

NOTES:

1. MANHOLE FRAME AND COVER SHALL BE MANUFACTURED BY PHOENIX IRON WORKS, OAKLAND, NO.P-1090 OR APPROVED EQUIVALENT.
2. FOR MANHOLE LOCATED IN SIDEWALK AREAS USE PHOENIX NO. P-1067 FRAME AND COVER OR APPROVED EQUIVALENT.
3. MINIMUM WEIGHT OF FRAME IS 138 LBS.
MINIMUM WEIGHT OF COVER IS 130 LBS.

SCALE: NTS



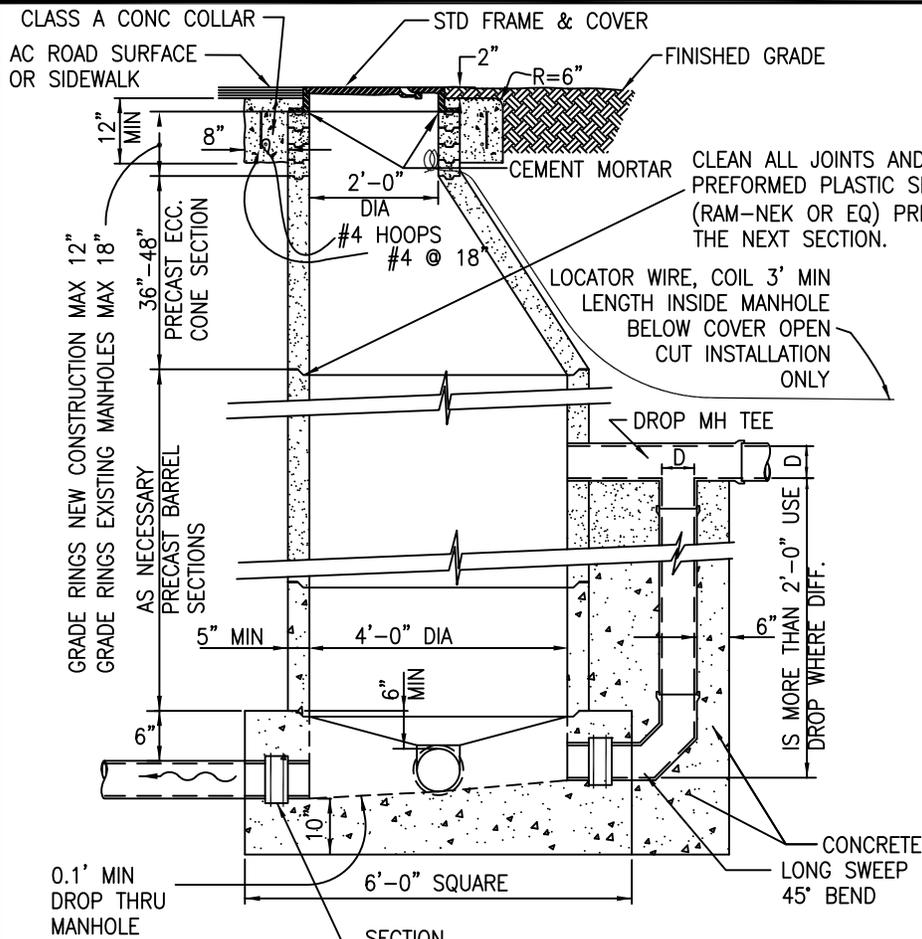
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
DATE: DECEMBER 2015

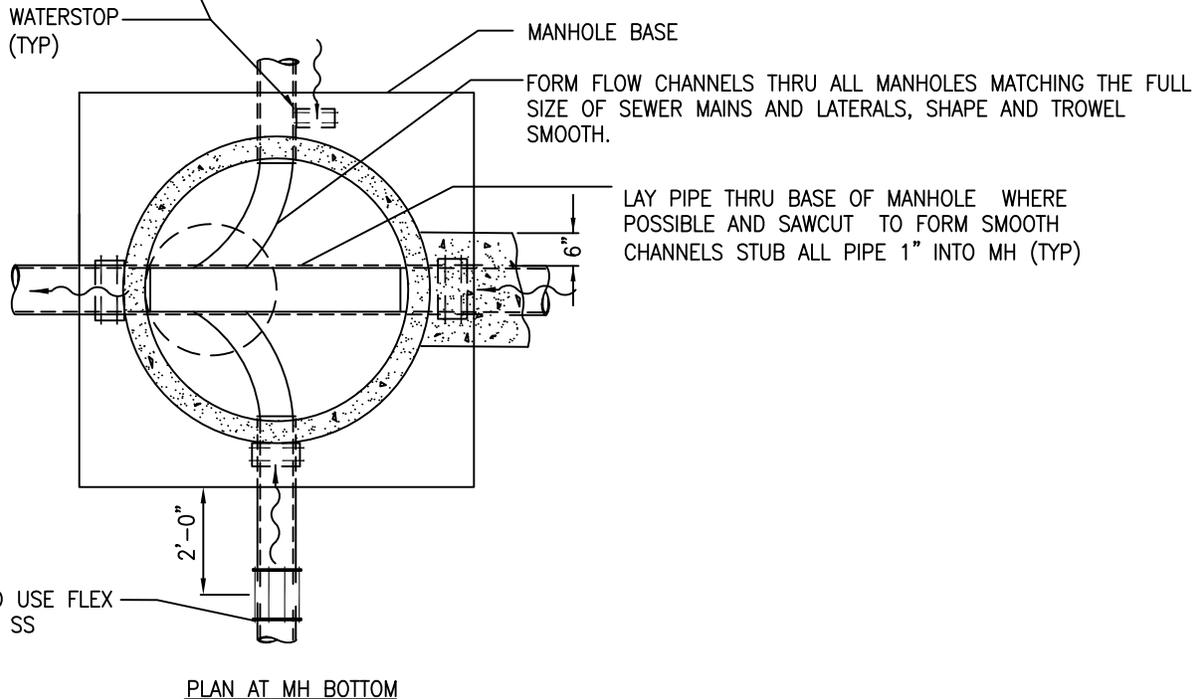
**STANDARD MANHOLE
FRAME AND COVER**

STD DETAIL No.
SS 1



NOTES:

1. MANHOLE BASE SHALL BE CLASS A (6-SACK) CONCRETE AND SHALL BE POURED AGAINST UNDISTURBED SOIL.
2. PRECAST CONCRETE CONE, BARREL AND GRADE RINGS SHALL CONFORM TO A.S.T.M. SPEC C-478, EXCEPT THAT TYPE II MODIFIED PORTLAND CEMENT SHALL BE USED.
3. ECCENTRIC CONE SECTION SHALL BE POSITIONED AS DIRECTED BY THE CITY.
4. RECESS IN MANHOLE BASE SHALL BE FORMED WITH AN APPROVED METAL FORMING RING TO RECEIVE PRECAST MANHOLE JOINT. PREFORMED PLASTIC SEAL GASKET SHALL BE INSTALLED BEFORE PLACING FIRST BARREL SECTION.
5. PRECAST MANHOLE BASES ARE NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY.



SCALE: NTS



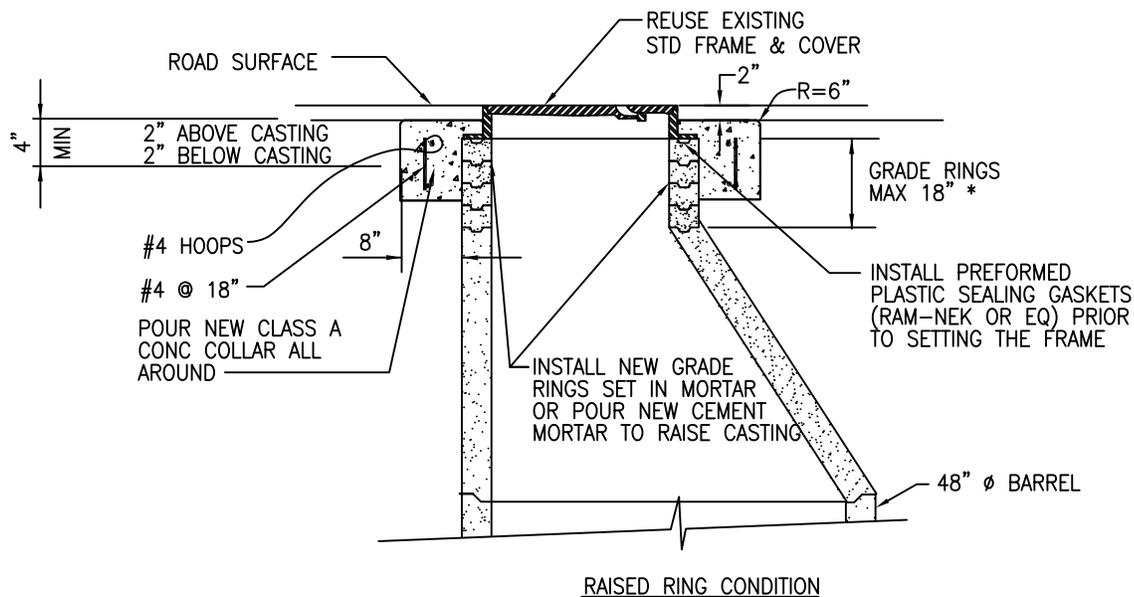
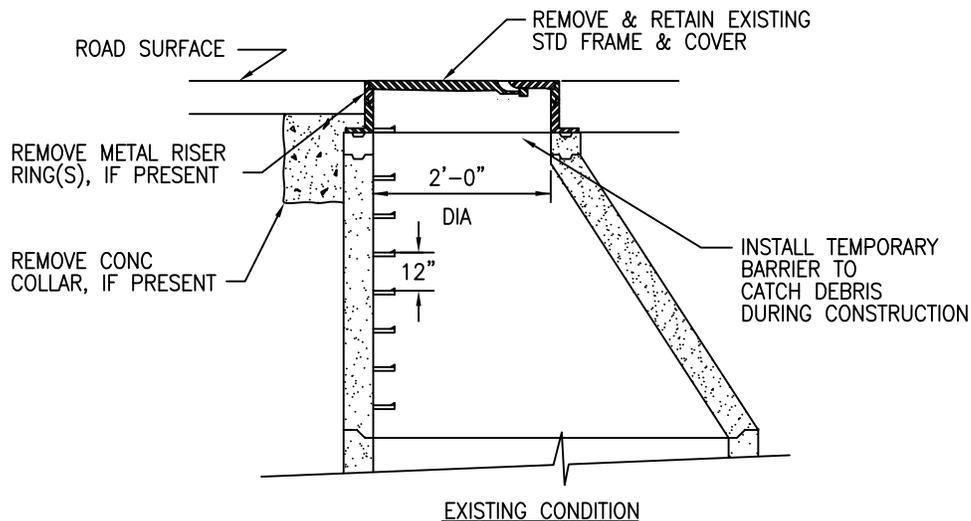
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
DATE: DECEMBER 2015

**STANDARD
SEWER MANHOLE**

STD DETAIL No.
SS 2



* IF GRADE RINGS EXCEED 18" REMOVE CONE AND INSTALL NEW 48" DIAMETER BARREL SECTION

SCALE: NTS



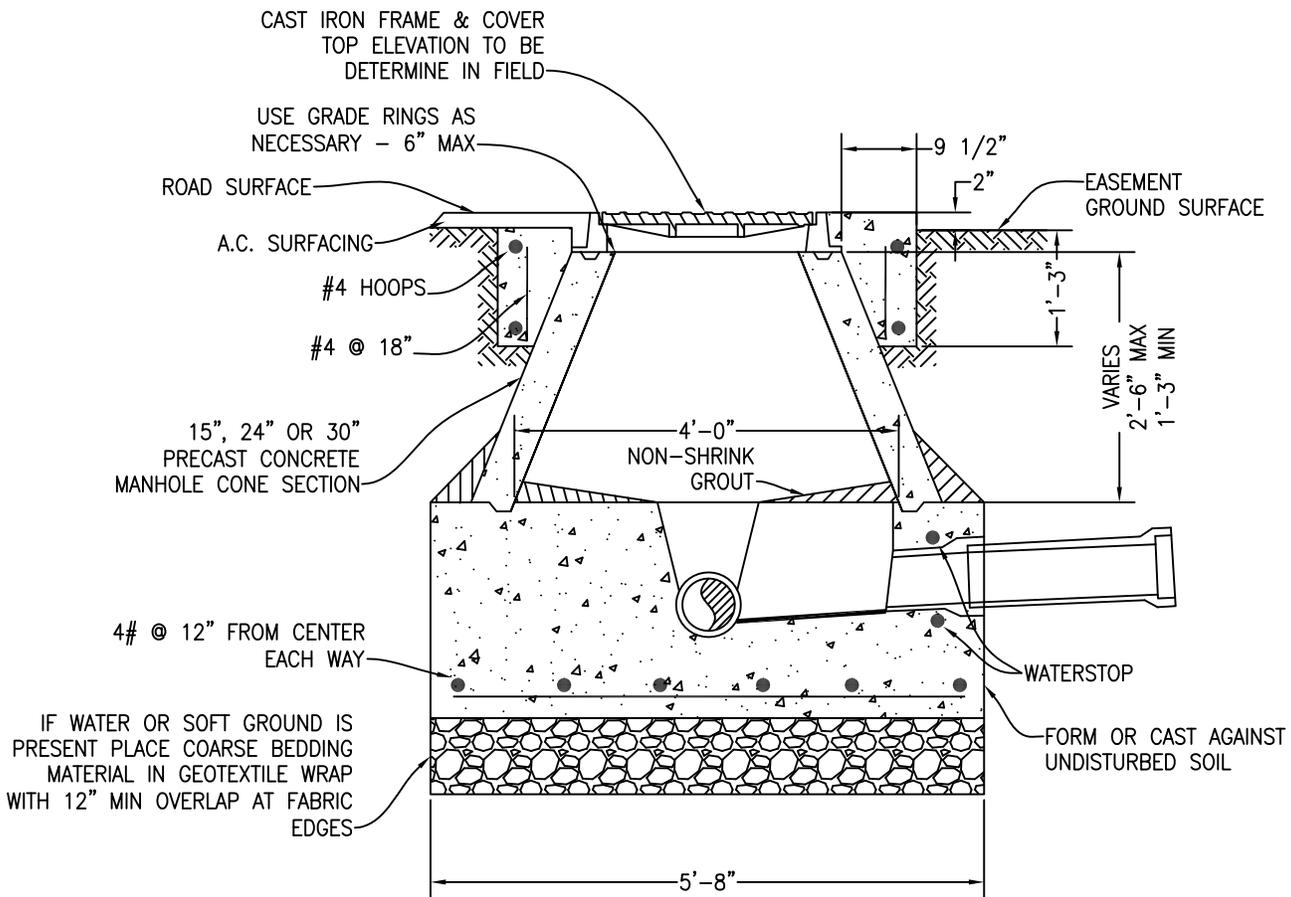
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
DATE: DECEMBER 2015

RAISED MANHOLE
RING AND COVER

STD DETAIL No.
SS 3



NOTES:

1. THIS MANHOLE MAY BE USED WHERE DISTANCE FROM TOP OF BASE TO BOTTOM OF FRAME IS BETWEEN 1'-3" AND 2'-6".
2. ALL STEEL REINFORCEMENT SHALL HAVE 3" MINIMUM CONCRETE COVER.

SCALE: NTS



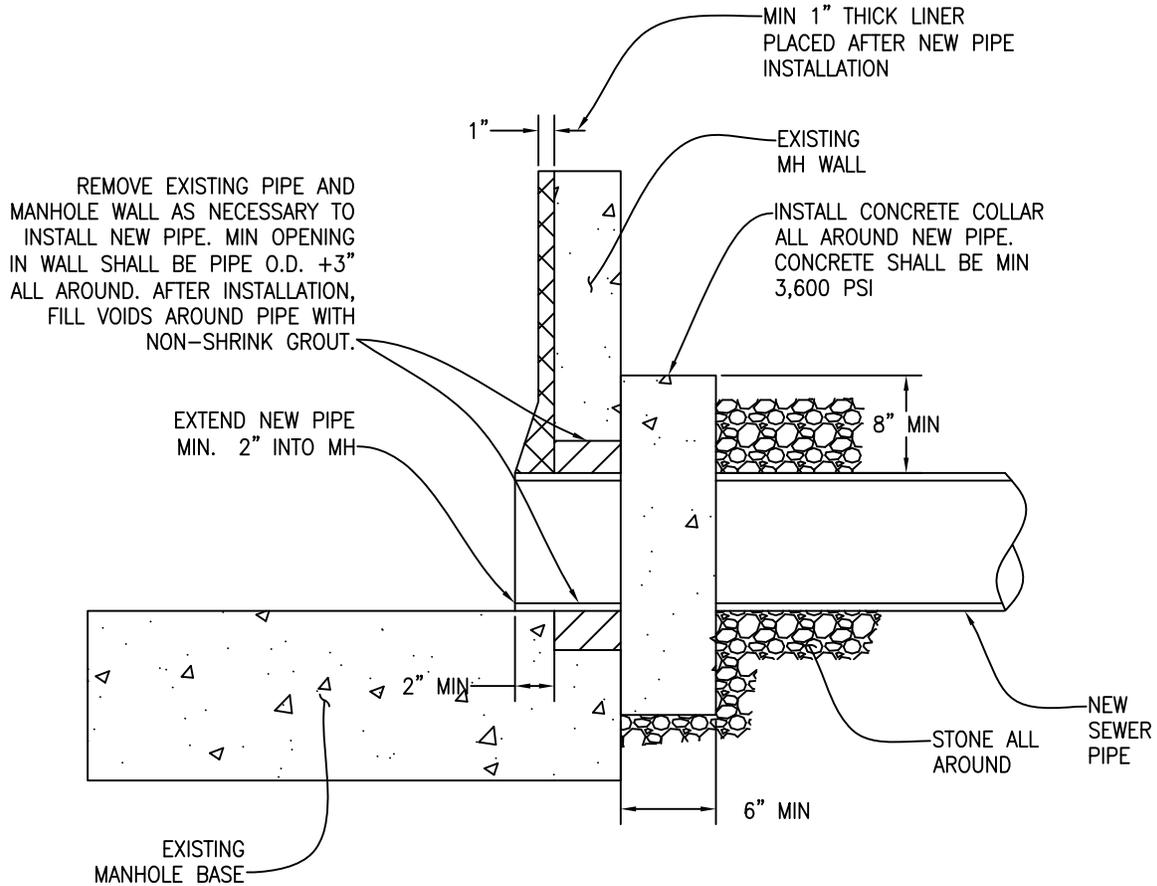
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
DATE: DECEMBER 2015

SHALLOW MANHOLE

STD DETAIL No.
SS 4



NOTES:

1. CONTRACTOR SHALL REFER TO THIS DETAIL WHEN CONNECTING NEW SEWER PIPES TO EXISTING MANHOLES. THE NEW PIPE MAY BE INSTALLED FOR A POINT REPAIR, PIPE REPLACEMENT, PIPE BURSTING OR SERVICE LATERAL REPLACEMENT.

SCALE: NTS



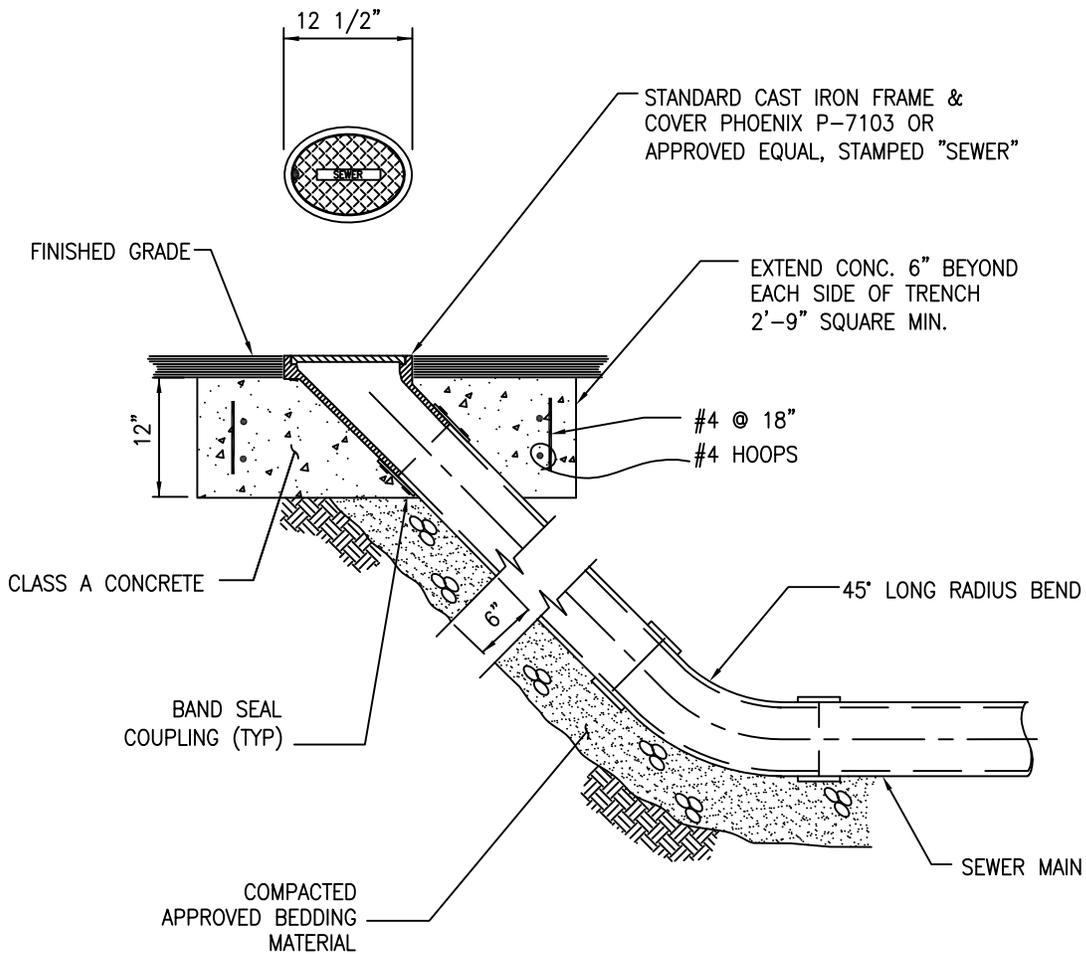
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
 DATE: DECEMBER 2015

**NEW PIPE TO EXISTING MANHOLE
 CONNECTION**

STD DETAIL No.
SS 5



NOTES

1. WHERE SEWER MAIN IS 6.63" OD POLYETHYLENE PIPE, USE 6" C-900 LONG RADIUS BELL X BELL 45° BEND AND RUN TO CLEANOUT CASTING.
2. CONTRACTOR SHALL VERIFY COMPATIBILITY WITH SEWER PIPE USE FOR RODDING AND FLUSHING CLEANOUT.

SCALE: NTS



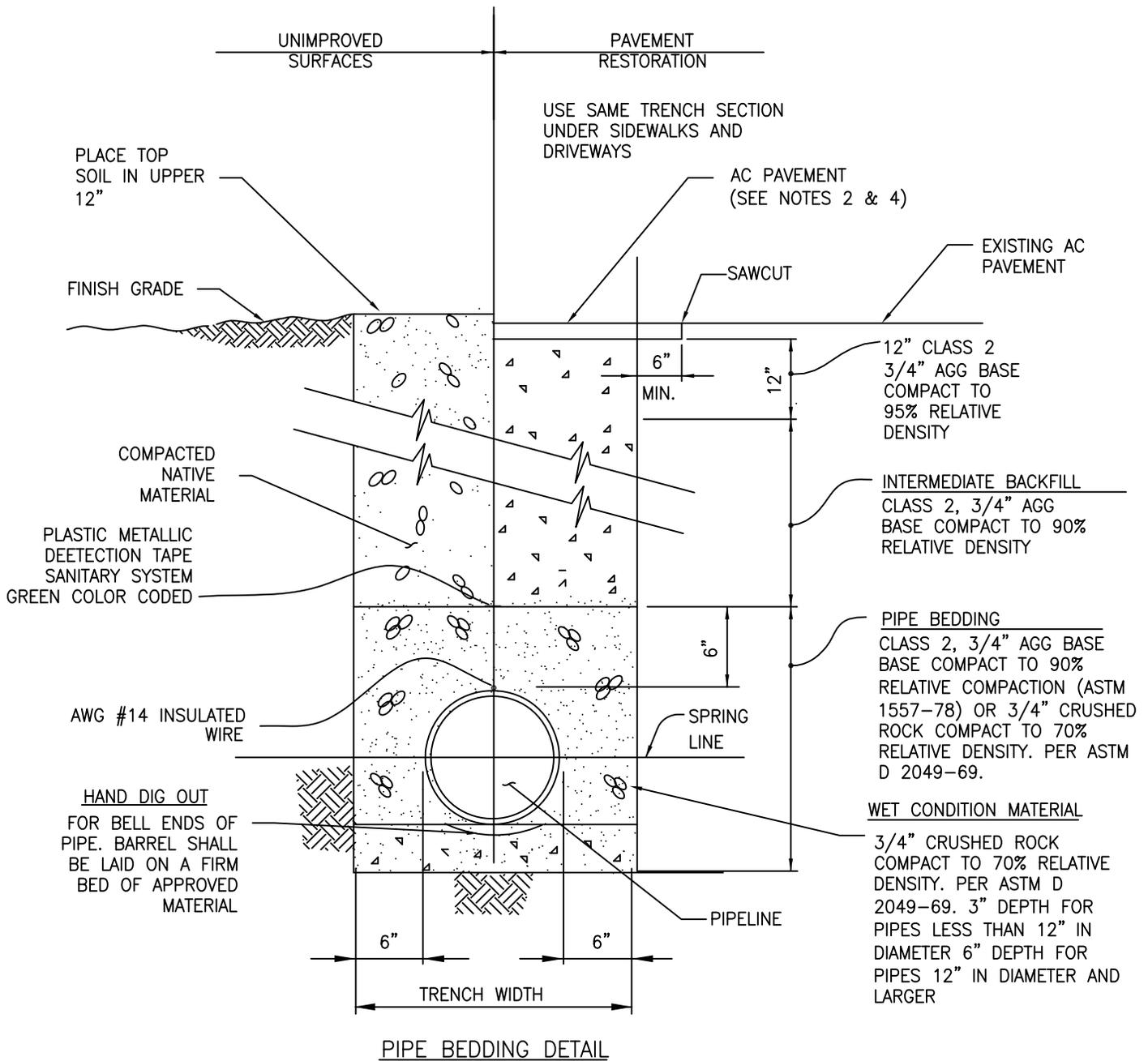
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
DATE: DECEMBER 2015

**STANDARD
RODDING INLET**

STD DETAIL No.
SS 6

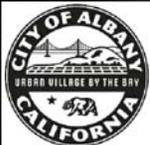


PIPE BEDDING DETAIL

NOTES:

1. INSTALL 4' LONG COMPACTED IMPERVIOUS CLAY OR SLURRY CEMENT PLUGS IN PIPE ZONE BACKFILL AND PIPE BEDDING AT 400' INTERVALS.
2. MATCH EXISTING ASPHALT THICKNESS PLUS 1" (3" THICK, MINIMUM).
3. CONTROLLED DENSITY FILL MAY BE USED AS AN ALTERNATE PROVIDING MEASURES ARE TAKEN TO PREVENT PIPE FLOTATION.
4. THE FINAL LIFT OF AC IN STREETS SHALL BE COMPACTED WITH A ROLLER APPROVED BY THE PUBLIC WORKS DEPARTMENT.

SCALE: NTS



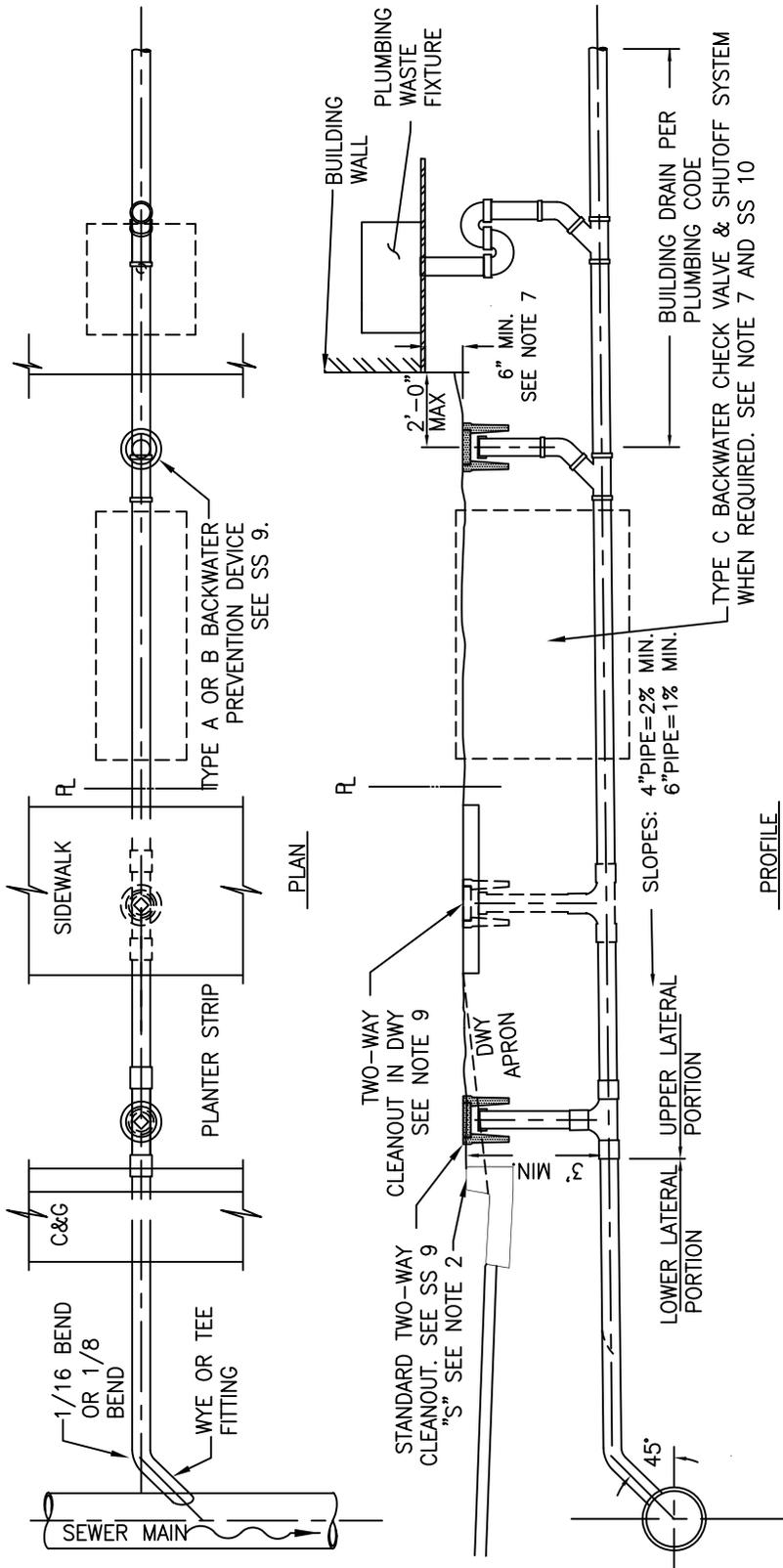
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
 DATE: DECEMBER 2015

TYPICAL TRENCH SECTION

STD DETAIL No.
 SS 7



NOTES:

1. WHEN THE LOWER LATERAL SEWER IS INSTALLED IN ADVANCE OF THE UPPER LATERAL, IT SHALL BE TERMINATED AT OR NEAR THE PROPERTY LINE. THE END OF THE LOWER LATERAL SHALL BE MARKED WITH A 4" x 4" REDWOOD STAKE, PAINTED GREEN, FROM THE TOP OF THE PIPE TO A MINIMUM OF 6" ABOVE THE FINISHED GROUND SURFACE.
2. WHERE CONCRETE CURBS AND GUTTERS EXIST OR ARE TO BE A PART OF AN IMPROVEMENT, EACH SIDE SEWER SHALL BE PERMANENTLY LOCATED BY IMPRINTING OR CHISELING AN "S" (3" SIZE) ON THE TOP OF THE CURB VERTICALLY ABOVE THE SEWER PIPE.
3. BACKFILL SHALL NOT BE PLACED UNTIL PIPE INSTALLATION HAS BEEN INSPECTED AND APPROVED BY THE CITY.
4. IN TRAFFIC AREAS WHERE MINIMUM COVER CANNOT BE ACHIEVED, THE CITY ENGINEER MAY REQUIRE CAST IRON PIPE OR STANDARD CONCRETE PIPE PROTECTION PER SS 13.
5. MINIMUM PIPE SLOPE OF LESS THAN WHAT IS SPECIFIED MUST BE APPROVED BY THE CITY ENGINEER.
6. THE SIDE SEWER SIZE IS FOUR (4) INCHES IN DIAMETER FOR SINGLE FAMILY RESIDENTIAL. SIX (6) INCHES OR LARGER IN DIAMETER SIDE SEWER SHALL BE INSTALLED WHERE USE IS TO BE INDUSTRIAL, COMMERCIAL, OR MULTI-FAMILY RESIDENTIAL.
6. IF THE DIFFERENCE IN ELEVATION BETWEEN THE LOWEST FLOOR WITH PLUMBING WASTE FIXTURES AND THE RIM OF THE BACKWATER PREVENTION DEVICE IS LESS THAN SIX (6) INCHES, A TYPE C OR D BACKWATER CHECK VALVE AND SHUTOFF SYSTEM SHALL BE INSTALLED AS SHOWN ON STANDARD DETAIL SS 7.
7. ADDITIONAL CLEANOUTS SHALL BE INSTALLED AT CHANGES IN DIRECTION WHERE THE ACCUMULATIVE TOTAL OF DEFLECTION FROM ANOTHER CLEANOUT IS MORE THAN 45°. THE MAXIMUM DISTANCE BETWEEN CLEANOUTS SHOULD BE 100 FEET, PER THE UNIFORM PLUMBING CODE.
8. CLEANOUTS AND RISER PIPES SHALL BE THE SAME SIZE AS THE LATERAL.
9. WHEN LOWER LATERAL FALLS WITHIN A DRIVEWAY, THE TWO WAY CLEANOUT SHALL BE LOCATED AT THE SIDEWALK ELEVATION, CLEAR OF THE APRON. **SCALE: NTS**



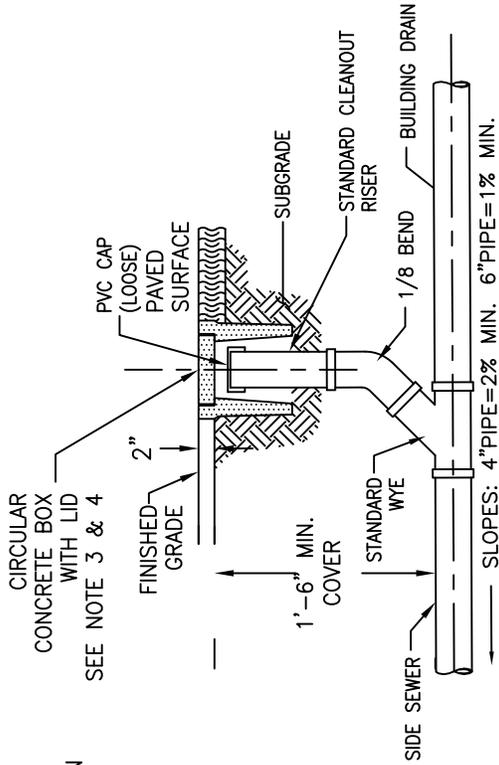
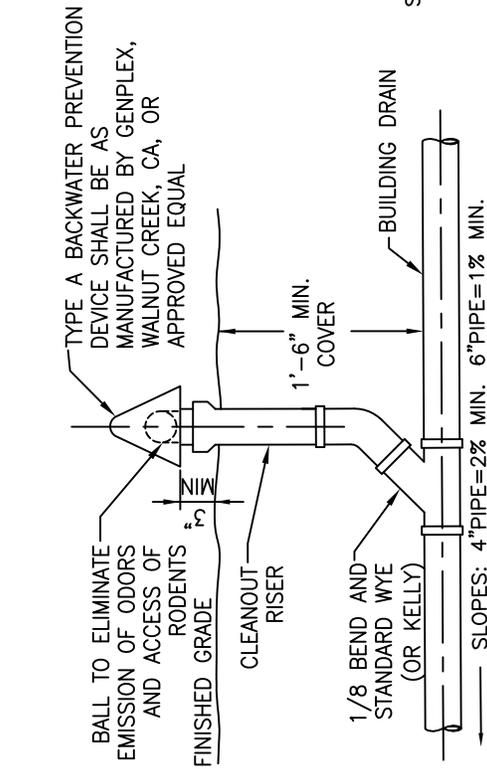
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

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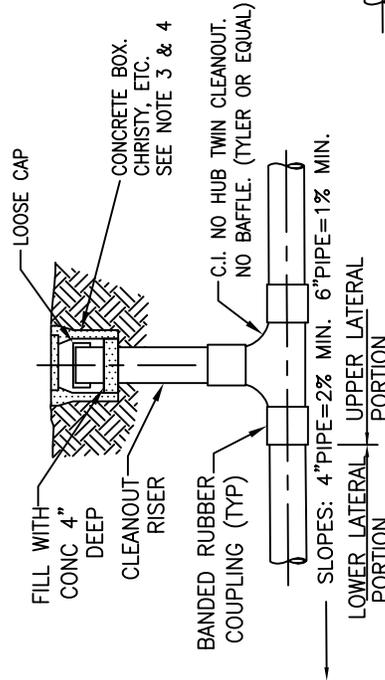
**STANDARD LATERALS
 AND CLEANOUTS**

STD DETAIL No.
SS 8

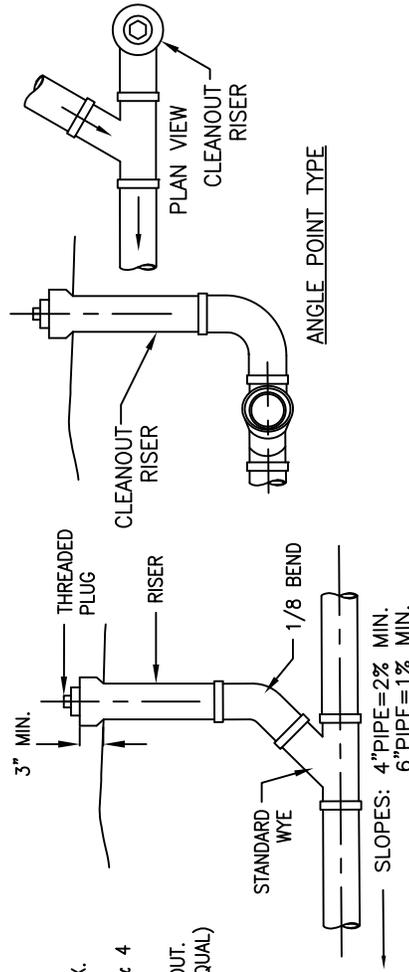


TYPE A
BACKWATER PREVENTION DEVICE

TYPE B
BACKWATER PREVENTION DEVICE



STANDARD TWO-WAY CLEANOUT



STANDARD ONE-WAY CLEANOUT

NOTES

1. A BACKWATER PREVENTION DEVICE OR A BACKWATER SHUTOFF AND CHECK VALVE SYSTEM SHALL BE INSTALLED ON ALL UPPER LATERALS. BACKWATER PREVENTION DEVICES WILL ONLY BE PERMITTED WHEN SEWER OVERFLOW FROM THE PREVENTION DEVICE WILL NOT CAUSE DAMAGE TO THE SURROUNDING AREA. WHEN SEWER OVERFLOW COULD CAUSE SERIOUS DAMAGE TO THE SURROUNDING AREA, A STANDARD BACKWATER SHUTOFF AND CHECK VALVE SYSTEM SHALL BE INSTALLED AS SHOWN ON SS 10.
2. IF THE DIFFERENCE IN ELEVATION BETWEEN THE LOWEST FLOOR WITH PLUMBING WASTE FIXTURES AND THE RIM OF THE BACKWATER PREVENTION DEVICE IS LESS THAN SIX (6) INCHES, A TYPE C OR D BACKWATER CHECK VALVE AND SHUTOFF SYSTEM SHALL BE INSTALLED AS SHOWN ON STANDARD DETAIL SS 8.
3. CONCRETE BOXES COVERS SHALL BE TRAFFIC RATED WHEN USED IN AREAS SUBJECTED TO TRAFFIC SUCH AS DRIVEWAYS.
4. BOX SHALL BE CHRISTY F8 OR EQUAL; USE F8D LID IN NON-TRAFFIC AREAS AND F8C FOR TRAFFIC AREAS.



CITY OF ALBANY, CALIFORNIA

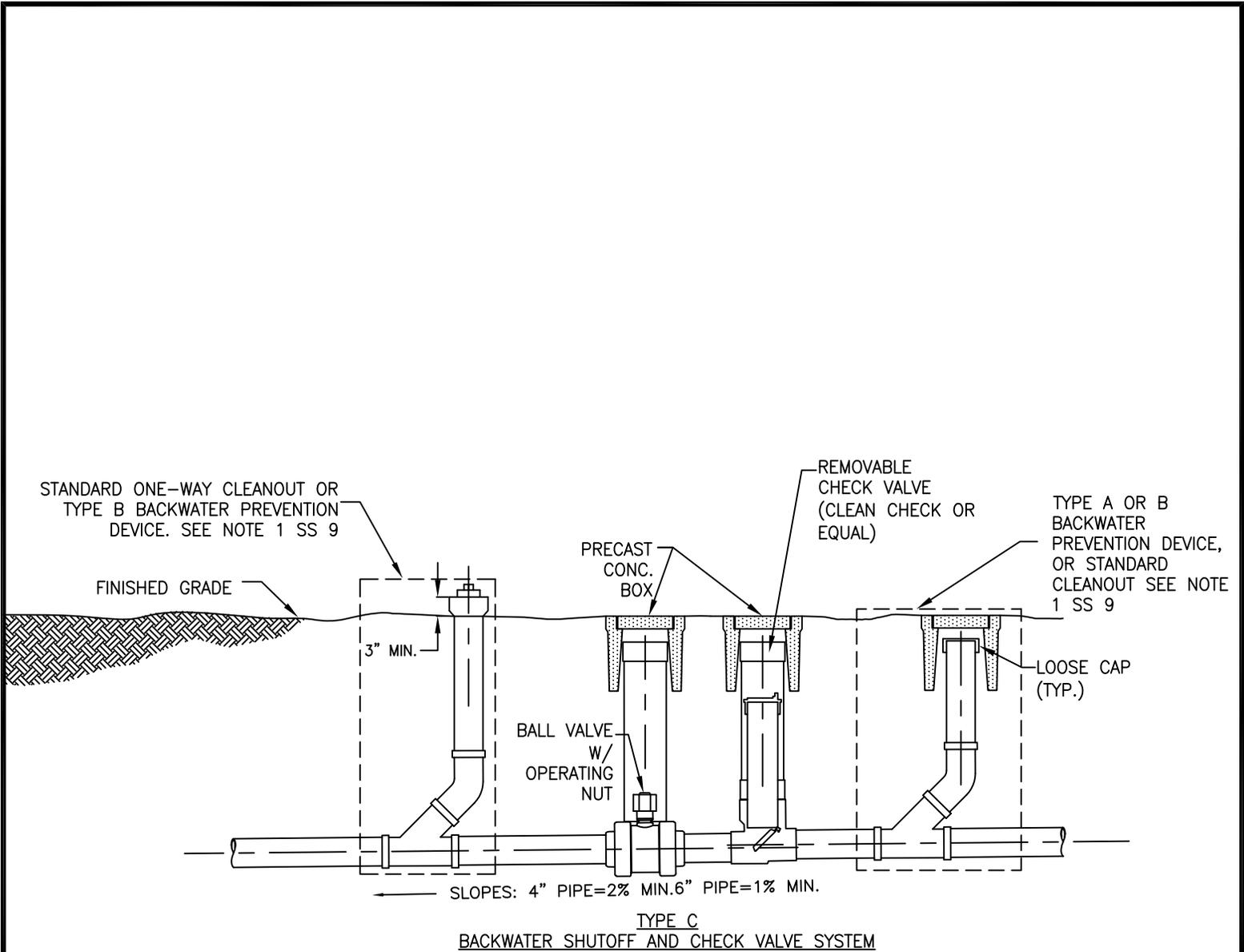
STANDARD DETAIL

APPROVED BY: *Ray Chan*
DATE: DECEMBER 2015

STANDARD CLEANOUTS AND
BACKWATER PREVENTION DEVICE

STD DETAIL No.
SS 9

SCALE: NTS



SCALE: NTS



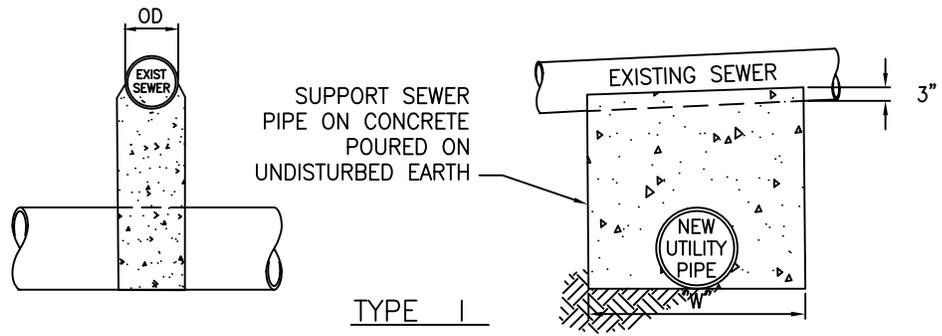
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STANDARD DETAIL

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BACKWATER SHUTOFF AND
CHECK VALVE SYSTEM

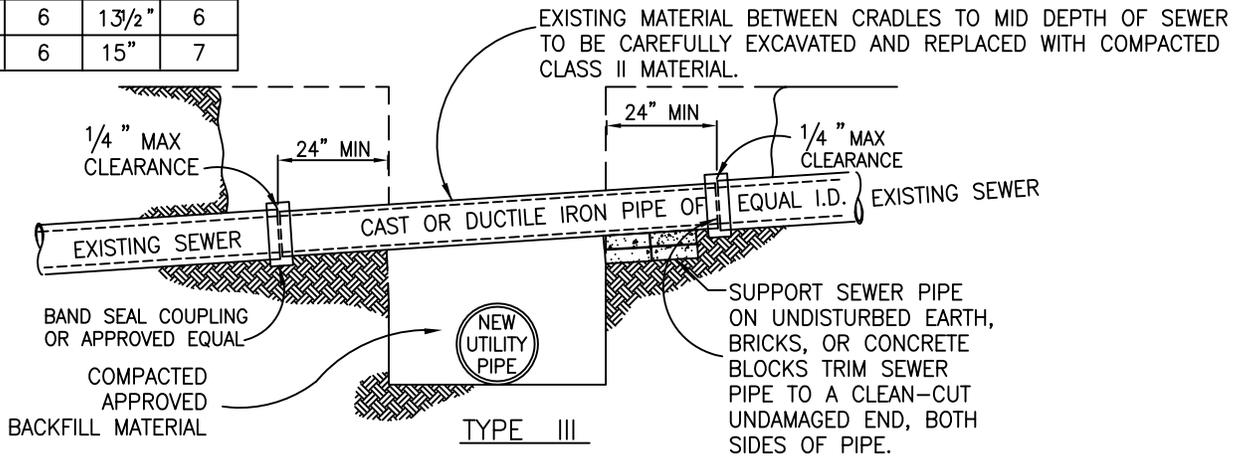
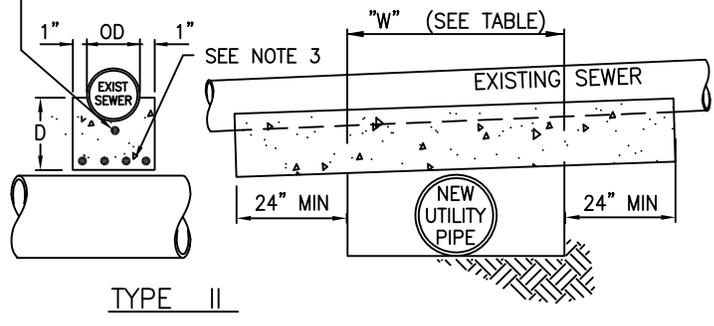
STD DETAIL No.
SS 10



ADDITIONAL BAR IF BEAM IS PRECAST

DIMENSIONS OF REINFORCED CONCRETE BEAM

W	DEPTH OF COVER TO SEWER			
	0' - 8'-0"	8'-0" - 16'-0"	D	BAR No.
4'	8"	4	8"	4
5'	8"	4	9"	5
6'	8 1/2"	5	10 1/2"	5
7'	9"	5	11 1/2"	6
8'	10"	5	12 1/2"	6
9'	11"	6	13 1/2"	6
10'	12"	6	15"	7



NOTES:

- SEWER PROTECTION, AS DETAILED HEREON, SHALL BE PROVIDED WHEN A NEW UTILITY PIPE, IS INSTALLED BELOW AN EXISTING MAIN SEWER. TYPE I, TYPE II OR TYPE III MAY BE USED AT THE CONTRACTOR'S OPTION, UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE CITY.
- WHEN THE CLEARANCE BETWEEN THE PIPES IS 1' OR LESS INSTALL A 4" x 4" PAD OF 35-45 DUROMETER RUBBER SNUGLY FIT BETWEEN THE PIPES.
- MAXIMUM SPACING OF REINFORCING STEEL TO BE 4" CENTER TO CENTER.
- CONCRETE TO BE CLASS A (6 SACK MIX)
- BACKFILL SHALL NOT BE PLACED UNTIL PIPE INSTALLATION HAS BEEN INSPECTED AND APPROVED BY THE CITY.

SCALE: NTS



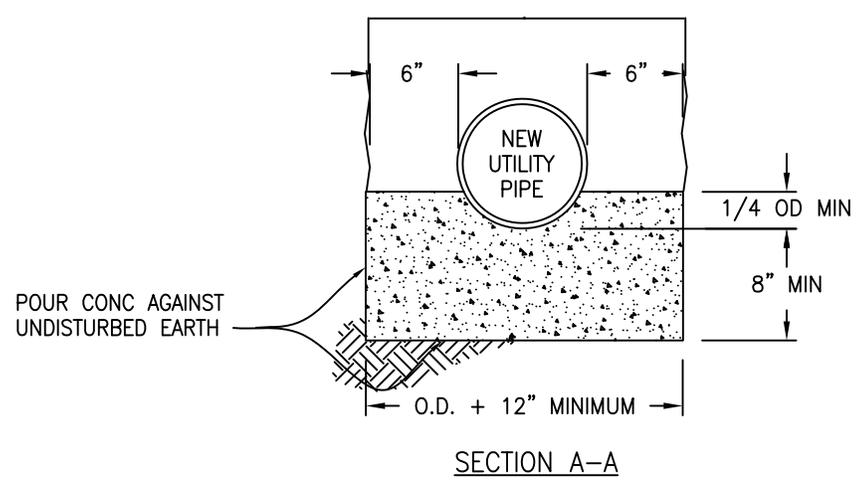
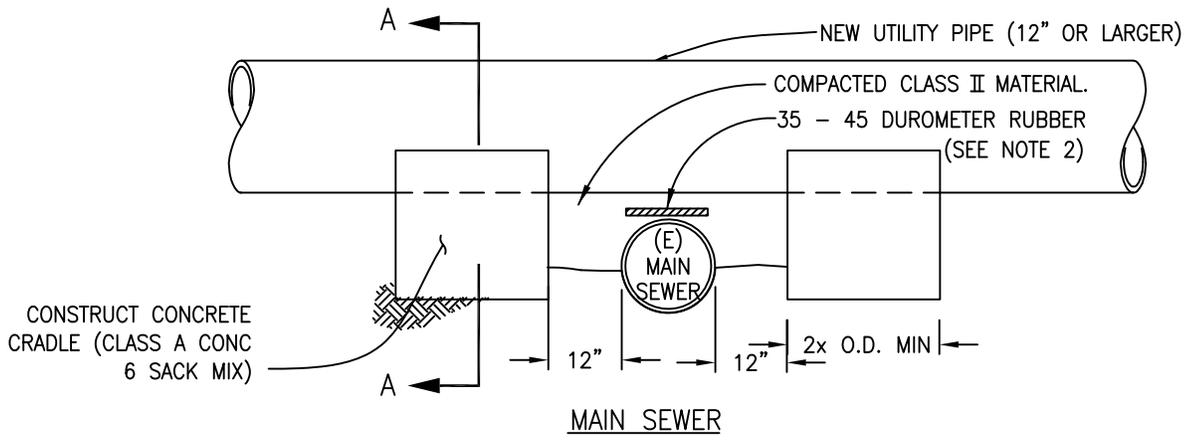
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
DATE: DECEMBER 2015

MAIN SEWER PROTECTION
ABOVE UTILITY CROSSING

STD DETAIL No.
SS 11



NOTES:

1. SEWER PROTECTION, AS DETAILED HEREON, SHALL BE PROVIDED WHEN A NEW UTILITY PIPE, 12" OR LARGER, IS INSTALLED ABOVE AN EXISTING MAIN SEWER AND THE CLEARANCE IS LESS THAN 12".
2. WHEN THE OUTSIDE DIAMETER OF THE PIPES ARE WITHIN 1' OF THE OTHER THERE SHALL BE A 4" x 4" PAD OF 35-45 DUROMETER RUBBER PLACED SNUGLY BETWEEN PIPES.
3. EXISTING MATERIAL BETWEEN CRADLES TO MID DEPTH OF SEWER TO BE CAREFULLY EXCAVATED AND REPLACED WITH COMPACTED CLASS II MATERIAL.
4. BACKFILL SHALL NOT BE PLACED UNTIL PIPE INSTALLATION HAS BEEN INSPECTED AND APPROVED BY CITY.

SCALE: NTS



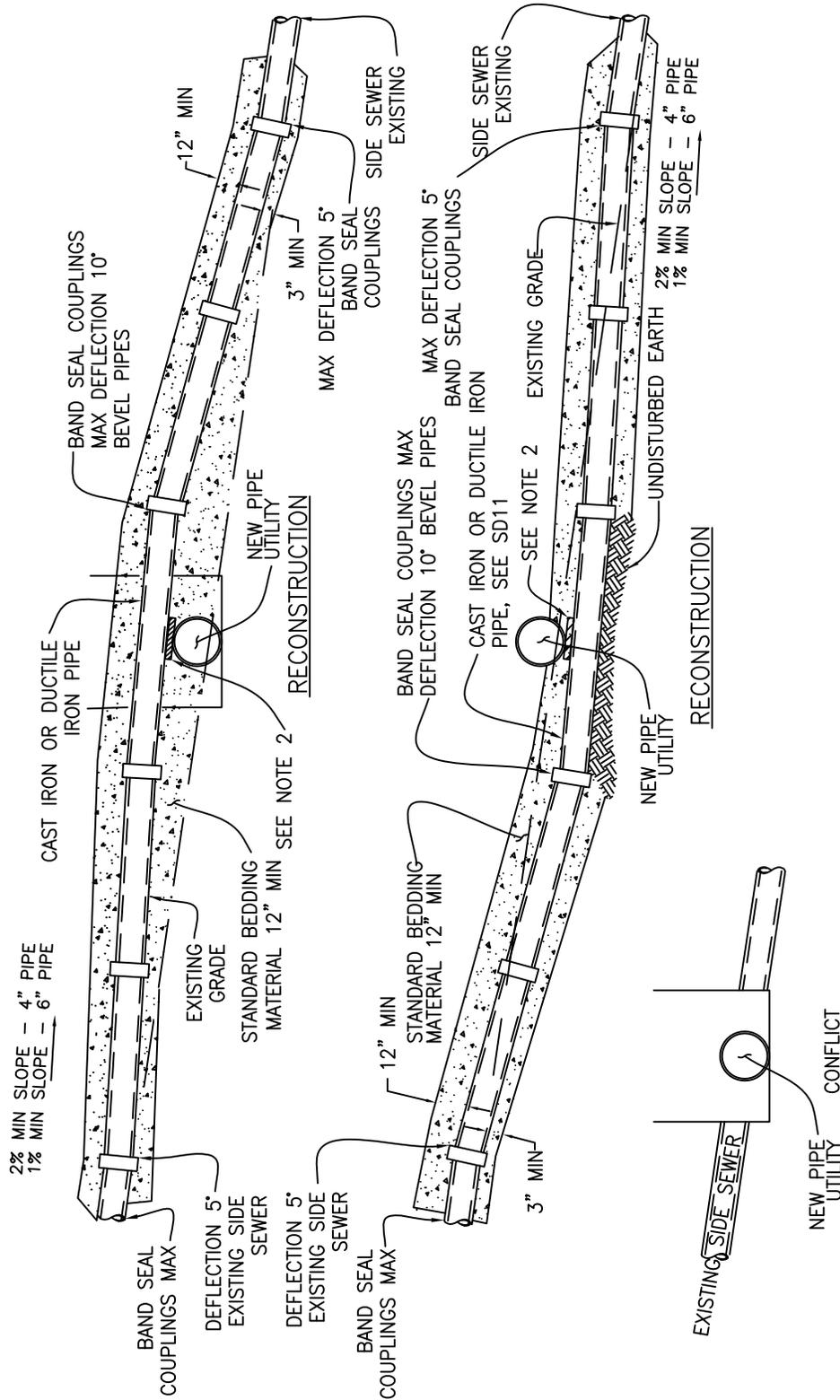
CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
 DATE: DECEMBER 2015

**MAIN SEWER PROTECTION
 BELOW UTILITY CROSSING**

STD DETAIL No.
SS 12



NOTES:

1. WHEN ANY NEW UTILITY PIPE OR CONDUIT CONFLICTS WITH AN EXISTING SEWER LINE GRADE, THE UTILITY PIPE OR CONDUIT WRITTEN PERMISSION SHALL BE OBTAINED FROM THE CITY OF ALBANY, AND THE SEWER LINE SHALL BE RECONSTRUCTED IN SHALL BE RAISED OR LOWERED, IF POSSIBLE, TO MISS THE SEWER LINE. IF IT IS NOT POSSIBLE TO MOVE THE UTILITY LINE, ACCORDANCE WITH ONE OF THE DETAILS ABOVE AND THE STANDARD SPECIFICATIONS OF THE CITY.
2. WHEN THE CLEARANCE BETWEEN THE PIPES IS 1' OR LESS, INSTALL A 4" x 4" PAD OF 35-45 DUROMETER RUBBER SNUGLY FIT BETWEEN THE PIPES.



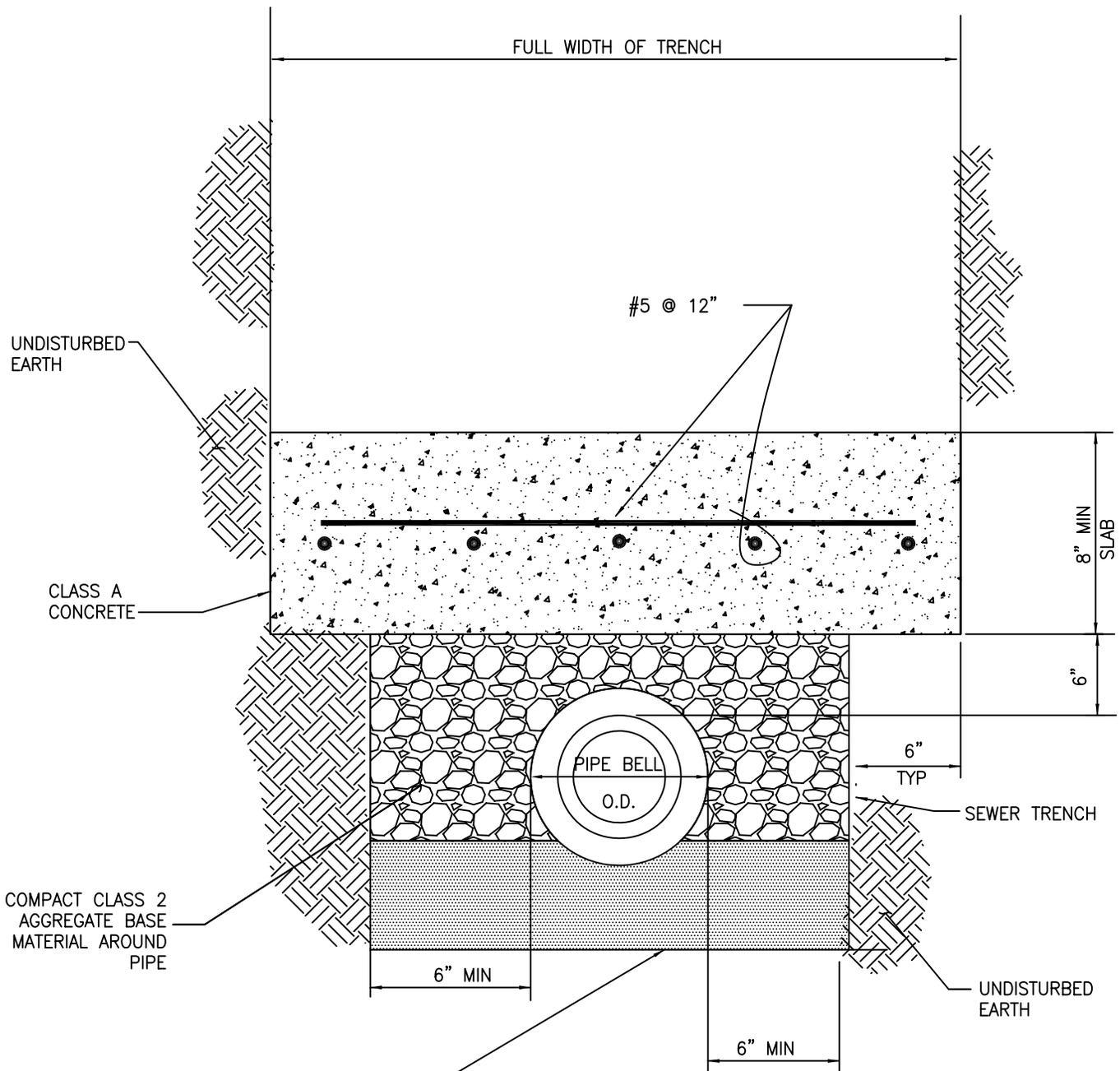
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SIDE SEWER RECONSTRUCTION
 AT UTILITY CROSSING

STD DETAIL No.
 SS 13

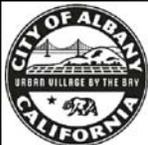


SEE STANDARD DETAIL
SS 7 FOR PIPE
BEDDING SCHEDULE &
PIPE ZONE BACKFILL

NOTES

1. INSTALL OVER SEWER MAINS AND LOWER LATERALS WITH LESS THAN 30" COVER AND OVER UPPER LATERALS WITH LESS THAN 18" COVER.

SCALE: NTS



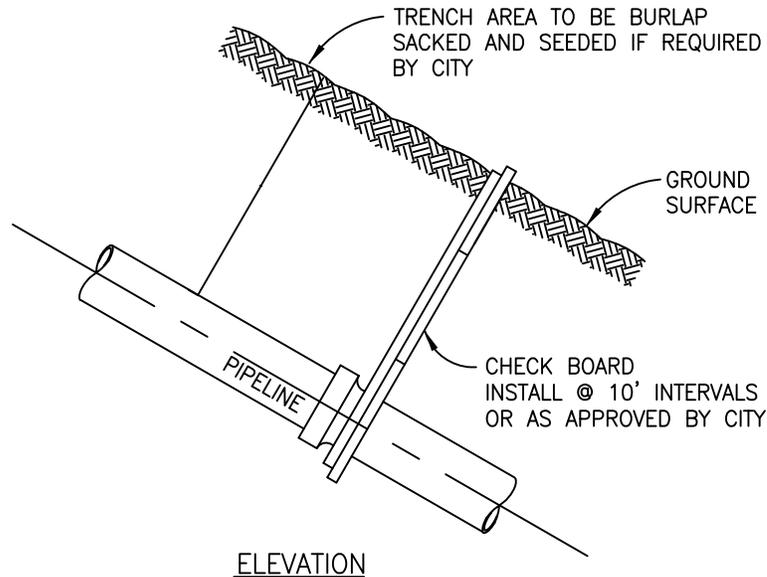
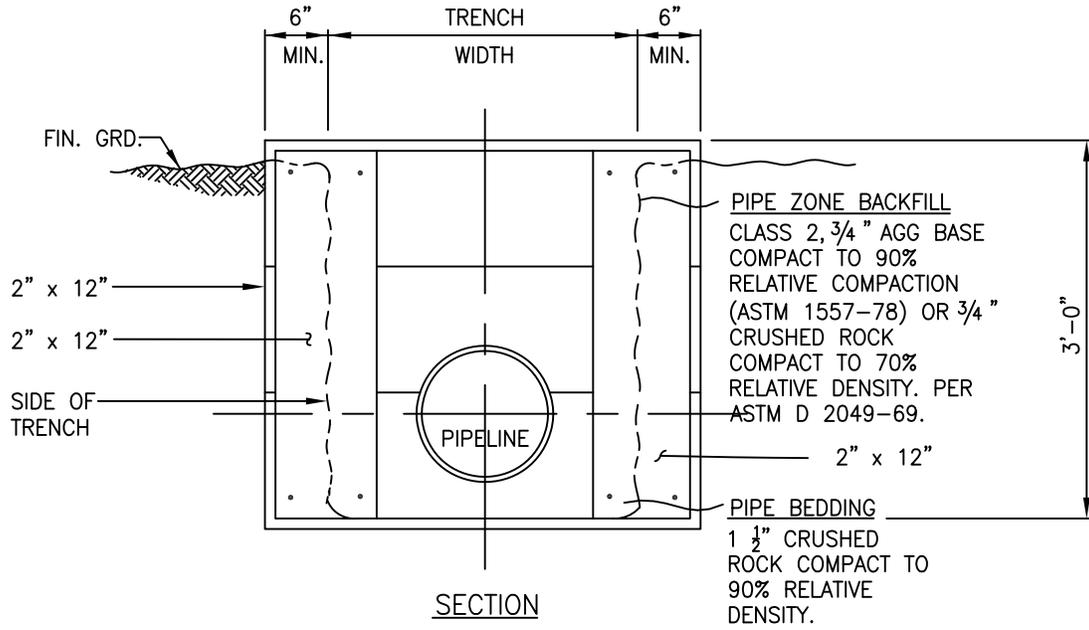
CITY OF ALBANY, CALIFORNIA

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**STANDARD CONCRETE
PIPE PROTECTION**

STD DETAIL No.
SS 14



NOTES:

1. CHECK BOARDS TO BE PLACED ON ALL SLOPES GREATER THAN 50% OR WHERE REQUIRED BY THE CITY.
2. ALL SLOPES 50% OR GREATER SHALL HAVE CLASS 150 C.I. BELL & SPIGOT PIPE.
3. ALL REDWOOD TO BE FOUNDATION GRADE

SCALE: NTS



CITY OF ALBANY, CALIFORNIA

STANDARD DETAIL

APPROVED BY: *Ray Chan*
DATE: DECEMBER 2015

**STANDARD REDWOOD
CHECK BOARD**

STD DETAIL No.
SS 15