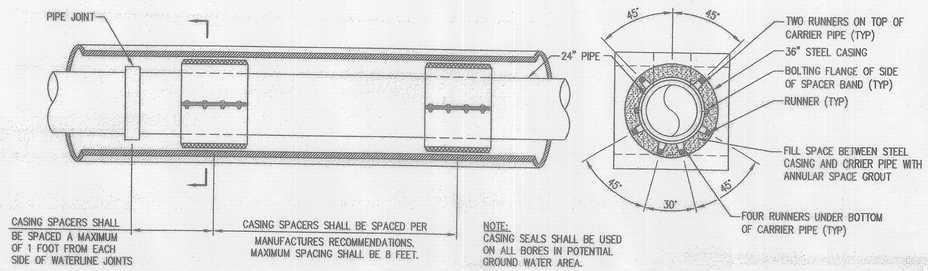
RAILROAD NOTES

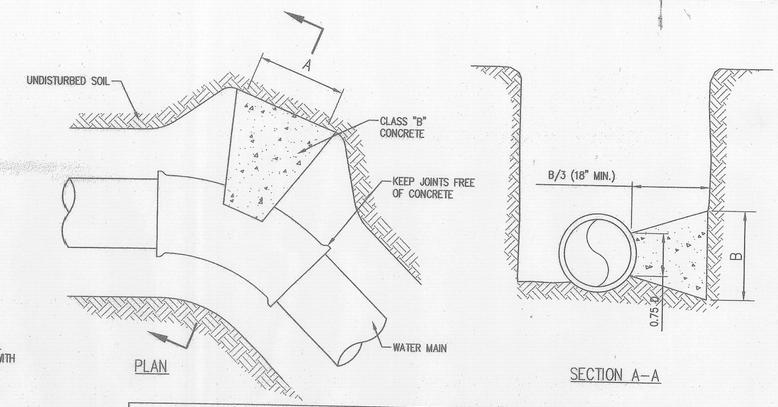
1. CARE MUST BE TAKEN NOT TO OBSTRUCT DITCHES, STREAMS, TRACKS, RAILROAD STRUCTURES, OR PRIVATE PROPERTY.
2. ADEQUATE BARRIER PROTECTION IS REQUIRED FOR ALL EXCAVATION ON RAILROAD RIGHT-OF-WAY TO PROTECT INDIVIDUALS FROM FALLING INTO HOLES.
3. GRADING IS REQUIRED ON THE RAILROAD RIGHT-OF-WAY ON ALL AREAS DISTURBED BY CONSTRUCTION TO PREVENT PONDING OF STORM WATER.
4. EROSION PROTECTION MUST BE ESTABLISHED ON ALL AREAS DISTURBED BY CONSTRUCTION USING PERENNIAL GRASSES NATIVE TO THE AREA.
5. ALL PROJECTS WILL REQUIRE A PROJECT INSPECTOR AND FLAGMAN WHEN REQUIRED FOR PROTECTION OF TRAIN OPERATIONS. PLEASE KEEP IN MIND IT NORMALLY TAKES THREE WEEKS TO OBTAIN FLAGMEN FOR A PROJECT. THEREFORE, WORK SCHEDULES WILL HAVE TO BE PLANNED ACCORDINGLY.
6. ALL COSTS INCURRED FOR REVIEW AND APPROVAL WILL BE AT CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT.
7. THE CONTRACTOR SHALL KEEP THE JOB SITE FREE FROM SAFETY AND HEALTH HAZARDS AND ENSURE THAT ITS EMPLOYEES ARE COMPETENT AND ADEQUATELY TRAINED IN ALL SAFETY AND HEALTH ASPECTS OF THE JOB. THE CONTRACTOR SHALL HAVE PROPER FIRST AID SUPPLIES AVAILABLE ON THE JOB SITE SO THAT PROMPT FIRST AID SERVICES CAN BE PROVIDED TO ANY PERSON THAT MAY BE INJURED ON THE JOB SITE. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE RAILROAD OF ANY U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REPORTABLE INJURIES OCCURRING TO ANY PERSON THAT MAY ARISE DURING THE WORK PERFORMED ON THE JOB SITE. THE CONTRACTOR SHALL HAVE A NONDELEGABLE DUTY TO CONTROL ITS EMPLOYEES, WHILE THEY ARE ON THE JOB SITE OR ANY OTHER PROPERTY OF THE RAILROAD, TO BE CERTAIN THEY DO NOT USE, BE UNDER THE INFLUENCE OF, OR HAVE IN THEIR POSSESSION ANY ALCOHOLIC BEVERAGE OR ILLEGALLY OBTAINED DRUG, NARCOTIC OR OTHER SUBSTANCES.
8. THE EMPLOYEE OF THE CONTRACTOR SHALL BE SUITABLY DRESSED TO PERFORM THEIR DUTIES SAFELY AND IN A MANNER THAT WILL NOT INTERFERE WITH THEIR VISION, HEARING, OR FREE USE OF THEIR HANDS OR FEET. ONLY WAIST LENGTH SHIRTS WITH SLEEVES AND TROUSERS THAT COVER THE ENTIRE LEG ARE TO BE WORN. IF FLARELEGGED TROUSERS ARE WORN, THE TROUSER BOTTOMS MUST BE TIED TO PREVENT CATCHING. THE EMPLOYEES SHOULD WEAR STURDY AND PROTECTIVE FOOTWEAR. EMPLOYEES SHALL NOT WEAR BOOTS (OTHER THAN WORK BOOTS), SANDALS, CANVAS TYPE SHOES, OR OTHER SHOES THAT HAVE THIN SOLES OR HEELS THAT ARE HIGHER THAN NORMAL. IN ADDITION, THE CONTRACTOR SHALL REQUIRE ITS EMPLOYEES TO WEAR PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED BY RAILROAD RULES, REGULATIONS, OR RAILROAD OFFICIALS OVERLOOKING THE WORK AT THE JOB SITE. IN PARTICULAR, THE PROTECTIVE EQUIPMENT TO BE WORN SHALL BE:
   - 8.a. PROTECTIVE HEAD GEAR THAT MEETS AMERICAN NATIONAL STANDARD Z89.1 ---- LATEST REVISION. IT IS SUGGESTED THAT ALL HARD HATS BE AFFIXED WITH CONTRACTOR'S OR SUBCONTRACTOR'S COMPANY LOGO OR NAME.
   - 8.b. EYE PROTECTION THAT MEETS AMERICAN NATIONAL STANDARD FOR OCCUPATIONAL AND EDUCATIONAL EYE AND FACE PROTECTION, Z87.1 ---- LATEST REVISION. ADDITIONAL EYE PROTECTION MUST BE PROVIDED TO MEET SPECIFIC JOB SITUATIONS SUCH AS WELDING, GRINDING, BURNING, ETC
   - 8.c. HEARING PROTECTION WHICH AFFORDS ENOUGH ATTENUATION TO GIVE PROTECTION FROM NOISE LEVELS THAT WILL BE OCCURRING ON THE JOB SITE
9. ALL HEAVY EQUIPMENT PROVIDED OR LEASED BY THE CONTRACTOR SHALL BE EQUIPPED WITH AUDIBLE BACKUP WARNING DEVICES.IF IN THE OPINION OF THE RAILROAD REPRESENTATIVE ANY OF CONTRACTOR'S OR ANY OF ITS SUBCONTRACTOR'S EQUIPMENT IS UNSAFE FOR USE ON THE RAILROADS' RIGHT-OF-WAY, THE CONTRACTOR, AT THE REQUEST OF THE RAILROAD REPRESENTATIVE, SHALL REMOVE SUCH EQUIPMENT FROM THE RAILROAD'S RIGHT-OF-WAY.
10. IF THE RAILROAD REPRESENTATIVE HAS GIVEN THE CONTRACTOR PERMISSION TO USE CERTAIN EQUIPMENT ON ANY TRACKAGE AT THE JOB SITE, CONTRACTOR SHALL ENSURE THAT EACH AND ALL OF ITS EMPLOYEES RESPONSIBLE FOR OPERATING ANY MOTIVE POWER INCLUDING, WITHOUT LIMITATION ANY TRYRAIL EQUIPMENT (SUCH EQUIPMENT HEREAFTER BRING REFERRER TO AS "MOTIVE POWER") ON ANY TRACKAGE OF RAILROAD WILL BE TRAINED TO KNOW AND UNDERSTAND, AND WILL COMPLY WITH RAILROAD'S OPERATING RULES APPLICABLE TO THE OPERATION AND USE OF SUCH MOTIVE POWER.
11. IN THE EVENT CONTRACTOR'S EMPLOYEES USE ANY SUCH MOTIVE POWER TO MOVE ALL RAIL CARS OR OTHER RAILBOUND EQUIPMENT EQUIPPED WITH AIR BRAKES, CONTRACTOR SHALL FURTHER ENSURE THAT THE EMPLOYEES ARE TRAINED TO KNOW AND UNDERSTAND AND WILL COMPLY WITH RAILROAD'S RULES FOR HANDLING SUCH MOTIVE POWER, CARS AND EQUIPMENT, AND THAT CONTRACTOR'S EMPLOYEES PERFORM ALL REQUIRED TESTS OF THE OPERATING SYSTEMS OF ANY MOTIVE POWER, CARS AND OTHER EQUIPMENT BEFORE AND AFTER MOVEMENT. CONTRACTOR ACKNOWLEDGES RECEIPT OF RAILROADS APPLICABLE RULES GOVERNING:
   - A. OPERATION AND USE OF MOTIVE POWER, CARS AND OTHER EQUIPMENT, AND
   - B. THE MOVEMENT OF SUCH MOTIVE POWER, CARS AND EQUIPMENT BY RAIL.
12. IN LIVE TRACK OPERATIONS, A DISTANCE OF TWENTY-FIVE (25) FEET FROM TRACK MUST BE MAINTAINED UNLESS THE CONTRACT NECESSITATES WORKING IN CLOSE PROXIMITY TO THE TRACK. WHEN DOING SO, YOUR EMPLOYEES AND EQUIPMENT MUST FIRST HAVE AUTHORIZATION OF UNION PACIFIC RAILROAD. WHEN SO AUTHORIZED WHERE WORK IS IN CLOSE PROXIMITY TO TRACKS, A UNION PACIFIC RAILROAD FLAGMAN MUST BE PRESENT.
13. CONTRACTOR/SUBCONTRACTOR EMPLOYEES MUST BE FAMILIAR WITH PROCEDURES TO CLEAR MEN AND EQUIPMENT FROM TRACK AREA FOR APPROACHING TRAINS. IN ADDITION, THE FOLLOWING SAFETY PROCEDURES SHALL BE ADHERED TO BY CONTRACTOR/SUBCONTRACTOR EMPLOYEES:
   - A. ALWAYS BE ON THE ALERT FOR MOVING EQUIPMENT WHILE WORKING NEAR ANY RAILROAD TRACKS OR FACILITIES.
   - B. DO NOT STEP OR WALK ON THE TOP OF THE RAIL, FROG, SWITCHES, GUARD RAILS, OR OTHER TRACK COMPONENTS.
   - C. IN PASSING AROUND ENDS OF STANDING CARS, ENGINES, RAILROAD MACHINERY, AND OTHER ONTRACK EQUIPMENT, LEAVE AT LEAST ONE RAIL CAR LENGTH (50 FEET) BETWEEN YOURSELF AND THE END OF THE EQUIPMENT.
   - D. AVOID WALKING OR STANDING ON TRACK AT ANY TIME.
   - E. WHEN IT IS NECESSARY TO WALK OR WORK ON TRACK, ALWAYS KEEP A SHARP LOOKOUT IN BOTH DIRECTIONS FOR APPROACHING TRAINS.
   - F. BEFORE STEPPING OR CROSSING TRACKS, LOOK IN BOTH DIRECTIONS FIRST. THE SAME IS TRUE WHEN WALKING AROUND MACHINERY AND EQUIPMENT ON AND ABOUT THE TRACKS.
   - G. DO NOT SIT ON, LIE UNDER, OR CROSS BETWEEN CARS EXCEPT AS REQUIRED IN PERFORMANCE OF YOUR DUTY, AND ONLY WHEN TRACK AND EQUIPMENT ARE UNDER PROPER PROTECTION.
   - H. IN MULTIPLE TRACK TERRITORY, DO NOT STAND ON ONE TRACK WHILE A TRAIN IS PASSING ANOTHER.
14. CONTRACTOR REQUIRED TO CARRY RAILROAD PROTECTIVE LIABILITY INSURANCE.

CALTRANS NOTES

1. CONTRACTOR SHALL WAIT FOR A CALTRANS ENCROACHMENT PERMIT TO BE OBTAINED BEFORE BORING IN CALTRANS RIGHT-OF-WAY.
2. CONTRACTOR IS RESPONSIBLE FOR FIELD CONDITIONS 24 HOURS A DAY.
3. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IF THE EXISTING CONDITIONS DIFFER FROM WHAT IS SHOWN ON THE PLANS.
4. ALL TRENCHES, RECEIVING AND BORE PITS SHALL BE SHORED IN ACCORDANCE TO CAL-OSHA REQUIREMENTS. SHORING OF PITS LOCATED WITHIN 15' OF LANES WITHIN STATE HIGHWAY RIGHT-OF-WAY SHALL NOT EXTEND MORE THAN 36" IN HEIGHT ABOVE THE PAVEMENT GRADE, UNLESS AUTHORIZED BY A CALTRANS' REPRESENTATIVE.
5. THE EXACT LOCATION OF EXISTING UTILITIES ARE NOT SPECIFICALLY LOCATED. THE CONTRACTOR SHOULD EXERCISE EXTREME PRECAUTIONS.
6. REPAIR ANY DAMAGED FENCES DURING CONSTRUCTION TO ORIGINAL CONDITION.
7. BORE AND RECEIVING PITS TO BE LOCATED A MINIMUM OF 10' FROM FROM THE EDGE OF PAVEMENT IN RURAL AREAS, OR AT LEAST 5' BEYOND THE CONCRETE CURB AND GUTTER OR AC DIKE IN URBAN AREAS, OR AT LEAST 5' BEYOND THE TOE OF SLOPE OF EMBANKMENTS.
8. BORE AND RECEIVING PITS SHALL BE PROTECTED BY PLACEMENT OF 6' CHAIN LINK FENCE OR TYPE-K BARRIER AROUND THEM.
9. PROVIDE THRUST BLOCKS AT ALL PRESSURE LINE ELBOWS PER THRUST BLOCK DETAIL SEE SHEET 4.
10. GROUNDWATER ENCOUNTERED DURING CONSTRUCTION SHALL NOT BE DISCHARGED WITHIN CALTRANS RIGHT-OF-WAY.
11. ALL JOINTS OF CARRIER PIPE WITHIN CASING SHALL BE RESTRAINED.
12. CARRIER PIPE SHALL BE PRESSURE TESTED PRIOR TO INSTALLATION OF CASING END SEALS.
13. REFLECTORS SHALL BE AFFIXED TO THE SHORING ON ALL SIDES FACING TRAFFIC.
14. PITS SHALL NOT AFFECT ANY STATE FACILITIES, OR CREATE A HAZARD TO THE TRAVELING PUBLIC. DAMAGED STATE FACILITIES SHALL BE REPLACED IN-KIND OR REPAIRED TO THEIR ORIGINAL STATE.
15. ALL PITS SHOULD HAVE CRUSHED-ROCK AND SUMP AREAS TO CLEAR GROUNDWATER AND WATER USED TO CLEAN THE CASINGS. PITS SHALL BE LINED WITH FILTER FABRIC WHEN GROUNDWATER IS FOUND AND PUMPING IS REQUIRED.



BORE AND JACKING DETAIL
NOT TO SCALE

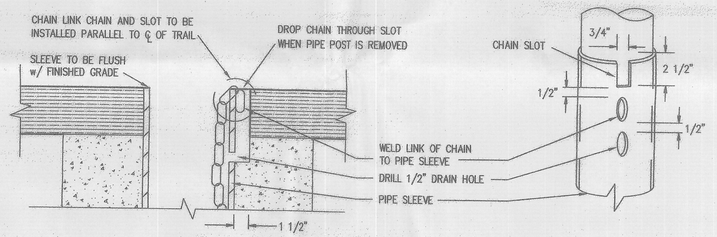


MINIMUM DIMENSIONS FOR THRUST BLOCKS

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
16"	5.5'	4.5'	7.0'	5.0'	5.0'	5.0'	4.5'	3.0'	3.0'	3.0'
24"	6.0'	6.0'	7.0'	7.0'	5.0'	5.0'	4.5'	3.0'	3.0'	3.0'

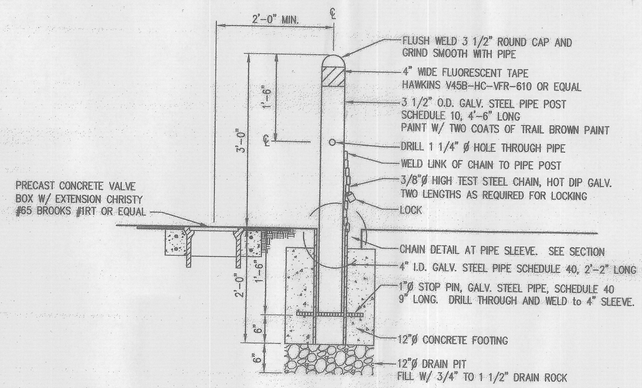
NOTES:
1. THRUST BLOCKS SHALL BE CLASS B CONCRETE (5 SACK MIX)
2. MAXIMUM TEST PRESSURE = 150 PSI
3. D = DIAMETER OF PIPE
4. TOP OF THRUST BLOCK SHALL NOT BE PLACED WITHIN 2' OF FINISHED GRADE.

THRUST BLOCK DETAIL
NOT TO SCALE



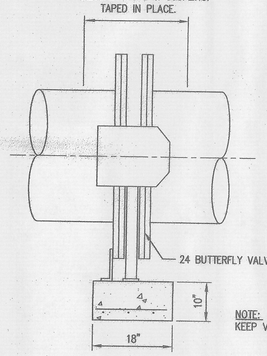
SECTION - CHAIN DETAIL

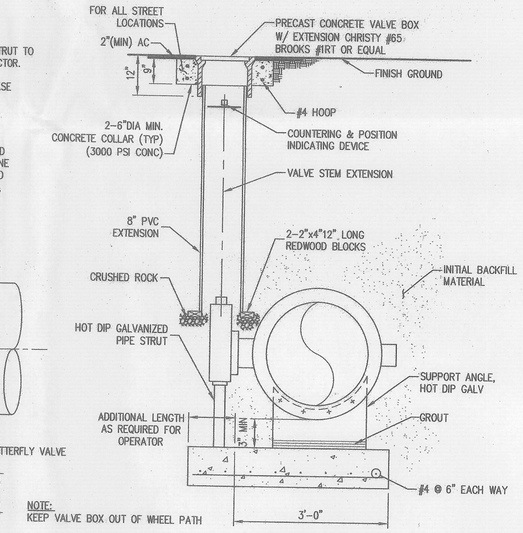
SECTION - SLOT DETAIL



SECTION

REMOVABLE METAL BOLLARD





BUTTERFLY VALVE
NOT TO SCALE

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REGISTERED PROFESSIONAL ENGINEER — STEVEN F. CARPENTER — 59 — 3/10/11 — CIVIL — STATE OF CALIFORNIA

NEWCASTLE TRANSMISSION MAIN

GENERAL NOTES, DETAILS AND SECTIONS

MUNICIPAL UTILITIES DEPARTMENT
CITY OF STOCKTON, CALIFORNIA

SCALE: AS SHOWN	APPROVED BY:	DATE: 3/10/10	SHEET NO. 3
DESIGNED BY: M.J.S.			OF 34 SHEETS
DRAWN BY: G.S.			PROJECT NO.
CHECKED BY: L.F.C.	ASSISTANT DIRECTOR STOCKTON, CALIFORNIA		M07004
RECORD DWG: ---			

3/22/2010 10:07 AM
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