

STARK COUNTY METROPOLITAN SEWER DISTRICT

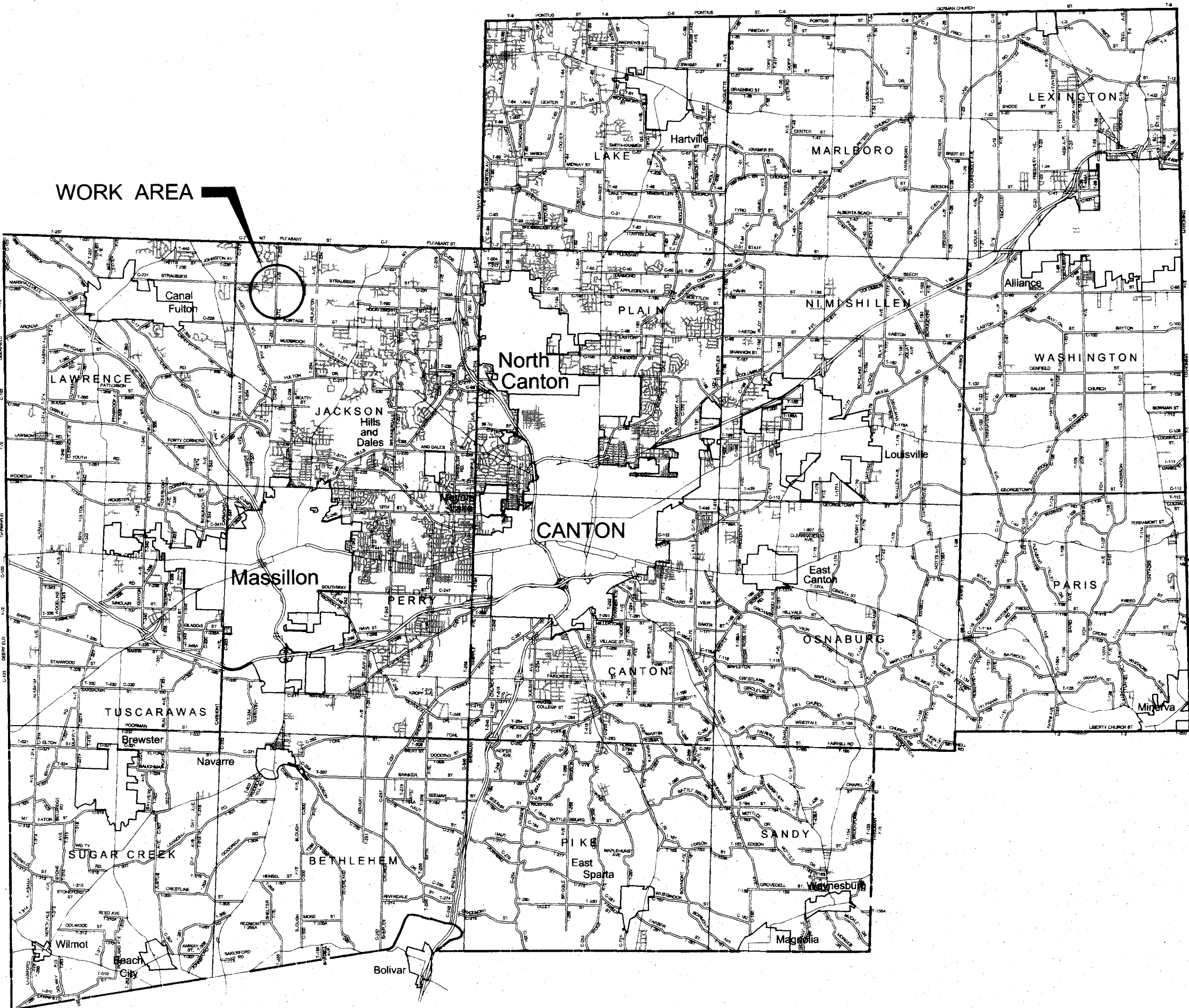
PROJECT NO. 529

WOODMOOR INTERCEPTION

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2001



STARK COUNTY, OHIO

LOCATION MAP
NOT TO SCALE

STARK COUNTY METROPOLITAN SEWER DISTRICT
SANITARY ENGINEERING DEPARTMENT

P.O. BOX 7906 - 1701 MAHONING RD. N.E. CANTON, OHIO 44705-7906
PHONE (330) 451-2303 - FAX (330) 453-9044

APPROVALS

APPROVED BY: _____ DATE: _____

STARK COUNTY SANITARY ENGINEER _____

STARK COUNTY COMMISSIONERS: _____

PRESIDENT _____

VICE PRESIDENT _____

MEMBER _____

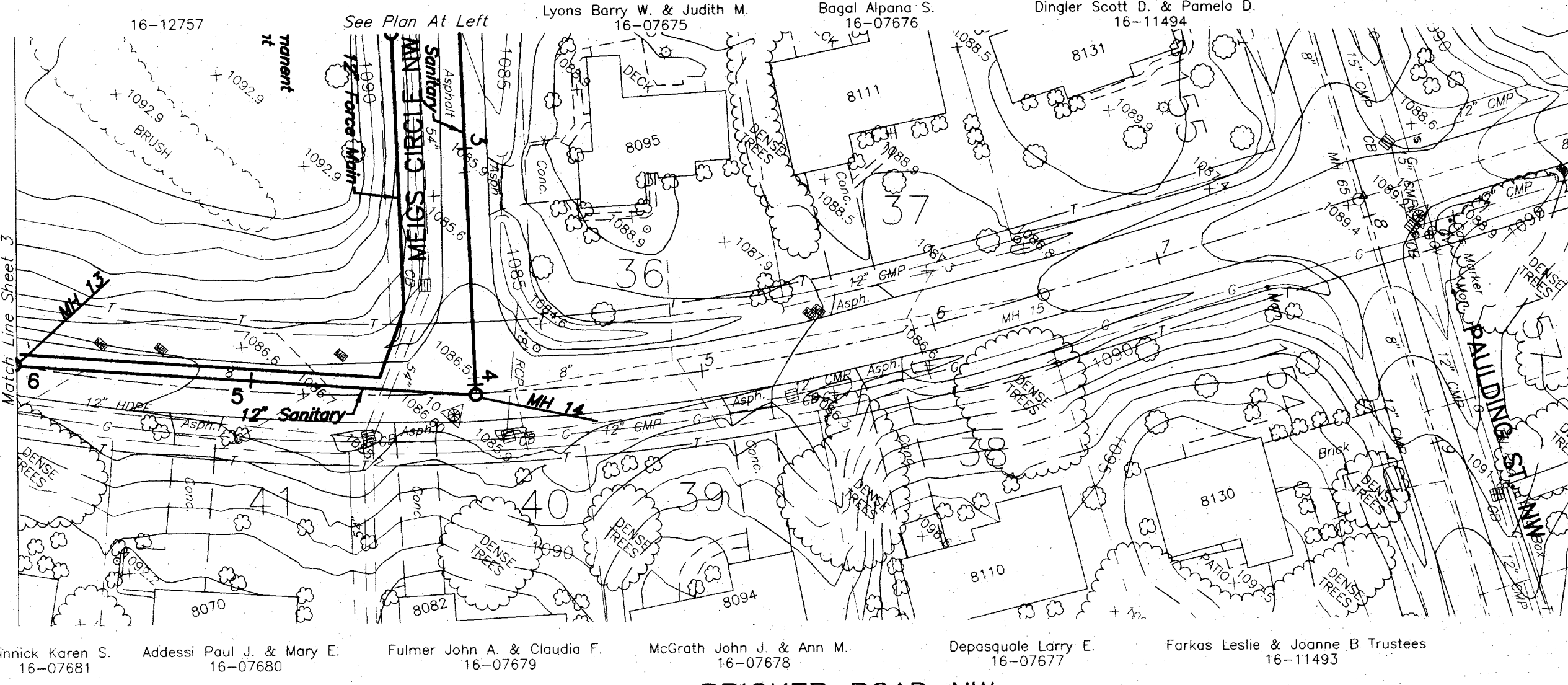
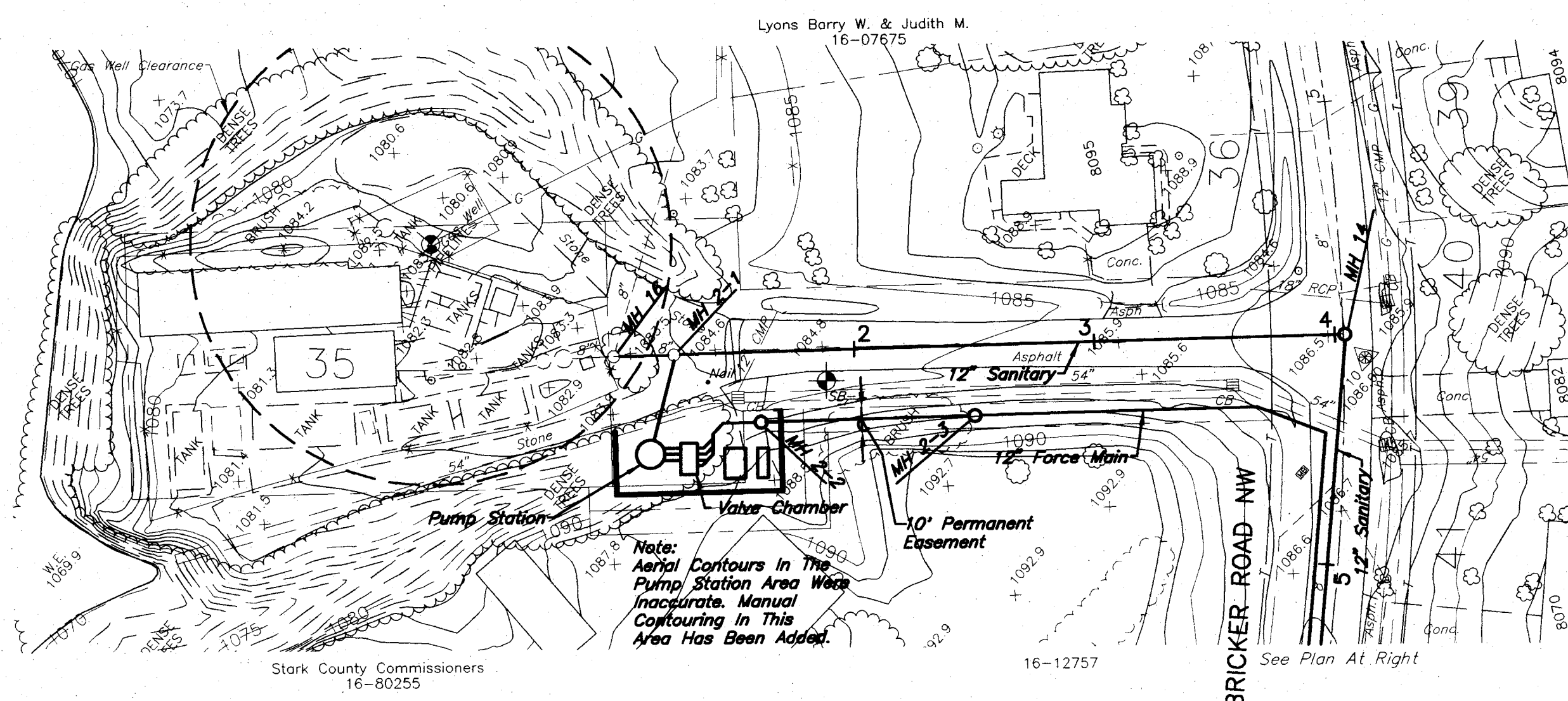
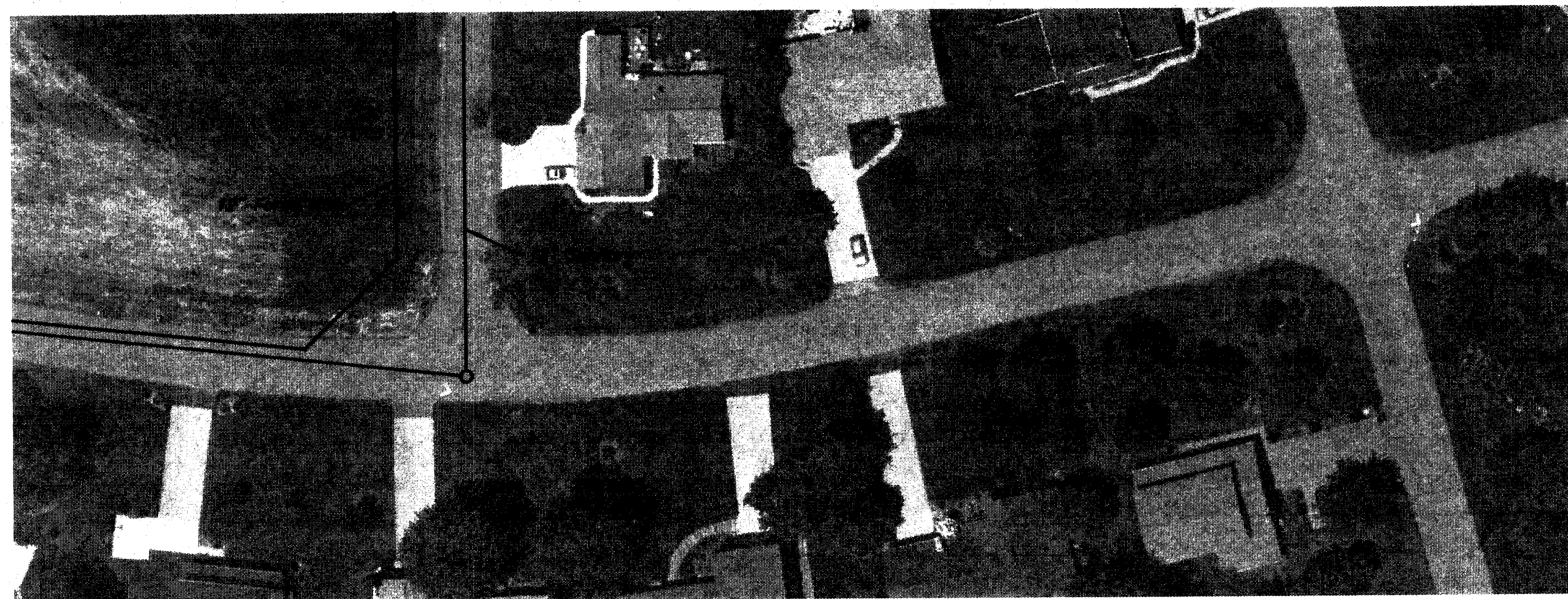
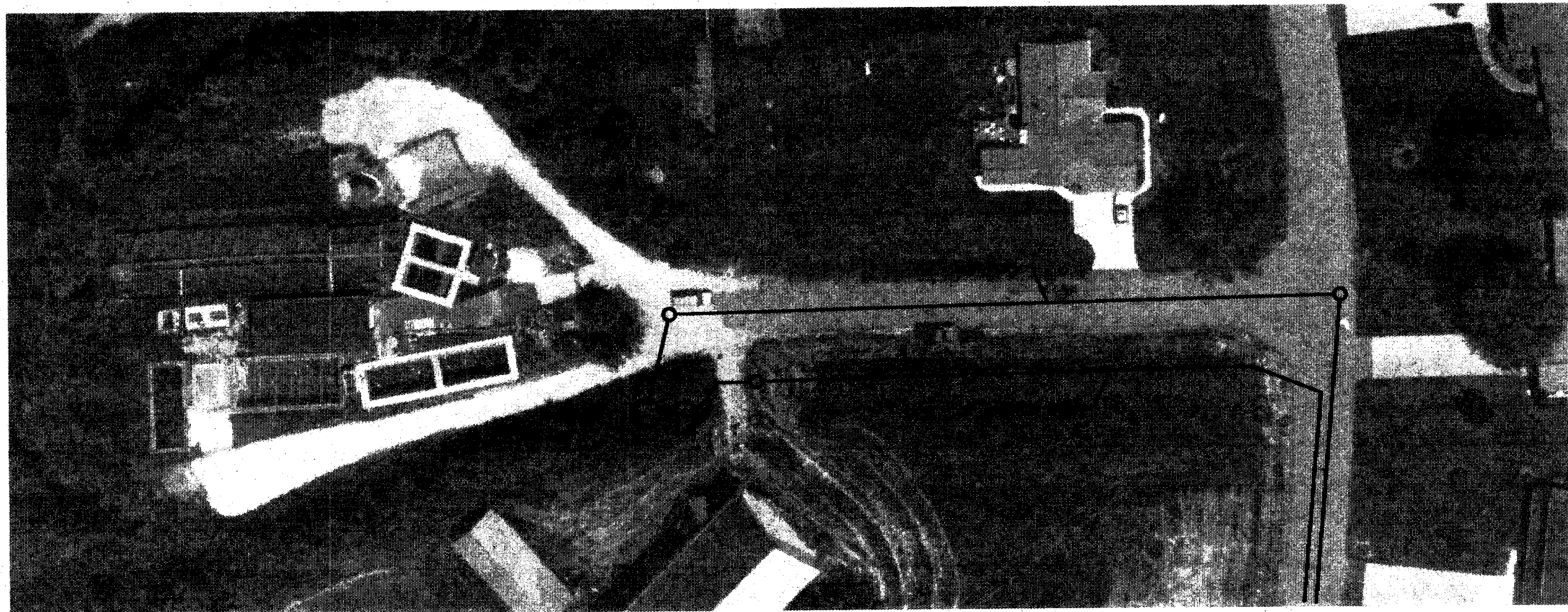
CITY OF MASSILLION ENGINEER _____

BOARD OF STARK COUNTY COMMISSIONERS

JOHN P. DOUGHERTY
GAYLE A. JACKSON
JANE F. VIGNOS

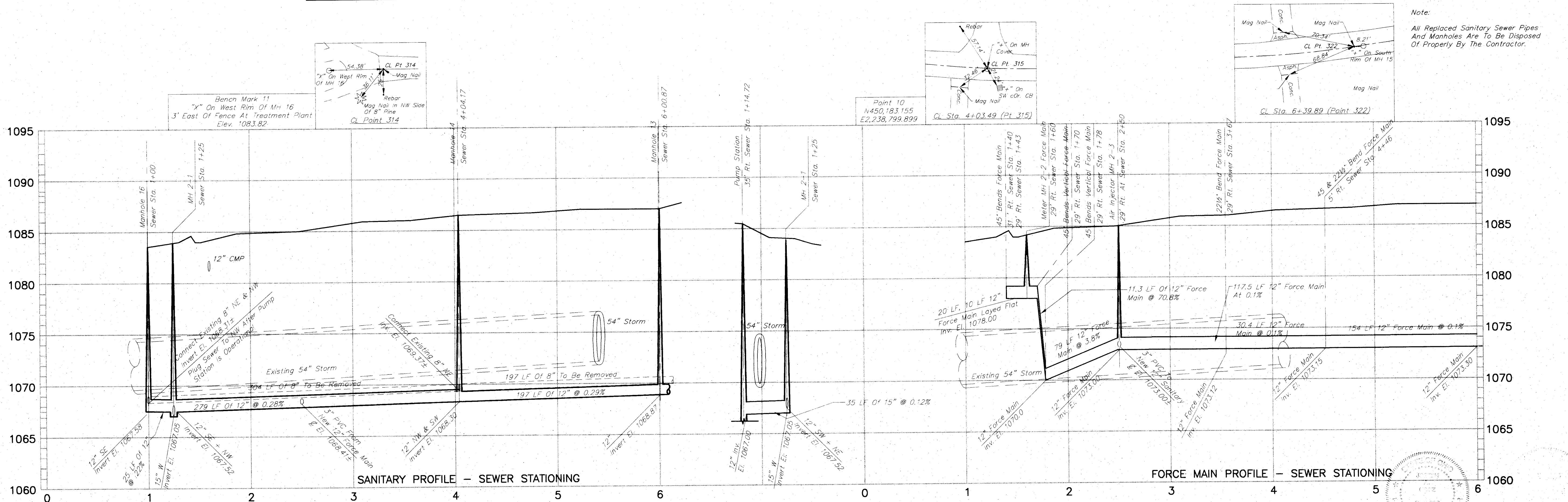
STARK COUNTY OFFICIALS

MICHAEL S. ARMOGIDA SANITARY ENGINEER
STEVEN SINGLETON COUNTY ADMINISTRATOR
JANET W. CREIGHTON COUNTY AUDITOR
ROBERT HOROWITZ PROSECUTING ATTORNEY



MEIGS CIRCLE NW

BRICKER ROAD NW



SANITARY PROFILE - SEWER STATIONING

FORCE MAIN PROFILE - SEWER STATIONING

TOL-5140P01
07/13/01 10:14
XREF STINGER
IMAGE 5140PIL.TIF, 5140PPIR.TIF

SCALE
HOR. 1"=50' VERT. 1"=5'

DATE: _____
FIELD BOOK NO. _____

STARK COUNTY DISTRICT
METROPOLITAN SEWER DISTRICT

1701 WASHINGTON RD. N.E. CANTON, OHIO 44705-7906
(330) 451-2303 FAX (330) 451-9044

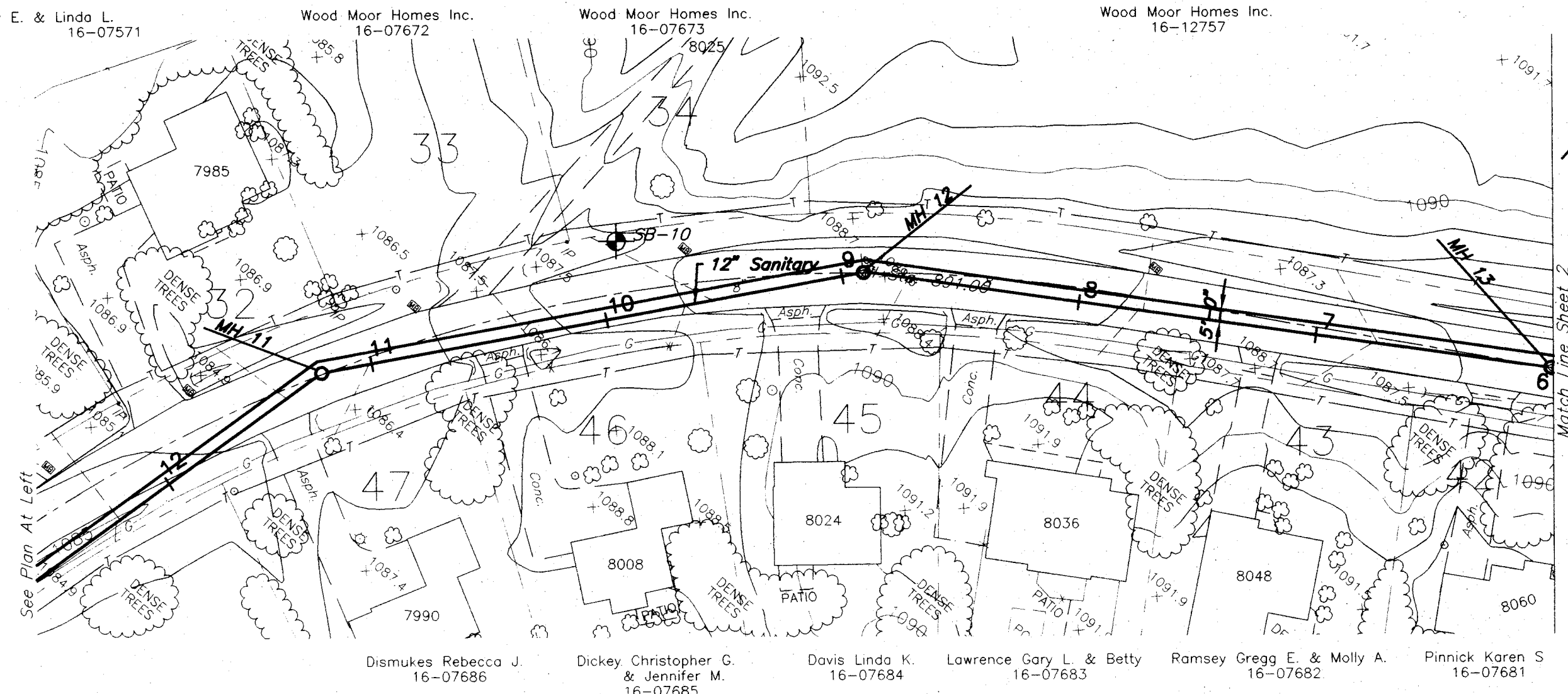
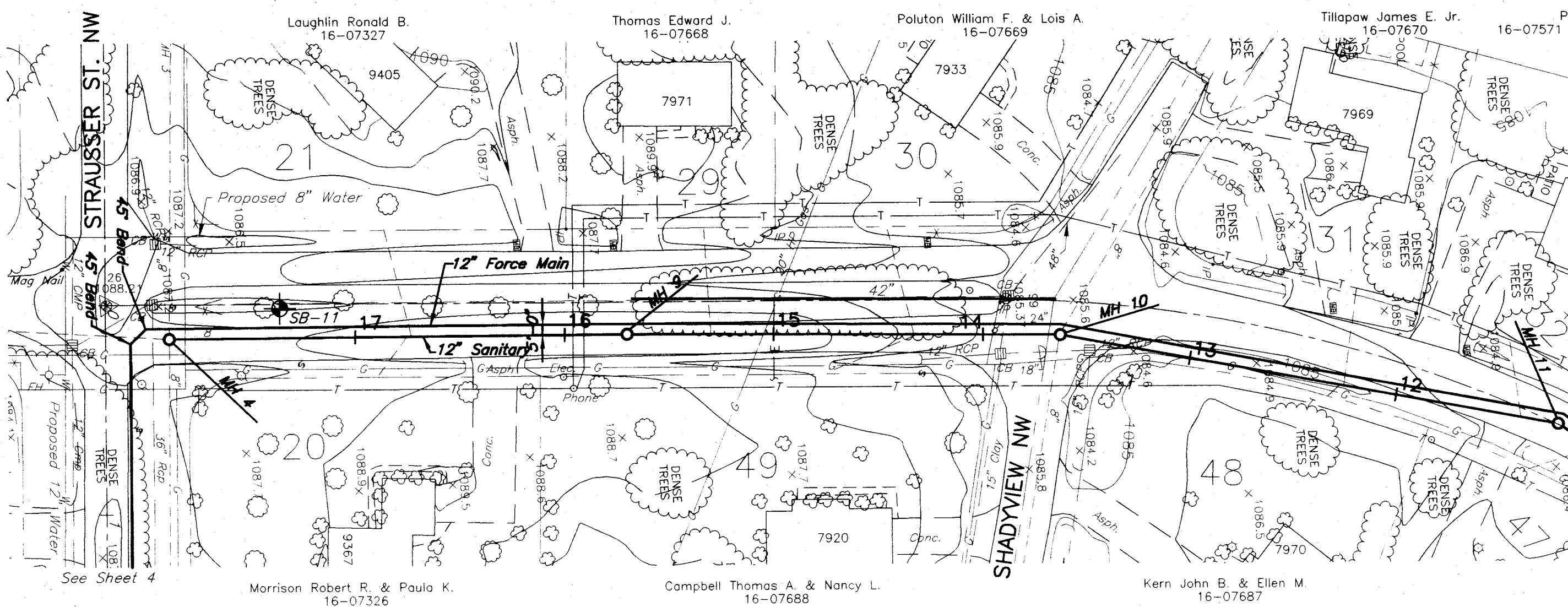
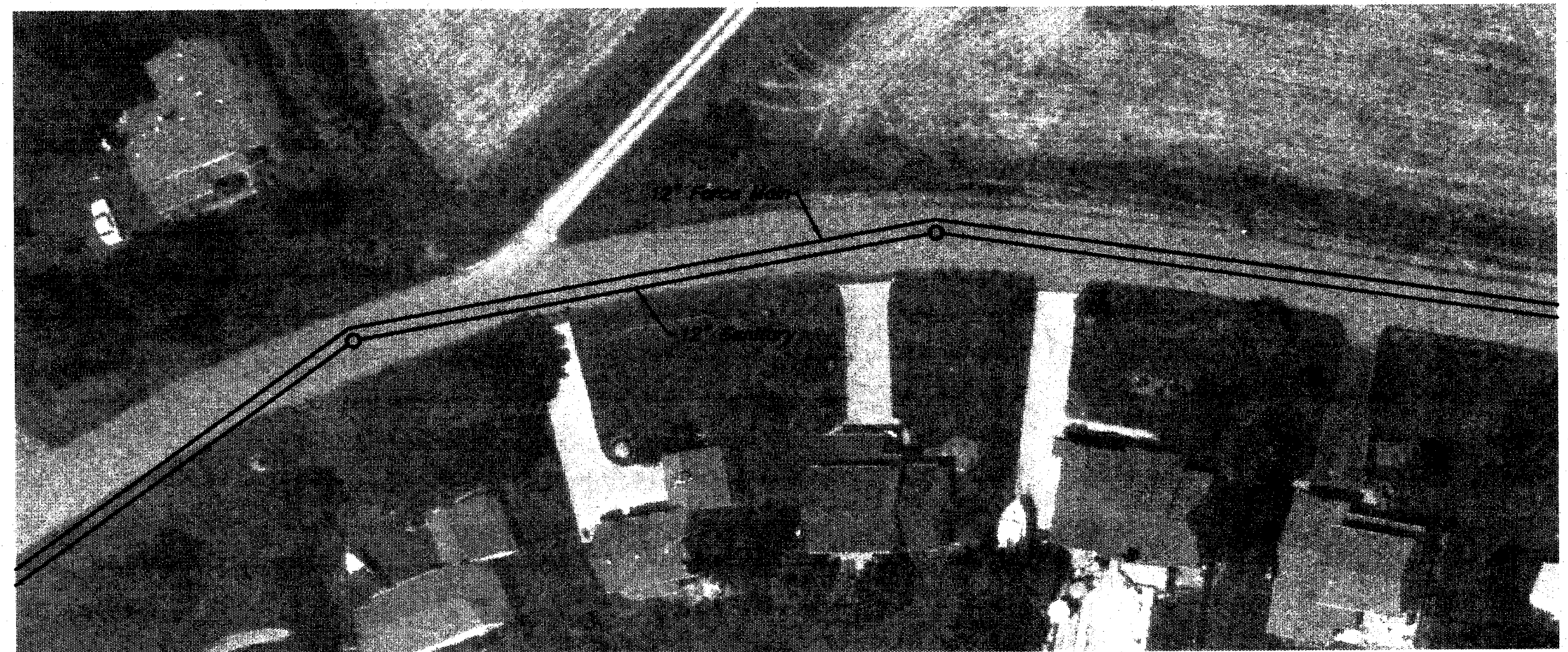
MEIGS CIRCLE NW
PROJECT NO. 529
WOODMOOR INTERCEPTION

STARK COUNTY, OHIO

PREPARED BY:
JONES & HENRY ENGINEERS, LTD.

REVISIONS
DESCRIPTION BY DATE

PROJECT NUMBER
529
SHEET
2 OF 20

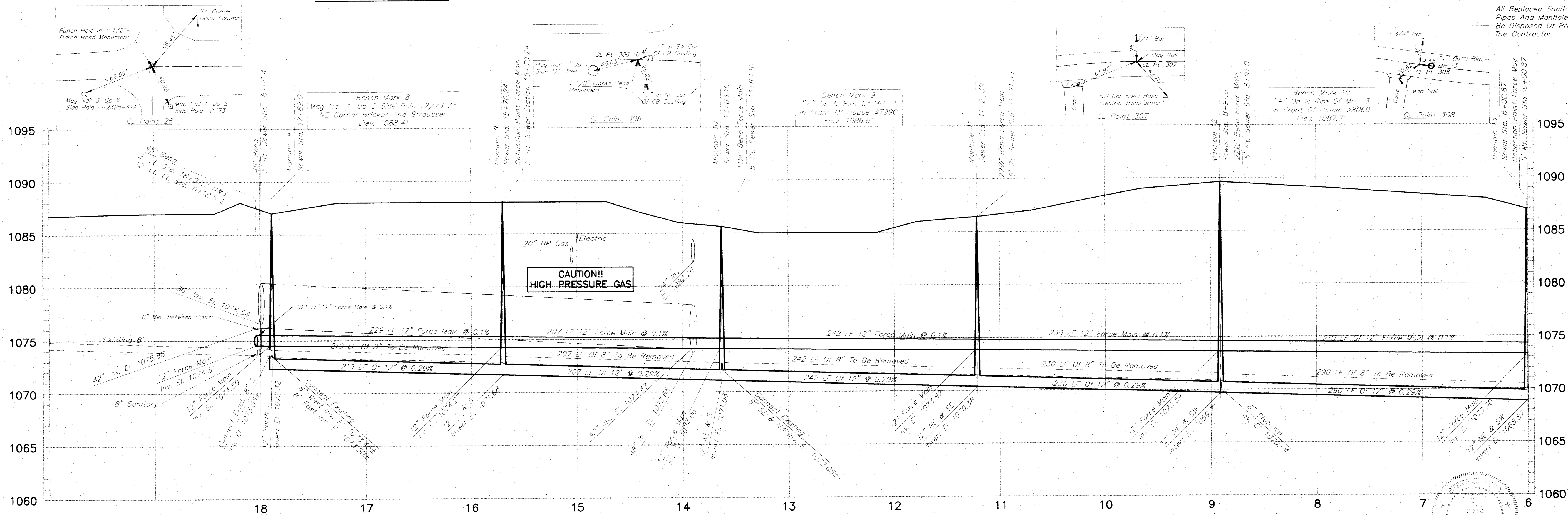


BRICKER ROAD NW

BRICKER ROAD NW

Note:

All Replaced Sanitary Sewer Pipes And Manholes Are To Be Disposed Of Properly By The Contractor.



TOL-5140PP07
09/25/01 03:14
XREF: 5140PP7R.TIF

SCALE
HOR. 1"=50' VERT. 1"=5'
DATE: _____
FIELD BOOK NO. _____

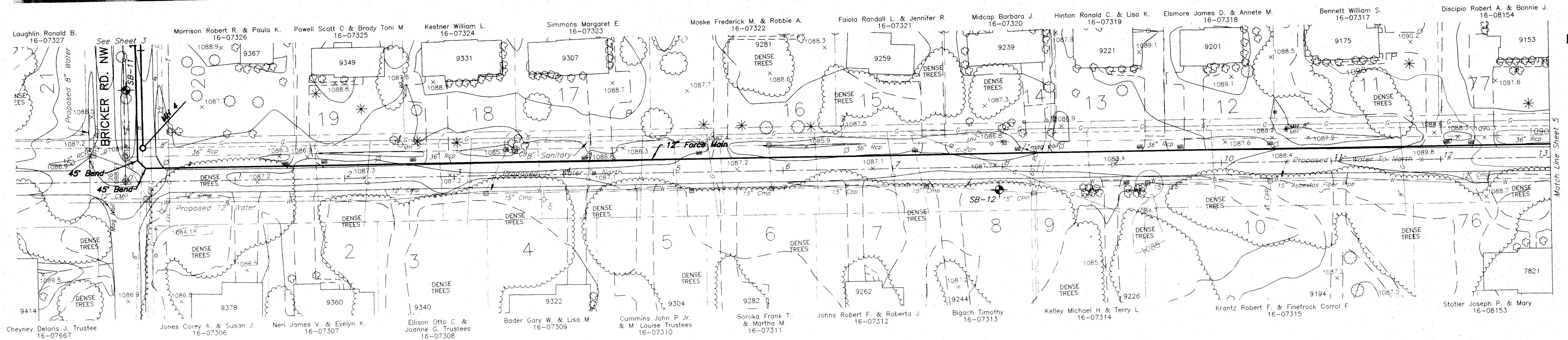
STARK COUNTY DISTRICT
METROPOLITAN SEWER
MICHELE M. LOGGIA, P.E.
P.O. BOX 7906 - 1701 MACHING RD. N.E. CANTON, OHIO 44705-7906
(330) 451-2303 FAX (330) 453-6044

BRICKER ROAD NW
PROJECT NO. 529
WOODMOOR INTERCEPTION
STARK COUNTY, OHIO

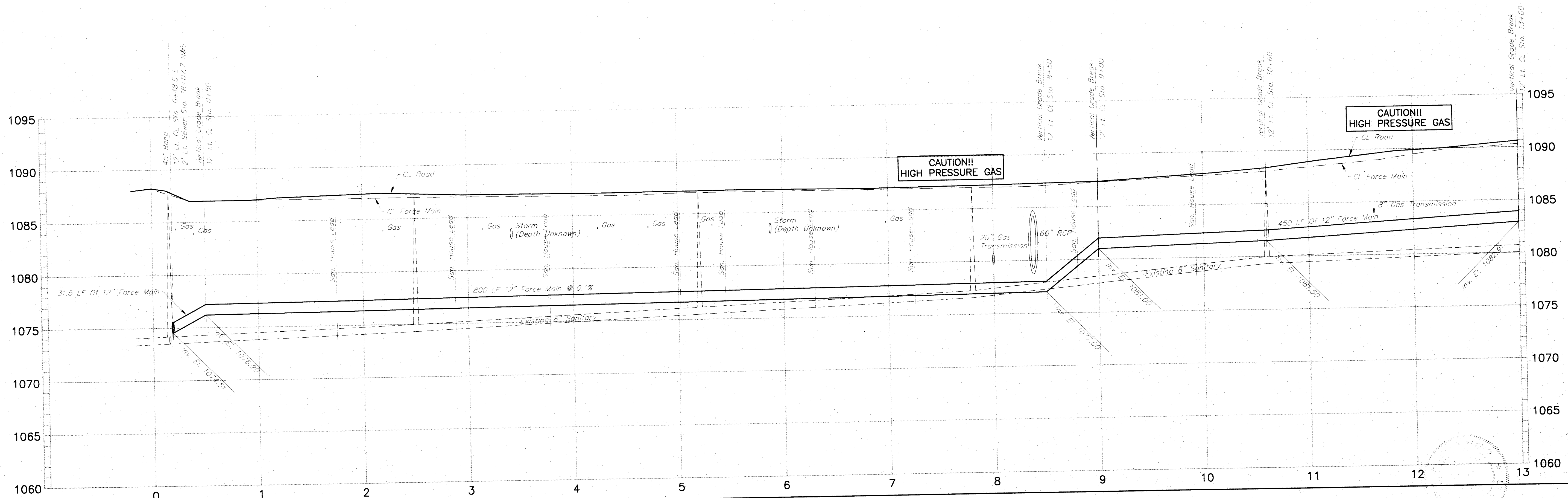
PREPARED BY:
Jones & Henry Engineers, Ltd.

REVISIONS	DESCRIPTION	BY	DATE

PROJECT NUMBER
529
SHEET
3 OF 20
DRAWN BY: _____ CHK'D BY: RPS



STRAUSSER STREET NW



TOL-5140PP3A
09/24/01 03-14
XREF 5140AER
IMAGE 5140PP3A.TIF

SCALE
HOR. 1"=50' VERT. 1"=5'
DATE: _____
FIELD BOOK No. _____

STARK COUNTY
METROPOLITAN SEWER DISTRICT
MICHAEL S. ARMSTRONG, P.E.
P.O. BOX 7906 - 1701 MAHONING RD. N.E. CANTON, OHIO 44705-7906
(330) 481-2303 FAX (330) 483-9044

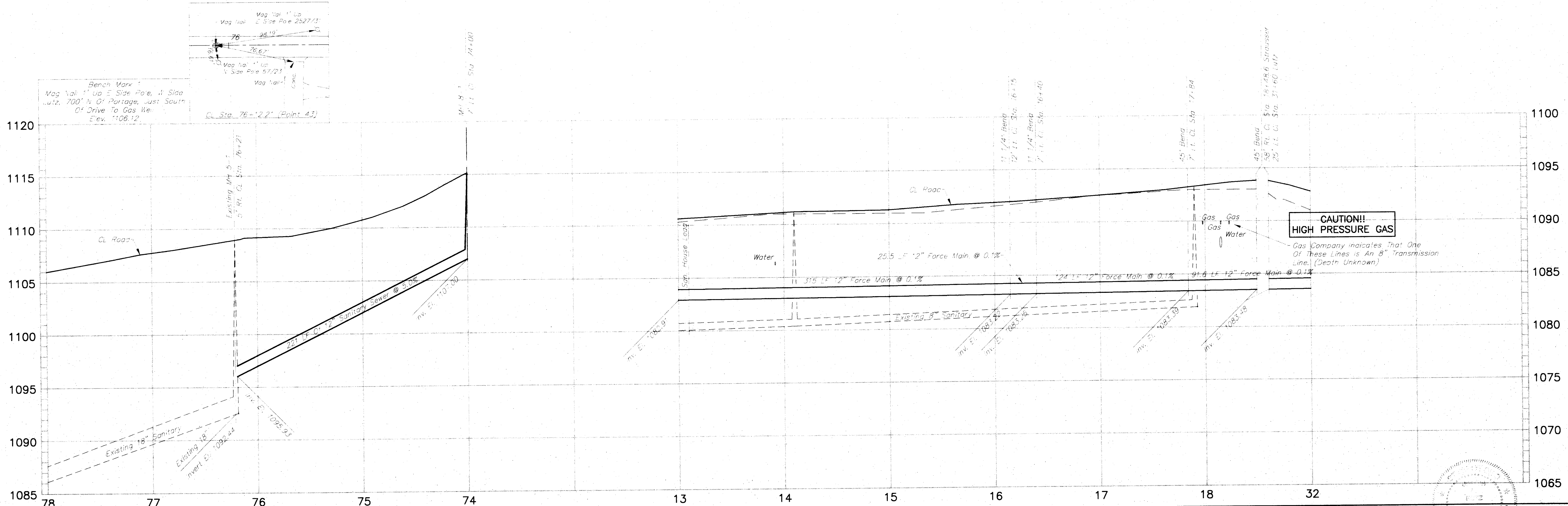
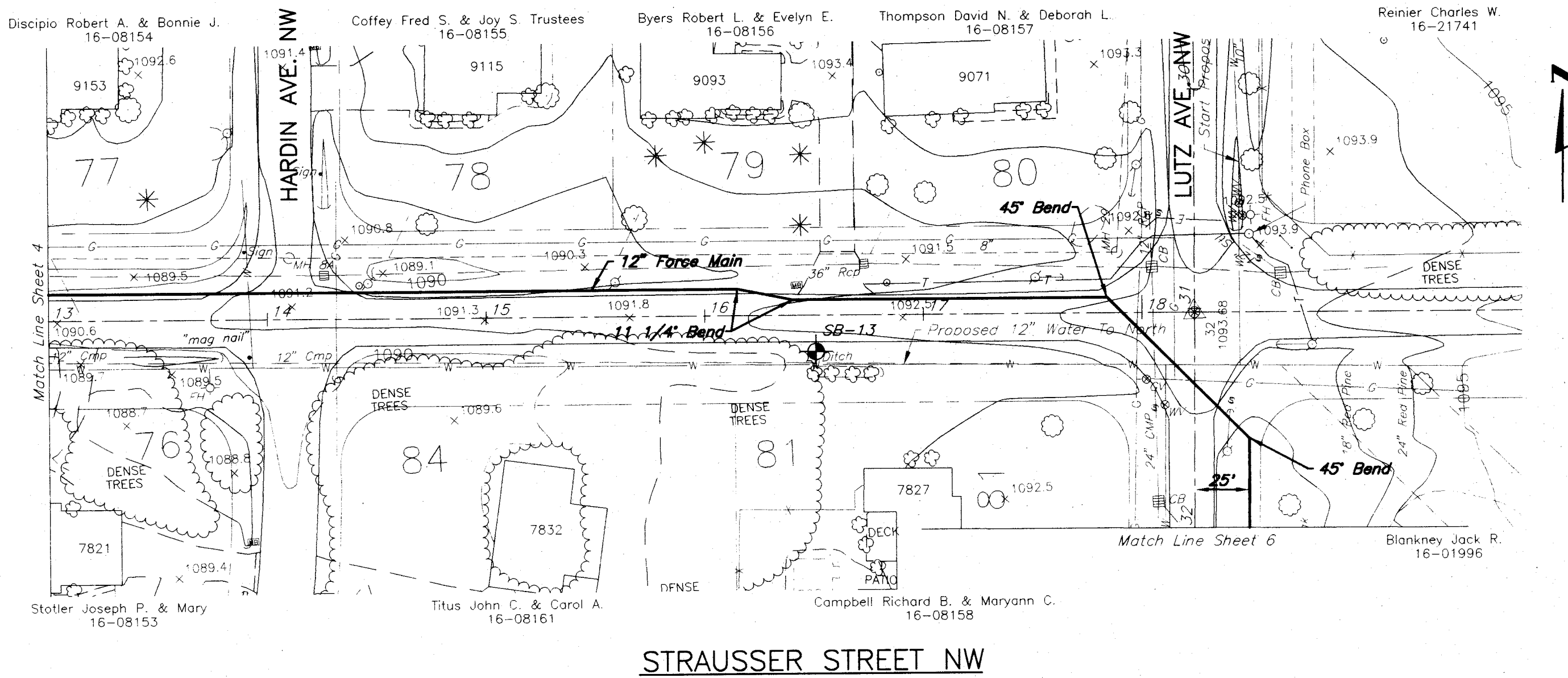
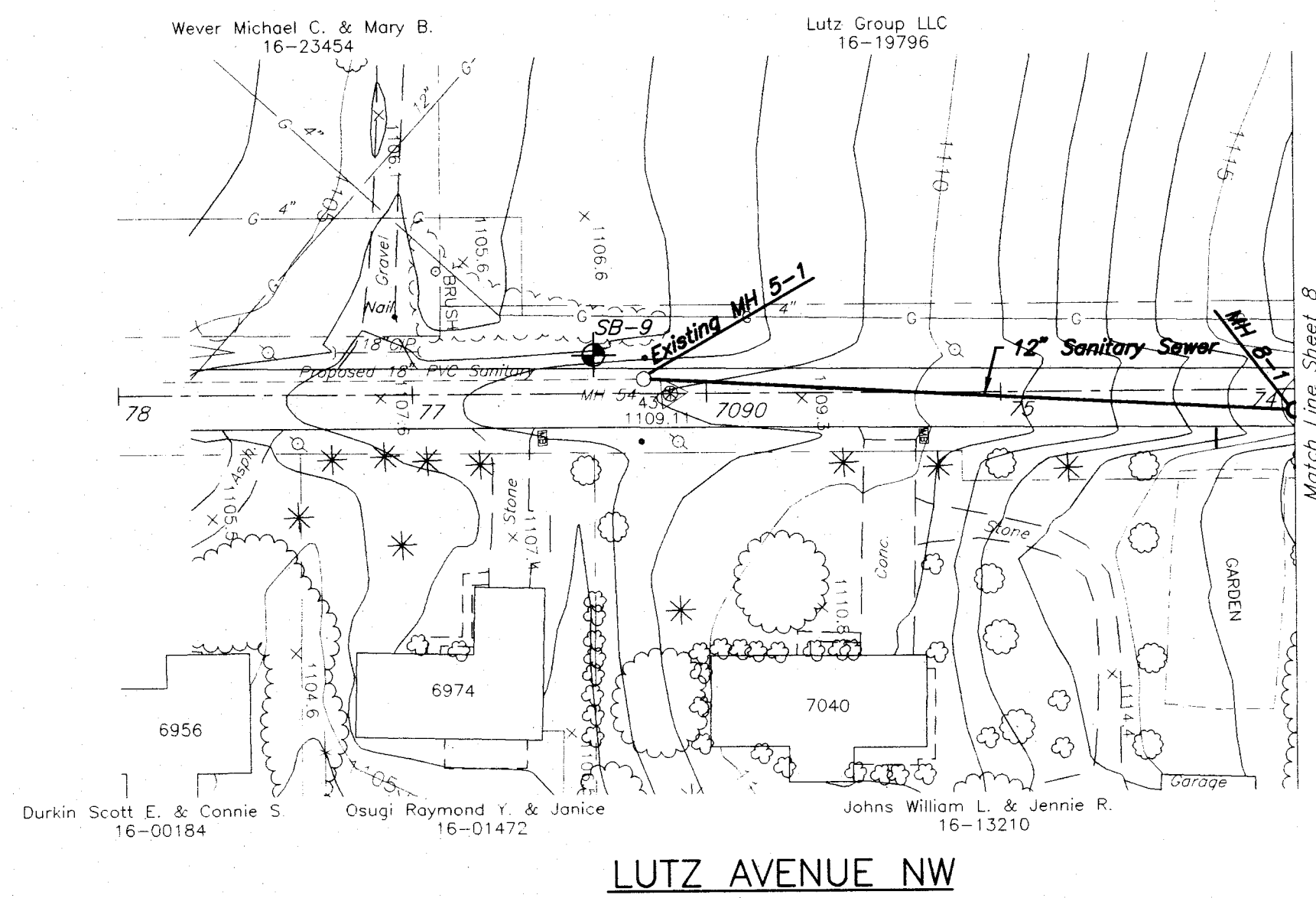
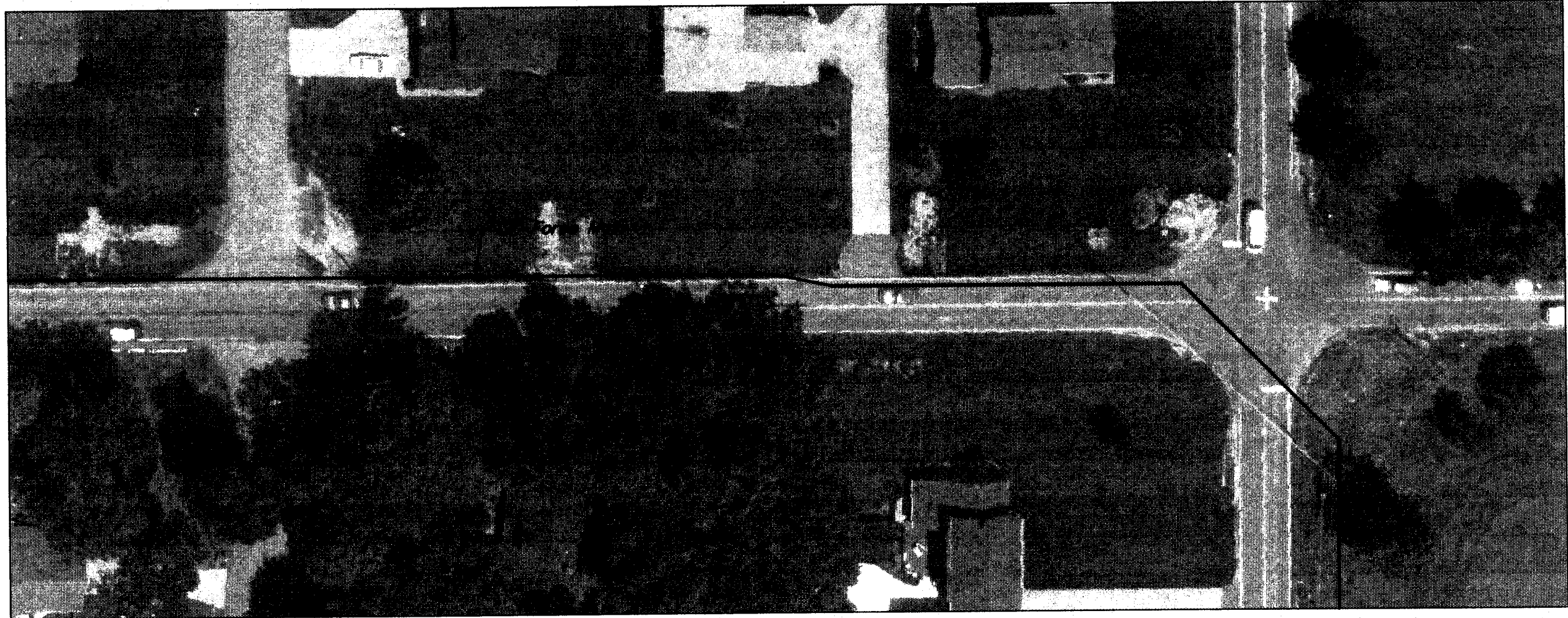
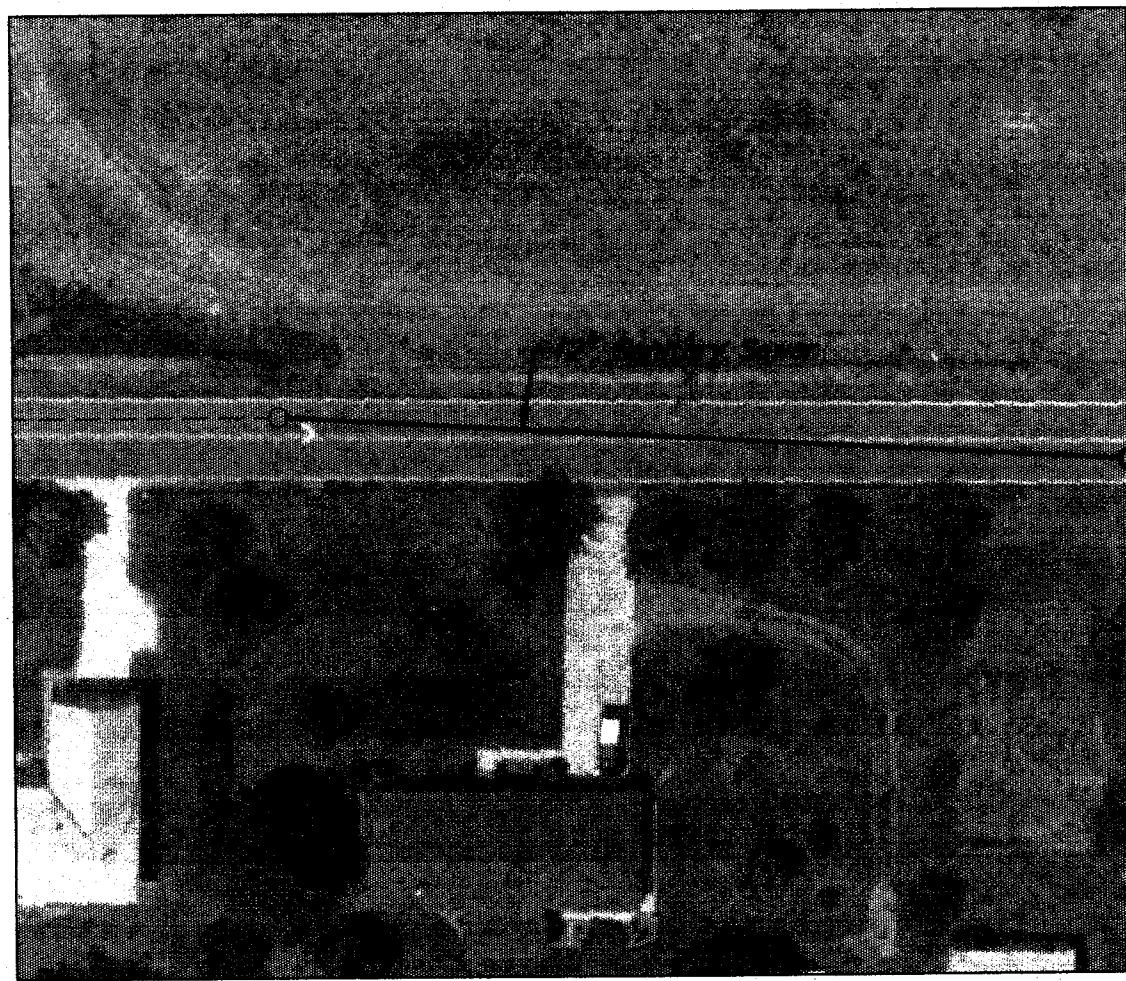
STRAUSSER STREET NW
PROJECT NO. 529
WOODMOOR INTERCEPTION
STARK COUNTY, OHIO

PREPARED BY:
Jones & Henry Engineers, Ltd.
JHE

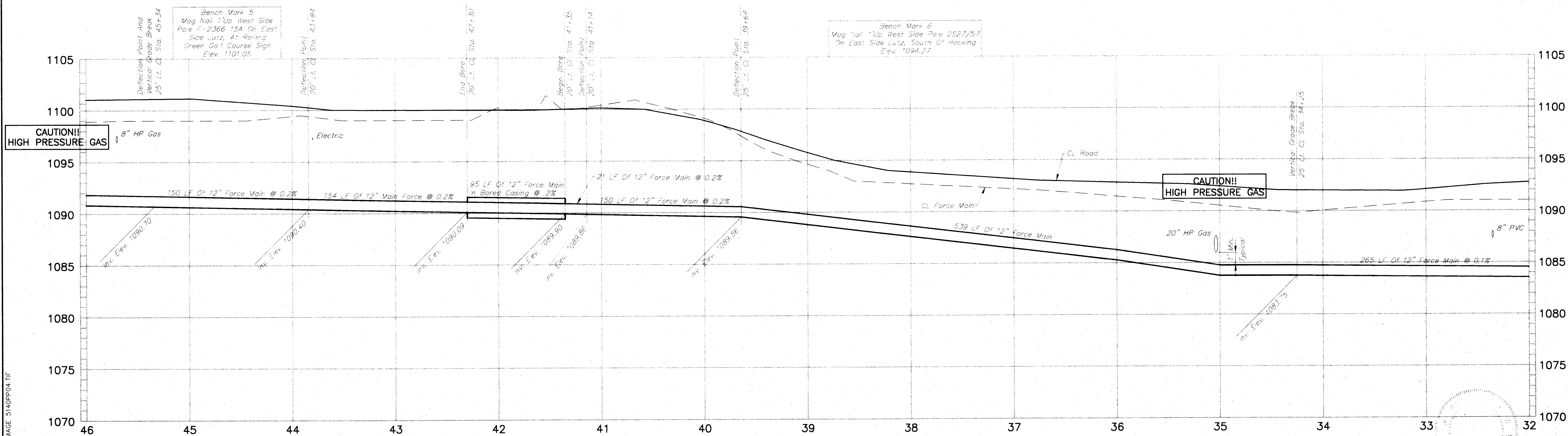
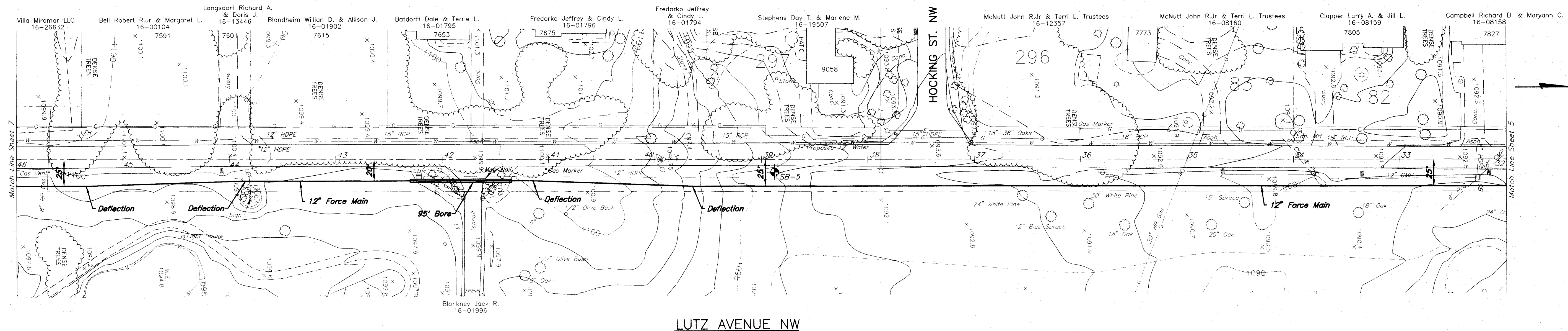
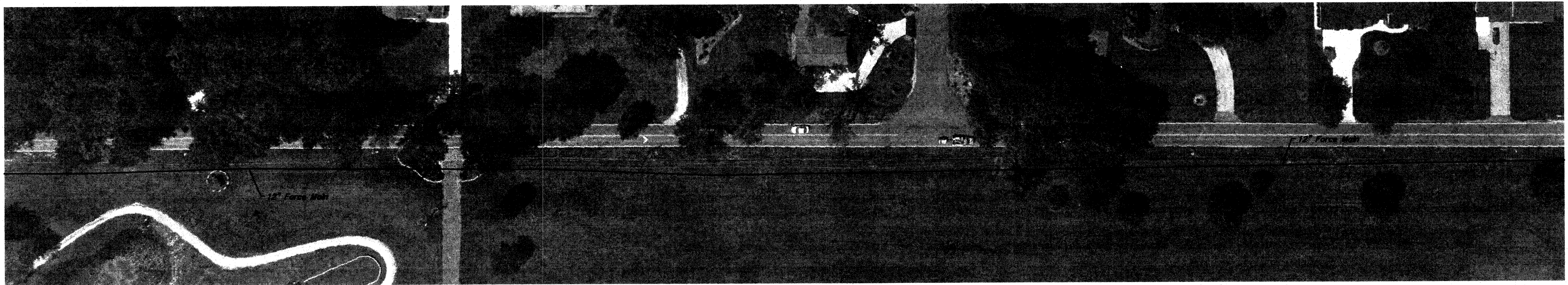
REVISIONS	DESCRIPTION	BY	DATE

CHK'D BY: _____
DWN BY: _____

PROJECT NUMBER
529
SHEET 4 OF 20



TOL-5140P66A
07/13/01 10:14
XREF: SHOWER
IMAGE: 5140P66A.tif & 5140P66A.tif



SCALE
HOR. 1"=50' VERT. 1"=5'

DATE: _____

FIELD BOOK No. _____

STARK COUNTY
METROPOLITAN SEWER DISTRICT

MICHAEL J. WILSON, P.E.
DIRECTOR

P.O. BOX 7906 - 1701 WOODROW RD. N.E. CANTON, OHIO 44705-7906
(330) 471-2303 • FAX (330) 453-9044

PREPARED BY:
Jones & Henry Engineers, Ltd.

PROJECT NUMBER
529

SHEET
6 OF 20

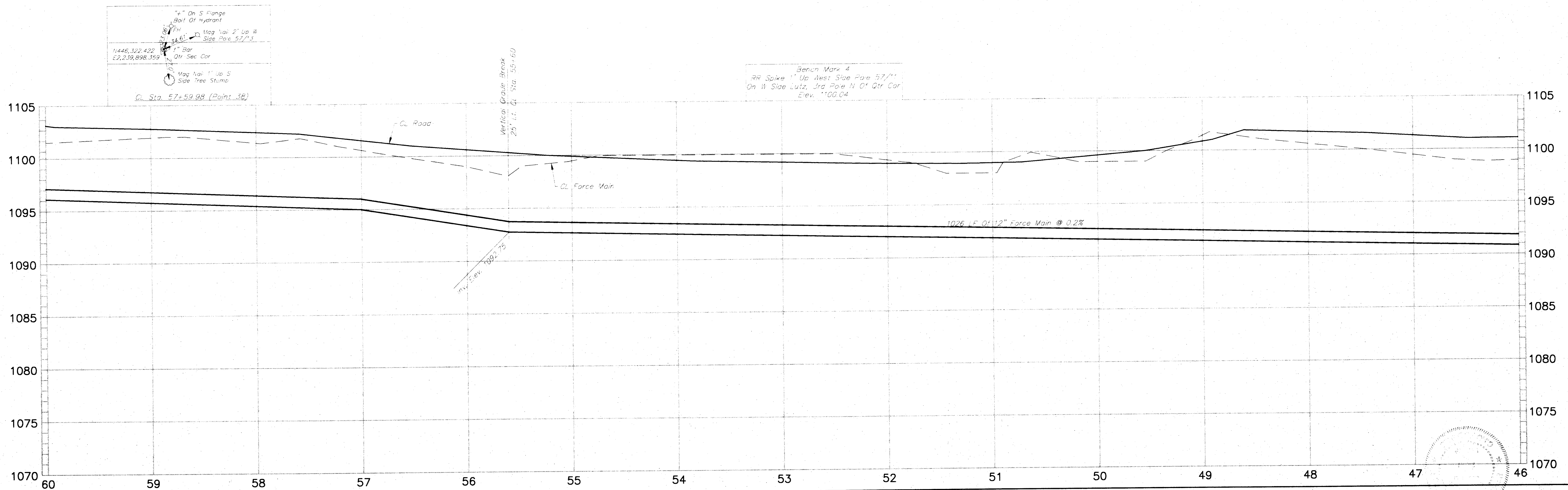
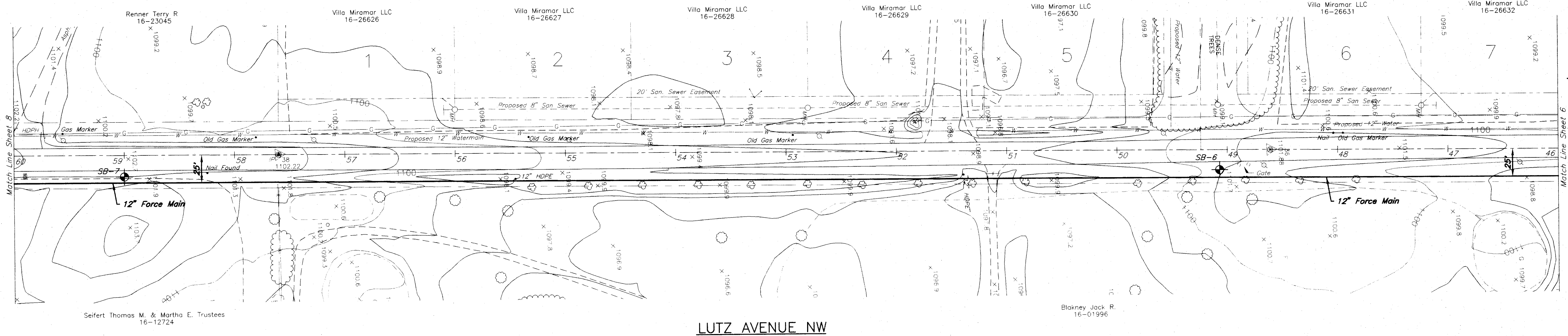
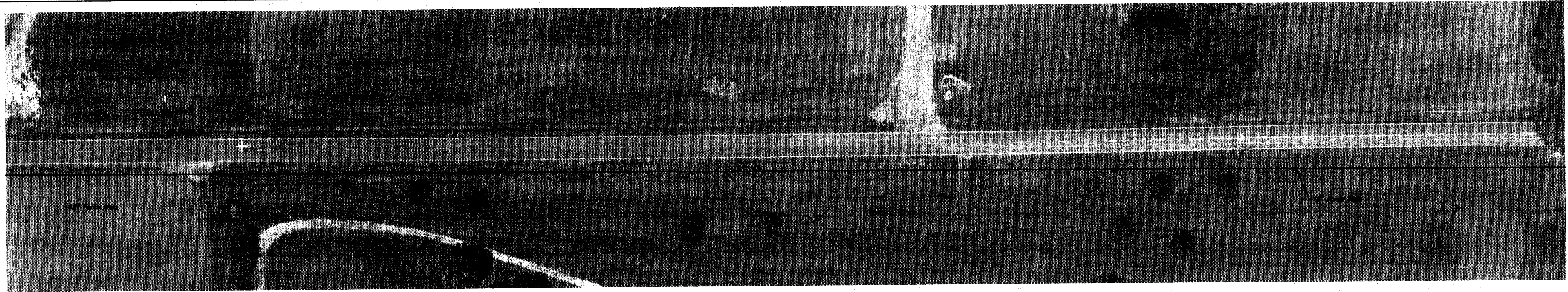
REVISIONS
DESCRIPTION BY DATE

CHK'D BY: JPS

STARK COUNTY
METROPOLITAN SEWER DISTRICT

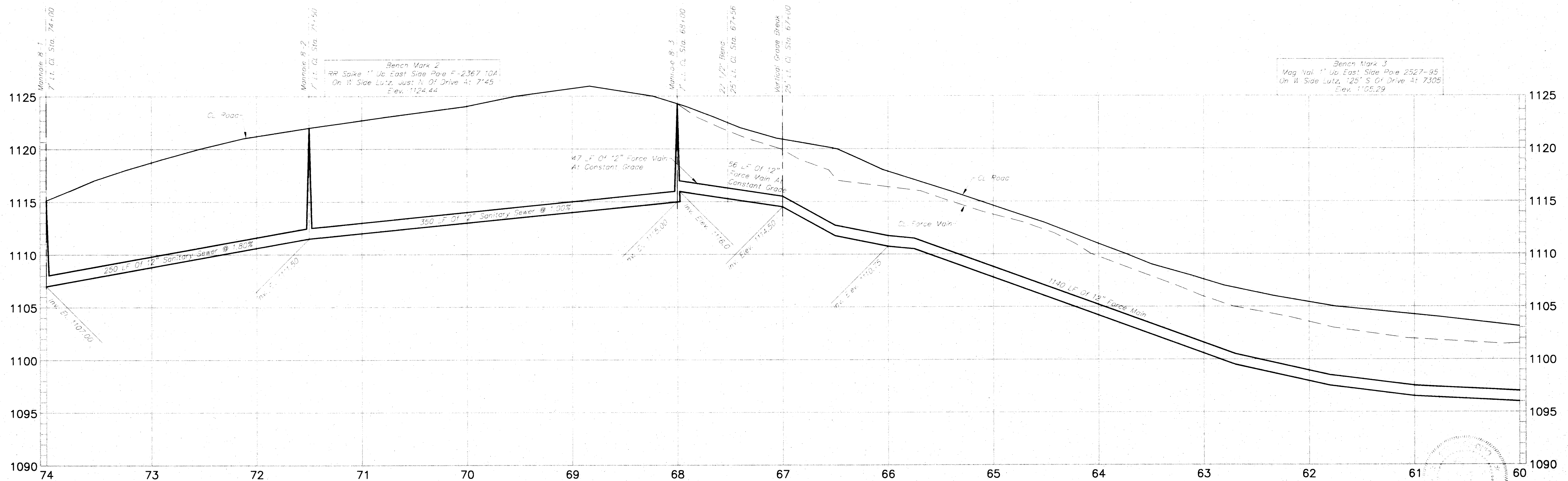
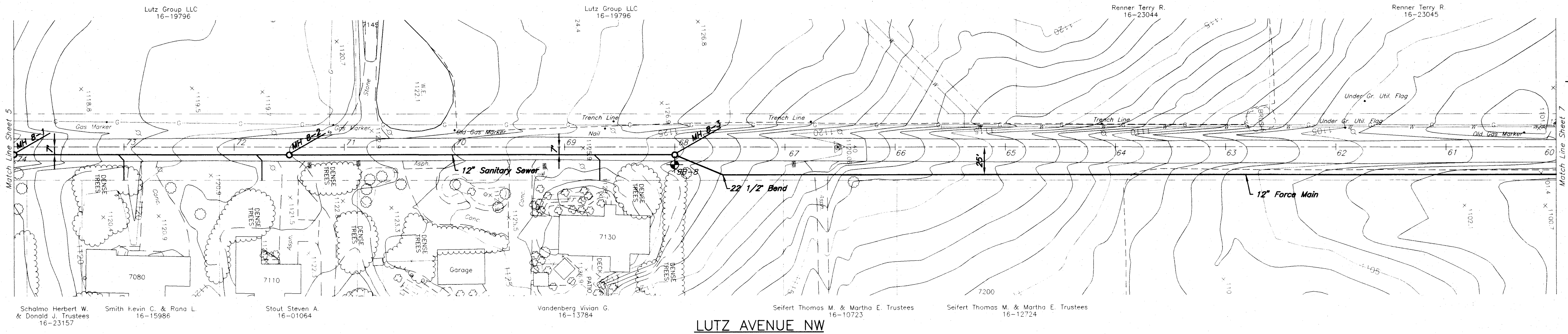
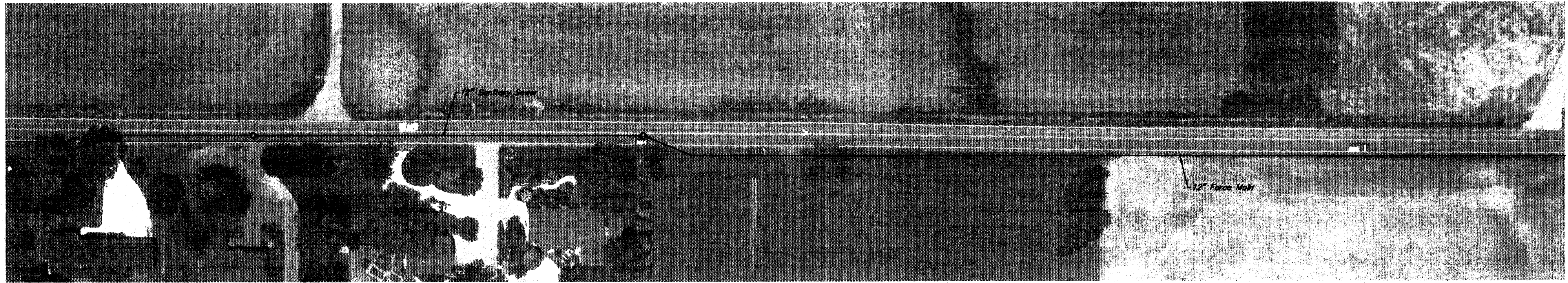
PROJECT NO. 529
WOODMOOR INTERCEPTION

STARK COUNTY, OHIO



TOL-5140PP05
07/13/01 10:14
XREF 5140AER
IMAGE 5140PP05.TIF

SCALE HOR. 1"=50' VERT. 1"=5'	
DATE: _____	
FIELD BOOK No. _____	
STARK COUNTY DISTRICT METROPOLITAN SEWER DISTRICT MICHAEL J. JONES, P.E. P.O. BOX 7906 - 1701 MARSHING RD. N.E. CANTON, OHIO 44705-7906 (330) 451-2503 FAX (330) 453-9044	
LUTZ AVENUE NW PROJECT NO. 529 WOODMOOR INTERCEPTION STARK COUNTY, OHIO	
PREPARED BY: Jones & Henry Engineers, Ltd. 	
REVISIONS DESCRIPTION BY DATE	DWN BY: _____ CHK'D BY: BPS
PROJECT NUMBER 529	
SHEET 7 OF 20	



SCALE
HOR. 1"=50'
VERT. 1"=5'

DATE: _____
FIELD BOOK No. _____

STARK COUNTY
METROPOLITAN SEWER DISTRICT
MICHAEL J. DODD, P.E.
DIRECTOR
P.O. BOX 7906 - 1701 MAHONING RD., N.E. CANTON, OHIO 44705-7906
(330) 451-2303 • FAX (330) 453-9044

LUTZ AVENUE NW
PROJECT NO. 529
WOODMOOR INTERCEPTION
STARK COUNTY, OHIO

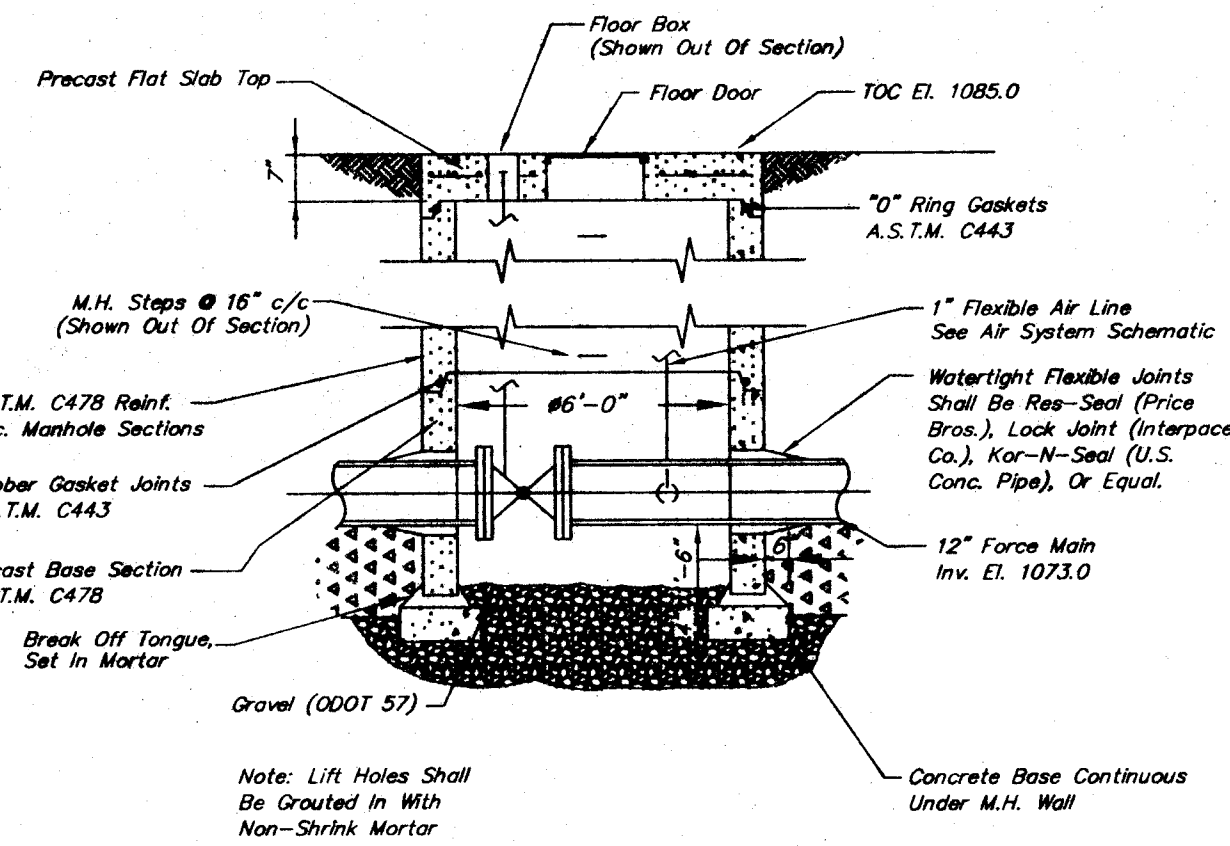
PREPARED BY:
Jones & Henry Engineers, Ltd.

REVISIONS	DESCRIPTION	BY	DATE

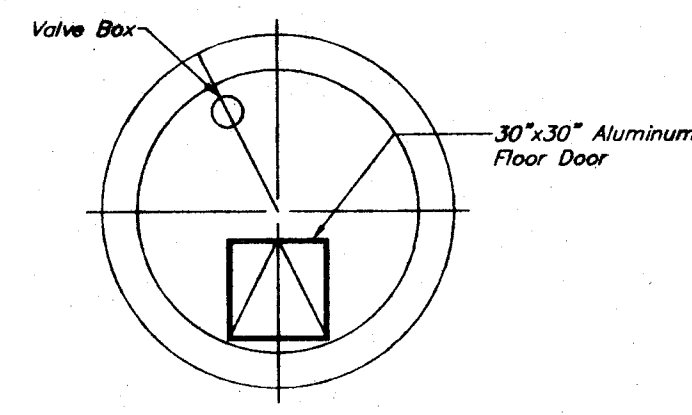
DWN BY: _____ CHK'D BY: RPS

PROJECT NUMBER
529
SHEET
8 OF 20

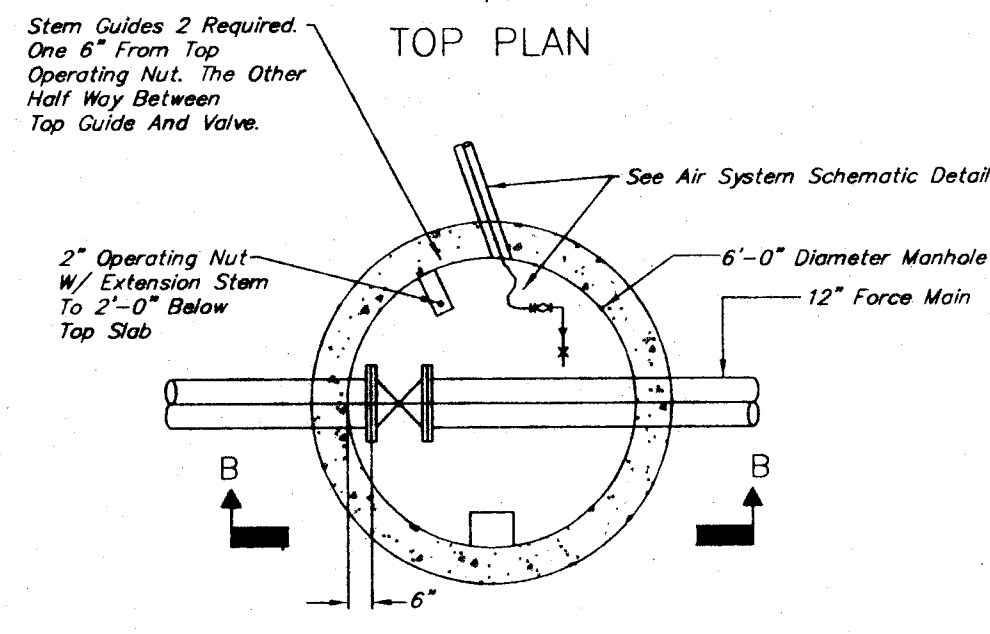
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SECTION B-B
NTS

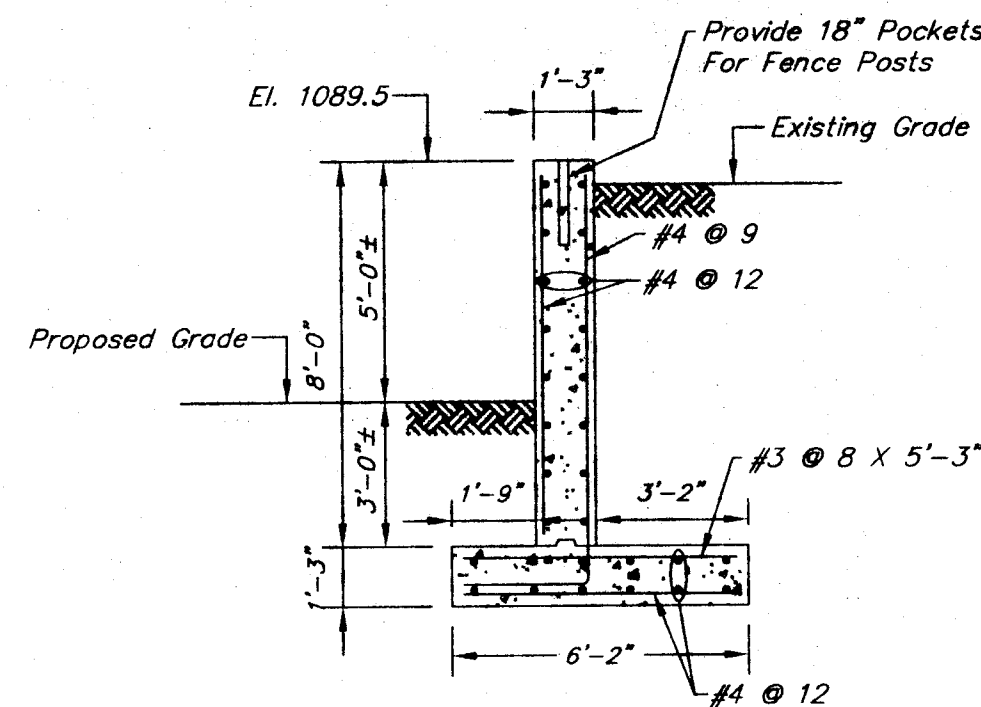


TOP PLAN

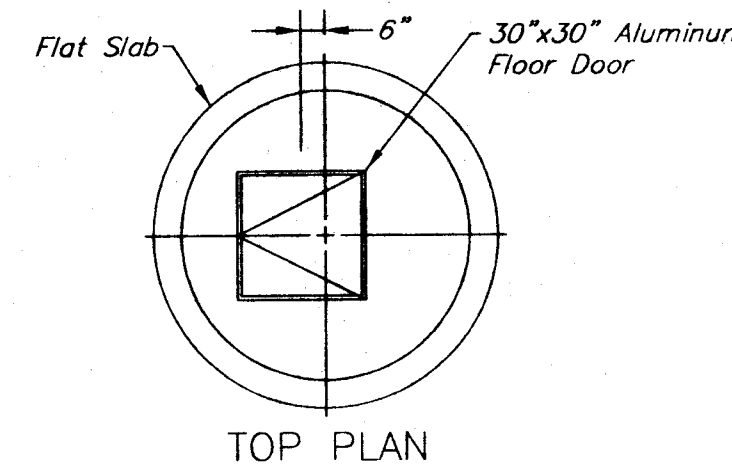


LOWER PLAN

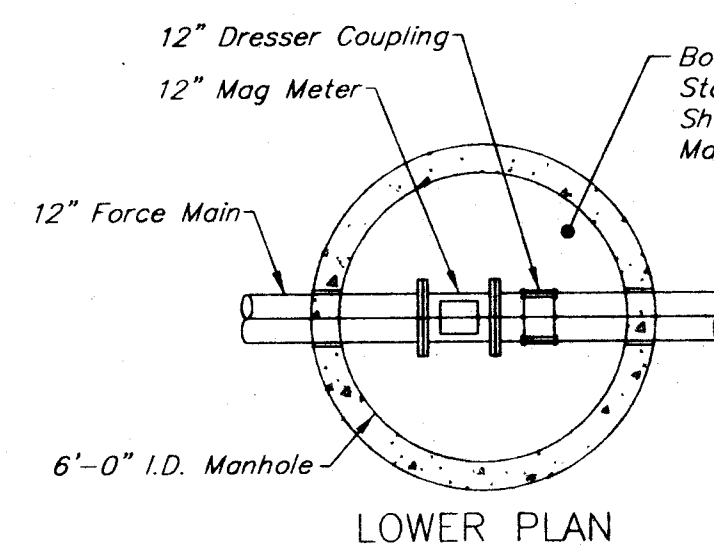
AIR INJECTION MANHOLE 2-3
1/4" = 1'-0"



RETAINING WALL DETAIL
1/4" = 1'-0"



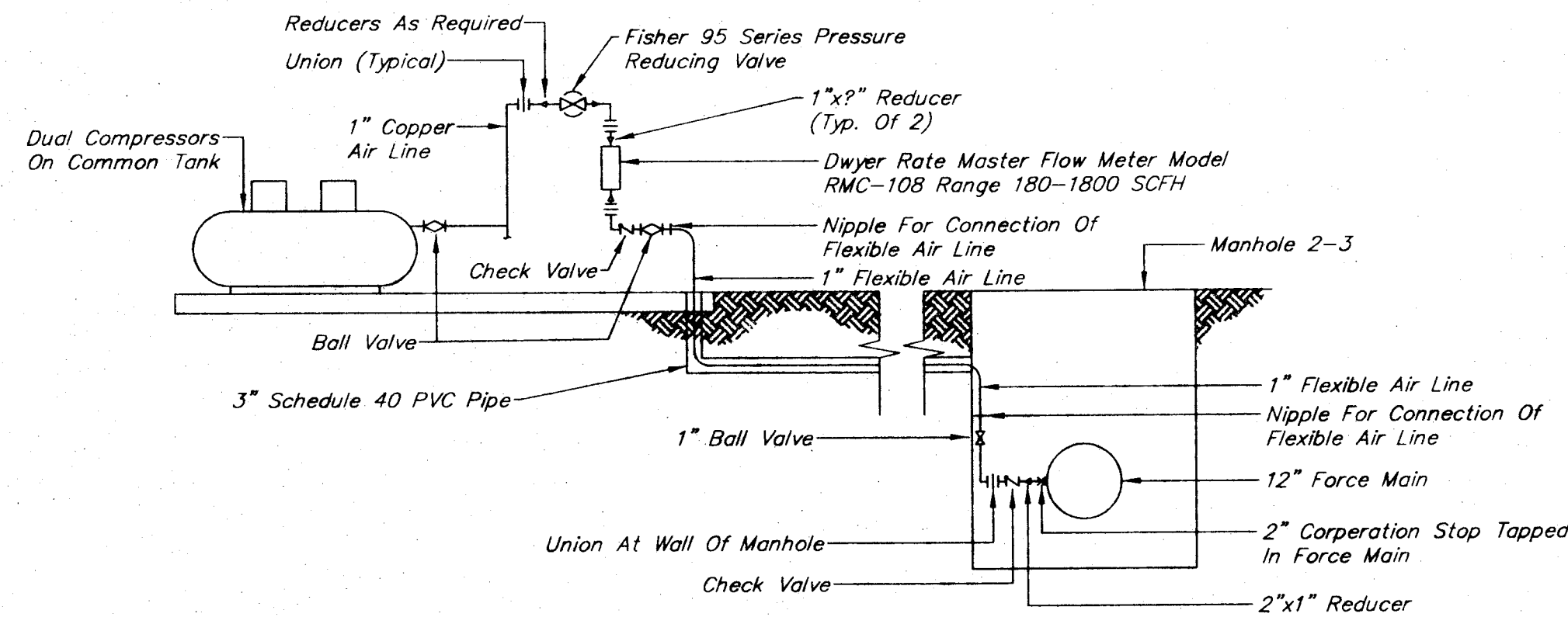
TOP PLAN



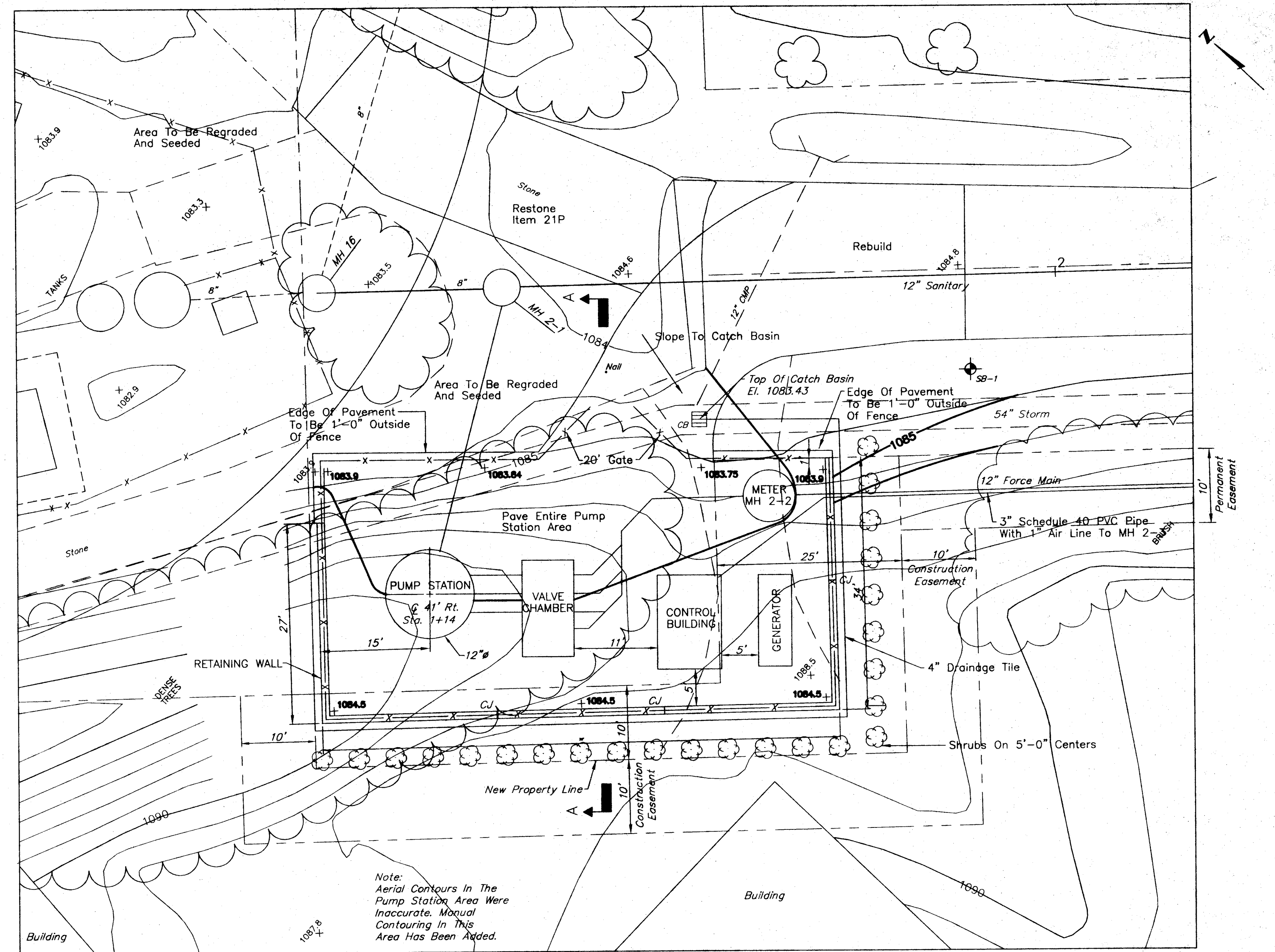
LOWER PLAN

METER MANHOLE 2-2
1/4" = 1'-0"

NOTE: INSTALL MANHOLE 2-2 CASTING AND COVER FLUSH W/ FINISH GRADE TO ALLOW VEHICLE ACCESS TO GENERATOR.

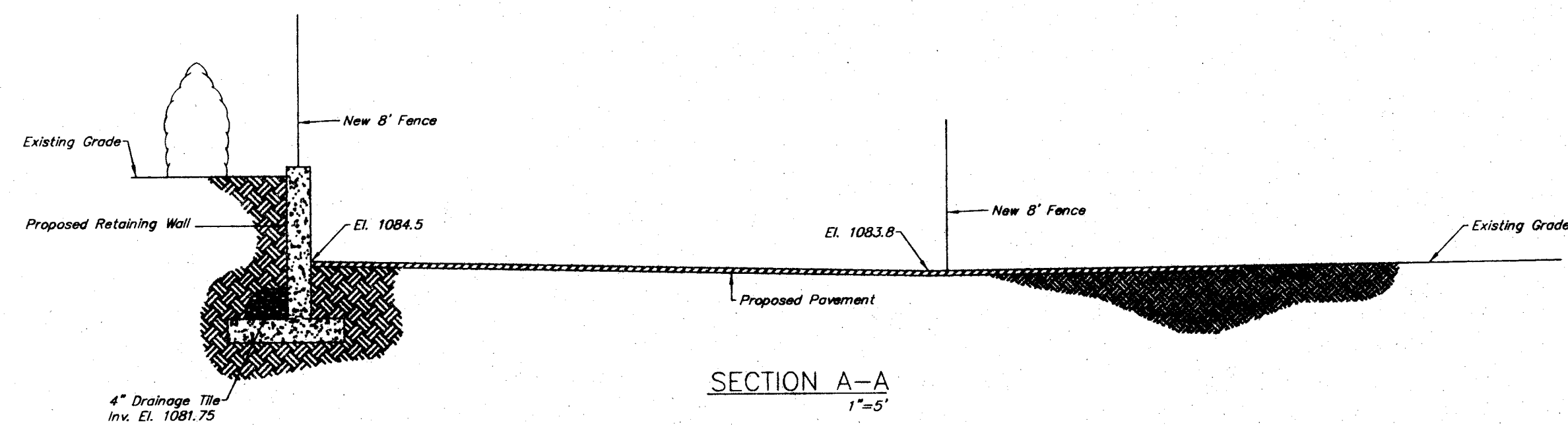


AIR SYSTEM SCHEMATIC
NTS



PUMP STATION SITE PLAN
1" = 10'

Note: Asphalt Pavement Located In Pump Station Area And Access Road Shall Be Constructed In Accordance With Item 21m.



SECTION A-A
1" = 5'

PREPARED BY:

Jones & Henry Engineers, Ltd.

REVISIONS	BY	DATE

PROJECT NUMBER
529
SHEET 9 OF 20

PUMP STATION SITE PLAN

PROJECT NO. 529
WOODMOOR INTERCEPTION

STARK COUNTY, OHIO

STARK COUNTY

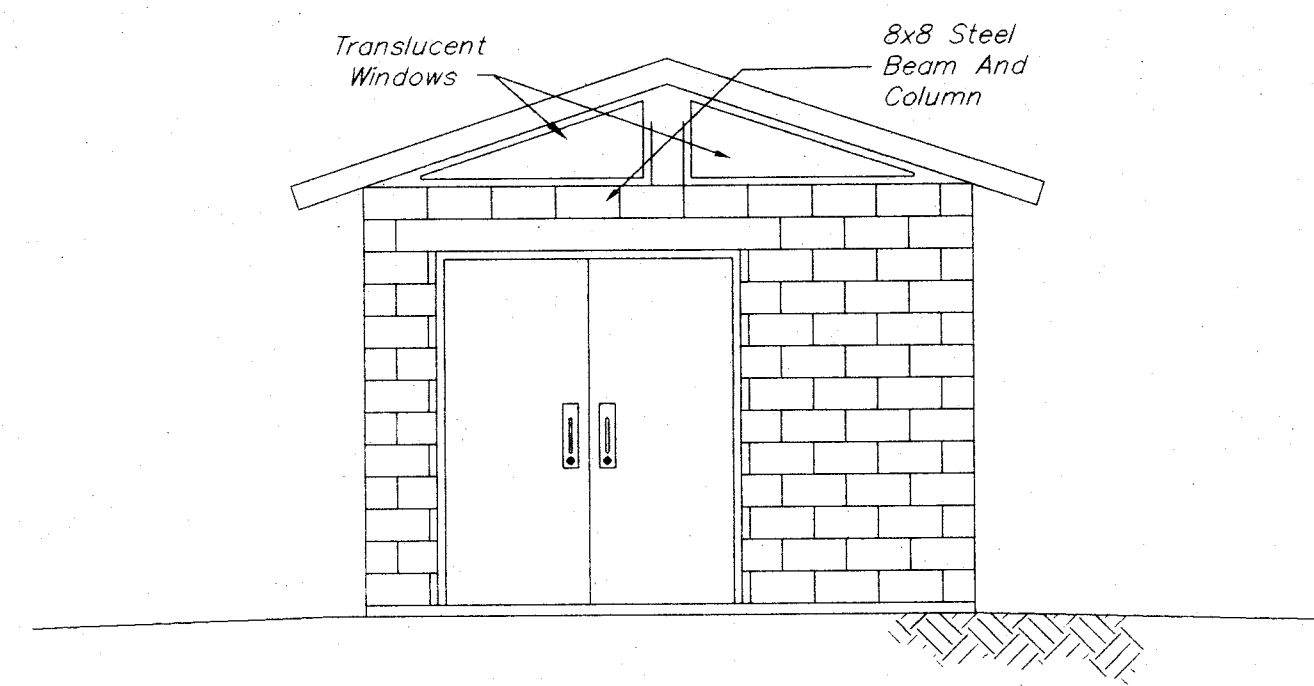
METROPOLITAN SEWER DISTRICT

MICHAEL S. ARMSTRONG, P.E.
DIRECTOR
P.O. BOX 7906 - 1701 MAHONING RD. N.E. CANTON, OHIO 44705-7906
(330) 451-2303 - FAX (330) 453-8044

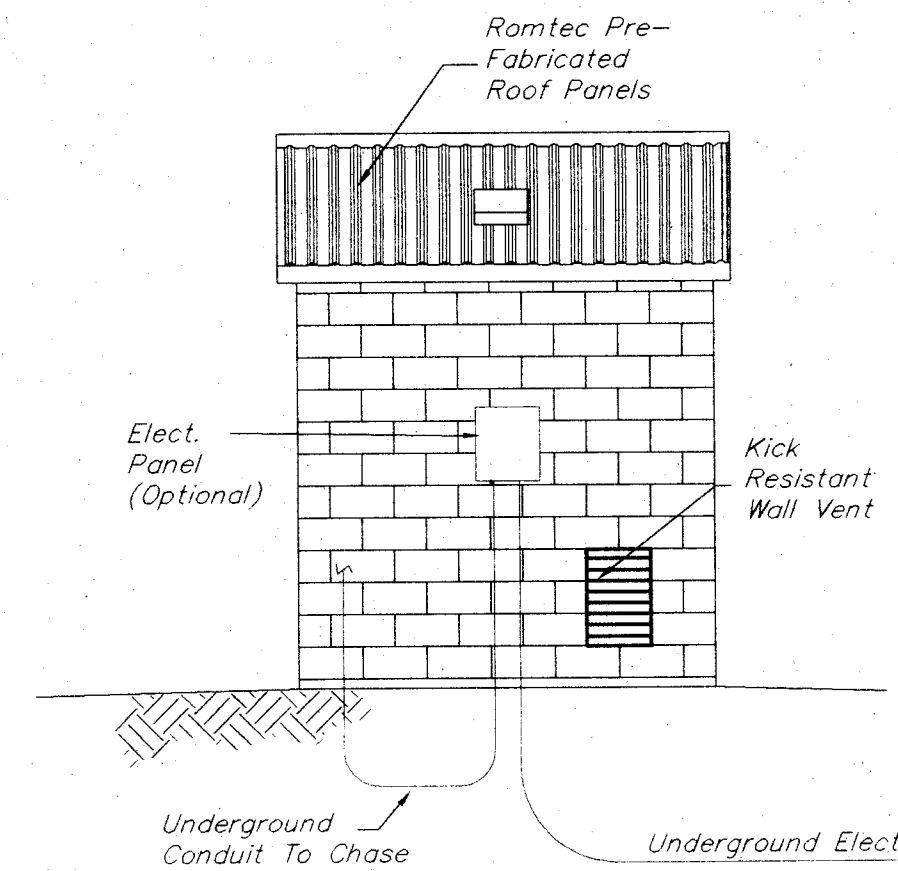
SCALE
HOR. 1" = 10' VERT. 1" = 10'

DATE:

FIELD BOOK NO.

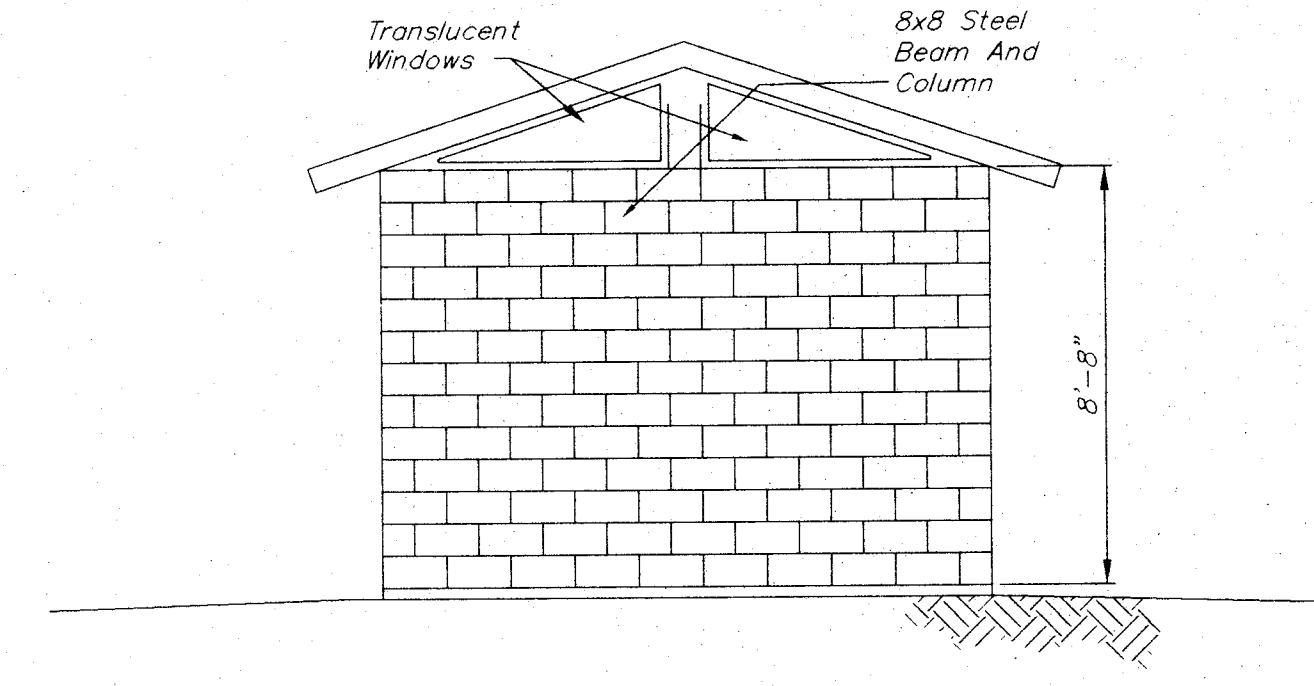


WEST ELEV.

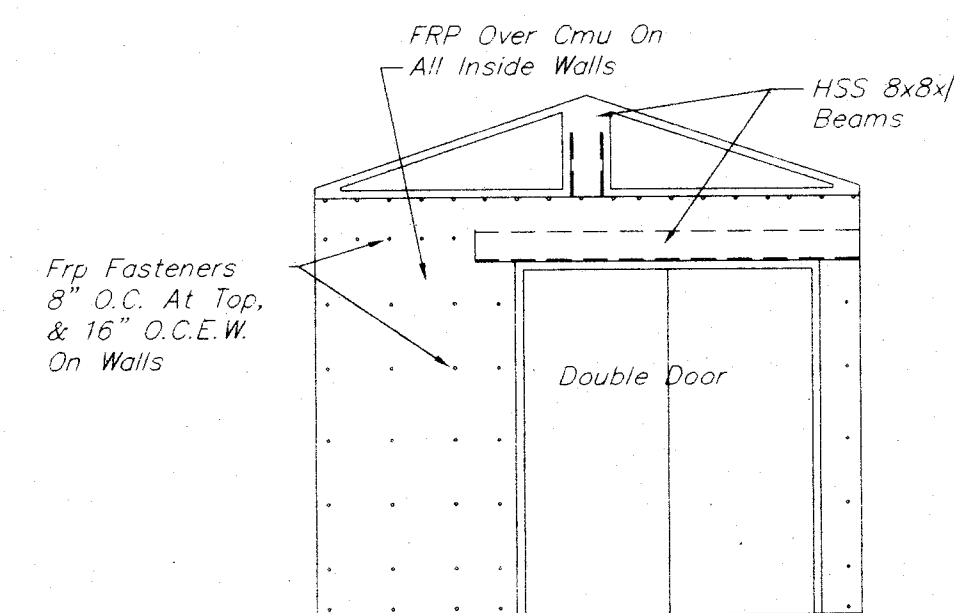


NORTH ELEV.

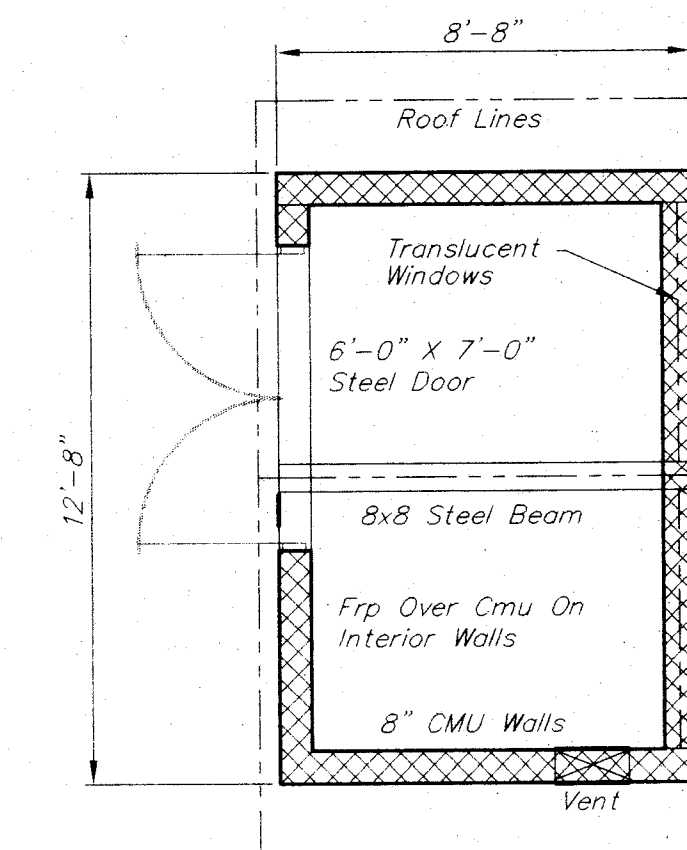
South Elev. Similar



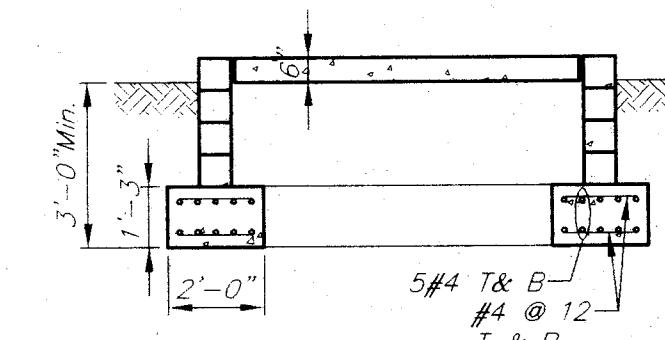
EAST ELEV.



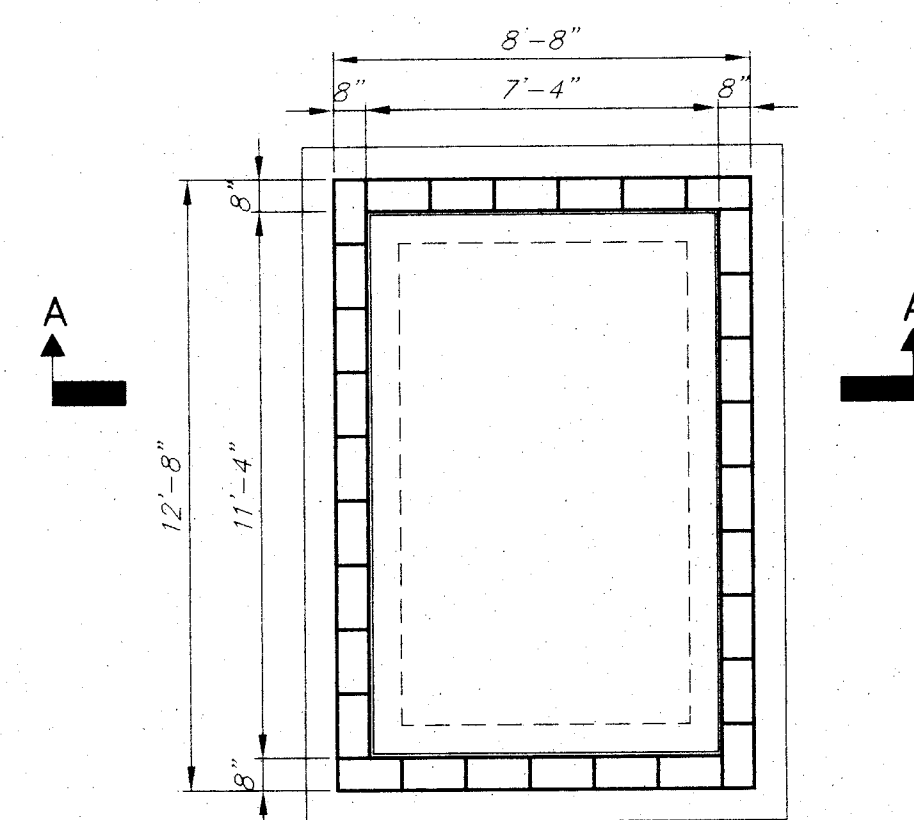
INT. ELEVATION



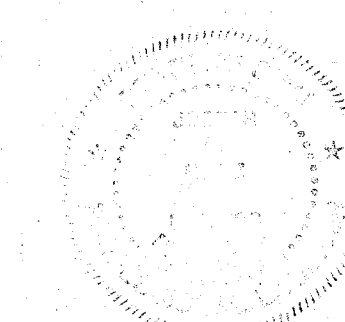
FLOOR PLAN



SECTION A-A

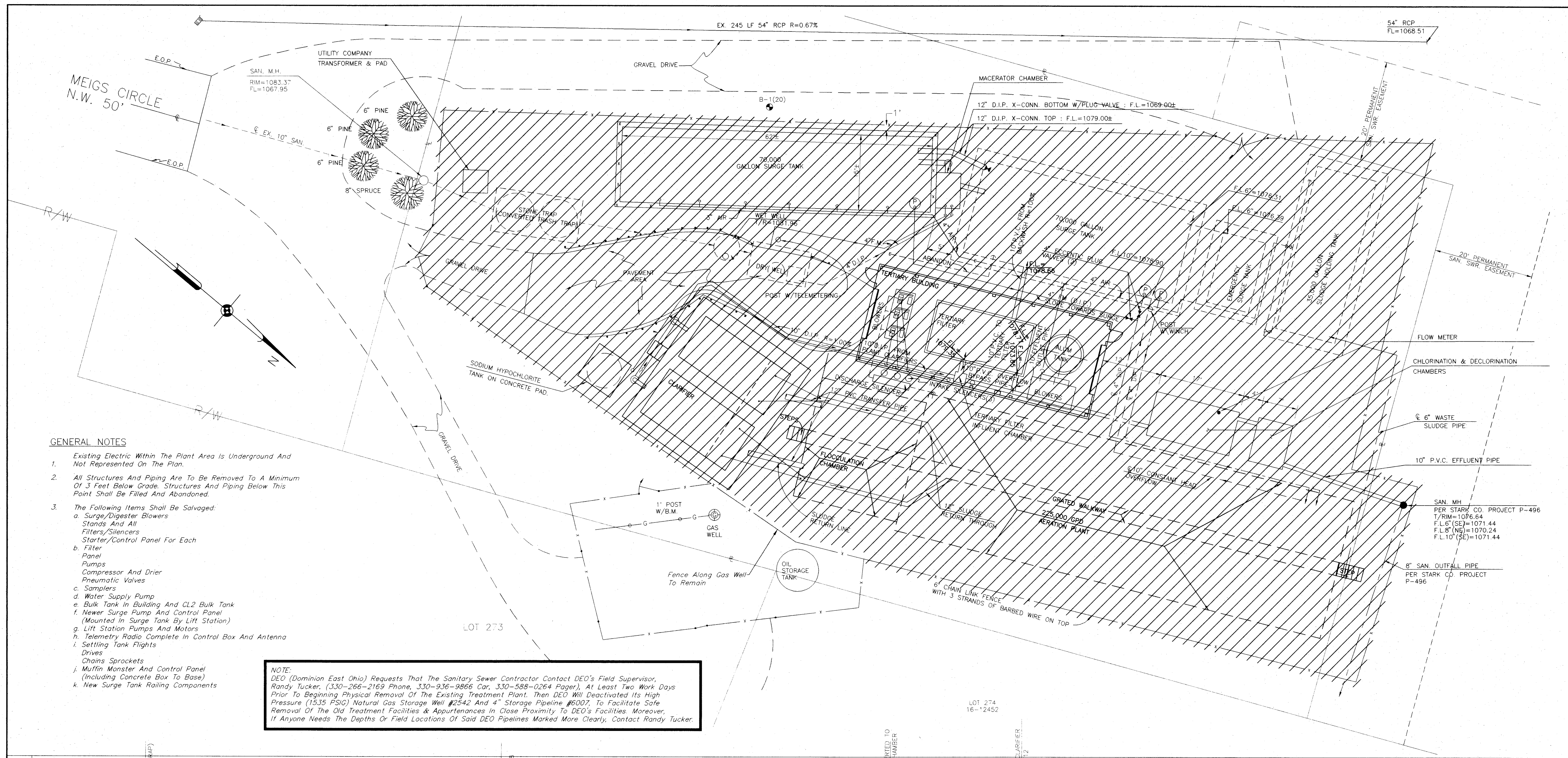


FOUNDATION PLAN



SCALE HOR. 1/4" = 1'-0" VERT.		DATE:		FIELD BOOK No.	
STARK COUNTY METROPOLITAN SEWER DISTRICT MICHAEL S. ARMOGIDA, P.E. DIRECTOR P.O. BOX 7906 - 1701 WARDING RD. N.E. CANTON, OHIO 44705-7906 (330) 451-2303 - FAX (330) 453-9044					
CONTROL BUILDING PROJECT NO. 529 WOODMOOR INTERCEPTION STARK COUNTY, OHIO					
PREPARED BY: Jones & Henry Engineers, Ltd.					
REVISIONS DESCRIPTION BY DATE		DWN BY: CHK'D BY: RFS			
PROJECT NUMBER 529		SHEET 11 OF 20			

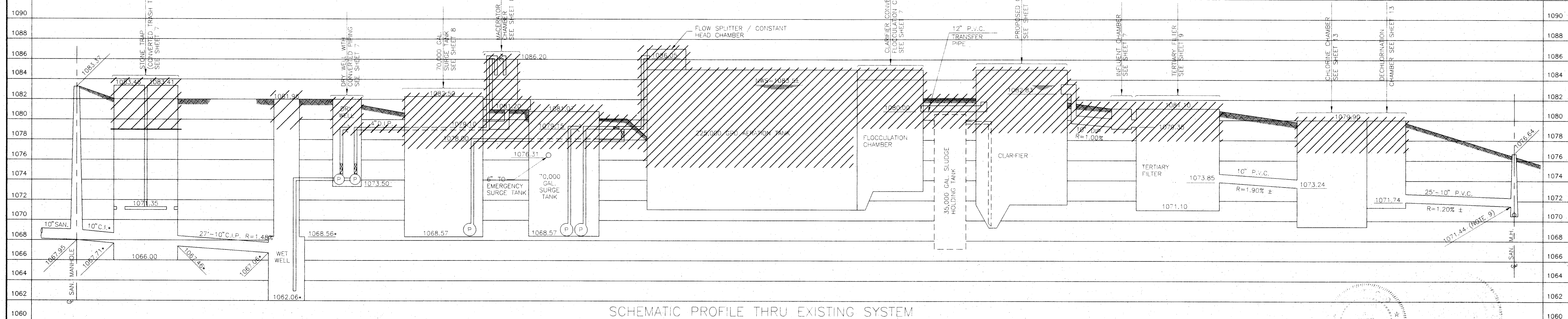
TOL-5145 SITE
09/06/01 05-14



GENERAL NOTES

- Existing Electric Within The Plant Area Is Underground And Not Represented On The Plan.
- All Structures And Piping Are To Be Removed To A Minimum Of 3 Feet Below Grade. Structures And Piping Below This Point Shall Be Filled And Abandoned.
- The Following Items Shall Be Salvaged:
 - Surge/Digester Blowers
 - Stands And All Filters/Silencers
 - Starter/Control Panel For Each Filter
 - Panel
 - Pumps
 - Compressor And Drier
 - Pneumatic Valves
 - Samplers
 - Water Supply Pump
 - Bulk Tank In Building And CL2 Bulk Tank
 - Newer Surge Pump And Control Panel (Mounted In Surge Tank By Lift Station)
 - Lift Station Pumps And Motors
 - Telemetry Radio Complete In Control Box And Antenna
 - Settling Tank Flights
 - Drives
 - Chains Sprockets
 - Muffin Monster And Control Panel (Including Concrete Box To Base)
 - New Surge Tank Railing Components

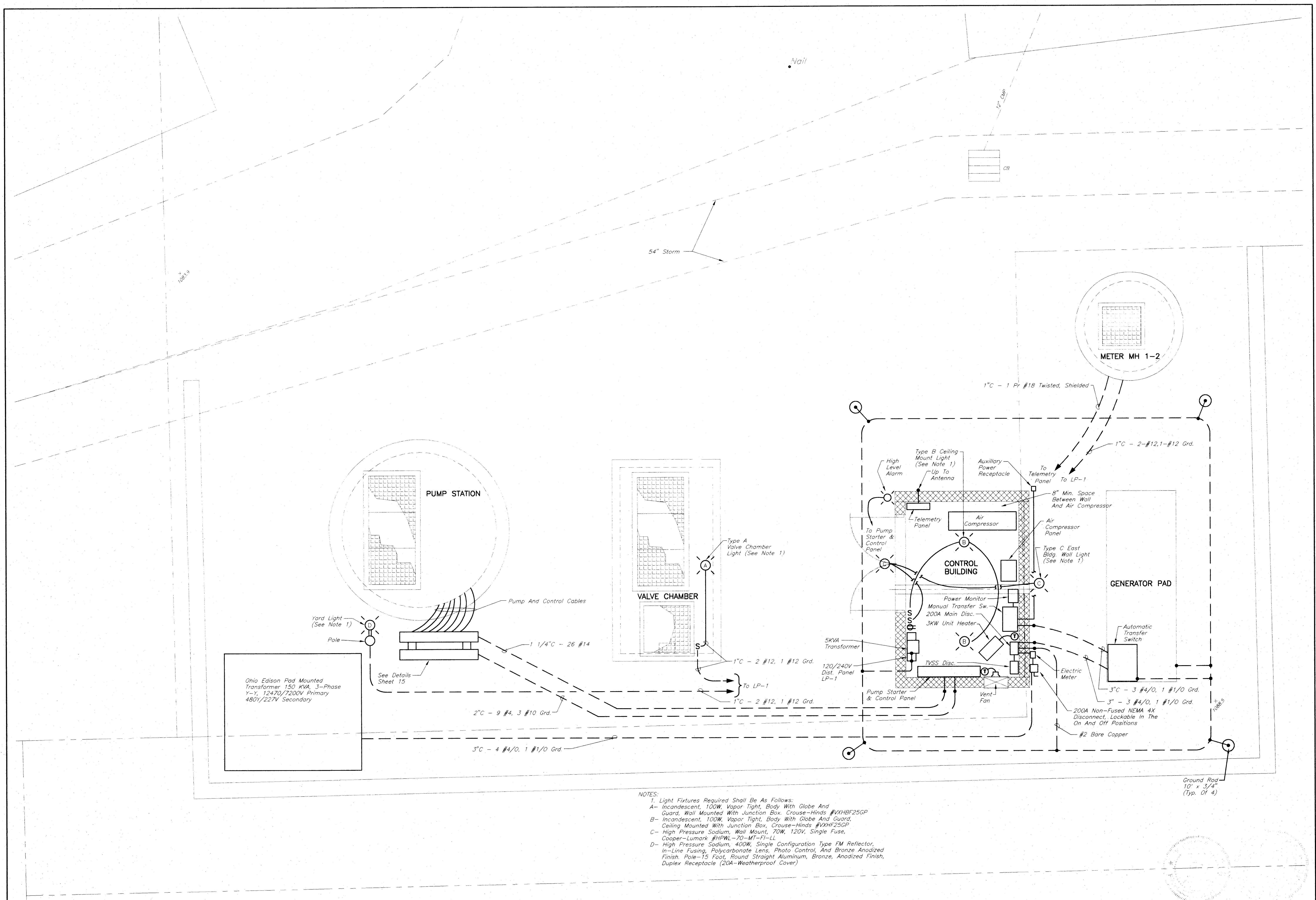
NOTE:
DEO (Dominion East Ohio) Requests That The Sanitary Sewer Contractor Contact DEO's Field Supervisor, Randy Tucker, (330-266-2169 Phone, 330-936-9866 Car, 330-588-0264 Pager), At Least Two Work Days Prior To Beginning Physical Removal Of The Existing Treatment Plant. Then DEO Will Deactivated Its High Pressure (1535 PSIG) Natural Gas Storage Well #2542 And 4\"/>



SCHEMATIC PROFILE THRU EXISTING SYSTEM

SCALE HOR. 1"=10' VERT. 1"=10'		STARK COUNTY METROPOLITAN SEWER DISTRICT MICHAEL S. ARMSTRONG, P.E. P.O. BOX 7906 - 1701 MANNING RD. N.E. CANTON, OHIO 44705-7906 (330) 481-2303 - FAX (330) 453-9044	
DATE: _____		FIELD BOOK NO. _____	
TREATMENT PLANT REMOVAL PLAN PROJECT NO. 529 WOODMOOR INTERCEPTION STARK COUNTY, OHIO			
PREPARED BY: Jones & Henry Engineers, Ltd.			
REVISIONS DESCRIPTION BY DATE		DWN BY: _____ CHK'D BY: RPS	
PROJECT NUMBER 529 SHEET 12 OF 20			

TOL-S110E04
09/06/01 05-14



REVISIONS	DESCRIPTION	BY	DATE

PROJECT NUMBER	529
SHEET	13 OF 20

DWN BY:	CHK'D BY: RFS
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PREPARED BY:

Jones & Henry Engineers, Ltd.

ELECTRICAL SITE PLAN

PROJECT NO. 529

WOODMOOR INTERCEPTION

STARK COUNTY, OHIO

SCALE

HOR. 3/8" = 1'-0" VERT. 1/4" = 1'-0"

DATE:

FIELD BOOK No.:

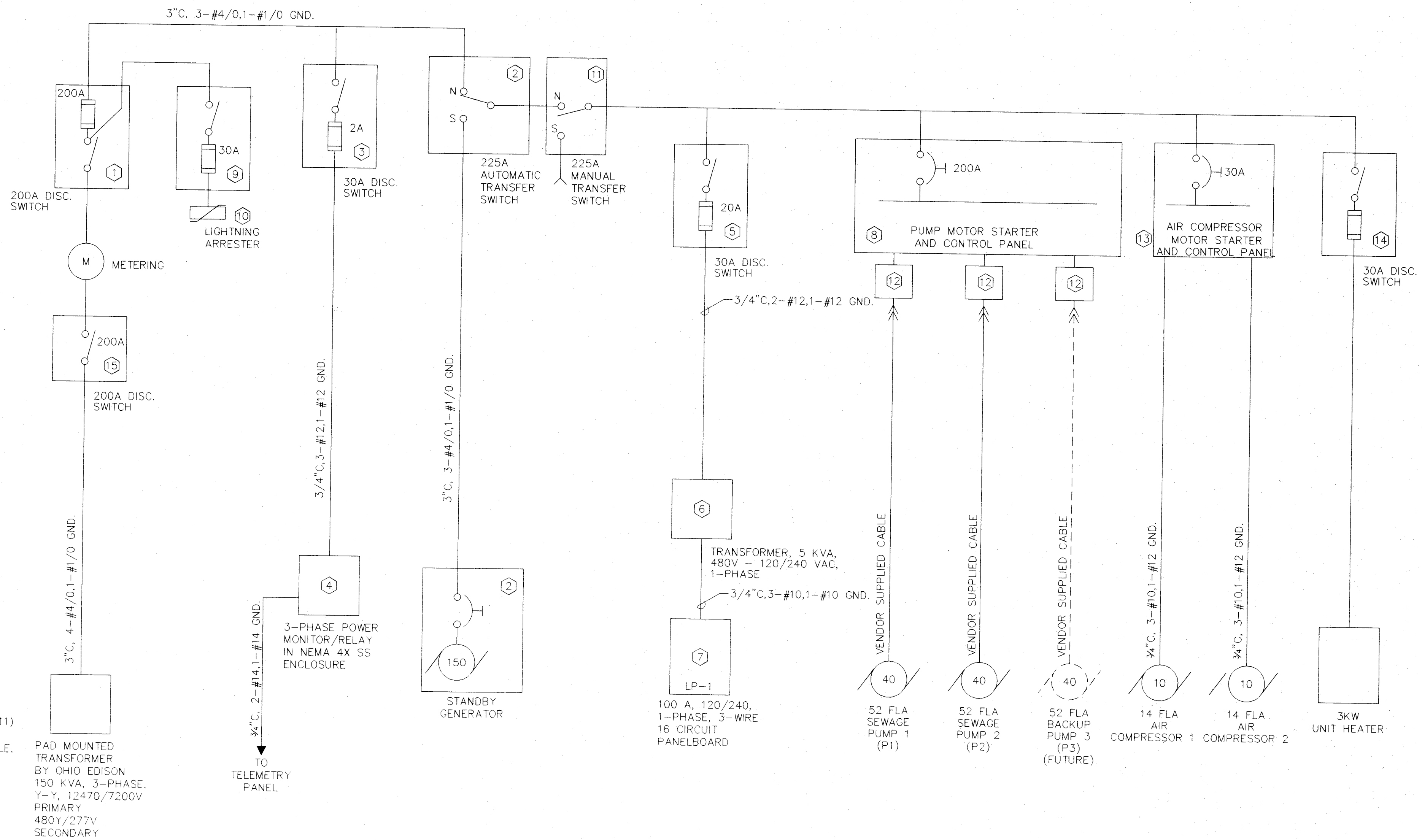
STARK COUNTY METROPOLITAN SEWER DISTRICT

MICHAEL J. GIDA, P.E.
DIRECTOR

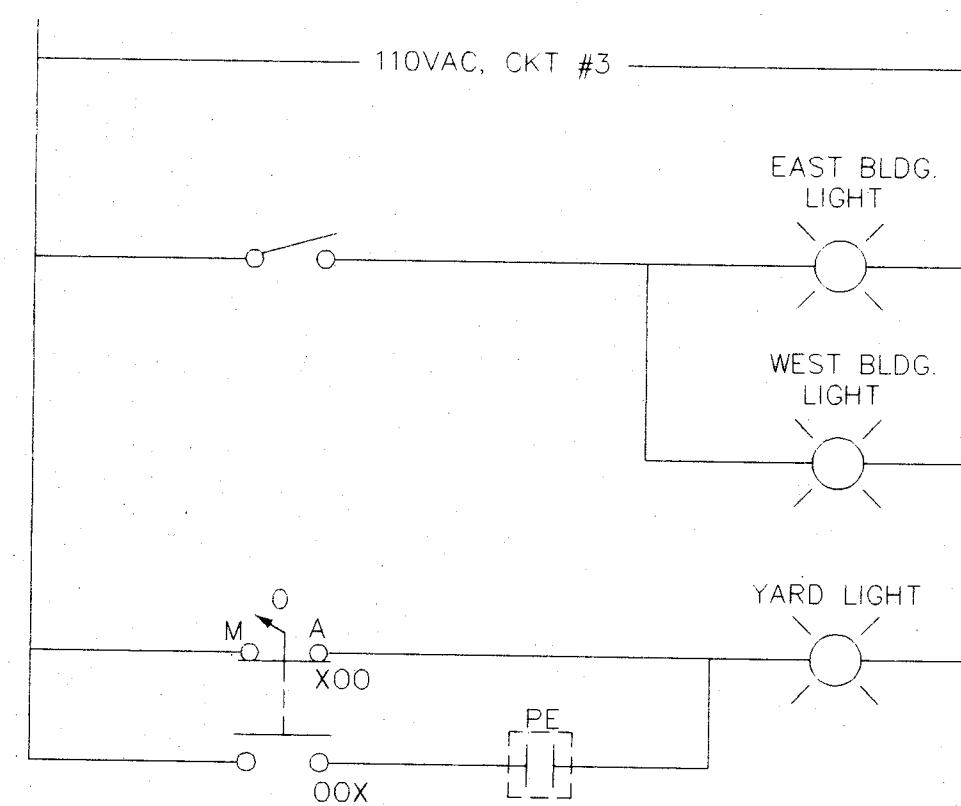
P.O. BOX 7906 - 1701 MAPLEWOOD RD. N.E. CANTON, OHIO 44705-7906

(330) 481-2303 FAX (330) 483-9044

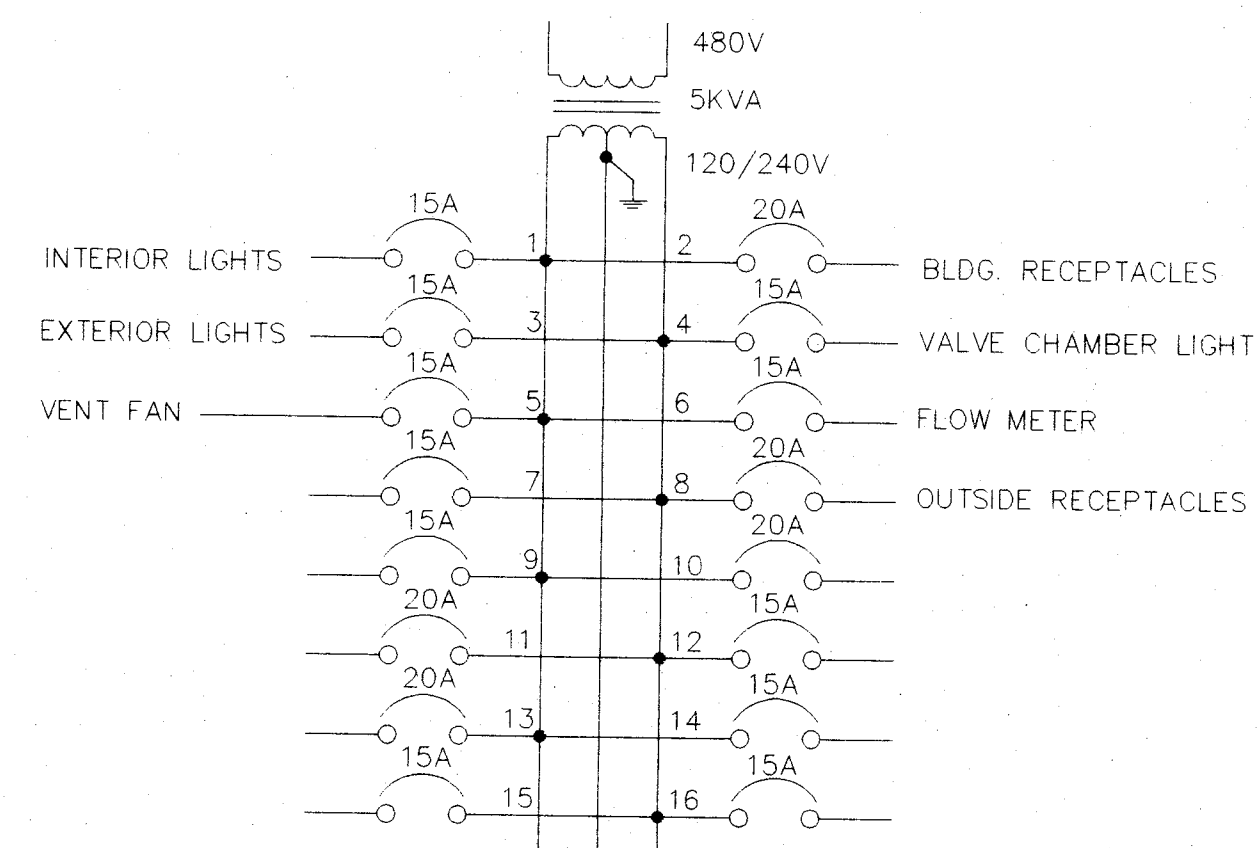
- ① FUSIBLE MAIN DISCONNECT SWITCH, HEAVY-DUTY, NEMA 4X SS ENCLOSURE 200 A, 600 VAC, 3-POLE, WITH SOLID-NEUTRAL BAR, GROUND LUG, REJECTION FUSE CLIPS, SQUARE D CLASS 3110, OR EQUAL, WITH 3 CLASS RK-5 FUSES, BUSSMANN FRS-R-200, OR EQUAL.
- ② STANDBY GENERATOR, DIESEL ENGINE DRIVEN, 3-PHASE, 480Y/277 VAC, 60 HZ, 150 KW @ 80% POWER FACTOR, 225A, 3-POLE, 600 VAC, AUTOMATIC TRANSFER SWITCH (BY GENERATOR VENDOR), KOHLER, OR EQUAL (SPEC. ITEM 33).
- ③ FUSIBLE DISCONNECT SWITCH, HEAVY-DUTY, NEMA 4X SS ENCLOSURE 30 A, 600 VAC, 3-POLE, WITH GROUND LUG, REJECTION FUSE CLIPS, SQUARE D CLASS 3110, OR EQUAL, WITH 3 CLASS RK-5 FUSES, BUSSMANN FRS-R-2, OR EQUAL.
- ④ THREE-PHASE POWER MONITOR/RELAY IN NEMA 4X SS ENCLOSURE, SSAC RLM9505, TIME MARK A258B, OR EQUAL.
- ⑤ FUSIBLE DISCONNECT SWITCH, HEAVY-DUTY, NEMA 4X SS ENCLOSURE 30 A, 600 VAC, 3-POLE, WITH GROUND LUG, REJECTION FUSE CLIPS, SQUARE D CLASS 3110, OR EQUAL, WITH 2 CLASS RK-5 FUSES, BUSSMANN FRS-R-20, OR EQUAL.
- ⑥ TRANSFORMER, 5 KVA, 480 VAC - 120/240 VAC, 1-PHASE, 2 - 5% TAPS FCBN, DRY TYPE, 115 DEGREE CELSIUS RISE, SQUARE D CLASS 7400, CAT. NO. 5540F.
- ⑦ CIRCUIT BREAKER PANELBOARD, 100 A, 120/240, 1-PHASE, 3-WIRE 16 CIRCUIT, WITH MAIN BREAKER AND SOLID NEUTRAL.
- ⑧ MOTOR CONTROL PANEL, NEMA 4X SS, (BY PUMP VENDOR), HYDROMATIC, OR APPROVED EQUAL. (SPEC. ITEM 28.11)
- ⑨ FUSIBLE DISCONNECT SWITCH, HEAVY-DUTY, NEMA 4X SS ENCLOSURE 30A, 600 VAC, 3-POLE, WITH GROUND LUG, REJECTION FUSE CLIPS, SQUARE D CLASS 3110, OR EQUAL, WITH 3 CLASS RK-5 FUSES, BUSSMANN FRS-R-30, OR EQUAL.
- ⑩ TVSS (TRANSIENT VOLTAGE SURGE SUPPRESSOR), UL 1449, 2ND EDITION, LISTED FOR USE ON 480Y/277 VOLT SYSTEM, PEAK SURGE CURRENT RATING = 160,000A, INNOVATIVE TECHNOLOGY, INC. PTX160-3Y201. (SPEC. SECTION 28.10A)
- ⑪ DOUBLE THROW, HEAVY DUTY MANUAL TRANSFER SWITCH 480/277V, 60HZ, 3-PHASE, 4-WIRE, 3-POLE, 225A, NEMA 4X ENCLOSURE, CUTLER-HAMMER OR EQUAL (SPEC. ITEM 33) WITH CROUSE-HINDS ARKTITE #APJ-10487-S22 FEMALE RECEPTACLE
- ⑫ UNFUSED PIN AND SLEEVE MECHANICAL INTERLOCK, 60 AMP, 480V, 3 PHASE, 4 WIRE, HUBBELL CIRCUIT-LOCK NO. HBL460M17W OR EQUAL WITH MATCHING PLUG, HUBBELL NO. HBL460P7W
- ⑬ MOTOR CONTROL PANEL, NEMA 4X SS, (BY AIR COMPRESSOR VENDOR) (SPEC. ITEM 28.11)
- ⑭ FUSIBLE DISCONNECT SWITCH, HEAVY-DUTY, NEMA 4X ENCLOSURE, 30A, 600VAC, 3-POLE, WITH GROUND LUG, REJECTION FUSE CLIPS, SQUARE D CLASS 3110, OR EQUAL, WITH THREE CLASS RK-5 FUSES, BUSSMAN FRS-R2, OR EQUAL.
- ⑮ NON-FUSIBLE MAIN DISCONNECT SWITCH, HEAVY-DUTY, NEMA 4X ENCLOSURE, 200A, 600VAC, 3-POLE, WITH SOLID NEUTRAL BAR, GROUND LUG, SQUARE D CLASS 3110.



SINGLE LINE DIAGRAM



EXTERIOR LIGHTING WIRING DETAIL



LP-1 CIRCUIT DETAILS

- NOTES:
1. PROVIDE AND INSTALL 1 1/2" C, FOR FUTURE BACKUP PUMP 3 (P3) UNDER THIS CONTRACT. RUN PULL STRING IN CONDUIT AND CAP BOTH ENDS OF CONDUIT.
 2. ALL POWER AND CONTROL WIRE SHALL BE STRANDED COPPER WITH THHN/THWN 90°C DRY, 75°C WET, INSULATION FOR SIZES #14 THROUGH #3. SIZE #4 AWG AND LARGER SHALL HAVE XHHW-2 INSULATION.
 3. CONTROL WIRES SHALL BE #14 AWG, MINIMUM.
 4. EXCEPT WHERE SHOWN, 120 VAC CONTROL WIRES SHALL BE INSTALLED IN SEPARATE CONDUIT FROM 120 VAC AND 480 VAC POWER CONDUCTORS.
 5. 480V POWER CONDUCTORS SHALL NOT BE INSTALLED IN SAME CONDUIT AS 120 VAC POWER CONDUCTORS, EXCEPT WHERE NOTED.
 6. INSTRUMENTATION LEVEL WIRING (4-20ma, 1-5 VDC, ETC.) SHALL BE INSTALLED IN SEPARATE, RIGID GALVANIZED STEEL (RGS), OR PVC COATED RGS.

SCALE
HOR. AS NOTED VERT.
DATE:
FIELD BOOK NO.

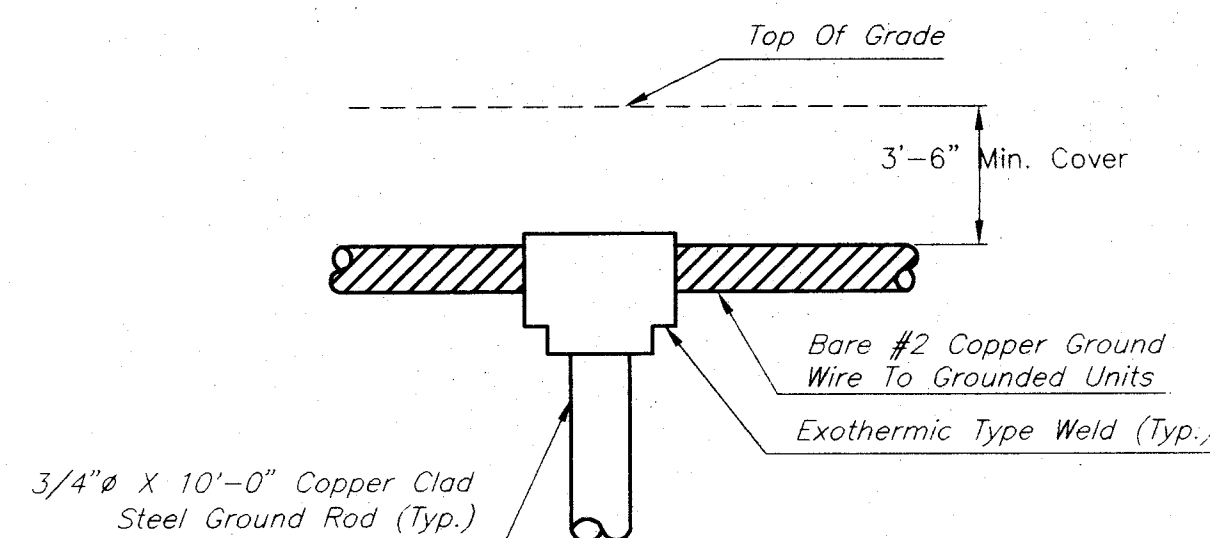
STARK COUNTY
METROPOLITAN SEWER DISTRICT
MICHAEL J. DODD, P.E.
P.O. BOX 7906 - 1701 MACHING RD. N.E. CANTON, OHIO 44705-7906
(330) 481-2303 FAX (330) 453-9044

ELECTRICAL-SINGLE LINE POWER DIAGRAM AND DETAILS
PROJECT NO. 529
WOODMOOR INTERCEPTION
STARK COUNTY, OHIO

PREPARED BY:
Jones & Henry Engineers, Ltd.
JHE

REVISIONS
DESCRIPTION BY DATE
OWN BY: CHY/D.B.Y. RFS

PROJECT NUMBER
529
SHEET 14 OF 30



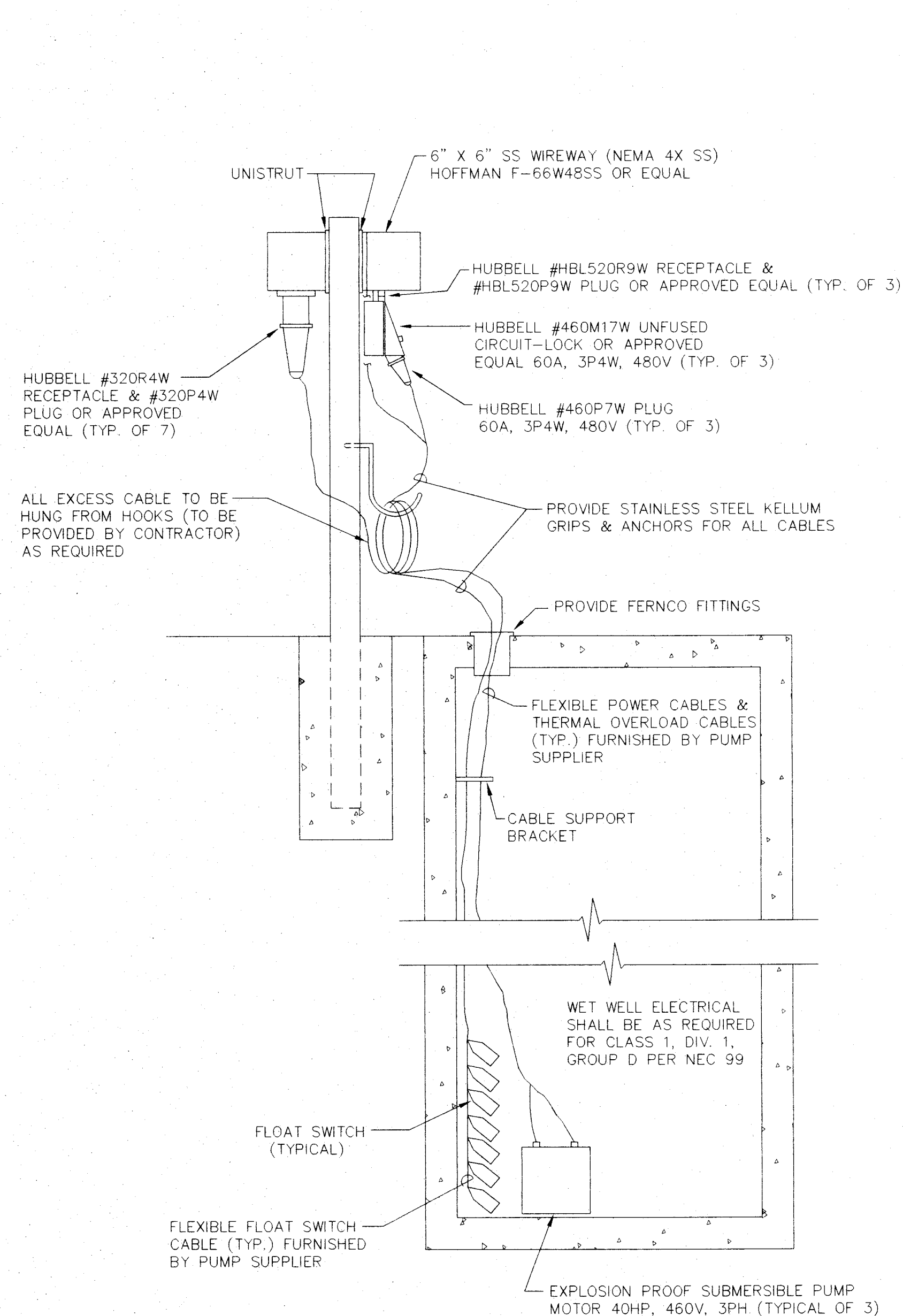
GROUNDING DETAIL
NO SCALE

CONTROL PANEL NOTES:

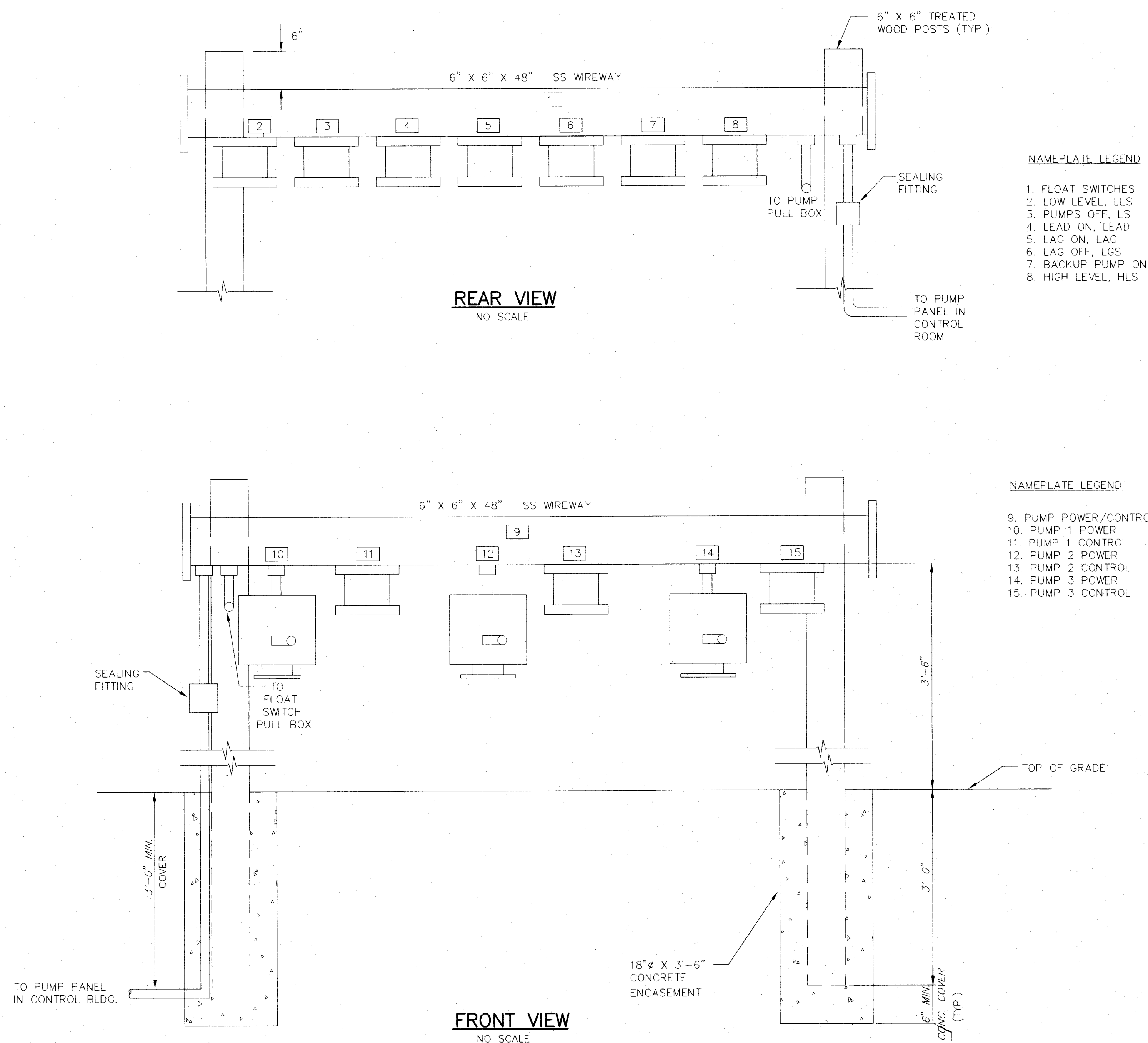
1. THE WIREWAY SHALL BE MADE OF 316-STAINLESS STEEL, RATED NEMA 4X SS, AND HAVE A LOCKING HASP; AS MANUFACTURED BY HOFFMAN OR APPROVED EQUAL. THE SIZE OF THE WIREWAY SHALL BE 6" X 6" X 48"
2. THE UNISTRUTS SHALL BE 14 GA. A60 GALVANIZED MINIMIZED SPANGLE PHOSPHATIZED PAINTING STEEL OF COMMERCIAL QUALITY; AS MANUFACTURED BY HOFFMAN (MODEL 11258605) OR EQUAL. ALL MOUNTING HARDWARE SHALL BE INCLUDED.
3. THE WOOD SUPPORT POSTS SHALL BE PRESSURE TREATED 6" X 10'0". THE WOOD SUPPORT POSTS SHALL BE FREE OF ALL DEFECTS, AS DETERMINED BY THE ENGINEER. THE PORTION OF THE POSTS IN THE GROUND SHALL BE ENCASED IN CONCRETE AS SHOWN ON THE DETAIL.

PLEASE NOTE: UNDERGROUND CONDUIT RUNS SHALL BE USED IN ALL AREAS POSSIBLE, AS DETERMINED BY THE ENGINEER

4. THE CONDUIT FROM THE WIREWAY TO THE CONTROL BUILDING SHALL BE SEALED WITH SEALING FITTINGS AS SHOWN ON THE DETAIL. THE SEALING FITTING SHALL BE FILLED WITH SEALING COMPOUND.
5. ALL GROUNDING RODS SHALL BE 10' COPPER CLAD STEEL GROUND ROD; AS MANUFACTURED BY COPPERWELD OR APPROVED EQUAL. THE GROUNDING ROD SHALL BE CONSTRUCTED PER THE GROUNDING DETAIL.
6. ALL CONDUIT SHALL BE THE SIZE AND MATERIAL AS SHOWN ON THE PLANS AND CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS. A 3'-0" MINIMUM COVER FOR THE CONDUIT FROM THE WIREWAY TO THE CONTROL BUILDING SHALL BE MAINTAINED AT ALL TIMES.



SIDE VIEW
NO SCALE



REAR VIEW
NO SCALE

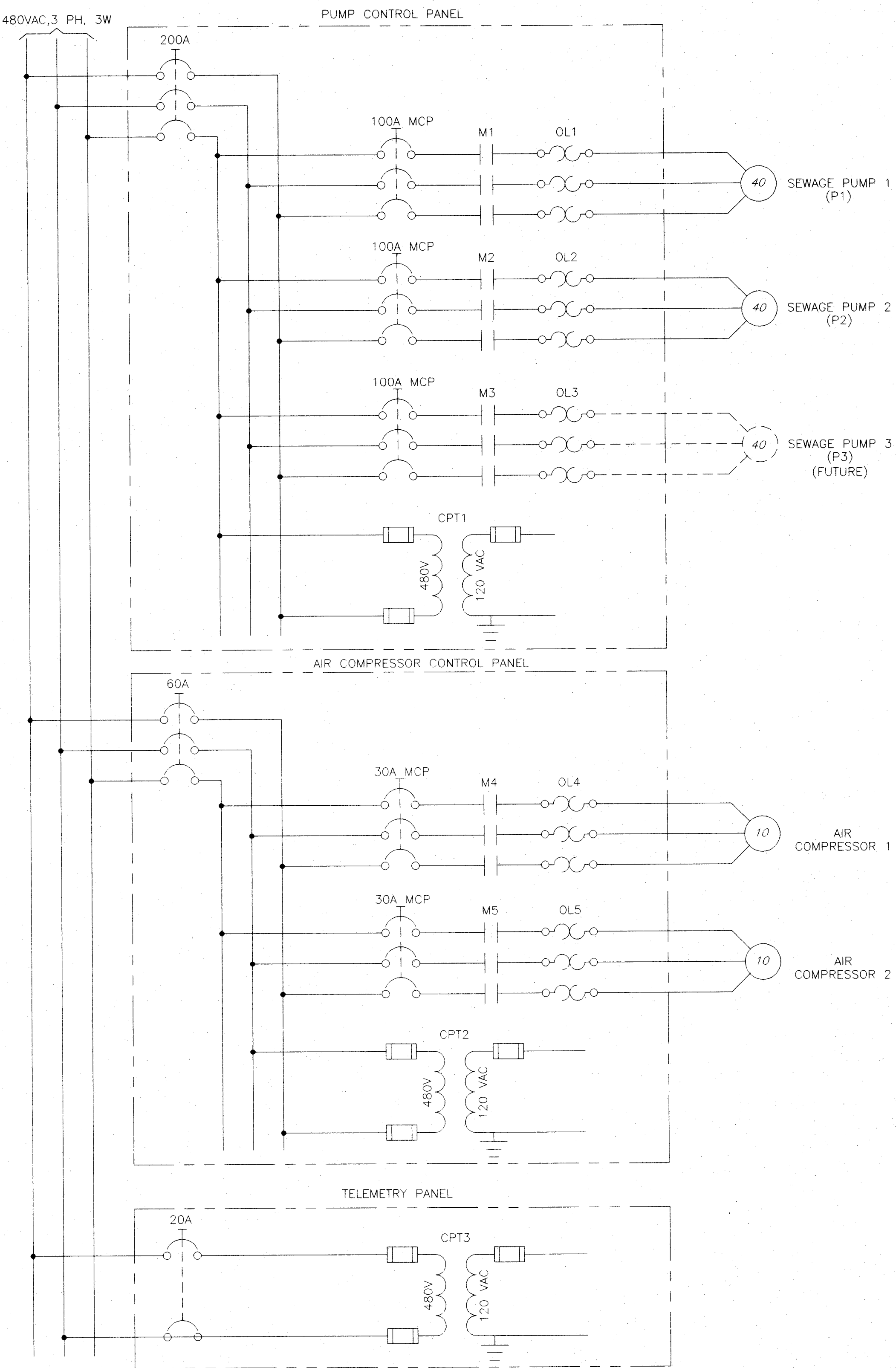
FRONT VIEW
NO SCALE

NAMEPLATE LEGEND

1. FLOAT SWITCHES
2. LOW LEVEL, LLS
3. PUMPS OFF, LS
4. LEAD ON, LEAD
5. LAG ON, LAG
6. LAG OFF, LGS
7. BACKUP PUMP ON
8. HIGH LEVEL, HLS

NAMEPLATE LEGEND

9. PUMP POWER/CONTROLS
10. PUMP 1 POWER
11. PUMP 1 CONTROL
12. PUMP 2 POWER
13. PUMP 2 CONTROL
14. PUMP 3 POWER
15. PUMP 3 CONTROL



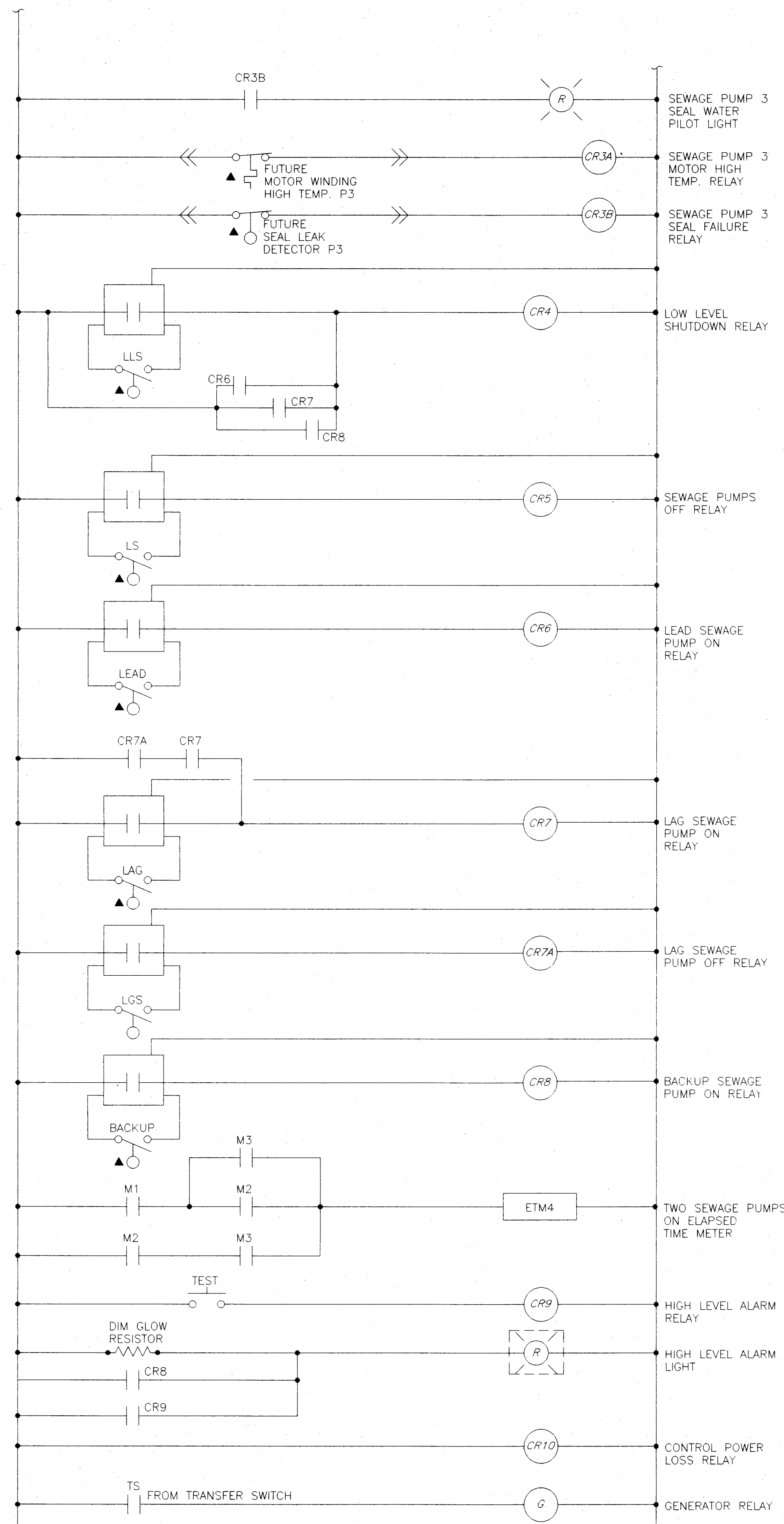
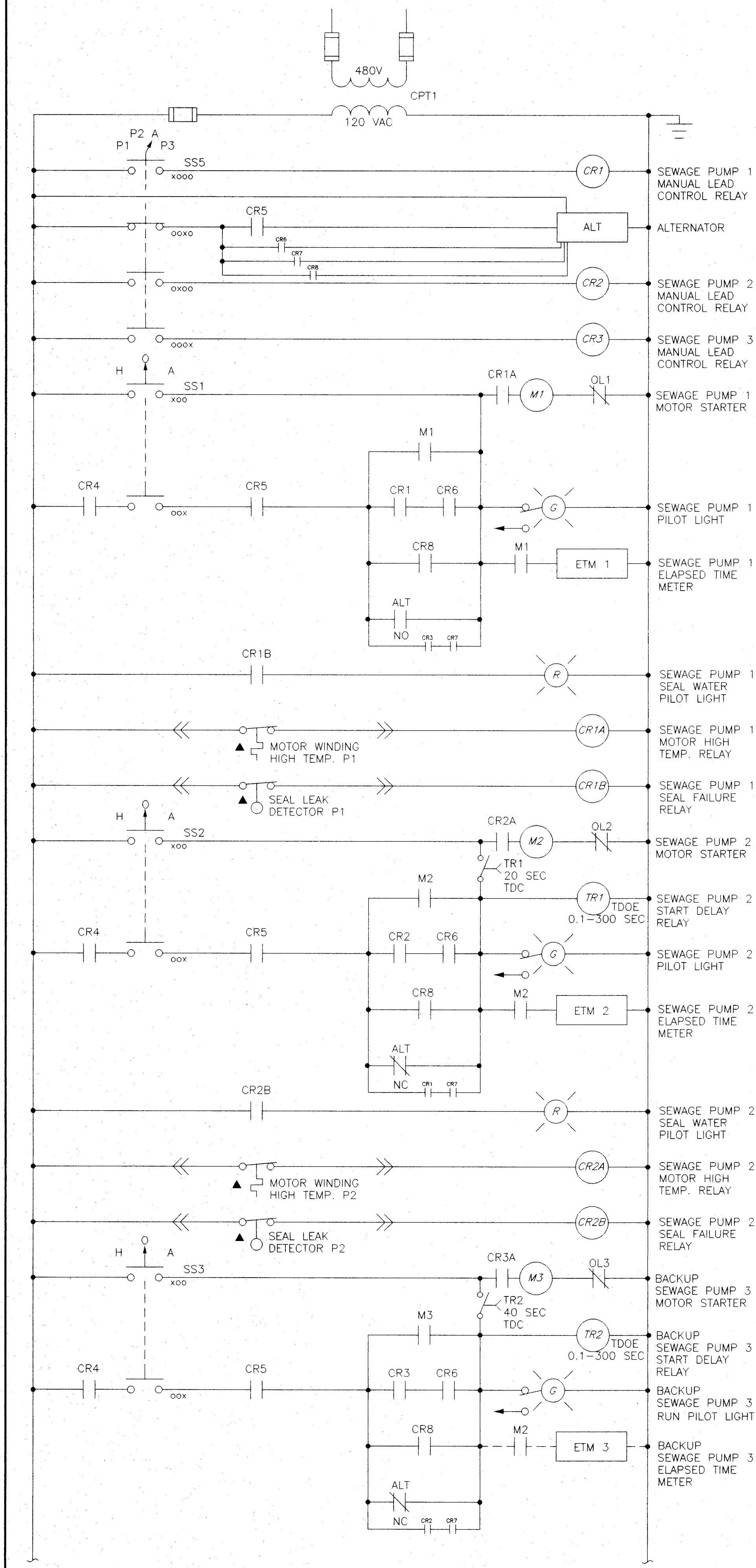
LEGEND

NONE LOCATED IN MOTOR STARTER PANEL

▲ LOCATED IN FIELD

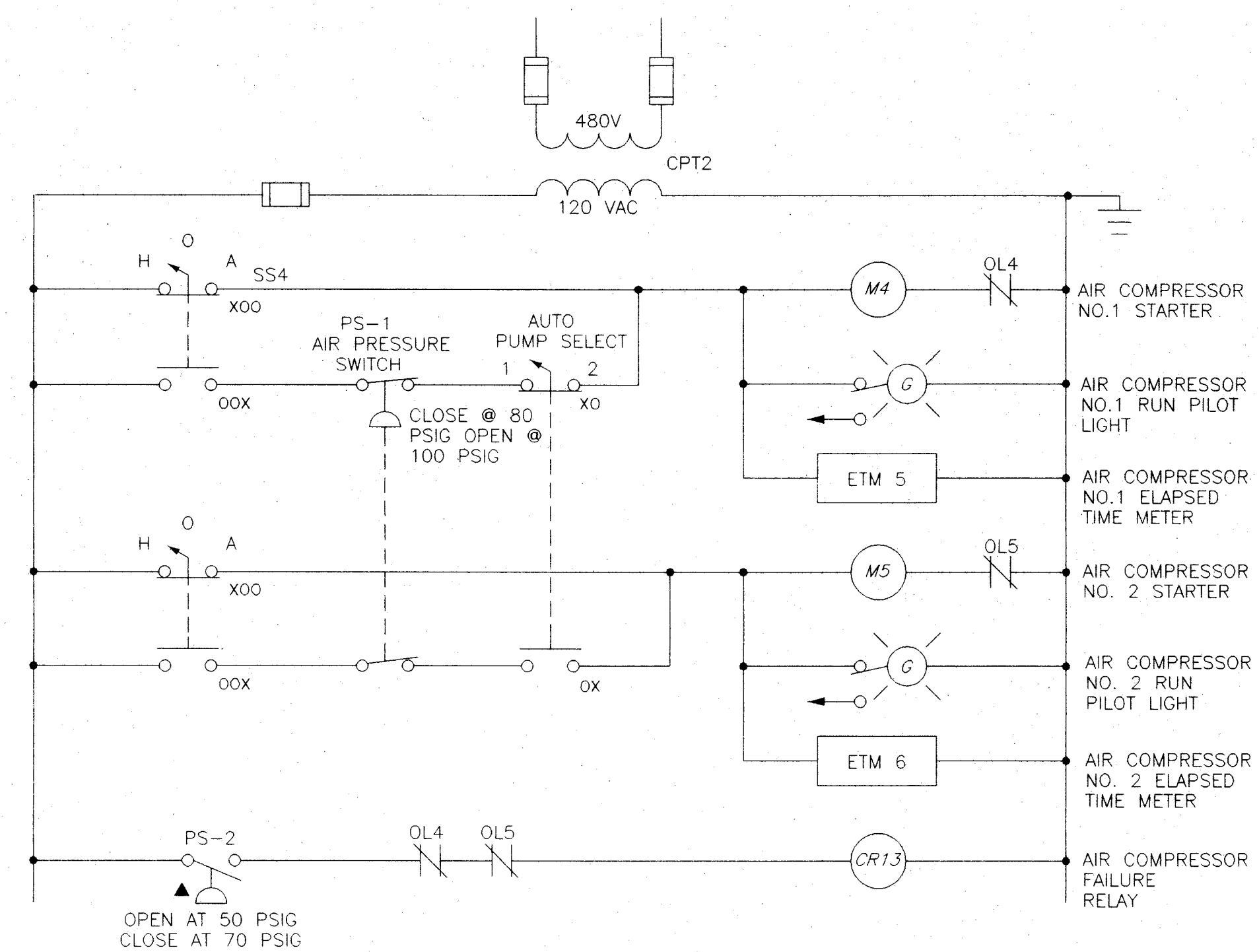
----- FUTURE

TOL-5148501
09/13/01 03-14



TRIPLEX SEWAGE PUMP SYSTEM SCHEMATIC

THE ABOVE LOGIC DIAGRAM IS SUGGESTIVE. THE SEQUENCE OF OPERATION AND THE FINAL CONTROL DIAGRAM WILL DEPEND ON THE EQUIPMENT SELECTED. MANUFACTURE SHALL PROVIDE FINAL CONTROL SCHEMATIC TO THE ENGINEER FOR APPROVAL.



AIR COMPRESSOR CONTROL SCHEMATIC

- NOTES:
- SEE TELEMETRY PANEL INPUT SIGNALS FOR ALARM CIRCUITS.
 - THE AIR COMPRESSOR STARTERS SHALL BE FURNISHED AND INSTALLED IN THE PUMP STARTER PANEL BY THE PUMP VENDOR.
 - ALL CONTROL AND TIME DELAY RELAYS, ELAPSED TIME METERS, SELECTOR SWITCHES, AND PILOT LIGHTS SHALL BE INSTALLED AND WIRED BY THE PUMP STARTER PANEL SUPPLIER AS PART OF THIS CONTRACT. WIRES THAT WILL BE CONNECTED TO THE THIRD PUMP STARTER SHALL BE TERMINATED ON A TERMINAL STRIP EASILY ACCESSED FROM FRONT OF ENCLOSURE.

LEGEND

NONE LOCATED IN MOTOR STARTER PANEL
▲ LOCATED IN FIELD
--- FUTURE

LLS = LOW LEVEL SHUTDOWN SWITCH
LS = LOW SWITCH OFF
LEAD = LEAD PUMP SWITCH
LAG = LAG PUMP ON SWITCH
HLS = HIGH LEVEL SWITCH
LGS = LAG PUMP OFF SWITCH

REVISIONS	BY	DATE

PROJECT NUMBER
529

SHEET
17 OF 20

PREPARED BY:

Jones & Henry Engineers, Ltd.

ELECTRICAL - MOTOR CONTROL PANEL SCHEMATIC

PROJECT NO. 529
WOODMOOR INTERCEPTION

STARK COUNTY
METROPOLITAN SEWER DISTRICT

MICHAEL S. ARAGODA, P.E.
P.O. BOX 7906 - 1701 MAHONING RD. N.E. CANTON, OHIO 44705-7906
(330) 481-2303 - FAX (330) 453-9044

SCALE
HOR. AS NOTED VERT.

STARK COUNTY, OHIO

FIELD BOOK No.

PROJECT DESCRIPTION

THIS PROJECT WILL PROVIDE PUBLIC SANITARY SEWER SERVICES TO APPROXIMATELY 96 LOTS IN THE MONTEREY HEIGHTS AND BEL-AIR ESTATES ALLOTMENT AREAS.

THIS PROJECT, IN PART, WILL CONSIST OF THE CONSTRUCTION OF 335 VF. OF MANHOLES, 20 VF. OF DROP ATTACHMENTS, 93 V.F. OF 6" DUCTILE IRON PIPE, 5598' LF. OF 8" PVC, 1552 LF. OF 10" PVC, 96-SERVICE CONNECTIONS, 2885' LF. OF 6" PVC LATERALS, 263 LF. OF 12 INCH CASING, 81 LF OF 16 INCH CASING, AND ALL NECESSARY APPURTENANCES.

EXISTING DATA

EACH CONTRACTOR SHALL VISIT THE SITE PERSONALLY TO ASCERTAIN THE NATURE OF THE WORK AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE SITE PRIOR TO BID SUBMISSION. EXISTING STRUCTURES, GRADES, PIPING ETC. ARE INDICATED IN APPROXIMATE LOCATION ON THE PLAN. INFORMATION SHOWN IS NOT GUARANTEED TO BE CORRECT AND COMPLETE. THE DATA SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE EXISTENCE OF FACILITIES ABOVE OR BELOW GROUND, WHICH MAY NOT BE SHOWN, WILL NOT BE A BASIS FOR A CLAIM FOR EXTRA WORK. EXISTING UNDERGROUND UTILITIES SHOWN ARE FROM RECORDS PROVIDED BY UTILITY COMPANIES AND ARE APPROXIMATE ONLY. SERVICE LATERALS ARE NOT SHOWN.

PRECONSTRUCTION MEETING

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MR. PAUL HOOT OF THE SANITARY ENGINEER'S OFFICE (330) 438-9310 TO SCHEDULE A PRECONSTRUCTION MEETING. A MINIMUM OF 72 HOURS NOTICE IS REQUIRED TO SCHEDULE THIS MEETING.

SAFETY PROCEDURES

THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REQUIREMENTS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE THE NECESSARY PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO: 1. ALL PERSONS ON THE WORK SITE OR WHO MAY BE AFFECTED BY THE WORK. 2. ALL THE WORK AND MATERIALS AND EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFF THE SITE. 3. OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAYS, STRUCTURES, UTILITIES AND UNDERGROUND FACILITIES NOT DESIGNATED FOR REMOVAL, RELOCATION OR REPLACEMENT IN THE COURSE OF CONSTRUCTION.

SEQUENCE OF CONSTRUCTION

ONCE CONSTRUCTION IS INITIATED THE CONTRACTOR SHALL CONTINUE CONSTRUCTION THRU COMPLETION.

SUBSURFACE CONDITIONS

IT IS THE OBLIGATION AND RESPONSIBILITY OF THE BIDDER TO MAKE HIS OWN INVESTIGATIONS OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL. THE BIDDER MAY EXAMINE THE RECORDS OF ALL BORINGS, TEST EXCAVATIONS AND OTHER SUBSURFACE INVESTIGATIONS, IF ANY, MADE SOLELY FOR DESIGN PURPOSES FOR THE OWNER. SAID BORINGS, TEST EXCAVATIONS AND OTHER SUBSURFACE INVESTIGATIONS, ARE NOT A PART OF THE CONTRACT DOCUMENTS, EXCEPT TO THE EXTENT THAT THE RESULTS THEREOF ARE SPECIFICALLY SHOWN ON THE PLANS OR INCLUDED IN THE SPECIFICATIONS AND ARE NOT WARRANTED TO SHOW THE ACTUAL SUBSURFACE CONDITIONS. THE CONTRACTOR AGREES THAT HE WILL MAKE NO CLAIM AGAINST THE OWNER OR THE ENGINEER IF, IN CARRYING OUT THE WORK, HE FINDS THAT THE ACTUAL SUBSURFACE CONDITIONS ENCOUNTERED DO NOT CONFORM TO THOSE INDICATED BY SAID BORINGS, TEST EXCAVATIONS AND OTHER SUBSURFACE INVESTIGATIONS.

ACCESSIBILITY TO PRIVATE PROPERTY

ACCESS TO ALL DRIVEWAYS AND PARKING AREAS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES, IF POSSIBLE. ANY TRENCHES AFFECTING ACCESS SHALL BE BACK FILLED AT THE END OF EACH WORKING DAY TO PROVIDE ACCESS TO ALL BUSINESSES & RESIDENTS. ANY BUSINESSES OR RESIDENTS MUST BE GIVEN 24 HOURS NOTICE BY THE CONTRACTOR THAT CONSTRUCTION WILL TEMPORARILY BLOCK ACCESS TO THEIR DRIVEWAYS/ PARKING LOTS.

PRESERVATION OF PRIVATE PROPERTY

THE CONTRACTOR SHALL PERFORM WORK AS NOT TO DISTURB, DAMAGE OR DESTROY ANY MAILBOX, PAPER BOX, TELEPHONE OR POWER POLES, SIGNS, LANDSCAPING ITEMS, ETC. ANY ITEM DAMAGED OR DESTROYED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ANY ITEM DISTURBED OR IN CONFLICT WITH THE WORK TO BE PERFORMED SHALL BE REMOVED AND RESET AT THE CONTRACTOR'S EXPENSE. ENGINEER APPROVAL IS REQUIRED BEFORE ANY OF THESE ITEMS ARE PERFORMED. ANY REQUIRED TREE PLANTING AND/OR MAINTENANCE SHALL BE IN ACCORDANCE WITH THE ANSI STANDARDS Z60.1, AMERICAN STANDARD FOR NURSERY STOCK AND ODOT SECTION 650.

UTILITIES

THE UTILITIES SHOWN ON THE PLANS CAN NOT BE CERTIFIED AS COMPLETE NOR CORRECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EACH UTILITY WITHIN THE CONSTRUCTION AREA LOCATED AND VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR MUST ALSO VERIFY THAT ANY DISCREPANCIES IN THE UTILITIES, AS MENTIONED ABOVE, WILL NOT AFFECT THE PLANNED CONSTRUCTION. ANY DISCREPANCIES MUST IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER, IN WRITING.

UTILITIES NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITY PROTECTION SERVICE (1-800-362-2764) AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN IN THE PLANS. THE OWNER OF THE UNDERGROUND UTILITY FACILITY SHALL, WITHIN FORTY-EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

DOMINION EAST OHIO

1. ONE-FOOT MINIMUM VERTICAL CLEARANCE AND THREE-FEET MINIMUM HORIZONTAL CLEARANCE FROM DEO GAS FACILITIES MUST BE MAINTAINED.
2. ADEQUATE SUPPORT OF THE DITCH IS THE RESPONSIBILITY OF THE CONTRACTOR WHEN NEAR DEO GAS FACILITIES.
3. SUPPORT MUST BE PROVIDED BY THE CONTRACTOR WHEN DEO GAS FACILITIES ARE AFFECTED BY AN OPEN DITCH (I.E. TIE-OFF, SUPPORT TIMBERS, ETC.
4. CARE SHOULD BE TAKEN NOT TO DENT OR CHIP THE COATING ON THE STEEL PIPE.
5. NOTIFY DEO SO THAT REPAIRS CAN BE MADE IF THE LINE IS DAMAGED. CALL (330)736-6651.

UTILITIES AND PUBLIC SERVICE CORPORATIONS

THE CONTRACTOR SHALL NOTIFY AT LEAST 48 HOURS BEFORE BREAKING GROUND ALL PUBLIC SERVICE CORPORATIONS HAVING WIRE POLES, PIPES, CONDUITS OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION.

A. KNOWN UTILITIES WITHIN THE LIMITS OF THIS PROJECT ARE AS FOLLOWS:

OHIO EDISON
1910 EAST MARKET STREET
BUILDING NO. 1
AKRON, OH 44313
MR. KEN DOWNS

AMERITECH
50 W. BOWERY, 4TH FLR.
AKRON, OHIO 44308
ENGINEER MANAGER
MR. JIM McLAUGHLIN

DOMINION EAST OHIO
4725 SOUTHWAY ST. SW
CANTON, OH 44706-1936
DISTRIBUTION-KATE QUILLIN

OHIO WATER SERVICE COMPANY
123 THIRD STREET SE
MASSILLON, OH 44646
ENGINEER MANAGER
MR. DON SNYDER

STARK COUNTY ENGINEER
5165 SOUTHWAY STREET S.W.
CANTON, OH 44706
(330) 477-6781

WARNER CABLE
5520 WHIPPLE AVE. N.W.
NORTH CANTON, OH. 44711
(330) 494-6752
STEVE WEAVER

STARK COUNTY SANITARY ENGINEER
P.O. BOX 7906
1701 MAHONING ROAD, N.E.
CANTON, OHIO 44705-7906
(330) 438-9303

NOTIFICATION OF SAFETY FORCES

THE CONTRACTOR SHALL NOTIFY THE TOWNSHIP POLICE AND FIRE DEPARTMENTS, AND LOCAL SCHOOL DISTRICT TRANSPORTATION SUPERVISOR, AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSING OR TRAFFIC CHANGE.

CONTRACTOR AVAILABILITY

THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A 24 HOUR PHONE NUMBER WHERE HE, THE CONTRACTOR, SHALL BE AVAILABLE FOR EMERGENCIES.

SURVEY CONTROL

THE HORIZONTAL CONTROL IS BASED UPON THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE (NAD83). THE VERTICAL CONTROL IS BASED ON SEA LEVEL DATUM (NAVD 88). ALL MEASUREMENTS SHOWN ON THE PLANS ARE GROUND MEASUREMENTS.

PRESERVATION OF PROPERTY CORNERS AND SURVEY MARKERS

THE CONTRACTOR SHALL PERFORM WORK AS NOT TO DISTURB, DAMAGE, OR DESTROY ANY AND ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS, OR ANY TYPE OF LAND MONUMENT IN THE PROJECT AREA. ANY OF THESE ITEMS DISTURBED, DAMAGED, OR DESTROYED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL HIRE AN OHIO REGISTERED PROFESSIONAL SURVEYOR TO REPLACE OR RESTORE THESE ITEMS. THE SURVEYOR PERFORMING THE WORK SHALL FURNISH A CERTIFICATION THAT THE MONUMENTS HAVE BEEN RESTORED. ENGINEER APPROVAL IS REQUIRED BEFORE ANY OF THESE ITEMS ARE PERFORMED.

EXCAVATED MATERIAL

ALL EXCAVATED MATERIAL AND ALL MATERIAL USED IN CONSTRUCTION OF THE WORK SHALL BE STOCK PILED IN A MANNER THAT WILL NOT ENDANGER THE WORK AND THAT WILL LEAVE DRIVEWAYS, FIRE AND POLICE CALL BOXES OR OTHER CONTROLS UNOBSTRUCTED AND ACCESSIBLE WHILE THE WORK IS BEING COMPLETED. SATISFACTORY PROVISIONS SHALL BE MADE FOR STREET DRAINAGE, AND NATURAL WATERCOURSES SHALL NOT BE OBSTRUCTED. DURING THE PROGRESS OF THE WORK, ALL MATERIAL STOCK PILES SHALL BE KEPT TRIMMED UP AND MAINTAINED IN A NEAT MANNER. ALL EXCAVATED WASTE MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE, AS PER THE ENGINEER, AND IN ACCORDANCE WITH ANY FEDERAL, STATE, AND LOCAL STANDARDS, AT NO ADDITIONAL COST TO THE OWNER.

PROHIBITED CONNECTIONS

ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

WATERLINE SEPARATION

THE REQUIRED SEPARATION BETWEEN SANITARY SEWER AND WATER LINES (PARALLEL AND CROSSING) INSTALLATIONS ARE AS FOLLOWS:

MINIMUM HORIZONTAL SEPARATION 10'-0" (PARALLEL)
MINIMUM VERTICAL SEPARATION 1'-6" (CROSSINGS)

IF THESE CLEARANCES CAN NOT BE MAINTAINED THE CONTRACTOR SHALL CONTACT THE STARK COUNTY SANITARY ENGINEERS OFFICE.

BUILDING ELEVATIONS

ALL BUILDING ELEVATIONS SHOWN ON THIS PLAN INDICATE THE BASEMENT FLOOR ELEVATION UNLESS NOTED.

THIS SYMBOL INDICATES A CRITICAL FLOOR ELEVATION THAT HAS INFLUENCED THE ELEVATION OF THE MAIN LINE SEWER. SPECIAL ATTENTION MUST BE EXERCISED REGARDING LATERAL LOCATION AND GRADE AT THE TIME OF CONSTRUCTION TO INSURE PROPER CONNECTION OF THE HOUSE LATERAL.

SEPTIC/AERATION SYSTEMS

CONTRACTOR SHALL RELOCATE AND REINSTALL ANY SEPTIC/AERATION SYSTEM TANKS, PIPING, AND LEACH LINES DISTURBED DURING CONSTRUCTION. NO SEPARATE PAYMENT SHALL BE MADE. COSTS TO PERFORM THESE ITEMS SHALL BE INCLUDED IN OTHER PAY ITEMS.

SCALE		HORIZ. NONE		VERT.	
DATE:		DATE:		DATE:	
FIELD BOOK No.		FIELD BOOK No.		FIELD BOOK No.	
STARK COUNTY METROPOLITAN SEWER DISTRICT					
MICHAEL S. BRIDGES, P.E. DIRECTOR P.O. BOX 7906 - 1701 MAHONING RD. N.E. CANTON, OHIO 44705-7906 (330) 438-2803 - FAX (330) 433-9044					
GENERAL NOTES					
PROJECT NO. 529 WOODMOOR INTERCEPTION					
STARK COUNTY, OHIO					
PREPARED BY:					
Jones & Henry Engineers, Ltd.					
JH					
REVISIONS		BY		DATE	
DESCRIPTION		BY		DATE	
DWN BY:		CHK'D BY:		BFS	
PROJECT NUMBER					
529					
SHEET					
18 OF 20					

