| SHEET NO. | TOTAL SHEETS |
|---|---|
| 1 | 7 |

# CITY OF WICHITA, KANSAS
## MICHAEL E. LINDEBAK, P.E., CITY ENGINEER

# STORM WATER SEWER IMPROVEMENTS

## IN

# BRADLEY FAIR 3RD ADDITION

## CITY OF WICHITA PRIVATE PROJECT NO. 747 PPS (607861)

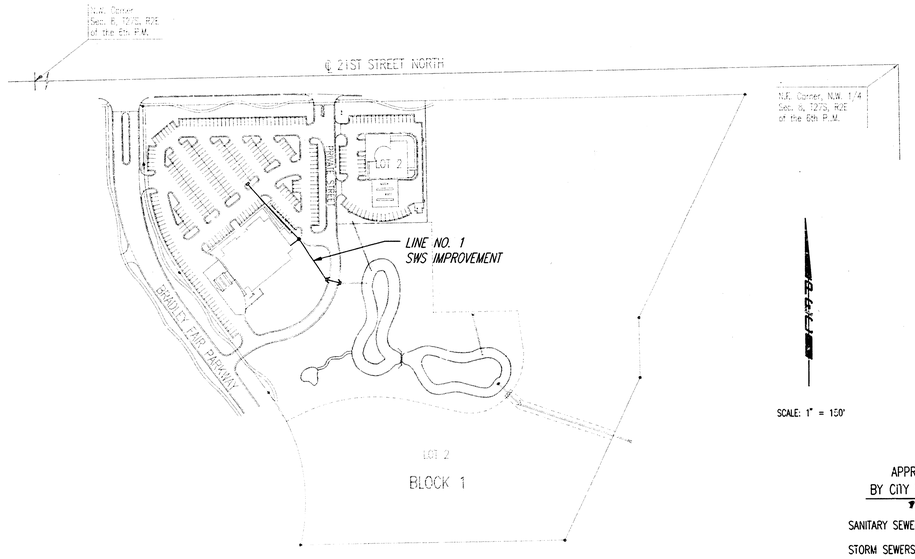
INDEX OF SHEETS


1. TITLE SHEET
2. PLAN AND PROFILE - LINE NO. 1
3. STD. TYPE 1A CURB INLET
4. STD. TYPE 22 INLET
5. MANHOLE FRAME AND COVER DETAILS
6. INLET PROTECTION DETAILS
7. SHALLOW MANHOLE DETAILS

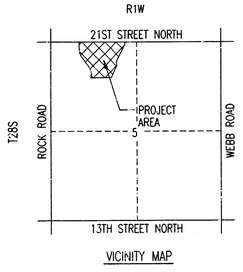

PROJECT SURVEY CONTROL

B.M. - CITY OF WICHITA B.M. DISC, 45' NORTH AND 48' EAST OF THE INTERSECTION OF THE CENTERLINES OF 21ST STREET NORTH AND ROCK ROAD.

ELEV.=214.568 CITY DATUM




SCALE: 1" = 150'




VICINITY MAP

GENERAL NOTES

UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION. CONTRACTOR SHALL SATISFY HIMSELF OF SUBSURFACE CONDITIONS PRIOR TO BIDDING.

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.

RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR AND APPROVED AS NOTED.

ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

EXCESS EXCAVATED MATERIAL AND EXCESS TOPSOIL SHALL BE STOCKPILED OR WASTED WITHIN THE PLAT LIMITS. THE CONTRACTOR SHALL CONTACT THE OWNER'S ARCHITECT AT 267-4002 FOR INFORMATION PERTAINING TO THE ACCEPTABLE LOCATIONS FOR THE DISPOSITION OF EXCESS MATERIAL.

CONTRACTOR SHALL PROVIDE A MINIMUM FORTY-EIGHT (48) HOUR ADVANCE NOTICE (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO BEGINNING ANY EXCAVATION, TO KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ALL EXISTING LINES WITHIN THE PROJECT AREA: K.G.&E. GAS, PEOPLES NATURAL GAS, K.G.&E. ELECTRIC, SOUTHWESTERN BELL TELEPHONE, MULTIMEDIA CABLEVISION, CITY OF WICHITA SEWER MAINTENANCE AND CITY OF WICHITA WATER DEPARTMENT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

THE WATER DEPARTMENT SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, WATER VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

THE CONTRACTOR SHALL ADJUST WATER VALVE BOXES AS DIRECTED BY THE ENGINEER.

ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR78 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION.

THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF OTHER SEEDING IS REQUIRED IN ACCORDANCE WITH PREVIOUS GENERAL NOTE. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED.

INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS. THE CONTRACTOR SHALL UTILIZE BARRICADES, SIGNS, GUARDS, AND FLAGMEN IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

GRANT L. REMSBURG
No. 6168
LICENSED PROFESSIONAL ENGINEER
STATE OF KANSAS

BOOKED
5-4-98
MCG
D-389

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

SANITARY SEWERS _____

STORM SEWERS VRH 10/14/97

DRIVEWAY APPROACHES _____

WATER MAINS _____

PAVING _____

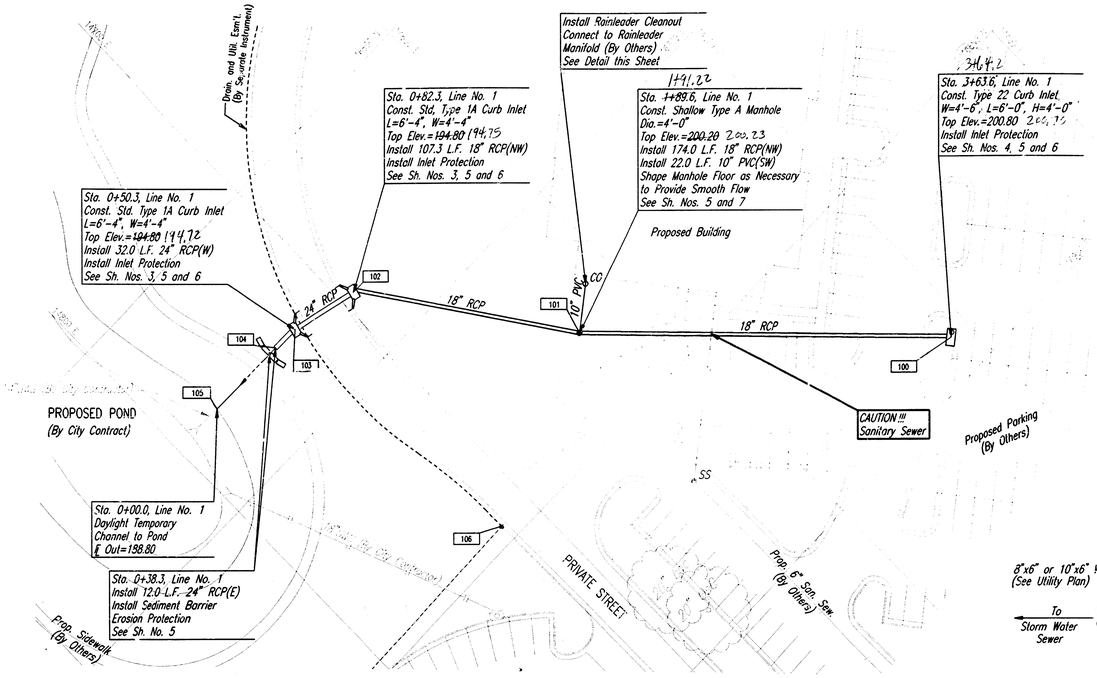
REVISED "AS BUILT" 12-18-97 TBB

# OCTOBER, 1997

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

NOTE TO CONTRACTOR

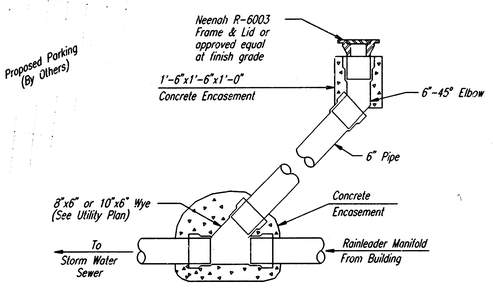
INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM CONTRACTED BY THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR UNTIL SUCH INSPECTION IS ARRANGED FOR AND REQUIRED BONDS HAVE BEEN SUBMITTED TO AND APPROVED BY THE CITY NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER. IMPROVEMENTS PERFORMED UNDER THIS PROJECT SHALL NOT BE ACCEPTED BY THE CITY UNTIL ALL APPLICABLE DOCUMENTATION HAS BEEN SUBMITTED TO THE CITY ENGINEER. THIS MAY INCLUDE: AS-BUILT DRAWINGS, INSPECTION LOGS, TEST DOCUMENTATION, TV TAPES, AND A CERTIFICATE OF COMPLETION. THE ABOVE SHALL BE PERFORMED BY THE CONSULTING FIRM CONTRACTED TO INSPECT THIS PROJECT.



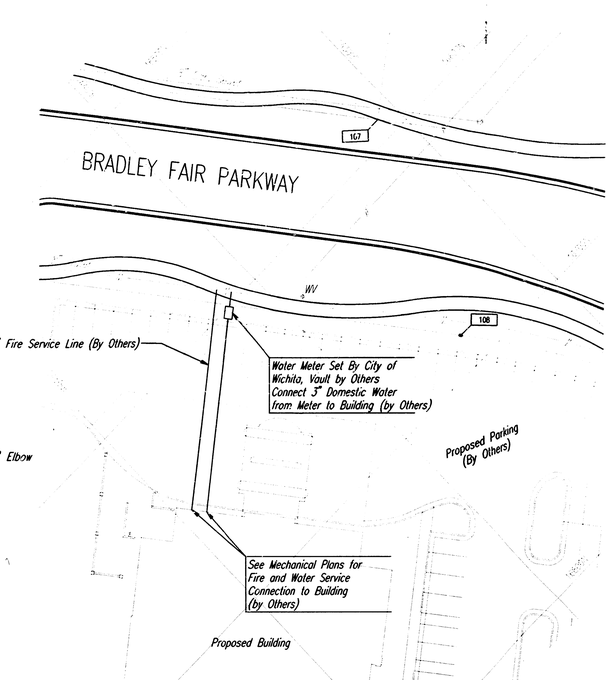

SCALE: 1"=30'

| COORDINATE LIST | | |
|---|---|---|
| POINT | NORTH | EAST |
| 100 | 16,881.4867 | 14,510.1343 |
| 101 | 16,756.7603 | 14,631.5531 |
| 102 | 16,669.0794 | 14,693.3772 |
| 103 | 16,661.3532 | 14,724.4557 |
| 104 | 16,660.9097 | 14,736.4475 |
| 105 | 16,660.9069 | 14,774.7472 |
| 106 | 16,792.1113 | 14,717.5127 |
| 107 | 16590.5437 | 14309.3487 |
| 108 | 16685.5780 | 14349.6660 |

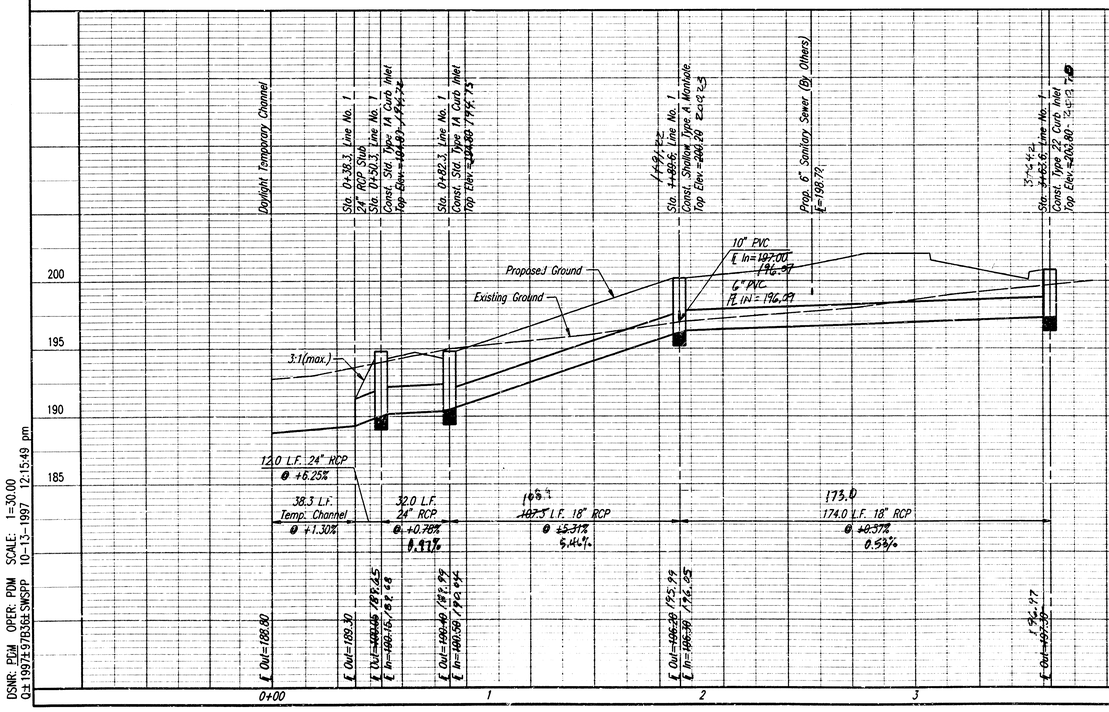
100 = COORDINATE POINT NO.




6" RAIN LEADER CLEANOUT DETAIL




REVISED "AS BUILT" 12-16-97 TEB




LINE NO. 1
STA. 0+00.0 TO STA. 3+63.6

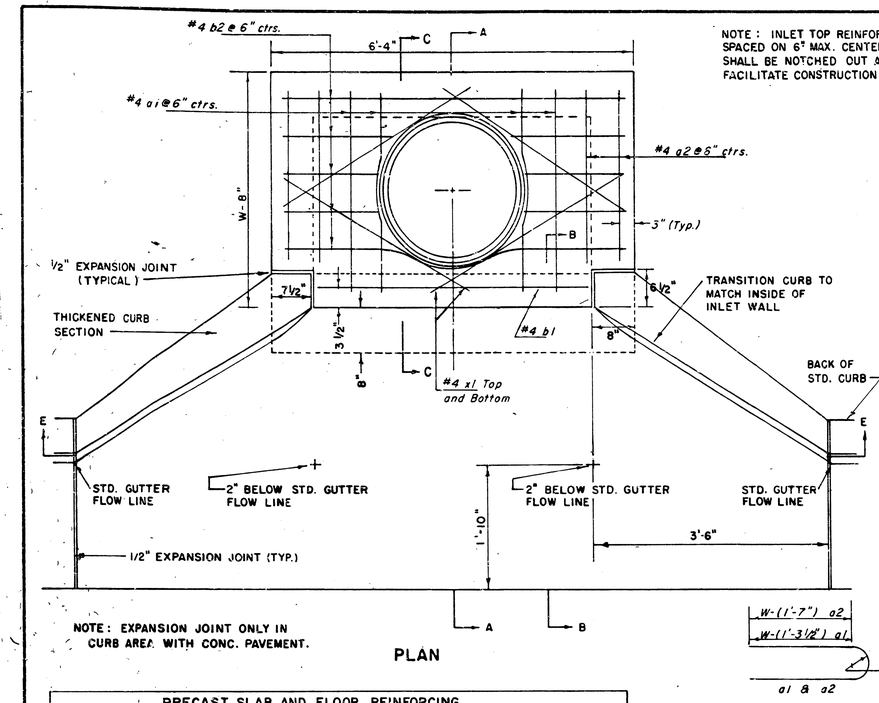
C.O.W. PRIVATE PROJ. NO. 747 PPS (607861)

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
150 NORTH MAIN
WICHITA, KANSAS

| | |
|---|---|
| Designed by | BER, PDM |
| Drawn by | DEP |
| Job No. | 97B36 |
| Date | OCT., 1997 |

Sheet 2 of 7

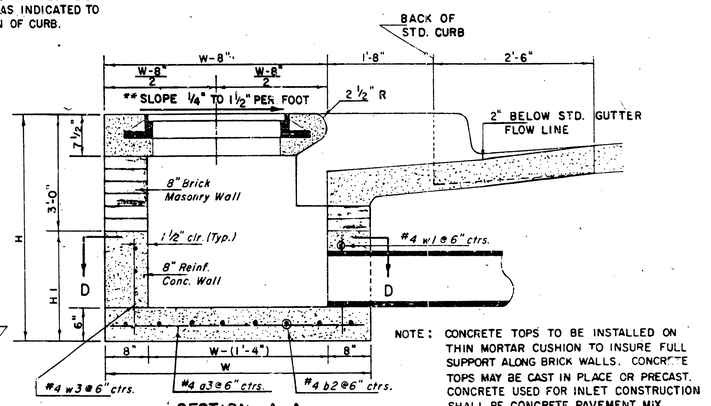
DSNR: PDM OPER: PDM SCALE: 1=30.00
D:\1997\97B36\SWSPP 10-13-1997 12:15:49 pm




NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

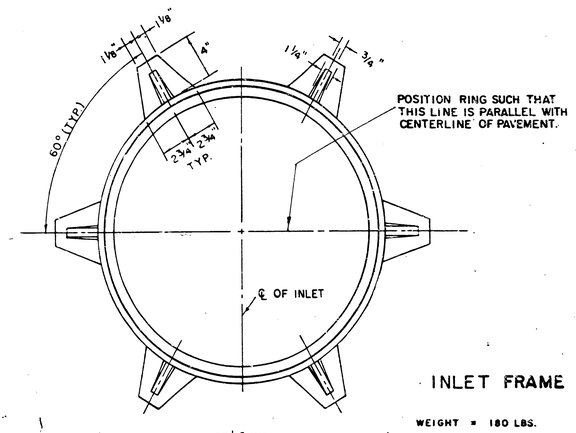
PLAN

NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.



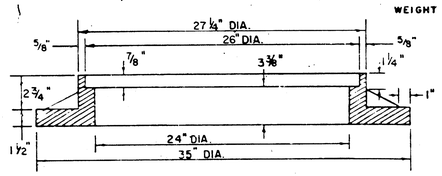

SECTION A-A

NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX WITH AIR ENTRAINMENT.




INLET FRAME

WEIGHT = 180 LBS.




SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.




BENDING DIAGRAM

NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 6'4" AND H = 7'0" OR LESS.

ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

**NOTE: Slope of Inlet Tops to match Sidewalk or Parking Slopes within Limits indicated.

**PRECAST SLAB AND FLOOR REINFORCING**

| | | W=4'-4" | | W=5'-4" | | W=6'-4" | | W=7'-4" | | W=8'-4" | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mark | Size | No. | Length | No. | Length | No. | Length | No. | Length | No. | Length |
| a1 | #4 | 6 | 6'-7" | 6 | 8'-7" | 6 | 10'-7" | 6 | 12'-7" | 6 | 14'-7" |
| a2 | #4 | 4 | 6'-0" | 4 | 8'-0" | 4 | 10'-0" | 4 | 12'-0" | 4 | 14'-0" |
| a3 | #4 | 13 | 4'-1" | 13 | 5'-1" | 13 | 6'-1" | 13 | 7'-1" | 13 | 8'-1" |
| b1 | #4 | 1 | 4'-9" | 1 | 4'-9" | 1 | 4'-9" | 1 | 4'-9" | 1 | 4'-9" |
| *b2 | #4 | 23 | 6'-1" | 29 | 6'-1" | 35 | 6'-1" | 41 | 6'-1" | 47 | 6'-1" |
| x1 | #4 | 8 | 3'-10" | 8 | 4'-2" | 8 | 4'-6" | 8 | 4'-10" | 8 | 5'-2" |

**WALL REINFORCING**

| | | W=4'-4" | | W=5'-4" | | W=6'-4" | | W=7'-4" | | W=8'-4" | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mark | Size | No. | Length | No. | Length | No. | Length | No. | Length | No. | Length |
| w1 | #4 | (1) | 6'-1" | (1) | 6'-1" | (1) | 6'-1" | (1) | 6'-1" | (1) | 6'-1" |
| w2 | #4 | (1) | 4'-1" | (1) | 5'-1" | (1) | 6'-1" | (1) | 7'-1" | (1) | 8'-1" |
| w3 | #4 | 32 | (2) | 36 | (2) | 40 | (2) | 44 | (2) | 48 | (2) |

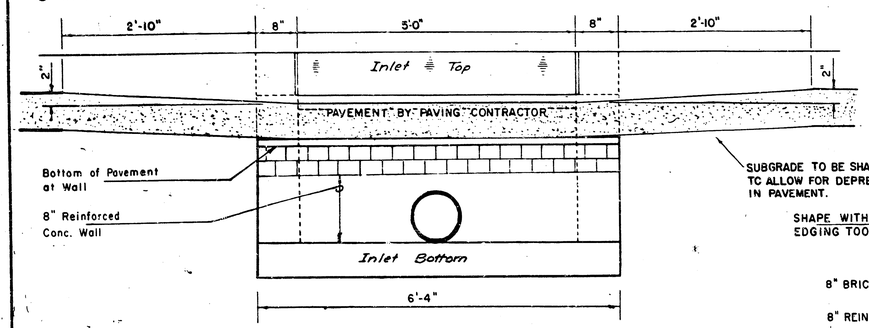
* Field bend or cut Reinforcing as required for clearance.

(1) 4(H1-12"); (H1-12") Round down to nearest 0.5'

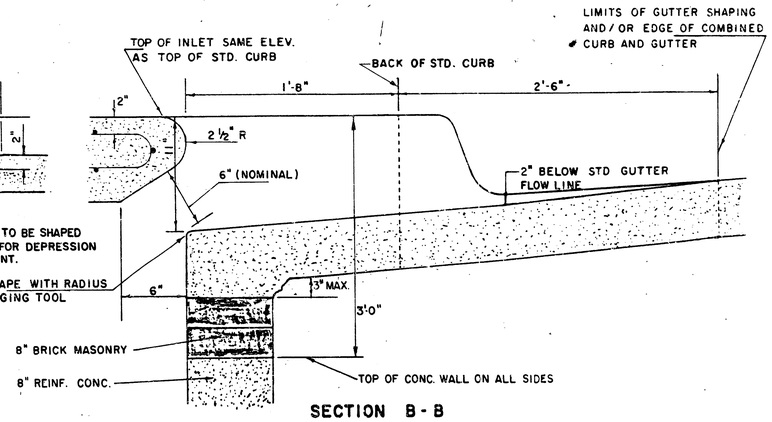
(2) H1-3"

**STANDARD CURB INLET PRECAST TOPS**

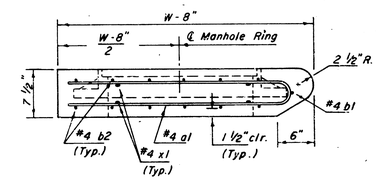
| W | PRE-CAST TOP SIZE | PIPE SIZE | CU.YD. CONC. |
|---|---|---|---|
| 4' 4" | 3'8"x 5'4" x7 1/2" | 21" & SMALLER | 0.38 ± |
| 5' 4" | 4'8"x 6'4" x7 1/2" | 24" & 30" | 0.51 ± |
| 6' 4" | 5'8"x 6'4" x7 1/2" | 36" & 42" | 0.64 ± |
| 7' 4" | 6'8"x 6'4" x7 1/2" | 48" & 54" | 0.77 ± |
| 8' 4" | 7'8"x 6'4" x7 1/2" | 60" & 66" | 0.90 ± |



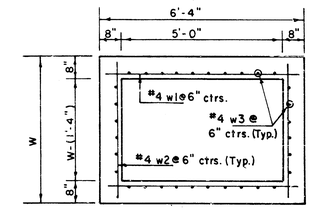

SECTION E-E




SECTION B-B




SECTION C-C




SECTION D-D

~~REVISED 11-30-1938~~

~~REVISED 12-31-1984~~ Revised 2-16-1989

# DETAIL STANDARD TYPE IA CURB INLET

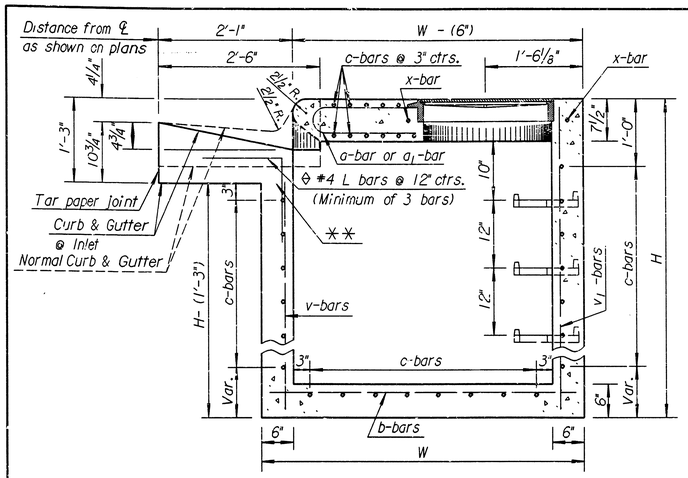
CITY OF WICHITA, KANSAS

INLET OPENING = 6" × 5'0"

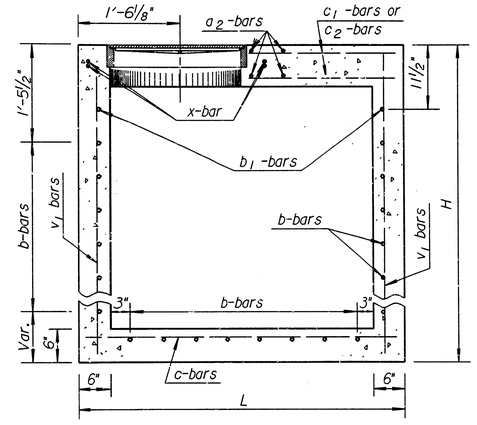
COW P.P. #: 7-7 PPS: (607861)

JUNE 1984

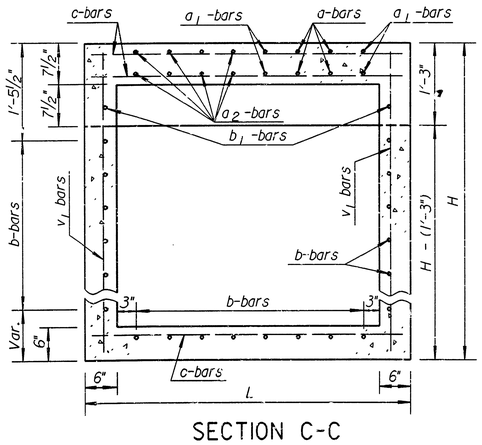
| FHWA REGION NO. | STATE | PROJECT NO. | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 7 | KANSAS | 747 PRS (607861) | 1997 | 4 | 7 |



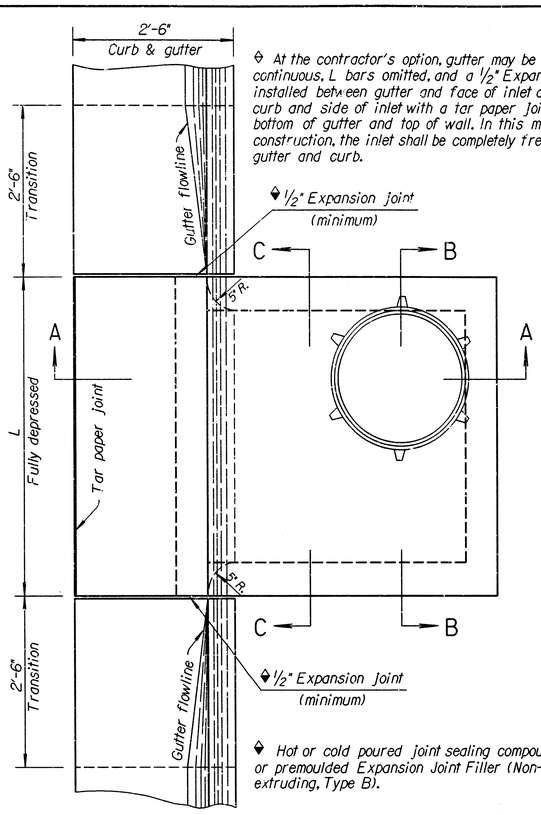

SECTION A-A




SECTION B-B



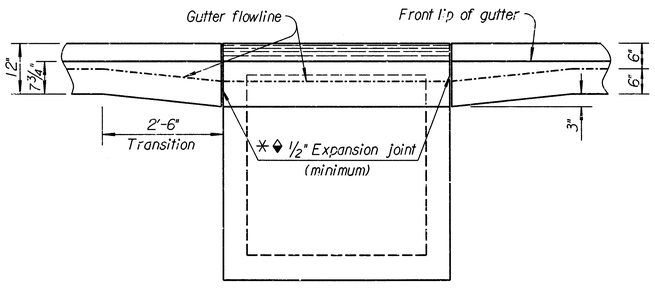

SECTION C-C




◆ At the contractor's option, gutter may be constructed continuous, L bars omitted, and a 1/2" Expansion joint installed between gutter and face of inlet and between curb and side of inlet with a tar paper joint between bottom of gutter and top of wall. In this method of construction, the inlet shall be completely free of the gutter and curb.

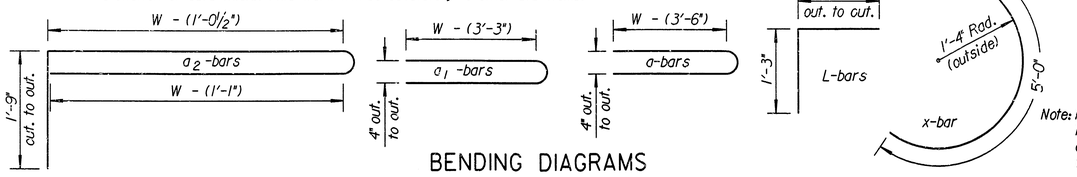
◆ Hot or cold poured joint sealing compound, or premoulded Expansion Joint Filler (Non-extruding, Type B).

PLAN



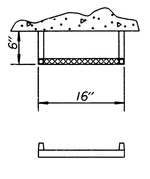

ELEVATION

Note: Transition gutter from normal depth of 6" to 9" at inlet in 2'-6". Curb and Gutter sections shall be shaped as shown where required by the installation of curb inlets. This work will be subsidiary to other bid items.

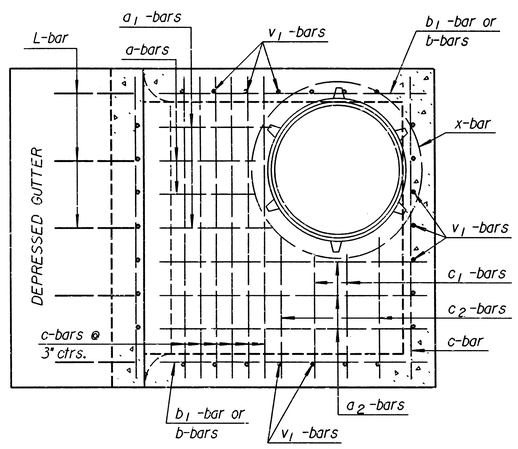



BENDING DIAGRAMS

Note: Reinforcing steel for L bars is not included in the steel quantity and is subsidiary to the other inlet items.



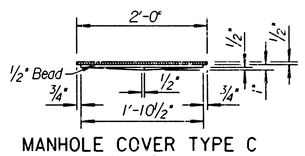

STEP DETAILS



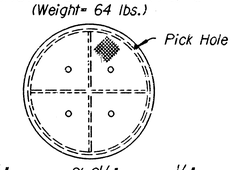

Reinforcing Steel Top View

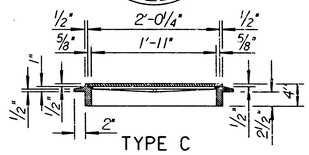
GENERAL NOTES

Use Class A Concrete throughout. All exposed edges shall be finished with an edging tool.
At the contractors option Class A Concrete (AE) or mix used in concrete pavement may be used throughout.
In general, pipes will enter and leave manhole at various positions. Where possible bend bars around pipes.
Floor of manhole to be shaped as shown in various "EXAMPLES" with unreinforced Class "A" Concrete.
Manhole opening and steps, where used, shall be placed to afford easy access to top of shaped invert. Top reinforcing bars to be adjusted accordingly.
All castings shall be gray iron and shall comply with the KDOT Standard Specifications.
When so ordered by the Engineer, the top of the manhole shall be sloped slightly to approximately fit the ground line or other conditions.
Dimensions and weights of cast iron as shown on this sheet are minimum. Larger dimensions and/or heavier weights of cast iron may be used.
Steps shall be installed in all storm sewer inlets when specified in the plans or when "H" is equal to or greater than six feet. Steps shall comply with the KDOT Standard Specification.
No reduction in concrete quantities shall be made for pipe openings.
When directed by the Engineer, a small opening in the back of the inlet shall be provided in order to drain a low area. Reinforcing bars shall extend through the opening. No reduction in concrete quantities will be made for this opening.
No addition in concrete quantities shall be made for shaping floor of inlet.
No reduction in pay length of curb, gutter, or curb & gutter will be made through the inlet area.
The weight of castings includes no allowance for fillets and overruns.
Curb and Gutter sections shall be shaped as shown where required by the installation of curb inlets. This work shall be subsidiary to other bid items.
See sheet entitled "Reinforcing Steel for Inlets and Manholes" for details and quantities.
For additional notes and details on Light Type Cast Iron Manhole Cover and Ring Type C and Cast Iron Steps, see Standard RD633 "Reinforced Concrete Manhole".
All reinforcing steel shall be #4 at 6" centers except where noted. Minimum clear distance to reinforcement shall be 1 1/2".

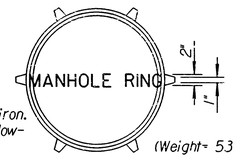



MANHOLE COVER TYPE C
(Weight= 64 lbs.)




TYPE C




(Weight= 53 lbs.)

NOTE: All manhole castings are cast iron. Weight of castings includes no allowance for fillets and overruns.

* LIGHT TYPE MANHOLE COVER & RING

*Rings with four equally spaced lugs will be permitted.

| NO. | DATE | REVISIONS | BY | APP'D |
|---|---|---|---|---|
| 3 | 12-8-94 | Added misc. notes | R.J.S. | J.O.B. |
| 2 | 12-27-93 | Delete paint note | R.J.S. | J.O.B. |
| 1 | 1-30-92 | Rev. paint&step notes, ext. on CADD | R.J.S. | J.O.B. |

KANSAS DEPARTMENT OF TRANSPORTATION

# TYPE 22 CURB INLET

RD646

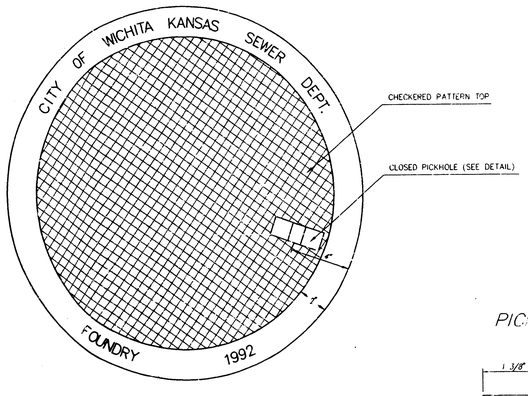
| | | | |
|---|---|---|---|
| FHWA APPROVAL | 1-12-95 | APP'D. James O. Brewer | |
| DESIGNED | DETAILED | QUANTITIES | TRACED Bowser |
| DESIGN CK. | DETAIL CK. | QUAN.CK. | TRACE CK. Seitz |

DRAWN BY : Plotted goes to PaulMiller
FILE :

# MANHOLE FRAME AND COVER DETAIL

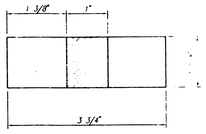
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

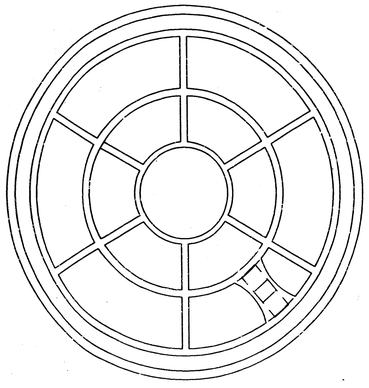



TOP VIEW

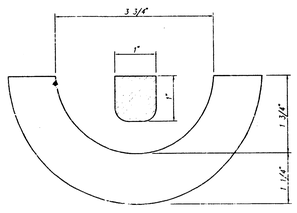
PICKHOLE DETAIL



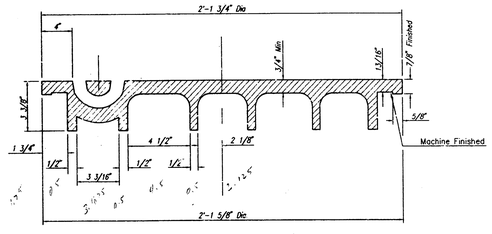

TOP VIEW



BOTTOM VIEW

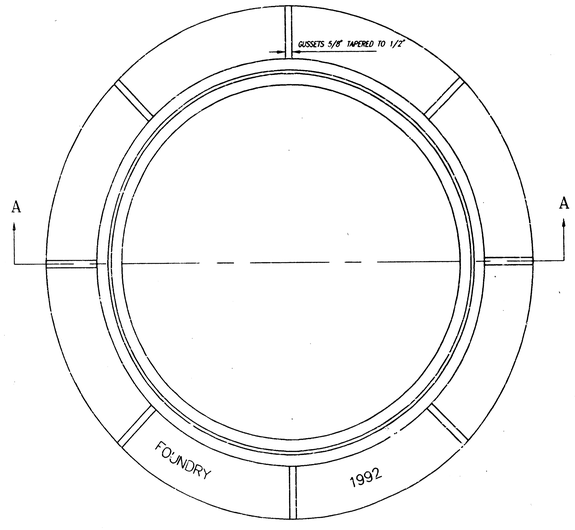



SECTION VIEW

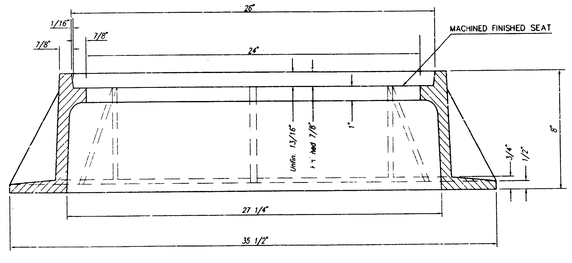



SECTION VIEW

MANHOLE FRAME
Weight = 240 Lbs.




TOP VIEW




SECTION A–A

## GENERAL NOTES

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.

MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDARY 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.

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 AS THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

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.

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.

TO INSURE CONFORMANCE TO TENSILE STRENGTH REQUIREMENTS ALL CASTINGS SHALL BE JULIAN HEAT DATED WITH THE FOLLOWING REQUIREMENTS:

TWO TEST BAR SPECIMENS MUST BE POURED WHEN PRODUCING CITY OF WICHITA CASTINGS. ONE OF THE TEST BAR SPECIMENS SHALL BE SENT TO AN INDEPENDENT LABORATORY FOR TENSILE STRENGTH VERIFICATION TESTING. A TEST REPORT SHALL ACCOMPANY EACH SHIPMENT OF CASTINGS. THE HEAT DATE(S) ON THE CASTINGS SHALL RESPOND TO THE TENSILE STRENGTH REPORT(S). THE TEST REPORT WILL BE PAID FOR BY THE SUPPLIER. THE REMAINING TEST BAR SPECIMEN WILL BE SHIPPED TO SEWER MAINTENANCE AT 715 W. HARRY, WICHITA, KANSAS 67213.

MANHOLE FRAME AND COVER DETAIL
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

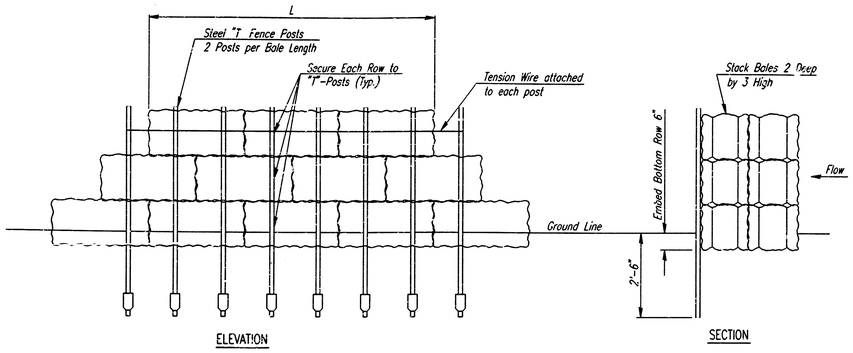
CITY OF WICHITA, KANSAS
M. E. LINDEBAK – CITY ENGINEER

REVISED 6/27/95

PROJ. NO. 74-1 EPS (307861)

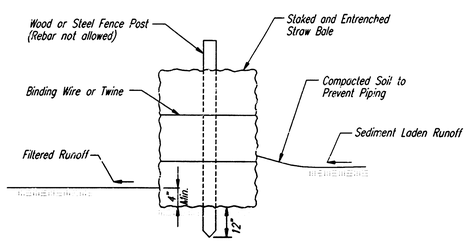
SHEET 5 OF 7

| SHEET NO. | TOTAL SHEETS |
|---|---|
| 6 | 7 |

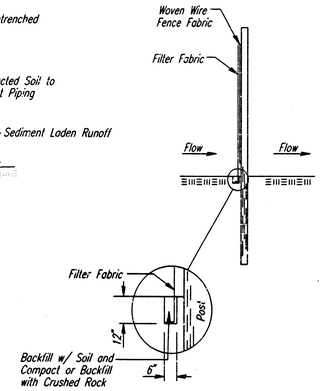



ELEVATION SECTION

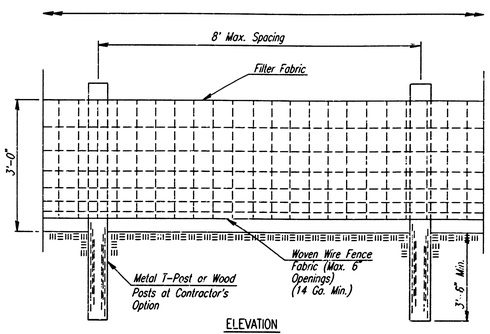
## SEDIMENT BARRIER DETAILS
HAY/STRAW BALE OPTION




## LINEAR SEDIMENT BARRIER




ANCHOR TRENCH DETAIL




ELEVATION

## SEDIMENT BARRIER DETAILS
FENCE OPTION

### GENERAL NOTES
SEDIMENT BARRIERS

1. SEDIMENT BARRIERS SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ADDITIONAL SEDIMENT BARRIERS WILL BE INSTALLED AT LOCATIONS AS DIRECTED BY THE ENGINEER WITH NO ADJUSTMENT IN UNIT PRICE.

2. SEDIMENT BARRIERS SHALL BE ERECTED PRIOR TO THE COMMENCEMENT OF EARTHWORK OPERATIONS IN A GIVEN BASIN. REMOVAL AND DISPOSAL OF ACCUMULATED SILT AND DEBRIS AND/OR REMOVAL AND RECONSTRUCTION OF SEDIMENT BARRIERS WILL BE PERFORMED THROUGHOUT THE PROJECT LIFE WHEN DEBRIS REACHES ONE-THIRD THE FENCE HEIGHT OR AS DEEMED NECESSARY BY THE ENGINEER. SEDIMENT BARRIERS AND ACCUMULATED DEBRIS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AFTER TURF COVER HAS BEEN ESTABLISHED, UNLESS OTHER ARRANGEMENTS HAVE BEEN AGREED TO.

3. FILTER FABRIC FOR FENCE OPTION SEDIMENT BARRIERS SHALL BE RESISTANT TO ULTRAVIOLET LIGHT. MATERIALS MAY BE SUPPLIED BY THE FOLLOWING MANUFACTURERS:

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

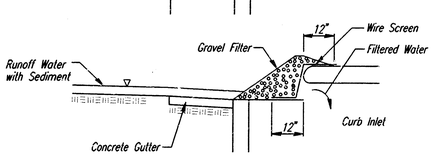
MATERIALS SUPPLIED BY THE ABOVE NAMED MANUFACTURERS SHALL BE ACCEPTED UPON VISUAL INSPECTION BY THE ENGINEER. OTHER COMPARABLE MATERIALS MAY BE USED IF APPROVED BY THE ENGINEER.

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

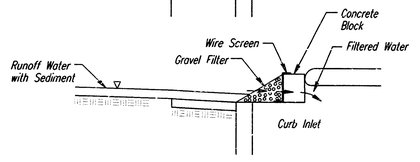
4. BALES USED FOR SEDIMENT BARRIERS MAY BE EITHER HAY OR STRAW, PROVIDED THEY ARE SOUND AND INTACT.

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

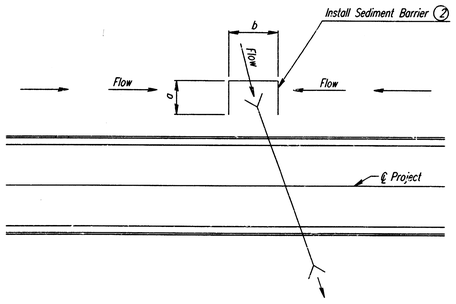
THE ITEM "TEMPORARY SEEDING AND MULCHING" SHALL BE MEASURED AND PAID FOR AT THE CONTRACT PRICE BID PER ACRE OR PER LUMP SUM, AS INDICATED IN THE PROPOSAL.




## CURB INLET PROTECTION
GRAVEL AND WIRE MESH FILTER




## CURB INLET PROTECTION
BLOCK AND GRAVEL FILTER




## SEDIMENT CONTROL
TYPICAL CROSS ROAD PIPE LOCATION

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

### GENERAL NOTES
INLET PROTECTION

1. INLET PROTECTION METHOD MAY BE ANY OF THE APPLICABLE TYPES SHOWN, AT THE CONTRACTORS OPTION.

2. GRAVEL FILTER SHALL BE A DURABLE, WELL-GRADED SAND-GRAVEL OR CRUSHED STONE, MAXIMUM 1-1/2 IN. SIPE. AS AN ALTERNATE GRAVEL FILLED BAGS OF BURLAP OR OTHER FABRIC MAY BE USED WHERE BAGS ARE USED, THE WIRE SCREEN, WHERE SHOWN, MAY BE OMITTED.

3. FILTER FABRIC, WHERE USED, SHALL BE RESISTANT TO ULTRAVIOLET LIGHT. MATERIALS MAY BE SUPPLIED BY THE FOLLOWING MANUFACTURERS:

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

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

4. INLET PROTECTION SHALL BE ERECTED AS SOON AS THE STRUCTURE HAS BEEN BACKFILLED. MEASURES SHALL BE TAKEN TO PRECLUDE ENTRY OF SEDIMENT INTO THE STORM WATER SEWER SYSTEM DURING CONSTRUCTION OF THE STRUCTURE.

5. REMOVAL AND DISPOSAL OF ACCUMULATED SILT AND DEBRIS AND/OR REMOVAL AND RECONSTRUCTION OF INLET PROTECTION INSTALLATIONS SHALL BE PERFORMED THROUGHOUT THE PROJECT LIFE WHENEVER DEBRIS REACHES ONE-THIRD THE BARRIER HEIGHT, OR AS DEEMED NECESSARY BY THE ENGINEER. ULTIMATE REMOVAL AND DISPOSAL OF INLET PROTECTION AND DEBRIS WILL BE PERFORMED BY THE DEVELOPER.

6. MEASUREMENT AND PAYMENT: THE ITEM "INLET PROTECTION" SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE BID PER EACH FOR EACH INLET LOCATION PROTECTED REGARDLESS OF METHOD SELECTED BY THE CONTRACTOR. SAID PRICE SHALL BE CONSIDERED FULL COMPENSATION FOR EXCAVATION, COMPACTION, BACKFILL, SEDIMENT, AND DEBRIS REMOVAL AND DISPOSAL, AND ALL LABOR, MATERIALS, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. RECONSTRUCTION OF INLET PROTECTION INSTALLATION DUE TO DAMAGE BY WIND, FLOOD, FIRE, ETC. OR DUE TO ACTIONS BY THE CONTRACTOR OR OTHERS SHALL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.

BRADLEY FAIR 3RD ADDITION

# SEDIMENT AND EROSION CONTROL STANDARD DETAILS AND INLET PROTECTION

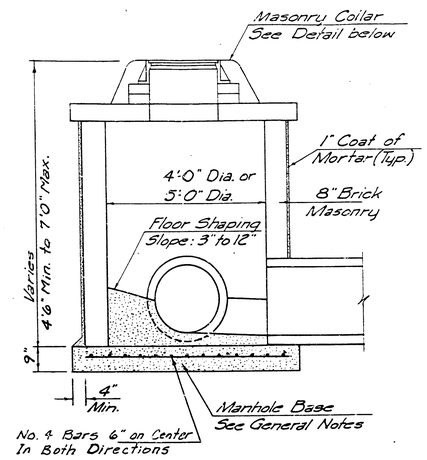
C.O.W. PRIVATE PROJ. NO. 74-7 PPS (6078.61)


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

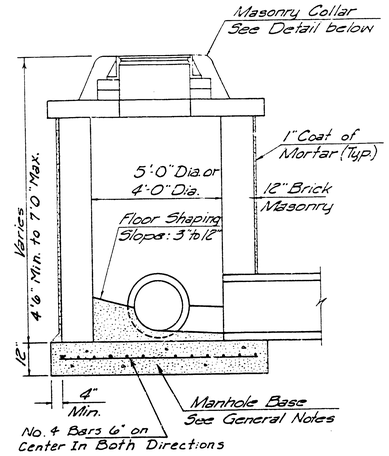

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| Drawn by | DEP | Date OCT., 1997 | Job No. 97B36 |

REVISED 1/95

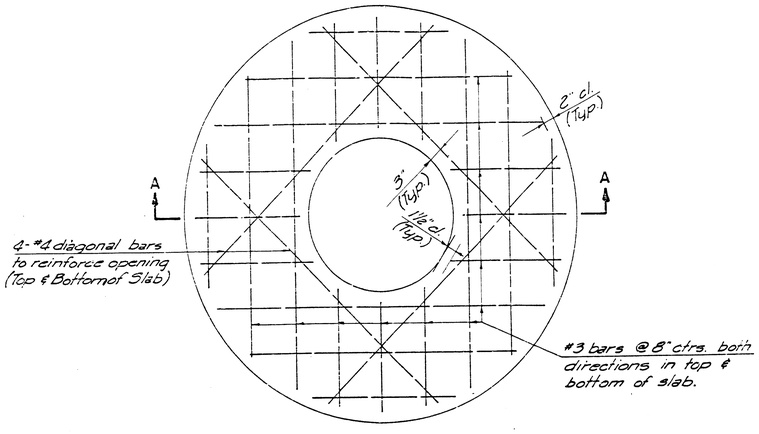

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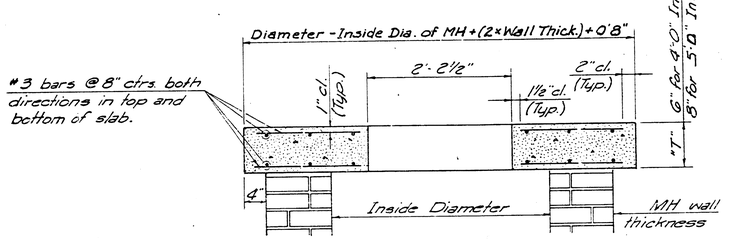

SHALLOW TYPE "A" MANHOLE




SHALLOW TYPE "B" MANHOLE

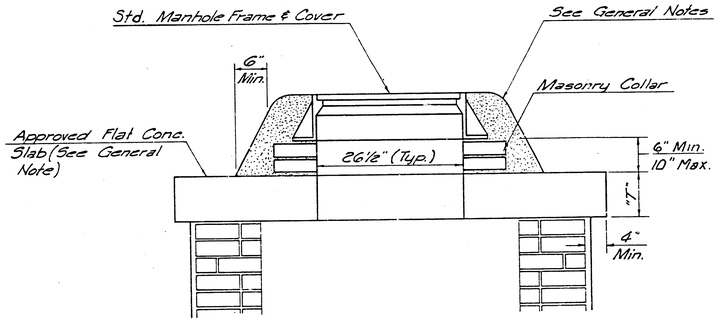



PLAN




SECTION A-A

FLAT CONCRETE SLAB DETAILS




MASONRY COLLAR DETAIL

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. TYPE "A" SHALLOW MANHOLES CAN BE USED ON SEWERS WHEN THE MANHOLE IS NOT LOCATED WITHIN PUBLIC STREET PAVEMENT. 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.

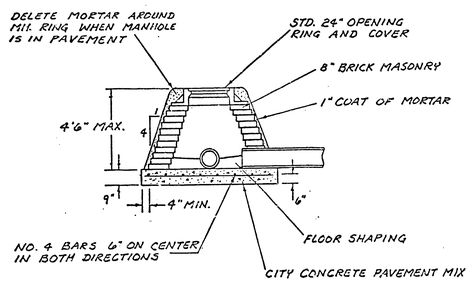
3. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE 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.

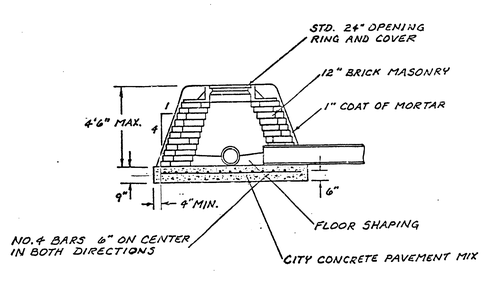
5. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWINGS.

6. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

7. STANDARD SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE AND DIAMETER INDICATED. STANDARD SPECIAL SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE INDICATED. ALL STANDARD SHALLOW MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.




SPECIAL SHALLOW TYPE 'A' MANHOLE




SPECIAL SHALLOW TYPE 'B' MANHOLE

CITY OF WICHITA, KANSAS
STANDARD SHALLOW MANHOLES
TYPE 'A' AND TYPE 'B'

747 RPS (607861)

| Designed by | PDM | Checked by | |
|---|---|---|---|
| Drawn by | | Date OCT. '97 | Job No. 97836 |

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