

HARRIMAN UTILITY BOARD

Roane County, Tennessee

GRACE SUBDIVISION

PINE RIDGE ROAD/STATE ROUTE 29A

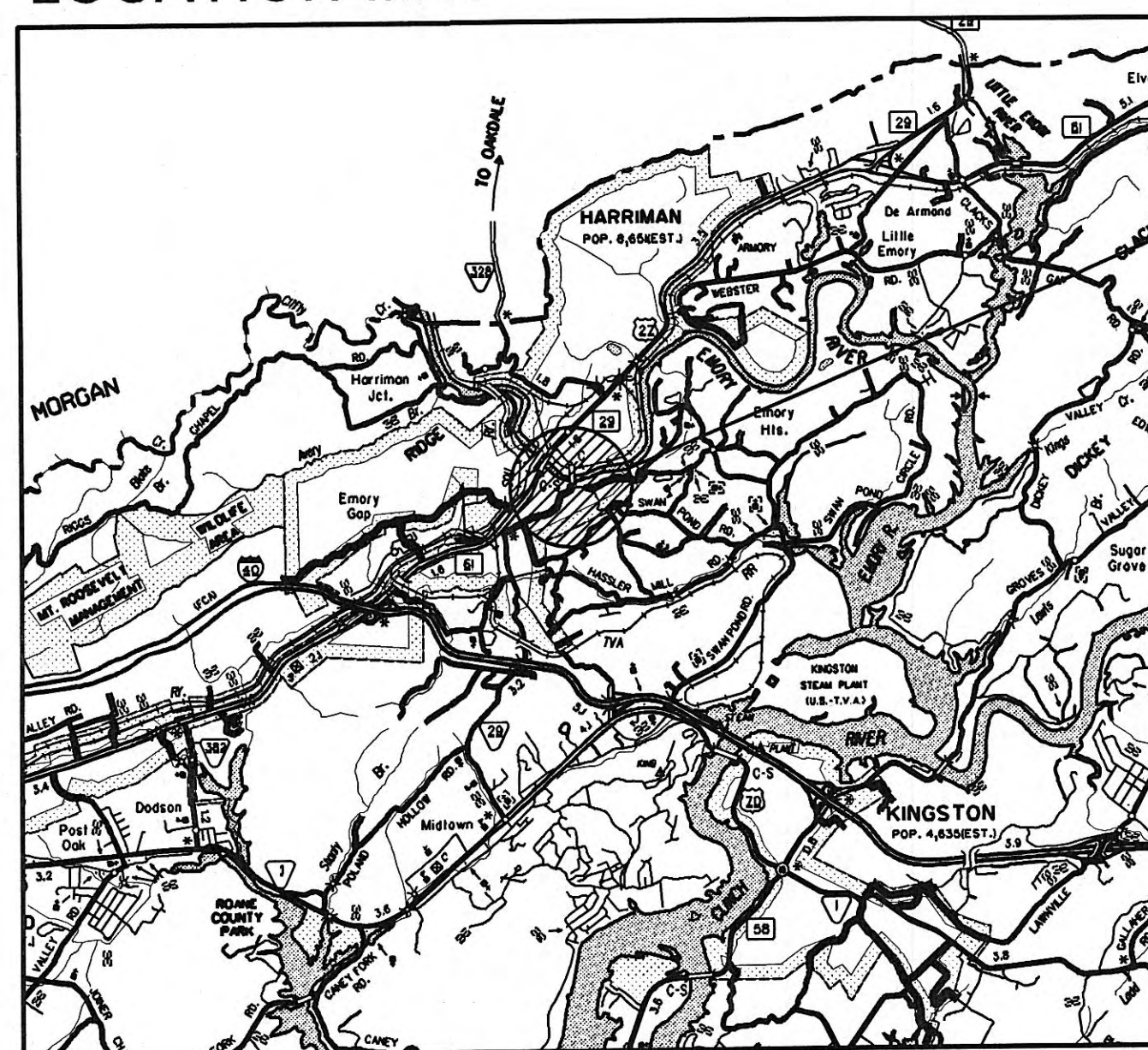
SEWER LINE ADDITIONS

2008

Project Engineer



LOCATION MAP



PROJECT LOCATION

SHEET INDEX	
SEWER LINE ADDITIONS - PINE RIDGE RD -	1
STA. 0+92.11 TO STA. 2+32.11	
STANDARD SEWER DETAILS -	2
STANDARD SEWER DETAILS -	3

HARRIMAN UTILITY BOARD APPROVED
CONTRACTOR: CK CONSTRUCTION

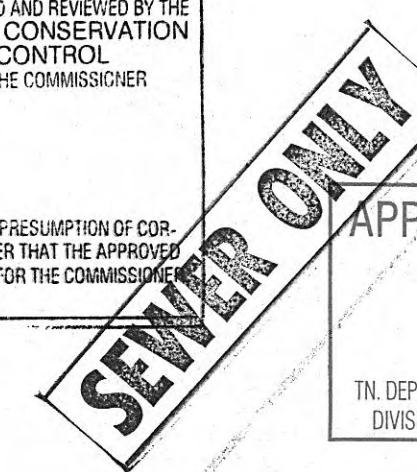
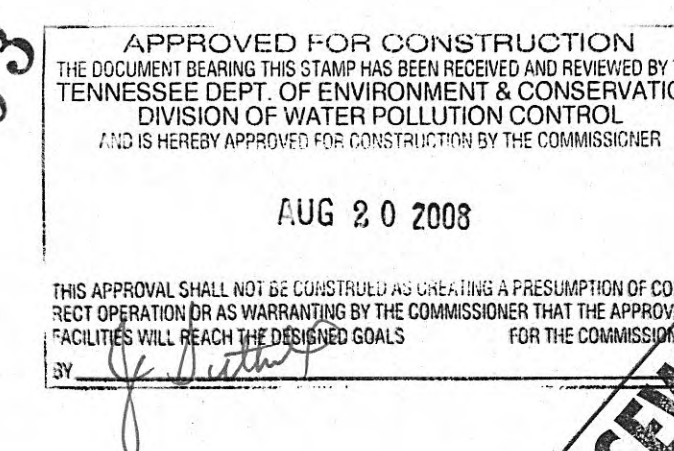
PLANS REVIEWED AND APPROVED BY HARRIMAN UTILITY BOARD

Frankie Davis

08-06-08
DATE

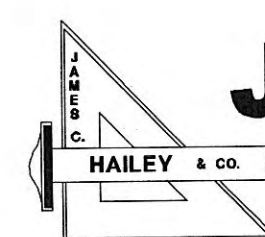
Return to Engineering
Flat File Drawer 3

WPC08-0763



APPROVAL EXPIRES
AUG 20 2009
TN. DEPT. OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER POLLUTION CONTROL

SET NUMBER



JAMES C. HAILEY & CO.

PHONE: 615-883-4933

2622 OLD LEBANON ROAD - SUITE 200

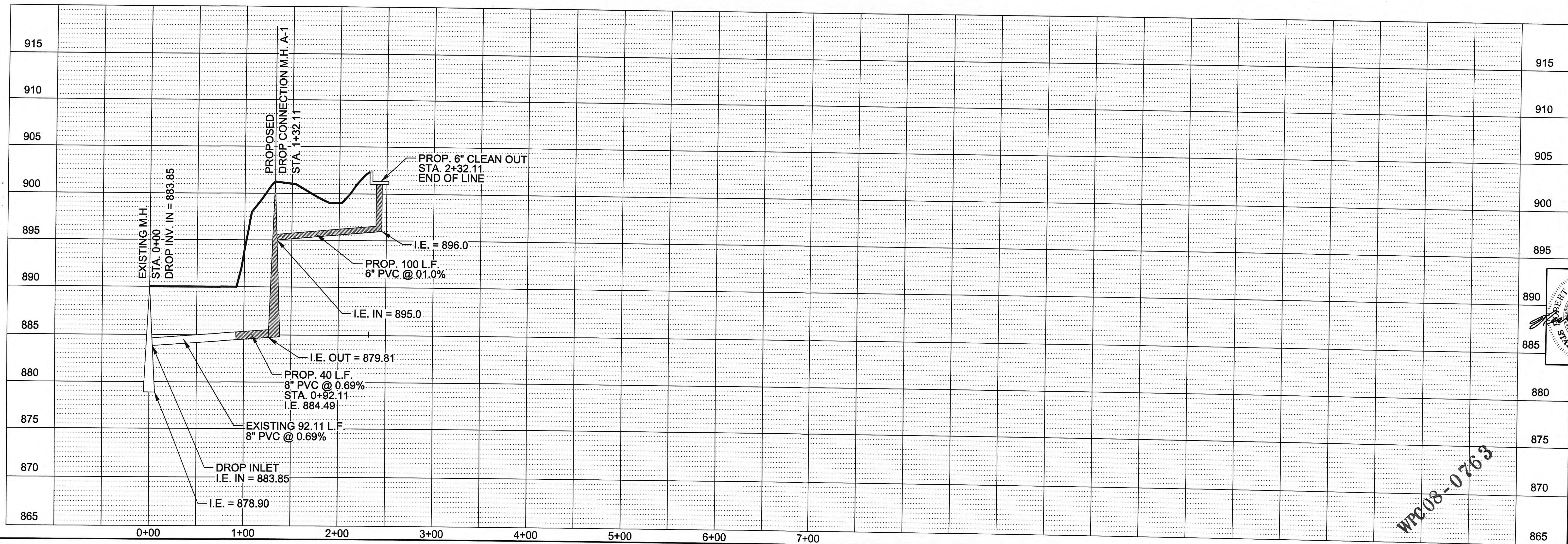
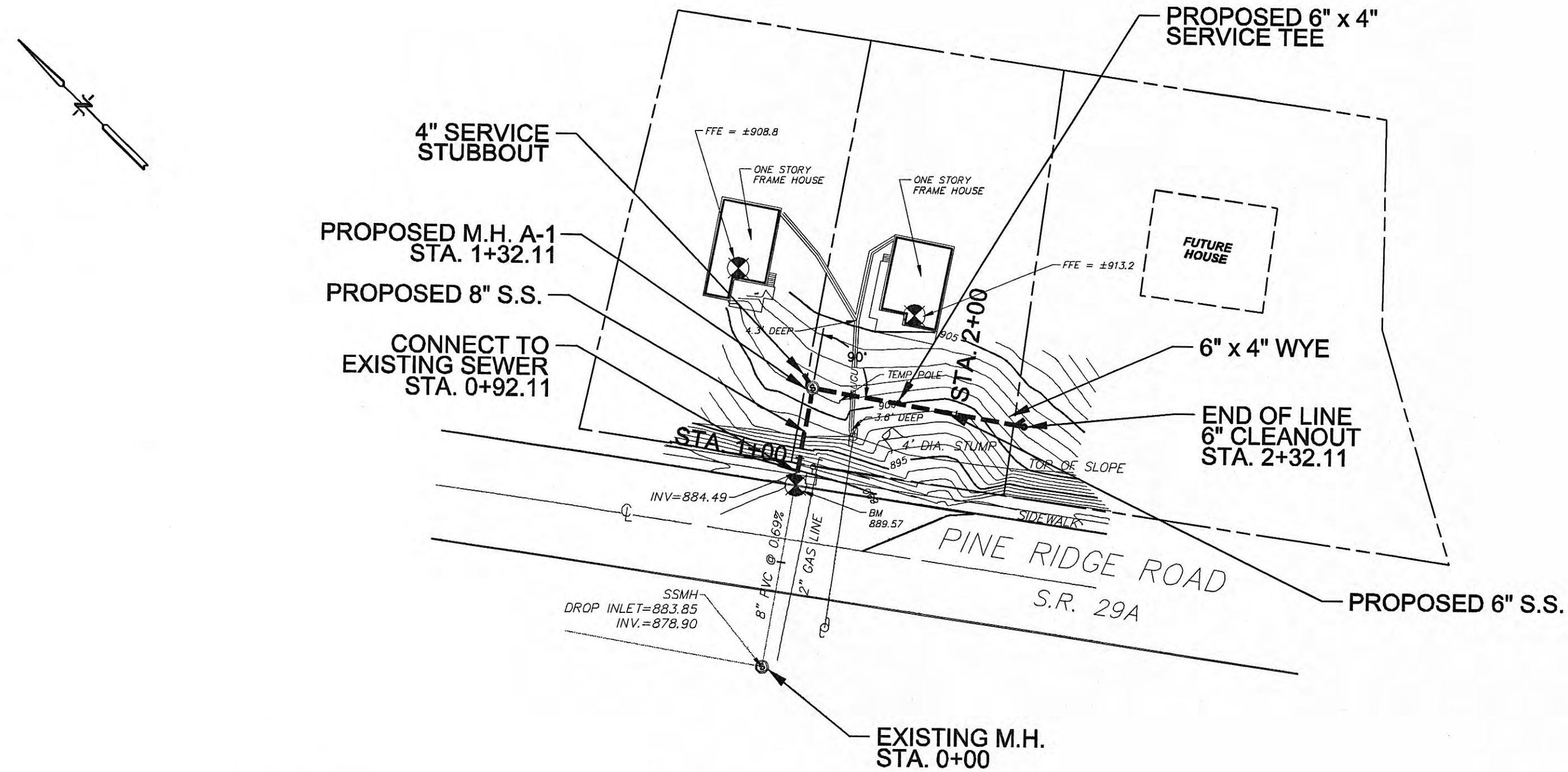
FAX: 615-883-4937

NASHVILLE, TENNESSEE

<http://www.jchengr.com>

JCH PROJECT NO. 08178

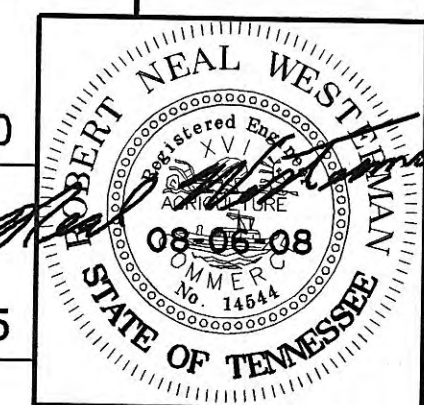
HUTB - GRACE SUBDIVISION - SEWER LINE ADDITIONS



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SEWER LINE ADDITIONS
 PINE RIDGE ROAD
 STA. 0+92.11 - STA. 2+32.11

HARRIMAN
 UTILITY DISTRICT
 Roane County, Tennessee



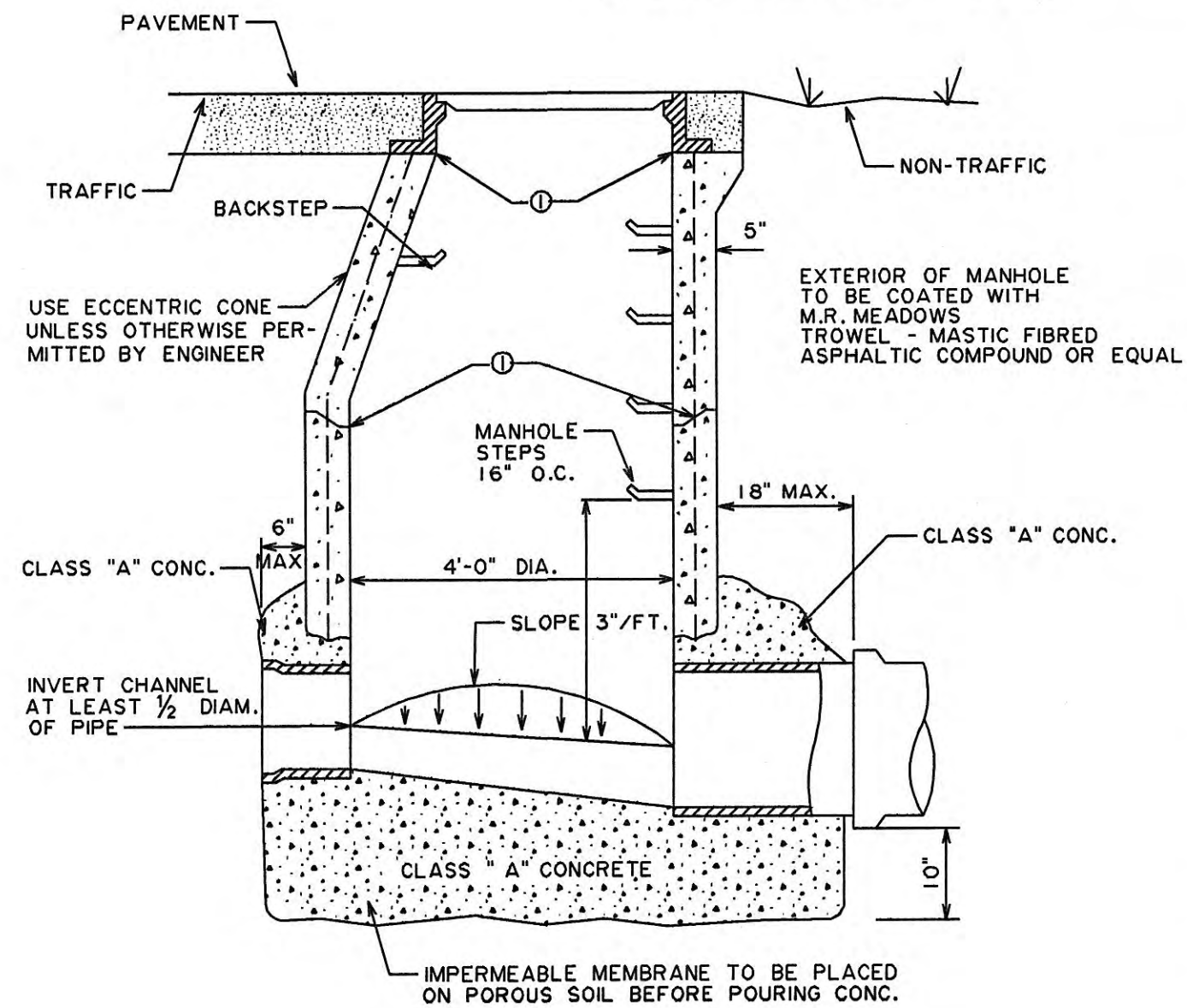
DESIGN	RNW
DRAWN	BKQ
CHECKED	RNW
DATE	AUG. 2008
SCALE	H:1" = 50' V:1" = 5'
PROJECT NO.	08178
SHEET	1

WPC08-0763

STANDARD PRECAST MANHOLE

BUILD MANHOLE TO HEIGHT OF CASTING ELEVATION (C.E.)
INDICATED ON DRAWING OR AS DIRECTED BY RESIDENT INSPECTOR.

① - BUTYL RESIN CONSEAL - 102 & 202



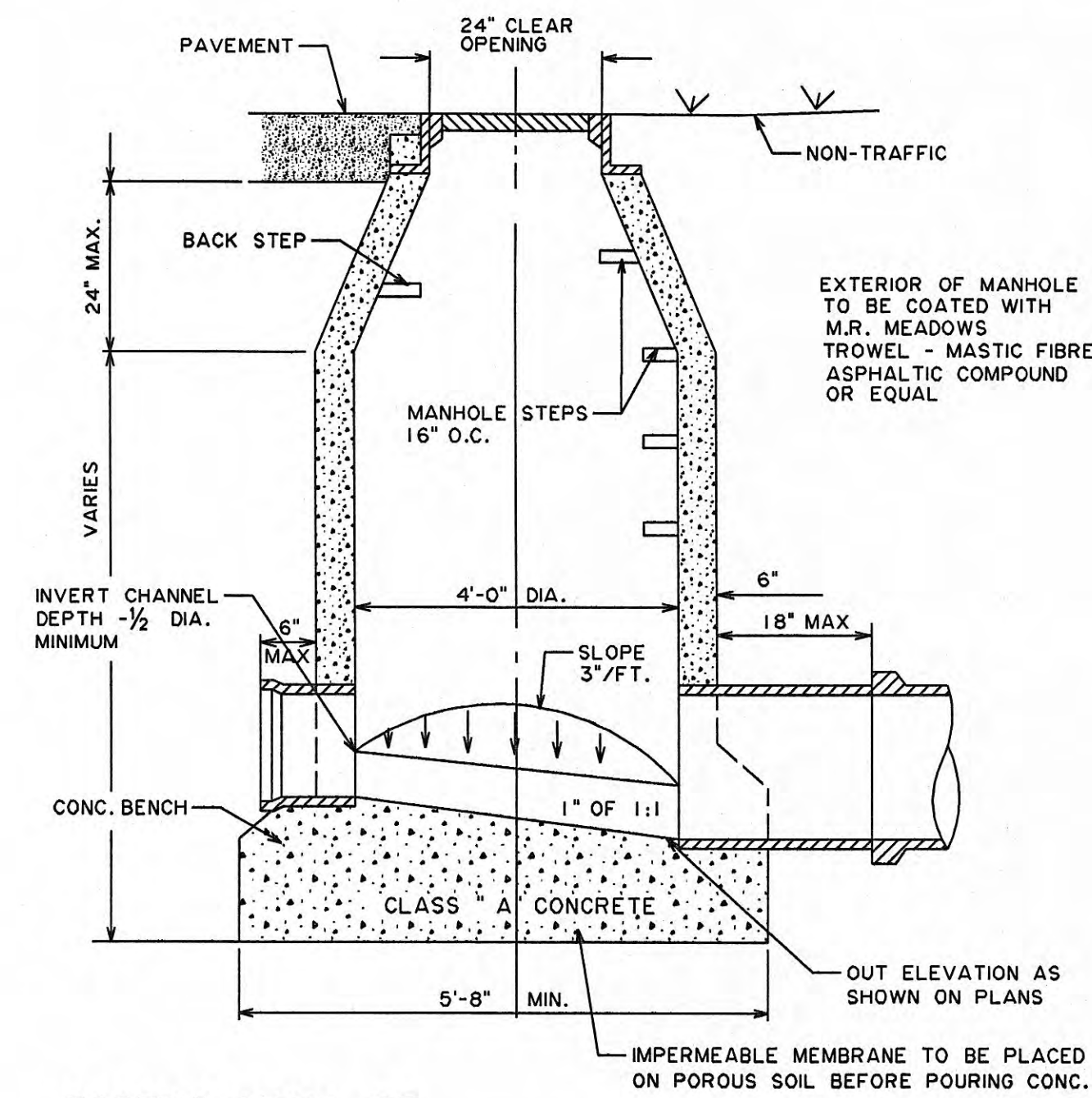
CASTING SHALL BE:

TRAFFIC - JOHN BOUCHARD & SONS, CO. NO. 1150 OR EQUAL
FIELD - JOHN BOUCHARD & SONS, CO. NO. 1155 OR EQUAL
WATER TIGHT - JOHN BOUCHARD & SONS, CO. NO. 1123 OR EQUAL

AS DIRECTED BY THE ENGINEER OR SHOWN ON THE DRAWINGS.

STANDARD "CAST-IN-PLACE" CONCRETE MANHOLE

BUILD MANHOLE TO HEIGHT OF CASTING ELEVATION (C.E.)
INDICATED ON DRAWING OR AS DIRECTED BY RESIDENT INSPECTOR



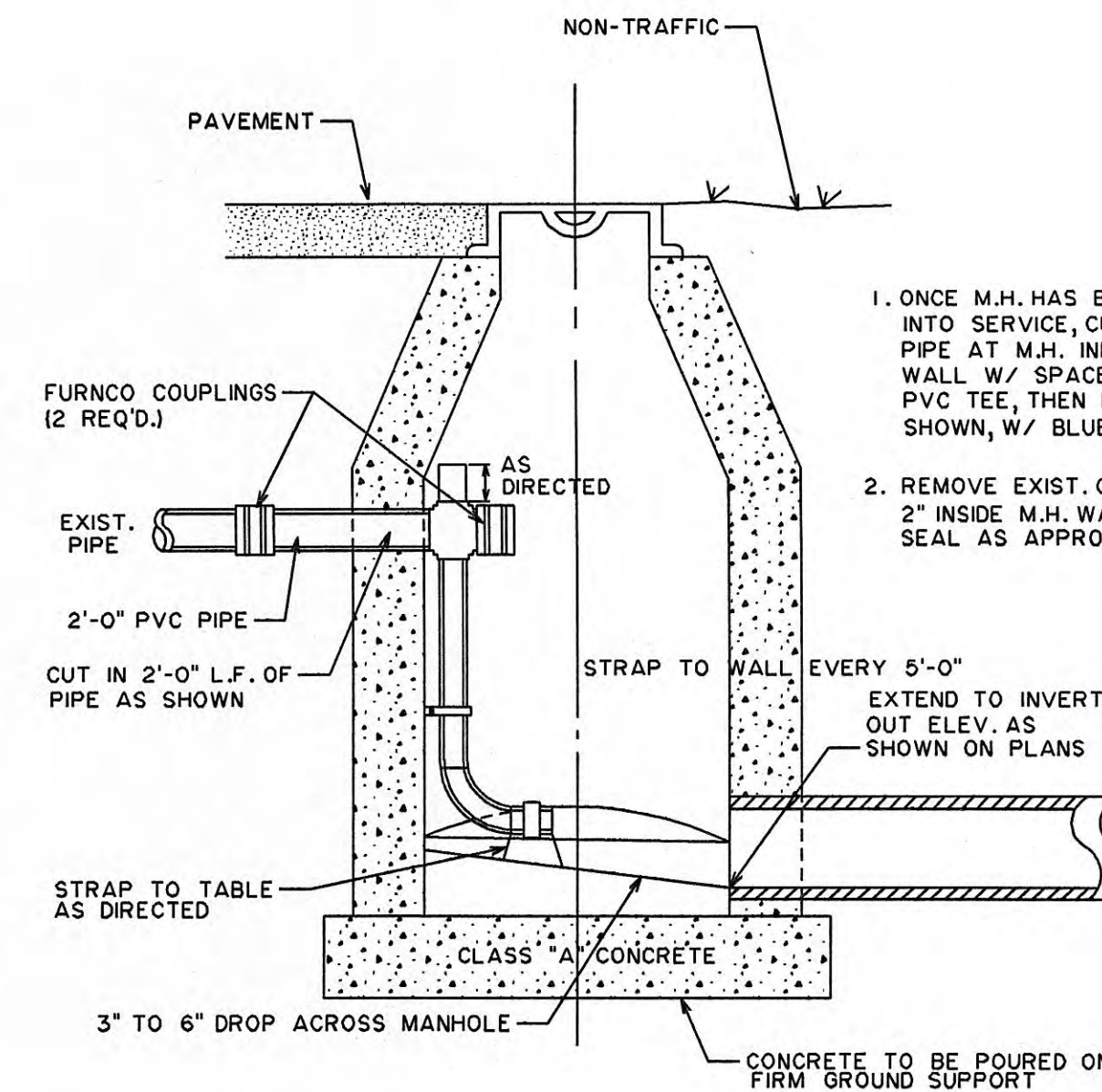
CASTING SHALL BE:

TRAFFIC - JOHN BOUCHARD & SONS, CO. NO. 1150 OR EQUAL
FIELD - JOHN BOUCHARD & SONS, CO. NO. 1155 OR EQUAL
WATER TIGHT - JOHN BOUCHARD & SONS, CO. NO. 1123 OR EQUAL

AS DIRECTED BY ENGINEER OR SHOWN ON THE DRAWINGS

METHOD "C" DETAIL DROP MANHOLE CONSTRUCTION

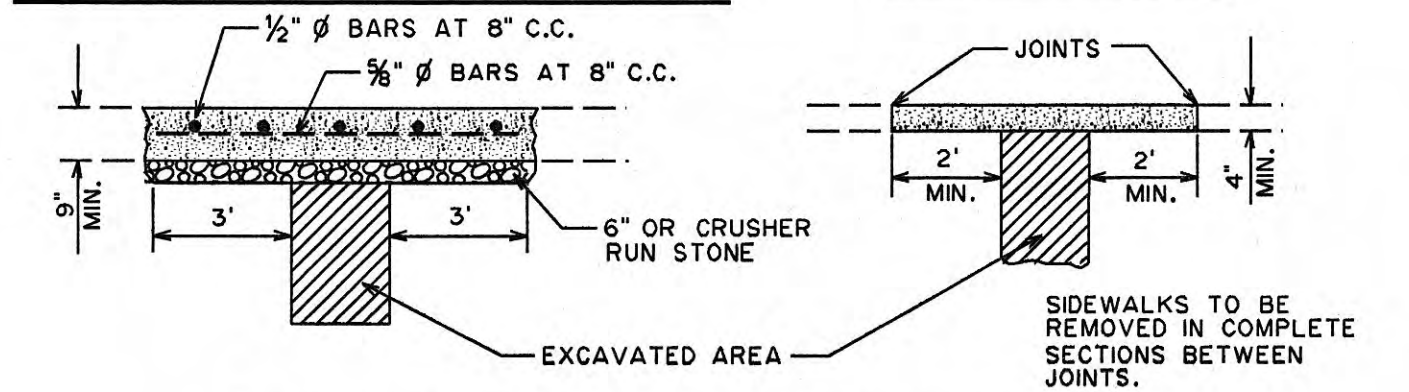
MAINTAINING EXISTING SERVICE IN
6" SEWER AND ABOVE



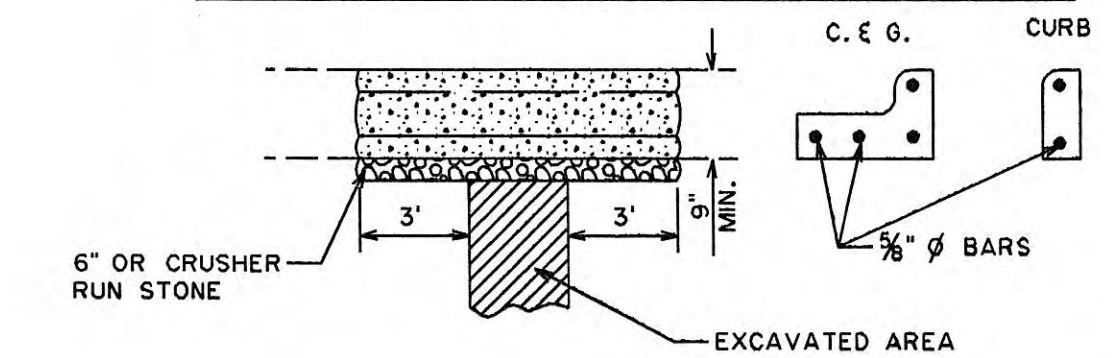
1. ONCE M.H. HAS BEEN PLACED INTO SERVICE, CUT BACK PVC PIPE AT M.H. INNER FACE WALL W/ SPACE TO INSTALL PVC TEE, THEN EXTEND AS SHOWN, W/ BLUE ON FITTINGS.
2. REMOVE EXIST. OUT LINE BACK 2" INSIDE M.H. WALL, PLUG & SEAL AS APPROVED.

CONCRETE PAVEMENT

SIDEWALK



CURB OR CURB AND GUTTER

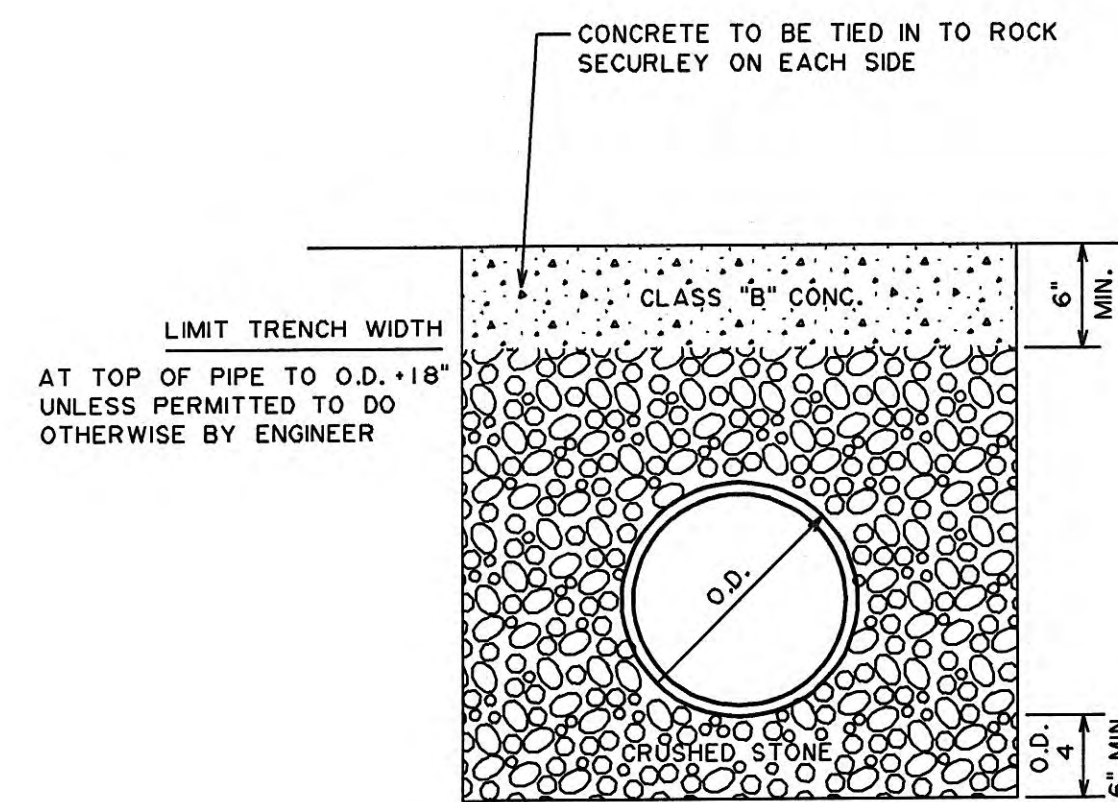


NOTES:

1. PAVEMENT, CURBS OR GUTTERS SHALL BE CUT FIRST AT EDGE OF EXCAVATION. AFTER BACKFILL HAS BEEN MADE AND TAMPED, THE PAVEMENT SHALL AGAIN BE CUT 3" BACK OF EXCAVATION LINE BEFORE REPLACING.
2. CONCRETE BASES, WITH BITUMINOUS SURFACE SHALL BE CUT SAME AS PAVEMENT AND SURFACING MATERIAL REMOVED 1/2 FOOT BACK OF FINAL CUT.
3. EXISTING PAVEMENT, BASES, CURBS, CURB & GUTTERS AND SIDEWALKS SHALL BE CUT AND BROUGHT TO A NEAT LINE BY USE OF AN AIR HAMMER OR OTHER SUITABLE EQUIPMENT.
4. WHEREVER TRENCHES ARE EXCAVATED WITHIN TRAVELED AREAS, PERMANENT REPAIRS TO BE MADE WITHIN FIVE DAYS.
5. BACKFILL FOR TRENCHES WITHIN PAVED AREAS SHALL BE PLACED IN 6" LAYERS AND EACH LAYER SHALL BE THOROUGHLY COMPACTED BY MEANS OF MECHANICAL TAMPS.
6. EARTH BACKFILL, EVEN OF A TEMPORARY NATURE, SHALL NOT BE PLACED ABOVE AN ELEVATION 6" BELOW THE BOTTOM OF ANY CONCRETE PAVEMENT, BITUMINOUS PAVEMENT OR CRUSHED STONE OR GRAVEL BASE.
7. EXPANSION JOINTS REMOVED SHALL BE REPLACED.
8. ALL CONCRETE TO BE CLASS "A".

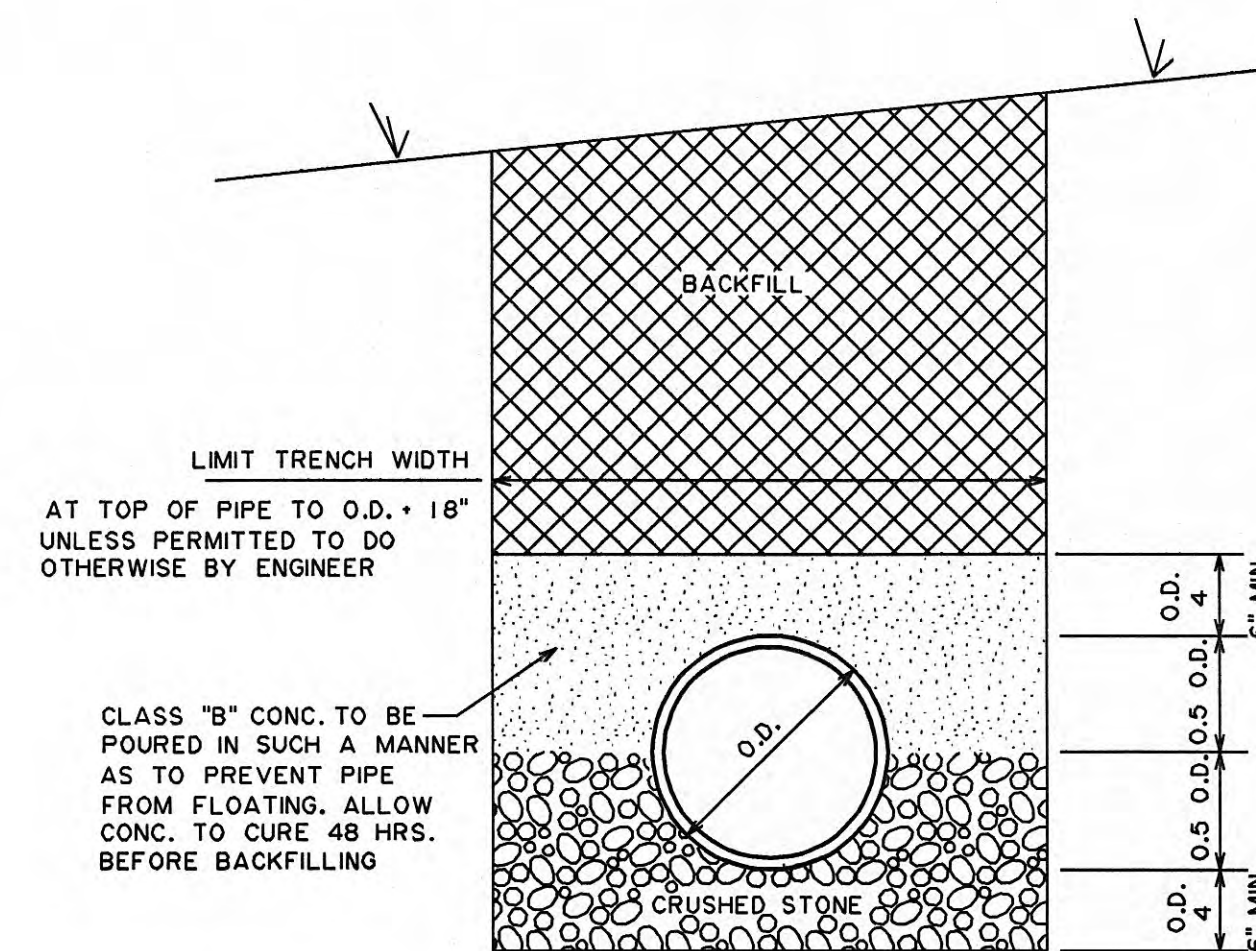
STANDARD METHOD

OPENING TRENCHES THROUGH HIGHWAYS
AND REPLACING PAVEMENT, ETC.
(TENNESSEE HIGHWAY DEPARTMENT STANDARD)



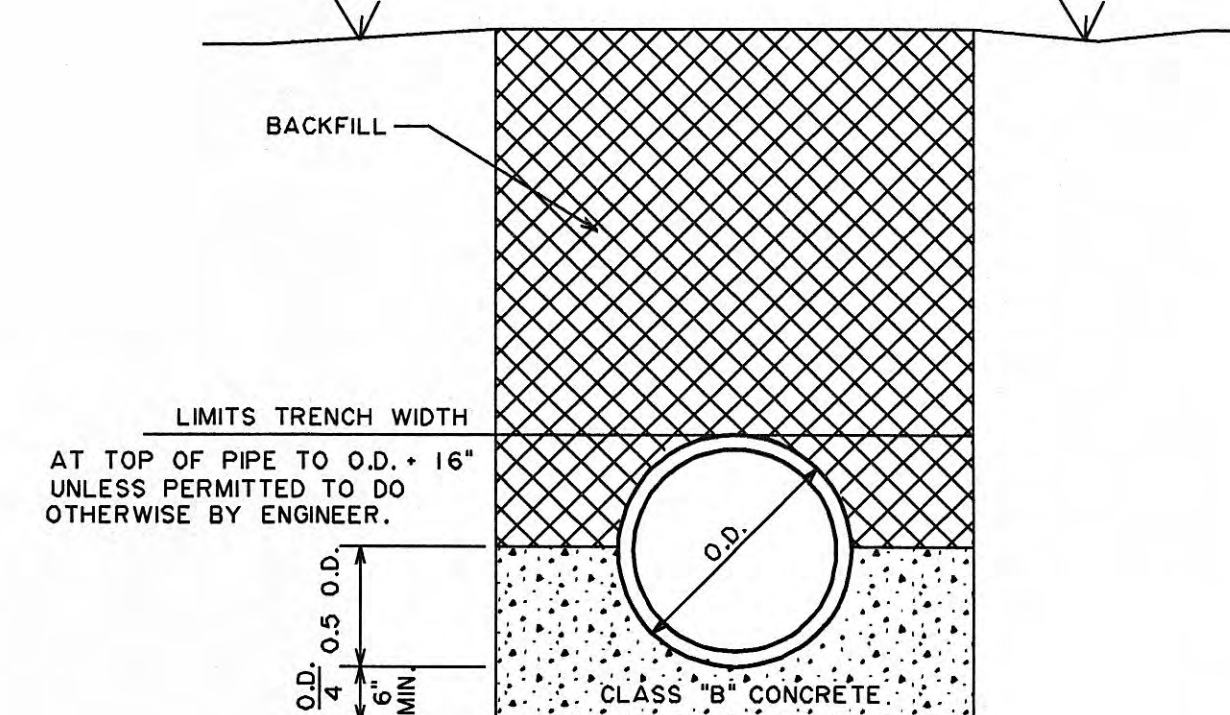
INSTALL CONCRETE CAP WHERE DIRECTED BY ENGINEER OR AS SHOWN IN PLANS GENERALLY, CAP SHALL BE IN CREEKS TO RESTORE CREEK ROCK BOTTOM AND PREVENT PIPE WASHOUT.

CONCRETE CAP



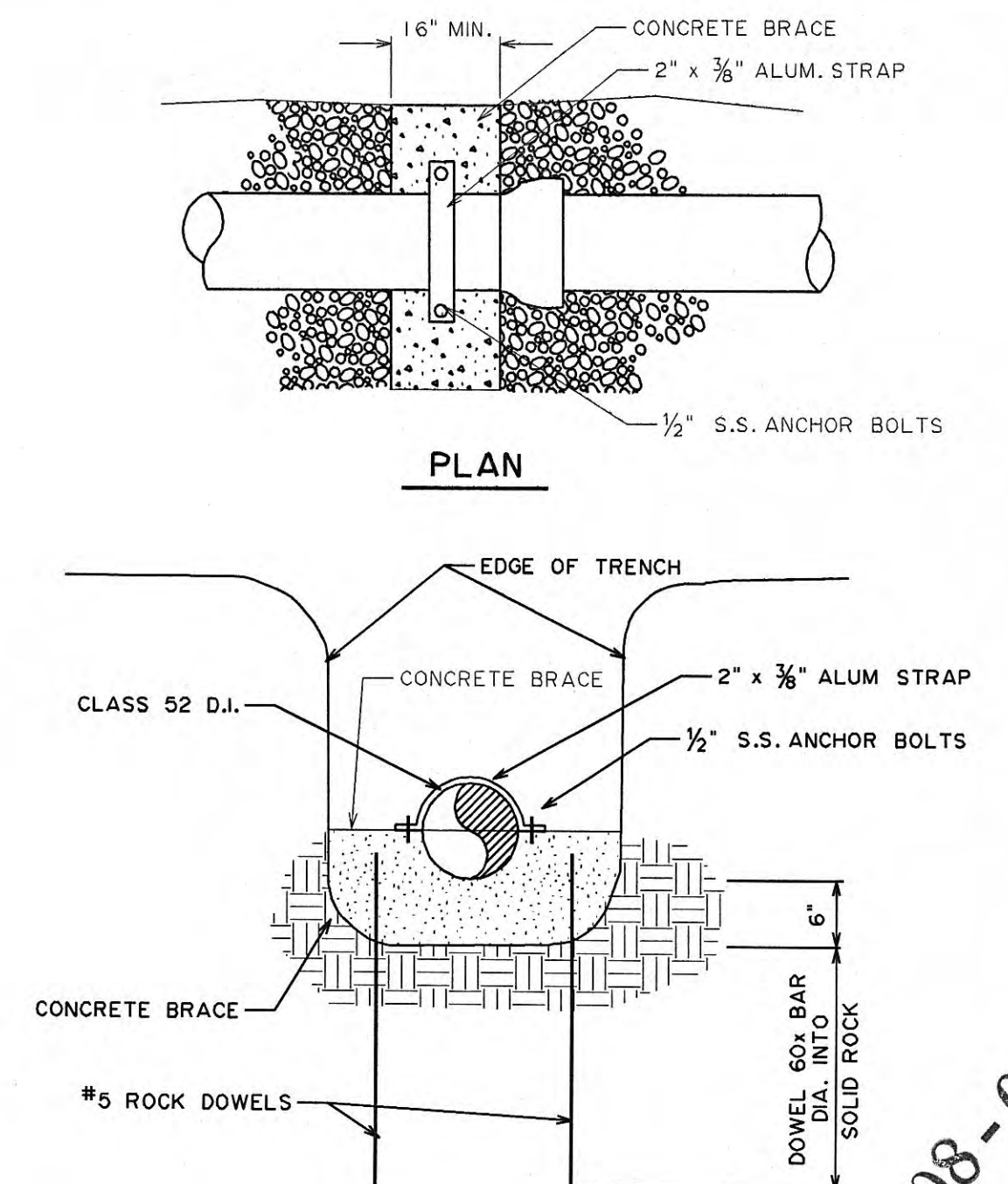
INSTALL ENCASMENT WHERE DIRECTED BY ENGINEER OR AS SHOWN IN PLANS. GENERALLY, CONC. ENCASMENT SHALL BE USED ON ALL BUT CAST IRON SEWERS WHERE DEPTH OF COVER IS LESS THAN 2' IN AREAS NOT SUBJECT TO TRAFFIC AND WHERE DEPTH OF COVER IS LESS THAN 3' IN AREAS SUBJECT TO VEHICULAR TRAFFIC LOADS.

CONCRETE ENCASEMENT

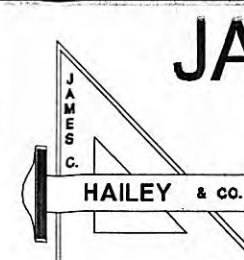


LINES TO BE LAID BEFORE CONCRETE TAKES INITIAL SET AND IN SUCH A MANNER AS TO PREVENT FLOATATION OF THE PIPE. DO NOT PLACE BACKFILL UNTIL CONCRETE HAS BEEN ALLOWED TO CURE FOR 48 HOURS.

CONCRETE CRADLE

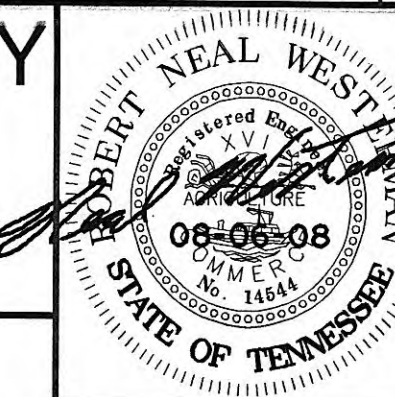


BRACING DETAIL FOR SEWER LINE OVER 20%
SLOPE - TYPICAL FOR ROCK



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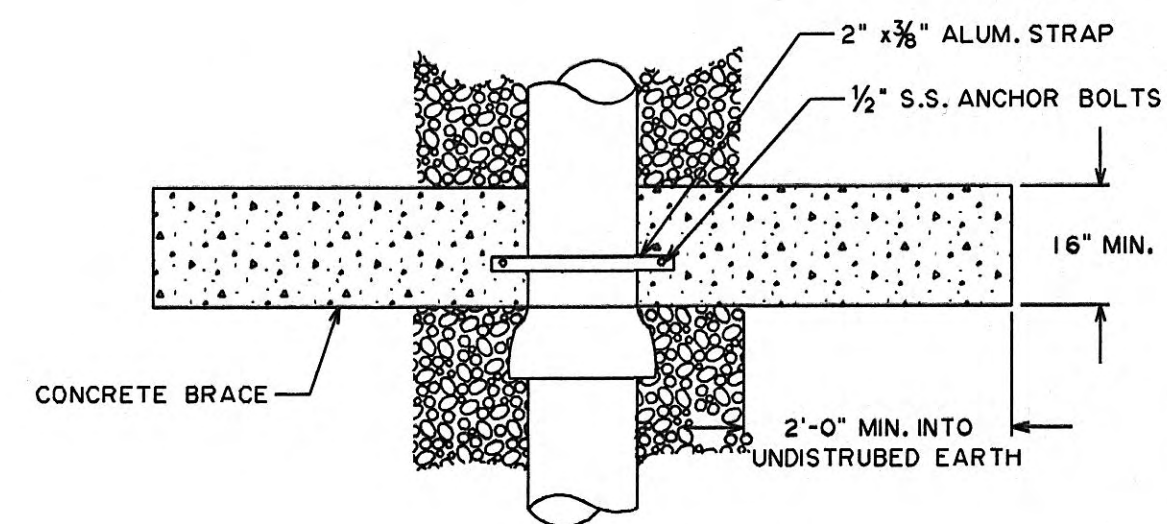
HARRIMAN UTILITY BOARD
Roane County, Tennessee

STANDARD SEWER DETAILS

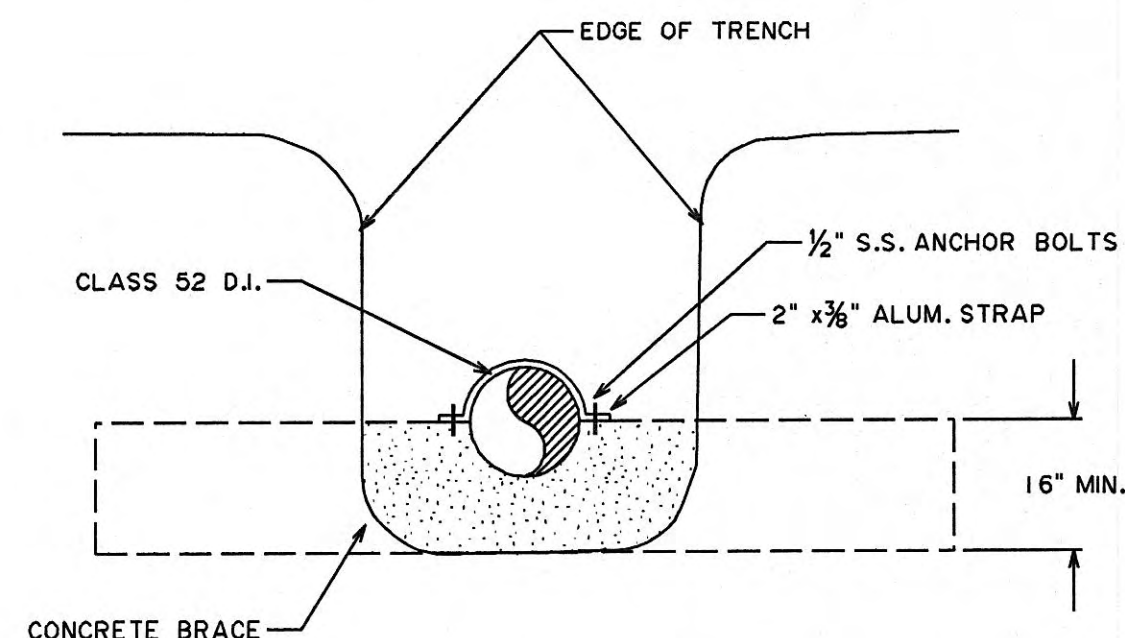
DESIGN RNW	DRAWN BKQ	CHECKED RNW	DATE AUG. 2008	SCALE NONE	PROJECT NO. 08178
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SHEET

2



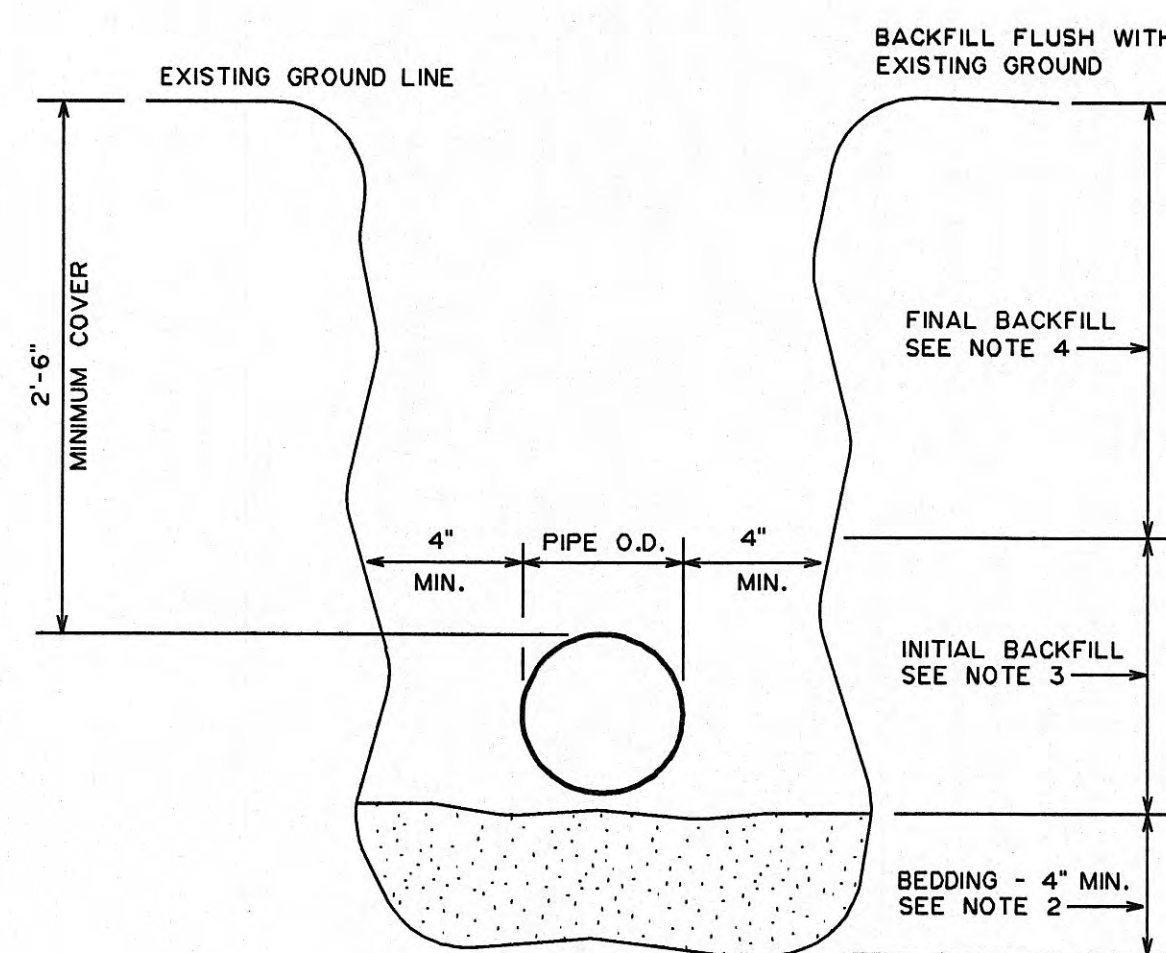
PLAN



SECTIONAL ELEVATION

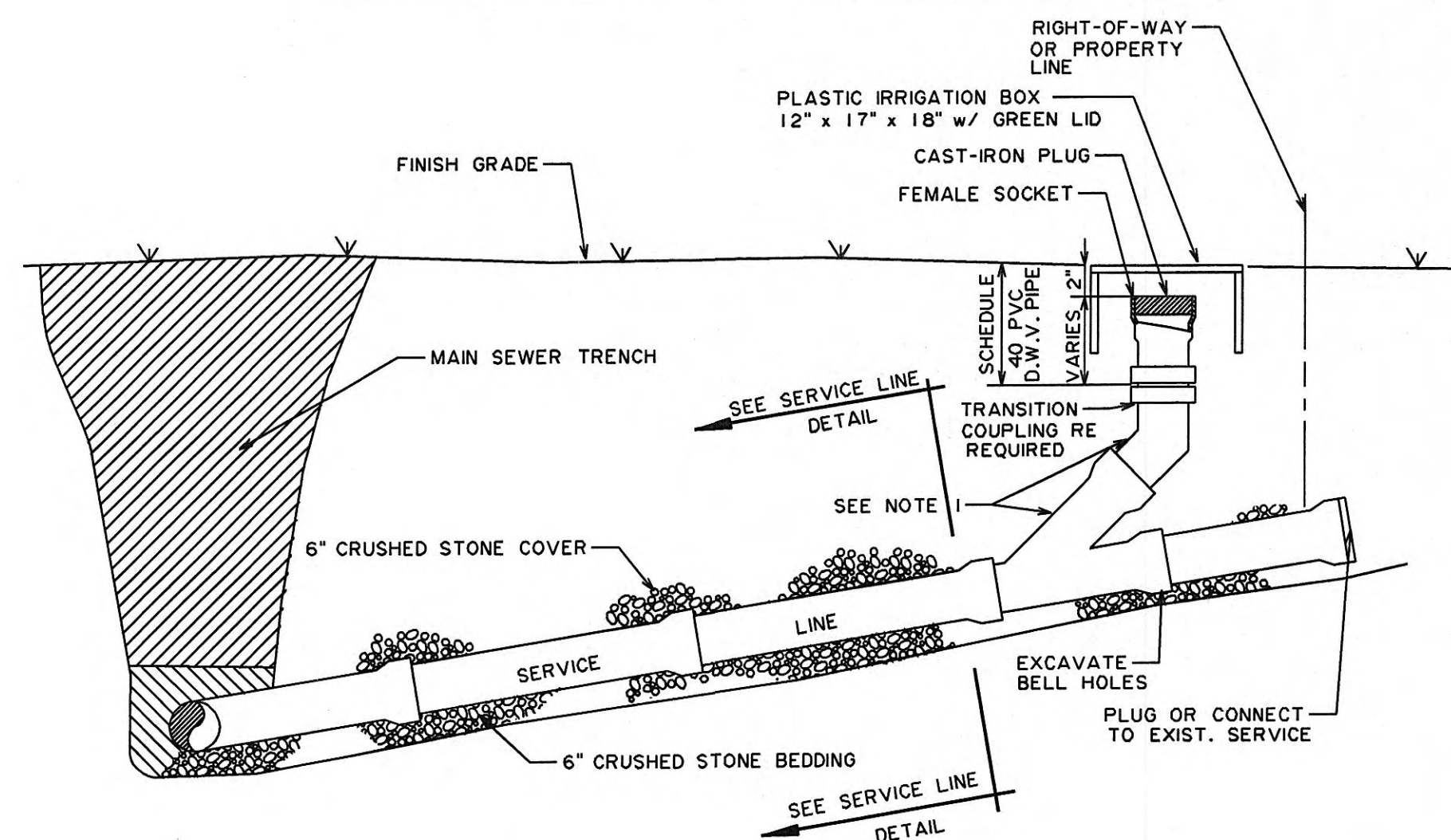
BRACING DETAIL FOR SEWER LINE OVER 20%
SLOPE - TYPICAL IN DIRT

- NOTES:
1. BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
 2. BEDDING TO BE CRUSHED STONE OR SAND.
 3. INITIAL BACKFILL TO BE CRUSHED STONE OR SAND A MINIMUM OF 6" ABOVE PIPE, COMPACTED.
 4. FINAL BACKFILL TO BE COMPACTED IN 12" MINIMUM LAYERS.



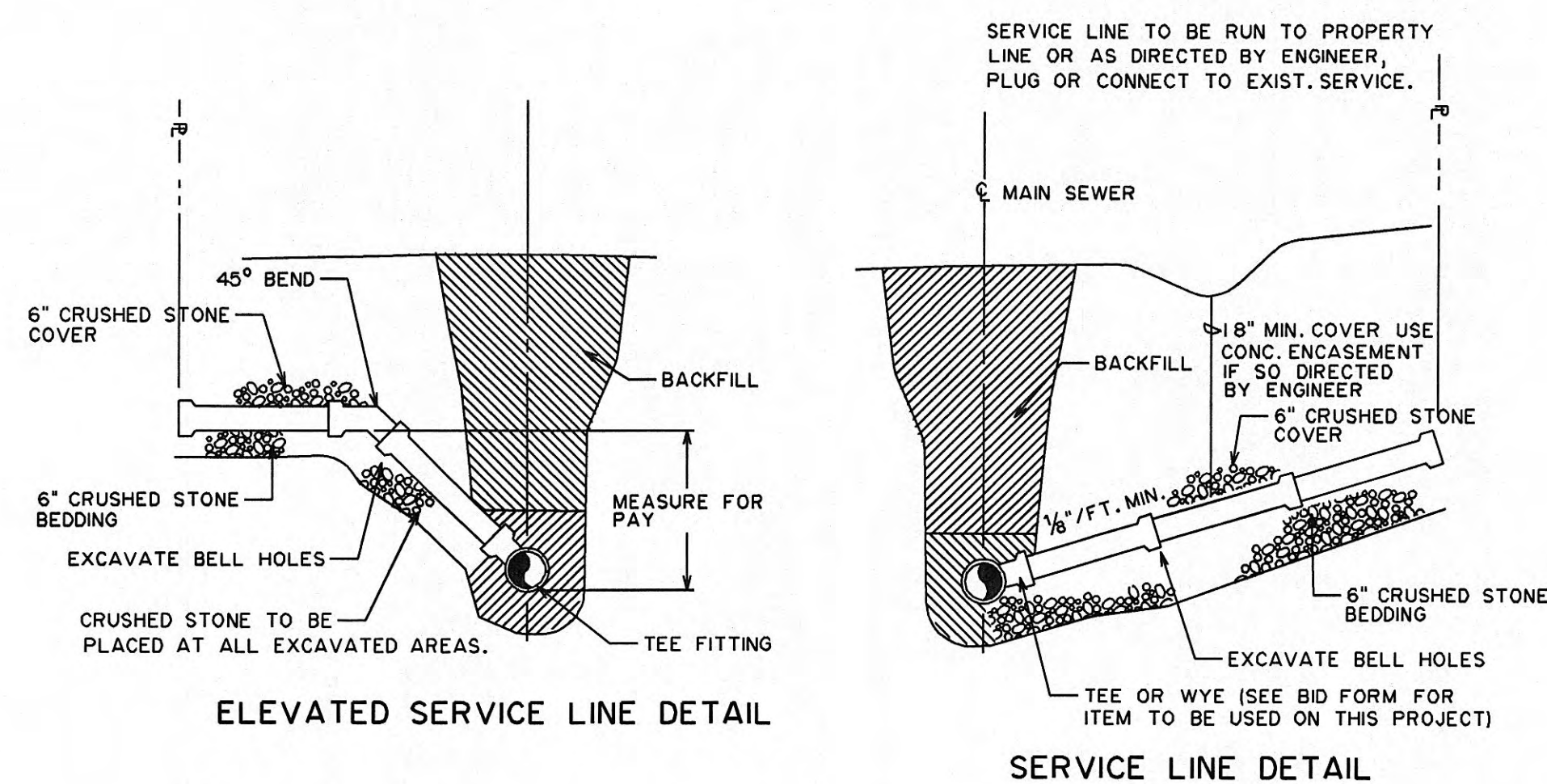
TYPICAL TRENCH SECTION
IN SOIL

SEWER SERVICE CLEAN-OUT DETAIL



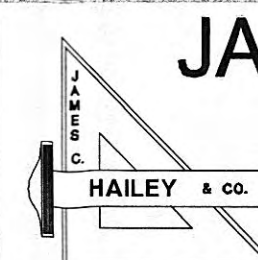
- NOTES:
1. FITTINGS BY MAIN LINE PIPE MANUFACTURERS (RUBBER RING JOINT).
 2. CLEAN-OUT SHALL BE SAME SIZE AS SERVICE LINE.

SEWER SERVICE DETAIL



- NOTES:
1. BACKFILL ON SERVICE LINES TO BE AS DESCRIBED IN PROJECT SPECIFICATIONS.
 2. ELEVATED SERVICE LINE TO BE USED WHERE SHOWN ON PLANS OR DIRECTED BY ENGINEER.
 3. BATTER BOARDS NOT REQ'D. FOR PIPE LAYING, BUT GRADE TO BE REASONABLY UNIFORM AND ALIGNMENT STRAIGHT GRADE SHALL BE THAT SUFFICIENT TO PROVIDE SERVICE TO BUILDING OR AS DIRECTED BY ENGINEER WITH MINIMUM TO BE THAT ALLOWED BY LOCAL PLUMBING CODE OR 1/8" MINIMUM.

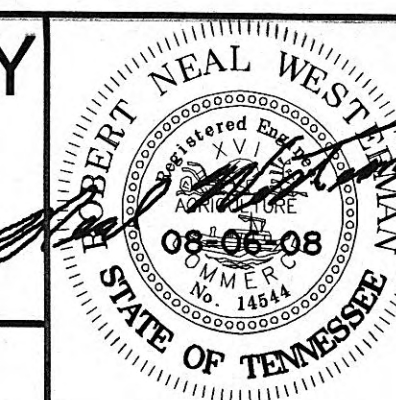
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STANDARD SEWER DETAILS

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SHEET

3