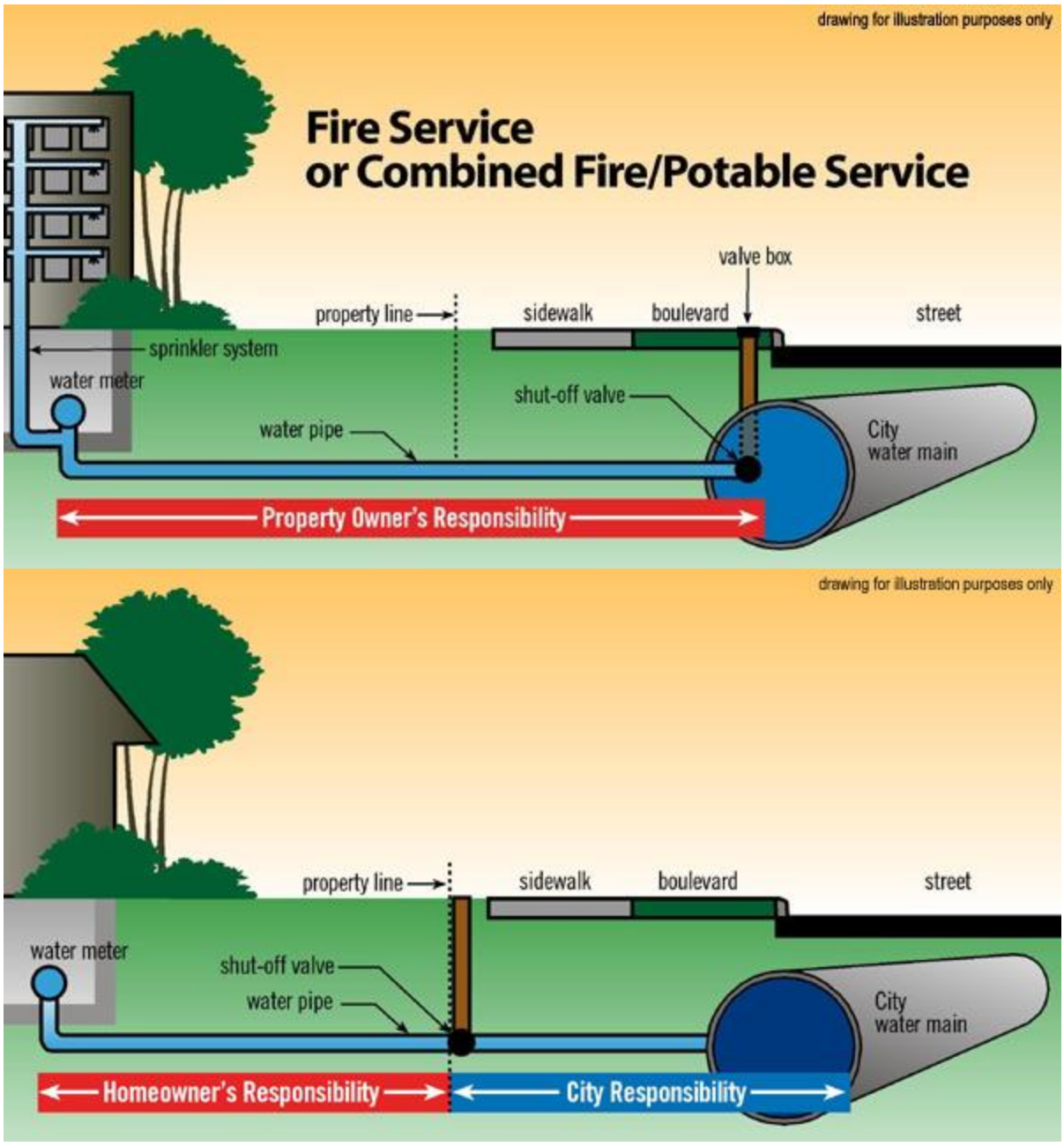
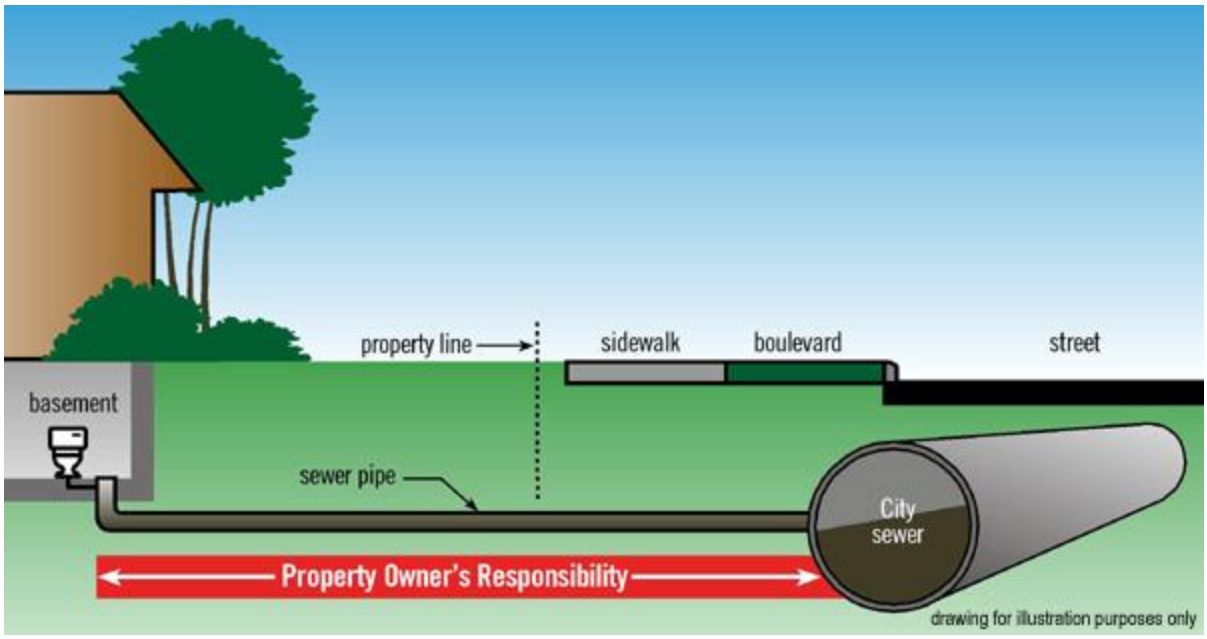

drawing for illustration purposes only
Fire Service
or Combined Fire/Potable Service
valve box
property line
sidewalk
boulevard
street
sprinkler system
water meter
shut-off valve
water pipe
City
water main
Property Owner's Responsibility
drawing for illustration purposes only
property line
sidewalk
boulevard
street
water meter
shut-off valve
water pipe
City
water main
Homeowner's Responsibility
City Responsibility


property line
sidewalk
boulevard
street
basement
sewer pipe
City sewer
Property Owner's Responsibility
drawing for illustration purposes only

City of Torrington
Standard Drawings

Revised – 01/15/09

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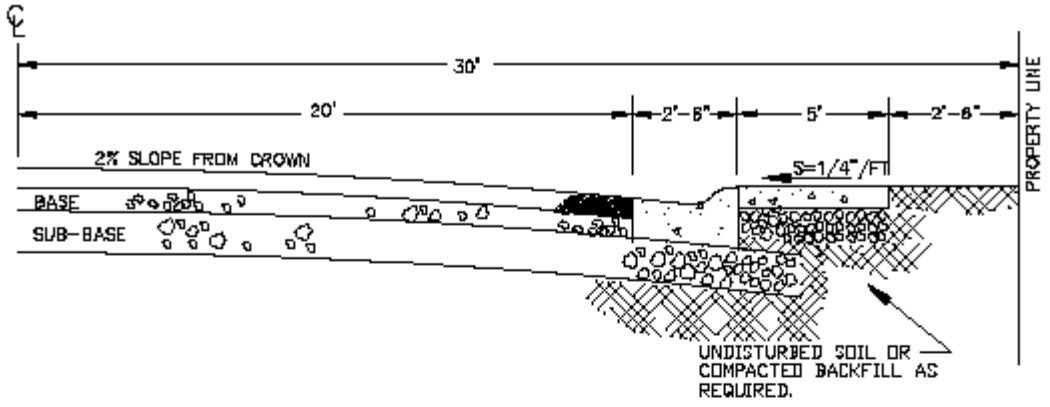
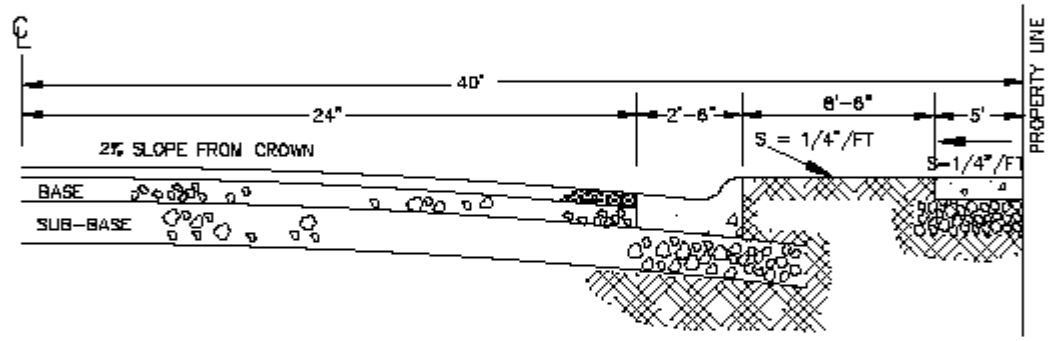
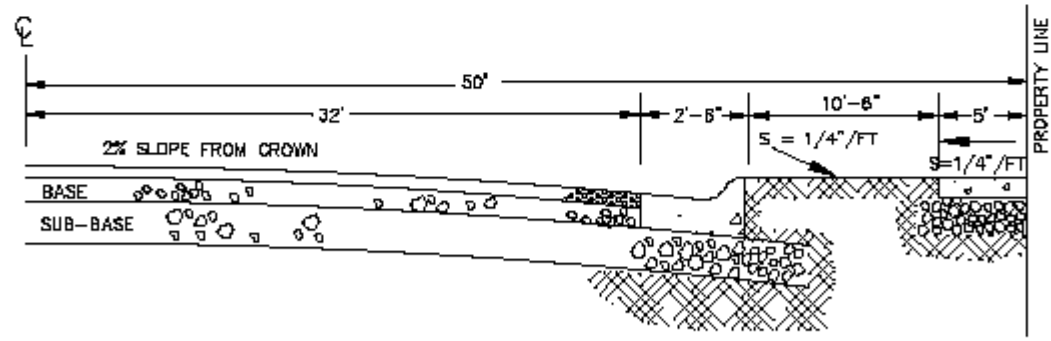


LOCAL STREET (60' R\W)

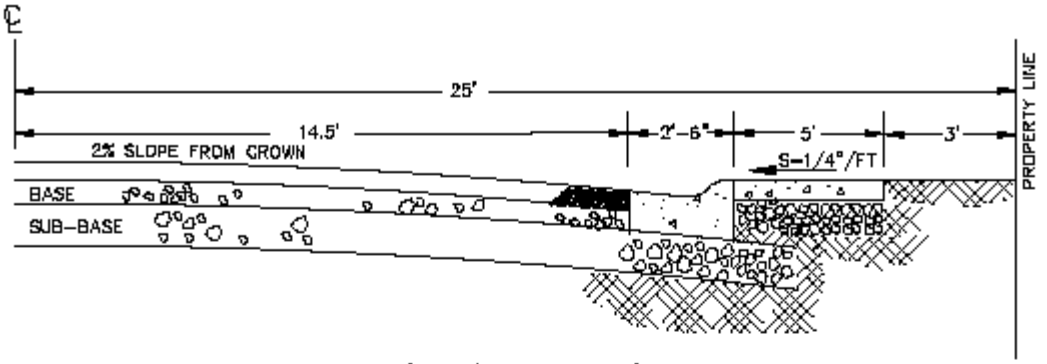


COLLECTOR STREET (80' R\W)

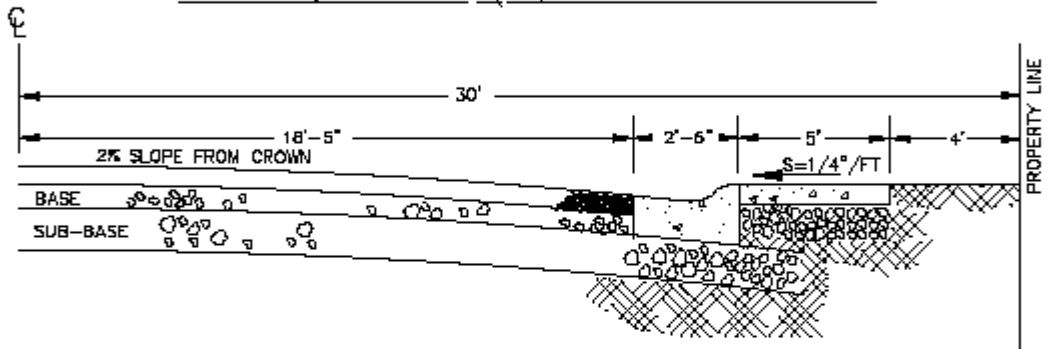


ARTERIAL STREET (100' R\W)

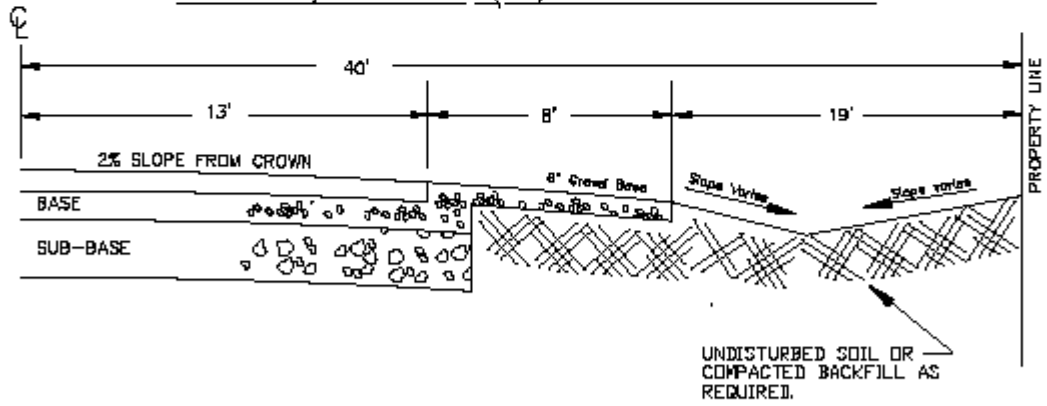
LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 1



LOCAL, 50' R\W, 29' ROADWAY



LOCAL, 60' R\W, 37' ROADWAY



LOCAL STREET – Rural Section

Paved Roadway (80' R\W)

(Side swale section varies with elevations & drainage requirements)

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 2

NOTES: – STREET CONSTRUCTION

1. ALL STREETS SHALL BE CONSTRUCTED WITH A MINIMUM OF 2" PLANT MIX ASPHALT.

1–A. HOT PLANT MIX ASPHALT SHALL BE TYPE II, AND SHALL CONFORM TO SECTION 02512 OF THE WYOMING PUBLIC WORKS STANDARD SPECIFICATIONS (WPWSS). THE ASPHALT CEMENT SHALL BE PG58–28 FOR LOCAL STREETS, AND PG64–28 FOR COLLECTOR AND ARTERIAL STREETS, COMPRISING 4 TO 7% OF THE MIXTURE. THE AGGREGATE SHALL CONFORM TO TABLE 803.5.5–1 OF THE WYDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS FOLLOWS:

SIEVE NO.	1"	3/4"	1/2"	3/8"	4	8	30	200
% PASSING	100	80–100	55–80	45–85	30–85	20–50	5–30	2–7

1–B. THE PRIME COAT SHALL BE MC–70, APPLIED AT A RATE BETWEEN 0.1 TO 0.3 GAL/SQ YD, AND SHALL CONFORM TO SECTION 02550 OF THE WPWSS.

1–C. THE TACK COAT SHALL BE CSS1H, A MINIMUM OF 57% ASPHALT, APPLIED AT A RATE OF 0.05 TO 0.15 GAL/SQ YD, AND SHALL CONFORM TO SECTION 02551 OF THE WPWSS.

1–D. THE SEAL COAT, WHEN SPECIFIED, SHALL BE CRS–2P, A MINIMUM OF 63% ASPHALT, APPLIED FROM EDGE OF CURB TO EDGE OF CURB AT 0.25 TO 0.35 GAL/SQ YD. THE SEAL COAT SHALL CONFORM TO SECTION 02552 OF THE WPWSS. COVER COAT AGGREGATE SHALL CONFORM TO SECTION 02190 OF THE WPWSS AND SHALL MEET THE FOLLOWING GRADATION: MAXIMUM SIZE OF 3/8" OR 5/16", 40 TO 60% SHALL BE RETAINED ON A NO. 4 MESH, AND 95 TO 100% SHALL BE RETAINED ON A NO. 10 MESH. THE AGGREGATE SHALL BE APPLIED AT APPROXIMATELY 20 LBS/SQ YD.

2. TYPE I BASE COURSE SHALL BE GRADING "W" AND SHALL COMPLY WITH SECTION 02190 OF THE WPWSS. AGGREGATE SOURCE TO BE APPROVED BY THE CITY ENGINEER. LOCAL, COLLECTOR, AND ARTERIAL STREETS SHALL HAVE A MINIMUM THICKNESS OF 4", UNLESS SOIL TESTS AND INDEPENDENT STREET SECTION DESIGN ARE SUBMITTED AND APPROVED.

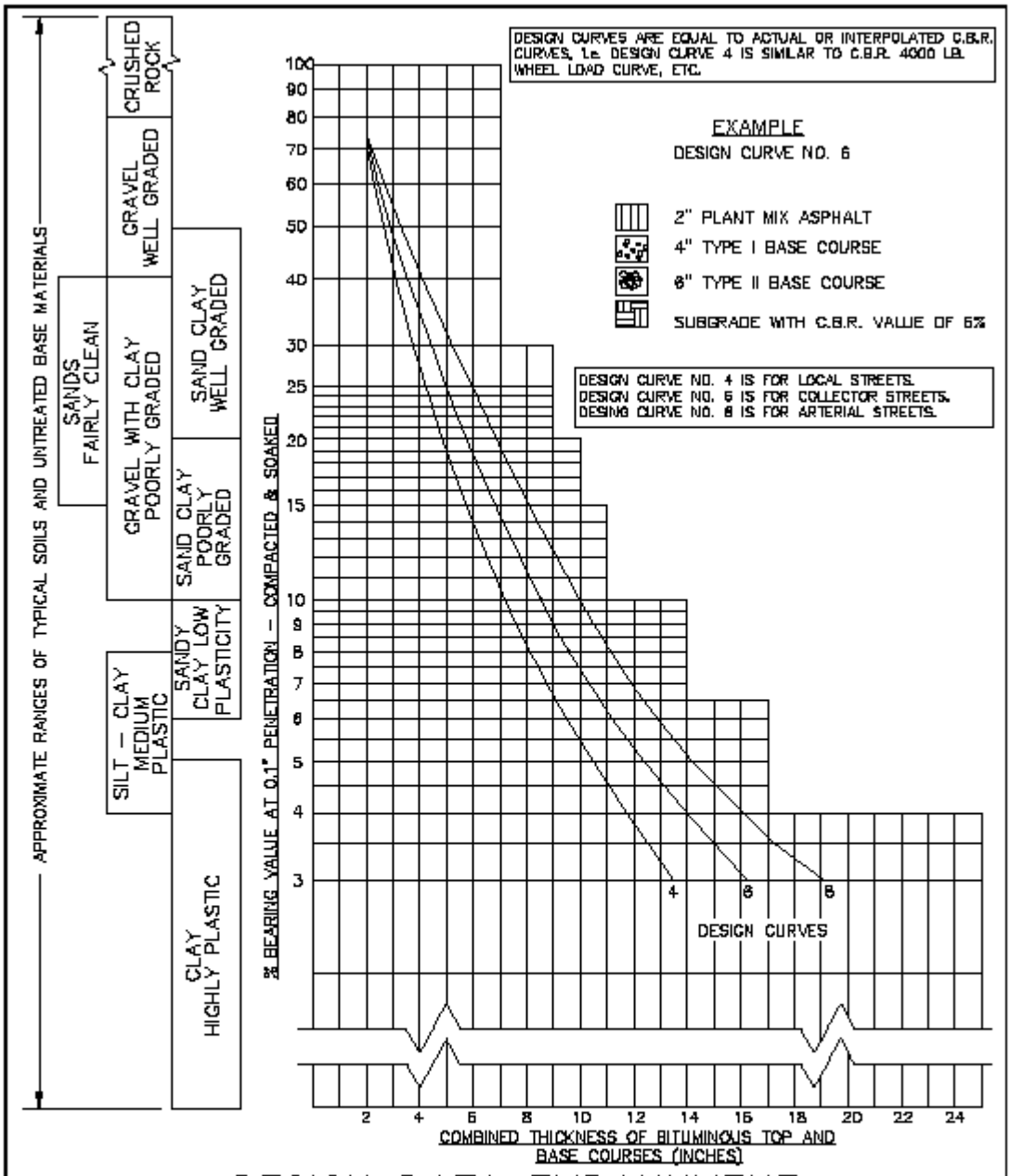
3. TYPE II SUB–BASE COURSE SHALL BE GRADING J AND SHALL COMPLY WITH SECTION 02190 OF THE WPWSS. AGGREGATE SOURCE TO BE APPROVED BY THE CITY ENGINEER. LOCAL STREETS SHALL HAVE A MINIMUM SUB–BASE THICKNESS OF 8", COLLECTOR STREETS 11", AND ARTERIAL STREETS 14", UNLESS SOIL TESTS AND INDEPENDENT STREET SECTION DESIGN ARE SUBMITTED AND APPROVED.

4. CBR IS ASSUMED TO BE 3% IF SOIL TESTS ARE NOT SUBMITTED TO THE CITY ENGINEER, REFERENCE DESIGN DATA EMBANKMENT, BASE COURSE AND BITUMINOUS TOP, CITY OF TORRINGTON STANDARD DETAIL NO. 17. (LOCAL STREETS SHALL HAVE A MINIMUM SUB–BASE THICKNESS OF 8", COLLECTOR STREETS 11" AND ARTERIAL STREETS 14").

5. CURB AND GUTTER SHALL BE CONCRETE, 5 SACK MIX, TYPE II PORTLAND CEMENT, 3/4" MAX. AGGREGATE, 40% CRUSHED LIMESTONE, MIN 28 DAY STRENGTH OF 4,000 PSI, 4–1/2" MAX SLUMP, AIR ENTRAINMENT 5 TO 7%. ALL PORTLAND CEMENT CONCRETE SHALL CONFORM TO SECTION 03304 OF THE WPWSS.

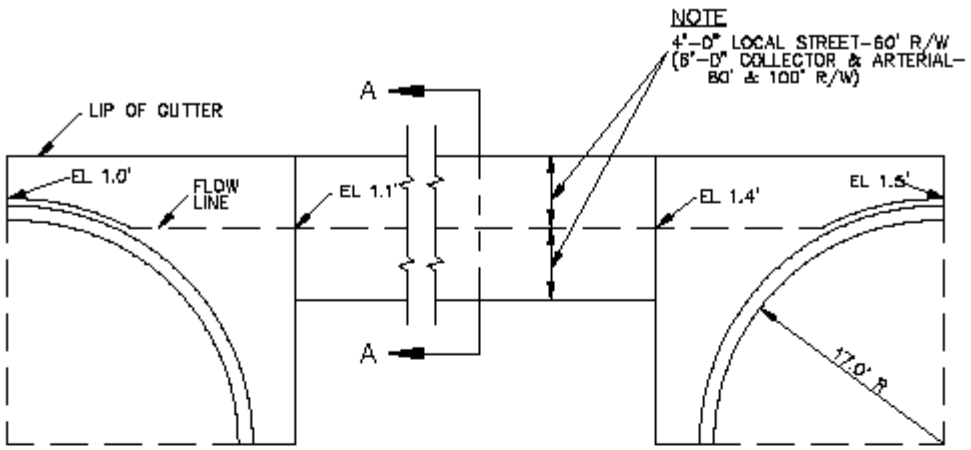
6. AGGREGATE FOR ROAD BASE FOR SURFACE APPLICATIONS (GRAVEL ROADS, ALLEYS, AND OTHER AREAS WHERE BASE IS NOT TO BE COVERED BY ASPHALT OR CONCRETE) SHALL HAVE AN L.A. ABRASION (AASHTO T 96) RATING OF 40% OR LESS, AND SHALL HAVE SOURCE APPROVED BY THE CITY ENGINEER.

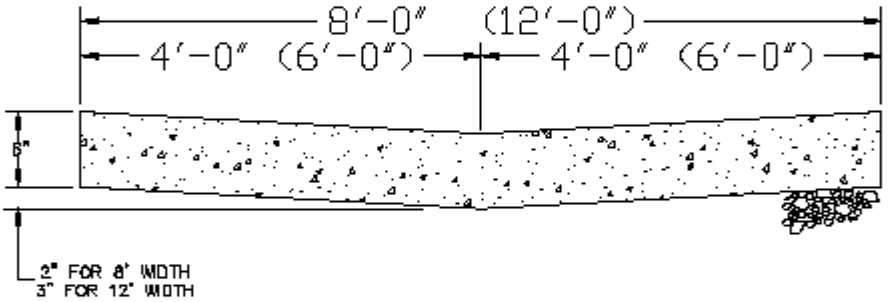
LATEST REVISION 01–15–09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 3



DESIGN DATA EMBANKMENT
BASE COURSES AND BITUMINOUS TOP

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 4





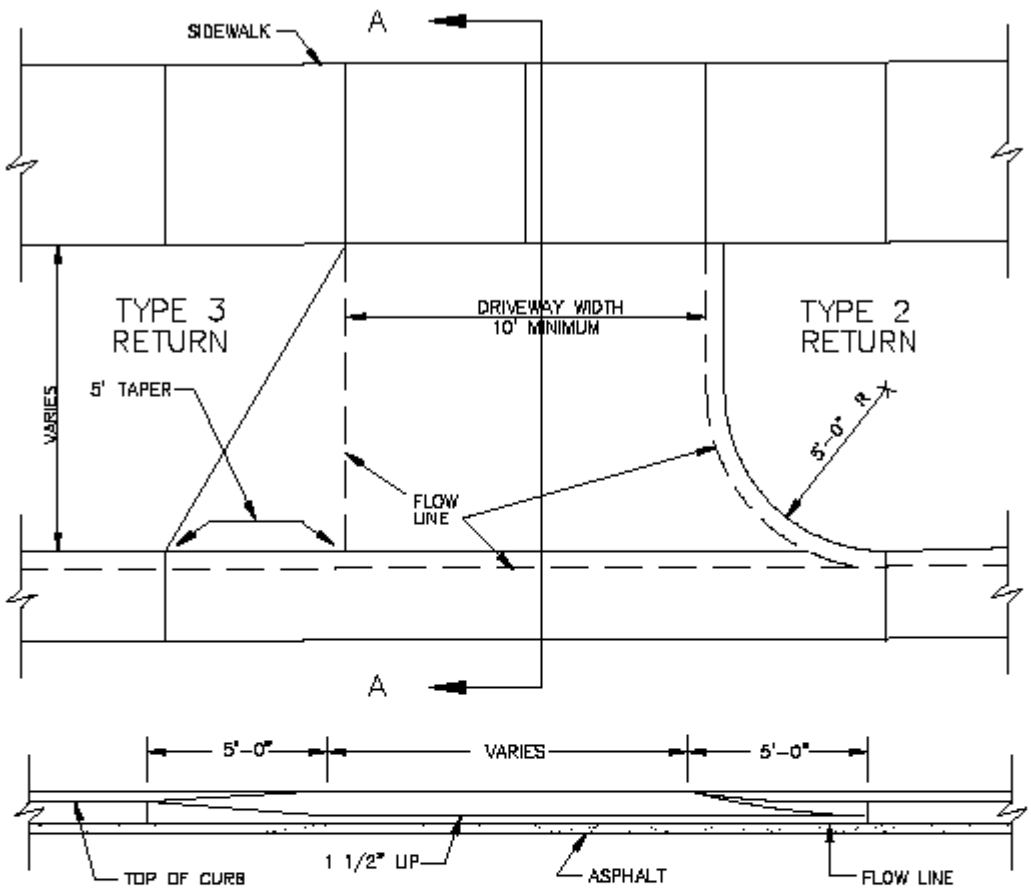
SECTION A-A

NOTES:

1. ELEVATIONS SHOWN ARE RELATIVE FLOW LINE ACROSS INTERSECTION.
2. VALLEY GUTTER SHALL HAVE A MINIMUM SLOPE OF 1% ACROSS INTERSECTION.
3. REQUIRED TYPE I & TYPE II GRAVEL BASE SAME AS THAT FOR STREET.
4. CONCRETE SHALL BE A 6 SACK MIX, TYPE II PORTLAND CEMENT, 3/4" MAX. AGGREGATE, 40% CRUSHED LIMESTONE, MIN 28 DAY STRENGTH OF 4000 PSI & 4-1/2" MAX SLUMP WITH 5 TO 7 % AIR ENTRAINMENT.
5. TRANSVERSE CONTRACTION JOINTS SHALL BE AT A MAXIMUM OF 12' SPACING AND SHALL CONFORM TO SECTION 02528 AND 02776 OF THE W.P.W.S.S.

VALLEY GUTTER & CURB RETURN

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 5



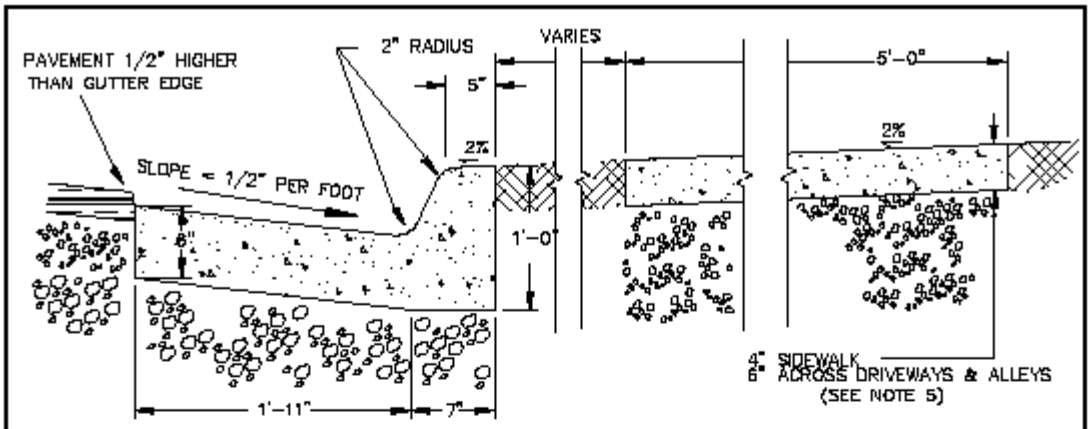
SECTION A–A

NOTES:

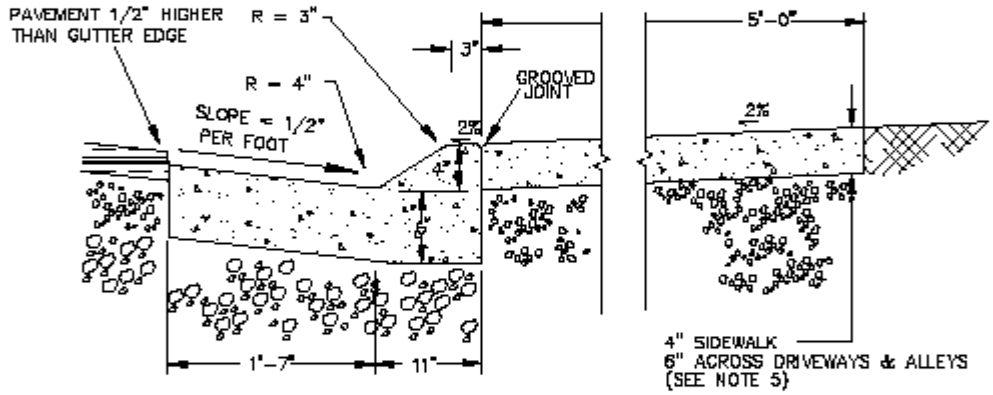
1. ALL ALLEY APPROACHES AND ADJACENT SIDEWALKS SHALL BE PROVIDED WITH TYPE II BASE AS REQUIRED FOR THE ADJACENT STREET.
2. JOINTING SHALL BE DONE IN CONFORMANCE WITH SECTION 02528 AND 02778 OF THE W.P.W.S.S.

STANDARD DRIVEWAY & ALLEY RETURNS

LATEST REVISION 01–15–09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 6



TYPE II CURB AND GUTTER

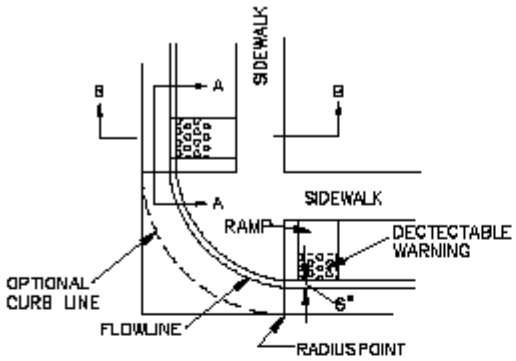


TYPE I CURB AND GUTTER

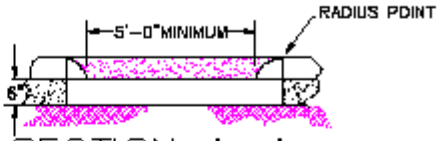
NOTES

1. SEE APPLICABLE STREET SECTION FOR BASE MATERIAL REQUIREMENTS.
2. CONCRETE SHALL BE A 6 SACK MIX, TYPE II PORTLAND CEMENT, 3/4" MAX. AGGREGATE, 40% CRUSHED LIMESTONE, MIN. 28 DAY STRENGTH OF 4,000 PSI AND 4-1/2" MAX. SLUMP WITH 5-7% AIR ENTRAINMENT
3. SUBGRADE COMPACTION AND CONTRACTION JOINTS SHALL CONFORM TO SECTION 02528, WPWSS
4. SIDEWALK AND PARKWAY CROSS-SLOPE SHALL BE 2% UP FROM STREET SIDE. TYPE II SIDEWALK WITH PARKWAY SHALL BE 2 TO 2-1/2" ABOVE TOP OF CURB. TOP OF CURB CROSS-SLOPE SHALL MATCH SIDEWALK CROSS-SLOPE.
5. SIDEWALK MAY BE 4" CONCRETE IN RESIDENTIAL DRIVEWAYS, 6" CONCRETE REQUIRED ALL OTHER DRIVEWAYS AND ACROSS ALL ALLEYS (SEE STANDARD DRIVEWAY AND ALLEY RETURNS).
6. TYPE I USED FOR 60' ROW IN ALL RESIDENTIAL STREETS. TYPE II USED FOR 60' ROW IN NON-RESIDENTIAL AREAS SHALL HAVE SIDEWALK AGAINST CURB WITH NO PARKWAY.
7. SIDEWALK SHALL BE PLACED SEPARATELY FROM CURB & GUTTER.

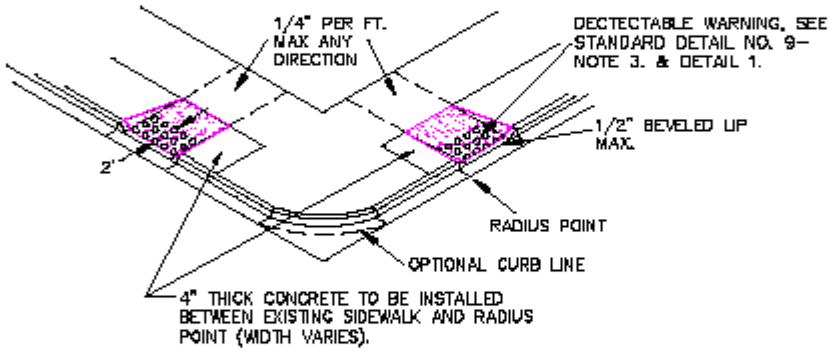
LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 7



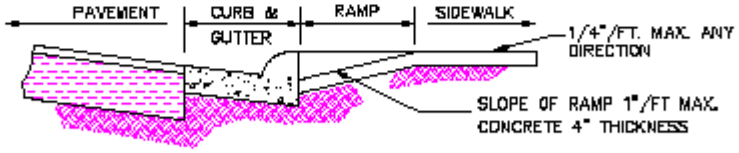
PLAN



SECTION A–A



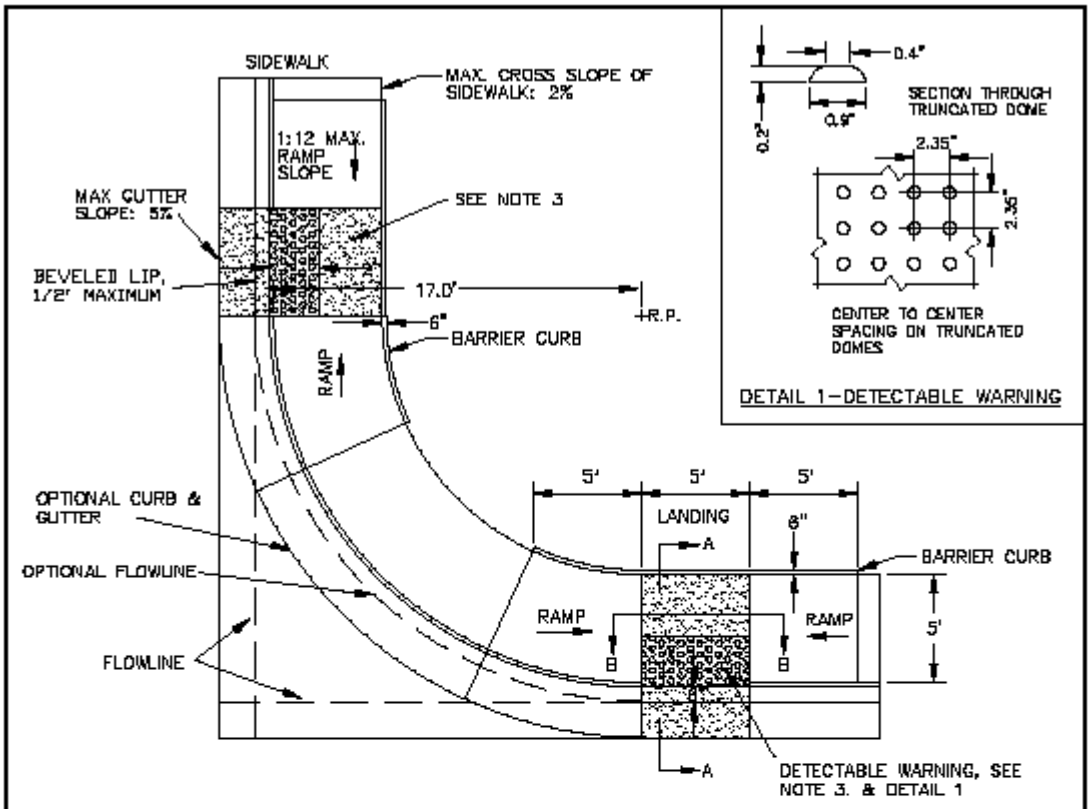
PERSPECTIVE

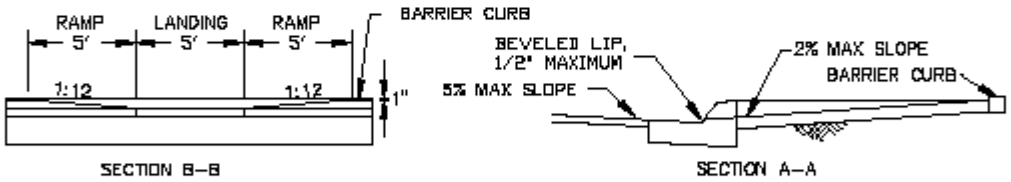


SECTION B–B

CURB RAMP – TYPE A

LATEST REVISION 06–01–09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 8



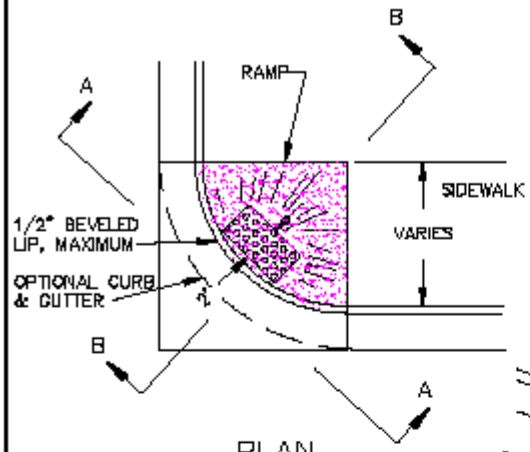


CURB RAMPS - TYPE B

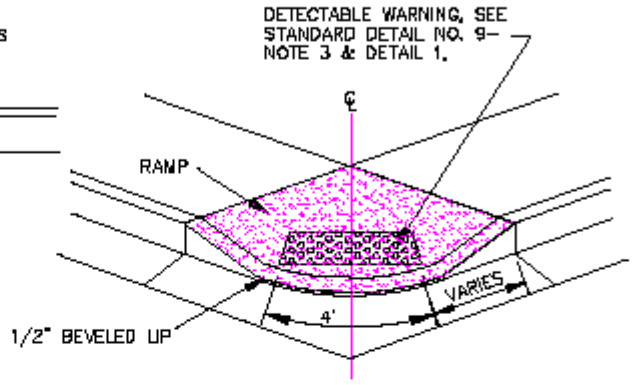
NOTES:

1. SEE STANDARD DETAILS FOR TYPE 1 CURB AND GUTTER, NOTES 1, 2, 3, & 4.
2. SEE SECTION 02776 OF THE WYOMING PUBLIC WORKS STANDARD SPECIFICATIONS LATEST EDITION FOR SURFACE FINISH.
3. REQUIREMENT FOR CONTRAST WITH SIDEWALK SHALL BE MET BY INSTALLATION OF TWO 24" X 24" DETECTABLE WARNING PLATES, NEENAH R-4984, OR EQUIVALENT.
4. THE MAXIMUM CROSS SLOPE OF LANDINGS IN ANY DIRECTION IS 2 PERCENT.
5. THE MAXIMUM VARIATION BETWEEN SURFACES WITHOUT EDGE TREATMENT IS 1/4 INCH. SURFACES WITH VARIATIONS BETWEEN 1/4" AND 1/2" SHALL BE BEVELED. SURFACES WITH VARIATIONS OVER 1/2" SHALL HAVE A MAXIMUM SLOPE OF 1:2 BETWEEN LEVELS.
6. THE DETECTABLE WARNING SURFACE (AREA OF TRUNCATED DOMES) TO BE INTEGRAL PART OF THE RAMP SURFACE.
7. BARRIER CURB TO BE 1' ABOVE BACK OF SIDEWALK (MAY BE INTEGRAL WITH SIDEWALK).

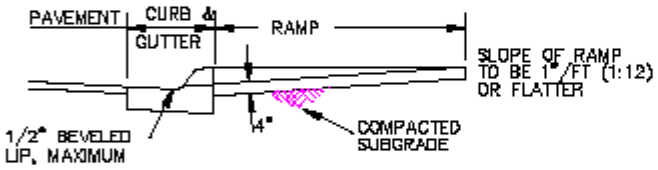
LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 9



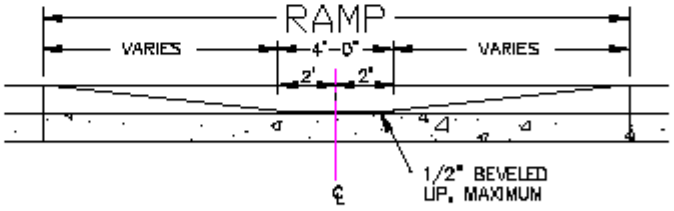
PLAN



PERSPECTIVE



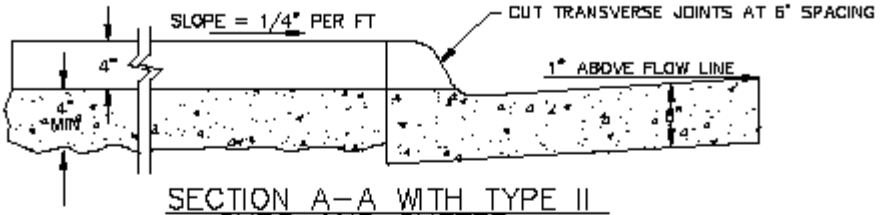
SECTION B–B



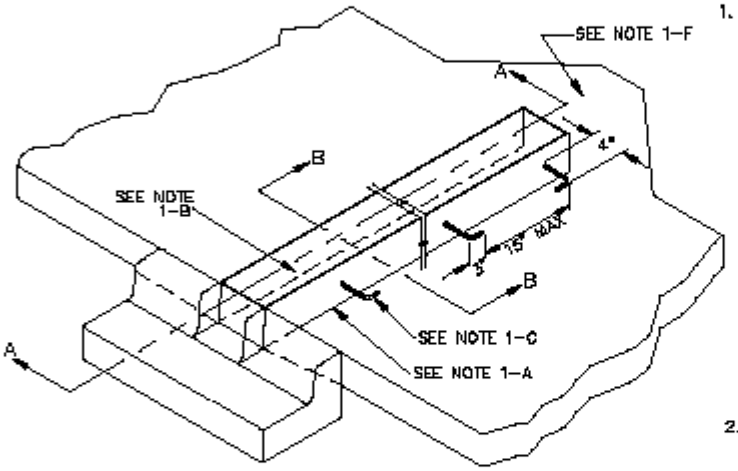
SECTION A–A

CURB RAMP – TYPE C

LATEST REVISION 06–01–09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 10

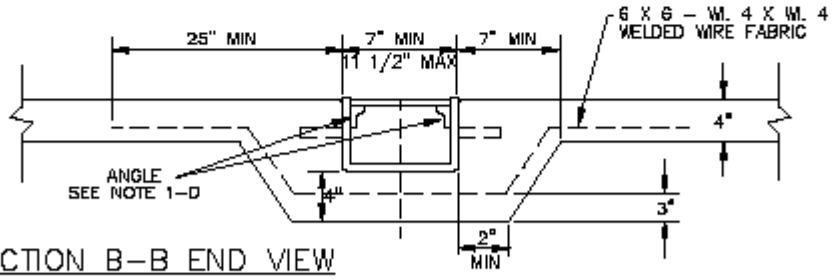


SECTION A–A WITH TYPE II CURB AND GUTTER



NOTES:

1. MATERIAL
   - A. BOX – 1/4" A36 STEEL PLATE.
   - B. LID – 1/4" A36 STEEL TREAD PLATE, BOLTED TO ANGLE WITH MIN. 4 – 1/4" FLAT HEAD BOLTS.
   - C. REBAR – #4, GRADE 40, WELDED TO BOX WITH 1/4" FILLET WELD ALL AROUND.
   - D. ANGLE – 1–1/4" X 1–1/4" X 1/4" A36 STEEL WELDED TO BOX 1/8" FILLET WELD 2" LONG ON 6" CENTERS.
   - E. CONCRETE – TO MEET CITY OF TORRINGTON STANDARD SPECIFICATIONS.
   - F. SIDEWALK TO BE WIDENED 1' AT BACK OF WALK IF THERE IS A TRENCH
2. NEENAH R–4995/R–4996 TYPE M TRENCH FRAME & R–3262 CURB OPENING MAY BE SUBSTITUTED

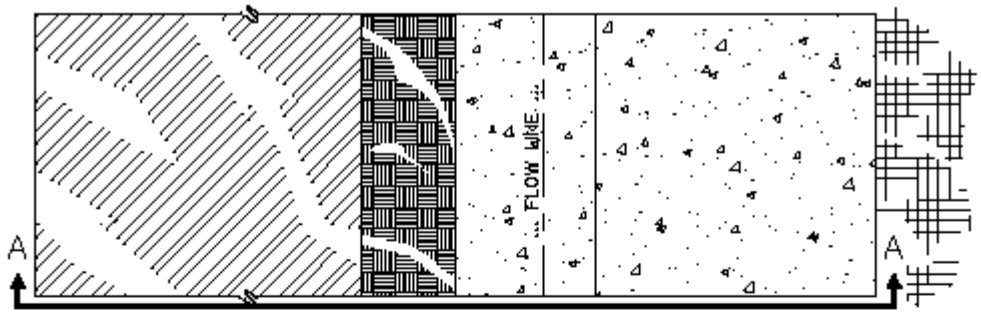


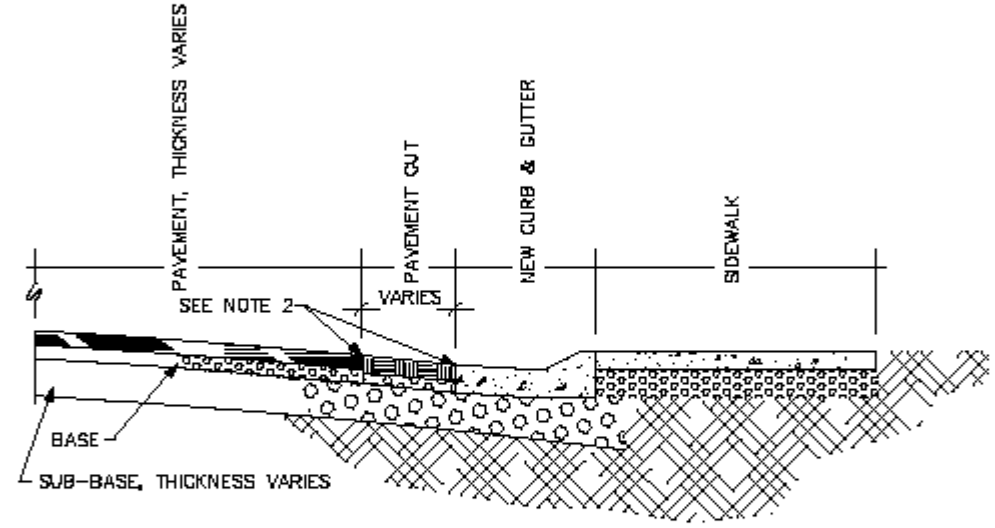
SECTION B–B END VIEW

THROUGH SIDEWALK/CURB DRAIN

LATEST REVISION 01–15–09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 11

PLAN VIEW





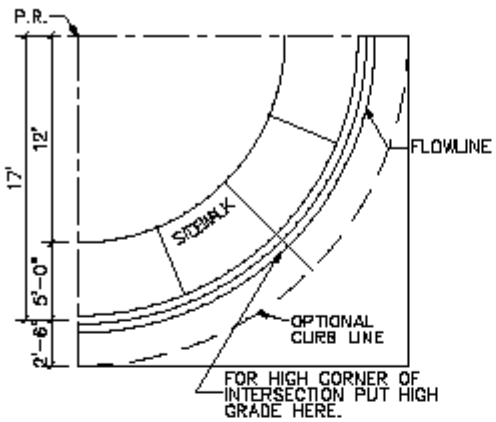
SECTION A–A

NOTES:

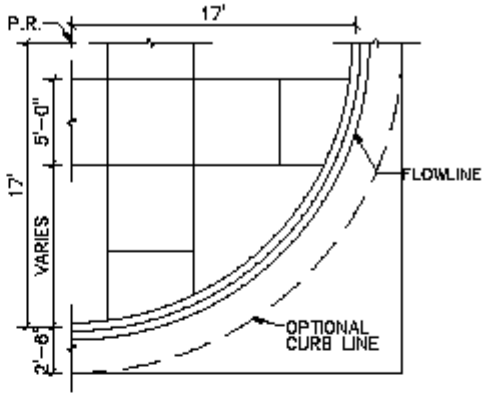
1. PAVEMENT CUT SHALL BE A MINIMUM OF 20 INCHES IN WIDTH. GREATER WIDTH REQUIRED AS FIELD CONDITIONS DEMAND. CUT SHALL BE GENERALLY UNIFORM. WIDTH OF CUT SHALL VARY ONLY WHEN FIELD CONDITIONS DEMAND. EDGE OF PAVEMENT SHALL BE LEFT VERTICAL AND CLEAN FOR PATCHING.
2. SURFACE RESTORATION SHALL MATCH EXISTING CUT. IN NO CASE SHALL PATCH SURFACE BE HIGHER THAN EXISTING SURFACE. SURFACE RESTORATION SHALL BE 3/8–5/8 INCHES ABOVE NEW CURB. SURFACE CROSS-SLOPE VARIES WITH FIELD CONDITIONS.
3. PREPARATION OF PATCH AREA SHALL ALLOW FOR PATCH THICKNESS TO BE 1 INCH GREATER IN DEPTH THAN EXISTING PAVEMENT TO A MAXIMUM OF 6 INCH DEPTH. PATCHING SHALL BE BY AN APPROVED CONTRACTOR. CONTRACTOR SHALL MAINTAIN PREPARED AREA AND TRAFFIC PROTECTION UNTIL PATCH IS COMPLETED.
4. BASE DISTURBED DURING REMOVAL OF PAVEMENT AND PLACEMENT OF CURB & GUTTER SHALL BE RECOMPACTED. FIELD CONDITIONS MAY REQUIRE ADDITIONAL SUBGRADE WORK COMPLETED IN CONJUNCTION WITH CURB & GUTTER REMOVAL AND REPLACEMENT. 4" TYPE I BASE REQUIRED UNDER CURB & GUTTER.

PAVEMENT RESTORATION FOR CURB & GUTTER REMOVAL & REPLACEMENT

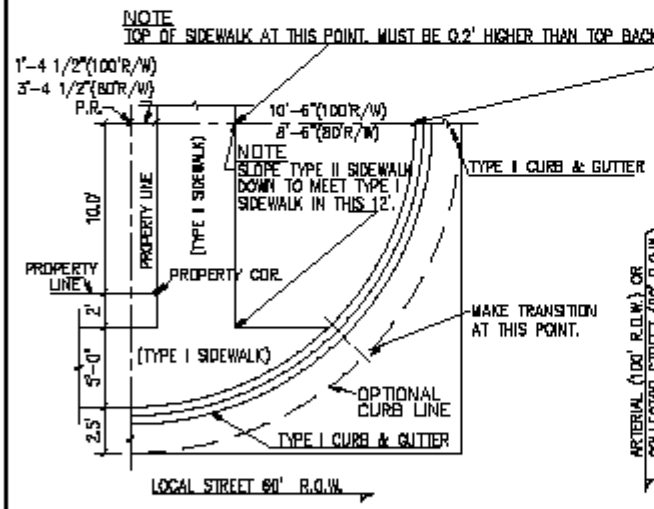
LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV.	STANDARD DETAIL NO. 12



STANDARD SIDEWALK INTERSECTION FOR TYPE-I, CURB AND GUTTER



STANDARD SIDEWALK INTERSECTION FOR TYPE-II, CURB AND GUTTER



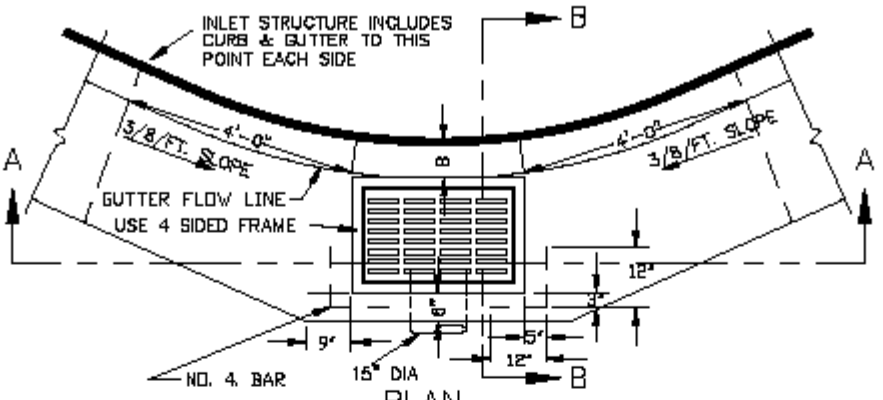
NOTES:

1. CONTRACTION JOINTS SHALL BE AT 5'-0" INTERVALS FOR SIDEWALK, 6'-0" FOR CURB AND GUTTER.
2. JOINTING SHALL BE DONE IN CONFORMANCE WITH SECTIONS 02520 & 02776 OF THE WYOMING PUBLIC WORKS STANDARD SPECIFICATIONS.
3. MAXIMUM FLOW SLOPE AROUND RADIUS 0.50'. MINIMUM FLOW SLOPE AROUND RADIUS 0.20'.
4. SEE STANDARD DETAIL DRAWINGS 7, 8, AND 9 FOR CURB RAMP SPECIFICATIONS.

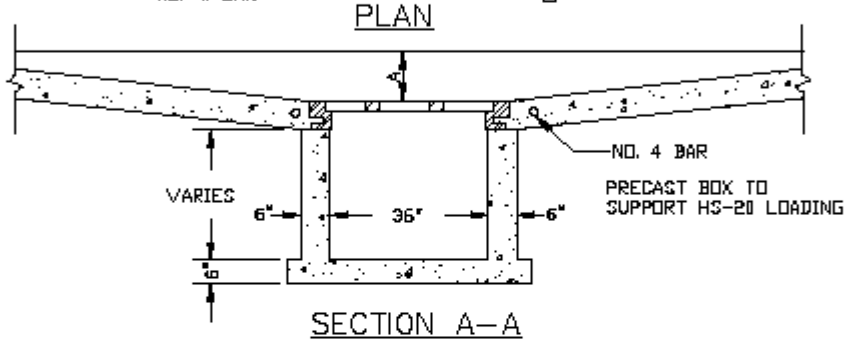
STANDARD SIDEWALK, CURB AND GUTTER TRANSITION FOR TYPE I TO TYPE II

SIDEWALK, CURB & GUTTER INTERSECTIONS

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 13

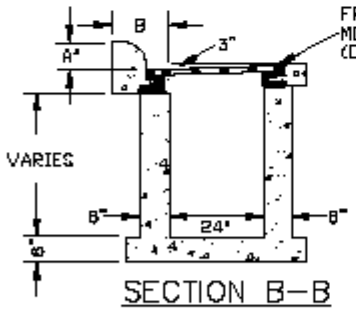


PLAN



SECTION A–A

N.T.S.



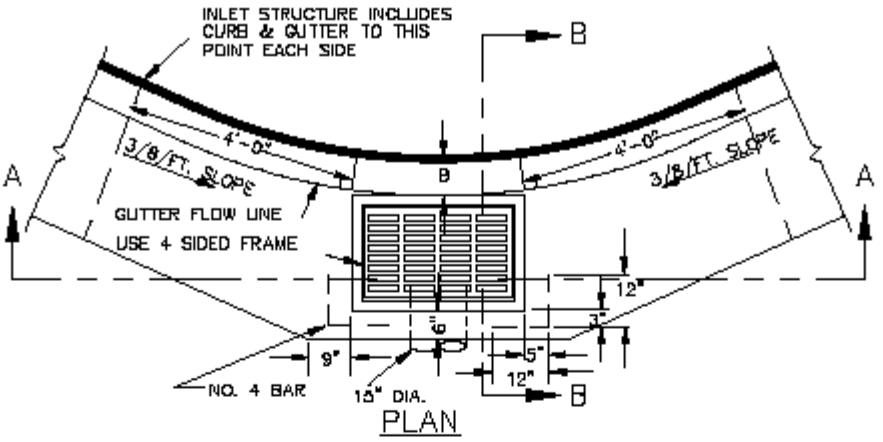
SECTION B–B

	RADIUS CURB		STRAIGHT CURB	
	A	B	A	B
TYPE I C. & G.	6"	8" MIN	6"	10 1/2"
TYPE II C. & G.	8"	8" MIN	8"	8 3/4"

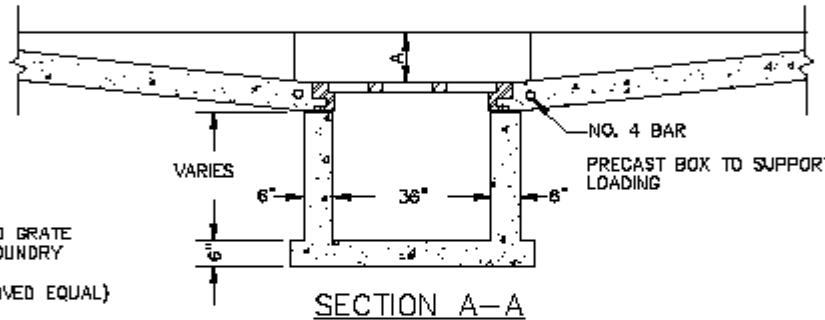
STORM SEWER INLET – TYPE 3

3 cfs

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV.	STANDARD DETAIL NO. 14

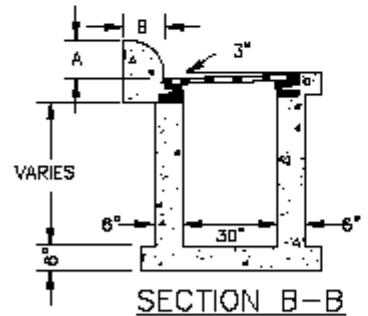


PLAN



FRAME AND GRATE
NEENAH FOUNDRY
MODEL
(OR APPROVED EQUAL)

SECTION A–A
N.T.S.

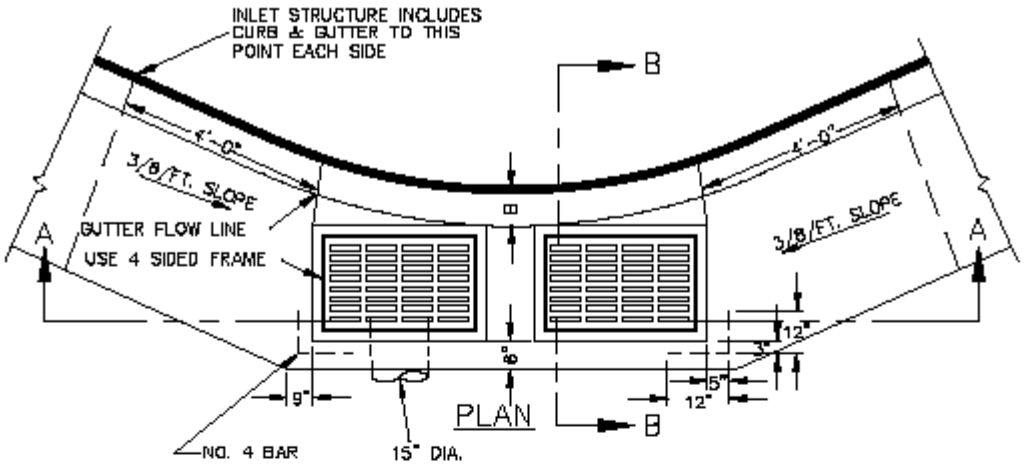


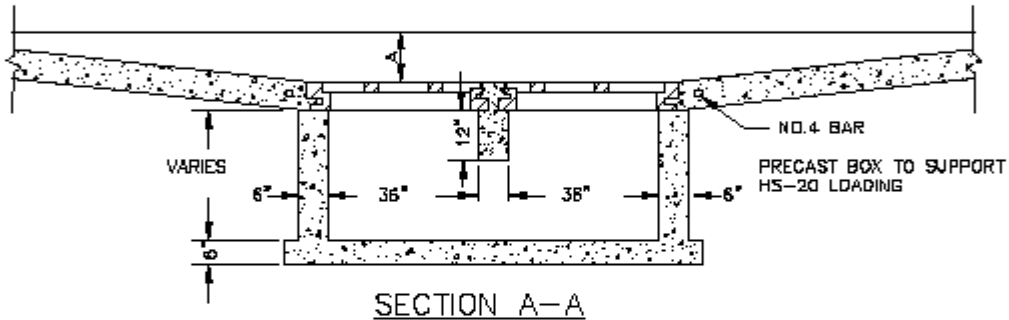
SECTION B–B

	RADIUS CURB		STRAIGHT CURB	
	A	B	A	B
TYPE I C. & G.	6"	6" MIN	6"	10 1/2"
TYPE II C. & G.	8"	8" MIN	8"	8 3/4"

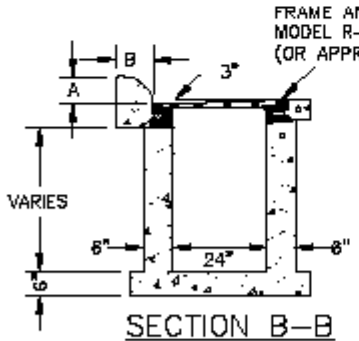
STORM SEWER INLET – TYPE 5
5 cfs

LATEST REVISION 01–15–09	CITY OF TORRINGTON	APPROV.	STANDARD DETAIL NO. 15





SECTION A–A

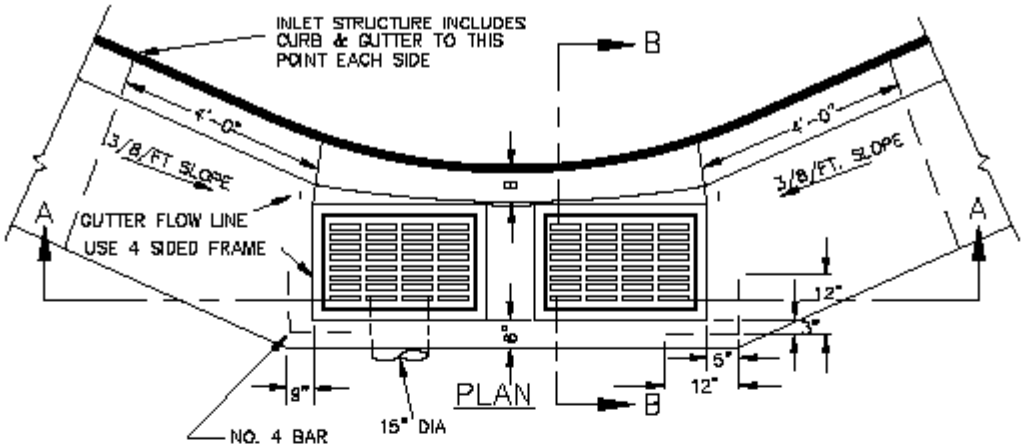


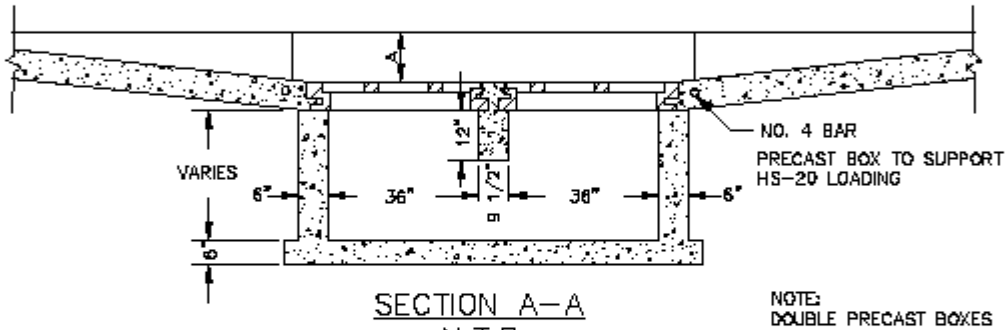
SECTION B–B

	RADIUS CURB		STRAIGHT CURB	
	A	B	A	B
TYPE I C. & G.	6"	8" MIN	6"	10 1/2"
TYPE II C. & G.	6"	8" MIN	6"	8 3/4"

STORM SEWER INLET – TYPE 6
6 cfs

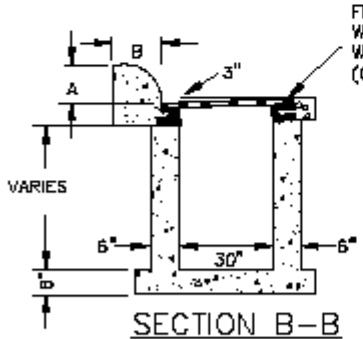
LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 16





SECTION A–A
N.T.S.

NOTE:
DOUBLE PRECAST BOXES MAY BE USED

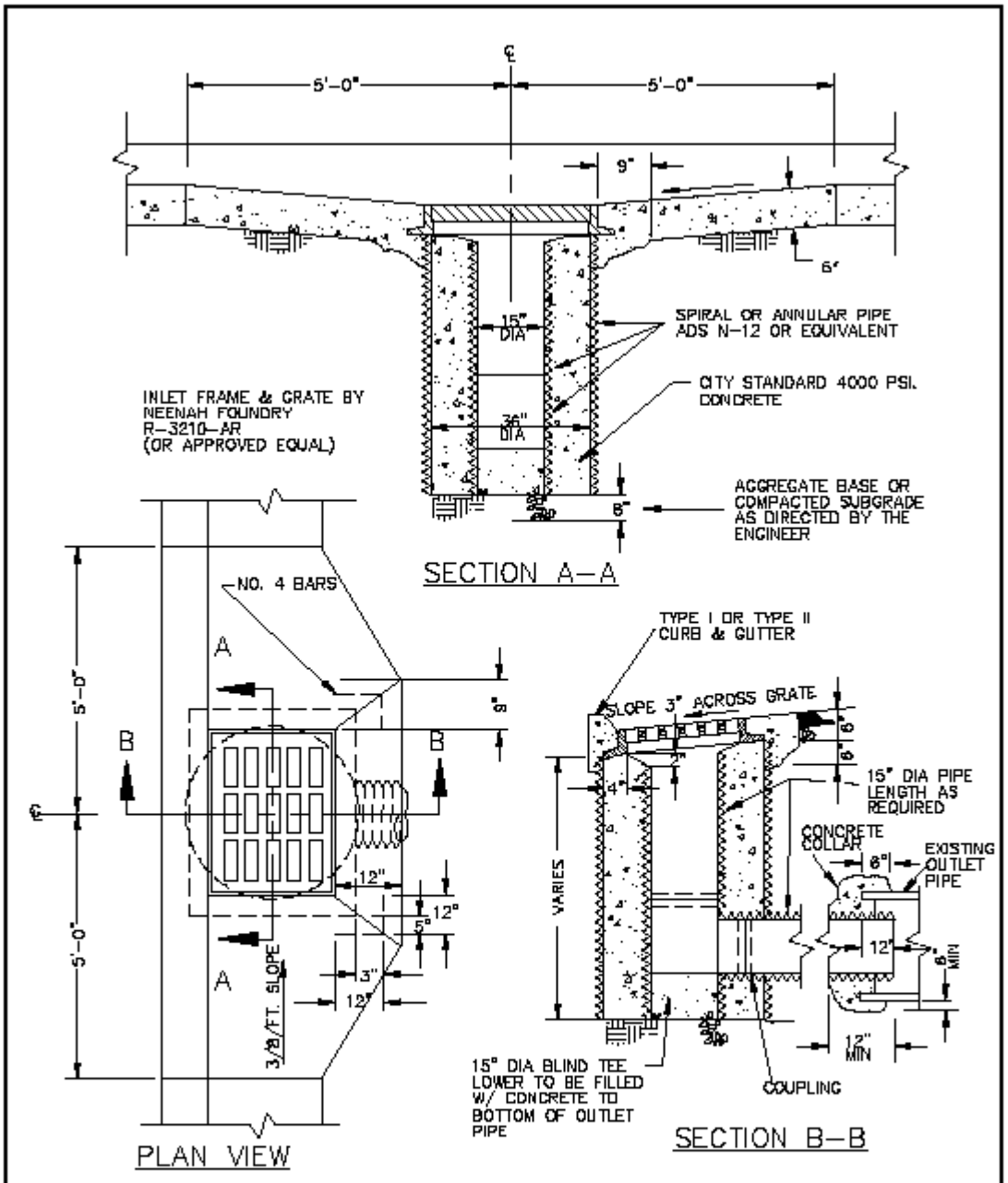


SECTION B–B

	RADIUS CURB		STRAIGHT CURB	
	A	B	A	B
TYPE I C. & G.	6"	8" MIN	6"	10 1/2"
TYPE II C. & G.	8"	8" MIN	8"	8 3/4"

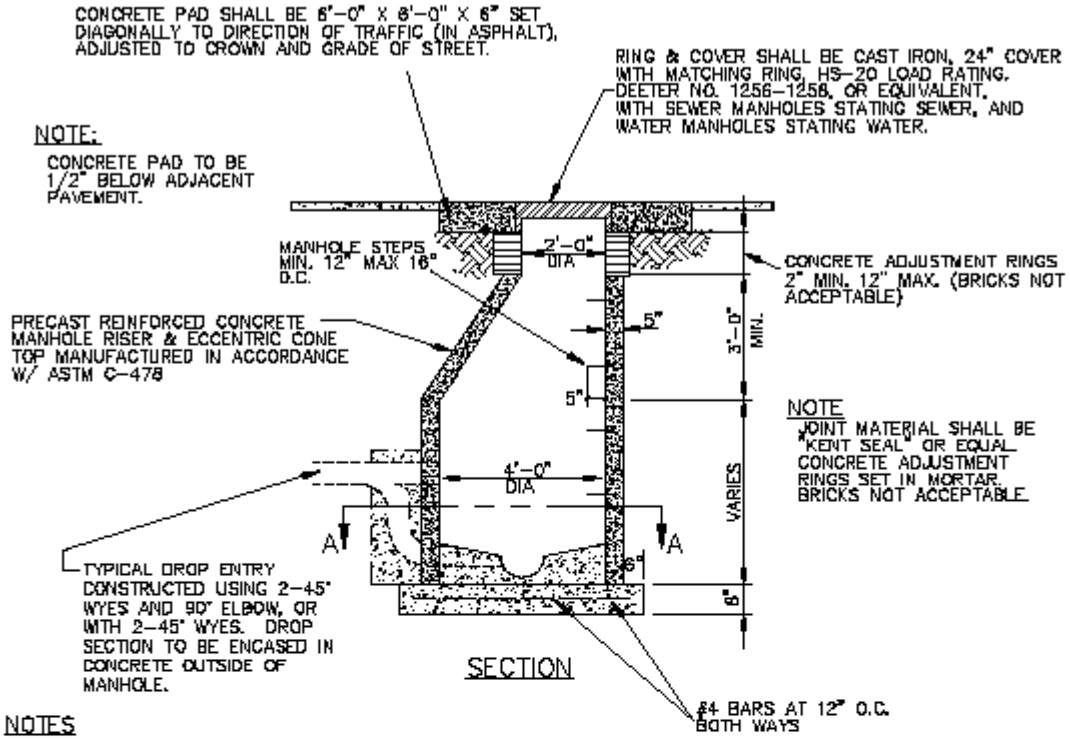
STORM SEWER INLET – TYPE 10
10 cfs

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 17



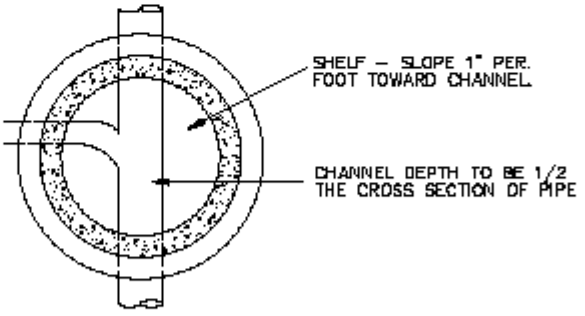
STORM SEWER INLET-TYPE 3 ROUND

LATEST REVISION 01-15-08	CITY OF TORRINGTON	APPROV.	STANDARD DETAIL NO. 18



NOTES

1. STEPS SHALL CONFORM TO §02700, WPWSS.
2. SEE CITY OF TORRINGTON STANDARD DETAIL FOR TYPE I AND II CURB AND GUTTER FOR CONCRETE SPECIFICATIONS.
3. INVERT CHANNELS SHALL BE HALF-PIPE LAID IN CONCRETE. CHANNELS FORMED DIRECTLY IN THE CONCRETE OF THE MANHOLE BASE MAY BE USED WITH SPECIFIC PERMISSION OF THE ENGINEER.
4. CONCRETE CHANNELS AND SHELVES SHALL BE HARD-TROWEL FINISHED.
5. CONCRETE CHANNEL INVERT SHALL HAVE 0.1" MINIMUM DROP ACROSS MANHOLE.
6. THE MAXIMUM DISTANCE BETWEEN THE TOP OF THE UPPERMOST STEP AND THE TOP OF THE RING & COVER SHALL BE 26".



SECTION A-A

STANDARD PRECAST MANHOLE

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 19

GENERAL NOTES

TRASH GUARDS AS PER WYOMING DEPARTMENT OF TRANSPORTATION STANDARDS.

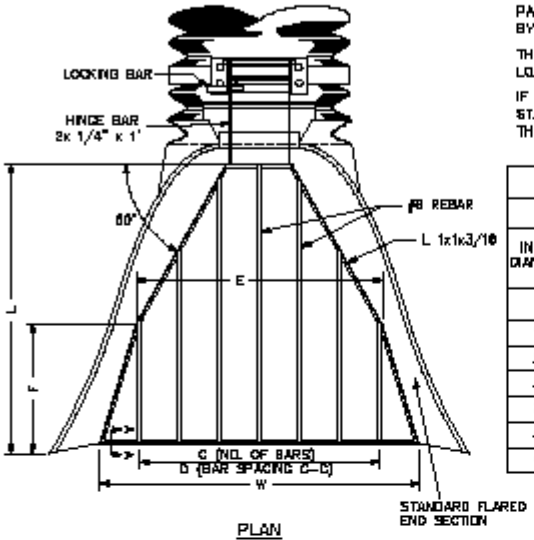
TRASH GUARDS SHALL BE INSTALLED AT LOCATIONS SHOWN ON PLANS OR SPECIFIED BY THE ENGINEER.

PADLOCKS FOR LOCKING BAR WILL BE FURNISHED AND INSTALLED BY THE CITY AS REQUIRED.

THE TRASH GUARDS ARE NOT DESIGNED TO CARRY WHEEL LOADINGS AND AS SUCH ARE NOT TO BE USED AS SAFETY GRATES.

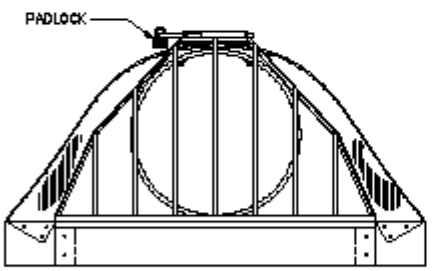
IF THE FLARED END DIMENSIONS VARY FROM THOSE SHOWN IN THE STANDARD PLANS, NECESSARY ADJUSTMENTS SHALL BE MADE TO THE TRASH GUARD DIMENSIONS.

TRASH GUARD INSTALLED

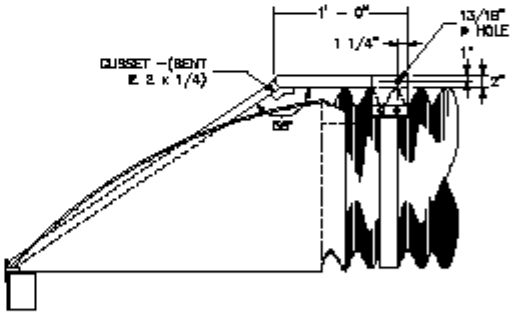


PLAN

TABLE OF DIMENSIONS											
	TRASH GUARD									MOUNTING	
INSIDE DIAMETER	A	B	D	E	F	G	L	W	C	R	S
	(INCHES)								(EA.)	(INCHES)	
18	8	5 1/8	8	27 1/2	15	2 1/2	33	34	3	8 1/2	4 1/4
24	11	7 3/8	7 1/2	36	22	2 1/2	44 1/2	46	3	12 1/2	6 1/2
30	13	10 1/4	9 1/2	44 1/2	30	2 1/2	56	58	5	15 1/2	8 3/4
36	16	12 3/4	9	56	35	3 1/2	67 1/4	70	7	18 1/2	8
42	18	15 1/4	9	69 1/2	40	3 1/2	78	82	8	21 1/2	9 1/2
48	21	17 3/4	8 1/2	79 1/2	46	3 1/2	88 1/2	86	8	24 1/2	10 3/4



ELEVATION



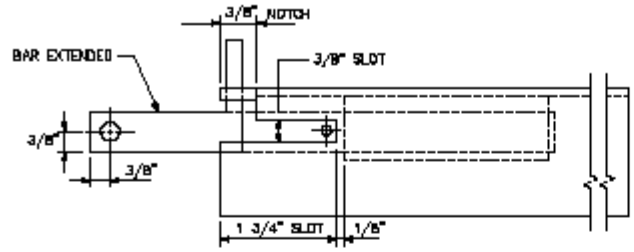
SIDE VIEW

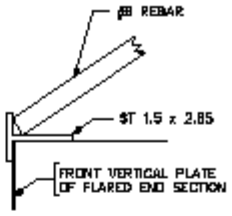
TRASH GUARDS FOR FLARED END SECTIONS

(CORRUGATED METAL PIPE)

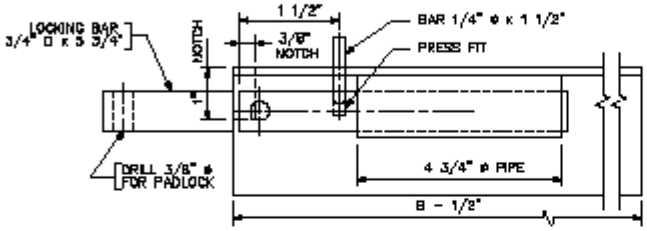
SEE STANDARD DETAIL NO.20 FOR ADDITIONAL DETAILS

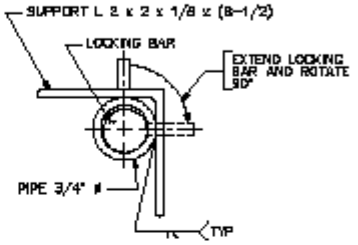
LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 20



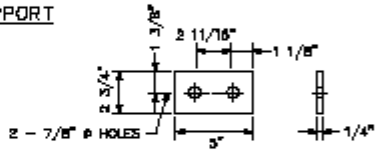


SECTION A–A

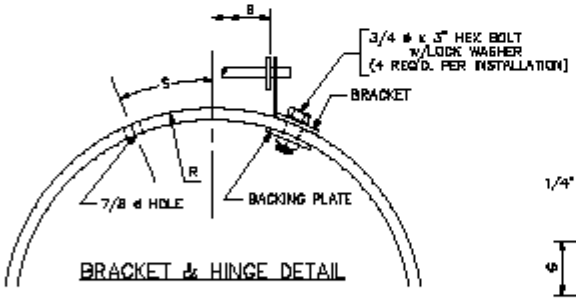




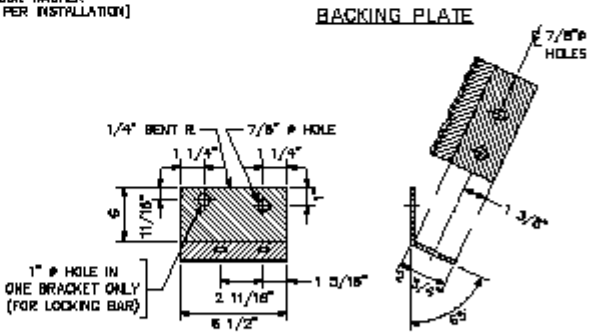
LOCKING BAR & SUPPORT



BACKING PLATE



BRACKET & HINGE DETAIL



BRACKET (2 REQ'D)

TRASH GUARDS FOR FLARED END SECTION

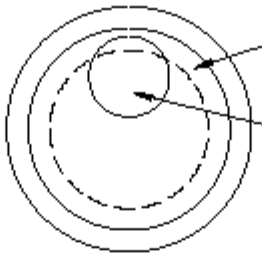
(CORRUGATED METAL PIPE)

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 21

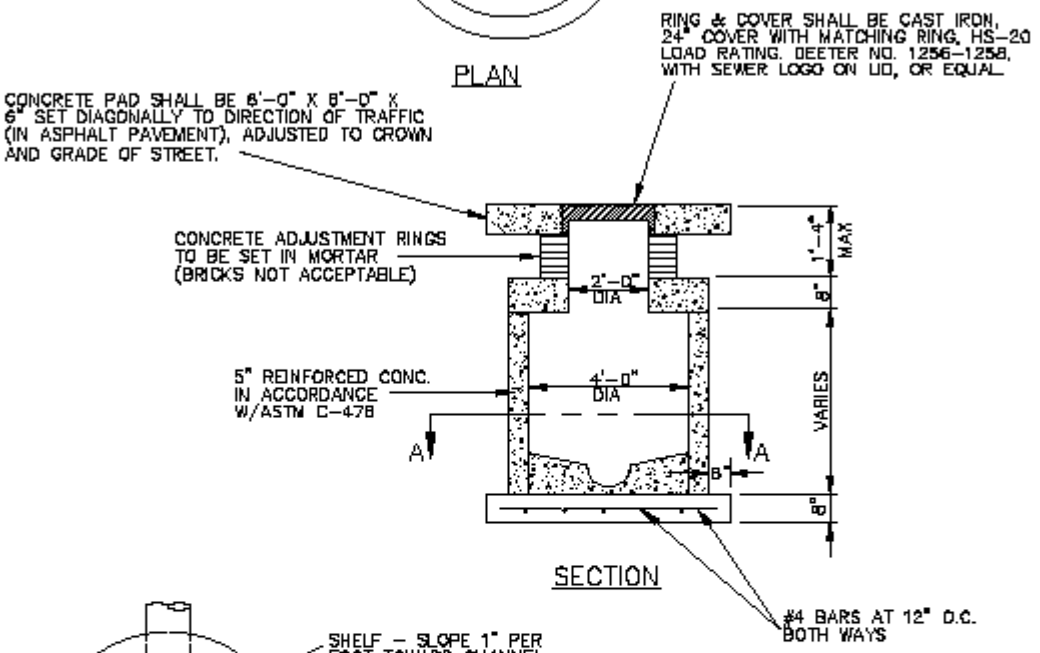
NOTES:

CONCRETE PAD TO BE 1/2" BELOW ADJACENT PAVEMENT.

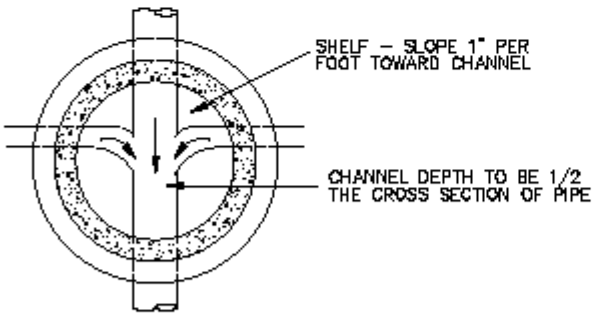
SEE APPLICABLE NOTES FOR STANDARD PRECAST MANHOLE



PLAN



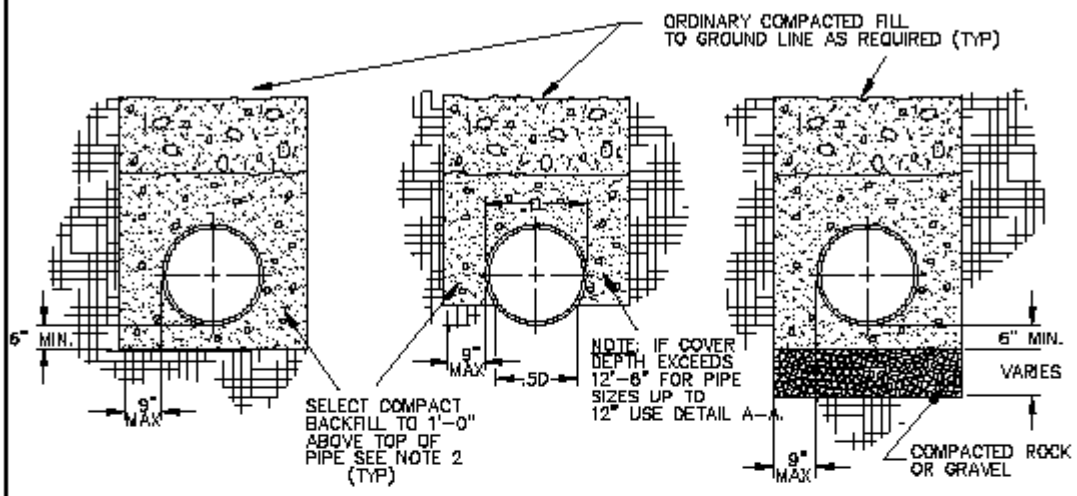
SECTION



SECTION A-A

STANDARD PRECAST MANHOLE UNDER 7'-0" DEEP

LATEST REVISION 01-20-10	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 22



IN ROCK A–A

IN SOIL B–B
(SEE NOTE 1)

IN UNSTABLE SOIL C–C
(SEE NOTE 3)

NOTES:

1. IF ROCKS OVER 3/4" ARE ENCOUNTERED IN TRENCH BOTTOM, THEY SHALL BE REMOVED TO ALLOW 2" CLEARANCE FROM PIPE TO ANY ROCK OVER 3/4" BEDDED WITH SELECT BACKFILL AND COMPACTED.

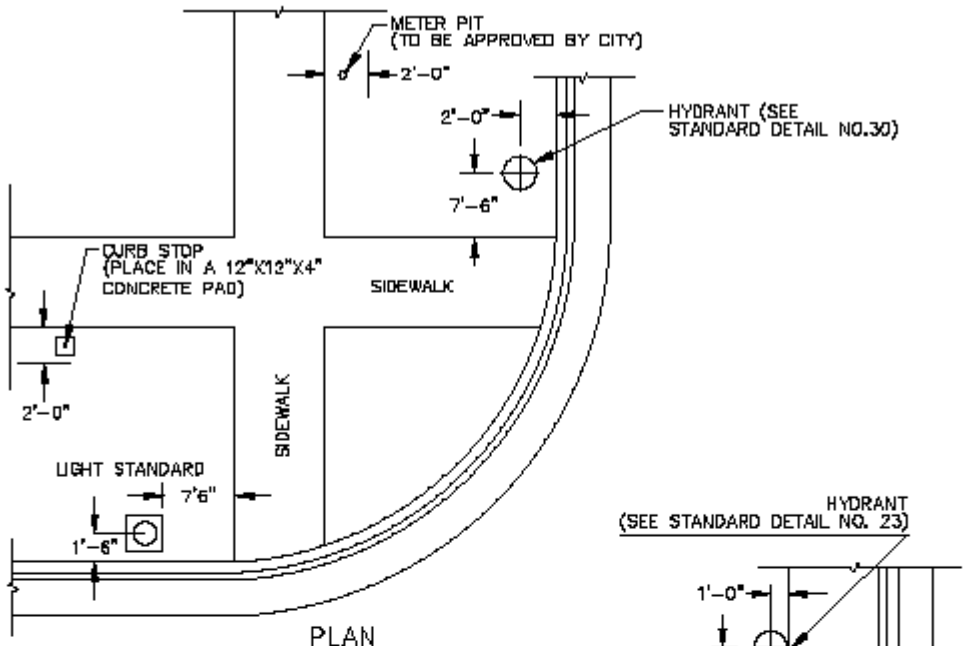
2. SELECT BACKFILL SHALL BE COARSE GRAINED SOILS (OVER 50% RETAINED ON A NO. 200 SIEVE) SUCH AS GRAVEL, SAND, OR SILTY SAND MEETING UNIFIED SOIL CLASSIFICATION REQUIREMENTS FOR TYPE GW, GP, GM, GC, SW, SP, SM, & SC. SELECT BACKFILL SHALL NOT CONSIST OF FINE GRAINED SOIL (LESS THAN 50% RETAINED ON A NO. 200 SIEVE) SUCH AS SILT, CLAY & ORGANIC SOILS MEETING REQUIREMENTS FOR SOIL TYPES ML, CH, & PT. SELECT BACKFILL SHALL BE FREE OF ROCKS, CLODS & FROZEN PARTICLES OVER 3/4".

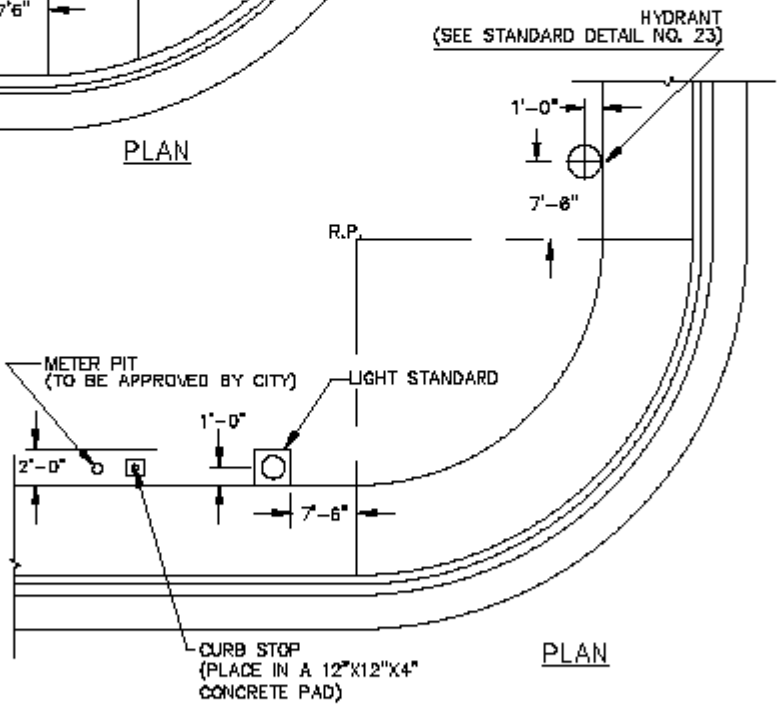
3. COMPACTED ROCK OR GRAVEL SHALL BE CRUSHED MATERIAL APPROVED BY THE ENGINEER. DEPTH OF COMPACTED ROCK LAYER TO BE DETERMINED BY THE ENGINEER TO FIT EACH SOIL CONDITION ENCOUNTERED.

4. SEE PIPE MANUFACTURERS RECOMMENDATIONS FOR TYPE OF PIPE INSTALLATIONS.

WATER, SEWER BACKFILL AND BEDDING DETAILS

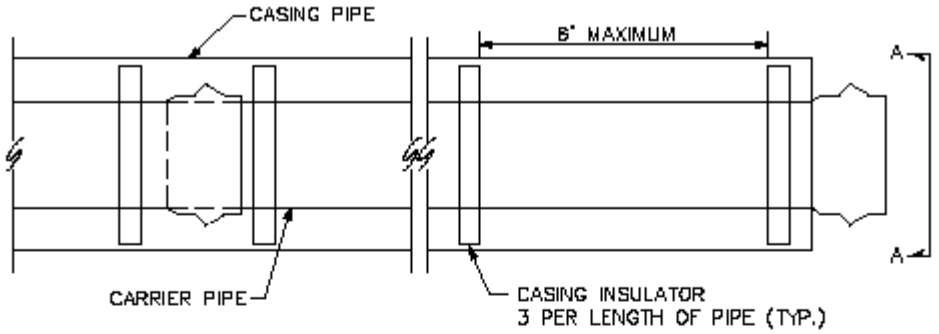
LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 23



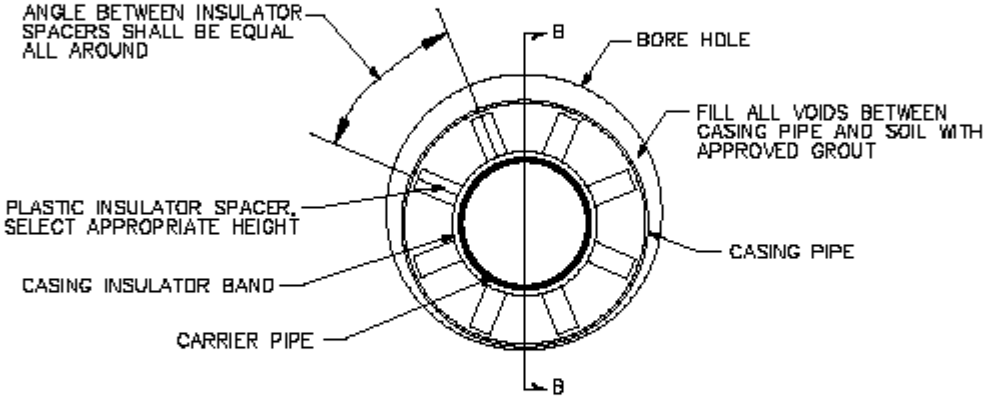


FIRE HYDRANT, METER PIT & LIGHT STANDARD LOCATION FOR TYPE I & II CURB AND GUTTER

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV.	STANDARD DETAIL NO. 24



VIEW B–B



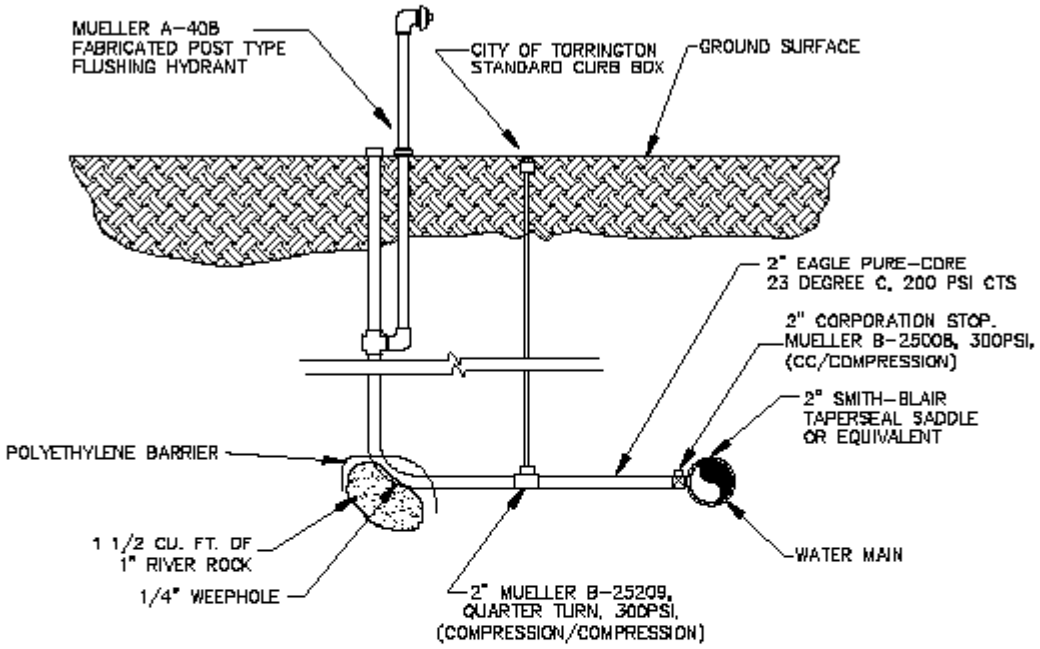
VIEW A–A

NOTES:

1. EACH SECTION OF STEEL CASING PIPE SHALL BE WELDED WITH A FULL PENETRATION BUTT WELD TO FORM A CONTINUOUS WATERTIGHT JOINT WITH SUFFICIENT STRENGTH TO WITHSTAND ALL STRESS OF LOADING AND JACKING.
2. PIPE JOINTS SHALL BE ADEQUATELY PROTECTED BY SPACERS TO PROTECT JOINTS FROM OVER INSERTION WHEN PIPE IS BEING PUSHED INTO CASING.
3. STAINLES OR POLYMER CASING SPACERS SHALL BE EVENLY SPACED ALONG EACH SECTION OF PIPE. A MINIMUM OF THREE CASING SPACERS SHALL BE ATTACHED FOR EACH JOINT OF PIPE. THE LINEAR DISTANCE BETWEEN SPACERS SHALL NOT EXCEED 6 FEET. SPACERS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. SPACERS SHALL BE APPROVED BY ENGINEER.
4. THE ENDS OF THE CASING PIPE SHALL BE SEALED WITH APPROVED CASING SEALS.

TYPICAL PIPE BORING AND JACKING DETAIL

LATEST REVISION 01–15–09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 25

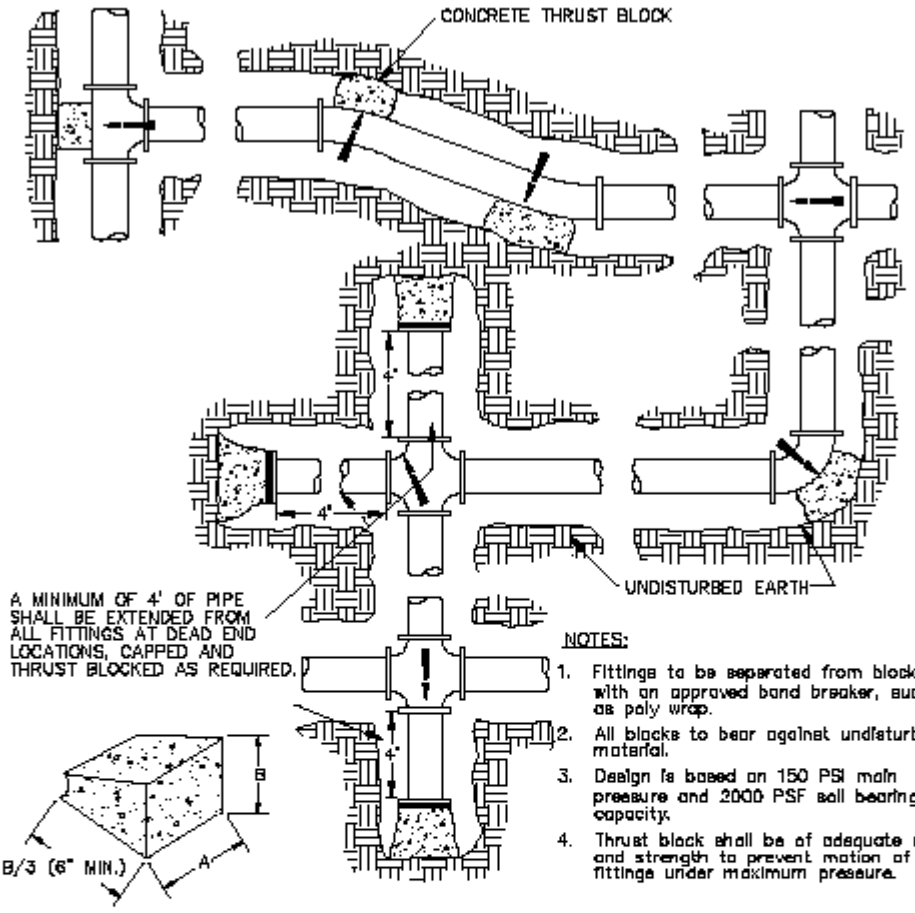


NOTES:

1. BLOW-OFF ALLOWED ONLY AS A PERMANENT INSTALLATION ON NON-POTABLE WATER SYSTEM LINES.
2. BLOW-OFF SHALL ONLY BE ALLOWED AS TEMPORARY INSTALLATION ON POTABLE SYSTEM WITH SPECIFIC APPROVAL OF ENGINEER.
3. BLOW-OFFS SHALL COMPLY WITH SECTION D2665 OF THE WPWSS.

WATER LINE BLOW-OFF DETAIL

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 26



NOTES:

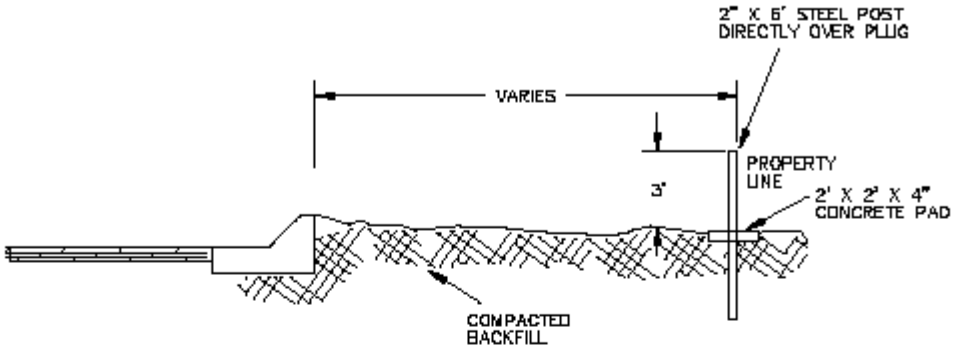
1. Fittings to be separated from blocks with an approved bond breaker, such as poly wrap.
2. All blocks to bear against undisturbed material.
3. Design is based on 150 PSI main pressure and 2000 PSF soil bearing capacity.
4. Thrust block shall be of adequate size and strength to prevent motion of fittings under maximum pressure.

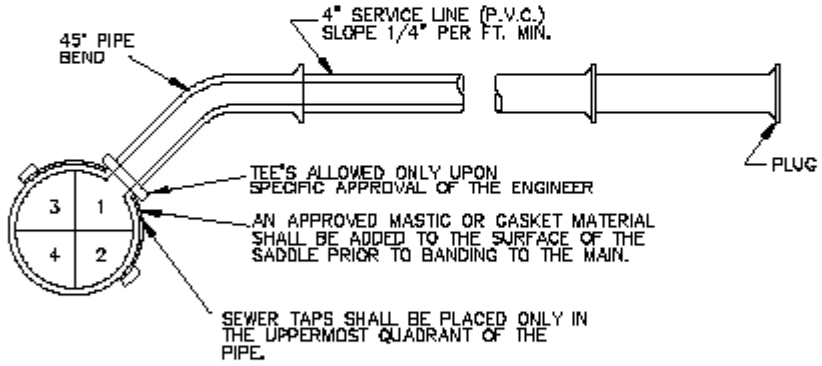
MINIMUM DIMENSIONS FOR THRUST BLOCKING

FITTING SIZE	TEES & PLUGS		90° BENDS		45° BENDS & WYES		REDUCERS & 22 1/2° BENDS		11 1/4° BENDS	
	A	B	A	B	A	B	A	B	A	B
4"	1'-7"	1'-2"	1'-9"	1'-6"	1'-6"	0'-10"	1'-7"	0'-6"	0'-6"	0'-6"
6"	2'-0"	1'-11"	2'-5"	2'-2"	1'-10"	1'-7"	1'-9"	0'-10"	0'-6"	0'-6"
8"	2'-8"	2'-6"	3'-2"	3'-0"	2'-5"	2'-1"	1'-9"	1'-6"	1'-0"	1'-0"
10"	3'-4"	3'-3"	4'-0"	3'-10"	3'-0"	2'-9"	2'-2"	1'-11"	1'-6"	1'-0"
12"	4'-0"	3'-10"	4'-8"	4'-6"	3'-8"	3'-3"	2'-7"	2'-3"	2'-0"	1'-0"
14"	5'-5"	3'-10"	6'-6"	4'-11"	4'-9"	3'-5"	3'-5"	2'-5"	2'-0"	1'-6"
20"	5'-0"	5'-0"	6'-0"	6'-0"	5'-0"	4'-0"	3'-6"	3'-0"	3'-0"	2'-0"
24"	6'-0"	6'-0"	7'-0"	7'-0"	5'-0"	5'-0"	4'-6"	3'-0"	3'-0"	3-0"
30"	7'-6"	7'-6"	8'-0"	8'-0"	6'-3"	6'-3"	4'-8"	4'-6"	3'-3"	3-3"

THRUST BLOCK PLACEMENT FOR WATER MAIN

LATEST REIVSION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 27



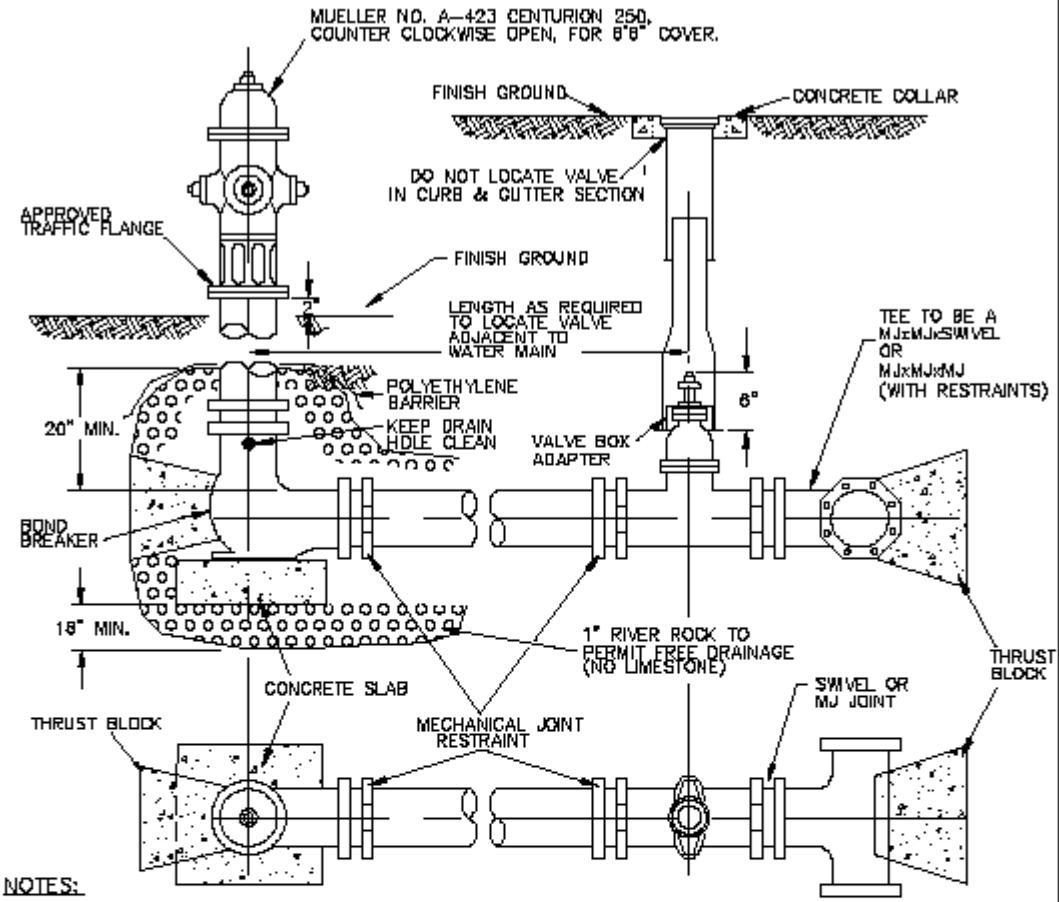


NOTES:

1. ALL SANITARY SEWER LINES SHALL HAVE A MINIMUM OF 44" OF COVER FROM TOP OF PIPE TO FINISH GRADE.
2. ALL SEWER, SANITARY OR STORM SHALL BE INSPECTED BY THE USE OF A TELEVISION CAMERA BEFORE FINAL ACCEPTANCE.
3. ALL NEW SEWER PIPE AND FITTINGS SHALL BE PVC PIPE, SDR 35. WYE OR TEE FITTINGS SHALL BE OF THE SAME MATERIAL AS THE PIPE USED.
4. SEWER TAPS SHALL NOT PROTRUDE IN SEWER MAIN.

SANITARY SEWER SERVICE LINE

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 28

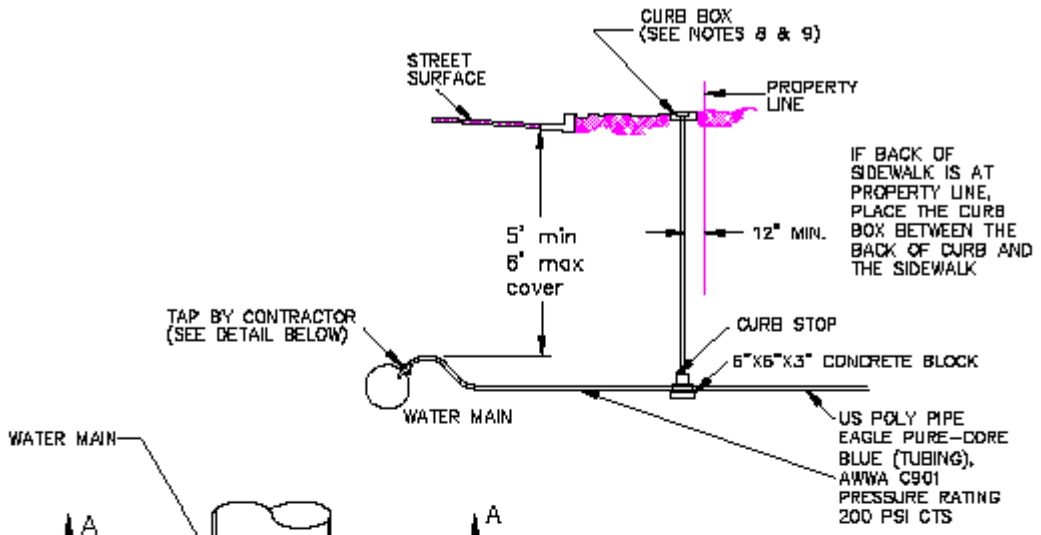


NOTES:

1. BONNET SHALL BE STAR 666S 5 1/4" (OR APPROVED EQUAL). BASE OF BONNET SHALL SET ON VALVE BOX ADAPTOR. ADAPTOR INC., SERIES I OR APPROVED EQUIVALENT.
2. VALVES SHALL BE LEFT HAND OPEN (2" SQUARE WRENCH NUT) AND SHALL BE IN CONFORMANCE WITH SECTION C-500 OF THE A.W.W.A. STANDARDS. NONRISING STEM VALVES SHALL BE USED IN ALL UNDERGROUND APPLICATIONS WITH MECHANICAL JOINT. VALVES SHALL BE RESILIENT SEATED MUELLER A-2360, CLASS 250, (2" TO 12").
3. MECHANICAL JOINT RESTRAINT SHALL BE MEGALUG EBBA 1100 SERIES (OR APPROVED EQUAL), FOR ALL SIZE, TYPE AND CLASS OF PIPE USED.
4. VALVE BOX SHALL BE CAST IRON, 5 1/4" DIA. ADJUSTABLE SCREW TYPE AND OF SUFFICIENT LENGTH FOR THE TYPE OF BURY SPECIFIED, THE CAST IRON COVER SHALL HAVE THE WORD WATER AND SHALL BE CENTERED AND PLUMB OVER THE WRENCH NUT.
5. ALL CAP SCREWS AND T-BOLTS BELOW FINISH GRADE SHALL BE STAINLESS STEEL.
6. ANTI-SEIZE COMPOUND SHALL BE APPLIED TO ALL STAINLESS BOLT AND NUT CONNECTIONS PRIOR TO ASSEMBLY.
7. STAINLESS STEEL SHOULDER BOLTS SHALL BE USED FOR TOP TWO BOLTS ON VALVES AND HYDRANTS.
8. POLYETHYLENE BARRIER SHALL BE USED TO PREVENT CONTAMINATION OF 1" RIVER ROCK FOR PROPER DRAINAGE.

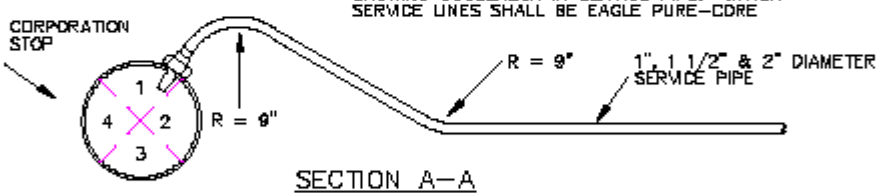
FIRE HYDRANT & VALVE ASSEMBLY

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 29



TOP VIEW

DETAIL PROPERLY INSTALLED CORPORATION STOP, SHOWING GOOSENECK IN SERVICE PIPE. WATER SERVICE LINES SHALL BE EAGLE PURE-CORE

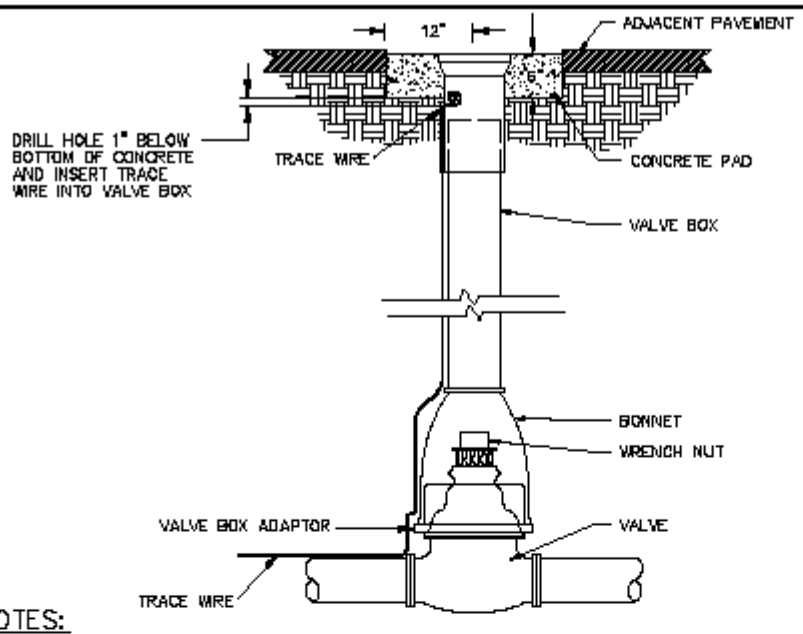


SECTION A-A

1. WATER SERVICE LINES SHALL HAVE A MINIMUM COVER OF 5', MAXIMUM 6', MEASURED FROM FINISH GRADE.
2. WATER SERVICE LINES SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS OR AS SPECIFIED.
3. WATER SERVICE LINES SHALL BE 1", 1 1/2", OR 2" EAGLE PURE-CORE, 200 PSI, 23 DEGREE C, CTS AND INSTALLED PERPENDICULAR TO THE WATER MAIN.
4. BEDDING SHALL BE 1" DIAMETER MAXIMUM MATERIAL WITHIN 6" OF SERVICE PIPE.
5. MANIFOLD TAPS SHALL NOT BE ALLOWED.
6. TAPPING SADDLES SHALL BE SMITH-BLAIR 317 TAPERSEAL OR EQUIVALENT ON ALL PVC PIPE.
7. CURB STOPS SHALL BE BE MUELLER B-25209, QUARTER TURN, 300 PSI FOR ALL 1", 1 1/2", AND 2".
8. MCDONALD CURB BOX 5601 TO 5607 SERIES W/ 5601L (GRASS) AND 5607L (CONCRETE) LIDS. ALL CURB BOXES REQUIRE THE APPROPRIATE LENGTH ROD.
9. CURB STOPS SHALL BE CENTERED IN A 12"X12"X4" CONCRETE PAD. CURB STOPS IN UNDEVELOPED AREAS SHALL ALSO HAVE A STEEL "T" POST PLACED NEXT TO THE CONCRETE PAD.
10. CORPORATION STOPS SHALL BE MUELLER 300 BALL CORP VALVE B-25008 FOR ALL 1", 1 1/2" AND 2".
11. US POLY PIPE COMPRESSION FITTINGS SHALL BE ACCOMPANIED WITH STAINLESS STEEL INSERTS.
12. ALL FITTINGS SHALL BE COPPER TUBING SIZE.

WATER SERVICE LINE DETAIL

LATEST REVISION 06-01-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 30



NOTES:

1. CONCRETE PAD SHALL BE 2'-0" x 6" SET DIAGONALLY TO DIRECTION OF TRAFFIC, ADJUSTED TO CROWN AND GRADE OF STREET AND 1/2" BELOW ADJACENT ASPHALT PAVEMENT. VALVE BOXES IN CONCRETE PAVEMENT SHALL BE 1/4" BELOW ADJACENT PAVEMENT WITH A MINIMUM OF 12" OF SPACING BETWEEN BOX AND NEAREST JOINT. CONCRETE SHALL BE CITY OF TORRINGTON STANDARD.

2. BONNET SHALL BE STAR 666S 5 1/4" OR APPROVED EQUAL, BASE OF BONNET SHALL SET ON VALVE BOX ADAPTOR. ADAPTOR INC., SERIES II OR APPROVED EQUAL.

3. VALVES SHALL BE LEFT HAND OPEN (2" SQUARE RED WRENCH NUT) AND SHALL BE IN CONFORMANCE WITH SECTION C-509 OF THE A.W.W.A STANDARDS. NON-RISING STEM VALVES SHALL BE USED IN ALL UNDERGROUND APPLICATIONS WITH MECHANICAL JOINTS, UNLESS OTHERWISE SPECIFIED. VALVES SHALL BE RESILIENT SEATED MUELLER A-2360 GATE VALVE, CLASS 250, (2"-12").

4. PERMANENT BLOCKING SHALL NOT BE PLACED UNDER THE VALVES.

5. VALVE BOXES SHALL BE CAST IRON, 5-1/4" DIA., ADJUSTABLE SCREW TYPE AND OF SUFFICIENT LENGTH FOR THE TYPE OF BURY SPECIFIED, AND SHALL BE CENTERED AND PLUMB OVER THE WRENCH NUT.

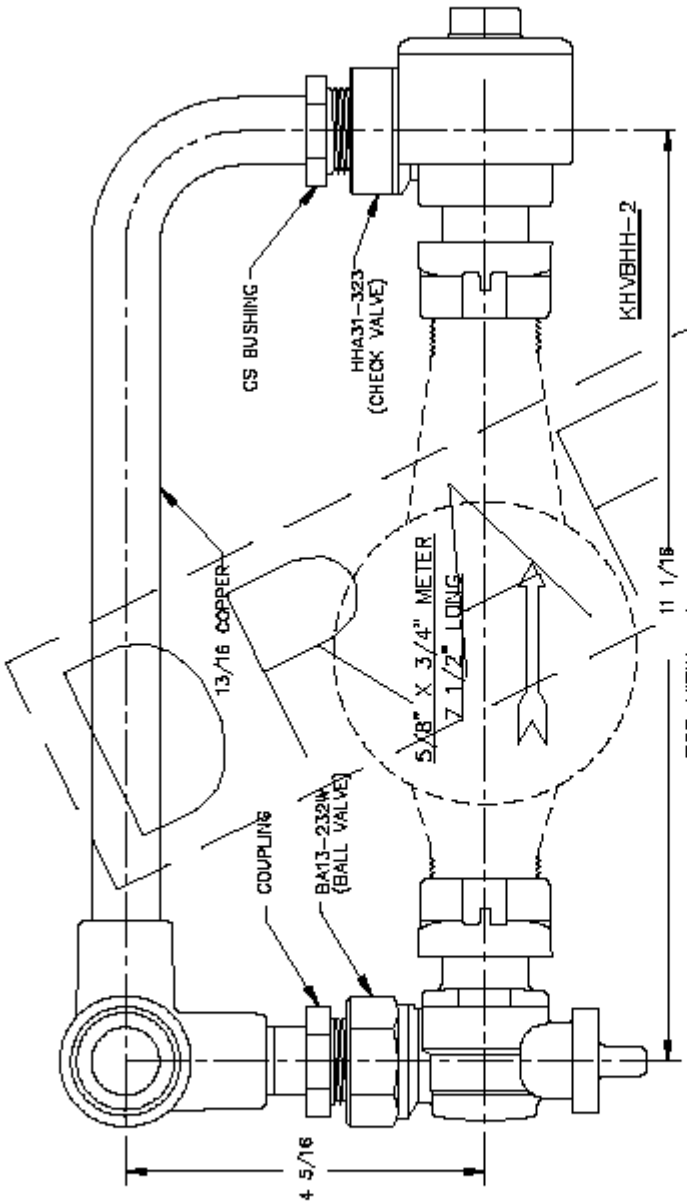
6. TRACE WIRE SHALL BE INSTALLED ALONG THE TOP CENTERLINE OF THE PIPE ON ALL PVC WATERLINES. WIRE SHALL BE CONNECTED TO A FLANGE BOLT AT EACH FITTING WITH A STAINLESS STEEL HOSE CLAMP AND SHALL PROVIDE CONTINUITY THROUGHOUT THE SYSTEM. CONTINUITY SHALL BE DOCUMENTED BY TESTING PRIOR TO ACCEPTANCE. TRACE WIRE SHALL BE A MINIMUM OF 12 GAGE THHN SOLID COPPER. ALL BARE WIRE SHALL BE SEALED WITH AN APPROVED SEALANT. TRACE WIRE TO BE RUN UP OUTSIDE VALVE RISER, THEN INSIDE THROUGH HOLE CUT 1" BELOW BOTTOM OF CONCRETE PAD.

7. ALL CAP SCREWS AND T-BOLTS BELOW FINISH GRADE SHALL BE STAINLESS STEEL. ANTI-SEIZE COMPOUND SHALL BE USED FOR STAINLESS STEEL BOLT INSTALLATION. STAINLESS STEEL SHOULDER BOLTS SHALL BE REQUIRED FOR TOP TWO BOLTS ON VALVES AND HYDRANTS.

8. NO VALVE BOXES TO BE PLACED IN CURB AND GUTTER.

WATERLINE VALVE, VALVE BOX AND TRACE WIRE

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 31



ASSEMBLY: 3/4" KORNERHORN, BALL VALVE INLET, DUAL CHECK VALVE OUTLET

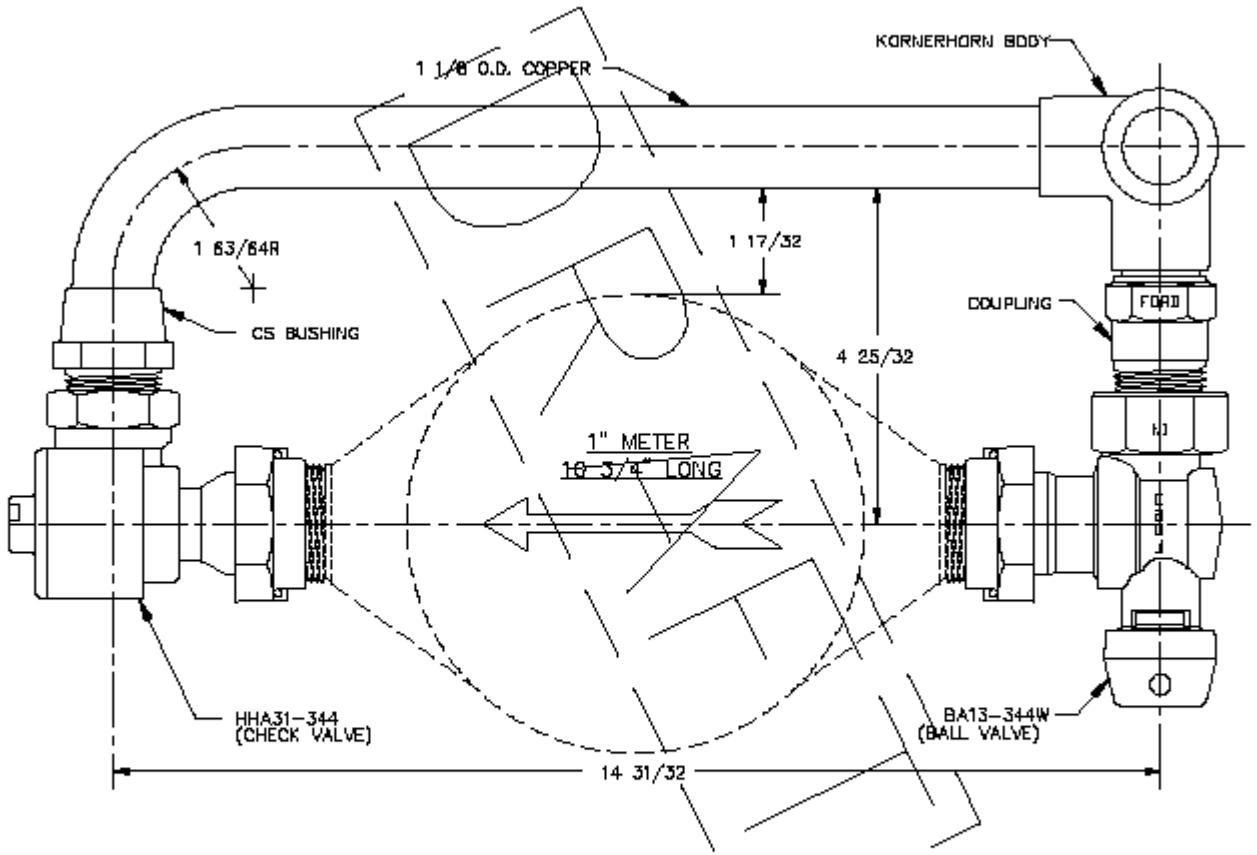
LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. ____	STANDARD DETAIL NO. 32

LATEST REVISION
01-15-09

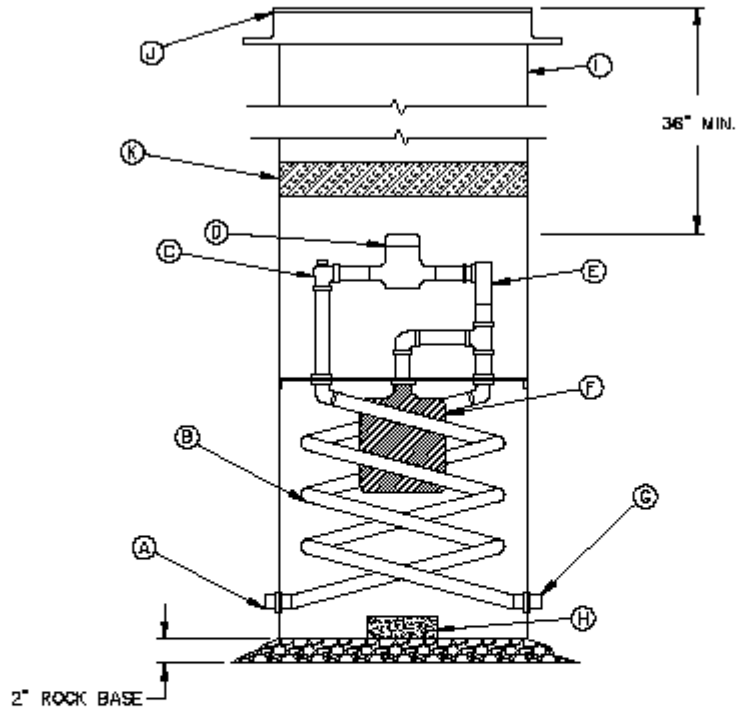
CITY OF TORRINGTON

APPROV.

STANDARD DETAIL NO. 33



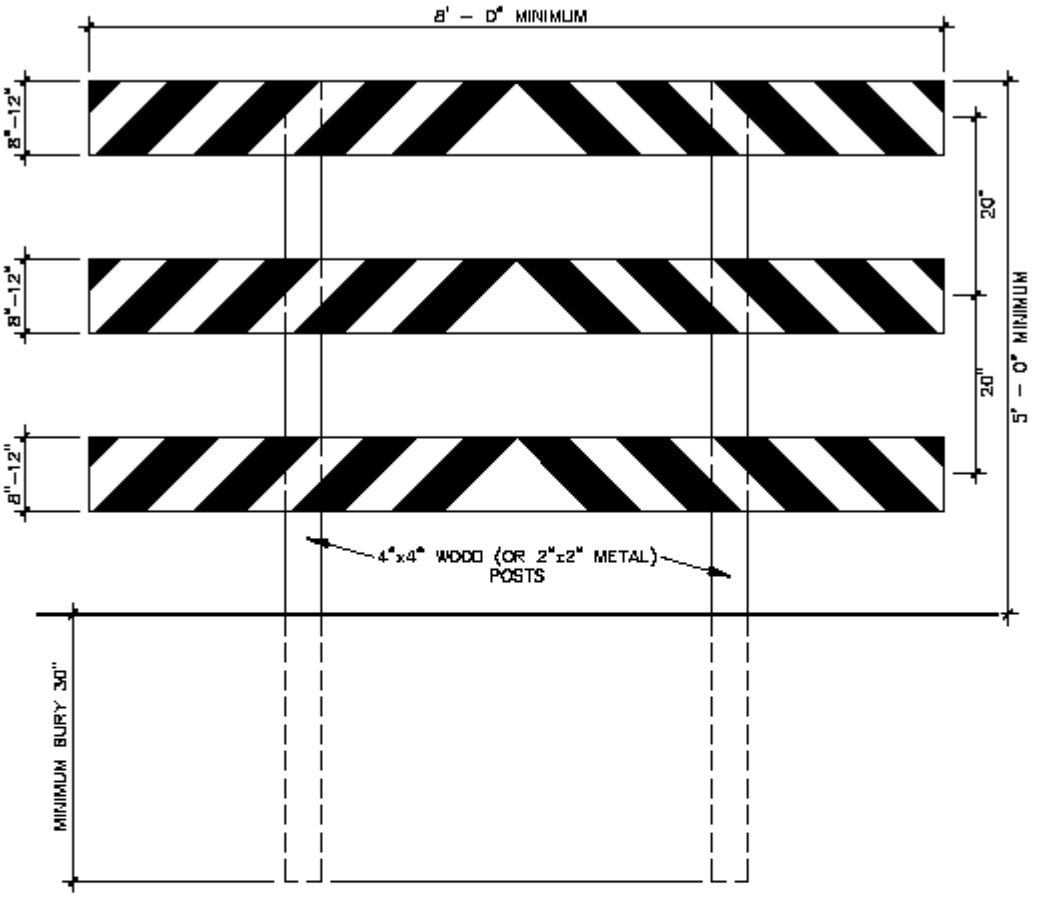
ASSEMBLY: 1" KORNERHORN, BALL VALVE INLET, DUAL CHECK VALVE OUTLET



A. 1" INLET
B. 1" CLASS 250 PB TUBING
C. MUELLER 300 BALL ANGLE METER VALVE
D. SENSUS SR II-EB WATER METER
E. ANGLE METER DUAL CHECK VALVE (ASSE APPROVED)
F. PRESSURE TANK
G. 1" OUTLET
H. CONCRETE BRICK
I. 60" DEPTH, MUELLER THERMAL-COIL METER BOX.
J. MUELLER NO. 282824 OR 282825 LID WITH MUELLER NO. 700097 OR 700098 FRAME (WHEN APPLICABLE).
K. 4" INSULATING PAD

1" OUTSIDE METER SETTING

LATEST REVISION 01-15-09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 34



TYPE III ROAD CLOSED BARRICADE

NOTES:

1. A SINGLE TYPE III BARRICADE SHALL BE USED FOR LOCAL STREETS.
2. FOR COLLECTOR AND ARTERIAL STREETS, ONE TYPE III BARRICADE AS SHOWN SHALL BE ACCOMPANIED BY ONE EACH TYPE III–LEFT AND TYPE III–RIGHT BARRICADES. TYPE III–LEFT AND RIGHT BARRICADES SHALL BE MINIMUM 4' WIDE, SPACED EVENLY 4' TO 6' OFF EACH SIDE OF THE TYPE III CENTER BARRIDCADE.
3. TYPE III BARRICADES ARE ALTERNATING REFLECTIVE ORANGE AND WHITE STRIPING, 4" WIDE.
4. WHEN BARRICADES ARE USED FOR TEMPORARY TRAFFIC CONTROL THEY SHALL BE HELD UPRIGHT WITH BASES AND SANDBAGS SUFFICIENT TO MAINTAIN BARRICADES UNDER NORMAL CONDITIONS.
5. PROPER SIGNAGE SHALL BE ADEQUATELY SECURED TO BARRICADES AS APPROVED BY THE ENGINEER.

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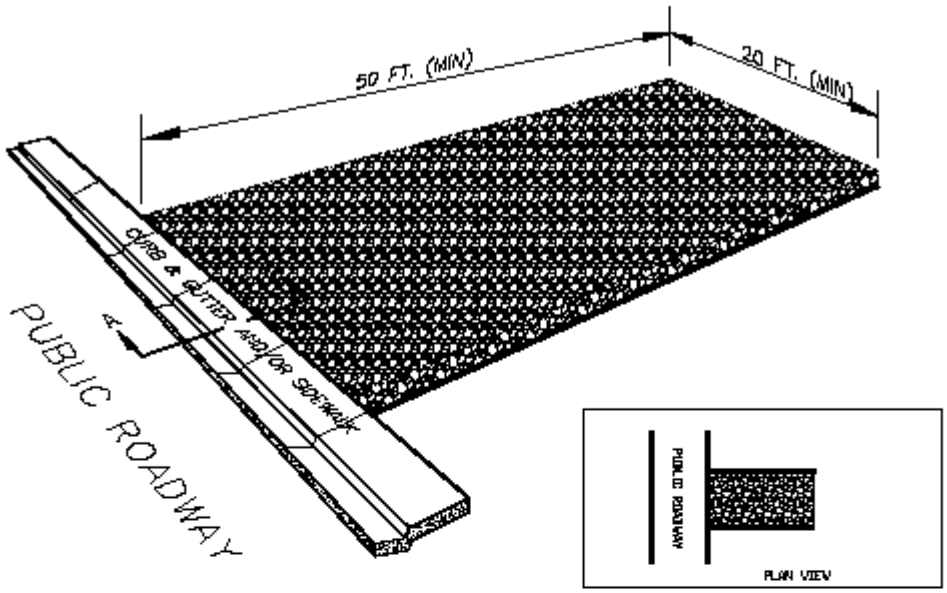
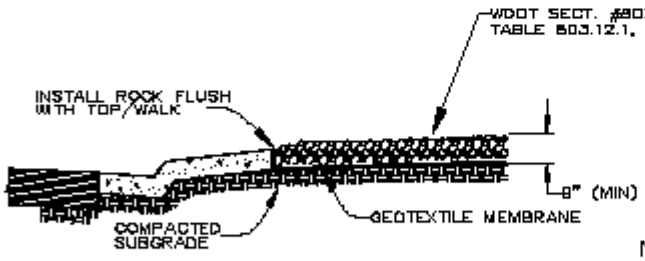


CONSTRUCTION STAGING AREA ENTRYWAY PAD



SECTION A–A

NOTES

1. ALL ROCK TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.
2. PUBLIC ROADWAY TO BE KEPT CLEAN AND FREE OF MUD, DIRT AND DEBRIS AT ALL TIMES.
3. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES AS DIRECTED BY THE ENGINEER

LATEST REVISION 01–15–09	CITY OF TORRINGTON	APPROV. _____	STANDARD DETAIL NO. 36

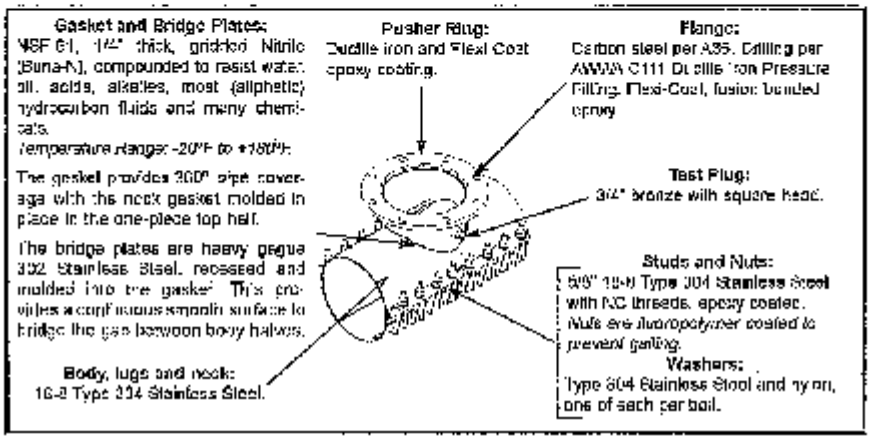
Smith-Blair
A SENSUS COMPANY

Water and Industrial

662 Stainless Steel Tapping Sleeve

4" - 24" Pipe Sizes with Outlets thru 12"

Product Specifications



Features:

- NSF 61 listed.
- Easy to install.
- Range helps reduce inventory.
- Meets applicable AWWA C223 Standards.
- Molded-in ring in the gasket to ensure effective sealing.
- Nylon washers provide to improve bolt torque capability
- Heavy gague, all-stainless steel body for rugged performance.
- Fully chemically passivated for maximum corrosion protection.
- 3/4" test outlet to allow hydrostatic pressure test before tapping the pipe.
- 360° seal provides maximum support and reinfocement around the pipe in case of pipe break.
- Body drawn out to accept the outlet neck adding to the overall strength of the area under the most stress.
- Reduces inventory by using standard MJ valves to make a tap. No special tapping valve required.

Nominal Pipe Size	Working Pressure	Test Pressure
4"-12"	200 PSI	300 PSI
14"-20"	150 PSI	225 PSI
24"	100 PSI	150 PSI