

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

|                             |           |
|-----------------------------|-----------|
| STATE PROJECT REFERENCE NO. | SHEET NO. |
| B-3705                      | TCP-1     |

**PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
WAKE COUNTY**

B-3705

**ROADWAY STANDARD DRAWINGS**

THE FOLLOWING ROADWAY STANDARDS AS APPEAR 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                        |
| 1130.01  | DRUM  |
| 1135.01  | CONES   |
| 1145.01  | BARRICADES                                      |
| 1150.01  | FLAGGING DEVICES                                |
| 1165.01  | TRUCK MOUNTED IMPACT ATTENUATOR                 |
| 1180.01  | SKINNY-DRUM                                     |
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES & OFFSETS        |
| 1205.02  | PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS |
| 1205.04  | PAVEMENT MARKINGS - INTERSECTIONS               |
| 1205.05  | PAVEMENT MARKINGS - TURN LANES                  |
| 1205.08  | PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES   |
| 1205.09  | PAVEMENT MARKINGS - PAINTED ISLANDS             |
| 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                       |

**INDEX OF SHEETS**

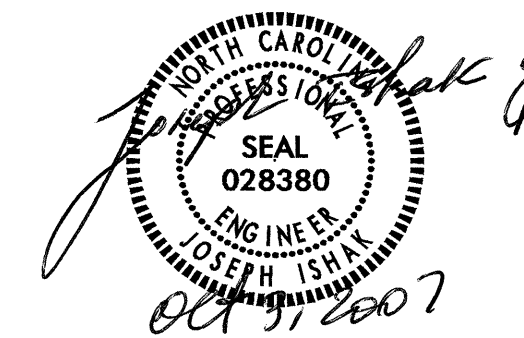
| SHEET NO. | TITLE   |
|-----------|---|
| TCP-1     | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS,<br>LEGEND AND INDEX OF SHEETS                 |
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| SD-1      | SPECIAL SIGN DESIGN   |
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| PM-2      | FINAL PAVEMENT MARKING PLAN   |

**LEGEND**

- GENERAL**
- ← DIRECTION OF TRAFFIC FLOW
  - ↑ NORTH ARROW
  - PROPOSED PVMT. - - - - - EXIST. PVMT.
  - WORK AREA
  - ▨ REMOVAL OF EXISTING PAVEMENT
- TRAFFIC CONTROL DEVICES**
- I TYPE I BARRICADE
  - II TYPE II BARRICADE
  - III TYPE III BARRICADE
  - ▲ CONE
  - DRUM    ⊙ SKINNY DRUM
  - ⊙ FLASHING ARROW PANEL (TYPE C)
  - ⊥ STATIONARY SIGN
  - ⊏ PORTABLE SIGN
  - STATIONARY OR PORTABLE SIGN
  - ⚠ WARNING FLAGS
  - ⊞ CRASH CUSHION
  - Ⓜ CHANGEABLE MESSAGE SIGN
  - Ⓜ TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
  - Ⓜ POLICE
  - Ⓜ FLAGGER
- PAVEMENT MARKINGS**
- CRYSTAL/CRYSTAL PAVEMENT MARKER
  - ◆ YELLOW/YELLOW PAVEMENT MARKER
  - CRYSTAL/RED PAVEMENT MARKER
  - ↔ PAVEMENT MARKING SYMBOLS

TIP PROJECT:

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halawandos AT WZTC224250

|   |  |
|---|--|
| APPROVED:<br>DATE:  | PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT  |
|  | J. S. BOURNE, PE    TRAFFIC CONTROL ENGINEER                 |
|   | JOSEPH ISHAK, PE    TRAFFIC CONTROL PROJECT ENGINEER         |
|   | HABIB A. LAWANDOS    TRAFFIC CONTROL PROJECT DESIGN ENGINEER |
|   | _____ TRAFFIC CONTROL DESIGN ENGINEER                        |

# GENERAL NOTES

|                     |           |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| B-3705              | TCP-2     |

ADAPT THE TRAFFIC CONTROL PLANS, WHEN DIRECTED BY THE ENGINEER, TO MEET FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT. CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE, OR RESULT IN DUPLICATE, OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES.

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- BURLINGTON MILLS RD. | MONDAY THRU FRIDAY<br>7:00AM TO 9:00AM AND 3:00PM TO 6:00PM |

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

ROAD NAME  
-L- BURLINGTON MILLS RD.

### HOLIDAY

- FOR ANY EVENT THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 3:00PM DECEMBER 31st TO 9:00AM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A SATURDAY OR A SUNDAY, THEN UNTIL 9:00AM THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 3:00PM THURSDAY AND 9:00AM MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 3:00PM FRIDAY TO 9:00AM TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 3:00PM THE DAY BEFORE INDEPENDENCE DAY AND 9:00AM THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A SATURDAY OR SUNDAY, THEN BETWEEN THE HOURS OF 3:00PM THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00AM THE TUESDAY AFTER INDEPENDENCE DAY.

- FOR LABOR DAY, BETWEEN THE HOURS OF 3:00PM FRIDAY AND 9:00AM TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 3:00PM TUESDAY TO 9:00AM MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 3:00PM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00AM THE FOLLOWING MONDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR OTHERWISE DIRECTED BY THE ENGINEER.

### 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 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.
- F) 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.
- G) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.
- H) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.
- I) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON ALL ROADS.

### 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 A 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 2.0 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- M) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.

- N) INSTALL PERMANENT SIGNING.
- O) PROVIDE DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS.
- P) COVER OR REMOVE ALL DETOUR SIGNS WITHIN/OUT THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC CONTROL DEVICES

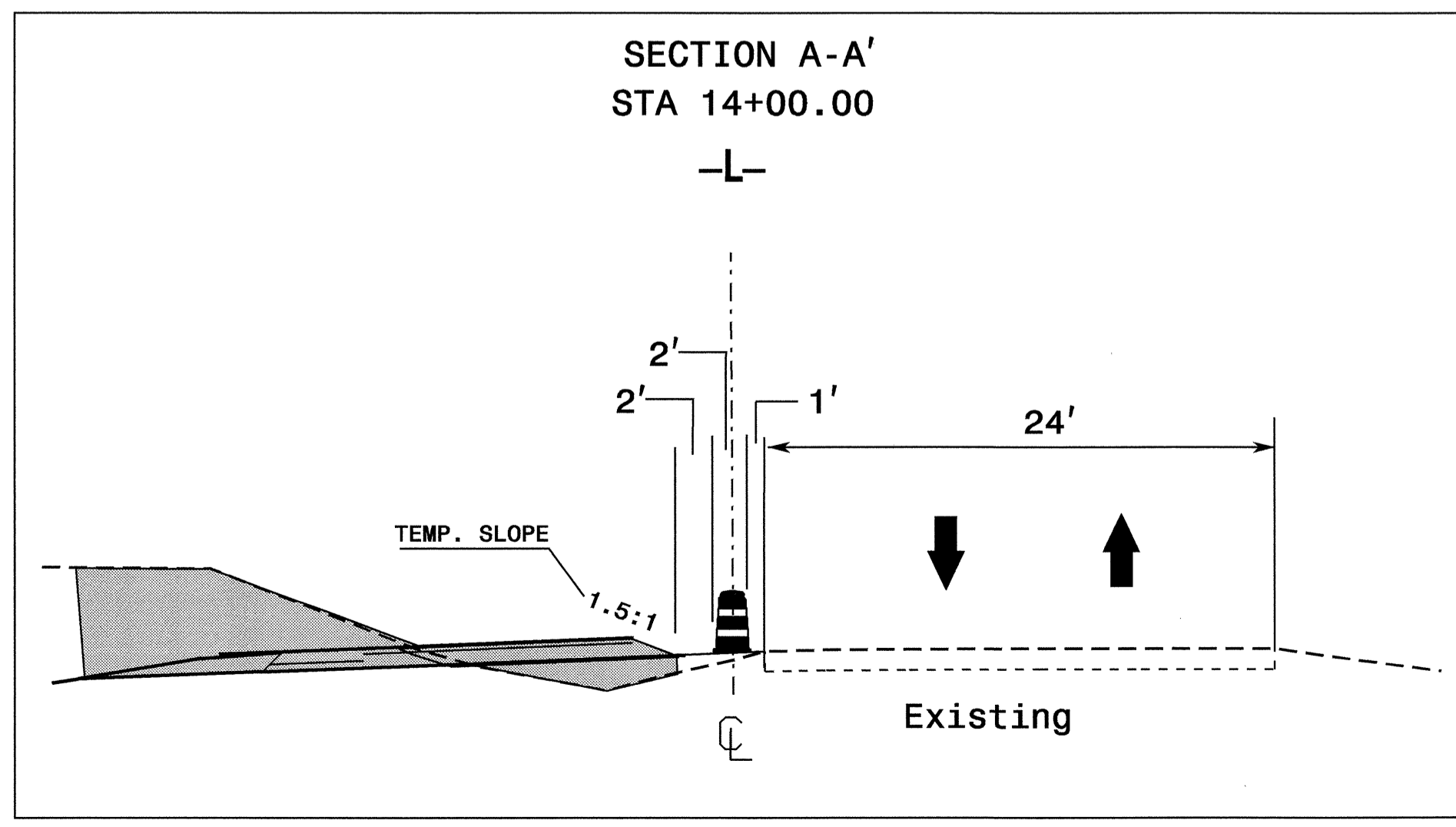
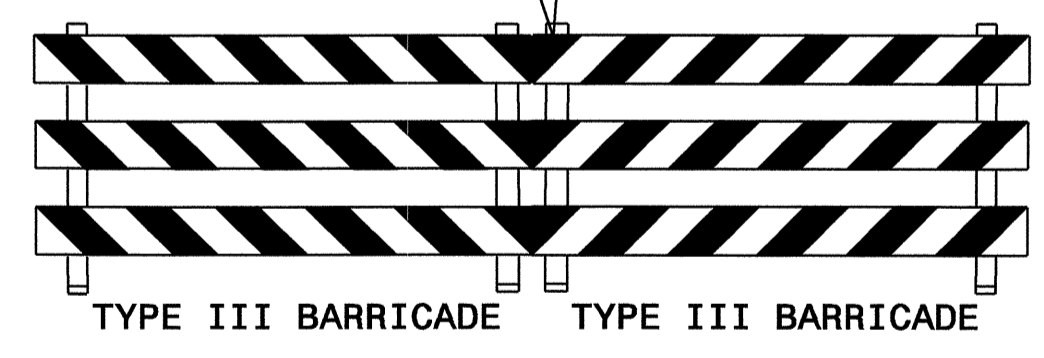
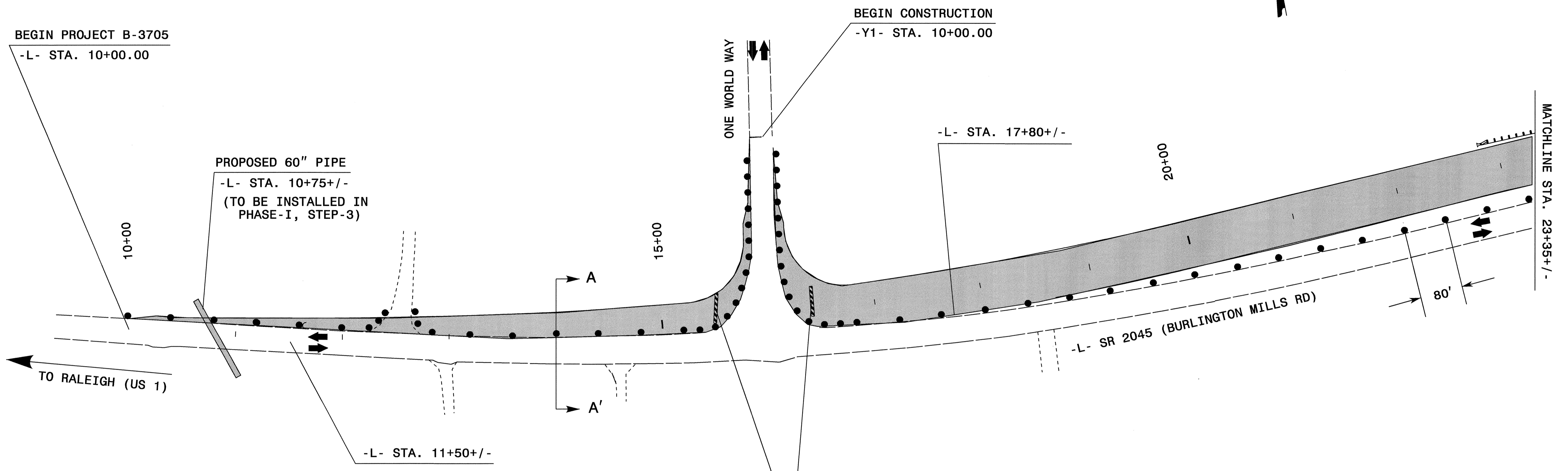
- R) WHEN USING ROADWAY STANDARD NO. 1101.02, CONES MAY BE USED IN LIEU OF DRUMS ON ALL ROADS.
- S) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10' ON-CENTER IN RADII, AND 3' OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.
- T) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.

### PAVEMENT MARKINGS AND MARKERS

- U) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:
- | ROAD NAME                | MARKING                     | MARKER           |
|--------------------------|-----------------------------|------------------|
| -L- BURLINGTON MILLS RD. | THERMOPLASTIC               | PERMANENT RAISED |
| -Y1- ONE WORLD WAY       | THERMOPLASTIC               | NONE             |
| BRATT AVE.               | THERMOPLASTIC               | NONE             |
| BRIDGE                   | TYPE 3-COLD APPLIED PLASTIC | PERMANENT RAISED |
- V) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:
- | ROAD NAME                | MARKING                                      | MARKER           |
|--------------------------|--|------------------|
| -L- BURLINGTON MILLS RD. | PAINT  | TEMPORARY RAISED |
| -Y1- ONE WORLD WAY       | PAINT  | NONE             |
| BRATT AVE.               | PAINT  | NONE             |
| BRIDGE                   | COLD APPLIED PLASTIC<br>Type4-REMOVABLE TAPE | TEMPORARY RAISED |
- W) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- X) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.
- Y) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

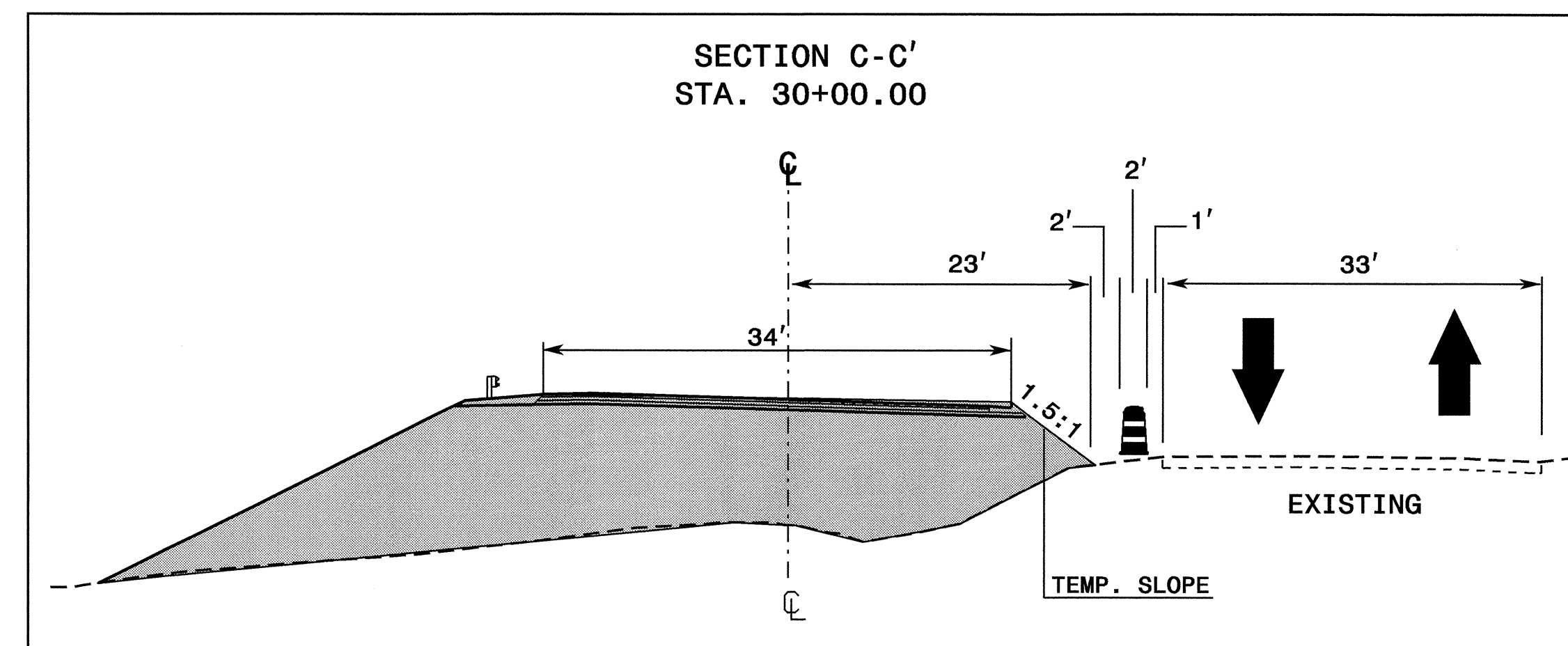
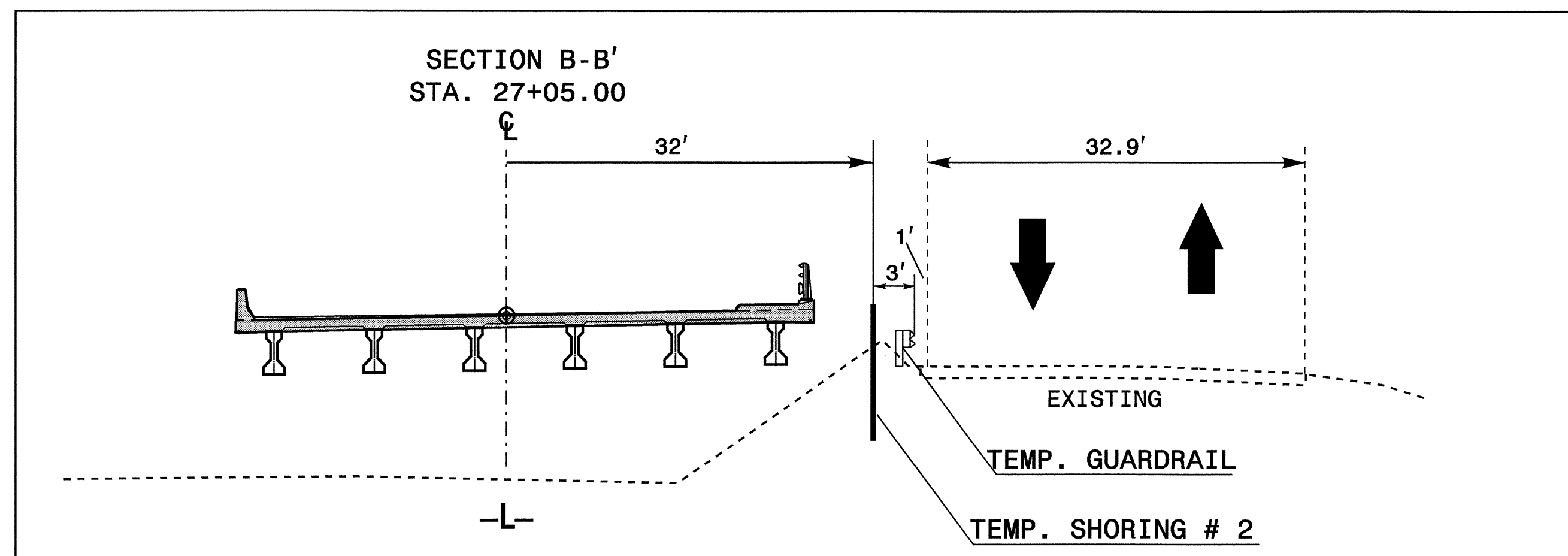
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|                             | DATE: 09/07            |  |             |
|                             | DWG. BY: WRD           |  |             |
| DESIGN BY: WRD              |                        |  |             |
| REVIEWED BY: HAL            |                        |  |             |



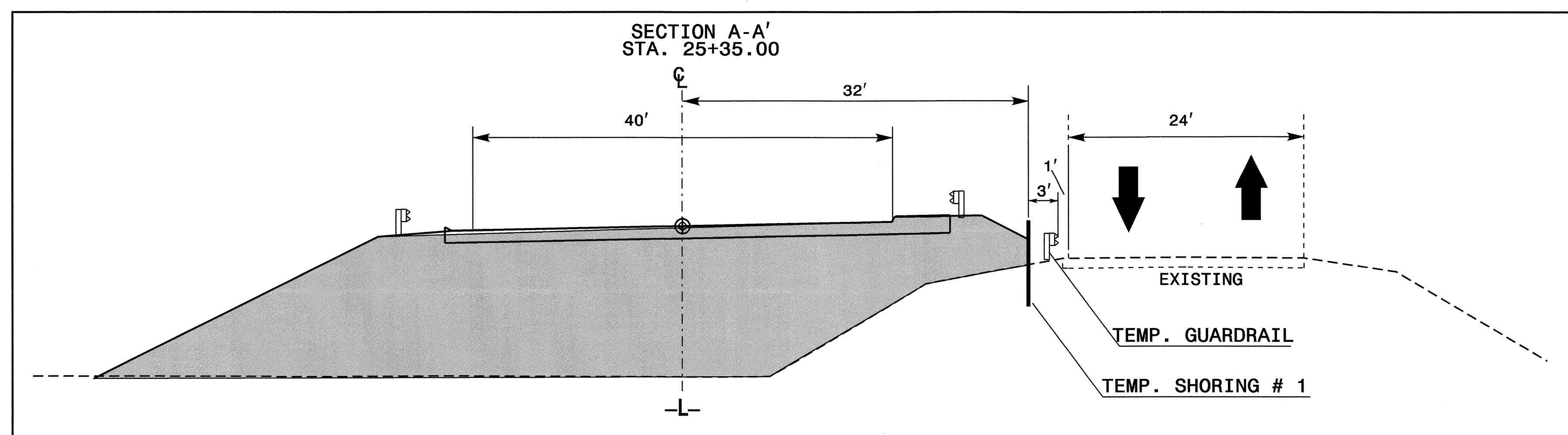
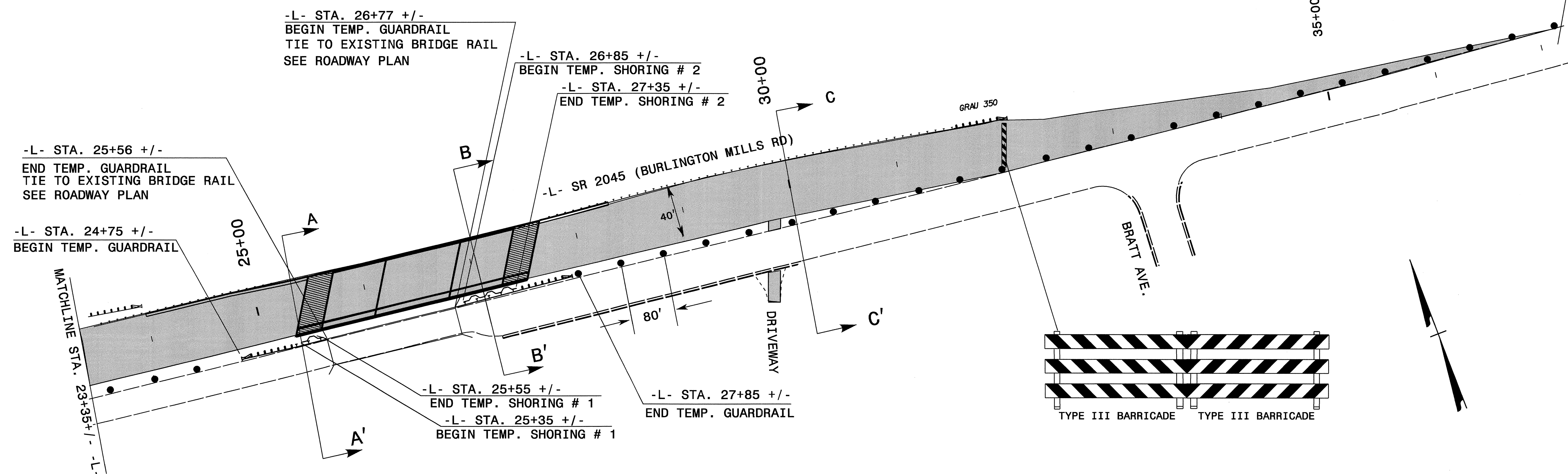


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|---------------------|-------|--------------------------|--|-----------|
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| <i>Joseph Ishik</i> |       |                          |  |           |
|                     |       | SCALE: NONE              |  |           |
|                     |       | DATE: 09/07              |  | REVISIONS |
|                     |       | DWG. BY: WRD             |  |           |
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| REVIEWED BY: HAL    |       | CADD FILE                |  |           |

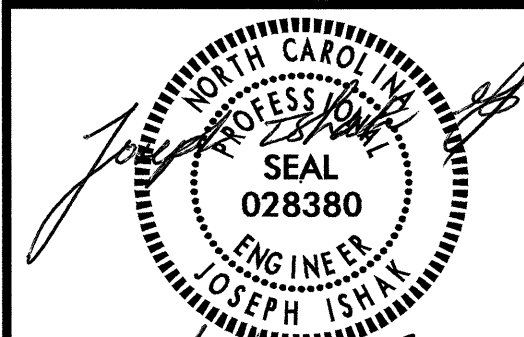
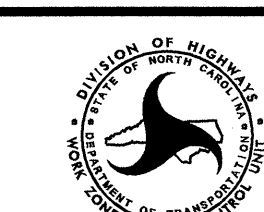
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END PROJECT B-3705  
-L- STA. 37+15.00



SEE SHEET TCP-5A FOR TEMPORARY SHORING RECOMMENDATIONS

|   |                |   |           |
|---|----------------|---|-----------|
| APPROVED:  | DATE:<br>09/07 | <b>PHASE I, DETAIL 2</b>  |           |
| SCALE: NONE   | REVISIONS      |   |           |
| DWG. BY: WRD  | DESIGN BY: WRD |  | REVISIONS |
| REVIEWED BY: HAL  | CADD FILE      |   | REVISIONS |

## TEMP. SHORING RECOMMENDATIONS

### Temporary Shoring No. 1

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 25 + 35 -L- TO STATION 25 + 55 -L-, 32 FEET RIGHT. STANDARD TEMPORARY SHORING OR CONTRACTOR DESIGNED SHORING IS REQUIRED. SEE TEMPORARY SHORING SPECIAL PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 25 + 35 -L- TO STATION 25 + 55 -L-, 32 FEET RIGHT, USE THE FOLLOWING SOIL PARAMETERS:  
 UNIT WEIGHT OF SOIL ABOVE WATER TABLE,  $\gamma = 120$  PCF  
 UNIT WEIGHT OF SOIL BELOW WATER TABLE,  $\gamma = 60$  PCF  
 FRICTION ANGLE,  $\phi = 30$  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 TEMPORARY SHORING FROM STATION 25 + 35 -L- TO STATION 25 + 55 -L-, 32 FEET RIGHT, MAY NOT PENETRATE BELOW ELEVATION 180 FT DUE TO THE PRESENCE OF AN OBSTRUCTION, VERY DENSE OR HARD SOIL, WEATHERED OR HARD ROCK.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL "F" SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TEMPORARY SHORING SPECIAL PROVISION

### Temporary Shoring No. 2

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 26 + 85 -L- TO STATION 27 + 35 -L-, 32 FEET RIGHT. STANDARD TEMPORARY SHORING OR CONTRACTOR DESIGNED SHORING IS REQUIRED. SEE TEMPORARY SHORING SPECIAL PROVISION..

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 26 + 85 -L- TO STATION 27 + 35 -L-, 32 FEET RIGHT, USE THE FOLLOWING SOIL PARAMETERS:  
 UNIT WEIGHT OF SOIL ABOVE WATER TABLE,  $\gamma = 120$  PCF  
 UNIT WEIGHT OF SOIL BELOW WATER TABLE,  $\gamma = 60$  PCF  
 FRICTION ANGLE,  $\phi = 30$  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 TEMPORARY SHORING FROM STATION 26 + 85 -L- TO

STATION 27 + 35 -L-, 32 FEET RIGHT, MAY NOT PENETRATE BELOW ELEVATION 175 FT DUE TO THE PRESENCE OF AN OBSTRUCTION, VERY DENSE OR HARD SOIL, WEATHERED OR HARD ROCK.

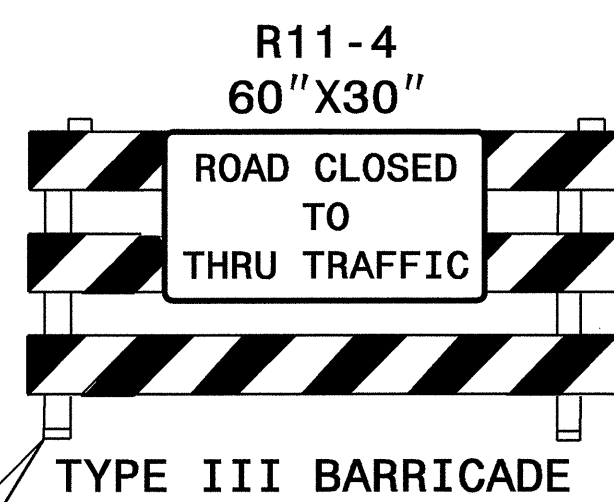
FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL "F" SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TEMPORARY SHORING SPECIAL PROVISION

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 halawandos AT WZTC224250

THE INFORMATION SHOWN ON THIS SHEET WAS PROVIDED THROUGH A SEALED DOCUMENT. THE DOCUMENT WAS SUBMITTED TO THE WORK ZONE TRAFFIC CONTROL UNIT ON SEPTEMBER 26, 2007 AND SEALED BY CHARLES A. GOVE, P.E., LICENSE # 029413

|              |            |  |  |
|--------------|------------|--|--|
| APPROVED:    | DATE:      | <b>TEMPORARY SHORING RECOMMENDATIONS</b> |  |
|              | SCALE:     | NONE                                     |  |
|              | DATE:      | 9/07                                     |  |
|              | DWG. BY:   | HAL                                      |  |
|              | DESIGN BY: | HAL                                      |  |
| REVIEWED BY: | HAL        | REVISIONS                                |  |

BEGIN PROJECT B-3705  
-L- STA 10+00.00



-Y1- STA 10+00.00

ONE WORLD WAY

-L- STA 17+00+/-

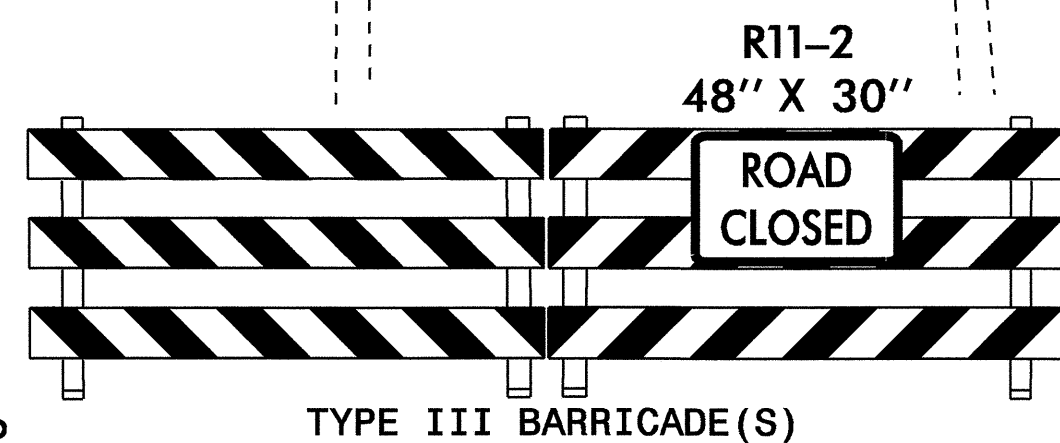
20+00

MATCHLINE -L- STA 23+00.00

-L- SR 2045 (BURLINGTON MILLS RD)

35+00

25+00

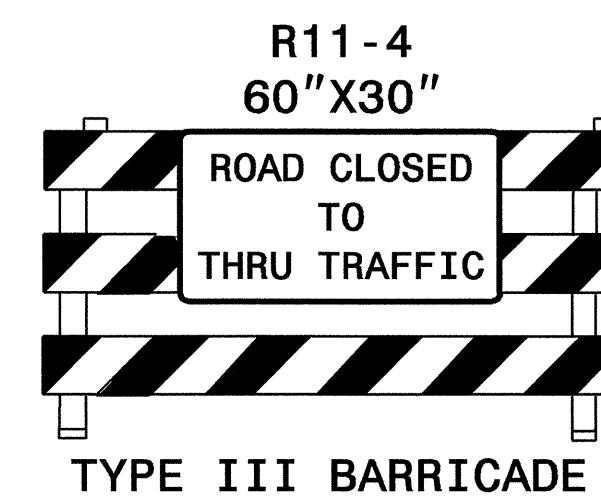


30+00

GRAU 350

BRATT AVENUE

-L- STA 32+00+/-



END PROJECT B-3705  
-L- STA 37+15.00

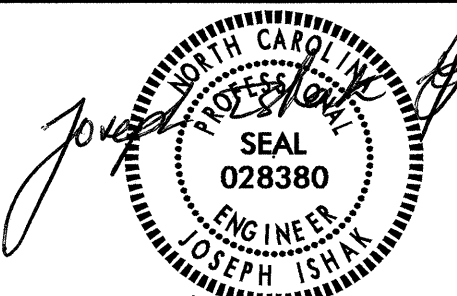
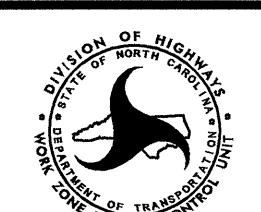
MATCHLINE -L- STA 23+00.00

GRAU 350

SMITH CREEK

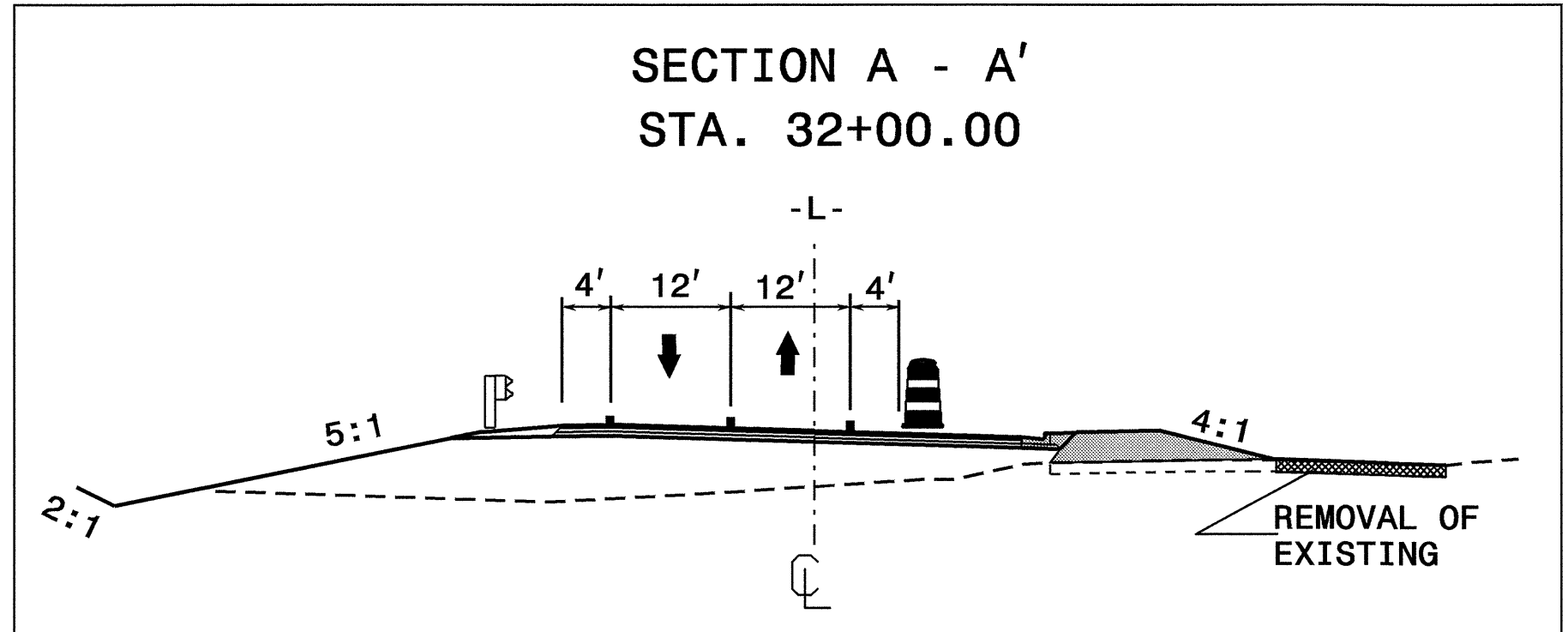
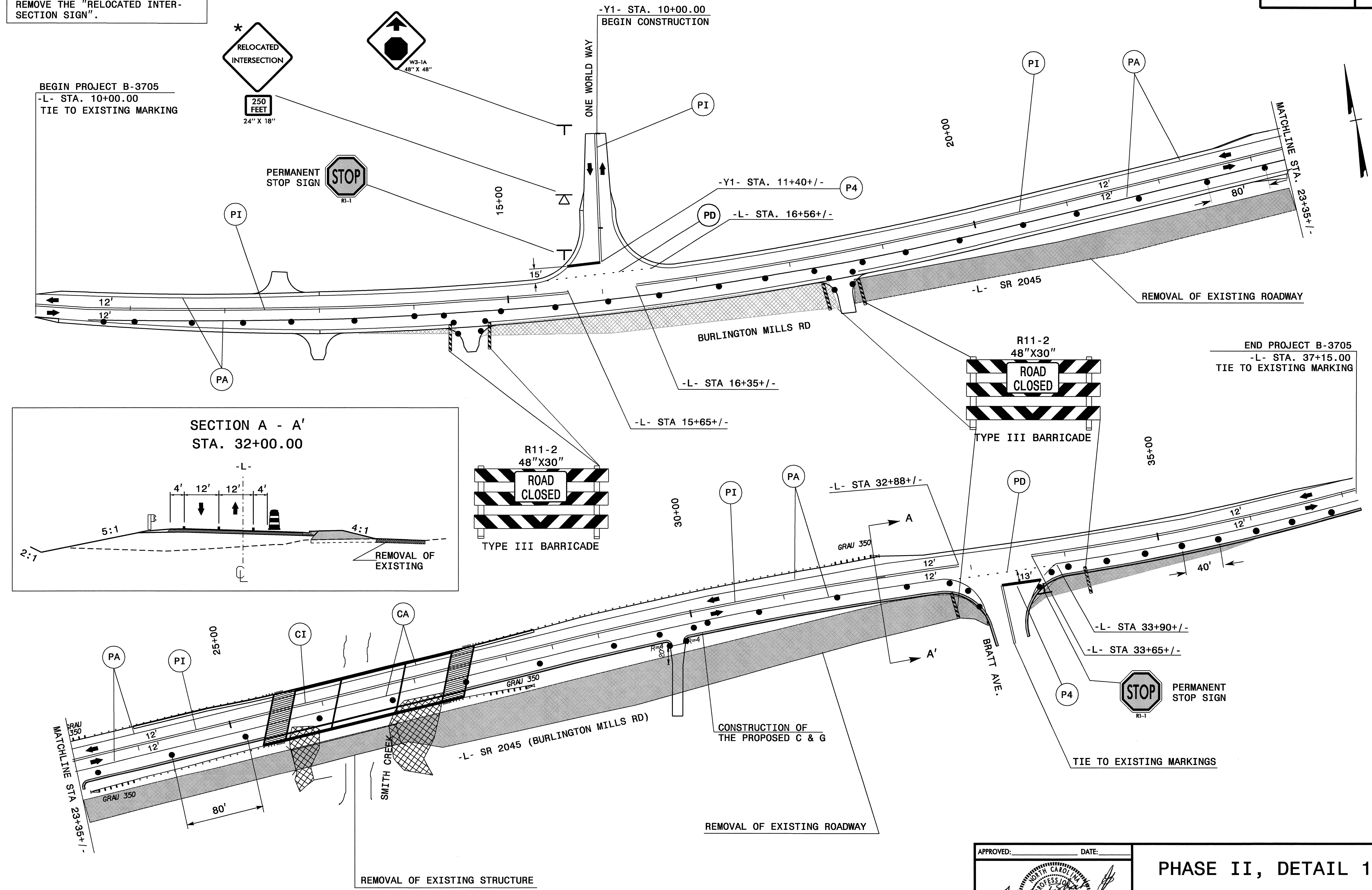
SR 2045 (BURLINGTON MILLS RD)

REFER TO SHEET TCP-8 FOR OFFSITE DETOUR ROUTE AND SIGNING

|   |                         |   |           |
|---|-------------------------|---|-----------|
| APPROVED:          | DATE: <u>          </u> | <b>PHASE I - DETAIL 3</b>   |           |
| <p>SCALE: NONE</p> <p>DATE: 09/07</p> <p>DWG. BY: WRD</p> <p>DESIGN BY: WRD</p> <p>REVIEWED BY: HAL</p> |                         |   |           |
|   |                         |  | REVISIONS |
|   |                         |   |           |

02-OCT-2007 12:19  
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 halawandos AT WZTC224250

\* NOTE: TWO WEEKS AFTER TRAFFIC HAS BEEN PLACED IN THIS PATTERN, REMOVE THE "RELOCATED INTERSECTION SIGN".



APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

*Joseph Ishak*

PROFESSIONAL SEAL  
028380  
ENGINEER  
JOSEPH ISHAK

Oct 3, 2007

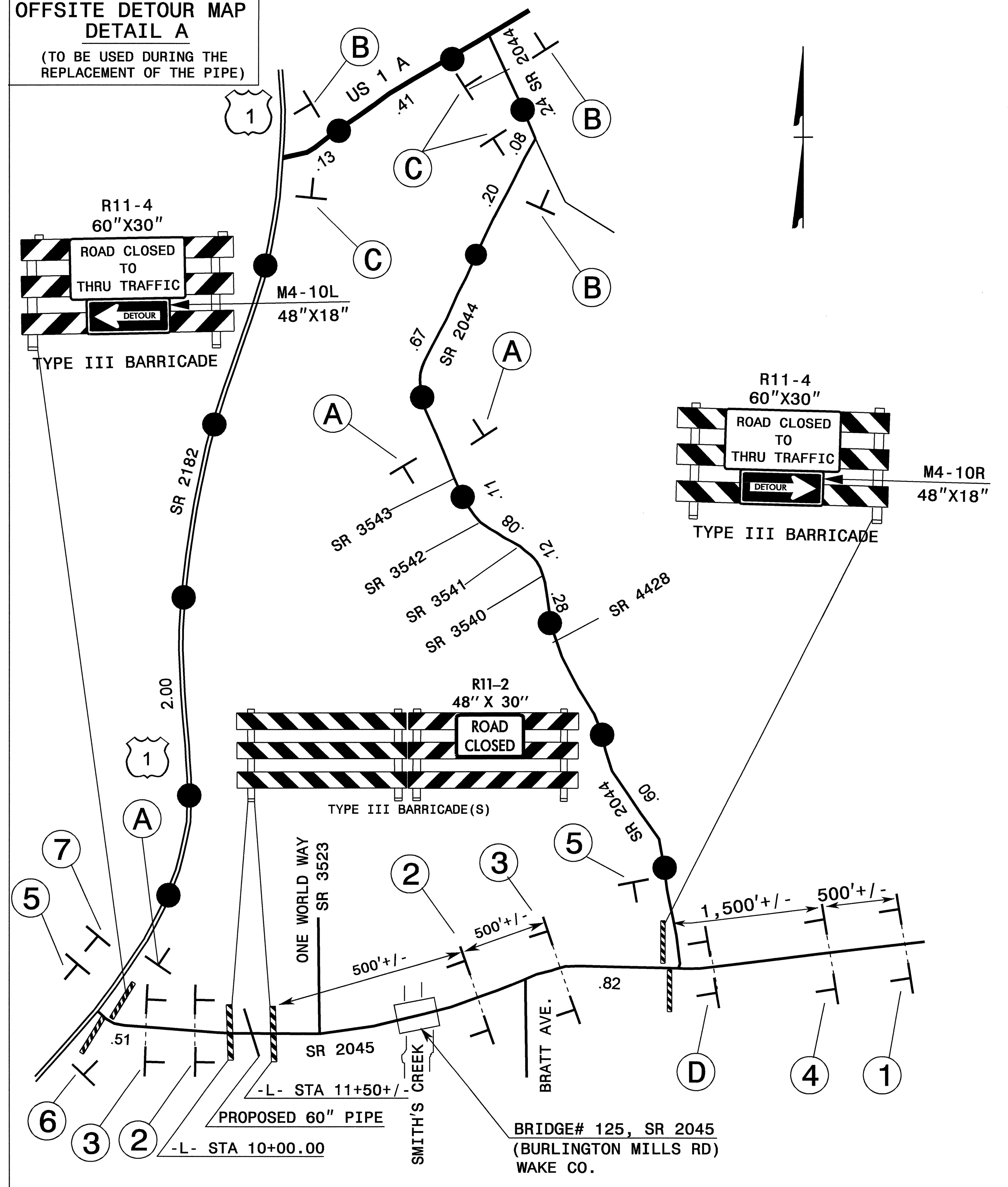
**PHASE II, DETAIL 1**

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|------------------|-----------|--|-----------|--|--|--|--|--|--|--|
| REVISIONS        |           |  |           |  |  |  |  |  |  |  |
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|                  |           |  |           |  |  |  |  |  |  |  |
| DATE: 09/07      |           |  |           |  |  |  |  |  |  |  |
| DWG. BY: WRD     |           |  |           |  |  |  |  |  |  |  |
| DESIGN BY: WRD   |           |  |           |  |  |  |  |  |  |  |
| REVIEWED BY: HAL | CADD FILE |  |           |  |  |  |  |  |  |  |

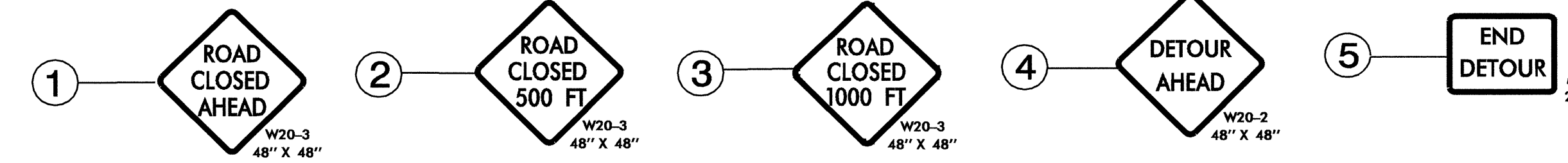
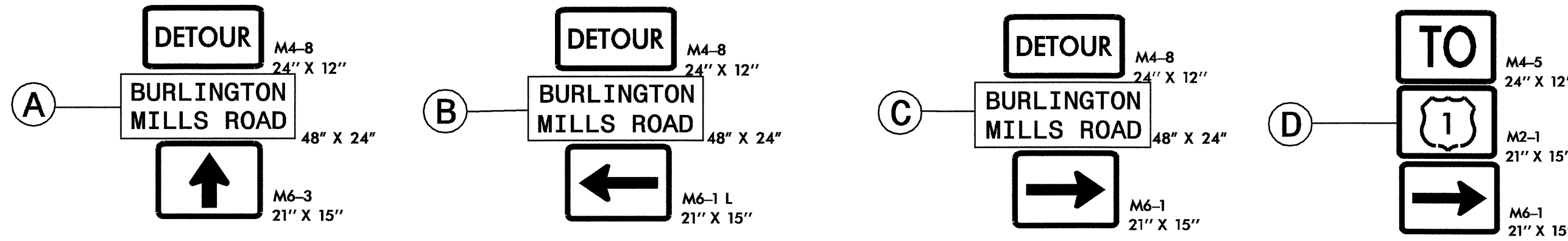
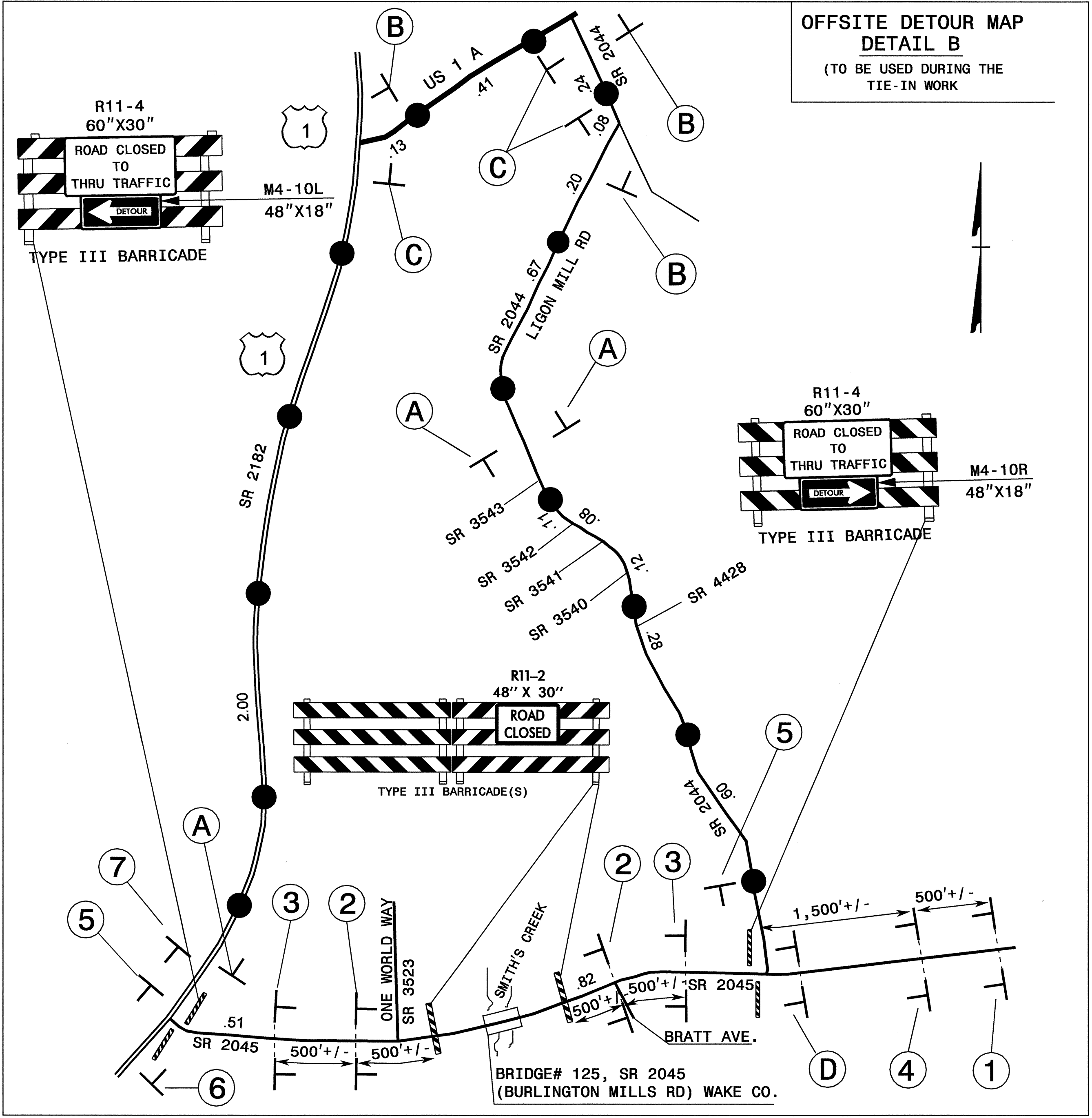
02-OCT-2007 12:48  
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 halwands AT WZT224230



**OFFSITE DETOUR MAP  
DETAIL A**  
(TO BE USED DURING THE  
REPLACEMENT OF THE PIPE)



**OFFSITE DETOUR MAP  
DETAIL B**  
(TO BE USED DURING THE  
TIE-IN WORK)



APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

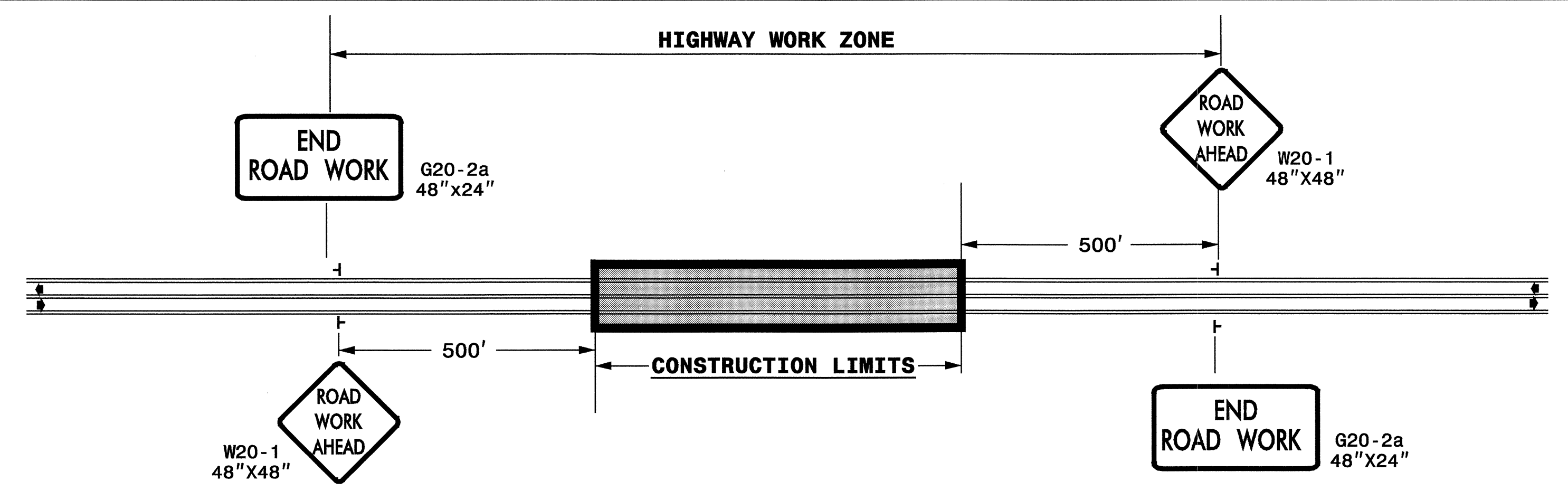
**DETOUR MAP AND SIGNING**

|                  |  |           |
|------------------|--|-----------|
| SCALE: NONE      |  | REVISIONS |
| DATE: 09/07      |  |           |
| DESIGN BY: WRD   |  |           |
| REVIEWED BY: HAL |  |           |

FILED: \_\_\_\_\_

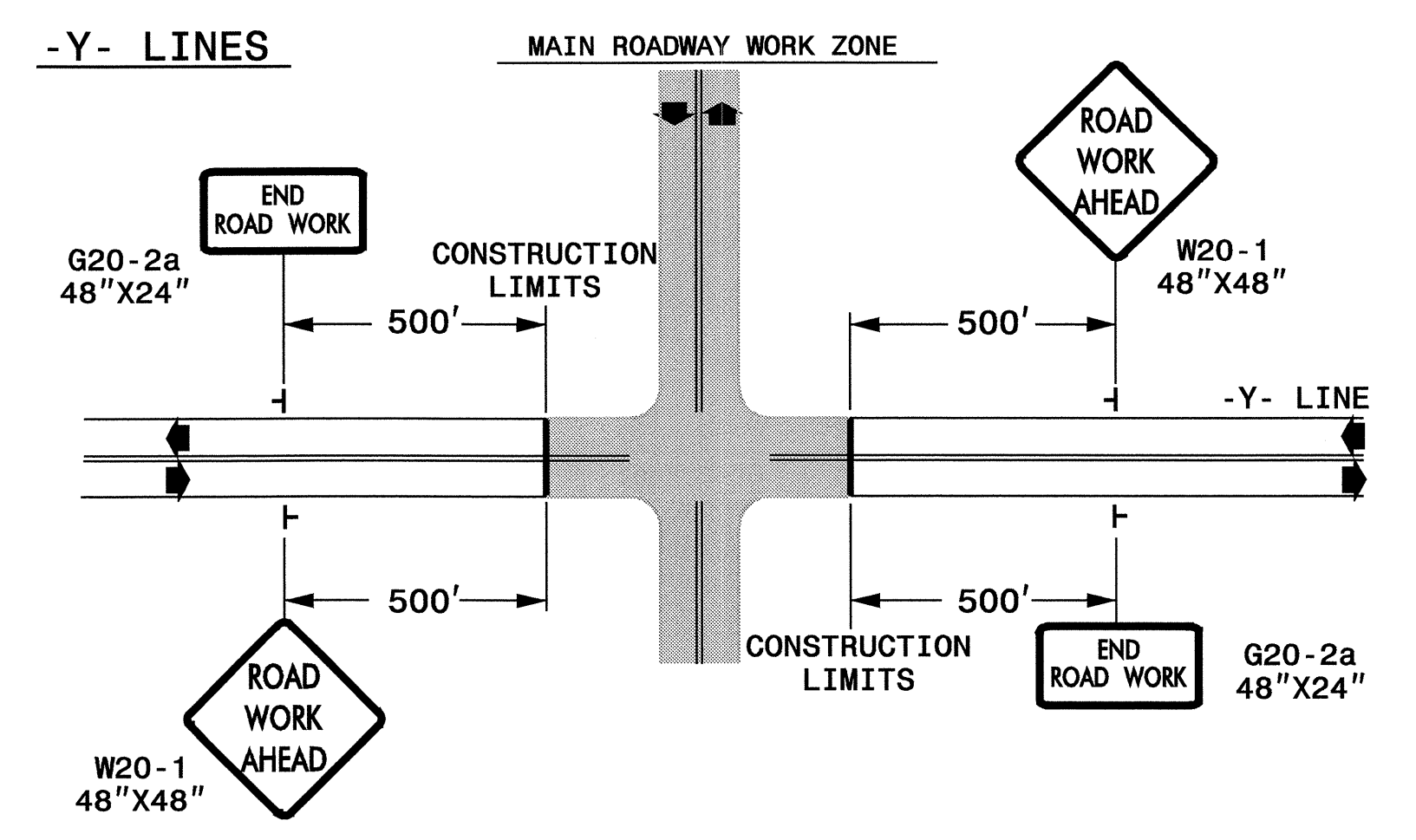
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AT  
halwandos

**TWO-WAY UNDIVIDED \*\* (L-LINES)**



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

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



DETAIL DRAWING FOR  
 TWO-WAY UNDIVIDED  
 WORK ZONE WARNING SIGNS

**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

SHEET 1 OF 1

|              |            |  |             |
|--------------|------------|--|-------------|
| APPROVED:    | DATE:      | DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS |             |
|              | SCALE:     | NONE   | REVISIONS   |
|              | DATE:      | 07/07  | 7-98 10/01  |
|              | DWG. BY:   |  | 10-98 03/04 |
|              | DESIGN BY: |  | 01/01 11/04 |
| REVIEWED BY: |            |  | CARD FILE   |

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 halawandos AT WZTC24250