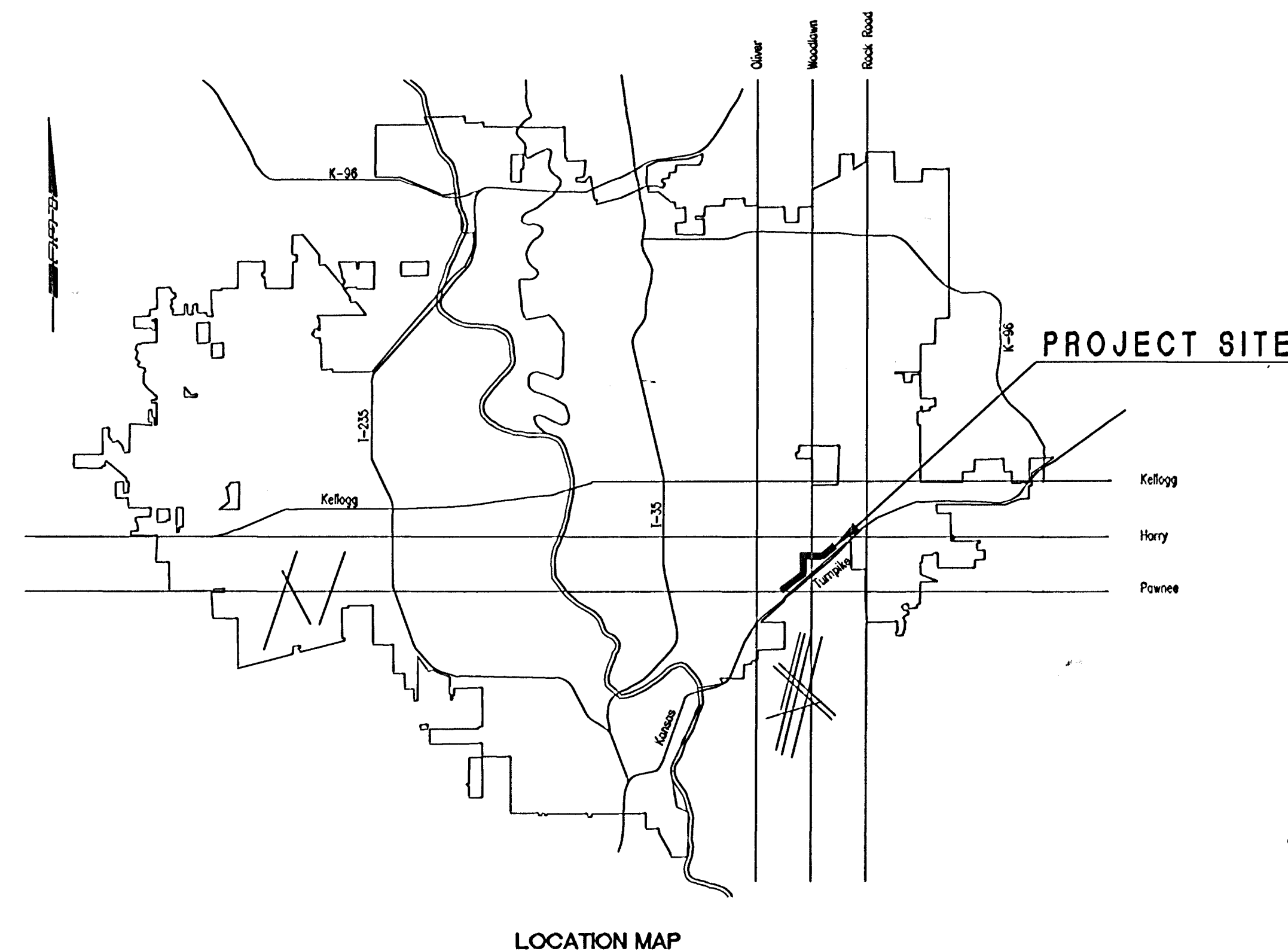


CONSTRUCTION PLANS FOR WAR INDUSTRIES RELIEF SEWER (PHASE 3)

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



LOCATION MAP

INDEX OF SHEETS

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SHEET NO. 18	EROSION CONTROL DETAILS

*Note: Not as-built
Changes reflect best info available
7/27/04 - RDL*

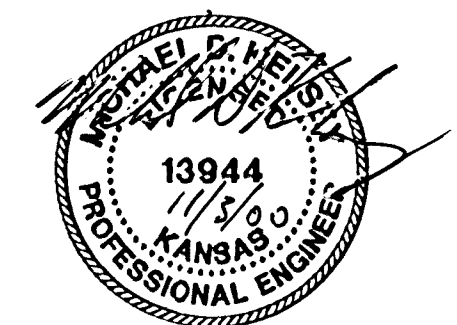
*Garver Construction, LTD., BRH Garver, General Partner- Contractor
Wood, City Inspector
Released 8/16/05
JDL 8/30/05*

OCA NO. 623323

CITY OF WICHITA PROJECT NO. 468-76-245-82930-000-000-001

OCTOBER 2000

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



BENCH MARKS

- BM #18 - (DATUM) CITY OF WICHITA BENCH MARK DISC AT NORTHEAST CORNER OF BRIDGE OVER THE GYPSUM CREEK ON PAMNEE, ± 300' WEST OF KANSAS TURNPIKE, ± 395' EAST OF E OF ADAMS STREET. ELEV. = 123.02
- BM #19 - "I" POST 5' OFF WESTERLY EDGE OF CONCRETE BIKE PATH, ± 60' ENE OF 12' DECIDUOUS TREE. ELEV. = 123.77
- BM #20 - CHISELED "o" AT NORTHEAST CORNER OF PAVILLON. ELEV. = 129.38
- BM #21 - CHISELED "o" IN TOP BACK CURB, ON SOUTH SIDE OF KINKAID STREET, ADJACENT TO CENTER OF DRIVE AT 5938 EAST KINKAID. ELEV. = 140.19
- BM #22 - CHISELED "o" ON WESTERLY SIDE OF CONCRETE BIKE PATH AT 2 - 15'±20' CMP'S. ELEV. = 139.77
- BM #23 - CHISELED "o" IN SOUTHWEST CORNER OF CONCRETE LIGHT POLE BASE NEAR NORTHEAST CORNER OF PLAYGROUND. ELEV. = 134.25
- BM #24 - RAILROAD SPIKE IN SOUTH FACE OF LIGHT POLE AT NORTHEAST CORNER OF WINDSOR AND SKINNER STREETS. ELEV. = 131.19
- BM #25 - CITY OF WICHITA BENCH MARK DISC ON SOUTHEAST CORNER OF BRIDGE OVER GYPSUM CREEK ON WOODLAWN. ELEV. = 136.79
- BM #26 - "I" POST ± 23' EAST AND ± 5' SOUTH OF NORTHEAST CORNER OF FENCE TO STORAGE UNITS. ELEV. = 144.78
- BM #27 - "I" POST AT SOUTHERLY EDGE OF ASPHALT BIKE PATH, ± 353' NE OF 40' RCP OUTFALL AT NORTH SIDE GYPSUM CREEK. ELEV. = 134.32
- BM #28 - CHISELED "o" ON NORTHERLY EDGE OF BIKE PATH WHERE ASPHALT STOPS AND CONCRETE BEGINS. ELEV. = 126.85
- BM #29 - "I" POST ON NORTHERLY EDGE OF CONCRETE BIKE PATH, ± 59' SE OF NORTHERLY MOST SS MANHOLE. ELEV. = 122.73
- BM #30 - (DATUM) CITY OF WICHITA BENCH MARK DISC ON SOUTHEAST CORNER OF BRIDGE OVER GYPSUM CREEK ON HARRY, JUST WEST OF KANSAS TURNPIKE. ELEV. = 143.10
- BM #24A - CHISELED "o" ON TOP OF CURB AT NORTH SIDE OF SKINNER STREET, ± 75' WEST OF FABRIQUE STREET. ELEV. = 126.31

NE 1/4, SECTION 36

1" = 300'

SW 1/4, SECTION 36

SE 1/4, SECTION 36

KEY MAP

CP #164

CP #168

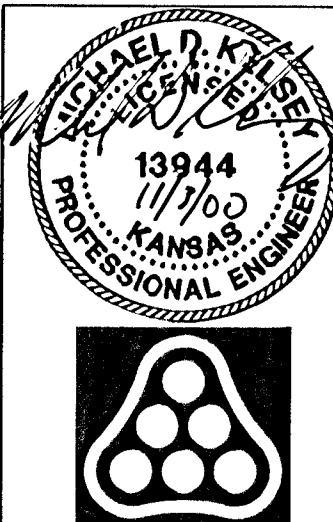
CP #127

NW 1/4, SECTION 31

HORIZONTAL CONTROL POINTS

- CP #2600 N-1,672,243.494 E-1,668,504.192
"I" POST AT SOUTHWEST CORNER ASPHALT PARKING LOT TO WOODLAWN APARTMENTS AT 5001 EAST PAMNEE.
- CP #2601 N-1,672,317.257 E-1,687,300.228
(14 BAR ON WEST BANK, NORTH OF PAMNEE)
± 43' ESE TO GYPSUM CREEK WEST HIGH BANK
21' ESE TO CENTER OF EXISTING SS MANHOLE
68.0' LINE TO 604 NAIL IN WEST FACE OF 48" 36.85' SOUTH TO 604 NAIL IN NW FACE 12' ELM
- CP #2602 N-1,672,281.748 E-1,687,281.589
(14 REBAR EAST BANK, NORTH OF PAMNEE)
± 45' WNW TO GYPSUM CREEK EAST HIGH BANK
96.55' SOUTH TO 604 NAIL IN EAST FACE TELEPHONE POLE
25.05' EAST TO PK NAIL IN SOUTH FACE 18' WALNUT TREE
41.10' SW TO PK NAIL IN NORTH FACE 18' WALNUT TREE
- CP #2603 N-1,673,285.557 E-1,668,079.887
(14 REBAR)
63.28' SOUTH TO PK NAIL EAST FACE OF TREE
78.83' NNN TO SE CORNER OF CONCRETE SLAB PICNIC TABLE AREA
44.85' WEST TO PK NAIL NORTH FACE OF HACKBERRY
104.85' SE TO BENCH MARK #19
- CP #2604 N-1,673,481.274 E-1,668,454.418
(14 BAR)
1' EAST OF THE EAST EDGE CONCRETE PATH, TOP OF HILL, SE OF PAVILLON
± 68' EAST TO R/W FENCE KANSAS TURNPIKE
22.78' SOUTH TO CHISELED "o" AT EAST EDGE OF CONCRETE BIKE PATH
18.72' NORTH TO CHISELED "o" AT WEST EDGE OF CONCRETE BIKE PATH
- CP #2605 N-1,674,068.503 E-1,669,202.818
(14 REBAR, SOUTH OF KINKAID BETWEEN HOUSE NO. 5938 & 5944)
34.95' NORTH TO 604 NAIL AT E CORNER KINKAID STREET
39.14' NW TO BENCH MARK #21
40.83' WEST TO PK NAIL IN NORTH POST, NORTH FACE OF CESSNA PARK SIGN
- CP #2606 N-1,674,437.873 E-1,669,688.038
(14 REBAR)
± 10' NORTH OF E OF BELLAIRE STREET EXTENDED EAST
28.45' EAST TO CHISELED "o" ON WEST EDGE OF CONCRETE BIKE PATH
19.45' SE TO CHISELED "o" ON WEST EDGE OF CONCRETE BIKE PATH
24.00' SOUTH TO CHISELED "o" ON WEST EDGE OF CONCRETE BIKE PATH
- CP #2607 N-1,674,925.828 E-1,670,203.973
(14 REBAR SOUTH OF PLAY GROUND)
22.45' SE TO CHISELED "o" ON CONCRETE BASE TO LIGHT POLE
58.25' NORTH TO CHISELED "o" ON SOUTH EDGE OF CONCRETE WALK
103.05' WEST TO CHISELED "o" ON CONCRETE BASE TO LIGHT POST
- CP #2608 N-1,675,884.754 E-1,670,226.949
(PK NAIL APPROX. CENTER INTERSECTION OF SKINNER & WINDSOR STREETS)
35.70' NE TO BENCH MARK #24
22.23' NNN TO CHISELED "o" ON TOP OF BACK CURB NORTH SIDE OF SKINNER
17.33' EAST TO CHISELED "o" ON TOP OF BACK CURB EAST SIDE OF WINDSOR
± 19.5' SW TO CENTER OF EXISTING SS MANHOLE
- CP #2609 N-1,676,094.517 E-1,670,699.207
(14 REBAR, SOUTH OF KINKAID, BANK, EAST OF WOODLAWN)
21.50' WEST TO CHISELED "o" ON TOP OF CURB EAST SIDE OF WOODLAWN
10.85' WEST TO 604 NAIL SOUTH FACE POWER POLE
15.05' NE TO FENCE CORNER POST, SW CORNER OF PLANT KINGDOM
24.00' NW TO CHISELED "o" ON TOP OF CURB EAST SIDE OF WOODLAWN
- CP #2610 N-1,678,400.934 E-1,671,808.941
(PK NAIL CENTER OF BIKE PATH ON NORTHERLY BANK GYPSUM CREEK, APPROX. 64' NW OF 40' RCP OUTFALL)
NO TEST TAKEN
- CP #2611 N-1,678,878.357 E-1,672,510.721
(PK NAIL CENTER OF BIKE PATH ON NORTHERLY BANK GYPSUM CREEK, APPROX. 892' SW OF EXISTING SS MH AT END OF LINE NO. 1)
NO TEST TAKEN
- CP #127 N-1,677,648.714 E-1,673,237.798
(14 REBAR WESTERLY BANK OF CREEK, SOUTH OF HARRY)
37.17' NNN TO PK NAIL IN EAST OF FACE 15' REBAR
29.25' NW TO SE CORNER OF CONCRETE SLAB - OLD DRIVE
61.45' WSW TO PK NAIL IN NORTH FACE UTILITY POLE
- CP #157 N-1,672,735.877 E-1,665,408.870 (SW CORNER, SEC. 36, 127S, R1E)
(5/4" P IN THIMBLE CENTER INTERSECTION PAMNEE AND OLIVER)
50.49' SE TO CHISELED "o" AT TOP BACK CONCRETE CURB
52.25' SW TO CHISELED "o" AT TOP BACK CONCRETE CURB
48.48' NW TO CHISELED "o" AT TOP BACK CONCRETE CURB
48.38' NE TO CHISELED "o" AT TOP BACK CONCRETE CURB
- CP #161 N-1,672,782.244 E-1,668,051.354 (S 1/4 CORNER, SEC. 36, 127S, R1E)
(1/2" REBAR IN THIMBLE CENTER PAMNEE JUST EAST OF THE KANSAS TURNPIKE)
28.45' S TO CHISELED "o" AT TOP BACK CONCRETE CURB
34.68' SW TO CHISELED "o" AT TOP BACK CONCRETE CURB
30.57' NE TO CHISELED "o" AT TOP BACK CONCRETE CURB
32.08' NW TO CHISELED "o" AT TOP BACK CONCRETE CURB
- CP #165 N-1,675,448.579 E-1,670,665.417 (E 1/4 CORNER, SEC. 36, 127S, R1E)
(5/4" P IN THIMBLE CENTER INTERSECTION WOODLAWN AND MT. VERNON)
32.59' NE TO CHISELED "o" AT TOP BACK CONCRETE CURB
32.58' SE TO CHISELED "o" AT TOP BACK CONCRETE CURB
53.45' WSW TO CHISELED "o" AT TOP BACK CONCRETE CURB
52.67' NE TO CHISELED "o" AT TOP BACK CONCRETE CURB
- CP #160 N-1,675,418.313 E-1,668,020.393 (CENTER, SEC. 36, 127S, R1E)
(5/4" P IN THIMBLE CENTER INTERSECTION EDELMOR AND MT. VERNON)
47.59' NW TO CHISELED "o" AT TOP BACK CONCRETE CURB
44.54' NE TO CHISELED "o" AT TOP BACK CONCRETE CURB
46.27' SE TO CHISELED "o" AT TOP BACK CONCRETE CURB
41.57' SW TO CHISELED "o" AT TOP BACK CONCRETE CURB
- CP #159 N-1,678,070.508 E-1,687,979.119 (N 1/4 CORNER, SEC. 36, 127S, R1E)
(5/4" P IN THIMBLE, CENTER INTERSECTION EDELMOR AND HARRY)
61.97' NW TO CHISELED "o" TOP CURB, NORTH RETURN
52.49' SW TO CHISELED "o" TOP CURB, NORTH POINT IN CURVE
67.33' SE TO CHISELED "o" TOP CURB, 108' EAST OF EAST RETURN
73.60' NE TO CHISELED "o" TOP CURB, EAST RETURN
- CP #164 N-1,678,098.978 E-1,670,630.314 (NE CORNER, SEC. 36, 127S, R1E)
(5/4" P IN THIMBLE, CENTER INTERSECTION WOODLAWN AND HARRY)
48.53' WEST TO CHISELED "o" ON EAST END CONCRETE MEDIAN
51.01' SW TO CHISELED "o" ON CONCRETE TURN LANE MEDIAN NOSE
49.07' EAST TO CHISELED "o" ON WEST END CONCRETE TURN LANE MEDIAN NOSE
51.82' NE TO CHISELED "o" ON CONCRETE TURN LANE MEDIAN NOSE
- CP #168 N-1,672,788.908 E-1,670,699.042 (SE CORNER, SEC. 36, 128S, R1E)
(5/4" P IN THIMBLE, CENTER INTERSECTION EDELMOR AND HARRY)
58.22' NE TO CHISELED "o" SW CORNER CONCRETE VAULT
50.89' SE TO 604 NAIL & SHINER WEST FACE 12' CEDAR TREE
41.53' SOUTH TO PK NAIL EAST FACE 12' CEDAR TREE
47.03' SW TO PK NAIL EAST FACE 15' HEDGE TREE
16.54' NNE TO CENTER ELECTRIC MANHOLE
- CP #168 N-1,678,139.302 E-1,673,108.518 (N 1/4 CORNER, SEC. 31, 127S, R2E)
(5/4" P IN THIMBLE, CENTER INTERSECTION WOODLAWN AND HARRY)
28.77' NE TO CHISELED "o" TOP CURB, NORTH SIDE HARRY
33.51' NW TO CHISELED "o" TOP CURB, NORTH SIDE HARRY
68.98' SW TO CHISELED "o" TOP CURB, MID POINT ON CURVE
60.22' SE TO CHISELED "o" TOP CURB, MID POINT ON CURVE

- 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.
 - 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/SEED 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 GOVERN CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP PRICE BID FOR "SITE RESTORATION".
 - RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED, TREE TRIMMINGS, AND EXCESS EXCAVATION 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. ALL TREES REQUIRED TO BE REMOVED, STA. 8+85.0 TO STATION 80+03.7 SHALL BE REPLACED WITH THE SAME VARIETY AND SIZES AS APPROVED BY THE CITY. COSTS FOR TREE/SHRUB REMOVAL, REPLACEMENT, AND TRIMMING REGARDLESS OF SIZE SHALL BE CONSIDERED SUBSIDIARY TO THE LUMP SUM PRICES BID FOR "SITE CLEARING" AND "SITE RESTORATION".
 - 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 ABUTTING 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.
 - THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TO ENSURE SAFETY AS DIRECTED IN THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
 - THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, AND BANKS TO THEIR ORIGINAL SLOPES AND GRADES, WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPES, FENCES, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN, THEY SHALL BE REMOVED AND REPLACED OR RESET UNLESS OTHERWISE INDICATED ON THE PLANS. REPLACEMENT OF ALL THE AFOREMENTIONED ITEMS, INCLUDING SEEDING, FERTILIZER, AND MULCHING SHALL BE CONSIDERED SUBSIDIARY TO "SITE CLEARING AND RESTORATION".
 - EASEMENTS AND RIGHT-OF-WAY PROVIDED BY THE OWNER FOR THE PROJECT ARE SHOWN IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION OF ANY ADDITIONAL TEMPORARY EASEMENTS OR RIGHT-OF-WAY THAT HE DESIRES TO USE IN COMPLETING THE WORK.
 - POSITIVE DRAINAGE SHALL BE PROVIDED FOR ALL AREAS ON OR NEAR SPOIL AREAS, NATURAL DRAINAGE WAYS SHALL BE MAINTAINED.
 - EACH BIDDER SHALL VISIT THE SITE OF THE PROJECT BEFORE SUBMITTING THE PROPOSAL FOR THIS WORK SO THAT HE WILL BE FULLY INFORMED OF THE EXISTING FIELD CONDITIONS AND THE OBSTACLES WHICH MIGHT BE ENCOUNTERED. UPON AWARD OF THE CONTRACT, THE CONTRACTOR WILL NOT BE GRANTED ANY ADDITIONAL COMPENSATION WITH REGARDS TO TIME AND MONEY FOR CONDITIONS THAT MAY HAVE BEEN EVALUATED DURING AN INSPECTION OF THE SITE.
 - PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE BOARD OF PARK COMMISSIONERS AT: MR. HAROLD HUGHEY, ACTING SUPERINTENDENT OF PARKS, PARK & RECREATION DEPARTMENT, PARK MAINTENANCE DIVISION, 1245 S. MCKEAN BOULEVARD, WICHITA, KS 67213, PH: (316) 337-9225, FAX: (316) 337-9229.
 - THE CONTRACTOR SHALL PROVIDE EROSION PROTECTION IN ACCORDANCE WITH THE STORM WATER PERMIT AND THE EROSION PROTECTION AND SEDIMENT BARRIER DETAILS. ALL COSTS ASSOCIATED WITH EROSION PROTECTION/STORM WATER MANAGEMENT SHALL BE INCLUDED IN THE LUMP SUM PRICES BID FOR "SITE CLEARING" AND "SITE RESTORATION" FOR THE BASE BID (MICROTUNNELING) OPTION.
 - LINE SEGMENTS BETWEEN THE EXISTING MANHOLE AND MANHOLE 1 (320.0 LF), MANHOLE 16 AND MANHOLE 17 (38.8 LF), AND MANHOLE 17 AND EXISTING MANHOLE (20.6) SHALL BE OPEN CUT WITH THE REMAINING LINE SEGMENTS MICROTUNNELLED.
 - WHERE INDICATED IN THE PLANS THE CONTRACTOR SHALL INSTALL A SYNTHETIC LOAD SUPPORT SYSTEM TO FACILITATE SEWER MAINTENANCE EQUIPMENT ACCESS. SYNTHETIC LOAD SUPPORT SHALL CONSIST OF A PERFORATED GEOWEB SYSTEM AS MANUFACTURED BY PRESTO PRODUCTS COMPANY - WAPLETON, WI (1-800-548-3424 OR ON THE INTERNET AT WWW.PRESTOGEOWEB.COM). GEOWEB SHALL BE AS RECOMMENDED BY THE MANUFACTURER. THE BASE FOR THE GEOWEB SYSTEM SHALL BE 5" TO 8" SAND GRAVEL (D-10). ALL Voids IN THE GEOWEB MATERIAL SHALL BE FILLED WITH SAND, SEED, FERTILIZER, AND MULCH SHALL BE APPLIED IN ACCORDANCE WITH GENERAL NOTE 9. ALL COSTS FOR THIS WORK, INCLUDING ALL MATERIALS, LABOR, AND INCIDENTALS SHALL BE PAID FOR AT THE PRICE BID PER SF FOR "SYNTHETIC LOAD SUPPORT".
 - THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE A MINIMUM OF 18 LF OF CONCRETE SIDEWALK AT ALL PROPOSED CROSSINGS OR AS SHOWN IN THE PLANS. THE REPLACED SIDEWALK THICKNESS SHALL BE INCREASED TO A MINIMUM OF 6" AND SHALL BE REINFORCED WITH #4 BARS AT 5" CENTERS TO SUPPORT SEWER MAINTENANCE EQUIPMENT. LOCATIONS OF REPLACED THICKENED SIDEWALK SECTIONS SHALL COINCIDE WITH THE LOCATIONS OF THE SYNTHETIC LOAD SUPPORT SYSTEM. SIDEWALK REMOVAL AND REPLACEMENT SHALL BE CONSIDERED SUBSIDIARY TO THE LUMP SUM PRICES BID FOR "SITE CLEARING" AND "SITE RESTORATION".
 - AFTER COMPLETION OF DRIVE, SHAFT LINER SHALL BE REMOVED A MINIMUM OF 8" BELOW FINISH GRADE. GROUT AROUND MANHOLE AND REMAINING LINER PER THE SPECIFICATIONS.



WAR INDUSTRIES REJF SEWER
(PHASE 3)

KEY MAP

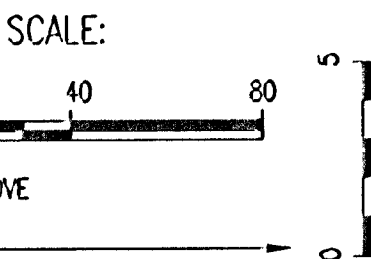
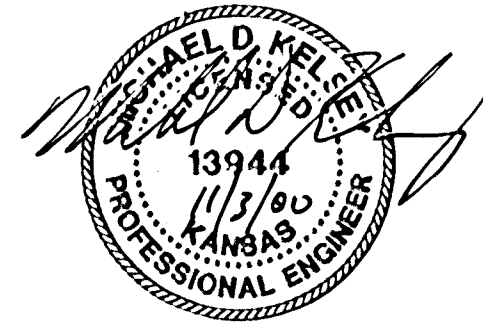
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-82930-000-000-001

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

Designed by	MDK, GM	Job No.	34-98249-4	Sht. 2 of 18
Drawn by	BB	Date	February 2000	



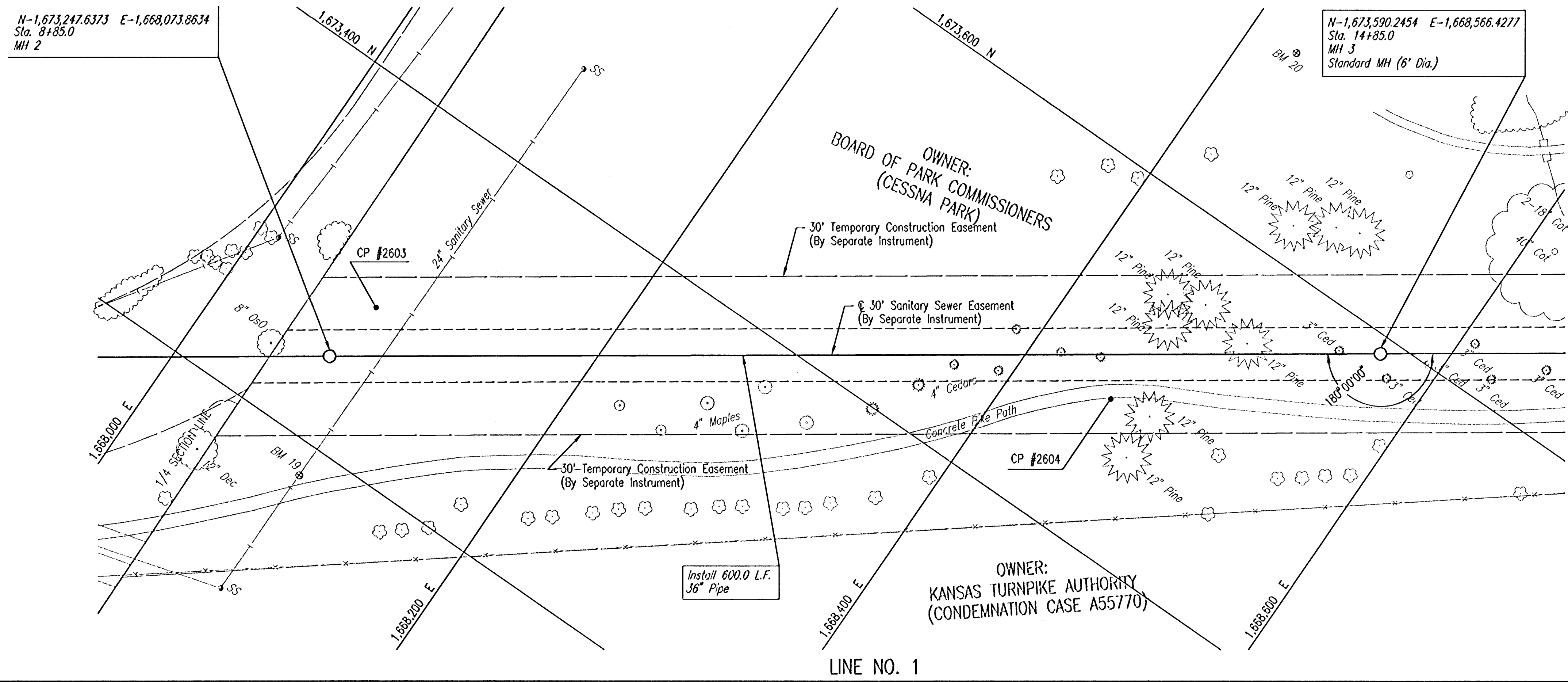
NOTE: CLAY PLUG SHALL EXIST IN PLACE.



 Professional Engineering Consultants, P.A. 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003	WAR INDUSTRIES RELIEF SEWER (PHASE 3)	
	LINE NO. 1	
Designed By MDK, CM Drawn By CM	Job No. 34-58248-4 Date February 2000	MICHAEL E. LINDBERGH, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-76-245-83930-400-000-001

PROFILE		BY	DATE
	CHECKED		
	CHECKED		

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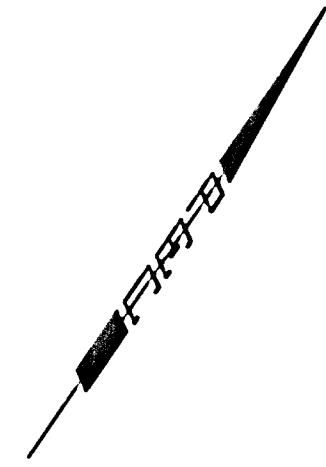


SCALE:

PLAN: LAT. & LONG. 

PROFILE: HORIZ. SAME AS ABOVE

VERT. 





Professional Engineering Consultants, P.A.
 303 S. TOPEKA • WICHITA, KANSAS 67202
 316-262-2691 • FAX 316-262-3063

WAR INDUSTRIES RELIEF FINDER
 (PHASE 3)

LINE NO. 1

MICHAEL E. LINDBECK, P.E. - CITY ENGINEER
 CITY OF WICHITA PROJECT NO. 468-76-245-82530-000-000-001

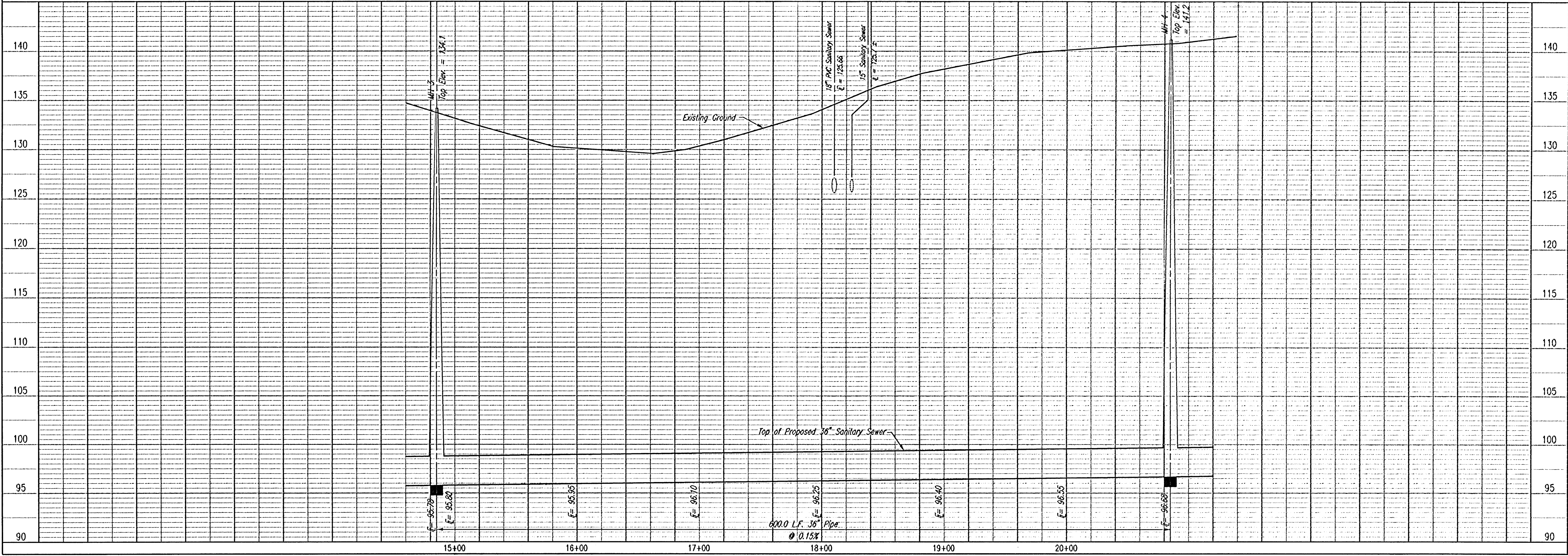
Sheet 4 of 18

Designed By	MOC, CM	Job No.	34-98249-4
Drawn By	CM	Date	February 2000

PLAN	CHECKED	DATE

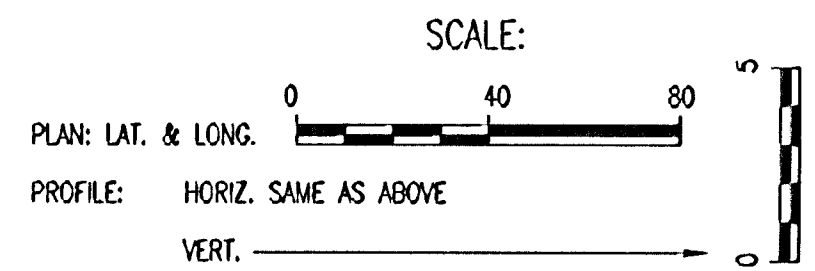
PROFILE	CHECKED	DATE

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Sta. 14+85.0
MH 3

N-1,673,932.8536 E-1,669,058.9921
Sta. 20+85.0
Construct MH 4
Standard MH (6' Dia.)

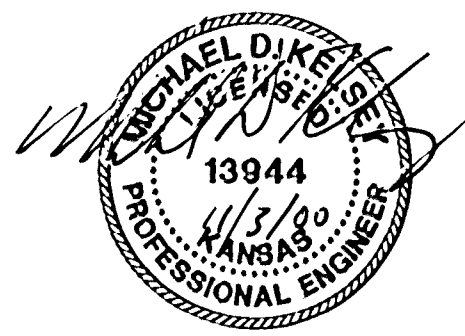
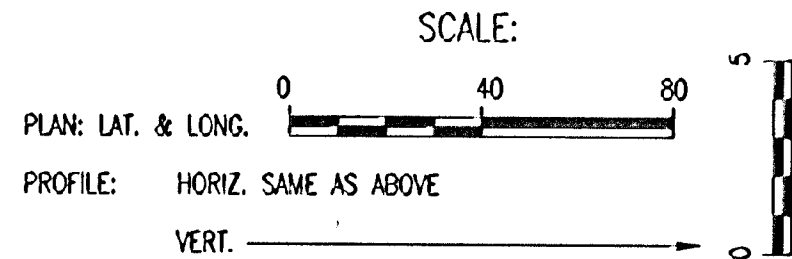
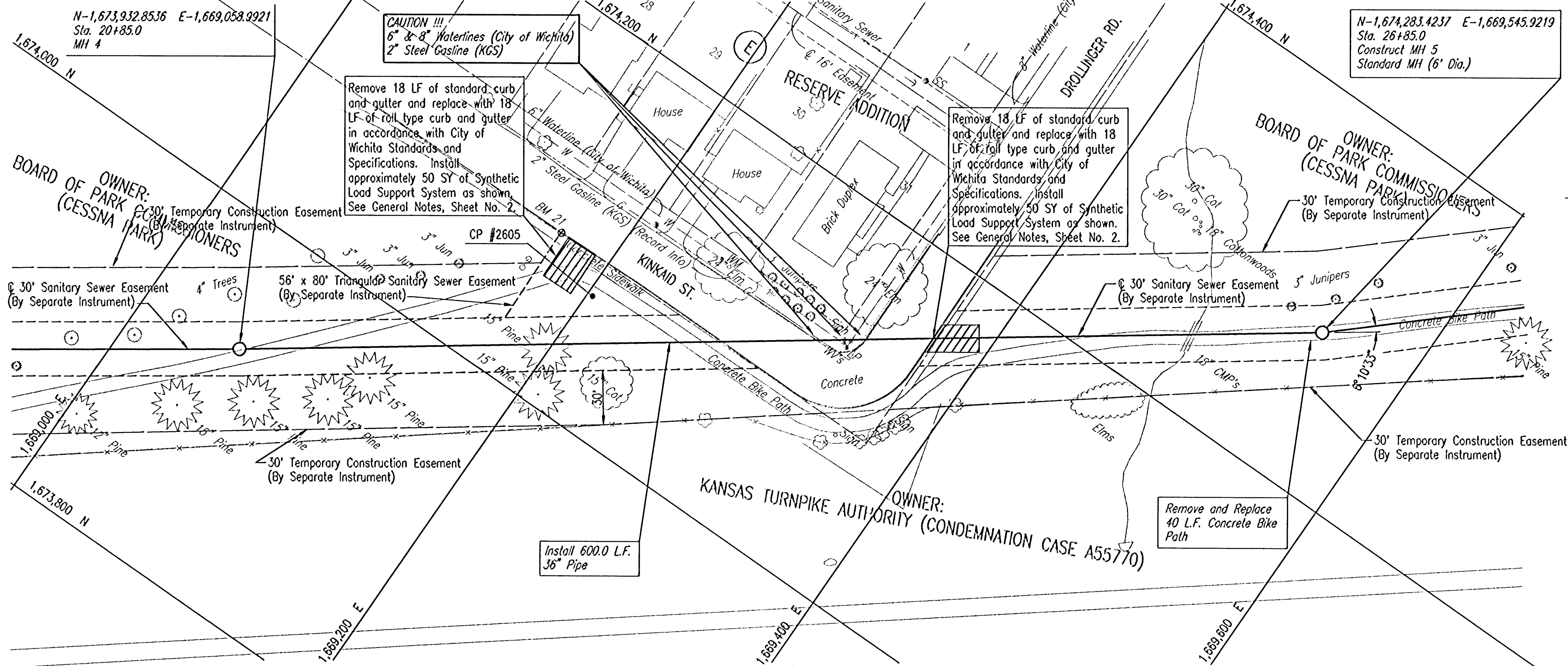
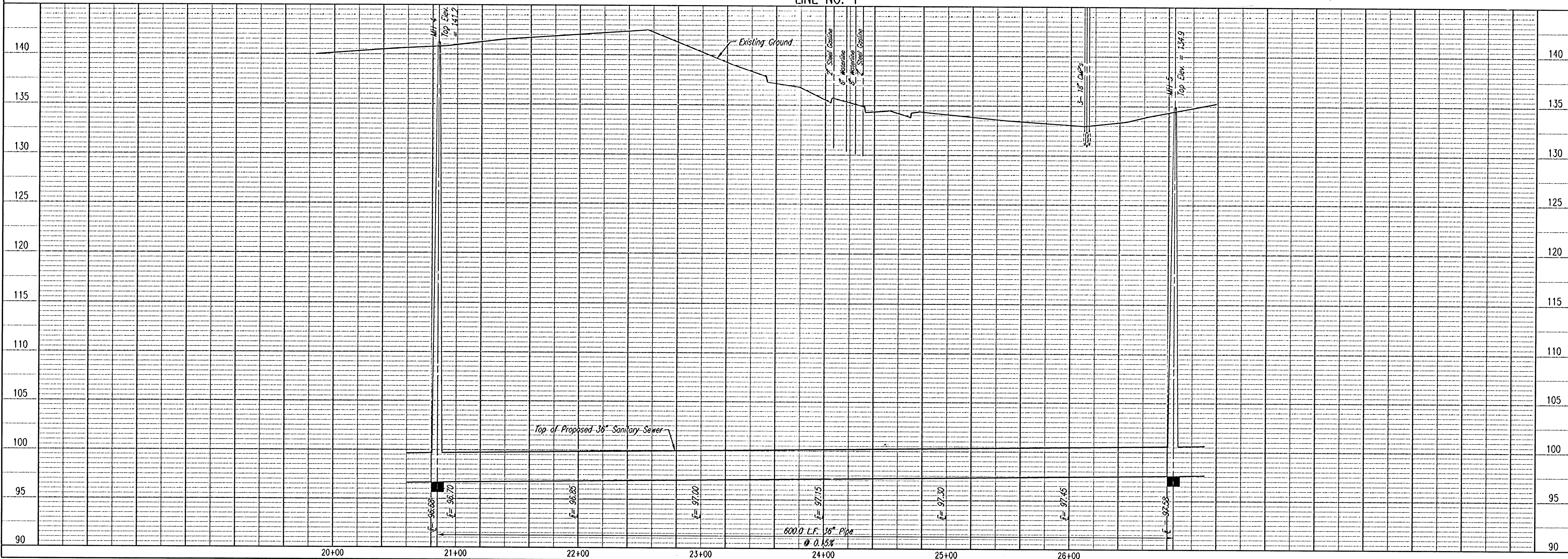


Professional Engineering Consultants, P.A.
303 S. 106th St., Suite 100, Overland Park, KS 66202
316-262-2691 • FAX 316-262-3000
Designed By: MCK, CM
Drawn By: CM
Job No.: 34-98249-4
Date: February 2000
WAR INDUSTRIES RELIEF SEWER (PHASE 3)
LINE NO. 1
MICHAEL E. LINDBERGH, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-82930-000-001

PLAN	CHECKED	DATE

PROFILE	CHECKED	DATE

DSNR: G.M. OPER: JCA SCALE: 1"=40.00
 Q: 1/19/98 18:24:49 (004) PP04 11-02-2000 04:01:33 pm



WAR INDUSTRIES RELIEF SEWER
 (PHASE 3)
 LINE NO. 1
 MICHAEL E. LINDBAK, P.E. - CITY ENGINEER
 CITY OF WICHITA PROJECT NO. 468-76-245-8230-000-001

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 303 S. TOPICKA • WICHITA, KANSAS 67202
 316-262-2291 • FAX 316-262-3003
 Designed By: M.E. Lindbak
 Drawn By: M.E. Lindbak
 Job No.: 34-88249-4
 Date: February 2000

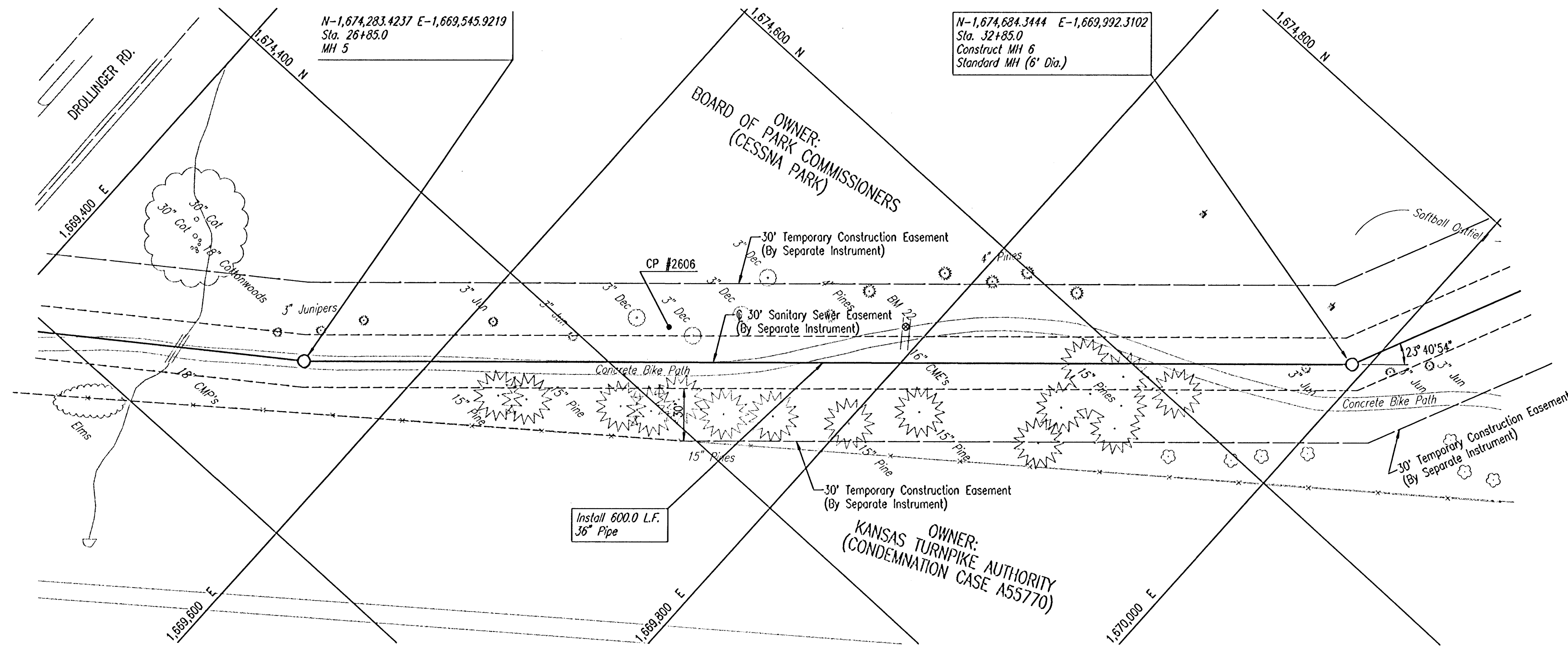
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	CHECKED		

Sanitary sewer profile view showing existing ground, proposed sewer line, and manholes. The profile is plotted on a grid with stationing from 26+00 to 32+00 and elevation from 90 to 140. Key features include manholes MH-5 and MH-6, an existing ground line, and a proposed 36-inch sanitary sewer line with a 0.15% slope. Elevation data points are provided for the sewer line at various stations.

Station	Elevation (ft)
26+00	92.58
27+00	97.60
28+00	97.75
29+00	97.90
30+00	98.05
31+00	98.20
32+00	98.35
32+00	98.40

Additional data points from the profile:

- Manhole MH-5 Top Elev. = 134.9
- Manhole MH-6 Top Elev. = 142.4
- Existing Ground Elevation at 27+00: ~134.9
- Existing Ground Elevation at 30+00: ~138.5
- Existing Ground Elevation at 32+00: ~142.4

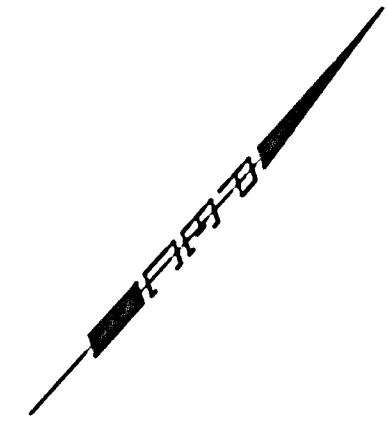


SCALE:

PLAN: LAT. & LONG. 

PROFILE: HORIZ. SAME AS ABOVE

VERT. 





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WAR INDUSTRIES RELIEF SEWER
(PHASE 3)

LINE NO. 1

MICHAEL E. LINDBERG, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-82330-000-000-001

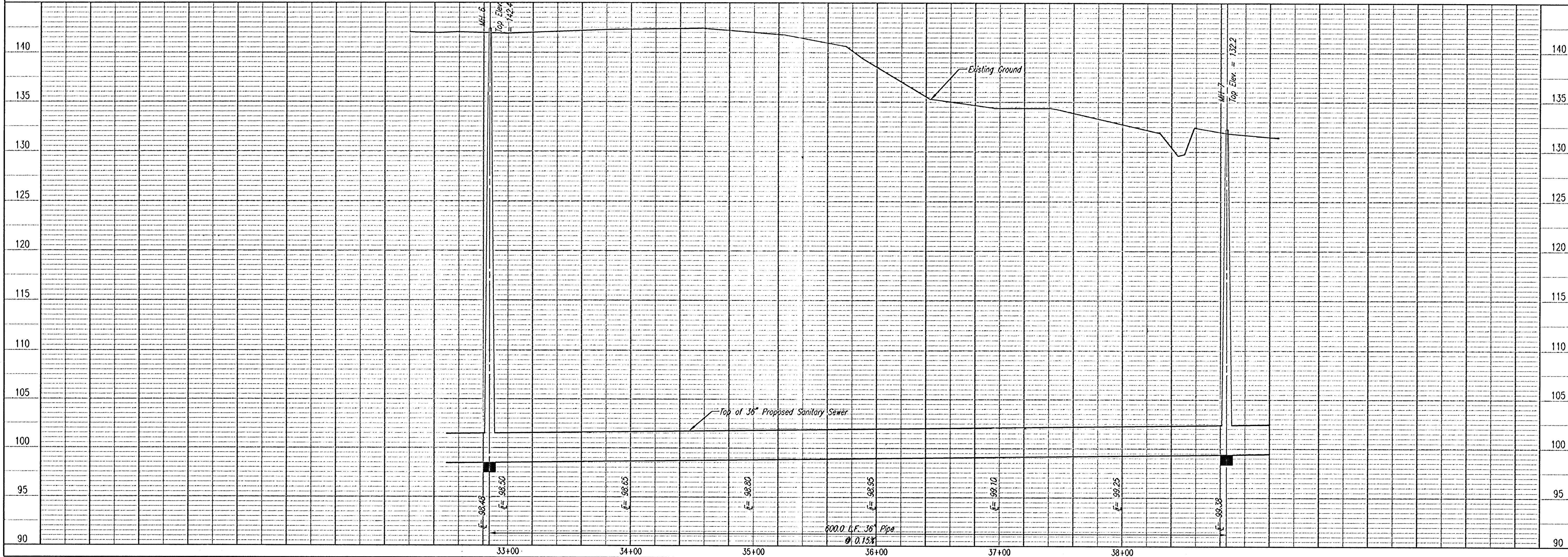
Sheet 7 of 18

Designed By	MCK, CM	Job No.	34-88249-4
Drawn By	CM	Date	February 2000

PLAN	CHECKED	DATE
	CHECKED	

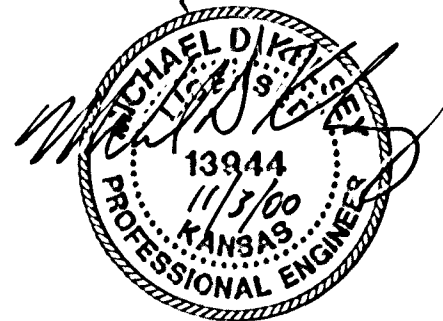
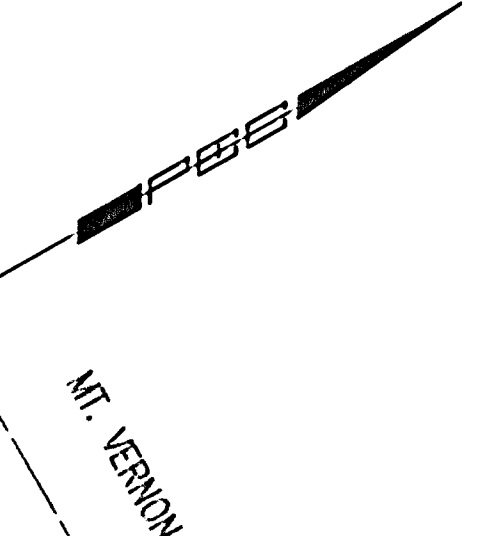
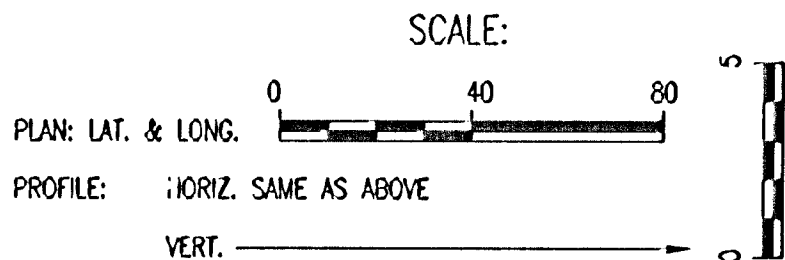
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 Sta. 32+85.0
 MH 6

N-1,675,230.7979 E-1,670,240.0774
 Sta. 38+85.0
 Construct MH 7
 Standard MH (6' Dia.)



WAR INDUSTRIES RELIEF SEWER
 (PHASE 3)
 LINE NO. 1

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Designed By: MEX, CM
 Drawn By: CM

Job No.: 34-58249-4
 Date: February 2000

CITY OF WICHITA PROJECT NO. 468-78-245-82330-100-000-001

Sheet 8 of 18

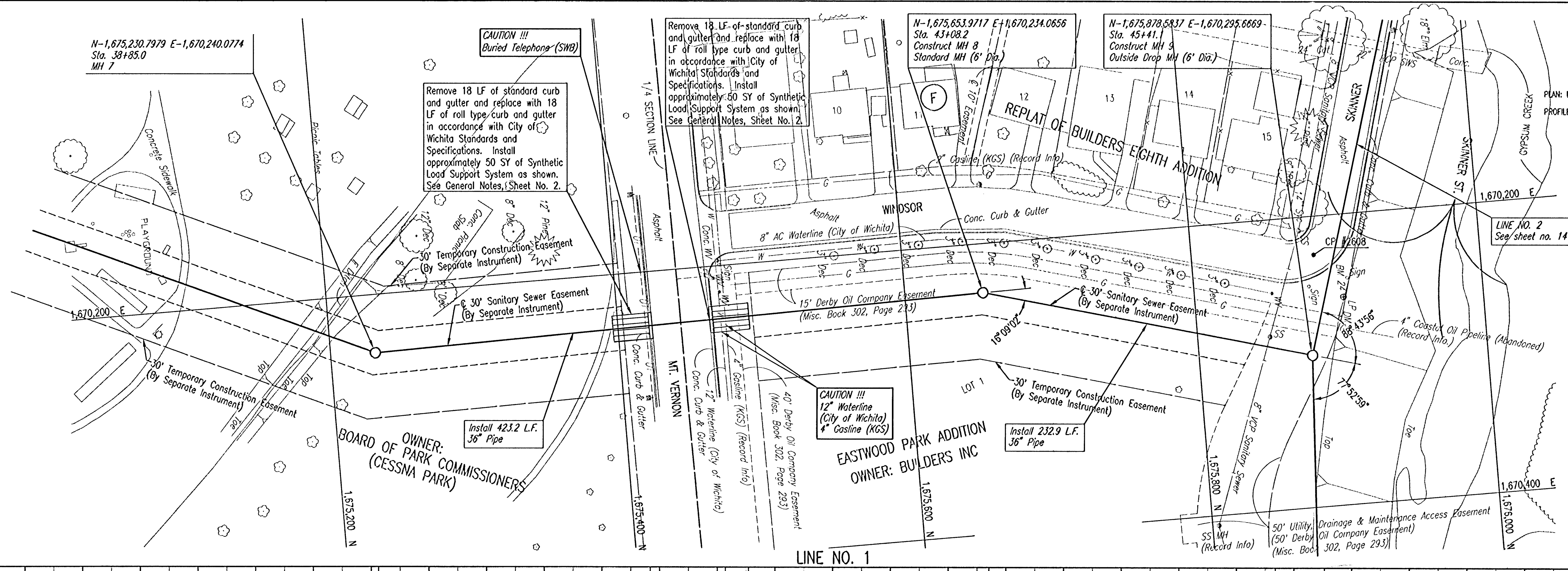
PROFILE	BY	DATE
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CHECKED		

DSNR: GJM OPER: JGA SCALE: 1"=40.00
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Profile drawing showing existing ground and proposed sanitary sewer line. The drawing includes manholes (MH 7, MH 8, MH 9) and a proposed 36" sanitary sewer line. The existing ground is shown as a solid line, and the proposed sewer line is shown as a dashed line. The profile is plotted on a grid with elevations from 90 to 140 feet and stationing from 39+00 to 45+00.

Key features and data points:

- Manhole 7 (MH 7):** Top Elev = 132.2, Invert Elev = 98.38
- Manhole 8 (MH 8):** Top Elev = 131.1, Invert Elev = 100.00
- Manhole 9 (MH 9):** Top Elev = 130.2, Invert Elev = 100.46
- Proposed 36" Sanitary Sewer Line:**
 - Station 39+00 to 40+00: Invert = 99.45
 - Station 40+00 to 41+00: Invert = 99.55
 - Station 41+00 to 42+00: Invert = 99.70
 - Station 42+00 to 43+00: Invert = 99.85
 - Station 43+00 to 44+00: Invert = 100.15
 - Station 44+00 to 45+00: Invert = 100.30
- Existing Ground:** Shown as a solid line profile.
- Notes:**
 - 423.2 L.F. 36" Pipe @ 0.15%
 - 232.9 L.F. 36" Pipe @ 0.15%
 - Top of 36" Proposed Sanitary Sewer
 - Existing Ground
 - Top of 12" Waterline
 - Top of 4" Gasline
 - Top of 8" Sanitary Sewer
 - In = 109.27 from LINE NO. 2 (18")
 - Out = 100.36



SCALE:

PLAN: LAT. & LONG.

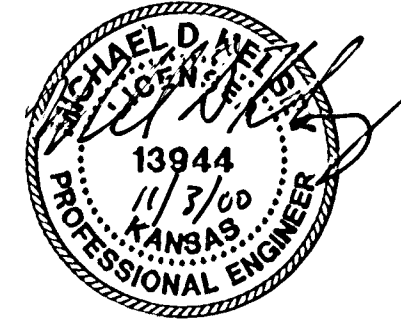
PROFILE: HORIZ. SAME AS ABOVE

VERT.

0 40 80

0 5

PBB

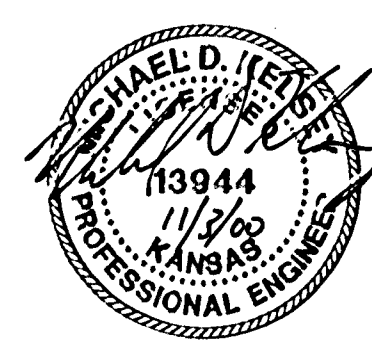
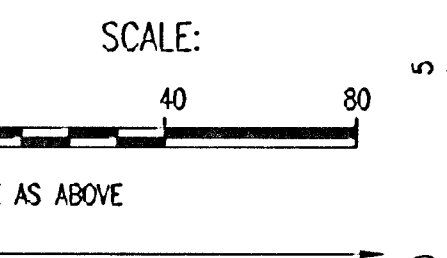
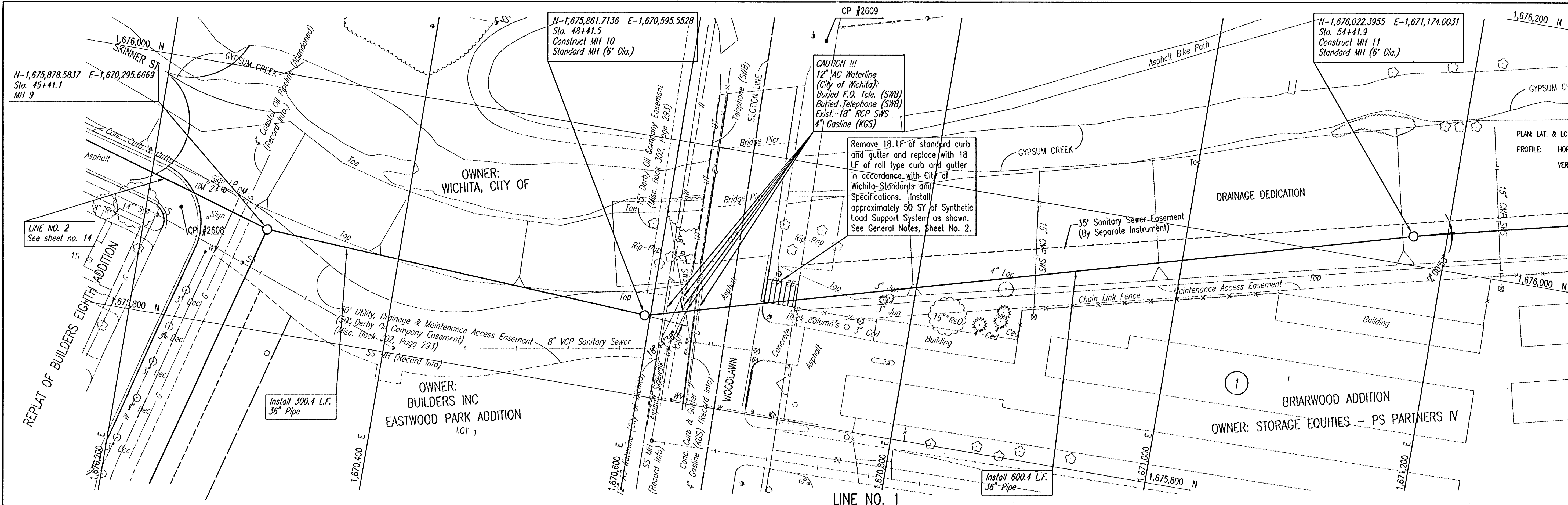
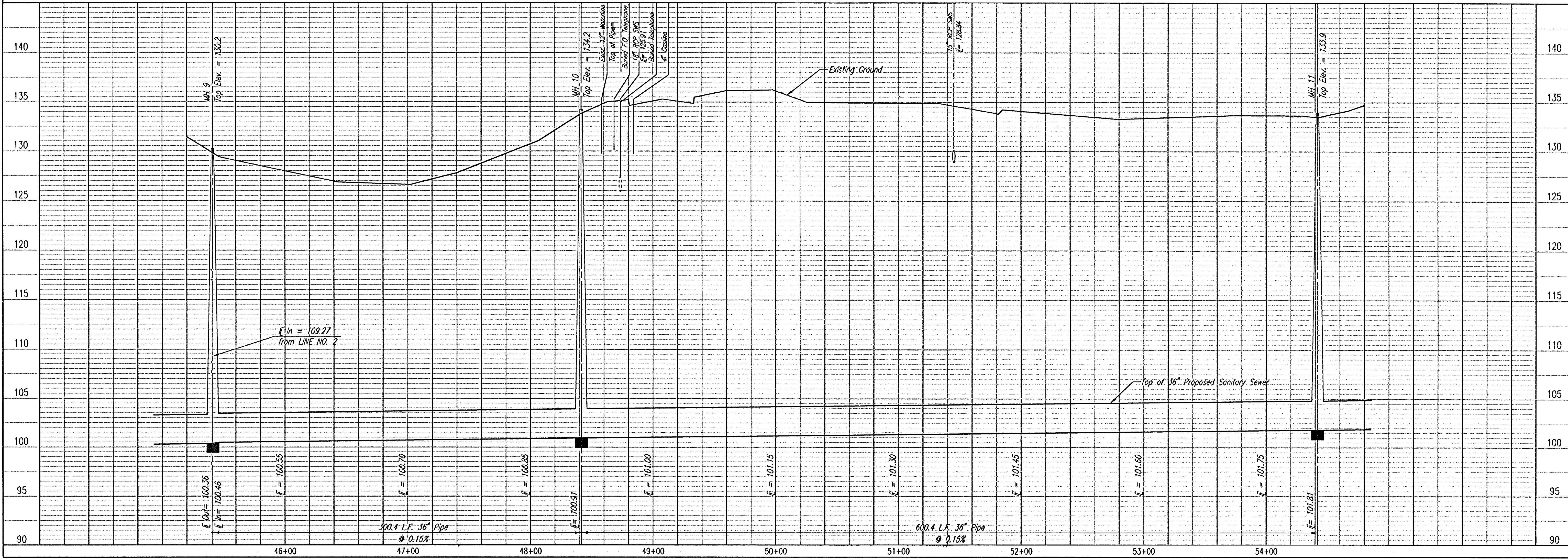


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	Designed By Drawn By	MDC, GM GM	

PLAN	CHECKED	DATE

PROFILE	CHECKED	DATE

DSNR: GLM OPER: JGA SCALE: 1"=40.00
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WAR INDUSTRIES RELIEF SEWER
(PHASE 3)

LINE NO. 1

MICHAEL E. LINDSEY, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-82835-000-001

Designed By: MUX, CM
Drawn By: CM

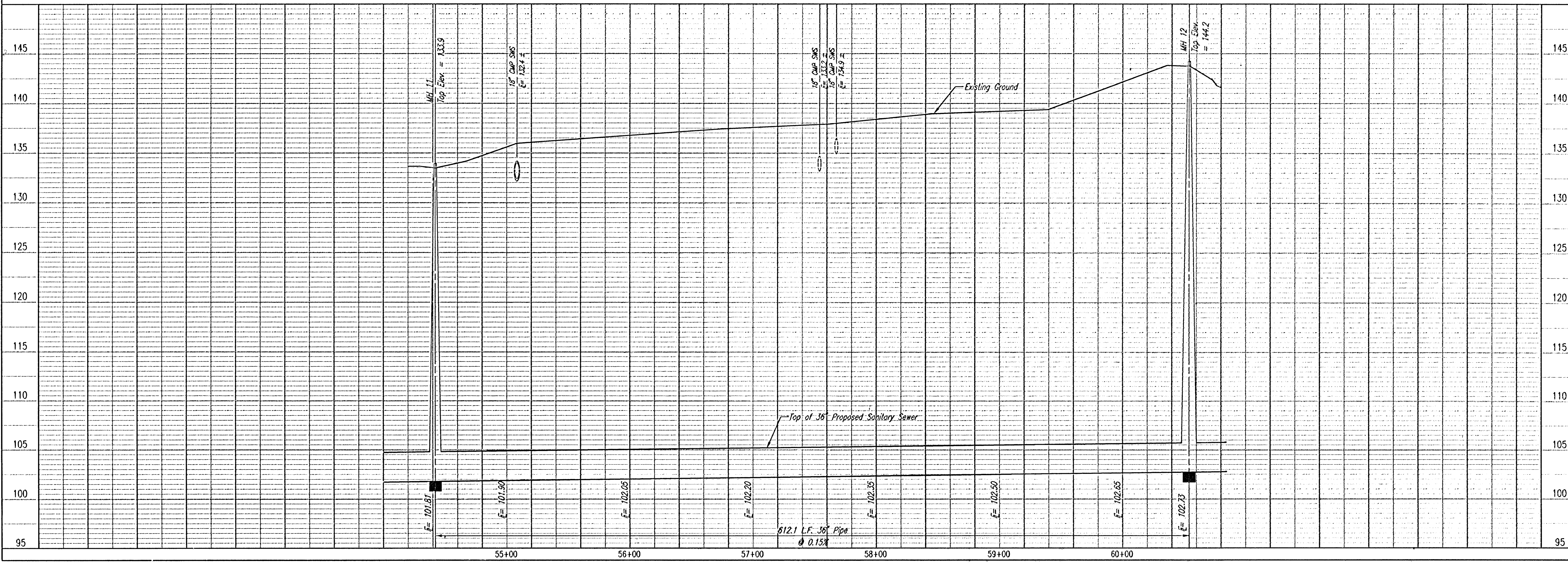
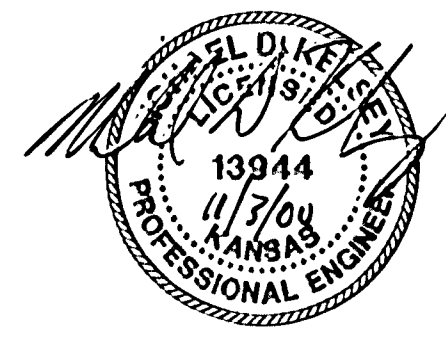
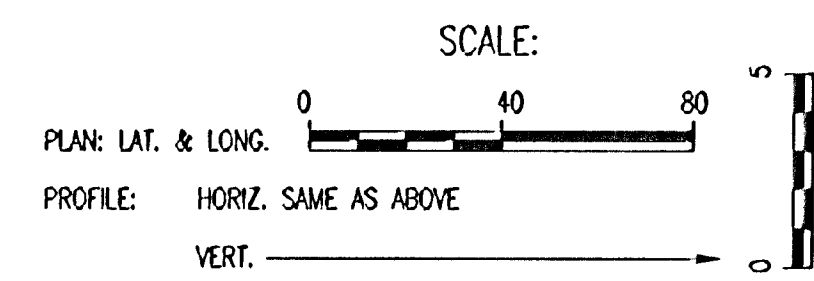
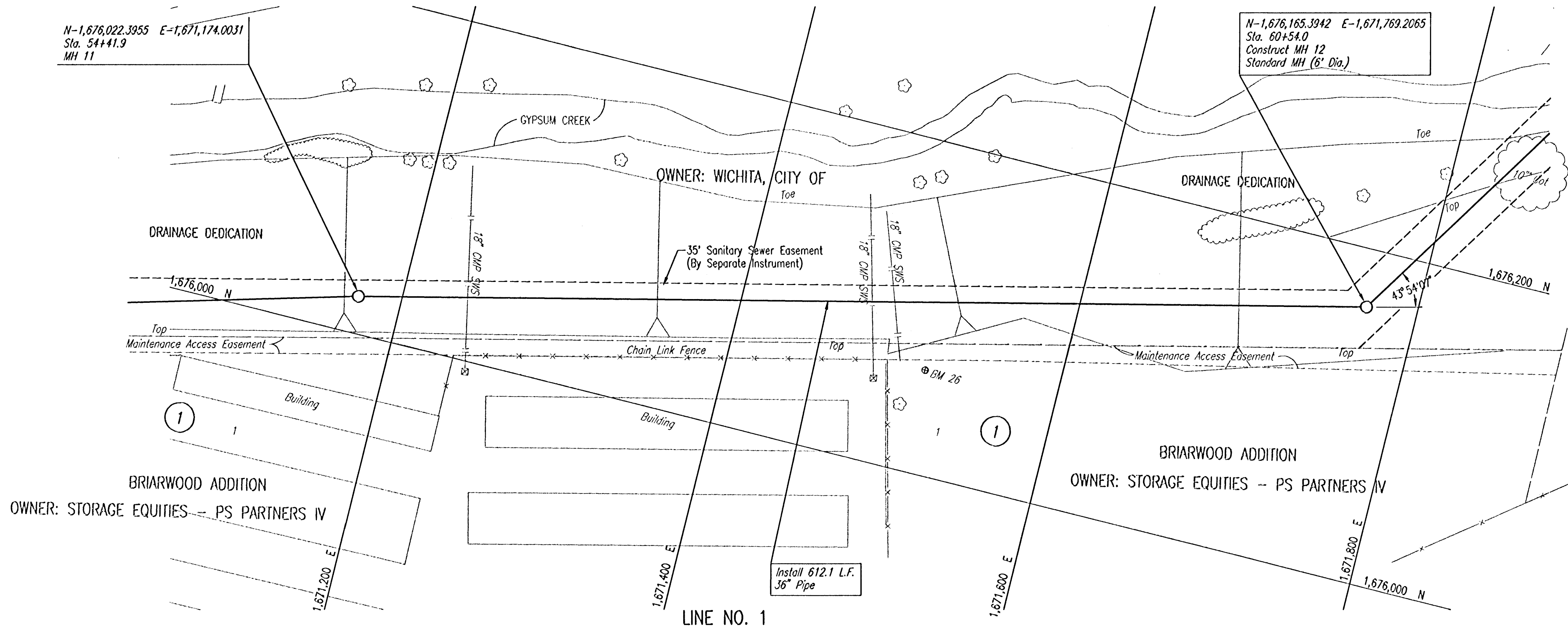
Job No. 34-98249-4
Date February 2000

Sheet 10 of 18

PLAN	CHECKED	DATE

PROFILE	CHECKED	DATE

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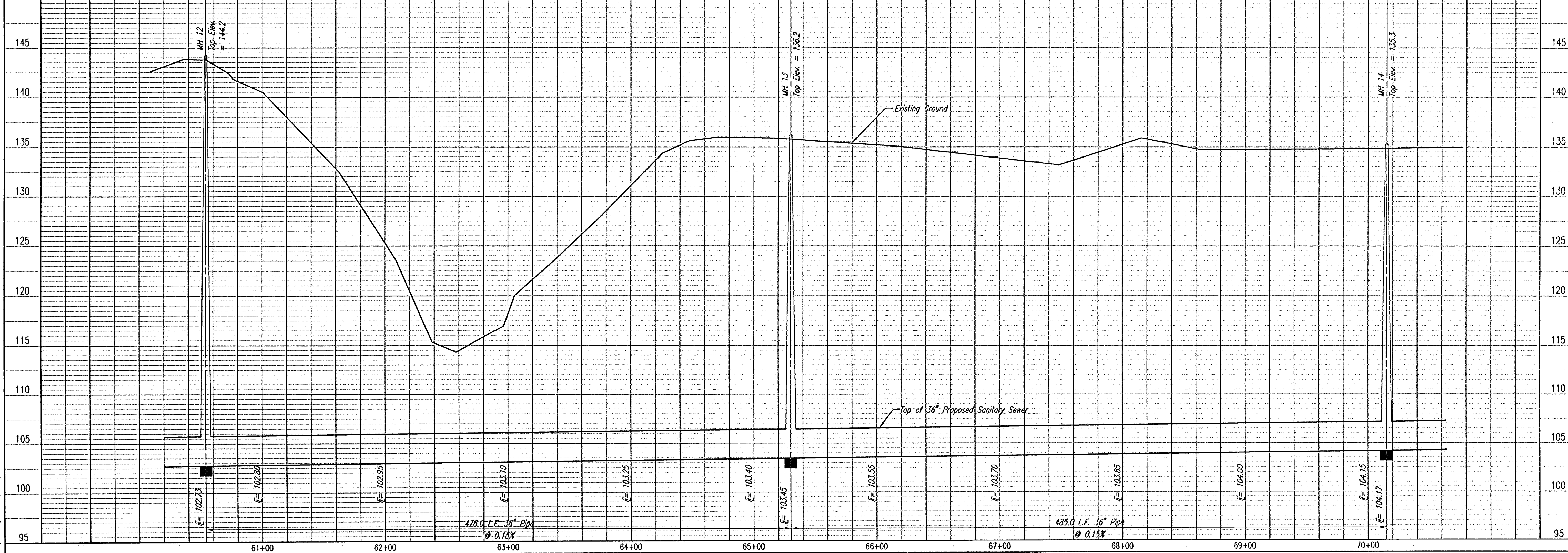
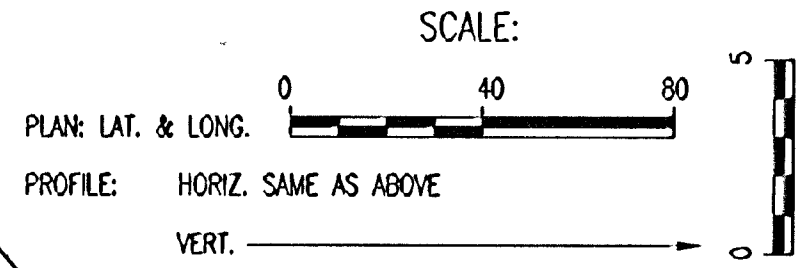
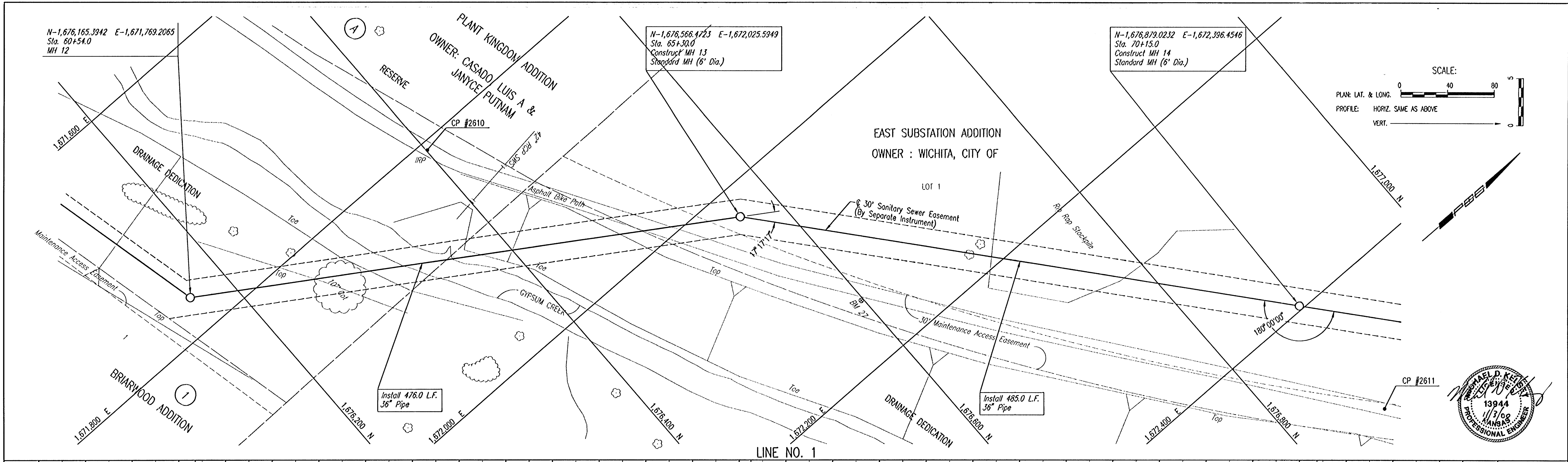
WAR INDUSTRIES RELIEF SEWER
(PHASE 3)
LINE NO. 1
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-82930-000-000-001

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Designed By: MCK, CM
Drawn By: CM
Job No.: 34-98249-4
Date: February 2000

PLAN	CHECKED	DATE

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WAR INDUSTRIES RELIEF SEWER
(PHASE 3)
LINE NO. 1

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303 S. TOPEKA • WICHITA, KANSAS 67202
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Designed By: MDK, GM
Drawn By: GM

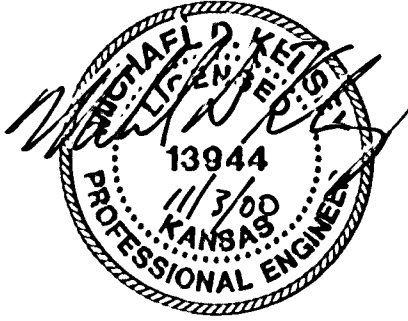
Job No. 34-98249-4
Date February, 2000

MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-82330-000-000-001

Sheet 12 of 18

PROFILE	CHECKED	BY	DATE
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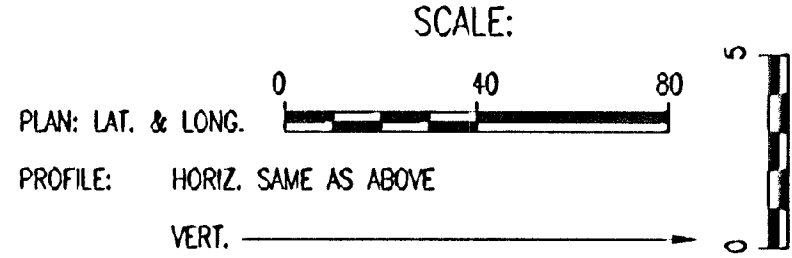
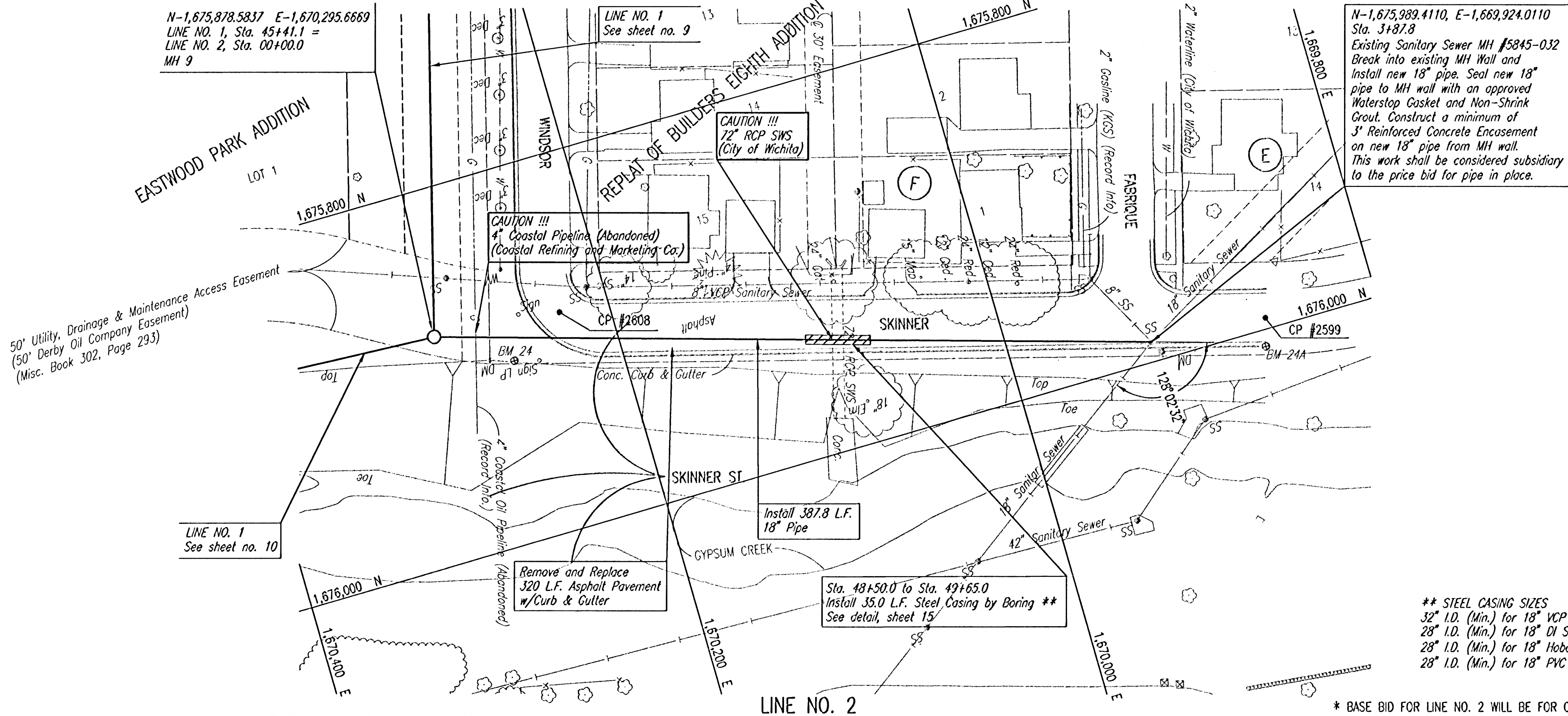
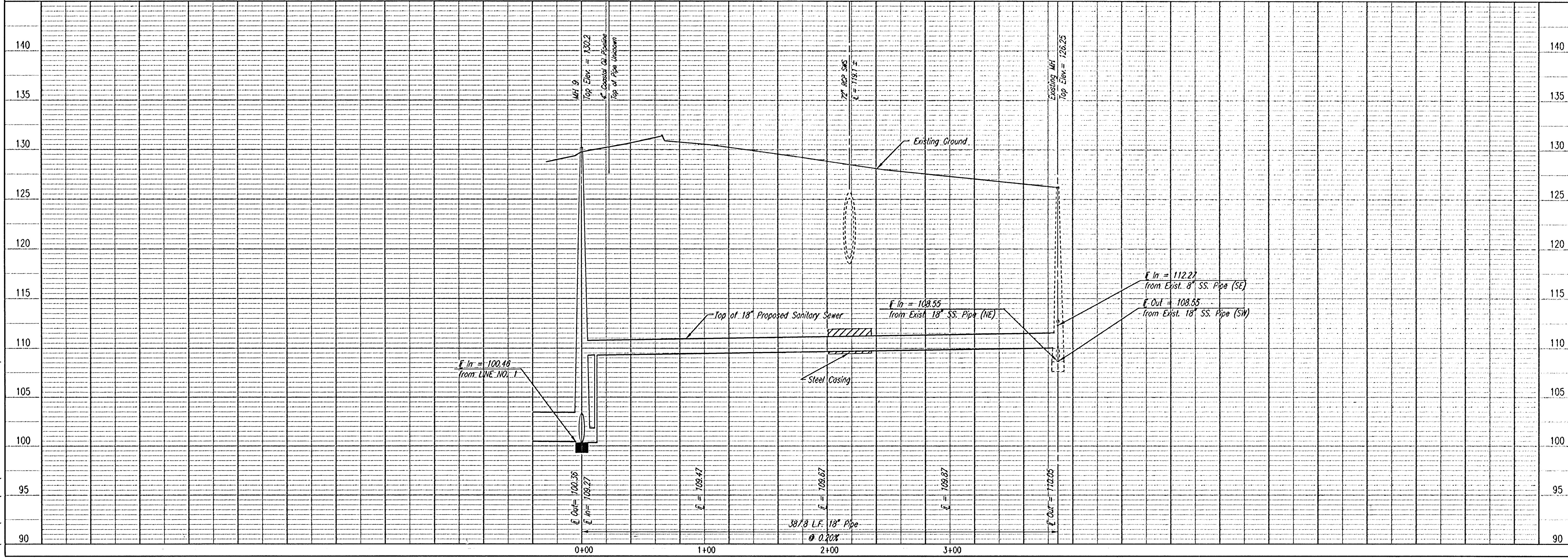
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PROFILE	CHECKED	DATE

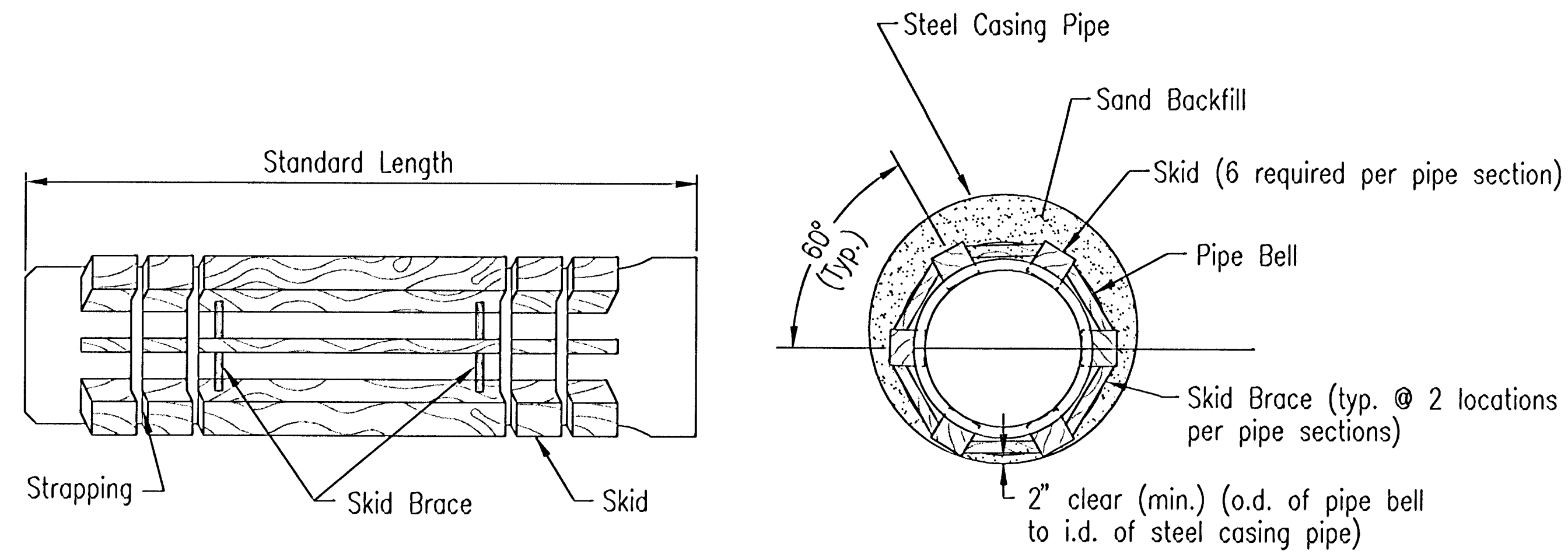
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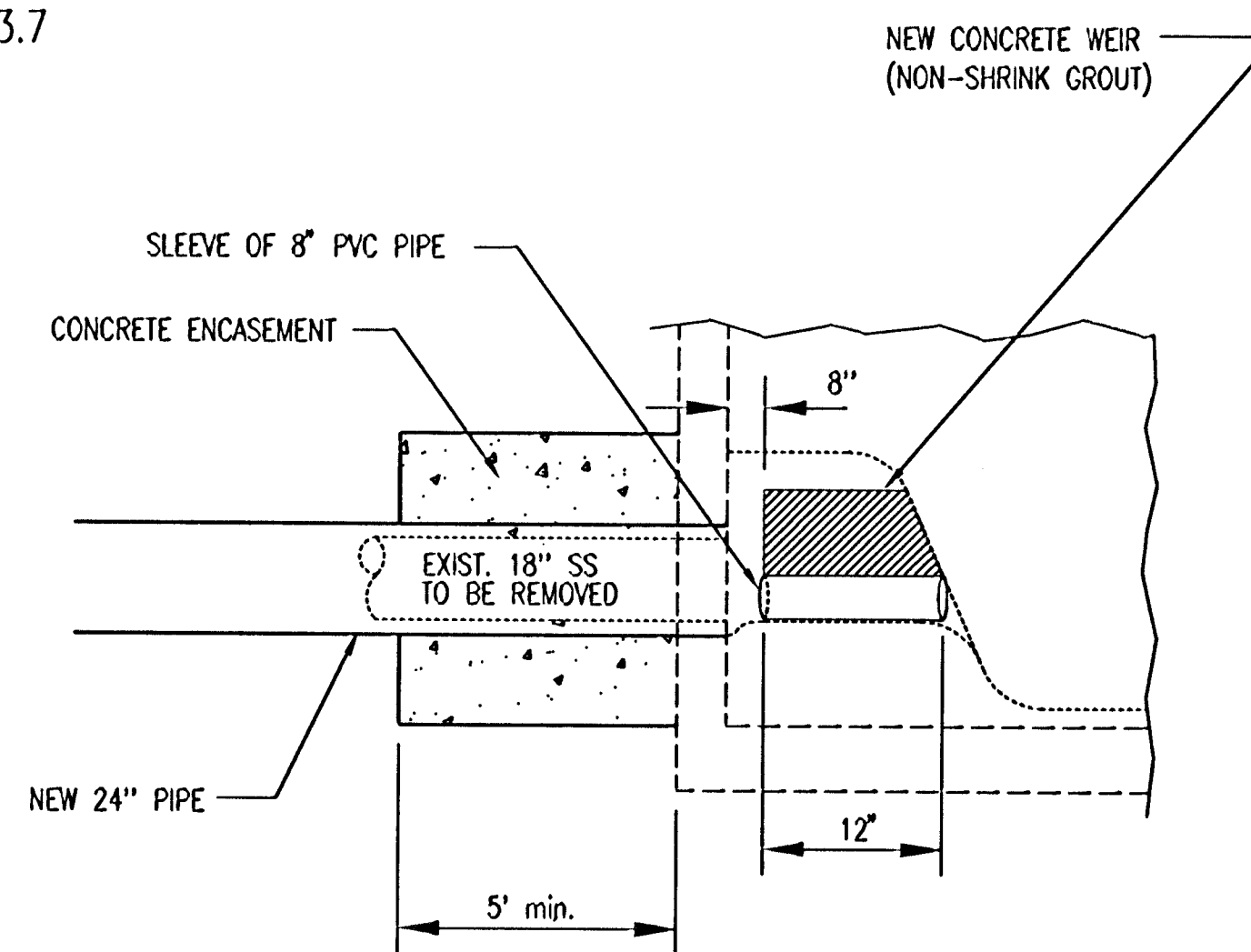
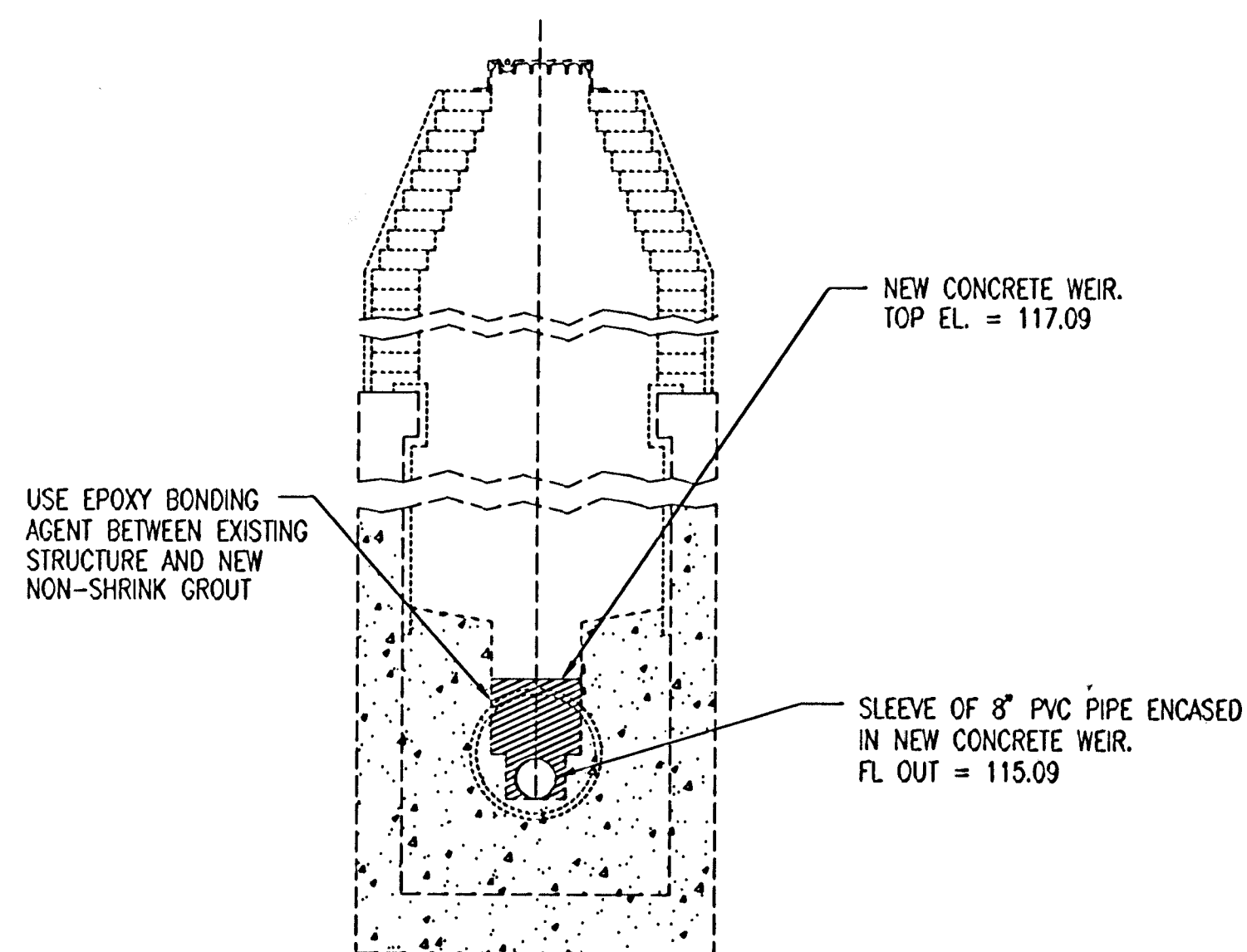
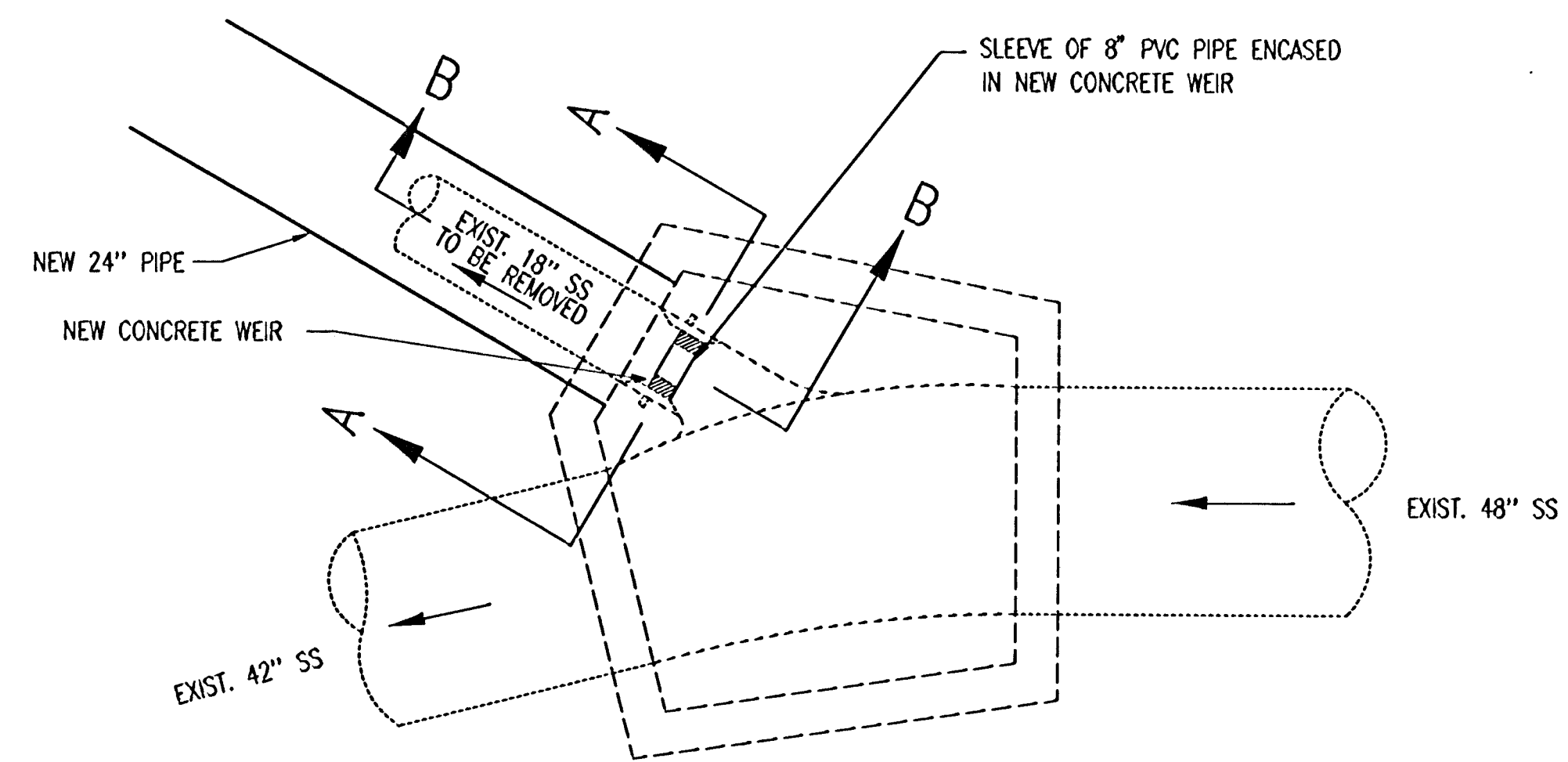
WAR INDUSTRIES RELIEF SEWER
(PHASE 3)
LINE NO. 2
MICHAEL E. UNDERBAK, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-82330-000-000-001

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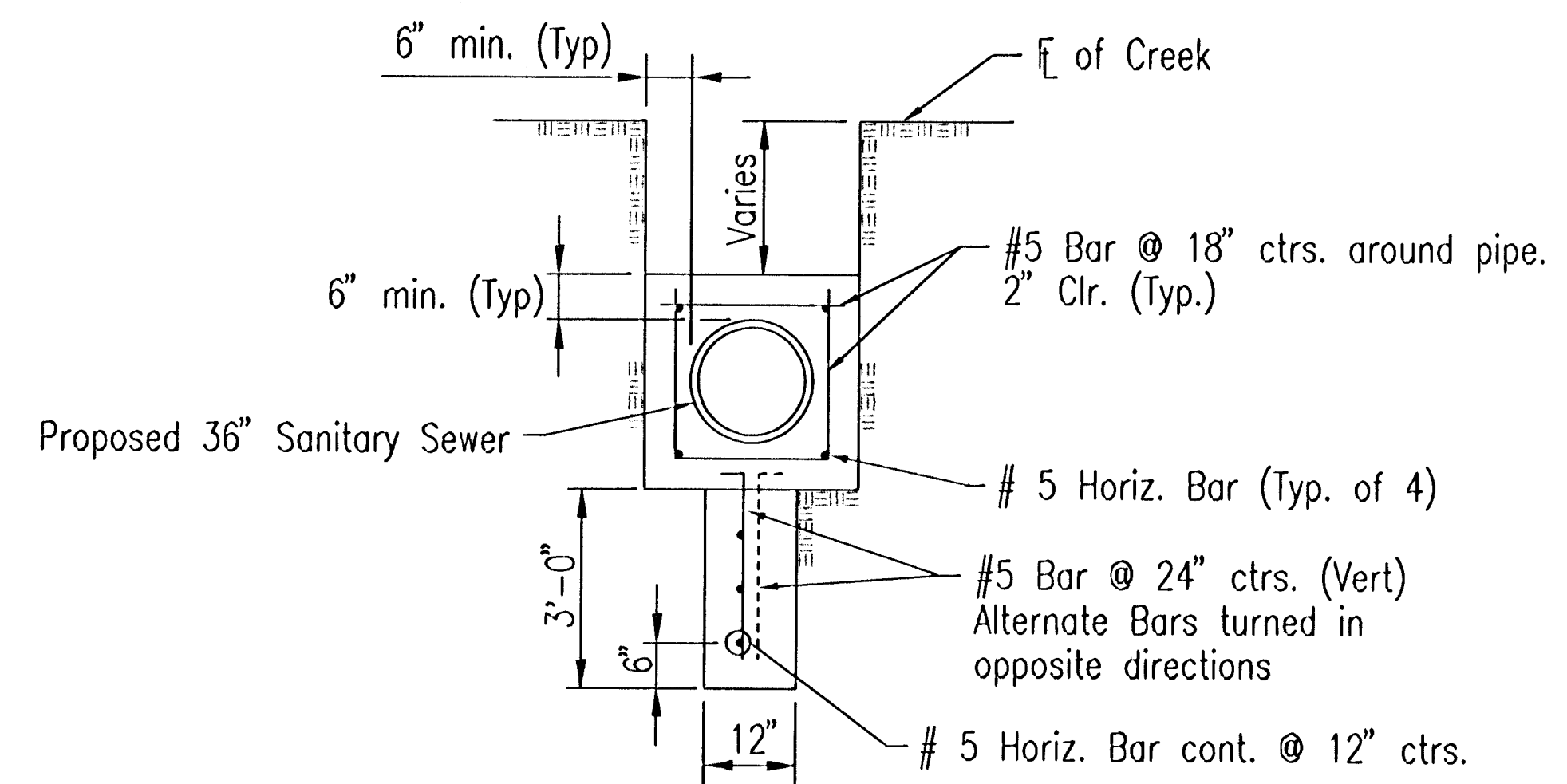
Designed By: MOK, GM
Drawn By: GM
Job No.: 34-98249-4
Date: February 2000



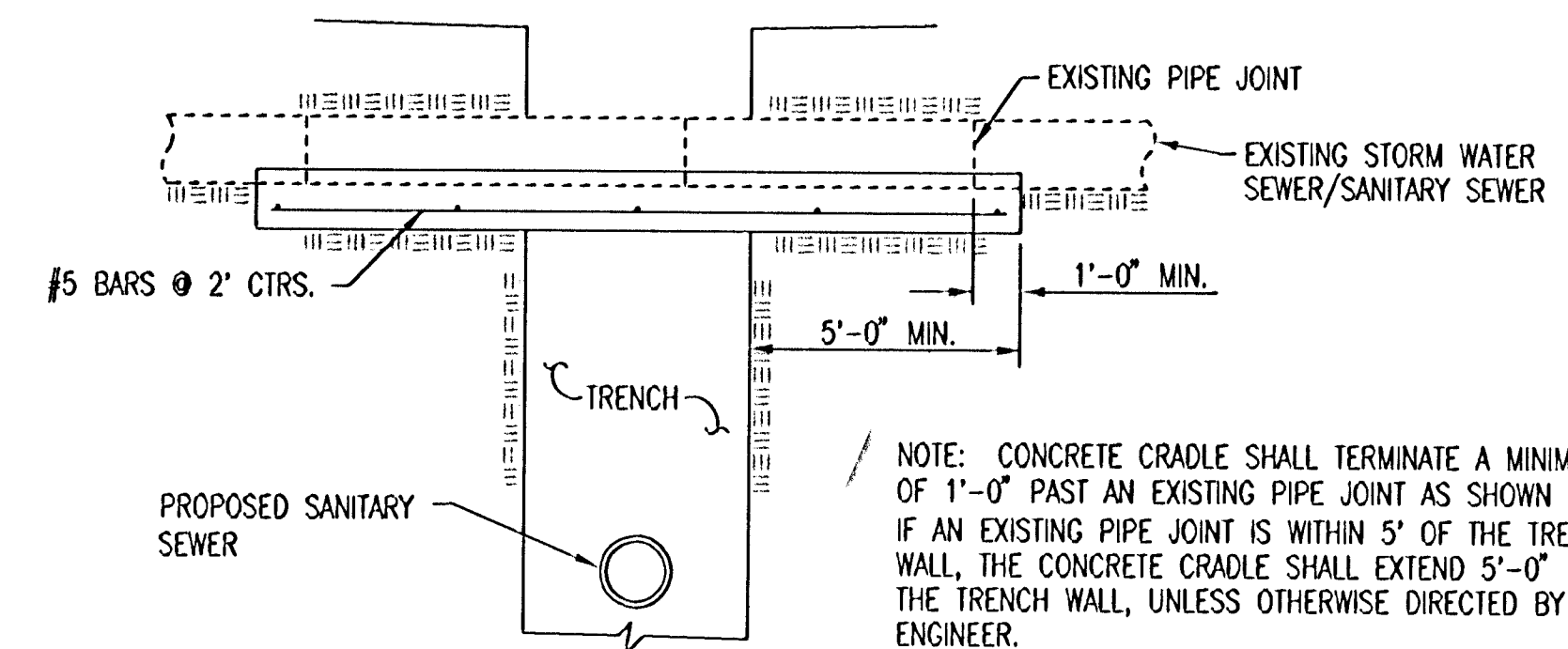
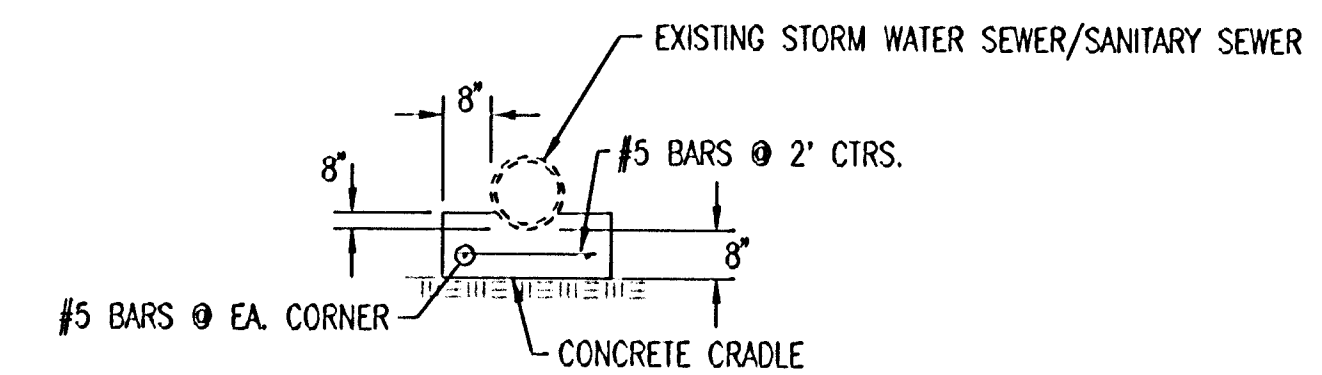
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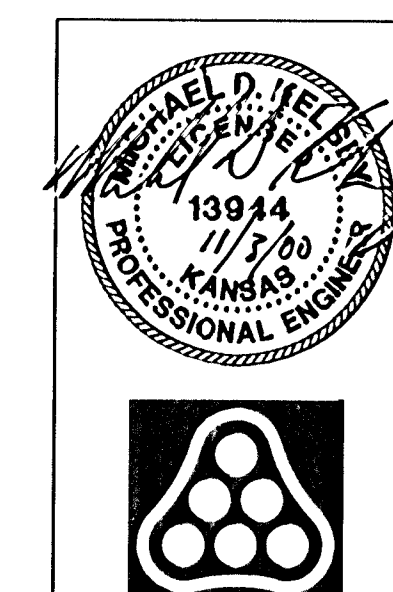
INTERCONNECT DETAILS



CONCRETE ENCASEMENT W/CUT-OFF WALL DETAIL

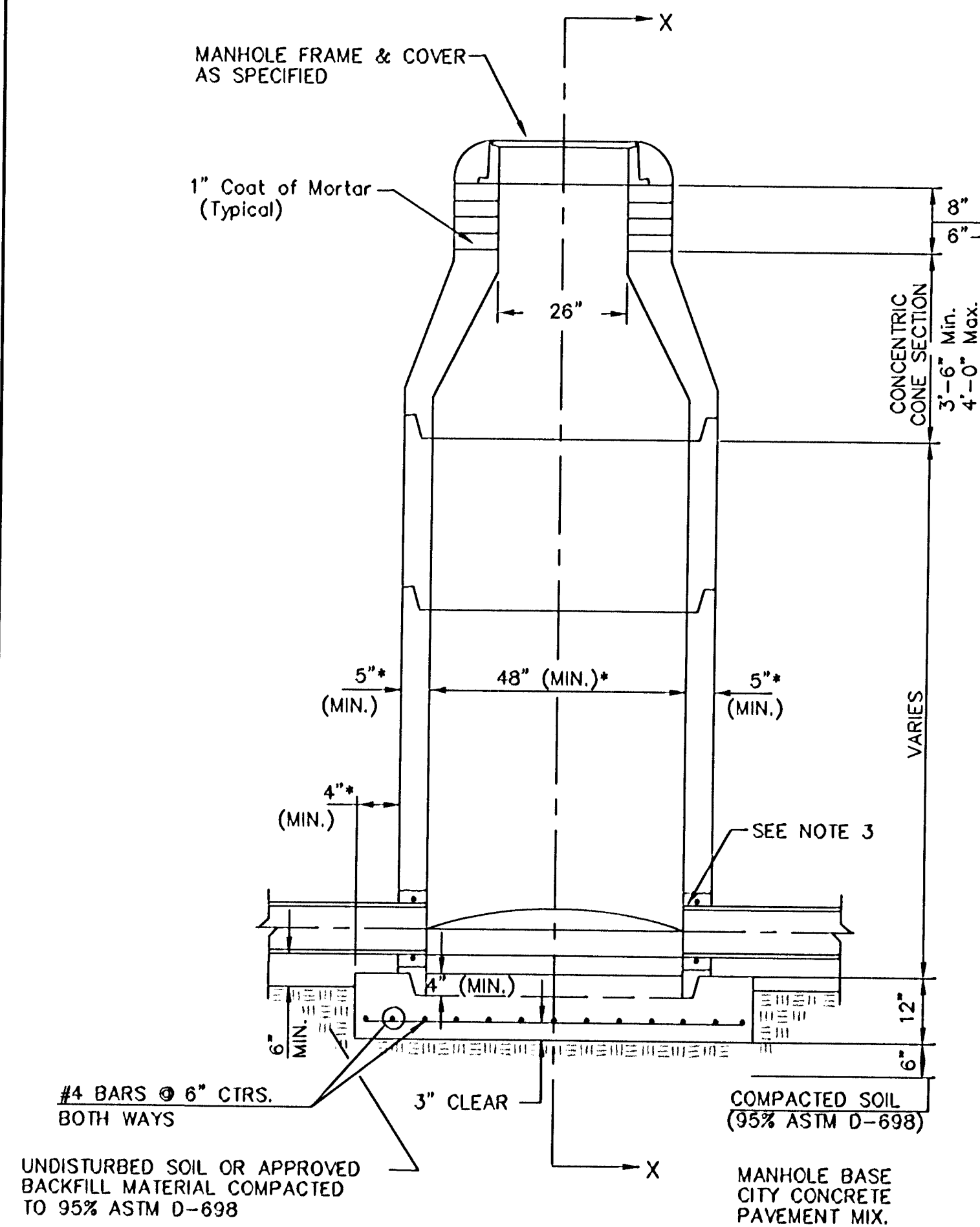


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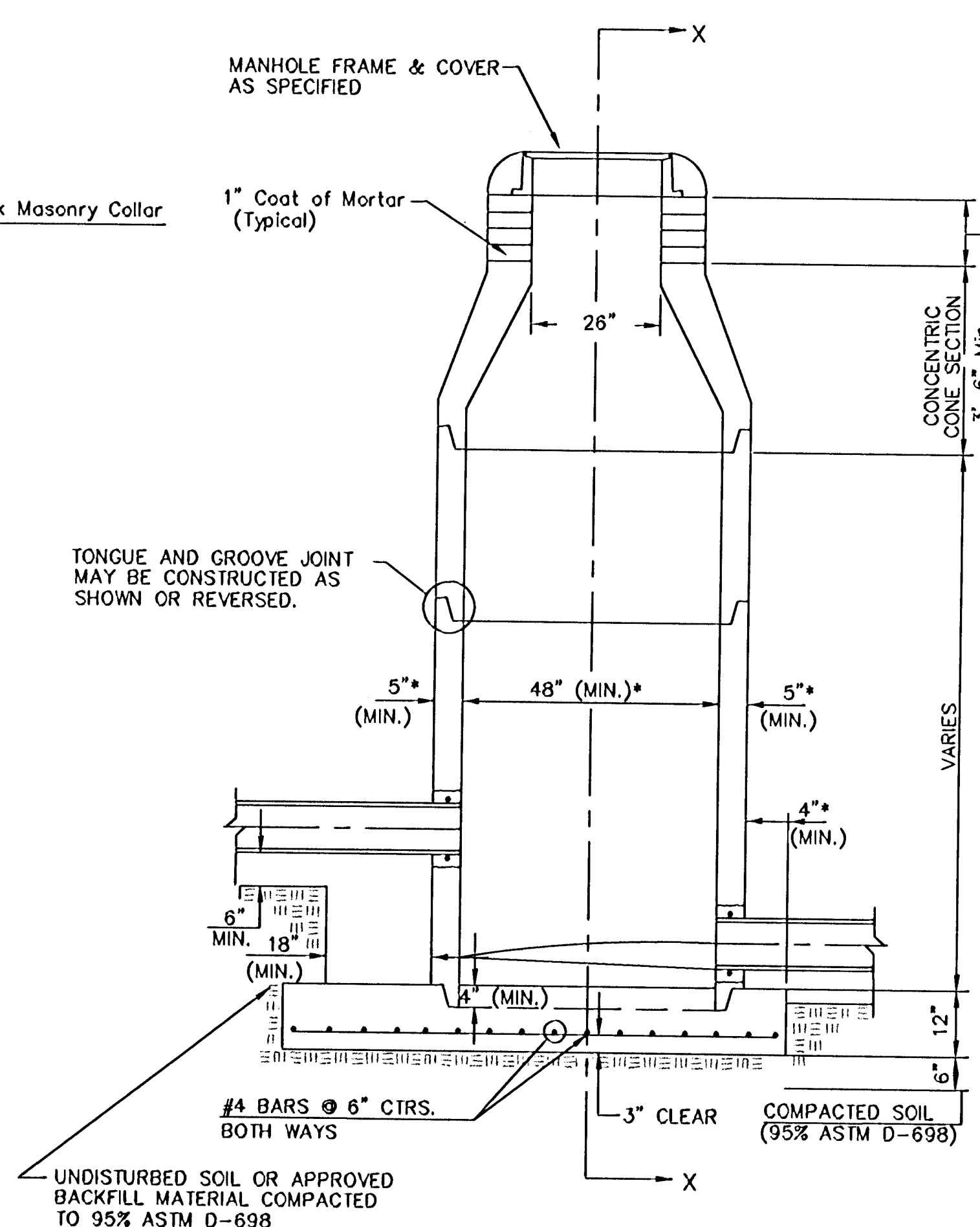


No.	Revision	By	Date
WAR INDUSTRIES RELIEF SEWER (PHASE 3)			
SANITARY SEWER DETAILS			
MICHAEL E. LINDEBAEK, P.E. - CITY ENGINEER			
CITY OF WICHITA PROJECT NO. 468-76-245-82930-000-001			
Professional Engineering Consultants, P.A.			
303 S. TOPEKA • WICHITA, KANSAS 67202			
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Designed by	MDK, GM	Job No.	34-98249-4
Drawn by	GM	Date	February 2000
			Sht. 15 of 18

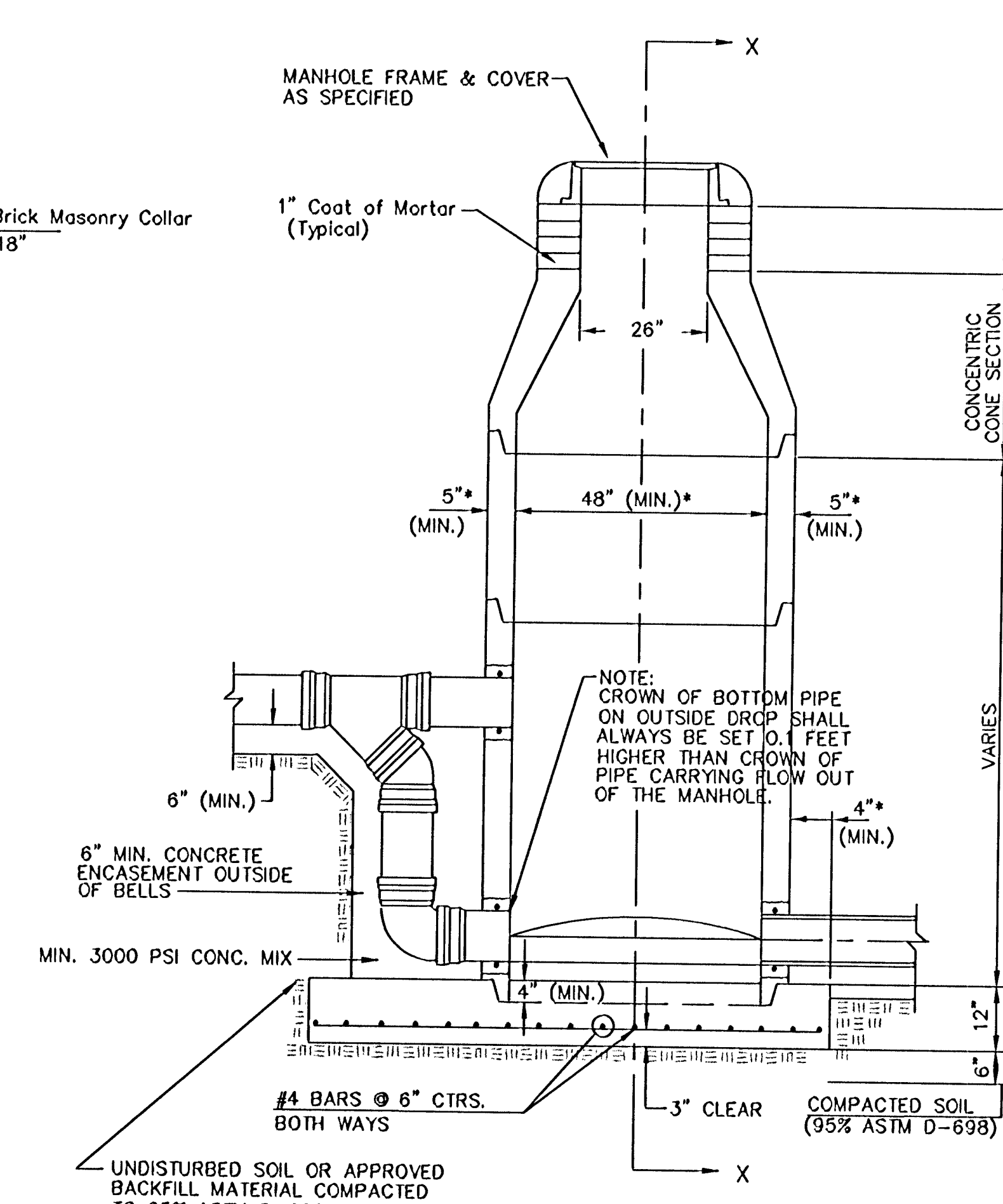
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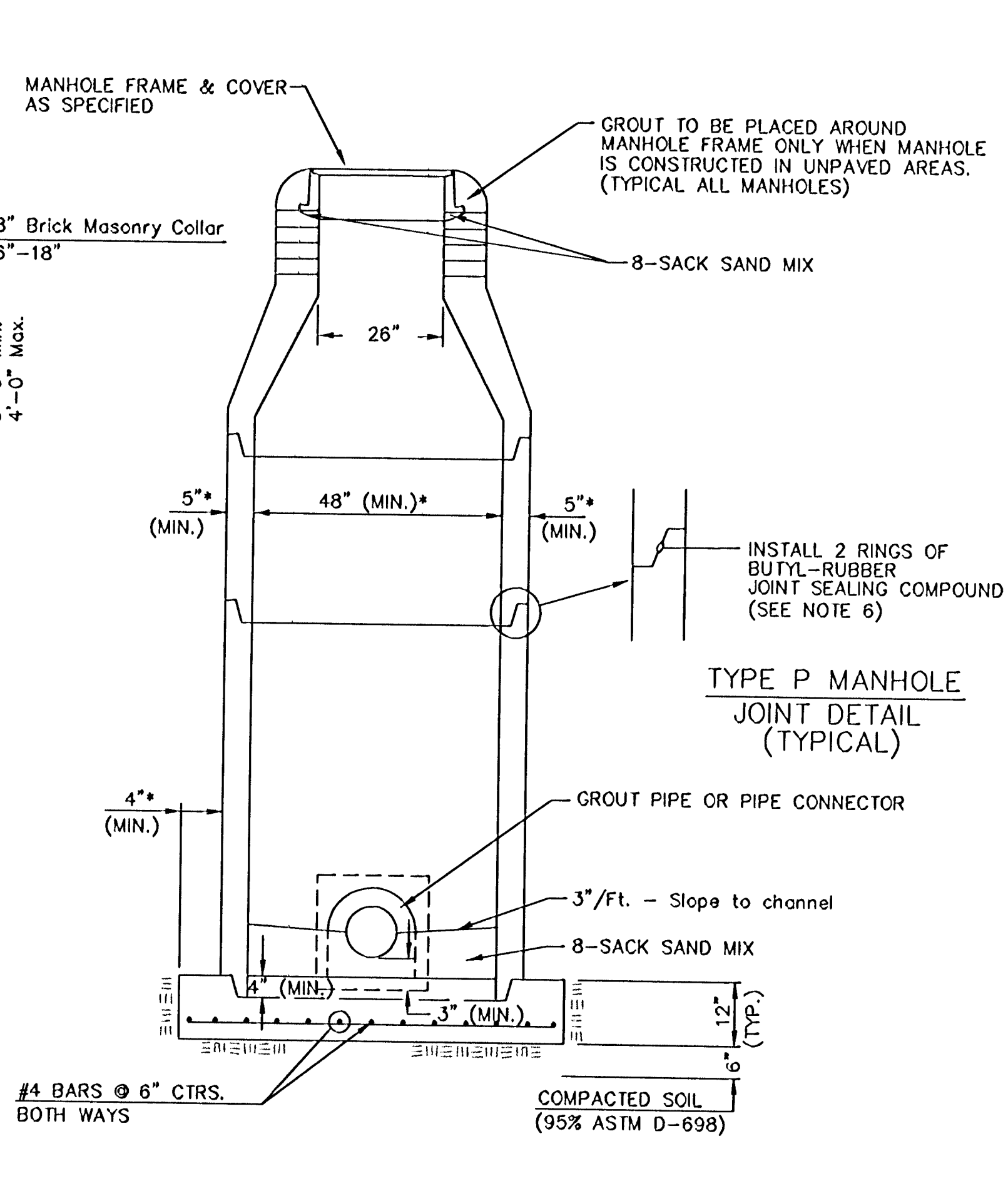
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



SECTION X
(TYPICAL)

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 TNEEC SERIES 66 HI-BUILD EPOXOLINE, 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 UNPAED 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 NEAT 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.

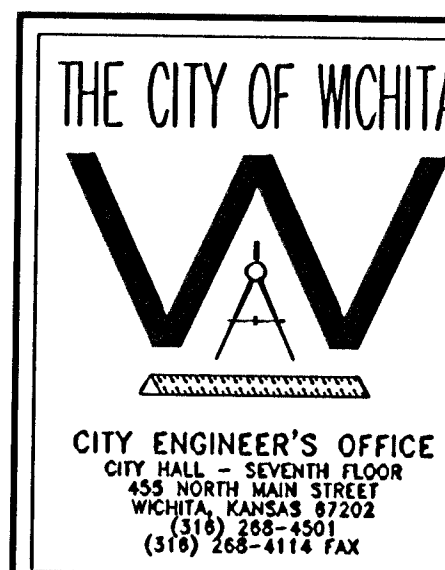
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
- THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING 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.

*SPECIAL PROJECT NOTES

ALL TYPE P MANHOLES SHALL HAVE A MINIMUM 6" INSIDE DIAMETER BARREL. 6" I.D. DIAMETER SHALL BE CONTINUOUS THROUGHOUT THE LENGTH OF THE MANHOLE BARREL SECTION.

TYPE P MANHOLES HAVING A 6" INSIDE DIAMETER BARREL SHALL HAVE 7" THICK (MIN) REINFORCED CONCRETE WALLS WITH A-LOK GASKETS FOR PIPE PENETRATIONS.

PRECAST MANHOLE BASES FOR TYPE P 6" INSIDE DIAMETER MANHOLES SHALL HAVE A MINIMUM THICKNESS OF 12" AND SHALL EXTEND A MINIMUM OF 12" BEYOND THE OUTSIDE WALL OF THE MANHOLE BARREL.



STANDARD TYPE 'P' MANHOLES

M. E. LINDEBAK P.E. - CITY ENGINEER

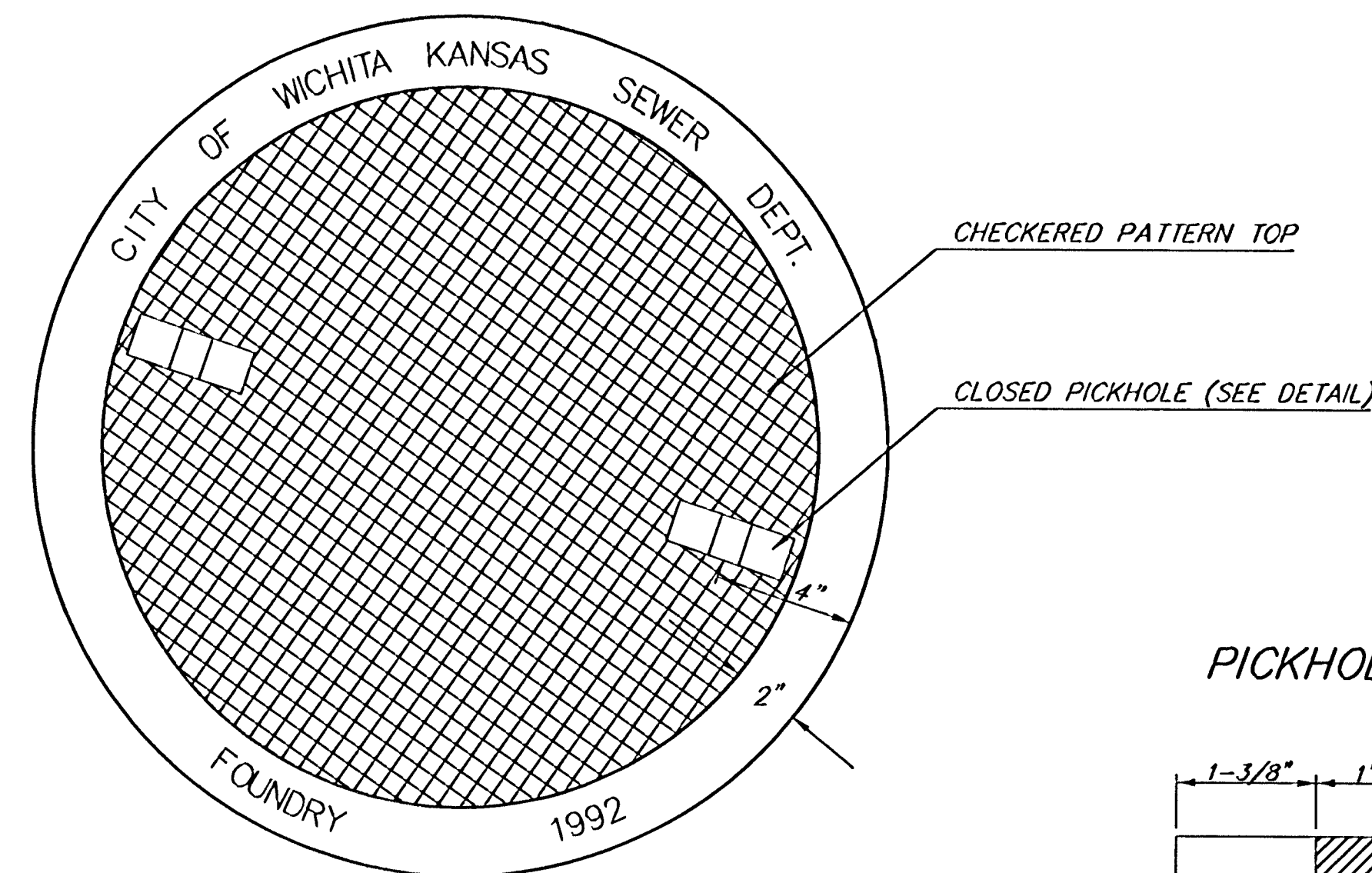
PROJECT NUMBER 468-82930 OCA NO. 623323

DATE MAR 98 SHEET 16 OF 18

MANHOLE COVER
Weight = 180 Lbs.

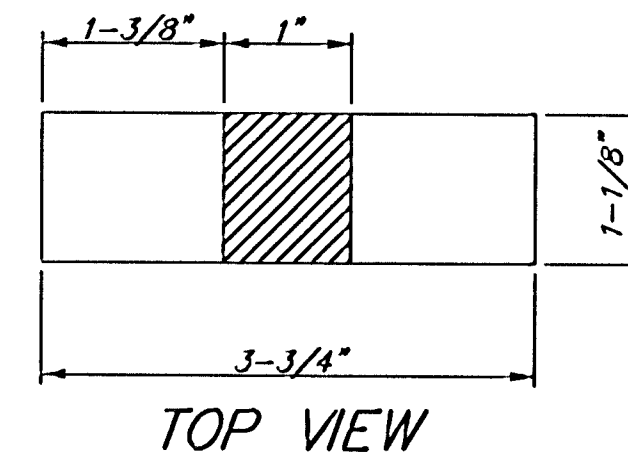
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

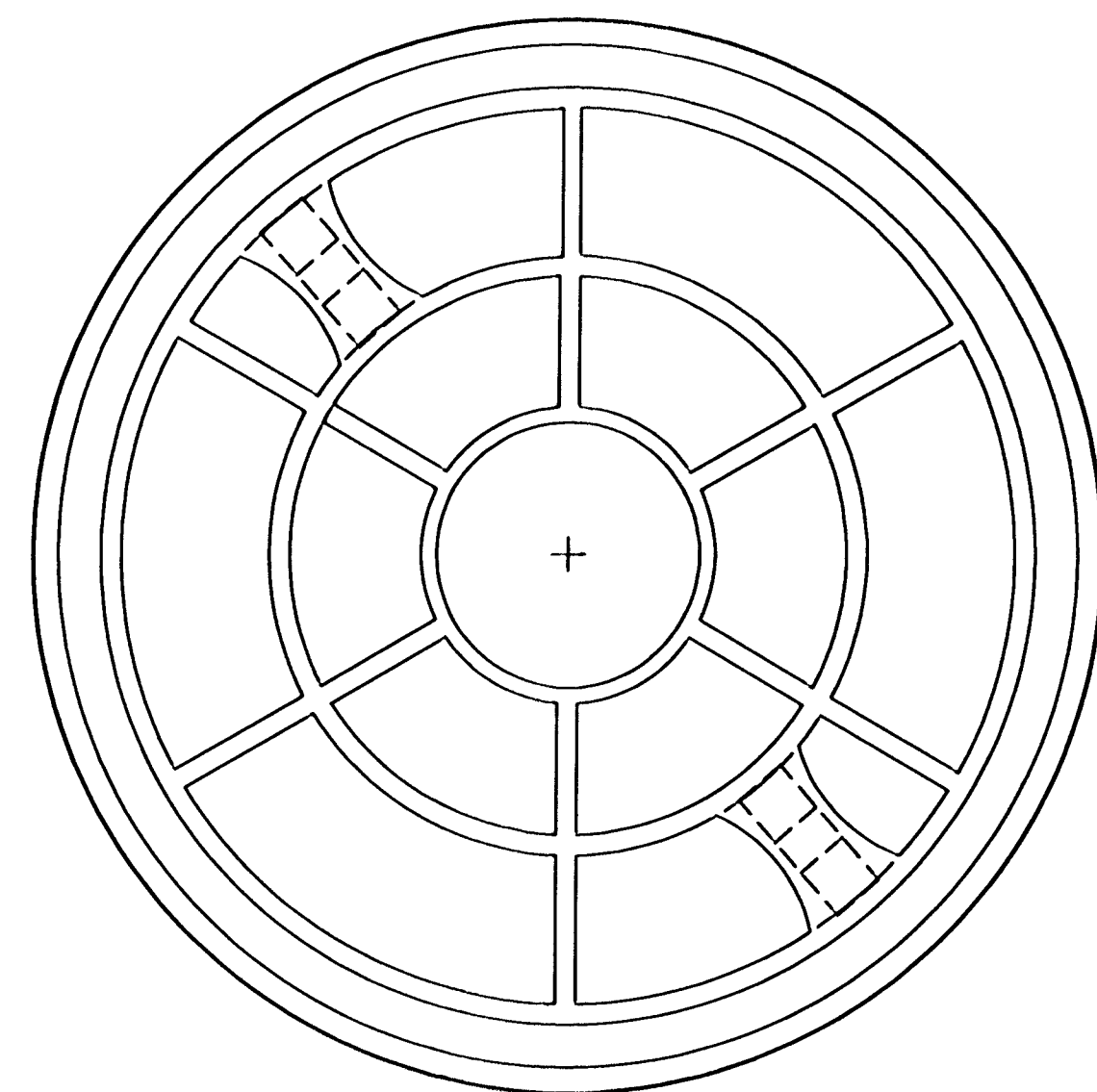


TOP VIEW

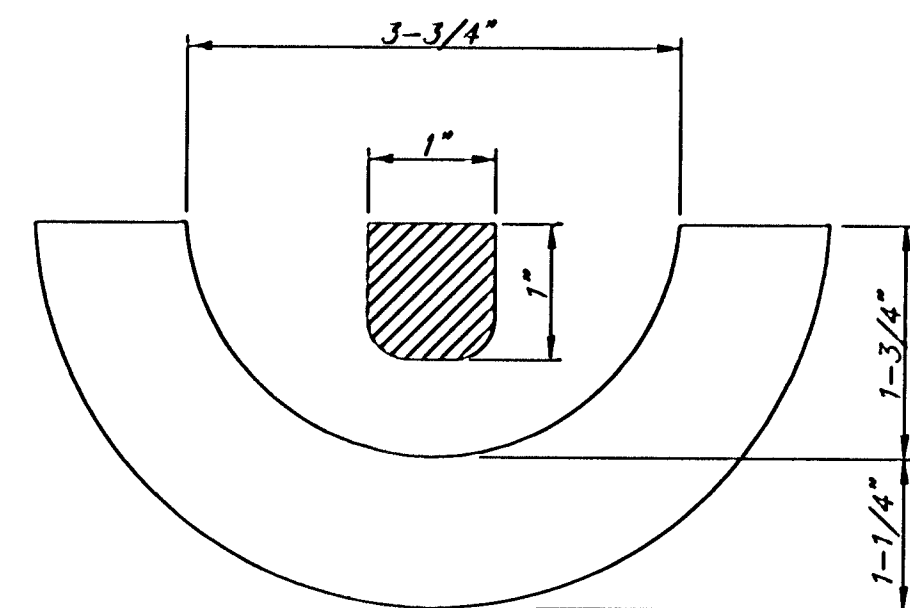
PICKHOLE DETAIL



TOP VIEW

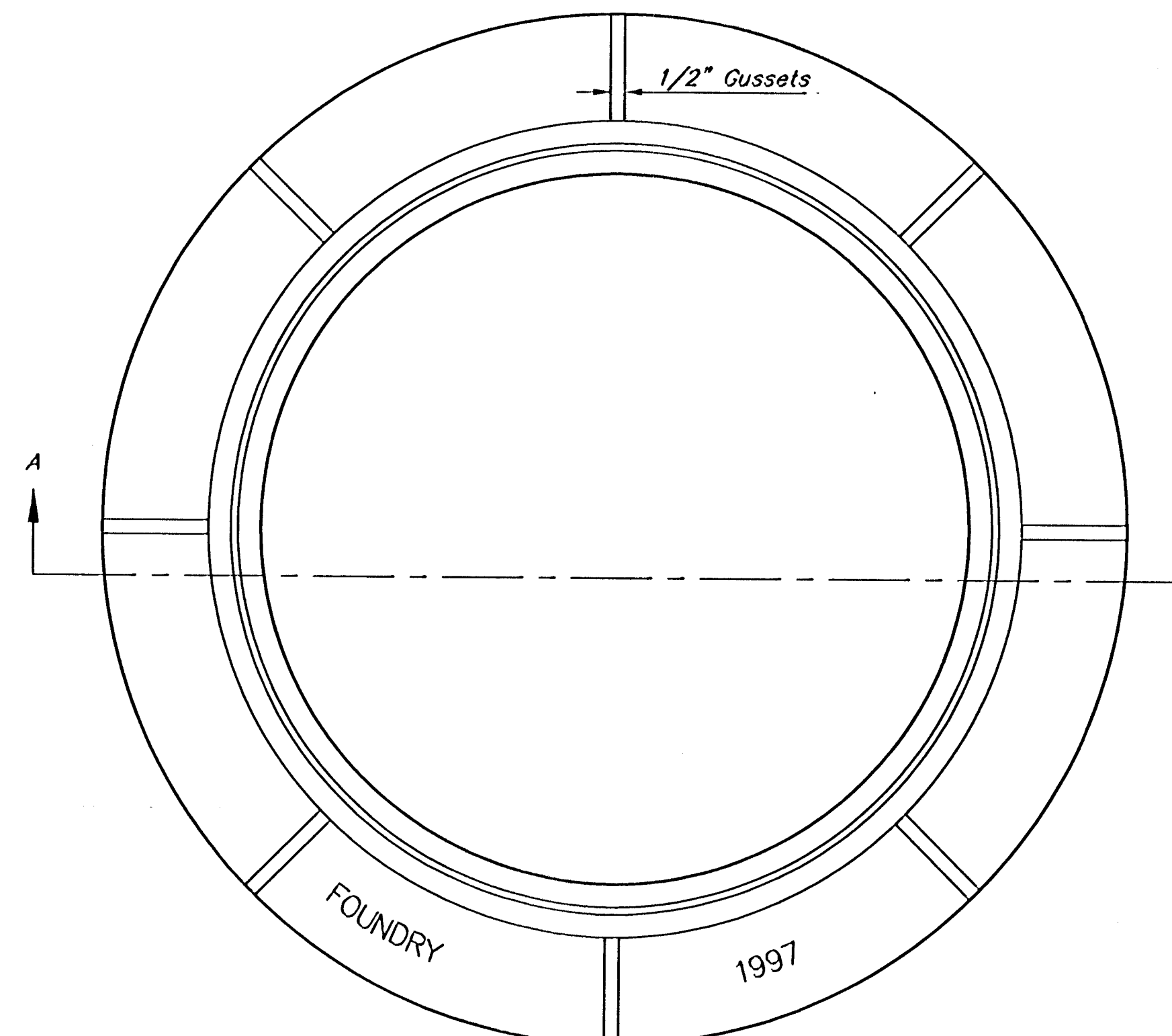


BOTTOM VIEW



SECTION VIEW

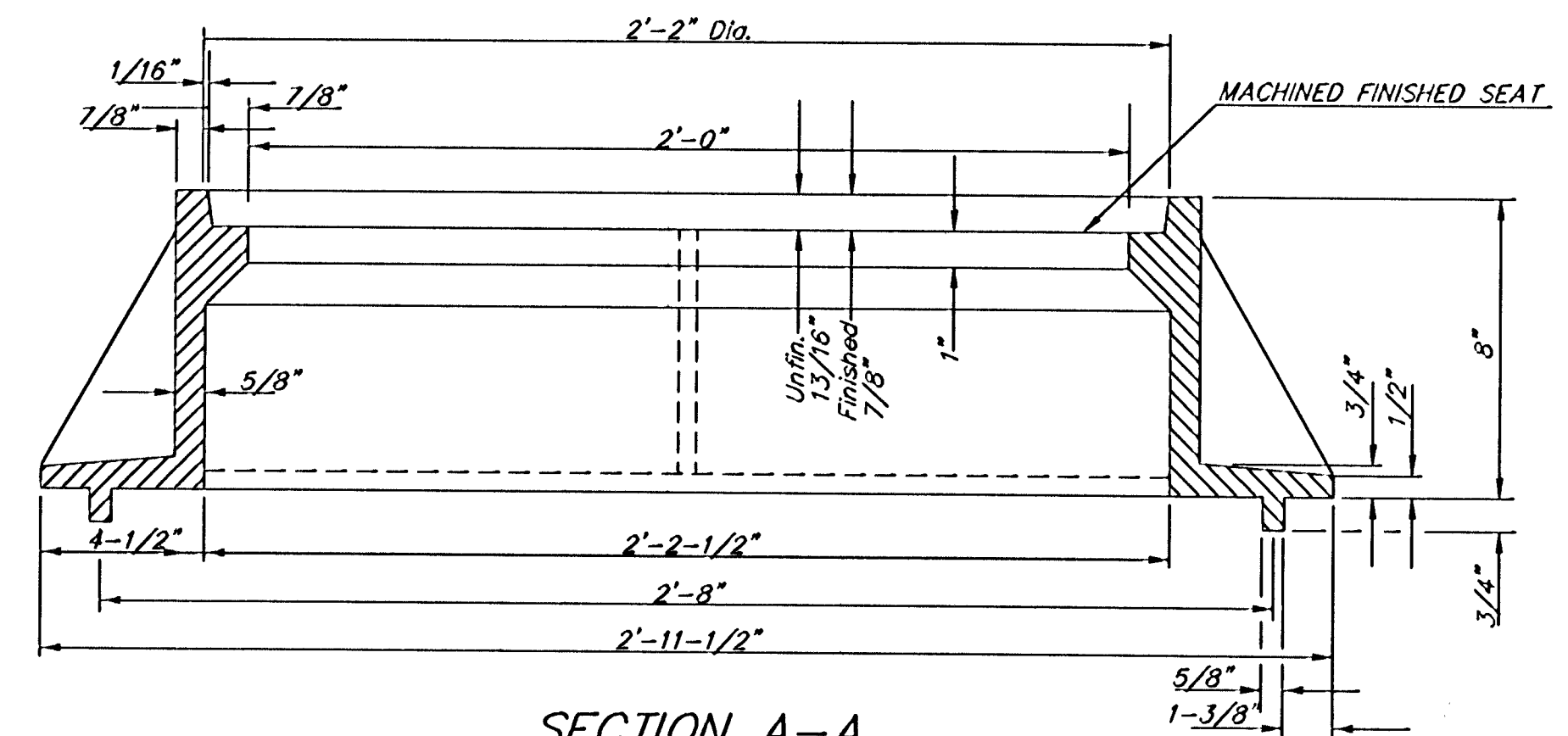
MANHOLE FRAME
Weight = 240 Lbs.



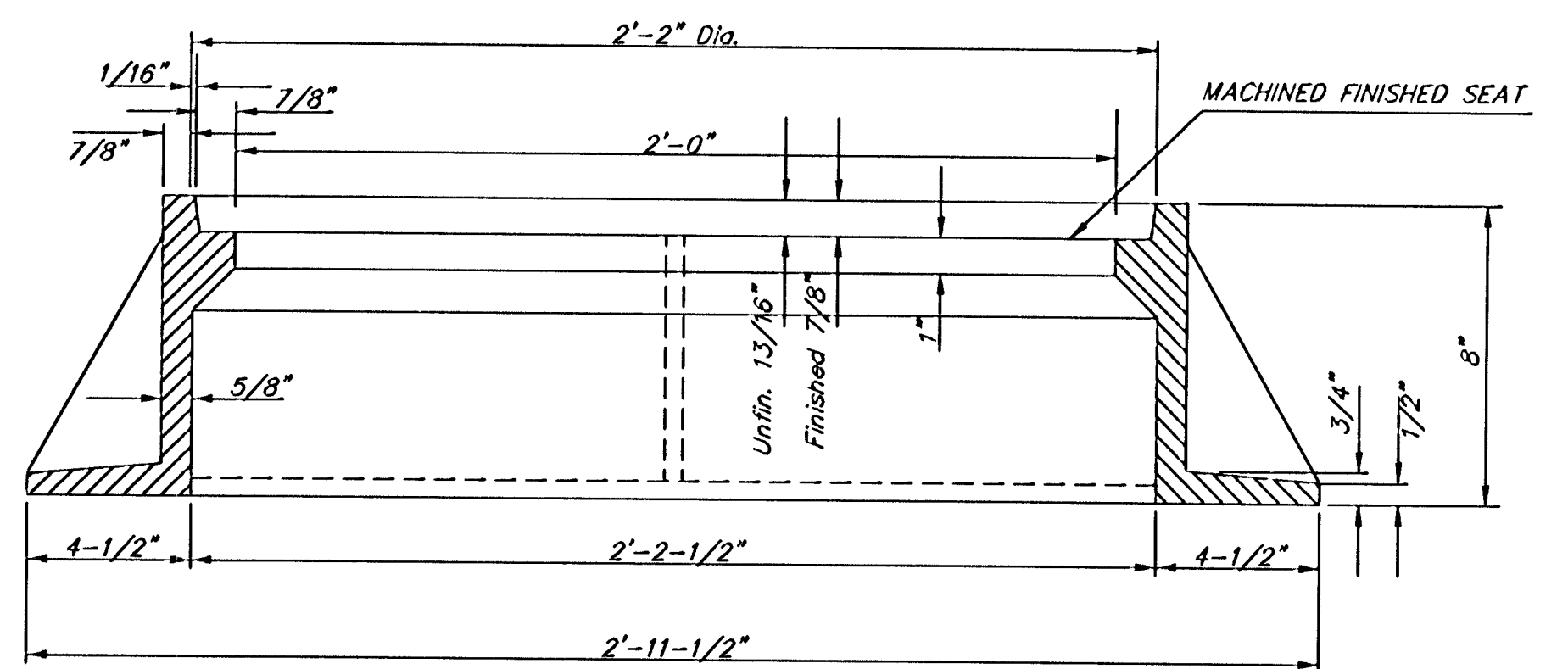
TOP VIEW

GENERAL NOTES

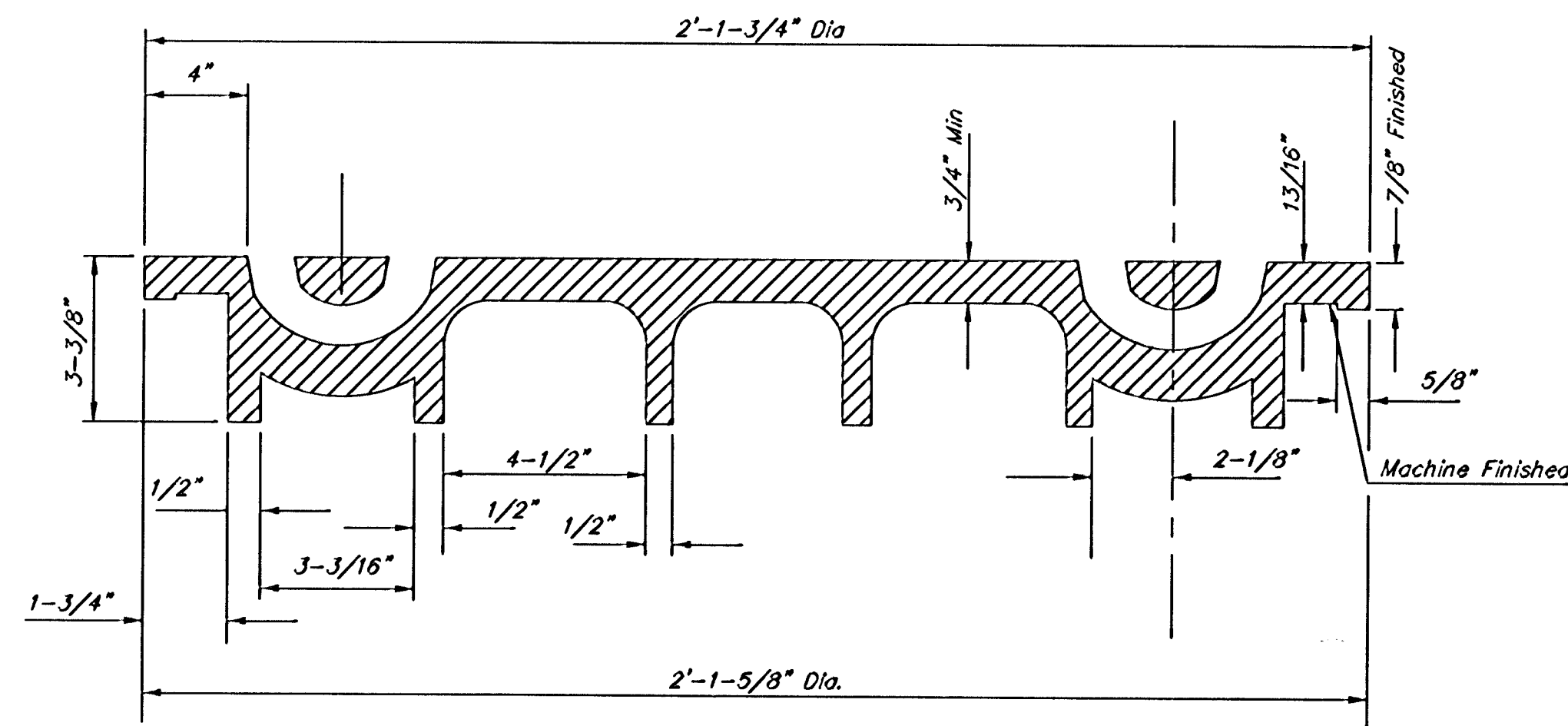
1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL WEIGH A MINIMUM OF 180 POUNDS ON THE SOLID COVER AND 240 POUNDS ON THE MANHOLE RING. THIS IS A TOTAL OF 420 POUNDS ON A RING AND COVER SET. CASTINGS WEIGHING LESS THAN THE MINIMUM SPECIFICATIONS WILL NOT BE ACCEPTED.
3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.



SECTION A-A
MUD RING

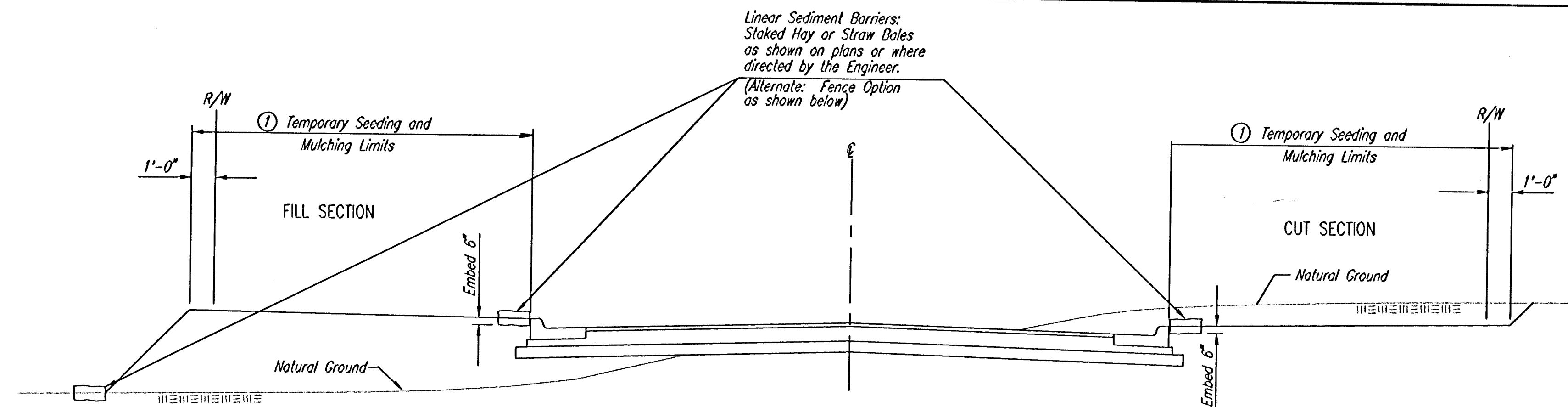


SECTION A-A



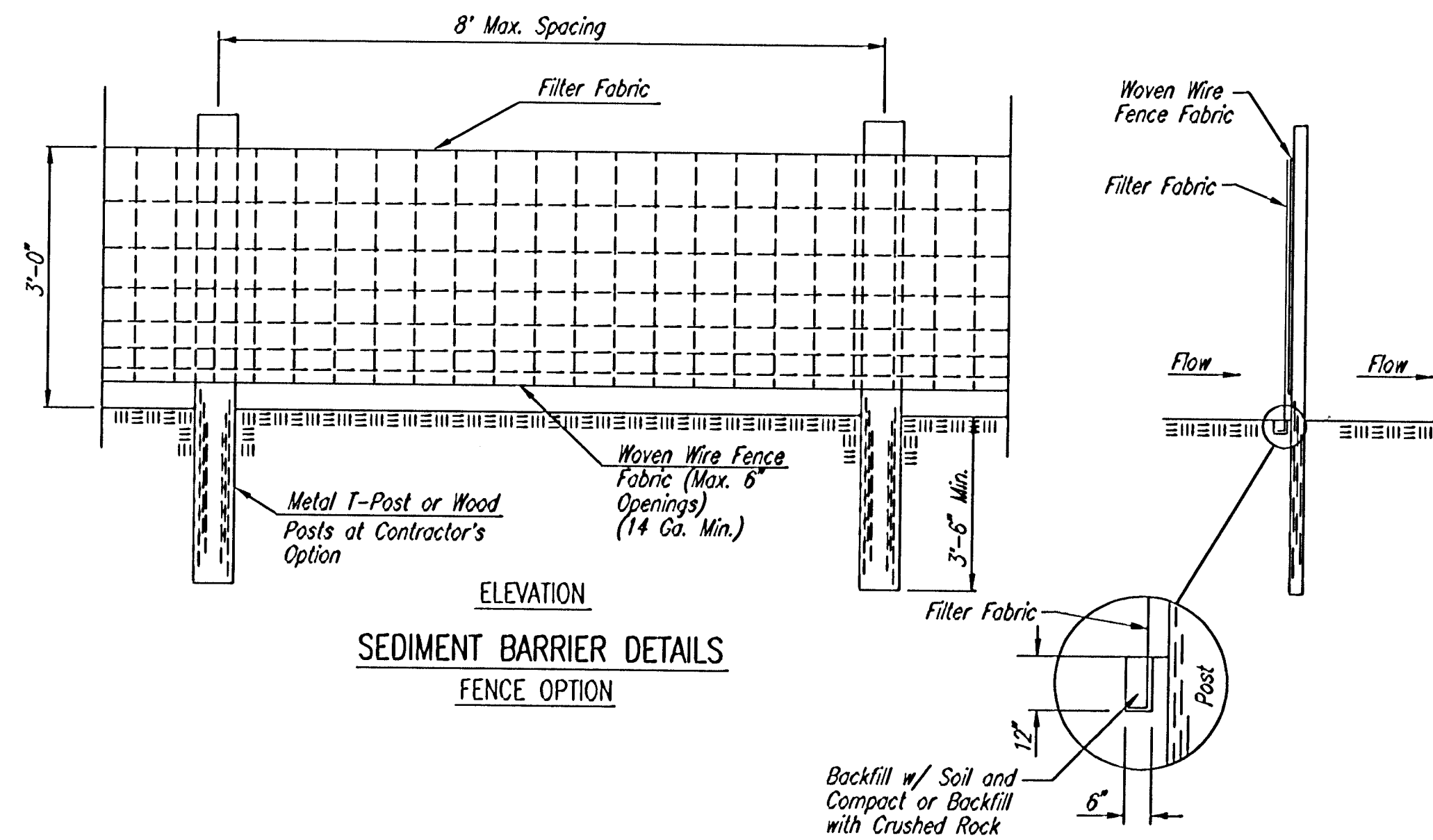
SECTION VIEW

THE CITY OF WICHITA CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4501 (316) 268-4114 FAX	MANHOLE FRAME AND COVER	
	M. E. LINDEBAK P.E. - CITY ENGINEER	
	PROJECT NUMBER 468-82930	OCA NO. 623323
	DATE MAR 96	SHEET 17 OF 18

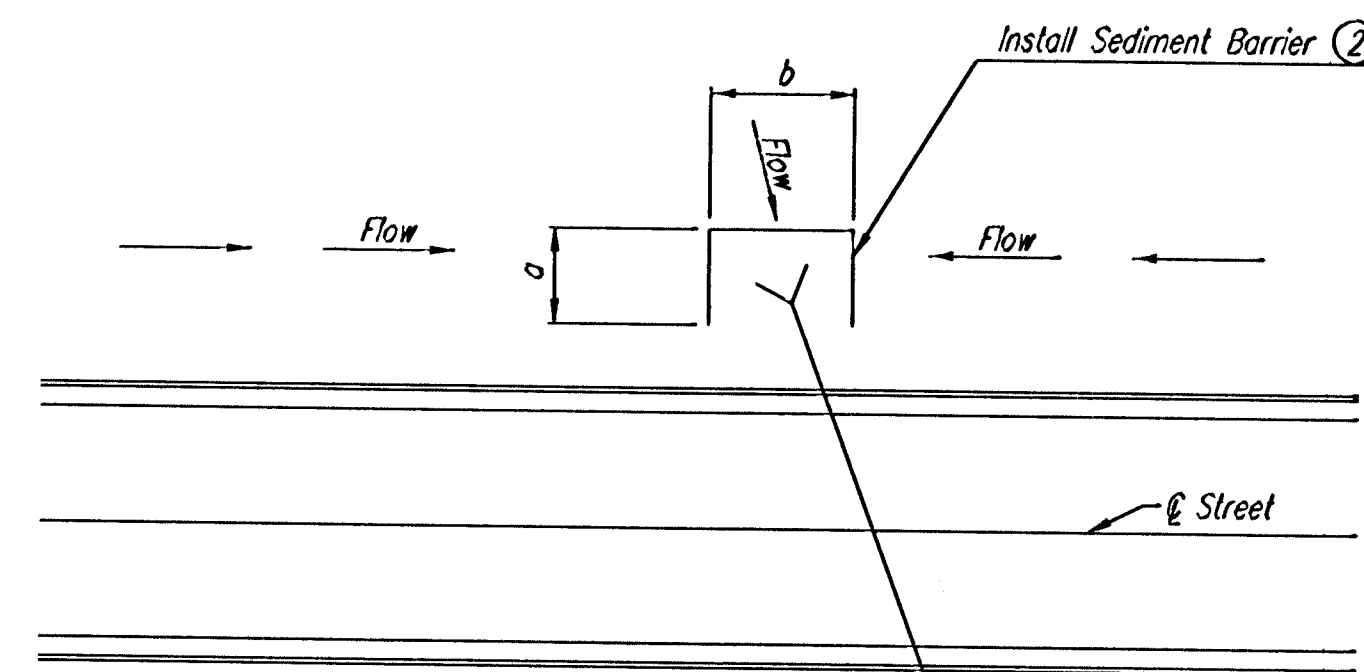


① Seed with Annual Rye at the rate of 4 lbs./1000 S.F.
Mulch with Hay at the rate of 90 lbs./1000 S.F.

SEDIMENT CONTROL CURB AND GUTTER STREET SECTION

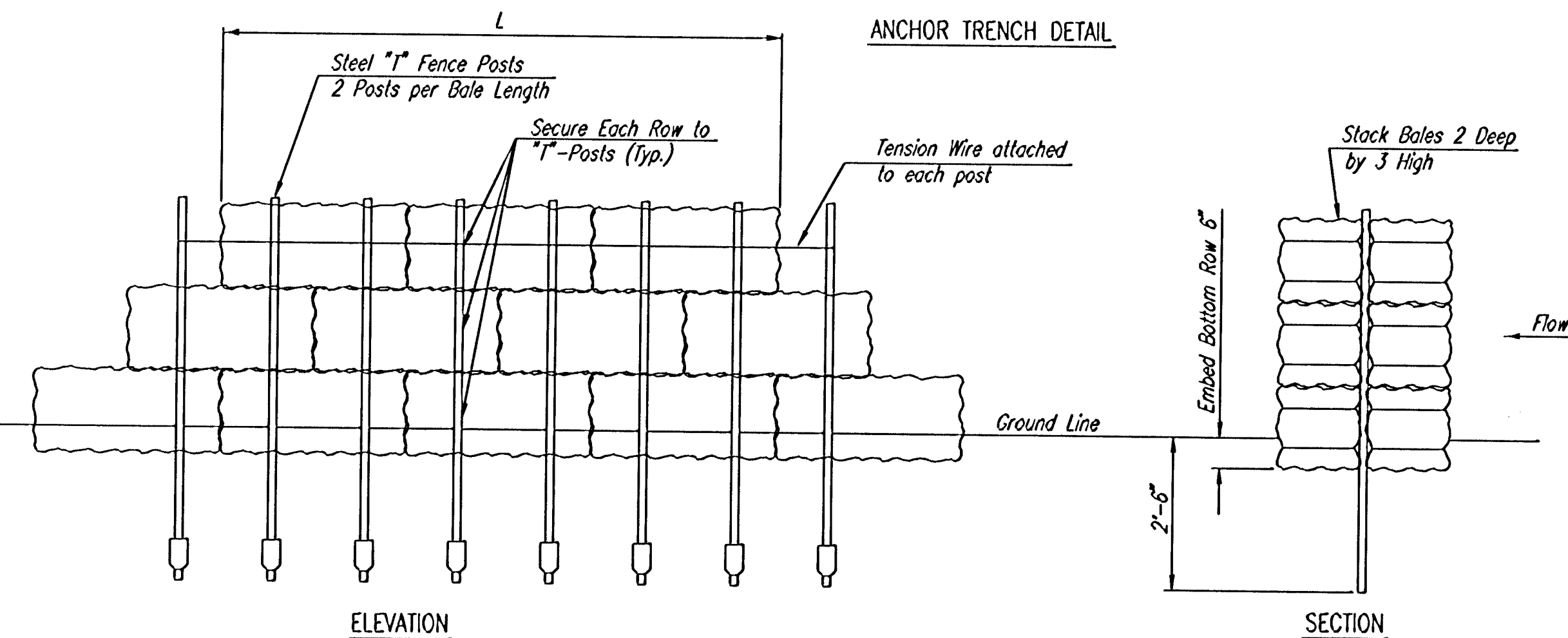


SEDIMENT BARRIER DETAILS FENCE OPTION

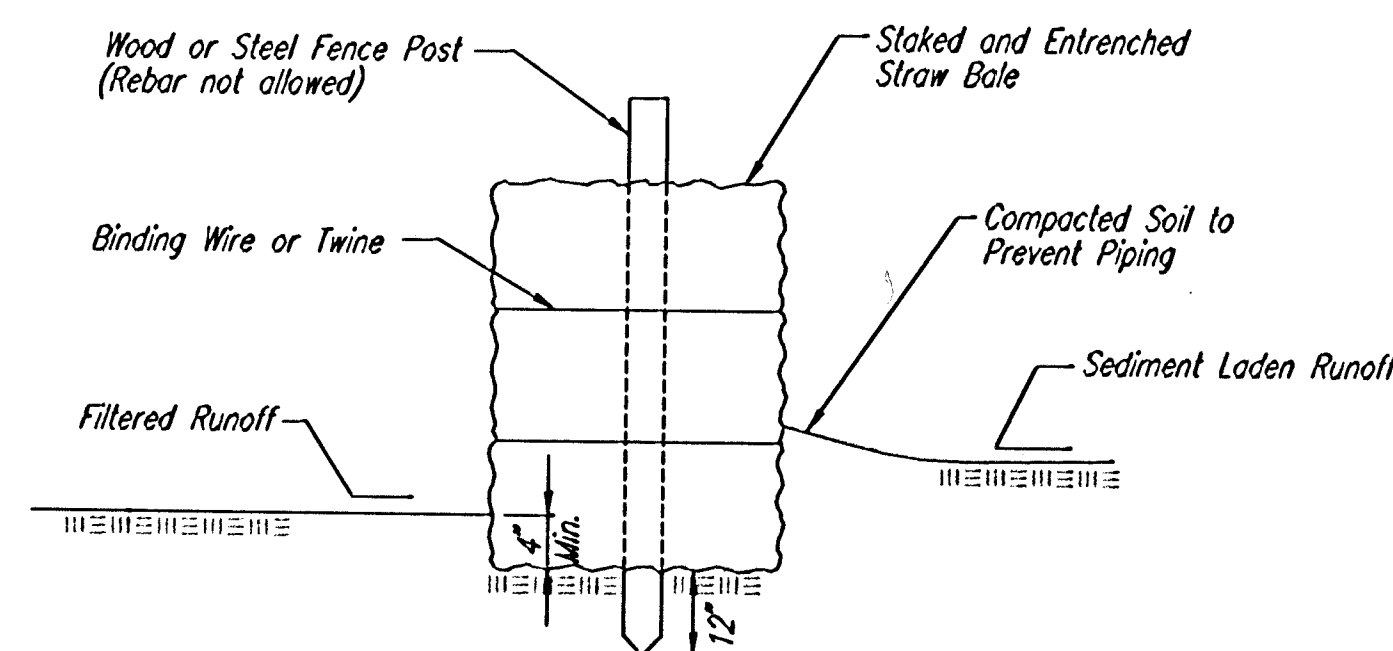


SEDIMENT CONTROL TYPICAL CROSS ROAD PIPE LOCATION

② "a" Dimension = Ditch bottom width +10'
"b" Dimension = End Section or Headwall width +10'



SEDIMENT BARRIER DETAILS HAY/STRAW BALE OPTION



LINEAR SEDIMENT BARRIER

- SEDIMENT BARRIERS SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ADDITIONAL SEDIMENT BARRIERS WILL BE INSTALLED AT LOCATIONS AS DIRECTED BY THE ENGINEER WITH NO ADJUSTMENT IN PRICE.
- SEDIMENT BARRIERS SHALL BE ERECTED PRIOR TO THE COMMENCEMENT OF EARTHWORK OPERATIONS IN A GIVEN BASIN. REMOVAL AND DISPOSAL OF ACCUMULATED SILT AND DEBRIS AND/OR REMOVAL AND RECONSTRUCTION OF SEDIMENT BARRIERS WILL BE PERFORMED THROUGHOUT THE PROJECT LIFE WHEN DEBRIS REACHES ONE-THIRD THE FENCE HEIGHT OR AS DEEMED NECESSARY BY THE ENGINEER. SEDIMENT BARRIERS AND ACCUMULATED DEBRIS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AFTER TURF COVER HAS BEEN ESTABLISHED, UNLESS OTHER ARRANGEMENTS HAVE BEEN AGREED TO.
- FILTER FABRIC FOR FENCE OPTION SEDIMENT BARRIERS SHALL BE RESISTANT TO ULTRAVIOLET LIGHT. MATERIALS MAY BE SUPPLIED BY THE FOLLOWING MANUFACTURERS:

MIRAFI, INC.	-	100X
HOECHST FIBERS INDUSTRIES	-	TREVIRA 1115
EXXON	-	TYPAR 3301 W

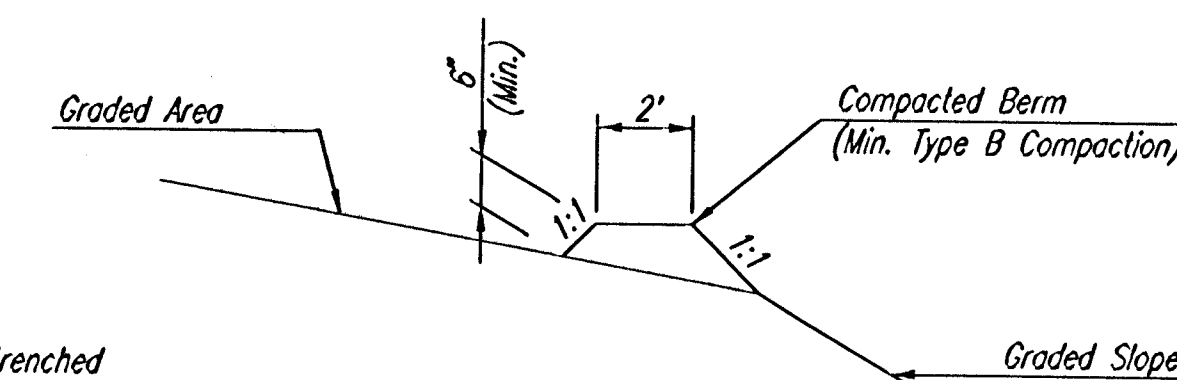
MATERIALS SUPPLIED BY THE ABOVE NAMED MANUFACTURERS SHALL BE ACCEPTED UPON VISUAL INSPECTION BY THE ENGINEER. OTHER COMPARABLE MATERIALS MAY BE USED IF APPROVED BY THE ENGINEER.

FILTER FABRIC SHALL BE ATTACHED TO FENCE FABRIC BY MEANS OF THE WIRES OR HOG RINGS PRIOR TO ATTACHMENT OF FENCE/FABRIC COMBINATION ONTO THE POSTS.

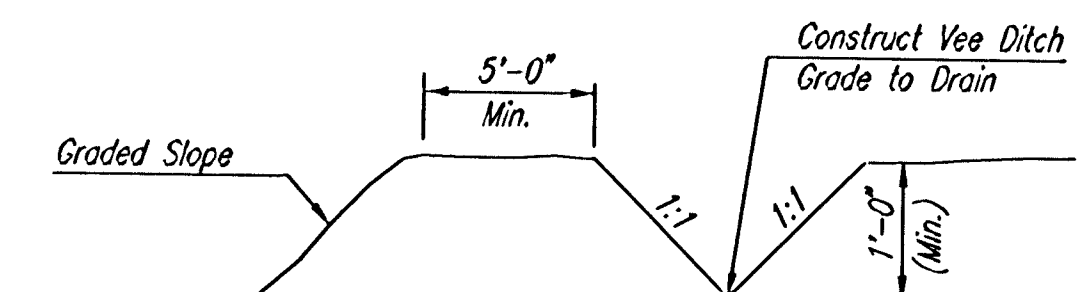
- BALES USED FOR SEDIMENT BARRIERS MAY BE EITHER HAY OR STRAW, PROVIDED THEY ARE SOUND AND INTACT.
- TEMPORARY EROSION CONTROL BERMS AND/OR INTERCEPT DITCHES SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ADDITIONAL BERMS AND/OR DITCHES MAY BE REQUIRED AT NO ADJUSTMENT IN PRICE.

WHERE TEMPORARY EROSION CONTROL BERMS AND/OR INTERCEPT DITCHES ARE USED, ALL AREAS WHERE FLOW IS CONCENTRATED SHALL BE PROTECTED BY SILTATION BARRIERS PRIOR TO DISCHARGING INTO ANY DITCH, STORM SEWER, OR WATERCOURSE.

- PAYMENT: THE ITEM "SEDIMENT BARRIERS" SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAL FOOT COMPLETE IN PLACE. SAID PRICE SHALL BE CONSIDERED FULL COMPENSATION FOR EXCAVATION, COMPACTION, BACKFILL, SEDIMENT AND DEBRIS REMOVAL AND DISPOSAL, AND ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. RECONSTRUCTION OF EROSION CONTROL MEASURES WHICH ARE DESTROYED BY WIND, FLOOD, FIRE, OR BY THE ACTIONS OF THE CONTRACTOR OR OTHERS SHALL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST. WHERE ADJUSTMENTS IN QUANTITIES ARE REQUIRED BY FIELD CONDITIONS, THERE SHALL BE NO ADJUSTMENTS IN UNIT PRICE.



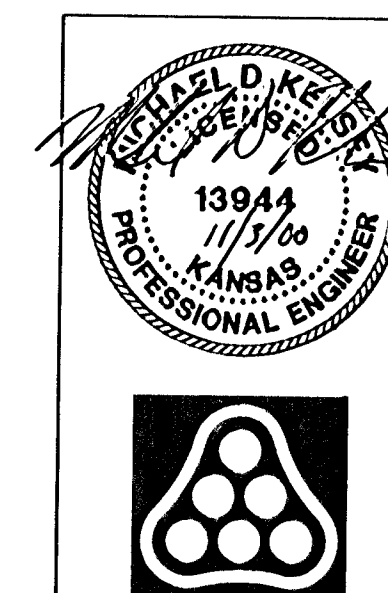
BERM DETAIL



INTERCEPT DITCH DETAIL

TEMPORARY EROSION CONTROL DETAILS FOR SLOPE PROTECTION

The Engineer may determine that the height of Berm or depth of Ditch should be increased over that shown if Drainage conditions are producing Slope Erosion.



No.	Revision	By	Date
WAR INDUSTRIES RELIEF SEWER (PHASE 3)			
EROSION CONTROL AND SEDIMENT BARRIER DETAILS			
MICHAEL E. LINDBAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-76-245-82930-000-001			
Professional Engineering Consultants, P.A. 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	MDK	Job No.	34-98249-4
Drawn by	GM	Date	February 2000
		Sheet	13 of 18