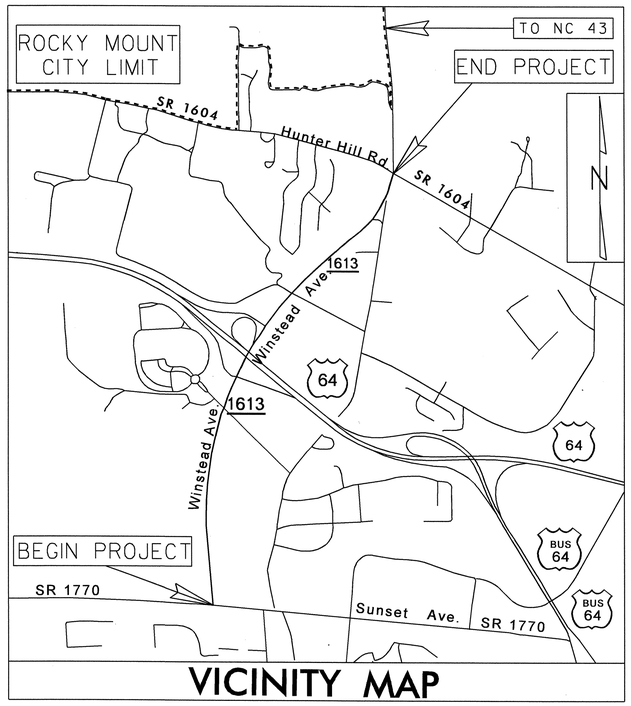
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

NASH COUNTY



VICINITY MAP

ROCKY MOUNT– SR 1613 (N. WINSTEAD AVE.) FROM SR 1770 (SUNSET AVE.) TO SR 1604 (HUNTER HILL RD.)

INDEX OF SHEETS

SHEET NO.
TMP-1

TIP PROJECT: U-4019

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1580 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1580
1020 BIRCH RIDGE DRIVE, RALEIGH, NC 27610 (DELIVERY)
PHONE: (919) 250-4094 FAX: (919) 250-4098

J. S. BOURNE, P.E. *STATE TRAFFIC MANAGEMENT ENGINEER*
G. L. GETTIER, P.E. *TRAFFIC CONTROL PROJECT ENGINEER*
J. W. WOOLARD, P.E. *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
L. K. DONALDSON, P.E *TRAFFIC CONTROL DESIGN ENGINEER*

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

APPROVED:
DATE: 4/4/11

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J.W. WOOLARD JR.

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PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD 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
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS
1264.02	PLACEMENT OF OBJECT MARKERS
1267.01	FLEXIBLE DELINEATOR INSTALLATION
1267.02	FLEXIBLE DELINEATOR SPACING
1267.03	FLEXIBLE DELINEATOR - INTERCHANGES

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA
- WEDGING

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW PANEL (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

EXISTING PROPOSED TEMP TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

SECTION LABEL

PLAN VIEW SHEET NUMBER — AA / 04 27 — CUT-SECTION VIEW SHEET NUMBER

TEMPORARY PAVEMENT MARKING

PAINT (24")

P4	WHITE STOPBAR

PAINT (4")

PA	WHITE EDGELINE
PC	10 FT. WHITE SKIP
PD	2 FT. WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PF	10 FT. YELLOW SKIP
PG	2 FT. YELLOW MINISKIP
PH	YELLOW SINGLE CENTER
PI	YELLOW DOUBLE CENTER

PAINT (8")

PR	WHITE GORE LINE
PS	WHITE DIAGONAL
PV	YELLOW DIAGONAL

PAINT MARKING SYMBOLS

QA	LEFT TURN ARROW
QB	RIGHT TURN ARROW
QC	STRAIGHT ARROW
QD	COMBO. STRAIGHT/LEFT
QE	COMBO. STRAIGHT/RIGHT

PAINT MARKING CHARACTER

QI	ALPHANUMERIC CHARACTER

COLD APPLIED PLASTIC (4") TYPE 4 - REMOVABLE TAPE

CA	WHITE EDGELINE
CC	10 FT. WHITE SKIP
CD	2 FT. WHITE MINISKIP
CE	WHITE SOLID LANE LINE
CH	YELLOW SINGLE CENTER
CI	YELLOW DOUBLE CENTER

COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL TYPE 4 - REMOVABLE TAPE

DA	LEFT TURN ARROW
DC	STRAIGHT ARROW

COLD APPLIED PLASTIC PAVEMENT MARKING CHARACTER TYPE 4 - REMOVABLE TAPE

DI	ALPHANUMERIC CHARACTER

APPROVED: _____ DATE: _____

J. W. WOOLARD JR. — NORTH CAROLINA — PROFESSIONAL — SEAL 19862 — ENGINEER — 4/4/11

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

ROADWAY STANDARD DRAWINGS & LEGEND

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lgordon AT TE23745

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-02

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	
-L- (FOR 2-LANE, 2-WAY PATTERN) & US 64	MONDAY THRU FRIDAY	7:00 AM TO 7:00 PM
-L- (FOR MULTI-LANE DIVIDED PATTERN)	MONDAY THRU FRIDAY	7:00 AM TO 9:00 AM 4:00 PM TO 7:00 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

US 64
-L- WINSTEAD AVE (SR 1613)
-Y- SUNSET AVE (SR 1770)
-Y4- ALEXANDER DR
-Y5- PROFESSIONAL DR
-Y7- CURTIS ELLIS DR
-Y9- AND -Y10- ENGLISH RD (SR 1614)
-LP A-, -RP B-, -RP C-, -RP D-

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.

2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31st TO 4:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 4:00 P.M. THE FOLLOWING TUESDAY.

3. FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 4:00 P.M. MONDAY.

4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 4:00 P.M. TUESDAY.

5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 4:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 4:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 4:00 P.M. TUESDAY.

7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 4:00 P.M. MONDAY.

8. FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 4:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 64	SUNDAY THRU THURSDAY 5:00 A.M. TO 2:00 A.M. AND THURSDAY 5:00 A.M TO SUNDAY 2:00 A.M.	30 MIN HANG GIRDERS

LANE AND SHOULDER CLOSURE REQUIREMENTS

D) 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.

E) 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.

F) 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.

G) 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.

H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

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

PAVEMENT EDGE DROP OFF REQUIREMENTS

J) 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.

K) 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) 100 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

L) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J.W. WOOLARD JR. 5/16/11

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

GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-02A

SIGNING

M) 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.

N) PROVIDE PERMANENT SIGNING.

O) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

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

Q) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 100 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

R) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

S) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS:

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

T) 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 WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

U) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

V) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

W) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN THE PAVEMENT MARKING PLAN.

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

ROAD NAME	MARKING	MARKER
BRIDGE DECKS	REMOVABLE COLD APPLIED PLASTIC, TYPE IV	TEMPORARY RAISED
ROADWAY	PAINT	TEMPORARY RAISED

Y) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

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

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

BB) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION

TEMPORARY / FINAL SIGNALS

CC) SHIFT AND REVISE ALL SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

MISCELLANEOUS

DD) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 150 AND 100 RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

EE) ALL WHEELCHAIR RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

FF) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

APPROVED: _____ DATE: _____

J. W. Woolard, Jr. NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD JR. 4/4/11

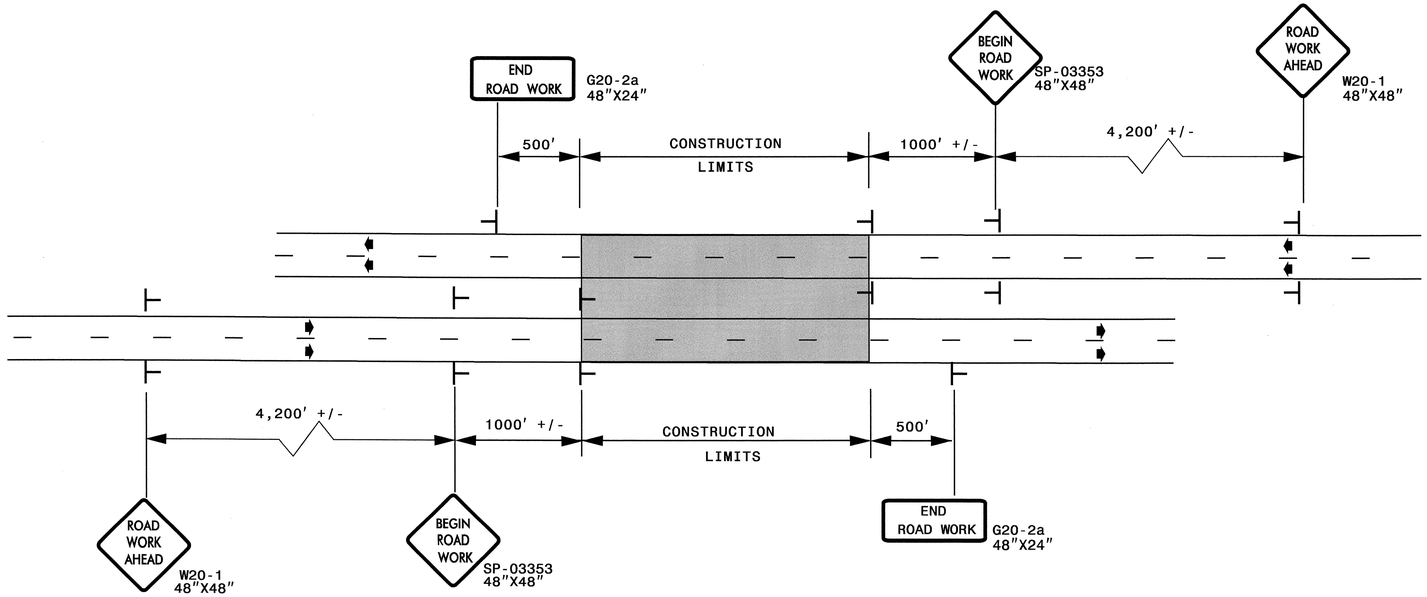
DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

GENERAL NOTES

ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-02B

DETAIL A

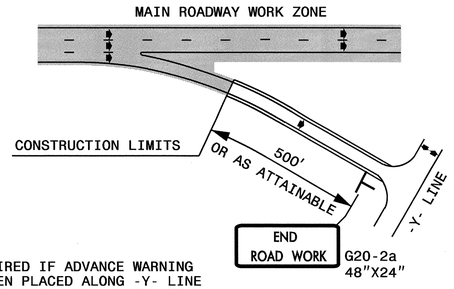


LEGEND
- ⊢ STATIONARY SIGN
- ➧ DIRECTION OF TRAFFIC FLOW

★ USE THE "$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

DETAIL B

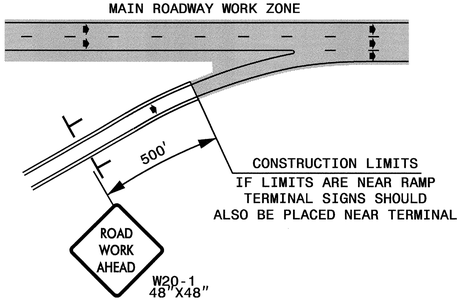
EXIT RAMPS



NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

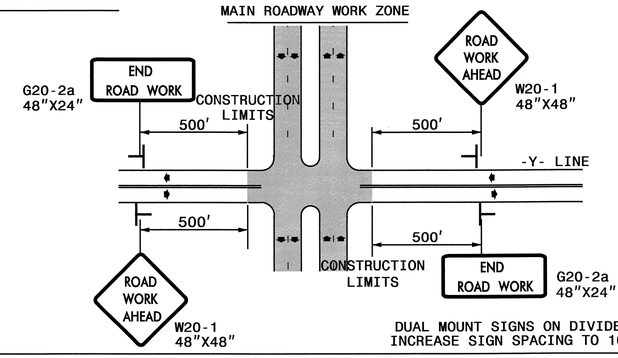
DETAIL C

ENTRANCE RAMPS



DETAIL D

-Y- LINES



DUAL MOUNT SIGNS ON DIVIDED HIGHWAYS AND INCREASE SIGN SPACING TO 1000'+/-.

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD JR. 4/4/11

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

ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-02C

SP 03353

SIGN NUMBER: SP-03353
TYPE: A
QUANTITY: 1

SIGN WIDTH: 4'-0"
HEIGHT: 4'-0"
TOTAL AREA: 16.0 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0.59"
WIDTH: 0.75"
RADII: 1.38"

NO. Z BARS: N/A
LENGTH: N/A

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

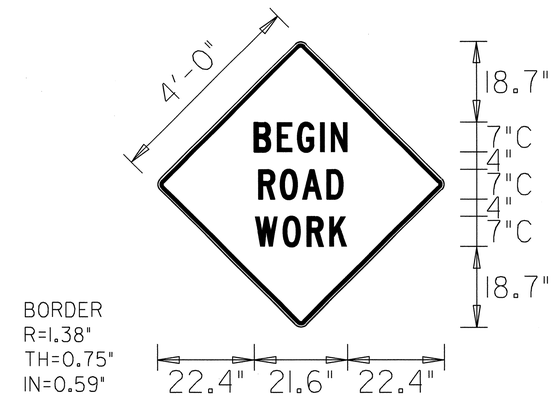
SYMBOL	X	Y	WID	HT

MAT'L:

USE NOTES: 2, 4

1. Legend and border shall be direct applied Type VII reflective sheeting.
2. Legend and border shall be direct applied non-reflective sheeting.
3. Shields shall be Type VII reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
4. Background shall be Type VII reflective sheeting.
5. Background shall be Type I reflective sheeting.
6. Center arrow(s) vertically on sign.
7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

DESIGNED BY: DESIGNER
PROJECT ID: ALL PROJECTS
CHECKED BY: CHECKED
DIV: DIV
STD #: W20-1
DATE: Aug 20,2003



LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		B	E	G	I	N																						C7
	22.4	5.3	4.6	5.4	2.5	3.8	22.4																					21.6
		R	O	A	D																							C7
	23.4	5	5.2	5.6	3.8	23.4																						19.6
		W	O	R	K																							C7
	22.6	6.4	5.6	5.2	4	22.6																						21.2

Spacing Factor is 1 unless specified otherwise

GENERAL NOTES FOR THE "BEGIN ROAD WORK" SIGN

-SIGN SP-03353 "BEGIN ROAD WORK" ONLY APPLIES TO FULL CONTROL AND PARTIAL CONTROL OF ACCESS ROADWAYS

-WHEN USED, INSTALL SIGN SP-03353 "BEGIN ROAD WORK" ACCORDING TO DETAIL A ON SHEET TMP-02B.

APPROVED: _____ DATE: _____

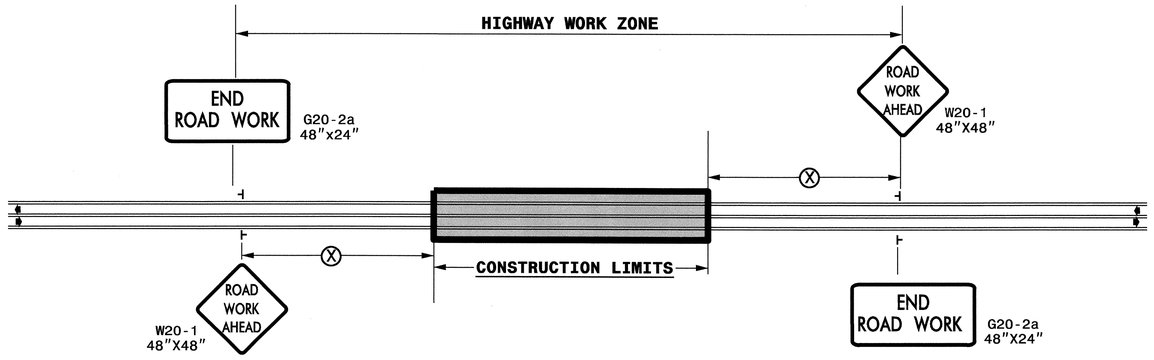
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD 4/4/11

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

DETAIL DRAWING FOR
ADVANCED WORK ZONE WARNING
SIGN DESIGNS

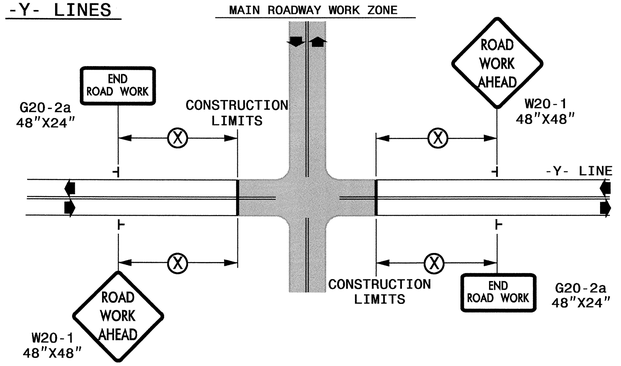
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-02D

TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING Ⓧ
≤ 50	500′
≥ 55	1000′

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

⊢ STATIONARY SIGN

DIRECTION OF TRAFFIC FLOW

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

DETAIL DRAWING FOR TWO-WAY UNDIVIDED WORK ZONE WARNING SIGNS

SHEET 1 OF 1

APPROVED: _____ DATE: _____

J. W. WOOLARD, JR. NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER 4/4/11

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

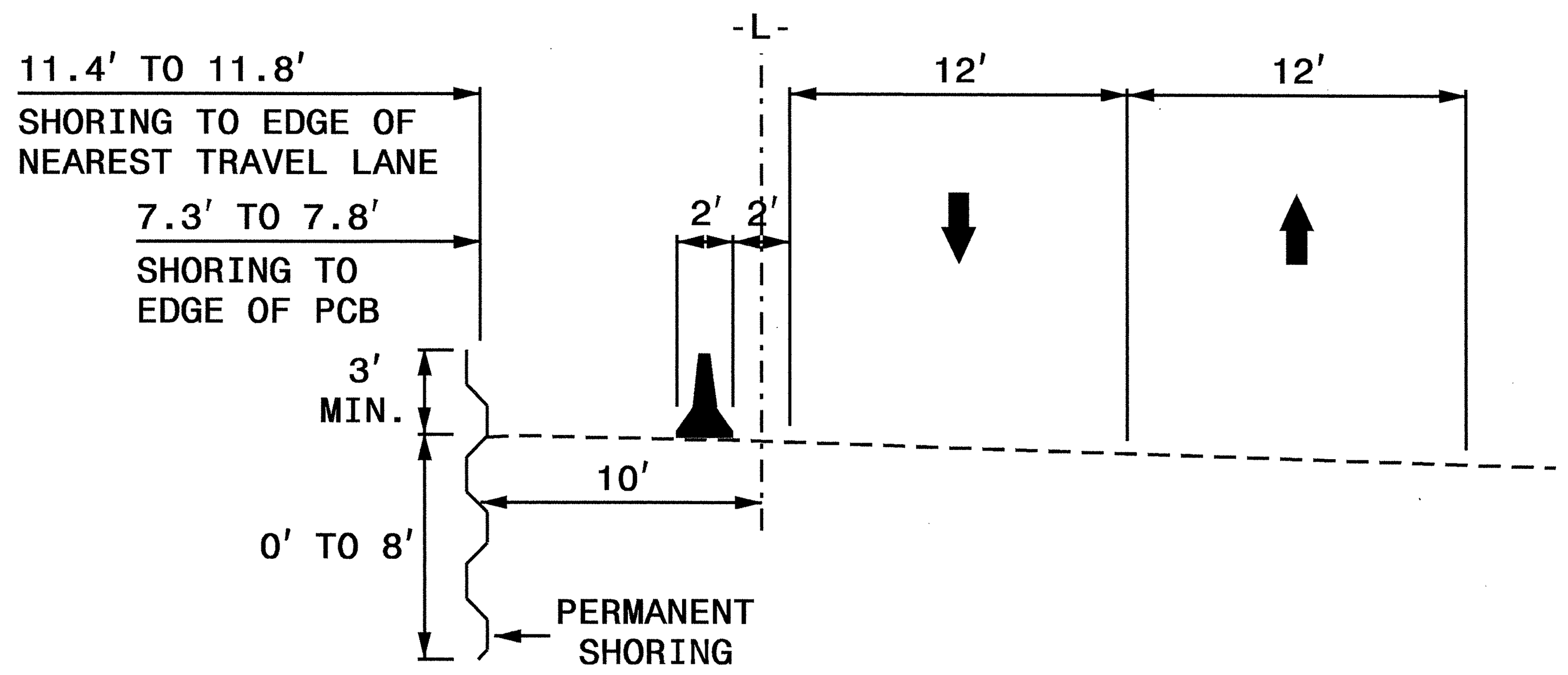
DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS

WORK ZONE WARNING SIGNS

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-02E

PERMANENT SHORING NO. 1 TYPICAL SECTION

STA. 26+86±-L- (0 HEIGHT) TO STA. 27+06±-L- (MAX HEIGHT), OFFSET 10' LEFT, MAXIMUM HEIGHT OF SHORING IS 8.0' (SEE TMP-05)



PERMANENT SHORING NO. 1 (140 SF)

FOR PERMANENT SHORING, SEE PERMANENT SHORING PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 26+86 ±-L- TO STATION 27+06 ±-L-, 10 FT. LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ= 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30 DEGREES
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

DRIVEN PILING FOR PERMANENT SHORING FROM 26+86 ±-L- TO STATION 27+06 ± -L-, 10 FT. LEFT, MAY NOT PENETRATE BELOW ELEVATION 89 ±FT DUE TO THE PRESENCE OF WEATHERED OR HARD ROCK.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR PERMANENT SHORING FROM 26+86 ±-L- TO STATION 27+06 ±-L-, 10 FT. LEFT. FOR ANCHORED PERMANENT SHORING, SEE ANCHORED PERMANENT SHORING SPECIAL PROVISION.

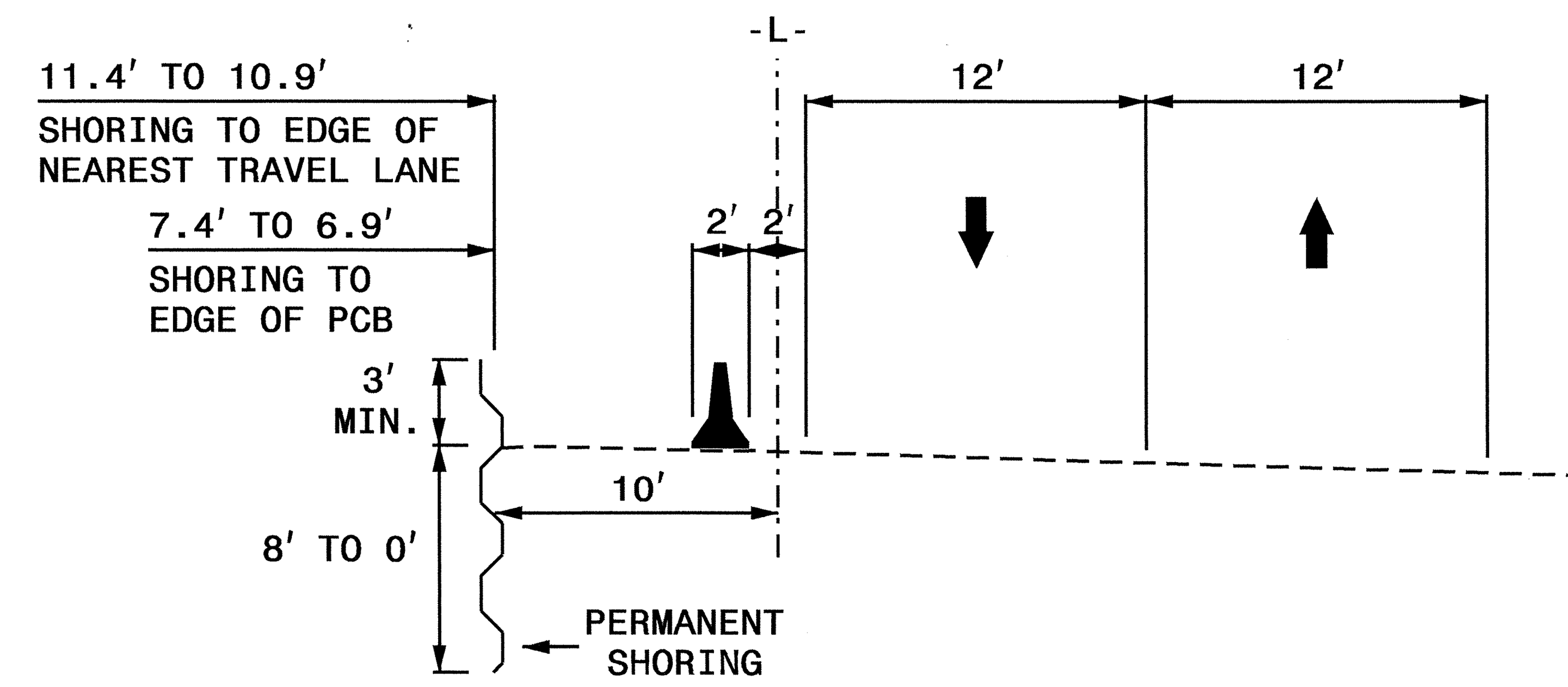
FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND PERMANENT SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER UNANCHORED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

PERMANENT SHORING FROM STATION 26+86 ±-L- TO STATION 27+06 ±-L-, 10 FT. LEFT, CONSISTING OF EITHER SHEET PILING, H PILES AND CONCRETE PANEL LAGGING, OR ANCHORED PERMANENT SHORING MUST REMAIN IN PLACE FROM ONE FOOT BENEATH SUBGRADE ELEVATION. AFTER COMPLETION OF SHORING, REMOVE ALL PERMANENT SHORING SYSTEMS ABOVE AN ELEVATION THAT IS AT LEAST ONE FOOT BENEATH THE SUBGRADE ELEVATION. SEE PERMANENT SHORING SPECIAL PROVISION OR ANCHORED PERMANENT SHORING SPECIAL PROVISION.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE PERMANENT SHORING FROM STATION 26+86 ±-L- TO STATION 27+06 ±-L-, 10 FT. LEFT. IF ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION VARY FROM THE ASSUMED, THEN SUBMIT THE ACTUAL SITE CONDITIONS FOR THE ENGINEER'S REVIEW.

PERMANENT SHORING NO. 2 TYPICAL SECTION

STA. 28+68±-L- (MAX HEIGHT) TO STA. 28+88±-L- (0 HEIGHT), OFFSET 10' LEFT, MAXIMUM HEIGHT OF SHORING IS 8.0' (SEE TMP-05)



PERMANENT SHORING NO. 2 (140 SF)

FOR PERMANENT SHORING, SEE PERMANENT SHORING PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 28+68 ±-L- TO STATION 28+88 ±-L-, 10 FT. LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ= 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ= 30 DEGREES
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

DRIVEN PILING FOR PERMANENT SHORING FROM 28+68 ±-L- TO STATION 28+88 ± -L-, 10 FT. LEFT, MAY NOT PENETRATE BELOW ELEVATION 87 ±FT DUE TO THE PRESENCE OF WEATHERED OR HARD ROCK.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR PERMANENT SHORING FROM 28+68 ±-L- TO STATION 28+88 ±-L-, 10 FT. LEFT. FOR ANCHORED PERMANENT SHORING, SEE ANCHORED PERMANENT SHORING SPECIAL PROVISION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND PERMANENT SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER UNANCHORED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

PERMANENT SHORING FROM STATION 28+68 ±-L- TO STATION 28+88 ±-L-, 10 FT. LEFT, CONSISTING OF EITHER SHEET PILING, H PILES AND CONCRETE PANEL LAGGING, OR ANCHORED PERMANENT SHORING MUST REMAIN IN PLACE FROM ONE FOOT BENEATH SUBGRADE ELEVATION. AFTER COMPLETION OF SHORING, REMOVE ALL PERMANENT SHORING SYSTEMS ABOVE AN ELEVATION THAT IS AT LEAST ONE FOOT BENEATH THE SUBGRADE ELEVATION. SEE PERMANENT SHORING SPECIAL PROVISION OR ANCHORED PERMANENT SHORING SPECIAL PROVISION.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE PERMANENT SHORING FROM STATION 28+68 ±-L- TO STATION 28+88 ±-L-, 10 FT. LEFT. IF ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION VARY FROM THE ASSUMED, THEN SUBMIT THE ACTUAL SITE CONDITIONS FOR THE ENGINEER'S REVIEW.

NOTE: THE PERMANENT SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO WZTC ON MARCH 28, 2011 AND SEALED BY A PROFESSIONAL ENGINEER, THEIN T. ZAN, P.E. 30943.

APPROVED: DATE:

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/14/11

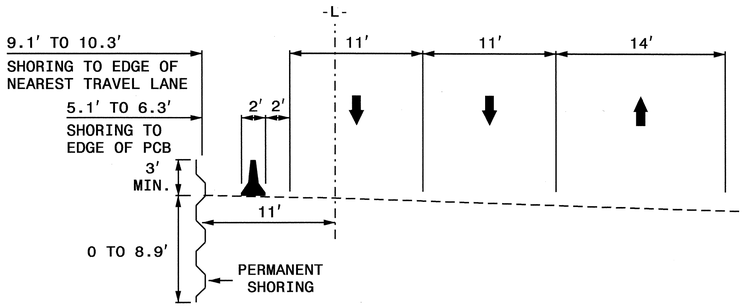
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PERMANENT SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-02F

PERMANENT SHORING NO. 3 TYPICAL SECTION

STA. 54+11±-L- (0 HEIGHT) TO STA. 54+41± -L- (MAX HEIGHT), OFFSET 11′ LEFT, MAXIMUM HEIGHT OF SHORING IS 8.9′ (SEE TMP-07)



PERMANENT SHORING NO.3 (223.5 SF)

FOR PERMANENT SHORING, SEE PERMANENT SHORING PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 54+11 ±-L- TO STATION 54+41 ±-L-, 11 FT. LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ= 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ= 30 DEGREES
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR PERMANENT SHORING FROM 54+11 ±-L- TO STATION 54+41 ±-L-, 11 FT. LEFT. FOR ANCHORED PERMANENT SHORING, SEE ANCHORED PERMANENT SHORING SPECIAL PROVISION.

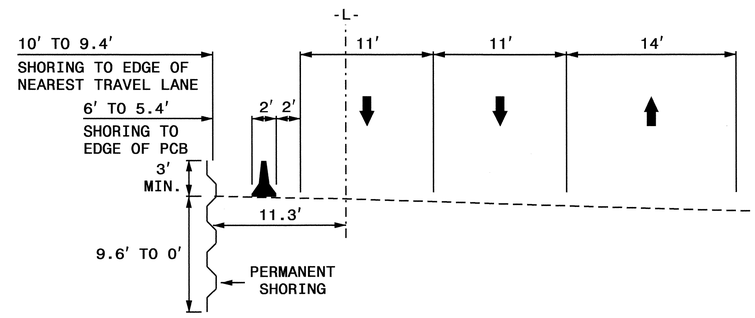
FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND PERMANENT SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER UNANCHORED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

PERMANENT SHORING FROM STATION 54+11 ±-L- TO STATION 54+41 ±-L-, 11 FT. LEFT, CONSISTING OF EITHER SHEET PILING, H PILES AND CONCRETE PANEL LAGGING, OR ANCHORED PERMANENT SHORING MUST REMAIN IN PLACE FROM ONE FOOT BENEATH SUBGRADE ELEVATION. AFTER COMPLETION OF SHORING, REMOVE ALL PERMANENT SHORING SYSTEMS ABOVE AN ELEVATION THAT IS AT LEAST ONE FOOT BENEATH THE SUBGRADE ELEVATION. SEE PERMANENT SHORING SPECIAL PROVISION OR ANCHORED PERMANENT SHORING SPECIAL PROVISION.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE PERMANENT SHORING FROM STATION 54+11 ±-L- TO STATION 54+41 ±-L-, 11 FT. LEFT. IF ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION VARY FROM THE ASSUMED, THEN SUBMIT THE ACTUAL SITE CONDITIONS FOR THE ENGINEER'S REVIEW.

PERMANENT SHORING NO. 4 TYPICAL SECTION

STA. 56+73±-L- (MAX HEIGHT) TO STA. 56+93±-L- (0 HEIGHT), OFFSET 11.3′ LEFT, MAXIMUM HEIGHT OF SHORING IS 9.6′ (SEE TMP-07)



PERMANENT SHORING NO. 4 (156 SF)

FOR PERMANENT SHORING, SEE PERMANENT SHORING PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 56+73 ±-L- TO STATION 56+93 ±-L-, 11.3 FT. LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ= 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ= 30 DEGREES
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR PERMANENT SHORING FROM 56+73 ±-L- TO STATION 56+93 ±-L-, 11.3 FT. LEFT. FOR ANCHORED PERMANENT SHORING, SEE ANCHORED PERMANENT SHORING SPECIAL PROVISION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND PERMANENT SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER UNANCHORED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

PERMANENT SHORING FROM STATION 56+73 ±-L- TO STATION 56+93 ±-L-, 11.3 FT. LEFT, CONSISTING OF EITHER SHEET PILING, H PILES AND CONCRETE PANEL LAGGING, OR ANCHORED PERMANENT SHORING MUST REMAIN IN PLACE FROM ONE FOOT BENEATH SUBGRADE ELEVATION. AFTER COMPLETION OF SHORING, REMOVE ALL PERMANENT SHORING SYSTEMS ABOVE AN ELEVATION THAT IS AT LEAST ONE FOOT BENEATH THE SUBGRADE ELEVATION. SEE PERMANENT SHORING SPECIAL PROVISION OR ANCHORED PERMANENT SHORING SPECIAL PROVISION.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE PERMANENT SHORING FROM STATION 56+73 ±-L- TO STATION 56+93 ±-L-, 11.3 FT. LEFT. IF ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION VARY FROM THE ASSUMED, THEN SUBMIT THE ACTUAL SITE CONDITIONS FOR THE ENGINEER'S REVIEW.

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APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD JR. 4/14/11

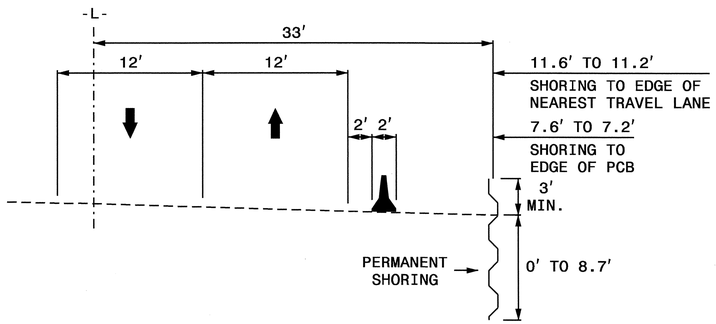
DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

PERMANENT SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-02G

PERMANENT SHORING NO. 5 TYPICAL SECTION

STA. 26+86±-L- (0 HEIGHT) TO STA. 27+06±-L- (MAX HEIGHT), OFFSET 33′ RIGHT, MAXIMUM HEIGHT OF SHORING IS 8.7′ (SEE TMP-14)



PERMANENT SHORING NO.5 (147 SF)

FOR PERMANENT SHORING, SEE PERMANENT SHORING PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 26+86 ±-L- TO STATION 27+06 ±-L-, 33 FT. RIGHT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ= 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ= 30 DEGREES
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

DRIVEN PILING FOR PERMANENT SHORING FROM 26+86 ±-L- TO STATION 27+06 ± -L-, 33 FT. RIGHT, MAY NOT PENETRATE BELOW ELEVATION 89 ±FT DUE TO THE PRESENCE OF WEATHERED OR HARD ROCK.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR PERMANENT SHORING FROM 26+86 ±-L- TO STATION 27+06 ±-L-, 33 FT. RIGHT. FOR ANCHORED PERMANENT SHORING, SEE ANCHORED PERMANENT SHORING SPECIAL PROVISION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND PERMANENT SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER UNANCHORED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

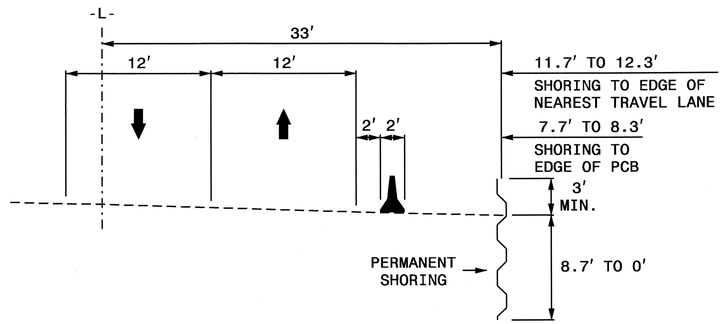
PERMANENT SHORING FROM STATION 26+86 ±-L- TO STATION 27+06 ±-L-, 33 FT. RIGHT, CONSISTING OF EITHER SHEET PILING, H PILES AND CONCRETE PANEL LAGGING, OR ANCHORED PERMANENT SHORING MUST REMAIN IN PLACE FROM ONE FOOT BENEATH SUBGRADE ELEVATION. AFTER COMPLETION OF SHORING, REMOVE ALL PERMANENT SHORING SYSTEMS ABOVE AN ELEVATION THAT IS AT LEAST ONE FOOT BENEATH THE SUBGRADE ELEVATION. SEE PERMANENT SHORING SPECIAL PROVISION OR ANCHORED PERMANENT SHORING SPECIAL PROVISION.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE PERMANENT SHORING FROM STATION 26+86 ±-L- TO STATION 27+06 ±-L-, 33 FT. RIGHT. IF ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION VARY FROM THE ASSUMED, THEN SUBMIT THE ACTUAL SITE CONDITIONS FOR THE ENGINEER'S REVIEW.

NOTE: THE PERMANENT SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO WZTC ON MARCH 28, 2011 AND SEALED BY A PROFESSIONAL ENGINEER, THEIN T. ZAN, P.E. 30943.

PERMANENT SHORING NO. 6 TYPICAL SECTION

STA. 28+68±-L- (MAX HEIGHT) TO STA. 28+88±-L- (0 HEIGHT), OFFSET 33′ RIGHT, MAXIMUM HEIGHT OF SHORING IS 8.7′ (SEE TMP-14)



PERMANENT SHORING NO.6 (147 SF)

FOR PERMANENT SHORING, SEE PERMANENT SHORING PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 28+68 ±-L- TO STATION 28+88 ±-L-, 33 FT. RIGHT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ= 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ= 30 DEGREES
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

DRIVEN PILING FOR PERMANENT SHORING FROM 28+68 ±-L- TO STATION 28+88 ± -L-, 33 FT. RIGHT, MAY NOT PENETRATE BELOW ELEVATION 85 ±FT DUE TO THE PRESENCE OF WEATHERED OR HARD ROCK.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR PERMANENT SHORING FROM 28+68 ±-L- TO STATION 28+88 ±-L-, 33 FT. RIGHT. FOR ANCHORED PERMANENT SHORING, SEE ANCHORED PERMANENT SHORING SPECIAL PROVISION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND PERMANENT SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER UNANCHORED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

PERMANENT SHORING FROM STATION 28+68 ±-L- TO STATION 28+88 ±-L-, 33 FT. RIGHT, CONSISTING OF EITHER SHEET PILING, H PILES AND CONCRETE PANEL LAGGING, OR ANCHORED PERMANENT SHORING MUST REMAIN IN PLACE FROM ONE FOOT BENEATH SUBGRADE ELEVATION. AFTER COMPLETION OF SHORING, REMOVE ALL PERMANENT SHORING SYSTEMS ABOVE AN ELEVATION THAT IS AT LEAST ONE FOOT BENEATH THE SUBGRADE ELEVATION. SEE PERMANENT SHORING SPECIAL PROVISION OR ANCHORED PERMANENT SHORING SPECIAL PROVISION.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE PERMANENT SHORING FROM STATION 28+68 ±-L- TO STATION 28+88 ±-L-, 33 FT. RIGHT. IF ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION VARY FROM THE ASSUMED, THEN SUBMIT THE ACTUAL SITE CONDITIONS FOR THE ENGINEER'S REVIEW.

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J.W. WOOLARD JR. 4/14/11

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

PERMANENT SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-03

NOTE: MAINTAIN TRAFFIC FOR ALL DRIVEWAYS AND SECONDARY ROADS THROUGHOUT THE PROJECT FOR THE DURATION OF THE PROJECT.

PHASE I

STEP 1

PLACE ADVANCED WORK ZONE WARNING SIGNING PER TMP-02B AND TMP-02D.

STEP 2

* USING RSD 1101.02 SHEETS 2 OF 9 AND 3 OF 9 AS NEEDED, PLACE TEMPORARY PAVEMENT MARKINGS ON -L- FROM STA. 10+51+/- TO STA. 16+20+/- AS SHOWN ON TMP-04 AND TEMPORARY MARKERS USING RSD 1250.01, REMOVE CONFLICTING EXISTING PAVEMENT MARKINGS, AND PLACE TRAFFIC INTO NEW TEMPORARY TRAFFIC PATTERN.

* USING RSD 1101.02 SHEET 1 OF 9 AND FLAGGERS AS NEEDED, PLACE TEMPORARY PAVEMENT MARKINGS USING REMOVABLE TAPE ON BRIDGE DECK AS SHOWN ON TMP-05 AND TEMPORARY PAVEMENT MARKERS USING RSD 1250.01. PLACE PORTABLE CONCRETE BARRIER ON LEFT SIDE OF EXISTING -L- (WINSTEAD AVE) FROM STA. -L- 25+00+/- TO -L- 30+90+/- AS SHOWN ON TMP-05. PROTECT EACH END OF THE PORTABLE CONCRETE BARRIER WITH A TEMPORARY CRASH CUSHION. PLACE TRAFFIC INTO NEW TRAFFIC PATTERN.

* USING RSD 1101.02 SHEET 3 OF 9 AS NEEDED, PLACE TEMPORARY PAVEMENT MARKINGS USING REMOVABEL TAPE ON BRIDGE DECK AS SHOWN ON TMP-07 AND TEMPORARY PAVEMENT MARKERS USING RSD 1250.01 PLACE PORTABLE CONCRETE BARRIER ON LEFT SIDE OF -L- (WINSTEAD AVE) FROM STA. -L- 53+90+/- TO -L- 57+47+/-. PROTECT EACH END OF THE PORTABLE CONCRETE BARRIER WITH A TEMPORARY CRASH CUSHION. PLACE TRAFFIC INTO NEW TRAFFIC PATTERN.

STEP 3

USING RSD 1101.02 SHEETS 1, 2, AND 3 OF 9 AS NEEDED, CONSTRUCT THE FOLLOWING AS SHOWN ON SHEETS TMP-04 THROUGH TMP-11

* CONSTRUCT SIDEWALK, CURB AND GUTTER, AND WIDENING OF THE LEFT SIDE OF -L- UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM EXISTING -Y-(SUNSET AVE.) TO STA. -L- 14+63+/-.

* USING FLAGGERS AS NEEDED, CONSTRUCT TIE-INS OF -Y3- (WOODRIDGE CT) AND -Y4- (ALEXANDER DR). PROVIDE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-05 TO MAINTAIN TRAFFIC DURING CONSTRUCTION ON -Y3- AND -Y4-.

* USING FLAGGERS AS NEEDED, CONSTRUCT TIE-IN OF -Y6- (EXECUTIVE DR) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS SHOWN ON TMP-06. PROVIDE TEMPORARY PAVEMENT MARKINGS ON -Y6- TO MAINTAIN TRAFFIC DURING CONSTRUCTION.

* CONSTRUCT WIDENING AND WEDGING OF -Y7- (CURTIS ELLIS DR) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM STA. -Y7- 10+81+/- ON THE SOUTH SIDE AND STA. -Y7- 12+00+/- ON THE NORTH SIDE TO TIE-IN AT -L- AS SHOWN ON TMP-06. REPLACE EXISTING MARKINGS ON -Y7- WITH TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-06 AND TEMPORARY MARKERS USING RSD 1250.01.

* USE RSD 1101.03, SHEET 9 OF 9 AND ROLLING ROAD BLOCK ON US 64 TO PLACE BRIDGE GIRDERS OVER US 64.

* MAINTAINING EXISTING TRAFFIC ON -RP C-, CONSTRUCT WIDENING OF -RP C- AND PROVIDE WEDGING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS SHOWN ON TMP-07. PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AS SHOWN ON TMP-07.

* USING RSD 1101, SHEET 1 OF 9, AND FLAGGERS AS NEEDED, CONSTRUCT WIDENING ON SOUTH SIDE OF -Y10- (ENGLISH RD) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM STA. -Y10- 20+25+/- TO TIE-IN AT -L- AS SHOWN ON TMP-10.

* CONSTRUCT SIDEWALK ON LEFT SIDE OF -L- FROM STA. -L- 14+63+/- TO TIE-IN OF -Y12- (HUNTER HILL RD)

STEP 4

WORKING IN A CONTINUOS MANNER AND MAINTAINING TRAFFIC ON -LP A- AND -RP B-:

A. REMOVE EXISTING MEDIAN BETWEEN -LP A- AND -RP B- AND PLACE PORTABLE CONCRETE BARRIER FROM -LP A- STA. 5+00 +/- TO STA. -SPUR A- 0+95 +/- AS SHOWN ON TMP-08. PROTECT EACH END OF PORTABLE CONCRETE BARRIER WITH TEMPORARY CRASH CUSHIONS. PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-08 AND MARKERS USING RSD 1250.01.

B. CONSTRUCT REALLIGNMENT OF -RP B-, -SPUR A- AND WIDENING OF RIGHT SIDE OF -LP A- INCLUDING WEDGING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS SHOWN ON TMP-08. PLACE TRAFFIC INTO PATTERN SHOWN ON TMP-08 AT THE END OF EACH WORK DAY.

C. PLACE TEMPORARY PAVEMENT MARKINGS, MARKERS AND PORTABLE CONCRETE BARRIER AS SHOWN ON TMP-09 AND PLACE TRAFFIC INTO TEMPORARY TRAFFIC PATTERN.

D. CONSTRUCT REMAINING -SPUR A-, -LP A-, AND LEFT SIDE OF -L- FROM THE EDGE OF THE BRIDGE APPROACH TO TIE-IN AT -SPUR A- UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS SHOWN ON TMP-09.

STEP 5

USING RSD 1101.02 SHEETS 2 OF 9 AND 3 OF 9 AS NEEDED, WEDGE EXISTING -L- UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM TIE-IN TO -Y- (SUNSET AVE) TO STA. -L- 15+80+/-, PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-12, MARKERS USING RSD 1250.01, AND PLACE TRAFFIC INTO NEW TRAFFIC PATTERN AS WEDGING IS COMPLETED.

PHASE II

STEP 1

* USING RSD 1101.02 SHEET 1 OF 9 AND FLAGGERS AS NEEDED, PLACE TEMPORARY PAVEMENT MARKINGS, MARKERS, AND REMOVE AND RESET PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHIONS ON -L- AS SHOWN ON TMP-14. PLACE TRAFFIC INTO TEMPORARY TRAFFIC PATTERN.

* USING RSD 1101.02 SHEET 2 OF 9 AND 3 OF 9 AS NEEDED, PLACE TEMPORARY PAVEMENT MARKINGS, MARKERS, AND REMOVE AND RESET PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHIONS ON -L-, -RP B-, -SPUR A- AND -LP A- AS SHOWN ON TMP-16 AND TMP-17. PLACE TRAFFIC INTO TEMPORARY TRAFFIC PATTERN.

STEP 2

USING RSD 1101.02 SHEETS 1, 2, AND 3 OF 9 AS NEEDED, CONSTRUCT THE FOLLOWING AS SHOWN ON SHEETS TMP-13 THROUGH TMP-14

* CONSTRUCT WIDENING OF EXISTING -Y- (SUNSET AVE) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM TIE-IN AT -L- TO STA. -Y- 17+92 +/- AS SHOWN ON TMP-13.

* CONSTRUCT SIDEWALK, CURB AND GUTTER, AND WIDENING OF RIGHT SIDE OF -L- UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM TIE-IN AT -Y- (SUNSET AVE) TO STA. -L- 9+70+/-.

* USING FLAGGERS AS NEEDED, CONSTRUCT TIE-IN OF -Y5- (PROFESSIONAL DR) AS SHOWN ON TMP-14. PROVIDE TEMPORARY PAVEMENT MARKINGS ON -Y5- TO MAINTAIN TRAFFIC DURING CONSTRUCTION.

* CONSTRUCT SIDEWALK, CURB AND GUTTER, AND WIDENING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE OF THE SOUTH SIDE OF -Y7- (CURTIS ELLIS RD) FROM TIE-IN AT -L- TO STA. -Y7- 20+26+/- AS SHOWN ON TMP-15.

* CONSTRUCT SIDEWALK ON RIGHT SIDE OF -L- FROM STA. -L- 9+70+/- TO TIE-IN -Y12- (HUNTER RD) AS SHOWN ON TMP-19.

* WHILE MAINTAINING TRAFFIC ON -RP D-, CONSTRUCT WIDENING OF -RP D- UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM TIE-IN AT -L- TO STA. -RP D- 4+00+/- AS SHOWN ON TMP-16 AND TMP-17.

* BEHIND PORTABLE CONCRETE BARRIER, CONTRUCT NEW BRIDGE RAIL AND SIDEWALK ON EXISTING BRIDGE ON -L- FROM STA. -L- 54+27+/- TO -L- 56+93+/- AS SHOWN ON TMP-16.

* MAINTAINING TRAFFIC ON -RP B-, CONSTRUCT MEDIAN FROM STA. -SPUR A- 1+37+/- TO STA. -RP B- 5+00+/- AS SHOWN ON TMP-17.

* CONSTRUCT WIDENING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE OF -Y9- (ENGLISH RD) FROM TIE-IN AT -L- TO STA. -Y9- 12+20+/- ON SOUTH SIDE OF -Y9- AND STA. -Y9- 14+46+/- ON NORTH SIDE OF -Y9- AS SHOWN ON TMP-18.

* USING FLAGGERS AS NEEDED, CONSTRUCT WIDENING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE ON NORTH SIDE OF -Y10- (ENGLISH RD) FROM STA. -Y10- 22+00+/- TO -Y10-25+88+/- AS SHOWN ON TMP-18.

APPROVED:_____ DATE:_____

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PHASING

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jdonaldson AT TE23749

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-03A

PHASE III

STEP 1

USING RSD 1101.02, SHEETS 1 OF 9, 2 OF 9, 3 OF 9 AND FLAGGERS AS NEEDED, PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-20 THROUGH TMP-25, MARKERS USING RSD 1250.01. ACTIVATE TEMPORARY SIGNALS AS SHOWN IN SIGNAL PLANS. PLACE TEMPORARY PORTABLE CONCRETE BARRIER ON -L- FROM STA. 25+19+/- TO STA. 29+67+/- AS SHOWN ON TMP-21 AND FROM STA. 53+04+/- TO STA. 58+00+/- AS SHOWN ON TMP-23. PLACE TRAFFIC INTO TEMPORARY TRAFFIC PATTERN. CLOSE EXISTING ROADWAY TO TRAFFIC USING TYPE III BARRICADES AND TRAFFIC CONTROL DEVICES AS NEEDED TO MAINTAIN NEW TRAFFIC PATTERN.

STEP 2

* BEGIN CONSTRUCTION OF NEW MEDIAN AND ROADWAY UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE IN CENTER OF -L- (WINSTEAD AVE)FROM STA. -L- 10+50+/- TO -L- 9+70+/- AS SHOWN ON TMP-20 THROUGH TMP-25.

* BEGIN CONSTRUCTION OF WIDENING OF NORTH SIDE OF -Y7- (CURTIS ELLIS DR) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM STA. -Y7- 15+75+/- TO -Y7- 18+90+/- AS SHOWN ON TMP-22.

* PLACE MODIFIED LATEX CONCRETE OVERLAY (AS SHOWN IN THE CONSTRUCTION PLANS) ON THE EXISTING BRIDGE ON -L- BETWEEN STA. 26+81+/- AND STA. 28+93+/- AS SHOWN ON TMP-21.

* PLACE MODIFIED LATEX CONCRETE OVERLAY (AS SHOWN IN THE CONSTRUCTION PLANS) ON THE EXISTING BRIDGE ON -L- BETWEEN STA. 54+28+/- AND 56+65 AS SHOWN ON TMP-23.

* USING RSD 1101.02, SHEET 3 OF 9, CONSTRUCT OVERHEAD SIGNS AS SHOWN IN SIGNING PLANS.

STEP 3

A. COMPLETE CONSTRUCTION OF MEDIAN AND ROADWAY UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE ON -L- STA. 45+80 +/- TO 61+30+/- THAT BEGAN IN PHASE III, STEP 2. (SEE TMP-22 AND TMP-23)

B. USING RSD 1101.02 SHEET 3 OF 9, PLACE TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PORTABLE CONCRETE BARRIER AS SHOWN ON TMP-26 AND PLACE TRAFFIC INTO NEW TRAFFIC PATTERN. PLACE MODIFIED LATEX CONCRETE OVERLAY (AS SHOWN ON THE CONSTRUCTION PLANS) ON THE EXISTING BRIDGE AS SHOWN ON TMP-26.

C. COMPLETE CONSTRUCTION OF MEDIAN AND ROADWAY UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE OF -L- AND -Y7- THAT BEGAN IN PHASE III, STEP 2.

D. CONSTRUCT NEW MONOLITHIC ISLAND ON -L- WINSTEAD AVE (SR 1613) FROM STA. -L- 6+00+/- TO -L- 8+92+/- AND OPEN MEDIAN TO U-TURN TRAFFIC.

   REMOVE TEMPORARY PORTABLE CONCRETE BARRIER ON -L- FROM STA. 53+05 +/- TO STA. 56+65 +/-. PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-26A AND PLACE TRAFFIC INTO NEW TRAFFIC PATTERN. CONSTRUCT MONOLITHIC CONCRETE ISLAND ON -L- FROM STA. 51+80 +/- TO STA. 53+95 +/- AS SHOWN ON TMP-26A.

PHASE IV

USING RSD 1101.02 SHEETS 1 OF 9, 2 OF 9, AND 3 OF 9 AS NEEDED CONSTRUCT FINAL LAYER OF SURFACE COURSE, PLACE PERMANENT PAVEMENT MARKINGS AS SHOWN IN PAVEMENT MARKING PLANS, ACTIVATE FINAL SIGNALS AS SHOWN IN SIGNAL PLANS, REMOVE ALL TYPE III BARRICADES AND TRAFFIC CONTROL DEVICES AND PLACE TRAFFIC INTO FINAL TRAFFIC PATTERN. REMOVE ADVANCED WARNING SIGNS.

APPROVED:_____ DATE:_____

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4/4/11

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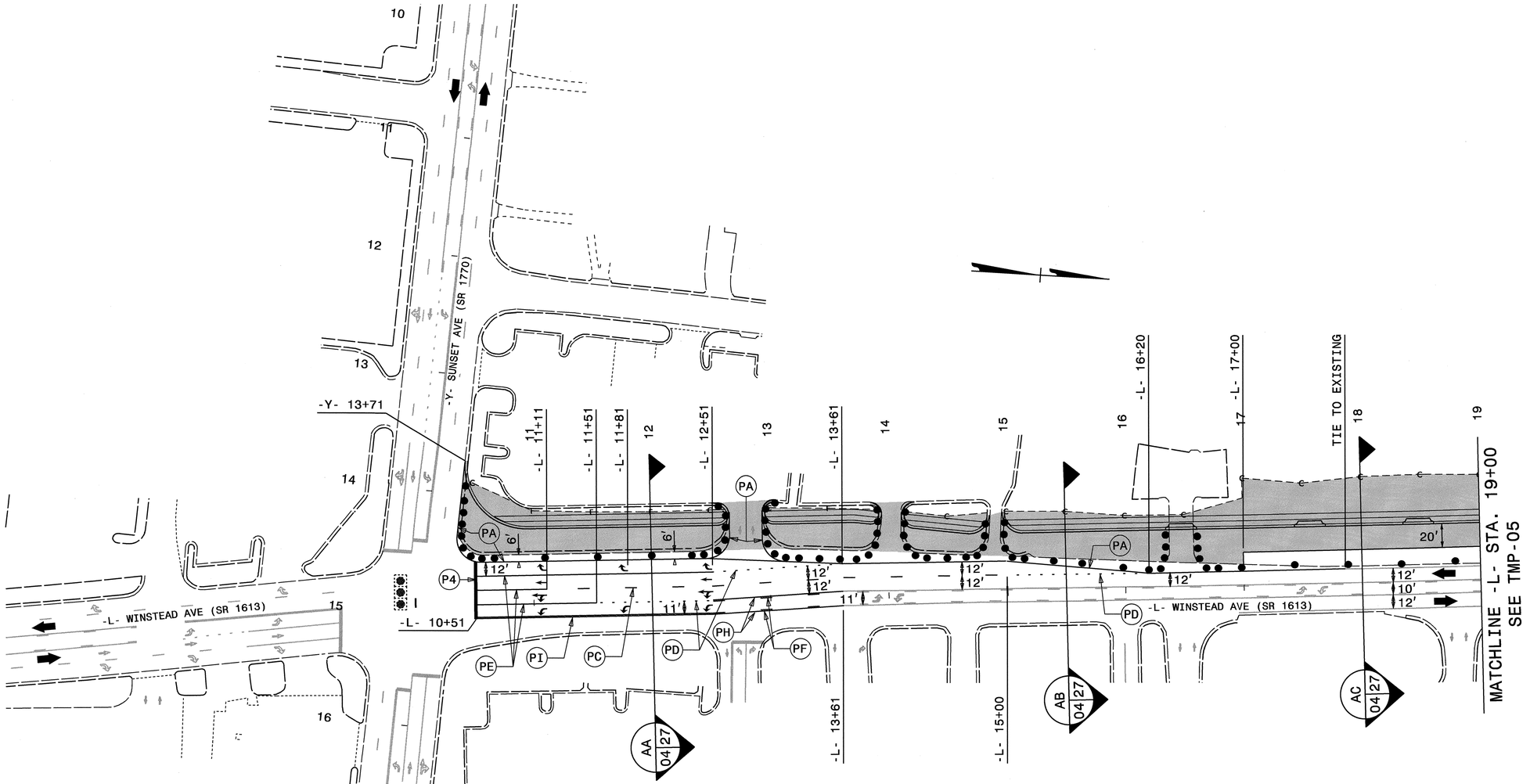
PHASING

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-04



SEE SHEET TMP-01A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

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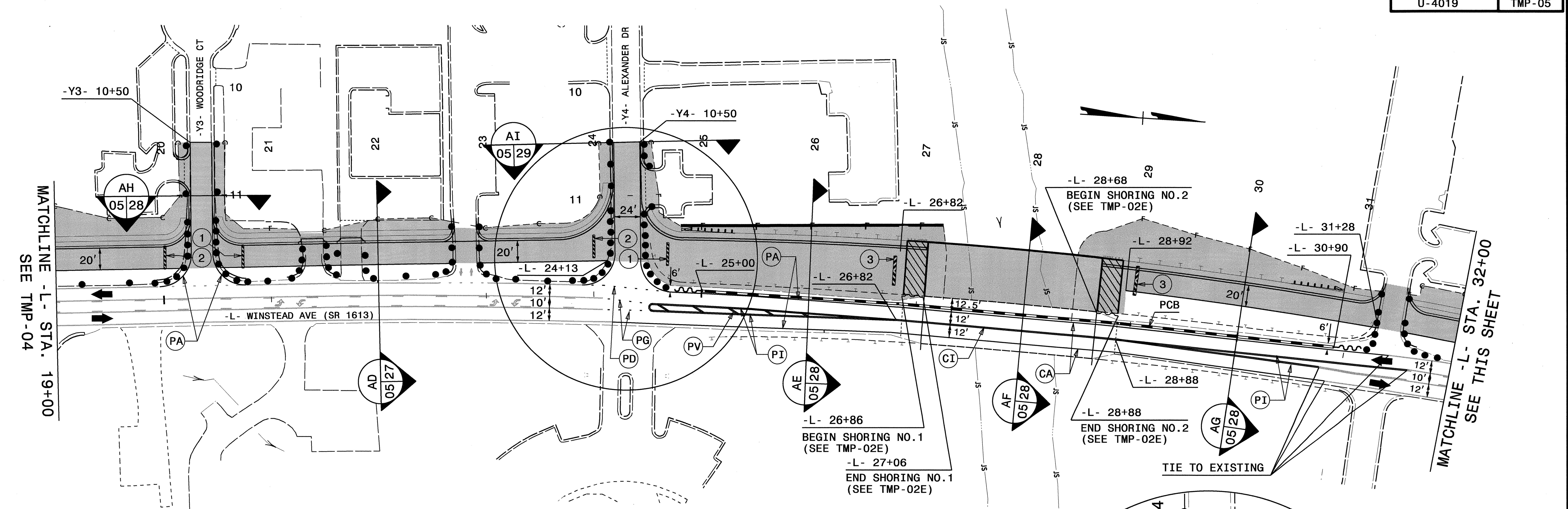
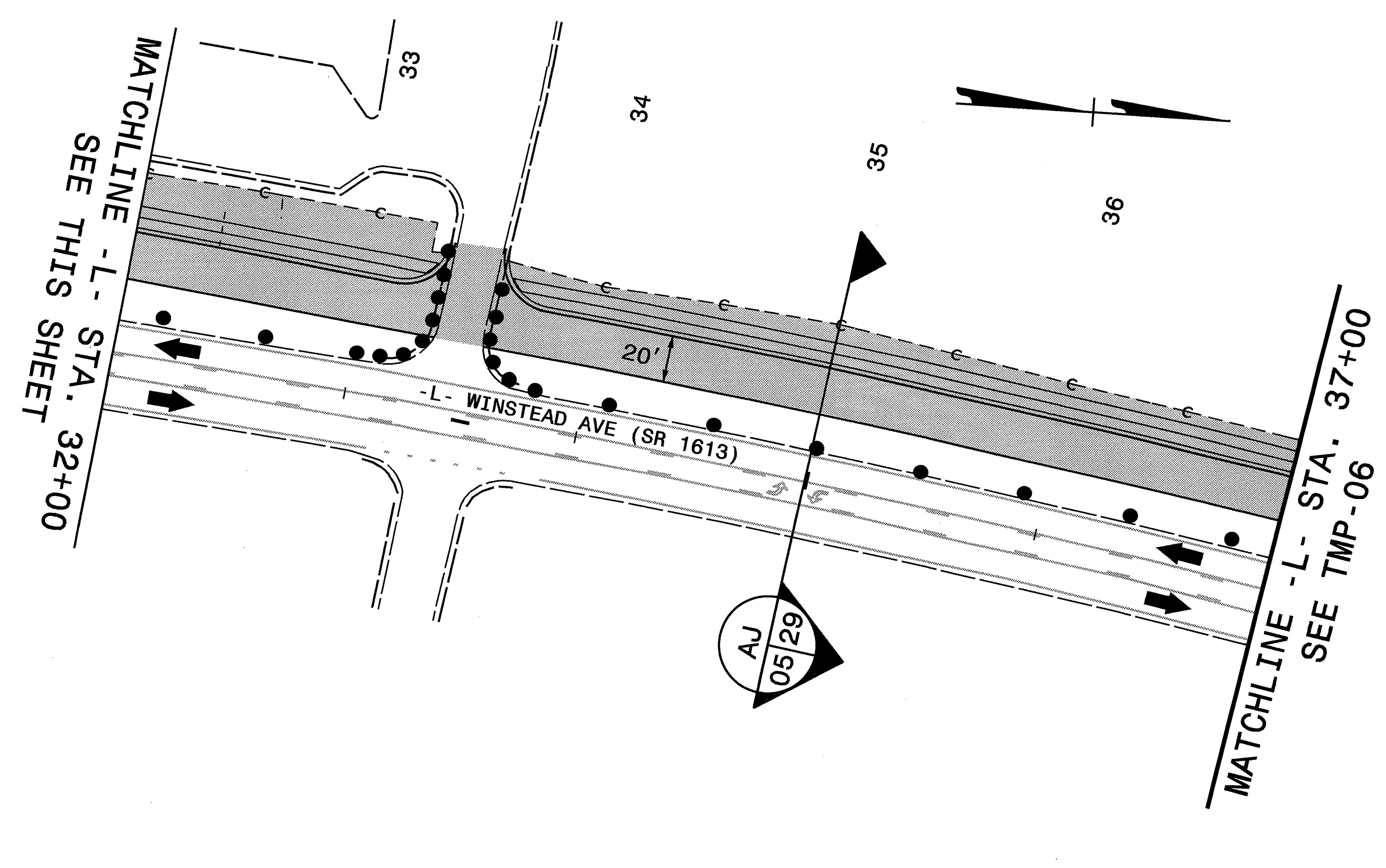
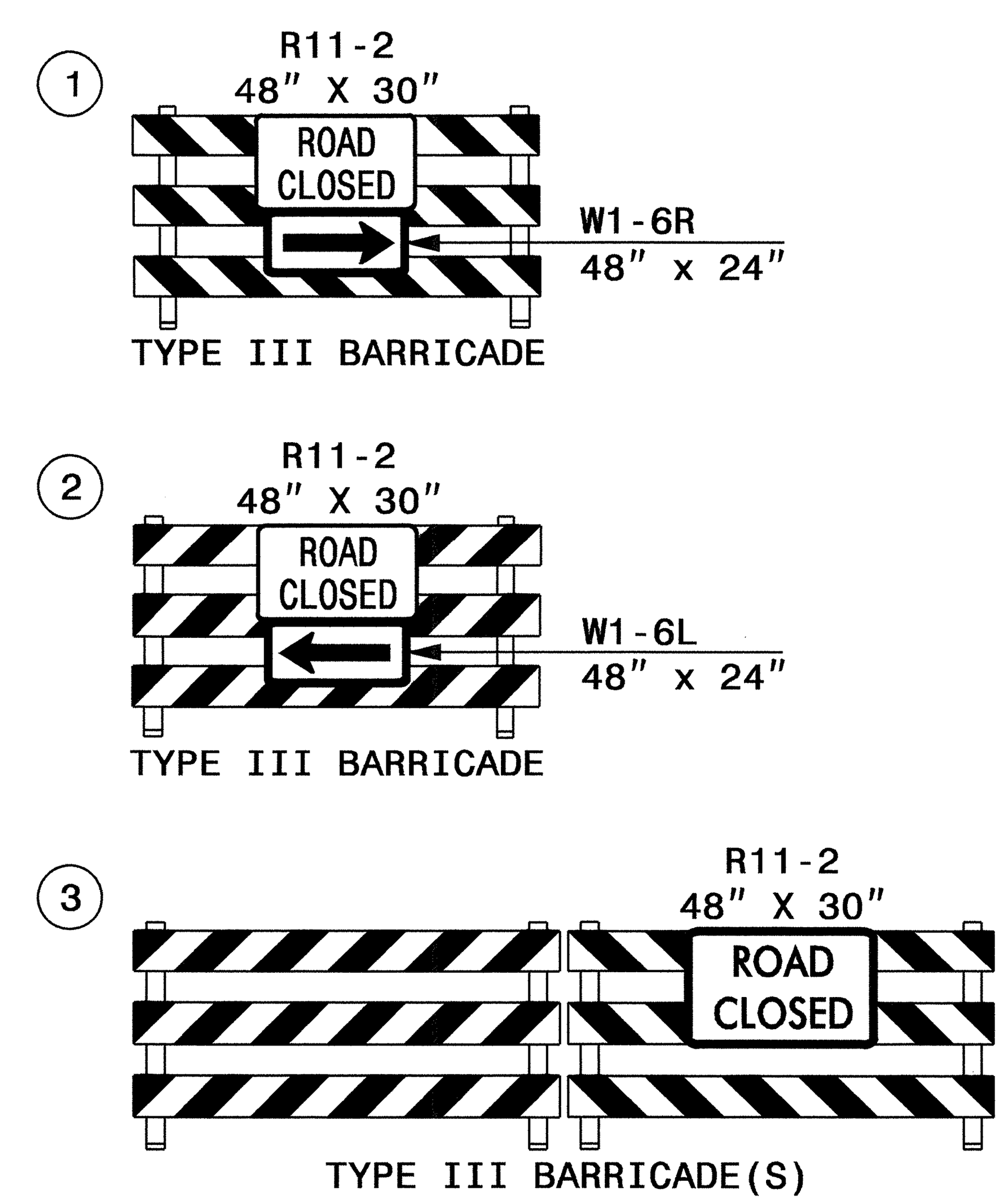
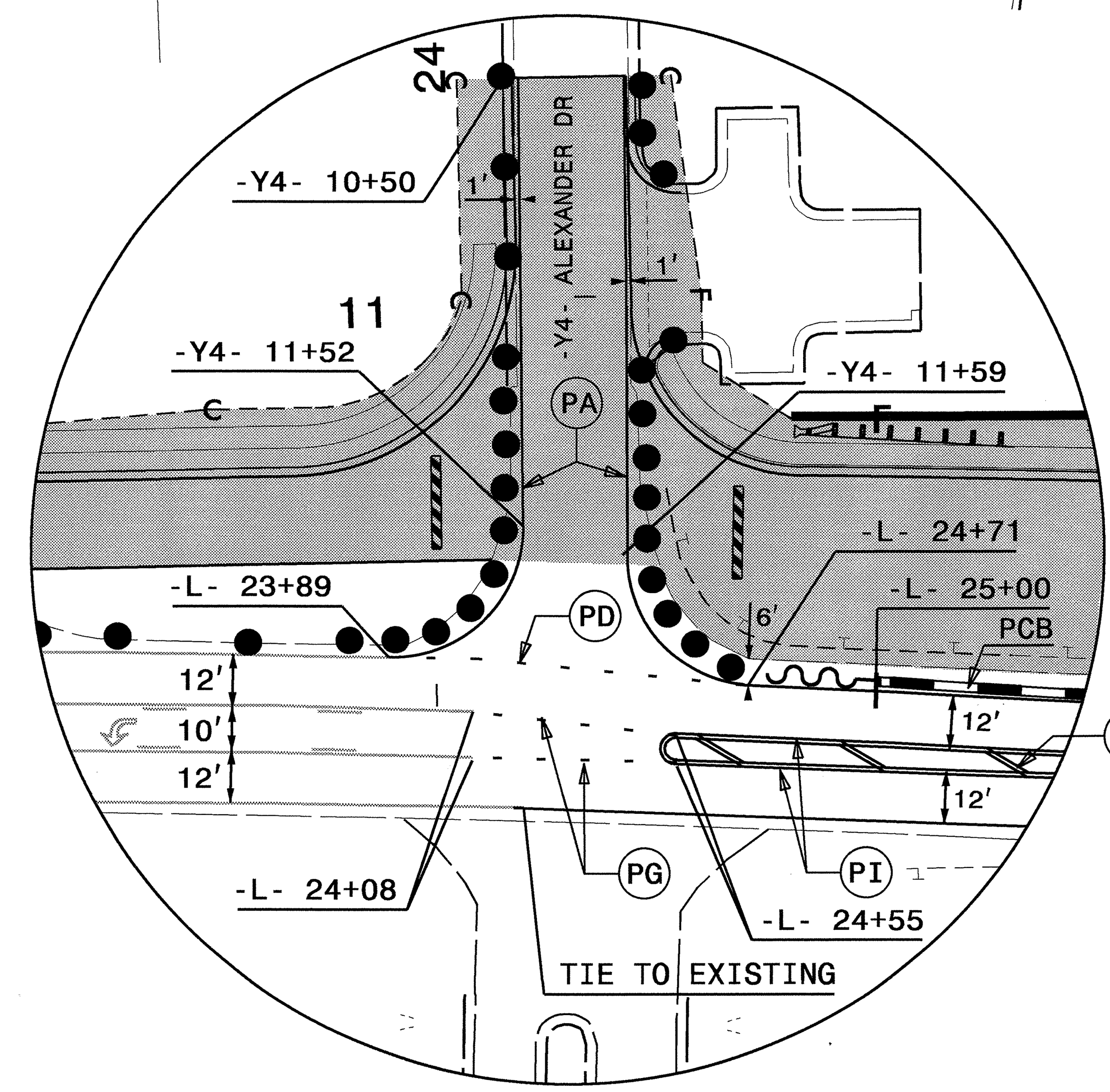
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-05









SEE SHEET TMP-02E FOR PERMANENT SHORING DATA

SEE SHEET TMP-01A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: DATE:

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4/14/11

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

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ldonaldson AT TE237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-06

1 R11-2 48" X 30" ROAD CLOSED W1-6R 48" x 24" TYPE III BARRICADE

2 R11-2 48" X 30" ROAD CLOSED W1-6L 48" x 24" TYPE III BARRICADE

-Y6- 10+00
-Y6- EXECUTIVE DR
-Y6- 11+56
-Y6- 11+16
-Y7- 10+81
-Y7- CURTIS ELLIS DR
-Y7- 12+00
-L- WINSTEAD AVE (SR 1613)
-L- 44+78
-L- 44+75
-L- 46+25
-L- 46+23
AM 06/29
AK 06/29
AL 06/29
AN 06/30
PC
PI
PA
P4
1
2
20'
110'
34'
MATCHLINE -L- STA. 37+00 SEE TMP-05
MATCHLINE -L- STA. 49+00 SEE TMP-07

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

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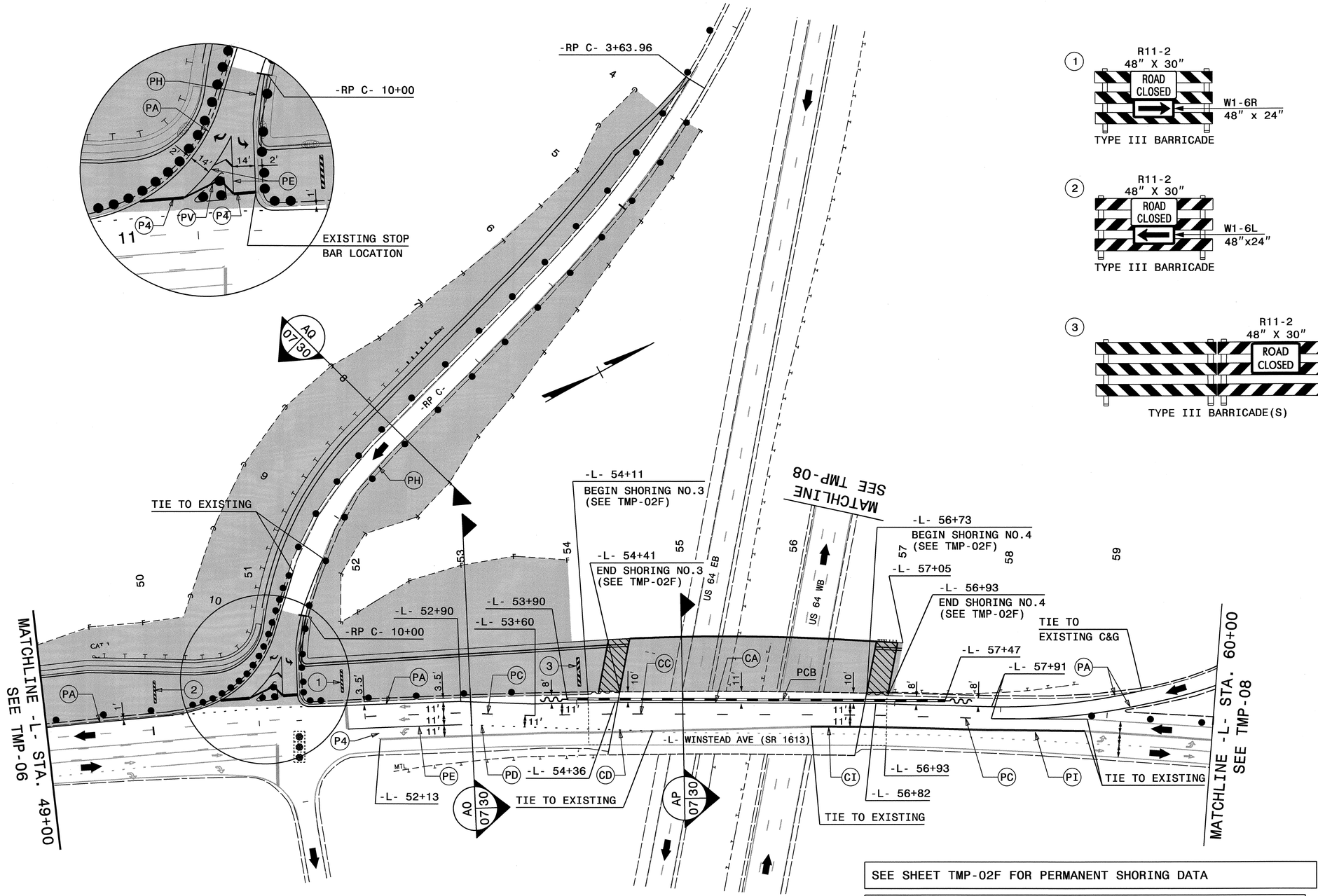
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-07



1 R11-2 48" X 30" ROAD CLOSED W1-6R 48" x 24"
TYPE III BARRICADE

2 R11-2 48" X 30" ROAD CLOSED W1-6L 48"x24"
TYPE III BARRICADE

3 R11-2 48" X 30" ROAD CLOSED
TYPE III BARRICADE(S)

SEE SHEET TMP-02F FOR PERMANENT SHORING DATA

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLAND JR. 9/14/11

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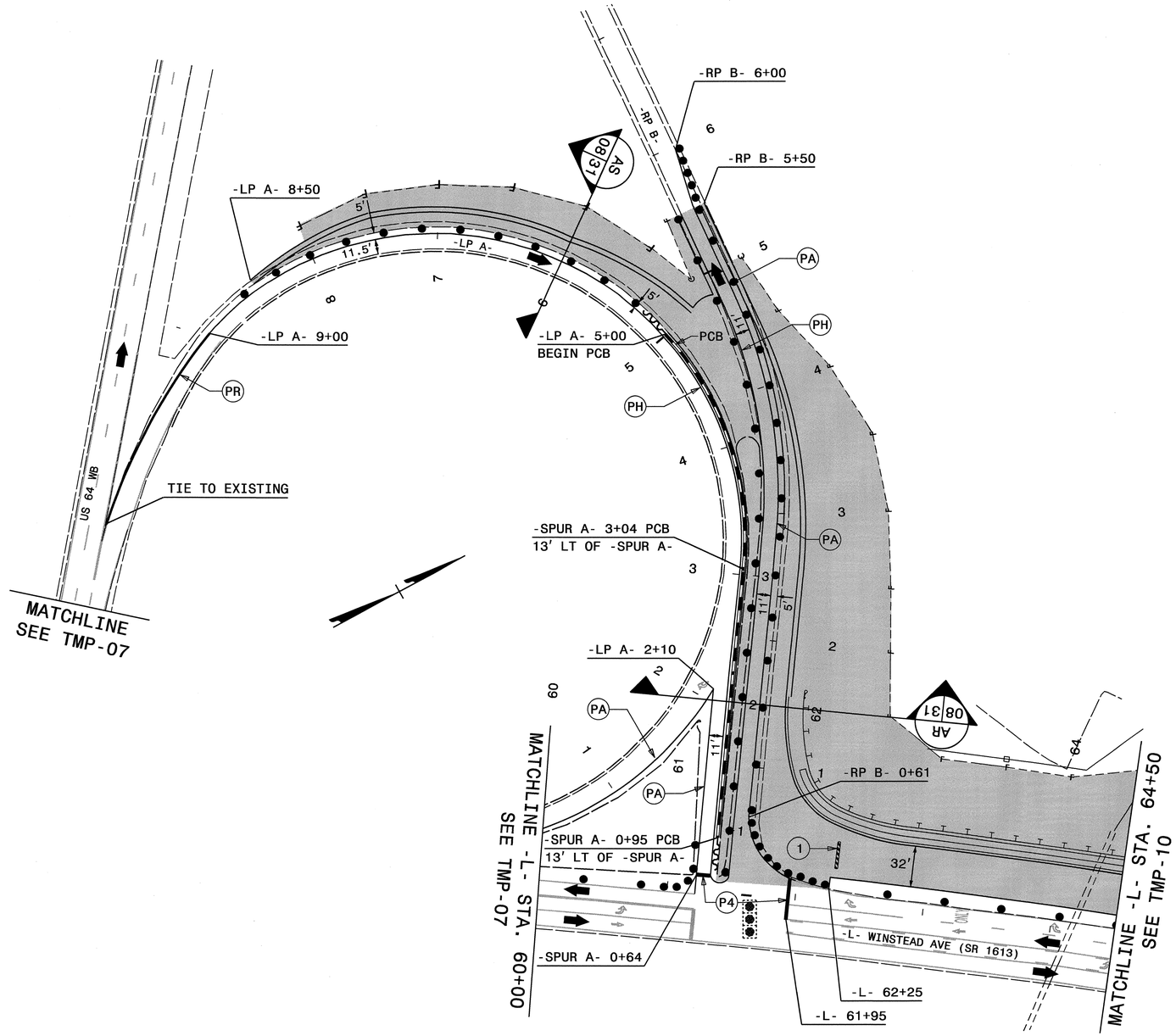
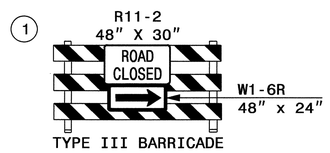
AT TE237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-08





SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

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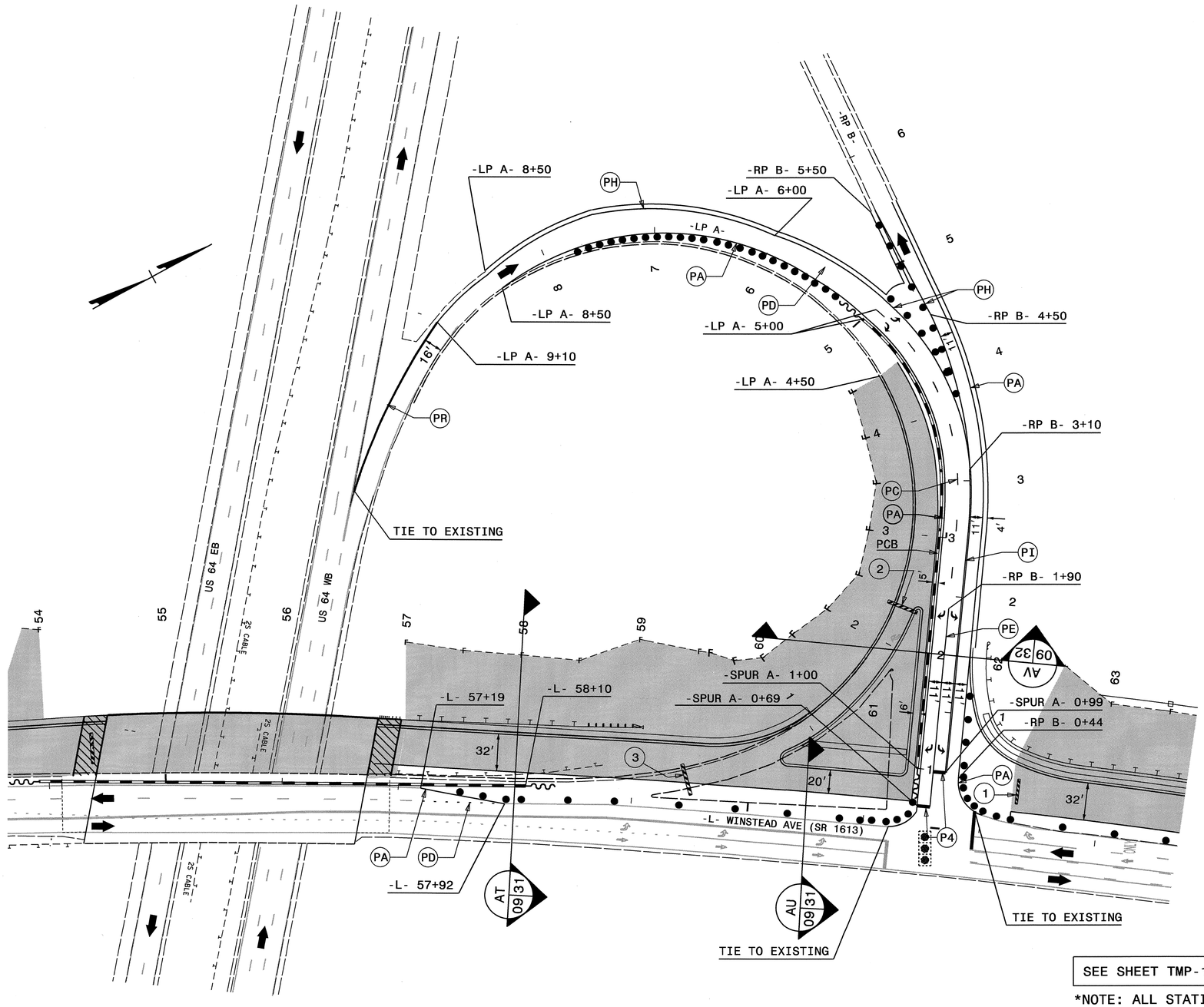
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-09



1. R11-2, 48" X 30", ROAD CLOSED, W1-6R, 48" x 24"
   TYPE III BARRICADE
2. R11-2, 48" X 30", ROAD CLOSED, W1-6L, 48" x 24"
   TYPE III BARRICADE
3. R11-2, 48" X 30", ROAD CLOSED
   TYPE III BARRICADE(S)

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED:_____ DATE:_____

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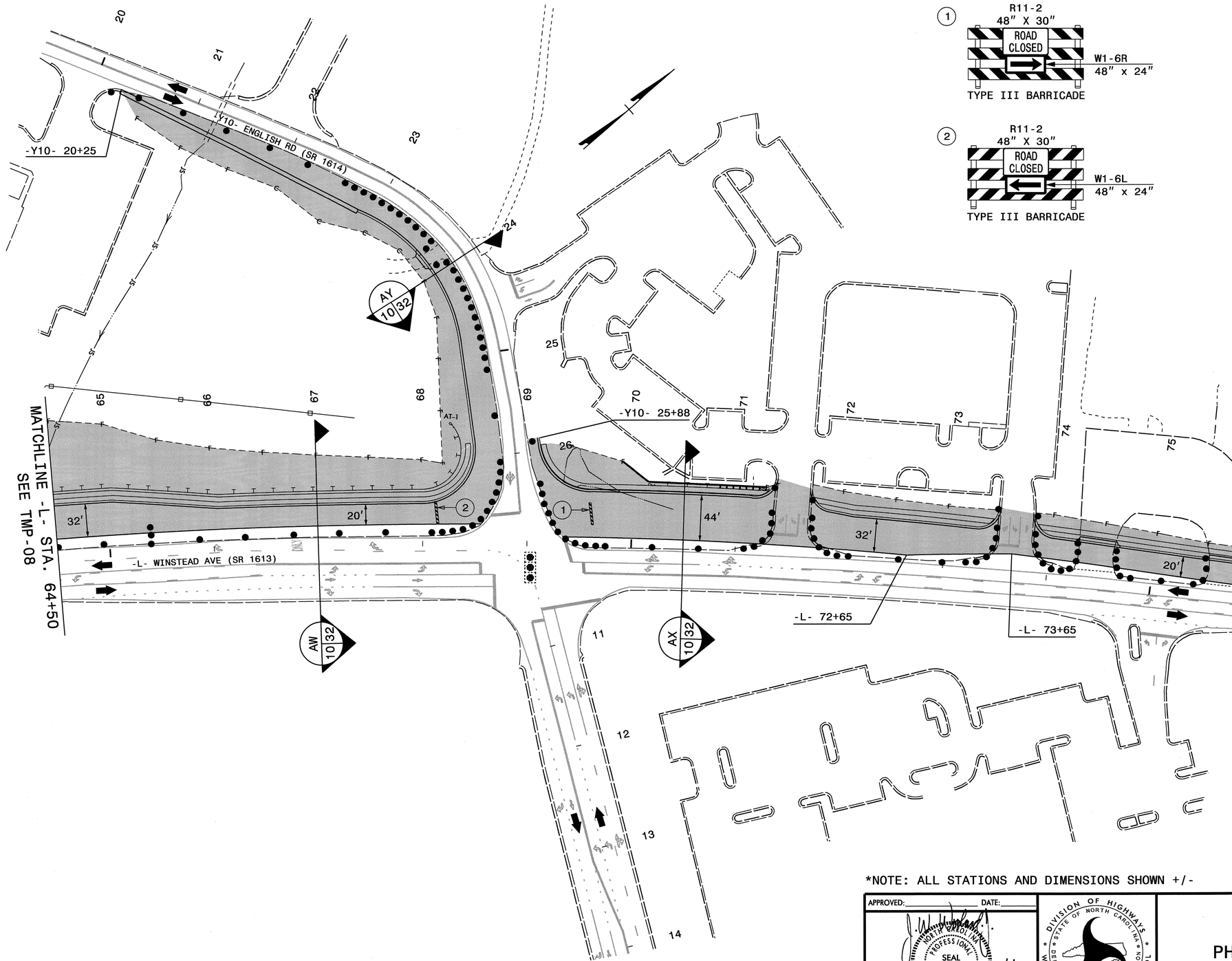
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-10



1 R11-2 48" X 30" ROAD CLOSED W1-6R 48" x 24"
TYPE III BARRICADE

2 R11-2 48" X 30" ROAD CLOSED W1-6L 48" x 24"
TYPE III BARRICADE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED:_____ DATE:_____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER W. WOOLARD, JR. 4/4/22

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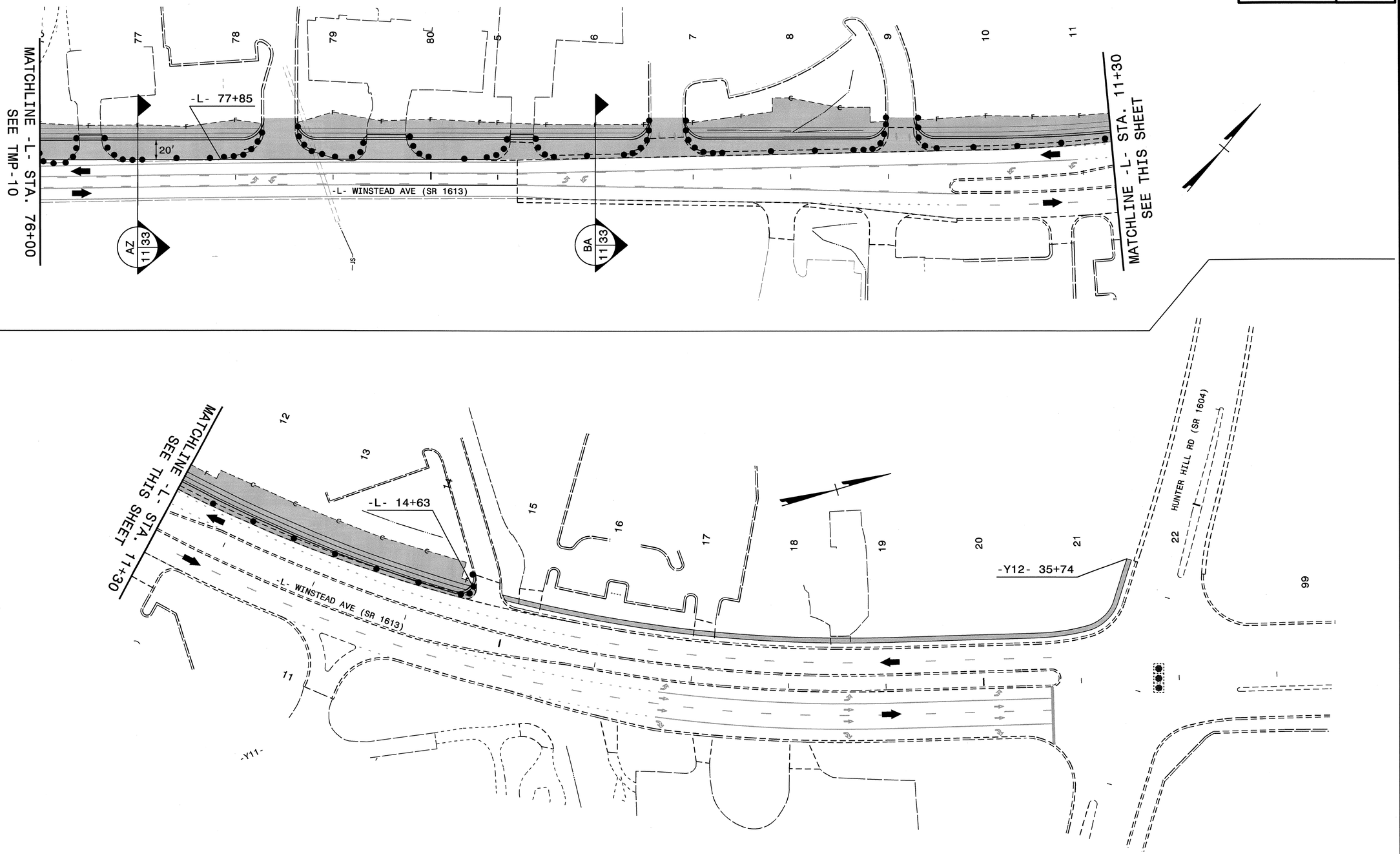
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-11



*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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PHASE I PLAN

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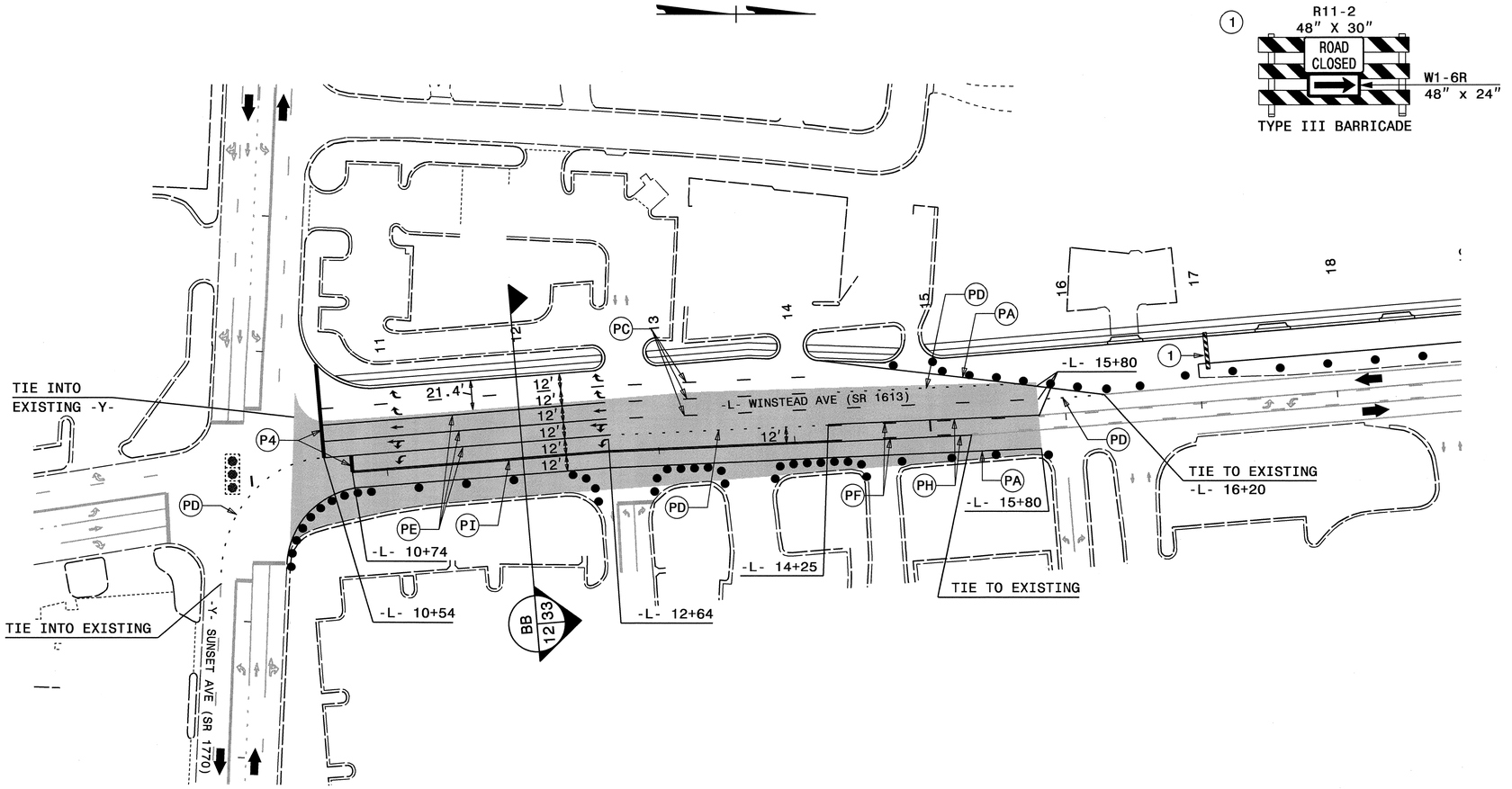
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-12



SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER W. WOOLARD JR. 4/4/11

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

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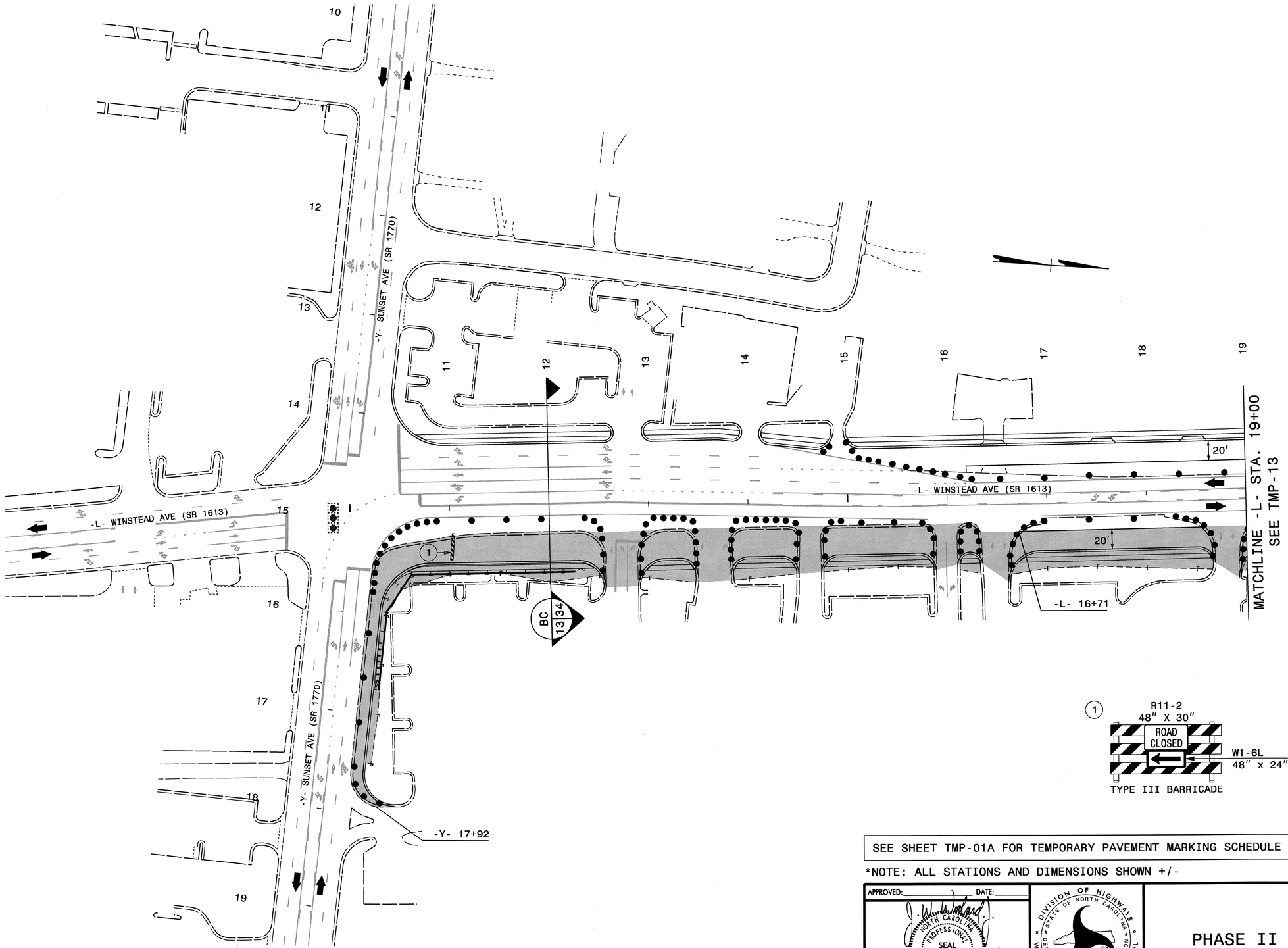
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-13



1 R11-2
48" X 30"
ROAD CLOSED
W1-6L
48" x 24"
TYPE III BARRICADE

SEE SHEET TMP-01A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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PHASE II PLAN

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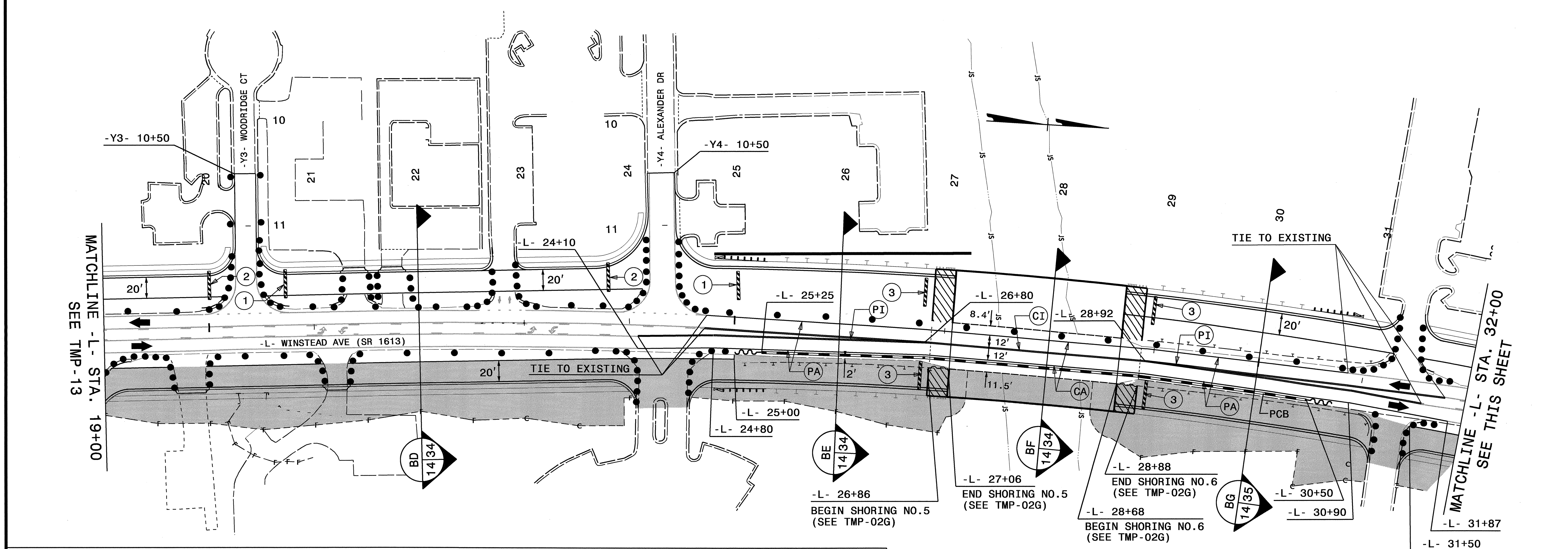
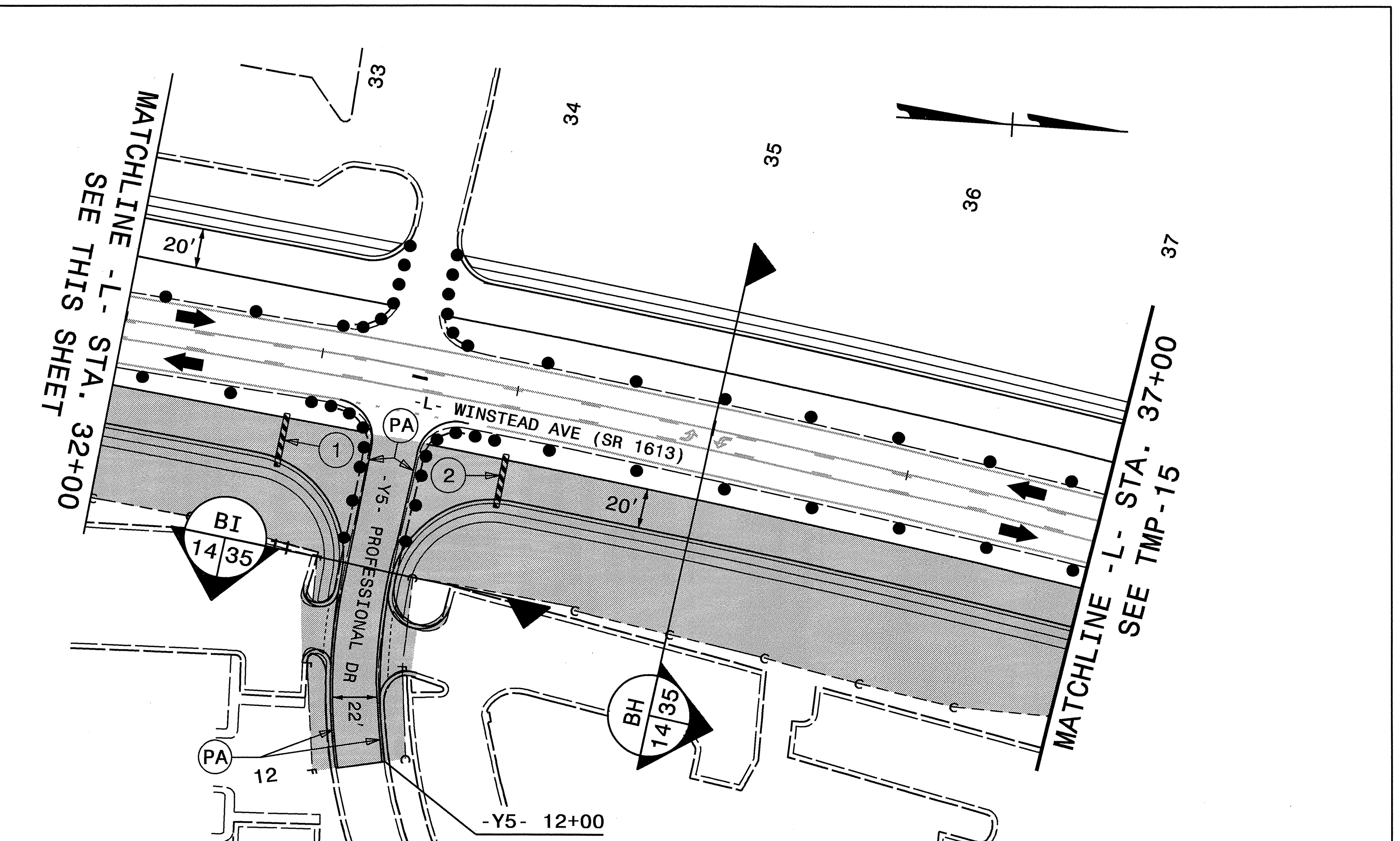
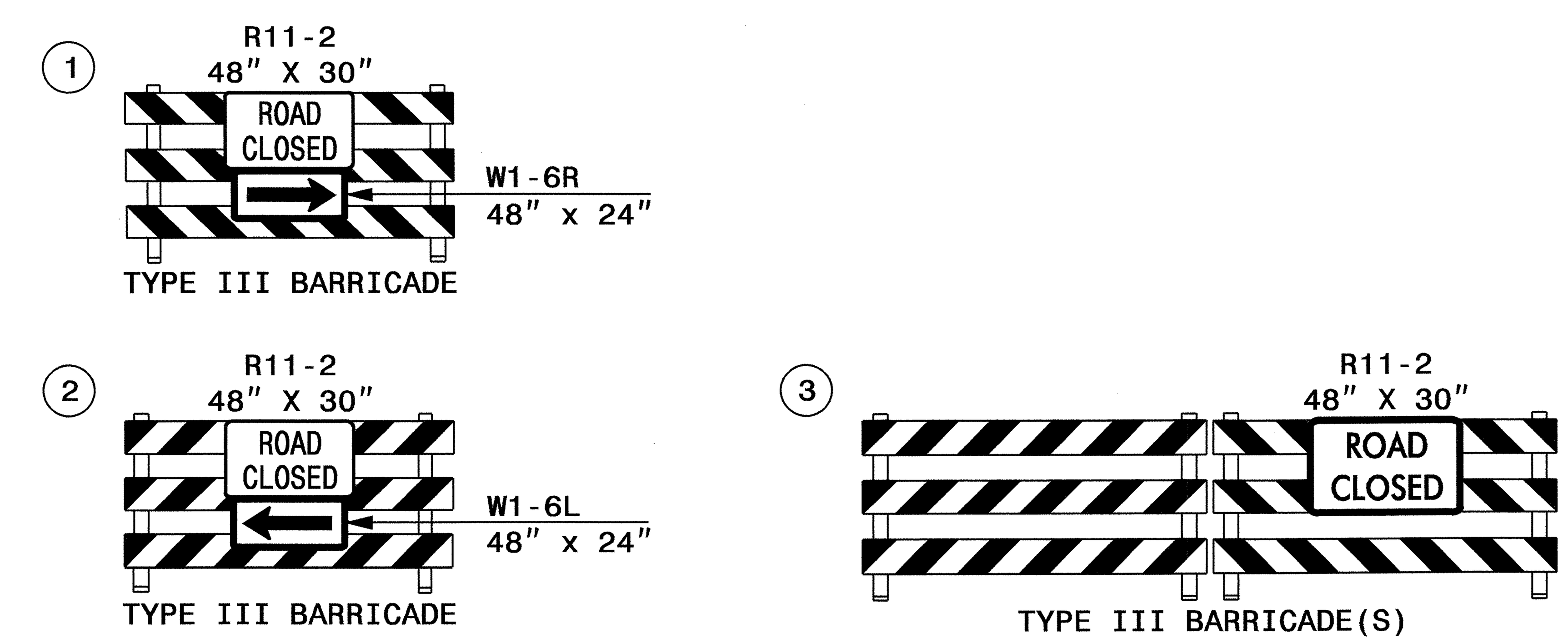
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-14







SEE SHEET TMP-02G FOR PERMANENT SHORING DATA

SEE SHEET TMP-01A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: ____________ DATE: ____________

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19862 J. W. WOOLARD, JR. 4/14/11

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

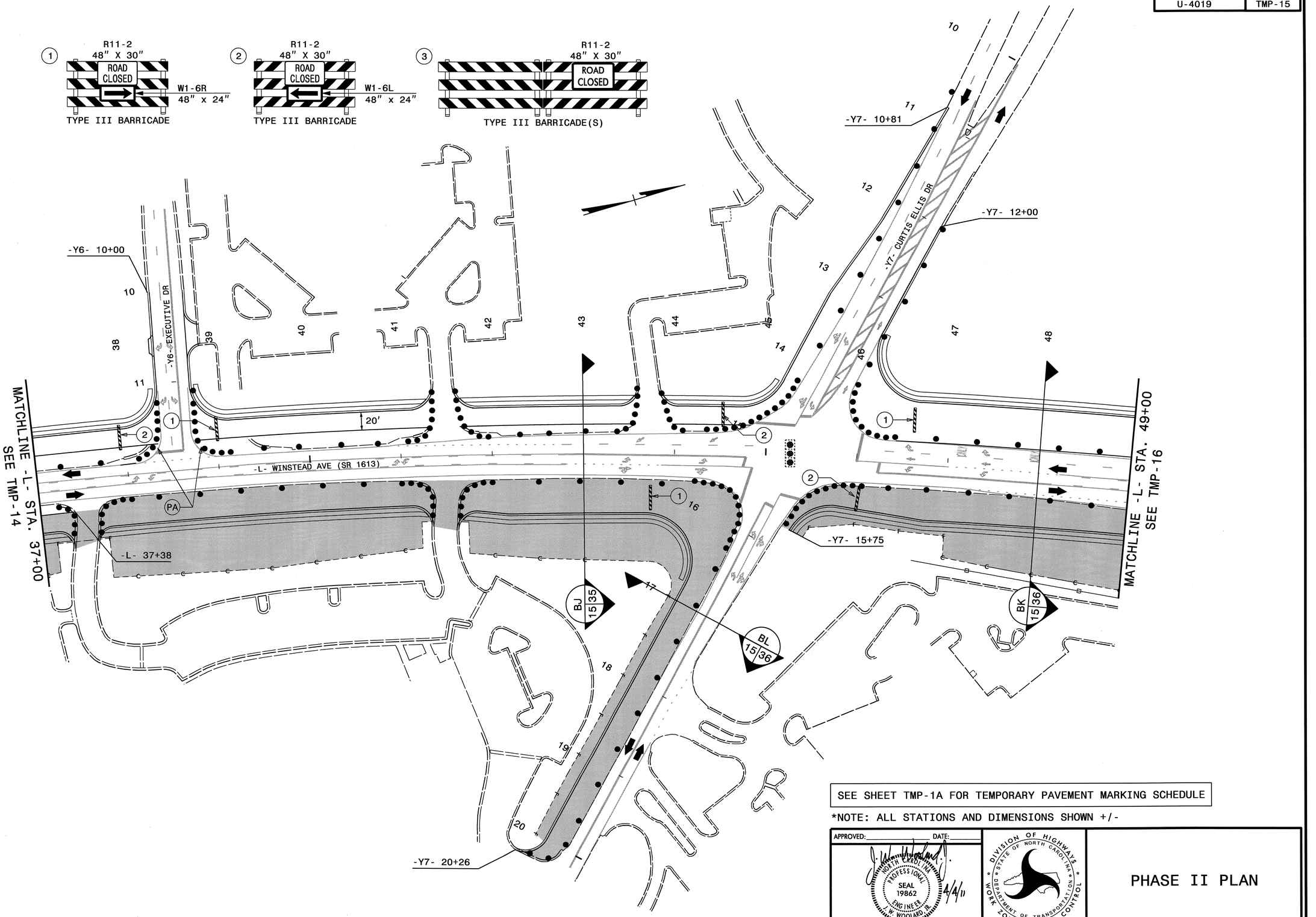
PHASE II PLAN

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-15

① R11-2 48" X 30" ROAD CLOSED W1-6R 48" x 24" TYPE III BARRICADE

② R11-2 48" X 30" ROAD CLOSED W1-6L 48" x 24" TYPE III BARRICADE

③ R11-2 48" X 30" ROAD CLOSED TYPE III BARRICADE(S)



SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

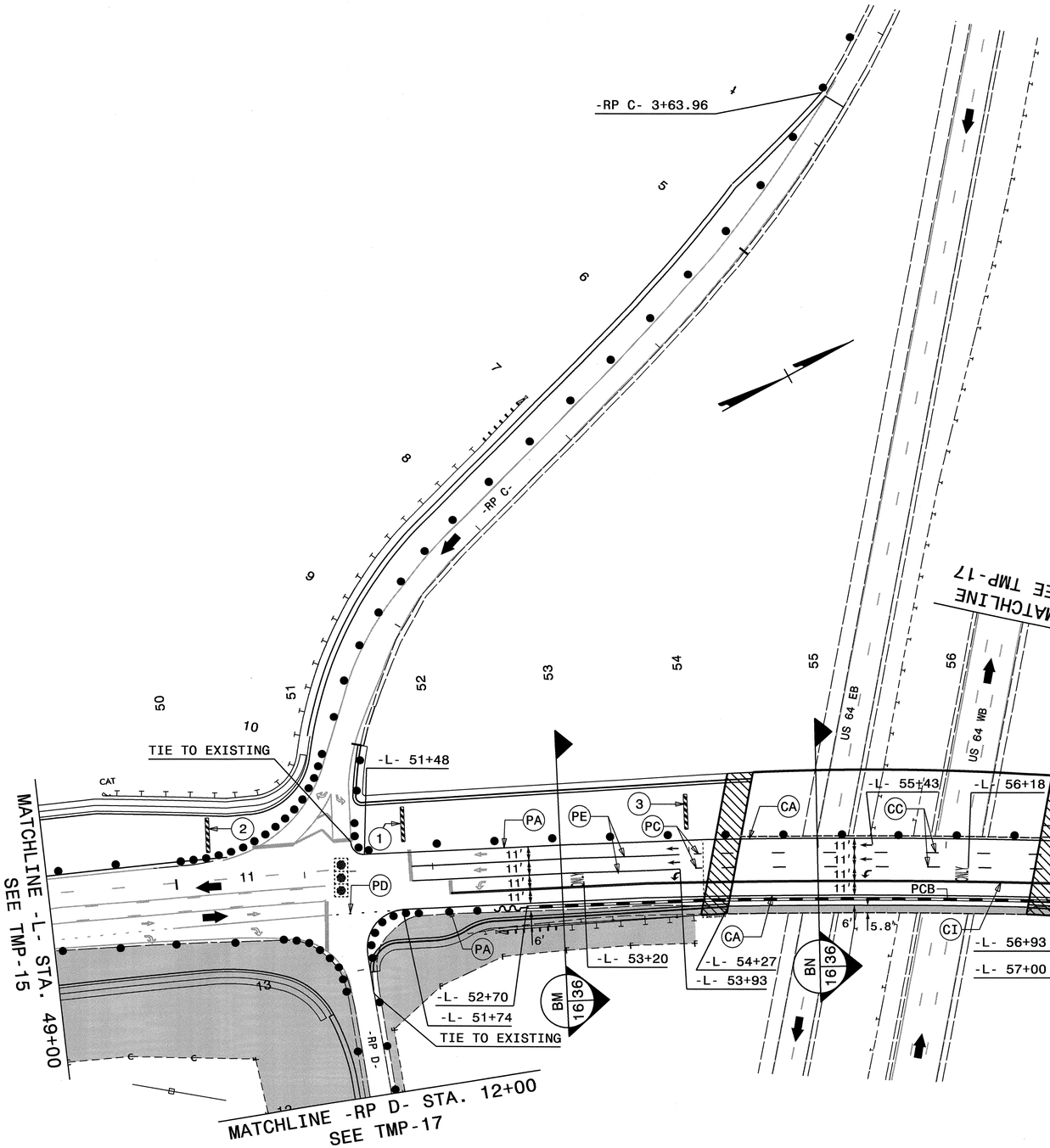
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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

PHASE II PLAN

01-APR-2011 13:36
\\Dot\dfsroot\NSProj\TIPProjects-U\U4019\Traffic\TrafficControl\tcp\U-4019_TC_TMP_TMP-15_phase02.dgn
rdonaldson AT TE23459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-16



1 R11-2 48" X 30" ROAD CLOSED W1-6R 48" x 24"
TYPE III BARRICADE

2 R11-2 48" X 30" ROAD CLOSED W1-6L 48"x24"
TYPE III BARRICADE

3 R11-2 48" x 30" ROAD CLOSED
TYPE III BARRICADE(S)

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED:_____ DATE:_____

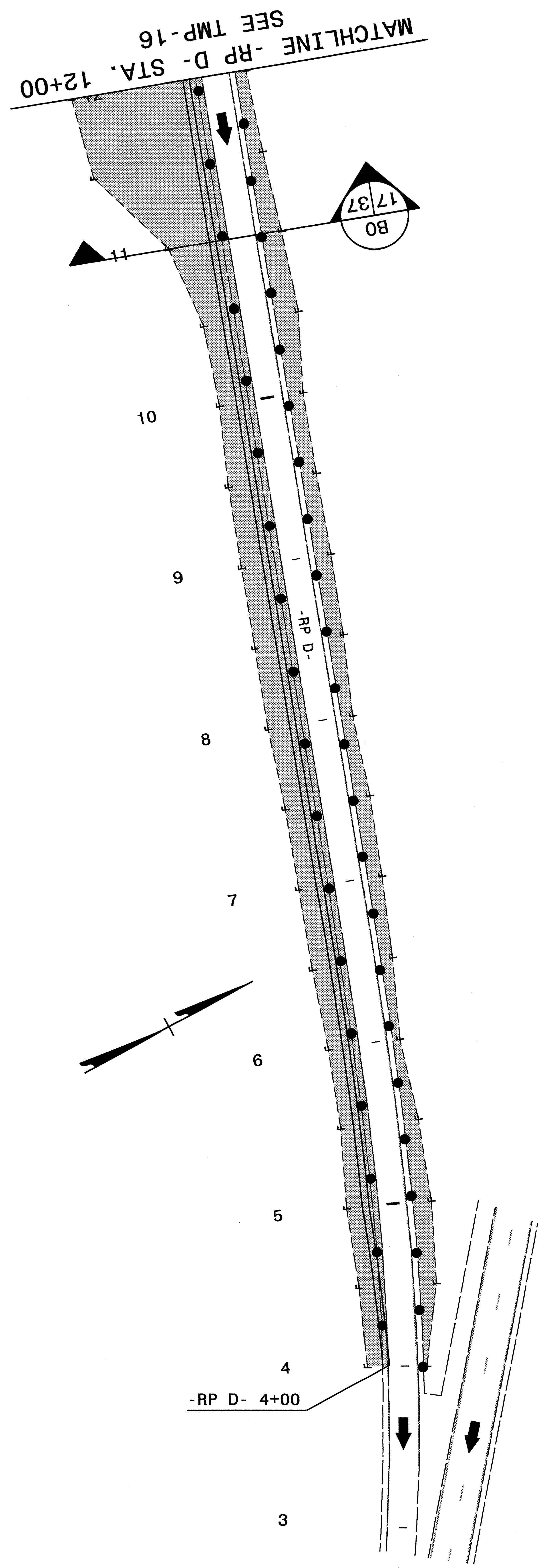
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

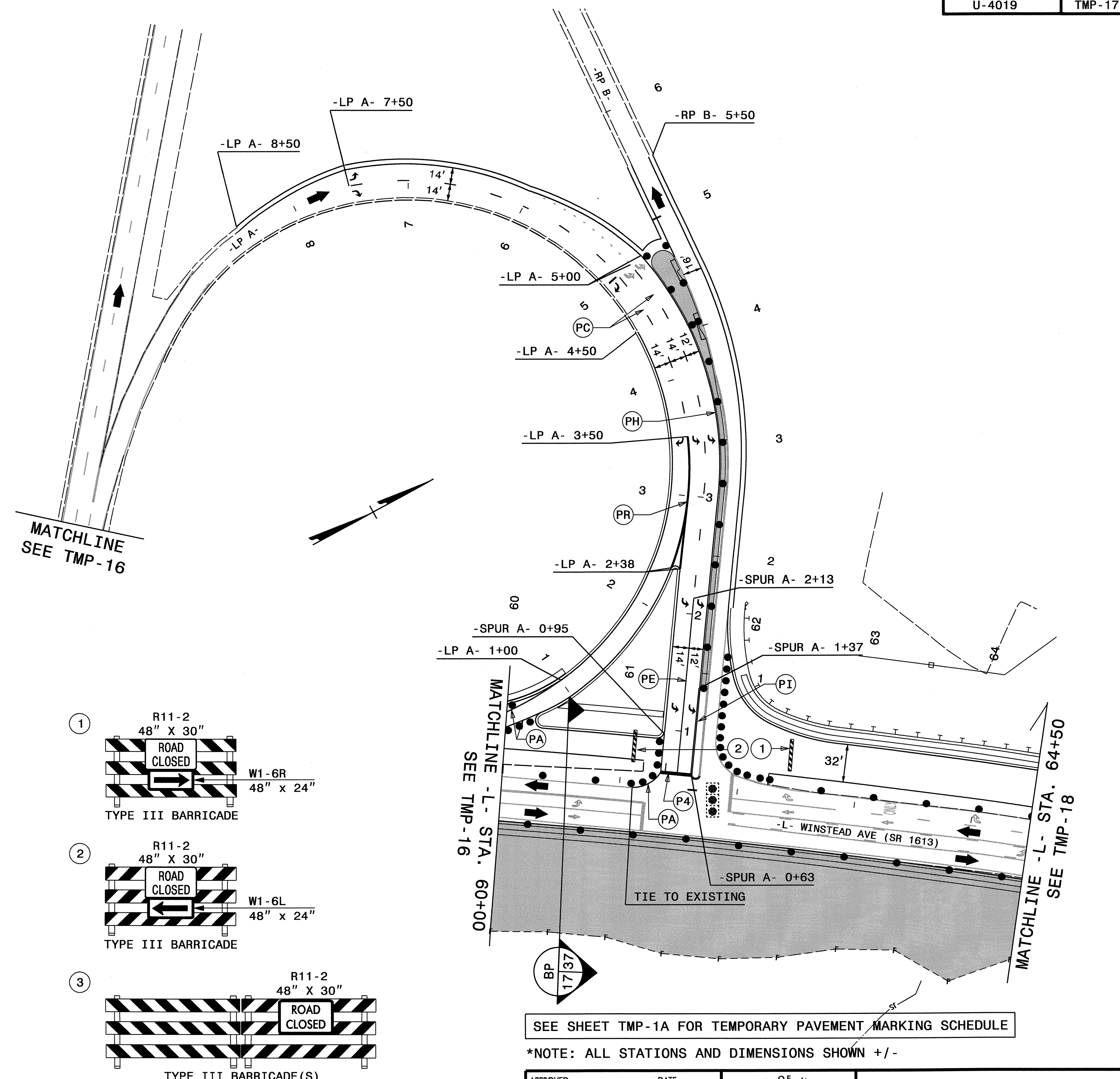
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

PHASE II PLAN

01-APR-2011 13:35
\\Dot\dfsroot01\NSProj\TIPProjects-U\U4019\Traffic\TrafficControl\tcp\U-4019_TC_TMP_TMP-16_phase02.dgn
idonaldson AT TE237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-17





SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: ______ DATE: ______

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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

PHASE II PLAN

01-APR-2011 13:34
\\Dot\dfsroot01\NSProj\TIPProjects-U\U4019\Traffic\TrafficControl\tcp\U-4019_TC_TMP_TMP-17_phase02.dgn
ldonaldson AT TE237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-18

-Y10- 22+00

-Y10- ENGLISH RD (SR 1614)

BS 18/38

-Y10- 25+88

MATCHLINE -L- STA. 64+50
SEE TMP-17

-L- WINSTEAD AVE (SR 1613)

BQ 18/37

BT 18/38

-Y9- 12+20

-Y9- ENGLISH RD (SR 1614)

PA

BR 18/37

-Y9- 14+46

MATCHLINE -L- STA. 76+00
SEE TMP-19

-L- WINSTEAD AVE (SR 1613)

AT-1

① R11-2 48" X 30" ROAD CLOSED W1-6R 48" x 24"
TYPE III BARRICADE

② R11-2 48" X 30" ROAD CLOSED W1-6L 48" x 24"
TYPE III BARRICADE

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: DATE: 4/4/11

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER W. WOOLARD JR.

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

PHASE II PLAN

01-APR-2011 13:33
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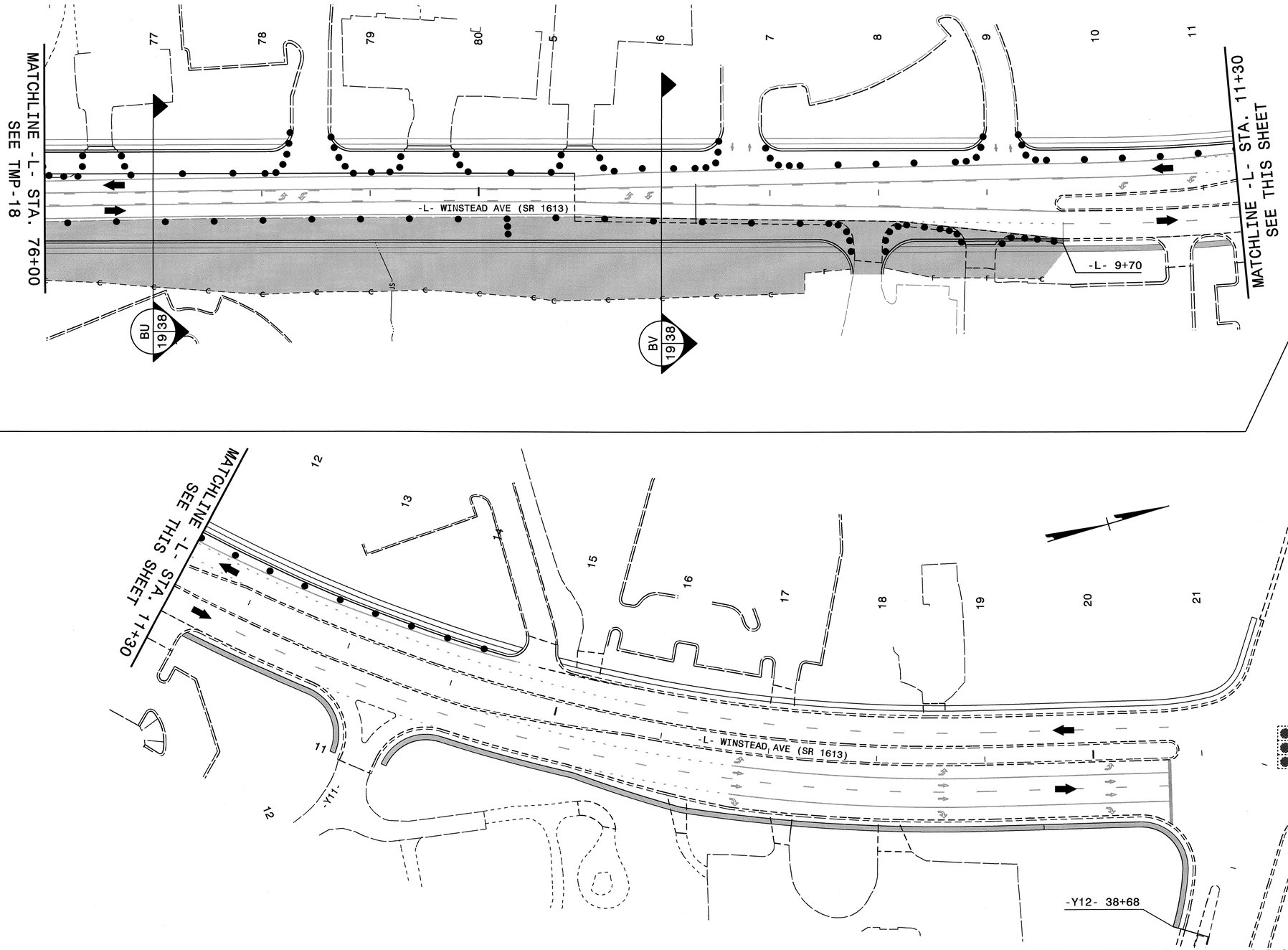
tdonaldson AT TE237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-19



*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED:_____ DATE:_____

J. W. WOOLARD JR. PROFESSIONAL SEAL 19862 ENGINEER 4/4/11

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

PHASE II PLAN

01-APR-2011 13:32
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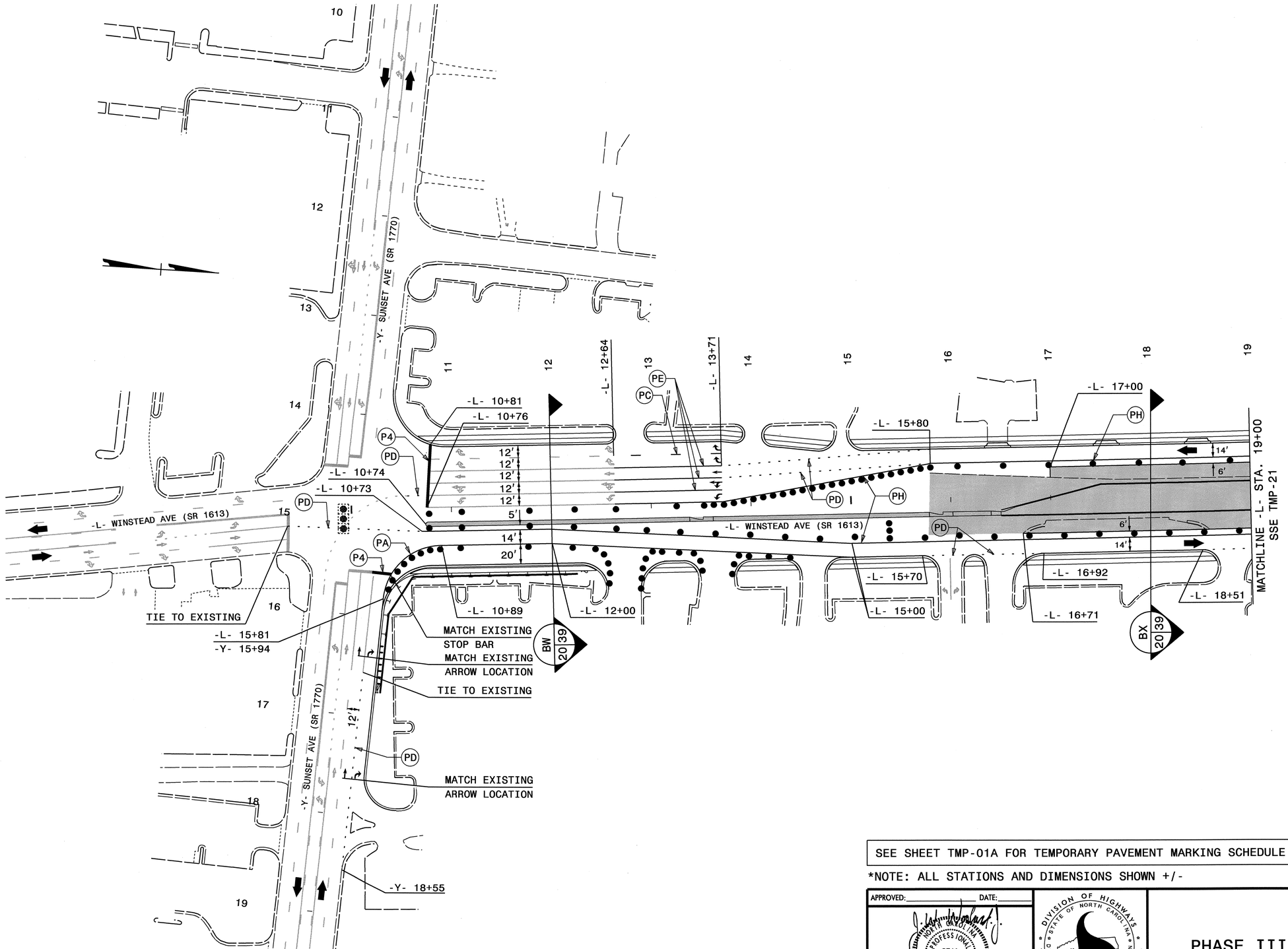
idonaldson AT TE23459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-20



SEE SHEET TMP-01A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED:_____ DATE:_____

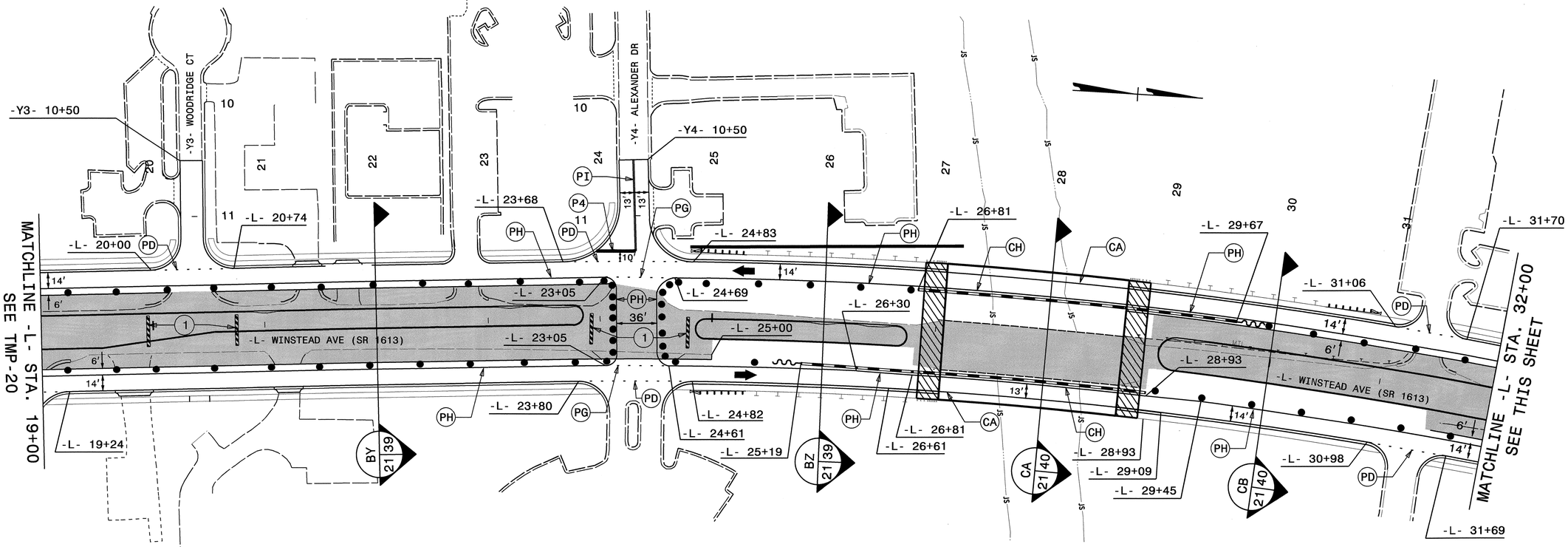
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

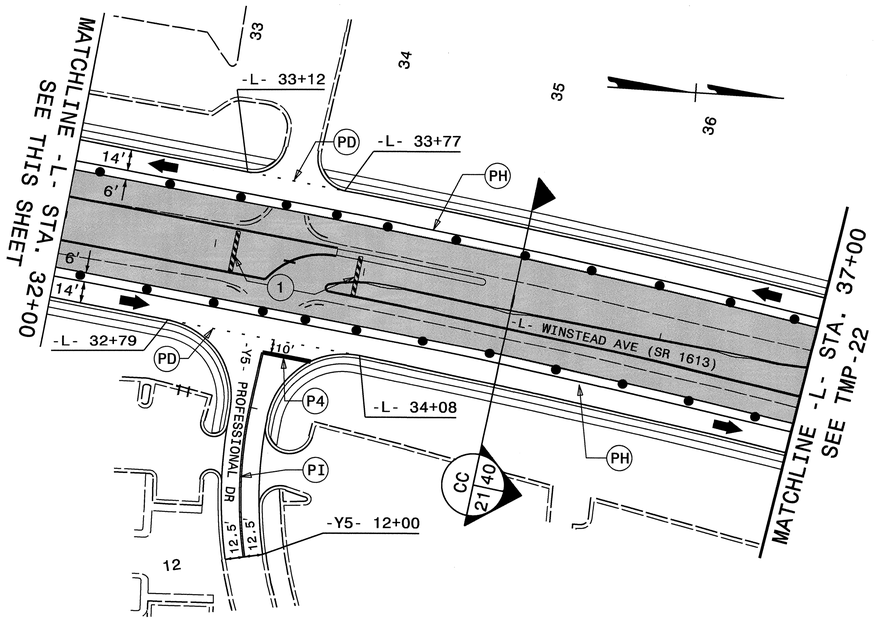
DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

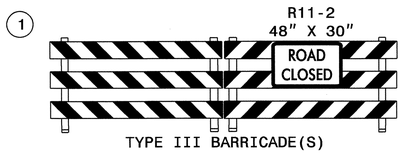
PHASE III PLAN

01-APR-2011 13:31
\\Dot\dfsroot\NSProj\TIPProjects-U\U4019\Traffic\TrafficControl\tcp\U-4019_TC_TMP_TMP-20_phase03.dgn
donaldson AT TE237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-21







TYPE III BARRICADE(S)

SEE SHEET TMP-01A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

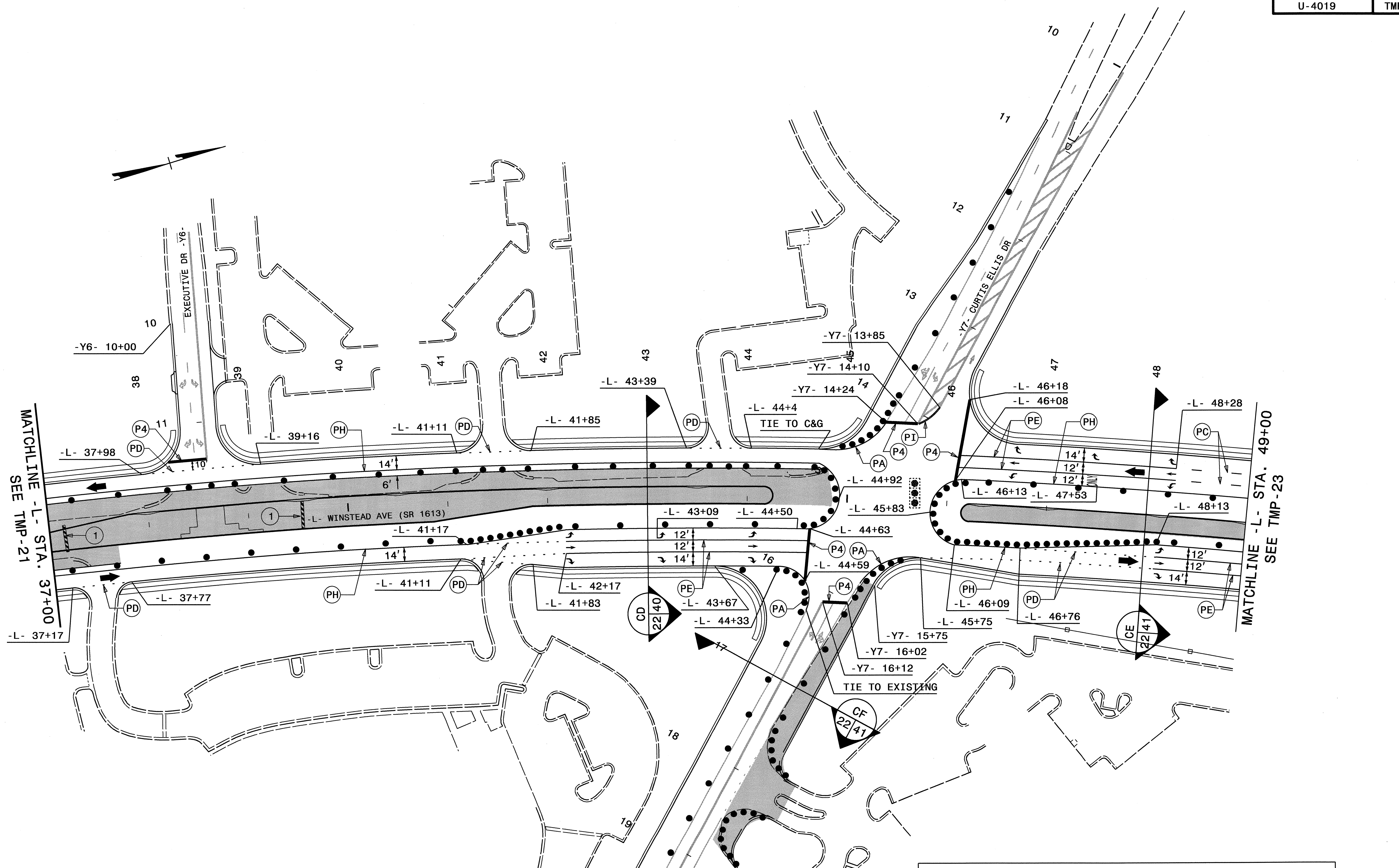
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER W. WOOLARD JR. 4/4/11

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

PHASE III PLAN

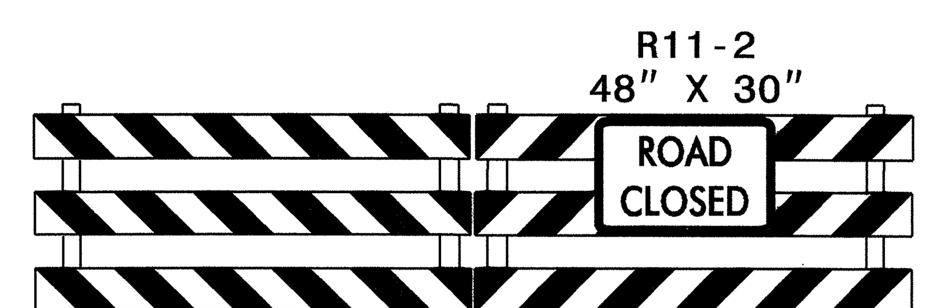
01-APR-2011 13:30
\\Dot\dfsroot01\NSProj\TIPProjects-U\U4019\Traffic\TraffiControl\tcp\U-4019_TC_TMP_TMP-2i_phase03.dgn
ldonaldson AT TE23749

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-22



SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-



TYPE III BARRICADE(S)

APPROVED: DATE:

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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

PHASE III PLAN

01-APR-2011 13:29
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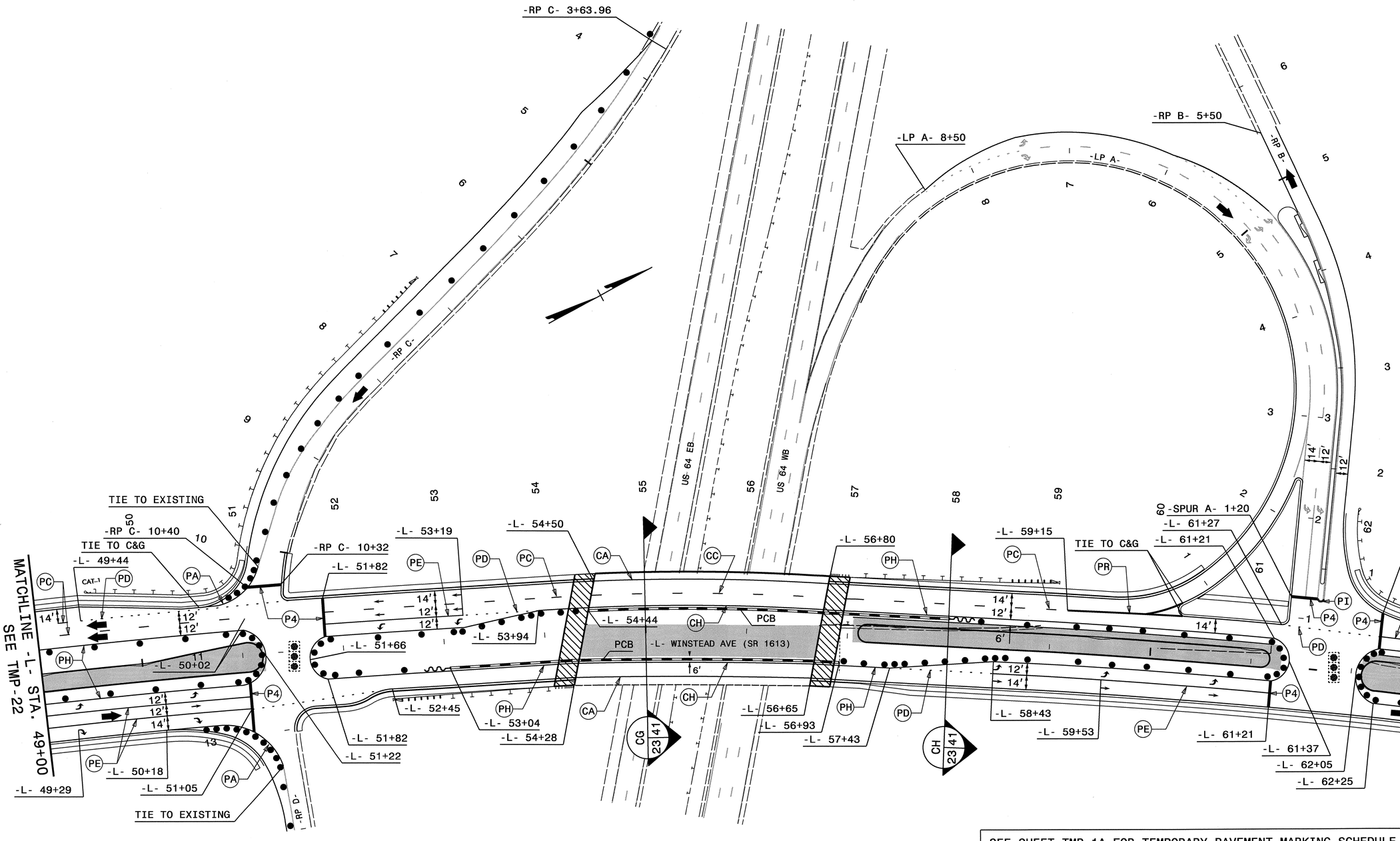
ldonaldson AT TE237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-23



SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD JR. 4/4/11

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

PHASE III PLAN

01-APR-2011 13:28
\\Dot\dfsroot01\NSProj\TIPProjects-U\U4019\Traffic\TrafficControl\tcp\U-4019_TC_TMP_TMP-23_phase03.dgn
tdonaldson AT TE23459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-24

-Y10- ENGLISH RD (SR 1614)

TIE TO EXISTING

-Y10- 25+08

-L- 65+05

-L- 66+05

-L- 68+36

-L- 68+17

-L- 68+00

-L- 69+49

-L- 71+14

-L- 71+36

-L- 72+64

-L- 72+10

-L- 73+28

-L- 74+02

-L- 69+39

-L- 69+80

-L- 69+55

-Y9- 10+79

-L- 64+67

-L- 65+67

-L- 66+72

-L- 68+36

-L- 68+58

-Y9- 10+74

TIE TO EXISTING

-L- 73+64

-L- 74+53

-L- 75+59

-L- WINSTEAD AVE (SR 1613)

-Y9- ENGLISH RD (SR 1614)

MATCHLINE -L- STA. 63+00
SEE TMP-23

MATCHLINE -L- STA. 76+00
SEE TMP-25

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

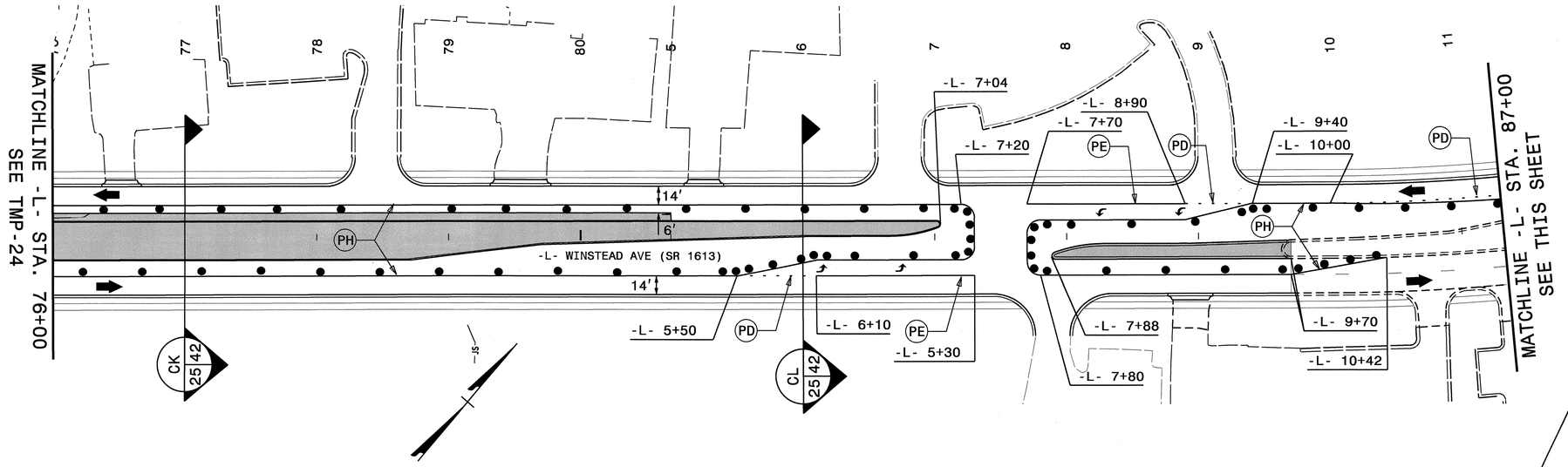
APPROVED: _____ DATE: _____

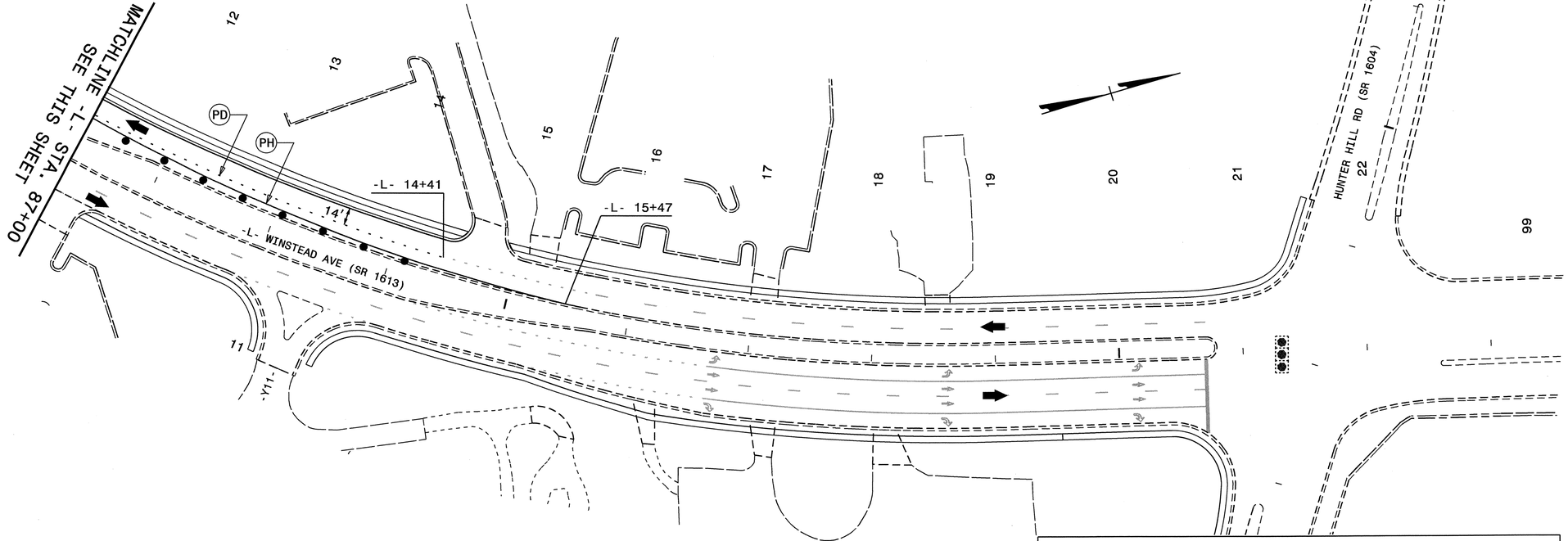
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER W. WOOLARD JR. 4/4/11

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

PHASE III PLAN

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-25





SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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

PHASE III PLAN

01-APR-2011 13:26
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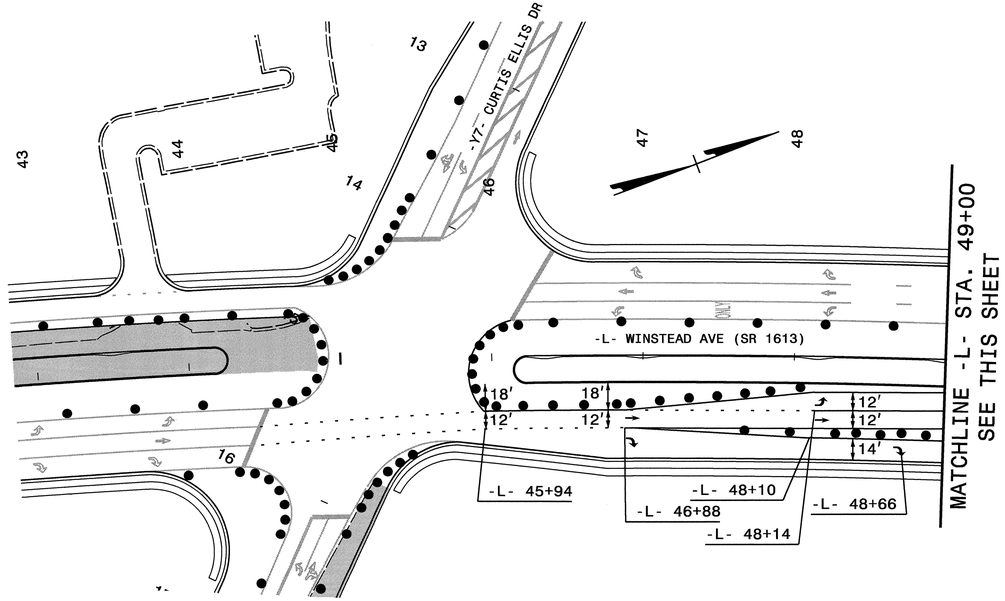
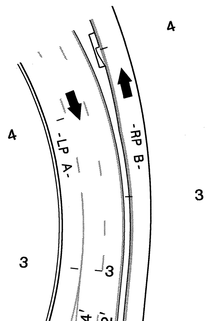
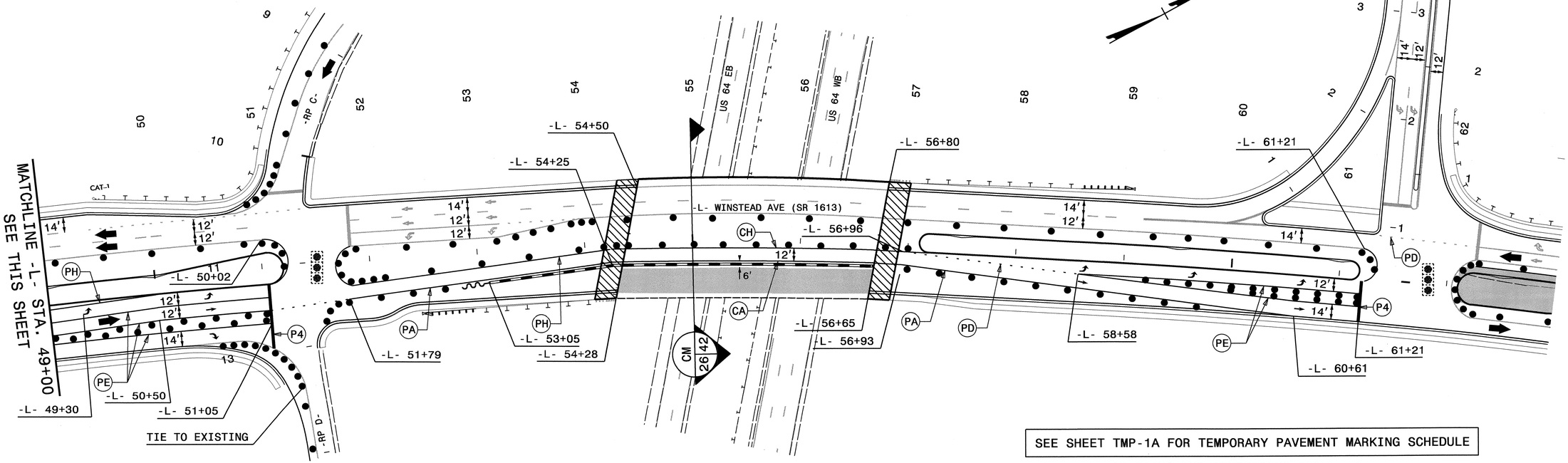
donaldson AT 1E237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-26







SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER W. WOOLARD JR. 4/4/11

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

PHASE III PLAN

01-APR-2011 13:25
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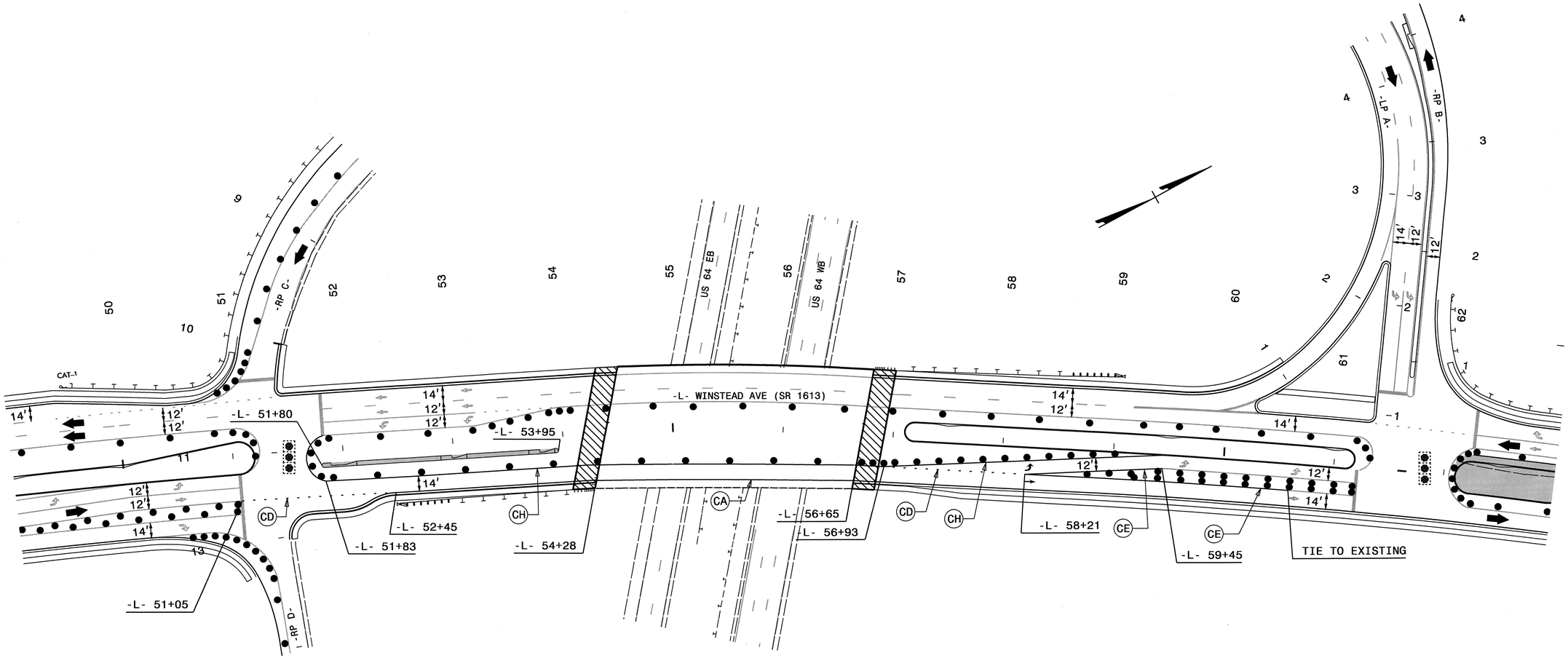
donaldson AT TE237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-26A



SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER W. WOOLARD JR. 2/4/11

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

PHASE III PLAN

01-APR-2011 13:24
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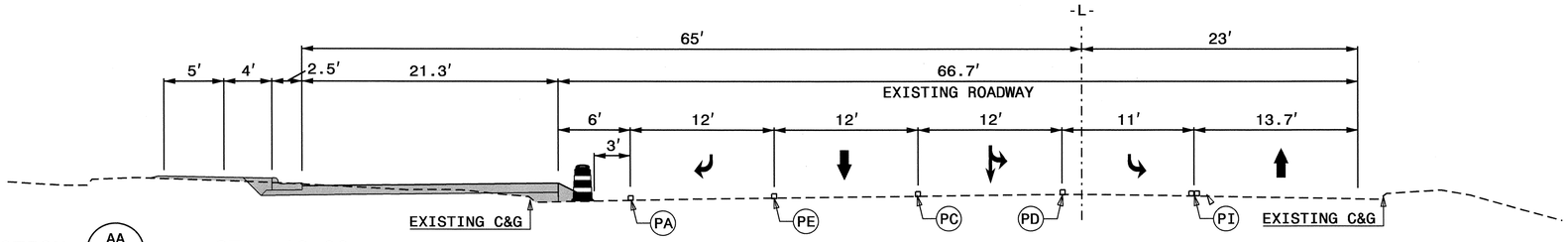
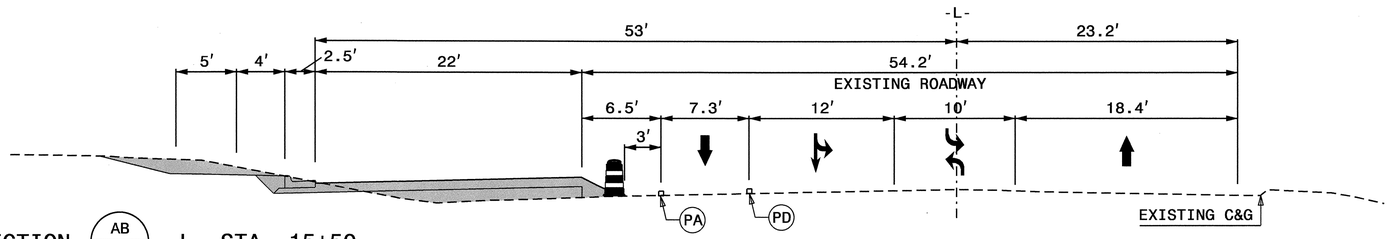
tdonaldson AT TE237459

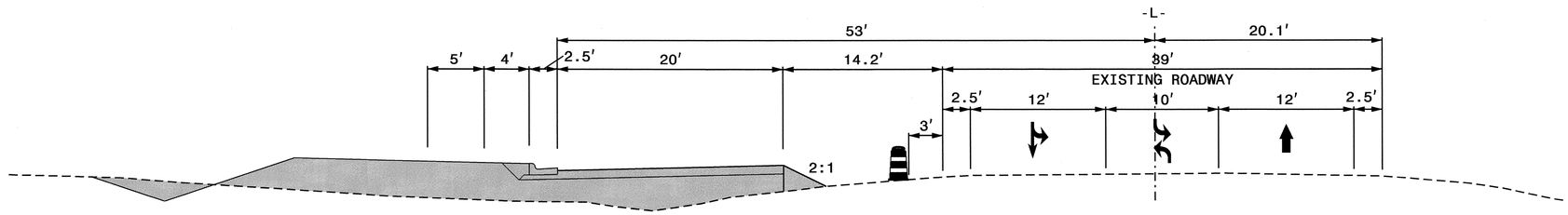
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-27



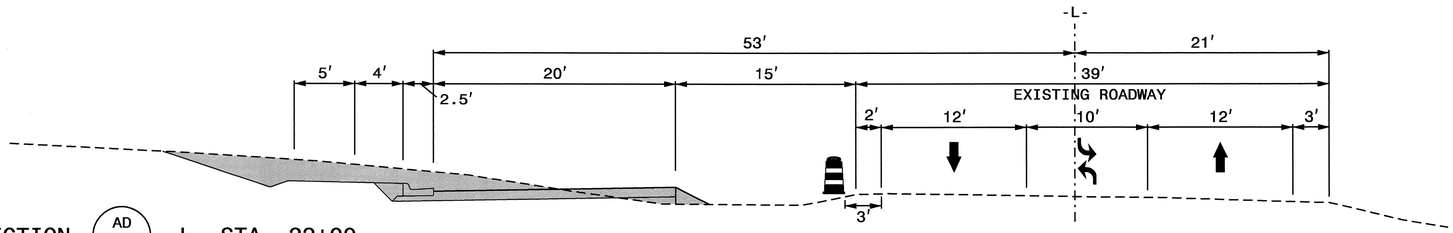
SECTION AA 04|27 -L- STA. 12+00



SECTION AB 04|27 -L- STA. 15+50



SECTION AC 04|27 -L- STA. 18+00



SECTION AD 05|27 -L- STA. 22+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED:_____ DATE:_____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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

PHASE I DETAILS
SECTIONS AA - AD

01-APR-2011 13:23
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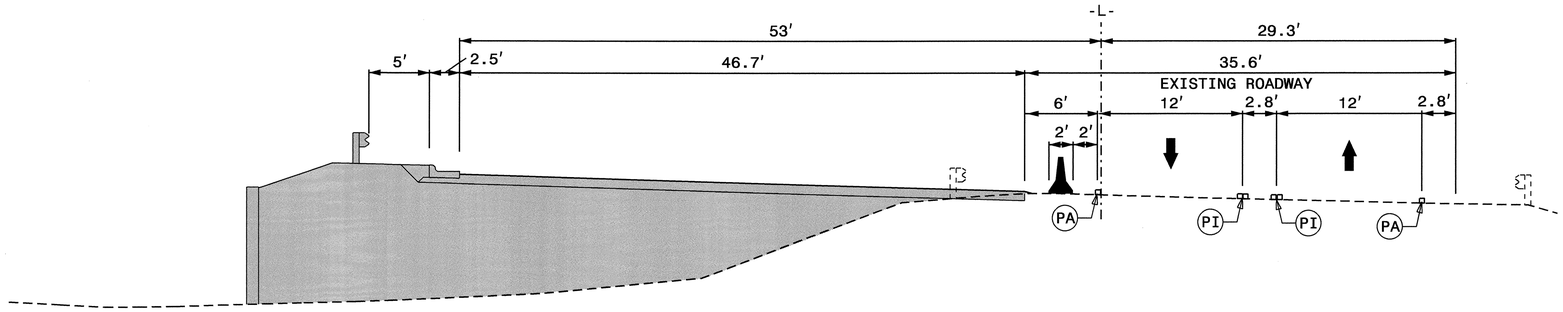
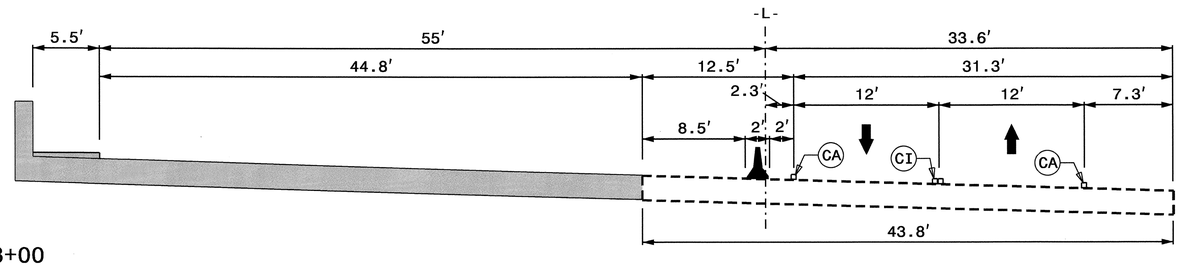
jdonaldson AT TE237459

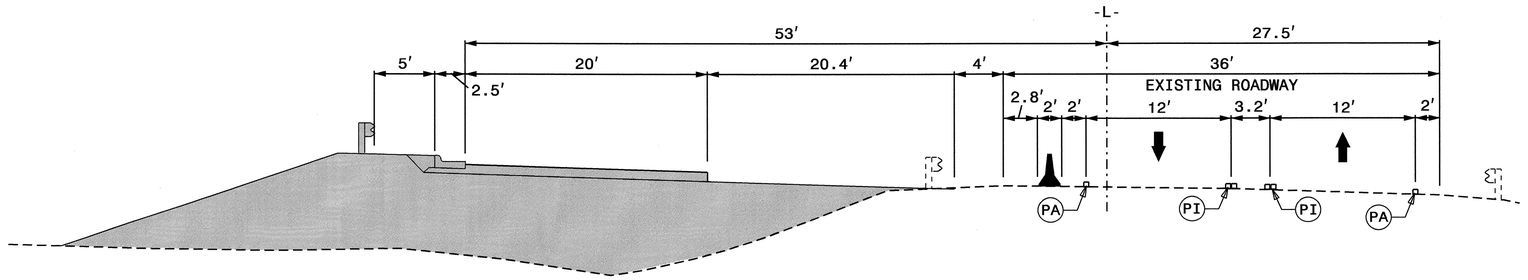
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-28



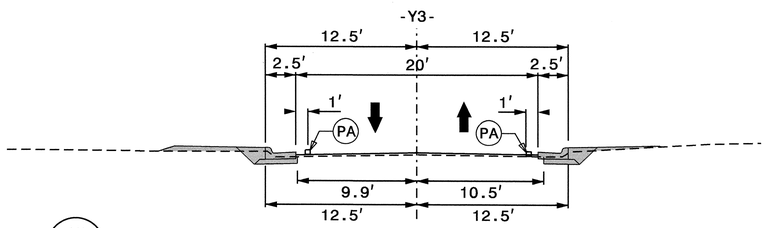
SECTION AE 05|28 -L- STA. 26+00



SECTION AF 05|28 -L- STA. 28+00



SECTION AG 05|28 -L- STA. 30+00



SECTION AH 05|28 -Y3- STA. 11+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

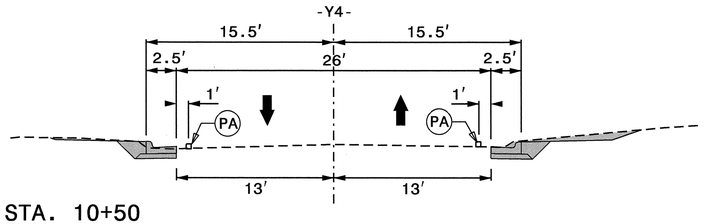
APPROVED:_____ DATE:_____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

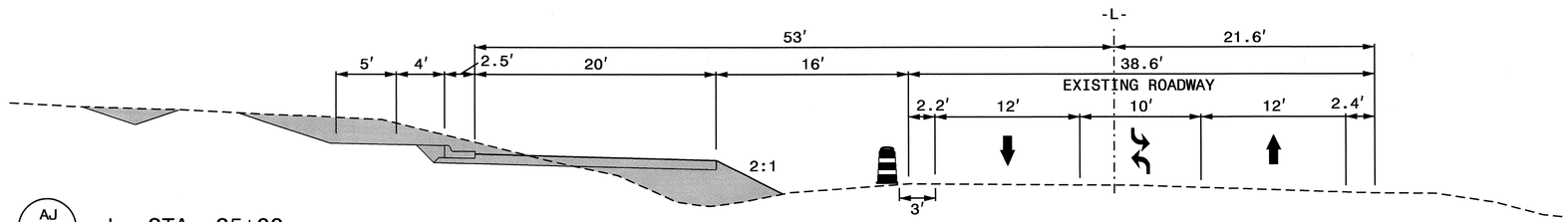
DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

PHASE I DETAILS
SECTIONS AE - AH

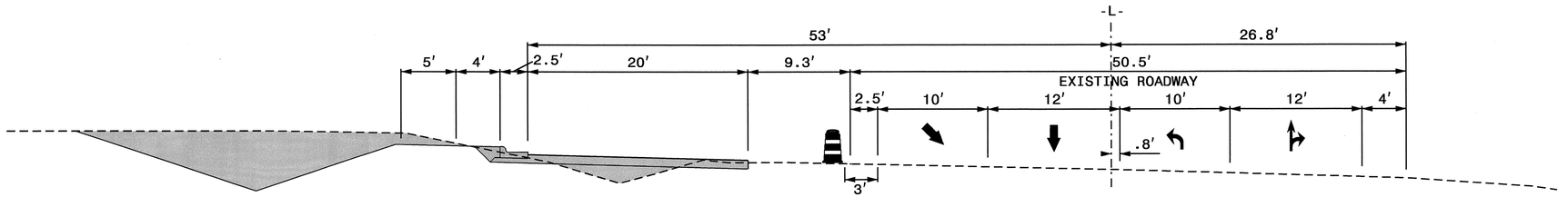
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-29



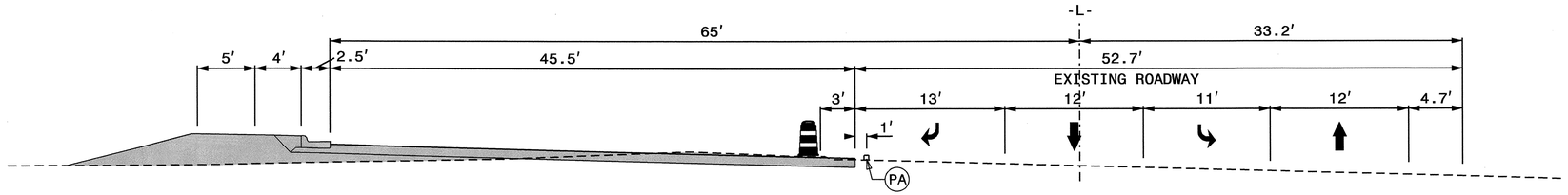
SECTION AI 05|29 -Y4- STA. 10+50



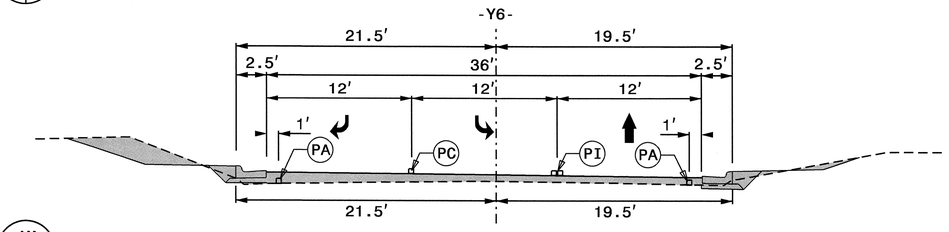
SECTION AJ 05|29 -L- STA. 35+00



SECTION AK 06|29 -L- STA. 43+00



SECTION AL 06|29 -L- STA. 48+00



SECTION AM 06|29 -Y6- STA. 11+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

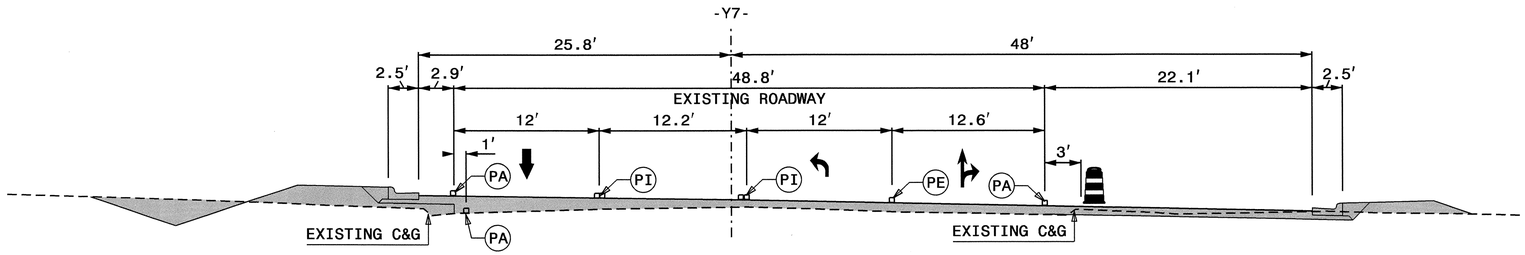
APPROVED:_____ DATE:_____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J.W. WOOLARD JR. 4/4/11

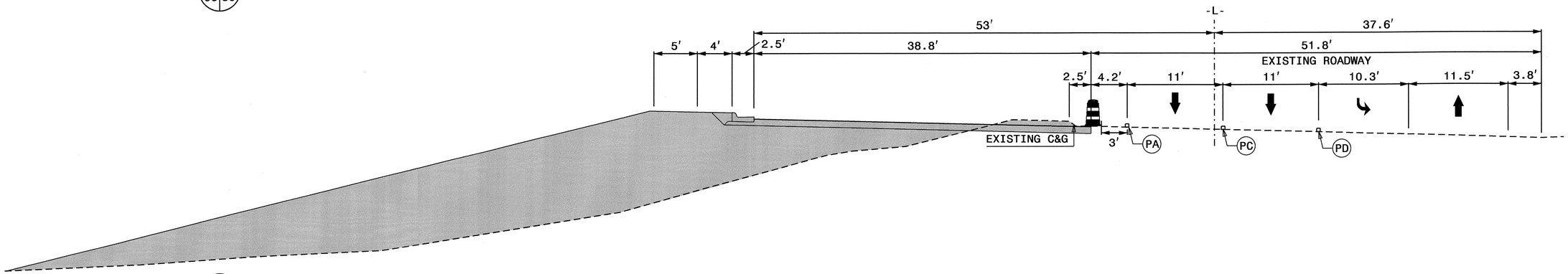
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

PHASE I DETAILS SECTIONS AI - AM

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-30

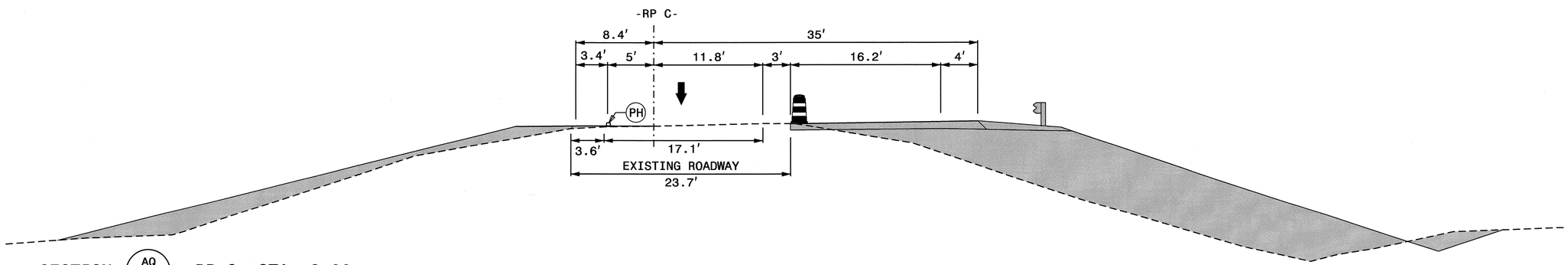


SECTION AN 06|30 -Y7- STA. 13+50



SECTION AO 07|30 -L- STA. 53+00

SECTION AP 07|30 -L- STA. 55+00



SECTION AQ 07|30 -RP C- STA. 8+00

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

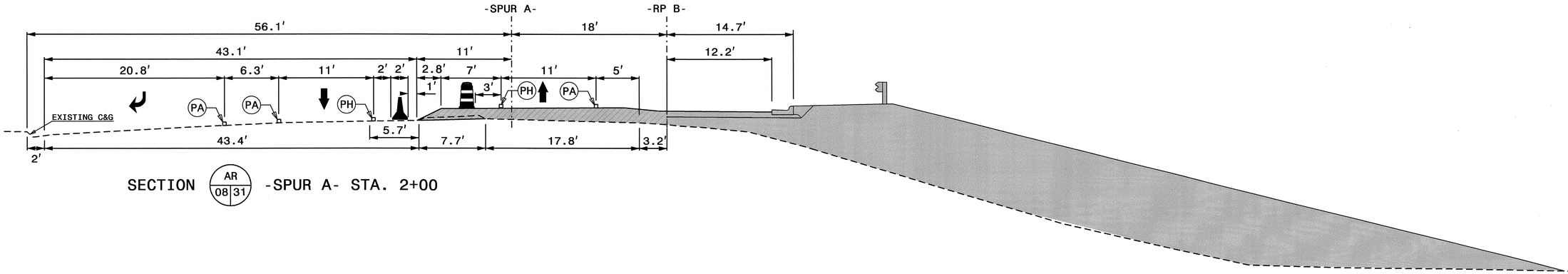
APPROVED:_____ DATE:_____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

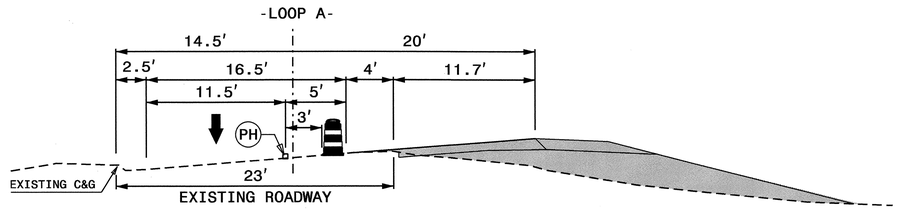
DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

PHASE I DETAILS SECTIONS AN - AQ

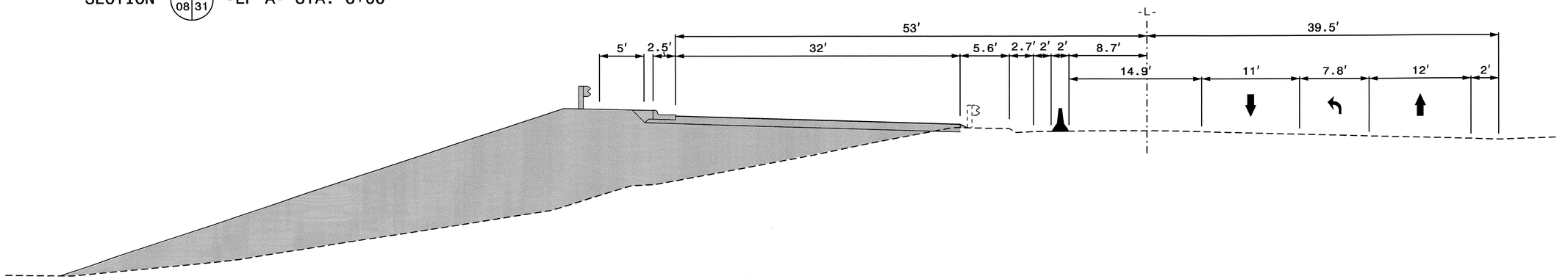
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-31



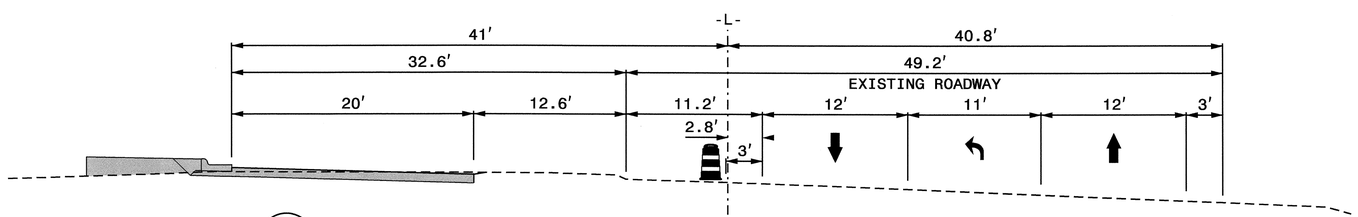
SECTION AR 08 31 -SPUR A- STA. 2+00



SECTION AS 08 31 -LP A- STA. 6+00



SECTION AT 09 31 -L- STA. 58+00



SECTION AU 09 31 -L- STA. 60+50

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

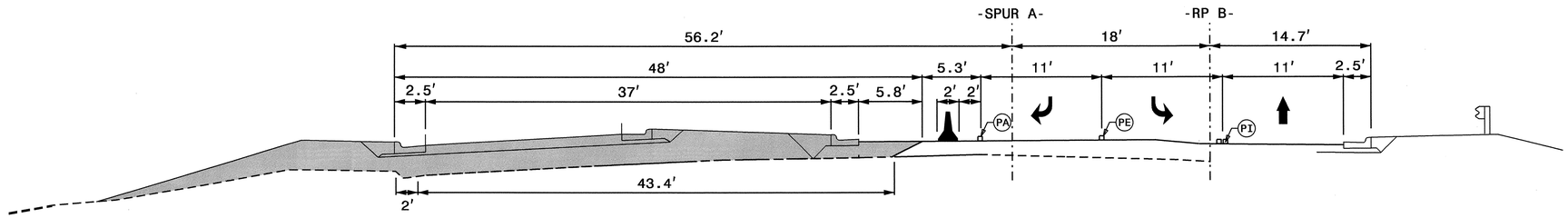
APPROVED:_____ DATE:_____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

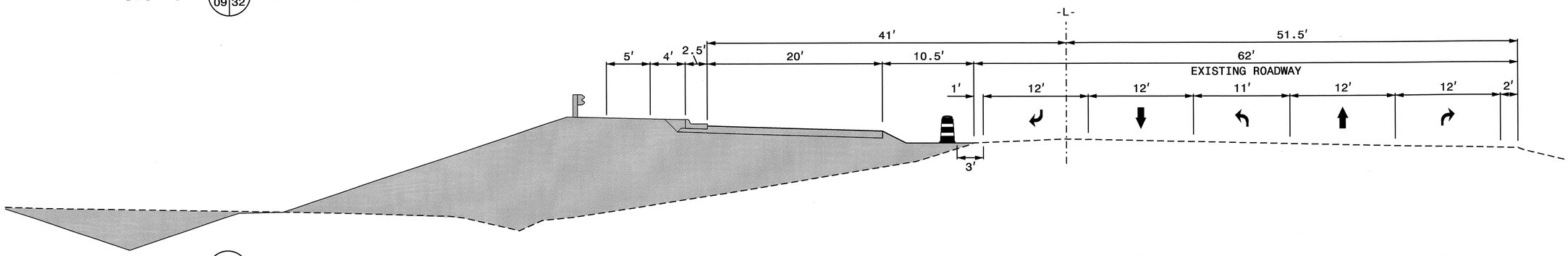
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PHASE I DETAILS SECTIONS AR - AU

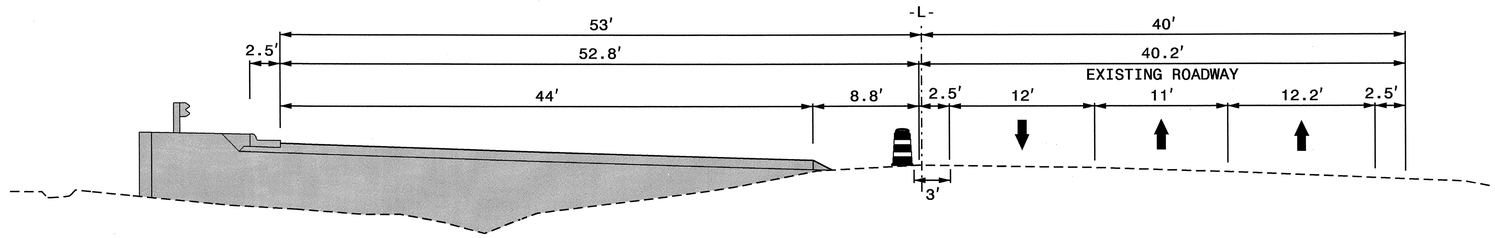
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-32



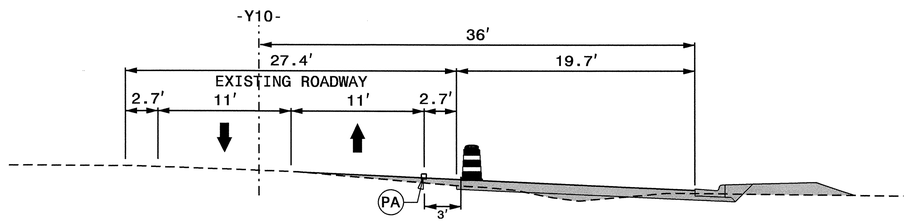
SECTION AV 09|32 -SPUR A- STA. 2+00



SECTION AW 10|32 -L- STA. 67+00



SECTION AX 10|32 -L- STA. 70+50



SECTION AY 10|32 -Y10- STA. 24+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD JR. 4/4/11

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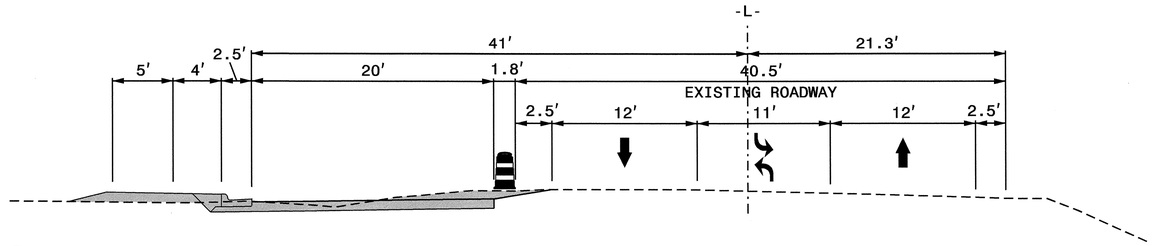
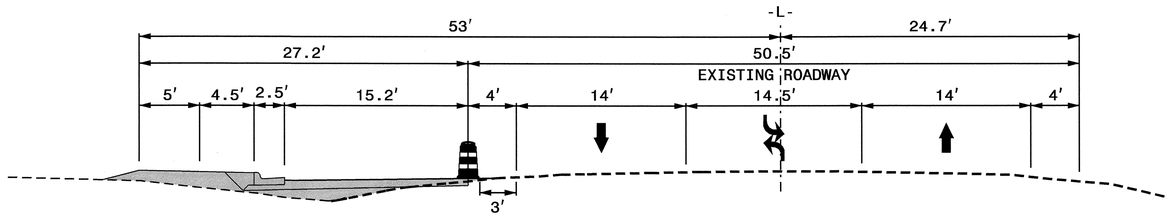
PHASE I DETAILS
SECTIONS AV - AY

01-APR-2011 13:17
\\DOT\dfsroot01\NSProj\TIPProjects-U\U4019\Traffic\TrafficControl\tcp\U-4019_TC_TMP_TMP-27-33_phase01_cuts.dgn
tdonaldson AT TE23459

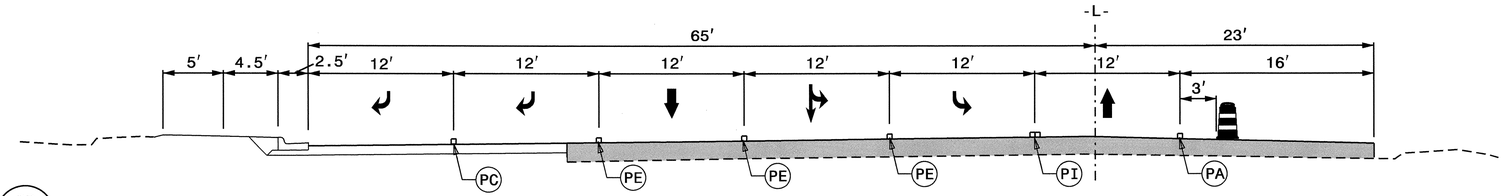
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-33



SECTION AZ / 11 33 -L- STA. 77+00



SECTION BA / 11 33 -L- STA. 6+00



SECTION BB / 12 33 -L- STA. 12+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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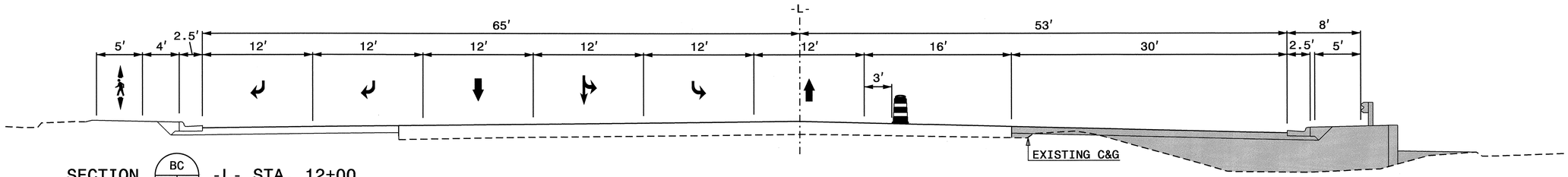
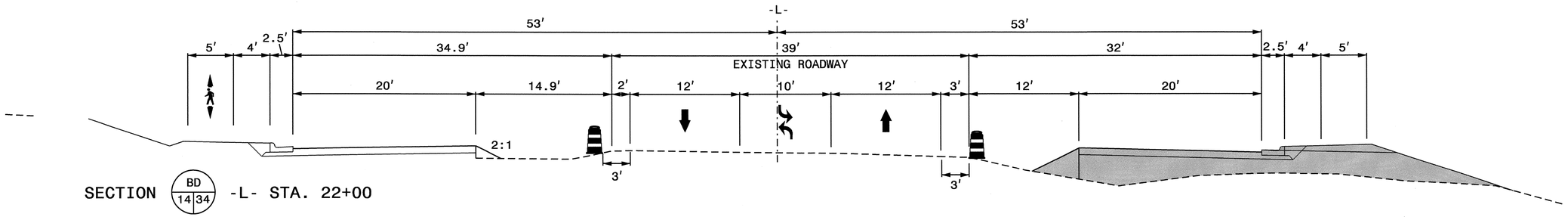
PHASE I DETAILS
SECTIONS AZ - BB

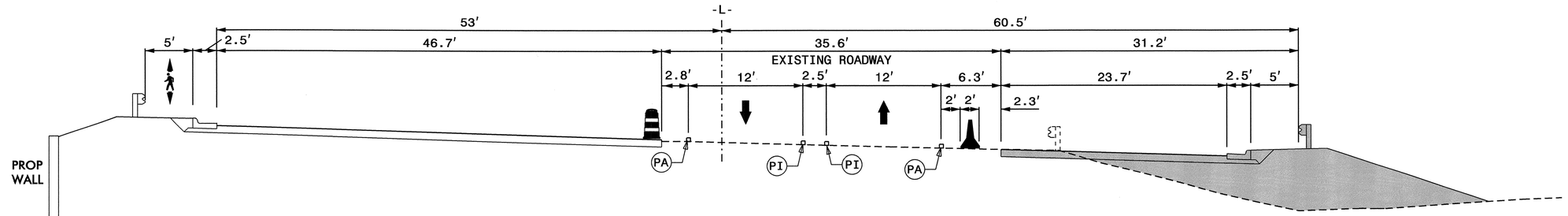
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-34



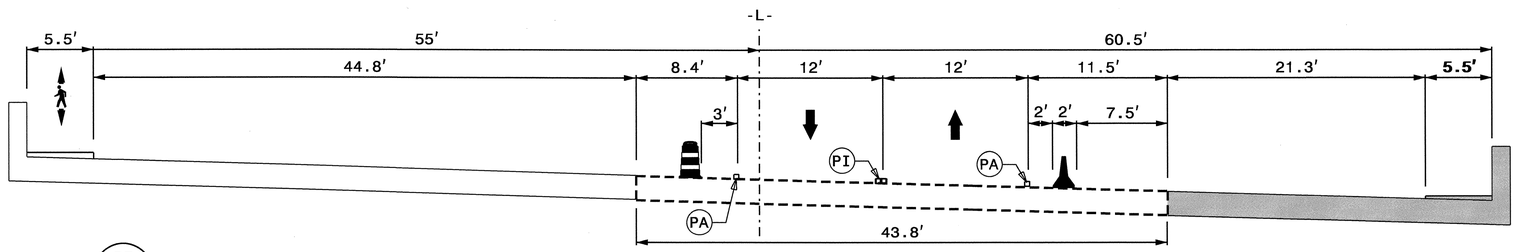
SECTION BC 13|34 -L- STA. 12+00



SECTION BD 14|34 -L- STA. 22+00



SECTION BE 14|34 -L- STA. 26+00



SECTION BF 14|34 -L- STA. 28+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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PHASE II DETAILS SECTIONS BC - BF

01-APR-2011 13:14
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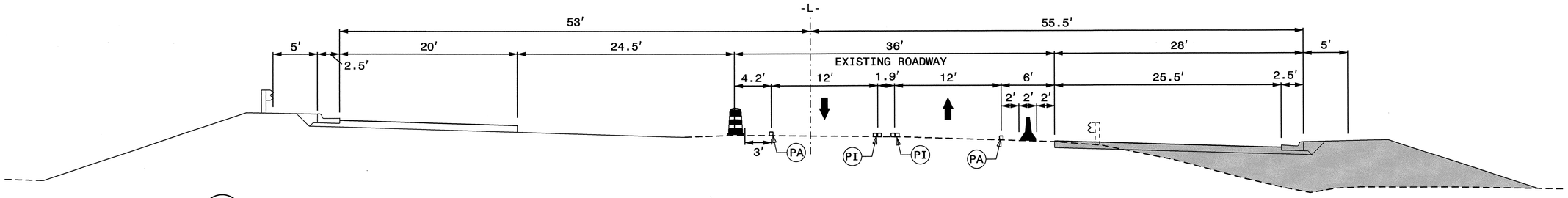
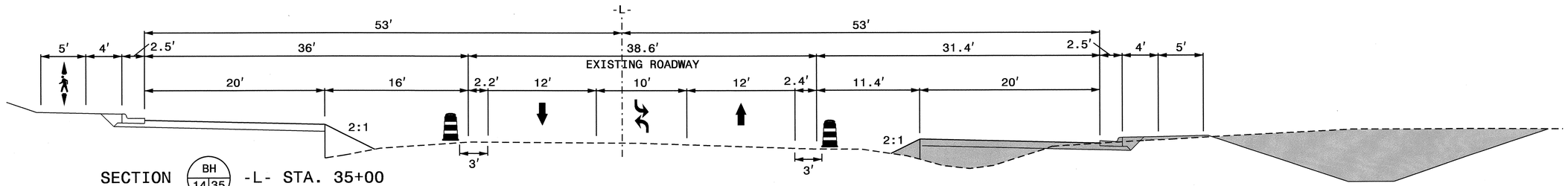
tdonaldson AT TE23759

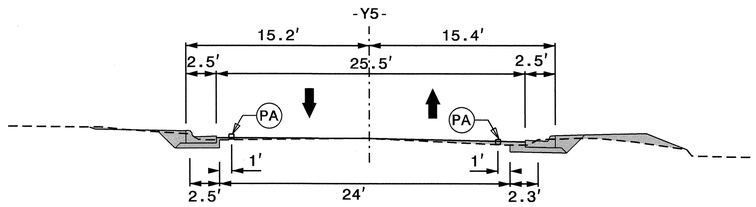
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-35



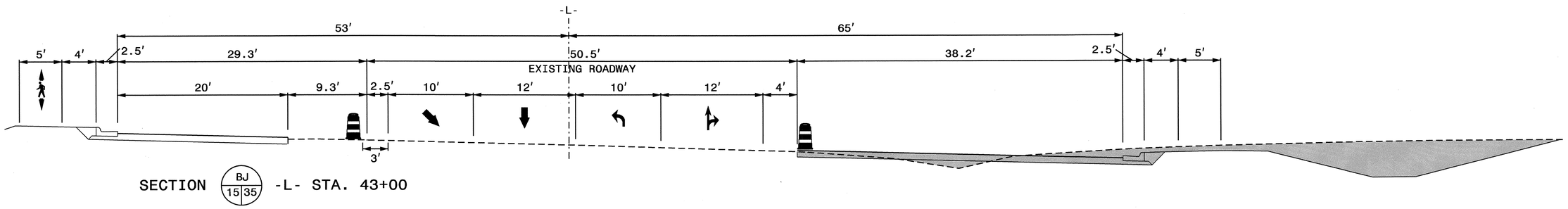
SECTION BG 14 35 -L- STA. 30+00



SECTION BH 14 35 -L- STA. 35+00



SECTION BI 14 35 -Y5- STA. 11+00



SECTION BJ 15 35 -L- STA. 43+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD

4/4/11

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

PHASE II DETAILS SECTIONS BG - BJ

01-APR-2011 13:13
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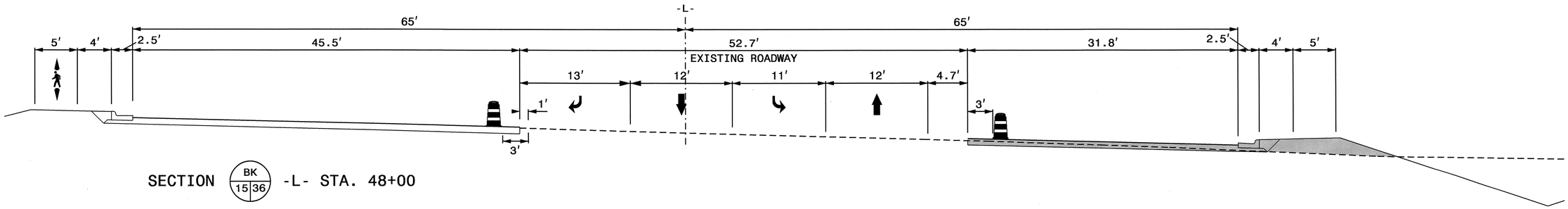
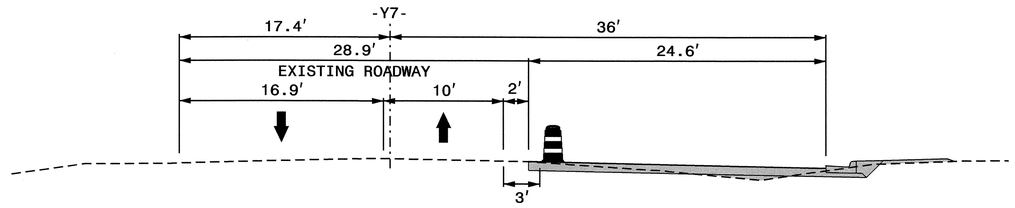
idonaldson AT TE23745

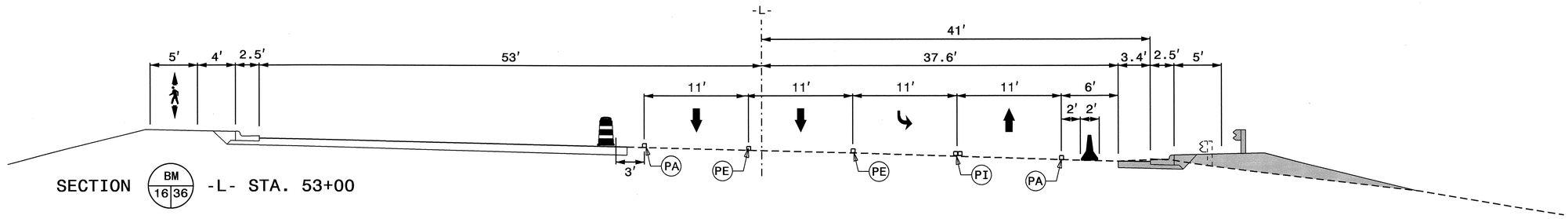
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-36



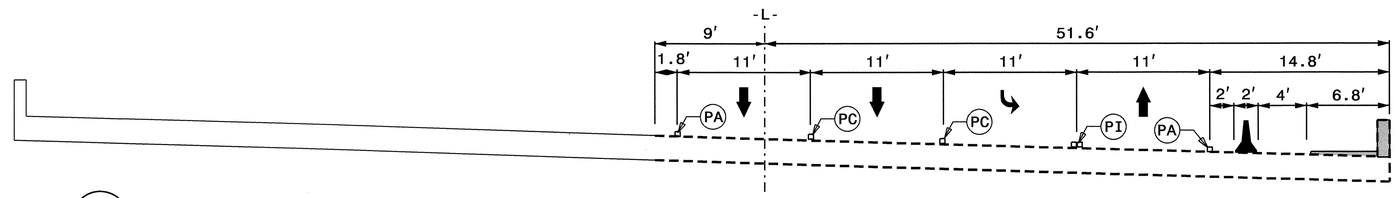
SECTION (BK / 15 | 36) -L- STA. 48+00



SECTION (BL / 15 | 36) -Y7- STA. 17+00



SECTION (BM / 16 | 36) -L- STA. 53+00



SECTION (BN / 16 | 36) -L- STA. 55+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER W. WOOLARD JR. 4/4/11

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PHASE II DETAILS SECTIONS BK - BN

01-APR-2011 13:12
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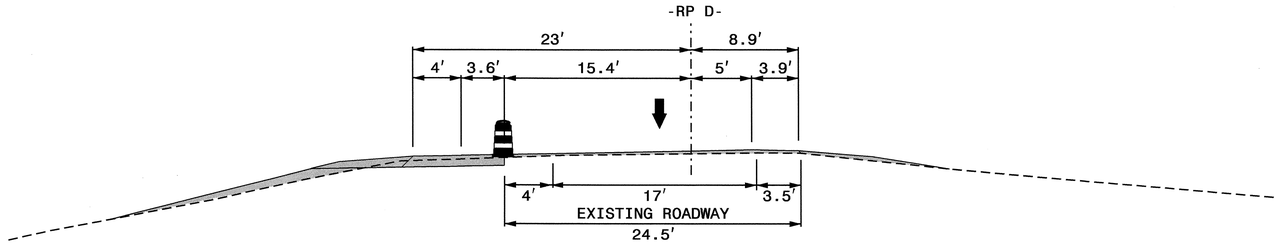
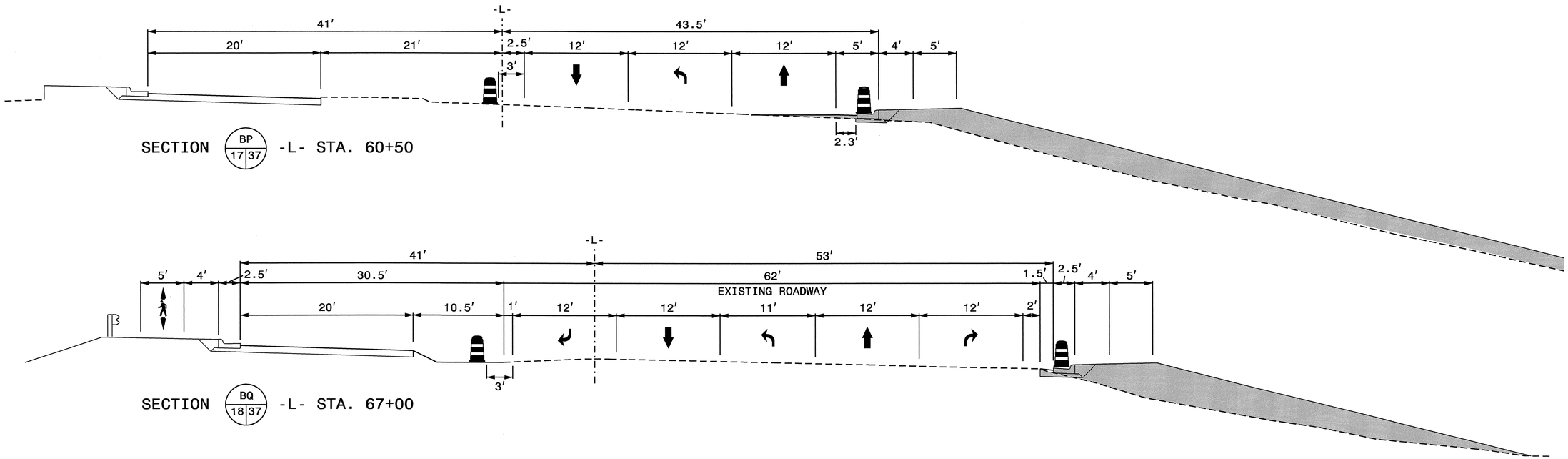
adonaldson AT TE23459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-37



SECTION BO 17 37 -RP D- STA. 11+00



SECTION BP 17 37 -L- STA. 60+50

SECTION BQ 18 37 -L- STA. 67+00

SECTION BR 18 37 -L- STA. 73+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER W. WOOLARD

4/4/11

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

PHASE II DETAILS SECTIONS BO - BR

01-APR-2011 11:11
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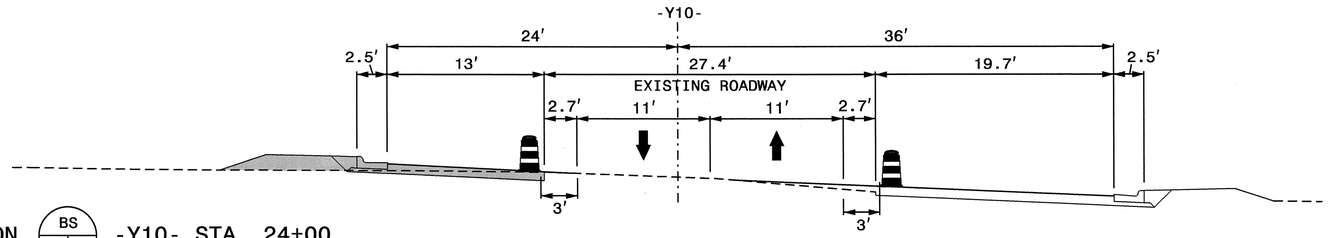
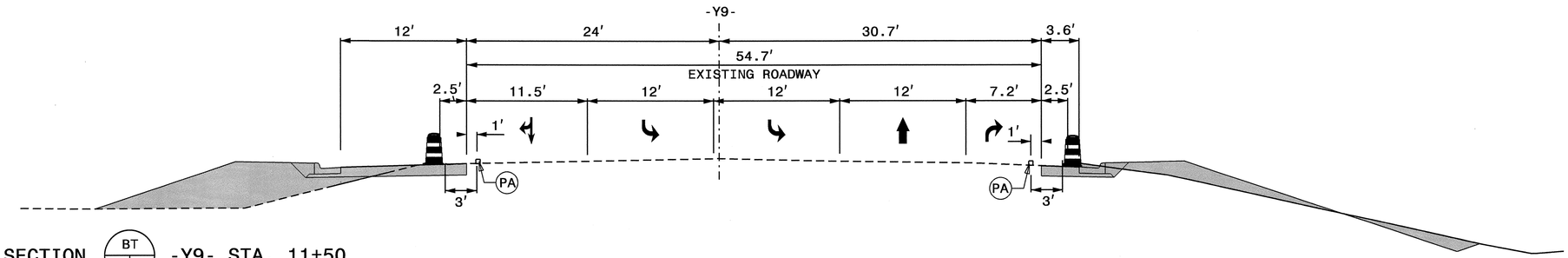
tdonaldson AT TE23459

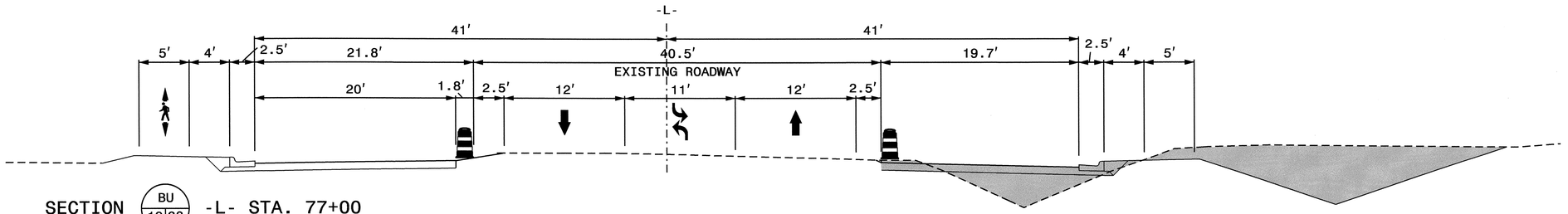
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-38



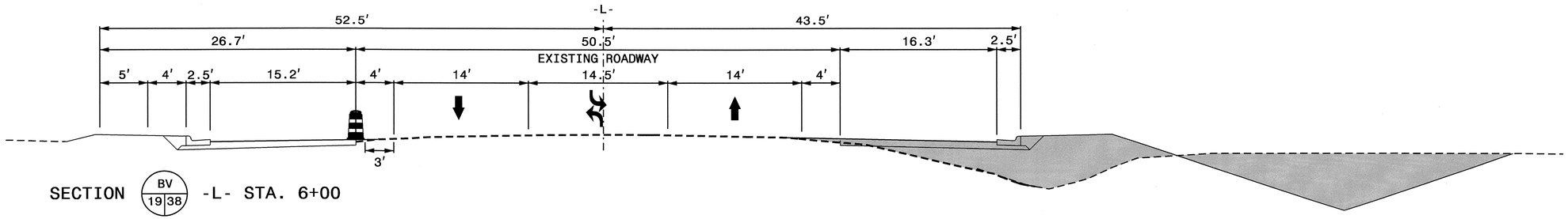
SECTION BS 18 38 -Y10- STA. 24+00



SECTION BT 18 38 -Y9- STA. 11+50



SECTION BU 19 38 -L- STA. 77+00



SECTION BV 19 38 -L- STA. 6+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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PHASE II DETAILS SECTIONS BS - BV

01-APR-2011 11:11
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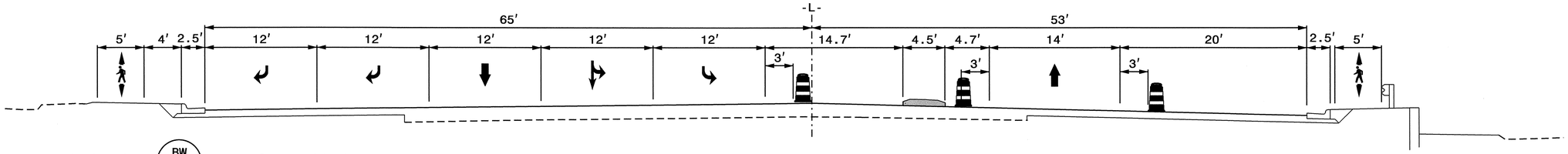
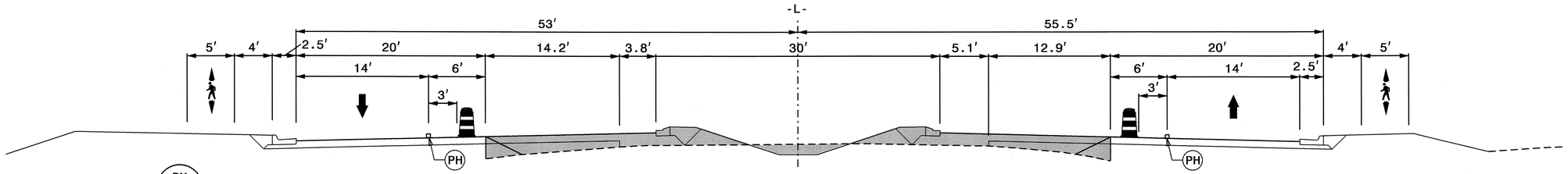
donaldson AT TE237459

PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-39

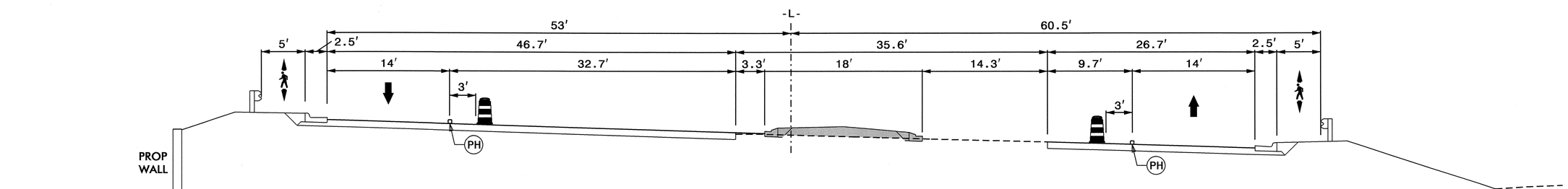


SECTION BW / 20 39 -L- STA. 12+00



SECTION BX / 20 39 -L- STA. 18+00

SECTION BY / 21 39 -L- STA. 22+00



SECTION BZ / 21 39 -L- STA. 26+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: _____ DATE: _____

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR. 4/4/11

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

PHASE III DETAILS SECTIONS BW - BZ

01-APR-2011 13:09
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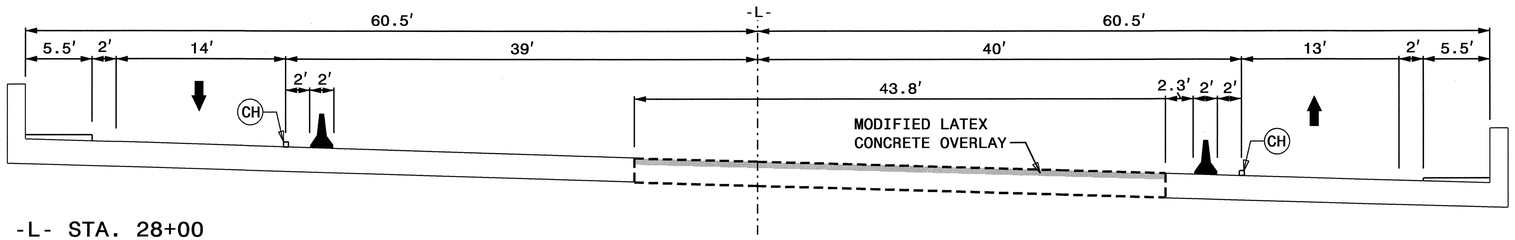
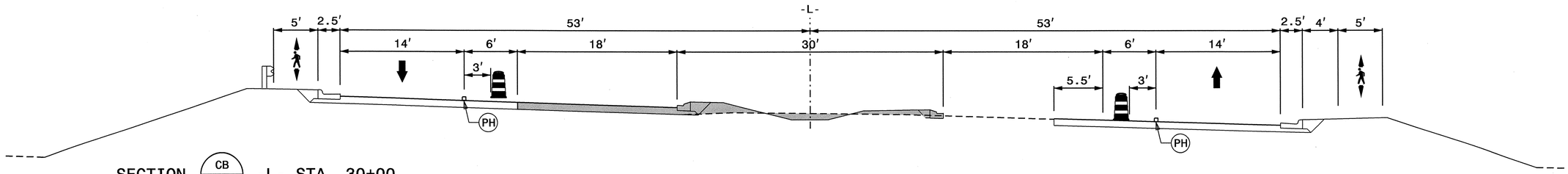
idonaldson AT TE23759

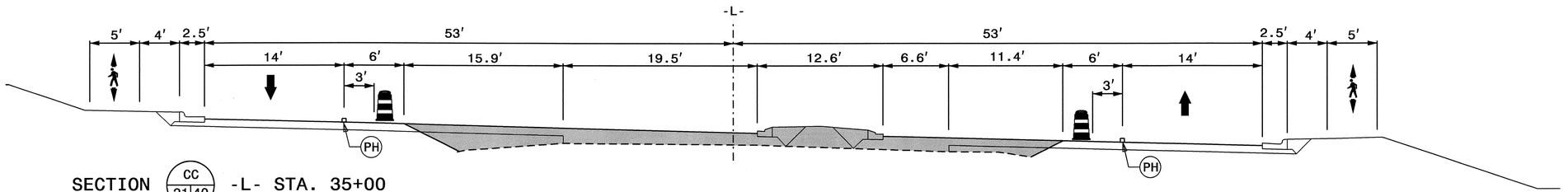
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-40



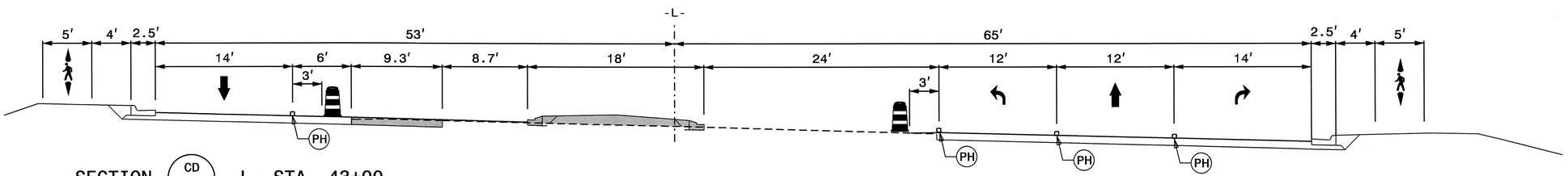
SECTION CA 21 40 -L- STA. 28+00



SECTION CB 21 40 -L- STA. 28+00



SECTION CC 21 40 -L- STA. 35+00



SECTION CD 22 40 -L- STA. 43+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

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PHASE III DETAILS SECTIONS CA - CD

01-APR-2011 13:08
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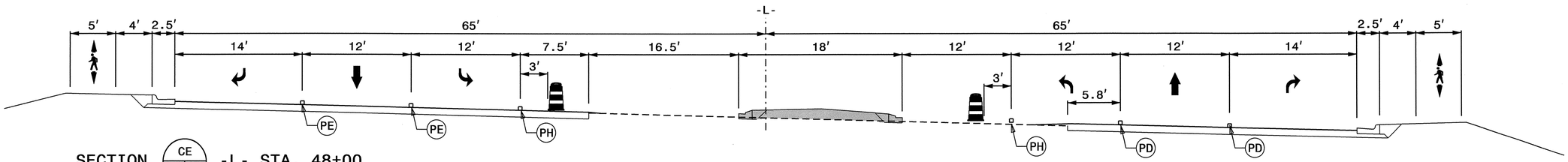
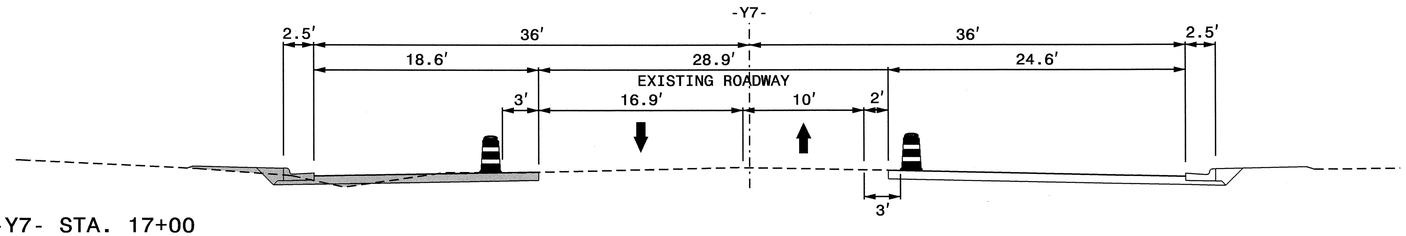
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-41



SECTION CE 22 41 -L- STA. 48+00



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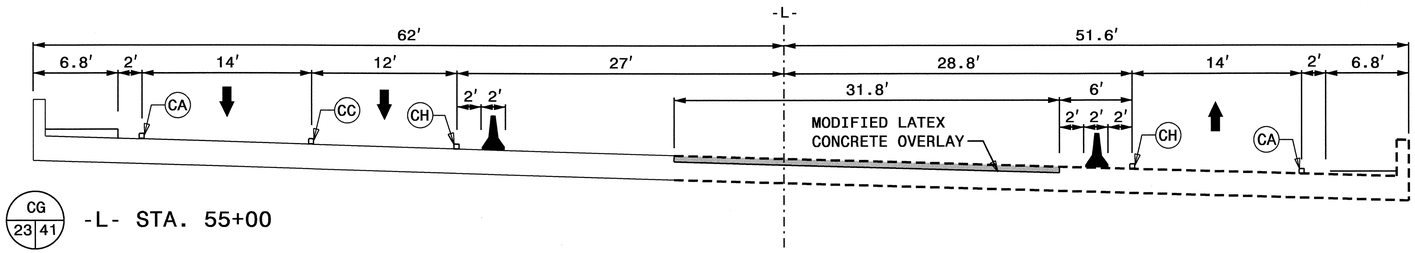
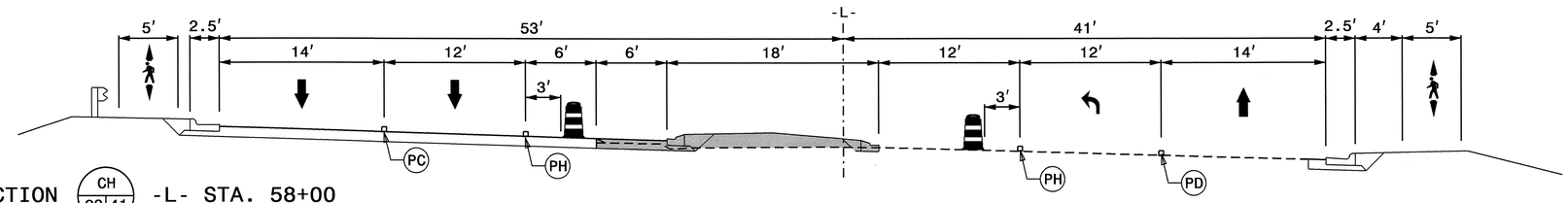
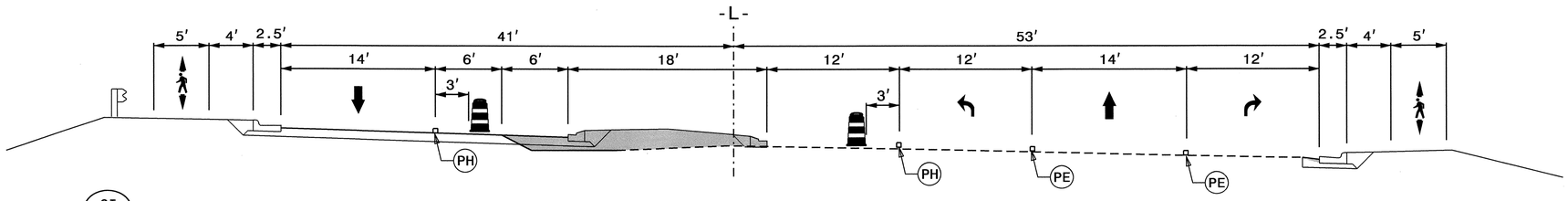


SECTION CG 23 41 -L- STA. 55+00



SECTION CH 23 41 -L- STA. 58+00



SECTION CI 24 41 -L- STA. 67+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

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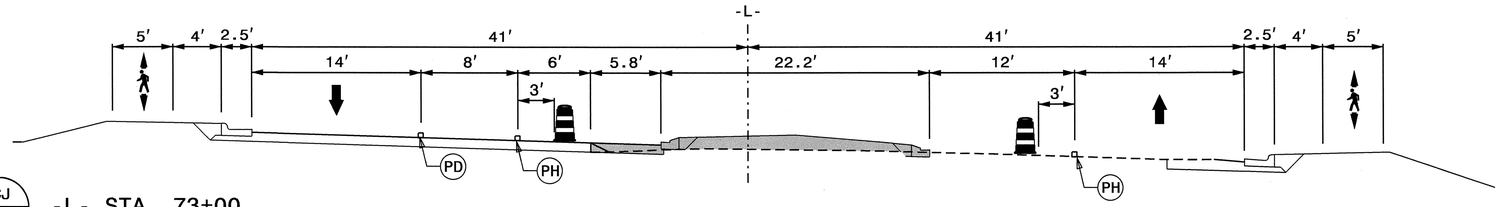
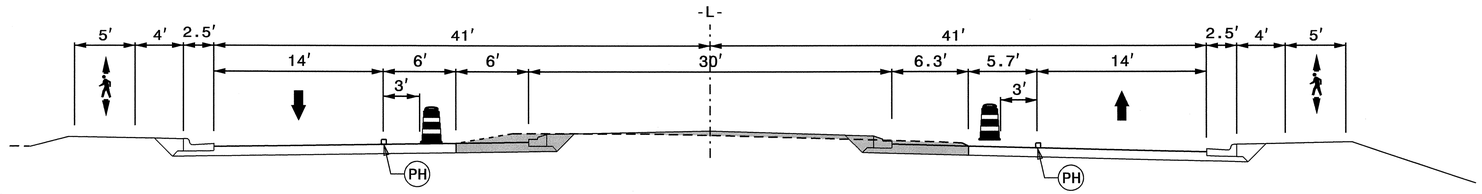
PHASE III DETAILS SECTIONS CE - CI

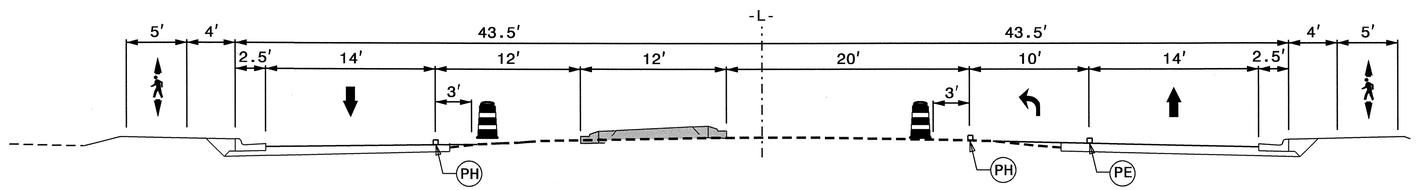
PROJ. REFERENCE NO.	SHEET NO.
U-4019	TMP-42



SECTION CJ 24 42 -L- STA. 73+00



SECTION CK 25 42 -L- STA. 77+00



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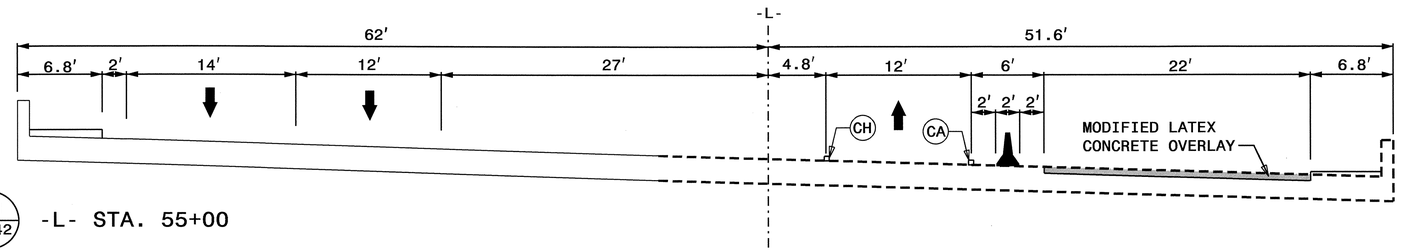

SECTION CM 26 42 -L- STA. 55+00

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

*NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

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PHASE III DETAILS
SECTIONS CJ - CM