

STORM WATER DRAIN IMPROVEMENTS GREAT PLAINS BUSINESS PARK 3RD ADDITION - LOT 1, BLOCK 2 TO THE CITY OF WICHITA, KANSAS JAMES L. ARMOUR, P.E. - CITY ENGINEER

PRIVATE PROJECT NO. 1836-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. 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.

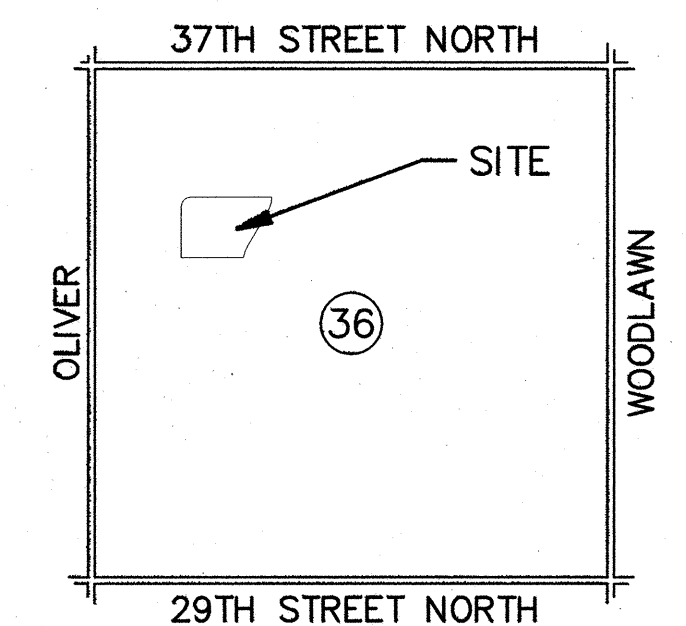
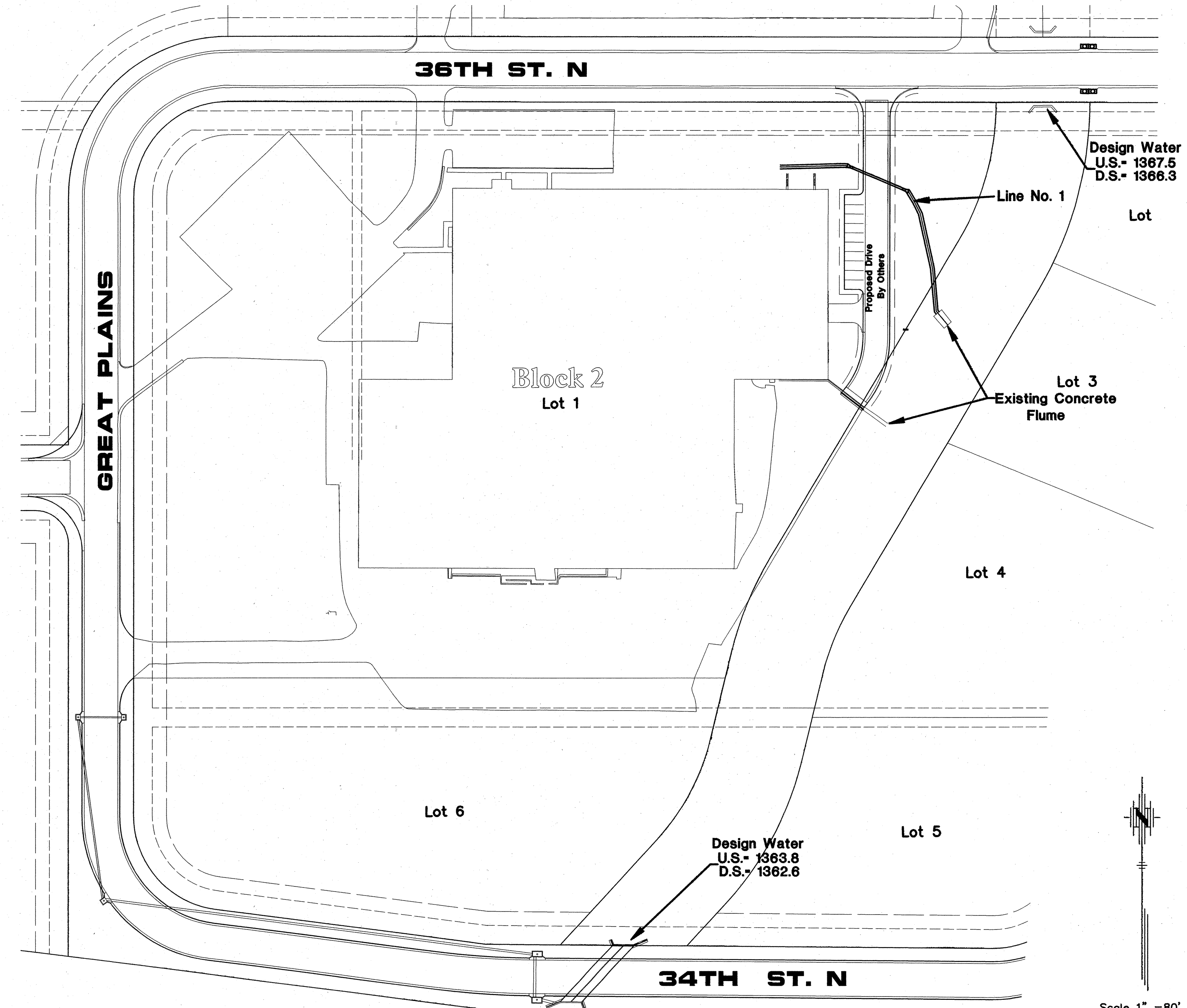
All suitable excavation shall be wasted on low lying lots within the addition before any material is disposed of off site.

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.
3. 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. The cost is subsidiary to street construction costs.
4. Limits of earthwork shall match existing ground elevations at the right-of-way line unless otherwise noted on the plans with a new finished grade elevation. When a new finished grade elevation is shown, the earthwork shall extend one foot beyond the right-of-way line and then slope up or down using permissible slopes to match the existing ground surface.
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 lawn/turf areas disturbed by construction shall be restored with the same sod as existing. Restoration of disturbed areas shall include, but not be limited to, top soil preparation and sodding. All sodding work shall be in accordance with City Standard Specifications and the City Administrative Regulation No. AR78, which governs cleanup and restoration or replacement following construction. The "Storm Water Pollution Prevention Plan" will show the estimated Square Yards of disturbed lawn/turf area to be sodded, with a bid item for the same. When the weather/season prevents the installation of sod, the Contractor shall be responsible for installing Erosion Control Blanket (Curlax I, or approved equal) at the back of curb (8' wide minimum). All costs for erosion mat installation shall be subsidiary to "Site Restoration".
7. The Contractor shall reseed all non-lawn/turf areas disturbed by construction with a mixture of Ryegrass (applied at a rate of 200 lbs per acre) and Fescue, Bermuda, or Buffalo grass, depending on the soil conditions (applied per Standard Specifications). Pure Nitrogen fertilizer shall also be applied at a rate of 1.5 lbs per thousand square feet. The seed shall be watered with deep soaking every two (2) weeks during dry periods until a mature stand of grass is obtained. The "Storm Water Pollution Prevention Plan" will show the estimated Square Yards of disturbed non-lawn/turf area to be seeded, with a bid item for the same. The permanent seeding may be omitted only if sodding is required in accordance with previous General Note. The Contractor shall be responsible for installing Erosion Control Blanket (Curlax I, or approved equal) at the back of curb, to and including the limits of all seeded areas. All costs for this work shall be subsidiary to the seeding bid item.
8. Contractor shall maintain all existing BMPs on project site during construction. Contractor shall repair or replace any existing BMPs that are damaged (Cost is subsidiary to site restoration). If BMPs were damaged prior to contractor beginning work on project, notify construction inspector or engineer.
9. 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. (Cost shall be subsidiary to Excavation)

INDEX

TITLE SHEET	SHEET 1
STORM SEWER NO. 1	SHEET 2
CROSS SECTIONS	SHEET 3-7
SOIL EROSION BMP DETAILS	SHEET 8-13
COORDINATE POINTS/POLLUTION PREVENTION	SHEET 14
GREAT PLAINS BUSINESS 3RD ADD. PLAT	SHEET 15

RECORD DRAWING
Contractor: APAC - Kansas, Inc.
Inspector: Poe & Associates, Inc.
JPD 4-6-2009



TOTAL PROJECT LENGTH: 293 L.F. = 0.06 Mi.
EARTHWORK SUMMARY

Excavation	103 C.Y.
Loose Fill*	0 C.Y.
Waste**	103 C.Y.

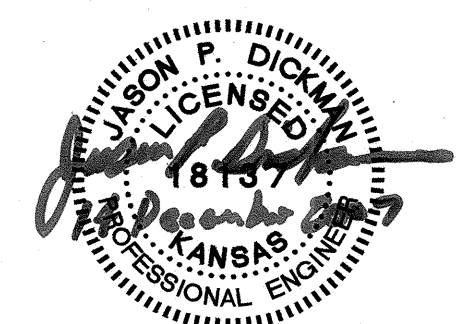
* Loose Fill Includes 15% for Shrinkage
** Contact Owner for Waste Location on Site

BENCH MARKS

- (City of Wichita Datum)
1. COW Benchmark 100' South of Norwood on SE corner of RCBC Hubguard. Elevation = 161.44
 2. COW Benchmark on Southwest corner of Hubguard 100' E. of Oliver on 37th. Elevation = 186.84

NOVEMBER 2007

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



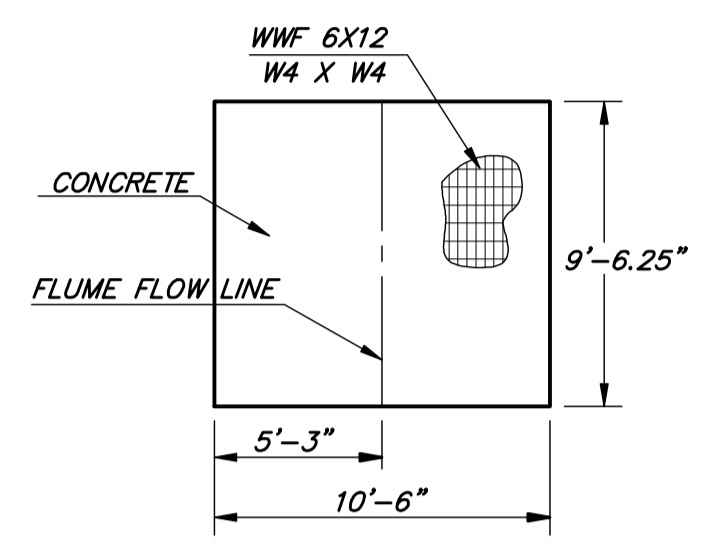
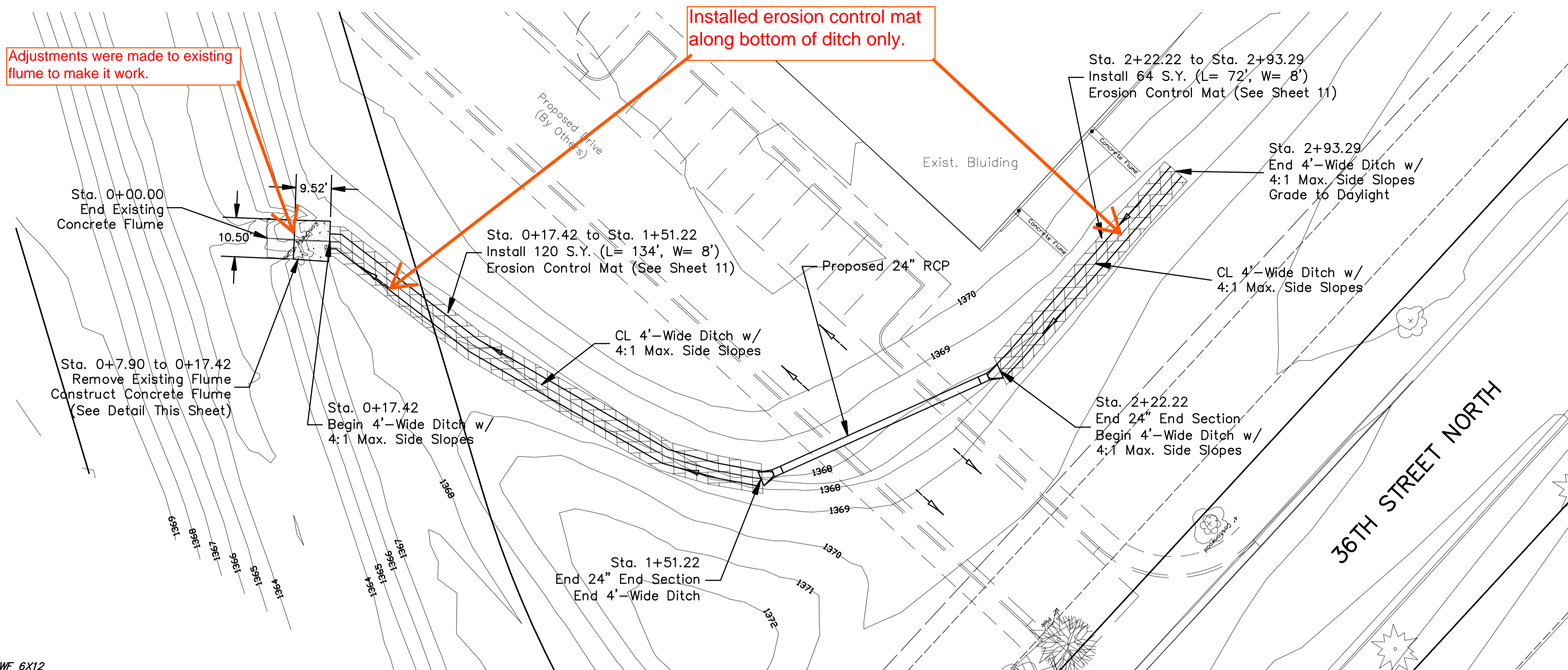
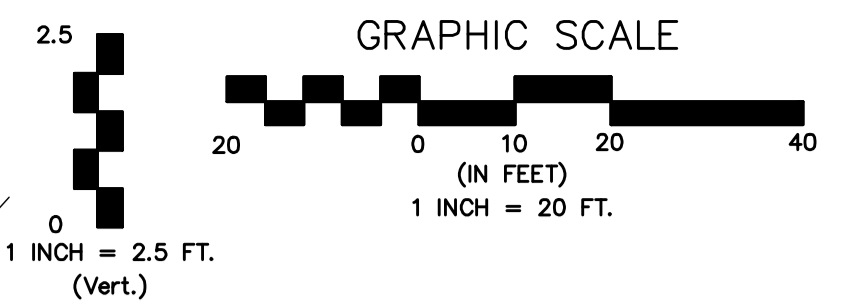
APPROVED AS NOTED BY CITY ENGINEER OF WICHITA

PAVING _____

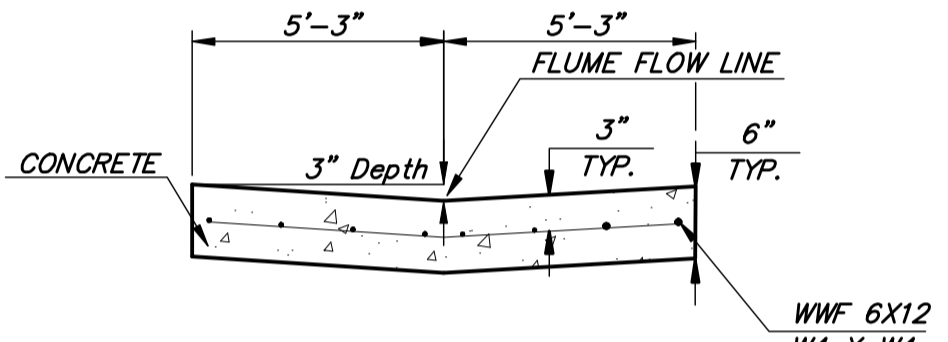
STORM SEWERS URH 12/14/07

NOTE TO CONTRACTORS

Inspection and testing for this project are 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 public right-of-way by the Contractor without such inspection nor shall work be commenced without written authorization by the City Engineer. All construction and materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

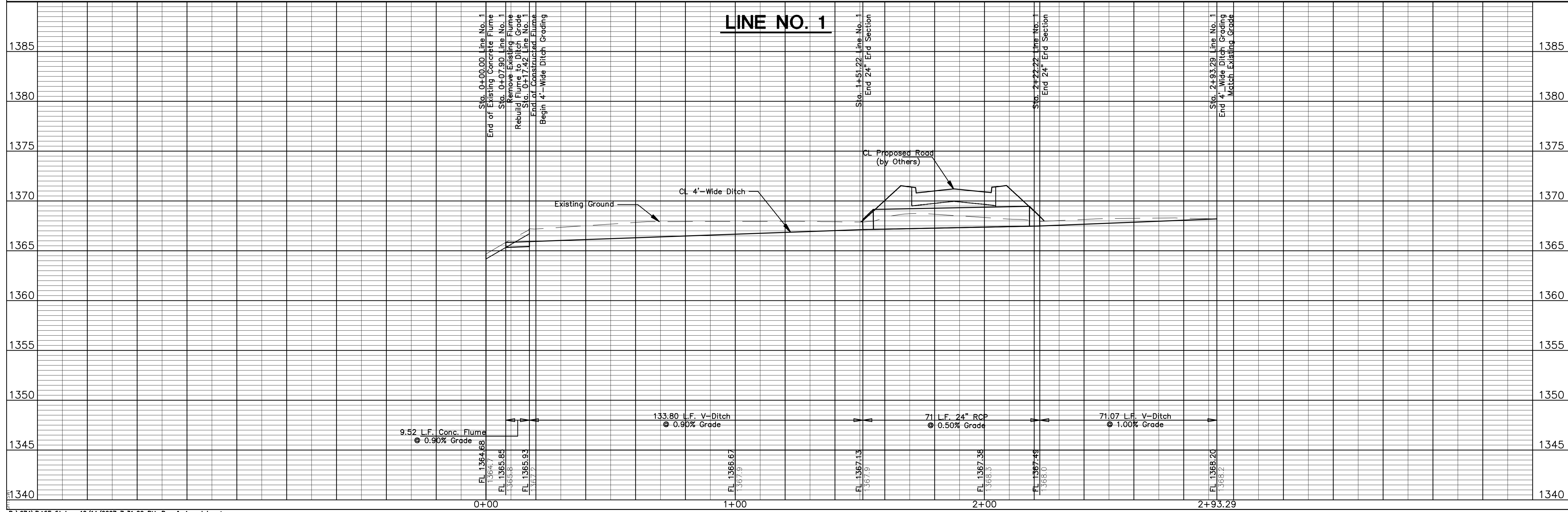


6" x 12" W4XW4 WIRE FABRIC REINFORCING SHALL BE PLACED SUCH THAT THE WIRES WITH THE 6" SPACING WILL RUN PARALLEL WITH THE LONGITUDINAL JOINT.



REINFORCED FLUME DETAIL
(Not to Scale)

RECORD DRAWING
JPD 4-6-2009

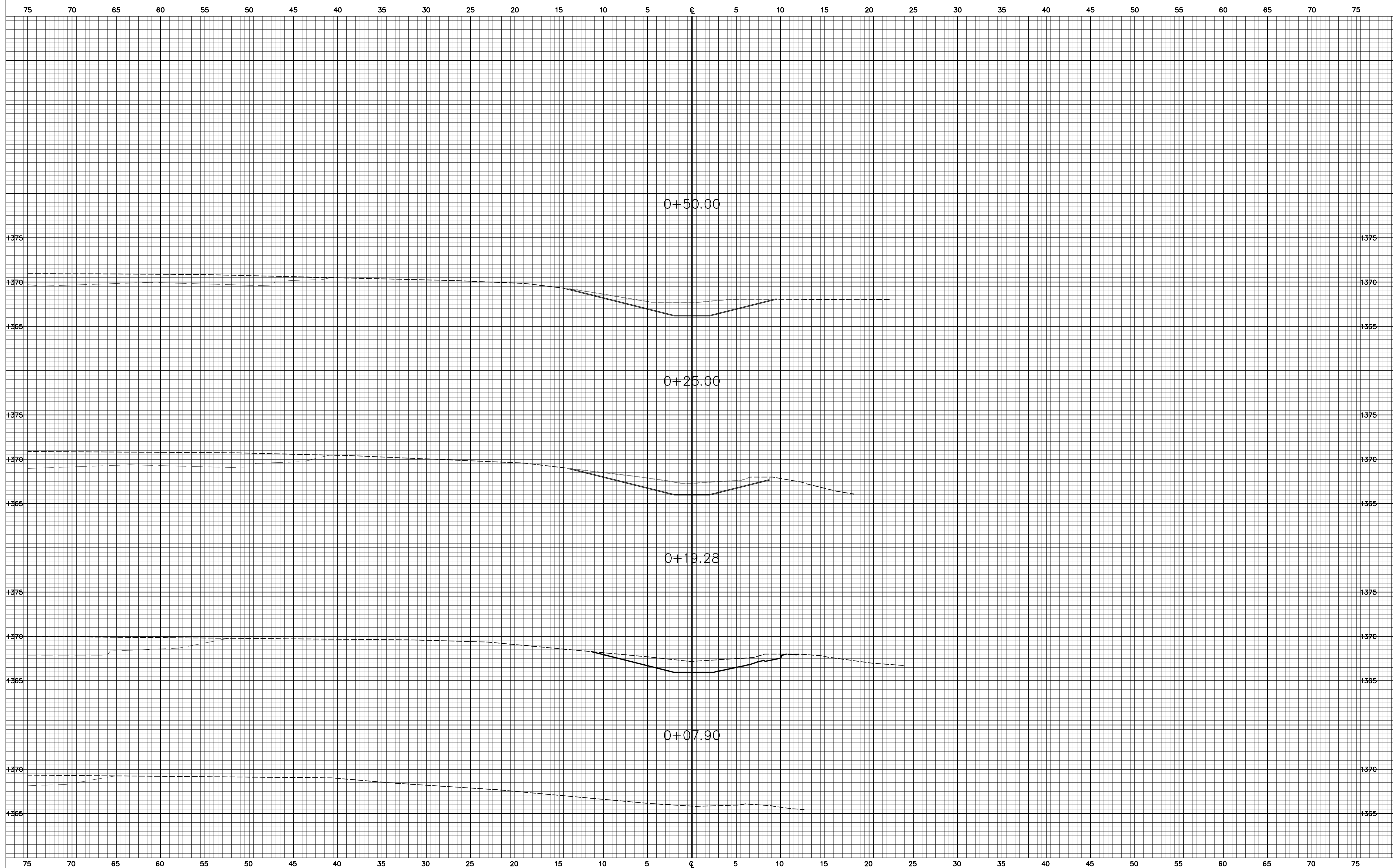


GREAT PLAINS BUSINESS PARK 3RD ADDITION
 STORM WATER DRAIN IMPROVEMENTS
 STORM SEWER LINE NO. 1
 CITY OF WICHITA, KANSAS
 JAMES L. ARMOUR, P.E. - CITY ENGINEER
 Private Project # 1836-PPS O.C.A. # 607861

POE & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 5940 E. Central, Suite 200 - Wichita, KS 67209-0242
 Phone 316/685-4114 - FAX 316/685-4444

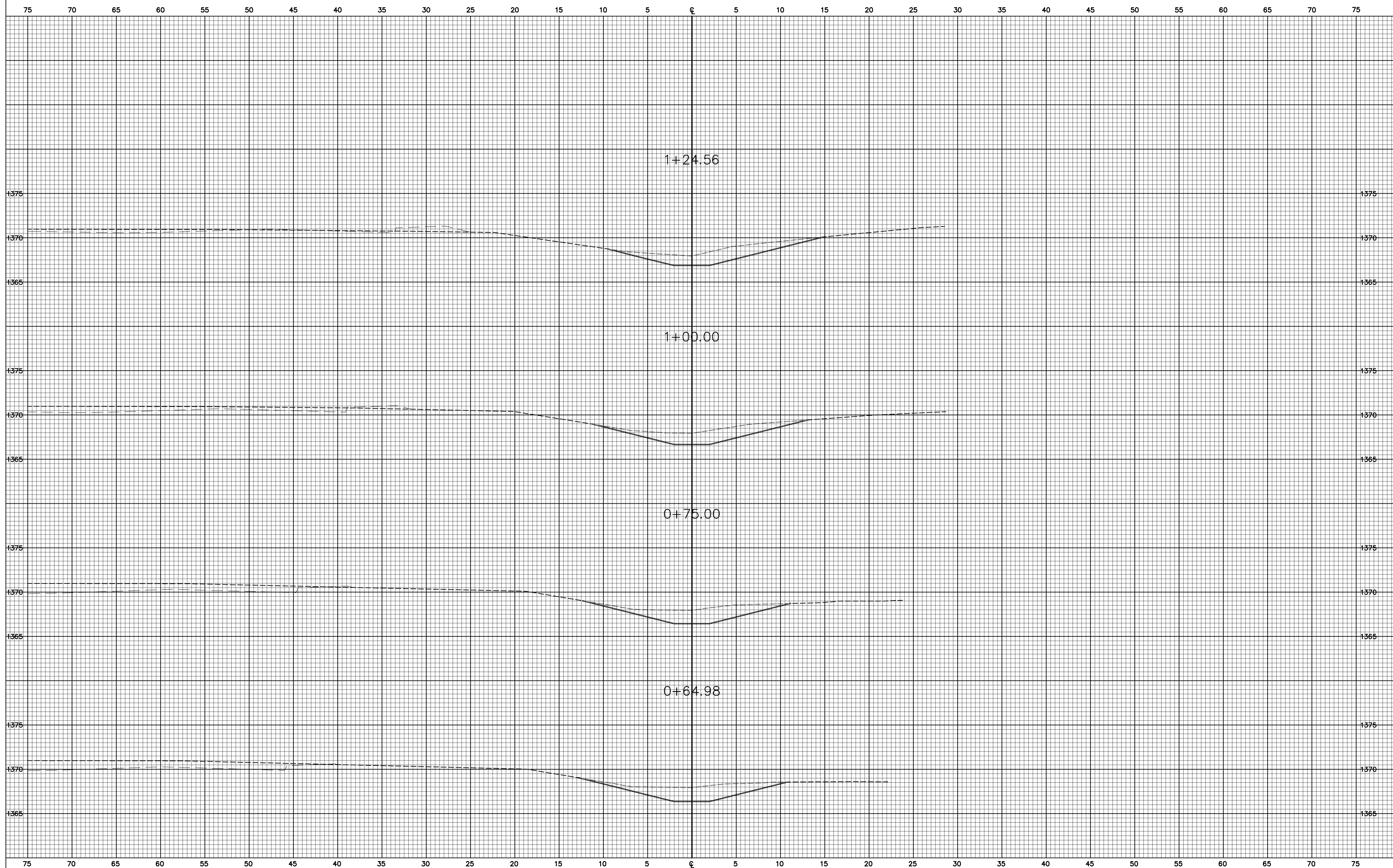
Designed By: J. Dickman
 Drawn By: M. Tucker
 Pce Job No.: 1674F
 Date: November 2007

FINAL
 Sheet 2 of 15



Revision	
By	
Date	
No.	△△△△
<p>GREAT PLAINS BUSINESS PARK 3RD ADDITION STORM WATER DRAIN IMPROVEMENTS DITCH NO. 1</p> <p>CITY OF WICHITA, KANSAS JAMES L. ARMOUR, P.E. - CITY ENGINEER Private Project # 1836-PPS O.C.A. # 607861</p>	
<p>POE & ASSOCIATES, INC. CONSULTING ENGINEERS 5940 E. Central, Suite 200 - Wichita, KS 67209-4242 Phone 316/685-4114 - FAX 316/685-4444</p>	
<p>FINAL</p>	
Designed By:	J. Dickman
Drawn By:	M. Tucker
Poe Job No.:	1674F
Date:	November 2007

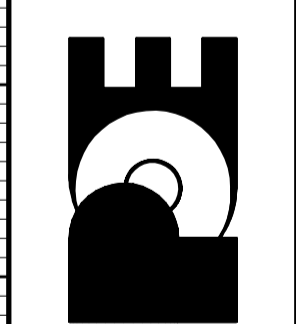
RECORD DRAWING
 JPD 4-6-2009



No.	Date	By	Revision
1			
2			
3			

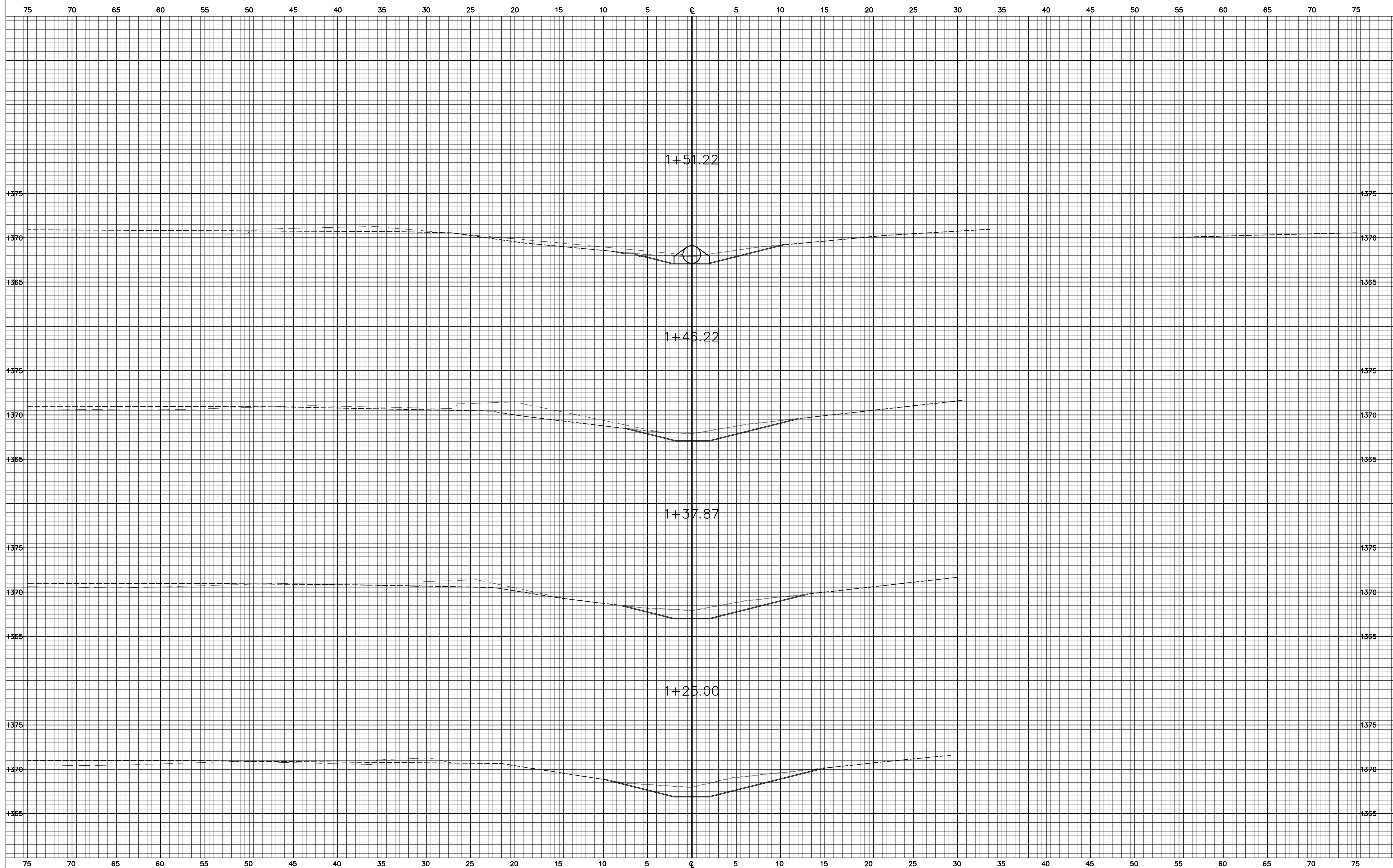
GREAT PLAINS BUSINESS PARK 3RD ADDITION
 STORM WATER DRAIN IMPROVEMENTS
 DITCH NO. 1
CITY OF WICHITA, KANSAS
 JAMES L. ARMOUR, P.E. - CITY ENGINEER
 Private Project # 1836-PPS O.C.A. # 607861

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



FINAL
 Designed By: J. Dickman
 Drawn By: M. Tucker
 Pce Job No.: 1674F
 Date: November 2007

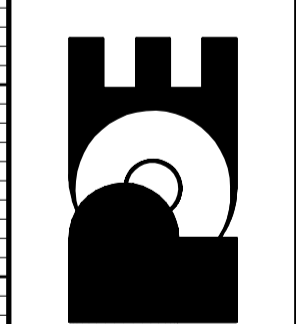
RECORD DRAWING
 JPD 4-6-2009



No.	Date	By	Revision
1			
2			
3			

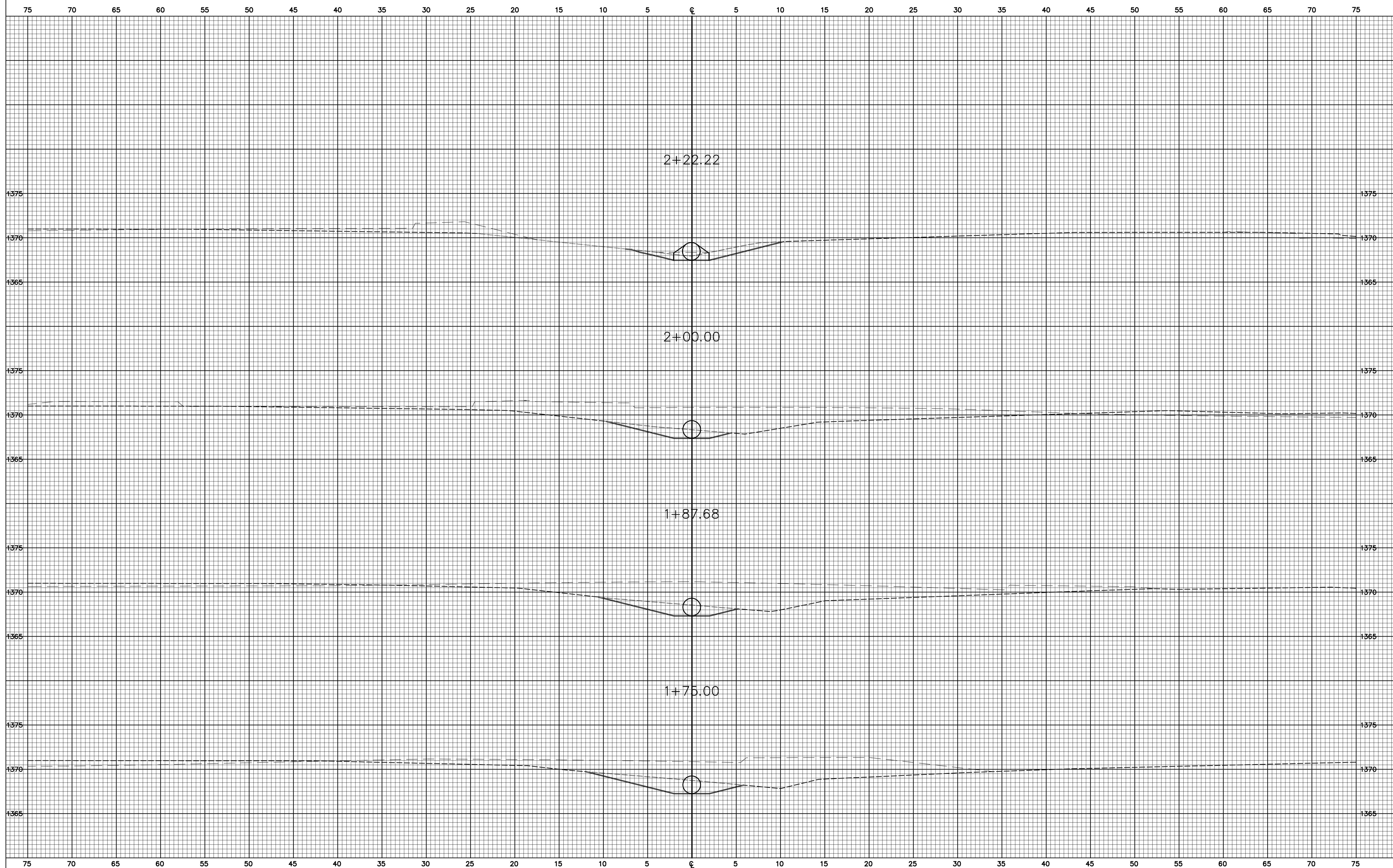
GREAT PLAINS BUSINESS PARK 3RD ADDITION
 STORM WATER DRAIN IMPROVEMENTS
 DITCH NO. 1
CITY OF WICHITA, KANSAS
 JAMES L. ARMOUR, P.E. - CITY ENGINEER
 Private Project # 1836-PPS O.C.A. # 607861

POE & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 5940 E. Central, Suite 200 - Wichita, KS 67209-4242
 Phone 316/685-4114 - FAX 316/685-4444



FINAL
 Designed By: J. Dickman
 Drawn By: M. Tucker
 Pce Job No.: 1674F
 Date: November 2007

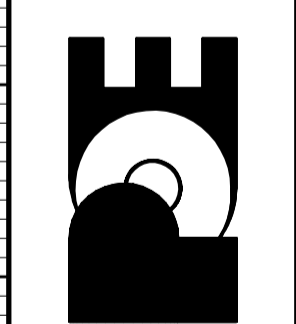
RECORD DRAWING
 JPD 4-6-2009



No.	Date	By	Revision
1			
2			
3			

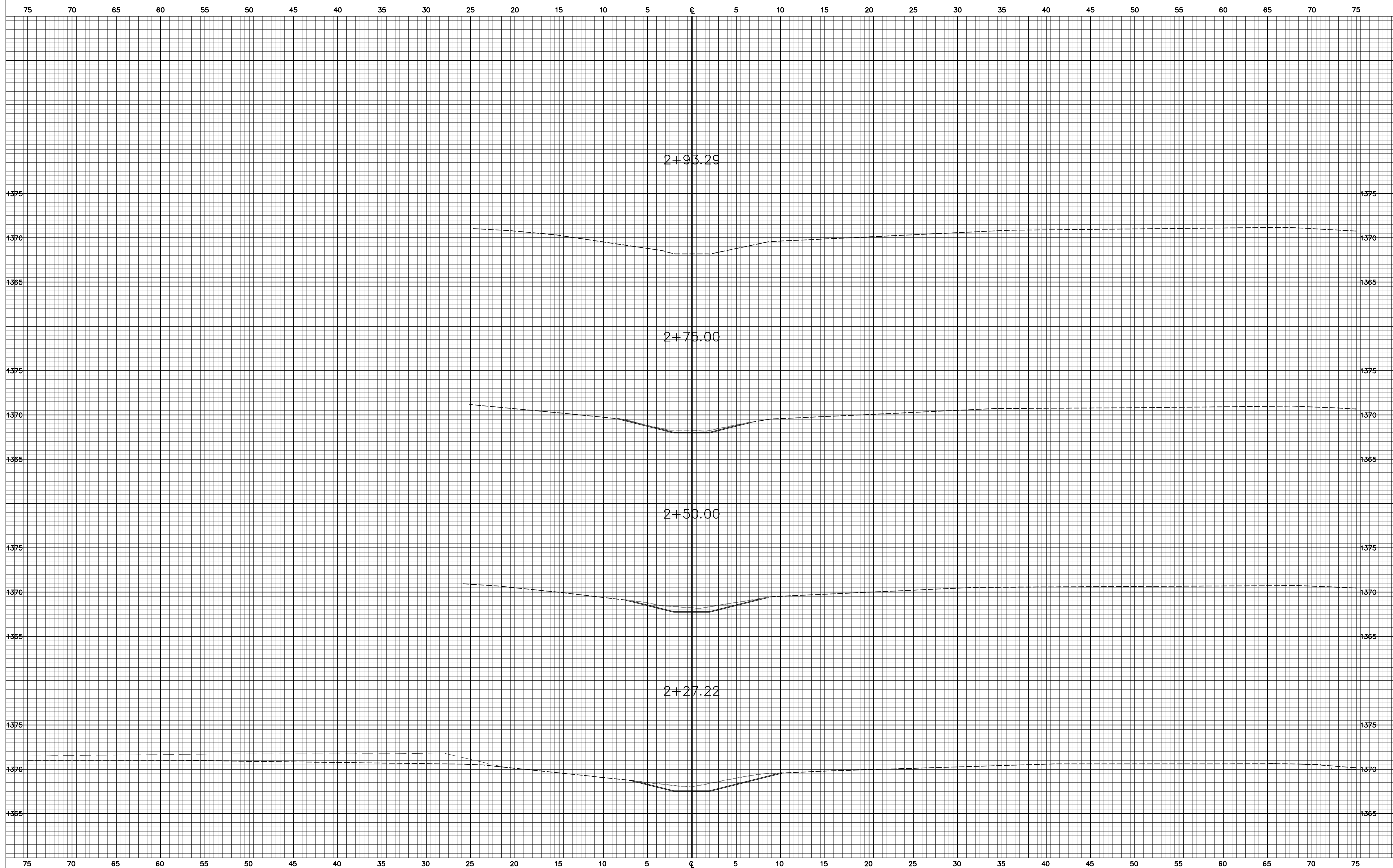
GREAT PLAINS BUSINESS PARK 3RD ADDITION
 STORM WATER DRAIN IMPROVEMENTS
 DITCH NO. 1
CITY OF WICHITA, KANSAS
 JAMES L. ARMOUR, P.E. - CITY ENGINEER
 Private Project # 1836-PPS O.C.A. # 607861

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



FINAL
 Designed By: J. Dickman
 Drawn By: M. Tucker
 Pce Job No.: 1674F
 Date: November 2007

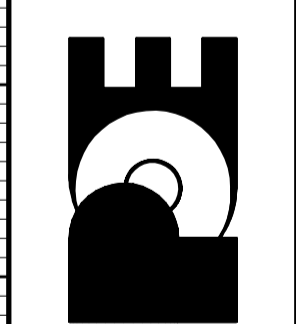
RECORD DRAWING
 JPD 4-6-2009



Revision	Date	By	Approved
1			
2			
3			

GREAT PLAINS BUSINESS PARK 3RD ADDITION
 STORM WATER DRAIN IMPROVEMENTS
 DITCH NO. 1
CITY OF WICHITA, KANSAS
 JAMES L. ARMOUR, P.E. - CITY ENGINEER
 Private Project # 1836-PPS O.C.A. # 607861

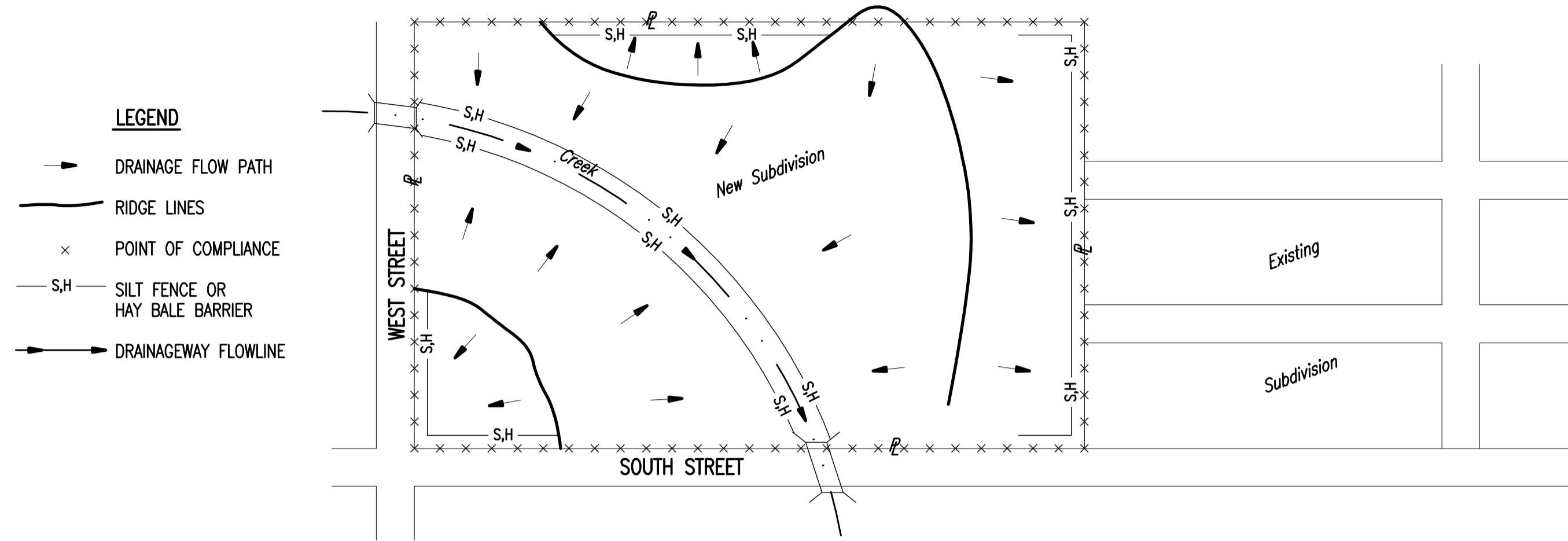
POE & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 5940 E. Central, Suite 200 - Wichita, KS 67208-4242
 Phone 316/685-4114 - FAX 316/685-4444



FINAL
 Designed By: J. Dickman
 Drawn By: M. Tucker
 Pce Job No.: 1674F
 Date: November 2007

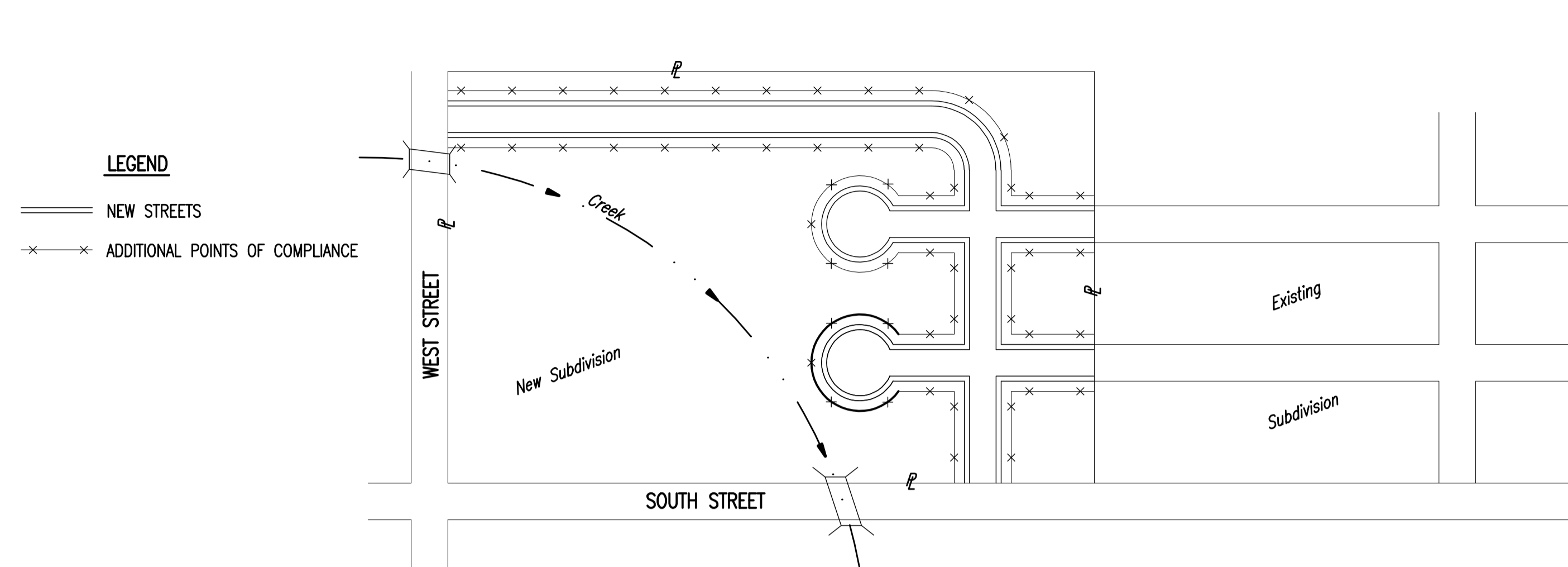
RECORD DRAWING
 JPD 4-6-2009

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



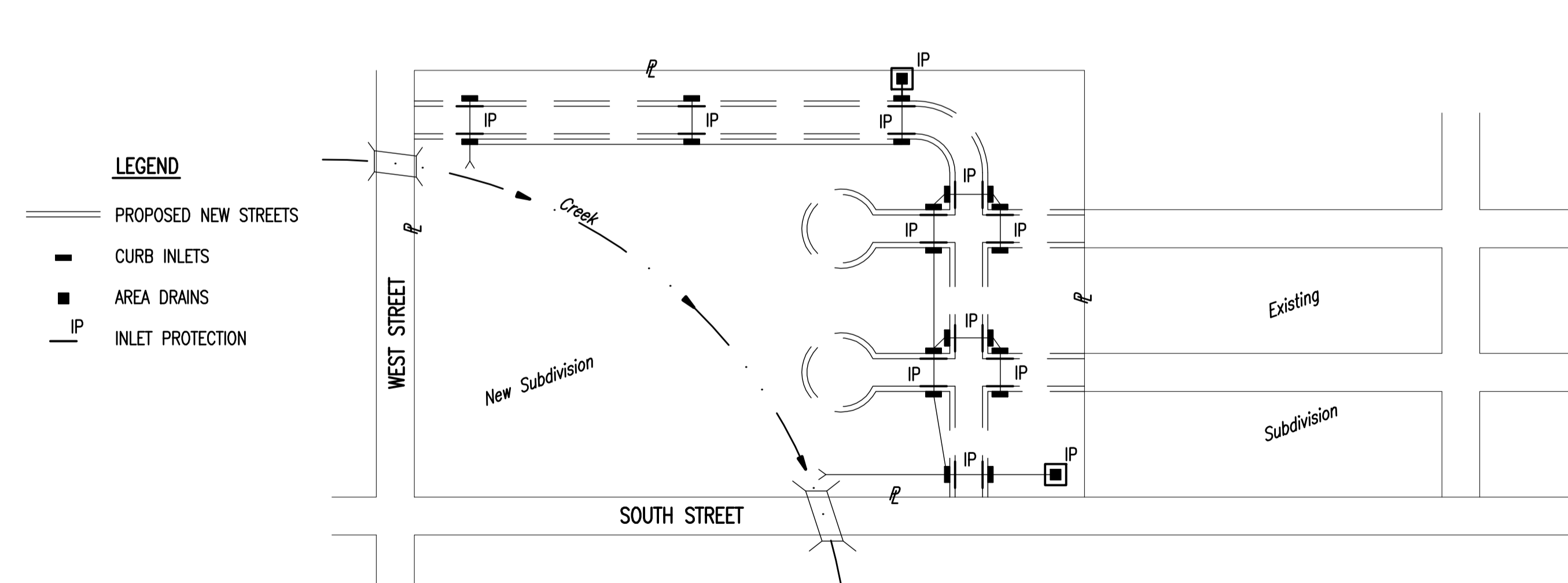
- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
- HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
- SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
- ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
- CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
- UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
- IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
- WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 3 – STREET CONSTRUCTION



- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
- CURB OPENING INLET PROTECTION:
 - SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
 - NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
- EROSION CONTROL DEVICES 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), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
- SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
- THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
- THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
- THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

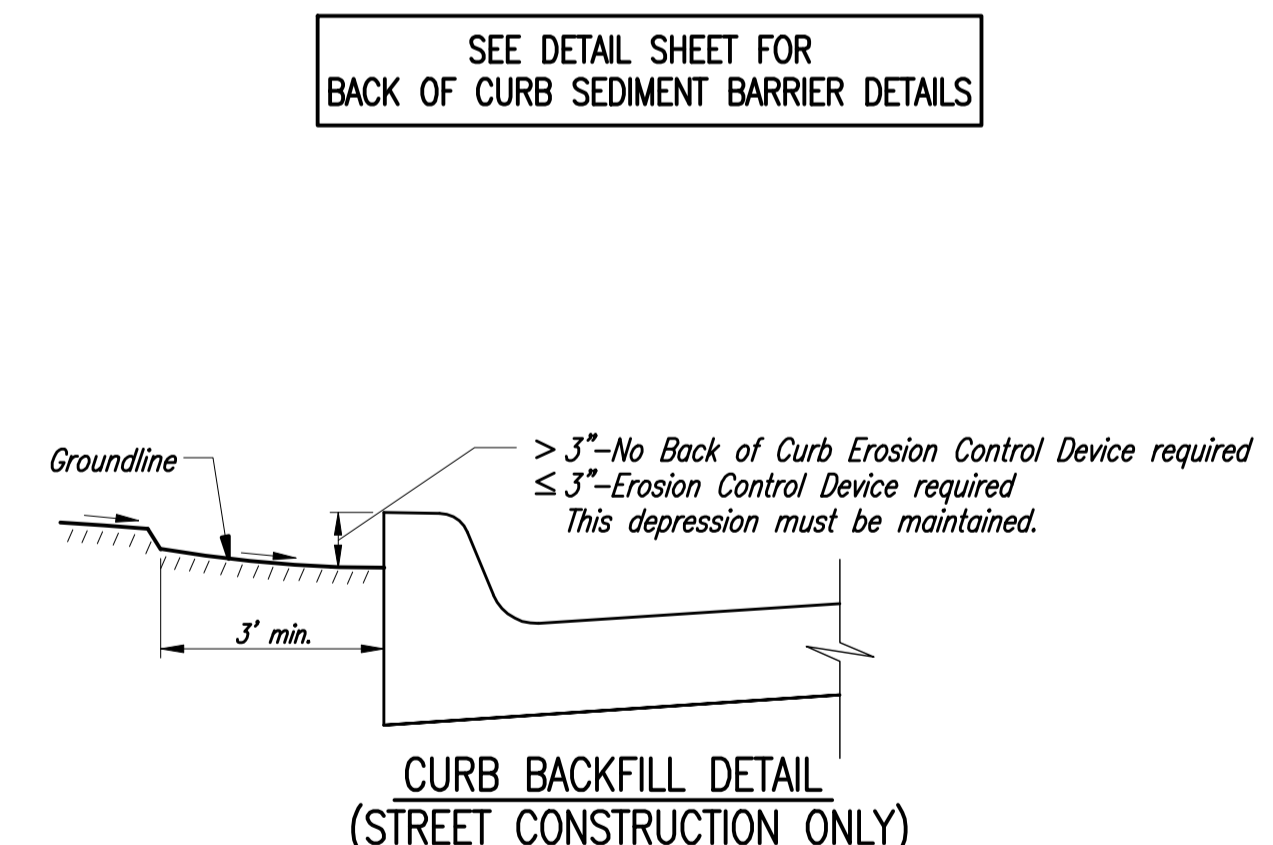
PHASE 2 – INSTALLATION OF STORM SEWER



- DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
- AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
- AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
- CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
- THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
- THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
- ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
- 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.

GENERAL NOTES:

- THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
- PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
- THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
- FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
- FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
- THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
- 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.

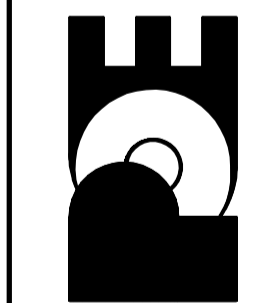


RECORD DRAWING
JPD 4-6-2009



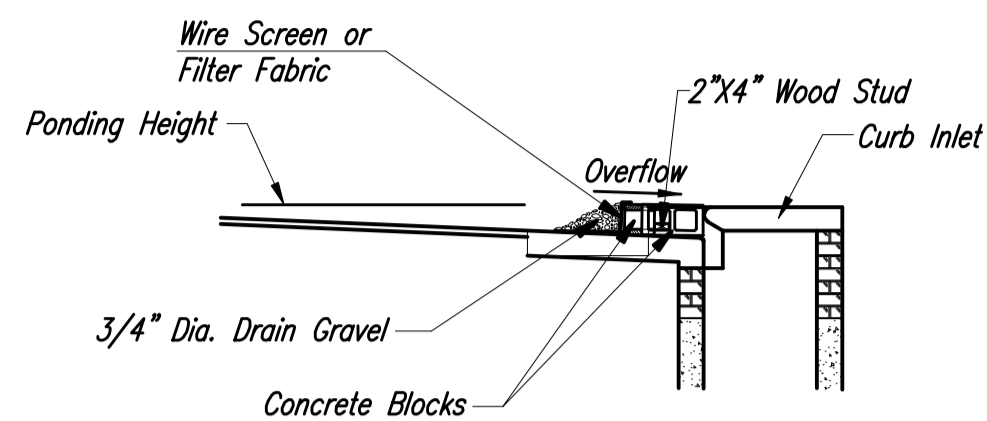
SOIL EROSION BMP's	
SUBDIVISION DEVELOPMENT PROCESS	
SCOTT LINDEBAK, P.E. STORM WATER ENGINEER	
PROJECT NUMBER 1836-PPS	OCA NO. 607861
DATE NOV 07	

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

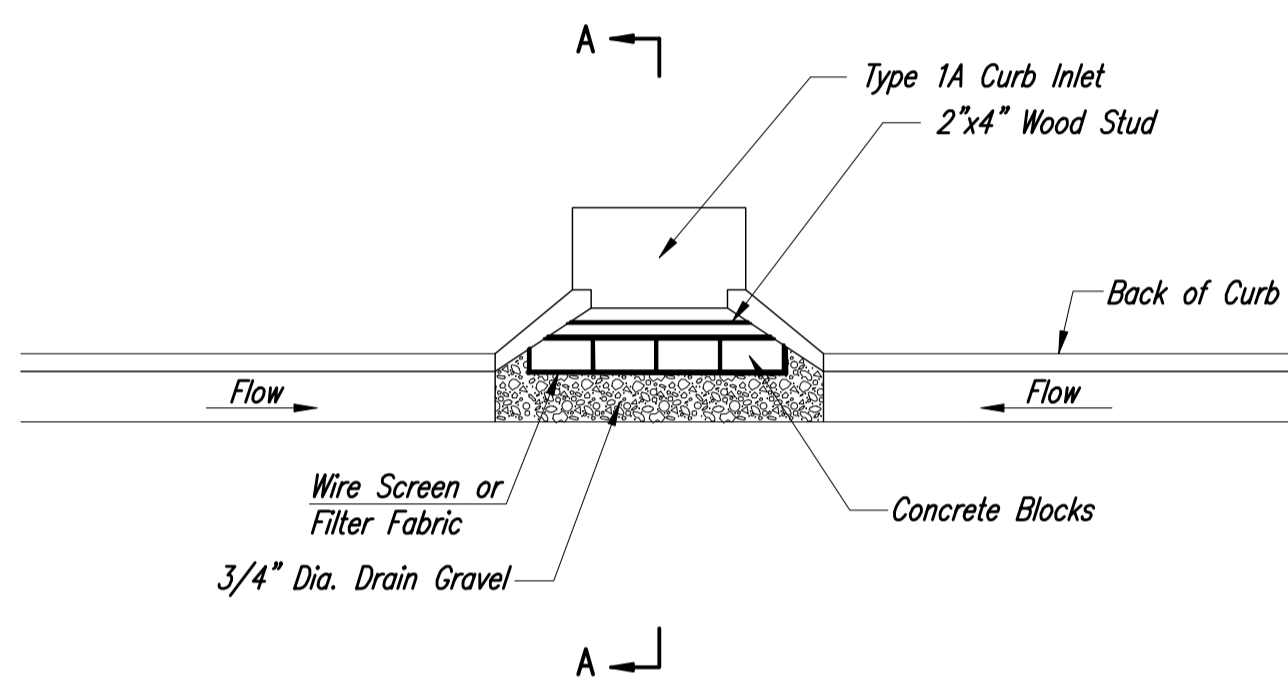


FINAL
Designed By: J. Dickman
Drawn By: M. Tucker
Fee Job No.: 1674F
Date: November 2007
Sheet 8 of 15

GREAT PLAINS BUSINESS PARK JRD ADDITION
STORM WATER DRAIN IMPROVEMENTS
SOIL EROSION BMP'S
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER
Private Project # 1836-PPS O.C.A. # 607861



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.

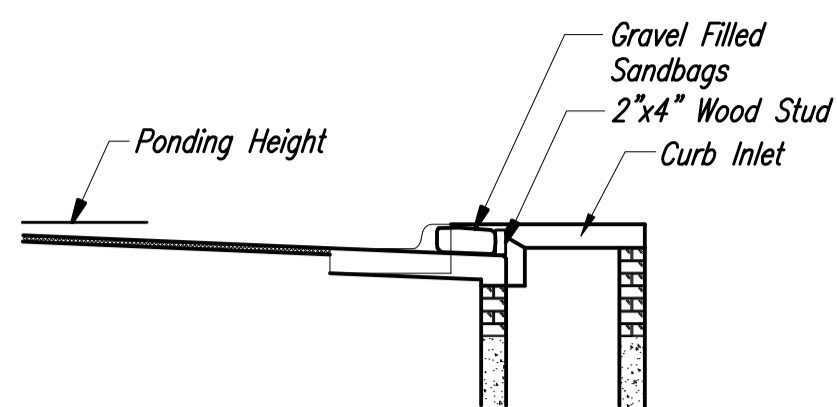
Instructions for Installing:

- 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.

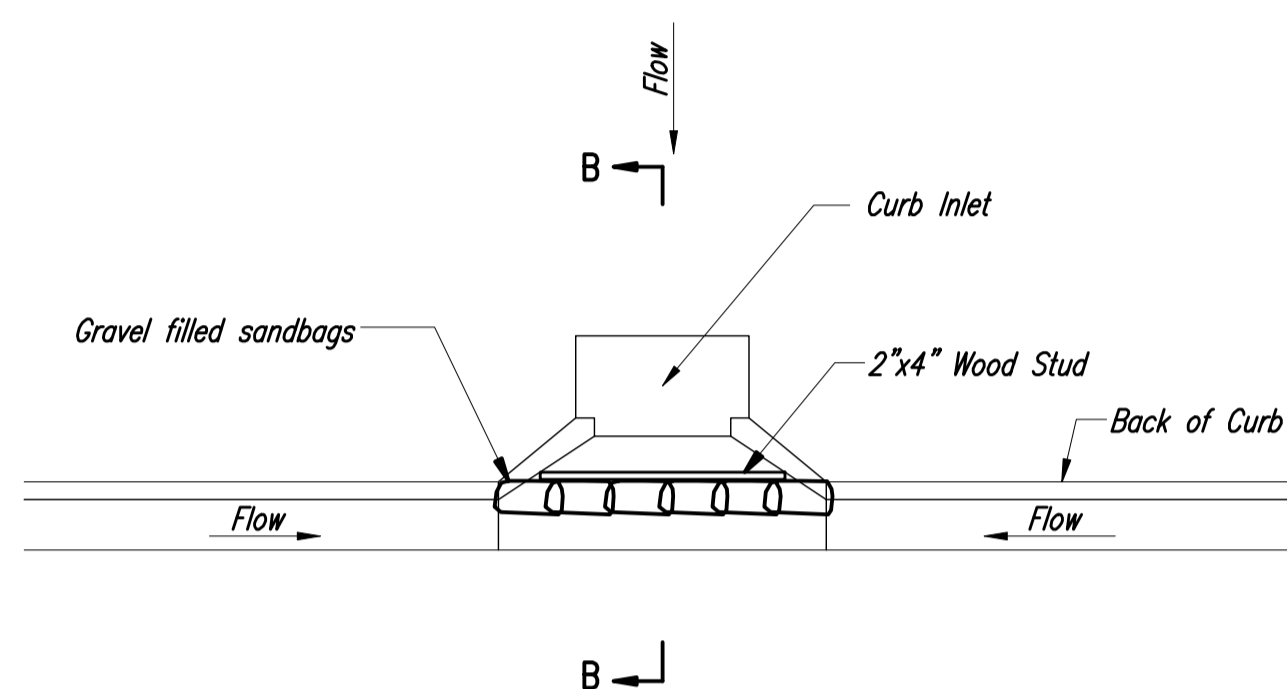
Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

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.

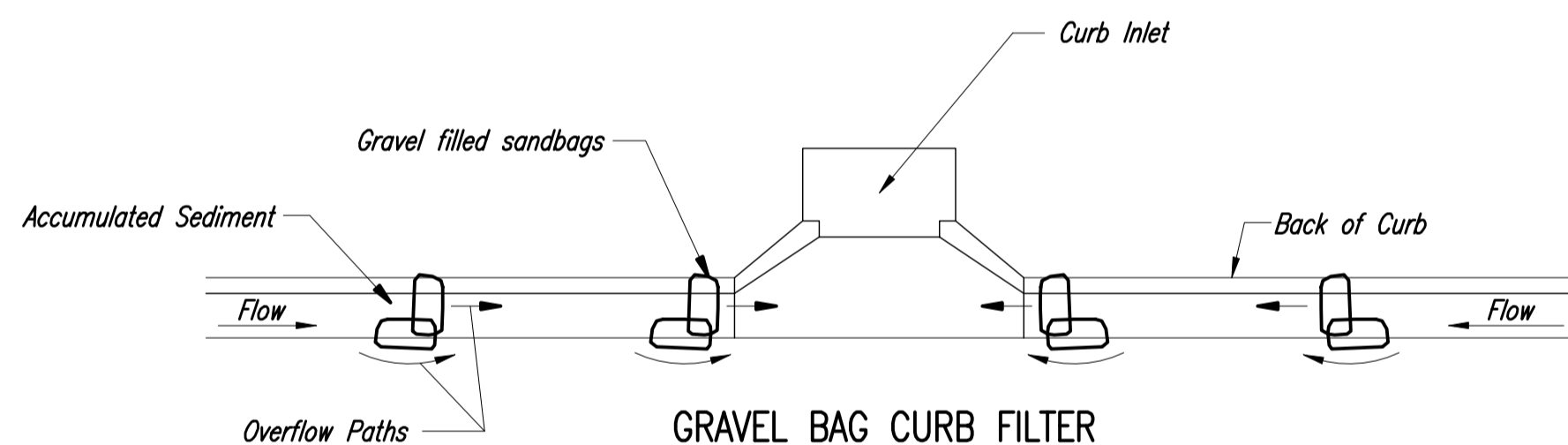


SECTION B-B



**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.

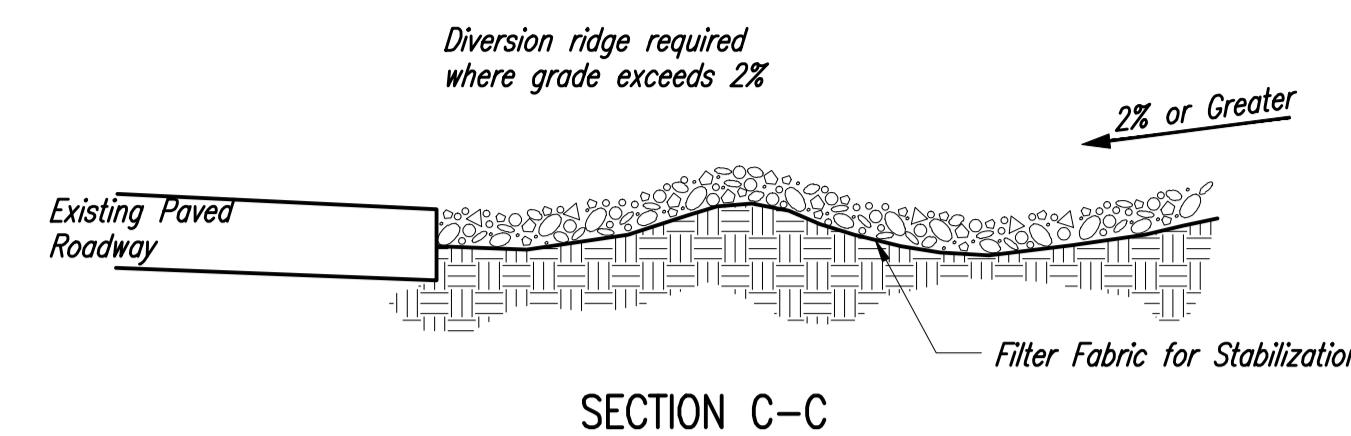
Spacing:

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

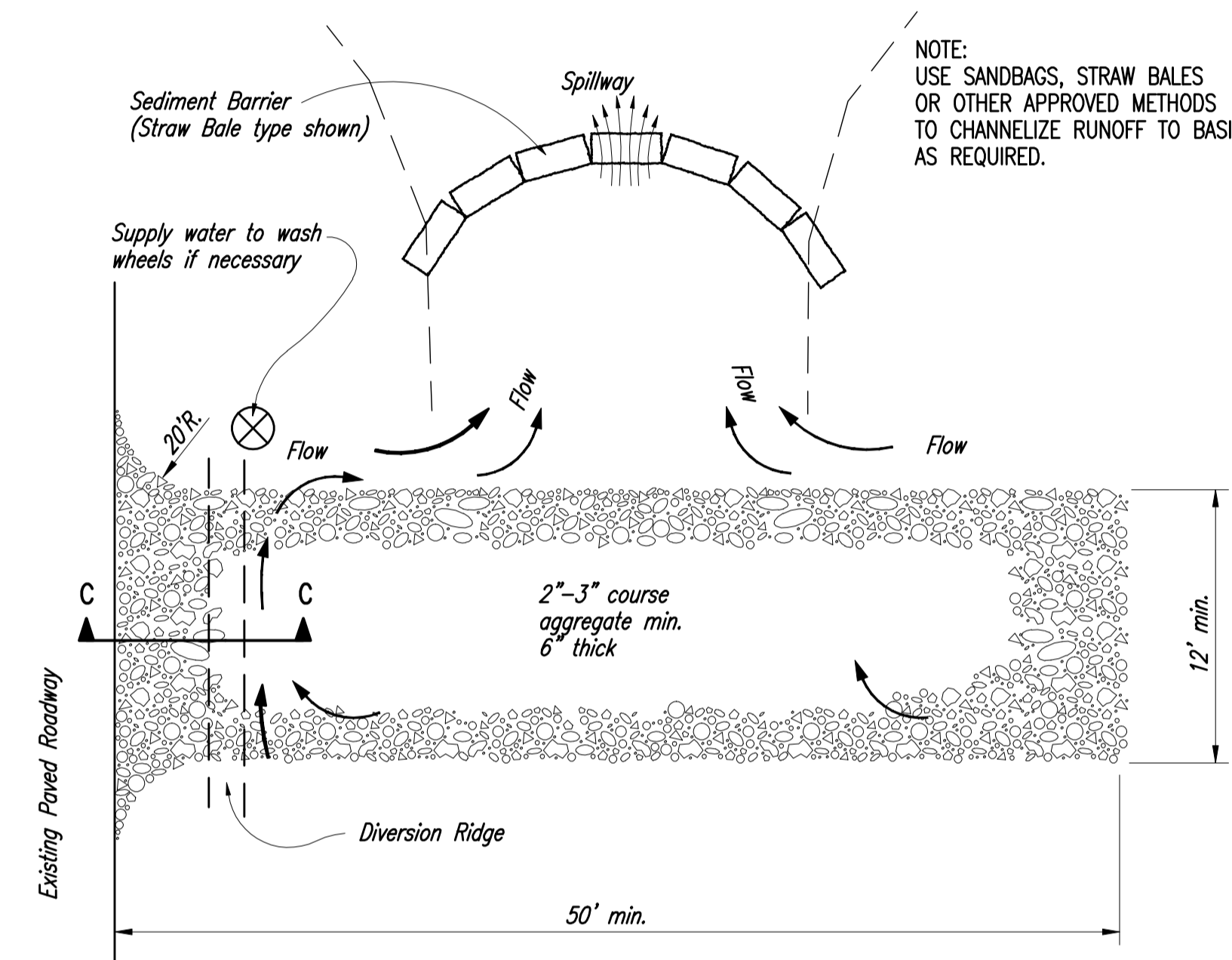
GRADE (%)	SPACING (FEET)
0.5	75
1.0	45
2.0	18
3.0	12
4.0	9
5.0	6

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 STABILIZED 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.

RECORD DRAWING
JPD 4-6-2009



SOIL EROSION BMPs	
CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE	
SCOTT LINDEBAK, P.E. STORM WATER ENGINEER	
PROJECT NUMBER 1836-PPS	OCA NO. 607861
DATE NOV 07	

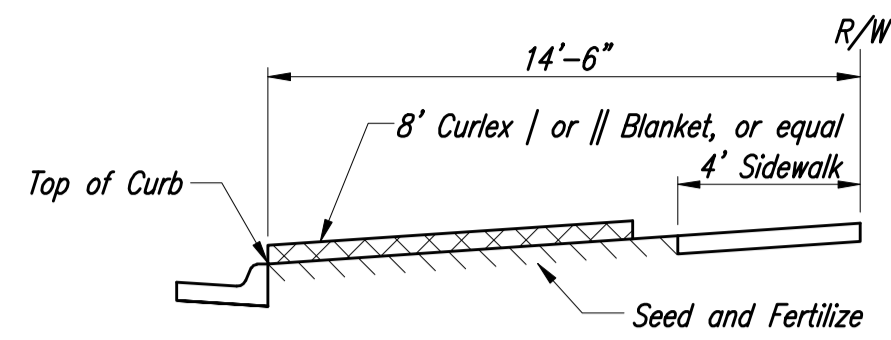
FINAL

Designed By: J. Dickman	Drawn By: M. Tucker	Fee Job No.: 1674F	Date: November 2007
SOIL EROSION BMPs			
CITY OF WICHITA, KANSAS			
JAMES L. HANCOCK, P.E. - CITY ENGINEER			
Private Project # 1836-PPS			
O.C.A. # 607861			

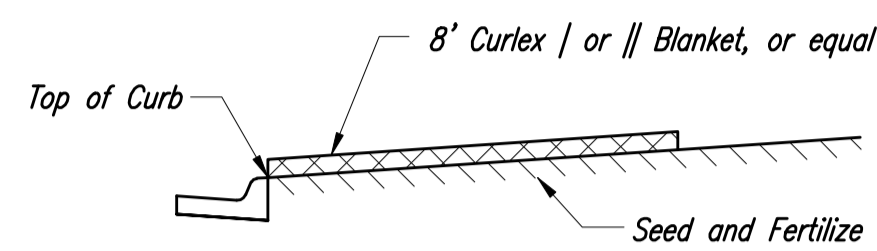
GREAT PLAINS BUSINESS PARK 3RD ADDITION
STORM WATER DRAIN IMPROVEMENTS
SOIL EROSION BMPs
CITY OF WICHITA, KANSAS
JAMES L. HANCOCK, P.E. - CITY ENGINEER
Private Project # 1836-PPS O.C.A. # 607861

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



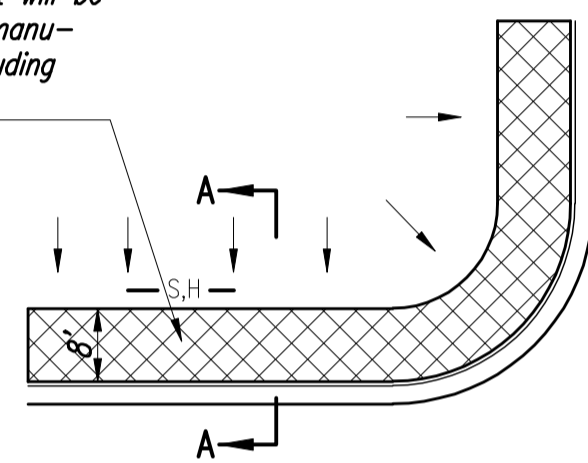


SECTION B-B

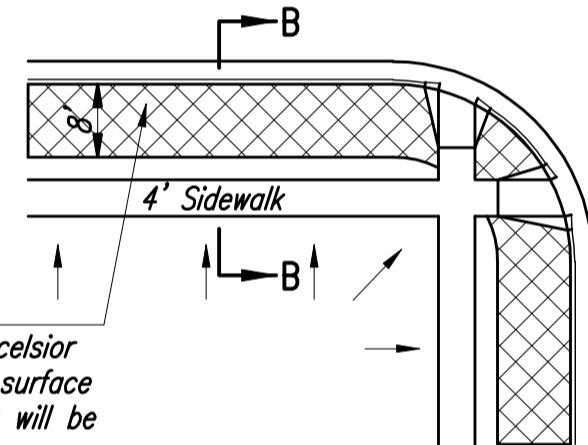


SECTION A-A

Install 8' wide Curlex | or || Excelsior Blanket, or equal, on prepared surface back of curb. Edge of blanket will be at back of curb. Install per manufacturer's recommendation, including staples. (See detail)



SOUTH STREET

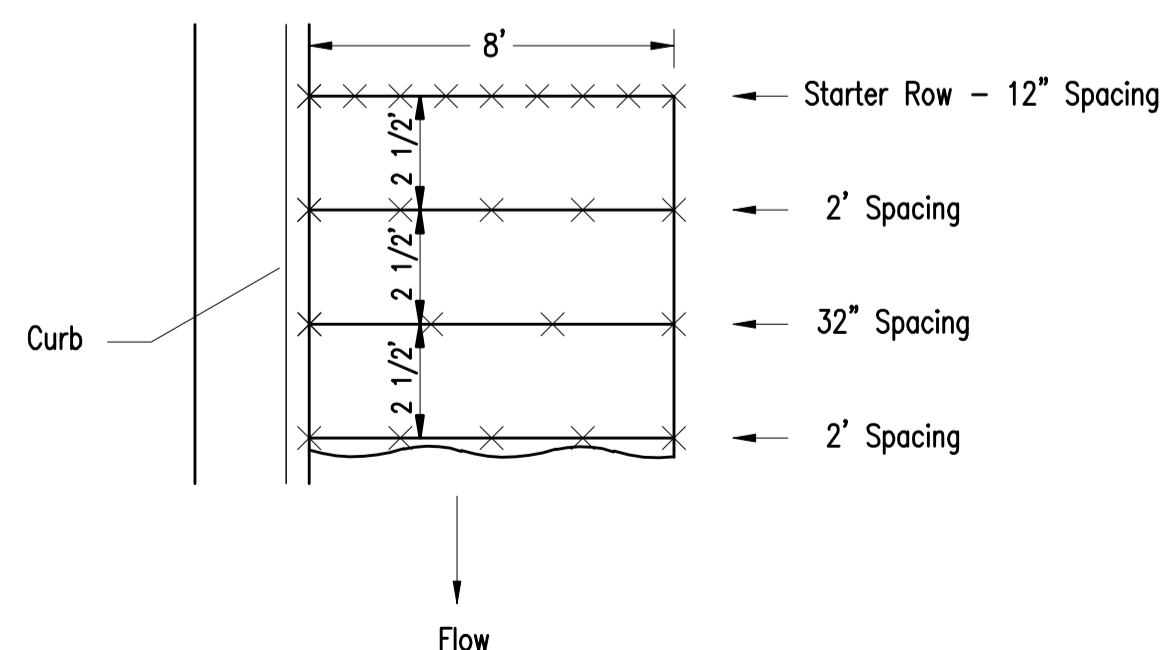


Install 8' wide Curlex | or || Excelsior Blanket, or equal, on prepared surface back of curb. Edge of blanket will be at back of curb. Install per manufacturer's recommendation, including staples. (See detail)

NOTES:

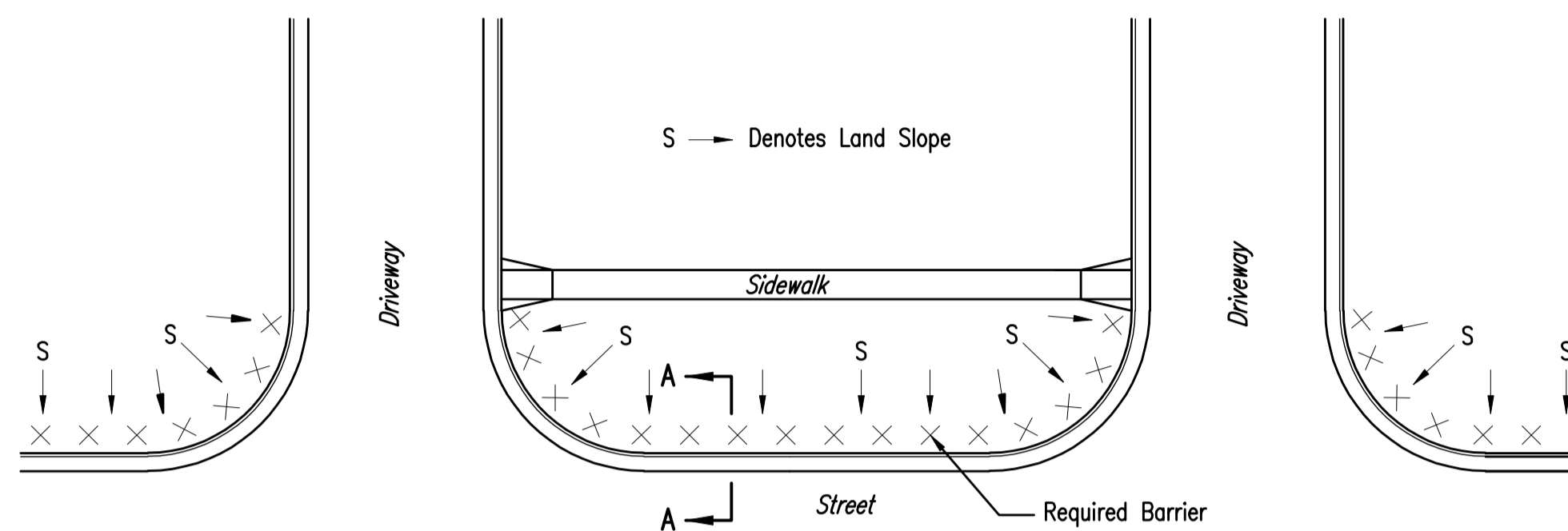
- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

BACK OF CURB PROTECTION DETAIL

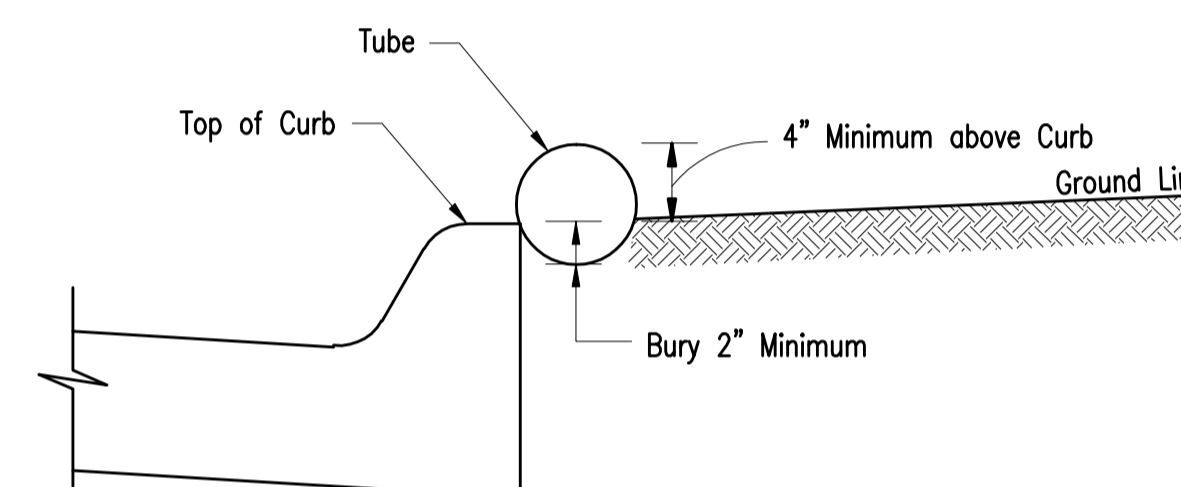


NOTES: Use 6" seam overlap

DETAILS FOR CURLEX | OR || BLANKETS



PLAN VIEW



SECTION A-A

NOTES:

- Barriers must be placed back of curb along street and up the driveway sufficiently to catch all sediment from the yard.
- Overlap seams 6 inches
- Anchor to ground every 3.0 feet.
- All tubes shall be constructed of heavy duty netting, rolled erosion control fabric or similar devices filled with a porous material that will allow water to pass while filtering sediment. Tubes shall be 6" to 9" in diameter.
- Remove accumulated sediment when within 2 inches of top of device.
- Replace all broken tubes to maintain effectiveness of device.
- If tubes are removed during the day for access to the site, they will be replaced prior to a rainfall event and at night before work ceases. Replace properly per original design.

TUBE BARRIERS

NOTES:

Properly constructed and maintained Silt Fence Barriers or Straw Bale Barriers may be used for back of curb erosion control. See the Soil Erosion BMPs-Barrier Details for additional information.

RECORD DRAWING
JPD 4-6-2009



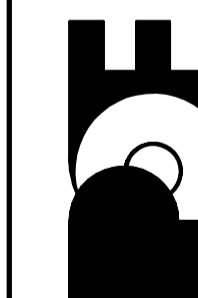
SOIL EROSION BMPs	
BACK OF CURB SEDIMENT BARRIER DETAILS	
SCOTT LINDEBAK, P.E. STORM WATER ENGINEER	
PROJECT NUMBER 1836-PPS	OCA NO. 607861
DATE NOV 07	

FINAL

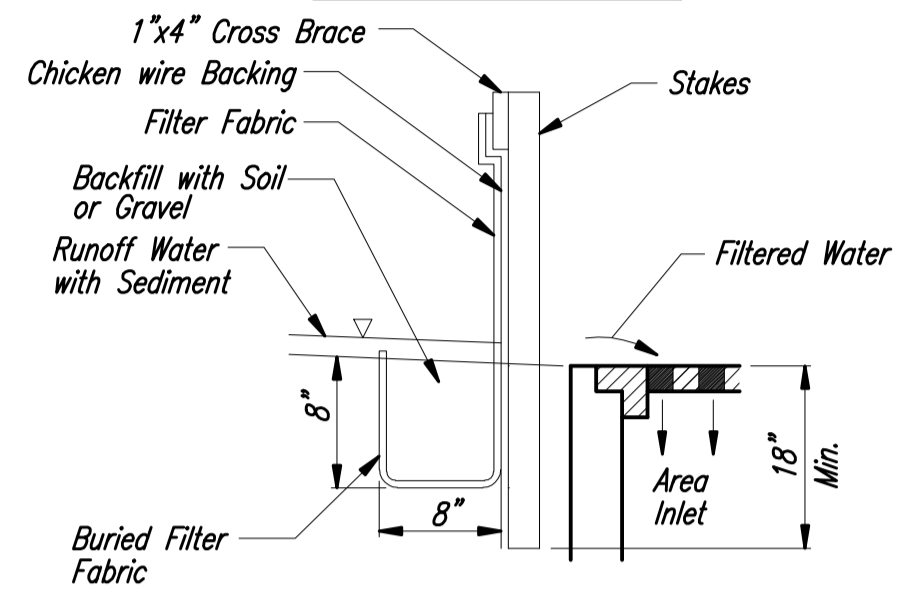
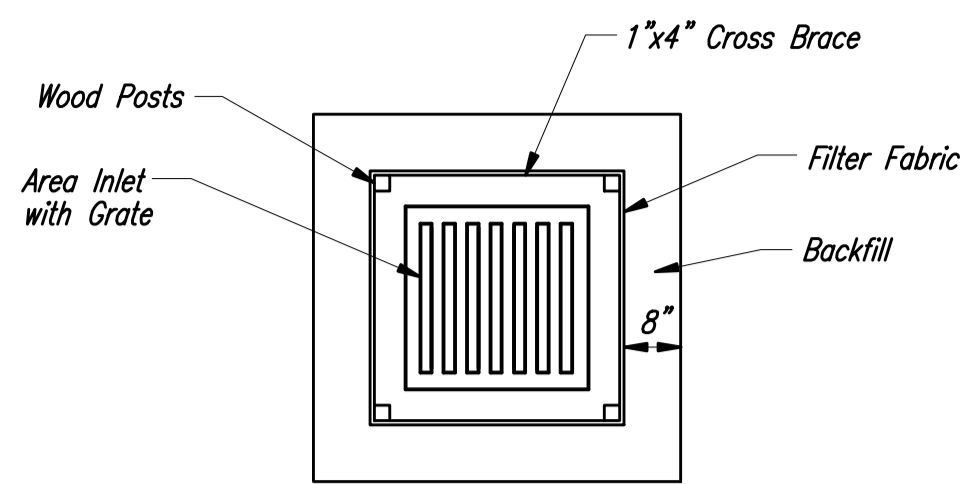
Designed By: J. Dickman
Drawn By: M. Tucker
Fee Job No.: 1674F
Date: November 2007

GREAT PLAINS BUSINESS PARK 3RD ADDITION
STORM WATER DRAIN IMPROVEMENTS
SOIL EROSION BMPs
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER
Private Project # 1836-PPS O.C.A. # 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 - Wichita, KS 67209-4242
Phone 316/685-4114 - FAX 316/685-4444



No.	Date	By	Approved



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

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

Placement:

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

Proper installation method:

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

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

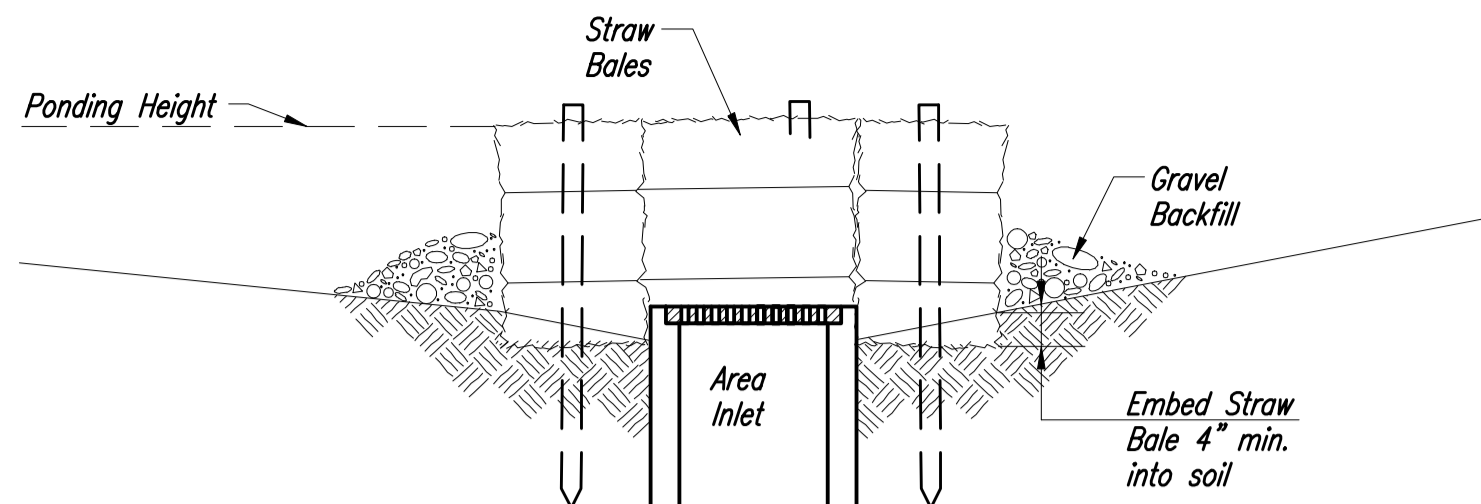
List of common placement/installation mistakes to avoid:

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

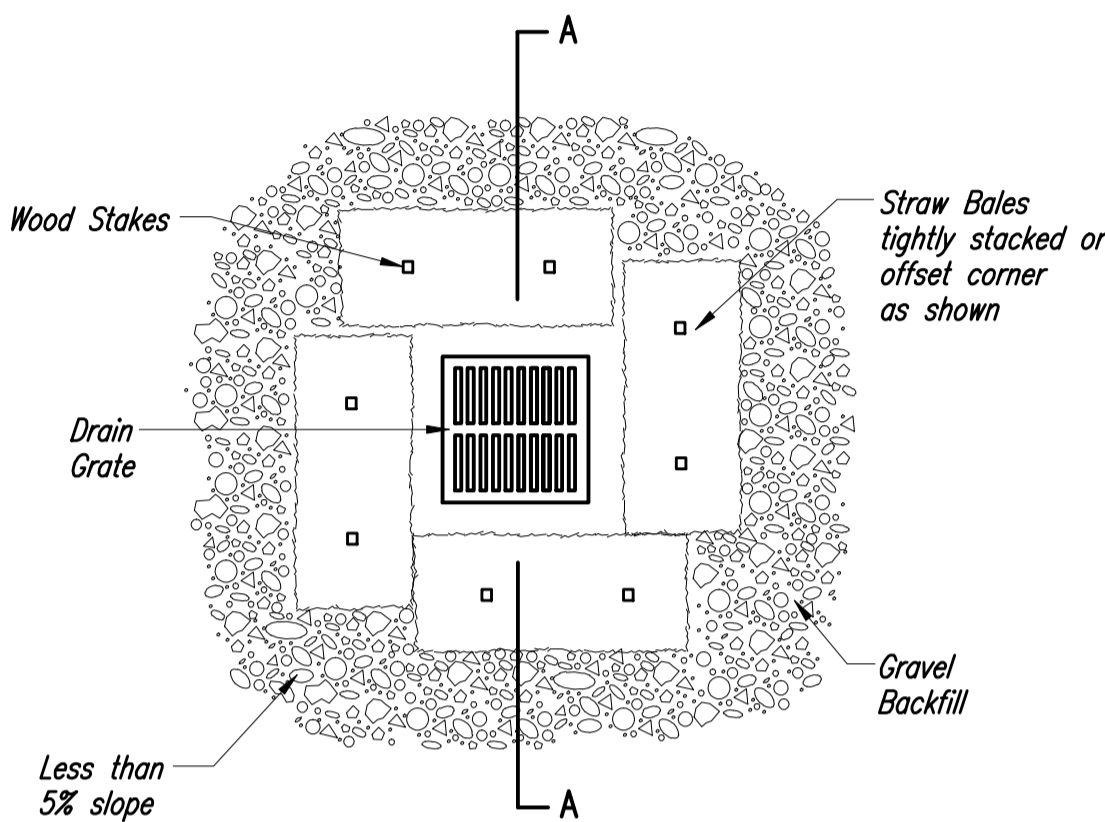
Inspection and Maintenance:

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

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



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Bale area inlet barriers should be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture. The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. Twine should be used to bind bales. The use of wire binding is prohibited because it does not biodegrade readily.

Placement:

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

Proper Installation Method:

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

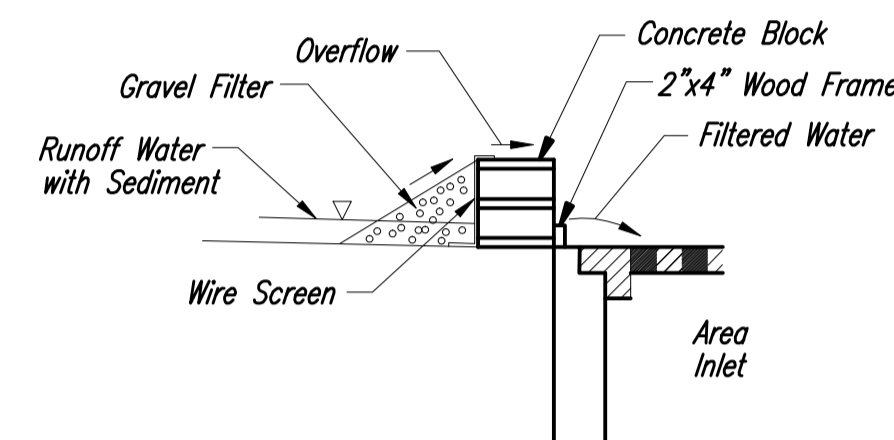
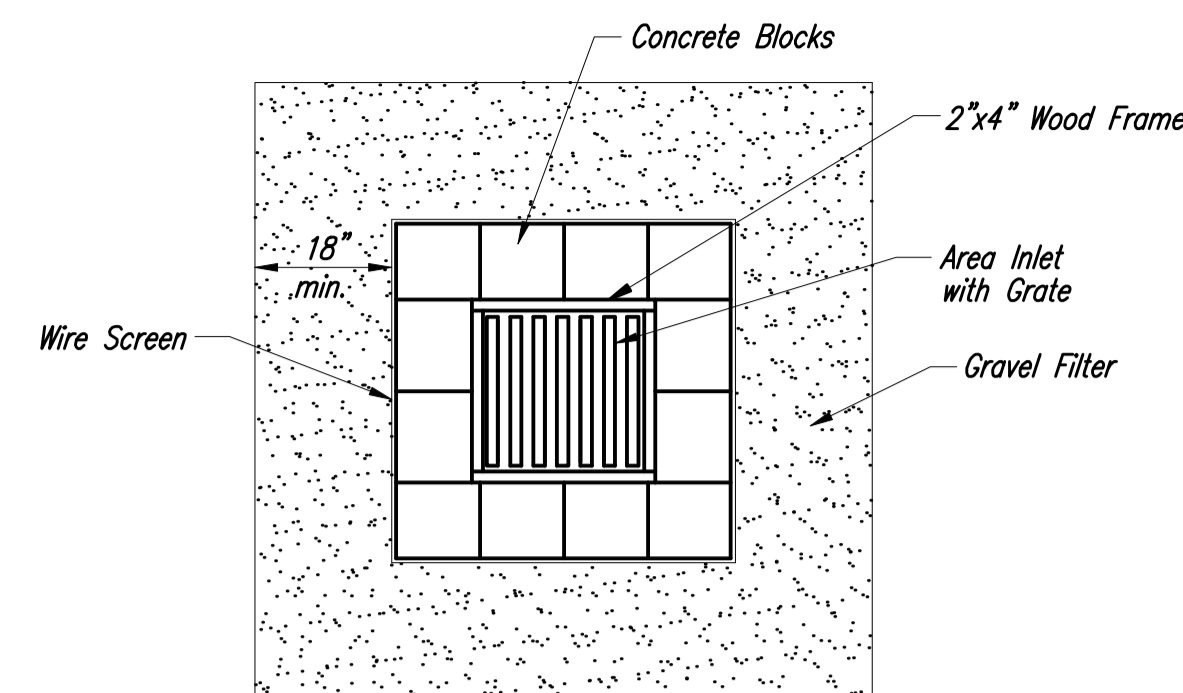
List of common placement installation mistakes to avoid:

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

Inspection and Maintenance:

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

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



CONCRETE BLOCK FILTER FOR AREA INLETS
(INLET PROTECTION)

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

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

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

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

Instructions for Installing:

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

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

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

Maintenance:

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

RECORD DRAWING
JPD 4-6-2009



SOIL EROSION BMPs	
AREA INLET BARRIERS	
SCOTT LINDEBAK, P.E. STORM WATER ENGINEER	
PROJECT NUMBER 1836-PPS	OCA No. 607861
DATE NOV 07	

Revision		Approved		Date		No.	
1		2		3		4	

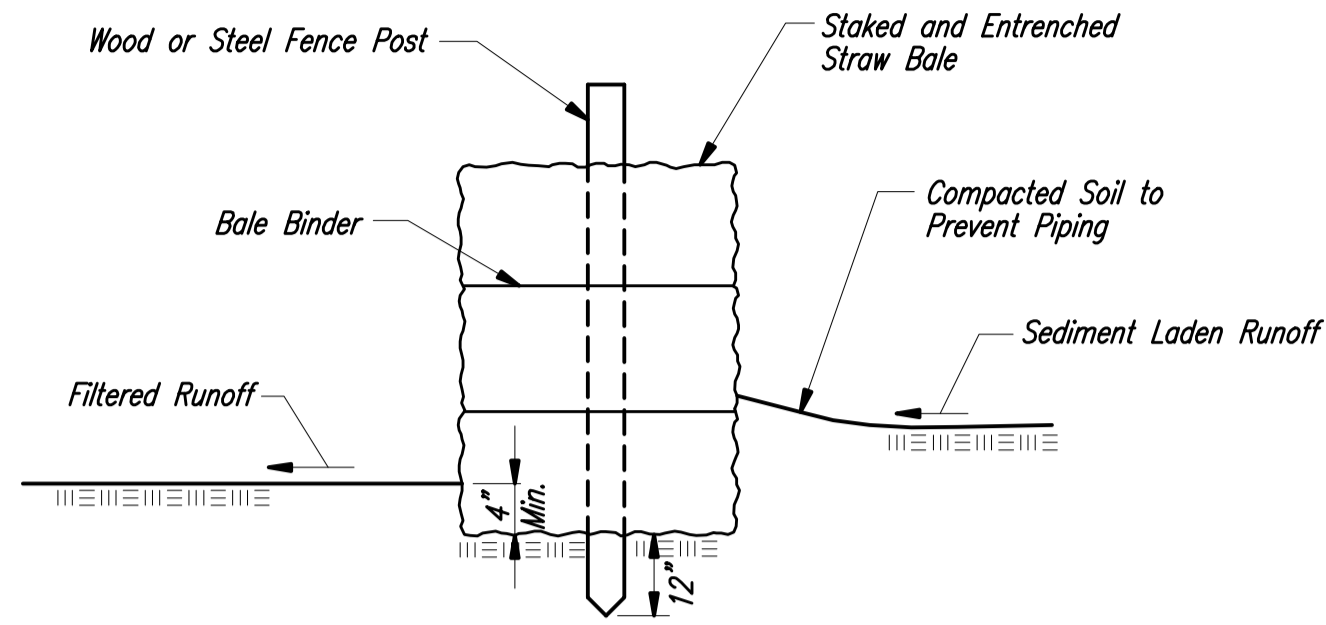
GREAT PLAINS BUSINESS PARK 3RD ADDITION
STORM WATER DRAIN IMPROVEMENTS
SOIL EROSION BMPs
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER
Private Project # 1836-PPS O.C.A. # 607861

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

Designed By: J. Dickman
Drawn By: M. Tucker
Poe Job No.: 1674F
Date: November 2007

FINAL

Sheet
11 of 15



STRAW BALE BARRIERS

Material Specification:

Bale slope barriers may be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture. The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. Twine should be used to bind bales. The use of wire binding is prohibited because it does not biodegrade readily.

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment.

When practicable, bale slope barriers should be placed along contours to avoid a concentration of flow.

Bale slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 4" deep and a bale's width wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use.

Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground.

Once all the bales have been installed and anchored, place the excavated soil against the upslope side of the check and compact it. The compacted soil should be no more than 3" to 4" deep.

List of common placement/installation mistakes to avoid:

When practical, do not place bale slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. Concentrated flow over a slope barrier creates a scour hole on the downslope side of the barrier. The scour hole eventually undermines the bales and the barrier fails.

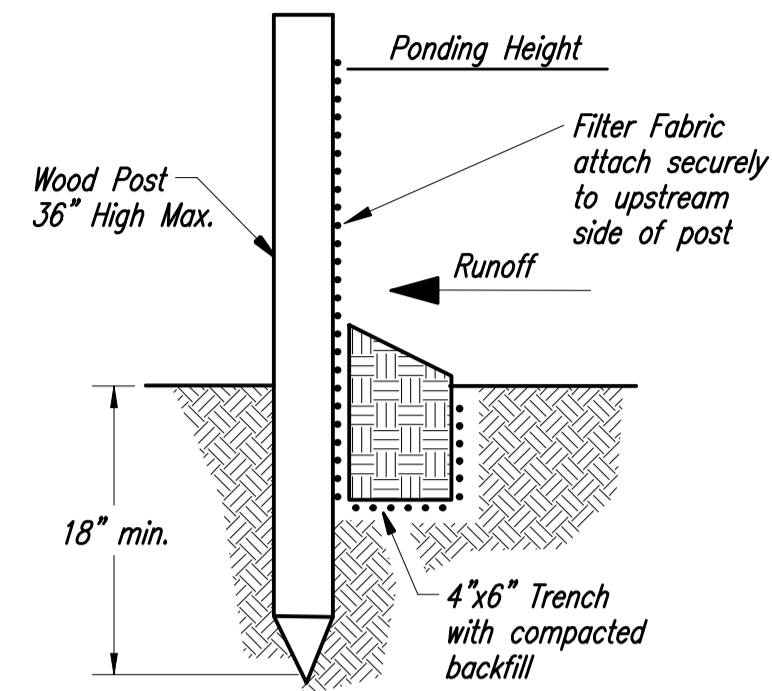
Do not place bale slope barriers in areas with shallow soils underlain by rock. If the barrier is not anchored sufficiently, it will wash out.

Bale slope barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

Inspection and Maintenance:

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

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



SILT FENCE BARRIERS

Material Specification:

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

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment.

When practicable, silt fence slope barriers should be placed along contours to avoid a concentration of flow.

Silt fence slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 6" deep by 4" wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use.

Roll out a continuous length of silt fence fabric on the downslope side of the trench. Place the edge of the fabric in the trench starting at the top upslope edge. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt-fence fabric should remain exposed.

Lay the exposed silt fence upslope of the trench to clear an area for driving in the posts. Just downslope of the trench, drive posts into the ground to a depth of at least 18". Place posts no more than 4' apart.

Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

List of common placement/installation mistakes to avoid:

When practicable, do not place silt fence slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. When the flow concentrates, it overtops the barrier and the silt fence slope barrier quickly deteriorates. Do not place silt-fence posts on the upslope side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail.

Do not place silt fence slope barriers in areas with shallow soils underlain by rock. If the barrier is not sufficiently anchored, it will wash out.

Silt fence slope barriers must be dug into the ground-silt fence at ground level does not work because water will flow underneath.

Inspection and Maintenance:

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

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

RECORD DRAWING
JPD 4-6-2009



SOIL EROSION BMPs	
BARRIER DETAILS	
SCOTT LINDEBAK, P.E. STORM WATER ENGINEER	
PROJECT NUMBER 1836-PPS	OCA NO. 607861
DATE NOV 07	

FINAL

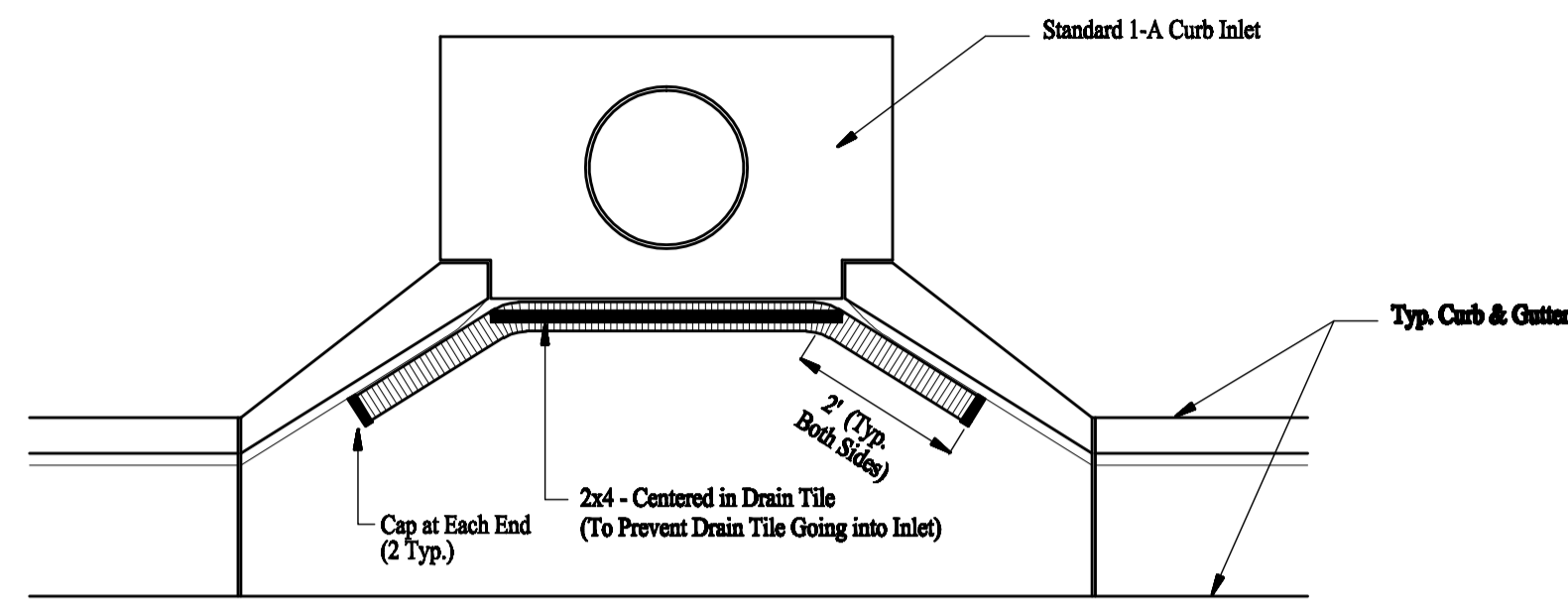
Designed By: J. Dickman	Drawn By: M. Tucker
Poe Job No.: 1674F	Date: November 2007

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

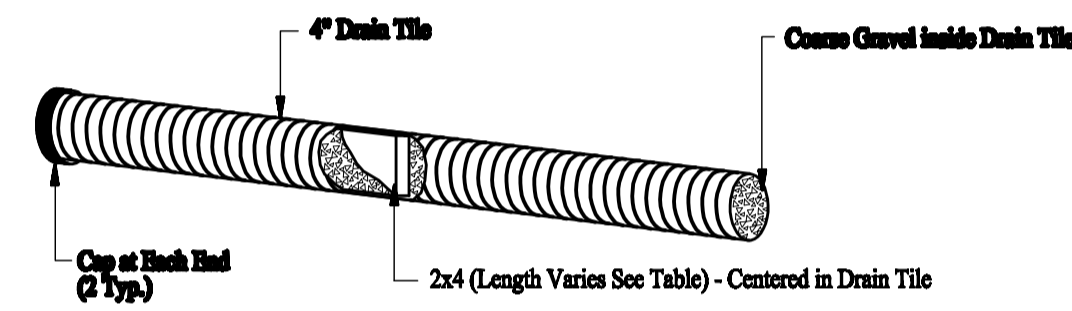
GREAT PLAINS BUSINESS PARK 3RD ADDITION
STORM WATER DRAIN IMPROVEMENTS
SOIL EROSION BMPs
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER
Private Project # 1836-PPS O.C.A. # 607861

No.	Date	By	Approved	Revision

EROSION CONTROL
ADDITIONAL DETAILS

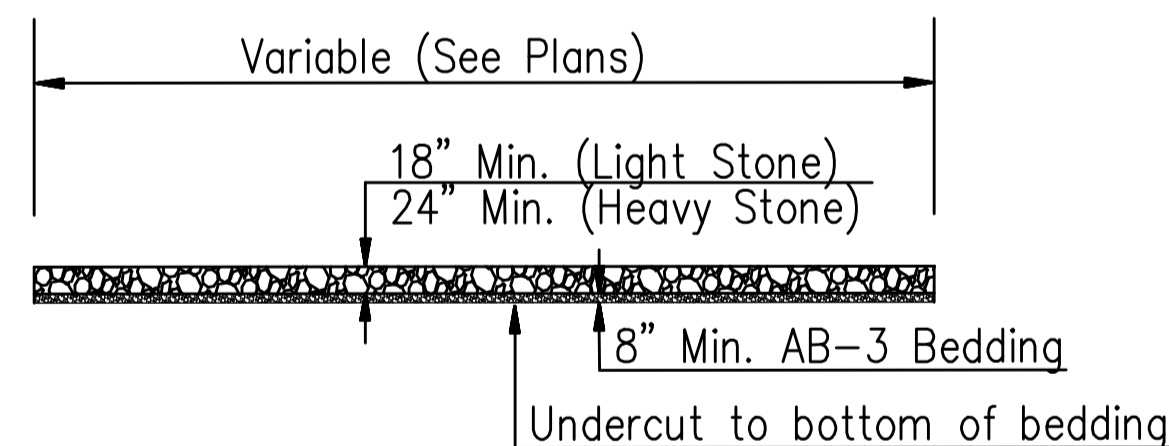


2x4 LENGTH	INLET TYPE	INLET OPENING
5' - 6"	1-A	5' - 0"
10' - 6"	1-A	10' - 0"
15' - 6"	1-A	15' - 0"



Curb Inlet Sediment Barrier Detail

(No Scale)

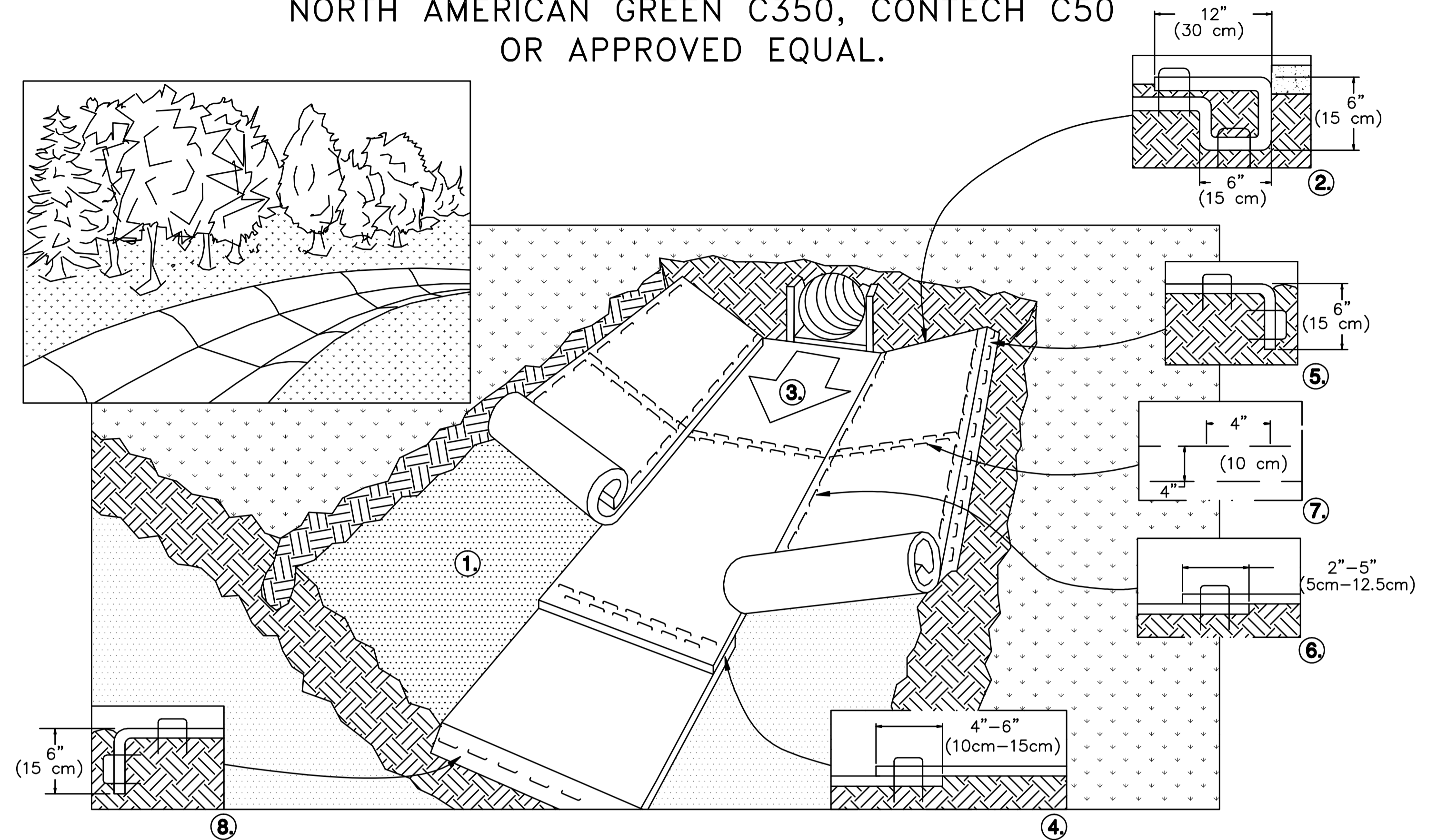


Light Stone Rip Rap shall be used
(Bedding shall be subsidiary to rip rap cost)

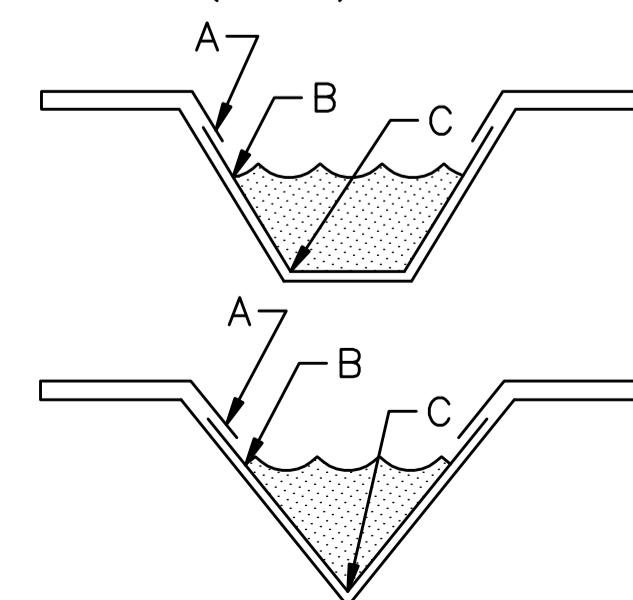
RIP RAP DETAIL

(No Scale)

EROSION CONTROL
(PERMANENT) TURF REINFORCEMENT MAT (TRM)
CHANNEL INSTALLATION
NORTH AMERICAN GREEN C350, CONTECH C50
OR APPROVED EQUAL.



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" (10cm-15cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5cm-12.5cm) (DEPENDING ON BLANKET TYPE) AND STAPLED. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m-12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



CRITICAL POINTS

- A. OVERLAPS AND SEAMS
- B. PROJECTED WATER LINE
- C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

*** USE NORTH AMERICAN GREEN SC150, LANDLOK CS2, CONTECH SCFB2, OR APPROVED EQUAL.

FINAL

Designed By: J. Dickman
Drawn By: M. Tucker
Poe Job No.: 1674F
Date: November 2007

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 - Wichita, KS 67209-4242
Phone 316/685-4114 • FAX 316/685-4444

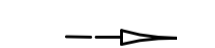


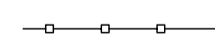
GREAT PLAINS BUSINESS PARK 3RD ADDITION
STORM WATER DRAIN IMPROVEMENTS
SOIL EROSION BMPs
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER
Private Project # 1836-PPS O.C.A. # 607861

No. Date By Approved Revision

RECORD DRAWING
JPD 4-6-2009

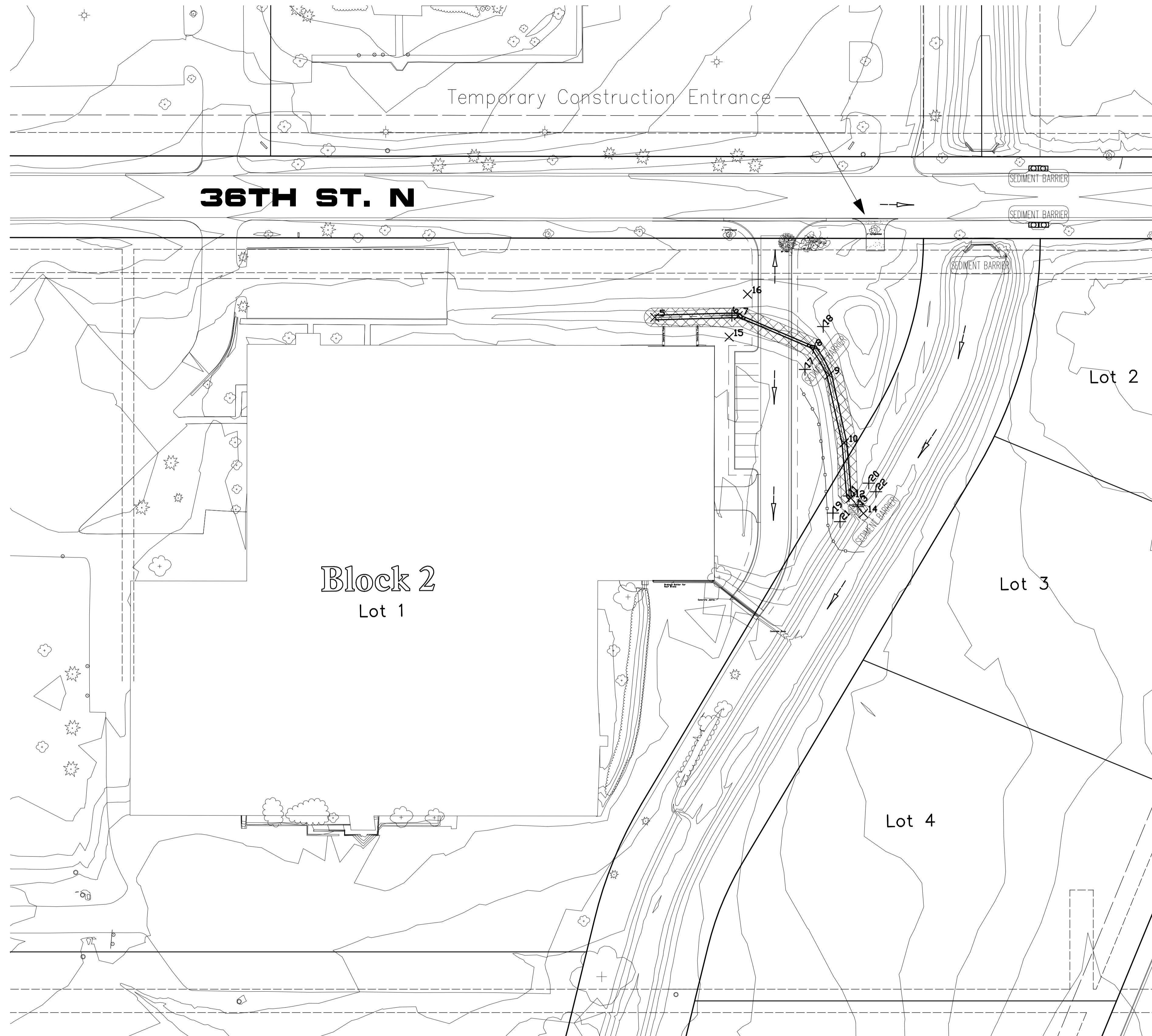
Point #	Raw Description	Northing	Easting
1	Sta. 3+42.00 CL Drive No. 1	6687.1444	3063.9588
2	Sta. 0+75.68 CL Drive No. 1	6420.8300	3063.6427
3	Sta. 0+10.25 CL Drive No. 1	6359.9938	3042.9173
4	Sta. 0+00.00 CL Drive No. 1	6351.8671	3036.6686
5	Sta. 2+93.29 Ditch No. 1	6602.1995	2960.9985
6	Sta. 2+27.29 Ditch No. 1	6603.9090	3026.9764
7	Sta. 2+21.70 Ditch No. 1	6603.7825	3032.5643
8	Sta. 1+51.11 Ditch No. 1	6576.0399	3097.4741
9	Sta. 1+24.56 Ditch No. 1	6552.9255	3110.4673
10	Sta. 0+64.98 Ditch No. 1	6494.7625	3123.3844
11	Sta. 0+19.28 Ditch No. 1	6449.2377	3127.3852
12	Sta. 0+16.92 Ditch No. 1	6447.4295	3128.8906
13	Sta. 0+07.40 Ditch No. 1	6440.1132	3134.9818
14	Sta. 0+00.00 Ditch No. 1	6434.4237	3139.7187
15	Sta. 2+21.70 Ditch No. 1 Lt. 20'	6585.3918	3024.7041
16	Sta. 2+21.70 Ditch No. 1 Rt. 20'	6622.1732	3040.4245
17	Sta. 1+51.11 Ditch No. 1 Lt. 20'	6557.6492	3089.6139
18	Sta. 1+51.11 Ditch No. 1 Rt. 20'	6594.4306	3105.3343
19	Sta. 0+16.92 Ditch No. 1 Lt. 20'	6434.6329	3113.5203
20	Sta. 0+16.92 Ditch No. 1 Rt. 20'	6460.2261	3144.2609
21	Sta. 0+07.40 Ditch No. 1 Lt. 20'	6427.3166	3119.6115
22	Sta. 0+07.40 Ditch No. 1 Rt. 20'	6452.9098	3150.3521
160	SO	6236.7370	1961.7940
161	SO	6236.7370	2166.7940
162	SO	6201.7370	2201.7940
163	SO	5793.4550	1961.7940
164	SO	5762.6070	2201.7940
165	SO	5912.1560	2271.7940
166	SO	5812.9710	2359.0460
167	SO	5775.9730	2646.9000
168	SO	5771.5660	3187.7060
169	SO	5833.4630	3280.9790
170	SO	5700.6320	3301.9540
171	SO	6042.7260	3442.9200
172	SO	6061.7520	3488.6150
173	SO	6017.1990	3596.7360
174	SO	5992.3070	3622.9050
175	SO	6081.1480	3659.5130
176	SO	6081.9190	3623.4050
177	SO	6126.4720	3515.2850
178	SO	6172.1670	3496.2590
179	SO	6669.5790	3565.0020
180	SO	6630.7420	3599.7570
181	SO	6568.3320	3583.7970
182	SO	6541.6640	3648.5180
183	SO	6656.2160	3671.1440
184	SO	6669.4750	3671.1330
185	SO	6999.4740	3670.8530
186	SO	6999.1520	4000.8530

LEGEND

-  = Direction of Flow
-  = Temporary Seeding Area (200 lbs/acre Rye Grass)
-  = Sediment Barrier (Ditch Check/Inlet= 5)
-  = Silt Fence (167 L.F.)

Storm Water Pollution Prevention Plan
GREAT PLAINS BUSINESS PARK 3RD

An Addition to Wichita - Sedgwick County, Kansas



Scale 1" = 50'

NOTES:

1. Contractor shall seed all disturbed areas with temporary grass. See General Notes for seeding information. Total Area = 0.105 Acres.

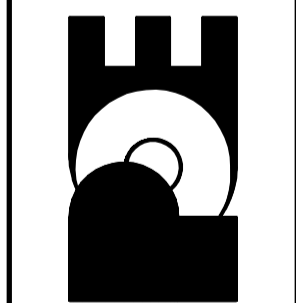
RECORD DRAWING
 JPD 4-6-2009

FINAL

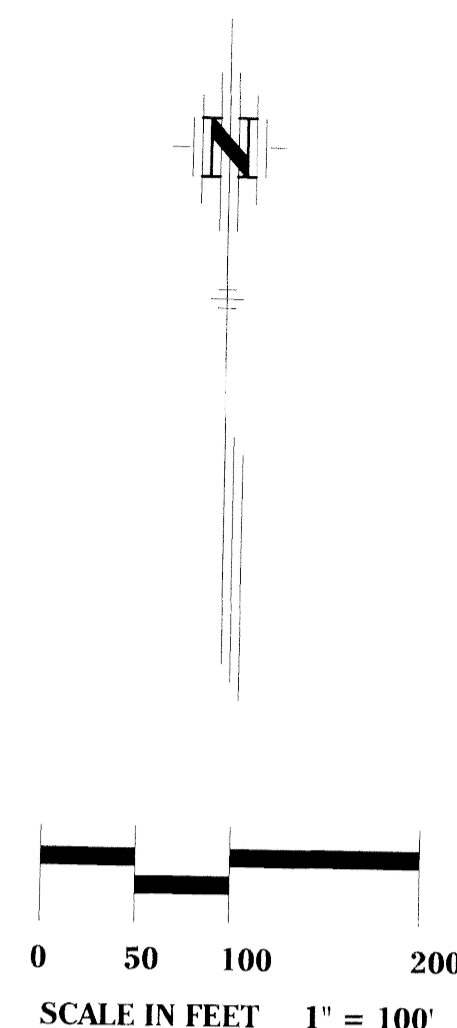
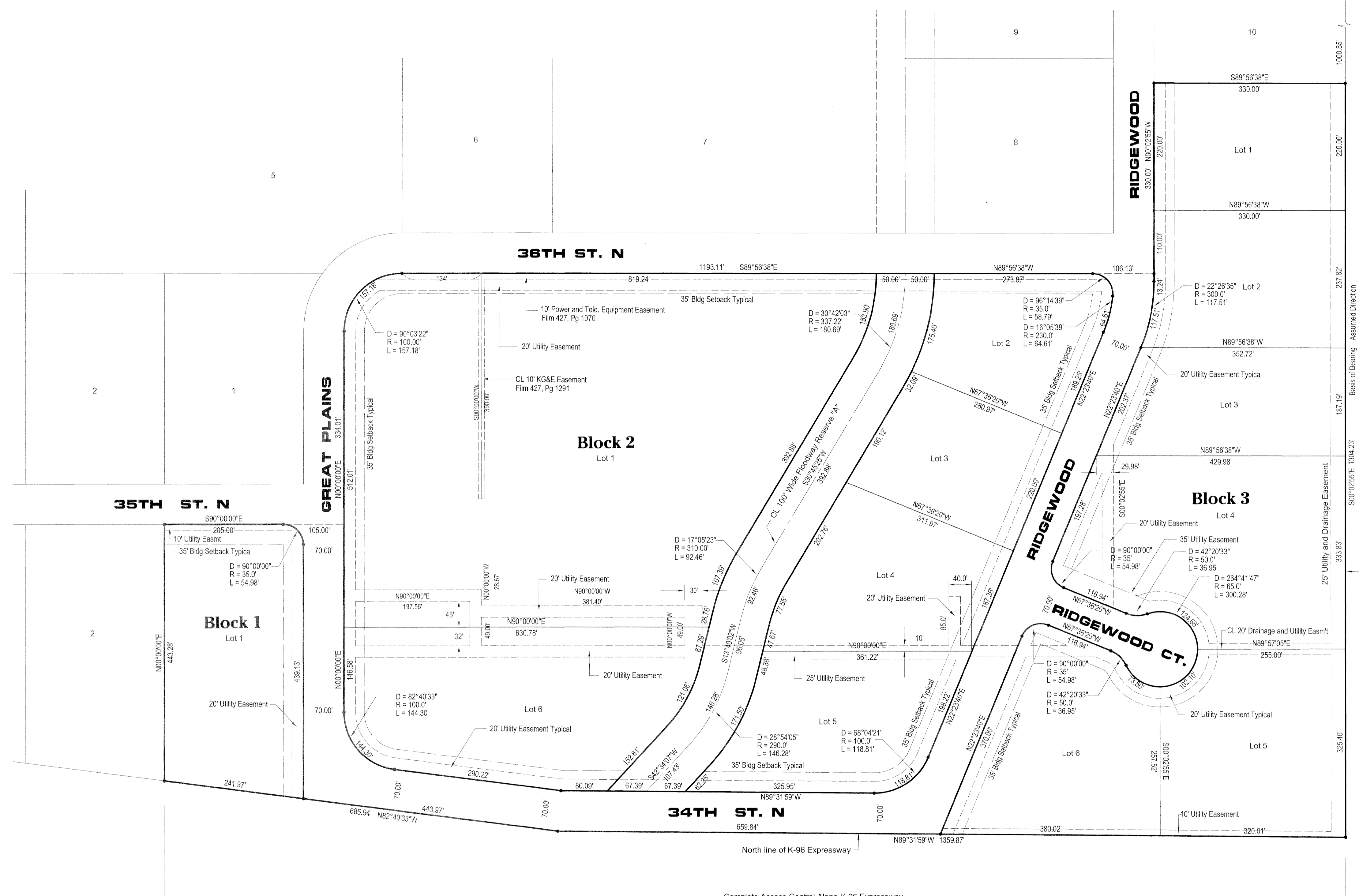
Designed By: J. Dickman
 Drawn By: M. Tucker
 Pce Job No.: 1674F
 Date: November 2007

GREAT PLAINS BUSINESS PARK 3RD ADDITION
 STORM WATER DRAIN IMPROVEMENTS
 STORM WATER POLLUTION PREVENTION PLAN
CITY OF WICHITA, KANSAS
 JAMES L. ARMOUR, P.E. - CITY ENGINEER
 Private Project # 1836-PPS O.C.A. # 607861

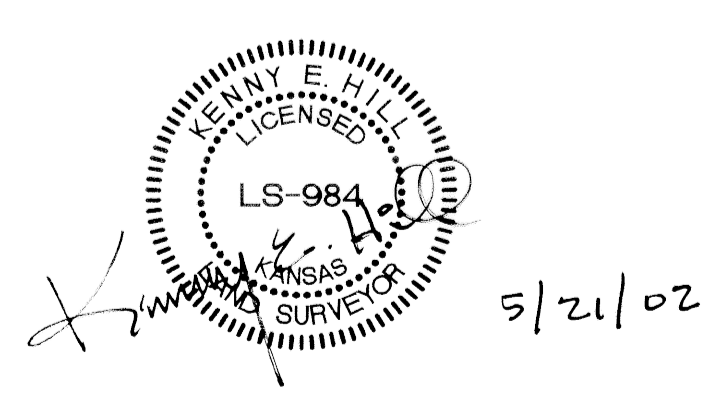
POE & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 5940 E. Central, Suite 200 - Wichita, KS 67208-4242
 Phone 316/685-4114 - FAX 316/685-4444



No.	Date	By	Approved	Revision



- Benchmarks:**
- City of Wichita Datum
 - 1. 100' South of Norwood on SE corner of RCBC Hubguard. COW Benchmark Elevation 161.44
 - 2. Southwest corner of Hubguard 100' E. of Oliver on 37th. COW Benchmark Elevation 166.84
- Minimum Building Low Opening Elevations**
- City of Wichita Datum
 - Lots 1, 2, 3 and 4, Block 2 - Elevation 179.5
 - Lots 5 and 6, Block 2 - Elevation 177.5



2094975

Great Plains Business Park 3rd Addition

to Wichita-Sedgwick County, Kansas

RECORD DRAWING
JPD 4-6-2009

