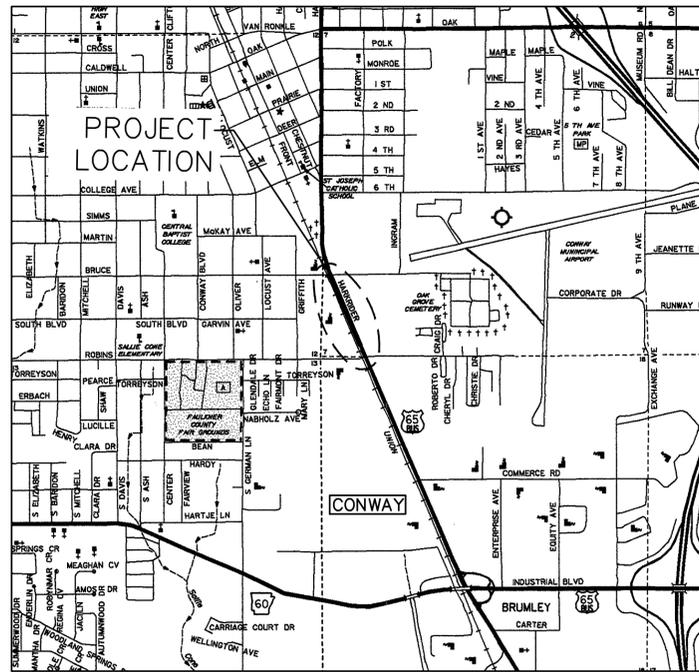


CITY OF CONWAY
CONSTRUCTION PLANS



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| | | | | | | 2 HARKRIDER SIDEWALK (CONWAY) (S) | | | |

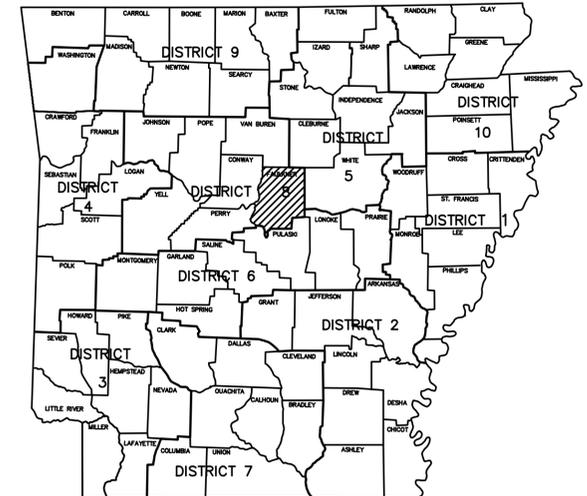


VICINITY MAP

HARKRIDER SIDEWALK (CONWAY) (S)

JOB NO. 080663

FAP PROJECT NO. TAPU-9095(42)



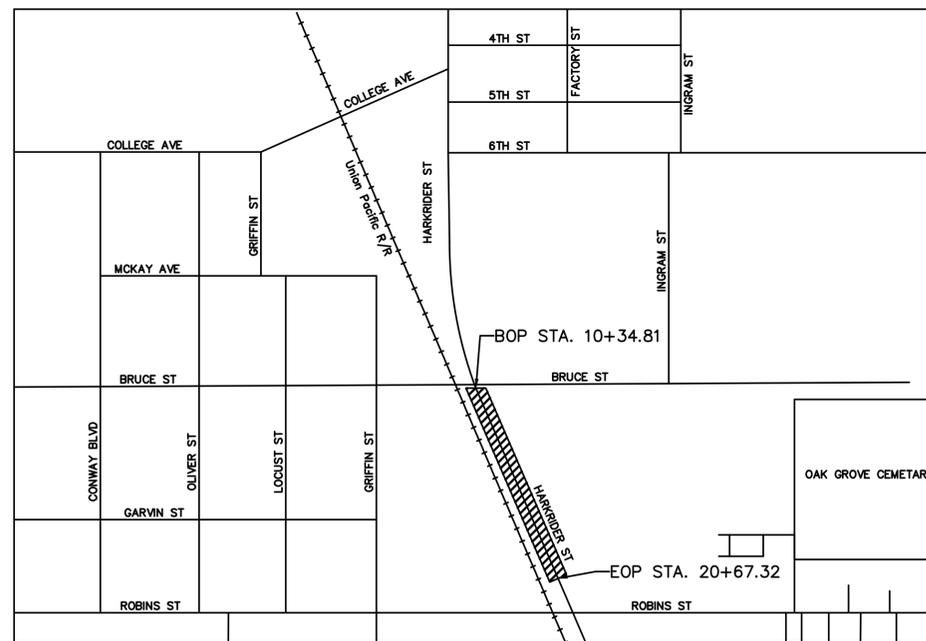
ARK. HIGHWAY DIST. 8

DESIGN TRAFFIC DATA

| | |
|-------------------------------|--------|
| DESIGN YEAR..... | 2021 |
| 2019 ADT..... | 20000 |
| 2041 ADT..... | 25000 |
| DIRECTIONAL DISTRIBUTION..... | 0.60 |
| TRUCKS..... | 3% |
| DESIGN SPEED..... | 35 MPH |

NOT TO SCALE

T 3 N



R 10 W

100% DESIGN
AUGUST 2021

HARKRIDER ST. SAFE ROUTES TO SCHOOL SIDEWALK

| | BEGIN PROJECT | MID-POINT PROJECT | END PROJECT |
|-----------|------------------|-------------------|------------------|
| LATITUDE | N 35° 04' 50.19" | N 35° 04' 45.43" | N 35° 04' 40.68" |
| LONGITUDE | W 92° 26' 10.65" | W 92° 26' 08.48" | W 92° 26' 06.14" |

GROSS LENGTH OF PROJECT..... 1032.51 FT. OR 0.20 MILES



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2 INDEX OF SHEETS & GENERAL NOTES



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ROADWAY STANDARD DRAWINGS

| DRWG. NO. | TITLE | DATE |
|-----------|--|----------|
| CG-1 | CURBING DETAILS | 11-29-07 |
| DR-1 | DETAILS FOR DRIVEWAYS & ISLANDS | 11-07-19 |
| FES-1 | FLARED END SECTION | 10-18-96 |
| FES-2 | FLARED END SECTION | 10-18-96 |
| FPC-9E | DETAILS OF DROP INLETS (TYPE C) | 11-16-01 |
| FPC-9M | DETAILS OF DROP INLET (TYPE MO) | 08-22-02 |
| PCC-1 | CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING | 02-27-14 |
| PM-1 | PAVEMENT MARKING DETAILS | 02-27-20 |
| SI-1 | DETAILS OF SPECIAL ITEMS | 10-25-18 |
| TC-1 | STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION | 11-07-19 |
| TC-2 | STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION | 11-07-19 |
| TC-3 | STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION | 02-27-20 |
| TEC-1 | TEMPORARY EROSION CONTROL DEVICES | 11-16-17 |
| WR-1 | WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS | 11-10-05 |

GENERAL NOTES:

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPLIANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO ENDURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
8. THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THIS PROJECT, AND IN NO WAY IS IT INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE AS APPROVED BY THE RESIDENT ENGINEER.
9. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
11. THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.

GENERAL EROSION CONTROL NOTES

1. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AND CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DIRECTED BY PERMITTING AGENCY AND OWNER OR AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
2. PERMIT FOR ANY CONSTRUCTION ACTIVITY MUST BE MAINTAINED ON SITE AT ALL TIMES.
3. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
4. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
5. ALL WASH WATER SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
6. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
7. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
8. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
9. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
10. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
11. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
12. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
13. CONTRACTOR SHALL DESIGNATE / IDENTIFY AREAS INSIDE THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.
14. ALL BMP'S SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED BY A MINIMUM OF 80% GRASS COVERAGE.
15. ALL DEWATERING ACTIVITIES SHALL CONFORM TO ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. DISCHARGED WATER MUST BE PROPERLY TREATED BEFORE RELEASING FROM THE SITE.

BMP MAINTENANCE

- THE CONTRACTOR SHALL IMPLEMENT ALL MEASURES SHOWN ON THE EROSION CONTROL PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) TO THE FULLEST EXTENT PRACTICAL. THE CONTRACTOR SHALL HAVE CHECKED ALL SEDIMENT AND EROSION CONTROL MEASURES BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS OR EVERY FOURTEEN (14) DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT EXCEEDING 0.25". ALL SITE BMP'S SHALL BE MAINTAINED IN A FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE HAS OCCURRED. ALL SITE BMP'S SHALL BE REPAIRED AND / OR CLEANED IN ACCORDANCE WITH THE FOLLOWING:
1. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION ENTRANCE(S) IN A SUCH A CONDITION THAT WILL PREVENT MUD BEING TRACKED INTO ANY PUBLIC RIGHT OF WAY(S). THIS MAY REQUIRE PERIODIC TOP DRESSING OF ALL CONSTRUCTION ENTRANCE(S) AS NECESSARY.
 2. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION. THIS MAY REQUIRE PERIODIC TOP DRESSING OF ALL PARKING AND STORAGE AREA(S) AS NECESSARY.
 3. CONTRACTOR SHALL REPAIR ALL SILT FENCING TO THEIR ORIGINAL CONDITION IF DAMAGED; SEDIMENT SHALL BE REMOVED FROM ALONG THE FENCE WHEN SEDIMENT REACHES NO MORE THAN ONE-HALF THE HEIGHT OF THE SILT FENCE.
 4. INLET BMP'S SHALL BE REPAIRED AND/OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING. CONTRACTOR SHALL REPLACE IF THEY SHOW SIGNS OF DETERIORATION.
 5. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. CONTRACTOR SHALL FERTILIZE AND RESEED THESE AREAS AS NECESSARY.
 6. IF THE GRAVEL FOUND IN ANY SEDIMENT FILTER(S) BECOME CLOGGED WITH SEDIMENT, CONTRACTOR SHALL PULL THE GRAVEL AWAY, CLEAN THE GRAVEL, AND REPLACE IN THE SEDIMENT FILTER(S).
 7. OUTFALL STRUCTURES IN SEDIMENT BASINS SHALL BE KEPT IN OPERATIONAL CONDITIONS AT ALL TIMES AND DURING ALL PHASES OF CONSTRUCTION. ANY SEDIMENT FOUND IN THE BASIN SHALL NOT EXCEED THE DEPTH OF THE CLEAN-OUT LEVEL (**SITE SPECIFIC**).
 8. THE EMBANKMENT OF THE SEDIMENT BASIN(S) AND/OR TEMPORARY SEDIMENT TRAPS AND THEIR OUTFALL STRUCTURES SHALL BE CHECKED REGULARLY TO ENSURE THEY ARE STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED DUE TO EROSION OR CONSTRUCTION (**SITE SPECIFIC**).
 9. ALL SEDIMENT FOUND IN THE TEMPORARY SEDIMENT TRAP SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS REACHED NO MORE THAN ONE-HALF THE DEPTH OF THE TEMPORARY SEDIMENT TRAP (**SITE SPECIFIC**).

SEQUENCE OF CONSTRUCTION

1. INSTALL PERIMETER EROSION CONTROL MEASURES AND TEMPORARY CONSTRUCTION ENTRANCES/CONCRETE WASHOUT.
2. EXCAVATION AND EMBANKMENT TO FORM THE PAVEMENT OR GRADED AREAS.
3. INSTALL STORM SEWER (ADJUST EXISTING SEDIMENT BARRIERS AS NECESSARY TO MAINTAIN SEDIMENT CONTROL).
4. INSTALL UNDERGROUND UTILITIES (ADJUST EXISTING SEDIMENT BARRIERS AS NECESSARY TO MAINTAIN SEDIMENT CONTROL); ADDITIONAL SEDIMENT BARRIERS SHALL BE UTILIZED AS REQUIRED TO BOUND THE DOWN SLOPE SIDE OF UTILITY CONSTRUCTION AND SOIL STOCKPILES.
5. FINAL GRADING (SEDIMENT BARRIERS SHALL BE MAINTAINED DOWN SLOPE FROM DISTURBED SOIL DURING THIS OPERATION).
6. INSTALL PAVING.
7. COMPLETION OF ONSITE STABILIZATION.
8. REMOVE PERIMETER EROSION CONTROL MEASURES.

GENERAL GRADING/DRAINAGE NOTES

1. INFORMATION PERTAINING TO UNDER GROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD LOCATIONS WHEN POSSIBLE, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS IN ADVANCE OF MACHINE TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED ON THESE PLANS OR 18" WHICH EVER IS LESS, CONTACT THE ENGINEER AND THE OWNER / DEVELOPER PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OR REMOVAL OF EXISTING UNDERGROUND UTILITIES SHOWN OR NOT SHOWN AT NO ADDITIONAL COST TO THE OWNER.
3. ALL STRUCTURES LOCATED WITHIN STATE RIGHT-OF-WAY OR OTHERWISE NOTED ON THESE PLANS SHALL BE CONSTRUCTED PER STATE DOT STANDARDS. IF STRUCTURE(S) ARE NOT PROTOTYPICAL OR CONSTRUCTION CANNOT BE ACHIEVED, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO McCLELLAND CONSULTING ENGINEERS, INC. FOR REVIEW AND APPROVAL.
4. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES ON ADJUSTING EXISTING UTILITY LINE AS REQUIRED BY CUT AND FILL AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF SHEETING, SHORING, BRACING, AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET ALL OSHA, FEDERAL, STATE AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THESE DRAWINGS.
6. WHERE THE WORD "PIPE" IS USED, CONTRACTOR SHALL HAVE THE OPTION OF BIDDING PIPE WITH A SMOOTH INTERIOR HAVING AN "N" VALUE OF 0.013 OR LESS.
7. ALL DRAINAGE STRUCTURES SHALL BE CAST-IN-PLACE (UNLESS OTHERWISE SPECIFIED OR APPROVED BY THE ENGINEER OF RECORD).
8. RETAINING WALL(S) SHALL BE CONSTRUCTED TO EXTEND A MINIMUM OF 6 INCHES ABOVE THE TOP OF FINISHED GRADE. CONTRACTOR SHALL REFER TO THE RETAINING WALL PLAN(S) FOR CONSTRUCTION AND DESIGN SPECIFICATIONS. CONTRACTOR SHALL NOTIFY THE ENGINEER IF RETAINING WALL PLANS DIFFER FROM THIS.
9. ALL DISTURBED AREAS AND SLOPES SHALL BE GRADED SMOOTH AND (4") OF TOP SOIL APPLIED. THE AREA SHALL BE SEEDED AND WATERED UNTIL HARDY GRASS GROWTH HAS BEEN ESTABLISHED (SEE LANDSCAPING GENERAL NOTES FOR SEEDING MIX & SPECIFICATIONS).
10. STORM SEWER TRENCHING AND BEDDING SHALL BE INSTALLED PER PCC-1.
11. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL PRACTICES IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND CONSTRUCTION SCHEDULE. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR IMPLEMENTING THE SWPPP.
12. REMOVE GOOD TOPSOIL FROM AREAS TO BE GRADED AND FILLED, AND PRESERVE IT FOR USE IN FINISHING THE GRADING OF ALL CRITICAL AREAS.
13. SCARIFY AREAS TO RECEIVE TOPSOIL TO A MINIMUM DEPTH OF 3 INCHES BEFORE PAVING TOPSOIL PER OWNER / DEVELOPER, CITY, AND / OR DOT STANDARDS AND SPECIFICATIONS.
14. CLEAR AND GRUB AREAS TO BE FILLED, REMOVE TREES, VEGETATION, ROOTS, DEBRIS, AND OTHER MATERIALS THAT WOULD AFFECT THE STABILITY OF THE FILL.
15. ENSURE THAT FILL MATERIAL IS FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER MATERIALS INAPPROPRIATE FOR CONSTRUCTING STABLE FILLS.
16. DO NOT INCORPORATE FROZEN MATERIAL OR SOFT, MUCK, OR HIGHLY COMPRESSIBLE MATERIALS INTO FILL SLOPES.
17. KEEP DIVERSIONS AND OTHER WATER CONVEYANCE MEASURES FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
18. PERMANENTLY STABILIZE ALL GRADED AREAS AFTER FINAL GRADING IS COMPLETED ON EACH AREA OF THE GRADING PLAN. APPLY TEMPORARY STABILIZATION MEASURES ON ALL GRADED AREAS WHEN WORK IS TO BE INTERRUPTED OR DELAYED (SEE EROSION CONTROL PLAN(S)).
19. CONTRACTOR SHALL MATCH TOP OF PROPOSED DRAINAGE STRUCTURES WITH PROPOSED GRADES. IF A DISCREPANCY OCCURS BETWEEN PROPOSED GRADES AND PROPOSED STRUCTURE TOPS, THE GRADING SHALL GOVERN. IF THE DISCREPANCY IS MORE THAN 4 INCHES, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD.
20. ALL UTILITIES, INCLUDING STORM SEWER, SHOWN WITHIN PUBLIC EASEMENTS OR RIGHT-OF-WAYS SHALL BE CONSTRUCTED TO THE GOVERNING AGENCY'S SPECIFICATIONS. ALL OTHER UTILITIES SHALL BE CONSTRUCTED TO THE CLIENT'S OR THE GOVERNING AGENCY'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT. IF THERE IS A QUESTION AS TO WHICH SPECIFICATIONS SHOULD APPLY, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD.
21. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
22. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY (STATE ONE CALL SYSTEM) AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
23. SITE GRADING SHALL NOT PROCEED UNTIL PERIMETER EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

GENERAL DEMOLITION NOTES

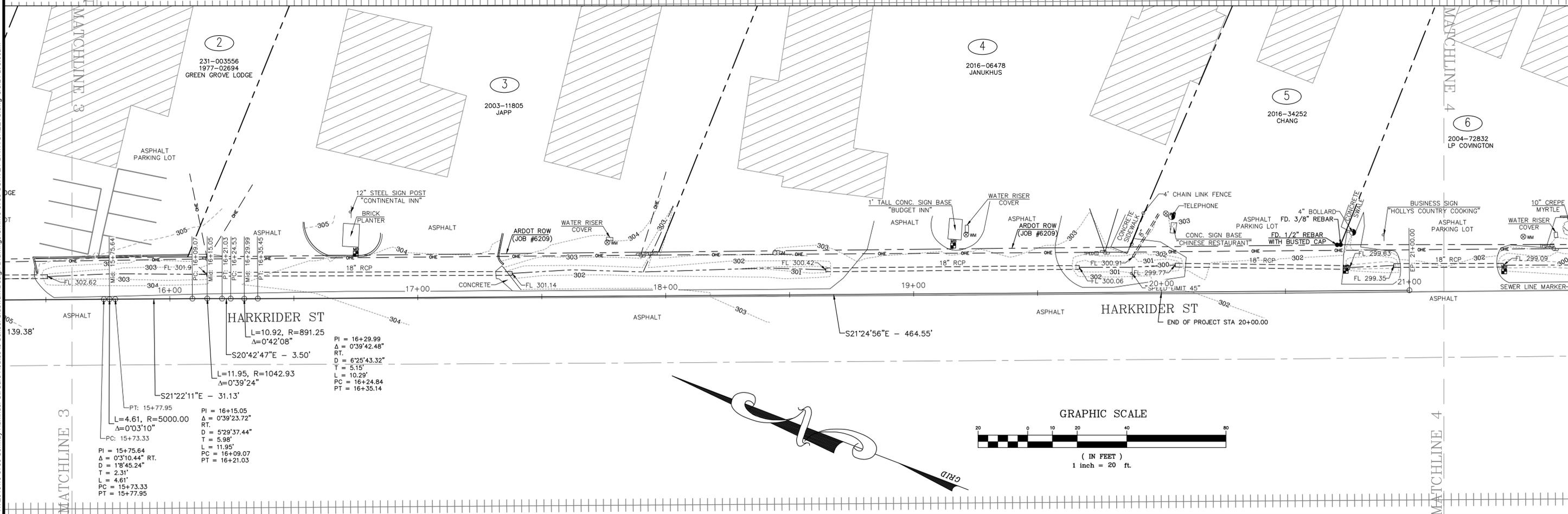
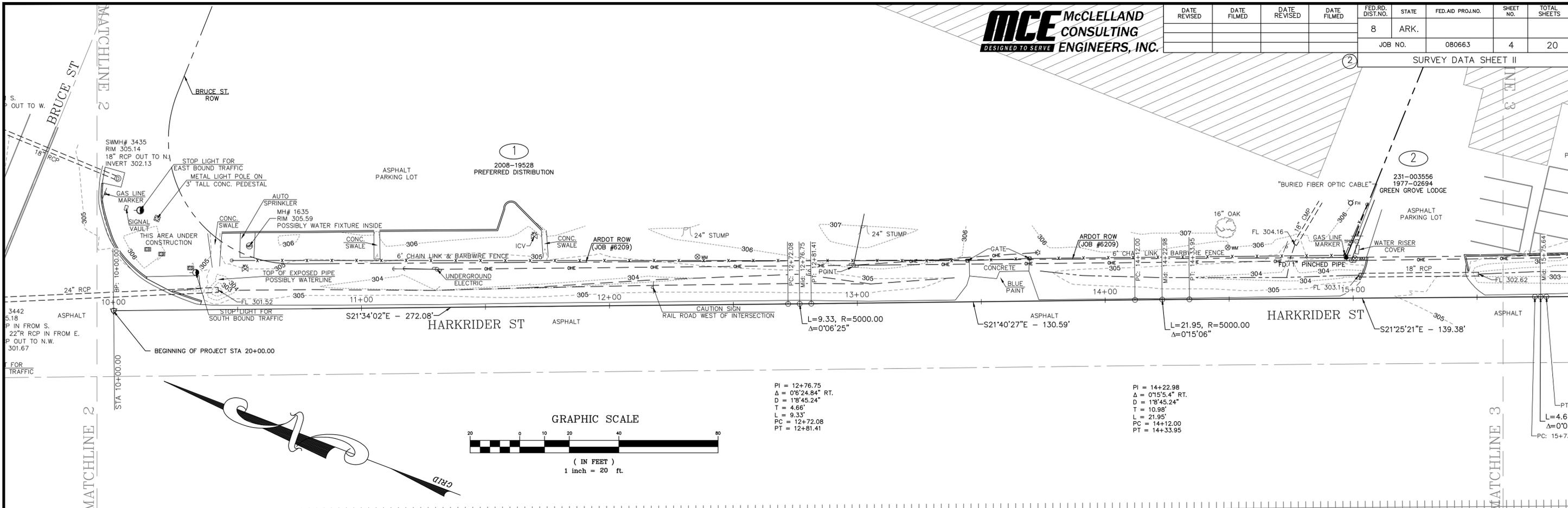
1. ALL AREAS WITHIN THE LIMITS OF DISTURBANCE TO BE DEMOLISHED AND REMOVED UNLESS OTHERWISE NOTED ON THIS PLAN.
2. THE CONTRACTOR IS REQUIRED TO NOTIFY THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO EXCAVATING IN ORDER THAT UNDERGROUND UTILITIES IN THE AREA CAN BE LOCATED.
3. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE TOPOGRAPHICAL SURVEY FOR REFERENCE. THE LOCATION OF KNOWN SUBSURFACE STRUCTURES, PIPES, POWER, GAS, PHONE, ETC. ARE SHOWN ON THE PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INFORMATION AND SATISFYING HIMSELF TO AS TO THE LOCATION OF THE FOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE OWNER OF THE UTILITY OR STRUCTURE. THE COST OF SUCH REPAIRS OR RELOCATIONS NECESSARY SHALL BE BORNE BY THE CONTRACTOR.
4. CONTRACTOR SHALL DISPOSE OF ALL MATERIALS RESULTING FROM DEMOLITION IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS THAT GOVERN SUCH OPERATIONS.
5. ALL ABANDONED SERVICE LINES SHALL BE DISCONNECTED AND CAPPED PER UTILITY COMPANIES REQUIREMENTS. COORDINATE ALL DISCONNECTIONS WITH UTILITY COMPANIES.
6. CONTRACTOR IS TO BRING TO THE ATTENTION OF THE CIVIL ENGINEER ANY AREA OF DEMOLITION IN QUESTION BEFORE PROCEEDING WITH WORK.
7. CONTRACTOR TO REVIEW AND COORDINATE DEMOLITION LIMITS WITH PROPOSED CONSTRUCTION PLANS.
8. EXISTING CLEAN TOPSOIL TO BE STOCKPILED FOR FUTURE USE ON THIS SITE AND IS TO BE COORDINATED BY THE GENERAL CONTRACTOR.
9. ALL EXISTING WATER, GAS AND / OR ELECTRICAL METERS AS NOTED TO BE REMOVED WITHIN THE PROJECT AREA ARE TO BE RETURNED TO THE APPROPRIATE AUTHORITY.

GENERAL SITE NOTES

1. CONTRACTOR SHALL RETAIN A FULL SET OF LATEST APPROVED CONSTRUCTION PLANS ON SITE DURING CONSTRUCTION ACTIVITIES.
2. CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE SITE WORK SPECIFICATIONS PROVIDED BY McCLELLAND CONSULTING ENGINEERS, INC. OR AS SPECIFIED BY THE OWNER'S RESIDENT REPRESENTATIVE.
3. ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF PROPERTY BOUNDARIES SHALL BE PERFORMED IN COOPERATION WITH AND IN ACCORDANCE WITH REGULATIONS OF THE AUTHORITIES CONCERNED.
4. PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND RESIDENTS ALONG AND ADJACENT TO HIGHWAYS IN THE CONSTRUCTION AREA IN AN ADEQUATE AND SATISFACTORY MANNER IN ACCORDANCE WITH THE ARDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
5. UNLESS OTHERWISE NOTED, ALL CURBING INDICATED SHALL BE 8.5" CONCRETE CURB AND GUTTER.
6. ALL DIMENSIONS, UNLESS OTHERWISE NOTED, ARE FROM THE FACE OF CURB, FACE OF BUILDING, OR CENTERLINE OF STRIPE.
7. CONTRACTOR SHALL REFER TO PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT DETAILS FOR PAVING DESIGN AND PROPER MATERIALS.
8. ALL RADII FOR CURBS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
9. ALL RADII ON CURBS ARE 2'-0" UNLESS OTHERWISE NOTED.
10. GENERAL CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COSTS.
11. ALL WORK TO BE DONE IN STRICT ACCORDANCE WITH THE OWNER'S STANDARD SITE SPECIFICATIONS.

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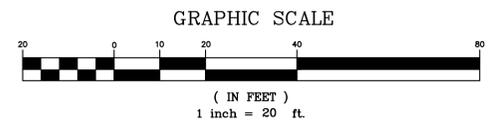
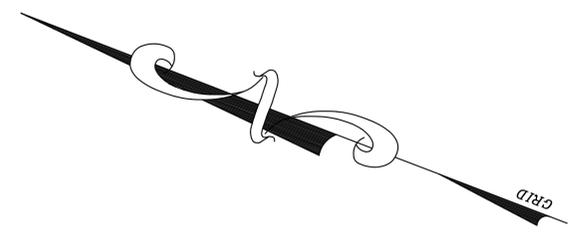
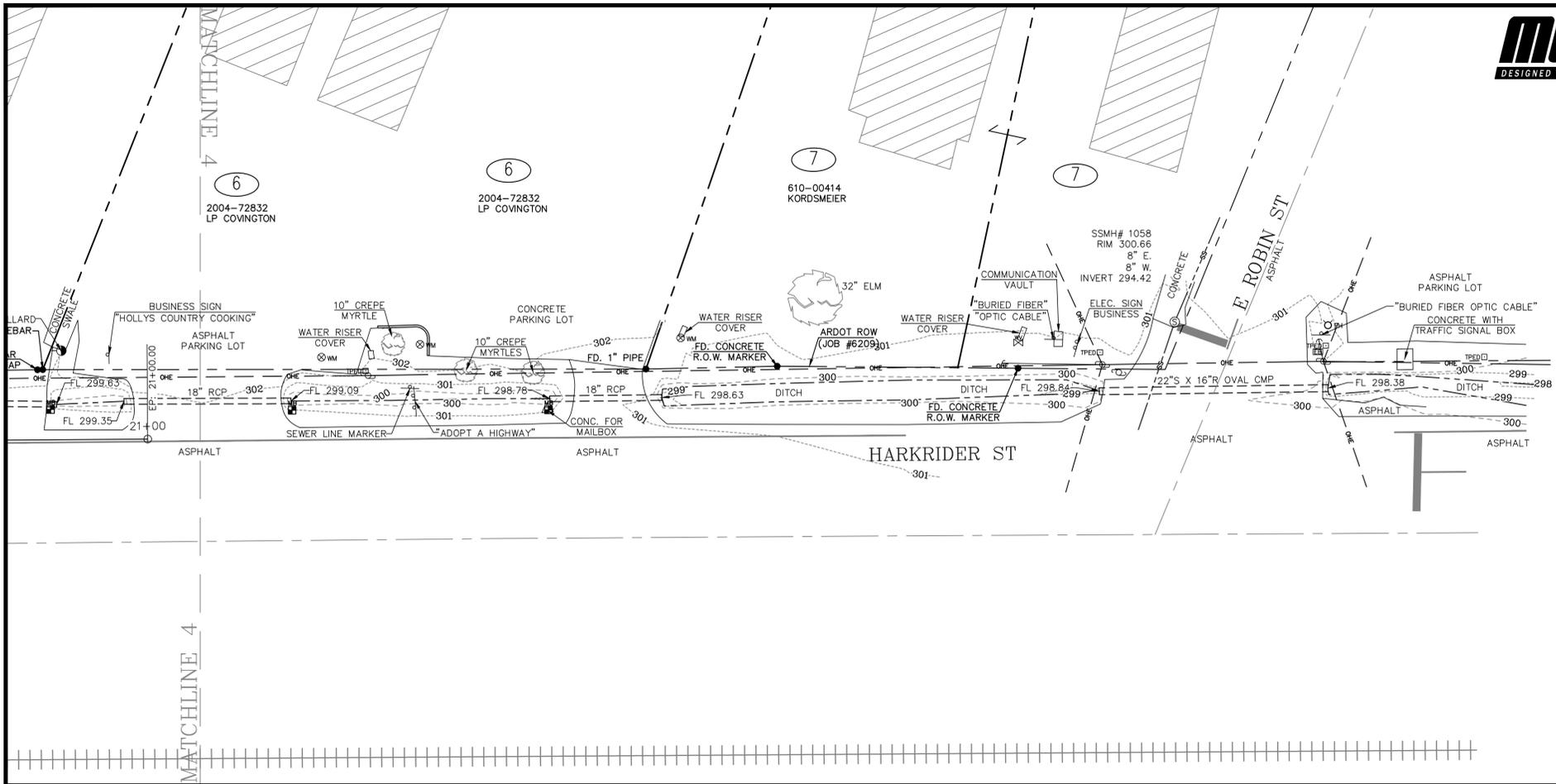
SURVEY DATA SHEET II



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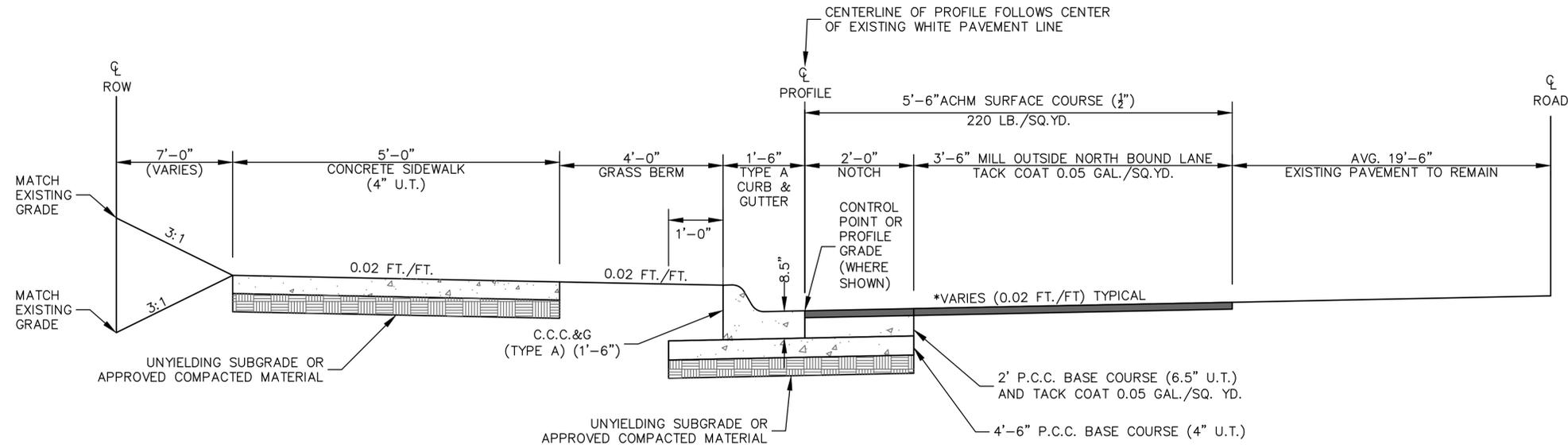
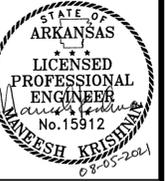
2 SURVEY DATA SHEET III



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② TYPICAL SECTIONS OF IMPROVEMENT

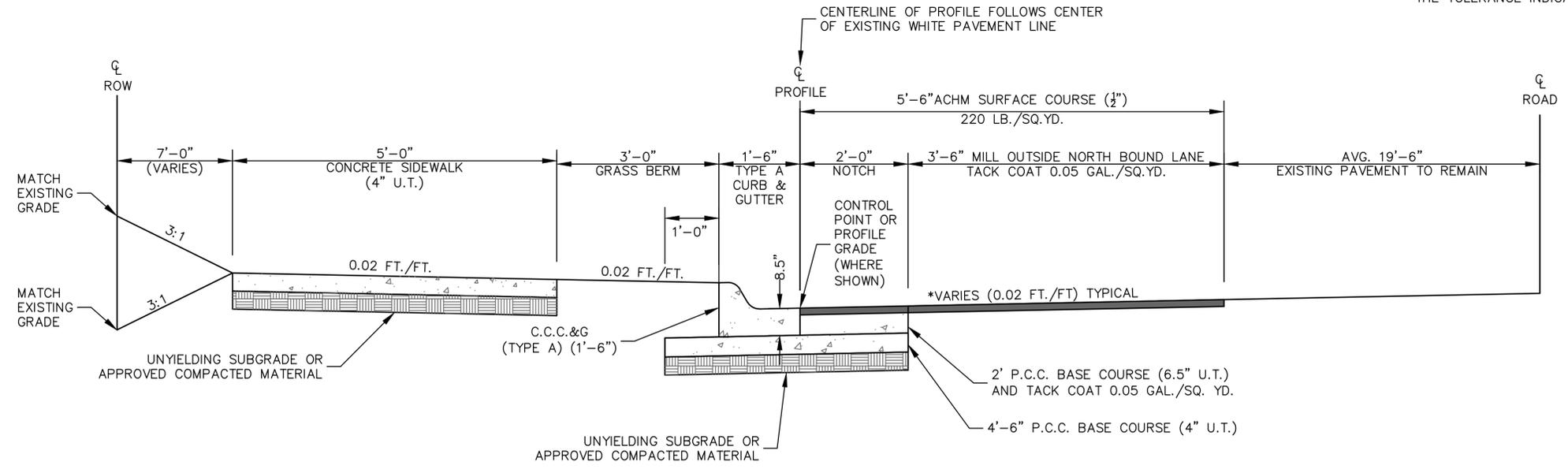


TYPICAL SECTION
CONCRETE SIDEWALK HARKRIDER ST.
(4' GRASS BERM)
STA.10+34.81 TO STA.18+05.10
N.T.S

NOTE:
STA.18+05.10 TO STA. 18+15.10 TRANSITION FROM CONCRETE SIDEWALK (4' GRASS BERM) TO CONCRETE SIDEWALK (3' GRASS BERM)

NOTES:
REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACE IN EXCESS OF THE TOLERANCE INDICATED.

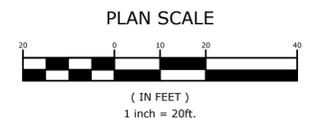
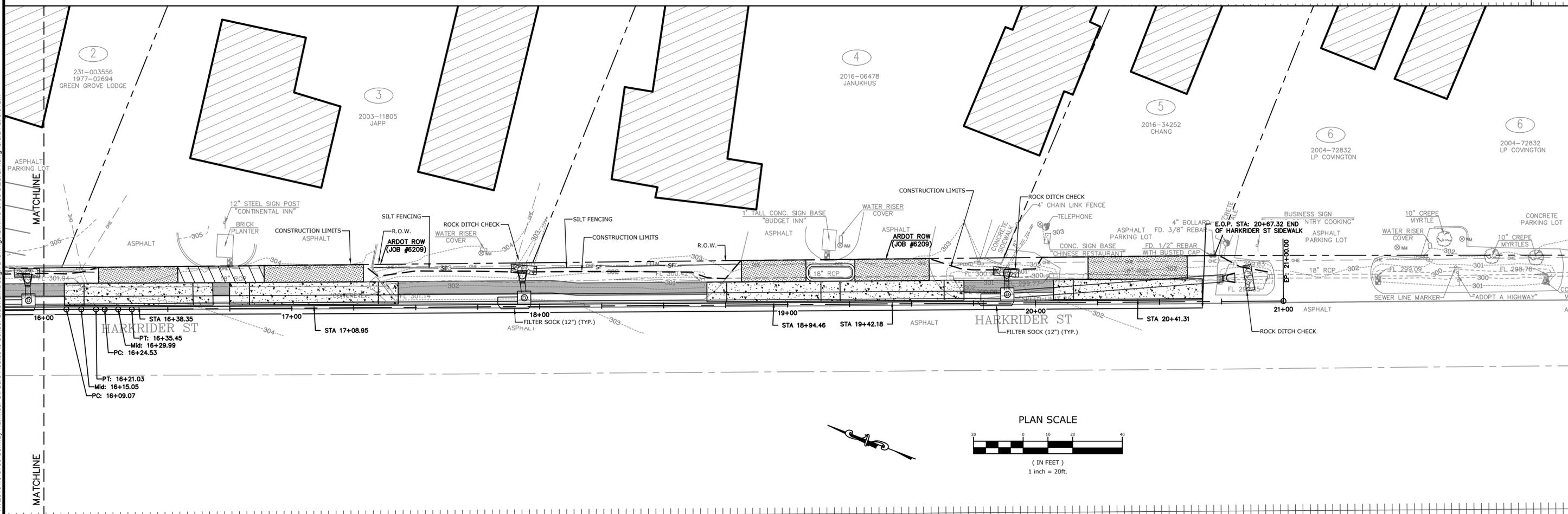
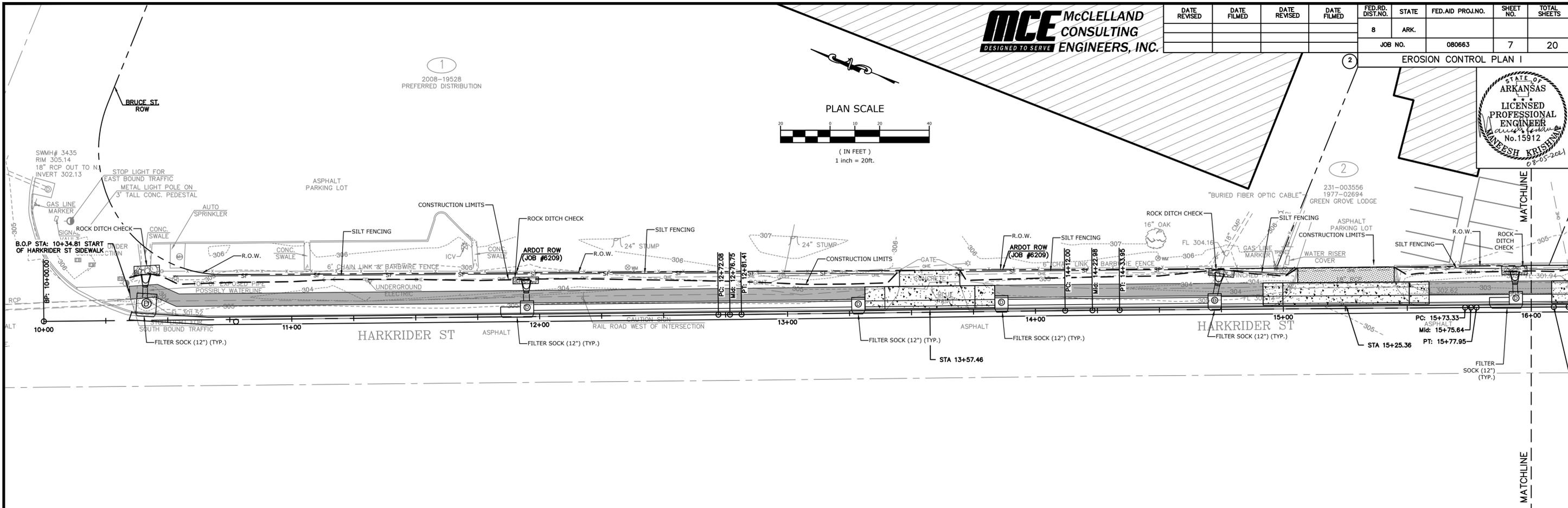
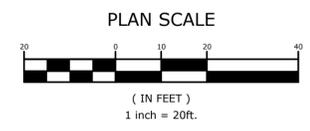


TYPICAL SECTION
CONCRETE SIDEWALK HARKRIDER ST.
(3' GRASS BERM)
STA.18+15.11 TO STA.20+67.32
N.T.S

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EROSION CONTROL PLAN I



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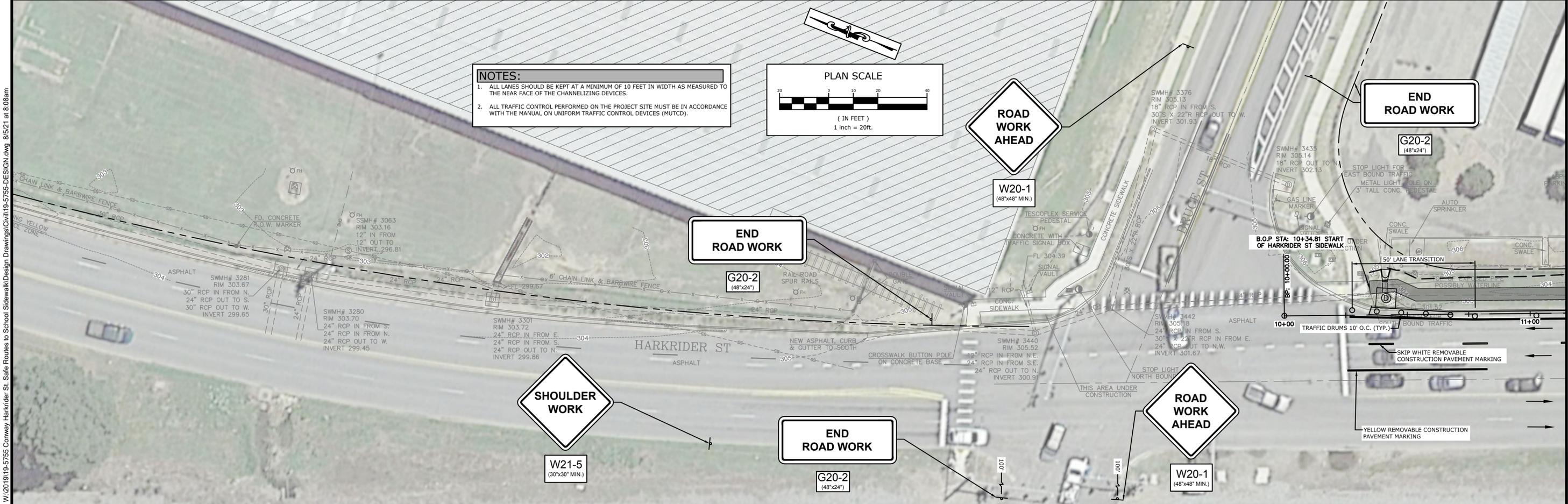
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2 MAINTENANCE OF TRAFFIC PLAN I



- TRAFFIC CONTROL NOTES:**
- ALL REFERENCES TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REFERS TO THE CURRENT EDITION (2009 EDITION) AND/OR ITS LATEST VERSION.
 - NOTHING IN THIS PLAN IS INTENDED TO SUPERSEDE OR RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING THE APPROPRIATE TRAFFIC DEVICES IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS.
 - SIGNS SHOWN ON THIS PLAN ARE TO WARN TRAFFIC ABOUT THE CONSTRUCTION. OTHER TRAFFIC CONTROL DEVICES MAY BE REQUIRED DURING VARIOUS PHASE OF CONSTRUCTION.
 - THE TRAFFIC CONTROL PLANS SHOWN ARE TO BE IMPLEMENTED DURING CONSTRUCTION WORKING HOURS ONLY. DURING NON-WORKING HOURS, ALL STREET SHALL BE OPENED TO TRAFFIC. ALL APPLICABLE WARNING SIGNS SHALL BE USED TO WARN THE TRAFFIC ABOUT THE CONSTRUCTION. IMPLEMENTATION OF ANY SIGNS OR OTHER TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - SEE PAGE 6F-4 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR HEIGHT AND LATERAL LOCATIONS OF SIGNS.
 - CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE CITY OF CONWAY A MINIMUM OF 24 HOURS PRIOR TO COMMENCING CONSTRUCTION OR IMPLEMENTING A TRAFFIC CONTROL PLAN. ALL TRAFFIC CONTROL DEVICES MUST BE IN PLACE BEFORE CONSTRUCTION ACTIVITY BEGINS.
 - CONTRACTOR SHALL CONTACT THE FIRE DEPARTMENT PRIOR TO COMMENCING WORK AND SHALL PROVIDE A PROPOSED SCHEDULE OF WORK AND AID IN THE COORDINATION OF ROUTING EMERGENCY VEHICLES AROUND THE CONSTRUCTION AREA.
 - SIZE OF ALL SIGNS SHALL COMPLY WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - ALL TRAFFIC CONTROL DEVICES AND THEIR INSTALLATIONS SHALL MEET THE STANDARDS PRESCRIBED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL COMPLY WITH THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION STANDARD SPECIFICATIONS FOR THE HIGHWAY CONSTRUCTION, SECTION 604 - TRAFFIC CONTROL DEVICES IN CONSTRUCTION AREAS.
 - ACCESS TO OCCUPIED ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
 - CONTRACTOR SHALL USE PLASTIC DRUMS WITH TYPE "C" WARNING LIGHTS TO SEPARATE TRAFFIC FROM THE CONSTRUCTION AREA.
 - CONTRACTOR SHALL COVER ALL EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SIGNS OR DEVICES DURING CONSTRUCTION AND THEY SHALL REMAIN COVERED DURING CONSTRUCTION AND UNTIL SUCH TIME THAT NO CONFLICT EXISTS.
 - DURING CONSTRUCTION (WORKING HOURS), A MINIMUM OF ONE TEN (10) FOOT LANE OF TRAFFIC SHALL REMAIN OPEN TO TRAFFIC WHEN THE LANE CLOSURE MAINTENANCE OF TRAFFIC PLAN IS IMPLEMENTED.
 - ONLY ONE PHASE OF THE TRAFFIC CONTROL PLAN CAN BE ACTIVATED AT ANY ONE TIME, (I.E. CONSTRUCTION CAN OCCUR ONLY ON ONE SIDE OF THE ROADWAY AT A TIME).
 - ALL TEMPORARY OR PERMANENT TRAVELING SURFACES SHALL BE INSPECTED DAILY BY THE CONTRACTOR (INCLUDING WEEKENDS) AND NECESSARY PATCHING OR FINISHING PERFORMED.
 - CHANNELIZING SHALL BE REMOVED TO THE EDGE OF PAVEMENT AT THE END OF EACH WORK DAY. NO CLOSURE SHALL BE IN EFFECT FROM 6:00 P.M. TO 7:00 A.M. UNLESS APPROVED BY OWNER.
 - WORK WITHIN THE ROADWAY SHALL BE CONDUCTED BETWEEN 7:00 A.M. AND 6:00 P.M. (MONDAY THRU FRIDAY, EXCLUDING HOLIDAYS) UNLESS APPROVED BY OWNER. THE ROADWAY SHALL BE COMPLETELY OPEN TO TRAFFIC AT ALL OTHER TIMES AND ALL NON-APPROPRIATE SIGNS SHALL BE COVERED OR REMOVED.
 - CENTERLINE LINES SHOULD BE PLACED, REPLACED, OR DELINEATED WHERE APPROPRIATED BEFORE THE ROADWAY IS OPEN TO TRAFFIC.
 - CONTRACTORS SHALL CALL ALL APPROPRIATE AGENCIES BEFORE CLOSING ANY ROADWAYS.
 - AT NO TIME SHALL ONE LANE SECTION BE LEFT OPEN UNATTENDED. WHERE TWO OR MORE FLAGGER'S ARE REQUIRED, AND IN CIRCUMSTANCES WHERE ONLY ONE LANE OF TRAFFIC IS OPEN AND THERE IS NO CLEAR LINE OF SIGHT FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, THE CONTRACTOR SHALL PROVIDE RADIO COMMUNICATION OR OTHER APPROPRIATE MEANS OF ESTABLISHING CONTROL OF TRAFFIC.
 - WORK WITHIN THE ROADWAYS DURING DIFFERENT PHASES OF CONSTRUCTION SHALL NOT BE ACTIVE AT THE SAME TIME.
 - THE APPROPRIATE TRAFFIC CONTROL SHALL BE INSTALLED AT THE INCEPTION OF EACH STAGE OF CONSTRUCTION AND SHALL BE PROPERLY MAINTAINED AND/OR OPERATED DURING THE TIME SUCH SPECIAL CONDITIONS EXISTS. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER.
 - ANY REQUIRED TRENCHING OR HOLES THAT OCCUR IN THE ROADWAY SHALL BE COMPLETELY COVERED AND PROTECTED DURING NON-WORKING HOURS.

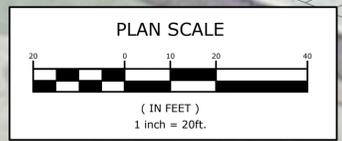
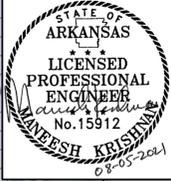
- SEQUENCE OF CONSTRUCTION:**
- INSTALL ADVANCE WARNING SIGNS
 - *REMOVE EXISTING PAVEMENT MARKINGS AND INSTALL PROPOSED REMOVABLE CONSTRUCTION PAVEMENT MARKINGS ALONG WITH TRAFFIC DRUMS AND SHIFT TRAFFIC
 - REMOVE EXISTING STORM DRAINAGE AND SPECIFIED STRUCTURES
 - SAWCUT DOWN CENTER OF EXISTING OUTSIDE LANE EDGE
 - CONSTRUCT STORM SEWER AND P.C.C. BASE LAYERS
 - CONSTRUCT CONCRETE CURB AND GUTTER, SIDEWALKS, AND DRIVEWAYS
 - *PERFORM COLD MILLING OF 5' OF THE OUTER LANE NEXT TO THE 2' NOTCH SAWCUT
 - *PLACE FINAL 2" LIFT OF ACHM SURFACE COURSE
 - PLACE FINAL STRIPING FOR THE PROJECT AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS
 - *NOTE: TO BE PERFORMED UTILIZING LANE CLOSURE DETAIL IN STANDARD DRAWINGS TC-1, TC-2, TC-3



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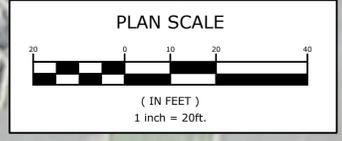
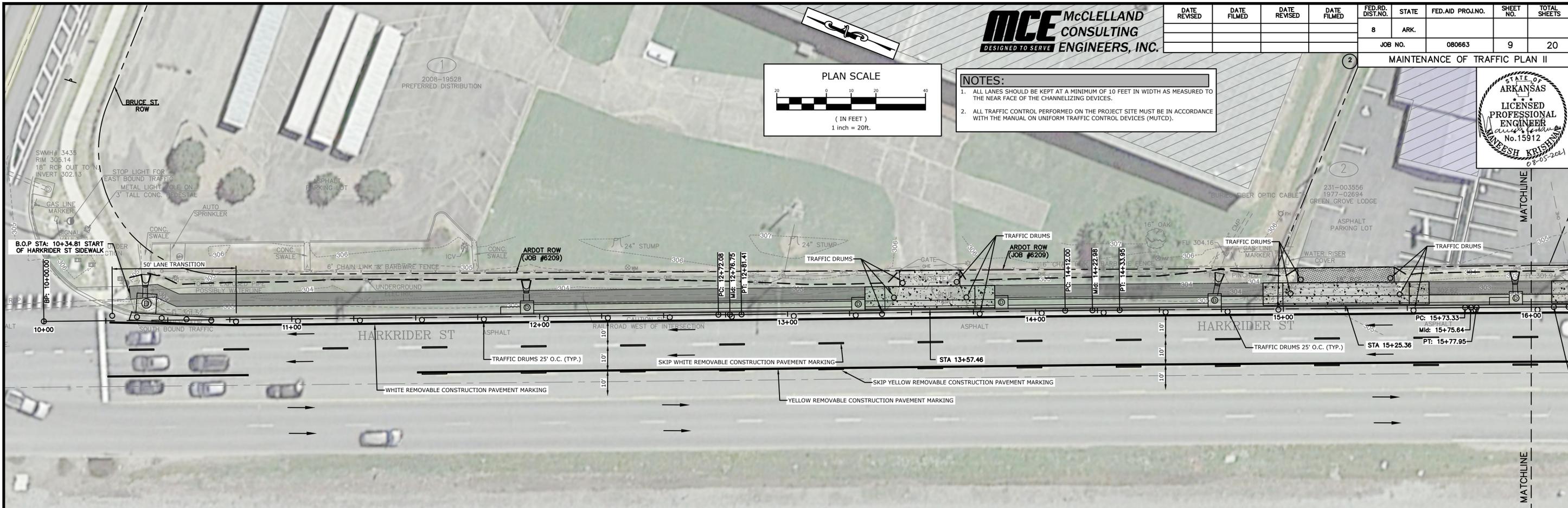
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| | | | | JOB NO. | 080663 | | | |

MAINTENANCE OF TRAFFIC PLAN II



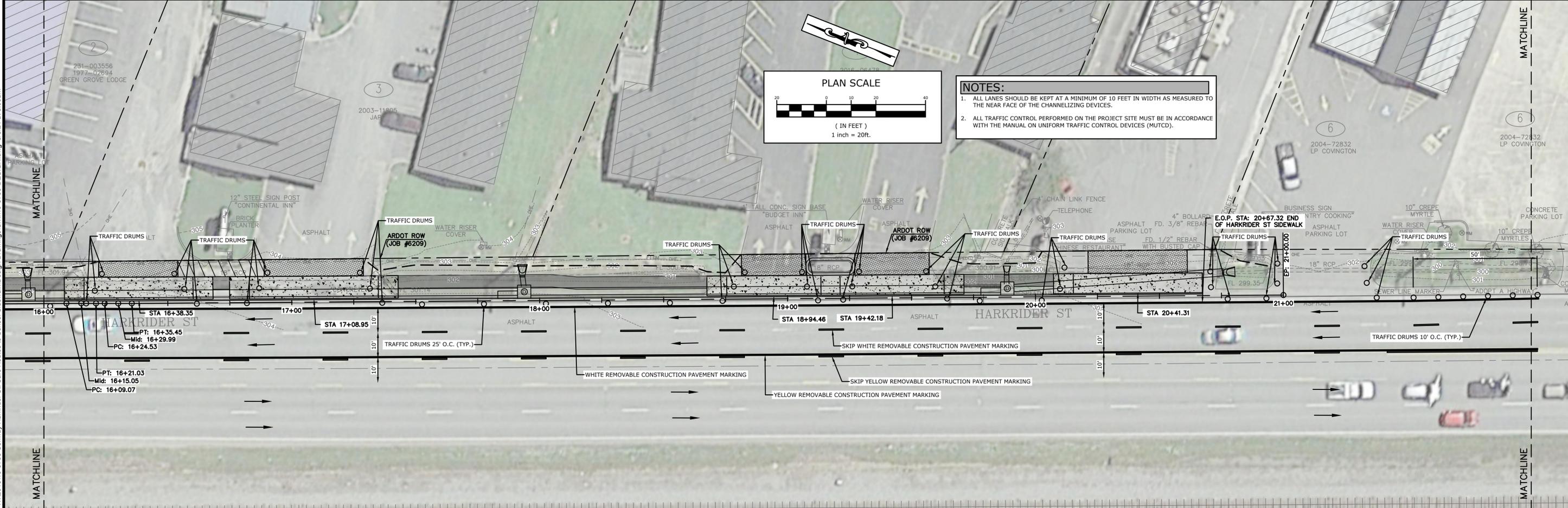
NOTES:

- ALL LANES SHOULD BE KEPT AT A MINIMUM OF 10 FEET IN WIDTH AS MEASURED TO THE NEAR FACE OF THE CHANNELIZING DEVICES.
- ALL TRAFFIC CONTROL PERFORMED ON THE PROJECT SITE MUST BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).



NOTES:

- ALL LANES SHOULD BE KEPT AT A MINIMUM OF 10 FEET IN WIDTH AS MEASURED TO THE NEAR FACE OF THE CHANNELIZING DEVICES.
- ALL TRAFFIC CONTROL PERFORMED ON THE PROJECT SITE MUST BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).



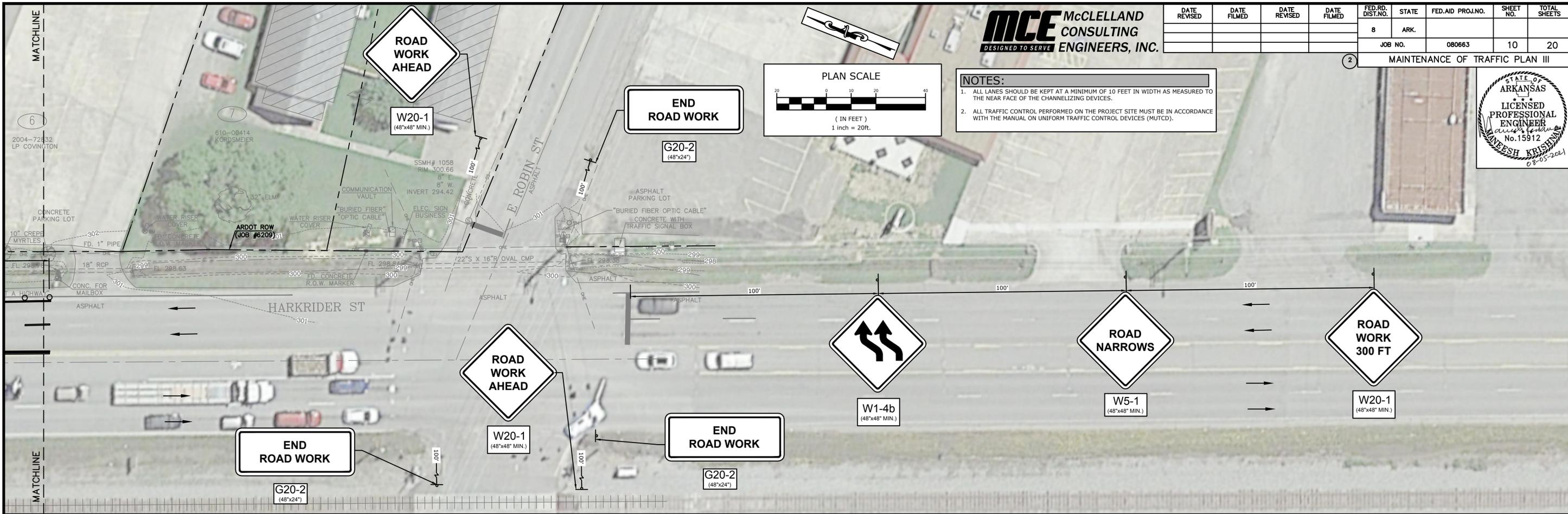
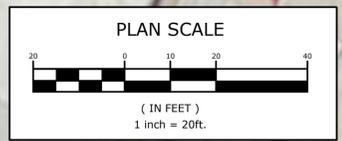
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| | | | | 8 | ARK. | | | |
| | | | | JOB NO. | | 080663 | 10 | 20 |

2 MAINTENANCE OF TRAFFIC PLAN III

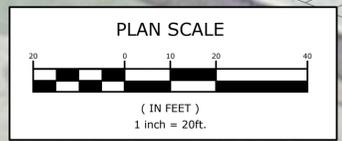


NOTES:
 1. ALL LANES SHOULD BE KEPT AT A MINIMUM OF 10 FEET IN WIDTH AS MEASURED TO THE NEAR FACE OF THE CHANNELIZING DEVICES.
 2. ALL TRAFFIC CONTROL PERFORMED ON THE PROJECT SITE MUST BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

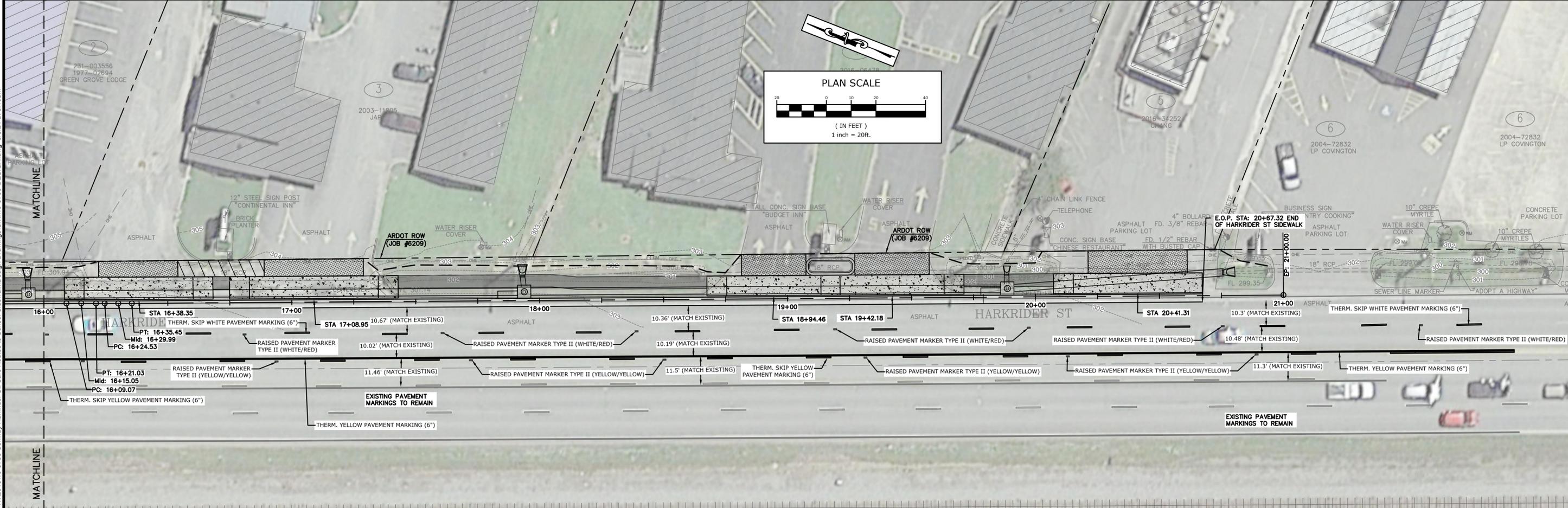
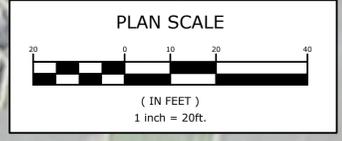
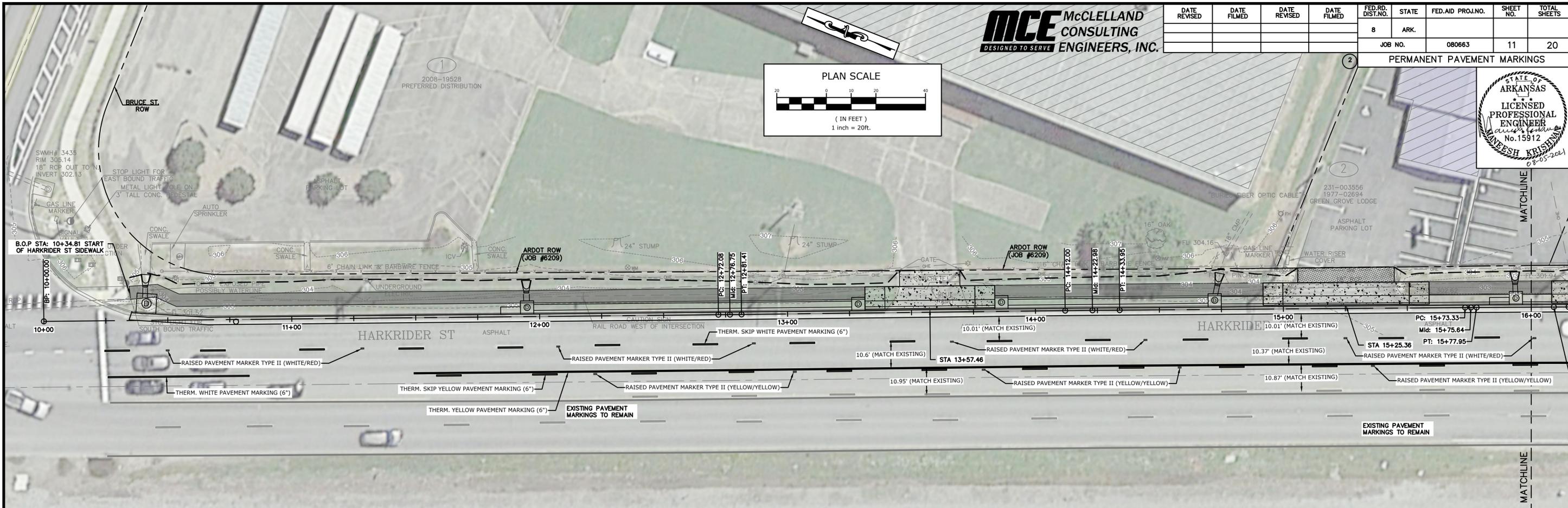


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PERMANENT PAVEMENT MARKINGS



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REMOVAL AND DISPOSAL OF ITEMS

| STATION | STATION | LOCATION | CURB AND GUTTER | CONCRETE DITCH PAVING | CONCRETE DRIVEWAYS | REMOVAL AND RELOCATION OF SIGNS |
|----------------|---------|----------------------|-----------------|-----------------------|--------------------|---------------------------------|
| | | | LIN. FT. | SQ. YD. | SQ. YD. | EACH |
| 10+41 | | LT. OF HARKRIDER ST. | | 8 | | |
| 11+31 | | LT. OF HARKRIDER ST. | | | | 1 |
| 12+17 | | LT. OF HARKRIDER ST. | | | | 1 |
| 13+45 | 13+69 | LT. OF HARKRIDER ST. | | | 16 | |
| 15+05 | | LT. OF HARKRIDER ST. | 10 | | | |
| 15+46 | | LT. OF HARKRIDER ST. | 7 | | | |
| 17+33 | | LT. OF HARKRIDER ST. | 5 | | 5 | |
| 19+88 | | LT. OF HARKRIDER ST. | | | | 1 |
| TOTALS: | | | 22 | 8 | 21 | 3 |

NOTE: THE QUANTITY SHOWN ABOVE FOR THE REMOVAL AND DISPOSAL OF GUARDRAIL SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ALL GUARDRAIL TERMINALS AND TERMINAL ANCHOR POSTS.

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

| STATION | DESCRIPTION | PIPE CULVERTS |
|---------------|---------------------------------------|---------------|
| | | EACH |
| 15+26 | 48LF OF 18" RCP LT. OF HARKRIDER ST. | 1 |
| 16+77 | 123LF OF 18" RCP LT. OF HARKRIDER ST. | 1 |
| 19+16 | 102LF OF 18" RCP LT. OF HARKRIDER ST. | 1 |
| 20+41 | 70LF OF 18" RCP LT. OF HARKRIDER ST. | 1 |
| TOTAL: | | 4 |

NOTE: QUANTITIES SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS AND FLARED END SECTIONS IF APPLICABLE.

EARTHWORK

| STATION | STATION | LOCATION / DESCRIPTION | UNCLASSIFIED EXCAVATION | COMPACTED EMBANKMENT |
|----------------|---------|------------------------|-------------------------|----------------------|
| | | | CU. YD. | CU. YD. |
| ENTIRE PROJECT | | HARKRIDER ST. | 302.12 | 366.08 |
| TOTALS: | | | 302.12 | 366.08 |

NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLAN QUANTITY ONLY.

NOTE: REMOVAL AND DISPOSAL OF ASPHALT DRIVEWAYS IS INCLUDED IN UNCLASSIFIED EXCAVATION.

CONCRETE COMBINATION CURB AND GUTTER

| STATION | STATION | LOCATION | TYPE A (1' 6") | GRASS BERM SOLID SODDING | SOLID SODDING FOR GRASS PATCH | TOTAL SOLID SODDING | WATER |
|---------------|---------|----------------------|----------------|--------------------------|-------------------------------|---------------------|-------------|
| | | | LIN. FT. | SQ. YD. | SQ. YD. | SQ. YD. | M. GAL. |
| 10+35 | 20+67 | LT. OF HARKRIDER ST. | 1032 | 276.15 | 25.90 | 302.05 | 3.81 |
| TOTAL: | | | 1032 | | | 302.05 | 3.81 |

BASIS OF ESTIMATE:

WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING

CONCRETE ISLAND

| STATION | LOCATION | CURB FACE TYPE | CONCRETE ISLAND | TYPE C (1' 6") | AGGREGATE BASE COURSE (CLASS 7) |
|---------------|------------------------------------|----------------|-----------------|----------------|---------------------------------|
| | | | SQ. YD. | LIN. FT. | TON |
| 19+17 | 42 LF OF CURB LT. OF HARKRIDER ST. | TYPE C | 7 | 42 | 4.07 |
| TOTAL: | | | 7 | 42 | 4 |

MAILBOXES

| LOCATION | MAILBOXES | MAILBOX SUPPORTS (SINGLE) |
|----------------|-----------|---------------------------|
| | EACH | EACH |
| ENTIRE PROJECT | 3 | 3 |
| TOTALS: | | |
| | 3 | 3 |

EROSION CONTROL

| STATION | STATION | LOCATION | PERMANENT EROSION CONTROL | | | | | TEMPORARY EROSION CONTROL | | | | | | |
|----------------|---------|----------------------|---------------------------|-------------|-------------|------------|----------------------------|---------------------------|-------------|------------|-------------------|------------|-------------------|------------------------------|
| | | | SEEDING | LIME | MULCH COVER | WATER | SECOND SEEDING APPLICATION | TEMPORARY SEEDING | MULCH COVER | WATER | ROCK DITCH CHECKS | SILT FENCE | (12") FILTER SOCK | *SEDIMENT REMOVAL & DISPOSAL |
| | | | ACRE | TON | ACRE | M.GAL. | ACRE | ACRE | ACRE | M.GAL. | CU. YD. | LIN. FT. | LIN. FT. | CU. YD. |
| ENTIRE PROJECT | | LT. OF HARKRIDER ST. | 0.08 | 0.16 | 0.08 | 8.2 | 0.08 | 0.11 | 0.11 | 2.2 | 21 | 613 | 92 | 30 |
| TOTALS: | | | 0.08 | 0.16 | 0.08 | 8.2 | 0.08 | 0.11 | 0.11 | 2.2 | 21 | 613 | 92 | 30 |

BASIS OF ESTIMATE:

LIME2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING

ROCK DITCH CHECKS.....3 CU.YD./LOCATION

NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

CONCRETE WALKS & HAND RAILING

| STATION | STATION | LOCATION | LENGTH | CONCRETE WALKS |
|---------------|---------|----------------------|----------|----------------|
| | | | LIN. FT. | SQ. YD. |
| 10+35 | 13+31 | LT. OF HARKRIDER ST. | 296 | 164 |
| 13+84 | 14+91 | LT. OF HARKRIDER ST. | 107 | 59 |
| 15+59 | 16+08 | LT. OF HARKRIDER ST. | 49 | 27 |
| 16+68 | 16+75 | LT. OF HARKRIDER ST. | 7 | 4 |
| 17+43 | 18+67 | LT. OF HARKRIDER ST. | 124 | 69 |
| 19+71 | 20+07 | LT. OF HARKRIDER ST. | 36 | 20 |
| TOTAL: | | | | 343 |

STRUCTURES

| STATION | DESCRIPTION | REINFORCED CONCRETE PIPE (CLASS III) | | | FLARED END SECTIONS FOR R.C. PIPE CULVERTS | | | DROP INLETS | | | STD. DWG. NOS. | |
|----------------|-----------------------------|--------------------------------------|------------|------------|--|----------|----------|-------------|----------|----------|----------------|-----------------------------|
| | | 18" | 22"X14" | 29"X18" | 18" | 22"X14" | 29"X18" | TYPE | EXT. | | | |
| | | LIN. FT. | | | EACH | | | C | MO | 4' | | 8' |
| 10+41 | CONSTRUCT DROP INLET ON LT. | 4 | | | 1 | | | 1 | | | | FPC-9E, PCC-1, FES-1, FES-2 |
| 11+95 | CONSTRUCT DROP INLET ON LT. | | 134 | | | 1 | | | 1 | | 1 | FPC-9M, PCC-1, FES-1, FES-2 |
| 13+29 | CONSTRUCT DROP INLET ON LT. | | 54 | | | | | | 1 | | | FPC-9M, PCC-1 |
| 13+86 | CONSTRUCT DROP INLET ON LT. | | 82 | | | | | | 1 | | | FPC-9M, PCC-1 |
| 14+72 | CONSTRUCT DROP INLET ON LT. | 4 | | 118 | 1 | | | | 1 | | | FPC-9M, PCC-1, FES-1, FES-2 |
| 15+94 | CONSTRUCT DROP INLET ON LT. | 4 | | 196 | 1 | | | | 1 | | 1 | FPC-9M, PCC-1, FES-1, FES-2 |
| 17+94 | CONSTRUCT DROP INLET ON LT. | 4 | | 191 | 1 | | | | 1 | | 1 | FPC-9M, PCC-1, FES-1, FES-2 |
| 19+89 | CONSTRUCT DROP INLET ON LT. | 4 | | 86 | 1 | | 1 | | 1 | | 1 | FPC-9M, PCC-1, FES-1, FES-2 |
| TOTALS: | | 20 | 270 | 591 | 5 | 1 | 1 | 1 | 7 | 4 | | |

BASIS OF ESTIMATE:

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.

NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.



SELECTED PIPE BEDDING

| LOCATION | SELECTED PIPE BEDDING |
|---|-----------------------|
| | CU.YD. |
| ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER | 80 |
| TOTAL: | 80 |

NOTE: QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.

BASE AND SURFACING

| STATION | STATION | LOCATION | LENGTH FEET | TACK COAT (0.05 GAL. PER SQ. YD.) | | | ACHM SURFACE COURSE (1/2") | | | | | |
|-------------------|----------|----------------------|----------------|--------------------------------------|---------------|--------------|----------------------------|-----------|---------------|-----------------|--------------|----------------|
| | | | | TOTAL WID. | SQ. YD. | GALLON | TOTAL GALLONS | AVG. WID. | SQ. YD. | POUND / SQ. YD. | PG 70-22 | TOTAL PG 70-22 |
| | | | | FEET | FEET | FEET | FEET | TON | TON | TON | TON | |
| MAIN LANES | | | | | | | | | | | | |
| 10+34.81 | 20+67.32 | LT. OF HARKRIDER ST. | 1032.51 | 3.50 | 401.53 | 20.08 | 20.08 | 5.50 | 630.98 | 220.00 | 69.41 | 69.41 |
| TOTALS: | | | | | 401.53 | 20.08 | 20.08 | | 630.98 | | 69.41 | 69.41 |

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.5% MIN. AGGR.....5.5% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

CONCRETE BASE

| STATION | STATION | LOCATION | LENGTH FEET | PORTLAND CEMENT CONCRETE BASE | |
|----------------|----------|----------------------|----------------|-------------------------------|---------------|
| | | | | AVG. WID. | 4" U.T. |
| | | | | FEET | SQ. YD. |
| 10+34.81 | 20+67.32 | LT. OF HARKRIDER ST. | 1032.51 | 4.50 | 516.26 |
| TOTALS: | | | | | 516.26 |

DRIVEWAYS & TURNOUTS

| STATION | SIDE | LOCATION | WIDTH FEET | **MODIFIED CURB | | PORTLAND CEMENT CONCRETE DRIVEWAY SQ. YD. | ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 70-22) | | AGGREGATE BASE COURSE (CLASS 7) TON | STANDARD DRAWINGS |
|----------------|------|---------------|---------------|-----------------|---------|--|--|--------------|--|-------------------|
| | | | | STATION | STATION | | SQ. YD. | TON | | |
| 13+57 | LT | HARKRIDER ST. | 24 | 13+31 | 13+83 | 69.60 | | | | DR-1 |
| 15+25 | LT | HARKRIDER ST. | 39 | 14+92 | 15+59 | 66.95 | 25.89 | 2.85 | 10.57 | DR-1 |
| 16+38 | LT | HARKRIDER ST. | 32 | 16+08 | 16+68 | 59.93 | 23.00 | 2.53 | 9.39 | DR-1 |
| 17+09 | LT | HARKRIDER ST. | 40 | 16+75 | 17+43 | 68.00 | 30.48 | 3.35 | 12.45 | DR-1 |
| 18+94 | LT | HARKRIDER ST. | 26 | 18+67 | 19+21 | 44.22 | 24.85 | 2.73 | 10.15 | DR-1 |
| 19+42 | LT | HARKRIDER ST. | 30 | 19+13 | 19+71 | 40.85 | 29.32 | 3.23 | 11.97 | DR-1 |
| 20+41 | LT | HARKRIDER ST. | 40 | 20+07 | 20+75 | 53.34 | 40.88 | 4.50 | 16.69 | DR-1 |
| TOTALS: | | | | | | 402.89 | 174.42 | 19.19 | 71.22 | |

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.5% MIN. AGGR.....5.5% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22
THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

* QUANTITY ESTIMATED
SEE SECTION 104.03 OF THE STD. SPECS.
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

** FOR INFORMATION ONLY

ADVANCE WARNING SIGNS AND DEVICES

| SIGN NUMBER | DESCRIPTION | SIGN SIZE | ENTIRE PROJECT EACH | MAXIMUM NUMBER REQUIRED | TOTAL SIGNS REQUIRED | | TRAFFIC DRUMS |
|----------------|-------------------|-----------|------------------------|-------------------------|----------------------|-----------|---------------|
| | | | | | NO. | SQ. FT. | |
| W1-4B | DOUBLE LANE SHIFT | 48"x48" | 1 | 1 | 1 | 16.0 | |
| W5-1 | ROAD NARROWS | 48"x48" | 1 | 1 | 1 | 16.0 | |
| W20-1 | ROAD WORK 300 FT. | 48"x48" | 1 | 1 | 1 | 16.0 | |
| W20-1 | ROAD WORK AHEAD | 48"x48" | 4 | 4 | 4 | 64.0 | |
| G20-2 | END ROAD WORK | 48"x24" | 6 | 6 | 6 | 48.0 | |
| W21-5A | SHOULDER WORK | 30"x30" | 1 | 1 | 1 | 6.3 | |
| TOTALS: | | | 82 | 82 | 166.3 | 82 | |

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NOTE: THE QUANTITY OF TRAFFIC DRUMS PROVIDED IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. HOWEVER, THE INSTALLATION OF TRAFFIC DRUMS SHALL NEVER EXCEED THE ACTUAL WORK AREA BY MORE THAN 1/4 MILE, UNLESS APPROVED BY THE ENGINEER.

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

| DESCRIPTION | ENTIRE PROJECT LIN. FT. - EACH | REMOVAL OF PERMANENT PAVEMENT MARKINGS LIN. FT. | REMOVABLE CONSTRUCTION PAVEMENT MARKINGS | RAISED PAVEMENT MARKERS | | THERMOPLASTIC PAVEMENT MARKING | |
|---|-----------------------------------|--|--|-------------------------|----------------------------|--------------------------------|-------------|
| | | | | TYPE II (WHITE/RED) | TYPE II (YELLOW/YELLOW) | 6" | 6" |
| | | | | WHITE | YELLOW | WHITE | YELLOW |
| REMOVAL OF PERMANENT PAVEMENT MARKINGS | 2652 | 2652 | | | | | |
| REMOVABLE CONSTRUCTION PAVEMENT MARKINGS | 2896 | | 2896 | | | | |
| RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) | 15 | | | 15 | | | |
| RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW) | 12 | | | | 12 | | |
| THERMOPLASTIC PAVEMENT MARKING WHITE (6") | 357 | | | | | 357 | |
| THERMOPLASTIC PAVEMENT MARKING YELLOW (6") | 1344 | | | | | | 1344 |
| TOTALS: | | 2652 | 2896 | 15 | 12 | 357 | 1344 |

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NOTE: THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

NOTE: NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED UNTIL A MINIMUM OF 3 DAYS AFTER ALL MAIN LANE PAVING HAS BEEN COMPLETED. IN ADDITION, NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED DURING THE TIME PERIOD FROM DECEMBER 21 TO MARCH 15, INCLUSIVE.

COLD MILLING ASPHALT PAVEMENT

| STATION | STATION | LOCATION | AVG. WIDTH FEET | COLD MILLING ASPHALT PAVEMENT |
|---------------|----------|----------------------|--------------------|-------------------------------|
| | | | | SQ. YD. |
| 10+34.81 | 20+41.31 | LT. OF HARKRIDER ST. | 5.00 | 559.17 |
| TOTAL: | | | | 559.17 |

NOTE: AVERAGE MILLING DEPTH 2".

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
| | | | | 8 | ARK. | | | |
| | | | | | | 080663 | 14 | 20 |

2 SUMMARY OF QUANTITIES



SUMMARY OF QUANTITIES

| ITEM NUMBER | ITEM | QUANTITY | UNIT |
|---------------|--|----------|----------|
| 202 | REMOVAL AND DISPOSAL OF CURB AND GUTTER | 22 | LIN. FT. |
| 202 | REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS | 21 | SQ. YD. |
| 202 | REMOVAL AND DISPOSAL OF PIPE CULVERTS | 4 | EACH |
| 202 | REMOVAL AND DISPOSAL OF DITCH PAVING | 8 | SQ. YD. |
| 202 | REMOVAL AND RELOCATION OF SIGN | 3 | EACH |
| 210 | UNCLASSIFIED EXCAVATION | 302 | CU. YD. |
| 210 | COMPACTED EMBANKMENT | 366 | CU. YD. |
| SS & 303 | AGGREGATE BASE COURSE (CLASS 7) | 75 | TON |
| 309 | PORTLAND CEMENT CONCRETE BASE (4" UNIFORM THICKNESS) | 516 | SQ. YD. |
| 309 | PORTLAND CEMENT CONCRETE BASE (6 1/2" UNIFORM THICKNESS) | 230 | SQ. YD. |
| SS & 401 | TACK COAT | 20 | GAL. |
| SP, SS, & 407 | MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2") | 84 | TON |
| SP, SS, & 407 | ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2") | 5 | TON |
| 412 | COLD MILLING ASPHALT PAVEMENT | 559 | SQ. YD. |
| SS & 505 | PORTLAND CEMENT CONCRETE DRIVEWAY | 403 | SQ. YD. |
| 601 | MOBILIZATION | 1.00 | LUMP SUM |
| 603 | MAINTENANCE OF TRAFFIC | 1.00 | LUMP SUM |
| SS & 604 | SIGNS | 167 | SQ. FT. |
| SS & 604 | TRAFFIC DRUMS | 82 | EACH |
| 604 | REMOVABLE CONSTRUCTION PAVEMENT MARKINGS | 2896 | LIN. FT. |
| 604 | REMOVAL OF PERMANENT PAVEMENT MARKINGS | 2652 | LIN. FT. |
| 606 | 18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) | 20 | LIN. FT. |
| 606 | 22" X 14" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III) | 270 | LIN. FT. |
| 606 | 29" X 18" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III) | 591 | LIN. FT. |
| 606 | 18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS | 5 | EACH |
| 606 | 22" X 14" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS | 1 | EACH |
| 606 | 29" X 18" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS | 1 | EACH |
| 606 | SELECTED PIPE BEDDING | 80 | CU. YD. |
| 609 | DROP INLETS (TYPE C) | 1 | EACH |
| 609 | DROP INLETS (TYPE MO) | 7 | EACH |
| 609 | DROP INLET EXTENSIONS (8') | 4 | EACH |
| 620 | LIME | 0.16 | TON |
| 620 | SEEDING | 0.08 | ACRE |
| SS & 620 | MULCH COVER | 0.19 | ACRE |
| 620 | WATER | 14.21 | M. GAL. |
| 621 | TEMPORARY SEEDING | 0.11 | ACRE |
| 621 | SILT FENCE | 613 | LIN. FT. |
| 621 | SEDIMENT REMOVAL AND DISPOSAL | 30 | CU. YD. |
| 621 | ROCK DITCH CHECKS | 21 | CU. YD. |
| SS & 621 | FILTER SOCK (12") | 92 | LIN. FT. |
| 623 | SECOND SEEDING APPLICATION | 0.08 | ACRE |
| 624 | SOLID SODDING | 302 | SQ. YD. |
| SS & 632 | CONCRETE ISLAND | 7 | SQ. YD. |
| SS & 633 | CONCRETE WALKS | 343 | SQ. YD. |
| SS & 634 | CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6") | 1032 | LIN. FT. |
| SS & 634 | CONCRETE COMBINATION CURB AND GUTTER (TYPE C) (1' 6") | 42 | LIN. FT. |
| 635 | ROADWAY CONSTRUCTION CONTROL | 1.00 | LUMP SUM |
| 637 | MAILBOXES | 3 | EACH |
| 637 | MAILBOX SUPPORTS (SINGLE) | 3 | EACH |
| 719 | THERMOPLASTIC PAVEMENT MARKING WHITE (6") | 357 | LIN. FT. |
| 719 | THERMOPLASTIC PAVEMENT MARKING YELLOW (6") | 1344 | LIN. FT. |
| 721 | RAISED PAVEMENT MARKERS (TYPE II) | 27 | EACH |

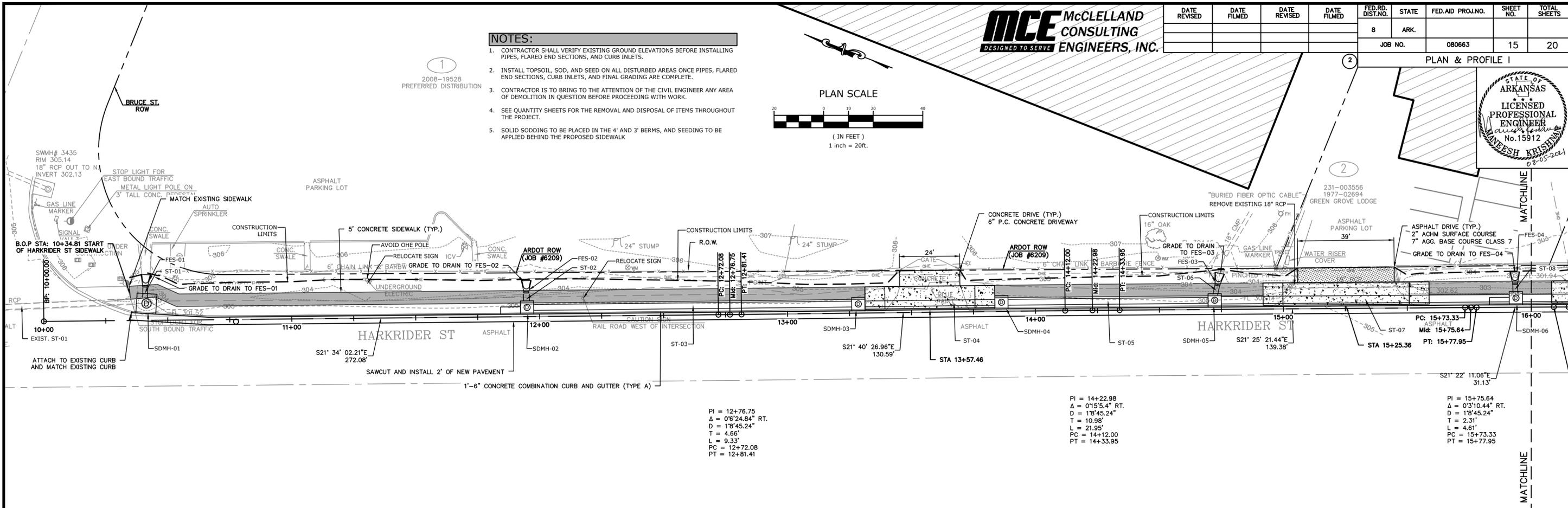
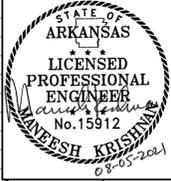
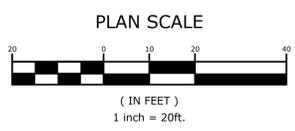
REVISIONS

| DATE | REVISION | SHEET NUMBER |
|------|----------|--------------|
| | | |
| | | |
| | | |
| | | |
| | | |

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
| | | | | 8 | ARK. | | | |
| | | | | JOB NO. | | 080663 | 15 | 20 |

NOTES:

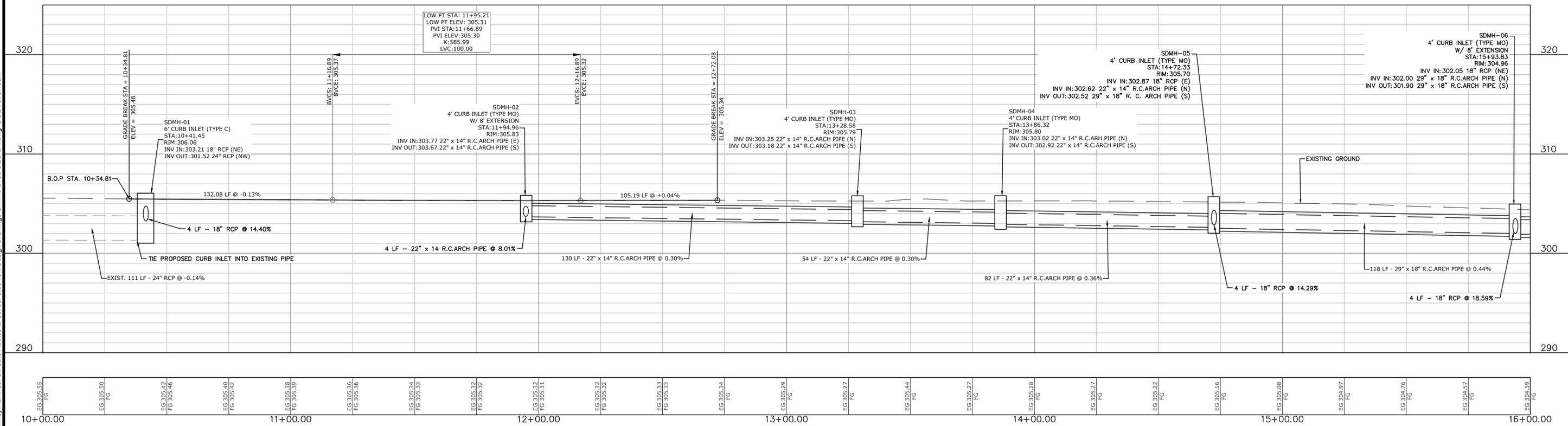
- CONTRACTOR SHALL VERIFY EXISTING GROUND ELEVATIONS BEFORE INSTALLING PIPES, FLARED END SECTIONS, AND CURB INLETS.
- INSTALL TOPSOIL, SOD, AND SEED ON ALL DISTURBED AREAS ONCE PIPES, FLARED END SECTIONS, CURB INLETS, AND FINAL GRADING ARE COMPLETE.
- CONTRACTOR IS TO BRING TO THE ATTENTION OF THE CIVIL ENGINEER ANY AREA OF DEMOLITION IN QUESTION BEFORE PROCEEDING WITH WORK.
- SEE QUANTITY SHEETS FOR THE REMOVAL AND DISPOSAL OF ITEMS THROUGHOUT THE PROJECT.
- SOLID SODDING TO BE PLACED IN THE 4' AND 3' BERMS, AND SEEDING TO BE APPLIED BEHIND THE PROPOSED SIDEWALK



PI = 12+76.75
 $\Delta = 0^{\circ}15'24.84''$ RT.
 $D = 18^{\circ}45.24''$
 $T = 4.66'$
 $L = 9.33'$
 $PC = 12+72.08$
 $PT = 12+81.41$

PI = 14+22.98
 $\Delta = 0^{\circ}15'5.4''$ RT.
 $D = 18^{\circ}45.24''$
 $T = 10.98'$
 $L = 21.95'$
 $PC = 14+12.00$
 $PT = 14+33.95$

PI = 15+75.64
 $\Delta = 0^{\circ}3'10.44''$ RT.
 $D = 18^{\circ}45.24''$
 $T = 2.31'$
 $L = 4.61'$
 $PC = 15+73.33$
 $PT = 15+77.95$



HARKRIDER ST EDGE OF GUTTER PROFILE
 SCALE:
 1"=20' HORIZ.
 1"=5' VERT.

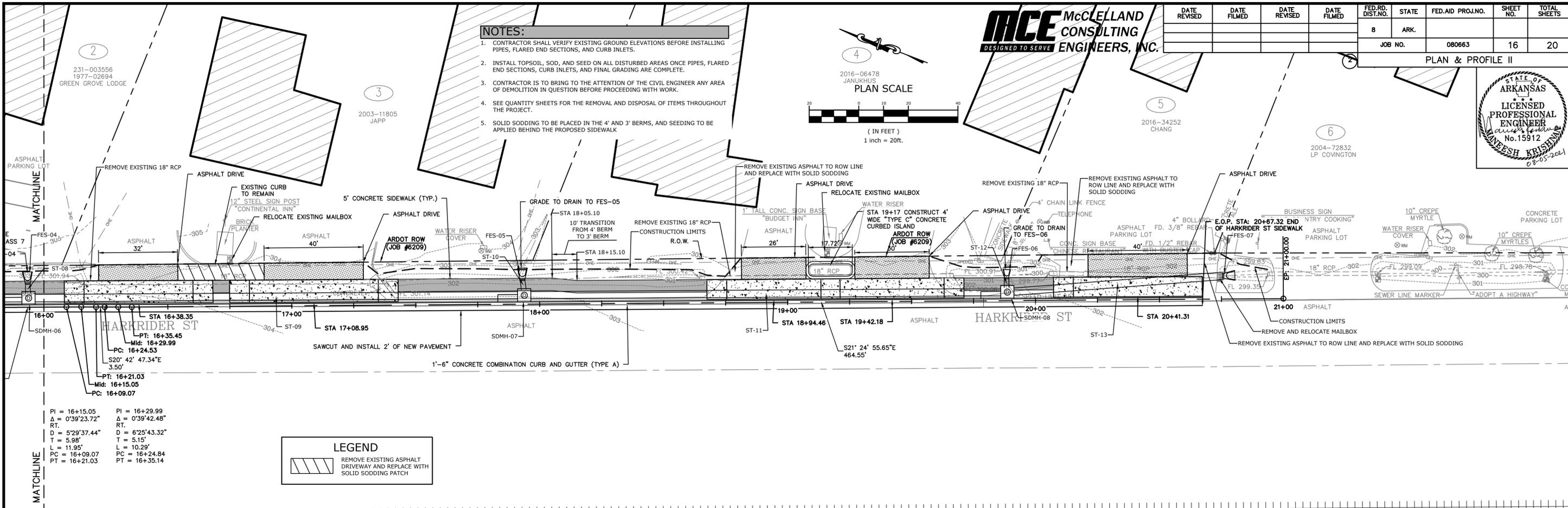
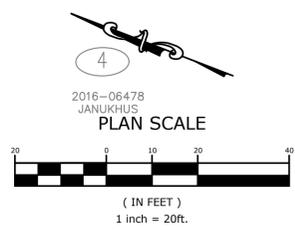
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| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|--------------------|--------|--------------------|-----------|--------------|
| | | | | 8 | ARK. | | 16 | 20 |
| | | | | JOB NO. | 080663 | | | |

PLAN & PROFILE II



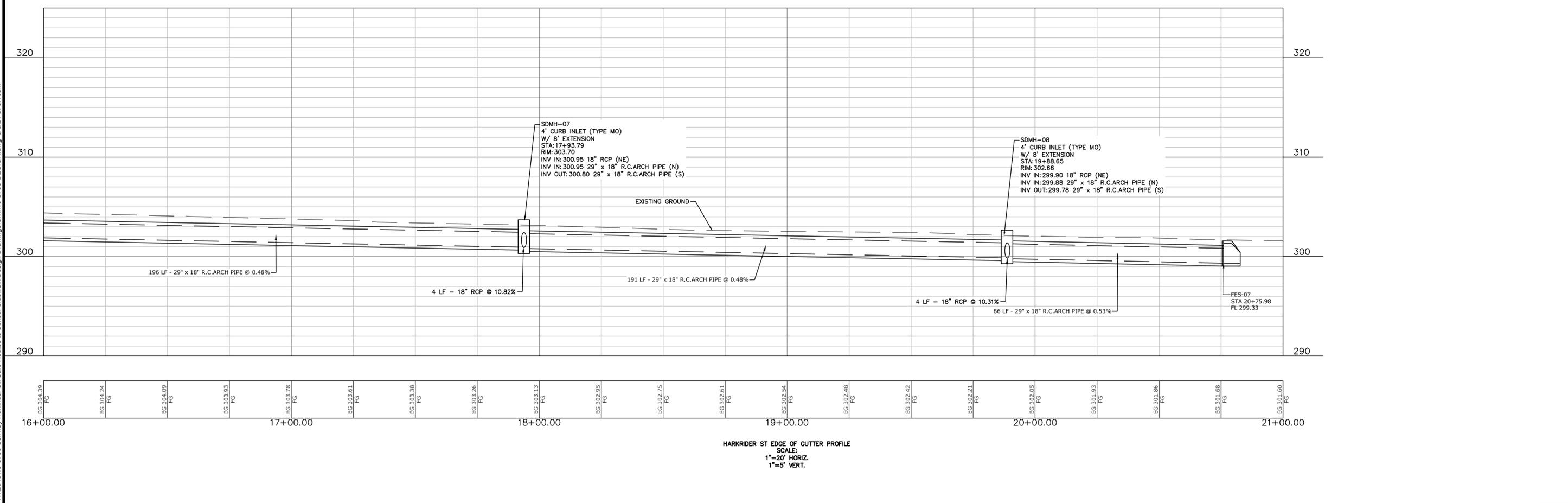
- NOTES:**
- CONTRACTOR SHALL VERIFY EXISTING GROUND ELEVATIONS BEFORE INSTALLING PIPES, FLARED END SECTIONS, AND CURB INLETS.
 - INSTALL TOPSOIL, SOD, AND SEED ON ALL DISTURBED AREAS ONCE PIPES, FLARED END SECTIONS, CURB INLETS, AND FINAL GRADING ARE COMPLETE.
 - CONTRACTOR IS TO BRING TO THE ATTENTION OF THE CIVIL ENGINEER ANY AREA OF DEMOLITION IN QUESTION BEFORE PROCEEDING WITH WORK.
 - SEE QUANTITY SHEETS FOR THE REMOVAL AND DISPOSAL OF ITEMS THROUGHOUT THE PROJECT.
 - SOLID SODDING TO BE PLACED IN THE 4' AND 3' BERMS, AND SEEDING TO BE APPLIED BEHIND THE PROPOSED SIDEWALK



LEGEND

REMOVE EXISTING ASPHALT DRIVEWAY AND REPLACE WITH SOLID SODDING PATCH

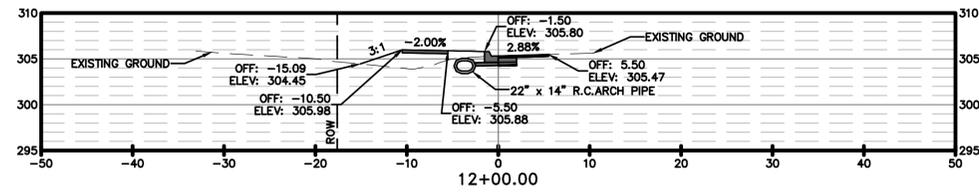
| | |
|-----------------|-----------------|
| PI = 16+15.05 | PI = 16+29.99 |
| Δ = 0°39'23.72" | Δ = 0°39'42.48" |
| RT. | RT. |
| D = 5°29'37.44" | D = 6°25'43.32" |
| T = 5.98' | T = 5.15' |
| L = 11.95' | L = 10.29' |
| PC = 16+09.07 | PC = 16+24.84 |
| PT = 16+21.03 | PT = 16+35.14 |



W:\2019\19-5755 Conway Harkrider St. Safe Routes to School Sidewalk\Design Drawings\Civil\19-5755-DESIGN.dwg, 8/5/21, at 8:16am

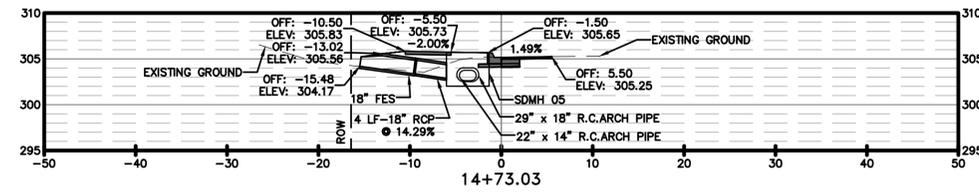
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|--------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
| | | | | 8 | ARK. | | | |
| JOB NO. | | | | | | 080663 | 17 | 20 |

2 CROSS SECTIONS I



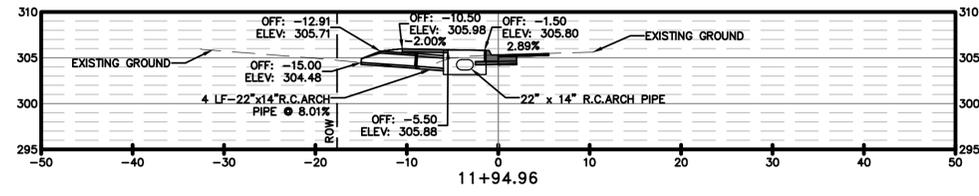
| Total Volume at Station 12+00.00 | |
|----------------------------------|--------|
| Cut Area | 5.29 |
| Fill Area | 13.82 |
| Cut Vol | 0.99 |
| Fill Vol | 2.69 |
| Net Vol | -62.00 |

EXISTING ELEV: 305.32
DESIGN ELEV: 305.31



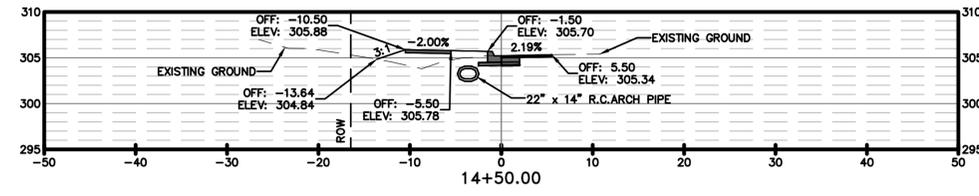
| Total Volume at Station 14+73.03 | |
|----------------------------------|--------|
| Cut Area | 5.46 |
| Fill Area | 14.82 |
| Cut Vol | 4.60 |
| Fill Vol | 11.20 |
| Net Vol | -90.04 |

EXISTING ELEV: 305.17
DESIGN ELEV: 305.17



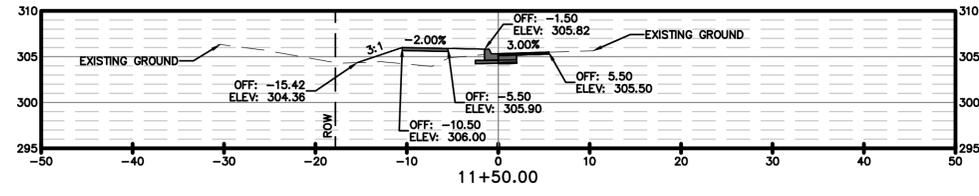
| Total Volume at Station 11+94.96 | |
|----------------------------------|--------|
| Cut Area | 5.28 |
| Fill Area | 15.00 |
| Cut Vol | 8.73 |
| Fill Vol | 23.85 |
| Net Vol | -60.30 |

EXISTING ELEV: 305.32
DESIGN ELEV: 305.32



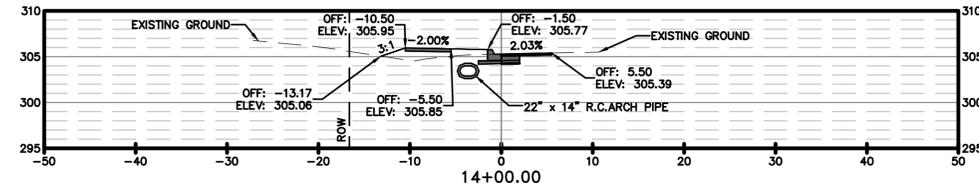
| Total Volume at Station 14+50.00 | |
|----------------------------------|--------|
| Cut Area | 5.32 |
| Fill Area | 11.44 |
| Cut Vol | 9.82 |
| Fill Vol | 17.72 |
| Net Vol | -83.44 |

EXISTING ELEV: 305.22
DESIGN ELEV: 305.22



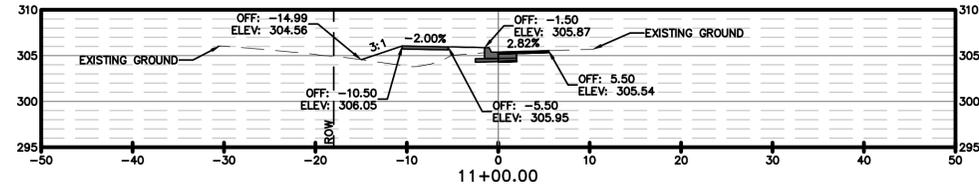
| Total Volume at Station 11+50.00 | |
|----------------------------------|--------|
| Cut Area | 5.21 |
| Fill Area | 13.65 |
| Cut Vol | 9.62 |
| Fill Vol | 26.59 |
| Net Vol | -45.18 |

EXISTING ELEV: 305.34
DESIGN ELEV: 305.33



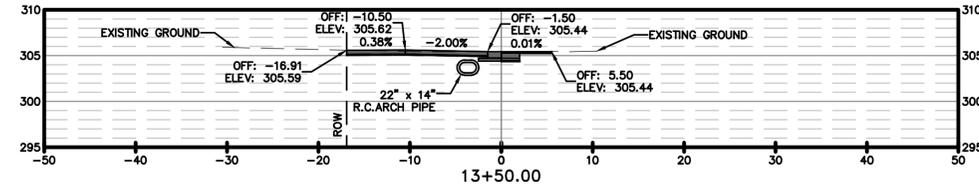
| Total Volume at Station 14+00.00 | |
|----------------------------------|--------|
| Cut Area | 5.29 |
| Fill Area | 7.70 |
| Cut Vol | 2.65 |
| Fill Vol | 3.39 |
| Net Vol | -75.54 |

EXISTING ELEV: 305.28
DESIGN ELEV: 305.28



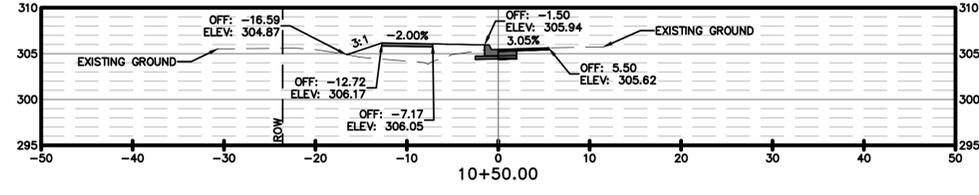
| Total Volume at Station 11+00.00 | |
|----------------------------------|--------|
| Cut Area | 5.18 |
| Fill Area | 15.07 |
| Cut Vol | 9.55 |
| Fill Vol | 30.66 |
| Net Vol | -28.21 |

EXISTING ELEV: 305.38
DESIGN ELEV: 305.39



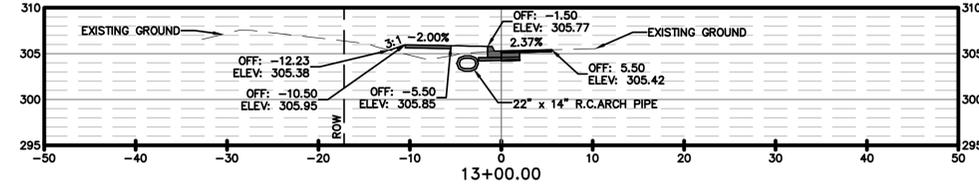
| Total Volume at Station 13+50.00 | |
|----------------------------------|--------|
| Cut Area | 11.25 |
| Fill Area | 0.00 |
| Cut Vol | 6.58 |
| Fill Vol | 1.94 |
| Net Vol | -82.04 |

EXISTING ELEV: 305.44
DESIGN ELEV: 305.44



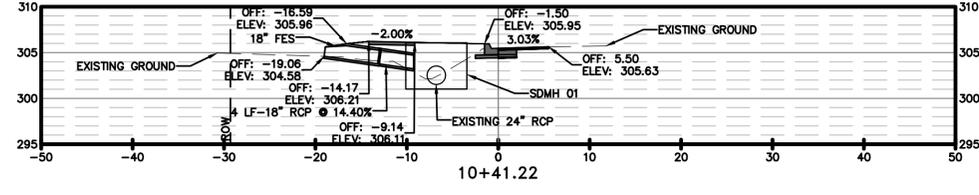
| Total Volume at Station 10+50.00 | |
|----------------------------------|-------|
| Cut Area | 5.14 |
| Fill Area | 18.05 |
| Cut Vol | 1.65 |
| Fill Vol | 8.75 |
| Net Vol | -7.10 |

EXISTING ELEV: 305.42
DESIGN ELEV: 305.46



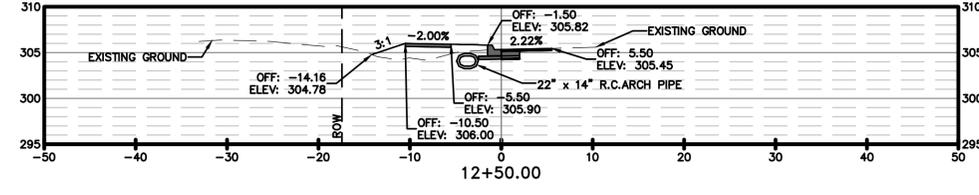
| Total Volume at Station 13+00.00 | |
|----------------------------------|--------|
| Cut Area | 5.21 |
| Fill Area | 8.26 |
| Cut Vol | 9.67 |
| Fill Vol | 18.77 |
| Net Vol | -85.28 |

EXISTING ELEV: 305.29
DESIGN ELEV: 305.29



| Total Volume at Station 10+41.22 | |
|----------------------------------|-------|
| Cut Area | 5.04 |
| Fill Area | 35.79 |
| Cut Vol | 0.00 |
| Fill Vol | 0.00 |
| Net Vol | 0.00 |

EXISTING ELEV: 305.47
DESIGN ELEV: 305.47



| Total Volume at Station 12+50.00 | |
|----------------------------------|--------|
| Cut Area | 5.23 |
| Fill Area | 12.01 |
| Cut Vol | 9.74 |
| Fill Vol | 23.92 |
| Net Vol | -76.18 |

EXISTING ELEV: 305.33
DESIGN ELEV: 305.33

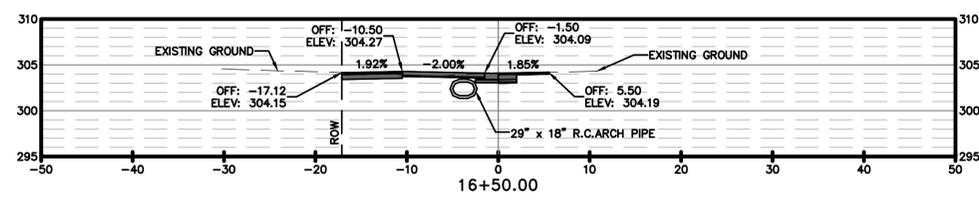
SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

EARTHWORK QUANTITIES ARE TO BE PAID PER PLAN QUANTITIES ONLY

W:\2019\19-5755 Conway Heikrider St. Safe Routes to School Sidewalk\Design Drawings\Civil\19-5755-CORRIDOR.dwg, 8/15/21 at 8:20am

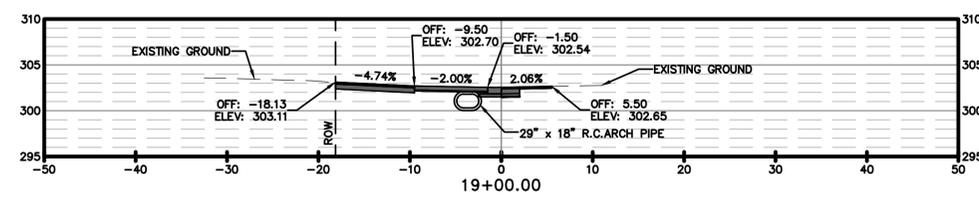
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
| | | | | 8 | ARK. | | | |
| | | | | | | JOB NO. | 080663 | 18 |
| | | | | | | | 20 | |

2 CROSS SECTIONS II



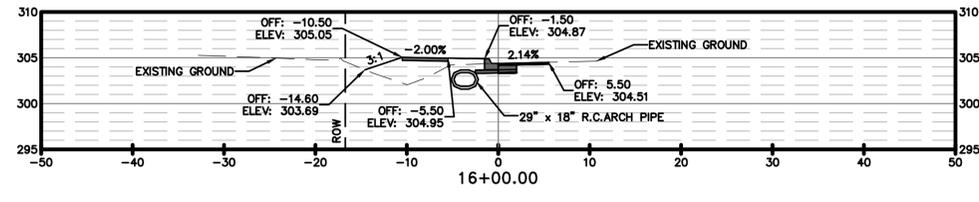
| Total Volume at Station 16+50.00 | |
|----------------------------------|---------|
| Cut Area | 10.42 |
| Fill Area | 0.00 |
| Cut Vol | 14.56 |
| Fill Vol | 15.64 |
| Net Vol | -101.30 |

EXISTING ELEV: 304.09
DESIGN ELEV: 304.09



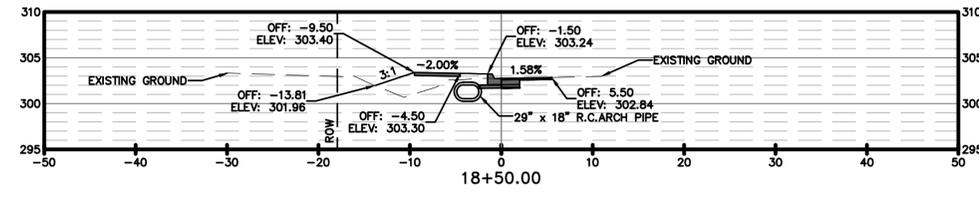
| Total Volume at Station 19+00.00 | |
|----------------------------------|---------|
| Cut Area | 14.81 |
| Fill Area | 0.00 |
| Cut Vol | 18.67 |
| Fill Vol | 12.12 |
| Net Vol | -108.19 |

EXISTING ELEV: 302.54
DESIGN ELEV: 302.54



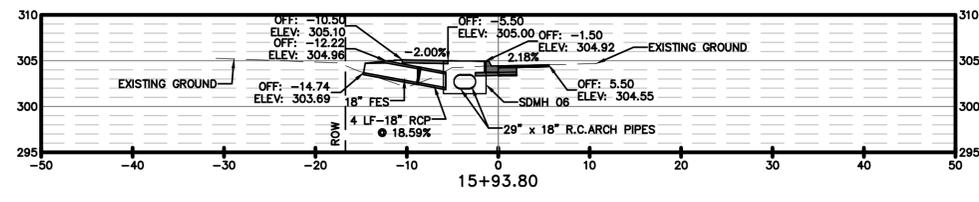
| Total Volume at Station 16+00.00 | |
|----------------------------------|---------|
| Cut Area | 5.31 |
| Fill Area | 16.89 |
| Cut Vol | 1.22 |
| Fill Vol | 3.72 |
| Net Vol | -100.22 |

EXISTING ELEV: 304.39
DESIGN ELEV: 304.39



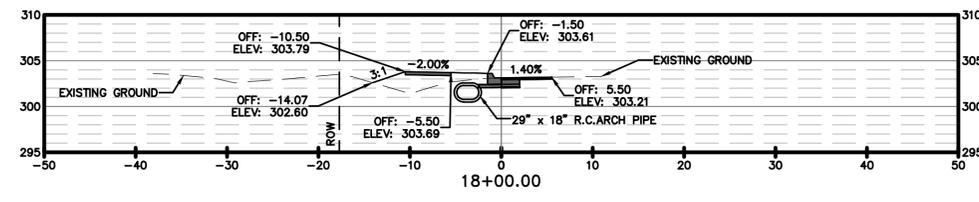
| Total Volume at Station 18+50.00 | |
|----------------------------------|---------|
| Cut Area | 5.35 |
| Fill Area | 13.09 |
| Cut Vol | 9.82 |
| Fill Vol | 24.52 |
| Net Vol | -114.74 |

EXISTING ELEV: 302.75
DESIGN ELEV: 302.75



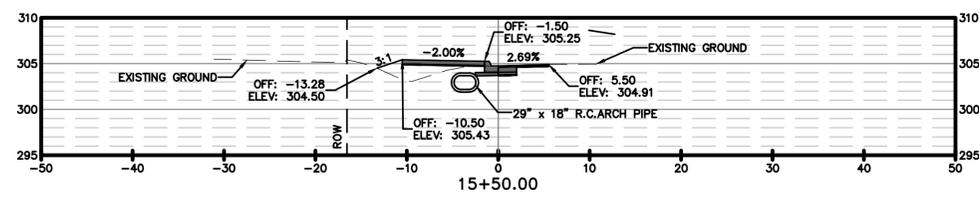
| Total Volume at Station 15+93.80 | |
|----------------------------------|--------|
| Cut Area | 5.30 |
| Fill Area | 15.49 |
| Cut Vol | 8.68 |
| Fill Vol | 20.83 |
| Net Vol | -97.72 |

EXISTING ELEV: 304.43
DESIGN ELEV: 304.43



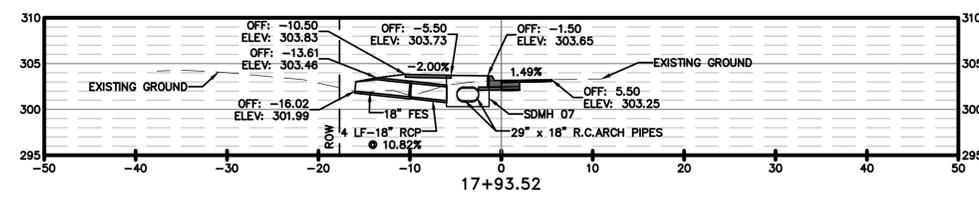
| Total Volume at Station 18+00.00 | |
|----------------------------------|---------|
| Cut Area | 5.25 |
| Fill Area | 13.40 |
| Cut Vol | 1.26 |
| Fill Vol | 3.36 |
| Net Vol | -100.03 |

EXISTING ELEV: 303.13
DESIGN ELEV: 303.13



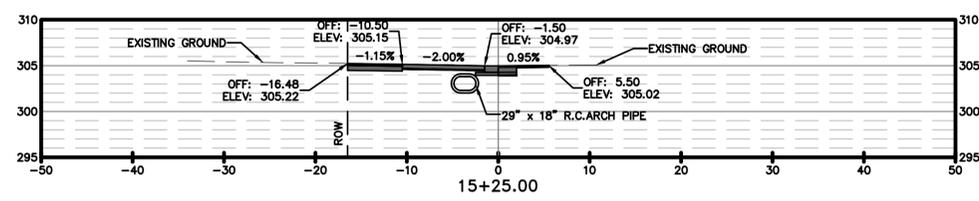
| Total Volume at Station 15+50.00 | |
|----------------------------------|--------|
| Cut Area | 5.40 |
| Fill Area | 10.19 |
| Cut Vol | 9.02 |
| Fill Vol | 4.72 |
| Net Vol | -85.57 |

EXISTING ELEV: 304.76
DESIGN ELEV: 304.76



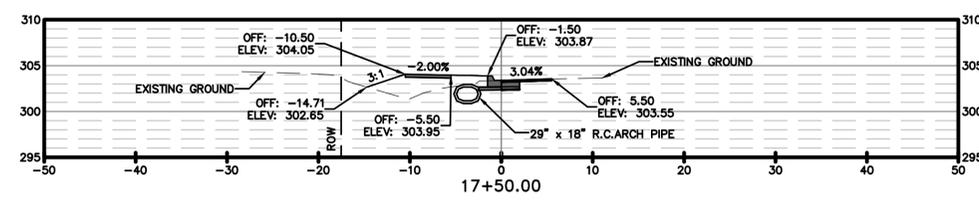
| Total Volume at Station 17+93.52 | |
|----------------------------------|--------|
| Cut Area | 5.25 |
| Fill Area | 14.62 |
| Cut Vol | 8.49 |
| Fill Vol | 25.26 |
| Net Vol | -97.93 |

EXISTING ELEV: 303.17
DESIGN ELEV: 303.17



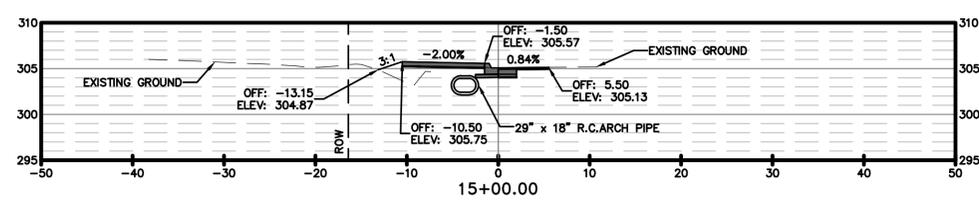
| Total Volume at Station 15+25.00 | |
|----------------------------------|--------|
| Cut Area | 14.08 |
| Fill Area | 0.00 |
| Cut Vol | 9.12 |
| Fill Vol | 3.41 |
| Net Vol | -89.88 |

EXISTING ELEV: 304.97
DESIGN ELEV: 304.97



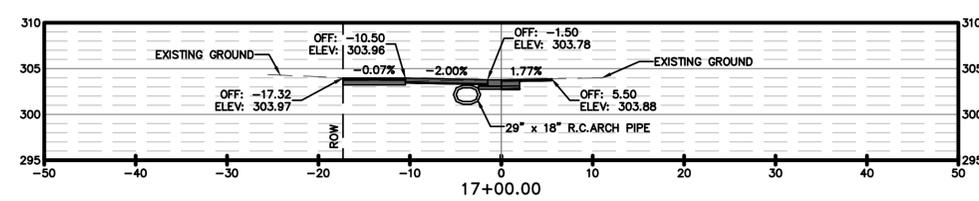
| Total Volume at Station 17+50.00 | |
|----------------------------------|--------|
| Cut Area | 5.29 |
| Fill Area | 16.72 |
| Cut Vol | 15.43 |
| Fill Vol | 15.48 |
| Net Vol | -81.16 |

EXISTING ELEV: 303.39
DESIGN ELEV: 303.39



| Total Volume at Station 15+00.00 | |
|----------------------------------|--------|
| Cut Area | 5.63 |
| Fill Area | 7.37 |
| Cut Vol | 5.54 |
| Fill Vol | 11.09 |
| Net Vol | -95.58 |

EXISTING ELEV: 305.08
DESIGN ELEV: 305.08



| Total Volume at Station 17+00.00 | |
|----------------------------------|--------|
| Cut Area | 11.38 |
| Fill Area | 0.00 |
| Cut Vol | 20.19 |
| Fill Vol | 0.00 |
| Net Vol | -81.11 |

EXISTING ELEV: 303.78
DESIGN ELEV: 303.78

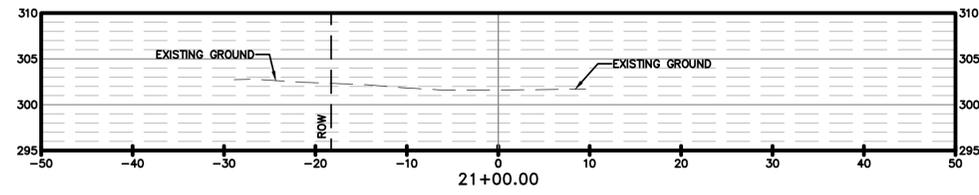
SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

EARTHWORK QUANTITIES ARE TO BE PAID PER PLAN QUANTITIES ONLY

W:\2019\19-5755 Conway Heikrider St. Safe Routes to School Sidewalk\Design Drawings\Civil\19-5755-CORRIDOR.dwg, 8/15/21 at 8:21 am

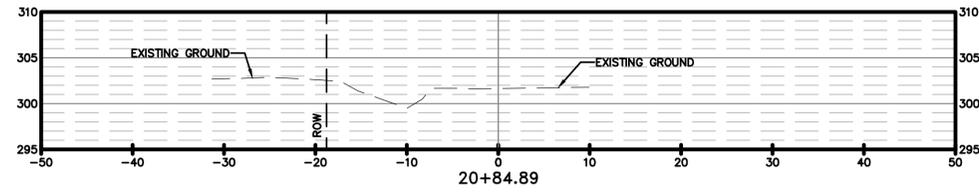
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|--------------------|--------|--------------------|-----------|--------------|
| | | | | 8 | ARK. | | | |
| | | | | JOB NO. | 080663 | | 19 | 20 |

2 CROSS SECTIONS III



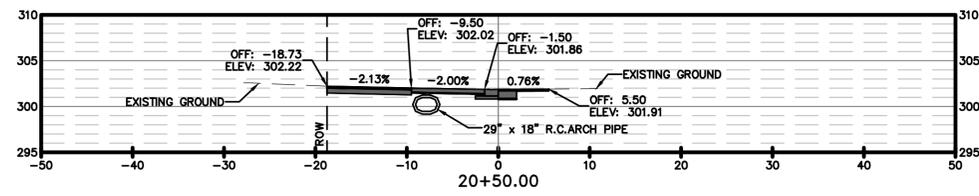
| Total Volume at Station 21+00.00 | |
|----------------------------------|--------|
| Cut Area | 0.00 |
| Fill Area | 0.00 |
| Cut Vol | 0.00 |
| Fill Vol | 0.00 |
| Net Vol | -64.35 |

EXISTING ELEV: 301.60
DESIGN ELEV: 301.60



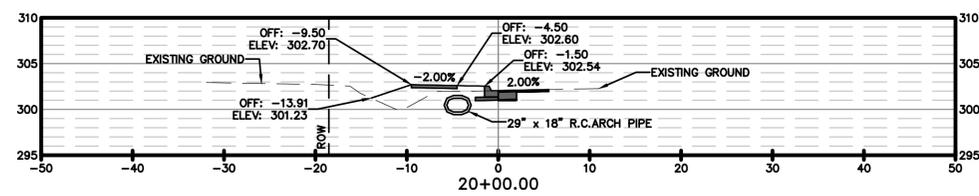
| Total Volume at Station 20+84.89 | |
|----------------------------------|--------|
| Cut Area | 0.00 |
| Fill Area | 0.00 |
| Cut Vol | 9.46 |
| Fill Vol | 0.00 |
| Net Vol | -64.35 |

EXISTING ELEV: 301.65
DESIGN ELEV: 301.65



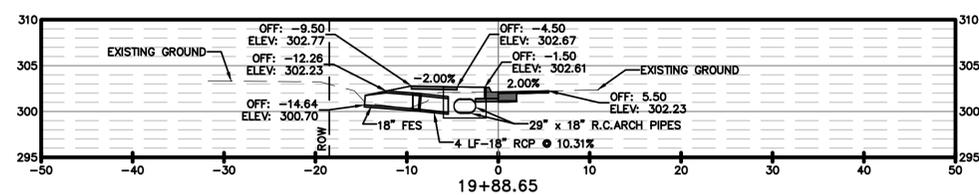
| Total Volume at Station 20+50.00 | |
|----------------------------------|--------|
| Cut Area | 14.64 |
| Fill Area | 0.00 |
| Cut Vol | 18.50 |
| Fill Vol | 10.87 |
| Net Vol | -73.81 |

EXISTING ELEV: 301.86
DESIGN ELEV: 301.86



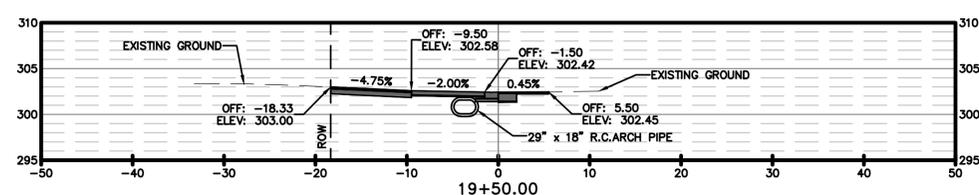
| Total Volume at Station 20+00.00 | |
|----------------------------------|--------|
| Cut Area | 5.34 |
| Fill Area | 11.74 |
| Cut Vol | 2.24 |
| Fill Vol | 5.30 |
| Net Vol | -81.43 |

EXISTING ELEV: 302.06
DESIGN ELEV: 302.06



| Total Volume at Station 19+88.65 | |
|----------------------------------|--------|
| Cut Area | 5.31 |
| Fill Area | 13.47 |
| Cut Vol | 13.99 |
| Fill Vol | 9.64 |
| Net Vol | -78.37 |

EXISTING ELEV: 302.12
DESIGN ELEV: 302.12



| Total Volume at Station 19+50.00 | |
|----------------------------------|--------|
| Cut Area | 14.24 |
| Fill Area | 0.00 |
| Cut Vol | 14.52 |
| Fill Vol | 0.00 |
| Net Vol | -82.72 |

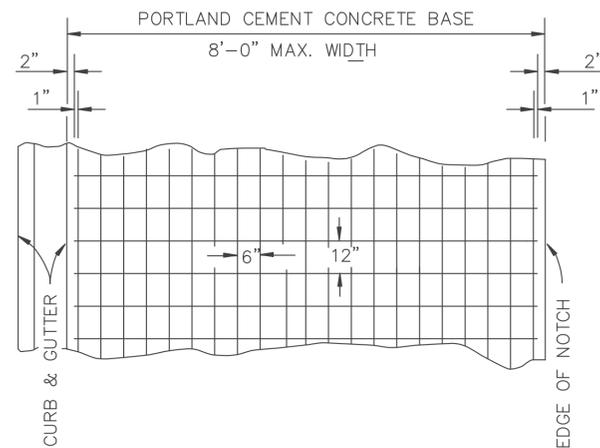
EXISTING ELEV: 302.42
DESIGN ELEV: 302.42

SCALE:
1" = 10' HORIZ.
1" = 10' VERT.
EARTHWORK QUANTITIES ARE TO BE PAID PER PLAN QUANTITIES ONLY

W:\2019\19-5755 Conway Henkridger St. Safe Routes to School Sidewalk\Design Drawings\Civil\19-5755-CORRIDOR.dwg, 8/5/21 at 8:21 am

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
| | | | | 8 | ARK. | | | |
| JOB NO. | | | | | | 080663 | 20 | 20 |

② SPECIAL DETAILS

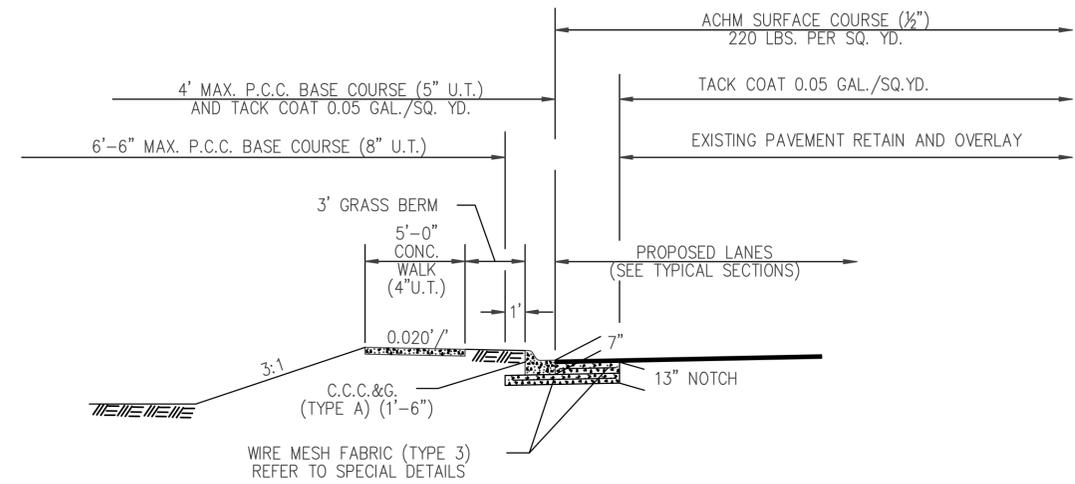


6" X 12" MESH FABRIC (TYPE 3) (W5.5 X W2.9) = 4.26 LBS./SQ. YD.

NOTES:

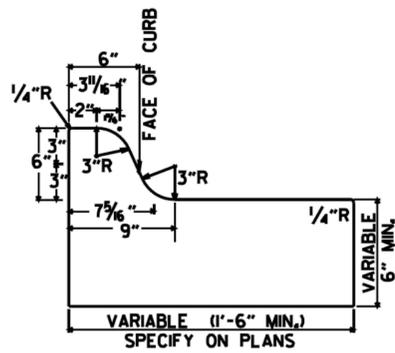
1. LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
2. MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12".
3. MESH FABRIC (TYPE 3) WILL NOT BE PAID FOR DIRECTLY, BUT FULL COMPENSATION THEREFORE WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (10" U.T.)

DETAIL OF REINFORCING
STEEL FOR PAVEMENT
(MESH FABRIC TYPE 3)

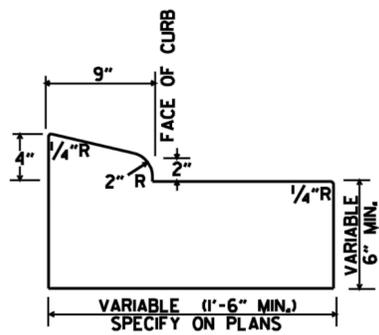


P.C.C. BASE WIDENING DETAIL

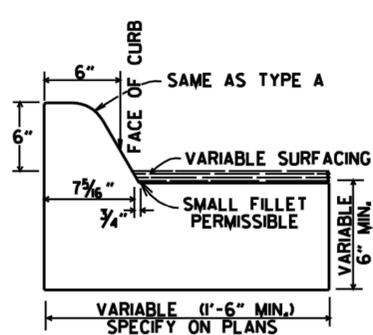
P.C.C. BASE WIDENING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.



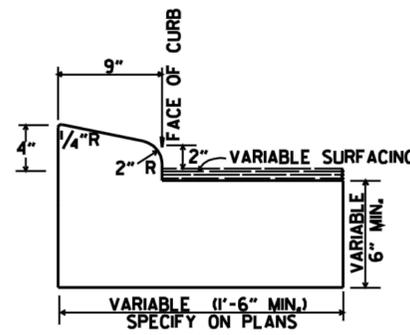
TYPE A



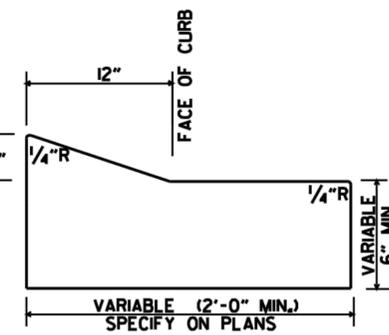
TYPE B-1



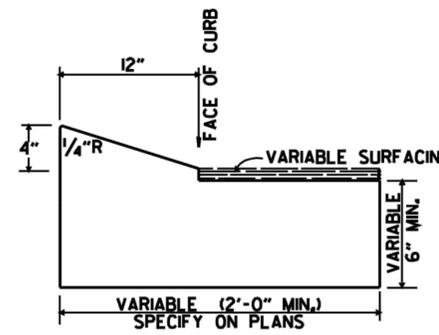
TYPE C



TYPE B-2

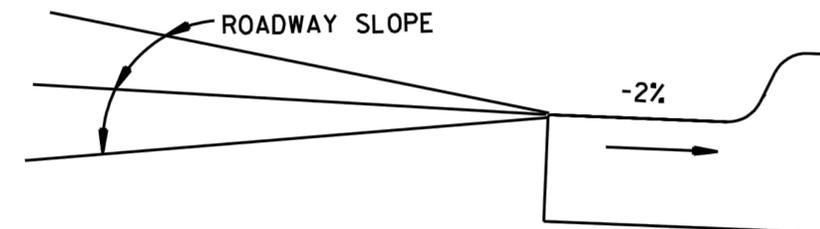


TYPE E-1

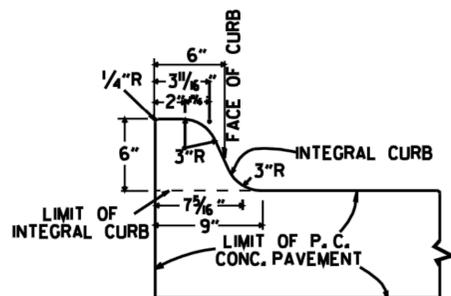


TYPE E-2

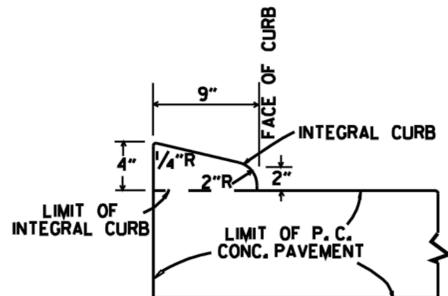
CONCRETE COMBINATION CURB AND GUTTER



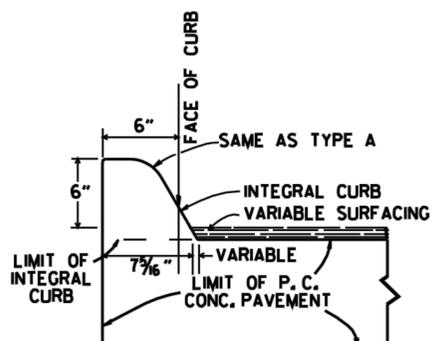
DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

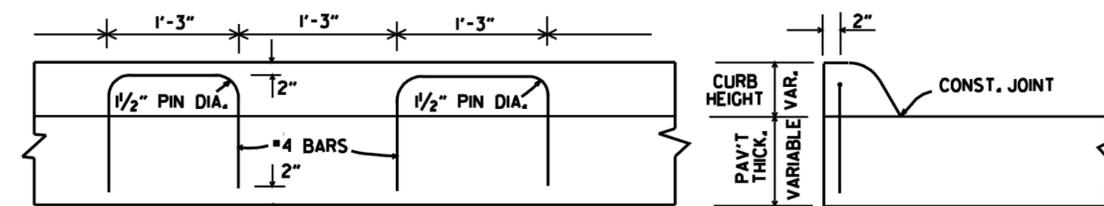


TYPE B



TYPE C

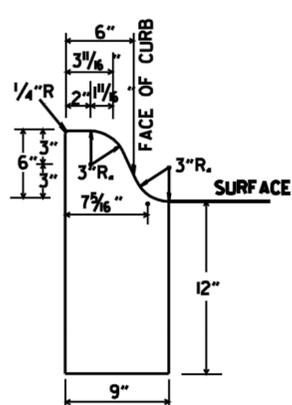
INTEGRAL CURB



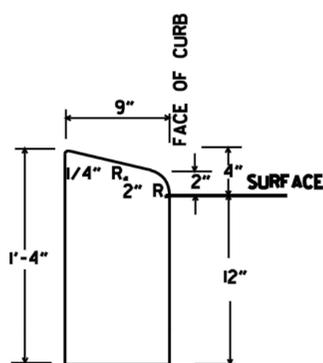
LONGITUDINAL SECTION

ELEVATION

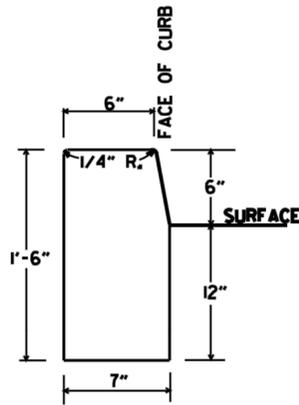
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



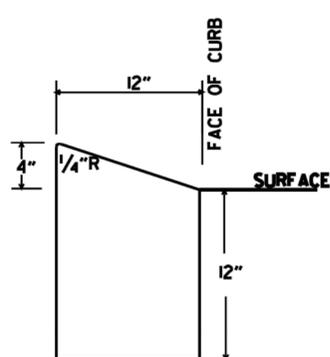
TYPE A



TYPE B

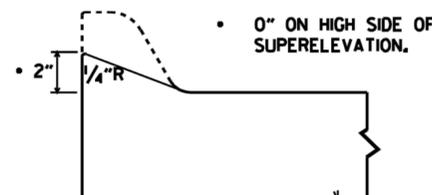


TYPE D



TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

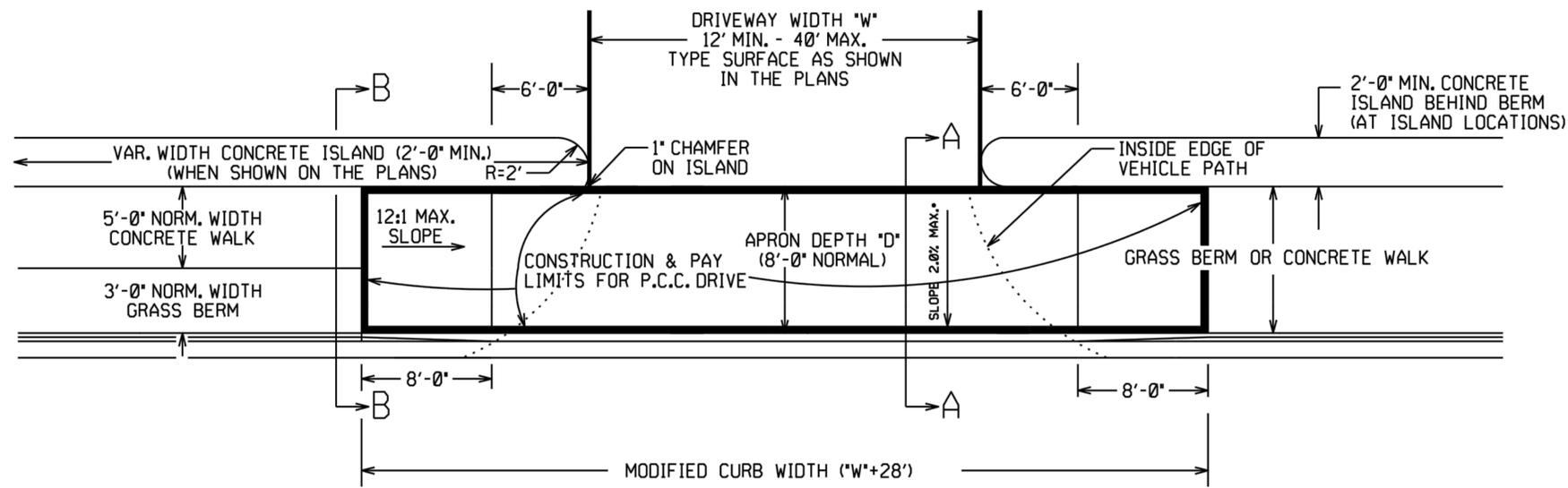
DETAILS OF MODIFIED CURB

| DATE | REVISION | DATE FILMED |
|----------|--|-------------|
| 11-29-07 | REVISED GUTTER SLOPE & MODIFIED CURB DETAILS | |
| 11-10-05 | ADDED DETAILS OF TYPE E CURBS | |
| 11-16-01 | REVISED CONCRETE CURB TYPE B | |
| 11-18-98 | REVISED MODIFIED CURB | |
| 6-2-94 | ADDED NOTE TO SPECIAL MODIFIED CURB | |
| 8-5-93 | CORRECTED GUTTER SLOPE | 8-5-93 |
| 10-1-92 | ADDED DETAILS OF GUTTER SLOPE | 10-1-92 |
| 5-24-90 | ADDED DETAILS OF MODIFIED CURB | 5-24-90 |
| 11-30-89 | VARIABLE DEPTH TYPE A & B 1 | 11-30-89 |
| 7-15-88 | REVISED MODIFIED CURB | 630-7-15-88 |
| 11-1-73 | REVISED MODIFIED CURB | 500-11-1-73 |
| 10-2-72 | REVISED AND REDRAWN | 512-10-2-72 |

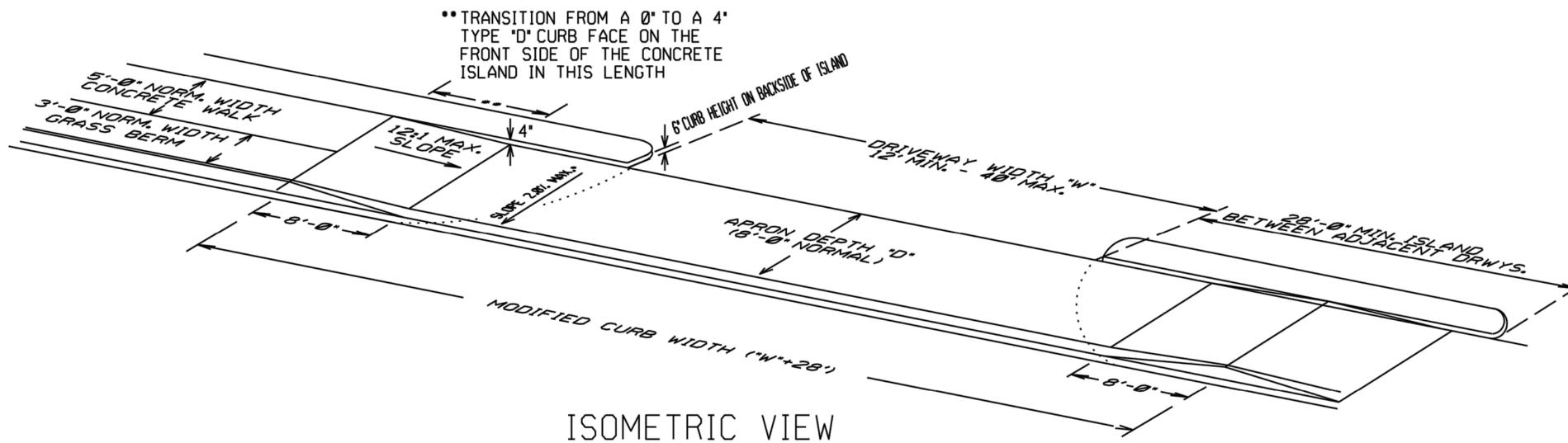
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

STANDARD DRAWING CG-1

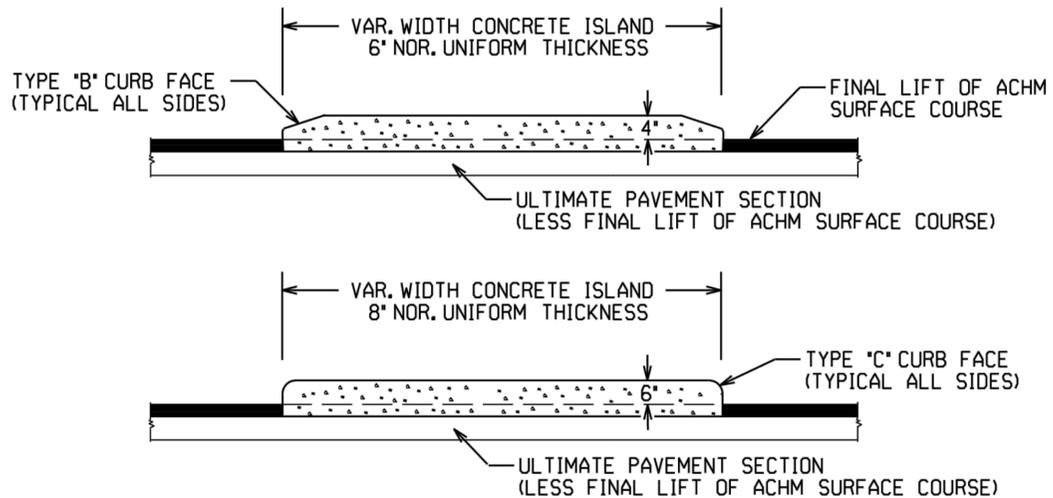


PLAN VIEW

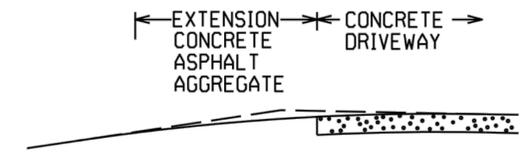


ISOMETRIC VIEW

REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM 'CONCRETE ISLAND'.



CURBED ISLANDS FOR CHANNELIZATION

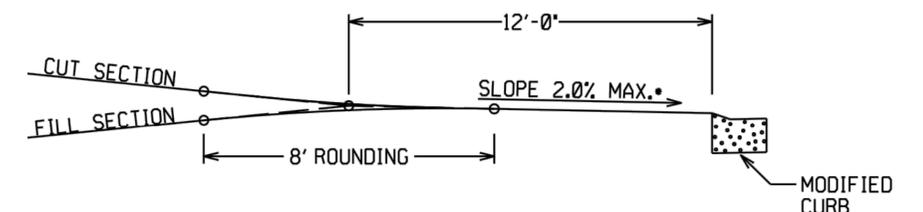


EXTENSION TYPICAL SECTIONS

- 1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY
- 2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")
- 3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE
- 4: AGGREGATE - 6" AGGREGATE BASE COURSE

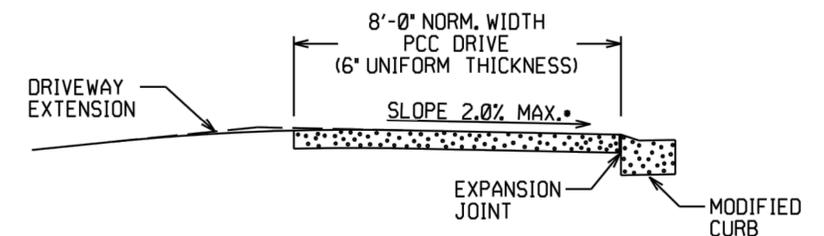
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

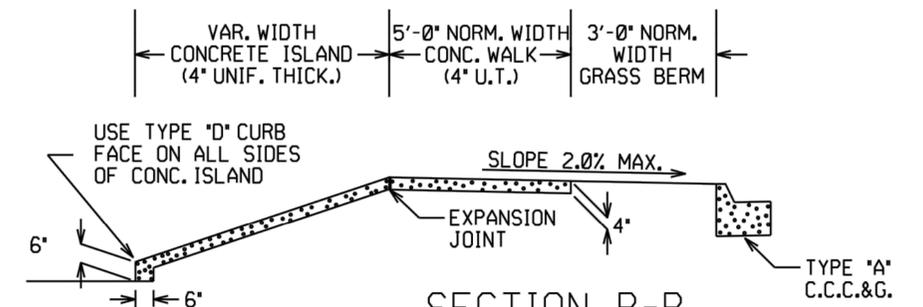


DRIVEWAY VERTICAL ALIGNMENT DETAILS

* NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



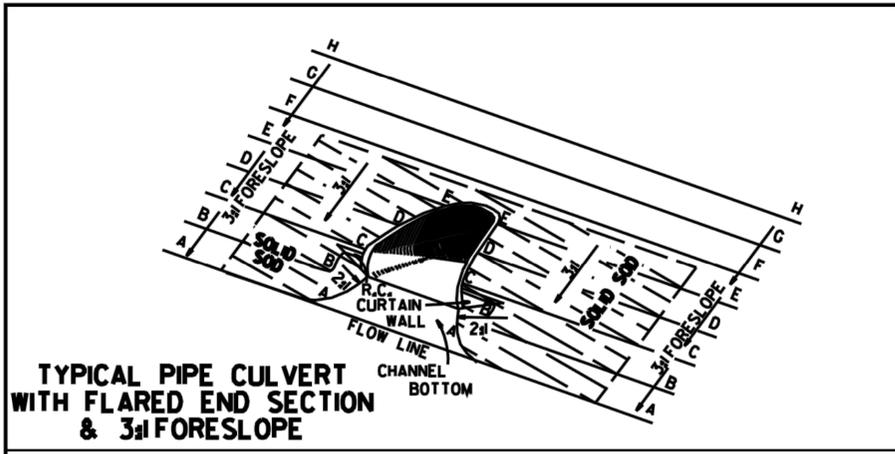
SECTION A-A



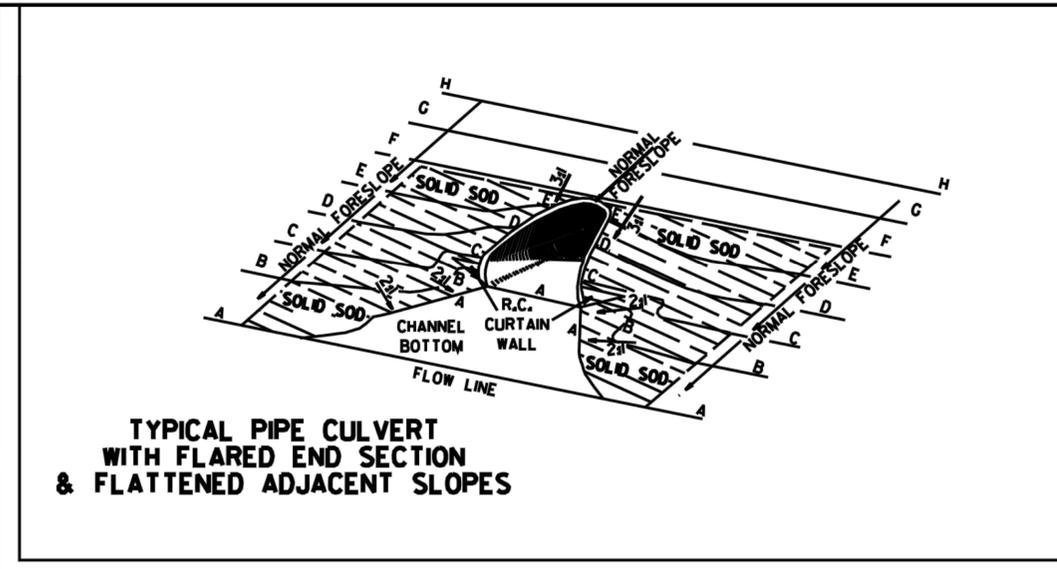
SECTION B-B
CURBED ISLAND BEHIND WALK

| DATE | REV | DATE FILMED | DESCRIPTION |
|----------|-----|-------------|---|
| 11-07-19 | | | REVISED WALK DETAILS |
| 2-27-14 | | | REVISED PLAN & ISOMETRIC VIEW |
| 11-29-07 | | | ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL |
| 11-10-05 | | | REV. APRON SLOPE & DEPTH OF AGG. BASE. |
| 8-22-02 | | | ADDED ISLAND DETAILS & NOTES |
| 3-30-00 | | | REV. MOD. CURB WIDTH & TRANS. NOTE |
| 11-19-98 | | | REVISED NOTES |
| 11-18-98 | | | REDRAWN AND REISSUED |

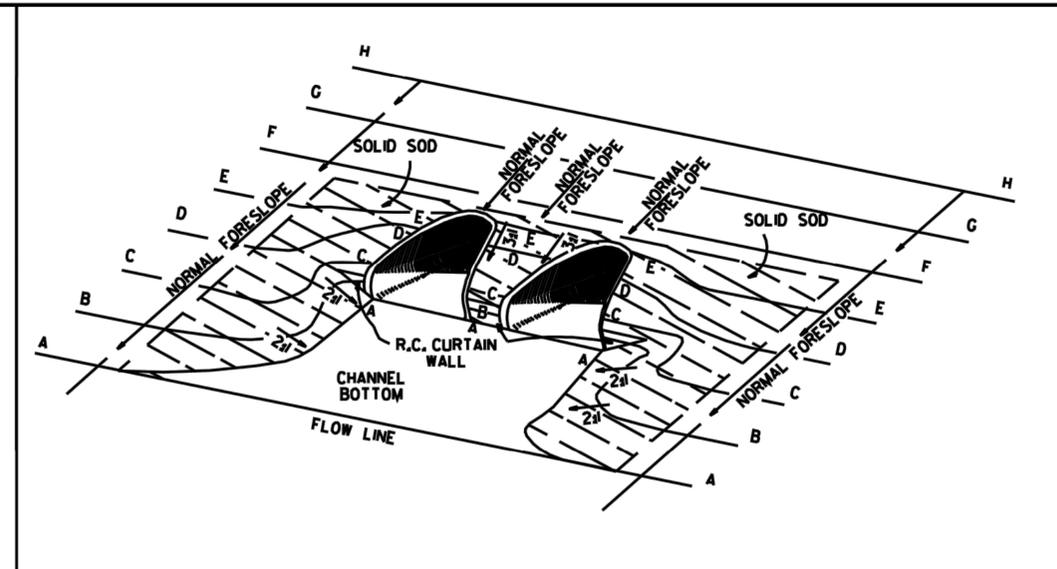
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



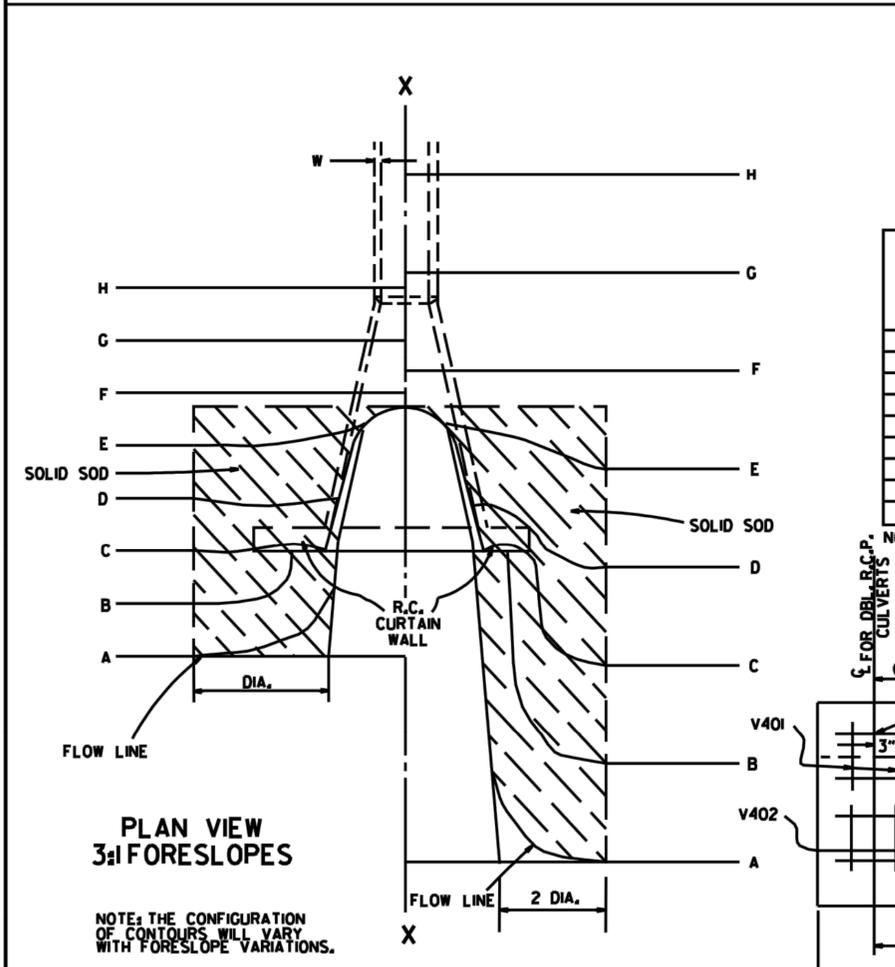
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3/4 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTIONS & FLATTENED ADJACENT SLOPES



PLAN VIEW 3/4 FORESLOPES

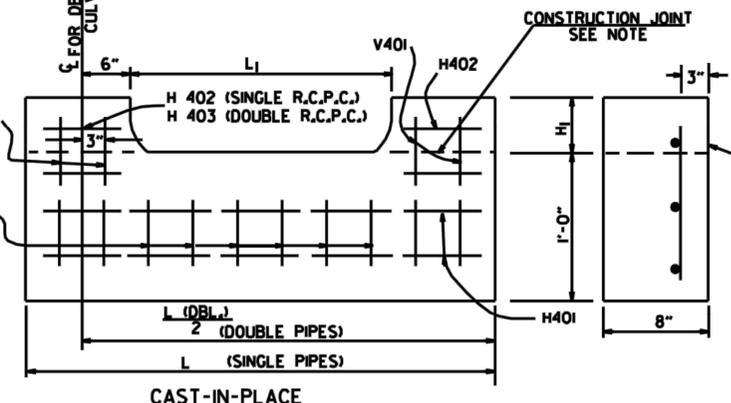
PLAN VIEW FLATTENED FORESLOPES

NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

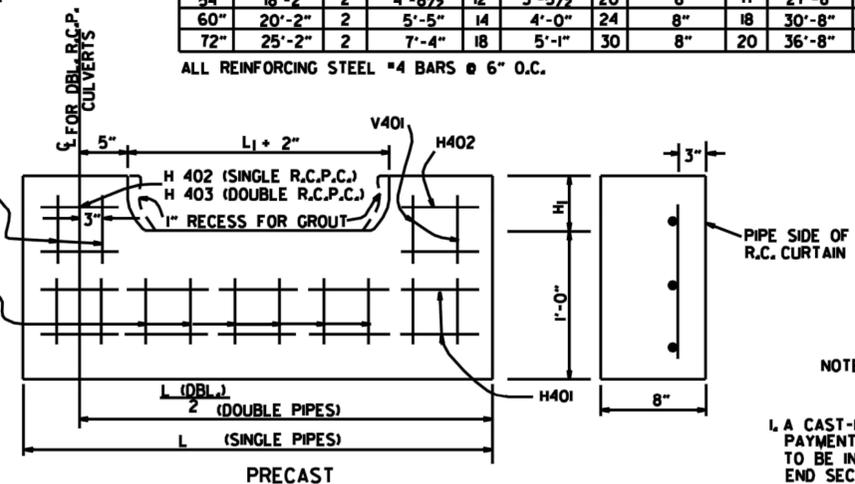
| PIPE DIA. | H ₁ | L ₁ | L | L (DBL.) 2 | SINGLE R.C.P.C. | | DOUBLE R.C.P.C. | |
|-----------|----------------|----------------|--------|---------------|-----------------|--------------|-----------------|--------------|
| | | | | | CONC. | REINF. STEEL | CONC. | REINF. STEEL |
| | | | | | CU. YDS. | LBS. | CU. YDS. | LBS. |
| 18" | 11 1/2" | 3'-5" | 8'-0" | 6'-3" | 0.31 | 27.7 | 0.45 | 39.5 |
| 24" | 1'-0 1/2" | 4'-6" | 9'-6" | 7'-6" | 0.37 | 33.4 | 0.53 | 48.0 |
| 30" | 1'-3 1/2" | 5'-7" | 11'-0" | 9'-0" | 0.45 | 39.0 | 0.67 | 59.0 |
| 36" | 1'-7" | 6'-8" | 13'-0" | 10'-6" | 0.58 | 52.6 | 0.83 | 73.9 |
| 42" | 2'-1 1/2" | 7'-3" | 15'-6" | 12'-0" | 0.82 | 77.1 | 1.10 | 100.7 |
| 48" | 2'-5" | 7'-10" | 17'-0" | 13'-0" | 0.98 | 94.9 | 1.27 | 120.4 |
| 54" | 2'-9 1/2" | 8'-5" | 18'-6" | 14'-0" | 1.16 | 115.8 | 1.47 | 143.7 |
| 60" | 3'-4" | 9'-0" | 20'-6" | 15'-6" | 1.47 | 149.7 | 1.84 | 180.3 |
| 72" | 4'-5" | 10'-2" | 25'-6" | 18'-6" | 2.31 | 232.6 | 2.73 | 271.0 |

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.

R.C. CURTAIN WALL DETAILS



NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

REINFORCING STEEL SCHEDULE

| PIPE DIA. | SINGLE R.C. PIPE CULVERT | | | | | | | | DOUBLE R.C. PIPE CULVERT | | | | | | | | | |
|-----------|--------------------------|-----|------------|-----|------------|-----|------|-----|--------------------------|-----|------------|-----|------|-----|------------|-----|------|-----|
| | H401 | | H402 | | V401 | | V402 | | H401 | | H402 | | H403 | | V401 | | V402 | |
| | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. | L | NO. |
| 18" | 7'-8" | 2 | 1'-11 1/2" | 4 | 1'-7 1/2" | 8 | 8" | 8 | 12'-2" | 2 | 1'-11 1/2" | 4 | 8" | 2 | 1'-7 1/2" | 10 | 8" | 14 |
| 24" | 9'-2" | 2 | 2'-2" | 4 | 1'-8 1/2" | 10 | 8" | 9 | 14'-8" | 2 | 2'-2" | 4 | 8" | 2 | 1'-8 1/2" | 12 | 8" | 18 |
| 30" | 10'-8" | 2 | 2'-4 1/2" | 4 | 1'-11 1/2" | 10 | 8" | 12 | 17'-8" | 2 | 2'-4 1/2" | 4 | 8" | 2 | 1'-11 1/2" | 14 | 8" | 22 |
| 36" | 12'-8" | 2 | 2'-10" | 6 | 2'-3" | 12 | 8" | 14 | 20'-8" | 2 | 2'-10" | 6 | 8" | 3 | 2'-3" | 14 | 8" | 28 |
| 42" | 15'-2" | 2 | 3'-9 1/2" | 8 | 2'-9 1/2" | 16 | 8" | 15 | 23'-8" | 2 | 3'-9 1/2" | 8 | 8" | 4 | 2'-9 1/2" | 18 | 8" | 30 |
| 48" | 16'-8" | 2 | 4'-3" | 10 | 3'-1" | 18 | 8" | 16 | 25'-8" | 2 | 4'-3" | 10 | 8" | 5 | 3'-1" | 20 | 8" | 32 |
| 54" | 18'-2" | 2 | 4'-8 1/2" | 12 | 3'-5 1/2" | 20 | 8" | 17 | 27'-8" | 2 | 4'-9" | 12 | 8" | 6 | 3'-5 1/2" | 22 | 8" | 34 |
| 60" | 20'-2" | 2 | 5'-5" | 14 | 4'-0" | 24 | 8" | 18 | 30'-8" | 2 | 5'-5" | 14 | 8" | 7 | 4'-0" | 26 | 8" | 36 |
| 72" | 25'-2" | 2 | 7'-4" | 18 | 5'-1" | 30 | 8" | 20 | 36'-8" | 2 | 7'-4" | 18 | 8" | 9 | 5'-1" | 33 | 8" | 40 |

ALL REINFORCING STEEL #4 BARS @ 6" O.C.

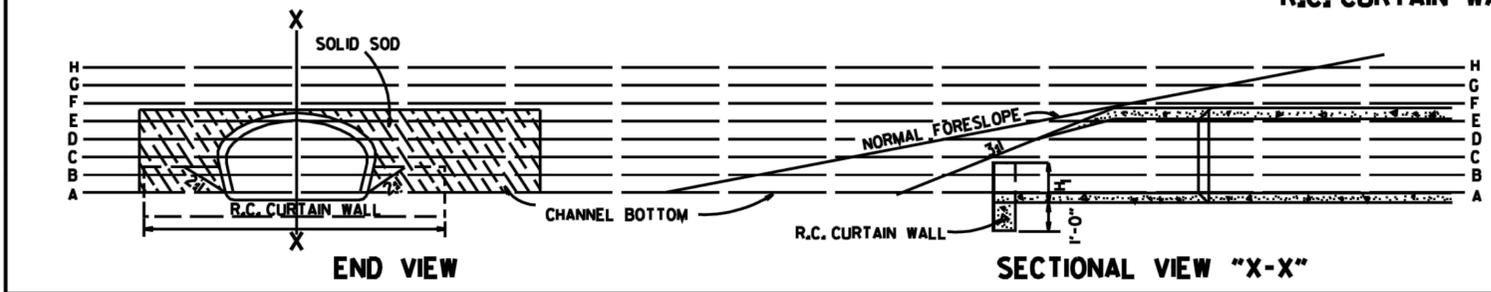
SOLID SODDING

| PIPE DIA. | SINGLE R.C.P.C. | | | | | | DOUBLE R.C.P.C. | | | | | |
|-----------|-----------------|----|-----|----|-----|-----|-----------------|----|-----|----|-----|-----|
| | 3/4 | | 4/4 | | 6/4 | | 3/4 | | 4/4 | | 6/4 | |
| | SO. YDS. | | | | | | SO. YDS. | | | | | |
| 18" | 5 | 7 | 12 | 6 | 8 | 13 | 5 | 7 | 12 | 6 | 8 | 13 |
| 24" | 8 | 12 | 19 | 9 | 13 | 20 | 8 | 12 | 19 | 9 | 13 | 20 |
| 30" | 13 | 18 | 29 | 14 | 19 | 30 | 13 | 18 | 29 | 14 | 19 | 30 |
| 36" | 17 | 26 | 41 | 18 | 28 | 43 | 17 | 26 | 41 | 18 | 28 | 43 |
| 42" | 23 | 35 | 55 | 25 | 37 | 57 | 23 | 35 | 55 | 25 | 37 | 57 |
| 48" | 29 | 46 | 68 | 31 | 48 | 70 | 29 | 46 | 68 | 31 | 48 | 70 |
| 54" | 35 | 57 | 85 | 37 | 59 | 87 | 35 | 57 | 85 | 37 | 59 | 87 |
| 60" | 45 | 62 | 104 | 48 | 65 | 107 | 45 | 62 | 104 | 48 | 65 | 107 |
| 72" | 64 | 92 | 156 | 67 | 95 | 159 | 64 | 92 | 156 | 67 | 95 | 159 |

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

GENERAL NOTES

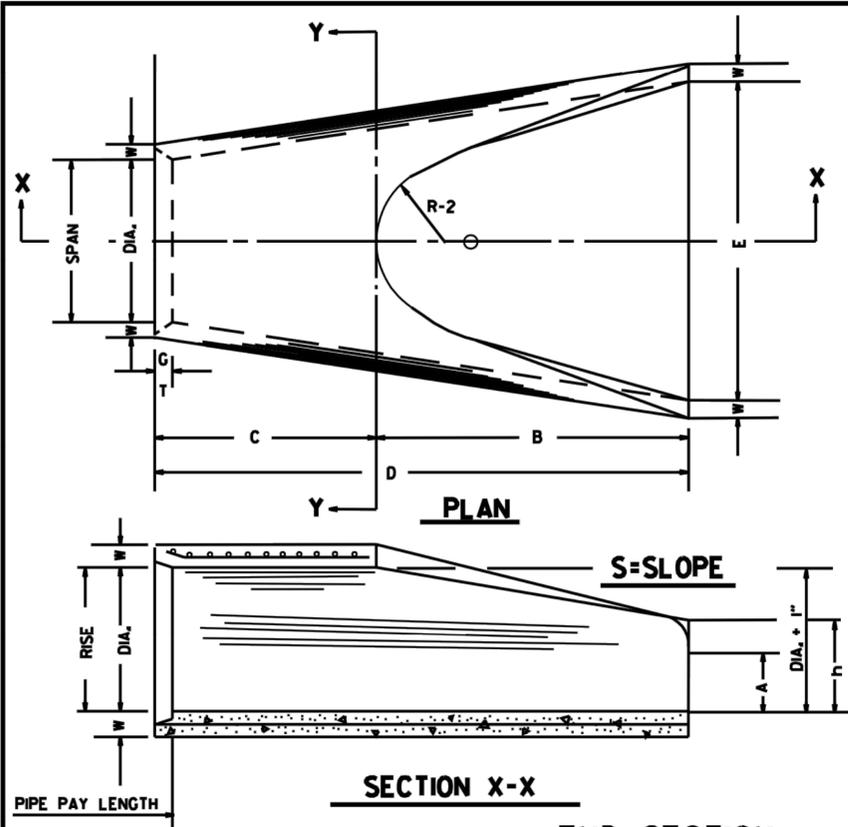
- A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
- ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
- CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
- WELDED WIRE MESH 3 x 3 W/10 x W/10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

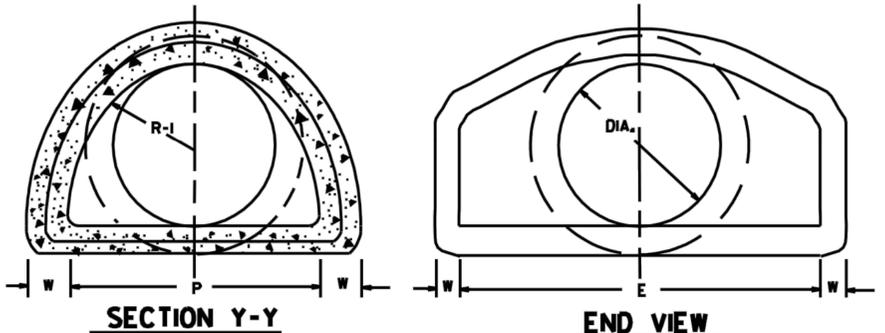
| | | | |
|----------|--|--------|-----------------------------------|
| 10-18-98 | ADDED NOTE TO SOLID SODDING | | ARKANSAS STATE HIGHWAY COMMISSION |
| 10-12-98 | CORRECTED SPELLING | | |
| 11-3-94 | ADDED GENERAL NOTE NO. 4 | | |
| 18-15-91 | REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT. | | |
| 3-2-81 | ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES | | |
| 5-15-80 | ADDED PRECAST WALL & GENERAL NOTES | | |
| 10-2-72 | REVISED AND REDRAWN | | |
| DATE | REVISION | FILMED | STANDARD DRAWING FES-1 |



END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

| DIA. | WALL | A | B | C | D | E | S | DIA. + 1" | P | R-1 | R-2 | G-T | WT. | h |
|------|--------|--------|-----------|------------|-----------|-------|----|-----------|---------|---------|-----|--------|-------|------------|
| 18" | 2 1/2" | 9" | 2'-3" | 3'-10" | 6'-1" | 3'-0" | 3d | 19" | 29" | 15 1/2" | 12" | 2" | 1000 | 1'-0 1/2" |
| 24" | 3" | 9 1/2" | 3'-7 1/2" | 2'-6" | 6'-1 1/2" | 4'-0" | 3d | 25" | 33 3/8" | 16 3/8" | 14" | 2 1/2" | 1600 | 1'-1 1/2" |
| 30" | 3 1/2" | 1'-0" | 4'-6" | 1'-7 1/2" | 6'-1 3/4" | 5'-0" | 3d | 31" | 37" | 18 1/2" | 15" | 3 1/4" | 1940 | 1'-4 1/2" |
| 36" | 4" | 1'-3" | 5'-3" | 2'-10 1/4" | 8'-1 1/2" | 6'-0" | 3d | 37" | 47 1/4" | 24 1/4" | 20" | 3 1/2" | 4100 | 1'-8" |
| 42" | 4 1/2" | 1'-9" | 5'-3" | 2'-11" | 8'-2" | 6'-6" | 3d | 43" | 53 1/2" | 27 1/2" | 22" | 3 1/2" | 5380 | 2'-2 1/2" |
| 48" | 5" | 2'-0" | 6'-0" | 2'-2" | 8'-2" | 7'-0" | 3d | 49" | 56 1/2" | 28 1/2" | 22" | 3 1/2" | 6550 | 2'-6" |
| 54" | 5 1/2" | 2'-4" | 6'-6" | 1'-10" | 8'-4" | 7'-6" | 3d | 55" | 65 1/2" | 33 1/8" | 24" | 4" | 8750 | 2'-10 1/2" |
| 60" | 6" | 2'-10" | 6'-6" | 1'-10" | 8'-4" | 8'-0" | 3d | 61" | 72 1/2" | 36 1/8" | 24" | 4" | 9270 | 3'-5" |
| 72" | 7" | 3'-10" | 6'-6" | 1'-10" | 8'-4" | 9'-0" | 3d | 73" | 77 1/4" | 38 3/8" | 24" | 5" | 13250 | 4'-6" |

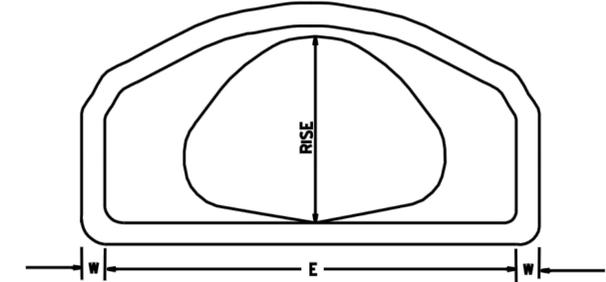


SECTION Y-Y **END VIEW**

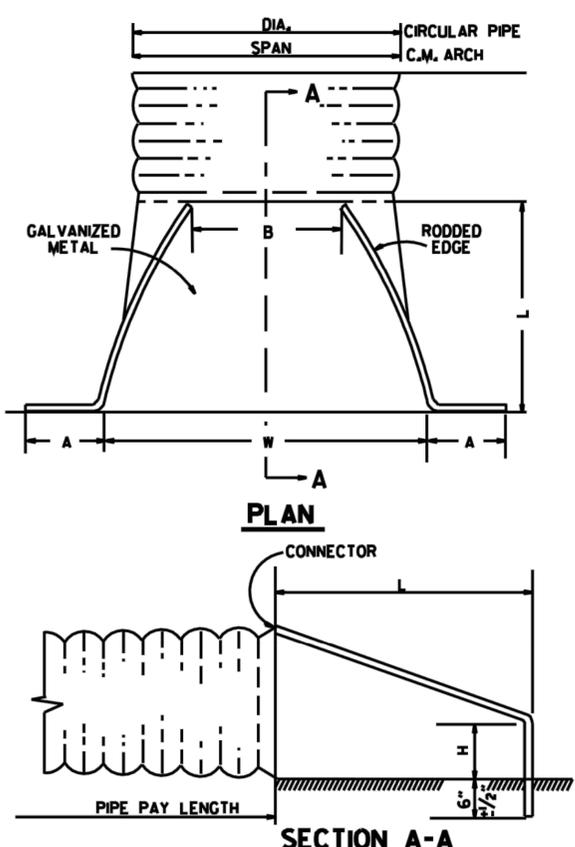
ARCH PIPE

| EQUIV. DIA. | SPAN | | RISE | | W | A | B | C | D | E | P | R2 | G-T | S |
|-------------|--------------|-------------|--------------|-------------|--------|---------|-------|------------|-----------|--------|---------|-----|--------|--------|
| | AASHTO M 206 | AHD NOMINAL | AASHTO M 206 | AHD NOMINAL | | | | | | | | | | |
| 15 | 18 | 18 | 11 | 11 | 2" | 4" | 2'-0" | 4'-0" | 6'-0" | 3'-0" | 29" | 12" | 1 1/2" | 2 1/2d |
| 18 | 22 | 22 | 13 1/2 | 14 | 2 1/2" | 5" | 2'-0" | 4'-1" | 6'-1" | 3'-6" | 32 1/8" | 13" | 2 1/2" | 2 1/2d |
| 21 | 26 | 26 | 15 1/2 | 16 | 2 3/4" | 7" | 2'-3" | 3'-10" | 6'-1" | 4'-0" | 34 1/8" | 14" | 2 1/2" | 2 1/2d |
| 24 | 28 1/2 | 29 | 18 | 18 | 3" | 9" | 2'-3" | 3'-10" | 6'-1" | 5'-0" | 36 1/8" | 15" | 2 1/2" | 2 1/2d |
| 30 | 36 1/4 | 36 | 22 1/2 | 23 | 3 1/2" | 10" | 3'-1" | 3'-0 1/2" | 6'-1 1/2" | 6'-0" | 47 1/4" | 20" | 3" | 2 1/2d |
| 36 | 43 1/4 | 44 | 26 3/4 | 27 | 4" | 10 1/2" | 4'-0" | 2'-1 1/2" | 6'-1 1/2" | 6'-6" | 54 1/4" | 22" | 3 1/2" | 2 1/2d |
| 42 | 51 1/8 | 51 | 31 3/4 | 31 | 4 1/2" | 11 1/2" | 4'-7" | 1'-10 1/4" | 6'-5 1/4" | 7'-2" | 59 1/2" | 23" | 3 3/4" | 2 1/2d |
| 48 | 58 1/2 | 59 | 36 | 36 | 5" | 1'-3" | 5'-3" | 2'-10 1/4" | 8'-1 1/4" | 7'-10" | 70 1/4" | 24" | 4 1/4" | 2 1/2d |
| 54 | 65 | 65 | 40 | 40 | 5 1/2" | 1'-7" | 5'-3" | 2'-11" | 8'-2" | 8'-6" | 72 1/8" | 24" | 4 1/4" | 2 1/2d |
| 60 | 73 | 73 | 45 | 45 | 6" | 1'-10" | 5'-6" | 2'-8" | 8'-2" | 9'-0" | 77 1/4" | 24" | 5" | 2 1/2d |

* THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



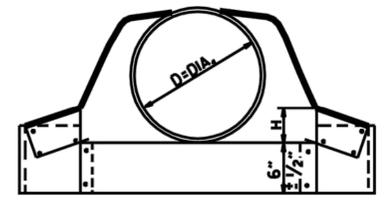
END VIEW CONCRETE ARCH PIPE



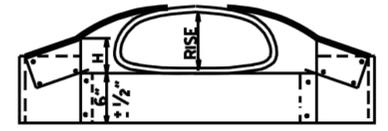
SECTION A-A

NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



CIRCULAR PIPE



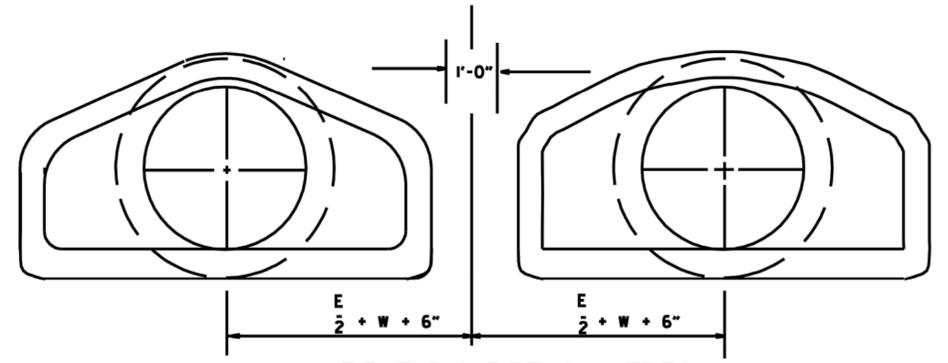
C.M. ARCH PIPE

CIRCULAR PIPE

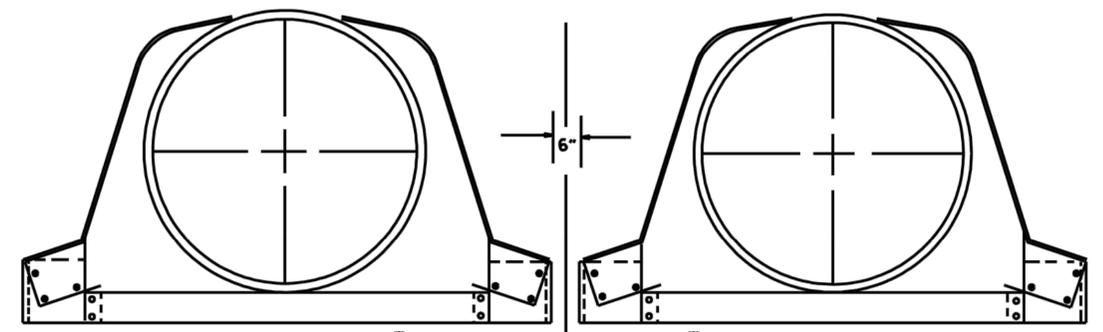
| D. DIA. | GAUGE | A | B. MAX. | H | L | W | S |
|---------|-------|----|---------|----|----|-----|--------|
| 12 | 16 | 6 | 6 | 6 | 21 | 24 | 2 1/2d |
| 15 | 16 | 7 | 8 | 6 | 26 | 30 | 2 1/2d |
| 18 | 16 | 8 | 10 | 6 | 31 | 36 | 2 1/2d |
| 21 | 16 | 9 | 12 | 6 | 36 | 42 | 2 1/2d |
| 24 | 16 | 10 | 13 | 6 | 41 | 48 | 2 1/2d |
| 30 | 14 | 12 | 16 | 8 | 51 | 60 | 2 1/2d |
| 36 | 14 | 14 | 19 | 9 | 60 | 72 | 2 1/2d |
| 42 | 12 | 16 | 22 | 11 | 69 | 84 | 2 1/2d |
| 48 | 12 | 18 | 27 | 12 | 78 | 90 | 2 1/2d |
| 54 | 12 | 18 | 30 | 12 | 84 | 102 | 2d |
| 60 | 12 | 18 | 33 | 12 | 87 | 114 | 1 1/2d |
| 66 | 12 | 18 | 36 | 12 | 87 | 120 | 1 1/2d |
| 72 | 12 | 18 | 39 | 12 | 87 | 126 | 1 1/3d |

C.M. ARCH PIPE

| EQUIV. DIA. | SPAN | RISE | A | B. MAX. | H | L | W | S | GAUGE |
|-------------|------|------|----|---------|----|----|-----|--------|-------|
| 15" | 17 | 13 | 7 | 9 | 6 | 19 | 30 | 2 1/2d | 16 |
| 18" | 21 | 15 | 7 | 10 | 6 | 23 | 36 | 2 1/2d | 16 |
| 21" | 24 | 18 | 8 | 12 | 6 | 28 | 42 | 2 1/2d | 16 |
| 24" | 28 | 20 | 9 | 14 | 6 | 32 | 48 | 2 1/2d | 16 |
| 30" | 35 | 24 | 10 | 16 | 6 | 39 | 60 | 2 1/2d | 14 |
| 36" | 42 | 29 | 12 | 18 | 8 | 46 | 75 | 2 1/2d | 14 |
| 42" | 49 | 33 | 13 | 21 | 9 | 53 | 85 | 2 1/2d | 12 |
| 48" | 57 | 38 | 18 | 26 | 12 | 63 | 90 | 2 1/2d | 12 |
| 54" | 64 | 43 | 18 | 30 | 12 | 70 | 102 | 2 1/4d | 12 |
| 60" | 71 | 47 | 18 | 33 | 12 | 77 | 114 | 2 1/4d | 12 |



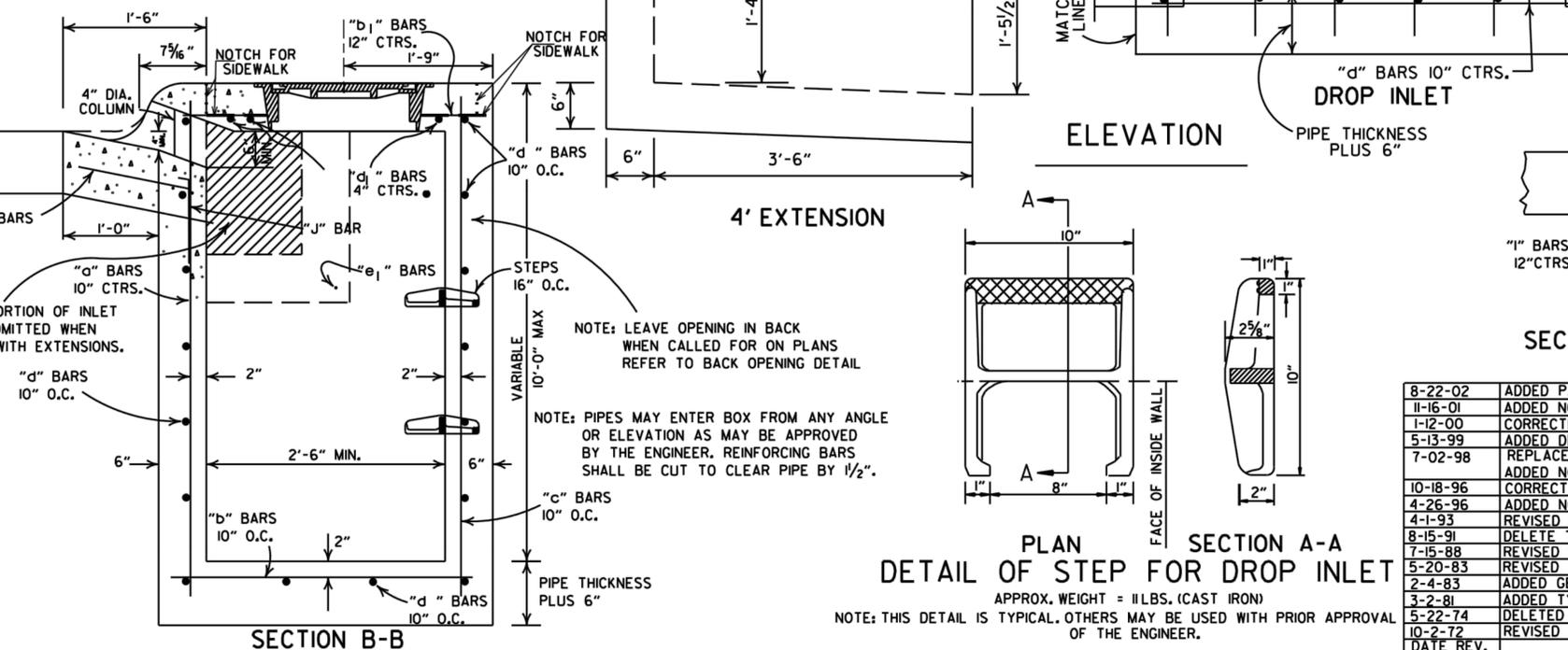
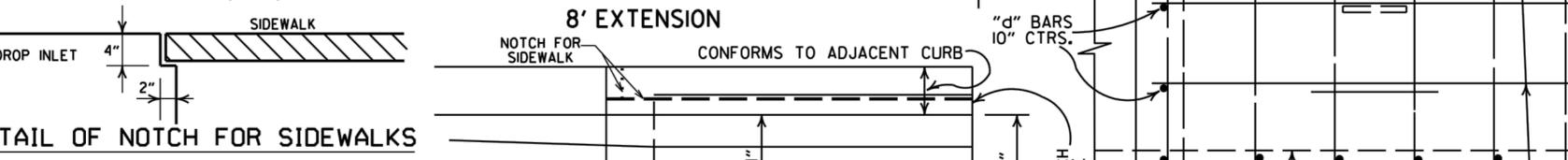
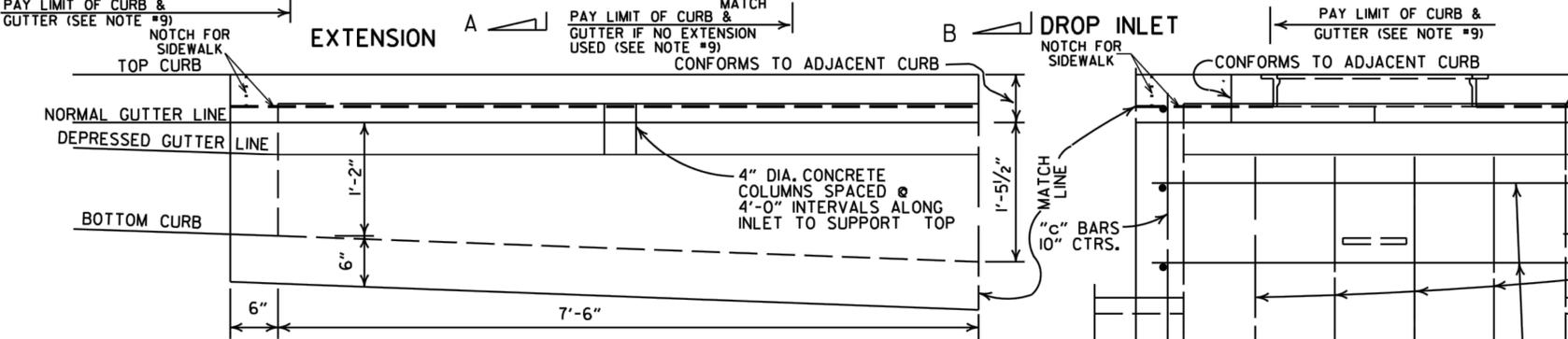
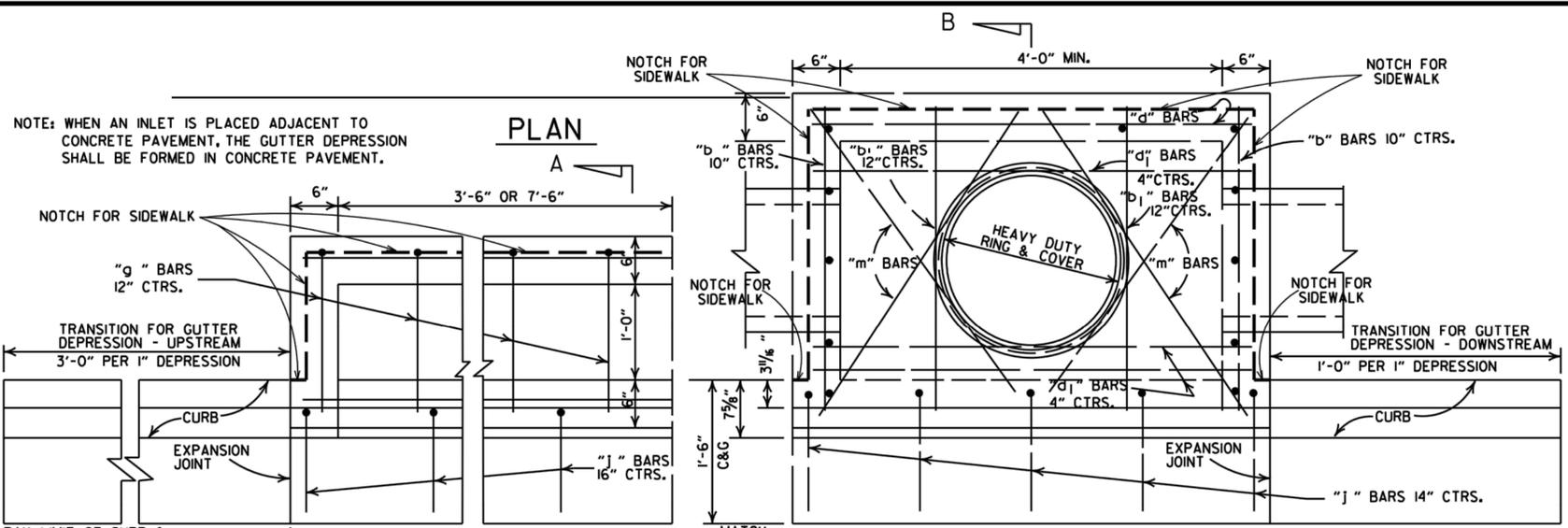
MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

| | | | |
|----------|---|-------------|-----------------------------------|
| 10-18-96 | REVISED ASTM REF. TO AASHTO | | ARKANSAS STATE HIGHWAY COMMISSION |
| 5-15-80 | REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S. | 664-5-15-80 | |
| 7-14-78 | C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES | 752-7-14-78 | |
| 8-22-75 | ADDED MULTIPLE PIPE CULVERTS | 517-8-22-75 | |
| 12-5-74 | REMOVED NOTE RE REINF. FOR R.C. F.E.S. | 500-12-5-74 | |
| 5-24-73 | CMP END SECTION, SHOW PIPE PAY LENGTH | 627-5-24-73 | |
| 10-2-72 | REVISED AND REDRAWN | 760-10-2-72 | |
| DATE | REVISION | FILE NO. | |

FLARED END SECTION
STANDARD DRAWING FES-2



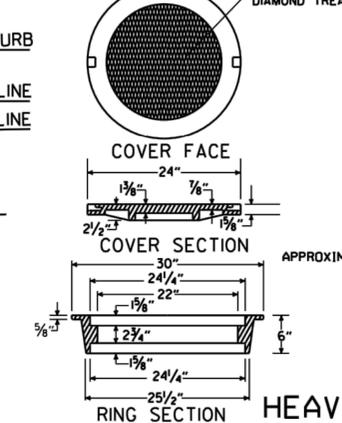
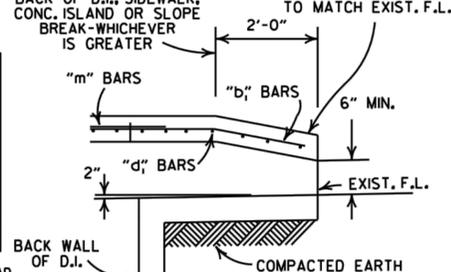
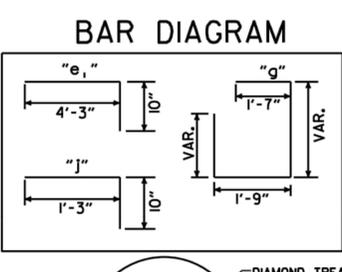
4'-0" LENGTH DROP INLET

| PIPE SIZE | MIN. WIDTH | HEIGHT 5'-0" | | PLUS OR MINUS PER LIN. FT. OF HEIGHT | | 4'-0" | | 8'-0" | |
|-----------|------------|------------------------|---------------------|--------------------------------------|---------------------|---|---------------------|------------------------|---------------------|
| | | CLASS A CONC. CU. YDS. | REINF. STEEL POUNDS | CLASS A CONC. CU. YDS. | REINF. STEEL POUNDS | CLASS A CONC. CU. YDS. | REINF. STEEL POUNDS | CLASS A CONC. CU. YDS. | REINF. STEEL POUNDS |
| 18" | 2'-6" | 1.77 | 156 | 0.28 | 22 | | | | |
| 24" | 2'-6" | 1.79 | 156 | 0.28 | 22 | | | | |
| 30" | 3'-2" | 2.39 | 205 | 0.30 | 26 | | | | |
| 36" | 3'-8" | 2.63 | 236 | 0.32 | 28 | | | | |
| 42" | 4'-4" | 2.95 | 250 | 0.34 | 30 | | | | |
| 48" | 4'-10" | 3.21 | 265 | 0.36 | 32 | | | | |
| | | | | | | DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED. | | | |
| | | | | | | 0.04 | 3 | | |

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

| INSIDE DIA. PIPE | CLASS A CONC. CU. YDS. | REINF. STEEL POUNDS |
|------------------|------------------------|---------------------|
| 18 | 0.05 | 2 |
| 24 | 0.09 | 3 |
| 30 | 0.13 | 4 |
| 42 | 0.24 | 8 |



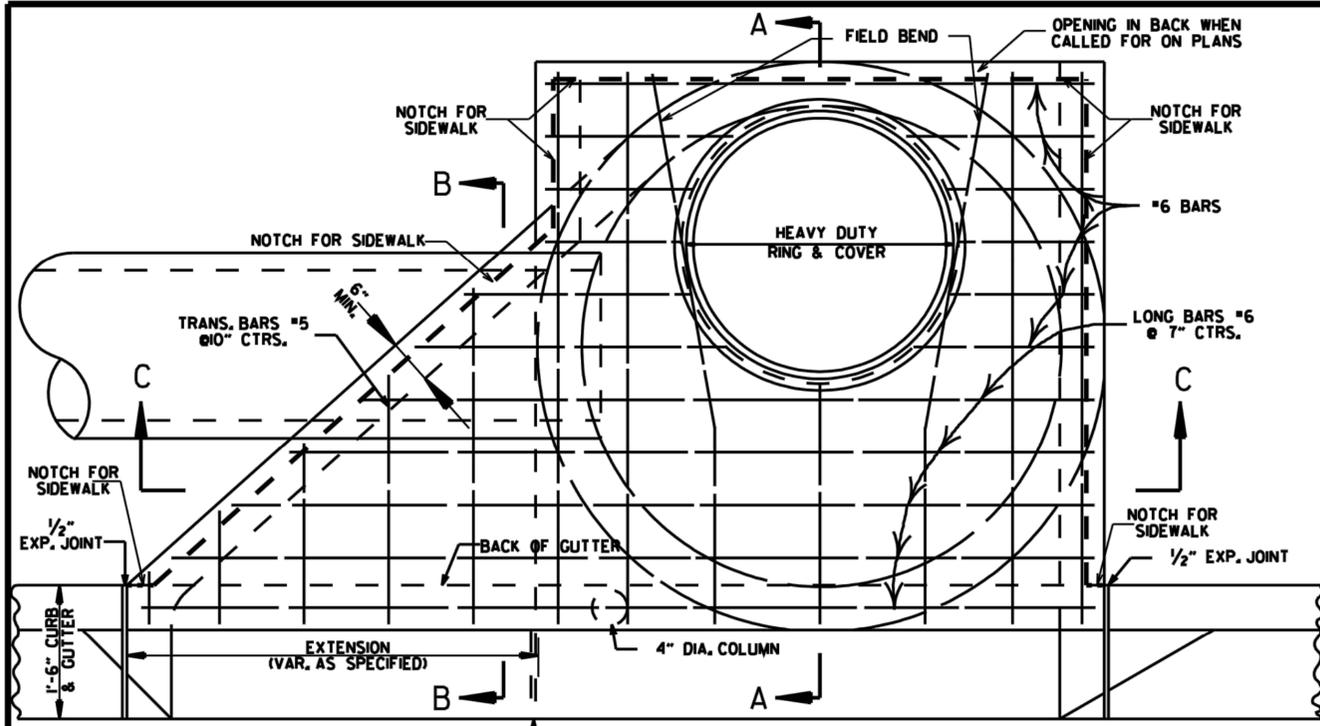
BACK OPENING
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).

HEAVY DUTY RING & COVER
APPROXIMATE TOTAL WEIGHT = 333 LBS.

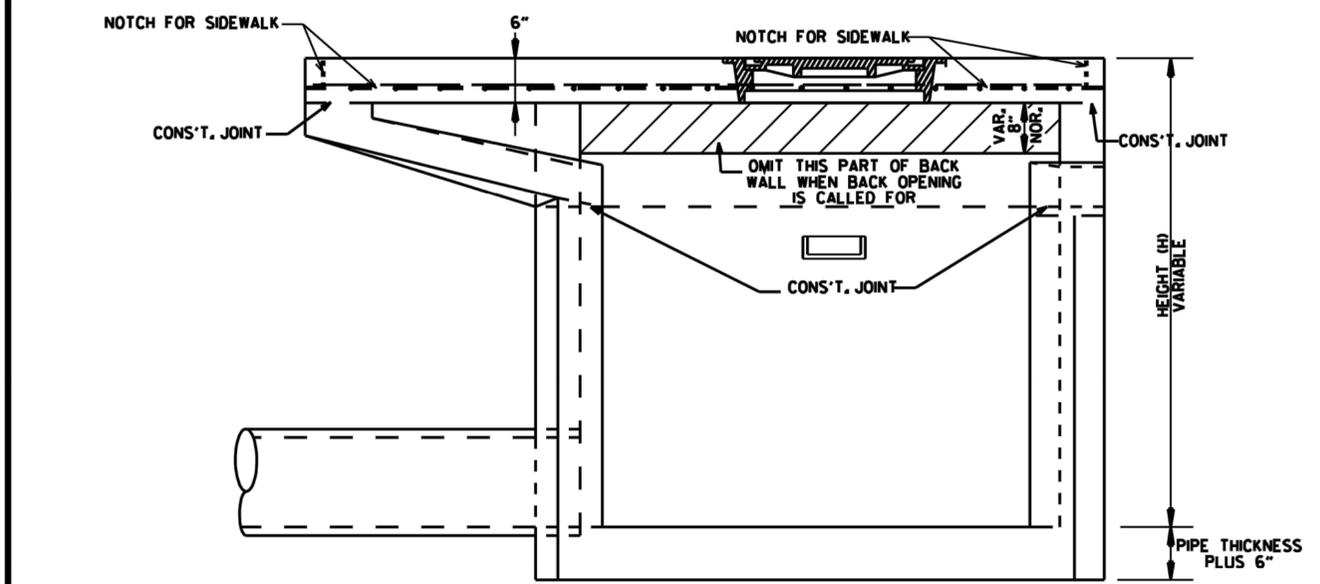
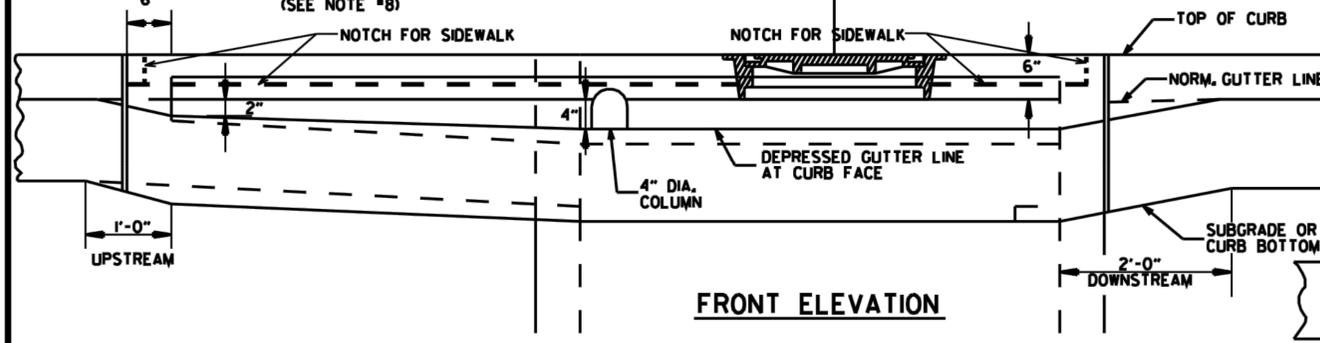
- GENERAL NOTES:**
- ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 - STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
 - ALL REINF. BARS SHALL BE #4 AND HAVE 1/2" COVER.
 - DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
 - THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
 - WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (FPC-9D).
 - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 - DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
 - PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
 - 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 M105 CLASS 35B & AASHTO M306.
 - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 - 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
 - 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 | REV. | DESCRIPTION | DATE FILMED |
|----------|------|---|-------------|
| 8-22-02 | | ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B | |
| 11-16-01 | | ADDED NOTE 13; REVISED SECTION B-B | |
| 1-12-00 | | CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER | |
| 5-13-99 | | ADDED DETAIL OF NOTCH FOR SIDEWALKS | |
| 7-02-98 | | REPLACED RING & COVER W/HEAVY DUTY RING & COVER | |
| | | ADDED NOTES 9,10,&11 | |
| 10-18-96 | | CORRECTED SPELLING | |
| 4-26-96 | | ADDED NOTE 8 & REVISED (4')(8') EXTENSION TITLES | 10-18-96 |
| 4-1-93 | | REVISED BACK OPENING & NOTE | |
| 8-15-91 | | DELETE TYPE IV GRATE | |
| 7-15-88 | | REVISED STEP DETAIL | |
| 5-20-83 | | REVISED DETAILS OF GRATES (TYPE IV & IV-A) | |
| 2-4-83 | | ADDED GENERAL NOTE NO. 4 | |
| 3-2-81 | | ADDED TYPE IV-A GRATE | |
| 5-22-74 | | DELETED INLET (TYPE F) & GRATE (TYPE III) | |
| 10-2-72 | | REVISED AND REDRAWN | |

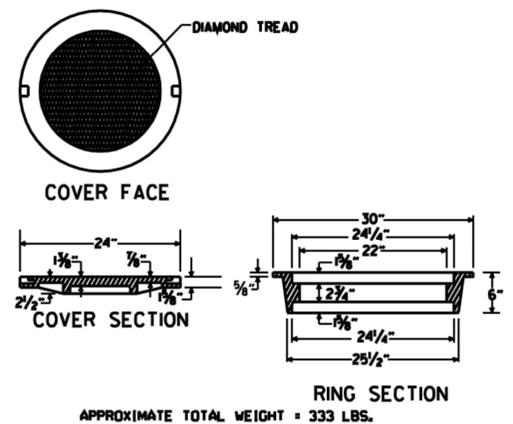
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DROP INLETS
(TYPE C)
STANDARD DRAWING FPC-9E



PLAN - W/SINGLE EXTENSION
 PAY LIMIT OF CURB & GUTTER (SEE NOTE #8)
 EXP. JOINT (IF NO EXTENSION USED)
 PAY LIMIT OF CURB & GUTTER IF NO EXTENSION USED (SEE NOTE #8)
 NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.
 PAY LIMIT OF CURB & GUTTER (SEE NOTE #8)

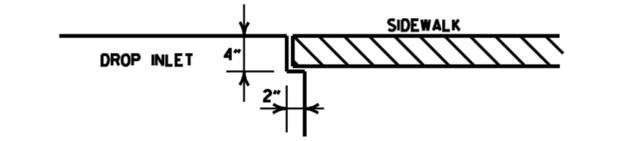


SECTION C-C
 HEIGHT (H) VARIABLE
 PIPE THICKNESS PLUS 6"

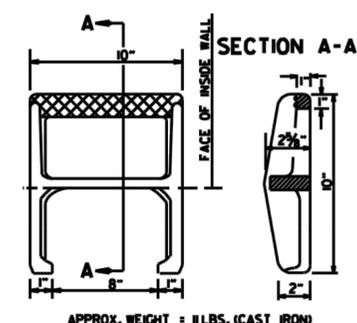


HEAVY DUTY RING & COVER
 APPROXIMATE TOTAL WEIGHT = 333 LBS.

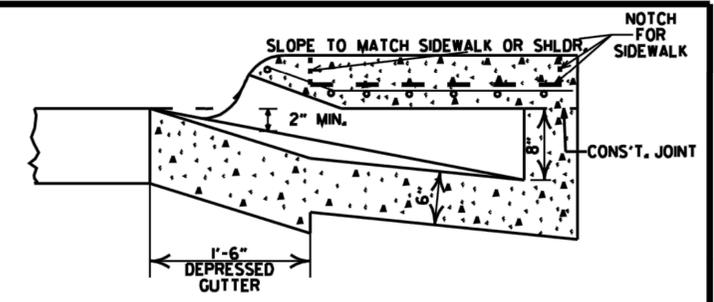
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.



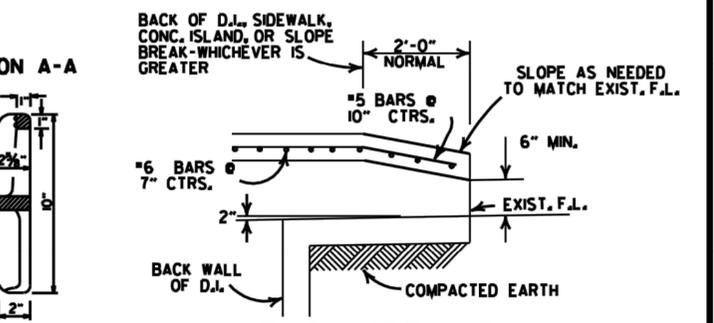
DETAIL OF NOTCH FOR SIDEWALKS



DETAIL OF STEP FOR DROP INLET
 APPROX. WEIGHT = # LBS. (CAST IRON)
 PLAN
 NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.



SECTION B-B



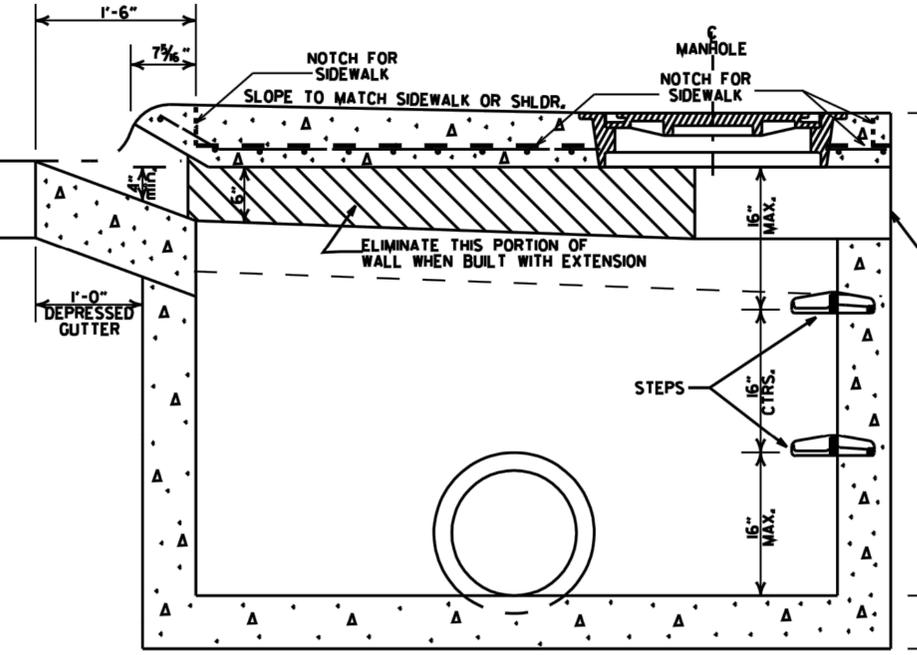
BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE MO).

- GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
 3. ALL REINFORCING BARS SHALL BE GRADE #60 AND HAVE MIN. 1/2" COVER.
 4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
 5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
 6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
 7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
 8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
 9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
 10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
 11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
 12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
 13. 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.

LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

| MINIMUM WALL THICKNESS | | | |
|------------------------|---------------------|---------------|---------|
| DIA. OF D.I. | DIA. OF OUTLET PIPE | CAST IN PLACE | PRECAST |
| 4" LD. | 12" THRU 27" | 6" | 5" |
| 5" LD. | 30" THRU 42" | 8" | 6" |
| 6" LD. | 48" THRU 54" | 8" | 7" |



SECTION A-A
 HEIGHT (H) VARIABLE
 PIPE THICKNESS PLUS 6"

| DATE | REVISIONS | DATE FILED |
|----------|---|------------|
| 11-22-02 | ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B | |
| 11-16-01 | ADDED NOTE 13 | |
| 1-12-00 | REVISED HEAVY DUTY RING & COVER | |
| 5-13-99 | ADDED NOTCH DETAIL FOR SIDEWALKS | |
| 7-02-98 | REP. NOTE B, REM. PLAN DET., REV. PICTURE FOR COVER AND DETAIL OF STEP FOR DROP INLET | |
| 4-26-98 | ADDED NOTE TO ADD OPENING DIMENSION | |
| 10-12-96 | CORRECTED #5 BAR SPACING | |
| 1-20-95 | CORRECTED DIAMETER OF D.I. IN BOX | |
| 2-2-95 | TYPE C TO MO (OPEN BACK DETAIL) | |
| 11-15-94 | REVISED GENERAL NOTES | 11-15-94 |
| 4-15-93 | REV. BACK OPEN DETAIL & NOTE | 4-15-93 |
| 11-15-91 | REVISED NOTES 11, 12 & ADDED BACK OPEN DETAIL | 11-15-91 |
| 11-15-89 | ADDED NOTE NO. 12 | 11-15-89 |
| 11-15-89 | ADDED NOTE & MINIMUM WALL THICKNESS | 11-15-89 |
| 1-15-89 | ADDED EXTEND NOTE TO SECTION A-A | 1-15-89 |
| 11-15-87 | MODIFIED WALL THICKNESS | 11-15-87 |
| 11-15-87 | ISSUED | 11-15-87 |

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DROP INLET (TYPE MO)
 STANDARD DRAWING FPC-9M

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

| EQUIV. DIA. | SPAN | | RISE | |
|-------------|--------------|---------------|--------------|---------------|
| | AASHTO M 206 | ARDOT NOMINAL | AASHTO M 206 | ARDOT NOMINAL |
| INCHES | INCHES | | | |
| 15 | 18 | 18 | 11 | 11 |
| 18 | 22 | 22 | 13½ | 14 |
| 21 | 26 | 26 | 15½ | 16 |
| 24 | 28½ | 29 | 18 | 18 |
| 30 | 36¼ | 36 | 22½ | 23 |
| 36 | 43¾ | 44 | 26¾ | 27 |
| 42 | 51½ | 51 | 31½ | 31 |
| 48 | 58½ | 59 | 36 | 36 |
| 54 | 65 | 65 | 40 | 40 |
| 60 | 73 | 73 | 45 | 45 |
| 72 | 88 | 88 | 54 | 54 |
| 84 | 102 | 102 | 62 | 62 |
| 90 | 115 | 115 | 72 | 72 |
| 96 | 122 | 122 | 77½ | 77 |
| 108 | 138 | 138 | 87½ | 87 |
| 120 | 154 | 154 | 96¾ | 97 |
| 132 | 168¾ | 169 | 106½ | 107 |

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

| EQUIV. DIA. | AASHTO M 207 | |
|-------------|--------------|------|
| | SPAN | RISE |
| INCHES | INCHES | |
| 18 | 23 | 14 |
| 24 | 30 | 19 |
| 27 | 34 | 22 |
| 30 | 38 | 24 |
| 33 | 42 | 27 |
| 36 | 45 | 29 |
| 39 | 49 | 32 |
| 42 | 53 | 34 |
| 48 | 60 | 38 |
| 54 | 68 | 43 |
| 60 | 76 | 48 |
| 66 | 83 | 53 |
| 72 | 91 | 58 |
| 78 | 98 | 63 |
| 84 | 106 | 68 |

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(F)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

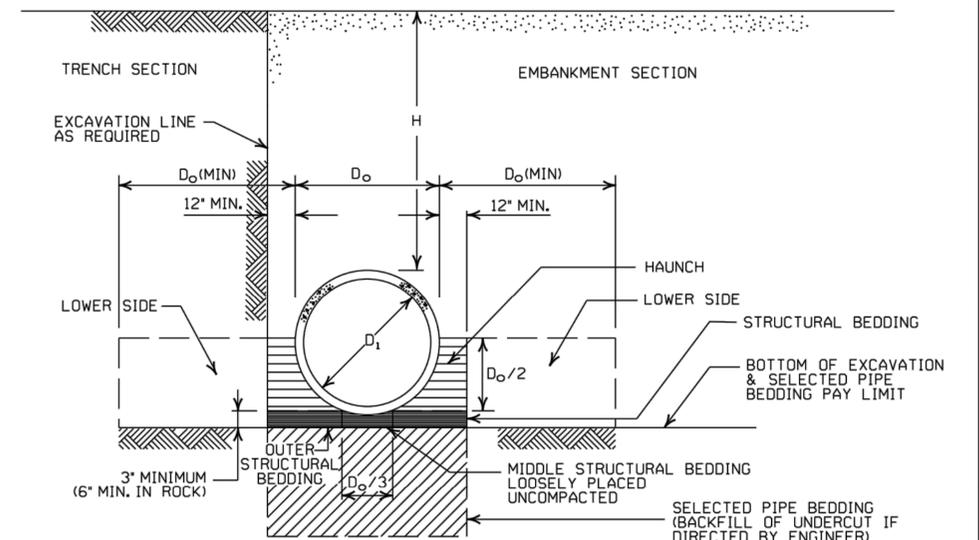
- LEGEND -

- D_i = NORMAL INSIDE DIAMETER OF PIPE
- D_o = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

| INSTALLATION TYPE | MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING |
|-------------------|---|
| TYPE 1 | AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7) |
| TYPE 2 | SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL* |
| TYPE 3** | AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL |

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

| INSTALLATION TYPE | CLASS OF PIPE | | | |
|-------------------|---------------|-----|----------|---------|
| | CLASS III | | CLASS IV | CLASS V |
| PIPE ID (IN.) | FEET | | | |
| 12-15 | 2 | 2.5 | 2 | 1 |
| 18-24 | 2.5 | 3 | 2 | 1 |
| 27-33 | 3 | 4 | 2 | 1 |
| 36-42 | 3.5 | 5 | 2 | 1 |
| 48 | 4.5 | 5.5 | 2 | 1 |
| 54-60 | 5 | 7 | 2 | 1 |
| 66-78 | 6 | 8 | 2 | 1 |
| 84-108 | 7.5 | 8 | 2 | 1 |

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

| INSTALLATION TYPE | CLASS OF PIPE | | |
|-------------------|---------------|----------|---------|
| | CLASS III | CLASS IV | CLASS V |
| TYPE 1 | 21 | 32 | 50 |
| TYPE 2 | 16 | 25 | 39 |
| TYPE 3 | 12 | 20 | 30 |

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

| INSTALLATION TYPE | CLASS OF PIPE | |
|-------------------|---------------|----------|
| | CLASS III | CLASS IV |
| TYPE 2 OR TYPE 3 | FEET | |
| | 2.5 | 1.5 |

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

| INSTALLATION TYPE | CLASS OF PIPE | |
|-------------------|---------------|----------|
| | CLASS III | CLASS IV |
| TYPE 2 | 13 | 21 |
| TYPE 3 | 10 | 16 |

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

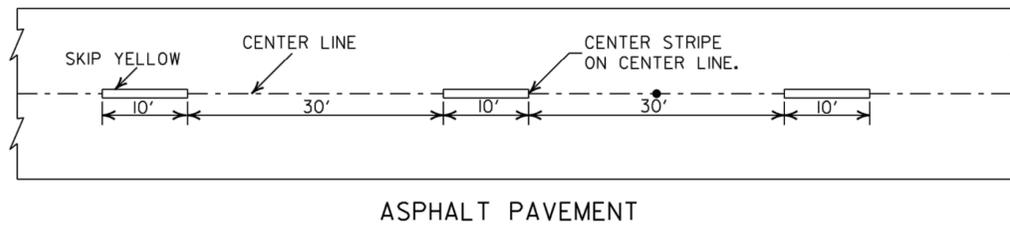
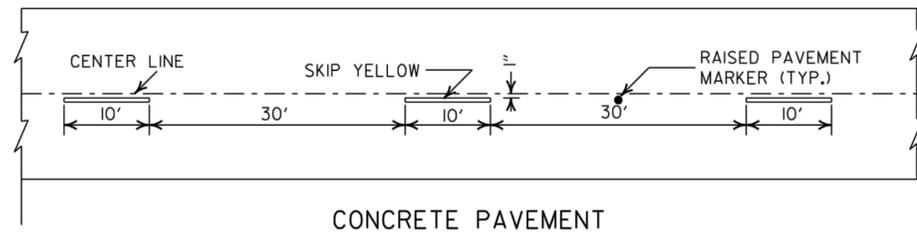
| DATE | REVISION | DATE FILMED |
|----------|--|-------------|
| 2-27-14 | REVISED GENERAL NOTE 1. | |
| 12-15-11 | REVISED FOR LRFD DESIGN SPECIFICATIONS | |
| 5-18-00 | REVISED TYPE 3 BEDDING & ADDED NOTE | |
| 3-30-00 | REVISED INSTALLATIONS | |
| 11-06-97 | ISSUED | |

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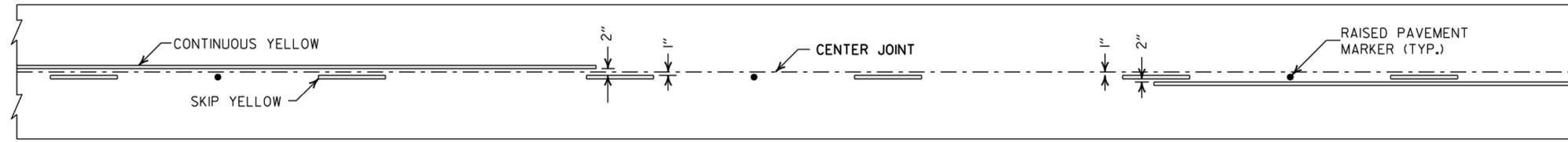
CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

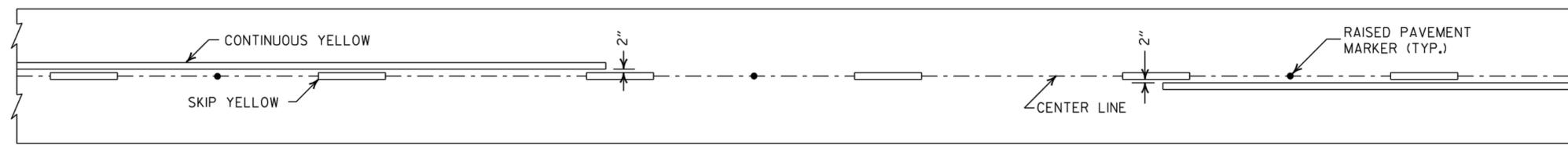
- NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
 2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
 3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



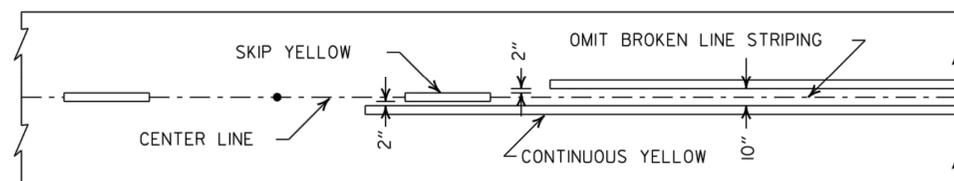
BROKEN LINE STRIPING



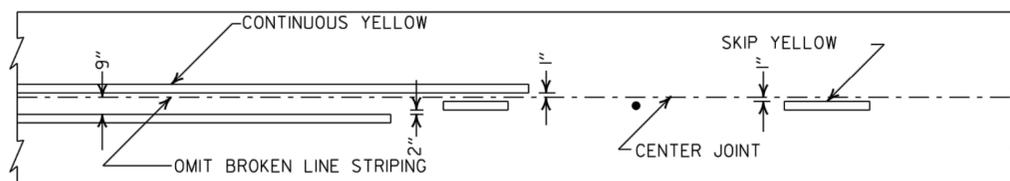
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

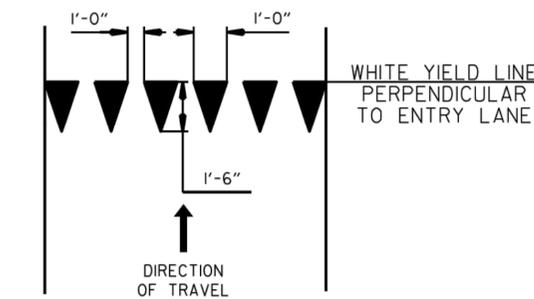


ASPHALT PAVEMENT

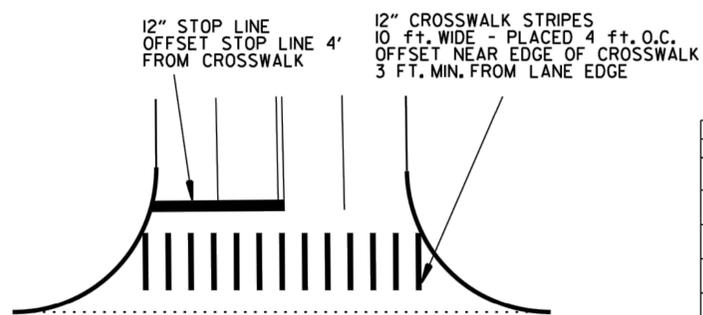


CONCRETE PAVEMENT

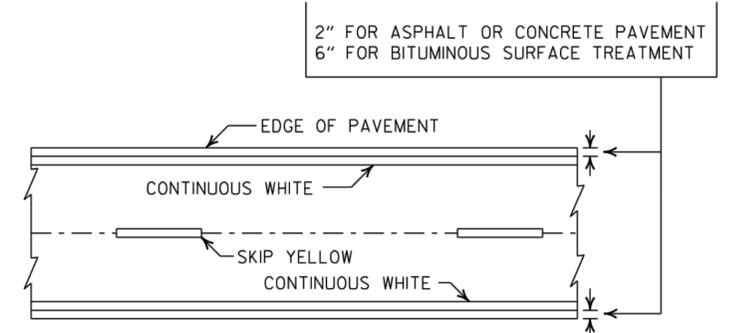
STRIPING AT ADJACENT NO PASSING LANES



YIELD LINE DETAIL



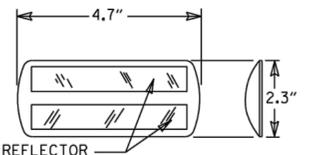
CROSSWALK AND STOP LINE DETAILS



PAVEMENT EDGE LINE MARKING

NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



PRISMATIC REFLECTOR

NOTE:
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 ADOT QUALIFIED PRODUCTS LIST.



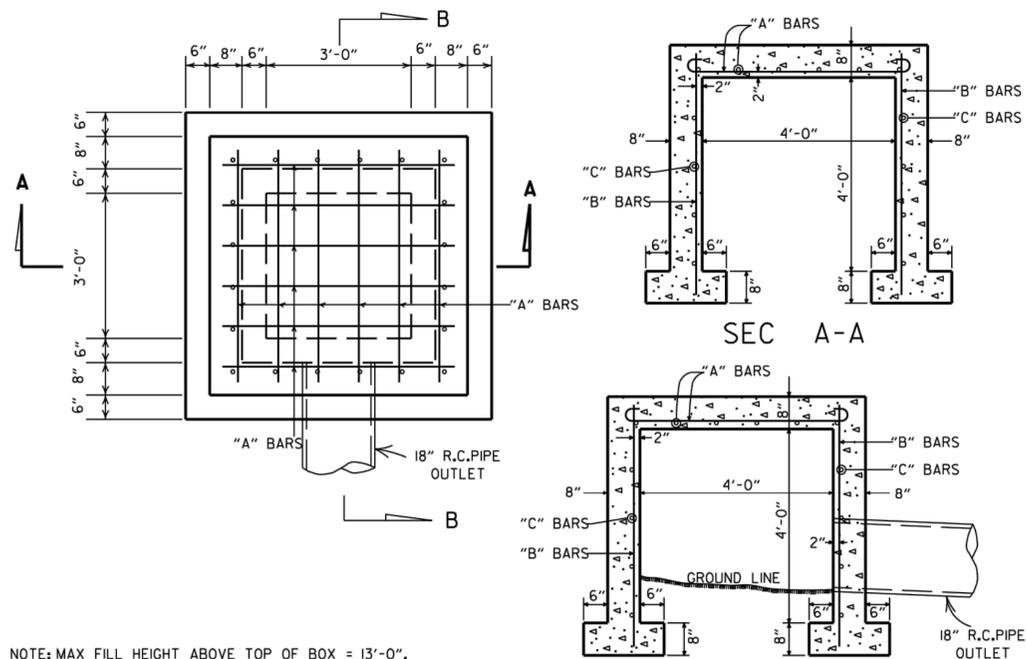
DETAIL OF STANDARD RAISED PAVEMENT MARKERS

| DATE | REVISION | FILMED |
|----------|---|-----------|
| 2-27-20 | REVISED STOP LINE DETAILS | |
| 6-1-17 | ADDED YIELD LINE DETAIL | |
| 5-12-16 | REVISED LINE WIDTHS, SPACING, & NOTES | |
| 9-12-13 | REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS | |
| 11-17-10 | REVISED GENERAL NOTES & REMOVED PLOWABLE PAVT MRKRS | |
| 11-18-04 | REVISED NOTE 2 & GENERAL NOTES | |
| 8-22-02 | ADDED CROSSWALK & STOPBAR DTLS. | |
| 7-02-98 | ADDED DETAILS OF STD. RAISED PAVT. MARKERS | |
| 4-26-96 | REV. NOTES 3&4; ADDED R.P.M. | |
| 9-30-80 | DRAWN | 1-9-30-80 |
| | | FILMED |

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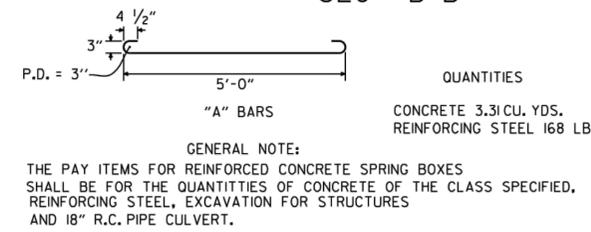
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

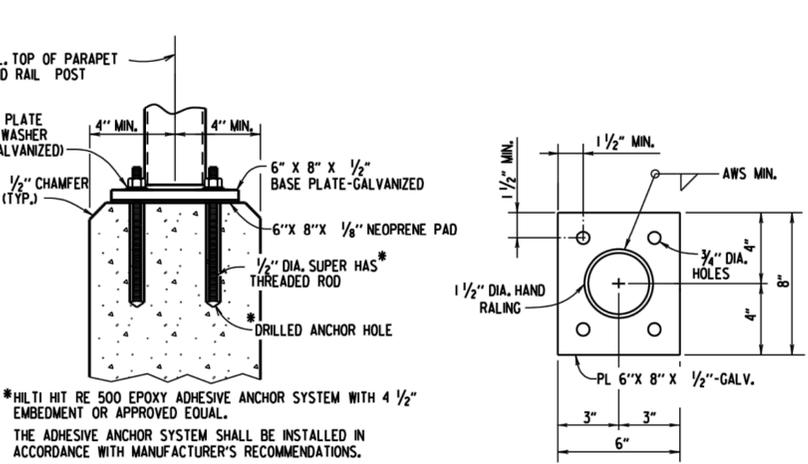
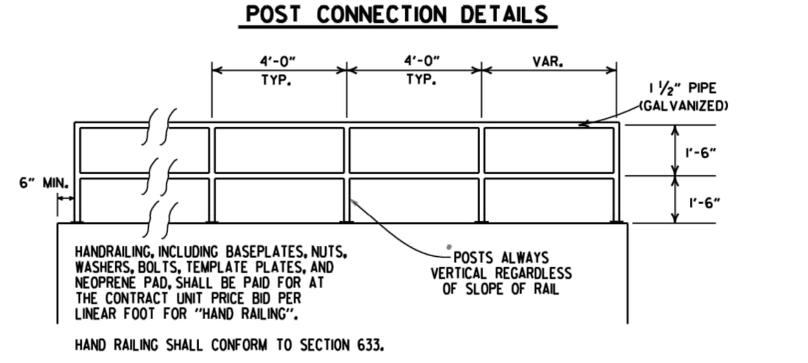
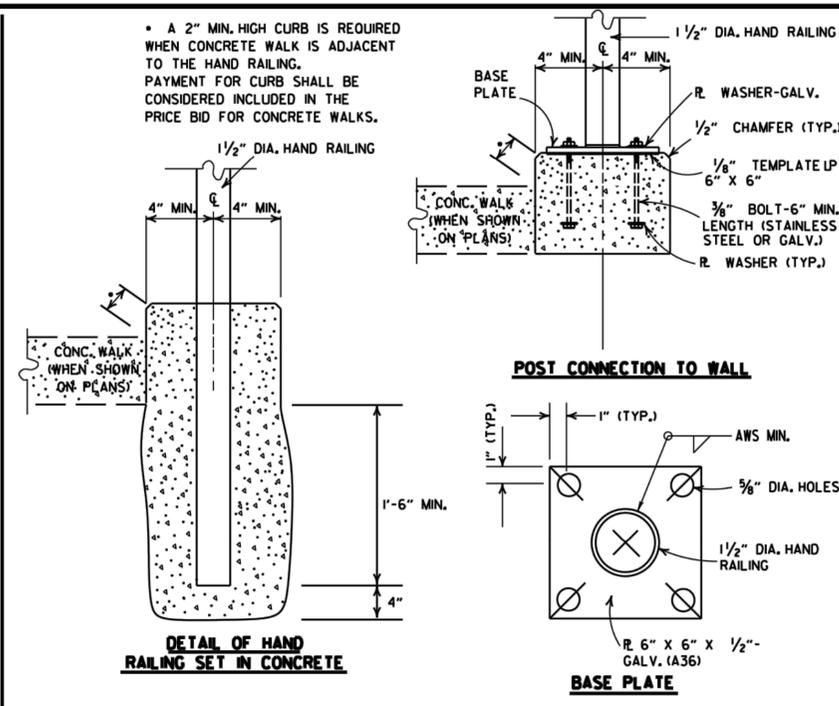


NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

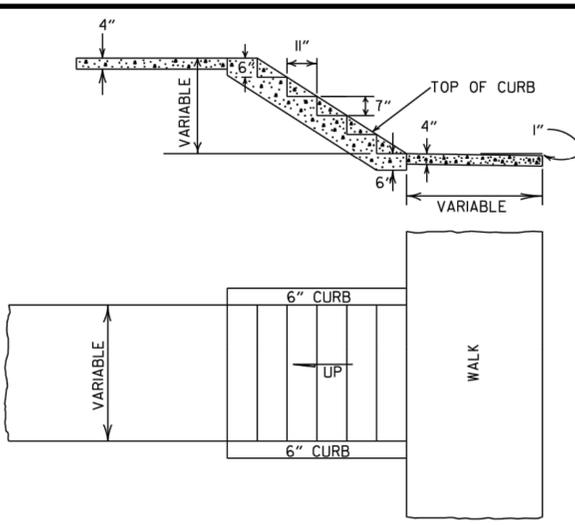
| STEEL SCHEDULE | | | |
|----------------|--------|--------|---------|
| BAR | NUMBER | LENGTH | SPACING |
| "A" | 12 | 6'-0" | 10" |
| "B" | 20 | 5'-0" | 10 1/2" |
| "C" | 16 | 5'-0" | 12" |



REINFORCED CONCRETE SPRING BOX



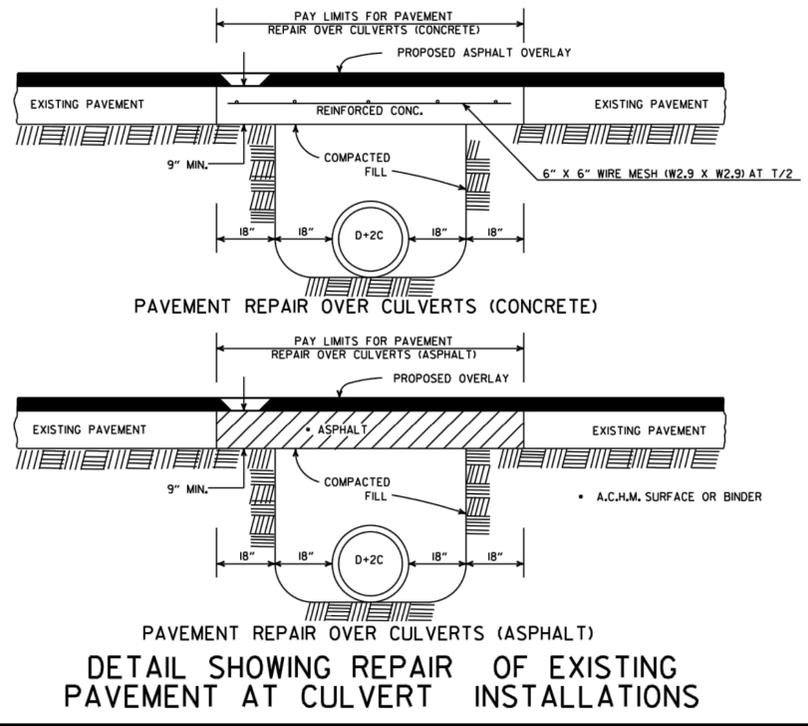
**DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)
HAND RAILING DETAILS**



DETAILS OF CONCRETE STEPS & WALKS

- GENERAL NOTES
1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER. HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
 2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

| DATE | REVISION | DATE FILMED |
|----------|---|-----------------|
| 10-25-18 | REVISED DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS | |
| 9-12-13 | REVISED REINFORCED CONCRETE SPRING BOX | |
| 7-26-12 | REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS | |
| 4-17-08 | REV. JOINT & FOOTING STEP DETAILS | |
| 11-29-07 | REVISED RETAINING WALL DRAINAGE | |
| 5-25-06 | REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX | |
| 10-9-03 | REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS | |
| 4-10-03 | REVISED RETAINING WALL DRAWING | |
| 8-22-02 | ADDED HAND RAILING DETAIL | |
| 11-16-01 | REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES | |
| 11-18-98 | ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS | |
| 7-02-98 | ENLARGED PIPE | |
| 4-03-97 | ADDED NOTE TO STEEL BAR SCHED. | |
| 10-18-96 | CORRECTED SPELLING | |
| 4-26-96 | ADD WEEP HOLE; REV. JOINT SPACING IN RET. WALL | |
| 6-2-94 | CHANGED CONST. TO CONTRACTION JOINT | 10-1-92 |
| 10-1-92 | CHANGED MESH FABRIC TO WIRE MESH | 8-15-91 |
| 8-15-91 | DELETED HDWL MODIFICATION DETAIL | 11-8-90 |
| 11-8-90 | DELETED COLD MIX FROM CULV'T. REPAIR | 11-30-89 |
| 11-30-89 | REV. RETAINING WALL STEEL SCHEDULE | 665-11-17-88 |
| 11-17-88 | V. BARS BEHIND ARROW | 649-7-15-88 |
| 7-15-88 | REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS | |
| 11-1-84 | REV. TRENCH FOR PIPE UNDERDRAIN | 510-11-1-84 |
| 1-4-83 | ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE | 682-1-4-83 |
| 3-2-81 | SPELLING OF "UNDERDRAIN" | 721-3-2-81 |
| 4-20-79 | REV. UNDERDRAIN DET & PAVEMENT REPAIR | 674-4-20-79 |
| 2-2-76 | 12" MIN. GRAN. MAT'L. OVER PIPE | 919-2-2-76 |
| 4-10-75 | REM. SPECS. FOR GRAN. MAT'L. | 568-4-10-75-853 |
| 5-22-74 | GRANULAR MAT'L. TO BE SB-3 | 567-5-22-74-740 |
| 10-2-72 | REVISED AND REDRAWN | 564-10-16-72 |

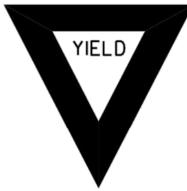
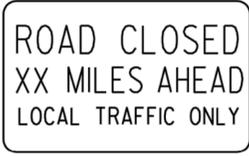
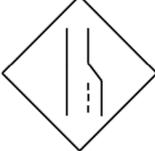
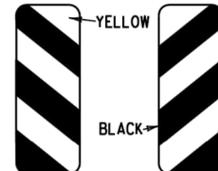
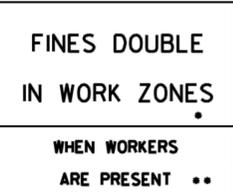


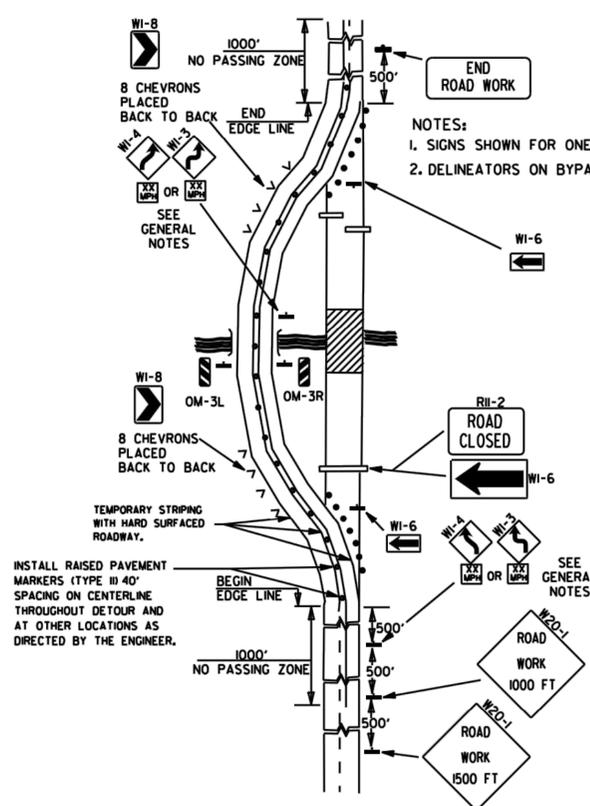
DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

ARKANSAS STATE HIGHWAY COMMISSION

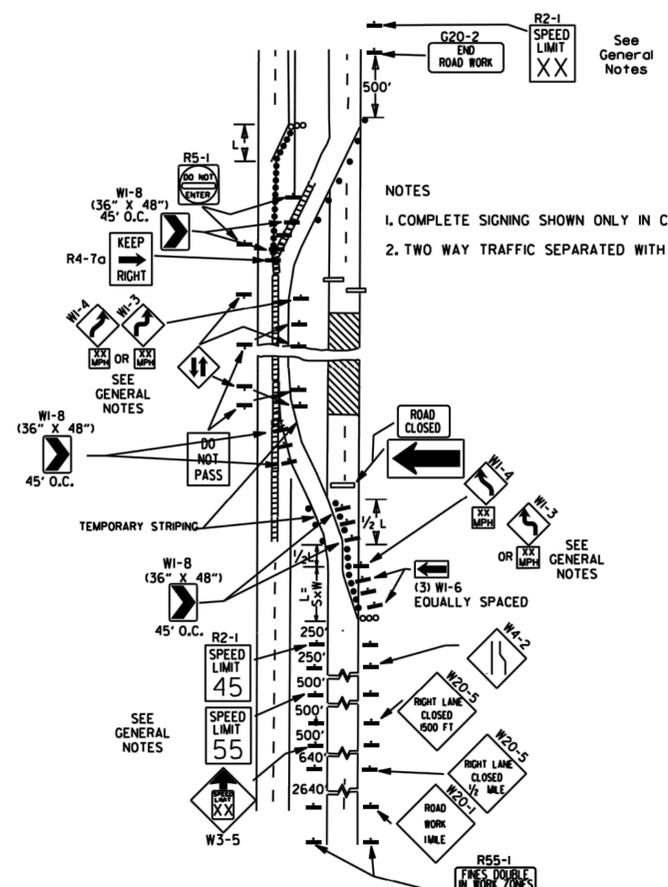
DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1

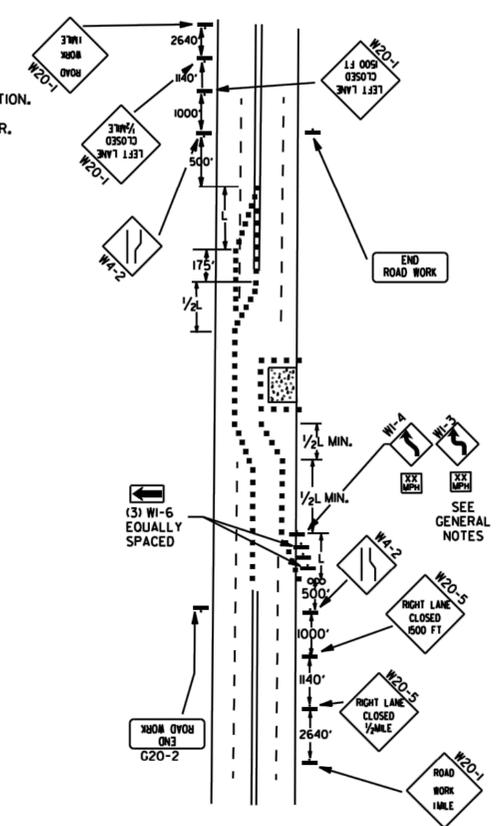
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|--|---|---|--|----------|------------------|--|---------|------------------------------|--|--------|--|--|----------|---------------|--|----------|----------------------------|--|----------|--|--|---------|---------------------------|--|----------|---------------|--|---------|----------------|--|----------|----------------|--|---------|--------------|--|----------|------------|--|---------|----------------|--|---------|----------------|--|----------|---|--|----------|-------------|--|--------|---------------------------------------|--------|--------|--|--|---------|-------------------------|--|------|----------|--------|
| <p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 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:</p> <ol style="list-style-type: none"> 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. 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. 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, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED. 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. 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. 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. 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. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS. 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. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE 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>• 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> <table border="1"> <tr><td>11-07-19</td><td>REVISED FOR MASH</td><td></td></tr> <tr><td>4-13-17</td><td>DELETED RSP-1 & ADDED W21-5a</td><td></td></tr> <tr><td>9-2-15</td><td>REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES</td><td></td></tr> <tr><td>12-15-11</td><td>REVISED W24-1</td><td></td></tr> <tr><td>11-17-10</td><td>DELETED W8-9g & ADDED W8-9</td><td></td></tr> <tr><td>10-15-09</td><td>ADDED REFERENCE TO MASH & ADDED SIGN W24-1</td><td></td></tr> <tr><td>4-17-08</td><td>REVISED SIGN DESIGNATIONS</td><td></td></tr> <tr><td>11-18-04</td><td>REVISED NOTES</td><td></td></tr> <tr><td>10-9-03</td><td>REVISED NOTE 1</td><td></td></tr> <tr><td>11-16-01</td><td>REVISED NOTE 7</td><td></td></tr> <tr><td>9-28-00</td><td>REVISED NOTE</td><td></td></tr> <tr><td>11-18-98</td><td>ADDED NOTE</td><td></td></tr> <tr><td>6-26-97</td><td>REVISED NOTE 5</td><td></td></tr> <tr><td>4-03-97</td><td>REVISED NOTE 5</td><td></td></tr> <tr><td>10-18-96</td><td>ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7</td><td></td></tr> <tr><td>10-12-95</td><td>ADDED R55-1</td><td></td></tr> <tr><td>6-8-95</td><td>REVISED TO CORRECT SIGN ILLUSTRATIONS</td><td>6-8-95</td></tr> <tr><td>2-2-95</td><td>REVISED PER PART VI, MUTCD SEPT. 3, 1993</td><td></td></tr> <tr><td>8-15-91</td><td>DRAWN AND PLACED IN USE</td><td></td></tr> <tr><td>DATE</td><td>REVISION</td><td>FILMED</td></tr> </table> | 11-07-19 | REVISED FOR 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 | | 12-15-11 | REVISED W24-1 | | 11-17-10 | DELETED W8-9g & ADDED W8-9 | | 10-15-09 | ADDED REFERENCE TO MASH & ADDED SIGN W24-1 | | 4-17-08 | REVISED SIGN DESIGNATIONS | | 11-18-04 | REVISED NOTES | | 10-9-03 | REVISED NOTE 1 | | 11-16-01 | REVISED NOTE 7 | | 9-28-00 | REVISED NOTE | | 11-18-98 | ADDED NOTE | | 6-26-97 | REVISED NOTE 5 | | 4-03-97 | REVISED NOTE 5 | | 10-18-96 | 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 | | 8-15-91 | DRAWN AND PLACED IN USE | | DATE | REVISION | FILMED |
| 11-07-19 | REVISED FOR 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12-15-11 | REVISED W24-1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11-17-10 | DELETED W8-9g & ADDED W8-9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10-15-09 | ADDED REFERENCE TO MASH & ADDED SIGN W24-1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-17-08 | REVISED SIGN DESIGNATIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11-18-04 | REVISED NOTES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10-9-03 | REVISED NOTE 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11-16-01 | REVISED NOTE 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9-28-00 | REVISED NOTE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11-18-98 | ADDED NOTE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6-26-97 | REVISED NOTE 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-03-97 | REVISED NOTE 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10-18-96 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8-15-91 | DRAWN AND PLACED IN USE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE | REVISION | FILMED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <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" FWY. 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>18" 500 FEET 24" W6-2</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> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



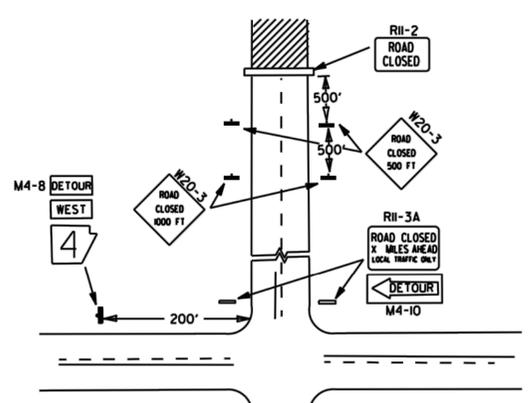
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



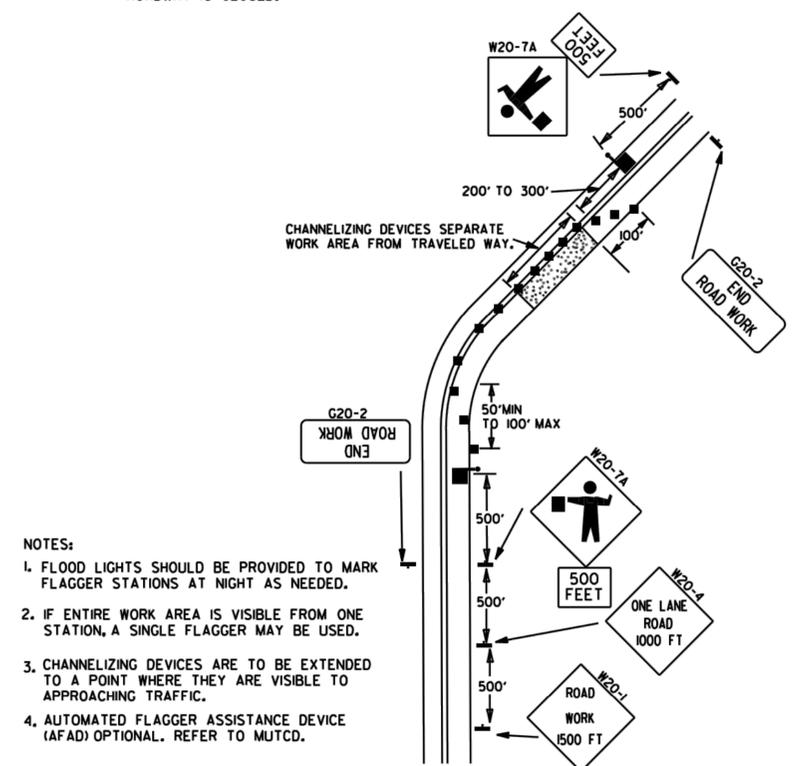
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



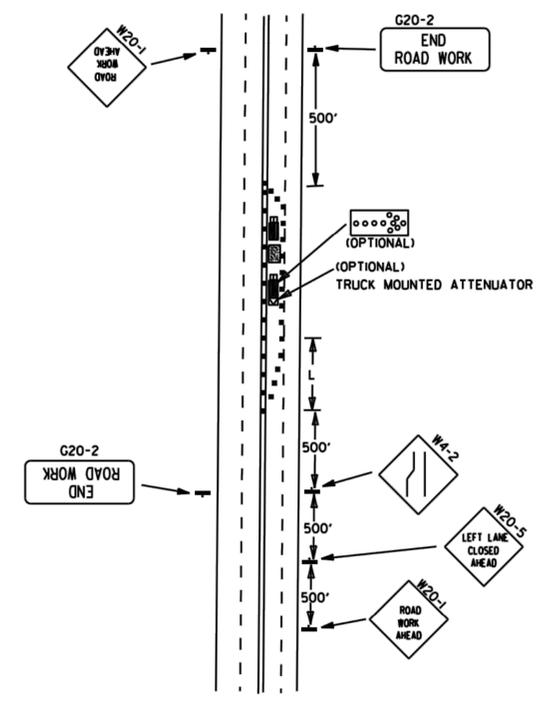
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



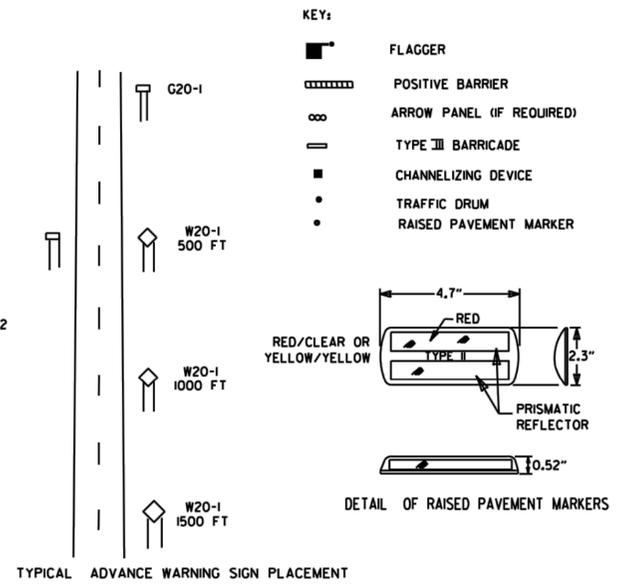
(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



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



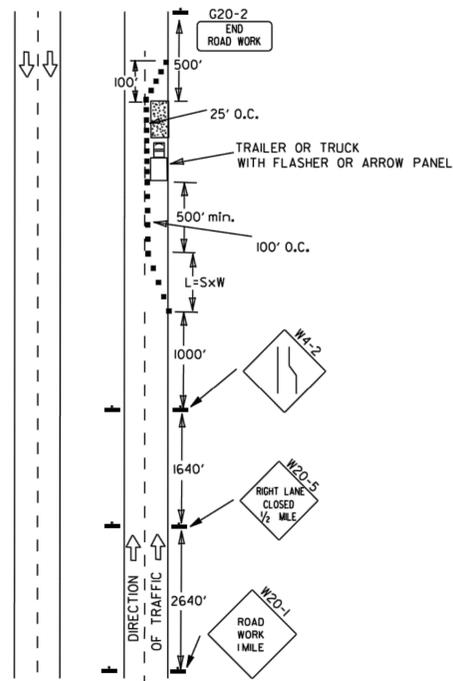
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.



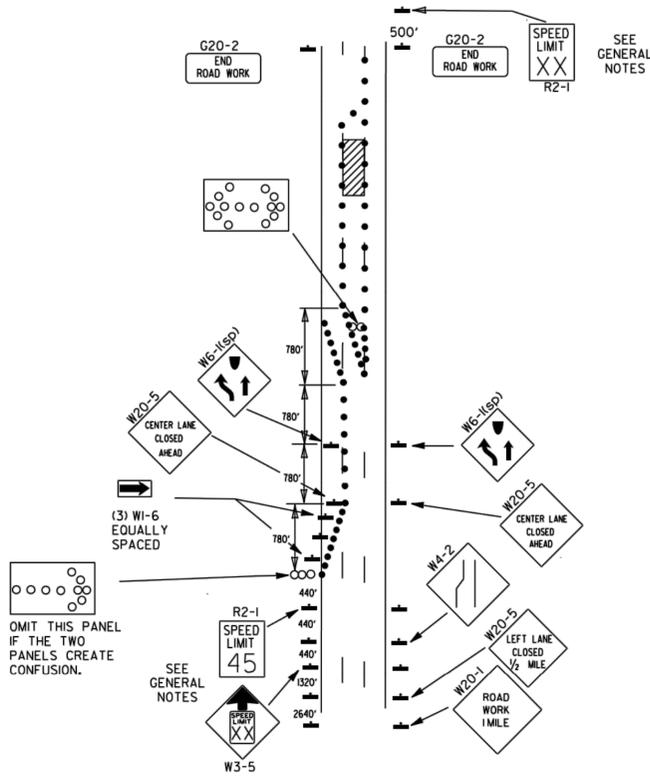
TAPER FORMULAE:
 $L = SXW$ FOR SPEEDS OF 45MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
 WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
 W = WIDTH OF OFFSET.

- GENERAL NOTES:
- 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.
 - WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(45) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/4 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) 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 R2-1(55) SHALL BE OMITTED. ADDITIONAL R2-1(55)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/4 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) 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.
 - 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.
 - 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.
 - 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 4, 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 | |



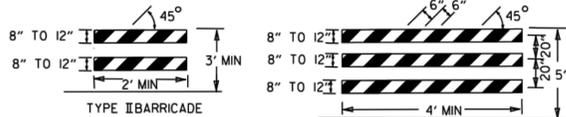
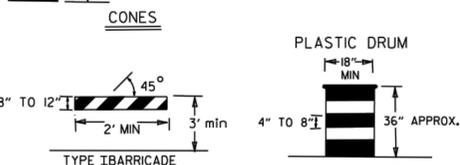
(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



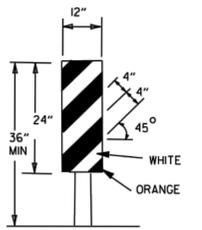
(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

CHANNELIZING DEVICES

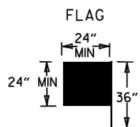
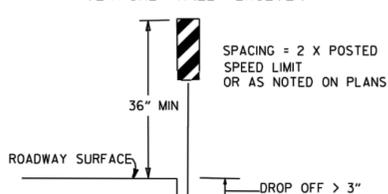
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.



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



VERTICAL PANEL PLACEMENT



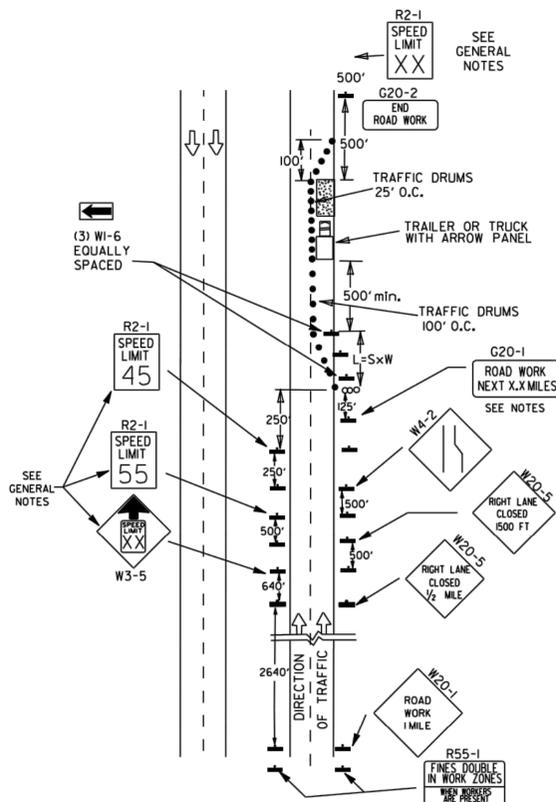
FLAG SHALL BE OF GOOD GRADE RED MATERIAL

KEY:

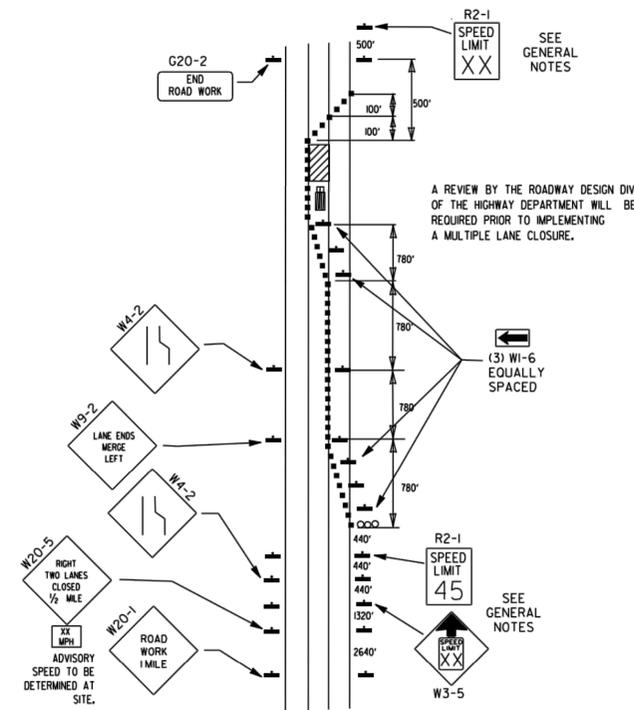
- ○ ○ ○ ARROW PANEL (IF REQUIRED)
- CHANNELIZING DEVICE
- TRAFFIC DRUM

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 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(45) 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 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) 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 R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) 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 ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1(1/2 MILE) 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 MUST 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).



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



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

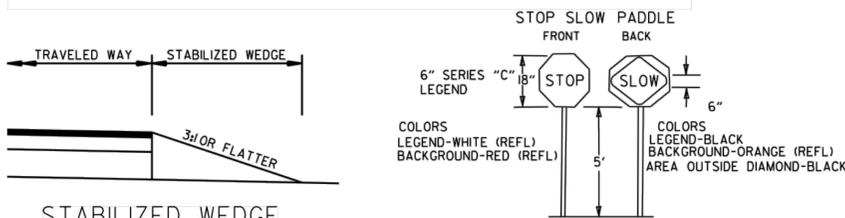
| TRAFFIC CONTROL DEVICES | | | |
|-------------------------|---|---|---|
| VERTICAL DIFFERENTIAL | LOCATION | TRAFFIC CONTROL | |
| | | ≤ 45 MPH | > 45 MPH |
| ≤ 2" | CENTERLINE | W8-11 AND LANE STRIPING | W8-11 AND LANE STRIPING |
| > 2" | CENTERLINE | STANDARD LANE CLOSURE | STANDARD LANE CLOSURE |
| ≤ 3" | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-9, EDGE LINE STRIPING, AND VERTICAL PANELS | W8-9, EDGE LINE STRIPING, AND VERTICAL PANELS |
| > 3" | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND VERTICAL PANELS | W8-17, EDGE LINE STRIPING, AND VERTICAL PANELS |
| > 6" | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾ | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾ |
| > 18" | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾ | A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽³⁾ |
| > 24" | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | PRECAST CONCRETE BARRIER ⁽⁴⁾ & EDGE LINES | PRECAST CONCRETE BARRIER ⁽⁴⁾ & EDGE LINES |

| INTERSTATE | | |
|-----------------------|---|---|
| VERTICAL DIFFERENTIAL | LOCATION | TRAFFIC CONTROL |
| ≤ 2" | CENTERLINE | W8-11 AND LANE STRIPING |
| ≤ 2" | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾ |
| > 2" | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾ |
| > 6" | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | PRECAST CONCRETE BARRIER & EDGE LINES |

| INTERSTATE AND NON-INTERSTATE | | |
|-------------------------------|--------|--------------------------|
| FORESLOPE | HEIGHT | TRAFFIC CONTROL |
| 1:1 | > 2 FT | PRECAST CONCRETE BARRIER |
| 2:1 | ≤ 5 FT | TRAFFIC DRUMS |
| 2:1 | > 5 FT | PRECAST CONCRETE BARRIER |
| Flatter than 2:1 | N/A | TRAFFIC DRUMS |

GENERAL NOTES:

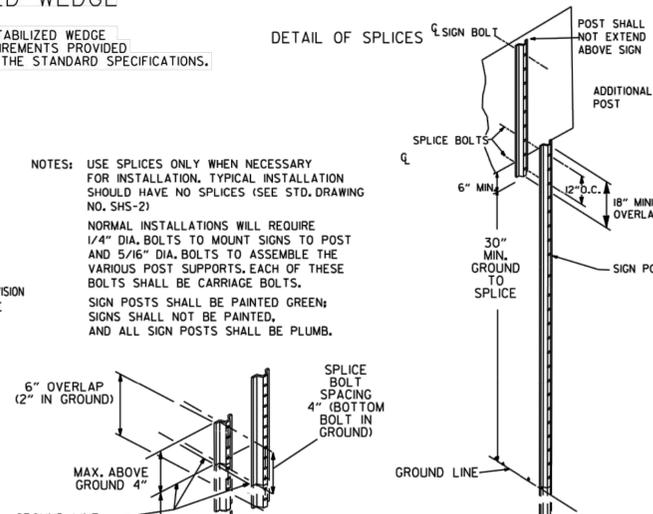
- WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
- WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED. PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER.
- A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
- W21-5, W21-5a, AND/OR W21-5b 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.

DETAIL OF SPLICES

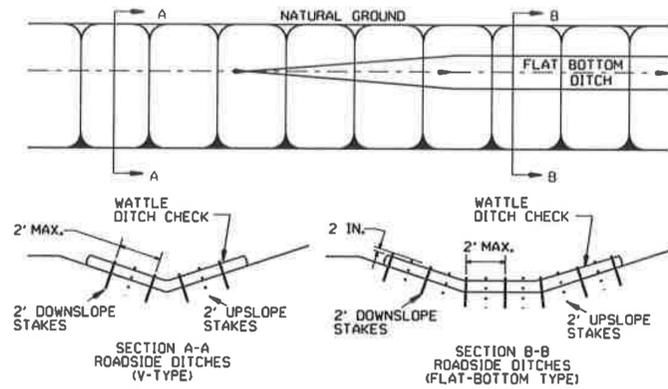


NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2) NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS. SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.

| DATE | REVISION | FILMED |
|----------|---|--------|
| 2-27-20 | REVISED TRAFFIC CONTROL DEVICES DETAILS | |
| 11-07-19 | REVISED NOTE 9, ADDED NOTE II | |
| 7-25-19 | REVISED TRAFFIC CONTROL DEVICES DETAILS | |
| 9-2-15 | REVISED NOTE 2 & REPLACED R2-5A WITH W3-5 | |
| 10-15-09 | ADDED REFERENCE TO MASH | |
| 11-20-08 | REVISED SIGN DESIGNATIONS | |
| 11-18-04 | ADDED NOTE | |
| 10-1-98 | ADDED NOTE | |
| 4-03-97 | ADDED (SP) TO W6-1 & 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 | |

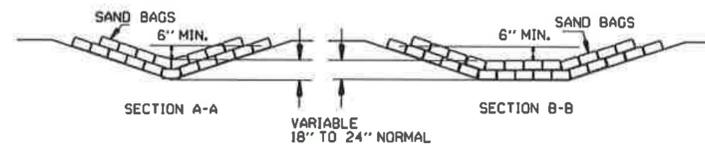
GENERAL NOTES

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

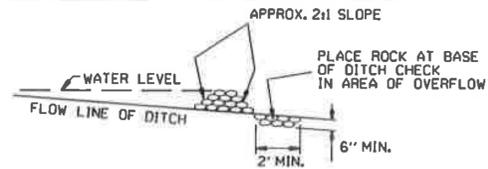


WATTLE DITCH CHECK (E-1)

NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS. PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW.

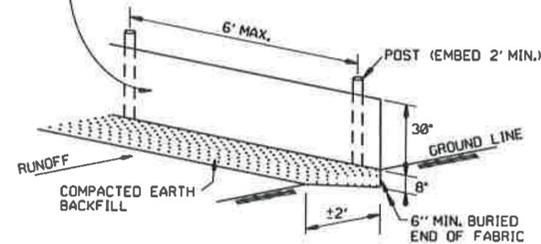


SAND BAG DITCH CHECK (E-5)

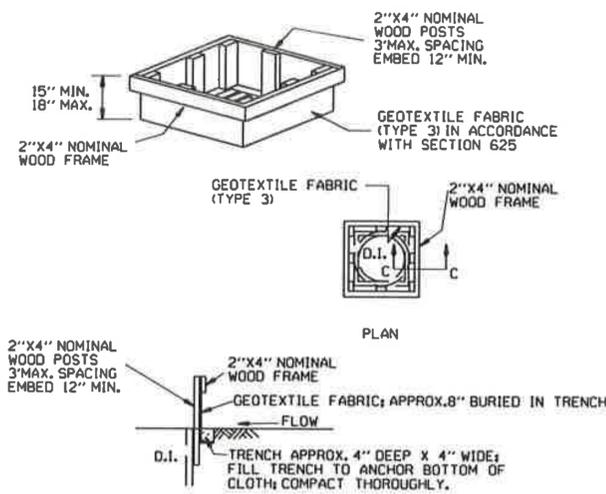


ROCK DITCH CHECK (E-6)

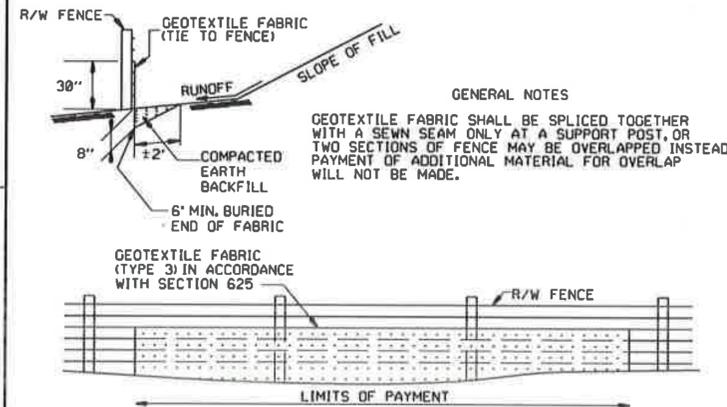
GENERAL NOTES
 GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625
 GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILTS FENCE (E-11)

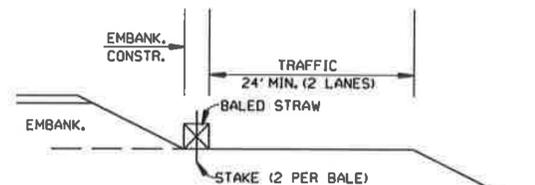


DROP INLET SILTS FENCE (E-7)

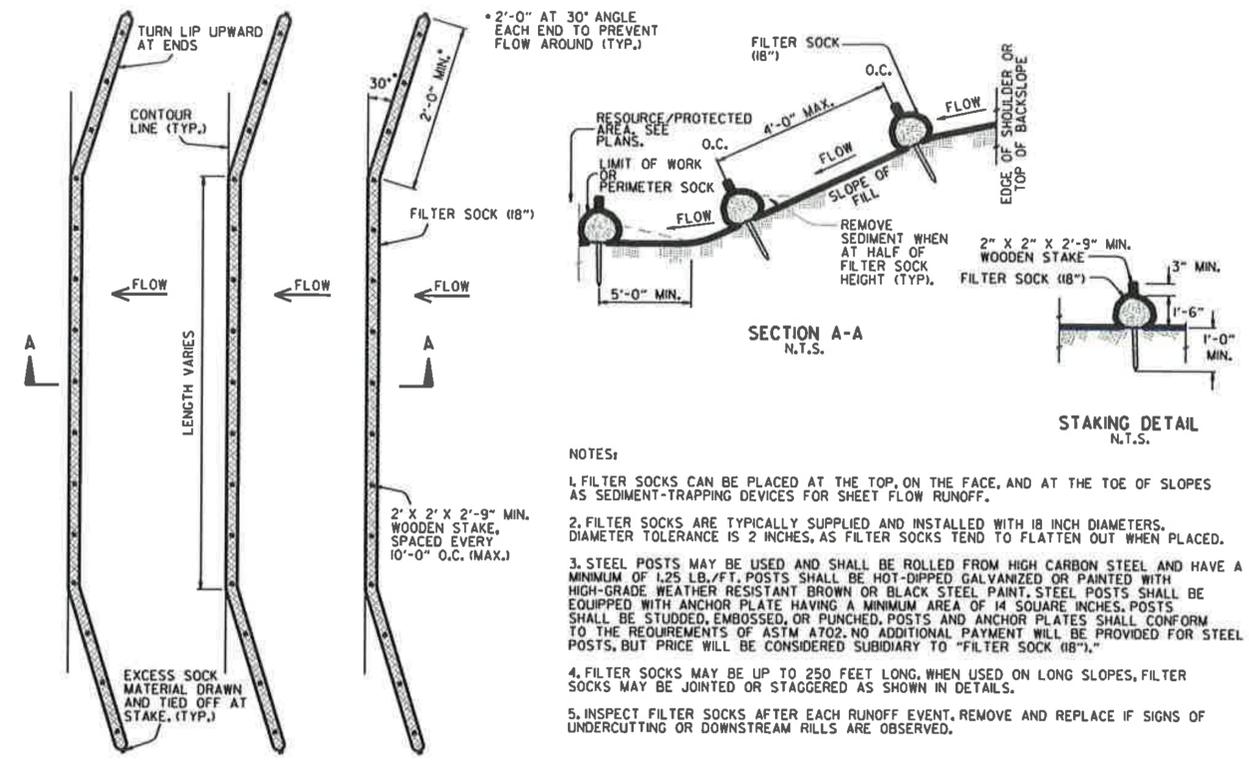


SILTS FENCE ON R/W FENCE (E-4)

GENERAL NOTES
 1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
 2. NO GAPS SHALL BE LEFT BETWEEN BALES.
 3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.

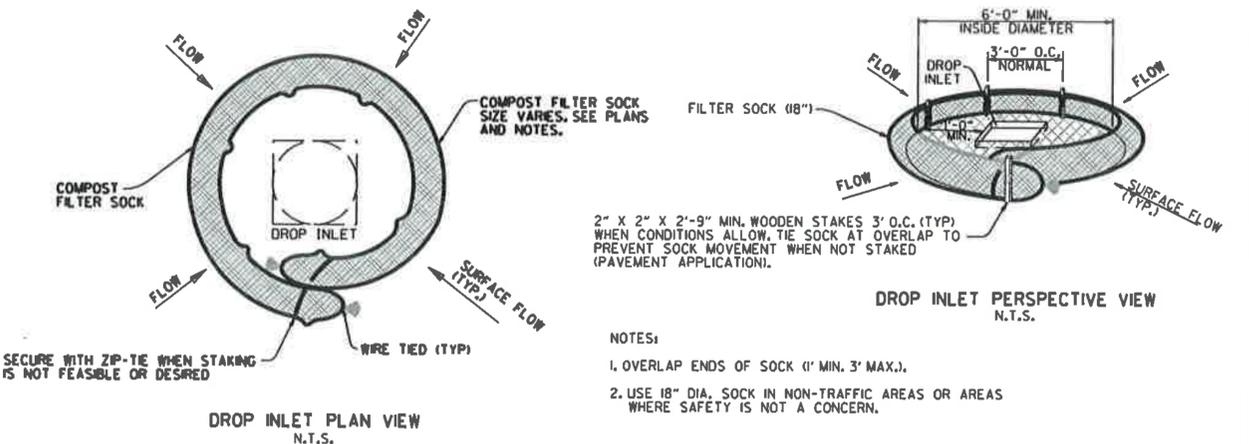


BALED STRAW FILTER BARRIER (E-2)



FILTER SOCK ALONG SLOPE (E-3)

NOTES:
 1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.
 2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.
 3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBSIDIARY TO "FILTER SOCK (18\"/>

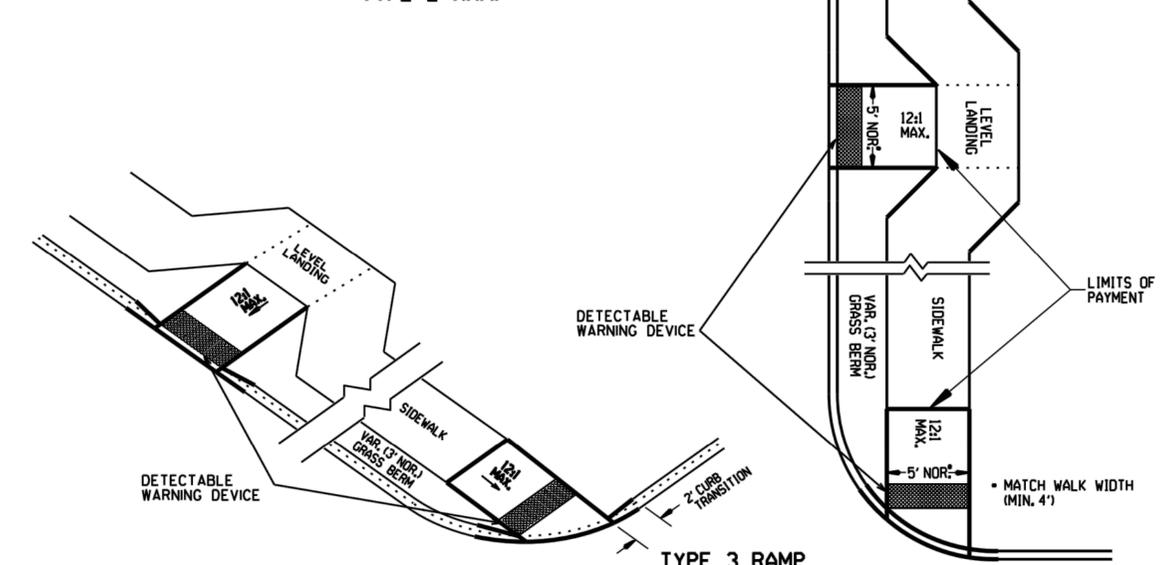
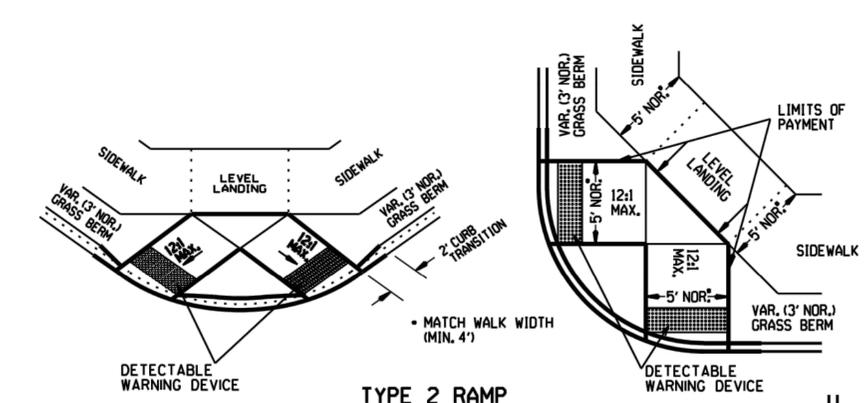
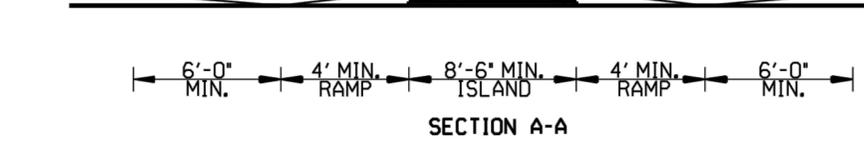
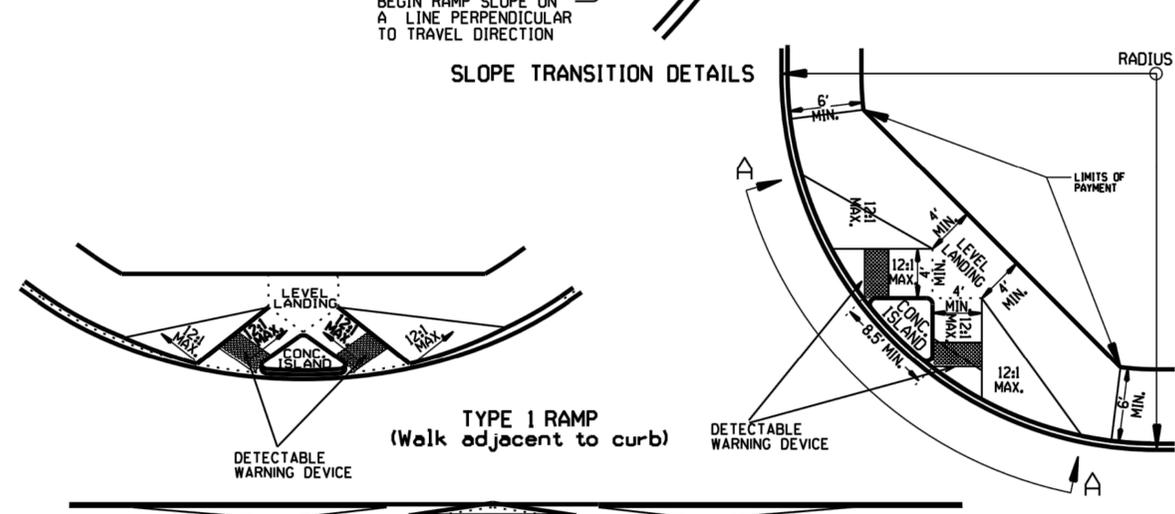
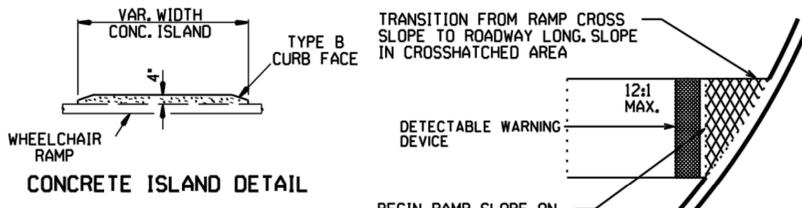


COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

NOTES:
 1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).
 2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

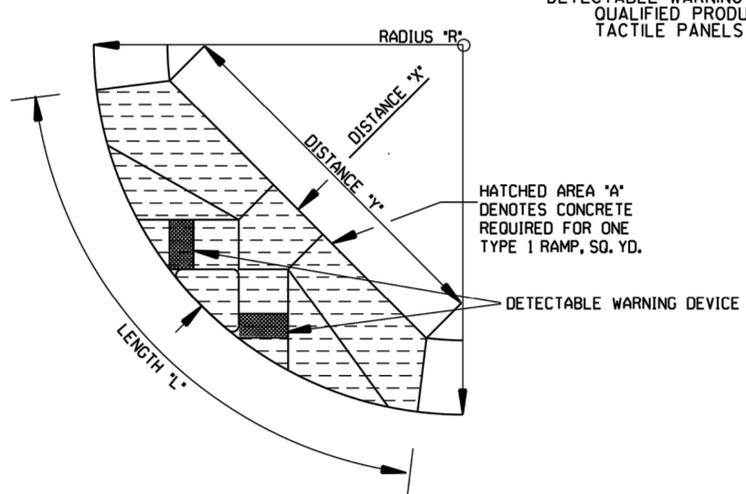
| | | |
|----------|--|-------------|
| 11-16-17 | ADDED FILTER SOCK E-3 AND E-13 | |
| 12-15-11 | DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK | |
| 1-18-98 | ADDED NOTES | |
| 07-02-98 | ADDED BALED STRAW FILTER BARRIER (E-2) | |
| 07-20-95 | REVISED SILTS FENCE E-4 AND E-11 | 7-20-95 |
| 07-15-94 | REV. E-4 & E-11 MIN. 13" 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.D.M. | 298-7-28-76 |
| DATE | REVISION | FILMED |

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

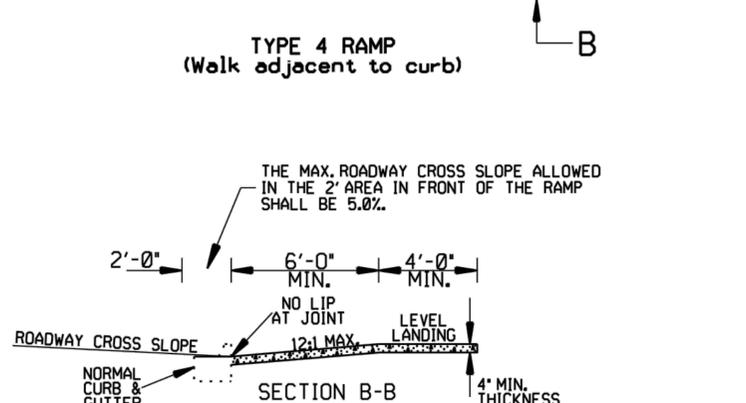
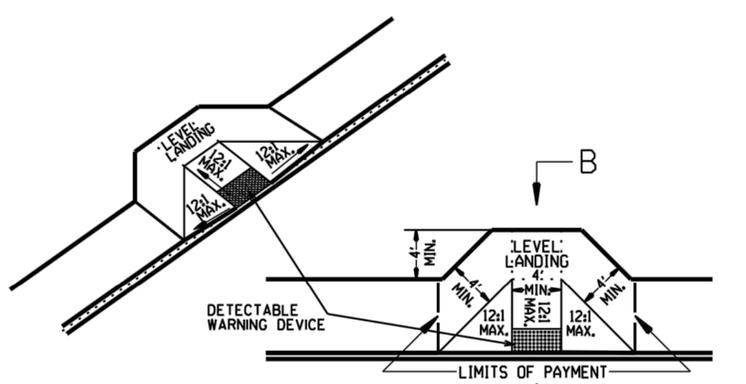


TYPE 1 RAMP DIMENSIONS AND QUANTITIES

| RADIUS "R" | DISTANCE "X" | DISTANCE "Y" | LENGTH "L" | RAMP AREA "A" |
|------------|--------------|--------------|------------|---------------|
| FEET | FEET | FEET | FEET | SQ. YD. |
| 15 | 11.67 | 18.82 | 32.18 | 26.21 |
| 20 | 11.52 | 22.28 | 35.46 | 30.07 |
| 25 | 11.43 | 26.60 | 38.77 | 33.80 |
| 30 | 11.37 | 30.26 | 40.93 | 36.90 |
| 35 | 11.33 | 33.51 | 43.11 | 39.77 |
| 40 | 11.30 | 36.45 | 45.26 | 42.45 |
| 45 | 11.27 | 39.16 | 47.34 | 44.97 |
| 50 | 11.25 | 41.69 | 49.36 | 47.35 |
| 55 | 11.24 | 44.07 | 51.31 | 49.63 |
| 60 | 11.22 | 46.33 | 53.21 | 51.80 |

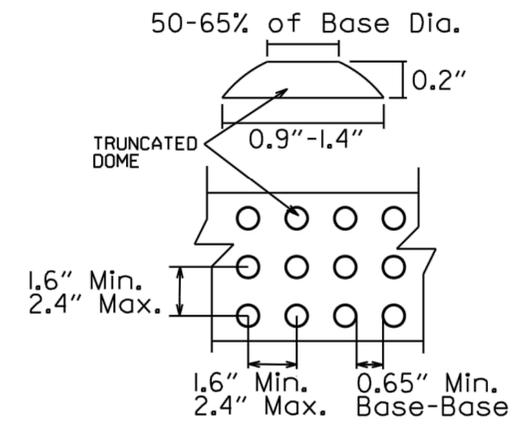


NOTE: THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGITUDINAL GRADE.



GENERAL NOTES FOR DETECTABLE WARNING DEVICES

THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB. TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. DETECTABLE WARNING DEVICE SHALL BE ON THE ARDOT QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



DETECTABLE WARNING DEVICE DETAIL

GENERAL NOTES:

- IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
- IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
- THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
- THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
- THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4". THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
- RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
- THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.

RAMP SELECTION CRITERIA

| CHOICE | TYPE | DESCRIPTION |
|---------------|--------|---|
| FIRST CHOICE | TYPE 1 | CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS). |
| | TYPE 2 | CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS). |
| | TYPE 3 | CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS). |
| | TYPE 4 | TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS). |
| SECOND CHOICE | TYPE 5 | TANGENT LOCATIONS (ALTERATIONS ONLY). |
| THIRD CHOICE | TYPE 6 | CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS. |
| FOURTH CHOICE | | IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES. |

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED. AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

| DATE | REVISION | DATE FILM |
|----------|------------------------------------|-------------|
| 11-10-05 | REVISED TO NEW SIDEWALK POLICY | |
| 10-9-03 | REVISED GEN. NOTES & ADDED NOTE | |
| 4-10-03 | REV. DETECTABLE WARNING DEVICES | |
| 8-22-02 | ADD DETECTABLE WARNING DEVICES | |
| 3-30-00 | ADD SLOPE TRANS. & REV. ISL. DIMS. | |
| 11-18-98 | REVISED NOTES | |
| 8-12-98 | REVISED TEXTURE | |
| 7-02-98 | REDRAWN & REISSUED | |
| 10-18-96 | CORRECTED DIMENSIONS | 10-18-96 |
| 5-24-90 | FROM 8:1 TO 12:1 MAX. SLOPES | 5-24-90 |
| 7-16-88 | ADJUSTED MAX. SLOPE | 652-7-16-88 |
| 7-14-88 | INCL. "CONC. ISLD." IN PAY ITEM | ----- |
| 6-02-76 | ISSUED-P.H.D. | 299-7-28-76 |

ARKANSAS STATE HIGHWAY COMMISSION

**WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS**

STANDARD DRAWING WR-1