

CITY OF MORENO VALLEY STANDARD PLANS

SECTION 3

FLOOD AND EROSION CONTROL

Note: All other Riverside County Flood Control and Water Conservation District Standards not specifically included, are adopted in this Section. The use of APWA's Flood Control and Storm Drain Facilities Standards must have prior approval from the Public Works Director/City Engineer.

City of Moreno Valley

Standard Plans Index - 2017 Edition

SECTION 2: Sewers and Sanitation

Note: *All Eastern Municipal Water District Standards are adopted in this Section.*

SECTION 3: Flood and Erosion Control

General

MVFE-300A-0	Catch Basin
MVFE-300B-0	Catch Basin Notes
MVFE-300C-0	Catch Basin Opening Detail
MVFE-300D-0	Catch Basin Face Plate and Protection Bar Detail
MVFE-300E-0	Catch Basin Manhole Frame and Cover
MVFE-300F-0	Catch Basin Reinforcement

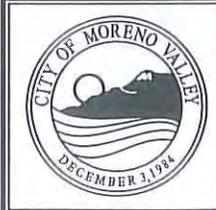
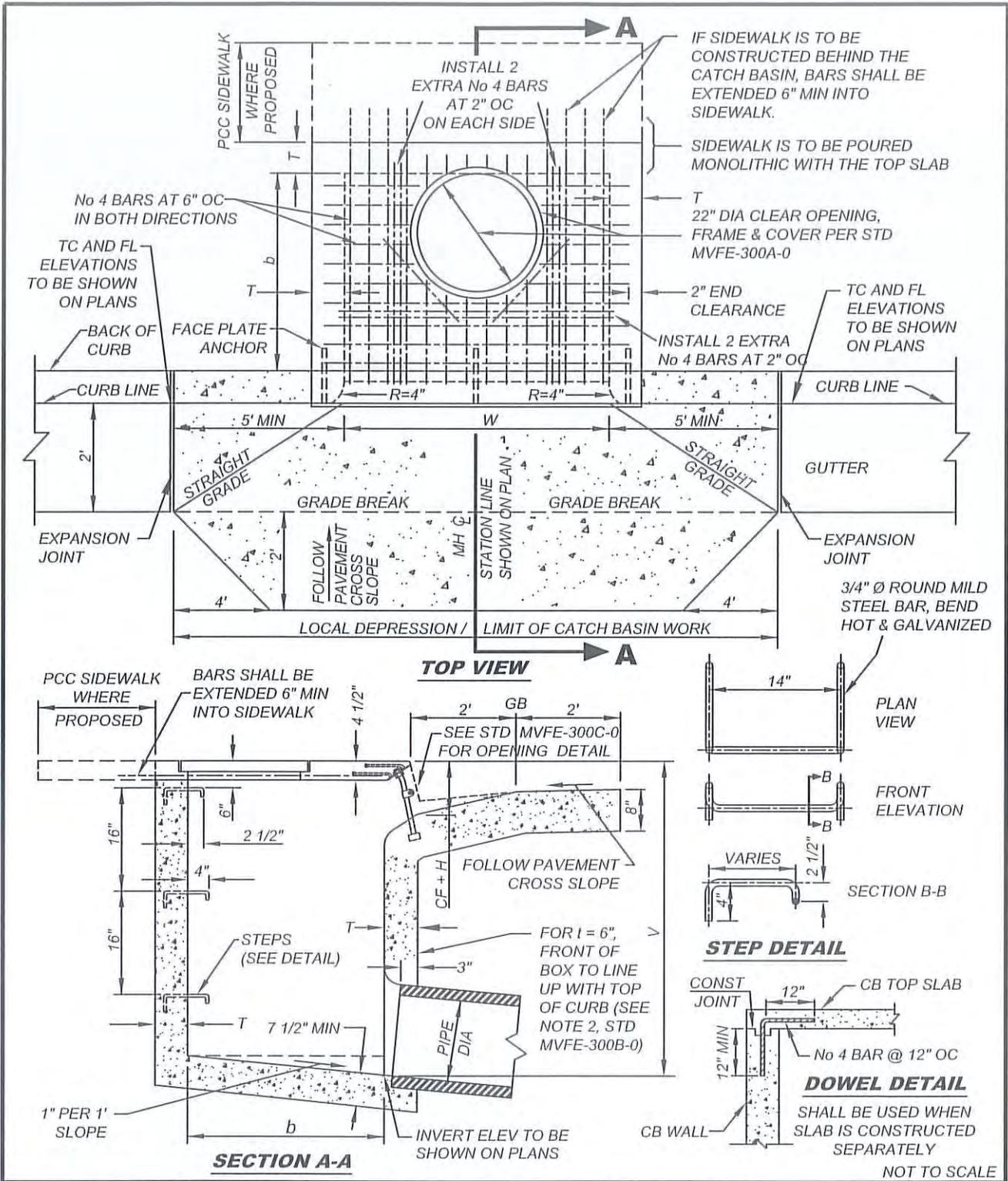
Manholes and Structures

MVFE-320A-0	Manhole
MVFE-320B-0	Manhole Notes
MVFE-320C-0	Manhole Shaft for Cast Pipe
MVFE-321A-0	Manhole Frame and Cover
MVFE-321B-0	Manhole Frame and Cover Notes
MVFE-340-0	Concrete Collar for Pipe 24 through 36 Inches

Water Quality and Erosion Control

MVFE-350-0	NPDES Notes
MVFE-351A-0	Erosion Control Notes (Rough Grading Phase)
MVFE-351B-0	Erosion Control Notes (Precise Grading Phase)
MVFE-351C-0	Erosion Control Notes (Straw-Bale Barriers)
MVFE-351D-0	Erosion Control Notes
MVFE-351E-0	Construction Driveway Desilting Basin
MVFE-351F-0	Temporary Access Ramp and Check Dam Detail
MVFE-352-0	Semi-Pervious Straw Bale Sediment Barrier
MVFE-353-0	Temporary Desilting Measures at Catch Basin
MVFE-354-0	Stabilized Construction Exit Sediment Removal
MVFE-355-0	Silt Fence Detail
MVFE-356-0	Desilting Basin

Note: *All other Riverside County Flood Control and Water Conservation District Standards which are not specifically included are adopted in this Section. The use of APWA's Flood Control and Storm Drain Facilities Standards must have prior approval from the Public Works Director/City Engineer.*



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CITY OF MORENO VALLEY
 PUBLIC WORKS DEPARTMENT - CAPITAL PROJECTS DIVISION

CATCH BASIN

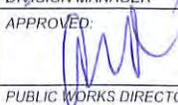
STANDARD PLAN
MVFE-300A-0

SHEET 1 OF 6

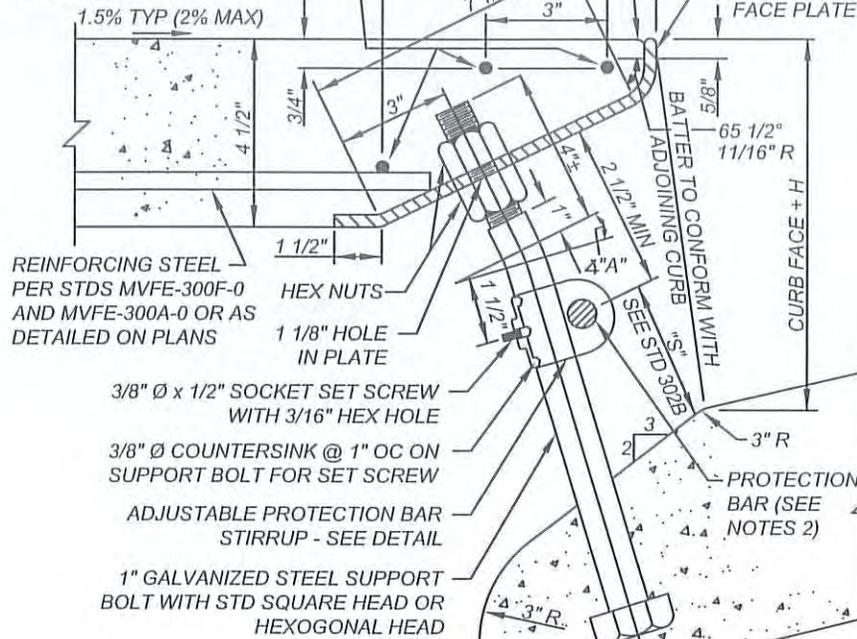
NOTES:

- 1) CONCRETE SHALL BE CLASS 560-C-3250 PCC, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2) DIMENSIONS:
 - a. W SHALL BE AS SPECIFIED ON THE PLAN (4' MIN).
 - b. V SHALL BE AS SPECIFIED ON THE PLAN.
 - c. H = 4" UNLESS OTHERWISE SPECIFIED ON THE PLAN.
 - d. b = 38" UNLESS OTHERWISE SPECIFIED ON THE PLAN.
 - e. T = 6" IF V IS 4' OR LESS. T = 8" IF V IS BETWEEN 4' AND 8'. T = 10" IF V IS 8' OR MORE.
 - f. THICKNESS OF THE WALL UNDER THE OPENING SHALL BE T + 2" WHEN W EXCEEDS 7'-0". IF T > 6", WIDENING OF WALL SHALL BE ON THE STREET SIDE.
- 3) PROTECTION BAR:
 - a. PROTECTION BAR SHALL BE PER STD MVFE-300D-0.
 - b. ALL BARS SHALL BE 1" Ø GALVANIZED SMOOTH STEEL. BAR LENGTHS SHALL NOT EXCEED 21' AND SHALL BE CUT TO FIT IN FIELD.
 - c. WHEN "W" IS OVER 21', PROTECTION BAR SHALL CONSIST OF TWO OR MORE SECTIONS DEPENDING UPON LENGTH OF BASIN.
 - d. INSTALL COUPLING AT DOWNSTREAM END OF CATCH BASIN OPENING.
 - e. PROTECTION BAR "S" SHALL BE INSTALLED WHEN THE MINIMUM CLEAR OPENING OF THE CATCH BASIN EXCEEDS 6". BAR "S" SHALL BE PLACED SUCH THAT NO MINIMUM CLEAR OPENING EXCEEDS 6".
 - f. WHEN ONE BAR IS REQUIRED, "S" SHALL BE 6 3/4". HOWEVER, THIS SHALL BE REDUCED IF NECESSARY SO THAT THE CENTER OF THE PROTECTION BAR IS NOT LESS THAN 2 1/2" FROM THE FACE PLATE.
 - g. WHEN TWO OR MORE BARS ARE REQUIRED, "S" SHALL BE 6 3/4" WITH REMAINING BARS SPACED AT 6 3/4" CC. SPACING OF TOP BAR SHALL BE REDUCED IF NECESSARY SO THAT THE CENTER OF THE BAR IS NOT LESS THAN 2 1/2" FROM THE FACE PLATE.
- 4) SUPPORT BOLT:
 - a. SUPPORT BOLTS SHALL BE PER STD MVFE-300C-0.
 - b. SUPPORT BOLTS ARE REQUIRED WHEN LENGTH OF THE CATCH BASIN IS 7' OR GREATER.
 - c. LOCATION OF SPECIAL SUPPORT BARS AND ADDITIONAL SOCKET SET SCREWS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - d. SOCKET SET SCREW SHALL BE STAINLESS STEEL OR BRASS.
- 5) FACE PLATE ASSEMBLY:
 - a. FACE PLATE SHALL BE PER STD MVFE-300D-0.
 - b. LENGTH OF FACE PLATE SHALL BE "W" + 12" EXCEPT AS MODIFIED FOR CURB OPENING CATCH BASIN AT DRIVEWAY.
 - c. WHERE CATCH BASIN IS TO BE CONSTRUCTED ON CURVE, THE MAXIMUM CHORD LENGTH FOR FACE PLATE SHALL BE SUCH THAT THE MAXIMUM DIMENSION FROM SAID CHORD (MEASURED PERPENDICULAR THERETO) TO THE TRUE CURVE WILL NOT EXCEED ONE INCH. WHERE MORE THAN ONE CHORD IS REQUIRED, CHORD LENGTHS SHALL BE EQUAL.
 - d. WHERE LENGTH OF FACE PLATE IS BETWEEN 22' AND 43', TWO SECTIONS MAY BE USED. WHEN LENGTH EXCEEDS 43', THREE SECTIONS MAY BE USED. SECTIONS SHALL BE SPLICED ACCORDING TO THE SPLICE DETAIL PER STD MVFE-300D-0. SPLICE SHALL BE PLACED ONE FOOT FROM SUPPORT BOLT.
 - e. SET END ANCHORS 3" FROM ENDS OF FACE PLATE.
 - f. PLACE ONE ANCHOR AT EACH SIDE OF ANY OR ALL SPLICE JOINTS AND WITHIN 6" THEREOF.
 - g. ROUND HEAD ANCHORS FOR FACE PLATE SHALL BE NELSON H-4F SHEAR CONNECTOR, KSN WELDING SYSTEMS DIVISION SHEAR CONNECTOR OR EQUAL.
- 6) CONNECTOR PIPE: UNLESS OTHERWISE INDICATED ON THE PROJECT PLANS, CONNECTOR PIPE SHALL BE 24" ID MINIMUM, REINFORCED CONCRETE PIPE (RCP).
- 7) STEPS: SHALL BE PER STD MVFE-300A-0 AND SHALL BE 3/4" Ø ROUND MILD STEEL BAR, BEND HOT & GALVANIZED. STEPS SHALL BE INSTALLED 16" APART WHEN V EXCEED 4 1/2'. THE TOP STEP SHALL BE 6" BELOW THE TOP SURFACE AND SHALL BE 2 1/2" CLEAR FROM THE WALL. ALL OTHER STEPS SHALL BE 4" CLEAR FROM THE WALL. ONLY ONE STEP 12" FROM THE BOTTOM FLOOR SHALL BE INSTALLED IF V IS 4 1/2' OR LESS. ALL STEPS SHALL BE ANCHORED NOT LESS THAN 4" INTO THE CATCH BASIN WALL. IF STEPS ARE NOT WET SET / INSTALLED, HIGH-STRENGTH EPOXY ANCHORING ADHESIVE, TYPE SET-XP BY STRONG-TIES OR EQUAL APPROVED, SHALL BE USED FOR THE INSTALLATION.
- 8) STEEL REINFORCEMENT: SHALL BE PER STD MVFE-300F-0.
- 9) MANHOLE FRAME AND COVER: SHALL BE PER STD MVFE-300E-0.
- 10) WHERE THE STRUCTURE IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH A SIDEWALK THE TOP SLAB OF THE STRUCTURE SHALL BE POURED MONOLITHIC WITH THE SIDEWALK (WITH NO WEAKENED PLANE JOINT IN BETWEEN). THE SIDEWALK SHALL BE PROVIDED WITH A WEAKENED PLANE JOINT OR A ONE INCH DEEP SAWCUT CONTINUOUSLY ON BOTH SIDES OF THE STRUCTURE WALLS, INCLUDING ACROSS THE FULL WIDTH OF THE SIDEWALK.
- 11) THE SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING OR PROPOSED CURB, GUTTER AND WALK ADJACENT TO THE STRUCTURE. CURVATURE OF CONCRETE SURFACE SHALL BE SHAPED BY CURVED FORMS AND SHALL NOT BE SHAPED BY PLASTERING. FLOOR OF STRUCTURE SHALL BE GIVEN A STEEL TROWELLED FINISH.
- 12) DOWELS SHALL BE REQUIRED PER DETAIL SHOWN ON STD MVFE-300A-0 WHEN THE TOP SLAB IS CONSTRUCTED SEPARATELY.
- 13) STENCIL INLET STRUCTURE WITH "ONLY RAIN IN THE STORM DRAIN".

NOT TO SCALE

	RECOMMENDED:  DIVISION MANAGER	1/21/14 DATE	<h2 style="margin: 0;">CITY OF MORENO VALLEY</h2> <p style="margin: 0;">PUBLIC WORKS DEPARTMENT - CAPITAL PROJECTS DIVISION</p>		
	APPROVED:  PUBLIC WORKS DIRECTOR / CITY ENGINEER	1/29/14 DATE	<h3 style="margin: 0;">CATCH BASIN NOTES</h3>	STANDARD PLAN <h3 style="margin: 0;">MVFE-300B-0</h3>	
				SHEET 2 OF 6	

3 - #4 BARS x (W + 6") IN
ADDITION TO REINFORCING
STEEL PER STDS MVFE-300A-0 &
MVFE-300F-0 OR AS DETAILED
ON PLANS



REINFORCING STEEL
PER STDS MVFE-300F-0
AND MVFE-300A-0 OR AS
DETAILED ON PLANS

HEX NUTS
1 1/8" HOLE
IN PLATE

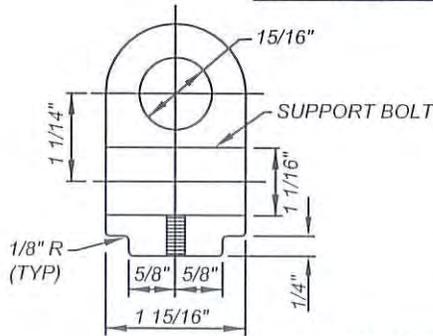
3/8" Ø x 1/2" SOCKET SET SCREW
WITH 3/16" HEX HOLE

3/8" Ø COUNTERSINK @ 1" OC ON
SUPPORT BOLT FOR SET SCREW

ADJUSTABLE PROTECTION BAR
STIRRUP - SEE DETAIL

1" GALVANIZED STEEL SUPPORT
BOLT WITH STD SQUARE HEAD OR
HEXAGONAL HEAD

CATCH BASIN OPENING DETAIL



DRILL AND TAP HOLE
AND INSTALL 3/8" x
1/2" SOCKET SET
SCREW WITH 3/16"
RECESSED HEX HOLE

STIRRUP DETAIL

NOTES:

- 1) SUPPORT BOLT ANGLE "A" SHALL VARY TO CONFORM WITH BATTER OF ADJOINING CURB.
- 2) PROTECTION BAR SHALL BE INSTALLED AND SUPPORT BOLTS SHALL BE SPACED PER STD MVFE-300D-0.
- 3) SUPPORT BOLTS SHALL BE EQUAL LENGTH TO CURB FACE + 6" FOR ALL CURB BATTER.
- 4) ALL EXPOSED METAL PARTS SHALL BE GALVANIZED AFTER FABRICATION.

NOT TO SCALE



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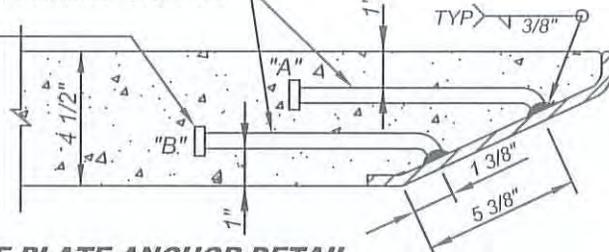
**CATCH BASIN OPENING
DETAIL**

STANDARD PLAN
MVFE-300C-0

SHEET 3 OF 6

1/2" Ø x 8" STEEL ANCHORS, 15" MAX OC,
ALTERNATE UPPER "A" AND LOWER "B"
ANCHORS AS SHOWN

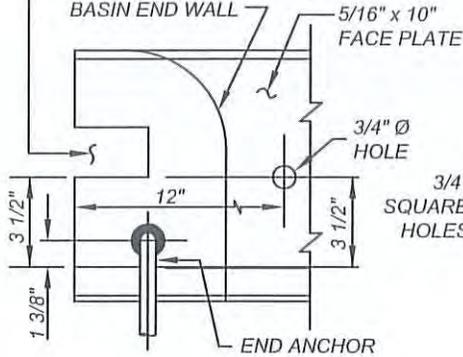
NELSON H-4F SHEAR
CONNECTOR, KSN WELDING
SYSTEMS DIVISION SHEAR
CONNECTOR OR EQUAL



FACE PLATE ANCHOR DETAIL

2" x 3" OPENING FOR
CONCRETE PLACEMENT

INTERIOR FACE OF CATCH
BASIN END WALL



5/16" x 10"
FACE PLATE

3/4" Ø
HOLE

END ANCHOR

3/4" SQUARE HOLES

5/8" x 1 1/2"
CARRIAGE BOLTS AND HEX NUTS

ANCHOR

6" x 3/8" x 8"
SPLICE PLATE

LOCATE WELDS IN
LONGER SPAN SEGMENT

1/4" V 2" 3 EA

5/16" x 10"
FACE PLATE

1 1/2"

1 3/8"

3"

3 1/2"

2"

2"

2"

4"

2"

ANCHOR

JOINT

FACE PLATE END AND SPLICE DETAILS

END ANCHOR
WITH
COUPLING AND
SET SCREW

FACE PLATE

SUPPORT BOLTS
WITH ADJUSTABLE
STIRRUP

3/4" Ø PROTECTION BAR

END ANCHOR

DOWN-
STREAM
END OF
BASIN

"X"

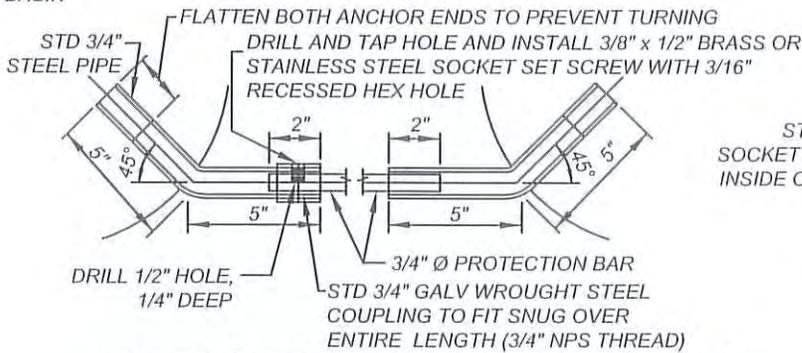
"X"

"X"

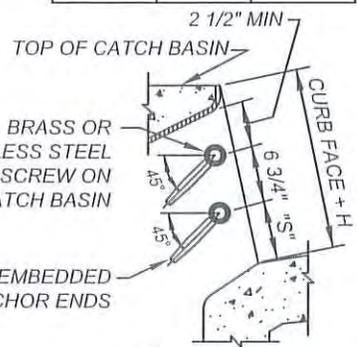
W

SUPPORT BOLT SPACING

W	NUMBER OF BOLTS	NUMBER OF "X" LENGTHS
7' TO 10'	1	2
10' TO 15'	2	3
15' TO 20'	3	4
20' TO 25'	4	5
25' TO 30'	5	6



PROTECTION BAR AND END ANCHOR DETAILS



SECTION VIEW

NOT TO SCALE



RECOMMENDED:

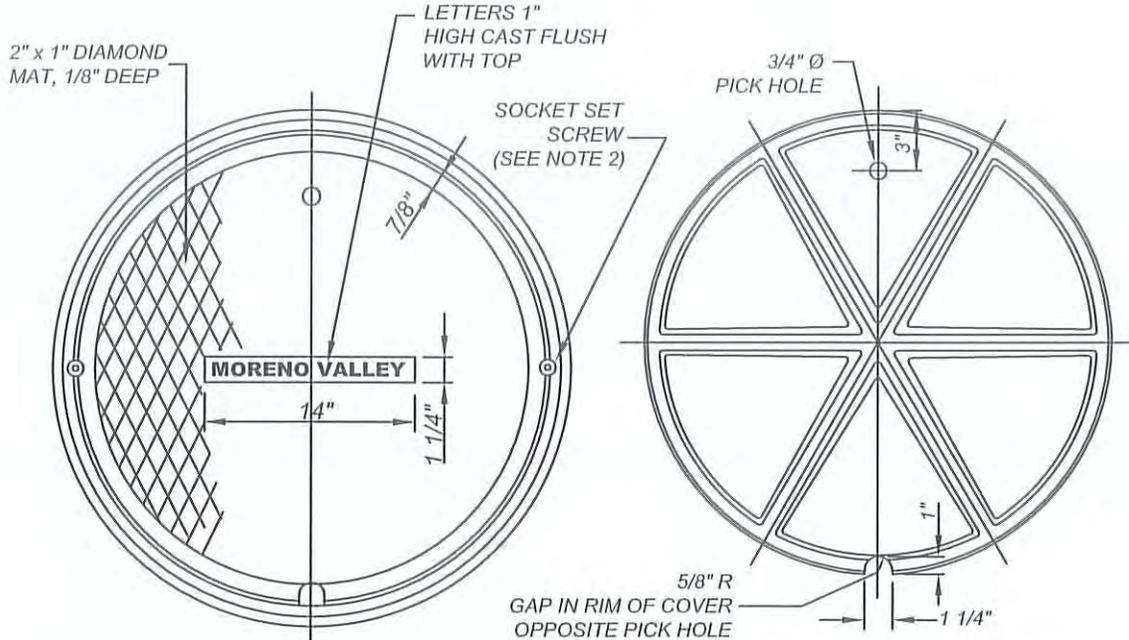
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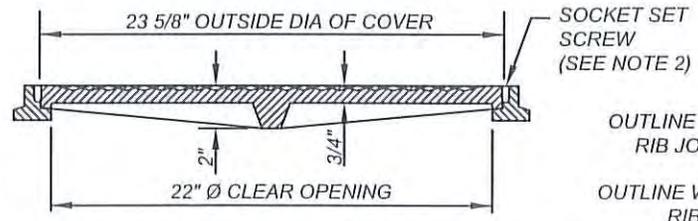
CATCH BASIN FACE PLATE AND PROTECTION BAR DETAIL

STANDARD PLAN
MVFE-300D-0
SHEET 4 OF 6

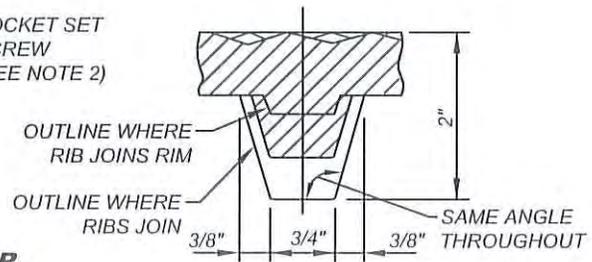


TOP OF MANHOLE FRAME AND COVER

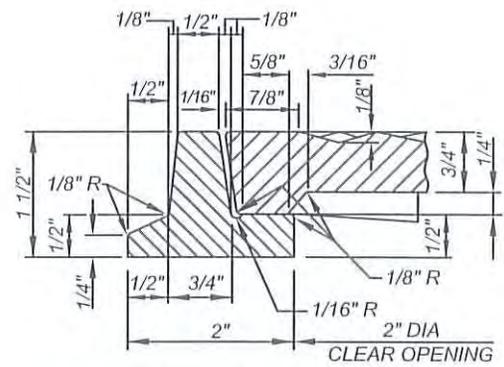
BOTTOM OF MANHOLE COVER



CROSS SECTION THRU FRAME AND COVER



CROSS SECTION THRU AT MID RADIUS



CROSS SECTION THRU RIM

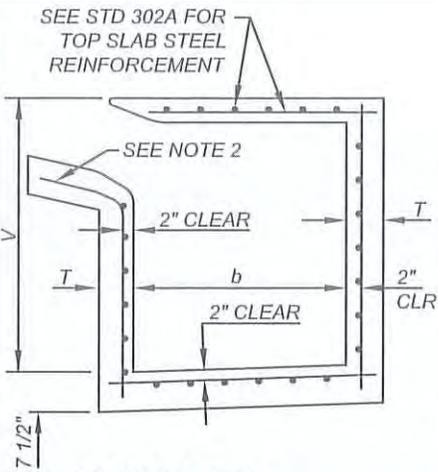
NOTES:

1. FRAME AND COVER SHALL BE GRAY CAST IRON CONFORMING TO THE LATEST A.S.T.M. STANDARD A48, CLASS 30 OR BETTER, AND GALVANIZED PER A.S.T.M. A385.
2. DRILL AND TAP HOLE AND INSTALL 3/4" x 1 1/4" STAINLESS STEEL SOCKET SET SCREW WITH 3/8" RECESSED HEX HOLE. ALL THREADS TO BE NC.
3. FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS BEFORE DELIVERY.
4. TOTAL WEIGHT OF FRAME AND COVER = 130 LBS.

NOT TO SCALE

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	APPROVED:  PUBLIC WORKS DIRECTOR / CITY ENGINEER DATE: 1/29/14	CATCH BASIN MANHOLE FRAME AND COVER	

WALL AND FLOOR STEEL						
W	V (ft)		T (in)	FRONT WALL STEEL		REAR, END WALLS, & FLOOR STEEL (EACH WAY)
	FROM	TO (INCLUDE)		HORIZONTAL	VERTICAL	
TO 7'		4	6	#3 @ 6"	#3 @ 6"	#3 @ 6"
TO 7'	4	8	8	#4 @ 12"	#4 @ 12"	#4 @ 12"
TO 7'	8	12	10	#4 @ 10"	#4 @ 10"	#4 @ 10"
14'		4	6	#3 @ 6"	#3 @ 6"	#3 @ 6"
14'	4	8	8	#4 @ 12"	#4 @ 12"	#4 @ 12"
14'	8	10	10	#4 @ 8"	#4 @ 12"	#4 @ 10"
14'	10	12	10	#4 @ 6"	#4 @ 12"	#4 @ 10"



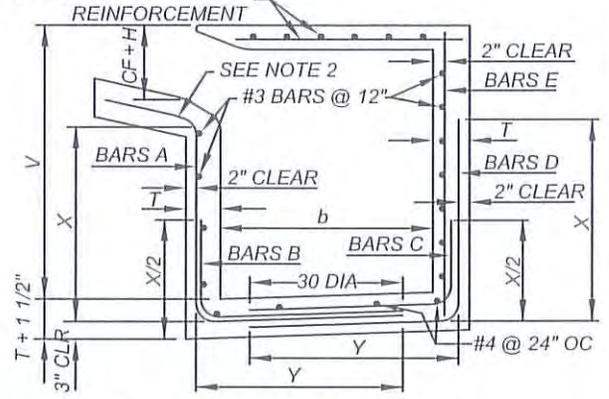
REINFORCEMENT FOR CATCH BASIN WITH "W" TO 14' (INCLUDE)

WALL AND FLOOR STEEL								
V (ft)		T (in)	FRONT WALL STEEL	REAR WALL STEEL			END WALL STEEL	
FROM	TO (INCLUDE)		BAR A & B	BAR C	BAR D	BAR E	HORIZONTAL & VERTICAL	
	4	6	#3 @ 24"	#3 @ 12"	----	#4 @ 24"	#3 @ 18"	
4	5	8	#3 @ 20"	#3 @ 12"	----	#4 @ 24"	#3 @ 14"	
5	6	8	#3 @ 12"	#3 @ 10 1/2"	----	#4 @ 24"	#3 @ 14"	
6	7	8	#4 @ 17"	#3 @ 8 1/2"	----	#4 @ 24"	#3 @ 14"	
7	8	8	#4 @ 13"	#3 @ 6 1/2"	----	#4 @ 24"	#3 @ 14"	
8	9	10	#4 @ 15"	#3 @ 7 1/2"	----	#4 @ 20"	#3 @ 11"	
9	10	10	#4 @ 12"	#4 @ 12"	----	#4 @ 20"	#3 @ 11"	
10	11	10	#5 @ 15"	----	#4 @ 11"	#4 @ 18"	#3 @ 11"	
11	12	10	#6 @ 18"	----	#4 @ 9"	#4 @ 13"	#3 @ 11"	
X = (V + T) - (CF + H + 4 1/2")			Y = ($\frac{b + 2T}{2}$) + 15 DIA. - 2"					

SEE STD MVFE-300A-0 FOR TOP SLAB STEEL REINFORCEMENT

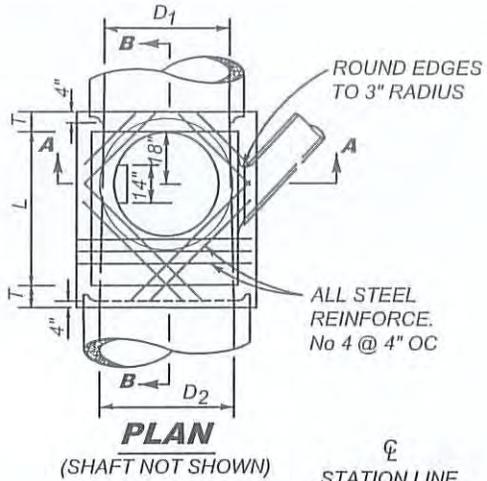
NOTES:

1. REINFORCING STEEL SHOWN HEREON SHALL BE USED FOR ALL CATCH BASIN REGARDLESS OF BASIN LENGTH "W" OF DEPTH "V".
2. VERTICAL BARS SHALL BE EXTENDED INTO LOCAL DEPRESSION AREA.
3. SEE STD MVFE-300A-0 FOR REINFORCEMENT FOR TOP SLAB.

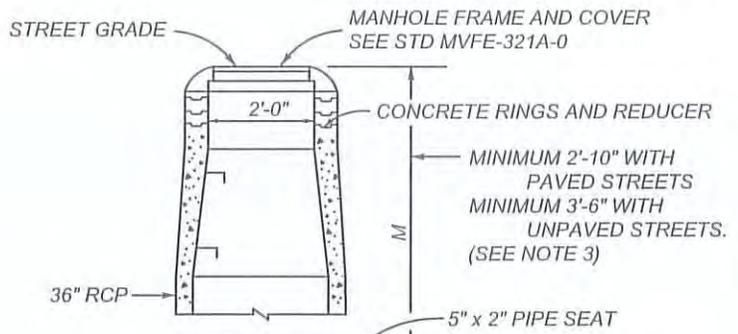


REINFORCEMENT FOR CATCH BASIN WITH "W" GREATER THAN 14' NOT TO SCALE

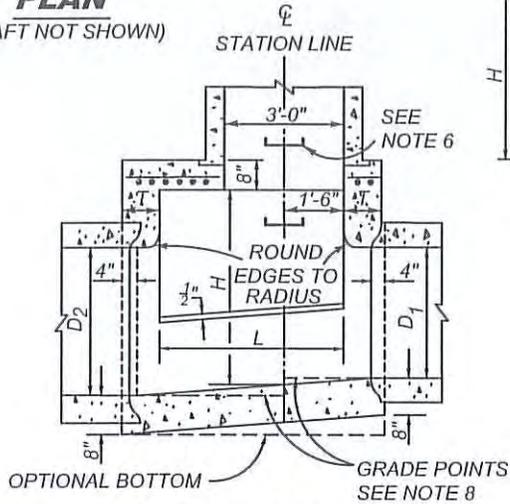
	RECOMMENDED:  DIVISION MANAGER DATE 1/21/14	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - CAPITAL PROJECTS DIVISION	STANDARD PLAN MVFE-300F-0
	APPROVED:  PUBLIC WORKS DIRECTOR/ CITY ENGINEER DATE 1/29/14		



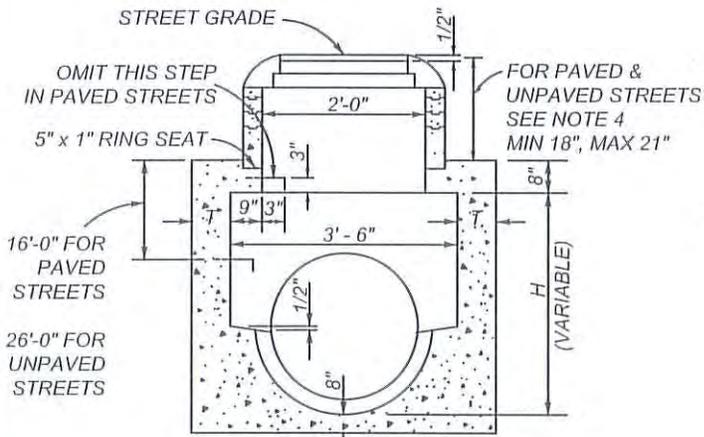
PLAN
(SHAFT NOT SHOWN)



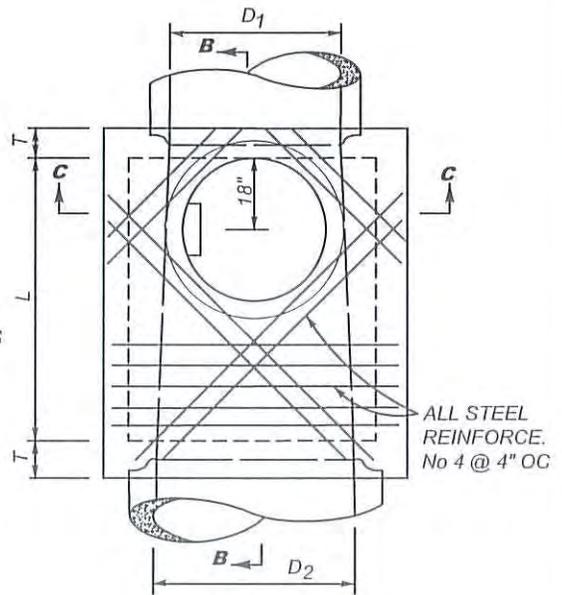
SECTION A-A



SECTION B-B

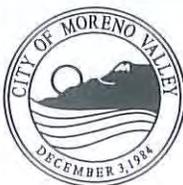


SECTION C-C



DETAIL N PLAN
(SHAFT NOT SHOWN, SEE NOTE 3)

NOT TO SCALE



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 CITY ENGINEER

CITY OF MORENO VALLEY
 PUBLIC WORKS DEPARTMENT - CAPITAL PROJECTS DIVISION

MANHOLE

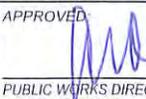
STANDARD PLAN
MVFE-320A-0

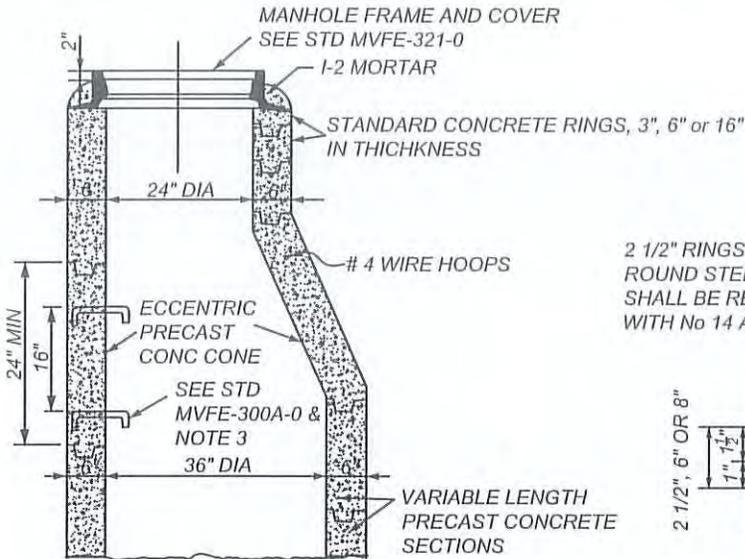
SHEET 1 OF 3

NOTES:

1. HEIGHT SHALL BE NOT LESS THAN 4'-0" BUT MAY BE INCREASED AT OPTION OF CONTRACTOR PROVIDED THAT THE VALUE OF M SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED AND THAT THE REDUCER SHALL BE USED. FOR H (IN SEC. C-C) SEE NOTE 4.
2. LENGTH L SHALL BE 4" UNLESS OTHERWISE SHOWN ON IMPROVEMENT PLAN. L MAY BE INCREASED OR LOCATION OF MANHOLE SHIFTED TO MEET PIPE ENDS, AT THE OPTION OF CONTRACTOR, EXCEPT THAT ANY CHANGE IN LOCATION OF MANHOLE MUST BE APPROVED BY THE ENGINEER.
3. SHAFT SHALL BE CONSTRUCTED AS PER SECTION C-C AND DETAIL N WHEN DEPTH M FROM STREET GRADE TO TOP OF BOX IS LESS THAN 2'-10 1/2" FOR PAVED STREETS OR 3'-6" FOR UNPAVED STREETS.
4. DEPTH P MAY BE REDUCED TO AN ABSOLUTE LIMIT OF 6" WHEN LARGE VALUES OF P WOULD REDUCE H (IN SECTION C-C) TO BE 3'-6" OR LESS.
5. T SHALL BE 8" FOR VALUE OF H UP TO AND INCLUDING 8'. T SHALL BE 10" FOR VALUE OF H OVER 8'.
6. STEPS SHALL BE 3/4" ROUND, GALVANIZED STEEL AND ANCHORED NOT LESS THAN 4" THE WALLS OF STRUCTURES. UNLESS OTHERWISE SHOWN, STEPS SHALL BE SPACED 16" ON CENTER. THE LOWEST STEP SHALL BE NOT MORE THAN 2" ABOVE THE INVERT.
7. REINFORCING STEEL SHALL BE ROUND, DEFORMED, BARS, No 4 AND 1 1/2" CLEAR FROM INSIDE FACE OF CONCRETE.
8. STATIONS REFER TO PLAN AND PROFILE SHEETS. ELEVATIONS AT C AND PROLONGED INVERT GRADE LINE. SEE NOTE 2 FOR SHIFTING LOCATION.
9. RINGS, REDUCER AND PIPE FOR ACCESS SHAFT SHALL BE SEATED IN CEMENT MORTAR AND NEATLY POINTED OR WIPED INSIDE SHAFT.
10. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRINGLINE.
11. CONCRETE SHALL BE CLASS "A"

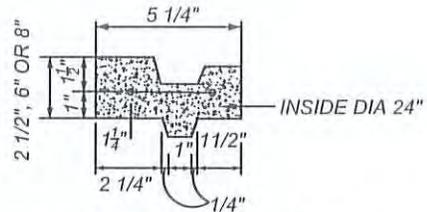
NOT TO SCALE

	RECOMMENDED:  DIVISION MANAGER	1/21/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - CAPITAL PROJECTS DIVISION	STANDARD PLAN MVFE-320B-0
	APPROVED:  PUBLIC WORKS DIRECTOR / CITY ENGINEER	1/29/14 DATE	MANHOLE NOTES	
				SHEET 2 OF 3

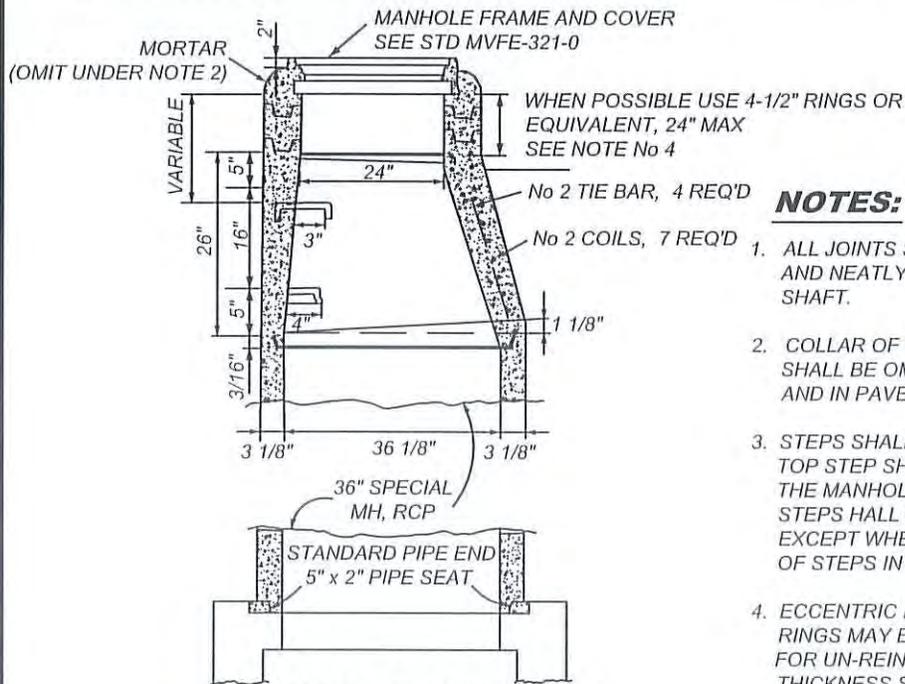


**VERTICAL SECTION
OF PLAIN CONCRETE
ECCENTRIC MANHOLE SHAFT**

2 1/2" RINGS SHALL BE REINFORCED WITH TWO 1/4 ROUND STEEL HOOPS, 6" AND 8" RINGS SHALL BE REINFORCED WITH FOUR HOOPS, TIED WITH No 14 A.S. & W. GAUGE WIRE, 8" OC



**CROSS SECTION OF
REINFORCED CONCRETE RING**



**VERTICAL SECTION
OF REINFORCED CONCRETE
ECCENTRIC MANHOLE SHAFT**

NOTES:

1. ALL JOINTS SHALL BE FILLED WITH 1-2 MORTAR AND NEATLY PAINTED OR WIPED ON INSIDE OF SHAFT.
2. COLLAR OF 1-2 MORTAR AROUND COVER FRAME SHALL BE OMITTED IN ROCK AND OIL STREETS AND IN PAVED STREETS.
3. STEPS SHALL BE 3/4" ROUND GALVANIZED STEEL. TOP STEP SHALL BE PLACED DIRECTLY BENEATH THE MANHOLE FRAME AND COVER. WIDTH OF ALL STEPS SHALL BE 14" BETWEEN LEG CENTERS. EXCEPT WHERE SHOWN OTHERWISE, SPACING OF STEPS IN SHAFT SHALL BE 16" CENTER.
4. ECCENTRIC MANHOLE: SHAFT, REDUCER AND RINGS MAY BE PLAIN CONCRETE. FOR UN-REINFORCED SECTIONS, THE MINIMUM THICKNESS SHALL BE 6". THE CONCRETE USED SHALL BE CLASS "A".

NOT TO SCALE



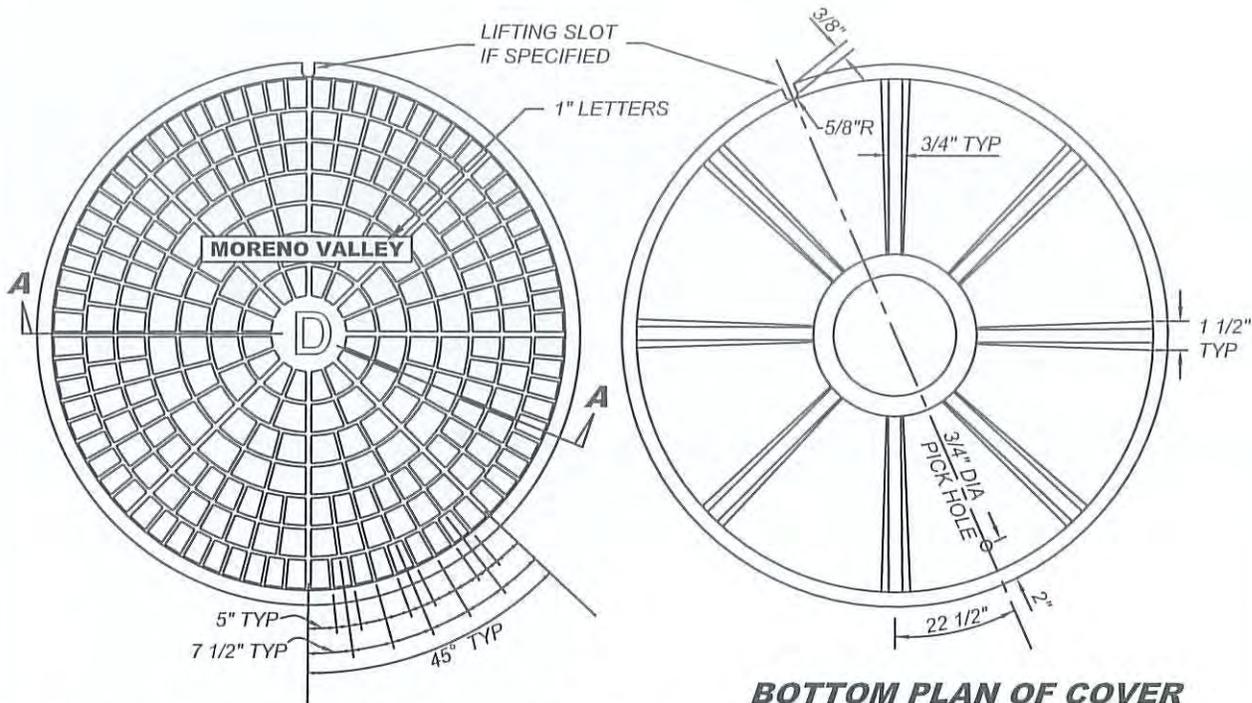
RECOMMENDED:
 DIVISION MANAGER DATE 1/21/14
 APPROVED:
 PUBLIC WORKS DIRECTOR / DATE 1/29/14
 CITY ENGINEER

CITY OF MORENO VALLEY
 PUBLIC WORKS DEPARTMENT - CAPITAL PROJECTS DIVISION

**MANHOLE SHAFT FOR
CAST PIPE**

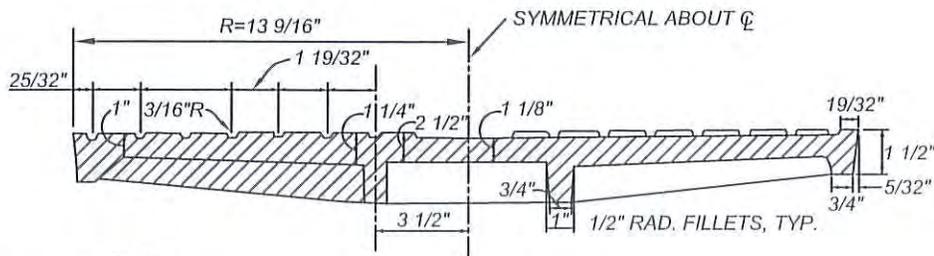
STANDARD PLAN
MVFE-320C-0

SHEET 3 OF 3

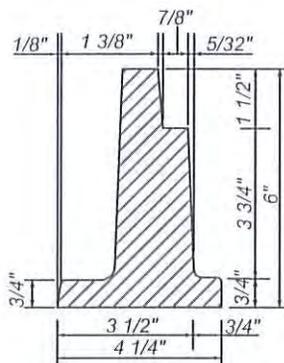


BOTTOM PLAN OF COVER

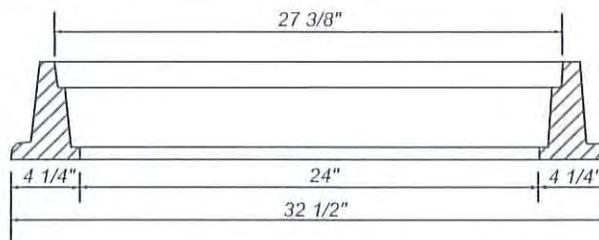
COVER FOR 24" CLEAR OPENING FRAME



SECTION A-A

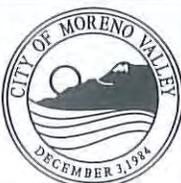


DETAIL OF FRAME



SECTION THRU FRAME

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 APPROVED:
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 CITY ENGINEER

CITY OF MORENO VALLEY
 PUBLIC WORKS DEPARTMENT - CAPITAL PROJECTS DIVISION

MANHOLE FRAME AND COVER

STANDARD PLAN
MVFE-321A-0

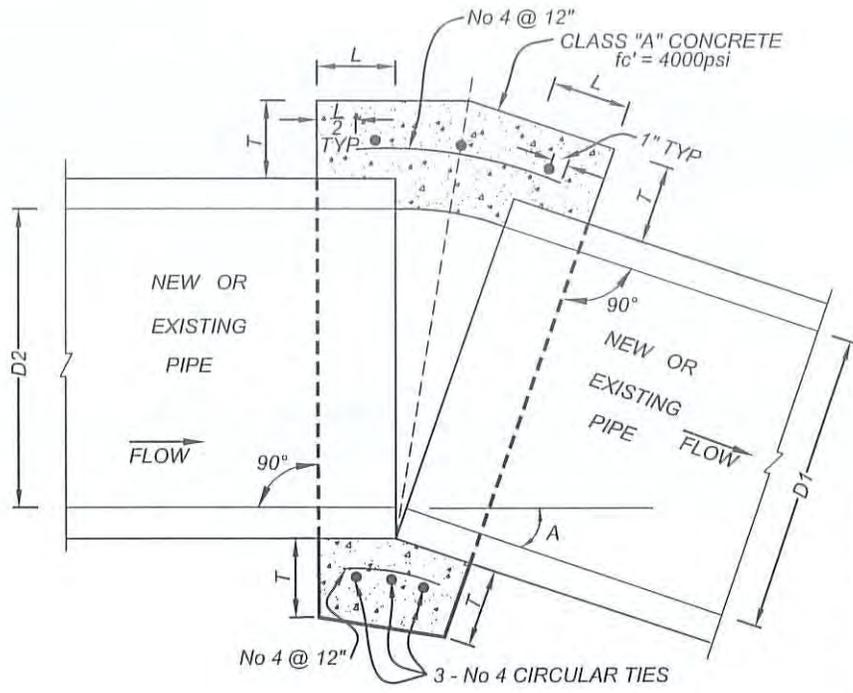
SHEET 1 OF 2

NOTES:

1. THE CAST IRON USED SHALL CONFORM WITH ASTM A-48 CLASS 35B.
2. THE FRAME AND COVER SHALL BE COATED WITH ASPHALTUM OR BITUMINOUS PAINT AFTER TESTING AND INSPECTION.
3. COVERS SHALL BE CAST WITH THE LETTERS "D" AND "RCFC & WCD". THE LETTER "D" SHALL BE APPROXIMATELY 2 1/2 INCHES HIGH WITH 1/2 INCH LINE WIDTH AND PLACED IN THE CENTER OF THE COVER. ALL LETTERS SHALL BE FLUSH WITH THE FINISHED SURFACE OF THE COVER.
4. FOUNDRY IDENTIFYING MARK, HEAT AND DATE SHALL BE CAST ON THE BOTTOM OF THE COVER AND ON THE INSIDE OF THE FRAME.
5. IMPORTED COVERS AND FRAMES SHALL HAVE THE COUNTRY OF ORIGIN MARKING IN COMPLIANCE WITH FEDERAL REGULATIONS.
6. WEIGHT OF FRAME SHALL BE 265 POUNDS. WEIGHT OF COVER SHALL BE 175 POUNDS. ACTUAL WEIGHT SHALL BE WITHIN A RANGE OF 95% TO 110%.
7. THE MANHOLE FRAME AND COVER SHALL BE INSPECTED BY THE ENGINEER PRIOR TO SHIPMENT TO THE JOB SITE. ACCEPTANCE WILL BE INDICATED BY THE AGENCY'S MARK.
8. THE PROOF-LOAD FOR TEST METHOD B OF THE STANDARD SPECIFICATION IS 40,700 POUNDS.
9. COVERS FOR MANHOLES LOCATED IN EASEMENTS, ALLEYS, PARKWAYS AND ALL OTHER PLACES EXCEPTS PAVED STREETS SHALL BE PROVIDED WITH SOCKET SET SCREW LOCKING DEVICES. DRILL AND TAP TWO HOLES TO A DEPTH OF ONE INCH AT 90 DEGREES TO PICK HOLE AND INSTALL 3/4 INCH x 3/4 INCH STAINLESS STEEL SOCKET SET SCREWS WITH 3/8 INCH RECESSED HEX HEAD. ALL THREADS SHALL BE N.C.

NOT TO SCALE

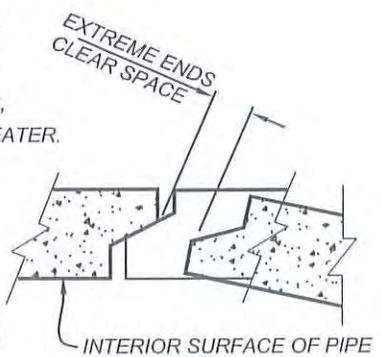
	RECOMMENDED:  1/21/14 DIVISION MANAGER DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - CAPITAL PROJECTS DIVISION	STANDARD PLAN MVFE-321B-0
	APPROVED:  1/29/14 PUBLIC WORKS DIRECTOR / DATE CITY ENGINEER	MANHOLE FRAME AND COVER NOTES	SHEET 2 OF 2



D	L	T
24"	1.0'	6"
36"	1.5'	8"
48"	1.5'	10"
57"	1.5'	10"
60"	1.75'	11"
66"	1.75'	11"

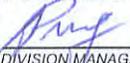
NOTES:

1. A CONCRETE COLLAR IS REQUIRED WHERE THE CHANGE IN GRADE EXCEEDS 0.10 FT. PER FOOT, OR IF CHANGE IN ALIGNMENT EXCEEDS 0.10 FT. PER FOOT.
2. IF THE EXTREME ENDS OF THE PIPE LEAVE A CLEAR SPACE THAT IS GREATER THAN 1", BUT LESS THAN 6", A CONCRETE COLLAR IS REQUIRED (SEE DETAIL A) IF THE CLEAR SPACE IS 6" OR GREATER, A TRANSITION STRUCTURE IS REQUIRED.
3. CONCRETE COLLAR SHALL NOT BE USED FOR A SIZE CHANGE ON THE MAIN LINE.
4. WHERE PIPES OF DIFFERENT DIAMETERS ARE JOINED WITH A CONCRETE COLLAR, L AND T SHALL BE THOSE OF THE LARGER PIPE. $D = D_1$ OR D_2 , WHICHEVER IS GREATER.
5. FOR PIPE LARGER THAN 66" A SPECIAL COLLAR DETAIL IS REQUIRED.
6. FOR PIPE SIZE NOT LISTED USE THE NEXT SIZE LARGER.
7. OMIT REINFORCING ON PIPES 24" AND LESS IN DIAMETER AND ON ALL PIPES WHERE ANGLE A IS LESS THAN 10°.
8. WHERE REINFORCING IS REQUIRED THE DIAMETER OF THE CIRCULAR TIES SHALL BE $D + (2 \times \text{WALL THICKNESS}) + 8"$.
9. WHEN D IS EQUAL TO OR LESS THAN D JOIN INVERTS AND WHEN D IS GREATER THAN D₂ JOIN SOFFITS.
10. PIPE MAY BE CORRUGATED METAL PIPE, CONCRETE PIPE, OR REINFORCED CONCRETE PIPE.



DETAIL "A"
TYPICAL JOINT FOR
REINFORCED CONCRETE PIPE

NOT TO SCALE

	RECOMMENDED:  1/21/14 DIVISION MANAGER DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - CAPITAL PROJECTS DIVISION	STANDARD PLAN MVFE-340-0
	APPROVED:  1/29/14 PUBLIC WORKS DIRECTOR / DATE CITY ENGINEER	CONCRETE COLLAR FOR PIPE 24 THROUGH 36 INCHES	

NPDES NOTES:

- 1.) EROSION CONTROL BMPs SHALL BE IMPLEMENTED AND MAINTAINED TO MINIMIZE AND/OR PREVENT THE ENTRAINMENT OF SOIL IN RUNOFF FROM DISTURBED SOIL AREAS ON CONSTRUCTION SITES.
- 2.) SEDIMENT CONTROL BMPs SHALL BE IMPLEMENTED AND MAINTAINED TO PREVENT AND/OR MINIMIZE THE TRANSPORT OF SOIL FROM THE CONSTRUCTION SITE.
- 3.) STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO ELIMINATE OR REDUCE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.
- 4.) APPROPRIATE BMPs FOR CONSTRUCTION-RELATED MATERIALS, WASTES, SPILLS OR RESIDUES SHALL BE IMPLEMENTED TO ELIMINATE OR REDUCE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTIES BY WIND OR RUNOFF.
- 5.) RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT CONSTRUCTION SITES AND MUST NOT BE DISCHARGED TO RECEIVING WATERS OR THE LOCAL STORM DRAIN SYSTEM.
- 6.) ALL CONSTRUCTION CONTRACTOR AND SUBCONTRACTOR PERSONNEL ARE TO BE MADE AWARE OF THE REQUIRED BEST MANAGEMENT PRACTICES AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS.
- 7.) AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED IN TRASH OR RECYCLE BINS.
- 8.) CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT A STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OTHER THAN STORMWATER (NON-STORMWATER DISCHARGES) ARE PROHIBITED, EXCEPT AS AUTHORIZED BY AN INDIVIDUAL NPDES PERMIT OR THE STATEWIDE GENERAL PERMIT-CONSTRUCTION. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, SOLVENTS, DETERGENTS, GLUES, LIME, PESTICIDES, HERBICIDES, FERTILIZERS, WOOD PRESERVATIVES, AND ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; CONCRETE AND RELATED CUTTING OR CURING RESIDUES; FLOATABLE WASTES; WASTES FROM ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; WASTES FROM STREET CLEANING; AND SUPER-CHLORINATED POTABLE WATER FROM LINE FLUSHING AND TESTING. DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON-SITE PHYSICALLY SEPARATED FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
- 9.) DISCHARGING CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING GROUNDWATER THAT HAS INFILTRATED INTO THE CONSTRUCTION SITE IS PROHIBITED. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS ALSO PROHIBITED. DISCHARGING NON-CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING ACTIVITIES MAY REQUIRE A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ISSUED BY THE REGIONAL BOARD.
- 10.) CONSTRUCTION SITES SHALL BE MANAGED TO MINIMIZE THE EXPOSURE TIME OF DISTURBED SOIL AREAS THROUGH PHASING AND SCHEDULING OF GRADING TO THE EXTENT FEASIBLE AND THE USE OF TEMPORARY AND PERMANENT SOIL STABILIZATION.
- 11.) BMPs SHALL BE MAINTAINED AT ALL TIMES. IN ADDITION, BMPs SHALL BE INSPECTED PRIOR TO PREDICTED STORM EVENTS AND FOLLOWING STORM EVENTS.

NOTE: THESE NOTES SHALL BE PLACED ON THE EROSION CONTROL SHEET OF ALL GRADING PLANS.

NOT TO SCALE

	RECOMMENDED:  1/21/14 DIVISION MANAGER DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION	STANDARD PLAN MVFE-350-0
	APPROVED:  1/29/14 PUBLIC WORKS DIRECTOR / DATE CITY ENGINEER		NPDES NOTES

EROSION CONTROL GRADING REQUIREMENTS

1. ALL EARTHWORK PERFORMED TO CONSTRUCT EROSION CONTROL MEASURES SHALL CONFORM TO CITY GRADING REGULATIONS.
2. YARDAGE SHOWN ON THE PLANS ARE APPROXIMATE ESTIMATES OF WORK TO BE DONE AND THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS AND QUANTITIES PRIOR TO COMMENCING WORK.
3. THE CONTRACTOR SHALL MAKE PROVISION FOR CONTRIBUTORY DRAINAGE AT ALL TIMES UNTIL WORK IS ACCEPTED BY THE CITY. THE EROSION CONTROL DEVICES SHOWN ON PLANS SHALL REMAIN IN OPERABLE CONDITION BY THE CONTRACTOR.
4. EXISTING STRUCTURES AND DEBRIS FOUND WITHIN WORK AREA SHALL BE REMOVED FROM SITE AND DISPOSED OF BY THE CONTRACTOR.
5. ROCK DISPOSAL AREAS ARE SHOWN ON PLANS. NO ROCK GREATER THAN 12" IN DIAMETER WILL BE PLACED IN THE FILL, UNLESS APPROVED BY THE SOILS ENGINEER.
6. FILL PLACED OVER EXISTING SLOPING TERRAIN SHALL BE SUPPORTED ON HORIZONTAL BENCH CUT INTO COMPETENT MATERIAL.
7. ANY MODIFICATIONS TO PLAN SHALL REQUIRE THE APPROVAL OF A REGISTERED CIVIL ENGINEER.
8. FILL SHALL BE COMPACTED TO 95 % OF MAXIMUM DENSITY AS DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D1557. ONE FIELD TEST TO BE MADE FOR EACH TWO FOOT OF VERTICAL LIFT.
9. THE SOIL ENGINEER SHALL PROVIDE SUFFICIENT INSPECTION OF EARTHWORK TO ENSURE COMPLIANCE WITH THE APPROVED PLANS AND APPLICABLE CODES.

EROSION CONTROL MAINTENANCE & INSPECTION:

1. A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE DURING THE RAINY SEASON AT ALL TIMES. CONTACT THE CONTRACTOR AT () IN CASE OF EMERGENCY.
2. ALL SILT AND DEBRIS SHALL BE REMOVED FROM ALL DEVICES WHENEVER SUCH MAY POSE A POTENTIAL HAZARD DOWNSTREAM.
3. THE PLACEMENT OF ADDITIONAL DEVICES TO REDUCE EROSION DAMAGE IS AT THE DISCRETION OF THE CITY INSPECTOR.
4. PLANTING AND IRRIGATION OF SLOPES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. A PREVENTIVE PROGRAM TO PROTECT SLOPES FROM POTENTIAL DAMAGE FROM BURROWING RODENTS IS REQUIRED. CONTRACTOR SHALL PERIODICALLY INSPECT SLOPES FOR EVIDENCE OF BURROWING RODENTS.

NOTE:

- 1.) THESE NOTES SHALL BE PLACED ON ALL ROUGH GRADING PLANS.

NOT TO SCALE

	RECOMMENDED: 	12/11/17 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION
	DIVISION MANAGER		
	APPROVED: 	9/14/18 DATE	EROSION CONTROL NOTES (ROUGH GRADING PHASE)
PUBLIC WORKS DIRECTOR/ CITY ENGINEER			STANDARD PLAN MVFE-351A-0 SHEET 1 OF 6

CURB INLET SEDIMENT BARRIERS CONSTRUCTION SPECIFICATIONS:

1. BARRIERS SHALL BE PLACED ON GENTLY SLOPING STREETS WHERE WATER CAN POND PER STD PLAN MVFE-353.
2. THE BARRIERS SHALL ALLOW FOR OVERFLOW FROM A SEVERE STORM EVENT. SLOPE RUNOFF SHALL BE CONTROLLED USING STD PLANS MVFE-355 OR MVFE-356. A SPILLWAY SHALL BE CONSTRUCTED WITH THE SANDBAG STRUCTURES TO ALLOW OVERFLOW.
3. GRAVEL BAGS SHOULD BE OF WOVEN-TYPE GEOTEXTILE FABRIC.
4. GRAVEL BAGS SHALL BE FILLED WITH 3/4 INCH DRAIN ROCK OR 1/4 INCH PEA GRAVEL.
5. GRAVEL BAGS SHALL BE PLACED IN A CURVED ROW FROM THE TOP OF CURB AT LEAST 4 FEET INTO THE STREET. THE ROW SHOULD BE CURVED AT THE ENDS, POINTING UPHILL.
6. LAYERS OF BAGS SHALL BE OVER LAPPED AND PACKED TIGHTLY.
7. LEAVE ONE GRAVEL BAG GAP IN THE TOP ROW TO ACT AS A SPILLWAY.

INSPECTION AND MAINTENANCE:

1. THE CONTRACTOR SHALL INSPECT AND CLEAN BARRIER DURING AND AFTER EACH STORM AND REMOVE SEDIMENT FROM BEHIND GRAVEL BAG STRUCTURE AFTER EACH STORM.
2. ANY SEDIMENT AND GRAVEL SHALL BE IMMEDIATELY REMOVED FROM THE TRAVELED WAY OF ROADS.
3. THE REMOVED SEDIMENT SHALL BE PLACED WHERE IT CANNOT ENTER A STORM DRAIN, STREAM, OR BE TRANSPORTED OFF SITE.
4. IF THE GRAVEL BECOMES CLOGGED WITH SEDIMENT, IT MUST BE REMOVED FROM THE INLET AND OR REPLACED WITH NEW GRAVEL.
5. IT IS IMPERATIVE THAT EROSION CONTROL MEASURES ARE IN PLACE AT THE SOURCE IN ADDITION TO PROTECTING THE CATCH BASINS AND CURB INLETS DOWNSTREAM.

NOTE:

- 1.) THESE NOTES SHALL BE PLACED ON ALL PRECISE GRADING PLANS.

NOT TO SCALE

	RECOMMENDED:  12/11/17 DIVISION MANAGER DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION	
	APPROVED:  9/14/18 PUBLIC WORKS DIRECTOR / DATE CITY ENGINEER	EROSION CONTROL NOTES (PRECISE GRADING PHASE)	

STRAW - BALE SEDIMENT BARRIERS (SEMI-PERVIOUS) CONSTRUCTION SPECIFICATIONS:

1. THE ROCK SPILLWAY SHALL BE CONSTRUCTED OF GRADED DRAIN ROCK, 1-1/2 INCH MINIMUM, THAT IS SIZED ACCORDING TO EXPECTED FLOWS. FILTER FABRIC MAY BE USED TO COVER THE BALES AND BE ENVELOPED IN THE ROCK SPILLWAY.
2. THE ROCK SPILLWAY SHALL BE CONSTRUCTED TO A HEIGHT OF 2/3 THAT OF THE STRAW BALES.
3. THE MAXIMUM HEIGHT OF THE SPILLWAY SHALL BE 2 FEET.
4. PLACE BALES IN A SINGLE ROW, LENGTH WISE, ORIENTED PERPENDICULAR TO THE FLOW, AND WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
5. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES. USE STRAW, ROCKS, OR FILTER FABRIC TO FILL ANY GAPS BETWEEN THE BALES AND TAMP THE BACKFILL MATERIAL TO PREVENT EROSION UNDER OR AROUND THE BALES.
6. IF THE BALES ARE WIRE BOUND, THEY SHOULD BE ORIENTED SO BINDINGS ARE AROUND THE SIDES RATHER THAN ALONG THE TOP OR BOTTOM. WIRE BINDING THAT ARE PLACED IN CONTACT WITH SOIL SOON DISINTEGRATE AND MAY ALLOW THE BALE TO FALL APART.
7. THE BALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO WOODEN STAKES OR REBAR DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TIGHTLY TOGETHER. DRIVE THE STAKES AT LEAST 18 INCHES (0.5 m) INTO THE GROUND. PROPER STAKING IS PARTICULARLY IMPORTANT IN CHANNEL FLOW APPLICATIONS.
8. EXTEND THE BARRIER, ACROSS THE SWALE TO SUCH A LENGTH THAT THE BOTTOMS OF END BALE ARE AT A HIGHER ELEVATION THAN THE TOP OF THE ROCK SPILLWAY TO ASSURE THAT SEDIMENT-LADEN RUNOFF WILL FLOW THROUGH OR OVER THE BARRIER BUT NOT AROUND IT.
9. ROCK AND/OR FILTER FABRIC SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF THE ROCK THAT WILL DISSIPATE THE ENERGY OF THE FALLING WATER AND REDUCE DOWNSTREAM EROSION.

INSPECTION AND MAINTENANCE

1. THE SEMI-PERVIOUS STRAW BALE BARRIERS SHALL BE INSPECTED PERIODICALLY DURING THE WINTER AND AFTER EACH SIGNIFICANT STORM (1 INCH IN 24 HRS). REPAIRS AND/OR REPLACEMENT SHALL BE MADE PROMPTLY.
2. SEDIMENT SHALL BE REMOVED WHEN THE BARRIER IS 60 PERCENT FULL. THE REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. REMOVE THE STRAW BALES AND STAKES, AND REMOVE OR SPREAD THE ROCK IN THE CHANNEL BOTTOM WHEN THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.
4. PROPERLY DISPOSE OF ALL THE BINDINGS WHICH HAVE FALLEN FROM THE STRAW BALES.

NOTE:

- 1.) THESE NOTES SHALL BE PLACED ON ALL GRADING PLANS WHERE STRAW-BALE BARRIERS ARE REQUIRED.

NOT TO SCALE

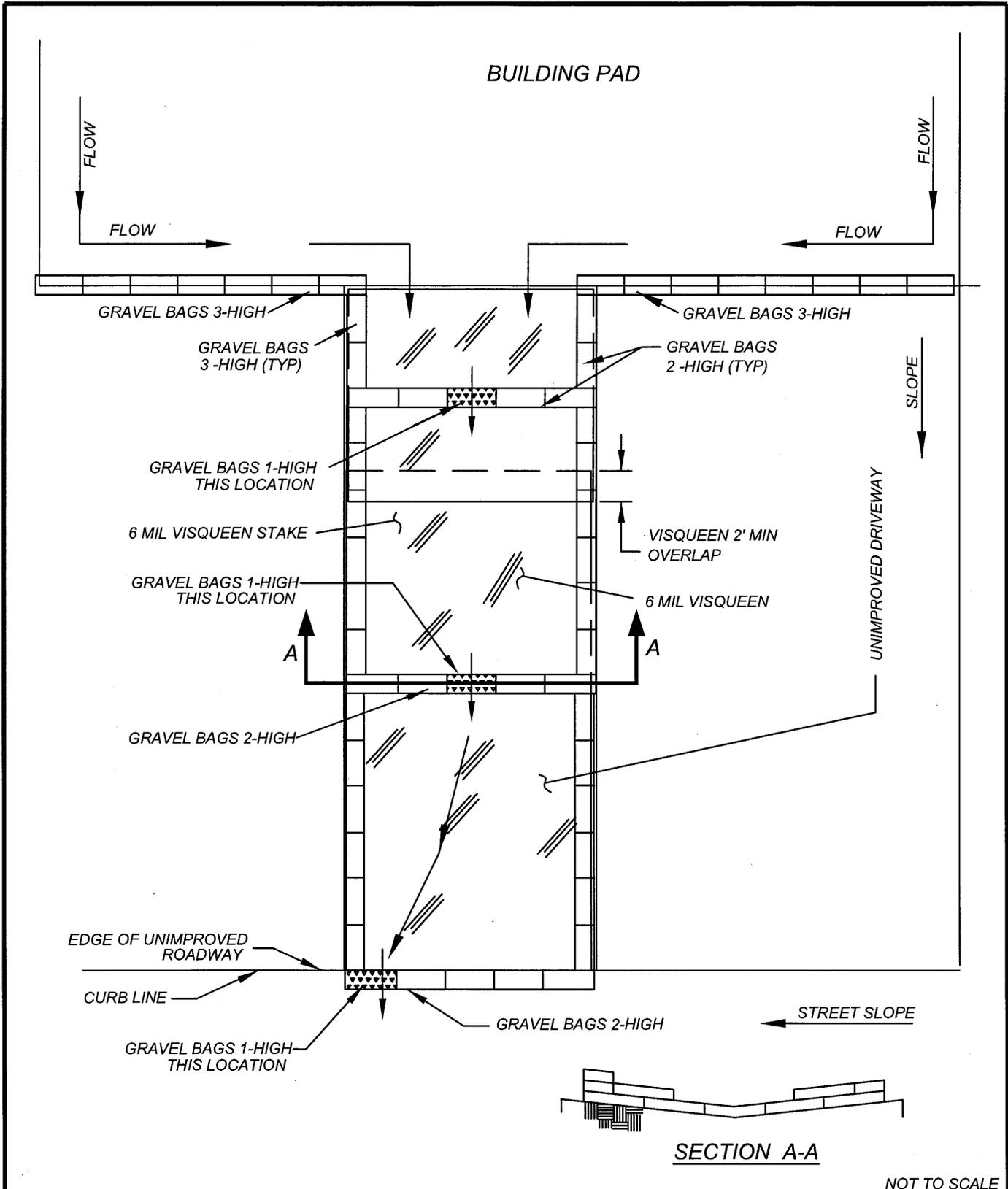
	RECOMMENDED: 	12/11/17 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION	STANDARD PLAN MVFE-351C-0
	APPROVED: 	9/14/18 DATE	EROSION CONTROL NOTES (STRAW-BALE BARRIERS)	SHEET 3 OF 6
DIVISION MANAGER		PUBLIC WORKS DIRECTOR / CITY ENGINEER		

STORM WATER POLLUTION CONTROL REQUIREMENTS

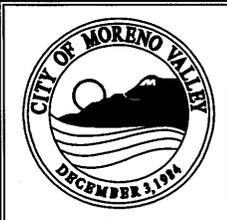
1. ERODED SEDIMENTS AND OTHER POLLUTANTS SHALL BE RETAINED ON SITE AND SHALL NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
2. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS SHALL BE PROTECTED.
3. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS SHALL BE STORED IN ACCORDANCE WITH THEIR LISTINGS AND ARE NOT TO CONTAMINATE THE SOIL, AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS SHALL NOT BE WASHED INTO THE DRAINAGE SYSTEM.
4. EXCESS OR WASTE CONCRETE SHALL NOT BE WASHED INTO THE PUBLIC RIGHT-OF-WAY OR ANY OTHER DRAINAGE SYSTEM, PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
5. TRASH AND CONSTRUCTION RELATED SOLID WASTES SHALL BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATIONS OF RAINWATER AND DISPERSAL BY WIND.
6. SEDIMENTS AND OTHER MATERIALS SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS SHALL BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC RIGHT-OF-WAY. ACCIDENTAL DEPOSITIONS SHALL BE SWEEPED UP IMMEDIATELY AND SHALL NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
7. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION SHALL BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
8. THE CASQA STORMWATER BMP HANDBOOK, LATEST REVISED EDITION, SHALL APPLY DURING CONSTRUCTION (ADDITIONAL MEASURES SHALL BE REQUIRED IF DEEMED APPROPRIATE BY THE CITY):

NOT TO SCALE

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	APPROVED:  9/14/18 PUBLIC WORKS DIRECTOR / DATE CITY ENGINEER	EROSION CONTROL NOTES	



NOT TO SCALE

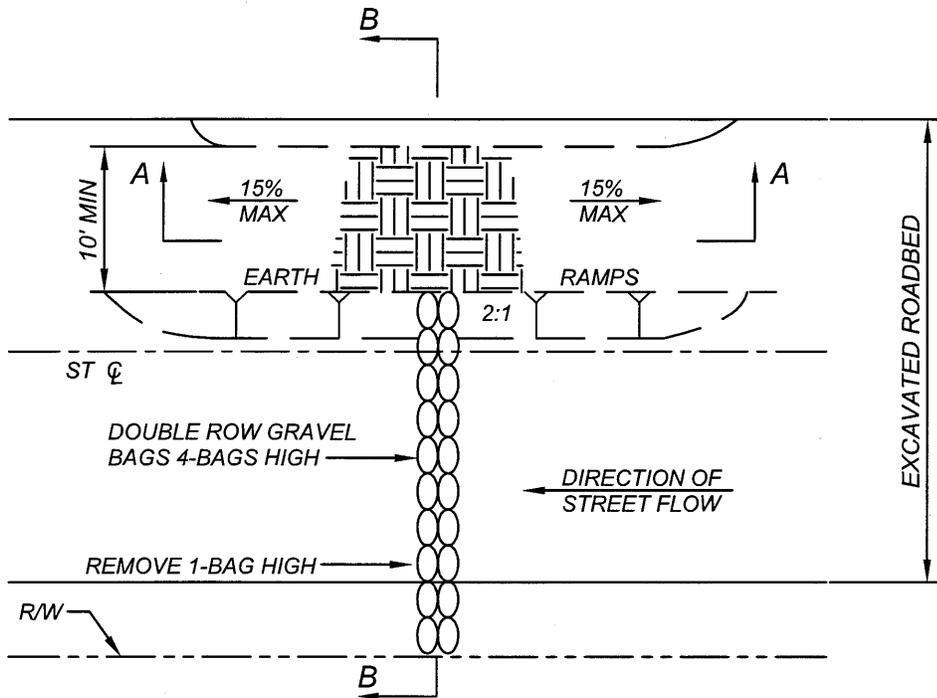


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 DIVISION MANAGER DATE
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[Signature] 9/24/18
 PUBLIC WORKS DIRECTOR / DATE
 CITY ENGINEER

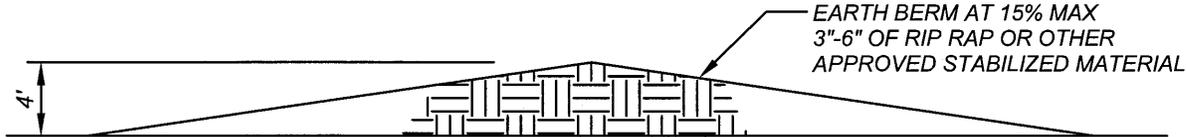
CITY OF MORENO VALLEY
 PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION

**CONSTRUCTION DRIVEWAY
 DESILTING BASIN**

STANDARD PLAN
MVFE-351E-0
 SHEET 5 OF 6



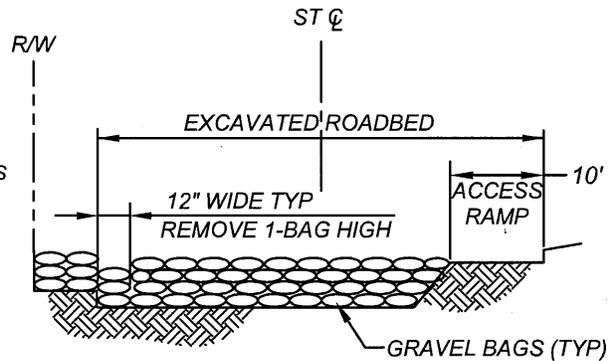
PLAN



SECTION A-A

NOTE:

1.) THIS TEMPORARY VEHICLE ACCESS RAMP IS TO BE USED WHEN ON-SITE RUN-OFF (DRAINAGE) IS DIRECTED TOWARDS THE ENTRANCE OF THE PROJECT SITE. THE RAMP/DAM DETAIL IS TO PREVENT STORM WATER FROM EXITING THE PROJECT SITE AND PREVENT VEHICLES FROM DAMAGING THE CHECK DAM AREA.



SECTION B-B

NOT TO SCALE



RECOMMENDED:
Chad 12/11/17
 DIVISION MANAGER DATE
 APPROVED:
MZ. Wref 9/4/18
 PUBLIC WORKS DIRECTOR/ DATE
 CITY ENGINEER

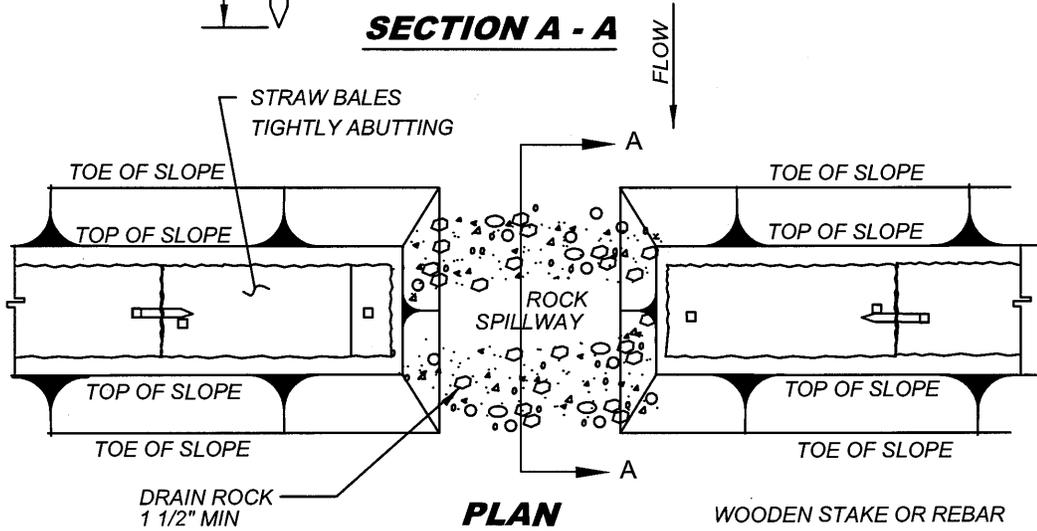
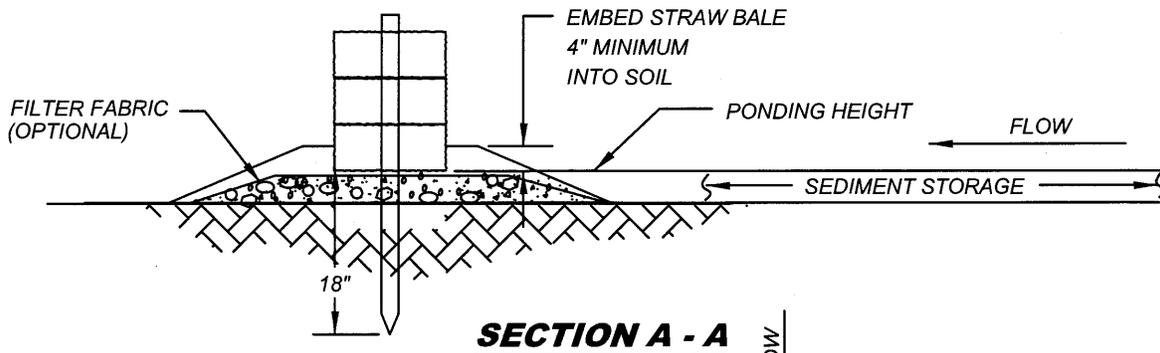
CITY OF MORENO VALLEY

PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION

TEMPORARY ACCESS RAMP AND CHECK DAM DETAIL

STANDARD PLAN
MVFE-351F-0

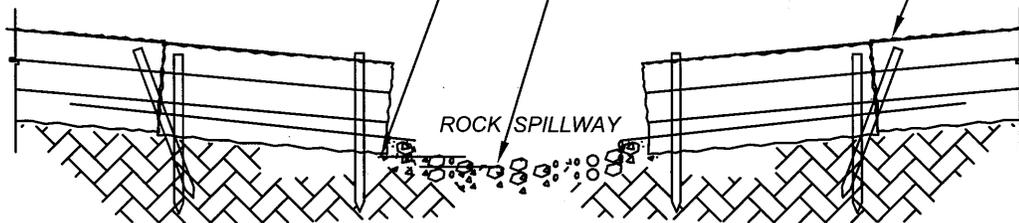
SHEET 6 OF 6



WOODEN STAKE OR REBAR
DRIVEN THROUGH BALE TYP
2 PER BALE

POINT "A" (SEE NOTE 8 ON SHT MVFE-351C)

POINT "B" (SEE NOTE 8 ON SHT MVFE-351C)



VIEW LOOKING UPSTREAM

NOTES:

- 1.) PLACE BALES PERPENDICULAR TO FLOW.
- 2.) EMBED THE BALES 4" INTO THE SWALE TO PREVENT FLOW AROUND THE BALES.
- 3.) BALES PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING.
- 4.) POINT "A" SHALL BE HIGHER THAN POINT "B".
- 5.) SPILLWAY HEIGHT SHALL NOT EXCEED 24".
- 6.) SEE EROSION CONTROL NOTES, CITY STANDARD NUMBER MVFE-351C.

NOT TO SCALE



RECOMMENDED:
[Signature] 12/11/17
DIVISION MANAGER DATE

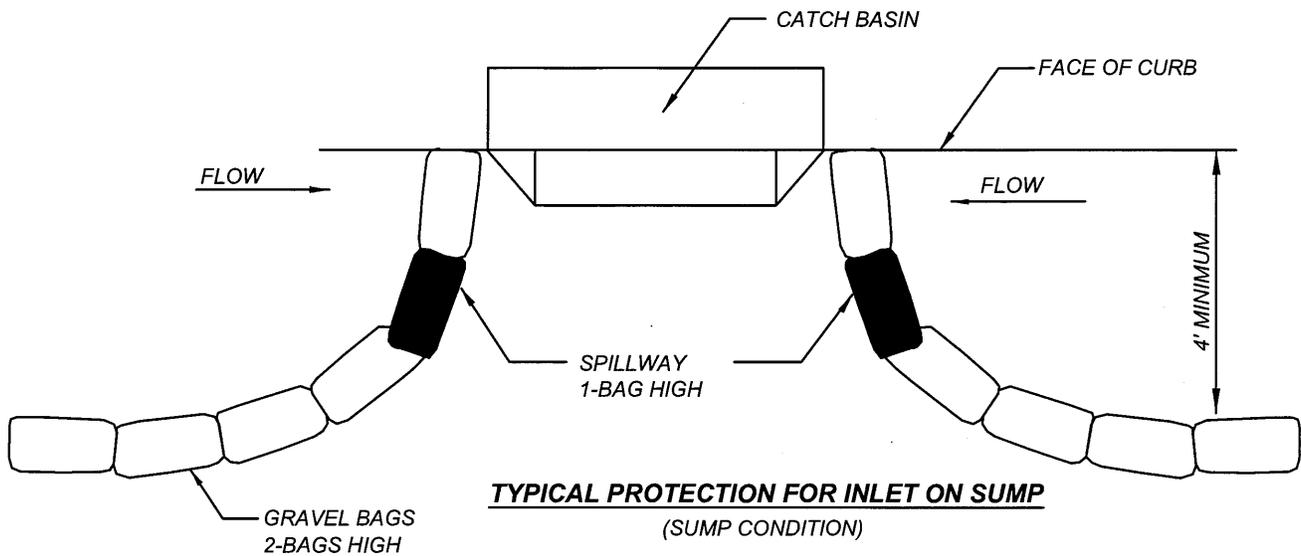
APPROVED:
[Signature] 9/24/18
PUBLIC WORKS DIRECTOR / DATE
CITY ENGINEER

CITY OF MORENO VALLEY
PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION

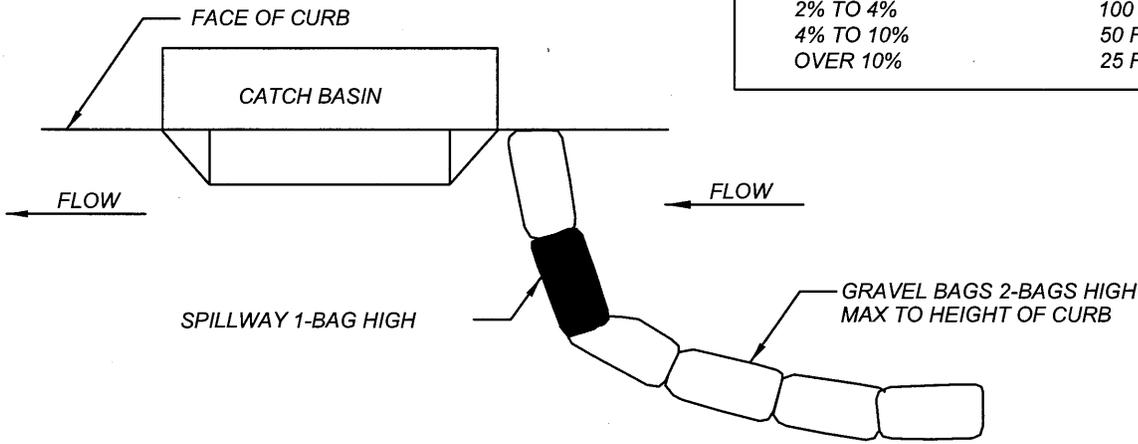
**SEMI-PERVIOUS STRAW BALE
SEDIMENT BARRIER**

STANDARD PLAN
MVFE-352-0

SHEET 1 OF 1



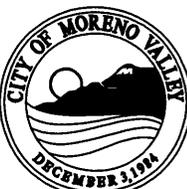
<u>GRADE OF STREET</u>	<u>INTERVAL</u>
LESS THAN 2%	AS REQUIRED
2% TO 4%	100 FEET
4% TO 10%	50 FEET
OVER 10%	25 FEET

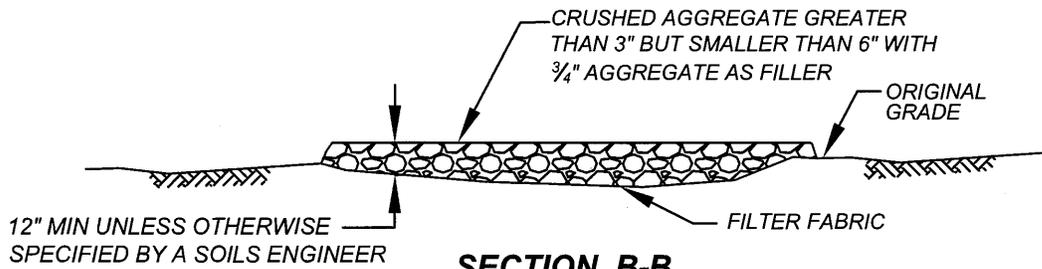


NOTES:

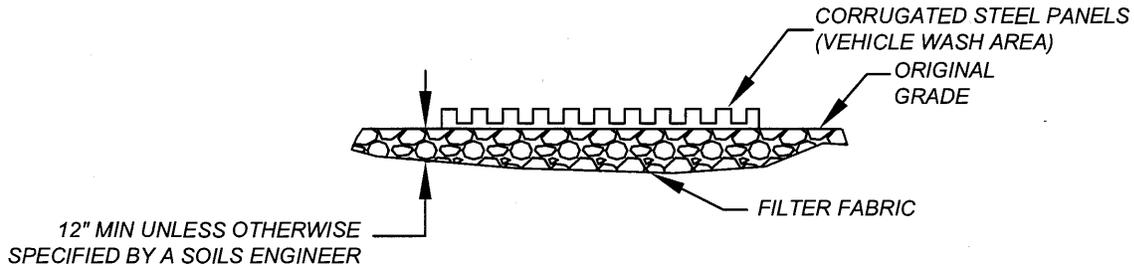
- 1.) PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
- 2.) GRAVEL BAGS, OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
- 3.) LEAVE ONE GRAVEL BAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW.
- 4.) INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVEL WAY IMMEDIATELY.
- 5.) PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED STREET AREAS AT THE INTERVALS INDICATED (SEE CHART).
- 6.) SEE EROSION CONTROL NOTES, CITY STD No MVFE-351A & MVFE-351B.

NOT TO SCALE

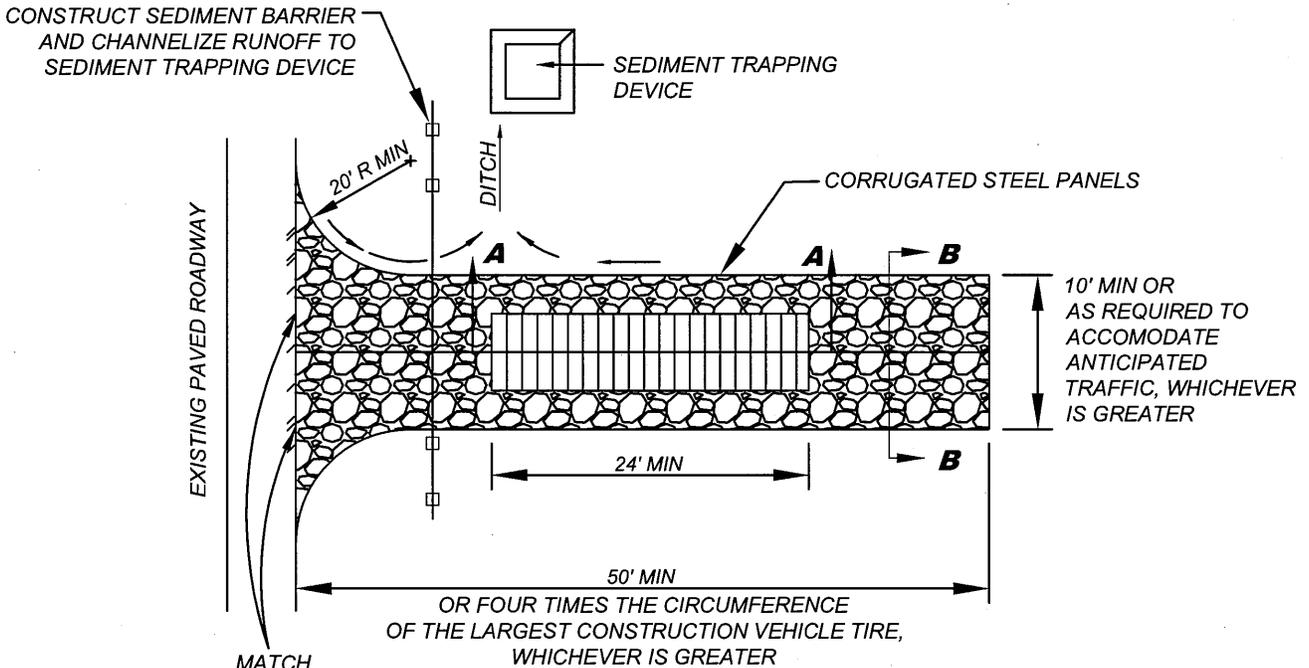
	RECOMMENDED:  12/11/17 DIVISION MANAGER DATE	<h2 style="margin: 0;">CITY OF MORENO VALLEY</h2> <p style="margin: 0;">PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION</p>	
	APPROVED:  9/14/18 PUBLIC WORKS DIRECTOR / DATE CITY ENGINEER	<h3 style="margin: 0;">TEMPORARY DESILTING MEASURES AT CATCH BASIN</h3>	
			SHEET 1 OF 1



SECTION B-B



SECTION A-A



PLAN

NOTES:

- 1.) ALL CONSTRUCTION EQUIPMENT / PERSONNEL VEHICLES LEAVING THE CONSTRUCTION SITE SHALL BE WASHED DOWN TO REMOVE ALL MUD FROM VEHICLE PRIOR TO ENTERING THE PUBLIC RIGHT-OF-WAY, AS NEEDED.
- 2.) DIMENSIONS SHOWN ABOVE MAY BE ALTERED BY CITY STAFF IN ORDER TO ACHIEVE EFFECTIVENESS.

NOT TO SCALE



RECOMMENDED:
[Signature] 12/11/17
 DIVISION MANAGER DATE

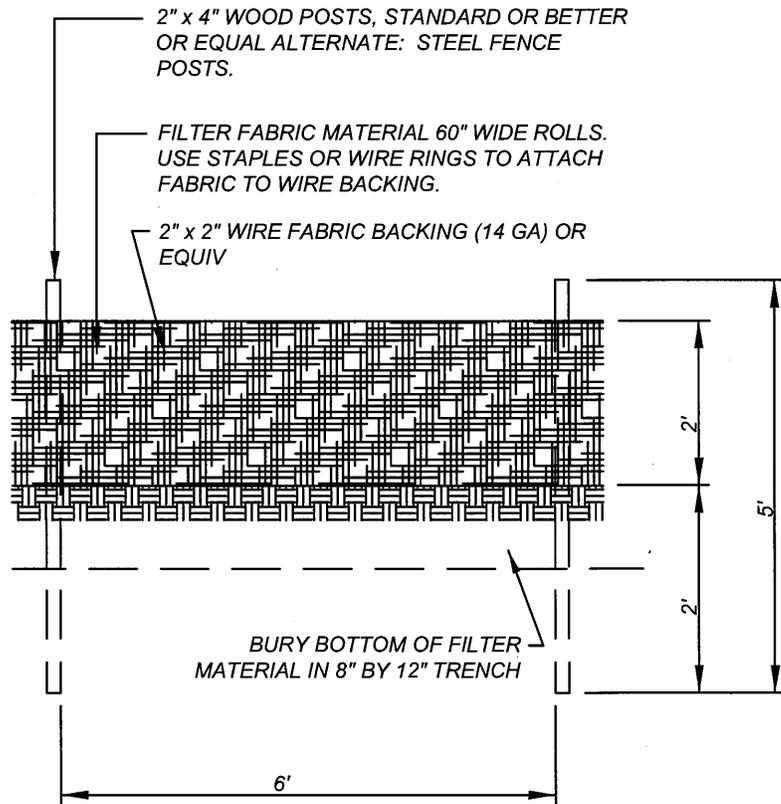
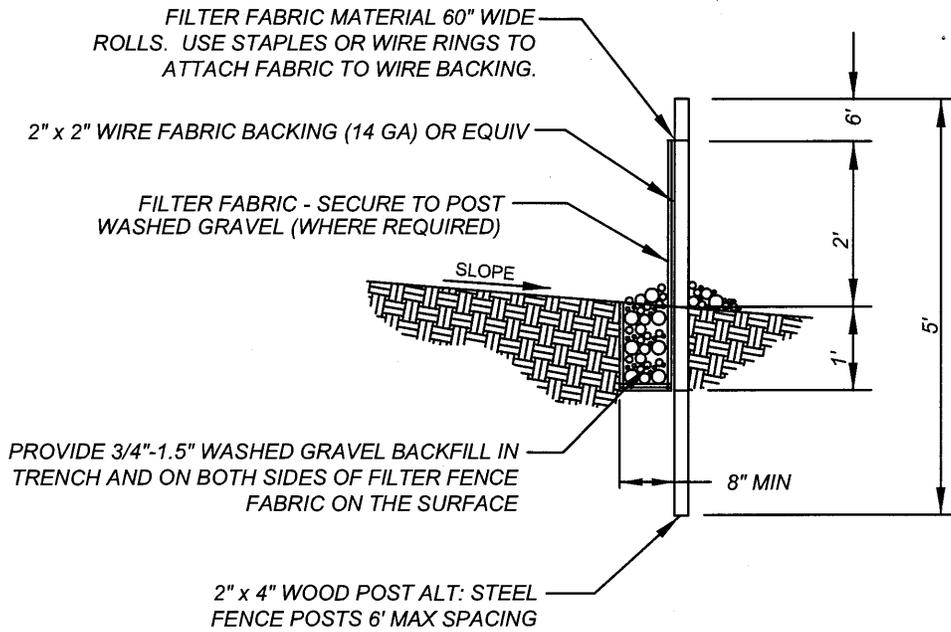
APPROVED:
[Signature] 9/19/18
 PUBLIC WORKS DIRECTOR / DATE
 CITY ENGINEER

CITY OF MORENO VALLEY
 PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION

**STABILIZED CONSTRUCTION
 EXIT
 SEDIMENT REMOVAL**

STANDARD PLAN
MVFE-354-0

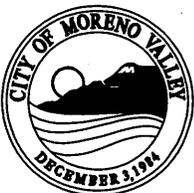
SHEET 1 OF 1



NOTE:

1.) SEE CITY STDS MVFE-351A, MVFE-351B, & MVFE-351C FOR EROSION CONTROL NOTES.

NOT TO SCALE



RECOMMENDED:
[Signature] 12/11/17
 DIVISION MANAGER DATE

APPROVED:
[Signature] 9/14/18
 PUBLIC WORKS DIRECTOR/ DATE
 CITY ENGINEER

CITY OF MORENO VALLEY
 PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT DIVISION

SILT FENCE DETAIL

STANDARD PLAN
MVFE-355-0

SHEET 1 OF 1

