CONSTRUCTION PLANS FOR DRAINAGE IMPROVEMENTS

LAKEPOINT OF WICHITA

TO

THE CITY OF WICHITA, KANSAS

JAMES ARMOUR, P.E. - ACTING CITY ENGINEER

PRIVATE PROJECT NO. 1500-PPS

OCA NO. 607861

GENERAL NOTES:

1. Utility service lines, poles, valve boxes, meters and etc. 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. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
2. A full-depth saw cut of existing total pavement thickness shall be provided at locations where proposed construction abuts an existing surface course or pavement for which partial removal of that surface or pavement is required. Sawed joint to facilitate removal within three (3) feet of existing joints will not be permitted and for such instances the limits of removal shall extend to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the project costs.
3. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved.

   All suitable excavation shall be wasted on low lying lots within the addition before any material is disposed of off site.

   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 archaeological investigations unless buried in a previously approved borrow location.
4. 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.
5. The Contractor shall be responsible for preserving property irons. The Contractor will be required to reestablish any property irons which are damaged or destroyed by his construction operations. Such irons shall be reestablished by a licensed land surveyor in accordance with state laws.
6. All disturbed areas within project shall be seeded with temporary rye grass within 14 days of disturbance at a rate of 250 lbs. per acre.
7. Contractor shall maintain all existing BMPs on project site during construction. Contractor shall repair or replace any existing BMPs that are damaged (cost subsidiary to site restoration). If BMPs were damaged prior to contractor beginning work on project, notify construction inspector or engineer.
8. Contractor shall remove and stockpile organic material (topsoil) to surface (to a minimum of twelve (12) inches) all fills, embankments and any other areas on the site of the work where the original topsoil will be covered or damaged. Topsoil shall be free from trash, debris and surface vegetation more than six (6) inches in height. After all work has been completed in each area, topsoil shall be placed and graded.

NOTE TO CONTRACTOR

Inspection and testing for this project is to be provided by a licensed consulting engineering firm under contract with the owner/developer. Said inspection is 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 in public right-of-way by the contractor without such inspection. Nor shall any work be commenced in dedicated easements or public right-of-way without written authorization by the City Engineer.

APPROVED AS NOTED

BY THE CITY ENGINEER

Sanitary Sewers _____

Storm Sewers VRH 12/8/04

Driveway Approaches _____

Water Mains _____

Paving _____



Scale 1" = 100'

INDEX

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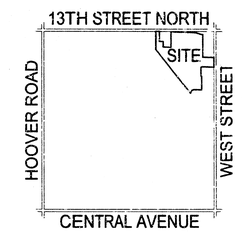


LOCATION MAP
No Scale

JAMES M. THOMPSON LICENSED 6262 KANSAS PROFESSIONAL ENGINEER
12/6/04

AS-BUILT
5/3/05
Date K.E. Miller
Signed

BENCH MARKS

M.S.L. Datum

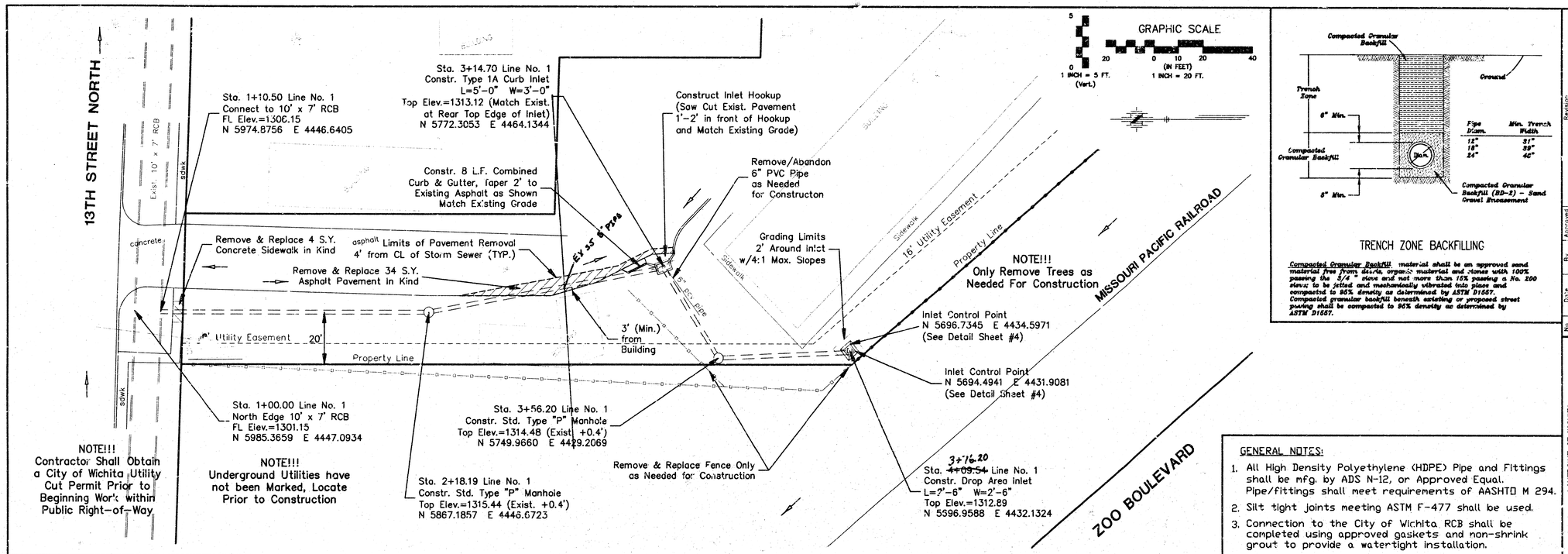
1. COW Bench Mark. NW Cor. Intersection West St. and 13th St. N. E. Side Traffic Signal Light Base. 70.28' NW of 1/2" Iron Ctr. Intersection. 35.8' N and 61.0' W of Ctr. Line Both. Elevation 1313.51

DECEMBER 2004

PLANS PREPARED BY

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

25 2004 Jason P. Dickman, Poe & Associates, Inc.

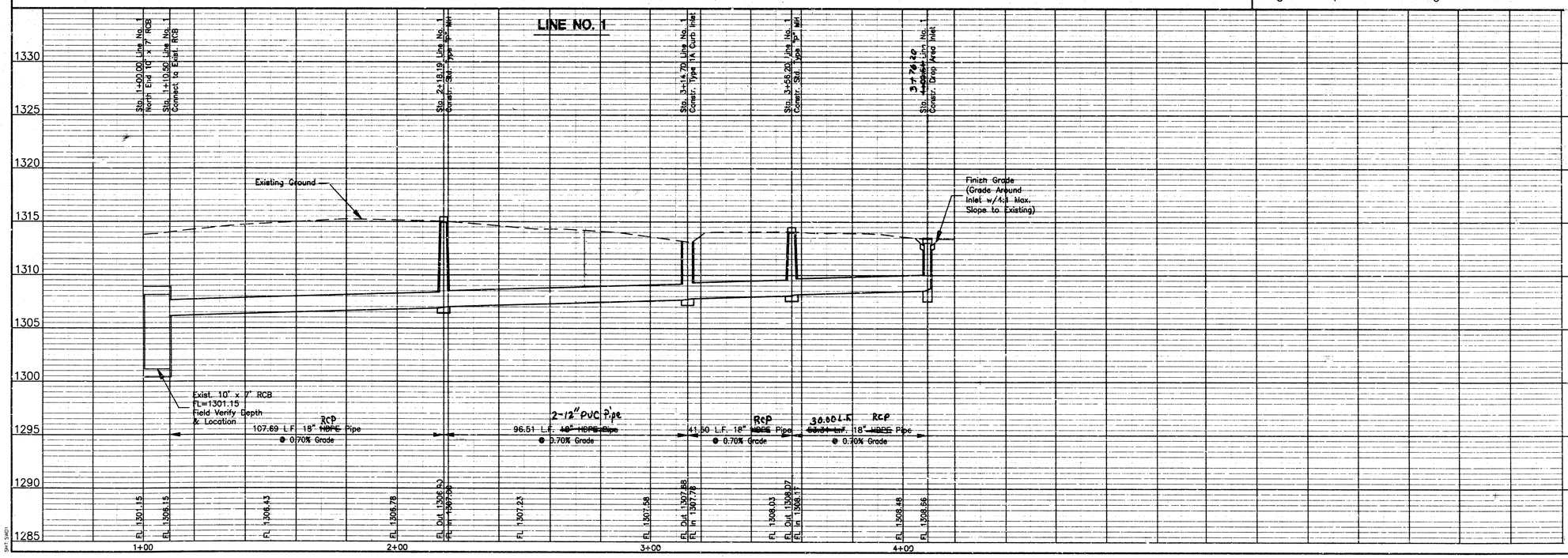


TRENCH ZONE BACKFILLING

Compacted Granular Backfill material shall be an approved sand material free from debris, organic material and stones with 100% passing the 3/4" sieve and not more than 15% passing a No. 200 sieve; to be jetted and mechanically vibrated into place and compacted to 95% density as determined by ASTM D1557. Compacted granular backfill beneath existing or proposed street paving shall be compacted to 95% density as determined by ASTM D1557.

GENERAL NOTES:

1. All High Density Polyethylene (HDPE) Pipe and Fittings shall be mfg. by ADS N-12, or Approved Equal. Pipe/fittings shall meet requirements of AASHTO M 294.
2. Silt tight joints meeting ASTM F-477 shall be used.
3. Connection to the City of Wichita RCB shall be completed using approved gaskets and non-shrink grout to provide a watertight installation.



LAKEPOINT OF WICHITA
STORM WATER SEWER
LINE NUMBER 1

CITY OF WICHITA, KANSAS
JAMES ARNOLD, P.E. - ACTING CITY ENGINEER
C.O.W. Finals Proj# 1306-PPS C.O.A.# 607861

No.	Date	By	Approved	Revision

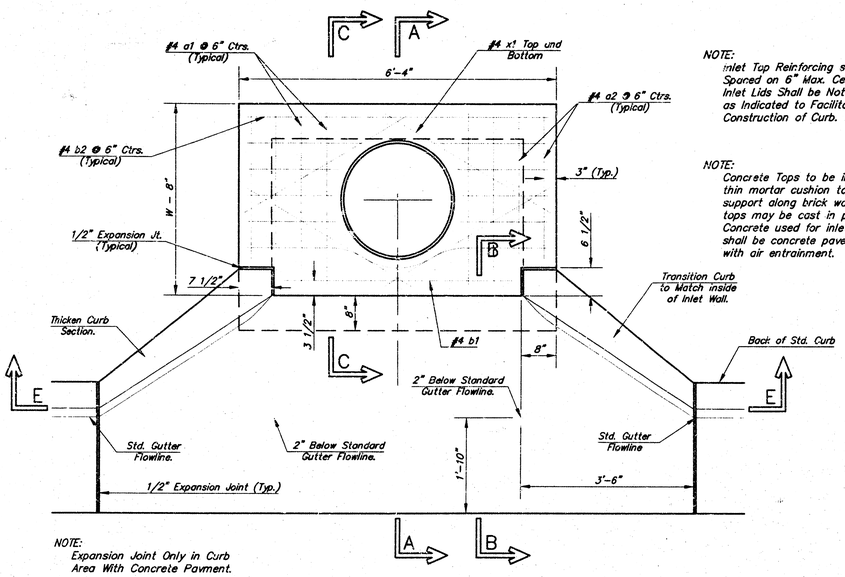
POE & ASSOCIATES, INC.
Consulting Engineers
5940 E. Central, Suite 230 ■ Wichita, KS 67208-4242
Phone 316.685-4114 ■ FAX 316.685-4444

FINAL

Designed By: M. Thompson / J. Dickman
Drawn By: J. Dickman
Poe Job No.: 1768
Date: December 2004

Sheet 2 of 10

Dec 09 12:13:52 2004 Jason P. Dickman, Poe & Associates, Inc.

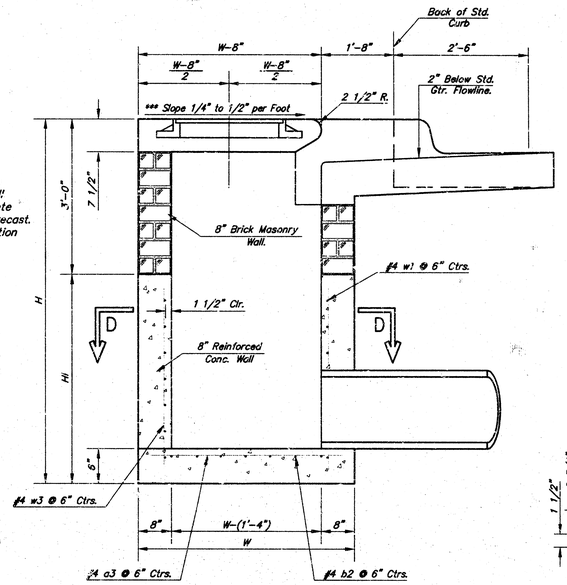


PLAN

NOTE:
Expansion Joint Only in Curb Area With Concrete Pavment.

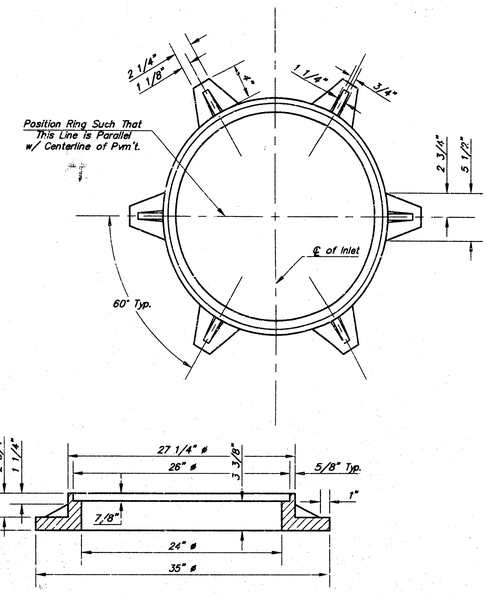
NOTE:
Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids Shall be Notched Out as Indicated to Facilitate Construction of Curb.

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.



SECTION A-A

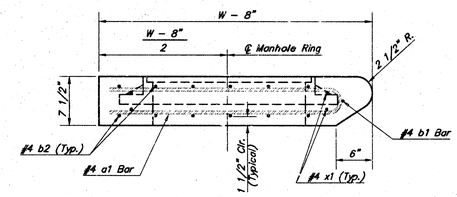
***NOTE: Slope of Inlet tops to match Sidewalk or Parking Slopes within Limits Indicated.



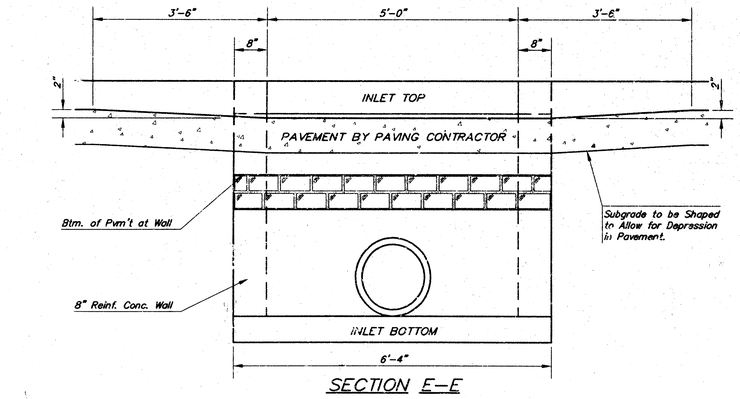
MANHOLE RING AND COVER

Weight = 180 Lbs.

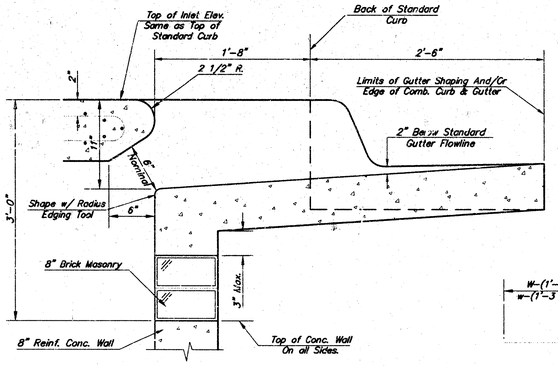
*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.



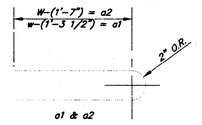
SECTION A-A



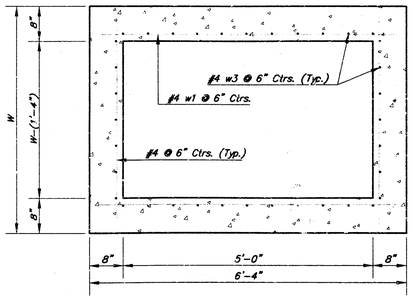
SECTION E-E



SECTION B-B



BENDING DIAGRAM



SECTION D-D

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

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	#5	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 (Hi - 12") (Hi - 21") Rounded down to nearest 0.5'
② Hi - 3"

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

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4351
(316) 268-4174 FAX

STANDARD TYPE 1-A CURB INLET OPENING = 6" x 5'-0"

JIM ARMOUR, P.E. - ACTING CITY ENGINEER

PROJECT NUMBER: 1500-PPS
INDEX CODE: 607881
DATE: MAR 96
SHEET 3 OF 16

FINAL

Designed By: M. Thompson / J. Dickman
Drawn By: J. Dickman
Poe Job No.: 1758
Date: December 2004

Sheet 3 of 10

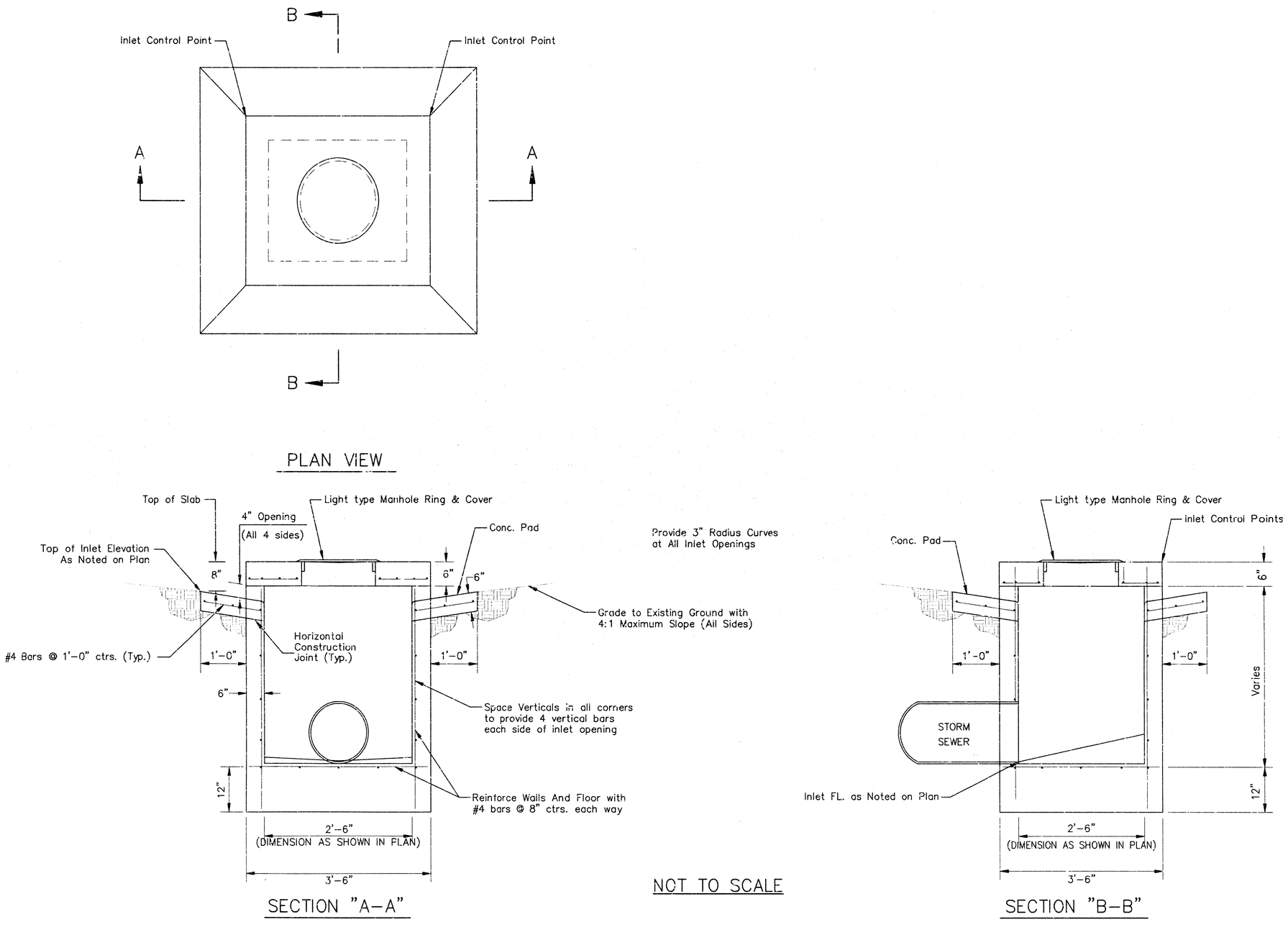
LAKEPOINT OF WICHITA
STORM WATER SEWER
TYPE 1-A INLET 5'-0"

CITY OF WICHITA, KANSAS
JAMES ARMOUR, P.E. - ACTING CITY ENGINEER
C.O.W. Private Proj # 1500-PPS C.O.A. # 607881

No.	Date	By	Approved	Revision
1				
2				
3				
4				

POE & ASSOCIATES, INC.
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-1114 ■ FAX 316/685-4444

SB 32 2004 Jason P. Dickman, Poe & Associates, Inc.



No.	Date	By	Approved	Revision

LAKEPOINT OF WICHITA
STORM WATER SEWER
DROP AREA INLET
CITY OF WICHITA, KANSAS
JAMES ARMOUR, P.E. - ACTING CITY ENGINEER
C.O.W. Private Proj# 1500-PPS O.C.A.# 607881

POE & ASSOCIATES, INC.
5940 E. Central, Suite 200 ■ Wichita, KS 67208-1242
Phone 316.685-4114 ■ FAX 316.685-4444

FINAL

Designed By: M. Thompson / J. Dickman
Drawn By: J. Dickman
Poe Job No.: 1768
Date: December 2004

Sheet
4 of 10

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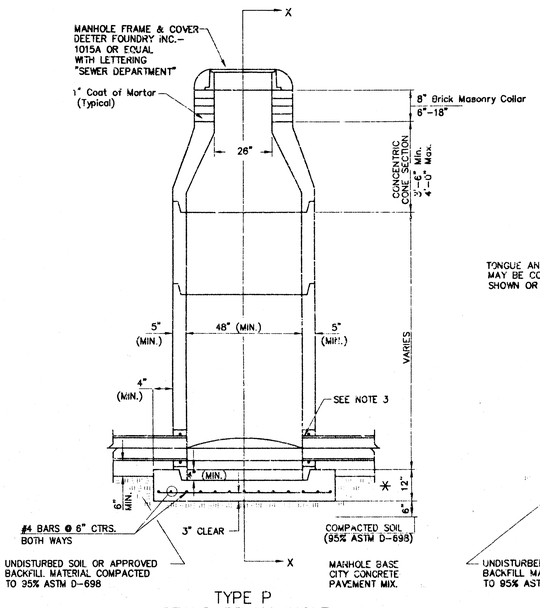
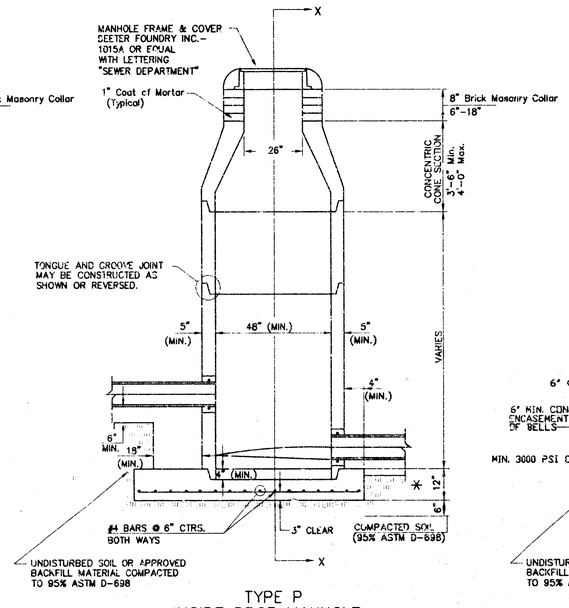
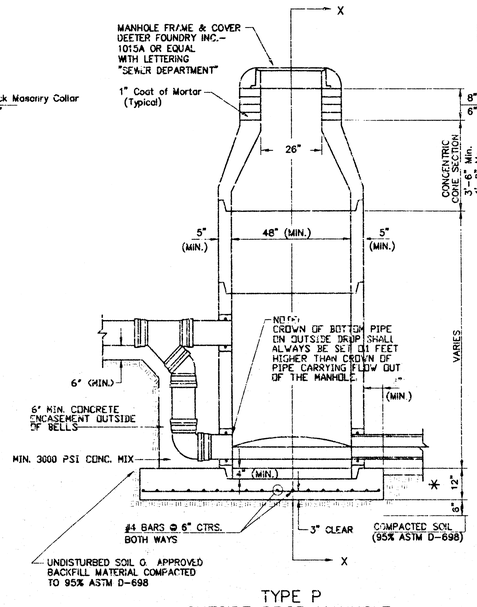
SEWER APPURTENANCES DETAILS



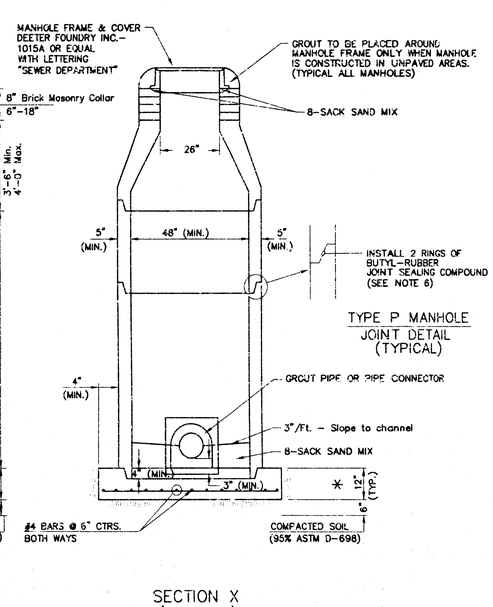
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



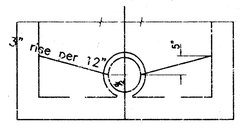
SECTION X
(TYPICAL)

TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

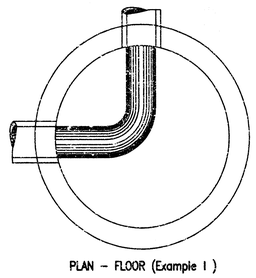
GENERAL NOTES

PRECAST MANHOLE NOTES

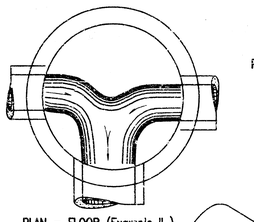
1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE 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 THEMEC 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 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 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
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 NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
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 STANDAPD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
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. * ALL MANHOLE BASE CONSTRUCTION THAT OCCURS IN THE FIELD MUST HAVE A MINIMUM OF EIGHT INCHES OF CONCRETE BELOW THE MANHOLE WALL AND THE WALL SECTION SHOULD EXTEND FOUR INCHES INTO THE BASE RESULTING IN A MINIMUM TOTAL BASE THICKNESS OF 12 INCHES. MONOLITHIC BASE SECTIONS CONSTRUCTED IN THE FACTORY AND CURED AS PER ASTM C478 MUST HAVE A MINIMUM EIGHT INCH THICK CONCRETE BASE. BASE SECTIONS CONSTRUCTED IN THE FACTORY UTILIZING A PREVIOUSLY MANUFACTURED MANHOLE WALL SECTION, AS OUTLINED IN THE ABOVE PARAGRAPH, MUST HAVE A MINIMUM BASE THICKNESS OF EIGHT INCHES WITH THE WALL SECTION EXTENDING FOUR INCHES INTO THE BASE AND BE MANUFACTURED IN COMPLIANCE WITH ASTM C478.



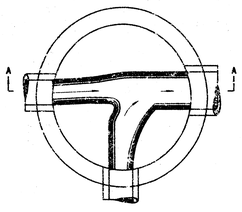
SECTION A-A (Example III)



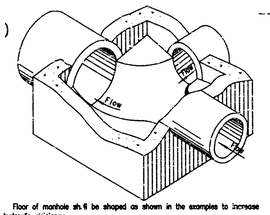
PLAN - FLOOR (Example I)



PLAN - FLOOR (Example II)

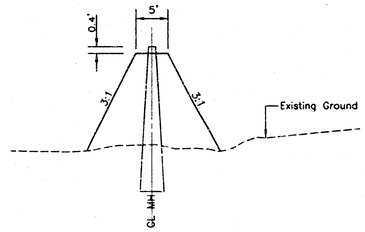


PLAN - FLOOR (Example III)



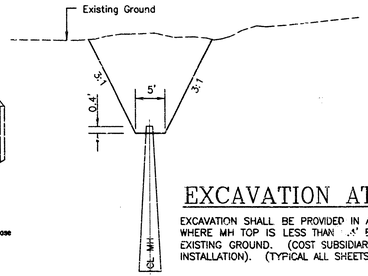
Floor of manhole shall be shaped as shown in the examples to increase hydraulic efficiency.

ISOMETRIC VIEW (Example IV)



PROTECTIVE FILL AT MH

MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE MH TOP IS GREATER THAN 0.4' ABOVE EXISTING GROUND. (COST SUBSIDIARY TO MH INSTALLATION)
(TYPICAL ALL SHEETS)



EXCAVATION AT MH

EXCAVATION SHALL BE PROVIDED IN ALL INSTANCES WHERE MH TOP IS LESS THAN .4' BELOW EXISTING GROUND. (COST SUBSIDIARY TO MH INSTALLATION). (TYPICAL ALL SHEETS)

No.	Revision	By	Approved	Date
1				
2				
3				
4				

LAKEPOINT OF WICHITA
STORM WATER SEWER
STANDARD TYPE "P" MANHOLE DETAIL
CITY OF WICHITA, KANSAS
JAMES ARMOUR, P.E. - ACTING CITY ENGINEER
C.O.W. Private Proj # 1500-PFS O.C.K.# 867861

POE & ASSOCIATES, INC.
5940 E. Central, Suite 200 ■ Wichita, KS 67208 4242
Phone 316 685-4114 ■ FAX 316 685-4444

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Designed By: M. Thompson / J. Dickinson
Drawn By: J. Dickinson
Poe Job No.: 1788
Date: December 2004

Sheet
5 of 10

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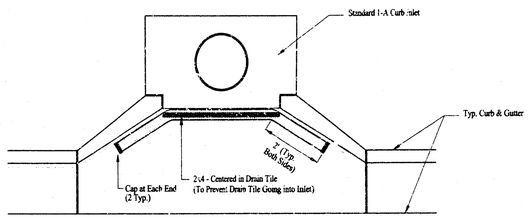
LEGEND

Temporary Seeding Area (200 lbs/Acre Rye Grass)
*See Sheets 8-12 for Details)
Total Area = 230 S.Y.

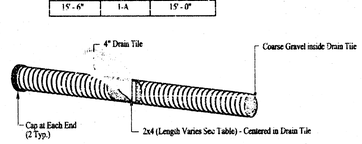
Back of Curb Protection w/Temporary Seeding
(See Sheets 8-12 for Details)
Total Area = 35 S.Y.

Sediment Barrier
(Per City Specifications)
Quantity = 5 Each

Quantities listed above are for information only.

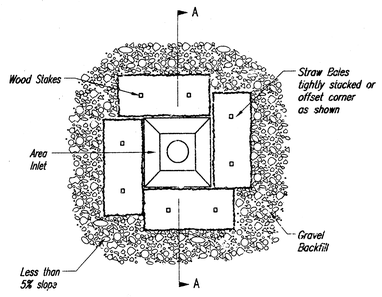


2x4 LENGTH	INLET TYPE	INLET OPENING
5' - 6"	I-A	5'-0"
10' - 6"	I-A	10' - 0"
15' - 6"	I-A	15' - 0"

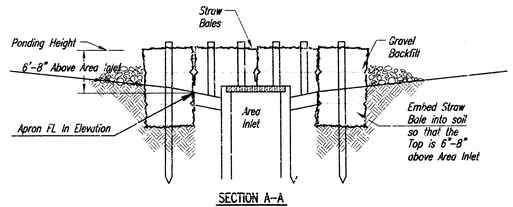


Curb Inlet Sediment Barrier Detail

(No Scale)



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)



SECTION A-A

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 shall be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.

LAKEPOINT OF WICHITA
STORM WATER SEWER
STORMWATER POLLUTION PREVENTION PLAN
CITY OF WICHITA, KANSAS
JAMES ARMOUR, P.E. - ACTING CITY ENGINEER
C.O.W. Private Proj.# 1500-PPS O.C.A.# 96786

POE & ASSOCIATES, INC.
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4212
Phone 316.685-4114 ■ FAX 316.685-4444

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Designed By: M. Thompson / J. Dickman
Drawn By: J. Dickman
Poe Job No.: 1768
Date: December 2004

Sheet 6 of 10

P:\1768\base.dwg Mon Dec 06 09:59:59 2004 Jason P. Dickman, Poe & Associates, Inc.

Set Saw

1. MUTCD COMPLIANCE:

ALL TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION AND MAINTENANCE SHALL COMPLY WITH THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS. WHENEVER THE TRAFFIC CONTROL STANDARDS CONFLICT WITH THE MANUAL, THE STANDARDS SHALL GOVERN.

2. DESIGN SPEED:

TRAFFIC CONTROL SHOULD BE DESIGNED AND INSTALLED USING THE POSTED/LEGAL SPEED OF THE ROADWAY PRIOR TO WORK STARTING.

3. CLEAR ZONE:

ALL CONSTRUCTION EQUIPMENT (INCLUDING VEHICLES), MATERIALS, AND DEBRIS SHALL BE STORED OUT OF THE CLEAR ZONE. WHERE THIS CANNOT BE ACHIEVED, THE CONTRACTOR SHALL PLACE APPROPRIATE SIGNS, OBJECT IDENTIFIERS, AND/OR BARRICADES AS DESIGNATED BY THE ENGINEER. TRAFFIC CONTROL DEVICES NEEDED FOR THIS CONDITION SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.

4. MINIMUM LANE WIDTHS:

LANE WIDTHS SHALL BE A MINIMUM OF 11' (MEASURED BETWEEN CENTERLINES OF PAVEMENT MARKINGS) OR AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. A LANE WIDTH LESS THAN 11' MAY REQUIRE RESTRICTED ROADWAY WIDTH SIGNING.

5. FLAGGER:

A MINIMUM OF ONE FLAGGER SHALL BE STATIONED WITHIN EACH MULTI-LANE ROADWAY WORK AREA WHERE WORK IS IN A CLOSED LANE ADJACENT TO TRAFFIC AND NOT SEPERATED BY CONCRETE SAFETY BARRIER.

6. PAVEMENT MARKING:

ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED OR MASKED. WHEN THE WORK WILL OCCUPY A LOCATION MORE THAN THREE DAYS, ALL TRANSITION TAPERS, CROSSOVERS, AND EDGE LINES ALONG CHANNELIZING DEVICES SHALL BE MARKED WITH SOLID 4" WIDE PAVEMENT MARKING.

7. FIRST MODULE OF IBS:

THE FIRST MODULE OF EACH INERTIAL BARRIER SYSTEM (IBS) SHALL HAVE A MINIMUM OF 2 SQ. FT. OF FLOURESCENT ORANGE PRISMATIC GRADE RETROREFLECTIVE SHEETING FACING TRAFFIC. EITHER A VERTICAL RECTANGLE OR DIAMOND SHAPE MAY BE USED.

8. PEDESTRIAN / BICYCLE SAFETY:

WORK ZONE SIGNS SHALL NOT INHIBIT PEDESTRIAN AND BICYCLE TRAFFIC ON SIDEWALKS OR OTHER AREAS DESIGNATED FOR PEDESTRIAN OR BICYCLE USE.

CONSIDERATION SHOULD BE MADE TO SEPERATE PEDESTRIAN AND BICYCLE MOVEMENTS FROM BOTH WORK SITE ACTIVITY AND MOTOR VEHICLE TRAFFIC. PEDESTRIANS AND BICYCLISTS SHOULD BE APPROPRIATELY DIRECTED WITH ADVANCE SIGNING THAT ENCOURAGES THEM TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY. IN URBAN AND SUBURBAN AREAS WITH HIGH MOTOR VEHICLE TRAFFIC VOLUMES, THESE SIGNS SHOULD BE PLACED AT INTERSECTIONS SO THAT PEDESTRIANS AND BICYCLISTS ARE NOT CONFRONTED WITH MID-BLOCK WORK SITES THAT WILL INDUCE THEM TO ATTEMPT SKIRTING THE WORK SITE OR MAKING A MID-BLOCK CROSSING.

9. CHANGED STOP CONDITIONS:

ATTACH TWO FLAGS AND A RED TYPE B HIGH INTENSITY WARNING LIGHT TO ANY STOP SIGN THAT CREATES A NEW STOP CONDITION OR MOVES THE STOP CONDITION TO A NEW LOCATION. LEAVE FLAGS AND LIGHTS IN PLACE FOR AT LEAST THE FIRST 30 DAYS. INSTALL W3-1a (SYMBOLIC STOP AHEAD) SIGN IN ADVANCE OF STOP SIGN IF STOP SIGN IS NOT VISIBLE FOR A MINIMUM OF DISTANCE 'A' (SEE CHART ON TE710) OR IF STOP CONDITION IS MOVED TO LESS THAN DISTANCE 'A' FROM AN EXISTING STOP AHEAD SIGN.

10. LUMP SUM BIDDING:

WHEN TRAFFIC CONTROL IS BID LUMP SUM, ADDITIONAL DEVICES WILL BE PAID FOR AS EXTRA WORK.

11. NIGHT TIME LIGHTING:

WHEN NIGHTTIME WORK IS REQUIRED, FLOODLIGHTS SHOULD BE USED TO ILLUMINATE FLAGGER STATIONS, EQUIPMENT CROSSINGS, AND OTHER AREAS WHERE EXISTING LIGHT IS NOT ADEQUATE FOR THE WORK TO BE PERFORMED SAFELY.

IN NO CASE SHALL FLOODLIGHTS BE PERMITTED TO CREATE A DISABLING GLARE FOR THE DRIVER. THE ADEQUACY OF THE FLOODLIGHT PLACEMENT AND ELIMINATION OF POTENTIAL GLARE SHOULD BE CHECKED BY DRIVING THROUGH THE PROJECT.

12. NCHRP REPORT 350 CRASHWORTHY REQUIREMENTS:

TRAFFIC CONTROL DEVICES SHALL MEET THE EVALUATION CRITERIA IN NCHRP REPORT 350 AS SUPPLEMENTED BY FHWA MEMORANDUM 'IDENTIFYING ACCEPTABLE HIGHWAY SAFETY FEATURES,' DATED JULY 25, 1997. AVAILABLE ON THE INTERNET AT http://safety.fhwa.dot.gov/fourthlevel/pro_res_road_nchrp350.htm.

THE CONTRACTOR SHALL:

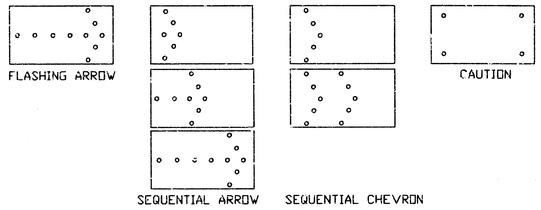
1) PROVIDE TO THE ENGINEER A COPY OF THE MANUFACTURER'S SELF-CERTIFICATION THAT ANY CATEGORY 1 (i.e. - PLASTIC TRIMLINE CONES, TUBULAR MARKERS, DRUMS WITHOUT ATTACHMENTS) AND CATEGORY 2 (i.e. - PORTABLE SIGN STANDS (WITH SIGNS), TYPE II AND III BARRICADES, AND VERTICAL PANELS) DEVICES USED ON THE PROJECT ARE NCHRP REPORT 350 COMPLIANT.

2) PROVIDE TO THE ENGINEER, UPON REQUEST, A COPY OF THE ENTIRE FHWA NCHRP REPORT 350 ACCEPTANCE LETTER (WZ-xxx) FOR ANY CATEGORY 2 DEVICE (i.e. - PORTABLE SIGN STANDS (WITH SIGNS), TYPE II AND III BARRICADES, AND VERTICAL PANELS) USED ON THE PROJECT. WORK ZONE FHWA NCHRP REPORT 350 ACCEPTANCE LETTERS (WZ-xxx) ARE AVAILABLE ON THE INTERNET AT http://safety.fhwa.dot.gov/fourthlevel/hardware/listing.cfm?code=workzone.

3) CERTIFY THAT THE TRUCK MOUNTED ATTENUATORS (TMA'S) (WHICH ARE DEFINED AS CATEGORY 3 DEVICES BY THE FHWA MEMORANDUM) WERE PURCHASED PRIOR TO OCTOBER 1, 1998, AND INCLUDE A COPY OF THE ENTIRE FHWA ACCEPTANCE LETTER STATING THAT THE TMA'S ARE NCHRP REPORT 230 COMPLIANT; OR IF THE DEVICES WERE PURCHASED AFTER OCTOBER 1, 1998, INCLUDE A COPY OF THE ENTIRE FHWA'S ACCEPTANCE LETTER STATING THAT THE TMA'S ARE NCHRP REPORT 350 COMPLIANT.

ALL CATEGORY 1 & 2 DEVICES USED ON PROJECTS LET AFTER JANUARY 1, 2002 SHALL BE NCHRP REPORT 350 COMPLIANT. TMA'S PURCHASED PRIOR TO OCTOBER 1, 1998, MAY BE USED UNTIL THE END OF THEIR SERVICEABLE LIVES.

ARROW DISPLAYS



ARROW DISPLAY ELEMENTS SHALL BE CAPABLE OF A MINIMUM 50 PERCENT DIMMING FROM THEIR FULL-RATED LAMP VOLTAGE. FULL LAMP VOLTAGE SHOULD BE USED FOR DAY AND DIMMED MODE SHALL BE USED FOR NIGHT. AN ARROW DISPLAY IN THE CAUTION MODE SHALL BE USED ONLY FOR SHOULDER WORK OR ROADSIDE WORK NEAR THE SHOULDER.

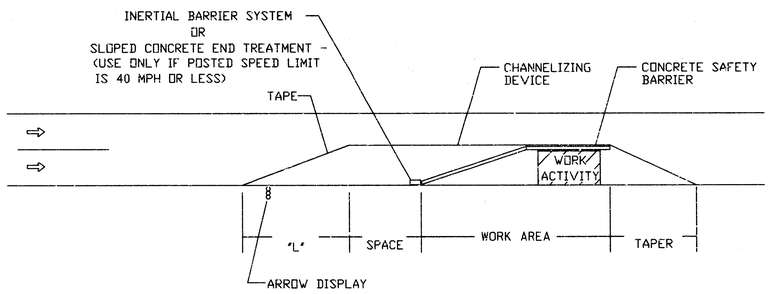
BUFFER SPACE:

SPEED (MPH)*	20	25	30	35	40	45	50	55	60	65	70
LENGTH (ft)	35	50	65	115	185	215	280	330	410	500	575

NEITHER WORK ACTIVITY NOR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIAL SHOULD OCCUR IN THE BUFFER SPACE. WHEN A PROTECTION VEHICLE IS PLACED IN ADVANCE OF THE WORK SPACE, ONLY THE SPACE UPSTREAM OF THE VEHICLE CONSTITUTES THE BUFFER SPACE.

* POSTED SPEED PRIOR TO WORK STARTING

IF TEMPORARY CONCRETE SAFETY BARRIER IS USED TO SEPERATE APPROACHING TRAFFIC FROM THE WORK ACTIVITY, THE BARRIER SHALL BE CONSIDERED PART OF THE WORK AREA. A FULL LANE WIDTH SHOULD BE AVAILABLE THROUGHOUT THEN LENGTH OF THE BUFFER SPACE. FOR EXAMPLE:



NO.	DATE	REVISIONS	BY	APP'D
3	3-17-03	MODIFIED NOTE 12	M.H.	S.A.B.
2	9-26-02	MODIFIED NOTES	M.H.	S.A.B.
1	11-13-01	MODIFIED NOTES 6 & 10	J.H.	S.A.B.

~~KANSAS DEPARTMENT OF TRANSPORTATION~~

GENERAL TRAFFIC CONTROL

~~TE700~~ 9/1/00

FHWA APPROVAL	4-23-03	APP'D Michael P. McKenna	
DESIGNED L.E.R.	DETAILED B.A.H.	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

Revisions

LAKEPOINT OF WICHITA
STORM WATER SEWER
TRAFFIC CONTROL DETAILS
CITY OF WICHITA, KANSAS
JAMES ARKOMS P.E. - ACTING CITY ENGINEER
C.O.W. Private Proj.# 1502 PPS 0.0.A.# 60.0861

POE & ASSOCIATES, INC.
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

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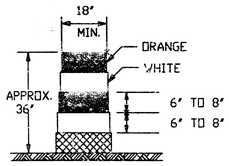
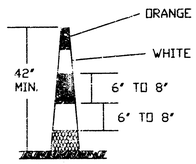
Designed By: M. Thompson / J. Dickman
Drawn By: J. Dickman
Poe Job No.: 1769
Date: December 2004

Sheet 7 of 10

P:\1769\base.dwg Mon Dec 06 10:00:14 2004 Jason P. Dickman, Poe & Associates, Inc.



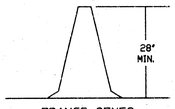
DRUM



TRIM LINE
CHANNELIZER

DRUMS AND TRIM LINE CHANNELIZERS SHALL BE RETROREFLECTORIZED FULL CIRCUMFERENCE WITH AT LEAST TWO ORANGE AND TWO WHITE 6" TO 8" WIDE STRIPES. ADDITIONAL STRIPES MAY BE NON-REFLECTIVE. IF THERE ARE NON-REFLECTIVE SPACES BETWEEN ADJACENT STRIPES, THEY SHALL BE NO MORE THAN 2" WIDE.

ALL RETROREFLECTIVE STRIPES ON DRUMS SHALL BE TYPE III HIGH PERFORMANCE SHEETING. THE WHITE STRIPES ON TRIM LINE CHANNELIZERS SHALL BE TYPE III HIGH PERFORMANCE SHEETING. PROJECTS LET AFTER JANUARY 1, 2002 WILL REQUIRE THAT THE ORANGE STRIPES ON ALL TRIM LINE CHANNELIZERS BE FLOURESCENT ORANGE PRISMATIC GRADE SHEETING.



ORANGE CONES

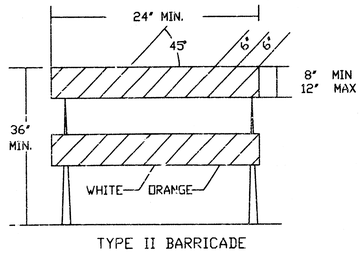
CONES MAY BE USED AS CHANNELIZING DEVICES FOR DAYTIME OPERATIONS ONLY. THEY WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE SUBSIDIARY TO OTHER TRAFFIC CONTROL BID ITEMS. THE ENGINEER MAY REQUIRE THAT CONES BE SUPPLEMENTED BY OTHER TRAFFIC CONTROL DEVICES IN CERTAIN SITUATIONS.

ITEM	LOCATION	CROSS-OVERS	DIVERSIONS	TANGENTS	TAPERS	RAMPS	HEAD TO HEAD	OBJECT IDENTIFIER	
PORTABLE									
	DRUMS	YES	YES	YES	YES	YES	(1)	YES	
	TRIM LINES	YES	YES	YES	YES	YES	(1)	YES	
	VERTICAL PANELS	(2)	(2)	(2)	(2)	(2)	(1,2)	YES	
	DIRECTION INDICATOR BARRICADE	NO	NO	NO	YES	NO	NO	NO	
	TYPE II BARRICADE	(2)	(2)	(2)	(2)	NO	NO	YES	
FIXED									
	TUBULAR MARKERS	(3)	(3)	(3)	NO	(3)	YES	NO	
	VERTICAL PANELS	(3)	(3)	(3)	(3)	(3)	(3)	YES	

(1) Not allowed on centerline delineation along freeways or expressways.

(2) Slashes must slope down toward direction traffic is to pass.

(3) May be used upon the approval of the Engineer.

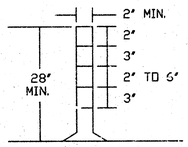


TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.

THE ENTIRE AREA OF BARRICADE RAILS, BOTH FRONT AND BACK, SHALL BE FULLY REFLECTORIZED WITH TYPE III HIGH PERFORMANCE RETROREFLECTIVE SHEETING.

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TUBULAR MARKERS

TAPER FORMULAS:

$L = WS$ FOR SPEEDS OF 45 MPH OR MORE

$L = WS^2/60$ FOR SPEEDS OF 40 MPH OR LESS

WHERE: L = MINIMUM LENGTH OF TAPER IN FEET
S = NUMERICAL VALUE OF POSTED SPEED PRIOR TO WORK STARTING IN MPH
W = WIDTH OF OFFSET IN FEET

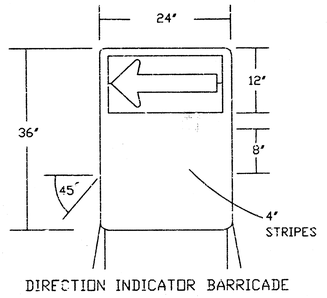
CHANNELIZER PLACEMENT:

(A) THE SPACING BETWEEN DEVICES IN THE TAPER SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO THE POSTED SPEED LIMIT IN MPH PRIOR TO WORK STARTING.

(B) THE SPACING BETWEEN DEVICES IN THE WORK ZONE SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO TWO TIMES THE POSTED SPEED LIMIT IN MPH PRIOR TO WORK STARTING.

(C) CHANNELIZING DEVICES SHALL BE PLACED FOR OPTIMUM VISABILITY, NORMALLY AT RIGHT ANGLES TO THE TRAFFIC FLOW.

(D) CHANNELIZING DEVICES PLACED ALONG SHOULDER EDGES OR IN DROPOFFS SHALL HAVE A MINIMUM OF 24" FROM THE TOP OF THE CHANNELIZING DEVICE TO THE TOP OF THE PAVEMENT.

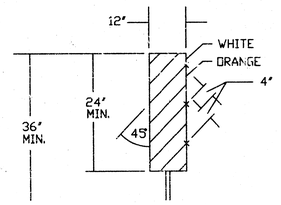


DIRECTION INDICATOR BARRICADE

THE ARROW PANEL SHALL BE BLACK ON FLUORESCENT ORANGE PRISMATIC GRADE SHEETING. THE STRIPES SHALL BE ORANGE AND WHITE TYPE III HIGH PERFORMANCE RETROREFLECTIVE SHEETING SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS.

THE DIRECTION INDICATOR BARRICADE SHALL BE USED IN SERIES TO DIRECT THE MOTORIST INTO THE INTENDED LANE OF TRAVEL.

THE ARROW PANEL SHOULD NOT BE VISIBLE TO OPPOSING TRAFFIC.



VERTICAL PANEL

THE ENTIRE AREA OF VERTICAL PANELS, BOTH FRONT AND BACK, SHALL BE FULLY REFLECTORIZED WITH TYPE III HIGH PERFORMANCE RETROREFLECTIVE SHEETING. THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

NO.	DATE	REVISIONS	BY	APP'D
3				
2	9-26-02	MODIFIED NOTES	M.H.	S.A.B.
1	11-13-01	REVISED CHANNELIZING DEVICE MATRIX	J.H.	S.A.B.

~~KANSAS DEPARTMENT OF TRANSPORTATION~~

CHANNELIZING DEVICES

~~TE702~~ 9/1/00

FHWA APPROVAL	4-23-03	APP'D Michael P. McKenna	
DESIGNED L.E.R.	DETAILED B.A.P.	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

LAKEPOINT OF WICHITA
STORM WATER SEWER
TRAFFIC CONTROL DETAILS
CITY OF WICHITA, KANSAS
JAMES ARMOUR, P.E. - ACTING CITY ENGINEER
C.O.W. Project # 1560-PPS O.C.A.# 607861

POE & ASSOCIATES, INC.
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316-683-4114 ■ FAX 316-683-4444

FINAL
Designed By: M. Thompson / J. Dickman
Drawn By: J. Dickman
Poe Job No.: 1768
Date: December 2004

Sheet
8 of 10

P:\1768\base.dwg Mon Dec 06 10:00:25 2004 Jason P. Dickman, Poe & Associates, Inc.

GENERAL NOTES

1. MAINTENANCE:

THE CONTRACTOR SHALL MAINTAIN ALL SIGNS AND DEVICES IN AN UPRIGHT POSITION. THE CONTRACTOR SHALL CLEAN OR REPLACE ANY DAMAGED OR ILLEGIBLE SIGN OR DEVICE AS DIRECTED BY THE ENGINEER.

2. EXISTING SIGNS:

IF EXISTING SIGNS THAT ARE TO REMAIN (WHETHER DENOTED ON THE PLANS OR NOT) INTERFERE WITH CONSTRUCTION WORK, THE CONTRACTOR SHALL REMOVE, STORE, AND RESET THE SIGNS. THIS SHALL BE SUBSIDIARY TO OTHER TRAFFIC CONTROL BID ITEMS. SIGNING DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

3. CONFLICTING SIGNS AND SIGNS NOT IN USE:

SIGNS THAT ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLAN OR DO NOT APPLY TO THE TRAFFIC OPERATIONS SHALL BE IMMEDIATELY REMOVED, TURNED SO NOT VISIBLE TO TRAFFIC FROM ANY DIRECTION, OR COMPLETELY COVERED WITH ADEQUATE OPAQUE WATERPROOF MATERIAL. TAPE SHALL NOT BE APPLIED TO THE FACE OF THE SIGN.

4. TEMPORARY AND POST MOUNTED SIGNS:

TRAFFIC CONTROL SIGNS THAT ARE ANTICIPATED TO REMAIN IN PLACE FOR 3 DAYS OR LESS ARE CONSIDERED "TEMPORARY." TEMPORARY SIGNS SHALL BE MOUNTED ON AN APPROVED SUPPORT AT A MINIMUM HEIGHT OF 12". TRAFFIC CONTROL SIGNS IN PLACE FOR OVER 3 DAYS ARE REQUIRED TO BE MOUNTED ON APPROVED POSTS. A MINIMUM OF 42" OF THE APPROVED POST MUST BE BELOW THE GROUND SURFACE WITH ADEQUATE BACKFILL AND COMPACTION. ALL POSTS SHALL EXTEND NO GREATER THAN 6" ABOVE THE SIGN.

5. SHEETING:

ALL ORANGE SIGNS SHALL BE RETROREFLECTORIZED WITH FLOURESCENT ORANGE PRISMATIC GRADE SHEETING. ALL OTHER SIGNS SHALL BE RETROREFLECTORIZED WITH TYPE III HIGH PERFORMANCE SHEETING OF STANDARD COLORS.

6. ROLL-UP SIGNS:

ROLL-UP SIGNS MAY BE USED FOR TEMPORARY WARNING SIGNS. THEY MUST BE FLOURESCENT ORANGE PRISMATIC GRADE RETROREFLECTIVE SIGNS OF OPAQUE MATERIAL. MESH SIGNS ARE NOT ALLOWED.

7. SIGNS INVOLVING SPEEDS:

THE R2-5E (REDUCED SPEED ⊗ AHEAD) SHOULD BE USED ONLY IF THE ENGINEER DETERMINES THAT A REDUCED SPEED IS REQUIRED ON THE PROJECT.

THE M4-20 (WORK ZONE) PLAQUE SHALL BE PLACED ABOVE ALL SPEED LIMIT SIGNS, (R2-1), EXISTING AND TEMPORARY.

FOR SPEEDS OF 30 MPH OR LESS, THE W1-1(TURN) OR W1-3(REVERSE TURN) SHOULD BE USED. FOR SPEEDS OF 35 MPH OR MORE, THE W1-2(CURVE) OR W1-4(REVERSE CURVE) SHOULD BE USED. THE W13-1(MPH) IS TO BE ELIMINATED IF THE ADVISORY SPEED IS WITHIN 5 MPH OF THE SPEED LIMIT.

8. SIGNS CONTROLLING WORK AREA:

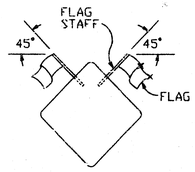
THE G20-2A(END ROAD WORK) SHOULD BE PLACED 500' FROM THE END OF THE ACTUAL WORK AREA, NOT NECESSARILY AT THE EXTREME LIMITS OF THE PROJECT.

WHERE TWO WORK AREAS ARE LESS THAN 1 MILE APART IN RURAL AREAS OR 1/4 MILE APART IN URBAN AREAS, THE G20-2A(END ROAD WORK) FOR THE FIRST WORK AREA AND THE W20-1(ROAD WORK) FOR THE SECOND WORK AREA SHOULD BE ELIMINATED.

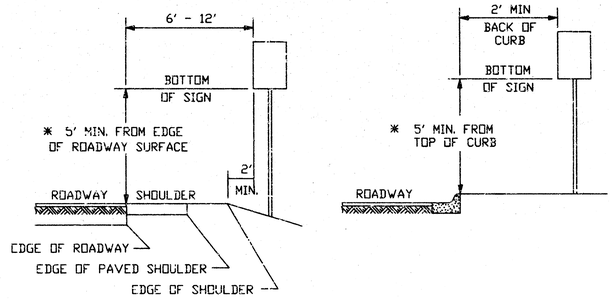
9. WARNING LIGHTS ON SIGNS:

TYPE B HIGH INTENSITY LIGHTS SHALL BE USED ON ALL CONSTRUCTION WARNING ACTION SIGNS. ON ALL OTHER CONSTRUCTION WARNING SIGNS, TYPE B HIGH INTENSITY LIGHTS ARE TO BE USED AS DIRECTED BY THE ENGINEER.

THEY SHALL NOT BE INSTALLED ON SIGNS MOUNTED LESS THAN 5' HIGH ON TEMPORARY SUPPORTS. THEY SHALL BE MAINTAINED SO THAT THEY ARE VISIBLE ON A SUNNY DAY FROM A DISTANCE OF 1000' WHEN VIEWED WITHOUT THE SUN DIRECTLY ON OR BEHIND THE DEVICE. IF A TYPE B LIGHT HAS A SEPARATE BATTERY CASE, THE BATTERY CASE SHALL BE MOUNTED NO HIGHER THAN 12" ABOVE THE GROUND AND MOUNTED BEHIND THE SIGN POST. FOR A TYPE B LIGHT, WHERE THE LENS IS MOUNTED TO THE TOP OF THE BATTERY CASE, THE TYPE B LIGHT (LENS AND BATTERY) SHALL BE MOUNTED AT THE TOP OF THE SIGN.



TWO (2) 18" x 18" FLOURESCENT RED-ORANGE FLAGS ARE TO BE ATTACHED IN THE POSITION SHOWN ON THE W20-2(DETOUR), W1-1(TURN), W1-2(CURVE), W1-3(REVERSE TURN), W1-4(REVERSE CURVE), W3-3(SIGNAL AHEAD), W4-2(LANE REDUCTION), W20-4(ONE LANE ROAD), W20-5(LANE CLOSED), W20-7A(FLAGGER), AND W20-7B (BE PREPARED TO STOP) SIGNS AND ANY OTHER ACTION SIGNS AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER. THE FLAGS AND STAFFS ARE TO BE ATTACHED IN SUCH A MANNER THAT THE SIGN WILL NOT BE OBSCURED. THE FLAGS MAY BE EITHER A CLOTH OR VINYL MATERIAL. THE FLAGS SHALL BE SUBSIDIARY TO THE CONSTRUCTION SIGN BID ITEMS.



* NOTE:

A. IN BUSINESS, COMMERCIAL, AND RESIDENTIAL DISTRICTS, THE DISTANCE BETWEEN THE BOTTOM OF THE SIGN AND THE TOP OF THE NEAR EDGE OF THE TRAVEL WAY SHALL BE AT LEAST 7'.

B. LARGE SIGNS HAVING AN AREA EXCEEDING 54 SQUARE FEET THAT ARE INSTALLED ON MULTIPLE BREAKAWAY POSTS SHALL BE MOUNTED A MINIMUM OF 7' ABOVE THE GROUND.

C. THE HEIGHT TO THE BOTTOM OF THE SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN MAY BE 1' LESS THAN THE APPROPRIATE HEIGHT SPECIFIED ABOVE.

HEIGHT AND LATERAL DIMENSIONS FOR POST MOUNTED SIGNS
(SIGNS LEFT IN PLACE OVER 3 DAYS)

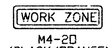
SIGN LAYOUT INFORMATION



W20-7b
48"x 48"
(BLACK/ORANGE)



R2-5e
(BLACK/WHITE)



M4-20
(BLACK/ORANGE)

	STD. SIZE	EXPWY/FREEWAY
	7' C	8' C
	7' C	8' C
	7' C	10' E
	4' D	8' D
	24"x 36"	48"x 72"
	3' C	6' C
	24"x 6'	48"x 12"

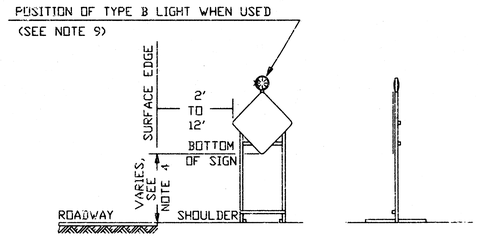
NOTE:
TEXT DIMENSIONS ARE IN INCHES.
BORDER IS BLACK NON-REFLECTIVE.

ADVANCE WARNING SIGN SPACING (IN FEET):

	A	B	C
URBAN (40 MPH OR LOWER)	100	100	100
URBAN (45 MPH OR HIGHER)	350	350	350
RURAL	500	500	500
EXPRESSWAY/FREEWAY	1000	1500	2640

THE SPACING BETWEEN ANY SIGNS MAY BE ADJUSTED AS APPROVED BY THE ENGINEER IN ORDER TO MAXIMIZE VISIBILITY.

THE SPACING BETWEEN SIGNS SHALL BE NO LESS THAN 100', UNLESS DIRECTED BY THE ENGINEER.



(SEE NOTE 6 FOR ROLL-UP SIGNS OPTION)

HEIGHT AND LATERAL DIMENSIONS FOR SIGNS MOUNTED ON SKIDS OR OTHER PORTABLE SUPPORTS

NO.	DATE	REVISIONS	BY	APP'D
3	3/17/03	MODIFIED NOTES	M.H.	S.A.B.
2	9-26-02	MODIFIED NOTES	M.H.	S.A.B.
1	6-11-01	REDUCED MOUNTING HEIGHT	J.H.	S.A.B.

~~KANSAS DEPARTMENT OF TRANSPORTATION~~

TRAFFIC CONTROL SIGNS

~~TE710~~ 9/1/00

FHWA APPROVAL	4-23-03	APP'D Michael P. McKenna	
DESIGNED L.E.R.	DETAILED B.A.H.	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

LAKEPOINT OF WICHITA
STORM WATER SEWER
TRAFFIC CONTROL DETAILS
CITY OF WICHITA, KANSAS
JAMES ARMOUR, P.E. - ACTING CITY ENGINEER
C.O.W. Project No. 1500-PPS - D.C.A.# 647861

POE & ASSOCIATES, INC.
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4241
Phone 316.683-4114 ■ FAX 316.683-4444

FINAL

Designed By: N. Thompson / J. Dickman
Drawn By: J. Dickman
Pon Job No.: 1765
Date: December 2004

Sheet 9 of 10

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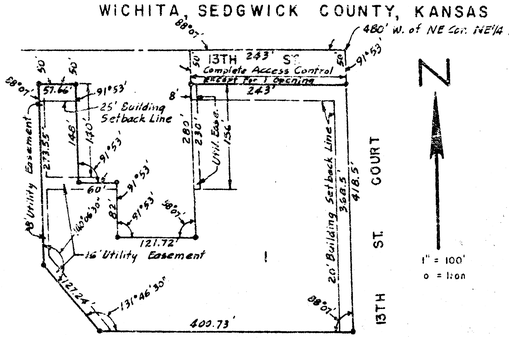
SHT 13

M-2 5-14

KARDATZKE THIRD ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS



This plat of "KARDATZKE THIRD ADDITION", Wichita, Sedgwick County, Kansas, has been approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas, and is hereby transmitted to the Board of Commissioners of the City of Wichita, Kansas, with the recommendation that such plat be approved as proposed.

Dated this 13th day of MAY, 1968.

Wichita-Sedgwick County Metropolitan Area Planning Commission

By _____ Acting-Chairman

_____ Secretary
C. Bicklow Foster

Approved by the Board of City Commissioners this _____ day of June, 1968.

_____ Mayor
William O. Anderson

_____ City Clerk
Ralph C. Eberly

Approved by the Board of County Commissioners this _____ day of _____, 19__.

_____ Chairman
Elmer S. Peters

_____ Commissioner
Tom Scott

_____ Commissioner
Earl E. Rich

_____ County Clerk
Marie Warden by _____ Deputy

Entered on transfer record this 2nd day of August, 1968.

Marie Warden by M. Cain County Clerk
Marie Warden by M. Cain Deputy

State of Kansas)
County of Sedgwick) ss

This is to certify that this instrument was filed for record in the Register of Deeds Office on the 2nd day of August, 1968, at 2:00 o'clock P. M., and is duly recorded.

16144

Rufus E. Deering Register of Deeds

Pearl E. Gilbert Deputy

State of _____)
County of _____) ss

Be it remembered, that on this _____ day of _____, 19__, before me the undersigned, a Notary Public in and for the County and State aforesaid, came _____, President of Alexander Hamilton Life Insurance Company of America, a Corporation, to me personally known to be the same person who executed the within instrument as _____ President of said corporation, and such person duly acknowledged the execution of the same as _____ President, for and on behalf of, and as the act and deed of said corporation. In testimony whereof, I have hereunto set my hand and affixed my official seal the day and year above written.

_____ Notary Public

My Commission expires _____

CAROLYN J. STAGG

State of Kansas)
County of Sedgwick) ss

I, Kenneth O. Taylor, Civil Engineer in said State and County, do hereby certify that I have surveyed and platted "KARDATZKE THIRD ADDITION", Wichita, Sedgwick County, Kansas, and that the accompanying plat is a REPLAT of Part of Zackula Addition to Wichita, Sedgwick County, Kansas, and Part of Kardatzke 2nd Addition to Wichita, Kansas, and is a true and correct exhibit of said survey described as follows: Beginning at a point 480 feet west of the NE corner of the NE¼ of Section 14, T27S, R1W of the 6th P.M., Sedgwick County, Kansas; thence west on the north line of said NE¼, 243 feet; thence south 280 feet; thence west 121.72 feet; thence south 130.5 feet; thence east 364.72 feet, thence north 410.5 feet to the point of beginning. Also Lot 2, except the north 148 feet and all of Lot 4 in Zackula Addition to Wichita, Sedgwick County, Kansas. Also the north 8 feet of Lot 1 lying west of 13th Street Court in Kardatzke 2nd Addition to Wichita, Kansas.

Kenneth O. Taylor Civil Engineer
Kenneth O. Taylor

Know all men by these presents that Terrace Gardens Skilled Nursing Center, Inc., by E. E. Kardatzke, President, has caused the land described in the Civil Engineer's certificate to be platted into a lot and a street to be known as "KARDATZKE THIRD ADDITION", Wichita, Sedgwick County, Kansas. Utility easements as indicated on the plat are hereby granted for the construction and maintenance of all public utilities. The street is hereby dedicated to and for the use of the public. All abutter's rights of access to or from 13th Street over and across the east 243 feet of the north line of Lot 1 are hereby granted to the City of Wichita, provided, however, that the east 243 feet of Lot 1 shall have access to 13th Street at one location as may be established by the City of Wichita.

Terrace Gardens Skilled Nursing Center, Inc.

_____ President
E. E. Kardatzke

ATTEST:

_____ Secretary
Charles F. Thomas

State of Kansas)
County of Sedgwick) ss

Be it remembered, that on this _____ day of _____, 19__, before me the undersigned, a Notary Public in and for the County and State aforesaid, came E. E. Kardatzke, President of Terrace Gardens Skilled Nursing Center, Inc., a corporation, to me personally known to be the same person who executed the within instrument as President of said corporation, and such person duly acknowledged the execution of the same as President, for and on behalf of, and as the act and deed of said corporation. In testimony whereof, I have hereunto set my hand and affixed my official seal the day and year above written.

_____ Notary Public
Eugene J. Basore

My Commission expires _____

Know all men by these presents, that Fourth National Bank and Trust Co., by G. L. CARMICHAEL, VICE President, mortgagee of part of the land described in the Civil Engineer's certificate does hereby consent to the platting of "KARDATZKE THIRD ADDITION", Wichita, Sedgwick County, Kansas.

Fourth National Bank and Trust Co.

_____ Vice President
G. L. CARMICHAEL

ATTEST:

_____, Mtg. Loan Officer
R. W. ZINN

State of Kansas)
County of Sedgwick) ss

Be it remembered, that on this 6th day of FEBRUARY, 1968, before me the undersigned, a Notary Public in and for the County and State aforesaid, came G. L. CARMICHAEL, Vice President of Fourth National Bank and Trust Co., a Corporation, to me personally known to be the same person who executed the within instrument as VICE President of said corporation, and such person duly acknowledged the execution of the same as VICE President, for and on behalf of, and as the act and deed of said corporation. In testimony whereof, I have hereunto set my hand and affixed my official seal the day and year above written.

_____ Notary Public
FRANIC A. DEAN

My Commission expires AUGUST 10, 1968

Know all men by these presents, that Alexander Hamilton Life Insurance Company of America, by ALYN L. FLETCHER, Vice President, mortgagee of part of the land described in the Civil Engineer's certificate does hereby consent to the platting of "KARDATZKE THIRD ADDITION", Wichita, Sedgwick County, Kansas.

Alexander Hamilton Life Insurance Company

_____ Vice President
ALYN L. FLETCHER

ATTEST:

_____, _____

No.	Date	By	Approved	Revision
1				
2				
3				
4				

LAKEPOINT OF WICHITA
STORM WATER SEWER
KARDATZKE 3RD ADDITION PLAT
CITY OF WICHITA, KANSAS
JAMES ARNOUR, P.E. - ACTING CITY ENGINEER
C.O.W. Private Proj # 1500 PPS O.C.A.# 907361

POE & ASSOCIATES, INC.
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone: 316/685-4114 ■ FAX: 316/685-4444

FINAL

Designed By: M. Thompson / J. Dickman
Drawn By: J. Dickman
Poe Job No.: 1168
Date: December 2004

Sheet 10 of 10

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