

T.I.P. NO.	SHEET NO.
I-5501	UC-1

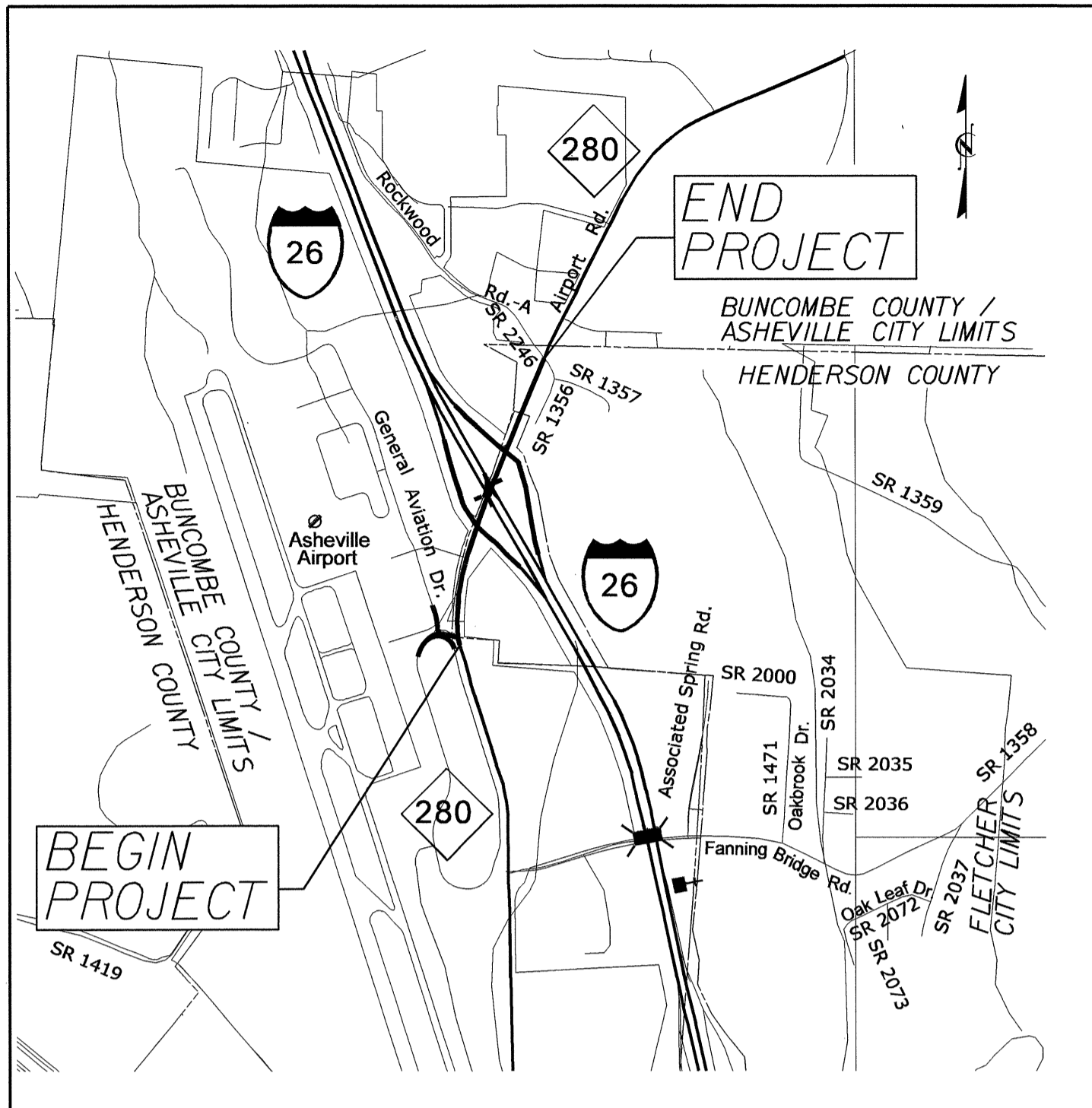
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS  
BUNCOMBE &  
HENDERSON COUNTIES**

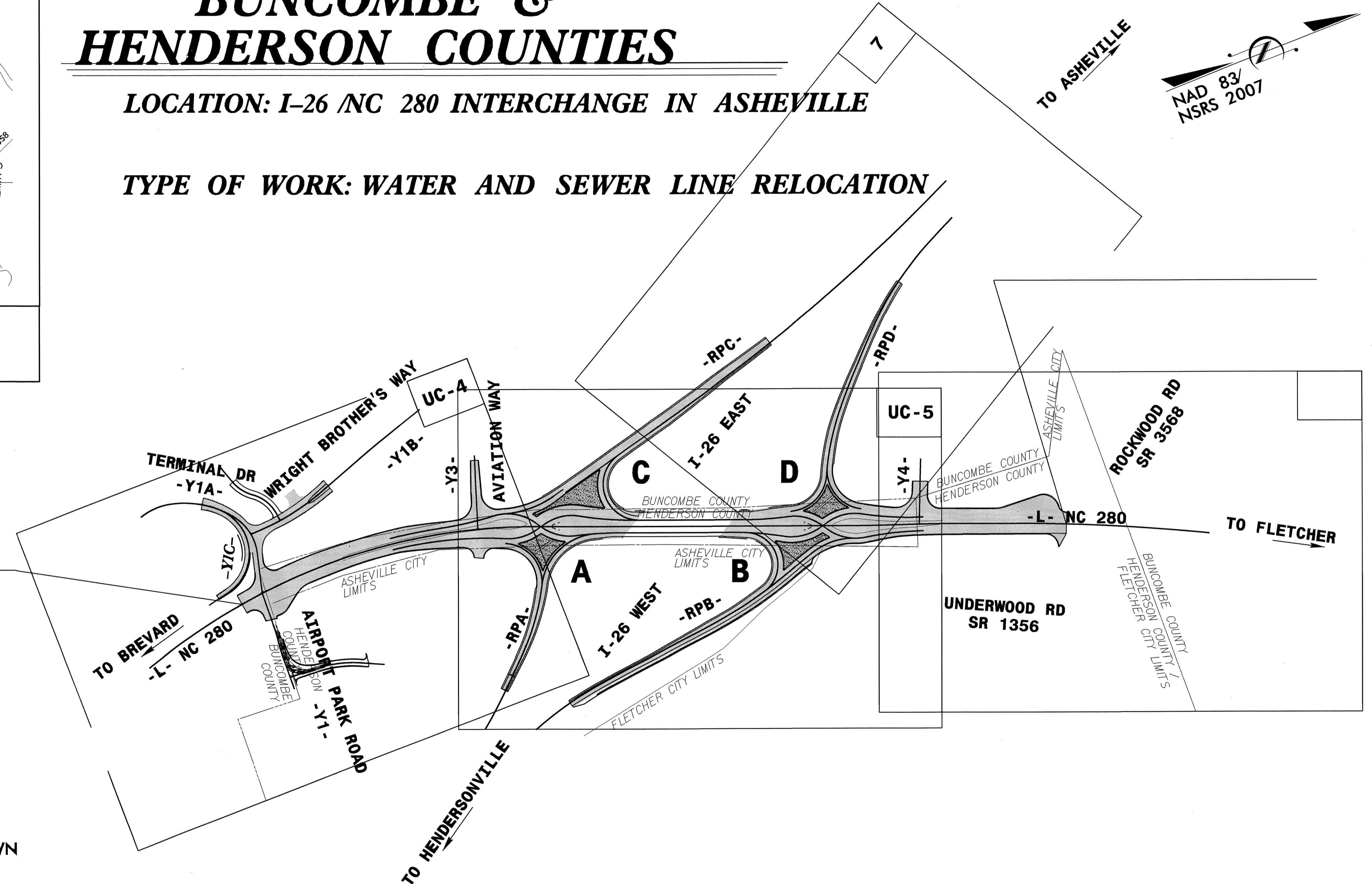
LOCATION: I-26 / NC 280 INTERCHANGE IN ASHEVILLE

TYPE OF WORK: WATER AND SEWER LINE RELOCATION

TIP PROJECT: I-5501

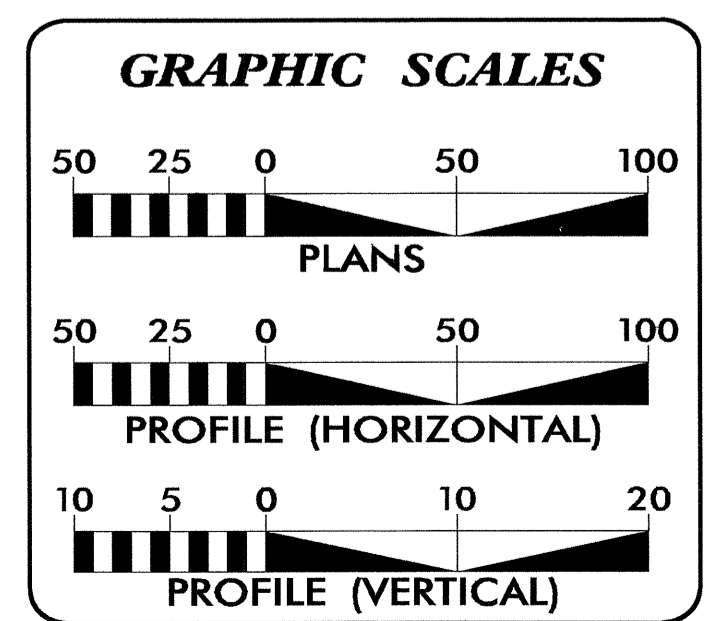


VICINITY MAP



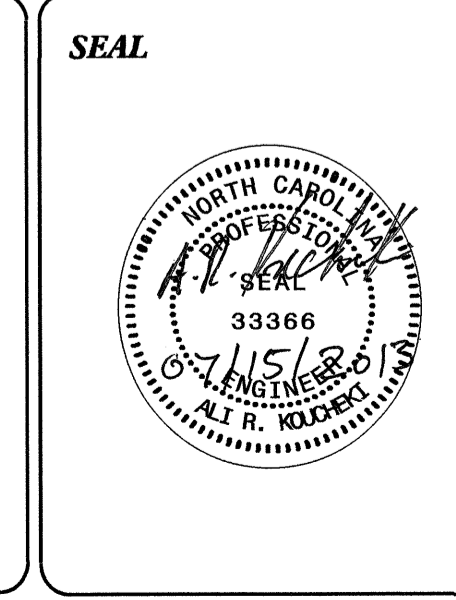
NOTES:

THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-4 THRU UC-10	WATER AND SEWER LINE RELOCATION

WATER AND SEWER OWNERS ON PROJECT	
(1) WATER	CITY OF ASHEVILLE
(2) SANITARY	METROPOLITAN SEWERAGE DISTRICT (MSD)



PREPARED IN THE OFFICE OF:  
DIVISION OF HIGHWAYS  
UTILITIES UNIT  
UTILITIES ENGINEERING

1555 MAIL SERVICES CENTER  
RALEIGH NC 27699-1555  
PHONE (919) 707-6690  
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**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**Carl Barclay, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**Ali Kouchehi, P.E.** UTILITIES PROJECT DESIGNER

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# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## UTILITIES PLAN SHEET SYMBOLS

### PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11 1/4 Degree Bend	
22 1/2 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	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
Water Pump Station	PS(W)
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	PS(SS)

### 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	

NOTE  
PAY ITEM

### 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	AATUR	Sanitary Sewer Cleanout	
End of Information	E.O.I.		

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

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# 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 2012.
2. THE EXISTING UTILITIES BELONG TO CITY OF ASHEVILLE WATER RESOURCES DEPARTMENT AND METROPOLITAN SEWERAGE DISTRICT (MSD)
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, DIVISION OF ENVIRONMENTAL HEALTH. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF WATER QUALITY. 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 OPPROTUNITY 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. MAKE INVESTIGATIONS FOR DETERMINING 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.
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.

## PROJECT SPECIFIC NOTES:

3. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.

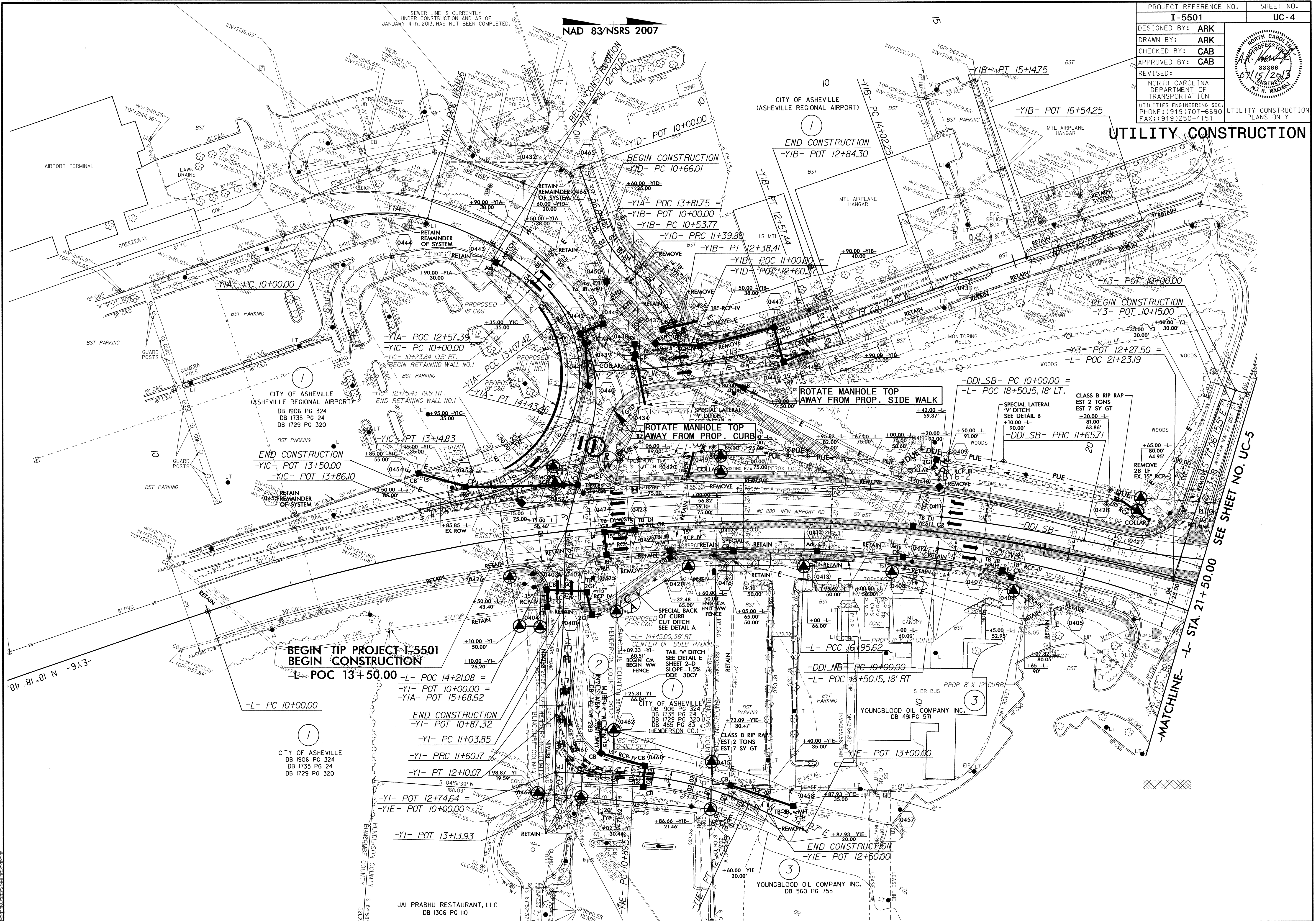
PROJECT REFERENCE NO.	SHEET NO.
	UC-3
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

## UTILITY CONSTRUCTION



PROJECT REFERENCE NO.	SHEET NO.
I-5501	UC-4
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

**UTILITY CONSTRUCTION**



REVISIONS

6/17/09  
 15/4/11/2010/10/04/818  
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SEWER LINE IS CURRENTLY UNDER CONSTRUCTION AND AS OF JANUARY 4TH, 2013, HAS NOT BEEN COMPLETED.

NAD 83/NSRS 2007

**BEGIN TIP PROJECT I-5501  
BEGIN CONSTRUCTION**  
-L- POC 13+50.00

**CITY OF ASHEVILLE**  
DB 1906 PG 324  
DB 1735 PG 24  
DB 1729 PG 320

**JAI PRABHU RESTAURANT, LLC**  
DB 1306 PG 110

**YOUNGBLOOD OIL COMPANY INC.**  
DB 560 PG 755

**ROTATE MANHOLE TOP AWAY FROM PROP. SIDE WALK**

**ROTATE MANHOLE TOP AWAY FROM PROP. CURB**

**CLASS B RIP RAP EST 2 TONS EST 7 SY GT**  
SEE DETAIL B  
SPECIAL LATERAL W/ DITCH  
SEE DETAIL B  
-DDI-SB- PRC 11+65.71

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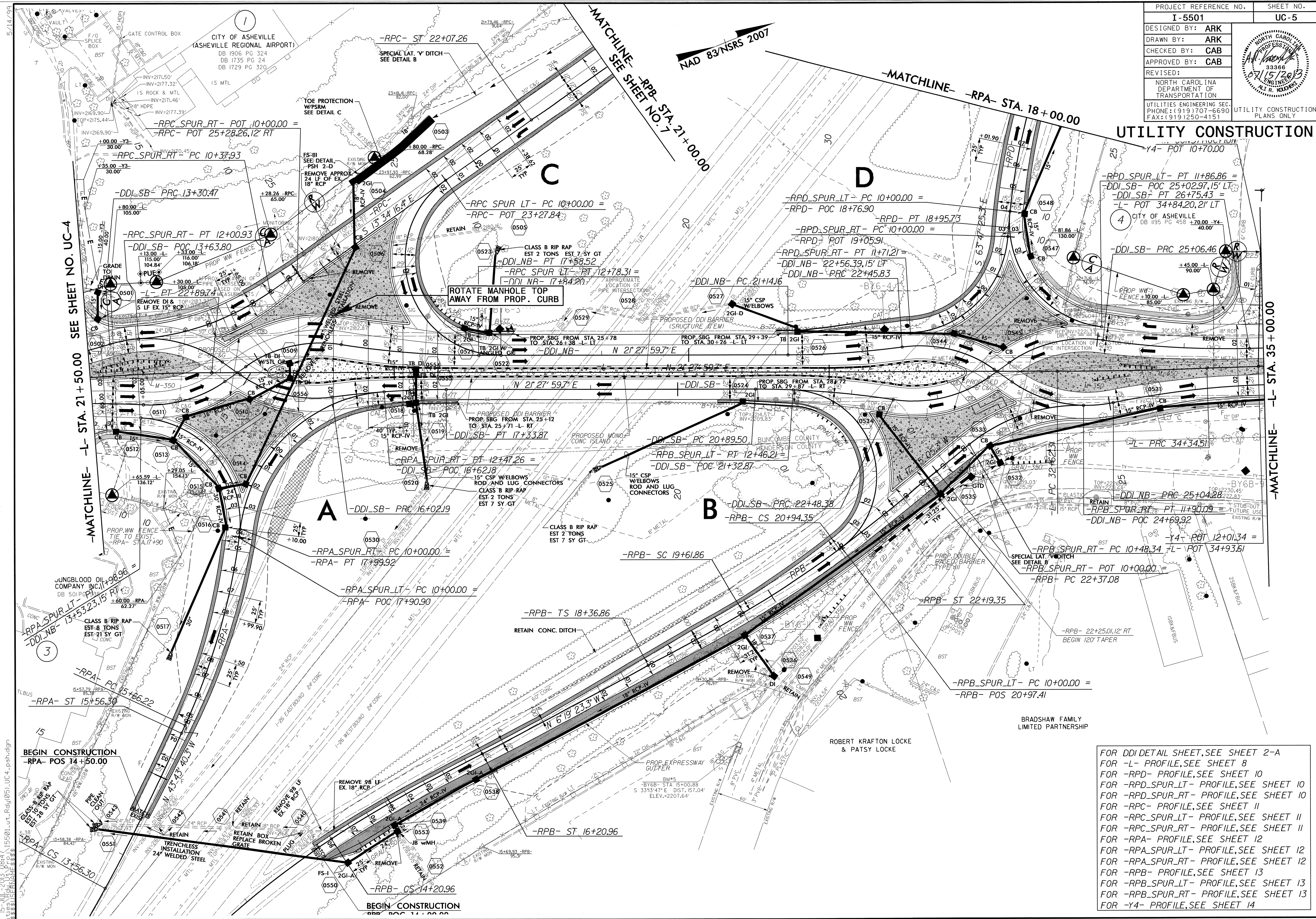
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SEE DETAIL B  
-DDI-SB- PRC 11+65.71

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PROJECT REFERENCE NO.	SHEET NO.
I-5501	UC-5
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

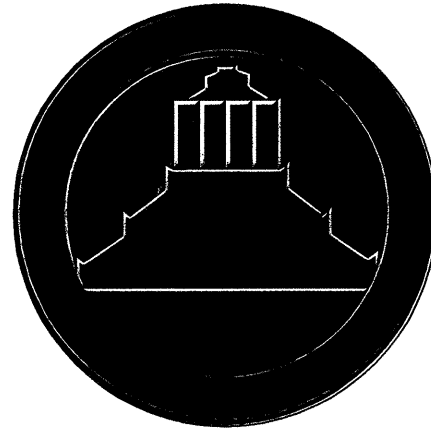
**UTILITY CONSTRUCTION**



FOR DDI DETAIL SHEET, SEE SHEET 2-A  
 FOR -L- PROFILE, SEE SHEET 8  
 FOR -RPD- PROFILE, SEE SHEET 10  
 FOR -RPD\_SPUR\_LT- PROFILE, SEE SHEET 10  
 FOR -RPC- PROFILE, SEE SHEET 11  
 FOR -RPC\_SPUR\_RT- PROFILE, SEE SHEET 11  
 FOR -RPA- PROFILE, SEE SHEET 12  
 FOR -RPA\_SPUR\_LT- PROFILE, SEE SHEET 12  
 FOR -RPA\_SPUR\_RT- PROFILE, SEE SHEET 12  
 FOR -RPB- PROFILE, SEE SHEET 13  
 FOR -RPB\_SPUR\_RT- PROFILE, SEE SHEET 13  
 FOR -Y4- PROFILE, SEE SHEET 14

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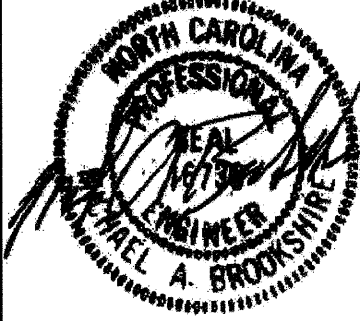




City of Asheville, NC

Water Resources Department

P.O. Box 7148 • Asheville, N.C. 28802 • 828-259-5403

PROJECT REFERENCE NO. I-5501	SHEET NO. UC-6
DESIGNED BY: MCL	
DRAWN BY: MCL	
CHECKED BY: MCL	
APPROVED BY: MB	
REVISED: 7/10/13	
CITY OF ASHEVILLE WATER RESOURCES DEPARTMENT PO BOX 7148 ASHEVILLE, NC 28802 PHONE: 828-259-5403	

UTILITY CONSTRUCTION

PROJECT NUMBER: I-5501

# AIRPORT ROAD NCDOT I-5501 PROJECT

## CITY OF ASHEVILLE, NORTH CAROLINA WATERLINE RELOCATION

### INDEX TO DRAWINGS

SHEET	DESCRIPTION
UC-6	COVERSHEET
UC-7	LOCATION MAPS, CONSTRUCTION & GENERAL NOTES AND TRAFFIC CONTROL
UC-8	AIRPORT ROAD (I-5501) WEST SIDE OF I-26
UC-9	AIRPORT ROAD (I-5501) EAST SIDE OF I-26
UC-10	DETAILS & EROSION CONTROL NOTES





LOCATION MAP  
N.T.S.



LEGEND

- EXISTING SEWER LINE
- RIGHT OF WAY LINE
- |— CHAIN LINK FENCE LINE
- ▲— PROPERTY LINE SURVEYED
- - - LINE NOT SURVEYED
- - - PERMANENT EASEMENT
- - - TEMP. CONSTRUCTION ESMT.
- - - UNDER GROUND TELEPHONE
- - - EXISTING WATER LINE SIZE AS SHOWN
- - - UNDER GROUND GAS LINE
- - - EXISTING UTILITY POLE
- - - EXISTING GUY WIRE
- - - EXISTING MAIL BOX
- EXISTING BOUNDARY MONUMENT
- SEWER MANHOLE
- CLEAN OUT
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED WATER LINE SIZE AS SHOWN
- PROPOSED AIR RELEASE VALVE SIZE AS SHOWN
- PROPOSED DIMJ BEND SIZE AS SHOWN
- PROPOSED FIRE HYDRANT ASSEMBLY

CONSTRUCTION NOTES

1. DISRUPTION OF NATURAL CONDITIONS ALONG THE WATER LINE CONSTRUCTION SHALL BE KEPT TO A MINIMUM. RESTORATION OF THESE AREAS SHALL BE DONE AS SOON AS THE WATER LINE INSTALLATION ALLOWS IT.
2. DUE TO THE NARROW CORRIDOR AVAILABLE, IN SOME AREAS, TO INSTALL THE PROPOSED WATER LINES, THE CONTRACTOR SHALL, AT ALL TIMES, CONDUCT THE WORK IN SUCH A MANNER AS TO INSURE THE LEAST PRACTICABLE OBSTRUCTION TO PUBLIC TRAVEL. THE CONVENIENCE OF THE GENERAL PUBLIC AND OF THE RESIDENTS ALONG AND ADJACENT TO THE AREA OF THE WORK SHALL BE PROVIDED FOR IN A SATISFACTORY MANNER, CONSISTENT WITH THE OPERATION AND LOCAL CONDITIONS. UPON APPROVAL OF NCDOT OR THE DIRECTOR OF ENGINEERING, "STREET CLOSED" SIGNS SHALL BE PLACED IMMEDIATELY ADJACENT TO THE WORK, AS PER TRAFFIC CONTROL PLAN. AT ANY TIME THAT STREETS ARE REQUIRED TO BE CLOSED, THE CONTRACTOR SHALL NOTIFY LAW ENFORCEMENT AGENCIES, FIRE DEPARTMENTS, PARTIES OPERATING EMERGENCY VEHICLES AND RESIDENTS BEFORE THE STREET IS CLOSED AND AGAIN AS SOON AS IT IS OPENED.
3. STORAGE OF MATERIALS AND EQUIPMENT SHALL BE AT A LOCATION WHERE IT MINIMIZES TRAFFIC CONFLICT AND PUBLIC INCONVENIENCE. CONTRACTOR IS RESPONSIBLE FOR SECURING PERMISSION OF THE STORAGE SITE FROM THE RESPECTIVE OWNER OR GOVERNMENT AGENCY.
4. CONTRACTOR SHALL BE RESPONSIBLE TO ADHERE AND COMPLY WITH ALL THE SPECIAL REQUIREMENTS OUTLINED BY THE DIFFERENT PERMITTING AGENCIES IN CONJUNCTION WITH THE PROPOSED WATER LINE CONSTRUCTION.
5. CONTRACTOR WILL BE RESPONSIBLE TO RE-STRIP ALL ROADS WHICH ARE SCHEDULED TO BE OVERLAYERED OR WHERE CONSTRUCTION OPERATIONS DISTURB OR DAMAGE EXISTING PAVEMENT MARKINGS. RE-STRIPPING SHALL BE DONE IN ACCORDANCE TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
6. BUNCOMBE COUNTY PROPERTY TAX DATA SHOWN WAS OBTAINED FROM GIS RECORDS.
7. IN AREAS WHERE NEW WATER LINE IS INSTALLED WITHIN THE IMPROVED PAVED SURFACE, TRENCH SHALL BE REPAIRED IN ACCORDNCE WITH TRENCH REPAIR DETAILS, OR AS OTHERWISE REQUIRED BY NCDOT FOR STATE MAINTAINED ROADWAYS OR CITY OF ASHEVILLE'S PUBLIC WORK DEPT FOR CITY MAINTAINED STREETS. SURFACE OVERLAY SHALL MATCH EXISTING PAVEMENT GRADE.
8. REPAIR EXISTING DRIVEWAYS/WALKWAYS WITH SAME MATERIAL. SAW-CUT TRENCH EDGES TO PROVIDE SMOOTH TRANSITION. CONTRACTOR MUST REGRADE AND REPAIR ALL DISTURBED SHOULDER AREAS TO PRE-EXISTING CONDITIONS.
9. IN AREAS WHERE NEW WATER LINE CROSSES OTHER UNDERGROUND UTILITIES, COVER ADJUSTMENTS CAN BE MADE TO ALLOW INSTALLATION OF WATER LINE ABOVE THE OTHER EXISTING UTILITY. IN ALL CASES, ADEQUATE VERTICAL SEPARATION AND A MINIMUM OF 24" OF COVER MUST BE PROVIDED.
10. THE CONTRACTOR SHALL GIVE FIVE (5) DAYS WRITTEN NOTICE TO NCDOT AND THE CITY OF ASHEVILLE'S WATER RESOURCES DEPARTMENT PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITY WITHIN NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY.

ASSITANT DISTRICT ENGINEER  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
POST OFFICE BOX 3279  
ASHEVILLE, NORTH CAROLINA 28802

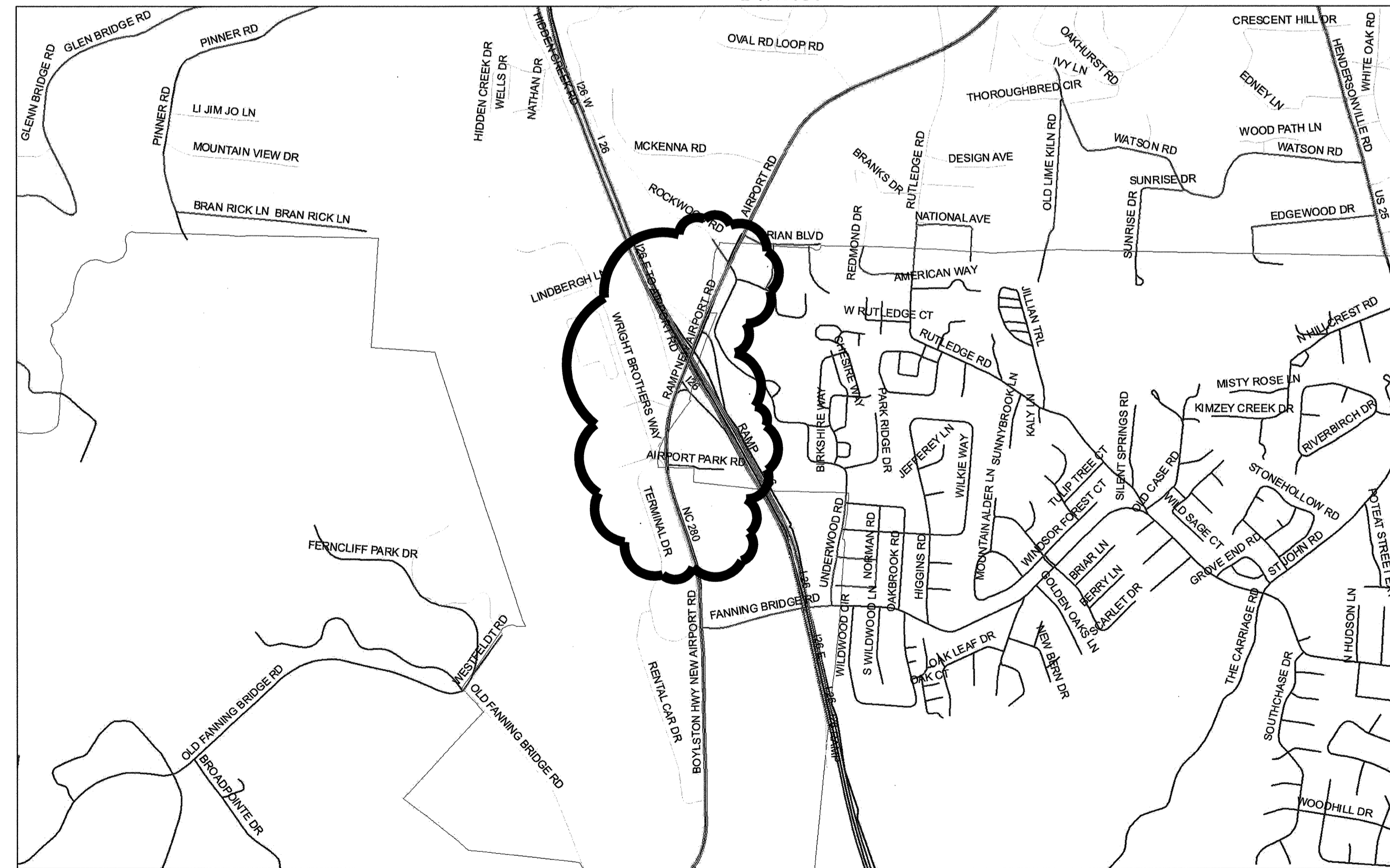
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DRAWN BY: MCL	
CHECKED BY: MCL	
APPROVED BY: MB	
REVISED: 7/10/13	
CITY OF ASHEVILLE WATER RESOURCES DEPARTMENT PO BOX 7148 ASHEVILLE, NC 28802 PHONE: 828-259-5403	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

GENERAL NOTES

- \* A MINIMUM OF 10' HORIZONTAL OR 3' MINIMUM HORIZONTAL AND 18" VERTICAL SEPARATION BETWEEN WATER AND SANITARY SEWER LINES MUST BE MAINTAINED. WHERE THE WATER LINE INSTALLATION DOES NOT CONFORM TO THIS REQUIREMENT OR WHERE SEWER LINE CROSSES OVER WATER LINE, SEWER PIPE MUST BE OF A FERROUS MATERIAL FOR A DISTANCE OF 10FT ON BOTH SIDES OF CROSSING.
- \* WATER LINE SHALL HAVE A MINIMUM OF 5' HORIZONTAL OR 3' MINIMUM HORIZONTAL AND 12" VERTICAL SEPERATION FROM ALL OTHER UTILITIES.
- \* A MINIMUM OF 36" OF GROUND COVER SHALL BE MAINTAINED FOR ALL WATER LINES
- \* ALL WATER DISTRIBUTION SYSTEM COMPONENTS ARE TO BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH THE STANDARDS OF THE CITY OF ASHEVILLE
- \* LOCATION AND DEPTH OF EXISTING UTILITIES IS APPROXIMATE ONLY. CONTRACTOR TO VERIFY EXACT LOCATION IN THE FIELD PRIOR TO STARTING CONSTRUCTION.
- \* TYPE AND SIZE OF EXISTING WATER LINE IS BASED UPON BEST AVAILABLE INFORMATION.
- \* CONTRACTOR TO COORDINATE ALL PROPOSED CROSS CONNECTIONS WITH THE CITY OF ASHEVILLE WATER RESOURCES DEPARTMENT, WATER MAINTENANCE DIVISION IN ORDER TO MINIMIZE WATER SERVICE INTERRUPTIONS.
- \* THE LOCATION OF EXISTING UTILITIES ACROSS OR ALONG THE LINE OF THE PROPOSED WORK IS NOT NECESSARILY SHOWN ON THE DRAWINGS.
- \* THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION AND RESTORATION OF ALL BUILDINGS, STRUCTURES, AND UTILITIES, PUBLIC OR PRIVATE, INCLUDING POLES, SIGNS, SERVICES TO BUILDING, UTILITIES IN THE STREET, GAS PIPES, WATER PIPES, HYDRANTS, SEWERS, DRAINS AND ELECTRIC AND TELEPHONE CABLES, WHETHER OR NOT THEY ARE SHOWN ON THE DRAWINGS. CONTRACTOR SHALL CAREFULLY SUPPORT AND PROTECT ALL SUCH STRUCTURES AND UTILITIES FROM INJURY. DAMAGE RESULTING FROM CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY CONTRACTOR.
- \* THE CONTRACTOR SHALL FULLY COOPERATE AT ALL TIMES WITH THE UTILITY OWNERS TO MAINTAIN THE OPERATION OF EXISTING UTILITIES WITH THE LEAST AMOUNT OF INTERFERENCE AND INTERRUPTION POSSIBLE. CONTINUOUS SERVICE, PUBLIC HEALTH AND SAFETY CONSIDERATIONS SHALL EXCEED ALL OTHERS AND CONTRACTOR'S SCHEDULE, PLANS AND WORK SHALL AT ALL TIMES BE SUBJECT TO ALTERATION AND REVISION IF NECESSARY FOR THESE CONSIDERATIONS.
- \* THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY OR PERMANENT RELOCATION OF STRUCTURES AND UTILITIES, INCLUDING BUT NOT LIMITED TO POLES, SIGNS, FENCES, HYDRANTS, VALVES PIPING, CONDUITS AND DRAINS THAT INTERFERE WITH THE POSITIONING OF THE WORK AS SHOWN ON THE DRAWINGS.

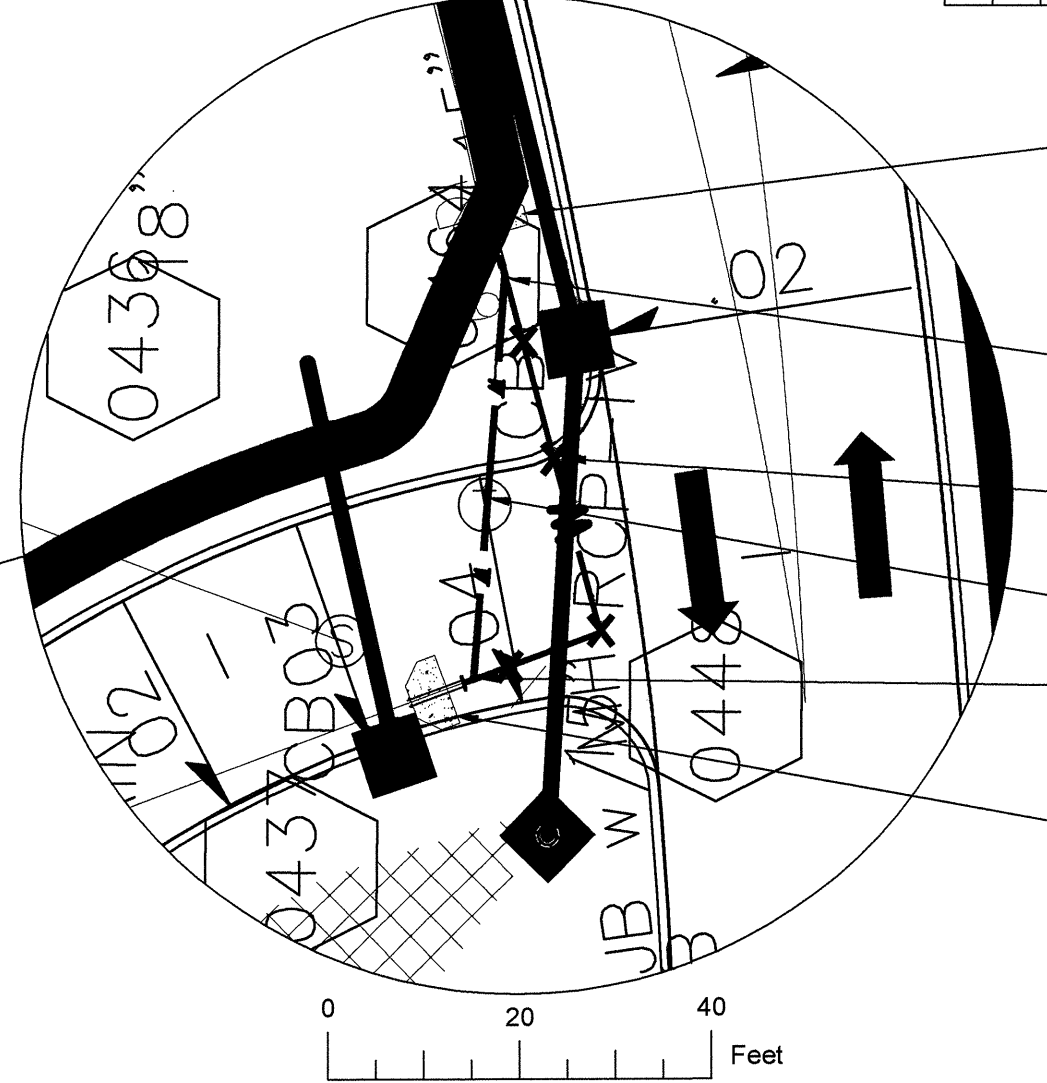
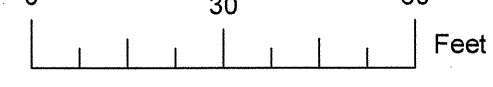
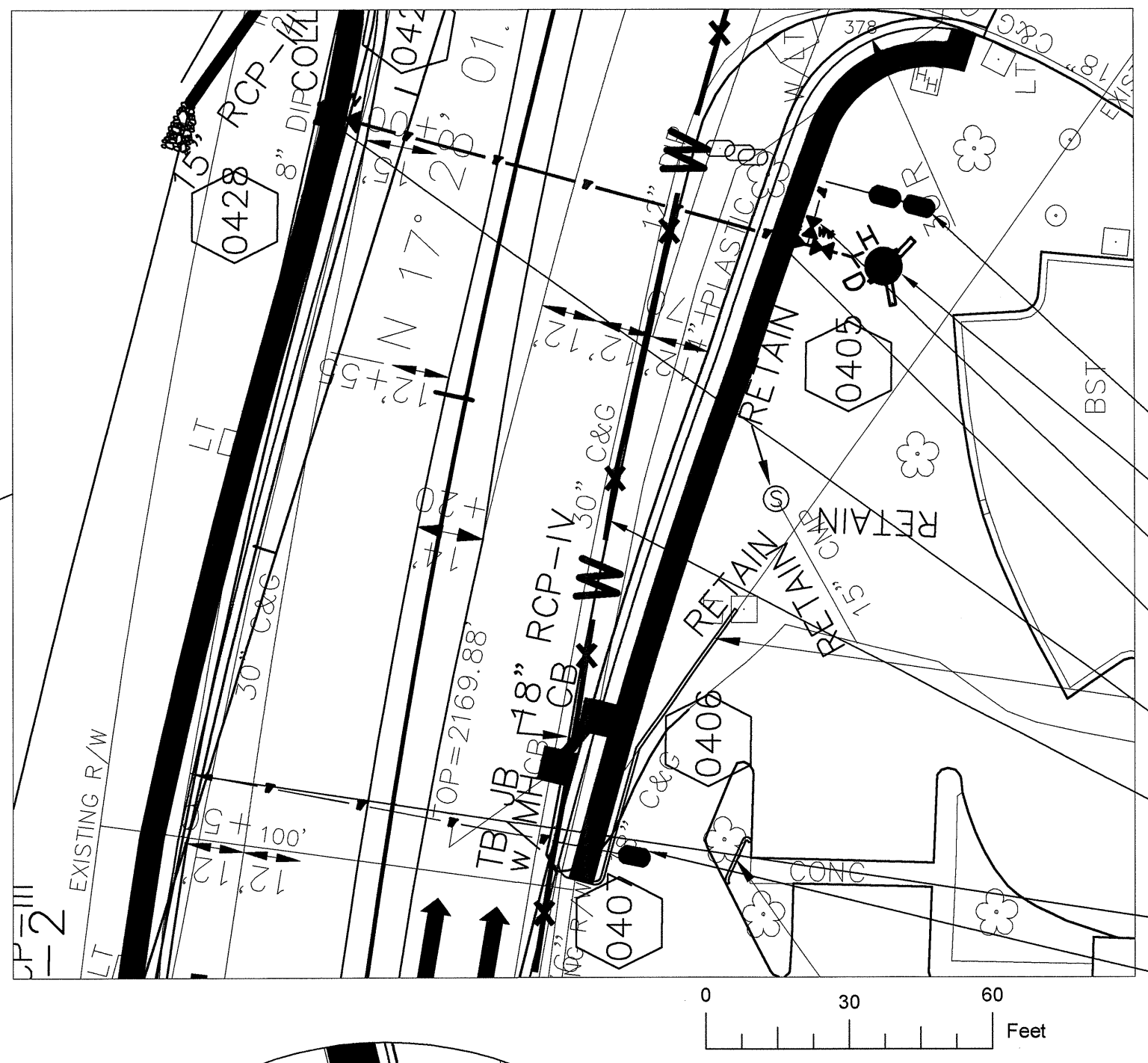
VICINITY MAP  
N.T.S.



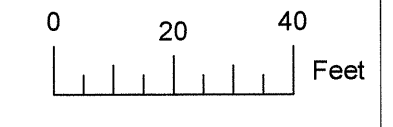
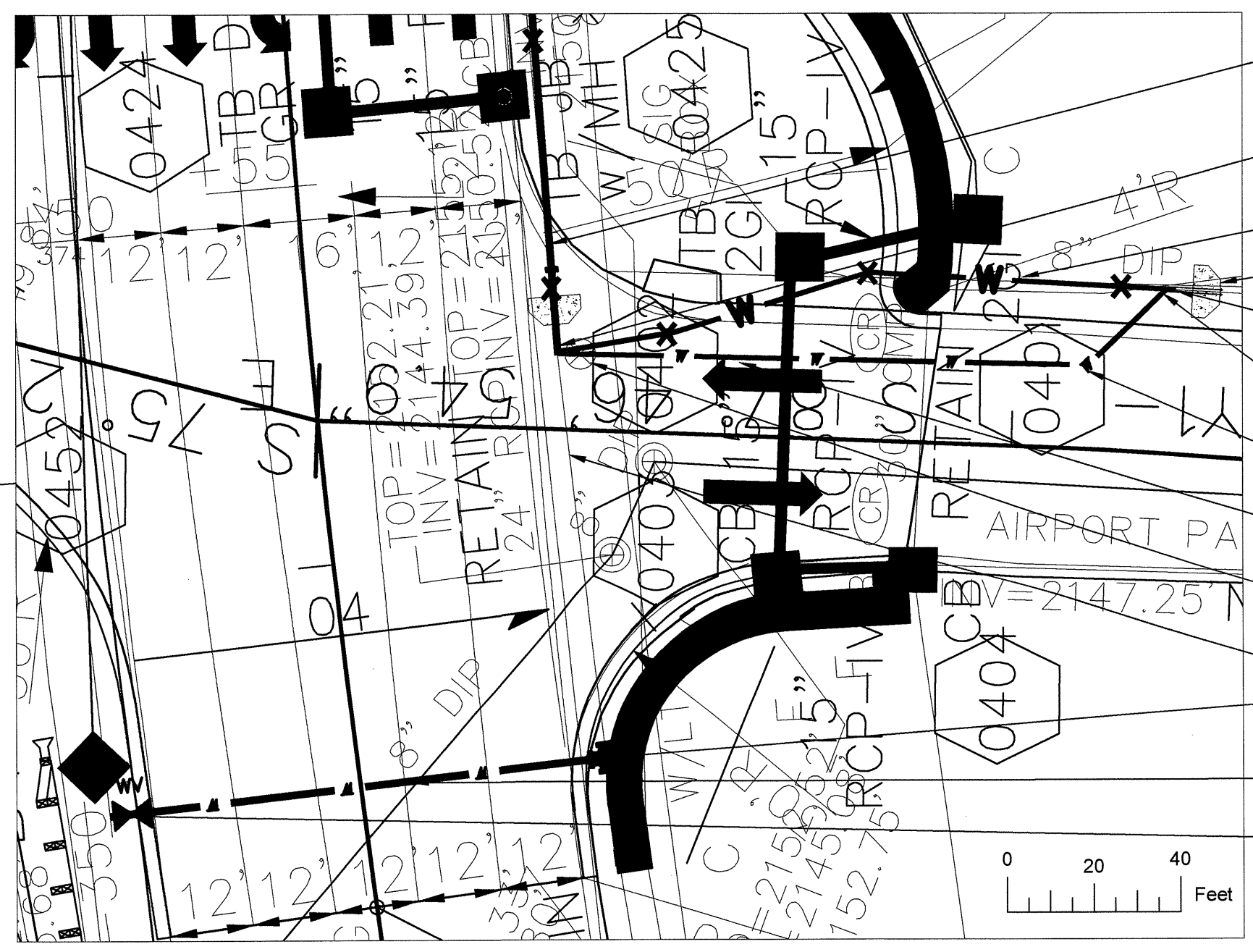
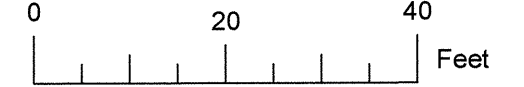


# UTILITY CONSTRUCTION

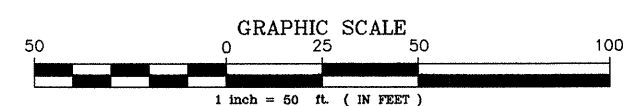
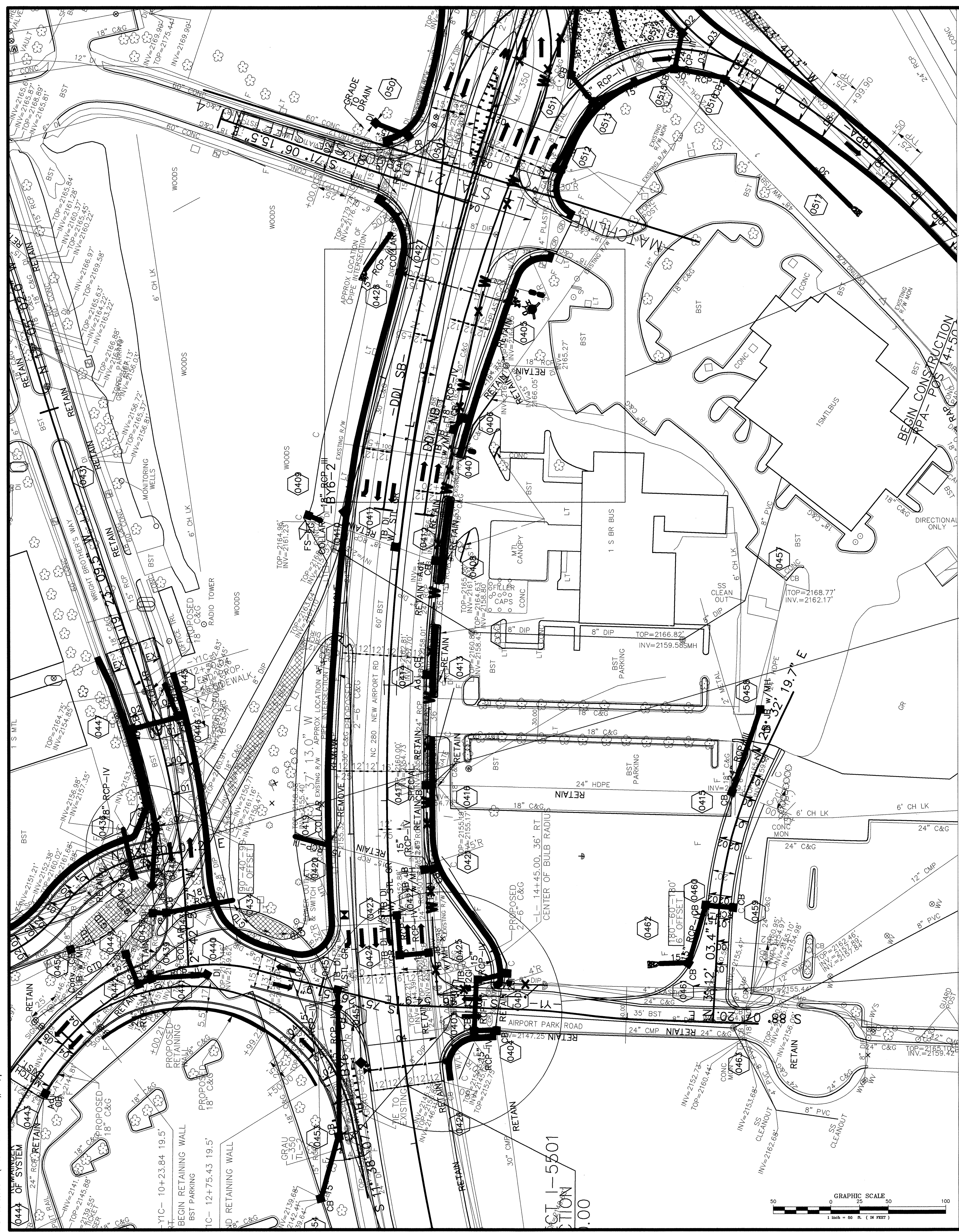
- Relocated New 1 1/2" BMW of Asheville Water Meter & Backflow
- New 6" GV & fire hydrant assembly
- Provide 2" tap with 2" brass ball valve connect to meter with 2" type K Copper
- New 8" DIP WL with 8"x6" reducer just before 2" tap
- 24"x8" tapping saddle and 8" GV
- 12" DIP WL to be abandoned from just before Underwood Rd to Airport Park Rd
- 24"x12" Tapping Saddle & New 1" type K copper WL to meter
- Relocate & Renew Youngblood Oil Company Meter 1"




- Concrete dead man, rod to bend
- Use appropriate fittings to reconnect 6" WL
- Abandon 6" DIP WL
- New 6" WL to provide appropriate clearances between WL and Storm drain
- Use appropriate fittings to reconnect 6" WL
- All fittings to be restrain joint
- Concrete dead man, rod to bend



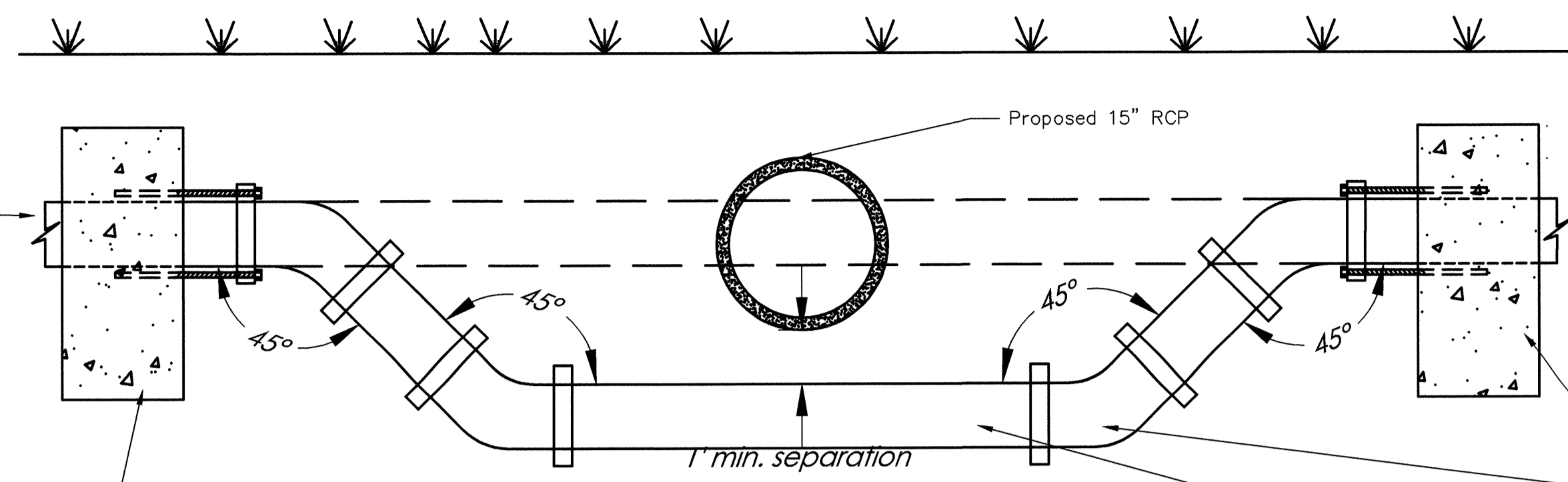
- Existing 12" WL to be abandoned
- Cap or plug 12" WL out of Tee
- 8" WL to be abandoned
- Concrete dead man, rod to bend
- Connect to existing 8" WL
- 45° Bend (Restrained Joint)
- 45° Bend (Restrained Joint)
- New 8" DIP WL (Restrained Joint)
- Connect to existing 8" WV (Restrained Joint)
- Existing 12" WL to remain
- Connect to existing 12" DIP WL with 12"x12" Tee
- New 12" DIP Waterline cross connection
- New 24"x12" Tapping saddle & Valve





PROJECT REFERENCE NO.	SHEET NO.
I-5501	UC-9
DESIGNED BY: MCL	
DRAWN BY: MCL	
CHECKED BY: MCL	
APPROVED BY: MB	
REVISED: 7/10/13	
CITY OF ASHEVILLE WATER RESOURCES DEPARTMENT	
PO BOX 7148 ASHEVILLE, NC 28802 PHONE: 828-259-5403	

### UTILITY CONSTRUCTION



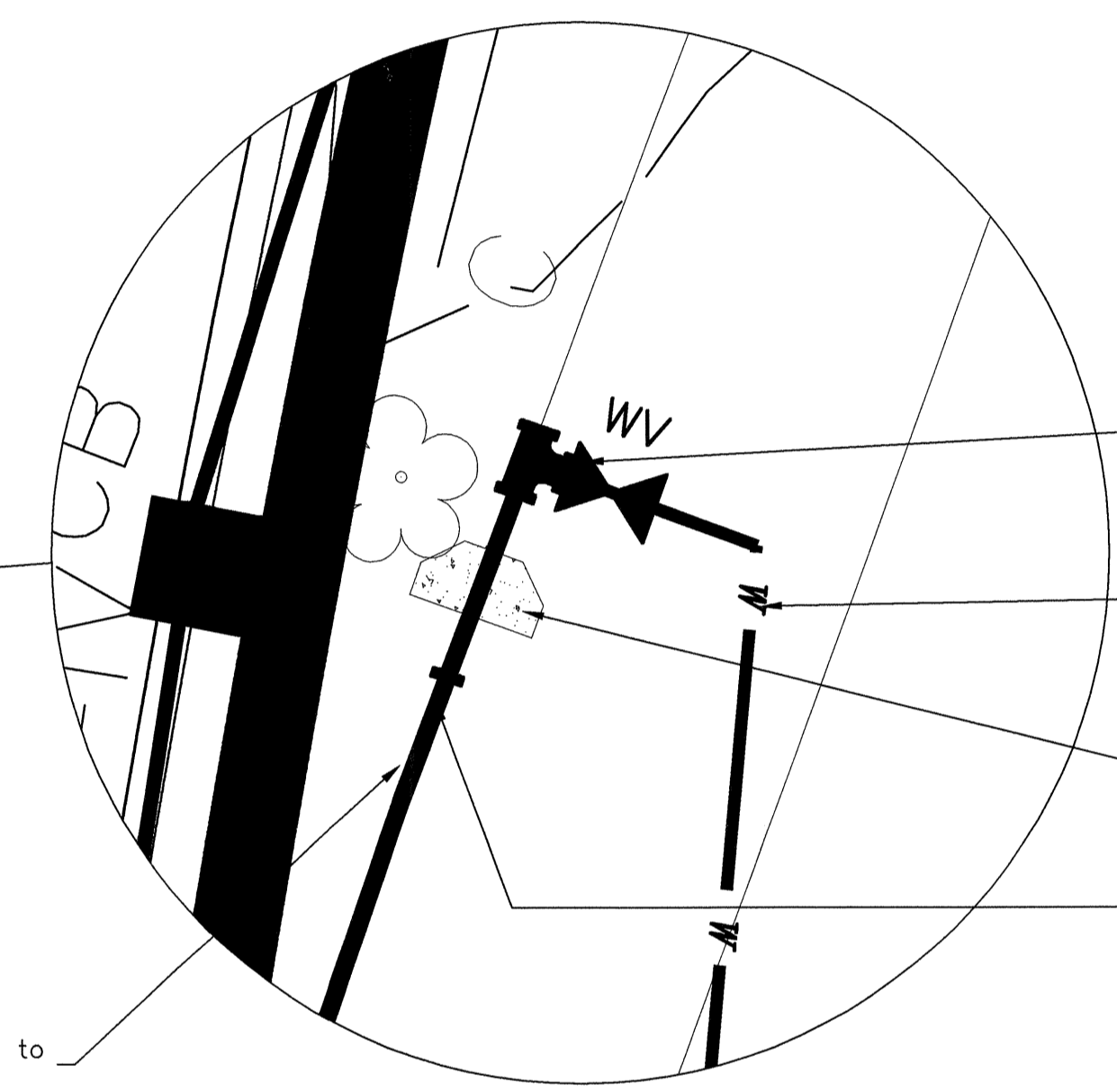
### N.T.S Notes

- 12" WL shall remain in service until 24" WL relocation is done.
- Expose top of existing 24" WL if 6" min. clearance can not be provided from invert of new 15" RCP then 24" WL to be relocated vertically as shown above.

Concrete dead man  
See Detail W.23 for dimensions

24" restrained Joint bends

24" Class 200 DIP WL



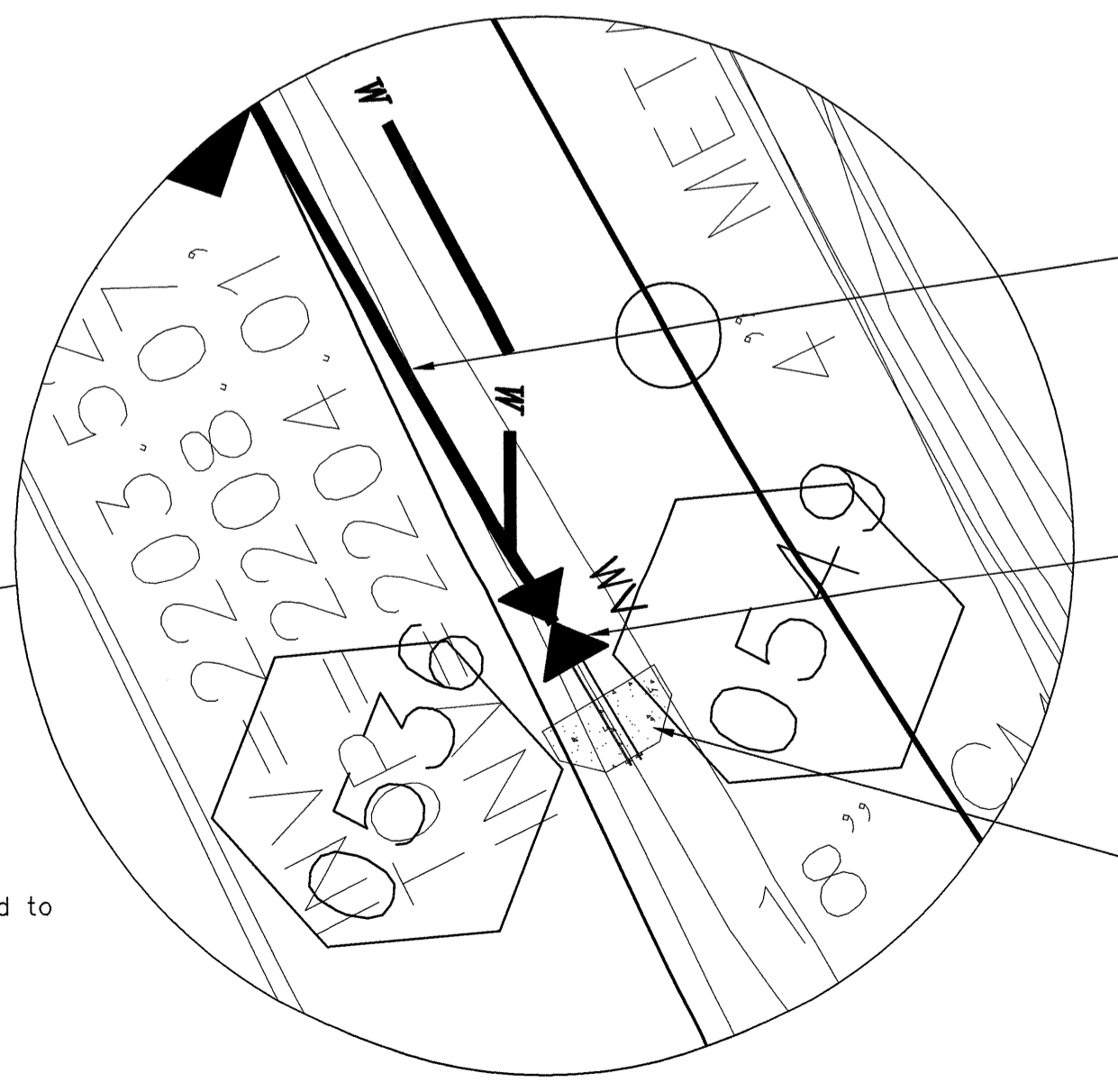
Install new 8" DIP WL with appropriate fittings.  
(90° bends are not to be used)

Cut in 12"x8" Tee & install 8" GV

New 8" DIP WL

Concrete dead man  
rod to tee

Cap or plug 12" WL out of Tee



Provide appropriate clearances per COA Details

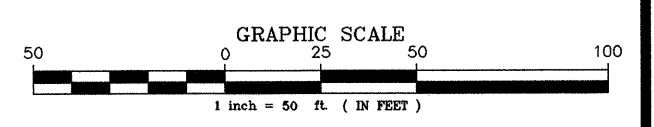
8" PVC WL to be abandoned

cap abandoned line

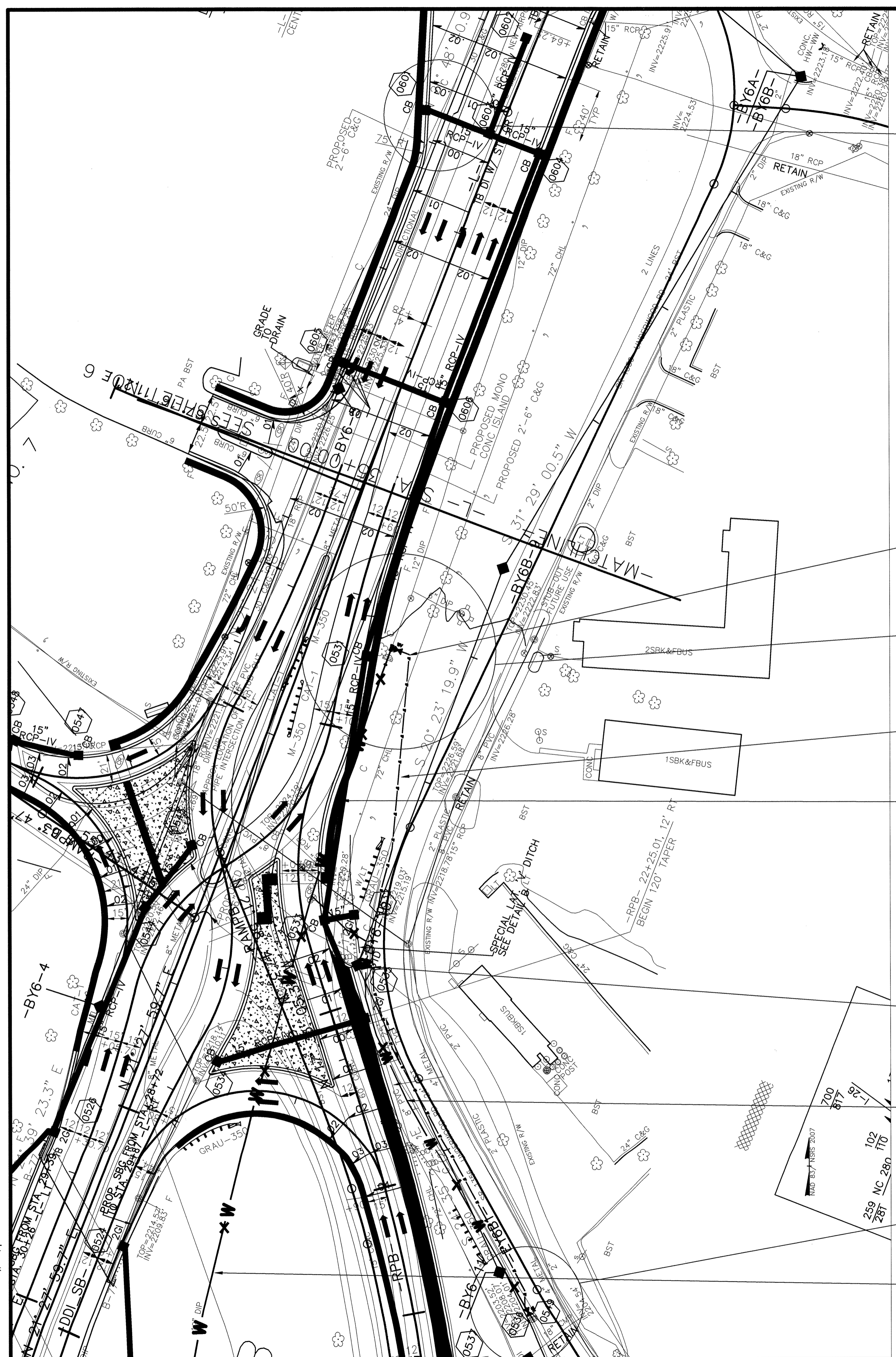
Cut in new 8" GV on existing PVC WL & connect new line

Concrete dead man  
rod to tee

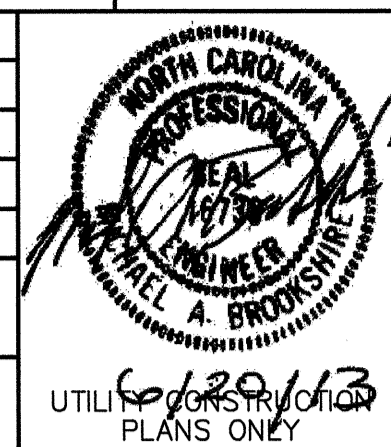
12" DIP WL to be abandoned from just before Underwood Rd to Airport Park Road



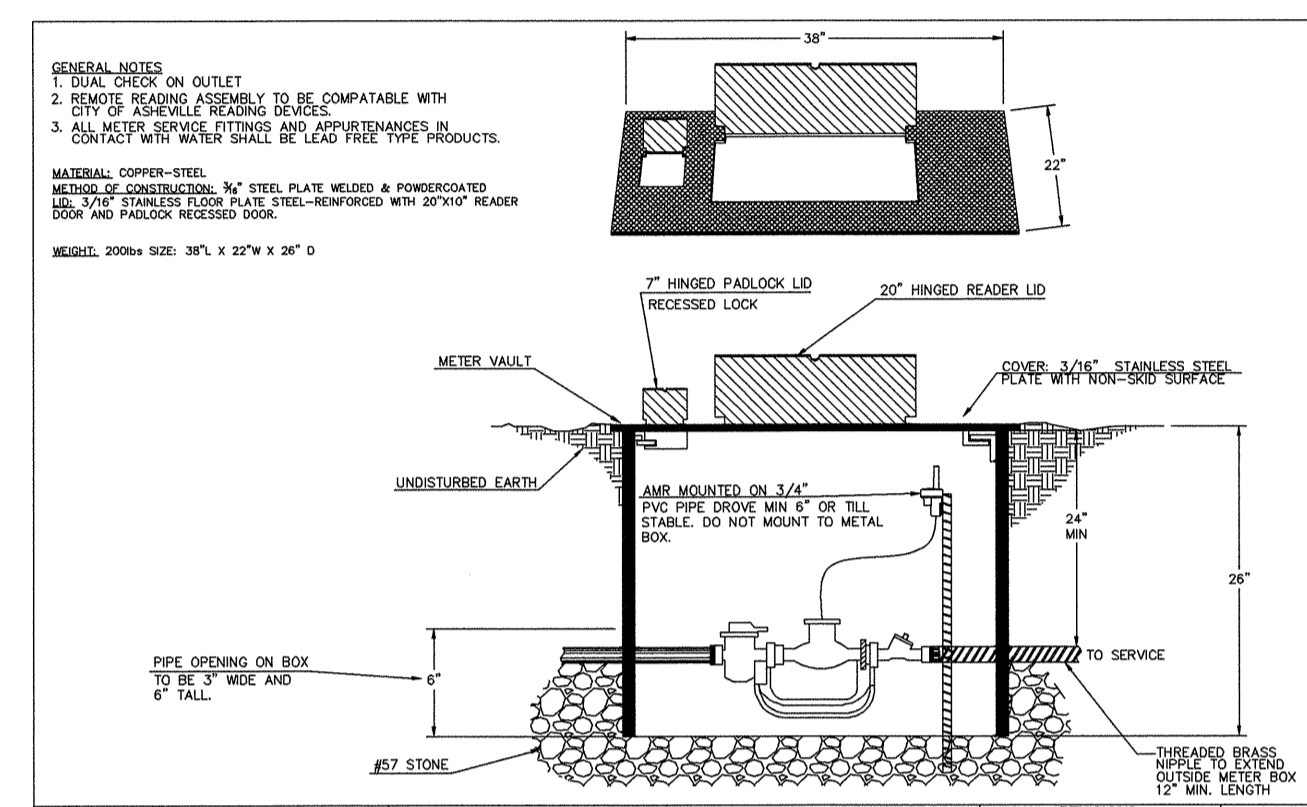
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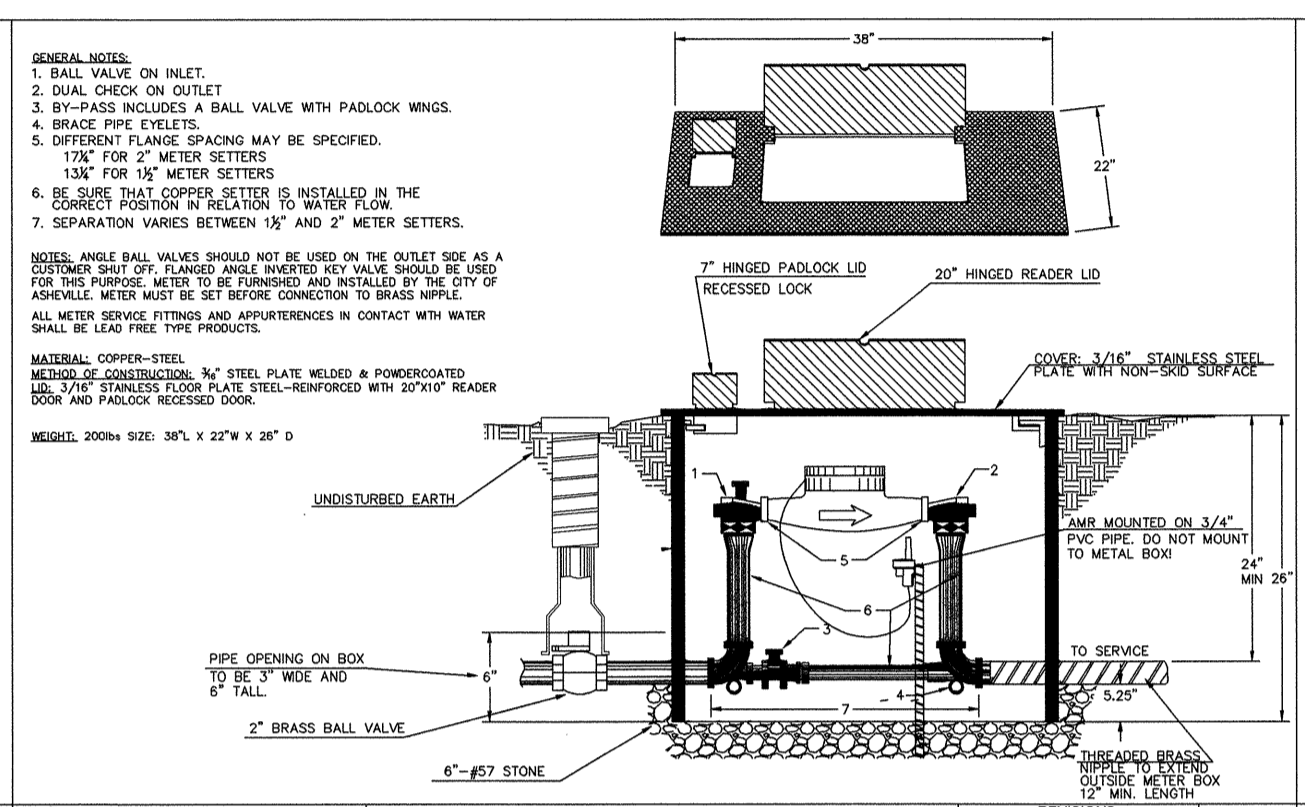




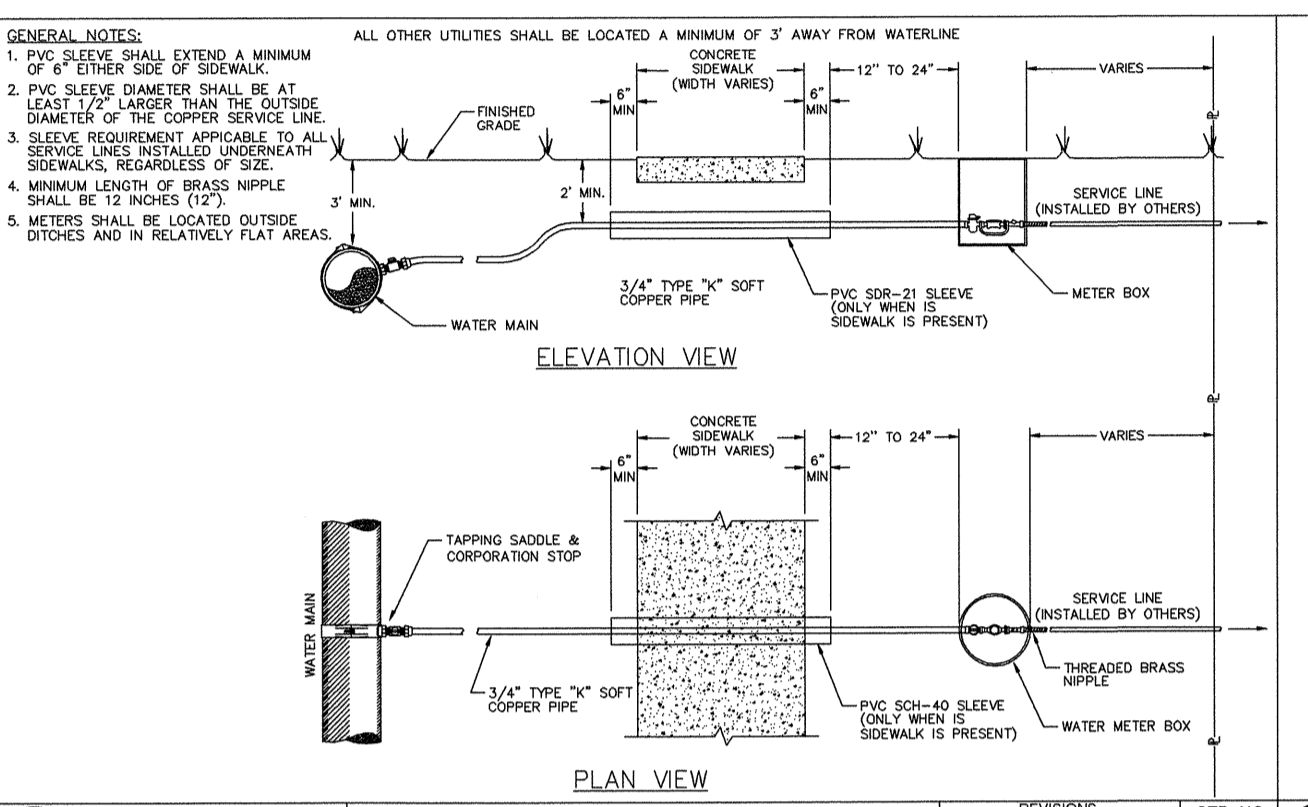
UTILITY CONSTRUCTION



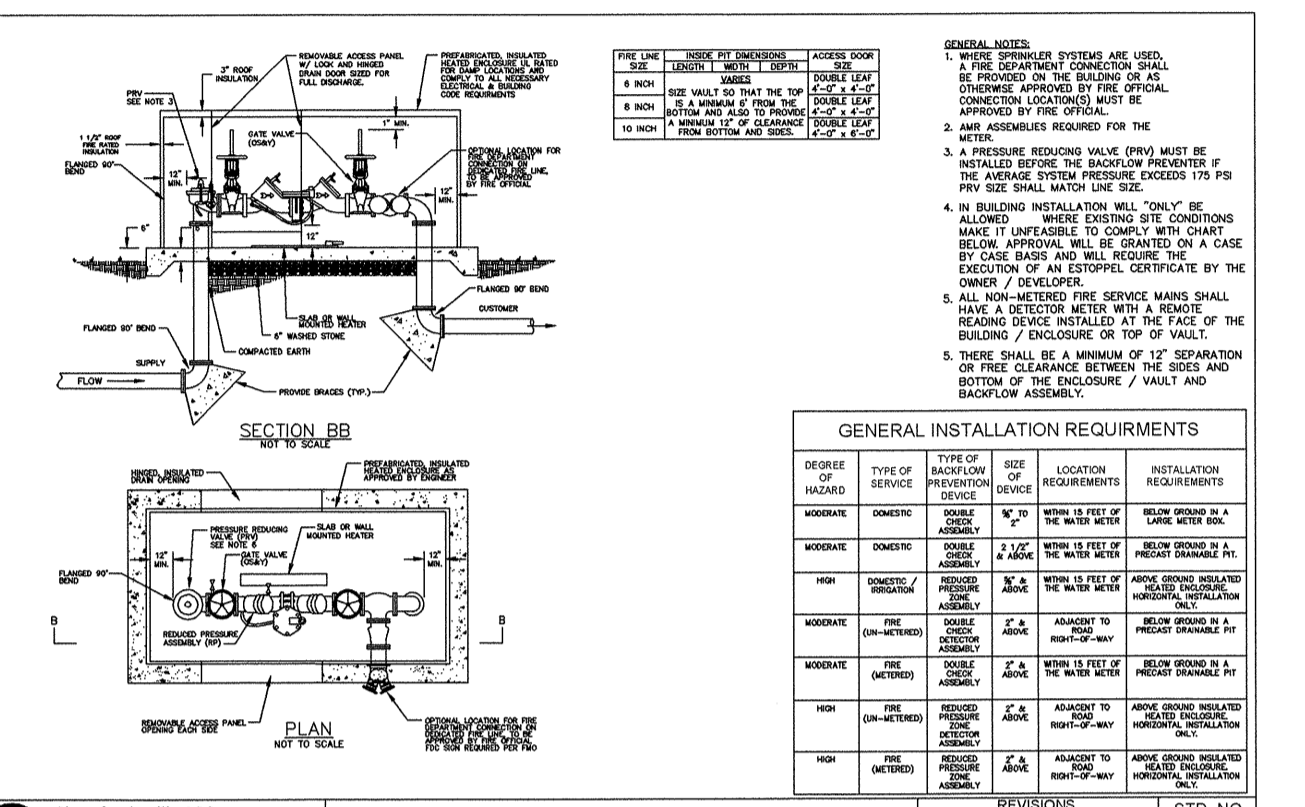
City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**1" WATER METER BOX**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.02



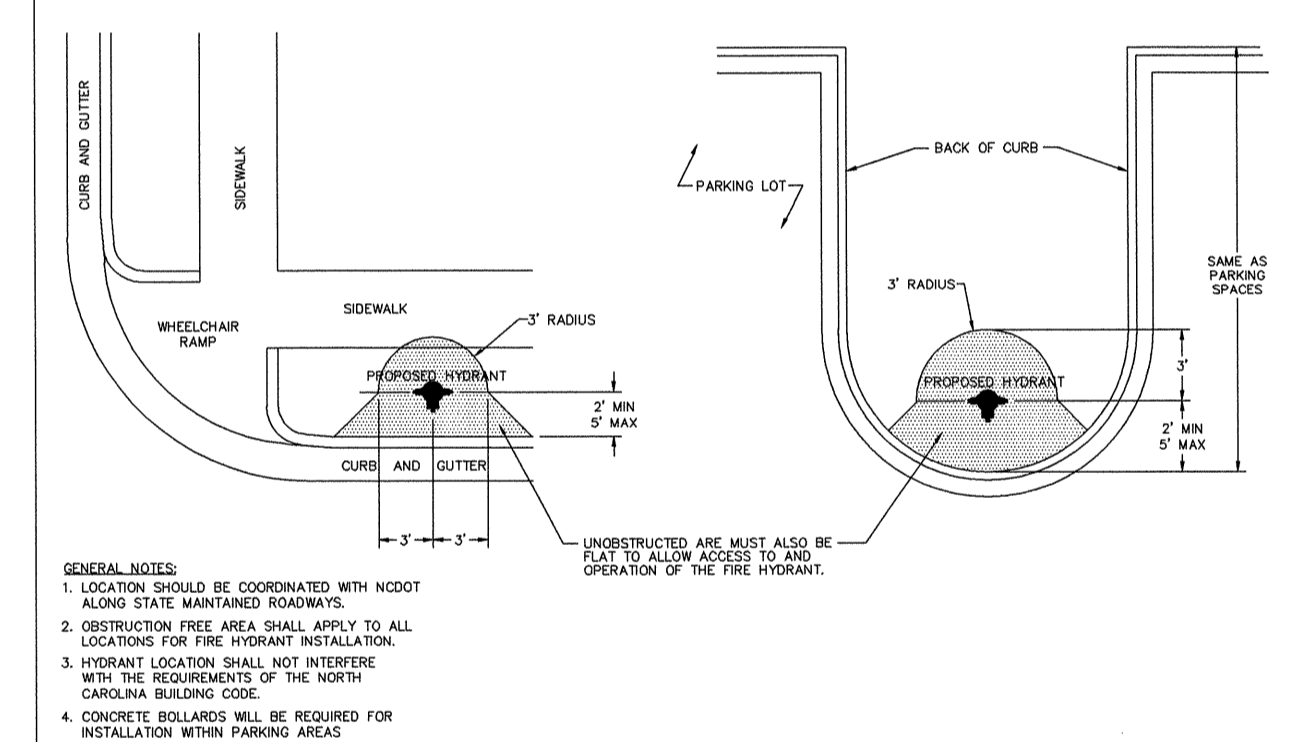
City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**POSITIVE DISPLACEMENT  
 1 1/2" - 2" METER & METER VAULT**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.03



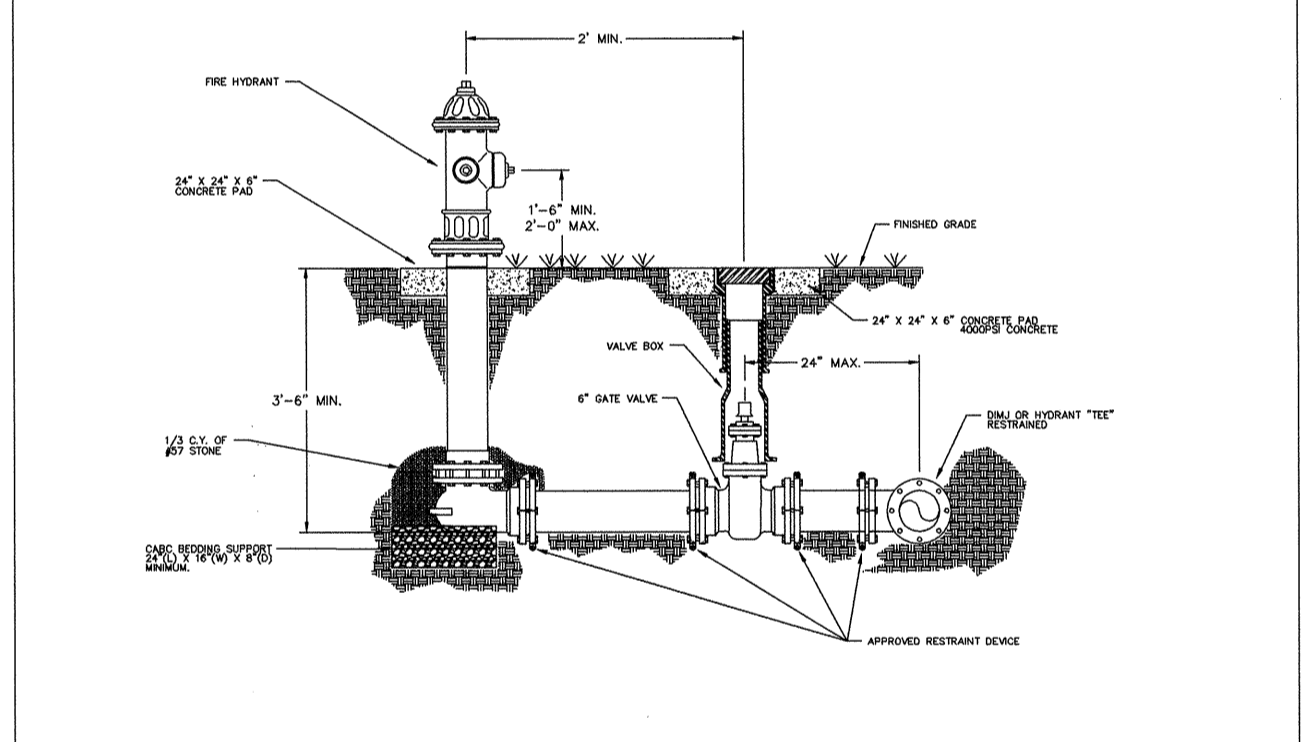
City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**TYPICAL WATER SERVICE  
 INSTALLATION WITH SIDEWALK**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.06



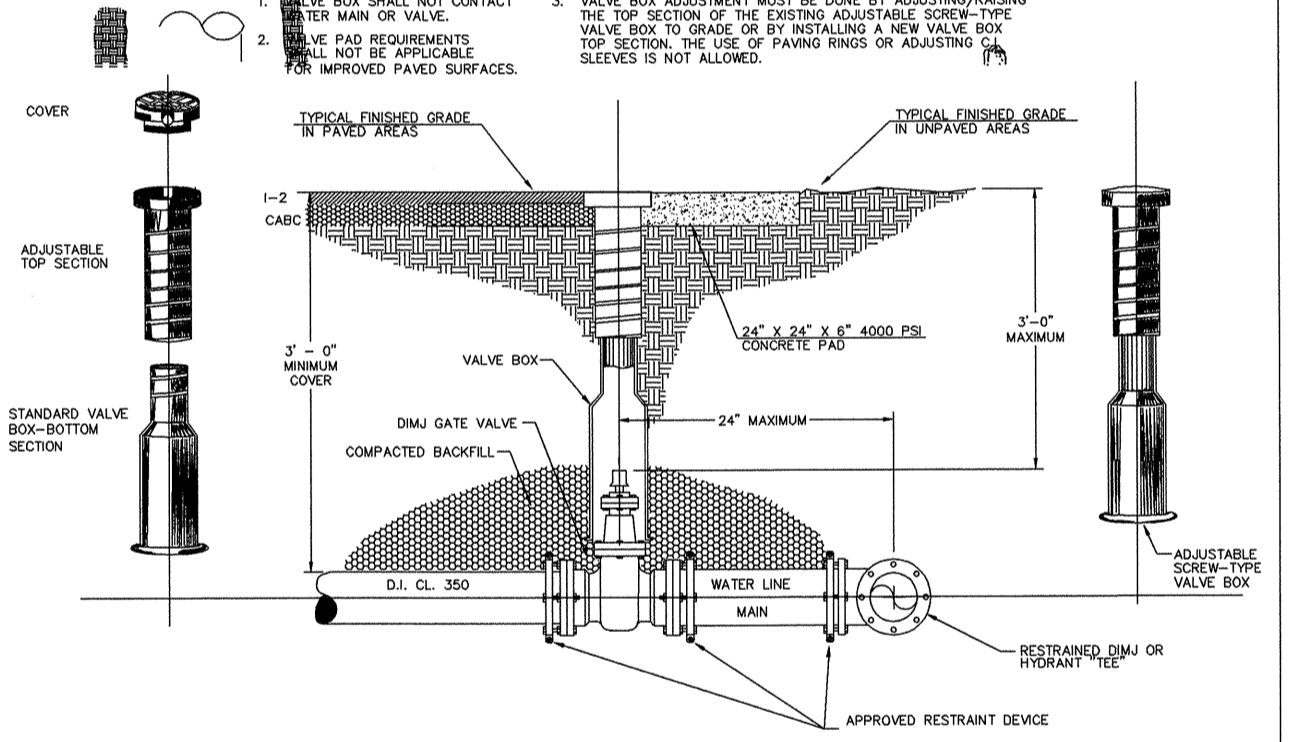
City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**ABOVE GROUND BACKFLOW / ENCLOSURE**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.08



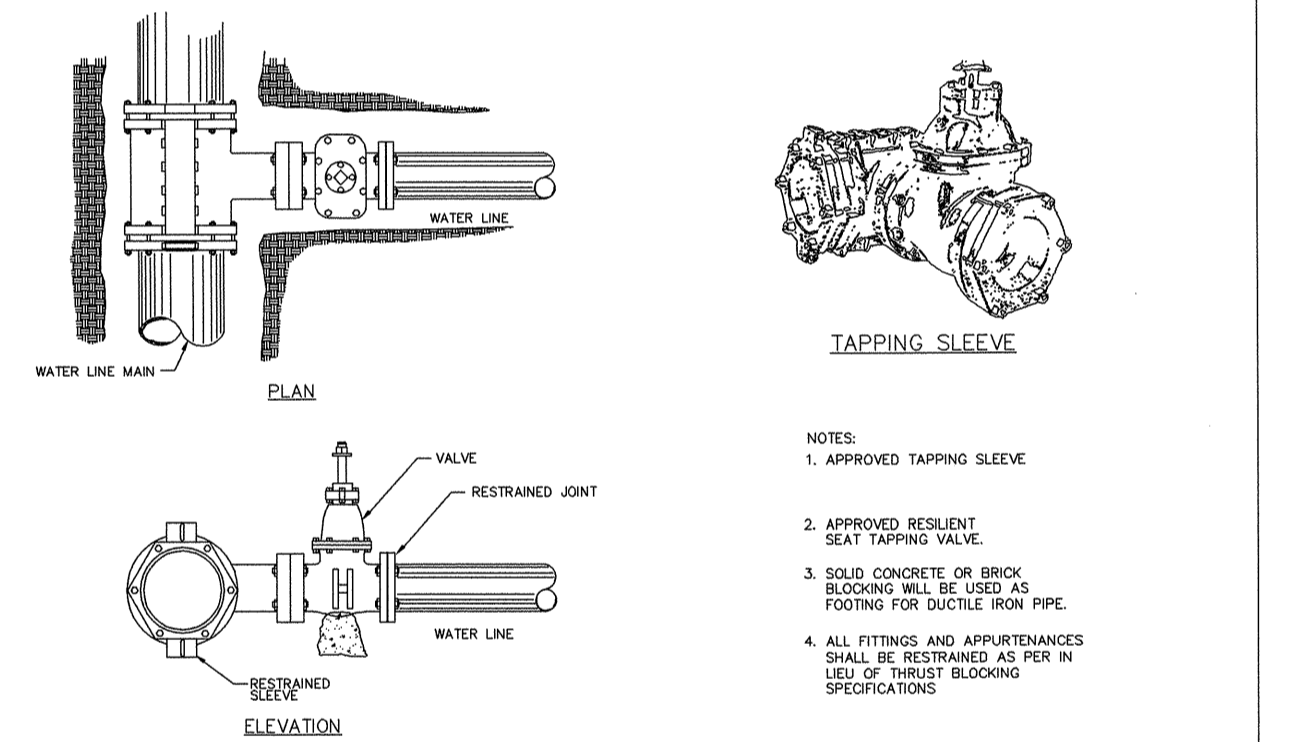
City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**STANDARD HYDRANT LOCATION**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.15



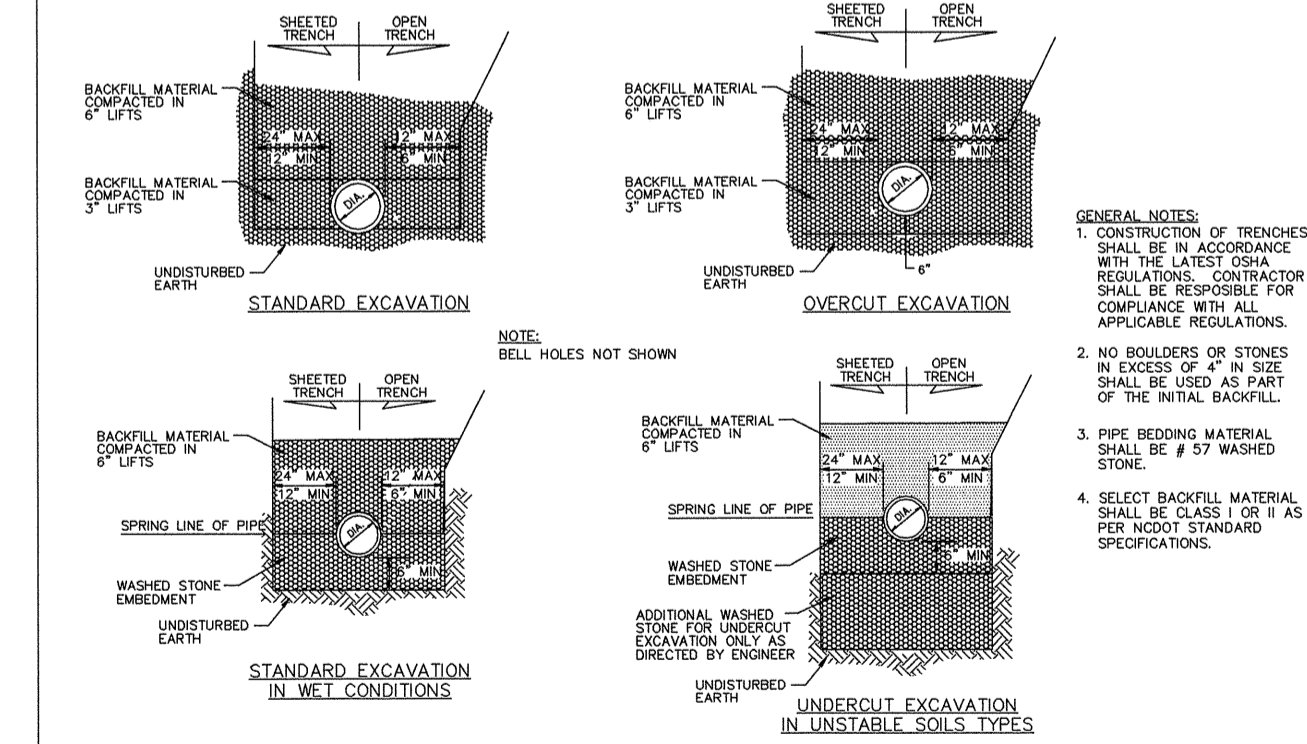
City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**FIRE HYDRANT INSTALLATION**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.16



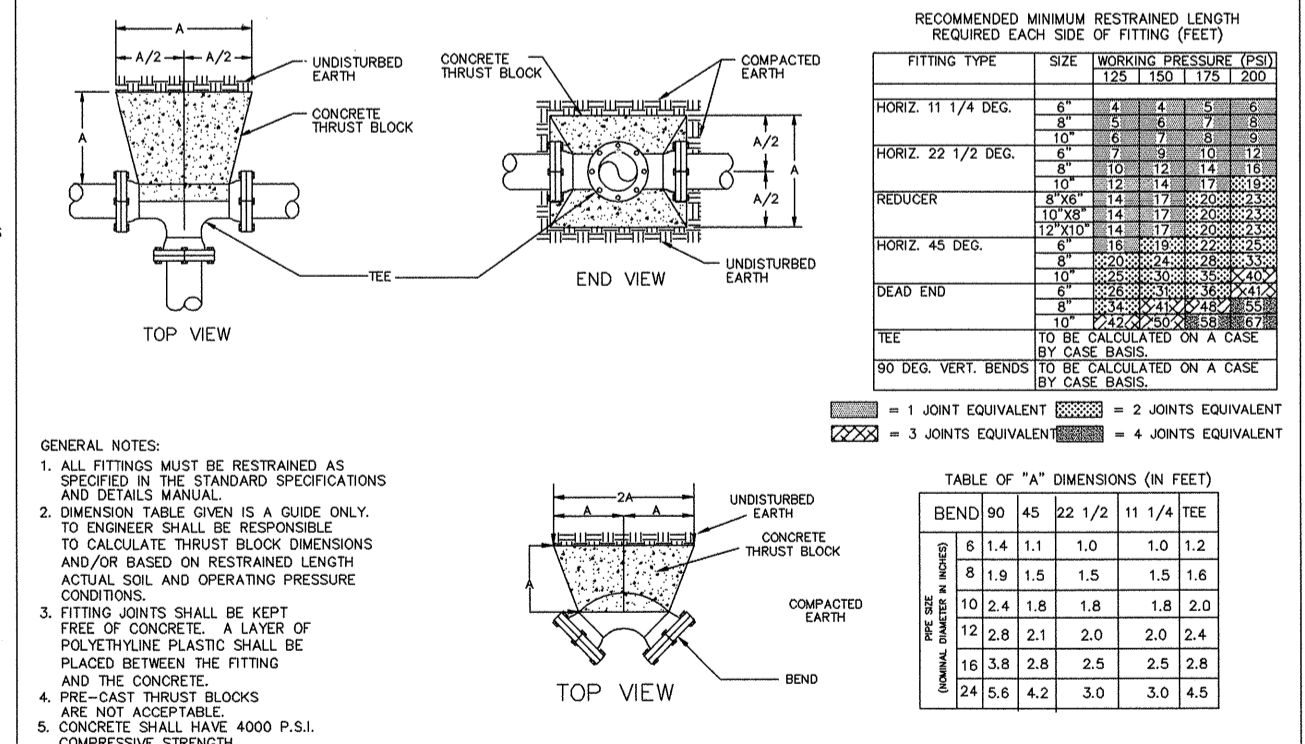
City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**TYPICAL VALVE & VALVE BOX  
 INSTALLATION / ADJUSTMENT**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.18



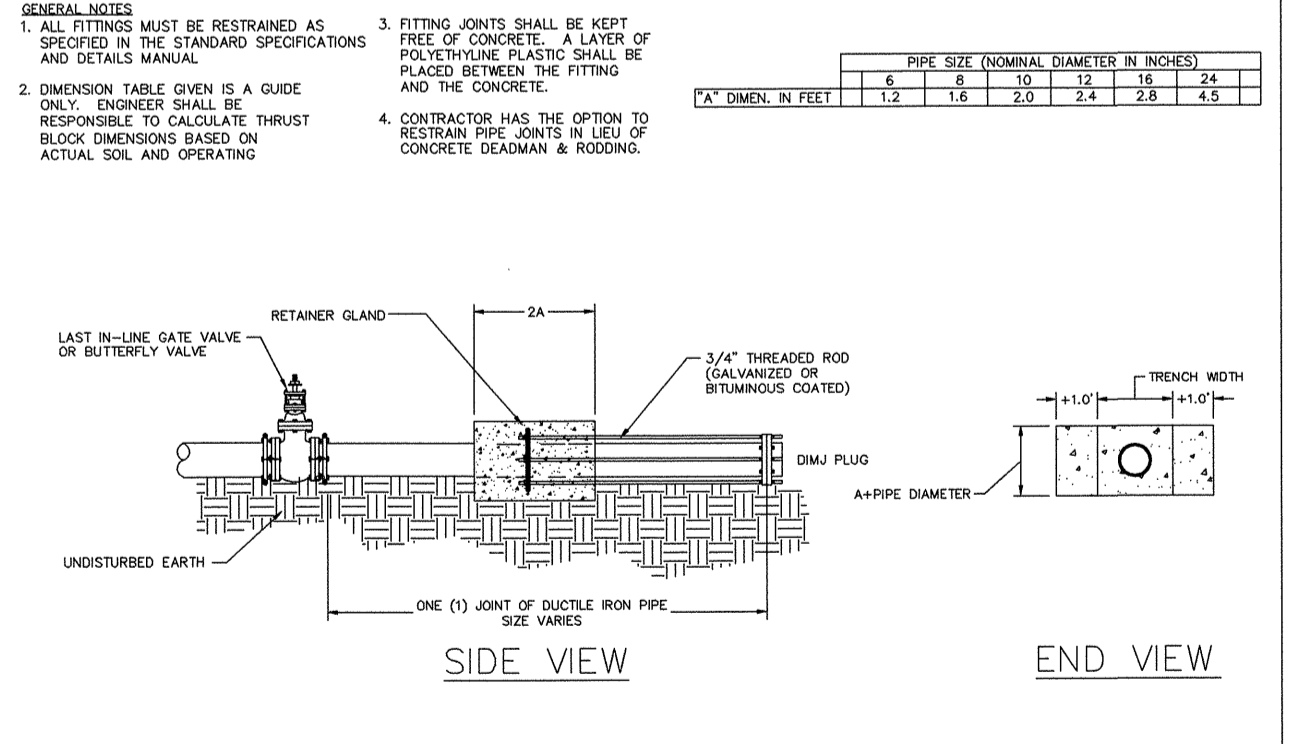
City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**TAPPING SLEEVE AND  
 VALVE ASSEMBLY**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.20



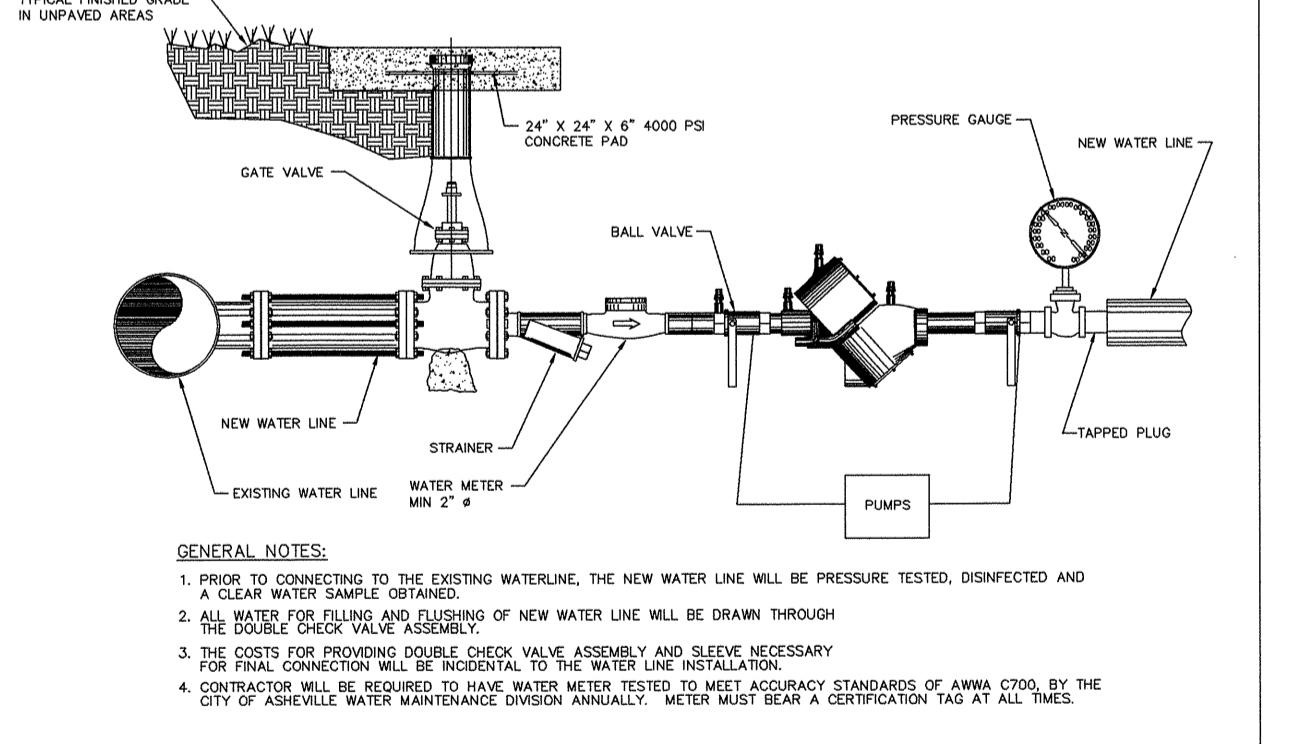
City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**TYPICAL TRENCH DETAIL**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.21



City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**THRUST BLOCK FOR FITTINGS &  
 RESTRAINING REQUIREMENTS**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.22



City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**END OF LINE PLUG**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.23



City of Asheville, NC  
 WATER ENGINEERING DIVISION  
**NEW WATER LINE PRESSURE TEST  
 BACKFLOW PREVENTION ASSEMBLY**  
 DATE: 07/10/13  
 REVISIONS: 1. REVISED FOR 2013 PROJECTS  
 STD. NO. W.28

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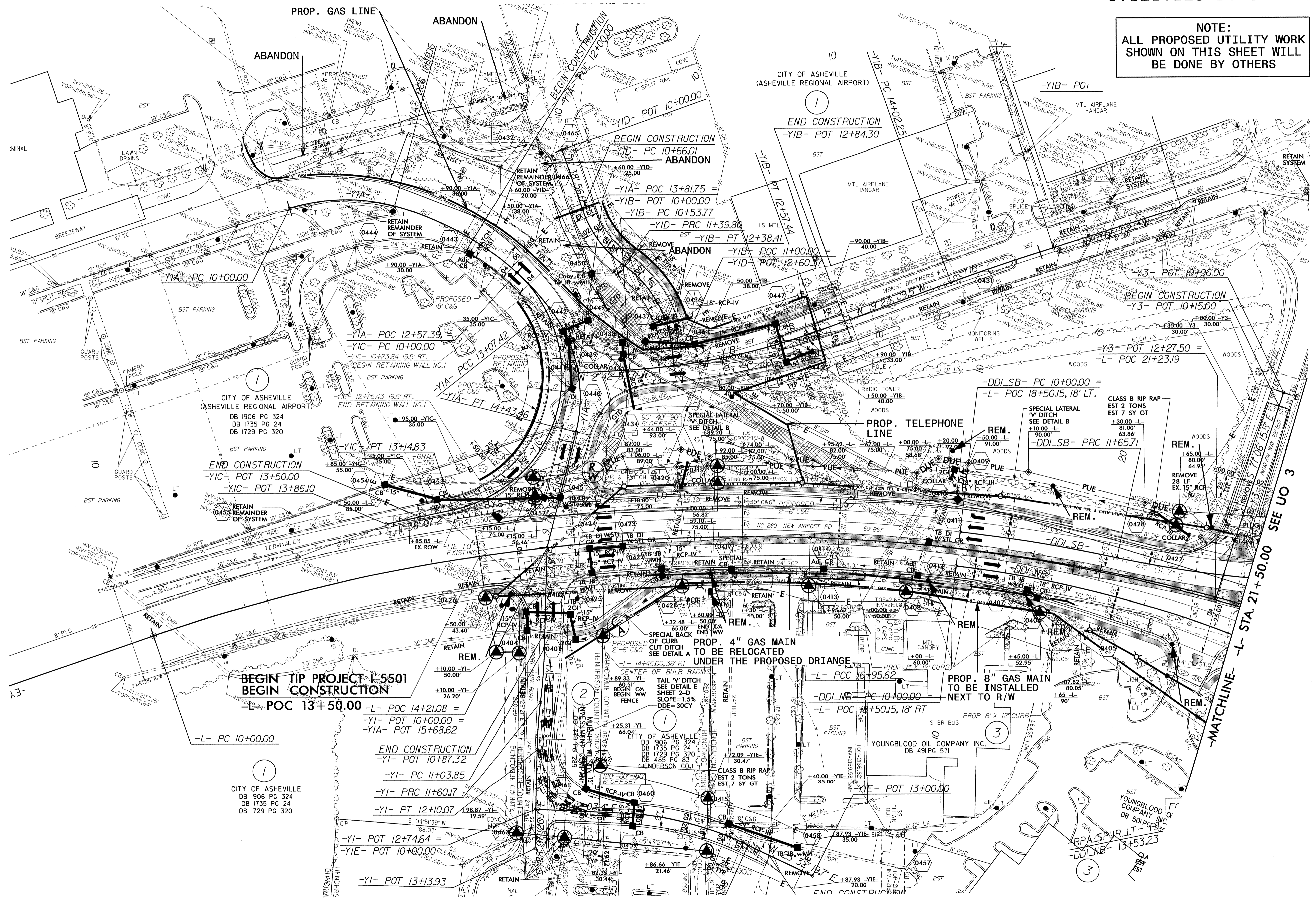






UTILITIES BY OTHERS

NOTE:  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS



**BEGIN TIP PROJECT 5501  
BEGIN CONSTRUCTION**  
-L- POC 13+50.00

**END CONSTRUCTION**  
-YI- POT 10+78.32  
-YI- PC 11+03.85  
-YI- PT 12+10.07  
-YI- POT 12+74.64 =  
-YIE- POT 10+00.00  
-YI- POT 13+13.93

**END CONSTRUCTION**  
-YI- POT 10+78.32  
-YI- PC 11+03.85  
-YI- PT 12+10.07  
-YI- POT 12+74.64 =  
-YIE- POT 10+00.00  
-YI- POT 13+13.93

**CITY OF ASHEVILLE**  
DB 1906 PG 324  
DB 1735 PG 24  
DB 1729 PG 320

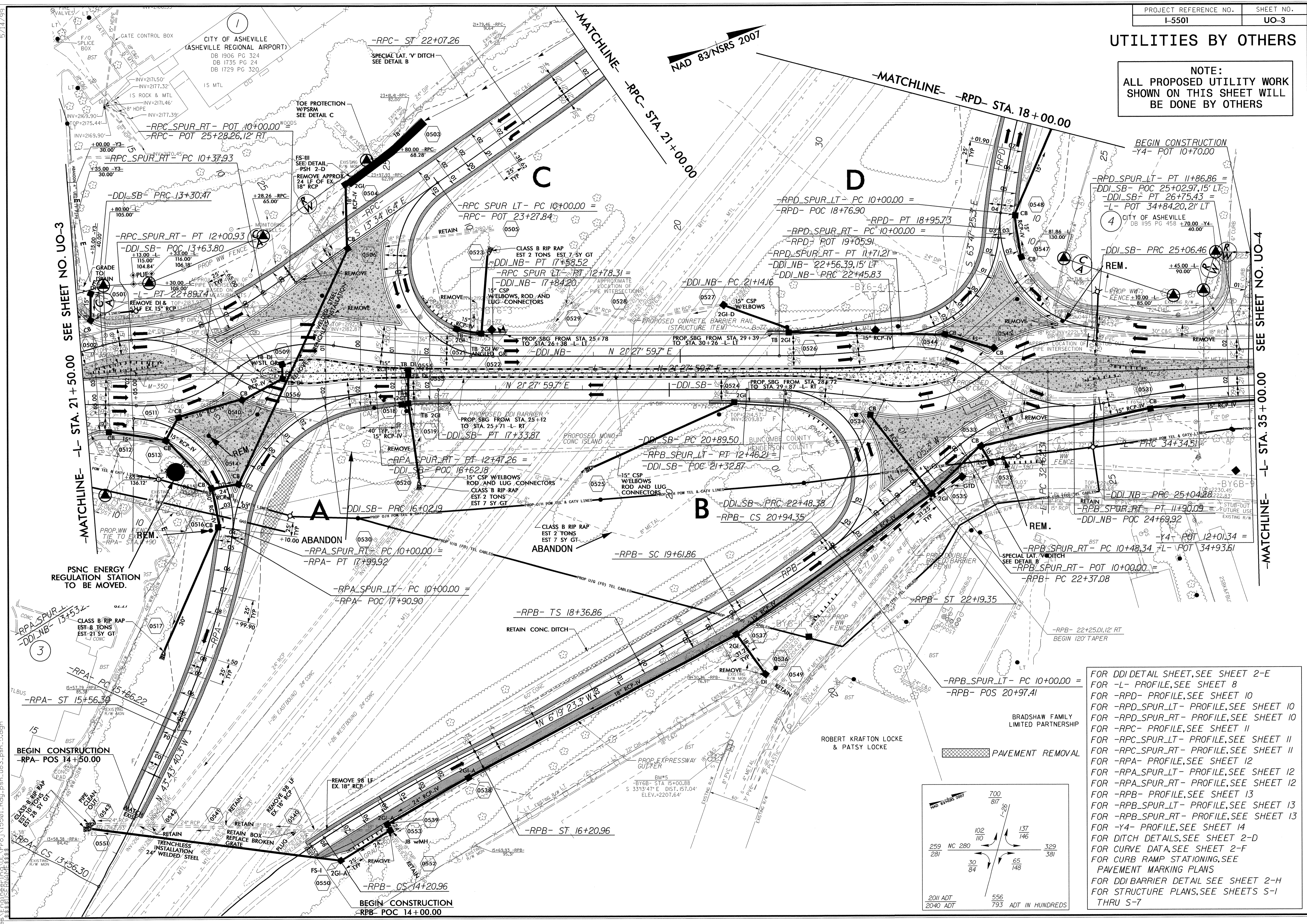
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# UTILITIES BY OTHERS

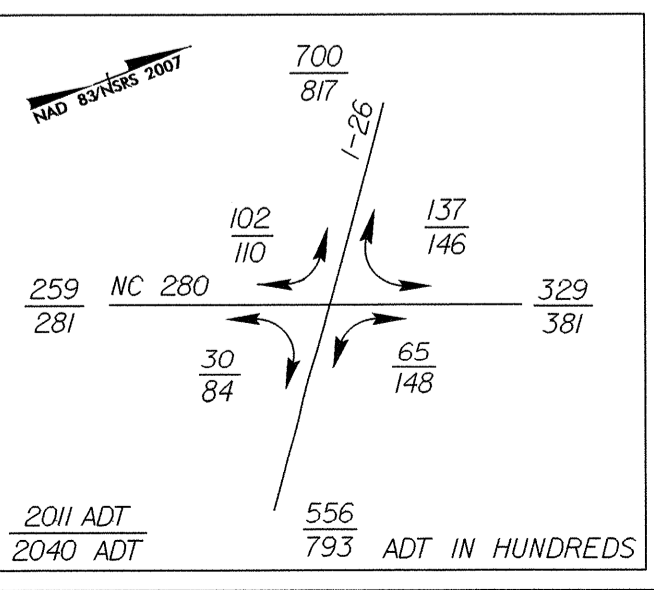
**NOTE:**  
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS



-MATCHLINE- L- STA. 21+50.00 SEE SHEET NO. UO-3

-MATCHLINE- L- STA. 35+00.00 SEE SHEET NO. UO-4

FOR DDI DETAIL SHEET, SEE SHEET 2-E  
 FOR -L- PROFILE, SEE SHEET 8  
 FOR -RPD- PROFILE, SEE SHEET 10  
 FOR -RPD\_SPUR\_LT- PROFILE, SEE SHEET 10  
 FOR -RPC- PROFILE, SEE SHEET 11  
 FOR -RPC\_SPUR\_LT- PROFILE, SEE SHEET 11  
 FOR -RPC\_SPUR\_RT- PROFILE, SEE SHEET 11  
 FOR -RPA- PROFILE, SEE SHEET 12  
 FOR -RPA\_SPUR\_LT- PROFILE, SEE SHEET 12  
 FOR -RPA\_SPUR\_RT- PROFILE, SEE SHEET 12  
 FOR -RPB- PROFILE, SEE SHEET 13  
 FOR -RPB\_SPUR\_LT- PROFILE, SEE SHEET 13  
 FOR -RPB\_SPUR\_RT- PROFILE, SEE SHEET 13  
 FOR -Y4- PROFILE, SEE SHEET 14  
 FOR DITCH DETAILS, SEE SHEET 2-D  
 FOR CURVE DATA, SEE SHEET 2-F  
 FOR CURB RAMP STATIONING, SEE PAVEMENT MARKING PLANS  
 FOR DDI BARRIER DETAIL SEE SHEET 2-H  
 FOR STRUCTURE PLANS, SEE SHEETS S-1 THRU S-7

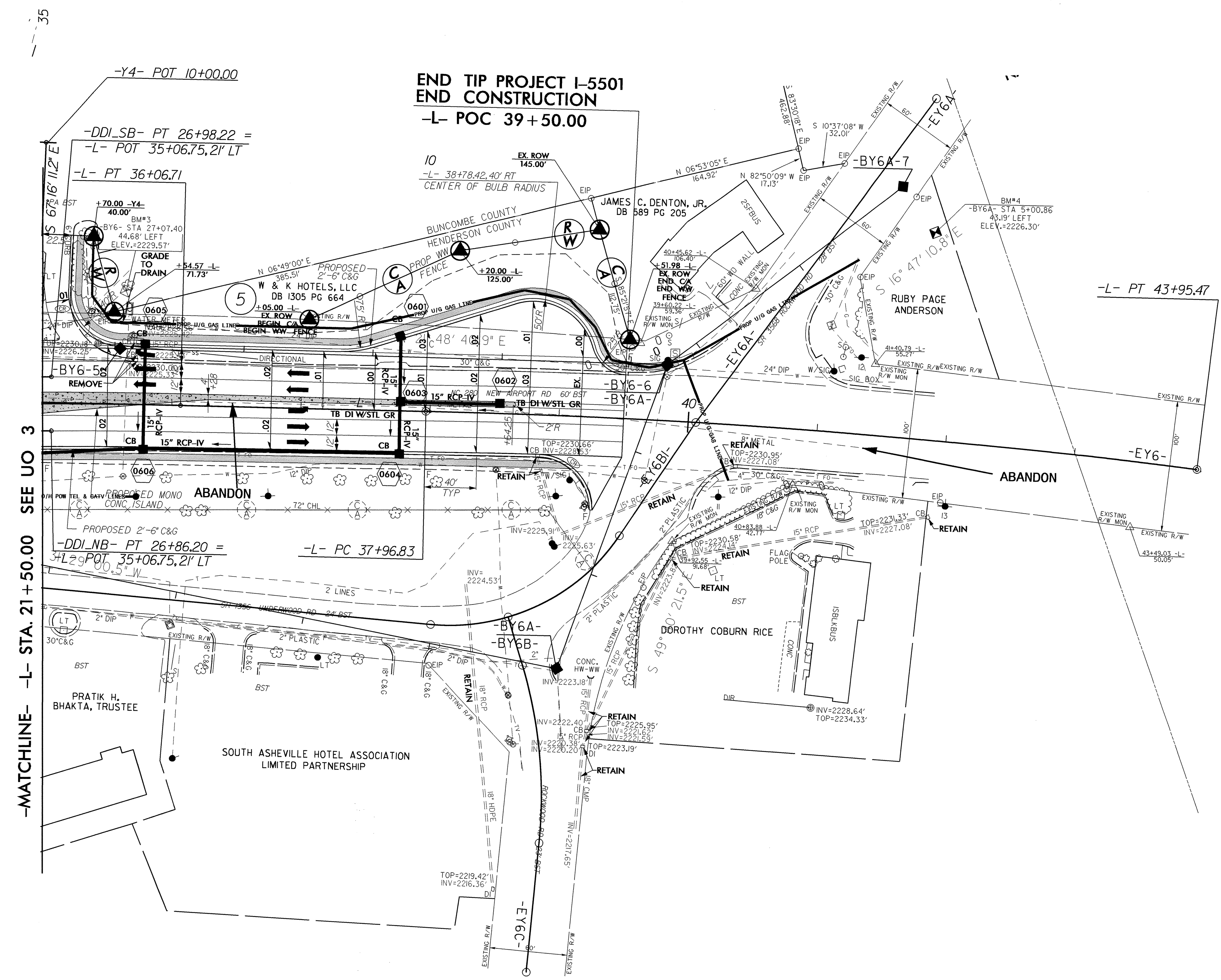


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### UTILITIES BY OTHERS

**NOTE:**  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS



-MATCHLINE- -L- STA. 21+50.00 SEE UO 3

5/14/99

04-JUN-2013 15:18  
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