

## HOWARD AVENUE & TARPLEY LANE GENERAL PLAN

## GENERAL NOTES

## GRADING AND EXCAVATION

1. WHEN SPECIFIC GRADING REQUIREMENTS ARE NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL GRADE ALL AREAS WITHIN THE LIMITS OF CONSTRUCTION, OR OTHERWISE DISTURBED BY CONSTRUCTION, TO DRAIN AND TO MATCH THE EXISTING, ADJACENT GROUND.
2. THE CONTRACTOR SHALL PERFORM ALL NECESSARY STRIPPING OF EXISTING TOPSOIL ON THE JOBSITE.
3. ON THE PROJECT, NEWLY GRADED, EARTH AREAS NOT TO BE PAVED, RIP-RAPPED, OR STABILIZED, SHALL BE SEEDED IN ACCORDANCE WITH THE SPECIFICATIONS. PRIOR TO SEEDING, A FOUR INCH LAYER OF TOPSOIL SHALL BE PLACED ON THESE AREAS IN ACCORDANCE WITH SAID SPECIFICATIONS.
4. THE CONTRACTOR SHALL DISPOSE OF, AT HIS OWN EXPENSE, ALL UNSUITABLE AND/OR SURPLUS, EXCAVATED MATERIAL.
5. EXCAVATION ADJACENT TO EXISTING PAVEMENT SHALL BE MADE TO A NEAT LINE.
6. ALL TREES THAT ARE CUT OR KNOCKED DOWN WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED AND DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE. BURNING SHALL NOT BE PERMITTED.
7. BACKFILLING, COMPACTING, GRADING, AND SITE-CLEANUP SHALL OCCUR DAILY AS PIPE INSTALLATION PROGRESSES.

### EROSION/POLLUTION CONTROL

8. ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL REQUIREMENTS SHALL BE FOLLOWED DURING CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO CONTROL EROSION AND WATER POLLUTION THROUGHOUT THE CONSTRUCTION PERIOD. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE IN PLACE BEFORE EXCAVATION OPERATIONS BEGIN. CLEARING AND GRUBBING SHALL BE HELD TO A MINIMUM WITH NECESSARY TO ACCOMMODATE CONSTRUCTION OPERATIONS. EROSION-PRONE AND EXCAVATED AREAS SHALL BE PROMPTLY STABILIZED TO MINIMIZE EROSION. BALED STRAW EROSION CHECKS AND SILT FENCE SHALL BE USED ALONG THE TOE OF FILL SLOPES, IN DITCHES, AND IN OTHER AREAS WHERE EROSION IS A PROBLEM AND SILT-LADEN RUNOFF MAY ENTER A DRAINAGE DITCH, STREAM OR ADJACENT PROPERTY.
9. ANY STOCKPILED SOIL OR FILL MATERIAL SHALL BE LOCATED AND TREATED IN A MANNER TO PREVENT SILT ENTERING STREAMS. NO EXCAVATED MATERIAL SHALL BE DISCHARGED INTO DITCHES. THE CONTRACTOR SHALL DISPOSE OF ALL EXCAVATED MATERIAL IN A LOCATION, APPROVED BY THE ENGINEER, ABOVE THE NORMAL HIGH WATER ELEVATION.
10. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL EROSION CONTROL PROVISIONS AS SET FORTH IN THE EROSION & SEDIMENT CONTROL HANDBOOK AVAILABLE FROM THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION.
11. THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN AND SHALL MAINTAIN THE EROSION CONTROL MEASURES THROUGHOUT THE LENGTH OF THE CONTRACT AS REQUIRED.
12. THE CONTRACTOR SHALL PROVIDE TEMPORARY EROSION AND WATER CONTROL MEASURES (SUCH AS WATTLES, CHECK DAMS, WASHOUTS, AND SILT FENCES, ETC.) AS SHOWN ON THE EROSION CONTROL PLAN AND DIRECTED BY THE ENGINEER. THESE TEMPORARY MEASURES SHALL BE COORDINATED WITH THE PERMANENT EROSION CONTROL FEATURES TO ASSURE ECONOMICAL, EFFECTIVE, AND CONTINUOUS EROSION CONTROL THROUGHOUT THE PROJECT.

## UTILITIES

13. LOCATIONS OF UTILITIES, PUBLIC AND/OR PRIVATE, ARE APPROXIMATE ONLY, AND THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD. IT IS POSSIBLE THAT SOME EXISTING FACILITIES ARE NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING ALL UNDERGROUND UTILITY FACILITIES LOCATED AND MARKED PRIOR TO THE BEGINNING OF CONSTRUCTION.
14. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITY OWNERS PRIOR TO INTERRUPTING ANY ELECTRICAL, COMMUNICATIONS, GAS, WATER, OR SEWER SERVICES. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY CUSTOMERS AT LEAST 24 HOURS BEFORE INTERRUPTING THE CUSTOMERS' SERVICE. WHERE INDIVIDUAL SERVICES ARE TO BE DISCONTINUED FOR MORE THAN 4 HOURS, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR PROVIDING TEMPORARY SERVICE SATISFACTORY TO THE AFFECTED CUSTOMER. THE REPAIR OR REPLACEMENT OF UTILITY COMPONENTS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE UTILITY OWNER. NO SEPARATE PAYMENT SHALL BE ALLOWED FOR THESE ACTIVITIES, AND COMPENSATION, THEREFORE, SHALL BE INCLUDED IN THE CONTRACT PRICES FOR OTHER ITEMS.
15. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. SHOULD SPECIAL EQUIPMENT BE REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR SHALL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FOR FURNISHING SPECIAL EQUIPMENT SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.



**BEECH & WALNUT STREET GENERAL PLAN**  
SCALE: 1" = 200'

### UTILITIES (CONTINUED)

18. IF ANY UTILITY IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER. REPAIR OF THE UTILITY SHALL THEN BE ACCORDING TO THE OWNER'S INSTRUCTIONS.
  17. ALL CUTS AND FILLS SHALL BE IN PLACE, AND ALL FILLS COMPACTED, PRIOR TO THE INSTALLATION OF WATER LINES AND APPURTENANCES.
  18. TRANSITION JOINTS ON PIPES OF DIFFERENT MATERIALS MUST BE APPROVED BY THE ENGINEER, AND CONSTRUCTION MUST BE DONE WITH APPROVED FITTINGS AND/OR ADAPTERS.
  19. ALL PROPOSED PIPING AND MISCELLANEOUS APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, CONTRACT DRAWINGS, AND SPECIFICATIONS.
  20. WHERE WATER PIPE CROSSES THE SEWER MAIN, THE WATER PIPE WITHIN 10 FEET OF THE POINT OF CROSSING SHALL BE AT LEAST 18 INCHES ABOVE THE SEWER MAIN OR THE WATER PIPE SHALL BE ENCASED.
  21. TOPS OF ALL BOXES SHALL BE RAISED FLUSH WITH FINISHED GRADES AND BE VISIBLE.
  22. THE WATER LINES SHALL BE TESTED AND APPROVED PER THE REQUIREMENTS OF THE SPECIFICATIONS.
  23. THE CROWN OF THE WATER LINES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 36-INCHES BELOW THE EXISTING SURFACE WITHIN RIGHTS-OF-WAY AND 30-INCHES BELOW THE EXISTING SURFACE IN OTHER AREAS EXCEPT WHERE ADDITIONAL BURIAL IS NEEDED TO ACCOMMODATE INSTALLATION OF APPURTENANCES AND CROSSINGS.
  24. THE CROWN OF THE WATER LINES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 30-INCHES LOWER THAN THE SURFACE OF ADJACENT ROADWAYS SO AS TO ALLOW FUTURE DRIVEWAY CUTS THAT WILL NOT IMPACT OR DISTURB THE WATER LINE.
- MISCELLANEOUS**
25. THE ENGINEER SHALL HAVE THE AUTHORITY TO DESIGNATE AND/OR LIMIT AREAS OF CONSTRUCTION.
  26. THE OWNER MAKES NO REPRESENTATIONS ABOUT SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED WITHIN THE LIMITS OF THE PROJECT. THE CONTRACTOR SHOULD SATISFY HIMSELF BY ON SITE INSPECTIONS, CORE DRILLINGS, OR OTHER METHODS OF THE SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED. THE RISK OF ENCOUNTERING AND CORRECTING UNFAVORABLE SUBSURFACE CONDITIONS SHALL BE BORNE SOLELY BY THE CONTRACTOR.
  27. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL FIELD LAYOUTS.
  28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PAYMENT FOR TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND ORDERING APPROPRIATE TESTS AS REQUIRED.
  29. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF THE PROJECT WITHIN TEN (10) DAYS AFTER SUBSTANTIAL COMPLETION OF THE WORK.
  30. SHOULD THERE BE A CONFLICT BETWEEN THESE GENERAL NOTES, CONTRACT DRAWINGS, AND/OR SPECIFICATIONS, THE MOST RESTRICTIVE INTERPRETATION IN FAVOR OF THE OWNER SHALL PREVAIL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY CLARIFICATION OR INTERPRETATION OF GENERAL NOTES, CONTRACT DRAWINGS, AND/OR SPECIFICATIONS, IN ADVANCE AND IN WRITING, FROM THE ENGINEER.
  31. MAIN AND SERVICE LINE PIPING INCLUDING APPURTENANCES SHALL "PASS" PRESSURE TESTING PRIOR TO ANY PAYMENT BY THE OWNER FOR THOSE ITEMS.
  32. ALL 2-INCH POLYETHYLENE PIPE SHALL BE CONTINUOUS WITH NO "BUTT FUSED" CONNECTIONS.

## MISCELLANEOUS

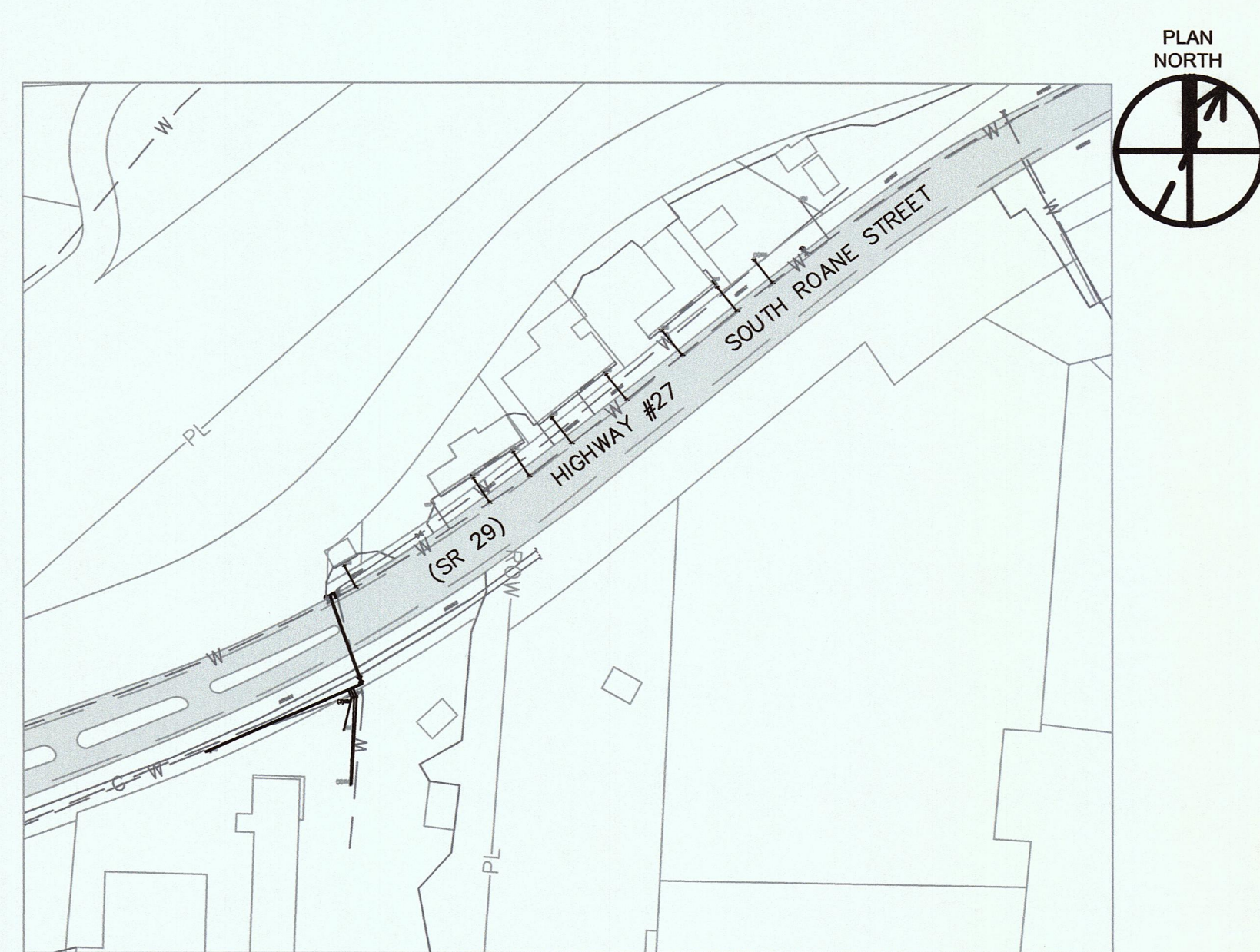
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## UTILITY OWNERS

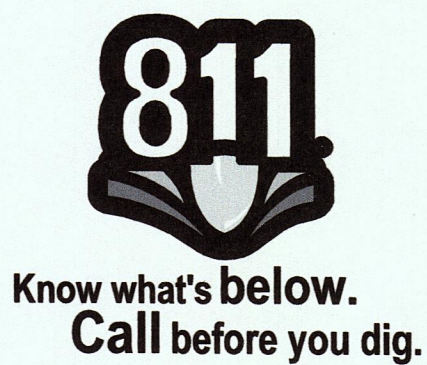
HARRIMAN UTILITY BOARD  
300 NORTH ROANE STREET  
HARRIMAN, TN 37748  
ELECTRIC - HEATH LEWIS (865) 719-9248  
GAS, WATER, AND SEWER - JEFF MIZE (865) 755-4173

AT&T TENNESSEE  
9733 PARKSIDE DRIVE  
KNOXVILLE, TN 37922  
DAVID OVERMAN (865) 539-8579

XFINITY/COMCAST  
5720 ASHEVILLE HIGHWAY  
KNOXVILLE, TN 37924  
JT POPE (865) 862-5060

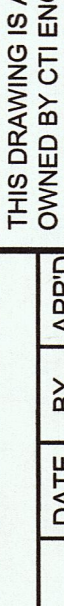
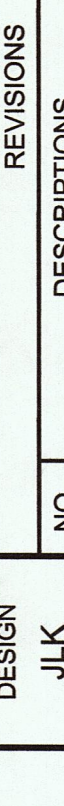


**SOUTH ROANE STREET GENERAL PLAN**  
SCALE: 1" = 200'

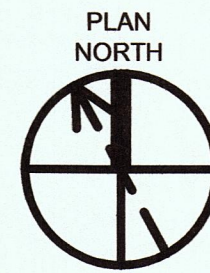


A horizontal scale bar with markings at 0, 100, 200, and 400 feet. The bar is divided into segments by vertical tick marks. The word "Feet" is written at the right end of the bar.

MAPPING INFORMATION (CONTOURS, PROPERTY LINES, ETC.)  
PROVIDED BY HARRIMAN UTILITY BOARD.

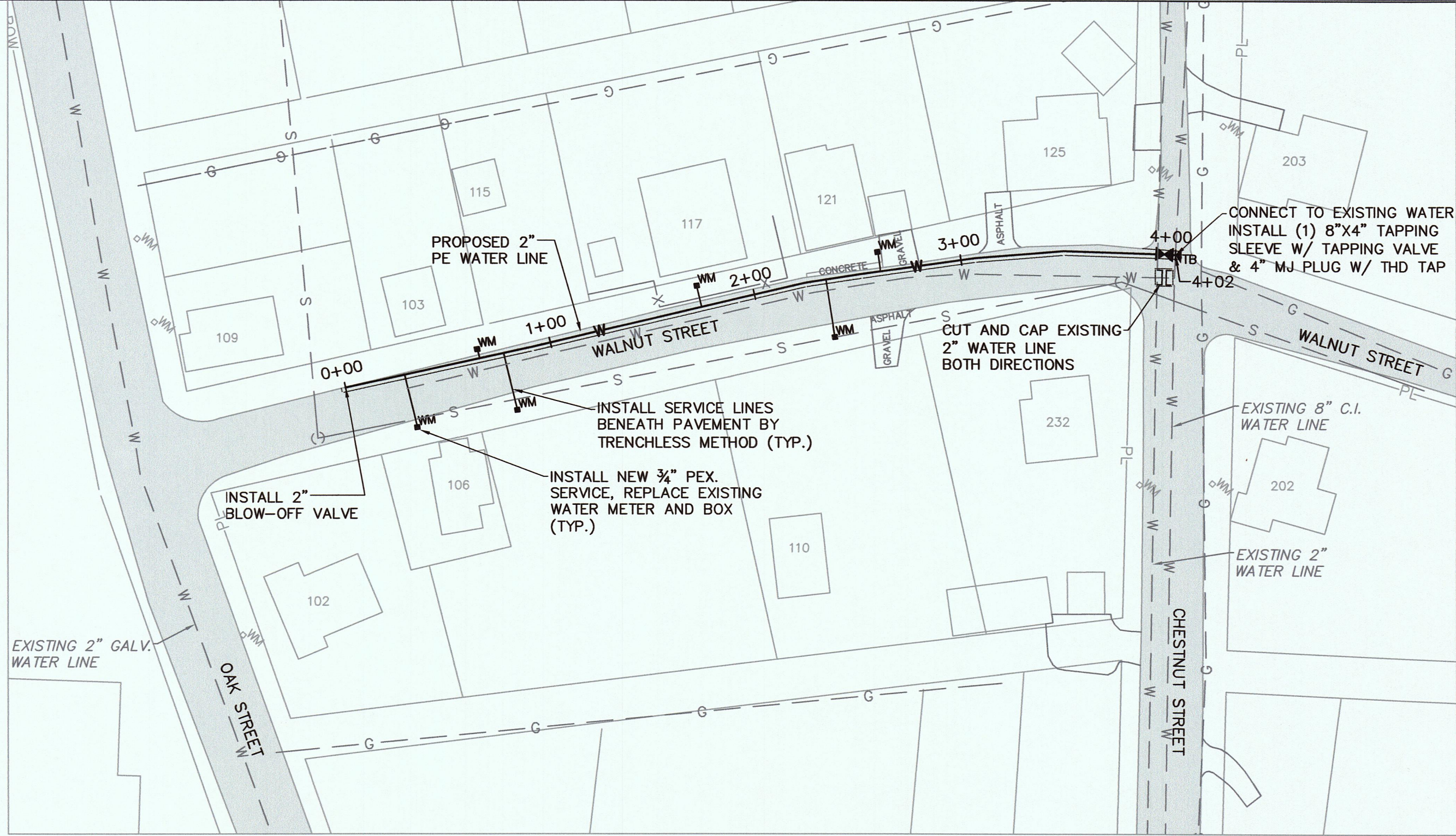
			<b>2017 HARRIMAN CDBG WATER SYSTEM IMPROVEMENTS PROJECT - PHASE II</b> <b>STATE CONTRACT NO. 12079</b>		<b>GENERAL PLAN</b>	
	JOB NO. K17015-II		ISSUE DATE 05/24/2018		SCALE AS SHOWN	
	DRAWING NO. 2.0					
	DESIGN JLK					
	DRAWN JLK					
		NO.	DATE	BY	APPD	THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY CTI ENGINEERS, INC. (CTI), WHICH SHALL BE DEEMED THE AUTHOR AND COMMON SHALL RETAIN ALL STATUTORY AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS. THIS DRAWING SHALL BE SOLELY OWNED, OR DISTRIBUTED TO OTHERS, BY CTI, AND NOT FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN CONSENT OF CTI. CTI IS NOT RESPONSIBLE FOR CONSEQUENCES RELATED TO UNAUTHORIZED USE OR REUSE OF THIS DRAWING OR PORTIONS THEREOF.
CHECKED JLK						
APPROVED JLK						





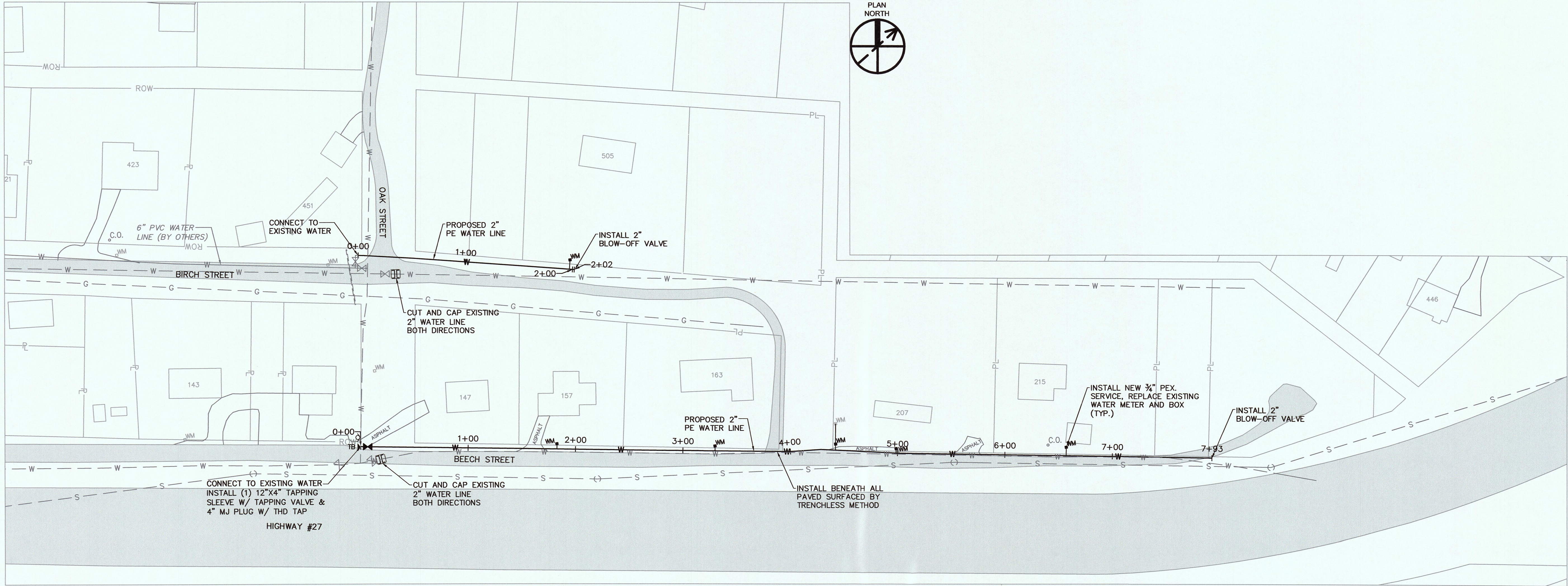
JOB NO. K17015-II
ISSUE DATE 05/24/2018
SCALE 1" = 50'
DRAWING NO. 3.0





WALNUT STREET PLAN

SCALE: 1" = 50'



BEECH STREET PLAN

SCALE: 1" = 50'

NOTES:

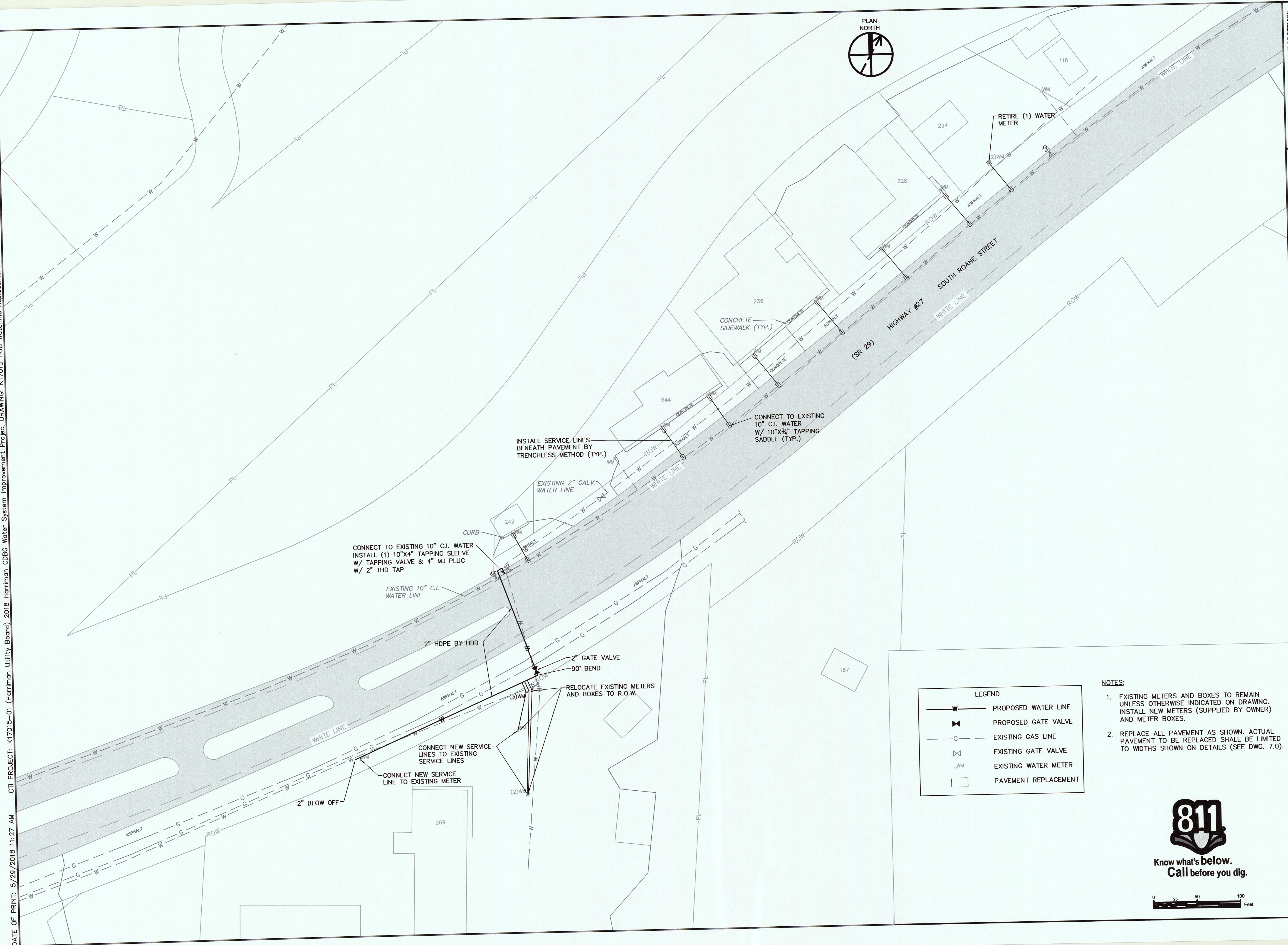
1. REMOVE EXISTING METERS AND BOXES AND RETURN TO OWNER. INSTALL NEW METERS (SUPPLIED BY OWNER) AND METER BOXES.
2. REPLACE ALL PAVEMENT AS SHOWN. ACTUAL PAVEMENT TO BE REPLACED SHALL BE LIMITED TO WIDTHS SHOWN ON DETAILS (SEE DWG. 7.0).
3. HYDRANT AND VALVE SHALL BE INSTALLED WITHIN ROW AND OUT OF PAVEMENT.

LEGEND	
	PROPOSED WATER LINE
	PROPOSED GATE VALVE
	PROPOSED WATER METER
	AIR RELEASE VALVE
	THRUST BLOCK
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING GAS LINE
	EXISTING GATE VALVE
	EXISTING WATER METER
	PAVEMENT REPLACEMENT

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		JLK	JLK	NO.	DESCRIPTIONS	DATE	BY
2017 HARRIMAN CDBG WATER SYSTEM IMPROVEMENTS PROJECT - PHASE II STATE CONTRACT NO. 12079 BEECH & WALNUT STREETS		DRAWN	JMG				
		CHECKED	JLK				
		APPROVED	JLK				
 112 DUNWOOD ROAD, SUITE A 37422 865-246-2729		JOB NO.		ISSUE DATE		SCALE	
		K17015-II		05/24/2018		AS SHOWN	
 STATE OF TENNESSEE		DRAWING NO.					
		4.0					

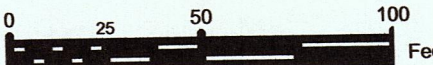
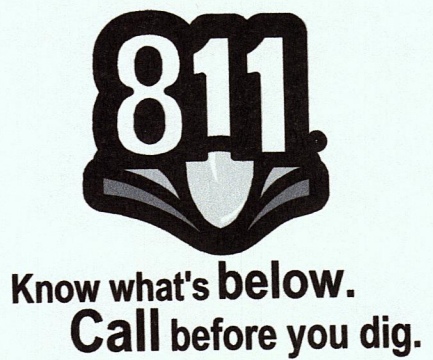


DATE OF PRINT: 5/29/2018 11:27 AM CTI PROJECT: K17015-01 (Harriman Utility Board) 2018 Harriman CDBG Water System Improvement Project, DRAWING: K17015 HUB Waterline Replacement - Phase II (550701v6/5/29/18 11:22AM), LAYOUT: S. Roane St.



LEGEND	
	PROPOSED WATER LINE
	PROPOSED GATE VALVE
	EXISTING GAS LINE
	EXISTING GATE VALVE
	EXISTING WATER METER
	PAVEMENT REPLACEMENT

- NOTES:
- EXISTING METERS AND BOXES TO REMAIN UNLESS OTHERWISE INDICATED ON DRAWING. INSTALL NEW METERS (SUPPLIED BY OWNER) AND METER BOXES.
  - REPLACE ALL PAVEMENT AS SHOWN. ACTUAL PAVEMENT TO BE REPLACED SHALL BE LIMITED TO WIDTHS SHOWN ON DETAILS (SEE DWG. 7.0).



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DATE

BY

APPD

2017 HARRIMAN CDBG WATER SYSTEM IMPROVEMENTS PROJECT - PHASE II

STATE CONTRACT NO. 12079

SOUTH ROANE STREET

ENGINEERS, INC.

112 DUNWOOD ROAD, SUITE A  
HARRIMAN, TN 37082  
615-246-2750

JOHN L. ...  
PROFESSIONAL ENGINEER  
STATE OF TENNESSEE  
10321  
12/18

JOB NO.

K17015-II

ISSUE DATE

05/24/2018

SCALE

1" = 50'

DRAWING NO.

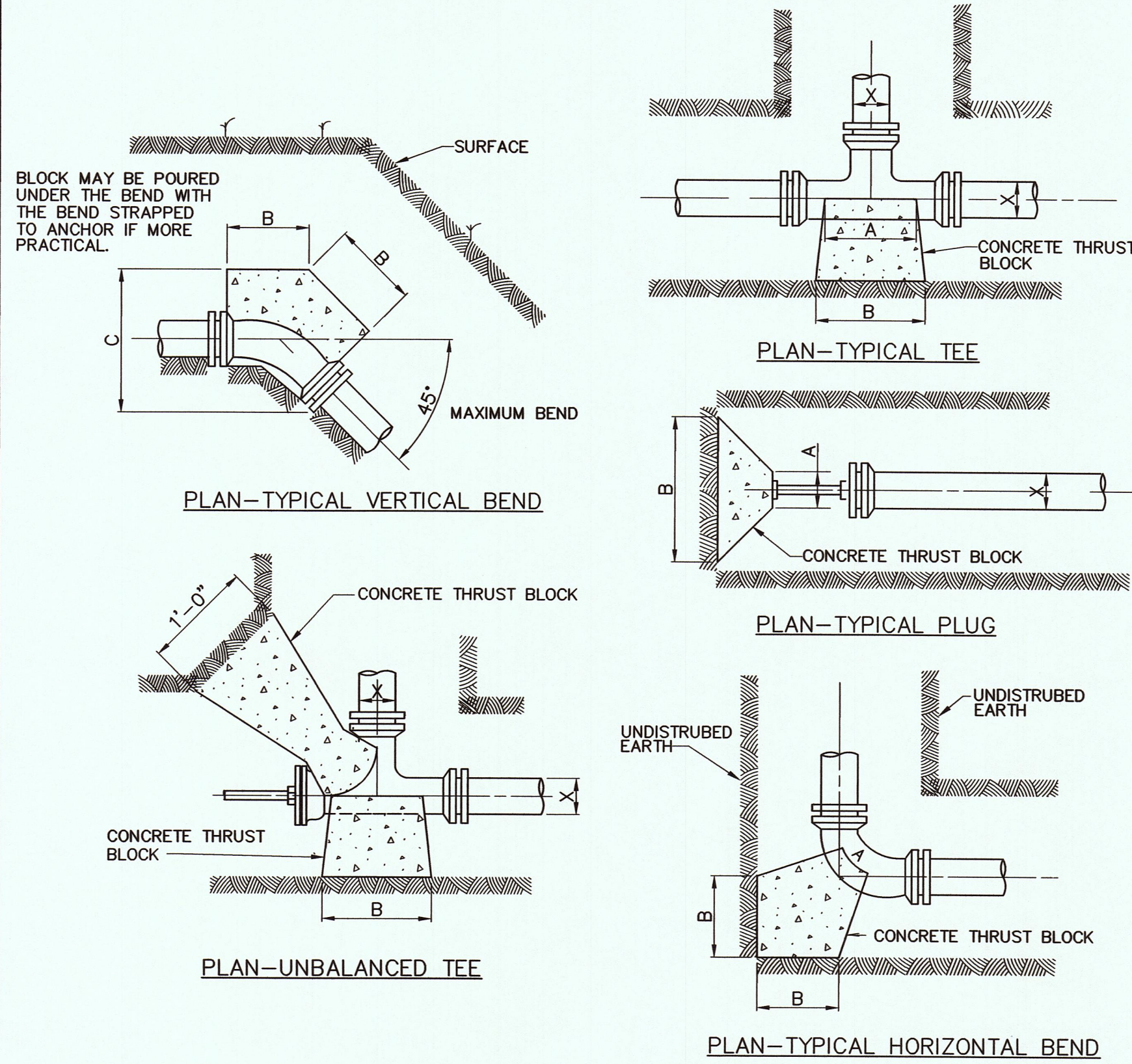
5.0





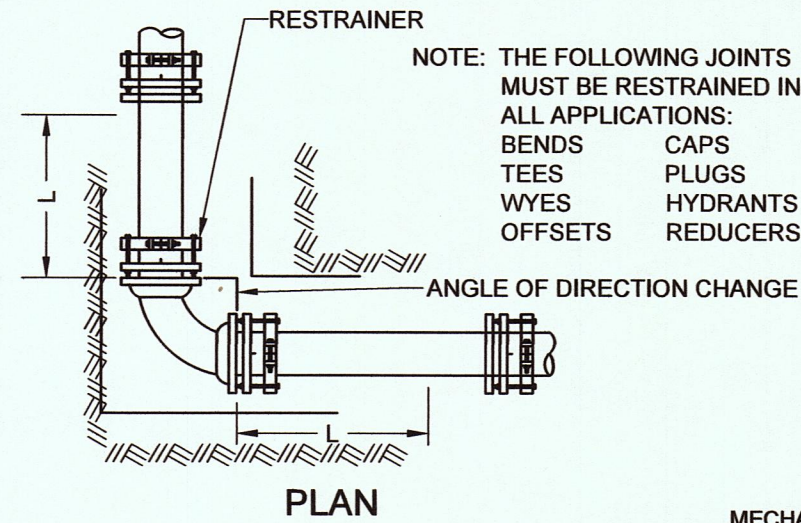


DATE OF PRINT: 5/23/2018 4:50 PM C.T.I. PROJECT: K17015-01 (Harriman Utility Board) 2018 Harriman CDBG Water System Improvement Project, DRAWING: K17015 HUB Waterline Replacement - Phase II (550701v5/5/23/18 4:49PM), LAYOUT: DETAILS 2



### THRUST BLOCK DETAILS

NOT TO SCALE



TEST PRESSURE - 150 psi						
NOM. PIPE SIZE (IN.)	ELBOWS (DEGREES)				TEES, VALVES, DEAD-ENDS	
	11 1/2	22 1/2	45	90		
3	2	4	9	21	—	44
4	2	5	10	25	17	52
6	3	7	14	35	38	74
8	5	9	19	46	40	96

COMMENTS AND ASSUMPTIONS:

The tabulated values shown were generated using the EBAA Iron, Inc. computer program.

Soil Type: Worst Case

MF Granular - For Elbows

ML - For Reducers, Tees, Valves, and Dead-ends.

Trench Type: 3 (Pipe bedded in 4-inch minimum loose soil. Backfill lightly consolidated to top of pipe).

Depth of cover to top of pipe: 3 feet

Safety Factor: 1.5

The values shown for the Reducers were based on a reduction from the nominal pipe size to a pipe one-size smaller.

\* Restrain one joint beyond the minimum length for all lengths over 10 feet.

### MECHANICALLY RESTRAINED JOINT DETAIL FOR PVC PIPE

NOT TO SCALE

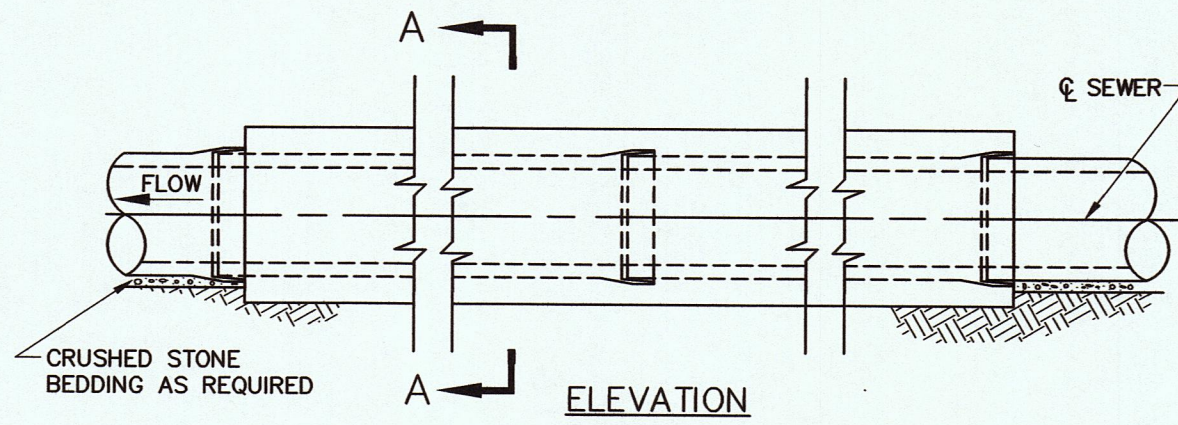
PIPE SIZE X	11 1/2° BEND			PIPE SIZE X	90° BEND & UNBALANCED TEE		
	A	B	DEPTH C		A	B	DEPTH C
8"	0'-9"	1'-0"	0'-8"	8"	1'-0"	2'-0"	2'-3"
6"	0'-9"	1'-0"	0'-6"	6"	1'-0"	1'-3"	2'-0"
2"-4"	0'-6"	1'-0"	0'-4"	2"-4"	0'-9"	1'-0"	1'-0"
DEAD END							
8"	0'-7"	2'-9"	2'-3"	8"	0'-9"	1'-8"	1'-6"
6"	0'-5"	1'-3"	1'-5"	6"	0'-9"	1'-0"	1'-6"
2"-4"	0'-4"	0'-10"	0'-11"	2"-4"	0'-9"	1'-0"	1'-0"
TEE							
8"	1'-6"	4'-0"	2'-3"	8"	0'-9"	1'-0"	2'-0"
6"	1'-0"	2'-8"	1'-6"	6"	0'-9"	0'-10"	1'-0"
2"-4"	1'-0"	2'-0"	1'-0"	2"-4"	0'-9"	0'-7"	1'-0"

TABLE OF DIMENSIONS FOR HORIZONTAL & VERTICAL BENDS

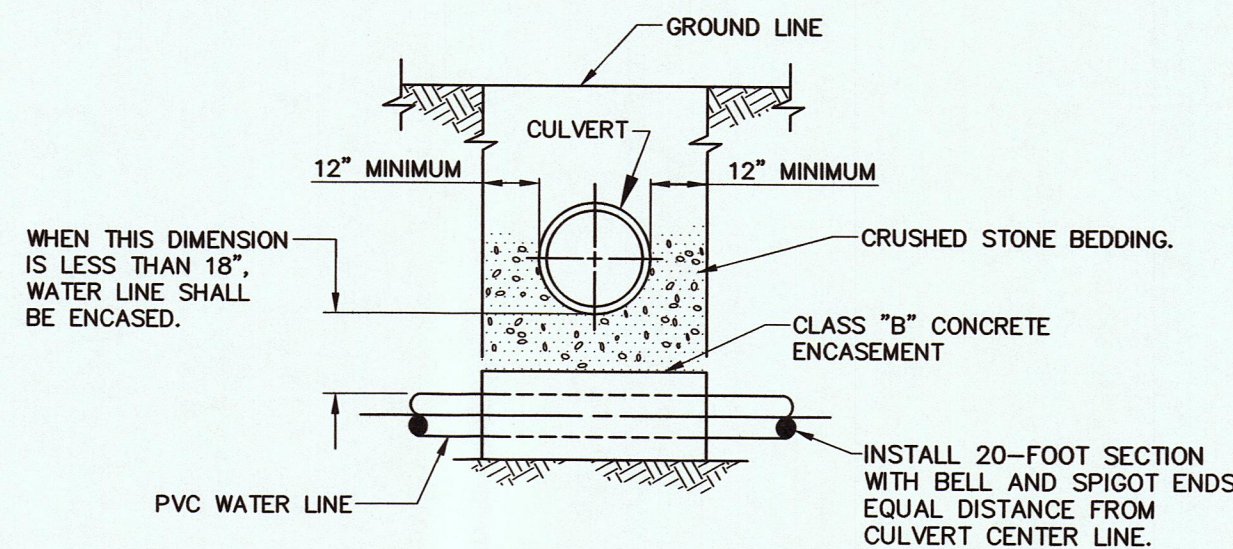
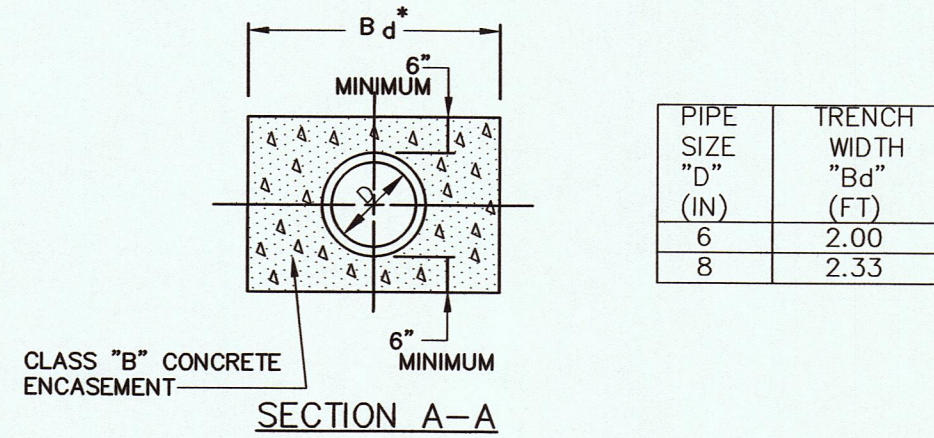
NOTE : ALL CONCRETE FOR THRUST BLOCKS SHALL BE READY-MIXED 3000 psi (MINIMUM) CLASS "B". MIX DESIGN SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO USE. THRUST BLOCKS BASED ON 225 psi & 2000lb/ft<sup>2</sup> SOIL RESISTANCE TYPICAL FOR UNDISTURBED SAND AND GRAVEL CEMENTED WITH CLAY. FOR OTHER SOILS THE BEARING FACE OF THE THRUST BLOCKS SHOULD BE INCREASED BY THE FOLLOWING FACTORS.

SAND & GRAVEL 1.33  
SHALE 0.4

SOFT CLAY, MUCK AND PEAT SHALL USE RESTRAINED JOINTS IN LIEU OF THRUST BLOCKS.

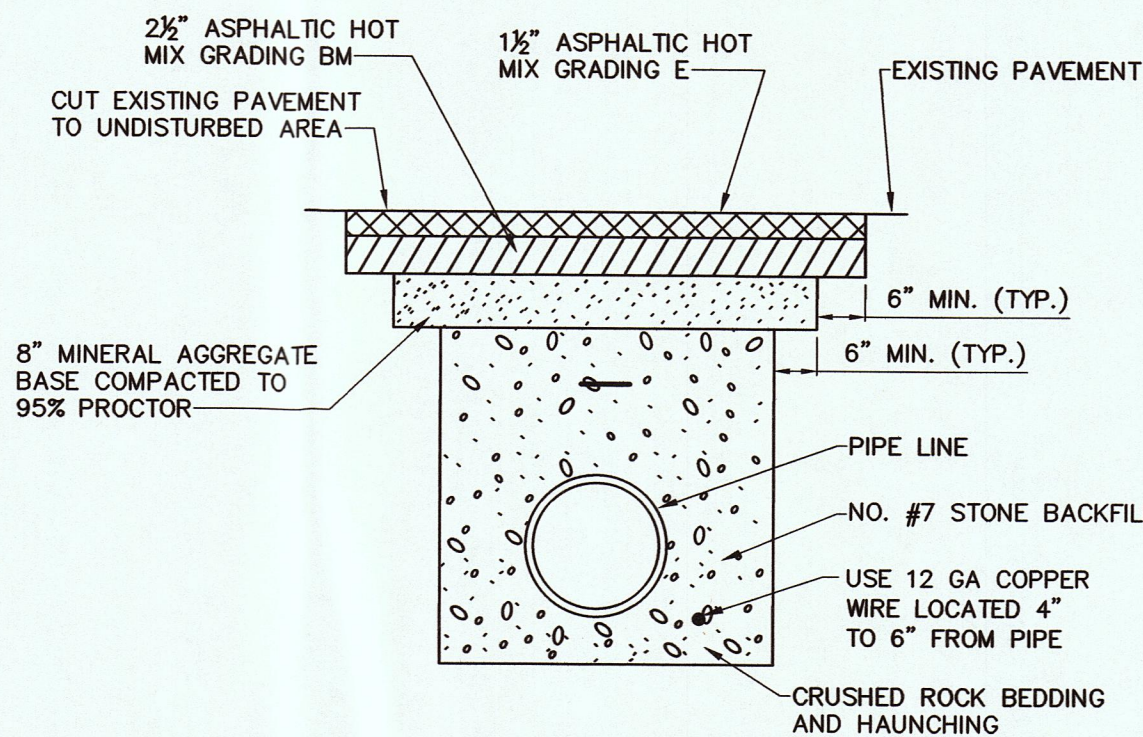


NOTE: CLAY CUT-OFFS SHALL BE CONSTRUCTED AT MINIMUM 500-FOOT INTERVALS ALONG PIPELINE WHERE CRUSHED ROCK EMBEDMENT AND/OR BACKFILL IS USED. SEE DITCH CROSSING DETAIL ABOVE.



### CONCRETE ENCASEMENT

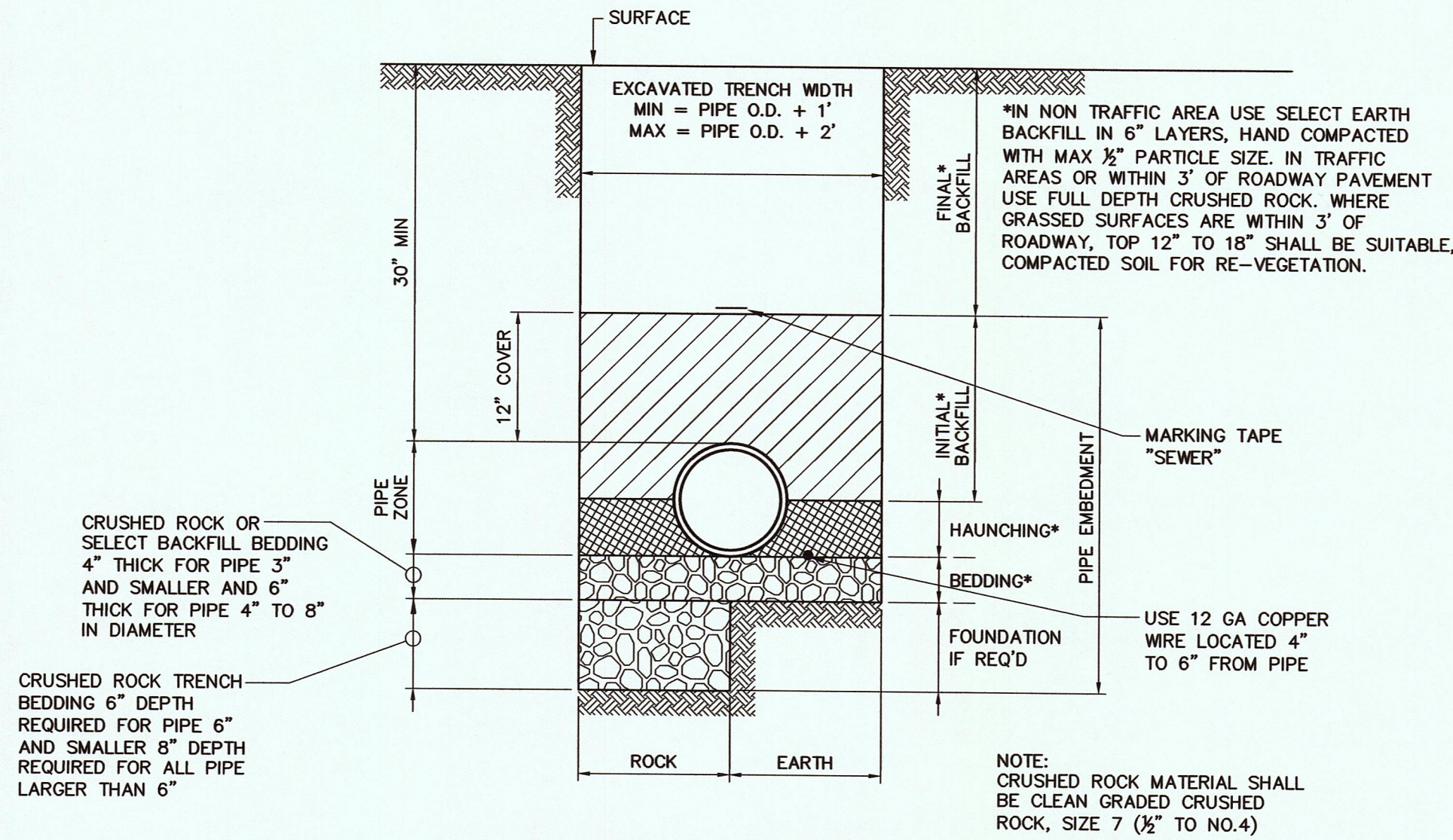
NOT TO SCALE



TO BE USED ON HOT MIX PAVED CITY ROADS AND ELSEWHERE AS DESIGNATED BY THE ENGINEER.

### ASPHALT PAVEMENT REPLACEMENT DETAIL

NOT TO SCALE

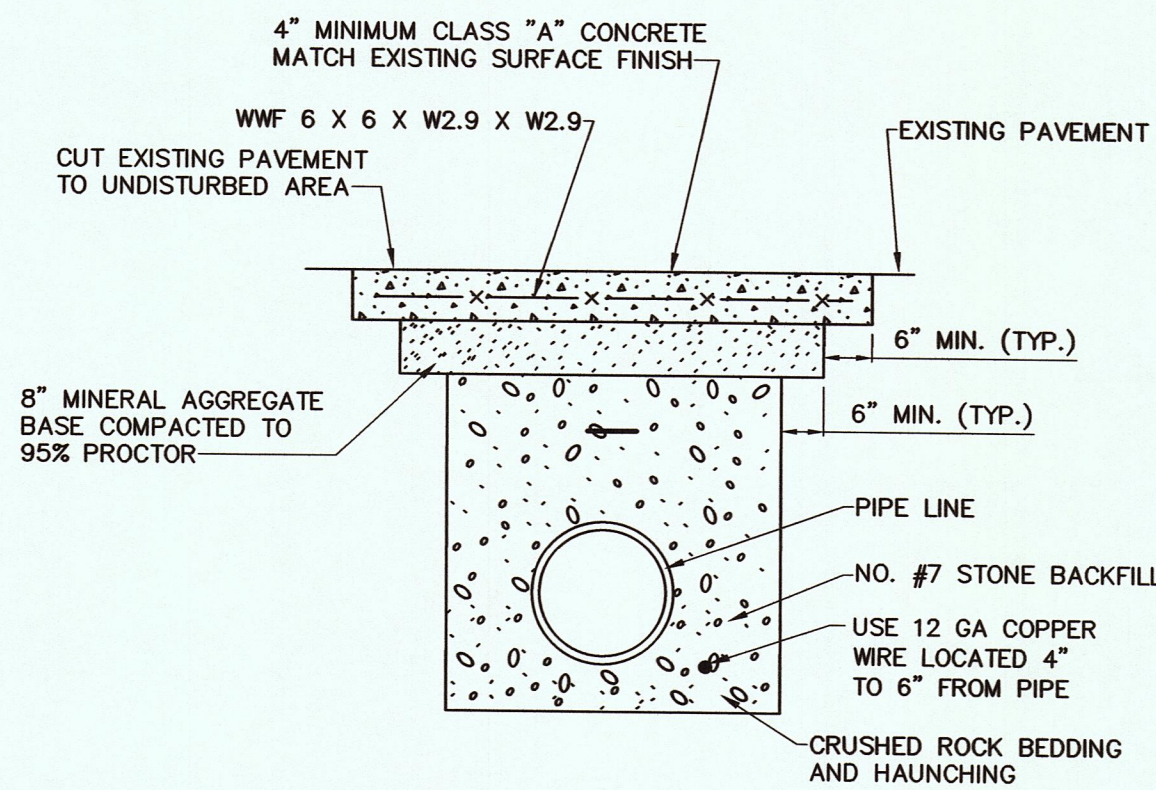


### PIPE BEDDING

NOT TO SCALE

#### PAVING NOTES

- COST OF SAW CUTTING, COMPACTING, MINERAL AGGREGATE, HOT MIX, ETC. TO BE INCLUDED IN THE UNIT PRICE FOR ASPHALT OR OTHER PAVEMENT REPLACEMENT IN THE BID SCHEDULE.
- IT IS THE INTENTION OF THE OWNER TO INSTALL ALL LINES OUT OF PAVEMENT IF POSSIBLE, IN ROAD SHOULDERS OR DITCHES; IF LINE IS INSTALLED UNDER PAVEMENT FOR CONVENIENCE OF CONTRACTOR, NO SEPARATE PAYMENT WILL BE MADE FOR EXTRA PAVEMENT AND CRUSHED ROCK BACKFILL REQUIRED.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ROAD CUT PERMITS PRIOR TO CUTTING ROADWAY PAVEMENTS.



TO BE USED ON CONCRETE DRIVEWAYS AND ELSEWHERE AS DESIGNATED BY THE ENGINEER.

### CONCRETE PAVEMENT REPLACEMENT DETAIL

NOT TO SCALE

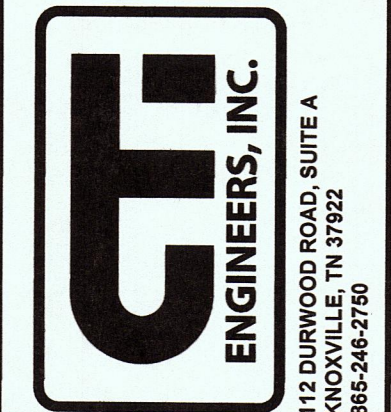
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REVISIONS		DATE	BY	APPD
NO.	DESCRIPTIONS			

DESIGN	JLK	DRAWN	JMG	CHECKED	JLK	APPROVED	JLK
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2017 HARRIMAN CDBG WATER SYSTEM IMPROVEMENTS PROJECT - PHASE II  
STATE CONTRACT NO. 12079

DETAIL SHEET 2 OF 2



JOB NO.	K17015-II
ISSUE DATE	02/15/2018
SCALE	AS SHOWN
DRAWING NO.	7.0





**BEECH & WALNUT STREET PLAN**  
SCALE: 1" = 100'

**EROSION CONTROL PLAN**  
GENERAL NOTES

1. COMPREHENSIVE:  
A. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO OR CONCURRENT WITH LAND-DISTURBING ACTIVITIES.  
B. PROVISIONS TO PREVENT EROSION OF SOIL FROM THE SITE SHALL BE AT A MINIMUM IN CONFORMANCE WITH THE REQUIREMENTS OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN TENNESSEE, FOURTH EDITION, AND ALL APPLICABLE CODES OF THE LOCAL ISSUING AUTHORITY GOVERNING EROSION SEDIMENTATION CONTROL. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.  
C. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE STANDARDS SPECIFIED IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN TENNESSEE AND ALL APPLICABLE CODES OF THE LOCAL ISSUING AUTHORITY.  
D. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM ACTUAL DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL EXISTING DRAINAGE PATTERNS AND THOSE CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.  
E. THE CONSTRUCTION OF THE SITE MAY COMMENCE AFTER THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION AND ALL PAVING IS COMPLETE.  
F. CONSTRUCTION EXITS SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY OR EXIT FROM ANY STORAGE OR EQUIPMENT SITES AND SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE AS CONDITIONS DEMAND, REPAIR, AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OFF SITE ONTO PUBLIC RIGHTS-OF-WAY AND PRIVATE PROPERTY MUST BE REMOVED IMMEDIATELY.  
G. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION EXITS, ANY NEEDED PERIMETER EROSION CONTROL DEVICES AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.  
H. ALL SILT BARRIERS MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO EXCAVATION OR GRADING SHALL BE DONE UNTIL SILT BARRIER INSTALLATION IS COMPLETE.

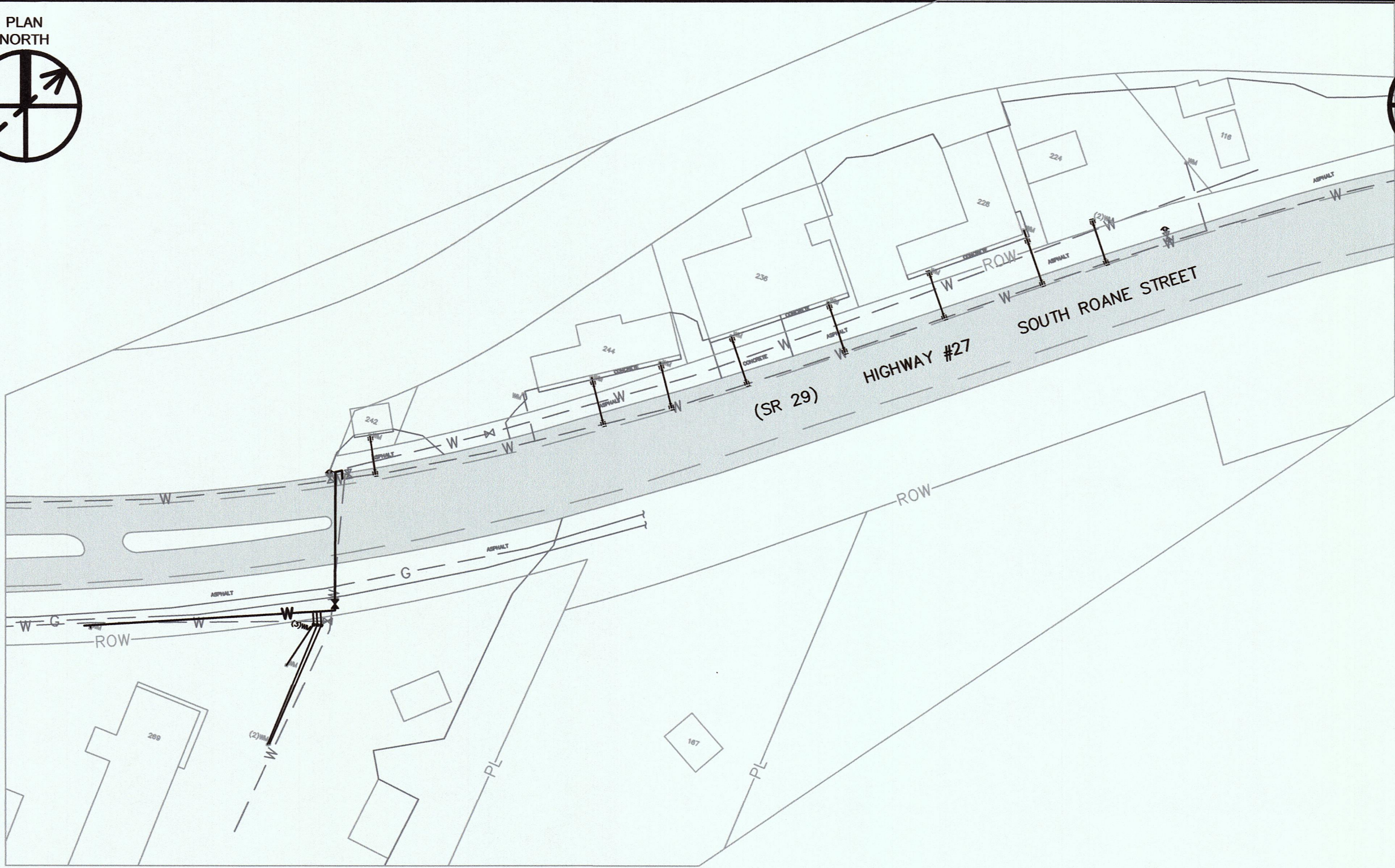
- I. CONCRETE WASHOUTS SHALL BE FIELD LOCATED BY CONTRACTOR.  
J. STORM DRAIN INLETS (CATCH BASINS) AND/OR PAVED AREAS SHALL BE STABILIZED BY REMOVING ALL SPOILS AND APPLYING GRAVEL COVER PRIOR TO RAINFALL EVENTS AS DESCRIBED BELOW. ADDITIONAL INLET PROTECTION MAY BE NEEDED AS DEEMED NECESSARY BY THE ENGINEER.  
2. DURING CONSTRUCTION:  
A. ON SITE DUST CONTROL DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES OF THE LOCAL ISSUING AUTHORITY.  
B. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT HAS ACCUMULATED TO ONE-HALF (1/2) OF THE HEIGHT OF THE SILT FENCE OR WATTLE UTILIZED FOR EROSION CONTROL.  
C. STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ON ANY PORTION OF THE SITE, AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS. SOIL STABILIZATION (SEEDING AND STRAW MULCHING) OF THOSE DISTURBED AREAS MUST BE COMPLETED AS SOON AS POSSIBLE, BUT NOT LATER THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED OR BEFORE ANY PREDICTED RAINFALL EVENTS THAT WOULD EXCEED 0.1 INCH IN A 24-HOUR PERIOD. IN ARID, SEMIARID, AND DROUGHT-STRICKEN AREAS WHERE INITIATING VEGETATIVE STABILIZATION MEASURES IMMEDIATELY IS INFEASIBLE, ALTERNATIVE STABILIZATION MEASURES (SUCH AS, BUT NOT LIMITED TO: PROPERLY ANCHORED MULCH, SOIL BINDERS, MATTING) MUST BE EMPLOYED.  
D. LIMITS OF DISTURBANCE ARE NOT TO EXTEND BEYOND THE RIGHT-OF-WAY OR EASEMENTS AS INDICATED ON DRAWINGS.  
E. ANY DISTURBED SOIL WILL BE STABILIZED W/ MULCH AT THE END OF EVERY WORK WEEK OR PRIOR TO A RAINFALL EVENT AS DESCRIBED ABOVE.  
F. OPEN CUT INSTALLATION OF SERVICE LINES IN GRASSY AREAS SHALL ALSO BE STABILIZED WITH STRAW MULCH AND PERMANENT VEGETATION.

**NARRATIVE**

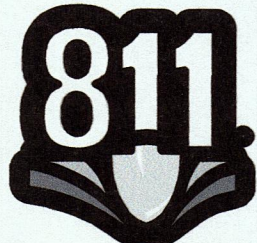
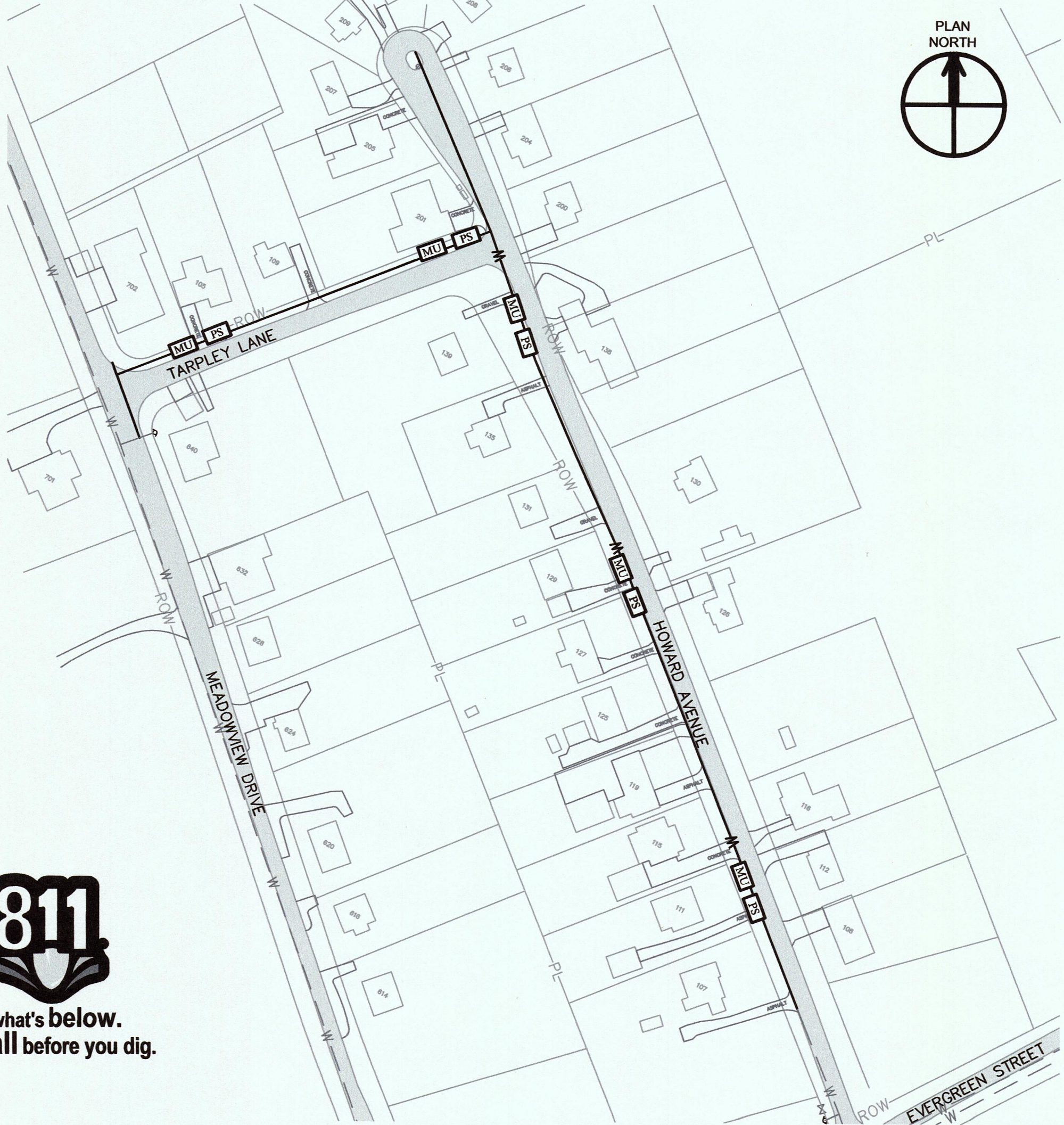
THE PROJECT INCLUDES THE CONSTRUCTION OF APPROXIMATELY 3,420 LF OF 2-INCH AND 6-INCH WATER MAIN, 1,965 L.F. OF ¾" SERVICE LINE, AND SERVICES TO APPROXIMATELY 61 RESIDENCES. IT IS ESTIMATED THAT APPROXIMATELY 0.16 ACRES WILL BE DISTURBED.  
MAPPING INFORMATION (PROPERTY LINES, ETC.) PROVIDED BY HARRIMAN UTILITY BOARD.



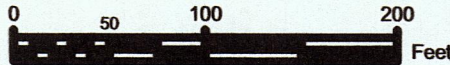
- LEGEND**
- SILT FENCE
  - >->- WATTLES
  - >->- CHECK DAM
  - MU STABILIZATION WITH STRAW MULCH
  - PS STABILIZATION WITH PERMANENT VEGETATION
  - OR INLET PROTECTION



**SOUTH ROANE STREET PLAN**  
SCALE: 1" = 100'



Know what's below.  
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**HOWARD AVENUE & TARPLEY LANE PLAN**  
SCALE: 1" = 100'



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DESIGN	REVISIONS			
	NO.	DESCRIPTIONS	DATE	BY
JLK				
DRAWN				
JMG				
CHECKED				
JLK				
APPROVED				
JLK				

2017 HARRIMAN CDBG WATER SYSTEM IMPROVEMENTS PROJECT - PHASE II  
STATE CONTRACT NO. 12079

**EROSION CONTROL PLAN**



JOB NO.	K17015-II
ISSUE DATE	05/24/2018
SCALE	AS SHOWN
DRAWING NO.	8.0



ELEVATION VIEW

### SECTIONAL VIEW

**SILT FENCE**  
NOT TO SCALE

**LEGEND**

■ ■ ■ ■ SILT FENCE

TEMPORARY SEEDING REQUIREMENTS TABLE					
				RATE (LB/ACRE)	
AREA	SOWING SEASON	SPECIES	SEED	FERTILIZER (10-10-10)	LIMESTONE
ALL	MAY 1 – AUG. 15	OATS	60	750 <sup>*</sup>	2,000 <sup>*</sup>
		BROWN TOP MILLET	30		
	AUG. 15 – DEC. 30	OATS	30		
		WINTER WHEAT	30		
* OR FOLIAR OW RECOMMENDATIONS OF SOIL TEST(S)					

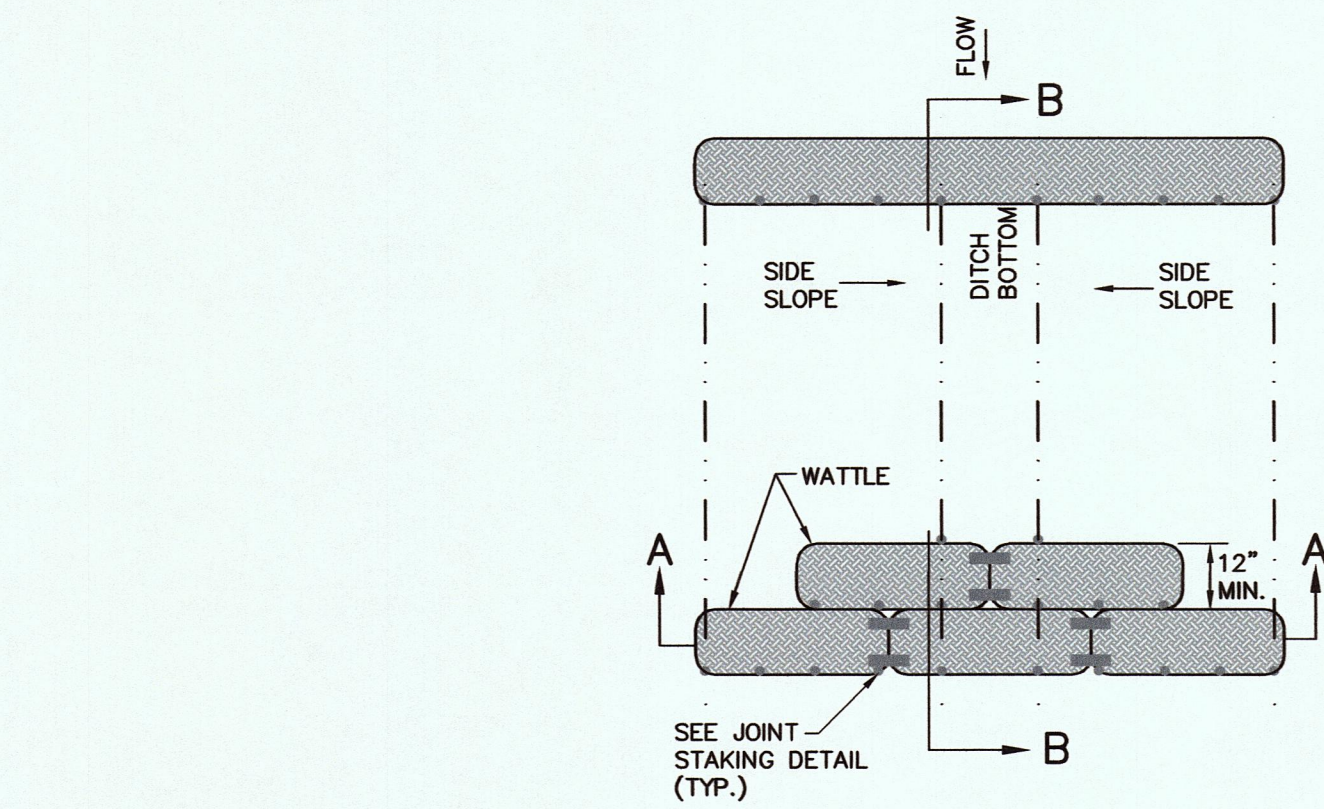
NOTES: 1. APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL.

2. REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

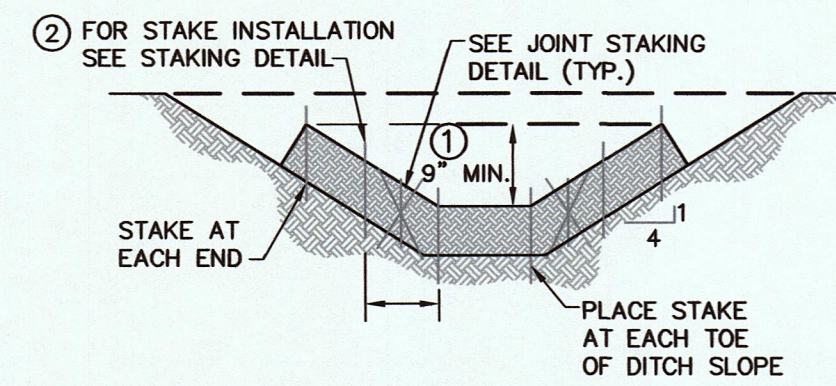
PERMANANT SEEDING REQUIREMENTS TABLE				RATE (LB/ACRE)	
AREA	SOWING SEASON	SPECIES	SEED	FERTILIZER (6-12-12)	LIMESTONE
FLAT TO ROLLING TERRAIN WITH SLOPES LESS THAN 3:1	MAR. 1 – JUNE 1	KENTUCKY 31 FESCUE LADINO WHITE CLOVER*	200-400 100-100	1,350**	4,300**
	AUG. 1 – NOV. 1	KENTUCKY 31 FESCUE LADINO WHITE CLOVER* ANNUAL RYEGRASS	200-400 10-20 100-180		
EMBANKMENTS WITH SLOPES GREATER THAN 3:1	MAR. 1 – JUNE 1	KENTUCKY 31 FESCUE WEEPING LOVEGRASS	140 15		
	AUG. 1 – NOV. 1	KENTUCKY 31 FESCUE ANNUAL RYEGRASS	140 90		

NOTES: 1. APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL.

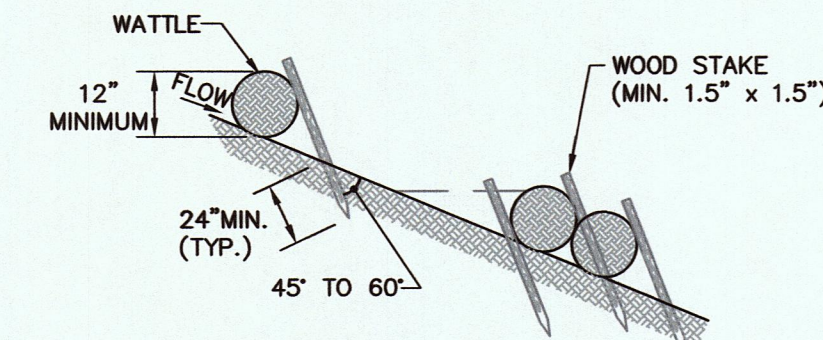
2. REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.



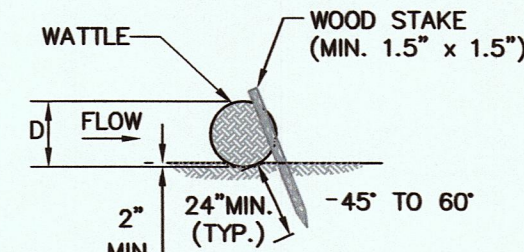
### PLAN VIEW FOR DITCH APPLICATION



SECTION A-A



SECTION B-B



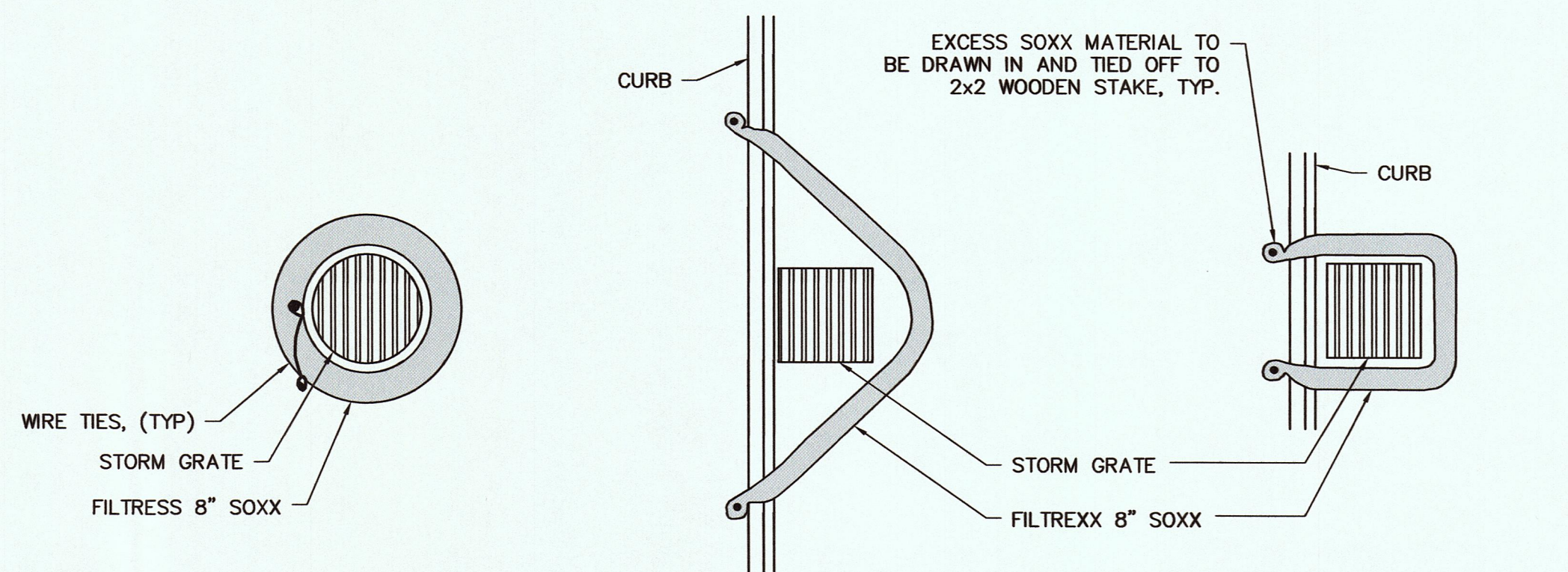
### STAKING DETAIL

**NOTES:**

- ) THE DEPTH AND WIDTH OF THE WEIR SECTION OF THE WATTLE SHALL BE DESIGNED TO PASS THE 2yr/24hr OR 5yr/24hr STORM EVENT WITHOUT OVERTOPPING THE CHANNEL.
- ) STAKE PER MANUFACTURERS RECOMMENDATIONS

LEGEND

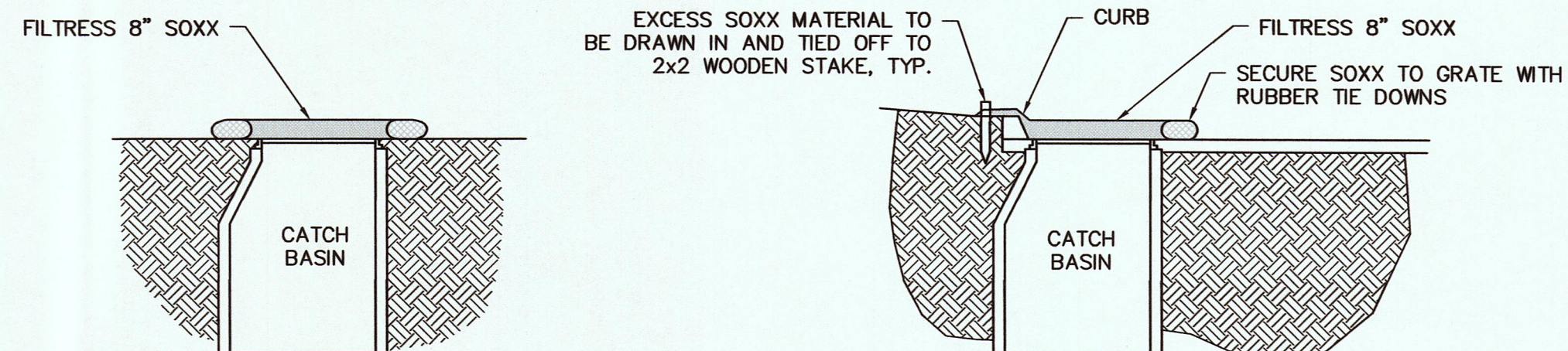
→) →) →) WATTLES



DRAIN INLET PLAN

CURBSIDE OPTION "A" PLAN

CURBSIDE OPTION "B" PLAN



### DRAIN INLET SECTION

CURBSIDE SECTION

**NOTES:**

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

### LEGEND

 INLET PROTECTION

**INLET PROTECTION**  
NOT TO SCALE



Know what's **below**.  
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