

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS
PRIVATE PROJECT NO. 1164PPS(607861)

SANITARY SEWERS _____
STORM SEWERS VRH 9/28/00
DRIVEWAY APPROACHES _____
WATER MAINS _____
PAVING _____

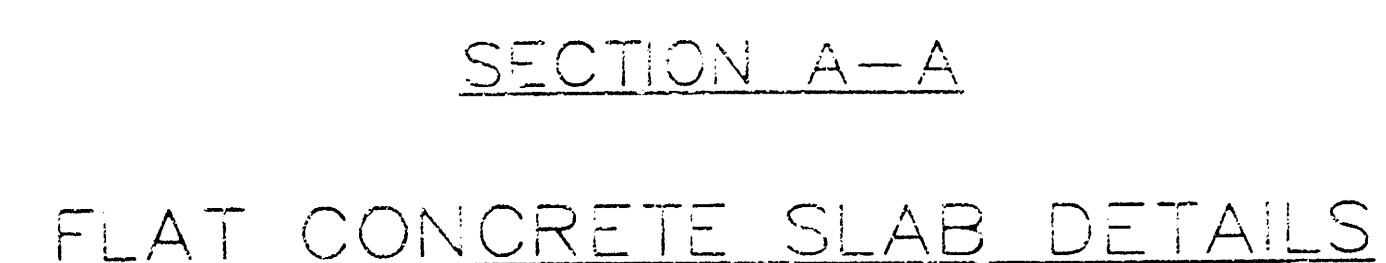
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DOWN EXPENSE.
BOOKED
5-31-02
MCG
7-4081C-2.3

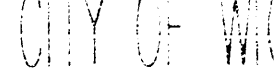
Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-7691 • FAX 316-262-3003

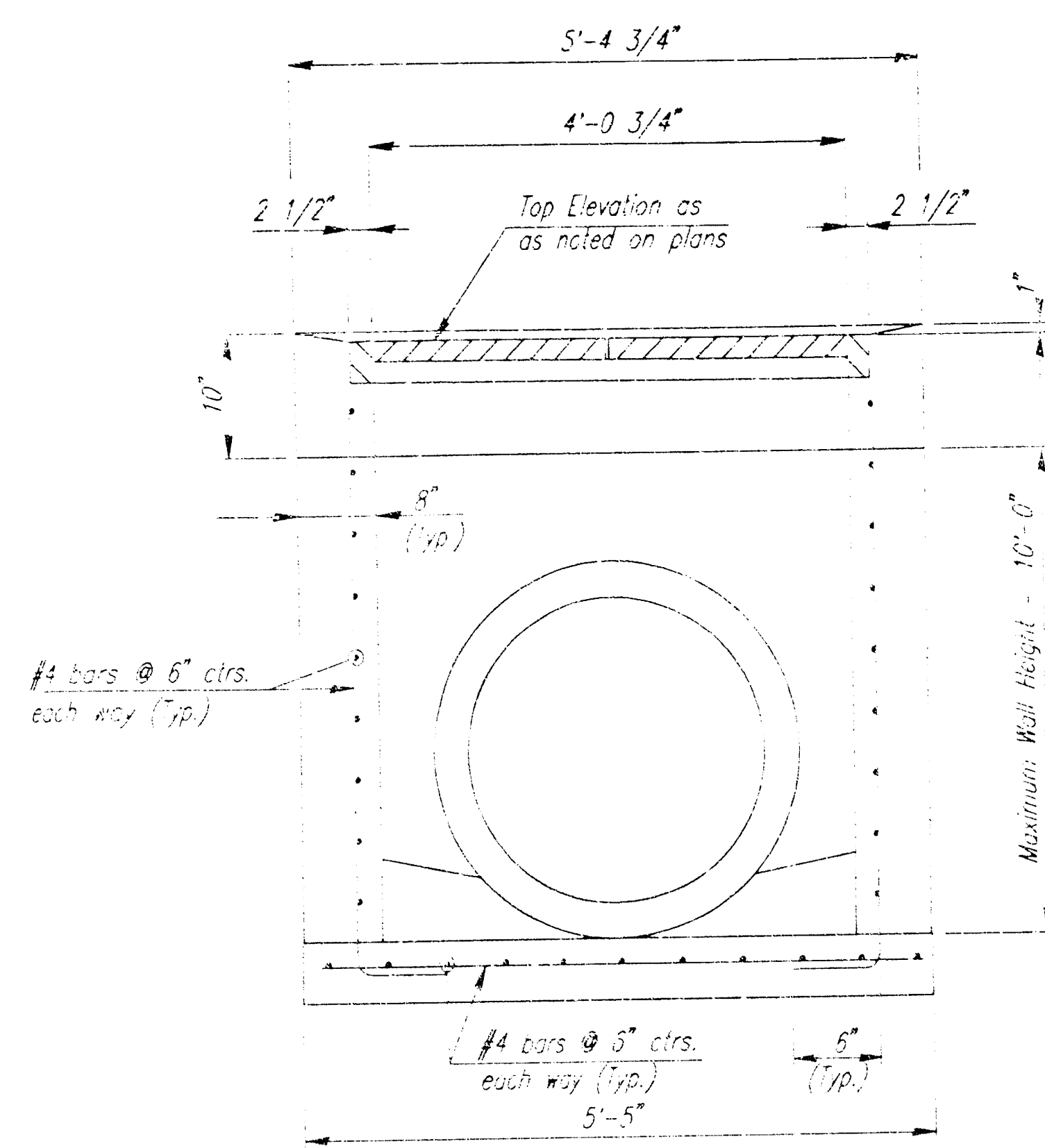
Designed by	DRC	Checked by	
Drawn by	SAD	Date	SEPT 2001
		Job No.	01498

AS-BUILT 12.13.11 HCF W/160

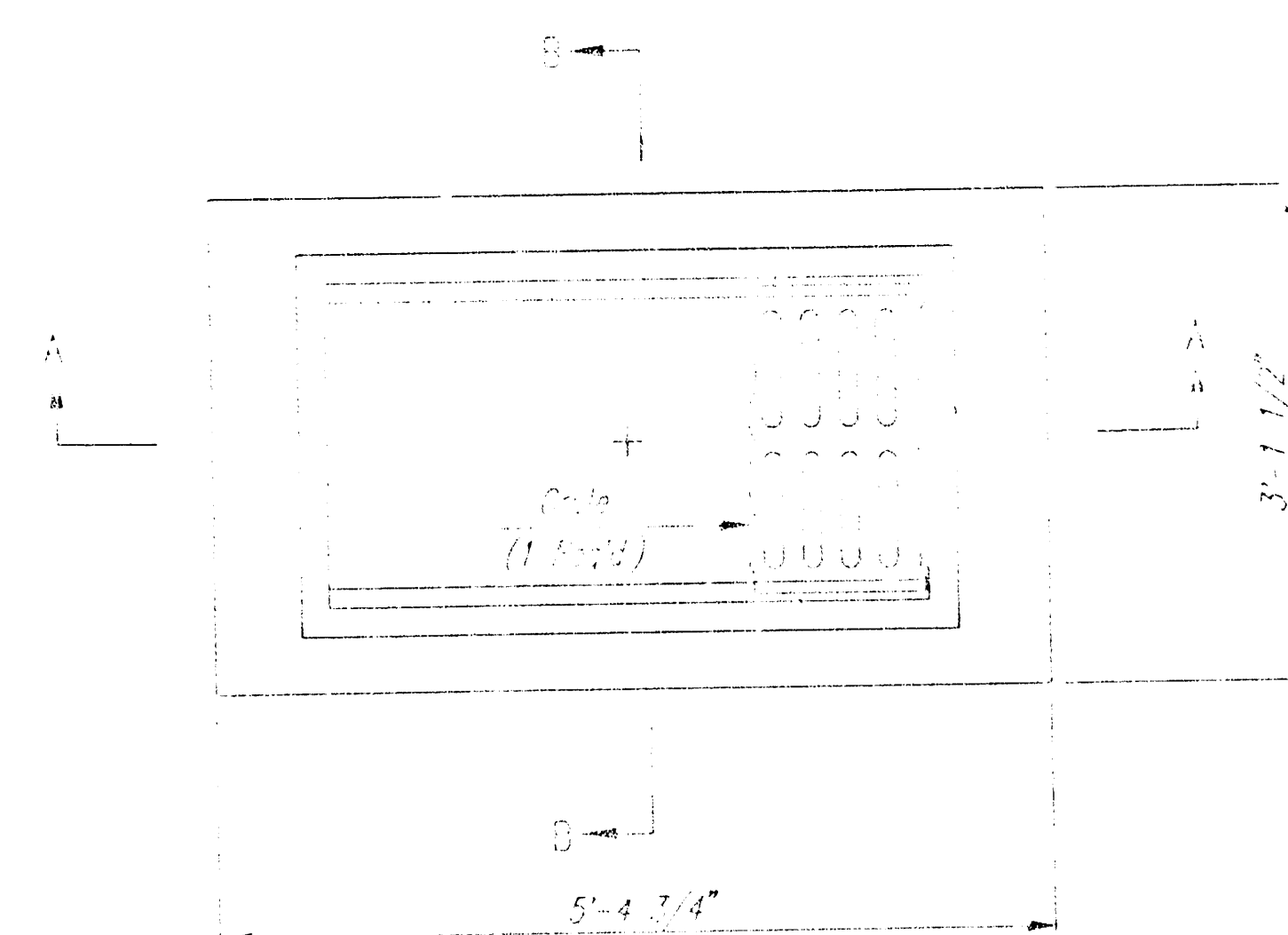


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THE CITY OF WICHITA  CITY ENGINEER'S OFFICE CITY HALL SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4501 (316) 268-4114 FAX		SHALLOW MANHOLES TYPE 'P' & 'C'	
M. E. LINDEBAK P.E. - CITY ENGINEER		PROJECT NUMBER 472-BXXXX	OCA NO. XXXXXXX
DATE MAR 96		SHEET 3 OF 3	



SECTION A-A



PLAN

GENERAL NOTES- AREA INLETS

CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. ALL EXPOSED SURFACES SHALL BE FINISHED TO A SMOOTH CAST AND CUR.

REINFORCING STEEL SHALL BE GRADE 60, ASTM A615.

ALL ENTRANCES SHALL BE FINISHED TO A SMOOTH CAST AND CUR. ALL ENTRANCES SHALL BE FINISHED TO A SMOOTH CAST AND CUR.

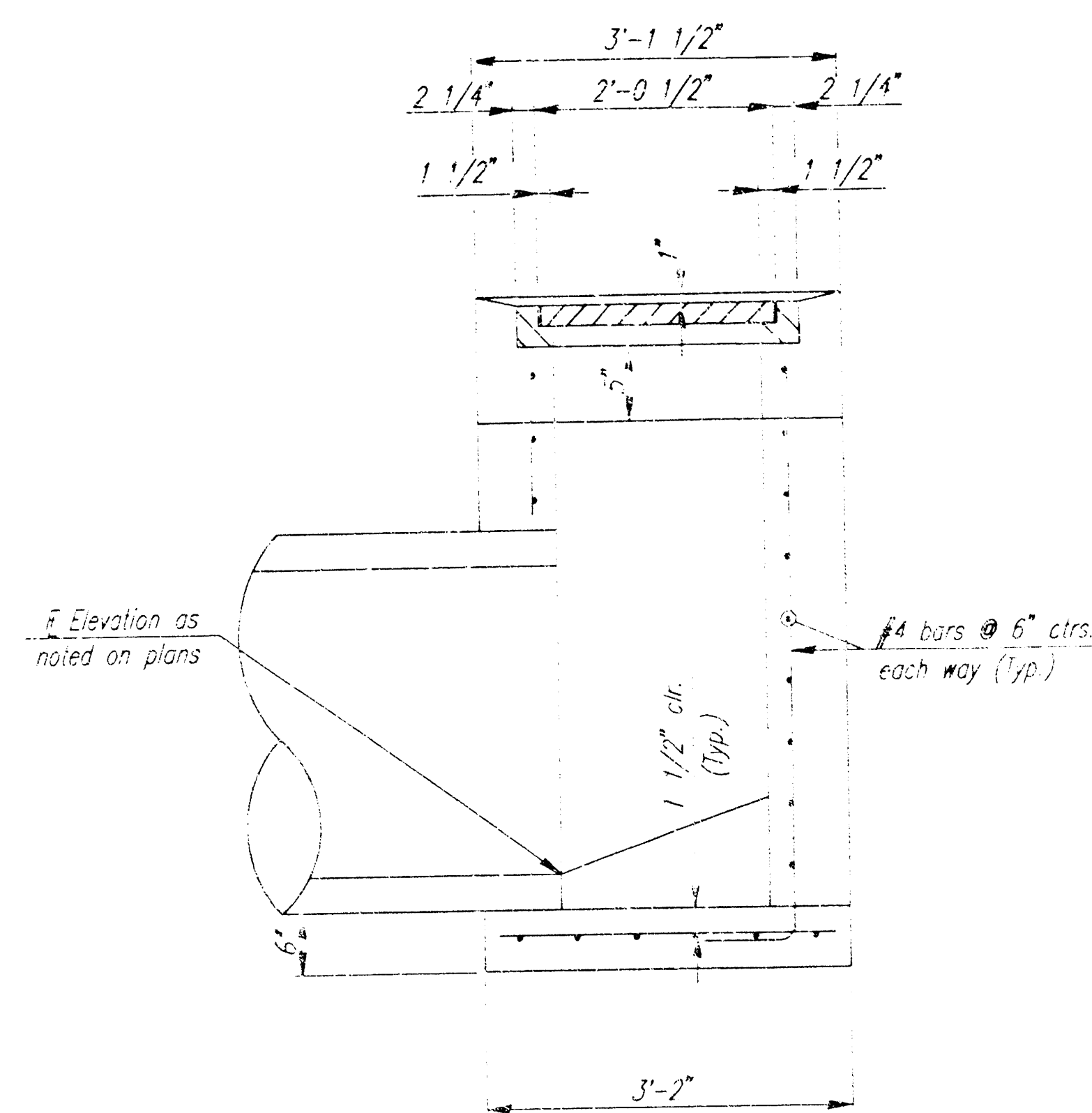
ALL ENTRANCES SHALL BE MANUFACTURED USING DUCTILE IRON. THE INLET SHALL BE 24\"/>

ALL ENTRANCES SHALL BE FINISHED TO A SMOOTH CAST AND CUR. ALL ENTRANCES SHALL BE FINISHED TO A SMOOTH CAST AND CUR.

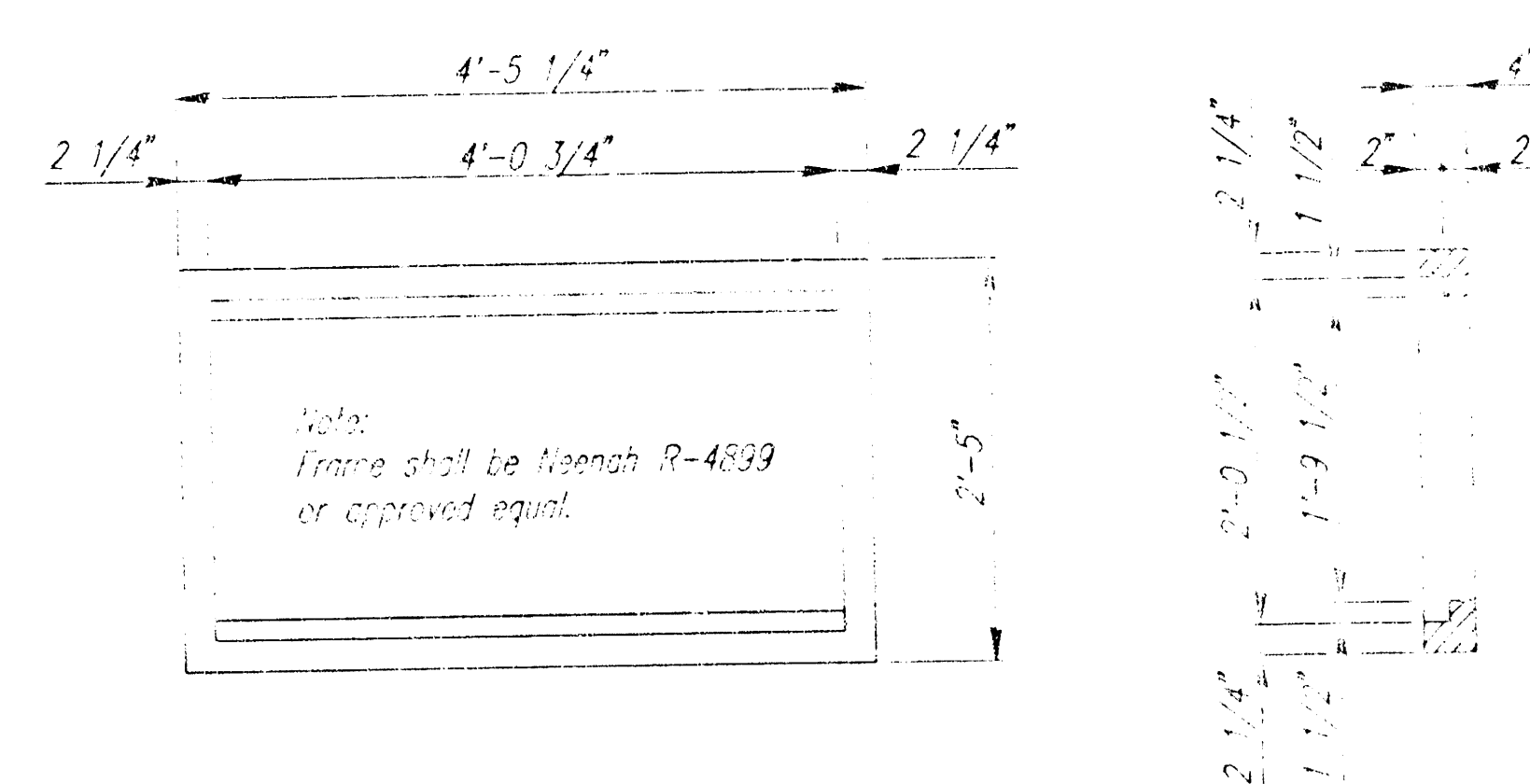
ENTRANCES EXISTING STRUCTURE SHALL BE DEMOLISHED ON BORE FACE OF WALL.

ALL EXPOSED STRUCTURAL STEEL SHALL BE PAINTED WITH A COAT OF ZINC RICH PRIMER AND THEN WITH A TOP COAT OF OR A FIELD COAT OF GRAY ZINC. EACH COAT TO BE 3 TO 4 MILS. STRUCTURAL STEEL USED TO FABRICATE THE SPECIAL AREA INLET FRAME SHALL COMPLY WITH ASTM A36. WELDING SHALL CONFORM TO THE STRUCTURAL WELDING CODE AWS D1.1-BB.

AREA INLETS MAY BE PRECAST AT THE CONTRACTOR'S OPTION, WITH APPROVAL OF THE ENGINEER.

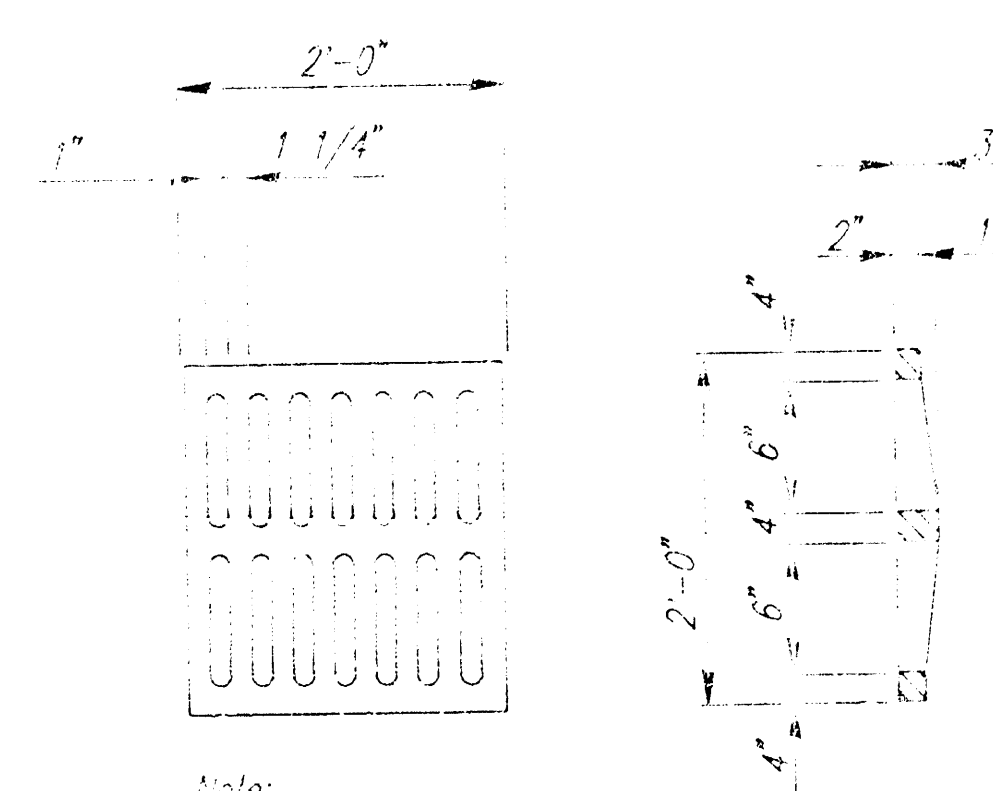


SECTION B-B



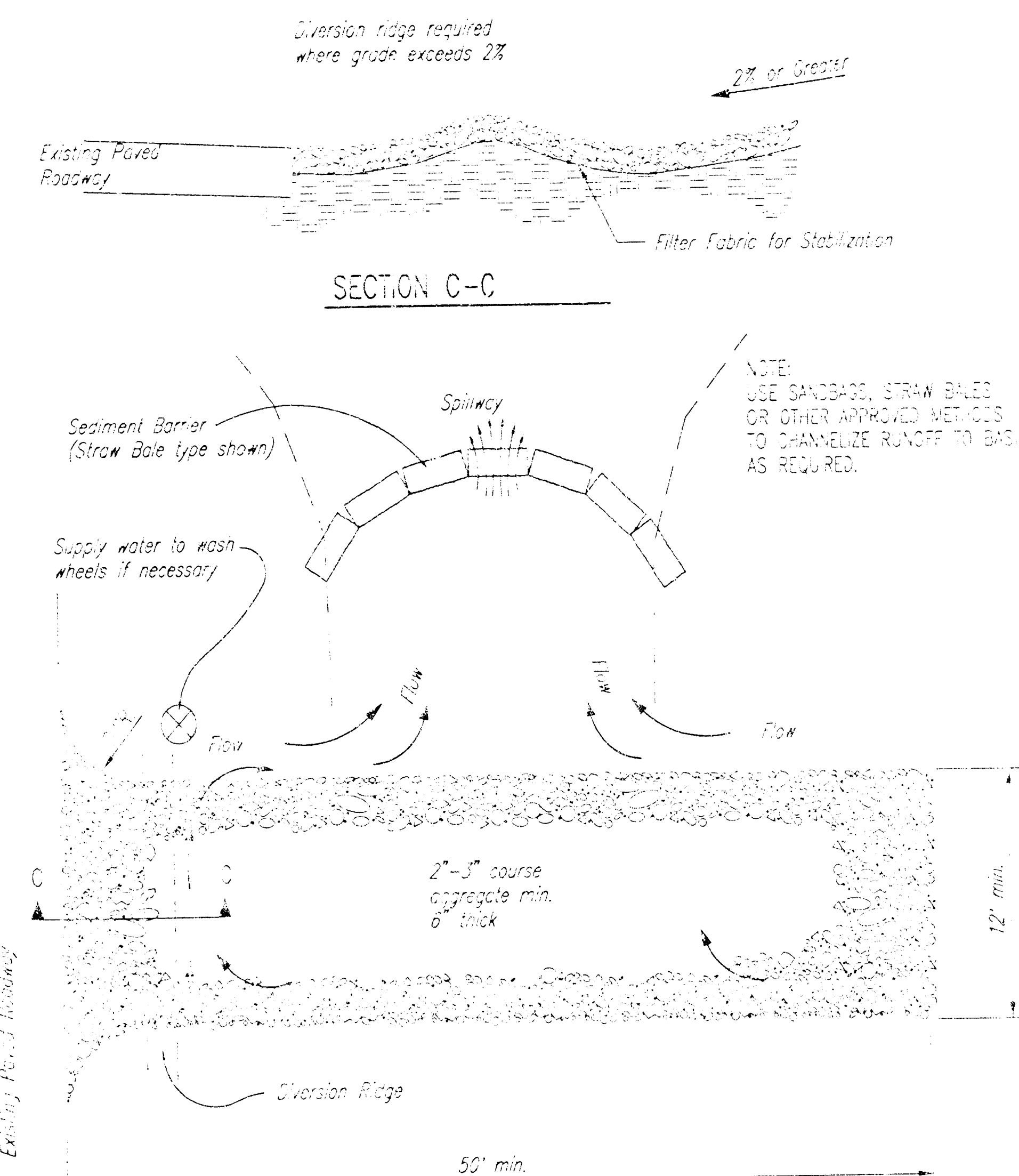
FRAME DETAIL
(R-4639 eq.)

Note:
Frame to mate with 2 Neenah R-4639 Grates or approved equal.



GRATE DETAIL
(Wt. = 190 lbs.)
(2 Required)

STANDARD AREA INLET (2'X4')



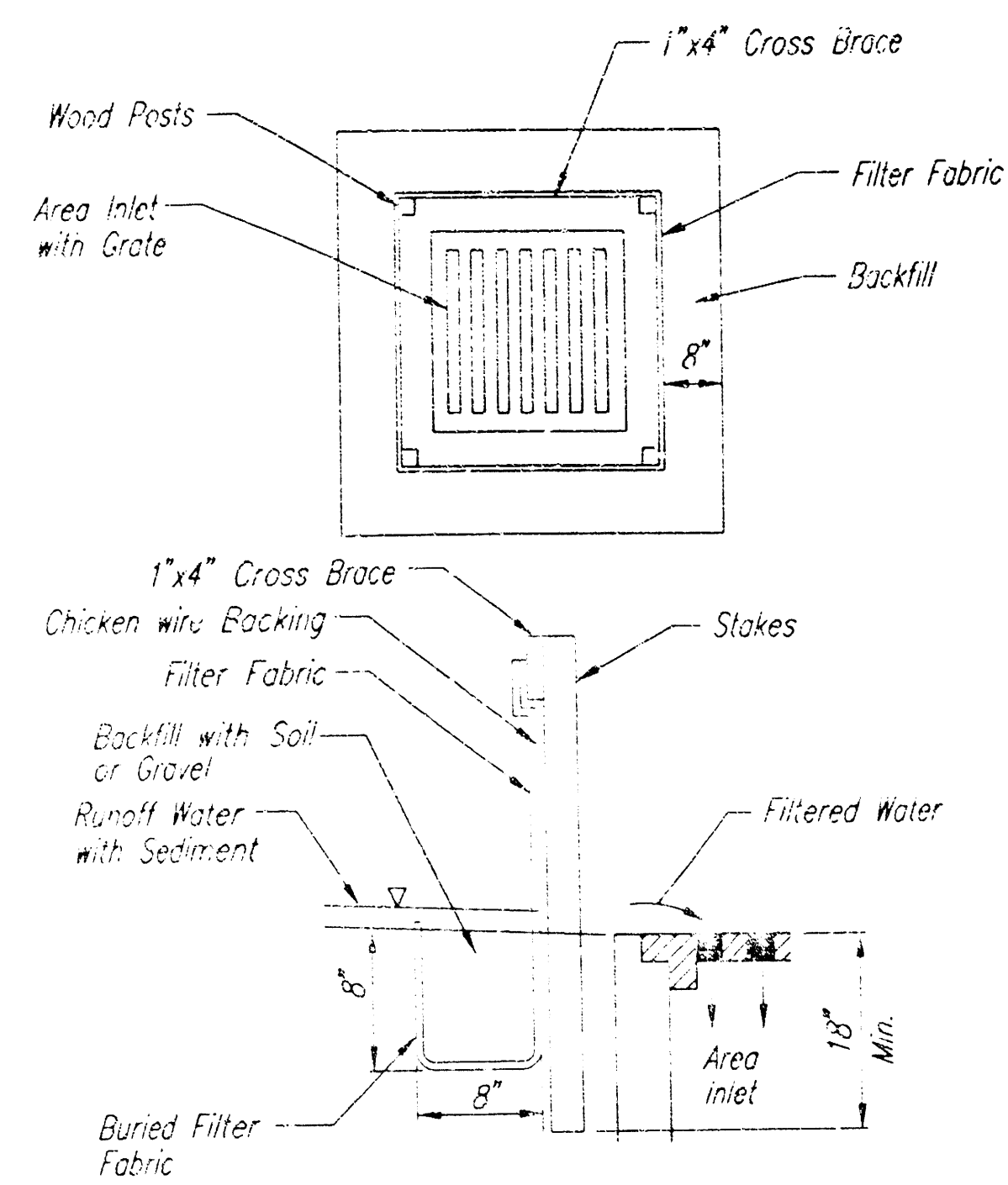
STABILIZED CONSTRUCTION ENTRANCE

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, RESURFACING 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 ORIGIN, 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.

MISCELLANEOUS DETAILS

Professional Engineering Consultants, L.P. 303 S. TOPERKA • WICHITA, KANSAS 67202 316 262 2691 • FAX 316 262 3003	
Designed by: GRC	Checked by:
Drawn by: SAG	Date: SEPT. 2001 Job No. 01458



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Silt fence fabric should conform to the AASHTO M268 96 silt fence specification. The wire or polymeric mesh backing used to help support the silt fence fabric should conform to the AASHTO M268 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 12" 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.

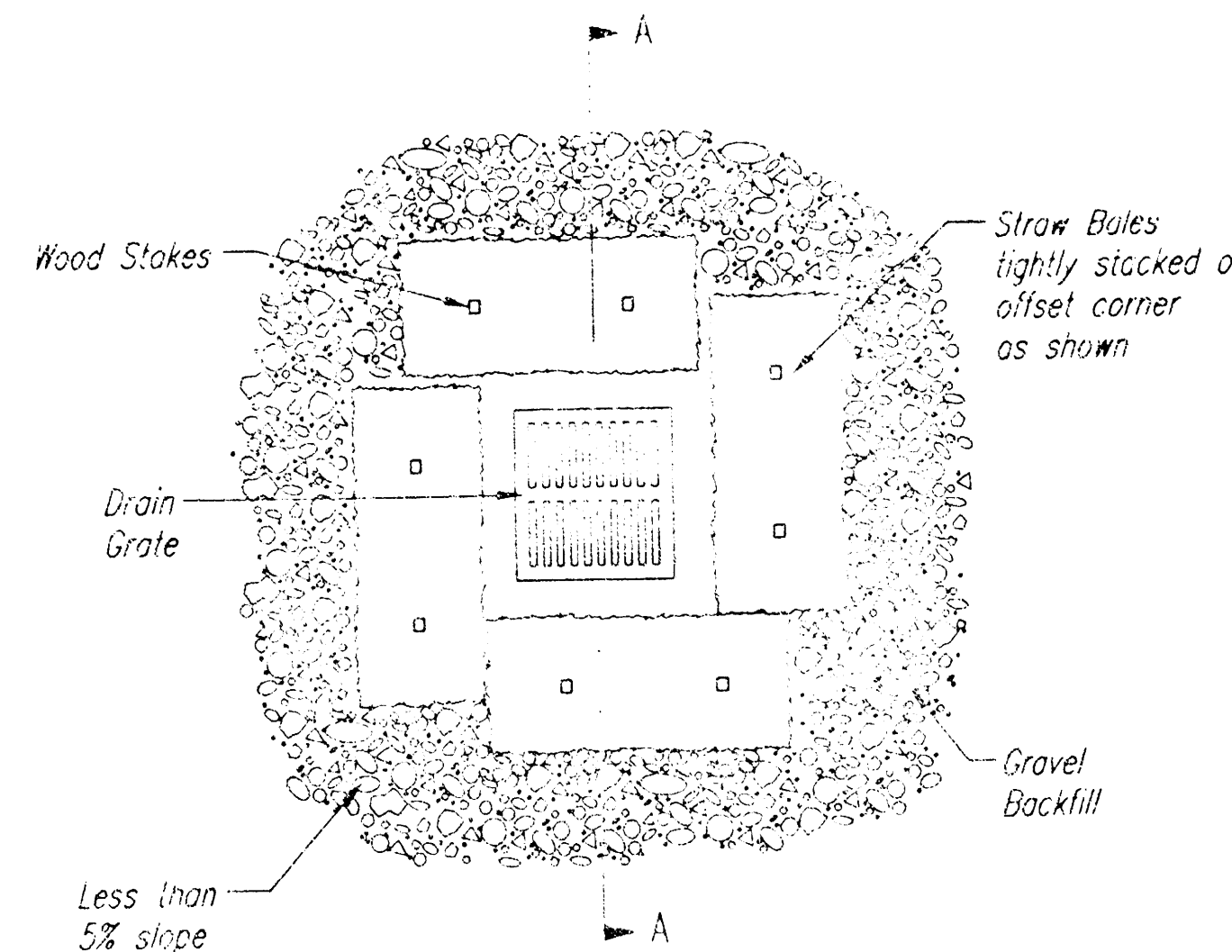
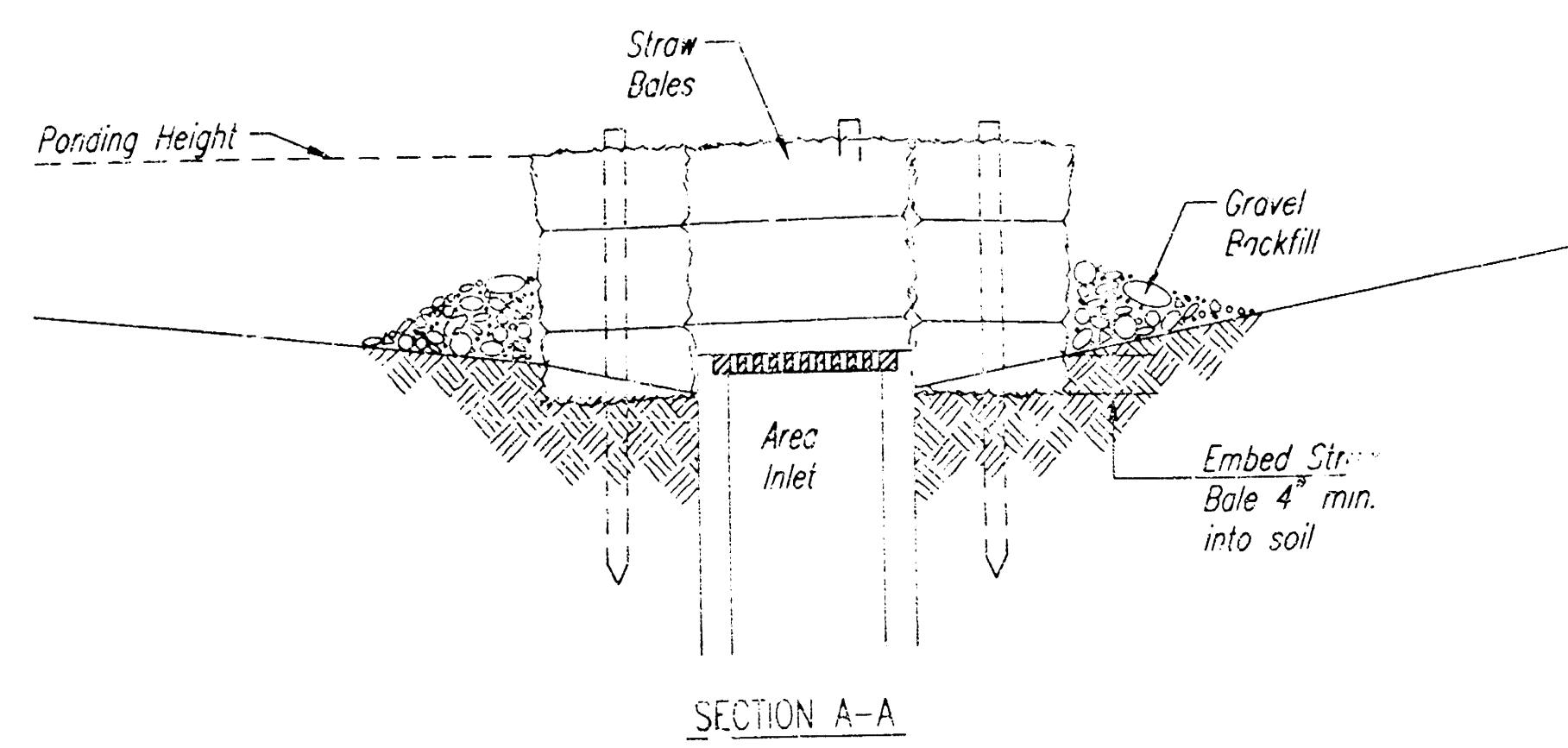
List of common placement/installation mistakes to avoid:

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 barriers 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?



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Bale area inlet barriers should be constructed of wheat straw, oat straw, proso millet, 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.

Placement:

Bale area inlet barriers should be placed directly around 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 5" 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.

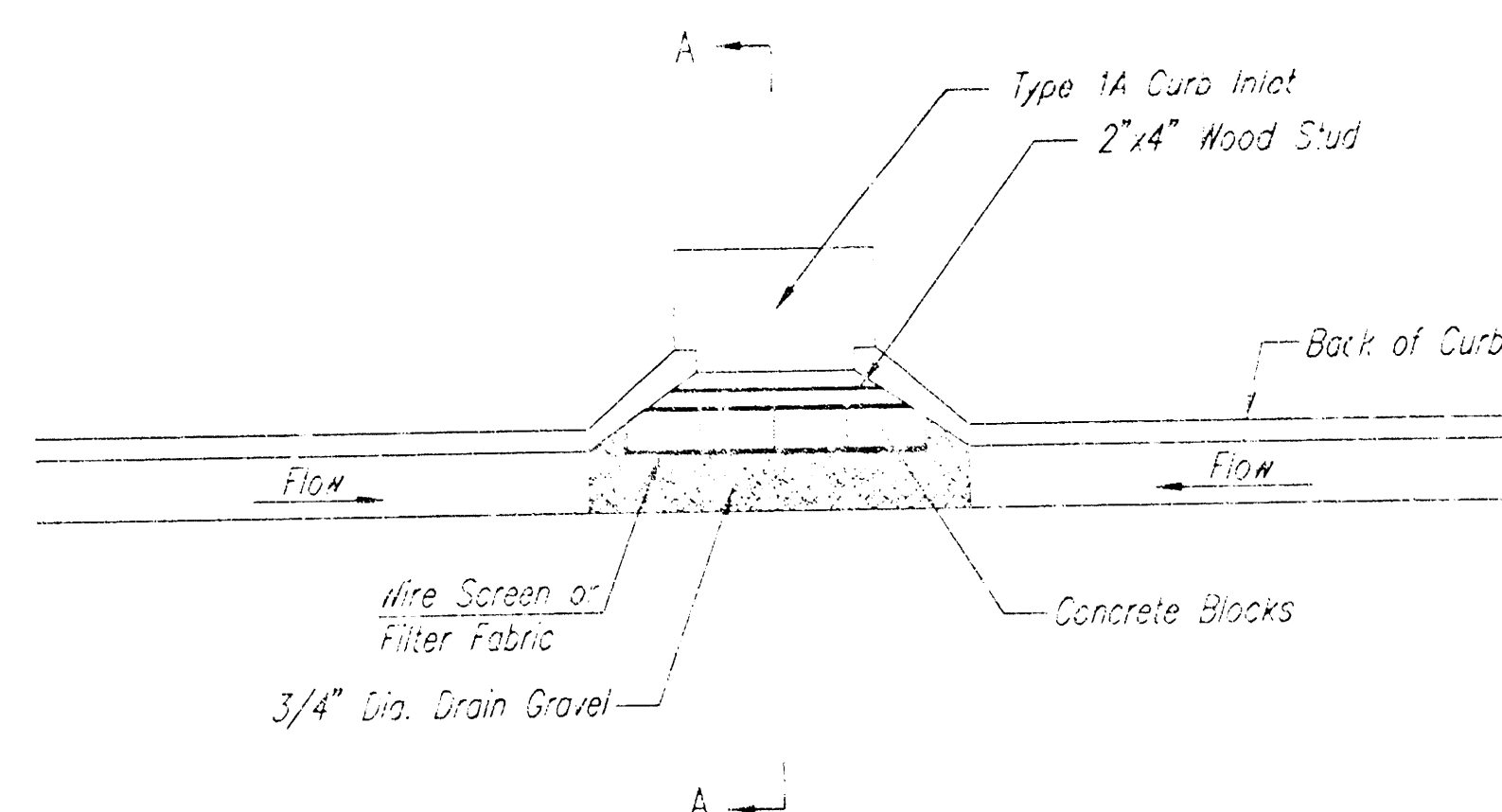
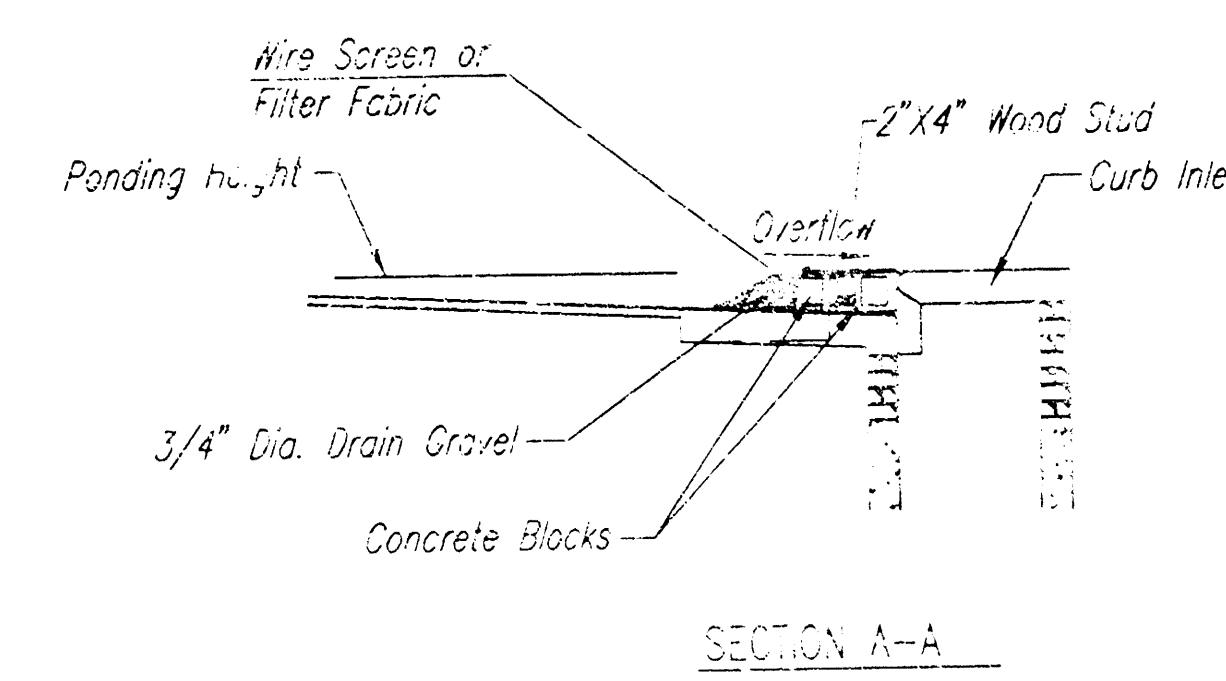
List of common placement installation mistakes to avoid:

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?



CURB INLET GRAVEL FILTERS
(INLET PROTECTION-RESIDENTIAL STREETS ONLY)

NOTE: Other types of curb inlet protection may be approved 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.

	INLET PROTECTION BMP DETAILS	
	CHRISTOPHER M. CARRIER, P.E. STORM WATER ENGINEER	
	PROJECT NUMBER 472-8XXXX	PLAN NO. ---
	DATE MAY 2001	SHEET 5 OF 5

As-Submittal 10/13/01 484-14 04 13