- 2. ANY CHANGES TO THE DESIGN AND/OR CONSTRUCTION SHALL BE APPROVED BY THE OWNER AND ENGINEER.
- 3. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONDITION MATERIAL TYPES, DIMENSIONS. ELEVATIONS AND CONDITIONS. VERIFY DESIGN DIMENSIONS IN THE FIELD PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION, ANY DISCREPANCY FOUND AMONG THE NOTES AND DRAWINGS SHALL BE REPORTED TO THE ENGINEER FOR CORRECTION AND/OR CLARIFICATION.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING, TEMPORARY SHORING, DEWATERING AND OTHER ENVIRONMENTAL CONTROLS REQUIRED DURING CONSTRUCTION TO ENSURE THE STABILITY AND SAFETY OF ALL CONSTRUCTION UNTIL COMPLETE AND SELF-SUPPORTING.
- 5. CONTRACTOR SHALL LOCATE AND PROTECT ALL ABOVE GROUND AND BELOW GROUND UTILITIES. ANTICIPATED UTILITIES INCLUDE BUT NOT LIMITED TO; WATER, POWER, GAS, TELEPHONE, AND IRRIGATION. CONTRACTOR SHALL REPAIR ANY UTILITIES DAMAGED DURING CONSTRUCTION AT OWN EXPENSE. CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCE NOTICE AND COORDINATE ANY PLANNED DISRUPTION IN UTILITY SERVICE WITH PURVEYOR AND USER.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS 15. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK BY CONTRACTOR. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION.

## EROSION / STORMWATER CONTROL NOTES:

- 6. DUST CONTROL IS REQUIRED UNTIL THE DISTURBED/EXPOSED SOILS ONSITE HAVE BEEN RE-VEGETATED OR PERMANENTLY STABILIZED. A WATER TRUCK OR OTHER IDEQ BMP METHOD SHALL BE UTILIZED TO MITIGATE FUGITIVE DUST.
- 7. ALL GRADING AND EROSION CONTROL MATERIALS, WORKMANSHIP AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF THE "CATALOG OF STORMWATER BEST MANAGEMENT PRACTICES" PREPARED BY THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY. EROSION CONTROL SHALL BE PER THE SPECIFICATIONS AND DETAILS CONTAINED THEREIN AND SHALL TAKE PRECEDENCE OVER OTHER STANDARDS AND SPECIFICATIONS.
- 8. THE IMPLEMENTATION OF EROSION AND SEDIMENT CONTROL (ESC) DEVICES AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND PERMANENT 19. A TACK COAT SHALL BE APPLIED TO THE ADJACENT CURBS STABILIZATION IS ACHIEVED.
- 9. HYDROMULCH ALL DISTURBED AREAS WITH DRYLAND SEED 20. PRIOR TO PLACING OF ASPHALTIC CONCRETE, THE MIX EXCEPT WHERE OTHERWISE NOTED. SUBMIT DRYLAND SEED MIX DESIGN FOR APPROVAL PRIOR TO APPLICATION.
- 10. THE IMPLEMENTATION OF THIS PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
- 11. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, LEAVE THE SITE, OR VIOLATE APPLICABLE WATER STANDARDS, AND MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR EROSION CONTROL.
- 12. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS.
- 13. THE ESC FACILITIES SHALL BE INSPECTED AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- 14. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A WEEK OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.
- 15. STABILIZED CONSTRUCTION ENTRANCES AND WASH PADS 25. ALL CONSTRUCTION SHALL BE IN ACCORDANCE IS WITH SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- 16. THE ESC FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE APPROVED PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY OF PONDERAY INSPECTOR.

- 17. A COPY OF THE APPROVED EROSION CONTROL PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- 18. IF ANY PART(S) OF THE CLEARING LIMIT BOUNDARY OR TEMPORARY EROSION / SEDIMENTATION CONTROL PLAN IS/ARE DAMAGED, IT SHALL BE REPAIRED IMMEDIATELY.
- 19. ALL PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND RUNOFF.
- 20. DO NOT FLUSH CONCRETE BYPRODUCTS OR TRUCKS NEAR OR INTO THE STORM DRAINAGE SYSTEM.
- 21. ENTITIES OR INDIVIDUALS RESPONSIBLE FOR MAINTENANCE AND UPKEEP OF BOTH TEMPORARY AND PERMANENT EROSION CONTROL MEASURES:

CONTRACTOR FOR TEMPORARY OWNERS FOR PERMANENT

22. OPERATION AND MAINTENANCE: THE STORM WATER MANAGEMENT PLAN SHALL IDENTIFY THE ENTITIES OR INDIVIDUALS RESPONSIBLE FOR THE LONG TERM MAINTENANCE OF THE STORM WATER FACILITIES:

HAWTHORNE BUSINESS PARK OWNERSHIP

23. MAINTENANCE ACTIVITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, WATERING, MOWING AND FERTILIZING OF GIAS, SOD RENOVATION OF GIAS, SEDIMENT AND DEBRIS REMOVAL FROM DETENTION BASIN, DEBRIS REMOVAL AND CLEANING OF ALL INLETS, PIPING, OUTLET STRUCTURES, SLOPE PROTECTION, ETC.

## STREET AND PAVING NOTES:

- DIVISION 800 OF THE "IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION" (ISPWC), LATEST EDITION.
- 16. THE UPPER TWELVE INCHES (12") OF SUBGRADE SHALL BE COMPACTED TO A RELATIVE COMPACTION OF 95% MODIFIED PROCTOR.
- 17. PRIOR TO PLACING BASE MATERIAL, THE FOLLOWING SHALL BE COMPLETED:
- A. PROVIDE COMPACTION TEST RESULTS FOR ALL UTILITY TRENCHES, SUBGRADE, AND AREAS UNDER CURB AND GUTTER TO THE ENGINEER OF RECORD.
- B. OBTAIN AUTHORIZATION FROM THE ENGINEER OF RECORD TO PROCEED WITH PLACEMENT OF BASE MATERIAL.
- C. PRIOR TO PLACING BASE, THE SUBGRADE SHALL BE PROOF-ROLLED AND OBSERVED BY THE ENGINEER OF RECORD.
- 17. COMPACTION OF THE CRUSHED AGGREGATE BASE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 802, PART 3.4 OF THE ISPWC, LATEST EDITION.
- 18. COMPACTION OF THE AGGREGATE BASE SHALL BE TESTED AND APPROVED BY ENGINEER OF RECORD PRIOR TO PLACEMENT OF ASPHALTIC CONCRETE.
- PRIOR TO PLACEMENT OF ASPHALTIC CONCRETE.
- FOLLOWING SHALL BE COMPLETED:
- A. PROVIDE COMPACTION TEST RESULTS FOR BASE MATERIAL TO THE ENGINEER OF RECORD.
- B. OBTAIN AUTHORIZATION FROM THE ENGINEER OF RECORD PROCEED WITH ASPHALT PAVING.
- C. OBTAIN APPROVAL OF ALL UNDERGROUND UTILITIES WHICH WILL LIE UNDER THE PAVEMENT.
- 21. PLACEMENT OF ASPHALTIC CONCRETE SHALL BE OBSERVED BY A REPRESENTATIVE OF THE ENGINEER OF RECORD.
- 22. ASPHALTIC CONCRETE SHALL BE COMPACTED TO AT LEAST 92% OF THE MAXIMUM THEORETICAL DENSITY -AASHTO T209-94.
- 23. THE ENGINEER OF RECORD MAY REQUIRE CORING OF THE ASPHALT PAVEMENT TO VERIFY PAVEMENT THICKNESS OR DENSITY.

## SEWER NOTES:

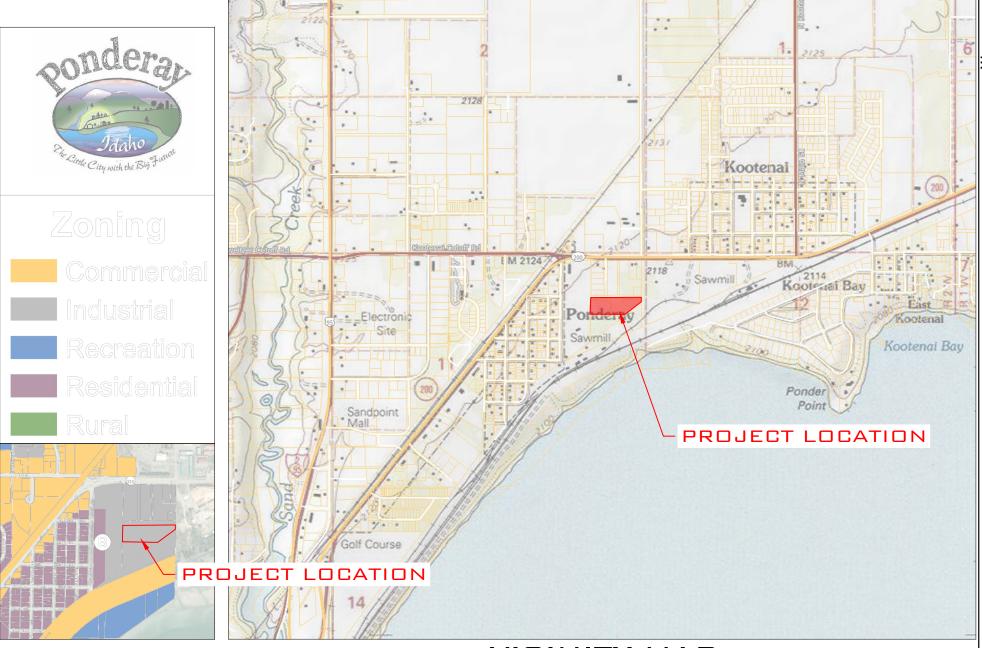
- 24. KOOTENAI-PONDERAY SEWER DISTRICT RULES AND REGULATIONS ARE HEREBY INCLUDED BY REFERENCE. WHERE CONFLICT OCCURS, RULES AND REGULATIONS SHALL GOVERN.
- IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPWC) CURRENT EDITION.
- 26. PRIOR TO CONSTRUCTION THE KOOTENAI-PONDERAY SEWER DISTRICT WILL SCHEDULE A PRE-DEVELOPMENT MEETING WITH APPROPRIATE PARTIES TO DISCUSS DEVELOPMENT REQUIREMENTS.
- 27. SCHEDULING INSPECTIONS FOR ALL PHASES OF THE WORK ARE THE RESPONSIBILITY OF THE DEVELOPER OR

THEIR DESIGNATED REPRESENTATIVE. FAILURE TO CALL FOR INSPECTIONS (208-263-0229) WILL RESULT IN EXCAVATING OR FURTHER TESTING TO ENSURE COMPLIANCE WITH KOOTENAI-PONDERAY SEWER DISTRICT REQUIREMENTS.

- 28. ALL INFRASTRUCTURE WORK SHALL BE WARRANTIED FOR 2 YEARS FROM TIME OF INITIAL ACCEPTANCE BY THE DISTRICT. ACCEPTANCE MEANS A WRITTEN DOCUMENT FROM THE DISTRICT SPECIFICALLY ACCEPTING THE WORK.
- 29. ALL SERVICE SADDLES SHALL BE DOUBLE STRAP, STAINLESS STEEL STRAPS.
- 30. TRACING WIRE (12 GAUGE) SHALL BE PLACE ATOP ALL SEWER MAINS/SERVICES AND SHALL BE BROUGHT TO THE SURFACE AT EACH MAINLINE VALVE, CURB BOX AND INSIDE EACH VALVE BOX.
- 31. UTILITY TRENCHING, PIPE BEDDING AND BACKFILL SHALL MEET THE REQUIREMENTS OF ISPWC SECTIONS 305 AND 306. PIPE BEDDING MATERIALS SHALL BE TYPE I BEDDING AND PIPE BACKFILL MATERIALS SHALL BE TYPE A AS APPROVED BY THE INSPECTOR. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY PER ASTM D1557 (MODIFIED PROCTOR).
- 32. THE EXISTENCE AND LOCATION OF SEWER FACILITIES SHOWN ON THE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. LOCATION AND ELEVATION OF EXISTING SEWER FACILITIES SHALL BE CONFIRMED BY FIELD MEASUREMENTS AND EXCAVATION EXPLORATION BY THE CONTRACTOR PRIOR TO BEGINNING OF NEW WORK.
- 33. SEE SHEET 02 FOR ADDITIONAL KPSD RULES AND REGULATIONS

## WATER NOTES:

- 34. CONTACT CITY OF SANDPOINT 48 HOURS IN ADVANCE OF DESIRED INSTALLATION TIME.
- 35. METERS AND YOKES SHALL BE PURCHASED FROM THE CITY AND INSTALLED BY THE CITY, REGARDLESS OF WHO INSTALLS THE REMAINING SERVICE CONNECTION. THE INSTALLATION OF ANY OTHER METER OR YOKE IS CONSIDERED AN UNAUTHORIZED WATER USER.
- 36. SERVICE CONNECTIONS MAY BE INSTALLED BY EITHER THE CITY, A PRIVATE CONTRACTOR HIRED BY THE CITY, OR A PRIVATE CONTRACTOR HIRED BY THE OWNER OR WATER USER, AS APPROVED BY PERMIT ISSUED BY THE CITY IN ACCORDANCE WITH THESE WATER RULES. THE CITY RESERVES THE RIGHT TO REQUIRE A SERVICE CONNECTION BE INSTALLED BY A PRIVATE CONTRACTOR.
- 37. PRIVATE CONTRACTORS INSTALLING SERVICE CONNECTIONS SHALL HAVE PROOF OF AND MAINTAIN A VALID PUBLIC WORKS CONTRACTOR LICENSE, CLASS A (TYPE 4 - SPECIALTY CONSTRUCTION; CATEGORY 02500 -UTILITIES) AS ISSUED BY THE IDAHO DIVISION OF BUILDING SAFETY AND SHALL PROVIDE CERTIFICATE OF INSURANCE MEETING THE CITY'S MOST CURRENT REQUIREMENTS.
- 38. ANY AND ALL PERMITTED WORK PERFORMED BY AN AUTHORIZED PRIVATE CONTRACTOR SHALL MEET THE REQUIREMENTS OF THESE WATER RULES AND THE TERMS OF THE PERMIT AND FAILURE TO COMPLY WITH SUCH REQUIREMENTS CONSTITUTES A VIOLATION IN ACCORDANCE WITH CITY CODE 7-6-19, PENALTIES.
- 39. TRACING WIRE (12 GAUGE) SHALL BE PLACE ATOP ALL WATER LINES AND SHALL BE BROUGHT TO THE SURFACE AT EACH END. ALL TRACING WIRE SHALL BE CONNECTED WITH SPLICE KITS AND PROVIDE COMPLETE SYSTEM CONTINUITY.
- 40. UTILITY TRENCHING, PIPE BEDDING AND BACKFILL SHALL MEET THE REQUIREMENTS OF ISPWC SECTIONS 305 AND 306. PIPE BEDDING MATERIALS SHALL BE TYPE I BEDDING AND PIPE BACKFILL MATERIALS SHALL BE TYPE A AS APPROVED BY THE INSPECTOR. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY PER ASTM D1557 (MODIFIED PROCTOR).
- 41. NO CONNECTIONS FOR THE PURPOSE OF OBTAINING WATER SUPPLY DURING CONSTRUCTION SHALL BE MADE WITHOUT FIRST OBTAINING APPROVAL FROM THE CITY OF SANDPOINT WATER DIVISION. BULK WATER FOR CONSTRUCTION AND DUST CONTROL SHALL BE PURCHASED THROUGH APPROVED FILLING STATIONS.
- 42. THE EXISTENCE AND LOCATION OF WATER FACILITIES SHOWN ON THE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE CITY RECORDS. LOCATION AND ELEVATION OF EXISTING WATER FACILITIES SHALL BE CONFIRMED BY FIELD MEASUREMENTS AND EXCAVATION EXPLORATION BY THE CONTRACTOR PRIOR TO BEGINNING OF NEW WORK.
- 43. ALL WATER MAINS, VALVES AND VALVE BOXES, FIRE HYDRANTS, SERVICES, AND APPURTENANCES SHALL BE INSTALLED, TESTED, AND APPROVED PRIOR TO PAVING.



ZONING MAP

VICINITY MAP

N.T.S.

# PROJECT SUMMARY:

THIS CIVIL SITE PLAN SET IS FOR THE HAWTHORNE BUSINESS PARK INITIAL DEVELOPMENT PHASE AND RELATED IMPROVEMENTS TO 7TH STREET FRONTAGE.

## PROJECT CONTACTS:

### CIVIL ENGINEER:

RYAN FOBES, PE FORESITE ENGINEERING, PLLC 418 E. LAKESIDE AVE. #01 SANDPOINT, IDAHO 83814 P# 208-714-6866 RYAN@FORESITE.SOLUTIONS

## CONTRACTOR:

COLIN BURNETT IDAGON RCE-28014 P#(208)304-2394 COLIN@IDAGON.NET

## SHEET INDEX:

COVER SHEET - GENERAL NOTES 7TH ST / SITE / STORMWATER MANAGEMENT PLAN 02 03 SITE PLAN / STORMWATER MANAGEMENT PLAN SITE / STORMWATER DETAIL SHEET 04

05 WATER AND SEWER SITE PLAN

06 WATER DETAIL SHEET 07 SEWER NOTES KPSD

SEWER DETAIL SHEET 08

## SITE DATA TABLE

## RPP39490030010A:

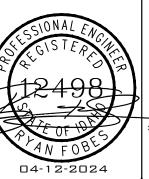
LOT SIZE AREA: 96,330.31 SF -OR- 2.21 ACRES TOTAL IMPERVIOUS AREA: 56,962.87 SF -OR- 1.31 ACRES TOTAL BUILDING FLOOR AREA: 20,000.00 SF -OR- 0.46 ACRES GREEN SPACE AREA: 39,367.44 SF -OR- 0.90 ACRES GREEN SPACE AREA: 41% OPEN SPACE AREA: 76,330.31 SF -OR- 1.75 ACRES OPEN SPACE AREA DISTURBANCE AREA: 88,622.04 SF -OR- 2.03 ACRES

## RPP39490030020A:

LOT SIZE AREA: 122,175.72 SF -OR- 2.80 ACRES TOTAL IMPERVIOUS AREA: - ACRES - SF -OR-TOTAL BUILDING FLOOR AREA: - SF -OR- - ACRES GREEN SPACE AREA: 122,175.72 SF -OR- 2.80 ACRES GREEN SPACE AREA: 100% OPEN SPACE AREA: 122,175.72 SF -OR- 2.80 ACRES OPEN SPACE AREA 100% DISTURBANCE AREA: 8,299.15 SF -OR- 0.19 ACRES

> LOCATES (2 WORKING DAYS NOTICE REQUIRED PRIOR TO EXCAVATION) 81





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3+00

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4+00

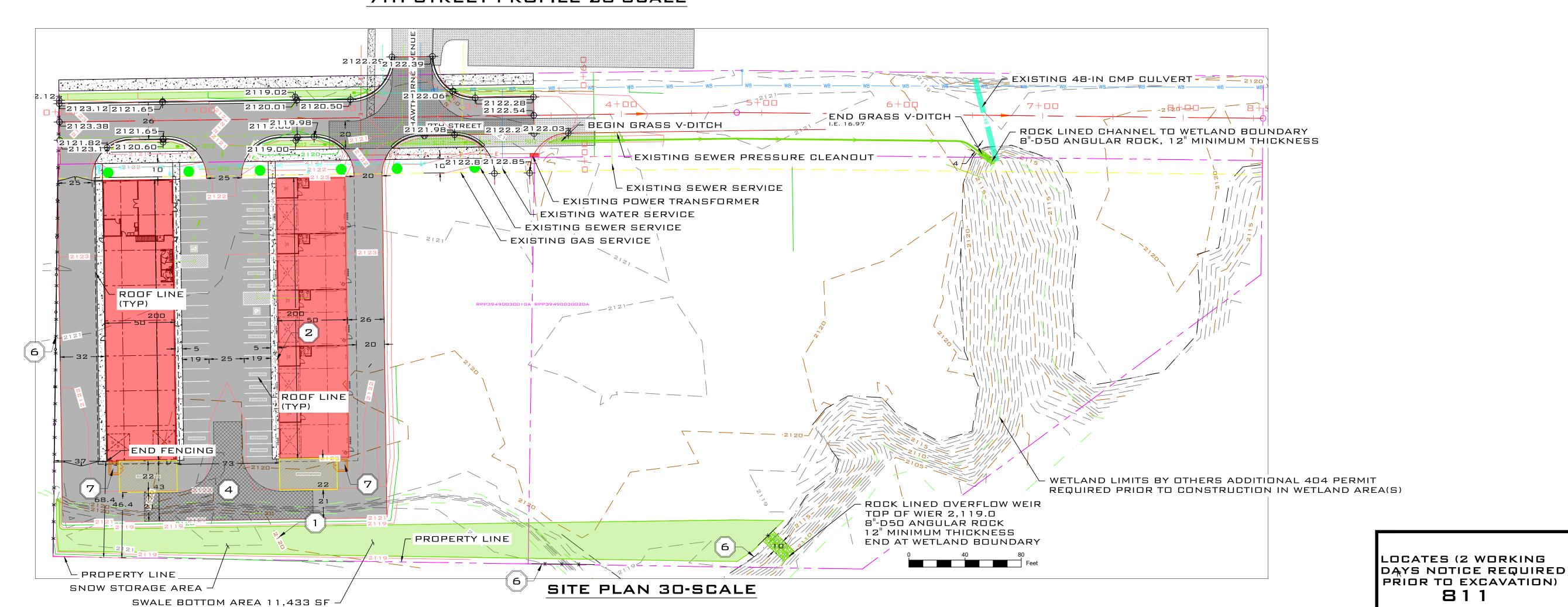
# 7TH STREET PROFILE 20-SCALE

1 + 50

2110

0+50

 $1 + \Box \Box$ 



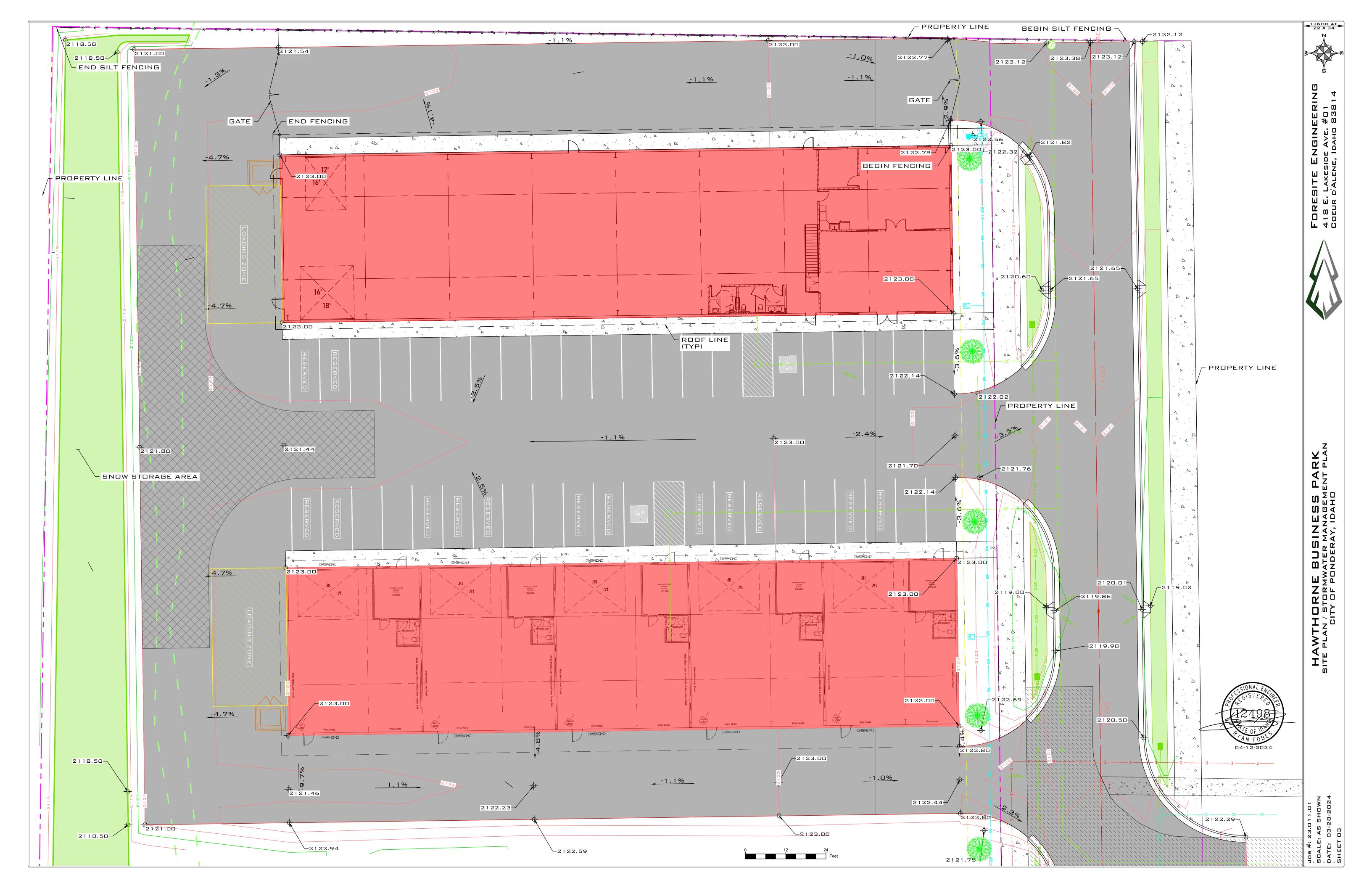
2+50

HAWTHORNE BUSINES

ENGINEERING SIDE AVE. #01 NE, IDAHO 83814

811

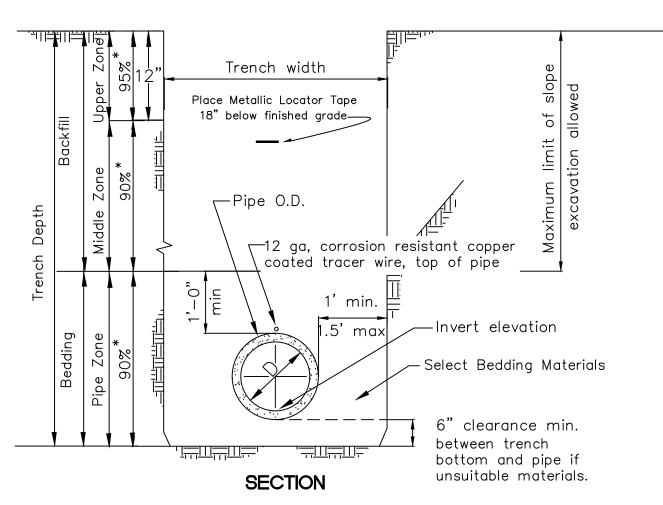




## NOTES:

- 1. STONE SIZE: 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. 2. LENGTH: AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT 20 FOOT MINIMUM ON A SINGLE FAMILY RESIDENCE).
- 3. THICKNESS: NOT LESS THAN 6 INCHES.
- 4. WIDTH: 10 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH OF INGRESS AND EGRESS LOCATIONS.
- 5. FILTER FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
- 6. SURFACE WATER: ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE REQUIRED.
- 7. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
- 8. WASHING: WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

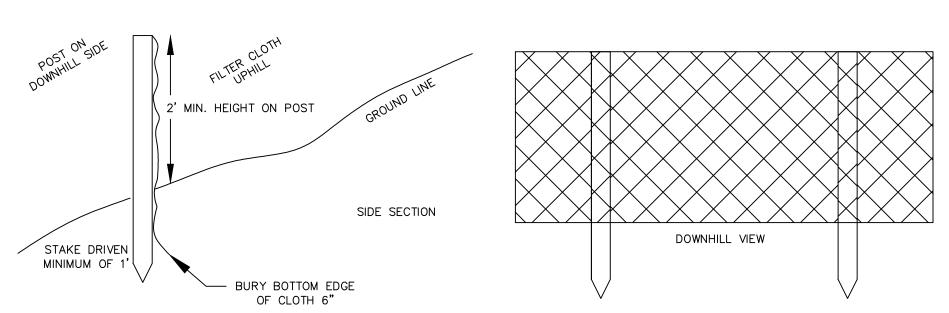
# CONSTRUCTION ENTRANCE DETAIL



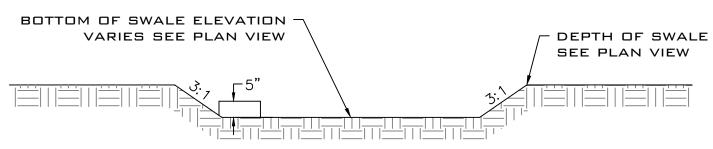
## NOTES

- For trenching in improved streets, see Standard Drawing for trench resurfacing.
- 2. (\*) indicates minimum relative compaction using modified proctor (ASTM D-1557). 3. Minimum depth of cover from the top of pipe to finished grade shall be 4'6".
- 4. Bedding Material shall be Sand, Gravel, Crushed Aggregate, or Native material which shall be approved by the Water Dept. prior to using. Bedding shall be placed at least 6" below the pipe if the native materials are unsuitable to a minimum depth of 12" above the pipe unless the backfill is judged to be excessively course. Then the Water Dept. may require 24" or more of select bedding materials over the main.
- 5. Backfill with rocks in excess of 5" diameter or sharp jagged rock shall <u>not</u> be allowed in the trench at any time from bottom of trench to finished grade. <u>Only select</u> <u>material shall be used.</u>
- 6. Bedding material shall be distributed to an even grade across the width of the trench profile.
- 7. Compaction shall be accomplished by approved methods in maximum 12" lifts above the compacted bedding materials.

# PIPE BEDDING AND BACKFILL



## SILT FENCE DETAIL N.T.S.



### SWALE NOTES:

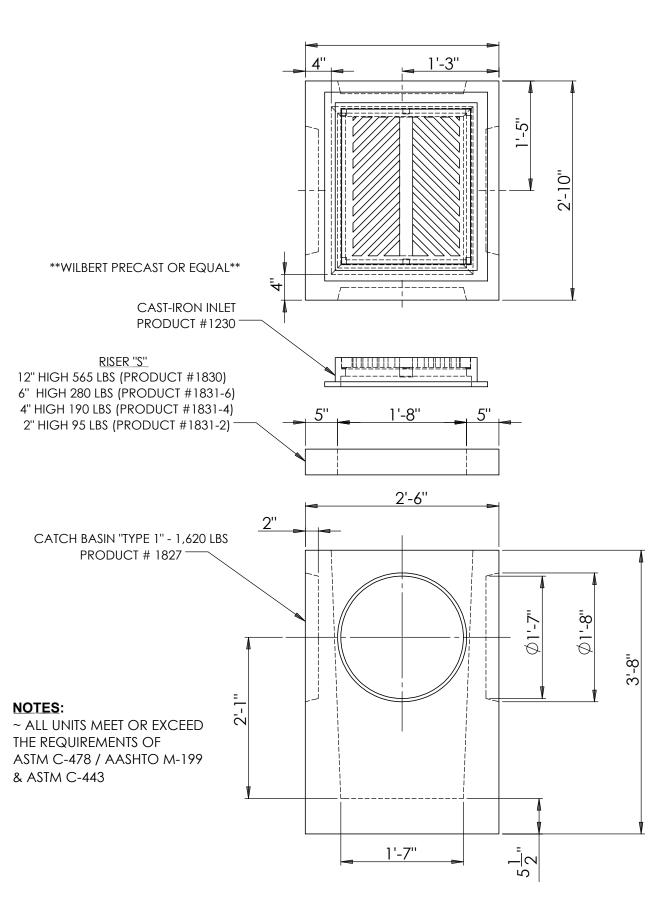
EACH SWALE SHALL BE MEASURED AT THE BOTTOM.

BACK FILL IN THE LOCATION OF SWALES SHALL NOT BE COMPACTED MORE THAN 85 PERCENT FROM BOTTOM OF SWALE TO TOP OF NATIVE SOIL.

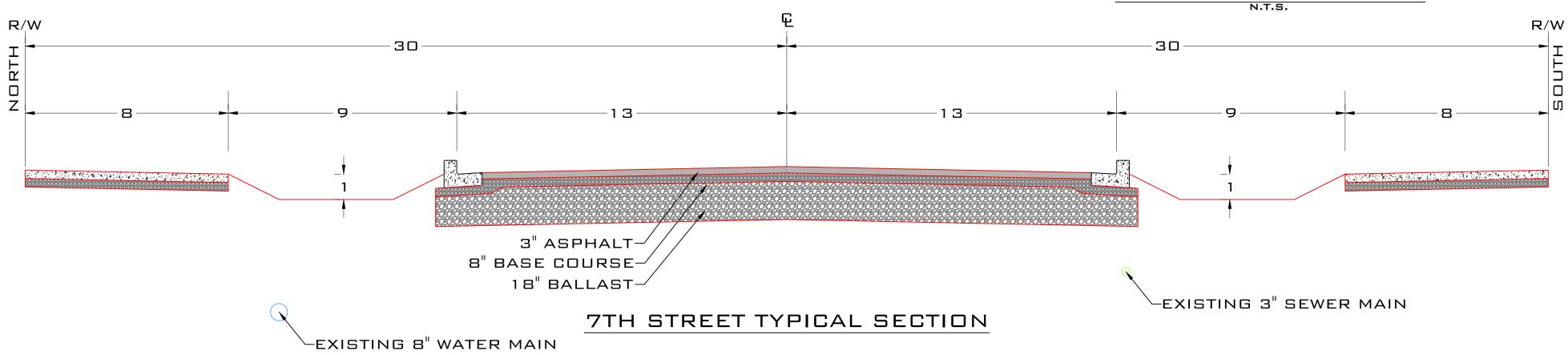
SWALE BOTTOM IS TO BE FLAT AND LEVEL.

SWALE IS TO HAVE TURF GRASS INSTALLED.

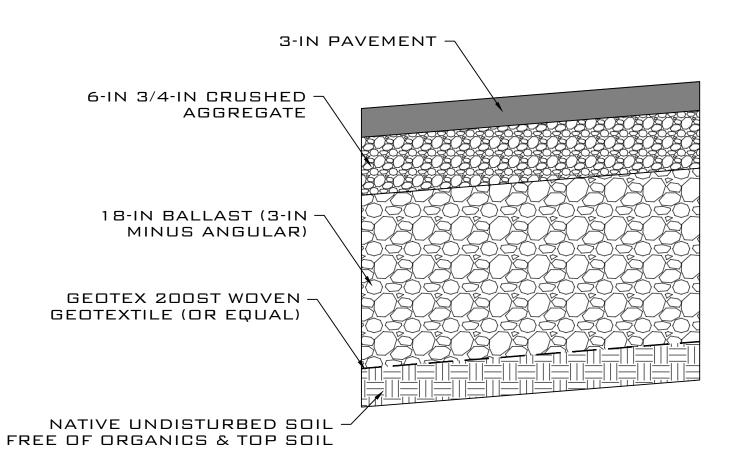
# **GRASSY SWALE DETAIL**



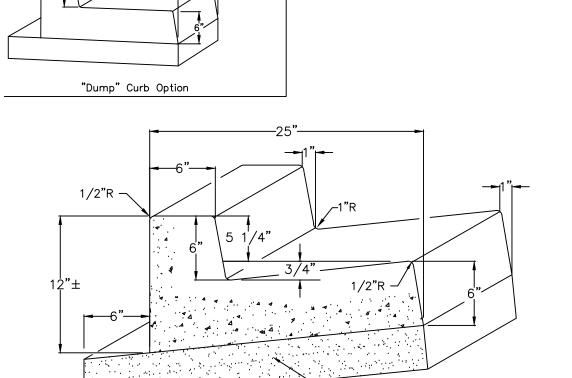
# TYPE 1 CATCH BASIN



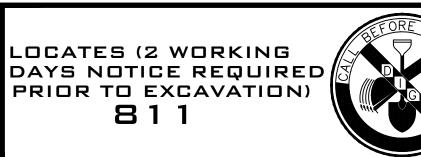
 Match street cross slope

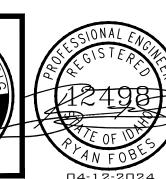


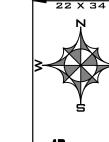
TYPICAL PAVEMENT SECTION



4" of 3/4" minus crushed rock base Compacted to 95% of modified proctor. Subgrade compacted to 95%. CURB AND GUTTER

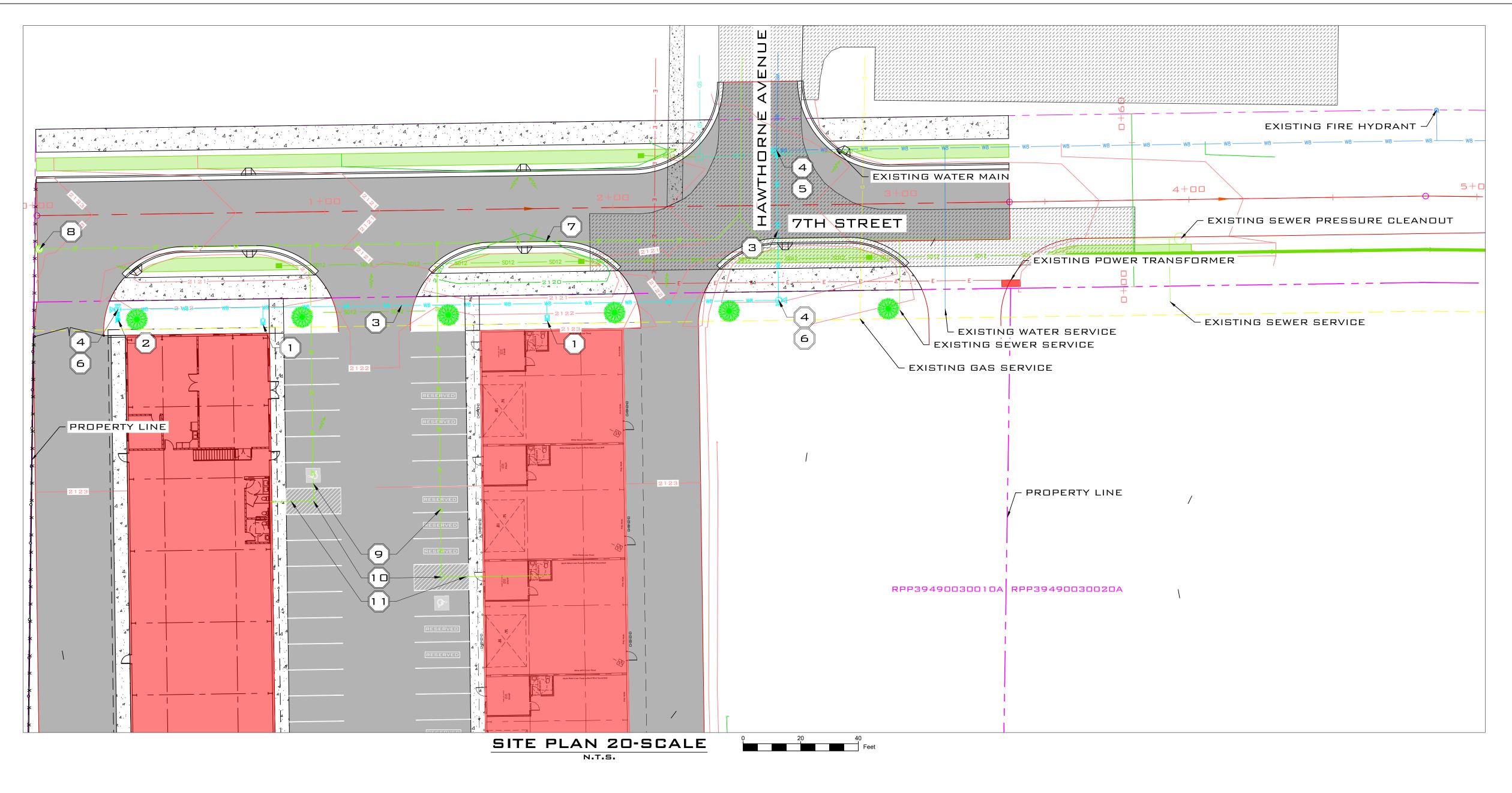






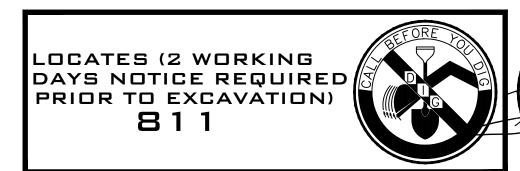
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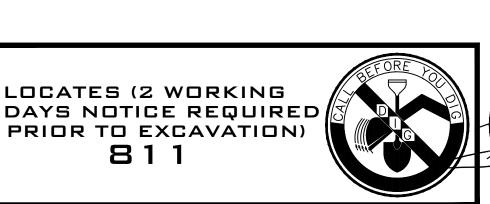


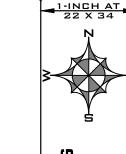


# KEY LEGEND:

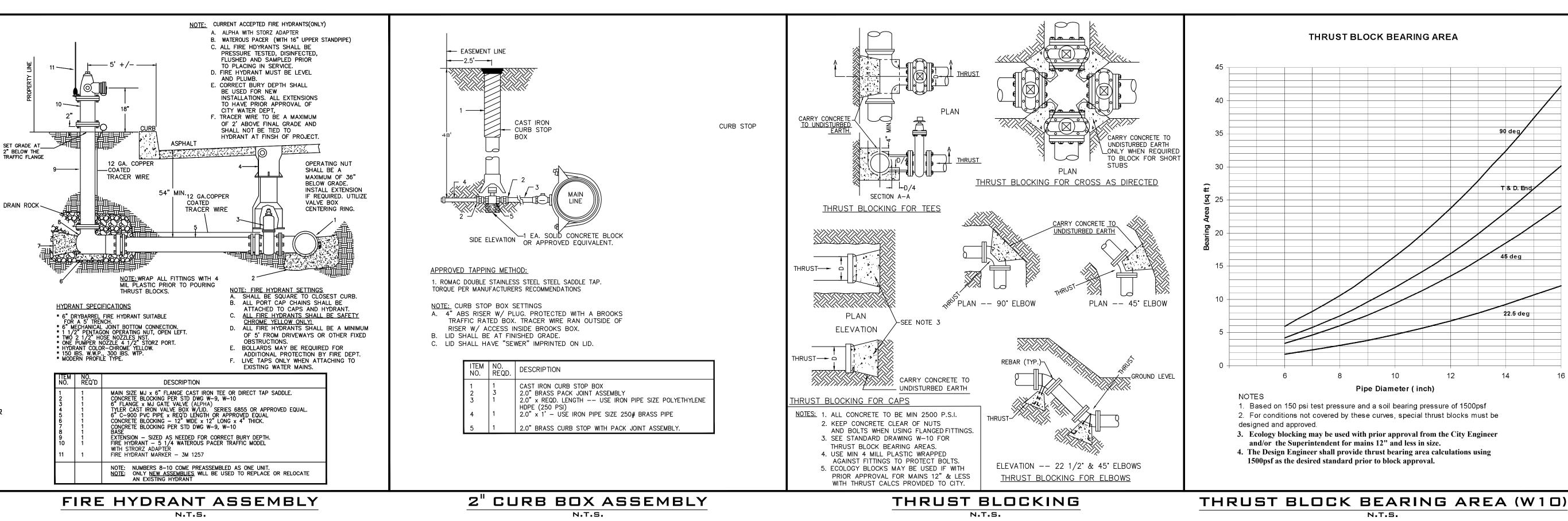
- 1 2-IN WATER SERVICE ASSEMBLY PER CITY OF SANDPOINT STANDARDS
- 2 FIRE HYDRANT ASSEMBLY PER CITY OF SANDPOINT STANDARDS
- 3 8-IN C-900 WATER MAIN PER CITY OF SANDPOINT STANDARDS
- $\left[\!\left[\!\left[ \mathbf{4} \right]\!\right]\!\right]$ 8-IN WATER TEE PER CITY OF SANDPOINT STANDARDS  $\left[\!\left[\!\left[ \mathbf{4} \right]\!\right]\!\right]$
- 5 B-IN WATER GATE VALVE PER CITY OF SANDPOINT STANDARDS
- 6 B-IN BLIND FLANGE W THRUST BLOCK PER CITY OF SANDPOINT STANDARDS
- (7) 2-IN POLY SEWER FORCE MAIN PER K.P.S.D. STANDARDS
- 8 PRESSURE SEWER CLEANOUT PER K.P.S.D. STANDARDS
- 9 PRESSURE SEWER SERVICE PER K.P.S.D. STANDARDS
- [1 🗖 GRINDER PUMP ASSEMBLY PER K.P.S.D. STANDARDS |
- (1 1) GRAVITY SEWER SERVICE LINE PER K.P.S.D. STANDARDS





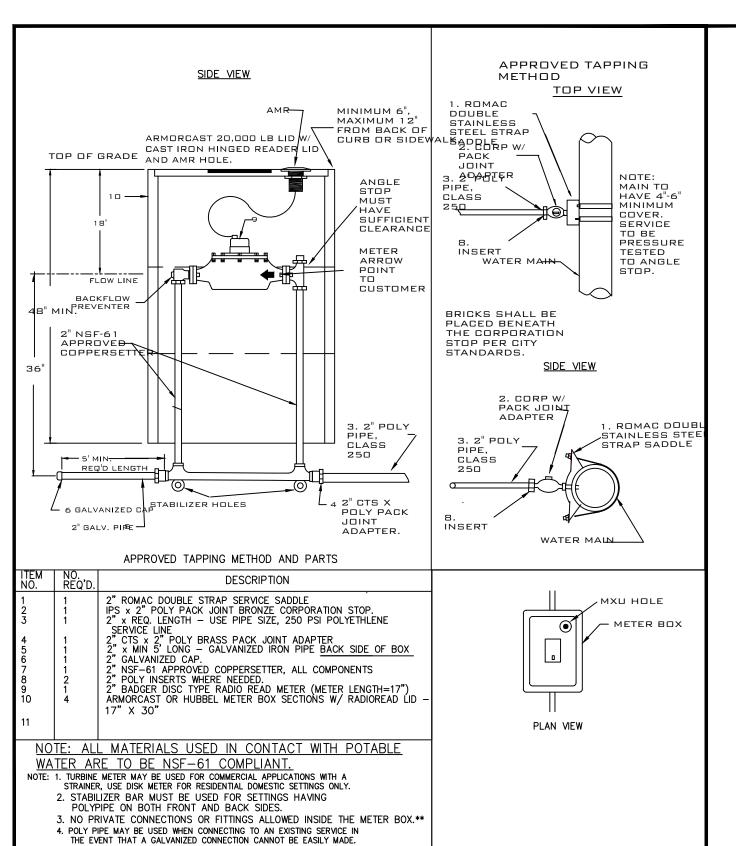






# THRUST BLOCK BEARING AREA (W10)

WATER MAIN FLUSHING



	FLOW REQUIRED TO PRODUCE 2.5 F.FPS (APPROX.)	SIZE OF FLUSHING TAP (INCH) (1") (1 1/2") (2")		HYDRANT OUTLETS		
PIPE DIAMETER (INCH)	VELOCITY IN MAIN, (GPM)	NUMBER OF TAPS ON PIPE (2)			NUMBER OF PORTS	SIZE IN (INCH)
4"	100	1			1	2 1/2"
6"	220		1		1	2 1/2"
8"	400		2	1	1	2 1/2"
10"	600		3	2	1	2 1/2"
12"	900			2	2	2 1/2"
16"	1600			4	2	2 1/2"
18"	2000			6	1	4 1/2"
20"	2500			8	1	4 1/2"
24"	3500			11	2	4 1/2"
(1)	WITH A 40 PSI RESIDUAL PRESSURE IN THE MAIN WITH THE FIRE HYDRANT OR FLUSH PORT FLOWING TO ATMOSPHERE, A 2 1/2" HYDRANT OUTLET WILL DISCHARGE APPROX. 1000 GPM AND A 4 1/2" HYDRANT NOZZLE WILL DISCHARGE APPROX. 2500 GPM					
(2)	NUMBER OF TAPS ON PIPE BASED ON DISCHARGE RATE THROUGH 5 FEET OF GALVANIZED IRON (GI) PIPE WITH ONE 90 DEGREE ELBOW.					

- 1. MAINS DO NOT NEED TO BE THOROUGHLY FLUSHED PRIOR TO PRESSURE TEST. FLUSH ONLY ENOUGH TO RELEASE ANY TRAPPED AIR. PRESSURE TEST WILL BE CONDUCTED PRIOR TO COLLECTION OF BACTERIA
- 2. MUST USE A MINIMUM SCOURING VELOCITY OF 2.5 FEET PER SECOND (FPS).
- 3. IF NO FIRE HYDRANT IS PROVIDED NEAR THE END OF THE MAIN, PROVIDE A FLUSHING TAP OF THE SIZE SUFFICIENT TO PROVIDE A MINIMUM VELOCITY IN THE MAIN OF 2.5 FPS.
- 4. REFER TO THE TABLE ABOVE FOR THE MINIMUM VELOCITY REQUIRED THROUGH A FLUSH PORT OR FIRE HYDRANT TO ACHIEVE SCOURING VELOCITY.
- 5. EXERCISE EXTREME CARE AND CONDUCT A THOROUGH INSPECTION DURING WATER MAIN INSTALLATION TO PREVENT SMALL STONES, CONCRETE, WILDLIFE AND DEBRIS FROM ENTERING THE MAINS.
- 6. CLEAR LARGE MATERIAL BY FLUSHING AND INSPECTING ALL HYDRANTS ON THE MAINS TO ENSURE THAT
- ALL VALVES ARE CLEAR AND AND IN GOOD CONDITION. 7. CONTRACTOR MUST RECEIVE APPROVAL FROM THE CITY WATER DEPT. PRIOR TO FLUSHING ANY WATER
- 8. THE CITY WATER DEPT. WILL NOT BE LIABLE FOR ANY DAMAGE CAUSED BY THE CONTRACTOR WHILE FLUSHING A WATER MAIN. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHERE TO DISPOSE OF EXCESS WATER.

# PIPE BEDDING & BACKFILL

. Compaction shall be accomplished by approved methods in maximum 12" lifts above

N.T.S.

Trench width

Place Metallic Locator Tape 18" below finished grade—

—Pipe O.D.

**SECTION** 

For trenching in improved streets, see Standard Drawing for trench resurfacing.

3. Minimum depth of cover from the top of pipe to finished grade shall be 4'6".

Dept. may require 24" or more of select bedding materials over the main.

2. (\*) indicates minimum relative compaction using modified proctor (ASTM D-1557).

4. Bedding Material shall be Sand, Gravel, Crushed Aggregate, or Native material which shall be approved by the Water Dept. prior to using. Bedding shall be placed at least

6" below the pipe if the native materials are unsuitable to a minimum depth of 12" above the pipe unless the backfill is judged to be excessively course. Then the Water

5. Backfill with rocks in excess of 5" diameter or sharp jagged rock shall <u>not</u> be allowed

in the trench at any time from bottom of trench to finished grade. <u>Only select</u>

6. Bedding material shall be distributed to an even grade across the width of the

NOTES

<u>material shall be used.</u>

the compacted bedding materials.

─12 ga, corrosion resistant copper

coated tracer wire, top of pipe

∕—Invert elevation

Select Bedding Materials

6" clearance min.

unsuitable materials.

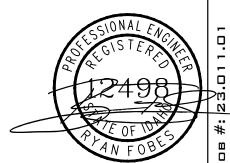
between trench bottom and pipe if

1' min.

2" COPPER METER SETTING \*\*\*NOTE\*\*\*

CITY OF SANDPOINT TO INSTALL METER AT TIME OF CONNECTION. CONTRACTOR TO INSTALL BLANK IN LIEU OF METER.

WATER MAIN FLUSHING CHART N.T.S.



## KOOTENAI PONDERY SEWER DISTRICT EXCERPTS FROM RULES AND REGULATIONS SECTION IV BUILDING SEWER AND SERVICE CONNECTION CONSTRUCTION POLICIES AND PROCEDURES

ALL NEW SEWER SERVICE CONNECTIONS WITHIN THE DISTRICT BOUNDARIES SHALL BE DESIGNED TO BE IN COMPLIANCE WITH ALL CURRENT STANDARDS AND SPECIFICATIONS OF THE DISTRICT. THE DISTRICT CONFORMS TO THE MOST CURRENT IDAHO STATE PLUMBING CODES (ISPC). THIS SECTION OUTLINES THE DISTRICT POLICIES AND PROCEDURES REQUIRED THAT ARE ABOVE ISPC WHICH REFLECT THE DEMONSTRATED HISTORICAL CONDITIONS AND INFORMATION AND SPECIFIC CLIMATE CONDITIONS, INCLUDING GROUND WATER LEVELS, WHICH ARE UNIQUE TO THE DISTRICT. THE REQUIREMENTS IN THIS SECTION SHALL APPLY TO ALL EXISTING SEWER SERVICE CONNECTIONS WHICH HAVE BEEN DETERMINED BY A DISTRICT REPRESENTATIVE TO BE IN NEED OF REPAIR OR REPLACEMENT.

- 1. SIDE SEWER: A SIDE SEWER SHALL MEAN THE CONNECTING SEWER BETWEEN ANY BUILDING SANITARY DRAIN AND ANY PUBLIC OR PRIVATE SEWER OR PART OF
  - A. PIPE: ALL PIPE SHALL BE SCHEDULE 40 ABS. USE OF OTHER PIPE SHALL BE UPON APPROVAL OF SPECIFICATIONS BY A DISTRICT REPRESENTATIVE. SUCH APPROVAL SHALL BE IN WRITING AND PRIOR TO CONNECTION. SUCH APPROVAL SHALL ALSO BE REQUIRED FOR EXISTING CONNECTIONS REQUIRED TO BE REPAIRED/REPLACED.
  - B. Clean-out: Clean-outs are required on all side sewers. Clean-outs are required to be accessible and to be protected regardless of THE LOCATION OF THE CLEAN-OUT. A DISTRICT REPRESENTATIVE SHALL DETERMINE IF THE CLEAN-OUT, AT ITS UPPER TERMINAL, REQUIRES A TRAFFIC RATED PROTECTIVE BOX IN CORRELATION TO ITS SURROUNDINGS. CLEAN-OUT LOCATIONS SHALL FOLLOW THE IDAHO PLUMBING CODE AS WELL AS BE LOCATED AT LEAST 6 (SIX) INCHES AWAY FROM A FOUNDATION AND WITHIN 5 (FIVE) FEET FROM THE BUILDING. CLEAN-OUTS SHALL NOT BE LOCATED UNDER DECKS OR porches. Additional clean-outs are required to be protected with a traffic rated protective box as approved by a District REPRESENTATIVE. SUCH APPROVAL SHALL BE IN WRITING. ALL CLEAN-OUT MATERIAL SHALL BE SCHEDULE 40 ABS. CLEAN-OUTS SHALL ALWAYS REMAIN PLUGGED OR SEALED, IN A MANNER APPROVED AND ACCEPTED BY THE DISTRICT, TO PREVENT STORM WATER AND GROUND WATER FROM ENTERING THE SIDE E. CATCH BASINS (STORM AND SURFACE DRAINAGE) SEWER AND TO PREVENT GASES FROM THE SIDE SEWER FROM VENTING OUT. PIPE SIZES: NO PART OF A GRAVITY SIDE SEWER SHALL BE SMALLER THAN 4 (four) inches. Single family dwellings, multi-unit dwellings, small apartments and small businesses normally shall be served by a 4 (four) inch side sewer. Pressure sewer line sizes and large flow units shall have pipe sized specified by a design engineer and shall be APPROVED BY THE DISTRICT REPRESENTATIVE PRIOR TO INSTALLATION.
  - A.PIPE FITTINGS: ALL FITTINGS SHALL BE MADE OF APPROVED MATERIAL AND BONDING AGENTS FOR THE APPLICATION. THE USE OF 1/4 OR 90-DEGREE BENDS SHALL BE LIMITED TO LONG SWEEPS AND ONLY ON APPROVAL OF A DISTRICT REPRESENTATIVE IN WRITING. NO FLEXIBLE COUPLERS ARE PERMITTED.
  - B.PIPE LAYING: SIDE SEWERS SHALL BE LAID IN A STRAIGHT LINE EXCEPT WHERE CHANGE OF DIRECTION IS MADE WITH THE PROPER PIPE FITTING. SIDE SEWERS REQUIRE PIPE BEDDING APPROVED BY A DISTRICT REPRESENTATIVE DUE TO THE HIGH GROUND WATER IN THE DISTRICT. MINIMUM GRADE SHALL BE  $^{1}\!/_{4}$  inch per foot or 2% (two percent) slope. Side sewers shall be via gravity. However, if gravity sewer is not reasonable under GENERALLY ACCEPTED ENGINEERING STANDARDS, AND WITH THE AGREEMENT OF A DISTRICT REPRESENTATIVE, FLOW MAY BE VIA SOLIDS HANDLING OR GRINDER PUMPS IN A PRIVATE PUMP STATION. IF GRADE COULD BE MADE WITH A 1% (ONE PERCENT) SLOPE, DIFFERENT PIPE SIZES MAY BE ABLE TO LOWER SLOPE AS A 6 (SIX) INCH PIPE CAN BE LAID AT 1/8 INCH PER FOOT OR 1% (ONE PERCENT) SLOPE UNDER SPECIAL CIRCUMSTANCES APPROVED BY A DISTRICT REPRESENTATIVE IN WRITING. AN EXCEPTION OF SLOPE AND PIPE SIZE INCREASE IN ORDER TO PREVENT THE INSTALLATION OF A PUMP STATION SHALL REQUIRE APPROVAL OF THE IDAHO STATE PLUMBING INSPECTOR.
  - C.PIPE BEDDING: PIPE BEDDING ABOVE STATE MINIMUM PLUMBING CODE IS REQUIRED DUE TO THE HIGH GROUND WATER TABLE IN THE DISTRICT. NATIVE SOIL AND SAND ARE NOT ACCEPTABLE. PIPE BEDDING IS TO BE A CRUSHED AGGREGATE WITH MINIMAL FINES CAPABLE OF BRIDGING SOFT OR WET SOIL TO CREATE AND MAINTAIN A BASE FOR THE SIDE SEWERS.
  - D.TRACER WIRE: GREEN COLORED 12-GAUGE SOLID CORE COPPER WIRE IS TO BE RUN UP THE CLEAN OUT AND REMAIN ACCESSIBLE TO THE DISTRICT FOR locating the lateral. Tracing wire connections shall be made with waterproof silicon filled direct burial connector. Tracing wire is to BE RUN ON THE LATERAL TAPED IN 10- FOOT INTERVALS FROM THE MAIN OR STUB OUT TO THE BUILDING AND RUN UP THE CLEAN OUT CLOSEST TO THE
  - E.COUPLINGS: COUPLINGS SHALL BE RIGID. NO FLEXIBLE COUPLINGS ARE TO BE USED.
  - F. PRIVATE PUMP STATIONS: SIDE SEWERS SHALL BE VIA GRAVITY, HOWEVER, IF NOT REASONABLE UNDER GENERALLY ACCEPTED ENGINEERING STANDARDS, FLOW SHALL BE VIA A PRIVATE PUMP STATION (CONTINUED IN SECTION IV 2-D). RESIDENTIAL NON-COMMERCIAL PUMP STATIONS REQUIRE A SINGLE SOLIDS handling or grinder pump depending on lateral pipe size and sewer main size. Commercial pump stations require duplex solids handling OR GRINDER PUMPS DEPENDING ON LATERAL PIPE SIZE AND SEWER MAIN SIZE. RESIDENTIAL NON-COMMERCIAL PRESSURE SEWER LATERAL PIPE SIZE FOR SOLID HANDLINGS PUMP SHALL REQUIRE 2" (INCH) LATERAL PIPE SIZE OR GRINDER PUMPS  $1^{-1/4}$ " (INCH) LATERAL PIPE SIZE. COMMERCIAL PRESSURE sewer lateral for solids handling pumps shall require 3" (inch) lateral pipe size or grinder pumps 2" (inch) lateral pipe size. The PRESSURE SEWER MAIN PIPE SIZE WILL ULTIMATELY DETERMINE THE LATERAL SIZE WHICH WILL DETERMINE WHETHER THE PUMP TYPE IS A SOLIDS HANDLING OR GRINDER PUMP. LATERAL SIZE SHOULD BE ONE SIZE SMALLER THAN THE MAIN. FOR EXAMPLE: 4" (INCH) MAIN LINE REQUIRES A MAXIMUM LATERAL SIZE
  - (INCH) MAIN LINE REQUIRES A MAXIMUM LATERAL SIZE OF 2" (INCHES); AND A 2" (INCH) MAIN LINE REQUIRES A MAXIMUM LATERAL SIZE OF 1 1/4" (INCHES). PRIVATE PUMP STATIONS ARE REQUIRED TO BE ACCESSIBLE AND TO BE PROTECTED. PRIVATE PUMP STATION LIDS SHALL REMAIN CAPPED AND/OR SEALED AT ALL TIMES, IN A MANNER APPROVED AND ACCEPTED BY THE DISTRICT, TO PREVENT STORM/GROUND WATER FROM INFLOWING TO THE SIDE SEWER AND TO PREVENT GASES FROM VENTING OUT OF THE SIDE SEWER.
  - G.LATERAL INSPECTION VIA CAMERA: A DISTRICT REPRESENTATIVE MAY INSPECT SIDE SEWERS OR REQUIRE AN INSPECTION BE DONE BY A QUALIFIED THIRD PARTY. A COPY OF THE VIDEO INSPECTION SHALL BE SUPPLIED TO THE DISTRICT VIA A DVD OR DIGITAL COPY ON A USB DEVICE. LATERAL INSPECTIONS SHALL BE DONE VIA A SELF-LEVELING CAMERA CAPABLE OF MARKING FOOTAGE. A DISTRICT REPRESENTATIVE SHALL DETERMINE THE INTEGRITY AND
- 2.CONTRACTOR RESPONSIBILITIES: THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO PUBLIC OR PRIVATE FACILITIES INCURRED BY OR DURING CONSTRUCTION OF SIDE SEWERS. THE DISTRICT REPRESENTATIVE SHALL BE NOTIFIED OF SUCH DAMAGE AND SHALL MAKE A THOROUGH INSPECTION OF REPAIRS PERFORMED BY THE APPROPRIATE AGENCIES. IN CASES WHERE A SIDE SEWER IS CONNECTED TO A PREVIOUSLY CONSTRUCTED SIDE SEWER, SUCH AS A SIDE SEWER PREVIOUSLY LAID TO A PROPERTY LINE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FUNCTIONING OF THE JOINED SIDE SEWER. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THAT ANY CESSPOOL OR SEPTIC TANK PIPING USED IN CONNECTING A SIDE SEWER IS FUNCTIONING PROPERLY FROM THE BUILDING DRAIN TO THE POINT OF CONNECTION. THE CONTRACTOR MUST TAKE PROPER MEASURES TO PROTECT AN UNCOVERED SIDE SEWER FROM DAMAGE BY CAVE-INS, VANDALISM AND WEATHER CONDITIONS, AND TO PROTECT THE PUBLIC FROM INJURY AND/OR DAMAGE INCLUDING, WITHOUT LIMITATION, INSURANCE LIMITS, SIGNS AND BARRICADES, LIGHTS, DETOUR ROUTES AND OTHER RELATED FACILITIES. CONNECTION OF FOOTING DRAINS OR ANY OTHER TYPE OF GROUND OR STORM WATER COLLECTION INSTALLATIONS TO A SIDE SEWER IS ABSOLUTELY PROHIBITED.
- 3. Taps: All taps shall be made with a tapping fitting approved by a District Representative. The tap fittings shall be made by a MANUFACTURER FOR THAT PURPOSE. NO TAPS SHALL BE MADE UNTIL A SEWER PERMIT IS OBTAINED. THE DISTRICT REPRESENTATIVE MAY REFUSE PERMISSION FOR MORE THAN ONE TAP IN A SINGLE LENGTH OF PIPE IN A PUBLIC SEWER IF, IN HIS/HER JUDGMENT, THE CONDITION OF THE PUBLIC SEWER WARRANTS SUCH PRECAUTION. THE CONNECTION SHALL BE LEFT EXPOSED TO ALLOW THE DISTRICT TO MAKE AN INSPECTION. THE COSTS FOR MATERIALS AND LABOR INCURRED IN EITHER CONSTRUCTION OR REPAIR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/PROPERTY OWNER AND HE/SHE/THEY SHALL BE BILLED FOR AND BE LIABLE FOR THE PAYMENT OF SUCH COSTS. SUCH CONTRACTOR SHALL GUARANTEE ANY WORK PERFORMED WITHIN THE PUBLIC RIGHTS-OF-WAY AGAINST DEFECTS IN MATERIALS OR DEFICIENCIES OR WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF COMPLETION. AT THE END OF THE PERIOD OF GUARANTEE. DWNERSHIP AND RESPONSIBILITY FOR MAINTENANCE OF THE SERVICE LINE UP TO AND INCLUDING THE SADDLE SHALL REVERT TO THE PROPERTY OWNER. ANY CONSTRUCTION OR REPAIR OF SEWER SERVICE LINES WITHIN THE PUBLIC RIGHTS-OF-WAY, INCLUDING ALLEYS AND UTILITY EASEMENTS, BY ANYONE OTHER THAN THE DISTRICT SHALL BE SUBJECT TO INSPECTION AND RECONSTRUCTION AS NECESSARY WHICH SHALL BE DETERMINED BY THE DISTRICT AND THE CONTRACTOR/PROPERTY OWNER SHALL BE BILLED FOR TIME AND MATERIALS. ALL EXISTING SEWER SERVICE TAPS AT TIME OF REPAIR OR REPLACEMENT SHALL MEET CURRENT DISTRICT REQUIREMENTS.

## B. CONNECTIONS TO MANHOLES

- SIDE SEWERS SHALL NOT BE CONNECTED TO MANHOLES. IN CASES WHERE AN EXISTING SIDE SEWER IS CONNECTED TO A MANHOLE AND HAS NOT BEEN REMOVED AND INSTALLED ON A MAIN, THE DROP SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE FOLLOWING STANDARD SPECIFICATIONS: 1.Interior drops, if authorized, shall be made entirely of ABS Schedule 40 pipe or PVC Schedule 40 pipe, details shall be furnished by
- 2.A PROPER INVERT SHALL BE BUILT IN ALL CASES WHERE A SIDE SEWER ENTERS A MANHOLE.
- 3.IF THE DISTRICT HAS DETERMINED THERE ARE REPAIRS THAT ARE REQUIRED TO BE MADE TO THE SIDE SEWER, A FULL REPLACEMENT OF THE SIDE SEWER IS NEEDED OR IF THE PROPERTY CHANGES OWNERSHIP, THE CONNECTION TO THE MANHOLE MUST BE REMOVED AND BE PROPERLY CONNECTED TO A SEWER MAIN.
- C. CROSSING CESSPOOLS AND CONNECTIONS TO CESSPOOLS

THE DISTRICT REPRESENTATIVE IN EACH CASE.

WHERE A SIDE SEWER CROSSES A CESSPOOL, THE CESSPOOL SHALL BE CLEANED AND FILLED WITH EARTH AND TAMPED. CROSSING A CESSPOOL SHALL BE DONE EITHER WITH A 4" (INCH) ABS SCHEDULE 40 SOLID PIPE IN SUCH A MANNER THAT THERE ARE NO JOINTS BETWEEN THE WALLS OF THE CESSPOOL. WHERE A CESSPOOL IS BYPASSED, CARE SHALL BE TAKEN TO AVOID FUTURE SETTLEMENT OF THE GROUND AROUND THE CESSPOOL AND THE PIPE TO THE CESSPOOL SHALL BE SEALED WITH CONCRETE.

### D. BASE AND BACKFILLING

A MINIMUM SOLID BASE MATERIAL SHALL BE REQUIRED UNDER ALL SERVICE CONNECTION PIPE. BASE MATERIAL SHALL BE HAND GRADED TO PROPER GRADE AHEAD OF PIPE LAYING. BASE MATERIAL SHALL PROVIDE A FIRM, UNYIELDING SUPPORT ALONG THE ENTIRE PIPE LENGTH. THE PIPE ZONE SHALL BE CONSIDERED TO EXTEND FROM THE TOP OF THE PIPE BASE TO 8" ABOVE THE TOP OF THE PIPE AND FOR THE FULL WIDTH OF THE TRENCH. THE PIPE ZONE SHALL BE BACKFILLED WITH IMPORTED PIPE ZONE MATERIAL, HAND-PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE PIPE FOR A FULL TRENCH WIDTH AND HAND-TAMPED with approved tamping sticks supplemented by "walking in" and slicing with a shovel. The District requires pipe bedding above State minimum PLUMBING CODE DUE TO THE HIGH GROUND WATER TABLE WITHIN THE DISTRICT'S SERVICE AREA. NATIVE SOIL AND SAND ARE NOT ACCEPTABLE BEDDING MATERIAL. PIPE BEDDING IS TO BE A CRUSHED AGGREGATE WITH MINIMAL FINES CAPABLE OF BRIDGING SOFT OR WET SOIL TO CREATE AND MAINTAIN A BASE FOR THE SIDE SEWERS.

IN UNTRAVELED AREAS ON PRIVATE PROPERTY AND PUBLIC AREAS, SUCH AS PARKS, THE TRENCH SHALL BE BACKFILLED ABOVE THE PIPE ZONE WITH EXCAVATED TRENCH MATERIALS. THE TRENCH SHALL BE LEFT WITH THE BACKFILL MATERIAL NEATLY MOUNDED NOT MORE THAN 6" (INCHES) ABOVE THE EXISTING GROUND FOR THE ENTIRE WIDTH OF THE TRENCH.

IN LAWN OR GARDEN AREAS, THE TRENCH SHALL BE BACKFILLED AND THE BACKFILL SHALL BE MAINTAINED AT A LEVEL WITH THE EXISTING ADJACENT GRADE. IN ALL OTHER LOCATIONS, THE AMOUNT OF BACKFILL MATERIAL SHALL

BE ESTIMATED AND PROVIDED AS REQUIRED SO, AFTER NORMAL SETTLEMENT, THE FINISHED SURFACE SHALL MEET THE EXISTING GRADE. THE MATERIAL OVER THE TRENCH SHALL BE NEATLY WIND-ROWED AND ALL EXCESS SHALL BE REMOVED. ANY EXCESS OR DEFICIENCY OF BACKFILL MATERIAL WHICH BECOMES APPARENT AFTER SETTLEMENT AND WITHIN THE WARRANTY PERIOD SHALL BE CORRECTED BY RE-GRADING, DISPOSAL OF EXCESS MATERIAL, AND ADDING ADDITIONAL MATERIAL WHERE REQUIRED. IN PUBLIC STREETS, BACKFILL AND SURFACING SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS OF THE GOVERNMENTAL AGENCY WITH AUTHORITY FROM THE RIGHT-OF-WAY OF THE LINE OR SEWER MAIN.

NO CATCH BASIN, ROOF DRAIN, SURFACE DRAIN, FOUNDATION DRAIN, OR SUMP PUMP MAY BE CONNECTED TO OR ALLOWED TO DRAIN INTO A SIDE, PRIVATE OR PUBLIC SEWER OR CLEAN-OUT. IF AN EXISTING SEWER SERVICE IS DISCOVERED TO HAVE SUCH A CONNECTION OR DRAIN, SUCH CONNECTION OR DRAIN MUST BE IMMEDIATELY REMOVED AND DISCONTINUED.

### F. DEPTH OF SIDER SEWERS

ALL SIDE SEWERS SHALL HAVE AT LEAST 2 (TWO) FEET OF COVER IN ALL PUBLIC WAYS OR OTHER LOCATIONS WHERE THE WEIGHT OF VEHICULAR TRAFFIC MIGHT CRUSH THE PIPE, AND NOT LESS THAN  $1^{-1}/2$  (ONE AND A HALF) FEET OF COVER IN ALL OTHER AREAS. ANY DEVIATION FROM THE ABOVE STATED PARAMETERS MUST BE SPECIFICALLY AUTHORIZED BY A DISTRICT REPRESENTATIVE.

### G. LOCATIONS RELATIVE TO WATER SERVICE PIPES AND MAINS

Under normal conditions, a horizontal separation of at least 10' (ten feet) shall be maintained between water lines and any sanitary sewer, STORM SEWER OR SEWER MANHOLE. WHEN A TEN-FOOT HORIZONTAL SEPARATION CANNOT BE PROVIDED, TWO CONDITIONS SHALL BE MET: 1. The water line and sewer line shall be at least 6' (six feet) apart.

- 2.The water line shall be at least 18" (eighteen inches) above the sanitary sewer or storm sewer. If the water line is not at least 18" (EIGHTEEN INCHES) ABOVE THE SEWER, A VERTICAL SEPARATION, THE SEWER SHALL BE CONSTRUCTED OR RE-CONSTRUCTED WITH PIPE THAT CONFORMS TO WATER MAIN STANDARDS FOR A DISTANCE OF AT LEAST 10' (TEN FEET) HORIZONTALLY ON BOTH SIDES OF THE WATER MAIN. THE WATER PIPE SHALL BE CENTERED AT THE CROSSING SO THAT JOINTS SHALL BE AN EQUAL DISTANCE AND AS FAR AS POSSIBLE FROM THE SEWER. IF THE WATER MAIN IS LOCATED BELOW THE SEWER, IT SHALL BE AT LEAST 18" (EIGHTEEN INCHES) BELOW THE SEWER AND THE SEWER SHALL BE SUPPORTED TO PREVENT EXCESSIVE DEFLECTION AND SETTLING ON OR BREAKING OF THE WATER MAIN. IN LIEU OF CONSTRUCTING OR RE-CONSTRUCTING THE SEWER WITH PIPE WHICH CONFORMS TO WATER MAIN STANDARDS, THE WATER LINE OR SEWER LINE OR BOTH SHALL BE ENCASED IN 4" (FOUR INCHES) OF CONCRETE MEASURED AT THE BELL.
- H. PERMITS-INSPECTION FORMS-SEWER CONNECTION PERMITS

PERMITS SHALL BE ISSUED BY THE DISTRICT OFFICE WHEN THE DISTRICT AGREES THAT SUCH ISSUANCE IS APPROPRIATE. BEFORE ANY PERMIT SHALL BE ISSUED, ALL APPLICABLE FEES SHALL BE PAID, APPLICATIONS FOR SERVICE COMPLETED, SITE PLANS MAY BE REQUIRED AND, IN SOME CASES, PRIOR APPROVAL OF THE BOARD OF DIRECTORS MAY BE REQUIRED. PERMITS ARE REQUIRED FOR ANY SIDE SEWER CONNECTIONS TO STUB-OUTS OR MAIN LINES; ANY REPAIRS OR REPLACEMENTS OF EXISTING SIDE SEWERS SHALL ALSO REQUIRE A DISTRICT PERMIT TO BE OBTAINED.

## I. INSPECTIONS

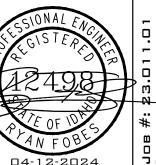
- 1.A District representative shall make all inspections for new and/or repairs to current connections, authorize connections (to a STUB-OUT OR DISTRICT SEWER) AND SPECIFY SPECIAL REQUIREMENTS. CALLS FOR INSPECTIONS AND MATTERS PERTAINING TO METHODS OF CONSTRUCTION SHALL BE MADE TO THE DISTRICT COLLECTIONS REPRESENTATIVE AT 208-263-0229. CALLS FOR INSPECTION OF LATERAL STUB-OUTS SHALL BE MADE AT LEAST 24 HOURS IN ADVANCE. LATERAL STUB-OUTS SHALL BE INSPECTED VIA A LATERAL INSPECTION CAMERA PRIOR TO CONNECTING TO VERIFY THE ADEQUACY OF THE STUB-OUT. ANY NECESSARY REPAIRS TO THE STUB-OUT SHALL BE COMPLETED NO LATER THAN AT TIME OF CONNECTION. THE DISTRICT COLLECTIONS REPRESENTATIVE SHALL NOTIFY THE CONTRACTOR/PROPERTY OWNER OF ANY SPECIFIC REQUIREMENTS PRIOR TO CONNECTION AND ENSURE SUCH REQUIREMENTS ARE MET. NO PERSON SHALL OPEN OR EXPOSE ANY PART OF A DISTRICT OWNED SEWER OR STUB-OUT WITHOUT AUTHORIZATION FROM A DISTRICT COLLECTIONS REPRESENTATIVE AND SUCH PERSONS SHALL PROVIDE PROPER ADVANCE NOTICE TO THE DISTRICT COLLECTIONS REPRESENTATIVE. INSPECTIONS BY THE DISTRICT MAY BE MADE ON ANY WEEKDAY EXCEPTING WHEN A HOLIDAY MAY FALL ON A WEEKDAY. SIDE SEWER INSPECTIONS SHALL BE REFUSED WHERE ANY REQUIRED SEWER PERMIT IS NOT IN ORDER.
- 2.Side sewers that have been inspected by a District Collections representative and which have been determined to not meet the REQUIREMENTS AS SET FORTH IN THE RULES AND REGULATIONS OF THE DISTRICT, SUCH CONNECTIONS SHALL BE DEEMED UNACCEPTABLE. THE DISTRICT COLLECTIONS REPRESENTATIVE SHALL COMMUNICATE IN WRITING TO THE CONTRACTOR/PROPERTY OWNER REGARDING THE REQUIRED STEPS NEEDED TO REMEDY THE ITEMS WHICH DO NOT MEET THE REQUIREMENTS OF THE DISTRICT. SUCH REQUIREMENTS MUST BE MET WITHIN 72 HOURS OF NOTIFICATION BY THE DISTRICT. IF DISTRICT REQUIREMENTS ARE NOT MET WITHIN THE 72 HOURS, WHICH TIME IS CALCULATED IN RELATION TO BUSINESS OR WORKING DAYS, THE DISTRICT WILL CAP THE SIDE SEWER NEAR THE CONNECTION. THE CONNECTION SHALL NOT BE UNCAPPED UNTIL ALL REQUIREMENTS OF THE DISTRICT HAVE BEEN MET TO THE SATISFACTION OF THE DISTRICT COLLECTIONS REPRESENTATIVE AND AUTHORIZATION HAS BEEN GIVEN BY THE BOARD OF DIRECTORS OF THE DISTRICT AT THE NEXT REGULARLY SCHEDULED MEETING. SIDE SEWER INSPECTION FAILURES ARE REPAIRED AT THE PROPERTY OWNER'S EXPENSE.
- 3.Grease traps are required to be cleaned and maintained on a regular basis. These are subject to, at minimum, quarterly inspection by a THIRD-PARTY LICENSED PUMPING COMPANY. COPIES OF THE PUMPING REPORTS SHALL BE PROVIDED TO THE DISTRICT OFFICE.

# J. SERVICE CONNECTION CLEANING

CONNECTION, OR REQUEST FOR CONNECTION, TO THE DISTRICT'S WASTEWATER SYSTEM SHALL CONSTITUTE A REPRESENTATION THAT ALL OF THE SYSTEM UNDER THE CONTROL AND/OR OWNERSHIP OF THE USER IS PROPERLY VENTED. SUCH CONNECTION, OR REQUEST FOR CONNECTION, SHALL CONSTITUTE AN AUTHORIZATION FOR THE DISTRICT TO CLEAN THE SAME WITH HIGH-POWERED WASHING EQUIPMENT AND A RELEASE WHEREBY THE DISTRICT SHALL NOT BE LIABLE TO THE USER FOR ANY DAMAGE CAUSED BY SUCH CLEANING. A DISTRICT REPRESENTATIVE MAY REQUIRE A SIDE SEWER OR BUILDING SEWER LATERAL TO BE CLEANED WITH HIGH-PRESSURE JETTING EQUIPMENT AT THE OWNER'S EXPENSE. NEW OWNERS OF EXISTING SEWER SERVICE CONNECTIONS ARE SUBJECT TO SUCH REPRESENTATION, AUTHORIZATION AND RELEASE AS STATED FOR CONNECTION AND REQUEST FOR CONNECTION TO THE DISTRICT'S WASTEWATER SYSTEM.

> LOCATES (2 WORKING DAYS NOTICE REQUIRED PRIOR TO EXCAVATION) 811



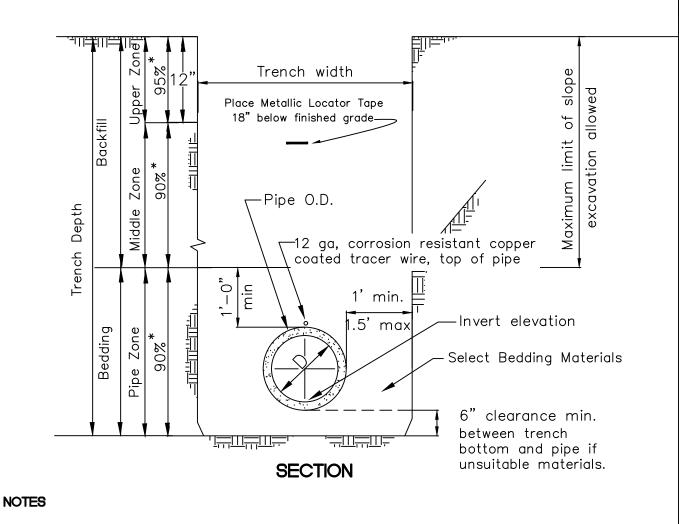






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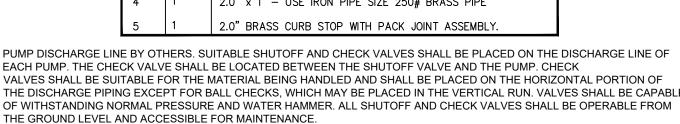




- 1. For trenching in improved streets, see Standard Drawing for trench resurfacing.
- 2. (\*) indicates minimum relative compaction using modified proctor (ASTM D-1557).
- 3. Minimum depth of cover from the top of pipe to finished grade shall be 4'6". 4. Bedding Material shall be Sand, Gravel, Crushed Aggregate, or Native material which shall be approved by the Water Dept. prior to using. Bedding shall be placed at least 6" below the pipe if the native materials are unsuitable to a minimum depth of 12" above the pipe unless the backfill is judged to be excessively course. Then the Water Dept. may require 24" or more of select bedding materials over the main.
- 5. Backfill with rocks in excess of 5" diameter or sharp jagged rock shall <u>not</u> be allowed in the trench at any time from bottom of trench to finished grade. <u>Only select</u> <u>material shall be used.</u>
- 6. Bedding material shall be distributed to an even grade across the width of the Compaction shall be accomplished by approved methods in maximum 12" lifts above
- the compacted bedding materials.

PIPE BEDDING & BACKFILL

### APPROVED TAPPING METHOD TOP VIEW - EASEMENT LINE 1. ROMAC DOUBLE STAINLESS —2.5'—<del>-</del>| STEEL STRAP SADDLE 2. CORP W/ PACK -JOINT 3. ADASTER POLY PIPE, CLASS 250 CAST IRON - CURB STOP 8. INSE<del>RT</del> SEWER — PRESSURE MAIN TO HAVE 4 MINIMUM COVER TO FINISHED GRADE. SERVICE TO PRESSURE TESTED TO ANGLE STOP. SIDE VIEW 12 GA.COPPER POLY PIPE, CLASS TRACER WIRE 1 EA. SOLIĎ CONCRETE BLOCK 2. CORP W/ PACK JOINT ADAPTER SIDE ELEVATION OR APPROVED EQUIVALENT. 1 ROMAC DOL APPROVED TAPPING METHOD: TRAP SADD 1. ROMAC DOUBLE STAINLESS STEEL STEEL SADDLE TAP. TORQUE PER MANUFACTURERS RECOMMENDATIONS NOTE: CURB STOP BOX SETTINGS PRESSURE MAIN A. 4" ABS RISER W/ PLUG. PROTECTED WITH A BROOKS TRAFFIC RATED BOX. TRACER WIRE RAN OUTSIDE OF RISER W/ ACCESS INSIDE BROOKS BOX. B. LID SHALL BE AT FINISHED GRADE. C. LID SHALL HAVE "SEWER" IMPRINTED ON LID. DESCRIPTION CAST IRON CURB STOP BOX O" BRASS PACK JOINT ASSEMBLY 2.0" x REQD. LENGTH -- USE IRON PIPE SIZE POLYETHYLENE 2.0" x 1' - UŚE IRON PIPE SIZE 250# BRASS PIPE



# FINISH GRADE-24" <sup>I</sup>MIN. BELOW FINĮSH GRADE -THREE 6" DIA. COILS. SET 24" BELOW FINISH GRADE. 2" X 4" MARKER. MARK— -12- GAUGE GALVANIZED LOCATING WIRE INCREMENTAL 1-FOOT MEASUREMENTS FROM BOTTOM OF 2" X 4" TIMBER AND PAINT "WASTEWATER GREEN". —3M LOCATING BALL (SEWER) STAPLE WIRE TO BOTTOM OF 2" X 4" MARKER. SEWER LATERAL-- SOLID CONCRETE BLOCK OR APPROVED EQUIVALENT. SEWER SERVICE MARKER

STAPLE WIRE TO TOP-

36" MIN. ABOVE FINISH GRADE

OF 2" X 4" MARKER.

NOTES THIS DETAIL:

1. ALL LATERAL MARKERS SHALL BE SET VERTICALLY AGAINST COMPACTED BACKFILL OR

2. ALL LATERAL MARKERS SHALL BE A TREATED TIMBER 2" X 4" X 8'. DEEPER LATERALS REQUIRE

LONGER 2" X 4" TIMBERS. MULTIPLE 2" X 4"

3. ALL LATERAL MARKERS SHALL BE PAINTED WITH

LOCATOR "WASTEWATER GREEN" PAINT THE

4. LOCATING WIRE SHALL BE CONTINUOUS ENTIRE

LENGTH OF 2" X 4" TIMBER. SPLICE AT BREAKS.

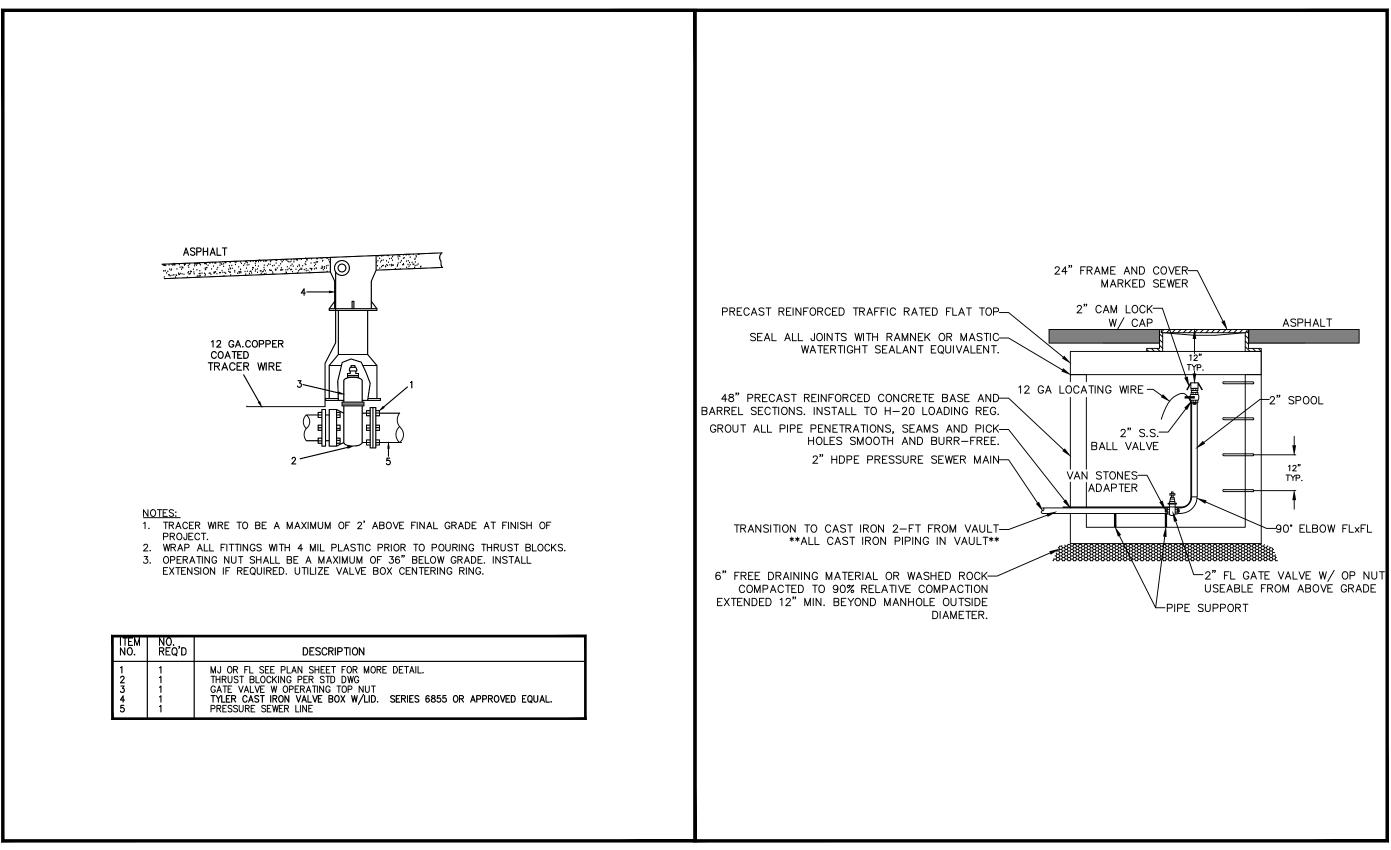
ENTIRE LENGTH OF THE 2" X 4" TIMBER.

UNDISTURBED NATIVE GROUND MATERIAL.

TIMBERS FASTENED TOGETHER ARE NOT

ACCEPTABLE.

# 2.0" PRESSURE SERVICE ASSEMBLY



VALVE BOX DETAIL N.T.S.

PRESSURE SEWER CLEANOUT

LOCATES (2 WORKING DAYS NOTICE REQUIRED PRIOR TO EXCAVATION) 81

