

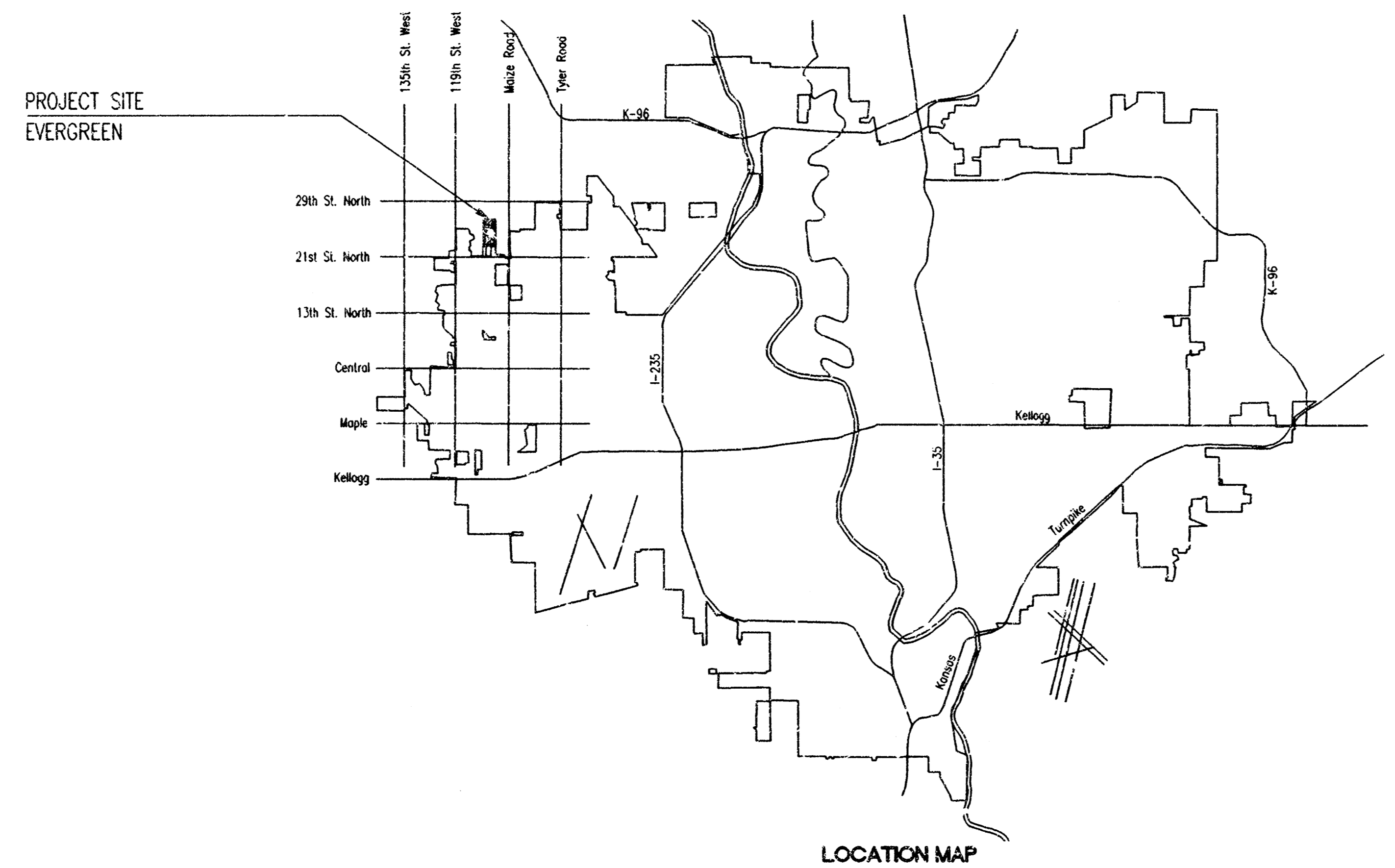
CONSTRUCTION PLANS FOR LIFT STATION AND FORCE MAIN TO SERVE EVERGREEN

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

IN

THE CITY OF WICHITA, SEDGWICK COUNTY, KANSAS

MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER



INDEX OF SHEETS

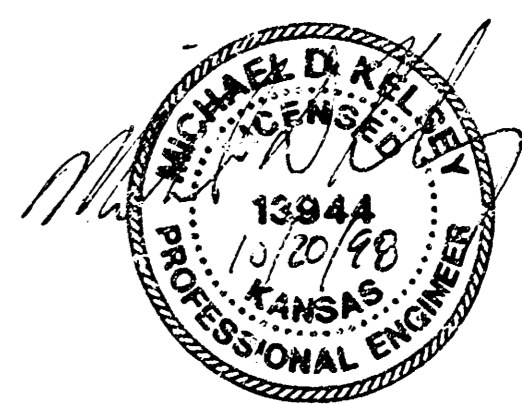
SHEET NO. 1	TITLE SHEET
SHEET NO. 2	KEY MAP AND GENERAL NOTES
SHEET NO. 3-4	PLATS
SHEET NO. 5-6	PLAN/PROFILE
SHEET NO. 7	LIFT STATION DETAILS
SHEET NO. 8	LIFT STATION ELECTRICAL
SHEET NO. 9	MISCELLANEOUS DETAILS
SHEET NO. 10	TYPE "P" MANHOLE DETAILS

INDEX CODE 743708
CITY OF WICHITA PROJECT NO. 468-76-245-82906-000-000-001

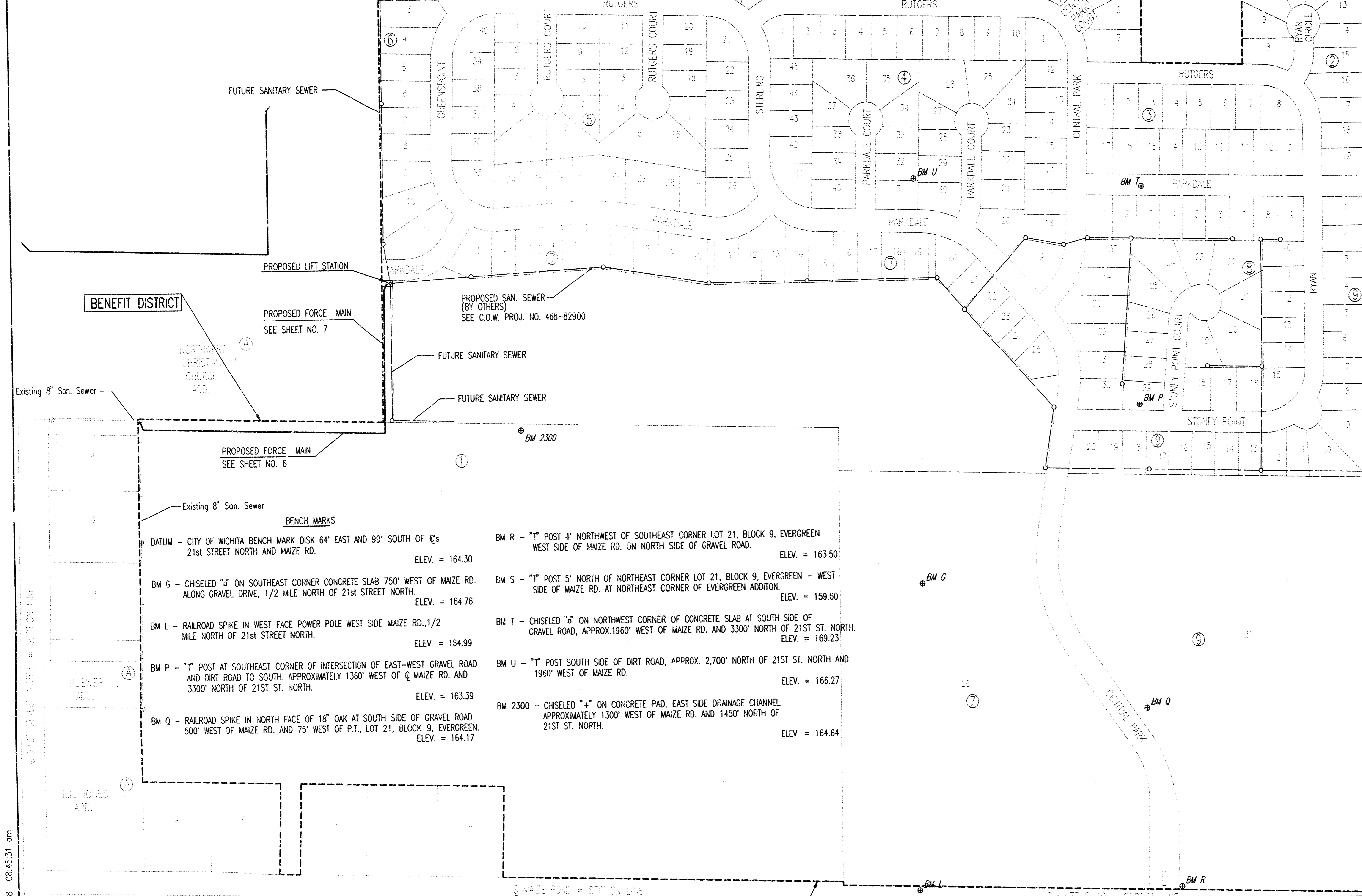
OCTOBER 1998

PLANS PREPARED BY
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

BOOKED
6-10-99
P-80
RDL



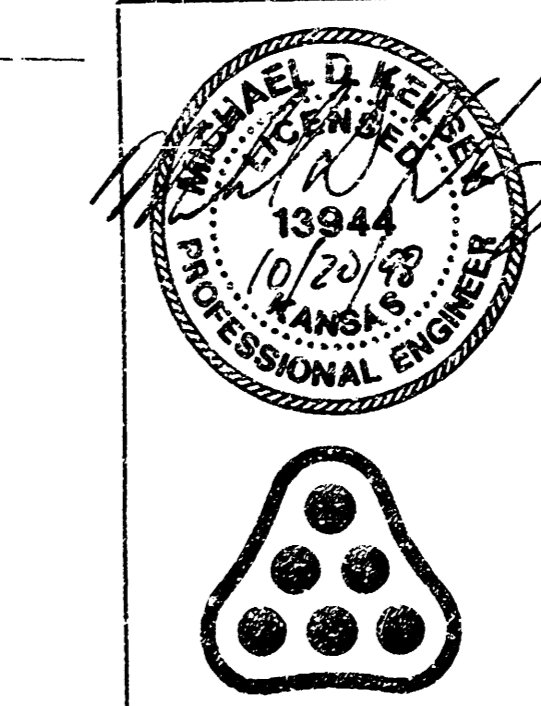
1" = 150'



- BENCH MARKS**
- DATUM - CITY OF WICHITA BENCH MARK DISK 64' EAST AND 90' SOUTH OF @s 21st STREET NORTH AND MAIZE RD. ELEV. = 164.30
 - BM G - CHISELED "G" ON SOUTHEAST CORNER CONCRETE SLAB 750' WEST OF MAIZE RD. ALONG GRAVEL DRIVE, 1/2 MILE NORTH OF 21st STREET NORTH. ELEV. = 164.76
 - BM L - RAILROAD SPIKE IN WEST FACE POWER POLE WEST SIDE MAIZE RD., 1/2 MILE NORTH OF 21st STREET NORTH. ELEV. = 164.99
 - BM P - "T" POST AT SOUTHEAST CORNER OF INTERSECTION OF EAST-WEST GRAVEL ROAD AND DIRT ROAD TO SOUTH APPROXIMATELY 1360' WEST OF @ MAIZE RD. AND 3300' NORTH OF 21ST ST. NORTH. ELEV. = 163.39
 - BM Q - RAILROAD SPIKE IN NORTH FACE OF 16" OAK AT SOUTH SIDE OF GRAVEL ROAD 500' WEST OF MAIZE RD. AND 75' WEST OF P.T., LOT 21, BLOCK 9, EVERGREEN. ELEV. = 164.17
 - BM R - "T" POST 4' NORTHWEST OF SOUTHEAST CORNER LOT 21, BLOCK 9, EVERGREEN WEST SIDE OF MAIZE RD. ON NORTH SIDE OF GRAVEL ROAD. ELEV. = 163.50
 - BM S - "T" POST 5' NORTH OF NORTHEAST CORNER LOT 21, BLOCK 9, EVERGREEN - WEST SIDE OF MAIZE RD. AT NORTHEAST CORNER OF EVERGREEN ADDITION. ELEV. = 159.60
 - BM T - CHISELED "T" ON NORTHWEST CORNER OF CONCRETE SLAB AT SOUTH SIDE OF GRAVEL ROAD, APPROX. 1960' WEST OF MAIZE RD. AND 3300' NORTH OF 21ST ST. NORTH. ELEV. = 169.23
 - BM U - "T" POST SOUTH SIDE OF DIRT ROAD, APPROX. 2,700' NORTH OF 21ST ST. NORTH AND 1960' WEST OF MAIZE RD. ELEV. = 166.27
 - BM 2300 - CHISELED "+" ON CONCRETE PAD, EAST SIDE DRAINAGE CHANNEL, APPROXIMATELY 1300' WEST OF MAIZE RD. AND 1450' NORTH OF 21ST ST. NORTH. ELEV. = 164.64

- GENERAL NOTES
- ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS AS WELL AS ANY SPECIAL PROVISIONS MADE TO THE SPECIFICATIONS AND/OR 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.
 - MANHOLES SHALL BE TYPE "P" MANHOLES. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.
 - 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. 4078 WHICH GOVERNS CLEARUP 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
 - 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 ADJACENT OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
 - ALL APPROVED EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE STOCKPILED WITHIN EVERGREEN AT NO ADDITIONAL COST TO THE OWNER. STOCKPILE LOCATIONS SHALL BE AS DIRECTED BY MR. LARRY CHAMBERS, AT (316) 263-3201 AND IN ACCORDANCE WITH GENERAL NOTE NO. 10 ABOVE.
 - 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.

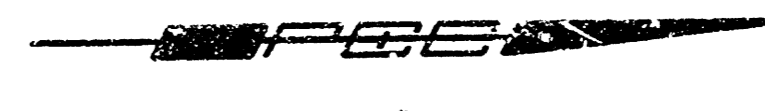
USDK: HJ OPER: JLS SCALE: 10-01-1998
 00:1998/98322/00A/KEYMAP
 1=120.00 08:45:31 am



No.	Revision	Date
LIFT STATION AND FORCE MAIN TO SERVE EVERGREEN AN ADDITION TO WICHITA, SEBOWICK COUNTY, KANSAS		
KEY MAP AND GENERAL NOTES		
MICHAEL E. LUNDEAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-76-245-82306-000-000-001		
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.		
ENGINEERS WICHITA, KANSAS		
Designed by	MDK, KJW	Job No. 34-98322-4
Drawn by	RFJ	Date August 1998
		Set 2 of 10

NEWMARKET SQUARE

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



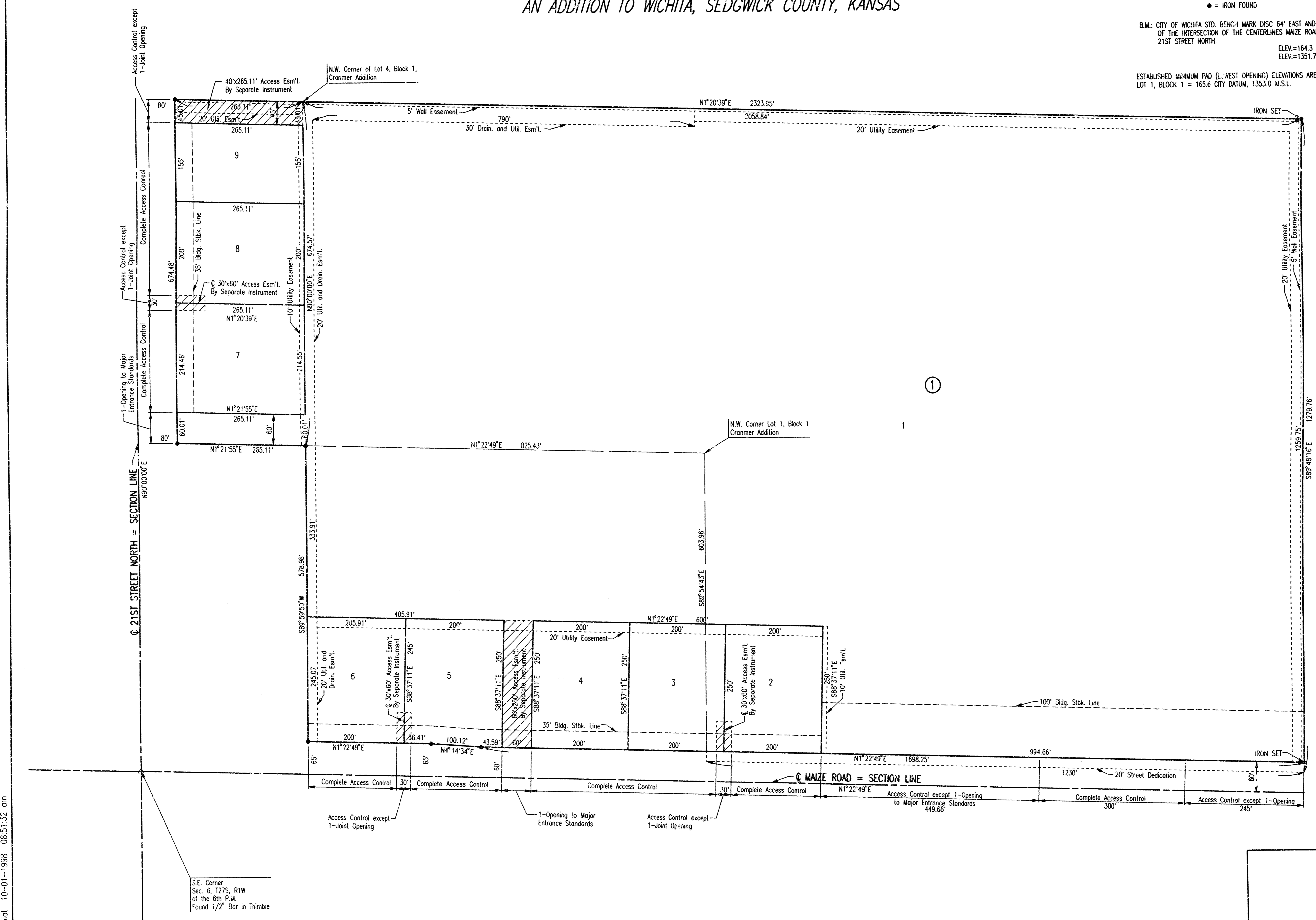
SCALE: 1"=100'

● = IRON FOUND

B.M.: CITY OF WICHITA STD. BENCH MARK DISC 64" EAST AND 99" SOUTH OF THE INTERSECTION OF THE CENTERLINES MAIZE ROAD AND 21ST STREET NORTH.

ELEV.=164.3 CITY DATUM
ELEV.=1351.7 M.S.L.

ESTABLISHED MINIMUM PAD (L.WEST OPENING) ELEVATIONS ARE AS FOLLOWS:
LOT 1, BLOCK 1 = 165.6 CITY DATUM, 1353.0 M.S.L.



DSNR: RMH OP:ER: ILS SCALE: 1"=100.00
 0:\1998\98322\004\ssplot 10-01-1998 08:51:32 am

S.E. Corner
Sec. 6, T27S, R1W
of the 6th P.M.
Found 1/2" Bar in Thimble

	NEWMARKET SQUARE PLAT MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-76-245-82906-000-000-001 PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS		
Designed by	Job No. 34-98322-4	Sht. 3 of 10	
Drawn by DEP	Date May 1998		



NE Corner, S.E. 1/4
 of the 6th P.M.
 Found 3/4" Iron Pipe
 Point of Beginning

N.E. Corner
 Neunhardt Square Add.
 Found 3/4" IP

S.E. Corner
 S.E. 1/4 S. RW
 of the 6th P.M.
 Found 1/2" Bar in Thimble

NW Corner
 Neunhardt Square Add.
 Found 3/4" IP

NW Corner, S.E. 1/4
 of the 6th P.M.
 Found 3/4" Iron Pipe
 Point of Beginning

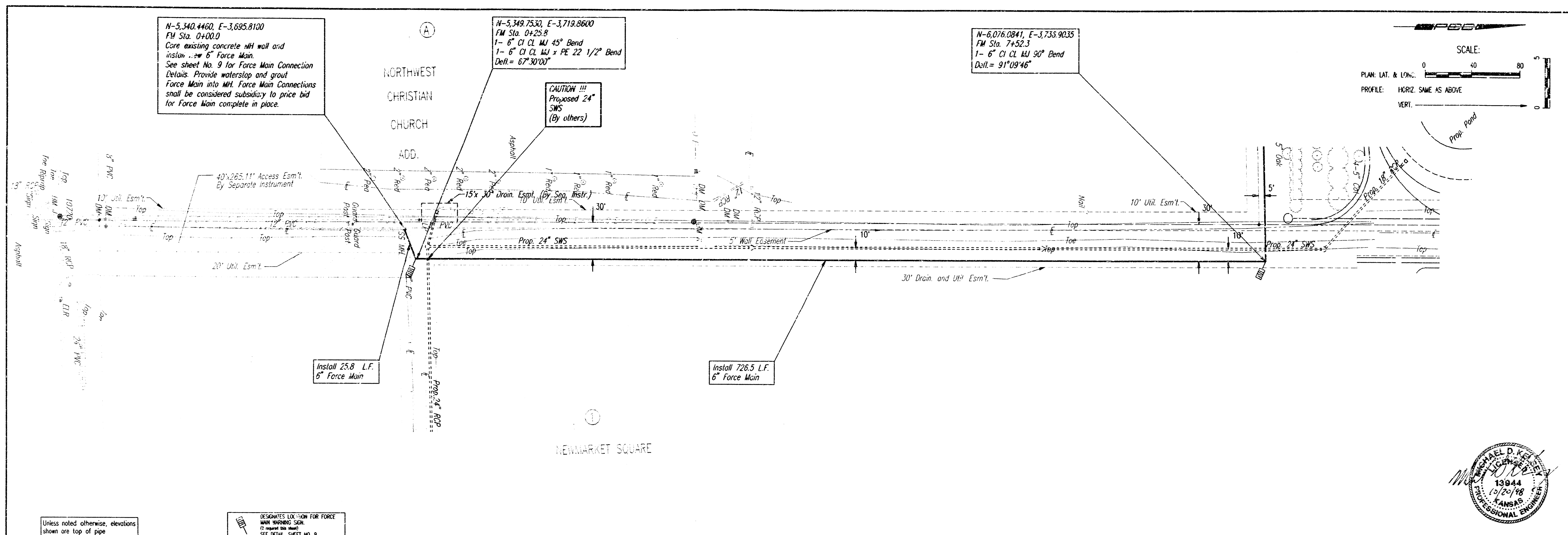
Access Control easement 2' openings

236.23' N72°49' E
 239.49'
 232.28'
 236.23'

SCALE: 1" = 100'
 • = IRON SET
 B.M. CITY OF WICHITA, STD. BENCH MARK DISC. 84" EAST AND 89" SOUTH
 OF THE INTERSECTION OF THE GREENWICH MAZE ROAD AND
 21ST STREET NORTH.
 ELEV. = 164.3 CITY DATUM
 ELEV. = 1351.7 M.S.L.

ESTABLISHED MINIMUM PAD (CONCRETE OPENINGS) AS FOLLOWS:
 LOTS 1 THROUGH 26, BLOCK 7, = 165.6 CITY DATUM = 1354.0 M.S.L.

	REVISION EVERGREEN		By _____ Date _____
	PLAT MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-76-245-82906-000-001 PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS		
Designed by DEP	Job No. 34-98322-4	Date May 1998	Sht. 4 of 10



N-5,340.4460, E-3,695.8100
 FM Sta. 0+00.0
 Core existing concrete MH wall and
 install 6\"/>

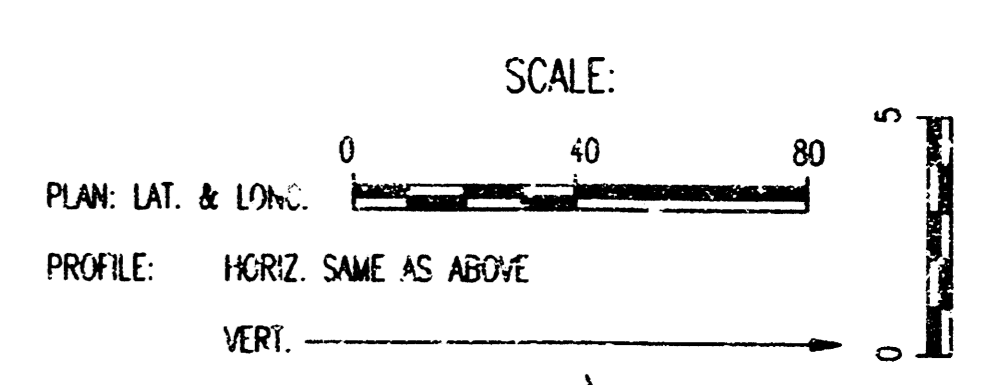
N-5,349.7530, E-3,719.8600
 FM Sta. 0+25.8
 1- 6\"/>

N-6,076.0841, E-3,735.9035
 FM Sta. 7+52.3
 1- 6\"/>

CAUTION !!!
 Proposed 24\"/>

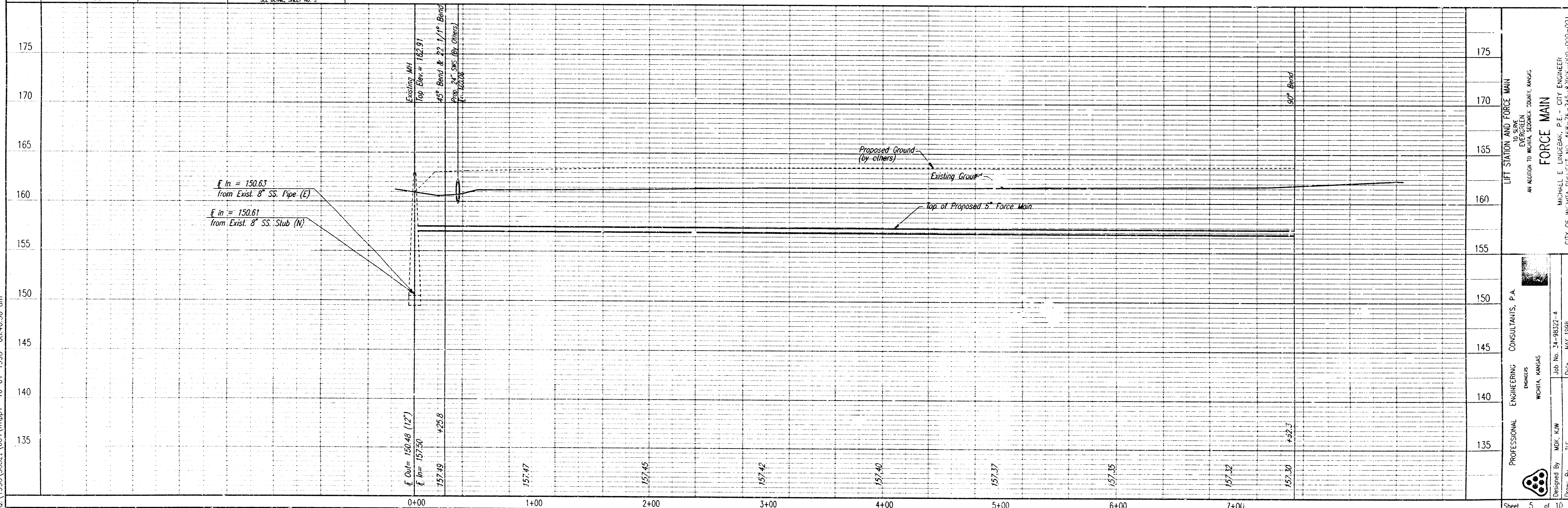
Install 25.8 L.F.
 6\"/>

Install 726.5 L.F.
 6\"/>

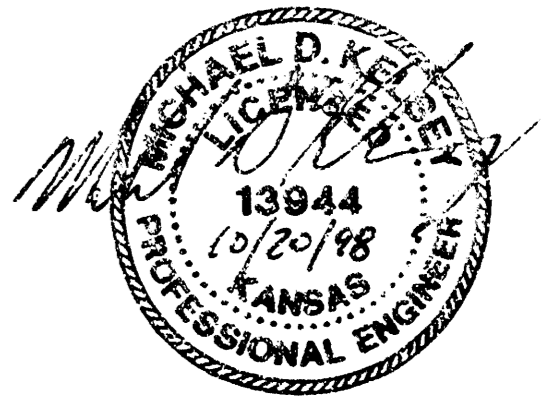


Unless noted otherwise, elevations shown are top of pipe

DESIGNATE LOCATION FOR FORCE MAIN SHARING SIGN. (If shared the sheet) SEE DETAIL, SHEET NO. 9



DSNR: RFJ OPER: ILS SCALE: 1"=40.00
 0:\1998\98322\004\1mmp1 10-01-1998 08:46:36 am



Sheet 5 of 10

ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS

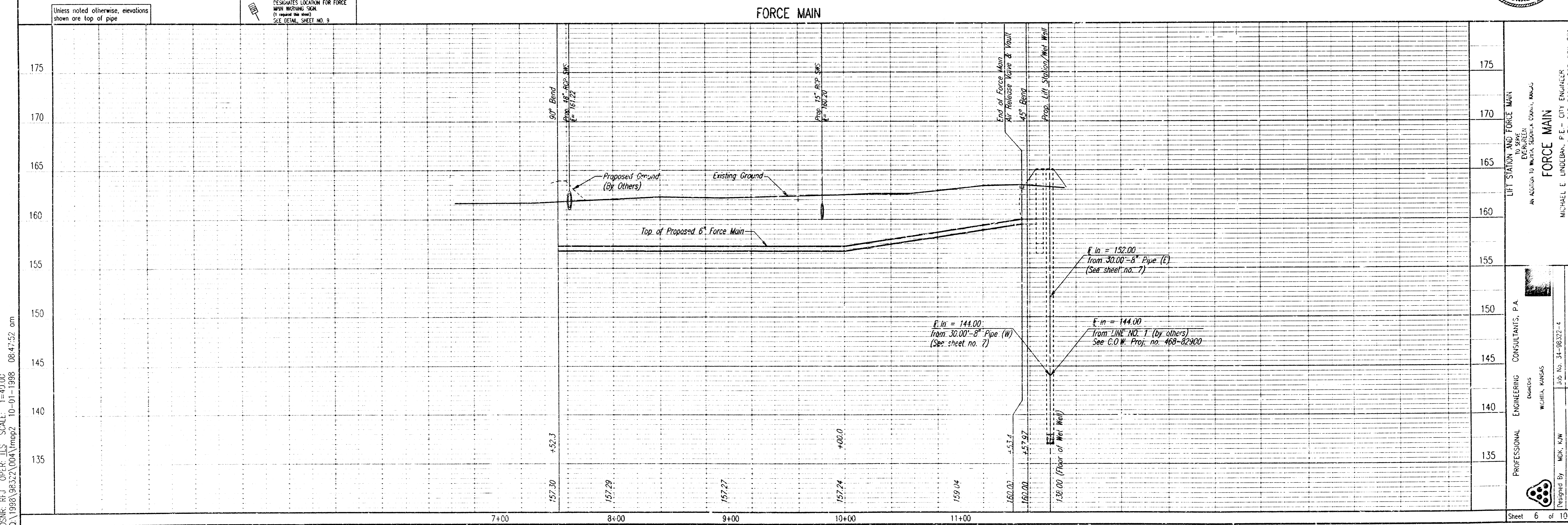
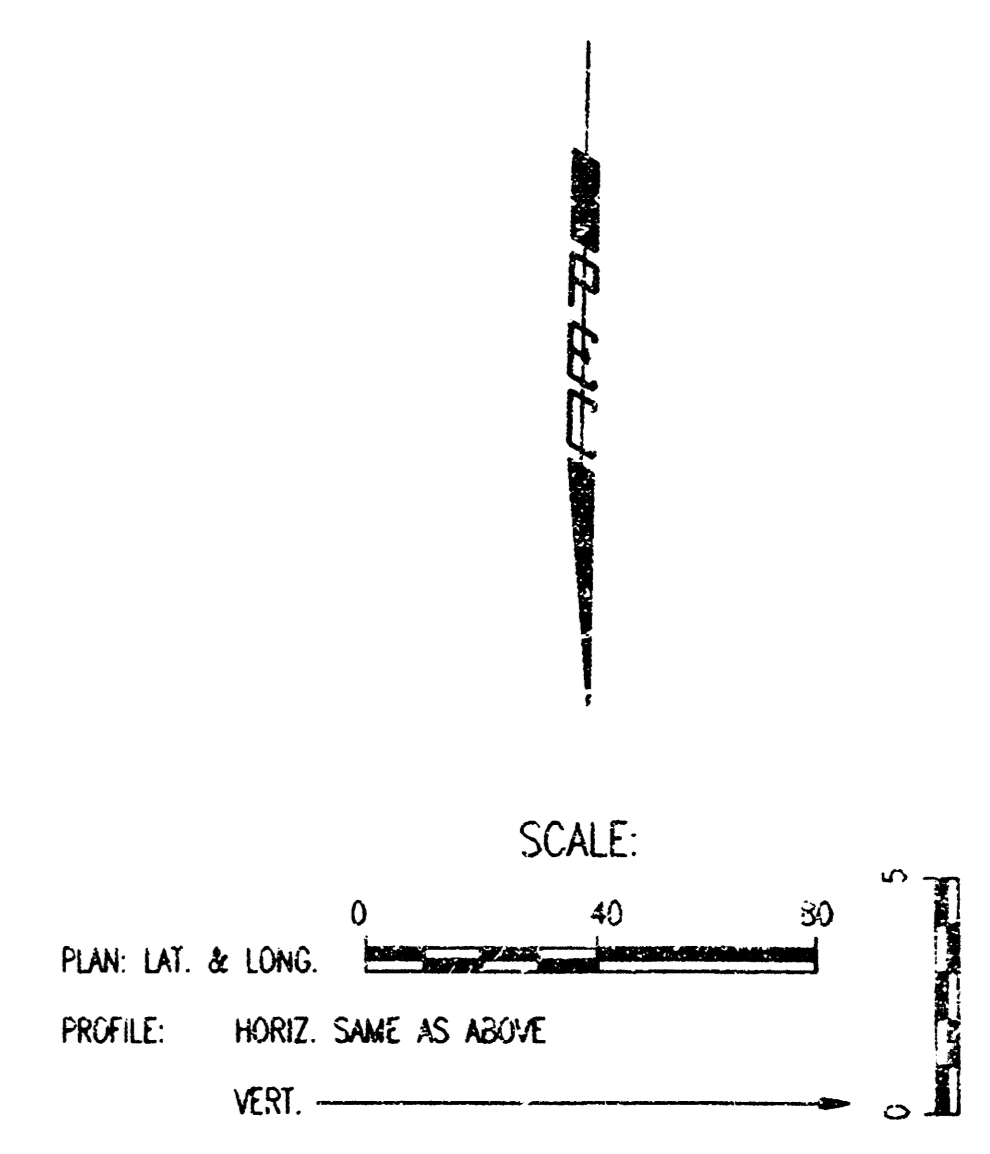
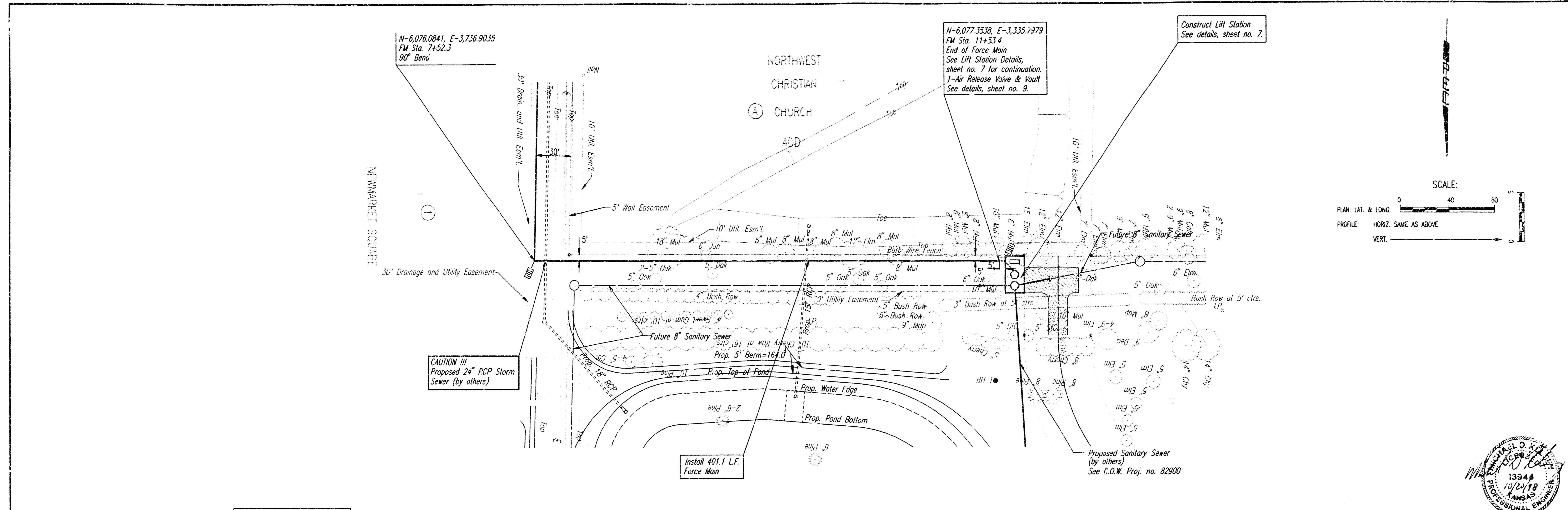
Job No. 34-98322-4
 Date: MAY 1998

Designed By: MDK, K.W.
 Drawn By: ILS

LIFT STATION AND FORCE MAIN
 EVERGREEN ELECTRIC
 AN AFFILIATE OF WICHITA SOUNDCON COUNTY, KANSAS

FORCE MAIN

MICHAEL E. LINDSEY, P.E. CITY ENGINEER
 CITY OF WICHITA PROJECT NO. 465-7E-245-82305-000-001



LIFT STATION AND FORCE MAIN

EXHIBIT TO SHEET

FORCE MAIN

AN ADDITION TO WURTLA SUBURBAN COUNTY, MISSOURI

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WURTLA, MISSOURI

Job No. 14-08322-4
Designed By: MCK, KCM
Drawn By: TCS

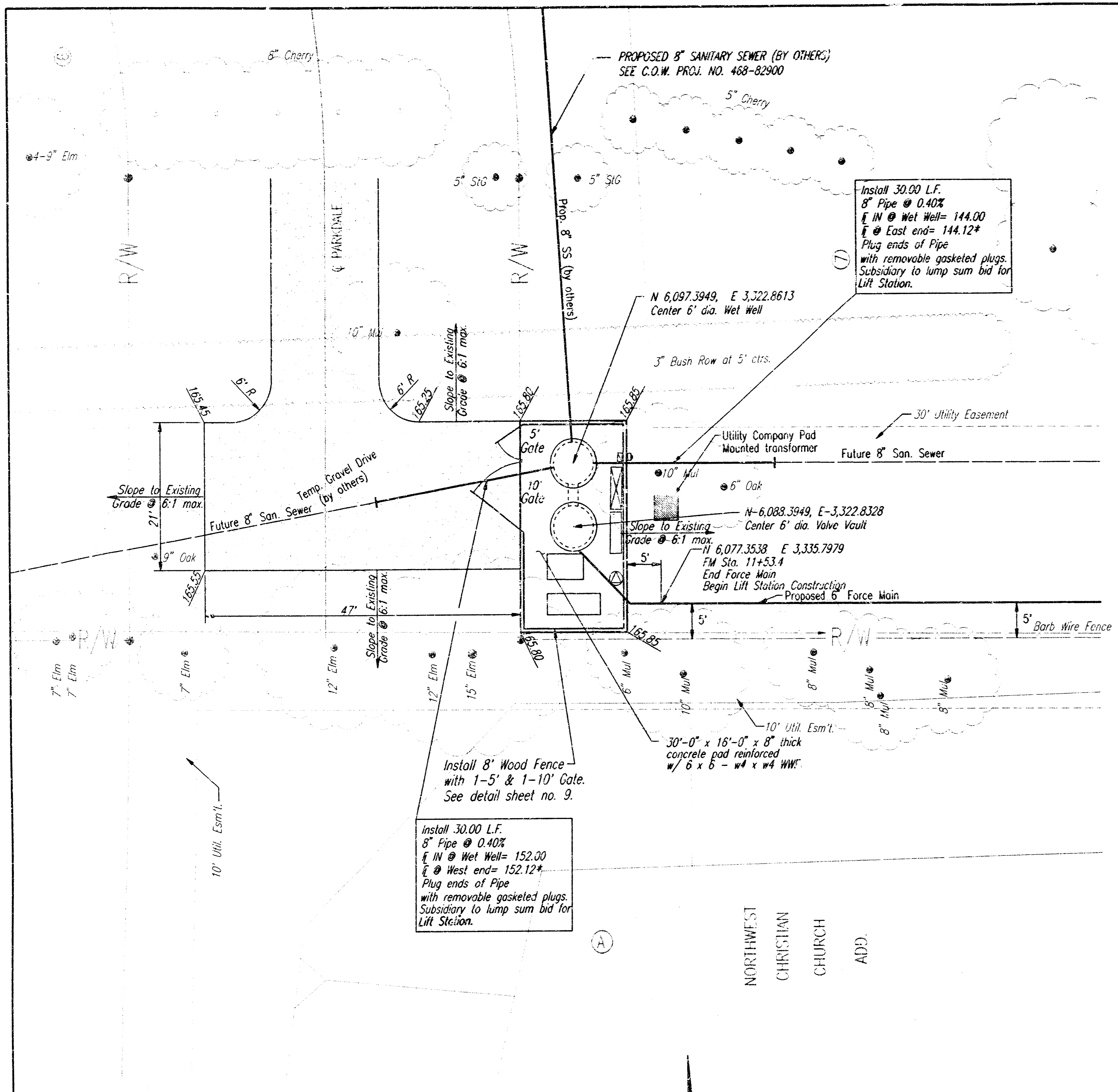
MICHAEL O. KELLY
13344
12/24/18
PROFESSIONAL ENGINEER
KANSAS

CITY OF WURTLA PROJECT NO. 468-245-245-245-000-UGU-003

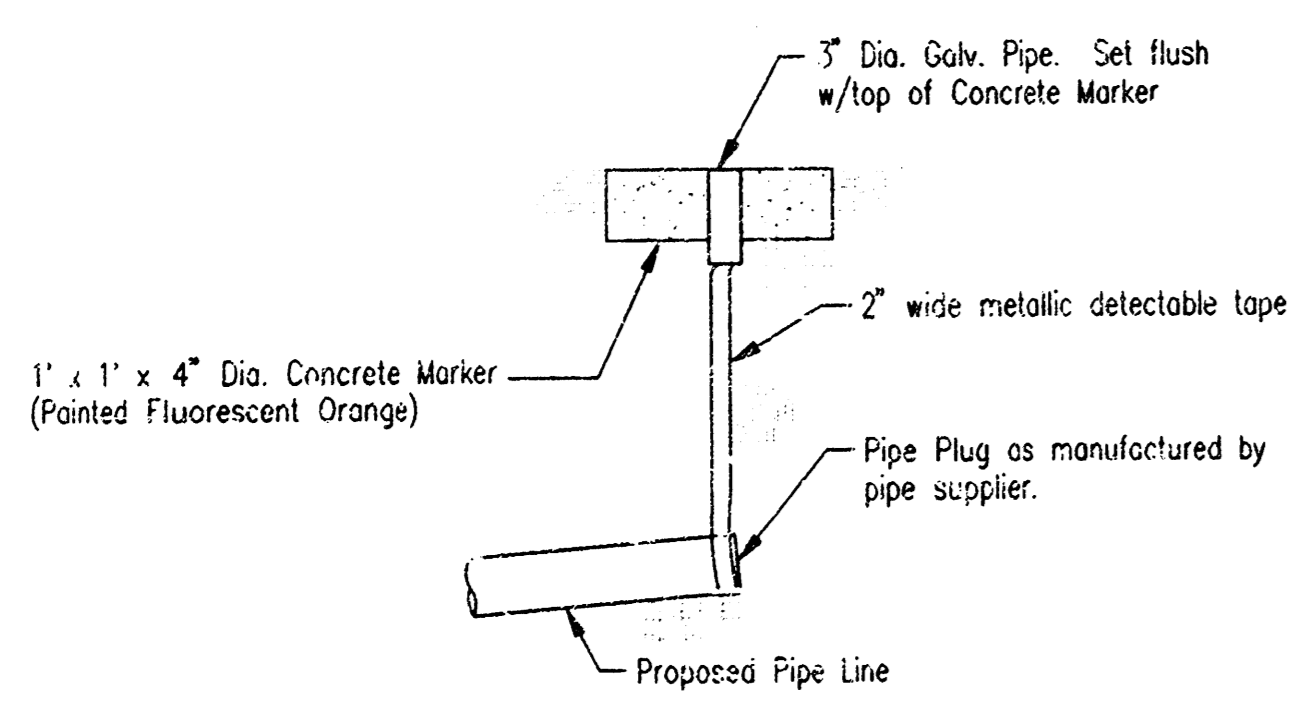
Sheet 6 of 10

DSMR: REF. OPER. ILS SCALE: 1"=40.00'
O:\1983\98322\004\Impop2_10-01-1998_08:47:52.dwg

DSNR: MDK OPER: CSI SCALE: 1"=10.00
 07/19/98 08:32Z004 VLF:FM: 10-20-1998 04:35:47 pm



*The ends of the 2-8" Pipes shall be staked as shown. Cost subsidiary to lump sum price bid for Wet Well.



MARKER DETAIL
 (PLUGGING & MARKING SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR PIPE IN PLACE)

SITE PLAN
 1"=10'

NORTHWEST
 CHRISTIAN
 CHURCH
 ADD.

Contractor shall coordinate construction of the Gravel Drive with the Evergreen Paving Contractor (COM Project No. 468-82717). If the gravel drive is disturbed during construction, the Lift Station Contractor will be required to restore the gravel drive to a condition as approved by the Field Engineer.

Install 30.00 L.F. 8" Pipe @ 0.40% E IN Wet Well= 144.00 E @ East end= 144.12* Plug ends of Pipe with removable gasketed plugs. Subsidiary to lump sum bid for Lift Station.

Install 30.00 L.F. 8" Pipe @ 0.40% E IN Wet Well= 152.00 E @ West end= 152.12* Plug ends of Pipe with removable gasketed plugs. Subsidiary to lump sum bid for Lift Station.

Install 8" Wood Fence with 1-5' & 1-10' Gate. See detail sheet no. 9.

PLUG VALVE SCHEDULE

MARK	LOCATION	STATUS	SIZE	FITTINGS	OPERATOR
PV-1	VALVE VAULT	NEW	6"	FLANGE	GEARED OPERATOR W/ EXTENSION & 2" NUT
PV-2	VALVE VAULT	NEW	6"	FLANGE	GEARED OPERATOR W/ EXTENSION & 2" NUT

CHECK VALVE SCHEDULE

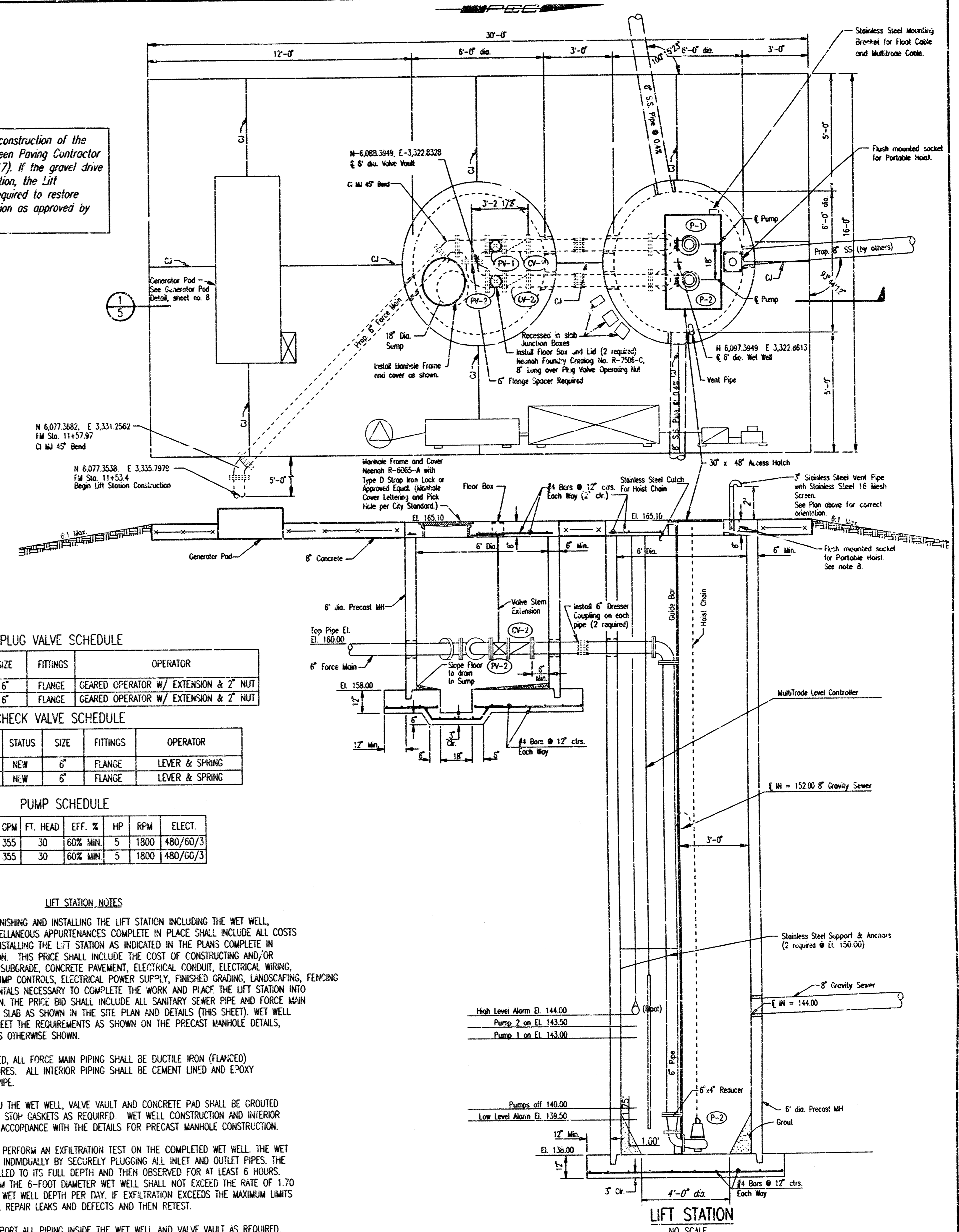
MARK	LOCATION	STATUS	SIZE	FITTINGS	OPERATOR
CV-1	VALVE VAULT	NEW	6"	FLANGE	LEVER & SPRING
CV-2	VALVE VAULT	NEW	6"	FLANGE	LEVER & SPRING

PUMP SCHEDULE

MARK	TYPE	QPM	FT. HEAD	EFF. %	HP	RPM	ELECT.
P-1	SUBMERSIBLE	355	30	60% MIN	5	1800	480/60/3
P-2	SUBMERSIBLE	355	30	60% MIN	5	1800	480/60/3

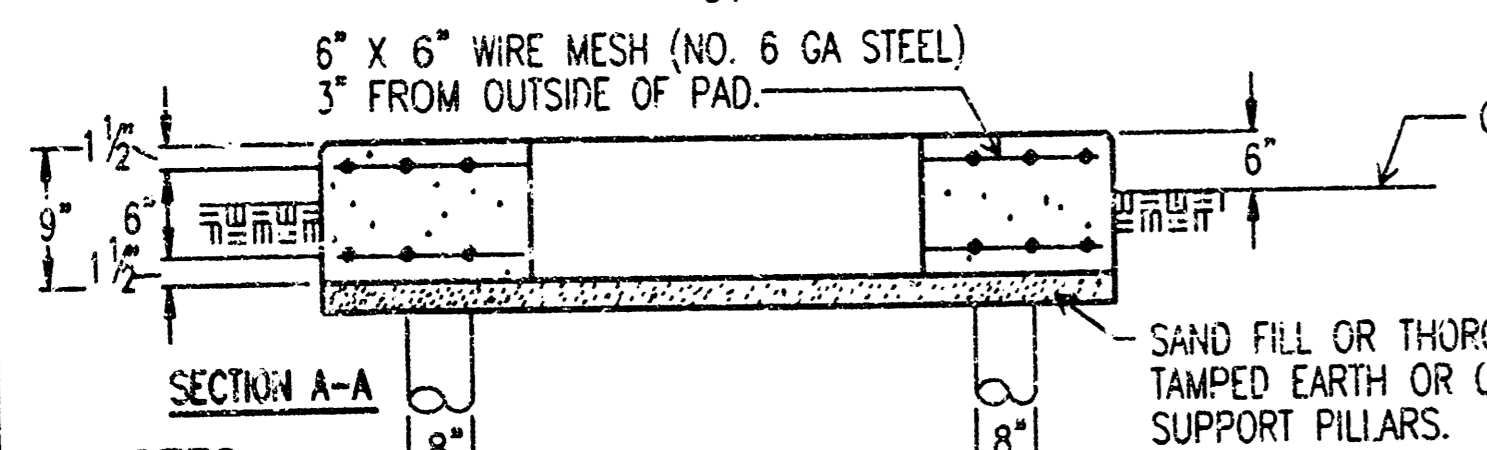
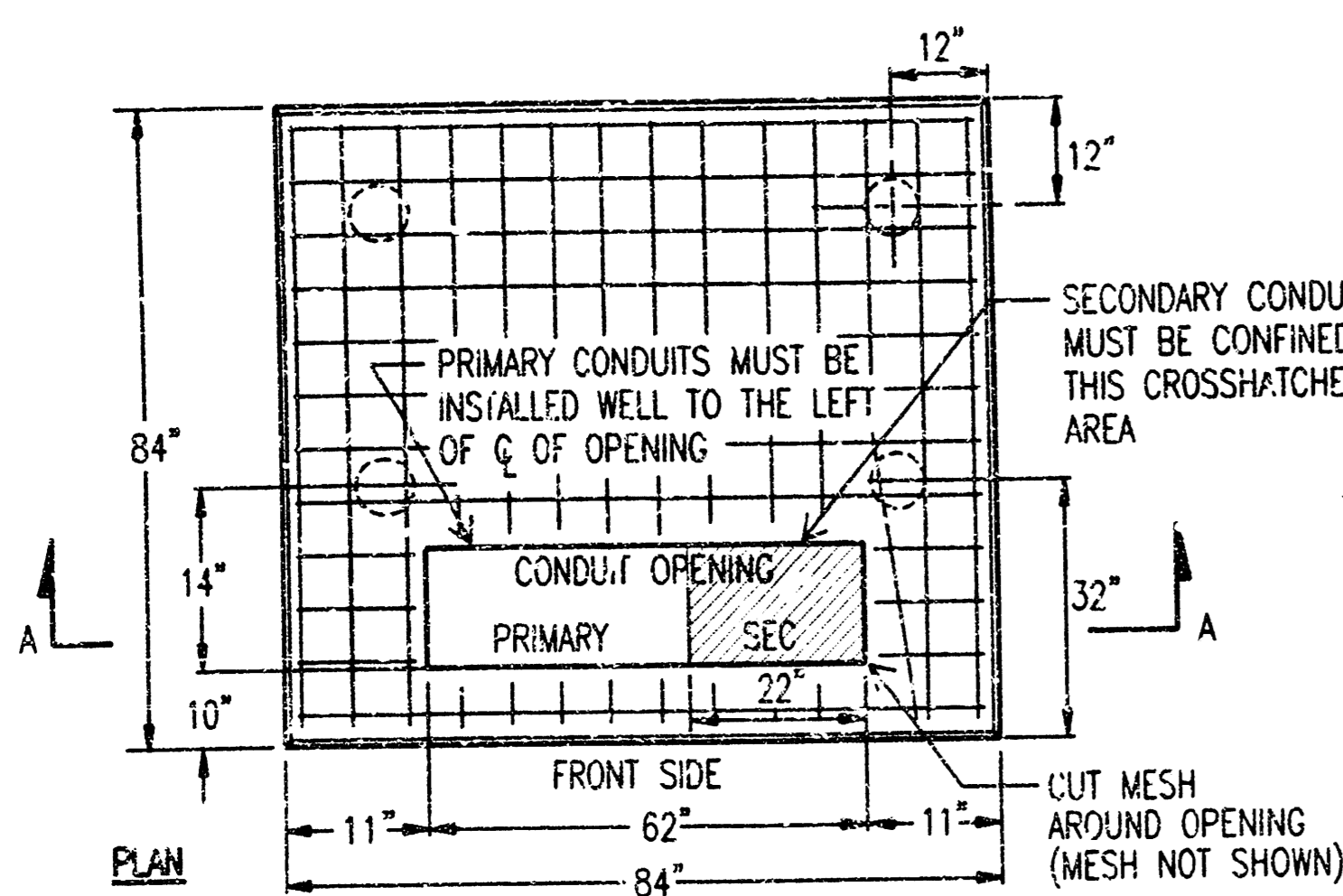
LIFT STATION NOTES

- THE PRICE BID FOR FURNISHING AND INSTALLING THE LIFT STATION INCLUDING THE WET WELL, VALVE VAULT, AND MISCELLANEOUS APPURTENANCES COMPLETE IN PLACE SHALL INCLUDE ALL COSTS FOR FURNISHING AND INSTALLING THE LIFT STATION AS INDICATED IN THE PLANS COMPLETE IN PLACE AND IN OPERATION. THIS PRICE SHALL INCLUDE THE COST OF CONSTRUCTING AND/OR INSTALLING COMPACTED SUBGRADE, CONCRETE PAVEMENT, ELECTRICAL CONDUIT, ELECTRICAL WIRING, DISCONNECT SWITCH, PUMP CONTROLS, ELECTRICAL POWER SUPPLY, FINISHED GRADING, LANDSCAPING, FENCING AND ANY OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK AND PLACE THE LIFT STATION INTO SATISFACTORY OPERATION. THE PRICE BID SHALL INCLUDE ALL SANITARY SEWER PIPE AND FORCE MAIN EXTENDED OUTSIDE. THE SLAB AS SHOWN IN THE SITE PLAN AND DETAILS (THIS SHEET). WET WELL CONSTRUCTION SHALL MEET THE REQUIREMENTS AS SHOWN ON THE PRECAST MANHOLE DETAILS, SHEET NO. 10, UNLESS OTHERWISE SHOWN.
- UNLESS OTHERWISE NOTED, ALL FORCE MAIN PIPING SHALL BE DUCTILE IRON (FLANGED) TO 5' OUTSIDE STRUCTURES. ALL INTERIOR PIPING SHALL BE CEMENT LINED AND EPOXY COATED DUCTILE IRON PIPE.
- PIPE PENETRATIONS THRU THE WET WELL, VALVE VAULT AND CONCRETE PAD SHALL BE GROUTED WATER TIGHT WITH WATER STOP GASKETS AS REQUIRED. WET WELL CONSTRUCTION AND INTERIOR COATINGS SHALL BE IN ACCORDANCE WITH THE DETAILS FOR PRECAST MANHOLE CONSTRUCTION.
- THE CONTRACTOR SHALL PERFORM AN INFILTRATION TEST ON THE COMPLETED WET WELL. THE WET WELL SHALL BE TESTED INDIVIDUALLY BY SECURELY PLUGGING ALL INLET AND OUTLET PIPES. THE WET WELL SHALL BE FILLED TO ITS FULL DEPTH AND THEN OBSERVED FOR AT LEAST 6 HOURS. INFILTRATION LOSS FROM THE 6-FOOT DIAMETER WET WELL SHALL NOT EXCEED THE RATE OF 1.70 GALLONS PER FOOT OF WET WELL DEPTH PER DAY. IF INFILTRATION EXCEEDS THE MAXIMUM LIMITS THE CONTRACTOR SHALL REPAIR LEAKS AND DEFECTS AND THEN RETEST.
- CONTRACTOR SHALL SUPPORT ALL PIPING INSIDE THE WET WELL AND VALVE VAULT AS REQUIRED.
- VALVE OPERATORS SHALL BE EXTENDED AND SUPPORTED TO WITHIN 6" BELOW THE FINISHED TOP ELEVATIONS.
- ALL HARDWARE WITHIN THE WET WELL INCLUDING GUIDE BAR, HOIST CHAIN, HOIST CHAIN CATCH, ETC. SHALL BE STAINLESS STEEL.
- THE CONTRACTOR SHALL PROVIDE A PORTABLE HOIST WITH 1,000 LB. CAPACITY. THE HOIST SHALL HAVE A REACH OF 24" (MIN.) TO 36" (MAX.) AND SHALL BE PROVIDED WITH A FLUSH MOUNTED SOCKED SET INTO THE LIFT STATION SLAB. THE PORTABLE HOIST SHALL BE MANUFACTURED BY U.S. FABRICATION INC. OR APPROVED EQUAL. THE COST TO PROVIDE THE PORTABLE HOIST AND SOCKET COMPLETE IN PLACE AND IN SUCCESSFUL OPERATION SHALL BE CONSIDERED SUBSIDIARY TO THE LUMP SUM PRICE BID TO CONSTRUCT THE LIFT STATION.
- A SAFETY NET SHALL BE PROVIDED ACROSS THE 30" x 48" ACCESS HATCH IN ACCORDANCE WITH THE CITY OF WICHITA REQUIREMENTS.



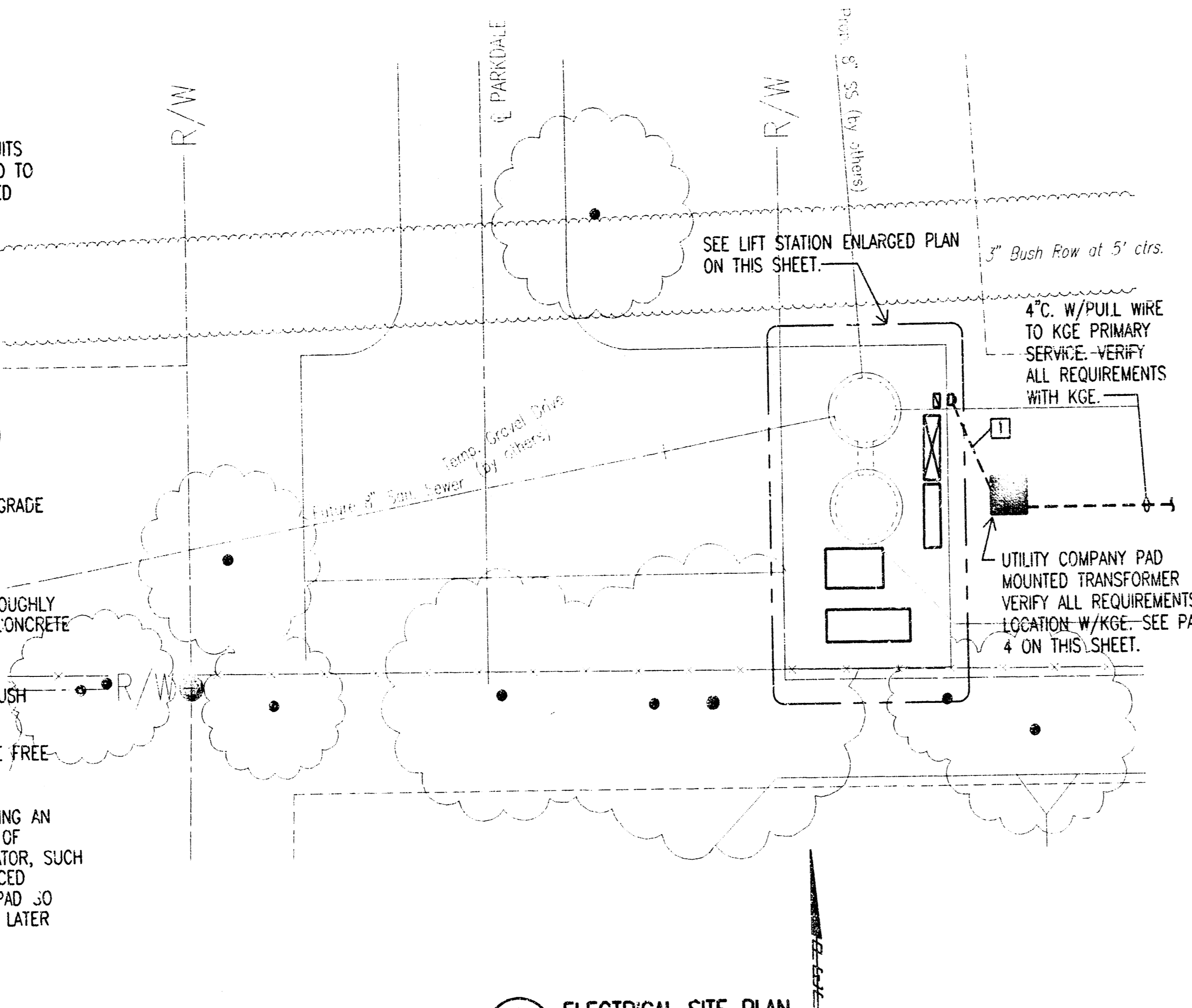
LIFT STATION
 NO SCALE

	Revision		Date
	LIFT STATION AND FORCE MAIN TO SERVE EVERGREEN AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS LIFT STATION DETAILS MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-76-245-82908-000-001 PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS		
Designed by MDK	Job No. 34-98322-4	Sh. 7 of 10	
Drawn by BB	Date August, 1998		

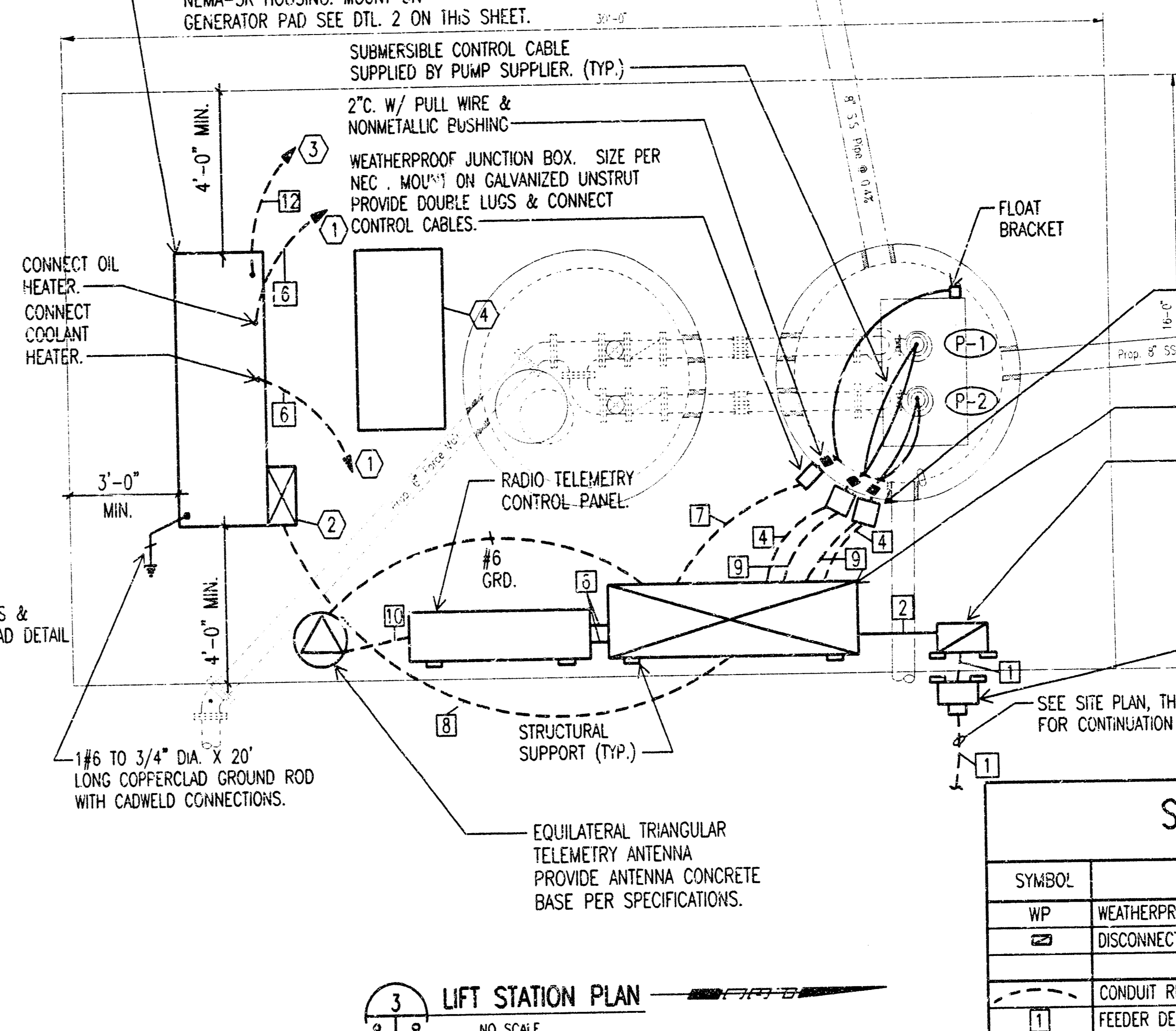


- NOTES:**
- VERIFY PAD LOCATION, DIMENSIONS & ALL REQUIREMENTS WITH LOCAL UTILITY CO.
 - THE TOP OF THE TRANSFORMER PAD SHALL RECEIVE A SMOOTH TRIMMED FINISH. THE CORNERS AND EDGES SHALL BE ROUNDED OR BEVELED.
 - THE CONCRETE SHALL BE A MINIMUM OF 3,000 LB. MIX.
 - CONTRACTOR SHALL EXTEND FORMS DOWN TO AT LEAST 3\"/>

4 **TRANSFORMER PAD DETAIL**
8 | 8 NO SCALE 75-500KVA



5 **ELECTRICAL SITE PLAN**
8 | 8 SCALE 1"=10'



3 **LIFT STATION PLAN**
8 | 8 NO SCALE

- KEYED NOTES:**
- TO 20A. 1P. 120V. CIRCUIT BREAKER IN PANEL 'L'
 - 70A. 3P. 480V. 1" T. BREAKER IN NEMA-3R ENCLOSURE. PROVIDED WITH GENERATOR.
 - 1" C. W/PULL WIRE TO TRANSFER SWITCH FOR CONTROL WIRES.
 - FUEL TANK. INSTALL ALL PIPING BETWEEN GENERATOR & FUEL TANK PER GENERATOR MFR. REQUIREMENTS.

SYMBOL LIST

SYMBOL	DESCRIPTION	MOUNTING
WP	WEATHERPROOF DISCONNECT SWITCH	
---	CONDUIT RUN (3/4" C MIN.)	EARTH/FLOOR
[1]	FEEDER DESIGNATION	
[R]	RED ALARM LIGHT FEDERAL MODEL 1215 W/LAMP NEMA-3R 120V.	
[H]	ALARM HORN FEDERAL MODEL 350 NEMA-3R 120V.	
---	CONDUIT SEAL	
---	RGS EXPOSED CONDUIT RUN	

PROVIDE HOFFMAN #A-727224ULP LOCKABLE W/DRIP SHIELD KIT #A-DK72A AND #A-72P72 PANEL NEMA-3R. FIELD PAINT WITH ANS 1 61 GRAY ENAMEL MINIMUM OF (2) COATS REQUIRED. FIELD INSTALL DRIP SHIELD, STAINLESS STEEL HINGE PIN AND STAINLESS STEEL DOOR CLAMPING ASSEMBLIES PROVIDED WITH DRIP SHIELD KIT. ENCLOSURE TO BE DESIGNED TO RESIST 80 MPH WIND LOAD (EXPOSURE C). PROVIDE ATTACHMENT TO FOUNDATION SLAB SUFFICIENT TO RESIST OVERTURNING. SUBMIT FOR APPROVAL.

DISTRIBUTION BLOCK SQ. 'D' CLASS 9080 W/COVER OR EQUAL

30A. 2P. 600V. DISC. SW. FUSED AT 30A

70A. 3P. 277/480V. AUTOMATIC TRANSFER SWITCH (ATS) 50,000 AIC

DISCONNECT SWITCH 30A. 3P. 480V. FUSE @ 20A

30A. 2P. 600V. DISC. SW. FUSED AT 30A

CONTROL PANEL W/BREAKERS & MOTOR STARTER FOR PUMP P-1 & P-2.

PNL 'L'

GFCI RECEPTACLE & TAYMAC WP "IN USE" COVER

TO GENERATOR

TO RADIO TELEMETRY ANTENNA

TO P-1 (SHP)

TO THERMAL OVERLOAD & MOISTURE DETECTION (P-1)

TO PUMP ALARMS

TO P-2 (SHP)

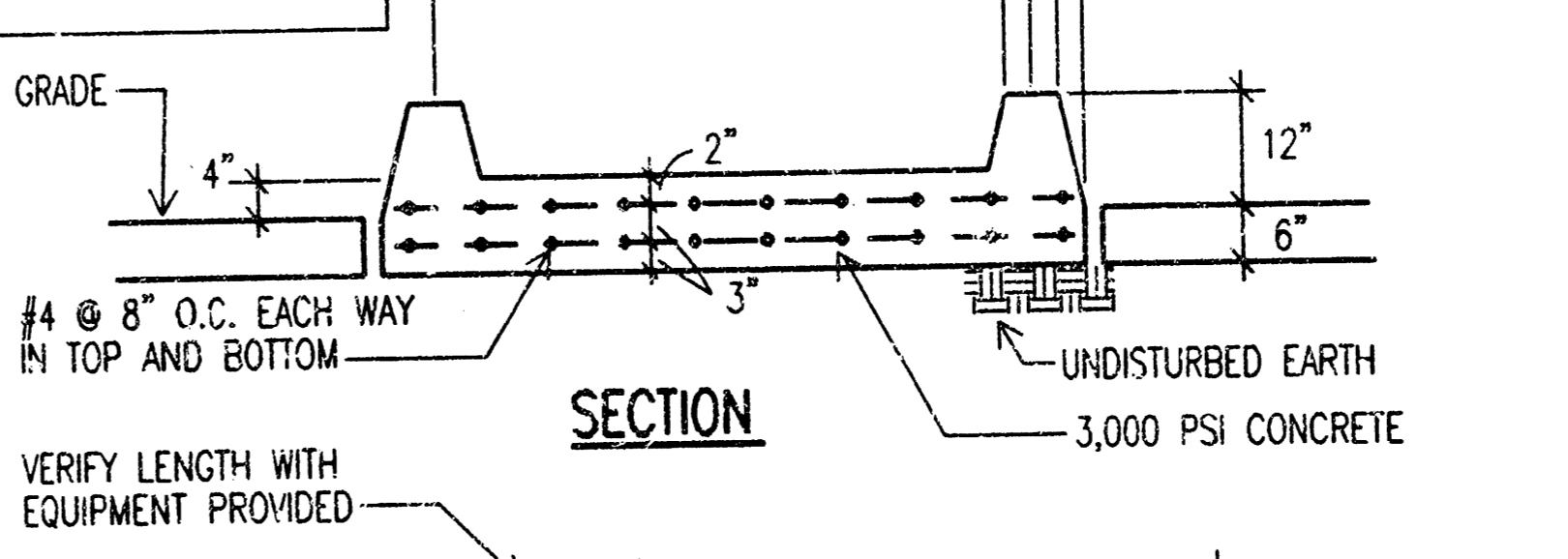
TO THERMAL OVERLOAD & MOISTURE DETECTION (P-2)

NOTE: THICKNESS & STEEL MUST BE SIZED PER GENERATOR SIZE.

VERIFY SKID WIDTH DIMENSION WITH EQUIPMENT PROVIDED

VERIFY LENGTH WITH EQUIPMENT PROVIDED

VERIFY SKID WIDTH DIMENSION WITH EQUIPMENT PROVIDED

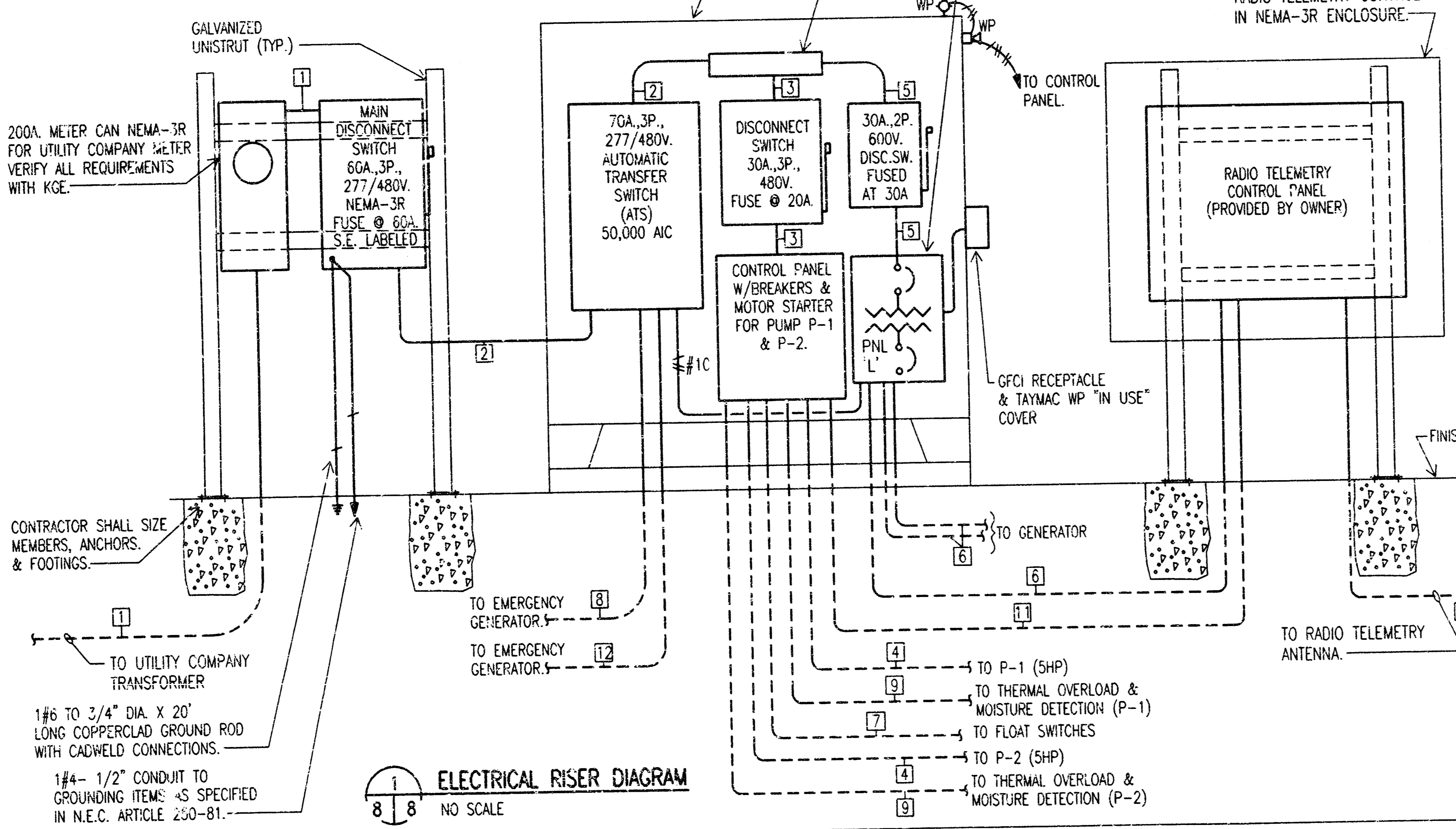


2 **ENGINE GENERATOR/TANK PAD DETAIL**
8 | 8 NO SCALE

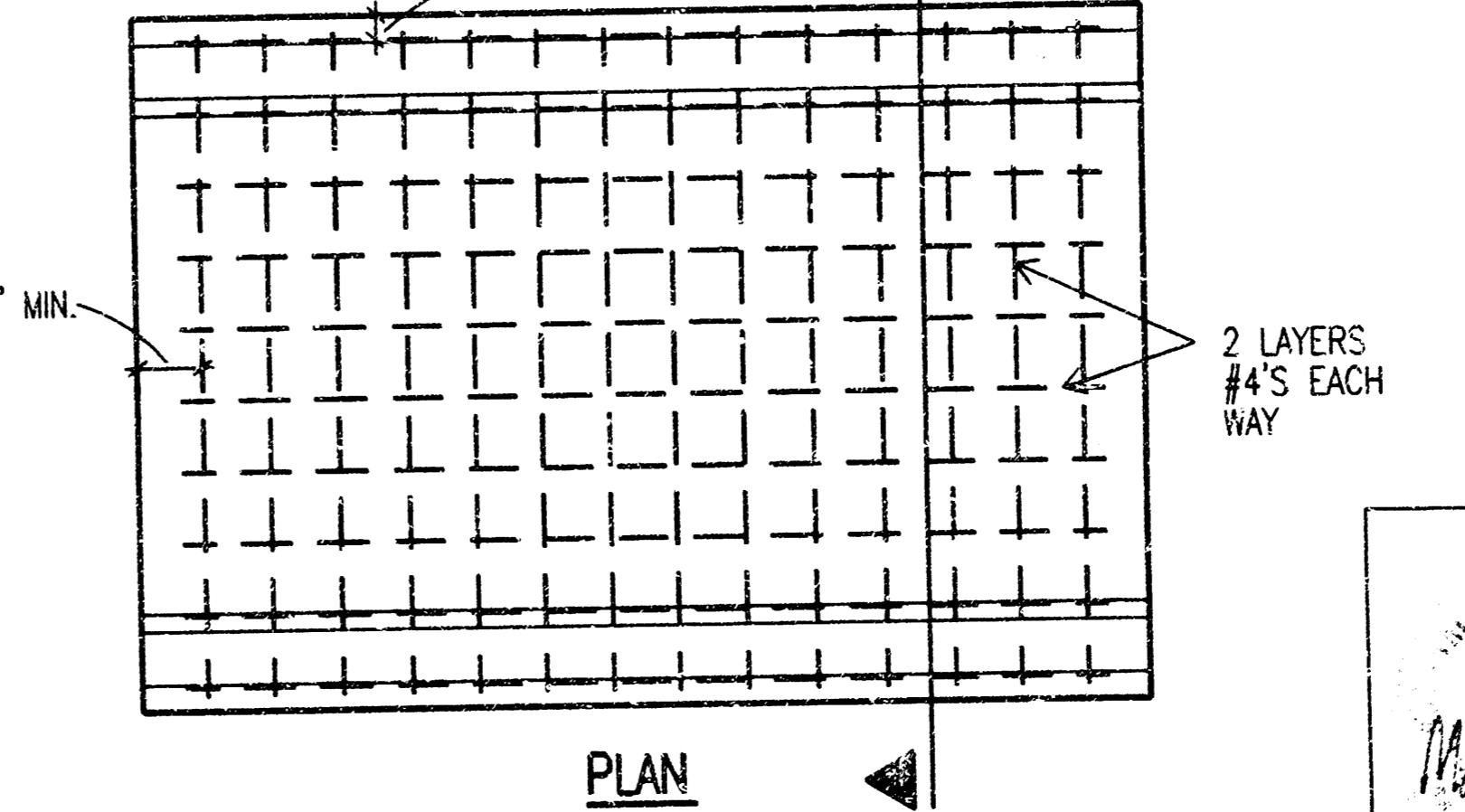
FEEDER SCHEDULE

DESIG.	EQUIPMENT SERVED	SETS	NO.	CONDUCTORS	GROUND SET PER SET	REQUIRED CONDUIT SIZE	CONDUIT SIZE PER SET
[1]	MAIN DISCONNECT	1	4	#4	---	---	3" C.
[2]	DIS. BLOCK, ATS	1	4	#4	#8	---	2" C.
[3]	P-1, P-2 CIL. PNL	1	3	#10	#10	---	3/4" C.
[4]	P-1, P-2	1	3	#10	#10	---	3/4" C.
[5]	POWER ZONE	1	2	#8	#10	---	1" C.
[6]	---	1	2	#12	#12	---	3/4" C.
[7]	FLOAT SWITCH	1	2	#14 CONTROL CABLE	#12	---	2" C.
[8]	GENERATOR	1	4	#4	#8	---	2" C.
[9]	PUMP ALARMS	---	---	#14 CONTROL CABLE	#12	---	1" C.
[10]	RTJ	---	---	COAX CABLE	---	---	1" C.
[11]	---	---	---	#14 CONTROL CABLE	#12	---	1" C.
[12]	---	---	---	W/PULL WIRE	---	---	1" C.

- GENERAL NOTES**
- REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
 - SEPARATE GREEN GROUND CONDUCTOR SHALL BE ROUTED IN ALL CIRCUITS WITH ALL PHASE CONDUCTORS.
 - ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERICANS WITH DISABILITIES ACT (ADA).
 - ALL EXPOSED & UNDERGROUND CONDUITS SHALL BE RGS (PVC COATED)



1 **ELECTRICAL RISER DIAGRAM**
8 | 8 NO SCALE



2 **ENGINE GENERATOR/TANK PAD DETAIL**
8 | 8 NO SCALE

Revision _____ By _____ Date _____

LIFT STATION AND FORCE MAIN TO SERVE EVERGREEN AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

LIFT STATION ELECTRICAL SITE PLAN

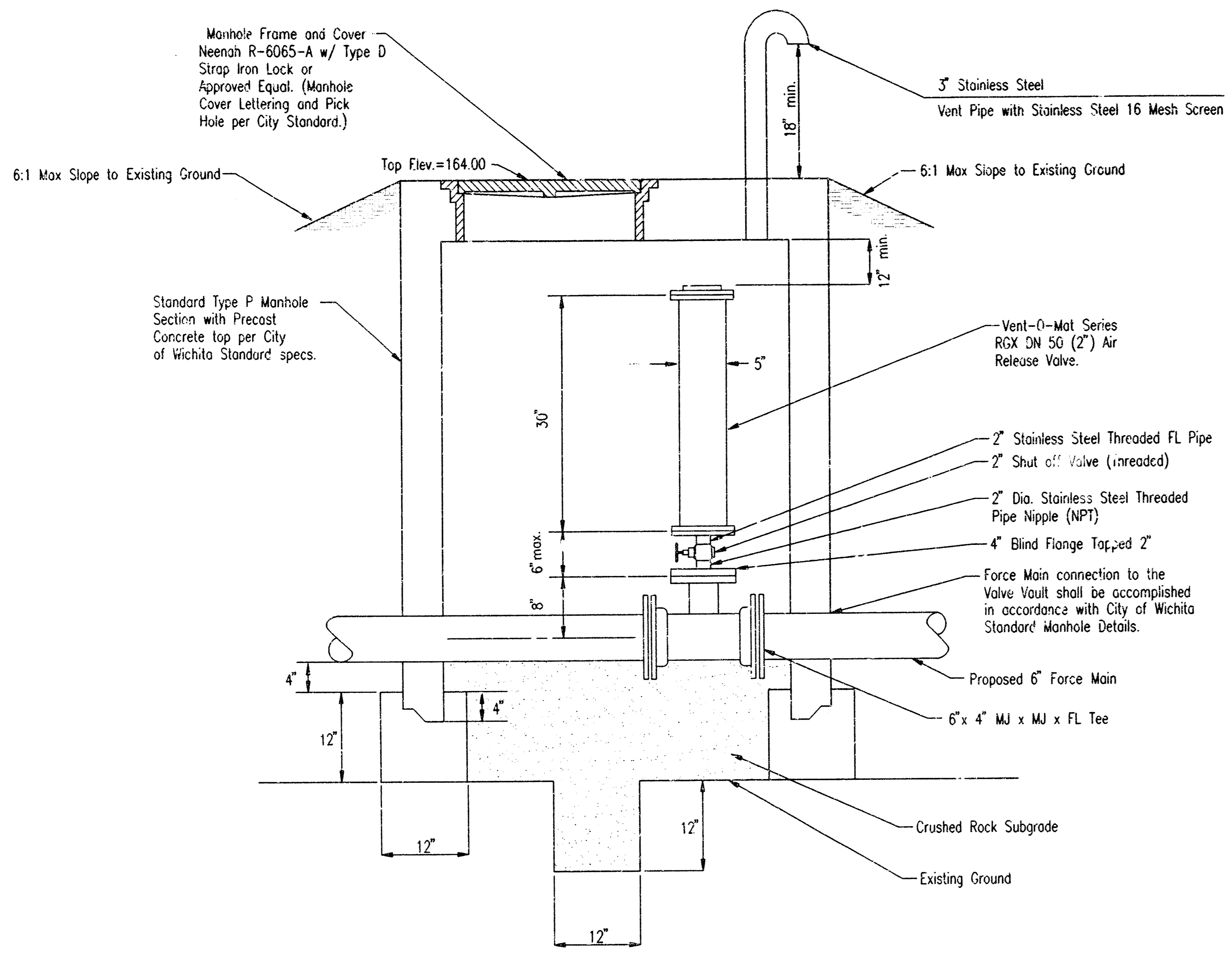
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-82906-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

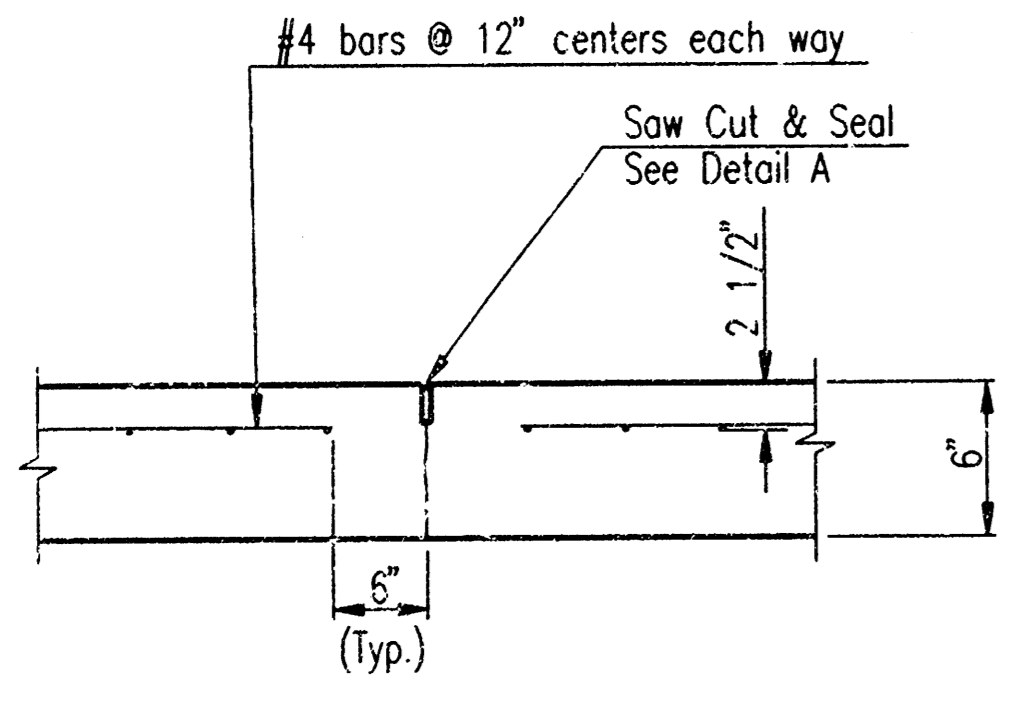
Designed by MMH Job No. 34-98322-4
Drawn by MMH Date OCT., 1998

Sheet 8 of 10

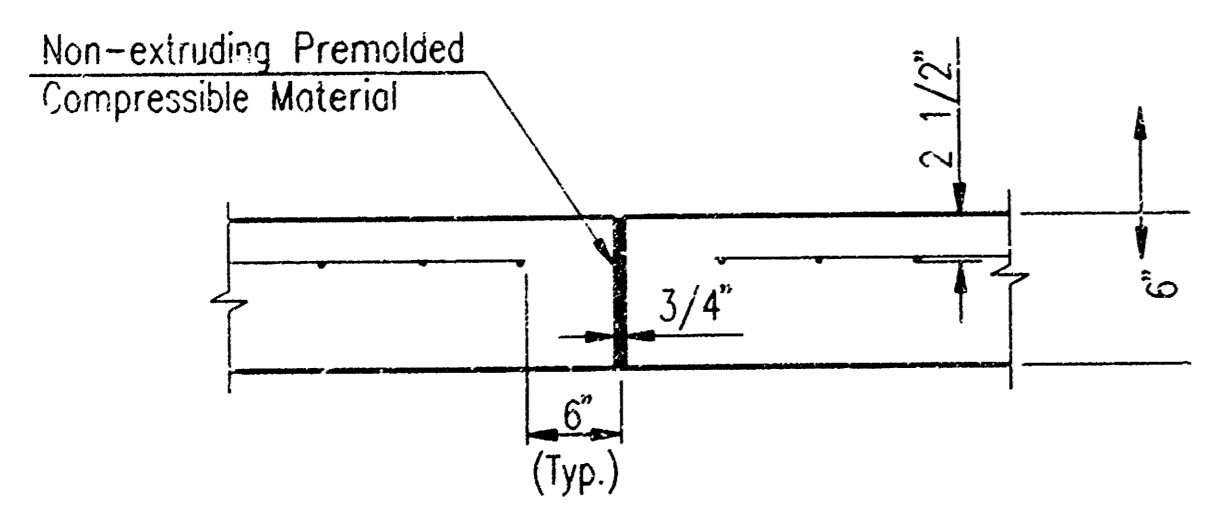
DSNR MMH OPER. MMH SCALE: 1"=120.00
E:\1998\36322\004\ELSE1 10-21-1998 09:27:56 am



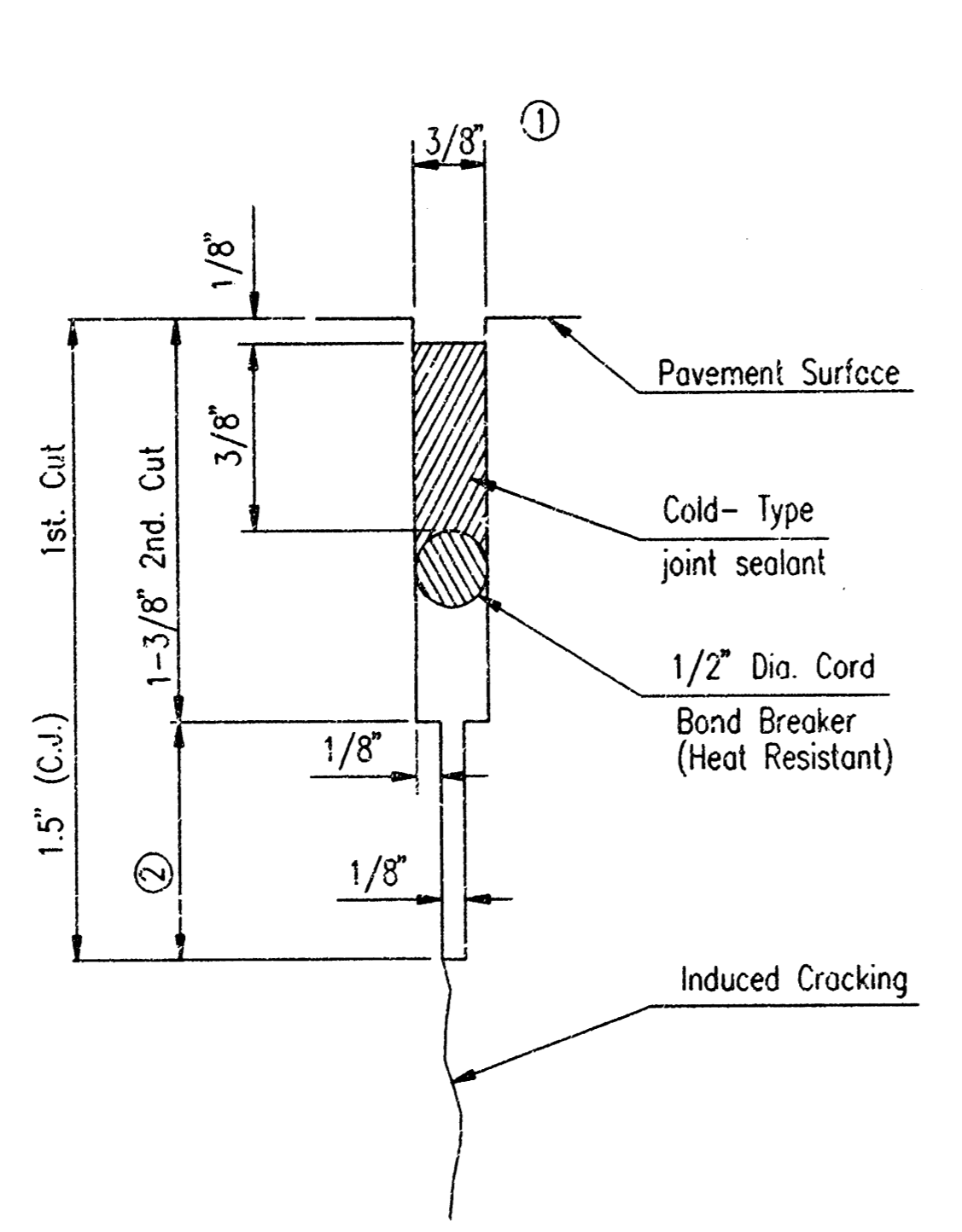
AIR RELEASE VALVE AND VAULT



**CONTRACTION JOINT DETAIL
REINFORCED PAVEMENT
(C.J.)**

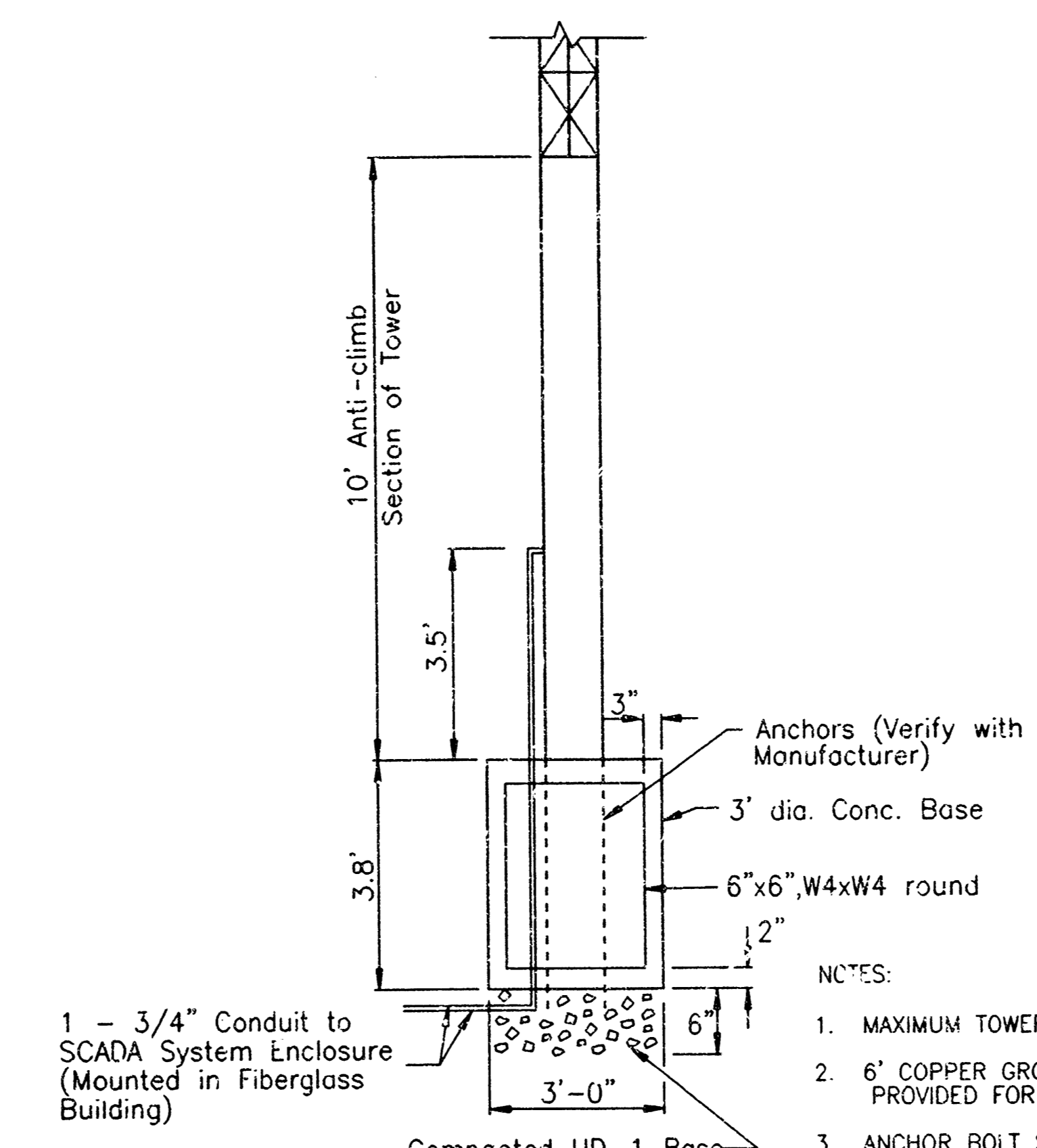


**EXPANSION JOINT DETAIL
(E.J.)**



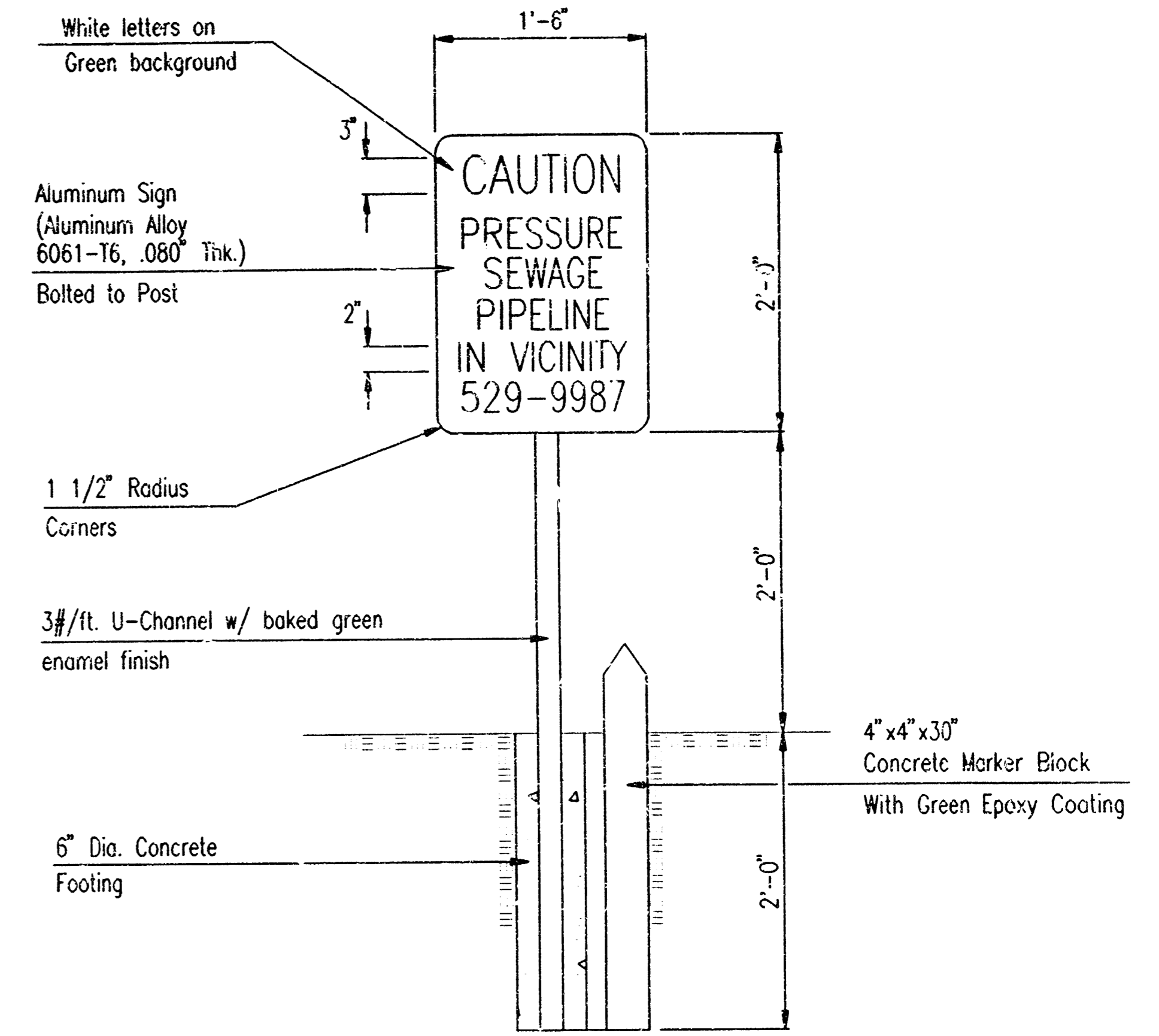
DETAIL A

- TO BE ACCOMPLISHED IN 2 CUTS FOR LONGITUDINAL JOINTS & CONTRACTION JOINTS. INITIAL CUT TO BE 1/8" WIDE.
- ELIMINATE BOTTOM OF CUT WHEN METAL KEYWAY IS USED AS PART OF LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT.



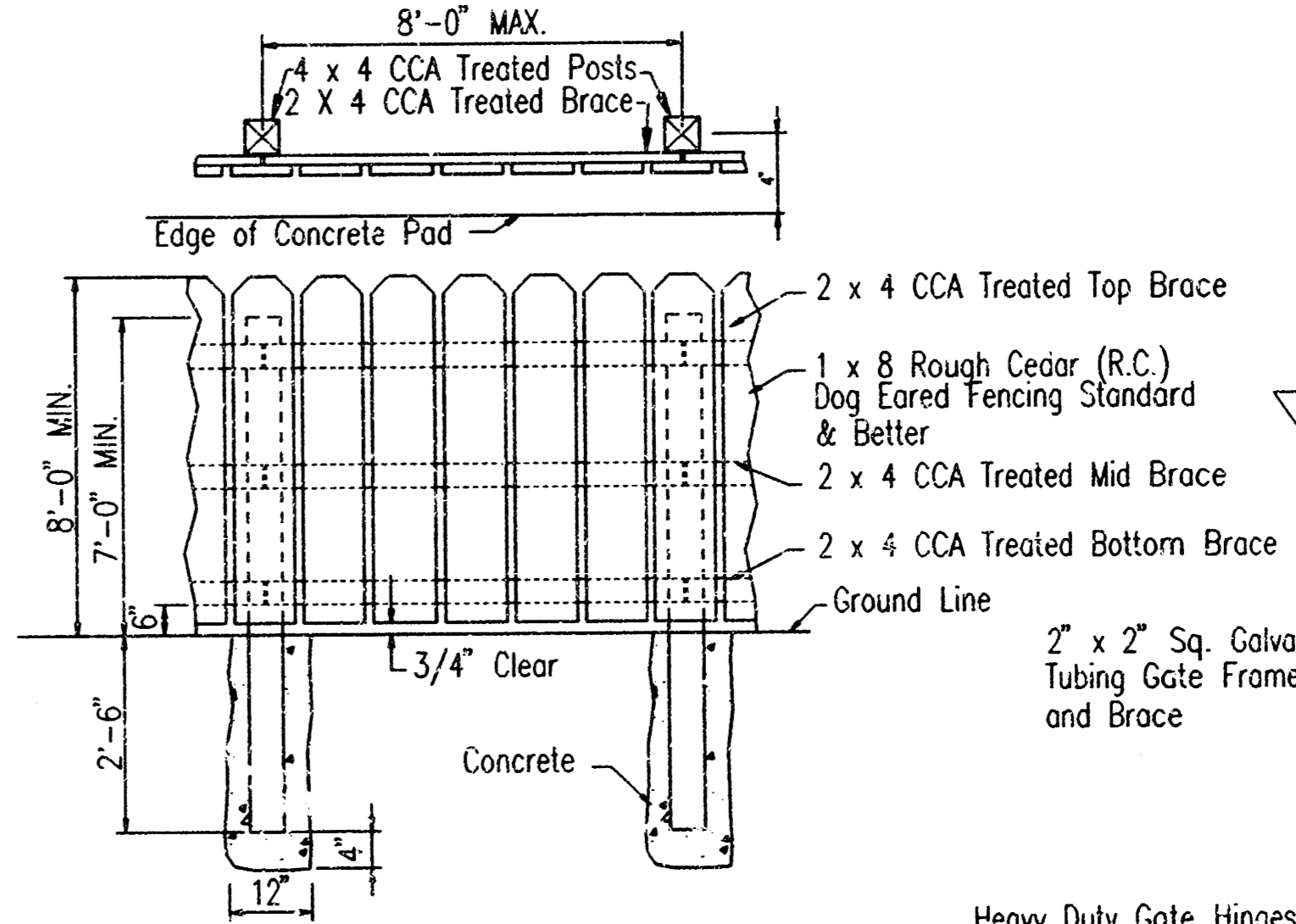
SCADA SYSTEM DETAIL

- NOTES:
- MAXIMUM TOWER HEIGHT IS 30 FEET.
 - 6" COPPER GROUND ROD SHALL BE PROVIDED FOR THE TOWER.
 - ANCHOR BOLT SIZES AND LENGTHS SHALL BE PER THE TOWER MANUFACTURERS RECOMMENDATIONS.



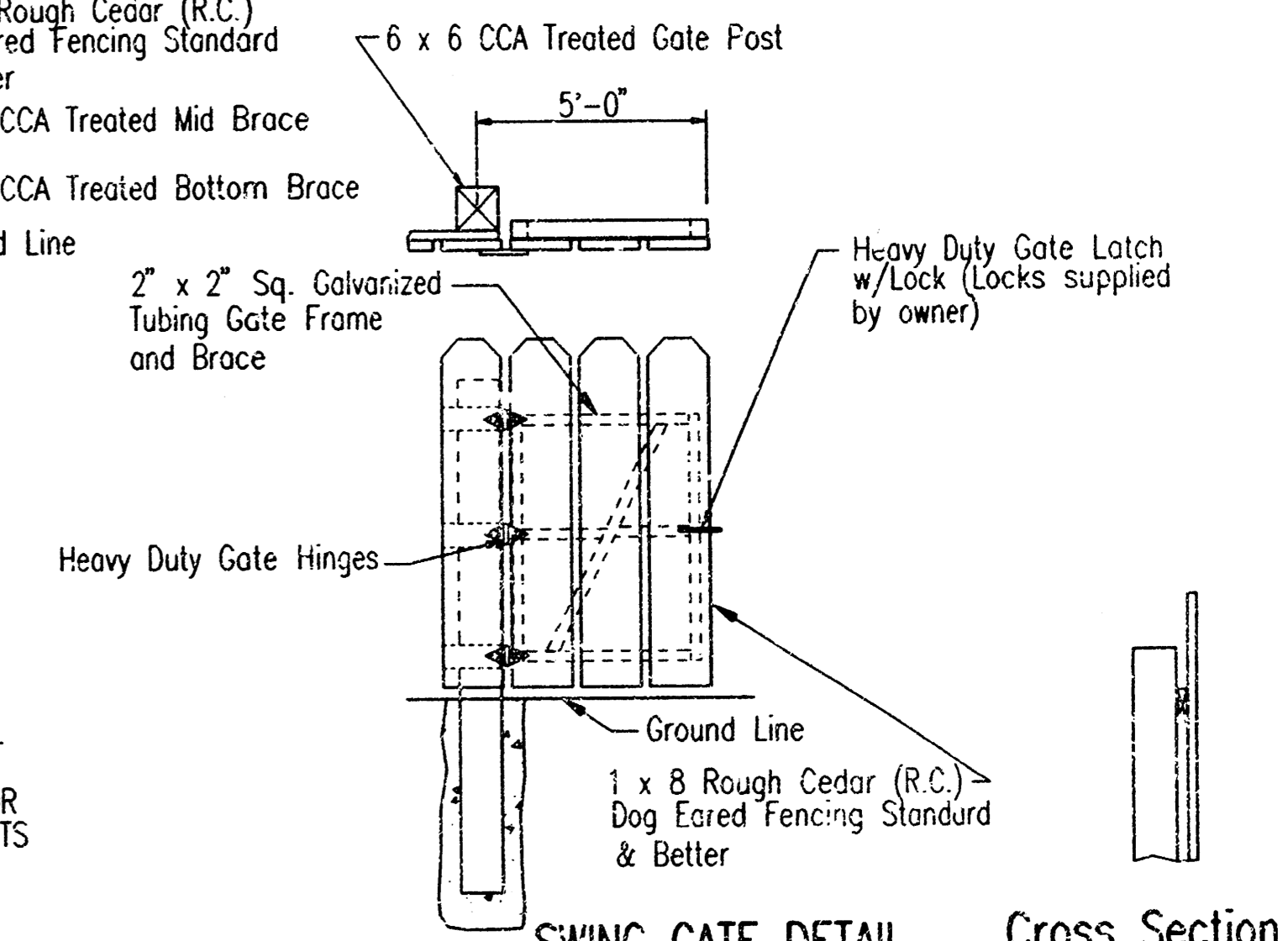
FORCE MAIN WARNING SIGN DETAIL

SCALE: 1"=1'-0"



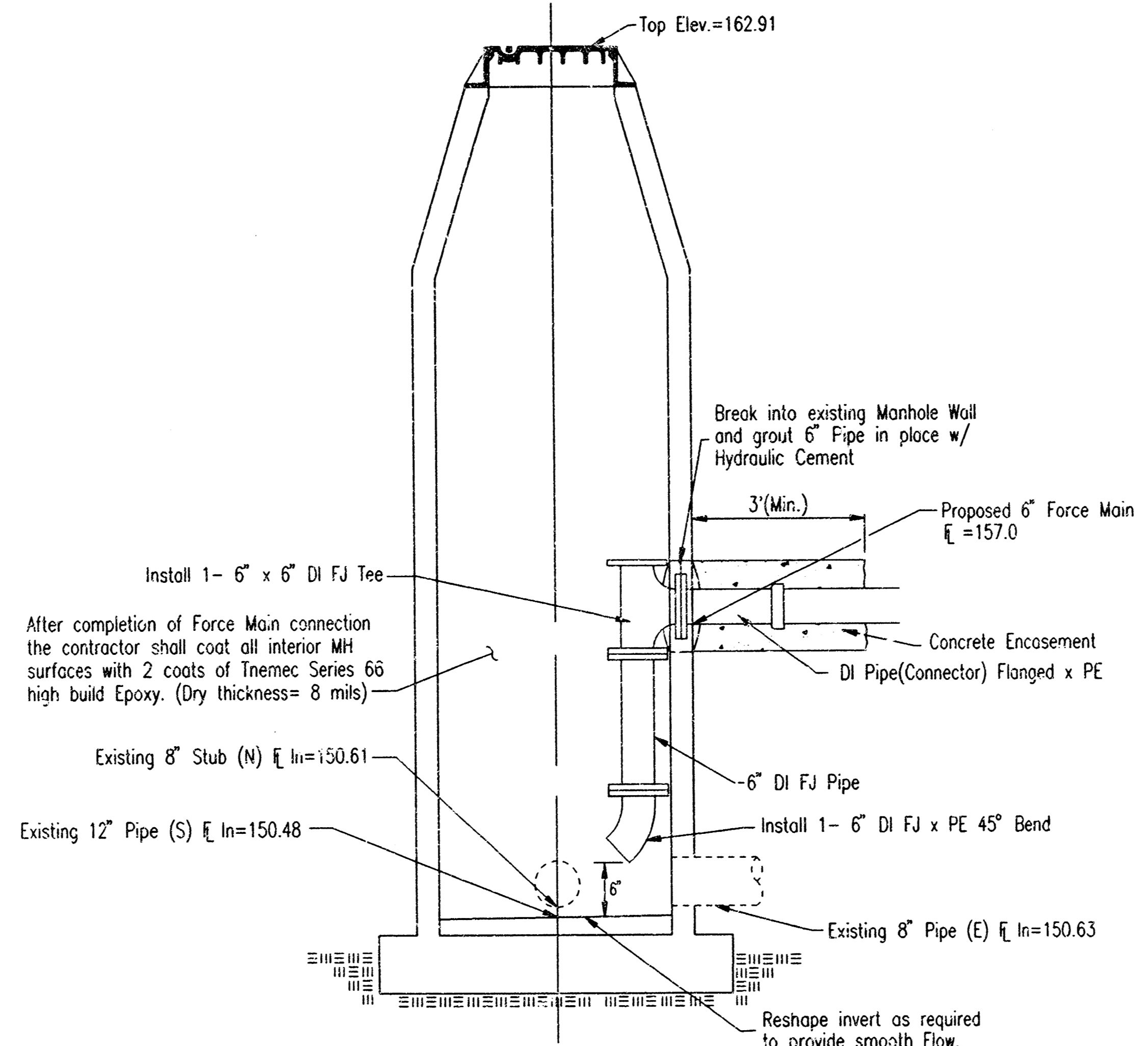
8'-0" WOOD FENCE DETAIL

NOTE: LINE POSTS SHALL BE 4 x 4 CCA TREATED. END POSTS SHALL BE 4 x 4 CCA TREATED. PICKETS SHALL BE INSTALLED ON THE EXTERIOR FACING OUT. PICKETS SHALL BE FREE OF SPLITS AND/OR OTHER DEFECTS.



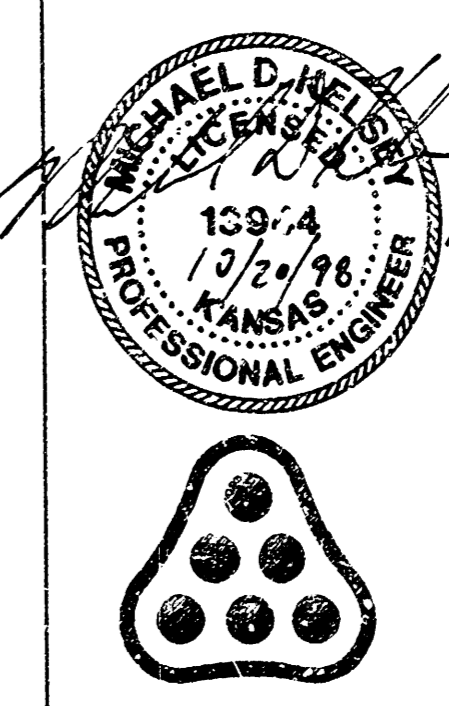
SWING GATE DETAIL

Cross Section of Fence
NO SCALE
LARGER GATES - PROVIDE ROLLER SUPPORT ON LATCHED END OF 10' GATE.



**FORCE MAIN CONNECTION DETAIL
STA. 0+00.00**

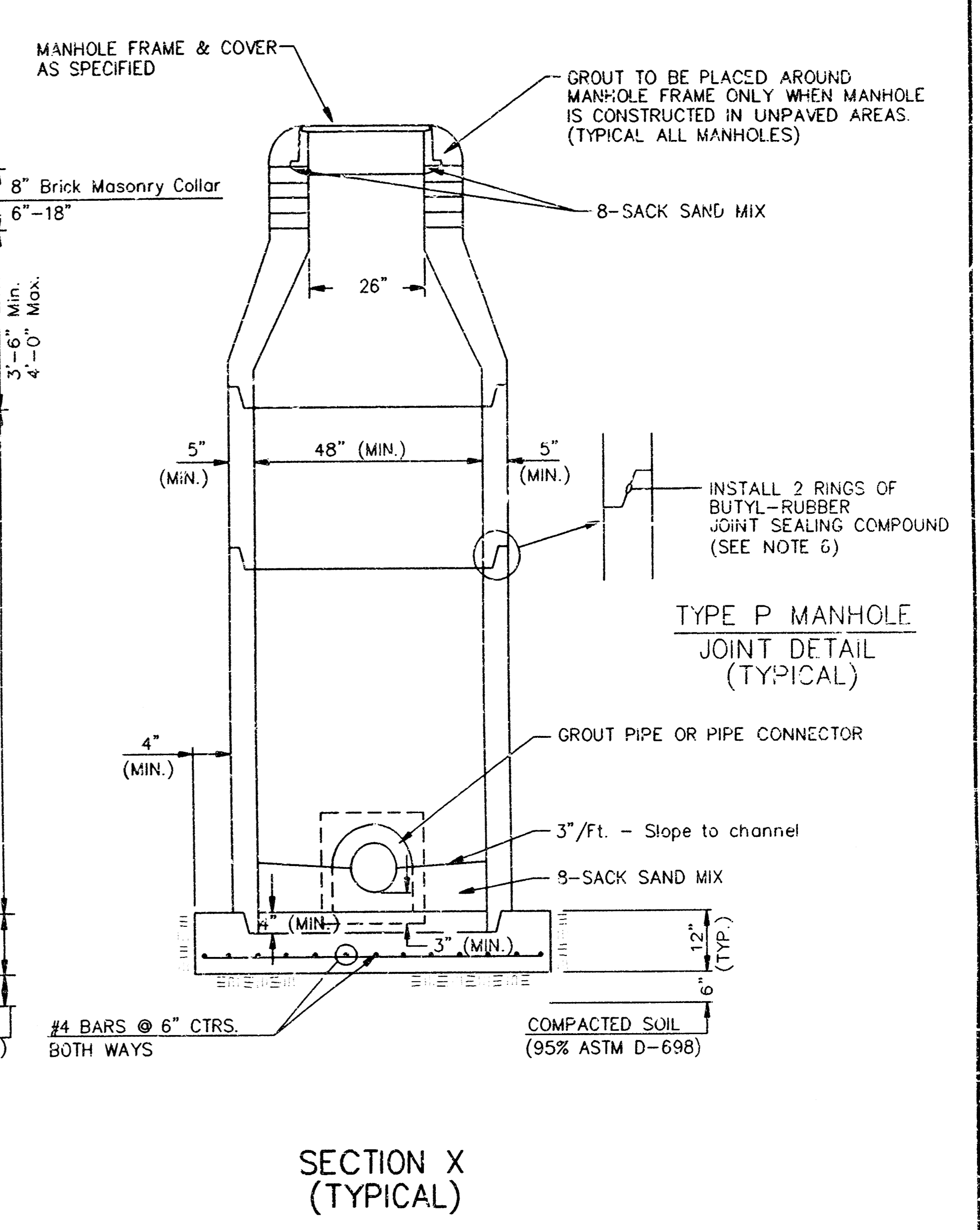
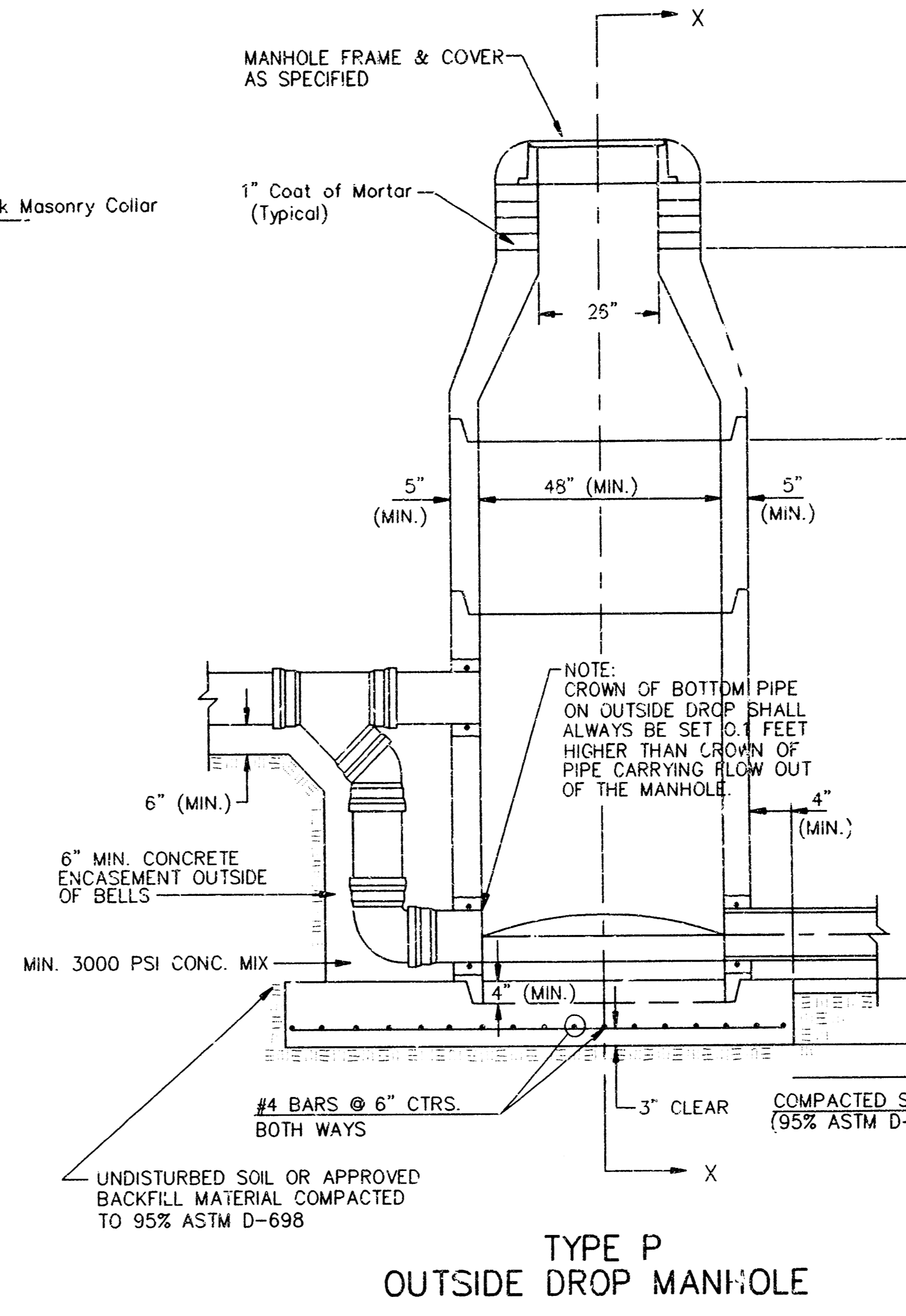
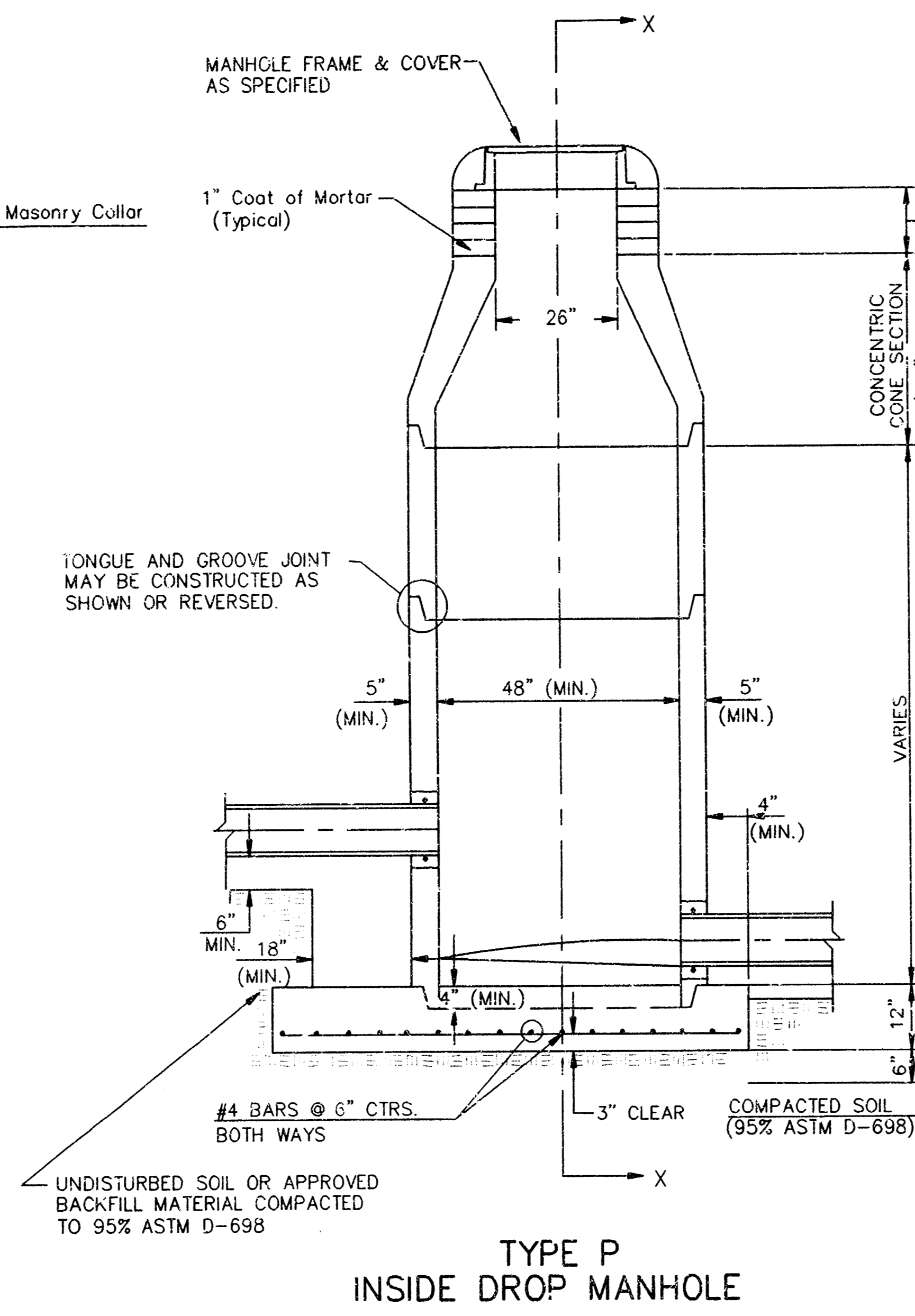
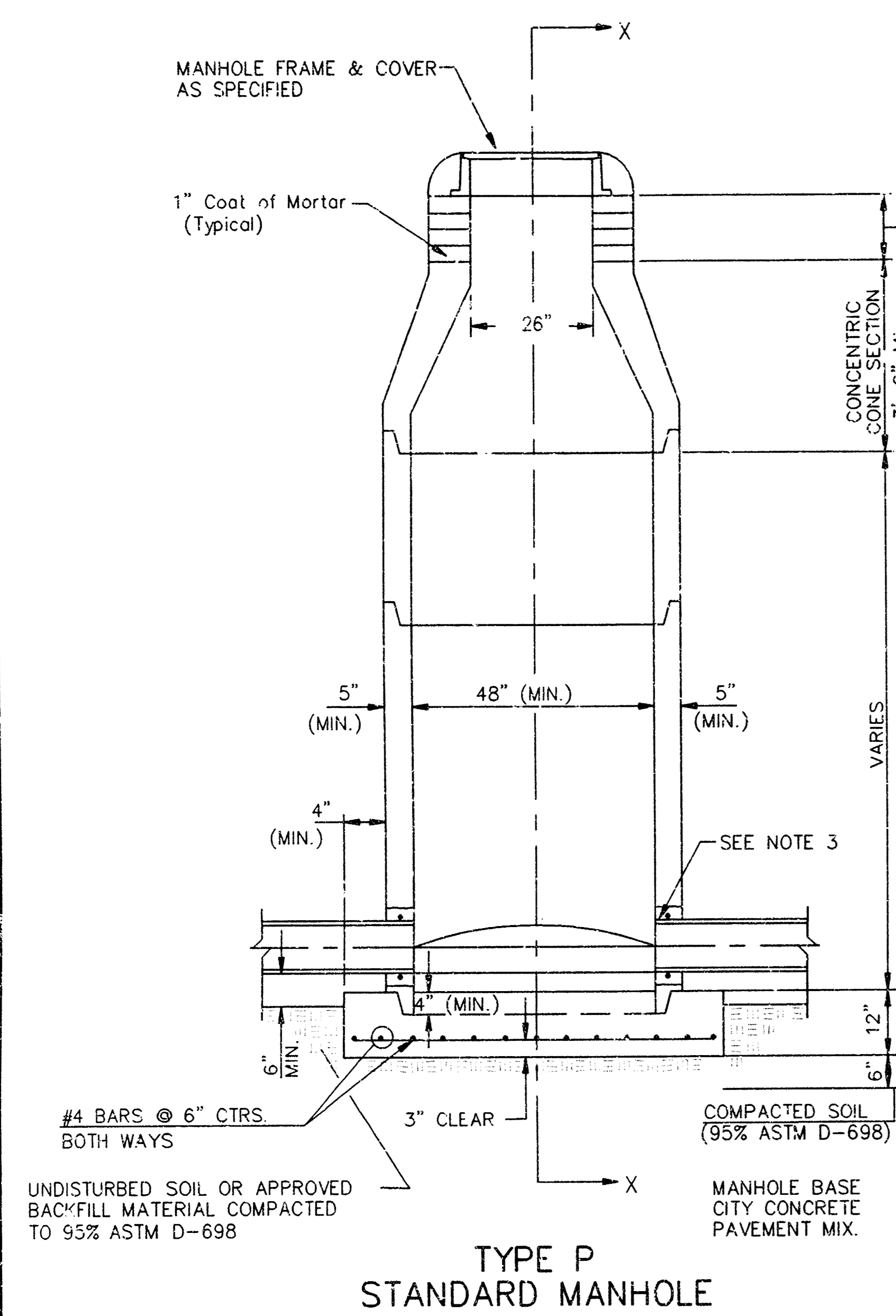
ALL INTERIOR FITTINGS SHALL BE FLANGED OR RESTRAINED JOINT. COST SUBSIDIARY TO 6" FORCE MAIN.
NOTE: All D.I. Pipe shall be coated according to the specifications.



No.	Revision	By	Date
LIFT STATION AND FORCE MAIN TO SERVE EVERGREEN AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS			
MISCELLANEOUS DETAILS			
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 488-76-245-82906-000-000-001			
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.			
ENGINEERS WICHITA, KANSAS			
Designed by	MDK	Job No.	34-98322-4
Drawn by	BB	Date	August 1998
			Sh. 9 of 10

DSNR: MDK OPER: CSJ SCALE: 1"=1'-0" 10-51-02 am
 CA:19980322\004\MISC\MODL 10-21-1998

SEWER APPURTENANCES DETAILS



GENERAL NOTES

PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEPEC SERIES 66 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.)
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
- JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF-CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO HEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWINGS.
- THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
- A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.

DSNR: MOK OPER: JLS SCALE: 1"=1'-0" 08-49-46: gtt
 01-1998 96327 (04) MH-PDL 10-01-1998

<p>THE CITY OF WICHITA</p> <p>CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 405 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 258-5501 (316) 268-4114 FAX</p>	<p>STANDARD TYPE 'P' MANHOLES</p>	
	<p>M. E. UNDEBAK P.E. - CITY ENGINEER</p>	
<p>PROJECT NUMBER 468-82906</p>	<p>INDEX CODE 743708</p>	
<p>DATE MAR 96</p>	<p>SHEET 10 OF 10</p>	

18-10-01-10