

OAK & INGRAM DRAINAGE IMPROVEMENT

CONWAY, ARKANSAS CONSTRUCTION PACKAGE



REVISIONS

NO.	DESCRIPTION	DATE

VICINITY MAP



SHEET NO.	TITLE
1	COVER SHEET
2	GENERAL NOTES
3-4	MAINTENANCE OF TRAFFIC AND DETOUR
5	PLAN SHEET

REFERENCE ARDOT STANDARD DRAWINGS:
FPC-9S, TC-1, TC-2, TC-3, TEC-1



OAK & INGRAM DRAINAGE IMPROVEMENT
CONWAY, ARKANSAS

JOB NUMBER: 20-126
DRAWN BY: MHW1
CHECKED BY: BFV3
DATE: 12-2-2020
SCALE: 1"=40'

OAK & INGRAM
DRAINAGE
IMPROVEMENT

DATE: DECEMBER 2, 2020
JOB#: 20-126

CONWAY TRANSPORTATION DEPARTMENT
100 E. ROBINS STREET STREET CONWAY, ARKANSAS
PH: 501.450.6165 FAX: 501.513.3566

GENERAL CONSTRUCTION REQUIREMENTS:

1. (ALL CONSTRUCTION WITHIN THE PUBLIC ROW OR PUBLIC EASEMENTS SHALL CONFORM TO ARDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION UNLESS AMENDED HEREIN.)
2. THE CONWAY TRANSPORTATION DEPARTMENT SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS PRIOR TO PLACEMENT OF ANY FILL MATERIAL, INSTALLATION OF STORM DRAINAGE PIPE OR DRAINAGE STRUCTURES, CONCRETE CURB & GUTTER, PLACEMENT OF CRUSHED STONE OR ASPHALT. THE SUB-GRADE SHALL BE APPROVED BY THE CONWAY TRANSPORTATION DEPARTMENT PRIOR TO PLACEMENT OF CURB & GUTTER OR CRUSHED STONE.
3. ALL STORM DRAINAGE PIPE (INCLUDING FLARED END SECTIONS AND HEADWALLS) SHALL BE RCP CLASS III UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE CITY ENGINEER.
4. STORM DRAINAGE PIPES, DITCHES AND DRAINAGE STRUCTURES MUST BE FREE OF SEDIMENTS, TRASH, DEBRIS AND PONDING WATER PRIOR TO FINAL APPROVAL OF THE STREETS.
5. THE CITY ENGINEER SHALL BE GIVEN TWENTY-FOUR, 24, HOURS NOTICE PRIOR TO PLACEMENT OF STORM DRAINAGE PIPE (INCLUDING DRAINAGE STRUCTURES, FORMING, AND REINFORCING STEEL). NO WORK SHALL PROCEED UNTIL APPROVAL HAS BEEN GIVEN BY THE CITY ENGINEER.
6. (THE CONTRACTOR SHALL PROVIDE APPROPRIATE ADVANCED WARNING DEVICES, BARRICADES, BARRELS AND OTHER MEASURES AS NEEDED TO PROPERLY CONTROL AND ADVISE TRAFFIC OF CONSTRUCTION EQUIPMENT THAT MAY BE ON OR ADJACENT TO THE PUBLIC STREETS.)
7. (THE CONTRACTOR SHALL KEEP THE ADJACENT PUBLIC STREETS CLEAN AND FREE OF SEDIMENT, GRAVEL AND OTHER DEBRIS.)
8. (THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE PUBLIC STREETS AND INFRASTRUCTURE THAT THE CONSTRUCTION ACTIVITY OR HAULING OF MATERIAL MAY CAUSE.)
9. ALL WORK SHALL CONFORM TO THE CITY OF CONWAY STANDARD DETAILS AND SPECIAL PROVISIONS.

STANDARDS:

1. CITY OF CONWAY STANDARD DETAILS FOR ROADWAY AND DRAINAGE CONSTRUCTION ARE LOCATED ON THE CONWAY TRANSPORTATION DEPARTMENT WEB PAGE.
2. ALL CONSTRUCTION & MATERIALS SHALL COMPLY WITH THE ARKANSAS HIGHWAY & TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION. UNLESS OTHERWISE NOTED.

QUALITY CONTROL REQUIREMENTS:

FOR NOTIFICATION OF NEEDED INSPECTION CONTACT:
CITY OF CONWAY
TRANSPORTATION DEPARTMENT
100 EAST ROBINS
CONWAY, ARKANSAS 72032
PHONE 501-450-6165 FAX 501-513-3566

COORDINATION OF THE WORK

THE CONTRACTOR SHALL PROVIDE COMPETENT AND EXPERIENCED FIELD PERSONNEL TO COORDINATE THE WORK AND VERIFY THAT THE CONTRACTOR IS CONFORMING TO THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL COORDINATE WITH CONWAY CORP AND ANY OTHER UTILITY COMPANIES WITH EQUIPMENT LOCATED ON SITE TO ENSURE THAT ALL UTILITIES THAT COULD POTENTIALLY INTERFERE WITH WORK HAVE BEEN RELOCATED OR ARE PROPERLY INCORPORATED INTO THE PROJECT.

THE CITY IS NOT RESPONSIBLE FOR COORDINATION OF THE PROJECT WORK.

EROSION CONTROL REQUIREMENTS:

1. INSTALL GRATE INLET PROTECTION AROUND PROPOSED JUNCTION BOX IN THE FORM OF EITHER ARDOT "COMPOST FILTER SOCK DROP INLET PROTECTION (ARDOT STD. DWG. TEC-1) OR THE CITY STANDARD BLOCK & STONE INLET PROTECTION (CITY ST. DWG. EC-7).
2. PREVENT THE TRACKING OF MUD AND DIRT ONTO ADJACENT STREETS. IF ANY TRACKING OCCURS THE MATERIAL SHALL BE REMOVED FROM THE ROADWAY IMMEDIATELY.

MAINTENANCE OF TRAFFIC:

1. TEMPORARY CLOSURE OF THE EASTBOUND OUTSIDE LANE OF OAK STREET WILL BE PERMITTED AS NEEDED FOR CONSTRUCTION ACTIVITIES.
2. TEMPORARY CLOSURE OF THE NORTHBOUND LANE OF INGRAM STREET WILL BE PERMITTED AS NEEDED FOR CONSTRUCTION ACTIVITIES.
3. THE CONTRACTOR MUST PROVIDE ARDOT AND THE CITY ENGINEER AT LEAST 2 WEEKS NOTICE BEFORE ANY ROAD CLOSURE.
4. THE CONTRACTOR MUST NOTIFY PROPER EMERGENCY SERVICES AT LEAST 24 HOURS PRIOR TO ANY ROAD CLOSURE.
5. ALL LANE CLOSURE AND DETOUR DEVICES MUST BE IN PLACE PRIOR TO ANY ROADWAY/LANE CLOSURES.
6. THE CONTRACTOR MUST PROVIDE TEMPORARY ACCESS TO PROPERTIES ALONG THE CLOSURE AT ALL TIMES.
7. ITEMS NECESSARY FOR A DETOUR OR ANY OTHER MAINTENANCE OF TRAFFIC ACTIVITY SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE CONTRACT LUMP SUM COST FOR MAINTENANCE OF TRAFFIC.

REVISIONS

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OAK & INGRAM DRAINAGE IMPROVEMENT
CONWAY, ARKANSAS

JOB NUMBER: 20-126
DRAWN BY: MHW1
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DATE: 12-2-2020
SCALE: 1"=40'

OAK & INGRAM
DRAINAGE
IMPROVEMENT

REVISIONS

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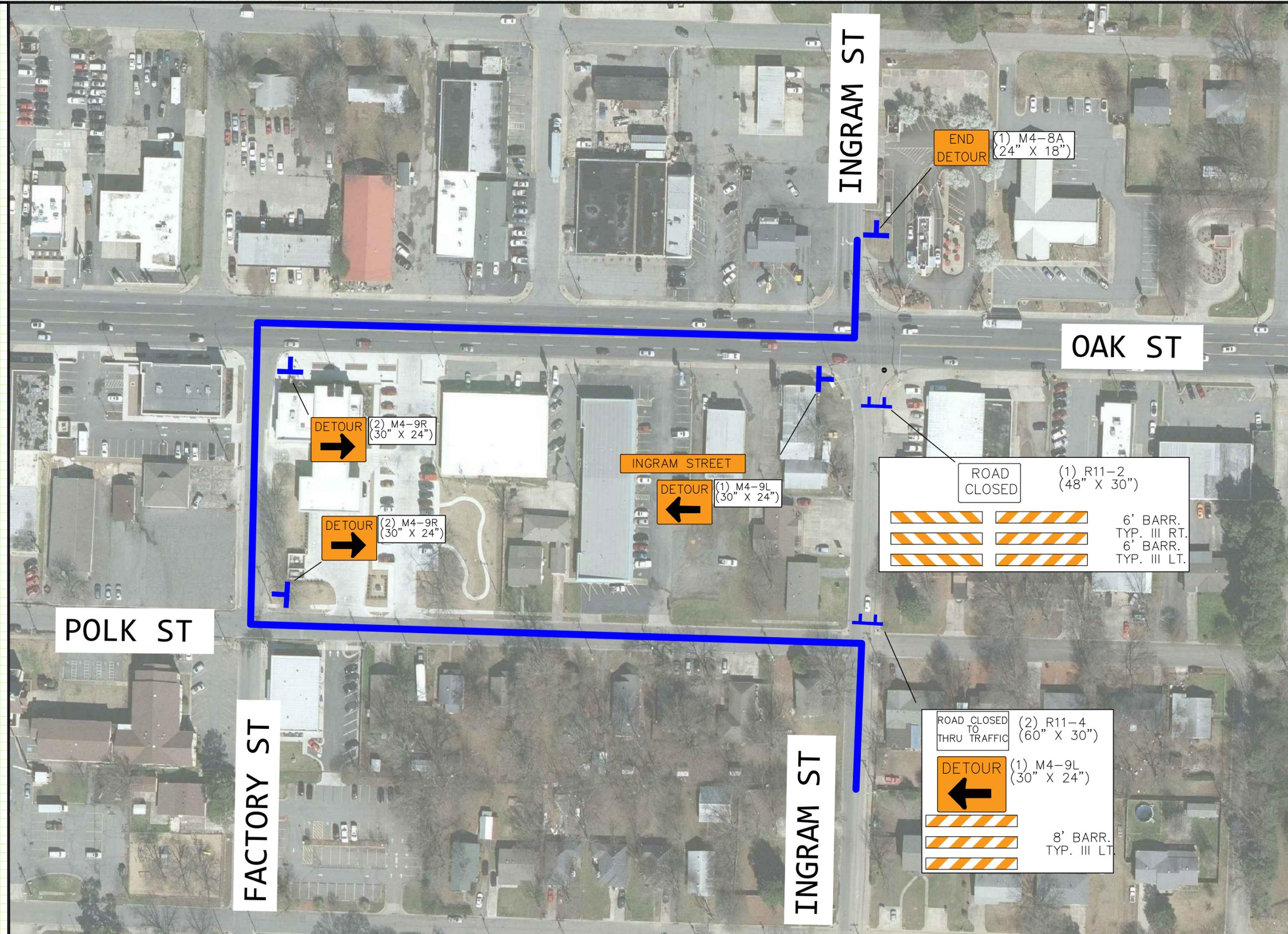
OAK & INGRAM DRAINAGE IMPROVEMENT
 CONWAY, ARKANSAS

JOB NUMBER: 20-126
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 DATE: 12-2-2020
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OAK STREET
 LANE CLOSURE
 WITH SIGNAGE

REVISIONS

NO.	DESCRIPTION	DATE



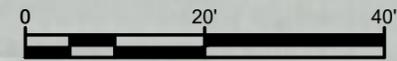
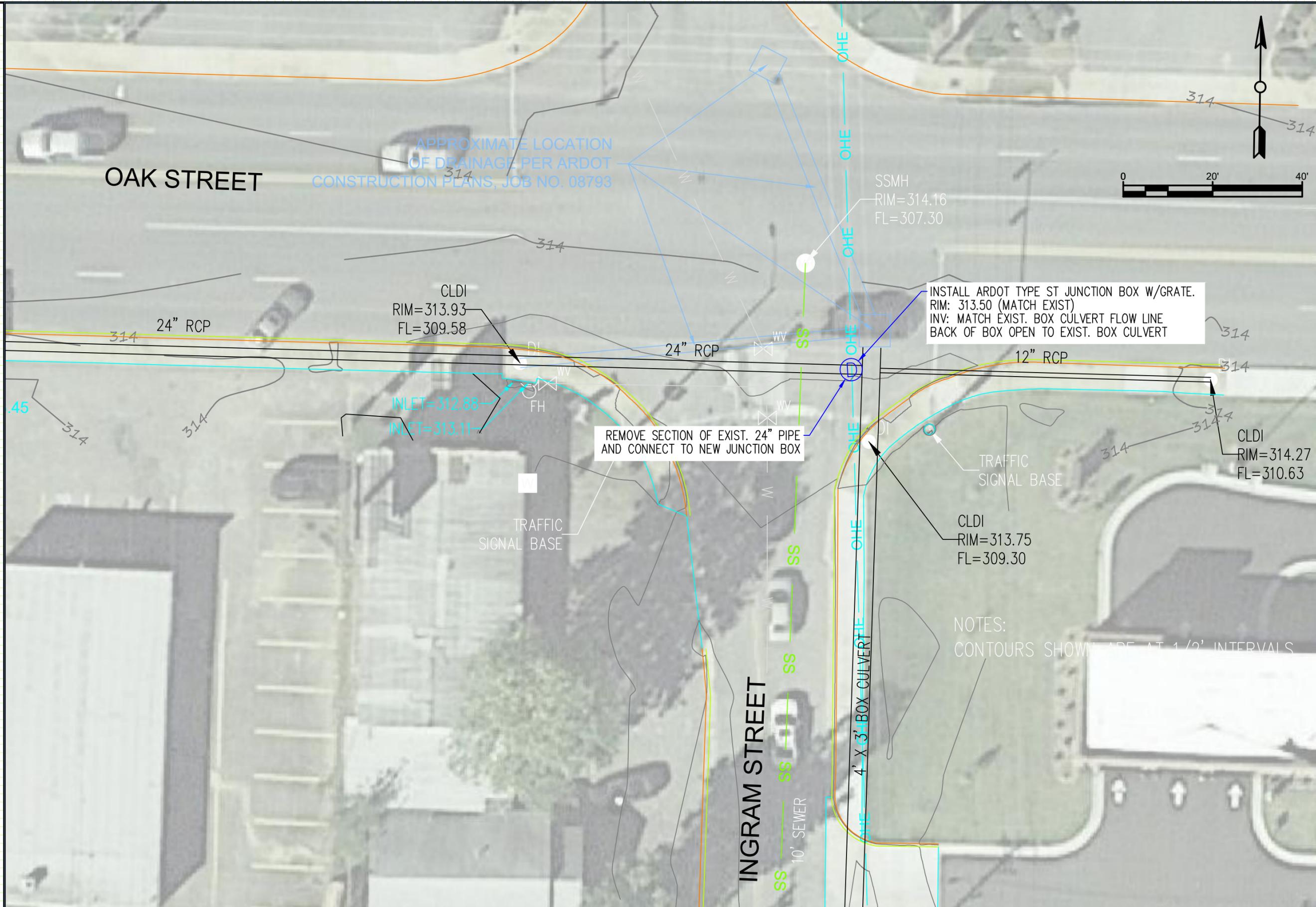
OAK & INGRAM DRAINAGE IMPROVEMENT
 CONWAY, ARKANSAS

JOB NUMBER: 20-126
 DRAWN BY: MHW1
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 DATE: 12-2-2020
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INGRAM STREET
 DETOUR WITH
 SIGNAGE

REVISIONS

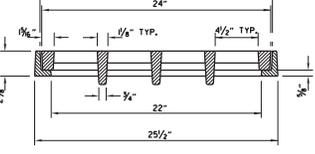
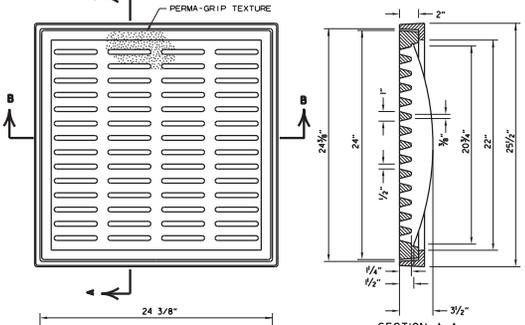
NO.	DESCRIPTION	DATE



**OAK & INGRAM DRAINAGE IMPROVEMENT
 CONWAY, ARKANSAS**

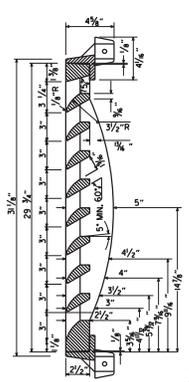
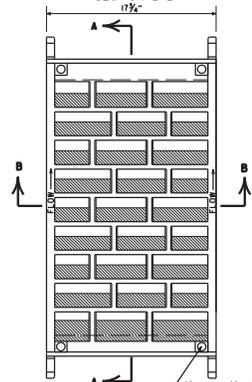
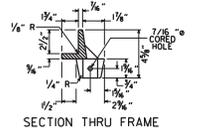
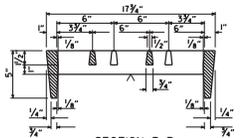
JOB NUMBER: 20-126
 DRAWN BY: NTR
 CHECKED BY: BFV3
 DATE: 12/04/20
 SCALE: 1"=20'

OAK & INGRAM
 DRAINAGE IMPROVEMENT
 PLAN SHEET



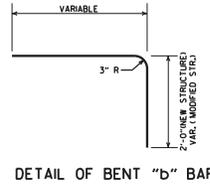
SECTION A-A
GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE 1/2\"/>

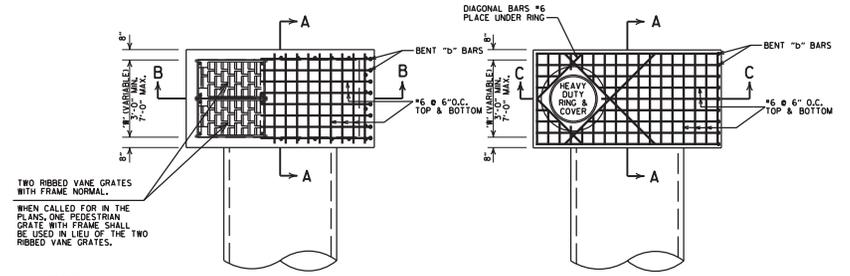


GENERAL NOTES (RIBBED VANE GRATE & FRAME)

1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.

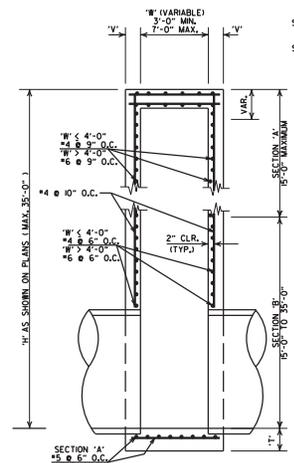


DETAIL OF BENT "b" BAR

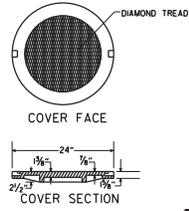


TWO RIBBED VANE GRATES WITH FRAME NORMAL

WHEN CALLED FOR IN THE PLANS, ONE PEDESTRIAN GRATE WITH FRAME SHALL BE USED IN LIEU OF THE TWO RIBBED VANE GRATES.

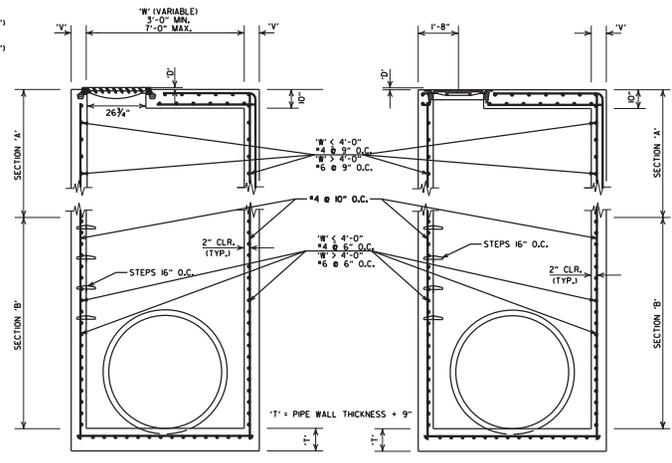


DETAILS OF DROP INLET (TYPE ST)



RING SECTION HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.



DETAILS OF JUNCTION BOX (TYPE ST)

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

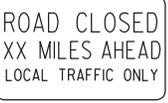
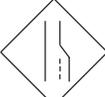
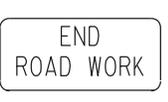
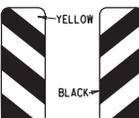
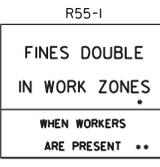
1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER AND SHALL BE 'D' AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE 'W' IS LESS THAN 4'-0\"/>

GENERAL NOTES (HEAVY DUTY RING & COVER):

1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
4. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER, REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

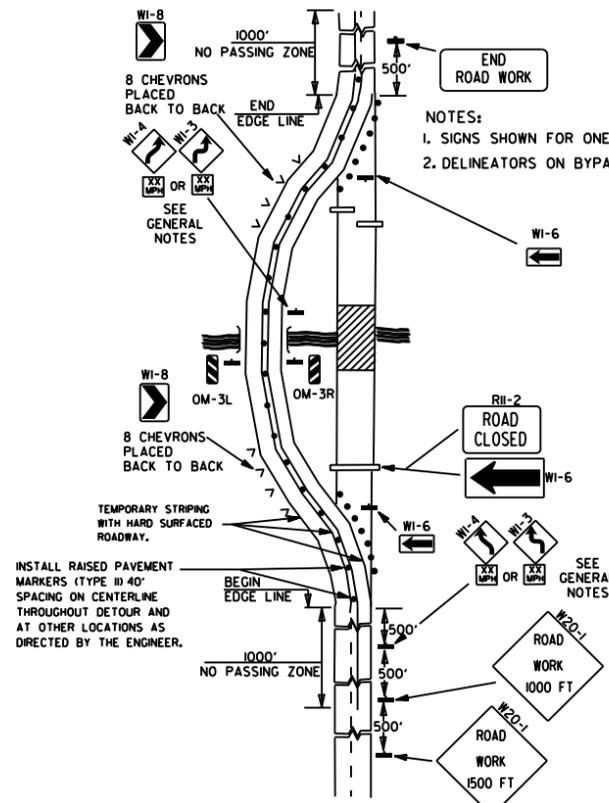
DATE REVISED	DATE FILMED	DESCRIPTION
7-26-12		REMOVED NOTE 4, REVISED 'T', REVISED BOTTOM SLAB REBAR FOR SECTION 'A', SHOWED REBAR CLEARANCE IN SECTIONS.
11-16-01		ADDED NOTE 4
1-12-00		REVISED HEAVY DUTY RING & COVER
5-13-99		ADDED PEDESTRIAN FRAME & GRATE
7-02-98		REMOVED NOTE 5, REV. DIMENSIONS, ADDED HEAVY DUTY RING & COVER ADDED AASHTO REF. REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
10-1-92		REVISED & REISSUED
8-15-91	8-15-91	REVISED & REISSUED

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)
 STANDARD DRAWING FPC-95

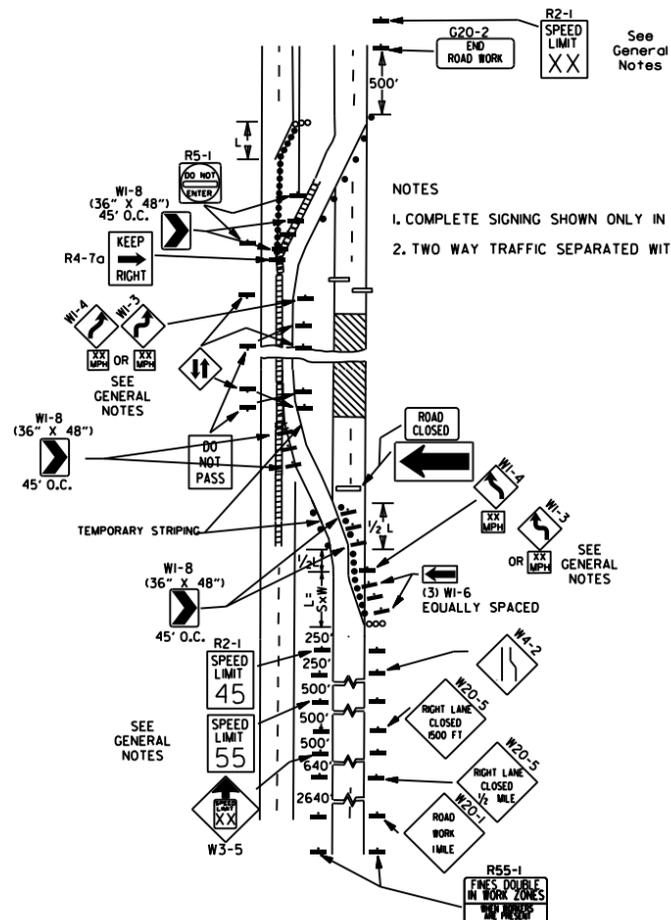
<p>RI-1</p>  <p>STANDARD 30"x30" EXPWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>W3-5</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>ADVANCE DISTANCES (XXXX)</p> <p>500 FT 1/2 MILE 1000 FT 3/4 MILE 1500 FT 1 MILE AHEAD</p> <p>GENERAL NOTES: 1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION. 2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER. 3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DETAILED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED. 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE. 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3. 6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE. 7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS. 8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS. 9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT. 10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN AHEAD OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.</p> <p>* NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.</p>
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>W21-5a</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>W1-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60"</p> <p>• USE 6" C LETTERS •• USE 4" D LETTERS</p>

11-07-19	REVISED MASH		
4-13-17	DELETED RSP-1 & ADDED W21-5a		
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS		
	REVISED ROAD WORK NEXT XX MILES		
12-5-14	DELETED W24-1		
11-17-10	DELETED W8-9a & ADDED W8-9		
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1		
4-17-08	REVISED SIGN DESIGNATIONS		
11-8-04	REVISED NOTES		
10-9-03	REVISED NOTE 1		
11-6-01	REVISED NOTE 7		
9-28-00	REVISED NOTE		
11-8-98	ADDED NOTE		
6-26-97	REVISED NOTE 5		
4-03-97	REVISED NOTE 5		
10-8-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7		
10-12-95	ADDED R55-1		
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS		6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993		
8-15-93	DRAWN AND PLACED IN USE		
DATE	REVISION		FILED

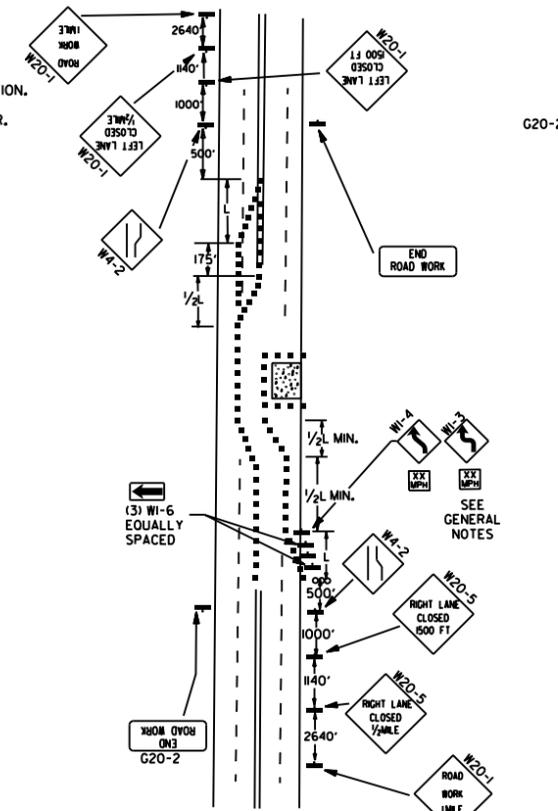
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1



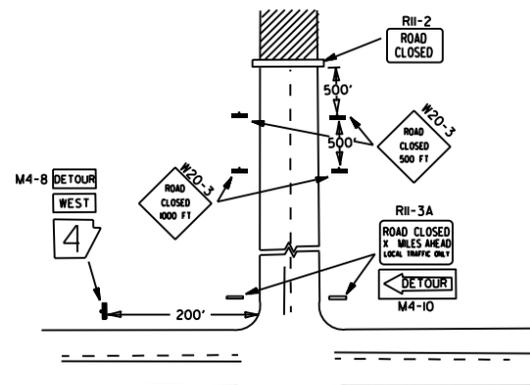
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.

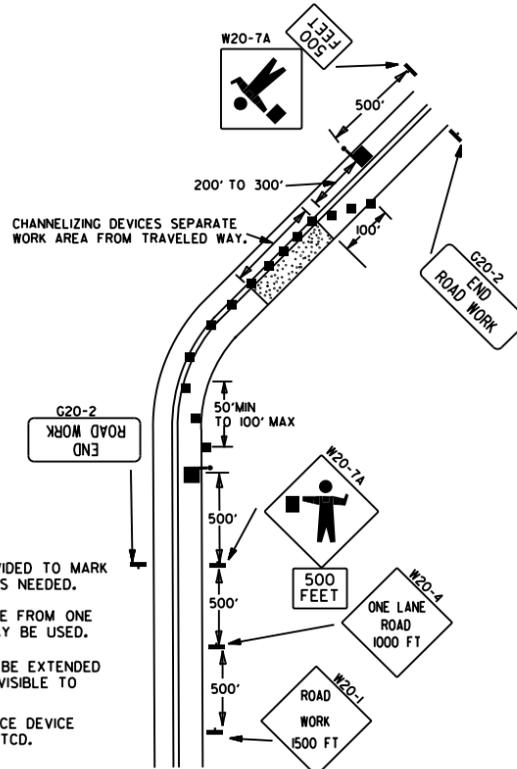


(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



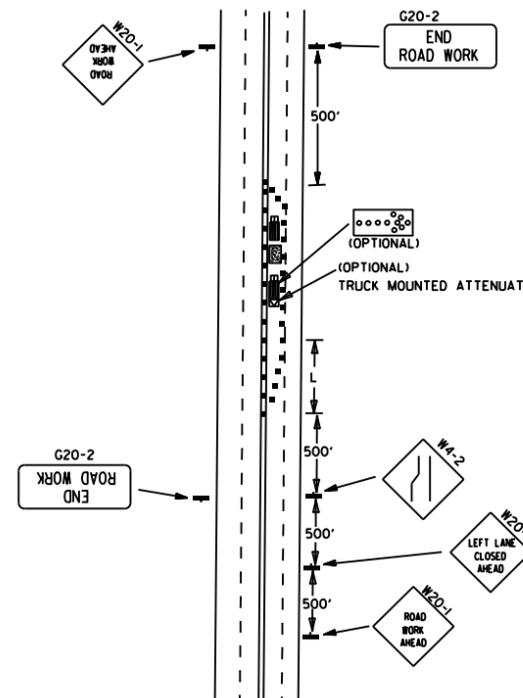
NOTES:
 1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
 2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



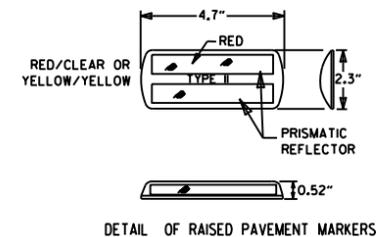
NOTES:
 1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
 2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
 3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
 4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

- KEY:
- FLAGGER
 - ▬ POSITIVE BARRIER
 - ∞ ARROW PANEL (IF REQUIRED)
 - ▬ TYPE III BARRICADE
 - CHANNELIZING DEVICE
 - TRAFFIC DRUM
 - RAISED PAVEMENT MARKER



TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

$L = S \times W$ FOR SPEEDS OF 45MPH OR MORE.

$L = \frac{W \times S^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.

WHERE:
 L = MINIMUM LENGTH OF TAPER.

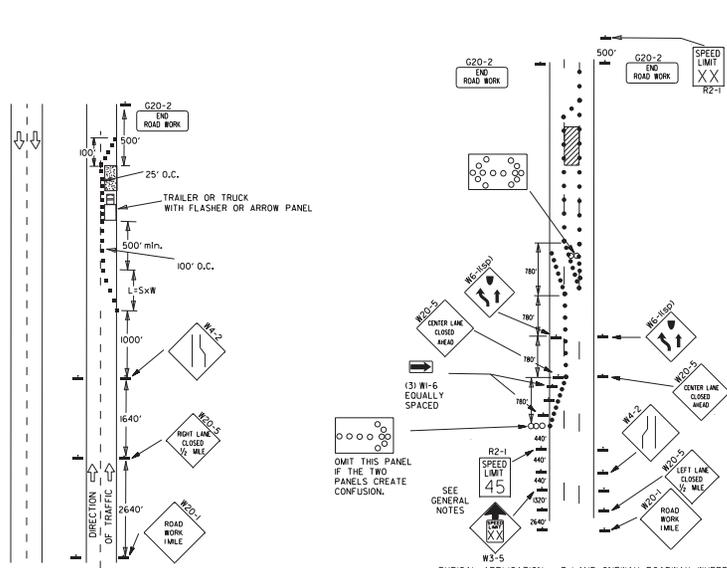
S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.

W = WIDTH OF OFFSET.

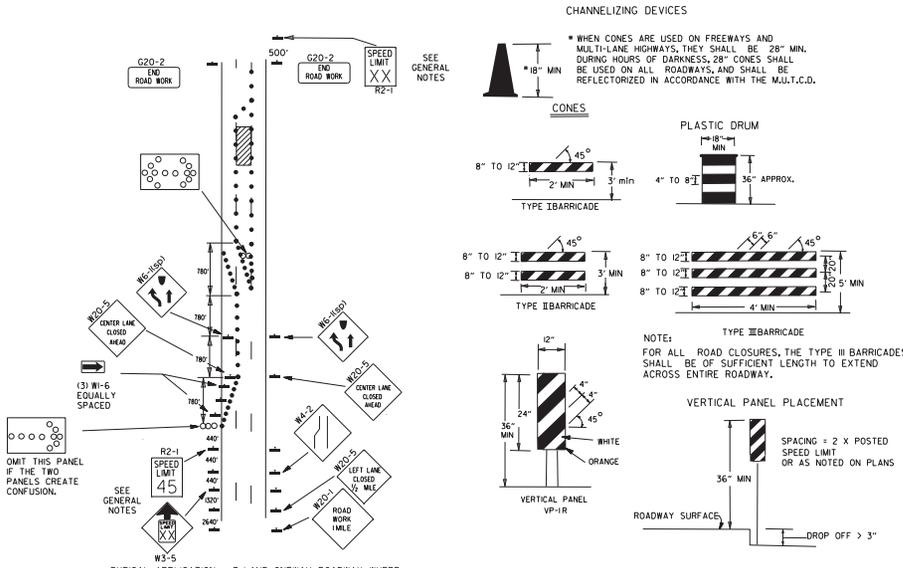
- GENERAL NOTES:
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45) SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(65) SHALL BE OMITTED. ADDITIONAL R2-1(55) SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
 5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
 8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.
 9. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

DATE	REVISION	FILMED
11-07-19	REVISED NOTE 1, ADDED NOTE 9	
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

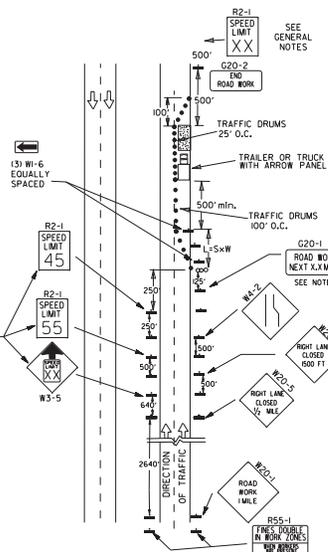
ARKANSAS STATE HIGHWAY COMMISSION
 STANDARD TRAFFIC CONTROLS
 FOR HIGHWAY CONSTRUCTION



(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

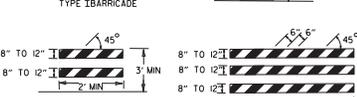
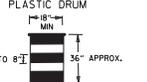
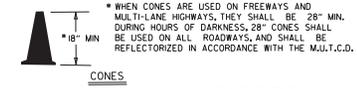


(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

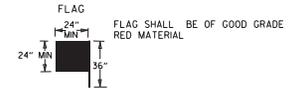
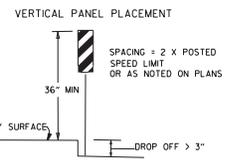


(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

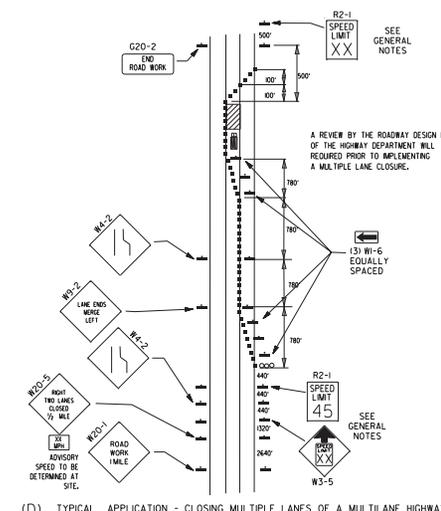
CHANNELIZING DEVICES



NOTE: FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.



- KEY:
- ○ ○ ○ ARROW PANEL (IF REQUIRED)
 - CHANNELIZING DEVICE
 - TRAFFIC DRUM
- GENERAL NOTES:
- A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
 - WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-155 SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/4 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1XXI SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-145I SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/4 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1XXI SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT OR AS DIRECTED BY THE ENGINEER.
 - WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 - PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 - THE G20-1 SIGN WILL BE REQUIRED ON JOBS OF OVER TWO MILES IN LENGTH, WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT. THE G20-1 SIGN SHALL BE ERRECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1MILE SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS.
 - FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
 - ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
 - TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER, WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
 - ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

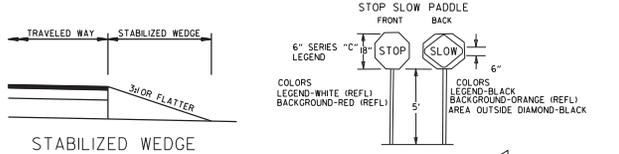
TRAFFIC CONTROL DEVICES

VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		NON-INTERSTATE	INTERSTATE
≤ 2"	CENTERLINE	WB-11 AND LANE STRIPING	WB-11 AND LANE STRIPING
> 2"	CENTERLINE	STANDARD LANE CLOSURE	STANDARD LANE CLOSURE
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	WB-9, EDGE LINE STRIPING, AND VERTICAL PANELS	WB-9, EDGE LINE STRIPING, AND VERTICAL PANELS
> 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	WB-17, EDGE LINE STRIPING, AND VERTICAL PANELS	WB-17, EDGE LINE STRIPING, AND VERTICAL PANELS
≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	WB-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	WB-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
≤ 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	WB-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	A STABILIZED WEDGE, WB-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER ⁽¹⁾ & EDGE LINES	PRECAST CONCRETE BARRIER ⁽¹⁾ & EDGE LINES

VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 2"	CENTERLINE	WB-11 AND LANE STRIPING
> 2"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	WB-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 2"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	WB-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES

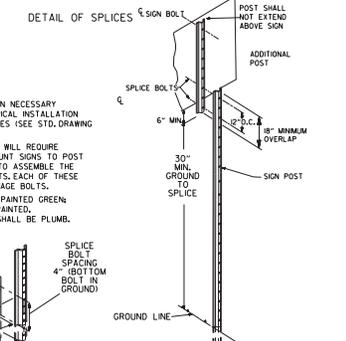
FORESLOPE	HEIGHT	TRAFFIC CONTROL
≥ 1:1	≤ 2 FT	PRECAST CONCRETE BARRIER
≥ 2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

- GENERAL NOTES:
- WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
 - WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED. PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE. WB-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER.
 - A STABILIZED WEDGE, WB-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
 - A STABILIZED WEDGE, WB-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
 - W2-5, W2-5a, AND/OR W2-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.

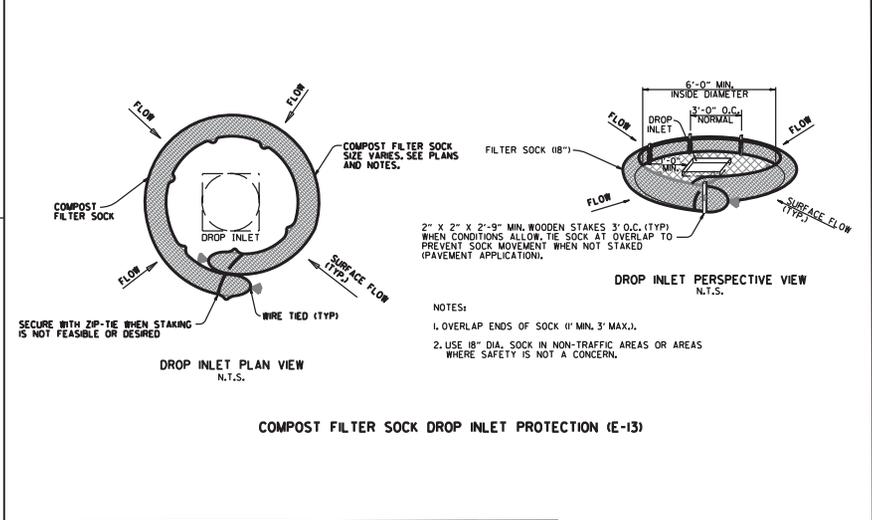
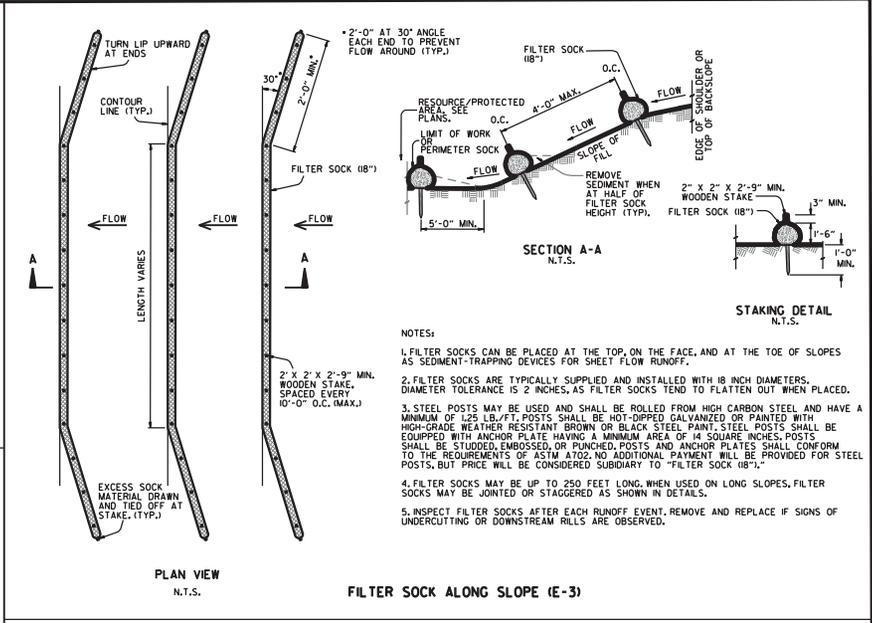
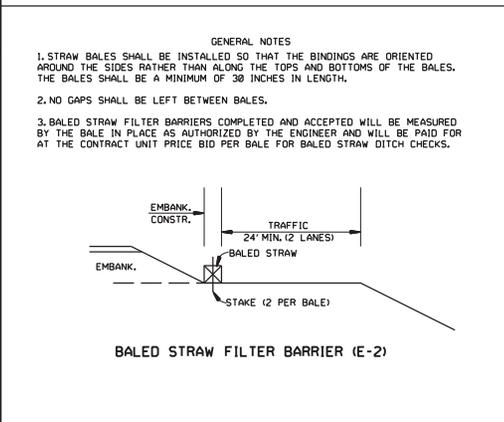
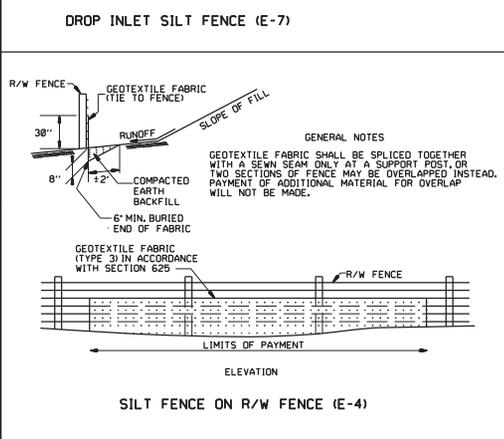
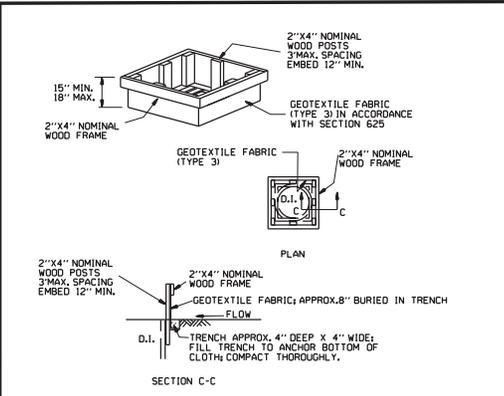
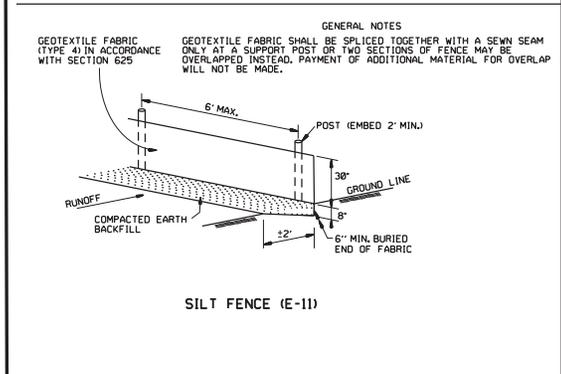
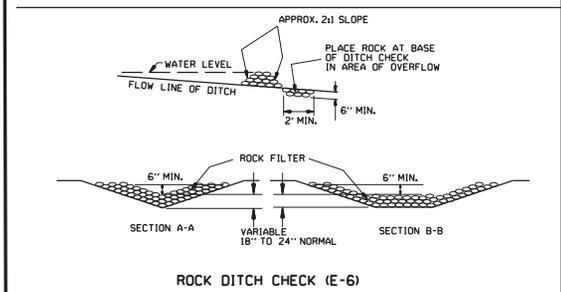
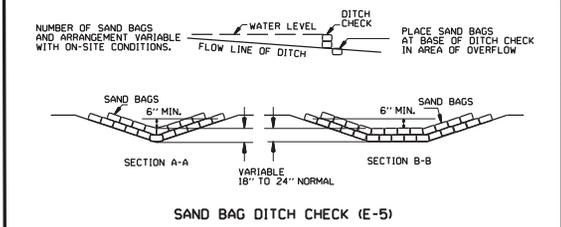
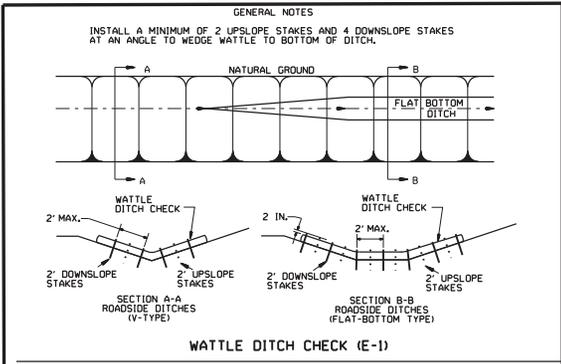


STABILIZED WEDGE

NOTE: MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.



DATE	REVISION	FILED
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 2, ADD NOTE #	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-05-10	ADDED REFERENCE TO MASH	
4-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-18 REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	



DATE	ISSUED R.O.M.	REVISION	FILED
11-16-17		ADDED FILTER SOCK E-3 AND E-13	
12-15-11		DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98		ADDED NOTES	
07-02-98		ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95		REVISED SILTS FENCE E-4 AND E-11	7-20-95
07-15-94		REV. E-4 & E-11 MIN. 15" BURIED END OF FABRIC	
06-02-94		REVISED E-1, 4, 7 & 11 DELETED E-2 & 3	6-2-94
04-01-93		REDRAWN	
10-01-92		REDRAWN	
08-02-76		ISSUED R.O.M.	298-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION
TEMPORARY EROSION CONTROL DEVICES
STANDARD DRAWING TEC-1