


STANDARD DETAILS INDEX

X=Included in Plans

| ROADWAY DETAILS | | | |
|-----------------|--------|---|---------------|
| X | NO. | DRAWING DESCRIPTION | APPROVED DATE |
| | 101.02 | Typical Street Sections Asphalt | 3/3/2022 |
| | 101.03 | Typical Street Sections Concrete | 2/14/2005 |
| | 101.04 | Asphalt Pavement Repair Details | 3/3/2022 |
| | 102.02 | HDPE Underdrain | 2/14/2005 |
| | 103.01 | Curb Details | 2/6/2006 |
| | 103.02 | Mower Access Curb Detail | 6/4/2005 |
| | 104.01 | Residential Drive Detail | 6/4/2006 |
| | 105.01 | Commercial Entrance Detail | 2/3/2006 |
| | 106.01 | Sidewalk Details | 3/4/2022 |
| | 106.02 | Integral Sidewalk Retaining Wall Details | 3/4/2022 |
| | 106.03 | Detectable Warning Panel Details | 3/4/2022 |
| | 106.04 | Type 1 Sidewalk Ramp Detail | 2/6/2006 |
| | 106.05 | Type 2 Sidewalk Ramp Detail | 2/6/2006 |
| | 106.06 | Type 3 Sidewalk Ramp Detail | 2/6/2006 |
| | 106.07 | Type 4 Sidewalk Ramp Detail | 3/4/2022 |
| | 106.08 | Type 5 Sidewalk Ramp Detail | 2/6/2006 |
| | 106.09 | Type 6 Sidewalk Ramp Detail | 5/4/2012 |
| | 107.01 | Concrete Joint Detail | 11/6/2008 |
| | 108.01 | Concrete Pavement Details | 2/14/2005 |
| | 111.01 | Concret Step Details | 2/14/2005 |
| | 112.01 | Handrail Details | 3/4/2022 |
| | 113.01 | Street Name Sign Details | 5/14/1997 |
| | 114.01 | Sign Post Details | 5/14/1997 |
| | 115.01 | Conduit Marking Detail | 1/10/2004 |
| | 116.01 | Pavement Marking Details | 1/10/2004 |
| | 116.02 | Speed Table with Pavement Markings | 3/4/2022 |
| | 117.01 | Street Intersection Sight Line Obstruction Detail | 5/14/2007 |
| | 117.02 | Street Sight Line Obstruction Details | 12/12/2001 |
| | 118.01 | C.A.R.S. Sign | 3/2/2022 |

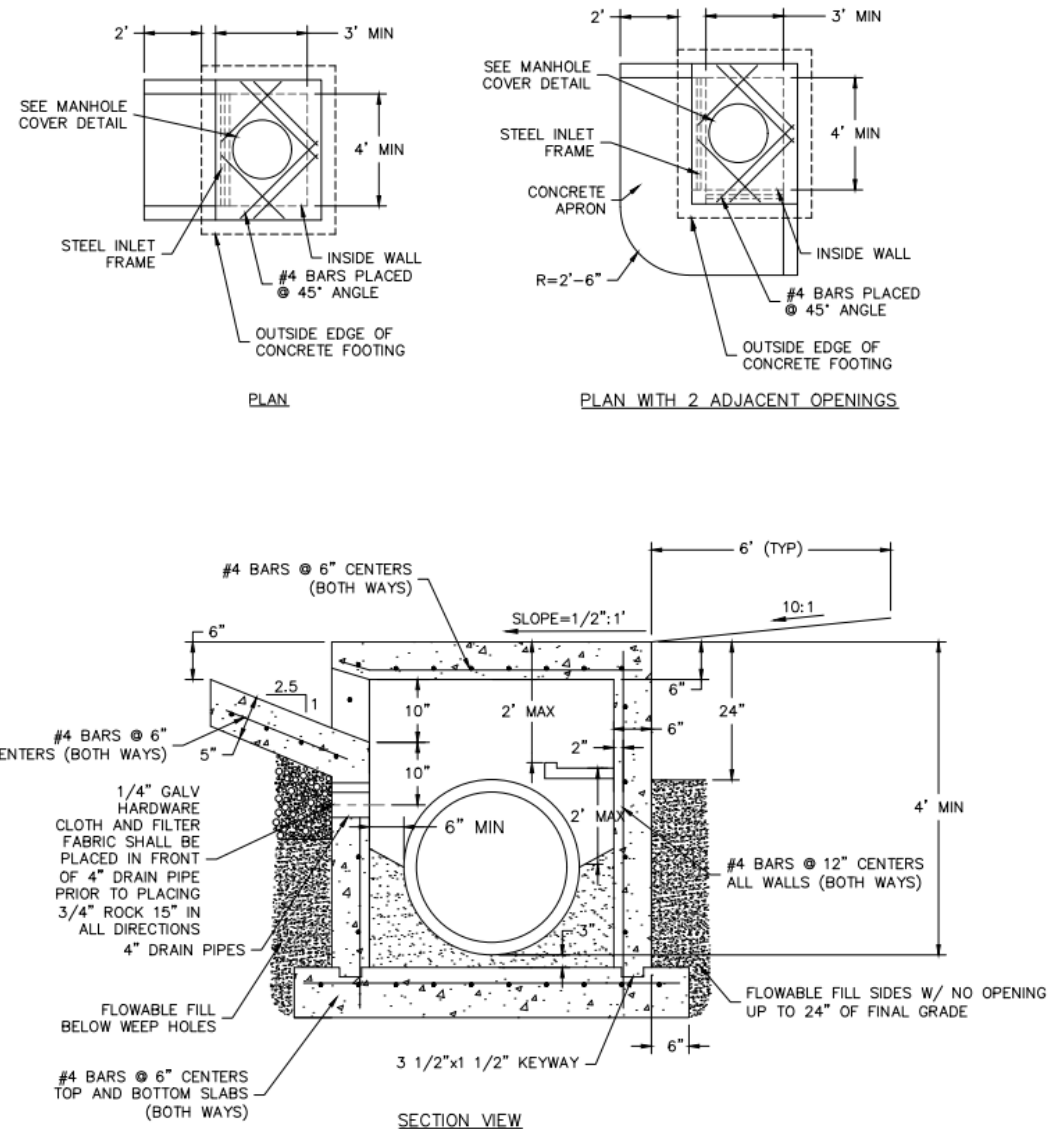
| STORMWATER/EROSION CONTROL DETAILS | | | |
|------------------------------------|--------|--|---------------|
| X | NO. | DRAWING DESCRIPTION | APPROVED DATE |
| | 201.01 | Area Inlet Details | 3/1/2022 |
| | 202.01 | Grate Inlet Details | 1/2/1998 |
| | 203.01 | Junction Box Details | 3/1/2022 |
| | 204.01 | Standard Curb Inlet | 2/19/2003 |
| | 204.02 | Standard Curb Inlet Steel Frame | 3/1/2022 |
| | 204.04 | Storm Manhole | 3/1/2022 |
| | 204.06 | Covers & Steps for Structures | 2/14/2003 |
| | 205.01 | Street Patch Detail | 3/1/2022 |
| | 205.02 | Street Trench Plating | 2/19/2003 |
| | 206.01 | Pipe Embedment Details | 2/14/2003 |
| | 207.01 | Collar and Pipe Details | 2/14/2003 |
| | 208.01 | Concrete Ditch Liner Detail | 2/14/2003 |
| | 209.01 | Concrete Channel Liner Detail | 1/6/1998 |
| | 210.01 | Storm Sewer Branch Connection Detail | 2/14/2003 |
| | 211.02 | Straw Bale & Small Rock Ditch Check | 2/14/2003 |
| | 211.03 | Installation of Silt Fence and Straw Bales | 2/14/2003 |
| | 211.04 | Area, Grate, and Curb Inlet Filters | 2/14/2003 |

| MISCELLANEOUS DETAILS | | | |
|-----------------------|--------|------------------------------------|---------------|
| X | NO. | DRAWING DESCRIPTION | APPROVED DATE |
| | 301.01 | Temporary Construction Fencing | 2/13/2003 |
| | 302.01 | Mailbox Installation | 2/13/2003 |
| | 303.01 | SURVEY Monument Box Details | 1/30/2004 |
| | 304.01 | Tree & Shrub Planting | 1/27/2003 |
| | 304.02 | Right of Way Tree Planting Details | 12/12/2001 |
| | 304.03 | Tree Trim Detail | 12/12/2001 |

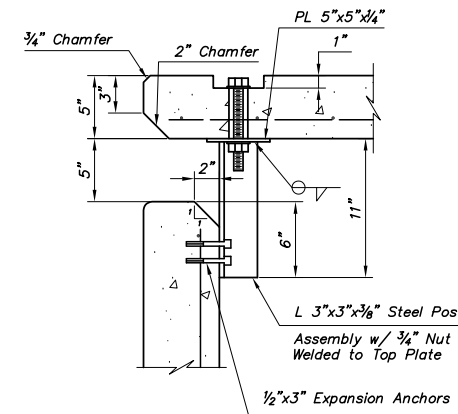
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| DATE | Z:\STANDARD\PV\PV-INDEX.DWG | REVISIONS |
| | | |
| CITY OF PRAIRIE VILLAGE PUBLIC WORKS DEPARTMENT | | |
|  STANDARD DETAILS INDEX | | |
| STANDARD DETAIL NUMBER: 100.00 | | |

NOTES

- USE ONLY KCMMB APPROVED CONCRETE THROUGHOUT.
- IF MORE THAN ONE SIDE IS OPEN, THEN AREA INLET LID SHALL BE CAST IN PLACE.
- THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
- SUPPLY MANHOLE STEPS THAT MEET THE REQUIREMENTS OF M.A. INDUSTRIES INC. PART NUMBER PS2-PF OR APPROVED EQUAL. STEPS SHALL BE SPACED AT 1'-4" ON CENTER VERTICALLY. THE DISTANCE FROM THE LAST STEP TO THE TOP OF THE CONCRETE INVERT SHOULD BE A MAXIMUM OF 24".
- BEVEL ALL EXPOSED EDGES WITH 3/4" TRIANGULAR MOLDING.
- REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
- ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS OTHERWISE NOTED. TOLERANCE OF +/- 1/8" SHALL BE PERMITTED.
- ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.
- DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER PRIOR TO CONSTRUCTION.
- THE BOTTOM SLAB SHALL HAVE A MINIMUM OF 24 HOURS CURE TIME PRIOR TO PLACING SIDEWALL CONCRETE. ALL SIDEWALL FORMS SHALL REMAIN IN PLACE A MINIMUM OF 24 HOURS AFTER SIDEWALLS ARE POURED BEFORE REMOVAL, AND AFTER REMOVAL SHALL BE IMMEDIATELY TREATED WITH MEMBRANE CURING COMPOUND.
- PIPE CANNOT PROJECT MORE THAN 3" BEYOND THE FACE OF THE STRUCTURE.
- ENGINEER SHALL SUBMIT STRUCTURAL DETAILS FOR INLETS GREATER THAN 7' IN DEPTH (RIM TO TOP OF BASE) FOR THE CITY ENGINEER'S REVIEW.
- DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER PRIOR TO CONSTRUCTION.



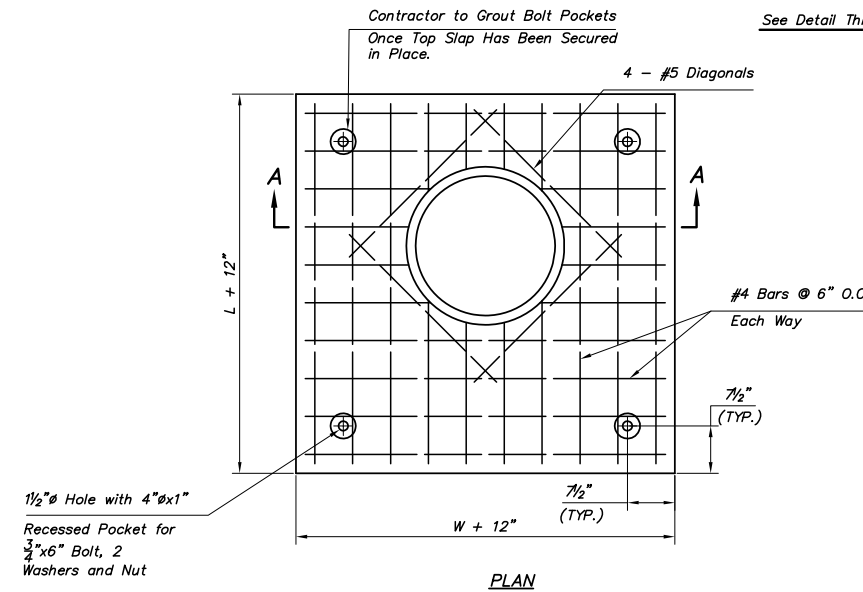
AREA INLET DETAILS
SINGLE OR 2 ADJACENT OPENINGS



DETAIL

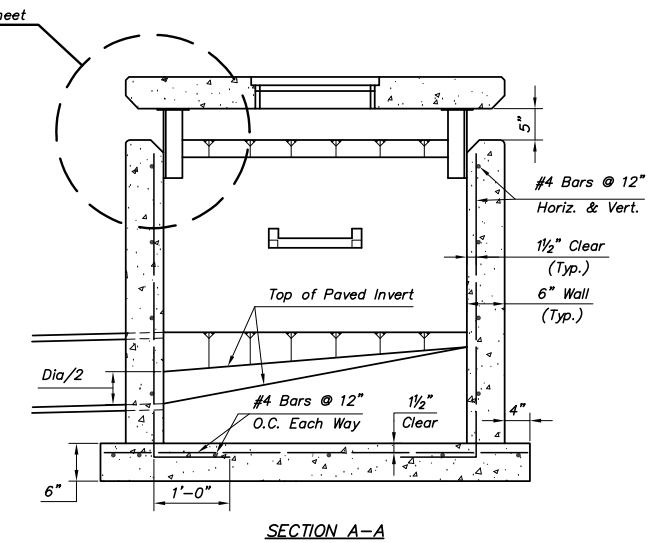
NOTES:

- Bevel all exposed edges with 3/4" triangular molding.
- Top step 2'-0" below top of lid then @ 16" spacing.
- Edge angle assemble:
 - Structural steel
 - Exposed steel surfaces to be finished smooth.
 - Hot dip galvanize assembly.
- Reinforcement:
 - Bend around MH ring & pipe openings wherever feasible. See plan.
 - Provide #5 diags. around pipe openings, same as for MH ring on plan.
- Broom finish top slab.
- Dimensions "L" & "W" given on plans as "L" x "W".
- Center line pipe at inside wall to be at center line wall unless otherwise specified. Trim pipe flush with inside walls.
- Area inlets are located on plan sheets by station and distance to center of inlet.
- Ring & cover to be over steps.



PLAN

AREA INLET
OPEN ALL SIDES

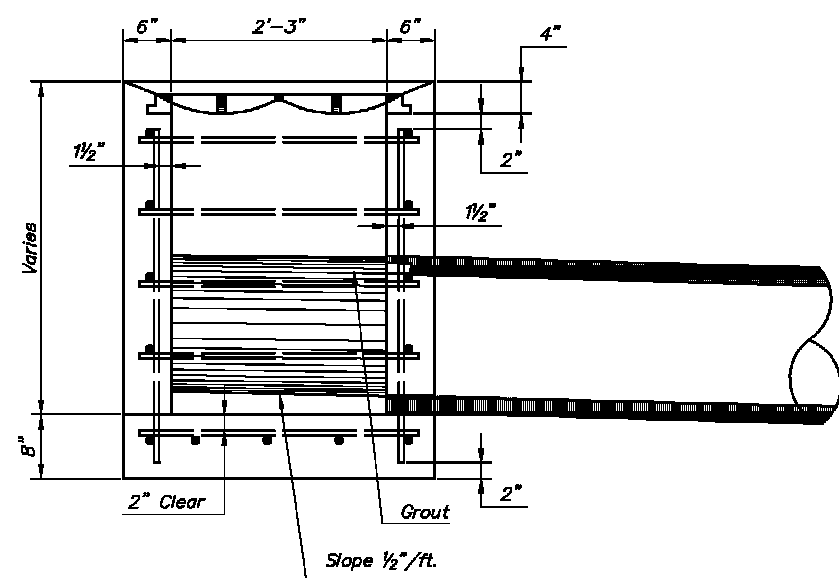


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|-----------|---------------------------------|
| 11/06/08 | Revised Note #9 |
| 3/01/2022 | Added detail for single opening |

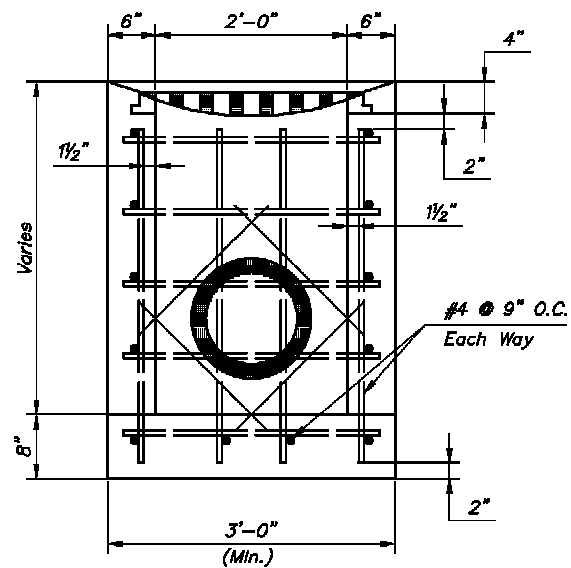
CITY OF PRAIRIE VILLAGE
PUBLIC WORKS DEPARTMENT

AREA INLET DETAILS

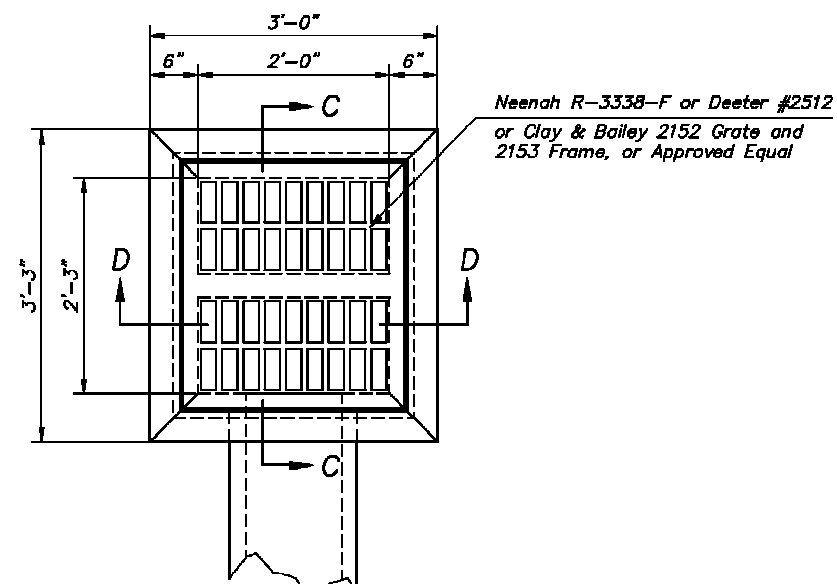
STANDARD DETAIL NUMBER: 201.01



SECTION C-C

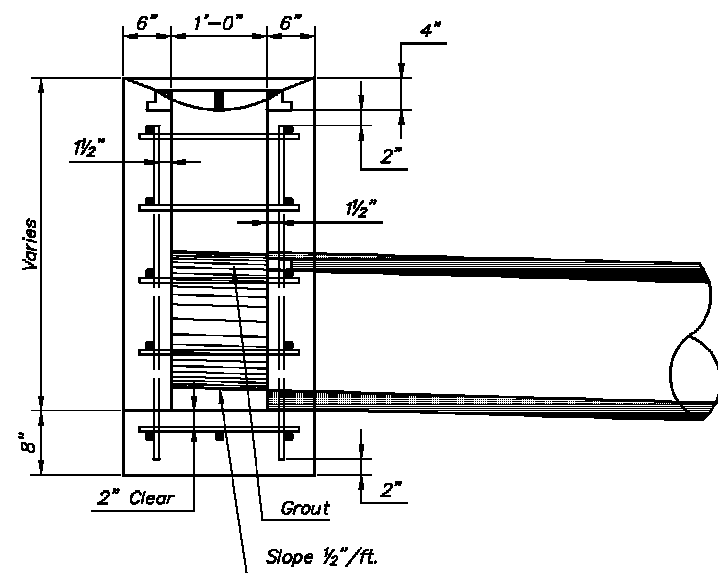


SECTION D-D

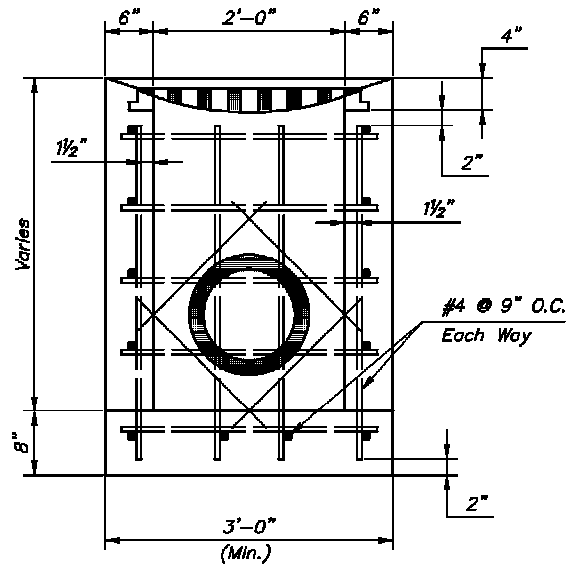


PLAN

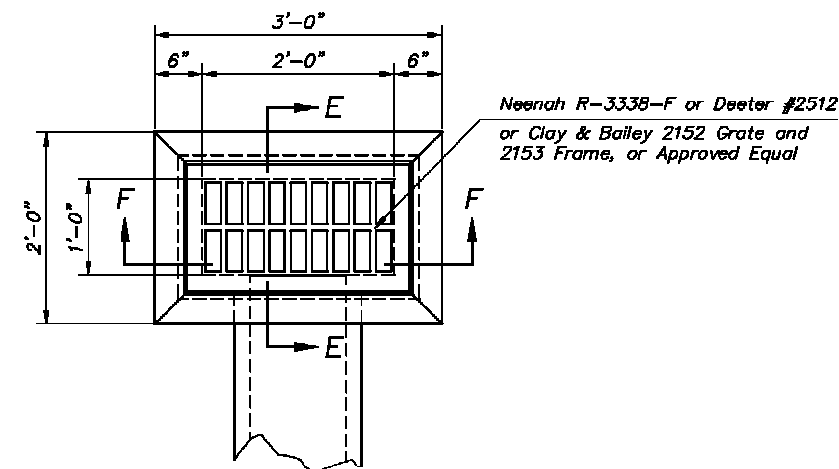
DOUBLE GRATE INLET DETAILS



SECTION E-E



SECTION F-F



PLAN

SINGLE GRATE INLET DETAILS

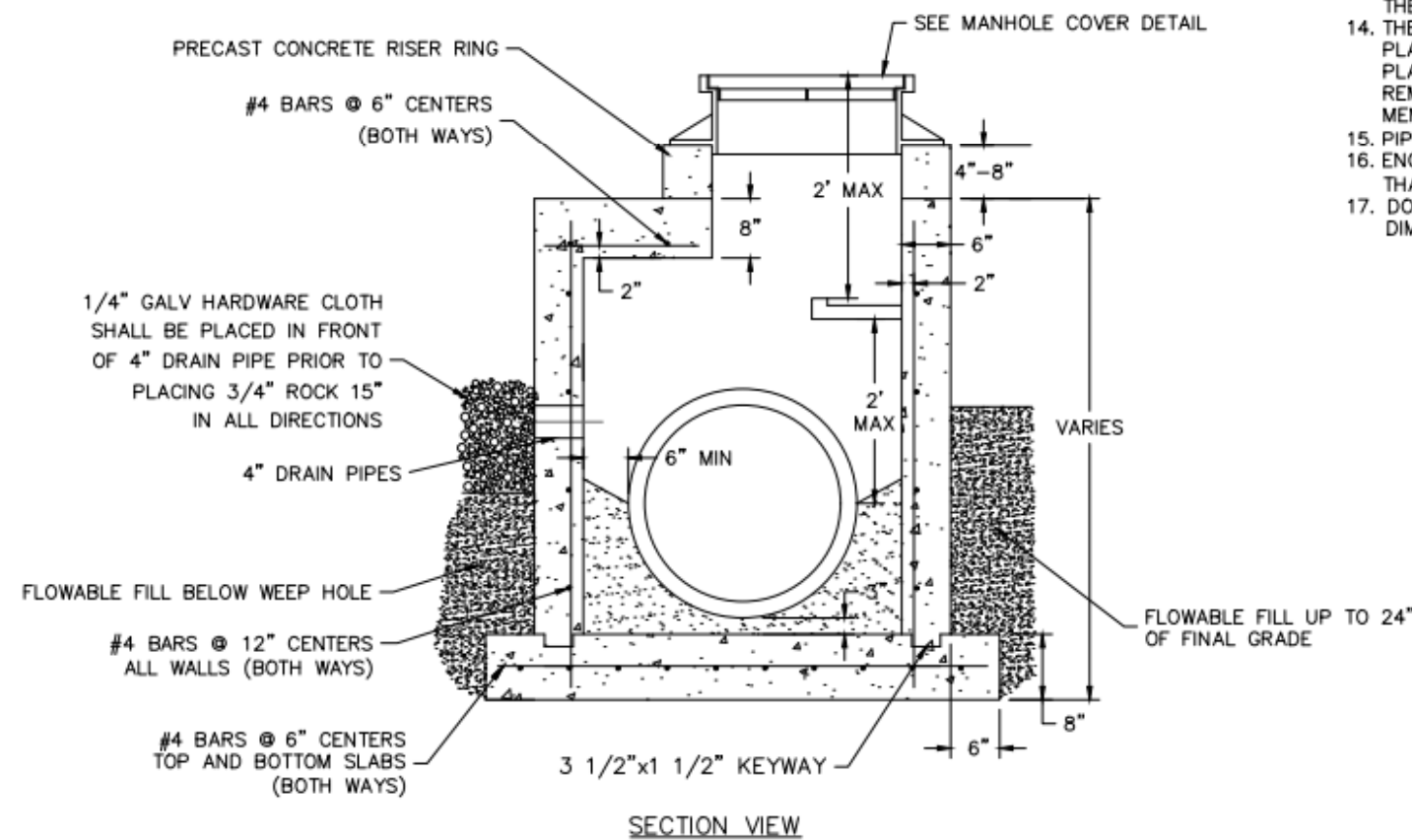
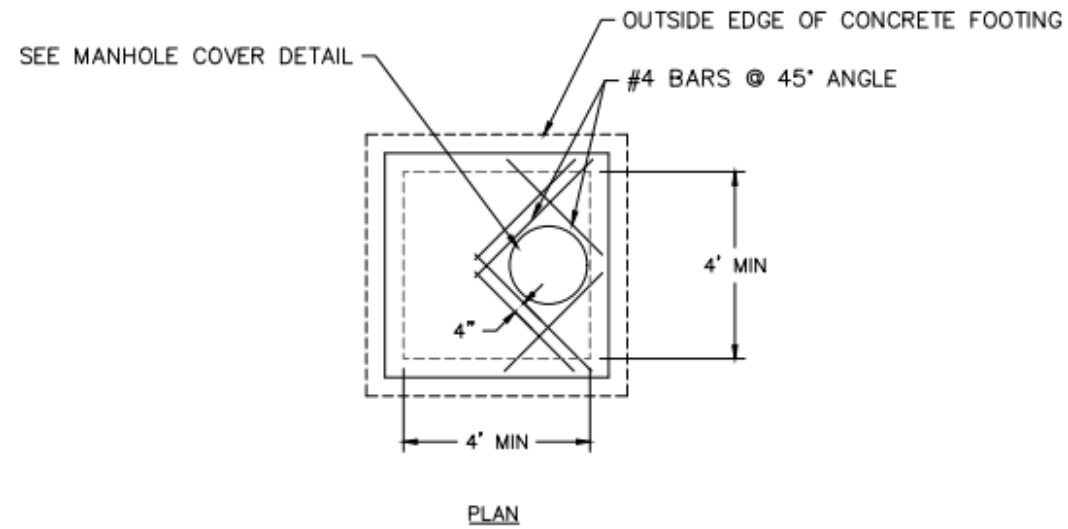
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CITY OF PRAIRIE VILLAGE
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GRATE INLET
DETAILS


STANDARD DETAIL NUMBER: **202.01**

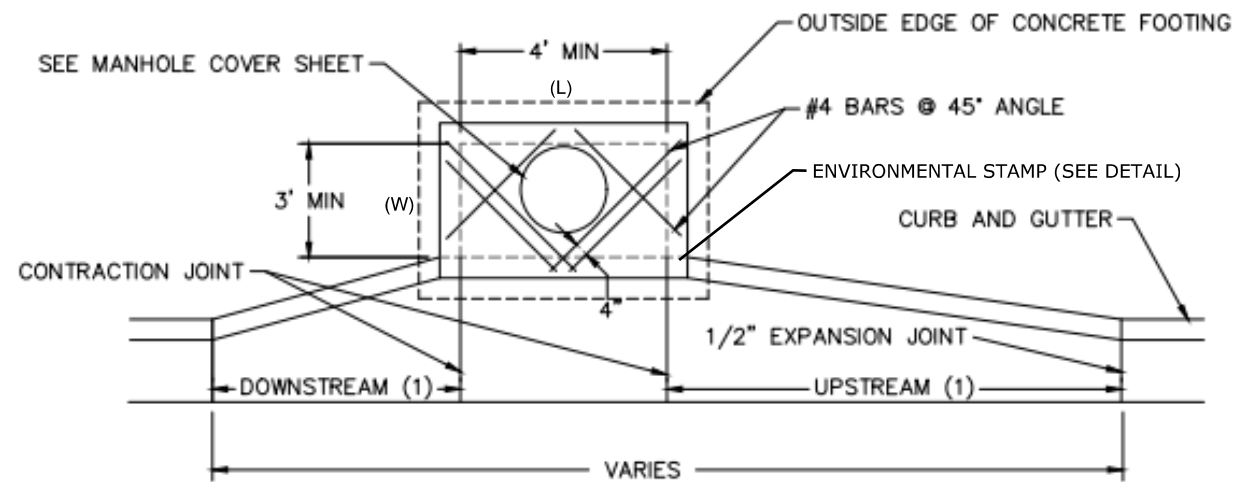


JUNCTION BOX DETAILS

NOTES

1. USE ONLY KCMMB APPROVED CONCRETE THROUGHOUT.
2. LIDS MAY BE PRECAST.
3. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
4. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
5. SUPPLY MANHOLE STEPS THAT MEET THE REQUIREMENTS OF M.A. INDUSTRIES INC. PART NUMBER PS2-PF (APPROVED EQUAL. STEPS SHALL BE SPACED AT 1'-4" ON CENTER VERTICALLY. THE DISTANCE FROM THE LAST STEP TO THE TOP OF THE CONCRETE INVERT SHOULD BE A MAXIMUM OF 24".
6. BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER MOLDING.
7. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
8. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS OTHERWISE NOTED. TOLERANCE OF +/- 1/8" SHALL BE PERMITTED.
9. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
10. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.
11. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS AT 3' MAXIMUM SPACING.
12. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER PRIOR TO CONSTRUCTION.
13. THE BOTTOM SLAB SHALL HAVE A MINIMUM OF 24 HOURS CURE TIME PRIOR TO PLACING SIDEWALL CONCRETE. ALL SIDEWALL FORMS SHALL REMAIN IN PLACE A MINIMUM OF 24 HOURS AFTER SIDEWALLS ARE POURED BEFORE REMOVAL, AND AFTER REMOVAL SHALL BE IMMEDIATELY TREATED WITH MEMBRANE CURING COMPOUND.
14. PIPE CANNOT PROJECT MORE THEN 3" BEYOND THE FACE OF THE STRUCTURE.
15. ENGINEER SHALL SUBMIT STRUCTURAL DETAILS FOR JUNCTION BOXES GREATER THAN 7' IN DEPTH (RIM TO TOP OF BASE) FOR THE CITY ENGINEER'S REVIEW.
16. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER PRIOR TO CONSTRUCTION.

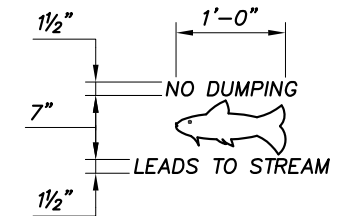
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| 11/06/08 | | Revised Note #6 |
| CITY OF PRAIRIE VILLAGE PUBLIC WORKS DEPARTMENT | | |
|  | | JUNCTION BOX DETAILS |
| STANDARD DETAIL NUMBER: 203.01 | | |



NOTE

1. 10' TRANSITION UPSTREAM SIDE, 5' TRANSITION DOWNSTREAM SIDE, EXCEPT:
 10' TRANSITION BOTH SIDES FOR SUMP INLET
 5' TRANSITION BOTH SIDES FOR SUMP INLET IN CUL-DE-SAC

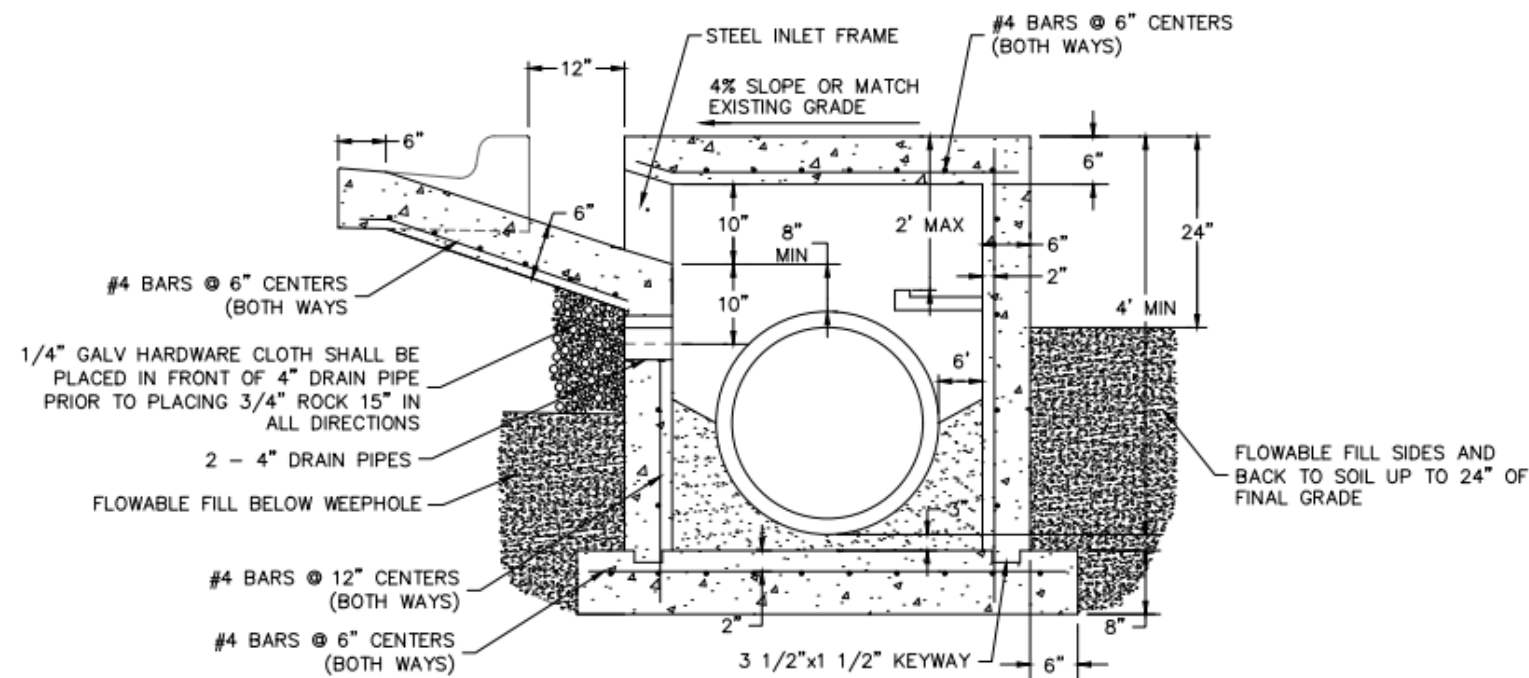
PLAN VIEW



NOTE:

Imprint to be 1/4" in depth stamped into inlet top when poured.

ENVIRONMENTAL STAMP DETAIL



SECTION VIEW

CURB INLET DETAILS

NOTES

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5. BEVEL ALL EXPOSED EDGES WITH 1/2" RADIUS TOOL
6. ON GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
7. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
8. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS OTHERWISE NOTED. TOLERANCE OF +/- 1/8" SHALL BE PERMITTED.
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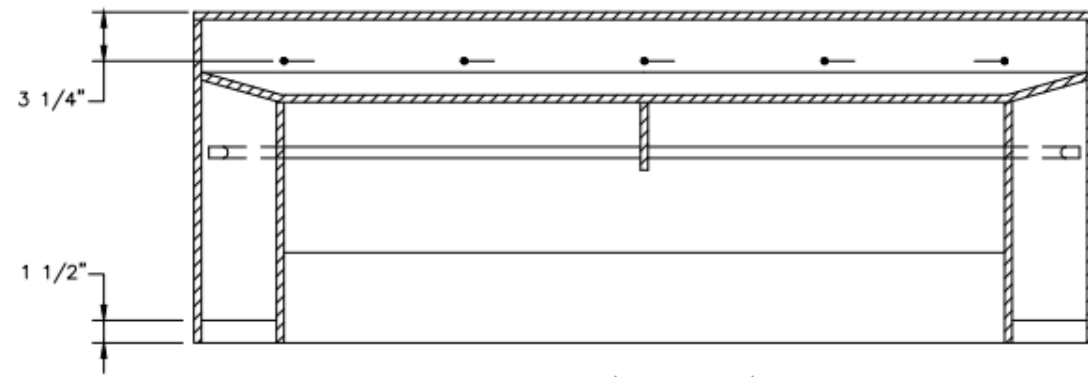
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| 3/2/2022 | STANDARD INLET CHANGED TO CURRENT CONST. | |

**CITY OF PRAIRIE VILLAGE
PUBLIC WORKS DEPARTMENT**

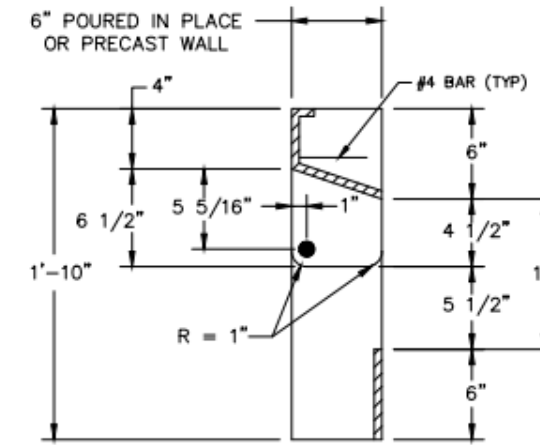


STANDARD CURB
INLET

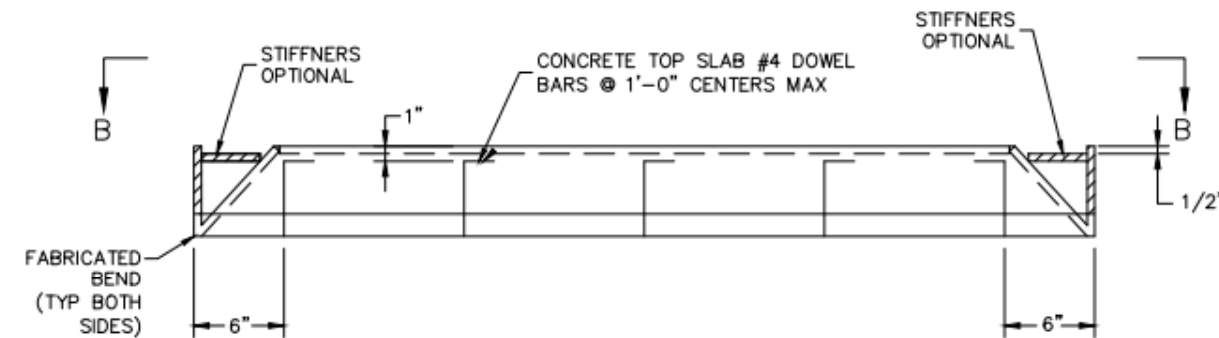
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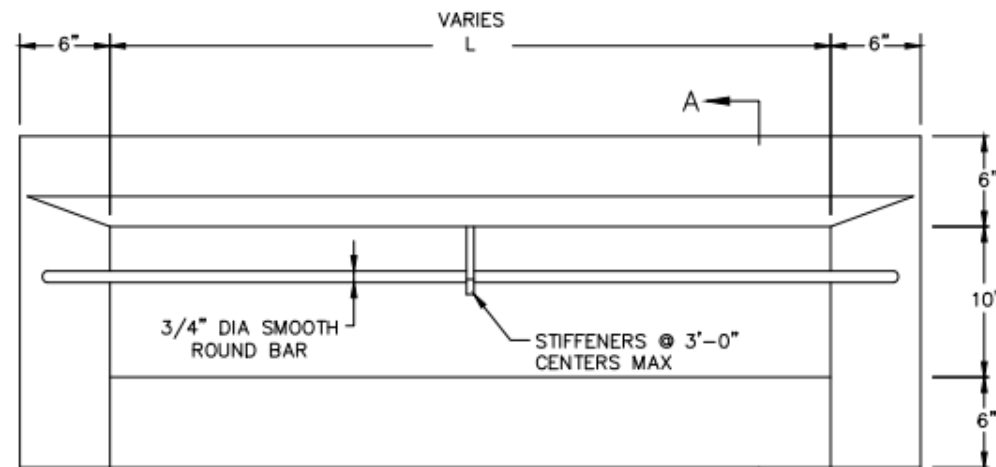
REAR VIEW (SECTION B-B)



SIDE VIEW (SECTION A-A)

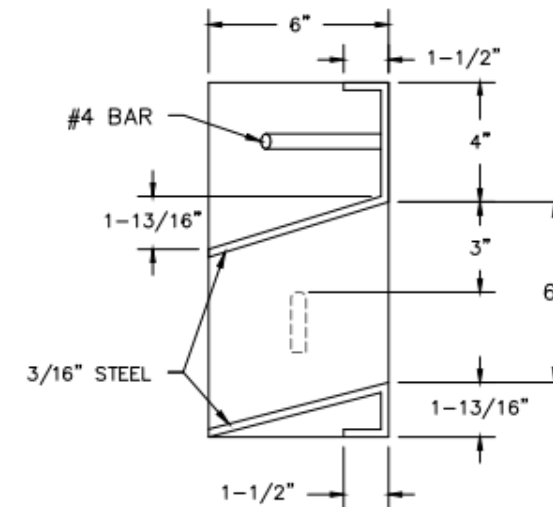


TOP VIEW



FRONT VIEW

10" STEEL INLET FRAME
NOT TO SCALE



SECTION A-A

6" STEEL INLET FRAME

STEEL INLET FRAME NOTES:

1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES
2. ALL STEEL SHALL BE 7 GAGE OR 3/16" THICK
3. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE
4. THE ENTIRE FRAME SHALL BE HOT DIP ZINC COATED IN ACCORDANCE WITH ASTM A-123
5. ROD AND STIFFENERS SHALL NOT BE INCLUDED IN 6" STEEL FRAME

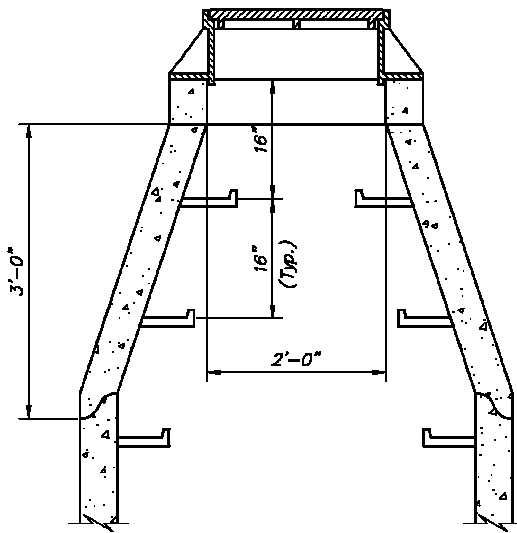
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| 3/2/2022 | | STANDARD INLET CHANGED TO CURRENT CONST. |

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PUBLIC WORKS DEPARTMENT**

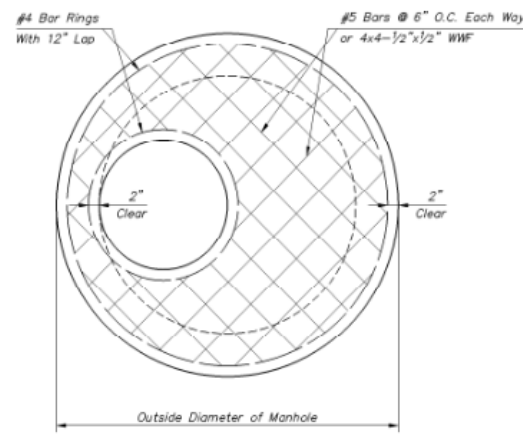


STANDARD CURB INLET
STEEL FRAME

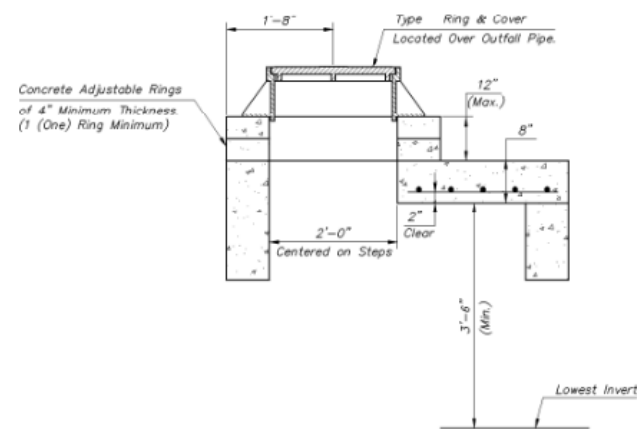
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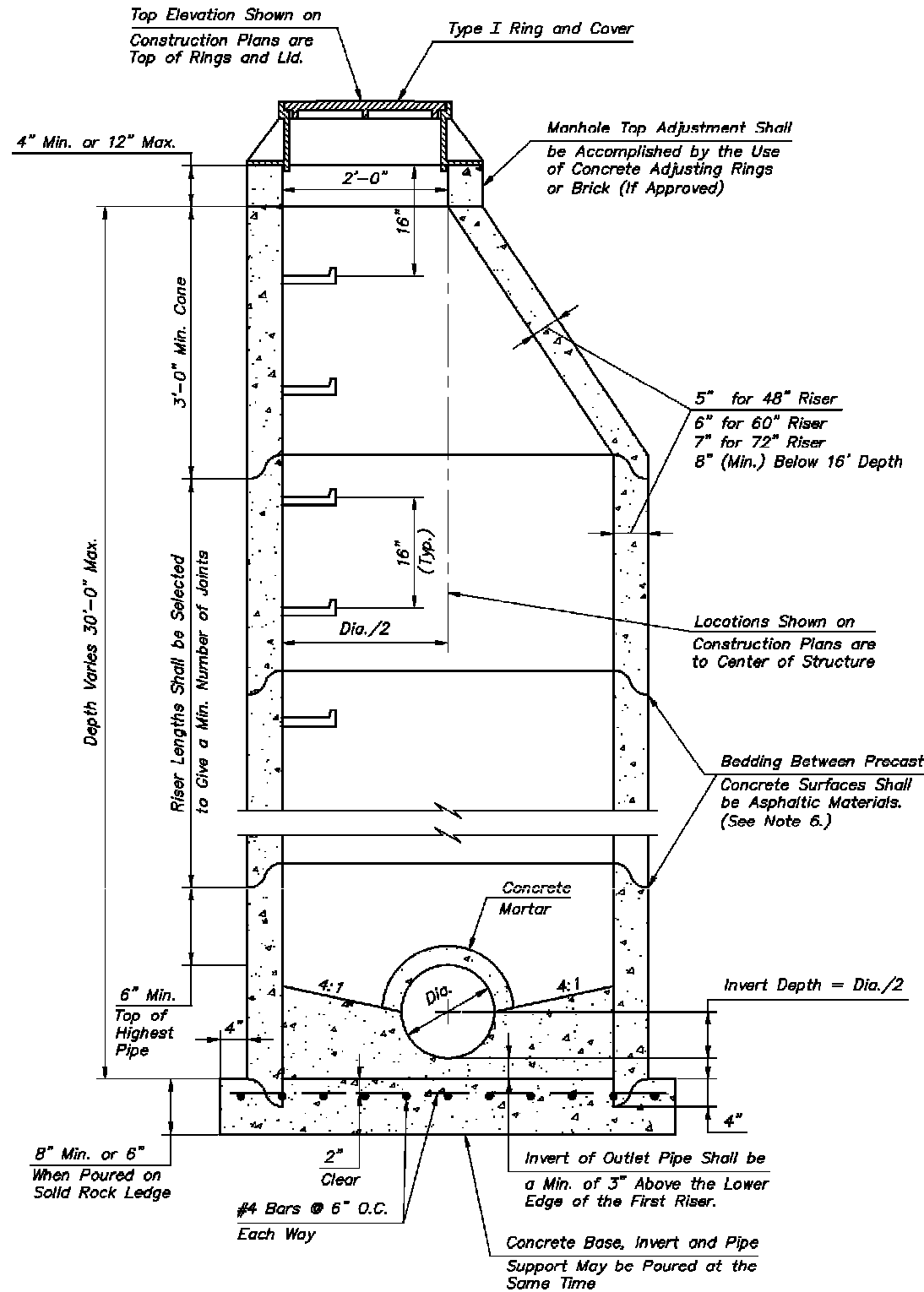
**ALTERNATE PRECAST MANHOLE
(CONCENTRIC CONE)**
(DETAILS NOT SHOWN, SAME AS ECCENTRIC CONE)



REINFORCING DETAIL



SLAB TOP ALTERNATE & SHALLOW MANHOLE DETAIL



**STANDARD PRECAST MANHOLE
(ECCENTRIC CONE)**

NOTES:

- All manholes shall be built of precast concrete and be of Eccentric Cone type unless otherwise specified.
- Manhole frames and lids in streets shall be machined.
- Top of manhole frame shall be set flush and on same slope as finished surface or as directed by the Engineer.
- Manholes are located on plan sheets by station & distance to center of manhole.
- Reinforcement in all sections shall equal or exceed A.S.T.M. C-478 Specifications.
- Mastic material to be used at all section joints. O-rings may be used for joints below the cone section, but the cone section itself shall not have O-ring joints.
- Approved gasket or concrete mortar to be used around pipe in knock-outs.
- Note to designer:
The inside diameter of the manhole shall be 4'-0" for pipe diameters from 12" thru 24", 5'-0" for pipe diameters from 27" thru 36", and 6'-0" for pipe diameters 42" thru 48".
- Clearance tolerance of pipe openings: The maximum allowable pipe opening on a horizontal axis shall be the outside diameter of the pipe plus 12". The maximum allowable pipe opening on a vertical axis shall be the outside diameter plus 8". The minimum clearance between the outside surface of an installed pipe and the concrete of the manhole shall be 2". The maximum openings allowable for the drop manhole entry in the barrel shall be the outside diameter of the pipe plus 12".
- Installation of pipe openings:
All required pipe openings shall be plant cast in manhole units. Field alterations of openings will be permitted provided walls are scored with a masonry saw to a depth sufficient to sever reinforcing steel. A chipping hammer may then be used to remove the concrete. Minimum distance between any two adjacent pipes shall be 4".

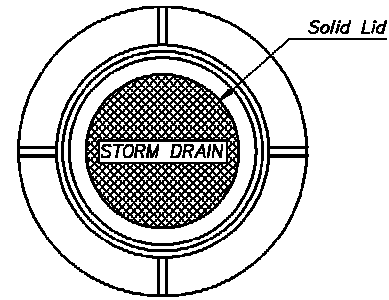
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| 3/1/2022 | | add shallow manhole detail |

**CITY OF PRAIRIE VILLAGE
PUBLIC WORKS DEPARTMENT**

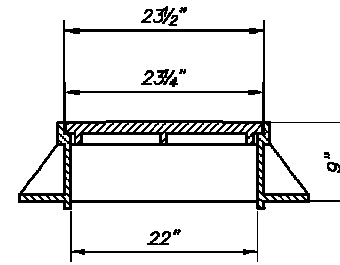


STORM MANHOLE

STANDARD DETAIL NUMBER: 204.04



Weight
 Ring=240 Lbs.
 Lid=160 Lbs.

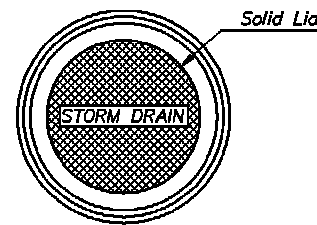


TYPE I RING AND COVER

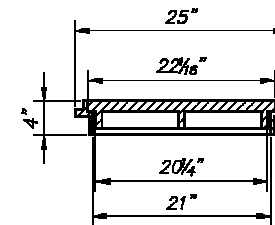
Type I ring and cover shall be one of the following or approved equal:

- Clay & Bailey 2008 ring and cover
- GCI Castings SM 2202 STD ring and cover
- Deeter Foundry 1315 ring and cover
- Neenah Foundry R-1536 ring and cover

Note: "Storm Drain" to be cast into all covers.



Weight
 Ring=50 Lbs.
 Lid=135 Lbs.

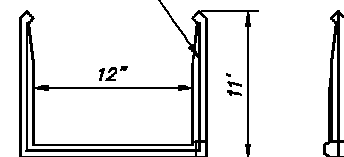


TYPE II RING AND COVER

Type II ring and cover shall be one of the following or approved equal:

- Clay & Bailey 2021 ring and 2038 cover
- GCI Castings SM 2100 ring and cover
- Deeter Foundry 2016 ring and cover
- Neenah Foundry R-1537 ring and cover

#4 Grade 60 Deformed Steel Rod



TOP SIDE

STRUCTURE STEPS

The steps for all storm drainage structures shall be reinforced polypropylene. They shall be one of the following or approved equal:

- MA Industries PS1-PF or PS2-PF

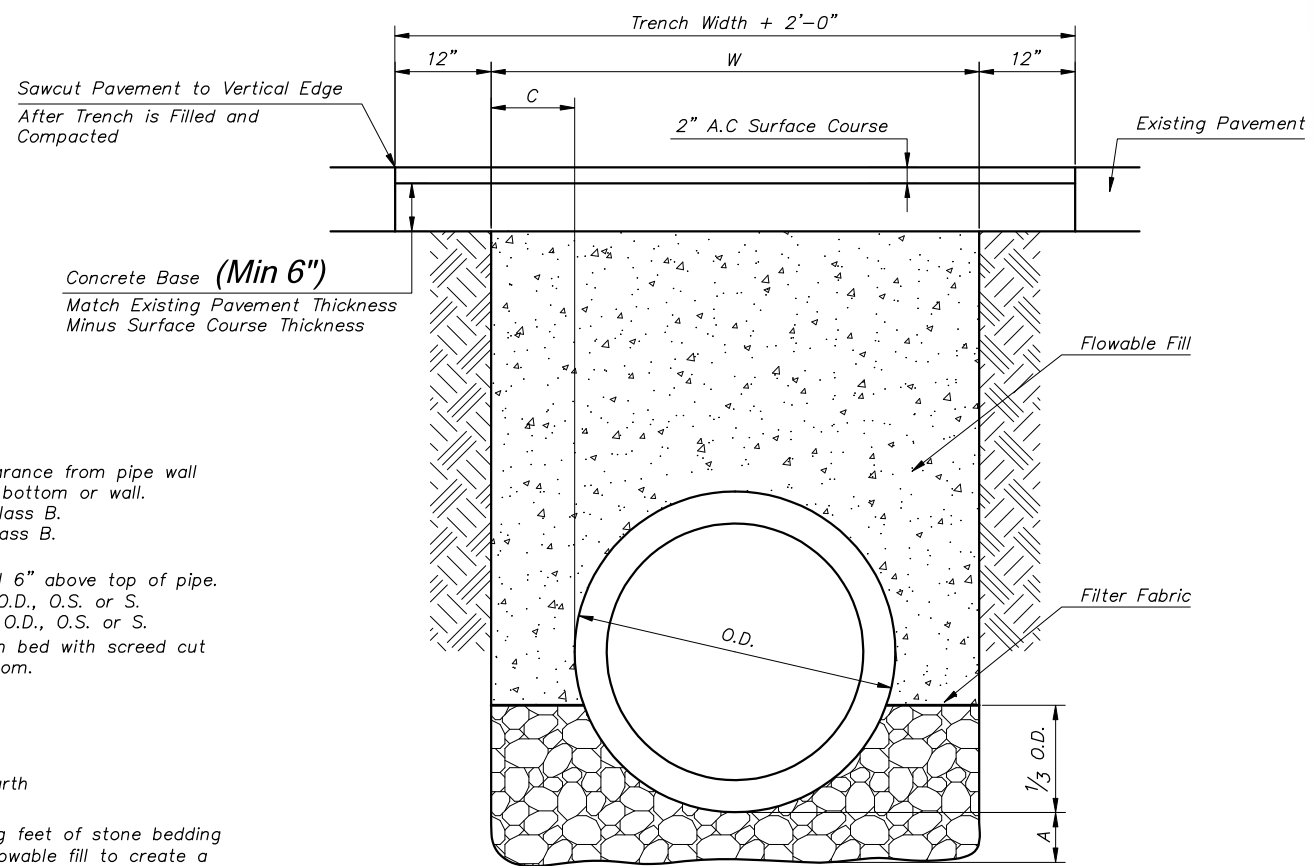
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**CITY OF PRAIRIE VILLAGE
 PUBLIC WORKS DEPARTMENT**






COVERS AND STEPS
 FOR STRUCTURES

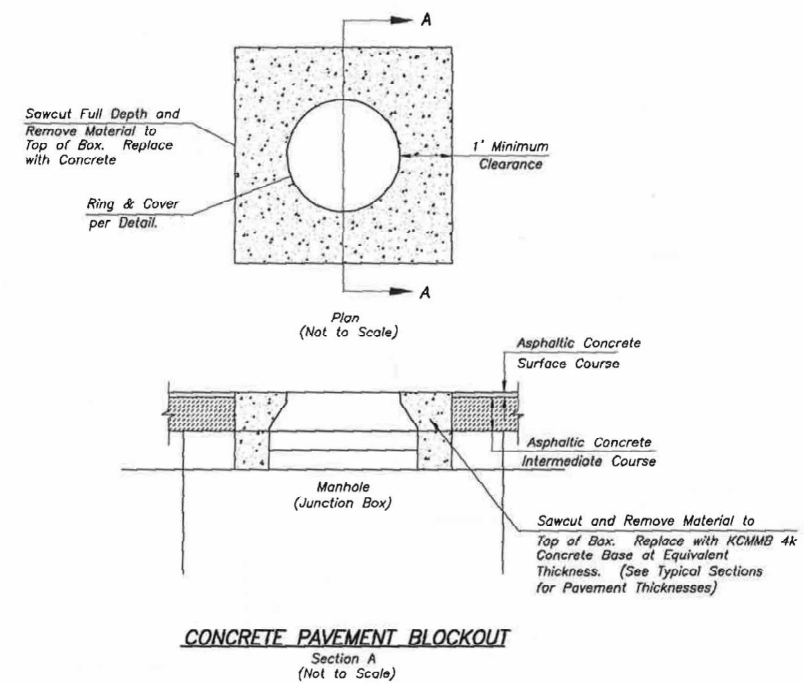
STANDARD DETAIL NUMBER: **204.06**



STREET PATCH DETAIL

NOTES:

1. A & C = Absolute min. clearance from pipe wall to any projection of trench bottom or wall.
 A (Earth Excav.) 2", Class B.
 A (Rock Excav.) 6", Class B.
 C = 8" min.
2. W = Trench width at a level 6" above top of pipe.
 W = Min. of 16" plus O.D., O.S. or S.
 W = Max. of 24" plus O.D., O.S. or S.
3. Where screeding shown, form bed with screed cut to exact shape of pipe bottom.
4.  = Granular fill
5.  = Flowable fill
6.  = Undisturbed earth
7. Every 200' remove 2 running feet of stone bedding beneath pipe & pour with flowable fill to create a water stop.
8. AB-3 may be used as temporary backfill only and shall be removed for final restoration. AB-3 shall be placed in 6" lifts and compacted with vibratory efforts. Moisture content shall be ±3% of optional moisture content as determined on the moisture/density curve. AB-3 can only be used in a dry excavation.
9. Flowable Fill shall have a minimum compressive strength of 50 psi and a maximum of 150 psi.
10. Material used for base is to be asphaltic concrete base course. Portland cement concrete may be used if approved by the owner.
11. Portland cement concrete for base shall be KCMMB 4K approved mix design.



CONCRETE PAVEMENT BLOCKOUT
Section A
(Not to Scale)

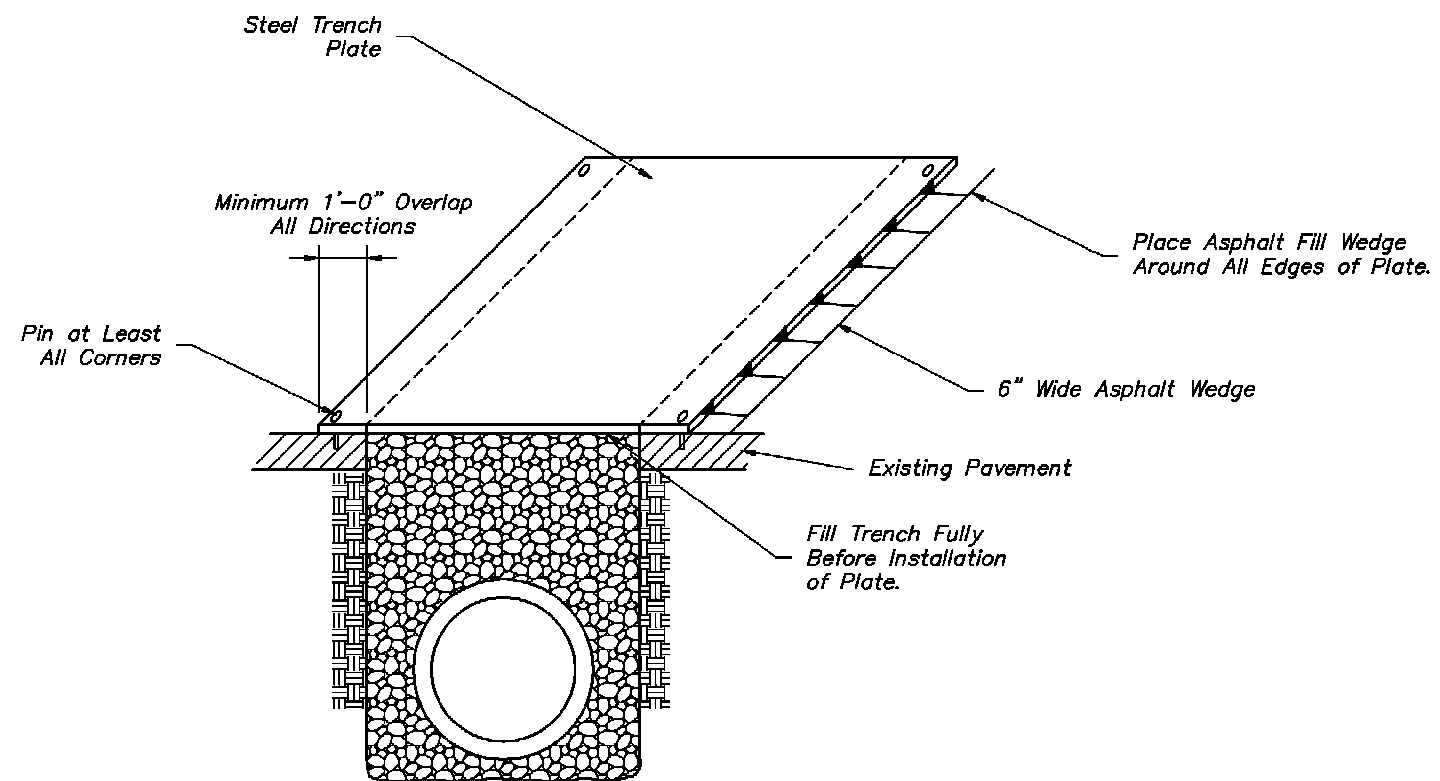
| DATE | Z:\STANDARD\PV\PV-TRNCH.DWG | REVISIONS |
|---------|-----------------------------|-----------|
| 5/14/12 | Revised | |
| 2/25/22 | ADD BLOCKOUT | |

**CITY OF PRAIRIE VILLAGE
PUBLIC WORKS DEPARTMENT**



STREET PATCH DETAIL


STANDARD DETAIL NUMBER: **205.01**

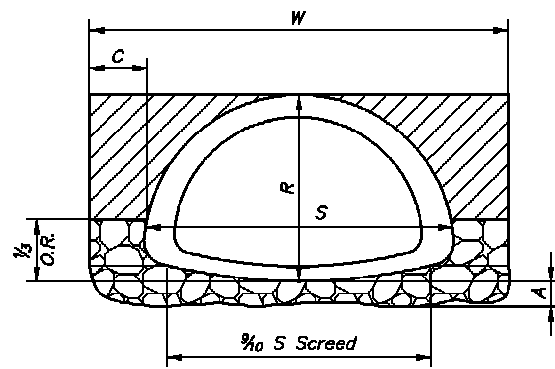


STREET TRENCH PLATING DETAIL

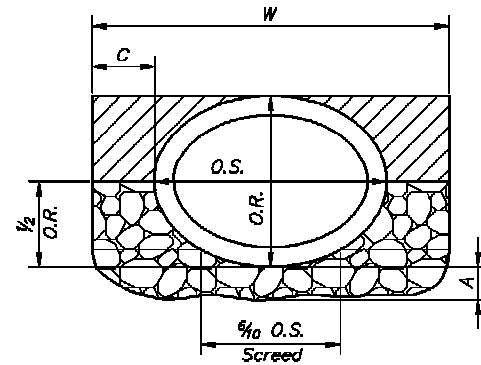
NOTES:

1. Pins shall extend a minimum of 3" into pavement.
2. Pins shall be smooth headed and heads shall not protrude more than 1/2" above plate.
3. A reflectorized "Bump" warning sign (WB-1) shall be installed 100' in advance of street plate.
4. Street plates in place longer than 3 days require millings along perimeter.

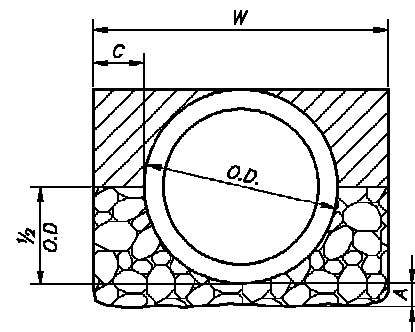
| DATE | Z:\STANDARD\PV\PV-TRENCH-PLDWG | REVISIONS |
|---|---------------------------------|--------------|
| 2/14/19 | | added note 4 |
| | | |
| CITY OF PRAIRIE VILLAGE PUBLIC WORKS DEPARTMENT | | |
|  | STREET TRENCH PLATING DETAIL | |
| STANDARD DETAIL NUMBER: 205.02 | | |



R.C.P. ARCH





R.C.P.-H.E.

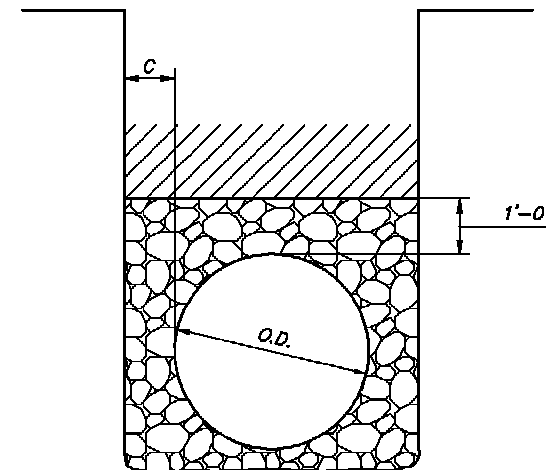


R.C.P.

CLASS "B" BEDDING


NOTES:

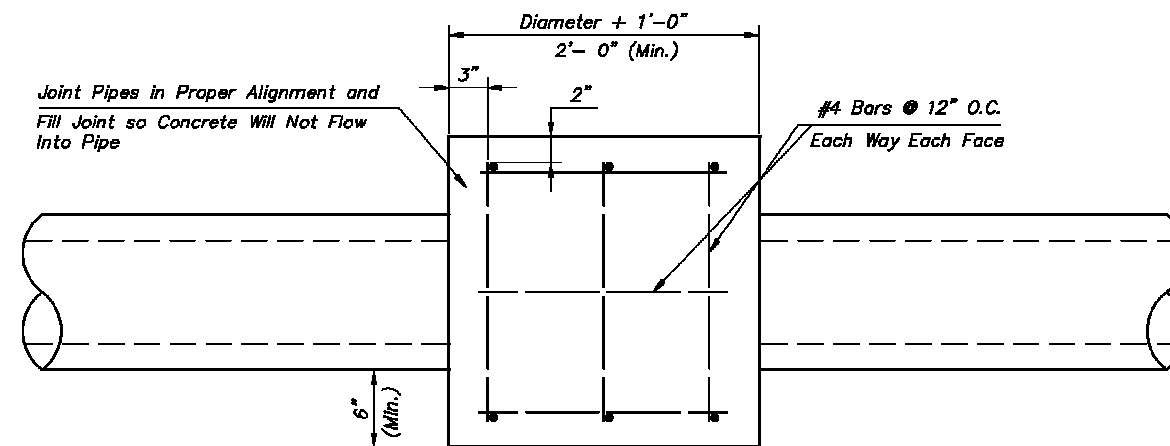
1. *A & C = Absolute min. clearance from pipe wall to any projection of trench bottom or wall.*
A (Earth Excav.) 2", Class "B".
A (Rock Excav.) 6", Class "B".
C = 8" Minimum
2. *W = Trench width at a level 6" above top of pipe.*
W = Min. of 16" plus O.D., O.S. or S.
W = Max. of 24" plus O.D., O.S. or S.
3. *Where screeding shown, form bed with screed cut to exact shape of pipe bottom.*
4.  = Granular fill (See Specs.)
5.  = Backfill to top of pipe (See Specs.)
6. *All bedding Class "B" except for flexible pipe bedding.*
7. *See specifications for trench bottom stabilization, if required.*
8. *See Roadway Trench Details if in roadway.*



FLEXIBLE PIPE BEDDING

PIPE EMBEDMENT DETAILS

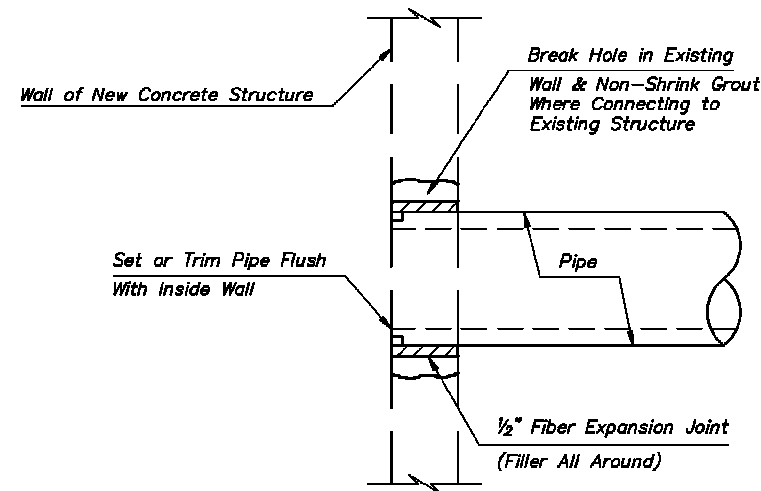
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| DATE | Z:\STANDARD\PV\PV-BED.DWG | REVISIONS |
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| CITY OF PRAIRIE VILLAGE PUBLIC WORKS DEPARTMENT | | |
|  PIPE EMBEDMENT DETAILS | | |
| STANDARD DETAIL NUMBER: 206.01 | | |



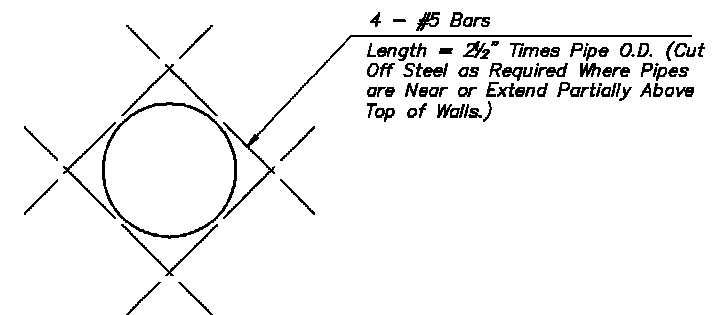
CONCRETE COLLAR

NOTE:

Concrete for collar shall be minimum 4000 P.S.I.
Air Entrained JCCB approved mix design.




AT EXISTING STRUCTURE



ADDITIONAL REINFORCEMENT AT NEW CONCRETE STRUCTURE

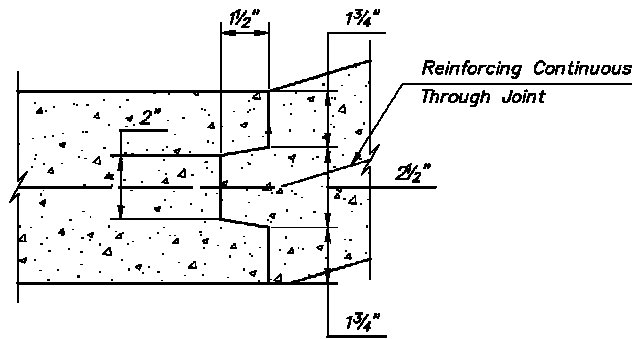
PIPE CONNECTION TO CONCRETE STRUCTURE

| DATE | Z:\STANDARD\PV\PV-COLLAR.DWG | REVISIONS |
|---|------------------------------|-----------|
| | | |
| CITY OF PRAIRIE VILLAGE PUBLIC WORKS DEPARTMENT | | |
|  | COLLAR AND PIPE DETAILS | |
| STANDARD DETAIL NUMBER: 207.01 | | |

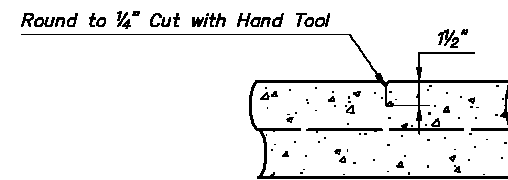
NOTES:

1. Transverse contraction joints at 10' intervals.
2. Toe walls to be continuous around all sides of the paved ditch.
3. Construction joints shall be similar to Key Joints. Reinf. shall be carried 12" through joint.
4. Reinforce with 1.4x6" welded wire fabric at mid depth or equivalent steel area #3 bars.

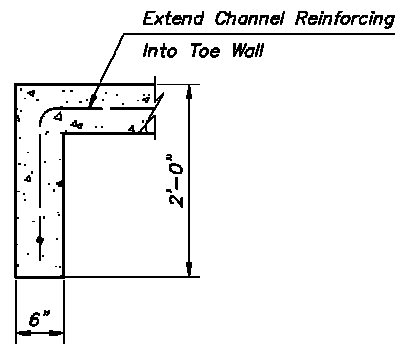
- D = Depth of ditch (See plan.)
 A = Key Joint or Contraction Joint (optional) paved ditch may be poured monolithically.
 W = The width of the flat bottom ditch.



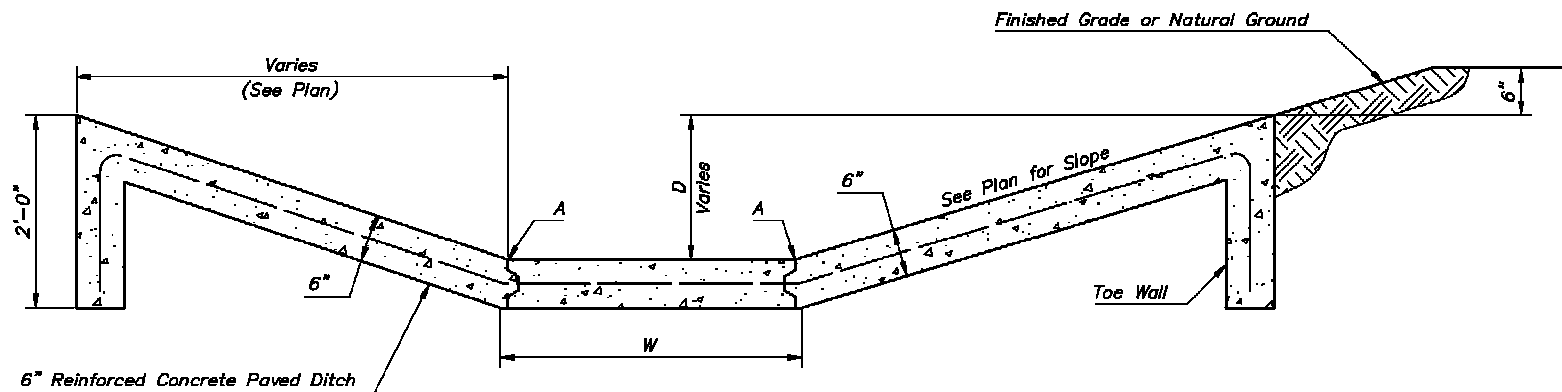
KEY JOINT DETAIL



TRANSVERSE CONTRACTION JOINT



TOE WALL



TYPICAL SECTION

6" REINFORCED CONCRETE PAVED DITCH

| DATE | Z:\STANDARD\PV\PV-DITCH.DWG | REVISIONS |
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**CITY OF PRAIRIE VILLAGE
 PUBLIC WORKS DEPARTMENT**

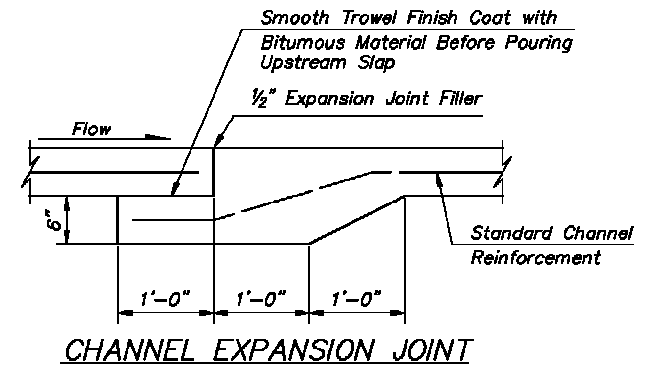


CONCRETE DITCH
 LINER DETAIL

STANDARD DETAIL NUMBER: **208.01**

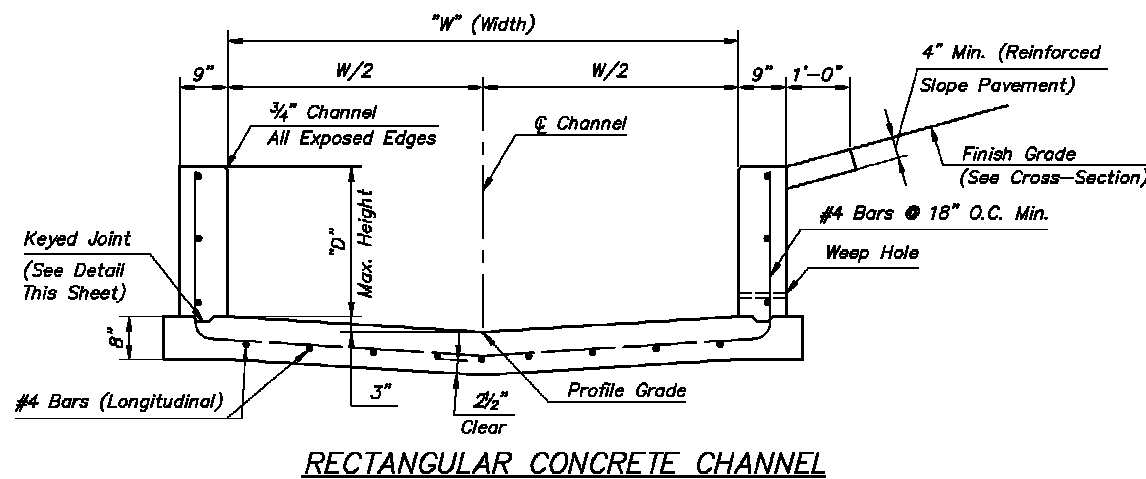
NOTES:

1. Size of channel is given on channel profile as: (Width) x (Standard Depth) concrete channel or trapezoidal. Depth refers to actual wall height. See profile for depths greater than standard.
2. Finished ground shall slope not less than 1% nor steeper than 3:1 to the new channel. See the cross sections.
3. Where channel meets culverts with flat bottoms, transition to 3" deep "V" as channel slope allows.
4. For wall heights in curved section, transition, and depths greater than standard. See profiles on plan-profile sheets.
5. Cut contraction joints 1/2" deep in slab @ 10' centers form 3/4" notches into wall to match slab contraction joint for rectangular channels.
6. Where "D" exceeds 3'; place weep holes @ 10' centers midway between contraction joints. Construct weep holes of 3" P.V.C. pipe, with flowline 6" above bottom slab. Cut end of pipe flush with interior surface of channel. Cover exterior end of pipe with hardware cloth and place approximately 1 cubic foot of pipe bedding material around exterior end.

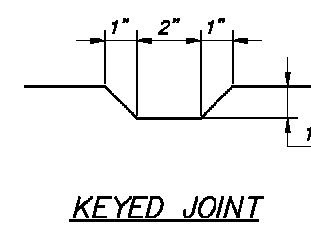


NOTE:

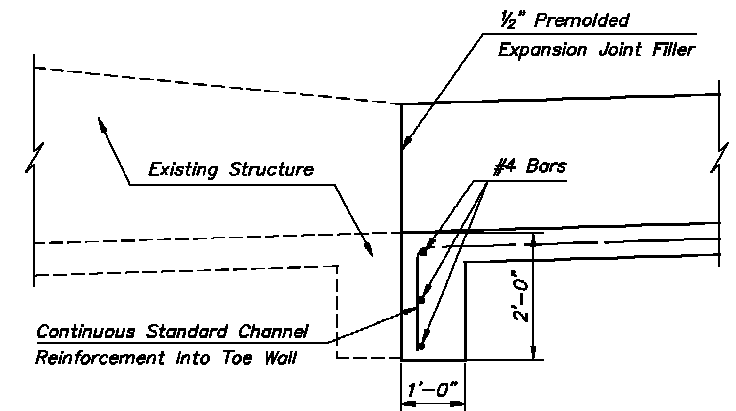
Expansion joint shall be placed as shown on the plans and also at P.C. and P.T.'S of curves with Δ's greater than 20' and at not greater than 250' spacing.



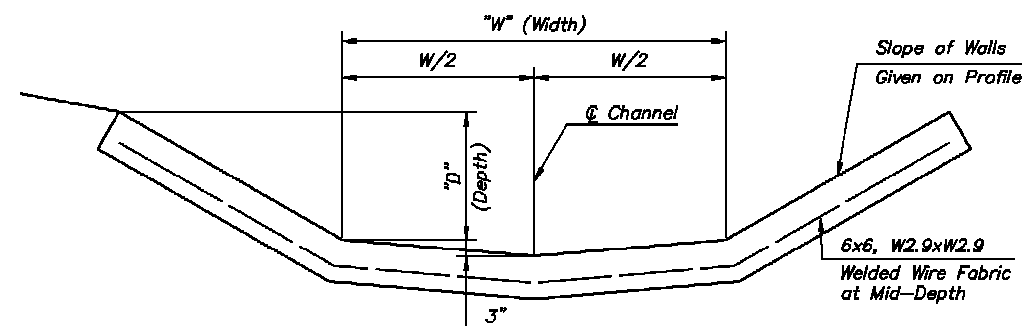
RECTANGULAR CONCRETE CHANNEL



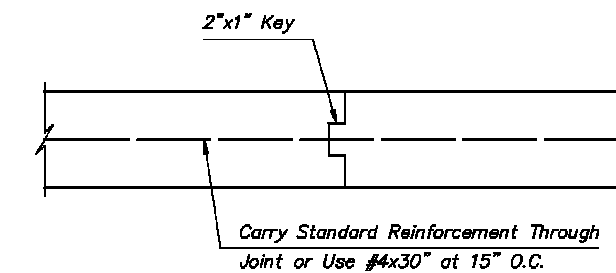
KEYED JOINT



PAVED CHANNEL MEETING EXISTING STRUCTURE



TRAPEZOIDAL CONCRETE CHANNEL



CONSTRUCTION JOINT

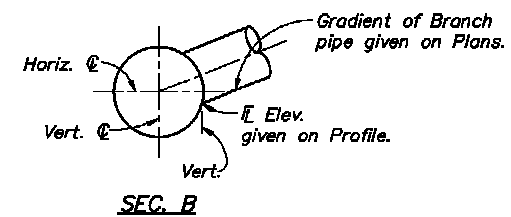
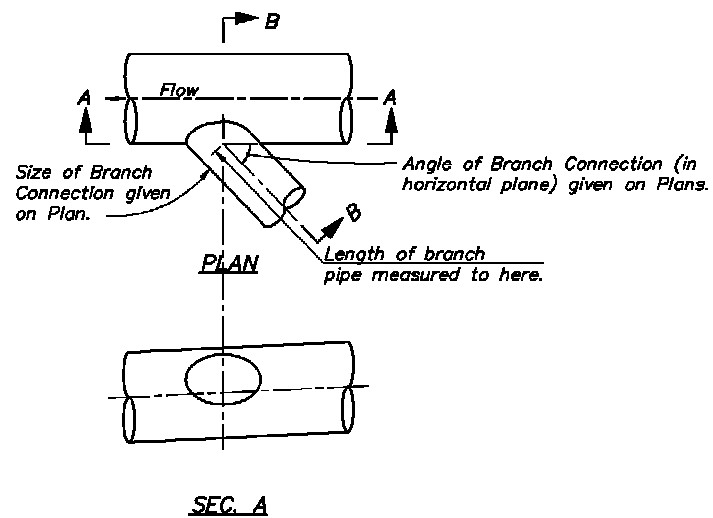
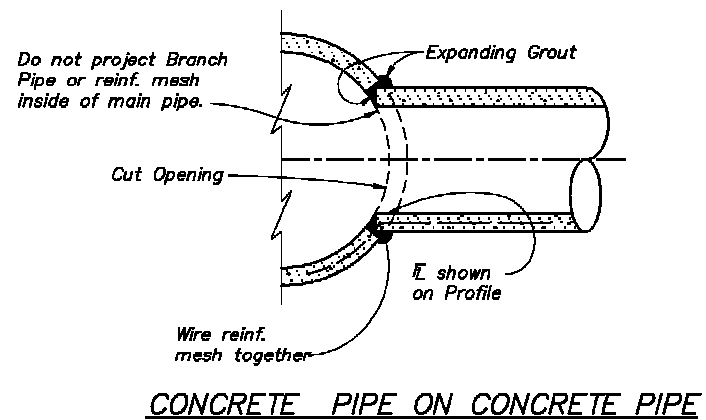
NOTES:

1. Use in both walls & slab of rectangle channel and full width of trapezoidal channel.
2. Keyed construction joints shall be used whenever a pour is ended at any location other than the end of a channel section or an expansion joint. Keyed construction joints without continuous reinforcing steel may be used at the contractor's option to separate side and bottom slab pours on trapezoidal channel.

NOTES:

1. Cut contraction joints 1/2" deep in sides and bottom transversely at 10' centers.
2. Cut contraction joints at each edge of channel bottom (on channels with 6" bottom width or greater.)
3. For expansion joint see detail this sheet.

| | | |
|--|----------------------------|-----------|
| DATE | Z:\STANDARD\VP\VP-CHAN.DWG | REVISIONS |
| | | |
| CITY OF PRAIRIE VILLAGE PUBLIC WORKS DEPARTMENT | | |
| CONCRETE CHANNEL LINER DETAIL | | |
| STANDARD DETAIL NUMBER: 209.01 | | |



GEOMETRICS

NOTES:

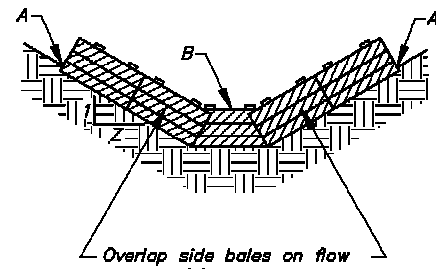
1. Only the Inside Walls of Pipes are Shown.
2. Actual Angle of Branch Connection in a Plane Through The Centerlines of Main and Branch Pipes will be Different Than the Angle of Branch Connections (in Horizontal Plane) as Given on the Plans when the Branch Pipe Gradient is relatively Steep. This is to be computed by Pipe Manufacturer and Included in the Shop Drawings.

NOTES ON BRANCH CONNECTIONS:

1. Details of Layout, Granular Fill, Etc. as Shown for CMP on CMP are Typical except as Shown and are not Repeated on Other Details.
2. All Branch Connections must be Structurally Sound and Watertight and must not project Past Inside Wall of Main Pipe.
3. Where Main and Branch are Approximately same size, Field Cut Branch Connections Should be Avoided with Concrete Pipe.
4. Factory made Wye Branches shall be used Wherever Practicable.
5. Details for Elliptical or Arch Pipe Similar to Those Shown Above, for Round Pipe.
6. Refer to Detailed Layouts when Provided on Plans.
7. Submit Shop Drawings for all Factory made Branches Prior to Fabrication.
8. Where the Branch Line is not Built under this Contract, Construct 8" Bulkhead of Concrete or Brick in Open End of Branch Connection.

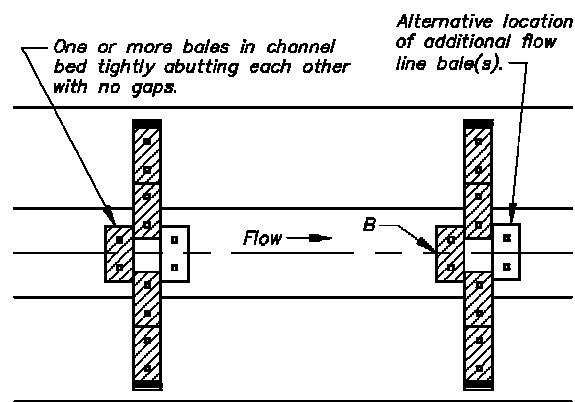
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| DATE | Z: \STANDARD\PV\PV-BRANCH | REVISIONS |
| | | |
| CITY OF PRAIRIE VILLAGE PUBLIC WORKS DEPARTMENT | | |
| STORM SEWER BRANCH CONNECTION DETAILS | | |
| STANDARD DETAIL NUMBER: 210.01 | | |

End points "A" must be higher than flow line point "B".



Overlap side bales on flow line bale(s) to prevent gaps.

FRONT VIEW

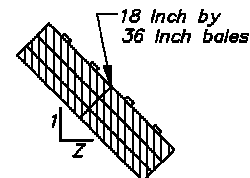


One or more bales in channel bed tightly abutting each other with no gaps.

Alternative location of additional flow line bale(s).

TOP VIEW

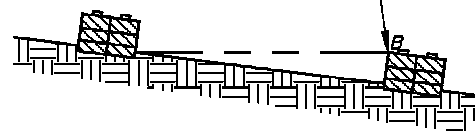
WIDE CHANNELS



| Value of Z | Minimum Number of Bales |
|------------|-------------------------|
| 1.0 OR < | 1** |
| 1.0 - 3.5 | 2** |
| 3.5 - 5.0 | 3** |
| 5.0 - 7.0 | 4** |
| 7.0 OR > | Not Recommended |

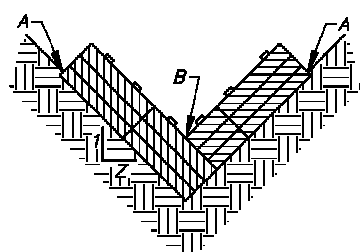
** Assumes depth of water above point "B" will not exceed 6 inches.

Place downstream bales such that point "B" is approximately level with the lowest ground elevation of upstream bales.

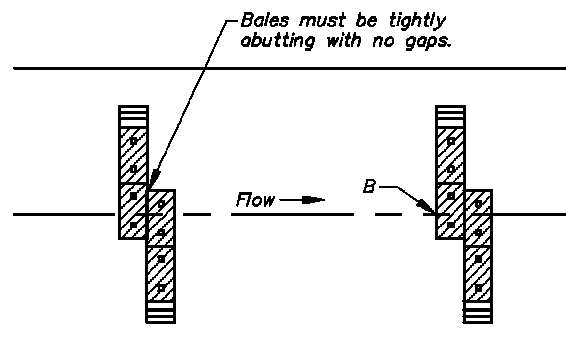


PROFILE VIEW

End points "A" must be higher than flow line point "B".



FRONT VIEW



Bales must be tightly abutting with no gaps.

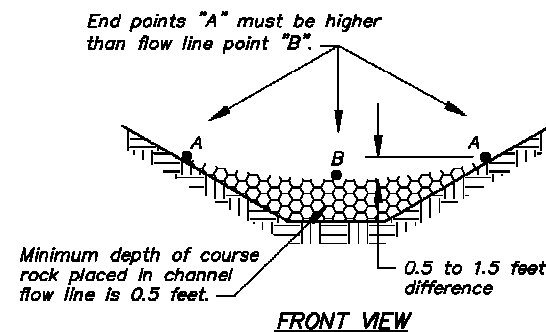
TOP VIEW

NARROW CHANNELS

GENERAL NOTE:

Straw Bales shall be set such that there are no significant gaps between or beneath Straw Bales.

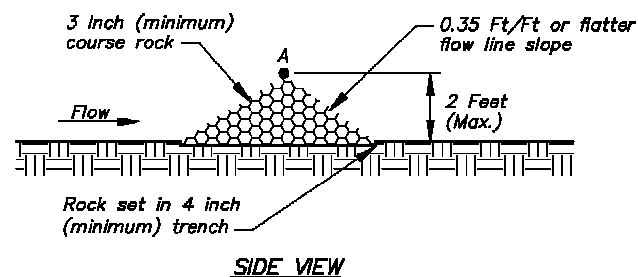
STRAW BALE DITCH CHECK



End points "A" must be higher than flow line point "B".

Minimum depth of course rock placed in channel flow line is 0.5 feet.

FRONT VIEW



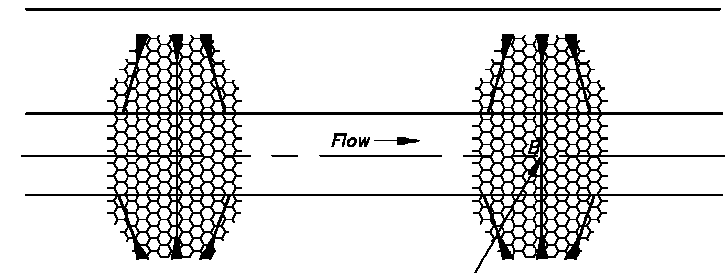
3 inch (minimum) course rock

0.35 Ft/Ft or flatter flow line slope

2 Feet (Max.)

Rock set in 4 inch (minimum) trench

SIDE VIEW



TOP VIEW

Place downstream structure such that point "B" is approximately level with the lowest ground elevation of the upstream structure.



PROFILE VIEW

RECOMMENDED ROCK SIZE & FLOW DEPTHS

| D-50* of Rock (Inches) | Maximum Water Depth Over Rock (Inches) | | | | | |
|------------------------|--|------|------|------|------|------|
| | 0.35 | 0.30 | 0.25 | 0.20 | 0.15 | 0.10 |
| 3 | 0.6 | 0.7 | 0.8 | 1.0 | 1.3 | 1.9 |
| 6 | 1.2 | 1.4 | 1.6 | 2.0 | 2.6 | 3.9 |

* 50% or greater

SMALL ROCK DITCH CHECK

DATE Z: \STANDARD\PV\PV-BALE.DWG REVISIONS

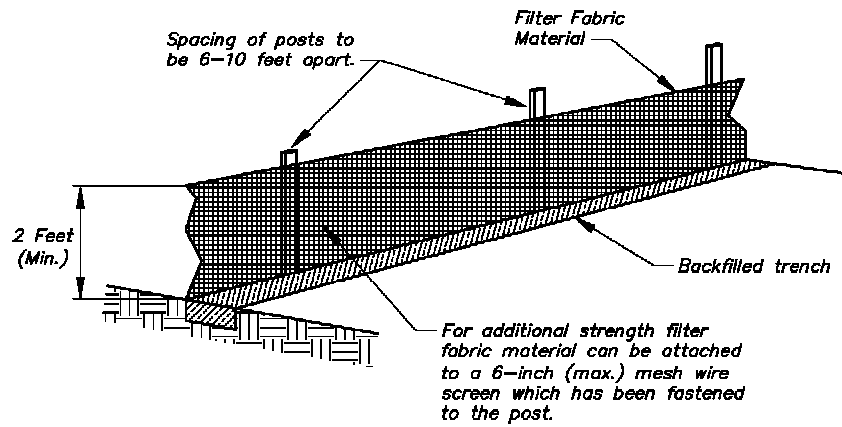
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**CITY OF PRAIRIE VILLAGE
PUBLIC WORKS DEPARTMENT**

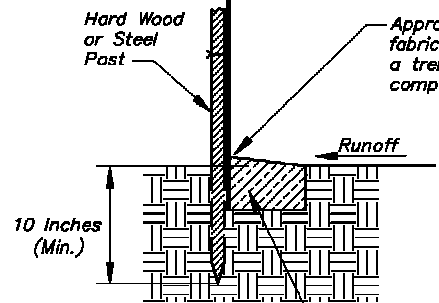


STRAW BALE AND
SMALL ROCK DITCH CHECK

STANDARD DETAIL NUMBER: **211.02**



Filter fabric material securely fastened to the posts or (if used) the wire mesh.



Approximate 4-inch by 4-inch trench.

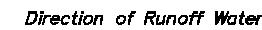
Attaching Two Silt Fences



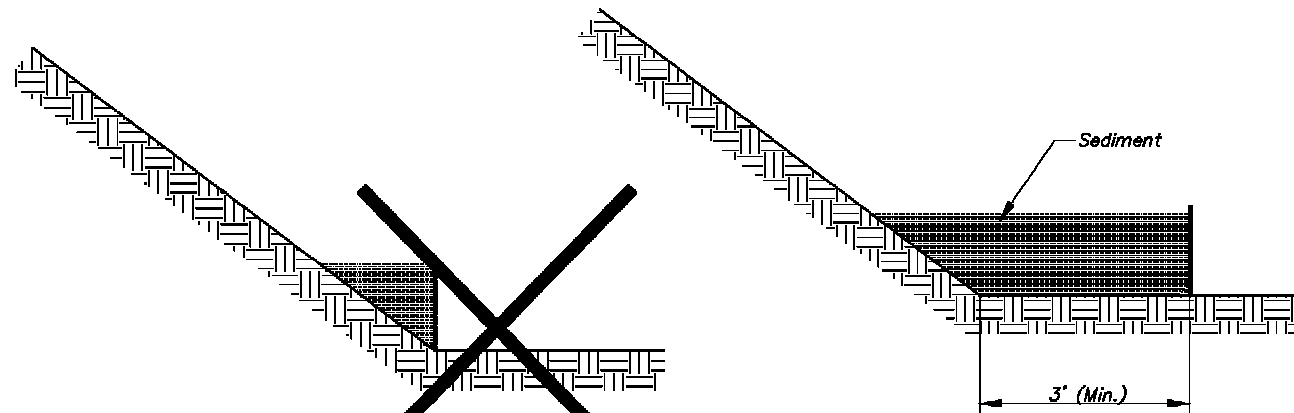
Place the end post of the second fence inside the end post of the first fence.



Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.



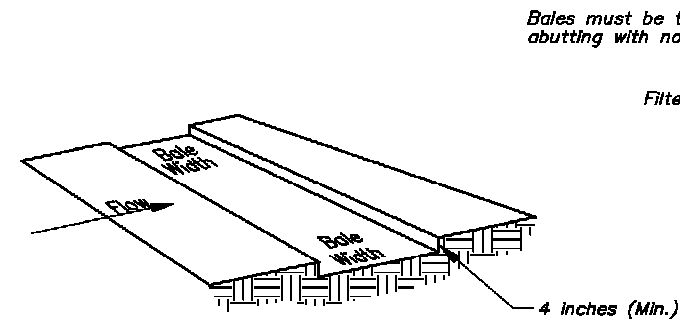
Drive both posts about 10 inches into the ground and bury flap.



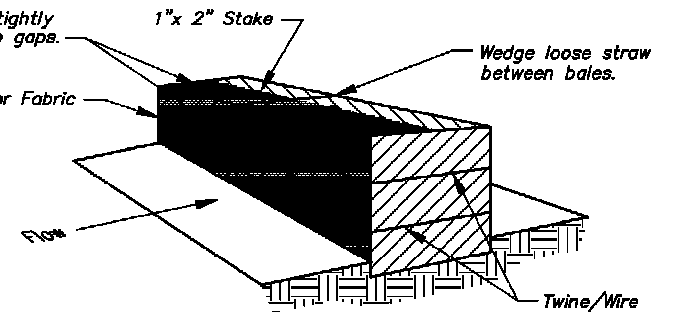
NOT PERMITTED

When used to control sediment from steep slopes, filter fences should be placed away from the toe of a slope for increased holding capacity.

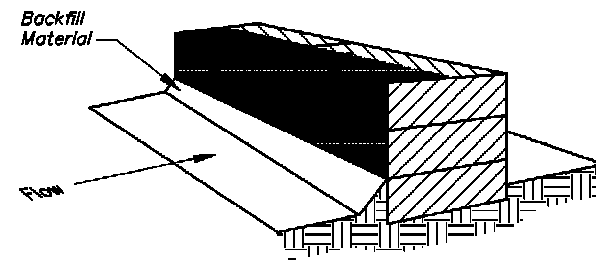
INSTALLATION OF SILT FENCE



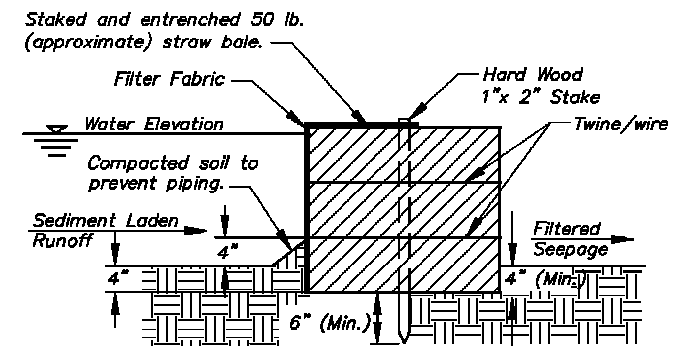
1. EXCAVATE THE TRENCH



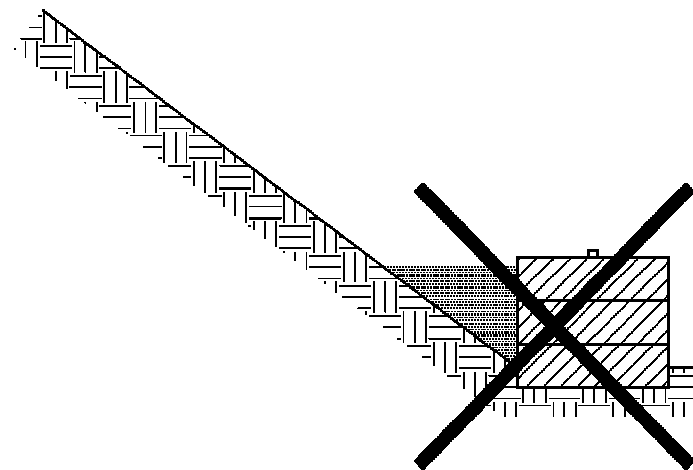
2. PLACE AND INSTALL FILTER FABRIC AND STAKE STRAW BALES



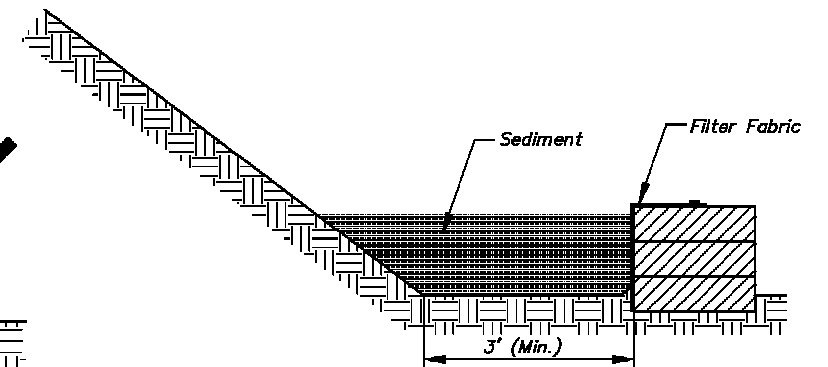
3. BACKFILL AND COMPACT EXCAVATED SOIL



CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE



NOT PERMITTED



When straw bales are installed at the toe of a slope to trap sediment they should be placed away from the toe for increased holding capacity.

INSTALLATION OF STRAW BALES

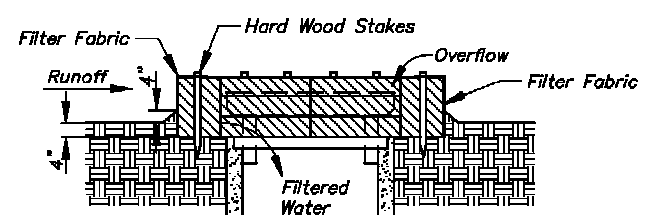
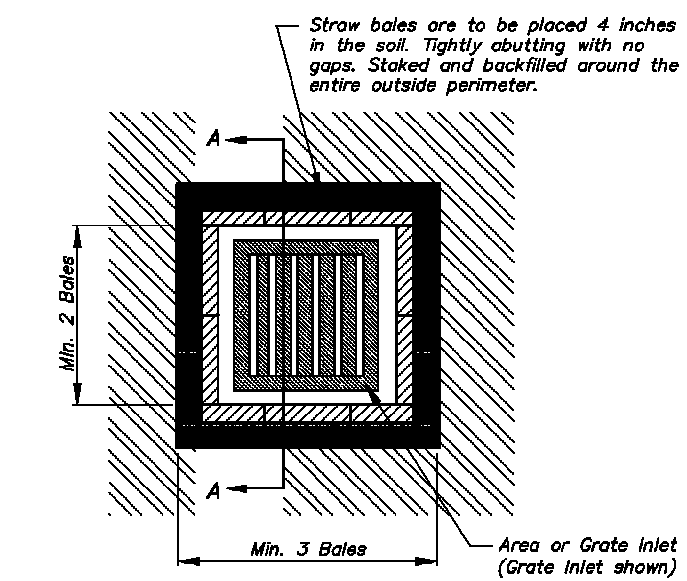
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| DATE | Z:\STANDARD\PV\PV-SILT.DWG | REVISIONS |
| | | |

**CITY OF PRAIRIE VILLAGE
PUBLIC WORKS DEPARTMENT**



**INSTALLATION OF SILT FENCE
AND STRAW BALES**

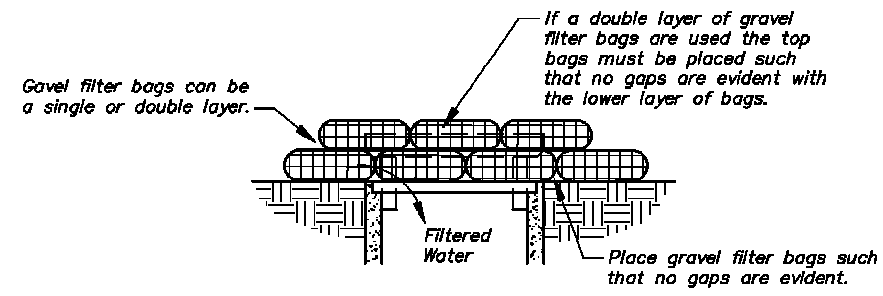
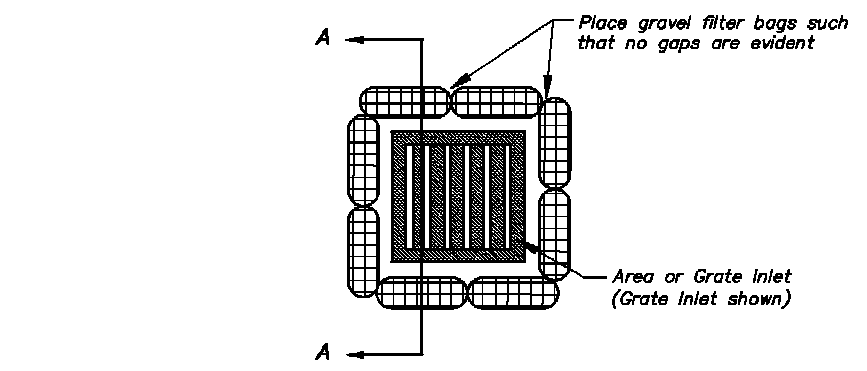
STANDARD DETAIL NUMBER: **211.03**



CROSS-SECTION AA

NOTE: Straw bale filters are not to be used on pavement.

**STRAW BALE FILTER
AROUND AREA OR GRATE INLET**

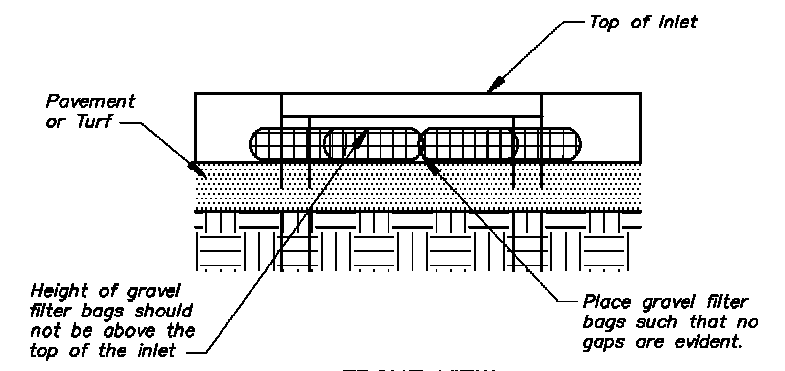
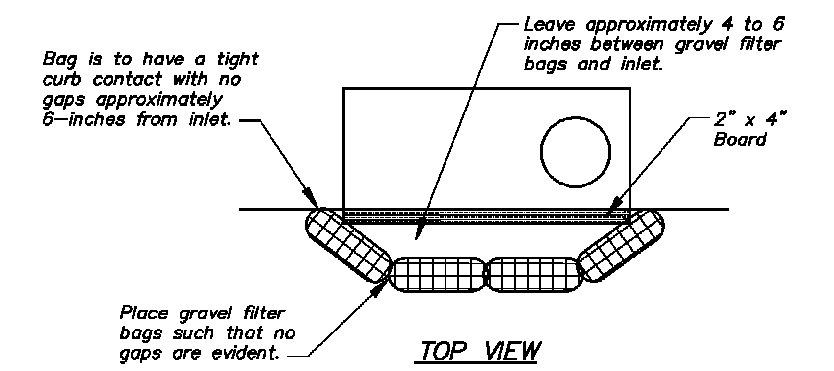


CROSS-SECTION AA

GENERAL NOTES:

1. Each bag is to consist of 3/4-inch diameter gravel contained in pervious burlap bags or synthetic net bags (1/8-inch mesh) and be approximately 24 inches long, 12 inches wide, and 6 inches high.
2. 3/4" gravel shall have the following gradation:
100% passing the 1" sieve
95% retained on the 1/2" sieve
3. Gravel filter bags may be used on pavement or bare ground.

**GRAVEL FILTER BAGS
AROUND AREA OR GRATE INLET**



FRONT VIEW

GENERAL NOTES:

1. Each bag is to consist of 3/4-inch diameter gravel contained in pervious burlap bags or synthetic net bags (1/8-inch mesh) and be approximately 24 inches long, 12 inches wide, and 6 inches high.
2. 3/4" gravel shall have the following gradation:
100% passing the 1" sieve
95% retained on the 1/2" sieve

**GRAVEL FILTER BAGS
FOR CURB INLET**

| DATE | Z:\STANDARD\PV\PV-INLTLTR.DWG | REVISIONS |
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**CITY OF PRAIRIE VILLAGE
PUBLIC WORKS DEPARTMENT**



**AREA, GRATE, AND CURB
INLET FILTERS**

STANDARD DETAIL NUMBER: 211.04