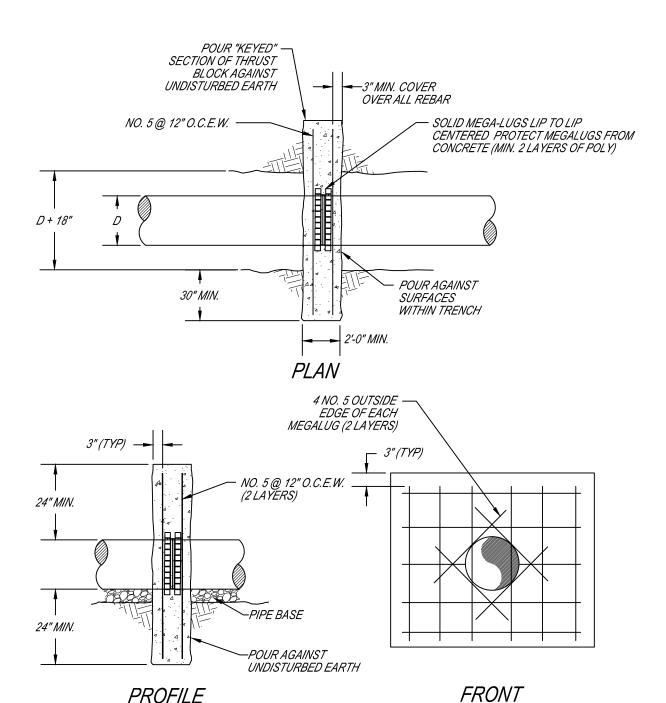
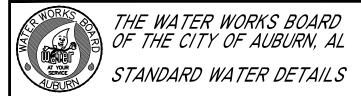


## TYPICAL DEADMAN THRUST RESTRAINT

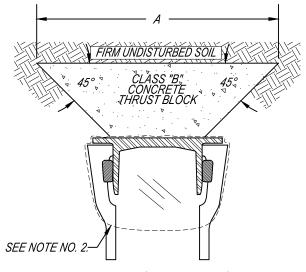


- DEADMAN TO BE CENTERED ON FULL JOINT OF PIPE
- 1. 2. 3. ALL CONCRETE SHALL BE CLASS "A" (4000 PSI) IN ACCORDANCE WITH THE CITY OF AUBURN STANDARD SPECIFICATIONS NO CALCIUM CHLORIDE CURING ACCELERATOR ALLOWED.
- 4. APPLICABLE FOR UP TO AND INCLUDING 12" DIAMETER PIPE. MAY BE USED FOR PIPES ABOVE 12" DIAMETER ON A CASE BY CASE BASIS.
- TO BE USED ON EXISTING DUCTILE IRON OR CAST IRON PIPE IN GOOD CONDITION.

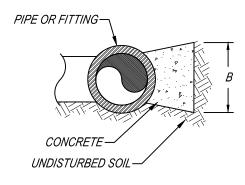


DRAWING TITLE:	TYPIC	CAL DE	4DMAN	THRUST RESTRAINT
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.			OOO
DRAWN BY:	BS			
REVIEWED BY:	JC			/
APPROVED BY:	EC			
IMPLEMENTED:	12/2007			

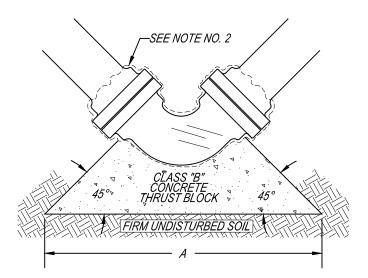
## TYPICAL CONCRETE THRUST BLOCK DESIGN



**BELL JOINT PLUG** UNRESTRAINED TYPE



SIDE VIEW



## **BEARING AREA**

AREA (SF) AGAINST UNDISTURBED SOIL

Size	Tee, Wye,Plug or 90° Bend	45° Bend	22.5° Bend	11.5° Bend	
4"	1	1	1	1	
6"	3	2	1.5	1	
8"	5	3	2	1.5	
10"	9	5	3	2	
12"	12	8	4	3	
16"	22	12	5	4	
BASED ON 2500 LB/ft. <sup>2</sup> SOIL					

BEARING AREA (SF) = A x B 1<(A / B)<3 ≤ 100 PSI STATIC PRESSURE ( 600 MSL OR HIGHER)

## TYPICAL BEND THRUST BLOCK

## NOTES:

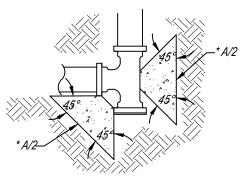
- 45 DEGREE ANGLES REQUIRED FOR ALL THRUST BLOCKS.
- NON STANDARD THRUST BLOCKING WILL REQUIRE SPECIAL DETAILING PROVIDED BY A LICENSED ENGINEER AND 2. APPROVED BY THE CITY OF AUBURN.
- ALL MECHANICAL JOINT FITTINGS THAT REQUIRE THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC. CONCRETE SHALL NOT BE POURED OVER JOINTS.
- CLASS "B" CONCRETE SHALL BE AS DEFINED IN THE CITY OF AUBURN STANDARD SPECIFICATIONS SECTION II.
- THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED JOINT DEVICES SUCH AS MEGA -LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL NOT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS . THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.



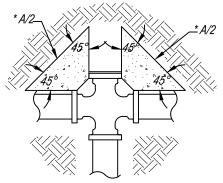
THE WATER WORKS BOARD OF THE CITY OF AUBURN, AL STANDARD WATER DETAILS

DRAWING TITLE:	TYPIC.	<u>AL CON</u>	<u> </u>	<u>THRUST BLOCK DESIGN</u>
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	OOO
DRAWN BY:	GM			
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			_

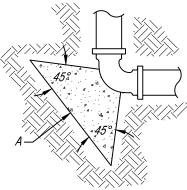
## TYPICAL CONCRETE THRUST BLOCK LAYOUT



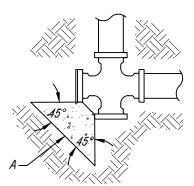
PLUGGED TEE



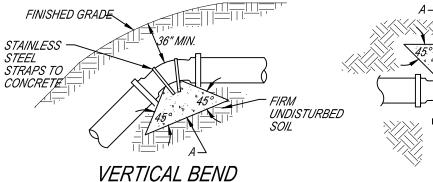
PLUGGED CROSS



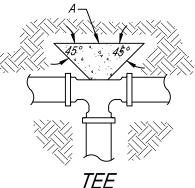
BEND



PLUGGED CROSS







45 DEGREE ANGLES REQUIRED FOR ALL THRUST BLOCKS.

(AGAINST DISTURBED SOIL)

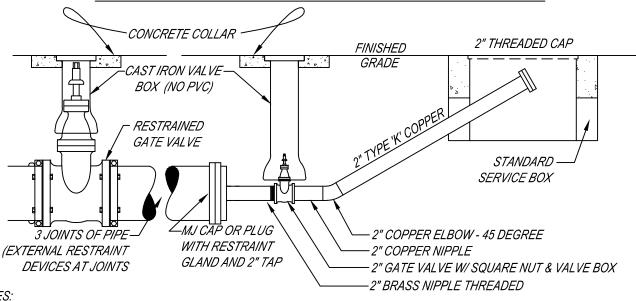
- 1. NON STANDARD THRUST BLOCKING WILL REQUIRE SPECIAL DETAILING PROVIDED BY A LICENSED ENGINEER AND APPROVED BY THE CITY OF AUBURN.
- 3. ALL MECHANICAL JOINT FITTINGS THAT REQUIRE THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC. CONCRETE SHALL NOT BE POURED OVER JOINTS.
- CLASS "B" CONCRETE SHALL BE AS DEFINED IN THE CITY OF AUBURN STANDARD SPECIFICATIONS SECTION II.
- THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED JOINT DEVICES SUCH AS MEGA -LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL NOT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS. THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.



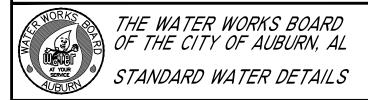
THE WATER WORKS BOARD OF THE CITY OF AUBURN, AL STANDARD WATER DETAILS

DRAWING TITLE:	TYPIC.	AL CONCRETE	THRUST BLOCK LAYOUT
DEPARTMENT:	WRM	REVISIONS:	
SCALE:	N.T.S.		
DRAWN BY:	CN		
REVIEWED BY:	JC		///
APPROVED BY:	EC		
IMPLEMENTED:	DCM 2010		_

## TYPICAL END OF MAIN FOR FUTURE EXTENSION

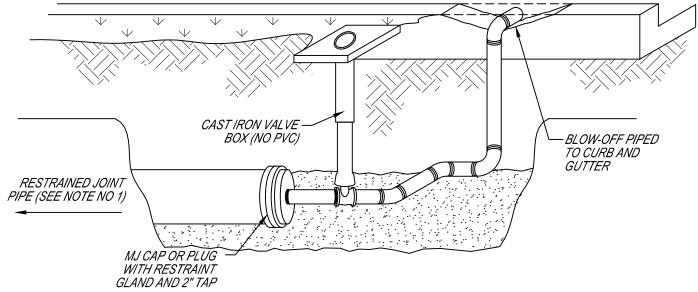


- 1. THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED JOINT DEVICES SUCH AS MEGA -LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL NOT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS. THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
- 2. BLOW OFF SHALL BE PIPED TO CURB AND GUTTER IN ACCORDANCE WITH STANDARD DETAIL NO. 208, WHERE POSSIBLE.



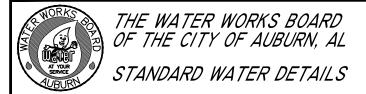
DRAWING TITLE:	TYPICA	4L END	OF MAIN	FOR FUTURE EXTENSION
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	
DRAWN BY:	GM			
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

## TYPICAL END OF MAIN IN CUL DE SAC



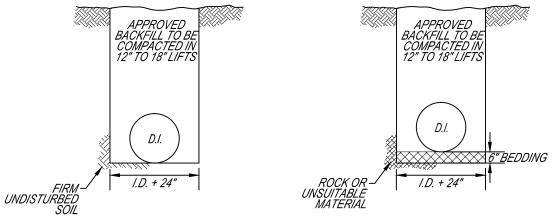
NOTES:

1. THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED JOINT DEVICES SUCH AS MEGA -LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL NOT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS. THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

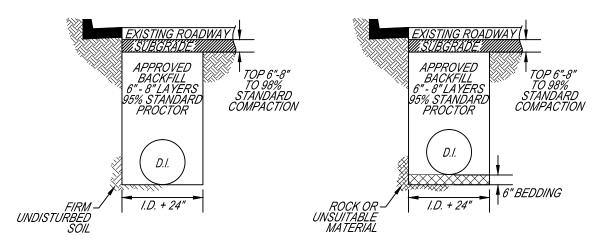


DRAWING TITLE:	TYPI	<u>CAL E</u>	ND OF I	MAIN IN CUL DE SAC
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	OOO
DRAWN BY:	GM			
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003	l		

## BEDDING REQUIREMENTS FOR TRENCHES

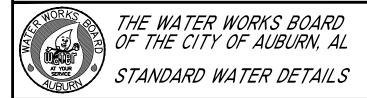


## NON-STREET TRENCH



## STREET TRENCH

- 1. BEDDING MATERIALS SHALL BE 1/4" TO 1 1/2" GRADED CRUSHED STONE SUCH AS: 56,57,6,67,68,7,OR 78, STONE PER ALDOT STANDARD SPECS.
- WIDTH VARIES BASED ON WALL STABILITY. STABLE WALLS WIDTH AS NEEDED TO JOIN PIPE AND COMPACT HAUNCHING AND INITIAL BACKFILL. UNSTABLE WALLS: WIDTH TO BE A MINIMUM OF FIVE TIMES PIPE DIAMETER.
- 3. FLOWABLE FILL CAN BE USED AS BACKFILL, BUT MUST HAVE PRIOR APPROVAL AND MUST BE ALLOWED TO SET FOR 24 HOURS PRIOR TO TOPPING.
- 4. APPROVED BACKFILL MATERIAL INCLUDES 825 B, FLOWABLE FILL AND APPROVED DIRT. ALTERNATIVE MATERIAL MUST BE APPROVED BY PROJECT MANAGER PRIOR TO USE.



DRAWING TITLE:	BEDD	ING RE	QUIREM	MENTS FOR TRENCHES
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	OAO
DRAWN BY:	GM			
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			_

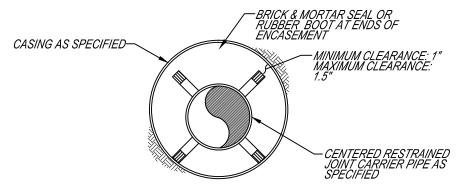
## TYPICAL BORE ENCASEMENT

CARRI	IER PIPE	SPACER	STEEL EI	VCASEMENT
NOMINAL PIPE DIAMETER	STANDARD PIPE BELL O.D.*	CASING SPACER BAND WIDTH	MINIMUM CASING THICKNESS	MINIMUM CASING DIAMETER**
4	6.40	8	0.25	14
6	8.60	8	0.25	16
8	11.16	8	0.25	18
10	13.25	8	0.25	20
12	15.22	8	0.25	22
14	17.73	12	0.25	24
16	19.86	12	0.3125	<i>26</i>
18	22.16	12	0.3125	30
20	24.28	12	0.3125	<i>32</i>
24	28.50	12	0.3125	<i>36</i>
30	34.95	12	0.5	42
36	41.37	12	0.5	48

ALL SIZES INDICATED ARE IN INCHES

\*PIPE BELL OUTSIDE DIAMETER BASED ON PRESSURE CLASS 350 DUCTILE IRON PIPE.

\*\*CASING DIAMETERS BASED ON BEING A MINIMUM OF 6 INCHES GREATER THAN THE OUTER DIAMETER OF THE JOINT BELL, TO THE NEAREST EVEN SIZE.



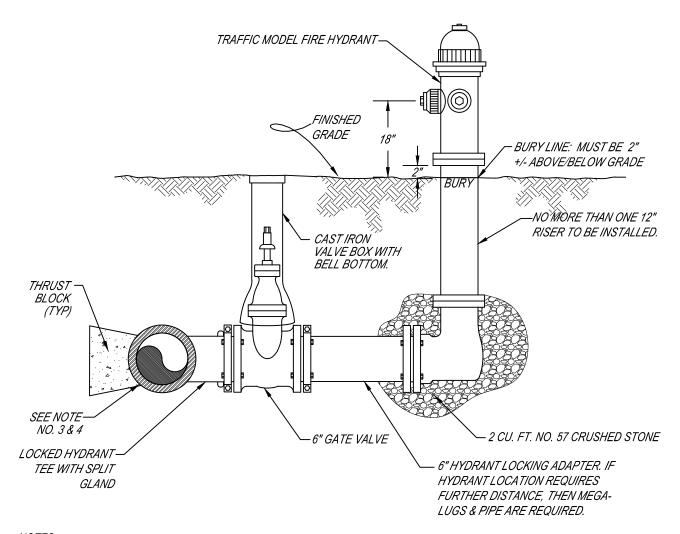
## CASING SECTION

- ALL SPACER BANDS SHALL BE MADE FROM T-304 STAINLESS STEEL OF A MINIMUM 14 GAUGE THICKNESS.
- 2. ALL SPACERS SHALL HAVE A SYNTHETIC RUBBER OR PVC LINER TO INSULATE THE PIPELINE FROM THE SPACER.
- ALL SPACERS SHALL HAVE 1.5" WIDE GLASS REINFORCED PLASTIC OR UHMW POLYMER RUNNERS TO INSULATE THE SPACER.
- 4. SPACERS TO BE MANUFACTURED BY CASCADE WATERWORKS MFG. CO. (PSI) PIPELINE SEAL AND INSULATOR, INC. OR EQUAL.
- 5. 6" THRU 12" DIAMETER PIPELINE SHALL USE 8" WIDE BANDS: GREATER THAN 12" DIAMETER
  PIPELINES SHALL USE 12" WIDE RANDS
- PIPELINES SHALL USE 12" WIDE BANDS.
  6. CENTERED RESTRAINED CASING SPACERS SHALL BE SPACED AT A MAXIMUM OF TEN FEET APART WITH A MINIMUM OF TWO SPACERS PER JOINT OF PIPE.

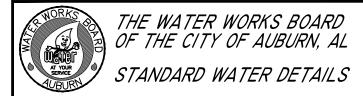
WORKS OF ARD	THE WATER WORKS BOARD OF THE CITY OF AUBURN, AL
ALIBURY	STANDARD WATER DETAILS

DRAWING TITLE:	TYF	I/CAL	BORE	E ENCASEMENT
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	0 1 0
SCALE:	N.T.S.			OAO
DRAWN BY:	BS			
REVIEWED BY:	JC			
APPROVED BY:	EC			
IMPLEMENTED:	12/2007			

## TYPICAL FIRE HYDRANT INSTALLATION

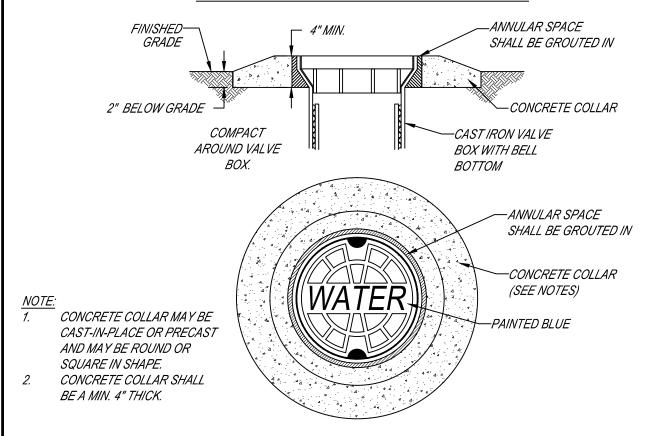


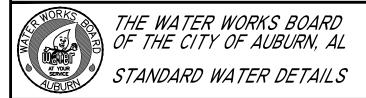
- 1. ALL FIRE HYDRANTS SHALL HAVE NATIONAL STANDARD THREADS, 4 1/2-INCH STEAMER & 2 1/2-INCH HOSE NOZZLE, AND SHALL BE MUELLER CENTURION, OR AMERICAN DARLING B-84-B, OR APPROVED EQUAL. BRONZE TO BRONZE SEATED. EPOXY COATED SHOES. WEATHER CAPS SHALL NOT BE MADE OF RUBBER.
- 2. ALL FIRE HYDRANTS SHALL BE LEVELED AND PLUMBED DURING INSTALLATION.
- 3. ALL MECHANICAL JOINT FITTINGS THAT REQUIRE THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC. CONCRETE SHALL NOT BE POURED OVER JOINTS.
- 4. THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED JOINT DEVICES SUCH AS MEGA-LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL NOT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS. THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
- 5. USE MEGA-LUGS BETWEEN HYDRANT AND GATE VALVE.
- 6. HYDRANT LOCKING TEE TO BE USED IN LIEU OF STANDARD M.J. TEE ON ALL FIRE HYDRANT CONNECTIONS.



DRAWING TITLE:	TYPI	CAL F	IRE H	YDRANT ASSEMBLY
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.			
DRAWN BY:	BS			
REVIEWED BY:	JC			//4
APPROVED BY:	EC			
IMPLEMENTED:	12/2007			

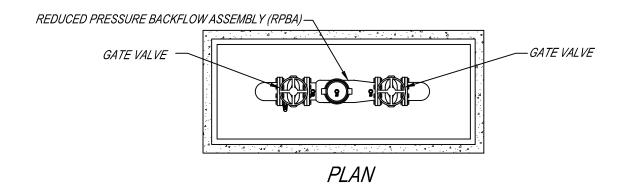
## TYPICAL VALVE BOX INSTALLATION

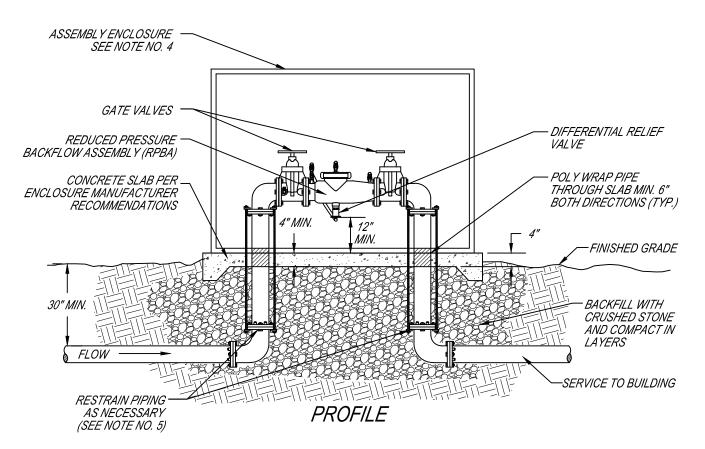




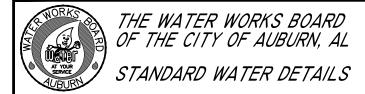
DRAWING TITLE:	TYPI	<u>CAL</u>	<i>VAL VE I</i>	BOX INSTALLATION
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.			
DRAWN BY:	BS			116
REVIEWED BY:	JC			
APPROVED BY:	EC			
IMPLEMENTED:	12/2007		·	

## TYPICAL REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA)



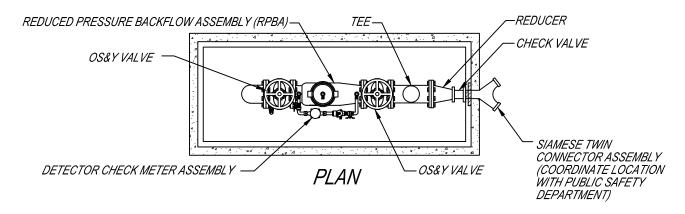


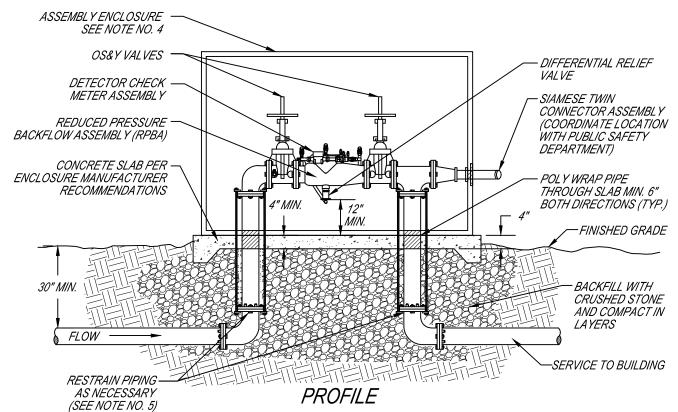
- 1. RPBA SHALL BE MANUFACTURED BY AMES, WATTS, OR AN APPROVED EQUAL.
- RPBA TO BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.
- 3. RPBA's SHALL NOT BE BURIED OR INSTALLED IN BELOW GROUND VAULTS.
- 4. RPBA ENCLOSURES SHALL BE CONCRETE, REINFORCED ALUMINUM, OR FIBERGLASS CONSTRUCTION AND SHALL BE INSULATED AND/OR HEATED SO AS TO ENSURE AGAINST FREEZING. ENCLOSURES APPROVED FOR INSTALLATION INCLUDE: HYDROCOWL, HOT BOX, AND LOK BOX.
- 5. RESTRAINT SYSTEM SHALL BE DESIGNED FOR SPECIFIC INSTALLATION CONDITIONS. WHERE STATIC PRESSURES EXCEED 100 PSI, MEGA-LUG RESTRAINTS USED ON VERTICAL BENDS SHALL BE REINFORCED WITH S.S. RODS.



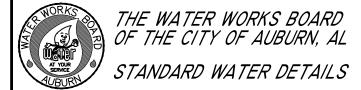
DRAWING TITLE:	<i>TYPICAL</i>	. REDUCE.	D PRESSUR	IE BACKFLOW ASSEMBLY (RPBA)
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.		JC-10-2011	OAO
DRAWN BY:	BS		JC-12-2012	
REVIEWED BY:	JC			
APPROVED BY:	EC			
IMPLEMENTED:	12/2007			_

## TYPICAL FIRE PROTECTION SYSTEM RPBA



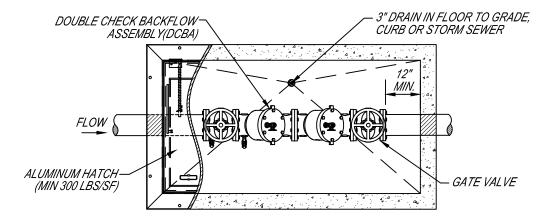


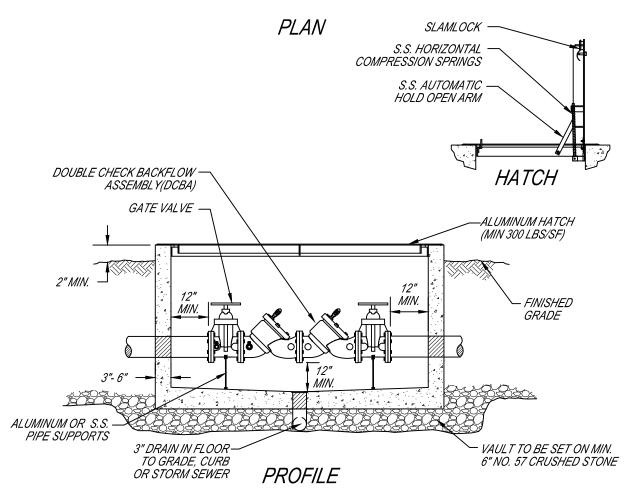
- 1. RPBA SHALL BE MANUFACTURED BY AMES, WATTS, OR AN APPROVED EQUAL.
- RPBA TO BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.
- 3. RPBA's SHALL NOT BE BURIED OR INSTALLED IN BELOW GROUND VAULTS.
- 4. RPBA ENCLOSURES SHALL BE CONCRETE, REINFORCED ALUMINUM, OR FIBERGLASS CONSTRUCTION AND SHALL BE INSULATED AND/OR HEATED TO PROTECT AGAINST FREEZING. ENCLOSURES APPROVED FOR INSTALLATION INCLUDE: HYDROCOWL, HOT BOX, AND LOK BOX.
- 5. RESTRAINT SYSTEM SHALL BE DESIGNED FOR SPECIFIC INSTALLATION CONDITIONS. WHERE STATIC PRESSURES EXCEED 100 PSI, MEGA-LUG RESTRAINTS USED ON VERTICAL BENDS SHALL BE REINFORCED WITH S.S. RODS.



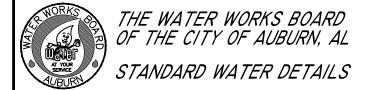
DRAWING TITLE:	TYPIC	CAL FIR	PE PROT	TECTION SYSTEM RPBA
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.		JC-10-2011	OAO
DRAWN BY:	BS		JC-12-2012	
REVIEWED BY:	JC			//9
APPROVED BY:	EC			
IMPLEMENTED:	12/2007			_

## TYPICAL DOUBLE CHECK BACKFLOW ASSEMBLY (DCBA)

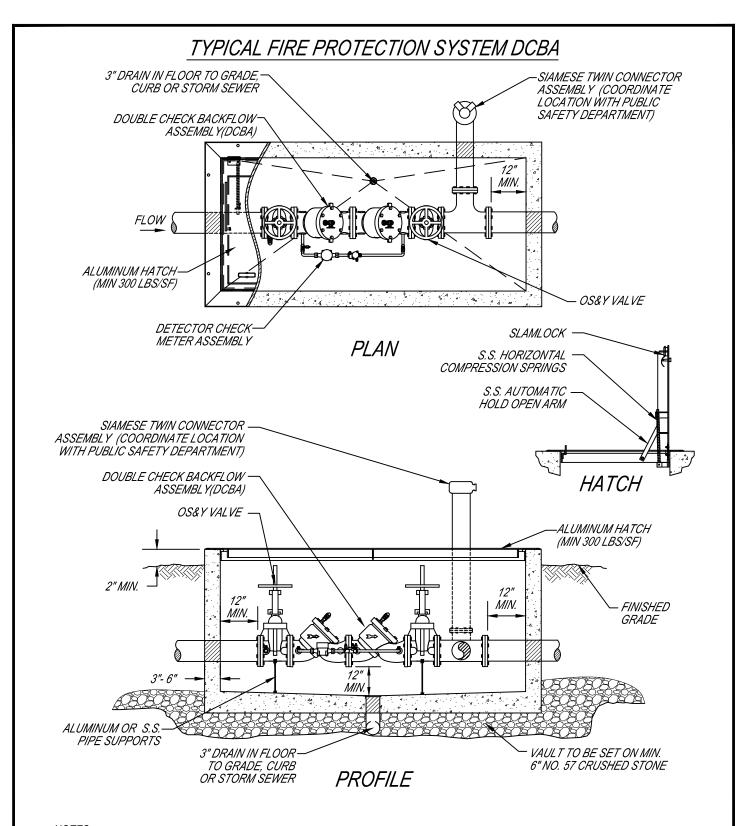




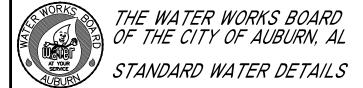
- 1. DOUBLE CHECK BACKFLOW ASSEMBLY SHALL BE MANUFACTURED BY AMES, WATTS, OR AN APPROVED EQUAL.
- 2. VAULTS SHALL BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.



DRAWING TITLE:	TYPICA.	<u>L DOUBLE</u>	<u>E CHECK L</u>	BACKFLOW ASSEMBLY (DCBA)
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.		JC-10-2011	OOO
DRAWN BY:	BS			////
REVIEWED BY:	JC			
APPROVED BY:	EC			
IMPLEMENTED:	12/2007			



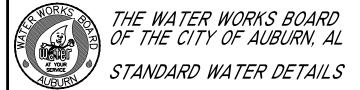
- 1. DOUBLE CHECK BACKFLOW ASSEMBLY SHALL BE MANUFACTURED BY AMES, WATTS, OR AN APPROVED EQUAL.
- 2. VAULTS SHALL BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.



DRAWING TITLE:	<u>TYPIC</u>	<u>'AL FIR</u>	7 <u>E PRO</u> 7	<u>ECTION SYSTEM DCBA</u>
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.		JC-10-2011	
DRAWN BY:	BS			
REVIEWED BY:	JC			
APPROVED BY:	EC			
IMPLEMENTED:	12/2007			

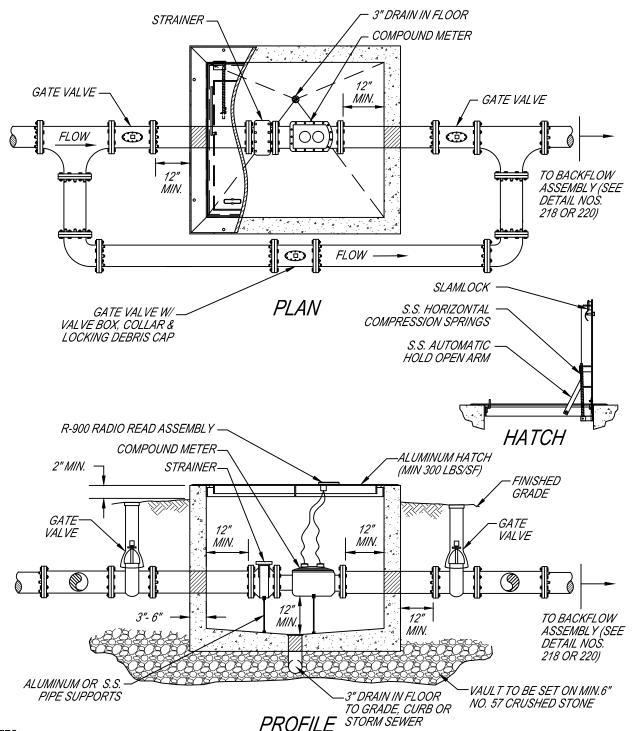
#### TYPICAL FIRE / DOMESTIC METER VAULT (4" AND LARGER) LARGE METER -3" DRAIN IN FLOOR STRAINER LARGE CHECK VALVE GATE VALVE -MIN. GATE VALVE FLOW **(D)** (1) 12" TO BACKFLOW MIN. ASSEMBLY (SEE DETAIL NOS. 218 OR 220) FLOW **(1)** LOW FLOW METER & DUAL CHECK VALVE **SLAMLOCK** PLAN S.S. HORIZONTAL GATE VALVE W/ COMPRESSION SPRINGS VALVE BOX, COLLAR & LOCKING DEBRIS CAP S.S. AUTOMATIC HOLD OPEN ARM R-900 RADIO READ ASSEMBLY -LARGE CHECK VALVE -HATCH LARGE METER ALUMINUM HATCH 2" MIN. STRAINER. (MIN 300 LBS/SF) **FINISHED GRADE** GATE 12" VAL VE GATE MIN. MIN. VAL VE 12" MIN. TO BACKFLOW ASSEMBLY (SEE DETAIL NOS. MIN. 218 OR 220) VAULT TO BE SET ON MIN.6" LOW FLOW METER & 3" DRAIN IN FLOOR NO. 57 CRUSHED STONE TO GRADE, CURB OR DUAL CHECK VALVE STORM SEWER PROFILE NOTES:

- 1. COMBINATION FIRE / DOMESTIC METER SHALL BE NEPTUNE PROTECTUS III.
- 2. VAULTS SHALL BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.
- THE APPROPRIATE BACKFLOW ASSEMBLY IN ACCORDANCE WITH STANDARD DETAIL NOS. 218 OR 220 SHALL BE 3. INSTALLED IMMEDIATELY FOLLOWING THE METER ASSEMBLY.

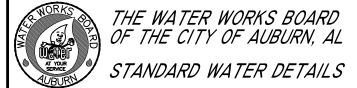


DRAWING TITLE:	<u>TYPICAL</u>	<u>FIRE / .</u>	<u>DOMESTIC M</u>	<u> 1ETER VAULT (4" AND LARGER)</u>
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.		JC-10-2011	
DRAWN BY:	BS			
REVIEWED BY:	JС			
APPROVED BY:	EC			
IMPLEMENTED:	12/2007			

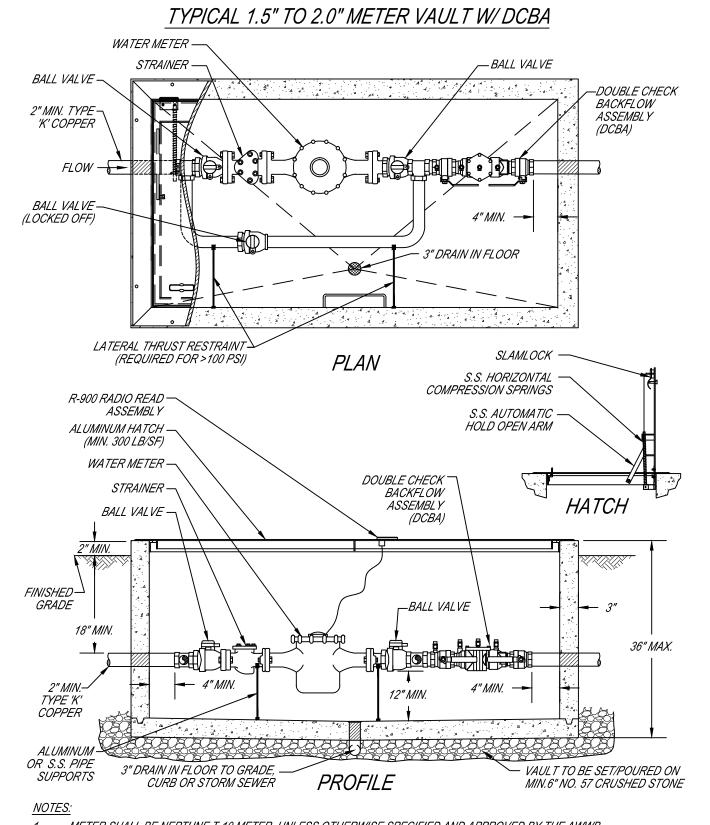
## TYPICAL LARGE DOMESTIC METER VAULT (3" AND LARGER)



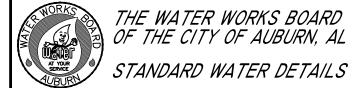
- 1. LARGE METER SHALL BE NEPTUNE TRU-FLOW COMPOUND METER.
- 2. VAULTS SHALL BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.
- 3. THE APPROPRIATE BACKFLOW ASSEMBLY IN ACCORDANCE WITH STANDARD DETAIL NOS. 218 OR 220 SHALL BE INSTALLED IMMEDIATELY FOLLOWING THE METER ASSEMBLY.



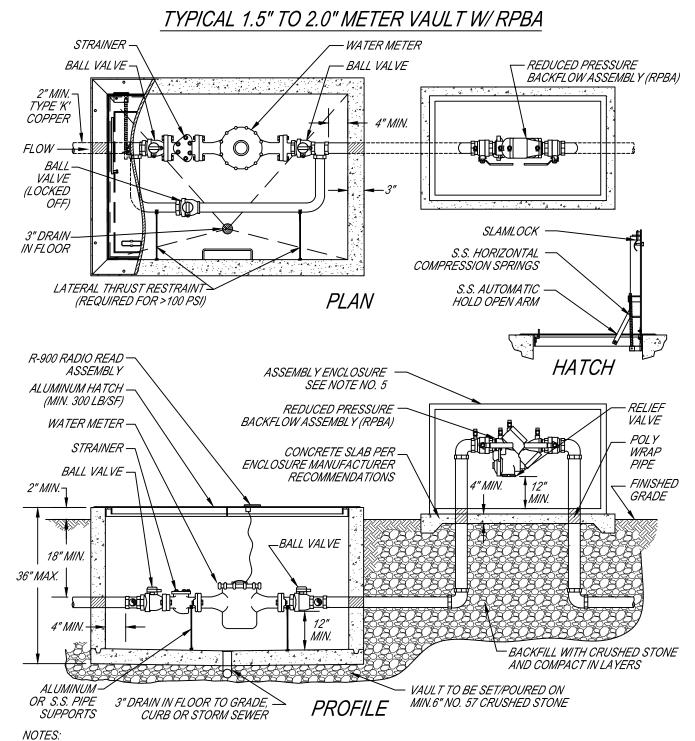
DRAWING TITLE:	TYPICAL	. <i>LARGE</i>	DOMESTIC I	METER VAULT (3" AND LARGER)
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.		JC-10-2011	
DRAWN BY:	BS			
REVIEWED BY:	JC			//4
APPROVED BY:	EC			
IMPLEMENTED:	12/2007			



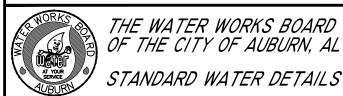
- METER SHALL BE NEPTUNE T-10 METER, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE AWWB.
- 2. VAULTS SHALL BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.



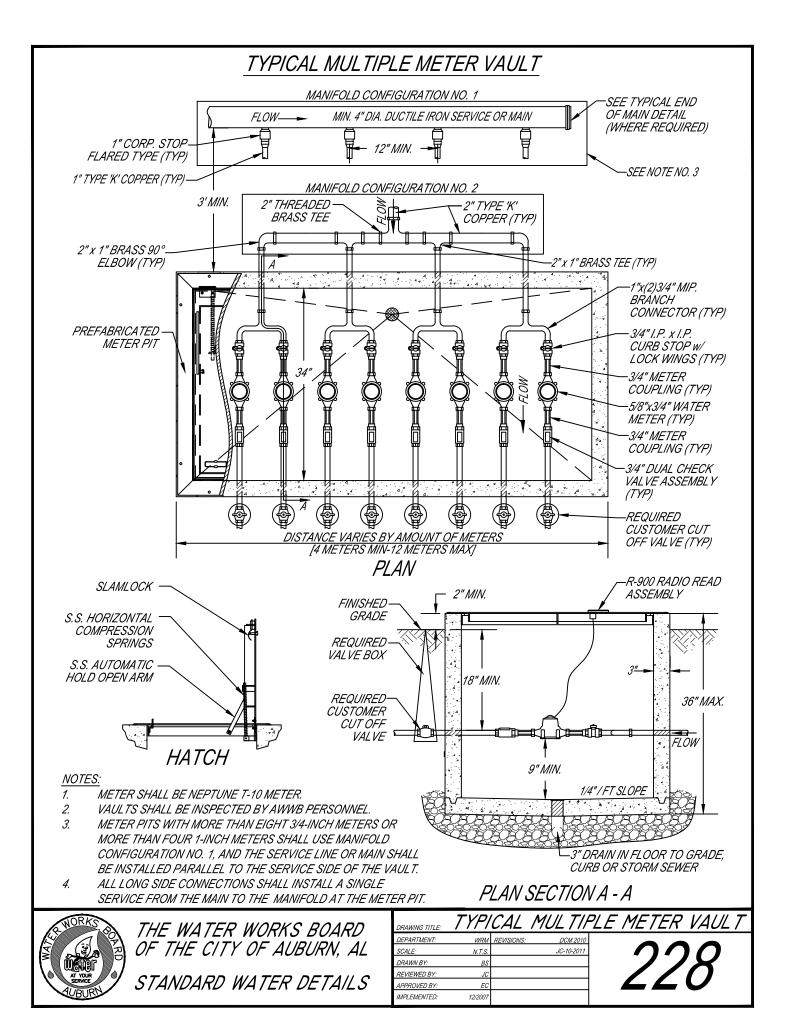
DRAWING TITLE:	TYPIC	'AL 1.5"	' TO 2.0"	METER VAULT W/ DCBA
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	
DRAWN BY:	GM		JC-10-2011	
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			



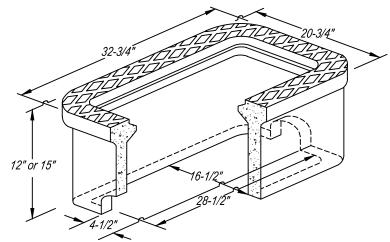
- 1. METER SHALL BE NEPTUNE T-10 METER, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE AWWB.
- 2. RPBA SHALL BE MANUFACTURED BY AMES, WATTS, OR AN APPROVED EQUAL.
- 3. VAULTS AND RPBA SHALL BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.
- 4. RPBA's SHALL NOT BE BURIED OR INSTALLED IN BELOW GROUND VAULTS.
- RPBA ENCLOSURES SHALL BE CONCRETE, REINFORCED ALUMINUM, OR FIBERGLASS CONSTRUCTION AND SHALL BE INSULATED AND/OR HEATED TO PROTECT AGAINST FREEZING. ENCLOSURES APPROVED FOR INSTALLATION INCLUDE: HYDROCOWL, HOT BOX, AND LOK BOX.



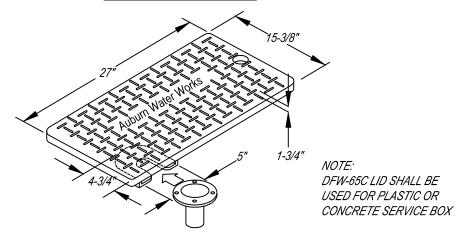
DRAWING TITLE:	TYPIC.	AL 1.5"	TO 2.0"	METER	VAUL I	T W/ RPBA
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07		_	_
SCALE:	N.T.S.		DCM 2010		7	7
DRAWN BY:	GM		JC-10-2011			
REVIEWED BY:	EC					
APPROVED BY:	RG					
IMPLEMENTED:	02/2003					



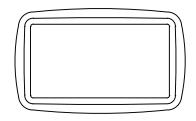
## CONCRETE SERVICE BOX

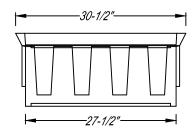


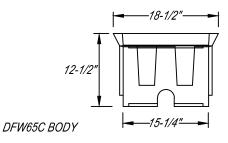
## SERVICE BOX LID

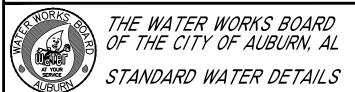


## REINFORCED PLASTIC SERVICE BOX



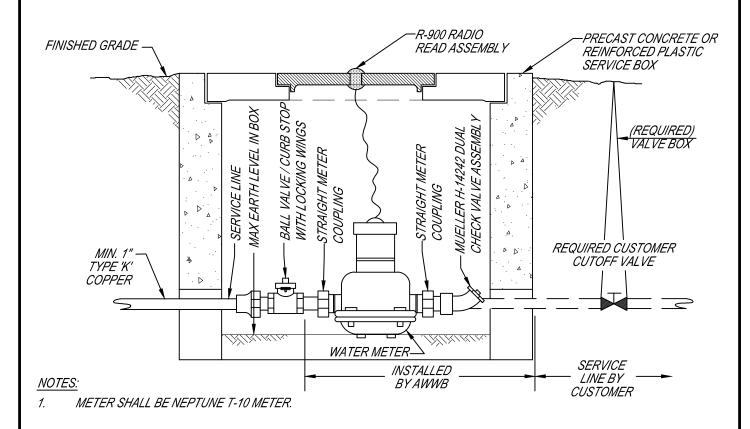


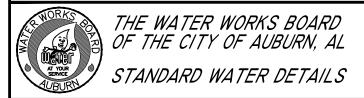




DRAWING TITLE:	/ YP	<u>ICAL</u>	SERV	<u>ICE BOX AN</u>
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	
DRAWN BY:	GM			
REVIEWED BY:	EC			<i></i>
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

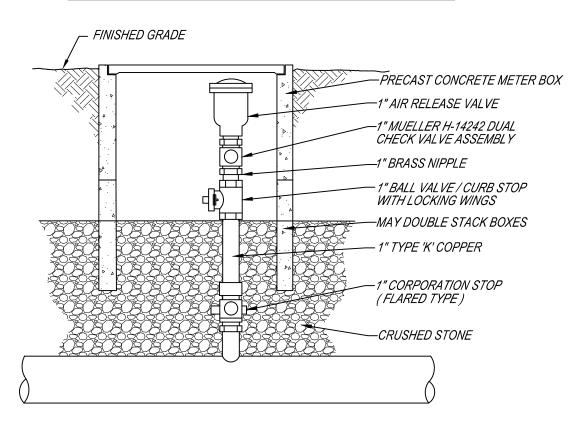
## TYPICAL 3/4" TO 1" METER

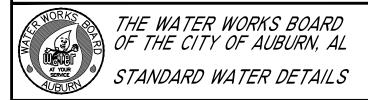




DRAWING TITLE:	TYF	PICAL	3/4	" TO I" METER
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	OOO
DRAWN BY:	GM			
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

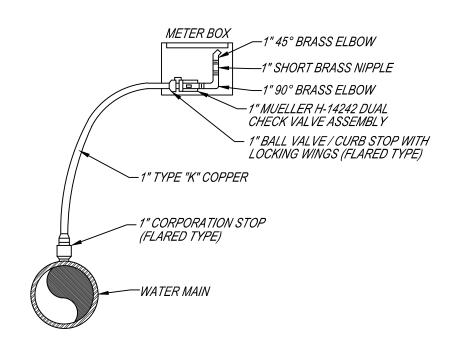
## TYPICAL AUTOMATIC AIR RELEASE VALVE

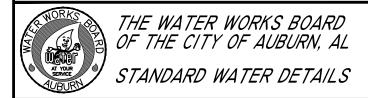




DRAWING TITLE:	<u>TYPIC</u>	AL AL	<u>/TOMAT/</u>	<u>'C AIR RELEASE VALVE</u>
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	
DRAWN BY:	GM			
REVIEWED BY:	EC			/.) <del>/</del>
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			_

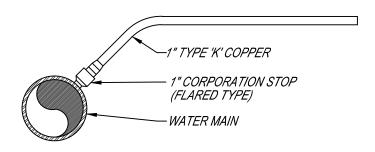
## TYPICAL MANUAL AIR RELEASE VALVE





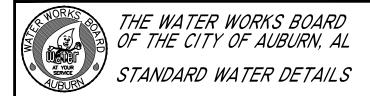
DRAWING TITLE:	TYPI	<u>CAL M</u>	<u>IANUAL  </u>	<u>AIR RELEASE VALVE</u>
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	
DRAWN BY:	GM			ノイカ
REVIEWED BY:	EC			/
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

## TYPICAL 1" SERVICE CONNECTION



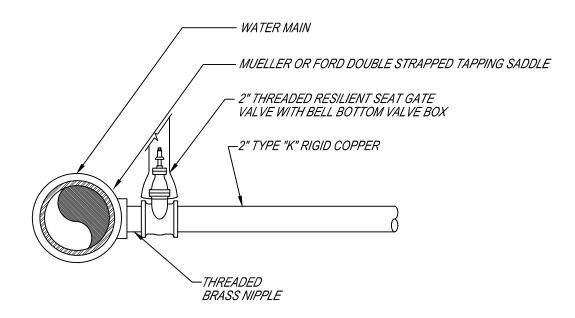
### NOTES:

1. TYPICAL 1" SERVICE CONNECTION SHALL BE USED AT A MINIMUM FOR ALL3/4" AND 1" METER INSTALLATIONS.



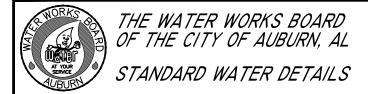
DRAWING TITLE:	TYPI	<u>CAL</u>	/" SER	VICE CONNECTION
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	$\boldsymbol{\Omega}$
DRAWN BY:	GM			
REVIEWED BY:	EC			<i>/.</i> 1/1
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

## TYPICAL 2" SERVICE CONNECTION



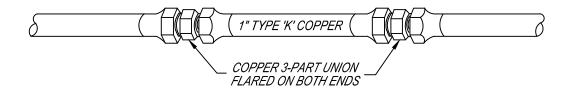
## NOTES:

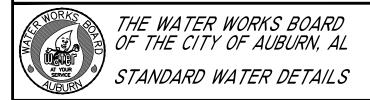
1. TYPICAL 2" SERVICE CONNECTION SHALL BE USED AT A MINIMUM FOR ALL 1-1/2" AND 2" METER INSTALLATIONS.



DRAWING TITLE:	TYPI	'CAL	2" SER	VICE CONNECTION
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	
DRAWN BY:	GM			
REVIEWED BY:	EC			/41/
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

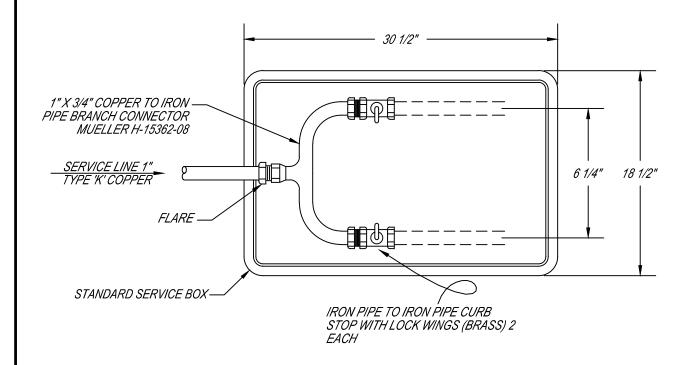
## TYPICAL COPPER REPAIR (1" ONLY)

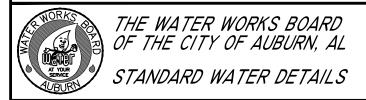




DRAWING TITLE:	<i>TYPI</i>	<u>CAL</u>	<u>COPPER</u>	<u>R REPAIR (I" ONLY)                                    </u>
DEPARTMENT:	WRM	REVISIONS:	BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	
DRAWN BY:	GM			
REVIEWED BY:	EC			<i>/4/</i>
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

## TYPICAL DOUBLE SERVICE CONNECTION





DRAWING TITLE:	<u>TYPIC</u>	<u>:AL                                    </u>	<u> 20UBLE S</u>	<u>ERVICE CONNECTION</u>
DEPARTMENT:	WRM	REVISIONS	S: BS-09-13-07	
SCALE:	N.T.S.		DCM 2010	
DRAWN BY:	GM			
REVIEWED BY:	EC			/44
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

## GENERAL SERVICE CONNECTION CONFIGURATIONS LONG SIDE TAP CONFIGURATIONS DETAIL: 218 W/O FDC **RPBA** FIRE DCBA FIRE RPBA ROW DETAIL: 218-DCBA M -DETAILS: 222, 224, 226, 228 0R 232 W/O DCBA Μ 222, 224, 226, 228 OR 232 DETAIL: 220 EOP **EOP** WM WM-DETAIL: 220 M DCBA W/O DCBA M ROW FIRE DCBA FIRE RPBA **RPBA** -DETAIL: 218 W/O FDC DETAIL: 218-

THE WATER WORKS BOARD OF THE CITY OF AUBURN, AL

STANDARD WATER DETAILS

DRAWING TITLE:	GENER	PAL SERVICE CON	INECTION CONFIGURATIONS
DEPARTMENT:	WRM	REVISIONS:	
SCALE:	N.T.S.		
DOMANA DV	CM		

 DRAWN BY:
 CN

 REVIEWED BY:
 JC

 APPROVED BY:
 EC

 IMPLEMENTED:
 DCM 2010

SHORT SIDE TAP CONFIGURATIONS

## TYPICAL DEADMAN THRUST RESTRAINT POUR "KEYED" SECTION OF THRUST BLOCK AGAINST UNDISTURBED EARTH NO. 5 @ 12" O.C.E.W SOLID MEGA-LUGS LIP TO LIP CENTERED PROTECT MEGALUGS FROM CONCRETE (MIN. 2 LAYERS OF POLY) POUR AGAINST SURFACES WITHIN TRENCH PLAN MEGALLIG (2 LAYERS) 3" (TYP) . NO. 5 @ 12" O.C.E.W. (2 LAYERS) 24" MIN. UNDISTURBED EARTH

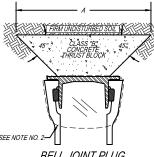
S:
DEADMAN TO BE CENTERED ON FULL JOINT OF PIPE
ALL CONCRETE SHALL BE CLASS 'A" (400) PSI) IN ACCORDANCE WITH THE CITY OF AUBURN STANDARD SPECIFICATIONS
NO CALCIUM CHORDE CURING ACCELERATOR ALLOWED.
APPLICABLE FOR UP TO AND INCLUDING 12" DIAMETER PIPE. MAY BE USED FOR PIPES ABOVE 12" DIAMETER ON A CASE
BY CASE BASIS.
TO BE USED ON EXISTING DUCTILE IRON OR CAST IRON PIPE IN GOOD CONDITION.

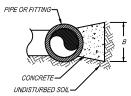
**FRONT** 

**PROFILE** 

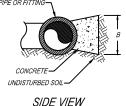
NOTES:

#### TYPICAL CONCRETE THRUST BLOCK DESIGN

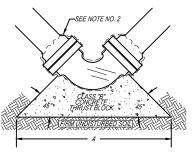




**BELL JOINT PLUG** UNRESTRAINED TYPE



## **BEARING AREA**



AREA	AREA (SF) AGAINST UNDISTURBED SUIL					
Size	Tee, Wye, Plug or 90° Bend 45° Bend 22.5° Bend 11.5° Bend					
4"	1	1	1	1		
6"	3	2	1.5	1		
8"	5	3	2	1.5		
10"	9	2				
12"	12 8 4 3					
16" 22 12 5 4						
BASED ON 2500 LB/ft.2 SOIL						
BEARING AREA (SF) = $A \times B$ 1<( $A / B$ )<3						

≤ 100 PSI STATIC PRESSURE ( 600 MSL OR HIGHER)

#### TYPICAL BEND THRUST BLOCK

45 DEGREE ANGLES REQUIRED FOR ALL THRUST BLOCKS.

NOTES.

- NON STANDARD THRUST BLOCKING WILL REQUIRE SPECIAL DETAILING PROVIDED BY A LICENSED ENGINEER AND APPROVED BY THE CITY OF AUBURN.
- ALL MECHANICAL JOINT FITTINGS THAT REQUIRE THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC. CONCRETE SHALL NOT BE POURED OVER JOINTS.
- CLASS "B" CONCRETE SHALL BE AS DEFINED IN THE CITY OF AUBURN STANDARD SPECIFICATIONS SECTION II. THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED JOINT DEVICES SUCH AS MEGA-LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL NOT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS. THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS

# TYPICAL CONCRETE THRUST BLOCK LAYOUT PLUGGED TEE PLUGGED CROSS PLUGGED CROSS REND FINISHED GRADE VERTICAL BEND

#### 45 DEGREE ANGLES REQUIRED FOR ALL THRUST BLOCKS.

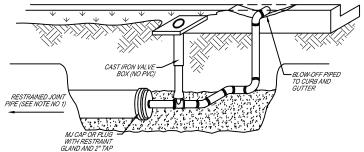
- NON STANDARD THRUST BLOCKING WILL REQUIRE SPECIAL DETAILING PROVIDED BY A LICENSED ENGINEER AND APPROVED BY THE CITY OF AUBURN.
  ALL MECHANICAL JOINT FITTINGS THAT REQUIRE THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC. CONCRETE SHALL
- NOT BE POURED OVER JOINTS. CLASS "B" CONCRETE SHALL BE AS DEFINED IN THE CITY OF AUBURN STANDARD SPECIFICATIONS SECTION II.

TEE

THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED JOINT DEVICES SUCH AS MEGA-LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL NOT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS. THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS

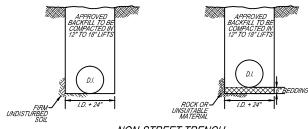
## TYPICAL END OF MAIN FOR FUTURE EXTENSION BOX (NO PVC) GATE VALVE 2" COPPER ELBOW - 45 DEGREE WITH RESTRAIN (EXTERNAL RESTRAINT 2" COPPER NIPPLE GLAND AND 2" TAP DEVICES AT JOINTS - 2" GATE VALVE W/ SQUARE NUT & VALVE BOX -2" BRASS NIPPLE THREADED THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED JOINT DEVICES SUCH AS MEGA LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL INCT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS. THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS BLOW OFF SHALL BE PIPED TO CURB AND GUTTER IN ACCORDANCE WITH STANDARD DETAIL NO. 208, WHERE POSSIBLE TYPICAL END OF MAIN IN CUL DE SAC

STANDARD -SERVICE BOX

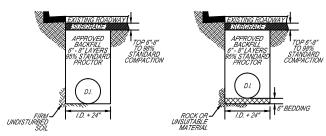


THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED JOINT DEVICES SUCH AS MEGA LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL NOT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS. THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS

### BEDDING REQUIREMENTS FOR TRENCHES



## NON-STREET TRENCH



#### STREET TRENCH

#### NOTES:

- BEDDING MATERIALS SHALL BE 1/4" TO 1 1/2" GRADED CRUSHED STONE SUCH AS: 56,57,6,67,68,7,OR 78,
- STONE PER ALDOT STANDARD SPECS. WIDTH VARIES BASED ON WALL STABILITY. STABLE WALLS WIDTH AS NEEDED TO JOIN PIPE AND COMPACT HAUNCHING AND INITIAL BACKFILL, UNSTABLE WALLS: WIDTH TO BE A MINIMUM OF FIVE TIMES PIPE
- FLOWABLE FILL CAN BE USED AS BACKFILL, BUT MUST HAVE PRIOR APPROVAL AND MUST BE ALLOWED TO SET FOR 24 HOURS PRIOR TO TOPPING.
- APPROVED BACKFILL MATERIAL INCLUDES 825 B, FLOWABLE FILL AND APPROVED DIRT. ALTERNATIVE MATERIAL MUST BE APPROVED BY PROJECT MANAGER PRIOR TO USE.

#### TYPICAL BORE ENCASEMENT

CARRI	CARRIER PIPE		STEEL E	<i>ICASEMENT</i>
NOMINAL PIPE DIAMETER	STANDARD PIPE BELL O.D.*	CASING SPACER BAND WIDTH	MINIMUM CASING THICKNESS	MINIMUM CASING DIAMETER**
4	6.40	8	0.25	14
6	8.60	8	0.25	16
8	11.16	8	0.25	18
10	13.25	8	0.25	20
12	15.22	8	0.25	22
14	17.73	12	0.25	24
16	19.86	12	0.3125	26
18	22.16	12	0.3125	30
20	24.28	12	0.3125	32
24	28.50	12	0.3125	36
30	34.95	12	0.5	42
36	41.37	12	0.5	48

ALL SIZES INDICATED ARE IN INCHES

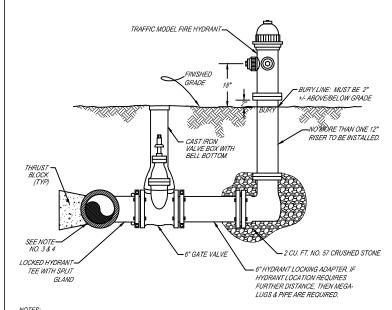
\*PIPE BELL OUTSIDE DIAMETER BASED ON PRESSURE CLASS 350 DUCTILE IRON PIPE. \*\*CASING DIAMETERS BASED ON BEING A MINIMUM OF 6 INCHES GREATER THAN THE OUTER DIAMETER OF THE JOINT BELL, TO THE NEAREST EVEN

BRICK & MORTAR SEAL OR RUBBER BOOT AT ENDS OF FNCASEMENT CASING AS SPECIFIED-

#### CASING SECTION

- SO
  ALL SPACER BANDS SHALL BE MADE FROM T-304 STAINLESS STEEL OF A MINIMUM 14 GAUGE
  THICKNESS.
  ALL SPACERS SHALL HAVE A SYNTHETIC RUBBER OR PVC LINER TO INSULATE THE PIPELINE
  FROM THE SPACER.
  ALL SPACERS SHALL HAVE 1.5" WIDE GLASS REINFORCED PLASTIC OR UHMW POLYMER
  RUNNERS TO IN USILATE THE SPACER.
  SPACERS TO BE MANUFACTURED BY CASCADE WATERWORKS MFG. CO. (PSI) PIPELINE SEAL
  AND, INSULATOR, INC. OR EQUAL
  6" THRU 12" DIAMETER PIPELINE SHALL USE 8" WIDE BANDS: GREATER THAN 12" DIAMETER
  PIPELINES SHALL USE 12" WIDE BANDS.
  CENTERED RESTRAINED CAISING SPACERS SHALL BE SPACED AT A MAXIMUM OF TEN FEET
  APART WITH A MINIMUM OF TWO SPACERS PER JOINT OF PIPE.

## TYPICAL FIRE HYDRANT INSTALLATION



NOTES:

1. ALL FIRE HYDRANTS SHALL HAVE NATIONAL STANDARD THREADS, 4 1/2-INCH STEAMER & 2 1/2-INCH HOSE

NOZZLE, AND SHALL BE MUELLER CENTURION, OR AMERICAN DARLING B-84-B, OR APPROVED EQUAL BRONZE TO

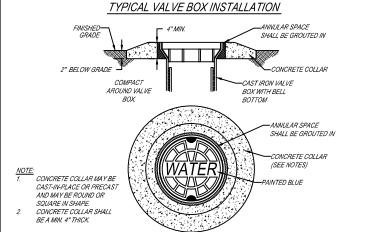
NOTES:

1. ALL FIRE HYDRANTS SHALL HAVE NATIONAL STANDARD THREADS, 4 1/2-INCH STEAMER & 2 1/2-INCH HOSE

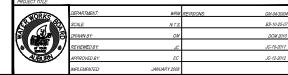
NOZZLE, AND SHALL BE MUELLER CENTURION, OR AMERICAN DARLING B-84-B, OR APPROVED EQUAL BRONZE TO

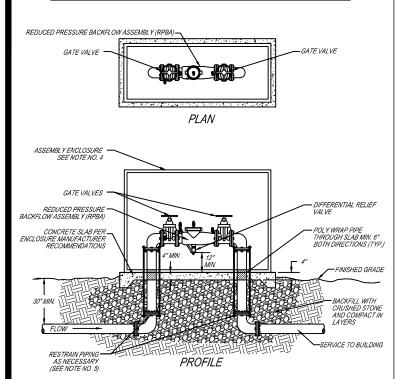
NOZZLE, AND SHALL BE MUELLER CENTURION, OR AMERICAN DARLING B-84-B, OR APPROVED EQUAL BRONZE TO

- ALL FIRE HYDRANT'S SHALL BE LEVELED AND PLUMBED DURING INSTALLATION.
  ALL MECHANICAL JOINT FITTINGS THAT REQUIRE THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC. CONCRETE
- SHALL NOT BE POURED OVER JOINTS. THE PREFERRED METHOD OF THRUST RESTRAINT SHALL BE THROUGH THE USE OF EXTERNALLY RESTRAINED
- JOINT DEVICES SUCH AS MEGA-LUGS IN LIEU OF CONCRETE BLOCKING. CONCRETE BLOCKING SHALL ONLY BE PERMITTED WHERE APPROVED BY THE AWWB AND SHALL NOT BE USED IN CONJUNCTION WITH MEGA-LUG RESTRAINTS. THE APPROPRIATE LENGTH OF RESTRAINT SHALL BE CALCULATED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. USE MEGA-LUGS BETWEEN HYDRANT AND GATE VALVE.
- HYDRANT LOCKING TEE TO BE USED IN LIEU OF STANDARD M.J. TEE ON ALL FIRE HYDRANT CONNECTIONS.



## STANDARD DETAILS: WATER - SHEET I OF 3

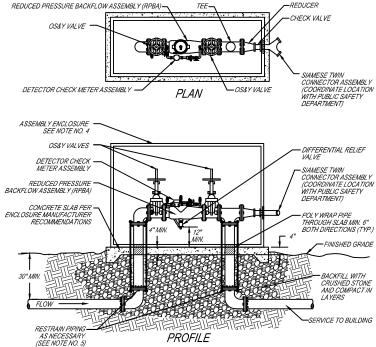




TYPICAL REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA)

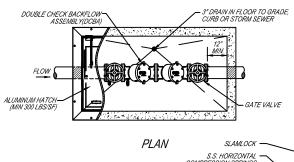
- ... RPBA SHALL BE MANUFACTURED BY AMES, WATTS, OR AN APPROVED EQUAL. RPBA TO BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.
- RPBA's SHALL NOT BE BURIED OR INSTALLED IN BELOW GROUND VAULTS.
- RPBA ENCLOSURES SHALL BE CONCRETE, REINFORCED ALUMINUM, OR FIBERGLASS CONSTRUCTION AND SHALL BE INSULATED AND/OR HEATED SO AS TO ENSURE AGAINST FREEZING, ENCLOSURES APPROVED FOR INSTALLATION
- INCLUDE: HYDROCOWL, HOT BOX, AND LOK BOX, RESTRAINT SYSTEM SHALL BE DESIGNED FOR SPECIFIC INSTALLATION CONDITIONS. WHERE STATIC PRESSURES EXCEED 100 PSI, MEGA-LUG RESTRAINTS USED ON VERTICAL BENDS SHALL BE REINFORCED WITH S.S. RODS.

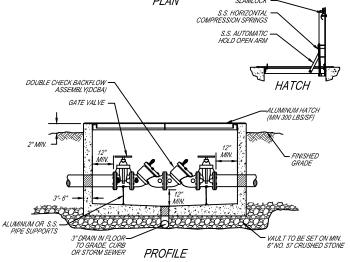
#### TYPICAL FIRE PROTECTION SYSTEM RPBA



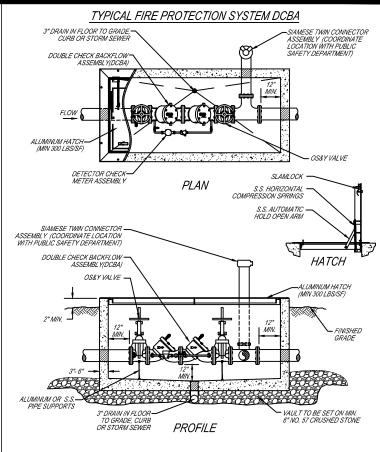
- RPBA SHALL BE MANUFACTURED BY AMES. WATTS. OR AN APPROVED EQUAL
- RPBA TO BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.
  RPBA'S SHALL NOT BE BURIED OR INSTALLED IN BELOW GROUND VAULTS.
- RPBA ENCLOSURES SHALL BE CONCRETE. REINFORCED ALUMINUM. OR FIBERGLASS CONSTRUCTION AND SHALL BE INSULATED AND/OR HEATED TO PROTECT AGAINST FREEZING. ENCLOSURES APPROVED FOR INSTALLATION INCLUDE: HYDROCOWL, HOT BOX, AND LOK BOX.
- RESTRAINT SYSTEM SHALL BE DESIGNED FOR SPECIFIC INSTALLATION CONDITIONS. WHERE STATIC PRESSURES EXCEED 100 PSI, MEGA-LUG RESTRAINTS USED ON VERTICAL BENDS SHALL BE REINFORCED WITH S.S. RODS.

## TYPICAL DOUBLE CHECK BACKFLOW ASSEMBLY (DCBA)





DOUBLE CHECK BACKELOW ASSEMBLY SHALL BE MANUFACTURED BY AMES, WATTS, OR AN APPROVED FOLIAL VAULTS SHALL BE INSPECTED BY AWWIB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.



FINISHED GRADE

NOTES:

METER SHALL BE NEPTUNE T-10 METER.

DOUBLE CHECK BACKFLOW ASSEMBLY SHALL BE MANUFACTURED BY AMES, WATTS, OR AN APPROVED EQUAL. VAULTS SHALL BE INSPECTED BY AWWB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS.

TYPICAL 3/4" TO 1" METER

WATER METER-

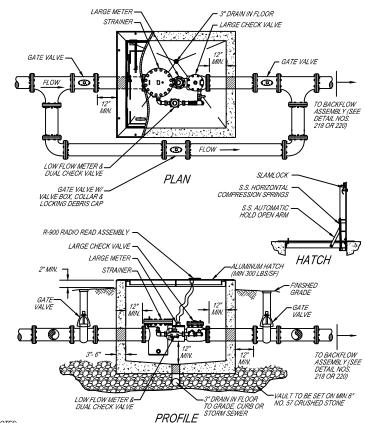
PRECAST CONCRETE OR

REINFORCED PLASTIC SERVICE BOX

REQUIRED CUSTON CUTOFF VALVE

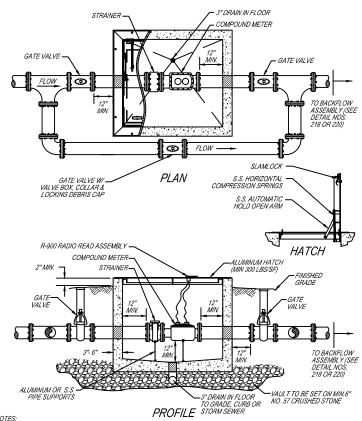
- LINE BY CUSTOMER

### TYPICAL FIRE / DOMESTIC METER VAULT (4" AND LARGER)



- VAULTS SHALL BE INSPECTED BY AWWIB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS. THE APPROPRIATE BACKFLOW ASSEMBLY IN ACCORDANCE WITH STANDARD DETAIL NOS. 218 OR 220 SHALL BE INSTALLED IMMEDIATELY FOLLOWING THE METER ASSEMBLY.

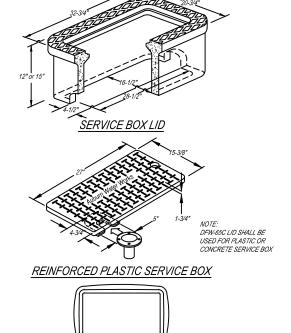
#### TYPICAL LARGE DOMESTIC METER VAULT (3" AND LARGER)



### 

VAULTS SHALL BE INSPECTED BY AWWIB PERSONNEL IN ADDITION TO CITY OF AUBURN PROJECT INSPECTIONS. THE APPROPRIATE BACKFLOW ASSEMBLY IN ACCORDANCE WITH STANDARD DETAIL NOS. 218 OR 220 SHALL BE INSTALLED IMMEDIATELY FOLLOWING THE METER ASSEMBLY.

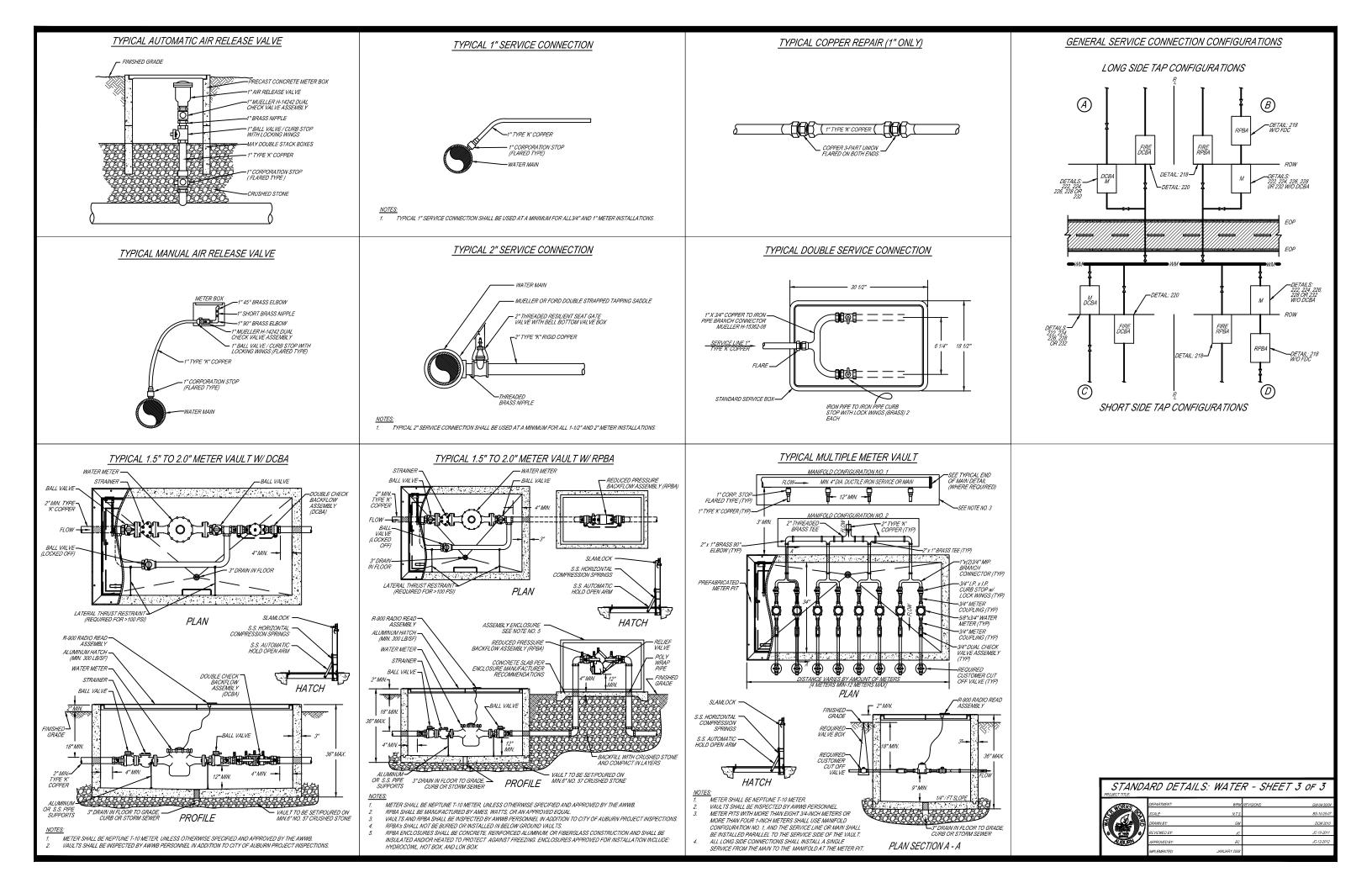
## CONCRETE SERVICE BOX

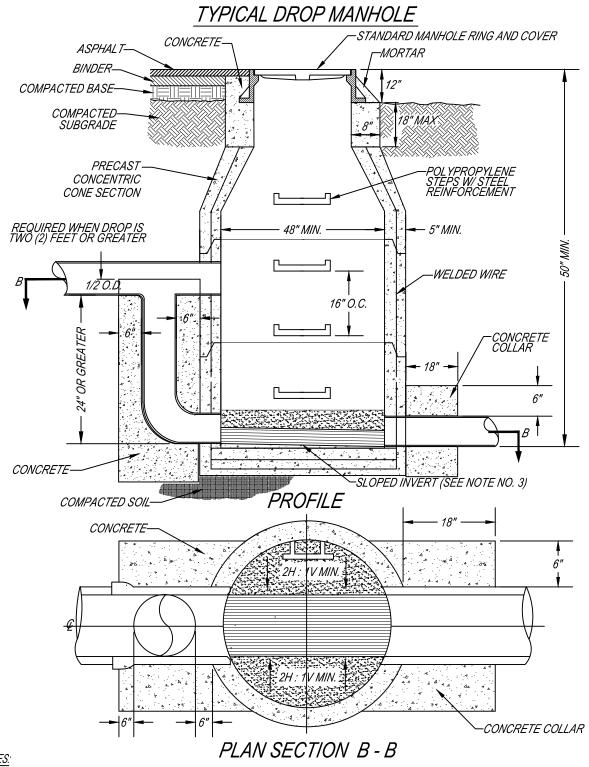




DFW65C BODY

## STANDARD DETAILS: WATER - SHEET 2 of 3





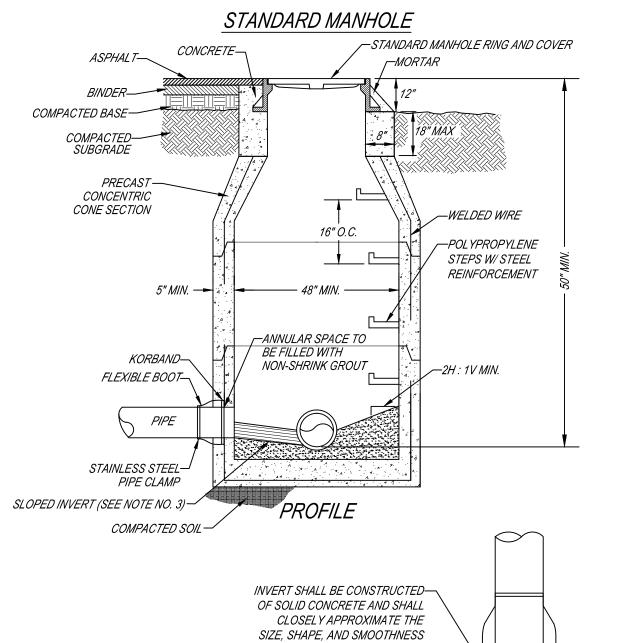
NOTES:

- ALL MANHOLES SHALL BE REQUIRED TO HAVE CLEAR LINE OF SIGHT FROM THE RIM TO ALL PIPE INVERTS.
- 2. ALL MANHOLE SECTIONS SHALL BE CYLINDRICAL SHAPED PRECAST STRUCTURAL CONCRETE.
- 3. ALL MANHOLES SHALL BE PROPERLY GROUTED AND WATER TIGHT.
- 4. INVERT SLOPE SHALL PROVIDE A 0.10' DROP ACROSS THE MANHOLE WHERE THERE IS NOT A TURN GREATER THAN 22 DEGREES AND A 0.25' DROP ACROSS THE MANHOLE WHERE THE TURN IS GREATER THAN 22 DEGREES.



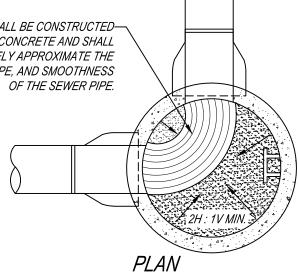
THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	/ YF	<u> </u>	DRUI	_
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	
SCALE:	N.T.S.		BS-10-30-07	
DRAWN BY:	BS		DCM 2010	
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			



NOTES:

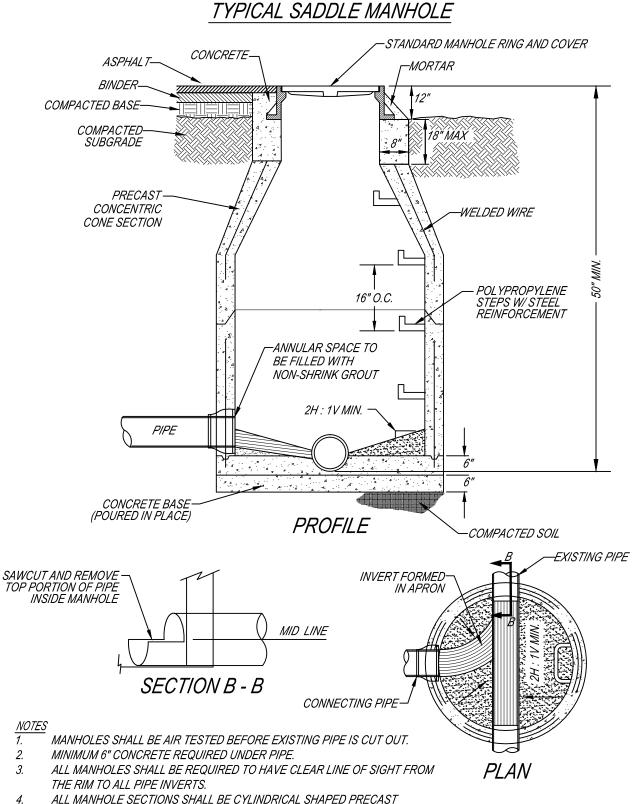
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- 2. ALL MANHOLE SECTIONS SHALL BE CYLINDRICAL SHAPED PRECAST STRUCTURAL CONCRETE.
- 3. ALL MANHOLES SHALL BE PROPERLY GROUTED AND WATER TIGHT.
- 4. INVERT SLOPE SHALL PROVIDE A 0.10' DROP ACROSS THE MANHOLE WHERE THERE IS NOT A TURN GREATER THAN 22 DEGREES AND A 0.25' DROP ACROSS THE MANHOLE WHERE THE TURN IS GREATER THAN 22 DEGREES.

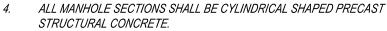




THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	5/A	<u>NDAF</u>	<i>RD MA</i>
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04
SCALE:	N.T.S.		BS-10-30-07
DRAWN BY:	BS		DCM 2010
REVIEWED BY:	EC		
APPROVED BY:	RG		
IMPLEMENTED:	02/2003		





5. ALL MANHOLES SHALL BE PROPERLY GROUTED AND WATER TIGHT.



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	<u> </u>	CAL	SADDLE
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04
SCALE:	N.T.S.		BS-10-30-07
DRAWN BY:	BS		DCM 2010
REVIEWED BY:	EC		
APPROVED BY:	RG		
IMPLEMENTED:	02/2003		

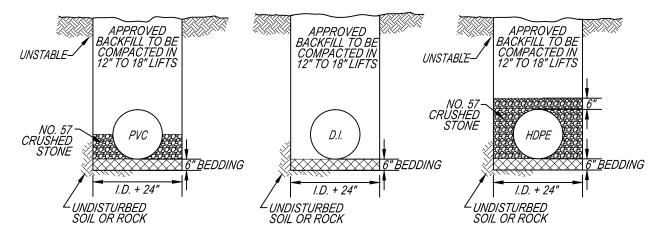
## TYPICAL 4" OR 6" DROP SERVICE LINE -STANDARD MANHOLE RING AND COVER CONCRETE-ASPHALT -MORTAR 12" BINDER **COMPACTED BASE** 18" MAX 8" **COMPACTED SUBGRADE PRECAST CONCENTRIC** CONE SECTION OPEN-ENDED TEE POLYPROPYLENE STEPS W/STEEL REINFORCEMENT -WELDED WIRE STAINLESS STEEL BANDS OR STRAPS ANCHORED TO THE WALL 24" OR GREATER 16" O.C. 48" MIN. 5" M/N. 2H: 1V MIN: 4" MIN. STAINLESS STEEL BANDS OR STRAPS **ANCHORED** TO THE WALL COMPACTED SOIL-**PROFILE** NOTES: SERVICE LINES SHALL BE A MINIMUM OF FOUR (4) INCHES ABOVE THE INVERT OF THE MANHOLE OR FLOW LINE OF OUTGOING PIPE. SERVICE LINES ANGLED AGAINST THE DIRECTION OF FLOW SHALL BE A MINIMUM SIX (6) INCHES ABOVE THE FLOWLINE. IF THE ANGLE IS GREATER THAN 135 DEGREES, THE SERVICE LINE SHALL TIE TO THE MAIN. ALL MANHOLES SHALL BE REQUIRED TO HAVE CLEAR LINE OF SIGHT PLAN SECTION A - A FROM THE RIM TO ALL PIPE INVERTS IN THE MANHOLE. ALL MANHOLE SECTIONS SHALL BE CYLINDRICAL SHAPED PRECAST STRUCTURAL CONCRETE. ALL MANHOLES SHALL BE PROPERLY GROUTED AND WATER TIGHT.



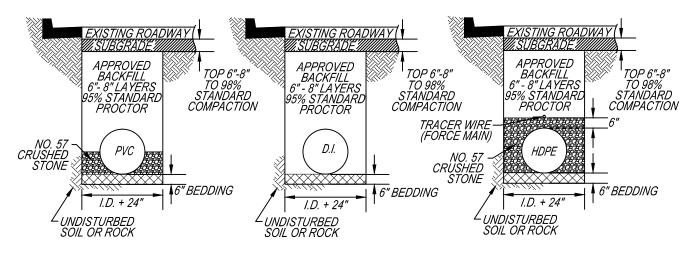
THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	11770	.AL 4	URO	<u> </u>
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	
SCALE:	N.T.S.		BS-10-30-07	
DRAWN BY:	BS		DCM 2010	
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

## BEDDING REQUIREMENTS FOR TRENCHES



## NON-STREET TRENCH



STREET TRENCH

#### NOTES:

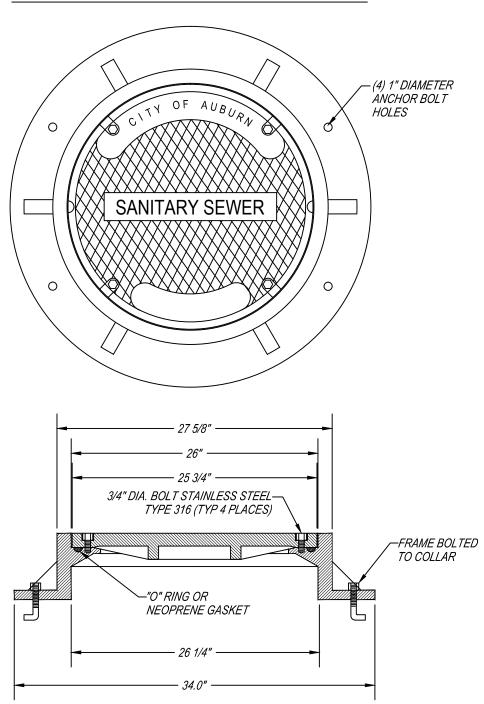
- 1. BEDDING MATERIALS FOR PVC AND HDPE PIPE SHALL BE 1/4" TO 1 1/2" GRADED CRUSHED STONE SUCH AS: 56,57,6,67,68,7,OR 78, STONE PER ALDOT STANDARD SPECS. SAND OR GRAVEL MAY BE USED AS BEDDING MATERIAL FOR D.I. PIPE.
- WIDTH VARIES BASED ON WALL STABILITY. STABLE WALLS WIDTH AS NEEDED TO JOIN PIPE AND COMPACT HAUNCHING AND INITIAL BACKFILL. UNSTABLE WALLS: WIDTH TO BE A MINIMUM OF FIVE TIMES PIPE DIAMETER.
- 3. FLOWABLE FILL CAN BE USED AS BACKFILL, BUT MUST HAVE PRIOR APPROVAL AND MUST BE ALLOWED TO SETUP FOR 24 HOURS PRIOR TO TOPPING.
- 4. APPROVED BACKFILL MATERIAL INCLUDES 825 B, FLOWABLE FILL AND APPROVED DIRT. ALTERNATIVE MATERIAL MUST BE APPROVED BY PROJECT MANAGER PRIOR TO USE.



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	BEDDI	ING RE	QUIREM	ENTS FOR TRENCHES
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	
SCALE:	N.T.S.		BS-10-30-07	-200
DRAWN BY:	BS		DCM 2010	21 IX
REVIEWED BY:	EC			. )///
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

### TYPICAL WATERTIGHT MANHOLE COVER



### NOTES:

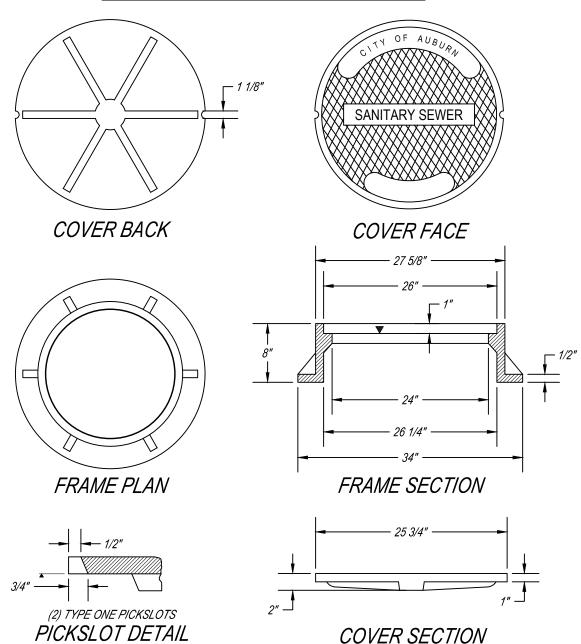
- REQUIRED FOR ALL MANHOLES WHERE THE RIM ELEVATION IS LESS THAN ONE (1) VERTICAL FOOT ABOVE THE 100-YEAR FLOODPLAIN ELEVATION.
- CAST IRON FRAME AND COVER IN ROADWAY AND TRAFFIC SHALL BE INSTALLED FLUSH WITH FINISHED GRADE OF THE PAVEMENT IN FLAT OR STEEP GRADES.
- THE FRAME AND COVER SHALL WEIGH APPROXIMATELY 370 POUNDS IN TRAFFIC AND NON TRAFFIC APPLICATIONS.
- THE DIAMETER OF THE COVER FOR ALL SANITARY SEWER MANHOLES SHALL BE 25 3/4".
- ALL COVERS SHALL BE MARKED "SANITARY SEWER" BY THE MANUFACTURER.
- APPROVED DRAWINGS ARE FROM US FOUNDRY (USF-152-BV-BWT CITY OF AUBURN).



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	TYPIC	CAL WA	ATERTIG	GHT MANHOLE COVER
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	
SCALE:	N.T.S.		BS-10-30-07	OAD
DRAWN BY:	BS		DCM 2010	2111
REVIEWED BY:	EC			.)///
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

## STANDARD MANHOLE RING & COVER



### NOTES:

- CAST IRON FRAME AND COVER IN ROADWAY AND TRAFFIC SHALL BE INSTALLED FLUSH WITH FINISHED GRADE OF THE PAVEMENT IN FLAT OR STEEP GRADES.
- THE FRAME AND COVER SHALL WEIGH APPROXIMATELY 370 POUNDS IN TRAFFIC AND NON TRAFFIC APPLICATIONS.
- THE DIAMETER OF THE COVER FOR ALL SANITARY SEWER MANHOLES SHALL BE 25 3/4".
- ALL COVERS SHALL BE MARKED "SANITARY SEWER" BY THE MANUFACTURER.
- APPROVED DRAWINGS ARE FROM US FOUNDRY (USF-152-BV CITY OF AUBURN) OR SIGMA CORPORATION (RMH-2565).

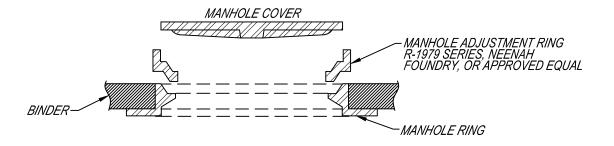
**▼** MACHINED BEARING SURFACE



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	STAN	DARD	MANHO	LE RING AND
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	
SCALE:	N.T.S.		BS-10-30-07	
DRAWN BY:	BS		DCM 2010	27
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			-

## MANHOLE ADJUSTMENT RISER

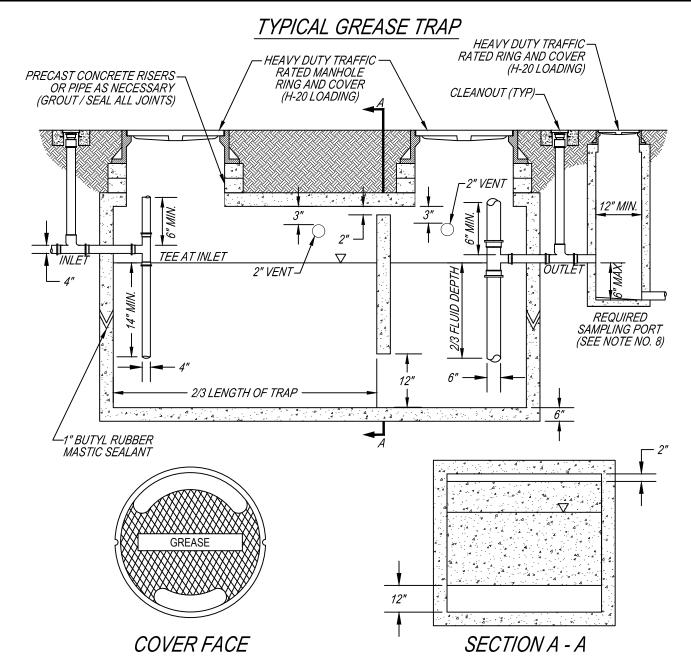


### NOTES:

- 1. ONE PIECE CONSTRUCTION, NO WELDS. COATED TO PREVENT RUST.
- 2. MULTIPLE RISERS ARE NOT ALLOWED.
- 3. ALL MANHOLES IN PAVEMENT MUST BE FLUSH WITH THE BINDER LAYER. THE MANHOLE ADJUSTMENT RISER SHALL BE USED UPON PLACEMENT OF WEARING SURFACE.



DRAWING TITLE:	ΜΑΝ	<u>IHOLE</u>	F ADJU	<u>/S</u>
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	
SCALE:	N.T.S.		BS-10-30-07	
DRAWN BY:	BS		DCM 2010	
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			



### NOTES:

- 1. MANHOLE, RING AND COVERS SHALL NOT BE COVERED, OR OBSCURED BY LANDSCAPING, PAVEMENT, ETC.
- 2. INLET AND OUTLET PIPES SHALL BE SCHEDULE 40 PVC, AND SHALL NOT BE COVERED OR CAPPED.
- 3. INLET PIPE MUST BE A MINIMUM OF 4" IN DIAMETER. VERTICAL PIPE ON OUTLET SIDE MUST BE A MINIMUM OF 6" IN DIAMETER.
- 4. TRAPS SHALL NOT BE LOCATED IN AN ENTRANCE, EXIT, DRIVE-THRU, OR UNDER A MENU BOARD.
- 5. SIZE TO BE PER STANDARD SIZING WORKSHEET (MIN. 500 GALLONS).
- 6. 2" DIAMETER VENTS TO BE CONNECTED TO BUILDING VENT SYSTEM (WHERE REQUIRED BY THE PLUMBING PLANS).
- 7. GREASE TRAPS SHALL MEET STATE OF ALABAMA HEALTH REGULATIONS SECTION 420-3-1-23: 420-3-1-24: 420-3-1-25
- 8. A DOWNSTREAM SAMPLING PORT OR MANHOLE WILL BE REQUIRED. NO OTHER CONNECTIONS ARE ALLOWED BETWEEN GREASE TRAP AND SAMPLING MANHOLE.
- RESTROOM AND NON GREASE LADEN WASTE SHALL NOT PASS THROUGH THE GREASE TRAP.



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	TYP	P/CAL	<u> </u>	7 <u>E</u>
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	
SCALE:	N.T.S.		BS-10-30-07	
DRAWN BY:	BS		DCM 2010	
REVIEWED BY:	EC		JC-10-2011	
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

## TYPICAL OIL/GRIT SEPARATOR HEAVY DUTY TRAFFIC PRECAST CONCRETE RISERS RATED MANHOLE CLEANOUT-OR PIPE AS NECESSARY RING AND COVER (GROUT / SEAL ALL JOINTS) (H-20 LOADING) P TEE AT INLET INLET ŌUTLĔŦ 1/2 FLUID DEPTH 14" 2/3 LENGTH OF TRAP 4.44 a 4.4 1" BUTYL RUBBER MASTIC SEALANT 4" DIA. HOLE

### NOTES:

1. MANHOLE RING AND COVERS SHALL NOT BE COVERED, OR OBSCURED BY LANDSCAPING, PAVEMENT, ETC.

SECTION A - A

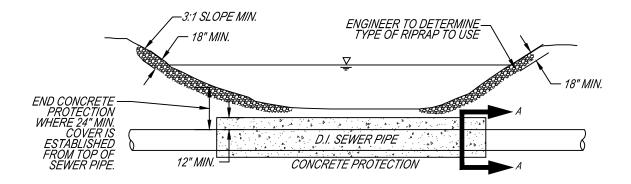
- 2. INLET AND OUTLET PIPES SHALL BE SCHEDULE 40 PVC, AND SHALL NOT BE COVERED OR CAPPED.
- INLET PIPE MUST BE A MINIMUM OF 4" DIAMETER. VERTICAL PIPE ON OUTLET SIDE MUST BE A MINIMUM OF 6" IN DIAMETER.
- 4. SEPARATOR SHALL NOT BE LOCATED IN AN ENTRANCE, EXIT, DRIVE-THRU, OR UNDER A MENU BOARD.
- 5. MINIMUM SIZE: 1000 GALLONS.

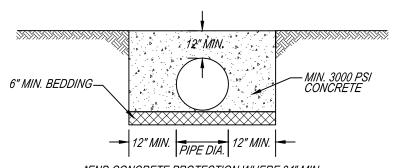


THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	/ YP/	<u>'CAL</u>	OIL/GI	4
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	_
SCALE:	N.T.S.		BS-10-30-07	
DRAWN BY:	BS		DCM 2010	
REVIEWED BY:	EC		JC-10-2011	
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			

### TYPICAL STREAM CROSSING





\*END CONCRETE PROTECTION WHERE 24" MIN. COVER IS ESTABLISHED FROM TOP OF SEWER PIPE.

DETAIL SECTION A - A

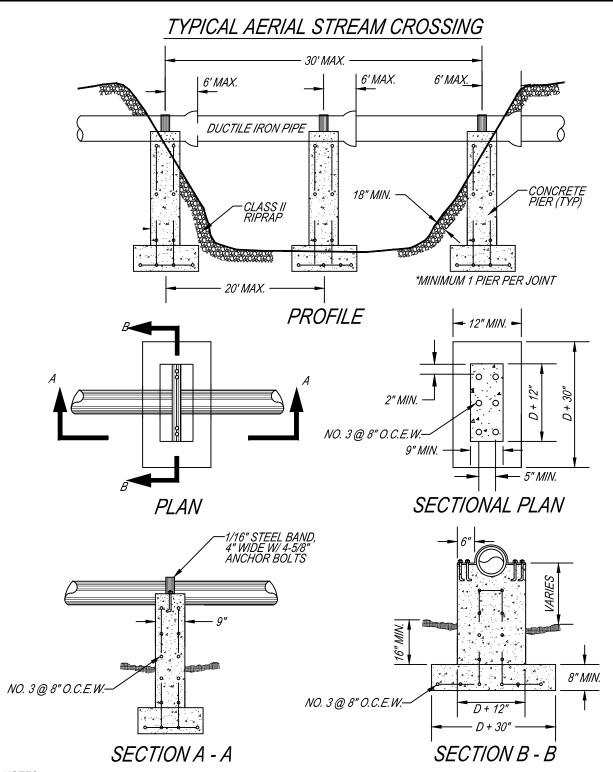
### NOTES:

- 1. ALL CREEK CROSSINGS SHALL BE DUCTILE IRON, PRESSURE CLASS 350 PIPE.
- 2. PIPE SHALL HAVE LOCKING GASKETS OR RESTRAINED JOINTS WHERE LOCATED INSIDE STREAM BANKS.
- 3. END CONCRETE PROTECTION WHERE 24" MINIMUM COVER IS ESTABLISHED FROM THE TOP OF THE SEWER PIPE.



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	1 YP	<u> 1CAL</u>	SIRE	<u>-4/</u>
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	
SCALE:	N.T.S.		BS-10-30-07	
DRAWN BY:	BS		DCM 2010	
REVIEWED BY:	EC			
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			



### NOTES:

- 1. ALL CREEK CROSSINGS SHALL BE DUCTILE IRON, PRESSURE CLASS 350 PIPE.
- 2. FOUNDATION AND OR FOOTINGS FOR PIERS SHALL BE PLACED A MINIMUM OF TWO (2) FEET BELOW STREAM BED OR ANCHORED TO SOLID ROCK AND SHALL BE CERTIFIED BY A GEOTECHNICAL ENGINEER.
- 3. PIPE SHALL HAVE LOCKING GASKETS OR RESTRAINED JOINTS.



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	TYPI	CAL A	ERIAL S
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04
SCALE:	N.T.S.		BS-10-30-07
DRAWN BY:	BS		DCM 2010
REVIEWED BY:	EC		
APPROVED BY:	RG		
IMPLEMENTED:	02/2003		

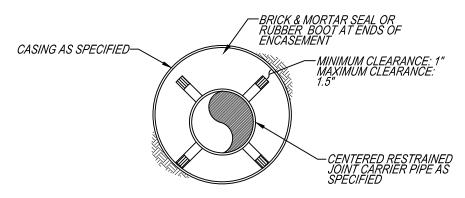
### TYPICAL BORE ENCASEMENT

CARRI	IER PIPE	SPACER	STEEL EI	VCASEMENT
NOMINAL PIPE DIAMETER	STANDARD PIPE BELL O.D.*	CASING SPACER BAND WIDTH	MINIMUM CASING THICKNESS	MINIMUM CASING DIAMETER**
4	6.40	8	0.25	14
6	8.60	8	0.25	16
8	11.16	8	0.25	18
10	13.25	8	0.25	20
12	15.22	8	0.25	22
14	17.73	12	0.25	24
16	19.86	12	0.3125	<i>26</i>
18	22.16	12	0.3125	<i>30</i>
20	24.28	12	0.3125	<i>32</i>
24	28.50	12	0.3125	<i>36</i>
30	34.95	12	0.5	42
36	41.37	12	0.5	48

ALL SIZES INDICATED ARE IN INCHES

\*PIPE BELL OUTSIDE DIAMETER BASED ON PRESSURE CLASS 350 DUCTILE IRON PIPE.

\*\*CASING DIAMETERS BASED ON BEING A MINIMUM OF 6 INCHES GREATER THAN THE OUTER DIAMETER OF THE JOINT BELL, TO THE NEAREST EVEN SIZE.



## CASING SECTION

### **NOTES**

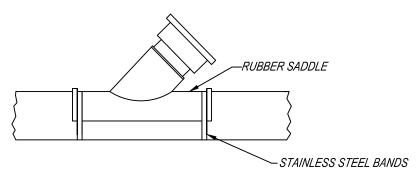
- ALL SPACER BANDS SHALL BE MADE FROM T-304 STAINLESS STEEL OF A MINIMUM 14 GAUGE THICKNESS.
- 2. ALL SPACERS SHALL HAVE A SYNTHETIC RUBBER OR PVC LINER TO INSULATE THE PIPELINE FROM THE SPACER.
- 3. ALL SPACERS SHALL HAVE 1.5" WIDE GLASS REINFORCED PLASTIC OR UHMW POLYMER RUNNERS TO INSULATE THE SPACER.
- 4. SPACERS TO BE MANUFACTURED BY CASCADE WATERWORKS MFG. CO. (PSI) PIPELINE SEAL AND INSULATOR, INC. OR EQUAL.
- 5. 6" THRU 12" DIAMETER PIPELINE SHALL USE 8" WIDE BANDS: GREATER THAN 12" DIAMETER PIPELINES SHALL USE 12" WIDE BANDS.
- 6. CENTERED RESTRAINED CASING SPACERS SHALL BE SPACED AT A MAXIMUM OF TEN FEET APART WITH A MINIMUM OF TWO SPACERS PER JOINT OF PIPE.



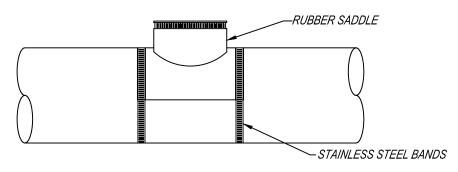
THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	1 YP	<u>ICAL</u>	BURE
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04
SCALE:	N.T.S.		BS-10-30-07
DRAWN BY:	BS		DCM 2010
REVIEWED BY:	EC		
APPROVED BY:	RG		
IMPLEMENTED:	02/2003		

## TYPICAL SERVICE CONNECTIONS



### RUBBER WYE SADDLE



### RUBBER TEE SADDLE



PVC SADDLE FOR USE WITH MAINS 3034 OR SCH. 40 - STAINLESS STEEL BANDS

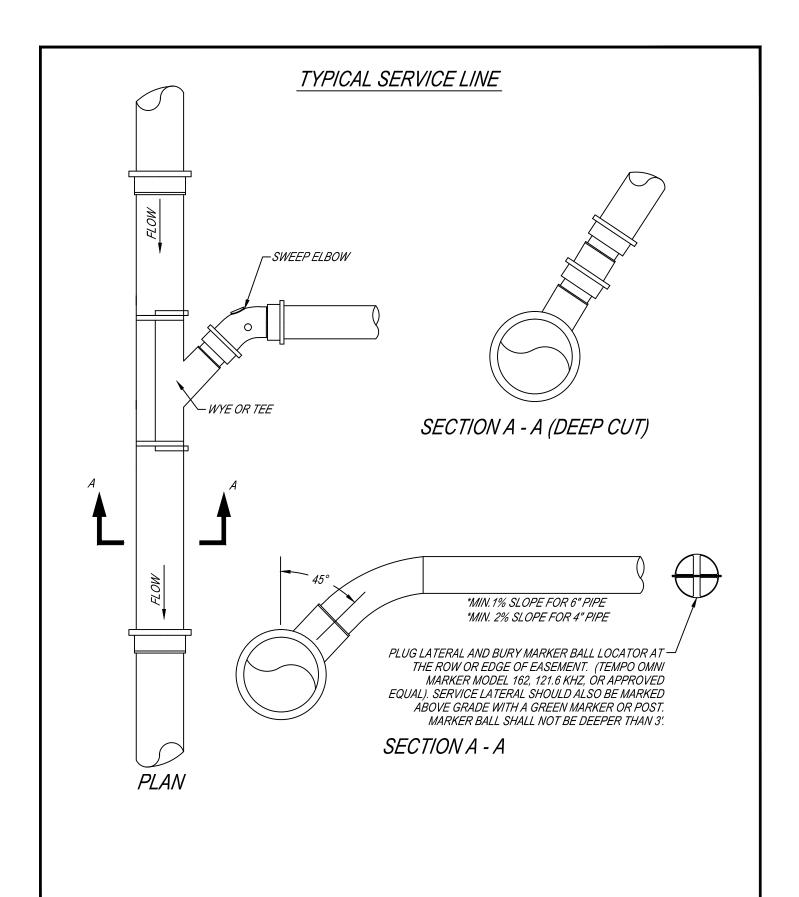
### NOTE

ALL CONNECTIONS SHALL BE MADE WITH AN APPROVED TYPE SADDLE FITTING. THE SADDLE SHALL BE PLACED OVER A CAREFULLY CUT OPENING IN THE UPPER QUADRANT OF THE SEWER MAIN AND ATTACHED TO THE MAIN USING STAINLESS STEEL BANDS. UNDER NO CIRCUMSTANCES SHALL ANY LATERAL CONNECTION BE ALLOWED TO PROTRUDE INTO THE SEWER MAIN.



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	/ YP/	CAL	SERVIC
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04
SCALE:	N.T.S.		BS-10-30-07
DRAWN BY:	BS		DCM 2010
REVIEWED BY:	EC		
APPROVED BY:	RG		
IMPLEMENTED:	02/2003		

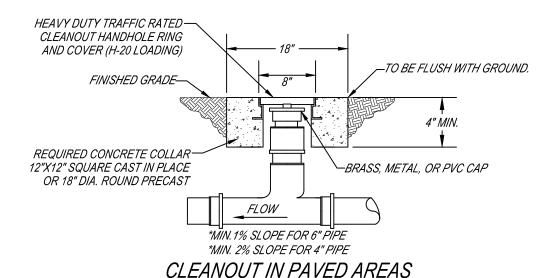


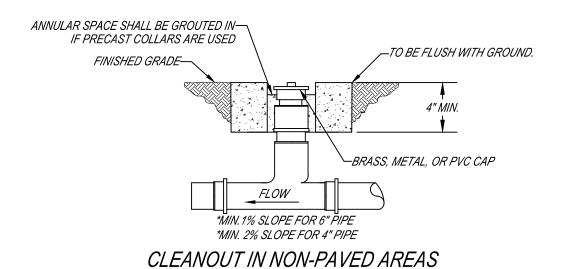


THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	<u> </u>	CAL	SERVI
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04
SCALE:	N.T.S.		BS-10-30-07
DRAWN BY:	BS		DCM 2010
REVIEWED BY:	EC		
APPROVED BY:	RG		
IMPLEMENTED:	02/2003		

### TYPICAL CLEANOUT





### NOTE:

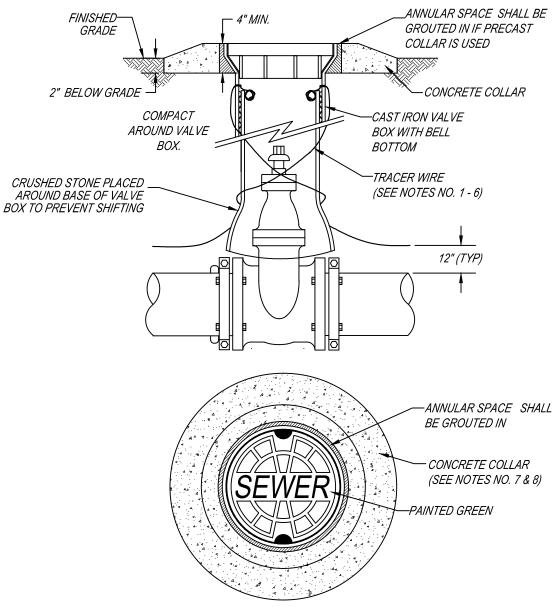
1. CLEANOUTS ARE
REQUIRED AT THE EDGE
OF ALL EASEMENTS AND
RIGHT OF WAYS, UNLESS
APPROVED OTHERWISE.



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	TYP	<u>ICAL</u>	<u>CLEAI</u>	1
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.			
DRAWN BY:	BS			
REVIEWED BY:	JC			
APPROVED BY:	EC			
IMPLEMENTED:	02/2003			

### TYPICAL VALVE BOX INSTALLATION



### NOTES:

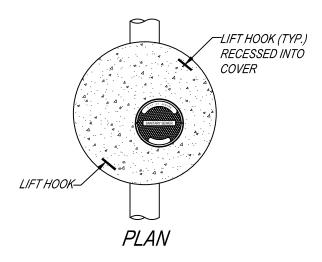
- TRACER WIRE SHALL BE BROUGHT TO GRADE AT A MINIMUM OF EVERY 500 FEET IN A VALVE BOX.
- TRACER WIRE SHALL BE WRAPPED AROUND THE VALVE BOX TO PREVENT MOVEMENT.
- A 3/16" DIAMETER HOLE SHALL BE LOCATED IN THE VALVE BOX NO MORE THAN 6 INCHES BELOW GRADE FOR THE TRACER WIRE TO PULL THROUGH.
- THE TRACER WIRE SHALL BE KNOTTED INSIDE THE VALVE BOX TO PREVENT SLIPPING BACK THROUGH THE HOLE.
- 5. A MINIMUM OF 12 INCHES OF EXCESS WIRE SHALL BE COILED AND LEFT IN THE VALVE BOX.
- TRACER WIRE SHALL BE NO. 14 A.W.G. COPPER CLAD STEEL W/ POLYETHYLENE INSULATION.
- CONCRETE COLLAR MAY BE CAST-IN-PLACE OR PRECAST AND MAY BE ROUND OR SQUARE IN SHAPE.
- CONCRETE COLLAR SHALL BE A MIN. 4" THICK.

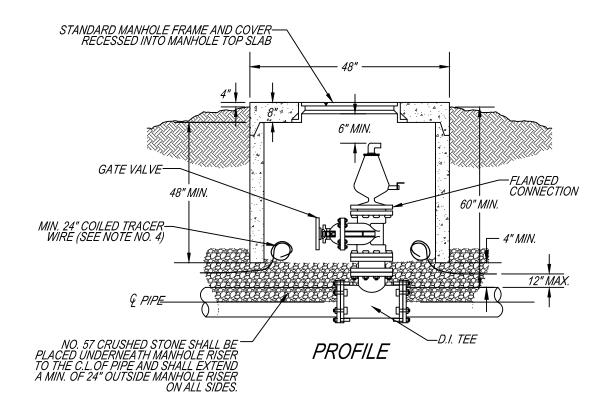


THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	TYPI	CAL VA	LVE B	OX INSTALLATION
DEPARTMENT:	WRM	REVISIONS:	DCM 2010	
SCALE:	N.T.S.			OOO
DRAWN BY:	BS			221
REVIEWED BY:	JC			. ). ) /
APPROVED BY:	EC			OOL
IMPLEMENTED:	02/2003			<u> </u>

### COMBINATION AIR RELEASE & AIR/VACUUM VALVE





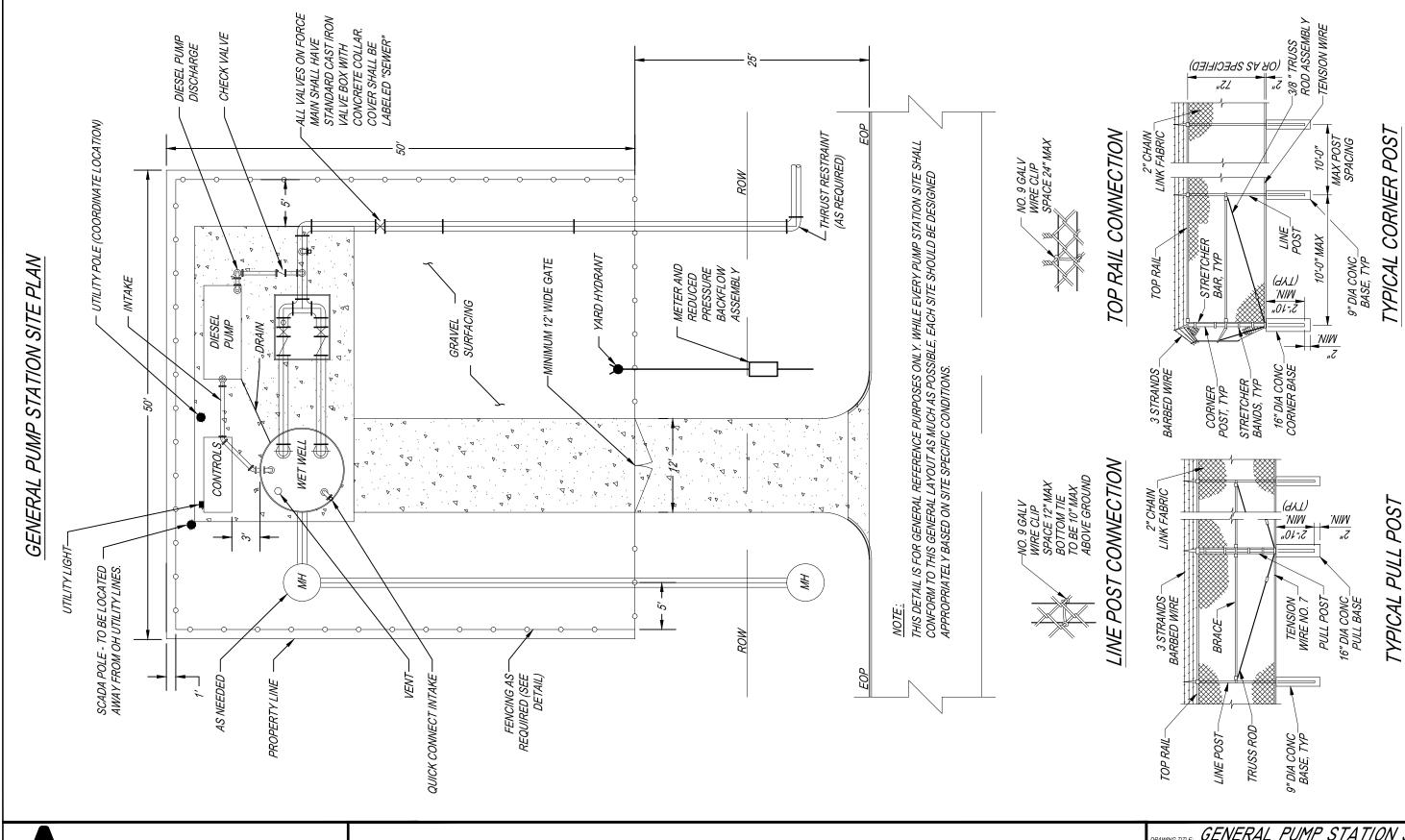
### NOTES:

- -AIR RELEASE VALVES SHALL BE MANUFACTURED BY ARI OR APPROVED EQUAL. 1.
- 2. VALVE BODY SHALL BE STAINLESS STEEL.
- 3. AIR RELEASE VALVES SHALL BE INSTALLED ON A LEVEL SECTION OF PIPE, EQUIDISTANT BETWEEN JOINTS.
- TRACER WIRE SHALL BE NO. 14 A.W.G. COPPER CLAD STEEL W/ POLYETHYLENE INSULATION.



THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	COMBIN	IATION	AIR RELE	ASE & AIR/VACUUM VALVE
DEPARTMENT:	WRM	REVISIONS:	GM-04-30-04	
SCALE:	N.T.S.		BS-10-30-07	
DRAWN BY:	BS		DCM 2010	22/1
REVIEWED BY:	EC			. ). )4
APPROVED BY:	RG			
IMPLEMENTED:	02/2003			



THE CITY OF AUBURN, AL

STANDARD SANITARY SEWER DETAILS

DRAWING TITLE: GENERAL PUMP STATION SITE PLAN

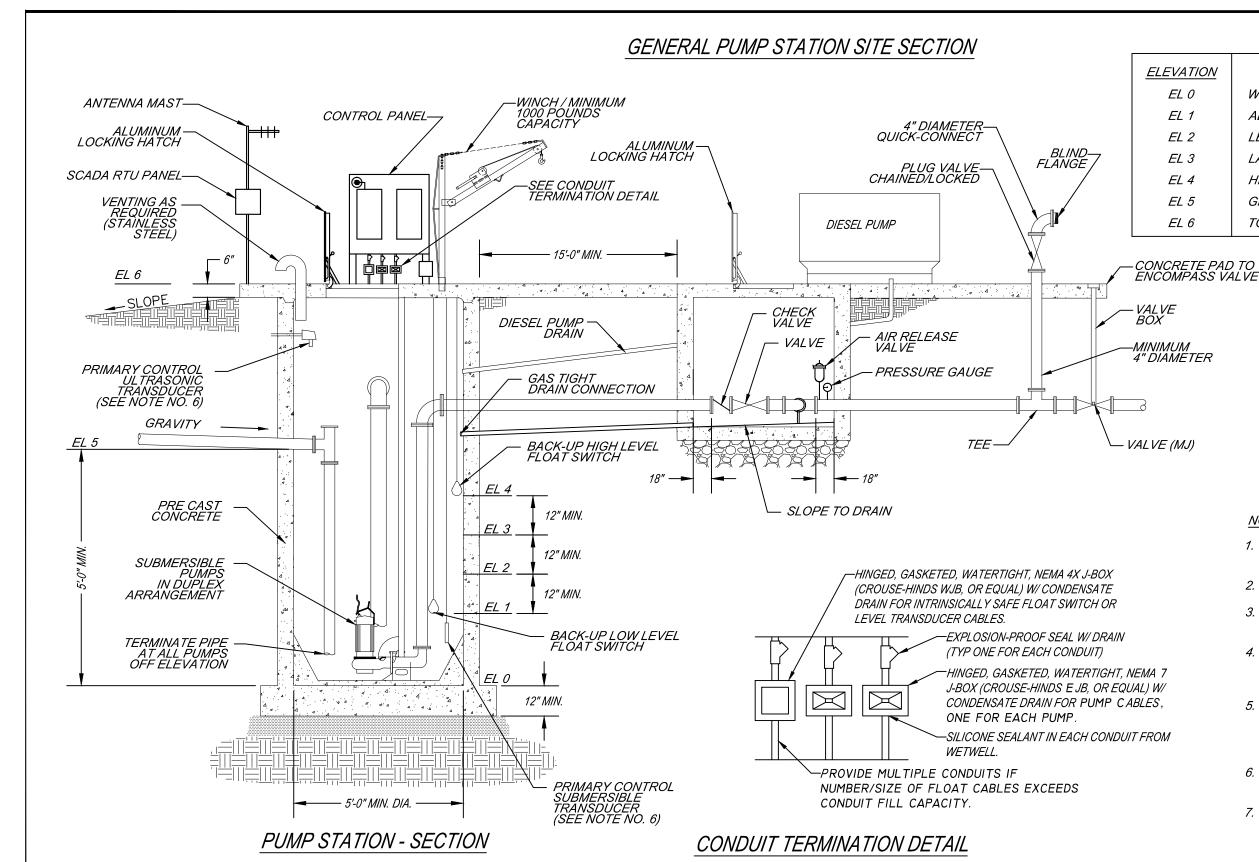
DEPARTMENT: WRM REVISIONS:

SCALE: N.T.S.

DRAWN BY: CN

REVIEWED BY: JC

APPROVED BY: MPLEMENTED: FENCE NOTES: 1. BRACE AND TRUSS ROD REQUIRED AT GATES AND SIDE OF ALL CORNER POSTS. 2. FABRIC ATTACHED TO OUTSIDE OF POSTS.



### NOTES:

DESCRIPTION

WET-WELL INVERT

ALL PUMPS OFF

LEAD PUMP ON

LAG PUMP ON

HIGH LEVEL ALARM

GRAVITY INVERT

TOP OF WET-WELL

VALUE

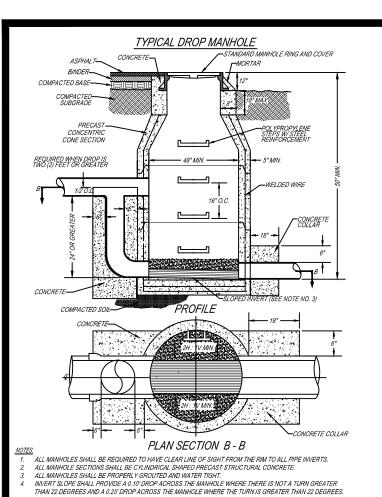
**NOTES** 

- 1. ELEVATION OF THE TOP OF THE PUMP STATION SHALL BE A MINIMUM 2'-0" ABOVE THE 100 YEAR FLOOD ELEVATION.
- 2. INTERIOR OF WET WELL TO BE LINED WITH HDPE, PVC, OR APPROVED EPOXY LINING.
- 3. ALL PIPING ON SITE TO BE DUCTILE IRON WITH EPOXY LINING SUITABLE FOR WASTEWATER SERVICE.
- 4. DIESEL PUMP SHALL BE SIZED TO HANDLE THE PEAK HOURLY DISCHARGE OF THE STATION AND SHALL HAVE A MINIMUM 24 HOUR FUEL CAPACITY.
- 5. WET WELL SIZE TO BE BASED ON SPECIFIC DESIGN CRITERIA. MINIMUM 5'-0" DIAMETER AND 5'-0" DEPTH FROM THE LOWEST INCOMING PIPE INVERT TO THE WET WELL BOTTOM.
- 6. PRIMARY LEVEL CONTROL SHALL UTILIZE A 4-20mA SUBMERSIBLE OR ULTRASONIC TRANSDUCER, AS APPROVED.
- 7. THIS IS A GENERAL SCHEMATIC DRAWING. EACH STATION SHALL HAVE A DETAILED SITE SPECIFIC DESIGN.



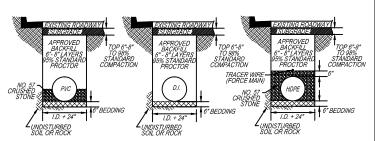
THE CITY OF AUBURN, AL STANDARD SANITARY SEWER DETAILS

DRAWING TITLE:	GENE	RAL PUMP ST	ATION SITE SECTION
DEPARTMENT:	WRM	REVISIONS:	
SCALE:	N.T.S.		$\alpha$
DRAWN BY:	CN		
REVIEWED BY:	JC		], ]()
APPROVED BY:	EC		
IMPLEMENTED:	DCM 2010		



- INSTARIF-

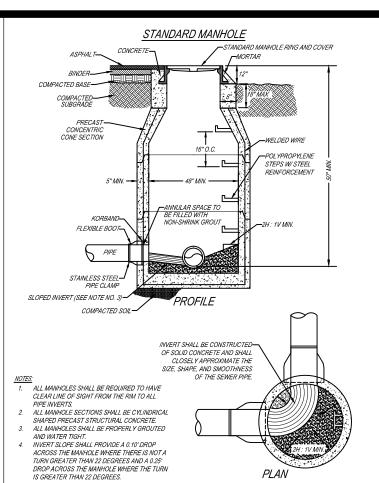
### NON-STREET TRENCH

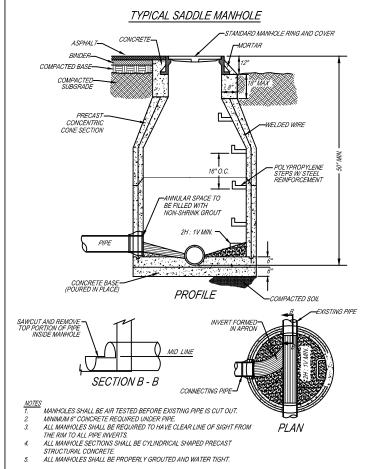


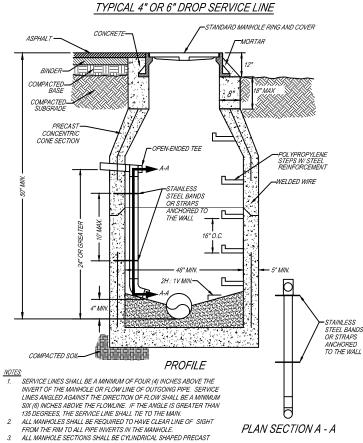
### STREET TRENCH

### NOTES:

- BEDDING MATERIALS FOR PVC AND HDPE PIPE SHALL BE 1/4" TO 1 1/2" GRADED CRUSHED STONE SUCH AS: 56,57,6,67,68,7,OR 78, STONE PER ALDOT STANDARD SPECS. SAND OR GRAVEL MAY BE USED AS BEDDING
- MATERIAL FOR D.I. PIPE. WIDTH VARIES BASED ON WALL STABILITY. STABLE WALLS WIDTH AS NEEDED TO JOIN PIPE AND COMPACT HAUNCHING AND INITIAL BACKFILL. UNSTABLE WALLS: WIDTH TO BE A MINIMUM OF FIVE TIMES PIPE
- DIAMETER.
  FLOWABLE FILL CAN BE USED AS BACKFILL, BUT MUST HAVE PRIOR APPROVAL AND MUST BE ALLOWED TO
- SETUP FOR 24 HOURS PRIOR TO TOPPING. APPROVED BACKFILL MATERIAL INCLUDES 825 B, FLOWABLE FILL AND APPROVED DIRT. ALTERNATIVE MATERIAL MUST BE APPROVED BY PROJECT MANAGER PRIOR TO USE.



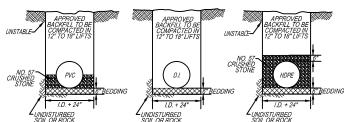


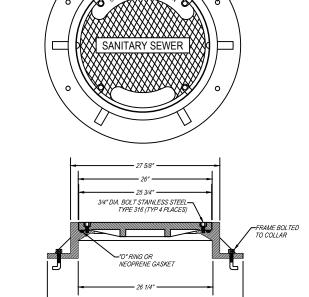


- 3. ALL MANHOLE SECTIONS SHALL BE CYLINDRICAL SHAPED PRECAST STRUCTURAL CONCRETE.

  4. ALL MANHOLES SHALL BE PROPERLY GROUTED AND WATER TIGHT.

### BEDDING REQUIREMENTS FOR TRENCHES

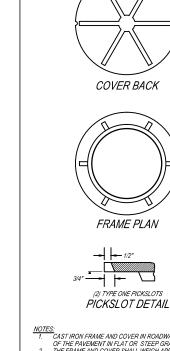




- S: REQUIRED FOR ALL MANHOLES WHERE THE RIM ELEVATION IS LESS THAN ONE (1) VERTICAL FOOT ABOVE THE 100 YEAR FLOODPLAIN ELEVATION. CAST IRON FRAME AND COVER IN ROADWAY AND TRAFFIC SHALL BE INSTALLED FLUSH WITH FINISHED GRADE OF
- DASI INDIVERSIA IND LOVER IN VOLUMENT AND TRAFFIC STRUCT DE INSTITUTE PLOST WITH FAIR AND COVER STRUCT WAS STEEP GRADE OF THE PAYER AND COVER STRUCT REGISTRANCE AND TRAFFIC APPLICATIONS. THE DIAMETER OF THE COVER FOR ALL SANTARY SEVER MANHOLES SHALL BE 25 34\*.
  ALL COVERS SHALL BE MARKED "SANTARY SEVER BY THE MANUFACTURER.
  APPROVED DRAWINGS ARE FROM US FOLINDRY (USF-152-8-BWT CTV OF AUBURN).

## TYPICAL WATERTIGHT MANHOLE COVER

-(4) 1" DIAMETER ANCHOR BOLT



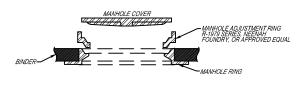
**COVER FACE** FRAME PLAN FRAME SECTION (2) TYPE ONE PICKS/ OTS COVER SECTION

STANDARD MANHOLE RING & COVER

## NOTES: 1. CAST IRON FRAME AND COVER IN ROADWAY AND TRAFFIC SHALL BE INSTALLED FLUSH WITH FINISHED GRADE OF THE PAVEMENT IN FLAT OR STEEP GRADES. 2. THE FRAME AND COVER SHALL WEIGH APPROXIMATELY 370 POUNDS IN TRAFFIC AND NON TRAFFIC APPLICATIONS. 3. THE DIAMETER OF THE COVER FOR ALL SANITARY SEWER MANHOLES SHALL BE 25 3/4". 4. ALL COVERS SHALL BE MARKED 'SANITARY SEWER' BY THE MANUFACTURER. 5. APPROVED DRAWINGS ARE FROM US FOUNDRY (USF-152-BV CITY OF AUBURN) OR SIGMA CORPORATION (BUHL-2761)

- - ▼ MACHINED BEARING SURFACE

### MANHOLE ADJUSTMENT RISER

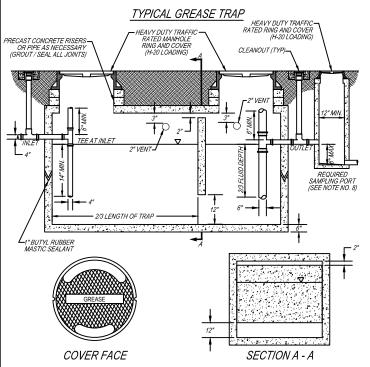


- ONE PIECE CONSTRUCTION, NO WELDS. COATED TO PREVENT RUST.
- MULTIPLE RISERS ARE NOT ALLOWED.

  ALL MANHOLES IN PAYEMENT MUST BE FLUSH WITH THE BINDER
  LAYER. THE MANHOLE ADJUSTMENT RISER SHALL BE USED UPON
  PLACEMENT OF WEARING SURFACE.

### STANDARD DETAILS: SANITARY SEWER - SHEET I OF 3



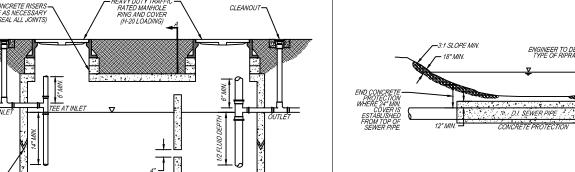


- MANHOLE RING AND COVERS SHALL NOT BE COVERED OR OBSCURED BY LANDSCAPING PAVEMENT. FTC.
- INLET AND OUTLET PIPES SHALL BE SCHEDULE 40 PVC, AND SHALL NOT BE COVERED OR CAPEUR.

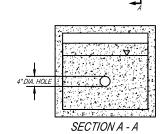
  INLET PIPE MUST BE A MINIMUM OF 4" IN DIAMETER. VERTICAL PIPE ON OUTLET SIDE MUST BE A MINIMUM OF 6" IN

- DIAMETER.
  TRAPS SHALL NOT BE LOCATED IN AN ENTRANCE, EXIT, DRIVE-THRU, OR UNDER A MENU BOARD.
  SIZE TO BE PER STANDARD SIZING WORKSHEET (MIN. 500 GALLONS).
  2" DIAMETER VENTS TO BE CONNECTED TO BUILDING VENT SYSTEM (WHERE REQUIRED BY THE PLUMBING PLANS).
  GREASE TRAPS SHALL MEET STATE OF ALABAMA HEALTH REQULATIONS SECTION 420-3-1-23: 420-3-1-24: 420-3-1-25
  A DOWNSTREAM SAMPLING PORT OR MANHOLE WILL BE REQUIRED. NO OTHER CONNECTIONS ARE ALLOWED
- BETWEEN GREASE TRAP AND SAMPLING MANHOLE. RESTROOM AND NON GREASE LADEN WASTE SHALL NOT PASS THROUGH THE GREASE TRAP.

### TYPICAL OIL/GRIT SEPARATOR TYPICAL STREAM CROSSING



CLEANOUT-

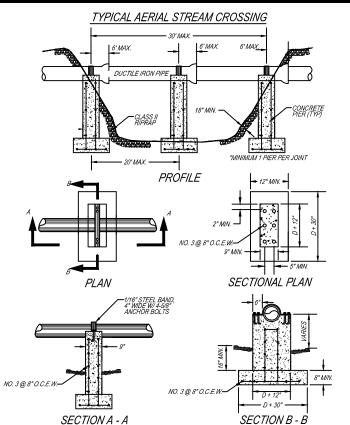


- 2/3 I ENGTH OF TRAP

- MANHOLE RING AND COVERS SHALL NOT BE COVERED, OR OBSCURED BY LANDSCAPING, PAVEMENT, ETC.
  INLET AND OUTLET PIPES SHALL BE SCHEDULE 40 PVC, AND SHALL NOT BE COVERED OR CAPPED.
  INLET PIPE MUST BE A MINIMUM OF 4" DIAMETER. VERTICAL PIPE ON OUTLET SIDE MUST BE A MINIMUM OF
- SEPARATOR SHALL NOT BE LOCATED IN AN ENTRANCE, EXIT, DRIVE-THRU, OR UNDER A MENU BOARD.
- NOTES:
  1. ALL CREEK CROSSINGS SHALL BE DUCTILE IRON, PRESSURE CLASS 350 PIPE.
  2. PIPE SHALL HAVE LOCKING GASKETS OR RESTRAINED JOINTS WHERE LOCATED INSIDE STREAM BANKS.
  3. END CONCRETE PROTECTION WHERE 24" MINIMUM COVER IS ESTABLISHED FROM THE TOP OF THE SEWER 1000.

\*END CONCRETE PROTECTION WHERE 24" MIN. COVER IS ESTABLISHED FROM TOP OF SEWER PIPE. DETAIL SECTION A - A

6" MIN. BEDDING



- PIPE SHALL HAVE LOCKING GASKETS OR RESTRAINED JOINTS.

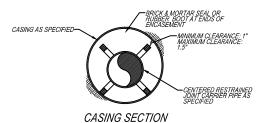
### TYPICAL BORE ENCASEMENT

CARR	IER PIPE	SPACER	STEEL EI	VCASEMENT
NOMINAL PIPE DIAMETER	STANDARD PIPE BELL O.D.*	CASING SPACER BAND WIDTH	MINIMUM CASING THICKNESS	MINIMUM CASING DIAMETER**
4	6.40	8	0.25	14
6	8.60	8	0.25	16
8	11.16	8	0.25	18
10	13.25	8	0.25	20
12	15.22	8	0.25	22
14	17.73	12	0.25	24
16	19.86	12	0.3125	26
18	22.16	12	0.3125	30
20	24.28	12	0.3125	32
24	28.50	12	0.3125	36
30	34.95	12	0.5	42
36	41.37	12	0.5	48
ALL CIZEC INC	NOATED ADE IA	UNOUEO		

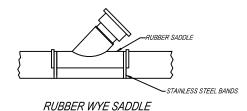
ALL SIZES INDICATED ARE IN INCHES

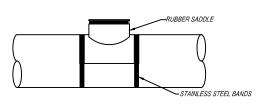
\*\*PIPE BELL OUTSIDE DIAMETER BASED ON PRESSURE CLASS 350 DUCTILE IRON PIPE.

\*\*CASING DIAMETERS BASED ON BEING A MINIMUM OF 6 INCHES GREATER THAN THE OUTER DIAMETER OF THE JOINT BELL, TO THE NEAREST EVEN SIZE



### TYPICAL SERVICE CONNECTIONS



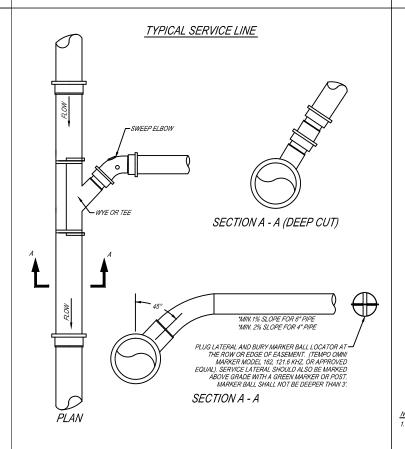




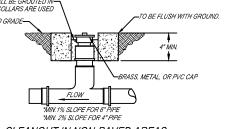
RUBBER TEE SADDLE

PVC SADDLE FOR USE WITH MAINS 3034 OR SCH. 40 - STAINLESS STEEL BANDS

ALL CONNECTIONS SHALL BE MADE WITH AN APPROVED TYPE SADDLE FITTING. THE SADDLE SHALL BE PLACED OVER A CAREFULLY CUT OPENING IN THE UPPER QUADRANT OF THE SEWER MAIN AND ATTACHED TO THE MINI USING STAINLESS
STEEL BANDS. UNDER NO CIRCUMSTANCES SHALL ANY LATERAL CONNECTION BE ALLOWED TO PROTRUDE INTO THE



### TYPICAL CLEANOUT HEAVY DUTY TRAFFIC RATED TO BE FLUSH WITH GROUND. FINISHED GRADE REQUIRED CONCRETE COLLAR BRASS, METAL, OR PVC CAP 12"X12" SQUARE CAST IN PLACE FLOW \*MIN.1% SLOPE FOR 6" PIPE \*MIN 2% SLOPE FOR 4" PIPE CLEANOUT IN PAVED AREAS ANNULAR SPACE SHALL BE GROUTED IN IF PRECAST COLLARS ARE USED TO BE FLUSH WITH GROUND. FINISHED GRADE-

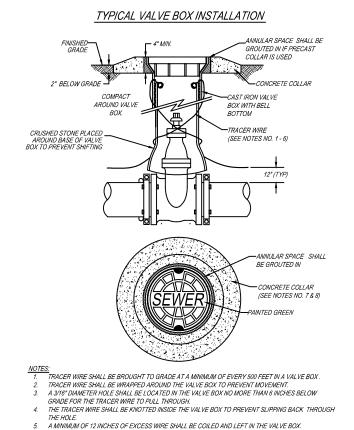


CLEANOUT IN NON-PAVED AREAS

NOTE: CLEANOLITS ARE REQUIRED AT THE EDGE OF ALL EASEMENTS AND RIGHT OF WAYS, UNLESS APPROVED OTHERWISE.

# STANDARD DETAILS: SANITARY SEWER - SHEET 2 OF 3

# ALL SPACER BANDS SHALL BE MADE FROM T-304 STAINLESS STEEL OF A MINIMUM 14 GAUGE THICKNESS. ALL SPACERS SHALL HAVE A SYNTHETIC RUBBER OR PVC LINER TO INSULATE THE PIPELINE FROM THE SPACER. ALL SPACERS SHALL HAVE 1.5" WIDE GLASS REINFORCED PLASTIC OR UHMW POLYMER RUNNERS TO INSULATE THE SPACER. SPACERS TO BE MANUFACTURED BY CASCADE WATERWORKS MFG. CO. (PSI) PIPELINE SEAL AND INSULATOR. INC. OR EQUAL 6" THRU 12" DIAMETER PIPELINE SHALL USE 8" WIDE BANDS: GREATER THAN 12" DIAMETER PIPELINES SHALL USE 12" WIDE BANDS. CREATER THAN 12" DIAMETER PIPELINES SHALL USE 12" WIDE BANDS. CREATER THAN 12" DIAMETER PIPELINES SHALL USE 12" WIDE BANDS: GREATER THAN 12" DIAMETER PIPELINES SHALL USE 12" WIDE BANDS.



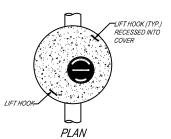
TRACER WIRE SHALL BE NO. 14 A.W.G. COPPER CLAD STEEL W/ POLYETHYLENE INSULATION

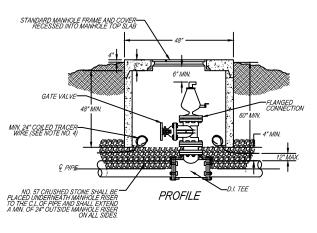
CONCRETE COLLAR MAY BE CAST-IN-PLACE OR PRECAST AND MAY BE ROUND OR SQUARE IN SHAPE. CONCRETE COLLAR SHALL BE A MIN. 4" THICK.

--- 5'-0" MIN. DIA. -

PUMP STATION - SECTION

COMBINATION AIR RELEASE & AIR/VACUUM VALVE





- <u>..</u> AIR RELEASE VALVES SHALL BE MANUFACTURED BY ARI OR APPROVED EQUAL.

GENERAL PUMP STATION SITE SECTION

 $\bowtie$ 

CONDUIT TERMINATION DETAIL

CONDUIT FILL CAPACITY

VALVE BODY SHALL BE STAINLESS STEEL. AIR RELEASE VALVES SHALL BE INSTALLED ON A LEVEL SECTION OF PIPE, EQUIDISTANT BETWEEN JOINTS. TRACER WIRE SHALL BE NO. 14 A.W.G. COPPER CLAD STEEL W/ POLYETHYLENE INSULATION.

J-BOX (CROUSE-HINDS E JB. OR EQUAL) W/

CONDENSATE DRAIN FOR PUMP CABLES, ONE FOR EACH PUMP. -SILICONE SEALANT IN EACH CONDUIT FROM

WETWELL. 

### **ELEVATION** FI 0 ANTENNA MAST-CONTROL PANEL-EL 1 ALUMINUM LOCKING HATCH EL 2 ALUMINUM LOCKING HATCH EL 3 PLUG VALVE-CHAINED/LOCKED SCADA RTU PANEL EL 4 SEE CONDUIT FERMINATION DETAIL EL 5 REQUIRED (STAINLESS STEEL) DIESEL PUMP FL 6 SLOPE CHECK VALVE DIESEL PUMP - AIR RELEASE VALVE - VAI VE PRIMARY CONTRO ULTRASONI TRANSDUCEI (SEE NOTE NO. 0 GAS TIGHT DRAIN CONNECTION BACK-UP HIGH LEVEL FLOAT SWITCH - VALVE (MJ) PRE CAST CONCRETE - SLOPE TO DRAIN 12" MIN NOTES: SUBMERSIBLE HINGED GASKETED WATERTIGHT NEMA 4X J-ROX (CROUSE-HINDS WJB, OR EQUAL) W/ CONDENSATE DRAIN FOR INTRINSICALLY SAFE FLOAT SWITCH OR IN DUPLEX ARRANGEMENT LEVEL TRANSDUCER CABLES BACK-UP LOW LEVEL FLOAT SWITCH FXPLOSION-PROOF SEAL W/ DRAIN TERMINATE PIPE AT ALL PUMPS OFF ELEVATION (TYP ONE FOR EACH CONDUIT) HINGED, GASKETED, WATERTIGHT, NEMA 7

12" MIN.

### **DESCRIPTION** <u>NOTES</u> <u>VALUE</u> WFT-WFI I INVFR1 ALL PUMPS OFF LEAD PUMP ON LAG PUMP ON HIGH LEVEL ALARM GRAVITY INVERT TOP OF WET-WELL

- ELEVATION OF THE TOP OF THE PUMP STATION SHALL BE A MINIMUM 2-0" ABOVE THE TON YEAR FLOOD ELEVATION.

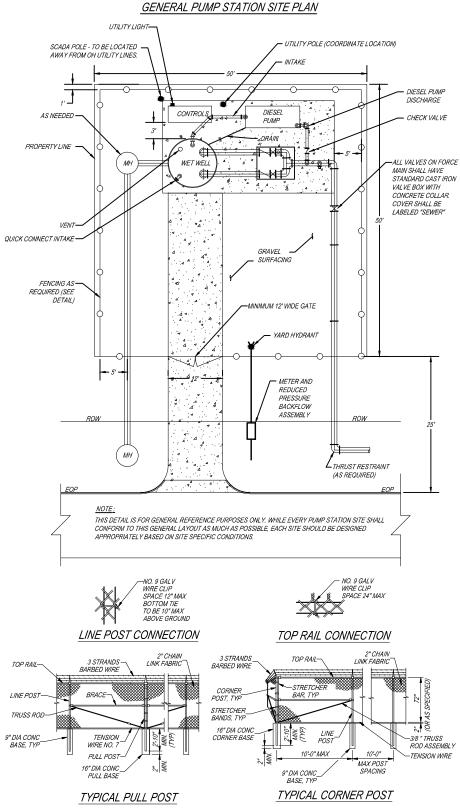
  INTERIOR OF WET WELL TO BE LINED WITH HOPE, PVC, OR APPROVED EPOXY LINING.

  ALL PIPING ON SITE TO BE DUCTILE IRON WITH EPOXY LINING SUITABLE FOR WASTEWATER SERVICE.

  DIESEL PUMP SHALL BE SIZED TO HANDLE THE PEAK HOURLY DISCHARGE OF THE STATION AND SHALL HAVE A MINIMUM 24 HOUR FUEL CAPACITY. WET WELL SIZE TO BE BASED ON SPECIFIC DESIGN CRITERIA MINIMUM 5-0" DIAMETER AND 5-0" DEPTH FROM THE LOWEST INCOMING PIPE INVERT TO THE WET WELL BOTTOM.

  PRIMARY LEVEL CONTROL SHALL UTILIZE A 4-20MA SUBMERSBILE OR ULTRASONIC TRANSDUCER, AS APPROVED.

  THIS IS A GENERAL SCHEMATIC DRAWING. EACH STATION SHALL HAVE A DETAILED SITE SPECIFIC DESIGN.



BRACE AND TRUSS ROD REQUIRED AT GATES AND SIDE OF ALL CORNER POSTS. FABRIC ATTACHED TO OUTSIDE OF POSTS.

STANDAR PROJECT TITLE:	D DETAILS	: SANITARY S	EWER - SH	HEET 3 OF 3
	DEPARTMENT:	WRM	REVISIONS:	DCM 2010
	SCALE:	N.T.S.		JC-10-2011
47	DRAWN BY:	BS		
	REVIEWED BY:	sc		
	APPROVED BY:	EC		
City of Auburn	IMPLEMENTED:	12/2007		

### **EROSION CONTROL NOTES:**

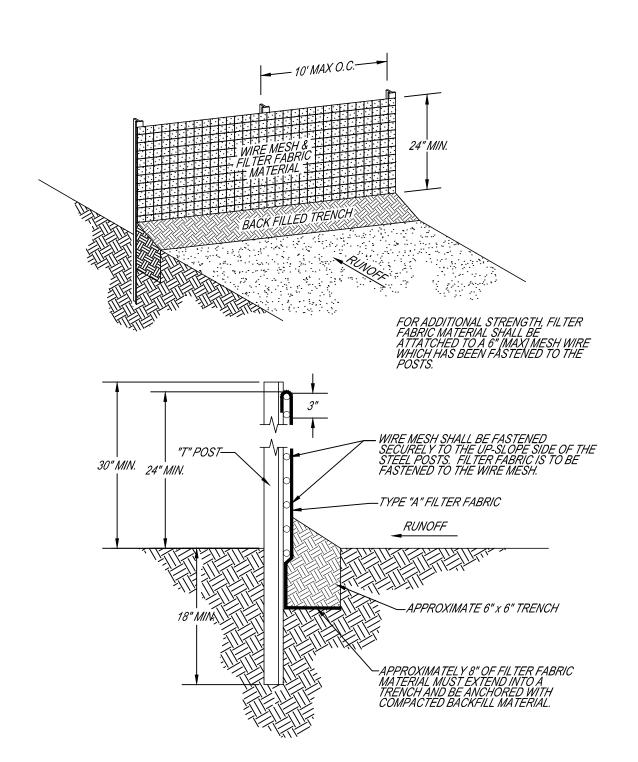
- 1. A CONSTRUCTION EXIT PAD MUST BE INSTALLED AT ALL POINTS OF INGRESS/EGRESS TO THE SITE.
- EROSION CONTROL BLANKETS AND NETTING SHOULD BE USED ON STEEP SLOPES
   AND IN CHANNELS IN CONJUNCTION WITH PERMANENT VEGETATION.
- 3. MULCH ALL BARE AREAS IMMEDIATELY FOLLOWING INITIAL GRADING PROCEDURES.
- 4. BMP'S SHALL BE INSPECTED AT LEAST MONTHLY AND WITHIN 24 HOURS OF RAIN EVENTS OF 0.75 INCHES OR GREATER. MAINTENANCE AND REPAIR MUST BE MADE WITHIN 3 DAYS OF INSPECTIONS, UNLESS OTHERWISE DIRECTED. COPIES OF THE QUALIFIED CREDENTIALED PROFESSIONAL (QCP) / QUALIFIED CREDENTIALED INSPECTOR (QCI) INSPECTION REPORTS SHALL BE SUBMITTED TO THE CITY OF AUBURN WATER RESOURCE MANAGEMENT DEPARTMENT, ATTN: WATERSHED DIVISION, 1501 WEST SAMFORD AVENUE, AUBURN, ALABAMA 36832.
- 5. TEMPORARY SEEDING OF DISTURBED AREAS SHOULD BE IMPLEMENTED WHENEVER DISTURBED SOIL AREAS WILL NOT BE BROUGHT TO FINISHED GRADE FOR A PERIOD OF 15 CALENDAR DAYS OR LONGER.
- 6. THESE STANDARD DETAILS SHALL BE APPLICABLE TO ALL LAND DISTURBING ACTIVITIES AND ATTACHED TO THE RELEVANT SITE PLAN AND/OR SUBDIVISION DRAWINGS.
- 7. ALL EROSION CONTROL MEASURES ARE TO BE IN ACCORDANCE WITH THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL, AND STORM WATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS (LATEST EDITION), AND SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
- 8. SILT FENCE: REMOVE ACCUMULATED SEDIMENT WHEN DEPTH REACHES 1/4" THE HEIGHT OF THE BARRIER.



THE CITY OF AUBURN, AL
STANDARD EROSION CONTROL DETAILS

DRAWING TITLE:	ERO	<u> </u>	CONI
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07
SCALE:	N.T.S.		BS-10-05-07
DRAWN BY:	BS/GM		DCM 2010
REVIEWED BY:			
APPROVED BY:	MD		
IMPLEMENTED:	02/2003		

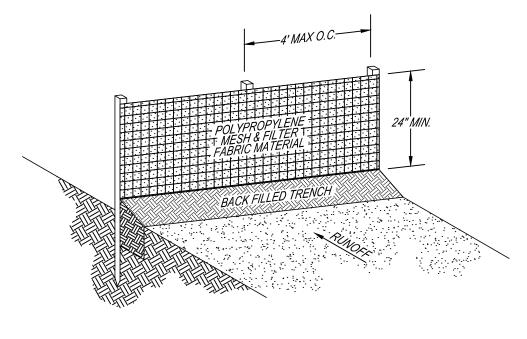
## SILT FENCE W/ WIRE MESH (ALDOT TYPE A)

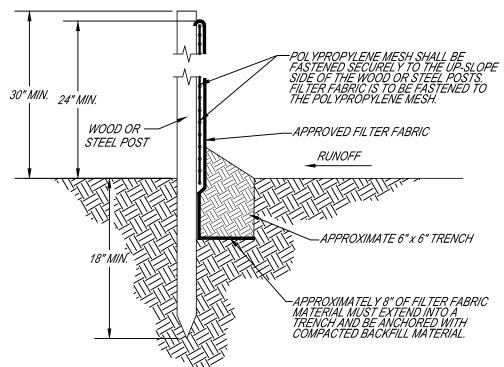




DRAWING TITLE:	SILTI	FENCE	W/WIRE	MESH (ALDOT TYPE A)
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	1.0.0
SCALE:	N.T.S.		BS-10-05-07	
DRAWN BY:	BS/GM		DCM 2010	
REVIEWED BY:			JC-12-2012	41//
APPROVED BY:	MD			102
IMPLEMENTED:	02/2003			

## SILT FENCE W/ POLYPROPYLENE MESH (GDOT TYPE C)

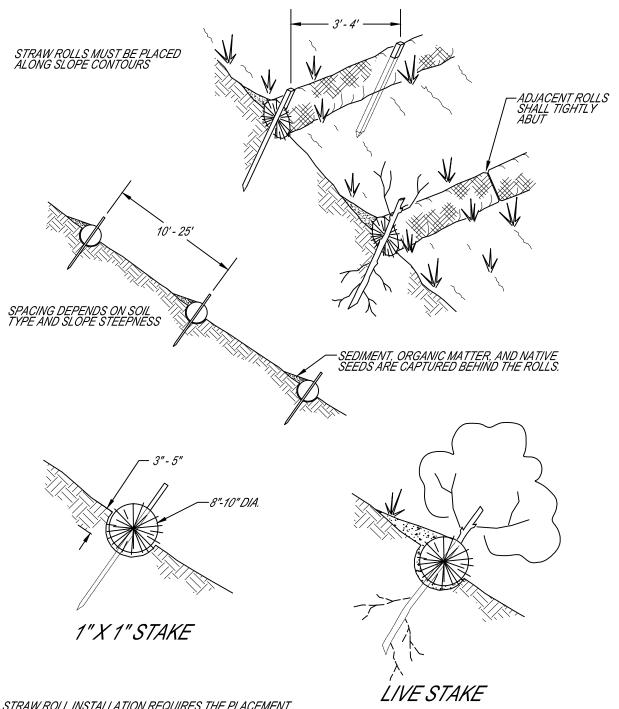






DRAWING TITLE:	SILT FE	NCE W/	<u>POL YPROP</u>	<u> PYLENE MESH (GDOT TYPE C)</u>
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	1.0.1
SCALE:	N.T.S.		BS-10-05-07	
DRAWN BY:	BS/GM		DCM 2010	
REVIEWED BY:			JC-12-2012	4114
APPROVED BY:	MD			/ / /
IMPLEMENTED:	02/2003			

### STRAW ROLL



<u>NOTE:</u>

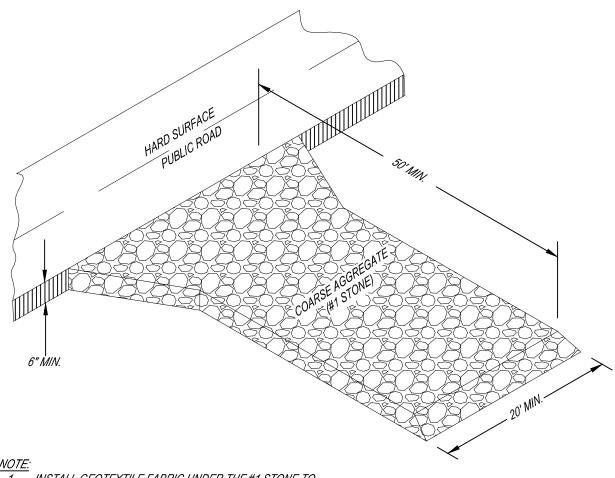
STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.



THE CITY OF AUBURN, AL STANDARD EROSION CONTROL DETAILS

DRAWING TITLE:	<u> </u>	<u> RA</u>	WK	7
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	
SCALE:	N.T.S.		BS-10-05-07	
DRAWN BY:	BS/GM		DCM 2010	
REVIEWED BY:				
APPROVED BY:	MD			
IMDI EMENTED:	00/0000			

## CONSTRUCTION EXIT PAD (CEP)

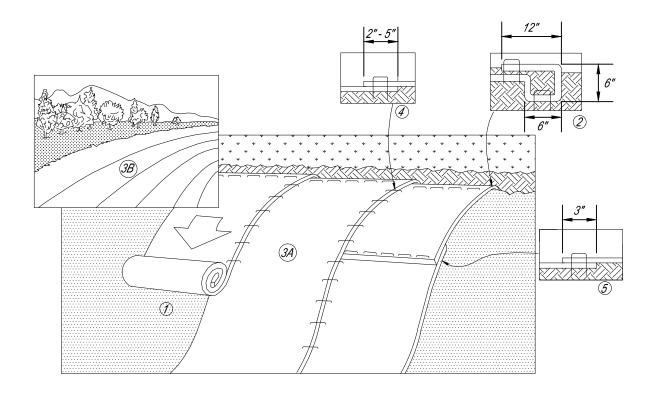


INSTALL GEOTEXTILE FABRIC UNDER THE #1 STONE TO EXTEND THE LIFE OF THE ENTRANCE.



DRAWING TITLE:	CON	STRU	CTION	EXIT PAD (CEP)
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	1.0.0
SCALE:	N.T.S.		BS-10-05-07	100
DRAWN BY:	BS/GM		DCM 2010	
REVIEWED BY:				41//)
APPROVED BY:	MD			100
IMPLEMENTED:	02/2003			

### SLOPE INSTALLATION



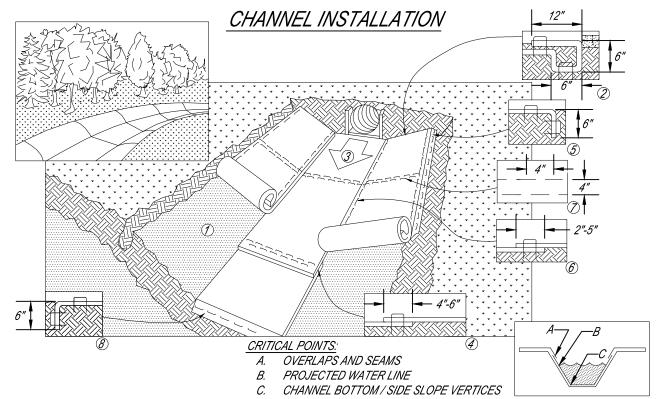
### NOTES.

- 1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME. FERTILIZER. AND SEED.
- 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
- 3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- 4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" 5" OVERLAP DEPENDING ON RECP'S TYPE.
- 5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
- IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.
- 7. RECPS SHALL BE IDENTIFIED AND DESIGNED ACCORDING TO THE CLASSIFICATION DESIGNATION GIVEN IN TABLES ECB-1, ECB-2, ECB-3, AND ECB-4 OF THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS (LATEST EDITION).



THE CITY OF AUBURN, AL
STANDARD EROSION CONTROL DETAILS

DRAWING TITLE:	<u>SZ (</u>	<u>OPE</u>	//VS	
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	
SCALE:	N.T.S.		BS-10-05-07	
DRAWN BY:	BS/GM		DCM 2010	
REVIEWED BY:				
APPROVED BY:	MD			
IMPLEMENTED:	02/2003			



### NOTES:

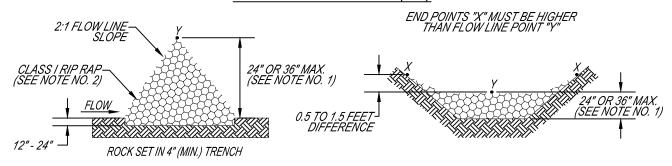
- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY
  APPLICATION OF LIME, FERTILIZER, AND SEED.
- 2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
- 3. ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- 4. PLACE CONSECUTIVE RECP'S END OVER END (SHINGLE STYLE) WITH A 4" 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP'S.
- 5. FULL LENGTH EDGE OF RECP'S AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- 6. ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" 5" (DEPENDING ON RECP'S TYPE) AND STAPLED.
- 7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
- 8. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- 9. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.
- 10. HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
- 11. RECPS SHALL BE IDENTIFIED AND DESIGNED ACCORDING TO THE CLASSIFICATION DESIGNATION GIVEN IN TABLES ECB-1, ECB-2, ECB-3, AND ECB-4 OF THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS (LATEST EDITION).



THE CITY OF AUBURN, AL STANDARD EROSION CONTROL DETAILS

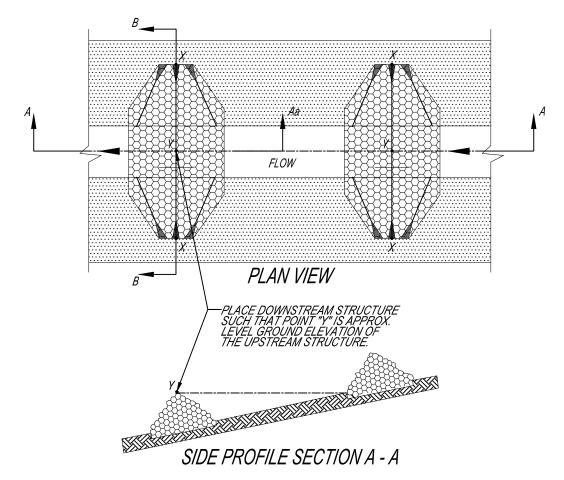
DRAWING TITLE:	CHA	<u>4/V/VZ</u>	<u>-</u>	<u>//V</u>	<u>'</u>
DEPARTMENT:	WRM	REVISIONS:	AF-0	6-13-07	
SCALE:	N.T.S.		BS-1	0-05-07	
DRAWN BY:	BS/GM		DC.	M 2010	
REVIEWED BY:					
APPROVED BY:	MD				
IMPLEMENTED:	02/2003				

### TYPICAL CHECK DAM (CD)



### SIDE PROFILE SECTION A - Aa

### FRONT PROFILE SECTION B - B



### NOTE:

- 1. MAXIMUM HEIGHT SHALL BE 24 INCHES WHEN DRAINAGE AREA IS LESS THAN 5 ACRES AND 36 INCHES WHEN DRAINAGE AREA IS 5 TO 10 ACRES.
- 2. RIP RAP GRADATION SHALL CONFORM TO THE REQUIREMENTS OF CLASS I RIP RAP, ALABAMA HIGHWAY DEPARTMENT, STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION.

D-50 OF ROCK (INCHES)	0.35	TREAM FL 0.30 UM WATE	0.25	0.20	0.15	CTURE (FT/FT) 0.10 CHES)	
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	

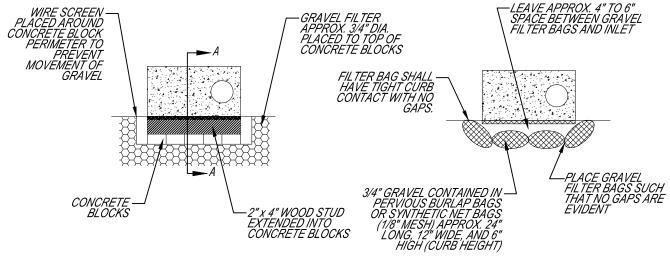
RECOMMENDED ROCK SIZE AND FLOW DEPTHS



THE CITY OF AUBURN, AL STANDARD EROSION CONTROL DETAILS

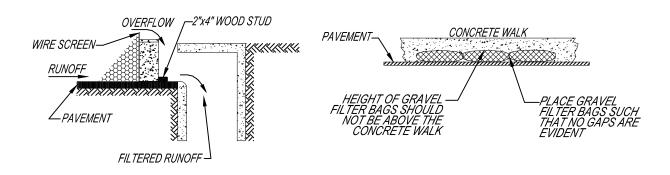
DRAWING TITLE:	<i>                                      </i>	7CAL	CHE	<u>-</u>
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	
SCALE:	N.T.S.		BS-10-05-07	
DRAWN BY:	BS/GM		DCM 2010	
REVIEWED BY:				
APPROVED BY:	MD			
IMPLEMENTED:	02/2003			

### TYPICAL CURB INLET GRAVEL FILTER



CONCRETE BLOCK FILTER PLAN VIEW

GRAVEL FILTER BAGS PLAN VIEW



CONCRETE BLOCK FILTER PROFILE SECTION A-A

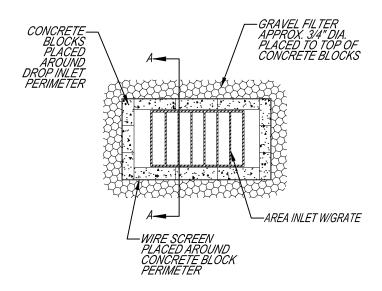
GRAVEL FILTER BAGS PROFILE VIEW

GRAVEL FILTERS CAN BE USED ON PAVEMENT OR BARE GROUND.

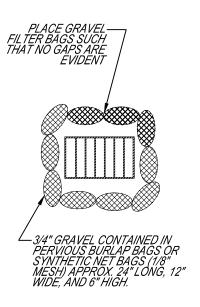


DRAWING TITLE:	TYPI	CAL C	URB INL	LET GRAVEL FILTER
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	
SCALE:	N.T.S.		BS-10-05-07	
DRAWN BY:	BS/GM		DCM 2010	// 1/6
REVIEWED BY:				4//
APPROVED BY:	MD			
IMPLEMENTED:	02/2003			

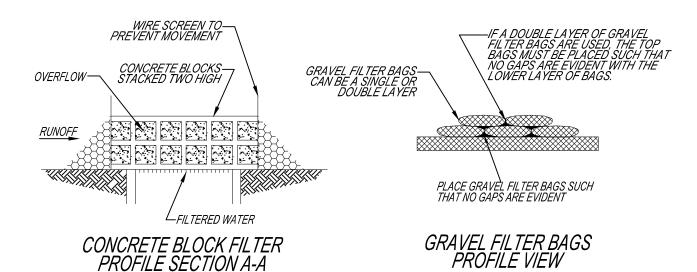
### TYPICAL EXCAVATED DROP INLET PROTECTION (EIP)



CONCRETE BLOCK FILTER PLAN VIEW



GRAVEL FILTER BAGS PLAN VIEW



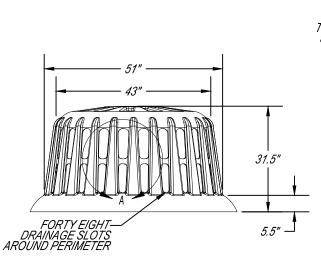
GRAVEL FILTERS CAN BE USED ON PAVEMENT OR BARE GROUND.



DRAWING TITLE:	TYPICA	L EXCAV	ATED DRO	OP INLET PROTECTION (EIP)
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	1 1 0
SCALE:	N.T.S.		BS-10-05-07	110
DRAWN BY:	BS/GM		DCM 2010	
REVIEWED BY:				4//
APPROVED BY:	MD			<i>, , ,</i>
IMPLEMENTED:	02/2003			_

## SILT-SAVER ROUND FRAME

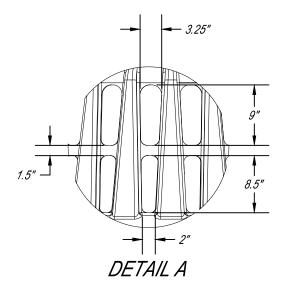
P/N SS-100

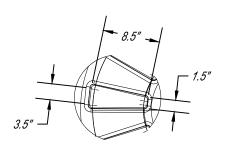


5.5" DIA. DRAINAGE HOLE TWELVE DRAINAGE SLOTS IN THE TOP 61.5"

PROFILE VIEW

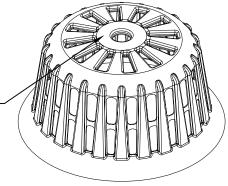
PLAN VIEW





DETAIL B





ISOMETRIC VIEW

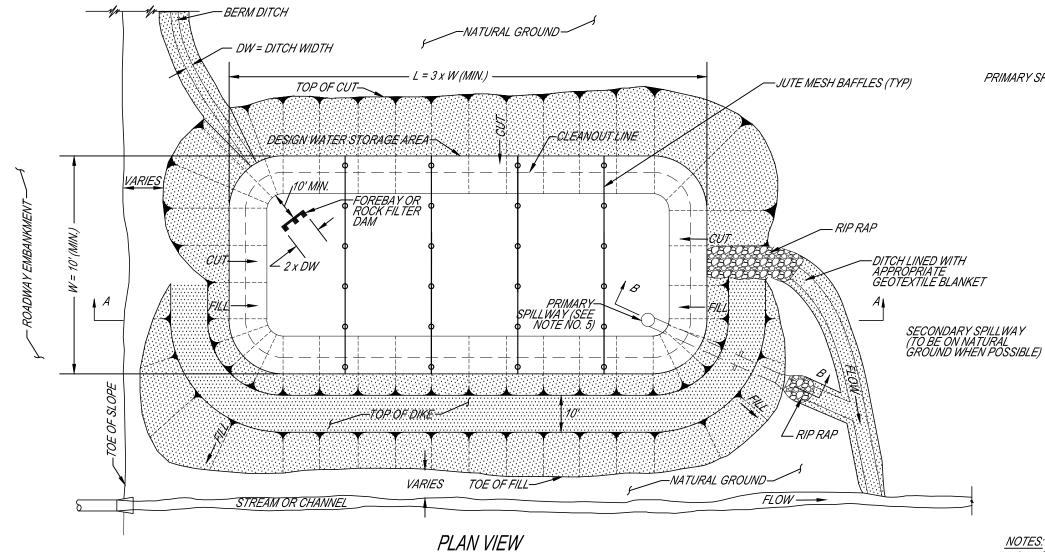


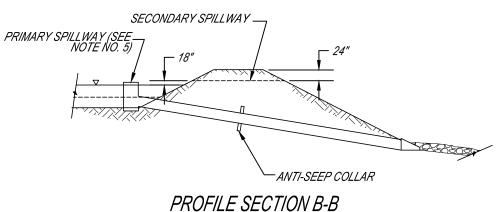
DRAWING TITLE:	S/L T	-SAVE	R ROU	ND FRAME
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	
SCALE:	N.T.S.		BS-10-05-07	<i>A (</i>
DRAWN BY:	BS/GM		DCM 2010	
REVIEWED BY:				4/
APPROVED BY:	MD			
IMPLEMENTED:	02/2003			

### TYPICAL SEDIMENT BASIN FOR USE OUTSIDE NATURAL CHANNELS

PRIMARY SPILLWAY (SEE NOTE NO. 5)

-SECONDARY SPILLWAY





LOCATION	SIDE	REQUIRED VOLUME	BASIN DEPTH	W AT DEPTI	L H SHOWN	PRIN SPILL D <sub>S</sub>	IARY WAY DO	SECONDARY SPILLWAY WIDTH
		CU. FT.	FT.	FT.	FT.	/N.	IN.	FT.

### NOTES:

- THIS IS A BASIN THAT IS EXCAVATED OR AN AREA THAT IS DAMMED. THE BASIN WILL BE DESIGNED TO HOLD A SEDIMENT LOAD OF 3600 CUBIC FEET OF VOLUME PER ACRE OF DRAINAGE AREA.
- 2. ALLOWABLE SEDIMENT DEPTH SHALL NOT EXCEED 1/3 TOTAL BASIN DEPTH.
- RUNOFF FROM UNDISTURBED, ADJACENT LAND SHOULD BE ROUTED TO BYPASS SEDIMENT BASINS.
- BASIN DEPTH 4'-0" MINIMUM, W & L MAY VARY TO CONFORM TO SITE CONDITIONS, PROVIDED REQUIRE VOLUME IS MAINTAINED, MINIMUM L = 2W.
- 5. PRIMARY SPILLWAY OUTLET STRUCTURE MAY BE CONVENTIONAL RISER TYPE (AS SHOWN) OR "SKIMMER" DEVICE, AS APPROVED. SEE THE APPROPRIATE STANDARD DETAILS FOR OUTLET STRUCTURE CONSTRUCTION.

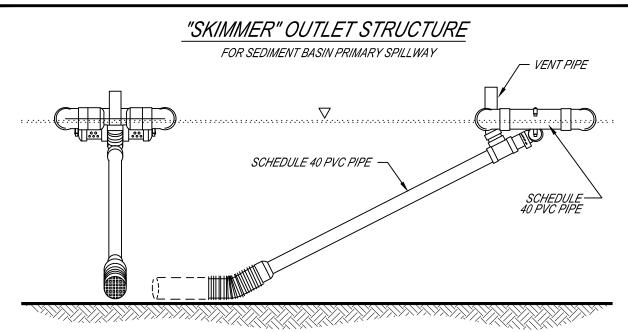
DESIGN WATER STORAGE ELEVATION

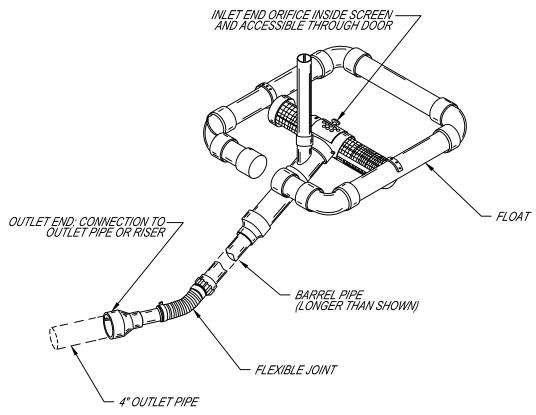
-CLEANOUT LINE

└─ 4' MIN. BASIN DEPTH

SEDIMENT STORAGE AREA

DRAWING TITLE:	TYF	<u> ICAL</u>	SEL	<u>DIMENT</u>
DEPARTMENT:	WRM	REVISIONS:	AF-06-13-07	_
SCALE:	N.T.S.		BS-10-05-07	
DRAWN BY:	BS/GM		DCM 2010	
REVIEWED BY:			JC-12-2012	4
APPROVED BY:	MD			/ _
IMPLEMENTED:	02/2003			





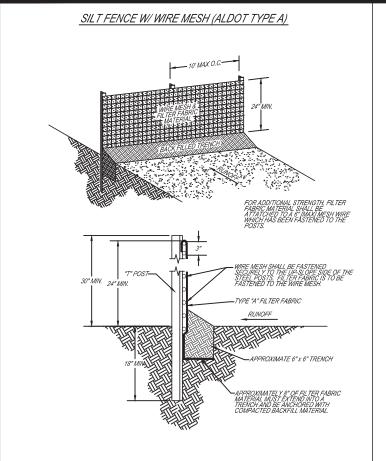
### NOTES:

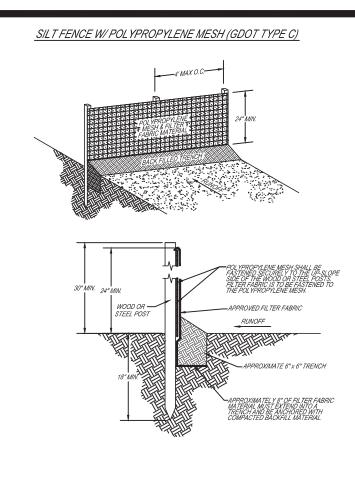
- 1. THE MOST IMPORTANT DESIGN PARAMETER IS THE CONTROL OF ORIFICE SIZE, WHICH CAN CONTROL THE DESIRED DEWATERING TIME. THE LONGER THE DEWATERING TIME, THE BETTER THE QUALITY OF WATER DISCHARGED FROM THE SEDIMENT BASIN.
- 2. SKIMMER DESIGN BY: W. FAIRCLOTH, PATENT # 5,820,751
- 3. SKIMMER SHALL BE DESIGNED IN ACCORDANCE WITH THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS (LATEST EDITION).

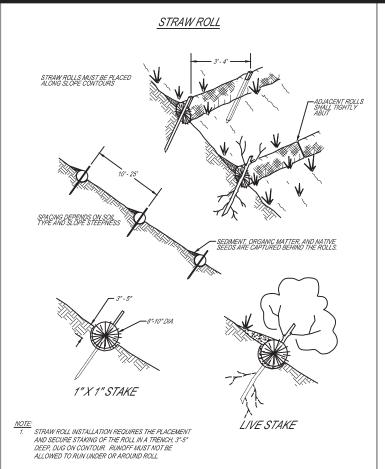


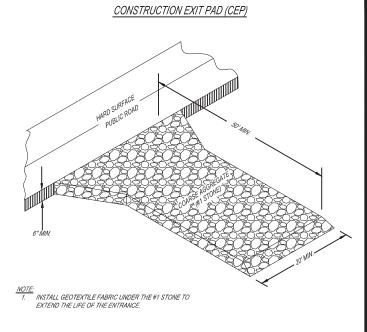
THE CITY OF AUBURN, AL STANDARD EROSION CONTROL DETAILS

DRAWING TITLE:	"5/1//	MMER" OUT.	<u>L</u>
DEPARTMENT:	WRM	REVISIONS:	
SCALE:	N.T.S.		
DRAWN BY:	JC		
REVIEWED BY:			
APPROVED BY:	MD		
IMPLEMENTED:	DCM 2010		

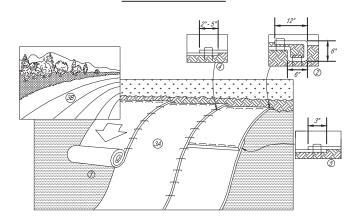








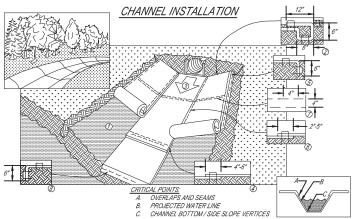
### SLOPE INSTALLATION



- <u>.</u> PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
- NECESSARY REPUBLIATION OF LIME, FERVILLER, RIND SEED.

  BEGINAT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH BOCKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL. WITH A ROW OF STAPLESISTAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S
- ACULT THE ROOM OF THE RECUES.

  ROLL THE RECY & A), DOWN OR (B), HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE SURPINE OF PLAUTING STAPLES STARLES THE APPROPRIATE LOVALIVING AS SURVIVIN THE ASTAPLES STARLE PATTERN GUIDE. WHEN USING THE DO'T SYSTEM, STAPLES STARES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOT'S CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING
- ON NEO'S 1712. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE APPROXIMATE 3" OVERLAP, STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
- APPRADIMENTAL APPRAS NACIOS ENSIRE REUPS WILLITS.
  IN LOOSE SOLI, CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE
  NECESSARY TO PROPERLY SECURE THE RECP'S:
  RECPS SHALL BE IDENTIFIED AND DESIGNED ACCORDING TO THE CLASSIFICATION DESIGNATION GIVEN IN TABLES ECB-1, ECB-2, ECB-3, AND ECB-4 OF THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS

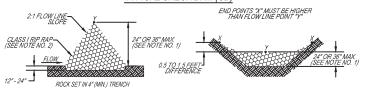


- NOTES:

  1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY
- APPLICATION OF LIME, FERTILIZER, AND SEED.

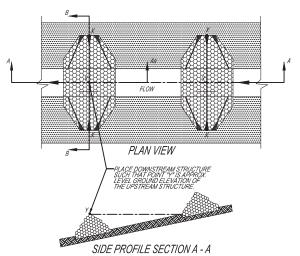
  BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP'S IN A 6" DEEP X 6" INIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLESSTAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT ITHE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING. "PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLESSTAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S. ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLESSTAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE FATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLESSTAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE ASTITEM.
- APPROPRIATE STAPLE PATTERN.
  PLACE CONSECUTIVE RECP'S END OVER END (SHINGLE STYLE) WITH A 4"- 6" OVERLAP. USE A DOUBLE ROW OF
- FLACE CONSECUTIVE RECP'S END OVER END (SHINGLES YILE) WITH 4 F 0 VIERLIAP. USE A DUDBLE ROWN'S STAPLES STAGGERED 4' APART AND 4' ON CENTER TO SECURE RECPS.
  FULL LENGTH EDGE OF RECP'S AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP K" INDE TREMCHO. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2"-5" (DEPENDING ON RECP'S TYPE) AND STAPLED. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 POOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTITIE WITH OTHER CHANNEL. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A SCHEED YES WIND TO THE VERNEL AND COURSE.
- IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP'S. 10. HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL
- THORIZONIAL STITLE STAINING STOULD BE ALTERED IT NECESSARY TO ALLOW STAFFLES TO SECURE THE CHINCIAL POINTS ALONG THE CHANNEL SURFACE. RECPS SHALL BE IDENTIFIED AND DESIGNED ACCORDING TO THE CLASSIFICATION DESIGNATION GIVEN IN TABLES ECB-1, ECB-2, ECB-3, AND ECB-4 OF THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS (LATEST EDITION).

### TYPICAL CHECK DAM (CD)



### SIDE PROFILE SECTION A - Aa

### FRONT PROFILE SECTION B - B



## : MAXIMUM HEIGHT SHALL BE 24 INCHES WHEN DRAINAGE AREA IS LESS THAN 5 ACRES AND 36 INCHES WHEN DRAINAGE AREA IS 5 TO 10

RIP RAP GRADATION SHALL CONFORM TO THE REQUIREMENTS OF CLASS I RIP RAP, ALABAMA HIGHWAY DEPARTMENT STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION.

## DOWNSTREAM FLOWLINE SLOPE OF STRUCTURE (FT/FT) 0.35 0.30 0.25 0.20 0.15 0.10 MAXIMUM WATER DEPTH OVER ROCK (INCHES) 0.6 0.7 0.8 1.0 1.3 1.9 1.2 1.4 1.6 2.0 2.6 3.9

- EROSION CONTROL NOTES:

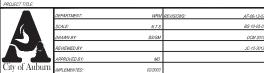
  1. A CONSTRUCTION EXIT PAD MUST BE INSTALLED AT ALL POINTS OF INGRESS/EGRESS TO THE SITE.
- TO THE SITE.

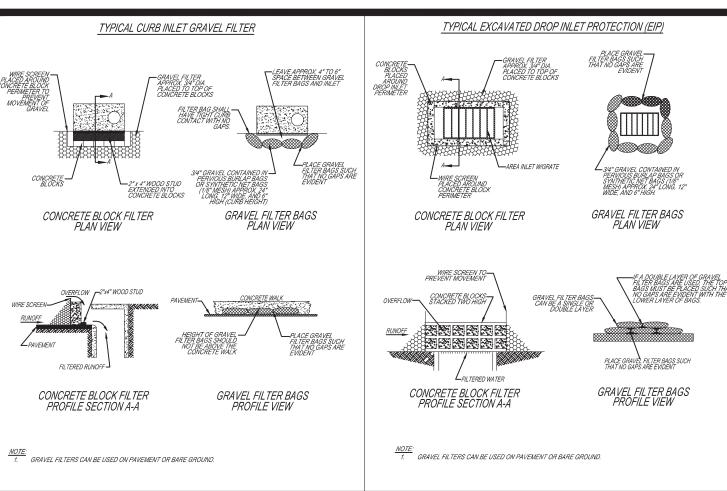
  EROSION CONTROL BLANKETS AND NETTING SHOULD BE USED ON STEEP SLOPES

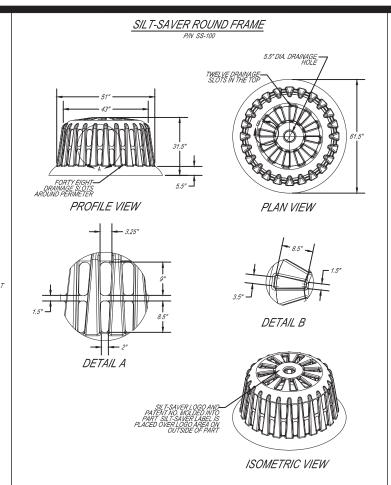
  AND IN CHANNELS IN CONJUNCTION WITH PERMANENT VEGETATION.

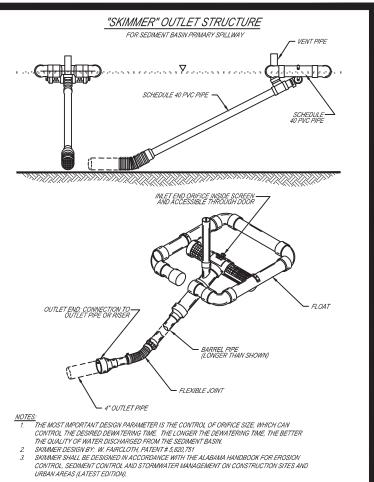
  MULCH ALL BARE AREAS IMMEDIATELY FOLLOWING INITIAL GRADING PROCEDURES.
- MULCH ALL SARE AREAS IMMEDIA LEV FOLLCOMING INVIAL GRADING PROCEDURES: BIMPS SHALL BE INSPECTED AT LEAST MONTHLY AND WITHIN 24 HOURS OF PAIN EVENTS OF 0.75 INCHES OR GREATER. MAINTENANCE AND REPAIR MUST BE MADE WITHIN 3 DAYS OF INSPECTIONS, UNILESS OTHERWISE DIRECTED. COPIES OF THE QUALIFIED OREDENTIAL EDPORESSIONAL (OCP) VOLULIFIED CREDENTIAL DE INSPECTOR (OCI) INSPECTION REPORTS SHALL BE SUBMITTED TO THE CITY OF
- MUBURN WATER RESOURCE MANAGEMENT DEPARTMENT, ATTN: WATERSHED DIVISION, 1501 WEST SAMFORD AVENUE, AUBURN, ALABAMA 36832. TEMPORARY SEEDING OF DISTURBED AREAS SHOULD BE IMPLEMENTED WHENEVER DISTURBED SOIL AREAS WILL NOT BE BROUGHT TO FINISHED GRADE FOR A PERIOD
- OF 15 CALEMOAR DAYS OR LONGER.
  THESE STANDARD DETAILS SHALL BE APPLICABLE TO ALL LAND DISTURBING ACTIVITIES AND ATTACHED TO THE RELEVANT SITE PLAN AND/OR SUBDIVISION DRAWINGS
- URAWINGS. ALL EROSION CONTROL MEASURES ARE TO BE IN ACCORDANCE WITH THE ALABAMA HANDBOOK FOR EROSION CONTROL. SEDMENT CONTROL, AND STORM WATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS (LATEST EDITION), AND SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
- SILT FENCE: REMOVE ACCUMULATED SEDIMENT WHEN DEPTH REACHES 1/4" THE

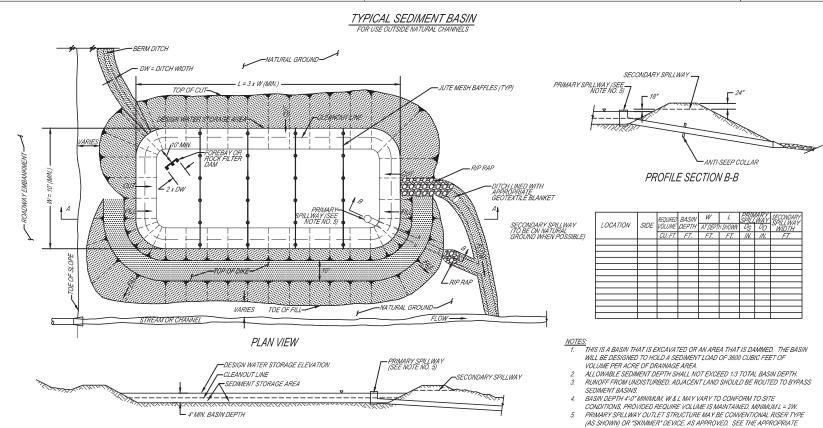
### STANDARD DETAILS: EROSION CONTROL - SHEET I OF 2











PROFILE SECTION A-A

STANDARD DETAILS FOR OUTLET STRUCTURE CONSTRUCTION.

## STANDARD DETAILS: EROSION CONTROL - SHEET 2 OF 2 DEPARTMENT: WHAT DEVISIONS: AF-06-13-07 SOLLE N.T.S. BS-10-05-07 DEPARTMENT: BS-04 DEMAND BY BS-04