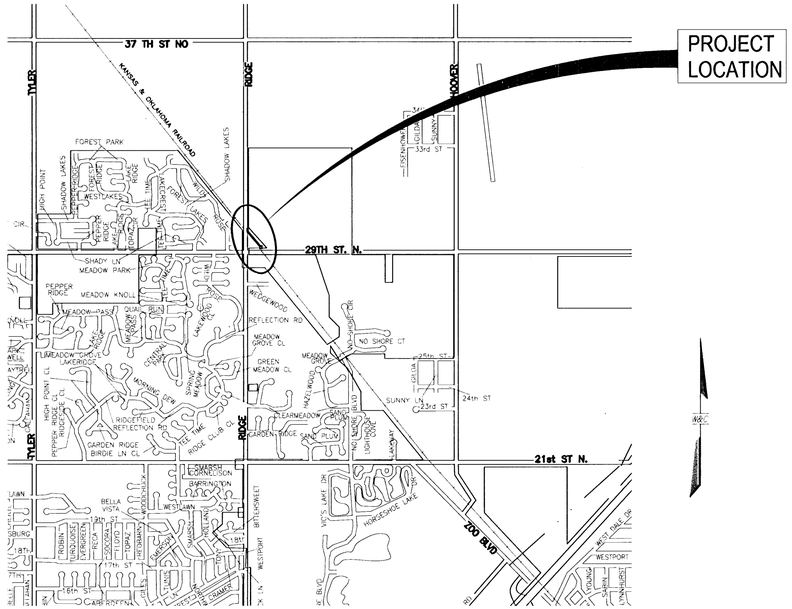
MAIN 19 SOUTHWEST INTERCEPTOR SEWER
PHASE 1A - PUMP STATION NO. 41 AND GRAVITY SEWER
CITY OF WICHITA, KANSAS
NEIL D. CABLE, P.E. - CITY ENGINEER

CITY OF WICHITA



LOCATION MAP
NOT TO SCALE

SHEET INDEX

1	TITLE, LOCATION MAP, SHEET INDEX & LEGEND
2	KEY MAP & GENERAL NOTES
~~3-9~~	~~PLAN & PROFILE~~ (PHASE 1B)
10-11	PLAN & PROFILE
12-18	PUMP STATION DETAILS
19-20	ELECTRICAL DETAILS
~~21~~	~~MISCELLANEOUS DETAILS~~ (PHASE 1B)
22-24	MANHOLE DETAILS
25-27	EROSION CONTROL BMP DETAILS

LEGEND

SYMBOL	DESCRIPTION
	BUILDING / STRUCTURE
	RAILROAD TRACKS
	EDGE OF PAVEMENT
	CURB AND GUTTER
	GRAVEL SURFACING
W	WATER LINE
W.M.	WATER METER
W.V.	WATER VALVE
F.H.	FIRE HYDRANT
G	GAS LINE
GAS REG.	GAS REGULATOR
G.V.	GAS VALVE
SWS	STORM WATER SEWER LINE
INLET	STORM WATER INLET
M.H.	MANHOLE
24" CMP	CULVERT PIPE
SS	SANITARY SEWER LINE
FM	SANITARY SEWER FORCE MAIN
T	UNDERGROUND TELEPHONE LINE
UGE	UNDERGROUND ELECTRIC LINE
OHE	OVERHEAD ELECTRIC LINE
FO	FIBER OPTIC LINE
	UTILITY POLE
	TELEPHONE PEDESTAL
U.M.	UTILITY DEADMAN/GUY WIRE
CATV	CABLE TELEVISION LINE
6" BUSH	BUSH
6" CEDAR / 6" DECID.	TREE
	TREE LINE EDGE
	SIGN POST
	ROADWAY GUARD RAIL
	STREAM FLOW DIRECTION
x 1338	SPOT ELEVATION
BH-1	SOIL BORING LOCATION
	WOOD FENCE
	WROUGHT IRON FENCE
	BARBED WIRE FENCE
	CHAIN LINK FENCE
	PROPERTY LINE / RIGHT-OF-WAY LINE
	LOT LINE
	EASEMENT LINE (EXISTING)
	EASEMENT LINE (PROPOSED)
	NEW FORCE MAIN WARNING SIGN

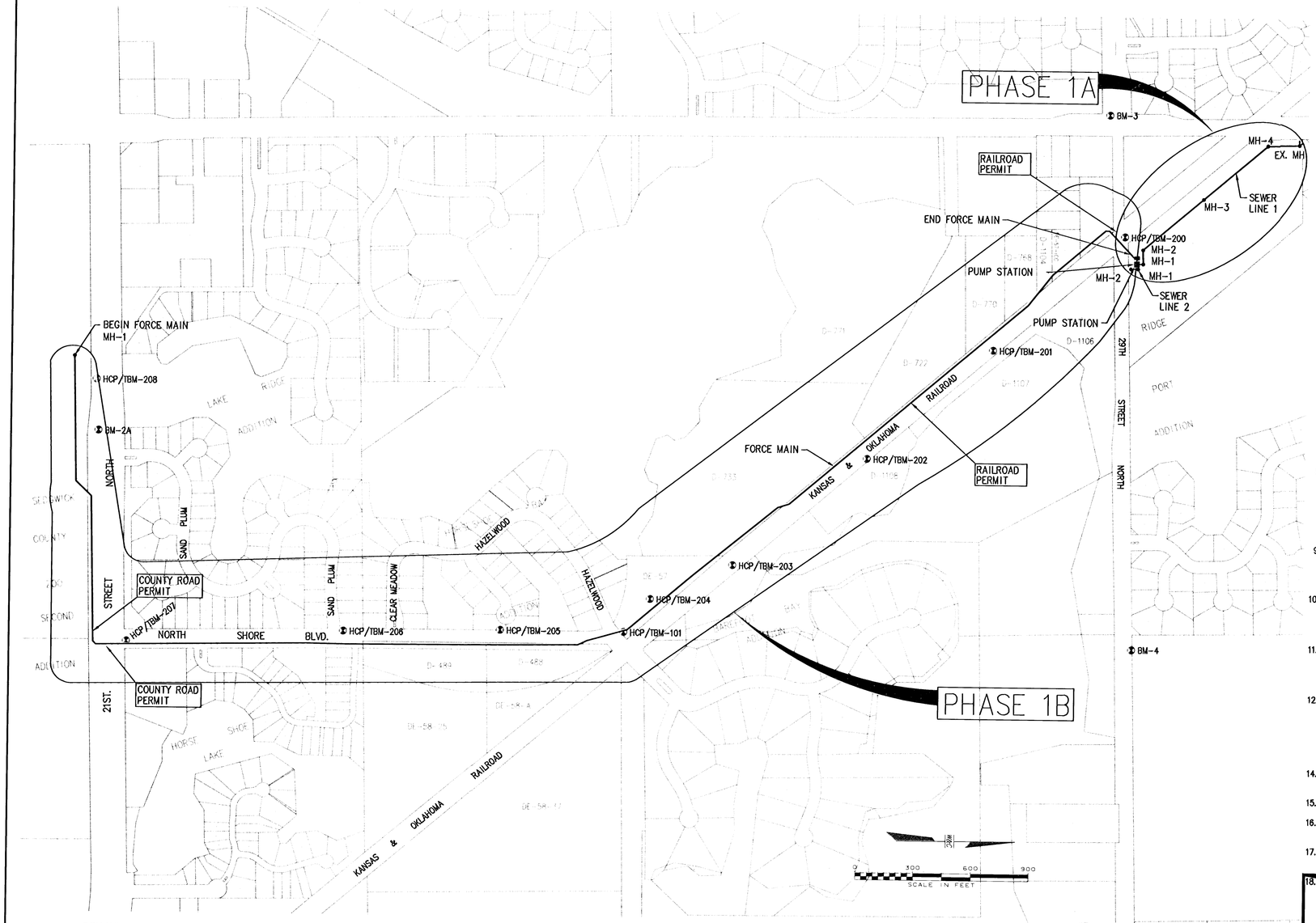
Utility Contractors, Inc. - Contractor
Shearer/Peterson, City - Inspectors
Released 6/18/04
As-Built per plans
.pdf by JDL 1/12/08

DAVID W. HERBERGER LICENSED PROFESSIONAL ENGINEER 16758 6-5-03 KANSAS

DAVID W. HERBERGER 16758 KANSAS PROFESSIONAL ENGINEER

OCA NO. 743-990
CITY OF WICHITA
PROJECT NO. 468-83186
MARCH 2003

WILSON & COMPANY
Engineers & Architects



BENCHMARK DATUM: CITY OF WICHITA

BM-2A — CITY OF WICHITA BENCHMARK DISK NEAR THE EAST END OF A HUBGUARD, LOCATED ON THE SOUTH SIDE OF 21ST. STREET NORTH, 1500 FEET EAST OF RIDGE ROAD. ELEVATION: 138.03 (SEE SHEET 3)

BM-3 — CITY OF WICHITA BENCHMARK DISK AT THE SW/COR. OF RIDGE ROAD AND 29TH STREET NORTH INTERSECTION. ELEVATION: 139.15

BM-4 — CITY OF WICHITA BENCHMARK DISK AT THE NORTH RIGHT OF WAY LINE OF 29TH STREET NORTH AND LOCATED 1/2 MILE EAST OF RIDGE ROAD. ELEVATION: 141.07

VERTICAL AND HORIZONTAL CONTROL

HCP/TBM-101 — TOP OF WCEA ALUM. CAP (SEE SHEET 7)
N = 11778.158, E = 15669.602, EL. = 140.38
GAS LINE MARKER POST 22' E
CENTER OF GAS VALVE 18.7' SSE
TOP CENTER OF T.PED 61.7' N

HCP/TBM-200 — SET 5/8" REBAR (SEE SHEET 10)
TOP OF N. RAIL 11.15' SW
N. EDGE PVM'T 29TH 16.8' S
RR X-ING SIGN POST 8.0' SE
N = 14357.266, E = 13591.543, EL. = 139.29

HCP/TBM-201 — SET 5/8" REBAR (SEE SHEET 9)
3" STEEL POST 24.8' NE
RR SWITCH FROG 30.9' SW
RR P.O.S. N. RAIL 88.6' NW
N = 13679.484, E = 14187.462, EL. = 137.02

HCP/TBM-202 — SET 5/8" REBAR (SEE SHEET 8)
FIBER OPTIC CABLE ROUTE MARKER POST #661 6.8' NE
FIBER OPTIC CABLE ROUTE MARKER POST #661 78.0' NW
TOP OF NORTH RAIL 38.9' SW
N = 13031.078, E = 14756.170, EL. = 138.00

HCP/TBM-203 — SET 5/8" REBAR (SEE SHEET 8)
TOP OF N. RAIL 18.0' SW
SE COR. BRIDGE ABUT 60.0' NNW
FIBER OPTIC CABLE ROUTE MARKER SIGN #663 67.4' N
N = 12339.431, E = 15316.353, EL. = 134.61

HCP/TBM-204 — SET 5/8" REBAR (SEE SHEET 7)
BOC 2.7' SW
KEEP RIGHT SIGN POST 36.3' SW
NO THRU TRAFFIC SIGN POST 90.0' NW
NO THRU TRAFFIC SIGN POST 104.6' NW
N = 11913.683, E = 15497.597, EL. = 137.18

HCP/TBM-205 — SET 5/8" REBAR (SEE SHEET 6)
BOC 2.8' E
TOP OF CENTER FH 40.7' N
E. EDGE CONC. WALK 7.6' W
N = 11138.283, E = 15667.113, EL. = 135.75

HCP/TBM-206 — SET 5/8" REBAR (SEE SHEET 6)
CURB RETURN 2.2' E
FIRE HYDRANT 4.15' W
BASE OF STREET SIGN POST 9.2' SW
N = 10325.074, E = 15680.305, EL. = 135.76

HCP/TBM-207 — SET 5/8" REBAR (SEE SHEET 5)
S. END CURB & GUTTER 12.7' NNW
STREET SIGN 11.4' NNW
TELEPHONE PAD 15.3' NNW
N = 9198.343, E = 15743.713, EL. = 133.99

HCP/TBM-208 — SET 5/8" REBAR (SEE SHEET 3)
3 NAILS IN E. POLE OF H-POLE 30.4' NNW
BACK OF GUARD RAIL 13.4' NNW
OBJECT MARKER SIGN 43.3' NNW
N = 9030.022, E = 14387.869, EL. = 137.71

GENERAL NOTES

1. CONTRACTOR SHALL PROVIDE NOTICE TO UTILITY COMPANIES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION, AS FOLLOWS:
   KANSAS ONE-CALL 687-2470
   THE CONTRACTOR SHALL NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY.

AQUILA NATURAL GAS	800-303-0357 OR 941-1608
SBC TELEPHONE CO.	800-870-8390 OR 268-2245
WESTAR ENERGY	383-8600 OR 261-6512
COX COMMUNICATIONS	262-0661 OR 262-4270
AT&T FIBER OPTIC	800-252-1133 OR 841-5887
~~KANSAS PIPELINE~~	~~800-167-0764 OR 838-4044~~
CITY OF WICHITA WATER & SEWER	262-6000 OR 268-4908
CITY OF WICHITA TRAFFIC ENG.	268-4446

2. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHER 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 LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 72 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO PIPELINES.
4. 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 AND AGAIN 48 HOURS PRIOR TO WORKING ADJACENT TO PROPERTY.
5. CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR IS ASSIGNED TO THE PROJECT AND IS PRESENT ON THE SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING SHOWN 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.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWAGE THROUGH CONSTRUCTION. CONTRACTOR'S PROPOSED METHOD FOR MAINTAINING SEWAGE FLOW SHALL BE APPROVED BY THE ENGINEER. COST OF MAINTAINING FLOW OF SEWAGE THROUGH CONSTRUCTION WILL NOT BE PAID FOR DIRECTLY AND THIS COST OF WORK SHALL BE CONSIDERED AS SUBSIDIARY TO OTHER PAY ITEMS OF WORK.
8. PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN PUBLIC RIGHT-OF-WAY AND DEDICATED EASEMENTS WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL COORDINATE WITH AND NOTIFY THE CITY OF SPRINKLER SYSTEMS WHICH ARE REQUIRED TO BE REMOVED AND REPAIRED. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE.
9. MAILBOXES WITHIN THE LIMITS OF THE PROJECT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AS APPROVED BY THE ENGINEER. CONTRACTOR WILL BE REQUIRED TO MAKE SATISFACTORY PROVISIONS FOR MAIL DELIVERY TO PROPERTIES AFFECTED BY THIS PROJECT DURING ITS CONSTRUCTION.
10. CONTRACTOR SHALL REMOVE AND RESET ALL FENCES AND SIGNS AS REQ'D FOR CONSTRUCTION. FENCES OR SIGNS WHICH ARE DAMAGED DURING CONSTRUCTION OR DEEMED UNSUITABLE FOR RE-USE BY THE ENGINEER SHALL BE REPLACED WITH NEW FENCE OR SIGN OF SAME TYPE. CONTRACTOR SHALL COORDINATE THIS WORK WITH OWNER.
11. TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
12. 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, SODDING AND/OR RESODDING. ALL 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.
14. THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.
15. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
16. MANHOLES SHALL BE TYPE "P" MANHOLES. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.
17. ALL EXISTING WATER LINES AS SHOWN ON PLANS ARE APPROXIMATED FROM RECORD INFORMATION. EXISTING WATER LINES WERE NOT LOCATED FOR THIS PROJECT.
18. ~~PIPING MATERIAL ACCEPTABLE FOR THE FORCE MAIN PIPING ON THIS PROJECT IS PVC C905 DR 18 OR HDPE C906 DR 17 (24.00 SIZE). AT ALL LOCATIONS WHERE PIPE IS INSTALLED BY HORIZONTAL DIRECTIONAL DRILL THE PIPE SHALL BE HDPE. HDPE PIPE SHALL BE CONNECTED TO PVC WITH MECHANICAL JOINT FITTINGS & ADAPTORS APPROVED BY THE ENGINEER. ANY LOCATION NOT SHOWN ON PLANS WHERE CONTRACTOR CHOOSES TO INSTALL PIPE BY HORIZONTAL DIRECTIONAL DRILL, WITH ENGINEERS APPROVAL, THE COST OF PIPE, FITTINGS, ADAPTORS AND INSTALLATION SHALL BE AS PIPE IN PLACE.~~
19. CONTRACTOR TO MAINTAIN/PROVIDE ACCESS TO ALL BUSINESSES & PROPERTIES THROUGH OUT CONSTRUCTION.
20. TESTING OF SEWERS AND MANHOLES SHALL BE CONDUCTED BY THE CONTRACTOR. ALL COST FOR THIS WORK SHALL BE SUBSIDIARY TO OTHER PAY ITEMS OF WORK.
21. CURLEX/EXCELSOR BLANKET OR APPROVED EQUAL SHALL BE INSTALLED AT ALL DISTURBED AREAS REQUIRING SEEDING FOR EROSION CONTROL BMP. INSTALLATION PER MANUFACTURERS RECOMMENDATION. EROSION CONTROL BMP'S SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

NO.	REVISION	DATE	BY

DAVID W. HERBERGER LICENSED 16758 3-17-2003 KANSAS PROFESSIONAL ENGINEER

NEIL D. CABLE P.E. - CITY ENGINEER

CITY OF WICHITA, KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION NO. 41 AND GRAVITY SEWER
KEY MAP & GENERAL NOTES

DESIGN	CHECKED
DWH	WOB
DRAWN	MEK/KMD
DATE	MARCH 2003
FILE NO.	X1460002
SHEET NO.	2

WILSON & COMPANY
WICHITA, KANSAS

INSTALL 88.74 LF 16" FORCE MAIN

PI STA 71+91.78
N = 13986.05 E = 13791.03
INSTALL 11.25° BEND
DEFLECT 11°30'00" RT

6" FM TO BE ABANDONED IN PLACE PER CITY OF WICHITA STANDARDS

REPLACE 100 LF GRAVEL SURFACING

PI STA 75+47.99
N = 14257.43 E = 13560.29
INSTALL 45° BEND
DEFLECT 45°00'00" RT

INSTALL 20.00 LF 16" FORCE MAIN

REPLACE 50 LF GRAVEL SURFACING

INSTALL 356.21 LF 16" FORCE MAIN

29TH STREET NORTH

PI STA 75+67.99
N = 14277.36 E = 13561.91
INSTALL 45° BEND
DEFLECT 42°10'06" RT

CAUTION!!! TELEPHONE

INSTALL 173.16 LF 16" FORCE MAIN

CAUTION!!! AT&T FIBER OPTIC

CAUTION!!! TELEPHONE

NOTE:
FM ENDS AT STA 77+41.14. PIPING, MANHOLE, FLOW METER, VALVES AND FITTINGS FROM THIS POINT TO THE PUMP STATION ARE CONSIDERED SUBSIDIARY TO PUMP STATION. SEE SHEET 13

PROJECT
PHASE 1B

MATCH LINE STA 71+00.0

30' SANITARY SEWER ESM'T

INSTALL FORCE MAIN WARNING SIGN (TYP.)

STA 75+75.00 TO STA 77+17.00
INSTALL 142 LF 30" MIN STEEL CASING PIPE BY BORING

CAUTION!!! 66" WATER

CAUTION!!! 16" WATER

KANSAS & OKLAHOMA RAILROAD

HCP / TBM-200

GUY WIRE TO BE RELOCATED BY COX. CONTRACTOR TO COORDINATE

CAUTION!!! ELECTRIC

CAUTION!!! 4" GAS

PI STA 77+41.14
N = 14395.91 E = 13688.13
DEFLECT 3°00'00" LT
END 16" FORCE MAIN

INSTALL 27.7 LF 10" PIPE

PUMP STATION SITE

STA 0+64.5 MH-2
N = 14382.98 E = 13761.37
CONST TYPE P MH, 4' DIA OVER EXIST. 10" SS. PLUG AND ABANDON IN PLACE 10" SEWER (W)

LINE 1

STA 0+00.0
N = 14419.15 E = 13732.94
BEGIN GRAVITY SEWER, LINE 2

PROPOSED 15' SANITARY SEWER ESM'T

PROJECT
PHASE 1A

GRAVITY SEWER LINE 1
SEE SHEET NO 11

INSTALL 38.8 LF 10" PIPE

STA 0+27.7 MH-1
N = 14419.73 E = 13760.60
CONST TYPE P MH, 4' DIA

LINE 2

LINE 1

16" FORCE MAIN

LINE 2

SCALE IN FEET
0 40 80 120

SCALE IN FEET
0 5 10

PROJECT
PHASE 1B

PVI STA 71+50.00
DEFLECT 102°29" VERT

+56.8 6" SAN FM

EXIST. GROUND

CL GRAVEL DRIVE

PVI STA 75+12.50
DEFLECT 111°42" VERT

PVI STA 75+54.00
INSTALL 22.5° BEND
DEFLECT 23°30'26" VERT

PVI STA 75+64.00
INSTALL 22.5° BEND
DEFLECT 23°18'20" VERT

+28 UGT & CL RAILROAD TRACKS

CL 29TH ST N

+73 TO WITH 8" STEEL CASING

PVI STA 77+21.30
INSTALL 22.5° BEND
DEFLECT 22°56'41" VERT

PVI STA 77+39.81
INSTALL 22.5° BEND
DEFLECT 22°30'28" VERT

PVI STA 77+41.14
END FORCE MAIN

+29 GAS
+36 UGT

+52 GAS

FINISHED GROUND

+90 UGT

+16 UGE

0.000%

+44 10" SS (PVC)

+41.43%

-1.899%

-0.083%

2.169%

-44.000%

-0.763%

+68 16" WATER WITH 30" STEEL ENCASEMENT

+64 16" WATER

41.50 LF 16" PIPE @ -2.182%

50.00 LF 16" PIPE @ -1.899%

362.50 LF 16" PIPE @ -0.083%

157.30 LF 16" PIPE @ -0.763%

10.00 LF 16" PIPE @ -44.000%

18.51 LF 16" PIPE @ +41.437%

1.33 LF 16" PIPE @ 0.000%

TOP 133.75
TOP 132.80
TOP 132.76
TOP 132.68
TOP 132.59
TOP 132.51
TOP 132.50
TOP 131.60
TOP 127.20
TOP 126.93
TOP 126.16
TOP 126.00
TOP 133.67
TOP 133.67

70+75 71+00 71+50 72+00 72+50 73+00 73+50 74+00 74+50 75+00 75+50 76+00 76+50 77+00 77+50

155 150 145 140 135 130 125 120 115 110

STA 0+00.0
PUMP STATION
TOP EL 140.80

STA 0+27.7
MH-1
TOP EL 140.4

STA 0+64.5
MH-2
TOP EL 140.0

EXIST. GROUND

+99 UGT

27.7 LF 10" PIPE @ 0.25%

38.8 LF 10" PIPE @ 0.25%

FL IN 119.20
FL OUT 119.22 (S)
FL IN 119.37 (W)
FL OUT 119.46 (N)
FL IN 119.63 (E) EXIST.

0+00 0+50 1+00

PROJECT
PHASE 1A

NO.	REVISION	DATE	BY

DAVID W. HERBERGER
LICENSED
10789
3-17-2003
KANSAS
PROFESSIONAL ENGINEER

WILSON & COMPANY

CITY OF WICHITA, KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
LINE 2 PLAN & PROFILE
STA. 0+00.00 TO STA. 0+64.5

NEIL D. CABLE P.E. - CITY ENGINEER

DESIGN	CHECKED
DWH	WOB
DRAWN	MEK/KMD
DATE	MARCH 2003
FILE NO.	X1460002
SHEET NO.	10

WILSON & COMPANY
WICHITA, KANSAS

PROJECT
PHASE 1B

PROJECT
PHASE 1A

KANSAS & OKLAHOMA RAILROAD

29TH STREET NORTH

71ST STREET WEST / RIDGE ROAD

HCP/TBM-200

STA 0+00.0 PUMP STATION
N = 14428.11 E = 13731.09
BEGIN GRAVITY SEWER, LINE 1

INSTALL 27.0 LF
24" PIPE

STA 0+27.0 MH-1
N = 14453.10 E = 13730.52
CONST TYPE P MH, 5' DIA

INSTALL 72.80 LF
24" PIPE

PROPOSED 125' X 85'
LAND ACQUISITION

STA 0+99.8 MH-2
N = 14451.58 E = 13657.74
CONST TYPE P MH, 5' DIA

PROPOSED 15' SANITARY
SEWER ESM'T

INSTALL 410.2 LF
24" PIPE

EXISTING MANHOLE
TO BE ABANDONED

EXISTING 10" SANIT. SEWER
TO BE ABANDONED IN PLACE

STA 5+10.0 MH-3
N = 14764.05 E = 13391.93
CONST TYPE P MH, 5' DIA

EXISTING MANHOLE
TO BE ABANDONED

CONTRACTOR SHALL PROTECT
ADJACENT SS MANHOLES AND
PIPE FROM ANY MOVEMENT OR
DISTURBANCE

INSTALL 434.2 LF
24" PIPE

EXISTING MANHOLE
TO BE ABANDONED

STA 9+44.2 MH-4
N = 15094.76 E = 13110.60
CONST TYPE P MH, 5' DIA

INSTALL 164.3 LF
24" PIPE

STA 11+08.5 CONNECT TO
EXIST. MH
N = 15259.00 E = 13108.36

PROVIDE TEMP. SUPPORT OR
RELOCATE ADJACENT UTILITY
GUY AS REQ'D. COORDINATE
WITH OWNER

WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL
ABANDON EXISTING SANITARY SEWER SYSTEM IN ACCORDANCE
WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS.

WHEN DIRECTED BY THE ENGINEER, REMOVE TEMP. PLUG (SE),
PLUG EXIST. 10" SS OUTLET (S) AND ABANDON SS (S).
RESHAPE INVERT AS REQUIRED TO PROVIDE SMOOTH FLOW.

LINE 1

STA 0+00.0
MH-1
TOP EL 140.80
FL IN 118.00

STA 0+27.0
MH-1
TOP EL 140.7
FL OUT 118.02 (S)
FL IN 118.12 (W)

STA 0+99.8
MH-2
TOP EL 139.4
FL OUT 118.18 (E)
FL IN 118.28 (NW)

STA 5+10.0
MH-3
TOP EL 140.1
FL 118.61

STA 9+44.2
MH-4
TOP EL 140.3
FL OUT 118.96 (SE)
FL IN 119.06 (N)

STA 11+08.5
EXIST. MH
FL OUT 119.19 (S)
FL IN 118.29 (W) & 121.50 (NW)

4-27 UGT

SS MH 10'± LT

SS MH 10'± LT

SS MH 11'± LT

27.0 LF 24" PIPE @ 0.08%
72.8 LF 24" PIPE @ 0.08%
410.2 LF 24" PIPE @ 0.08%
434.2 LF 24" PIPE @ 0.08%
164.3 LF 24" PIPE @ 0.08%

FL 118.00 · FL 118.02 (S) · FL 118.12 (W) · FL 118.18 (E) · FL 118.28 (NW) · FL 118.36 · FL 118.44 · FL 118.52 · FL 118.61 · FL 118.68 · FL 118.76 · FL 118.84 · FL 118.92 · FL 118.96 (SE) · FL 119.06 (N) · FL 119.10 · FL 119.19 (S) · FL 118.29 (W) & 121.50 (NW)

0+00 0+50 1+00 1+50 2+00 2+50 3+00 3+50 4+00 4+50 5+00 5+50 6+00 6+50 7+00 7+50 8+00 8+50 9+00 9+50 10+00 10+50 11+00 11+34.96

155 150 145 140 135 130 125 120 115 110

SCALE IN FEET 0 40 80 120

SCALE IN FEET 0 5

NO. | REVISION | DATE | BY

DAVID W. HERBERGER
LICENSED
16758
3-17-2003
KANSAS
PROFESSIONAL ENGINEER

WILSON & COMPANY

CITY OF WICHITA, KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
LINE 1 PLAN & PROFILE
STA. 0+00.0 TO STA. 11+08.5

NEIL D. CABLE P.E. - CITY ENGINEER

DESIGN	CHECKED
DWH	WOB
DRAWN	MEK
DATE	MARCH 2003
FILE NO.	X1460002
SHEET NO.	11

WILSON & COMPANY
WICHITA, KANSAS

NOTES:

1. CONTRACTOR SHALL SUBMIT SCHEDULE FOR EXECUTION OF DEMOLITION PLAN OF EXISTING PUMP STATION AND CONSTRUCTION OF NEW PUMP STATION IN PHASES TO PROVIDE PROPER PUMPING OPERATIONS DURING CONSTRUCTION.
2. CONTRACTOR SHALL PROVIDE A TEMPORARY HOOK UP TO A PORTABLE GENERATOR FOR THE EXISTING PUMP STATION DURING CONSTRUCTION. COORDINATE WITH CITY OF WHICHITA SEWAGE TREATMENT MAINTENANCE STAFF.
3. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANIES FOR RELOCATION OF EXISTING METERS, PEDESTALS, MARKER POSTS, SERVICE LINES, ETC., AS REQUIRED FOR PROPER OPERATIONS OF NEW PUMP STATION.
4. CONTRACTOR SHALL COORDINATE WITH OWNER FOR SALVAGEABLE ITEMS. ITEMS DEEMED SALVAGABLE BY THE OWNER SHALL BE DELIVERED TO THE OWNER AT LOCATIONS DESIGNATED BY THE OWNER.

PROPOSED SANITARY SEWER

EXISTING 10" SS TO BE ABANDONED IN PLACE PER CITY OF WICHITA SPECIFICATIONS

PROPOSED PROPERTY LINE

PROPOSED PUMP STATION

BH-1

RELOCATE GAS METER (SEE NOTE 3)

REMOVE GENERATOR PAD AND SALVAGE GENERATOR (SEE NOTE 4)

RELOCATE ANTENNA TOWER (SEE NOTE 3)

PROPOSED TEMPORARY FORCE MAIN

REMOVE EXISTING CONCRETE SLAB

REMOVE STEEL POSTS

REMOVE EXISTING GRAVEL DRIVE

EXISTING 6" FORCE MAIN

REMOVE ALL PIPING, VALVES, AND EQUIPMENT FROM EXISTING WET WELL, CONTROL BUILDING AND VALVE VAULT. REMOVE CONTROL BUILDING. ABANDON IN PLACE WET WELL AND VALVE VAULT PER CITY OF WICHITA MANHOLE ABANDONMENT SPECIFICATIONS. (SEE NOTE 4)

PROPOSED SANITARY SEWER

EXISTING 10" SS TO BE ABANDONED IN PLACE PER CITY OF WICHITA SPECIFICATIONS

3" COTTONWOOD

1"

50' R/W

EDGE OF PAVEMENT

EDGE OF PAVEMENT

29TH STREET NORTH

BITUMINOUS

ATCHISON, TOPEKA & SANTA FE RAILROAD

50' RR R/W

SCALE IN FEET 0 8 16 24

DAVID W. HERBERGER LICENSED 16758 KANSAS PROFESSIONAL ENGINEER 3-17-2003

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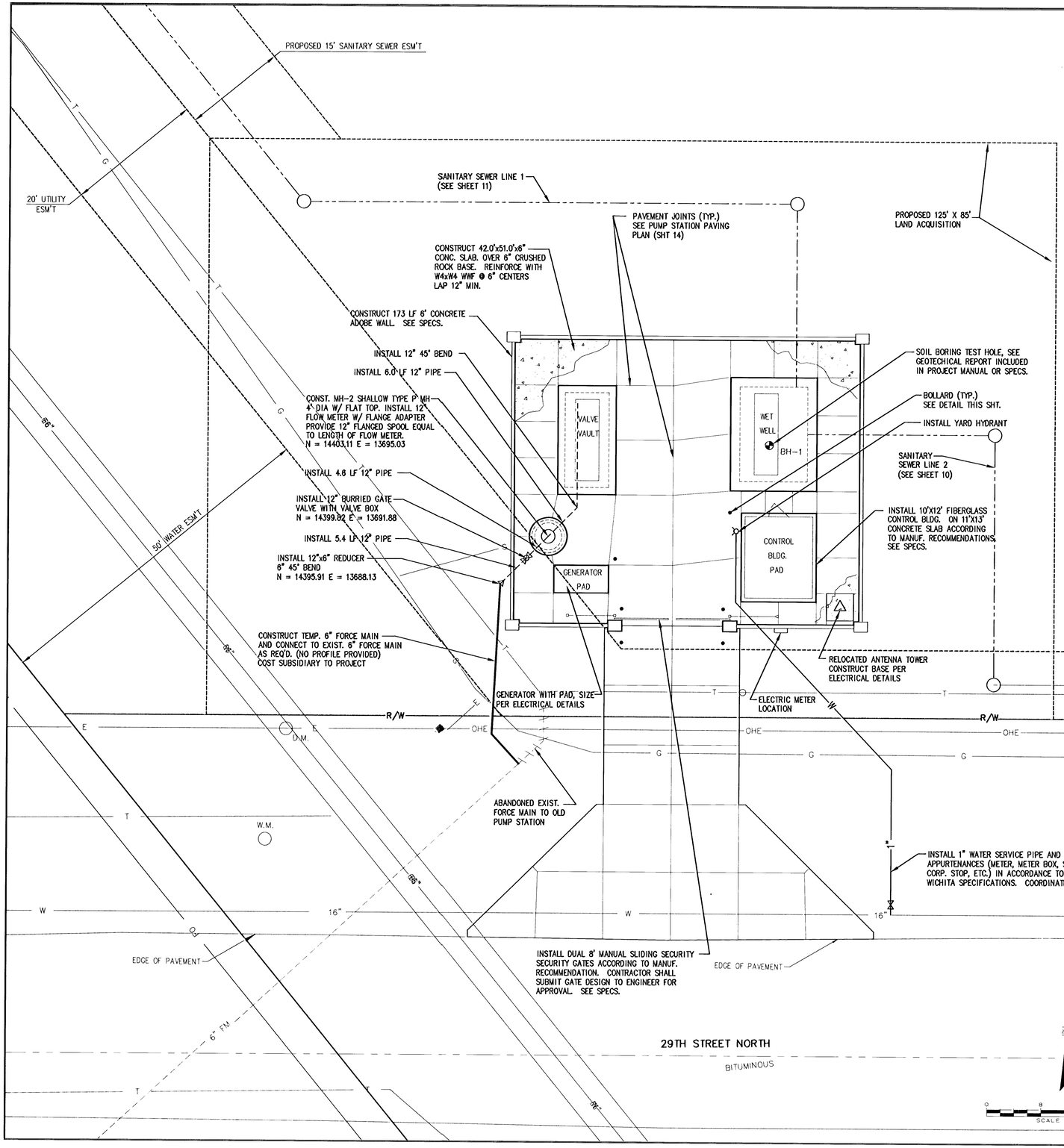
WILSON & COMPANY

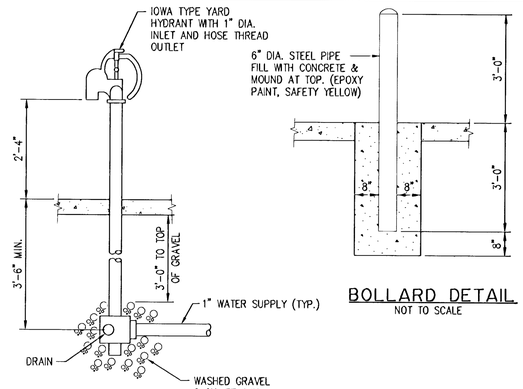
CITY OF WICHITA, KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION
SITE DEMOLITION PLAN

NEIL D. CABLE P.E. - CITY ENGINEER

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DATE	MARCH 2003
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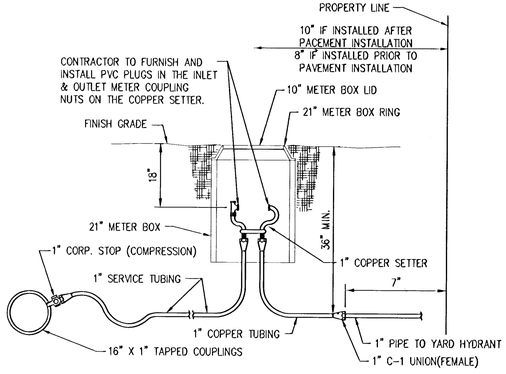
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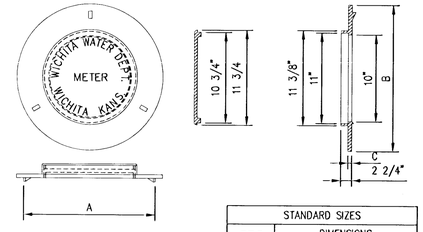
BOLLARD DETAIL
NOT TO SCALE

TYPICAL NON-FREEZE YARD HYDRANT
NOT TO SCALE



BORE HOLE UNDER PAVING SHALL BE A MAXIMUM OF 2" IN DIAMETER AND A MINIMUM OF 36" BELOW TOP OF PAVING.

TYPICAL METER SETTING
LONG SERVICE 1"
(CITY OF WICHITA STANDARD DETAIL)



STANDARD SIZES			
TITLE SIZE	DIMENSIONS		
	A	B	C
21"	20 1/2"	25"	7/16"

OTHER APPROVED RING AND LIDS:
FORD METER BOX CO. INC.
21" RING & LID CATALOG NO. C-4

RING & LID FOR METER VAULTS
(CITY OF WICHITA STANDARD DETAIL)

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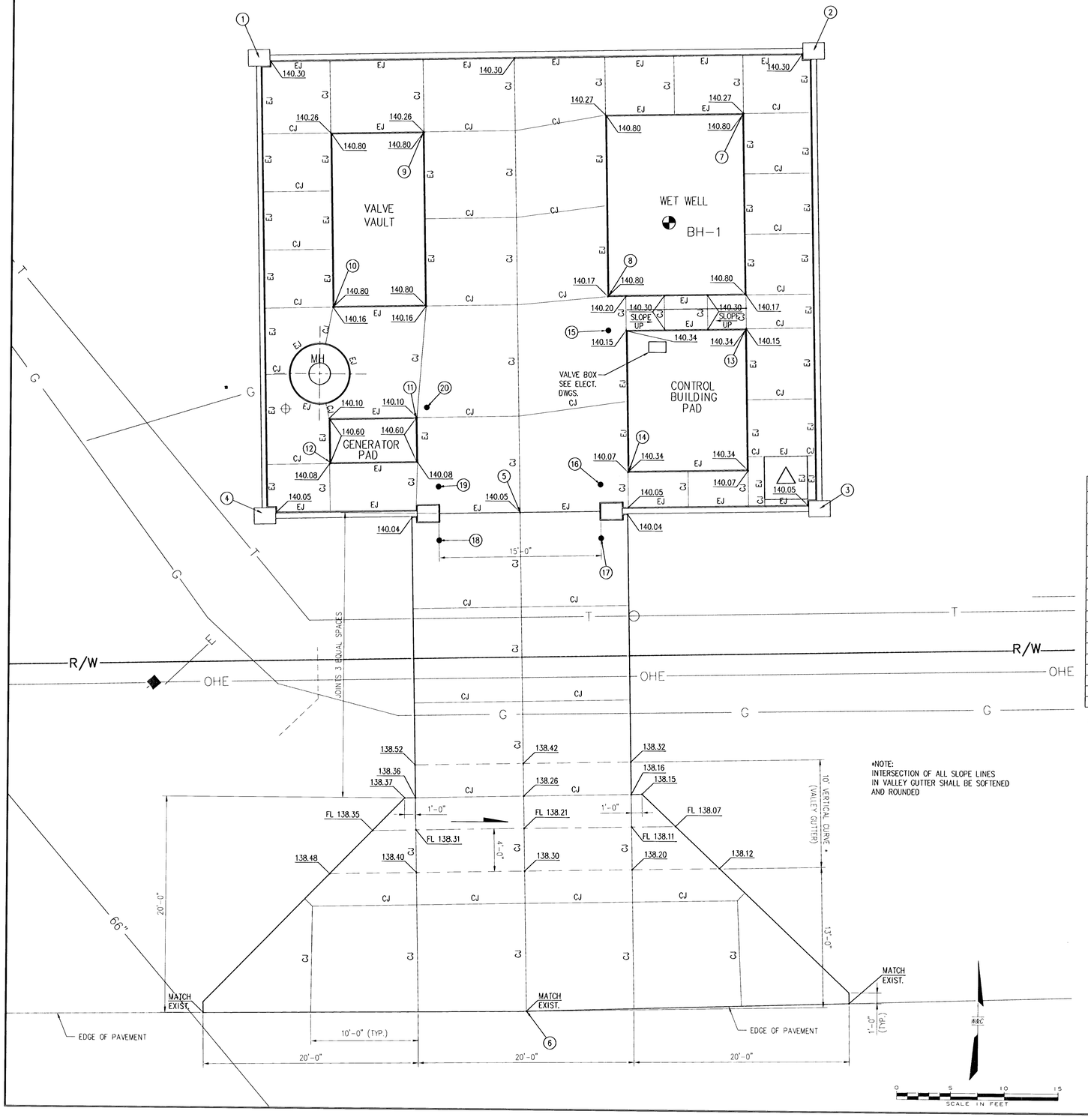
DAVID W. HERBERGER LICENSED PROFESSIONAL ENGINEER 16758 12-17-2002 KANSAS

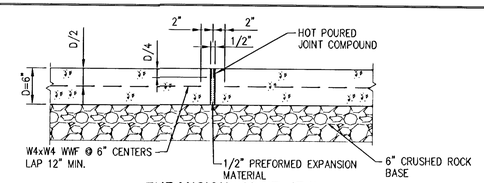
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CITY OF WICHITA, KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION
SITE CONSTRUCTION PLAN
NEIL D. CABLE P.E. - CITY ENGINEER

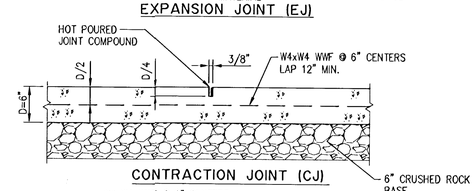
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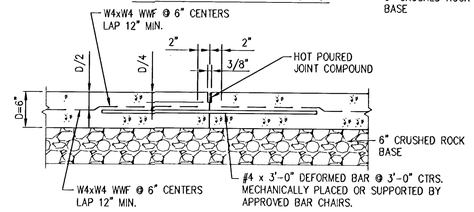




EXPANSION JOINT (EJ)



CONTRACTION JOINT (CJ)



CONSTRUCTION JOINT

JOINT DETAILS

NOT TO SCALE

MARK	COORDINATES		DESCRIPTION / LOCATION	ELEVATION
1	N 14432.37	E 13689.15	NW. COR. CONC. FENCE	NA
2	N 14433.46	E 13740.64	NE. COR. CONC. FENCE	NA
3	N 14390.96	E 13741.54	SE. COR. CONC. FENCE	NA
4	N 14389.88	E 13690.05	SW. COR. CONC. FENCE	NA
5	N 14344.07	E 13714.68	CL CONC. DRIVE	140.05
6	N 14390.38	E 13713.71	CL CONC. DRIVE	MATCH EXIST.
7	N 14427.51	E 13734.10	NE. COR. WET WELL	140.80
8	N 14410.58	E 13721.79	SW. COR. WET WELL	140.80
9	N 14425.55	E 13704.47	NE. COR. VALVE VAULT	140.80
10	N 14409.38	E 13696.31	SW. COR. VALVE VAULT	140.80
11	N 14399.04 *	E 13704.02 *	COR. GENERATOR PAD *	140.60
12	N 14394.87 *	E 13696.11 *	COR. GENERATOR PAD *	140.60
13	N 14407.51	E 13734.52	COR. BUILDING PAD	140.35
14	N 14394.28	E 13723.79	COR. BUILDING PAD	140.35
15	N 14407.33	E 13721.77	BOLLARD	NA
16	N 14393.04	E 13721.15	BOLLARD	NA
17	N 14388.04	E 13721.26	BOLLARD	NA
18	N 14387.72	E 13706.26	BOLLARD	NA
19	N 14392.72	E 13706.16	BOLLARD	NA
20	N 14400.06	E 13705.00	BOLLARD	NA

* ACTUAL LOCATION AND SIZE TO BE DETERMINED BY SIZE OF GENERATER SUPPLIED. SEE ELECTRICAL.

*NOTE:
INTERSECTION OF ALL SLOPE LINES IN VALLEY GUTTER SHALL BE SOFTENED AND ROUNDED

NO.	REVISION	DATE	BY

DAVID W. HERBERGER LICENSED 16758 3-17-03 KANSAS PROFESSIONAL ENGINEER

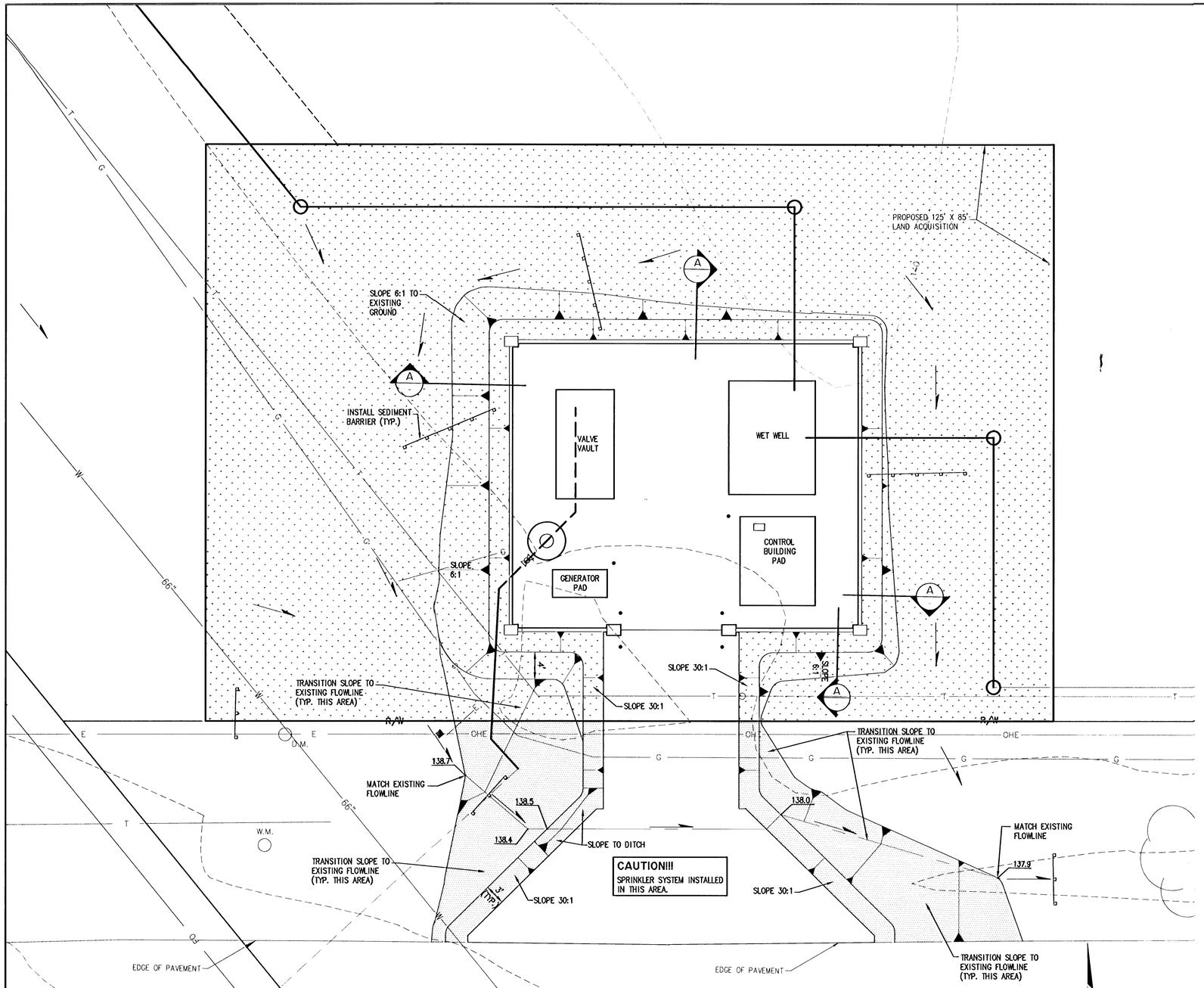
WILSON & COMPANY

CITY OF WICHITA, KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION
SITE LAYOUT AND PAVING PLAN

NEIL D. CABLE P.E. - CITY ENGINEER

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SHEET NO.	14

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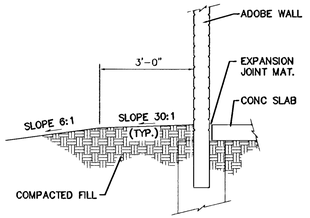


LEGEND

SYMBOL	DESCRIPTION
	SOD (SEE NOTE 3)
	MIN. SITE RESTORATION, MATCH EXIST. GRASS IN ALL DISTURBED AREAS
	SEDIMENT BARRIER (SEE BMP DETAILS)
	DIRECTION OF FLOW

NOTES:

1. SEDIMENT BARRIERS SHALL BE SILT FENCE OR STRAW BALE TYPE, PER BMP DETAILS.
2. CONTRACTOR SHALL CONSTRUCT A STABILIZED ENTRANCE PER BMP DETAIL DURING CONSTRUCTION.
3. ALL AREAS WITHIN PROPERTY LINE (AS SHOWN) SHALL BE SODDED WITH BUFFALO TYPE GRASS. CONTRACTOR SHALL PROVIDE ADEQUATE WATERING FOR A PERIOD OF AT LEASE THREE WEEKS AFTER INITIAL INSTALLATION. SOIL PREPARATION, INSTALLATION, AND WATERING REQUIREMENTS PER SOD PRODUCERS RECOMMENDATIONS.
4. ALL AREAS OF TRANSITION SLOPE GRADING WILL NOT HAVE SLOPES EXCEEDING 4:1.



SECTION A
NOT TO SCALE

NO.	REVISION	DATE	BY

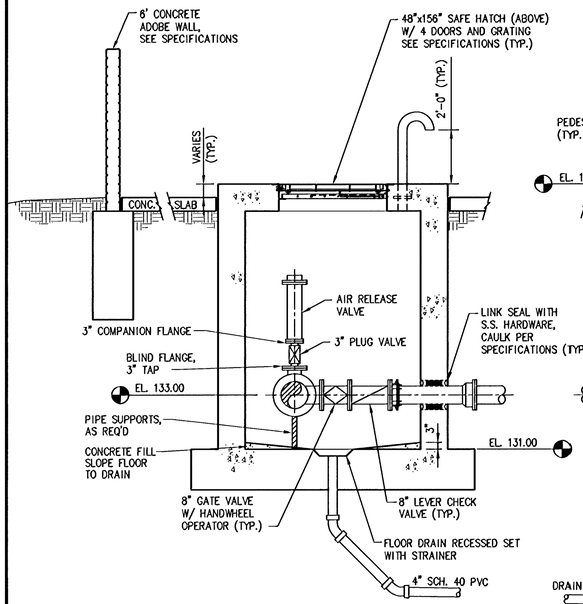
DAVID W. HERBERGER LICENSED 16758 3-17-03 KANSAS PROFESSIONAL ENGINEER

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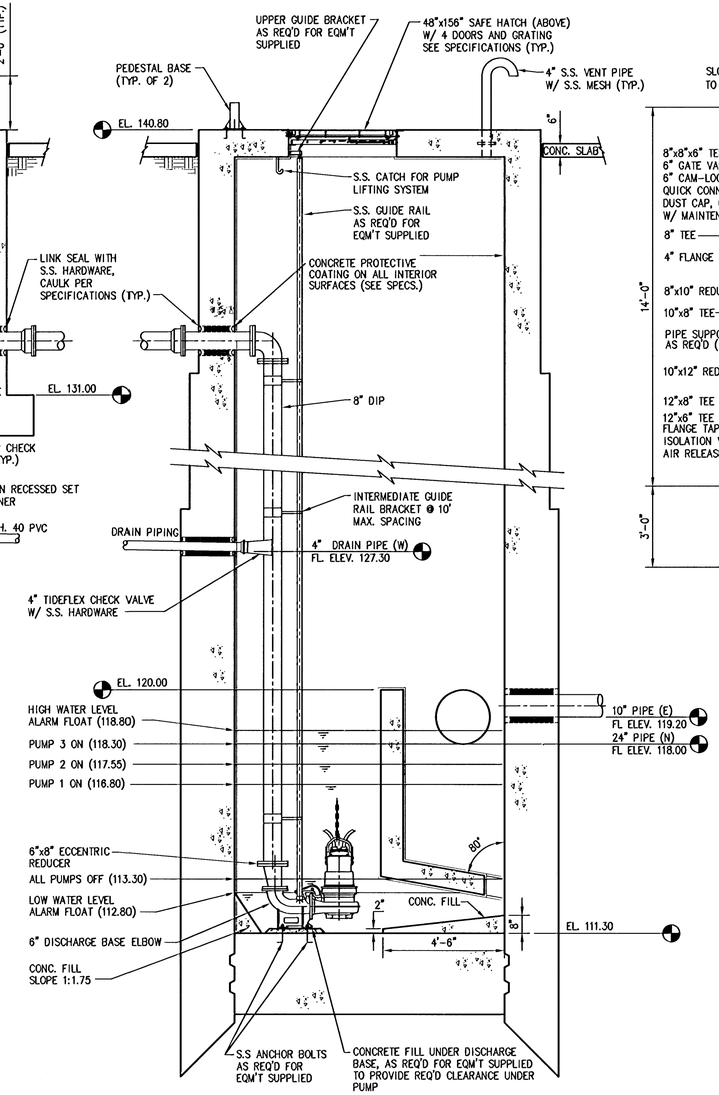
CITY OF WICHITA, KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION
SITE GRADING PLAN

NEIL D. CABLE P.E. - CITY ENGINEER

DESIGN | CHECKED

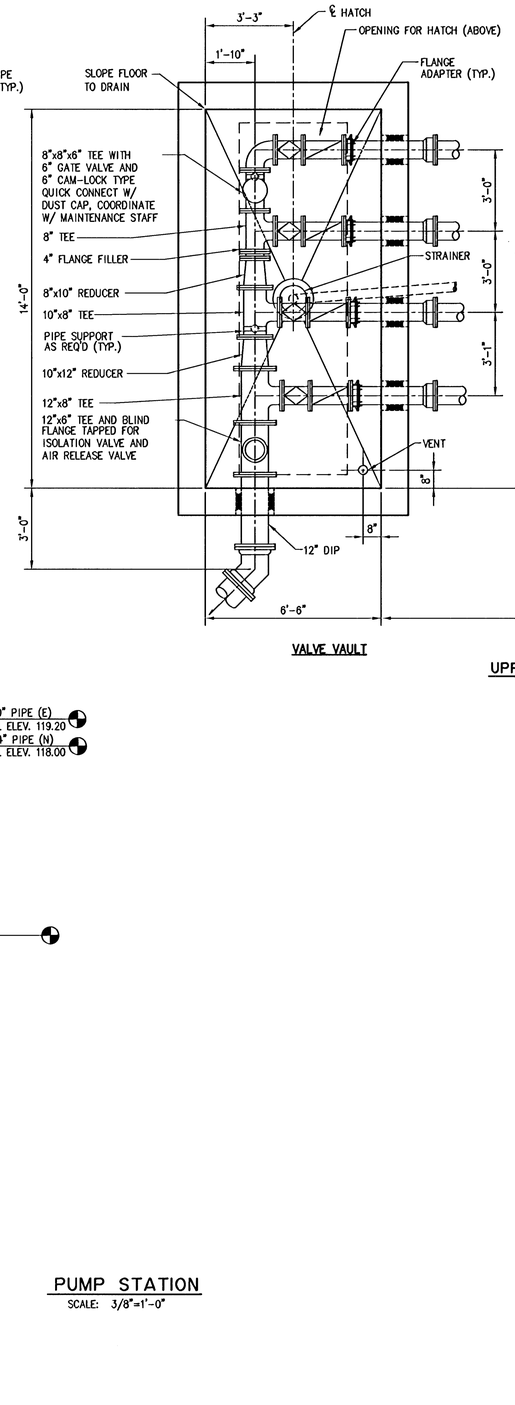


VALVE VAULT

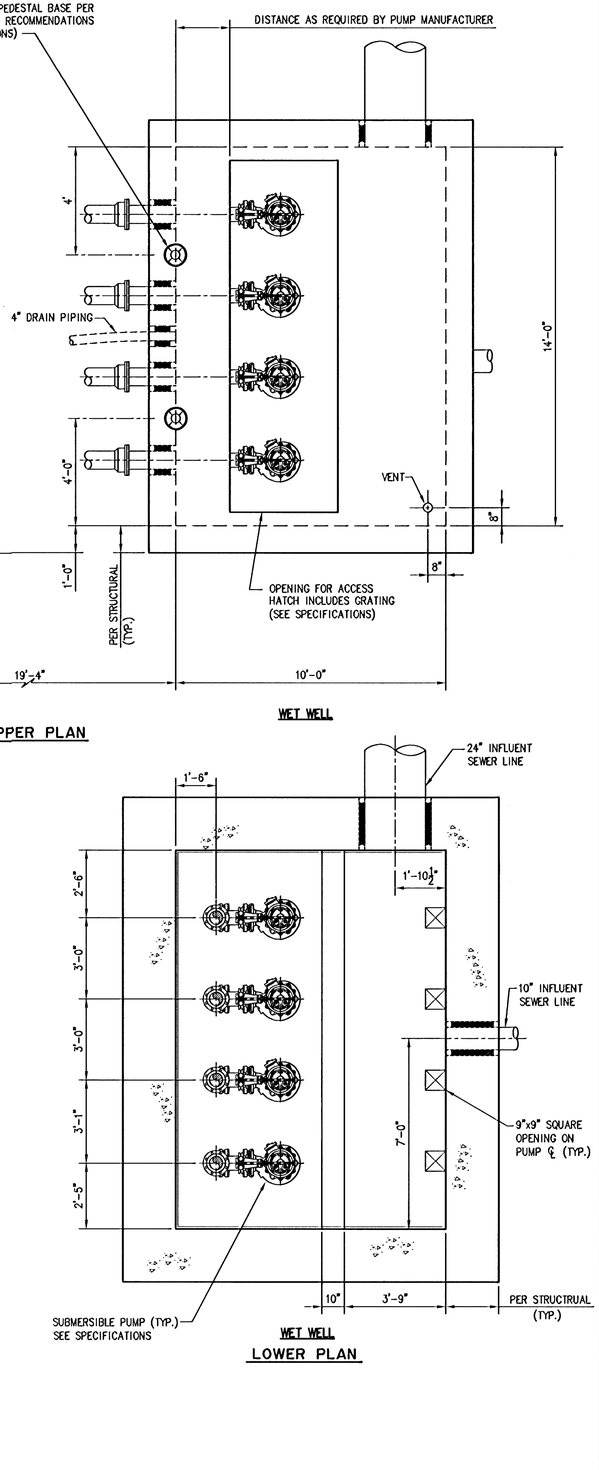


WET WELL

ELEVATION



VALVE VAULT



WET WELL

UPPER PLAN

WET WELL

LOWER PLAN

PUMP STATION

SCALE: 3/8"=1'-0"

NO.	REVISION	DATE	BY

DAVID W. HERBERGER LICENSED 16758 3-17-2003 KANSAS PROFESSIONAL ENGINEER

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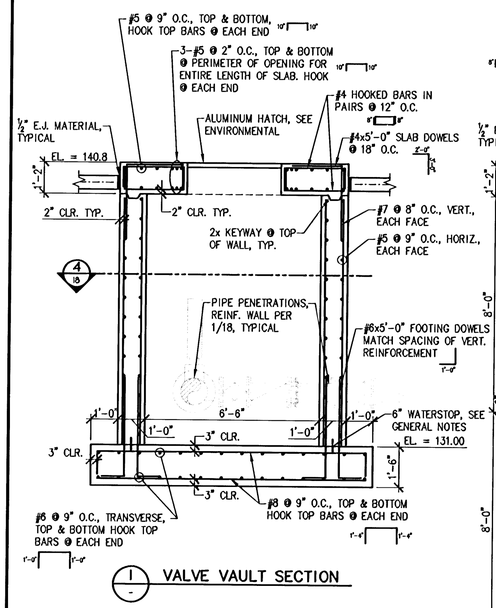
CITY OF WICHITA, KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION
PLAN AND SECTIONS

NEIL D. CABLE P.E. - CITY ENGINEER

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DATE	MARCH 2003
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SHEET NO.	16

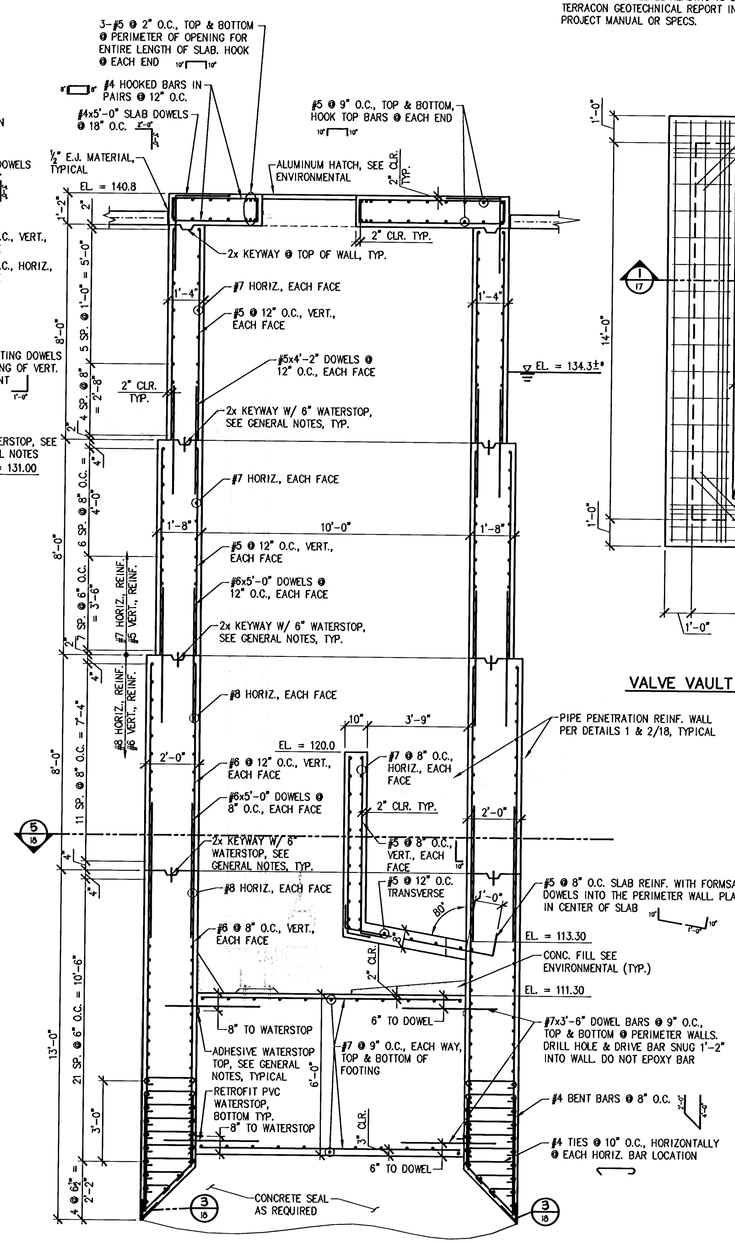
WILSON & COMPANY
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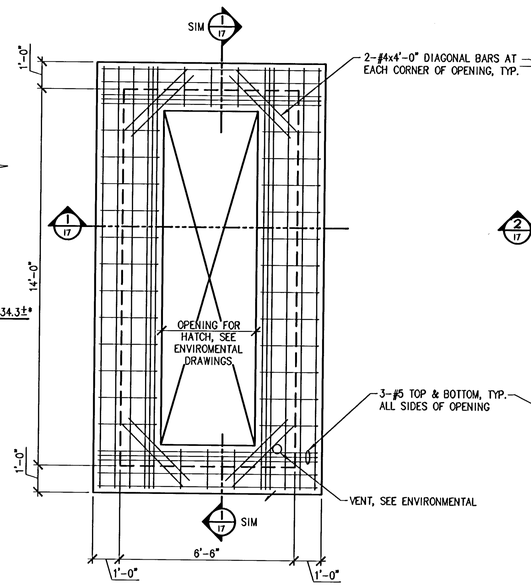
1 - VALVE VAULT SECTION

NOTE:
ALL SUPPORTS, ANCHOR BOLTS, FLANGE JOINT BOLTS, NUTS, FASTENERS, AND APPURTENANCES SHALL BE STAINLESS STEEL.

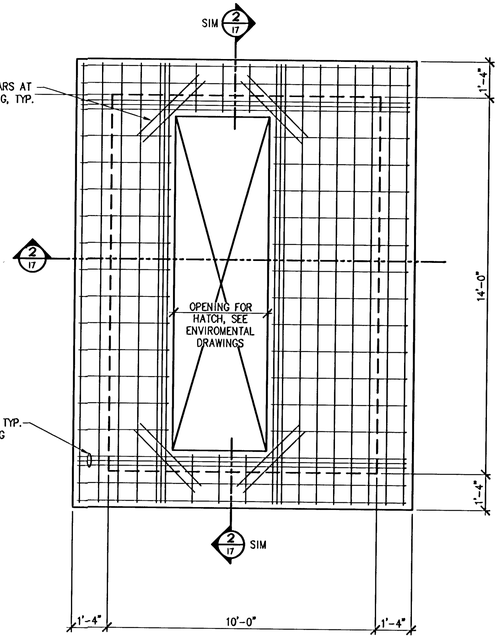


2 - PUMP STATION SECTION

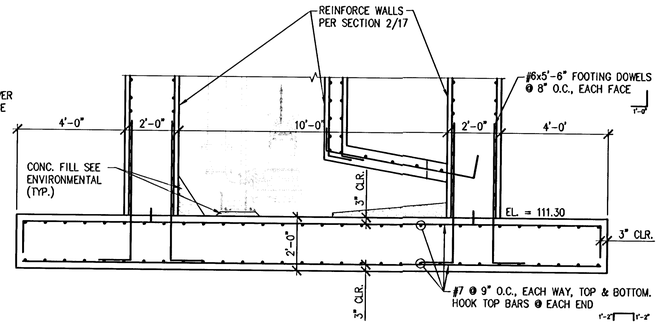
* GROUND WATER LEVEL READING IS BASED ON THE TERRACON GEOTECHNICAL REPORT INCLUDED IN THE PROJECT MANUAL OR SPECS.



VALVE VAULT SLAB REINFORCEMENT PLAN



PUMP STATION SLAB REINFORCEMENT PLAN



3 - PUMP STATION ALTERNATE FOOTING SECTION

NO.	REVISION	DATE	BY
1			

SCOTT A. MAILE — NUMBER — 15378 — 3/19/03 — KANSAS — PROFESSIONAL ENGINEER

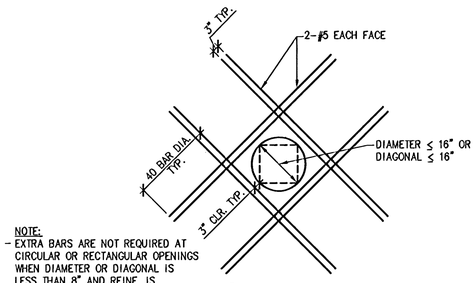
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MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION
PLAN AND SECTIONS
NEIL D. CABLE P.E. - CITY ENGINEER

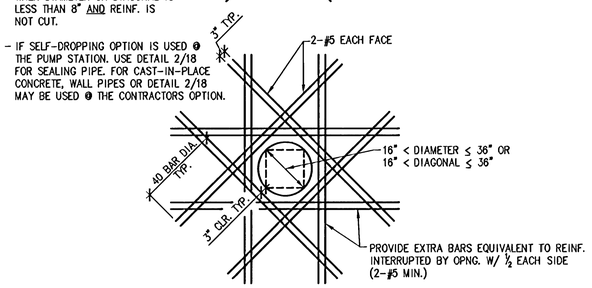
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DATE	MARCH 2003
FILE NO.	X1460002
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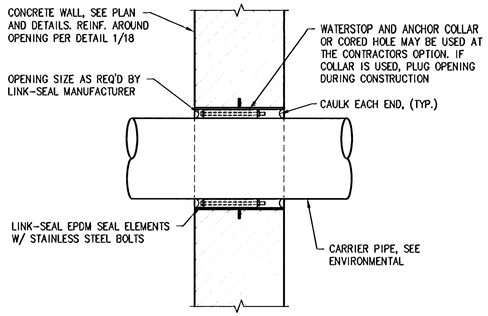
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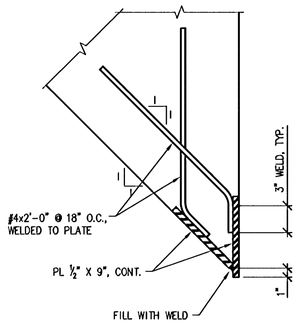
NOTE:
- EXTRA BARS ARE NOT REQUIRED AT CIRCULAR OR RECTANGULAR OPENINGS WHEN DIAMETER OR DIAGONAL IS LESS THAN 8" AND REINF. IS NOT CUT.
- IF SELF-DROPPING OPTION IS USED ❷ THE PUMP STATION. USE DETAIL 2/18 FOR SEALING PIPE. FOR CAST-IN-PLACE CONCRETE, WALL PIPES OR DETAIL 2/18 MAY BE USED ❷ THE CONTRACTORS OPTION.



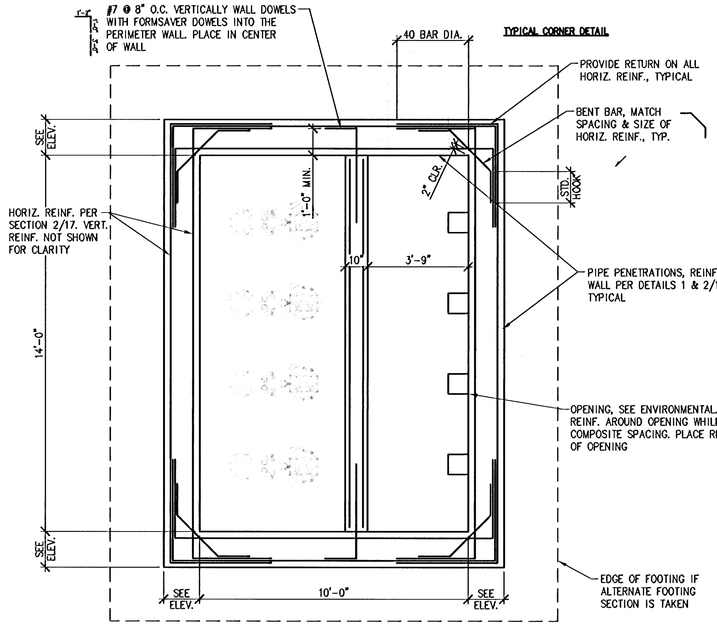
1 - TYPICAL OPENING BAR DETAILS



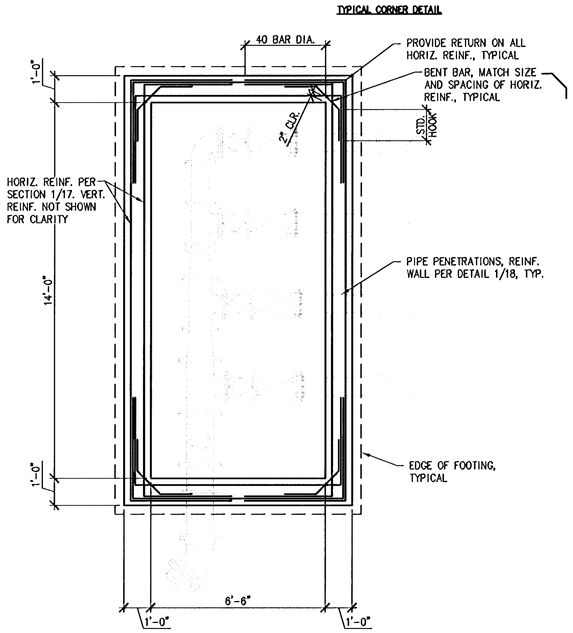
2 - TYPICAL OPENING DETAIL



3 - SHOE DETAIL



5 - SECTION



4 - SECTION

GENERAL STRUCTURAL NOTES

GENERAL CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTAL FOR APPROVAL.
VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ENVIRONMENTAL PLANS PRIOR TO STARTING WORK.
CONTRACTOR SHALL DESIGN, PROVIDE, AND MAINTAIN TEMPORARY BRACING, SHORING, GUYING, ETC., AND OTHER METHODS AS REQUIRED TO PREVENT EXCESSIVE LOADING AND TO STABILIZE STRUCTURAL ELEMENTS DURING CONSTRUCTION. THESE METHODS SHALL REMAIN IN PLACE UNTIL ALL MEMBERS AND FINAL CONNECTIONS HAVE BEEN COMPLETED.
STRUCTURE TOP IS DESIGNED FOR 150 PSF LIVE LOAD.

FOUNDATION/SOILS

ALL SOILS WORK SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED GEOTECHNICAL ENGINEER
FOUNDATION IS DESIGNED AS RECOMMENDED IN THE SOILS INVESTIGATION PREPARED BY TERRACON, PROJECT NO. 01025051 WITH THE FOLLOWING PARAMETERS:
ALLOWABLE BEARING PRESSURE: 2500 PSF
LATERAL EARTH PRESSURE: 94 PCF
SKIN FRICTION FOR HYDROSTATIC UPLIFT: 200 PSF
ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOILS OR ENGINEERED FILL AT ELEVATIONS SHOWN OR NOTED ON DETAILS AND PLANS. ALL BEARING MATERIALS SHALL BE VERIFIED FOR THE ALLOWABLE BEARING PRESSURE STATED ABOVE.
ALL FOOTINGS BELOW GRADE MAY BE EARTH FORMED WITH NEAT EXCAVATIONS, FOUNDATION WALLS SHALL BE FORMED.
ALL ABANDONED FOOTINGS, UTILITIES, STRUCTURES, ETC., THAT INTERFERE WITH THE NEW CONSTRUCTION SHALL BE REMOVED. NEW FOOTINGS SHALL EXTEND INTO UNDISTURBED SOILS OR ENGINEERED FILL AS REQUIRED BY THE GEOTECHNICAL ENGINEER.
SEE THE SOILS REPORT AND SPECIFICATIONS FOR PREPARATION OF SOILS UNDER THE FOOTINGS AND COMPACTION OF SOILS EXCAVATED FOR CONSTRUCTION. BACKFILL SHALL BE PLACED AND COMPACTED AS REQUIRED BY THE GEOTECHNICAL ENGINEER TO MAINTAIN THE ALLOWABLE SKIN FRICTION FOR UPLIFT RESISTANCE NOTED ABOVE.

PUMP STATION CONSTRUCTION

THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS. NOTIFY THE ENGINEER IF ACTUAL CONDITIONS DIFFER FROM THOSE INDICATED ON THE DRAWINGS AND SOIL REPORT.
CONSTRUCTION OF THE PUMP STATION IS DESIGNED FOR THE FOLLOWING SEQUENCE:
1. CONSTRUCT THE BOTTOM SECTION OF THE STRUCTURE ABOVE GRADE.
2. EXCAVATE THE CENTER CORE OF THE STRUCTURE ALLOWING THE STRUCTURE TO SLOWLY PENETRATE THE SOILS. EXCAVATE THE CORE UNIFORMLY TO ALLOW A UNIFORM SETTLEMENT OF THE STRUCTURE.
3. PRIOR TO THE TOP OF THE STRUCTURE REACHING THE GROUND LEVEL, CONSTRUCT THE NEXT LEVEL OF THE STRUCTURE ABOVE THE EXISTING GRADE.
4. REPEAT STEPS 1 THROUGH 3 UNTIL ALL SECTIONS ARE CONSTRUCTED AND THE STRUCTURE IS LOCATED AT THE PROPER ELEVATION.
5. PROVIDE A CONCRETE SEAL AS REQUIRED TO THE BOTTOM OF THE CONCRETE PLUG ELEVATION. CONSTRUCT THE CONCRETE PLUG AS SHOWN ON THE DRAWINGS.

** USE EXTREME CARE AND CAUTION DURING THE FINAL EXCAVATIONS SO THE STRUCTURE DOES NOT SETTLE GREATER THAN THE DESIRED ELEVATIONS. **
AS AN ALTERNATE TO CONSTRUCTING THE PUMP STATION ABOVE GROUND AND EXCAVATING THE CENTER CORE TO PLACE THE PUMP STATION INTO THE GROUND, THE CONTRACTOR MAY EXCAVATE THE AREA AS REQUIRED AND PLACE A TRADITIONAL FOOTING AS SHOWN ON THE DRAWINGS. THE CONTRACTOR WILL BE RESPONSIBLE FOR SHORING SURROUNDING STRUCTURES AND MAINTAINING EXISTING CONDITIONS SUPPORTING THE EXISTING STRUCTURES.

CONCRETE

ALL WATER RETAINING CONCRETE STRUCTURES SHALL CONFORM TO ACI 350 "ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES" AND BE DETAILED PER THE "ACI DETAILING MANUAL" SPECIAL PUBLICATION SP-66.
ALL CONCRETE SHALL HAVE 4000 PSI MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS WITH A MAXIMUM WATER/CEMENT RATIO OF 0.45.
MINIMUM CEMENTITIOUS MATERIAL CONTENT SHALL BE 564 LB PER CUBIC YARD.
A SLUMP OF 1" TO 3" SHALL BE PROVIDED IN THE CONCRETE UNLESS AN ACCEPTABLE HIGH-RANGE WATER REDUCER IS USED.
PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II.
ALL AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33.
AGGREGATES SHALL BE PROPORTIONED SUCH THAT MIX DESIGN SHALL CONTAIN A MINIMUM OF 50% COARSE AGGREGATES BY GRADATION REQUIREMENTS SET FORTH IN ASTM C33. COARSE AGGREGATE SHALL MEET NO. 67 GRADING REQUIREMENTS.
CONCRETE SHALL HAVE FROM 4 TO 7% ENTRAINED AIR, CONFORMING TO ASTM C 260.
CONCRETE SHALL BE IN STRICT CONFORMANCE WITH THE CURRENT "ACI MANUAL OF CONCRETE PRACTICE".
CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED OTHERWISE.
SPECIAL CARE SHOULD BE PROVIDED FOR THE FORMWORK OF WATERTIGHT STRUCTURES WITH FORM TIES HAVING WATERSTOPS. FORMWORK SHALL COMPLY TO THE ACI 347 "GUIDE TO FORMWORK FOR CONCRETE".
CONCRETE JOINTS SHALL OCCUR AT LOCATIONS SHOWN ON THE DRAWINGS.
WATERSTOPS SHALL BE POLYVINYL CHLORIDE WITH A 3/8" MINIMUM THICKNESS AND HAVE A MINIMUM WIDTH OF 6". ADHESIVE WATERSTOPS, WHERE NOTED ON THE DRAWINGS SHALL BE GREENSTREAK "HYDROTITE" OR APPROVED EQUAL.
PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH ACI 304R.
SPECIAL CORNER BAR CONFIGURATION IS NEEDED AT WATERTIGHT CONSTRUCTION, SEE DRAWINGS FOR DETAILS.

REINFORCING STEEL

ALL MESH SHALL MEET ASTM A 185 AND BE FURNISHED IN FLAT SHEETS. LAP A MINIMUM OF 6" OR ONE FULL MESH, WHICHEVER IS GREATER. ALL MESH SHALL BE PLACED ON SBP'S AT 48" O.C., MAX.
ALL REINFORCING SHALL MEET ASTM A615-60,000.
REINFORCING SHALL BE DETAILED ACCORDING TO THE ACI DETAILING MANUAL UNDER THE SUPERVISION OF A STRUCTURAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.
REINFORCING SHALL BE FABRICATED AND PLACED PER ACI AND CRSI ACCEPTED METHODS, INCLUDING CONCRETE COVER AND BAR SUPPORTS.
PROVIDE 3" SLAB BOLSTER WITH CONTINUOUS BOTTOM PLATE AT 4'-0" MAXIMUM CENTERS FOR POSITIONING ALL FOOTING BARS CAST AGAINST SOIL.
ALL REINFORCING STEEL FOR CONCRETE EXPOSED TO VIEW SHALL SUPPORTS WITH PLASTIC COATED FEET.
MARK EACH BUNDLE OF REINFORCING WITH WEATHERPROOF TAGS.

NO.	REVISION	DATE	BY

SCOTT A. MAH
LICENSED
M.E.
15378
3/18/03
KANSAS
PROFESSIONAL ENGINEER

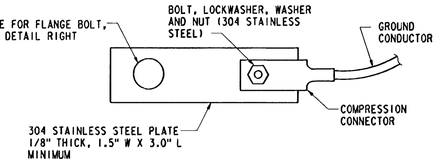
WILSON & COMPANY

CITY OF WICHITA, KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION
PLAN AND SECTIONS
NEIL D. CABLE P.E. - CITY ENGINEER

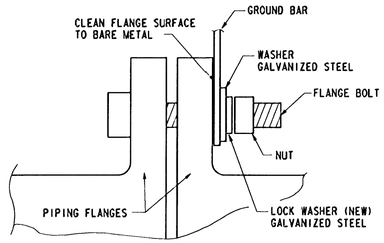
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DATE	MARCH 2003
FILE NO.	X1460002
SHEET NO.	18

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WICHITA, KANSAS

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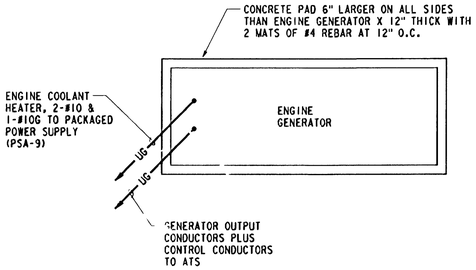
GROUND BAR



WASTEWATER PIPING

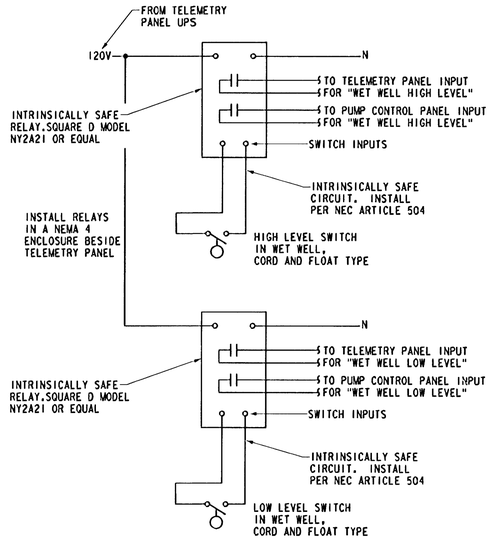
GROUNDING CONNECTION DETAIL

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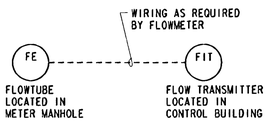
ENGINE GENERATOR

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LEVEL SWITCH CONTROL PANEL

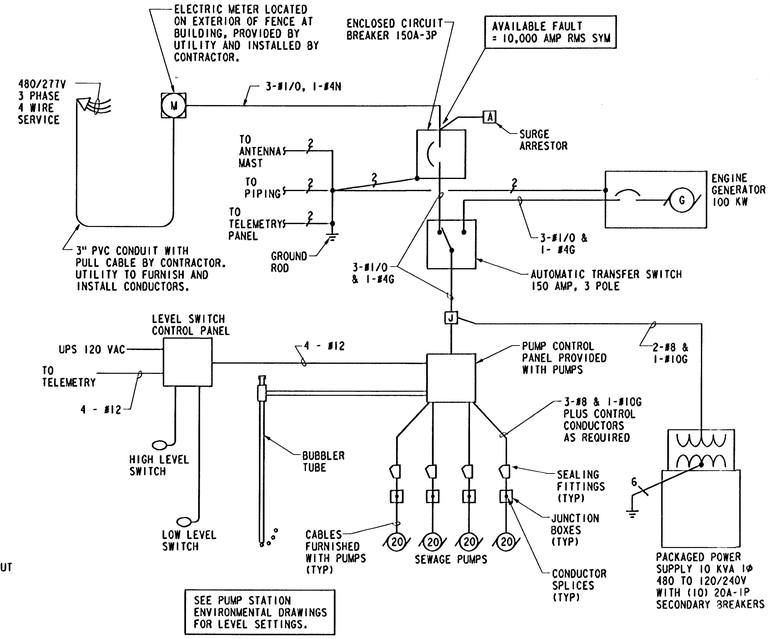
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FE/ FIT FLOWMETER, MAGNETIC TYPE
RANGE: 0 TO 3000 GPM
TOTALIZER: 1000'S OF GALLONS

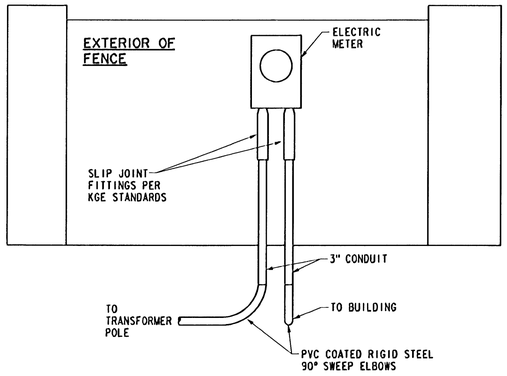
FLOWMETER

NOT TO SCALE



ONE LINE DIAGRAM

NOT TO SCALE



ELEVATION

ELECTRIC METER INSTALLATION

NOT TO SCALE

ELECTRICAL LEGEND

10	CONDUIT AND WIRING. ARROWS INDICATE HOMERUN TO PANEL. HATCH MARKS INDICATE NUMBER OF CONDUCTORS IF MORE THAN TWO. NUMBER INDICATES SIZE IF OTHER THAN #12 AWG.
6	EQUIPMENT GROUNDING CONDUCTOR IN CONDUIT WITH CIRCUIT(S). NUMBER INDICATES SIZE IF OTHER THAN #12 AWG.
UG	UNDERGROUND CONDUIT AND WIRING.
	DUPLEX RECEPTACLE 20A, NEMA CONFIGURATION 5-20R.
3	MOTOR, HP INDICATED
WP	INDICATES WEATHERPROOF
PP	POWER POLE
A	SURGE ARRESTER

GENERAL NOTES:

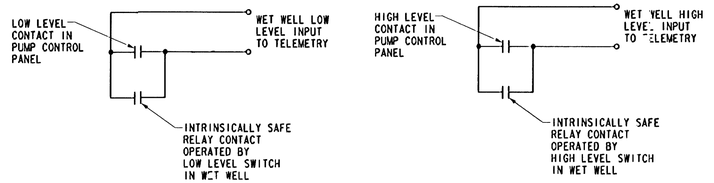
1. COMPLETE ALL WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL ELECTRICAL SAFETY CODE (NESC), AND LOCAL REGULATIONS.
2. ALL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED.
3. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. THE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC IN NATURE AND SHOW RELATIVE LOCATIONS OF DEVICES AND EQUIPMENT. COORDINATE WITH THE ACTUAL EQUIPMENT INSTALLED.
5. COORDINATE ELECTRICAL WORK WITH THE WORK OF OTHER TRADES.
6. CONTRACTOR IS RESPONSIBLE TO LOCATE AND PROTECT UTILITY LINES AND PIPING IN THE AREA UNDER CONSTRUCTION.
7. ALL STARTERS AND CONTACTORS SHALL HAVE 120 VOLT CONTROLS. PROVIDE FUSED CONNECTION FOR UNITS OPERATING AT 120 VOLTS LINE TO NEUTRAL. PROVIDE FUSED CONTROL POWER TRANSFORMERS FOR UNITS OPERATING ABOVE 120 VOLTS.
8. ALL CHARGES FROM KGE TO INSTALL AND/OR MODIFY ELECTRIC SERVICE TO THESE FACILITIES WILL BE PAID BY THE CONTRACTOR.

TELEMETRY NOTES:

1. EXISTING PUMP STATION HAS AN EXISTING TELEMETRY SYSTEM.
2. RELOCATE EXISTING TELEMETRY PANEL FROM EXISTING STATION TO NEW STATION CONTROL BUILDING
3. WIRE ALL INPUT SIGNALS TO RELOCATED TELEMETRY PANEL.
4. BUILD NEW FOUNDATION FOR ANTENNA TOWER AND RELOCATE TOWER.
5. INSTALL OWNER PROVIDED COAXIAL CABLE BETWEEN TELEMETRY PANEL AND ANTENNA.
6. OWNER WILL PROVIDE HARDWARE AND SOFTWARE MODIFICATIONS TO TELEMETRY PANEL.

TELEMETRY INPUTS

DISCRIPTION	TYPE	SIGNAL	FROM
PUMP NO. 1 RUNNING	DISCRETE	DRY CONTACT	PUMP CONTROL PANEL
PUMP NO. 2 RUNNING	DISCRETE	DRY CONTACT	PUMP CONTROL PANEL
PUMP NO. 3 RUNNING	DISCRETE	DRY CONTACT	PUMP CONTROL PANEL
PUMP NO. 4 RUNNING	DISCRETE	DRY CONTACT	PUMP CONTROL PANEL
HIGH WET WELL LEVEL	DISCRETE	2 DRY CONTACTS IN PARALLEL	PUMP CONTROL PANEL & LEVEL SWITCH CONTROL PANEL
GENERATOR RUNNING	DISCRETE	DRY CONTACT	GENERATOR
UTILITY POWER FAIL	DISCRETE	DRY CONTACT	AUTOMATIC TRANSFER SWITCH
LOW WET WELL LEVEL	DISCRETE	2 DRY CONTACTS IN PARALLEL	PUMP CONTROL PANEL & LEVEL SWITCH CONTROL PANEL



WET WELL LEVEL SIGNALS TO TELEMETRY

NOT TO SCALE

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WILSON & COMPANY

CITY OF WICHITA KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION
ELECTRICAL SECTIONS AND DETAILS
NEIL D. CABLE P.E. - CITY ENGINEER

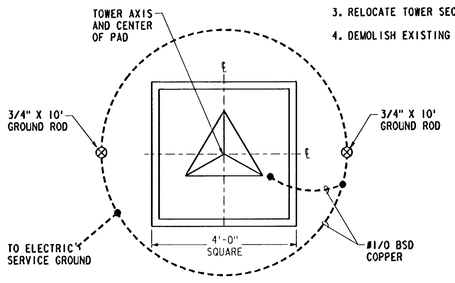
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MWP	MWP
DRAWN	BJS
DATE	MARCH 2003
FILE NO.	X1460002
SHEET NO.	19

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WICHITA, KANSAS

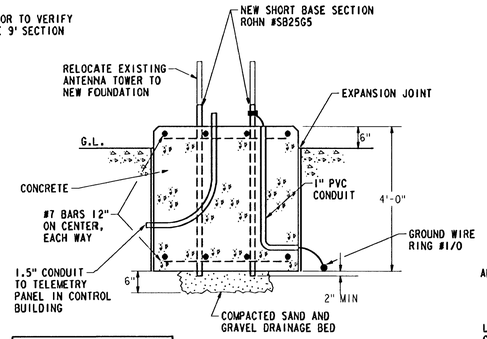
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ANTENNA TOWER NOTES:

1. EXISTING TOWER IS ROHN MODEL #25G, CONTRACTOR TO VERIFY WITH BASE SECTION, TWO 10' SECTIONS, AND ONE 9' SECTION (NOMINAL 30 FOOT TOWER)
2. PROVIDE NEW BASE SECTION AND FOUNDATION .
3. RELOCATE TOWER SECTION TO NEW FOUNDATION.
4. DEMOLISH EXISTING FOUNDATION.



PLAN

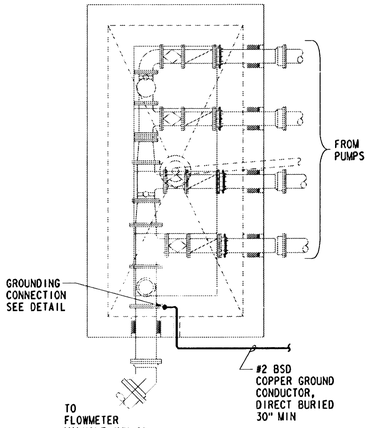


ALL BURIED GROUNDING CONNECTIONS TO BE EXOTHERMICALLY WELDED.

ELEVATION

NEW FOUNDATION FOR EXISTING TELEMETRY TOWER

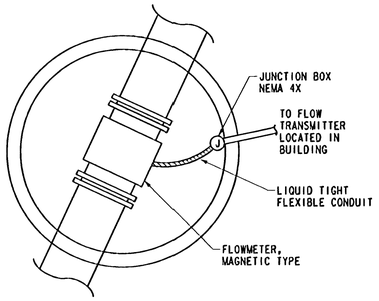
NOT TO SCALE



PLAN

VALVE VAULT

NOT TO SCALE



PLAN

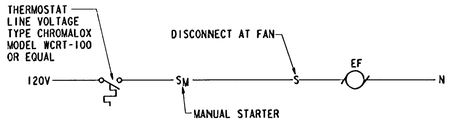
FLOWMETER MANHOLE (MH-2)

NOT TO SCALE

ELEVATION

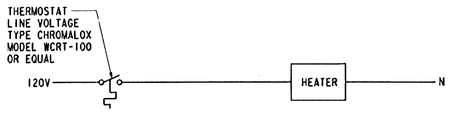
ALARM LIGHT AND HORN DETAIL

NOT TO SCALE



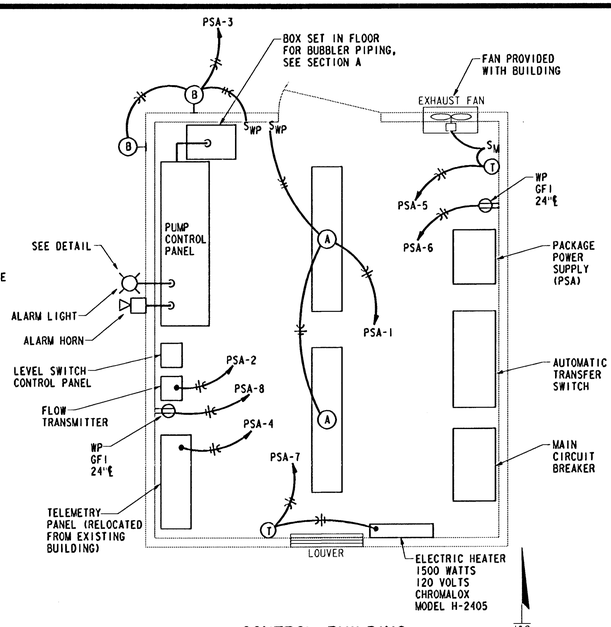
EXHAUST FAN CONTROL

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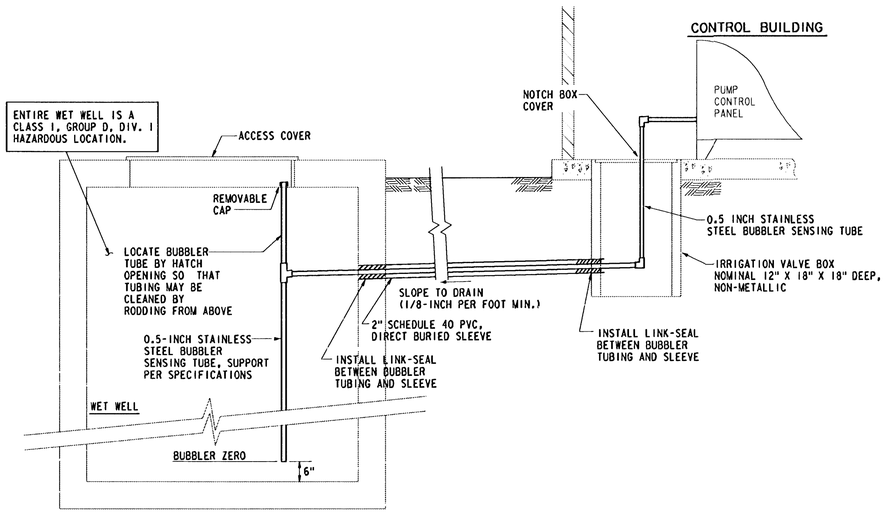
ELECTRIC HEATER CONTROL

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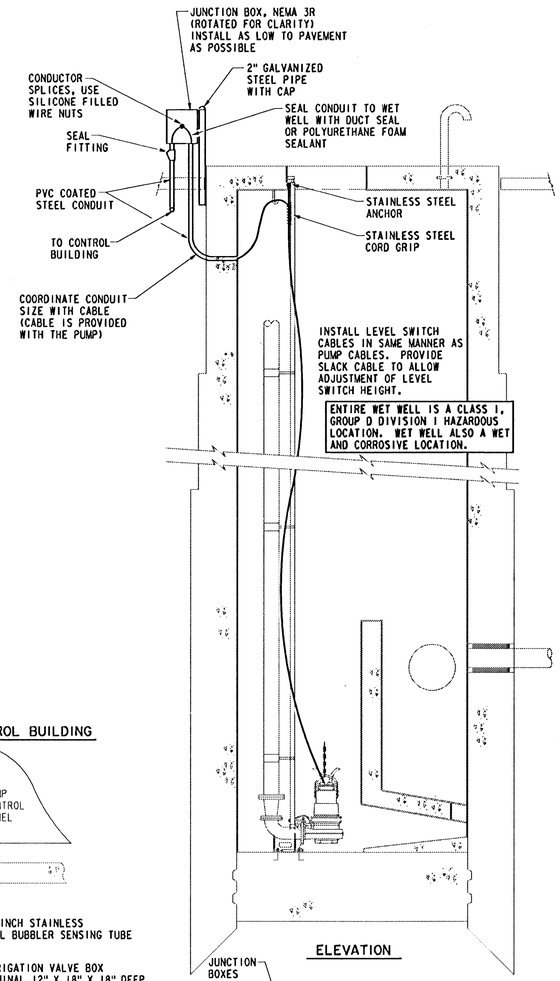
CONTROL BUILDING

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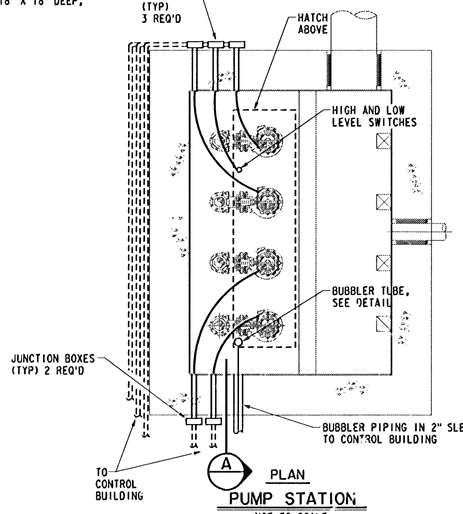


SECTION A

NOT TO SCALE



ELEVATION



PLAN

PUMP STATION

NOT TO SCALE

NO.	REVISION	DATE	BY

MARK W. PETERSON
LICENSED PROFESSIONAL ENGINEER
11122
3-11-2003
KANSAS
PROFESSIONAL ENGINEER

WILSON & COMPANY

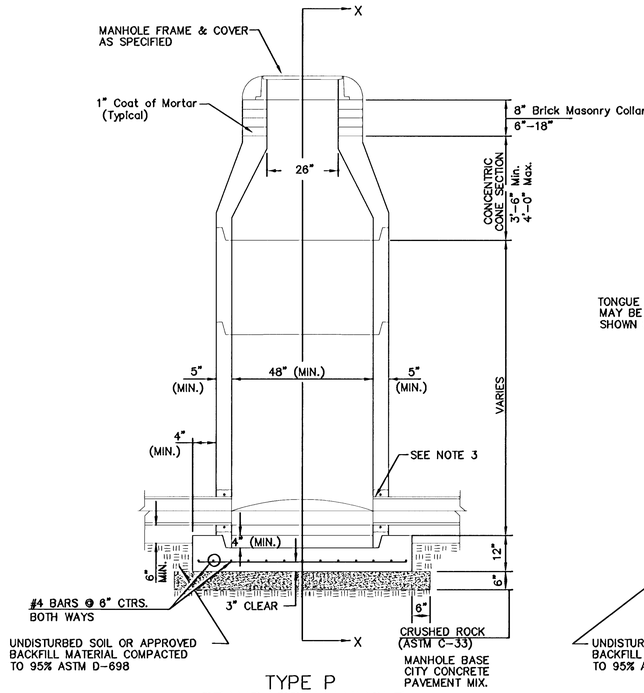
CITY OF WICHITA KANSAS
MAIN 19 SW INTERCEPTOR SEWER PHASE IA
468-83186
PUMP STATION
ELECTRICAL SECTIONS AND DETAILS
NEIL D. CABLE P.E. - CITY ENGINEER

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MWP	MWP
DRAWN	BJS
DATE	MARCH 2003
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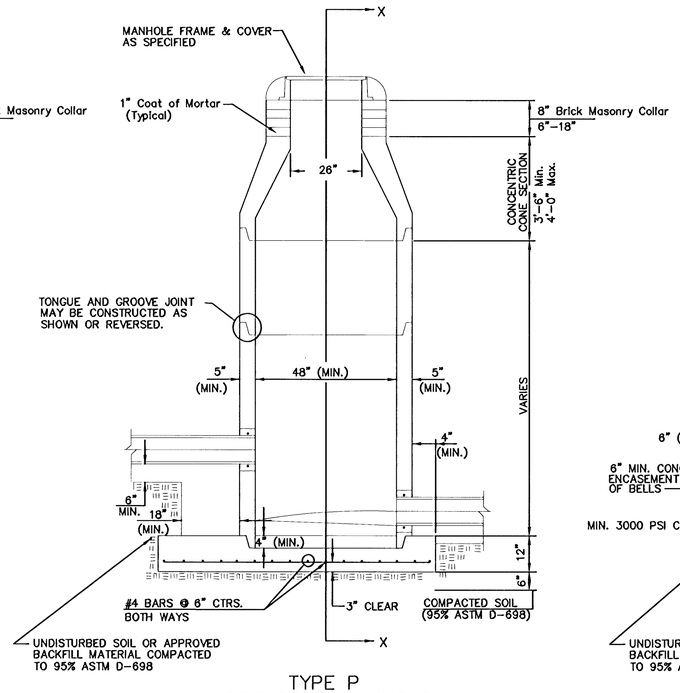
WILSON & COMPANY
WICHITA, KANSAS

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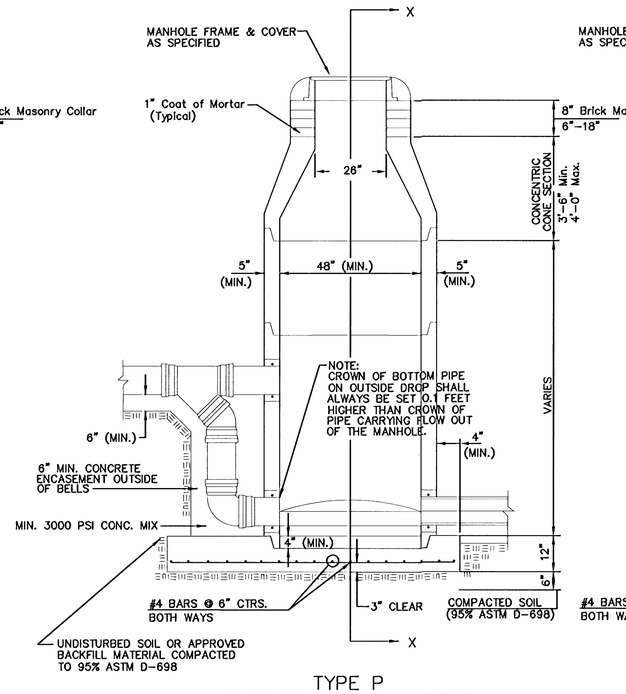
SEWER APPURTENANCES DETAILS



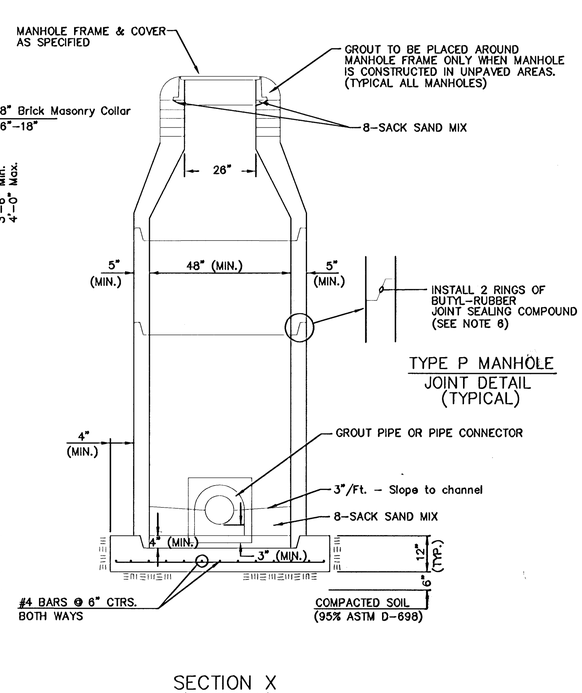
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. 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.

* ~~4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEMEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)~~

5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. 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.
9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. 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 AND WHERE DEPTH FROM MANHOLE COVER TO THE INVERT OF LOWEST PIPE IS 20' OR MORE, SHALL HAVE AN INSIDE DIAMETER OF 5'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
11. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 8" 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.
12. 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 NON-SHRINK 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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 (SEE NOTE 10).
18. 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.
19. CRUSHED ROCK CONFORMING TO ASTM C-33 WITH A GRADATION OF NO. 67 SHALL BE INSTALLED AT THE BASE OF THE MANHOLE TO A DEPTH OF NO LESS THAN 6", AND SHALL EXTEND NO LESS THAN 6" OUTSIDE THE DIAMETER OF THE CONCRETE FLOOR OF THE MANHOLE.

* 20. ALL INSIDE SURFACES OF CONCRETE MANHOLES WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE LINED WITH DURAPLATE PLASTIC LINER AS MANUFACTURED BY A-LOC PRODUCTS, INC. OR APPROVED EQUAL.

21. 5' DIAMETER MANHOLES SHALL MAINTAIN 5' DIAMETER FROM THE MANHOLE BASE TO THE CONE SECTION. REDUCTION OF THE MANHOLE DIAMETER FROM 5' TO 4' IS NOT ALLOWED.

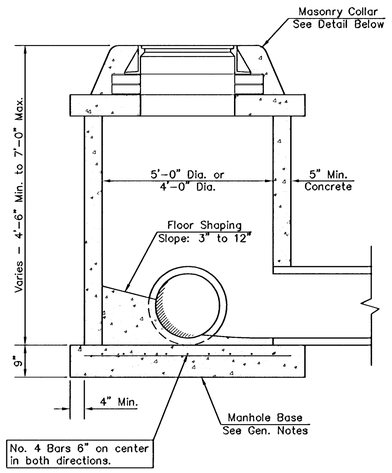
22. WHERE A MANHOLE IS TO BE PLACED OVER AN EXISTING LIVE SEWER LINE, THE BASE MAY BE CAST IN PLACE WITH ENGINEERS APPROVAL.

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

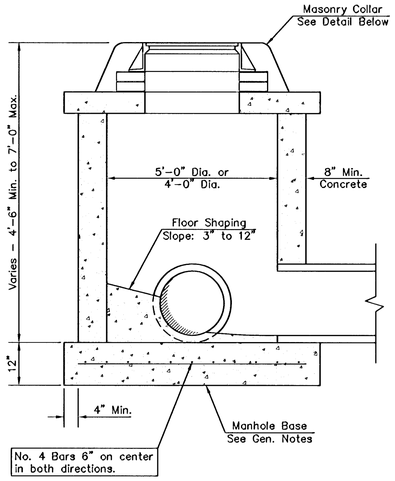
STANDARD TYPE 'P' MANHOLES

NEIL D. CABLE P.E. - CITY ENGINEER

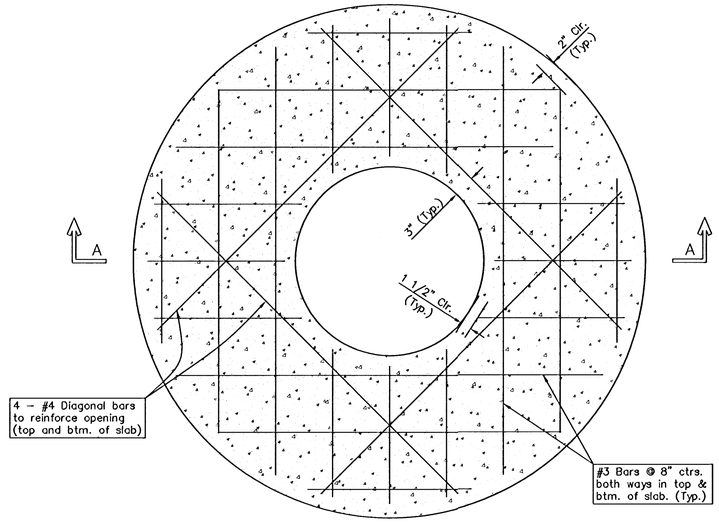
PROJECT NUMBER	INDEX CODE
468-83186	XXXXXX
DATE: FEB. 2003	SHEET 22



SHALLOW TYPE "P" MANHOLE



SHALLOW TYPE "C" MANHOLE



PLAN

GENERAL NOTES

1. 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 cement 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.

2. 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 6" 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.

3. 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. 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.

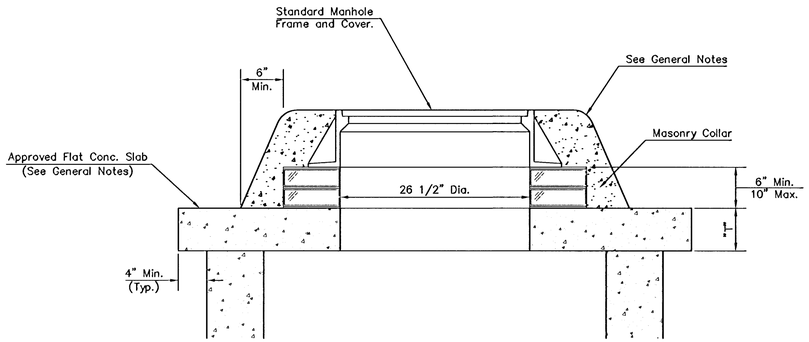
4. Pipes installed within the excavation made for the manhole shall be cradled with concrete to the limits of the manhole excavation. When clay pipe is used, the cradle shall extend to the first joint outside the manhole. The cradle shall be terminated at the clay pipe joint in a manner which will maintain 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.

5. 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.

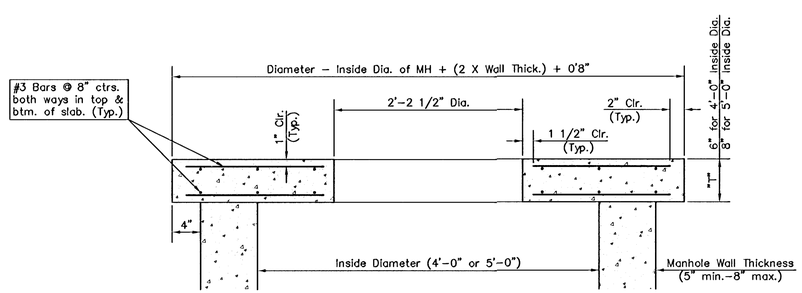
6. The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.

* 7. Standard shallow manholes type "P" and "C" shall be paid for at the unit price bid per each for the type and diameter indicated. All standard shallow manhole diameters will be 4' unless indicated otherwise.

8. All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-87.



MASONRY COLLAR DETAIL



SECTION A–A

FLAT CONCRETE SLAB DETAILS

~~* NOTE: For this project, cost for shallow type manhole req'd for air release valve shall be considered subsidiary to air release assembly.~~

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
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SHALLOW MANHOLES TYPE 'P' & 'C'

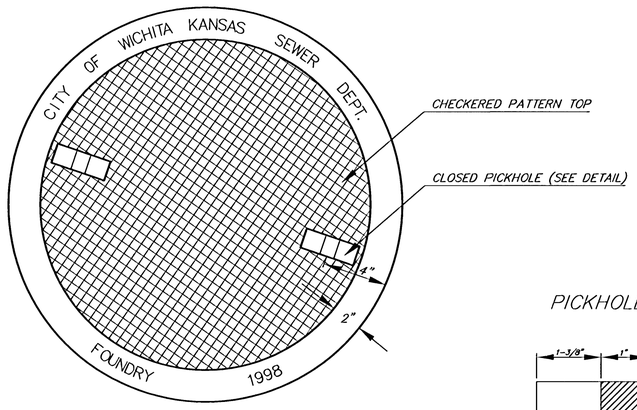
NEIL D. CABLE P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
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MANHOLE FRAME AND COVER DETAIL

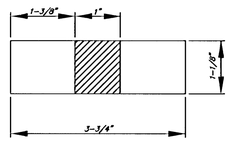
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

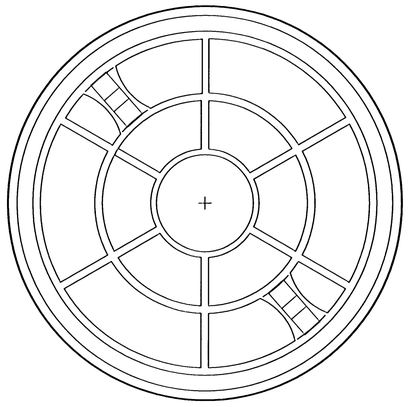


TOP VIEW

PICKHOLE DETAIL



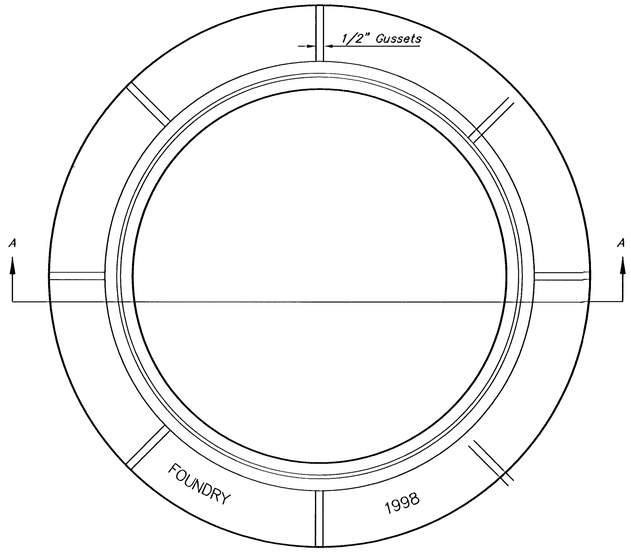
TOP VIEW



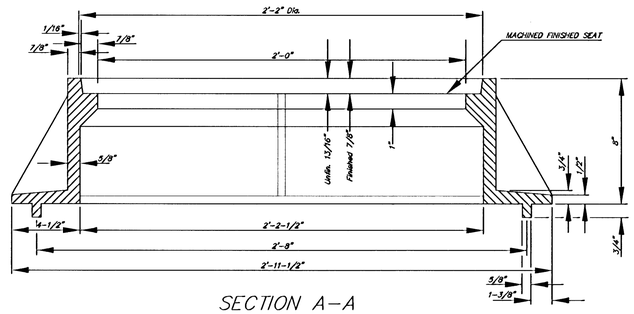
BOTTOM VIEW

SECTION VIEW

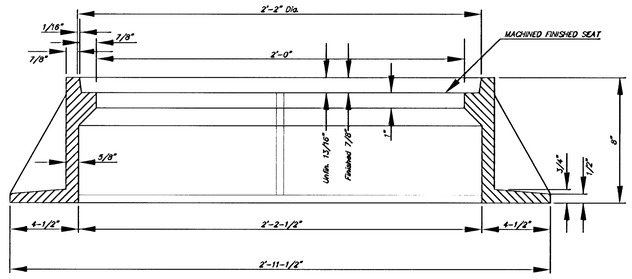
MANHOLE FRAME
Weight = 240 Lbs.



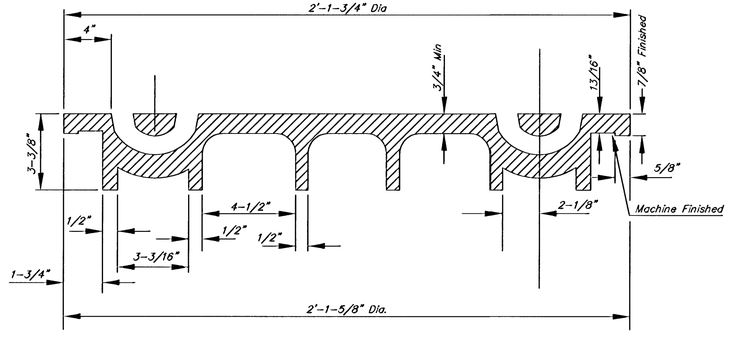
TOP VIEW



SECTION A–A
MUD RING



SECTION A–A



SECTION 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.

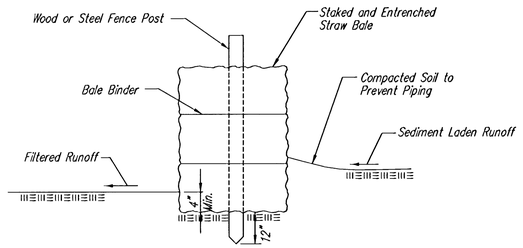
THE CITY OF WICHITA

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

NEIL D. CABLE P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
468-83186	XXXXXX
DATE	SHEET
FEB. 2003	SHEET 24



STRAW BALE BARRIERS

Material Specification:

Bale slope barriers may be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture.
The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment.
When practicable, bale slope barriers should be placed along contours to avoid a concentration of flow.
Bale slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 4" deep and a bale's width wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use.
Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground.
Once all the bales have been installed and anchored, place the excavated soil against the upslope side of the check and compact it. The compacted soil should be no more than 3" to 4" deep.

List of common placement/installation mistakes to avoid:

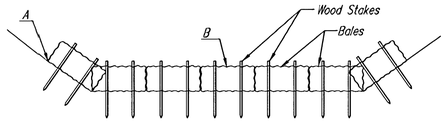
When practicable, do not place bale slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. Concentrated flow over a slope barrier creates a scour hole on the downslope side of the barrier. The scour hole eventually undermines the bales and the barrier fails.
Do not place bale slope barriers in areas with shallow soils underlain by rock. If the barrier is not anchored sufficiently, it will wash out.
Bale slope barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

Inspection and Maintenance:

Bale slope barriers should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Are there any points along the slope barrier where water is concentrating?
Does water flow under the slope barrier?
Does water flow through spaces between abutting bales?
Are any bales dislodged?
Are bales decomposing due to age and/or water damage?
Does sediment need to be removed from behind the slope barrier?

NOTE: Point A must be higher than Point B so that water flows over the bales and not around them.



STRAW BALE DITCH CHECKS

Material Specification:

Bale ditch checks may be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture.
The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Optional: The downstream scour apron should be constructed of a double-netted straw erosion-control blanket at least 6' wide.
Optional: The metal landscape staples used to anchor the erosion-control blanket should be at least 8" long.

Placement:

Bale ditch checks should be placed perpendicular to the flowline of the ditch.
The ditch check should extend far enough so that the ground level at the ends of the check is higher than the top of the lowest center bale. This prevents water from flowing around the check.
Checks should not be placed in ditches where high flows are expected. Rock checks should be used instead.
Bales should be placed in ditches with slopes of 6% or less. For slopes steeper than 6%, rock checks should be used.
The following table provides check spacing for a given ditch grade:

Ditch grade (%)	Check Spacing (feet)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

Proper installation method:

Excavate a trench perpendicular to the ditch flowline that is 4" deep and a bale's width wide. Extend the trench in a straight line along the entire length of the proposed ditch check. Place the soil on the upstream side of the trench-it will be used later.
Optional: On the downstream side of the trench, roll out a length of erosion-control blanket (scour apron) equal to the length of the trench. Place the upstream edge of the erosion-control blanket along the bottom upstream edge of the trench. The erosion control blanket should be anchored in the trench with one row of 8" landscape staples placed on 18" centers. The remainder of the erosion-control blanket (the portion that is not lying in the trench) will serve as the downstream scour apron. This section of the blanket should be anchored to the ground with 8" landscape staples placed around the perimeter of the blanket on 18" centers. The remainder of the blanket should be anchored using two evenly spaced rows of 8" landscape staples on 18" centers placed perpendicular to the flowline of the ditch.
Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground.
Once all the bales have been installed and anchored, place the excavated soil against the upstream side of the check and compact it. The compacted soil should be no more than 3" to 4" deep and extend upstream no more than 24".

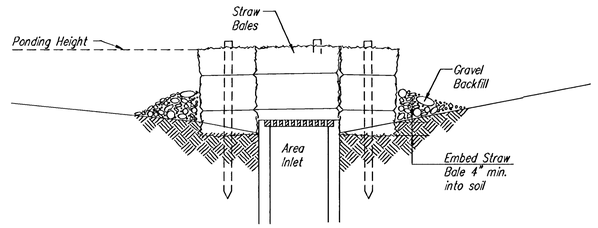
List of common placement/installation mistakes to avoid:

Do not place a bale ditch check directly in front of a culvert outlet. It will not stand up to the concentrated flow.
Do not place bale ditch checks in ditches that will likely experience high flows. They will not stand up to concentrated flow.
Follow prescribed ditch-check spacing guidelines. If spacing guidelines are exceeded, erosion will occur between the ditch checks.
Do not allow water to flow around the ditch check. Make sure that the ditch check is long enough so that the ground level at the ends of the check is higher than the top of the lowest center bale.
Do not place bale ditch checks in channels with shallow soils underlain by rock. If the check is not anchored sufficiently, it will wash out.
Bale ditch checks must be dug into the ground. Bales at ground level do not work because they allow water to flow under the check.

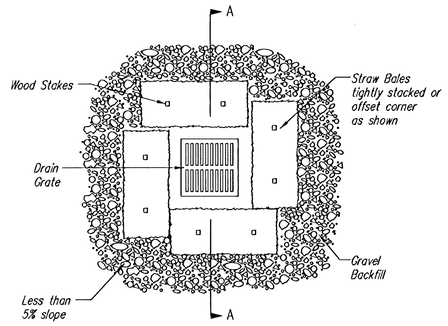
Inspection and Maintenance:

Bale ditch checks should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow around the ditch check?
Does water flow under the ditch check?
Does water flow through spaces between abutting bales?
Are any bales and/or scour aprons (optional) dislodged?
Are bales decomposing due to age and/or water damage?
Does sediment need to be removed from behind the ditch check?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Bale area inlet barriers should be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture.
The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.

Placement:

Bale area inlet barriers should be placed directly around the perimeter of a drop inlet.
When a bale area inlet barrier is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

Proper Installation Method:

Excavate a trench around the perimeter of the area inlet that is at least 4" deep by a bale's width wide.
Place the bales in the trench, making sure that they are butted tightly. Some bales may need to be shortened to fit into the trench around the area inlet. Two stakes should be driven through each bale, approximately 6" to 8" in from the bale ends.
Stakes should be driven at least 12" into the ground.
Once all the bales have been installed and anchored, place the excavated soil against the receiving side of the barrier and compact it. The compacted soil should be no more than 3" to 4" deep.
Note: When a bale area inlet barrier is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

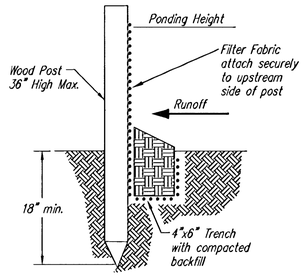
List of common placement installation mistakes to avoid:

Bales should be placed directly against the perimeter of the area inlet. This allows overtopping water to flow directly into the inlet instead of onto nearby soil causing scour.
Bale area inlet barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

Inspection and Maintenance:

Bale area inlet barriers should be inspected every 7 days and within 24 hours of a rainfall 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow under the area inlet barrier?
Does water flow through spaces between abutting bales?
Are any bales dislodged?
Are bales decomposing due to age andlor water damage?
Does sediment need to be removed from behind the area inlet barrier?



SILT FENCE BARRIERS

SILT FENCE BARRIERS

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Silt fence fabric should be attached to the wooden posts with staples, wire, zip ties, or nails.

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment.
When practicable, silt fence slope barriers should be placed along contours to avoid a concentration of flow.
Silt fence slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 6" deep by 4" wide.
Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use.
Roll out a continuous length of silt fence fabric on the downslope side of the trench.
Place the edge of the fabric in the trench starting at the top upslope edge. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt-fence fabric should remain exposed.
Lay the exposed silt fence upslope of the trench to clear an area for driving in the posts.
Just downslope of the trench, drive posts into the ground to a depth of at least 18".
Place posts no more than 4' apart.
Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

List of common placement/installation mistakes to avoid:

When practicable, do not place silt fence slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. When the flow concentrates, it overtops the barrier and the silt fence slope barrier quickly deteriorates.
Do not place silt-fence posts on the upslope side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, iiails, etc.). The silt fence will rip and fail.
Do not place silt fence slope barriers in areas with shallow soils underlain by rock. If the barrier is not sufficiently anchored, it will wash out.
Silt fence slope barriers must be dug into the ground-silt fence at ground level does not work because water will flow underneath.

Inspection and Maintenance:

Silt fence slope barriers should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Are there any points along the slope barrier where water is concentrating?
Does water flow under the slope barrier?
Do the silt fences sag excessively?
Has the silt fence torn or become detached from the posts?
Does sediment need to be removed from behind the slope barrier?

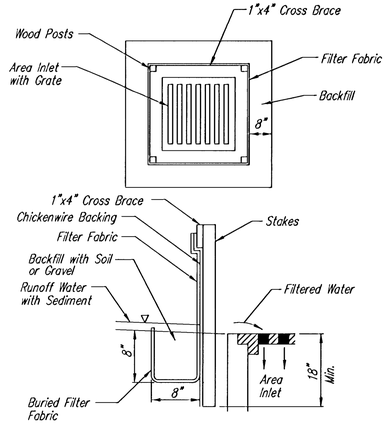
CITY OF WICHITA

SOIL EROSION BMP DETAILS

CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER

PROJECT NUMBER	OCA NO.
468-83186	624054
DATE: FEB. 2003	SHEET 25

DSNR: DEP OPER: DEP SCALE: 1=1.00
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SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The wire or polymeric mesh backing used to help support the silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
The material used to frame the tops of the posts should be 1" by 4" boards.
Silt fence fabric and support backing should be attached to the wooden posts and frame with staples, wire, zip ties, or nails.

Placement:

Place a silt fence drop inlet barrier in a location where it is unlikely to be overtopped.
Water should flow through silt fence, not over it. Silt fence barriers for area inlets often fail when repeatedly overtopped.
When used as a barrierfor area inlets, silt fence fabric and posts must be supported at the top by a wooden frame.
When a silt fence barrier for area inlets is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

Proper installation method:

Excavate a trench around the perimeter of the area inlet that is at least 8" deep by 8" wide.
Drive posts to a depth of at least 18" around the perimeter of the area inlet.
The distance between posts should be 4' or less. If the distance between two adjacent corner posts is more than 4', add another post(s) between them.
Connect the tops of all the posts with a wooden frame made of 1" by 4" boards. Use nails or screws for fastening.
Attach the wire or polymeric-mesh backing to the outside of the post/frame structure with staples, wire, zip ties, or nails.
Roll out a continuous length of silt fence fabric long enough to wrap around the perimeter of the area inlet. Add more length for overlapping the fabric joint. Place the edge of the fabric in the trench, starting at the outside edge of the trench. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed.
Attach the silt fence to the outside of the post/frame structure with staples, wire, zip ties, or nails. The joint should be overlapped to the next post.

Note: When a silt fence barrier for area inlet is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

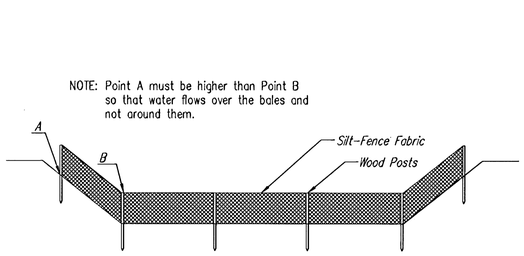
List of common placement/installation mistakes to avoid:

Water should flow through a silt fence barrier for area inlet-not over it. Place a silt fence barrier for area inlet in a location where it is unlikely to be overtopped. Silt fence barrier for area inlets often fail when repeatedly overtopped.
Do not place posts on the outside of the silt fence barrier for area inlet. In this configuration, the force of the water is not resisted by the posts, but only by the staples (wire, zip-ties, nails, etc.). The silt fence will rip and fail.
Do not install silt fence barrier for area inlets without framing the top of the posts.
The corner posts around area inlets are stressed in two directions whereas a normal silt fence is only stressed in one direction. This added stress requires more support.

Inspection and Maintenance:

Silt fence barrier for area inlets should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow under the silt fence?
Does the silt fence sag excessively?
Has the silt fence torn or become detached from the posts?
Does sediment need to be removed from behind the area inlet barrier?



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Silt fence fabric should be attached to the wooden posts with staples, wire, zip ties, or nails.

Placement:

Place silt fence in ditches where it is unlikely that it will be overtopped.
Water should flow through a silt fence ditch check, not over it. Silt fence ditch checks often fail when overtopped.
Silt fence ditch checks should be placed perpendicular to the flowline of the ditch.
The silt fence should extend far enough so that the ground level at the ends of the fence is higher than the top of the low point of the fence. This prevents water from flowing around the check.
Checks should not be placed in ditches where high flows are expected. Rock checks should be used instead.
Silt fence should be placed in ditches with slopes of 6% or less. For slopes steeper than 6%, rock checks should be used.

The following table provides check spacing for a given ditch grade:

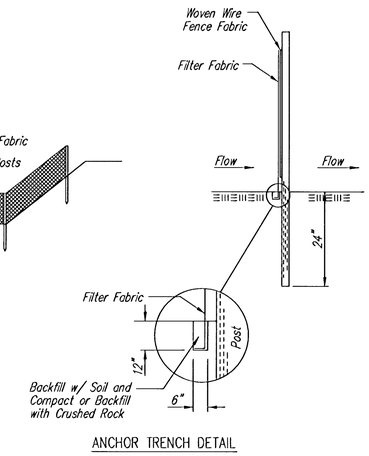
Ditch Check Ditch grade (%)	Spacing Check Spacing (feet)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

Proper installation method:

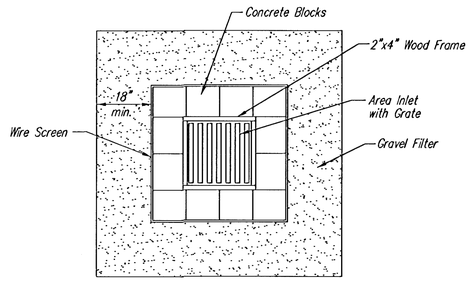
Excavate a trench perpendicular to the ditch flowline that is at least 12" deep by 6" wide.
Extend the trench in a straight line along the entire length of the proposed ditch check.
Place the soil on the upstream side of the trench for later use.
Roll out a continuous length of silt fence fabric on the downstream side of the trench.
Place the edge of the fabric in the trench starting at the top upstream edge of the trench.
Line two sides of the trench with the fabric as shown on detail. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed.
Lay the exposed silt fence on the upstream side of the trench to clear an area for driving in the posts. Just downstream of the trench, drive posts into the ground to a depth of at least 24". Place posts no more than 4' apart.
Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

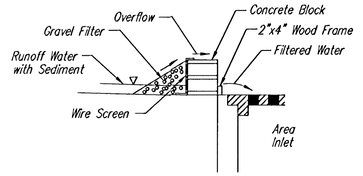
List of common placement/installation mistakes to avoid:

Water should flow through a silt fence ditch check-not over it. Place silt fence in ditches where it is unlikely that it will be overtopped. Silt fence installations quickly deteriorate when water overtops them.
Do not place silt fence posts on the upstream side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail.
Do not place a silt fence ditch check directly in front of a culvert outlet. It will not stand up to the concentrated flow.
Do not place silt fence ditch checks in ditches that will likely experience high flows. They will not stand up to concentrated flow.
Follow prescribed ditch check spacing guidelines. If spacing guidelines are exceeded, erosion will occur between the ditch checks.
Do not allow water to flow around the ditch check. Make sure that the ditch check is long enough so that the ground level at the ends of the fence is higher than the low point on the top of the fence.
Do not place silt fence ditch checks in channels with shallow soils underlain by rock. If the check is not anchored sufficiently, it will wash out.



ANCHOR TRENCH DETAIL





CONCRETE BLOCK FILTER FOR AREA DRAIN
(INLET PROTECTION)

Gravel barriers provide little filtering of large inflow waters. However, when installed correctly and maintained, they can effectively treat low runoff flows.

Placement of gravel filters around area drains must be completed in a manner that will not cause local flooding.

Gravel filters can be used if the immediate and adjacent area to the area drain consists of soil or pavement.

Only gravel filters are to be installed on top of the pavement.

Instructions for Installing:

STEP 1: Place concrete blocks around the grate. The blocks can be stacked one or two high and should be supported by a 2"x4" board.
STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
STEP 3: Place 1" to 1-1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary.

An alternative method is use of gravel bags that are supported to prevent collapsing.

Use of rock having diameters smaller than 1" may result in clogging of pores and reduce the amount of water flowing into an inlet.

Maintenance:

All gravel filters installed around area drains should be inspected and repaired after each runoff event. Sediment should be removed when material is within 3" of the top of any block. Periodically, the gravel should be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets after every runoff event.

Inspection and Maintenance:

Silt fence ditch checks should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow around the ditch check?
Does water flow under the ditch check?
Does the silt fence sag excessively?
Has the silt fence torn or become detached from the posts?
Does sediment need to be removed from behind the ditch check?

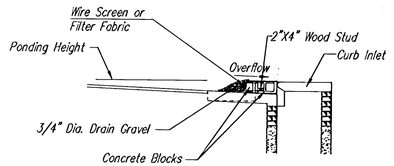
CITY OF WICHITA

SOIL EROSION BMP DETAILS

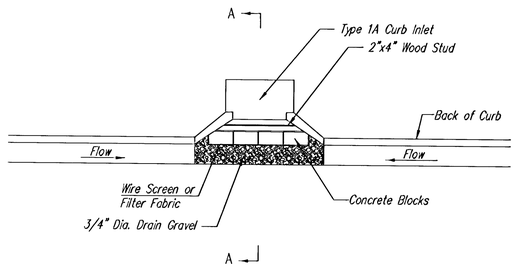
CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER

PROJECT NUMBER	OCA NO.
468-83186	624054
DATE: FEB. 2003	SHEET 26

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SECTION A–A



CURB INLET GRAVEL FILTERS
(INLET PROTECTION–RESIDENTIAL STREETS ONLY)

NOTE: Other types of curb inlet protection may be approved by the city so long as equal protection is provided.

A gravel inlet filter shall be installed at sump locations on residential streets. This type of protection is not to be used on arterial or collector streets at any time that it would pose an undue traffic hazard.

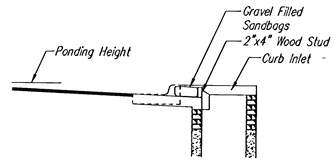
Instructions for Installing:

STEP 1: Place concrete blocks around the inlet as shown on drawing. Insert 2x4 board as shown.
STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
STEP 3: Place 1" to 1–1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary. An alternative installation is the use of gravel bags supported by a 2"x4" board to prevent collapsing.

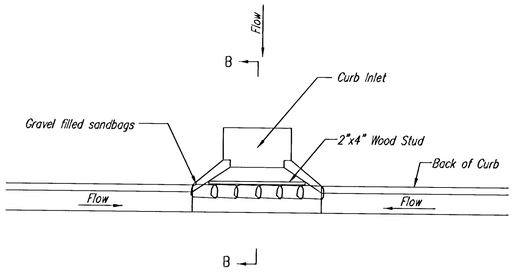
Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

Maintenance:

All curb inlet gravel filters shall be inspected and repaired after each runoff event. Sediment deposits are to be removed once material is within 8 cm (3 inches) of the top of any block. Periodically, the gravel shall be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets.

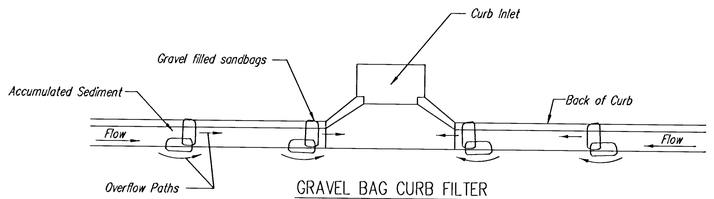


SECTION B–B



CURB INLET SANDBAG FILTERS
(INLET PROTECTION)

NOTE: Other types of curb inlet protection may be approved by the City so long as equal protection is provided.



GRAVEL BAG CURB FILTER
(INLET PROTECTION)

NOTE: Place two or more sets of bags in a manner that results in maximum support. The flow line bag must be lower than top of curb.

CURB SEDIMENT TRAPS

When inlets are located on streets having a grade (i.e., sump conditions do not exist), installing gravel (or sand) bags in the gutter flow line to create small sediment traps can be considered. Gravel bags are recommended over sand bags to allow for drainage.

If the spacing between bags becomes too large, little sediment may be trapped. Spacing of bags should be completed using the table or graph that illustrates placement distances based upon street slope. When installed in the gutter, bag tops must be lower than the sidewalk.

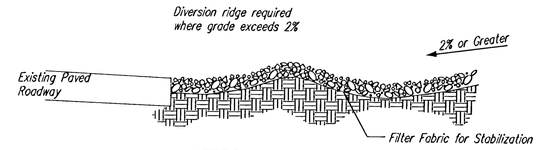
Spacing:

Gravel bags are to be placed according to street grades using the following table or graph that appears below.

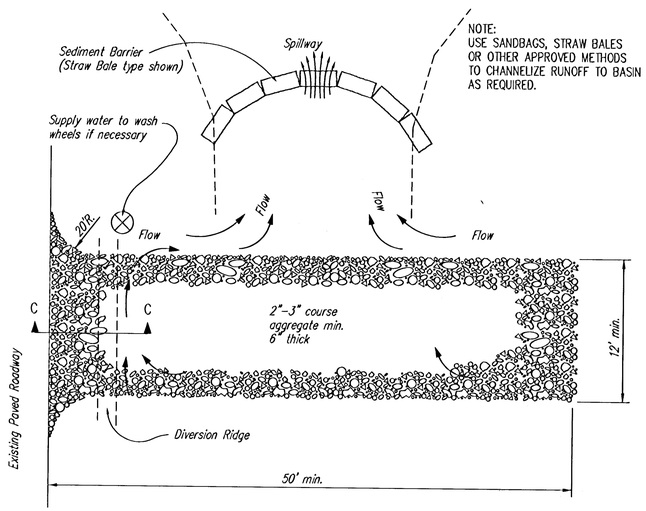
GRADE (%)	SPACING (FEET)
0.5	75
1.0	45
2.0	18
3.0	12
4.0	9
5.0	6

Maintenance:

Collected sediment shall be removed after every runoff event. Bags that are destroyed by vehicular traffic or through natural deterioration are to be immediately replaced.



SECTION C–C



STABILIZED CONSTRUCTION ENTRANCE

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABLIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

CITY OF WICHITA

SOIL EROSION BMP DETAILS

CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER

PROJECT NUMBER 468-83186 | OCA NO. 624054

DATE FEB. 2003 | SHEET 27

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