SANITARY SEWER PLANS

# IRONHORSE AT OXFORD ADDITION

## LATERAL 73, MAIN 5, SANITARY SEWER 23

## PROJECT NO. 468-83575

**CITY OF WICHITA, KANSAS**

**NEIL D. CABLE, CITY ENGINEER**

## OCA NO. 743980

## GENERAL NOTES

1. 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.

2. EXISTING UTILITIES AND THEIR LOCATIONS, 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 PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.

3. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT (48) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

   KANSAS ONE-CALL 1-800-344-7233
   or 687-2470 (LOCAL WICHITA)

   THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

   | | |
   |---|---|
   | SOUTHWESTERN BELL TELEPHONE COMPANY | 1-800-286-8313 |
   | COX CABLEVISION | 1-316-262-0661 |
   | WESTAR ENERGY (GAS & ELECTRIC) | 383-8600 |
   | CITY OF WICHITA WATER & SEWER MAINTENANCE | 262-6000 |
   | KANSAS GAS SERVICE | 383-8600 |

4. 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 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.

5. COST OF EXCAVATION, HAULING, AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO THE PROJECT.

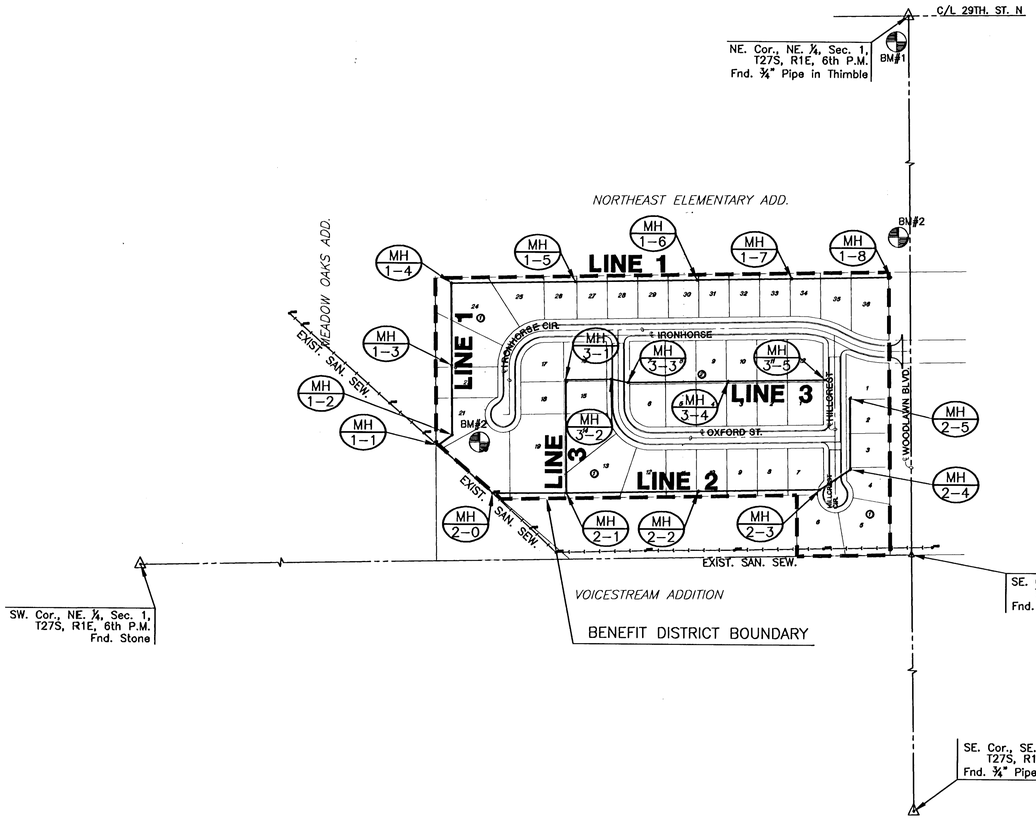
6. A PORTION OF EXCESS EXCAVATED MATERIAL SHALL BE MOUNDED AROUND MANHOLES WHICH EXTEND MORE THAN ONE (1) FOOT ABOVE THE EXISTING GROUND. SUCH MOUNDS SHALL BE CONSTRUCTED WITH A SIX (6) FOOT DIAMETER FLAT TOP WITH 4 TO 1 SIDE SLOPES DOWN TO THE ORIGINAL GROUND. THE ELEVATION OF THE FLAT TOP OF THE MOUND SHALL BE 0.4 FOOT BELOW THE TOP OF THE MANHOLE.

7. ALL STUBS AND PLUGGED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TAPE IN THE SAME MANNER AS RISERS.

8. CONNECTING TO EXISTING MANHOLES:
   PRIOR TO LAYING SEWER LINES USING EXISTING STUBS IN EXISTING MANHOLES, THE CONTRACTOR SHALL EXPOSE AND VERIFY THE ELEVATION, GRADE AND ALIGNMENT OF EXISTING STUBS AND NOTIFY THE ENGINEER OF ANY DEVIATION FROM THE PLAN. WHERE CONNECTION TO AN EXISTING MANHOLE THAT DOES NOT HAVE AN EXISTING STUB OR THE STUB IS UNUSABLE DUE TO ELEVATION GRADE OR ALIGNMENT, THE CONTRACTOR SHALL BORE CUT INTO EXISTING MANHOLE WALL TO MAKE CONNECTION USING APPROVED WATER STOP GASKET, AND RESHAPE THE EXISTING MANHOLE INVERT TO PROVIDE SMOOTH FLOW. THE COST OF CONNECTING TO EXISTING MANHOLES IS INCIDENTAL TO THE PROJECT.

9. 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.

10. ALL DISTURBED AREAS TO BE SEEDED WITH RYE GRASS AT A RATE OF 200 LBS. PER ACRE WITHIN 10 DAYS OF CONSTRUCTION. CONTRACTOR TO PREPARE GROUND PER CITY SPECIFICATIONS. COST IS SUBSIDIARY TO SITE PREPARATION AND RESTORATION.

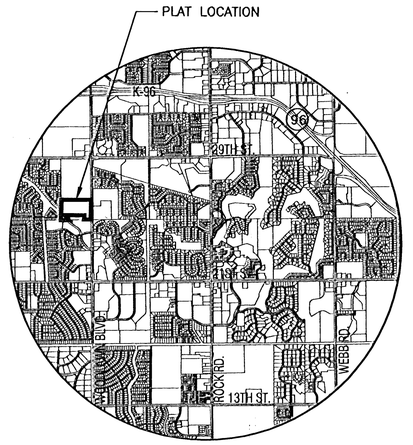



N

SCALE: 1" = 150'

LEGEND

• IRON




**VICINITY MAP**

## INDEX TO DRAWINGS


| SHEET NO. | DESCRIPTION |
|---|---|
| 1 | TITLE SHEET |
| 2 | MANHOLE DETAILS |
| 3-4 | EROSION CONTROL |
| 5 | EASEMENT GRADING DETAILS |
| 6 | LINE 1 |
| 7 | LINE 1, LINE 2 |
| 8 | LINE 2 |
| 9 | LINE 3 |
| 10 | FINAL PLAT |


## BENCHMARK

BM#1
RR Spike in NE face PP at the SW Corner of 29th. Street and Woodlawn.
ELEV. = 177.34 City Datum
1364.74 NGVD

BM#2
RR Spike in W face of 7th. PP S. of 29th. Street, W side of Woodlawn.
ELEV. = 190.70 City Datum
1378.10 NGVD

GREGORY J. ALLISON LICENSED PROFESSIONAL ENGINEER 11150 KANSAS 3/18/03

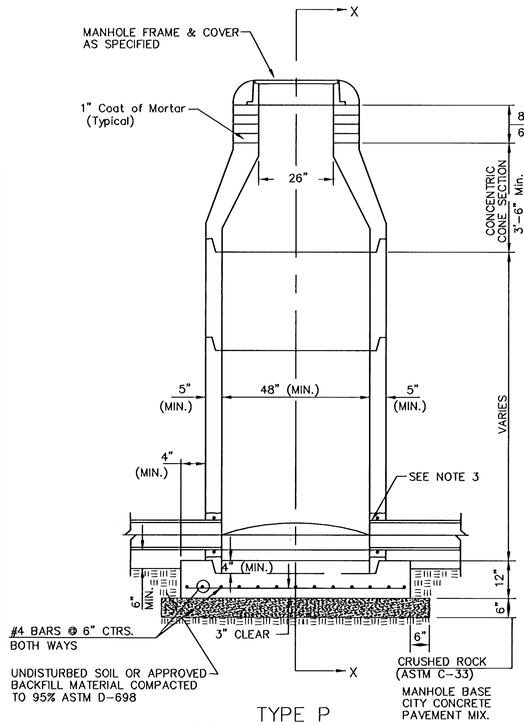
Per Plan
10/01/03
RDL.
.PDF

H:\CIVIL\02173\DWG\SAN\02173_BT.DWG

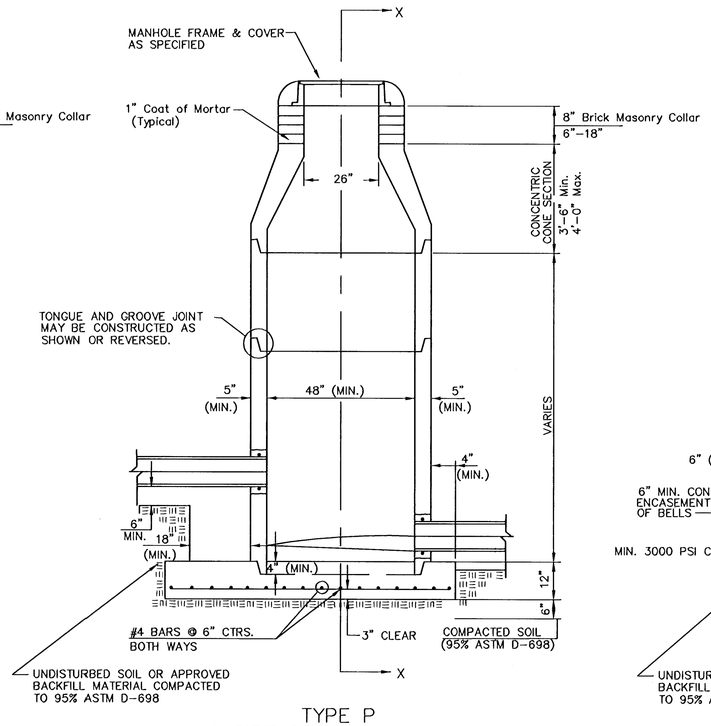
MKEC ENGINEERING CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

| | | |
|---|---|---|
| IRONHORSE AT OXFORD ADDITION (PROJECT NAME) | | |
| SANITARY SEWER TITLE SHEET (SHEET TITLE) | | |
| ASH (DESIGN BY:) | WNJ (DRAWN BY:) | ASH (CHECKED BY:) |
| MARCH 2003 (DATE) | 02173_BT (JOB NO.) | 1 / 10 (SHEET/OF) |

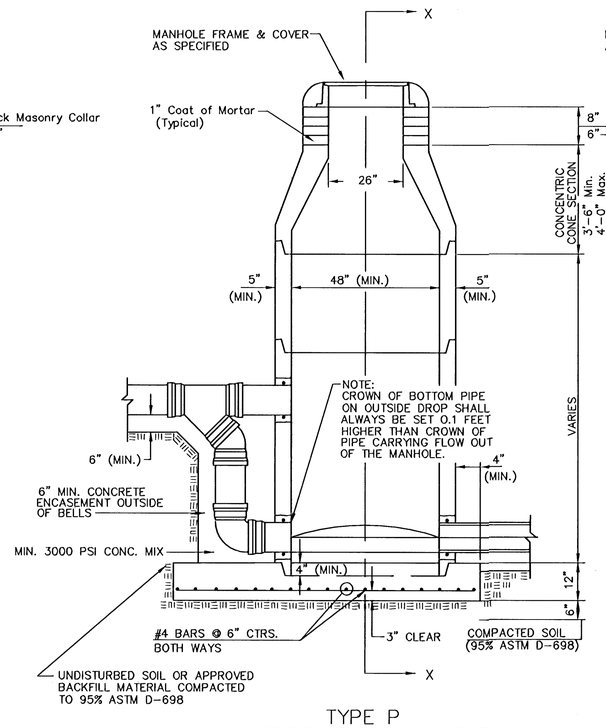
# SEWER APPURTENANCES DETAILS



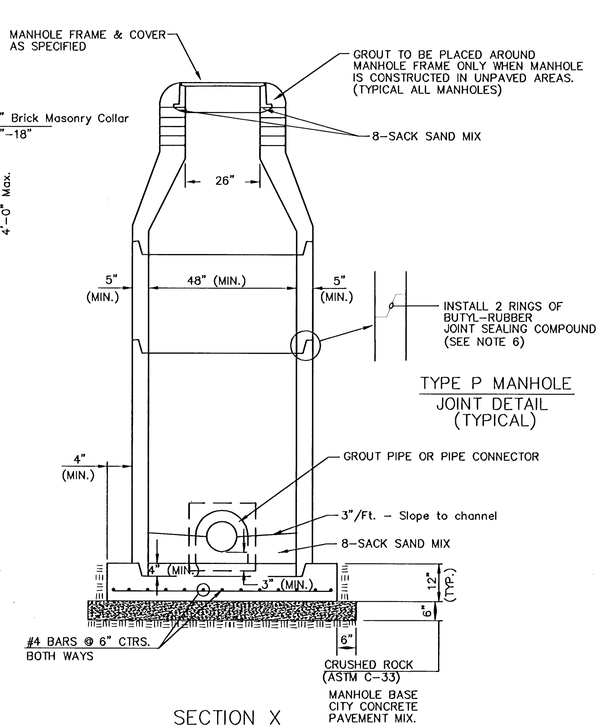

TYPE P
STANDARD MANHOLE




TYPE P
INSIDE DROP MANHOLE




TYPE P
OUTSIDE DROP MANHOLE




SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON–SHRINK GROUT SHALL BE NON–METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON–SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEMEC SERIES 66 HI–BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
9. LIFTING HOLES SHALL BE FILLED WITH NON–SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4'. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER 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 MAHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE–CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
19. CRUSHED ROCK CONFORMING TO ASTM C–33 WITH A GRADATION OF NO. 67 SHALL BE INSTALLED AT THE BASE OF THE MANHOLE TO A DEPTH OF NO LESS THAN 6", AND SHALL EXTEND NO LESS THAN 6" OUTSIDE THE DIAMETER OF THE CONCRETE FLOOR OF THE MANHOLE.
20. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
21. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.

REV. 1/05/01, MCG

H:\CWL\02172\DWG\SANMHDTLS

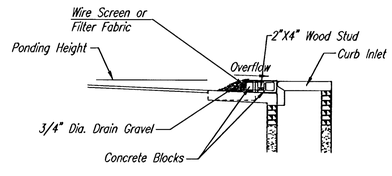
THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268–4501
(316) 268–4114 FAX

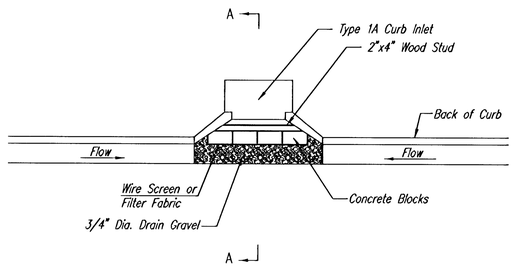
**STANDARD TYPE 'P' MANHOLES**

M. E. LINDEBAK P.E. – CITY ENGINEER

| PROJECT NUMBER | INDEX CODE |
|---|---|
| 468–83575 | XXXXXX |
| DATE: MAR 96 | SHEET 2 OF 10 |




SECTION A–A




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

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

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

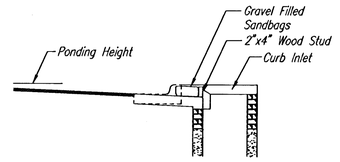
Instructions for Installing:

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

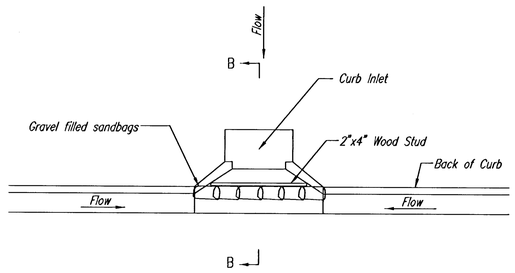
Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

Maintenance:

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

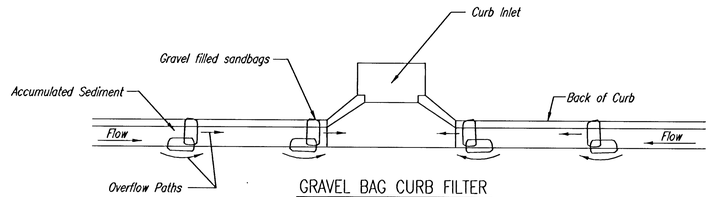



SECTION B–B




## CURB INLET SANDBAG FILTERS
(INLET PROTECTION)

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




## GRAVEL BAG CURB FILTER
(INLET PROTECTION)

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

CURB SEDIMENT TRAPS

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

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

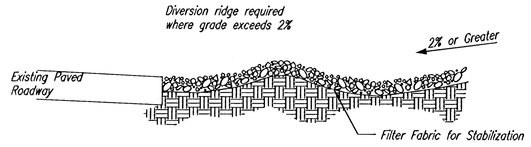
Spacing:

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

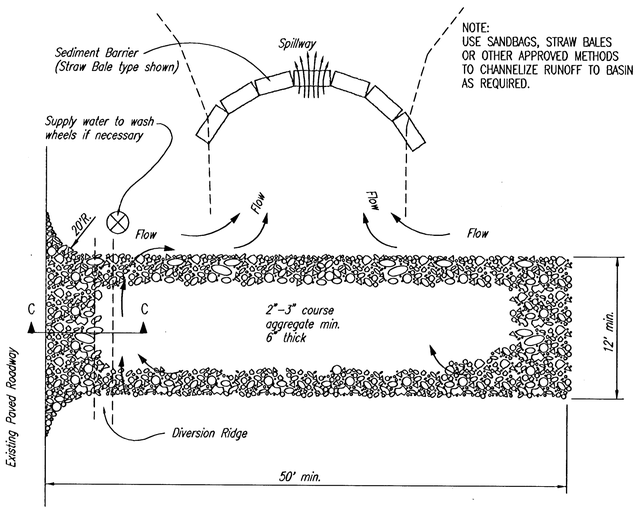
| GRADE (%) | SPACING (FEET) |
|---|---|
| 0.5 | 75 |
| 1.0 | 45 |
| 2.0 | 18 |
| 3.0 | 12 |
| 4.0 | 9 |
| 5.0 | 6 |

Maintenance:

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




SECTION C–C




## STABILIZED CONSTRUCTION ENTRANCE

NOTES:

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

CITY OF WICHITA

# SOIL EROSION BMP DETAILS

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

PROJECT NUMBER 468–83575
OCA NO. ———

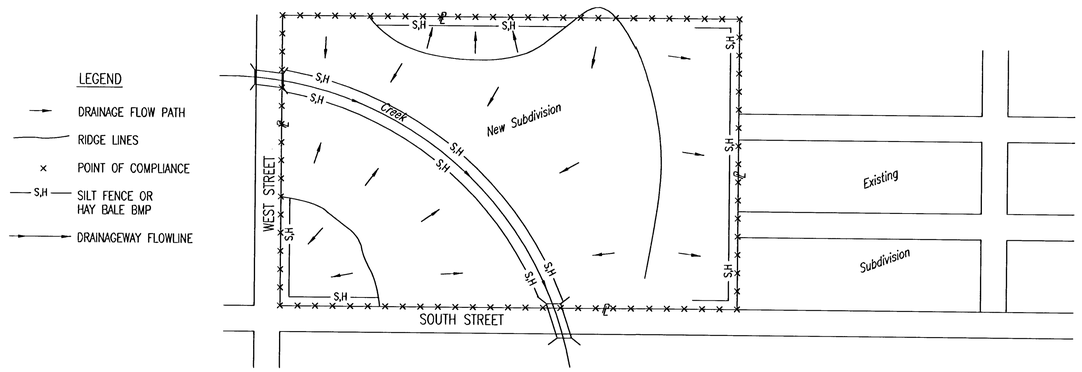
DATE MAY 2001



H:\CIVIL\02173\DWG\SAN\BMP1.DWG

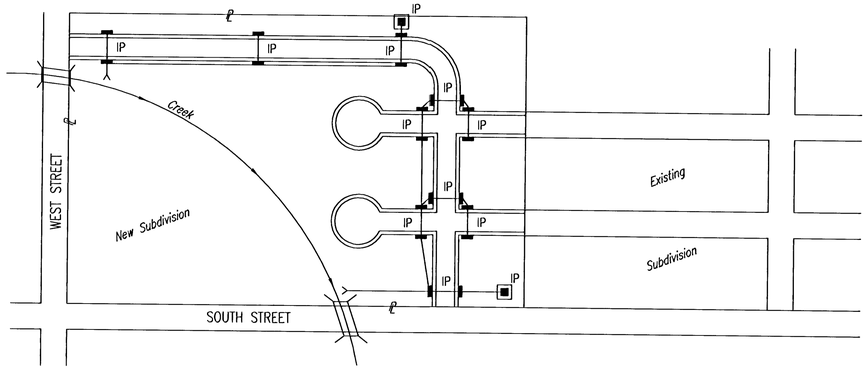
DSNR: DEP OPER: DEP SCALE: 1=1.00
:\LIBRARY\CIVIL\EROSION\WICHITA\BMP\SAN\SEBMP_PEC_DTLS3-R14.DWG 01/03/03 06:05:01 AM CST

## PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



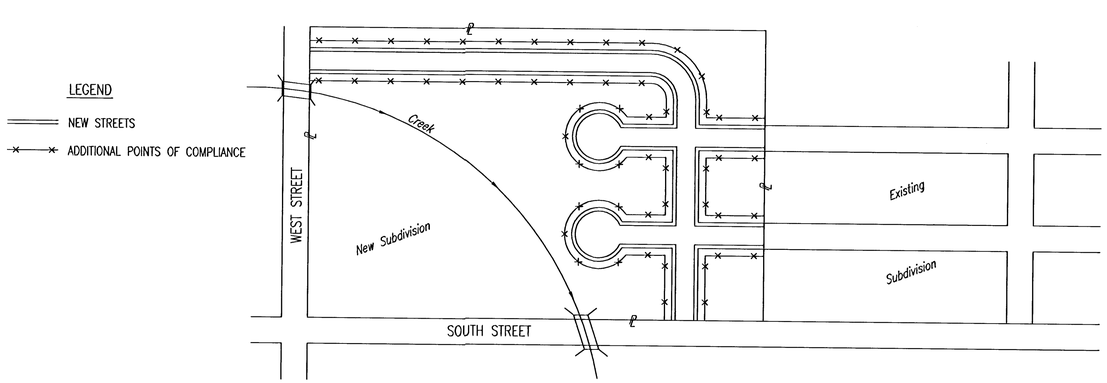

1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAYBALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE BMP'S WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR GUTTERLINES ON THE ADJACENT BOUNDRY STREETS, APPROPRIATE BMP'S WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED AT THE END OF EACH WORK DAY.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL BMP'S AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDRY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE BMP'S AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. THE SUBDIVISION DEVELOPER (OWNER) SHALL INSTALL AND MAINTAIN THE ON-SITE BMP'S.

## PHASE 2 – INSTALLATION OF STORM SEWER



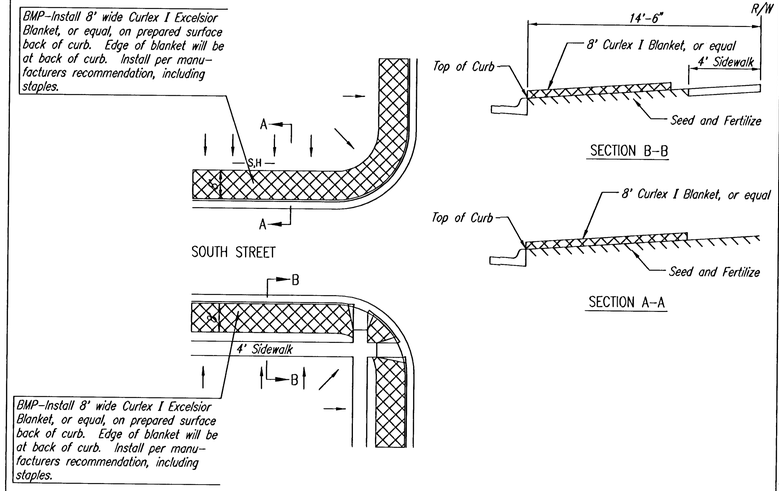

1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL BMP'S REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAYBALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION BMP'S MUST BE INSTALLED. SEE PHASE 3 – STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE BMP'S. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE BMP'S ONCE INSTALLED.
7. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

## PHASE 3 – STREET CONSTRUCTION

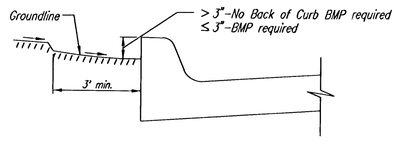



1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL BMP'S INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
   B. NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. BMP'S WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), BMP'S WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
4. SEE DETAIL THIS SHEET ON BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLIMENTED WITH HAYBALE OR SILT FENCE BMP'S AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB BMP'S.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB BMP'S IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

## BACK OF CURB PROTECTION DETAIL




## CURB BACKFILL DETAIL




GENERAL NOTES:

1. THE INTENT OF ALL BEST MANAGEMENT PRACTICES (B.M.P.'S) IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, OR ANY OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF BMP'S WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. BMP'S SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON THE BMP DETAIL SHEETS.
4. PERSONS DESTROYING BMP'S SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT BMP'S.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 5 ACRES OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL BMP'S ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLAN.
6. FOR SUBDIVISIONS SMALLER THAN 5 ACRES, SOIL EROSION BMP'S ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN BMP'S IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF BMP'S SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT BMP OTHER THAN THAT SHOWN. BMP'S, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

H:\CIVIL\021713\DWG\SAN\BMP2.DWG

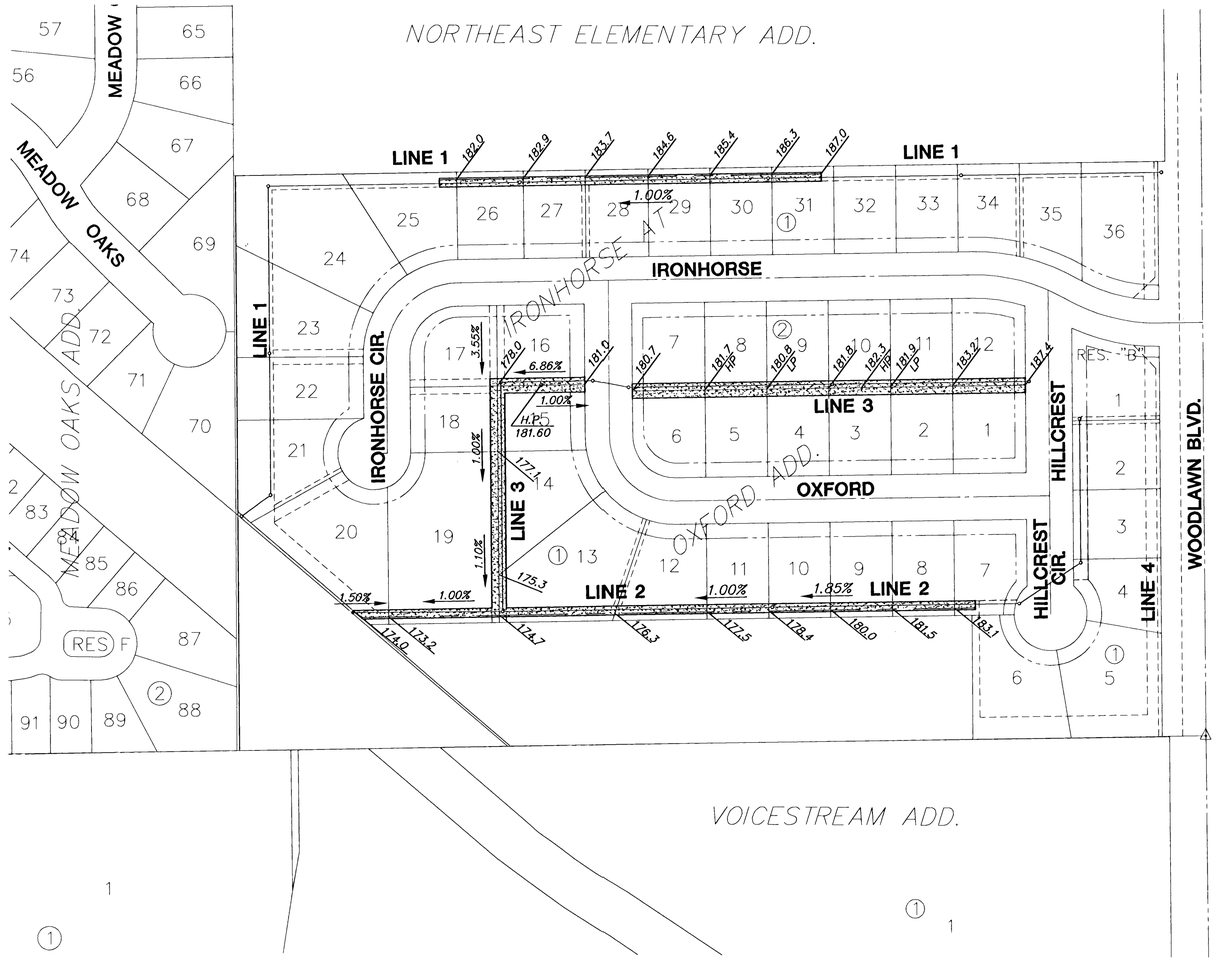
CITY OF WICHITA

# SOIL EROSION BMPS SUBDIVISION DEVELOPMENT PROCESS

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

| PROJECT NUMBER | OCA NO. |
|---|---|
| 468-83575 | |
| DATE: MAY 2001 | SHEET 4 OF 10 |

DSNR: DEP OPER: DEP SCALE: 1=1.00
I:\LIBRARY\CIVIL\EROSION\WICHITA\BMP\SAN\SEBMP_SUBDIVISION-R14.DWG 01/03/03 06:05:52 AM CST




## EASEMENT GRADING DETAILS

= AREAS TO BE GRADED (AREA SHOWN REPRESENTS DITCH BOTTOM, SIDE SLOPES ARE NOT INCLUDED)

= LOCATION FOR SEDIMENT CONTROL

H.P. = HIGH POINT
M.E. = MATCH EXISTING

**Graded widths and slopes may vary as approved by the Engineer to minimize conflict with existing trees.

Easement Grading will be bid on a lump sum basis for grading the easements to the profile and elevations shown on the Easement Grading Plan (this sheet). Approximate quantities of earthwork for easement grading are shown below. These approximate quantities are given for information only. The Contractor should verify the quantities when preparing the proposal.

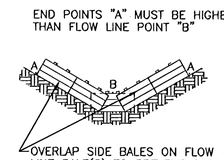
Cut 3,865 C.Y. (Approximate)
Fill 905 C.Y. (Approximate)

NOTE:
EXCESS EXCAVATION FROM EASEMENT GRADING SHALL BE DISTRIBUTED ON LOTS 7 THRU 12 BLK 2 OF IRONHORSE AT OXFORD ADDITION OR OTHER LOCATION APPROVED BY DEVELOPER. MATERIAL SHALL BE PLACED IN MAX. 9" LIFTS AND COMPACTED TO 95% STANDARD DENSITY. COST SUBSIDIARY TO PROJECT.

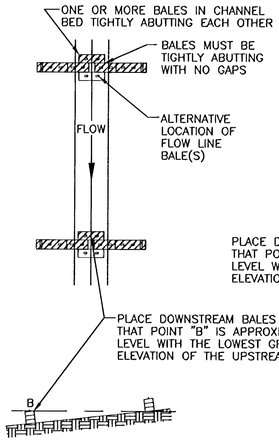
N

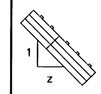
SCALE: 1"= 100'
0 50 100 200

END POINTS "A" MUST BE HIGHER THAN FLOW LINE POINT "B"



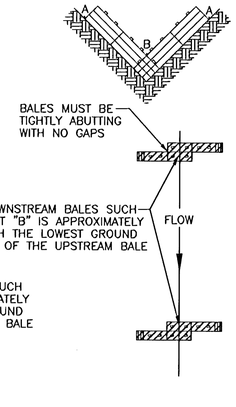

OVERLAP SIDE BALES ON FLOW LINE BALE(S) TO PREVENT GAPS




| 18 INCH BY 36 INCH BALES | VALUE OF Z | MINIMUM NUMBERS OF BALES |
|---|---|---|
|  | 10 OR < | 1** |
| | 10–35 | 2** |
| | 35–50 | 3** |
| | 50–70 | 4** |
| | 70 OR > | NOT RECOMMENDED |

** ASSUMES DEPTH OF WATER ABOVE POINT "B" WILL NOT EXCEED 6 INCHES

END POINTS "A" MUST BE HIGHER THAN FLOW LINE POINT "B"

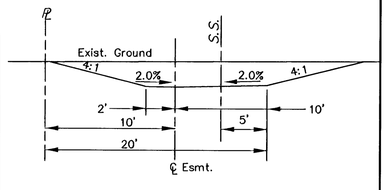



WIDE CHANNELS

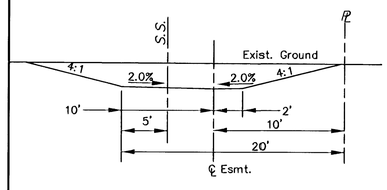
NARROW CHANNELS

STRAW BALE DIKES FOR EASEMENT GRADING

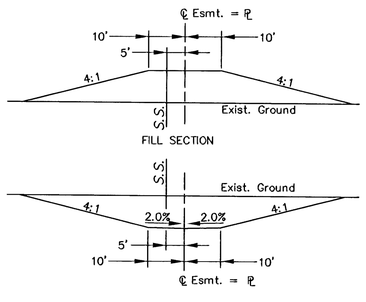
### EASEMENT GRADING DETAIL LINE 1

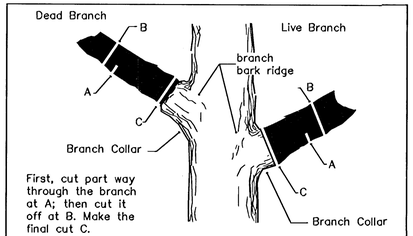



### EASEMENT GRADING DETAIL LINE 2




### EASEMENT GRADING DETAIL LINE 3




**TREE TRIMMING DETAIL**

Not to Scale

MKEC ENGINEERING CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

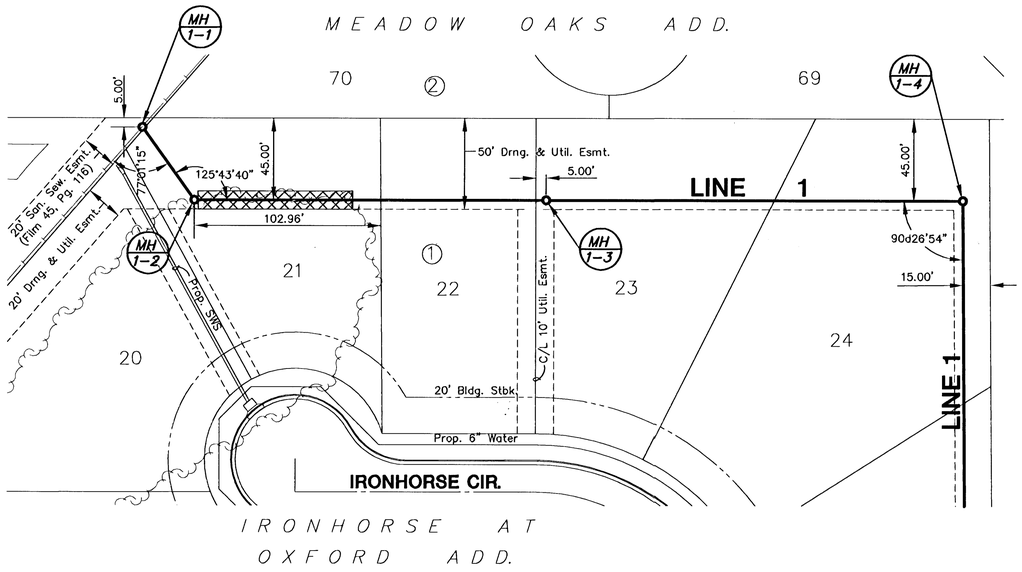
H:\CIVIL\02173\DWG\SAN\02173_B6

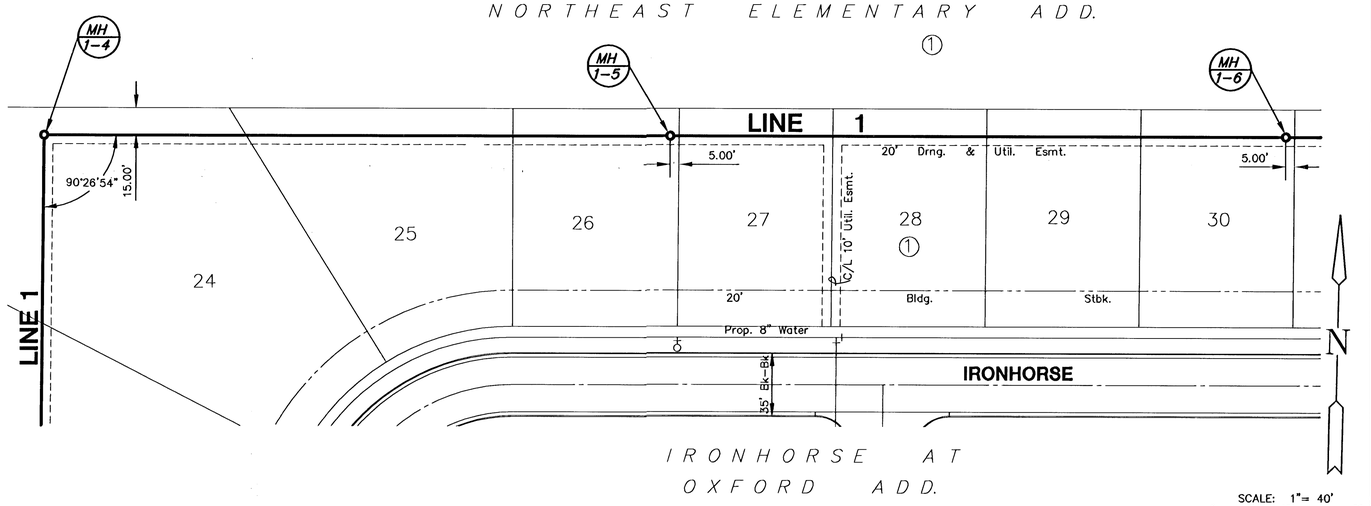
**IRONHORSE AT OXFORD ADDITION**
PROJECT NAME

**EASEMENT GRADING DETAILS**
SHEET TITLE

| ASH | WNJ | GJA |
|---|---|---|
| DESIGN BY: | DRAWN BY: | CHECKED BY: |
| MARCH 2003 | 02173_B6 | 6 / 10 |
| DATE | JOB NO. | SHEET/OF |

**IRONHORSE AT OXFORD ADD.**
**SANITARY SEWER PLANS**
**468-83675**
**LINE 1**



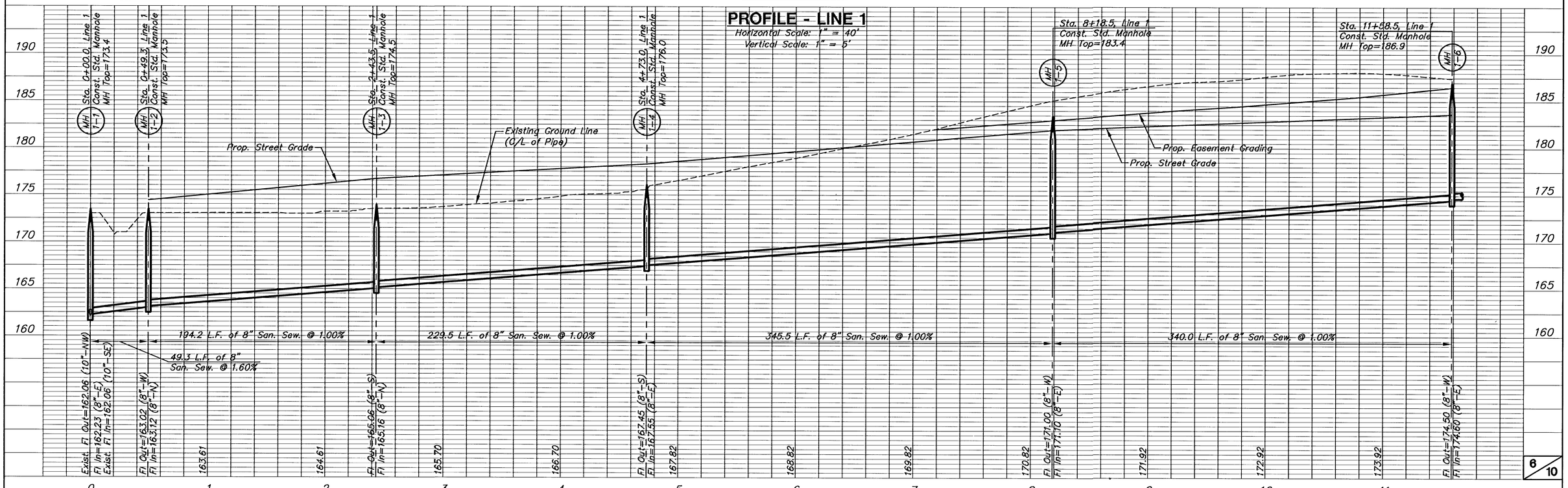

TREE REMOVAL

SCALE: 1" = 40'
0 20 40 80

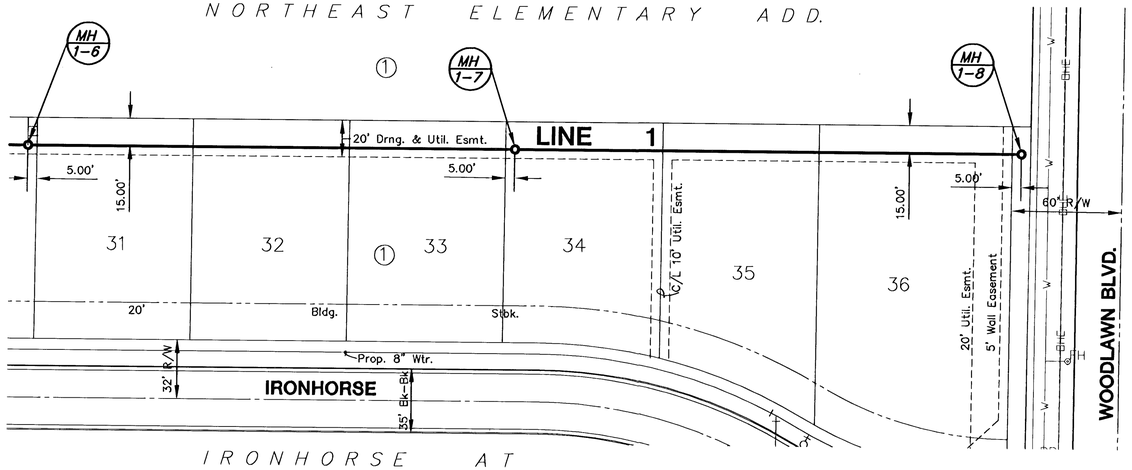
## PLAN - LINE 1

## PROFILE - LINE 1

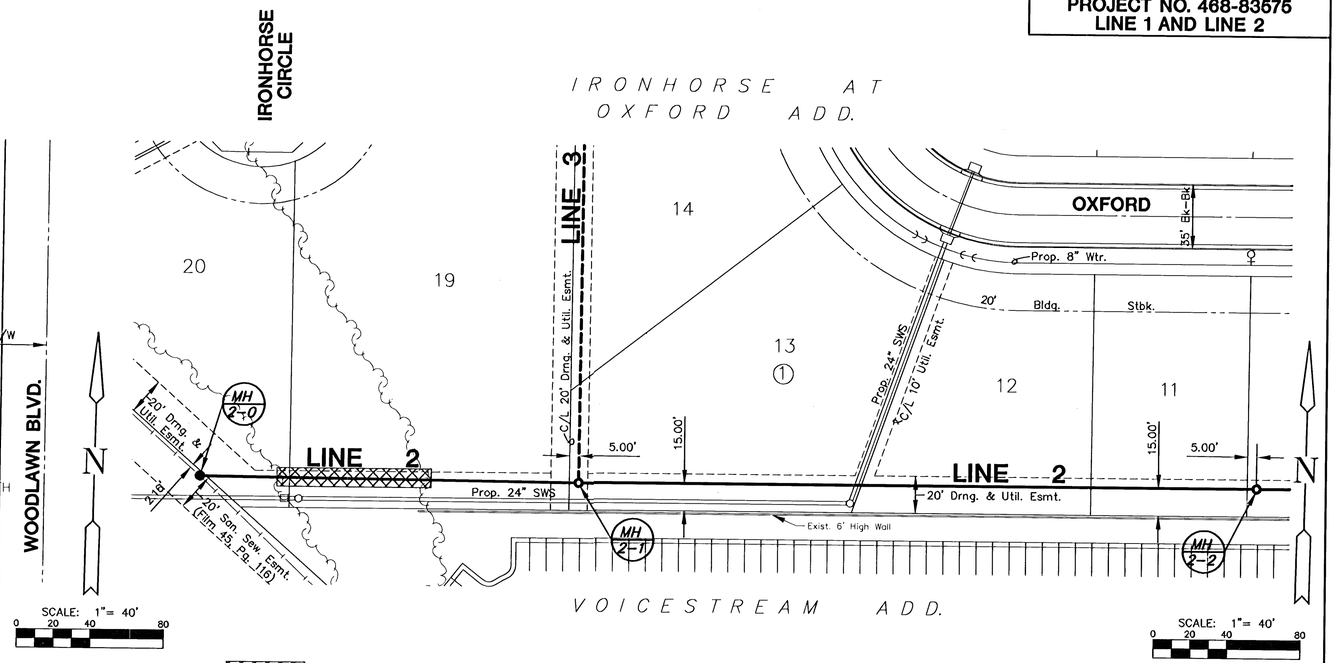
Horizontal Scale: 1" = 40'
Vertical Scale: 1" = 5'



**IRONHORSE AT OXFORD ADD.**
**SANITARY SEWER PLANS**
**PROJECT NO. 468-83575**
**LINE 1 AND LINE 2**




## PLAN - LINE 1



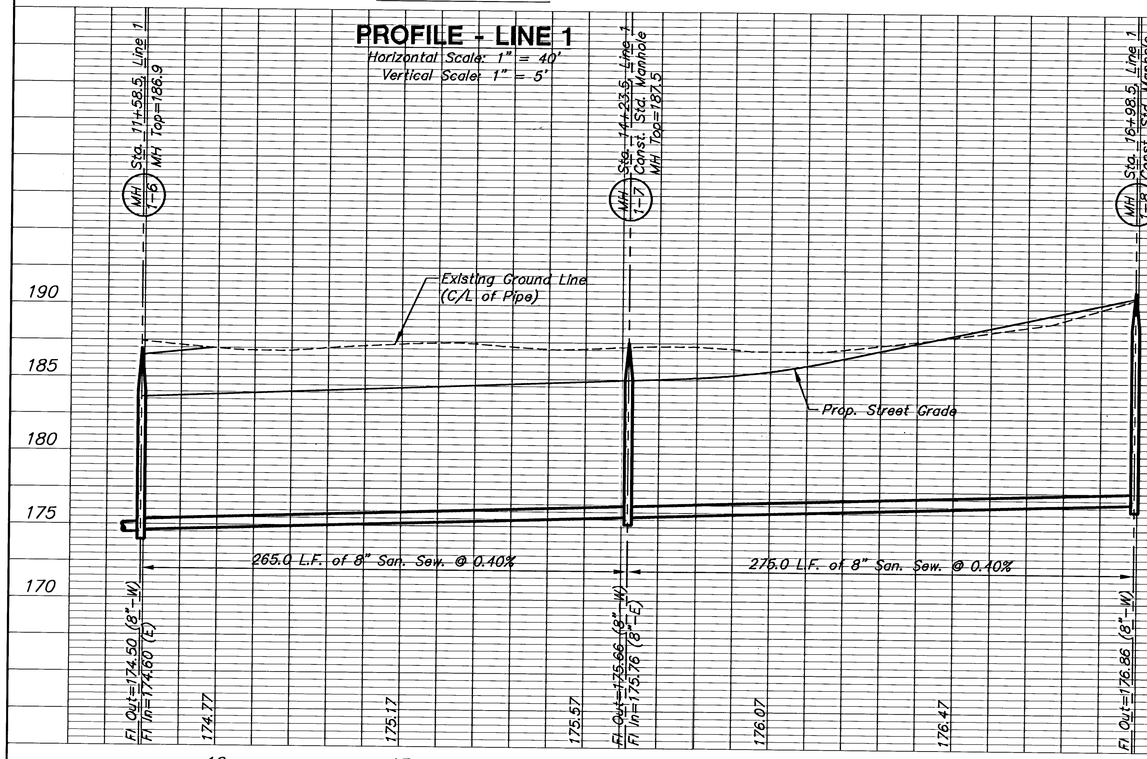

## PLAN - LINE 2

SCALE: 1"= 40'
0 20 40 80

TREE REMOVAL

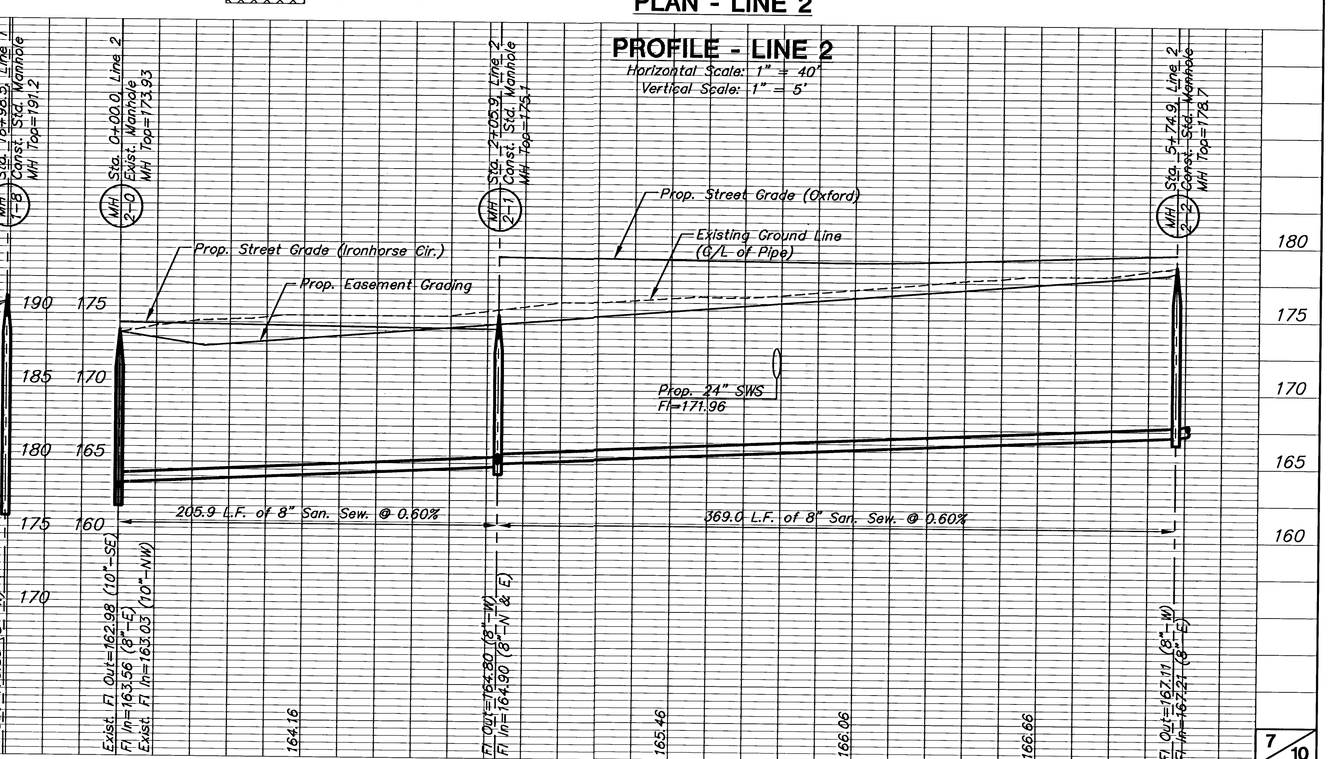
## PROFILE - LINE 1

Horizontal Scale: 1" = 40'
Vertical Scale: 1" = 5'

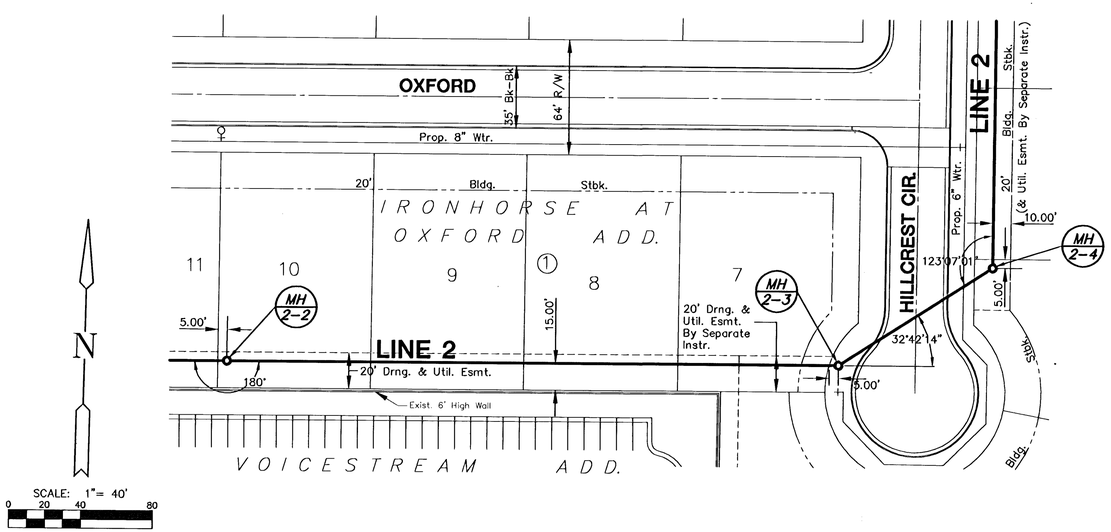


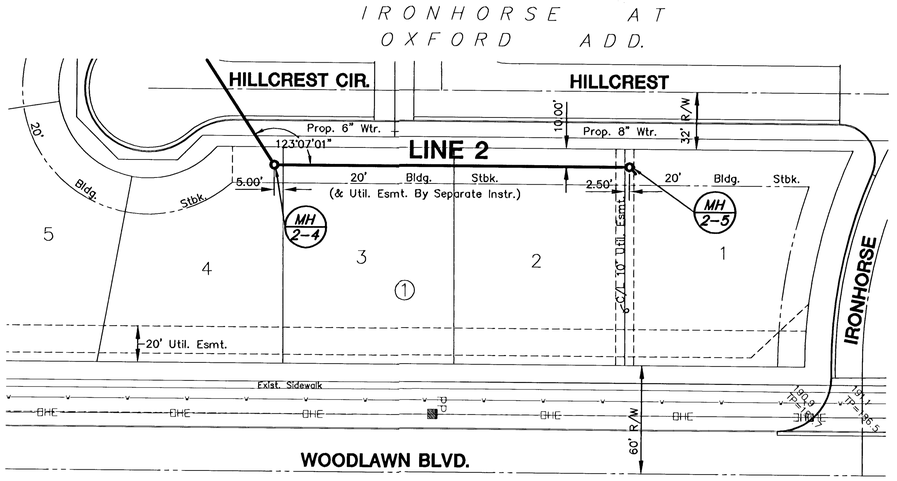

## PROFILE - LINE 2

Horizontal Scale: 1" = 40'
Vertical Scale: 1" = 5'



**IRONHORSE AT OXFORD ADD.**
**SANITARY SEWER PLANS**
**PROJECT NO. 468-83675**
**LINE 2 AND LINE 4**



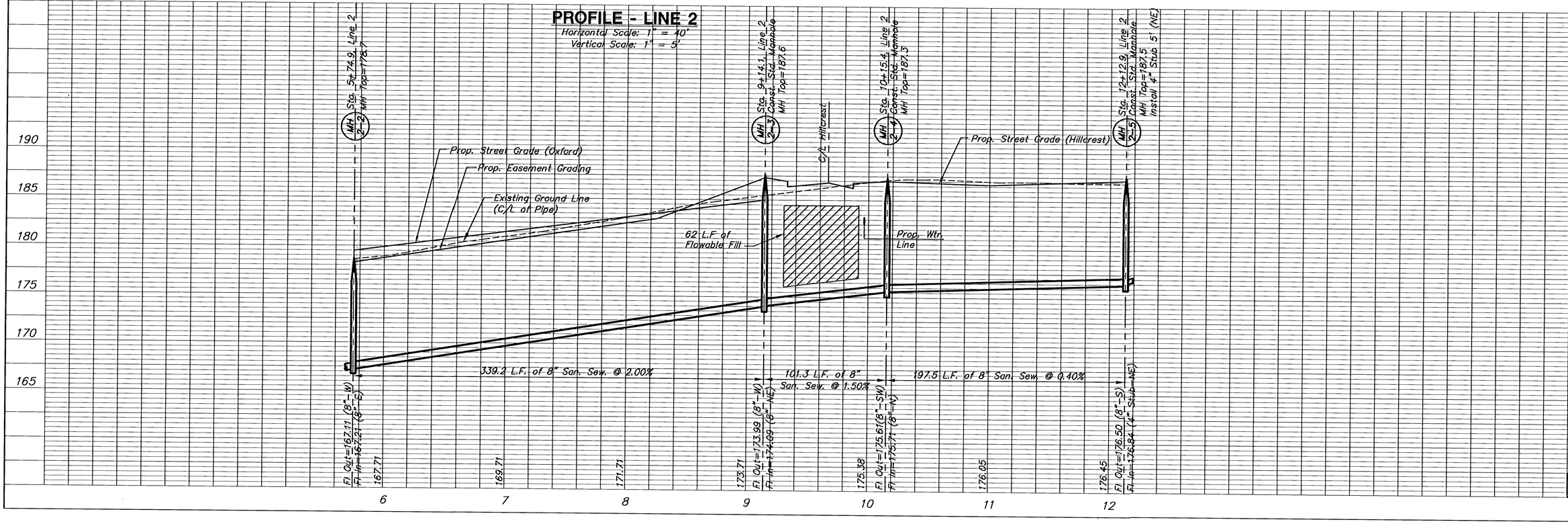




SCALE: 1"= 40'
0 20 40 80

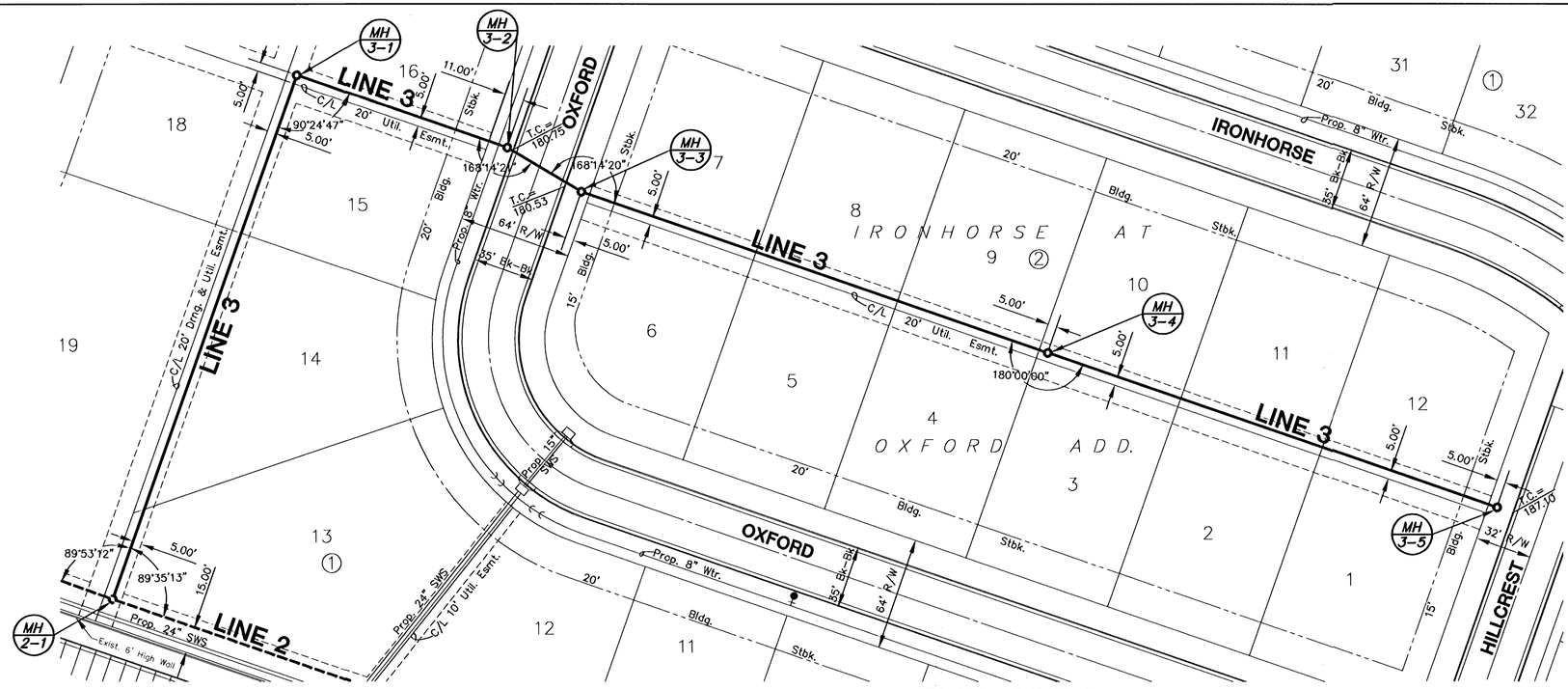
## PLAN - LINE 2

## PROFILE - LINE 2

*Horizontal Scale: 1" = 40'*
*Vertical Scale: 1" = 5'*



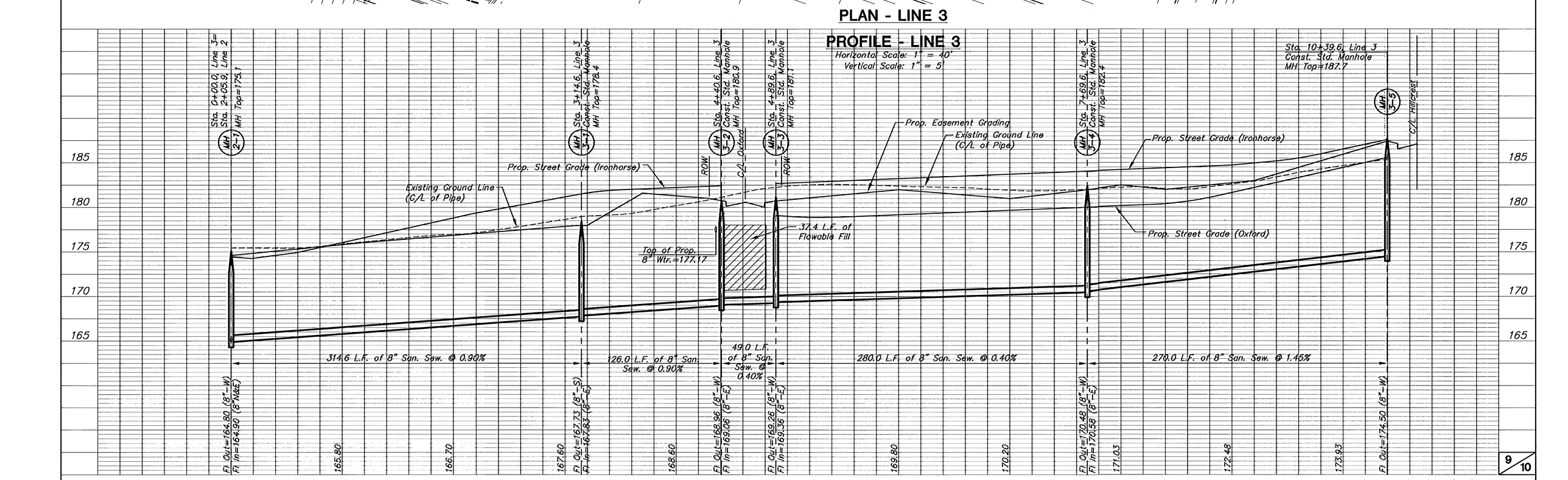
**IRONHORSE AT OXFORD ADD.**
**SANITARY SEWER PLANS**
**PROJECT NO. 468-83675**
**LINE 3**




## PLAN - LINE 3

## PROFILE - LINE 3

Horizontal Scale: 1" = 40'
Vertical Scale: 1" = 5'






H:\CIVIL\02173\DWG\SAN\02713_B4

# FINAL PLAT

# IRONHORSE AT OXFORD ADDITION

## AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

I, Gregory J. Allison, a Registered Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "IRONHORSE AT OXFORD", an addition to Wichita, Sedgwick County, Kansas, into Lots, Blocks, Reserves, and Streets, the same being accurately set forth in the accompanying plat and described herein:

A tract of land lying in the Northeast Quarter, Section 1, Township 27 South, Range 1 East, of the 6th Principal Meridian, Wichita, Sedgwick County, Kansas; more particularly described as follows:

BEGINNING at a point lying on the South line of said Northeast Quarter 50.00 feet West of the Southeast corner of said Northeast Quarter, said point being the Northeast corner of a tract of land known as the Voicestream Addition, an addition to Wichita, Sedgwick County Kansas; thence along the North line of said Voicestream Addition, and along the South line of said Northeast Quarter on a Kansas South Zone Grid Bearing of S88°51'49"W, 270.00 feet; thence along the east, north and westerly lines of Lot 1, Block 1, of said Voicestream Addition through the following three courses: N00°43'24"W, 170.00 feet; S88°51'49"W, 826.45 feet; S49°32'56"E, 256.11 feet; to a point on the South line of said Northeast Quarter; thence along said South line, S88°51'49"W, 372.20 feet to the Southeast corner of Courts II Addition, an addition to Wichita, Sedgwick County Kansas; thence along the East line of said Courts II Addition, and along the East line of Meadow Oaks Addition, an addition to Wichita, Sedgwick County, Kansas, N00°41'40"W, 788.58 feet to the Southwest corner of a tract of land known as Northeast Elementary School Addition, an addition to Wichita, Sedgwick County, Kansas; thence along the South line of said Northeast Elementary School Addition, N88°51'26"E, 1275.47 feet to a point 50.00 feet West of the East line of said Northeast Quarter; thence parallel with said East line S00°43'24"E, 788.73 feet to the POINT OF BEGINNING.

The portions of the 20' Sanitary Sewer Easement and 30' Sanitary Sewer Easement recorded on FILM 45, Page 116; AND ALSO the portion of the 16' Easement for sanitary sewer recorded on Film 145, Page 104 lying within the above described property is hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this___ day of _____, 2003.

Gregory J. Allison, PE, LS #1257
MKEC Engineering Consultants, Inc.
411 North Webb Road
Wichita, Kansas 67206

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into Lots, Blocks, and Streets the same to be known as "IRONHORSE AT OXFORD", an addition to Wichita, Sedgwick County, Kansas. Easements for the construction and maintenance of public utilities, and drainage, as indicated on the accompanying plat are hereby granted to the appropriate governing body. The wall easement is for the construction and maintenance of a private wall. Utilities may cross the wall easement. The streets are hereby dedicated to and for the use of the public. A drainage plan has been developed for this plat and all drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water. All abutters right of access to or from Woodlawn Boulevard over and across the East line of "IRONHORSE AT OXFORD," are hereby granted to the appropriate governing body, as indicated on the face of the plat. Lots 20-24, inclusive will be required to hold the minimum pad elevations as shown on the "Minimum Pad Elevations" table. The drainage dedication per FILM 115, PAGE 929 and FILM 106, PAGE 1269 is owned and maintained by the City of Wichita, Kansas.

Leewood Homes, Inc.

_____, President
Leewood Homes, Inc., Joe H. Lee, President

STATE OF KANSAS)
) ss:
SEDGWICK COUNTY)

BE IT REMEMBERED, that on this _____ day of _____, 2003, before me the undersigned, a Notary Public in and for the County and State aforesaid, came Joe H. Lee, President, Leewood Homes, Inc, to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public
My appointment expires:

We, Legacy Bank, holders of mortgages on the above described property, do hereby consent to the plat of "IRONHORSE AT OXFORD ADDITION."

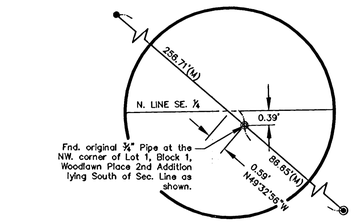
_____

STATE OF KANSAS)
) ss:
SEDGWICK COUNTY)

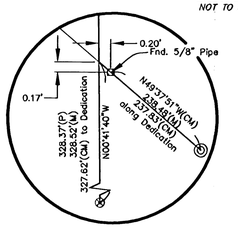
BE IT REMEMBERED, that on this _____ day of _____, 2003, before me the undersigned, a Notary Public in and for the County and State aforesaid, came _____ Legacy Bank to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

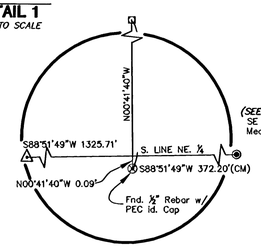
_____, Notary Public
Notary Public
My appointment expires: _____



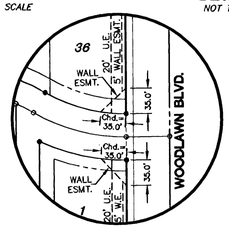

DETAIL 1
NOT TO SCALE



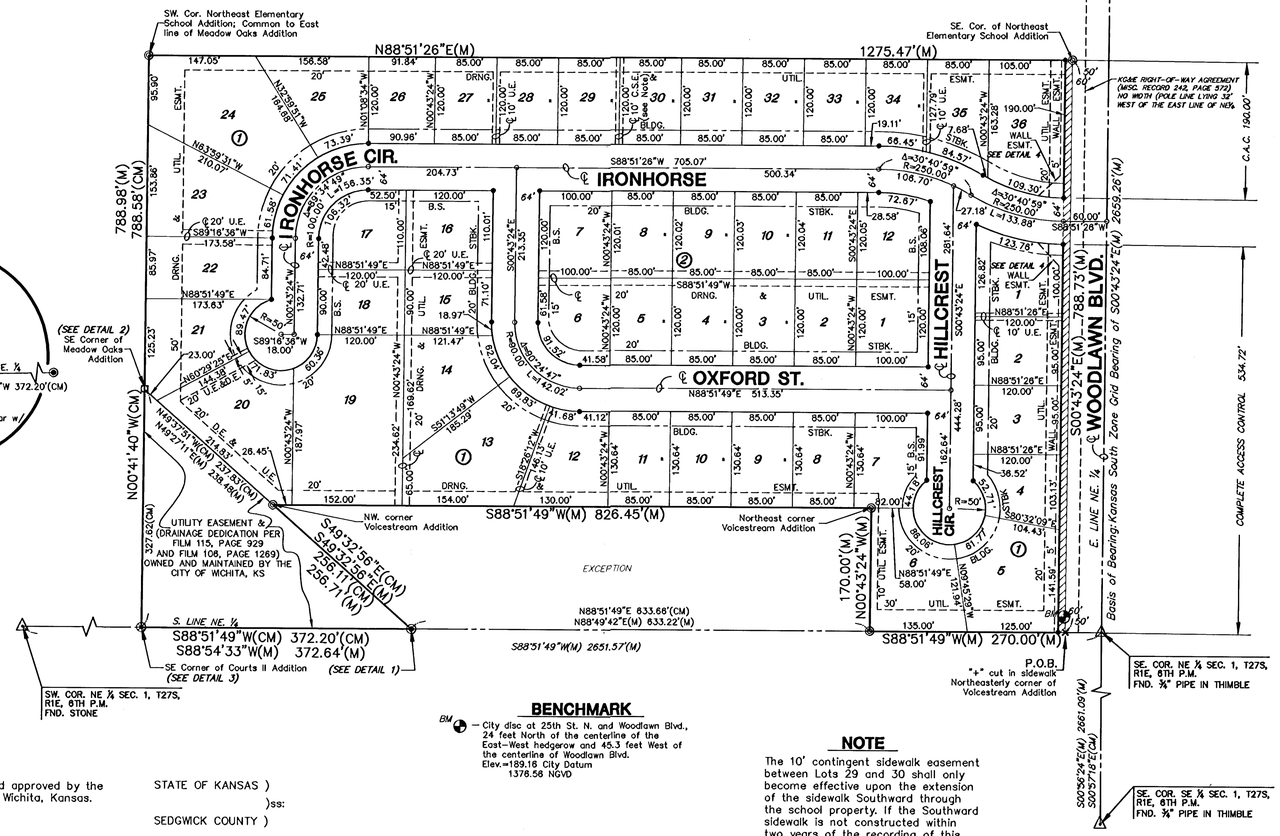

DETAIL 2
NOT TO SCALE




DETAIL 3
NOT TO SCALE




DETAIL 4
NOT TO SCALE




This plat of "IRONHORSE AT OXFORD", has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this 7th day of November, 2002.

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

_____, Chair
Bernard A. Hentzen, Chair

_____, Secretary
Dale Miller, Secretary

This plat approved and all dedications shown thereon, if any, accepted by the City Council of the City of Wichita, Kansas, this ____ day of _____, 2003.

At the direction of the City Council.

_____, City Manager
Chris Cherches, City Manager

_____, City Clerk
Pat Graves, City Clerk

Entered on transfer record this ____ day of _____, 2003.

_____, County Clerk
Don Brace, County Clerk

STATE OF KANSAS )
)ss:
SEDGWICK COUNTY )

This is to certify that this instrument was filed for record in the Register of Deeds office this_____day of_____, 2003 at _____ o'clock M; and duly recorded.

_____, Register of Deeds
Bill Meek, Register of Deeds

_____, Deputy
Linda Kizzire, Deputy

Reviewed in accordance with K.S.A. 58-2005 on this ____ day of _____, 2003.

_____, Deputy County Surveyor
Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County, Kansas

## BENCHMARK

BM – City disc at 25th St. N. and Woodlawn Blvd., 24 feet North of the centerline of the East-West hedgerow and 45.3 feet West of the centerline of Woodlawn Blvd.
Elev.=1389.16 City Datum
1378.58 NGVD

## NOTE

The 10' contingent sidewalk easement between Lots 29 and 30 shall only become effective upon the extension of the sidewalk Southward through the school property. If the Southward sidewalk is not constructed within two years of the recording of this plat, the contingent sidewalk easement shall expire.

## LEGEND

- △ – SECTION CORNER
- ● – SET 5/8" REBAR/MKEC CLS #39
- ◎ – FOUND ⅝" REBAR/MKEC CLS #39
- ◉ – FOUND 3/4" PIPE SET AT N.W. COR. LOT 1, BLOCK 1, WOODLAWN PLACE 2ND ADDITION
- □ – FND 5/8" PIPE
- ⊗ – FOUND 1/2" REBAR W/ PEC CAP
- B.S. = BUILDING SETBACK
- U.E. = UTILITY EASEMENT
- D.E. = DRAINAGE EASEMENT
- (P) = PLATTED MEASUREMENT
- (M) = MEASURED
- (CM) = CALCULATED FROM MEASUREMENT
- C.S.E. = CONTINGENT SIDEWALK EASEMENT (see note)

N

SCALE: 1" = 100'
100 0 100 200

| MINIMUM PAD ELEVATIONS (LOWEST OPENINGS) | | |
|---|---|---|
| LOT | ELEVATION (CITY DATUM) | ELEVATION (NGVD) |
| 20 | 174.1 | 1361.5 |
| 21 | 174.1 | 1361.5 |
| 22 | 174.8 | 1362.2 |
| 23 | 175.5 | 1362.9 |
| 24 | 176.8 | 1364.2 |

H:\CIVIL\02173\Dwg\PROP\Final\02173A.DWG

18-80-01-12