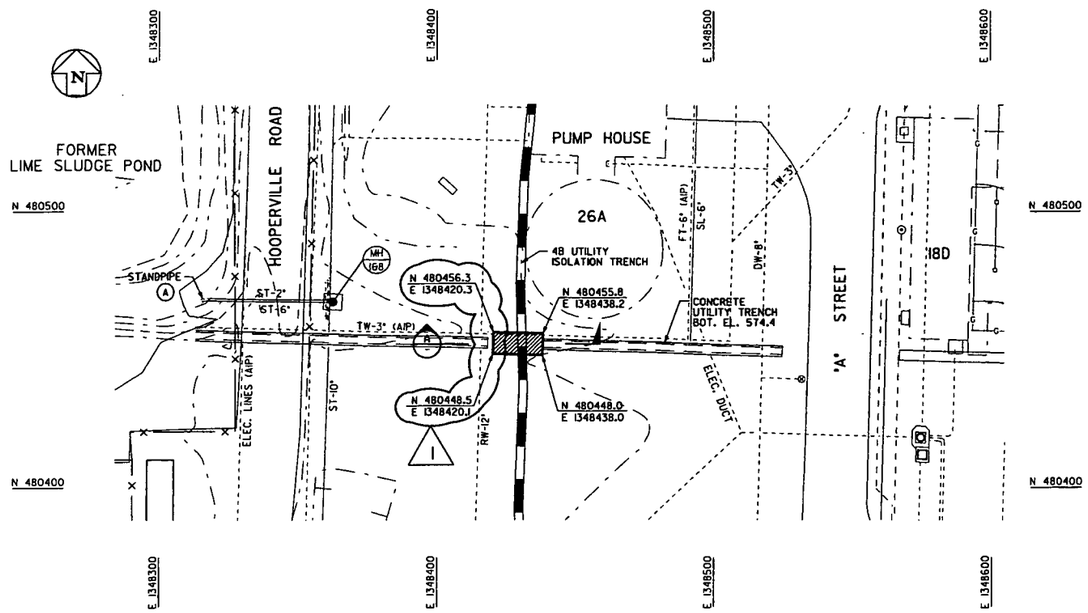
AREAS 3B/4B/5/MDC

DRAWING 99X-5500-X-00641
TECHNICAL REFERENCE PACKAGE

FOR PROJECT 20810

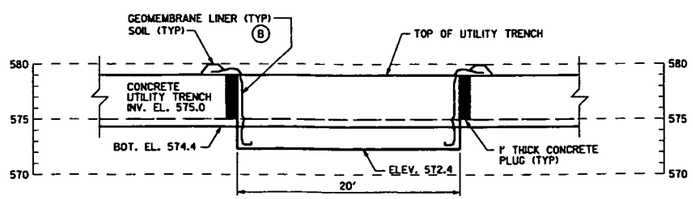
Technicalcover OSDF3 lind8392 Tuesday February 03 2004 01:41:19 PM EST

99xg0767 OSDF3 lind8392 Wednesday February 04 2004 10:55:10 AM EST



PLAN

20 0 20 40
SCALE: 1"=20'



SECTION A
NTS

5 0 5 10
SCALE: 1"=5'

CONSTRUCTION & DEWATERING NOTES

THE FOLLOWING SEQUENCE DOES NOT SUPERCEDE REQUIREMENTS SPECIFIED IN THE TECHNICAL SPECIFICATION OR CONSTRUCTION DRAWINGS, RATHER IT IS INTENDED TO PRESENT GENERAL GUIDANCE FOR SEQUENCING:

1. INSTALL A TRASH PUMP IN THE UTILITY TRENCH WEST OF HOOPERVILLE ROAD. PUMP WATER FROM THE TRENCH TO THE STAND PIPE LOCATED AT THE SOUTHEAST CORNER OF THE LIME SLUDGE PONDS.
2. EXCAVATE ABOVE-WAC SEDIMENT FROM THE PORTION OF THE UTILITY TRENCH REMAINING BETWEEN "A" STREET AND HOOPERVILLE ROAD AND DISPOSE OF THE SEDIMENT IN ACCORDANCE WITH SPECIFICATION SECTION 02205. REMOVE THE METAL PLATE FROM OVER THE UTILITY TRENCH AS EXCAVATION PROCEEDS.
3. WASH THE UTILITY TRENCH FROM EAST TO WEST USING A PRESSURE WASHER TO CLEAN THE TRENCH OF ABOVE-WAC SEDIMENT RESIDUE. COLLECT WASH WATER IN THE WESTERN PORTION OF THE TRENCH AND PUMP IT INTO THE STAND PIPE LOCATED IN THE SOUTHEAST CORNER OF THE LIME SLUDGE PONDS.
4. INSTALL CONCRETE PLUGS IN THE TRENCH JUST BEYOND THE LIMITS OF THE PROPOSED 20-FEET SECTION EXCAVATION AS SHOWN IN SECTION A.
5. EXCAVATE THE 20-FEET LONG SECTION OF UTILITY TRENCH DESIGNATED BY COORDINATES SHOWN IN THE PLAN VIEW TO ELEVATION 572.4. DISPOSE OF SOIL AND DEBRIS IN ACCORDANCE WITH SPECIFICATION SECTION 02205.
6. UPON COMPLETION OF UTILITY TRENCH EXCAVATION, DECONTAMINATE THE EXCAVATOR BUCKET WITHIN THE HAUL TRUCK BED AS DIRECTED BY THE CONSTRUCTION MANAGER.
7. THE CONSTRUCTION MANAGER WILL ARRANGE FOR REAL-TIME MONITORING AND/OR PHYSICAL SAMPLING AT THE EXCAVATION LIMITS.
8. DRAPE GEOMEMBRANE LINER OVER THE ENTIRE EXPOSED ENDS OF THE EXCAVATION TO A DEPTH OF 572.4 AS SHOWN IN SECTION A.
9. PLACE SOIL ON THE GEOMEMBRANE LINER AT THE TOP EDGE OF THE EXCAVATION AS SHOWN IN SECTION A SUFFICIENT TO ANCHOR THE LINER IN PLACE.
10. BACKFILL THE EXCAVATION BY PUSHING THE SIDES OF THE EXCAVATION INTO THE HOLE, KEEPING THE GEOMEMBRANE IN PLACE.
11. GRADE THE AREA TO PROVIDE A GRADUAL DIP IN THE PROPOSED PATH OF THE ISOLATION TRENCHER. COMPACT THE AREA WITH FOUR PASSES OF EXCAVATION EQUIPMENT TO PROVIDE A FIRM PATH FOR THE TRENCHER.

GENERAL NOTES

1. SEE DRAWING 99X-5500-X-00639 FOR LEGEND AND GENERAL NOTES.
2. SEE THE LATEST REVISIONS OF UNDERGROUND UTILITY GRID DRAWINGS 220-5500-P-00678 (GRID 19) AND 220-5500-P-00684 (GRID 25) FOR INFORMATION PERTAINING TO UNDERGROUND UTILITIES IN THE AREA.
3. THIS DRAWING PROVIDES DETAILS, LIMITS AND GENERAL SEQUENCING FOR EXCAVATION OF ABOVE-WAC SEDIMENTS FROM THE REMAINING SECTION OF UTILITY TRENCH WITHIN AREA 4B AND EXCAVATION OF A 20 FEET LONG SECTION OF THE TRENCH IN THE PATH OF 3B/4B UTILITY ISOLATION TRENCHING.
4. FIELD VERIFY THAT PIPING WITHIN THE UTILITY TRENCH HAS BEEN REMOVED BY OTHERS.
5. EXCAVATION LIMITS SHOWN REPRESENT THE MINIMUM EXCAVATION REQUIRED TO CAPTURE CONTAMINATION AND UTILITY TRENCH MATERIAL. SEDIMENT WITHIN THE UTILITY TRENCH, THE TRENCH CONCRETE, AND 2 FEET OF SOIL ALONGSIDE AND UNDERNEATH THE UTILITY TRENCH SHALL BE DISPOSED OF AT WPRAP AS ABOVE-WAC MATERIAL.
6. PLACE GEOMEMBRANE LINER ON THE GROUND WHERE EXCAVATED MATERIAL IS TO BE TRANSFERRED FROM ONE VEHICLE TO ANOTHER.
7. EXCAVATE ABOVE-WAC MATERIAL IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND AS DIRECTED BY THE CONSTRUCTION MANAGER. THE CONSTRUCTION MANAGER WILL VERIFY THE LIMITS OF ABOVE-WAC EXCAVATION IN THE FIELD AND EXPAND THE EXCAVATION AS NECESSARY.
8. SIZE REDUCE TRENCH CONCRETE TO MEET WPRAP WAC IN ACCORDANCE WITH SPECIFICATION SECTION 02205. WET CONCRETE DURING BREAKING AS NECESSARY TO CONTROL DUST.
9. SURVEY FINAL LIMITS OF SEDIMENT REMOVAL AND UTILITY TRENCH EXCAVATION.
10. INSTALL WIREMESH CONSTRUCTION SAFETY FENCE AROUND THE TRENCH EXCAVATION AND HANG "DANGER-OPEN EXCAVATION" SIGNAGE AS DIRECTED BY THE CONSTRUCTION MANAGER.
11. PERFORM WORK IN ACCORDANCE WITH THE APPROVED CONSTRUCTION TRAVELER PACKAGE.

KEYED NOTES

(A) PUMP WASH WATER COLLECTED IN THE UTILITY TRENCH TO THE STANDPIPE LOCATED IN THE SOUTHEAST CORNER OF THE LIME SLUDGE PONDS.

(B) GEOMEMBRANE MATERIAL SHALL MEET OR EXCEED THE MATERIAL PROPERTIES SPECIFIED IN SPECIFICATION SECTION 02770.

000002

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
1	REVISED PER DCN: 20810-001	2/04/04	RML	GEP
0	ISSUED CERTIFIED FOR CONSTRUCTION	3/17/03	RML	GEP

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
FLUOR FERNALD, INC.

PROJECT NAME
SOIL REMEDIATION

DRAWING TITLE
AREA 4B
SILOS UTILITY TRENCH EXCAVATION PLAN
PHASE I

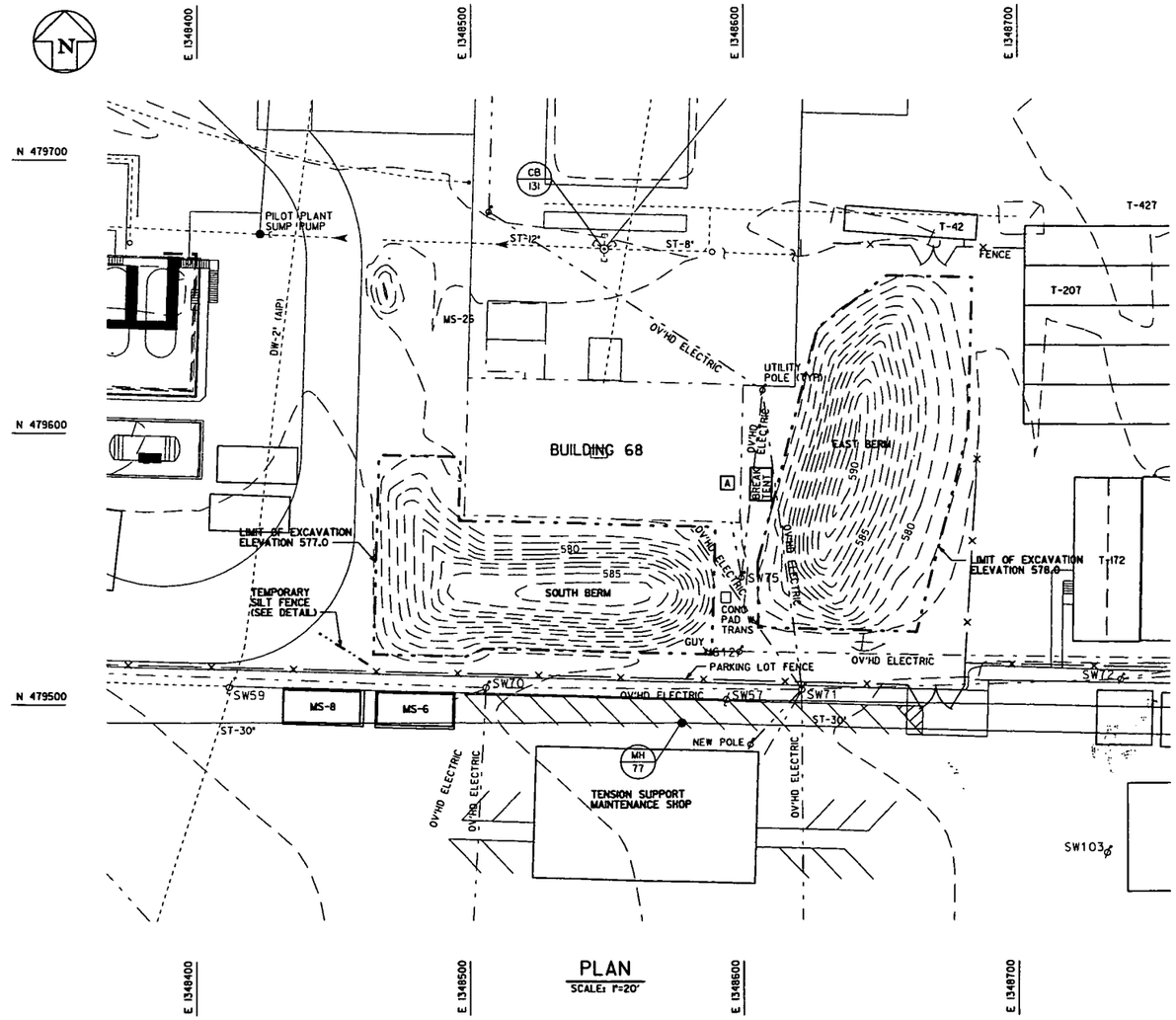
APPROVALS

COGNIZANT ENG.	R. RUSSELL	3/4/03	SAFETY ENG.	J. MCDONOUGH FOR G. JOHNSON	3/4/03
CIVIL & STR.			MAINTENANCE		
ELECTRICAL			FIRE PROTECT.		
ENGINEER	A.C. SIKKER	3/4/03	WASTE MANAGE		
INSTRUMENT			SECURITY		
MECHANICAL			QA	R. KOEBER	3/4/03
			CONSTRUCTION	C. WARREN	3/4/03
CHECKED	J.D. CROW	3/4/03			
APPROVED	J. PRIE	3/4/03			

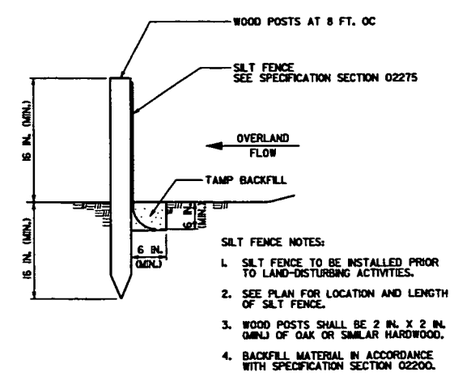
DRAWN BY	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
RM LINDGREN	20810	99X-5500-G-00767		1
RES PROJECT NO.	FILENAME 99XG0767.DGN			

99xg0768 OSDF3 lind8392 Tuesday February 03 2004 10:01:16 AM EST

533-4



PLAN
SCALE: 1"=20'



SILT FENCE NOTES:

1. SILT FENCE TO BE INSTALLED PRIOR TO LAND-DISTURBING ACTIVITIES.
2. SEE PLAN FOR LOCATION AND LENGTH OF SILT FENCE.
3. WOOD POSTS SHALL BE 2 IN. X 2 IN. (MIN.) OF OAK OR SIMILAR HARDWOOD.
4. BACKFILL MATERIAL IN ACCORDANCE WITH SPECIFICATION SECTION 02200.

SILT FENCE DETAIL
NTS

20 0 20 40
SCALE: 1"=20'

GENERAL NOTES

1. HORIZONTAL CONTROL SHOWN ON THIS DRAWING IS BASED UPON NORTH AMERICAN DATUM 1983 (NAD 83).
2. VERTICAL CONTROL SHOWN ON THIS DRAWING IS BASED UPON NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29).
3. SEE THE LATEST REVISION OF UNDERGROUND UTILITY DRAWING 22G-5500-P-00685 (GRID 26) FOR LOCATIONS AND DEPTHS OF EXISTING UTILITIES.
4. PROTECT TRANSFORMER NEAR POLE SW75, UNDERGROUND AND OVERHEAD UTILITIES, UTILITY POLES, AND GUY WIRES DURING BERM EXCAVATION.
5. TECHNICAL SPECIFICATIONS GOVERNING THIS ACTIVITY ARE THE LATEST REVISIONS OF TECHNICAL SPECIFICATIONS FOR SOIL AND DISPOSAL FACILITY PROJECT - EXCAVATION FOR REMEDIATION (DOCUMENT NO. 20300-TS-0001) AND ON-SITE DISPOSAL FACILITY (OSDF) PHASE IV TECHNICAL SPECIFICATIONS (DOCUMENT NO. 20104-TS-0001).
6. INSTALL TEMPORARY SILT FENCE PER DETAIL ON THIS DRAWING.
7. PROCEED WITH EXCAVATIONS OF THE "EAST" BERM FROM THE NORTH SIDE AND THE "SOUTH" BERM FROM THE WEST SIDE MAKING SURE THE EXCAVATED SOIL IS NOT PUSHED AGAINST THE EXISTING PARKING LOT FENCE.
8. REMOVE BERM PILES TO ELEVATION SHOWN ON LIMIT OF EXCAVATION OUTLINES.
9. EXCAVATE BERMS IN A MANNER THAT MINIMIZES DISTURBANCE TO SOIL BELOW THE LIMIT OF EXCAVATION ELEVATION AS INDICATED ON THIS DRAWING.
10. STABILIZE THE EXCAVATED AREA USING INTERIM VEGETATION SEED MIX IN ACCORDANCE WITH SPECIFICATION SECTION 02930.

KEYED NOTES

A PRIOR TO EXCAVATION, VERIFY BREAKTENT BETWEEN BUILDING 68 AND EAST BERM HAS BEEN REMOVED BY OTHERS.

000003

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
0	ISSUED CERTIFIED FOR CONSTRUCTION	7/16/03	RML	GEP

DETAILS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD CLOSURE PROJECT

THIS DRAWING PREPARED BY
FLUOR FERNALD, INC.

PROJECT NAME
SOIL REMEDIATION

DRAWING TITLE
AREA 4B
BUILDING 68 BERM REMOVAL

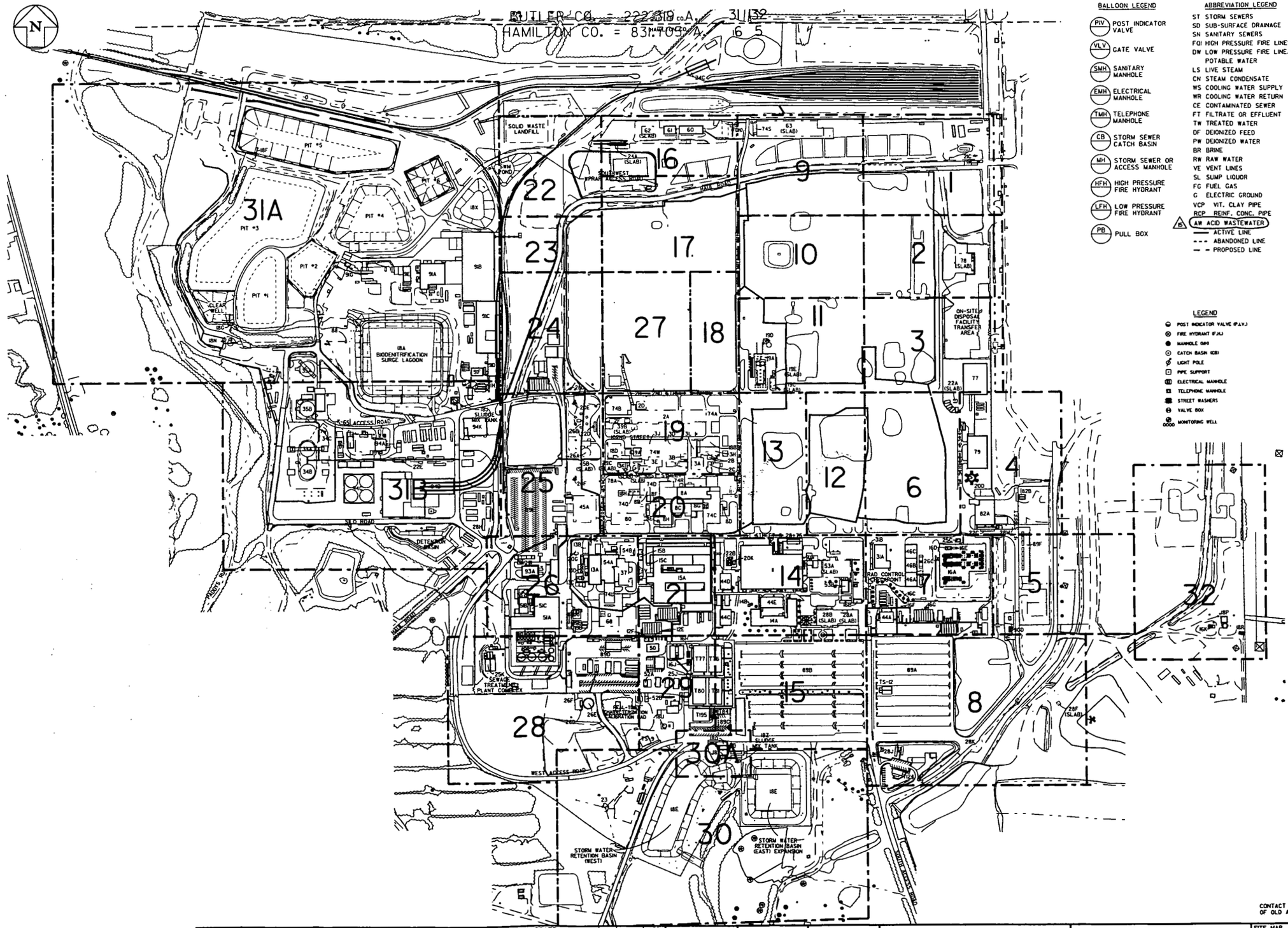
APPROVALS

COGNIZANT ENG.	A. SHIER	7/17/03	SAFETY ENG.	J. MEDACCO	7/17/03
CIVIL & STR.			MAINTENANCE		
ELECTRICAL			FIRE PROTECT.		
ENGINEER	B. RUSSELL	7/17/03	WASTE MANAGE		
INSTRUMENT			SECURITY		
MECHANICAL			QA	B. FRIGGE	7/17/03
			CONSTRUCTION	C. CHINEY	7/17/03
CHECKED	C. HERMANN	7/17/03			
APPROVED	G.E. PAUL	7/18/03			

DRAWN BY	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
RM LINDGREN	20810	99X-5500-G-00768		0
RES PROJECT NO.	FILENAME 99XG0768.DGN			

FCP5AE.DGN 5/30/03

22xp0659 OSDF3 lind8392 Friday January 23 2004 01:44:26 PM EST



BALLOON LEGEND

- PIV — POST INDICATOR VALVE
- VLV — GATE VALVE
- SMH — SANITARY MANHOLE
- EMH — ELECTRICAL MANHOLE
- TMH — TELEPHONE MANHOLE
- CB — STORM SEWER CATCH BASIN
- MH — STORM SEWER OR ACCESS MANHOLE
- HFH — HIGH PRESSURE FIRE HYDRANT
- LFH — LOW PRESSURE FIRE HYDRANT
- PB — PULL BOX

ABBREVIATION LEGEND

ST	STORM SEWERS
SD	SUB-SURFACE DRAINAGE
SN	SANITARY SEWERS
FQ	HIGH PRESSURE FIRE LINES
DW	LOW PRESSURE FIRE LINE/ POTABLE WATER
LS	LIVE STEAM
CN	STEAM CONDENSATE
WS	COOLING WATER SUPPLY
WR	COOLING WATER RETURN
CE	CONTAMINATED SEWER
FT	FILTRATE OR EFFLUENT
TW	TREATED WATER
DF	DEIONIZED FEED
PW	DEIONIZED WATER
BR	BRINE
RW	RAW WATER
VE	VENT LINES
SL	SUMP LIQUOR
FG	FUEL GAS
G	ELECTRIC GROUND
VCP	VIT. CLAY PIPE
RCP	REINF. CONC. PIPE
AW	ACID WASTEWATER

- ACTIVE LINE
- ABANDONED LINE
- PROPOSED LINE

GRID	DRAWING NUMBER
1	22C-5500-P-00660
2	22C-5500-P-00661
3	22C-5500-P-00662
4	22F-5500-P-00663
5	22A-5500-P-00664
6	22F-5500-P-00665
7	22H-5500-P-00666
8	22H-5500-P-00667
9	22C-5500-P-00668
10	22C-5500-P-00669
11	22C-5500-P-00670
12	22E-5500-P-00671
13	22E-5500-P-00672
14	22H-5500-P-00673
15	22H-5500-P-00674
16	22B-5500-P-00675
17	22B-5500-P-00676
18	22B-5500-P-00677
19	22D-5500-P-00678
20	22D-5500-P-00679
21	22G-5500-P-00680
22	22B-5500-P-00681
23	22B-5500-P-00682
24	22B-5500-P-00683
25	22D-5500-P-00684
26	22G-5500-P-00685
27	22B-5500-P-00686
28	22A-5500-P-00687
28	22A-5500-P-00744
29	22A-5500-P-00688
30	22A-5500-P-00689
30A	22A-5500-P-00785
31A	22A-5500-P-00804
31B	22A-5500-P-00805
32	22A-5500-P-00707

LEGEND

- POST INDICATOR VALVE (P.I.V.)
- FIRE HYDRANT (F.H.)
- MANHOLE (MH)
- CATCH BASIN (CB)
- LIGHT POLE
- PIPE SUPPORT
- ELECTRICAL MANHOLE
- TELEPHONE MANHOLE
- STREET WASHERS
- VALVE BOX
- MONITORING WELL

GRID DETAIL DRAWINGS

GRID NO.	DETAIL DWG NO.
10	22C-5500-P-00706
13,14,20,21	22H-5500-P-00963
28	22A-5500-P-00744
31A	22A-5500-P-00961
31B	22A-5500-P-00930
31B	22A-5500-P-00961

FUEL GAS (FG) NOTE:

THE ONLY ACTIVE FUEL GAS LINES ARE FROM NEW GAS METER AT WILLEY ROAD TO HIGHLINE (EAST OF BLDG. 51A), THEN TO NEW BOILER HOUSE (BLDG. 93A) AND TO WRAP AREA.

FERNALD UNDERGROUND UTILITES

THIS COMPOSITE DRAWING CONTAINS INFORMATION TAKEN FROM ENGINEERING DRAWINGS FROM 1951 TO THE PRESENT WHICH ARE PRESENTLY ON FILE IN THE FERNALD SITE ENGINEERING DEPARTMENT. NOTE: UNDERGROUND UTILITIES WHICH ARE NOT OF RECORD IN THE FERNALD SITE ENGINEERING DEPARTMENT ARE NOT DISPLAYED IN THESE COMPOSITE DRAWINGS.

POST INDICATOR COLORS AT THE F.E.M.P.
(PER FRED BRAUN, UTILITY ENG. 5/18/95)

COLOR	SERVICE
WHITE	(DW) POTABLE WATER LOW PRESSURE FIRE HYDRANT
ORANGE/GREEN	HIGH PRESSURE FIRE HYDRANT
YELLOW	(TW) TREATED WATER PROCESS WATER
BLACK	(FT) EFFLUENT
GREEN	(FS) COOLING WATER SUPPLY
BLUE	(RR) COOLING WATER RETURN
PINK	(RW) RAW WATER
PINK/WHITE	(AW-HSD) (RW) & (DW) CROSS CONNECTION
RED	PROPANE AREA SUMP PIT
PINK/GREEN	(RW) & FIRE PUMP HOUSE (26A)
GRAY	(FT) LIME SLURRY POND LINE
YELLOW/GREEN	(TW) TREATED WATER
WHITE/GREEN	(DW) FEED TO GROUNDWATER STORAGE TANK

FIRE HYDRANT COLORS AT THE F.E.M.P.

ORANGE	LOW PRESSURE HYDRANTS
ORANGE/GREEN	HIGH PRESSURE HYDRANTS

INTERIOR PIPING COLORS (PRELIMINARY)

BLUE	AIR
GREEN	WATER
RED	FIRE PROTECTION

000004

CONTACT CADD SERVICES FOR PIPE SPECIFICATIONS OF OLD AND MOST OF THE NEW PIPING INSTALLATIONS.

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY. FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.

NO.	REVISIONS	DATE	DWN. BY	APPD.
15	GENERAL UPDATE	6/5/03	GEP	GEP
14	ADDED GRID DETAIL DRAWING INDEX	6/07/00	RML	GEP
13	REVISED PER MARK-UP	5/16/00	SJS	GEP

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
12	REMOVE GRID 10A REF. GENERAL UPDATE	1-25-00	RML	GEP	
11	MODIFIED GRID 26 & GRID 31B OUTLINES, ADD GRID 10A	1-05-98	RML	GEP	
10	MODIFIED GRID 28 OUTLINE, ADDED DWG NO., DELETED GRID 33	1-9-98	RML	GEP	
9	UPDATED	1-11-97	GEP	GEP	
8	UPDATED	1-15-96	JSW	GEP	93X-5900-G-00273
7	UPDATED	2-14-95	GES	GEP	93X-5900-G-00272

FORMAT REVISED 8/17/95

NOTE:
FERMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

PERFORMANCE GRADE
1 2 3 4 5
BY: DATE:

APPROVALS

CIVIL & STR.			SAFETY ENG.
ELECTRICAL			MAINTENANCE
ENGINEER			Q.A.
INSTRUMENT			FIRE PROTECT.
MECHANICAL			WASTE MANAGE
			SECURITY
			CRU
CHECKED	GP		
APPROVED	S.E.PAIL		

FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION
FERMCO
Fernald Environmental Management Project
U.S. DEPARTMENT OF ENERGY

SITE MAP

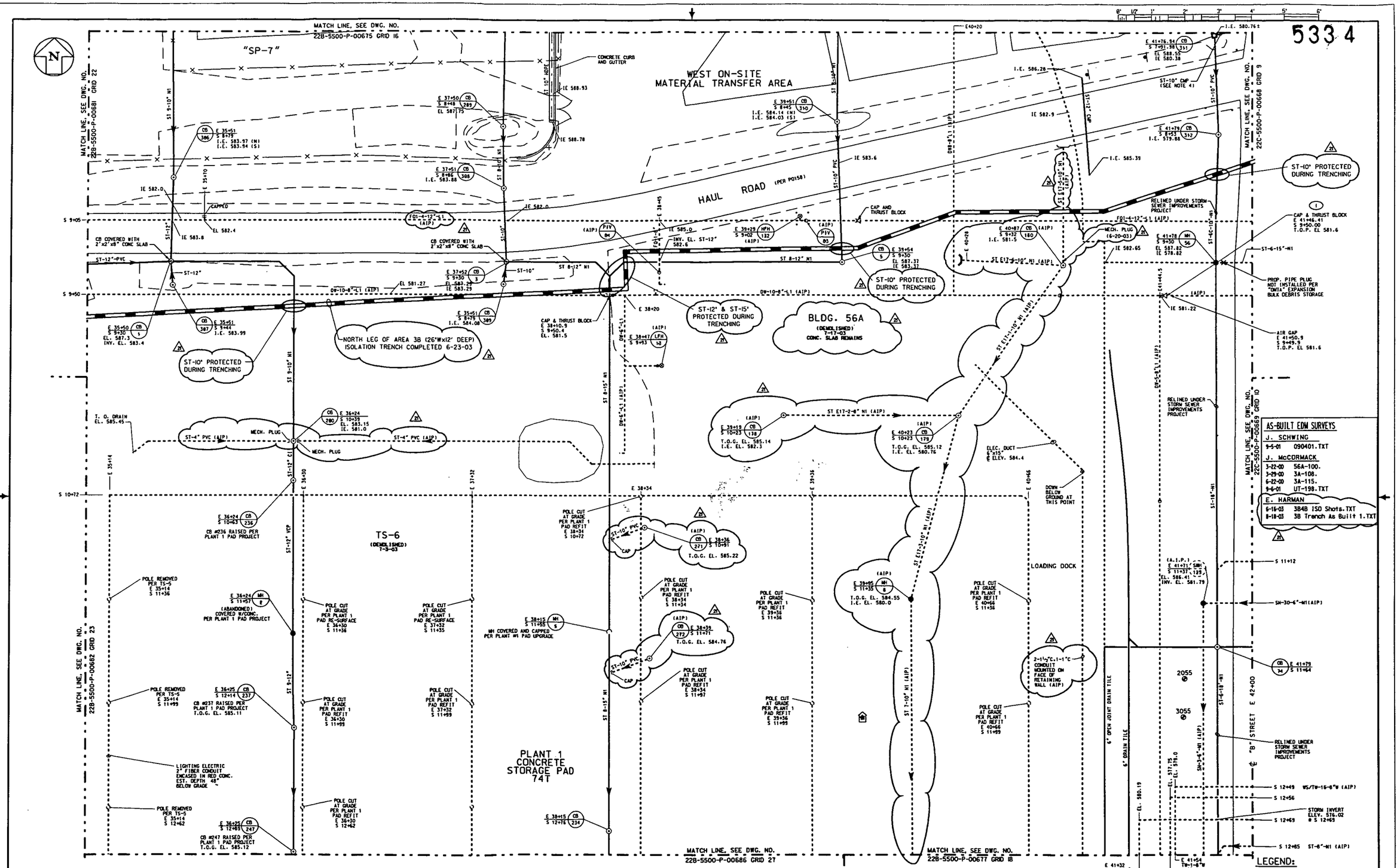
MASTER GRID OF UNDERGROUND UTILITY PLANS

DATE 5/5/78
DRAWN G.E.S.

22X-5500-P-00659 | 15

FILE NAME: /UNDER/22XP0659.DGN

22bp0676 OSDF3 lind8392 Friday January 23 2004 01:51:53 PM EST



DIGITAL PHOTO NUMBERS

(1) 7337-001.JPG THRU 7337-006.JPG

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY. FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.
3. HAUL ROAD & REV 8 RELOCATED AND NEW CATCH BASINS AND FIRE HYDRANTS PER B.L. PATHE AS-BUILT SURVEY (PO 158) SEE /PATHE/HAUL/HAULROAD.DGN.
4. STORM SEWERS PER PROJECT 20102. SEE DRAWING /RES444/SI20102-005.DGN

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					21	FOR 4-12" LI AIP PER COMPLETED WORK ORDER RT00343, STORM SEWERS AND CATCH BASINS AIP PER AREA 3B UTILITY ISOLATIONS PROJECT	1-14-03	GES	GEP	17X-7000-S-00008 22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.05
.XXX ± 0.025
.XXXX ± 0.0005
ORIG. RELEASE DATE

APPROVALS				
			SAFETY ENG.	
CIVIL & STR.			MAINTENANCE	
ELECTRICAL				
ENGINEER			O.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E PAUL		SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

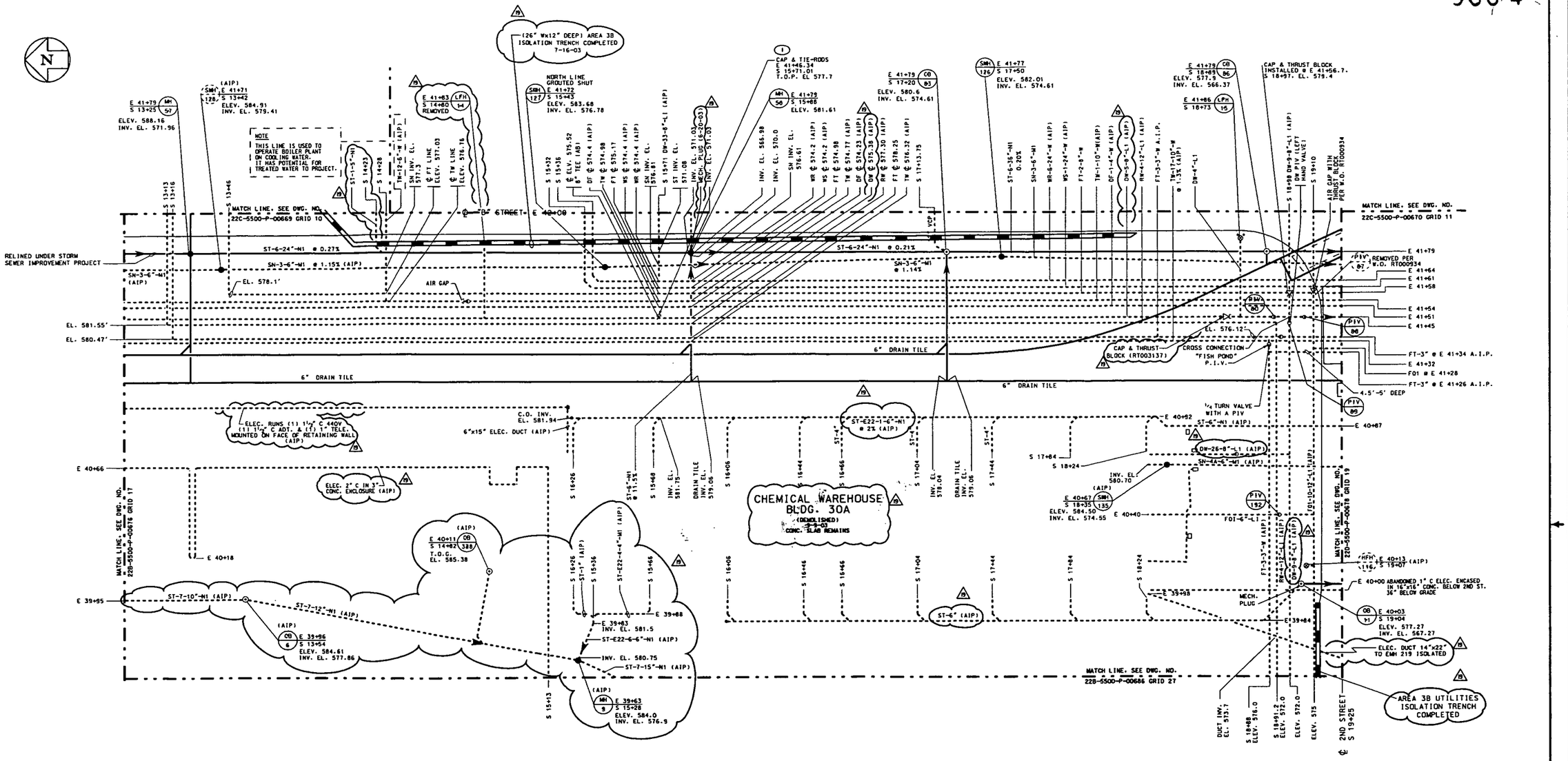
BLDG. 56 & PLANT #1 PAD — YARD AREA
GRID 17
UNDERGROUND UTILITIES
SCALE 1"-20'

DATE 4-25-90
DRAWN DEL. TURPIN

22B-5500-P-00676 | 21

FILE NAME: /UNDER/22BP0676.DGN

22bp0677 OSDF3 lind8392 Friday January 23 2004 01:52:34 PM EST



AS-BUILT EDM SURVEYS
A. CLINTON
8-13-02 Thrustblock.txt
E. HARMAN
6-10-03 3B Isolation shots.txt
8-18-03 3B Trench As Built 1.txt
J. McCORMACK
4-5-00 3A-110.
11-15-01 UT-216.txt

DIGITAL PHOTO NUMBERS

(1) T337-007.JPG THRU T337-010.JPG

000006

LEGEND:

- ABANDONED
- ACTIVE

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE AS-BUILT. COORDINATES SHOWN IN SLANTED FONTS WILL BE CONSIDERED AS-BUILT PER FIELD SURVEYS. IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.

NO.	REVISIONS	DATE	DWN. BY	APPD.
19	INSTALLED CAP & THRUST BLOCK PER COMPLETED WORK ORDER	1-2-03	GES	GEP
	RT003137, AIP STORM SEWERS PER COMPLETED AREA 3B UTILITY			
	ISOLATION PROJECT, DW-5-8" -L1 BLDG. 30A AIP PER W.O. RT003631			
	MISC. UNDERGROUND AIP, DW-9-8"-L1 AIP PER COMPLETED W.O. RT003139			
18	ALL FT-3" LINE A.I.P. PER LIME SLUDGE PONDS	1-15-02	GES	GEP
	REMEDIATION PROJECT #20103			

22X-5500-P-00659
REF. DWG. NO.

NOTE:
WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/64
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
FINAL RELEASE DATE

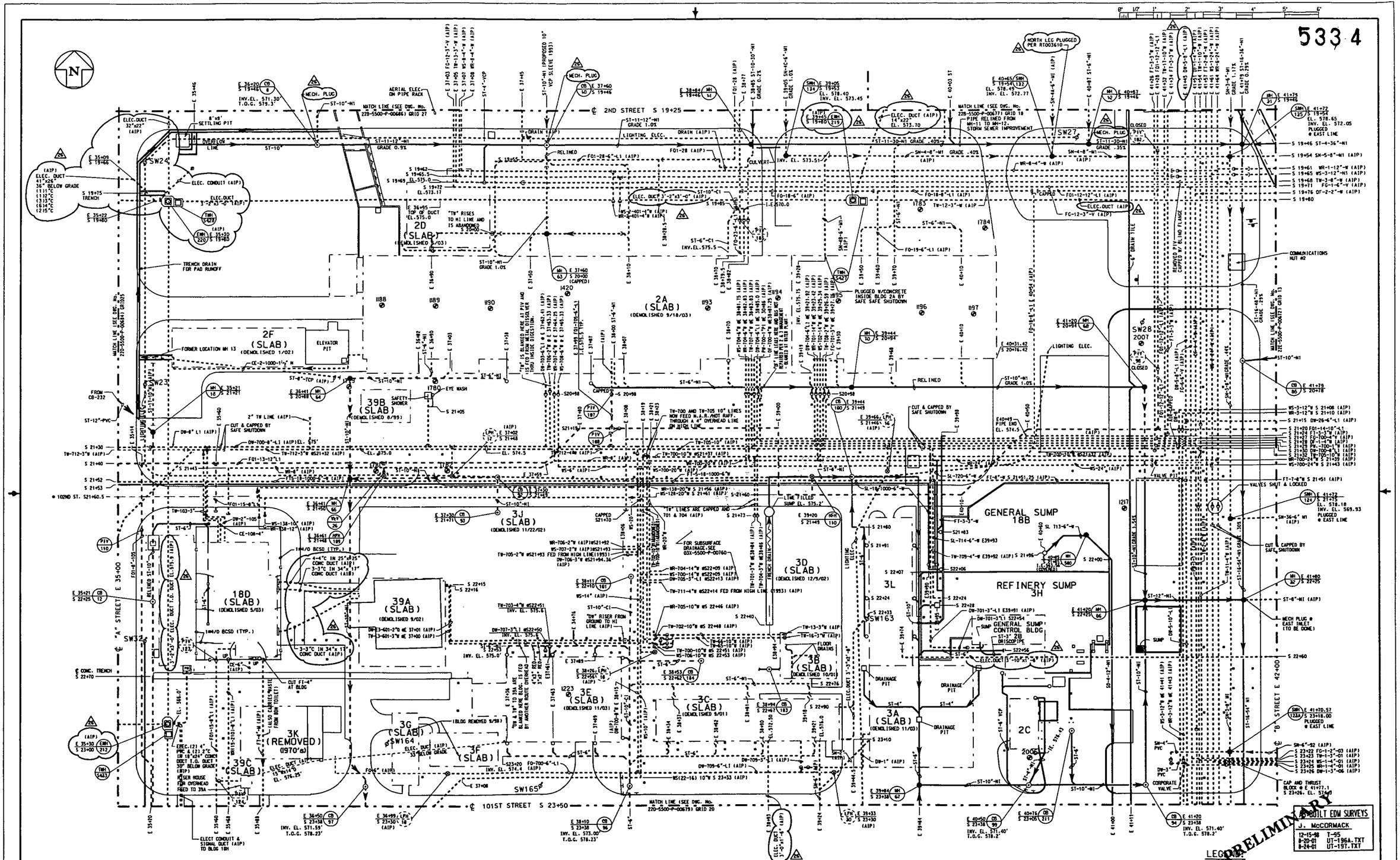
APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			Q.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E. PAUL	1/5/93	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 30 YARD AREA
GRID 18
UNDERGROUND UTILITIES
SCALE 1"=20'
DATE 4-25-90
DRAWN DEL. TURPIN
22B-5500-P-00677 | 19

FILE NAME: /UNDER/22BP0677.DGN

22dp0678 OSDF3 lind8392 Friday January 23 2004 01:53:07 PM EST



NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.

NO.	REVISIONS	DATE	DWN. BY	APPD.
26	DW-5-8"-L1, BRANCHES & HYDRANTS AIP PER COMPLETED W.O. RT003139	2/5/18	GEP	
	ELEC. DUCTS, EMH-212, 219 & 220 AIP PER COMPLETED W.O. CM056671			
	ELEC. ISOLATED BETWEEN BLDG. 3A & 3L PER COMP. W.O. RT003685			
	NORTH LEG PF SMH-132 PLUGGED PER COMPLETED W.O. RT003610			
	ADDED STORM SEWER AIP & PLUGGED LOCATIONS, BLDG. DEMO. DATES			

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					22X-5500-P-00659

NOTE:
WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
ENG. RELEASE DATE

APPROVALS

CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		Q.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT.	
		WASTE MANAGE	
CHECKED	GEP	D.O.E.	
APPROVED	G E PIKE	9-24-98	SECURITY

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

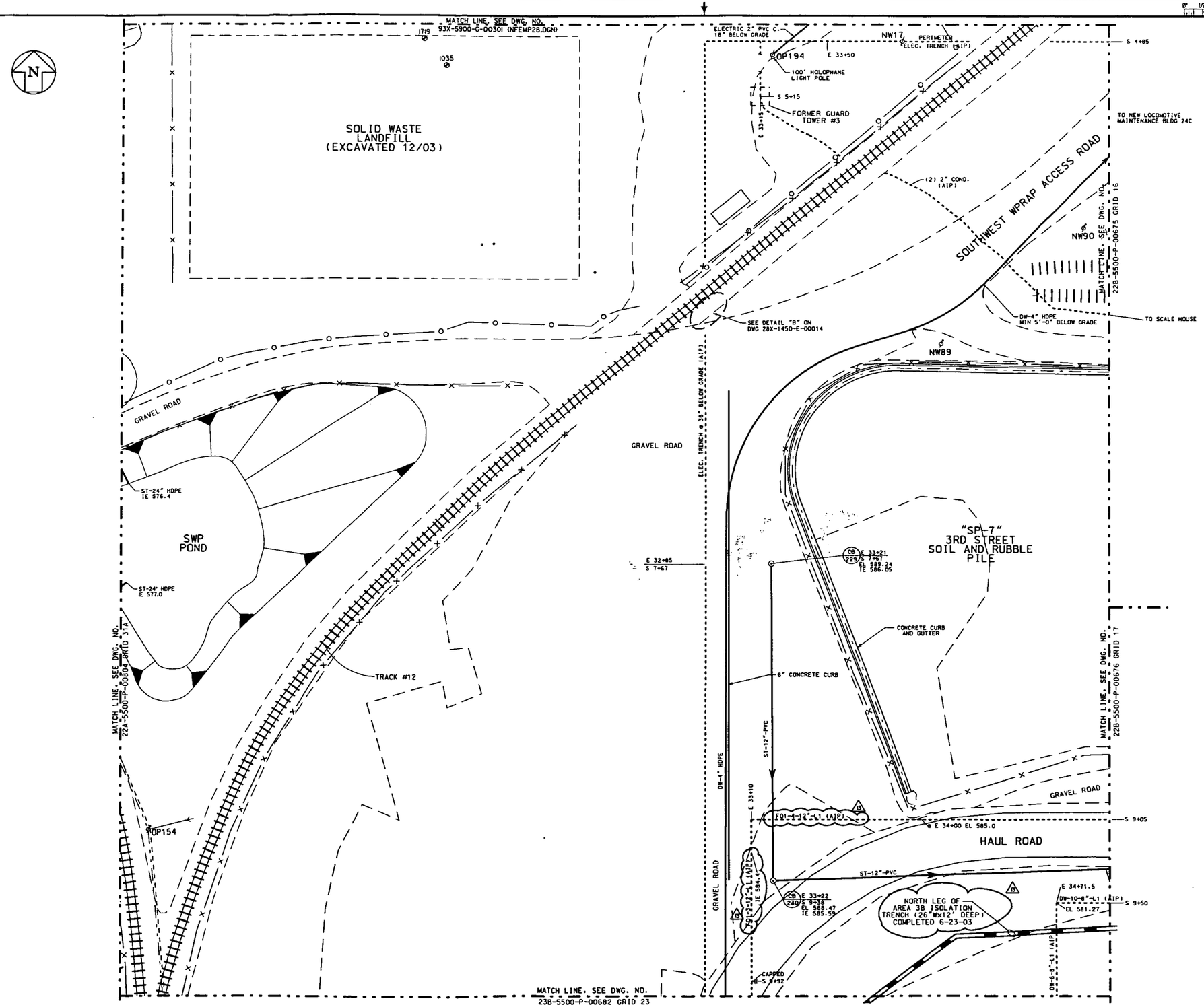
PLANTS 2 & 3 — YARD AREA
GRID 19
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 10-10-90
DRAWN J. KING
22D-5500-P-00678 | 26

FILE NAME: /UNDER/22DP0678.DGN

22bp0681 OSDF3 lind8392 Friday January 23 2004 01:54:09 PM EST

5334



AS-BUILT EDM SURVEYS

J. SCHWING
5-10-99 WL-106.TXT
6-3-99 060399NA.TXT

J. McCORMACK
11-20-99 RY-114.
11-23-99 RY-115.

E. HARMAN
8-18-03 3B Trench As Built 1.txt

000008

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.
3. FOR INFORMATION ON HAUL ROAD SEE P0681.

NO.	REVISIONS	DATE	DWN. BY	APPD.
13	F01-4-12"-L1 A.I.P. PER COMPLETED WORK ORDER RT003143, ADDED COMP. AREA 3B TRENCH	12-03	GES	GEP

22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

APPROVALS

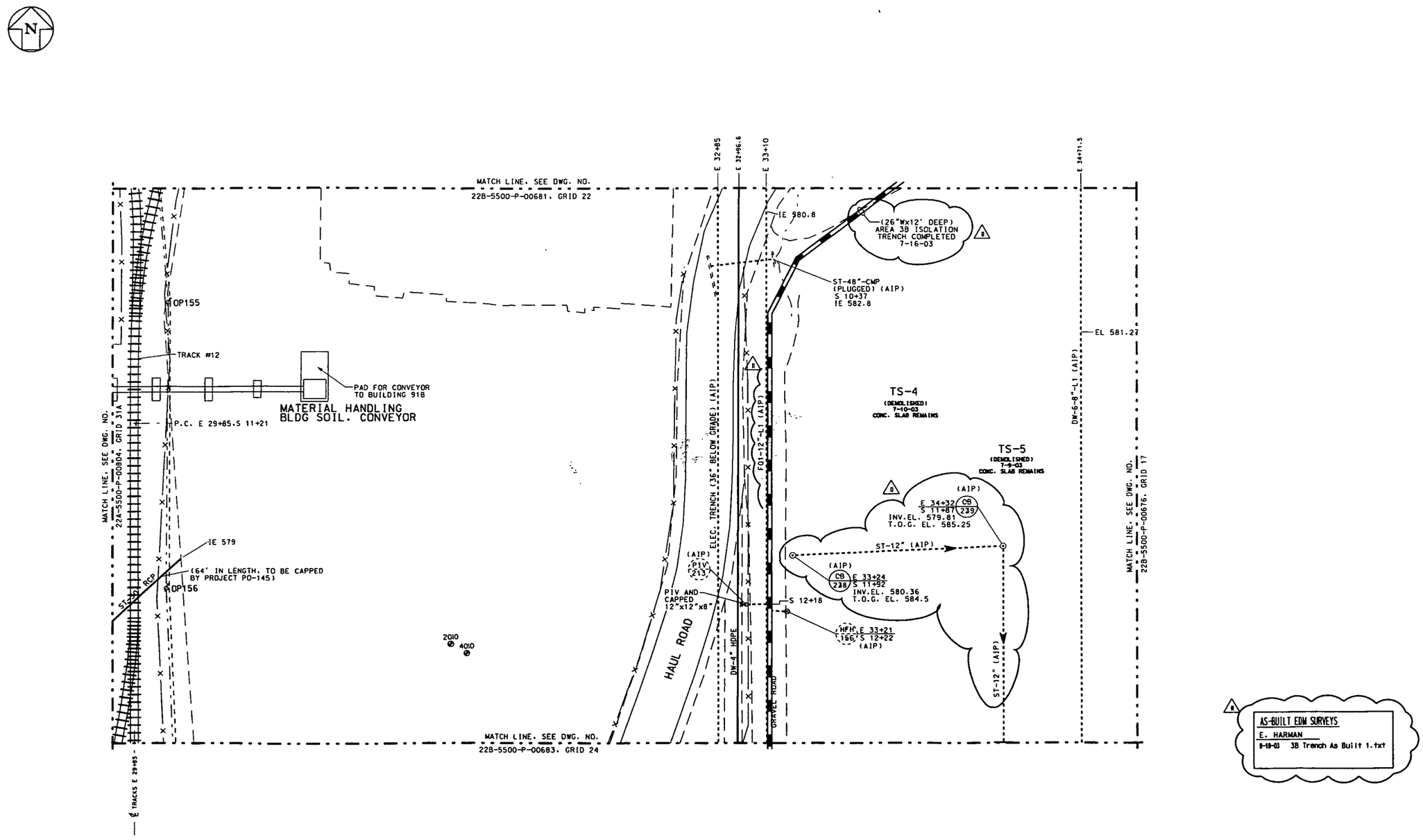
CIVIL & STR.			SAFETY ENG.
ELECTRICAL			MAINTENANCE
ENGINEER			Q.A.
INSTRUMENT			
MECHANICAL			FIRE PROTECT.
			WASTE MANAGE
CHECKED	GEP		D.O.E.
APPROVED	G.E.PAUL	12/23/03	SECURITY

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

N.W. CORNER/SITE YARD AREA
GRID 22
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 9/25/90
DRAWN S.J.S.
22B-5500-P-00681 13

FILE NAME: /UNDER/22BP0681.DGN



000009

NOTE:
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3. FOR INFORMATION ON HAUL ROAD SEE PO158.

NO.	REVISIONS	DATE	DWN. BY	APPD.
11	FO1-12"-L1 A.I.P. PER WORK ORDER	1-2-03	GES	GEP
	RT003143, STORM SEWERS A.I.P.			
10	REMOVED T-53, AP DW-6-8"L1, GENERAL UPDATE	6-4-02	RML	GEP
9	ADD PIV NUMBER TO FO1 LINE, ADDED T-53, SOIL	2-25-00	JsW	GEP
	CONVEYOR PAD, DELETED OSDF WAC TEXT			
8	UPDATED, ADDED DW-4" & RELOCATED FIRE HYDRANT 156	1/5/98	SJS	GEP

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
7	UPDATED ADDED PROPOSED HAUL ROAD AND RELOCATED FIRE HYDRANT 156	3-10-97	GES	GEP	
6	UPDATED	2-6-96	JsW	GEP	
5	UPDATED	1-25-96	JsW	GEP	
4	ADDED NOTE	1-10-95	GES	GEP	
3	UPDATED	10/18/94	GES	GEP	
2	UPDATED	10-2-93	GES	GEP	
1	UPDATED	1-1-93	RJH	GEP	22X-5500-P-00659

NOTE:
WEMCO C.A.D.
DRAWING NOT
TO BE REVISED
MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
ORIG. RELEASE DATE

APPROVALS

CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			Q.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	QF		D.O.E.	
APPROVED	G.E. PRO.	8/25/90	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD
ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

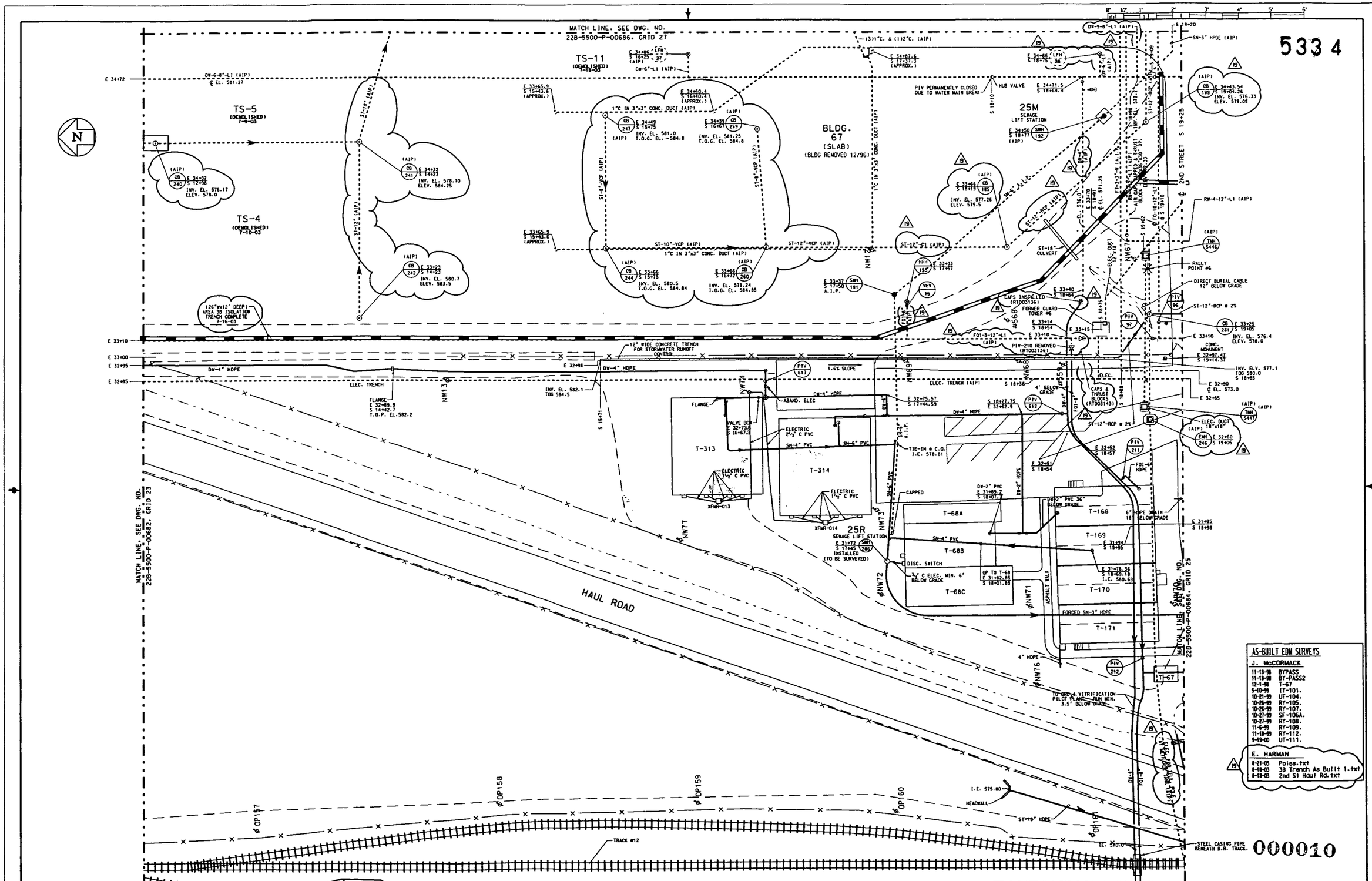
E. OF BLDG. 56 YARD AREA
GRID 23
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 9/25/90
DRAWN S.J.S.
22B-5500-P-00682 11

FILE NAME: /UNDER/22BP0682.DGN

22bp0682 OSDF3 lind8392 Friday January 23 2004 01:54:32 PM EST

5334



AS-BUILT EDM SURVEYS

J. McCORMACK

11-18-98	BYPASS
11-18-98	BY-PASS2
12-1-98	T-67
5-10-99	IT-101.
10-21-99	UT-104.
10-26-99	RY-105.
10-26-99	RY-107.
10-27-99	SF-106A.
10-27-99	RY-108.
11-6-99	RY-109.
11-18-99	RY-112.
5-19-00	UT-111.

E. HARMAN

8-21-03	Poles.txt
8-18-03	3B Trench As Built 1.txt
8-18-03	2nd St Haul Rd.txt

NOTE:
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3. FOR INFORMATION ON HAUL ROAD SEE P0158.

NO.	REVISIONS	DATE	DWN. BY	APPD.
19	INSTALLED CAPS & THRUST BLOCK EAST OF PIV-210 AND SOUTH LEG OF TEE PER WORK ORDER RT003143. REMOVED PIV-210 CUT & CAPPED DN-4" HDPE PER COMP. W.O. RT003136, STORM SEWERS & CB's AIP	11-18-03	GES	GEP
18	A.I.P. SN-6" NW OF SMH-192 PER AS-BUILT SKETCH FROM D. HENNEKES. WORK COMPLETED DCN 4384-001	11/1/01	GES	GEP
17	RW-4-12"-L1 A.I.P. PER COMPLETED WORK ORDER RT002974	3/13/01	GEP	GEP
16	FT-3-3" A.I.P. PER LIME SLUDGE PONDS REMEDIATION PROJECT 20103, ADD SMH#206, 25R LIFT STATION PER DCN: 4384-001	1/26/02	RML	GEP

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
19	INSTALLED CAPS & THRUST BLOCK EAST OF PIV-210 AND SOUTH LEG OF TEE PER WORK ORDER RT003143. REMOVED PIV-210 CUT & CAPPED DN-4" HDPE PER COMP. W.O. RT003136, STORM SEWERS & CB's AIP	11-18-03	GES	GEP	
18	A.I.P. SN-6" NW OF SMH-192 PER AS-BUILT SKETCH FROM D. HENNEKES. WORK COMPLETED DCN 4384-001	11/1/01	GES	GEP	
17	RW-4-12"-L1 A.I.P. PER COMPLETED WORK ORDER RT002974	3/13/01	GEP	GEP	
16	FT-3-3" A.I.P. PER LIME SLUDGE PONDS REMEDIATION PROJECT 20103, ADD SMH#206, 25R LIFT STATION PER DCN: 4384-001	1/26/02	RML	GEP	67X-5500-E-00003 22B-5500-P-00588 22X-5500-P-00659

NOTE:
WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± .XX
.XX ± .0XX
.XXX ± .0XXX
.XXXX ± .0XXXX
ORIG. RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			O.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	G.E.P.		O.O.E.	
APPROVED	G.E. PAUL	11/21/01	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 67 YARD AREA

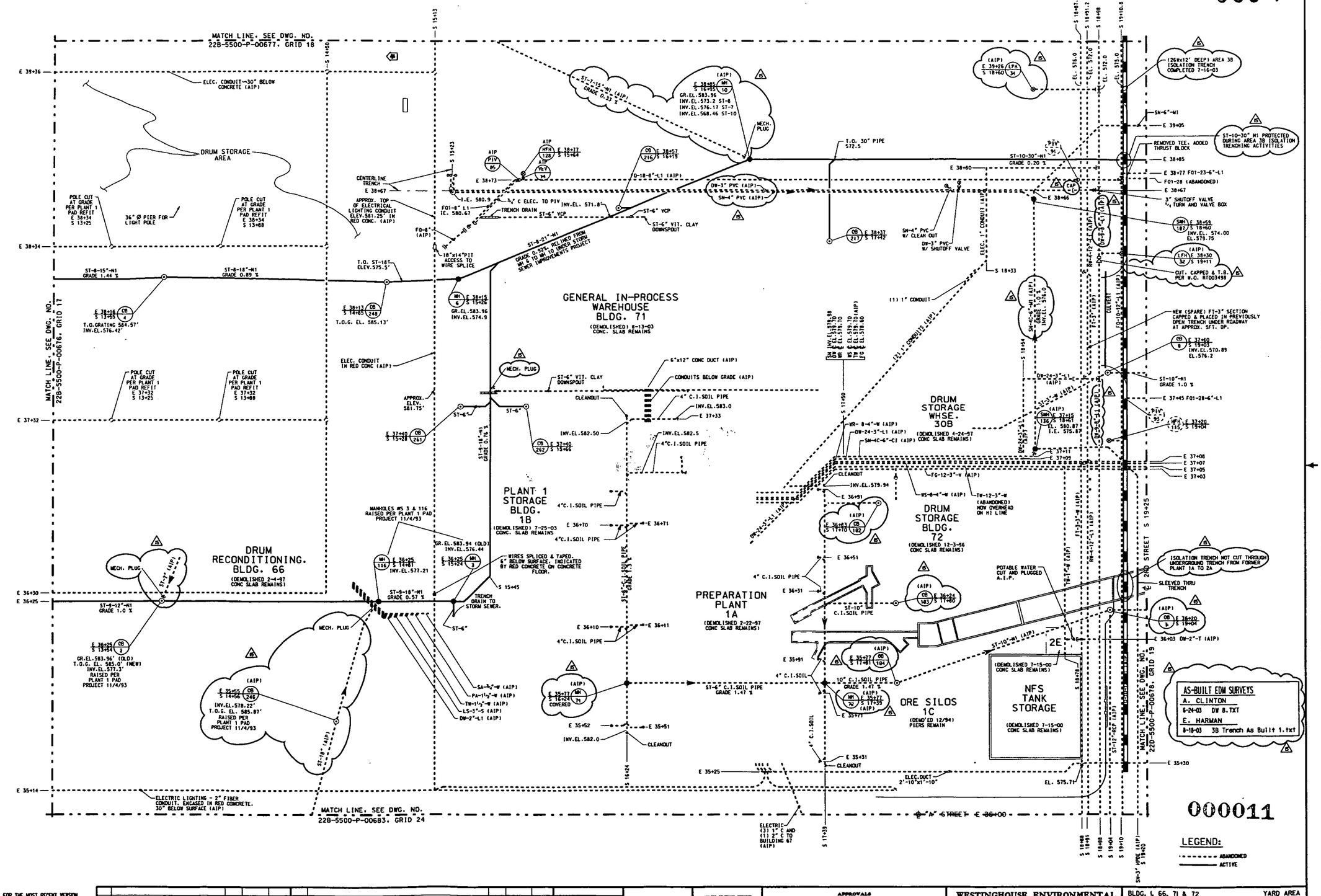
GRID 24
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 9/26/90
DRAWN S.J.S.

22B-5500-P-00683 | 19

FILE NAME: /UNDER/22BP0683.DGN

533 4



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NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
15	CAP & THRUST BLOCK INSTALLED PER	1-9-03	GES	GEP	14	FT-3-3"W A.I.P. PER LIME SLUDGE PONDS REMEDIATION	1/5/92	RML	GEP	
	WORK COMPLETED W.O. RT003498					PROJECT 20103, GENERAL UPDATE				
	DW-9-8"-LI & HYDRANTS A.I.P. PER				13	SECTION OF FO-18-8"-LI REMOVED AND REPLACED, TEE	1/5/92	RML	GEP	
	COMPLETED W. O. RT003439, ADDED					REMOVED, THRUST BLOCK INSTALLED PER COMPLETED				
	AS-BUILT AREA 3B ISOLATION TRENCH					W.O. CM055550I (RES 4232), NFS STORAGE TANKS AND				
	PLUGGED STORM LINES, AIP MANHOLES					BLDG 2E REMOVED, GENERAL UPDATE				22X-5500-P-00659

NOTE:
WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

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TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0030
DWG. RELEASE DATE

APPROVALS					
CIVIL & STR.			SAFETY ENG.		
ELECTRICAL			MAINTENANCE		
ENGINEER			O.A.		
INSTRUMENT					
MECHANICAL			FIRE PROTECT. WASTE MANAGE		
CHECKED	GEP	1/5/93	D.O.E.		
APPROVED	G.E. PAUL	1/5/93	SECURITY		

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

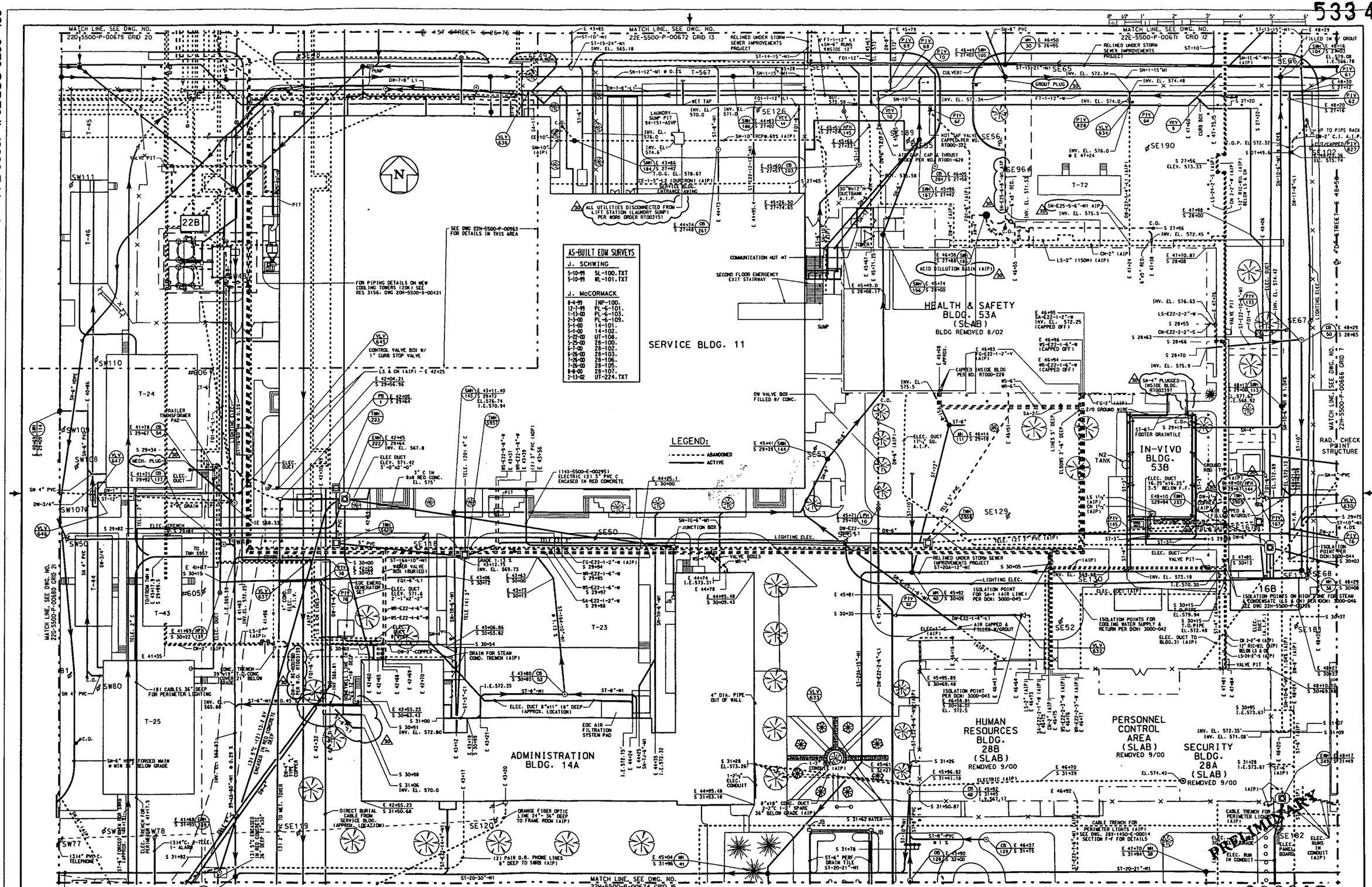
BLDG. 1, 66, 71 & 72 — YARD AREA

GRID 27
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 9-25-90
DRAWN J. KING

22B-5500-P-00686 | 15

FILE NAME: under/22bp0686.dgn



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NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					30	ALL UTILITIES DISCONNECTED TO LIFT STATION PER COMP. W. O. RT003354, SN-4" PLUGGED INSIDE BLDG. 53B PER W.O. RT003397 DW-1½' TO BLDG. 53B CAPPED AND A.I.P. PER WORK ORDER RT003209, FOH-6" CUT, CAPPED & T.B. INSTALLED NORTH OF HFH. I44 A.I.P. PER W.O. RT003220. DW LINES WEST OF BLDG. 14 REMOVED AND RE-ROUTED PER COMPLETED WORK ORDER RT003339 AND DCN: 445I-001, ADD 12" MECH. PLUG (CB-54)	2/6/03	GES		22H-5500-P-00673 22X-5500-P-00659

NOTE:
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TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± .1x
.XX ± .0x
.XXX ± .0xx
.XXXX ± .0xxx
ORIG. RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			O.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT. WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E. PAUL	11-27-90	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 11,14,28 & 53 YARD AREA
GRID 14
UNDERGROUND UTILITIES
SCALE 1"=20'

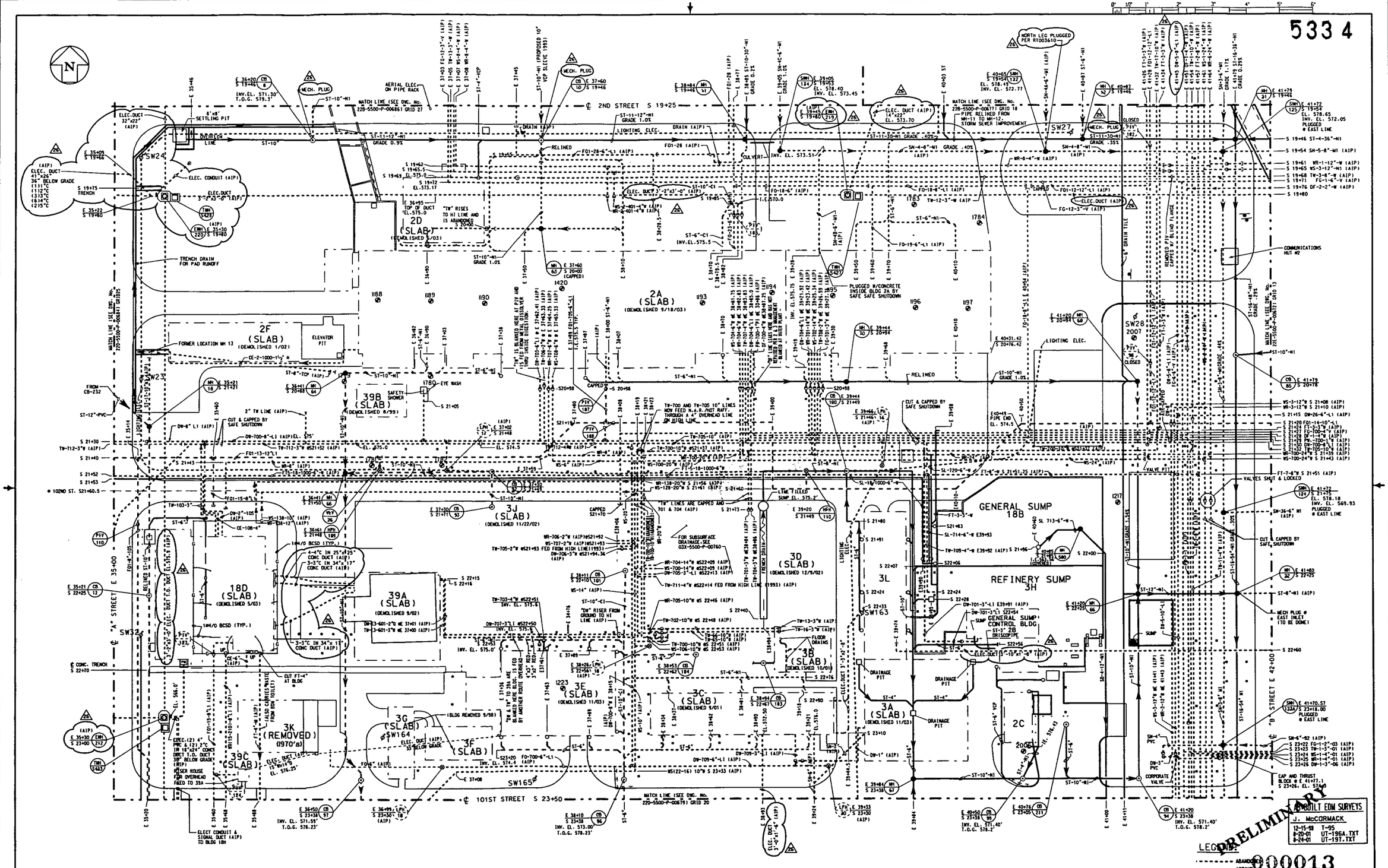
DATE 05-30-89
DRAWN J. KING
22H-5500-P-00673 30

FILE NAME: /UNDER/22HP0673.DGN

000012

22dp0678 OSDF3 lind8392 Friday January 23 2004 01:47:21 PM EST

5334



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NO.	REVISIONS	DATE	DWN.	BY	APPD.	NO.	REVISIONS	DATE	DWN.	BY	APPD.	REF. DWG. NO.
						26	DW-5-8"-LL BRANCHES & HYDRANTS AIP PER COMPLETED W.O. RT003039	8/6/03		GEP		
							ELEC. DUCTS, EMH-212, 219 & 220 AIP PER COMPLETED W.O. CM056671					
							ELEC. ISOLATED BETWEEN BLDG. 3A & 3L PER COMP. W.O. RT003685					
							NORTH LEG PF SMH-132 PLUGGED PER COMPLETED W.O. RT003610					
							ADDED STORM SEWER AIP & PLUGGED LOCATIONS, BLDG. DEMO. DATES					22X-5500-P-00659

NOTE:
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TOLERANCES ARE
FRACTIONS ± 1/8
ANGLES ± 0° - 30'
DECIMALS
.X ± .1
.XX ± .03
.XXX ± .010
.XXXX ± .0005
GENERAL RELEASE DATE

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		Q.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT.	
		WASTE MANAGE	
CHECKED	RF	D.O.E.	
APPROVED	E E PAUL	9-24-8 SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

PLANTS 2 & 3 — YARD AREA

GRID 19
UNDERGROUND UTILITIES
SCALE 1"=20'

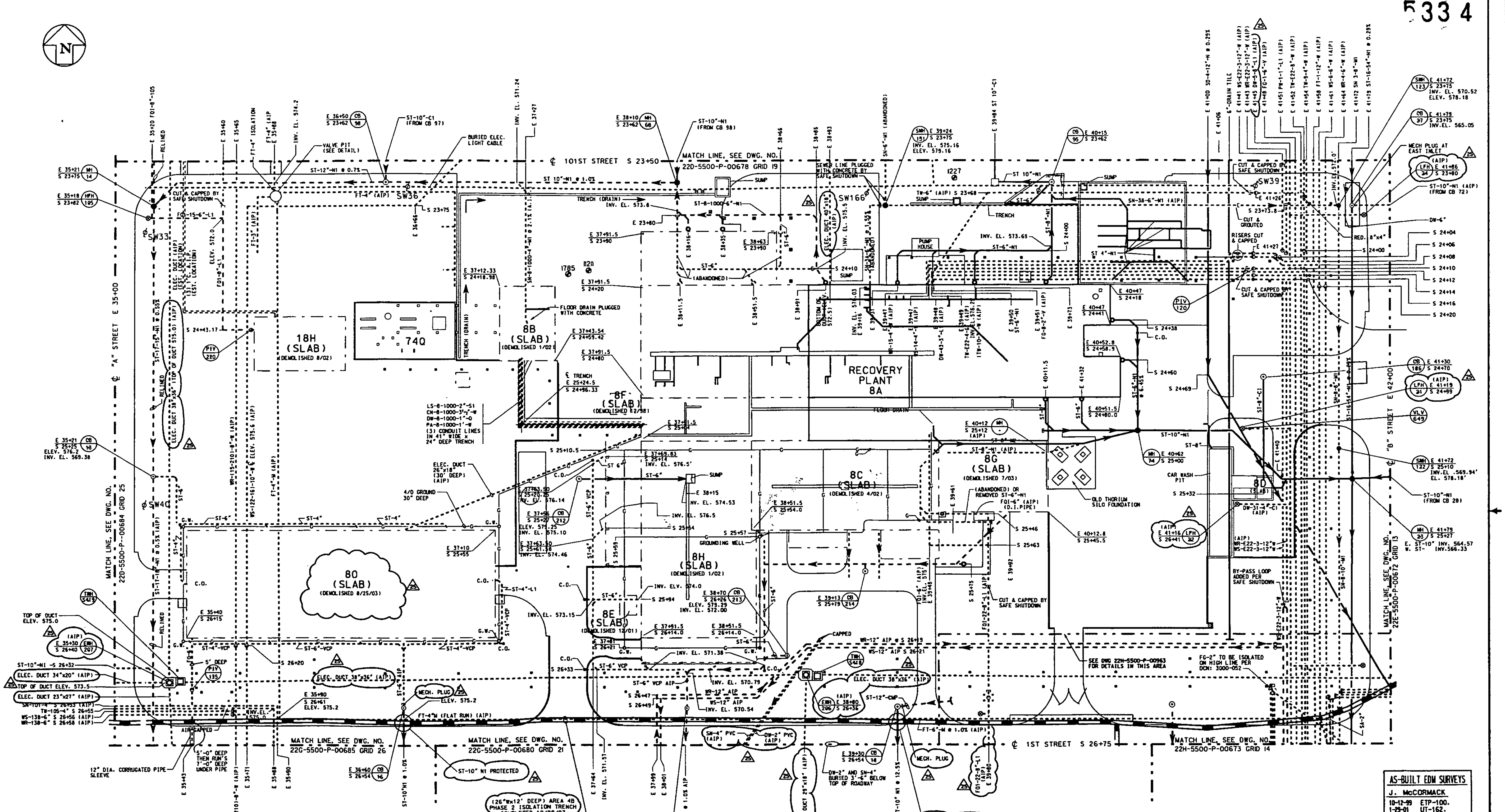
DATE 10-10-90
DRAWN J. KING

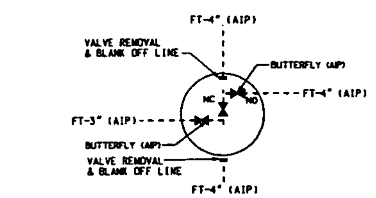
22D-5500-P-00678 | 26

FILE NAME: /UNDER/22DP0678.DGN

22dp0679 OSDF3 lind8392 Friday January 23 2004 01:48:26 PM EST

5334





VALVE PIT DETAIL
ISOLATED

AS-BUILT EDM SURVEYS
J. McCORMACK
10-12-99 ETP-100.
1-29-01 UT-162.
3-5-01 UT-179.
8-24-01 UT-197.TXT

PRELIMINARY

LEGEND:
- - - - - - ABANDONED
———— ACTIVE

000014

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
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NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					25	FOI-22-8"-L1 AIP PER COMPLETED W.O. RT003084, DW-5-8"-L1 BRANCHES & HYDRANTS AIP PER COMPLETED W.O. RT003139, AIP ELEC. DUCTS AND EMH-206 & 207 PER W.O. CM05667L SN-4"&DW-2" AIP PER COMP. W.O. RT003142, ADDED BLDG. DEMO DATES, MISC. AIPs	12-5-03	GES		22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

APPROVALS

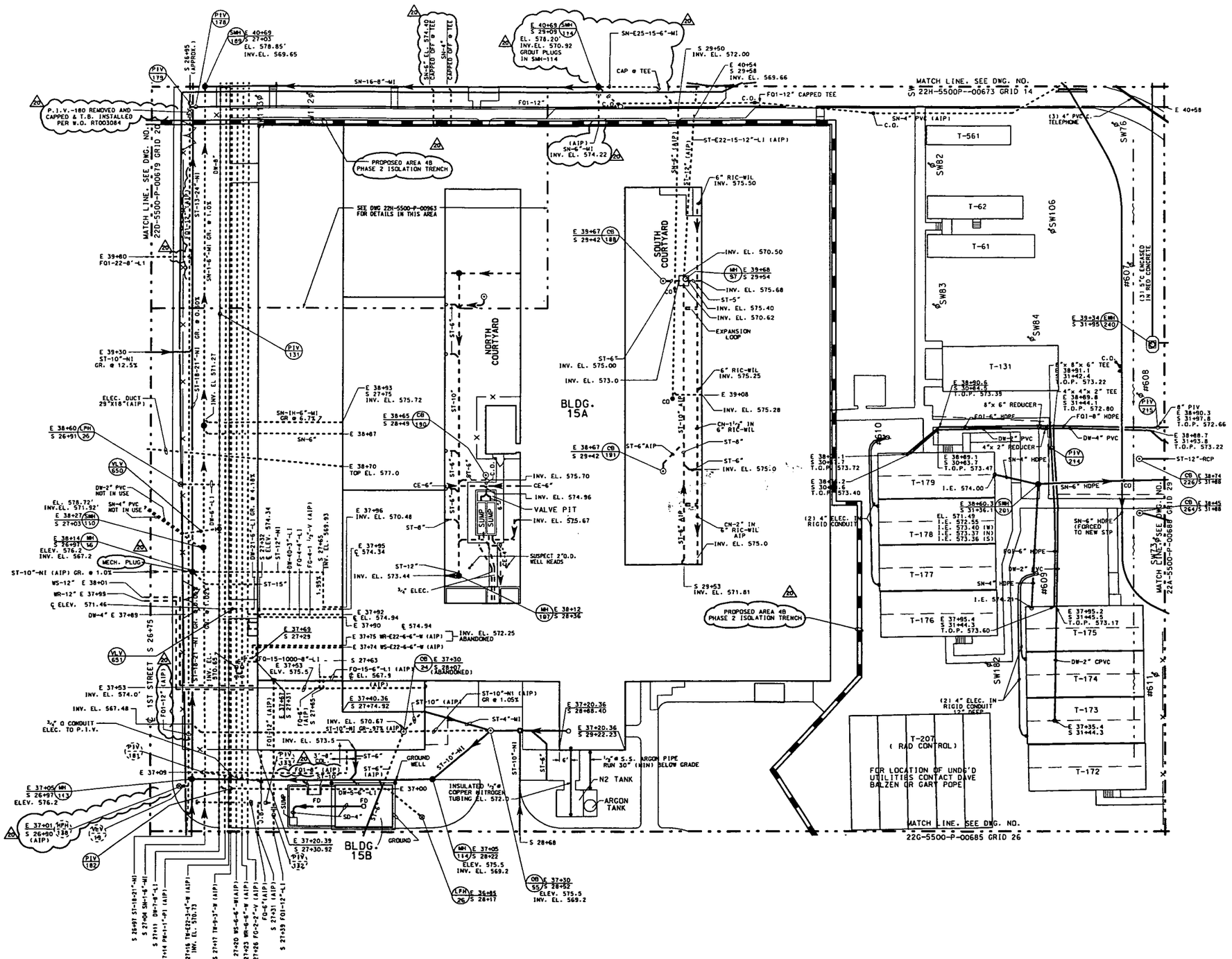
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			Q.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	C.E. PAUL	4/25/9	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

PLANT 8 — YARD AREA
GRID 20
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 7-10-90
DRAWN DEL TURPIN
22D-5500-P-00679 | 25

FILE NAME: /UNDER/22DP0679.DGN



NOTE:
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2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.

NO.	REVISIONS	DATE	DWN. BY	APPD.
20	P.I.V. IB REMOVED, CAP & T.B. INSTALLED FOH-12" LI A.LP., FOH-8" TO LAB A.LP. PER COMP. WORK ORDER RT003084. SH-6"-MI (FROM LAB TO SMH-84) A.LP. WITH PER W.O. RT003030 & RT00353 & CAPS	01/15/03	GES	
19	LAB SOUTH COURTYARD SN-6" A.P., LAB SN-6" MI A.P., SN-4" PVC A.P. PER RES 4401, GROUT SHUT IN SMH-84	4/15/02	GEP	GEP
18	NUMBERED DW PIV'S & VLV'S NOT PREVIOUSLY NUMBERED. PIV'S EU & IB2, VLV'S 650 & 651, GENERAL UPDATE ADDED ELEC. CONDUIT TO TRAILERS T-173, 174, 177 & 178, ADDED DW-2" CPVC PER GARY POPE 6-18-02., GENERAL UPDATE	9/25/02	SJS/GES	GEP

REF. DWG. NO.
I5X-5500-P-01991
I5X-5500-G-01667
22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± ⅛
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.4
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
ORIG. RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			O.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP	4/25/91	D.O.E.	
APPROVED	G.E. PAUL	4/25/91	SECURITY	

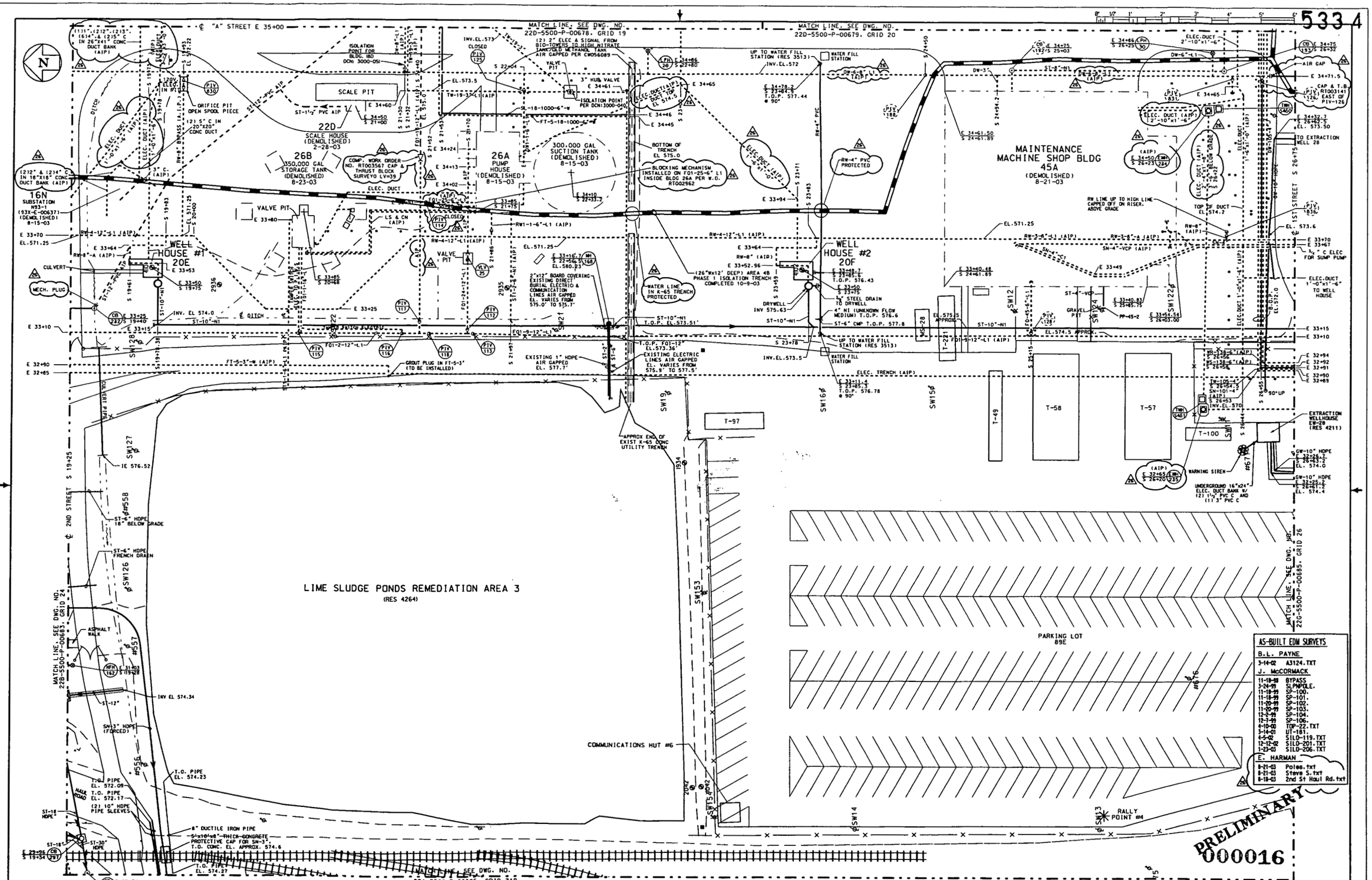
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 15-LAB. YARD AREA
GRID 21
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 7/17/03
DRAWN DEL TURPIN

22G-5500-P-00680 | 20

FILE NAME: /UNDER/22GP0680.DGN



NOTE:
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NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					26	F01-25-6" LI AIP PER COMPLETED W.O. RT002962 & RT003567.	04-03	GES		
						ADDED CAP & THRUST BLOCK TO LINE DW-6-8" LI PER COMP.				
						W.O. RT003341, ELEC. DUCTS & EMH-234 & 235 AIP PER COMP.				
						W.O. CM056671, BLDG. 45A ELEC. ISOLATED PER COMPLETED				
						W.O. CM056669, WEST WATER TOWER (26B) ELECTRICALLY				SIX-1910-G-00006
						ISOLATED PER COMPLETED W.O. RT003687, SUBSTATION N93-1				22X-5500-P-00659
						ISOLATED PER W.O. RT003181				26A-4445-P-00040

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/8
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.4
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
ISSUE RELEASE DATE

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		Q.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT.	
		WASTE MANAGE	
CHECKED	GEP	D.O.E.	
APPROVED	G.E. PAUL	4/29/11 SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG 45, SLUDGE PITS — YARD AREA

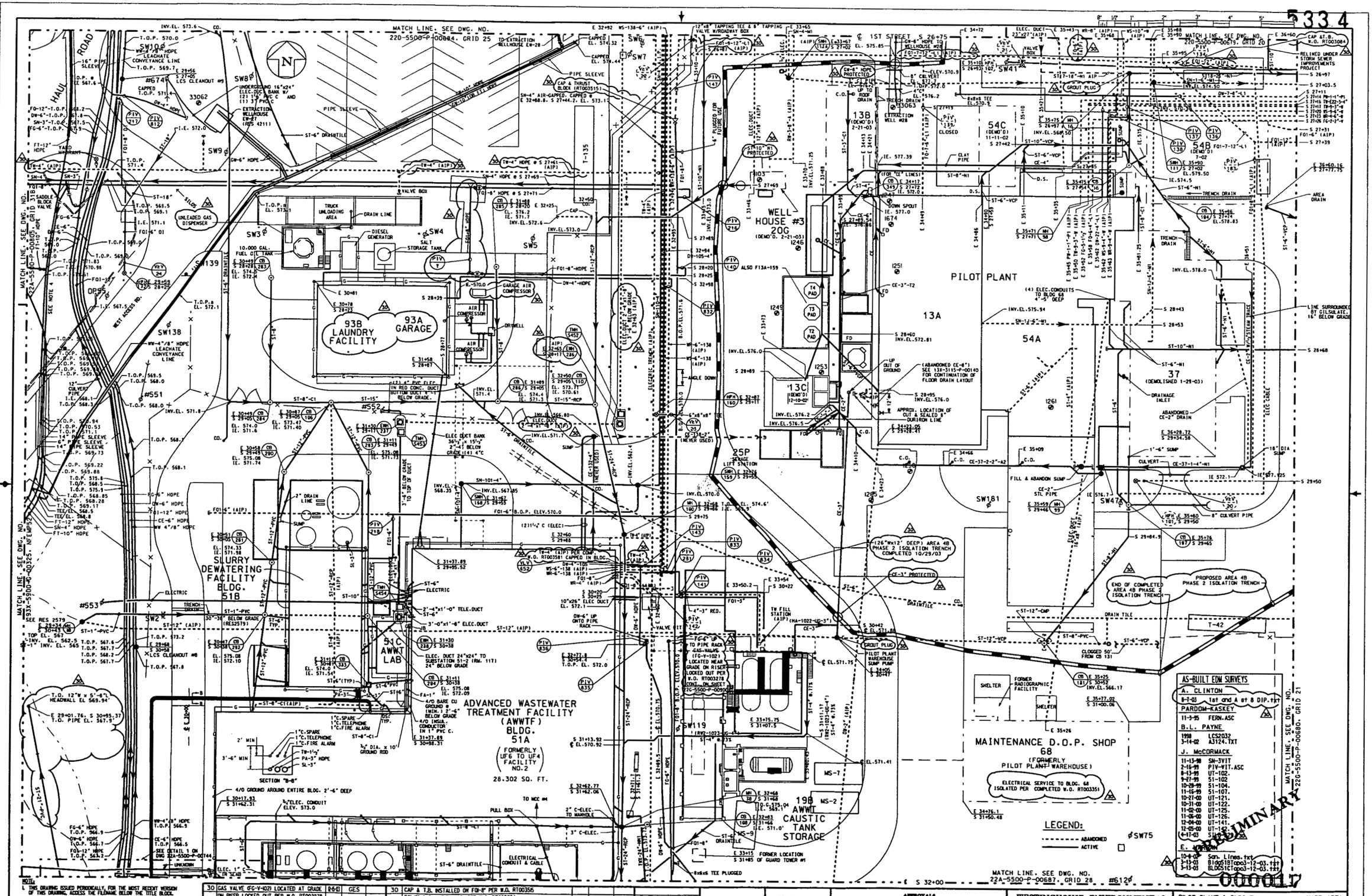
GRID 25
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 9-7-90
DRAWN J. KING

22D-5500-P-00684 | 26

FILE NAME: /UNDER/22DP0684.DGN

533.4



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3. OR-07 AND WN-4"/8" LINES LOCATED PER B.L. PAYNE AS-BUILT SURVEY, SEE /PAYNE/LCS/LCS2032.DGN.
4. SEE PARSONS TOP-046 DWG 95X-5900-G-00009 FOR CONSTRUCTION DETAILS.

NO.	REVISIONS	DATE	DWN. BY	APPD.
30	GAS VALVE (FG-V-102) LOCATED AT GRADE ON RISER LOCKED OUT PER W.O. RT003278, AIP ELEC. DUCTS & EMH-236 PER COMP. W.O. CM056671, WORK COMPLETED DCN: 4460-001 TO RE-ROUTE FOI-8" HDPE NORTH-EAST OF BLDG. 93A, SN-1-6" MI AIP PER COMP W.O. RT003942, NEW BLDG. DESCRIPS.	8-6-03	GES	
29	ADDED ELEC. DUCT TO WELLHOUSE #27, RW-3-8"A A.I.P. PER COMPLETED WORK ORDER RT002974	3/8/03	GEP	GEP

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
30	CAP & T.B. INSTALLED ON FOI-8" PER W.O. RT003356				22X-4445-G-00737
	FOI-12" CAP & T.B. A.I.P. PER W.O. RT003084				95X-5900-P-00430
	TW-4" A.I.P. PER COMP. W.O. RT003581				96X-5900-E-00354
	ADDED END OF ST-27' PCV PIPE CALLOUTS PER SURVEY SLO-229				93X-5900-G-00688
	ELEC. SERVICE TO BLDG. 68 ISOLATED PER W.O. RT003351				13X-5500-P-00619
	ADDED ELEC. DUCT TO WELLHOUSE #27, RW-3-8"A A.I.P. PER COMPLETED WORK ORDER RT002974				22X-5500-P-00659

NOTE:
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TOLERANCES ARE
FRACTIONS ± 1/8
ANGLES ± 0° - 30'
DECIMALS
.X ± .1
.XX ± .03
.XXX ± .010
.XXXX ± .0005
FINAL RELEASE DATE

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		Q.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT.	
		WASTE MANAGE.	
CHECKED	GEP	D.O.E.	
APPROVED	G.E. PAUL 1/23/03	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

PILOT PLANT & BLDG S1 — YARD AREA

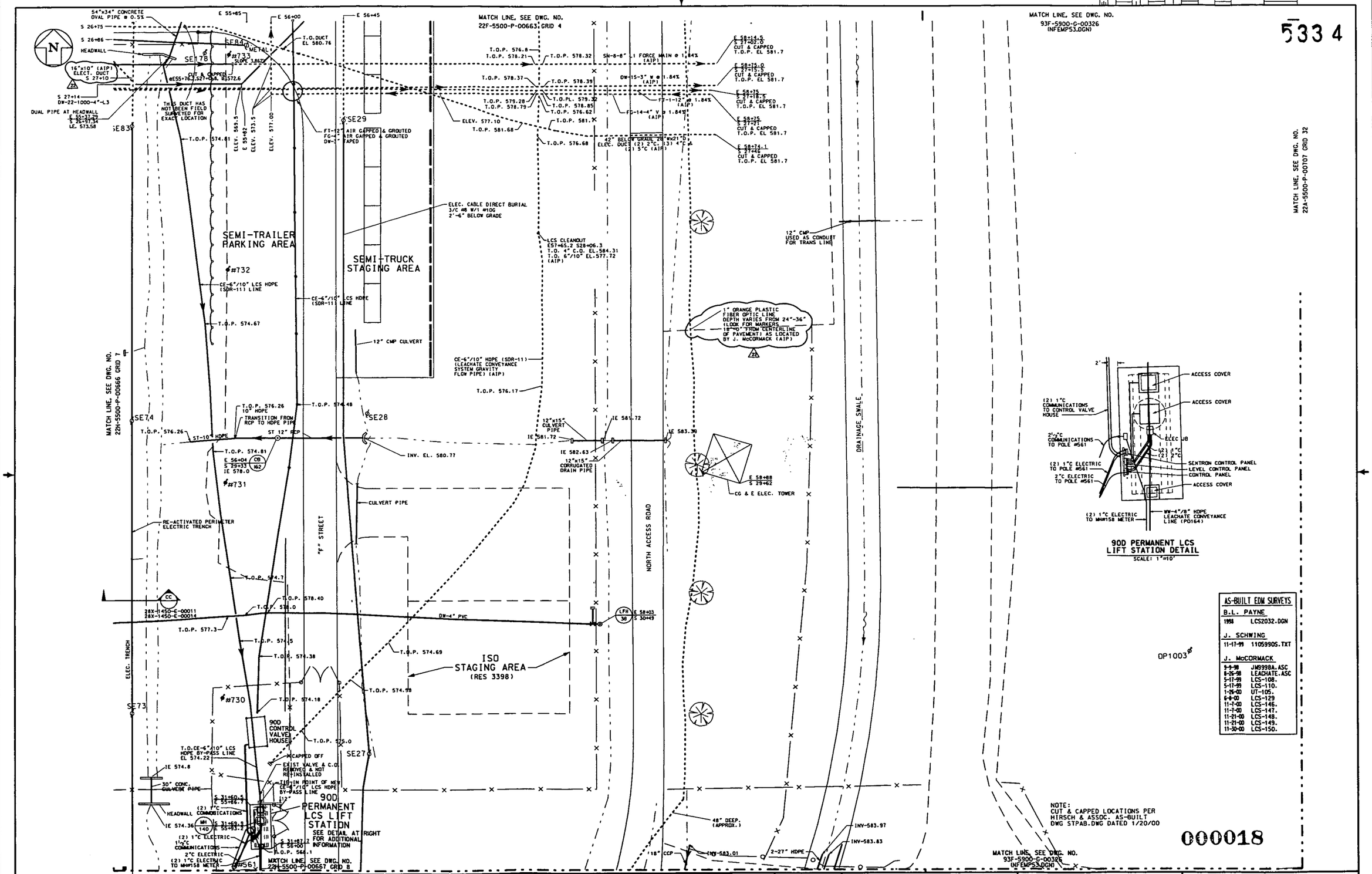
GRID 26
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 9-5-90
DRAWN J. KING

22G-5500-P-00685 | 30

FILE NAME: /UNDER/22GP0685.DGN

22ap0664 OSDF3 lind8392 Friday January 23 2004 01:56:16 PM EST



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3. THE WEST UTILITIES CORRIDOR TRENCH IS THE RESULT OF AN AS-BUILT SURVEY BY B.L. PAYNE & ASSOC. THIS INCLUDES THE LCS LINE (PD164), FOR B.L. PAYNE SURVEY SEE FILE:/PAYNE/LCS2032.DGN.

NO.	REVISIONS	DATE	DWN. BY	APPD.
23	A.I.P. UND'GD. FIBER OPTIC LINE, GENERAL UPDATE	2/8/02	RML	GEP
22	RE-ACTIVATED PERIMETER ELECTRIC IN TRENCH PER R. DUCKWORTH 3/18/01 MEMO, ADDED LIFT STATION DETAIL. INCORP. REDLINE AS-BUILT FROM J. McCORMACK 5/01/01. GENERAL UPDATE	5/2/01	RML	GEP

NO.	REVISIONS	DATE	DWN. BY	APPD.

REF. DWG. NO.

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TOLERANCES ARE
FRACTIONS ± 1/8
ANGLES ± 0° 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
GEN. RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			O.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E. PAUL	7-20-90	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

EAST OF MAIN SUB-STATION — YARD AREA

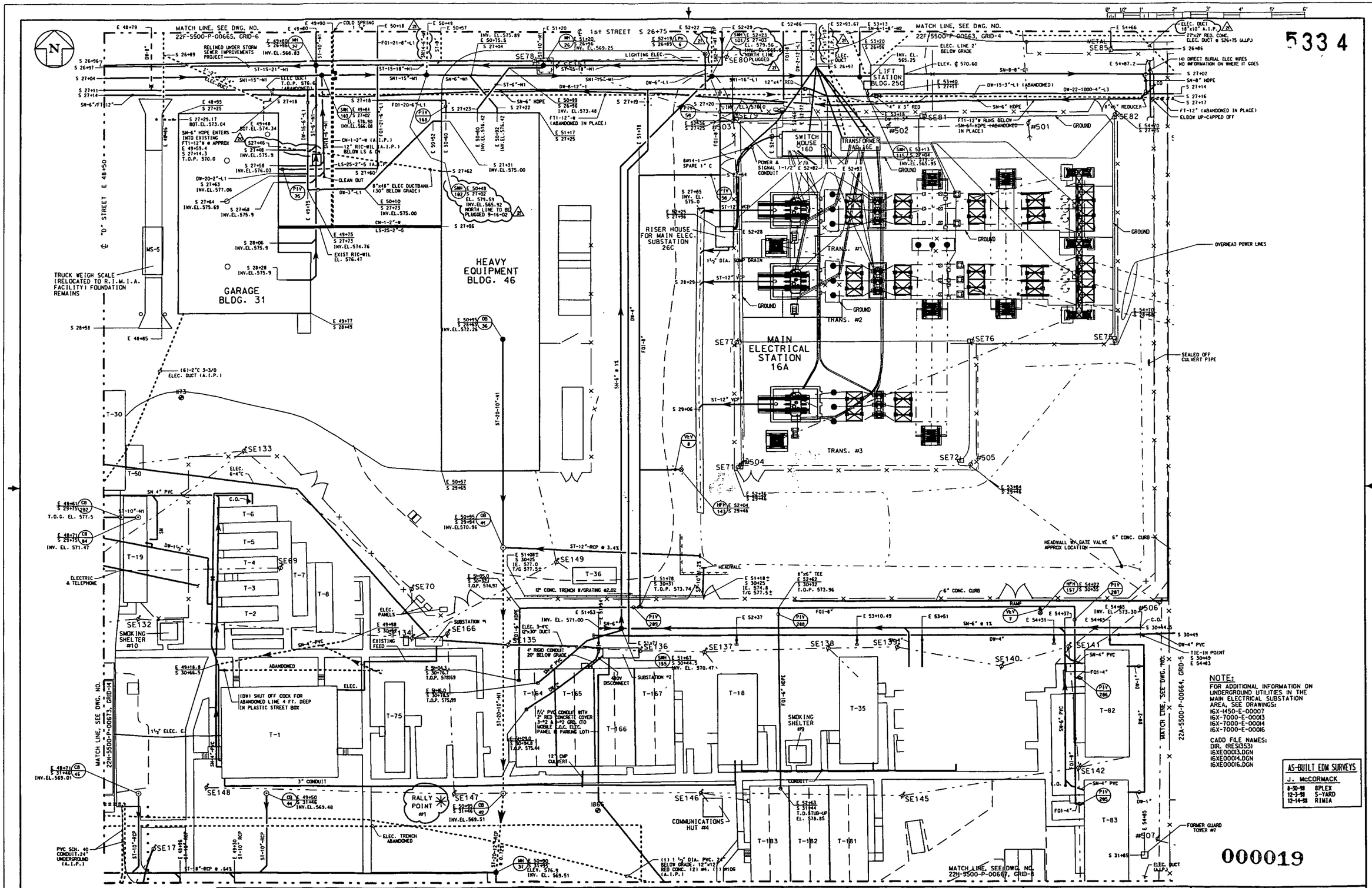
GRID 5
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 2-20-90
DRAWN DEL TURPIN

22A-5500-P-00664 | 23

FILE NAME: /UNDER/22AP0664.DGN

5334



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NO.	REVISIONS	DATE	DWN. BY	APPD.
21	NORTH LINE (SN14-6"-MI) FROM SMH-102 PLUGGED PER COMPLETED WORK ORDER RT002406. NORTH LINE (SN-2-8"-MI) FROM SMH-101 PLUGGED PER COMPLETED WORK ORDER RT002405. ELECTRIC DUCTS A.I.P. PER COMPLETED WORK ORDER AL056313	11-02	GES	GEP

REF. DWG. NO.: 22X-5500-P-00659

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TOLERANCES ARE
FRACTIONS ± 1/8
ANGLES ± 0°-30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
FINAL RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			Q.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE.	
CHECKED	GEP		D.O.E.	
APPROVED	G.E. PAUL	2-20-90	SECURITY	

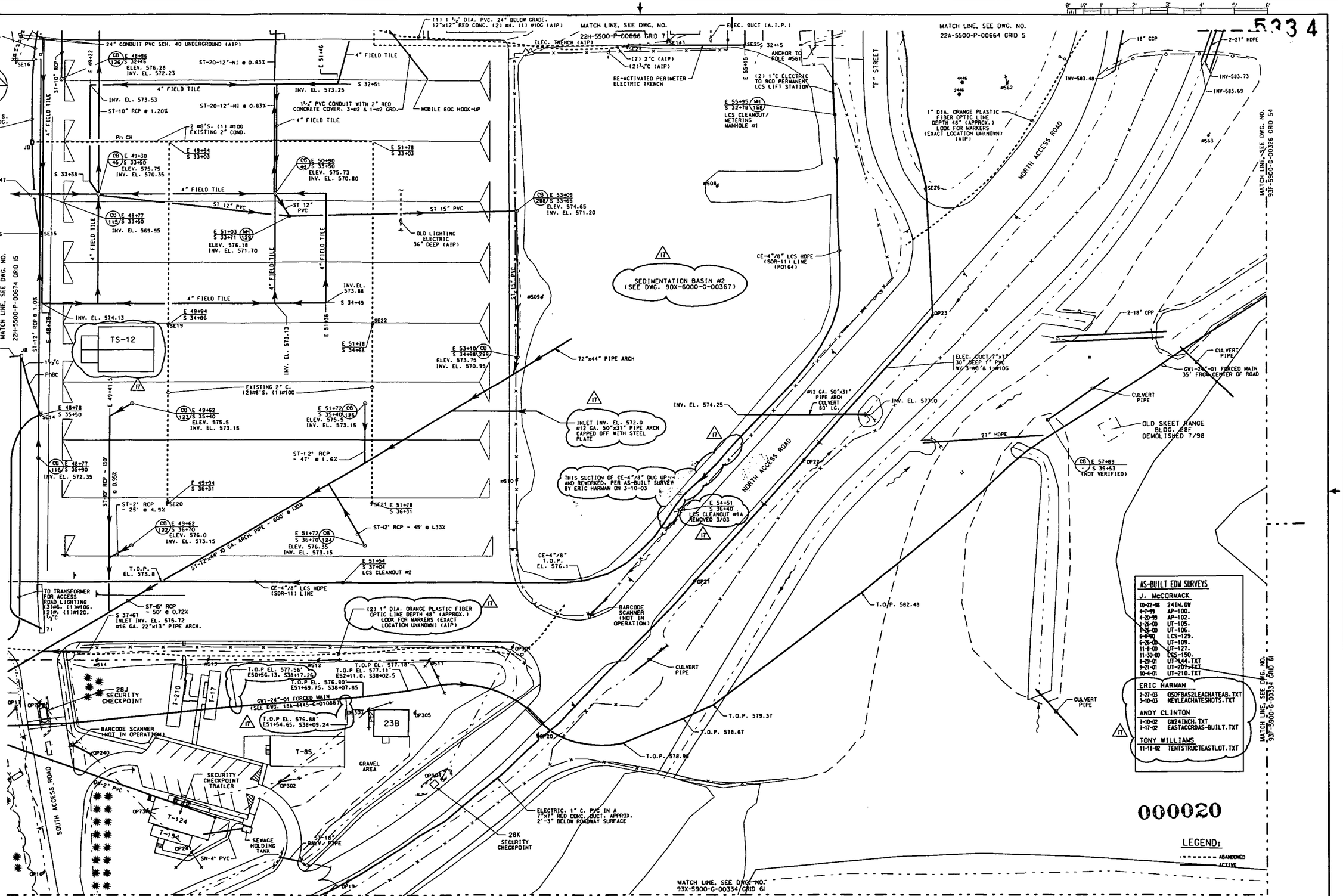
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 31 & 46, AREA 16 — YARD AREA
GRID 7
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 2-20-90
DRAWN J. KING
22H-5500-P-00666 | 21

FILE NAME: /UNDER/22HP0666.DGN

22hp0667 OSDF3 lind8392 Friday January 23 2004 01:58:41 PM EST



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3. FOR ADDITIONAL INFO. ON STORM SEWER LINES AND CATCH BASINS SEE INS #2899. FOR AS-BUILT FIELD SURVEY OF THE 4"/8" LCS LINE, SEE B.L. PAYNE SURVEY (REF. DRAWING - LCS2032.DGN)

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
17	ADD TS-12 TENT STRUCTURE PER SURVEY DATED 8/18/02, REWORKED PORTION OF LEACHATE LINE PER E. HARMAN AS-BUILT SURVEY 3-10-03 ADDED MISC. PIPE CALOUTS	3/04/03	GEP	GEP	16	ADD TELE. BLDG 23B, ADD 28K SECURITY CHECKPOINT, ADD T-194, UNDERGROUND FIBER OPTIC LINE (A.I.P.), GENERAL UPDATE	7/25/02	RWL	GEP	
					15	RE-ACTIVATED PERIMETER ELECTRIC IN TRENCH PER R. DUCKWORTH MEMO 3/18/04, ADDED ELECTRIC TO MH#58 FROM 900, GENERAL UPDATE	5/3/03	RWL	GEP	
					14	ELECT. TRENCH A.I.P.	5/8/01	RWL	GEP	92X-5900-E-00323 22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

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TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
ORIG. RELEASE DATE

APPROVALS			
CIVIL & STR.		SAFETY ENG. MAINTENANCE	
ELECTRICAL			
ENGINEER		Q.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT. WASTE MANAGE	
CHECKED	GEP	D.O.E.	
APPROVED	LE. FELL	2-20-90 SECURITY	

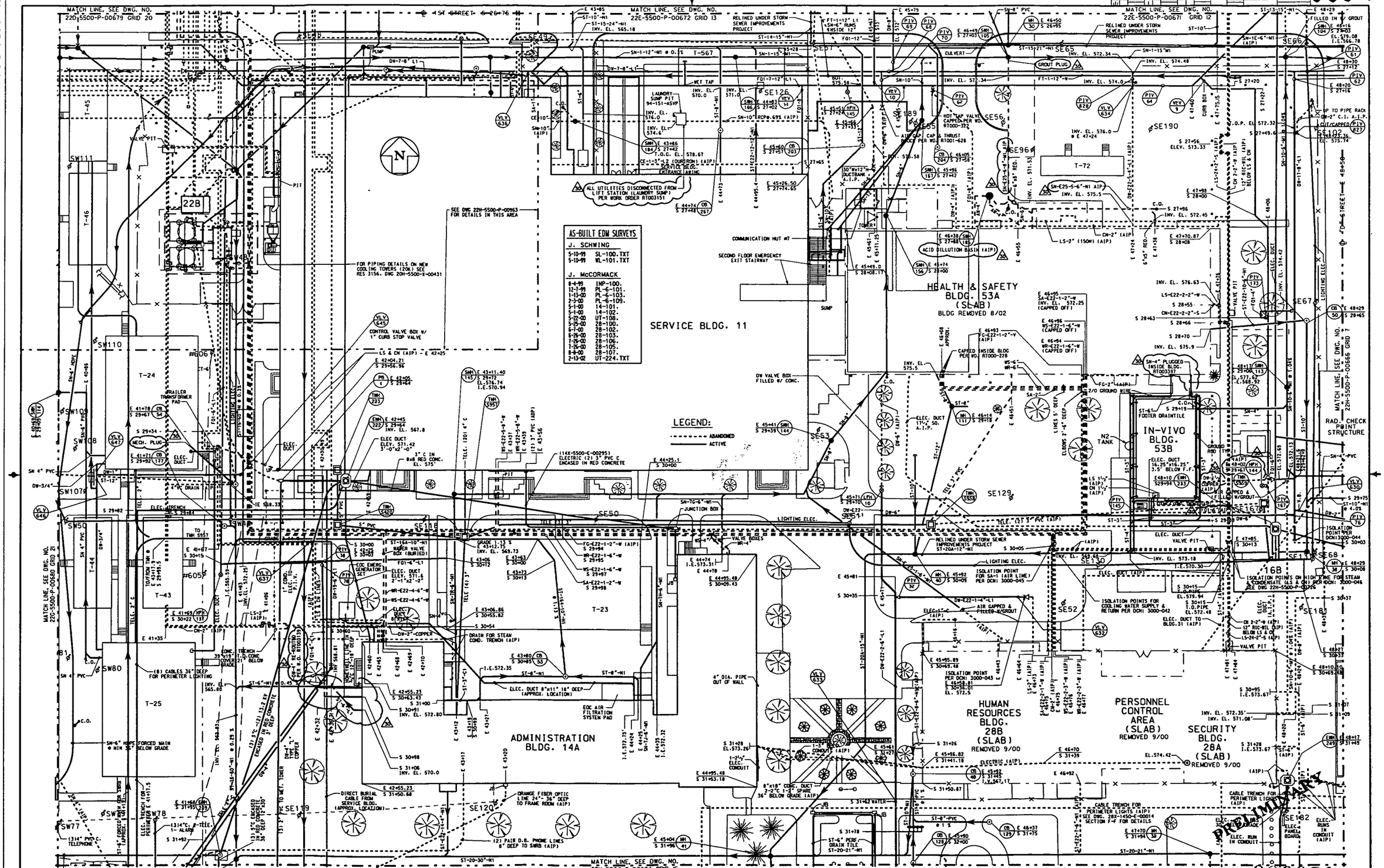
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

EAST PARKING LOT — YARD AREA

GRID 8
UNDERGROUND UTILITIES
SCALE 1"=30'

DATE 2-20-90
DRAWN DEL TURPIN
22H-5500-P-00667 | 17

FILE NAME: /UNDER/22HP0667.DGN



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NO.	REVISIONS	DATE	DWN. BY	APPD.
30	ALL UTILITIES DISCONNECTED TO LIFT STATION PER COMP. W. O. RT003351, SH-4" PLUGGED INSIDE BLDG. 53B PER W.O. RT003397 DW-4½' TO BLDG. 53B CAPPED AND A.I.P. PER WORK ORDER RT003209, FO1-6' CUT, CAPPED & T.B. INSTALLED NORTH OF HFH 144 A.I.P. PER W.O. RT003220. DW LINES WEST OF BLDG. 14 REMOVED AND RE-ROUTED PER COMPLETED WORK ORDER RT003309 AND DCN: 445I-001, ADD 12" MECH. PLUG (CB-54)	2/5/03	GES	

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					22H-5500-P-00673
					22X-5500-P-00659

NOTE:
WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± ½
ANGLES ± 0° - 30'
DECIMALS
.X ± .04
.XX ± .015
.XXX ± .0005
.XXXX ± .00005
SHARP, DEBURR & BREAK

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		Q.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT. WASTE MANAGE	
CHECKED	GEP	D.O.E.	
APPROVED	G.E. PAUL 1-17-03	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 8,14,28 & 53 YARD AREA
GRID 14
UNDERGROUND UTILITIES
SCALE 1"=20'

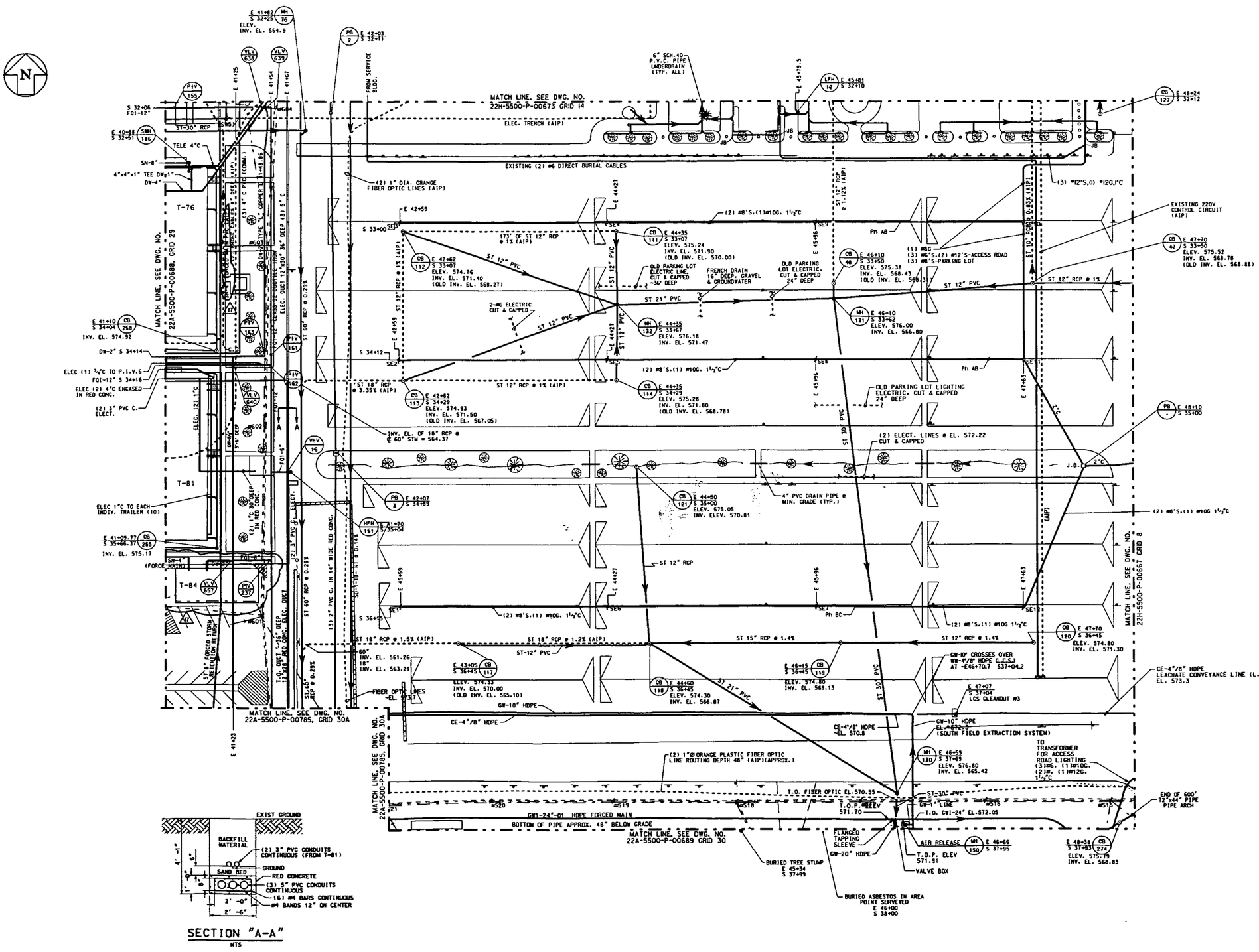
DATE 05-30-89
DRAWN J. KING

22H-5500-P-00673 | 30

FILE NAME: /UNDER/22HP0673.DGN

000021

22hp0674 OSDF3 lind8392 Friday January 23 2004 02:00:25 PM EST



000022

NOTE:
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3. FOR ADDITIONAL INFO: ON STORM SEWER LINES AND CATCH BASINS SEE RES #2899. FOR AS-BUILT FIELD SURVEY OF THE 4"/8" LCS LINE: SEE B.L. PAYNE SURVEY (REF. DRAWING - LCS2032.DGN)

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.
					17	ADDED T-84. NUMBERED DW, FOI PIV'S & VLV'S NOT PREVIOUSLY NUMBERED. DW VLV'S 638, 639, 640, 657. FOI PIV 237. SN-4" PVC (FORCED) A.I.P. PER RES 4401	4/5/03	SJS/RML	GEP

REF. DWG. NO.: 22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

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TOLERANCES ARE
FRACTIONS ± 1/8
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
FINAL RELEASE DATE

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		Q.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT.	
		WASTE MANAGE	
CHECKED	GP	4/29/03 D.O.E.	
APPROVED	S.E. PAUL	4/29/03 SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

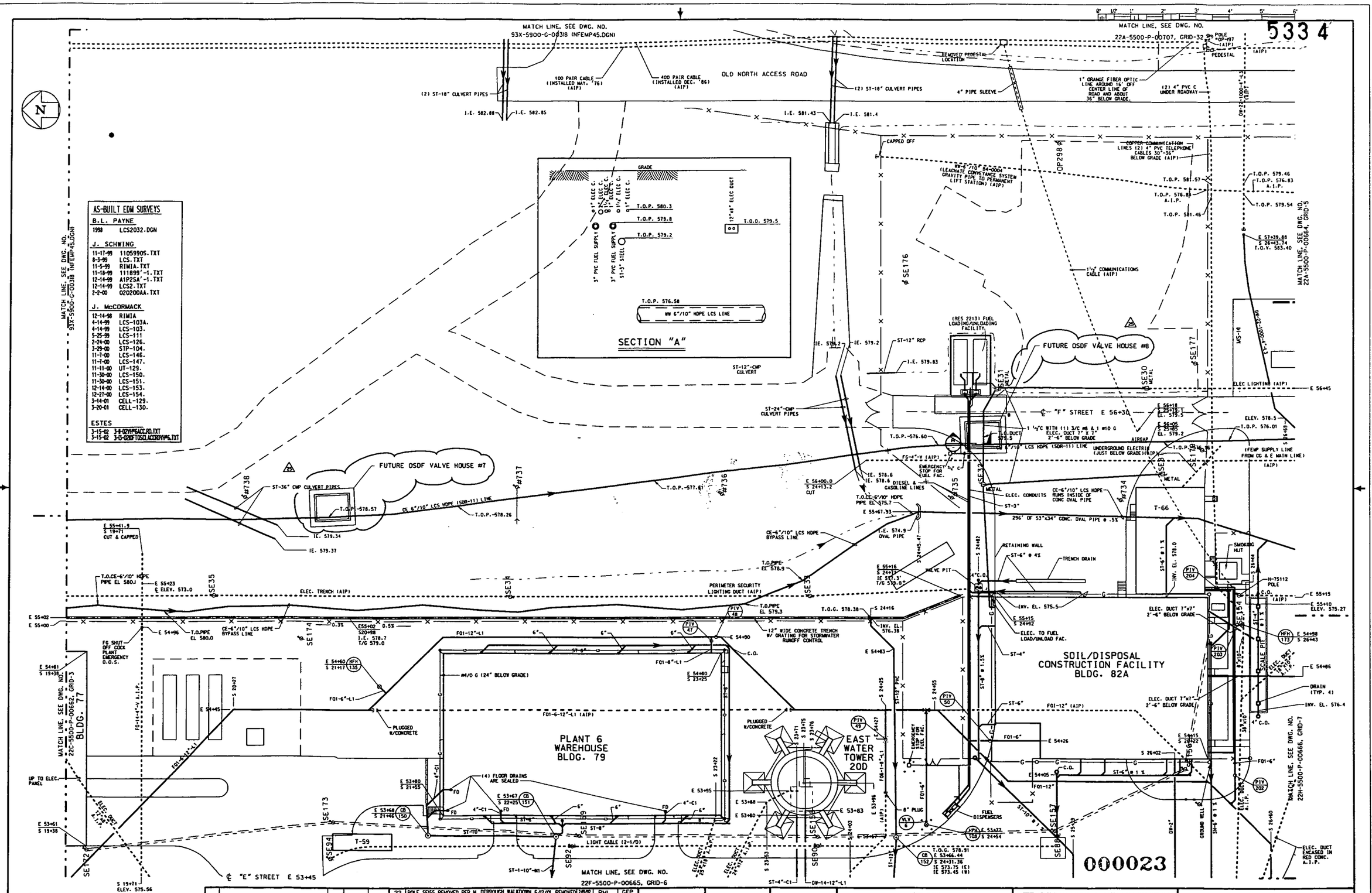
WEST PARKING LOT — YARD AREA
GRID 15
UNDERGROUND UTILITIES
SCALE 1"=30'

DATE 5-21-90
DRAWN DEL TURPIN

22H-5500-P-00674 | 17

FILE NAME: /UNDER/22HP0674.DGN

22fp0663 OSDF3 lind8392 Friday January 23 2004 02:01:15 PM EST



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3. LEACHATE CONVEYANCE SYSTEM (PO 840 (LCS) LINE IS FROM B.L. PAYNE AS-BUILT SURVEY, SEE /PAYNE/LCS/LCSSLDGN.

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.
					22	POLE SE155 REMOVED PER M. DERROUGH WALKDOWN 6/12/01, REMOVED PORTION OF ORIGINAL WW-6"/10" LEACHATE LINE, REMOVED POLES SE185 & SE186 PER WISE TASK ORDER 051, MOVE 28M TO NFEMP 45, MOVE 28E SOUTH, COMM EAST OF FENCE A.I.P., GENERAL UPDATE	2/8/02	RML	GEP
25	ADDED FUTURE OSDF VALVE	1/1/03	GEP	GEP					
	HOUSES 7 & 8								
24	ADDED ESTES AS-BUILT SURVEYS	2/26/02	GEP	GEP	21	ADD ELEC & LCS LINE TO SECTION 'A', AS-BUILT LCS LINE & BOUNDARIES	5/2/01	RML	GEP
23	ELECTRIC DUCTS A.I.P. PER COMPLETED WORK ORDER AL056313	1/1/02	GES	GEP					

REF. DWG. NO.: 22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± ¼
ANGLES ± 0° - 30'
DECIMALS
.X ± .1
.XX ± .03
.XXX ± .005
.XXXX ± .0005
FINAL RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			O.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E.PAUL	1-24-90	SECURITY	

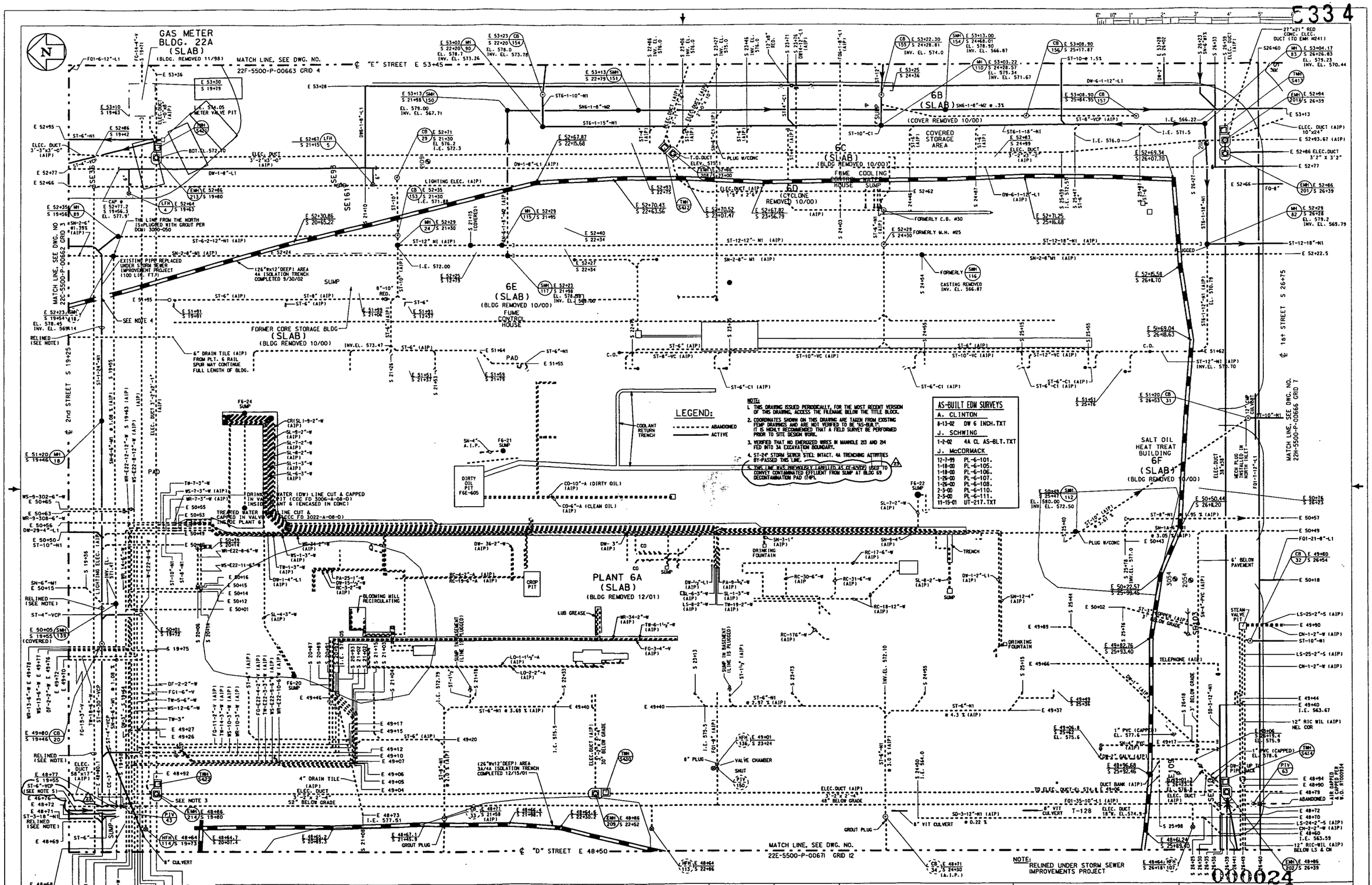
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 79,82 & E. WATER TOWER YARD AREA.
GRID 4
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 2-20-90
DRAWN J. KING

22F-5500-P-00663 | 25

FILE NAME: /UNDER/22FP0663.DGN



NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
23	CHANGE CE-6' TO ST-6', ADD NOTE 5	1/5/02	RML	GEP						
22	INCORPORATED UNDG'D UTILITIES UNDER	11/29/02	RML	GEP	21	SN-4" PVC A.I.P. PER COMPLETED WORK ORDER RT002406.	9/1/02	GES	GEP	
	FORMER PLANT 6 BUILDING, MH-82					DW-1-8"U CAPPED OFF NORTH OF LFH-4 PER COMPLETED WORK				
	PLUGGED ON WEST WALL PER COMP WORK					ORDER RT002396. ELECTRIC DUCTS A.I.P. PER COMPLETED WORK				
	ORDER 2080I TRAVELER #104, GENERAL					ORDER AL056633. DW-2 GALV A.I.P. PER COMPLETED WORK ORDER				99X-5500-G-00631
	UPDATE					RT002332				22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.010
.XXXX ± 0.0050
ORIG. RELEASE DATE

APPROVALS					
CIVIL & STR.			SAFETY ENG.		
ELECTRICAL			MAINTENANCE		
ENGINEER			Q.A.		
INSTRUMENT					
MECHANICAL			FIRE PROTECT. WASTE MANAGE		
CHECKED	GEP	2-20-90	D.O.E.		
APPROVED	G.E. PAUL	2-20-90	SECURITY		

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

PLANT 6 — YARD AREA

GRID 6
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 2-20-90
DRAWN J. KING

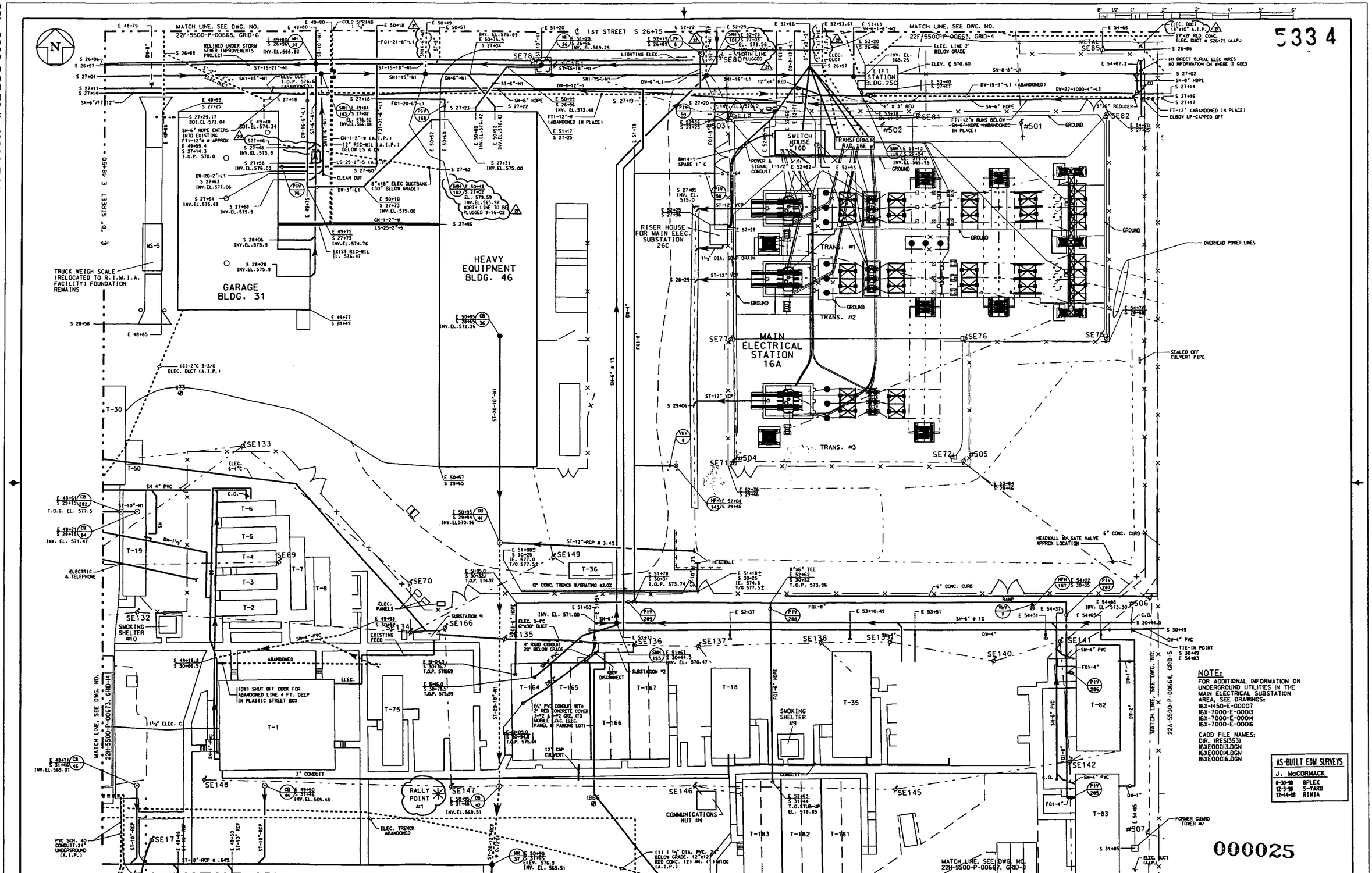
22F-5500-P-00665 | 23

FILE NAME: /UNDER/22FP0665.DGN

000024

22hp0666 OSDF3 lind8392 Friday January 23 2004 02:03:59 PM EST

5334



NOTE:
FOR ADDITIONAL INFORMATION ON UNDERGROUND UTILITIES IN THE MAIN ELECTRICAL SUBSTATION AREA, SEE DRAWINGS:
16X-1450-E-00007
16X-7000-E-00013
16X-7000-E-00014
16X-7000-E-00016

CADD FILE NAMES:
DIR. (RES1353)
16XE00013.DGN
16XE00014.DGN
16XE00016.DGN

AS-BUILT EDM SURVEYS	
J. McCORMACK	
8-30-98	8PLEX
12-3-98	S-YARD
12-14-98	RIMIA

000025

NOTE:
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2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.

NO.	REVISIONS	DATE	DWN.	BY	APPD.
21	NORTH LINE (SM14-6"-MI) FROM SMH-102 PLUGGED PER COMPLETED WORK ORDER RT002406. NORTH LINE (SN-2-8"-MI) FROM SMH-101 PLUGGED PER COMPLETED WORK ORDER RT002405. ELECTRIC DUCTS A.I.P. PER COMPLETED WORK ORDER AL056313		SH12	GES	GEP

REF. DWG. NO.: 22X-5500-P-00659

NOTE:
WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± .1
.XX ± .03
.XXX ± .005
.XXXX ± .0005
FINAL RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			O.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E. PAUL	7-20-90	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 31 & 46, AREA 16 — YARD AREA.
GRID 7
UNDERGROUND UTILITIES
SCALE 1"=20'

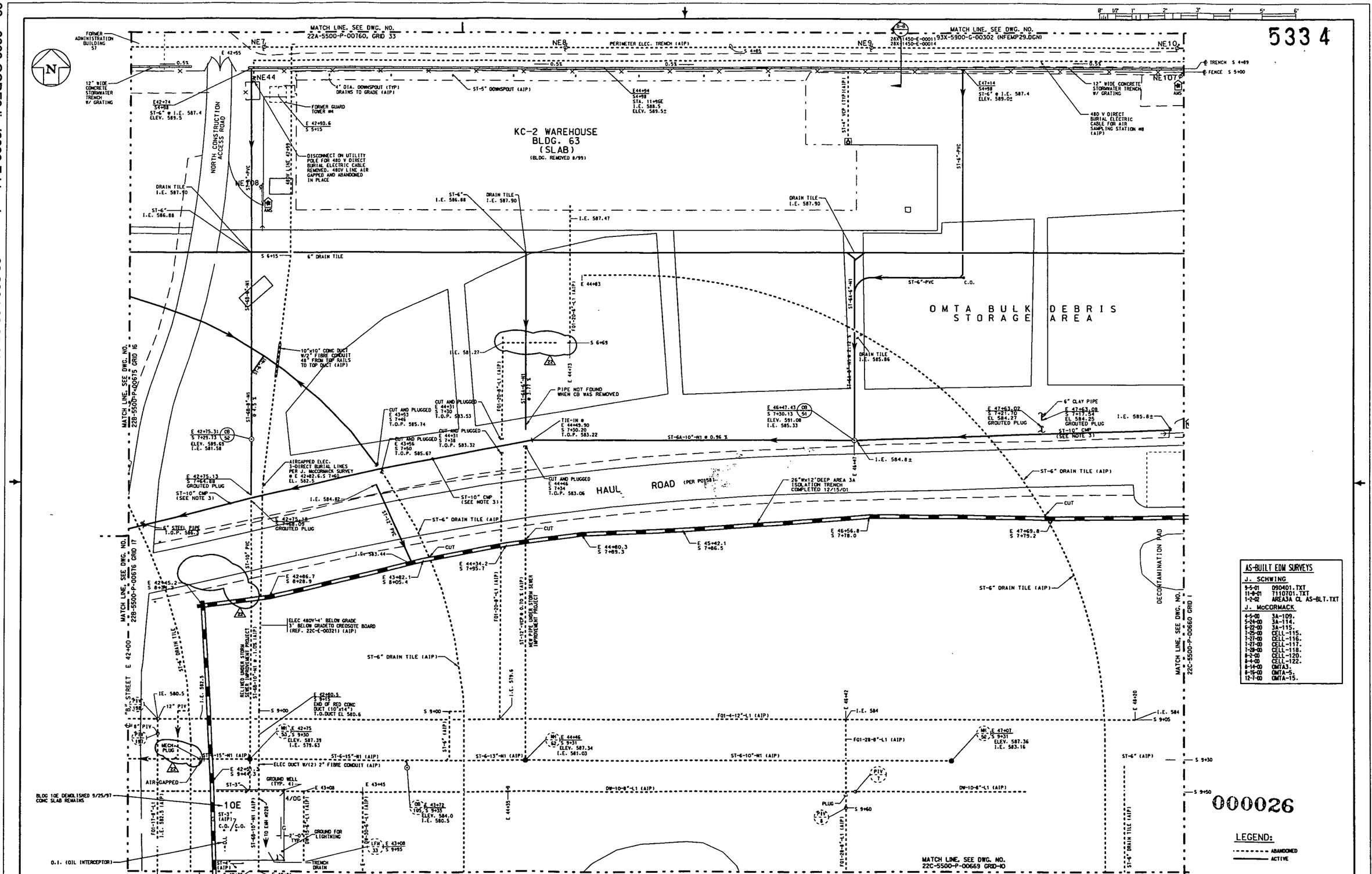
DATE 2-20-90
DRAWN A. KING

22H-5500-P-00666 | 21

FILE NAME: /UNDER/22HP0666.DGN

22cp0668 OSDF3 lind8392 Friday January 23 2004 02:05:09 PM EST

5334



AS-BUILT EDM SURVEYS

J. SCHWING	
9-5-01	090401.TXT
11-9-01	1110701.TXT
1-2-02	AREA3A CL AS-BLT.TXT
J. McCORMACK	
4-5-00	3A-109.
5-24-00	3A-114.
6-22-00	3A-115.
7-25-00	CELL-115.
7-27-00	CELL-116.
7-27-00	CELL-117.
7-28-00	CELL-118.
8-2-00	CELL-120.
8-4-00	CELL-122.
8-14-00	OMTA3.
8-15-00	OMTA-5.
12-7-00	OMTA-15.

NOTE:
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2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.
3. STORM SEWERS PER PROJECT 20102. SEE DRAWING /R3544/S20102-005.DGN

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
22	GENERAL UPDATE, HFH-130 & PIV-1	1/25/02	CES/RML	GEP	21	AREA 3A TRENCHING COMPLETED BY WISE TASK ORDER 051	1/6/02	RML	GEP	
	REMOVED PER COMPLETED WORK					12/15/01 GENERAL UPDATE				
	ORDER RT00934, REMOVED CB 314,				20	ADD PROP AREA 3A ISOLATION TRENCH AND BUFFER PER RES 427L	1/01/01	RML	GEP	
	ADDED GROUT AND MECH. PLUG					GENERAL UPDATE				
	LOCATIONS PER COMPLETED AREA				19	480V LINE ABANDONED IN PLACE, DISCONNECT FOR	1/11/01	RML	GEP	
	3A TRENCHING ACTIVITIES.					480V REMOVED FROM POLE NE44 AND 480V SERVICE				99X-5500-G-00627
						AIR GAPPED PER R. DUCKWORTH REQUEST 7-27-01.				22X-5500-P-00659

NOTE:
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TOLERANCES ARE
FRACTIONS ± 1/8
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.4
.XX ± 0.03
.XXX ± 0.010
.XXXX ± 0.0050
ORIG. RELEASE DATE

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		O.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT.	
		WASTE MANAGE.	
CHECKED	GEP	D.O.E.	
APPROVED	G.E. PAUL	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BUILDING 63 — YARD AREA

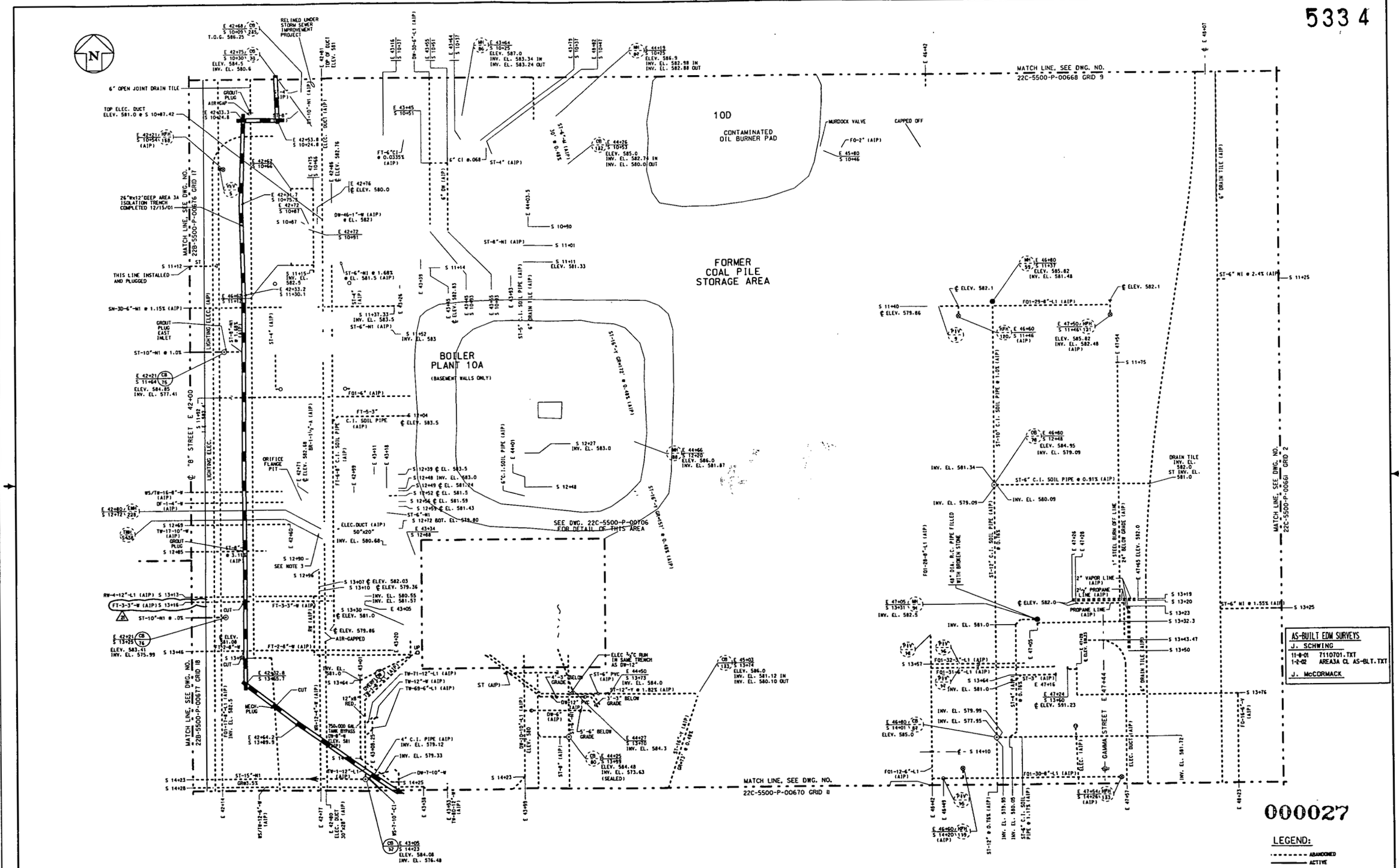
GRID 9
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 7-10-89
DRAWN J. KING

22C-5500-P-00668 | 22

FILE NAME: /UNDER/22CP0668.DGN

22cp0669 OSDF3 lind8392 Friday January 23 2004 02:05:42 PM EST



NOTE:
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2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.
3. VERIFIED THAT NO ENERGIZED LINES IN ELECTRIC MANHOLE #226 FED INTO OR THROUGH THE 3A EXCAVATION ZONE PER W.O. #AL054806.

NO.	REVISIONS	DATE	DWN. BY	APPD.
21	FT-3-3"W A.I.P. PER LIME SLUDGE PONDS REMEDIATION	1/30/02	RML	GEP
	PROJECT 20103			
20	GENERAL UPDATE ADDED GROUT & MECH. PLUGS	9/26/02	GES	GEP
	TO STORM SEWER LINES PER COMPLETED AREA			
	3A TRENCHING ACTIVITIES			
19	AREA 3A TRENCHING COMPLETED BY WISE TASK ORDER 051	1/16/02	RML	GEP
	12/15/01 GENERAL UPDATE			

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					99X-5500-G-00629
					99X-5500-G-00627
					22C-5500-P-00706
					22X-5500-P-00659

NOTE:
WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		O.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT.	
		WASTE MANAGE	
CHECKED	GEP	D.O.E.	
APPROVED	G.E. PAUL	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

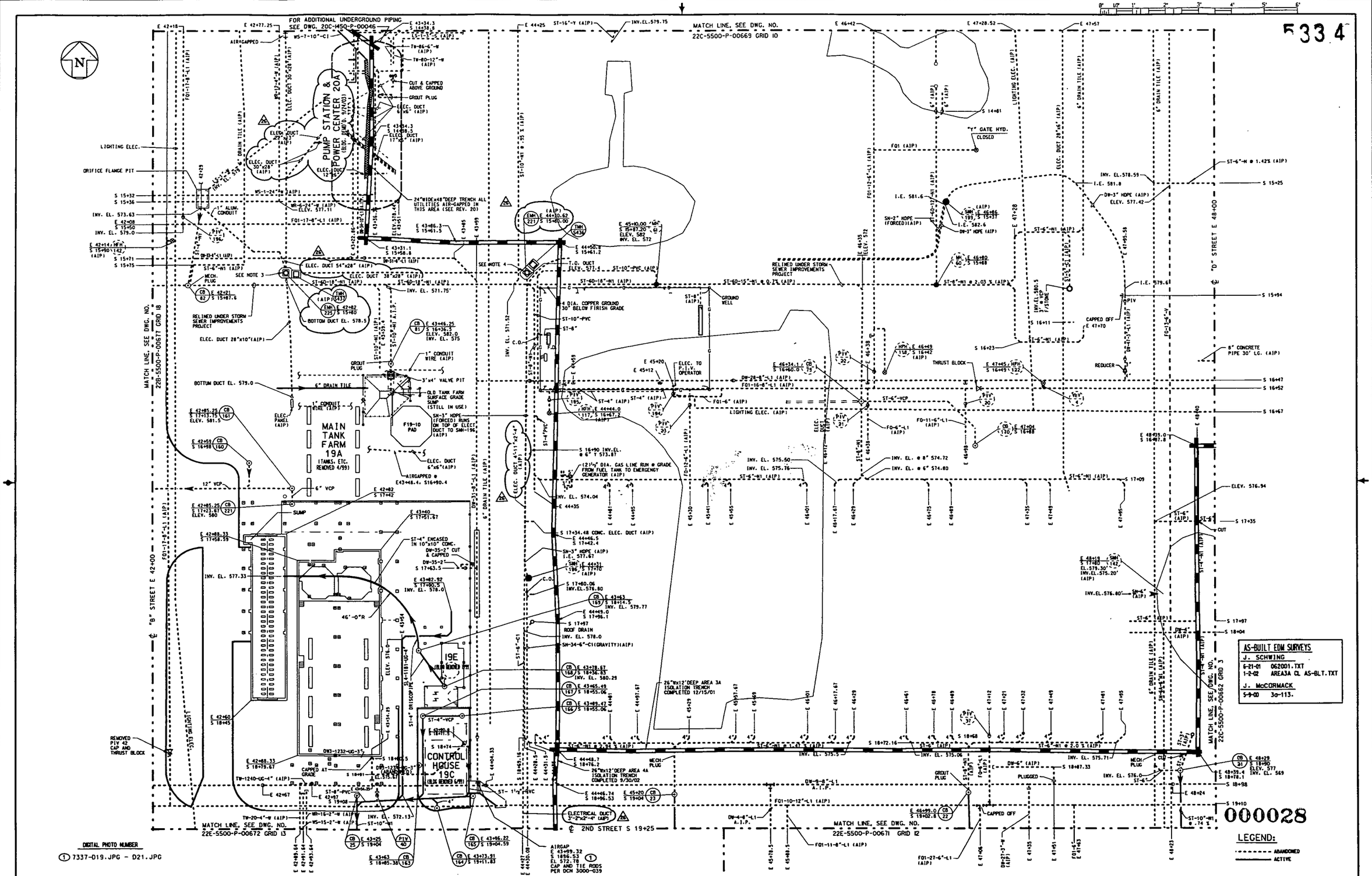
BLDG. 10.20 & 38 YARD AREA
GRID 10
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 6-15-90
DRAWN DEL TURPIN

22C-5500-P-00669 | 21

FILE NAME: /UNDER/22CP0669.DGN

22cp0670 OSDF3 lind8392 Friday January 23 2004 02:06:19 PM EST



DIGITAL PHOTO NUMBER

(1) 7337-D19.JPG - D21.JPG

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
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3. TERMINATED FEEDER 4 THAT FORMERLY FED OLD BOILER PLANT PER W.O. #AL054806.
4. VERIFIED THAT NO ENERGIZED WIRES LOCATED INSIDE OR CROSSING THE BOUNDARY AREA OF THE 3A EXCAVATION GRID PER W.O. #AL054806.

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					26	WORK COMPLETED TO AIP ELEC. DUCTS TO BLDG. 20A, EMH-221 & 225 PER W.O CM056671	1/14/03	GEP	GEP	
					25	ADD 4A ISOLATION TRENCH COMPLETED 9/30/02, GENERAL UPDATE	11/29/02	RML	GEP	99X-5500-G-00629 19X-1450-E-00008
					24	ADDED GROUT & MECH. PLUGS PER COMPLETED AREA 3A TRENCHING ACTIVITIES	1/25/02	GES	GEP	22C-1450-E-00319 20B-1450-E-00023
					23	DW-9-8"L1 A.I.P. PER COMPLETED WORK ORDER RT002403	1/11/02	GES	GEP	22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

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TOLERANCES ARE
FRACTIONS ± ⅛
ANGLES ± 0° - 30'
DECIMALS
.X ± .4
.XX ± .03
.XXX ± .005
ERRL RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			Q.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E. PAUL	5-2-02	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 12, 24 & TANK FARM — YARD AREA

GRID II
UNDERGROUND UTILITIES
SCALE 1"=20'

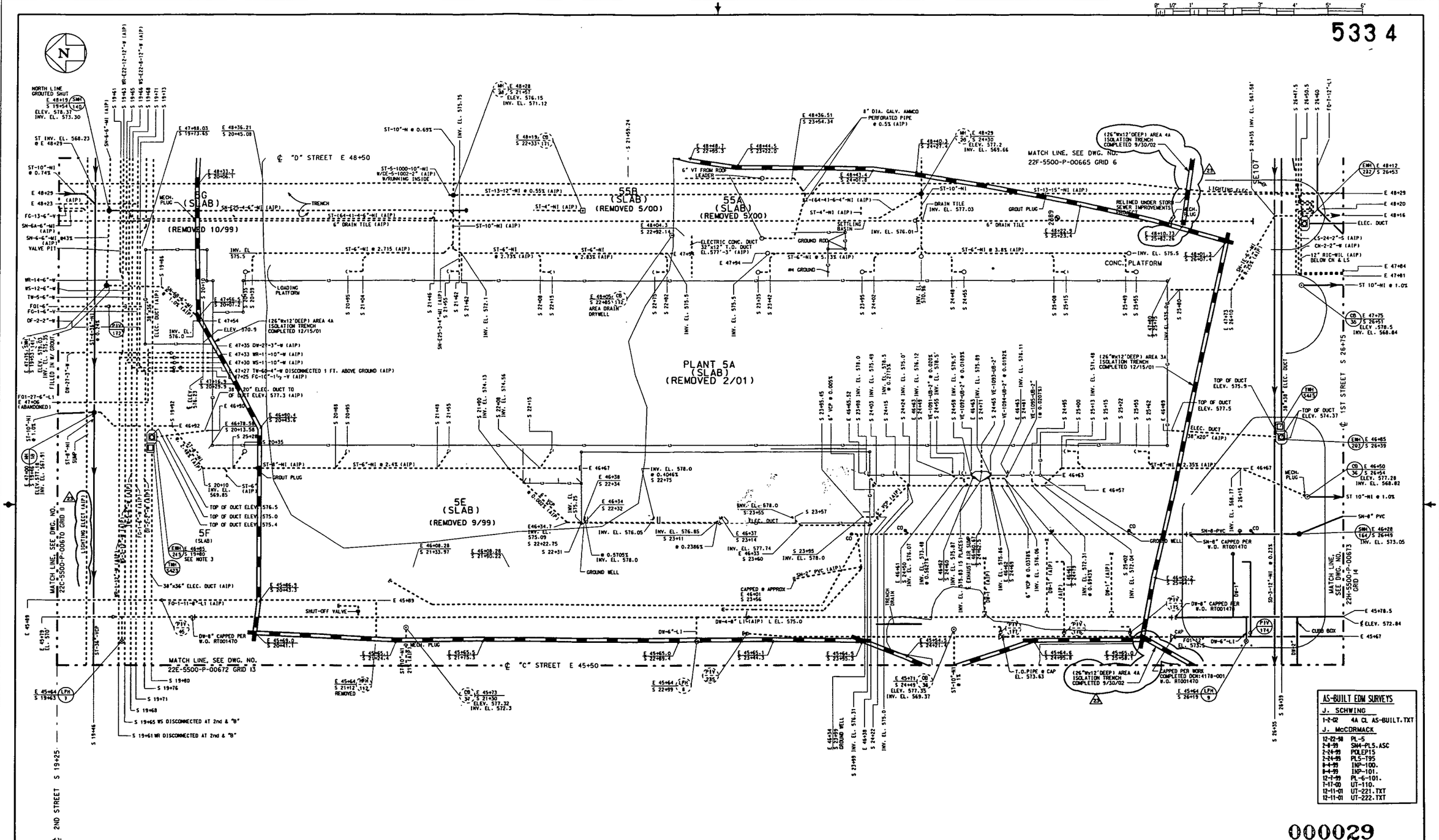
DATE 5-21-90
DRAWN J. ENG

22C-5500-P-00670 | 26

FILE NAME: /UNDER/22CP0670.DGN

22ep0671 OSDF3 lind8392 Friday January 23 2004 02:07:03 PM EST

5334



AS-BUILT EDM SURVEYS

J. SCHWING

1-2-02	4A CL AS-BUILT.TXT

J. McCORMACK

12-22-98	PL-5
2-8-99	SN4-PL5.ASC
2-24-99	POLEP15
2-24-99	PL5-T95
8-4-99	INP-100.
8-4-99	INP-101.
12-7-99	PL-6-101.
7-17-00	UT-110.
12-11-01	UT-221.TXT
12-11-01	UT-222.TXT

000029

LEGEND:

- - - - - - - ABANDONED
——— ACTIVE

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
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3. VERIFIED THAT NO ENERGIZED LINES IN THE MANHOLE FED INTO OR THROUGH THE 3A EXCAVATION ZONE BOUNDARY PER W.O. #AL054806.

NO.	REVISIONS	DATE	DWN. BY	APPD.
23	4A ISOLATION TRENCH, COMPLETED	12/29/02	RML	GEP
	9/30/02, GENERAL UPDATE			

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
22	SN-HE-6"MI A.I.P. PER COMPLETED WORK ORDER RT002404	9/1/02	GES	GEP	
	ELECTRIC DUCTS A.I.P. PER COMPLETED WORK ORDER AL056313.				
21	MECH. & GROUT PLUGS PER AS-BUILT DWG. 99X-5500-G-00631	3/20/02	RML	GEP	
20	DW-8" CAPPED AT EACH END AND SN-8" CAPPED AT T-84 PER	1/9/02	RML	GEP	
	J. McCORMACK SURVEYS, (26"Wx12"DEEP) AREA 4A TRENCHING				99X-5500-G-00631
	COMPLETE PER WISE TASK ORDER 051 12/15/01, GENERAL UPDATE				22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

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ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
MIN. RELEASE DATE

APPROVALS

CIVIL & STR.			SAFETY ENG.
ELECTRICAL			MAINTENANCE
ENGINEER			O.A.
INSTRUMENT			
MECHANICAL			FIRE PROTECT.
			WASTE MANAGE
CHECKED	G.E. PAUL	6-29-9	D.O.E.
APPROVED	G.E. PAUL	6-29-9	SECURITY

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

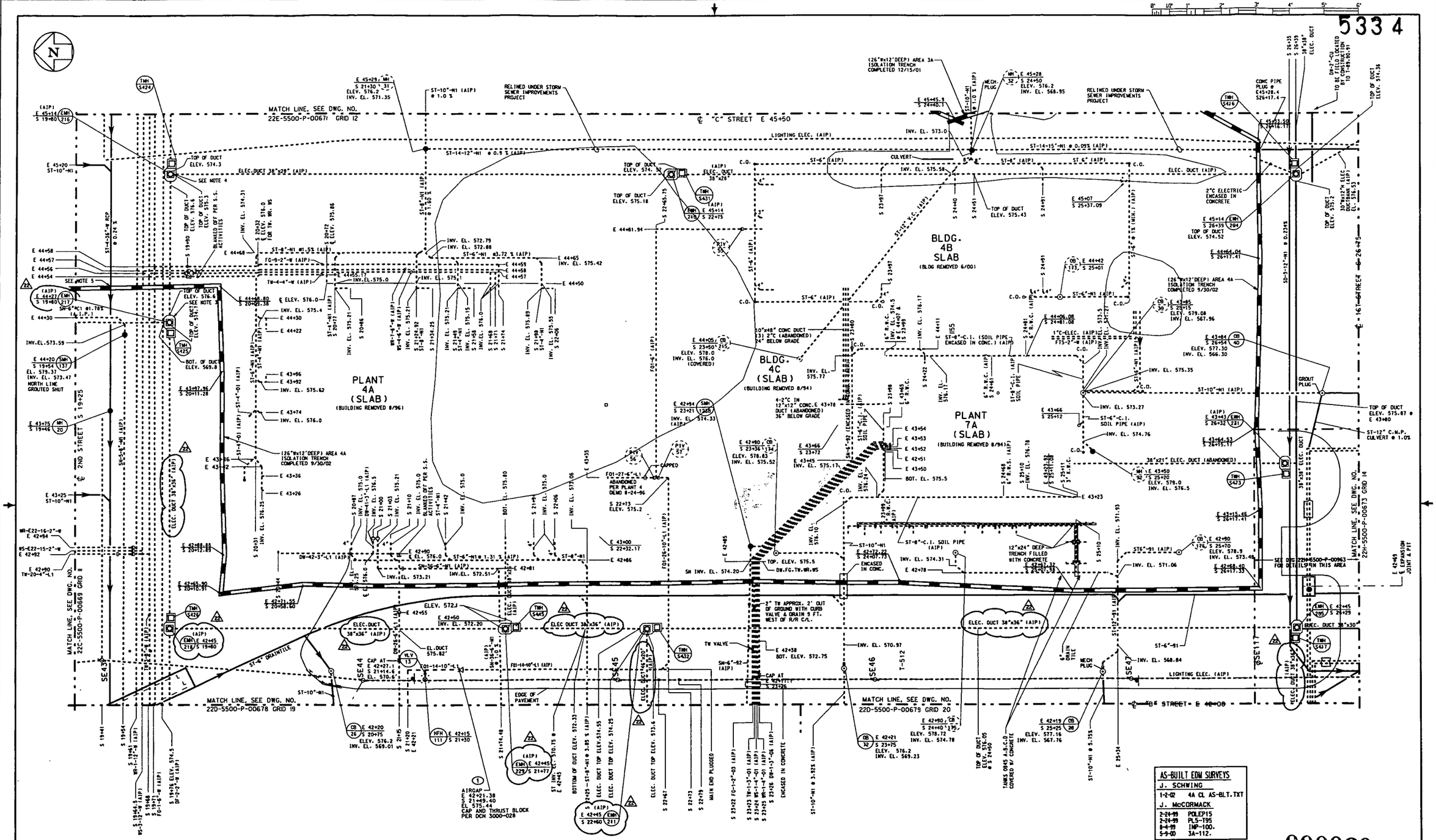
BLDG. 5 YARD AREA

GRID 12
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 12-14-89
DRAWN DEL TURPIN

22E-5500-P-00671 | 23

FILE NAME: /UNDER/22EP0671.DGN



DIGITAL PHOTO NUMBER

(1) 7337-013.JPG - D18.JPG

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.
3. VERIFIED THAT FEEDER #4 GOING NORTH TO FORMER LOCATIONS OF THE WATER PLANT AND OLD BOILER PLANT HAS BEEN TERMINATED PER W.O. #AL054806.
4. TERMINATED FEEDER #4 SHOWN USED TO FEED OLD BOILER PLANT PER W.O. #AL054806.
5. ST-4-36" RCP STORM SEWER STILL INTACT. 4A TRENCHING ACTIVITIES BY-PASSED THIS LINE.

NO.	REVISIONS	DATE	DWN. BY	APPD.
22	WORK COMPLETED TO AIP ELEC. DUCTWORK, EMH-214, 216 & 217	1/14/03	GEP	GEP
	PER W.O. CM056671			
21	ADD MECH PLUG ON EAST INLET OF MH-32 PER COMPLETED AREA	1/5/02	RML	GEP
	4A TRENCHING ACTIVITIES, GROUT PLUG IN NORTH INLET OF CB-40,			
	MECH PLUG ON EAST INLET OF CB-28, CONC PLUG INSTALLED IN			
	ST-14-15"N1, CB-39, 72, 173, 175, 176, 215 & MH-34, 32, 92 A.I.P.			
	PER WORK ORDER 2080L TRAVELER #104, GENERAL UPDATE			

NO.	REVISIONS	DATE	DWN. BY	APPD.
20	ADD ELEC. DUCTWORK, EMH-211, 212 & 213	11/14/96	GEP	GEP
	PER W.O. CM056671			
19	ADD ELEC. DUCTWORK, EMH-209 & 210	11/13/96	GEP	GEP
	PER W.O. CM056671			
18	ADD ELEC. DUCTWORK, EMH-207 & 208	11/12/96	GEP	GEP
	PER W.O. CM056671			
17	ADD ELEC. DUCTWORK, EMH-204, 205 & 206	11/11/96	GEP	GEP
	PER W.O. CM056671			
16	ADD ELEC. DUCTWORK, EMH-201, 202 & 203	11/8/96	GEP	GEP
	PER W.O. CM056671			
15	ADD ELEC. DUCTWORK, EMH-199 & 200	11/7/96	GEP	GEP
	PER W.O. CM056671			
14	ADD ELEC. DUCTWORK, EMH-197 & 198	11/6/96	GEP	GEP
	PER W.O. CM056671			
13	ADD ELEC. DUCTWORK, EMH-195 & 196	11/5/96	GEP	GEP
	PER W.O. CM056671			
12	ADD ELEC. DUCTWORK, EMH-193 & 194	11/4/96	GEP	GEP
	PER W.O. CM056671			
11	ADD ELEC. DUCTWORK, EMH-191 & 192	11/1/96	GEP	GEP
	PER W.O. CM056671			
10	ADD ELEC. DUCTWORK, EMH-189 & 190	10/31/96	GEP	GEP
	PER W.O. CM056671			
9	ADD ELEC. DUCTWORK, EMH-187 & 188	10/30/96	GEP	GEP
	PER W.O. CM056671			
8	ADD ELEC. DUCTWORK, EMH-185 & 186	10/29/96	GEP	GEP
	PER W.O. CM056671			
7	ADD ELEC. DUCTWORK, EMH-183 & 184	10/28/96	GEP	GEP
	PER W.O. CM056671			
6	ADD ELEC. DUCTWORK, EMH-181 & 182	10/25/96	GEP	GEP
	PER W.O. CM056671			
5	ADD ELEC. DUCTWORK, EMH-179 & 180	10/24/96	GEP	GEP
	PER W.O. CM056671			
4	ADD ELEC. DUCTWORK, EMH-177 & 178	10/23/96	GEP	GEP
	PER W.O. CM056671			
3	ADD ELEC. DUCTWORK, EMH-175 & 176	10/22/96	GEP	GEP
	PER W.O. CM056671			
2	ADD ELEC. DUCTWORK, EMH-173 & 174	10/21/96	GEP	GEP
	PER W.O. CM056671			
1	ADD ELEC. DUCTWORK, EMH-171 & 172	10/18/96	GEP	GEP
	PER W.O. CM056671			

22X-5500-P-00659
REF. DWG. NO.

NOTE:
WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± ⅛
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.010
.XXXX ± 0.0005
WEMCO RELEASE DATE

APPROVALS				
			SAFETY ENG.	
CIVIL & STR.			MAINTENANCE	
ELECTRICAL				
ENGINEER			Q.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E. PAUL	4-29-9	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

PLANT 4 & 7 — YARD AREA

GRID 13
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 2-29-90
DRAWN DEL TURPIN

22E-5500-P-00672 | 22

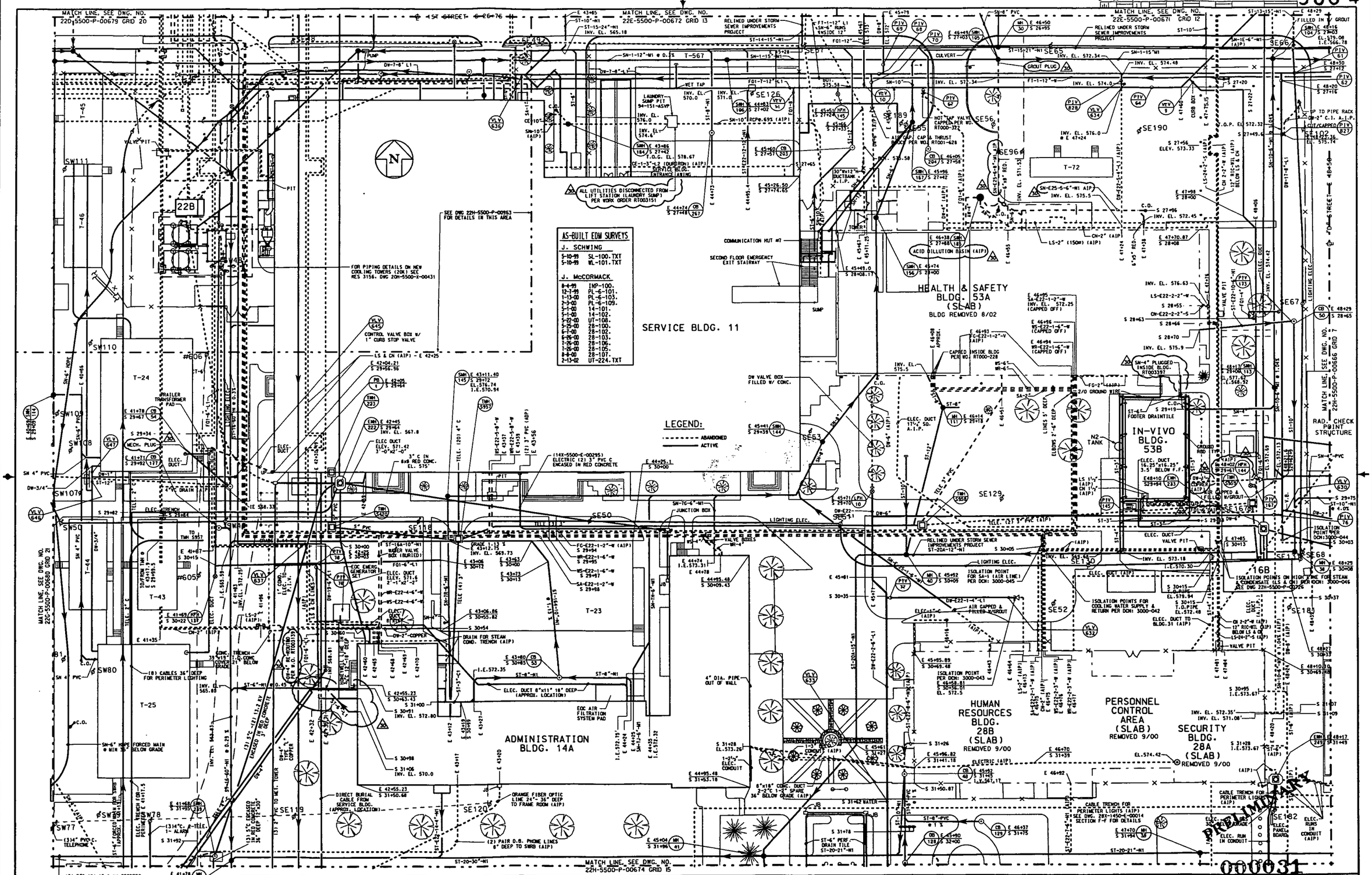
FILE NAME: /UNDER/22EP0672.DGN

000030

AS-BUILT EDM SURVEYS

J. SCHWING		
1-2-02	4A CL AS-BLT.TXT	
J. McCORMACK		
2-24-99	POLEP15	
2-24-99	PL5-T95	
8-4-99	INP-100.	
5-9-00	3A-112.	

LEGEND:
ABANDONED
ACTIVE



NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					30	ALL UTILITIES DISCONNECTED TO LIFT STATION PER COMP.	0/0/03	GES		
						W. O. RT003151, SM-4" PLUGGED INSIDE BLDG. 53B PER				
						W.O. RT003397 DW-4½" TO BLDG. 53B CAPPED AND A.I.P. PER				
						WORK ORDER RT003209, FOR-6" CUT, CAPPED & T.B. INSTALLED				
						NORTH OF HFH M4 A.I.P. PER W.O. RT003220. DW LINES WEST OF				
						BLDG. 14 REMOVED AND RE-ROUTED PER COMPLETED WORK				22H-5500-P-00673
						ORDER RT003339 AND DCN: 445I-001, ADD 12" MECH. PLUG (CB-54)				22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± ⅛
ANGLES ± 0° - 30'
DECIMALS
.X ± .1
.XX ± .03
.XXX ± .010
.XXXX ± .0005
FINAL RELEASE DATE

APPROVALS			
CIVIL & STR.		SAFETY ENG. MAINTENANCE	
ELECTRICAL			
ENGINEER		Q.A.	
INSTRUMENT MECHANICAL		FIRE PROTECT. WASTE MANAGE	
CHECKED	GEP	D.O.E.	
APPROVED	G.E. PAUL	11-21-03 SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 14,28 & 53 — YARD AREA

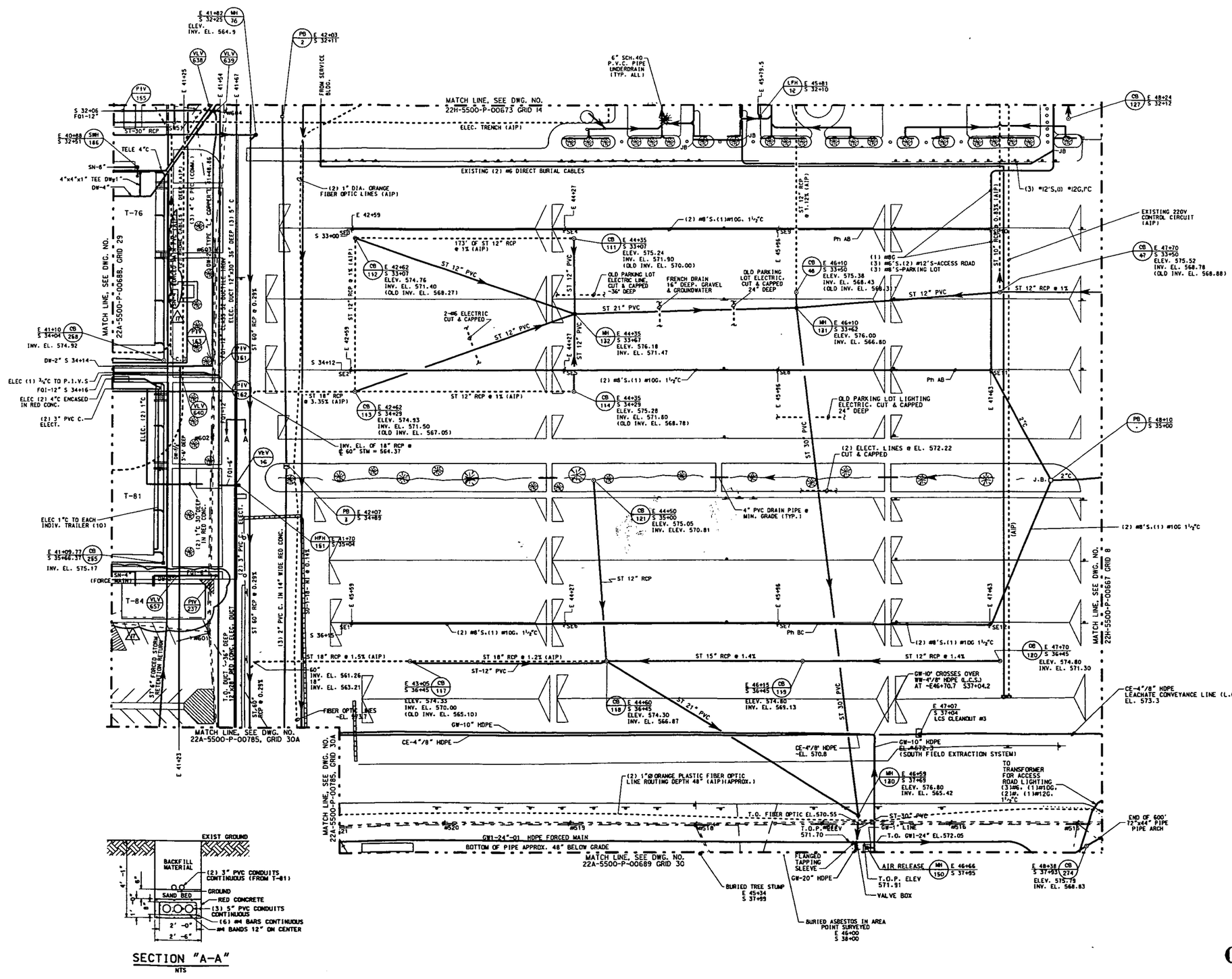
GRID 14
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 05-30-03
DRAWN J. KING

22H-5500-P-00673 | 30

FILE NAME: /UNDER/22HP0673.DGN

22hp0674 OSDF3 lind8392 Friday January 23 2004 02:09:43 PM EST



000032

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.
3. FOR ADDITIONAL INFO. ON STORM SEWER LINES AND CATCH BASINS SEE RES #2899. FOR AS-BUILT FIELD SURVEY OF THE 4"/8" LCS LINE, SEE B.L. PAYNE SURVEY (REF. DRAWING - LCS2032.DGN)

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.
					17	ADDED T-84. NUMBERED DW, FOI PIV'S & VLV'S NOT PREVIOUSLY NUMBERED. DW VLV'S 638, 639, 640, 657. FOI PIV 237, SN-4" PVC (FORCED) A.I.P. PER RES 4401	4/5/03	SJS/RML	GEP

REF. DWG. NO.: 22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.015
.XXXX ± 0.0005
FINAL RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			O.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT	
			WASTE MANAGE	
CHECKED	RP	4/25/8	D.O.E.	
APPROVED	C.E. PKG.	4/25/8	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

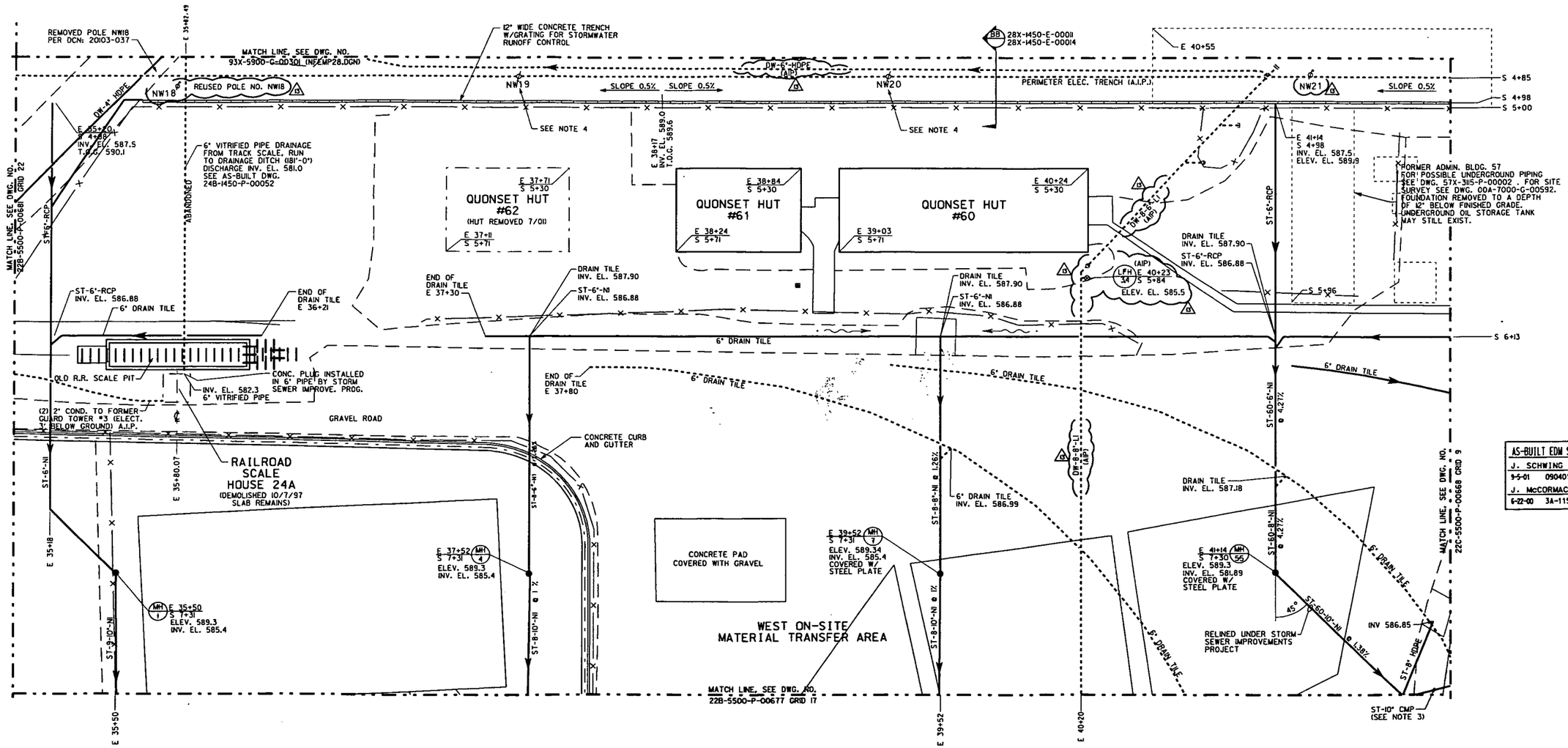
WEST PARKING LOT — YARD AREA
GRID 15
UNDERGROUND UTILITIES
SCALE 1"=30'

DATE 5-21-90
DRAWN DEL TURPIN

22H-5500-P-00674 | 17

FILE NAME: /UNDER/22HP0674.DGN

22bp0675 OSDF3 lind8392 Friday January 23 2004 02:10:21 PM EST



AS-BUILT EDM SURVEYS
J. SCHWING
9-5-01 090401.TXT
J. McCORMACK
6-22-00 3A-115.

PRELIMINARY

000033

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.
3. STORM SEWERS PER PROJECT 20102. SEE DRAWING /RES4944/ SX20102-005.DGN
4. POLES NW19 AND NW20 REMOVED AND REPLACED WITH 35' CLASS II SOUTHERN PINE (DOZ TREATED PER DCN: 20103-037.

NO.	REVISIONS	DATE	DWN. BY	APPD.
13	DW-8-8" LI, DW-8-6" LI & DW-6" HDPE A.I.P.	8-6-03	GES	
	PER WORK COMPLETED W.O. RT003137.			
12	INCORP WORK COMLETED DCN: 20103-037, ADDED NOTE 4.	5/30/02	RML	GEP
11	AS-BUILT ST-10" CMP PER J. McCORMACK SURVEY 3A-115, AS-	0/10/01	RML	GEP
	BUILT ST-8" HDPE PER J. SCHWING SURVEY 09040LTXT, REMOVE			
	POLES NW29 & NW30, COVERED MH 7 & MH 55 PER RES 4267,			
	GENERAL UPDATE			

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					90X-5500-G-00576
					22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/16
ANGLES ± 0° - 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
FINAL RELEASE DATE

APPROVALS			
CIVIL & STR.		SAFETY ENG. MAINTENANCE	
ELECTRICAL			
ENGINEER		Q.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT. WASTE MANAGE.	
CHECKED	GEP	D.O.E.	
APPROVED	G.E. PICL	SECURITY	

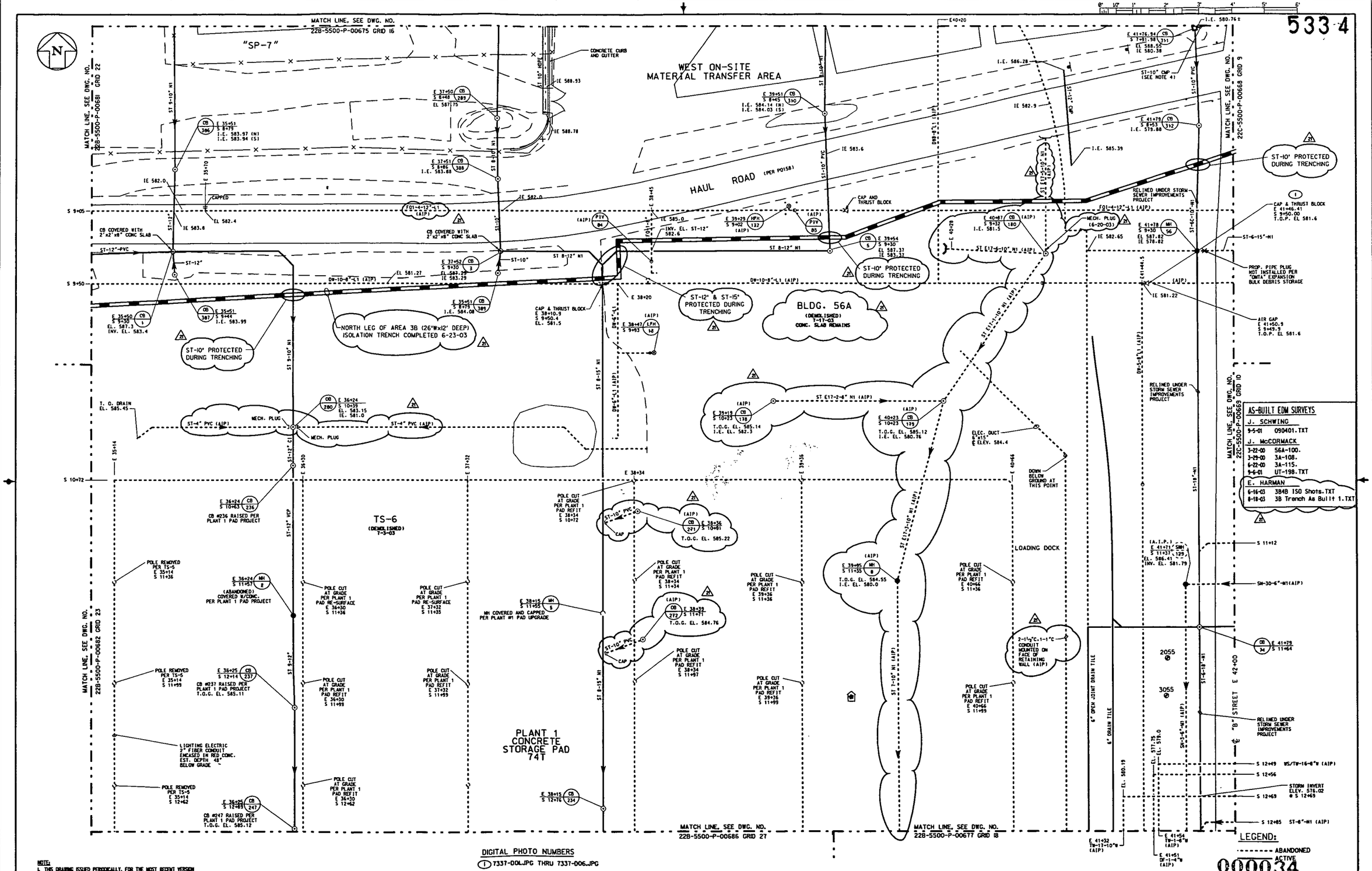
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 60,61 & 62 YARD AREA
GRID 16
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 4-25-90
DRAWN DEL. TURPIN
22B-5500-P-00675 | 13

FILE NAME: /UNDER/22BP0675.DGN

22bp0676 OSDF3 lind8392 Friday January 23 2004 02:10:46 PM EST



DIGITAL PHOTO NUMBERS

(1) 7337-00L.JPG THRU 7337-006.JPG

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY, FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.
3. HAUL ROAD & REV 8 RELOCATED AND NEW CATCH BASINS AND FIRE HYDRANTS PER B.L. PAYNE AS-BUILT SURVEY (PO 150) SEE /PAYNE/HAUL/HAULROAD.DGN.
4. STORM SEWERS PER PROJECT 20102. SEE DRAWING /RES444/SK20102-005.DGN

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					21	FO1-4-12" LI AIP PER COMPLETED WORK ORDER RT00343, STORM SEWERS AND CATCH BASINS AIP PER AREA 3B UTILITY ISOLATIONS PROJECT	1-12-03	GES	GEP	17X-7000-S-00008 22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

APPROVALS

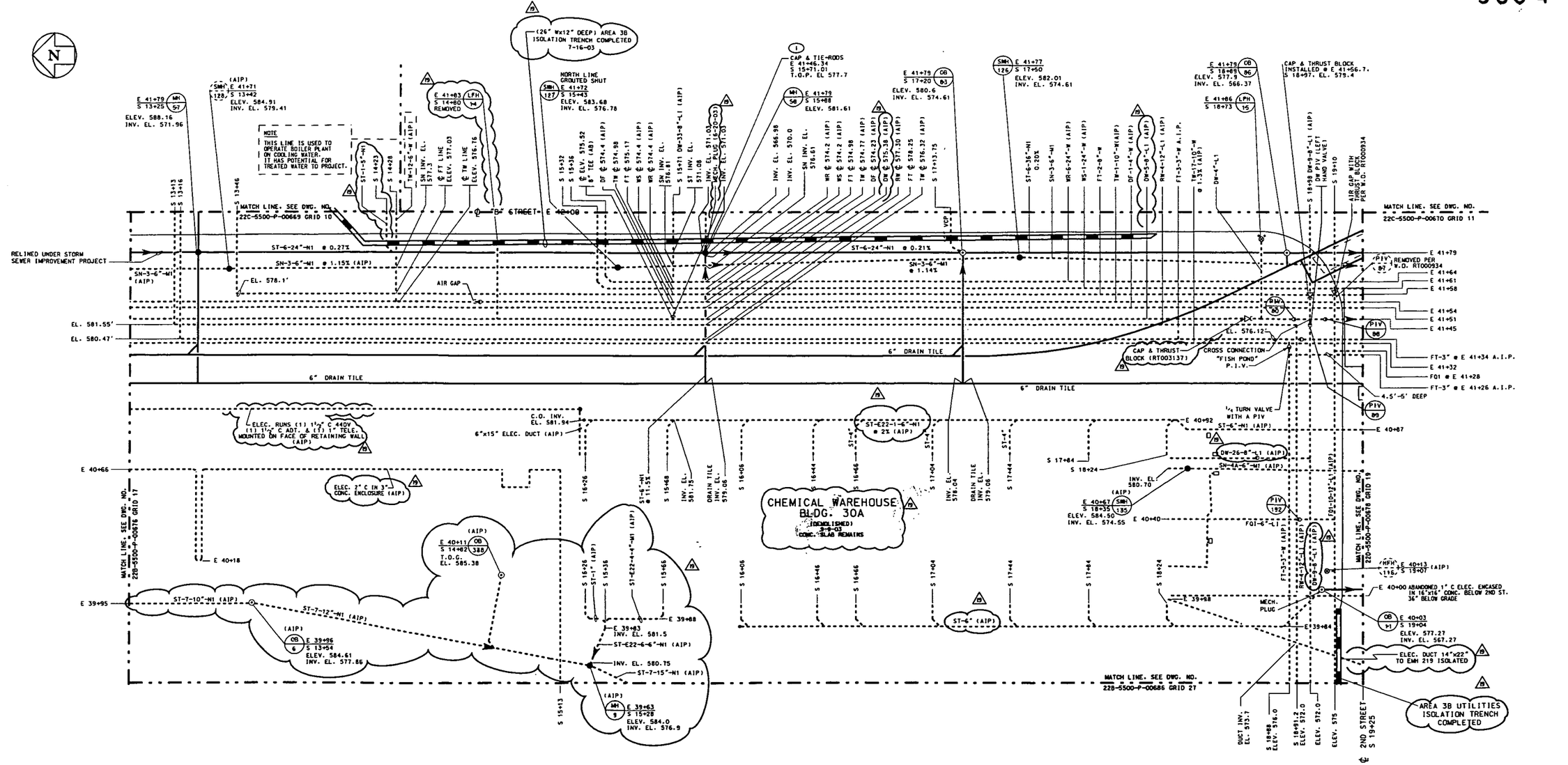
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		Q.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT.	
		WASTE MANAGE	
CHECKED	GEP	D.O.E.	
APPROVED	G.E PAUL	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 56 & PLANT #1 PAD — YARD AREA
GRID 17
UNDERGROUND UTILITIES
SCALE 1"-20'

DATE 4-25-90
DRAWN DEL. TURPIN
22B-5500-P-00676 | 21

FILE NAME: /UNDER/22BP0676.DGN



AS-BUILT EDM SURVEYS

A. CLINTON
8-13-02 Thrustblock.txt
E. HARMAN
6-10-03 3B isolation shots.txt
8-18-03 3B Trench As Built 1.txt
J. McCORMACK
4-5-00 3A-110.
11-15-01 UT-216.txt

DIGITAL PHOTO NUMBERS

(1) 7337-007.JPG THRU 7337-010.JPG

000035

LEGEND:

- - - - - - - ABANDONED
———— ACTIVE

NOTE:
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2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE "AS-BUILT". COORDINATES SHOWN IN SLANTED FONTS WILL BE CONSIDERED AS-BUILT PER FIELD SURVEYS. IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.

NO.	REVISIONS	DATE	DWN. BY	APPD.
19	INSTALLED CAP & THRUST BLOCK PER COMPLETED WORK ORDER	12-18	GES	GEP
	RT003371, AP STORM SEWERS PER COMPLETED AREA 3B UTILITY			
	ISOLATION PROJECT, DW-5-8"-L1 BLDG. 30A AIP PER W.O. RT003631,			
	MISC. UNDERGROUND AIP, DW-9-8"-L1 AIP PER COMPLETED W.O. RT003039			
18	ALL FT-3" LINE A.I.P. PER LIME SLUDGE PONDS	9-25-02	GES	GEP
	REMEDIATION PROJECT #20103			22X-5500-P-00659

NOTE:
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/64
ANGLES ± 0° - 30'
DECIMALS
.X ± .1
.XX ± .03
.XXX ± .005
.XXXX ± .0005
GENL RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			Q.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E. PAUL	1/6/93	SECURITY	

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 30 YARD AREA

GRID 18
UNDERGROUND UTILITIES
SCALE 1"=20'

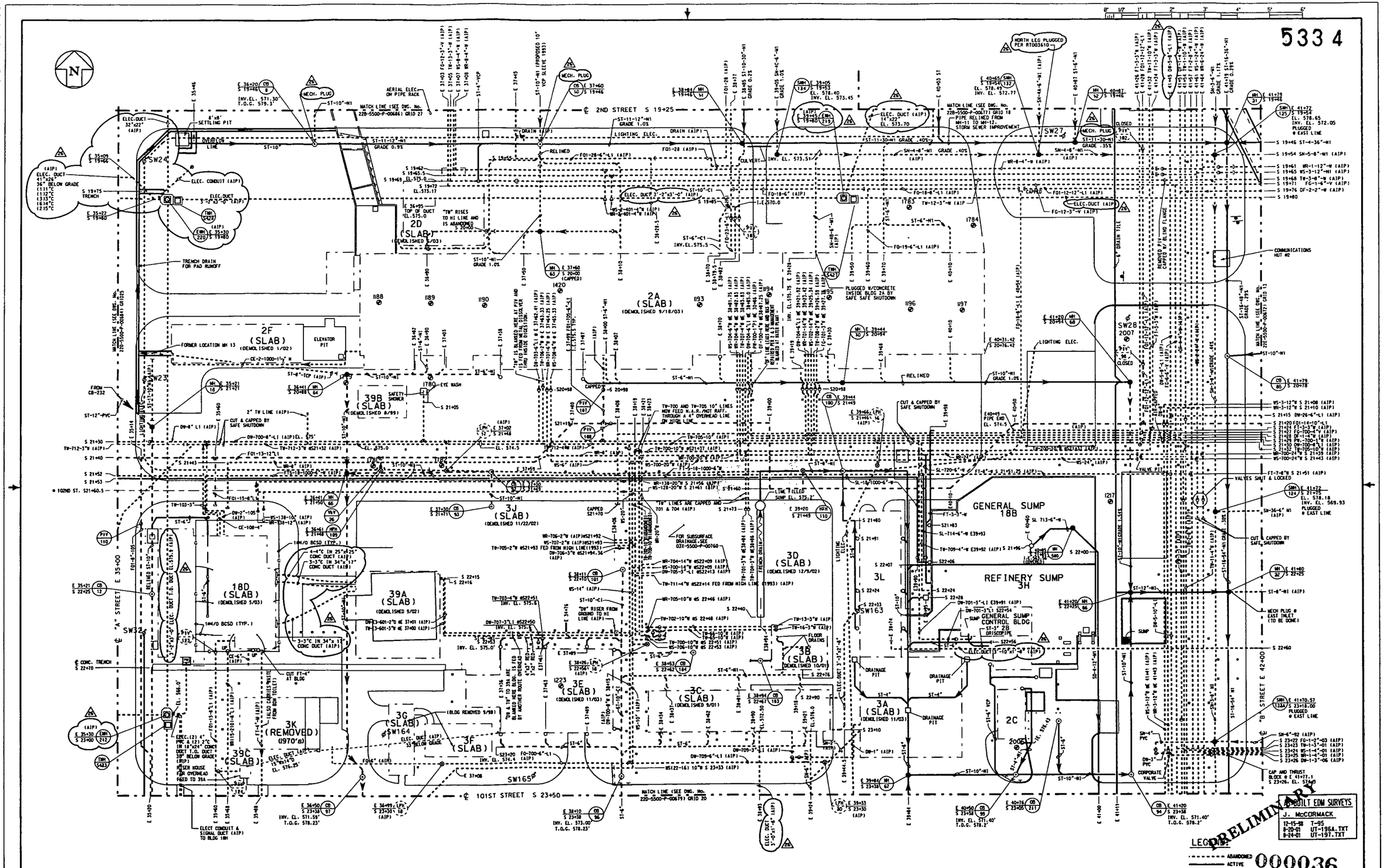
DATE 4-25-90
DRAWN DG. TURPIN

22B-5500-P-00677 | 19

FILE NAME: /UNDER/22BP0677.DGN

22bp0677 OSDF3 lind8392 Friday January 23 2004 02:11:23 PM EST

22dp0678 OSDF3 lind8392 Friday January 23 2004 02:11:57 PM EST



NOTE:
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NO.	REVISIONS	DATE	DWN. BY	APPD.
26	DW-5-8"-L1 BRANCHES & HYDRANTS AIP PER COMPLETED W.O. RT003339	12/15/93	GEP	
	ELEC. DUCTS, EMH-212, 219 & 220 AIP PER COMPLETED W.O. CM056671			
	ELEC. ISOLATED BETWEEN BLDG. 3A & 3L PER COMP. W.O. RT003685			
	NORTH LEG PF SMH-132 PLUGGED PER COMPLETED W.O. RT003610			
	ADDED STORM SEWER AIP & PLUGGED LOCATIONS, BLDG. DEMO. DATES			

REF. DWG. NO. 22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		O.A.	
INSTRUMENT			
MECHANICAL		FIRE PROTECT.	
		WASTE MANAGE	
CHECKED		D.O.E.	
APPROVED	9-24-93	SECURITY	

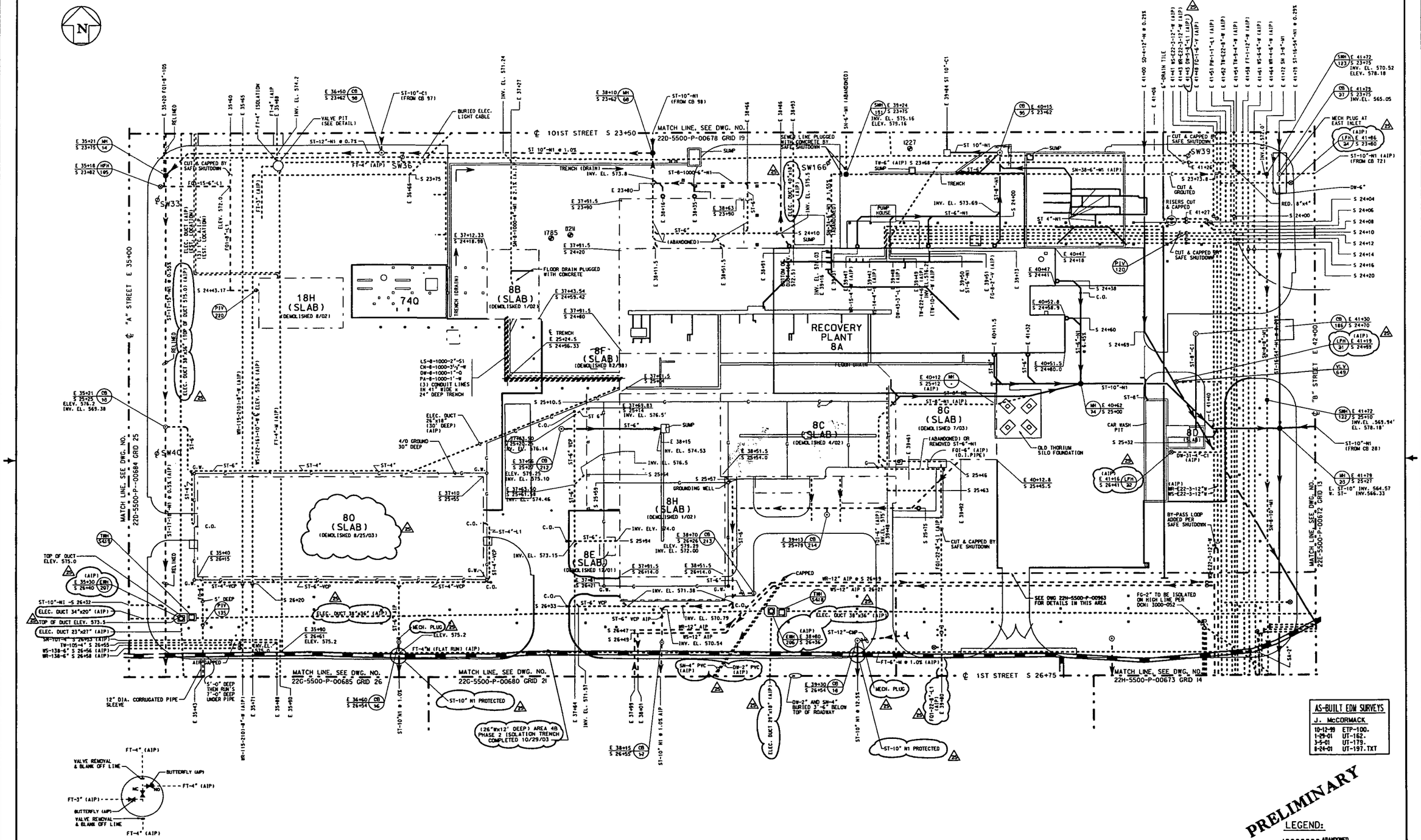
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

PLANTS 2 & 3 YARD AREA
GRID 19
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 10-10-90
DRAWN J. KING
22D-5500-P-00678 26

FILE NAME: /UNDER/22DP0678.DGN

5334



AS-BUILT EDM SURVEYS

J. McCORMACK	
10-12-99	ETP-100.
1-29-01	UT-162.
3-5-01	UT-179.
8-24-01	UT-197.TXT

PRELIMINARY

LEGEND:

- ABANDONED
- ACTIVE

000037

NOTE:
1. THIS DRAWING ISSUED PERIODICALLY. FOR THE MOST RECENT VERSION OF THIS DRAWING, ACCESS THE FILENAME BELOW THE TITLE BLOCK.
2. COORDINATES SHOWN ON THIS DRAWING ARE TAKEN FROM EXISTING FEMP DRAWINGS AND ARE NOT VERIFIED TO BE AS-BUILT. IT IS HIGHLY RECOMMENDED THAT A FIELD SURVEY BE PERFORMED PRIOR TO SITE DESIGN WORK.

NO.	REVISIONS	DATE	DWN. BY	APPD.
25	FOI-22-8"-L1 AIP PER COMPLETED W.O. RT003084, DW-5-8"-L1	8-5-03	GES	
	BRANCHES & HYDRANTS AIP PER COMPLETED W.O. RT003039, AIP			
	ELEC. DUCTS AND EMH-206 & 207 PER W.O. CM05667L, SN-4"&DW-2"			
	AIP PER COMP. W.O. RT003942, ADDED BLDG. DEMO DATES, MISC. APs			

REF. DWG. NO. 22X-5500-P-00659

NOTE: WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			Q.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT.	
			WASTE MANAGE	
CHECKED	GEP		D.O.E.	
APPROVED	G.E. PAUL	4/29/9	SECURITY	

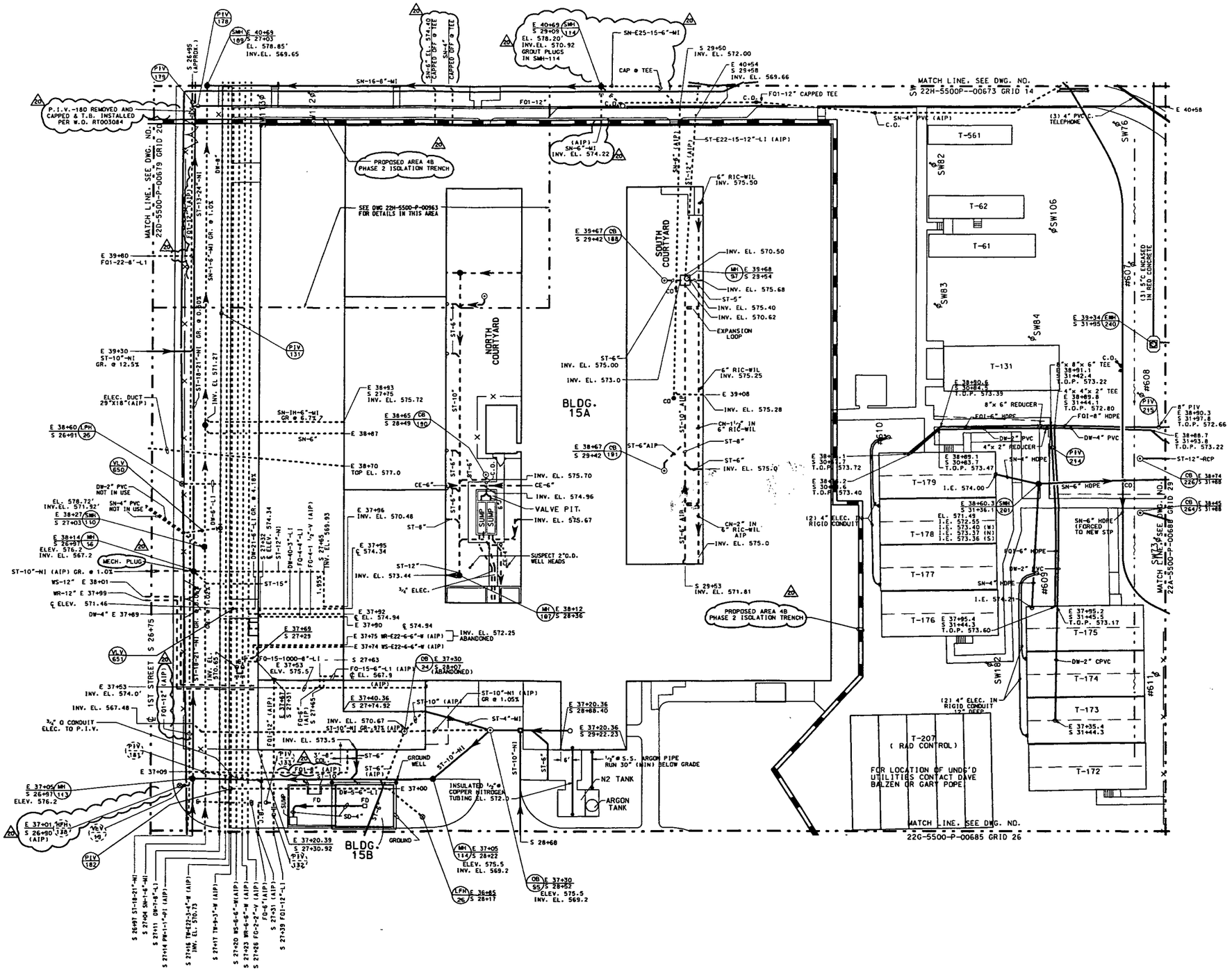
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

PLANT 8 — YARD AREA

GRID 20
UNDERGROUND UTILITIES
SCALE 1"=20'

DATE 7-10-90 — DRAWN DEL TURPIN — 22D-5500-P-00679 — 25

FILE NAME: /UNDER/220P0679.DGN



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NO.	REVISIONS	DATE	DWN. BY	APPD.
20	P.I.V. IS REMOVED, CAP & T.B. INSTALLED	0/5/03	GES	
	FO-12" LI A.I.P., FO-8" TO LAB A.I.P. PER			
	COMP. WORK ORDER RT003084.			
	SN-6"-MI (FROM LAB TO SMH-90 A.I.P.			
	WITH PER W.O. RT00330 & RT00353 & CAPS			

NO.	REVISIONS	DATE	DWN. BY	APPD.
19	LAB SOUTH COURTYARD SN-6" AIP, LAB SN-6" M AIP, SN-4" PVC AIP	4/5/03	GEP	GEP
	PER RES 440L GROUT SHUT IN SMH-84			
18	NUMBERED DW PIV'S & VLV'S NOT PREVIOUSLY NUMBERED. PIV'S (3)	9/26/02	SJS/GES	GEP
	& (82, VLV'S 650 & 651, GENERAL UPDATE. ADDED ELEC. CONDUIT			
	TO TRAILERS T-173, T74, T77 & T78, ADDED DW-2" CPVC PER			
	GARY POPE 6-18-02, GENERAL UPDATE			

REF. DWG. NO.
15X-5500-P-01991
15X-5500-C-01667
22X-5500-P-00659

NOTE:
WEMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/8
ANGLES ± 0° 30'
DECIMALS
.X ± 0.1
.XX ± 0.03
.XXX ± 0.005
.XXXX ± 0.0005
GEN. RELEASE DATE

APPROVALS				
CIVIL & STR.			SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			O.A.	
INSTRUMENT				
MECHANICAL			FIRE PROTECT. WASTE MANAGE	
CHECKED	GEP	4/25/8	D.O.E.	
APPROVED	G.E. PAUL	4/25/8	SECURITY	

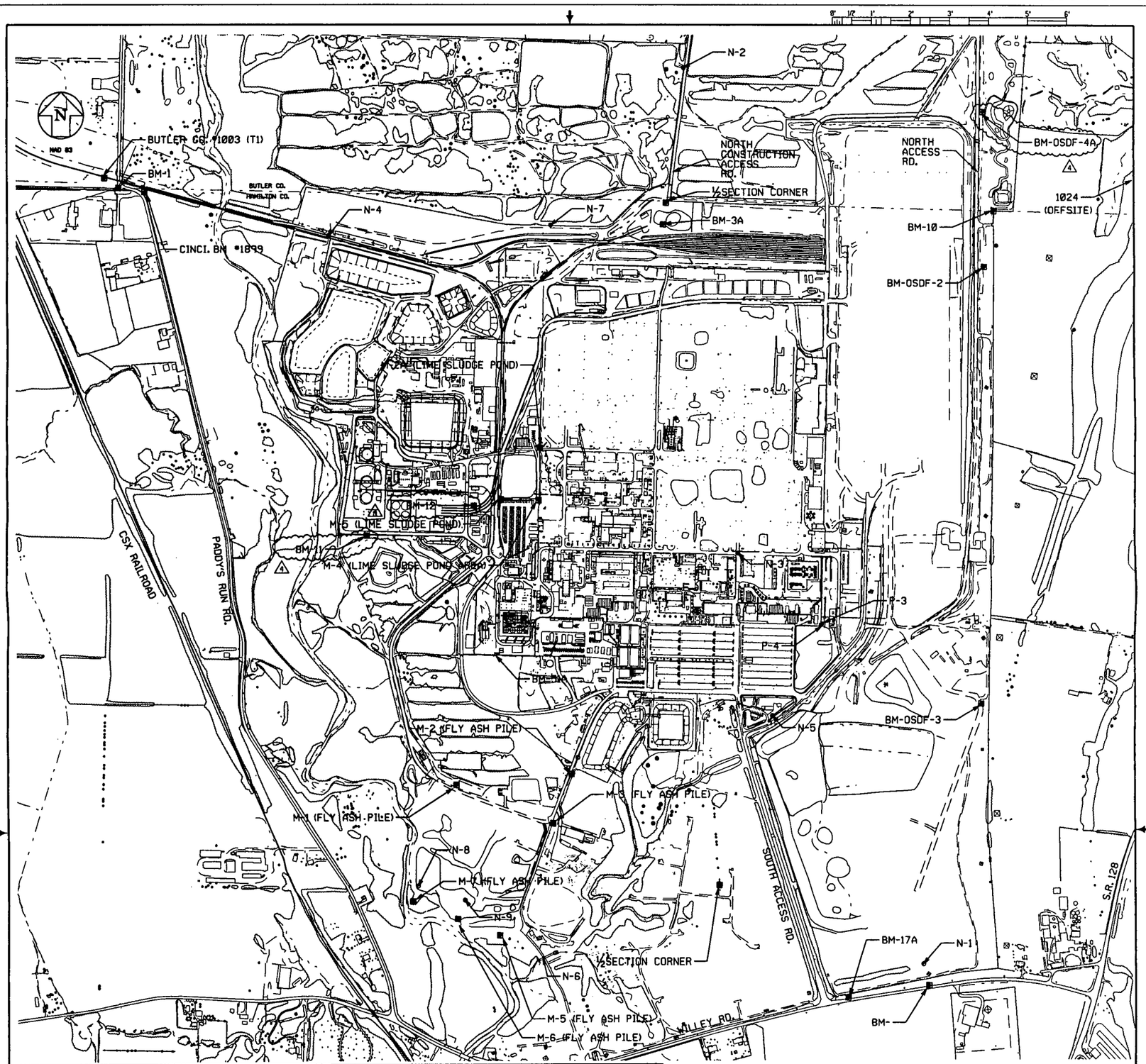
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 15-LAB. YARD AREA
GRID 21
UNDERGROUND UTILITIES
SCALE 1"=20'
DATE 7/17/89
DRAWN DEL TURPIN
22G-5500-P-00680 | 20

FILE NAME: /UNDER/22GP0680.DGN

22gp0680 OSDF3 lind8392 Friday January 23 2004 02:13:44 PM EST

00xg1846 OSDF3 iind8392 Friday January 23 2004 02:20:29 PM EST



MONUMENT	DESCRIPTION	NORTHING	EASTING	ELEVATION	SURVEY	COMMENTS
BM-1	(ESTAB.)SITE ORIGIN (0,0)	482813.982	1345109.041	579.83	WOOLPERT	COUNTY SECTION CORNER GPS LOCATED
M-1A	LIME SLUDGE POND					DESTROYED RAIL UPGRADE 1997
M-2A	LIME SLUDGE POND					
M-4A	LIME SLUDGE POND					DESTROYED/COVERED PER BLDG 45 PARKING LOT PROJ.
M-5A	LIME SLUDGE POND					
M-1	FLY ASH PILE	478237.93	1347705.20	573.62	WOOLPERT	GPS LOCATED
M-2	FLY ASH PILE	478322.05	1348595.78	576.67	WOOLPERT	GPS LOCATED
M-3	FLY ASH PILE	477948.929	1348451.099	577.41	WOOLPERT	GPS LOCATED
M-4	FLY ASH PILE					DESTROYED 10/94 PER FLY ASH PILE DRAIN. DITCH PROJ.
M-5	FLY ASH PILE	477100.59	1348036.39	537.83	WOOLPERT	GPS LOCATED
M-6	FLY ASH PILE	477226.90	1347710.31	538.66	WOOLPERT	GPS LOCATED
M-7	FLY ASH PILE	477360.67	1347365.20	537.75	WOOLPERT	GPS LOCATED
M-5A/M-8	FLY ASH PILE	477071.77	1348110.37	537.60	WOOLPERT	GPS LOCATED
M-1	SAN LANDFILL					DESTROYED RAIL UPGRADE 1997
M-2	SAN LANDFILL					DESTROYED RAIL UPGRADE 1997
M-3	SAN LANDFILL					DESTROYED RAIL UPGRADE 1997
N-1	ALUMINUM CAPPED PIN	476876.20	1351301.43	607.88	WOOLPERT	GPS LOCATED
N-2	ALUMINUM CAPPED PIN	483117.88	1349475.83	634.26	WOOLPERT	GPS LOCATED
N-3	ALUMINUM CAPPED PIN	480007.25	1349883.72	579.44	WOOLPERT	GPS LOCATED
N-4	ALUMINUM CAPPED PIN	482445.14	1346725.45	576.91	WOOLPERT	GPS LOCATED
N-5	ALUMINUM CAPPED PIN	478758.71	1350146.60	580.37	WOOLPERT	GPS LOCATED
N-6	ALUMINUM CAPPED PIN	476928.55	1348369.68	551.99	WOOLPERT	GPS LOCATED
N-7	ALUMINUM CAPPED PIN	482526.88	1348443.85	585.57	WOOLPERT	GPS LOCATED
N-8	ALUMINUM CAPPED PIN	477479.18	1347404.43	538.88	WOOLPERT	GPS LOCATED
N-9	ALUMINUM CAPPED PIN	477370.11	1347767.16	537.99	WOOLPERT	GPS LOCATED
P-1	U.S. AEC				WOOLPERT	DESTROYED PER T-42 PROJECT
P-2	U.S. AEC				WOOLPERT	DESTROYED PER HAUL ROAD 1997
P-3	U.S. AEC	479464.687	1350529.596	577.18	WOOLPERT	PRODUCTION AREA BOUNDARY (10' OFFSET) GPS LOCATED
P-4	U.S. AEC	479454.81	1350519.26	577.74	WOOLPERT	PRODUCTION AREA BOUNDARY (10' OFFSET) GPS LOCATED
BM 1003	BUTLER CO.	482887.97	1345001.20	579.93	WOOLPERT	BUTLER COUNTY WITNESS GPS LOCATED
BM 1024		482524.62	1357525.75	542.64	WOOLPERT	GPS LOCATED
BM 1899	CITY OF CINCINNATI	482781.79	1345309.62	579.06	WOOLPERT	CINCINNATI WATER DEPT BM GPS LOCATED
½ SECTION	HAMILTON COUNTY					DESTROYED 11/94 - BASE STONE INTACT
½ SECTION	HAMILTON COUNTY					CAGIS #3160
BM-1A	U.S. DOE/WMCO					DESTROYED BY STP DEMOLITION PROJECT
BM-2A	U.S. DOE/WMCO					CAGIS #3154, WOOLPERT #551 DESTROYED PER OSDF
BM-3A	U.S. DOE/WMCO	482531.64	1349314.19	589.53	WOOLPERT	GPS LOCATED
BM-10	U.S. AEC	482637.962	1351857.178	615.88	WOOLPERT	GPS LOCATED
BM-17A	U.S. DOE/WMCO				WOOLPERT	DAMAGED-BRASS PLATE MISSING/DESTROYED
BM-51-A1						TO BE RE-SURVEYED
BM-	U.S. DOE/WMCO					TO BE RE-SURVEYED
8011	HAMILTON COUNTY	475374.29	1352068.16	614.20	WOOLPERT	CAGIS #8011 GPS LOCATED
BM-OSDF-2	ON-SITE DISPOSAL FAC.	482199.937	1351779.165	615.82	B.L. PAYNE	GPS LOCATED
BM-OSDF-3	ON-SITE DISPOSAL FAC.	478850.416	1351749.328	595.61	B.L. PAYNE	GPS LOCATED
BM-OSDF-4	ON-SITE DISPOSAL FAC.					DESTROYED
BM-11	SILOS AREA	480149.12	1347018.47	569.02	T. BAUMANN	#996, BRASS DISK LOCATED AT BASE OF SILOS CAMERA
BM-12	SILOS AREA	480368.83	1347842.41	577.76	T. BAUMANN	#9912, BRASS DISK ADJACENT TO HFH-171
BM-OSDF-4A	ON SITE DISPOSAL FAC.	483394.96	1351770.39	609.93	J. SCHWING	REPLACED BM-OSDF-4

LOCATION	FEMP	NAD27	NAD83	USGS
BUTTERFIELD NATIONAL MONUMENT	—	—	—	N 39° 18' 09.711" W 84° 42' 50.567"
BM-1	N 00+00 E 00+00	N 482,784.90 E 1,376,578.31	N 482,813.982 E 1,345,109.041	N 39° 18' 16.9" W 84° 42' 12.5"
CENTER PLANT 4A (CENTER OF FEMP)	S 21+35.38 E 43+72.89	—	N 480,559.36 E 1,349,421.62	N 39° 17' 55.1" W 84° 41' 14.1"
CENTER EAST WATER TOWER 20D	S 23+75.21 E 54+00.0	—	N 480,291.53 E 1,350,442.15	N 39° 17' 54" W 84° 41' 03"

PRELIMINARY

1. COORDINATES LISTED ON THIS DRAWING ARE BASED ON N.A.D. 83 FOR HORIZONTAL CONTROL.
2. BENCHMARKS LOCATED ARE EITHER CONCRETE MONUMENTS W/ CHISELED CROSSES OR CONCRETE MONUMENTS WITH BRASS PLATES.

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
6	ADDED COORDINATE BLOCK	6/26/02	JaW		
5	REVISED BM-8&12 COORDINATES PER DCN-40315-065	1/5/01	JaW	GEP	
4	ADDED BM-11,12, OSDF-4A REMOVED BM-1A & BM-OSDF-4, INCORP. DCN:20102-084	1/8/99	JaW	GEP	00X-7000-G-00058

FORMAT REVISED 4/8/96 FORM3V4.DGN

NOTE: FERMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

CONFIGURATION MANAGEMENT DRAWING
REFLECTS AUTHORIZED AS CONFIRMED PER DCN, RFI, CLARIFICATION, TECH. DOC. OR NOTES.
COGNIZANT ENGINEER DATE

APPROVALS				
CIVIL & STR.	J. SCHWING	7/3/96	SAFETY ENG.	
ELECTRICAL			MAINTENANCE	
ENGINEER			Q.A.	
INSTRUMENT			FPE PROJECT.	
MECHANICAL			WASTE MANAGE	
			SECURITY	
			CRU	
CHECKED	GEP			
APPROVED	G.E. PAUL	7/3/96		

FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION
FERMCO
Fernald Environmental Management Project
U.S. DEPARTMENT OF ENERGY

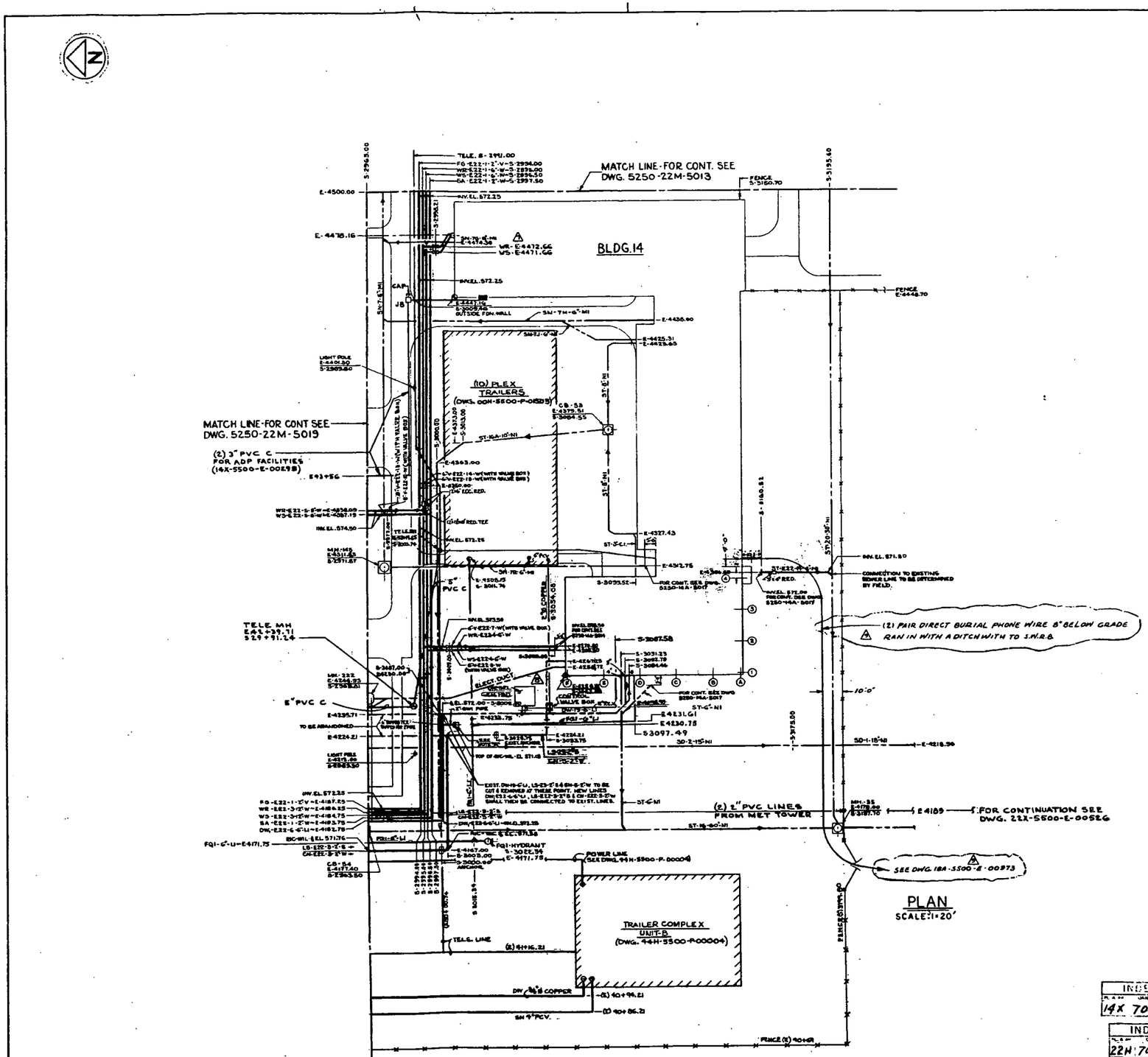
SITEWIDE
MASTER FEMP
GPS BENCHMARK LOCATION PLAN
NO SCALE

RES-2740
DATE June 4, 1996
DRAWN JaW
00X-5500-G-01846 6

FILE NAME: /res2740/00xg1846.dgn

000039

534

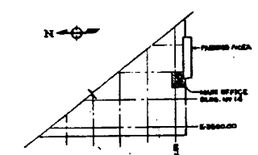


NOTE "A"

2" NON-FREEZE BOX TYPE-HYDRANT, ZURN #2-1482 OR EQUAL. DEPTH OF BURY-30", INSTALL TOP FLUSH WITH GRADE. PACK 6" OF GRAVEL AROUND HYDRANT BASE. ANCHOR BASE ELBOW IN CONCRETE.

GENERAL NOTES

1. All piping to be fabricated and installed, as shown on Singmaster & Breyer drawings, and in accordance with Singmaster & Breyer piping specifications.
2. All pipe supports and anchors to be supplied by the Contractor unless otherwise noted on the drawing.
3. Pipe elevations indicated are to inverts of pipe, unless otherwise noted.
4. All locating dimensions of existing piping and equipment to be checked in the field.
5. When a discrepancy between drawing and piping specifications occurs, conditions as indicated on the drawing will govern.
6. Any deviation from piping layout and design, as shown on Singmaster & Breyer drawings, must be approved by Singmaster & Breyer Project Engineer or Field Engineer in charge.
7. All steam lines to be cold sprung 50% of expansion.



KEY PLAN

LEGEND

EXISTING LINES
NEW LINES

ADMINISTRATION BLDG.-PLUMBING-PLAN	5250-14A-5017
H.V. BASEMENT & 1ST FLOOR PLAN	5250-14A-5016
TRACING NO. 5250-22M-5020	REV. 8

REFERENCE DRAWING	NO.
YD. PIPING-ADMINISTRATION AREA-COMPOSITE PLAN	5250-22M-5007
YD. PIPING-PERSONNEL & SECURITY BLDG. AREA-PLAN	5250-22M-5013
YD. PIPING-SERVICE BLDG. AREA-PLAN	5250-22M-5018
VALVE NOMENCLATURE SHEET	5250-22M-1025
LINE NOMENCLATURE SHEET	5250-22M-1026
BILL OF MATERIAL REF.	BY CONTRACTOR
SPECIFICATION INSTALLATION REF.	5250-22M-[illegible]

U. S. ATOMIC ENERGY COMMISSION

SINGMASTER & BREYER
METALLURGISTS & CHEMICAL ENGINEERS
420 LEXINGTON AVE. NEW YORK 17, N.Y.

NATIONAL LEAD COMPANY OF OHIO
OPERATING CONTRACTOR OF
FEED MATERIALS PRODUCTION CENTER
FERNALD OHIO

YARD PIPING
MAIN OFFICE BLDG. AREA
UNDERGROUND PIPING PLAN

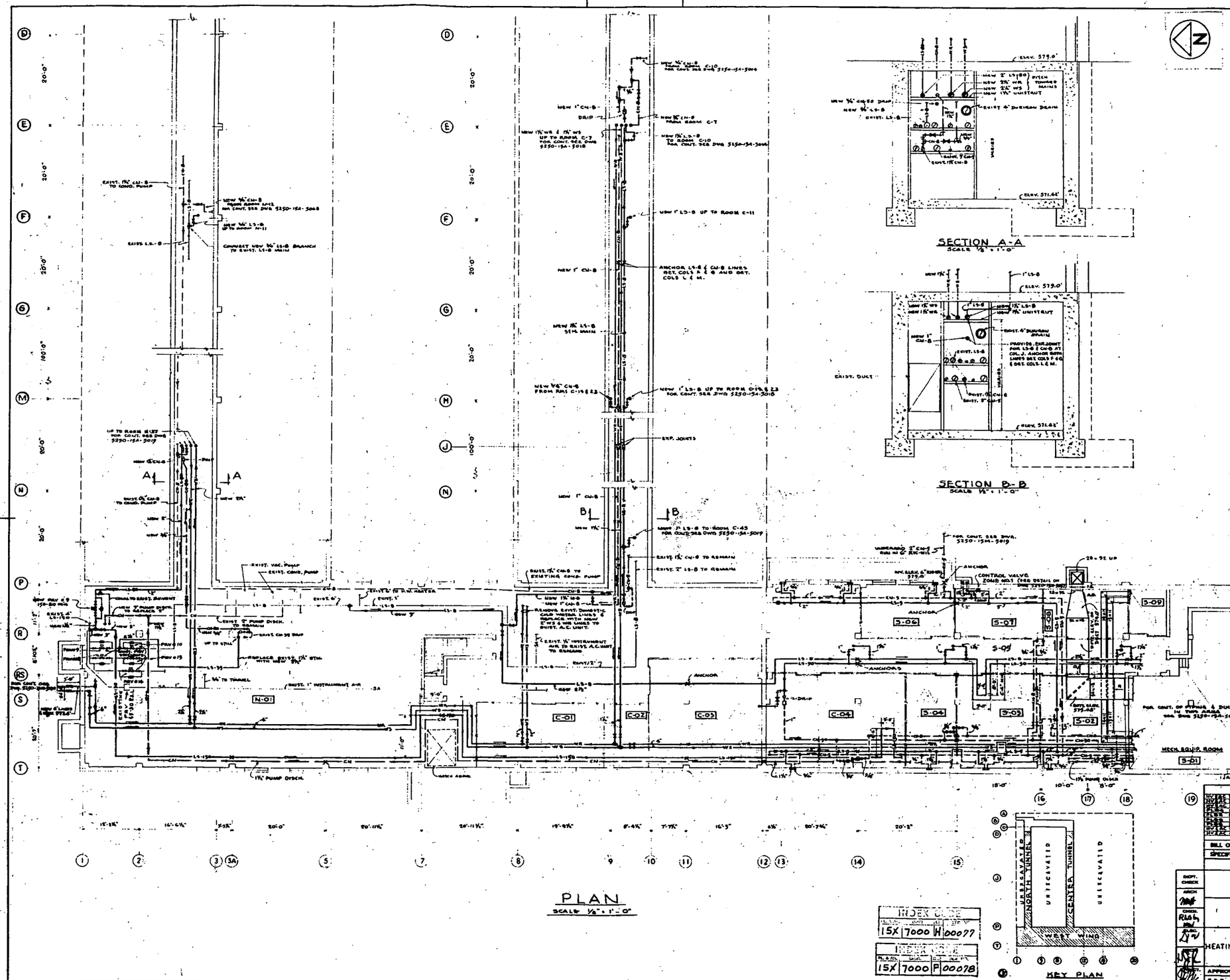
INDEX CODE
14X 7000P 00067

INDEX CODE
22H 7000P 00086

NO.	REVISIONS	DATE	BY	CHK.
9	ADDED PHONE WIRE	2-6-58	[illegible]	[illegible]
8	[illegible]	6-2-58	R.G.H.	[illegible]
7	ADDED WR & WS LINES TO NE WING, BLDG 14	2-7-57	LAM	[illegible]
6	UP DATE DWG.	[illegible]	R.G.H.	[illegible]
5	GENERAL UP-DATE	[illegible]	R.G.H.	[illegible]
4	GENERAL UP-DATE	[illegible]	R.G.H.	[illegible]
3	REVISED LINES FOR [illegible]	2-7-58	C.A.A.	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]
1	LOCATION OF WATER LINE OR ST-E22-14-4"-W, & COORD. OF OUTSIDE FOUNDATION WALL	[illegible]	[illegible]	[illegible]
1	ISSUED FOR CONSTRUCTION	2-7-58	C.A.A.	[illegible]

APPROVED		DATE
B & B	[illegible]	5-13-58
N. L. CO.	[illegible]	[illegible]
A. E. C.	[illegible]	6-10-58
DRAWN C. METAXAS	CHECKED [illegible]	REV. 9
DATE 2-12-58	DWG. NO. 5250-22M-5020	
SCALE 0-1"-20'-0"		

Untitled CADD9 wini6775 Tuesday February 03 2004 09:48:52 AM EST



LEGEND

SYMBOL	DESCRIPTION
	PITCH
	FLOW
B.R.	BOTTOM REGISTER
B.G.	BOTTOM GRILLE
A.D.	ACCESS DOOR
V.D.	VOLUME DAMPER
S.D.	SPLITTER DAMPER
F.D.	FIRE DAMPER
AUTO. D.	AUTOMATIC DAMPER
B.D.D.	BACK DRAFT DAMPER
F.A.I.	FRESH AIR INTAKE
	BAFFLE
T.R.	TOP REGISTER
C.R.	CEILING REGISTER
C.G.	CEILING GRILLE
T.G.	TOP GRILLE
C.D.	CEILING DIFFUSER
	NECK
T	THERMOSTAT
H	HUMIDISTAT
F.T.	FLAT TOP
F.B.	FLAT BOTTOM
C.F.M.	CUBIC FEET/MIN.
SAN.	SANITROL
D.T.	DUCT TURNS
F.C.	FLEXIBLE CONNECTION
N.C.	NEOPRENE CONN.
R	RISE
D	DROP
	LOUVERED DOOR
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	RADIATOR VALVE
	AUTOMATIC VALVE
	PRESS. RED. VALVE
	LOCK SHIELD VALVE
	ROOM NO.
	SAFETY VALVE
	STRAINER
	PRESSURE GAGE
	THERMOMETER
	BUCKET TRAP
	FLOAT & THER. TRAP
	THERMOSTATIC TRAP
	ECC. REDUCER
	CON. REDUCER
LS	STEAM SUPPLY
CR	CONDENSATE RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
WS	COOLING WATER SUPPLY
WR	COOLING WATER RETURN
L	REFRIGERANT LIQUID
S	REFRIGERANT SUCTION
SA	INSTRUMENT AIR
V	VENT
VP	PIPE ANCHOR

GENERAL NOTES

1. ALL DUCTWORK AND PIPING SHALL BE FIELD CHECKED FOR CLEARANCE PRIOR TO FABRICATION.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING PIPING AND DUCTWORK. THE LOCATION OF NEW PIPING OR DUCTWORK CONNECTED TO EXISTING PIPING OR DUCTWORK SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD AND ADJUSTMENTS IN LOCATION AND ELEVATION SHALL BE MADE TO SUIT THE CONDITION.
3. ALL STEAM AND RETURN MAINS SHALL BE PITCHED IN DIRECTION OF FLOW 1" IN 40'-0". ALL HORIZONTAL RUNOUTS SHALL PITCH BACK TO THE MAIN 1/2" IN 1'-0", UNLESS OTHERWISE INDICATED.
4. ALL DIMENSIONS PERTAINING TO NEW EQUIPMENT ARE FOR BASIC INFORMATION ONLY AND ARE SUBJECT TO CHANGE PENDING RECEIPT OF CERTIFIED VENDORS PRINTS.
5. PITCH WS, WR, CHS & CHR LINES TO DRAIN, PROVIDE ROOM FOR DRAINING.
6. FOR PIPING DETAILS SEE DWG. NO. 5037.
7. FOR DUCTWORK DETAILS SEE DWG. NO. 5036.
8. EXIST. PIPE TO REMAIN
   NEW PIPING

DRAWING NO. 5250-15A-5017 REV. 3

REFERENCE DRAWING		
5250-15A-5000	GENERAL NOTES, DETAILS - SHEET 2	
5250-15A-5001	SECTIONS & DETAILS - SHEET 1	
5250-15A-5002	SECTIONS & DETAILS - SHEET 2	
5250-15A-5003	SECTIONS & DETAILS - SHEET 3	
5250-15A-5004	PLAN - PIPING - SHEET 1	
5250-15A-5005	PLAN - PIPING - SHEET 2	
5250-15A-5006	PLAN - PIPING - SHEET 3	
5250-15A-5007	PLAN - PIPING - SHEET 4	
5250-15A-5008	PLAN - PIPING - SHEET 5	
5250-15A-5009	PLAN - PIPING - SHEET 6	
5250-15A-5010	PLAN - PIPING - SHEET 7	
5250-15A-5011	PLAN - PIPING - SHEET 8	
5250-15A-5012	PLAN - PIPING - SHEET 9	
5250-15A-5013	PLAN - PIPING - SHEET 10	
5250-15A-5014	PLAN - PIPING - SHEET 11	
5250-15A-5015	PLAN - PIPING - SHEET 12	
5250-15A-5016	PLAN - PIPING - SHEET 13	
5250-15A-5018	PLAN - PIPING - SHEET 14	
5250-15A-5019	PLAN - PIPING - SHEET 15	
5250-15A-5020	PLAN - PIPING - SHEET 16	
5250-15A-5021	PLAN - PIPING - SHEET 17	
5250-15A-5022	PLAN - PIPING - SHEET 18	
5250-15A-5023	PLAN - PIPING - SHEET 19	
5250-15A-5024	PLAN - PIPING - SHEET 20	
5250-15A-5025	PLAN - PIPING - SHEET 21	
5250-15A-5026	PLAN - PIPING - SHEET 22	
5250-15A-5027	PLAN - PIPING - SHEET 23	
5250-15A-5028	CONTROL DIAGRAMS	
BILL OF MATERIAL		REF.
SPECIFICATION		REF. 5250-15A-021 & 022

U. S. ATOMIC ENERGY COMMISSION

SINGMASTER & BREYER
METALLURGISTS & CHEMICAL ENGINEERS
420 LEXINGTON AVE. NEW YORK 17, N.Y.

NATIONAL LEAD COMPANY OF OHIO
OPERATING CONTRACTOR OF
FEED MATERIALS PRODUCTION CENTER
FERNALD OHIO

LABORATORY
HEATING-VENTILATING & AIR CONDITIONING
BASEMENT PLAN

	APPROVED		DATE
	S&B	PE	10-18-55
	N. L. CO.		11-22-55
	A.E.C.		11-21-55

DRAWN E.M. DISPENZA — O.S.H. 9/2/55 — REV.

DATE LAST CHG. 11-15-55 — DWG. NO. 5250-15A-5017 — 3

SCALE AS NOTED

NO.	REVISIONS	DATE	BY	CHK.
3	REVISED TRACING TO AGREE WITH "AS BUILT" REVISION NO. 2	3-21-56	CVT	R.J.J.
2	REVISED SHADED STAIRS DELETED THORIUM FACILITIES.	7-19-55	CVT	R.J.J.
1	ISSUED FOR CONSTRUCTION	11/1/54	DMD	R.J.J.

INDEX CODE
15X 7000 H 00077

REPORT CODE
15X 7000 P 00078

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Untitled CADD9 wini6775 Tuesday February 03 2004 09:50:45 AM EST

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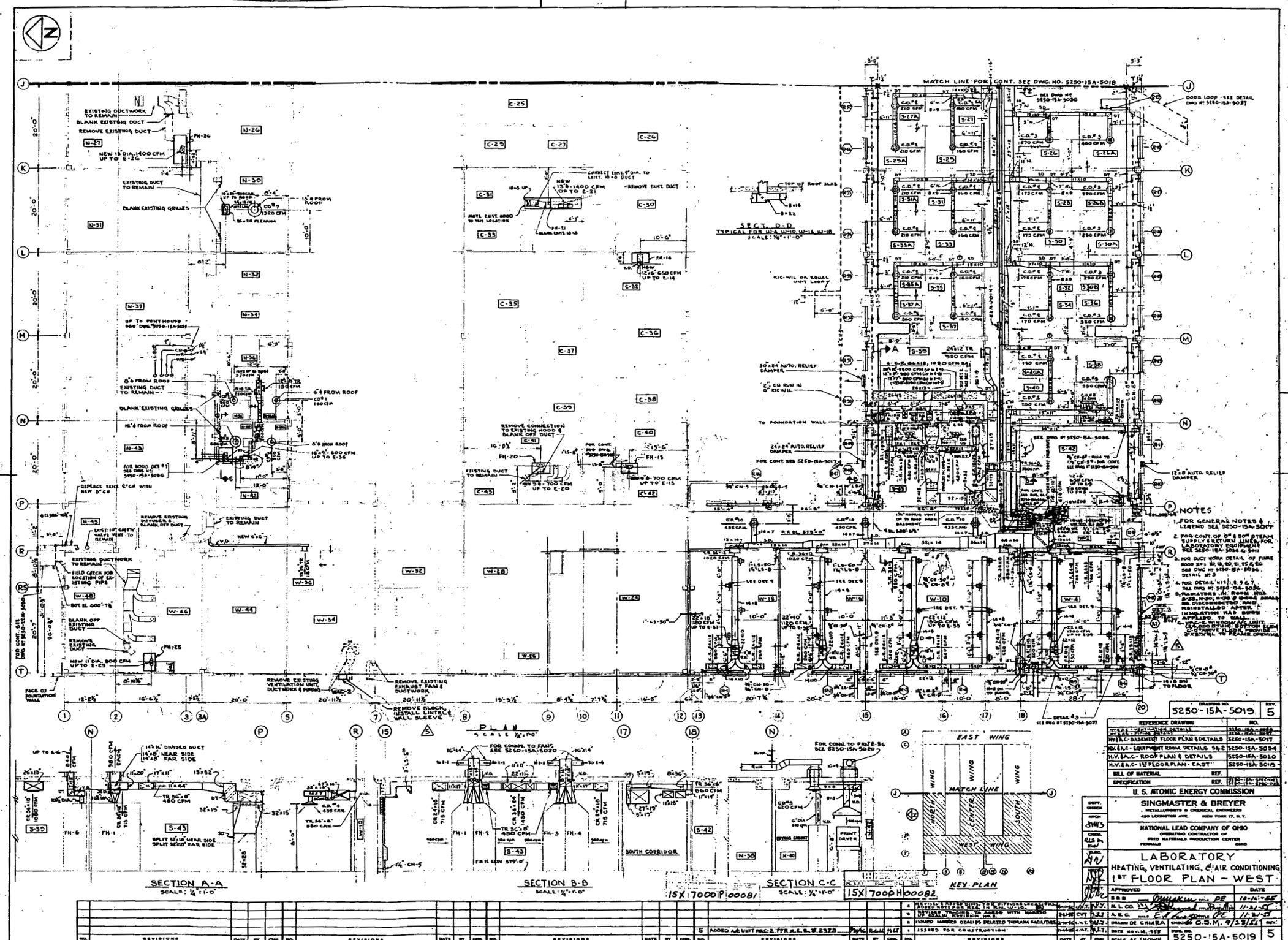

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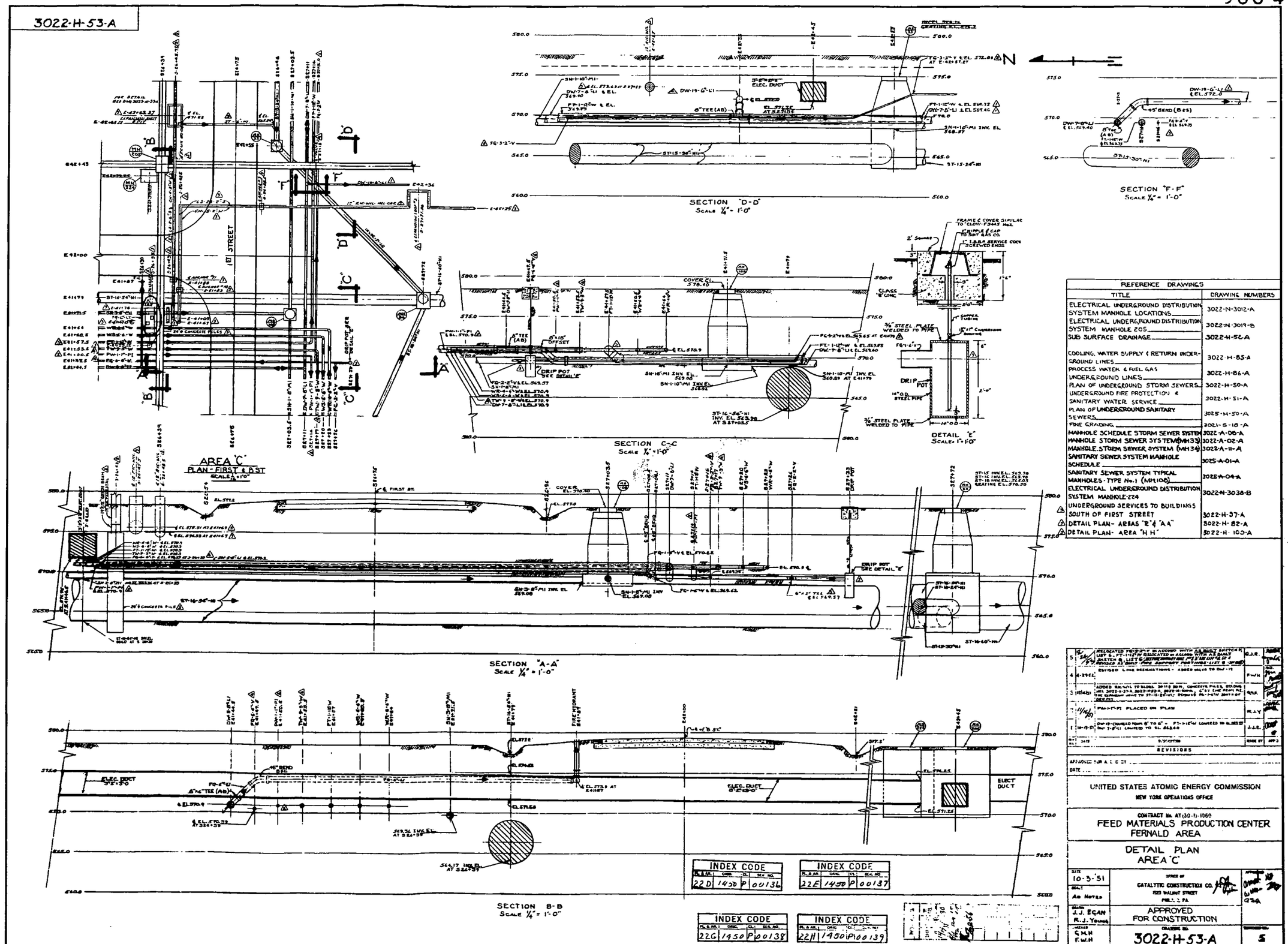
3022-H-53-A



REFERENCE DRAWINGS	
TITLE	DRAWING NUMBERS
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM MANHOLE LOCATIONS	3022-N-3012-A
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM MANHOLE 205	3022-N-3019-B
SUB SURFACE DRAINAGE	3022-H-52-A
COOLING, WATER SUPPLY & RETURN UNDER-GROUND LINES	3022-H-85-A
PROCESS WATER & FUEL GAS UNDERGROUND LINES	3022-H-86-A
PLAN OF UNDERGROUND STORM SEWERS	3022-H-50-A
UNDERGROUND FIRE PROTECTION & SANITARY WATER SERVICE	3022-H-51-A
PLAN OF UNDERGROUND SANITARY SEWERS	3025-H-50-A
FINE GRADING	2021-S-18-A
MANHOLE SCHEDULE STORM SEWER SYSTEM	3022-A-06-A
MANHOLE STORM SEWER SYSTEM (MH33)	3022-A-02-A
MANHOLE, STORM SEWER, SYSTEM (MH34)	3022-A-11-A
SANITARY SEWER SYSTEM MANHOLE SCHEDULE	3025-A-01-A
SANITARY SEWER SYSTEM TYPICAL MANHOLES - TYPE No. 1 (MH106)	3025-A-04-A
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM MANHOLE-224	3022-N-3038-B
UNDERGROUND SERVICES TO BUILDINGS SOUTH OF FIRST STREET	3022-H-37-A
△ DETAIL PLAN- AREAS "E" & "A A"	3022-H-82-A
△ DETAIL PLAN- AREA "H H"	3022-H-103-A

5	2/4/64	RELOCATED FW-3-2"-V IN ACCORD WITH AS-BUILT SKETCH P. LIST 6. FT-1-12"-W RELOCATED IN ACCORD WITH AS-BUILT SKETCH P. LIST 6. DEPRESSURIZING FT-3 TO LIST 6 & 7	G.J.R.
4	4-29-62	REVISED LINE DESIGNATIONS - ADDED VALVE TO DW-19	F.W.H.
3	11/14/60	ADDED SN-1-11 TO SD-203, SN-1-12 SD-11, CONCRETE PADS, SD-206, MH. 3022-A-37-A, 3022-P-22-A, 3022-H-86-A, 6" ST LINE REPLACE THE GASKET JOINT TO ST-15-24"-U, REMOVE FG-1-2"-W SHOWN ON SKETCH	R.A.S.
2	11/14/60	FW-1-1"-PI PLACED ON PLAN	R.A.Y.
1	10-19-59	DW-19 CHANGED FROM 8" TO 6" & FT-1-12"-W LOWERED TO EL.563.25 DW-7-8"-LI LOWERED TO EL. 562.40	J.J.E.
NO.	DATE	DESCRIPTION	CHKD BY / APP'D

REVISIONS

APPROVED FOR A.E.C. BY ...
DATE ...

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OPERATIONS OFFICE

CONTRACT No. AT(30-1)-1060
FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

DETAIL PLAN
AREA 'C'

DATE 10-3-'51	OFFICE OF CATALYTIC CONSTRUCTION CO. 1520 WALNUT STREET PHILA. 2, PA.	APPROVED
SCALE As Noted		
DRAWN J.J. EGAN R.J. YOUNG	APPROVED FOR CONSTRUCTION	
DESIGN S.M.H. F.W.H.	DRAWING NO. 3022-H-53-A	REVISION NO. 5

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3022-H-97-A

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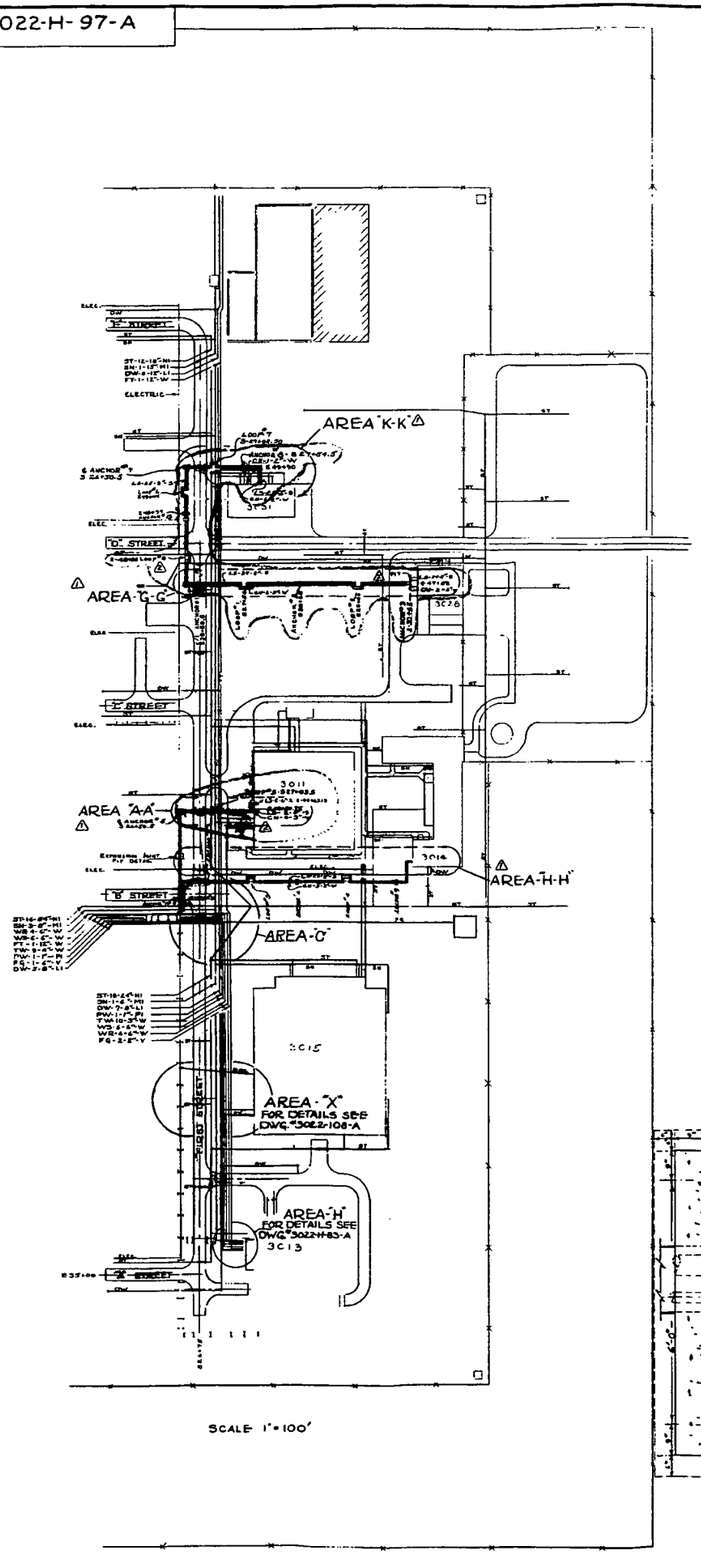
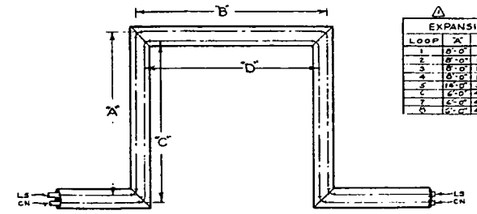
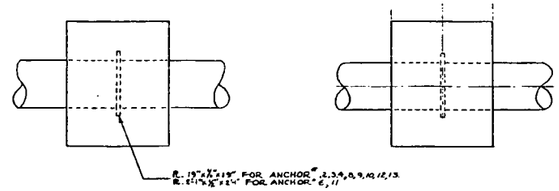


SCALE 1" = 100'

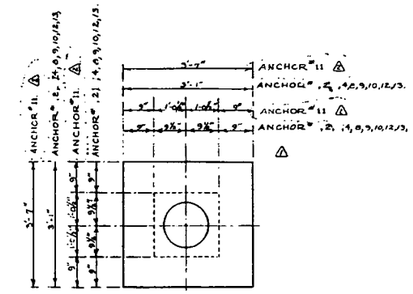


EXPANSION LOOP
NOT TO SCALE

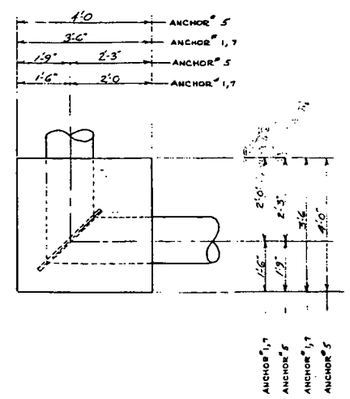
EXPANSION LOOP SCHEDULE						
LOOP	"A"	"B"	"C"	"D"	LS	CN
1	8'-0"	10'-0"	TO	SUIT	2"	2"
2	8'-0"	10'-0"	-	-	2"	2"
3	8'-0"	10'-0"	-	-	2"	2"
4	8'-0"	10'-0"	-	-	2"	2"
5	10'-0"	5'-0"	-	-	6"	3"
6	6'-0"	4'-0"	-	-	2"	2"
7	6'-0"	4'-0"	-	-	2"	2"
8	6'-0"	4'-0"	-	-	2"	2"



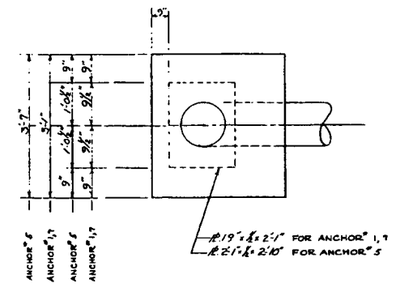
PLAN



PROFILE

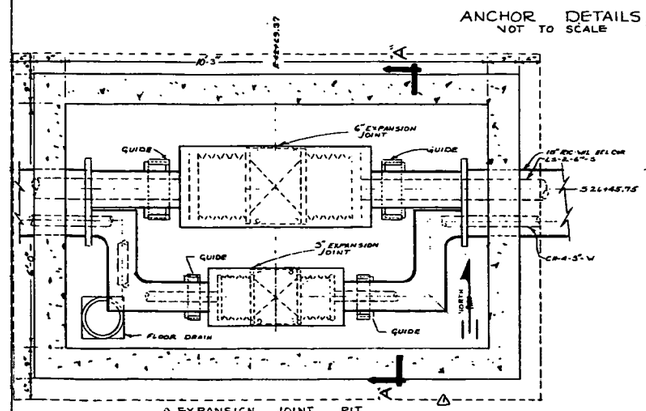


PLAN

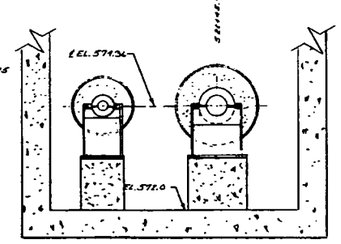


PROFILE

ANCHOR DETAILS
NOT TO SCALE



EXPANSION JOINT PIT
3/4" = 1'-0"



SECTION A-A
3/4" = 1'-0"

INDEX CODE				
PL & AR.	CHRG.	CL.	SER. NO.	
22D	1450	P	00208	

INDEX CODE				
PL & AR.	CHRG.	CL.	SER. NO.	
22E	1450	P	00209	

INDEX CODE				
PL & AR.	CHRG.	CL.	SER. NO.	
22G	1450	P	00210	

INDEX CODE				
PL & AR.	CHRG.	CL.	SER. NO.	
22H	1450	P	00211	

REFERENCE DRAWINGS	
TITLE	DRAWING No.
PLAN OF UNDERGROUND STORM-WATER SEWERS	3022-H-50-A
PLAN OF UNDERGROUND SANITARY SEWERS	3025-H-50-A
UNDERGROUND FIRE PROTECTION AND SANITARY WATER SERVICE	3022-H-51-A
SUB-SOIL DRAINAGE	3022-H-52-A
COOLING WATER SUPPLY AND RETURN, UNDERGROUND LINES	3022-H-85-A
PROCESS WATER AND FUEL GAS UNDERGROUND LINES.	3022-H-86-A
AREA "G-G" DETAIL PLAN	3022-H-95-A
AREA "A-A" DETAIL PLAN	3022-H-92-A
AREA "H-H" DETAIL PLAN	3022-H-100-A
AREA "C" DETAIL PLAN	3022-H-53-A
AREA "H" DETAIL PLAN	3022-H-83-A
PIPE SUPPORTS - GENERAL PLAN INTERPLANT SERVICES	3022-J-01-A
PIPE SUPPORTS - PLANS AND ELEVATIONS ALONG FIRST ST.	3022-J-10-A

NOTE
STEAM AND CONDENSATE LINES TO BE LAID IN RIC-WIL-"HEL-COR" CONDUIT OR EQUAL WITH 1½" THICK FIBRE INSULATION, INCLUDING EXPANSION LOOPS AND ANCHORS. 2" OR 3" STEAM AND 2" CONDENSATE LINE LAID IN 12" CONDUIT; 6" STEAM AND 3" CONDENSATE LINE LAID IN 18" CONDUIT.
"RIC-WIL" CONDUIT TO BE SEALED AT 1'-0" ABOVE GRADE, AT PIPE RISER TO OVERHEAD PIPE RACK AND IN APPARATUS ROOMS IN BUILDINGS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD.
STEAM AND CONDENSATE PIPE FOR RIC-WIL SHALL BE ASTM-A-53 GRADE A SEAMLESS STEEL STD. WT.
CONCRETE FOR ANCHORS TO DEVELOP A COMPRESSIVE STRENGTH OF 2,500 P.S.I. AT THE AGE OF 28 DAYS

REVISED AS BUILT (RIC-WIL LOOP ANCHOR PLT. RIC-WIL LINE) — REF. LIST & SECTION 3 REF. LIST & SECTION 3 REF. LIST & SECTION 3 — 8/5/97 — E.B. — RYBA
REVISED CHANGES LINES; ADDED ANCHOR DETAILS AND EXPANSION JOINT PIT DETAIL AND SECTION. CHANGED LOOP SCHEDULE — 12/1/03 — 12/1/03 — RYBA

REVISIONS

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OPERATIONS OFFICE

CONTRACT NO. AT (30-1)-1145

FEED MATERIAL PRODUCTION CENTER
FERNALD AREA

UNDERGROUND SERVICES TO BUILDINGS SOUTH OF FIRST STREET

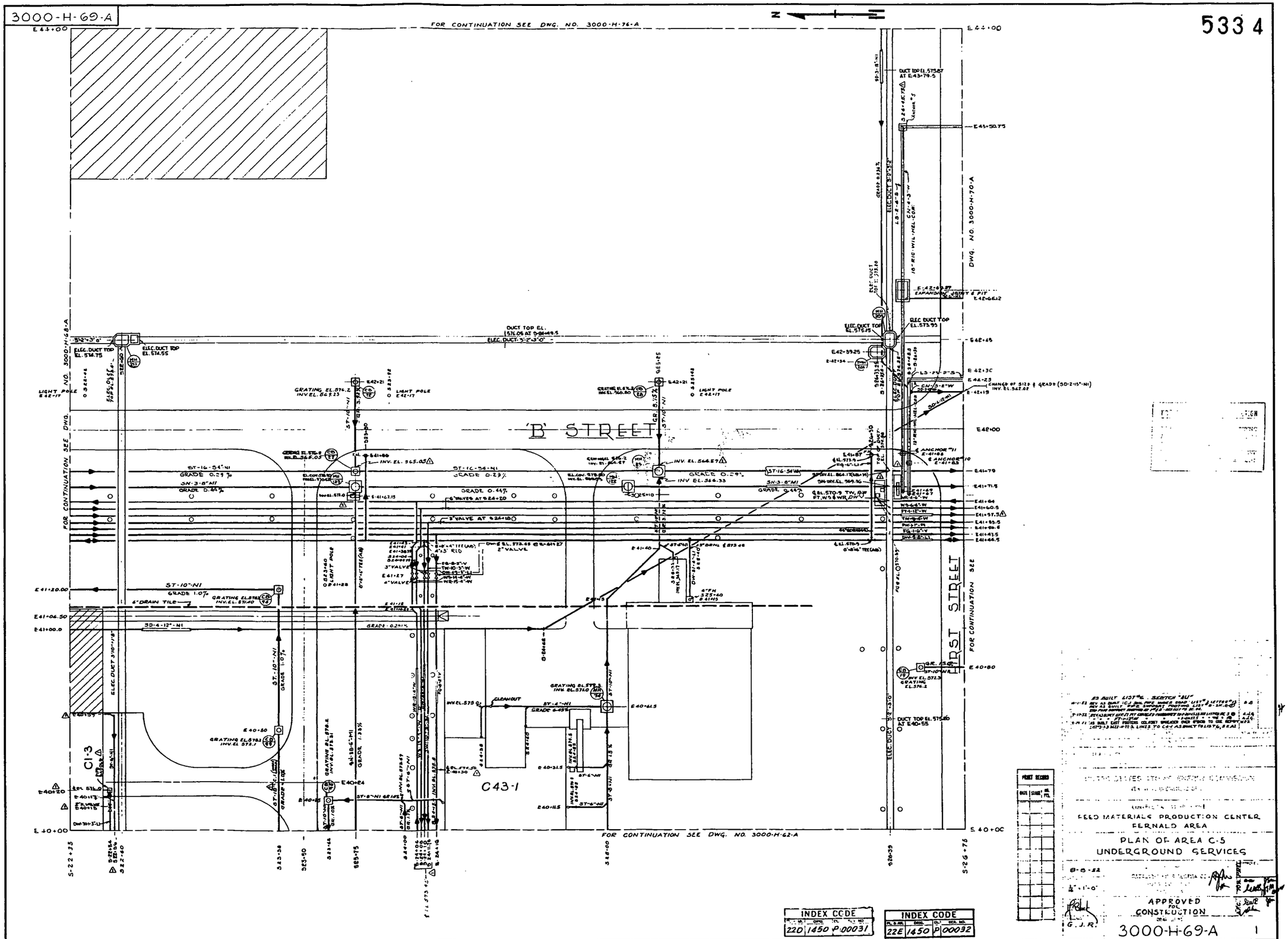
PRINT RECORD		
DATE	STAGE	No. PTS.
12/1/97	2	20
12-8-03	R2	1

1145-61
CATALYTIC CONSTRUCTION CO
AS NOTED
R. Young
APPROVED FOR CONSTRUCTION
G.J.R.
DRAWING NO. 3022-H-97-A
REVISION NO. 2

000045

Untitled CADD9 wini6775 Tuesday February 03 2004 09:38:30 AM EST

3000-H-69-A



INDEX CODE				
PL. & SR.	DIST.	SUBD.	SEQ. NO.	
22D	1450	P	00031	

INDEX CODE				
PL. & SR.	DIST.	SUBD.	SEQ. NO.	
22E	1450	P	00032	

PRINT RECORD		
DATE	STAGE	INIT.

AS BUILT LIST - SKETCH "BU"

FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

PLAN OF AREA C-5
UNDERGROUND SERVICES

8-8-52

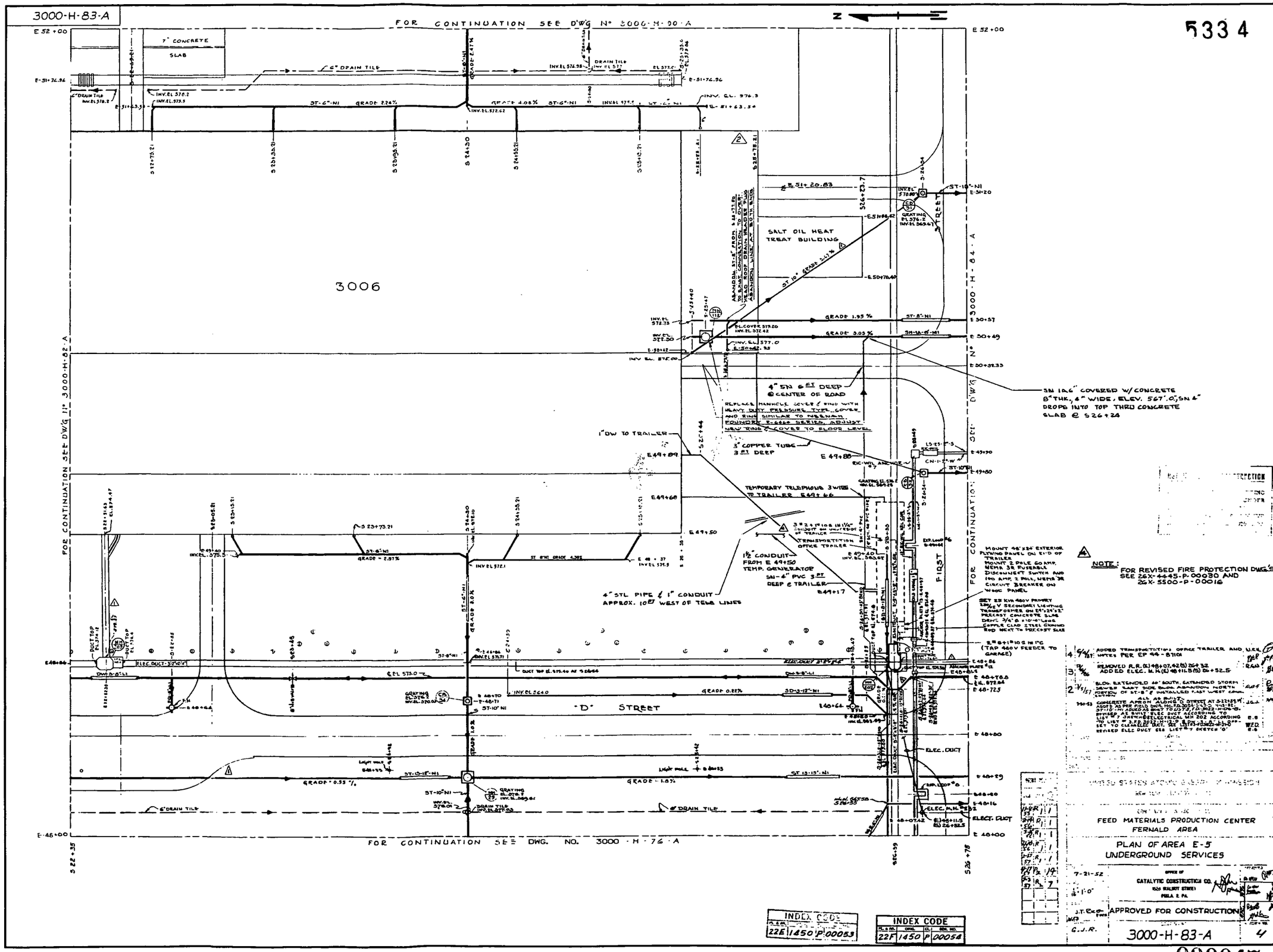
1" = 1'-0"

APPROVED FOR CONSTRUCTION

G.J.R.

3000-H-69-A 1

Untitled CADD9 wini6775 Tuesday February 03 2004 09:39:08 AM EST



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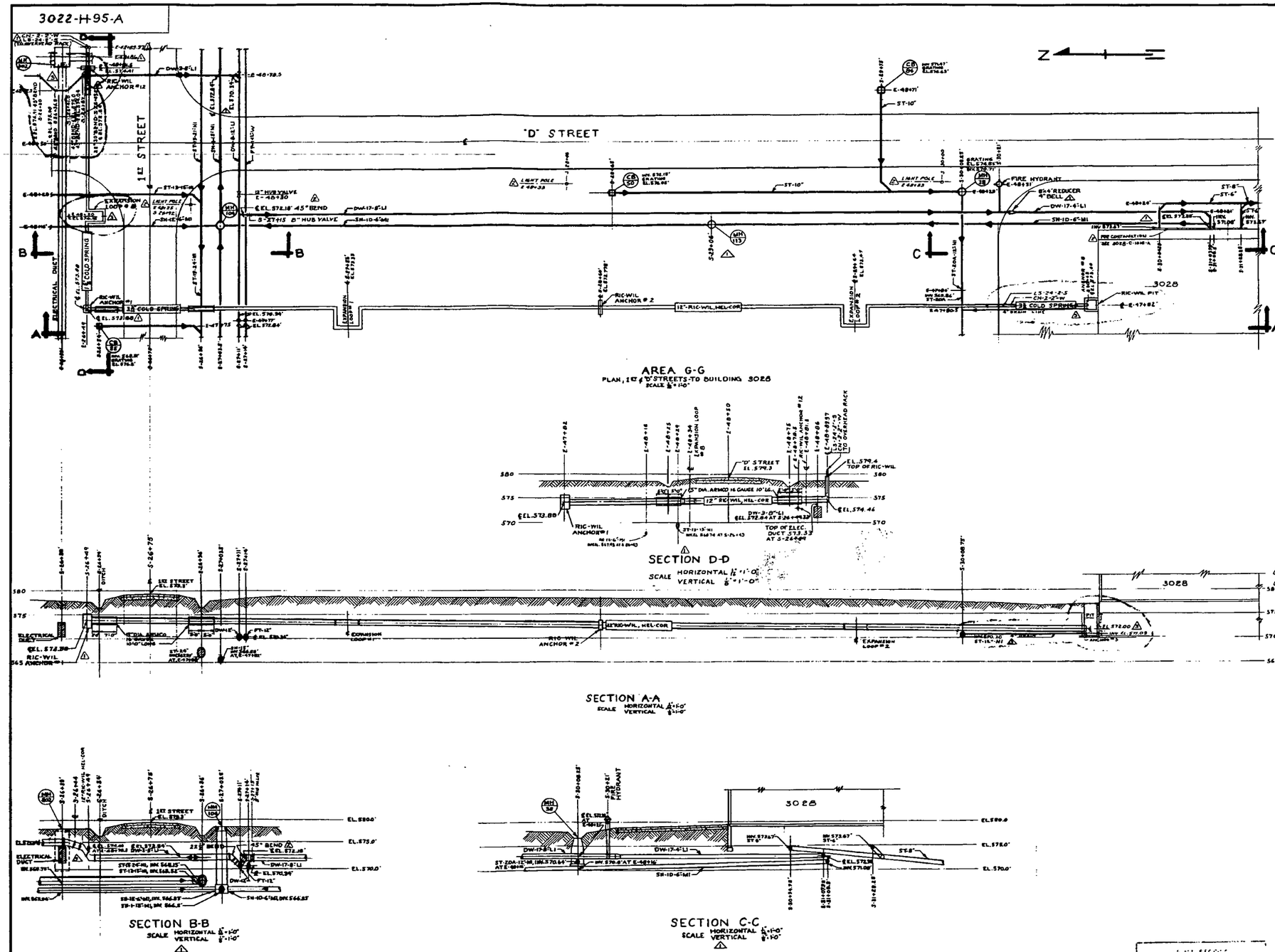
3022-H-95-A



NOTE

STEAM & CONDENSATE LINES TO BE LAID IN 12" RIC-WIL "HEL-COR" CONDUIT, OR EQUAL WITH 1/4" THICK FIBRE INSULATION INCLUDING EXPANSION LOOPS & ANCHOR.
EXPANSION LOOPS TO BE SIZE IN ACCORDANCE SCHEDULE ON DRAWINGS NO. 3022-H-92-A.
ANCHORS TO BE IN ACCORDANCE WITH ANCHOR DETAILS ON DRAWINGS NO. 3022-H-92-A.
RIC-WIL CONDUIT TO BE SEALED AT 1'-0" ABOVE GRADE AT PIPE RISER TO OVERHEAD PIPE RACKS IN APPURTENTS ROOMS IN BUILDINGS IN ACCORDANCE WITH MANUFACTURERS STANDARD.
STEAM & CONDENSATE PIPE FOR RIC-WIL SHALL BE ASTM-A53, GRADE "A" SEAMLESS STEEL STANDARD WEIGHT.

5334

REFERENCE DRAWINGS	
TITLE	DRAWING Nº
PLAN OF UNDERGROUND STORM SEWERS	3022-H-50-A
PLOT PLAN	3000-A-1-A
PLAN OF UNDERGROUND SANITARY SEWERS	3022-H-50-A
FIRE PROTECTION & SANITARY SERVICE WATER	3022-H-51-A
FINE GRADING PLAN	3021-3-18-A
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM	3022-E-N-3012-A
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM MANHOLE M-362	3022-H-3016-A
SUB-SURFACE DRAINAGE	3022-H-52-A
DETAIL PLAN AREA "E"	3022-H-62-A
MANHOLE SCHEDULE STORM SEWER SYSTEM	3022-A-08-A
MANHOLES STORM SEWER SYSTEM (MH-38)	3022-A-11-A
CATCH BASIN SCHEDULE STORM SEWER SYSTEM	3022-A-07-A
CATCH BASINS STORM SEWER SYSTEM (CB, 35, 36)	3022-A-03-A
SANITARY SEWER SYSTEM MANHOLE SCHEDULE	3025-A-01-A
SANITARY SEWER SYSTEM TYPICAL MANHOLES TYPE 3-1 (MH-104)	3025-A-04-A
UNDERGROUND SERVICES TO BUILDING SOUTH OF 1ST ST.	3022-H-37-A
PIPE SUPPORTS, GENERAL PLAN INTERPLANT SERVICE	3022-J-01-A
PIPE SUPPORTS, PLANS & ELEVATIONS ALONG 1ST ST.	3022-J-10-A
DETAIL PLAN AREA "F"	3022-H-61-A
ELECTRICAL LIGHTING LAYOUT STREET, FENCE & PARKING LOT GENERAL PLANT AREA	3028-H-3011-A
FLOOR PLAN - GUARD HOUSE	3028-E-1010-A

3/26/53	REVISE AS BUILT: RIC-WIL PIT, DW-17-8"LI TO DW-17-6"LI, DW-3-8"LI TO DW-3-6"LI, DW-SET SEE LIST 2-26-53	G.J.R.
3-4-53	VALVES ADDED ON DW LINES, SECTION B-B REVISED, ADDED LIGHT POLES & ST. DRAIN.	G.J.R.
DEC. 12, 1951	DW-3-8"LI CHANGED TO 6" ON ALL ELECTRICAL DUCT, DW-3 DROP IS DW-3-8"LI TO DW-3-6"LI, ADD SECTIONS "B" & "C", ADD DW-3 MANHOLE 1B, ADD ELEVATIONS AT SLIPS, #3028, SHOW 8"x4" REDUCER IN DW-LINE, RIC-WIL REVISED	G.J.R.

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OPERATIONS OFFICE

CONTRACT NO. AT(40-1)-1946

FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

DETAIL PLAN
AREA "G-G"

OCT. 25, 1951		
AS NOTED		
WALTER PENNINGTON	APPROVED FOR CONSTRUCTION	
G.J.R.	3022-H-95-A	3

INDEX CODE			
22E	1450	P	00204

INDEX CODE			
22F	1450	P	00205

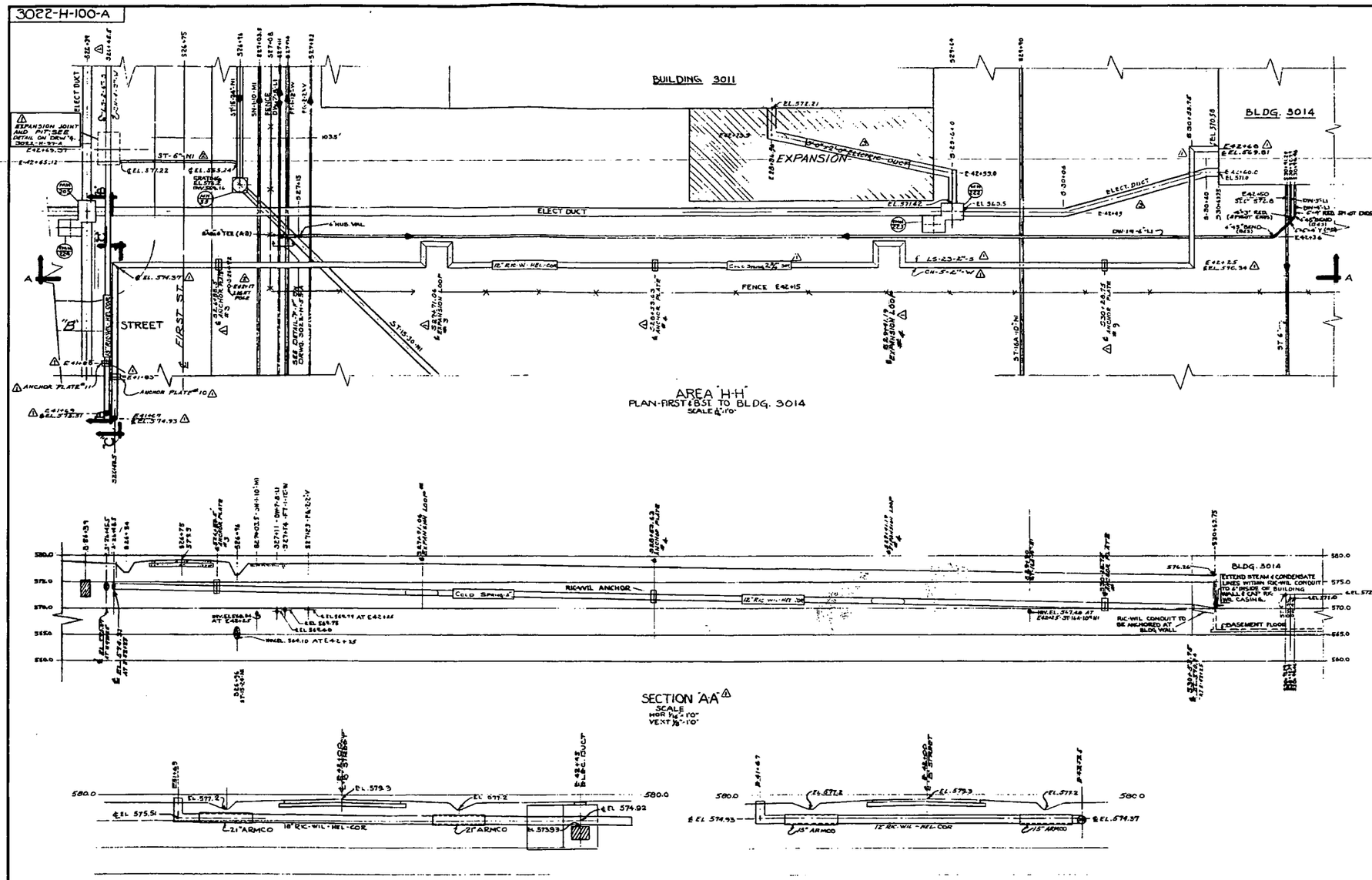
22H	1450	P	00206

000048

Untitled CADD9 wini6775 Tuesday February 03 2004 09:58:08 AM EST

3022-H-100-A

5334



NOTES

STEAM AND CONDENSATE LINES TO BE LAID IN 12" RIC-WIL-HEL-COR CONDUIT OR EQUAL WITH 1½" THICK FIBRE INSULATION, INCLUDING EXPANSION LOOPS AND ANCHORS.
EXPANSION LOOPS TO BE SIZE IN ACCORDANCE SCHEDULE ON DRAWING 3022-H-97-A.
ANCHORS TO BE IN ACCORDANCE WITH ANCHOR DETAILS ON DRAWING 3022-H-97-A.
RIC-WIL CONDUIT TO BE SEALED AT 1FT. ABOVE GRADE, AT PIPE RISER TO OVERHEAD PIPE RACK, AND IN APPARATUS ROOMS IN BUILDINGS IN ACCORDANCE WITH MANUFACTURER'S STANDARD.
STEAM AND CONDENSATE PIPE FOR RIC-WIL SHALL BE ASTM-A53 GRADE "A" SEAMLESS STEEL STD. WT.

REFERENCE DRAWING

TITLE	DRAWING NUMBERS
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM MANHOLE LOCATIONS	3022-N-3012-A
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM MANHOLE № 205	3022-N-3019-B
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM MANHOLE № 222	3022-N-3036-B
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM MANHOLE № 223	3022-N-3037-B
ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEM MANHOLE № 224	3022-N-3038-B
PROCESS WATER & FUEL GAS UNDERGROUND LINES	3022-H-86-A
PLAN OF UNDERGROUND STORM SEWERS	3022-H-50-A
UNDERGROUND FIRE PROTECTION & SANITARY WATER SERVICE	3022-H-51-A
PLAN OF UNDERGROUND SANITARY SEWERS	3025-H-50-A
FINE GRADING	3021-S-18-A
MANHOLE SCHEDULE STORM SEWER SYSTEM	3022-A-08-A
MANHOLE STORM SEWER SYSTEM (MH 33)	3022-A-02-A
PLAN OF ROADS & APRONS - PRODUCTION AREA	3024-S-01-A
UNDERGROUND SERVICES TO BLDGS SOUTH OF FIRST ST.	3022-H-97-A
ELECTRICAL LIGHTING LAYOUT STREET FENCE & PARKING LOT GENERAL PLANT AREA	3028-N-3011-A

8/6/52 ELECT. DUCT FROM MH 223 TO BLDG. 3014 AS BUILT ACCORDING TO LIST 1 INSTEAD OF 2. ELEC. DUCT FROM MH 222 TO BLDG. 3014 AS BUILT ACCORDING TO LIST 2 - SKETCH E-8 — E.J.R.
ST-6" NI FROM EXP. JOINT PIT TO ST-13 -24" NI ADDED. — E.J.R.
3-8-52 ADDED LIGHT POLE & REFDES REF. DRWG.
12/6/51 RIC-WIL 2 1/2" RELOCATED TO BUILDING 3014 N.E.W. ANCHOR ADDED, RACWAY TO BUILDING 3011 BURIAL BLOCKS REMOVED, INFORMATION FROM 3C-3012-A-10-A1 ADDED AND TO REF. DRAWS CHANGED TO READ REF. DRWG; PROFILES REVISED

INDEX CODE
PLANT 22E 1450 P 00217

INDEX CODE
PLANT 22H 1450 P 00218

[redacted]

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OFFICE

FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

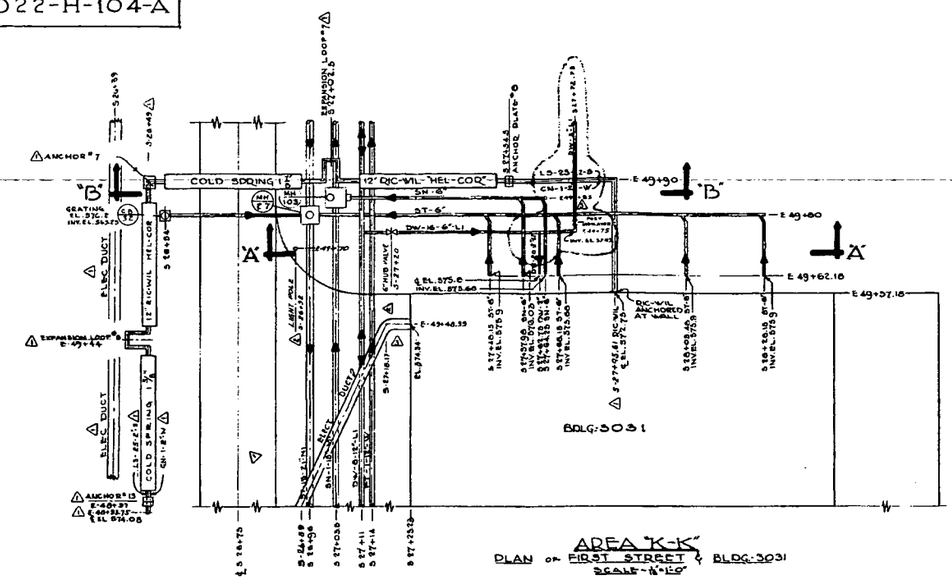
DETAIL PLAN
AREA "H-H"

10-31-51
AS NOTED
J.J. EGAN
APPROVED FOR CONSTRUCTION
E.J.R. 10-31-51

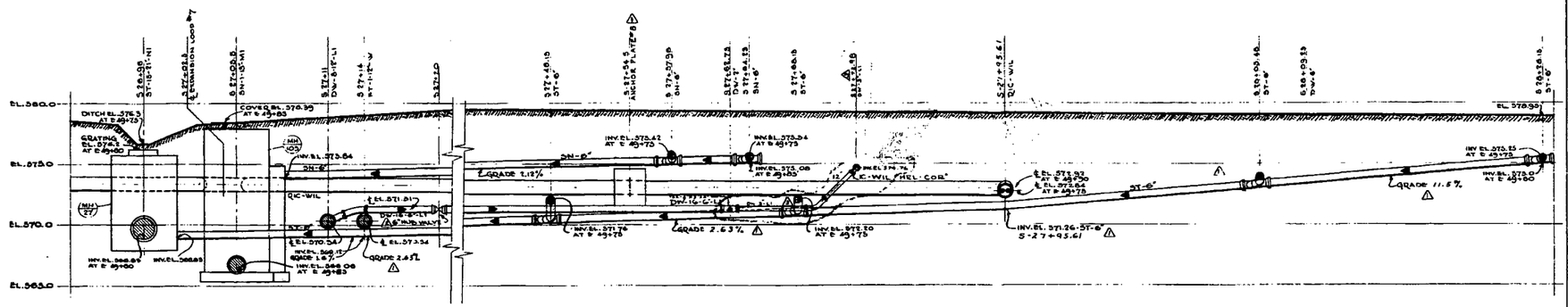
3022-H-100-A

3

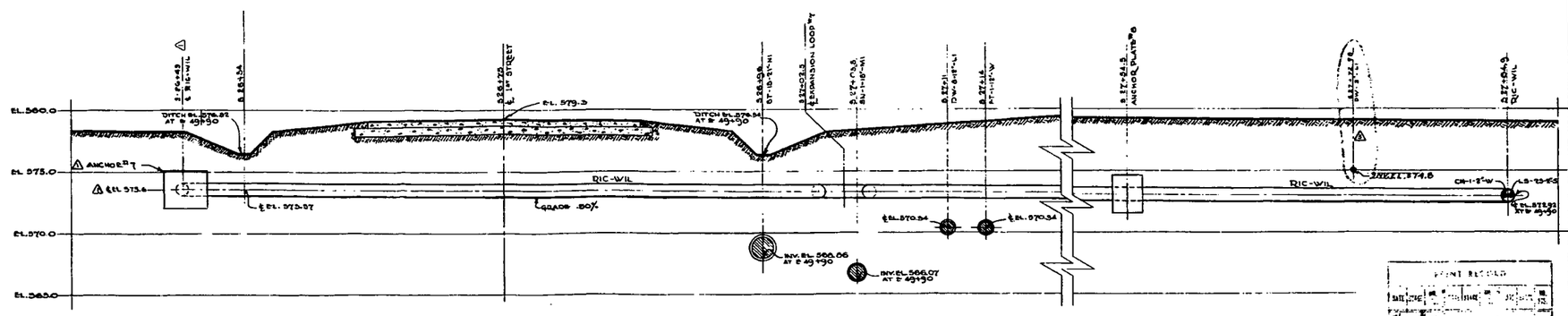
3022-H-104-A



AREA "K-K"
PLAN OF FIRST STREET & BLDG:3031
SCALE - 1/8" = 1'-0"



SECTION "A-A"
SCALE - 1/8" = 1'-0"



SECTION "B-B"
SCALE - 1/8" = 1'-0"

NOTES:-

STEAM AND CONDENSATE LINES TO BE LAID IN 12" RIC-WIL "HEL-COR" CONDUIT OR EQUAL WITH 1½" THICK FIBRE INSULATION, INCLUDING EXPANSION LOOPS AND ANCHORS. EXPANSION LOOPS TO BE SIZE IN ACCORDANCE SCHEDULE ON DRAWING 3022-H-97-A.
ANCHORS TO BE IN ACCORDANCE WITH ANCHOR DETAILS ON DRAWING 3022-H-97-A
RIC-WIL CONDUIT TO BE SEALED AT 1 FT. ABOVE GRADE, AT PIPE RISER TO OVERHEAD PIPE RACK, AND IN APPARATUS ROOMS IN BUILDINGS IN ACCORDANCE WITH MANUFACTURER'S STANDARD.
STEAM AND CONDENSATE PIPE FOR RIC-WIL SHALL BE ASTM-A-53 GRADE 'A' SEAMLESS STEEL STD. W.T.

REFERENCE DRAWINGS

TITLE	DRAWING NUMBER
PLAN OF UNDERGROUND STORM SEWERS	3022-H-50-A
PLAN OF UNDERGROUND SANITARY SEWERS	3025-H-50-A
PROCESS WATER & FUEL GAS UNDERGROUND LINES	3022-H-86-A
ELECTRIC UNDERGROUND DISTRIBUTION SYSTEM MANHOLE LOCATIONS	3025-H-85-A
PLAN OF UNDERGROUND FIRE PROTECTION & SANITARY WATER SERVICE	3022-H-51-A
PLANS OF ROADS & APRONS PRODUCTION AREA	3024-S-01-A
MANHOLE SCHEDULE STORM SEWER SYSTEM	3022-A-08-A
MANHOLE STORM SEWER SYSTEM (M.H. NO. 27)	3022-A-01-A
SANITARY SEWER SYSTEM MANHOLE SCHEDULE	3025-A-01-A
SANITARY SEWER SYSTEM DROP MANHOLES (M.H. NO. 103)	3025-A-02-A
FINE GRADING	3021-S-18-A
DETAIL PLAN - AREA "F"	3022-H-61-A
UNDERGROUND SERVICES TO BUILDINGS SOUTH OF 1ST ST.	3022-H-97-A
ELECTRICAL LIGHTING LAYOUT STREET, FENCE & PARKING LOT GENERAL PLANT AREA	3028-N-3011-A

REVISED AS BUILT: ELEC. DUCT TO BLDG.3031-1.1ST" & 1ST-6" DW-3"U FROM GARAGE - 1.1ST & DW-3"U
3-4-57 ADDED LIGHT POLE & ELEC. DRAIN.
12-14-51 ADDED RIC-WIL ALONG FIRST ST. ADDED SEC. DUCT REVISED SECTION "B"-"B", REVISED SECTION "A"-"A"

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OPERATIONS OFFICE

FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

DETAIL PLAN
AREA "K-K"

11-16-51	
AS NOTED	
J.T. RICE	APPROVED FOR CONSTRUCTION
G.J.R.	3022-H-104-A 3

INDEX CODE
22F 1450 P 00220

INDEX CODE
22H 1450 P 00221

PRINT RECORD

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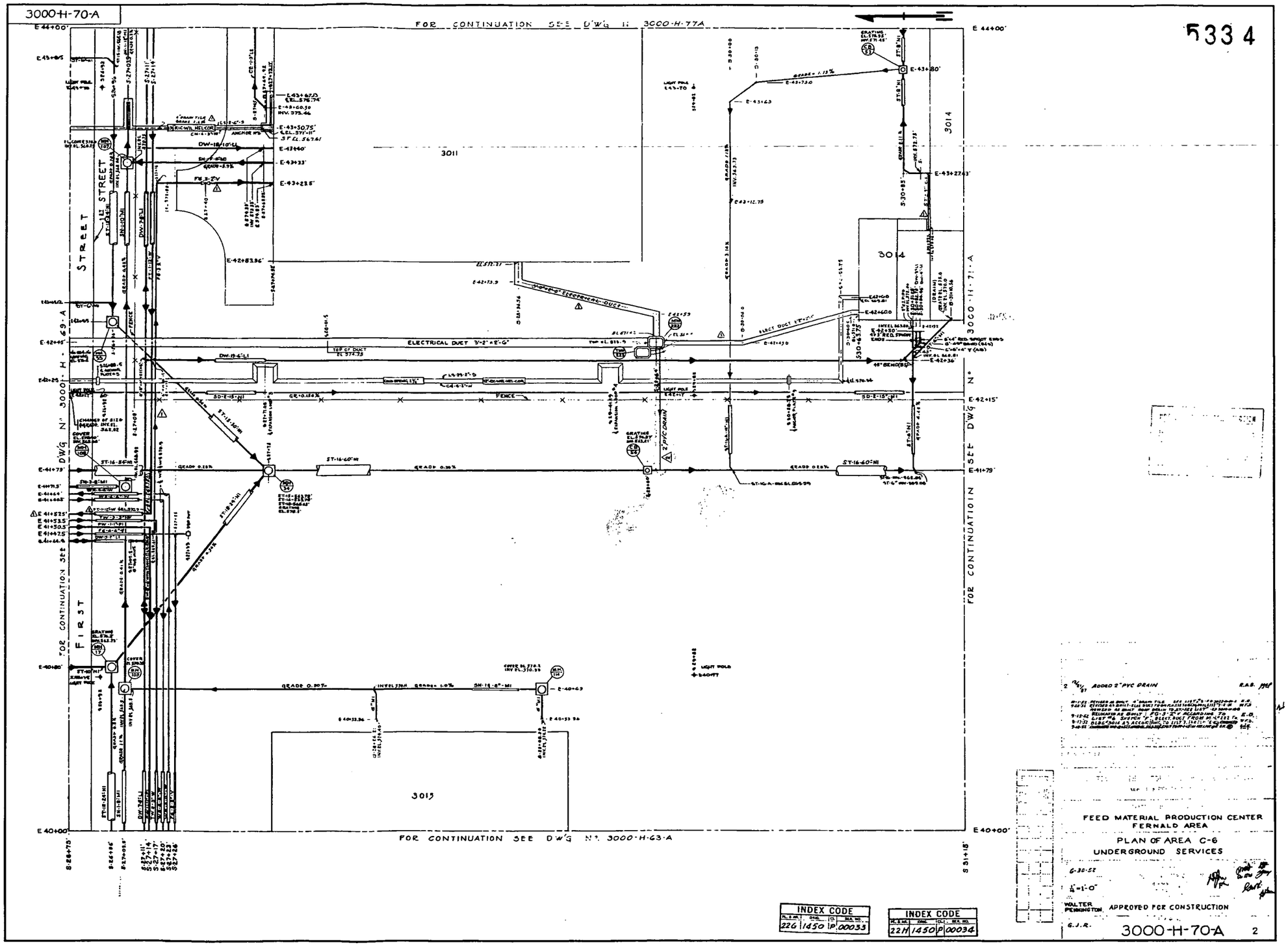
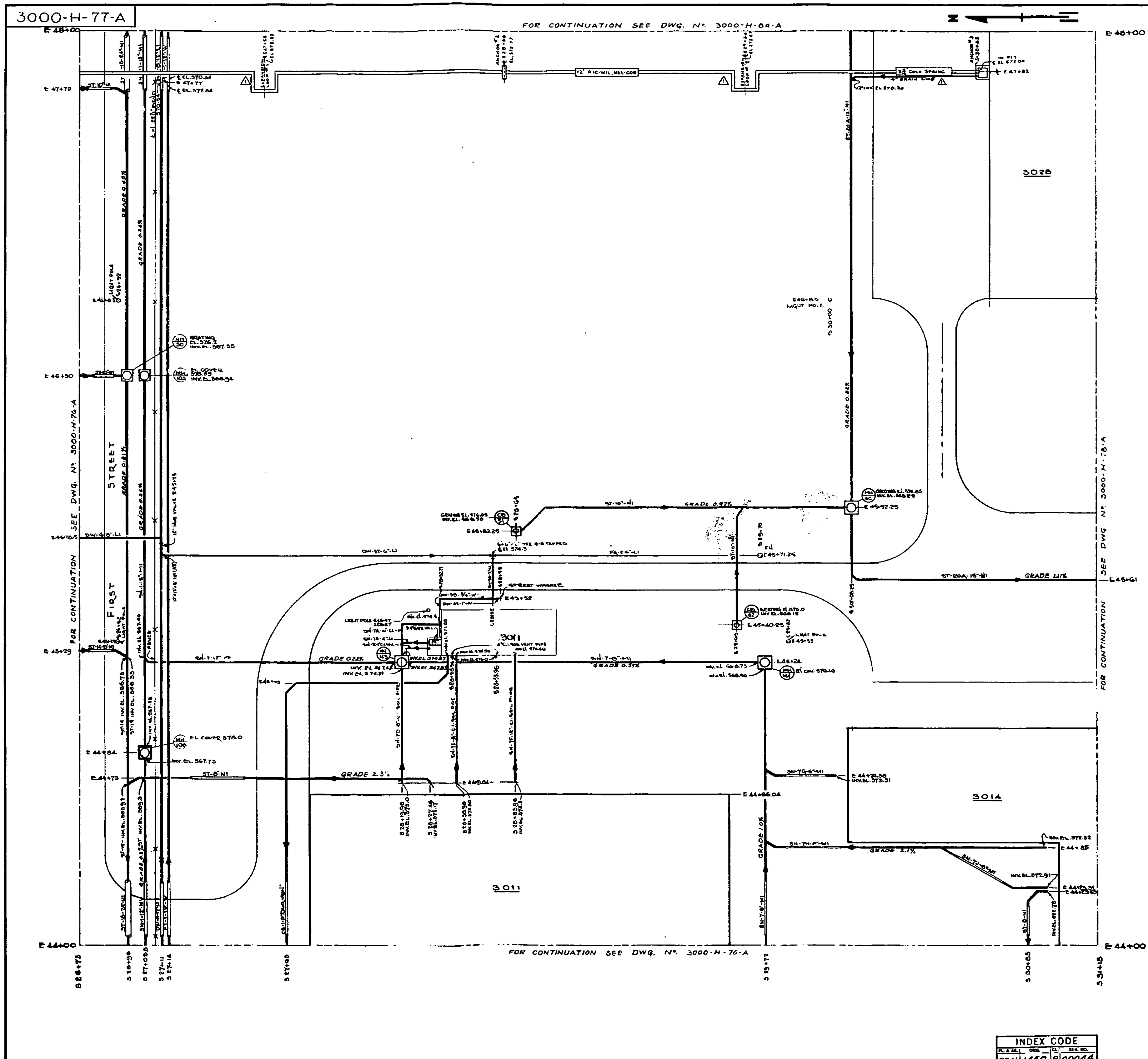
Untitled CADD9 wini6775 Tuesday February 03 2004 09:46:01 AM EST



Untitled CADD9 wini6775 Tuesday February 03 2004 09:46:32 AM EST

3000-H-77-A

5334



INDEX CODE

PL. & AR.	ORG.	CL.	SER. NO.
22H	1450	P	00044

PRINT RECORD

DATE	STAGE	NO. PTS.

1/6/67 THIS DWG. FOR REF. ONLY, SEE UNDERGROUND DWG. 22H-7000-P-00081, 85+86 GEP

REVISED AS BUILT RIC-WIL LINE RIC-WIL PIT SEE LIST SH. 8. SEE LIST SH. 8. E.O.

FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

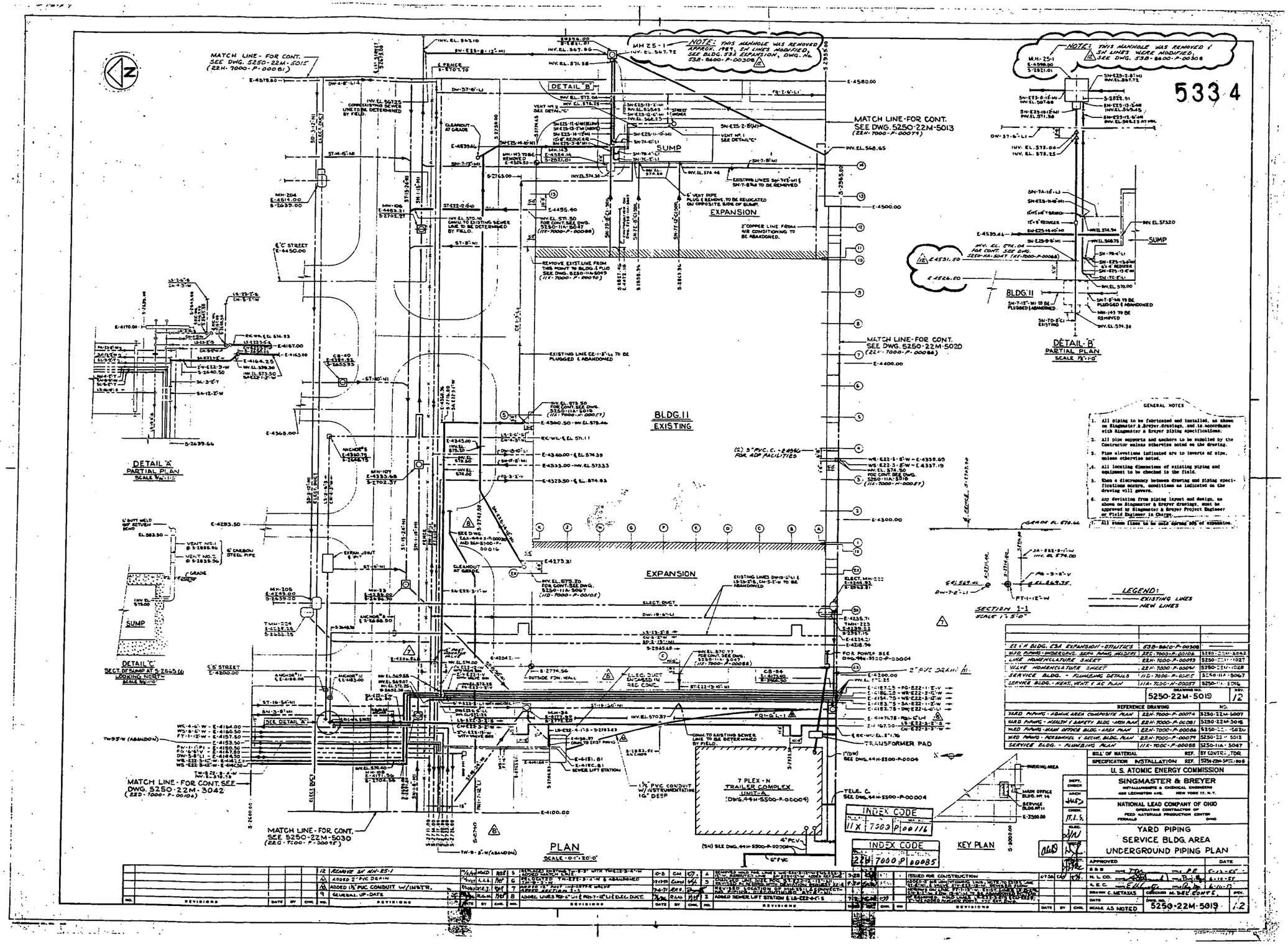
PLAN OF AREA D-6
UNDERGROUND SERVICES

G-30-52
1/16"=1'-0"
J.T. RICE
G.J.R.

APPROVED FOR CONSTRUCTION

3000-H-77-A 2

Untitled CADD9 wini6775 Tuesday February 03 2004 09:47:10 AM EST



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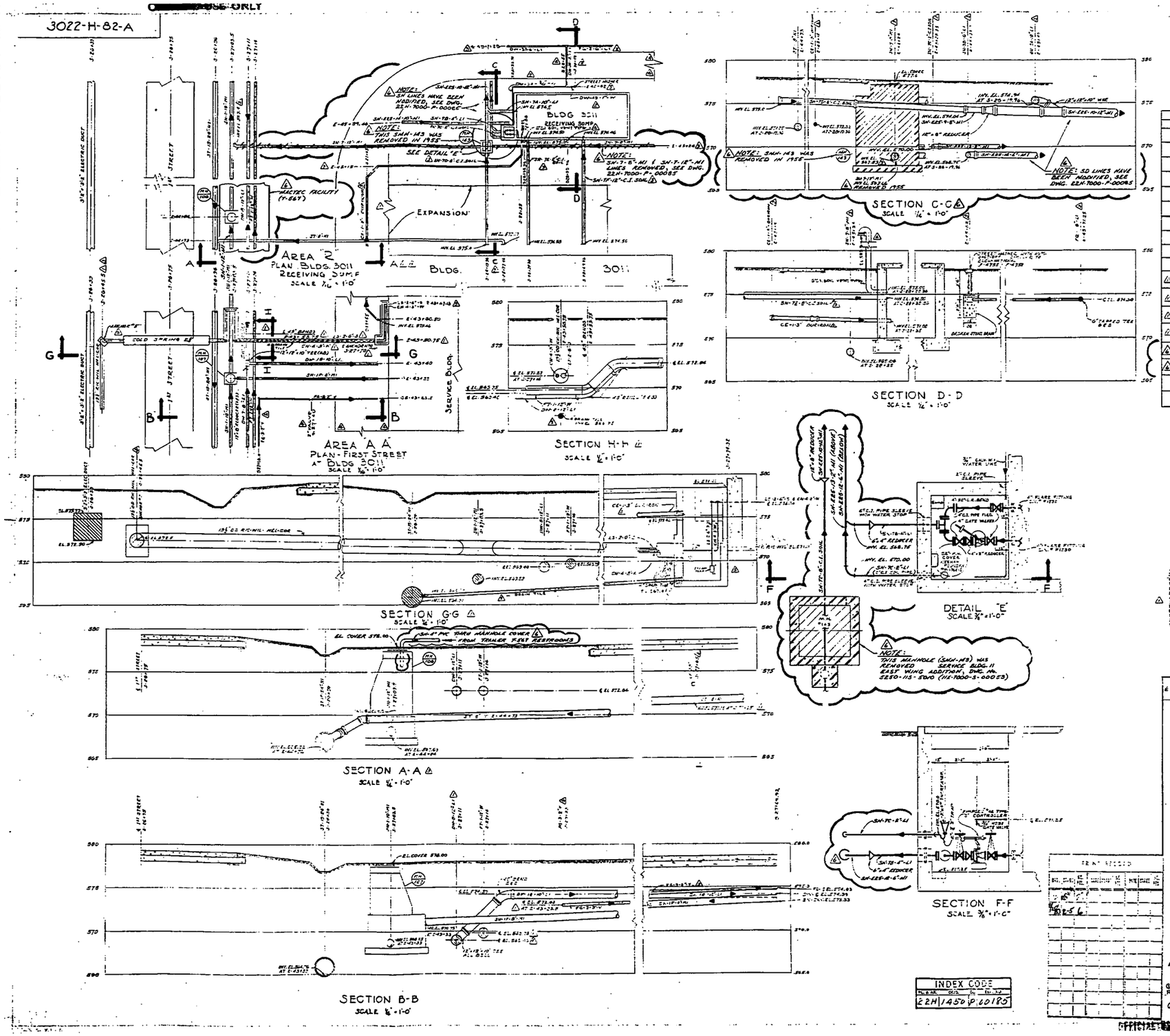
3022-H-82-A

5334



REFERENCE DRAWINGS	
TITLE	DRAWING NO.
FINE GRADING PLAN	3021-S-18-A
PLAN OF UNDERGROUND SANITARY SEWERS	3025-H-50-A (22X-1450-P-00013)
PLAN OF UNDERGROUND STORM SEWERS	3022-H-50-A (22X-1450-P-00129)
UNDERGROUND FIRE PROTECTION AND SANITARY WATER SERVICE	3022-H-57-A (22X-1450-P-00130)
PROCESS WATER AND FUEL GAS UNDERGROUND LINES	3022-H-66-A (22X-1450-P-00141)
DROP MANHOLE - SANITARY SEWER SYSTEM (MH.143)	3025-A-02-A (22X-1450-S-00004)
DROP MANHOLE - SANITARY SEWER SYSTEM (MH 107)	3025-A-03-A (22X-1450-S-00005)
TYPICAL MANHOLE TYPE NO. 1 SANITARY SEWER SYSTEM (MH.106)	3025-A-04-A (22X-1450-S-00006)
MANHOLE SCHEDULE - SANITARY SEWER SYSTEM	3025-A-01-A (25X-1450-X-00003)
BUILDING 3011 RECEIVING SUMP	3025-A-11-A (85B-1450-S-00009)
4 PLAN OF ROADS & APRON - PRODUCTION AREA	3024-S-01-A (24X-1450-G-00012)
4 UNDERGROUND SERVICES TO BUILDING 2 SOUTH OF "WEST" STREET	3022-H-97-A (22D-1450-P-00208)
4 PIPE SUPPORTS - GENERAL PLAN INTERPLANT SERVICES	3022-J-01-A (22X-1450-E-00250)
4 PIPE SUPPORTS - PLANS & ELEVATIONS ALONG FIRST STREET	3022-J-10-A (22D-1450-S-00253)
4 SANITARY SEWER SYSTEM MANHOLE SCHEDULE (SMH)	25X-5500-X-00143
4 YARD PIPING - SERVICE BLDG. 11 AREA - UNDERGROUND PIPING	5250-22M-5019 (22H-7000-P-00085)

NOTE:
STEAM AND CONDENSATE LINES TO BE LAID IN 18" RIC-WIL "HELI-CORE" CONDUIT OR EQUAL WITH 1½" THICK FIBER INSULATION, INCLUDING EXPANSION LOOPS AND ANCHORS.
EXPANSION LOOPS TO BE SIZED IN ACCORDANCE WITH SCHEDULE ON DRAWING 3022-H-37-A.
ANCHORS TO BE IN ACCORDANCE WITH ANCHOR DETAILS ON DRAWING 3022-H-37-A.
RIC-WIL CONDUIT TO BE SEALED AT ONE FOOT ABOVE GRADE AT PIPE RISER TO OVERHEAD PIPE RACK, AND IN MECHANICAL ROOM IN BUILDING IN ACCORDANCE WITH MANUFACTURER'S STANDARD.
STEAM AND CONDENSATE PIPE FOR RIC-WIL SHALL BE ASTM-A-53 GRADE "A" SEAMLESS STEEL STD.-WT.

6	12/10/79	REMOVED SMH-143, SM LINE REVISIONS & WORK COMPLETED TO RON SM-4" PVC TIMES SMH-106 PER DCN 17212-004 / 17212-004	WMD		
5		[illegible]	WMD		
4	10-29-59	[illegible]	[illegible]		
3	12-6-5	[illegible]	[illegible]		
2	11-8-65	[illegible]	G.J.R.		
1	8-10-61	ADDED STEAM & CONDENSATE LINES - ADDED SECTION B-B - REVISED SECTION A-A - ADDED "E" DETAIL - REVISED G.J.R. [illegible]	G.J.R.		

FEED MATERIALS PROCEDURE

FEED MATERIALS PRODUCTION CENTER
FERNALD AREA
DETAIL PLAN
AREAS "E" & A-A

9-27-51

AS NOTED

G. HOWARD APPROVED FOR CONSTRUCTION
R. YOUNG

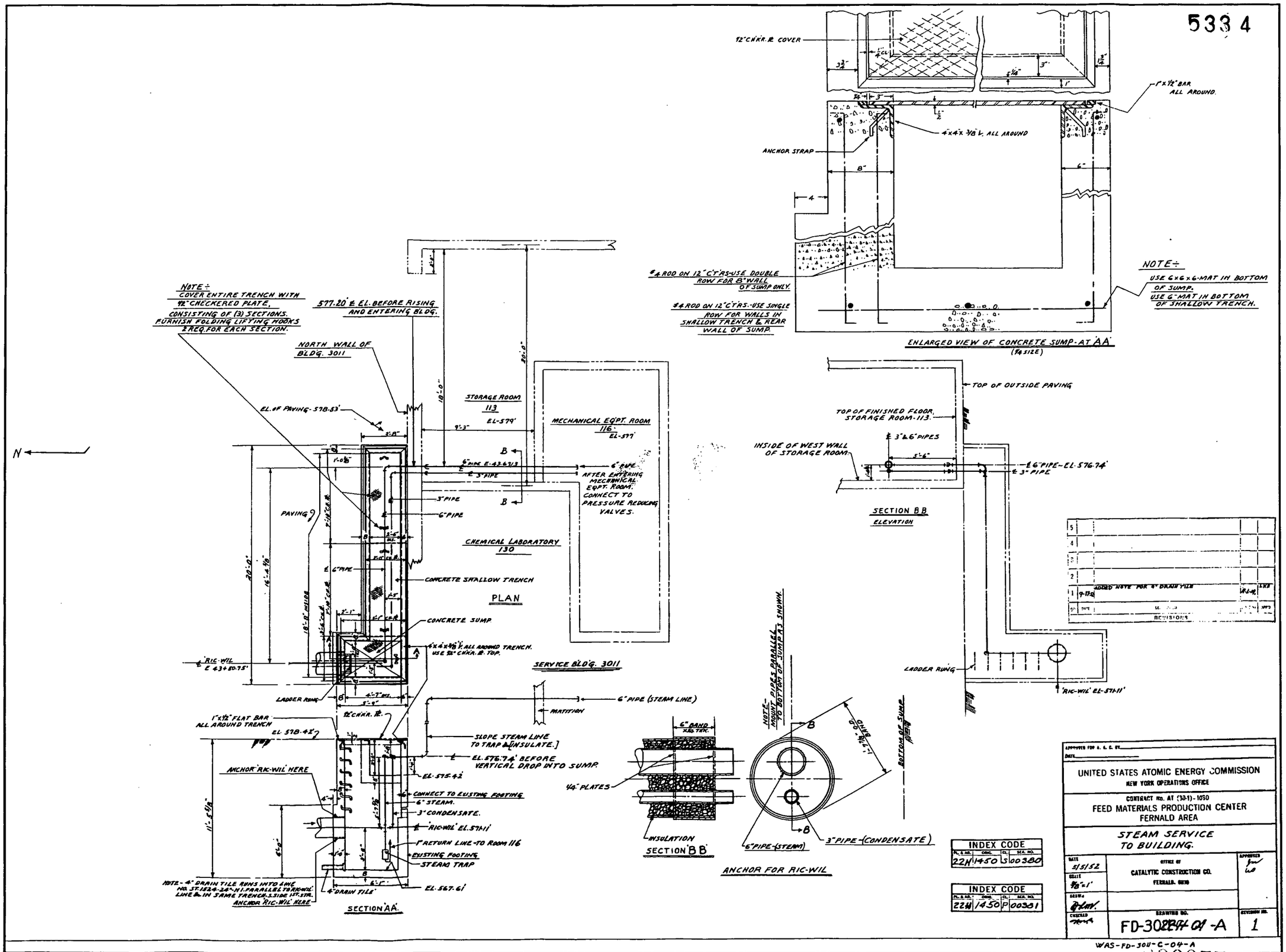
G.J.R.

3022-H-82-A

6

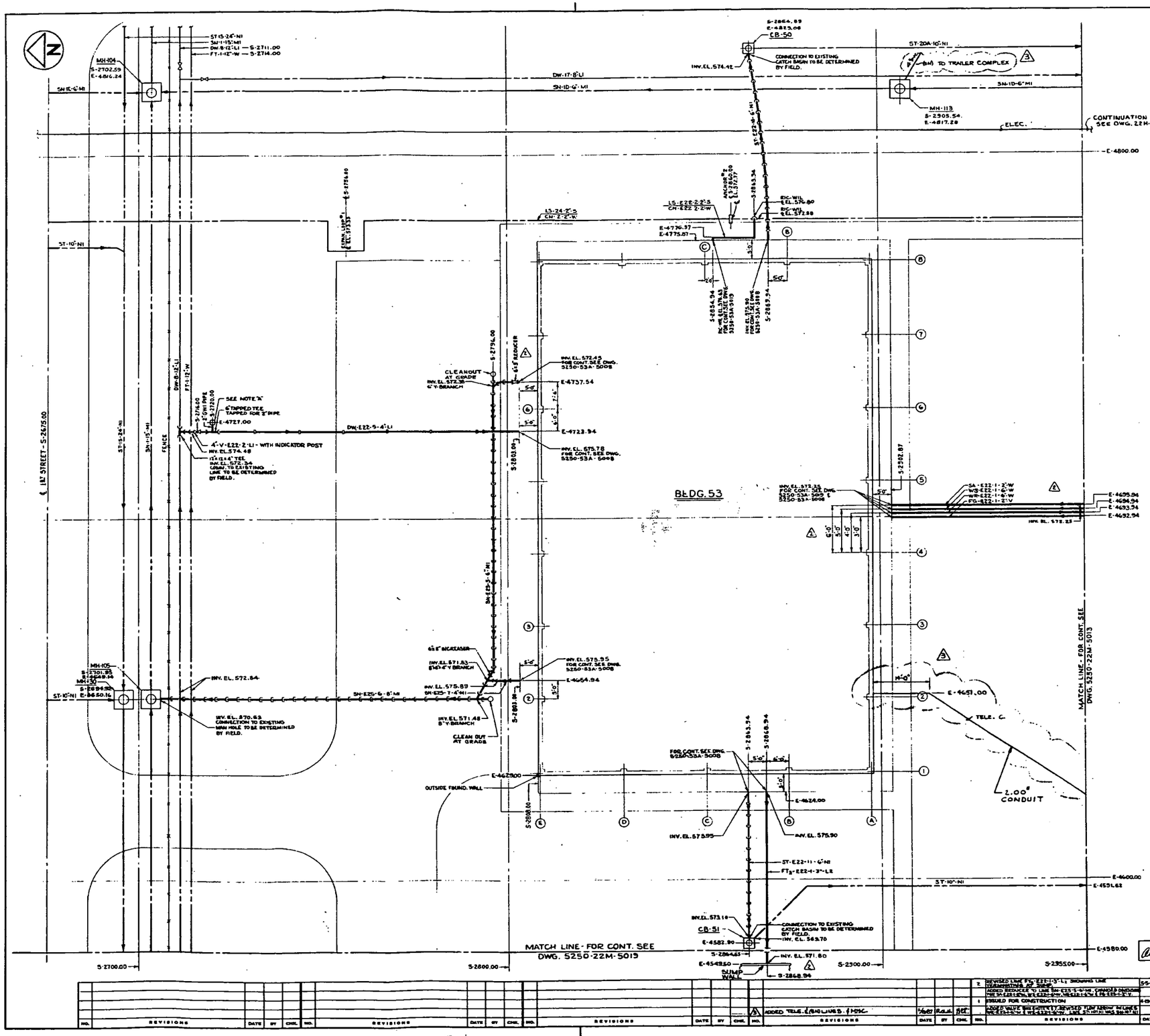
INDEX CODE				
PLANT	CODE	SYS	SEQ	SUF
22H	1450	P	00185	

Untitled CADD9 wini6775 Tuesday February 03 2004 09:48:19 AM EST



000055

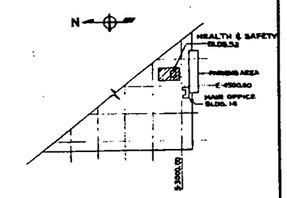
NOTE "A"
2" NON-FREEZE BOX TYPE HYDRANT, ZURN #2-1492 OR EQUAL. DEPTH OF BURY = 30". INSTALL TOP FLUSH WITH GRADE. PACK 6" OF GRAVEL AROUND HYDRANT BASE. ANCHOR BASE ELBOW IN CONCRETE.



LEGEND:
EXISTING LINES
NEW LINES

GENERAL NOTES

1. ALL PIPING TO BE FABRICATED AND INSTALLED, AS SHOWN ON SINGMASTER & BREYER DRAWINGS, AND IN ACCORDANCE WITH SINGMASTER & BREYER PIPING SPECIFICATIONS.
2. ALL PIPE SUPPORTS AND ANCHORS TO BE SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE DRAWING.
3. PIPE ELEVATIONS INDICATED ARE TO INVERTS OF PIPE, UNLESS OTHERWISE NOTED.
4. ALL LOCATING DIMENSIONS OF EXISTING PIPING AND EQUIPMENT TO BE CHECKED IN THE FIELD.
5. WHEN A DISCREPENCY BETWEEN DRAWING AND PIPING SPECIFICATIONS OCCURS, CONDITIONS AS INDICATED ON THE DRAWING WILL GOVERN.
6. ANY DEVIATION FROM PIPING LAYOUT AND DESIGN, AS SHOWN ON SINGMASTER & BREYER DRAWINGS, MUST BE APPROVED BY SINGMASTER & BREYER PROJECT ENGINEER OR FIELD ENGINEER IN CHARGE.
7. STEAM LINES TO BE COLD SPRUNG 50% OF EXPANSION.



KEY PLAN

INDEX CODE
53X 7000 P 00046

INDEX CODE
22H 7000 P 00081

LINE & VALVE NOMENCLATURE SURVEY HEALTH & SAFETY BLDG. AREA — 5250-22H-1026

DRAWING NO. 5250-22M-5015 — REV. 2

REFERENCE DRAWING	NO.
HEALTH & SAFETY BLDG.-HEATG & VENT & AIR COND	5250-53A-5019
HEALTH & SAFETY BLDG.-1ST FL. PLUMBING-PLAN	5250-53A-5008
YARD PIPING-PERSONNEL & SECURITY BLDG.-PLAN	5250-22M-5013
YARD PIPING-ADMIN. AREA-COMPOSITE PLAN	5250-22M-5007
YARD PIPING-SERVICE BLDG. AREA-PLAN	5250-22M-5010
BILL OF MATERIAL	REF. BY CONTRACTOR
SPECIFICATION INSTALLATION	REF. 5250-22H-SPEC-006

U. S. ATOMIC ENERGY COMMISSION

SINGMASTER & BREYER
METALLURGISTS & CHEMICAL ENGINEERS
420 LEXINGTON AVE. NEW YORK 17, N.Y.

NATIONAL LEAD COMPANY OF OHIO
OPERATING CONTRACTOR OF
FEED MATERIALS PRODUCTION CENTER
FERNALD OHIO

DEPT. CHECK — ARCH JMB — CHEM. BLS — ELEC. — MECH. — CONST. — PROJ. ENGR. — DIV. ENGR. — ASST. DIR.

YARD PIPING
HEALTH & SAFETY BLDG. AREA
UNDERGROUND PIPING PLAN

APPROVED		DATE
S&B		2-28-01
N.L.CO.		4-6-01
A.E.C.		

DRAWN C. METAXAS — CHECKED V.G. — REV. 3
DATE 3/25/55 — DWG. NO. 5250-22M-5015
SCALE 0'-1"=10'-0"

NO.	REVISIONS	DATE	BY	CHK.
2	REVISED LINE #4-E22-1-3"-LI SHOWING LINE TERMINATING AT SUMP.	5-5-55	CM	EG
	ADDED REDUCER TO LINE SN-E25-1-6"-MI. CHANGED INVERTS ON SN-E25-1-6"-MI, ST-E22-2-10"-MI, ST-E22-1-3"-LI			
1	ISSUED FOR CONSTRUCTION	4-13-55	CM	EG
	ADDED VALVE SN-E25-1-6"-MI. REVISED TOP NEW INTURE & NN-E25-1-6"-MI & ST-E22-1-10"-MI. LINE & ELEV. ST-E22-1-3"-LI			