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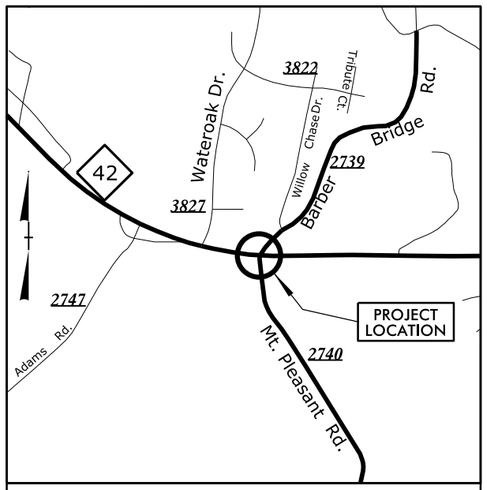
PROJECT: W-5205K

CONTRACT: DE00131

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP SHOWING
LOCATION OF PROJECT W-5205K

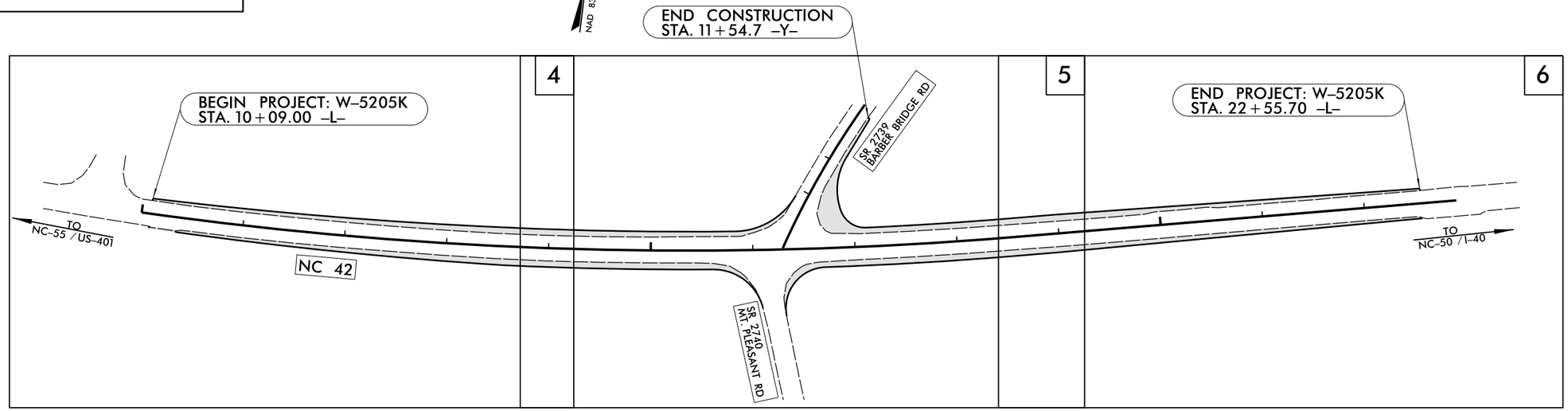
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
WAKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5205K	1	

STATE FED.I.NO.	F.A. PROJ. NO.	DESCRIPTION
45335.1.11	HRRR-0042(52)	PE
45335.2.FR11	HRRR-0042(52)	R /W & UTIL.
45335.3.FR11	HRRR-0042(52)	CONST.

LOCATION: NC-42 AT SR-2740 (MT. PLEASANT RD.) & SR-2739 (BARBER BRIDGE RD.)
TYPE OF WORK: GRADING, DRAINAGE, AND PAVING.

NAD 83/2007



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

PLANS: 20 10 0 20 40

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 5 2.5 0 5 10

DESIGN DATA

ADT 2013 = 8900
V = 60 MPH

PROJECT LENGTH

Length Roadway Project W-5205K = 0.236 Miles

Prepared In the Office of:
DIVISION OF HIGHWAYS
2612 N. Duke St., Durham, NC 27704

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

BEN J UPSHAW, P. E.
PROJECT ENGINEER

SUNIL PATEL
PROJECT DESIGN ENGINEER

DIVISION DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by:
Ben Upshaw
CD6EB110D6E54E5...
3/14/2016
SIGNATURE *P.E.*

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

FIFTH DIVISION
JOSEPH R. HOPKINS, P.E.
DIVISION ENGINEER

DIVISION OF HIGHWAYS · DIVISION DESIGN UNIT · STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

14-MAR-2016 11:51
R:\Roadway\Projects\W5205K_Rdy.SHT-1.dgn
$$USERNAME$$

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	1-A

DIVISION FIVE DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by: 5/14/2016
Ben Upshaw P.E.
CD6EB110D6E54E5...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

INDEX OF SHEETS

2012 ROADWAY ENGLISH STANDARD DRAWINGS

EFF. 01-17-2012
REV. 02-29-2016

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO. TITLE
DIVISION 2 - EARTHWORK
200.02 Method of Clearing - Method II
225.02 Guide for Grading Subgrade - Secondary and Local
DIVISION 3 - PIPE CULVERTS
300.01 Method of Pipe Installation
310.10 Driveway Pipe Construction
DIVISION 8 - INCIDENTALS
840.24 Frames and Narrow Slot Sag Grates
840.28 Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.72 Pipe Collar
876.02 Guide for Rip Rap at Pipe Outlets

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 10-31-2014

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE CENTURY LINK, DUKE ENERGY,

TWC, AND TOWN OF FUQUAY-VARINA.

04/06/15

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 23
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line LOS B (S.U.E.*) — P
- U/G Power Line LOS C (S.U.E.*) — P
- U/G Power Line LOS D (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Cable LOS B (S.U.E.*) — T
- U/G Telephone Cable LOS C (S.U.E.*) — T
- U/G Telephone Cable LOS D (S.U.E.*) — T
- U/G Telephone Conduit LOS B (S.U.E.*) — TC
- U/G Telephone Conduit LOS C (S.U.E.*) — TC
- U/G Telephone Conduit LOS D (S.U.E.*) — TC
- U/G Fiber Optics Cable LOS B (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS C (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS D (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E.*) — W
- U/G Water Line LOS C (S.U.E.*) — W
- U/G Water Line LOS D (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Cable LOS B (S.U.E.*) — TV
- U/G TV Cable LOS C (S.U.E.*) — TV
- U/G TV Cable LOS D (S.U.E.*) — TV
- U/G Fiber Optic Cable LOS B (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS C (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS D (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) — G
- U/G Gas Line LOS C (S.U.E.*) — G
- U/G Gas Line LOS D (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

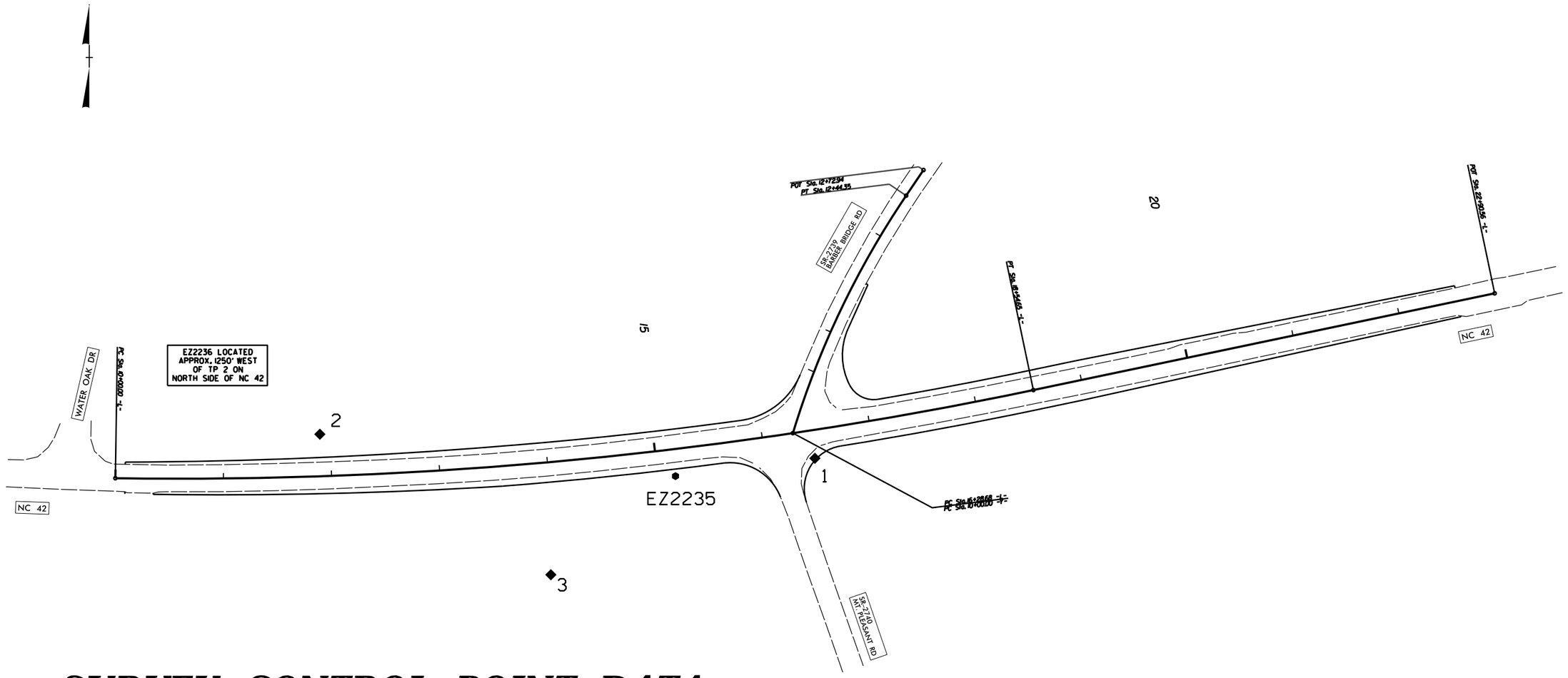
SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Forced Main Line LOS B (S.U.E.*) — FSS
- SS Forced Main Line LOS C (S.U.E.*) — FSS
- SS Forced Main Line LOS D (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	1-C



SURVEY CONTROL POINT DATA

CONTROL POINT NO.	NORTHING	EASTING	ELEVATION
1	667544.611	2097773.502	347.953
2	667566.841	2097315.684	343.617
3	667436.849	2097529.317	336.205
EZ2235	667528.120	2097644.590	346.456
EZ2236	667680.289	2096070.946	339.894
STA: 10+00.00	667526.184	2097126.562	-
STA: 18+54.65	667607.743	2097975.551	-
STA: 22+90.56	667697.233	2098402.174	-

WIDENING FOR TURN LANE ON NC-42 AT SR-2740 (MT. PLEASANT RD.) & SR-2739 (BARBER BRIDGE RD.)

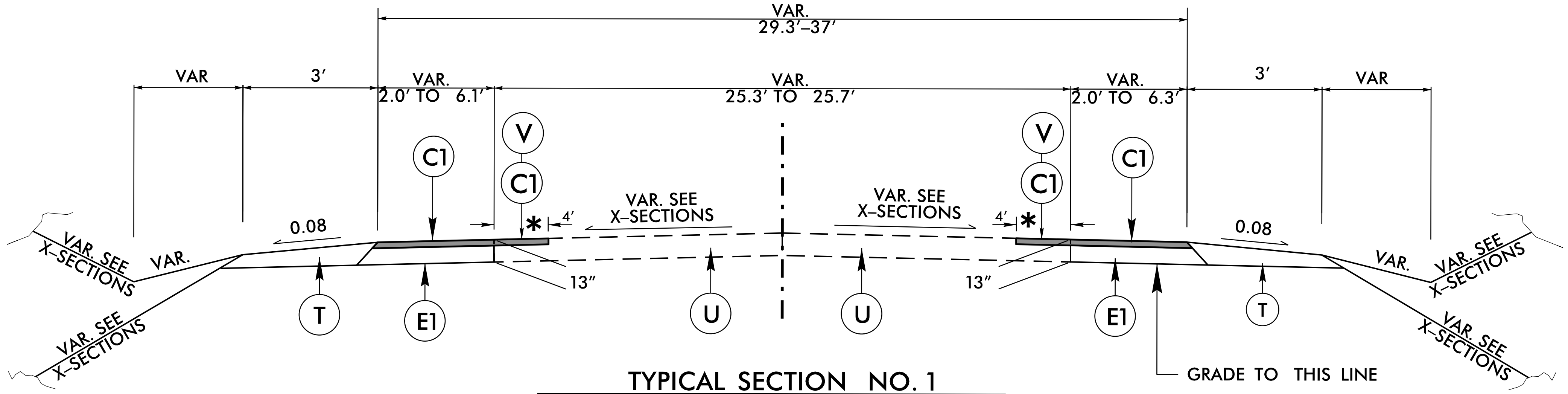
DIVISION 05 WAKE COUNTY WILLOW SPRING

REVISIONS	INIT.	DATE

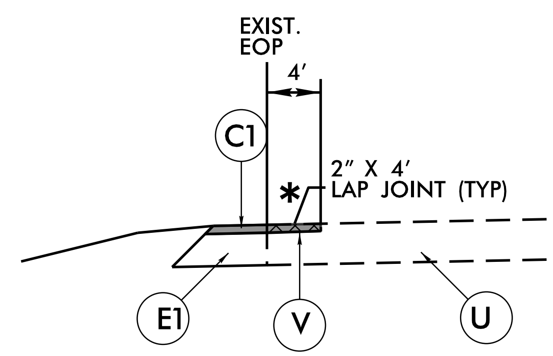
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DIVISION DESIGN UNIT

SCALE:	1"=50'
DATE:	11/5/2015
PREPARED BY:	DD
REVIEWED BY:	BU
REVIEWED BY:	



TYPICAL SECTION NO. 1
STA. 10+09.00 TO 22+55.7 (–L–)



LAP JOINT DETAIL

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
E1	PROP. APPROX. 11" ASPHALT CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	2" MILLING.

NOTES:
1). THE PORTION OF EACH EXISTING PAVED SHOULDER THAT IS NOT FULL DEPTH IS TO BE REMOVED AND PAVED TO FULL DEPTH.
2). PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION FIVE DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by:
Ben Upshaw 9/14/2016
SIGNATURE P.E.
...0D6E54E5...

WIDENING FOR TURN LANE ON NC–42 AT SR–2740 (MT. PLEASANT RD.) & SR–2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRINGS

REVISIONS	INIT.	DATE

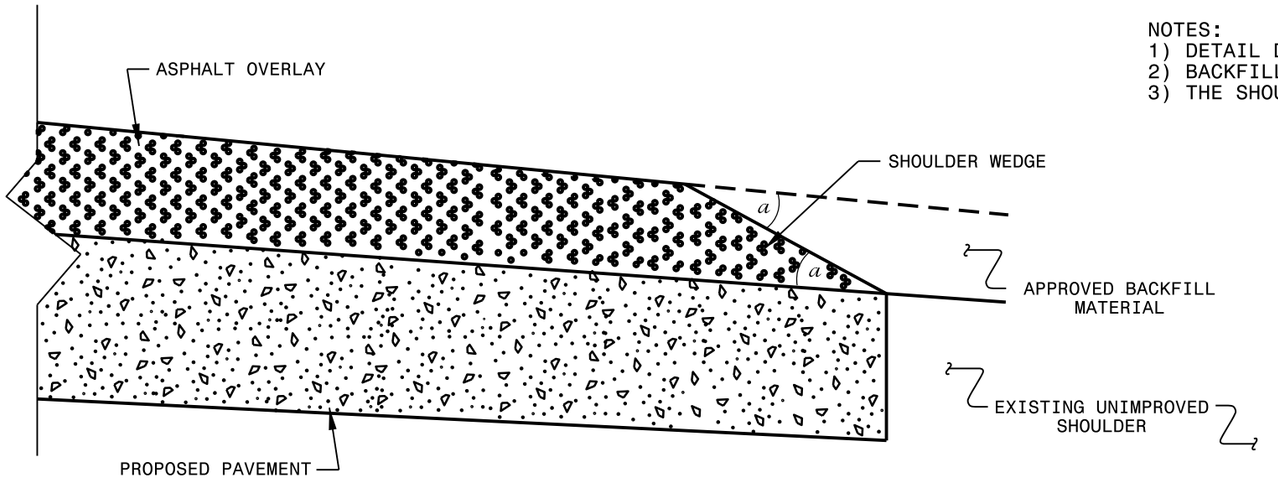
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

DIVISION OF HIGHWAYS DIVISION FIVE STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DESIGN UNIT

SCALE: NONE	DATE: 10/2015
PREPARED BY: SUNIL PATEL	
REVIEWED BY: BEN UPSHAW	
REVIEWED BY:	

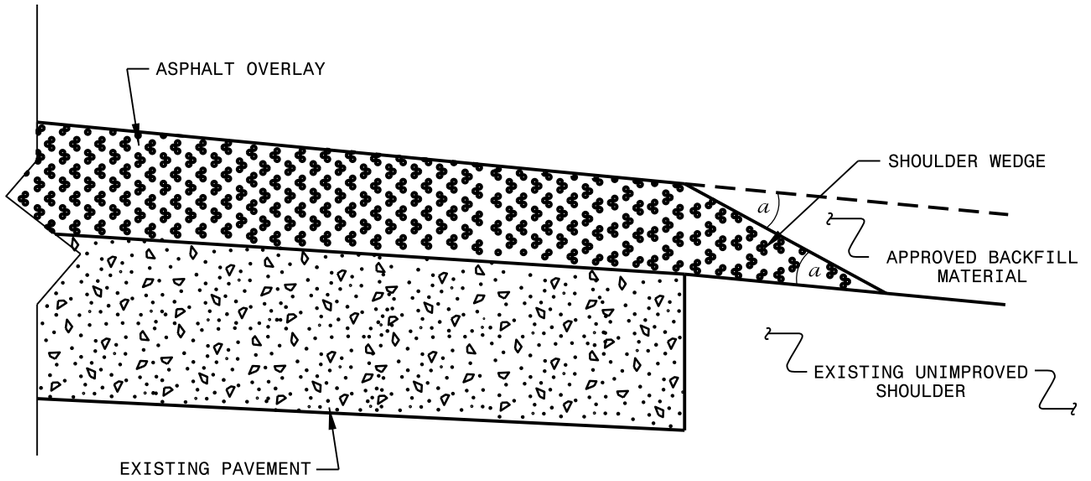
PROJECT REFERENCE NO.	SHEET NO.
W-5205K	2A-2

NOTES:
1) DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



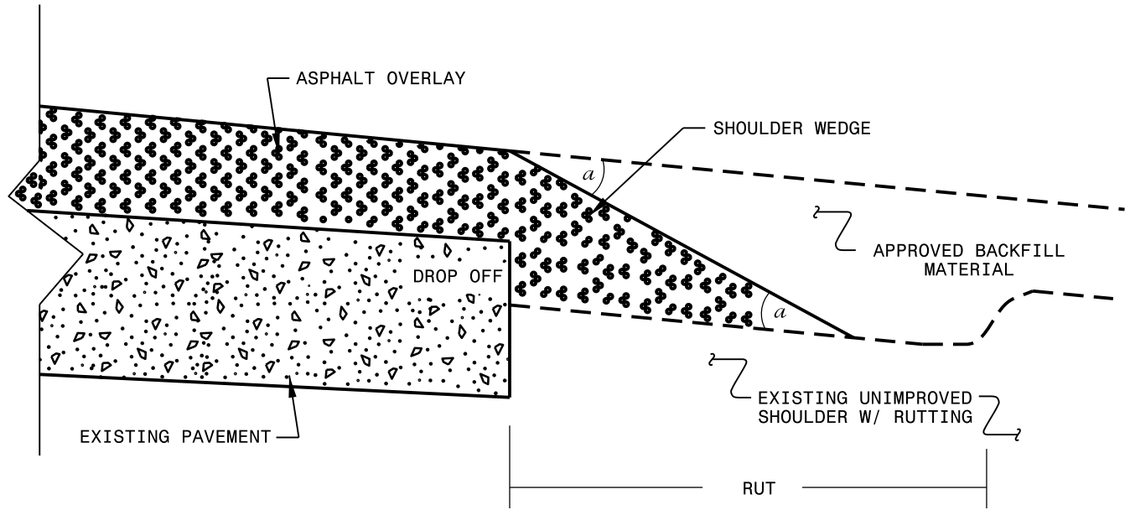
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SHOULDER WEDGE DETAILS

ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: DATE: 10/16/12
CHECKED BY: DATE:
FILE SPEC.: s:usr/details/stand/shoulderwedgedetail.dgn

$$$$$$$$SYSTIME$$$$
$$$$$$$$USERNAME$$$$

4/04/05

COMPUTED BY: SP DATE: 12 /2014
CHECKED BY: BU DATE: 12 /2014

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	3-A

See "Standard Specifications For Roads and Structures, Section 300–5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

STATION	LOCATION (LT,RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE: 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
								THICKNESS OR GAUGE											
SHEET 4																			
–L– 12+37	LT	401	402		341.17	340.98													
–L– 12+58	LT	402		343.18	340.93														
–L– 12+65	LT	403	402		341.10	341.00													
–L– 12+58	LT	404	402		340.93	EXIST.													
–L– 12+58	RT	405	406		EXIST.	337.27													
SHEET 5																			
–L– 15+30	LT	501			345.30	344.90													
SHEET 6																			
20+22	LT	601			337.00	336.70													
PROJECT TOTAL																			

STATION	C.S. PIPE SIZE: 12"	15"	18"	24"	36"	42"	48"	R.C. PIPE (CLASS III) SIZE: 15"	18"	24"	30"	36"	42"	48"	R.C. PIPE (CLASS IV) SIZE: 12"	15"	18"	24"	30"	36"	42"	48"
	THICKNESS OR GAUGE	.064	.064	.064	.079	.109	.109															
SHEET 4																						
–L– 12+37								40														
–L– 12+58																1						
–L– 12+65								8														
–L– 12+58									8													
–L– 12+58									12													
SHEET 5																						
–L– 15+30								40														
SHEET 6																						
20+22								56														
PROJECT TOTAL								144	20							1						

STATION	*** R. C. PIPE (CLASS V)	*** R. C. PIPE CULVERTS, CONTRACTOR DESIGN PIPE	*** R. C. PIPE CULVERTS, CONTRACTOR DESIGN PIPE	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS: STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES * TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') PER EACH (0' THRU 5.0')	LIN. *FT. A: 5.0' THRU 10.0'	B: 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION CATCH BASIN	DROP INLET	G.D.I. FRAME WITH GRATE STD. 840.22	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	T.B.J.B. STD. 840.34	M. H. FRAME & COVER ST. 840.54	CONC. COLLARS CL. "B" C.Y. STD 840.72	PIPE ELBOWS (15", C.A.A.)	PIPE REMOVAL LIN.FT.	REMARKS
SHEET 4																											
–L– 12+37																									36	REMOVE 15" RCP
–L– 12+58																				1						D. I.
–L– 12+65																										
–L– 12+58																					0.5			COLLAR & EXTEND W/18" RCP
–L– 12+58																					0.5			COLLAR & EXTEND W/18" RCP AT 2.8%
SHEET 5																										
–L– 15+30																									42	REMOVE 15" RCP
SHEET 6																										
20+22																									50	REMOVE 18" RCP
PROJECT TOTAL																				1	1				128	

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I. (N.S.)	GRATED DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

SUMMARY OF EARTHWORK

LOCATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +20%	BORROW	WASTE
(–L–) 10+09 TO 22+55.7	919		1248	329	
SUBTOTALS:	919		1248	329	
PROJECT TOTALS:	919		1248	329	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				17	
GRAND TOTALS:	919		1248	312	

Approximate quantities only. Unclassified excavation, removal of existing pavement, and clearing & gurbbing will be paid for at the lump sump price for "Grading".

11-MAR-2016 15:50
R:\Roadway\Proj\W5205K_RDY_SHT3A.dgn
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PROJECT REFERENCE NO.	SHEET NO.
W-5205K	4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PI Sta 14+29.09 -L-
△ = 12° 43' 08.2" (LT)
D = 1° 29' 17.5"
L = 854.65'
T = 429.09'
R = 3,850.00

ROBERT J & MANUELA S AVERITTE
DB 8375 PG 2267

ROBERT L JR & MARY J CLIFTON
DB 6217 PG 593

WATER OAK DR

PC Sta 10+00.00 -L-

BEGIN PROJECT: W-5205K
STA. 10+09.0 -L-

EIP

WOODEN FENCE

18" RCP

NC 42

25.4' EXIST.

SPECIAL DITCH (SEE DETAIL B)

WOODEN FENCE

EIP

REMOVE

GATE

SPECIAL DITCH (SEE DETAIL B)

401 402 403 404

15" 2GI 15"

15" RCP

18"

MATCHLINE STA. 14+00.00

10+35.04 -L-
TIE TO EXIST. EOP

15" RCP

CONC.

EIP

16" DI

405

406

18"

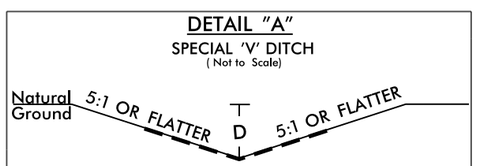
COLLAR & EXTEND W/18" RCP AT 2.8% GRADE

SPECIAL DITCH (SEE DETAIL "A")
TIE TO EXIST. DITCH
PSRM 10 SY

CL B RIP RAP
3 TONS

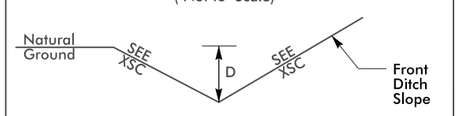
(1)
JOSEPH C & SARAH A OGBURN
DB 9191 PG 2754

DETAIL "A"
SPECIAL 'V' DITCH
(Not to Scale)



Type of Liner= PSRM Min. D=0.5'

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)



D=See X-Section

DIVISION FIVE DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by: Ben Upshaw 5/14/2016 P.E.
SIGNATURE CD6EB110D6E54E5...

WIDENING FOR TURN LANE ON NC-42 AT SR-2740 (MT. PLEASANT RD.) & SR-2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRING

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

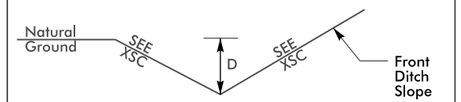
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DIVISION DESIGN UNIT

SCALE: 1"=40'	DATE: 08/2015
PREPARED BY: SUNIL PATEL	
REVIEWED BY: BEN UPSHAW	
REVIEWED BY:	

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	5

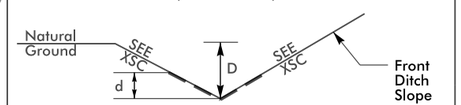
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)



D=See X-Section

DETAIL C
SPECIAL CUT DITCH
(Not to Scale)



Type of Liner= PSRM
D=See X-Section
Max. d=1.5 Ft.

POT Sta. 12+72.94
PT Sta. 12+44.35

ROBERT L JR & MARY J CLIFTON
DB 3545 PG 63

OGBURN FARMS LLC
DB 12585 PG 1215

N 34°03'52.4" E

SR-2739 BARBER BRIDGE RD

GRAVEL LOT

OGBURN LANDSCAPING SUPPLIES

END CONSTRUCTION
11+54.7 –Y–
TIE TO EXIST. EOP

PT Sta. 18+5465 –L–

SPECIAL DITCH
(SEE DETAIL B)

SPECIAL DITCH
(SEE DETAIL B)

10+53.0 –Y–
11.0
TIE TO
EXIST. EOP

DO NOT DISTURB

DO NOT DISTURB

R 70'

R 60'

R 60'

R 25

R 10 TYP

15"

501

REMOVE

ROCKS

ROCKS

MATCHLINE STA. 14+00.00

MATCHLINE STA. 19+00.00

37'

37'

15+00

16+00

17+00

18+00

NC 42

SPECIAL DITCH
(SEE DETAIL B)

R 40'

R 50'

16+08.9 –L–
56.8
TIE TO EXIST. EOP

16+31.6 –L–
65.1
TIE TO EXIST. EOP

PC Sta. 16+28.68 –L–
PC Sta. 10+00.00 –Y–

SR-2740
MT. PLEASANT RD

OGBURN FARMS LLC
DB 12585 PG 1215

JOSEPH C & SARAH A OGBURN
DB 9191 PG 2754

DEWEY CALVIN OGBURN
DB 66-SP PG 270

DIVISION FIVE DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by:
Ben Upshaw 7/14/2016 P.E.
SIGNATURE
C0CEE4...

WIDENING FOR TURN LANE ON NC-42 AT SR-2740 (MT. PLEASANT RD.) & SR-2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRING

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DIVISION DESIGN UNIT

SCALE:	1"=40'
DATE:	11/2014
PREPARED BY:	SUNIL PATEL
REVIEWED BY:	BEN UPSHAW
REVIEWED BY:	

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	6

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

OGBURN LANDSCAPING SUPPLIES

OGBURN FARMS LLC
DB 12585 PG 1215

ASHLEY PORTER FARMS LLC
DB 13234 PG 2646

PORTER FARMS

20

END PROJECT: W-5205K
STA. 22+55.7 -L-

POT Sta. 22+90.56 -L-

GRAVEL LOT

GRAVEL LOT

EIP

R 10 TYP

R 10 TYP

REMOVE

C

601

15"

15" RCP

F

?UTL

TV FO

TV

T

25.3'
EXIST.

18" RCP

NC 42

N 78° 09' 11.5" E

22+00

21+00

20+00

37'

MATCHLINE STA. 19+00.00

16" DI

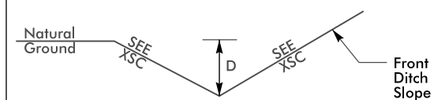
W

GRAVEL LOT

EIP

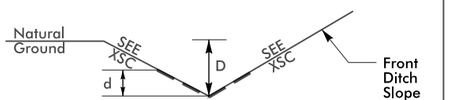
ASHLEY T &
CRISSY P PORTER
DB 15582 PG 2272

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)



D = See X-Section

DETAIL C
SPECIAL CUT DITCH
(Not to Scale)



Type of Liner= PSRM

D = See X-Section
Max. d = 1.5 Ft.

DIVISION FIVE DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by:
Ben Upshaw
CB6EB11056E54E5...

11/4/2016

P.E.

SIGNATURE

WIDENING FOR TURN LANE ON NC-42 AT SR-2740 (MT. PLEASANT RD.) & SR-2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRING

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

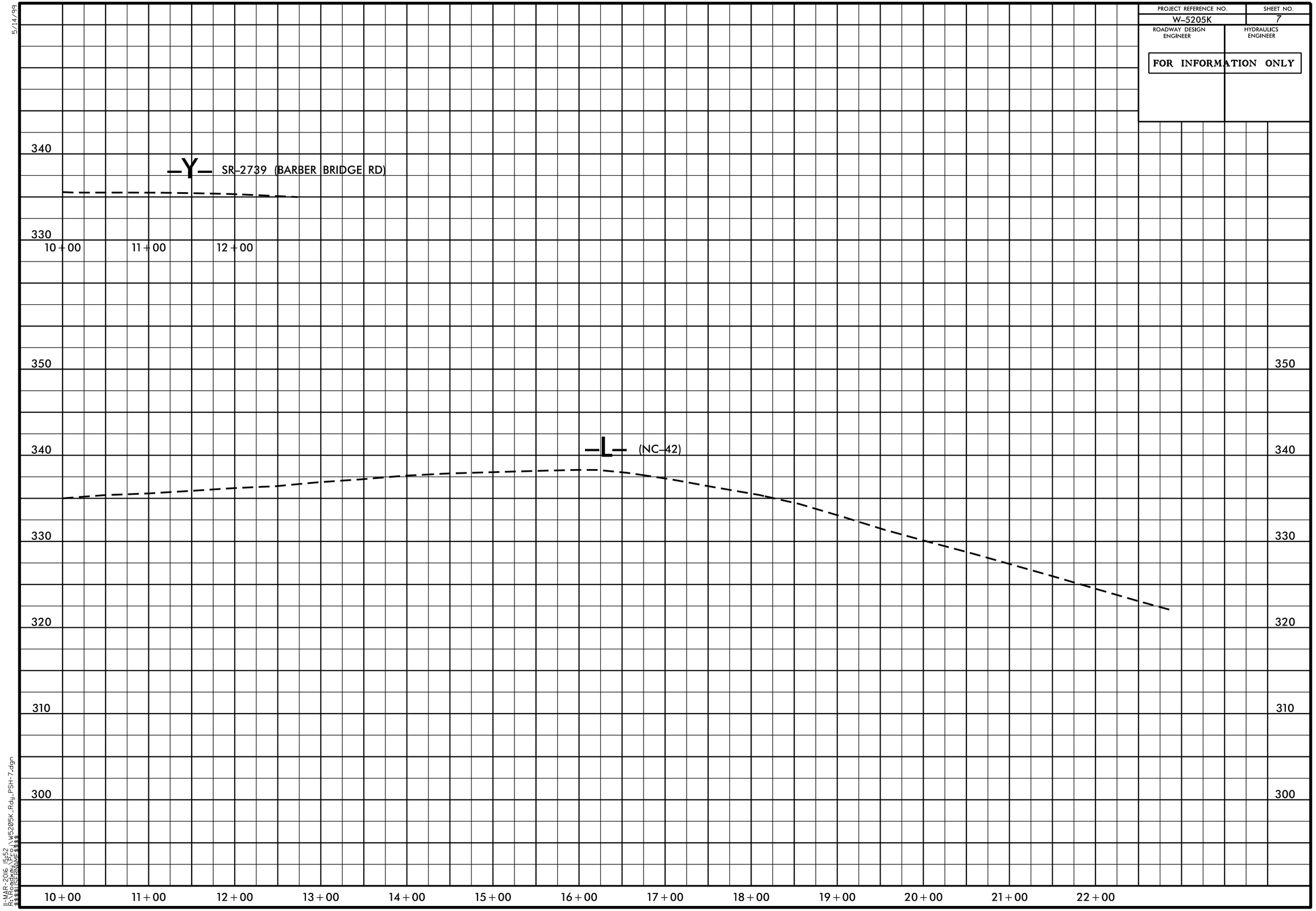
DIVISION OF HIGHWAYS · DIVISION FIVE · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DESIGN UNIT

SCALE:	1"=40'
DATE:	11/2014
PREPARED BY:	SUNIL PATEL
REVIEWED BY:	BEN UPSHAW
REVIEWED BY:	

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR INFORMATION ONLY



11-MAR-2016 15:52
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$$$$USERNAME$$$$

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

EXIST. PVMT.

NORTH ARROW

PROPOSED PVMT.

TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK AREA

REMOVAL

USER DEFINED (IF NEEDED)

USER DEFINED (IF NEEDED)

SIGNALS

EXISTING PROPOSED TEMPORARY (TEMP)

PAVEMENT MARKINGS

EXISTING LINES

TEMPORARY LINES

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

CONE

DRUM SKINNY DRUM TUBULAR MARKER

TEMPORARY CRASH CUSHION

FLASHING ARROW BOARD

FLAGGER

LAW ENFORCEMENT

TRUCK MOUNTED ATTENUATOR (TMA)

CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

PORTABLE SIGN

STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

11-MAR-2016 16:50
R:\Roadway\Proj\W5205K_TC_TMP-1A.dgn
$$$$USERNAME$$$$

ROADWAY STANDARD DRAWINGS

PROJ. REFERENCE NO.	SHEET NO.
W-5205K	TMP-1A

REV. SEPTEMBER 2011

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD.NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1150.01	FLAGGING DEVICES
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
NC-42	MONDAY THRU FRIDAY 7 AM TO 9 AM & 4 PM TO 6 PM
SR-2739 (BARBER BRIDGE RD)	MONDAY THRU FRIDAY 7 AM TO 9 AM & 4 PM TO 6 PM
SR-2740 (MT. PLEASANT RD)	MONDAY THRU FRIDAY 7 AM TO 9 AM & 4 PM TO 6 PM

LANE AND SHOULDER CLOSURE REQUIREMENTS

B) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

F) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

G) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

H) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 200' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

I) NOTIFY THE ENGINEER SEVEN (7) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

J) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

K) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

L) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

M) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

PAVEMENT MARKINGS AND MARKERS

N) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL	PAINT	TEMPORARY RAISED

O) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

P) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

APPROVED: Ben Upshaw

DATE: 3/14/2016

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

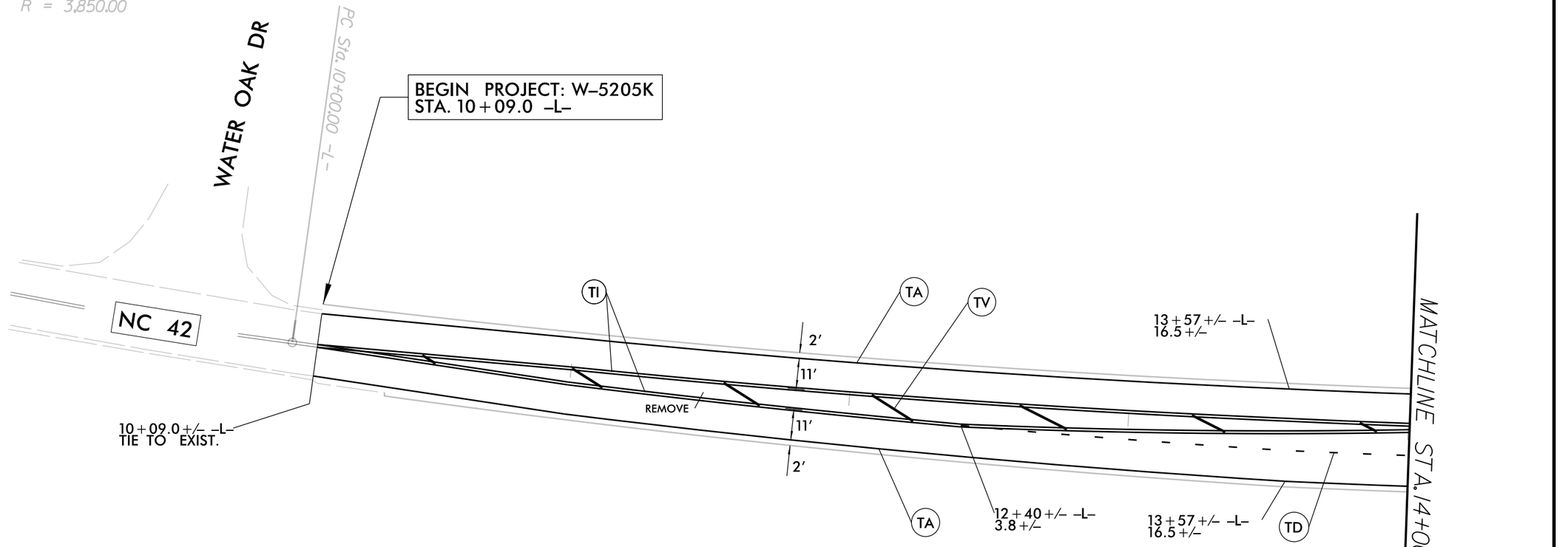
DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

LEGEND, ROADWAY STANDARD DRAWINGS & NOTES

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	PM-1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PI Sta 14+29.09 -L-
△ = 12° 43' 08.2" (LT)
D = 1° 29' 17.5"
L = 854.65'
T = 429.09'
R = 3,850.00



PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	PAY ITEM	QUANTITY
		THERMOPLASTIC(4", 90 MILS)	
TA	WHITE SOLID EDGE LINE		2548
			TOTAL= 2548 LF
		THERMOPLASTIC(4", 120 MILS)	
TD	2 FT. - 6 FT./SP WHITE MINISKIP		60
TD	3 FT. - 9 FT./SP WHITE MINISKIP		116
TE	WHITE SOLID LANE LINE		210
TI	YELLOW DOUBLE CENTER		3980
			TOTAL= 4366 LF
		THERMOPLASTIC(8", 90 MILS)	
TV	YELLOW DIAGONAL		174
			TOTAL= 174 LF
		THERMOPLASTIC (24", 120 MILS)	
T2	WHITE STOPBAR		93
			TOTAL= 93 LF
		THERMOPLASTICPAVEMENT MARKING SYMBOLS (90 MILS)	
UA	LEFT TURN ARROW		2
UE	COMBO STRAIGHT/RIGHT ARROW		2
			TOTAL= 4 EA
		MARKERS	
MA	YELLOW & YELLOW		39
MB	CRYSTAL & RED		13
			TOTAL= 52 EA

DIVISION FIVE DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by:
Ben Upshaw 8/14/2016 P.E.
SIGNATURE
CD8EB110D6E54E5...

WIDENING FOR TURN LANE ON NC-42 AT SR-2740 (MT. PLEASANT RD.) & SR-2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRING

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DIVISION FIVE DESIGN UNIT

SCALE:	1"=40'
DATE:	12/2014
PREPARED BY:	SUNIL PATEL
REVIEWED BY:	BEN UPSHAW
REVIEWED BY:	

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	PM-2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

POT Sta. 12+72.94
PT Sta. 12+44.35
N 34°03'52.4" E

SR-2739 BARBER BRIDGE RD

* SEE SIGNAL PLANS FOR STOP BAR LOCATIONS.

PT Sta. 18+54.65 -L-

MATCHLINE STA. 14+00.00

MATCHLINE STA. 19+00.00

10+41 +/- -Y-
0.4
*T2

10+41.0 +/- -Y-
TIE TO EXIST.

15+82 +/- -L-
16.5 +/-

10+35 +/- -Y-
12.4

15+85 +/- -L-
5.5 +/-

14+75 +/- -L-
5.5 +/-

15+75 +/- -L-
5.5 +/-

R 72'

REMOVE

TA
TI
2'
11'
11'
11'
2'

14+41 +/- -L-
5.5 +/-

TA
TD
TE
UA
UE
T2*

15+61 +/- -L-
16.5 +/-

R 52'

16+04 +/- -L-
TIE TO EXIST.

T8

REMOVE

REMOVE

11+39 +/- -Y-
TIE TO EXIST.

11+07 +/- -Y-
11.6 +/-

R 62'

10+59 +/- -Y-
33.8 +/-

17+12 +/- -L-
16.5 +/-

R 27'
*T2
UE
UA
TE
TA
2'
11'
11'
11'
2'
TI
TA

16+96 +/- -L-
5.5 +/-

16+96 +/- -L-
5.5 +/-

16+70 +/- -L-
16.5 +/-

*T2
16+42 +/- -L-
28.7
R 42'

16+16 +/- -L-
31.3

16+29 +/- -L-
TIE TO EXIST.

18+54 +/- -L-
16.5 +/-

TD

17+96 +/- -L-
5.5 +/-

18+55 +/- -L-
16.5 +/-

18+24 +/- -L-
5.5 +/-

PC Sta. 16+28.68 -L-
PC Sta. 10+00.00 -Y-

SR-2740
MT. PLEASANT RD

DIVISION FIVE DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by:
Ben Upshaw
SIGNATURE
CD6B1B1D6E54E5...

5/14/2016
P.E.

WIDENING FOR TURN LANE ON
NC-42 AT
SR-2740 (MT. PLEASANT RD.)
&
SR-2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRING

REVISIONS	INIT.	DATE

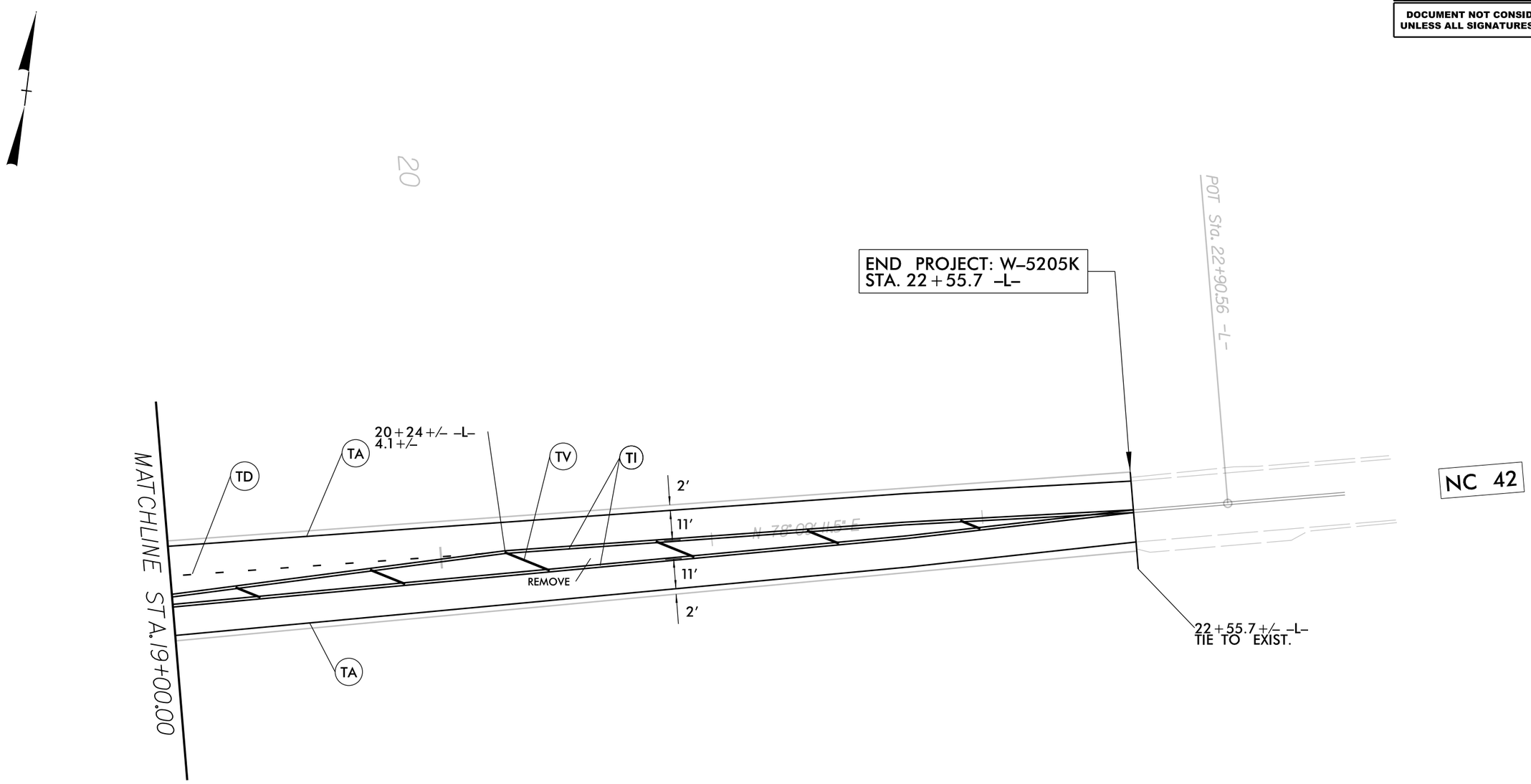
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DIVISION FIVE DESIGN UNIT

SCALE:	1"=40'
DATE:	12/2014
PREPARED BY:	SUNIL PATEL
REVIEWED BY:	BEN UPSHAW
REVIEWED BY:	

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	PM-3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



DIVISION FIVE DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by: 12/14/2016

Ben Upshaw *P.E.*

SIGNATURE

CD6EB110D6E54E5...

WIDENING FOR TURN LANE ON NC-42 AT SR-2740 (MT. PLEASANT RD.) & SR-2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRING

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N.C. DEPARTMENT of TRANSPORTATION
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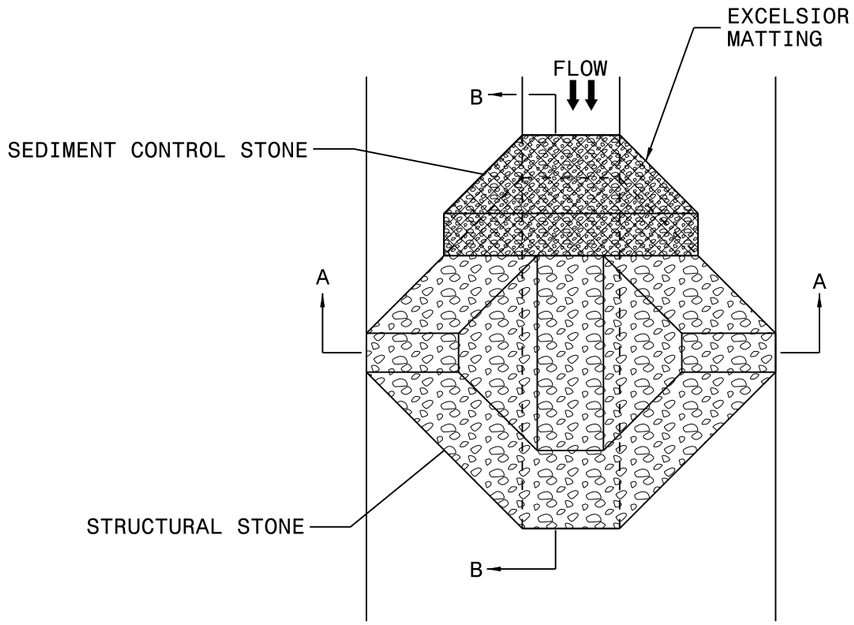
DIVISION OF HIGHWAYS · DIVISION FIVE · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DESIGN UNIT

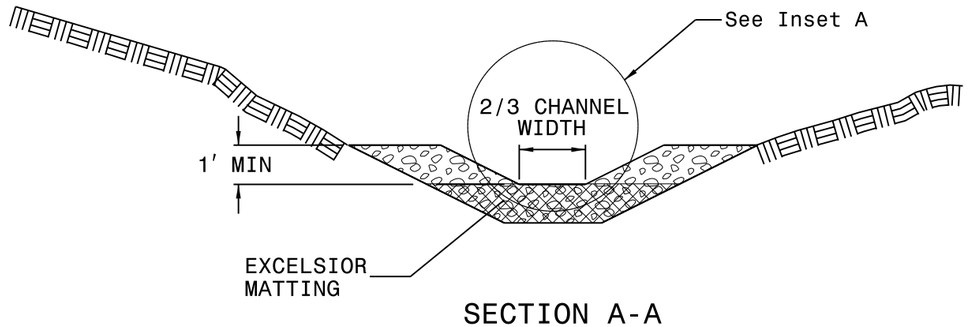
SCALE: 1"=40'	DATE: 12/2014
PREPARED BY:	SUNIL PATEL
REVIEWED BY:	BEN UPSHAW
REVIEWED BY:	

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	EC-2

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN



SECTION A-A

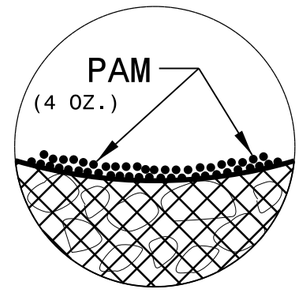
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

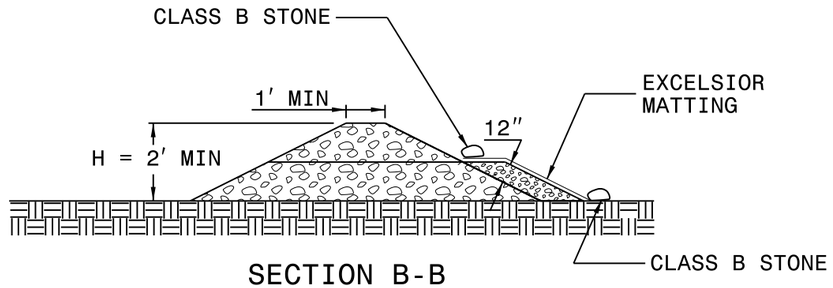
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	EC-4

PI Sta 14+29.09 -L-
△ = 12° 43' 08.2" (LT)
D = 1° 29' 17.5"
L = 854.65'
T = 429.09'
R = 3,850.00

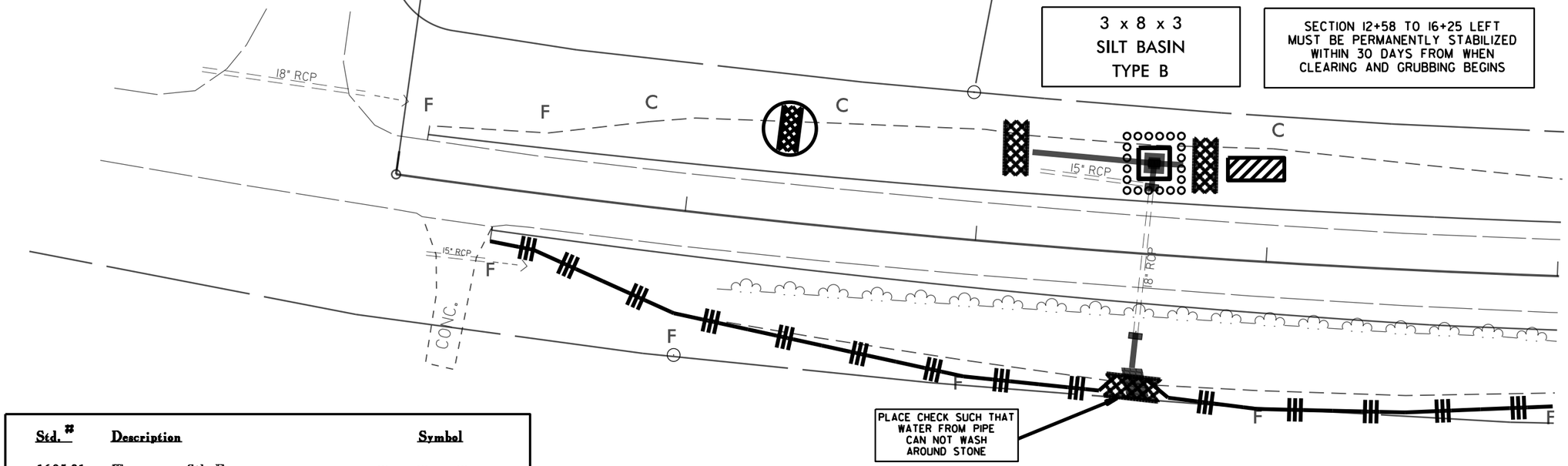
PC Sta 10+00.00 -L-

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

INCLUDE SINGLE ROW OF BAFFLES IN SILT BASIN

3 x 8 x 3
SILT BASIN
TYPE B

SECTION 12+58 TO 16+25 LEFT MUST BE PERMANENTLY STABILIZED WITHIN 30 DAYS FROM WHEN CLEARING AND GRUBBING BEGINS



Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	
1632.03	Rock Inlet Sediment Trap Type C	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle	
	Wattle with Polyacrylamide (PAM)	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	

INSTALL EXCELSIOR MATTING FOR EROSION CONTROL IN ALL PROPOSED DITCH LINES.

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

WIDENING FOR TURN LANE ON
NC-42 AT
SR-2740 (MT. PLEASANT RD.)
&
SR-2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRING

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

DIVISION OF HIGHWAYS · DIVISION FIVE · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DESIGN UNIT

SCALE:	1"=40'
DATE:	12/2014
PREPARED BY:	D DAVIS
REVIEWED BY:	BEN UPSHAW
REVIEWED BY:	

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	EC-5

POT Sta. 12+72.94
PT Sta. 12+44.35

ROBERT L JR &
MARY J CLIFTON
DB 3545 PG 63

N 34°03'52.4" E

OGBURN FARMS LLC
DB 12585 PG 1215

HPB

15

ROW104

ROW103

PT Sta. 18+54.65 -L-

C

HPB

15"

15" RCP

REMOVE

F

PLACE CHECK SUCH THAT WATER FROM DITCH FLOWS BEHIND SILT FENCE

PC Sta. 16+28.68 -L-
PC Sta. 10+00.00 -Y-

OGBURN FARMS LLC
DB 12585 PG 1215

1

JOSEPH C &
SARAH A OGBURN
DB 9191 PG 2754

DEWEY CALVIN OGBURN
DB 66-SP PG 270

WIDENING FOR TURN LANE ON
NC-42 AT
SR-2740 (MT. PLEASANT RD.)
&
SR-2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRING

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DIVISION DESIGN UNIT

SCALE:	1"=40'
DATE:	11/2014
PREPARED BY:	D DAVIS
REVIEWED BY:	BEN UPSHAW
REVIEWED BY:	

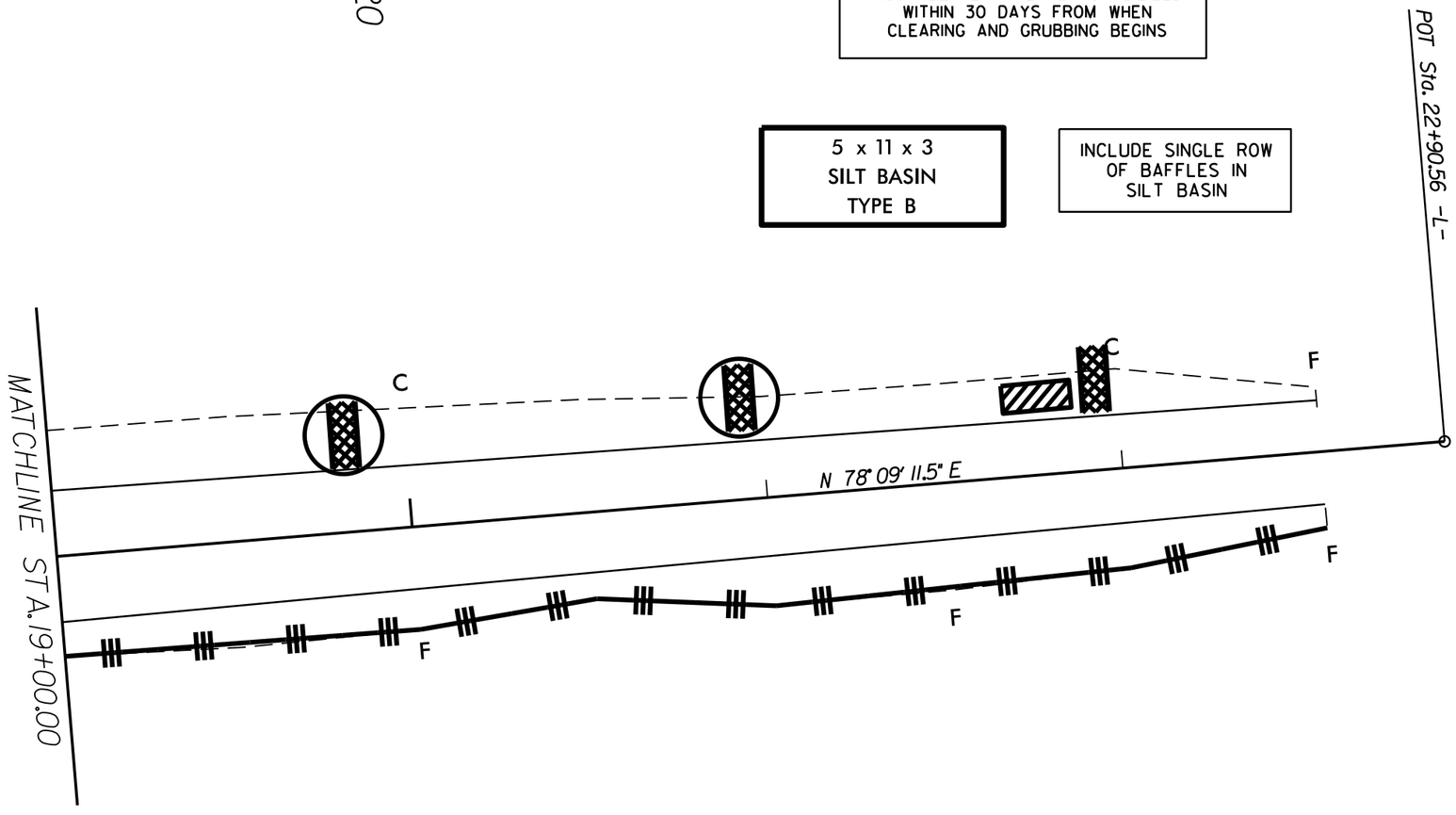
PROJECT REFERENCE NO.	SHEET NO.
W-5205K	EC-6

20

SECTION 17+00 TO 22+00 LEFT
MUST BE PERMANENTLY STABILIZED
WITHIN 30 DAYS FROM WHEN
CLEARING AND GRUBBING BEGINS

5 x 11 x 3
SILT BASIN
TYPE B

INCLUDE SINGLE ROW
OF BAFFLES IN
SILT BASIN



WIDENING FOR TURN LANE ON
NC-42 AT
SR-2740 (MT. PLEASANT RD.)
&
SR-2739 (BARBER BRIDGE RD.)

DIVISION 05 WAKE COUNTY WILLOW SPRING

REVISIONS	INIT.	DATE

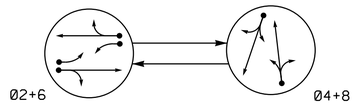
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

DIVISION OF HIGHWAYS · DIVISION FIVE · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DIVISION DESIGN UNIT

SCALE: 1"=40'	DATE: 11/2014
PREPARED BY:	D DAVIS
REVIEWED BY:	BEN UPSHAW
REVIEWED BY:	

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	Sig. 1.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

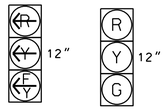
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4+8	FLASH
21	~~F Y~~	~~R~~	~~Y~~
22, 23	G	R	Y
41, 42	R	G	R
61	~~F Y~~	~~R~~	~~Y~~
62, 63	G	R	Y
81, 82	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



21
61

22, 23
41, 42
62, 63
81, 82

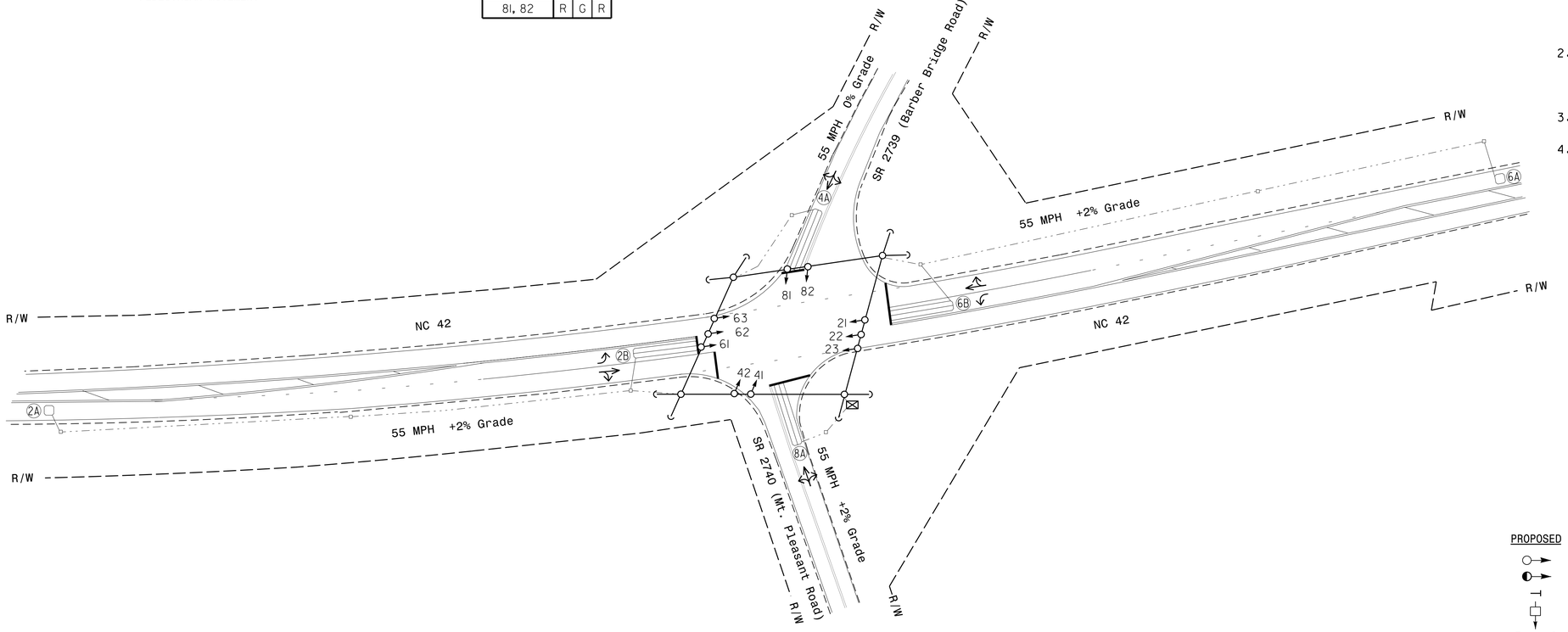
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	420	6	Y	2	Y	Y	-	-	-	-	Y
2B	6X40	0	2-4-2	Y	2	Y	Y	Y	-	3	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	5	-	Y
6A	6X6	420	6	Y	6	Y	Y	-	-	-	-	Y
6B	6X40	0	2-4-2	Y	6	Y	Y	Y	-	3	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	5	-	Y

2 Phase
Fully Actuated
(Isolated)

NOTES

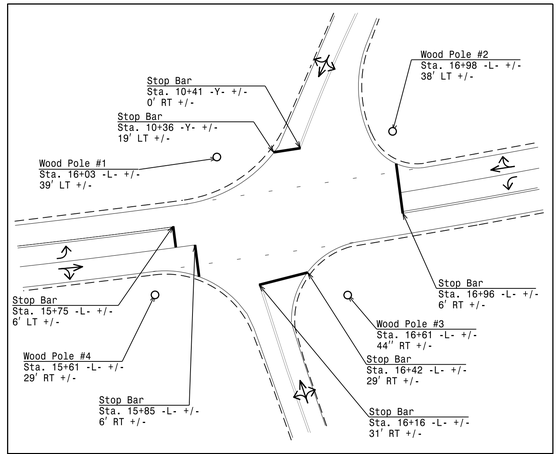
1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.



OASIS 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6	PHASE 8
Min Green 1 *	14	7	14	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	90	30	90	30
Yellow Clearance	5.0	5.2	5.0	5.0
Red Clearance	1.1	1.0	1.1	1.0
Red Revert	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	2.5	-
Max Variable Initial *	46	-	46	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	30	-	30	-
Minimum Gap	3.4	-	3.4	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.



Proposed Wood Pole & Stopbar Locations

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	

New Installation

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy.Garner,NC 27529

NC 42
at
SR 2740 (Mt. Pleasant Road)/ SR 2739 (Barber Bridge Road)

Division 5 Wake County Willow Spring

PLAN DATE: June 2015 REVIEWED BY:

PREPARED BY: C.E. Carter REVIEWED BY:

REVISIONS	INIT.	DATE

SCALE 0 40 1"=40'

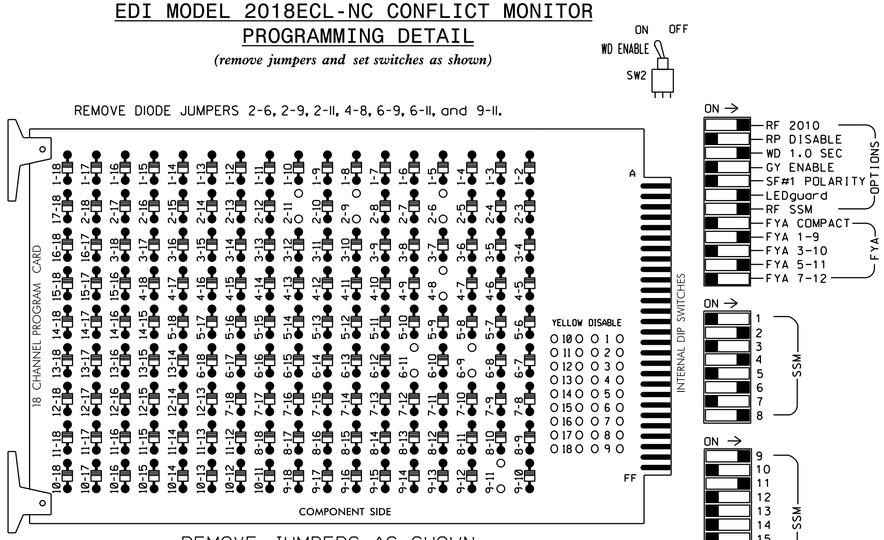
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036833 ENGINEER RYAN W. HOUGH
Ryan W. Hough 7/23/2015
E30320F0FAA2864C3... DATE

SIG. INVENTORY NO. 05-1389

PROJECT REFERENCE NO.	SHEET NO.
W-5205K	Sig. 1.1

EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE JUMPERS AS SHOWN

■ = DENOTES POSITION OF SWITCH

NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
3. Ensure that Red Enable is active at all times during normal operation.
4. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
2. Program phases 4 and 8 for Dual Entry.
3. Enable Simultaneous Gap-Out for all phases.
4. Program phases 2 and 6 for Variable Initial and Gap Reduction.
5. Program phases 2 and 6 for Start Up In Green.
6. Program phases 2 and 6 for Yellow Flash, and overlap 1 as Wag Overlaps.

EQUIPMENT INFORMATION

CONTROLLER.....2070
CABINET.....332 /W/ AUX
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED.....S2,S5,S8,S11,AUX S1,AUX S4.
PHASES USED.....2,4,6,8
OVERLAP "A".....6
OVERLAP "B".....NOT USED
OVERLAP "C".....2
OVERLAP "D".....NOT USED

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	NU	22,23	NU	NU	41,42	NU	NU	62,63	NU	NU	81,82	NU	61★	NU	NU	21★	NU	NU
RED		128			101			134			107							
YELLOW		129			102			135			108							
GREEN		130			103			136			109							
RED ARROW													A121			A114		
YELLOW ARROW													A122			A115		
FLASHING YELLOW ARROW													A123			A116		
GREEN ARROW																		

NU = Not Used
★ See pictorial of head wiring in detail below.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	SLOT EMPTY	ø2 2A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	ø4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L		ø2 2B				NOT USED								ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	ø6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	ø8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L		ø6 6B				NOT USED								

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

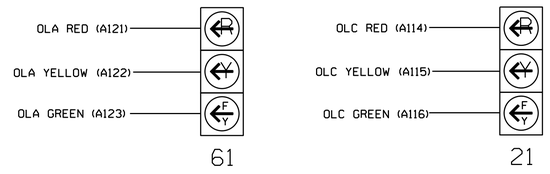
INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y	Y		3
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			5
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y	Y		3
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			5

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

FROM MAIN MENU PRESS '8' (OVERLAPS), THEN '1' (VEHICLE OVERLAP SETTINGS).

```
 PAGE 1: VEHICLE OVERLAP 'A' SETTINGS
 PHASE:          |123456789101112131415 16
VEH OVL PARENTS:|      X
VEH OVL NOT VEH:|
VEH OVL NOT PED:|
VEH OVL GRN EXT:|
STARTUP COLOR: _ RED  _ YELLOW  _ GREEN
FLASH COLORS:  _ RED  _ YELLOW  X GREEN
SELECT VEHICLE OVERLAP OPTIONS:   (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...Y
GREEN EXTENSION (0-255 SEC).........0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
```

← NOTICE GREEN FLASH

PRESS '+' TWICE

```
 PAGE 1: VEHICLE OVERLAP 'C' SETTINGS
 PHASE:          |123456789101112131415 16
VEH OVL PARENTS:| X
VEH OVL NOT VEH:|
VEH OVL NOT PED:|
VEH OVL GRN EXT:|
STARTUP COLOR: _ RED  _ YELLOW  _ GREEN
FLASH COLORS:  _ RED  _ YELLOW  X GREEN
SELECT VEHICLE OVERLAP OPTIONS:   (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...Y
GREEN EXTENSION (0-255 SEC).........0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
```

← NOTICE GREEN FLASH

OVERLAP PROGRAMMING COMPLETE

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1389
DESIGNED: June 2015
SEALED: 7/23/2015
REVISED:

Electrical Detail

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 42
at
SR 2740 (Mt. Pleasant Road)/
SR 2739 (Barber Bridge Road)

Division 5 | Wake County | Willow Springs

PLAN DATE: July 2015 | REVIEWED BY:
PREPARED BY: A. Aslami | REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared in the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Management Section
750 N.Greenfield Pkwy.Garner,NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022013 ENGINEER GEORGE C. BROWN
DocuSigned by: George C. Brown 7/30/2015
DATE
SIG. INVENTORY NO. 05-1389

PROJ. REFERENCE NO.	SHEET NO.
W-5205K	X-1A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CROSS-SECTION SUMMARY

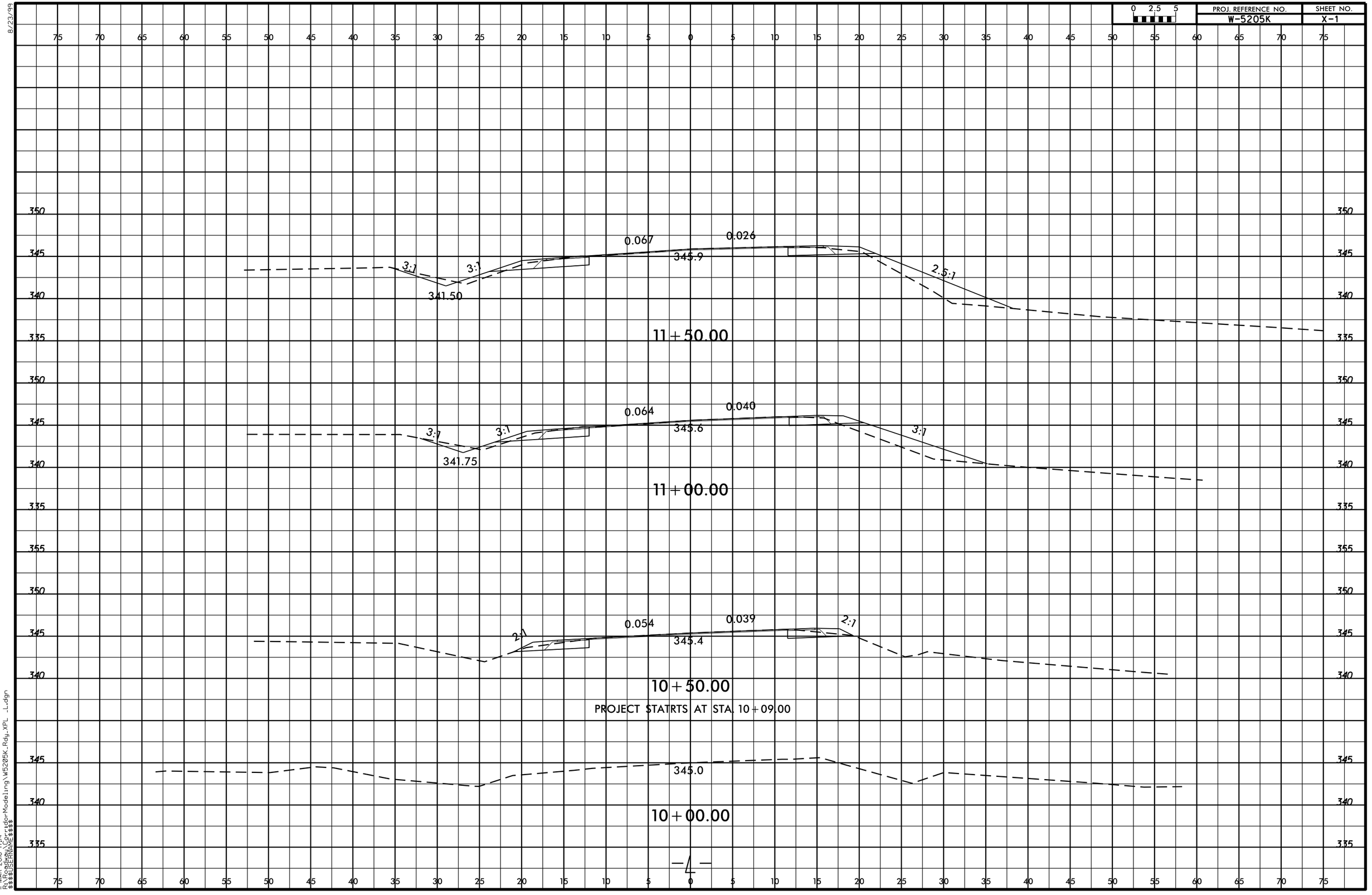
NOTE: EMBANKMENT COLUMN INCLUDES BACKFILL FOR UNDERCUT

Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
10+09	0	0
10+50	5	3
11+00	27	36
11+50	48	72
12+00.00	33	85
12+58.00	33	176
13+00.00	23	145
13+50.00	28	145
14+00.00	21	118
14+50.00	23	67
15+00.00	27	37
15+50.00	33	23
16+25.00	69	15
17+00.00	75	7
17+50.00	49	8
18+00.00	45	7
18+50.00	53	5
19+00.00	56	8
19+50.00	57	16
20+00.00	43	16
20+50.00	38	13
21+00.00	32	11
21+50.00	29	10
22+00.00	32	8
22+50.00	28	7
22+90.00	12	2
TOTAL=	**919**	**1040**

Approximate quantities only. Unclassified excavation, borrow excavation, shoulder borrow, fine grading, clearing and grubbing, breaking of existing pavement and removal of existing pavement will be paid for at the lump sum price for "Grading".

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205K	X-1



11-MAR-2016 17:14
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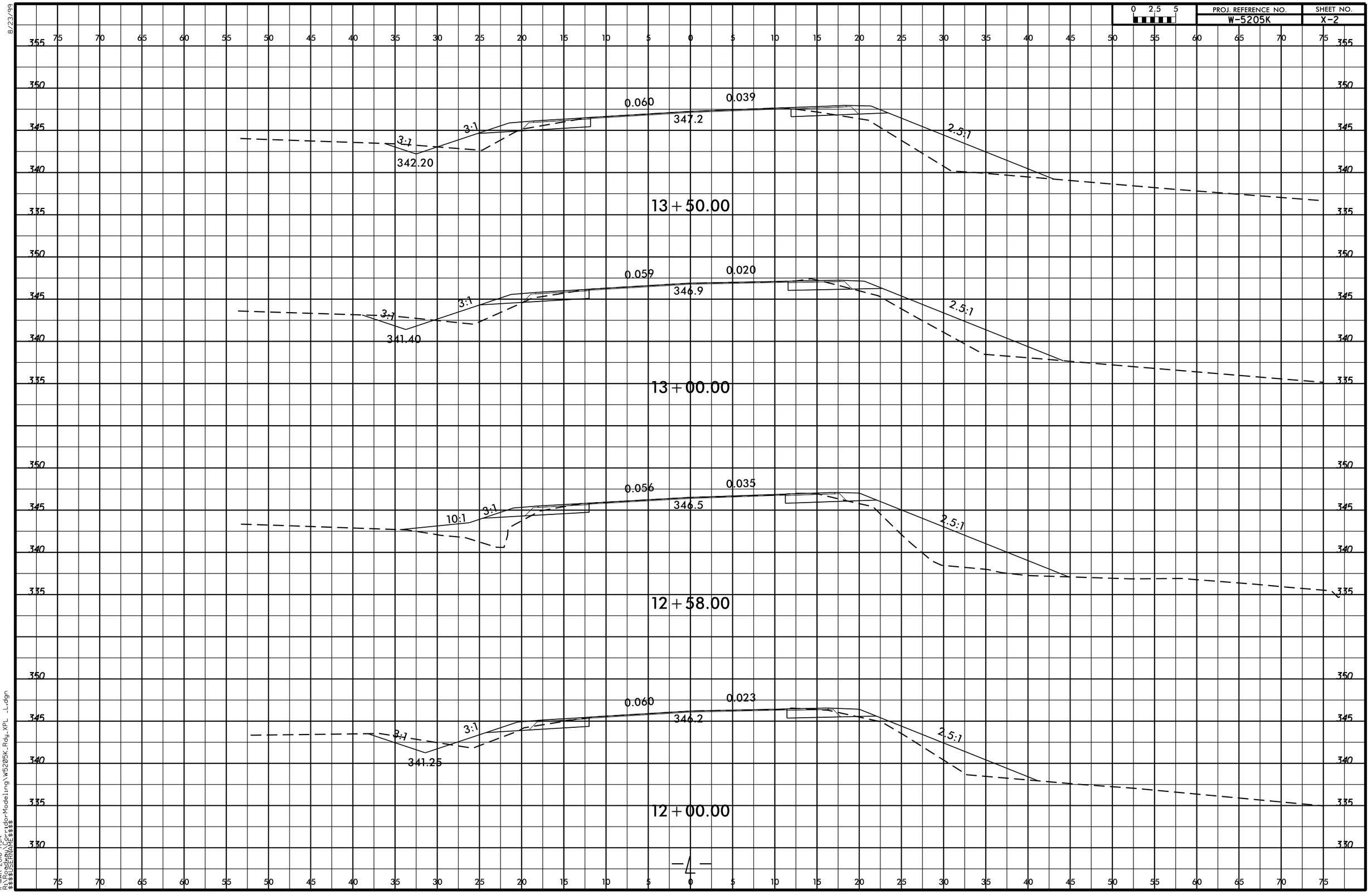
$$$$USERNAME$$$$

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205K	X-2



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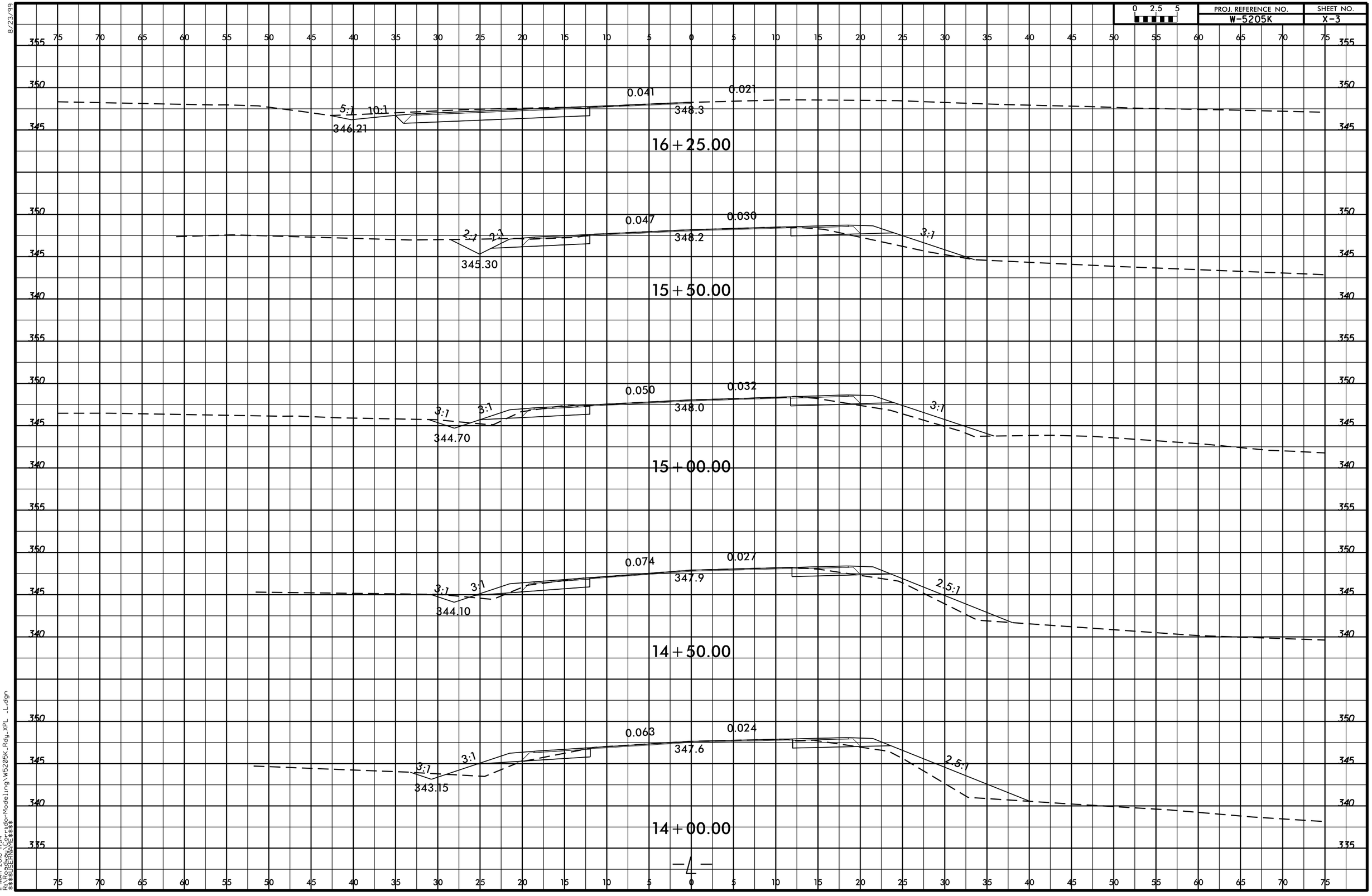
8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205K	X-3



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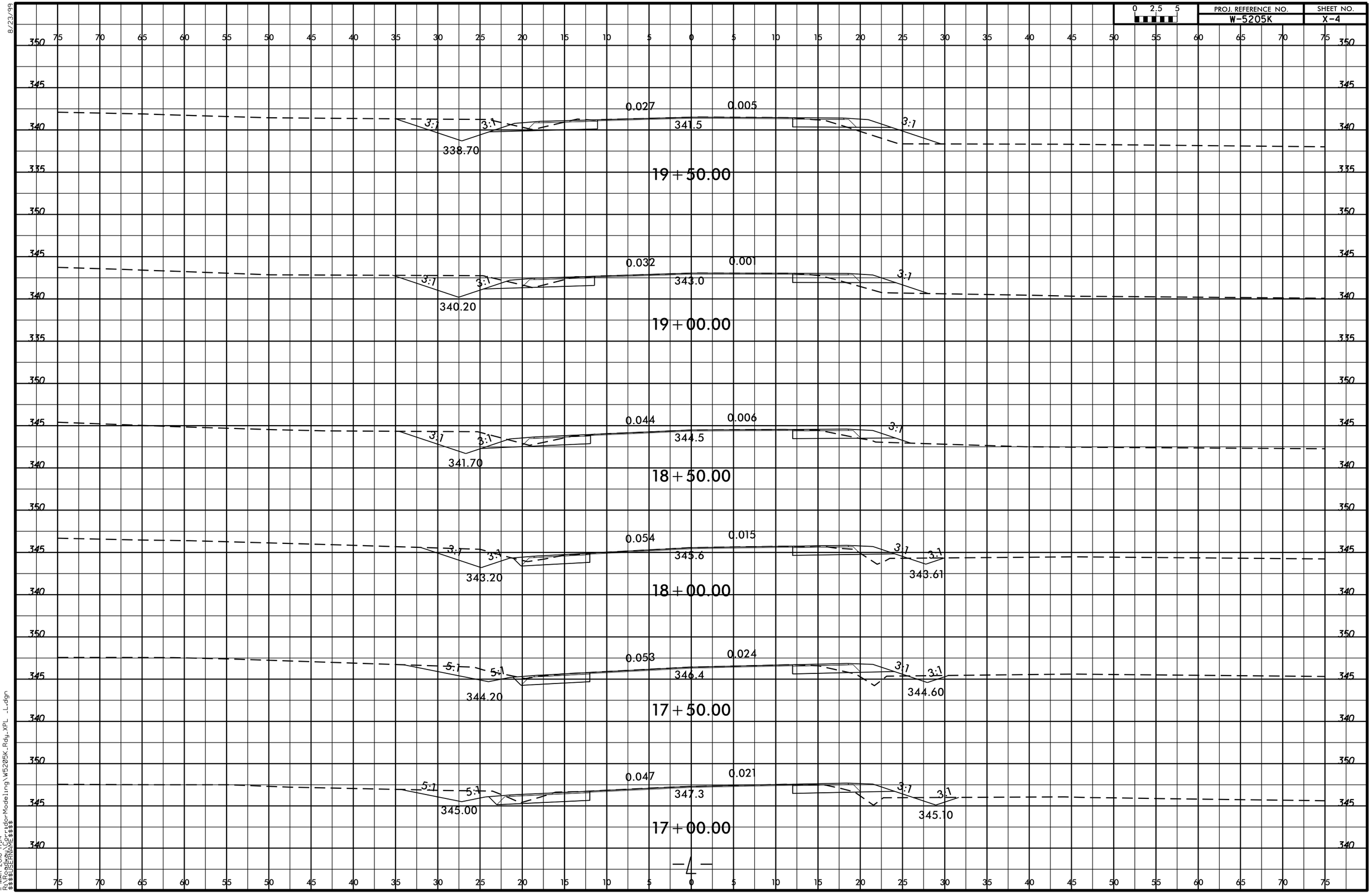
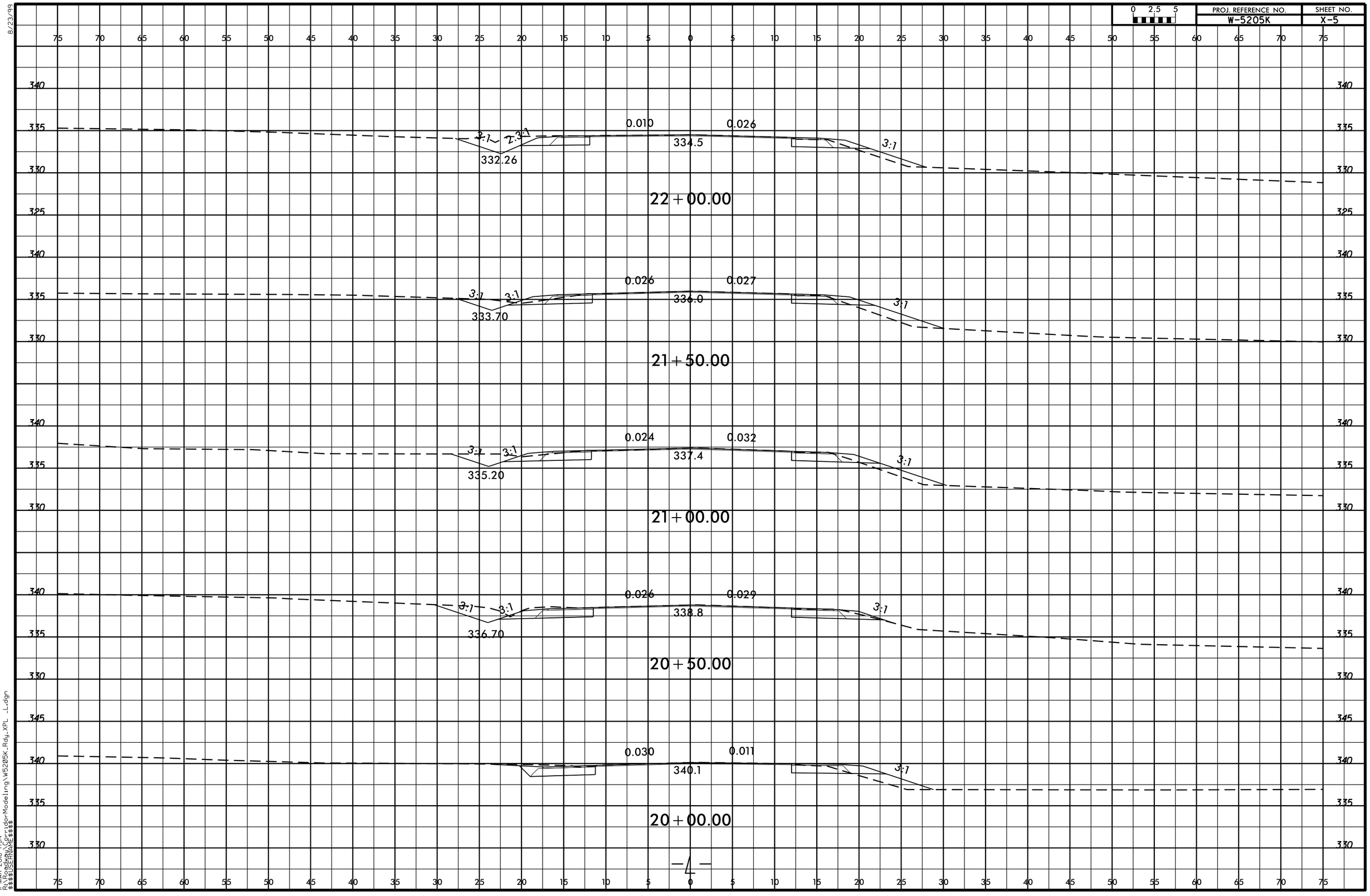
8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205K	X-4



8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205K	X-5



11-MAR-2016 17:14
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$$$$USERNAME$$$$

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205K	X-6

340
335
330
325

332.0

22+90.00

PROJECT ENDS AT STA. 22+55.70

0.014

0.031

3:1

333.1

22+50.00

0 2.5 5

PROJ. REFERENCE NO.	SHEET NO.
W-5205K	X-7

343.01
12+60.80

345.76
12+00.00

PROJECT ENDS AT STA. 11+54.70

0.033
346.99
345.25
4:1
4:1
11+50.00

0.016
347.56
346.20
4:1
4:1
11+00.00

0.009
347.68
345.00
4:1
4:1
10+60.00

0.010
347.06
346.50
347.66
INTERSECTION
NC-42
10+25.00

—Y—