

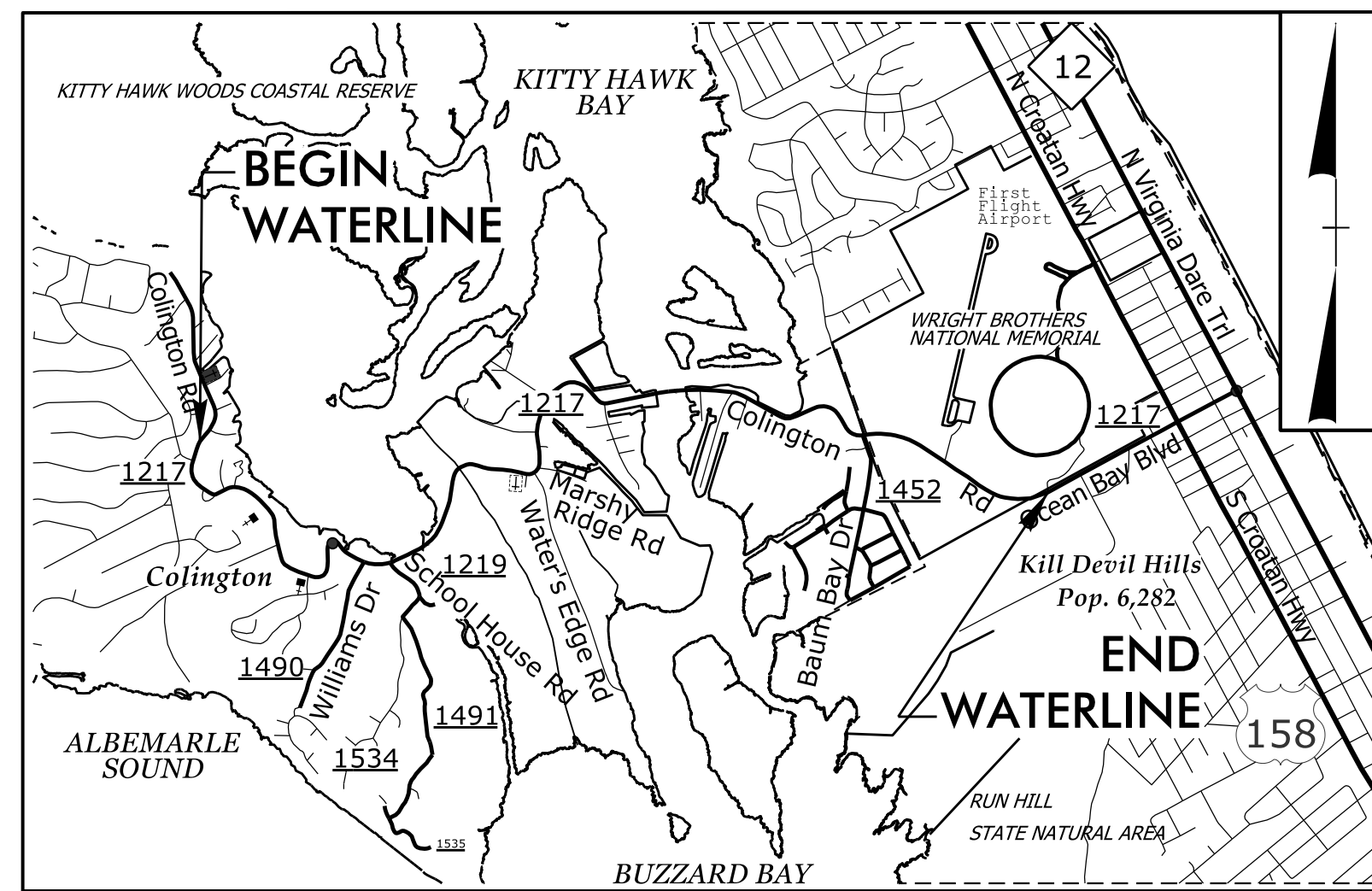
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS  
DARE COUNTY

LOCATION: SR 1217 (COLINGTON RD.) FROM COLINGTON DRIVE TO  
BERMUDA BAY BOULEVARD

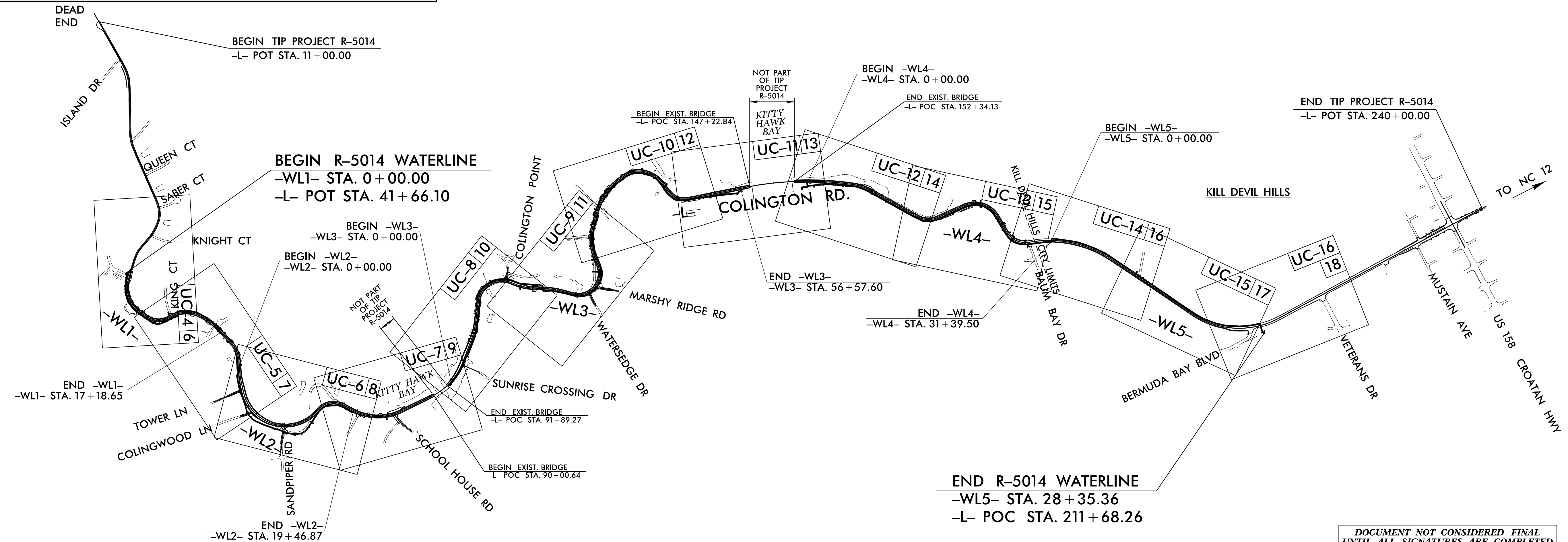
TYPE OF WORK: WATER LINE RELOCATION

TIP PROJECT: R-5014



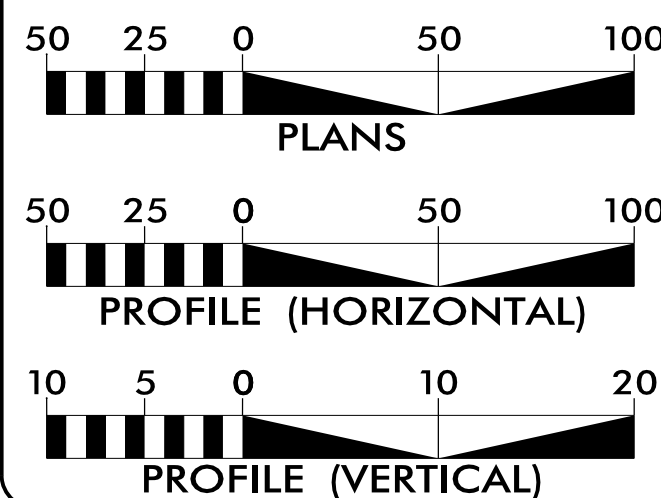
VICINITY MAP

N. T. S.



DOCUMENT NOT CONSIDERED FINAL  
UNTIL ALL SIGNATURES ARE COMPLETED

GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
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UC-3 THRU UC-3A	NOTES
UC-3B THRU UC-3G	DETAILS
UC-4 THRU UC-16	UTILITY PLAN SHEETS
UC-17 THRU UC-22	UTILITY PROFILE SHEETS

WATER AND SEWER  
OWNERS ON PROJECT

- (A) WATER - DARE COUNTY  
WATER DEPT
- (B) SANITARY SEWER - KILL DEVIL HILLS  
WASTE WATER TREATMENT PLANT  
(KDHWWTP, LLC)

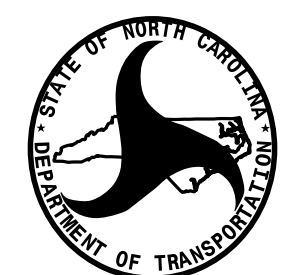
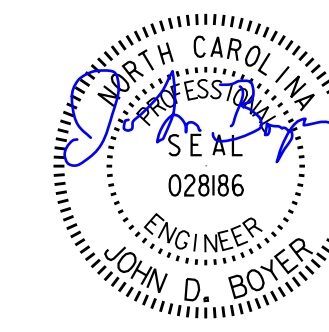
PREPARED IN THE OFFICE OF



CDM Smith Inc.  
5400 Glenwood Avenue  
Suite 400  
Raleigh, NC 27612-3228  
NC COA No. F-1255

DAVID DORAN PROJECT ENGINEER  
 JOHN BOYER, P.E. PROJECT MANAGER  
 CLAY TAPPAN, P.E. PROJECT DESIGN ENGINEER

SEAL



DIVISION OF HIGHWAYS  
UTILITIES UNIT  
1555 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

NABIL HAMDAN UTILITIES REGIONAL ENGINEER  
 KELVIN MARTIN UTILITIES ENGINEER  
 VACANT UTILITIES AREA COORDINATOR  
 DAYTON MARTIN UTILITIES COORDINATOR

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## UTILITIES PLAN SHEET SYMBOLS

### PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	
Water Meter	
Relocate Water Meter	
Remove Water Meter	
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

### PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	

### PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

### EXISTING UTILITIES SYMBOLS

Power Pole		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records		Sanitary Sewer Cleanout	
End of Information			

\*For Existing Utilities  
 Utility Line Drawn from Record (Type as Shown)

Designated Utility Line (Type as Shown)

5/14/13 SYSTEMS/14\_Ut\_sym\_UC2\_psh.dgn REV: 2/1/2012

# UTILITY CONSTRUCTION

## GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.

2. THE EXISTING WATER UTILITIES ARE OWNED BY DARE COUNTY.

3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.

4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.

5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

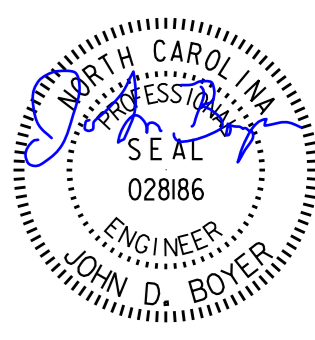
6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE INVESTIGATIONS AND DETERMINE THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.

7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.

8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY, AT NO ADDITIONAL COST TO THE DEPARTMENT OR OWNER.

9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

10. GEOTECHNICAL BORING INFORMATION AND LEVEL A SUBSURFACE UTILITY ENGINEERING (SUE) INFORMATION ARE AVAILABLE UPON REQUEST.

PROJECT REFERENCE NO.	SHEET NO.
R-5014	UC-3
DESIGNED BY: DMD	
DRAWN BY: DMD/MNG	
CHECKED BY: JDB	
APPROVED BY: CMT	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	
<b>UTILITY CONSTRUCTION</b>	
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# UTILITY CONSTRUCTION

## PROJECT SPECIFIC NOTES:

1. DARE COUNTY WATER DEPARTMENT SHALL BE NOTIFIED 72 HOURS PRIOR TO ANY CONSTRUCTION, TIE-INS, OR TESTING OF WATER LINES.

2. CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES. CONTRACTOR SHALL COORDINATE WITH OWNER TO HAVE EXISTING VALVES OPENED/CLOSED.

3. THE UTILITY CONTRACTOR SHALL PROVIDE THE DARE COUNTY WATER DEPARTMENT WITH MATERIAL SUBMITTALS AND SHOP DRAWINGS FOR ALL PROJECT MATERIALS PRIOR TO THE CONSTRUCTION OF ANY WATER LINE AND ASSOCIATED WATER SERVICES IN DARE COUNTY.

4. THE EXISTING 8" AC WATER LINE, ON THE SOUTH SIDE OF COLINGTON ROAD, IS TO REMAIN IN SERVICE DURING THE CONSTRUCTION OF THE PROPOSED 12" PVC WATER LINE. THE CONTRACTOR IS RESPONSIBLE TO PROTECT THE EXISTING WATER LINE AND TO MAINTAIN SERVICE DURING CONSTRUCTION.

5. AFTER COMPLETION OF THE PROPOSED 12" PVC WATER LINE, THE EXISTING 8" AC WATER LINE IS TO BE ABANDONED IN PLACE AND FILLED WITH GROUT FROM -L- STA. 41+83 TO -L- STA. 211+55.

6. WORK ON OR TO ASBESTOS CEMENT (AC) PIPE SHALL BE DONE IN ACCORDANCE WITH ALL STATE AND FEDERAL REGULATIONS. DISPOSAL OF AC PIPE SHALL BE AT A PERMITTED FACILITY AS REQUIRED BY NC LAW.

7. UNLESS OTHERWISE INDICATED ON THESE DRAWINGS. THE CONTRACTOR SHALL SUSTAIN IN THEIR PLACES AND PROTECT FROM DIRECT OR INDIRECT DAMAGE ALL PIPES, CONDUIT, TRACKS, UTILITY POLES, GUIDE RAILS, GUARD POSTS, WALLS, FOUNDATIONS, BUILDINGS, AND OTHER STRUCTURES OR PROPERTY IN THE GROUND, OR THAT MAY APPEAR IN THE TRENCH. PIPES AND UNDERGROUND CONDUITS EXPOSED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE ADEQUATELY SUPPORTED ALONG THEIR ENTIRE EXPOSED LENGTHS.

8. UNLESS OTHERWISE NOTED, ALL PROPOSED WATER LINE SHALL BE 12" C900 PVC, PRESSURE CLASS DR 18 RATED FOR AT LEAST 235 PSI. PVC PIPE JOINTS SHALL BE PUSH ON TYPE HAVING BELLS MADE AS AN INTEGRAL PART OF THE PIPE.

9. WATER LINE PIPING JOINT DEFLECTION SHALL BE LIMITED TO 75% OF THE MANUFACTURER'S ALLOWABLE DEFLECTION.

10. ALL FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT, CLASS 350, AWWA C110 OR AWWA C153.

11. ALL FITTING AND VALVE INSTALLATIONS ON TRANSMISSION AND DISTRIBUTION PIPING SHALL HAVE RESTRAINED JOINTS. REFER TO THE RESTRAINED JOINT DETAIL ON SHEET UC-3GFOR RESTRAINED JOINT LENGTHS.

12. CONNECTIONS TO EXISTING WATER LINE TO BE RESTRAINED BY THRUST COLLARS. SEE DETAIL A ON SHEET UC-3E.

13. ALL WATER MAIN PIPING SHALL BE INSTALLED WITH A MINIMUM DEPTH OF THREE (3) FEET OF COVER. INSTALLATION SHALL PROVIDE CONTINUOUS POSITIVE SLOPE TO AIR RELEASE VALVES OR FIRE HYDRANTS. FIRE HYDRANTS SHOWN ON THE DRAWINGS SHALL BE POSITIONED AT HIGH POINTS WHERE POSSIBLE. LOCATIONS AND NUMBER OF AIR RELEASE VALVES ARE SHOWN FOR BIDDING PURPOSES. THE CONTRACTOR IS RESPONSIBLE FOR PLACING AIR RELEASE VALVES AT ALL HIGH POINTS, UNLESS THE HIGH POINT IS NEAR FIRE HYDRANT, BASED ON THE INSTALLED PROFILE INCLUDING ADDITIONAL HIGH POINTS CREATED BY THE CONTRACTOR.

14. MAINTAIN MINIMUM 18" VERTICAL SEPARATION BETWEEN TRAVERSE CROSSINGS OF THE PROPOSED WATER MAIN AND ALL SEWER LINES.

15. ALL VALVES ON WATER MAINS, INCLUDING HYDRANT LATERALS, SHALL OPEN IN THE LEFT DIRECTION THROUGHOUT THE ENTIRE SYSTEM.

16. OPEN ENDS OF PIPE SHALL BE SECURED WITH WATER TIGHT PLUGS AT THE END OF EACH WORK DAY TO PREVENT CONTAMINATION.

17. ALL WATER LINES ARE TO BE PRESSURE TESTED, CHLORINATED, AND CHECKED FOR BACTERIA IN ACCORDANCE WITH DARE COUNTY'S STANDARD SPECIFICATIONS AND NCDEQ REGULATIONS.

18. CONNECTIONS TO EXISTING WATER MAIN SHALL BE MADE AT TIMES OF LOW DEMANDS, AND COORDINATED WITH THE OWNER. ALL SUCH WORK SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER, AND THE CONTRACTOR SHALL GIVE AT LEAST 72 HOURS NOTICE TO ALL PARTIES CONCERNED PRIOR TO BEGINNING WORK. ALL WATER MAINS SHALL BE TESTED, CLEANED, AND DISINFECTED IN ACCORDANCE WITH DARE COUNTY'S STANDARD SPECIFICATIONS PRIOR TO CONNECTING NEW SERVICES OR EXISTING MAINS.

19. FOR ALL TIE-IN PIPING, CROSSINGS, OR VALVES, CONTRACTOR SHALL VERIFY ALL EXISTING PIPELINE ELEVATIONS, LOCATIONS, DIAMETERS, AND MATERIALS PRIOR TO SHOP DRAWING SUBMITTALS, NOTIFYING THE OWNER OF ANY CONFLICTS. CRITICAL TIE-INS SHALL REQUIRE COORDINATION MEETINGS PRIOR TO SCHEDULED SHUT DOWNS AND CONNECTIONS.

20. WATER AND SEWER LATERALS SERVING RESIDENCES AND BUSINESSES ARE SHOWN IN APPROXIMATE LOCATIONS. CONTRACTOR SHALL VERIFY ACTUAL LOCATION AND RECORD ON RECORD DRAWINGS. CONTRACTOR IS WARNED THAT NOT ALL LATERALS OR SERVICES ARE SHOWN. CONTRACTOR IS TO PROTECT OR REPLACE LATERALS WHETHER SHOWN OR NOT.

21. LOCATIONS AND NUMBER OF WATER SERVICES ARE SHOWN FOR BIDDING PURPOSES. ACTUAL SERVICE INSTALLATION WILL BE DETERMINED IN THE FIELD EITHER BY THE GENERAL LOCATIONS SHOWN OR AS DIRECTED BY THE ENGINEER. RECORD ALL SERVICE LOCATIONS ON THE RECORD DRAWINGS.

22. TRENCHLESS LONG SERVICE CONNECTIONS SHALL BE INSTALLED BY A NCDOT APPROVED TRENCHLESS METHOD. A 2" PVC ENCASEMENT PIPE (200 PSI) SHALL BE UTILIZED UNDER THE ROADWAY EXTENDING 5' BEYOND THE EDGE OF PAVEMENT ON EACH SIDE.

23. PROFILE DOES NOT SHOW EXISTING PARALLEL UTILITIES. ONLY KNOWN EXISTING UTILITY CROSSINGS ARE SHOWN. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

24. THE UTILITY CONTRACTOR SHALL PROVIDE THE DARE COUNTY WATER DEPARTMENT WITH A SET OF RED LINE DRAWINGS IDENTIFYING THE COMPLETE WATER SYSTEM INSTALLED FOR THE PROJECT. THE RED LINE DRAWINGS SHALL IDENTIFY THE MATERIALS, PIPE SIZES AND DEPTHS OF THE WATER LINES AS WELL AS THE GATE VALVES, FIRE HYDRANTS, METER SETTERS, BLOW OFF ASSEMBLIES AND ALL ASSOCIATED APPURTENANCES FOR ALL WATER LINE(S). THE RED LINE DRAWINGS SHALL CLEARLY IDENTIFY ANY DEVIATIONS FROM THE NCDEQ APPROVED PLANS.

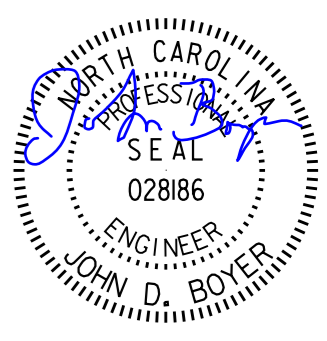
25. RETURN TO DARE COUNTY WATER DEPARTMENT ANY EXISTING VALVES OR HYDRANTS THAT ARE REMOVED OR REPLACED DURING CONSTRUCTION. THE CONTRACTOR SHALL PROTECT THE VALVES AND HYDRANTS FROM DIRECT OR INDIRECT DAMAGE DURING REMOVAL, TEMPORARY STORAGE, AND WHILE TRANSPORTING THEM TO THE OWNER.

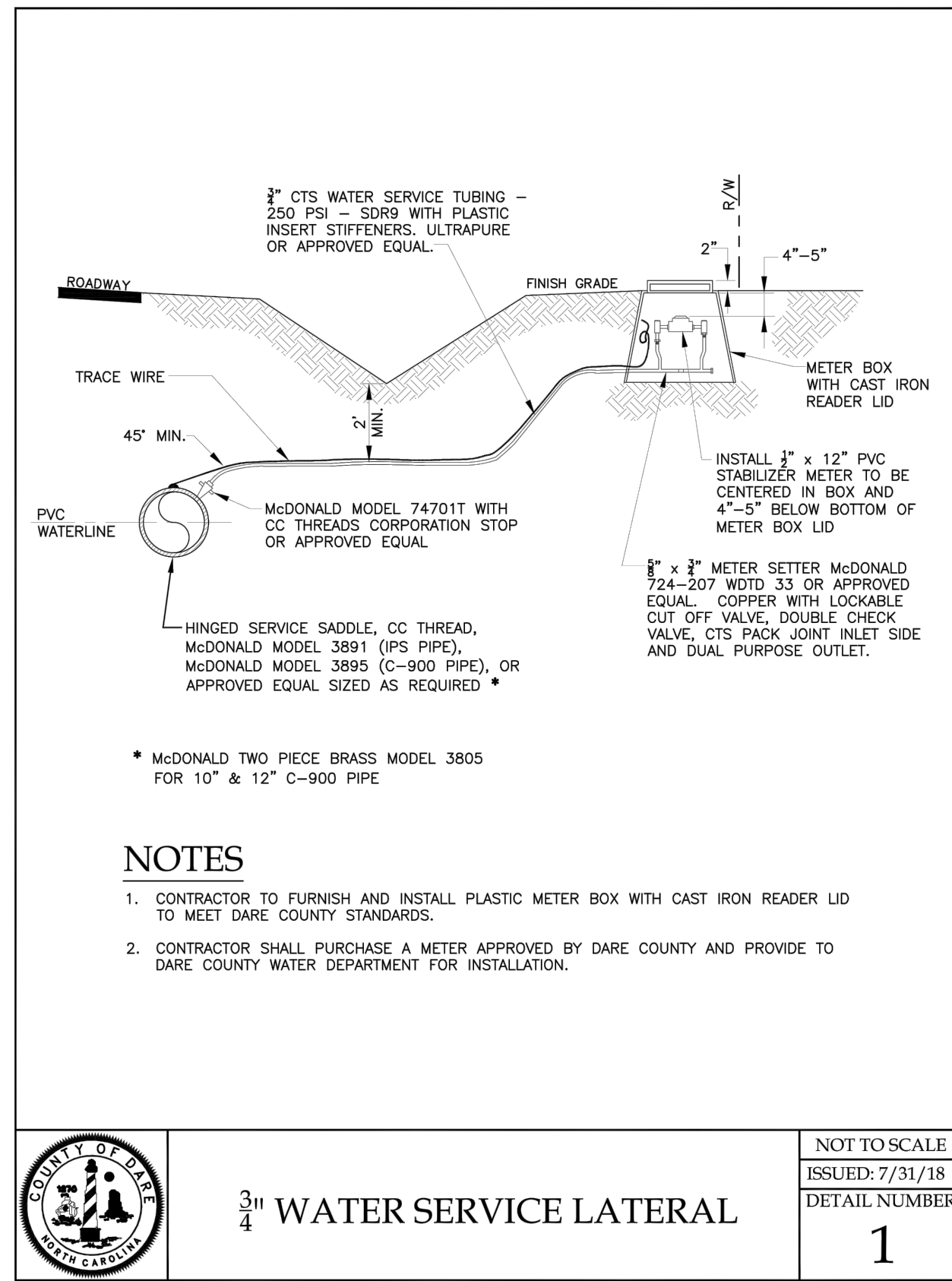
26. UNLESS OTHERWISE NOTED, ALL EXISTING WATER LINE IS ASSUMED TO BE ASBESTOS CEMENT (AC). CONNECTIONS TO AC PIPE ARE TO BE MADE WITH A TRANSITION COUPLING MANUFACTURED BY ROMAC INDUSTRIES, E.J. PRESCOTT INC., DRESSER, OR APPROVED EQUAL. TRANSITION COUPLINGS ARE NOT REQUIRED AND SHOULD NOT BE INSTALLED AT CONNECTIONS WITH DUCTILE IRON OR PVC PIPE, UNLESS APPROVED BY THE ENGINEER AND OWNER.

27. DUCTILE IRON WATER LINE SHALL BE UTILIZED FOR CONCRETE ENCASEMENT, CONCRETE CRADLES, THRUST COLLARS, AND WHEN DEPTH OF COVER IS LESS THAN THREE (3) FEET. BELLS FOR PUSH-ON JOINTS SHALL CONFORM TO THE REQUIREMENTS OF ANSI STANDARD A21.51, SUCH AS "FASTITE", "TYTON", "BELL-TITE", OR APPROVED EQUAL.

28. ALL VALVE LOCATIONS AND BLOW OFFS SHALL BE MARKED WITH A CONCRETE VALVE MARKER WITH A METAL COIN ON TOP SHOWING VALVE SIZE, DISTANCE, AND DIRECTION.

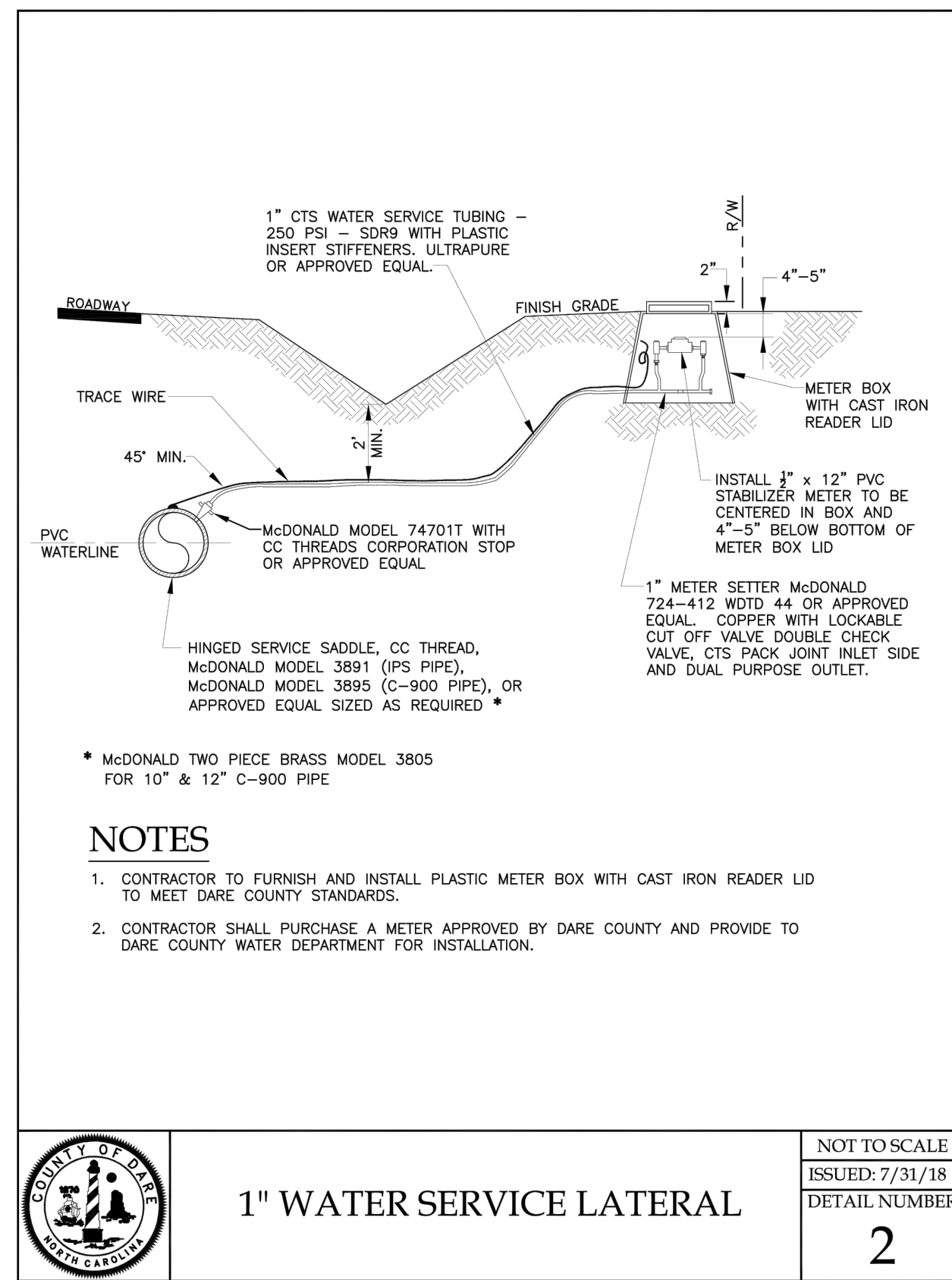
29. THE CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF EACH HYDRANT WITH DARE COUNTY.

PROJECT REFERENCE NO. <b>R-5014</b>	SHEET NO. <b>UC-3A</b>
DESIGNED BY: <b>DMD</b>	
DRAWN BY: <b>DMD/MNG</b>	
CHECKED BY: <b>JDB</b>	
APPROVED BY: <b>CMT</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
<b>UTILITY CONSTRUCTION</b>	
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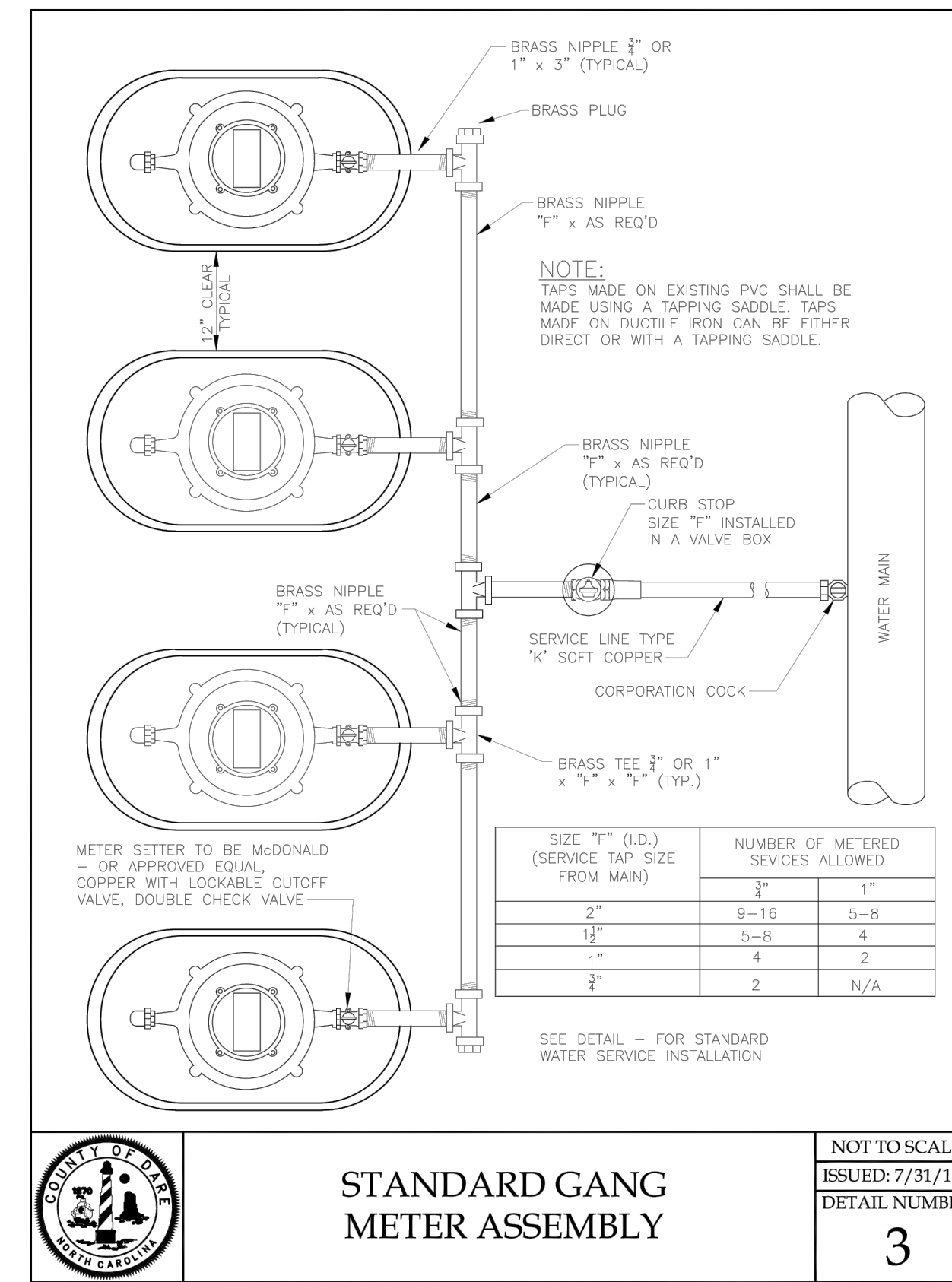
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ISSUED: 7/31/18  
DETAIL NUMBER  
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DETAIL A  
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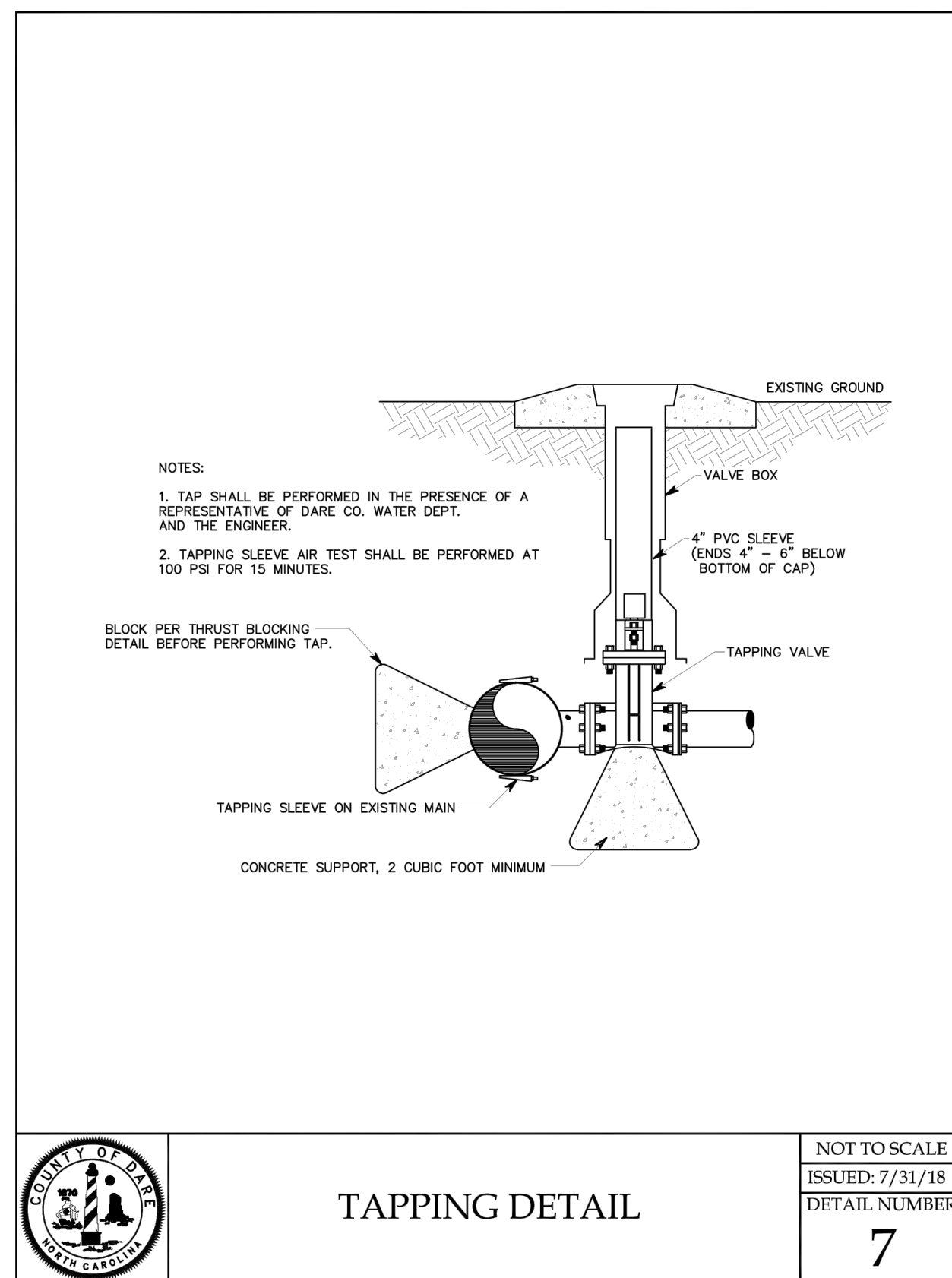
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DETAIL NUMBER  
**2**

DETAIL B  
NTS



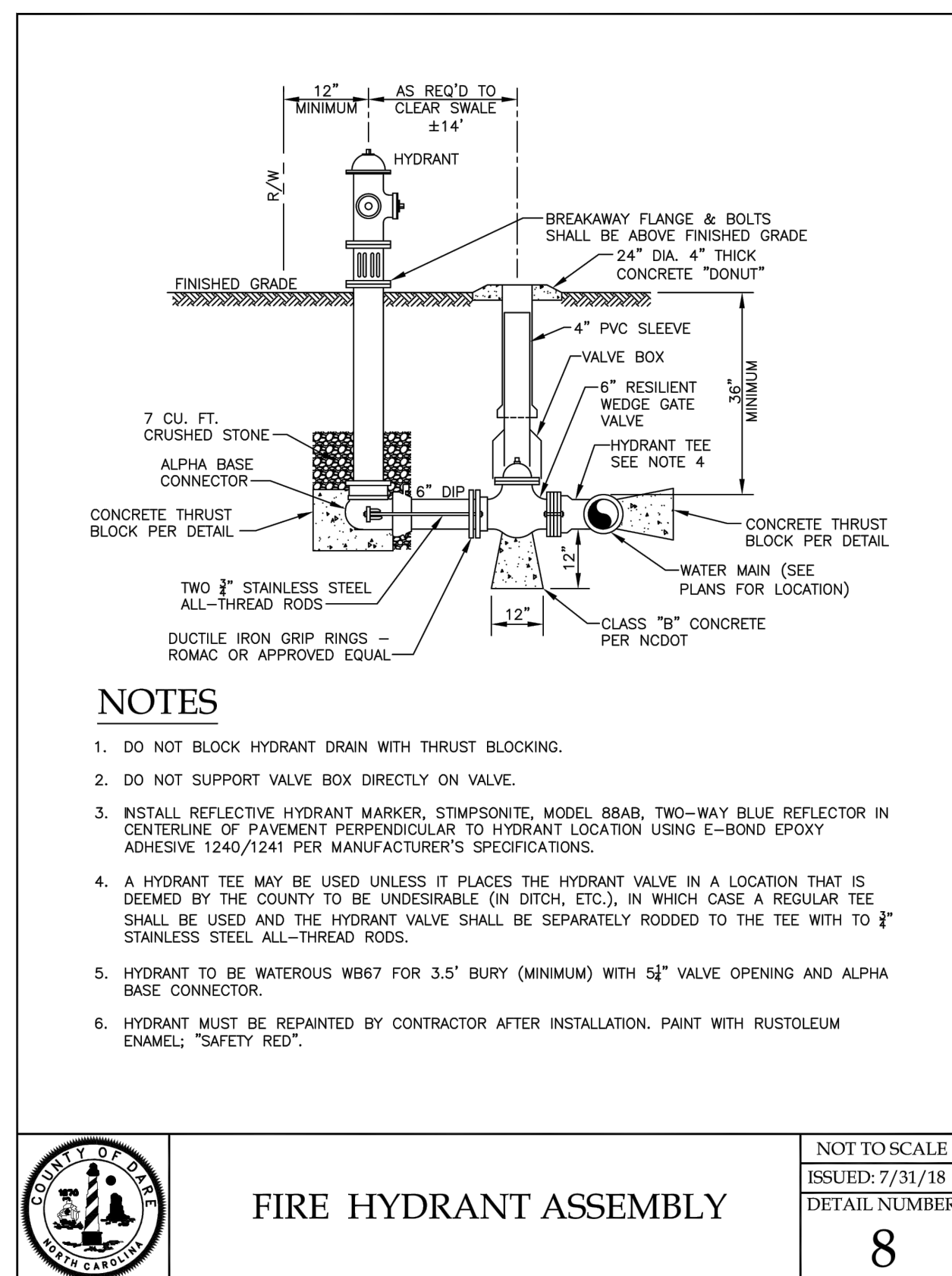
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DETAIL C  
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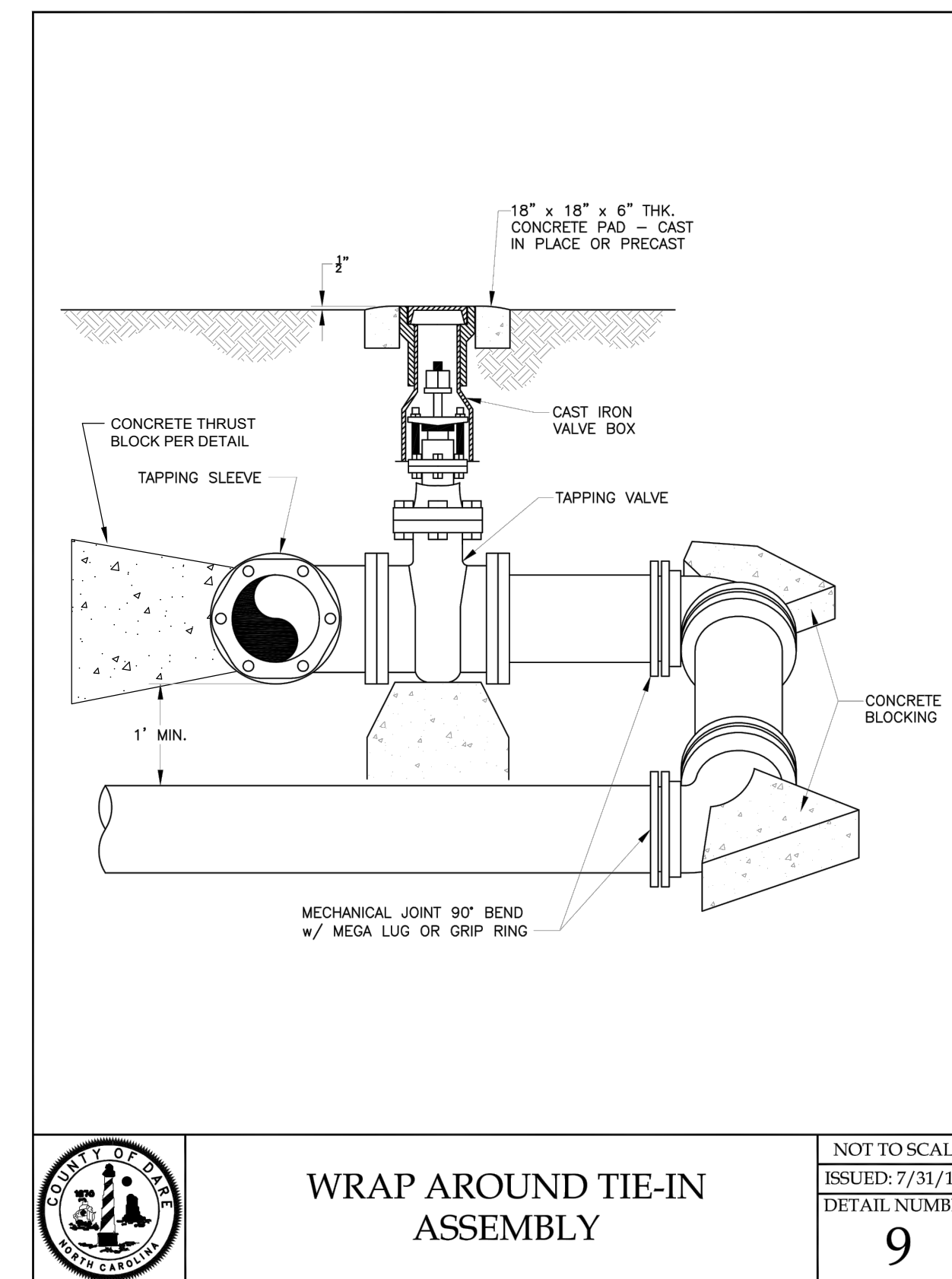
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DETAIL NUMBER  
**7**

DETAIL D  
NTS



NOT TO SCALE  
ISSUED: 7/31/18  
DETAIL NUMBER  
**8**

DETAIL E  
NTS



NOT TO SCALE  
ISSUED: 7/31/18  
DETAIL NUMBER  
**9**

DETAIL F  
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PROJECT REFERENCE NO. R-5014 SHEET NO. UC-3B

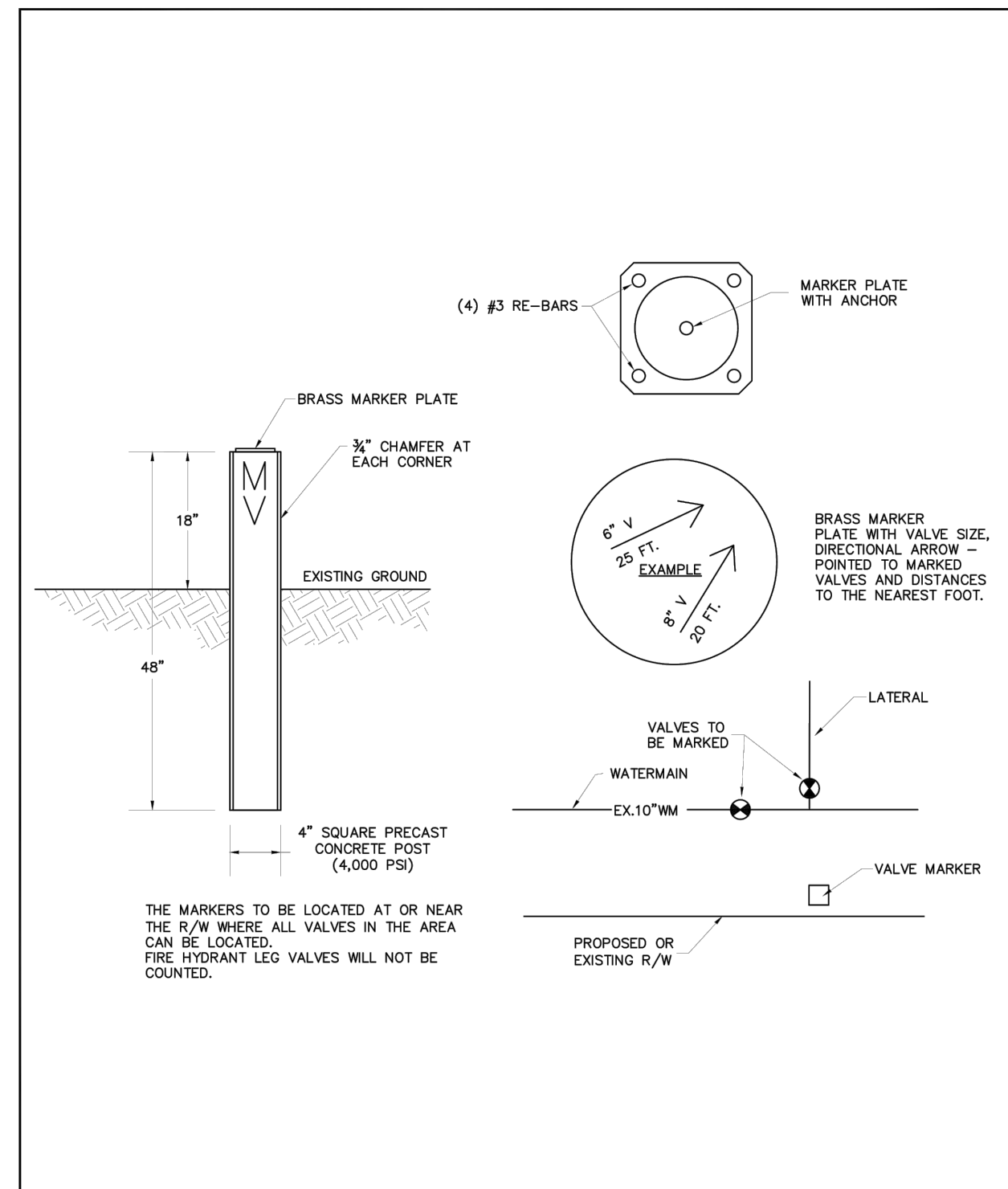
DESIGNED BY: DMD  
DRAWN BY: DMD/MNG  
CHECKED BY: JDB  
APPROVED BY: CMT  
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151

UTILITY CONSTRUCTION PLANS ONLY

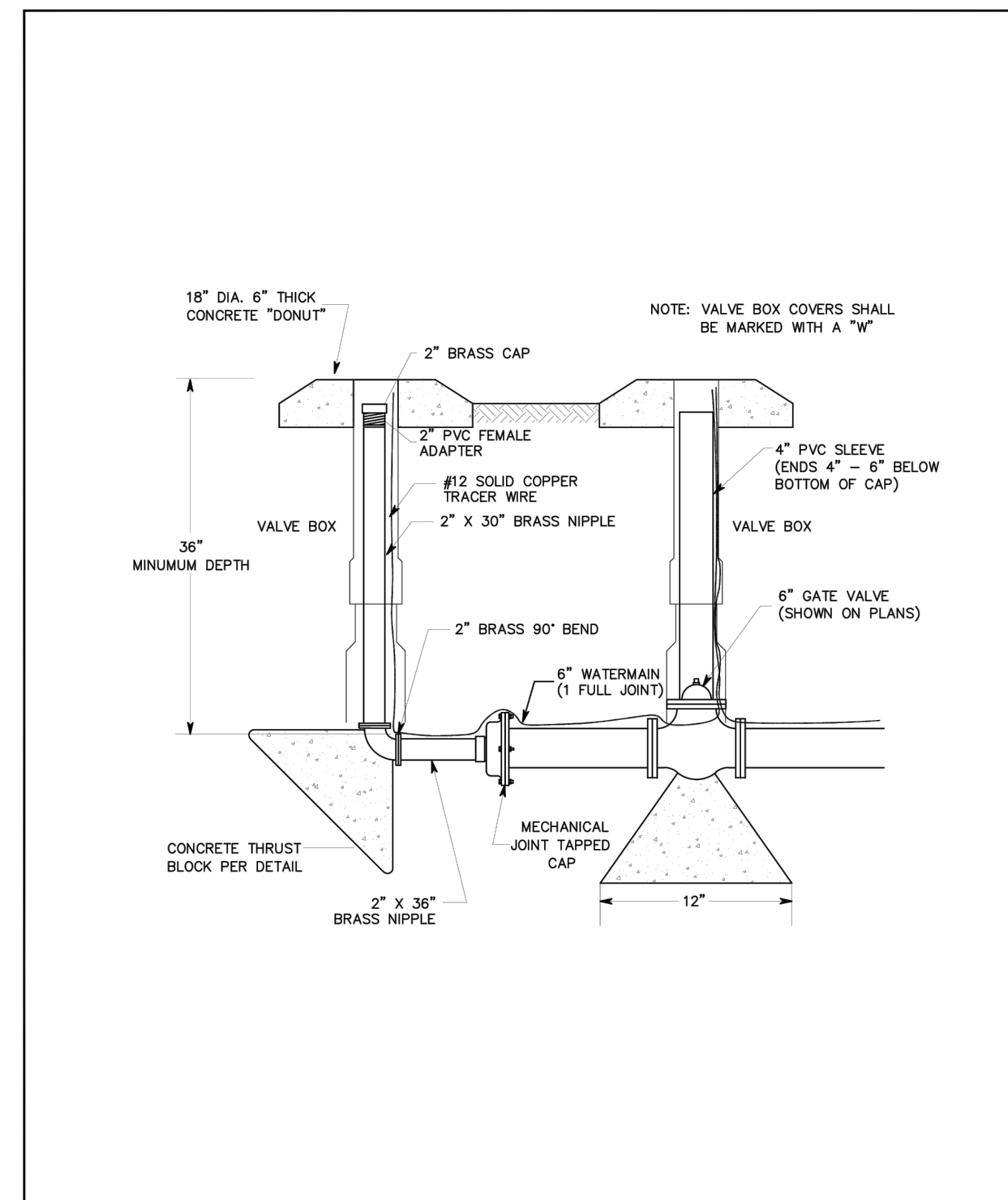
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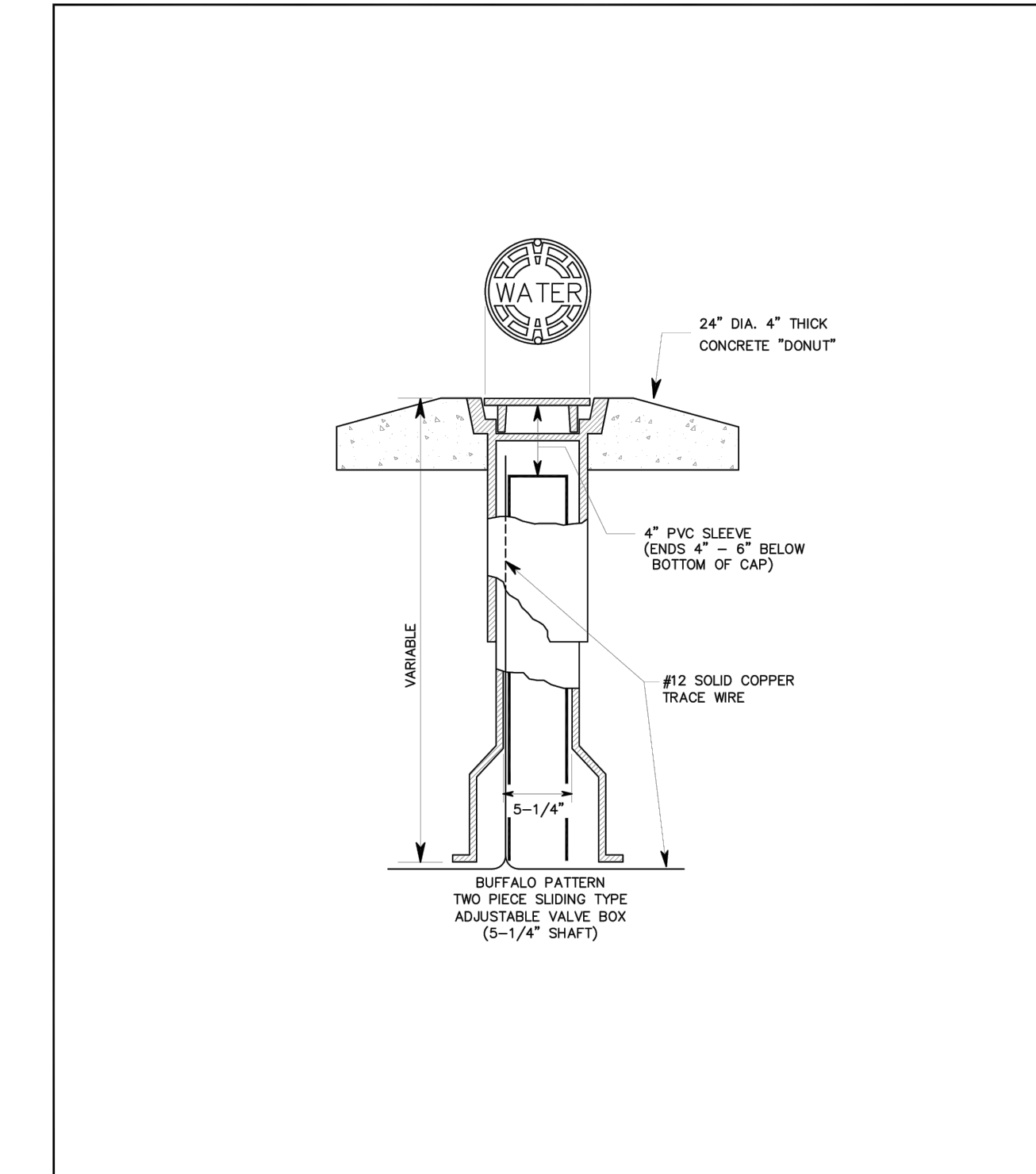
	VALVE MARKER DETAIL	NOT TO SCALE
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		DETAIL NUMBER
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DETAIL **A**  
NTS



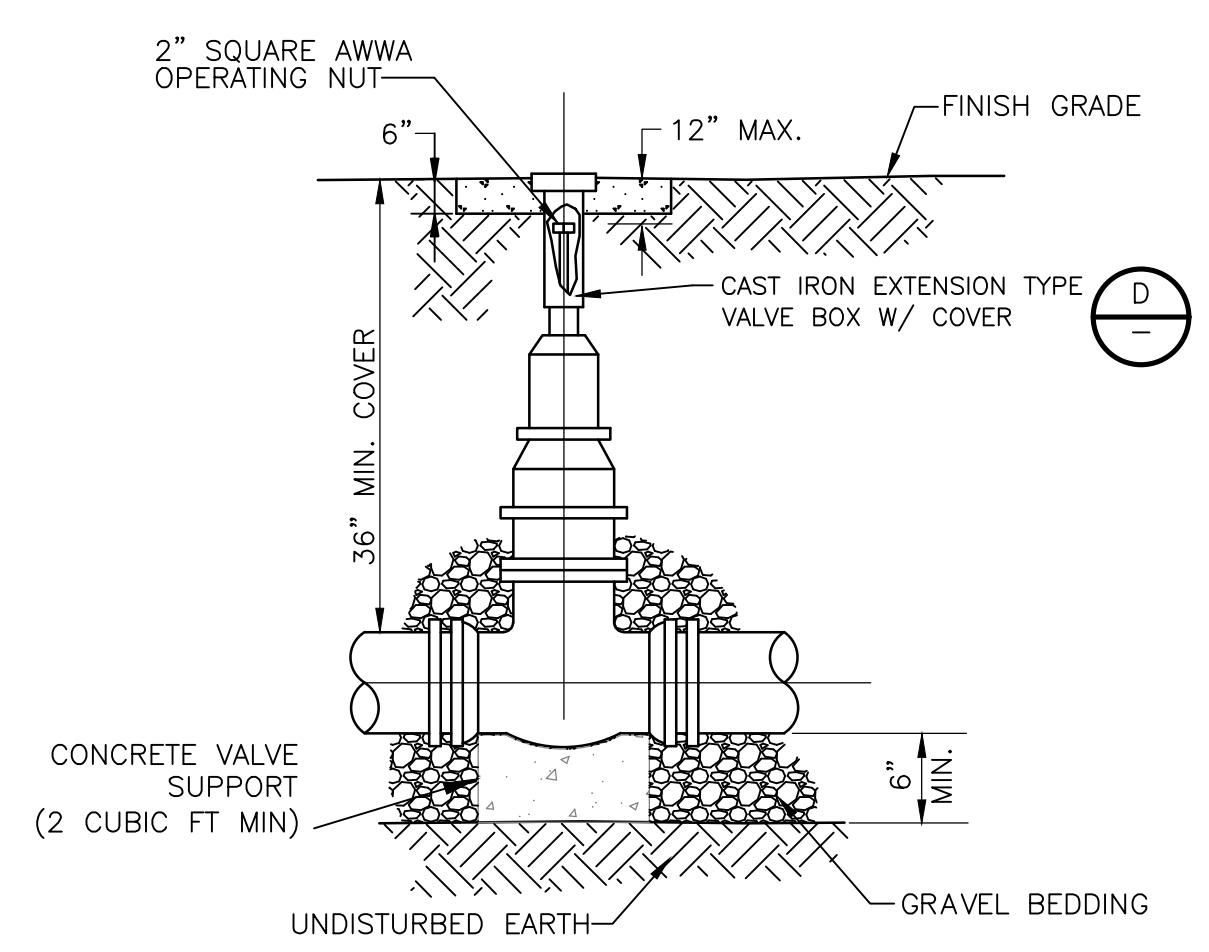
	TEMPORARY BLOW-OFF DETAIL	NOT TO SCALE
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DETAIL **B**  
NTS



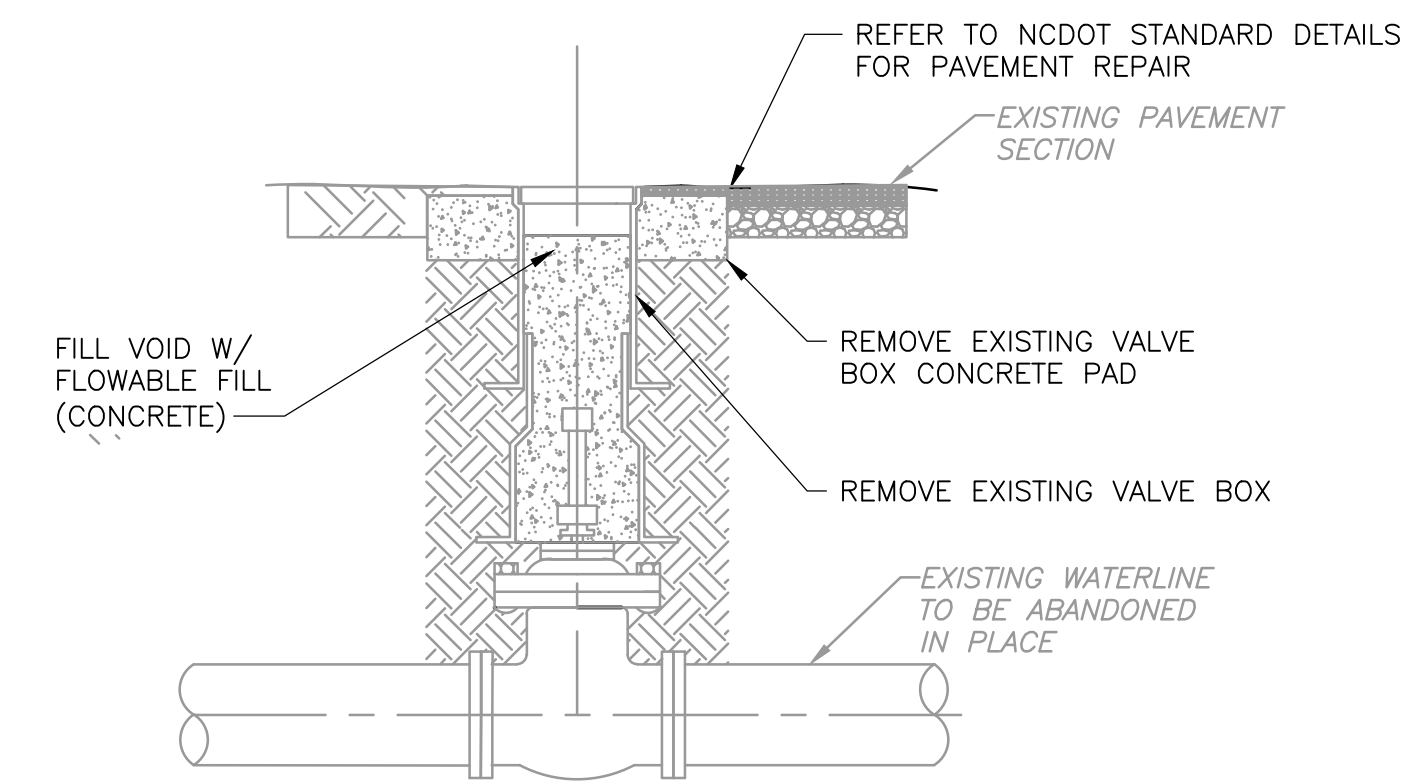
	VALVE BOX DETAIL	NOT TO SCALE
		ISSUED: 7/31/18
		DETAIL NUMBER
	14	

DETAIL **C**  
NTS




	VERTICAL VALVE WITH BELOW GROUND OPERATOR	NOT TO SCALE
		ISSUED: 7/31/18
		DETAIL NUMBER
	D	

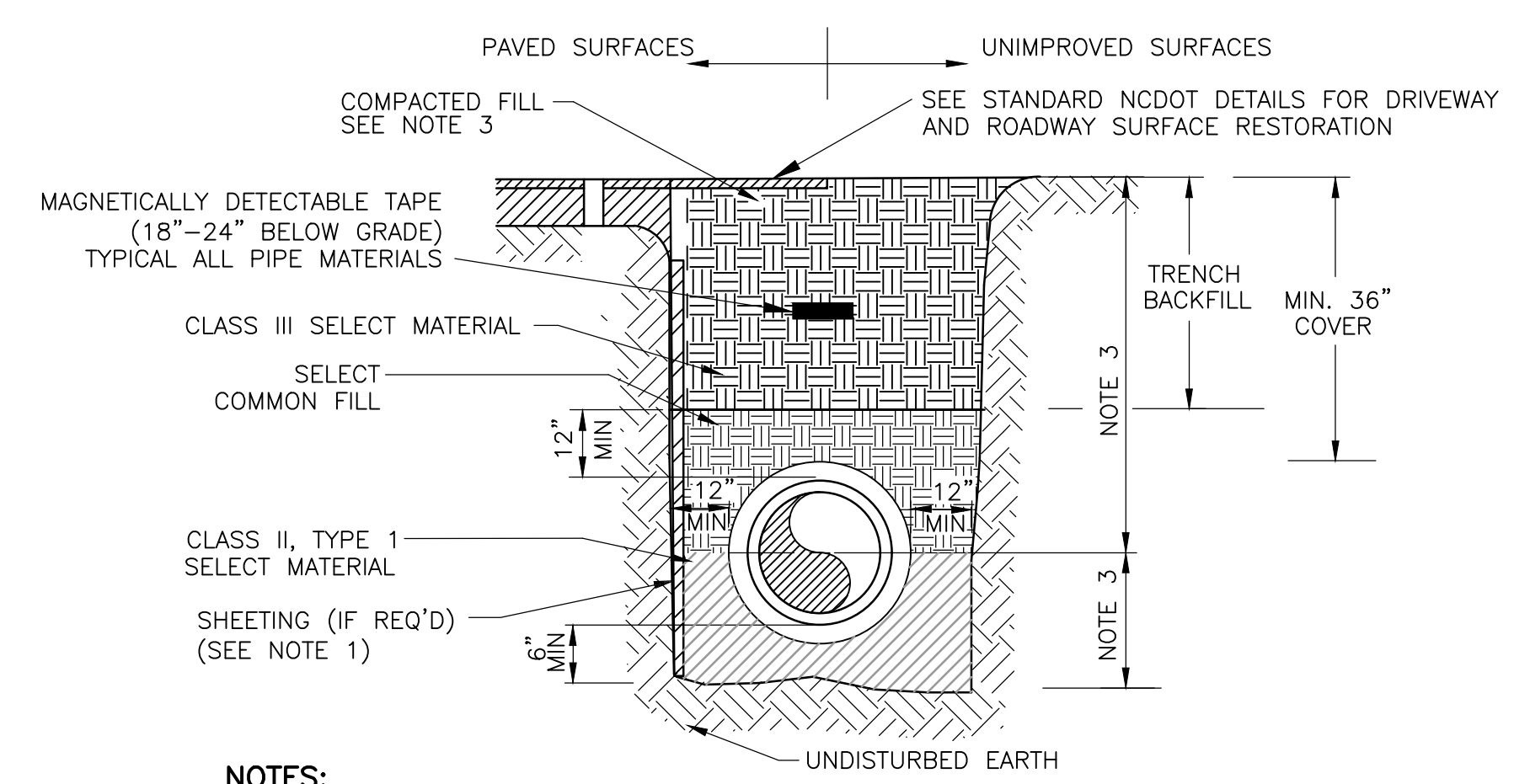
DETAIL **D**  
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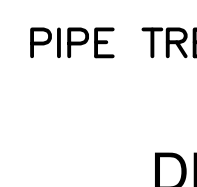
- NOTES:
- CLOSE THE VALVE THEN REMOVE UPPER VALVE BOX AND VALVE BOX COVER.
  - REMOVE EXISTING VALVE NUT.
  - FILL THE VOID AROUND THE VALVE WITH FLOWABLE FILL (CONCRETE) TO WITHIN 6 INCHES OF THE EXISTING PAVEMENT OR GRADE.
  - REPAIR, AS NEEDED, TO MATCH EXISTING SURFACE AT GRADE.
  - REMOVE EXISTING VALVE MARKER.

	ABANDON EXISTING VALVE IN PLACE	NOT TO SCALE
		ISSUED: 7/31/18
		DETAIL NUMBER
	E	

DETAIL **E**  
NTS



- NOTES:
- UTILIZE TRENCH BOXES, SHEETING OR OTHER APPROVED MEANS TO SUPPORT UTILITY TRENCHES IN COMPLIANCE WITH OSHA REQUIREMENTS. SHEETING SHALL BE DRIVEN BELOW THE PIPE INVERT IF REQUIRED FOR LATERAL SUPPORT OR UNSUITABLE MATERIAL REMOVAL. WHERE DRIVEN BELOW PIPE INVERT, SHEETING SHALL BE CUT OFF A MIN OF 12" ABOVE TOP OF PIPE OR HIGHER, AS AUTHORIZED BY THE ENGINEER, AND LEFT IN PLACE. IN NO CASE SHALL SHEETING LEFT IN PLACE EXTEND HIGHER THAN 18" BELOW SURFACE GRADE UNLESS SPECIFICALLY APPROVED. BRACING SHALL BE PROVIDED AS REQUIRED.
  - UNSUITABLE MATERIALS, AS DEFINED IN THE SPECIFICATIONS, SHALL NOT BE USED FOR OR ALLOWED IN BACKFILLING.
  - PLACE BEDDING AND BACKFILL LAYERS AND COMPACT PER SPECIFICATIONS.
  - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION. DEWATER AS SPECIFIED.

	PIPE TRENCH, BEDDING & BACKFILL PIPE INSTALLATION	NOT TO SCALE
		ISSUED: 7/31/18
		DETAIL NUMBER
	F	

DETAIL **F**  
NTS

REVISIONS

8/17/99