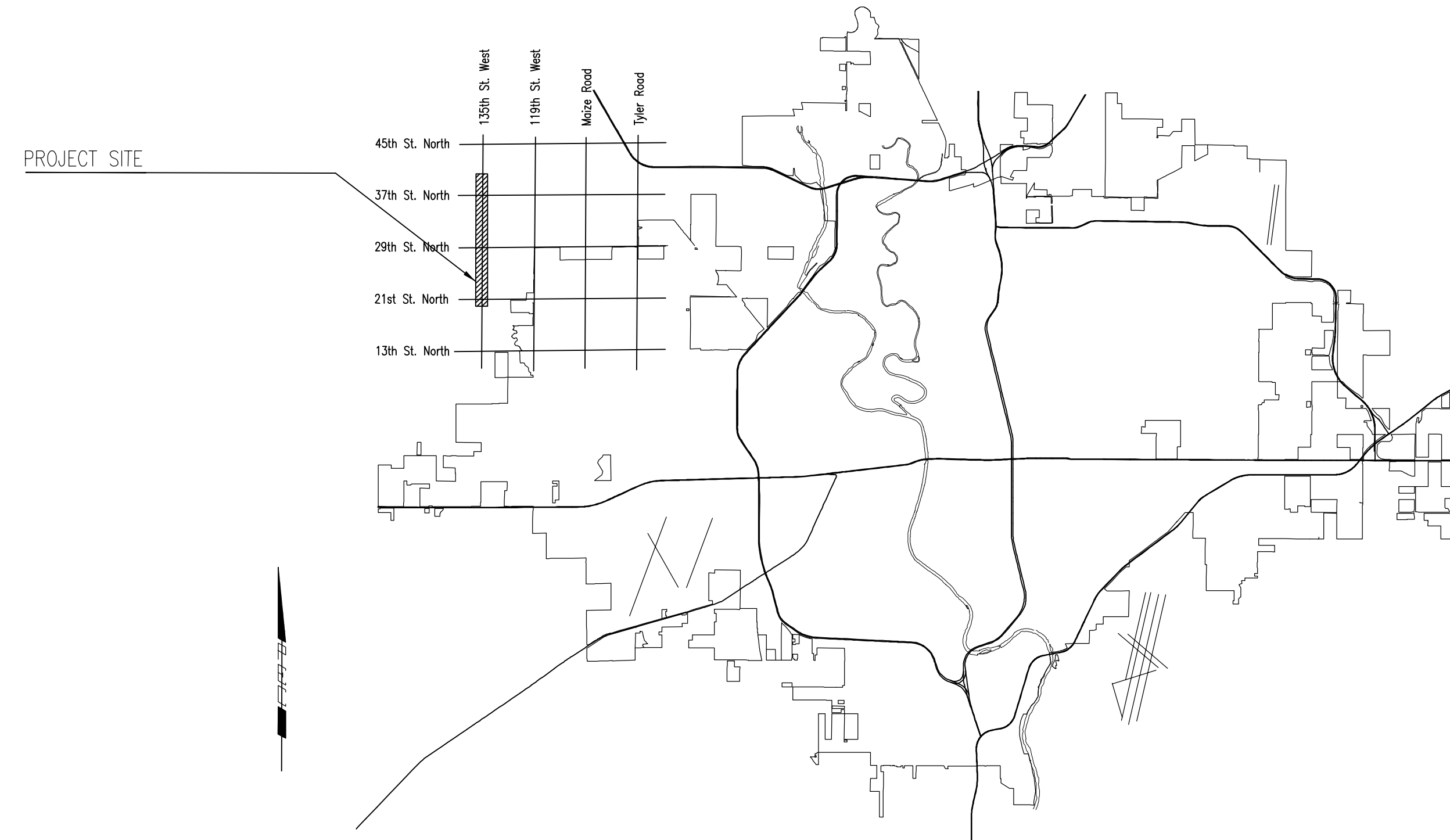


# CONSTRUCTION PLANS FOR NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN

WICHITA, SEDGWICK COUNTY, KANSAS  
MICHAEL E. LINDEBAK, P.E.-CITY ENGINEER



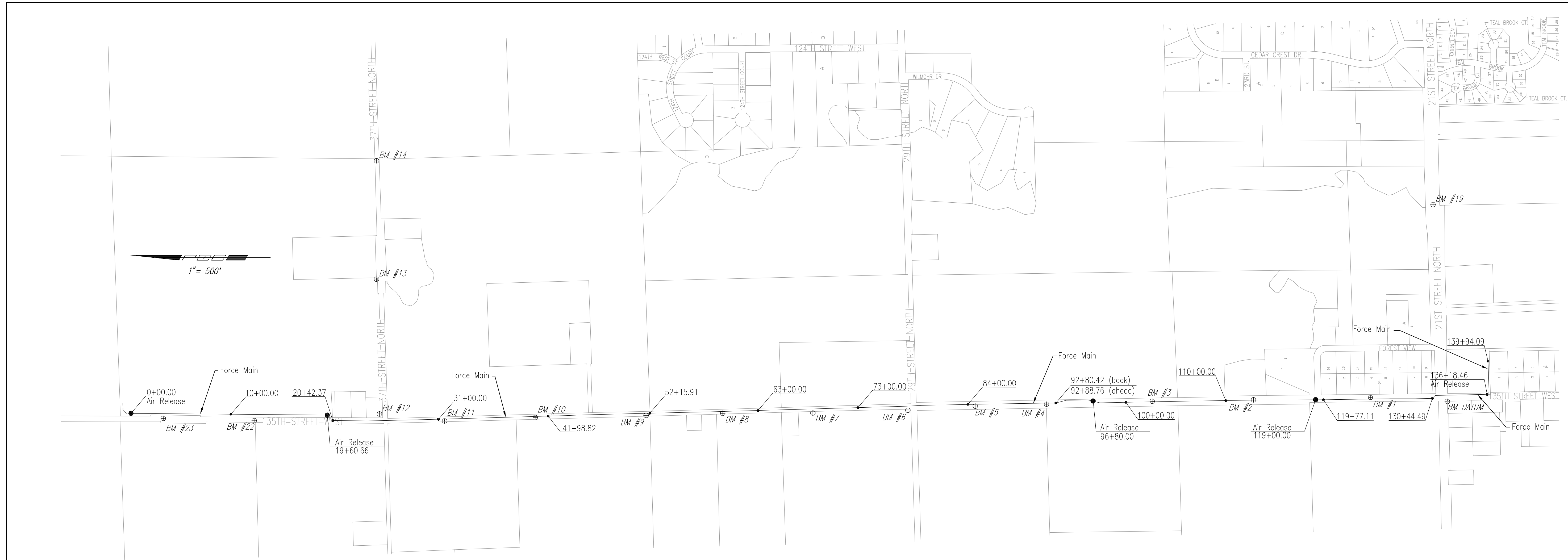
INDEX OF SHEETS	
SHEET NO. 1	TITLE SHEET
SHEET NO. 2	KEY MAP AND GENERAL NOTES
SHEET NO. 3	HORIZONTAL AND VERTICAL CONTROL
SHEET NO. 4-18	PLAN/PROFILE
SHEET NO. 19	MISCELLANEOUS DETAILS
SHEET NO. 20	AIR RELEASE VALVE VAULT DETAILS
SHEET NO. 21	FRAME & COVER DETAILS
SHEET NO. 22-24	SOIL EROSION BMP DETAILS

Mies Construction, Inc. - Contractor  
City - Inspector  
Released 10/03  
No As-built Info  
.pdf by JDL 12/21/07

 **Professional  
Engineering  
Consultants, P.A.**  
303 S. TOPEKA • WICHITA, KANSAS 67202  
316-262-2691 • FAX 316-262-3003  
www.pec1.com • designers@pec1.com

OCA NO. 624064  
CITY OF WICHITA PROJECT NO. 468-83134

## MARCH 2002



**GENERAL NOTES**

- ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.
- ALL ELEVATIONS SHOWN ARE BASED ON CITY OF WICHITA DATUM.
- THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- AT LEAST 72 HOURS PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE LOCAL UTILITY COMPANIES MARK ANY EXISTING LINES WITHIN THE PROJECT AREA.
- UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR THE DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE RESTORATION".
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
- ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR78 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE RESTORATION".
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED, TREE TRIMMINGS, AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL ALSO BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS. OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS MAY REQUIRE ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED DISPOSAL LOCATION.
- THE CONTRACTOR SHALL AVOID REMOVAL OR TRIMMING OF ANY TREES OR SHRUBS WHERE POSSIBLE. WHERE THE CONTRACTOR BELIEVES THE REMOVAL OR TRIMMING IS UNAVOIDABLE, HE SHALL COORDINATE SUCH WORK WITH THE ENGINEER. COSTS FOR TREE/SHRUB REMOVAL AND TRIMMING REGARDLESS OF SIZE SHALL BE CONSIDERED SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE CLEARING".
- THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR IS REQUIRED TO MAINTAIN CONTINUOUS FLOW OF SEWAGE IN EXISTING MAINS AT ALL TIMES.
- THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. RYE GRASS SEED SHALL BE PLANTED AT A MINIMUM RATE OF SIX (6) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF OTHER SEEDING IS REQUIRED IN ACCORDANCE WITH GENERAL NOTE NO. 9 ABOVE. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED.
- LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS.
- THE CONTRACTOR MUST OBTAIN A COPY OF THE APPROVED SEDGWICK COUNTY "UTILITY PERMIT AGREEMENT" FOR "USE OF PUBLIC ROAD RIGHT-OF-WAY" PRIOR TO THE START OF CONSTRUCTION. SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION. PERMIT WILL BE OBTAINED BY THE CITY.
- ACCEPTABLE PIPE MATERIALS FOR THIS PROJECT WILL INCLUDE AWMA C-905 DR-18 PVC OR PRESSURE CLASS 250 DUCTILE IRON PIPE WITH POLYETHYLENE TUBE ENCASMENT IN ACCORDANCE WITH AWMA C-105, UNLESS OTHERWISE SPECIFIED. PIPE MATERIAL REQUIREMENTS AND TESTING OF THE COMPLETED FORCE MAIN WILL BE ACCORDANCE WITH THE STANDARD CITY OF WICHITA SPECIFICATIONS FOR WATERLINE CONSTRUCTION.

UTILITY CONTACTS	
KANSAS GAS SERVICE	(316) 832-3169
WESTAR ENERGY	(316) 383-8600
PEOPLES NATURAL GAS	1(800) 527-0357
SEDGWICK COUNTY ELECTRIC CO-OP	(316) 542-3131
SOUTHWESTERN BELL TELEPHONE	1(800) 870-8390
COX COMMUNICATIONS	(316) 262-0661
WICHITA WATER	(316) 268-4940 or 269-4709

**FIBER OPTIC CONDUIT/SERVICE BOX ASSEMBLY**

The Contractor shall install a continuous conduit the entire length of the proposed 14" force main. The conduit shall be CARLON OPTIC-GARD 1-1/4" diameter, SDR 11, PE Pipe or approved equal. The pipe shall be ribbed/smooth, orange in color, and shall contain a pre-installed poly pull rope. Where necessary, the pipe shall be jointed with metallic threaded sleeve couplings as manufactured by Carlon, or approved equal. Stainless Steel bands shall be installed every 20 feet along the 14" force main to secure the conduit to the top of the force main. The contractor shall install service box at FM Sta. 0+00.00 and extend the conduit as installed by others into the service box.

The service box assembly shall be QUAZITE COMPOSOLITE Part No. PG3048BA18 service box (30"W x 48" L x 18"D) with a QUAZITE COMPOSOLITE Part No. PG3048HA00 heavy duty locking cover, or approved equal. The locking cover for the service box shall be imprinted with "CITY OF WICHITA".

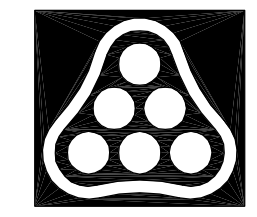
The conduit entering and exiting the service box assembly shall extend to an elevation approximately 12" below grade. The pre-installed poly rope shall extend a minimum of 3' inside the service box. The service box shall be placed on a 6" crushed rock base (compacted to 95% of ASTM D698) extending a minimum of 12" around the box perimeter. A 12" wide x 12" thick concrete border (COW concrete pavement mix) shall be placed flush around the top of the service box assembly.

Service Boxes shall be installed along the route of the force main as listed in the Service Box Location table. The locations of the service boxes shown in the Service Box Location table are approximate. Maximum spacing for service boxes shall be 2,000 feet. The service boxes shall be placed along the outside limits of the force main excavation except where such placement would fall within a paved or unpaved vehicular travelway. Service boxes shall be situated at least 5' outside of all vehicle travelways, and in locations as approved by the Field Engineer.

SERVICE BOX LOCATION TABLE	
APPROX. FORCE MAIN STATION	OFFSET
0+00.00	3' Rt.
19+67.60	3' Rt.
20+00.00	5' Lt.
39+00.00	17' Lt.
58+00.00	17' Lt.
78+00.00	17' Lt.
92+80.00	20' Lt.
96+65.00	5' Lt.
116+00.00	40' Lt.
131+00.00	30' Lt.
136+50.00	15' Lt.
139+94.08	5' Rt.

(Approx. 13,986 L.F. conduit required.)

STATION to STATION	SHEET NO.
0+00.00 to 10+00.00	4
10+00.00 to 20+42.37	5
20+42.37 to 31+00.00	6
31+00.00 to 41+98.82	7
41+98.82 to 52+15.91	8
52+15.91 to 63+00.00	9
63+00.00 to 73+00.00	10
73+00.00 to 84+00.00	11
84+00.00 to 92+80.42 (back) 92+88.76 (ahead)	12
92+80.42 (back) 92+88.76 (ahead) to 100+00.00	13
100+00.00 to 110+00.00	14
110+00.00 to 119+77.11	15
119+77.11 to 130+44.49	16
130+44.49 to 136+28.60	17
136+28.60 to 139+94.09	18



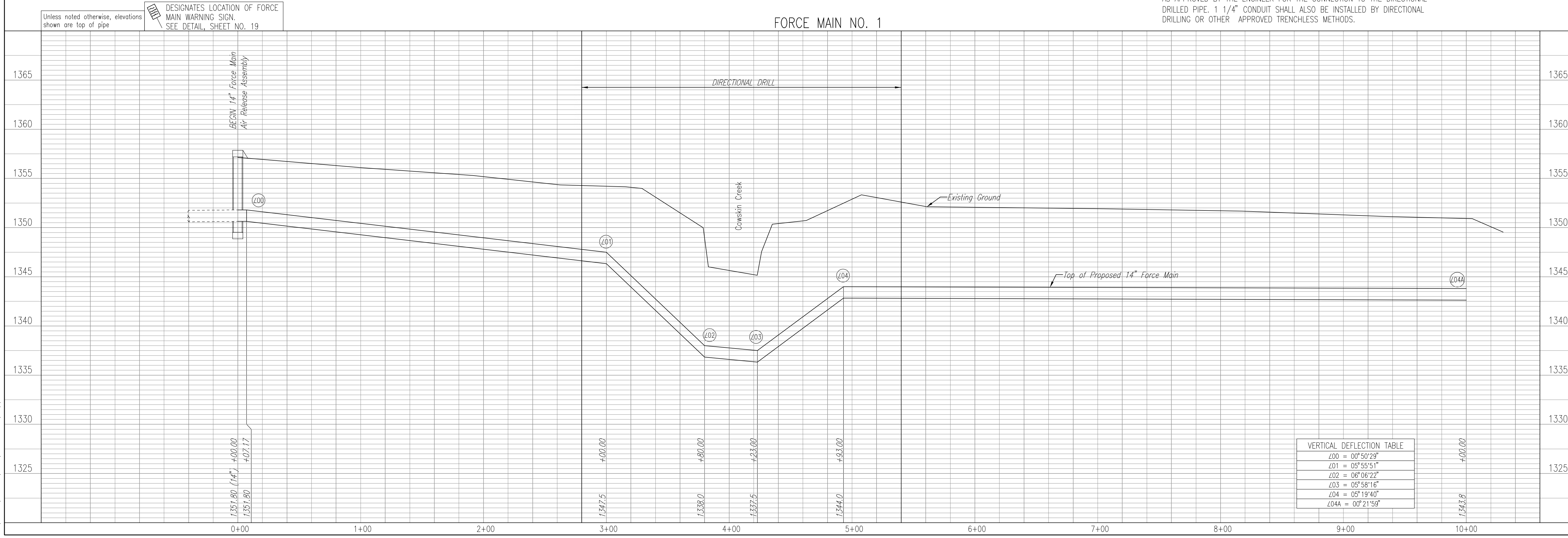
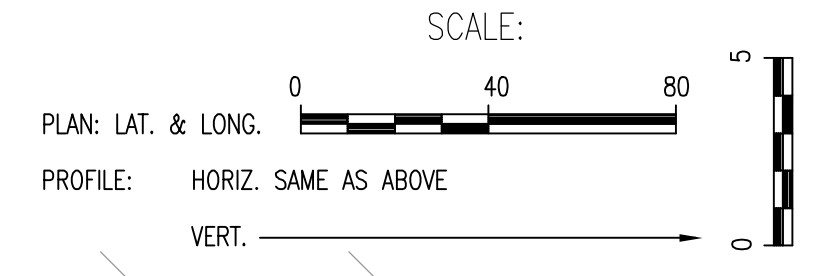
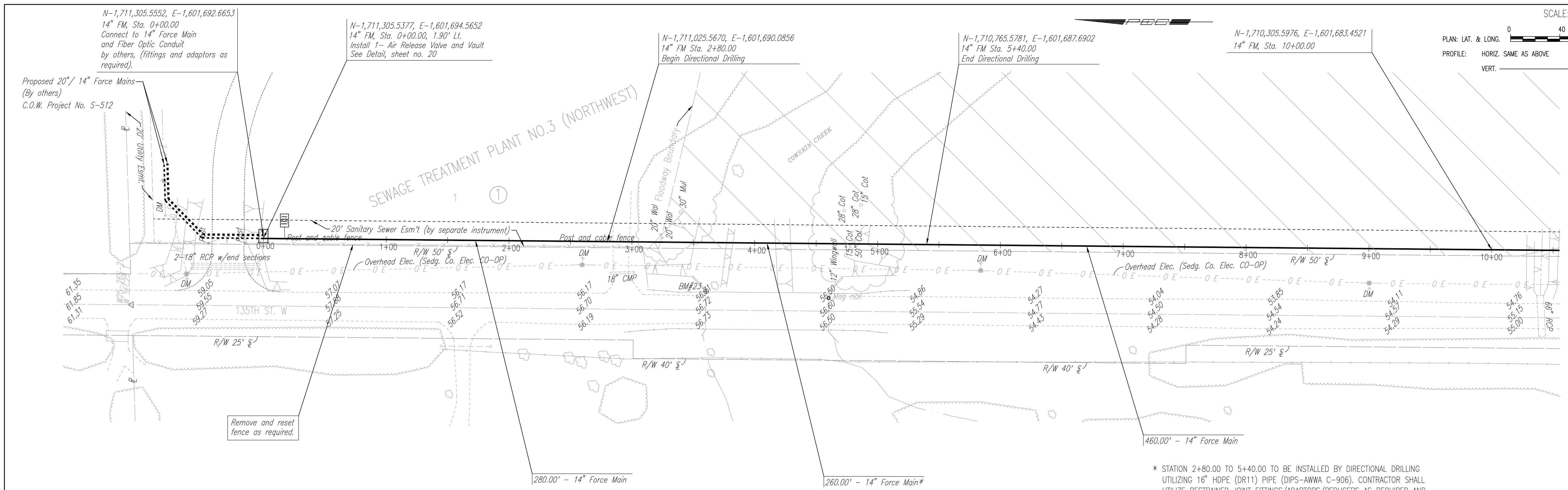
No.	Revision	By	Date
NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN			
<b>KEY MAP AND GENERAL NOTES</b>			
MICHAEL E. UNDEBAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-83134			
<b>Professional Engineering Consultants, P.A.</b> 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-9003			
Designed by	MDK	Job No.	99452-005
Drawn by	JGA	Date	October 2001
			Sht. 2 of 24

DSNR: MDK OPER: JGA SCALE: 1"=500.00  
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PLAN	

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PROFILE	

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VERTICAL DEFLECTION TABLE	
L00	= 00°50'29"
L01	= 05°55'51"
L02	= 06°06'22"
L03	= 05°58'16"
L04	= 05°19'40"
L04A	= 00°21'59"

\* STATION 2+80.00 TO 5+40.00 TO BE INSTALLED BY DIRECTIONAL DRILLING UTILIZING 16" HDPE (DR11) PIPE (DIPS-AWWA C-906). CONTRACTOR SHALL UTILIZE RESTRAINED JOINT FITTINGS/ADAPTORS/REDUCERS AS REQUIRED AND AS APPROVED BY THE ENGINEER FOR THE CONNECTION TO THE DIRECTIONAL DRILLED PIPE. 1 1/4" CONDUIT SHALL ALSO BE INSTALLED BY DIRECTIONAL DRILLING OR OTHER APPROVED TRENCHLESS METHODS.

NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN

**FORCE MAIN NO. 1**

MEMOR E. LUNDEN, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 488-88334

**Professional Engineering Consultants, P.A.**  
 303 S. TOPEKA • WICHITA, KANSAS 67202  
 316-262-2691 • FAX 316-262-3003

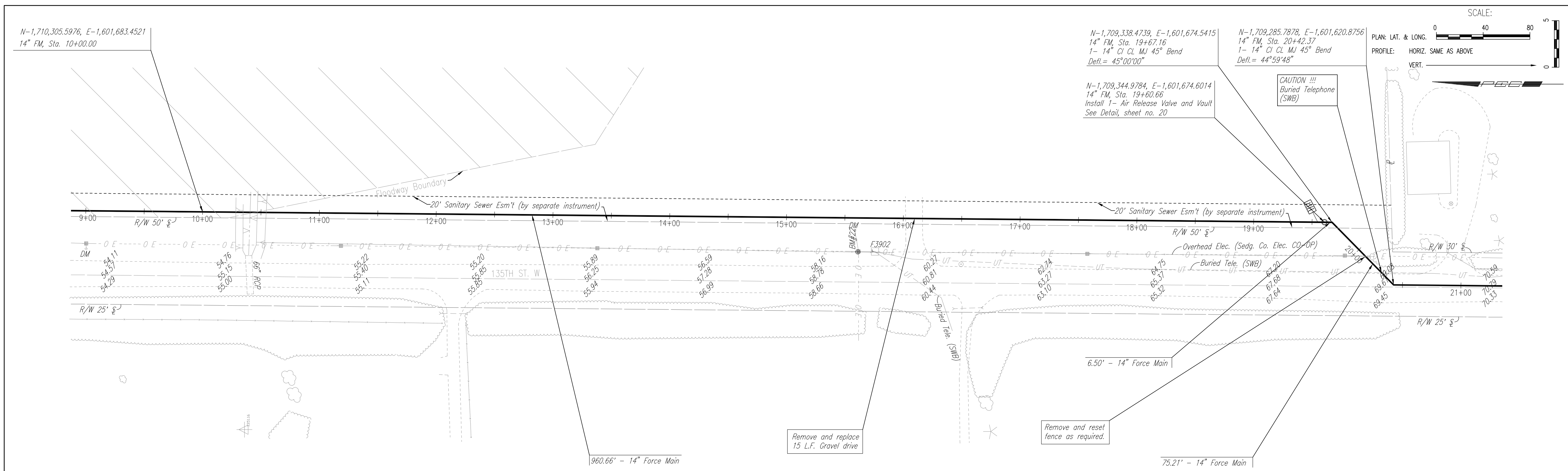
Designed By MDK Job No. 99452-005 Date October 2001  
 Drawn By JGA

Sheet 4 of 24

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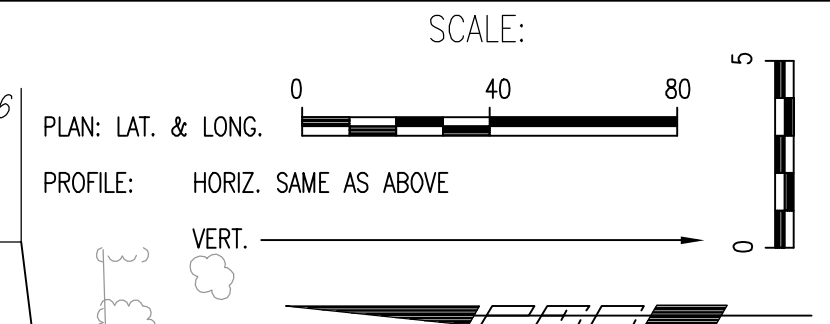


N-1,710,305.5976, E-1,601,683.4521  
 14" FM, Sta. 10+00.00

N-1,709,338.4739, E-1,601,674.5415  
 14" FM, Sta. 19+67.16  
 1- 14" CI CL MJ 45° Bend  
 Defl. = 45°00'00"

N-1,709,344.9784, E-1,601,674.6014  
 14" FM, Sta. 19+60.66  
 Install 1- Air Release Valve and Vault  
 See Detail, sheet no. 20

N-1,709,285.7878, E-1,601,620.8756  
 14" FM, Sta. 20+42.37  
 1- 14" CI CL MJ 45° Bend  
 Defl. = 44°59'48"



CAUTION !!!  
 Buried Telephone (SWB)

FORCE MAIN NO. 1



NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN

FORCE MAIN NO. 1

Professional Engineering Consultants, P.A.  
 303 S. TOPESKA • WICHITA, KANSAS 67202  
 316-262-2691 • FAX 316-262-3003

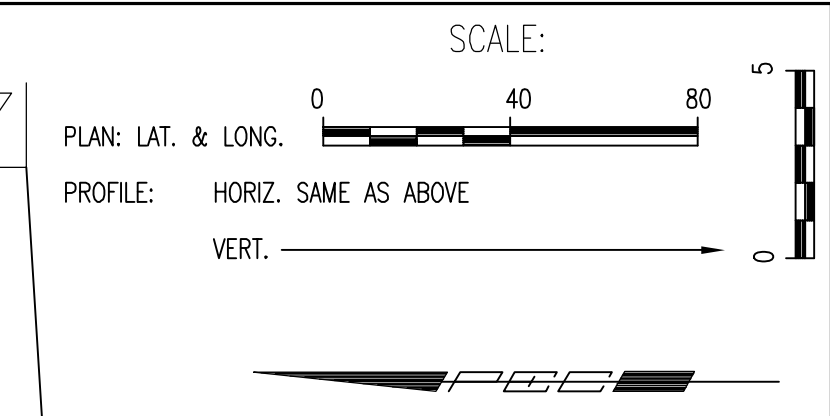
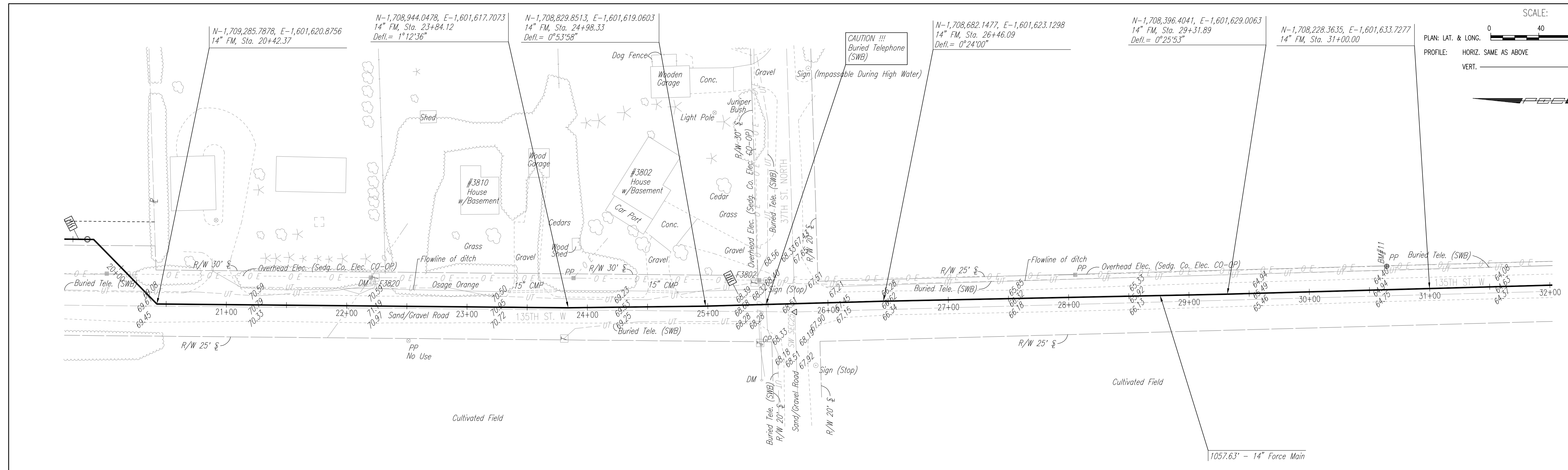
Designed By MDK JCA Job No. 99452-005 Date October 2001  
 Drawn By JCA

MICHAEL E. LINDESKY, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 488-58334

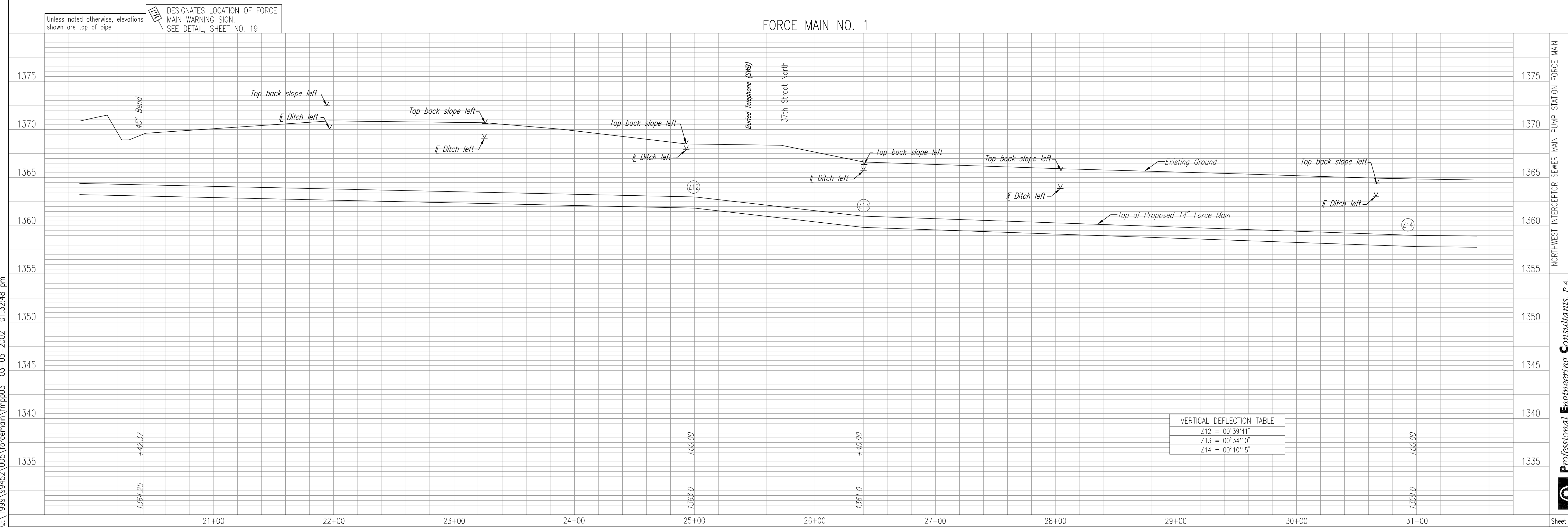
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FORCE MAIN NO. 1



VERTICAL DEFLECTION TABLE	
112	= 0° 39' 41"
113	= 0° 34' 10"
114	= 0° 10' 15"

NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN

Professional Engineering Consultants, P.A.  
 303 S. TOPEKA • WICHITA, KANSAS 67202  
 316-262-2691 • FAX 316-262-3003

Job No. 99452-005 Date October 2001

Designed By MDK Drawn By JCA

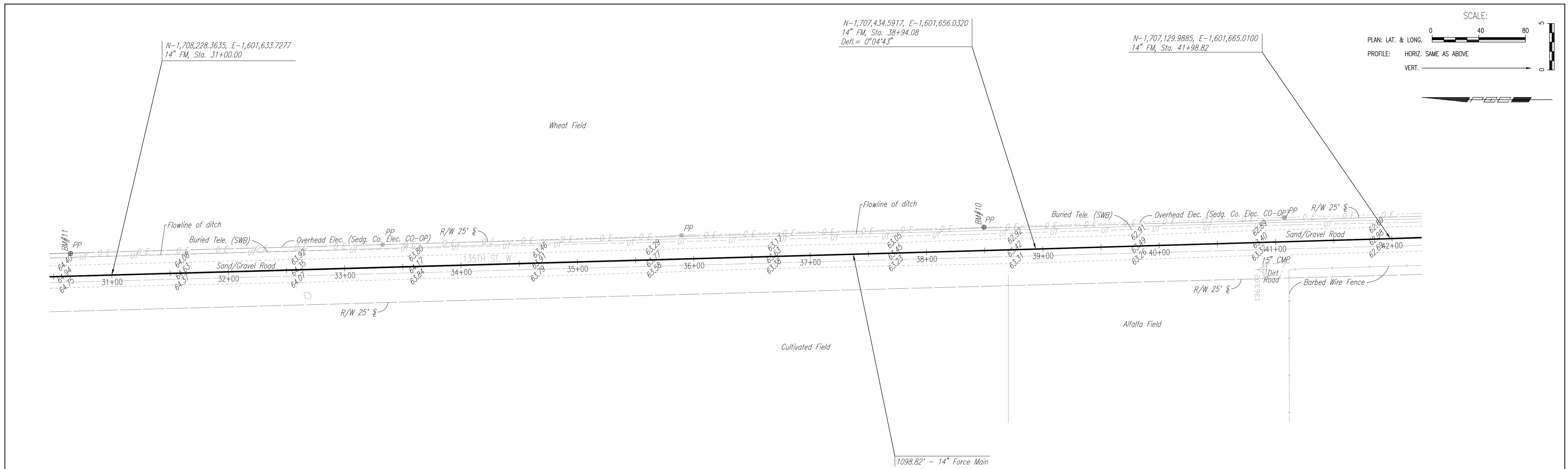
Sheet 6 of 24

FORCE MAIN NO. 1  
 MICHAEL E. LINDENBAUM, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 468-83134

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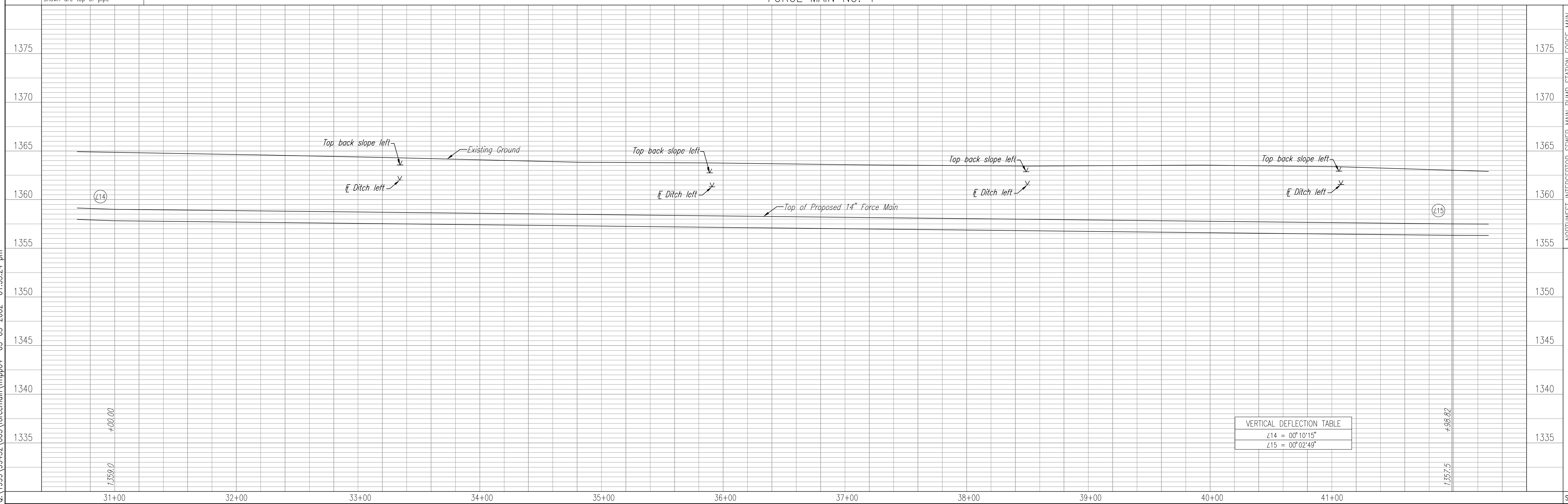
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Unless noted otherwise, elevations shown are top of pipe

FORCE MAIN NO. 1



NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN

FORCE MAIN NO. 1

Professional Engineering Consultants, P.A.  
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 316-262-2691 • FAX 316-262-3003

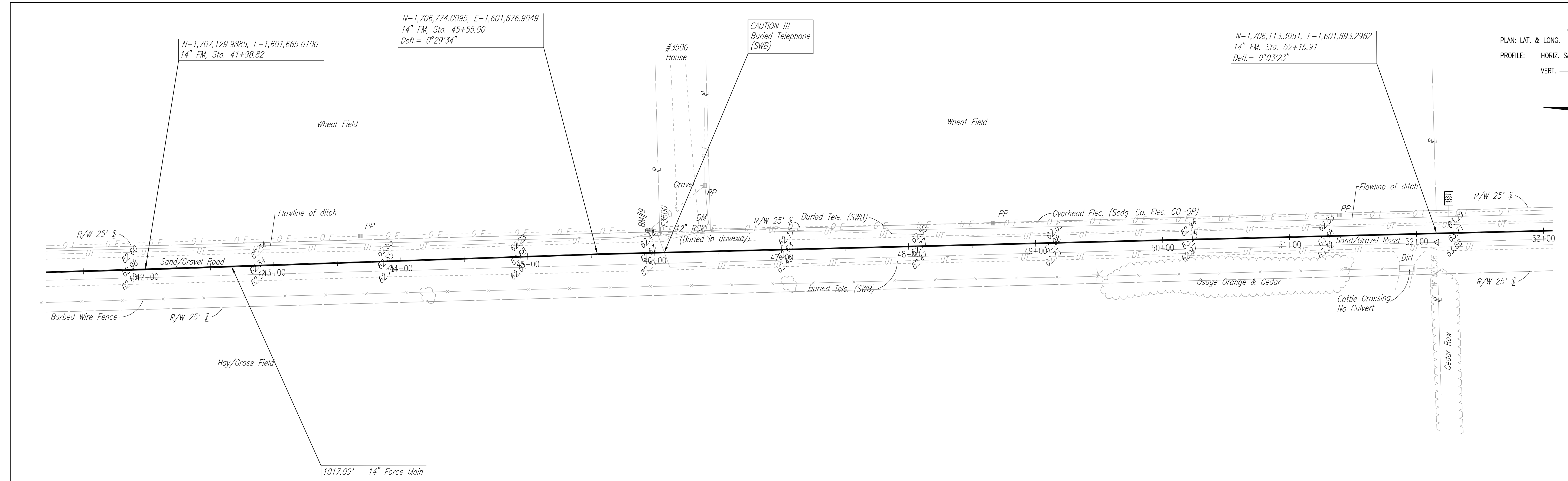
Designed By: MDK  
 Drawn By: JGA  
 Job No: 99452-005  
 Date: October, 2001

MICHAEL E. UNDESKA, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 488-53134

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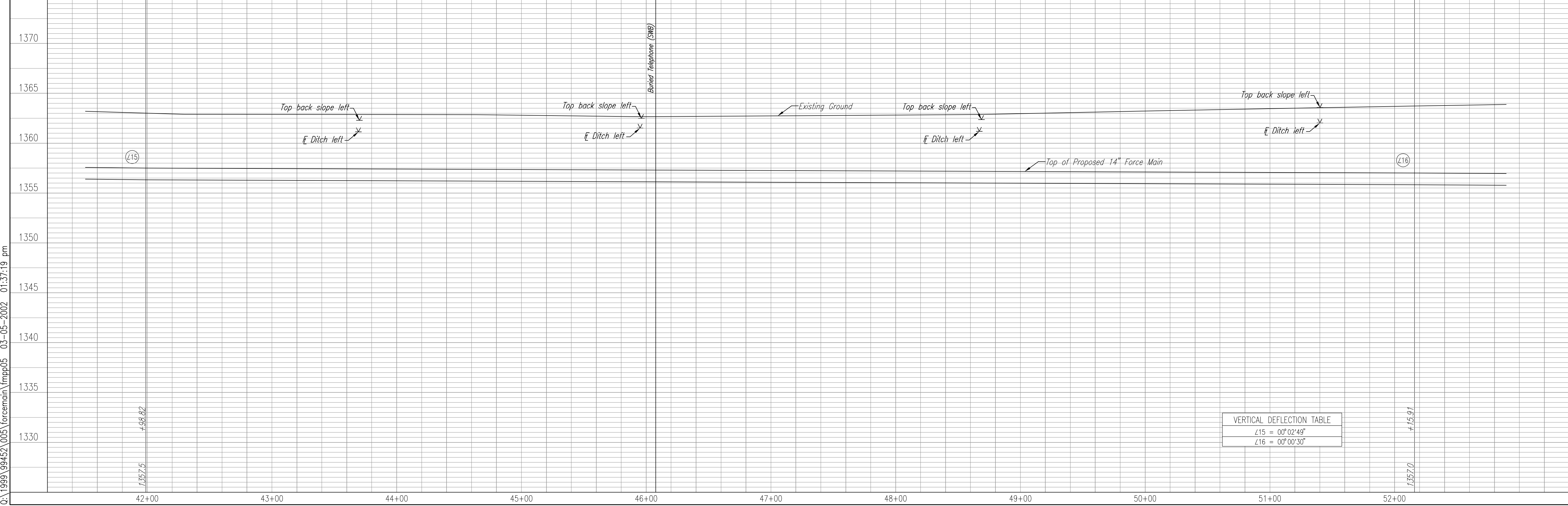
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Unless noted otherwise, elevations shown are top of pipe  
 DESIGNATES LOCATION OF FORCE MAIN WARNING SIGN. SEE DETAIL, SHEET NO. 19

FORCE MAIN NO. 1



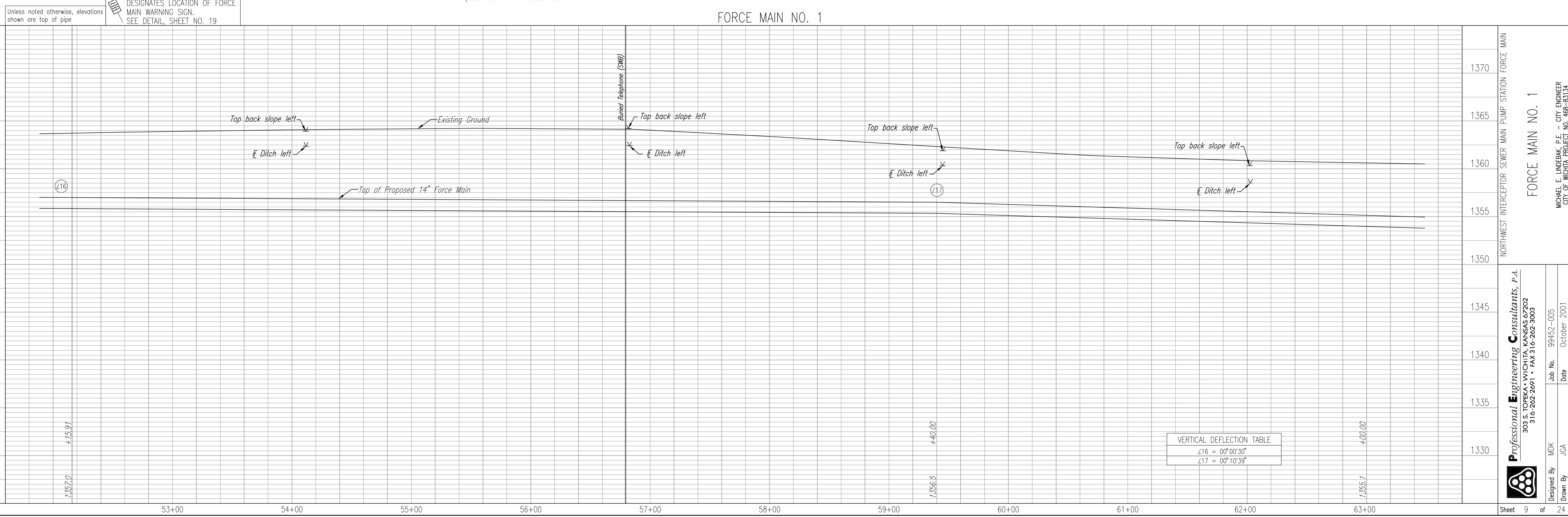
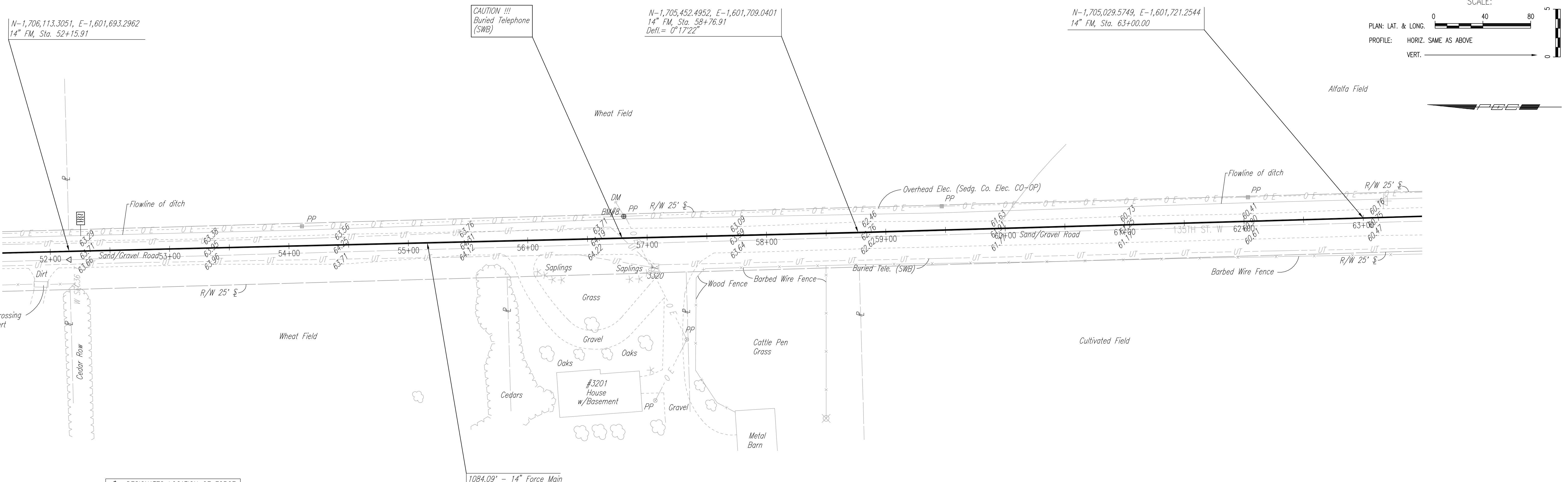
NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN

**Professional Engineering Consultants, P.A.**  
 303 S. TOPEKA • WICHITA, KANSAS 67202  
 316-262-2691 • FAX 316-262-3003

Job No. 99452-005 Date October 2001

Designed By MDK Drawn By JGA

Sheet 8 of 24



Unless noted otherwise, elevations shown are top of pipe

DESIGNATES LOCATION OF FORCE MAIN WARNING SIGN. SEE DETAIL, SHEET NO. 19

VERTICAL DEFLECTION TABLE	
L16 =	00'00'30"
L17 =	00'10'39"

DATE	
BY	
CHECKED	CHECKED
PLAN	

DATE	
BY	
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PROFILE	

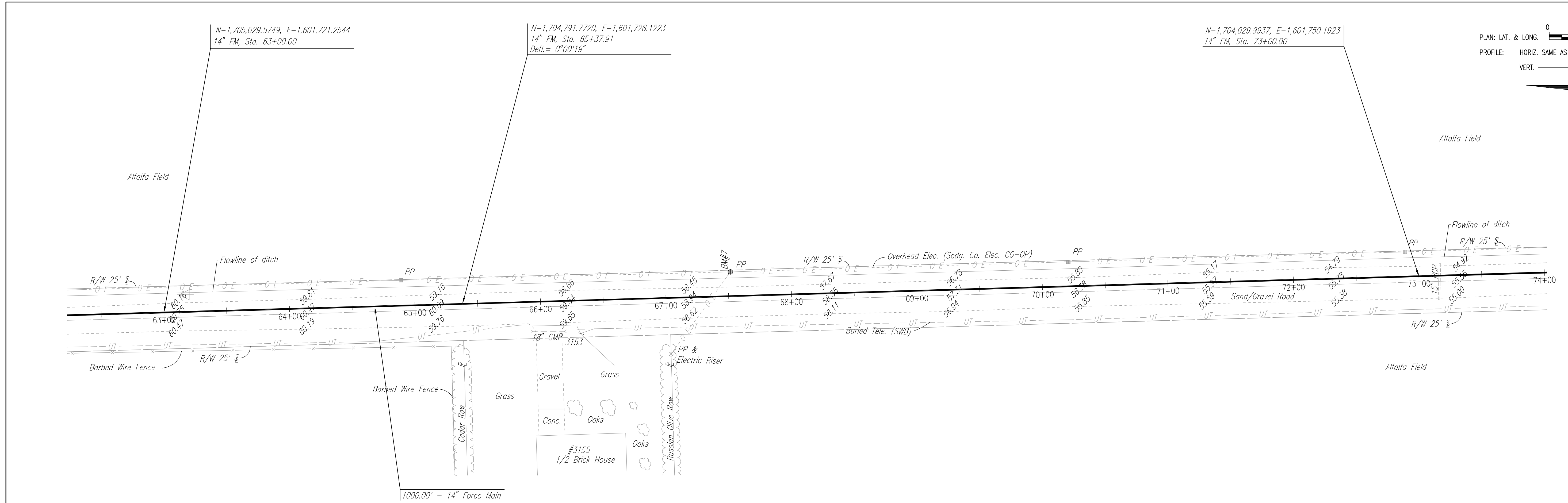
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NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN  
**FORCE MAIN NO. 1**  
 MICHAEL E. LINDBERG, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 488-85134  
 Professional Engineering Consultants, P.A.  
 303 S. TOPEKA - WICHITA, KANSAS 67202  
 316-262-2691 • FAX 316-262-3003  
 Designed By MDK Job No. 99452-005 Date October 2001  
 Drawn By JCA  
 Sheet 9 of 24

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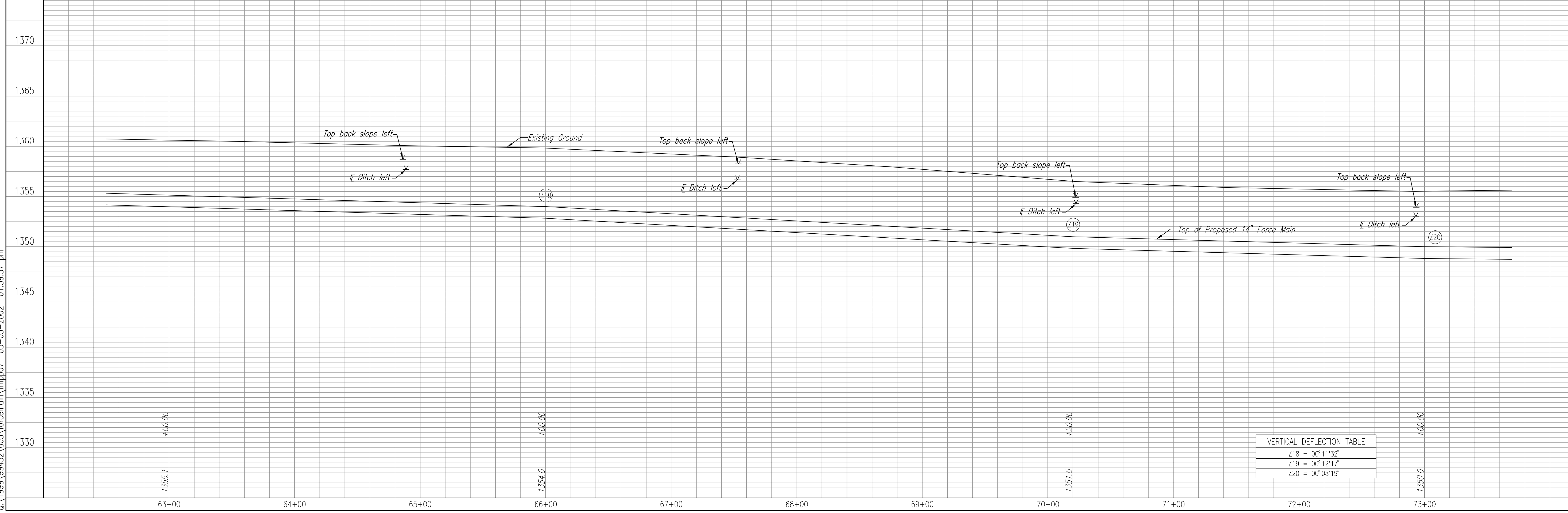
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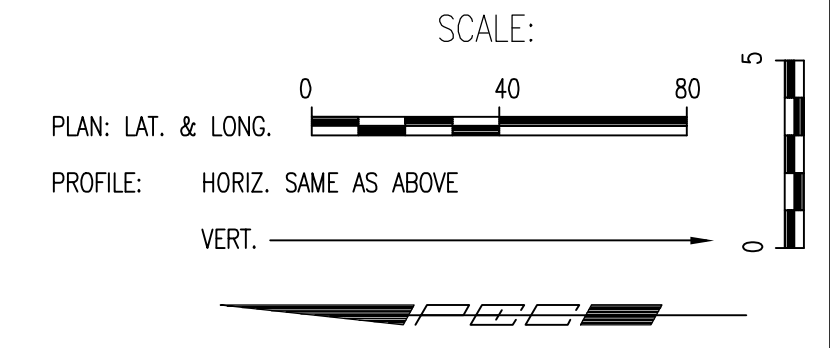


Unless noted otherwise, elevations shown are top of pipe

FORCE MAIN NO. 1



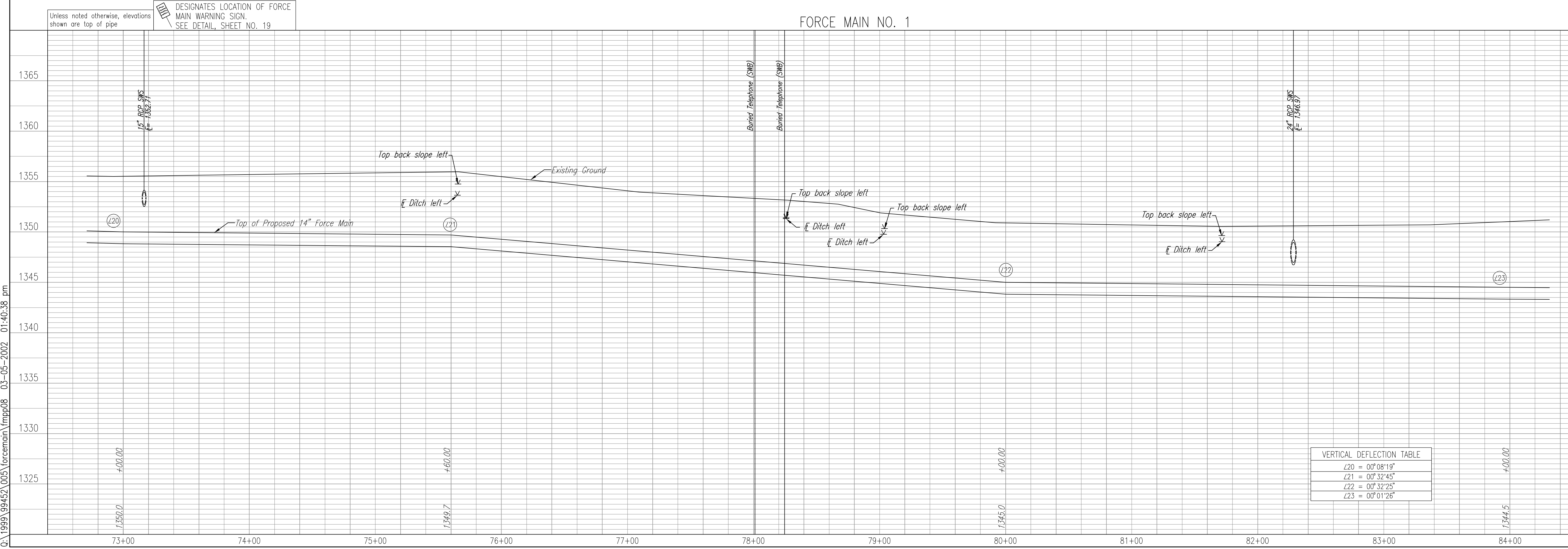
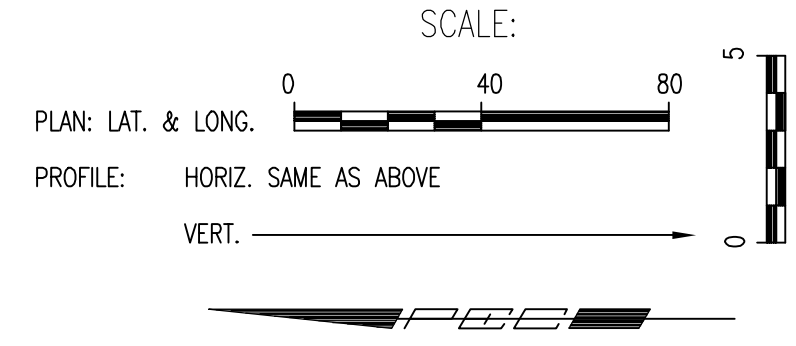
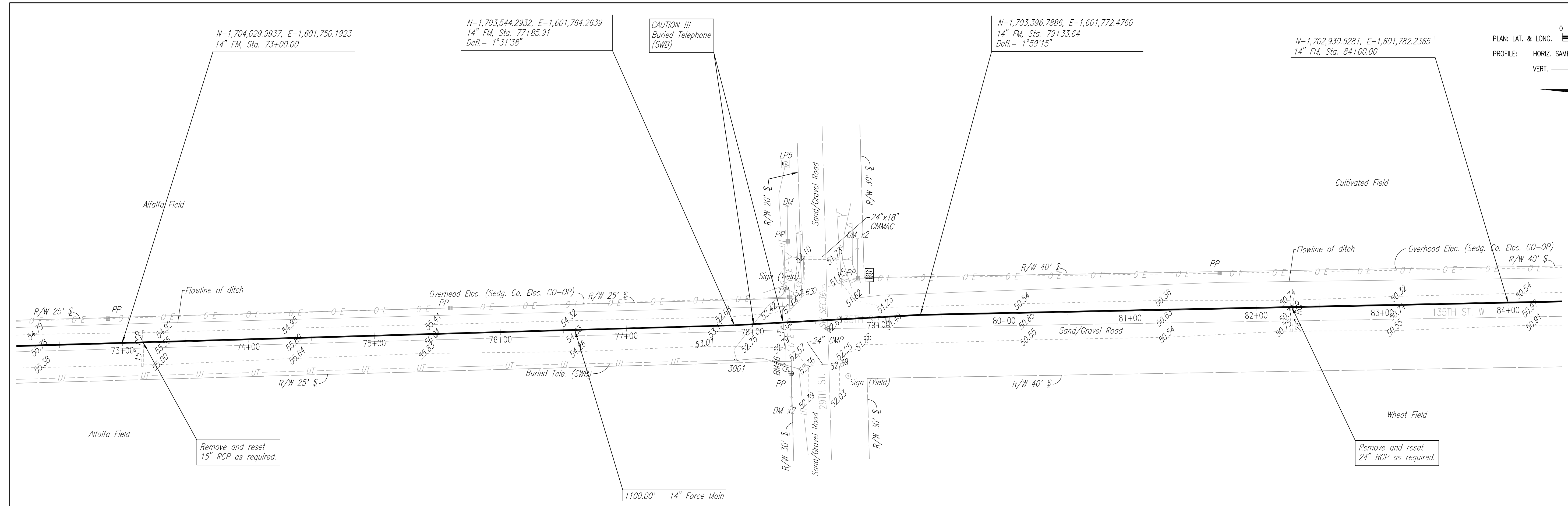
VERTICAL DEFLECTION TABLE	
∠18	= 0°11'32"
∠19	= 0°12'17"
∠20	= 0°08'19"



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PLAN	

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PROFILE	

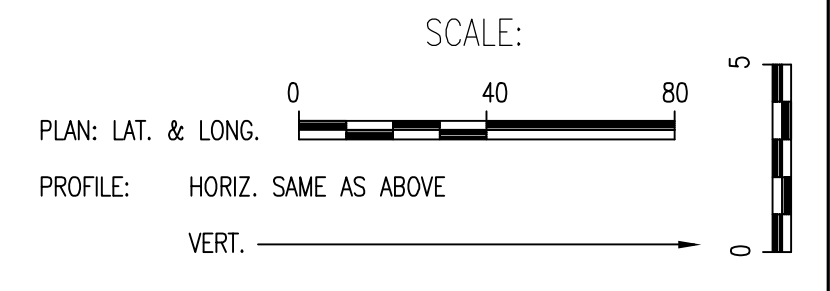
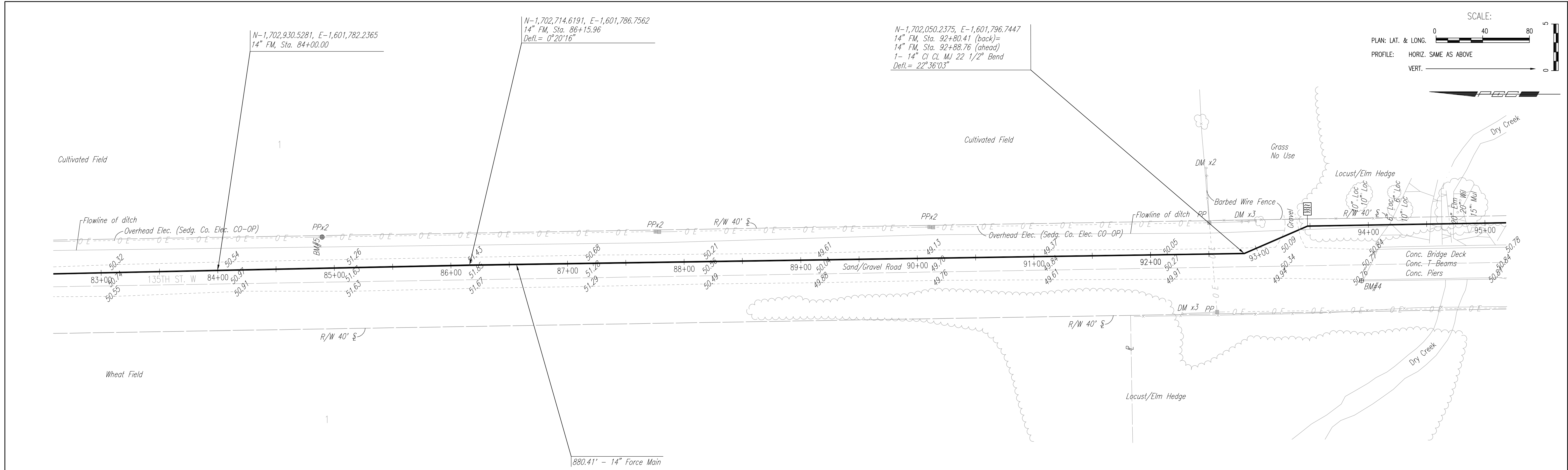
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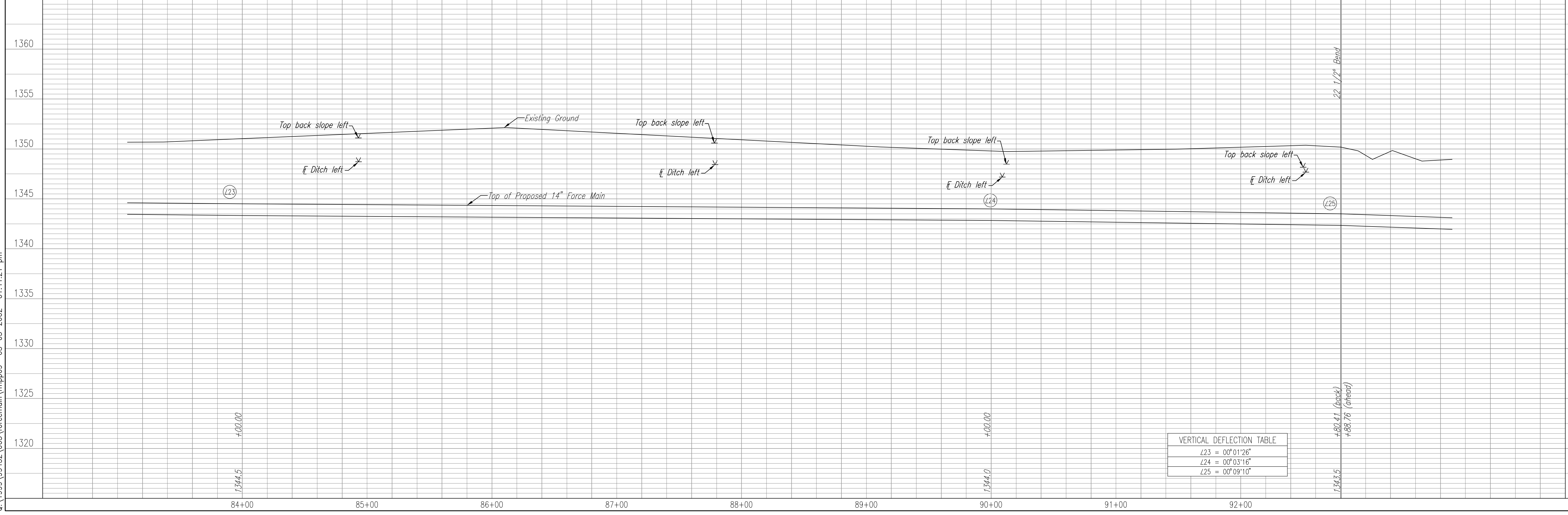
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Unless noted otherwise, elevations shown are top of pipe  
 DESIGNATES LOCATION OF FORCE MAIN WARNING SIGN. SEE DETAIL, SHEET NO. 19

FORCE MAIN NO. 1



VERTICAL DEFLECTION TABLE	
L23	= 00°01'26"
L24	= 00°03'16"
L25	= 00°09'10"

NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN

FORCE MAIN NO. 1

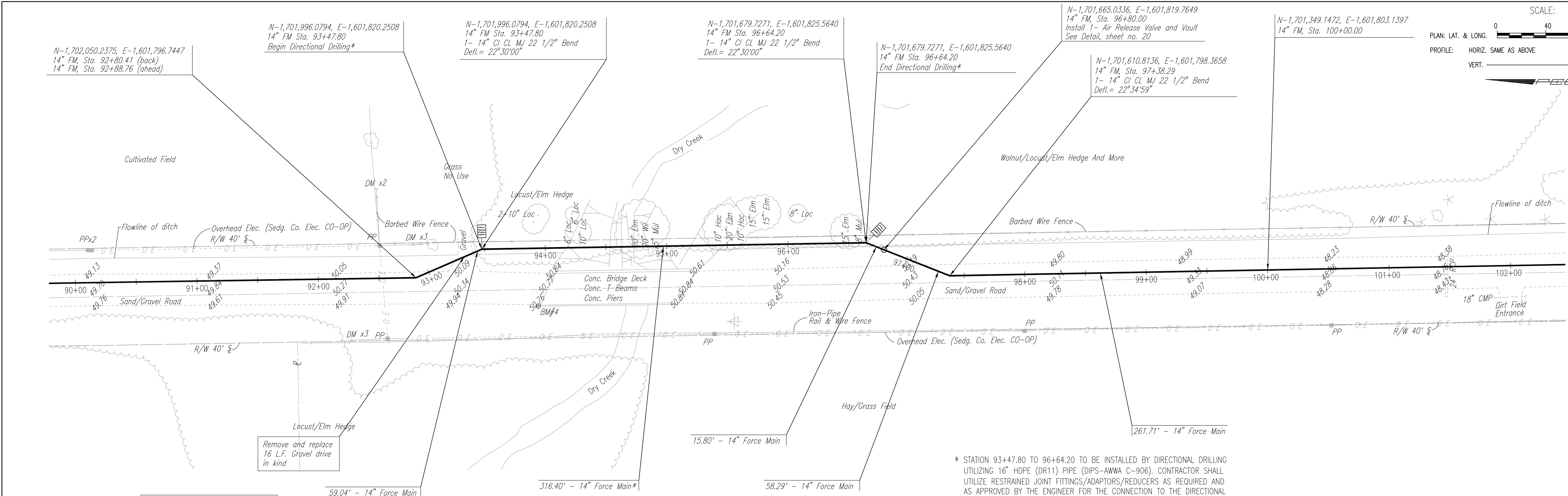
Professional Engineering Consultants, P.A.  
 303 S. TOPEKA - WICHITA, KANSAS 67202  
 316-262-2671 • FAX 316-262-3003  
 Job No. 99452-005 Date October 2001  
 Designed By MDK  
 Drawn By JCA  
 Sheet 12 of 24

MICHAEL E. LINDSEY, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 488-83134

PLAN	CHECKED	DATE
	CHECKED	

PROFILE	CHECKED	DATE
	CHECKED	

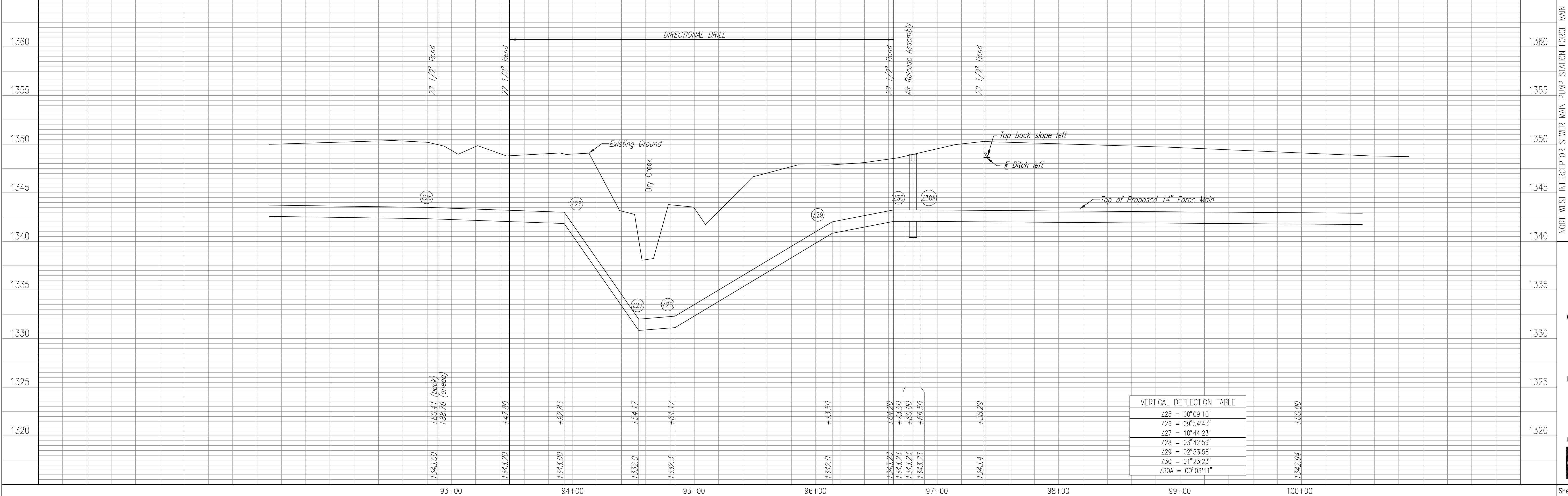
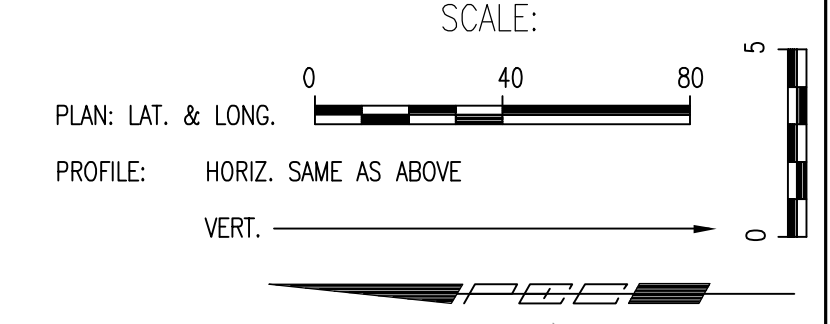
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Unless noted otherwise, elevations shown are top of pipe  
 DESIGNATES LOCATION OF FORCE MAIN WARNING SIGN. SEE DETAIL, SHEET NO. 19

FORCE MAIN NO. 1

\* STATION 93+47.80 TO 96+64.20 TO BE INSTALLED BY DIRECTIONAL DRILLING UTILIZING 16" HDPE (DR11) PIPE (DIPS-AWMA C-906). CONTRACTOR SHALL UTILIZE RESTRAINED JOINT FITTINGS/ADAPTORS/REDUCERS AS REQUIRED AND AS APPROVED BY THE ENGINEER FOR THE CONNECTION TO THE DIRECTIONAL DRILLED PIPE. 1 1/4" CONDUIT SHALL ALSO BE INSTALLED BY DIRECTIONAL DRILLING OR OTHER APPROVED TRENCHLESS METHODS.



NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN

FORCE MAIN NO. 1

Professional Engineering Consultants, P.A.  
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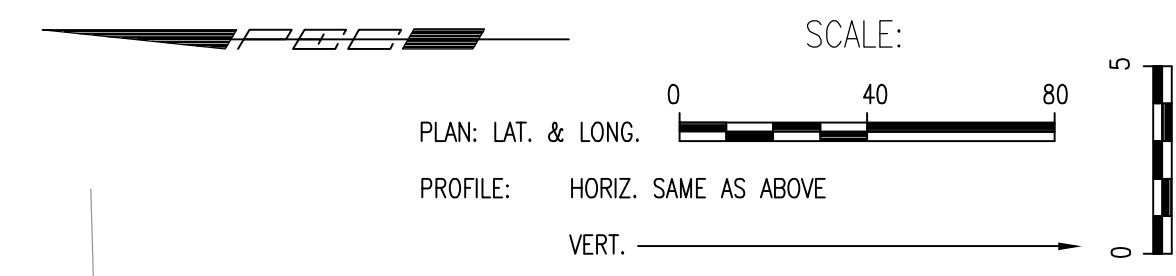
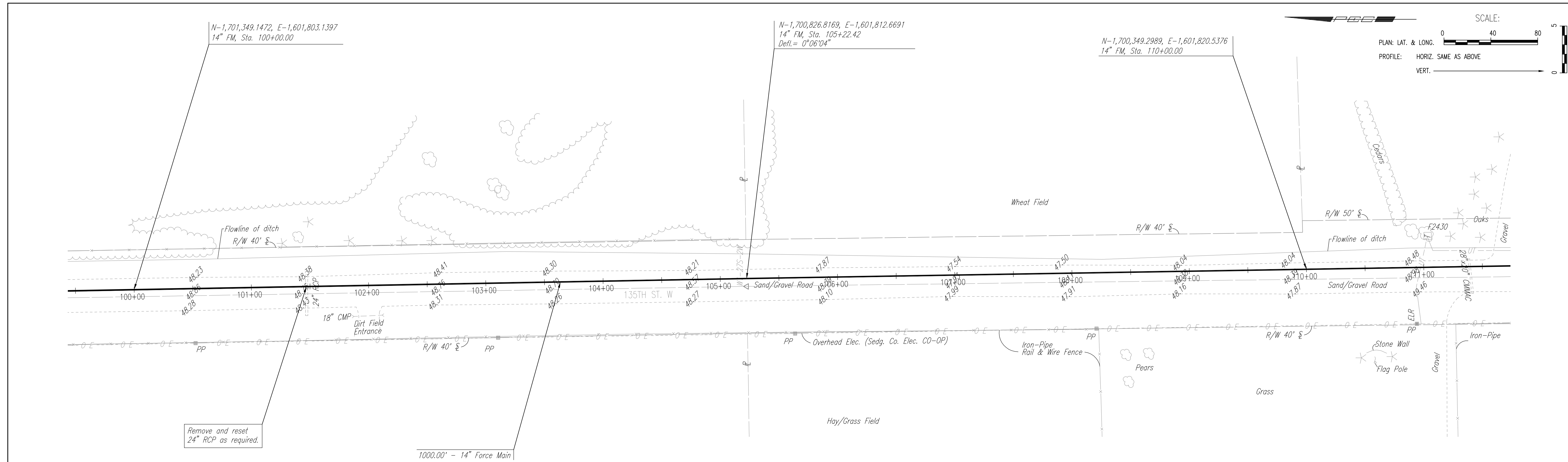
Designed By: MDK  
 Drawn By: JGA  
 Job No.: 99452-005  
 Date: October 2001

MICHAEL E. UNDEBAK P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 468-83134

PLAN	CHECKED	DATE
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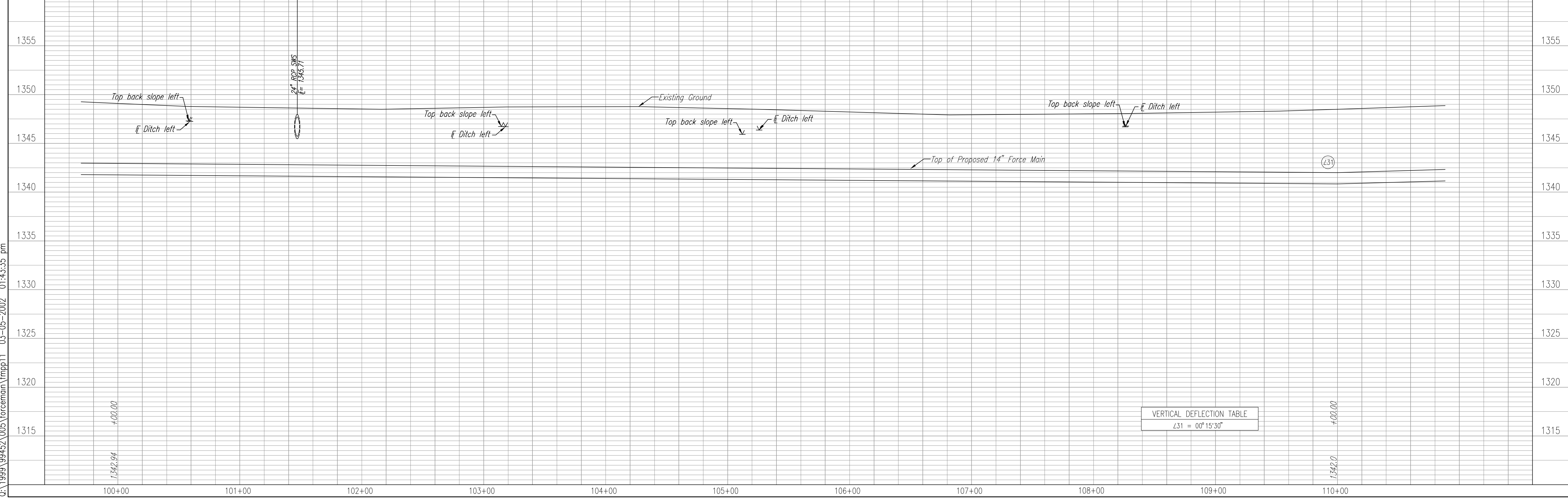
PROFILE	CHECKED	DATE
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Unless noted otherwise, elevations shown are top of pipe

FORCE MAIN NO. 1



NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN

Professional Engineering Consultants, P.A.  
 303 S. TOPEKA • WICHITA, KANSAS 67202  
 316-262-2691 • FAX 316-262-3003

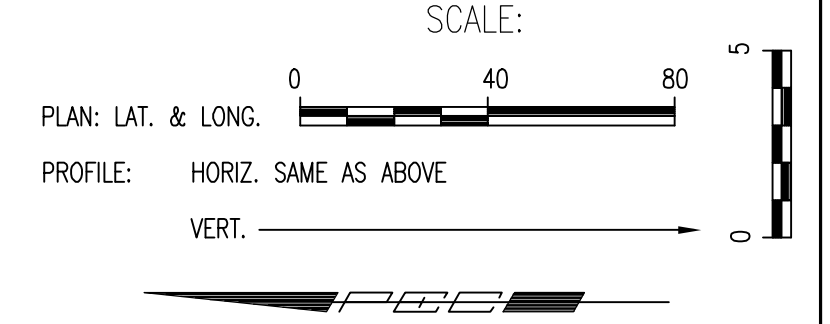
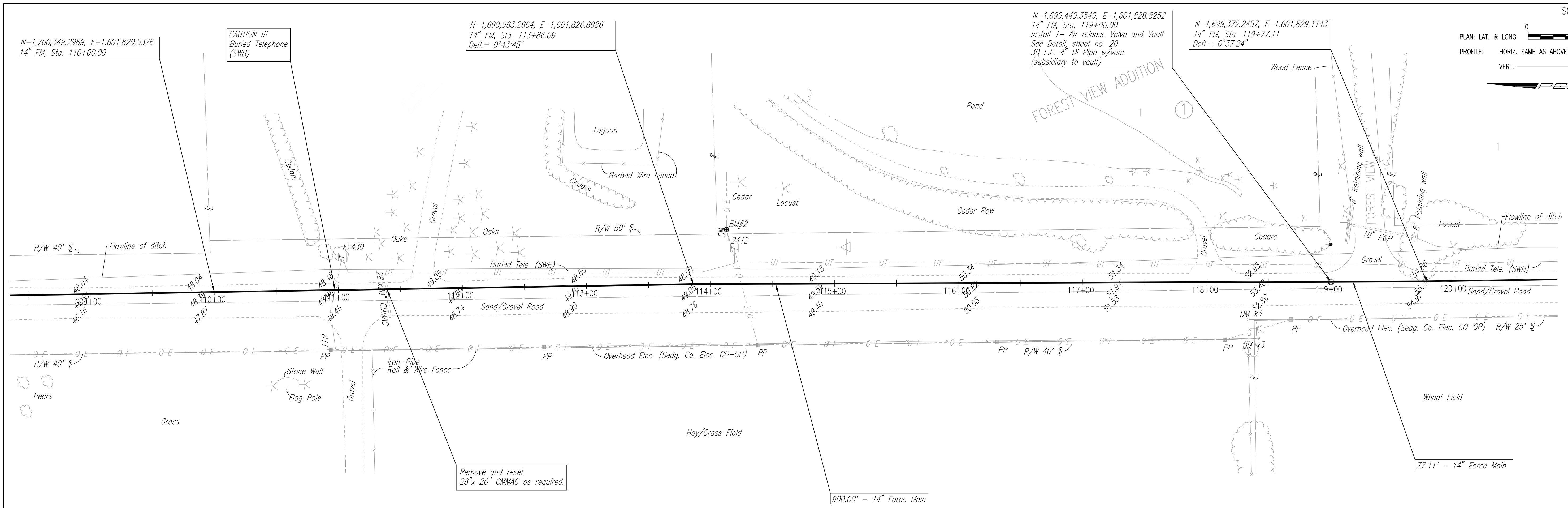
Designed By: MDK  
 Drawn By: JCA

Job No. 99452-005  
 Date October 2001

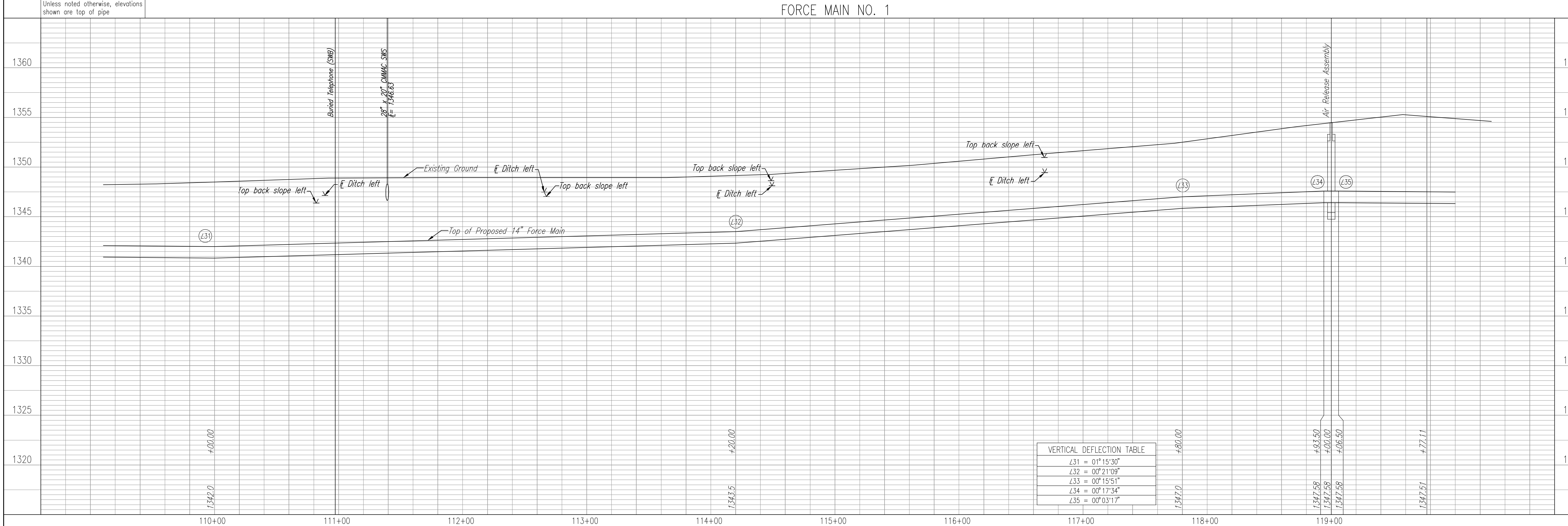
MICHAEL E. UNDERK, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 488-8135

Sheet 14 of 24

BY	DATE
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PLAN	



BY	DATE
CHECKED	CHECKED
PROFILE	



DSNR: MDK OPER: JGA SCALE: 1=40.00  
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NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN  
**FORCE MAIN NO. 1**  
 MICHAEL E. UNDEBAK, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 468-83134

Professional Engineering Consultants, P.A.  
 303 S. DOCKEN AVENUE, WICHITA, KANSAS 67202  
 316-262-2691 • FAX 316-265-3668

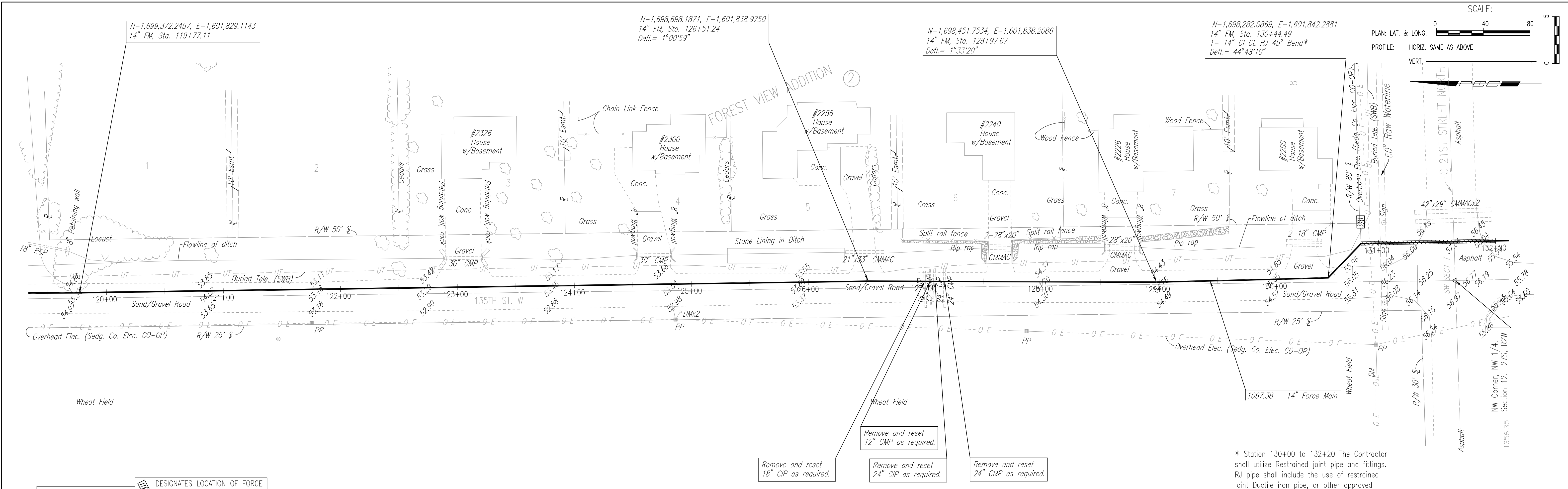
Designed By: MDK  
 Drawn By: JGA  
 Job No.: 99452-005  
 Date: October 2001

Sheet 15 of 24

PLAN	CHECKED	CHECKED
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DATE		

PROFILE	CHECKED	CHECKED
BY		
DATE		

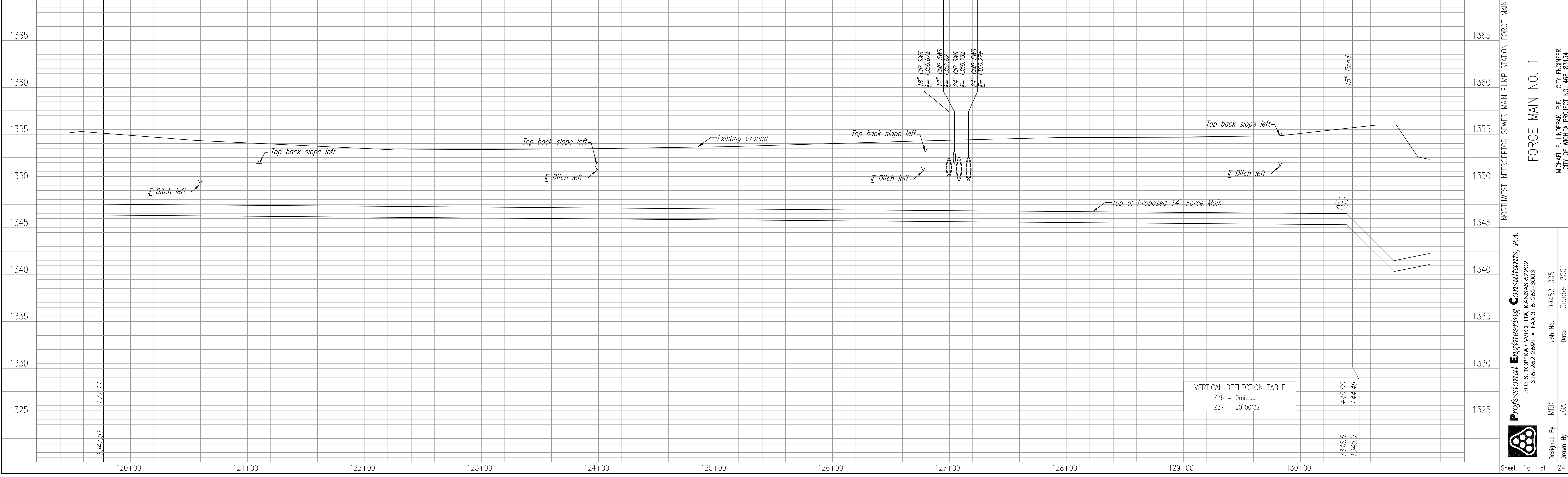
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Unless noted otherwise, elevations shown are top of pipe  
 DESIGNATES LOCATION OF FORCE MAIN WARNING SIGN. SEE DETAIL, SHEET NO. 19

FORCE MAIN NO. 1

\* Station 130+00 to 132+20 The Contractor shall utilize Restrained joint pipe and fittings. RJ pipe shall include the use of restrained joint Ductile iron pipe, or other approved methods of restraint.



VERTICAL DEFLECTION TABLE

136	= Omitted
137	= 00°00'32"

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 303 S. TOPEKA - WICHITA, KANSAS 67202  
 316-262-2691 • FAX 316-262-3003

Designed By: MDK  
 Drawn By: JGA

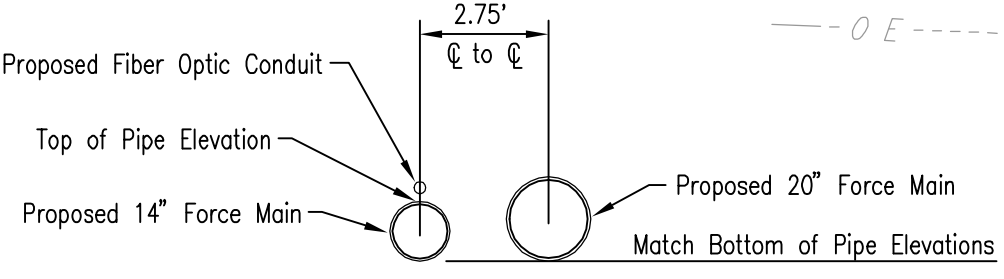
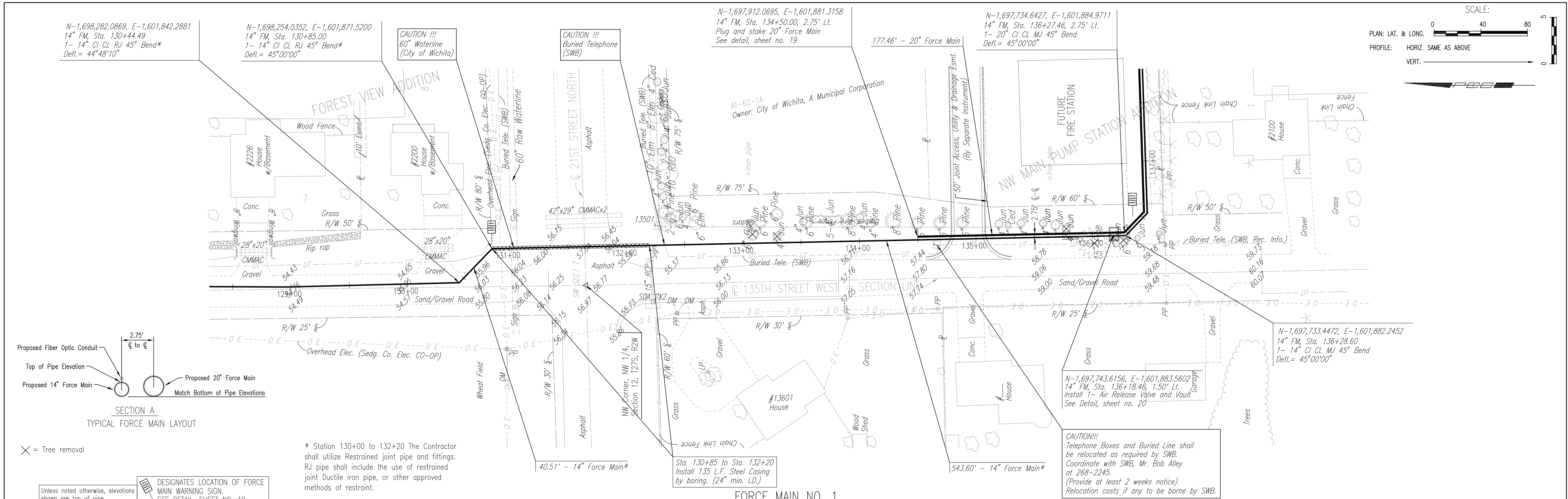
Job No.: 99452-005  
 Date: October 2001

NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN  
 FORCE MAIN NO. 1  
 MICHAEL E. MURPHY, P.E., CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 448-83134

DATE	
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PLAN	

DATE	
BY	
CHECKED	CHECKED
PROFILE	

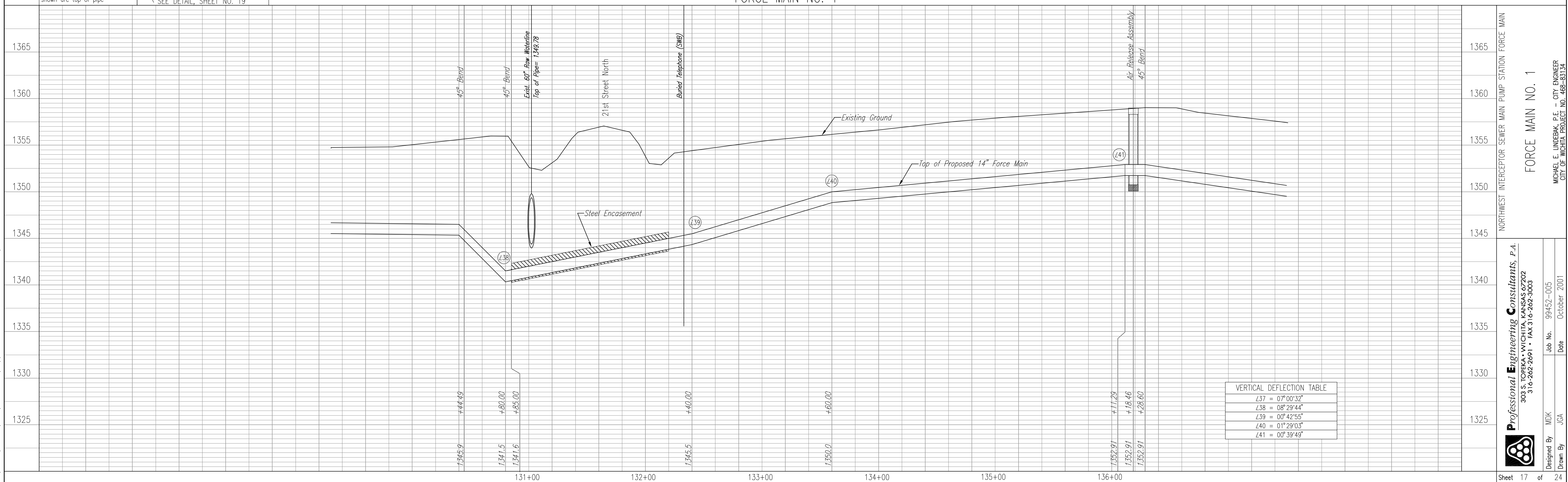
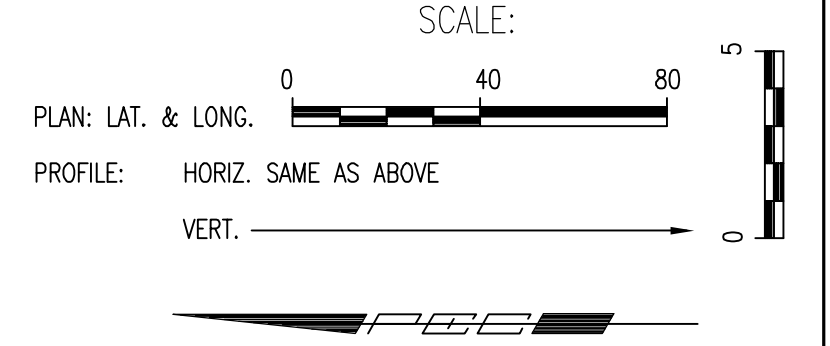
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✕ = Tree removal

\* Station 130+00 to 132+20 The Contractor shall utilize Restrained joint pipe and fittings. RJ pipe shall include the use of restrained joint Ductile iron pipe, or other approved methods of restraint.

Unless noted otherwise, elevations shown are top of pipe  
 DESIGNATES LOCATION OF FORCE MAIN WARNING SIGN. SEE DETAIL, SHEET NO. 19

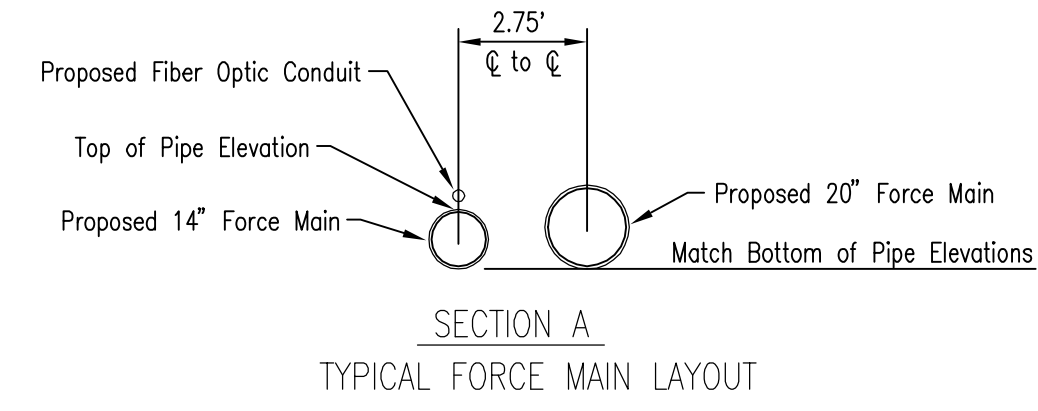
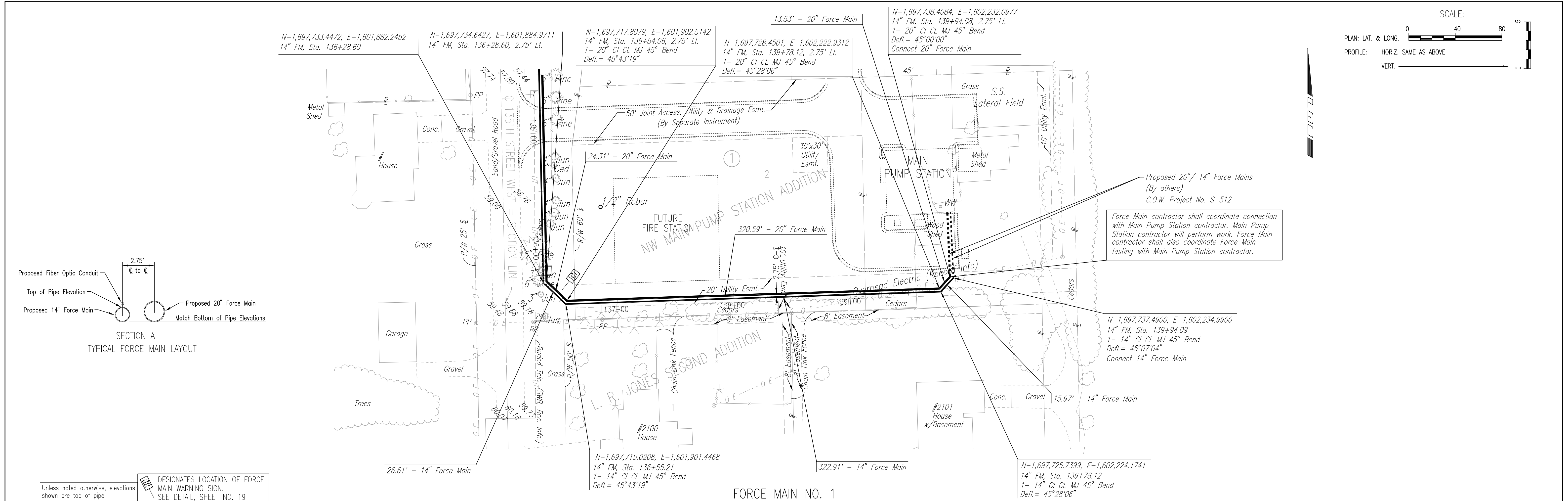


NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN  
**FORCE MAIN NO. 1**  
 MICHAEL E. UNDERAK, P.E. - CITY ENGINEER  
 CITY OF WICHITA, PROJECT NO. 468-83134  
 Professional Engineering Consultants, P.A.  
 303 S. TOPEKA - WICHITA, KANSAS 67202  
 316-262-2691 - FAX 316-262-3003  
 Designed By: MDK  
 Drawn By: JGA  
 Job No.: 99452-005  
 Date: October 2001  
 Sheet 17 of 24

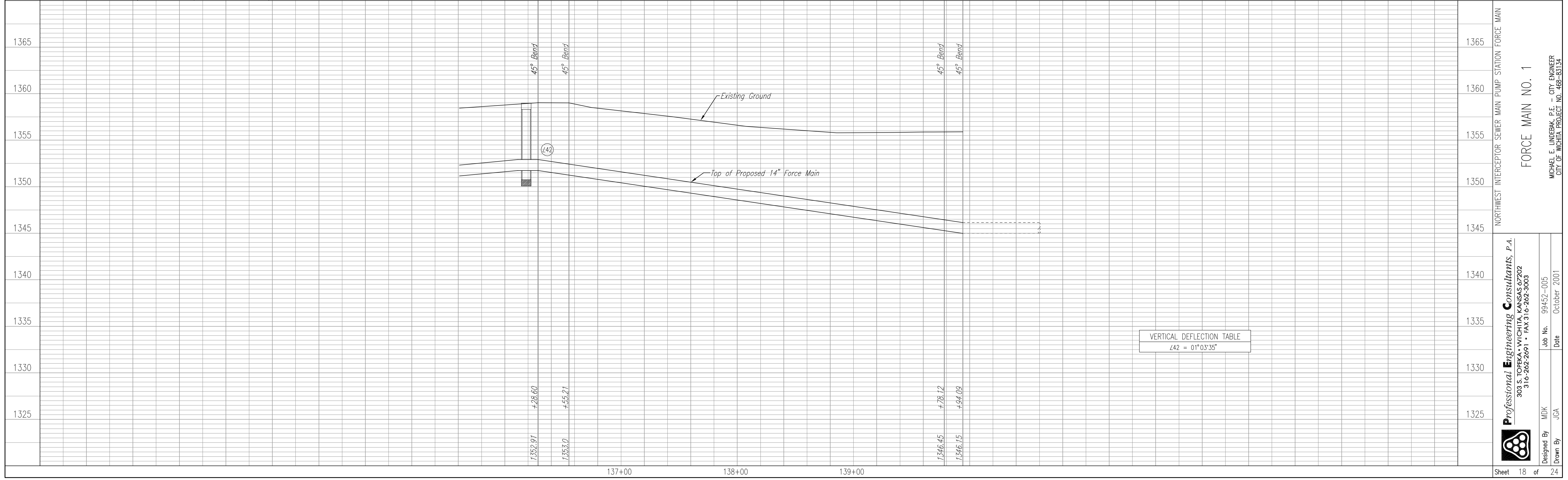
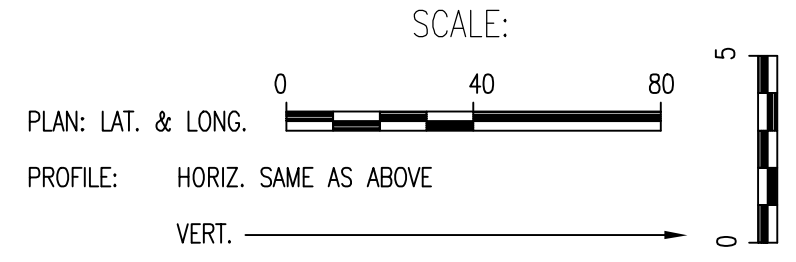
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DSNR: MDK OPER: JCA SCALE: 1"=40.00  
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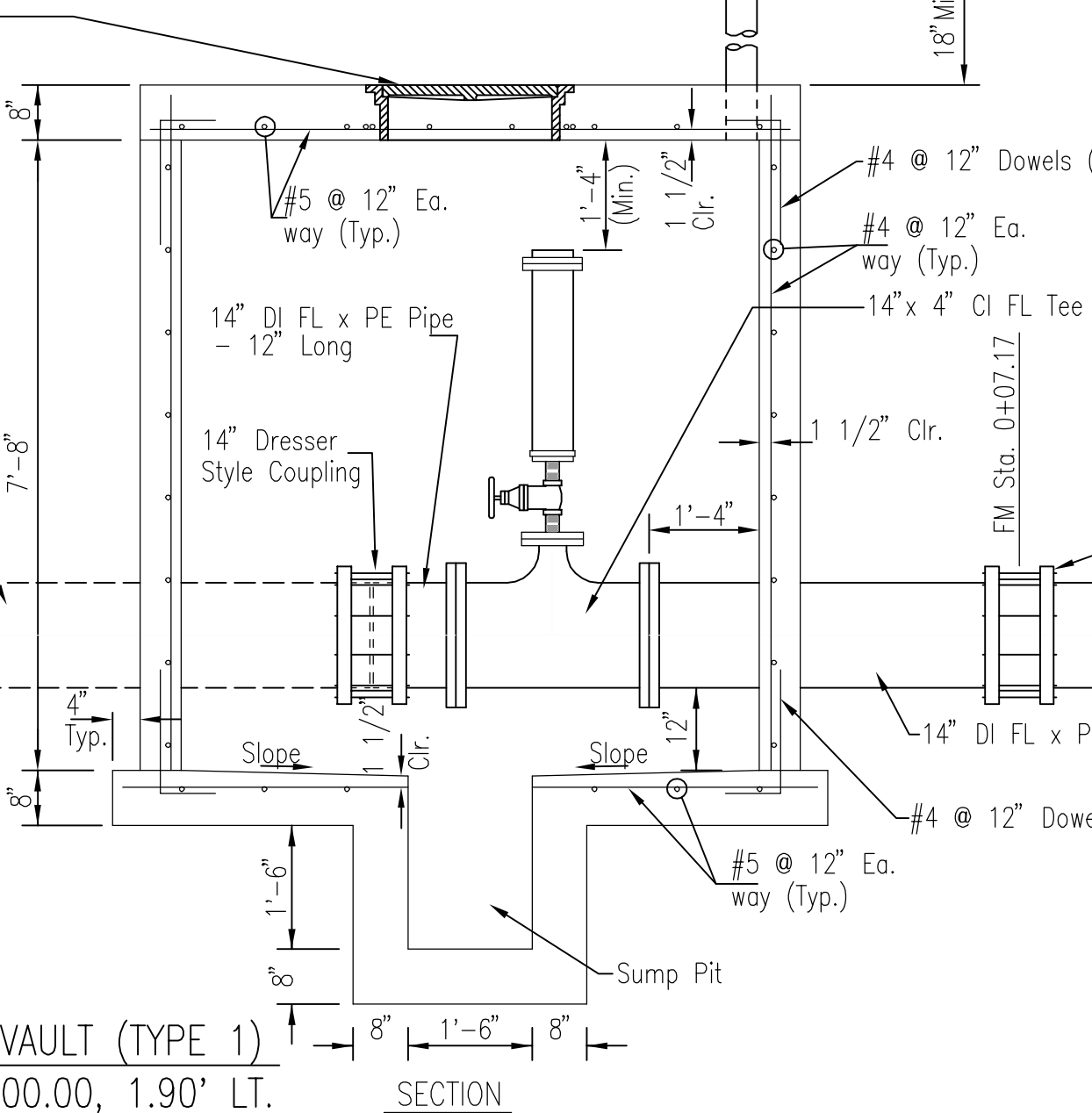
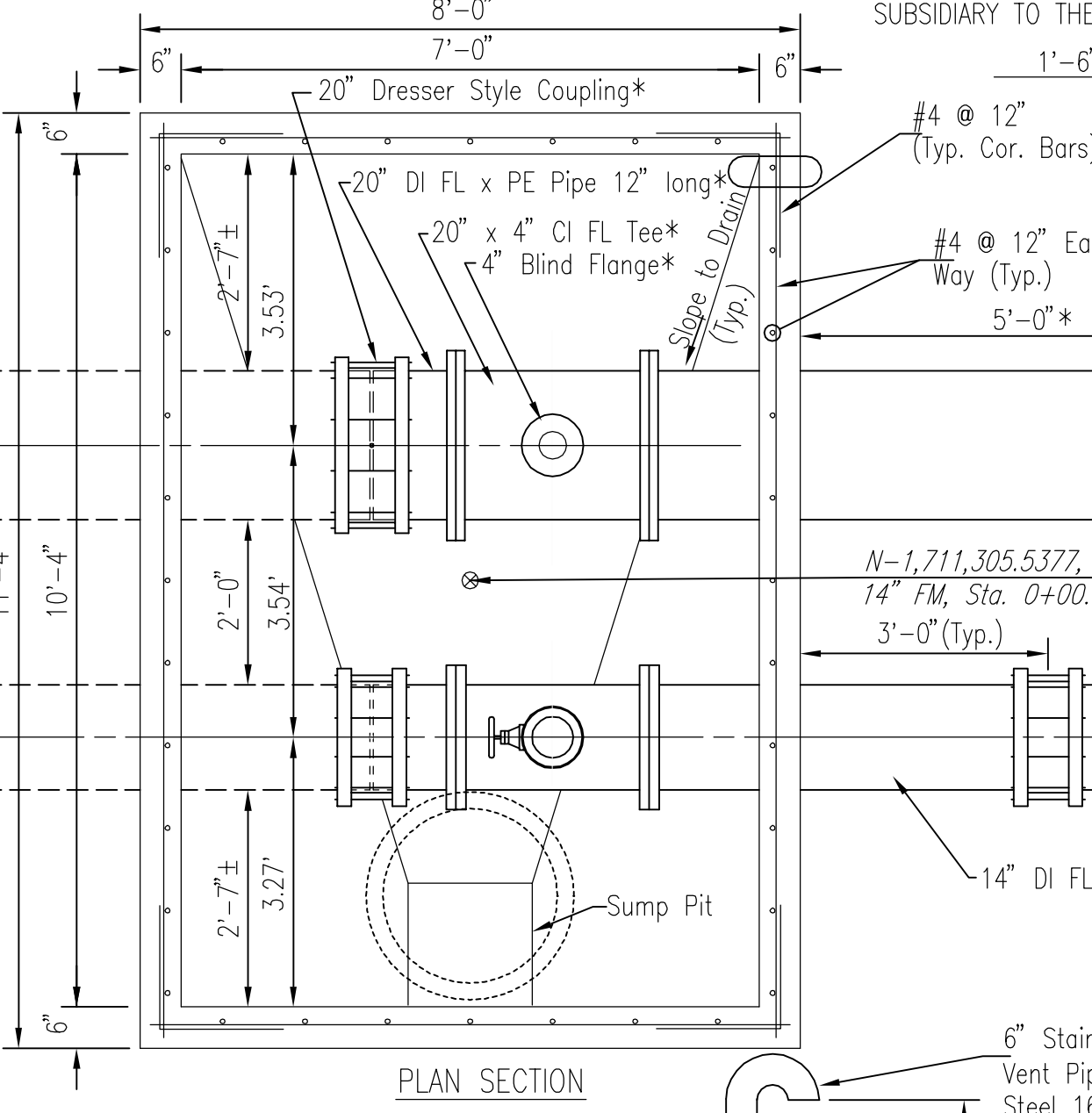
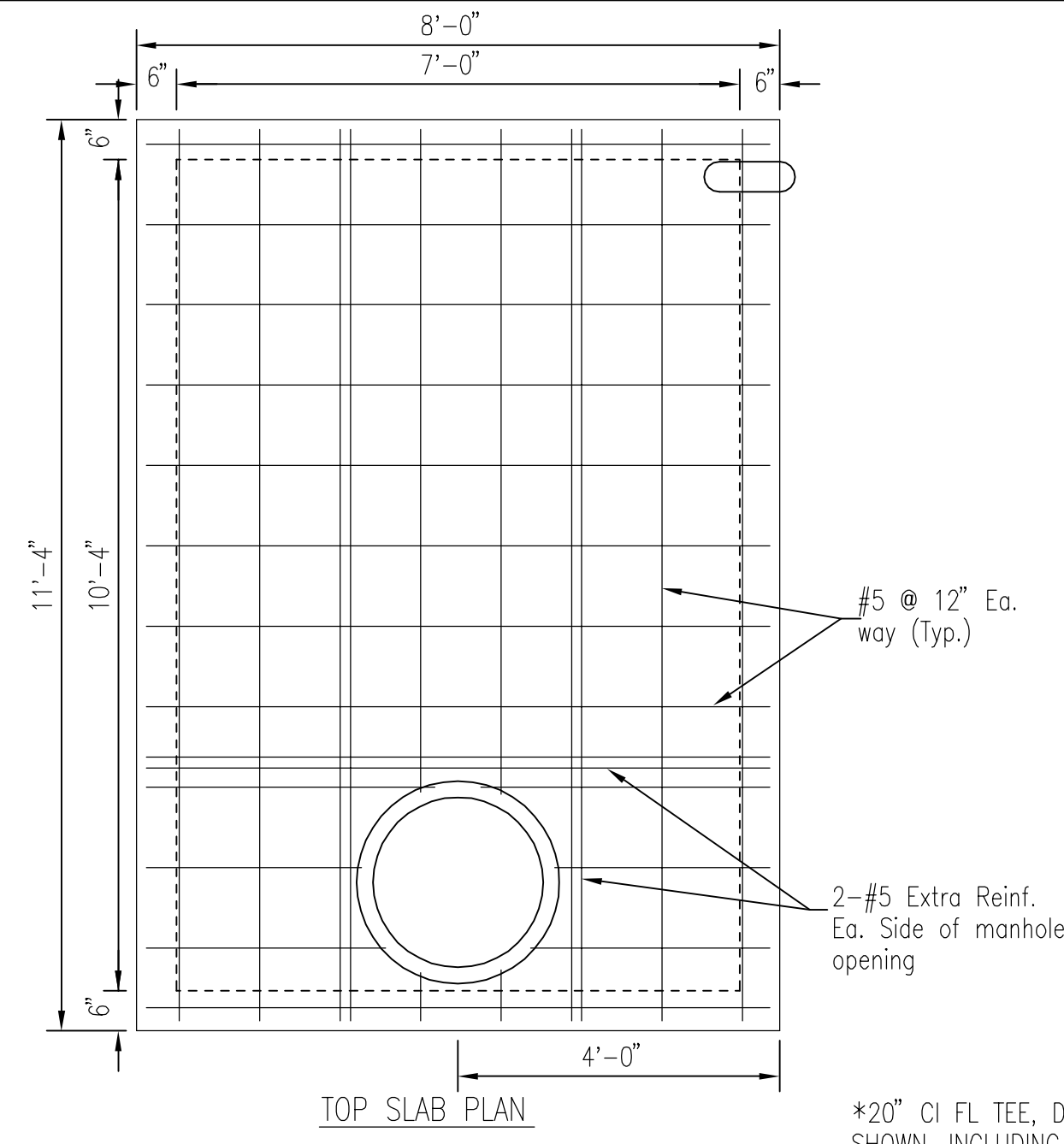


Unless noted otherwise, elevations shown are top of pipe  
 DESIGNATES LOCATION OF FORCE MAIN WARNING SIGN. SEE DETAIL, SHEET NO. 19

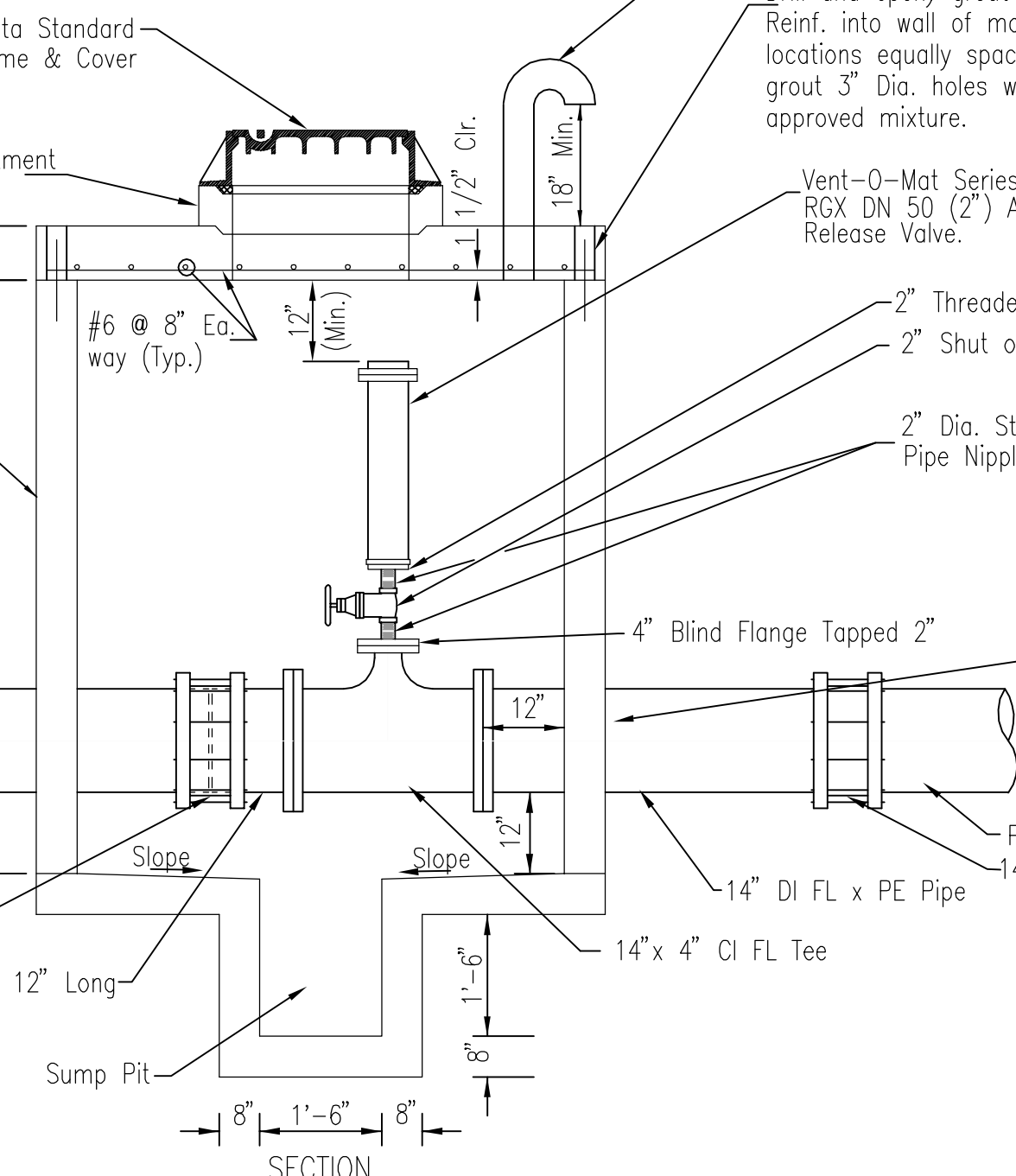
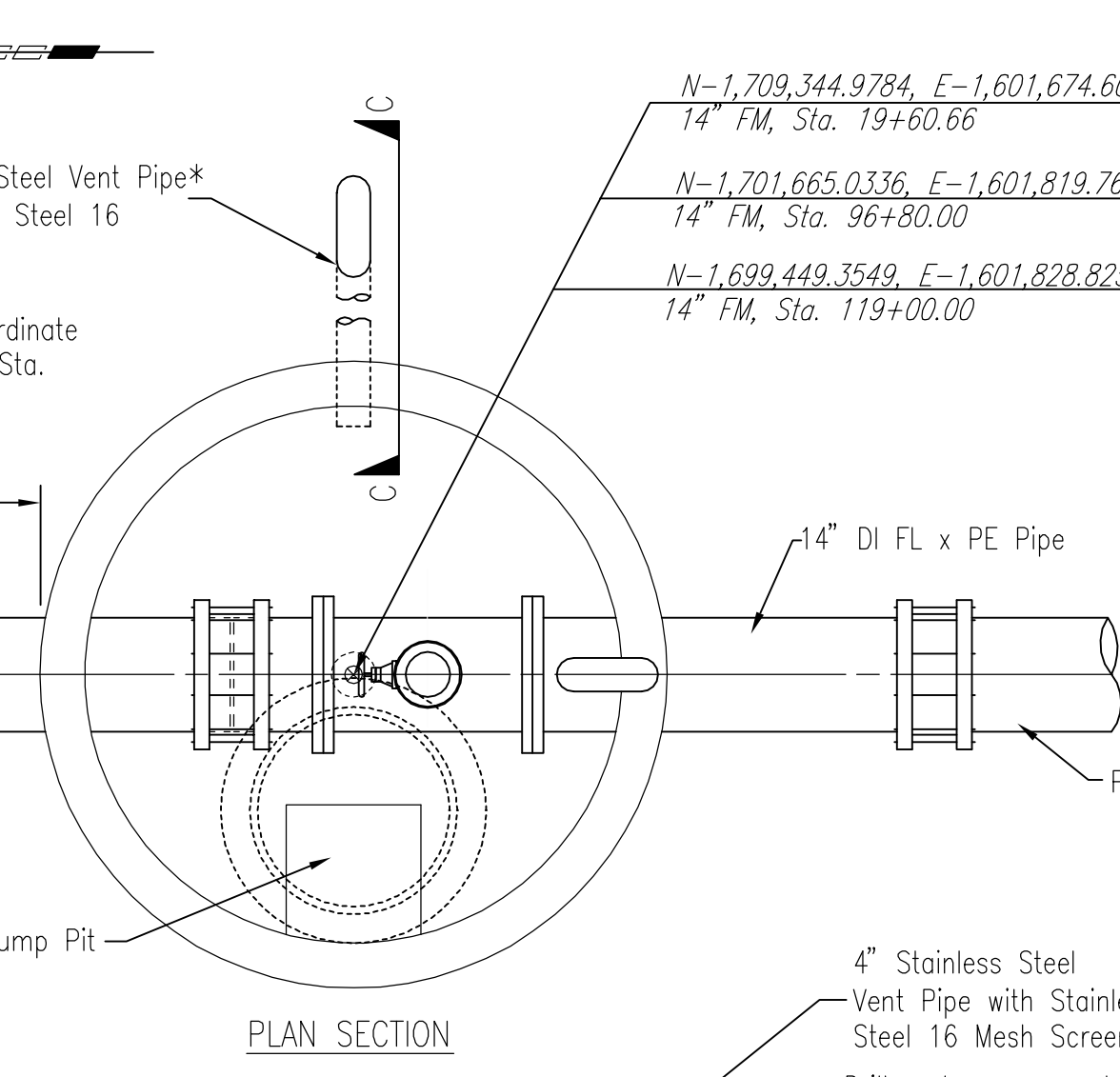
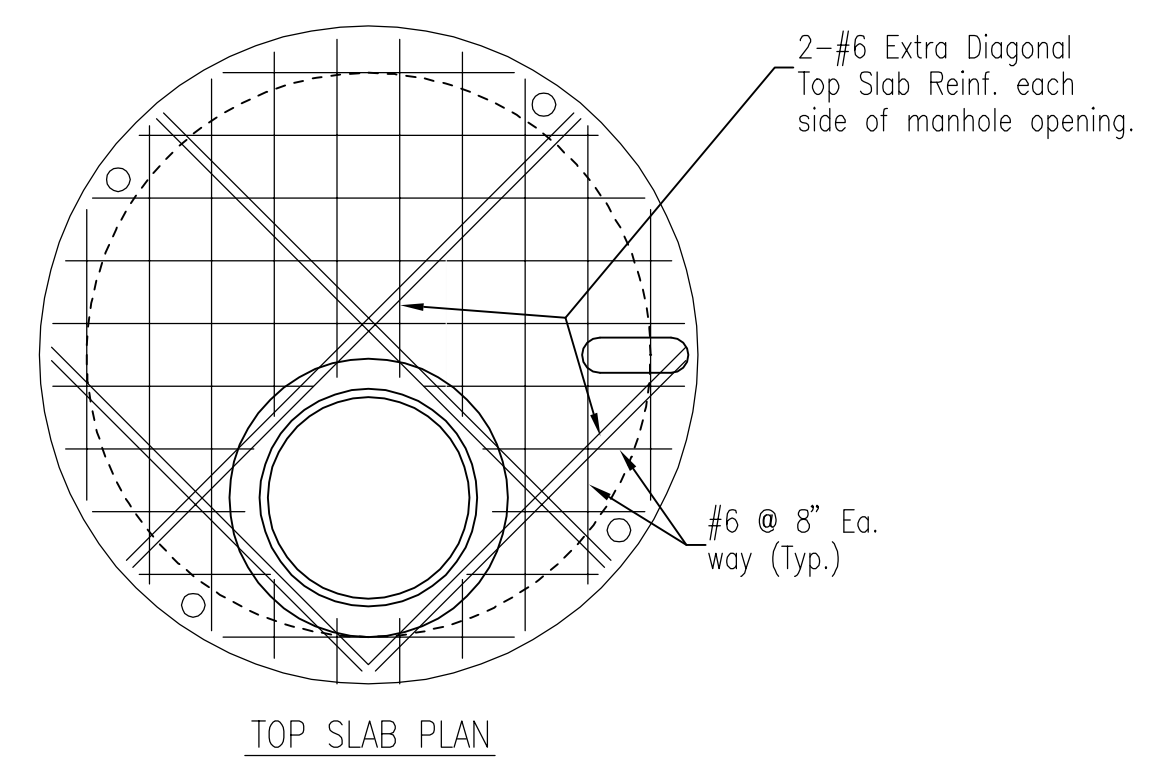


VERTICAL DEFLECTION TABLE  
 142 = 01°03'35"

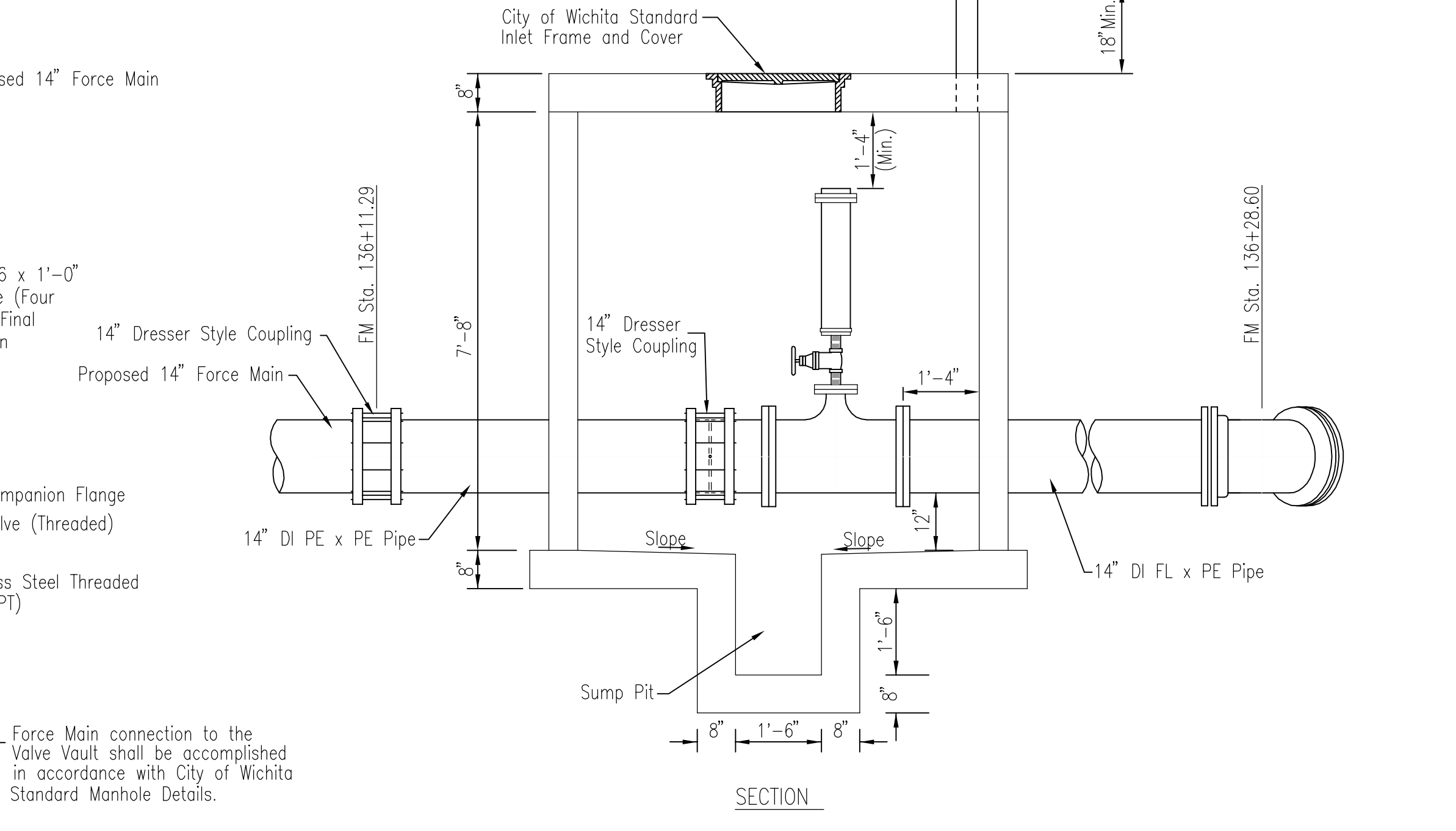
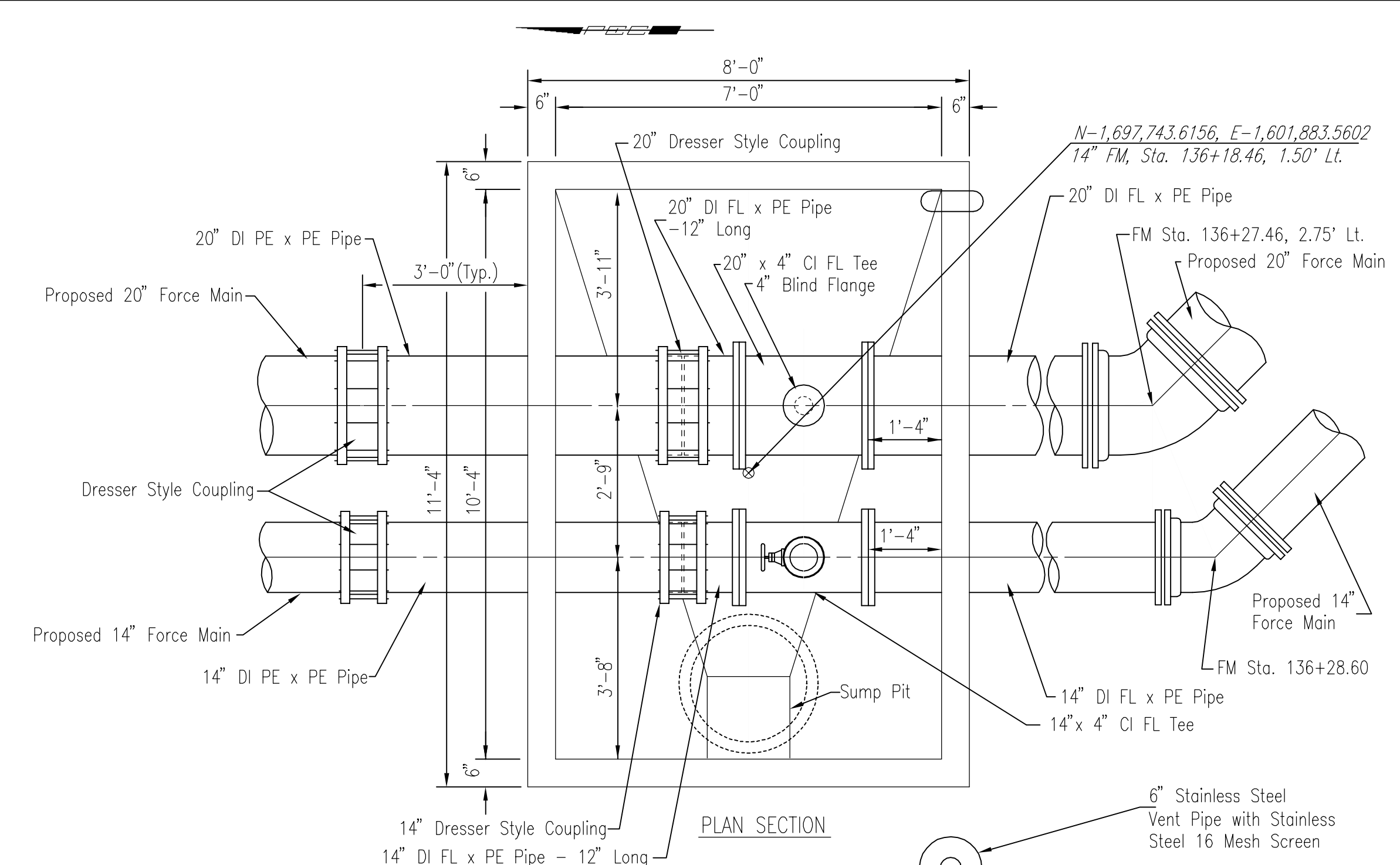
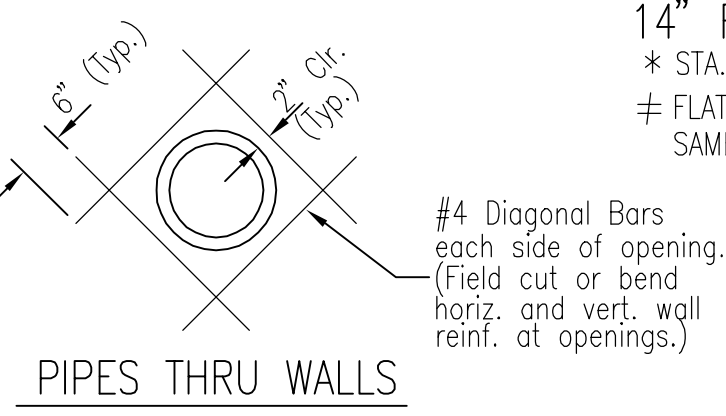
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**AIR RELEASE VALVE AND VAULT (TYPE 1)**  
 14" FORCE MAIN, STA. 0+00.00, 1.90' LT.



**AIR RELEASE VALVE AND VAULT (TYPE 2)**  
 14" FORCE MAIN, STA. 19+60.66 #  
 14" FORCE MAIN, STA. 96+80.00 #  
 14" FORCE MAIN, STA. 119+00.00  
 \* STA. 119+00.00 ONLY  
 # FLAT TOP SLAB MANHOLE, FRAME AND COVER  
 SAME AS STA. 0+00.00



**AIR RELEASE VALVE AND VAULT (TYPE 3)**  
 14" FORCE MAIN, STA. 136+18.46, 1.50' LT.  
 SEE VAULT DETAIL STA. 0+00.00 FOR  
 VAULT REINFORCING (THIS SHEET)

NOTE: THE PRICE BID FOR TYPE 1, TYPE 2, OR TYPE 3 AIR RELEASE VALVE AND VAULT SHALL INCLUDE THE AIR RELEASE VALVE, VENT PIPE, MANHOLE FRAME AND COVER, CONCRETE, AND REINFORCING STEEL. ALL DUCTILE IRON PIPE AND FITTINGS SHOWN, INCLUDING COUPLINGS SHALL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR PIPE, UNLESS OTHERWISE NOTED.

No.	Revision	By	Date
NORTHWEST INTERCEPTOR SEWER MAIN PUMP STATION FORCE MAIN			
<b>AIR RELEASE VALVE VAULT DETAILS</b>			
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-83134			
<b>Professional Engineering Consultants, P.A.</b> 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	MDK	Job No.	99452-005
Drawn by	JGA	Date	October 2001
			Sht. 20 of 24