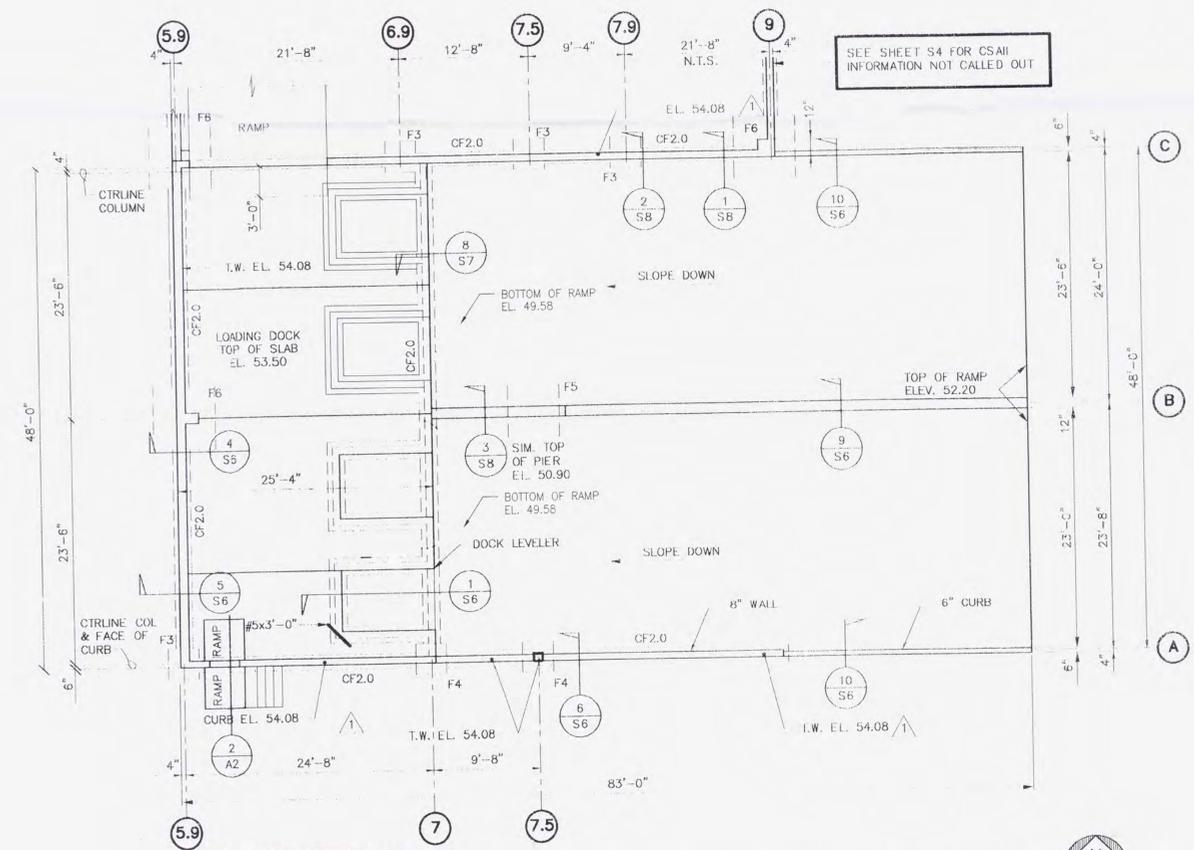
**1** DETAIL



**2** DETAIL AT MAN DOOR



**3** DETAIL



**FOUNDATION PLAN**  
1/8"=1'-0"

**FOUNDATION PLAN NOTES:**

- SEE SHEET S1 AND S2 FOR:
  - GENERAL STRUCTURAL NOTES
  - TYPICAL EXCAVATION ADJACENT TO FOOTING
  - TYPICAL SLAB JOINT DETAILS
  - TYPICAL STEPPED FOOTING
  - TYPICAL MASONRY CONTROL JOINT
- VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS
- K.C.J. - DENOTES KEYED CONSTRUCTION JOINT
- C.J. - DENOTES CONTROL JOINT
- M.J. - DENOTES MASONRY WALL FULL HEIGHT CONTROL JOINT
- TOP OF ALL F.G.S (T.O.F.) TO BE AT 1'-0" BELOW FIN. FLR. ELEV. 0'-0", U.N.O.
- DENOTES MASONRY WALL
- DENOTES EXISTING CONSTRUCTION
- XXX - DENOTES FINISHED FLOOR ELEVATION - SEE PLAN
- DENOTES FOOTING SIZE - SEE SCHEDULE SHEET S4
- CF-2 - DENOTES CONT. FTG. SEE SCHEDULE SHEET S4



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**FOUNDATION AT LOADING DOCK AND WORKSTATIONS**

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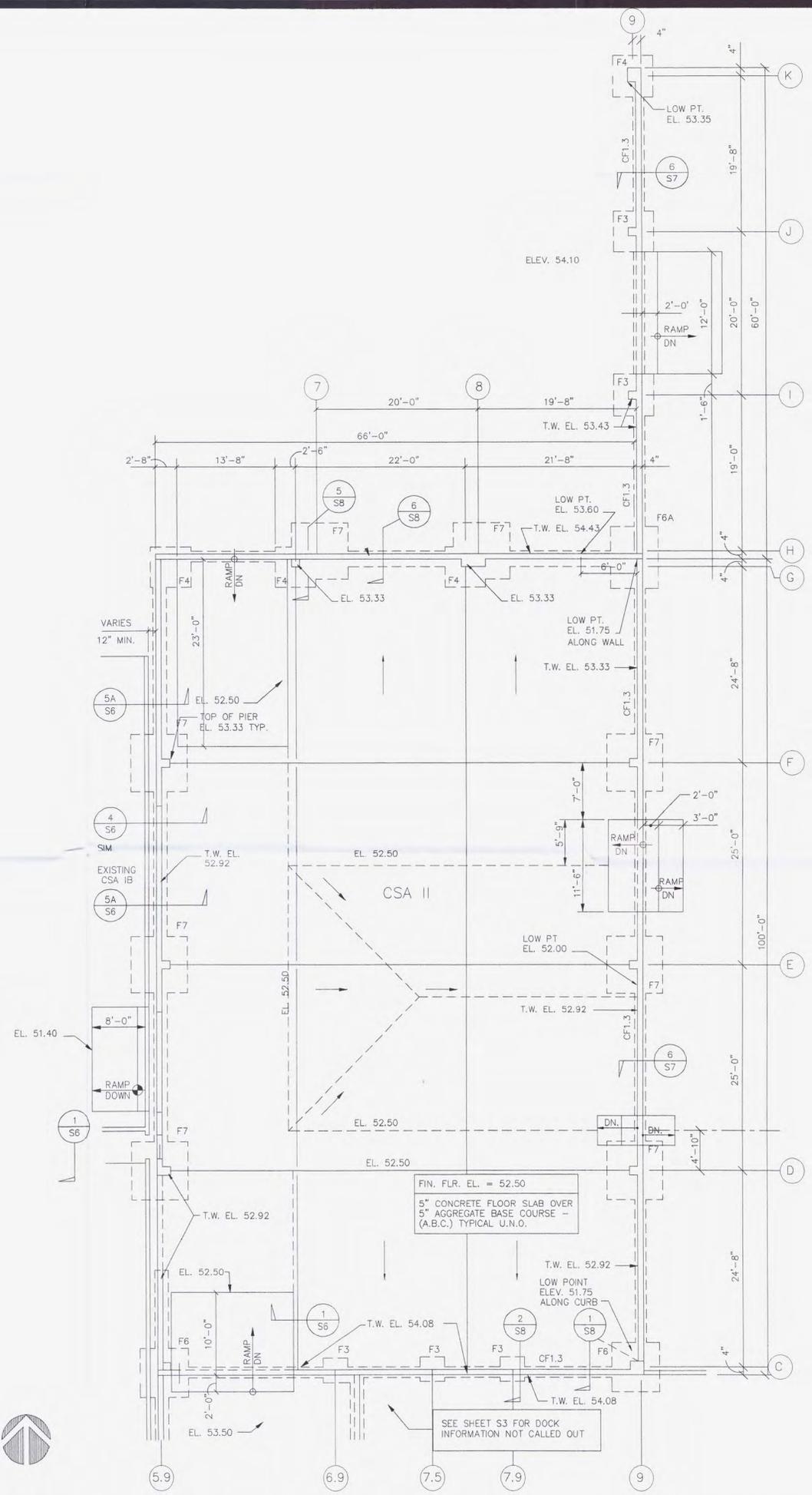
**RECORD SET**

DRW. BY: DEL	DATE: 6-4-95	PROJECT NO: 4017
DES. BY: EAP	DATE: 6-4-95	SHEET NO: S3
APP. BY: AVS	DATE: 6-4-95	DWG. NO.
SCALE: AS NOTED		581-CDA-105

NO.	REVISION	DATE	BY
1	CITY COMMENTS	8/1/96	GWL
2	AS BUILT	4/24/98	DEL
3	RECORD SET	12/13/06	WDS

- FOUNDATION PLAN NOTES:**
- NOTES SHEET S4 APPLY
  - SEE METAL BUILDING MANUFACTURER FOR BASE PLATE DETAILS AND ANCHOR BOLT REQUIREMENTS.
  - AT MAIN FRAME LINES MINIMUM PIER SIZE 12" X 18" OR 2" LARGER THAN COLUMN BASE PLATE SIZE. SEE DETAIL 4/S6 FOR REINFORCING REQUIREMENTS. AT SECONDARY COLUMN LOCATIONS PROVIDE (4) #6 VERT. WITH #3 TIES AT 12" O.C. SIM. TO DETAIL 4/S6.
  - TOP OF FOOTINGS TO BE A MINIMUM OF 2'-0" BELOW GRADE OR FIN. FLR., WHICHEVER IS LOWER.

FOOTING SCHEDULE			
MARK	SIZE	REINFORCING	REMARKS
F3	3'-0" x 3'-0" x 1'-0"	(3) #5 E.W.	
F4	4'-0" x 4'-0" x 1'-4"	(4) #5 E.W.	
F5	5'-0" x 5'-0" x 1'-6"	(5) #6 E.W.	
F6	6'-0" x 6'-0" x 1'-4"	(5) #6 E.W.	
F6A	6'-0" x 8'-0" x 1'-4"	(5) #6 E.W.	
F7	7'-0" x 7'-0" x 1'-8"	(6) #6 E.W.	
CF1.3	1'-4" x 8"	(2) #4 CONT.	
CF2	2'-0" x 1'-0"	(2) #5 CONT.	
CF3.0	3'-0" x 1'-0"	(3) #5 CONT.	



FOUNDATION PLAN  
1/8"=1'-0"

RECORD SET

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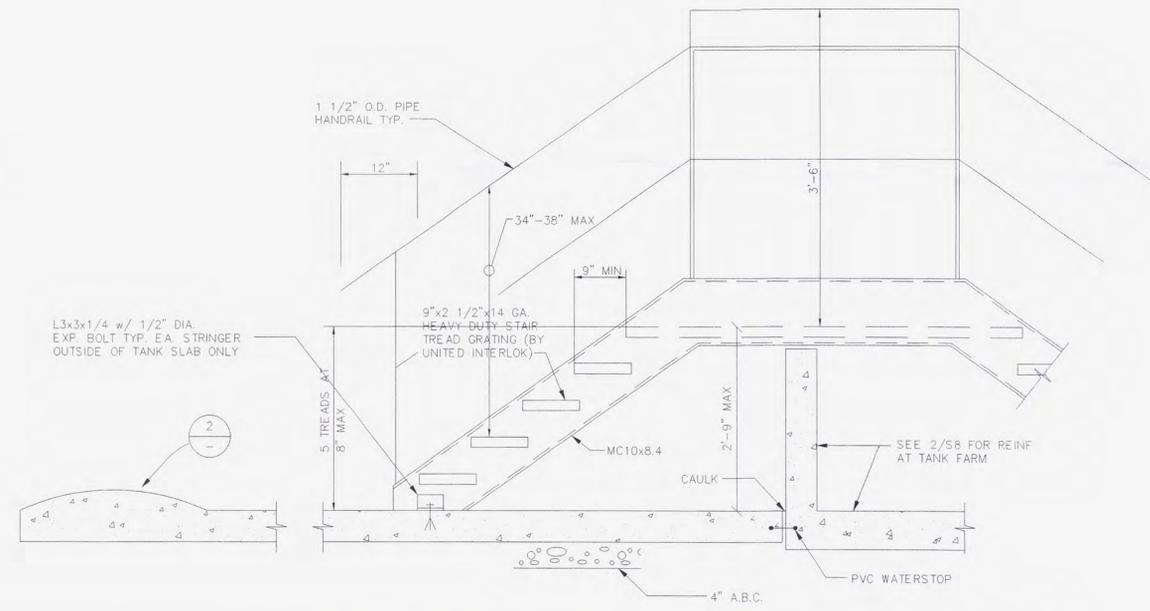


FOUNDATION PLAN AT CSA II  
AND MAINTENANCE

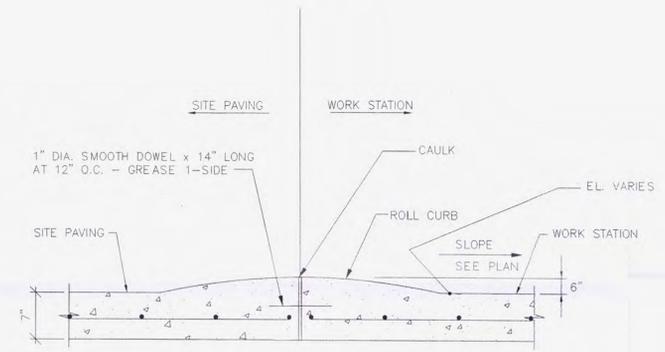
CLEAN HARBORS ENVIRONMENTAL SERVICES  
1340 WEST LINCOLN STREET  
PHOENIX, ARIZONA, 80057  
TELEPHONE (602)258-6155

DRW. BY: DEL	DATE: 6-4-96	PROJECT NO: 4017
DSG. BY: EAP	DATE: 6-4-96	SHEET NO. 54
APP. BY: AVS	DATE: 6-4-96	DWG. NO.
SCALE: AS NOTED		581-CDA-106

NO.	REVISION	DATE	BY
1	CITY COMMENTS	8/1/96	GWL
2	AS BUILT	4/24/98	DEL
3	RECORD SET	12/13/06	WDS



5 \_\_\_\_\_ 1 \_\_\_\_\_



6 \_\_\_\_\_ 3 \_\_\_\_\_ 2 \_\_\_\_\_

7 \_\_\_\_\_ 4 \_\_\_\_\_



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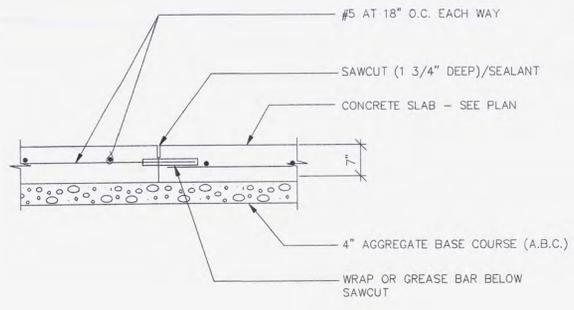
DETAILS

**RECORD SET**

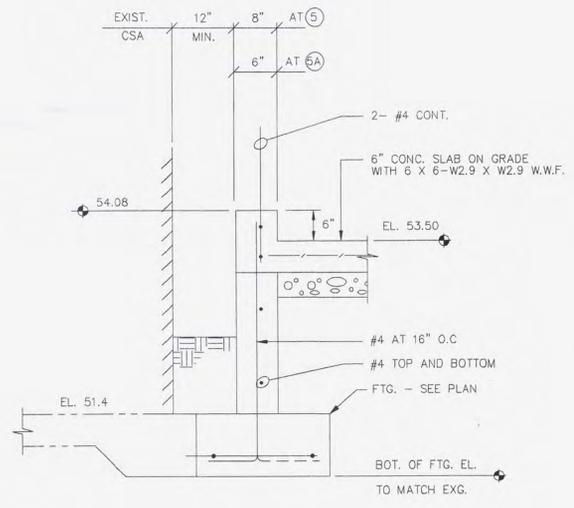
CLEAN HARBORS ENVIRONMENTAL SERVICES  
 1340 WEST LINCOLN STREET  
 PHOENIX, ARIZONA, 80057  
 TELEPHONE (602)258-6155

DRW. BY: DEL	DATE: 5-15-96	PROJECT NO: 4017
DSG. BY: EAP	DATE: 5-15-96	SHEET NO. 55
APP. BY: AVS	DATE: 5-15-96	DWG. NO.
SCALE: AS NOTED		581-CDA-107

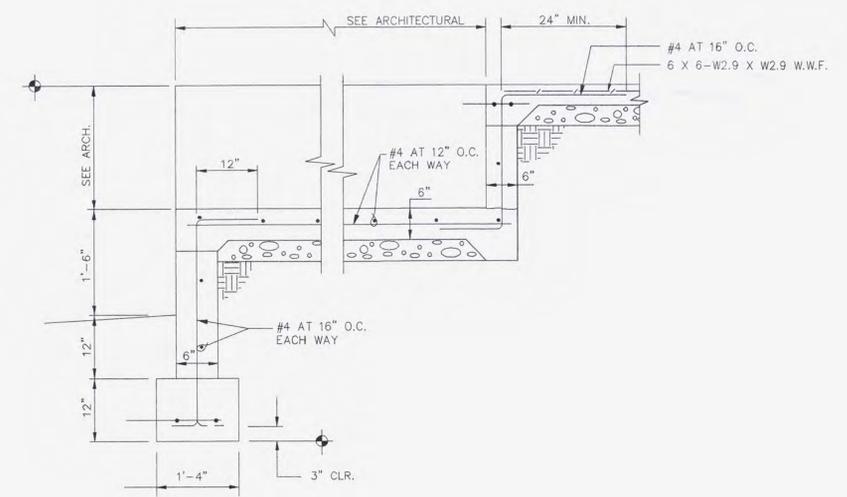
NO.	REVISION	DATE	BY
1	CITY COMMENTS	8/1/98	GWL
2	AS BUILT	4/24/98	DEL
3	RECORD SET	12/13/06	WDS



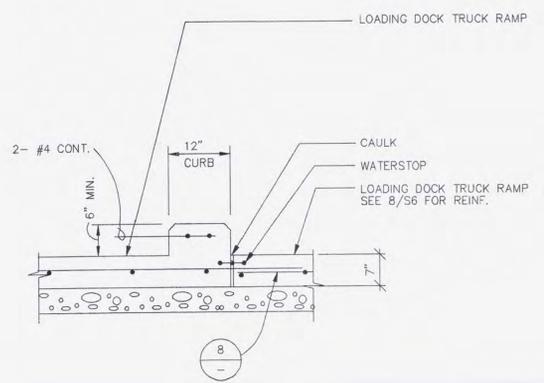
8 TYPICAL CONTROL JOINT



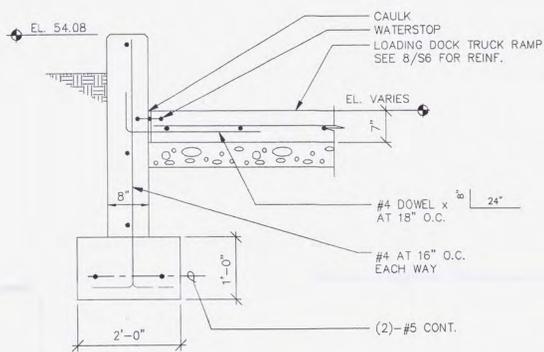
5 5A TYPICAL CONSTRUCTION JOINT



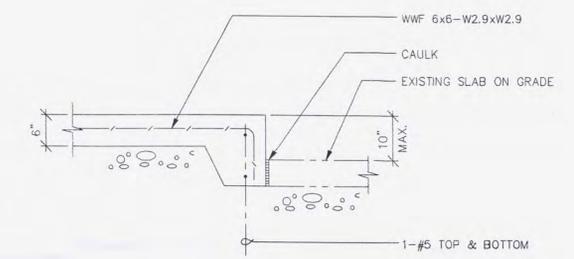
1 TYPICAL EXPANSION JOINT



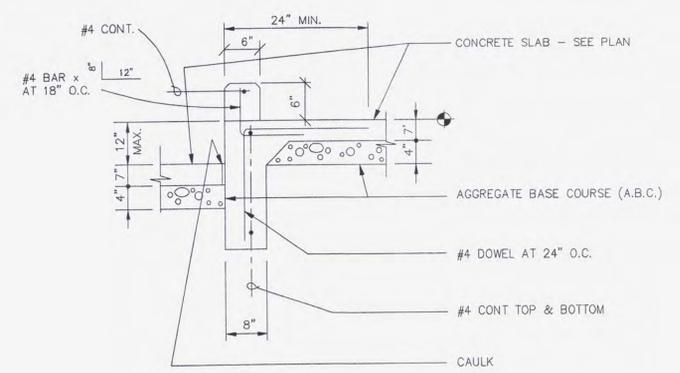
9 TYPICAL LOADING DOCK TRUCK RAMP JOINT



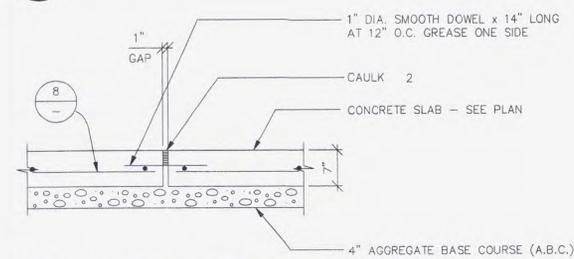
6 TYPICAL JOINT WITH TRUCK RAMP



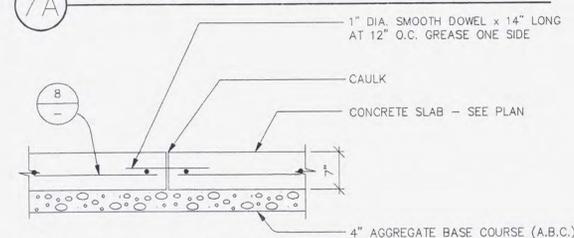
2 TYPICAL JOINT WITH EXISTING SLAB



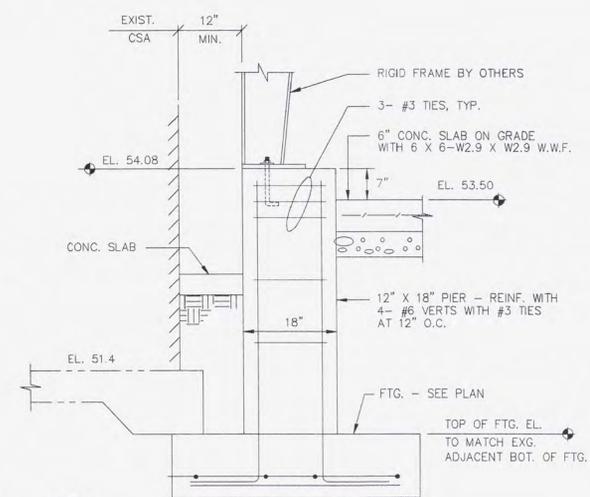
10 TYPICAL EXPANSION JOINT



7A TYPICAL EXPANSION JOINT



7 TYPICAL CONSTRUCTION JOINT



4 TYPICAL EXPANSION JOINT



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RECORD SET

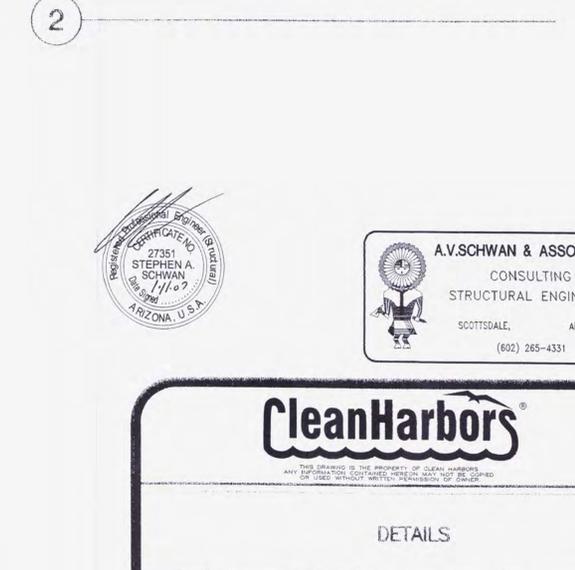
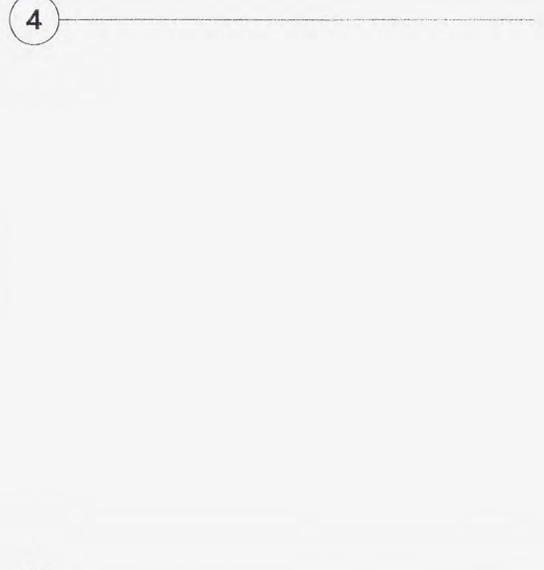
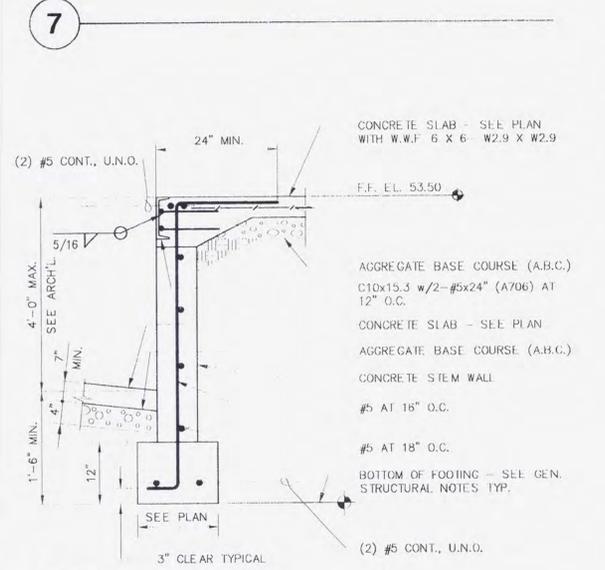
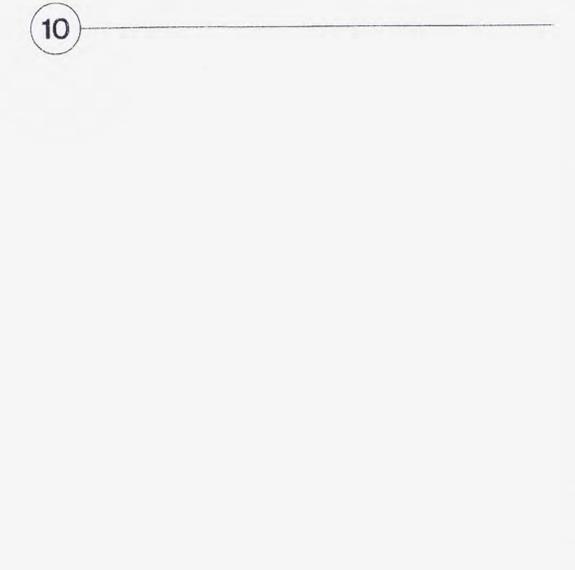
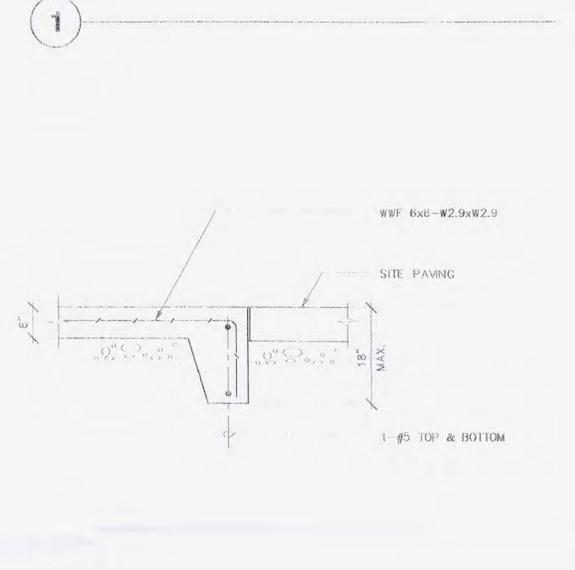
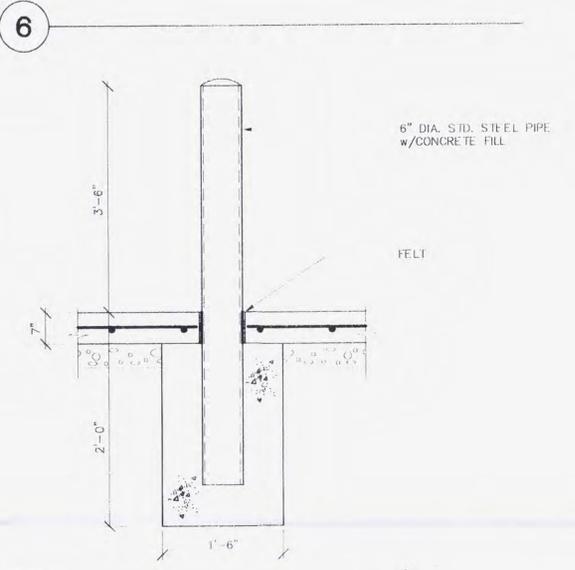
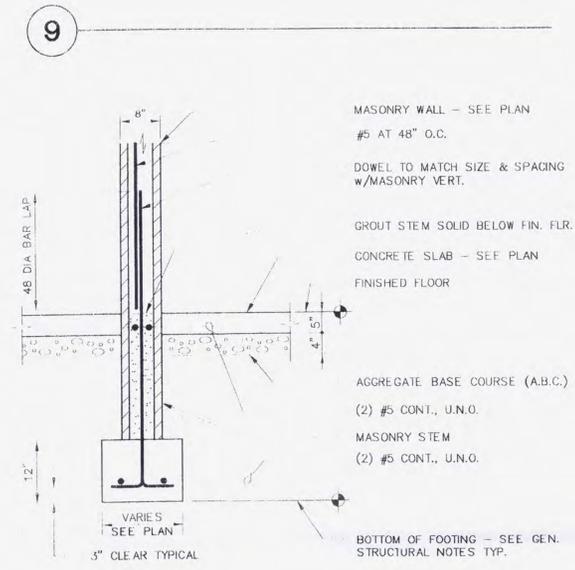
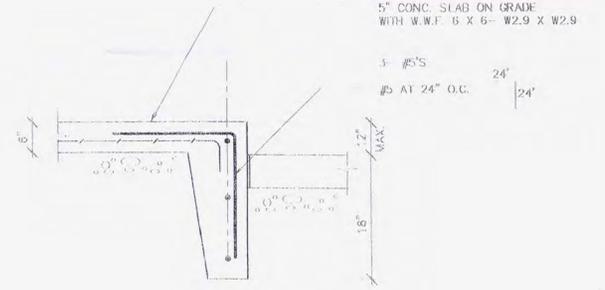
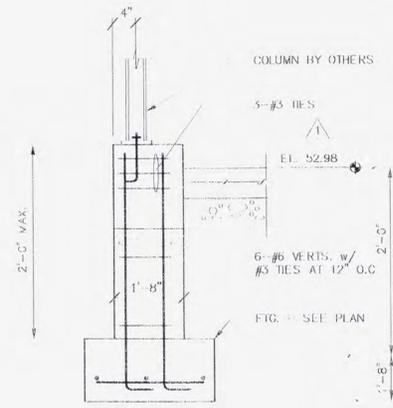
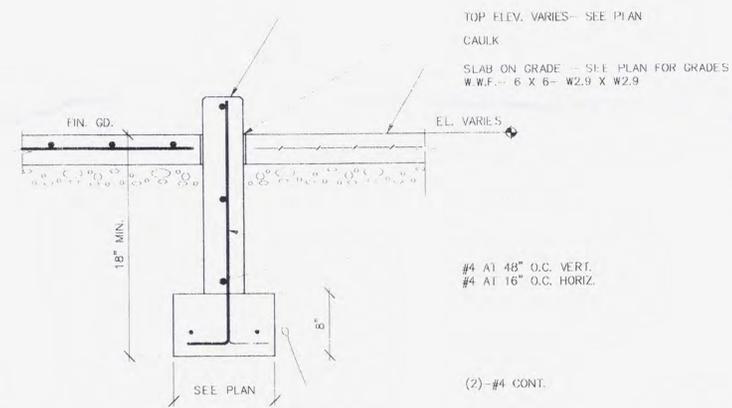


DETAILS

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TELEPHONE (602)258-6155

DRW. BY: DEL	DATE: 5-15-96	PROJECT NO: 4017
DSG. BY: EAP	DATE: 5-15-96	SHEET NO: 56
APP. BY: AVS	DATE: 5-15-96	DWG. NO.
SCALE: AS NOTED		581-CDA-108

NO.	REVISION	DATE	BY
1	CITY COMMENTS	8/1/96	GWL
2	AS BUILT	4/24/98	DEL
3	RECORD SET	12/14/06	WDS



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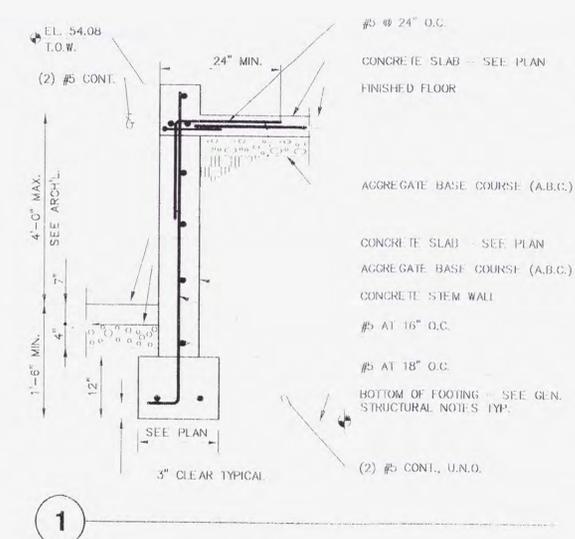
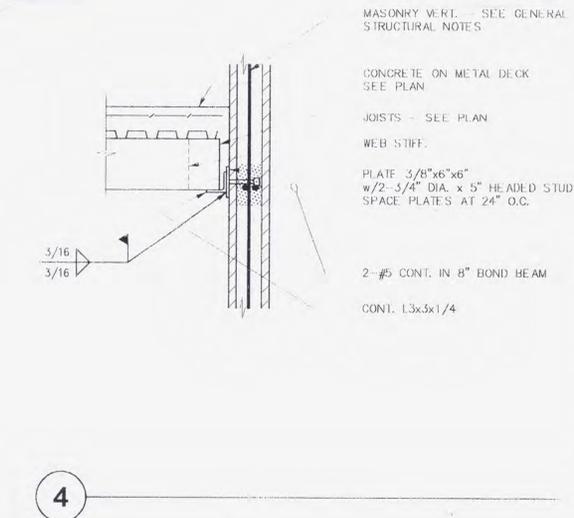
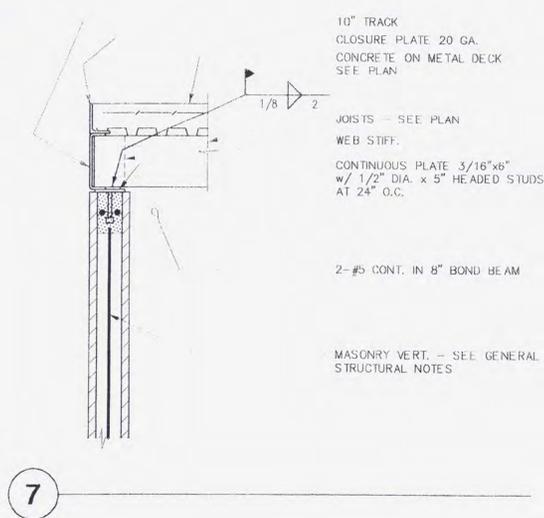
DETAILS

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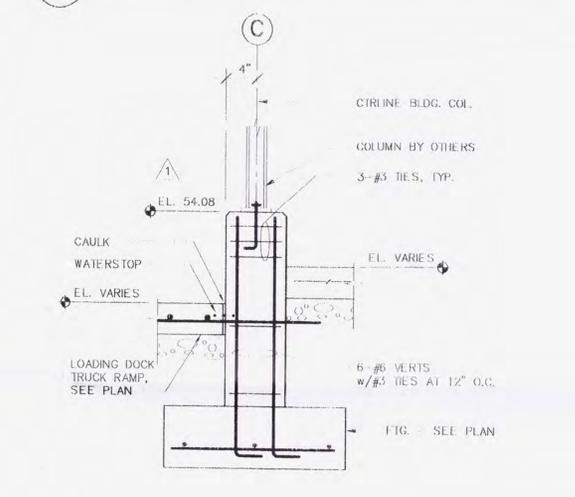
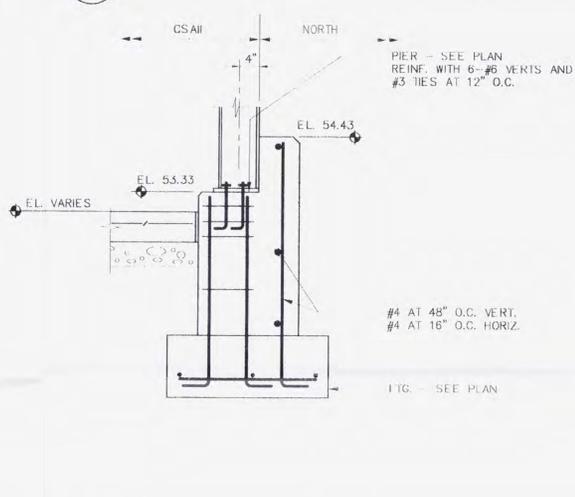
RECORD SET

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DES. BY: EAP	DATE: 6-4-96	SHEET NO: S7
APP. BY: AVS	DATE: 6-4-96	DWG. NO.
SCALE: AS NOTED		581-CDA-109

NO.	REVISION	DATE	BY
1	CITY COMMENTS	8/1/98	CWL
2	AS BUILT	4/24/98	DEL
3	RECORD SET	12/14/06	WDS



OPENING SIZE	8" C.M.U.	
	REINFORCING	GROUT "D"
1'-0" THRU 3'-4"	2 #5	4"
3'-5" THRU 5'-4"	2 #5	12"
5'-5" THRU 7'-4"	2 #5	16"
7'-5" THRU 8'-0"	2 #5	24"

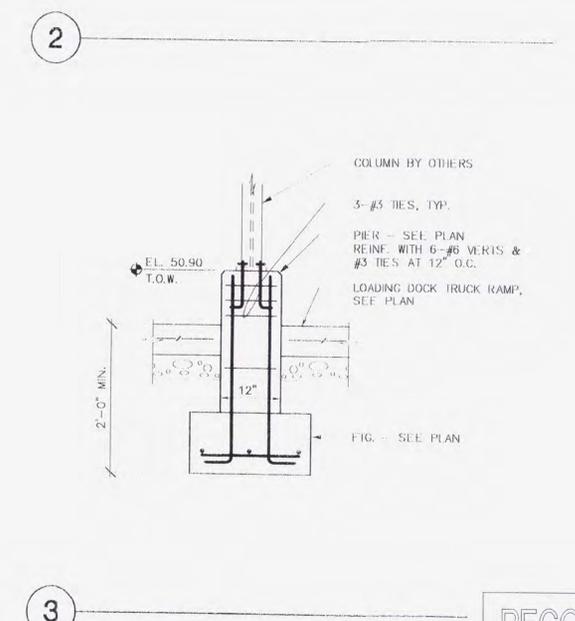
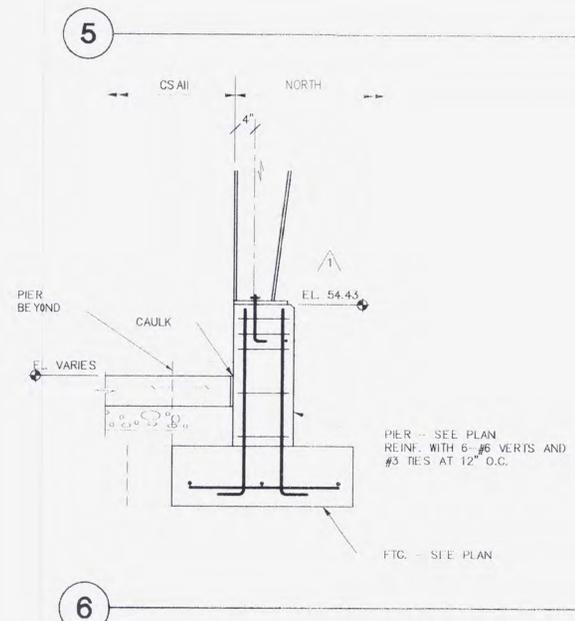
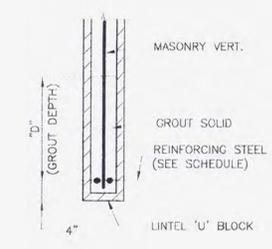


ALL REINFORCING TO EXTEND A MINIMUM OF 2'-0" BEYOND JAMBS AND BE GROUTED SOLID FOR DEPTH "D".

ALL CONCRETE MASONRY UNITS USED IN LENGTH OF LINTEL TO BE "OPEN-END" TYPE, TO INSURE FULLY GROUTED HEAD JOINTS.

ALL LINTELS TO BE PROPERLY SHORED DURING GROUTING AND REMAIN IN PLACE FOR A MINIMUM OF 7 DAYS FOLLOWING GROUTING.

ALL GROUT TO BE MINIMUM OF 2000 PSI AT 28 DAYS.



9 MASONRY LINTEL SCHEDULE

6

3



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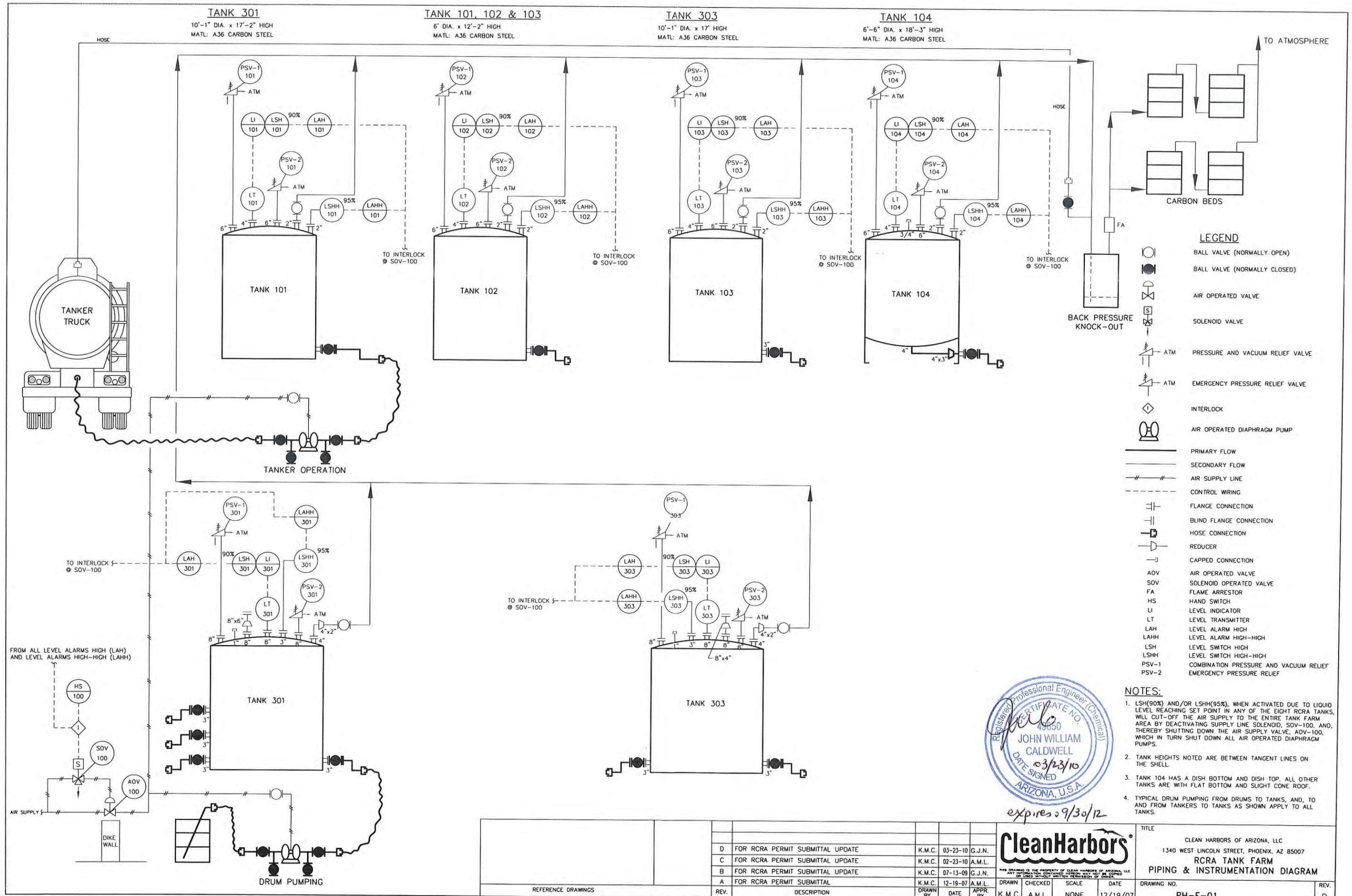


DETAILS

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PHOENIX, ARIZONA, 85057  
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DRW. BY: DEL	DATE: 6-4-96	PROJECT NO.: 4017
DISC. BY: EAP	DATE: 6-4-96	SHEET NO.: 58
APP. BY: AVS	DATE: 6-4-96	DWG. NO.:
SCALE: AS NOTED		581-CDA-110

RECORD SET



- LEGEND**
- BALL VALVE (NORMALLY OPEN)
  - BALL VALVE (NORMALLY CLOSED)
  - AIR OPERATED VALVE
  - SOLENOID VALVE
  - ATM PRESSURE AND VACUUM RELIEF VALVE
  - ATM EMERGENCY PRESSURE RELIEF VALVE
  - INTERLOCK
  - AIR OPERATED DIAPHRAGM PUMP
  - PRIMARY FLOW
  - SECONDARY FLOW
  - AIR SUPPLY LINE
  - CONTROL WIRING
  - FLANGE CONNECTION
  - BLIND FLANGE CONNECTION
  - HOSE CONNECTION
  - REDUCER
  - CAPPED CONNECTION
  - AOV AIR OPERATED VALVE
  - SOV SOLENOID OPERATED VALVE
  - FA FLAME ARRESTOR
  - HS HAND SWITCH
  - LI LEVEL INDICATOR
  - LT LEVEL TRANSMITTER
  - LAH LEVEL ALARM HIGH
  - LAHH LEVEL ALARM HIGH-HIGH
  - LSH LEVEL SWITCH HIGH
  - LSHH LEVEL SWITCH HIGH-HIGH
  - PSV-1 COMBINATION PRESSURE AND VACUUM RELIEF
  - PSV-2 EMERGENCY PRESSURE RELIEF

- NOTES:**
- LSH(90%) AND/OR LSHH(95%), WHEN ACTIVATED DUE TO LIQUID LEVEL REACHING SET POINT IN ANY OF THE EIGHT RCRA TANKS, WILL CUT-OFF THE AIR SUPPLY TO THE ENTIRE TANK FARM AREA BY DEACTIVATING SUPPLY LINE SOLENOID, SOV-100, AND, THEREBY SHUTTING DOWN THE AIR SUPPLY VALVE, AOV-100, WHICH IN TURN SHUT DOWN ALL AIR OPERATED DIAPHRAGM PUMPS.
  - TANK HEIGHTS NOTED ARE BETWEEN TANGENT LINES ON THE SHELL.
  - TANK 104 HAS A DISH BOTTOM AND DISH TOP. ALL OTHER TANKS ARE WITH FLAT BOTTOM AND SLIGHT CONE ROOF.
  - TYPICAL DRUM PUMPING FROM DRUMS TO TANKS, AND, TO AND FROM TANKERS TO TANKS AS SHOWN APPLY TO ALL TANKS.



REV.	DESCRIPTION	DATE	APPR. BY	DRAWN BY	SCALE	DATE	TITLE
D	FOR RCRA PERMIT SUBMITTAL UPDATE	03-23-10	G.J.N.	K.M.C.	NONE	12/19/07	<b>CleanHarbors</b> CLEAN HARBORS OF ARIZONA, LLC 1340 WEST LINCOLN STREET, PHOENIX, AZ 85007 <b>RCRA TANK FARM</b> <b>PIPING &amp; INSTRUMENTATION DIAGRAM</b> DRAWING NO. PH-F-01
C	FOR RCRA PERMIT SUBMITTAL UPDATE	02-23-10	A.M.L.	K.M.C.			
B	FOR RCRA PERMIT SUBMITTAL UPDATE	07-13-09	G.J.N.	K.M.C.			
A	FOR RCRA PERMIT SUBMITTAL	12-19-07	A.M.L.	K.M.C.			

AKE, Inc.  
January 10, 2008

**RCRA Tanks – Description of control system for  
Overfill Protection  
Phoenix, AZ**

*Reference drawing: PH-F-01, piping and instrument Diagram, RCRA Tank Farm.*

Each of the eight RCRA tanks has been fitted with a Rosemount 5400 series two-wire continuous level monitoring radar transmitter, as shown LT101, LT102, etc. on the drawing # PH-F-01. Each transmitter is connected to its own readout display. All readouts are centrally located in a control panel readily accessible to operators. The system continuously senses and indicates liquid level of the tank content at the readout displays in terms of volume in gallons.

The signal from the transmitters is also used to trigger a high level alarm, when a pre-set liquid level, typically set to 90% of capacity of the tank, is reached in any tank or tanks. During the filling operation, when a high level condition occurs in any one of the eight tanks, audible (horn) and visual (strobe light) alarms are activated. Simultaneously, the same signal also deactivates the solenoid valve, shown in the drawing at the air supply of diaphragm pumps, located in the main air supply to the entire tank farm area. The deactivation of solenoid valve cuts-off the air supply to any and all air operated diaphragm pumps in the tank farm. Thus stopping all tank farm operations, including any tank filling or draining operation or operations that may be going on at the time.

The audible and visual alarm alerts operators of the high level condition in one or more tanks. At the control panel operator can (a) visually verify the tank or tanks with high-level condition by identifying lit high-level light or lights located on the annunciation panel, (b) silence the audible alarm, horn, and turn-off the visual alarm, the strobe light, by pressing the acknowledge button, (c) make note of the alarm condition in the operating log, (d) via SOP, follow the necessary steps to isolate the tank or tanks with high level condition, so that they cannot be further filled. For constant reminder, even though the audible alarm is silenced and strobe light is turned-off, the annunciation panel lights will remain lit until the liquid level is reduced and high-level condition is removed in a given tank.

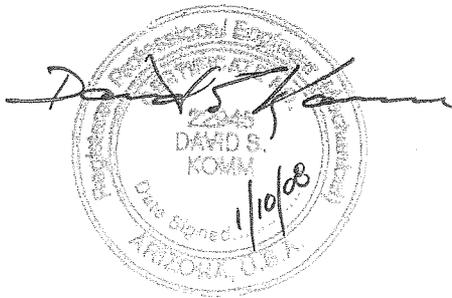
Once the operator has isolated the tank with a high-level condition and lined up filling operation to another tank, the pumping operation at other tanks can be restarted by re-activating the air supply solenoid valve from the control panel.

Each tank is also fitted with a Magnetrol - Echotel ultrasonic level switch shown as LSHH 101, LSHH 102, etc. on the drawing # PH-F-01. The point level switch is activated when tank free board reduces down to 5% of tank capacity. The point level switch provides redundant method of high-level indication. If and when a point-level-switch is activated, the audible and visual alarms will be triggered and air supply would be shut-off, in a similar mode as the high-level condition. This condition can also be verified at the annunciation panel via a high-high level indicator lit light.

AKE, Inc.  
January 10, 2008

The high-high level condition could only occur when (a) continued filling beyond high-level set point due to rare malfunctioning of the high level sensor or (b) operator error, where liquid is being pumped into a tank with an existing high-level condition. In either case, overfilling of the tank will be averted by high-high level switch activation. If a high-high level condition were to occur in a given tank, then by SOP, supervisor would lock out the valve of that particular tank. This tank could then only be accessed to remove liquid from it, after supervisory verification of pump and piping lineup.

Thus the redundant level controls, loss of air supply to pumps, alarms and SOP would prevent tank overfilling.



Handwritten signature: *David S. Komm*

Circular notary seal:  
Professional Employer  
22945  
DAVID S.  
KOMM  
Date Signed: 1/10/08  
ARIZONA, U.S.A.

S89°59'43"W  
652.53

**SURVEY STATEMENT:**

THIS IS A TOPOGRAPHIC MAP BASED ON AN AERIAL PHOTOGRAPHIC MAP PROVIDED BY VERTICAL MAPPING AND VERIFIED BY A FIELD SURVEY PERFORMED OCTOBER 2007 UNDER MY SUPERVISION

W.R. RALLS III  
ELS 41741



SCALE IN FEET  
1" = 20'

PREPARED FOR:  
CLEAN HARBORS ARIZONA, LLC  
1340 W LINCOLN STREET  
PHOENIX, ARIZONA 85007

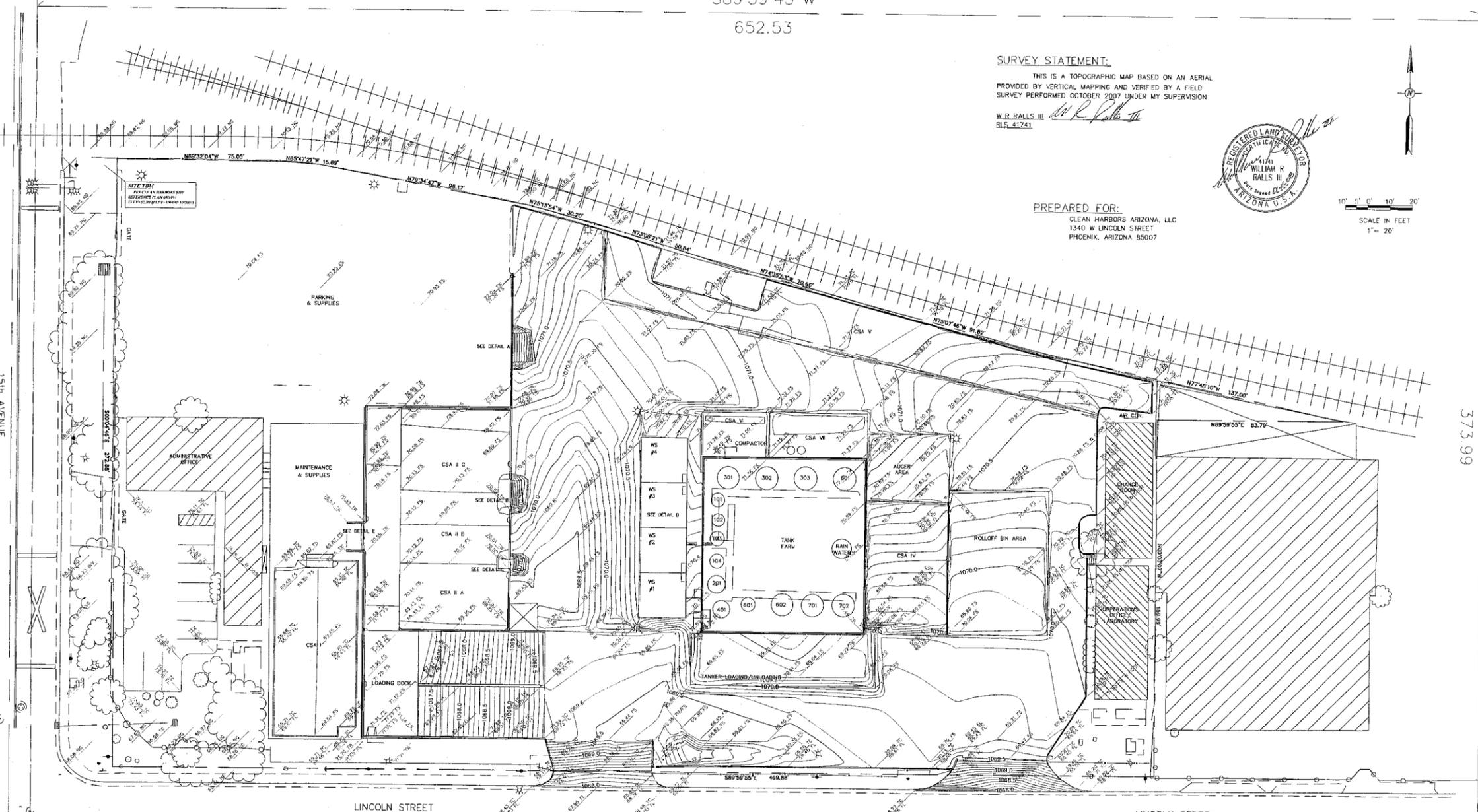
**REVISIONS**

NO.	DATE	DESCRIPTION

**GUIDA SURVEYING INC.**  
3016 S ASH AVE - SUITE 101  
(480) 885-2232 • FAX (480) 365-1401  
EMAIL: gnlcorp@guidasurveying.com



**BENCHMARK**  
CITY OF PHOENIX BENCHMARK  
NGVD-29 ELEVATION=1074.602  
CHISLED SQUARE ON WEST WING OF CATCH BASIN  
ON NORTHEAST CORNER OF INTERSECTION OF  
15TH AVENUE AND HARRISON



FS FINISHED SURFACE  
NG NATURAL GROUND  
FL FLOW LINE  
TC TOP OF CURB  
INV PIPE INVERT  
TW TOP OF WALL  
TG TOP OF GRATE  
CONTOUR INTERVAL = 1 TENTH

S89°59'55"E  
652.86

N00°03'07"W  
373.99

15TH AVENUE

LINCOLN STREET

LINCOLN STREET









