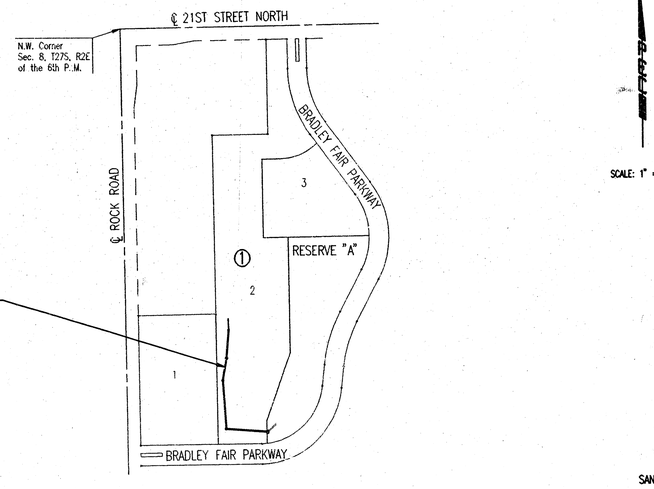
SHEET NO.	TOTAL SHEETS
1	7

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, P.E., CITY ENGINEER
STORM WATER SEWER AND SANITARY SEWER IMPROVEMENTS
IN
BRADLEY FAIR 2ND ADDITION
BRADLEY FAIR SOUTH PLAZA WING
CITY OF WICHITA PRIVATE PROJECT NO. 773PPS(607861)

INDEX OF SHEETS

1. TITLE SHEET
2. PLAT
3. PLAN AND PROFILE
4. TYPE 22 CURB INLET DETAILS
5. R.C. MANHOLE DETAILS
6. INLET PROTECTION AND FLUME DRAIN DETAILS
7. SANITARY SEWER PLAN



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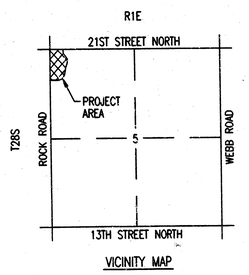


VICINITY MAP

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

SANITARY SEWERS VRH 3/14/98

STORM SEWERS VRH 3/14/98

DRIVEWAY APPROACHES _____

WATER MAINS _____

PAVING _____

BOOKED
11-16-00
MCG
D-485

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 ARCHEOLOGICAL 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 ENGINEER AT 262-2691 FOR INFORMATION PERTAINING TO THE ACCEPTABLE LOCATIONS FOR THE DISPOSITION OF EXCESS MATERIAL. WASTE MATERIAL SHALL BE GRADED SMOOTH AND SLOPED TO DRAIN.

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 AT NO COST TO THE OWNER.

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 AREAS DISTURBED DURING CONSTRUCTION SHALL BE SEEDED, FERTILIZED, AND MULCHED ACCORDING TO CITY OF WICHITA STANDARDS AND SPECIFICATIONS.

CONTRACTOR SHALL OBTAIN PERMIT FROM C.C.I. PRIOR TO INSTALLING SANITARY SEWER.

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 THE 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.

DARWIN R. CROSE LICENSED PROFESSIONAL ENGINEER 14886 9-1-99 KANSAS

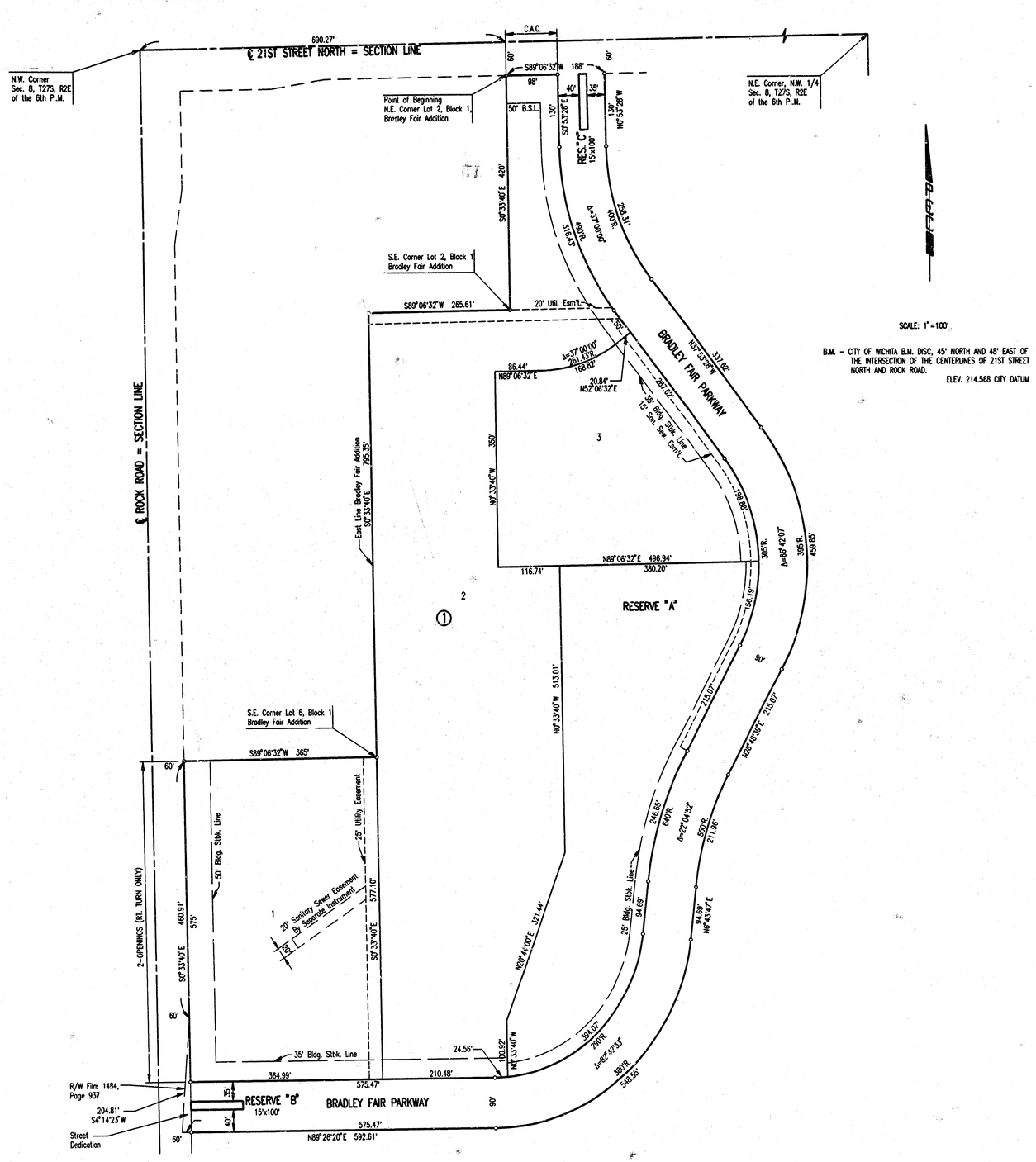
MARCH 1998

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

DSNR: DAR OPER: DAR SCALE: 1=300.00
O:\1998\98044\TITLE 03-04-1998 11:46:53 am

SHEET NO.	TOTAL SHEETS
2	6

BRADLEY FAIR 2ND ADDITION
TO WICHITA, SEDGWICK COUNTY, KANSAS



SCALE: 1"=100'

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

JSNR: DAR OPER: DAR SCALE: 1=100.00
Q:\1998\98044\STMPLAT 02-18-1998 11:16:52 am

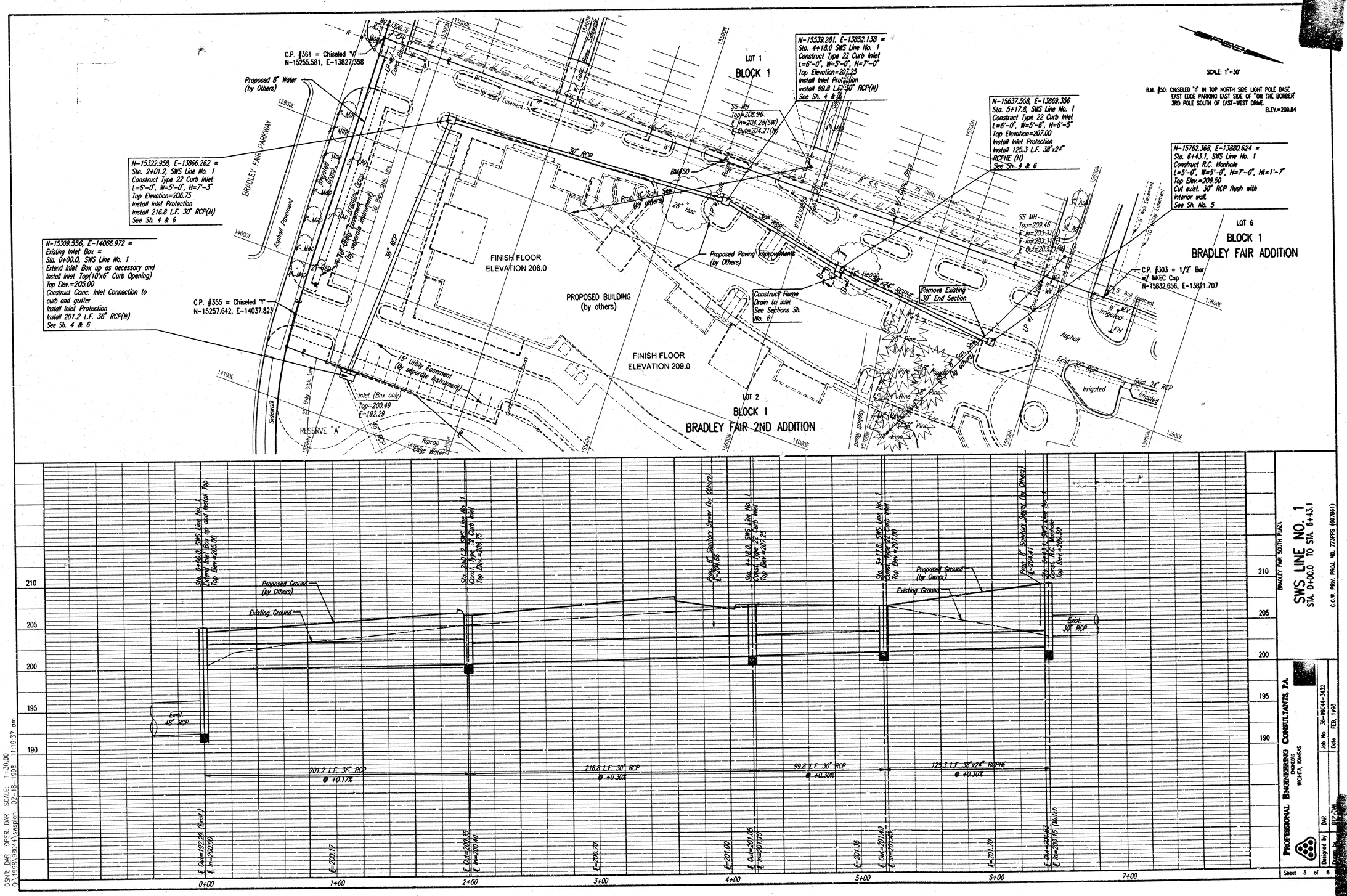
BRADLEY FAIR SOUTH PLAZA

PLAT

C.O.W. PRIV. PROJ. NO. 773PPS (607861)

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

Designed by	DAR	Checked by	
Drawn by	DAR	Date FEB., 1998	Job No. 98044



BRADLEY FAIR SOUTH PLAZA

SWS LINE NO. 1

STA. 0+00.0 TO STA. 6+43.1

C.C.W. PROJ. NO. 773PPS (607861)

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

Designed by DAR
Drawn by DEP/DAR
Job No. 36-98044-3432
Date FEB. 1998

Sheet 3 of 6

DSNR: DAR OPER: DAR SCALE: 1=30.00
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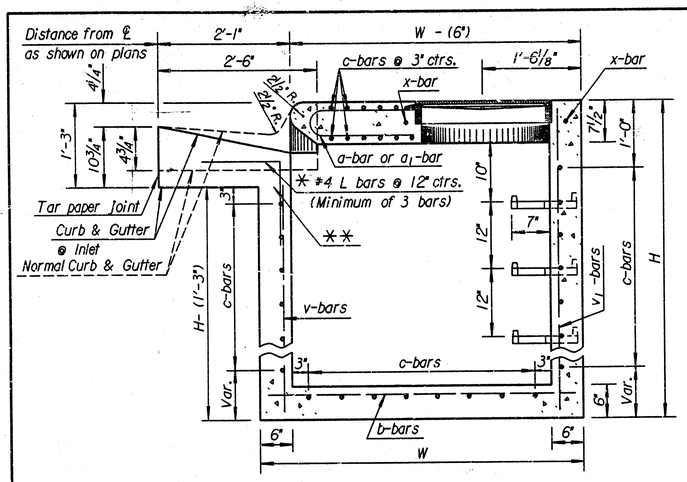
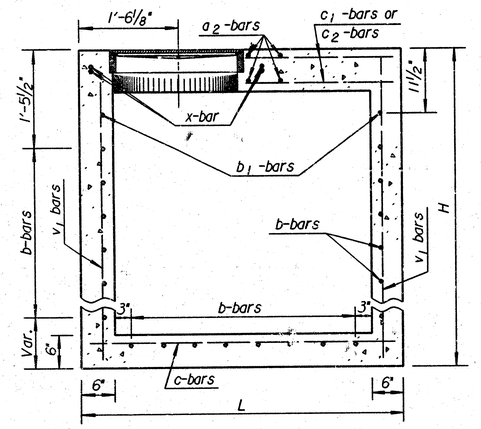
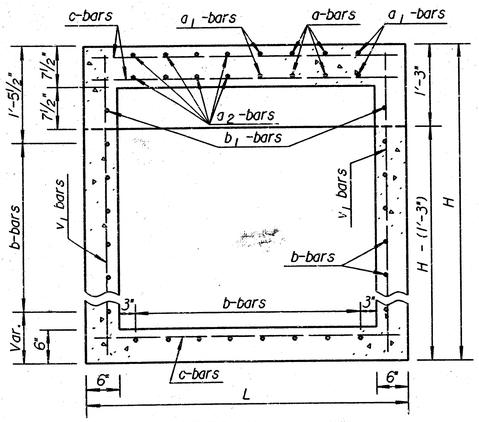
SHEET NO.	TOT. SHE
4	6



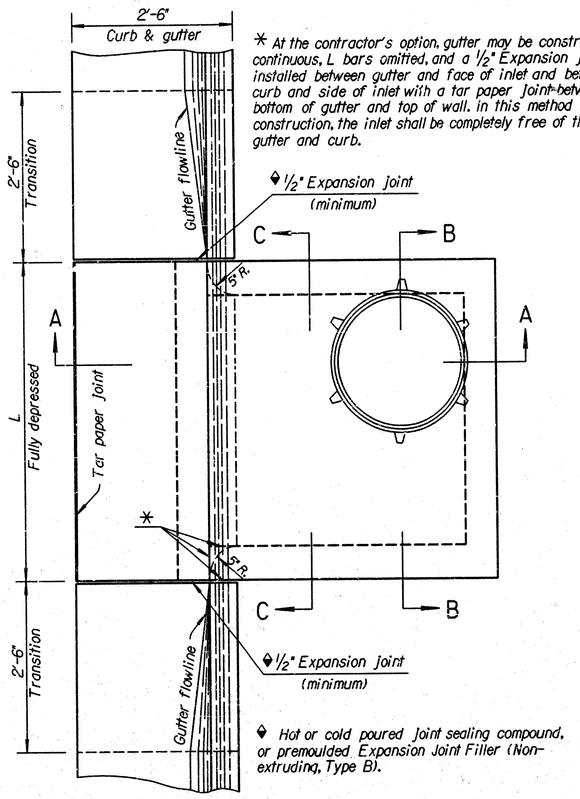
SECTION A-A



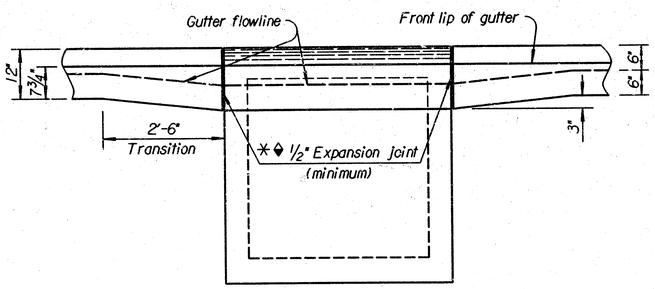
SECTION B-B



SECTION C-C

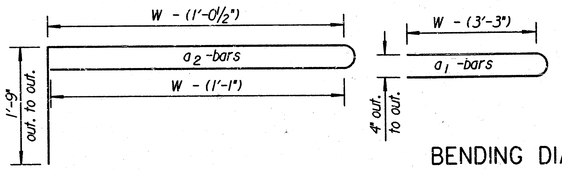


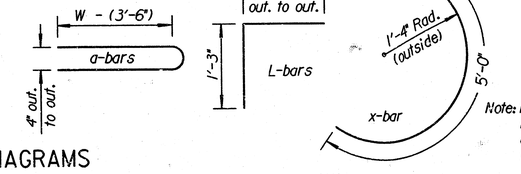
PLAN



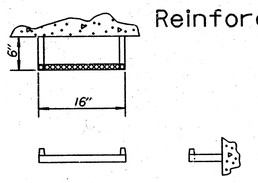
ELEVATION

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.



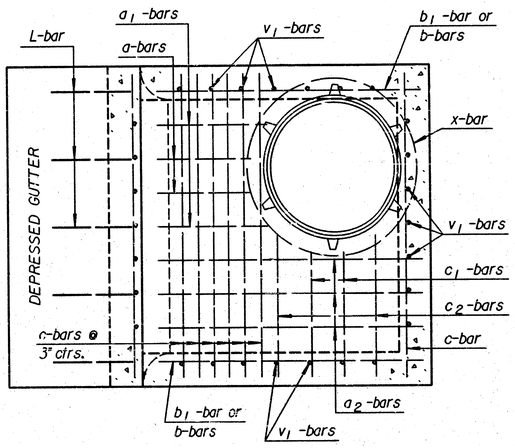


BENDING DIAGRAMS

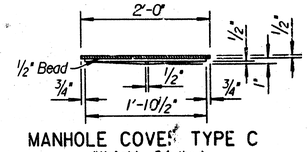


STEP DETAILS

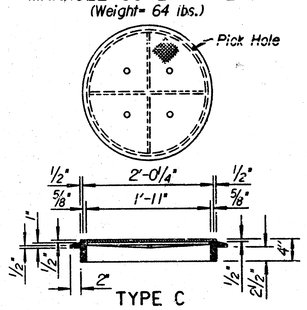
Note: Use Class A Concrete throughout. All exposed edges shall be finished with an edging tool.
At the contractors option Class A Concrete (AE) or mix used in concrete pavement may be used throughout.
In general, pipes will enter and leave manhole at various positions. Where possible bend bars around 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.
All exposed cast iron surfaces not subjected to traffic shall be painted with a coat of inorganic zinc primer and then with a topcoat or a field coat of organic zinc, each coat to be 3 to 4 mils.
No deductions in concrete quantities shall be made for pipe openings or additions to concrete quantities shall be made for shaping floor of manholes.
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.



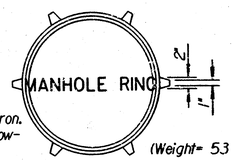
Reinforcing Steel Top View



MANHOLE COVER TYPE C
(Weight= 64 lbs.)



TYPE C



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

(Weight= 53 lbs.)

*LIGHT TYPE MANHOLE COVER & RING

*Rings with four equally spaced lugs will be permitted.

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

NO.	DATE	REVISIONS	BY	APP'D
1	1-30-92	Rev. paint&step notes, ent. on CADD	R.J.S.	J.O.B.

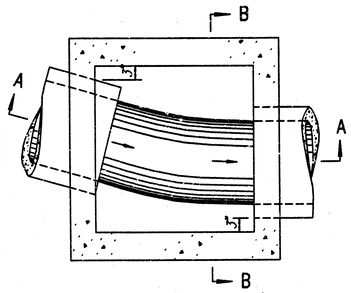
KANSAS DEPARTMENT OF TRANSPORTATION

TYPE 22 CURB INLET

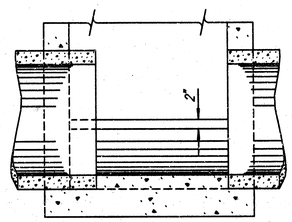
STD. NO. 646

FHWA APPROVAL	2-27-92	APP'D James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Seitz

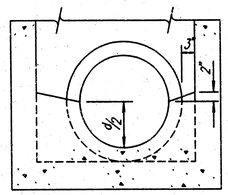
PROJECT NO.	SHEET NO.	TOTAL SHEETS
773PPS (607881)	5	8



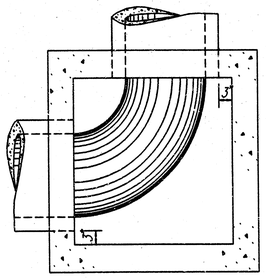
PLAN – FLOOR (Example I)



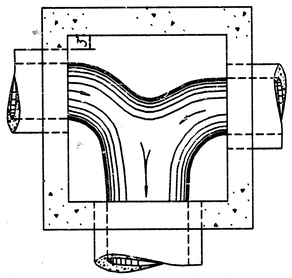
SECTION A–A (Example I)



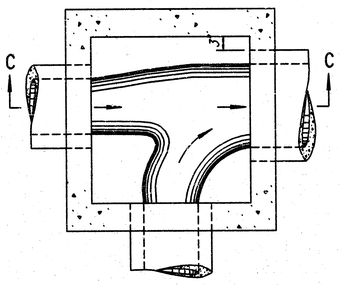
SECTION B–B (Example I)



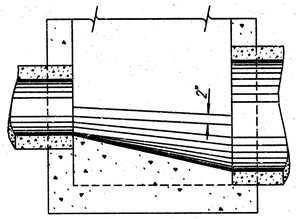
PLAN – FLOOR (Example II)



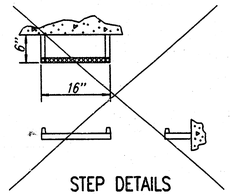
PLAN – FLOOR (Example III)



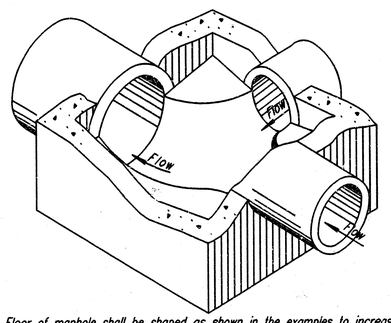
PLAN – FLOOR (Example IV)



SECTION C–C (Example IV)

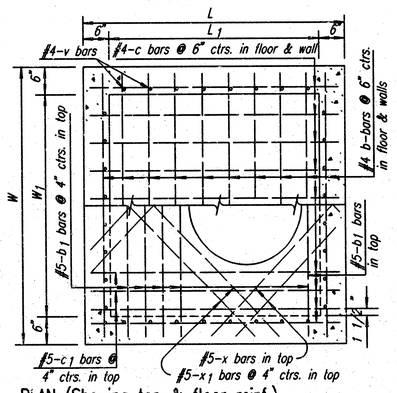


STEP DETAILS

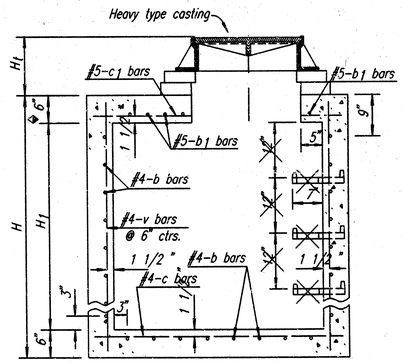


Floor of manhole shall be shaped as shown in the examples to increase hydraulic efficiency.

ISOMETRIC VIEW (Example IV)



PLAN (Showing top & floor reinf.)



◆ Where dimension "L" or "W" is greater than 6'–0" use 8" slab thickness.

SECTION (Exclusive of floor shaping)

Note: Use 4000 p.s.i. compressive strength concrete throughout. All exposed edges shall be finished with an edging tool.

In general, pipes will enter and leave manhole at various positions. Where possible bend bars around pipes.

Floor of manhole shall be shaped as shown in various "EXAMPLES" with unreinforced Concrete. Manhole opening and steps, where used, shall be placed to afford easy access to top of shaped invert. Top reinforcing bars shall be adjusted accordingly.

All castings shall be gray iron and shall comply with the Specifications. All exposed cast iron surfaces not subjected to traffic shall be painted with a coat of inorganic zinc primer and then with a topcoat or a field coat of organic zinc, each coat to be 3 to 4 mils.

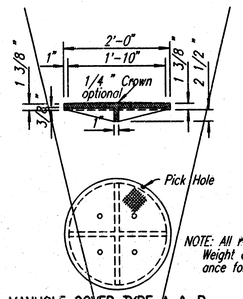
The top of the manhole shall be sloped slightly to approximately fit the ground line or other condition as directed by the Engineer.

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.

The Contractor has the option of using precast manholes, as approved by the Engineer.

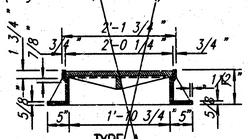
Steps shall not be installed on this project.

Manhole Frame and Cover shall be per City of Wichita standards.

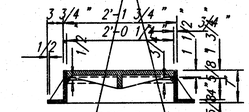


MANHOLE COVER TYPE A & B

(Weight=134 lbs., without 1/4" Crown= 125 lbs.)



TYPE A



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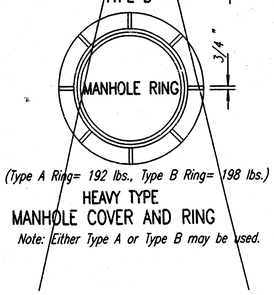
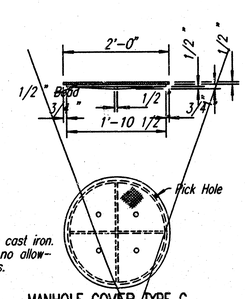


(Type A Ring= 192 lbs., Type B Ring= 198 lbs.)

HEAVY TYPE MANHOLE COVER AND RING

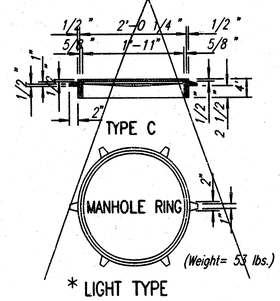
Note: Either Type A or Type B may be used.

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



MANHOLE COVER TYPE C

(Weight= 64 lbs.)



(Weight= 53 lbs.)

* LIGHT TYPE MANHOLE COVER & RING

* Rings with four equally spaced lugs will be permitted.

NO.	DATE	REVISIONS	BY	APP'D
28	1-30-92	Rev. pointstep notes, ent. on CADD	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

REINFORCED CONCRETE MANHOLE

~~STD. NO. 633~~

FINAL APPROVAL	2-27-92	APP'D James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUANTITY CK.	TRACE CK. Seitz

THIS SHEET ADAPTED FROM A KDOT STANDARD DETAIL SHEET.

PROFESSIONAL ENGINEERING CONSULTANTS WICHITA, KS (316) 262-2691

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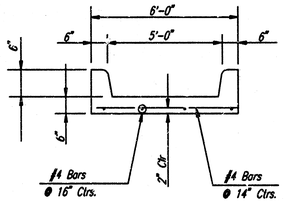
PROJECT NO.	SHEET NO.	TOTAL SHEETS
773PPS (607861)	6	6



SECTION B-B
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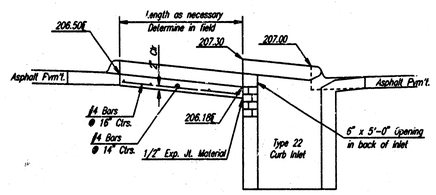

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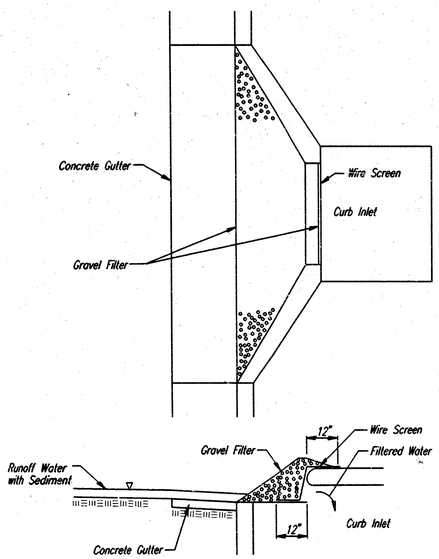
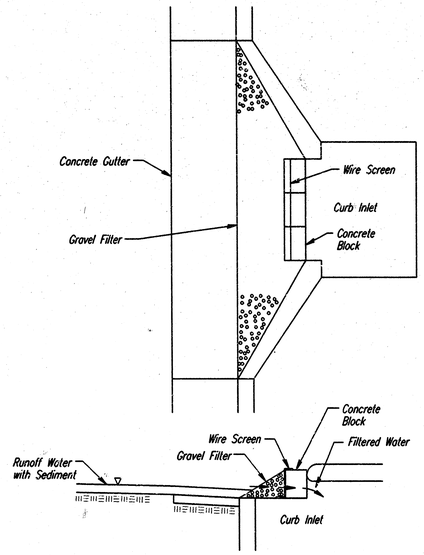
FLUME DRAIN SECTIONS



CURB INLET PROTECTION
GRAVEL AND WIRE MESH FILTER



CURB INLET PROTECTION
BLOCK AND GRAVEL FILTER

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.

REVISED 1/95

BRADLEY FAIR SOUTH PLAZA

INLET PROTECTION AND FLUME DRAIN DETAILS

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

Designed by	MWB, GDD	Checked by	
Drawn by	DEP	Date FEB., 1998	Job No. 98044

DSNR: DAR OPER: DAR SCALE: 1=1.00
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