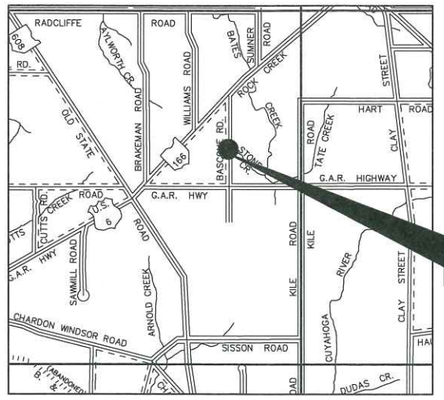

GEAUGA COUNTY ENGINEER'S OFFICE

BR-0069-B-01.010-2026

THE REPLACEMENT OF THE BASCOM ROAD BRIDGE, STRUCTURE #0069-0101

HAMBDEN TOWNSHIP
GEAUGA COUNTY

LOCATION MAP

LATITUDE: 41°36'52.24" N, LONGITUDE: 81°07'12.72" W

DESIGN DESIGNATION

	TR-0069
CURRENT ADT (2022)	158
DESIGN YEAR ADT (2046)	166 (+5% FROM 2022)
DESIGN HOURLY VOLUME (2046)	N/A
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	2%
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	LOCAL
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

N/A

INDEX OF SHEETS:

FEDERAL PROJECT NUMBER

NONE

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THE REMOVAL OF STRUCTURE #0069-0101, A 12' SINGLE SPAN CONCRETE SLAB SUPERSTRUCTURE ON STONE AND CONCRETE ABUTMENTS, AND REPLACEMENT WITH A 14' X 5' PRECAST CONCRETE BOX CULVERT WITH PRECAST WINGWALL BLOCKS AND HEADWALLS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.16 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.10 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND MODIFICATIONS TO THE OHIO DEPARTMENT OF TRANSPORTATION'S 2023 CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR GEAUGA COUNTY DATED 2026 SHALL GOVERN THIS PROJECT EXCEPT WHERE OTHERWISE NOTED IN THESE PLANS.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE COUNTY HIGHWAY AND THAT A DETOUR ROUTE WILL BE PROVIDED AS SHOWN ON PAGE 5 OF THESE PLANS.

APPROVED _____
ANDREW W. HAUPT, PE, PS
GEAUGA COUNTY ENGINEER

DATE 4/30/2026

APPROVED _____
CAROLYN BRAKEY

_____
JAMES W. DVORAK

_____
RALPH SPIDALIERI

DATE 5/12/2026 GEAUGA COUNTY BOARD OF COMMISSIONERS

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLANS PREPARED BY:
GEAUGA COUNTY ENGINEER'S OFFICE
ANDREW W. HAUPT, PE, PS
12665 MERRIT ROAD,
CHARDON, OHIO 44024
PHONE: (440) 279-1800

ENGINEER'S SEAL

STATE OF OHIO
JACOB H. SCOTESE
E-86779
REGISTERED
PROFESSIONAL ENGINEER
4-30-2026

STANDARD CONSTRUCTION DRAWINGS

BP-3.1 01/19/24					800 01/16/26 + GCE 2026 MODS	A.C.E. NATIONWIDE PERMIT #3
DM-4.2 07/20/12					832 07/18/25	
DM-4.4 01/15/16						
MT-101.60 01/17/25						
MT-105.10 01/17/20						
TC-52.10 10/18/13						
TC-52.20 01/15/21						

TITLE SHEET

DESIGNER JHS
REVIEWER HAE 4/7/2026
PROJECT ID N/A
SHEET 1 TOTAL 12

BR-0069-B-01.010-2026
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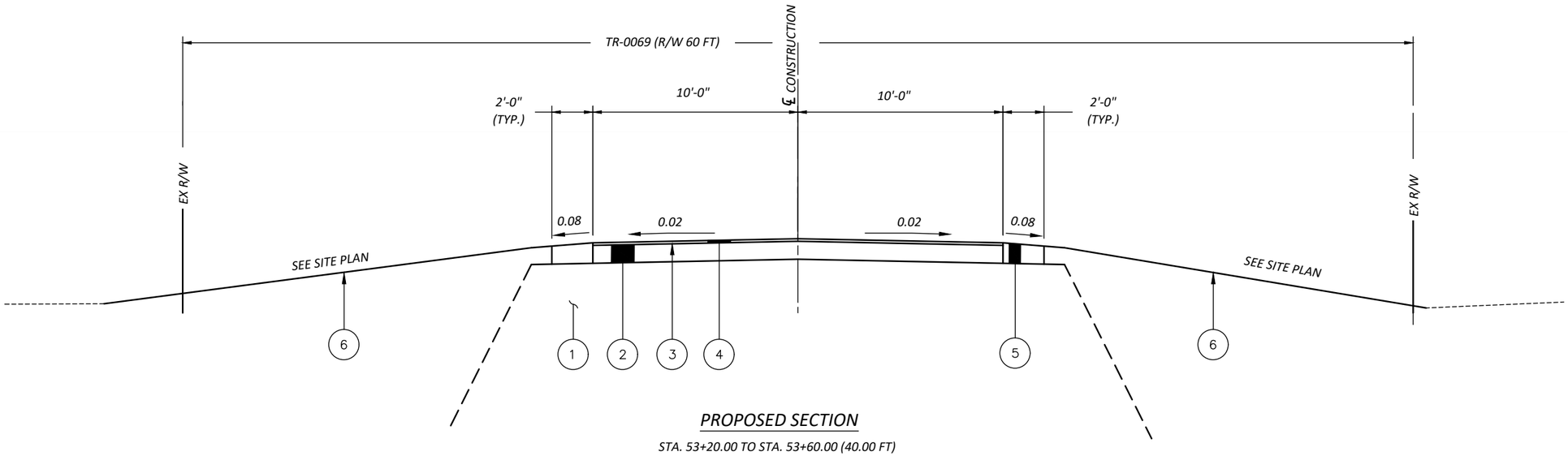
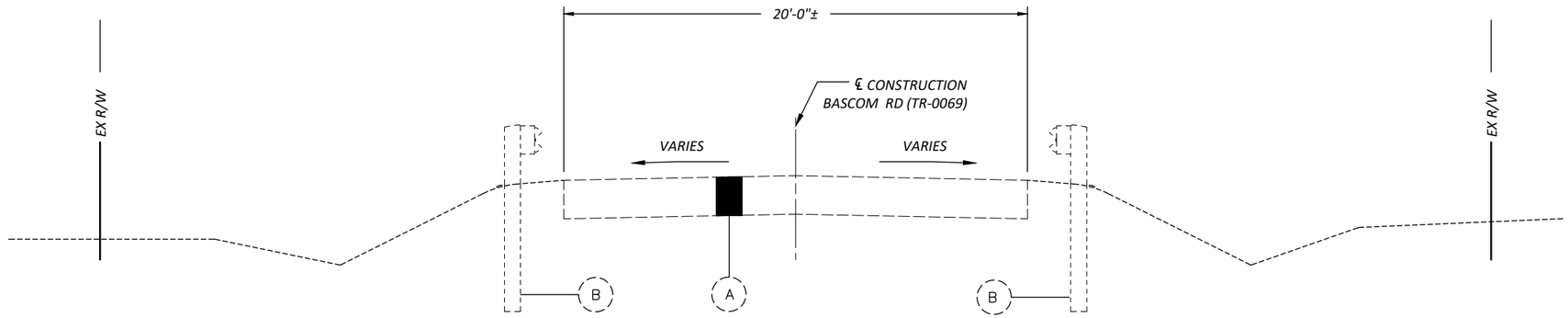


PROPOSED SECTION

STA. 53+20.00 TO STA. 53+60.00 (40.00 FT)



EXISTING SECTION

STA. 53+20.00 TO STA. 53+60.00 (40.00 FT)

PROPOSED ITEM LEGEND

1. LOW STRENGTH MORTAR BACKFILL (TYPE 2), SEE STRUCTURE DETAILS
2. ITEM 301 - 10.5" ASPHALT CONCRETE BASE, (449), PG64-22 - 6" MAX LIFTS
3. ITEM 407 - NON-TRACKING TACK COAT (0.05 GAL/SY SURFACE/BASE INTERFACE)
4. ITEM 441 - 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
5. ITEM 617 - 12" (AVG.) COMPACTED AGGREGATE (304 LIMESTONE) - 6" MAX LIFTS
6. ITEM 653 - TOPSOIL FURNISHED AND PLACED
   ITEM 659 - SEEDING AND MULCHING, CLASS 1

EXISTING ITEM LEGEND

A. 10"± ASPHALT CONCRETE

B. GUARDRAIL, TO BE REMOVED

TYPICAL SECTIONS

DESIGNER	JHS
REVIEWER	HAE 4/7/2026
PROJECT ID	N/A
SHEET	2
TOTAL	12

BR-0069-B-01.010-2026

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UTILITIES NOTIFICATION

THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES WITH FACILITIES WITHIN THE PROJECT AREA AT LEAST TWO (2) DAYS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED TO CONTACT OHIO811 A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO COMMENCING ANY WORK. CALL 8-1-1 OR (800) 362-2764 OR GO TO OHIO811.ORG.

THE UTILITIES LISTED BELOW MAY HAVE FACILITIES WITHIN THE PROJECT LIMITS.

ENBRIDGE GAS OHIO	(330) 980-4464
THE ILLUMINATING COMPANY	(440) 546-8706
WINDSTREAM OHIO	(606) 784-4140
ZITO MEDIA	(330) 224-3956

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO CROSS OVER OR UNDER AN UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING UTILITIES AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT OR EXCAVATE THE TRENCH. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING UTILITIES CONFLICT WITH THE PROPOSED PLAN ELEVATION OF THE TRENCH OR CONDUIT AND RESULTS IN A CHANGE IN THE PLAN SCOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN EXISTING ELEVATIONS.

THE AERIAL ELECTRIC LINES WILL REMAIN IN PLACE DURING THE DURATION OF THE PROJECT AND WILL BE TEMPORARILY DE-ENERGIZED, WITH WEATHER STIPULATIONS, FOR THE INSTALLATION OF THE PRECAST STRUCTURE ONLY.

LOCAL OFFICIALS

LOCAL OFFICIALS, LISTED BELOW, SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS PRIOR TO THE START OF WORK;

GEAUGA COUNTY SHERIFF	440-279-2009
STATE HIGHWAY PATROL (CHARDON POST)	440-286-6612
UNITED STATES POSTAL SERVICE (CHARDON)	440-286-5601
CHARDON LOCAL SCHOOL DISTRICT	440-285-4052
HAMBDEN TOWNSHIP VOLUNTEER FIRE DEPARTMENT	440-285-3329
CHARDON FIRE DEPARTMENT	440-285-4665
HAMBDEN TOWNSHIP ROAD DEPARTMENT	440-286-4364
GEAUGA TRANSIT	440-279-2150
GEAUGA METZENBAUM	440-729-9406

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE CONTRACTOR'S INVOICES.

IN STREAM WORK

IN STREAM WORK WILL BE LIMITED WHERE PRACTICABLE AND ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR FORDS AND COFFERDAMS. THIS TEMPORARILY PLACED MATERIAL WILL BE REMOVED AND THE STREAM RESTORED TO NEAR NATURAL CONDITIONS WHEN THE WORK IS COMPLETED.

DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, BUT NOT LIMITED TO; FOUNDATION OR ABUTMENT REMOVAL, CHANNEL CLEANOUT, AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH THE CONSTRUCTION OPERATIONS. IF SUITABLE, THE MATERIAL MAY BE USED IN EMBANKMENT CONSTRUCTION.

WETLANDS

THE CONTRACTOR SHALL NOT GO BEYOND THE CONSTRUCTION LIMITS AS SHOWN IN THESE PLANS UNLESS DIRECTED BY THE ENGINEER. WETLAND AREAS MAY BE PRESENT IN CLOSE PROXIMITY TO THESE LIMITS AND SHALL BE AVOIDED.

SEDIMENT AND EROSION CONTROL

TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING. ALL EROSION CONTROLS SHALL CONTINUE TO FUNCTION UNTIL DISTURBED AREAS ARE RE-STABILIZED WITH SEED AND MULCH. OTHER SEDIMENT AND EROSION CONTROLS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS AND MAY BE REQUIRED AT THE DIRECTION OF THE GEAUGA SOIL AND WATER CONSERVATION DISTRICT OR ITS REPRESENTATIVES.

PERMANENT STABILIZATION

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREA THAT WILL LIE DORMANT FOR ONE YEAR OR MORE.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE
ANY AREA WITHIN 50 FEET OF A WATERCOURSE AND AT FINAL GRADE.	WITHIN 2 DAYS OF REACHING FINAL GRADE.
ANY AREA AT FINAL GRADE.	WITHIN 7 DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.

TEMPORARY STABILIZATION

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREA WITHIN 50 FEET OF A WATERCOURSE AND NOT AT FINAL GRADE.	WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE, IF THAT AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREA, INCLUDING SOIL STOCKPILES, THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50' OF A WATERCOURSE.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA.
DISTURBED AREAS THAT WILL BE IDLE OVER THE WINTER.	PRIOR TO NOVEMBER 1.
NOTE: WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED. THESE TECHNIQUES MAY INCLUDE MULCHING, EROSION MATTING, OR PLACEMENT OF STONE.	

BEST MANAGEMENT PRACTICES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND COMPLY WITH THE PROVISIONS OF NPDES PHASE II AND APPLY ALL BEST MANAGEMENT PRACTICES AS NECESSARY AND APPROPRIATE FOR OFF SITE WORK ASSOCIATED WITH THE PROJECT. OFF SITE DISTURBANCE AREAS INCLUDE BUT NOT LIMITED TO WASTE SITES, BORROW AREAS, STAGING AREAS, WASHOUT AREAS, ETC. THE COST ASSOCIATED WITH INSTALLATION AND MAINTENANCE OF ALL BEST MANAGEMENT PRACTICES REQUIRED AND STABILIZATION OF THESE AREAS IS CONSIDERED INCIDENTAL TO THE WORK AND SHALL BE INCLUDED IN THE UNIT PRICE FOR THE AFFECTED ITEMS.

ITEM 201 - CLEARING AND GRUBBING

THE COUNTY HAS NOT MARKED INDIVIDUAL TREES OR STUMPS FOR REMOVAL. UNLESS SPECIFICALLY DESIGNATED AS "DO NOT DISTURB" IN THE PLANS, CONTRACTOR MAY REMOVE ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201 CLEARING AND GRUBBING THAT POSE A CONFLICT WITH GRADING AND WORKABILITY.

ANY REMAINING STUMPS OR PORTIONS OF STUMPS, ROOTS, TOPSOIL (ESTIMATED DEPTH IS SIX INCHES (6"), OR OTHER ORGANIC MATERIAL SHALL BE REMOVED BY THE CONTRACTOR.

ALL COSTS FOR LABOR, TOOLS AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR THE CLEARING AND GRUBBING ITEM.

ITEM 202 - STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE EXCAVATION, REMOVAL AND DISPOSAL OF THE EXISTING SUPERSTRUCTURE AND SUBSTRUCTURE. THE CONTRACTOR SHALL ALSO REMOVE THE BRIDGE I.D. MARKERS AND POSTS AND SET THEM ASIDE FOR SALVAGE BY THE ENGINEER ON SITE. THE CONTRACTOR SHALL REMOVE ALL PORTIONS OF THE EXISTING STRUCTURE.

EXCAVATED MATERIAL, IF SUITABLE, SHALL BE USED TO BACKFILL OUTSIDE THE LSM LIMITS OF THE PROPOSED STRUCTURE. STORAGE LOCATION OF THE EXCAVATED MATERIAL SHALL BE APPROVED BY THE ENGINEER AND ANY COSTS ASSOCIATED WITH THE EXCAVATION AND STORAGE OF THE MATERIAL SHALL BE INCLUDED IN THIS ITEM.

DISTURBANCE OF VEGETATED AREAS OUTSIDE THE PROPOSED GRADING LIMITS CAUSED BY STORAGE OF MATERIAL OR EQUIPMENT SHALL BE SEEDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

ITEM 202 - PAVEMENT REMOVED

THIS ITEM SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING ASPHALT CONCRETE BUILDUP AS WELL AS ANY SUBBASE REMOVAL NECESSARY TO PROVIDE THE PROPER DEPTH FOR THE PROPOSED SECTION BUILDUP SHOWN IN THE TYPICAL SECTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR EXCAVATION EXCEEDING THE PROPOSED SECTION BUILDUP DEPTH OR OUTSIDE OF THE EXCAVATION LIMITS SHOWN ON THE SITE PLAN.

ITEM 202 - GUARDRAIL REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE REMOVAL OF EXISTING GUARDRAIL, POSTS, ANCHOR ASSEMBLIES, TERMINAL ASSEMBLIES, AND FOUNDATIONS, AND ALL APPURTENANCES. EXISTING POST HOLES SHALL BE FILLED AND COMPACTED WITH SUITABLE MATERIAL AND INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

THE GUARDRAIL SHALL BE CAREFULLY REMOVED AND SET ASIDE FOR SALVAGE BY THE COUNTY ENGINEER'S OFFICE, INCLUDING POSTS, RAIL, AND ALL APPURTENANCES. THE POSTS MOUNTED TO THE BRIDGE DECK SHALL BE DISPOSED OF BY THE CONTRACTOR.

ITEM 203 - BORROW

THIS ITEM SHALL CONSIST OF SUPPLYING, PLACING AND COMPACTING CLAY EMBANKMENT MATERIAL FOR THE BACKFILLING OF THE STRUCTURE OUTSIDE THE ROADWAY LIMITS IN THE EVENT THAT THERE IS INSUFFICIENT OR UNSUITABLE MATERIAL GENERATED DURING THE REMOVAL OF THE EXISTING STRUCTURE AND EXCAVATION FOR THE PROPOSED STRUCTURE. ITEM 203 - BORROW IS A CONTINGENCY QUANTITY AND SHALL ONLY BE USED AS DIRECTED BY THE ENGINEER.

ITEM 301 - ASPHALT CONCRETE BASE, (449), PG64-22

THE CONTRACTOR SHALL PLACE A MINIMUM OF TEN AND ONE HALF INCHES (10.5") OF ITEM 301 ASPHALT CONCRETE BASE, PG 64-22, IN MAXIMUM LIFTS OF SIX INCHES (6") EACH. A MINIMUM OF TWO (2) ROLLERS SHALL BE USED WHEN COMPACTING THIS COURSE IN ORDER TO GET PROPER COMPACTION AND PROPER FINISH. A VIBRATORY ROLLER SHALL SERVE AS THE BREAKDOWN ROLLER AND COMPACT WITH VIBRATION USED IN ONLY ONE DIRECTION OF TRAVEL AND A PNEUMATIC ROLLER SHALL BE THE SECOND ROLLER. THE VIBRATORY ROLLER SHALL ALSO SERVE AS THE FINISH ROLLER WITHOUT VIBRATION.

ITEM 407 - NON-TRACKING TACK COAT

NON-TRACKING TACK COAT SHALL BE APPLIED TO THE ASPHALT CONCRETE BASE COURSE PRIOR TO THE INSTALLATION OF THE SURFACE COURSE AT A RATE OF 0.05 GAL/SY. THE APPLICATION RATE SHALL NOT BE ADJUSTED UNLESS DIRECTED BY THE ENGINEER.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22

THE CONTRACTOR SHALL PLACE THE ASPHALT SURFACE COURSE AT THE DEPTHS SHOWN ON THE TYPICAL SECTION. THE CONTRACTOR SHALL USE A COMPACTION METHOD THAT IS ACCEPTABLE TO THE ENGINEER. ALL COSTS ASSOCIATED WITH THE INSTALLATION OF THE SURFACE COURSE SHALL BE INCLUDED IN THIS LINE ITEM

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THIS PROJECT REQUIRES A 404 PERMIT FROM THE UNITED STATES ARMY CORPS OF ENGINEERS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THIS PERMIT AND SEE THAT NONE OF THE CONDITIONS OF THE PERMITS ARE VIOLATED DURING THE COURSE OF CONSTRUCTION.
THE CONTRACTOR SHALL ISOLATE THE PORTION OF THE STREAM CONTAINING THE BRIDGE PRIOR TO ITS REMOVAL. THIS SHALL BE ACCOMPLISHED THROUGH THE USE OF STEEL PLATES, SHEET PILING, SAND BAGS OR OTHER NON-ERODIBLE MATERIALS. EARTHEN DAMS WILL NOT BE PERMITTED. THE CONTRACTOR SHALL EITHER PUMP THE WATER AROUND THE SITE OR INSTALL A TEMPORARY BYPASS PIPE TO CONTROL THE WATER. WATER THAT IS PUMPED OUT OF THE ISOLATED SECTION OF THE STREAM SHALL BE FILTERED FOR SEDIMENT REMOVAL BEFORE BEING RETURNED TO THE STREAM. THE CONTRACTOR SHALL ADEQUATELY DEWATER THE ISOLATED AREA, INCLUDING GROUND WATER, TO PROVIDE A DRY WORK AREA PRIOR TO THE INSTALLATION OF THE AGGREGATE BEDDING. NO ADDITIONAL PAYMENT WILL BE MADE FOR EXCAVATION REQUIRED AS A RESULT OF INADEQUATE DEWATERING MEASURES.

THIS LINE ITEM SHALL INCLUDE THE INSTALLATION OF A 24" HDPE CONDUIT FOR TEMPORARY WATER CROSSING FOR FARM EQUIPMENT LOCATED ON PARCEL NO. 15-046200 (DOWNSTREAM PARCEL). THE CONDUIT SHALL BE A MINIMUM OF 15 FT IN LENGTH AND INSTALLED AT THE LOCATION DETERMINED BY THE ENGINEER AND BACKFILLED PROPERLY TO ALLOW THE CROSSING OF FARM EQUIPMENT TO ACCESS THE FIELD ON PARCEL NO. 15-102670 (NORTHWEST OF PROJECT SITE). ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

THIS ITEM SHALL INCLUDE THE EXCAVATION AND GRADING OF THE DOWNSTREAM AND UPSTREAM BANK TO ALIGN THE STREAM WITH THE PROPOSED STRUCTURE. THE APPROXIMATE EXCAVATION VOLUME IS 100 CY AND IS PROVIDED FOR ESTIMATING PURPOSES ONLY. THE PROPOSED BANK SHALL BE SLOPED AT 2:1. NO ADDITIONAL PAYMENTS WILL BE MADE FOR EXCAVATION VOLUMES THAT EXCEED THE ESTIMATED QUANTITY. EXCAVATED MATERIAL SHALL BE USED TO BACKFILL THE ABANDONED PORTION OF THE STREAM BEING RELOCATED TO PROVIDE POSITIVE DRAINAGE TO THE NEW STREAM ALIGNMENT. OTHERWISE IT SHALL BE PLACED ALONG THE STREAM BANK TO HELP RAISE THE STREAM BANK NEAR THE STRUCTURE.

ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN.

GENERAL NOTES

DESIGNER	JHS
REVIEWER	HAE 4/7/2026
PROJECT ID	N/A
SHEET	3
TOTAL	12

BR-0069-B-01.010-2026

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ITEM 511 - CLASS QC3 CONCRETE, MISC.: CUTOFF WALLS

THE CONCRETE FOR THE CUTOFF WALLS SHALL HAVE A MINIMUM DESIGN STRENGTH OF 3000 PSI. SEE THE STRUCTURE DETAILS SHEETS FOR ADDITIONAL INFORMATION.

ITEM 512 - TYPE 2 WATERPROOFING

THIS IS A PEEL AND STICK WATERPROOFING MEMBRANE THAT IS SIMILAR TO THE REQUIREMENTS OF ODOT SPEC. 711.25. THE MATERIAL SHALL BE MEL-DEK AS PRODUCED BY W.R. MEADOWS, INC. OR AN APPROVED EQUAL. PRIOR TO PLACEMENT OF THE MEMBRANE, SMOOTH ANY INCONSISTENCIES AT THE JOINTS, FILL THE LIFTING POCKETS WITH DRY SAND AND COVER THE POCKETS AND CONDUIT JOINTS WITH JOINT WRAP (ENTIRE HEIGHT OF BOX ON BOTH SIDES). THEN PLACE THE MEMBRANE ON THE VERTICAL FACE OF THE STRUCTURE (ENTIRE HEIGHT OF THE SIDES). ALL JOINTS SHALL BE LAPPED A MINIMUM OF THREE INCHES (3"). THIS WORK SHALL BE PERFORMED PRIOR TO THE INSTALLATION OF THE TYPE 3 WATERPROOFING. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN UNIT PRICE BID FOR THIS ITEM.

ITEM 512 - TYPE 3 WATERPROOFING

THIS IS A HEAVY DUTY COMPOSITE WATERPROOFING MEMBRANE THAT SHALL MEET THE REQUIREMENTS OF ODOT SPEC. 711.29 WITH A PRIMER COAT MEETING THE REQUIREMENTS OF ODOT SPEC. 705.04. THE MATERIAL SHALL BE OHIO TYPE III WATERPROOFING AS PRODUCED BY W.R. MEADOWS, INC. OR AN APPROVED EQUAL. PRIOR TO PLACEMENT OF THE MEMBRANE OR PRIMER COAT, SMOOTH ANY INCONSISTENCIES AT THE JOINTS, FILL THE LIFTING POCKETS AND BOX JOINTS WITH GROUT (TOP OF BOX). THEN INSTALL THE WATERPROOFING ON THE TOP FACE OF THE BOX (ENTIRE LENGTH AND WIDTH) AND EXTEND DOWN EACH VERTICAL FACE 1 FT. ALL JOINTS SHALL BE LAPPED A MINIMUM OF THREE INCHES (3") AND SEALED PER ODOT SPEC. 512.09H. THIS WORK SHALL BE PERFORMED AFTER THE INSTALLATION OF THE TYPE 2 WATERPROOFING. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN UNIT PRICE BID FOR THIS ITEM.

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC

ROCK CHANNEL PROTECTION SHALL BE PLACED ALONG THE PROPOSED CHANNEL ALIGNMENT EMBANKMENT AS ILLUSTRATED ON THE SITE PLAN AT A DEPTH OF 3 FT. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ITEM 602 - MASONRY, MISC.: PRECAST WINGWALL BLOCKS

THE BLOCKS SHALL BE CAST OF FRESHLY BATCHED CONCRETE MEETING THE ODOT DESIGN PARAMETERS OF SECTION 499.03 FOR QC 1 CONCRETE. WASTE CONCRETE SHALL NOT BE PERMITTED. THE COUNTY ENGINEER SHALL APPROVE THE BLOCKS PRIOR TO THEIR ACCEPTANCE. BLOCKS MAY BE REJECTED FOR CONCRETE THAT DOES NOT MEET THE SPECIFICATION OR FOR APPEARANCE. LENGTHS OF THE INDIVIDUAL BLOCKS MAY VARY FROM THOSE SHOWN ON THE STRUCTURE DETAIL SHEETS OF THESE PLANS, IF APPROVED BY THE ENGINEER, PROVIDED THE CONSTRUCTED WINGWALL LENGTH MEETS OR EXCEEDS THAT SHOWN.

GEOTEXTILE FABRIC THAT MEETS THE REQUIREMENTS OF ODOT SPEC. 712.09, TYPE B, SHALL BE PLACED TO ENCASE THE ENTIRETY OF THE POROUS BACKFILL (ALL FACES). IT SHALL BE USED TO PROVIDE A BARRIER BETWEEN THE BACKFILL MATERIAL AND THE POROUS BACKFILL AS TO PREVENT MIXING. AN ADDITIONAL 4' WIDE PIECE OF FABRIC SHALL BE PLACED THE ENTIRE HEIGHT OF THE JOINT BETWEEN THE WINGWALL AND BOX CENTERED ON THE JOINT TO PREVENT LOSS OF BACKFILL MATERIAL THROUGH THE JOINT. THE BLOCKS SHALL BE SET BACK FROM THE END OF THE BOX CULVERT APPROXIMATELY 3" TO BRACE WINGWALLS AND PREVENT OVERTURNING. THE USE OF SLAG FOR POROUS BACKFILL WILL NOT BE PERMITTED.

ONE UNIT IS DEFINED AS THE ENTIRE ASSEMBLY AT EACH CORNER OF THE STRUCTURE (4 TOTAL). ALL COSTS ASSOCIATED WITH THE INSTALLATION OF THE BLOCKS, INCLUDING THE POROUS BACKFILL AND FILTER FABRIC, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ITEM 611 - 14'X5' CONDUIT, TYPE A, 706.05

THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED STRUCTURE AND PROVIDE ALL OTHER IMPROVEMENTS IN CONFORMITY WITH THE LINES AND GRADES AS SHOWN ON THE SITE PLAN. THE EXCAVATION LIMITS FOR THE CONDUIT, AS SHOWN ON THE PLANS, ARE APPROXIMATE AND WILL VARY DEPENDING ON HOW THE CONTRACTOR PERFORMS HIS WORK. EXCAVATED MATERIAL, IF SUITABLE, SHALL BE USED TO BACKFILL OUTSIDE OF THE LSM LIMITS. THE STORAGE LOCATION OF THE EXCAVATED MATERIAL SHALL BE APPROVED BY THE ENGINEER. ALL COSTS FOR LOADING, TRANSPORTING, STORING, PLACEMENT AND COMPACTION OF THE EXCAVATED MATERIAL AS SHOWN ON THE PLANS, AND DISPOSAL OF SURPLUS MATERIAL SHALL BE INCLUDED IN THE 611 CONDUIT ITEM.

LOW STRENGTH MORTAR BACKFILL (LSM) TYPE 2 IS REQUIRED WITHIN THE LIMITS OF THE PROPOSED ROADWAY, EXTENDING TO A POINT TWO (2) FEET PAST THE EDGE OF THE GRADED SHOULDER. THE ESTIMATED QUANTITY OF THIS MATERIAL IN THE CONSTRUCTION PLANS IS BASED ON THE LINES, SLOPES AND EXCAVATION LIMITS SHOWN. THIS QUANTITY MAY VARY DEPENDING ON THE CONTRACTOR'S EXCAVATION METHODS AND LIMITS. THE CONTRACTOR, AT NO ADDITIONAL EXPENSE, SHALL PROVIDE ADDITIONAL BACKFILL MATERIAL TO GEAUGA COUNTY IF THE EXCAVATION LIMITS EXCEED THOSE SHOWN ON THE PLANS.

THE CONTRACTOR SHALL INSTALL A PREFABRICATED DRAINAGE COMPOSITE ALONG THE ENTIRE HEIGHT OF THE BOX OUTSIDE OF THE LSM LIMITS. THE PRODUCT SHALL BE J-DRAIN 200 SERIES AS PRODUCED BY JDR ENTERPRISES, INC. OR APPROVED EQUAL. THE DRAINAGE COMPOSITE SHALL BE INSTALLED AS PER THE MANUFACTURERS DIRECTIONS, INCLUDING FILTER FABRIC, EXTENDING FROM THE TOP OF THE BOX TO THE AGGREGATE BASE LIMITS.

THE CONTRACTOR SHALL INSTALL THREE INCHES (3") OF POROUS BACKFILL WITH GEOTEXTILE FABRIC OVER THE ENTIRE TOP OF THE STRUCTURE OUTSIDE THE LSM LIMITS. GEOTEXTILE FABRIC THAT MEETS THE REQUIREMENTS OF ODOT SPEC. 712.09, TYPE B, SHALL BE PLACED TO ENCASE THE ENTIRETY OF THE POROUS BACKFILL (EXCLUDING THE BOTTOM). IT SHALL BE USED TO PROVIDE A BARRIER BETWEEN THE BACKFILL MATERIAL AND THE POROUS BACKFILL AS TO PREVENT MIXING. THE FABRIC SHALL EXTEND ONE (1) FOOT DOWN THE SIDES OF THE PREFABRICATED DRAINAGE COMPOSITE. THE POROUS BACKFILL SHALL BE TOPPED WITH A MINIMUM OF SIX (6) INCHES OF EMBANKMENT MATERIAL, INCLUDING TOPSOIL. SEE THE STRUCTURE DETAILS SHEETS FOR ADDITIONAL DETAILS.

THE HEADWALLS SHOWN IN THE PLAN SHALL BE INCLUDED IN THIS ITEM, AS WELL AS ANY HARDWARE REQUIRED FOR ATTACHING THE HEADWALLS TO THE BOX SECTIONS.

THE PRECAST MANUFACTURER SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL TO THE GEAUGA COUNTY ENGINEER'S OFFICE PRIOR TO BEGINNING THE MANUFACTURING OF THE BOX CULVERT. THE PRECAST MANUFACTURER SHALL FOLLOW THE REQUIREMENTS OF ODOT'S CMS MANUAL SECTION 706.051 OR 706.052, SUBSECTION 6.4 CONCERNING THE USE OF CORROSION INHIBITORS OR EPOXY COATED REINFORCING STEEL. IN ADDITION, SUPPORT FOR THE REINFORCEMENT WITHIN THE FORMWORK, THAT BEARS AGAINST AN EXPOSED FACE OF THE CONDUIT, SHALL BE NON-METALLIC (PLASTIC).

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO CROSS OVER OR UNDER AN UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING UTILITIES AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT OR EXCAVATE THE TRENCH. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING UTILITIES CONFLICT WITH THE PROPOSED PLAN ELEVATION OF THE TRENCH OR CONDUIT AND RESULTS IN A CHANGE IN THE PLAN SCOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN EXISTING ELEVATIONS.

ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ITEM 617 - COMPACTED AGGREGATE (304 LIMESTONE)

THE MATERIAL FOR THIS ITEM SHALL BE LIMESTONE. THE CONTRACTOR SHALL PLACE THE STABILIZED SHOULDER BACK UP MATERIAL AS SHOWN ON THE TYPICAL SECTION. THE MATERIAL PLACEMENT SHALL NOT TAKE PLACE WITHIN TWENTY-FOUR HOUR (24HR) PERIOD TIME, BUT NOT MORE THAN SEVENTY-TWO HOURS (72HRS), AFTER THE COMPLETED PLACEMENT OF THE SURFACE COURSE. THE ROADWAY SHALL BE SWEPT AFTER THE PLACEMENT OF MATERIAL AND PRIOR TO COMPACTION. THE CONTRACTOR SHALL COMPACT THE MATERIAL USING A MINIMUM OF FOUR (4) PASSES WITH A TANDEM ROLLER. AFTER COMPLETION OF THIS ITEM, THE CONTRACTOR SHALL SEAL ASPHALT JOINTS.

ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING

ANY PROPERTY PINS ENCOUNTERED DURING CONSTRUCTION SHALL BE RESET BY A SURVEYOR LICENSED IN THE STATE OF OHIO. CONSTRUCTION LIMITS, WHERE OUTSIDE THE RIGHT OF WAY, SHALL BE MARKED PRIOR TO CONSTRUCTION.

LAYOUT STAKES ARE REQUIRED AND SHALL BE SUPERVISED BY AN OHIO REGISTERED PROFESSIONAL SURVEYOR. LAYOUT STAKES SHALL BE SET AT A DISTANCE NOT TO EXCEED TWENTY FEET (20') AND AT ALL PROPOSED CONDUIT FOR REFERENCING.

ITEM 653 - TOPSOIL FURNISHED AND PLACED

THE CONTRACTOR SHALL SPREAD THE TOPSOIL AT A DEPTH OF 2" OVER ALL DISTURBED LAWN AREAS, AT THE DIRECTION OF THE ENGINEER.

ITEM 659 - SEEDING AND MULCHING, CLASS 1

COMMERCIAL FERTILIZER SHALL BE APPLIED AT ALL PERMANENT SEEDING AND MULCHING AREAS IN ACCORDANCE WITH ODOT SPEC. 659.04. THE CONTRACTOR SHALL INCLUDE THE COST OF THE COMMERCIAL FERTILIZER IN THE UNIT PRICE BID FOR ITEM 659 SEEDING AND MULCHING. NO FINAL GRADED AREA SHALL BE BARE FOR MORE THAN ONE (1) WEEK WITHOUT SEEDING AND MULCHING.

ITEM 671 - EROSION CONTROL MAT, TYPE C

THIS ITEM INCLUDES PROVIDING THE SEED, MULCH AND FERTILIZER AS WELL AS THE EROSION CONTROL MAT AS PER SECTION 671.01 OF ODOT'S CMS MANUAL. IT SHALL BE PLACED IN THE DITCH BOTTOMS AND ALONG THE EXCAVATED RIVER BANK AS DIRECTED BY THE ENGINEER.

ITEM 832 - PERIMETER FILTER FABRIC FENCE

ITEM 832 - TEMPORARY DITCH CHECK (STRAW BALES)

EACH DITCH CHECK SHALL CONSIST OF TWO STRAW BALES PLACED IN A V-SHAPE AND PROPERLY SECURED WITH A METHOD APPROVED BY THE ENGINEER. COMPENSATION FOR STRAW DITCH CHECKS SHALL BE BY EACH DITCH CHECK PROPERLY PLACED AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL CONSTRUCT ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH ODOT SCD DM-4.4. THE COST OF MAINTAINING THE EROSION CONTROL FOR THE DURATION OF THE PROJECT AND SUBSEQUENT REMOVAL AND DISPOSAL OF THE PROTECTION SHALL BE INCLUDED IN THE CONTRACTORS UNIT PRICE FOR THIS ITEM.

GENERAL NOTES

DESIGNER JHS

REVIEWER HAE 4/7/2026

PROJECT ID N/A

SHEET 4 TOTAL 12

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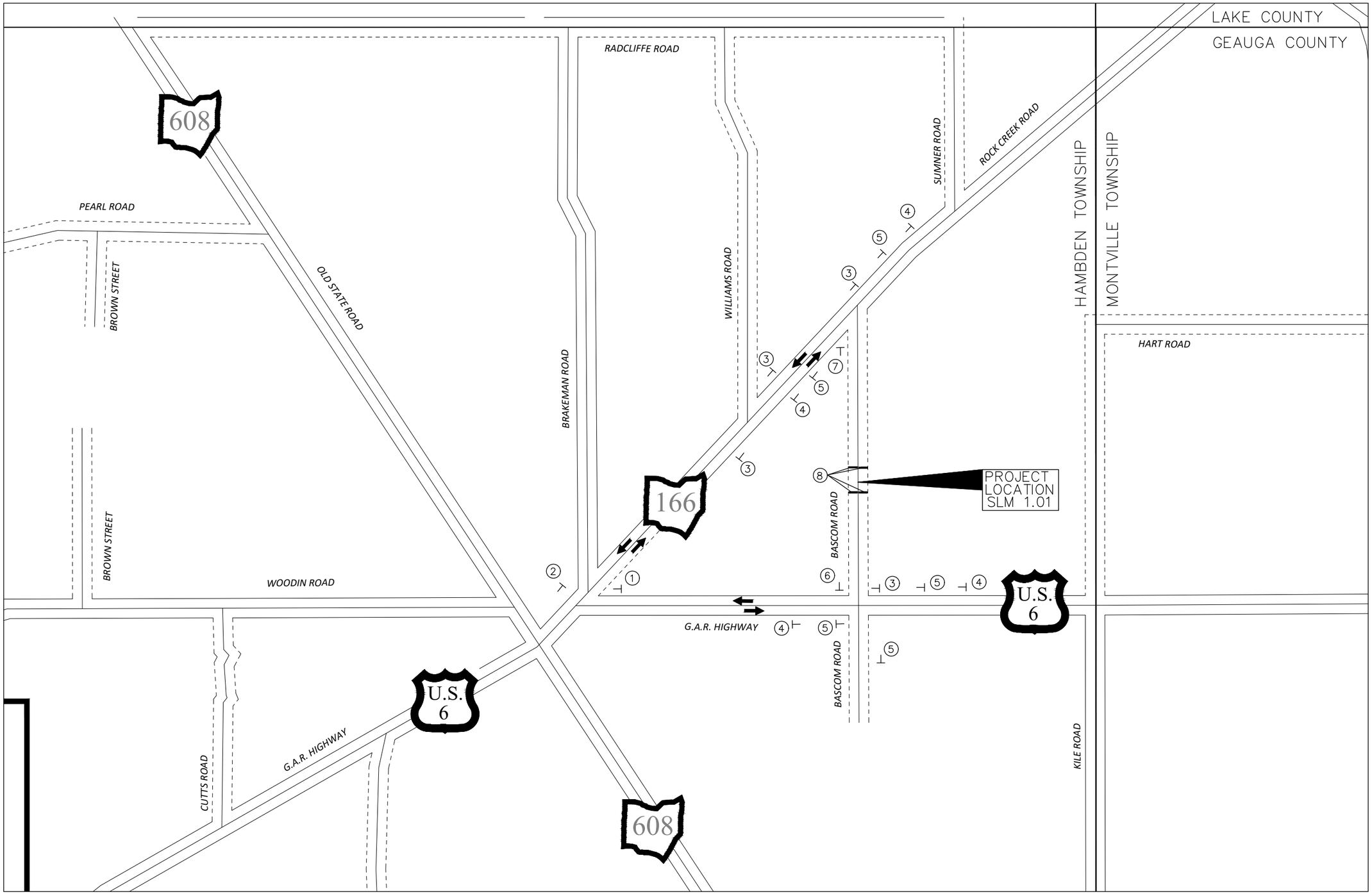

DETOUR ROUTE

ITEM 614 - MAINTAINING TRAFFIC

THE CONTRACTOR SHALL PLACE THE BARRICADES AS SHOWN IN THE PROJECT PLANS. THE ROADWAY MAY BE CLOSED TO TRAFFIC DURING THE PROJECT. THE LENGTH OF THE CLOSURE SHALL BE KEPT TO A MINIMUM AND IS SUBJECT TO APPROVAL BY THE COUNTY ENGINEER. THE CONTRACTOR SHALL NOTIFY ALL LOCAL SCHOOLS, POLICE, FIRE, SHERIFF AND APPROPRIATE LOCAL OFFICIALS OF THE DATES OF THE CLOSURE. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS FOR THE DURATION OF THE PROJECT.

LEGEND:

U.S. ROUTES — U.S. 6

STATE ROUTES — 608

COUNTY ROADS

TOWNSHIP ROADS

DETOUR

DESIGNER	JHS
REVIEWER	HAE 4/7/2026
PROJECT ID	N/A
SHEET	5
TOTAL	12

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1

D3-1
BASCOM ROAD
DETOUR
M4-9(R)

2

D3-1
BASCOM ROAD
DETOUR
M4-9(L)

3

D3-1
BASCOM ROAD
DETOUR
M4-9

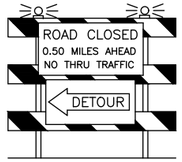
4

D3-1
BASCOM ROAD
ROAD CLOSED AHEAD
W20-1

5

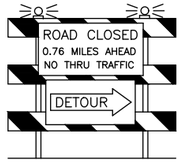
D3-1
BASCOM ROAD
DETOUR AHEAD
W20-2

6



4' TYPE III BARRICADE
WITH M4-10L AND R-11-3A

7



4' TYPE III BARRICADE
WITH M4-10R AND R-11-3A

8

10' TYPE III BARRICADE
WITH R-11-2

SIGN	QTY
R-11-2	4
R-11-3A	2
M4-10(L)	1
M4-10(R)	1
M4-9	4
M4-9(L)	1
M4-9(R)	1
D3-1	15
W20-2	5
W20-1	4

BARRICADE	QUANTITY-4'	QUANTITY-10'
TYPE III	2	4

EACH TYPE III BARRICADE SHALL BE EQUIPPED WITH TWO TYPE B2 BI-DIRECTIONAL FLASHING WARNING LIGHTS. ALL SIGNS SHALL MEET THE REFLECTIVE REQUIREMENTS OF O.D.O.T. SPEC. 630. REFLECTIVE MATERIAL SHALL BE ON BOTH FACES.

SIGNS DESIGNATED WITH THE LETTER R SHALL BE BLACK LETTERS ON A WHITE BACKGROUND.

SIGNS DESIGNATED WITH THE LETTER D, M AND W SHALL BE BLACK LETTERS ON AN ORANGE BACKGROUND.

DETOUR

DESIGNER JHS
REVIEWER HAE 4/7/2026
PROJECT ID N/A
SHEET 6 TOTAL 12

BR-0069-B-01.010-2026

CALCULATIONS

ITEM 202 - PAVEMENT REMOVED

PAVEMENT REMOVAL LIMITS: STA. 53+20.00 TO 53+60.00

LENGTH = 40'
WIDTH = 20'

AREA = 40' X 20' = 800 SF/9 = 88.9 SY

USE: 90.0 SY

ITEM 202 - GUARDRAIL REMOVED, AS PER PLAN

R-1: STA. 52+68± TO 54+05± *L = 137' (INCLUDES RADIUS)*
R-2: STA. 52+72± TO 54+10± *L = 138'*

TOTAL = 137' + 138' = 275'

USE: 275 FT

ITEM 203 - BORROW

TOTAL BORROW = 60 CY

CONTINGENCY QUANTITY TO BE USED AS DIRECTED BY THE ENGINEER

USE: 60 CY

ITEM 301 - ASPHALT CONCRETE BASE, (449), PG64-22

FULL WIDTH ASPHALT REPLACEMENT LIMITS: STA. 53+20.OO TO 53+60.00

LENGTH = 40'
WIDTH = 20'

AREA = 40' X 20' = 800 SF

VOLUME =800 SF X 10.5"/12 DEPTH /27 ≈ 25.9 CY

CONTINGENCY = 4.1 CY

USE: 30.0 CY

ITEM 407 - NON-TRACKING TACK COAT

FULL WIDTH PAVEMENT AREA = 40' X 20' = 800 SF / 9 = 88.9 SY

APPLICATION RATE = 0.05 GAL/SY (301 - SURFACE INTERFACE)

VOLUME = 88.9 SY X 0.05 GAL/SY = 4.4 GAL

USE: 5 GAL

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22

FULL WIDTH ASPHALT REPLACEMENT LIMITS: STA. 53+20.OO TO 53+60.00

LENGTH = 40'
WIDTH = 20'

AREA = 40' X 20' = 800 SF

VOLUME =800 SF X 1.5"/12 DEPTH /27 ≈ 3.7 CY

CONTINGENCY = 1.3 CY

USE: 5.0 CY

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CUTOFF WALLS

3 FT (HEIGHT) X 2 FT (WIDTH) X 16 FT (LENGTH) X 2 EACH = 192 CF / 27 = 7.11 CY

USE: 7.1 CY

ITEM 512 - TYPE 2 WATERPROOFING

BOX HEIGHT = 7.0'
BOX LENGTH = 54'

AREA = 7.0' x 2 X 54'/9 = 84.0 SY

USE: 84.0 SY

ITEM 512 - TYPE 3 WATERPROOFING

BOX WIDTH = 16' + 1 ft DOWN EACH SIDE = 18'
BOX LENGTH = 54'

AREA = 18' X 54'/9 = 108.0 SY

USE: 110.0 SY

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC

TO BE PLACED ALONG THE UPSTREAM EMBANKMENT OF THE PROPOSED STREAM ALIGNMENT.
ESTIMATED WIDTH IS 6 FT WIDE AND SHALL EXTEND TO TOP OF BANK.

AREA MEASURED IN CADD = 450 SF

DEPTH = 3 FT

VOLUME =450 SF X 3 FT DEPTH /27 = 50 CY

CONTINGENCY = 10 CY

USE: 60.0 CY

ITEM 617 - COMPACTED AGGREGATE (304 LIMESTONE)

FULL WIDTH ASPHALT REPLACEMENT LIMITS: 40 FT

WIDTH = 2 FT
DEPTH = 1 FT AVG.

VOLUME = 40 FT X 2 SIDES X 2 FT WIDE X 1 FT DEEP / 27 = 5.9 CY

USE: 10.0 CY

ITEM 642 - EDGE LINE, 4", TYPE 1

FULL WIDTH PAVEMENT LENGTH = 40 FT

LENGTH = 40 FT X 2 / 5280 = 0.015 MILES

USE: 0.02 MILE

ITEM 642 - CENTER LINE, TYPE 1

FULL WIDTH PAVEMENT LENGTH = 40 FT

LENGTH = 40 FT / 5280 = 0.008 MILES

USE: 0.01 MILE

ITEM 653 - TOPSOIL FURNISHED AND PLACED

ONLY TO BE USED AS DIRECTED BY THE ENGINEER. THE INTENT IS FOR THE TOPSOIL TO BE INSTALLED ON THE EAST SIDE OF THE ROAD AND IN THE DIRECT VICINITY OF THE BRIDGE ON THE WEST SIDE OF THE ROAD.

SEEDING AREA = 400 SY = 3,600 SF

DEPTH OF TOPSOIL = 2"

VOLUME = 3,600 X (2"/12) / 27 = 22.2 CY

USE: 25 CY

ITEM 659 - SEEDING AND MULCHING, CLASS 1

MEASURED IN CADD: 600 SY

USE: 600 SY

ITEM 671 - EROSION CONTROL MAT, TYPE C

CONTINGENCY QUANTITY - TO BE USED AT THE DIRECTION OF THE ENGINEER

USE: 100 SY

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DESIGNER	JHS
REVIEWER	HAE 4/7/2026
PROJECT ID	N/A
SHEET	7
TOTAL	12

GENERAL SUMMARY

ITEM		DESCRIPTION	QUANTITY	
1	201	CLEARING AND GRUBBING	1	LS
2	202	STRUCTURE REMOVED, AS PER PLAN	1	LS
3	202	PAVEMENT REMOVED	90.0	SY
4	202	GUARDRAIL REMOVED, AS PER PLAN	275	FT
5	203	BORROW	60	CY
6	301	ASPHALT CONCRETE BASE, (449), PG64-22	30.0	CY
7	407	NON-TRACKING TACK COAT	5	GAL
8	441	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	5.0	CY
9	503	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	1	LS
10	503	UNCLASSIFIED EXCAVATION, AS PER PLAN	1	LS
11	511	CLASS QC3 CONCRETE, MISC.: CUTOFF WALLS	7.1	CY
12	512	TYPE 2 WATERPROOFING	84.0	SY
13	512	TYPE 3 WATERPROOFING	110.0	SY
14	601	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	60.0	CY
15	602	MASONRY, MISC.: PRECAST WINGWALL BLOCKS	4	EACH
16	611	14' x 5' CONDUIT, TYPE A, 706.05	54.0	FT
17	614	MAINTAINING TRAFFIC	1	LS
18	617	COMPACTED AGGREGATE (304 LIMESTONE)	10.0	CY
19	623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LS
20	624	MOBILIZATION	1	LS
21	642	EDGE LINE, 4", TYPE 1	0.02	MILE
22	642	CENTER LINE, TYPE 1	0.01	MILE
23	653	TOPSOIL FURNISHED AND PLACED	25	CY
24	659	SEEDING AND MULCHING, CLASS 1	600	SY
25	671	EROSION CONTROL MAT, TYPE C	100	SY
26	832	PERIMETER FILTER FABRIC FENCE	200	FT
27	832	TEMPORARY DITCH CHECK (STRAW BALES)	4	EACH
28	SPEC	CONTRACT PERFORMANCE BOND AND PREMIUM	1	LS

GENERAL SUMMARY

DESIGNER JHS

REVIEWER HAE 4/7/2026

PROJECT ID N/A

SHEET 8 TOTAL 12

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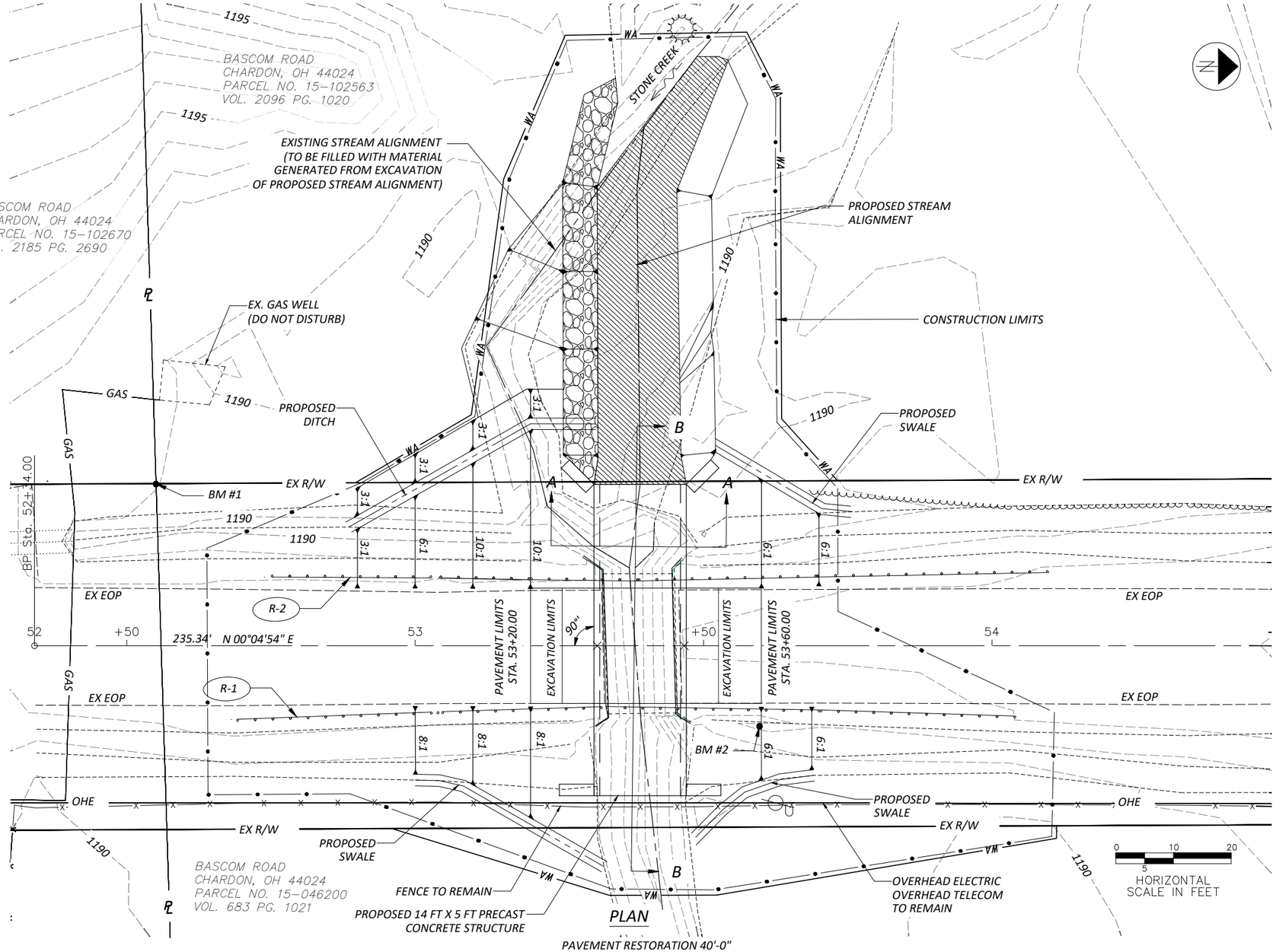

BENCHMARK DATA

BM #1 IRON PIN W/ CAP, ELEV. 1191.07, STA. 52+55.08, 28.14' LT
BM #2 HUB SET, ELEV. 1192.20, STA. 53+59.69, 13.96' RT

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE.
2. REFER TO THE TITLE SHEET FOR DESIGN TRAFFIC DATA.

LEGEND

EOP	EDGE OF PAVEMENT
OHE	OVERHEAD ELECTRIC
DND	DO NOT DISTURB
WA	WORK AGREEMENT
	ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN
	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC
	ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
R-#	ITEM 202 - GUARDRAIL REMOVED, AS PER PLAN

HYDRAULIC DATA

DRAINAGE AREA = 1.13 SQ. MILES
Q (10%) = 228 CFS V (10%) = 0.33 FT/S HW (10%) = 1190.97
Q (1%) = 437 CFS V (1%) = 0.26 FT/S HW (1%) = 1192.74

EXISTING STRUCTURE

TYPE: SINGLE SPAN CONCRETE SLAB SUPERSTRUCTURE ON CONCRETE STONE ABUTMENTS WITH SPREAD FOOTERS.
SPANS: 12'-0" CLEAR
ROADWAY: 20'-0" F/F RAIL
LOADING: HS20-44
SKEW: NONE
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
STRUCTURE FILE NUMBER: 2830493
DATE BUILT: 1930
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: 14' X 5' FOUR-SIDED PRECAST CONCRETE BOX WITH PRECAST CONCRETE CUTOFF WALLS AND WINGWALLS

SPANS: 14'-0" CLEAR SPAN
ROADWAY: 20'-0" EOP/EOP
LOADING: HL93 AND 0.060 KSF FUTURE WEARING SURFACE
SKEW: NONE
WEARING SURFACE: MONOLITHIC CONCRETE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: 0.02 FT/FT
COORDINATES: LATITUDE = N 41°36'52.24"
LONGITUDE = W 81°07'12.72"

SITE PLAN
BASCOM ROAD
OVER STONE CREEK

SFN	2830494
DESIGNER	JHS
CHECKER	CLG
REVIEWER	HAE 4/7/2026
PROJECT ID	N/A
SUBSET	1
TOTAL	4
SHEET	9
TOTAL	12

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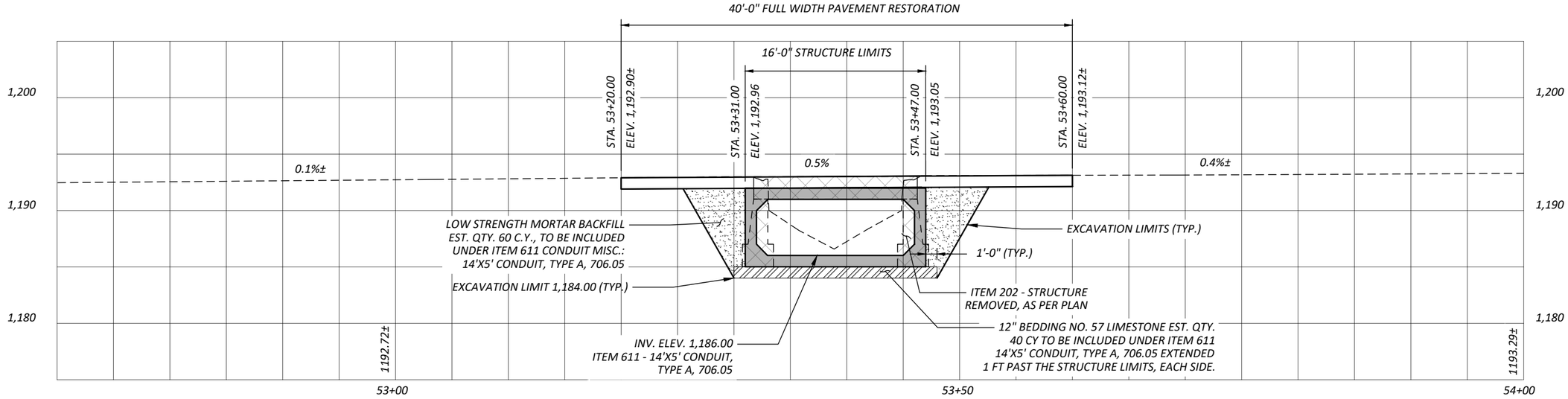
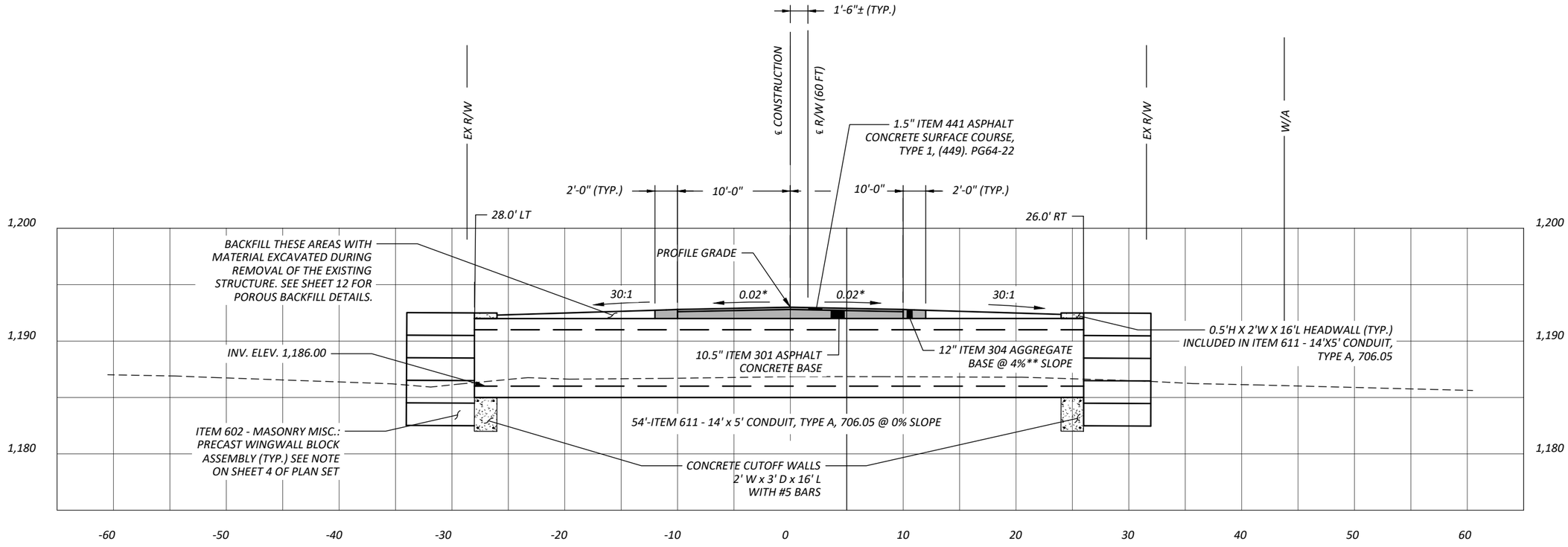


SECTION A-A

AS A PRECAUTION AGAINST INTRODUCING ANY UNBALANCED STRESSES IN THE CULVERT, AT NO TIME SHALL THE DIFFERENCE BETWEEN HEIGHTS OF FILL ON OPPOSITE SIDES OF THE CONDUIT EXCEED 24"



SECTION B-B

* *MATCH EXISTING CROSS SLOPE. CONTRACTOR TO VERIFY EXISTING CROSS SLOPE PRIOR TO THE REMOVAL OF THE ASPHALT.*

BOX DETAILS
BASCOM ROAD
OVER STONE CREEK

SFN	2830494
DESIGNER	JHS
CHECKER	CLG
REVIEWER	HAE 4/7/2026
PROJECT ID	N/A
SUBSET	2
TOTAL	4
SHEET	10
TOTAL	12

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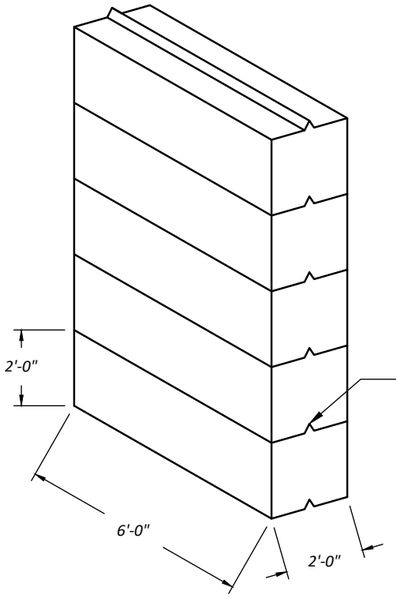
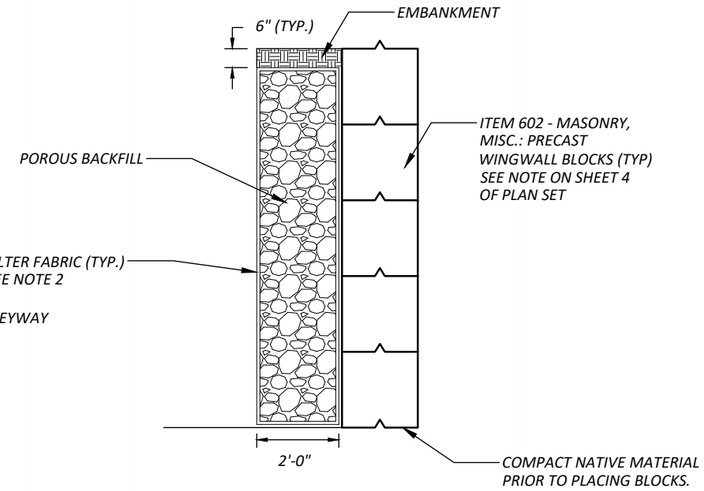
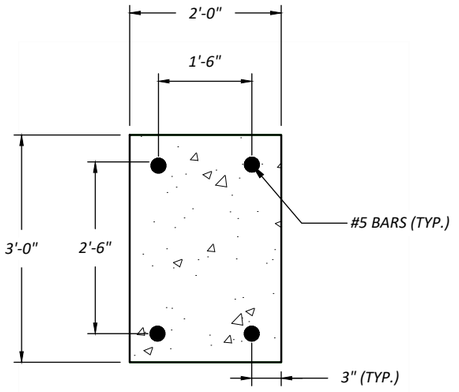


PRECAST WINGWALL BLOCKS

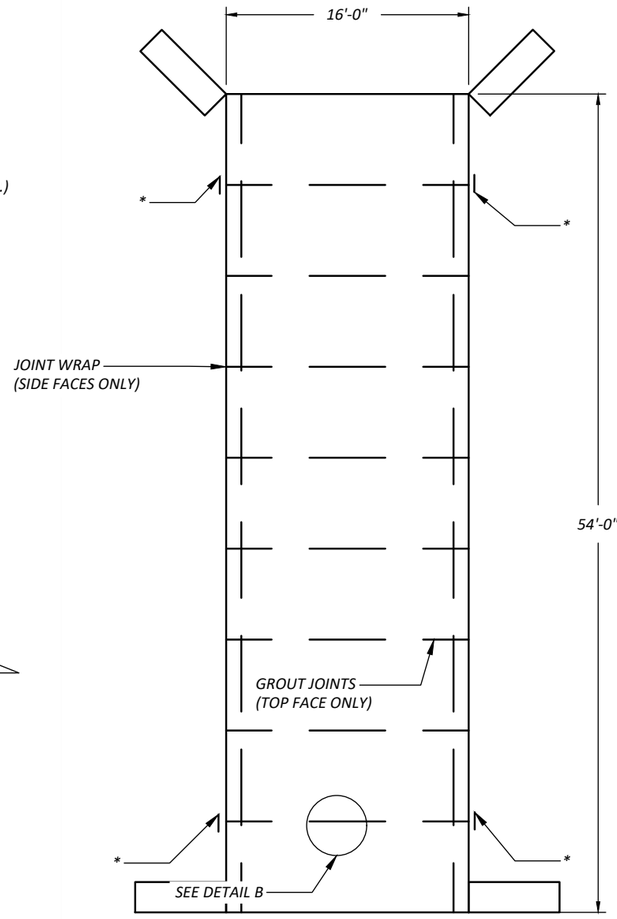


POROUS BACKFILL DETAIL

INCLUDED IN ITEM 602 - MASONRY, MISC.: PRECAST WINGWALL BLOCKS



CUTOFF WALL DETAIL



PLAN VIEW

LAYING LENGTH AND NUMBER OF PIECES TO BE DETERMINED BY THE MANUFACTURER.

NOTES:

1) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE PRECAST CONCRETE BOX STRUCTURE TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIAL.

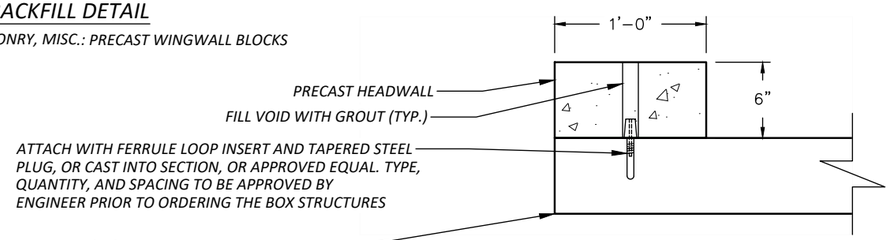
2) CONTRACTOR SHALL ENCASE ALL SIDES AND TOP & BOTTOM OF THE POROUS BACKFILL WITH FILTER FABRIC TO ENSURE TOTAL ENCASEMENT OF THE AGGREGATE.

3) PRECAST WINGWALL BLOCKS SHALL BE SET BACK 3" FROM END OF BOX SECTION TO PREVENT OVERTURNING ON THE WINGWALL BLOCKS.

DESIGN LOADING: HL-93

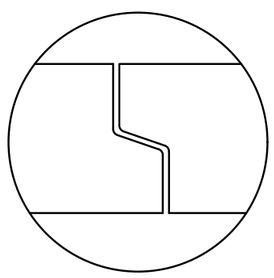
THERE WILL BE LESS THAN 2 FEET OF COVER OVER THE BOX.

* MECHANICAL COUPLINGS SHALL BE DESIGNED FOR THESE JOINTS TO PREVENT SEPARATION OF THE END SECTIONS FROM THE INTERIOR SECTIONS. THE COUPLINGS SHALL BE EITHER GALVANIZED OR STAINLESS STEEL PLATES BOLTED TO THREADED INSERTS CAST INTO THE CONCRETE. ALL BOLTS, WASHERS AND OTHER MISCELLANEOUS HARDWARE SHALL ALSO BE EITHER GALVANIZED OR STAINLESS. NO FIELD DRILLING SHALL BE PERMITTED. DETAILS OF AND MATERIALS TO BE USED IN THE COUPLINGS TO BE APPROVED BY THE ENGINEER PRIOR TO ORDERING THE BOX STRUCTURES.



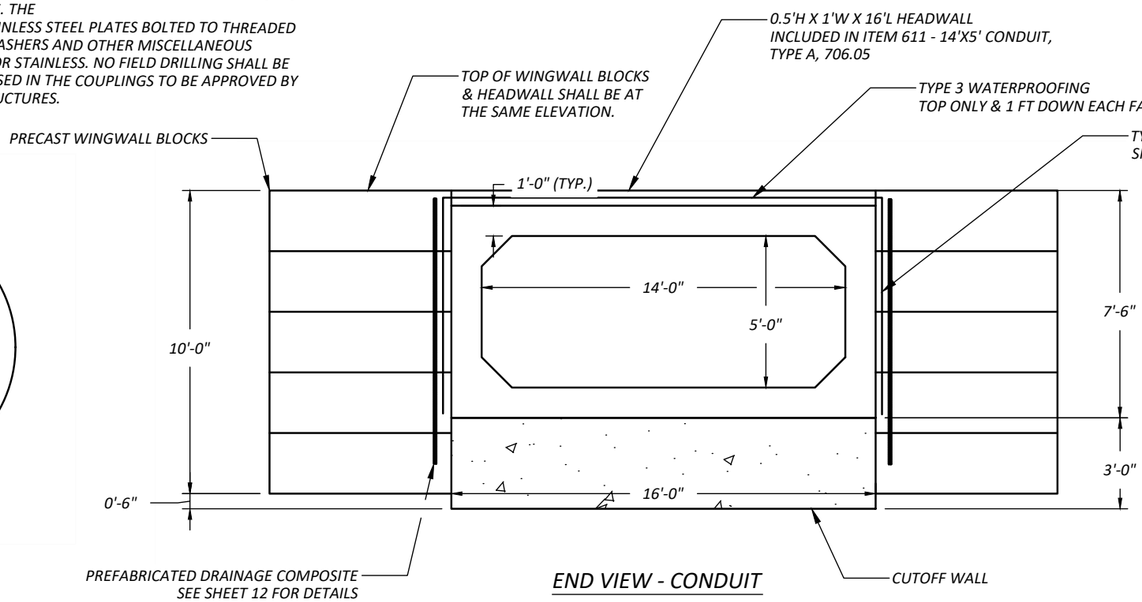
PRECAST HEADWALL DETAIL

INCLUDED IN ITEM 611 - 14' X 5' CONDUIT, TYPE A, 706.05



DETAIL B

INCLUDING END PIECES.



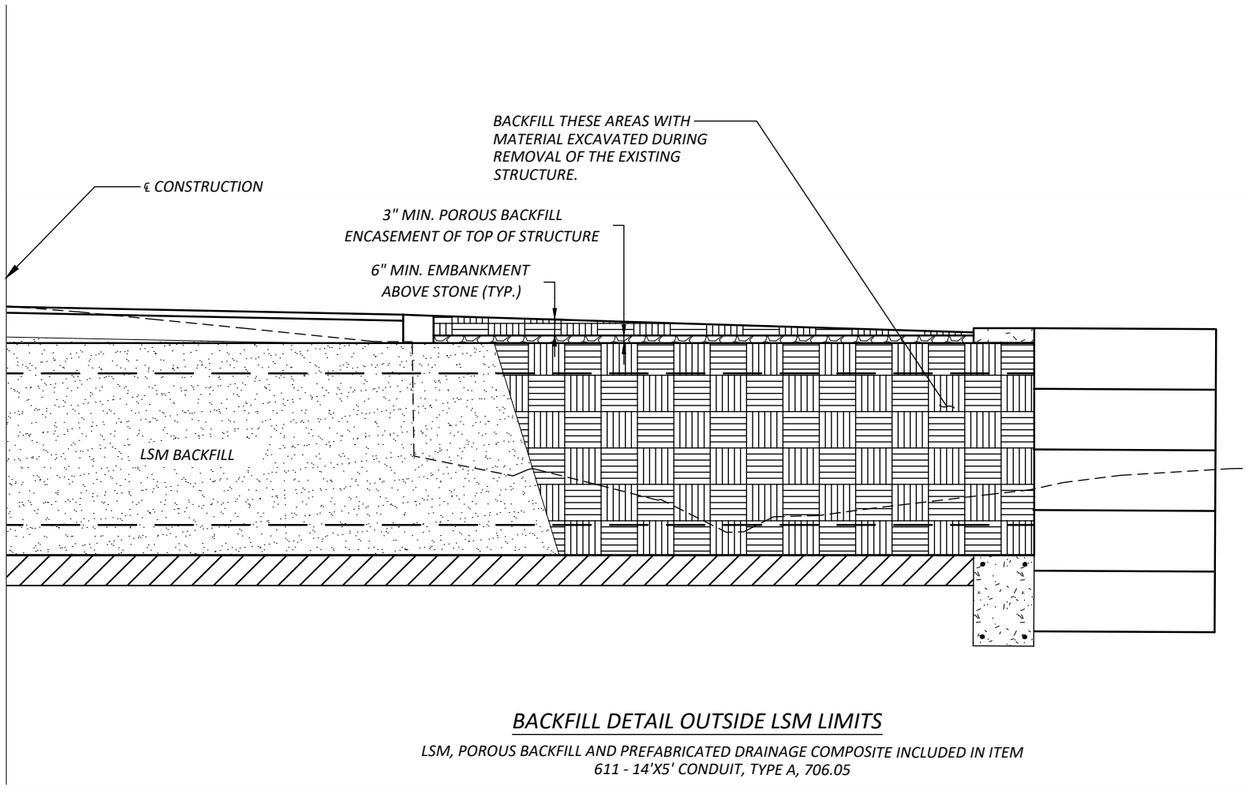
END VIEW - CONDUIT

BOX DETAILS
BASCOM ROAD
OVER STONE CREEK

SFN	2830494
DESIGNER	JHS
CHECKER	CLG
REVIEWER	HAE 4/7/2026
PROJECT ID	N/A
SUBSET	3
TOTAL	4
SHEET	11
TOTAL	12

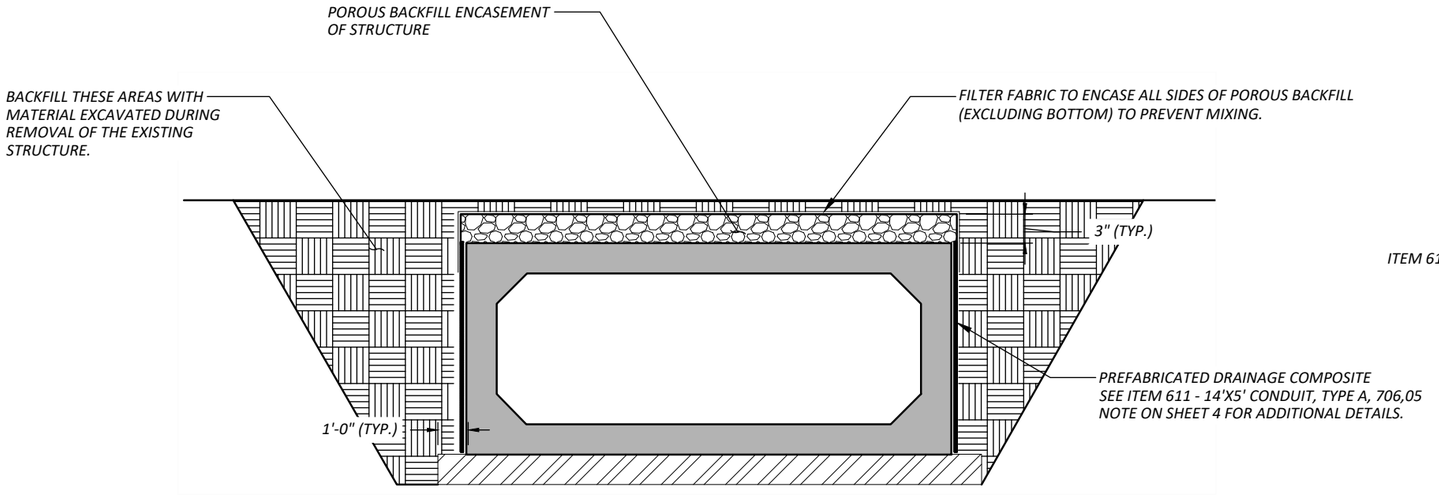
BR-0069-B-01.010-2026

C:\Users\JScotese\OneDrive - Geauga County ADP\Documents - ENG Projects\2026 DESIGN\County Design 2026\BR-0069-A-01.01-2026 BASCOM BRIDGE\200 DESIGN\204 CADD-PLANS\BR-0069-A-01.01-2026-PLAN SET.dwg
30-Apr-26 1:02 PM



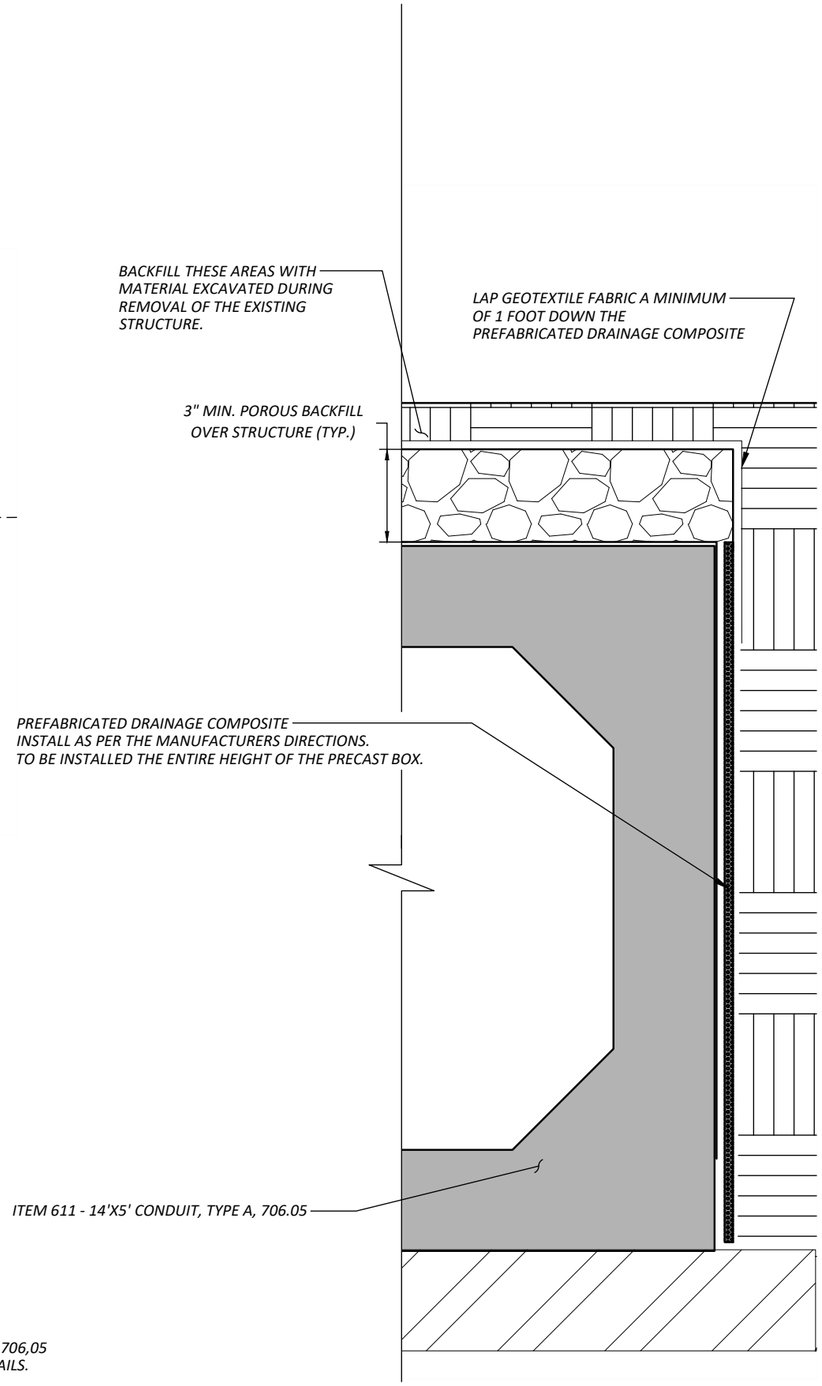
BACKFILL DETAIL OUTSIDE LSM LIMITS

LSM, POROUS BACKFILL AND PREFABRICATED DRAINAGE COMPOSITE INCLUDED IN ITEM 611 - 14'X5' CONDUIT, TYPE A, 706.05



BACKFILL DETAIL OUTSIDE LSM LIMITS

LSM, POROUS BACKFILL AND PREFABRICATED DRAINAGE COMPOSITE INCLUDED IN ITEM 611 - 14'X5' CONDUIT, TYPE A, 706.05



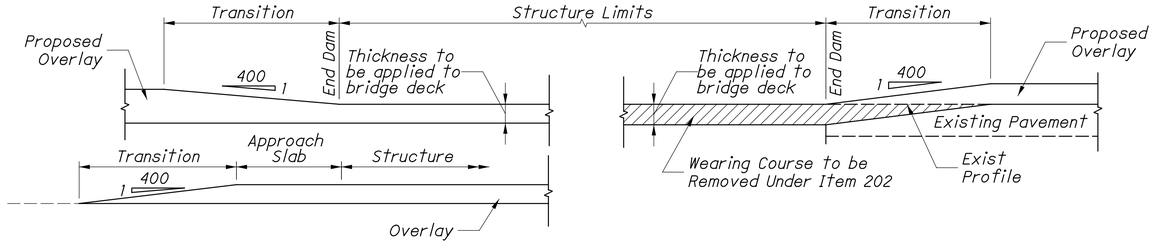
PREFABRICATED DRAINAGE COMPOSITE DETAIL

BOX DETAILS BASCOM ROAD OVER STONE CREEK

SFN	2830494
DESIGNER	JHS
CHECKER	CLG
REVIEWER	HAE 4/7/2026
PROJECT ID	N/A
SUBSET	4
TOTAL	4
SHEET	12
TOTAL	12

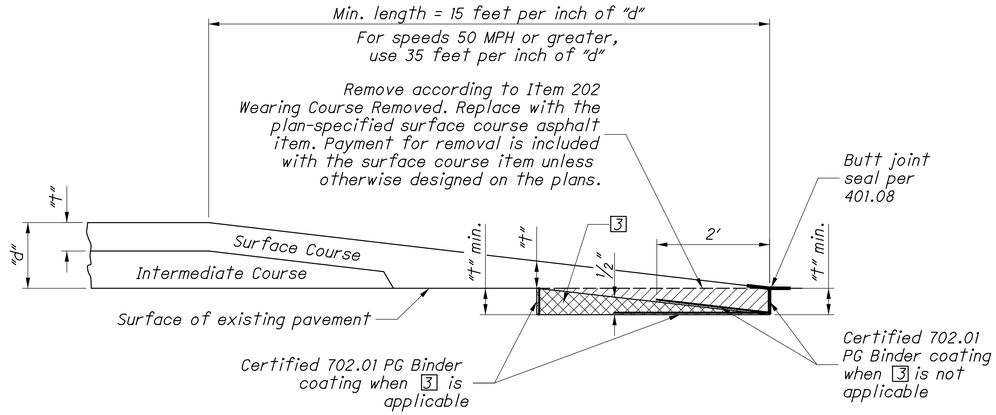
BR-0069-B-01.010-2026

C:\Users\JScobee\OneDrive - Geauga County ADP\Documents - ENG Projects\2026 DESIGN\County Design 2026\BR-0069-A-01.01-2026 BASCOM BRIDGE\200 DESIGN\204 CADD-PLANS\BR-0069-A-01.01-2026-PLAN SET.dwg
30-Apr-26 1:02 PM

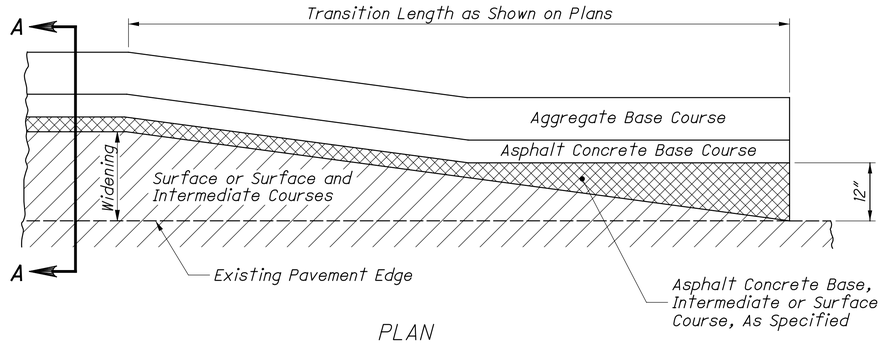


Details assume non-settled approach slabs. Smoothing of the profile for Settlement is required per plan grades or as directed by the Engineer.

TRANSITIONING AT STRUCTURES

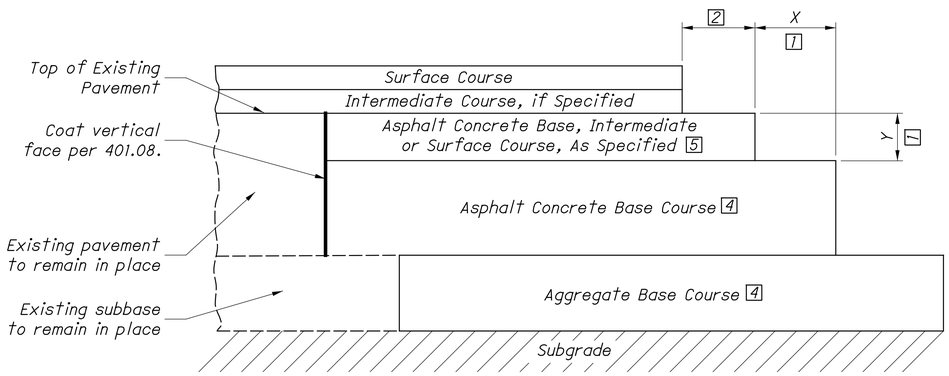


Butt Joint



PLAN

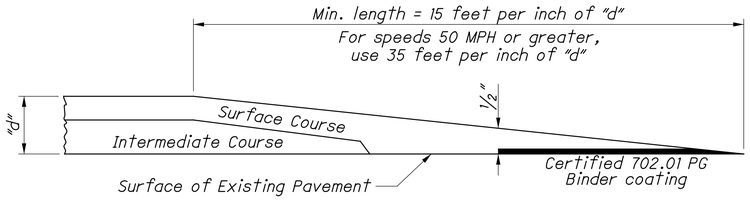
MERGING EDGE OF PAVEMENT WIDENING WITH EDGE OF EXISTING PAVEMENT



SECTION A-A

COURSE DETAIL FOR WIDENING

Note: Do not use this detail for cold longitudinal joints required by phasing for maintenance of traffic.



Taper End

NOTE: Butt joint is required unless the taper end is specified in the plans or approved by the Engineer

BUTT JOINTS AND TAPER ENDS

Values for "t" and "d" are obtained from the plans.

LEGEND

1 The extended width (X) of a base or subbase lift shall be equal to the depth (Y) of the overlaying lift or 6", whichever is greater, or as shown on the plans.

2 The extended width shall be equal to the combined thickness of the surface and intermediate courses, or 4", whichever is greater.

3 Permissible removal and replacement.

4 The bottom of the proposed Asphalt Concrete Base course and Aggregate Base course may not align with the existing pavement or subbase as shown. Ensure the widening subgrade is at or below the existing subgrade to ensure proper drainage.

5 Construct the lift shown so that the compacted surface slightly exceeds the elevation of the top of the existing pavement.

OFFICE OF PAVEMENT ENGINEERING

REVISIONS
10-19-2007
01-20-2012
04-20-2012
07-18-2014
10-18-2019
01-17-2020
01-21-2022
01-19-2024

STDS ENGINEER
W. Feehan

STATE OF OHIO OFFICE OF PAVEMENT ENGINEERING ADMINISTRATOR
Craig E. Landefeld

ASPHALT PAVING

DESIGN AGENCY

SCD NUMBER
BP-3.1

SHEET P.1 TOTAL 2

BP-3.1

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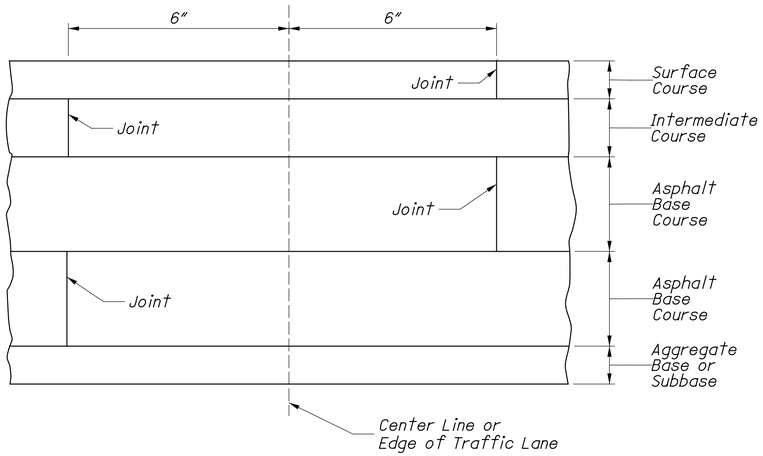
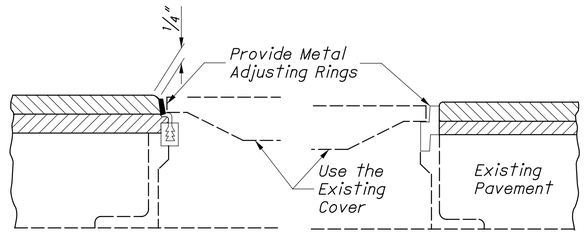
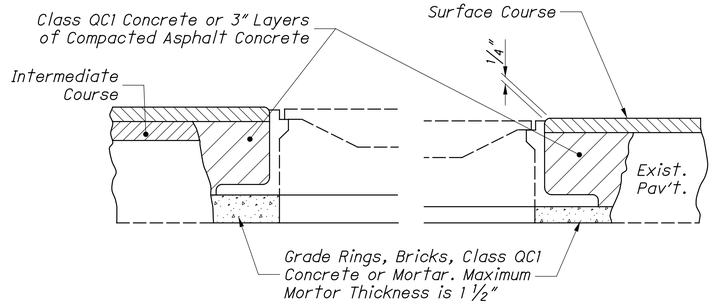


LAPPING LONGITUDINAL JOINTS
(see notes)

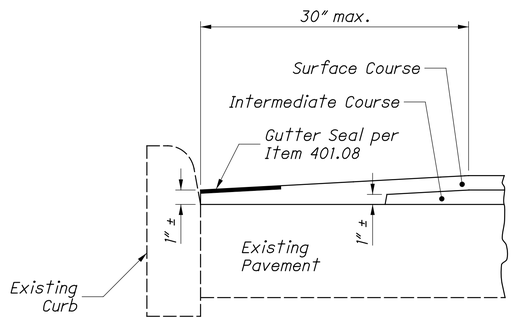


Using Metal Adjusting Rings



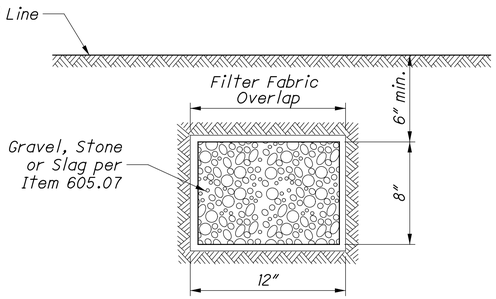
Using Concrete or Mortar

MANHOLES ADJUSTED TO GRADE



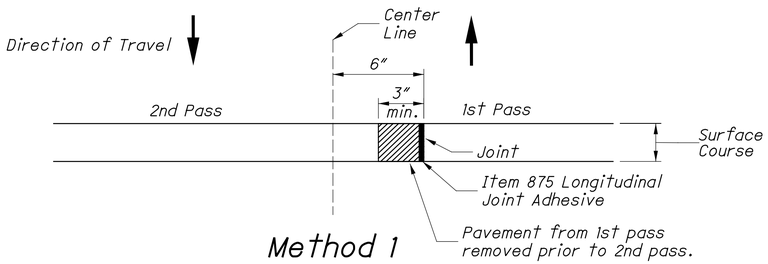
Special care shall be taken during construction to obtain maximum compaction of asphalt concrete in gutters.

GUTTER FINISH

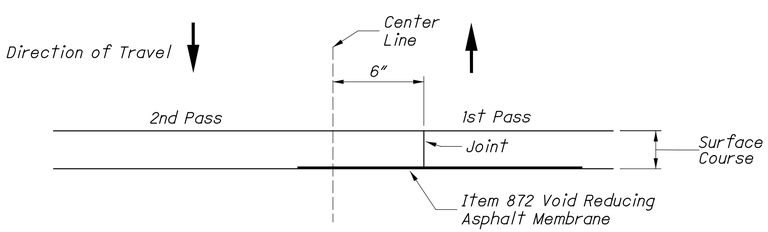


Aggregate drains to be placed where and as directed by Engineer. Provide Filter Fabric when specified as a separate pay item.

AGGREGATE DRAIN



Method 1



Method 2

LONGITUDINAL JOINT PREPARATION
(if specified)

NOTES

GENERAL: *Lap all longitudinal joints as shown regardless of the number of courses being placed. Do not construct a longitudinal joint directly above and in line with the longitudinal joint of previously placed material.*

METAL ADJUSTING RINGS:
Metal adjusting rings shall:
(a) Attach securely to the existing frame by welding or mechanical devices;
(b) Consist either of cast metal having an integral rim and seat, or be fabricated metal with a sturdy connection between the seat and rim; and
(c) Provide an even seat for the manhole cover.
In addition, the adjusting ring type shall be a design acceptable to the local governmental agency responsible for street and sewer maintenance. Any installation unacceptable to the Engineer shall be replaced by the Contractor at his expense.

PAYMENT: *The Department will pay for manholes adjusted to grade using Item 611 Manhole, Catch Basin, or Inlet Adjusted to Grade. The Department will pay for longitudinal joint preparation using Item 874 Longitudinal Joint Preparation.*

OFFICE OF PAVEMENT ENGINEERING

REVISIONS
10-19-2007
01-20-2012
04-20-2012
07-18-2014
10-18-2019
01-17-2020
01-21-2022
01-19-2024

STDS ENGINEER
W. Feehan

STATE OF OHIO OFFICE OF PAVEMENT ENGINEERING ADMINISTRATOR
Craig E. Landefeld

ASPHALT PAVING

DESIGN AGENCY

SCD NUMBER
BP-3.1

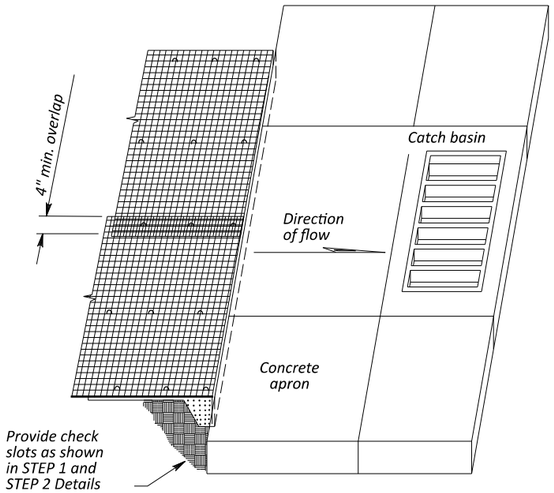
SHEET P.2 TOTAL 2

BP-3.1

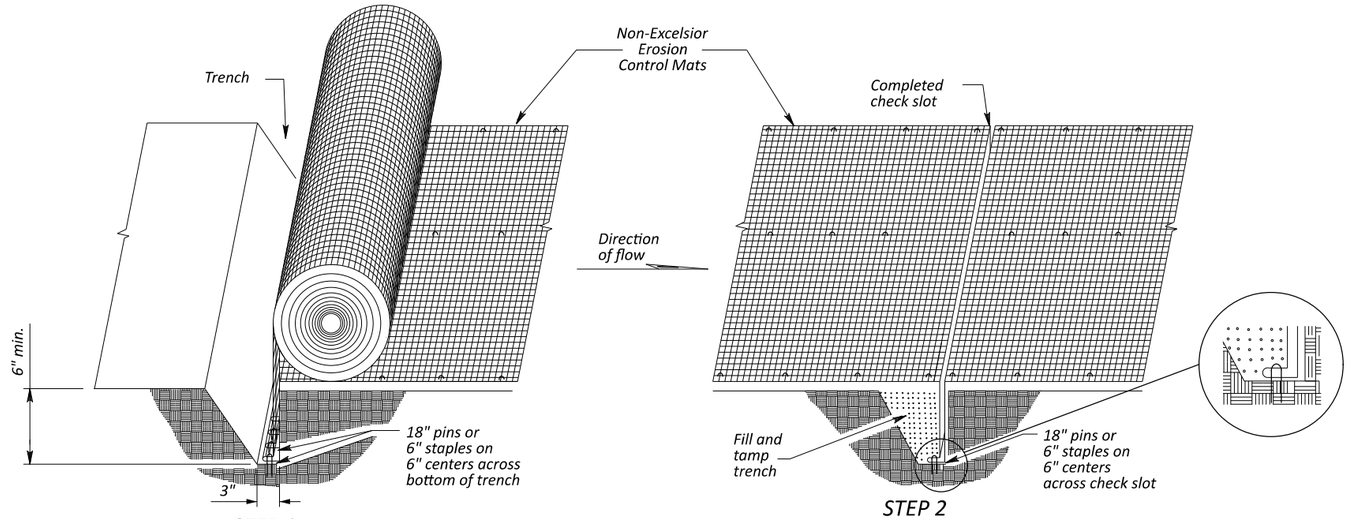
MODEL: Sheet_2 PAPERSIZE: 34x22 (in.) DATE: 3/20/2024 TIME: 2:10:54 PM USER: wfeehan
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\03 Standards\PIS_SCD\Pavement\SCD\Active\BP-3.1_2024-01-19.dgn

NON-EXCELSIOR EROSION CONTROL MAT INSTALLATION

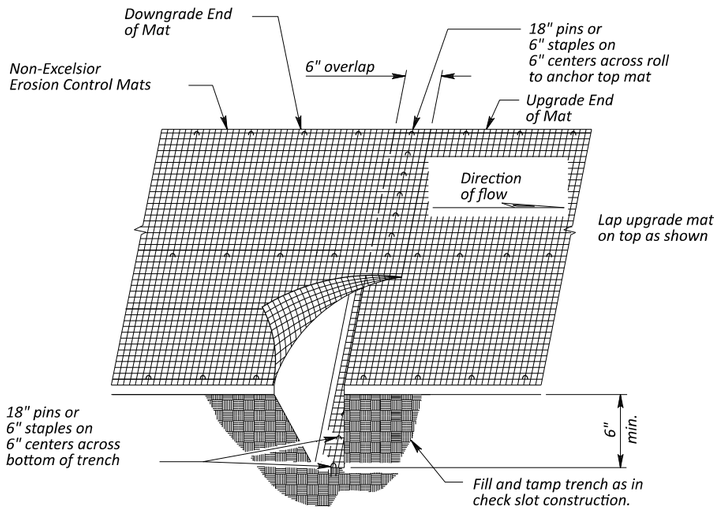
(FOR EXCELSIOR EROSION CONTROL MATS, SEE BELOW)



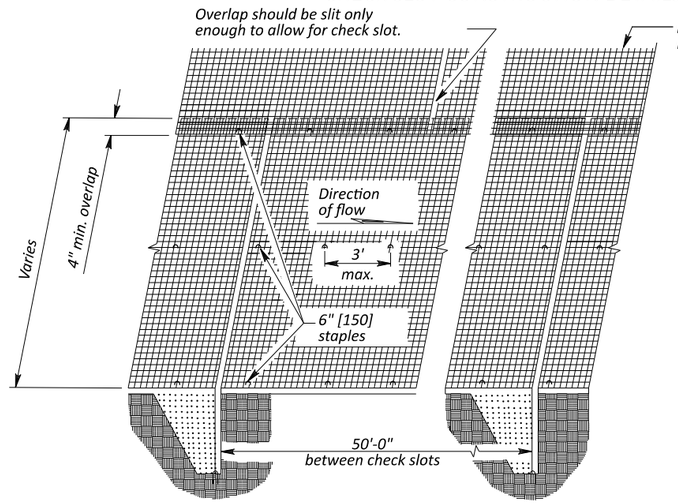
CHECK SLOT AT STRUCTURES



CHECK SLOT CONSTRUCTION DETAILS



END OF ROLL OVERLAP



TYPICAL INSTALLATION

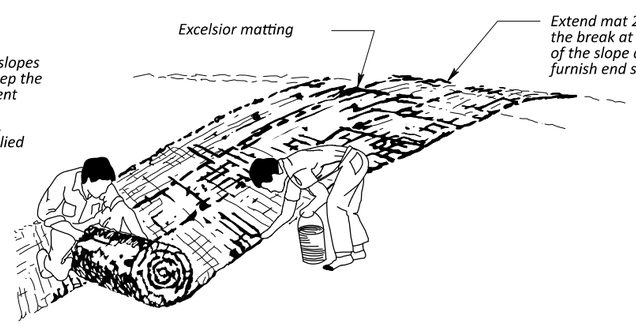
NOTES

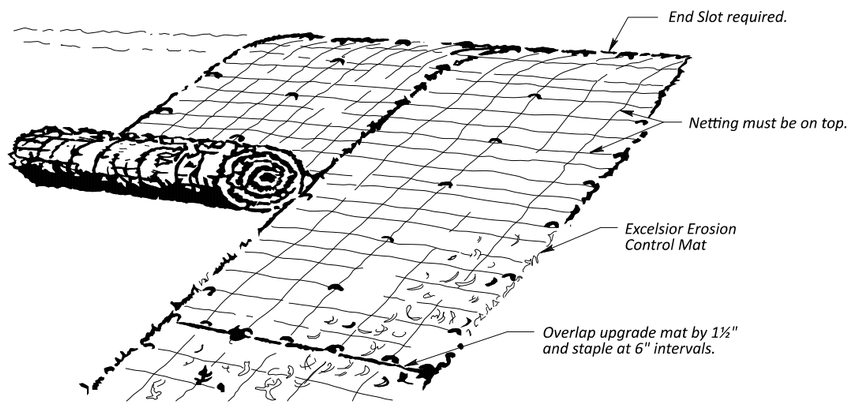
GENERAL: The details shown govern the installation of Erosion Control Mats unless otherwise shown in the plan.

END OF RUN: Use a check slot and staple or pin in the slot as shown in END OF ROLL OVERLAP Detail for all mats excluding excelsior mats. When placing matting for all ditch protection, start at the downstream end, as shown in the CHECK SLOT AT STRUCTURES Detail.

EXCELSIOR EROSION CONTROL MAT INSTALLATION

Apply the mat on steep slopes by backing down hill. Keep the edge overlapping adjacent material by 2". On short gradual slopes, the matting may be applied horizontally.





OFFICE OF HYDRAULIC ENGINEERING

REVISIONS
7-20-2001
7-19-2002
1-21-2005
7-20-2012

STDS ENGINEER
M. Cozzoli

STATE OF OHIO OFFICE OF HYDRAULIC ENGINEERING ADMINISTRATOR
Jeffery E. Syar

STANDARD HYDRAULIC CONSTRUCTION DRAWING
EROSION CONTROL MAT

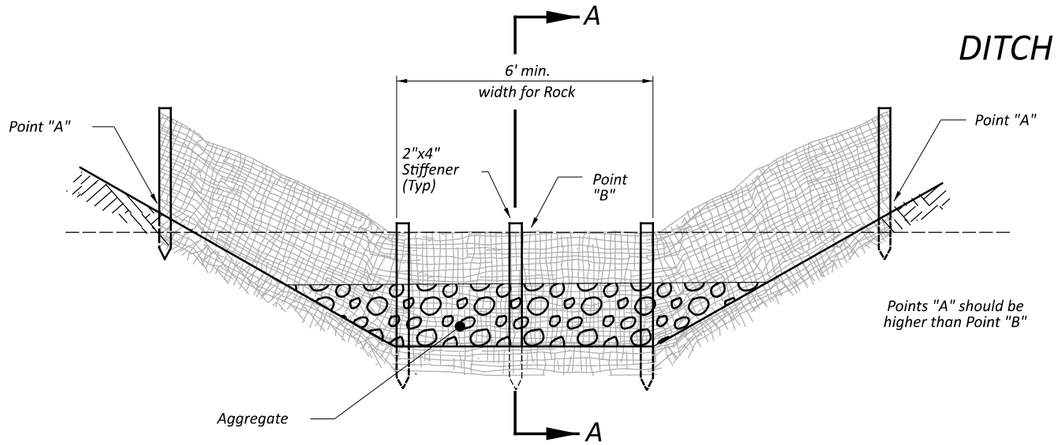
DESIGN AGENCY

SCD NUMBER
DM-4.2

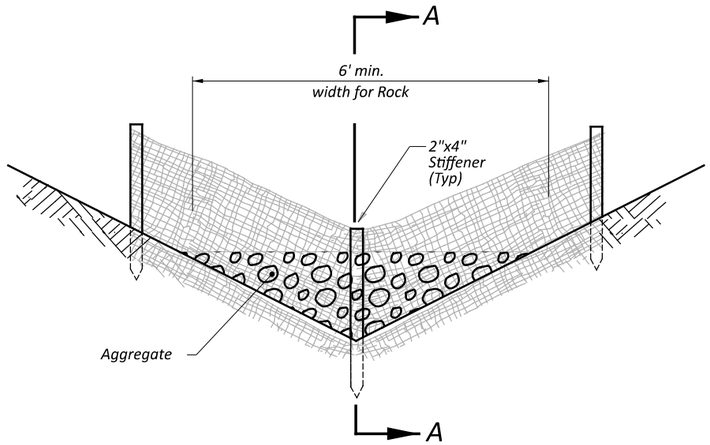
SHEET P.1 | TOTAL 1

DM-4.2

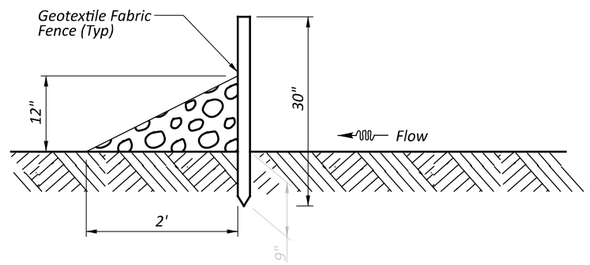
DITCH CHECKS



CROSS-SECTIONAL VIEW OF FLAT BOTTOM DITCH

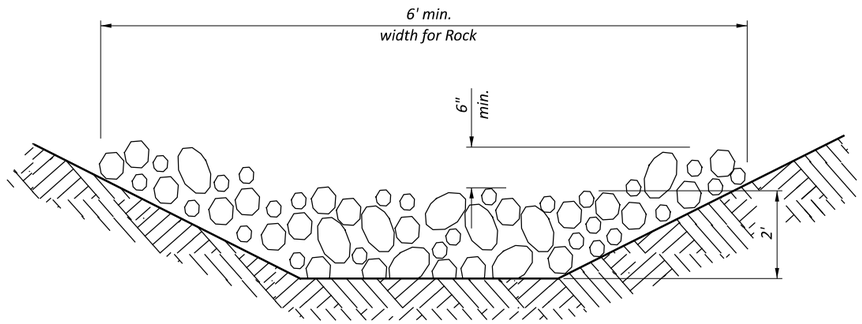


CROSS-SECTIONAL VIEW OF "V" DITCH



PROFILE VIEW OF FLAT BOTTOM AND V DITCH

SECTION A-A



Minimum dimensions: 2' high x 6' wide x 3' long

CROSS-SECTIONAL VIEW
ROCK CHECK

NOTES

GEOTEXTILE FABRIC DITCH CHECKS:

MATERIALS:

Furnish geotextile fabric ditch checks consisting of the following materials:

1. *30" wide geotextile fabric with sound wood supports with maximum on-center spacing of 10'. Use geotextile fabric conforming to 712.09, Type C.*
2. *A vertically driven 2"x4" stiffener stake in the center of the ditch.*
3. *Aggregate conforming to one of the following gradations: No. 1 through No. 4 on Table 703.01-1.*

When using straw bales, furnish 30" long 2"x2" wooden stakes, reinforcing bars or fence posts to stake straw bales in place.

CONSTRUCTION:

Trench the geotextile fabric fence as detailed for PERIMETER GEOTEXTILE FABRIC FENCE (see Sheet 2). Place a vertical 2"x4" stiffener stake in the center of the ditch with the top level to the top of the fence and at least 6" below the bottom of the ditch. Excavate for aggregate and place the aggregate on the downstream side of the ditch check.

If the Engineer determines that rock should not be used for the geotextile fabric ditch checks, replace aggregate with straw bales configured with minimal gaps between bales. Tightly place each bale adjacent to one another. Entrench 2" to 3" into the ground prior to staking. Firmly stake each bale with at least two stakes.

PAYMENT:

The Department will pay for accepted quantities at the prices shown in Appendix F of Supplemental Specification 832 (SS832) for the following items:

- Geotextile Fabric Ditch Check

All items shown on this Standard Construction Drawing that are required for construction that are not specifically identified in SS832 Appendix F are considered incidental.

NOTES

ROCK CHECKS:

MATERIALS:

Furnish material conforming to Item 601 - Rock Channel Protection, Type C or D, Without Filter.

CONSTRUCTION:

If the Engineer determines that rock should not be used for the rock checks, replace rock channel protection with straw bales configured with minimal gaps between bales. Tightly place each bale adjacent to one another. Entrench 2" to 3" into the ground prior to staking. Firmly stake each bale with at least two stakes.

PAYMENT:

The Department will pay for accepted quantities at the prices shown in Appendix F of Supplemental Specification 832 (SS832) for the following items:

- Rock Channel Protection, Type C or D, Without Filter

All items shown on this Standard Construction Drawing that are required for construction that are not specifically identified in SS832 Appendix F are considered incidental.

OFFICE OF HYRAULIC ENGINEERING

REVISIONS
4-29-2002
7-19-2002
12-01-2008
4-17-2009
7-20-2012
01-15-2016

STDS ENGINEER
M. Cozzoli

STATE OF OHIO OFFICE OF HYDRAULIC ENGINEERING ADMINISTRATOR
Jeffery E. Syar

STANDARD HYDRAULIC CONSTRUCTION DRAWING
CONSTRUCTION EROSION CONTROL

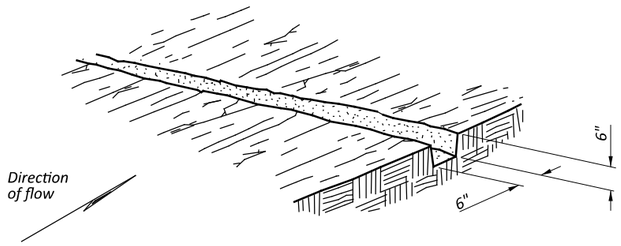
DESIGN AGENCY

SCD NUMBER
DM-4.4

SHEET P.1 | TOTAL 2

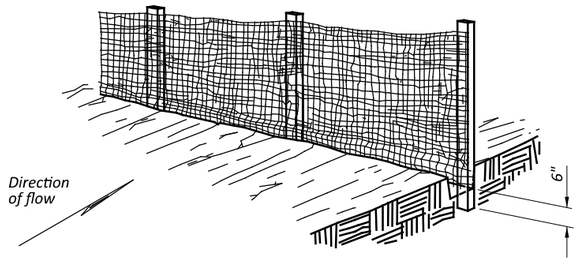
DM-4.4

PERIMETER GEOTEXTILE FABRIC FENCE



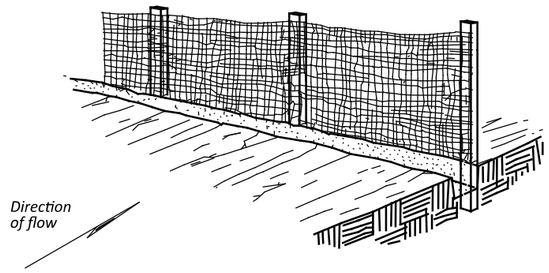
Excavate a 6"x6" trench along the proposed fence line.

STEP 1



Place fabric and support stakes and extend fabric into the trench.

STEP 2



Backfill and compact the excavated soil.

STEP 3

NOTES

MATERIALS:

Furnish 30" wide geotextile fabric with sound wood supports with maximum on-center spacing of 10'. Use geotextile fabric conforming to 712.09, Type C.

CONSTRUCTION:

Trench the geotextile fabric fence as detailed. The contractor may elect to trench the fence detailed on steps 1 through 3 in one plowing operation.

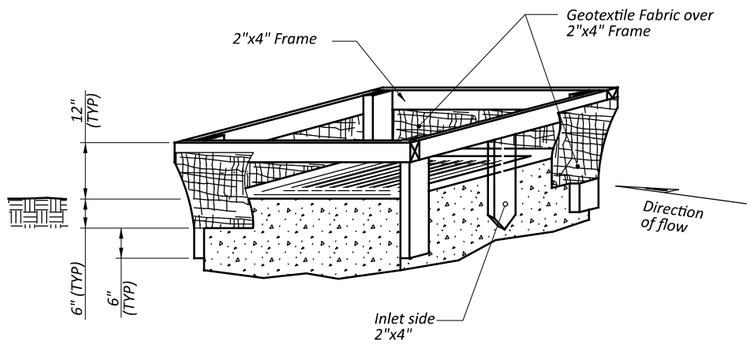
PAYMENT:

The Department will pay for accepted quantities at the prices shown in Appendix F of Supplemental Specification 832 (SS832) for the following items:

- Perimeter Geotextile Fabric Fence

All items shown on this Standard Construction Drawing that are required for construction that are not specifically identified in SS832 Appendix F are considered incidental.

INLET PROTECTION



INLET PROTECTION

NOTES

MATERIALS:

Furnish inlet protection consisting of 18" wide geotextile fabric fence with a securely nailed 2"x4" wood frame with a vertically driven 2"x4" on the inlet, or flow, side of the structure. Use geotextile fabric conforming to 712.09, Type C.

CONSTRUCTION:

Construct an 18" wide geotextile fabric fence supported around a storm drain inlet or catch basin with a securely nailed 2"x4" wood frame. Excavate a 6" trench around the inlet, and drive support posts 6" below the excavated trench bottom. Stretch the fabric around the frame. Secure it tightly, ensuring that 6" of fabric is in the trench. Overlap the fabric on one side of the inlet so that the fabric ends are not attached to the same post. Backfill and compact the excavated soil tightly onto the fabric. Place a vertical 2"x4" in the center of the inlet so that the top is at the top of the fence and the bottom is at least 6" below the bottom of the ditch.

PAYMENT:

The Department will pay for accepted quantities at the prices shown in Appendix F of Supplemental Specification 832 (SS832) for the following items:

- Inlet Protection

All items shown on this Standard Construction Drawing that are required for construction that are not specifically identified in SS832 Appendix F are considered incidental.

DM-4.4

OFFICE OF HYDRAULIC ENGINEERING

REVISIONS
4-29-2002
7-19-2002
12-01-2008
4-17-2009
7-20-2012
1-15-2016

STDS ENGINEER
M. Cozzoli

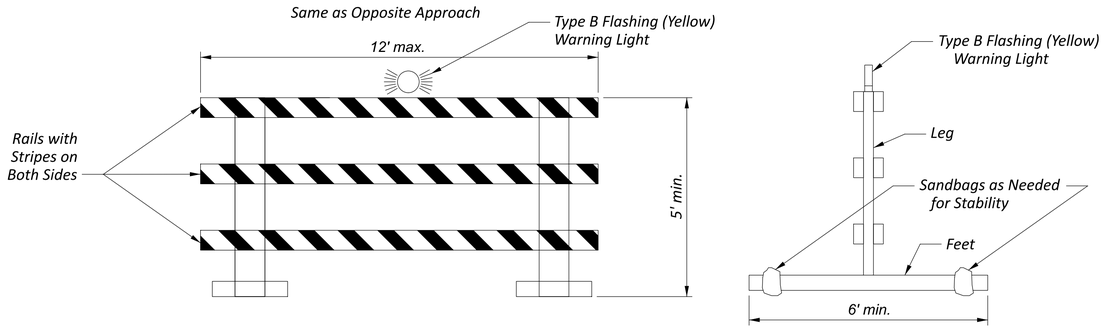
STATE OF OHIO OFFICE OF HYDRAULIC ENGINEERING ADMINISTRATOR
Jeffery E. Syar

STANDARD HYDRAULIC CONSTRUCTION DRAWING
CONSTRUCTION EROSION CONTROL

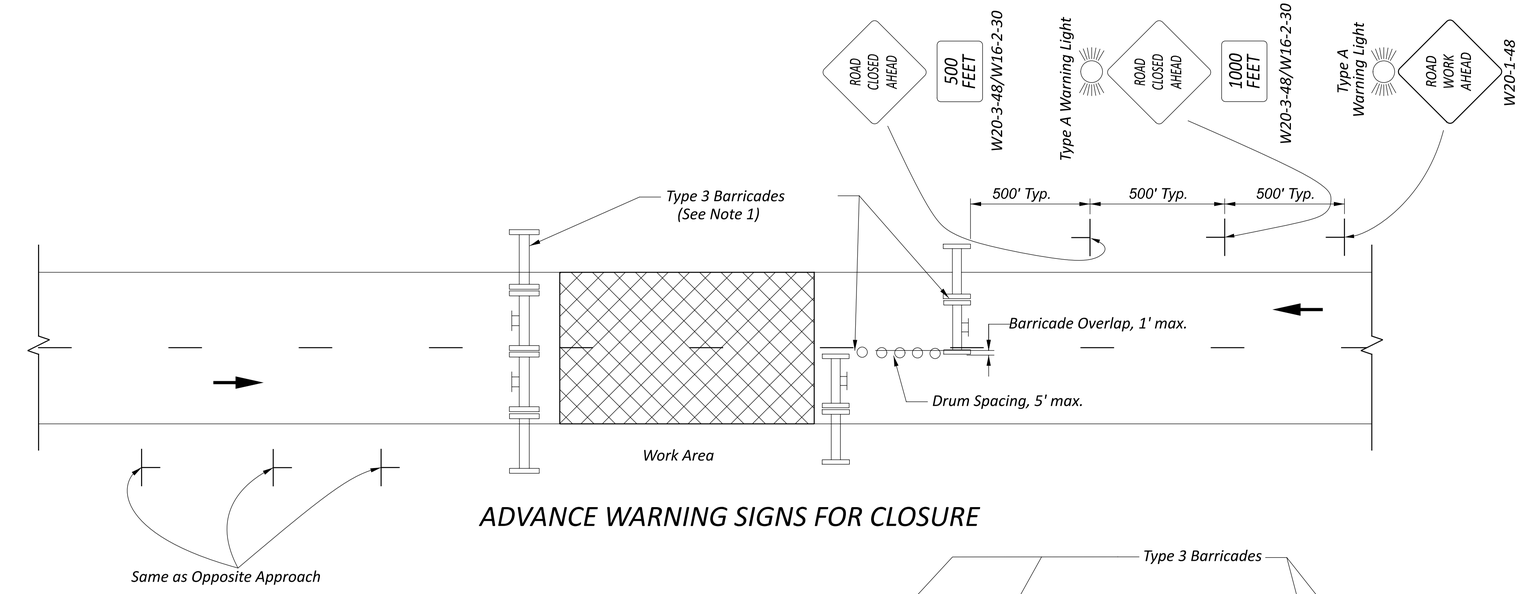
DESIGN AGENCY

SCD NUMBER
DM-4.4

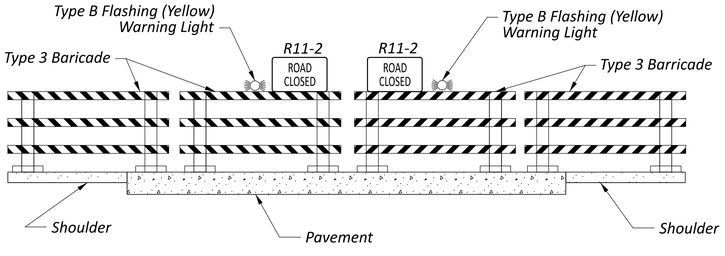
SHEET P.2 | TOTAL 2



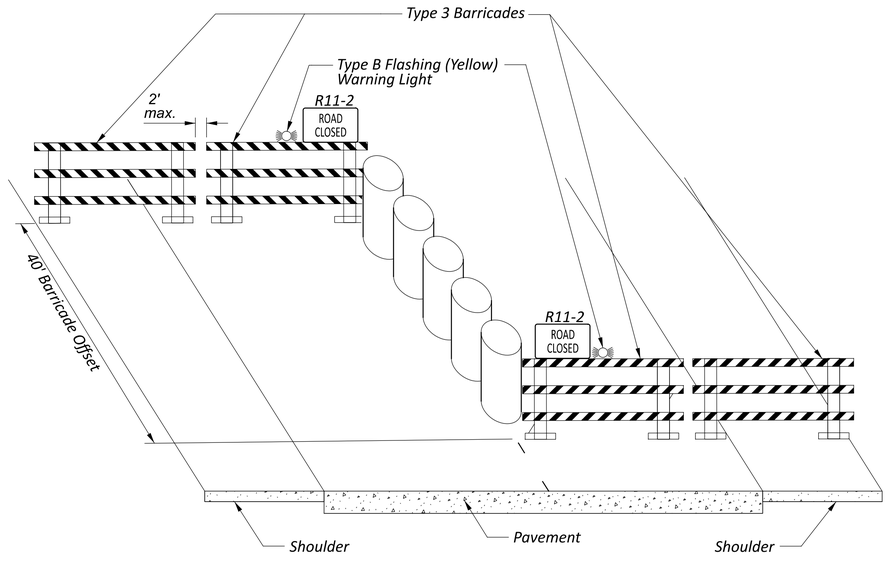
TYPE 3 BARRICADE DETAIL



ADVANCE WARNING SIGNS FOR CLOSURE



BARRICADE CLOSURE PROFILE



BARRICADE CLOSURE OFFSET OPTION

NOTES:

BARRICADE USE

1A. Barricades shall be MASH compliant (or NCHRP 350 compliant if used on or before 12/31/2024) and shall be erected according to details shown. When the road is closed to traffic, barricades shall be used to effectively close the entire roadway, including the paved or aggregate shoulder.

1B. Barricades along adjacent lanes may be offset from each other as shown, with drums used to close the resulting gap. Maximum drum spacing shall be 5'.

BARRICADE REFLECTORIZATION AND COLOR

2A. In construction or maintenance areas, all rails of the barricades shall be reflectorized with orange and white Type XI retroreflective sheeting (CMS 730.194) in 6" wide alternate stripes which slope downward toward the center line of the road at an angle of 45 degrees. All three rails of the barricade shall be striped on both sides. Legs and feet shall be either all white or may display the natural color of the material used.

2B. Barricades used in permanent or semi-permanent application shall differ only in that they shall use red and white stripes.

SIGNS

3A. Where the road is closed to traffic by the erection of barricades, ROAD CLOSED (R11-2) signs shall be mounted laterally as shown.

3B. The advance warning signs shown on this drawing are intended for use when the traveled way is brought to an end with no direction given to traffic. Where traffic has been directed from the permanent roadway at or just in advance of the barricades, advance signing should be provided as shown in Standard Construction Drawing MT-95.70 or Ohio Manual of Uniform Traffic Control Devices Figure 6H-7 as appropriate.

3C. Advance warning signs approaching a lane closure, as shown on these plans, shall consist of two ROAD CLOSED AHEAD (W20-3) signs with distance plaques placed about 500' and 1000' from the closure, and a ROAD WORK AHEAD (W20-1) sign placed about 1500' from the closure. The signs shall be placed on both sides of the roadway for multi-lane divided highways or when required by the plans.

FLASHING WARNING LIGHTS

4A. Type A flashing warning lights are required on the ROAD WORK AHEAD (W20-1) sign and on the first ROAD CLOSED AHEAD (W20-3) sign.

4B. Type B flashing warning lights shall be provided on Type 3 Barricades, one light per each closed lane. Each light shall be conspicuously visible at all distances up to 1000' under normal atmospheric conditions. The light shall be in operation at all times during the period the highway is closed.

OPERATION ON 2-LANE, 2-WAY ROADWAYS

5A. Where the barricade runs across the entire roadway without longitudinally offsetting sections, the Contractor will normally open only the left side of the barricade as necessary to allow the construction vehicle to enter, and then shall immediately close it. The entire barricade will not normally be opened at the same time. The Contractor shall assign an employee to assure that the barricade is closed at the end of each workday.

5B. Where the sections of the barricade are offset from each other with drums provided to close the gap (see note 1B), the Contractor may move the drums as necessary to allow the construction vehicle to enter, and then shall immediately replace the drums. The Contractor shall assign an employee to assure that the drums are in place at the end of each workday.

OFFICE OF ROADWAY ENGINEERING

REVISIONS
01-17-2025
04-21-2023
01-17-2020
01-20-2017
07-19-2013
07-20-2012
04-17-2009
09-05-2006

STDS ENGINEER
Willis

STATE OF OHIO OFFICE OF ROADWAY ENGINEERING ADMINISTRATOR
Adam Koenig

ROAD CLOSURE USING TYPE 3 BARRICADES

DESIGN AGENCY

SCD NUMBER
MT-101.60

SHEET P.1 | TOTAL 1

MT-101.60

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 12/7/2024 TIME: 12:59:29 PM USER: kflant
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\03 Standards\PIS_SCD\Traffic Control\Working Folder\2025\01_January\SCD\MT\MT-101.60\MT-101.60WT-101.60_2025-01-17

TEMPORARY SIGN SUPPORT REQUIREMENTS

PLACEMENT OF SIGNS

1A. Lateral placement to nearest edge of signs shall be as follows:

a) On the right side of the road for approaching traffic (except for dual-mounted signs and signs designated in the plans for left-side mounting).
b) Curbed roadway - minimum 2′ behind face of curb.
c) Uncurbed roadway - 12′ from edge of traffic lane or 6′ from edge of paved or useable shoulder, whichever is greater.
d) Behind guardrail or portable barrier - See table

SIGN OFFSET

Barrier Type / Support Class	BEHIND FACE OF GUARDRAIL	BEHIND FACE OF PORTABLE BARRIER
Class A Supports	2′ Preferred 1′ Minimum	1′ Minimum*
Class B Supports	6.5′ Minimum	1′ Minimum*

*unless barrier top mounting is required by the plans

1B. Vertical clearance of signs, as measured from near side roadway edge, shall be as follows:

a) Rural - 5′ when parked cars, construction equipment, etc. will not obscure sign visibility.
b) Rural areas with parked cars or construction equipment - 7′
c) Urban - 7′
d) Care shall be taken to assure that signs will not be obscured by construction equipment, trees, weeds or other obstacles. Brush, weeds or grass within the right-of-way shall be trimmed as necessary.
e) For signing which will remain for three days or less, minimum vertical clearance shall be 1′ from the roadway to bottom of sign.

CLASSES OF SUPPORTS

2A. The Contractor shall choose sign supports of adequate strength and with adequate foundations and anchorage to support the sign sizes erected. Sign supports which fail under typical wind load conditions shall be immediately modified or replaced with a support of adequate strength.

2B. All temporary sign supports shall be of the following types:

CLASS A:

Class A supports shall include the following:

a) All No. 2 and No. 3 posts when installed singly or in pairs (side-by-side) according to the details of Standard Construction Drawings (SCDs) TC-41.10 and TC-41.20.
b) Wood posts as shown in Solid Wood Posts detail.
c) All breakaway connection beam supports, when installed according to the proper details shown on SCD TC-41.10 with a minimum clear distance between supports of 7′ for supports larger than 6 x 9.
d) Any breakaway post or post and connection which are certified as per CMS 614.03.
e) Portable supports.

Use of Class A supports shall be required at unprotected locations on ODOT's roadway system. They may also be used on other roadway systems.

CLASS B:

Class B supports shall include the following:

a) All beam type supports without breakaway connections.
b) Supports similar to but larger than permitted for Class A.

Class B supports shall be used only at the following locations:

a) Within the clear zone where protected by guardrail or concrete barrier or where positively protected from traffic such as on retaining walls.
b) Outside the clear zone.

2C. All Class A and B supports shall be MASH complaint (or NCHRP 350 compliant if used on or before 12/31/2024).

SUPPORTS AND SIGNS

3A. Supports for signs which will remain in place more than three days should be fixed rather than portable except in situations where the sign must rest on permanent pavement or other surface which would be damaged by insertion of post type supports.

3B. Portable signing, including portable supports, ballasting of the supports, and signs shall be MASH compliant (or NCHRP 350 compliant if used on or before 12/31/2024).

3C. Ballasting of portable supports shall be in accordance with NCHRP 350 or MASH testing of the subject support.

THIS DRAWING REPLACES MT-105.10 DATED 07-19-2013.

REVISION DATE 01-17-2020

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR David L. Holstein

STDS. ENGINEER Stargell

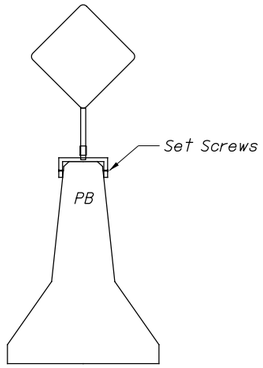
OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING

TEMPORARY SIGN SUPPORT

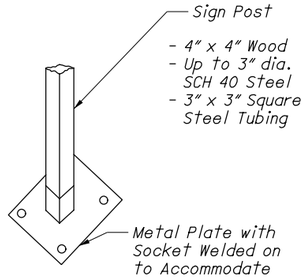
SCD NUMBER MT-105.10

CLASS A SUPPORTS FIXED



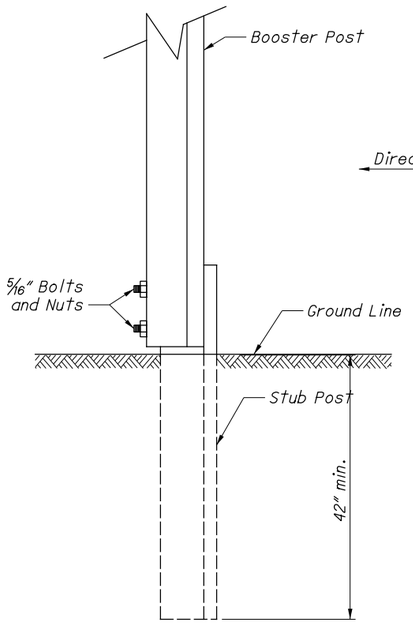
TYPE 1

Fasten to Top of PB with Expansion Bolts, etc.



TYPE 2

CLASS A SUPPORTS STUBBING STANDARD



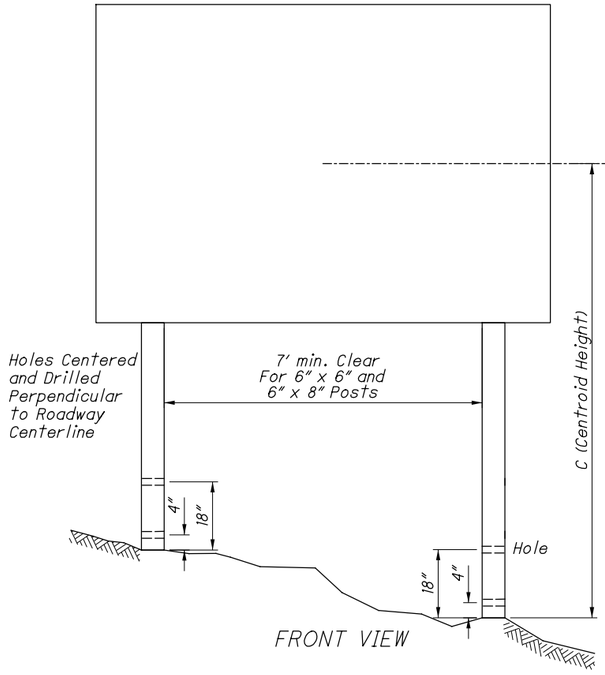
NOTES:

1. For use with No. 2 or No. 3 posts.
2. Booster post shall be the same or 1 lb/ft less than stub post.
3. When the booster post is smaller than the stub post, the booster post shall be mounted in front of the stub post.
4. When the booster post is the same size as the stub post, the booster post shall be mounted behind the stub post.
5. Bolts and nuts and other fasteners shall be steel or aluminum.
6. A minimum of two bolts and nuts or other fasteners shall be used per post assembly.
7. With steel bolts, the minimum center-to-center spacing between bolts shall be 4".
8. Stub height should be limited to 4" above the ground when using the aluminum bolts for the connection.

SOLID WOOD POSTS

TOP VIEW

When flat sheet signing is provided, bolt the flat sheet directly to the wood posts. Do not use U-Channels.

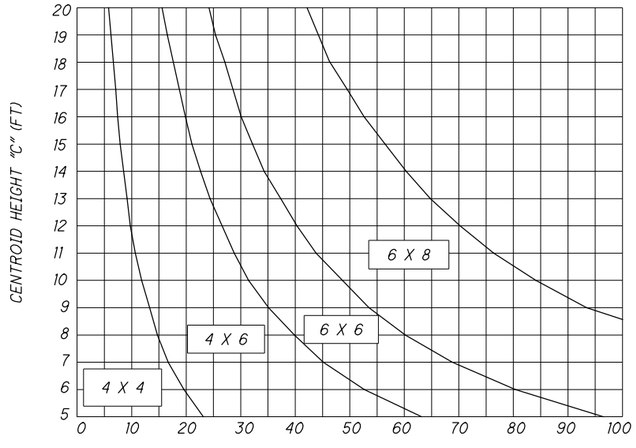


FRONT VIEW

NORMAL POST SIZE (IN)	HOLE DIAMETER (IN)	NO. OF POSTS PERMITTED IN 7' PATH IN EXPOSED LOCATIONS	MINIMUM RECOMMENDED EMBEDMENT DEPTH (FT)
4 X 4	NONE	2	3.5
4 X 6	1 ½	2	4
6 X 6	2	1	4.5
6 X 8	3	1	5

DESIGN CHART FOR WOOD POSTS TWO-POST INSTALLATIONS

(Nominal Post Size in Inches)



THIS DRAWING REPLACES MT-105.10 DATED 07-19-2013.

REVISION DATE 01-17-2020

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR Michael Bline

STDS. ENGINEER Stargell

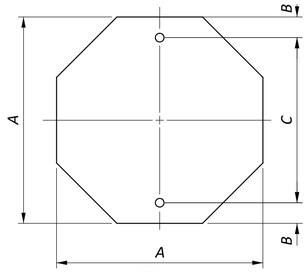
OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING

TEMPORARY SIGN SUPPORT

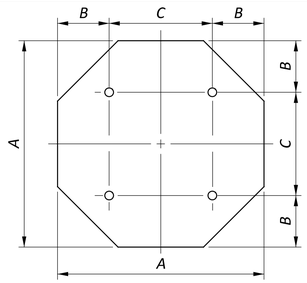
SCD NUMBER MT-105.10

2 / 2



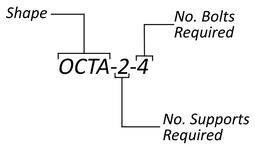
OCTA-1-2

A	B	C	THICKNESS	AREA (SQ FT)
18	3	12	0.080	2.25
24	3	18	0.080	4.00
30	3	24	0.080	6.25
36	3	30	0.080	9.00



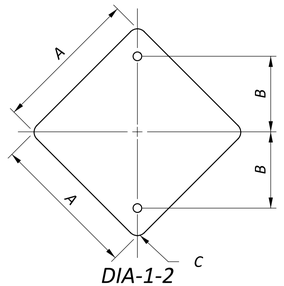
OCTA-2-4

A	B	C	THICKNESS	AREA (SQ FT)
48	9	30	0.100	16.00



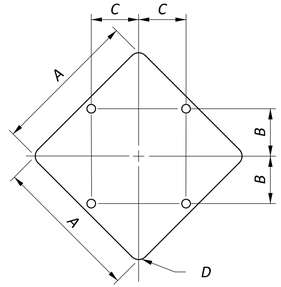
NOTES:

1. All bolt holes shall be ¾" in diameter, and may be drilled or punched to finished size.
2. Dimensions between bolt holes shall be to tolerance of ± 1/32".
3. All route shields shall be 0.080" thick and attached to extrusheet signs with aluminum blind rivets.
4. For back-to-back mounting of STOP (R1-1) and DO NOT ENTER (R5-1) sign, follow details shown on Standard Construction Drawing TC-41.50.



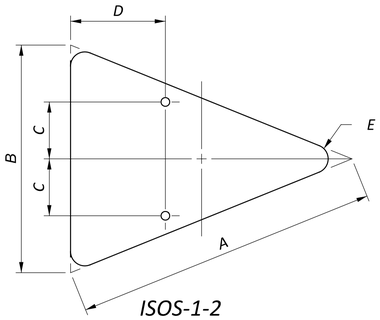
DIA-1-2

A	B	C	THICKNESS	AREA (SQ FT)
18	9	1.5	0.080	2.25
24	12	1.5	0.080	4.00
30	15	1.875	0.080	6.25
36	18	2.25	0.080	9.00



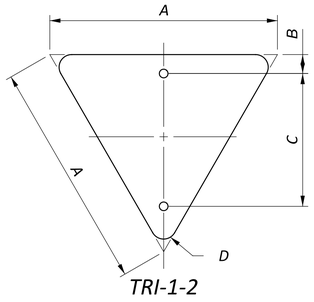
DIA-2-4

A	B	C	D	THICKNESS	AREA (SQ FT)
48	15	15	3	0.100	16.00
60	18	18	3.75	0.100	25.00



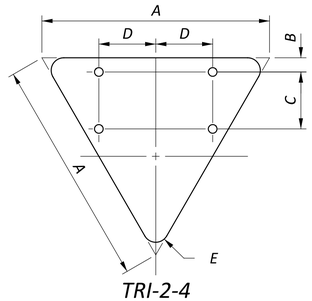
ISOS-1-2

A	B	C	D	E	THICKNESS	AREA (SQ FT)
40	30	7.5	12	1.875	0.080	3.86
48	36	9	15	2.25	0.100	5.56



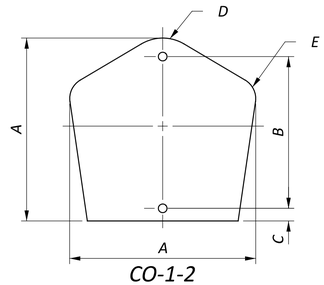
TRI-1-2

A	B	C	D	THICKNESS	AREA (SQ FT)
24	2	14	1.5	0.080	1.73
30	3	18	1.5	0.080	2.71
36	3	21	2	0.080	3.90



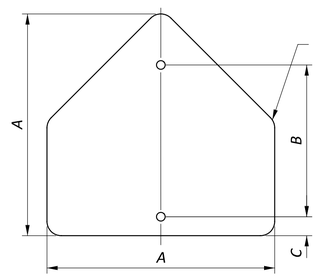
TRI-2-4

A	B	C	D	E	THICKNESS	AREA (SQ FT)
48	3	12	12	3	0.100	6.93
60	3	18	15	4	0.100	10.83



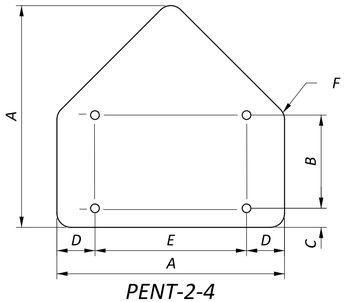
CO-1-2

A	B	C	D	E	THICKNESS	AREA (SQ FT)
18	15	1	5	2	0.080	2.25
24	18	2	5.313	2.688	0.080	4.00
30	24	2	6.625	3.375	0.080	6.25



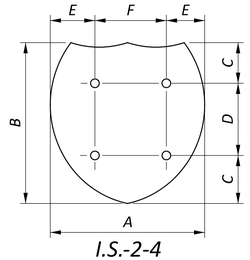
PENT-1-2

A	B	C	D	THICKNESS	AREA (SQ FT)
30	21	3	1.875	0.080	6.25
36	24	3	2.25	0.080	9.00



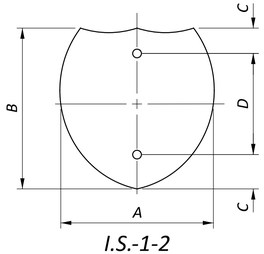
PENT-2-4

A	B	C	D	E	F	THICKNESS	AREA (SQ FT)
48	18	6	9	30	3	0.100	16.00



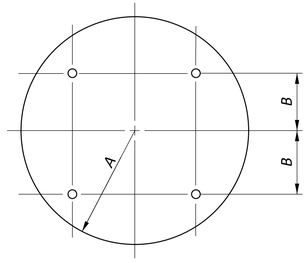
I.S.-2-4

A	B	C	D	E	F	THICKNESS	AREA (SQ FT)
48	48	9	30	9	30	0.100	16.00
60	48	9	30	12	36	0.100	20.00



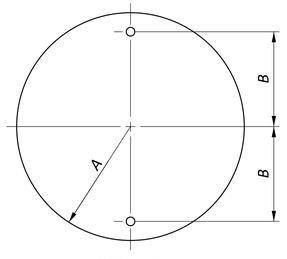
I.S.-1-2

A	B	C	D	THICKNESS	AREA (SQ FT)
24	24	3	18	0.080	4.00
24	30	3	18	0.080	5.00
30	30	3	24	0.080	6.25
37.5	30	3	24	0.080	7.81
36	36	6	24	0.080	9.00
45	36	6	24	0.080	11.25



CIR-2-4

A	B	THICKNESS	AREA (SQ FT)
24	15	0.100	16.00



CIR-1-2

A	B	THICKNESS	AREA (SQ FT)
9	6	0.080	2.25
12	9	0.080	4.00
15	12	0.080	6.25
18	15	0.080	9.00

OFFICE OF ROADWAY ENGINEERING

REVISIONS
10-18-2013
01-18-2013
01-19-2007
04-20-2001
07-29-1994
04-03-1979
04-01-1977

STDS ENGINEER
Soisson

STATE OF OHIO OFFICE OF ROADWAY ENGINEERING ADMINISTRATOR
Adam Koenig

SIGN BLANK DETAILS I

DESIGN AGENCY

SCD NUMBER
TC-52.10

SHEET P.1 | TOTAL 1

TC-52.10

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 12/12/2025 TIME: 2:52:15 PM PLTDRV: OHDOT_PDF.pltcfg PENTBL: OHDOT_Pen.tbl USER: Paul.Beck@dot.ohio.gov WORKSPACE: OHDOTCEv02 WORKSET: PIS_SCD PRODUCT: OpenRoadsDesigner 24.00.00.205
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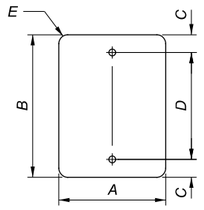
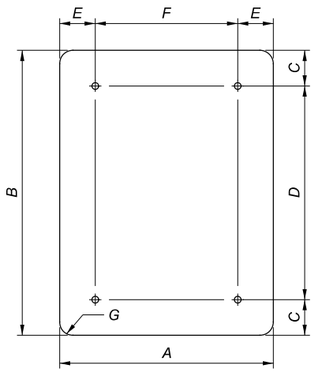
NOTES:

1. All bolt holes shall be ¾" in diameter and may be drilled or punched to finished size.
2. Dimensions between bolt holes shall be to tolerance of ± 1/32".
3. For back-to-back mounting of STOP (R1-1) and DO NOT ENTER (R5-1) sign, follow details shown on Standard Construction Drawing TC-41.50.



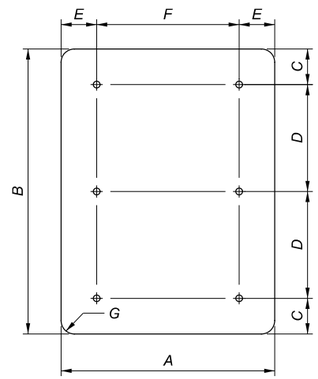
V-REC-1-2

A	B	C	D	E	THICKNESS	AREA (FT^2)
6	54	9	36	1.5	0.080	2.25
9	12	1.5	9	1.5	0.080	0.75
10	12	1.5	10	1.5	0.080	0.83
12	15	1.5	12	1.5	0.080	1.25
12	16	1.5	13	1.5	0.080	1.33
12	18	1.5	15	1.5	0.080	1.50
12	24	3	18	1.5	0.080	2.00
12	30	3	24	1.5	0.080	2.50
12	36	3	30	1.5	0.080	3.00
12	48	6	36	1.5	0.080	4.00
12	60	6	48	1.5	0.080	5.00
14	48	6	36	1.5	0.080	4.67
18	24	3	18	1.5	0.080	3.00
18	60	6	48	1.5	0.100	7.50
24	30	3	24	1.5	0.080	5.00
24	36	3	30	1.5	0.080	6.00
24	38	3	32	1.5	0.080	6.33
24	42	6	30	1.5	0.080	7.00
24	48	6	36	1.5	0.100	8.00
30	36	3	30	1.875	0.080	7.50
30	42	6	30	1.875	0.080	8.75
30	48	6	36	1.875	0.100	10.00
30	60	6	48	1.875	0.100	12.50



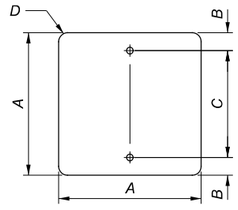
V-REC-2-4

A	B	C	D	E	F	G	THICKNESS	AREA (FT^2)
36	42	6	30	6	24	2.25	0.080	10.50
36	48	6	36	6	24	2.25	0.100	12.00
36	54	6	42	6	24	2.25	0.100	13.50
36	60	6	48	6	24	2.25	0.100	15.00
36	72	12	48	6	24	2.25	0.100	18.00
36	75	13.5	48	6	24	2.25	0.100	18.75
42	60	6	48	9	24	2.25	0.100	17.50
48	60	6	48	9	30	3	0.100	20.00



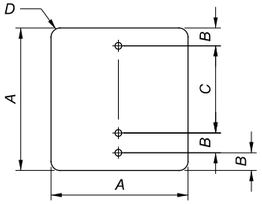
V-REC-2-6

A	B	C	D	E	F	G	THICKNESS	AREA (FT^2)
48	72	6	30	9	30	3	0.100	24.00
48	76	8	30	9	30	3	0.100	25.33
48	84	12	30	9	30	3	0.100	28.00
48	96	12	36	9	30	3	0.100	32.00



SQ-1-2

A	B	C	D	THICKNESS	AREA (FT^2)
6	1.0	4	1.0	0.080	0.25
9	1.0	7	1.0	0.080	0.56
12	1.5	9	1.5	0.080	1.00
15	1.5	12	1.5	0.080	1.56
16	1.5	13	1.5	0.080	1.78
18	3	12	1.5	0.080	2.25
24	3	18	1.5	0.080	4.00
30	3	24	1.875	0.080	6.25
36	3	30	2.25	0.080	9.00



SQ-1-3
(MAINTENANCE MARKER)

A	B	C	D	THICKNESS	AREA (FT^2)
12	1	9	1.5	0.08	1

Shape — # Bolts Required

V-REC-2-4

Supports Required

OFFICE OF ROADWAY ENGINEERING

REVISIONS
01-15-2021
07-20-2018
01-19-2018
07-21-2017
07-15-2016
07-18-2014
01-17-2014
01-18-2013...

STDS ENGINEER
Soisson

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR
Brenton Bogard

SIGN BLANK DETAILS II

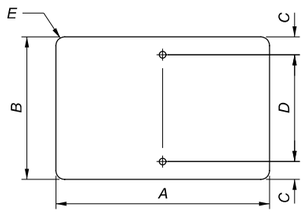
DESIGN AGENCY

SCD NUMBER
TC-52.20

SHEET 1 | TOTAL 2

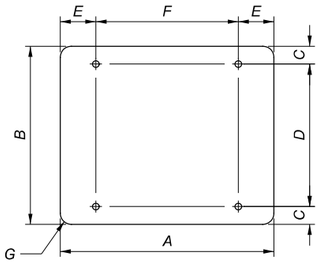
NOTES:

1. All bolt holes shall be ⅜" in diameter and may be drilled or punched to finished size.
2. Dimensions between bolt holes shall be to tolerance of ± 1/32".
3. For back-to-back mounting of STOP (R1-1) and DO NOT ENTER (R5-1) sign, follow details shown on Standard Construction Drawing TC-41.50.



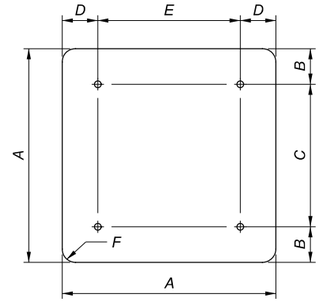
H-REC-1-2

A	B	C	D	E	THICKNESS	AREA (FT^2)
12	4	1	2	1.5	0.080	0.33
12	6	1	4	1.5	0.080	0.50
12	6.5	1	4.5	1.5	0.080	0.54
12	9	1.5	6	1.5	0.080	0.75
15	8	1.5	5	1.5	0.080	0.83
15	12	1.5	9	1.5	0.080	1.25
18	6	1	4	1.5	0.080	0.75
18	9	1.5	6	1.5	0.080	1.12
18	12	1.5	9	1.5	0.080	1.50
20	15	1.5	12	1.5	0.080	2.08
20	18	3	12	1.5	0.080	2.50
21	15	1.5	12	1.5	0.080	2.19
24	6	1	4	1.5	0.080	1.00
24	8	1.5	5	1.5	0.080	1.33
24	9	1.5	6	1.5	0.080	1.50
24	10	1.5	7	1.5	0.080	1.67
24	12	1.5	9	1.5	0.080	2.00
24	18	3	12	1.5	0.080	3.00
30	8	1.5	5	1.5	0.080	1.67
30	9	1.5	6	1.5	0.080	1.88
30	12	1.5	9	1.5	0.080	2.50
30	15	1.5	12	1.5	0.080	3.12
30	16	1.5	13	1.5	0.080	3.33
30	18	3	12	1.5	0.080	3.75
30	21	3	15	1.5	0.080	4.38
30	24	3	18	1.5	0.080	5.00
36	6	1	4	1.5	0.080	1.50
36	8	1.5	5	1.5	0.080	2.00
36	9	1.5	6	1.5	0.080	2.25
36	12	1.5	9	1.5	0.080	3.00
36	14	1.5	11	1.5	0.080	3.50
36	15	1.5	12	1.5	0.080	3.75
36	18	3	12	1.5	0.080	4.50
36	20	3	14	1.5	0.080	5.00
36	24	3	18	1.5	0.080	6.00
36	30	3	24	1.875	0.080	7.50
37.5	30	3	24	1.875	0.080	7.81
48	8	1.5	5	1.5	0.125	2.67
48	10	1.5	7	1.5	0.125	3.33
48	12	1.5	9	1.5	0.125	4.00
48	14	1.5	11	1.5	0.125	4.67
48	16	1.5	13	1.5	0.125	5.33
48	18	3	12	1.5	0.125	6.00



H-REC-2-4

A	B	C	D	E	F	G	THICKNESS	AREA (FT^2)
40	20	3	14	6	28	1.5	0.080	5.56
42	24	3	18	9	24	1.5	0.080	7.00
42	30	3	24	9	24	1.875	0.080	8.75
42	36	6	24	9	24	2.25	0.080	10.50
45	36	6	24	9	27	2.25	0.080	11.25
48	8	1.5	5	9	30	1.5	0.125	2.66
48	10	1.5	7	9	30	1.5	0.125	3.33
48	12	1.5	9	9	30	1.5	0.125	4.00
48	14	1.5	11	9	30	1.5	0.125	4.66
48	16	1.5	13	9	30	1.5	0.125	5.33
48	18	3	12	9	30	1.5	0.125	6.00
48	20	3	14	9	30	1.5	0.100	6.67
48	24	3	18	9	30	1.5	0.100	8.00
48	30	3	24	9	30	1.875	0.100	10.00
48	36	6	24	9	30	2.25	0.100	12.00
48	42	6	30	9	30	2.25	0.100	14.00
54	18	3	12	9	36	1.5	0.100	6.75
54	30	3	24	9	36	1.875	0.100	11.25
54	36	6	24	9	36	2.25	0.100	13.50
60	12	1.5	9	12	36	1.5	0.100	5.00
60	18	3	12	12	36	1.5	0.100	7.50
60	24	3	18	12	36	1.5	0.100	10.00
60	30	3	24	12	36	1.875	0.100	12.50
60	36	6	24	12	36	2.25	0.100	15.00
60	48	6	36	12	36	3	0.100	20.00
66	24	3	18	12	42	1.5	0.100	11.00
66	30	3	24	12	42	1.875	0.100	13.75
66	36	6	24	12	42	2.25	0.100	16.50
72	12	1.5	9	12	48	1.5	0.125	6.00
72	15	1.5	12	12	48	1.5	0.125	7.50
72	18	3	12	12	48	1.5	0.125	9.00
72	24	3	18	12	48	1.5	0.100	12.00
72	30	3	24	12	48	1.875	0.100	15.00
72	36	6	24	12	48	2.25	0.100	18.00
72	48	6	36	12	48	3	0.100	24.00
78	24	3	18	12	54	1.5	0.125	13.00
78	24	3	18	12	54	1.5	0.125	13.00
78	30	3	24	12	54	1.875	0.125	16.25
84	30	3	24	12	60	1.875	0.125	17.50
96	24	3	18	12	72	1.5	0.125	16.00



SQ-2-4

A	B	C	D	E	F	THICKNESS	AREA (FT^2)
36	6	24	6	24	2.25	0.080	9.00
42	6	30	9	24	2.25	0.080	12.25
48	6	36	9	30	3	0.100	16.00

Shape — # Bolts Required

H-REC-2-4

Supports Required

OFFICE OF ROADWAY ENGINEERING

REVISIONS
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Brenton Bogard

SIGN BLANK DETAILS II

DESIGN AGENCY

SCD NUMBER
TC-52.20

SHEET 2 | TOTAL 2