

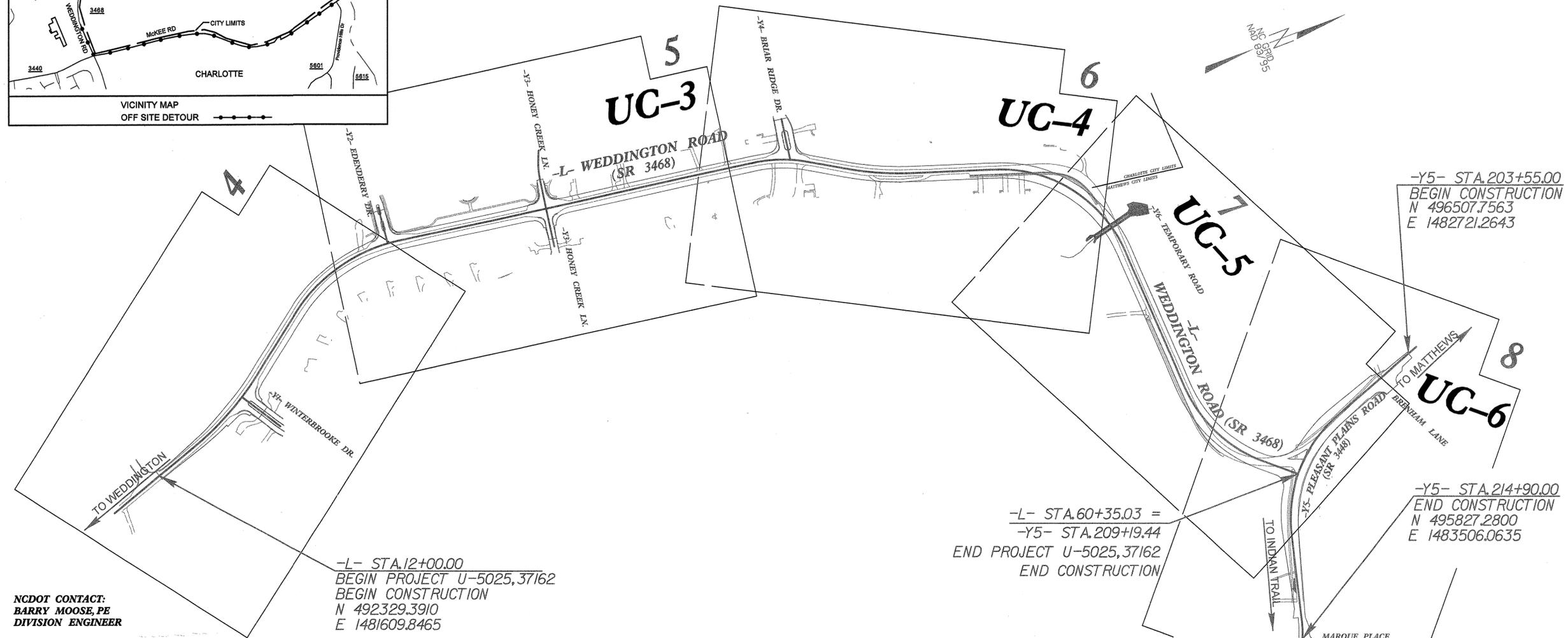
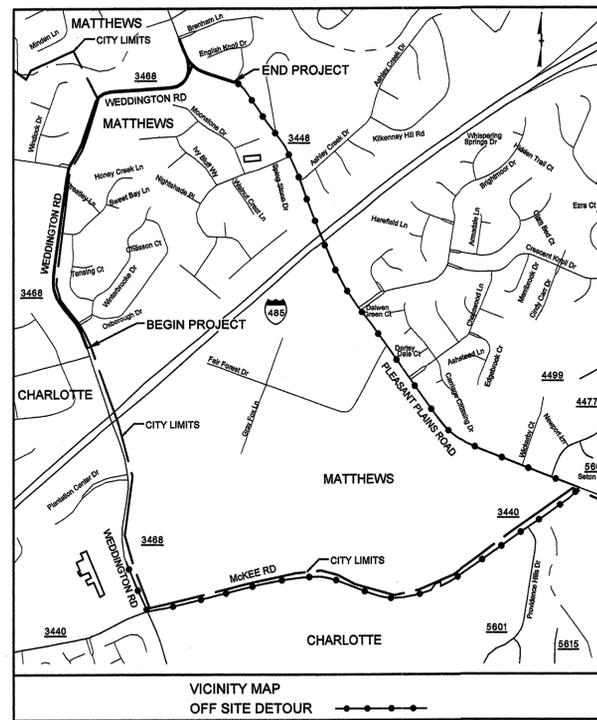
CONTRACT NO. C201995 U-5025, 37162

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5025, 37162	UC-0	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS
MECKLENBURG COUNTY**

LOCATION: WEDDINGTON ROAD (SR 3468) FROM SOUTH OF I-485
TO THE INTERSECTION OF PLEASANT PLAINS (SR 3448)
TYPE OF WORK: UTILITIES



NCDOT CONTACT:
BARRY MOOSE, PE
DIVISION ENGINEER

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-0	TITLE SHEET
UC-1	SYMBOLGY SHEET
UC-2	PERMIT SHEET
UC-3 THRU UC-6	UTILITY CONSTRUCTION PLAN SHEETS
UC-7 THRU UC-8	PROFILE SHEETS
UC-9 THRU UC-10	DETAIL SHEETS

WATER AND SEWER OWNERS ON PROJECT

(1) WATER - CMU
(2) SANITARY SEWER - CMU

SEAL:

KEVIN S. HINDE, P.E.
PROJECT ENGINEER

Prepared in the office of:

Hinde Engineering, Inc.

9303 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-814-4407 (office)
704-814-9042 (fax)

PROJECT REFERENCE NO. U-5025, 37162	SHEET NO. UC-1
DESIGNED BY: CLS	
DRAWN BY: JNA	
CHECKED BY: KSH	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

Water

- Proposed Back Flow Preventor
- Relocate Back Flow Preventor
- Existing Water Valve
- Proposed Valve
- Proposed Tapping Valve
- Existing Water Meter
- Proposed Water Meter
- Proposed Water Meter/Vault
- Relocate Water Meter
- Remove Water Meter REM WM

- Existing Hydrant
- Prop Hydrant
- Relocate Hydrant
- Remove Hydrant REM FH

- Proposed RPZ Back Flow Preventor
- Relocate RPZ Back Flow Preventor

- Water Cross
- Water Plug
- Water Reducer
- Water Tee
- Water Pump Station
- Water Thrust Block
- Blow Off Valve
- Air Release Valve
- Water Line Stop
- Water Line Stop w Bypass

Sewer

- Existing Manhole
- Proposed UT Manhole
- Remove UT Manhole REM UT MH
- Abandon Utility Manhole ABAND MH
- Sewer Line Stop
- Sewer Line Stop w Bypass

- Sewer Cross
- Sewer Plug
- Sewer Reducer
- Sewer Tee
- Sewer Pump Station
- Sewer Thrust Block

NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 ENGINEERING DIVISION
 RALEIGH, NORTH CAROLINA

WEDDINGTON ROAD FROM SOUTH OF I-485
 TO THE INTERSECTION OF PLEASANT PLAINS

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	1-8-08	UC-1	UC-10

Hinde Engineering, Inc.

9303 MONROE ROAD, SUITE E
 CHARLOTTE, NC 28270
 704-814-4407 (office)
 704-814-9042 (fax)

PROJECT REFERENCE NO. U-5025, 37162	SHEET NO. UC-2
DESIGNED BY: CLS	
DRAWN BY: JNA	
CHECKED BY: KSH	
APPROVED BY:	
REVISD:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

APPLICATION FOR NON-DISCHARGE PERMIT
GRAVITY SEWER MAIN EXTENSION
CHARLOTTE-MECKLENBURG UTILITIES

PROJECT NAME: MA-10181R Weddington Road

CMUD PROJECT NO.: _____

PROJECT TYPE: NEW CONSTRUCTION RELOCATION MODIFICATION OF PERMIT NO. _____
OTHER _____

VOLUME OF WASTEWATER GENERATED BY THIS PROJECT: _____ GALLONS PER DAY BASED
ON 190 GAL/DAY/SINGLE FAMILY HOUSEHOLD _____ HOUSEHOLDS OR
135 GAL/DAY/MULTI-FAMILY UNIT X _____ UNITS OR IS BASED ON: _____

WASTEWATER TREATMENT PLANT RECEIVING WASTEWATER:
 McALPINE CR. (NC0024970) IRWIN CR. (NC0024945) McDOWELL CR. (NC0036277)
 SUGAR CR. (NC0024937) MALLARD CR. (NC0030210)

NATURE OF WASTEWATER 100% % DOMESTIC 0 % % INDUSTRIAL
0 % % COMMERCIAL 0 % % OTHER _____

ORIGIN OF WASTEWATER SUBDIVISION _____ COMMERCIAL _____
 _____ SCHOOL _____ INDUSTRIAL _____
 _____ APARTMENTS/CONDO'S _____ OTHER _____

LIST ANY PARAMETER AND ITS CONCENTRATION THAT WILL BE GREATER THAN NORMAL DOMESTIC LEVELS:
N/A

IF WASTEWATER IS NON-DOMESTIC, DESCRIBE LEVEL OF PRETREATMENT:
N/A

IF A PRETREATMENT PERMIT IS REQUIRED, HAS ONE BEEN ISSUED? YES _____ NO _____ N/A

HAS ENGINEER DETERMINED THAT DOWNSTREAM SEWERS ARE CAPABLE TO HANDLE THIS FLOW? YES NO _____
 PERMIT NO. FOR SEWERS IMMEDIATELY DOWNSTREAM _____
 PIPE DIAMETER OF SEWERS IMMEDIATELY DOWNSTREAM 15"

HAS ENGINEER DETERMINED THAT NC DEM AND CMU MINIMUM DESIGN STANDARDS ARE MET BY THIS PROJECT? YES _____ NO _____

COMPLETE NAME AND ADDRESS OF ENGINEERING DESIGN FIRM:
HINDE ENGINEERING, INC.
9303 MONROE RD, SUITE E
CHARLOTTE, N.C. 28270

TELEPHONE 704-814-4407

PROFESSIONAL ENGINEER'S CERTIFICATION:
 I, KEVIN S. HINDE, P.E., ATTEST THAT THIS APPLICATION FOR THE RELOCATION AND NEW CONSTRUCTION OF SEWER LINES
 WITHIN THE AFOREMENTIONED PROJECT HAS BEEN REVIEWED BY ME AND IS ACCURATE AND COMPLETE TO THE
 BEST OF MY KNOWLEDGE. I FURTHER ATTEST THAT TO THE BEST OF MY KNOWLEDGE THE PROPOSED DESIGN HAS BEEN
 PREPARED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS. ALTHOUGH CERTAIN PORTIONS OF THIS SUBMITTAL
 PACKAGE MAY HAVE BEEN DEVELOPED BY OTHER PROFESSIONALS, INCLUSION OF THESE MATERIALS UNDER MY
 SIGNATURE AND SEAL SIGNIFIES THAT I HAVE REVIEWED THIS MATERIAL AND HAVE JUDGED IT TO BE CONSISTENT WITH
 THE PROPOSED DESIGN.

NORTH CAROLINA PROFESSIONAL ENGINEER'S SEAL, SIGNATURE, AND DATE:

CMU PERMIT NO. _____ ISSUED _____

PLANT FLOW ALLOCATION RECORDED BY: _____

PERMIT APPROVED BY: BARRY SHEARIN, P.E., CHIEF ENGINEER



APPLICATION FOR PERMIT FOR WATER MAIN EXTENSION

PROJECT NAME: MA-10181R Weddington Road

CMU PROJECT NO.: _____

PROJECT DESCRIPTION: 26 LF 6" DI WATER PIPE, 100 LF 8" DI WATER PIPE,
772 LF 16" DI WATER PIPE - WATER MAIN AND FITTINGS

DESIGNED BY: FIRM: HINDE ENGINEERING, INC.

ENGINEER: KEVIN S. HINDE, P.E. DESIGNED BY: CLINT L. STEVENS

ADDRESS: 9303 MONROE ROAD, SUITE E
CHARLOTTE, NORTH CAROLINA 28270

PHONE: 704-814-4407

THIS APPLICATION IS MADE UNDER AND IN FULL ACCORD WITH THE PROVISIONS OF CHAPTER 130A-317 OF THE NORTH CAROLINA GENERAL STATUTES, AND SUCH OTHER STATUTES AS RELATED TO PUBLIC WATER SYSTEMS. CMU HAS BEEN GRANTED AUTHORITY TO ISSUE PERMITS FOR EXTENSION OF WATER MAINS PURSUANT TO 15A NCAC 18C.1801. THE APPLICANT AGREES THAT NO SIGNIFICANT CHANGE OR DEVIATION FROM THE PLANS AND SPECIFICATIONS APPROVED BY CMU WILL BE MADE WITHOUT THE WRITTEN CONSENT AND APPROVAL OF CMU OR ITS AUTHORIZED REPRESENTATIVE. A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF NORTH CAROLINA SHALL SUBMIT A STATEMENT REFLECTING THAT ADEQUATE OBSERVATIONS DURING AND UPON COMPLETION OF CONSTRUCTION INDICATES THAT CONSTRUCTION WAS COMPLETED IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS.

PERMIT NO. _____ DATE _____

APPROVED: BARRY SHEARIN, P.E., CHIEF ENGINEER

CHARLOTTE MECKLENBURG UTILITIES
 5100 BROOKSHIRE BLVD.
 CHARLOTTE, NORTH CAROLINA 28216

NORTH CAROLINA
DEPT. OF TRANSPORTATION
ENGINEERING DIVISION
RALEIGH, NORTH CAROLINA

WEDDINGTON ROAD FROM SOUTH OF 1-485
TO THE INTERSECTION OF PLEASANT PLAINS

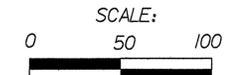
Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	1-8-08	UC-2	UC-10

Hinde Engineering, Inc.

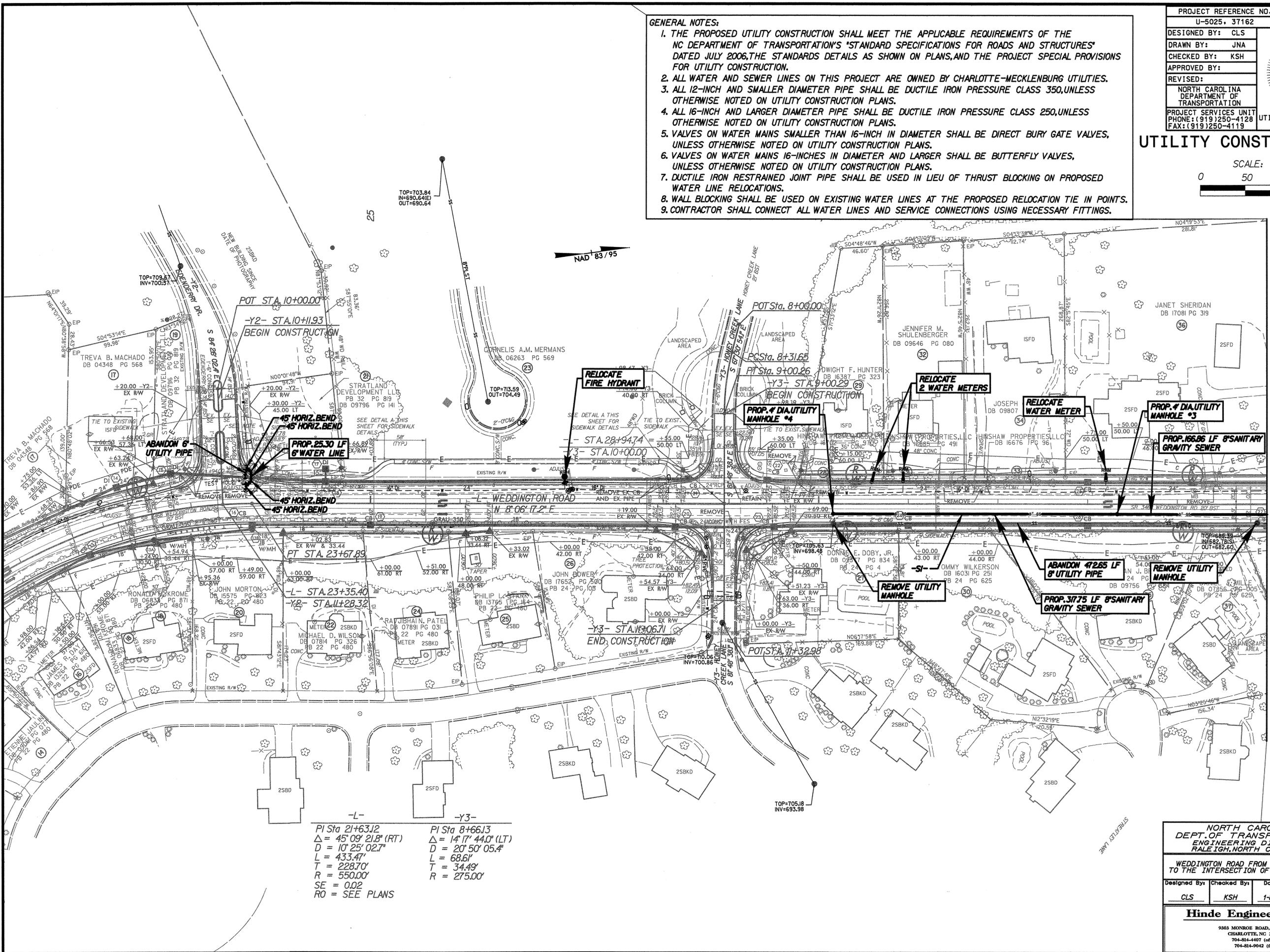
9303 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-814-4407 (office)
704-814-9042 (fax)

PROJECT REFERENCE NO.	SHEET NO.
U-5025, 37162	UC-3
DESIGNED BY: CLS	
DRAWN BY: JNA	
CHECKED BY: KSH	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	

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 JULY 2006, THE STANDARDS DETAILS AS SHOWN ON PLANS, AND THE PROJECT SPECIAL PROVISIONS FOR UTILITY CONSTRUCTION.
 2. ALL WATER AND SEWER LINES ON THIS PROJECT ARE OWNED BY CHARLOTTE-MECKLENBURG UTILITIES.
 3. ALL 12-INCH AND SMALLER DIAMETER PIPE SHALL BE DUCTILE IRON PRESSURE CLASS 350, UNLESS OTHERWISE NOTED ON UTILITY CONSTRUCTION PLANS.
 4. ALL 16-INCH AND LARGER DIAMETER PIPE SHALL BE DUCTILE IRON PRESSURE CLASS 250, UNLESS OTHERWISE NOTED ON UTILITY CONSTRUCTION PLANS.
 5. VALVES ON WATER MAINS SMALLER THAN 16-INCH IN DIAMETER SHALL BE DIRECT BURY GATE VALVES, UNLESS OTHERWISE NOTED ON UTILITY CONSTRUCTION PLANS.
 6. VALVES ON WATER MAINS 16-INCHES IN DIAMETER AND LARGER SHALL BE BUTTERFLY VALVES, UNLESS OTHERWISE NOTED ON UTILITY CONSTRUCTION PLANS.
 7. DUCTILE IRON RESTRAINED JOINT PIPE SHALL BE USED IN LIEU OF THRUST BLOCKING ON PROPOSED WATER LINE RELOCATIONS.
 8. WALL BLOCKING SHALL BE USED ON EXISTING WATER LINES AT THE PROPOSED RELOCATION TIE IN POINTS.
 9. CONTRACTOR SHALL CONNECT ALL WATER LINES AND SERVICE CONNECTIONS USING NECESSARY FITTINGS.



MATCHLINE -L- STA. 35+00
SEE SHEET UC-4

-L-	-Y3-
PI Sta 21+63.12	PI Sta 8+66.13
Δ = 45° 09' 21.8" (RT)	Δ = 14° 17' 44.0" (LT)
D = 10° 25' 02.7"	D = 20° 50' 05.4"
L = 433.47'	L = 68.61'
T = 228.70'	T = 34.49'
R = 550.00'	R = 275.00'
SE = 0.02	
RO = SEE PLANS	

NORTH CAROLINA
DEPT. OF TRANSPORTATION
ENGINEERING DIVISION
RALEIGH, NORTH CAROLINA

WEDDINGTON ROAD FROM SOUTH OF 1-485
TO THE INTERSECTION OF PLEASANT PLAINS

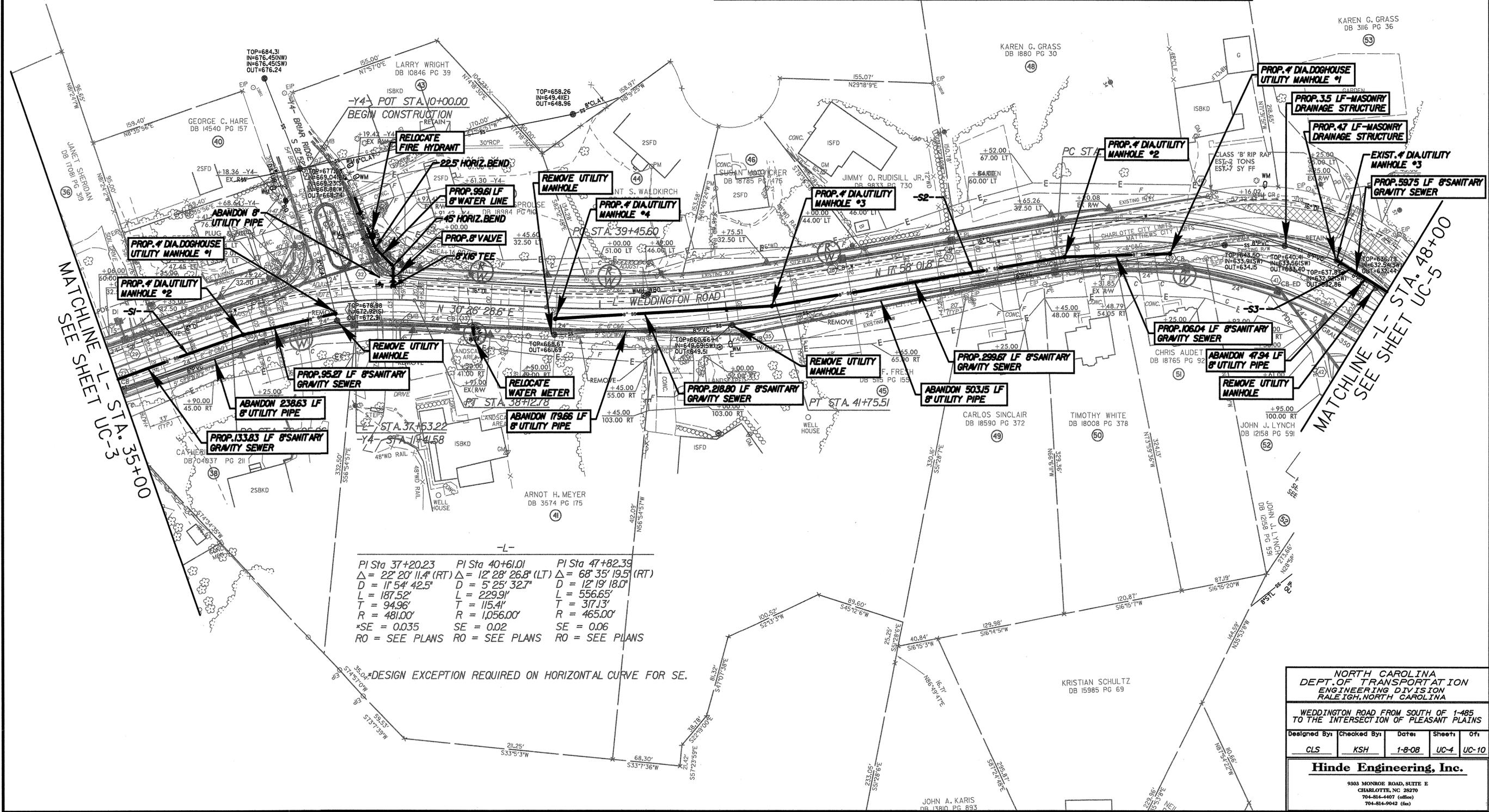
Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	1-8-08	UC-3	UC-10

Hinde Engineering, Inc.
9303 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-814-4077 (office)
704-814-9042 (fax)

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 JULY 2006, THE STANDARDS DETAILS AS SHOWN ON PLANS, AND THE PROJECT SPECIAL PROVISIONS FOR UTILITY CONSTRUCTION.
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 8. WALL BLOCKING SHALL BE USED ON EXISTING WATER LINES AT THE PROPOSED RELOCATION TIE IN POINTS.
 9. CONTRACTOR SHALL CONNECT ALL WATER LINES AND SERVICE CONNECTIONS USING NECESSARY FITTINGS.



PI Sta 37+20.23	PI Sta 40+61.01	PI Sta 47+82.39
$\Delta = 22^\circ 20' 11.4''$ (RT)	$\Delta = 12^\circ 28' 26.8''$ (LT)	$\Delta = 68^\circ 35' 19.5''$ (RT)
D = 11' 54' 42.5"	D = 5' 25' 32.7"	D = 12' 19' 18.0"
L = 187.52'	L = 229.91'	L = 556.65'
T = 94.96'	T = 115.41'	T = 317.13'
R = 481.00'	R = 1,056.00'	R = 465.00'
*SE = 0.035	SE = 0.02	SE = 0.06
RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS

*DESIGN EXCEPTION REQUIRED ON HORIZONTAL CURVE FOR SE.

MATCHLINE SEE SHEET UC-3 STA. 35+00

MATCHLINE SEE SHEET UC-5 STA. 48+00

NORTH CAROLINA DEPT. OF TRANSPORTATION ENGINEERING DIVISION RALEIGH, NORTH CAROLINA

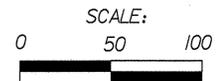
WEDDINGTON ROAD FROM SOUTH OF 1-485 TO THE INTERSECTION OF PLEASANT PLAINS

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	1-8-08	UC-4	UC-10

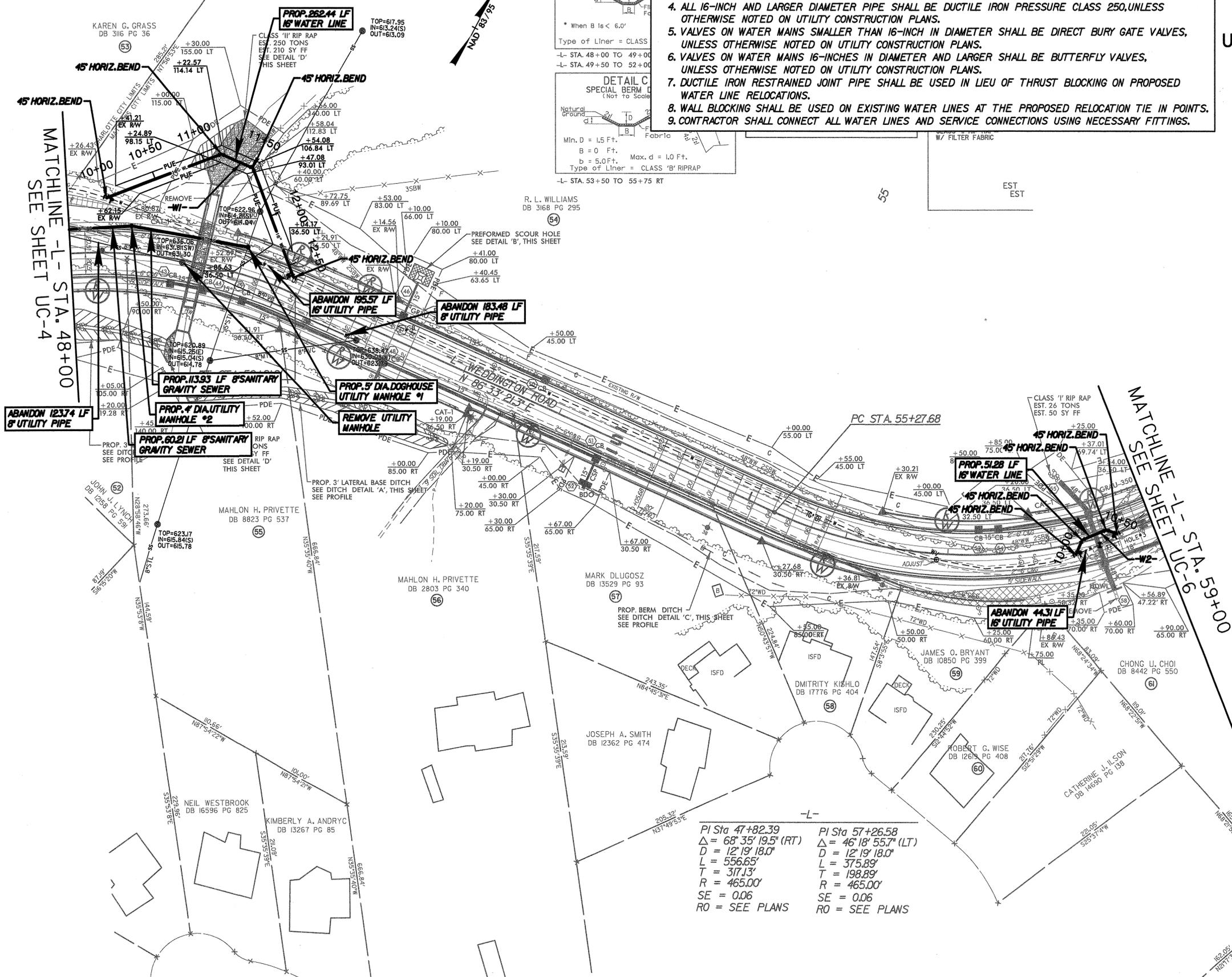
Hinde Engineering, Inc.
 9303 MONROE ROAD, SUITE E
 CHARLOTTE, NC 28270
 704-814-4407 (office)
 704-814-9042 (fax)

PROJECT REFERENCE NO.	SHEET NO.
U-5025, 37162	UC-5
DESIGNED BY: CLS	
DRAWN BY: JNA	
CHECKED BY: KSH	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	

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 JULY 2006, THE STANDARDS DETAILS AS SHOWN ON PLANS, AND THE PROJECT SPECIAL PROVISIONS FOR UTILITY CONSTRUCTION.
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 8. WALL BLOCKING SHALL BE USED ON EXISTING WATER LINES AT THE PROPOSED RELOCATION TIE IN POINTS.
 9. CONTRACTOR SHALL CONNECT ALL WATER LINES AND SERVICE CONNECTIONS USING NECESSARY FITTINGS.



PI Sta 47+82.39	PI Sta 57+26.58
Δ = 68° 35' 19.5" (RT)	Δ = 46° 18' 55.7" (LT)
D = 12° 19' 18.0"	D = 12° 19' 18.0"
L = 556.65'	L = 375.89'
T = 317.13'	T = 198.89'
R = 465.00'	R = 465.00'
SE = 0.06	SE = 0.06
RO = SEE PLANS	RO = SEE PLANS

NORTH CAROLINA DEPT. OF TRANSPORTATION
ENGINEERING DIVISION
RALEIGH, NORTH CAROLINA

WEDDINGTON ROAD FROM SOUTH OF I-485 TO THE INTERSECTION OF PLEASANT PLAINS

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	1-8-08	UC-5	UC-10

Hinde Engineering, Inc.
9305 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-514-4407 (office)
704-514-9042 (fax)

SPECIAL UTILITY NOTES:

1. THE THREE PROPOSED 16-INCH VALVES SHOWN ON THIS SHEET SHALL BE CUT-IN TO THE EXISTING 16-INCH WATER MAINS WHILE MAINTAINING SERVICE ON THE EXISTING MAINS.
2. BOTH EXISTING WATER MAINS ON THE EAST AND WEST SIDES OF PLEASANT PLAINS RD. ARE ONE WAY FEEDS FROM THE NORTH.
3. PRIOR TO BEGINNING THE CONSTRUCTION OF THE RELOCATED 16-INCH WATER MAIN, CONTRACTOR SHALL CONTACT BILL DEAL, PE OF CHARLOTTE MECKLENBURG UTILITIES AT (704) 391-5150.

CONSTRUCTION SEQUENCE:

1. CUT-IN THE THREE PROPOSED 16-INCH VALVES AT THE LOCATIONS SHOWN ON PLAN WHILE MAINTAINING SERVICE ON EXISTING WATER MAINS.
2. CUT OFF THE THREE NEWLY INSTALLED 16-INCH VALVES.
3. CONTRACTOR SHALL INSTALL PROPOSED 16-INCH WATER MAIN AND CONNECT TO EXISTING WATER MAINS USING NECESSARY FITTINGS. CONTRACTOR MAY INSTALL PROPOSED 16-INCH WATER MAIN AT ANY TIME, BUT SERVICE SHALL BE MAINTAINED AT ALL TIMES.

GENERAL NOTES:

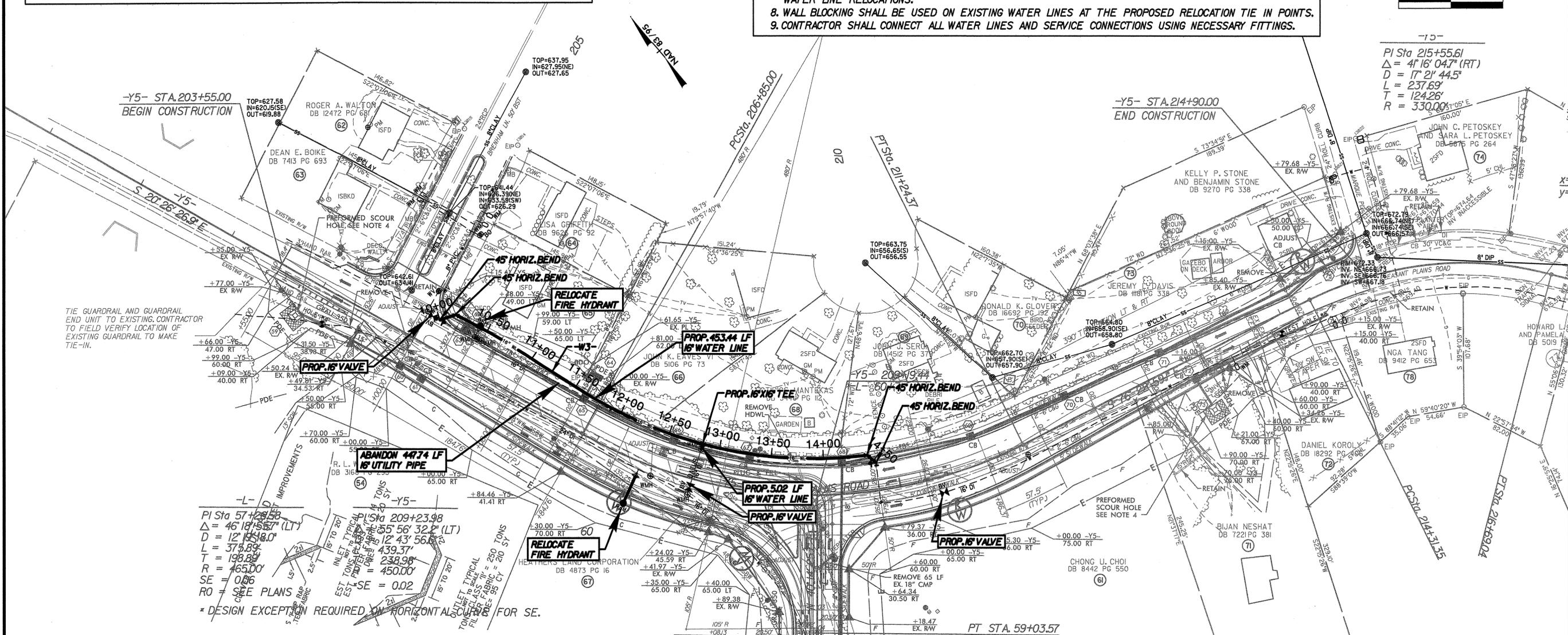
1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JULY 2006, THE STANDARDS DETAILS AS SHOWN ON PLANS, AND THE PROJECT SPECIAL PROVISIONS FOR UTILITY CONSTRUCTION.
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9. CONTRACTOR SHALL CONNECT ALL WATER LINES AND SERVICE CONNECTIONS USING NECESSARY FITTINGS.

PROJECT REFERENCE NO. U-5025, 37162	SHEET NO. UC-6
DESIGNED BY: CLS	
DRAWN BY: JNA	
CHECKED BY: KSH	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	

UTILITY CONSTRUCTION



PI Sta 215+55.61
 $\Delta = 41' 16" 04.7" (RT)$
 $D = 17' 21" 44.5"$
 $L = 237.69'$
 $T = 124.26'$
 $R = 330.00'$



TIE GUARDRAIL AND GUARDRAIL END UNIT TO EXISTING. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING GUARDRAIL TO MAKE TIE-IN.

PI Sta 57+28.58
 $\Delta = 46' 18" 55.7" (LT)$
 $D = 12' 15" 18.0"$
 $L = 375.89'$
 $T = 198.89'$
 $R = 165.00'$
 $SE = 0.06$
 $RO = \text{SEE PLANS}$

PI Sta 209+23.98
 $\Delta = 35' 56" 32.2" (LT)$
 $D = 12' 43" 56.8"$
 $L = 439.37'$
 $T = 238.98'$
 $R = 450.00'$
 $SE = 0.02$

* DESIGN EXCEPTION REQUIRED ON HORIZONTAL CURVES FOR SE.

MATCHLINE -L- STA. 59+00
 SEE SHEET UC-5

NORTH CAROLINA DEPT. OF TRANSPORTATION ENGINEERING DIVISION RALEIGH, NORTH CAROLINA

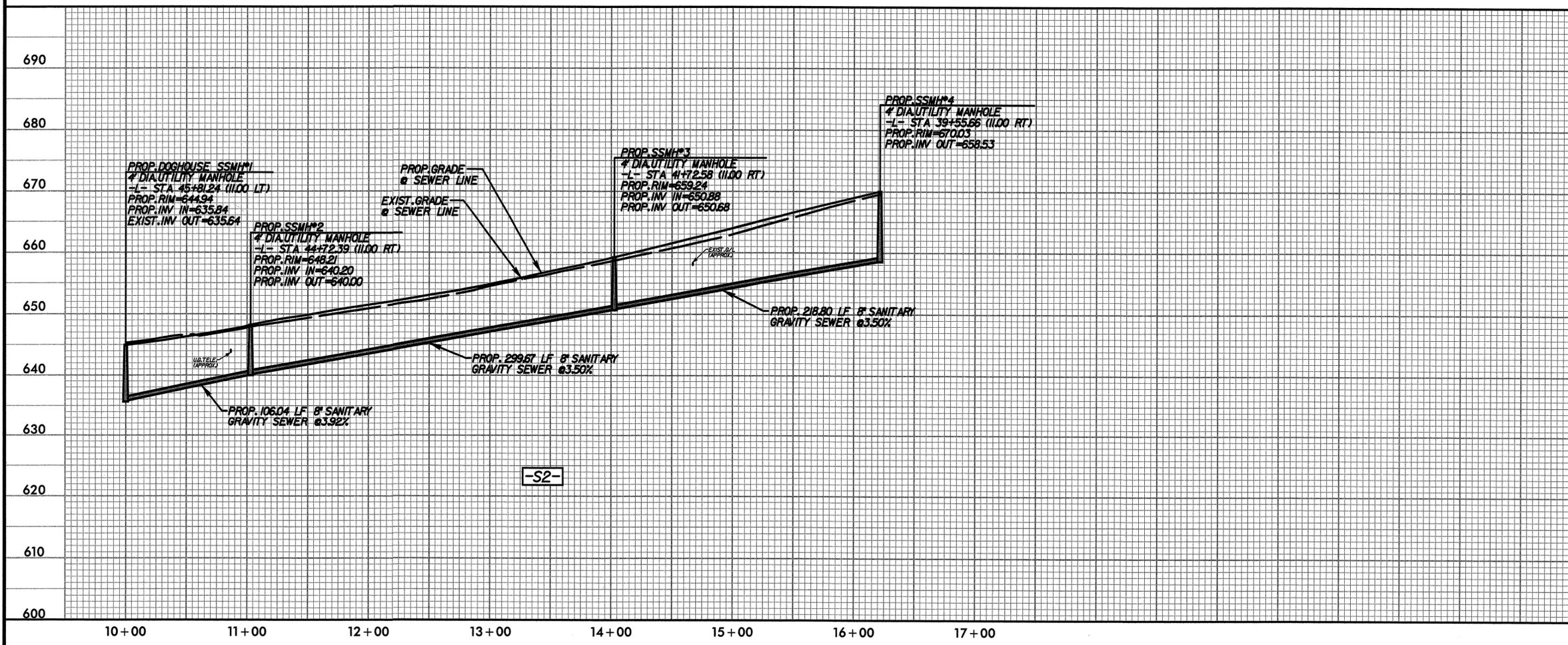
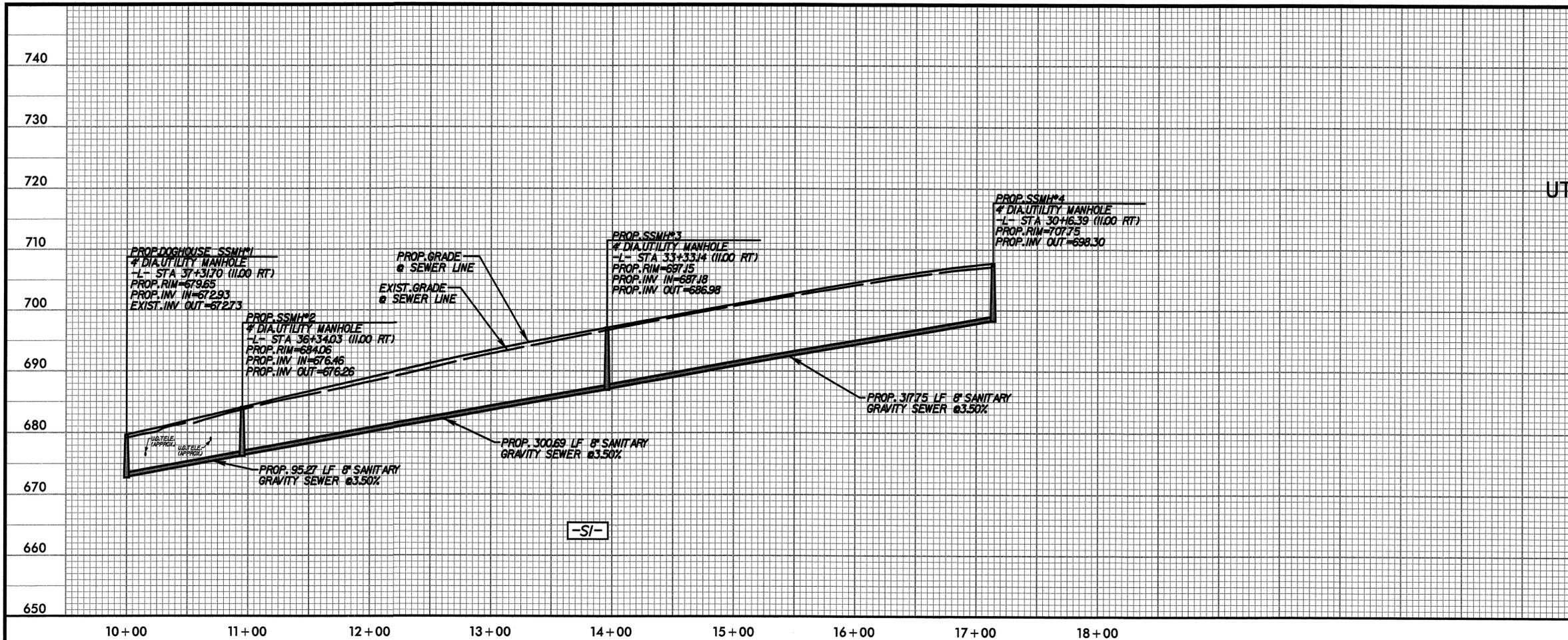
WEDDINGTON ROAD FROM SOUTH OF 1-485 TO THE INTERSECTION OF PLEASANT PLAINS

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	1-8-08	UC-6	UC-10

Hinde Engineering, Inc.
 9303 MONROE ROAD, SUITE E
 CHARLOTTE, NC 28270
 704-814-4101 (office)
 704-814-2942 (fax)

PROJECT REFERENCE NO.	SHEET NO.
U-5025, 37162	UC-7
DESIGNED BY: CLS	
DRAWN BY: JNA	
CHECKED BY: KSH	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 ENGINEERING DIVISION
 RALEIGH, NORTH CAROLINA

WEDDINGTON ROAD FROM SOUTH OF 1-485
 TO THE INTERSECTION OF PLEASANT PLAINS

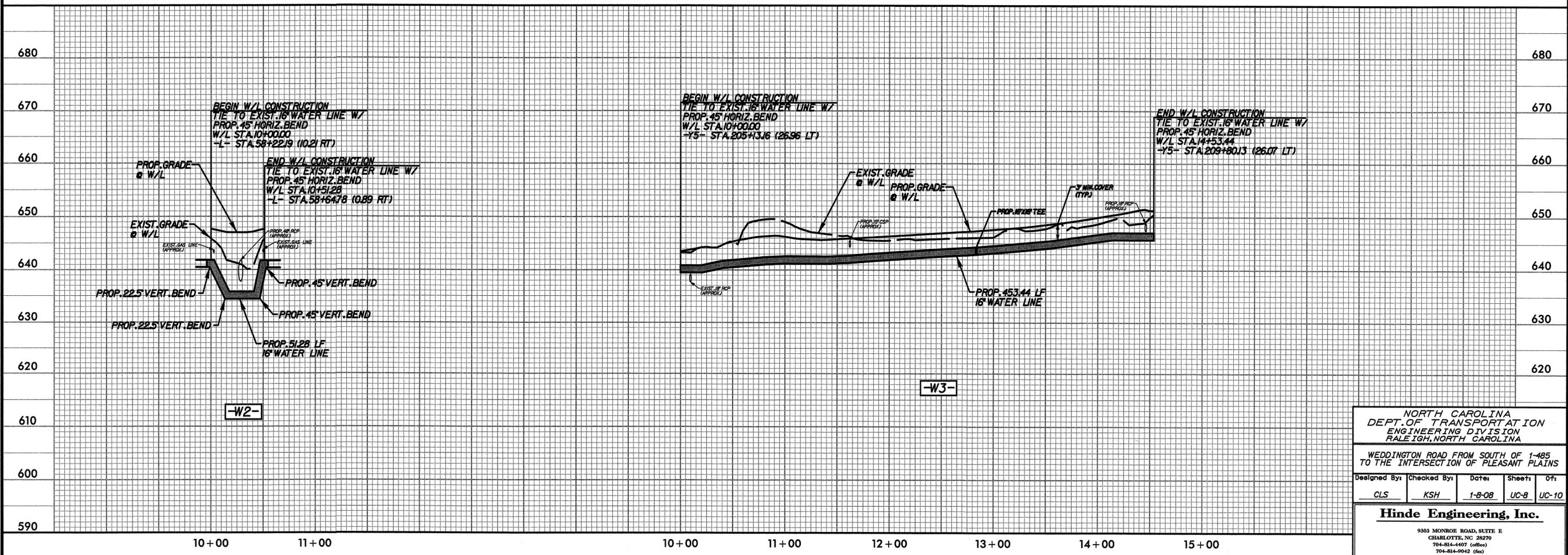
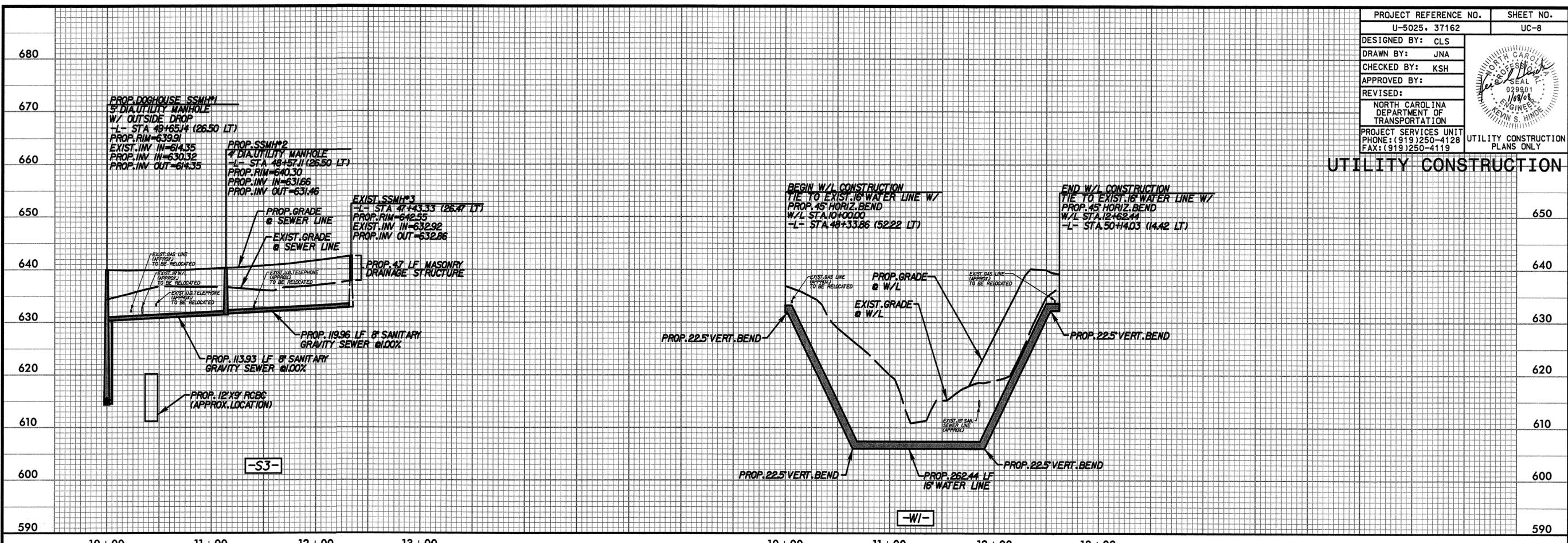
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CLS	KSH	1-8-08	UC-7	UC-10

Hinde Engineering, Inc.

9303 MONROE ROAD, SUITE E
 CHARLOTTE, NC 28270
 704-514-4407 (office)
 704-514-9042 (fax)

PROJECT REFERENCE NO.	SHEET NO.
U-5025, 37162	UC-8
DESIGNED BY: CLS	
DRAWN BY: JNA	
CHECKED BY: KSH	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



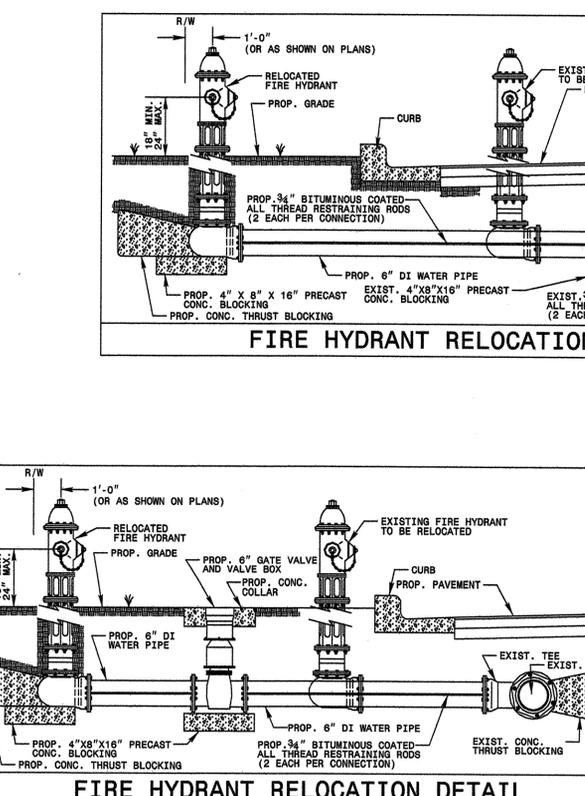
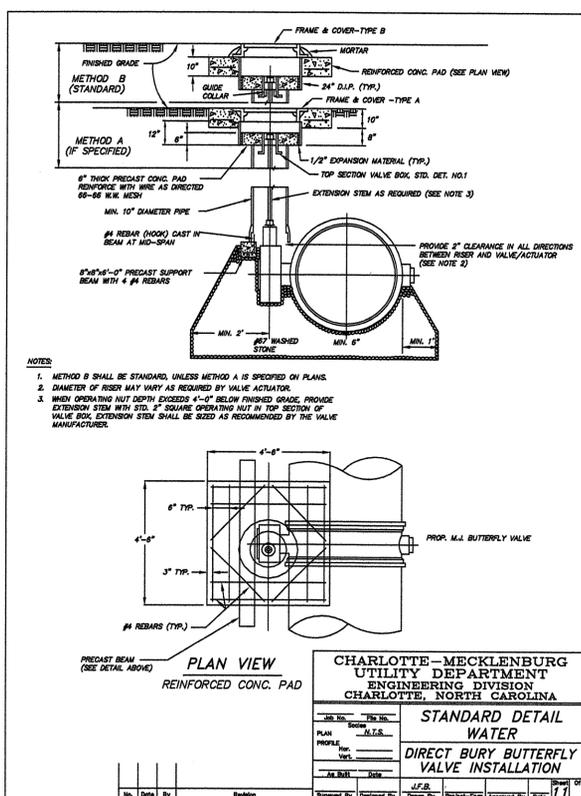
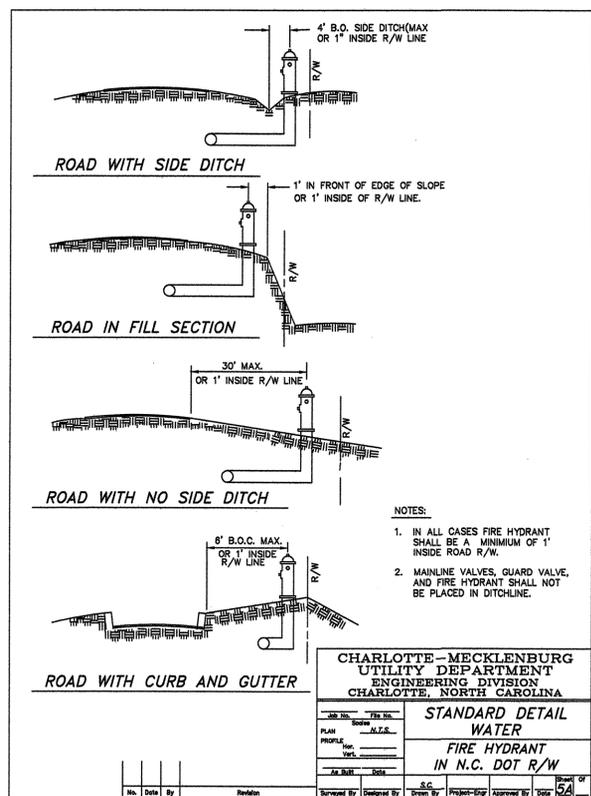
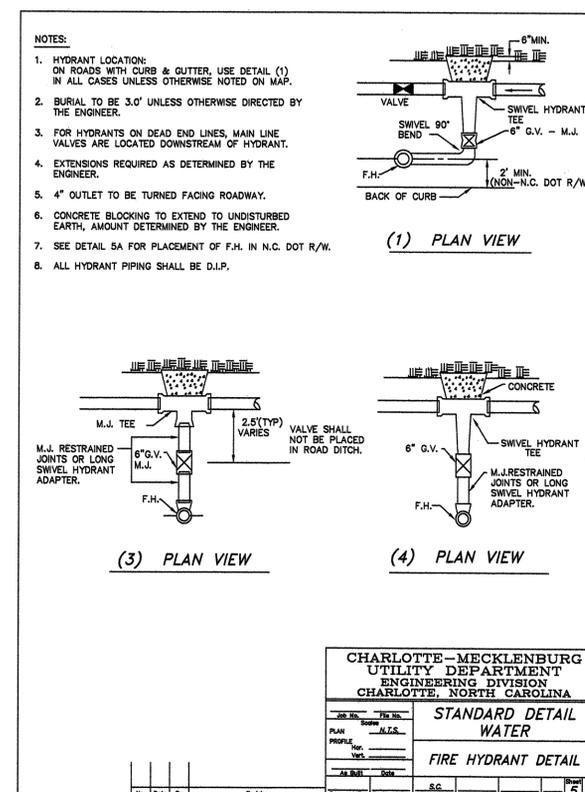
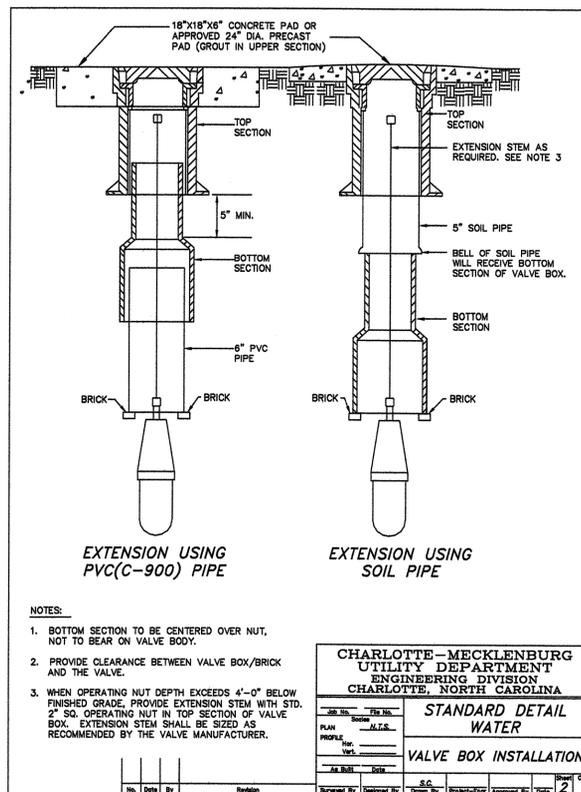
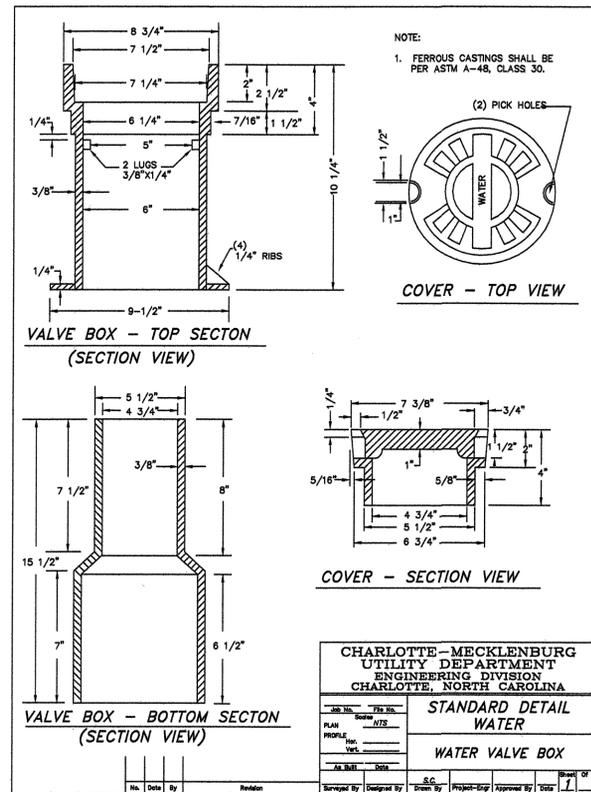
NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 ENGINEERING DIVISION
 RALEIGH, NORTH CAROLINA

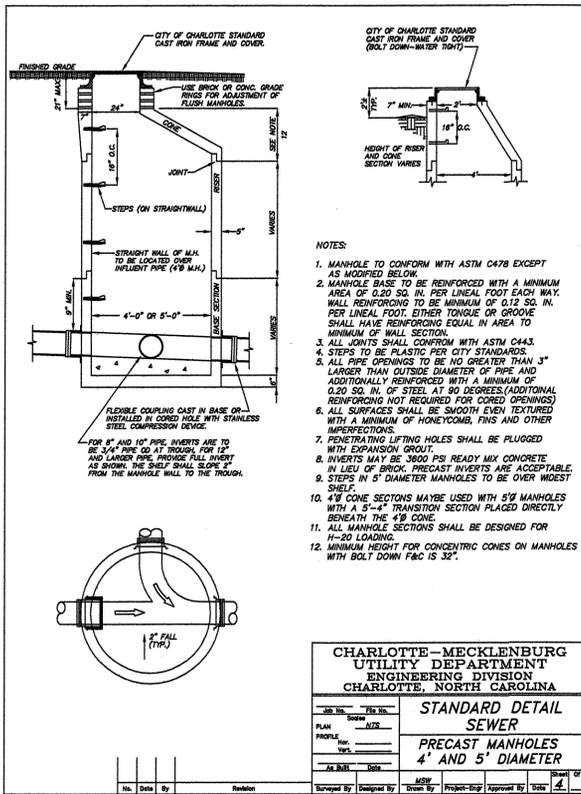
WEDDINGTON ROAD FROM SOUTH OF I-485
 TO THE INTERSECTION OF PLEASANT PLAINS

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	1-8-08	UC-8	UC-10

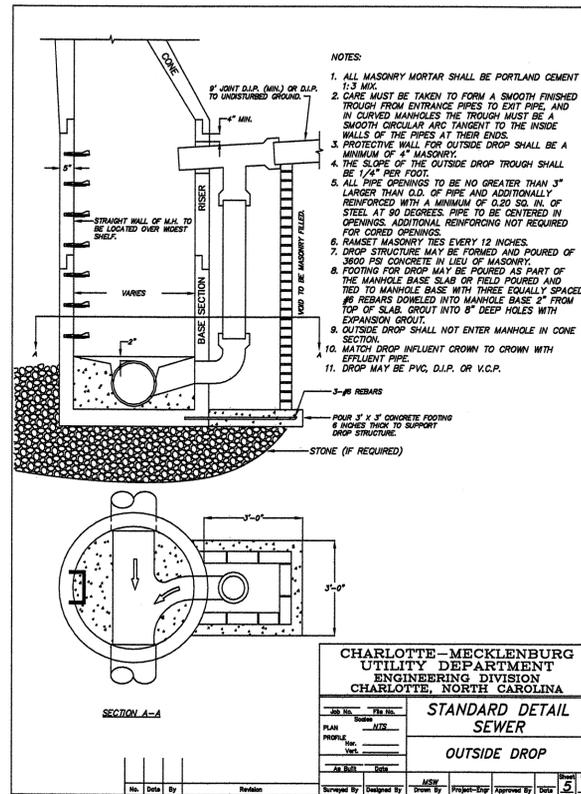
Hinde Engineering, Inc.

9303 MONROE ROAD, SUITE E
 CHARLOTTE, NC 28270
 704-514-4407 (office)
 704-514-9042 (fax)

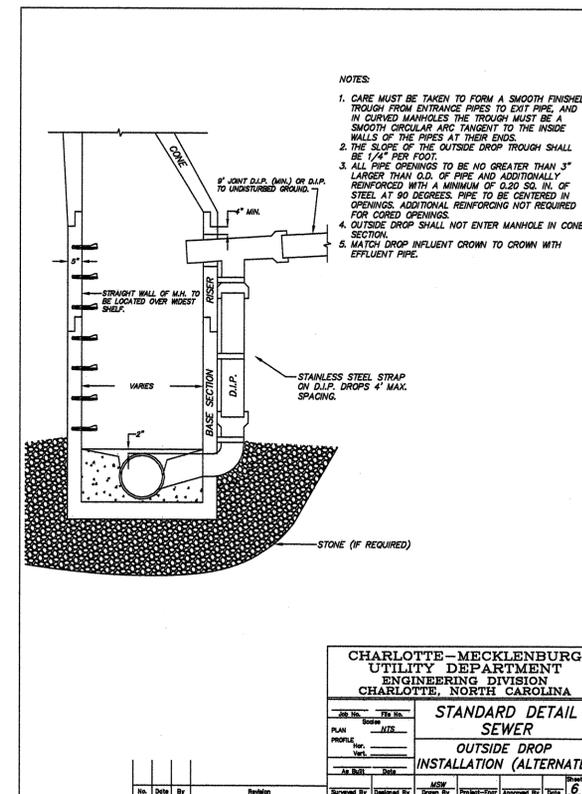




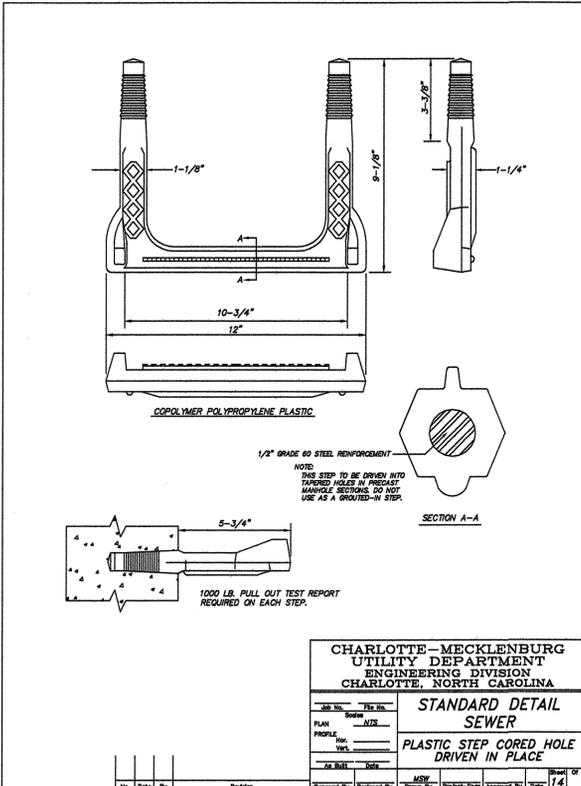
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No. _____ Date _____ By _____	STANDARD DETAIL SEWER PRECAST MANHOLES 4' AND 5' DIAMETER
No. _____ Date _____ By _____	No. _____ Date _____ By _____



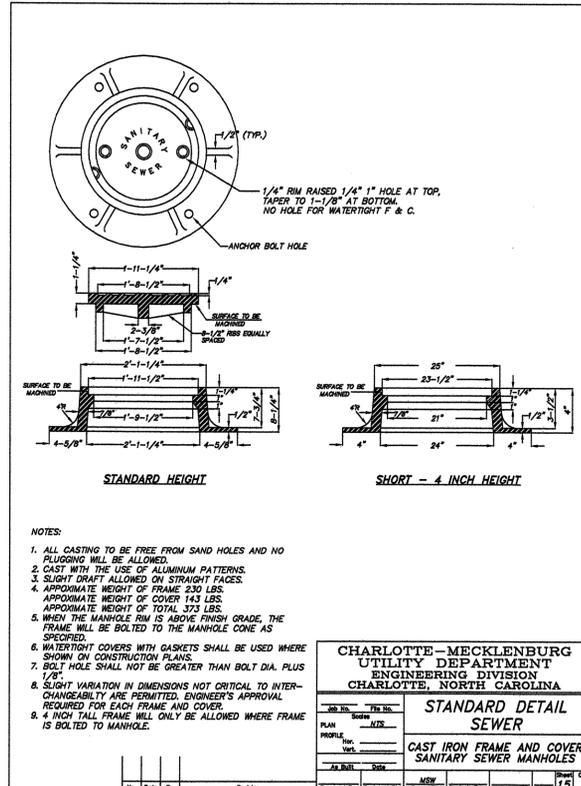
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No. _____ Date _____ By _____	STANDARD DETAIL SEWER OUTSIDE DROP
No. _____ Date _____ By _____	No. _____ Date _____ By _____



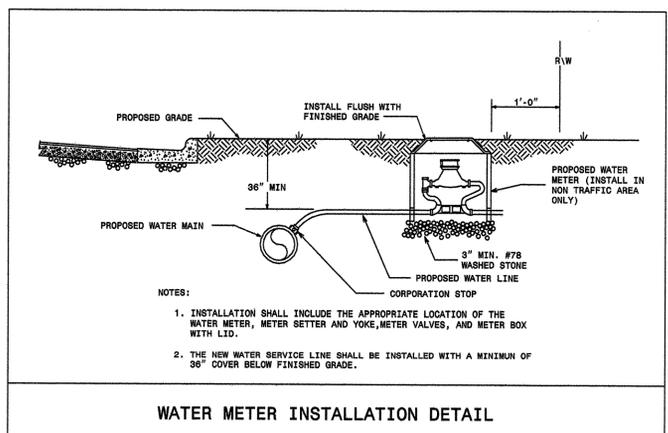
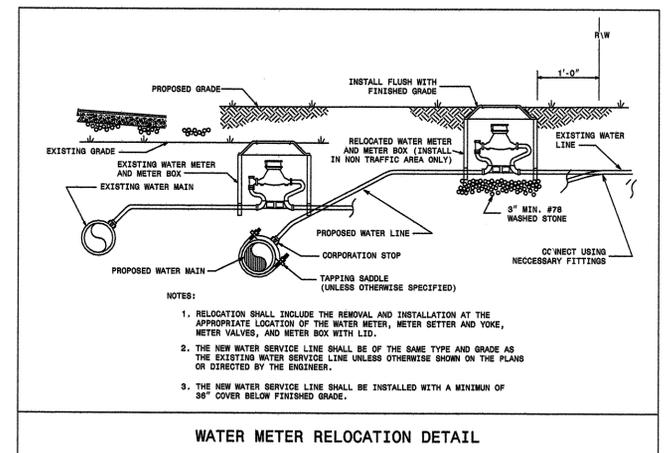
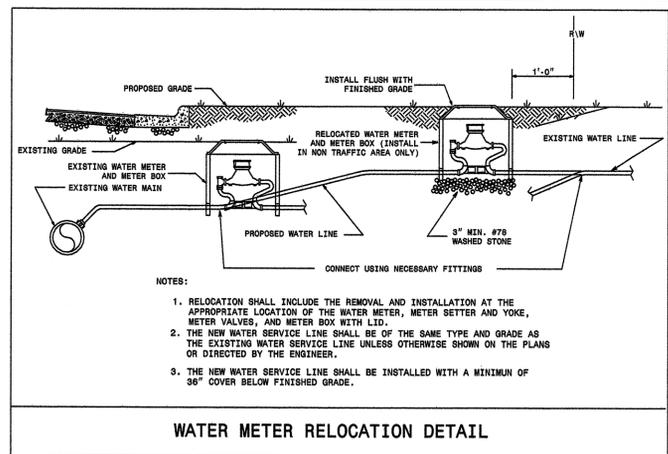
CHARLOTTE-MECKLENBURG UTILITY DEPARTMENT ENGINEERING DIVISION CHARLOTTE, NORTH CAROLINA	
No. _____ Date _____ By _____	STANDARD DETAIL SEWER OUTSIDE DROP INSTALLATION (ALTERNATE)
No. _____ Date _____ By _____	No. _____ Date _____ By _____



CHARLOTTE-MECKLENBURG UTILITY DEPARTMENT ENGINEERING DIVISION CHARLOTTE, NORTH CAROLINA	
No. _____ Date _____ By _____	STANDARD DETAIL SEWER PLASTIC STEP CORED HOLE DRIVEN IN PLACE
No. _____ Date _____ By _____	No. _____ Date _____ By _____



CHARLOTTE-MECKLENBURG UTILITY DEPARTMENT ENGINEERING DIVISION CHARLOTTE, NORTH CAROLINA	
No. _____ Date _____ By _____	STANDARD DETAIL SEWER CAST IRON FRAME AND COVER SANITARY SEWER MANHOLES
No. _____ Date _____ By _____	No. _____ Date _____ By _____



NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 ENGINEERING DIVISION
 RALEIGH, NORTH CAROLINA

WEDDINGTON ROAD FROM SOUTH OF I-485
 TO THE INTERSECTION OF PLEASANT PLAINS

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	1-8-08	UC-10	UC-10

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