STATE OF OHIO

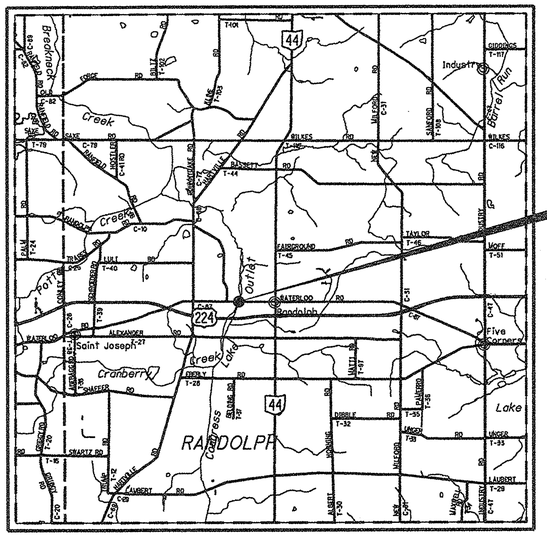
DEPARTMENT OF TRANSPORTATION

POR-224-7.14 PART 2

RANDOLPH TOWNSHIP

PORTAGE COUNTY

FOR PART 1, SEE POR-224-0.00



LOCATION MAP

LATITUDE: N41°01'47" LONGITUDE: W81°15'33"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2013)	6,700
DESIGN YEAR ADT (2033)	8,600
DESIGN HOURLY VOLUME (2033)	0.10
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS (24 HOUR B&C)	0.07
DESIGN SPEED	60
LEGAL SPEED	55

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MINOR ARTERIAL

NHS PROJECT ..... NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING
2088 SOUTH ARLINGTON STREET
AKRON, OHIO 44306

INDEX OF SHEETS:

TITLE SHEET 1
TYPICAL SECTIONS 2-3
GENERAL NOTES 4-5
MAINTENANCE OF TRAFFIC 6-9
GENERAL SUMMARY 10
SUBSUMMARY 11
PLAN AND PROFILE 12
CROSS SECTIONS 13-17
STRUCTURES 18-30
SOIL PROFILES .....

PROJECT DESCRIPTION

SUPERSTRUCTURE REPLACEMENT OF STRUCTURE POR-224-0714 IN RANDOLPH TOWNSHIP, PORTAGE COUNTY.

PROJECT EARTH DISTURBED AREA:	0.75 ACRES
ESTIMATED CONTRACTOR EDA:	0.00 ACRES
NOTICE OF INTENT EDA:	N/A (NOI NOT REQUIRED)

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2010 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVED THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
SEE PART 1	SEE PART 1	SEE PART 1

ENGINEERS SEAL:

STATE OF OHIO
LAUREN MARIE PHILLIS
E-75639
REGISTERED
PROFESSIONAL ENGINEER

SIGNED Lauren M. Phillis
DATE: 12.3.12

APPROVED
DATE 12.5.12 DISTRICT DEPUTY DIRECTOR

APPROVED Jerry Wray /jas
DATE 1/29/13 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E081 (113)

PID NO. 82919

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

POR-224-7.14

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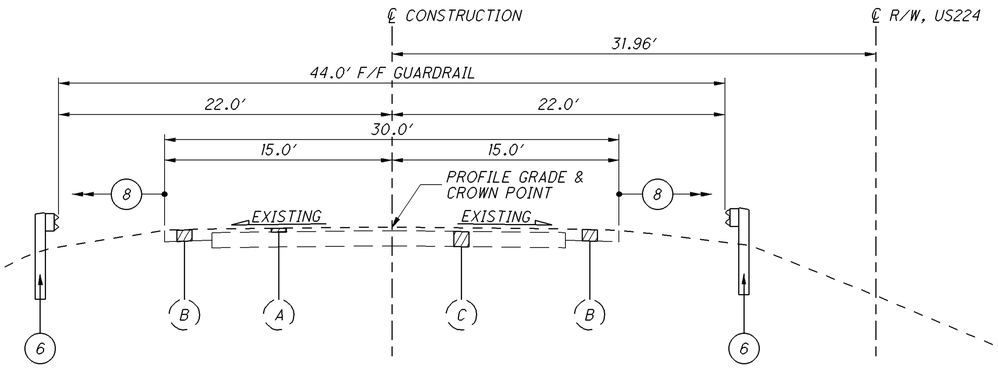
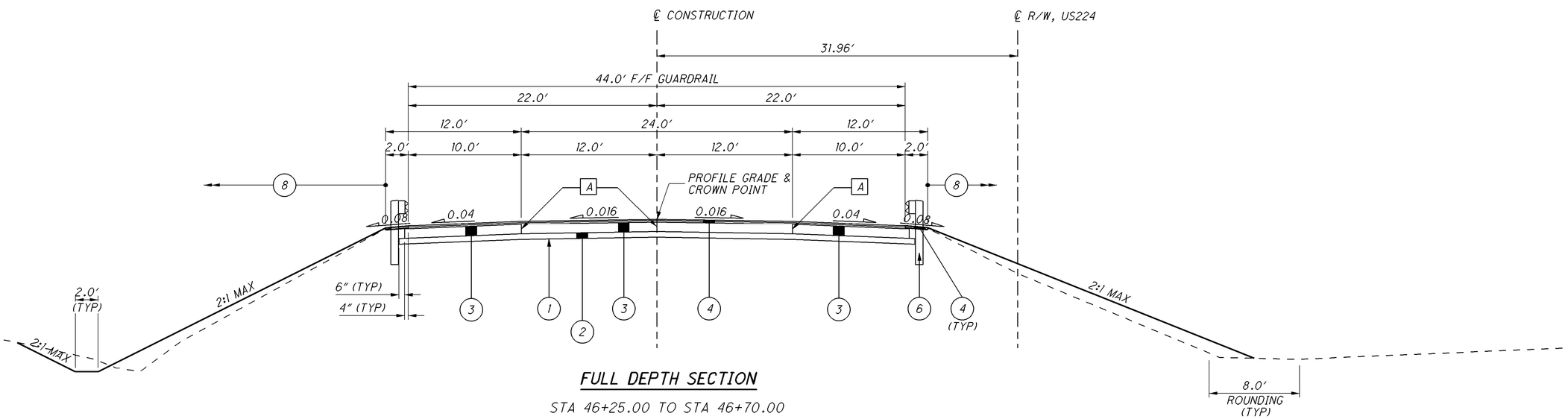


EXISTING SECTION

STA 42+50.00 TO STA 46+70.00
STA 48+12.52 TO STA 51+50.00



FULL DEPTH SECTION

STA 46+25.00 TO STA 46+70.00
STA 48+12.52 TO STA 48+50.00

LEGEND

1. ITEM 204, SUBGRADE COMPACTION
2. ITEM 304, AGGREGATE BASE, AS PER PLAN (T = 6″)
3. ITEM 305, CONCRETE BASE (T = 10″)
4. SEE PART I FOR RESURFACING
5. ITEM 526, REINFORCED CONCRETE APPROACH SLABS (T=15″), AS PER PLAN
6. ITEM 606, GUARDRAIL, TYPE 5
7. ITEM 617, COMPACTED AGGREGATE, AS PER PLAN (T = 2″)
8. ITEM 659, SEEDING AND MULCHING

A LONGITUDINAL JOINT PER BP-2.1

(A) EXISTING ASPHALT CONCRETE
(B) EXISTING ASPHALT CONCRETE SHOULDER
(C) EXISTING REINFORCED CONCRETE BASE

TYPICAL SECTIONS

POR-224-7.14

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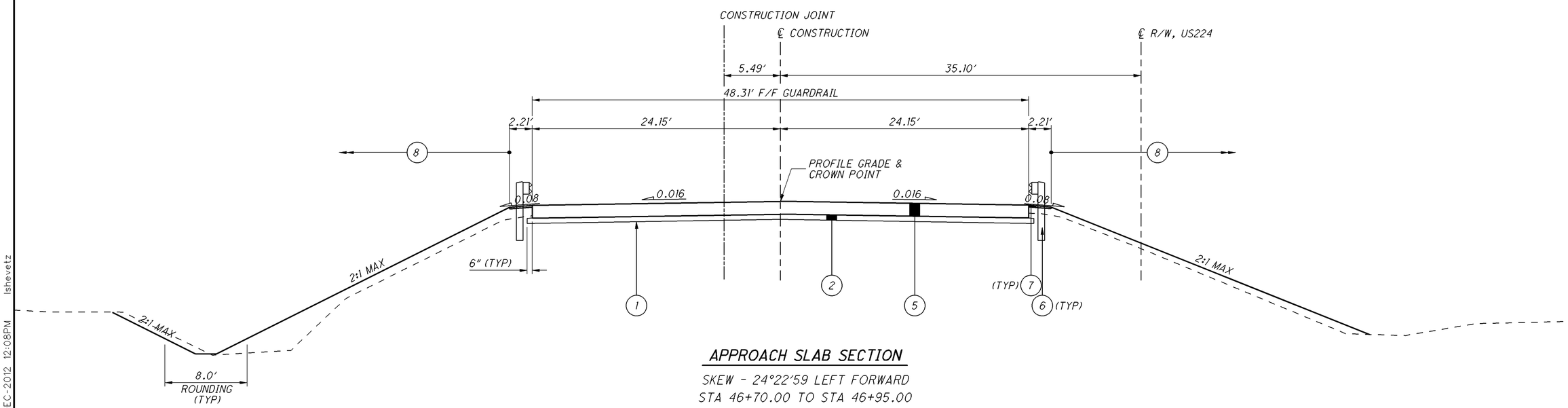

APPROACH SLAB SECTION

SKEW - 24°22'59 LEFT FORWARD
STA 46+70.00 TO STA 46+95.00
STA 47+87.52 TO STA 48+12.52

PRESSURE RELIEF JOINT STATIONS:

FORWARD APPROACH SLAB: STA 48+12.52 TO STA 48+16.52
REAR APPROACH SLAB: STA 46+66.00 TO STA 46+70.00

FOR LEGEND SEE SHEET 2

TYPICAL SECTIONS

POR-224-7.14

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UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEAD-QUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)
OGPUPS 1-800-925-0988
ODOT 330-786-3145 KEN GREENE

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AT&T
ATTN: BEN MILLER
50 W. BOWERY ST.
6TH FLOOR
AKRON, OH 44308
330-384-2237
330-384-9866 FAX

BELDEN AND BLAKE OIL AND GAS
ATTN: KEITH KERSTETTER
1748 SALTWELL ROAD
DOVER, OH 44622
330-602-5551 EXT: 227
330-602-5554 FAX

DOMINION EAST OHIO GAS
ATTN: MARY LONG
320 SPRINGSIDE DRIVE
SUITE 320
AKRON, OH 44333
330-664-2409
888-504-0126 FAX

OHIO EDISON
ATTN: DAVID L. MILLER
1910 W. MARKET STREET
BUILDING #1
AKRON, OH 44313
330-436-4055

PORTAGE COUNTY WATER RESOURCES
COUNTY ADMINISTRATION BUILDING, 3RD FLOOR
ATTN: LOUIE MUNOZ
449 SOUTH MERIDIAN STREET
RAVENNA, OH 44266
330-297-3670
330-297-3680 FAX

TIME WARNER CABLE
ATTN: TIM KNIGHT
5520 WHIPPLE AVE. NW
NORTH CANTON, OH 44720
330-494-9200 EXT. 3087

TIME WARNER CABLE
ATTN: CARL PRICE
8385 BAVARIA ROAD
MACEDONIA, OH 44056
330-963-3620 EXT. 113

SURVEYING PARAMETERS

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING:

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2009

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (CORS96) (EPOCH:2002.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99993807004

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAVEMENT MARKING

SEE PART 1 PLANS FOR ALL PAVEMENT MARKING DETAILS AND QUANTITIES

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

EARTHWORK

THE ESTIMATED QUANTITIES HAS BEEN CARRIED TO THE GENERAL SUMMARY:

203, EXCAVATION,	459	CU. YD.
203, EMBANKMENT,	254	CU. YD.

ITEM 304 - AGGREGATE BASE, AS PER PLAN

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALLBE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRAD-ATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL	333 CU. YD.
659, SEEDING AND MULCHING	3000 SQ. YD.
659, REPAIR SEEDING AND MULCHING	150 SQ. YD
659, COMMERCIAL FERTILIZER	0.40 TON
659, LIME	0.62 ACRES
659, WATER	16 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

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CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE (RIGHT OF WAY) (CONSTRUCTION) LIMITS BY ITEM 603 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

603, 6" CONDUIT, TYPE B	20 FT.
603, 6" CONDUIT, TYPE E	20 FT.
603, 6" CONDUIT, TYPE F	20 FT.
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER, 1 CU. YD.	

ITEM 606 - ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27.75 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

WETLANDS IMPACT AND AVOIDANCE CULVERT NO. POR-224-7.14

THE PROPOSED REHABILITATION OF BRIDGE NO. POR-224-7.14 WILL RESULT IN PERMANENT IMPACTS TO 120 LINEAR FEET (0.010 ACRE) OF STREAM 3 AND 0.019 ACRE OF PALUSTRINE FORESTED WETLANDS AREA AS SHOWN IN THE CONSTRUCTION PLAN. BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE IMPACTS TO STREAM CHANNEL BEYOND THE CONSTRUCTION LIMITS AND/OR THE REMAINING PORTION OF THE WETLANDS AT THE POR-224-7.14 BRIDGE. TO PROTECT AND DELINEATE THE BOUNDARIES OF THE EXISTING REMAINING WETLANDS AREAS AND STREAMS, TEMPORARY CONSTRUCTION FENCE AND PERIMETER FILTER FABRIC FENCE SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY ALONG THE PROPOSED CONSTRUCTION LIMITS WITHIN THE WETLANDS AREA AND AT STREAM 1 AND ALONG THE BANKS OF STREAM 2 IDENTIFIED AS CONGRESS LAKE OUTLET IN THE PLAN. THE TEMPORARY CONSTRUCTION FENCE AND PERIMETER FILTER FABRIC FENCE SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES INCLUDING ANY NECESSARY CLEARING AND GRUBBING ACTIVITIES. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT THE REMAINING WETLANDS AND STREAM 3 BEYOND THE CONSTRUCTION LIMITS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT STREAM 2 IDENTIFIED AS CONGRESS LAKE OUTLET IN THE PLAN. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE CONSTRUCTION EQUIPMENT AND/OR MATERIALS WITHIN THE REMAINING WETLANDS AREA AND/OR ANY STREAMS. THE TEMPORARY CONSTRUCTION FENCE AND PERIMETER FILTER FABRIC FENCE SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT.

ENDANGERED SPECIES HABITAT

WHENEVER PRACTICABLE, UNAVOIDABLE CUTTING OF LIVING OR DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES OR CAVITIES TREES SHALL BE PERFORMED AFTER SEPTEMBER 30 AND BEFORE APRIL 1. IF AT ALL POSSIBLE, TREES CONTAINING SUITABLE INDIANA BAT ROOST HABITAT, THAT MUST BE REMOVED BY THE PROJECT BETWEEN APRIL 1 AND SEPTEMBER 30, SHALL BE MARKED BY THE CONTRACTOR FOR AVOIDANCE DURING THESE MONTHS.

PRIOR TO BRIDGE DECK REMOVAL, THE UNDERSIDE OF BRIDGE NO. POR-224-0714 SHALL BE CAREFULLY EXAMINED BY THE CONTRACTOR FOR THE PRESENCE OF BATS, ESPECIALLY FROM APRIL 1 TO SEPTEMBER 30. IF ANY BATS ARE FOUND ROOSTING ON THE UNDERSIDE OF THE BRIDGE, THE USFWS, ECOLOGICAL SERVICES DIVISION (614-416-8993), ODOT OFFICE OF ENVIRONMENTAL SERVICES (614-466-7880) ODOT DISTRICT 4 ENVIRONMENTAL SERVICES (330-786-4930) SHALL BE CONTACTED TO PROVIDE THIS INFORMATION.

SHOULD ADDITIONAL INFORMATION ON LISTED ENDANGERED/THREATENED/POTENTIALLY THREATENED SPECIES OR THEIR CRITICAL HABITAT BECOME AVAILABLE, OR IF NEW INFORMATION REVEALS EFFECTS OF THIS PROJECT THAT WERE NOT PREVIOUSLY CONSIDERED, ODOT WILL REINITIATE CONSULTATION WITH THE USFWS ACCORDINGLY.

CONDITIONS IN THE PROGRAMMATIC CONSULTATION SHALL BE FOLLOWED AND BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENT CONTROL WILL BE IMPLEMENTED DURING AND FOLLOWING CONSTRUCTION ACTIVITIES TO MINIMIZE WATER QUALITY IMPACTS.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE POR-224-7.14 BRIDGE STRUCTURE SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

AKRON REGIONAL AIR QUALITY MANAGEMENT DISTRICT 146 S. HIGH ST. SUITE 904 AKRON, OHIO 44308 SAM RUBENS, ADMIN. (330) 375-2480 FAX: (330) 375-2402

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306

BASIS FOR PAYMENT-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

WATERWAY PERMIT DETERMINATION (404/401) - ODOT PROJECTS

ALL PROJECTS INVOLVING JURISDICTIONAL WATERS OF THE UNITED STATES (STREAMS, RIVERS, NON-ISOLATED WETLANDS) AND/OR ISOLATED WETLANDS ARE SUBJECT TO REGULATION UNDER SECTIONS 404 AND 401 OF THE CLEAN WATER ACT, AND POSSIBLY OHIO EPA ISOLATED WETLAND LAW. THE ODOT-OES WATERWAY PERMIT UNIT DETERMINED THE PROJECT MEETS THE CRITERIA FOR REGIONAL GENERAL PERMIT (RGP)-SECTION B (MAINTENANCE) AND SECTION C (TEMPORARY CONSTRUCTION, ACCESS, AND DEWATERING) BASED UPON THE ANTICIPATED IMPACTS TO STREAMS AND WETLANDS. THE WATERWAY PERMIT CONDITIONS ARE PROVIDED IN THE SPECIAL PROVISIONS PACKAGE. ALL CONDITIONS SHALL BE ADHERED TO DURING CONSTRUCTION. ALSO, PER CONDITION 9 OF THE WATERWAY PERMIT CONDITIONS, A COPY OF THE RGP IS TO BE KEPT AT THE WORK SITE AT ALL TIMES. A COPY OF THE RGP WILL BE PROVIDED TO THE CONTRACTOR BY ODOT PERSONNEL AT THE PRECONSTRUCTION MEETING.

BEST MANAGEMENT PRACTICES

ALL MATERIALS REMOVED FROM STREAM CHANNELS, WETLANDS AND DITCHES SHALL BE IMMEDIATELY REMOVED TO AN UPLAND SITE AND STABILIZED (I.E., SEEDED) TO PREVENT REDISTRIBUTION INTO ANY WATERS OF THE UNITED STATES. THE CONTRACTOR SHALL UTILIZE AN APPROVED DISPOSAL SITE FOR THE DISPOSAL OF ALL WASTE FILL MATERIAL. THE APPROVED DISPOSAL SITE SHALL NOT INCLUDE ANY WETLANDS, STREAM BANKS OR RIVERBANKS OR ANY 100-YEAR FLOOD PLAINS.

ADJACENT RIPARIAN HABITAT SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE. EQUIPMENT AND MATERIAL STAGING AREAS SHALL BE KEPT AWAY FROM STREAMS, RIVERS, WETLANDS AND OTHER WATERS OF THE UNITED STATES TO EXTENT PRACTICABLE AND ALL AREAS DISTURBED BY THE PROJECT SHALL BE STABILIZED TO DECREASE THE POTENTIAL FOR EROSION. ALL DISTURBED AREAS SHALL BE MULCHED AND REVEGETATED WITH NATIVE PLANTS.

THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK IN STREAM CHANNELS AND WETLANDS SHALL BE OPERATED IN SUCH A MANNER AS TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

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

PAINTING AND SEALING OPERATIONS

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT, OR OTHER MATERIALS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

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MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE TEN FOOT LANE BIDIRECTIONAL SHALL BE MAINTAINED ON THE EXISTING, TEMPORARY, AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS AND INCIDENTALS RELATED THERETO.

4. ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

PAVING RESTRICTIONS

DO NOT PLACE SURFACE COURSE OF ASPHALT FROM STA 41+75 TO STA 52+50 UNTIL AFTER BOTH PHASES OF CONSTRUCTION ON STRUCTURE POR-224-0714 ARE COMPLETED.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

WINTER TRAFFIC LIMITATIONS

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 1. NOVEMBER 14 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND DISINCENTIVES OF $1300 SHALL BE ASSESSED FOR EACH CALENDAR DAY THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. THE CONTRACTOR MAY CLOSE LANES PRIOR TO APRIL 1 WITH WRITTEN APPROVAL FROM THE DISTRICT CONSTRUCTION ENGINEER.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 20 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614, BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 50 FEET. AN ESTIMATED QUANTITY OF 20 EACH OF ITEM 614 BARRIER REFLECTOR, TYPE B2 AND 20 EACH OF ITEM 614 OBJECT MARKER, 2-WAY HAVE BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

ITEM 614 MAINTAINING TRAFFIC (TIME LIMITATION)

ONE BIDIRECTIONAL LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, AS SHOWN ON SHEETS 8-9, FOR A PERIOD NOT TO EXCEED A TOTAL OF 135 CONSECUTIVE CALENDAR DAYS FOR BOTH PHASES. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $2000 FOR EACH CALENDAR DAY THE ZONES ARE SET UP BEYOND THE SPECIFIED LIMIT.

TEMPORARY TRAFFIC SIGNALIZED LANE CLOSURE

THE TEMPORARY TRAFFIC SIGNAL FOR THE BRIDGE REPAIR AT POR-224-7.14 SHALL BE PLACED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS MT-96.11, MT-96.20 AND MT-96.26. A PRETIMED CONTROLLER IS NEEDED WITH THE INITIAL TIMING SHOWN BELOW.

INITIAL TIMING SETTINGS

PHASE 1 TIMING					
Φ1G	Φ1Y	Φ1R	Φ2G	Φ2Y	Φ2R
20	4	21	20	4	21

PHASE 2 TIMING					
Φ1G	Φ1Y	Φ1R	Φ2G	Φ2Y	Φ2R
22	4	19	22	4	19

THE SIGNAL WILL BE USED TO CLOSE THE EASTBOUND LANE IN PHASE 1 AND THE WESTBOUND LANE IN PHASE 2 AT SLM 7.14 IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AS DETAILED ON THIS SHEET AND THE NEXT 2 SHEETS DURING CONSTRUCTION OF THE WORK.

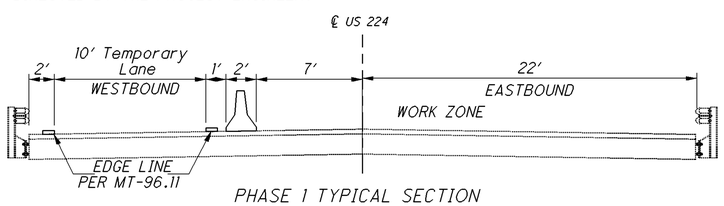
ALL LABOR, EQUIPMENT, AND INCIDENTALS NEEDED TO PERFORM THIS WORK SHALL BE PAID FOR UNDER ITEM 614 MAINTENANCE OF TRAFFIC EXCEPT FOR THOSE LISTED BELOW.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

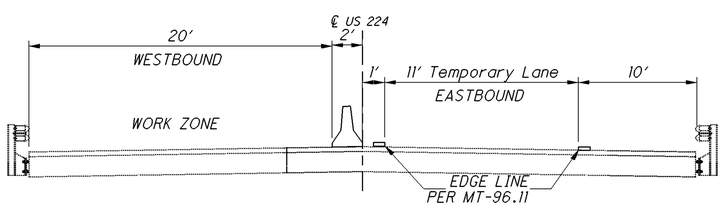
614, WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL), 24" WIDE HAZARDS, 4 EACH
622, PORTABLE CONCRETE BARRIER, 32", 810 FT
622, PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED, 190 FT
614, WORK ZONE CENTER LINE, CLASS I 0.07 MILE
614, WORK ZONE EDGE LINE, CLASS I 0.50 MILE
614, WORK ZONE STOP LINE, CLASS I 48 FT
615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A 642 SQ YD
615, ROADS FOR MAINTAINING TRAFFIC, LUMP

PORTABLE CONCRETE BARRIER (PCB)

THE PORTABLE CONCRETE BARRIER SHALL BE PLACED ACCORDING TO THE DETAIL BELOW UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER.



PHASE 1 TYPICAL SECTION



PHASE 2 TYPICAL SECTION

WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL), 24" WIDE HAZARDS

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS. THE APPROVED LIST IS AVAILABLE AT THE "ROADWAY STANDARDS: PROPRIETARY ROADSIDE SAFETY DEVICES" WEB PAGE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION)

A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, AS SHOWN SHEET 8, FOR A PERIOD NOT TO EXCEED A TOTAL OF 145 CONSECUTIVE CALENDAR DAYS FOR THE WIDENING ON BOTH SIDES.

A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $2000 FOR EACH CALENDAR DAY THE LANE REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

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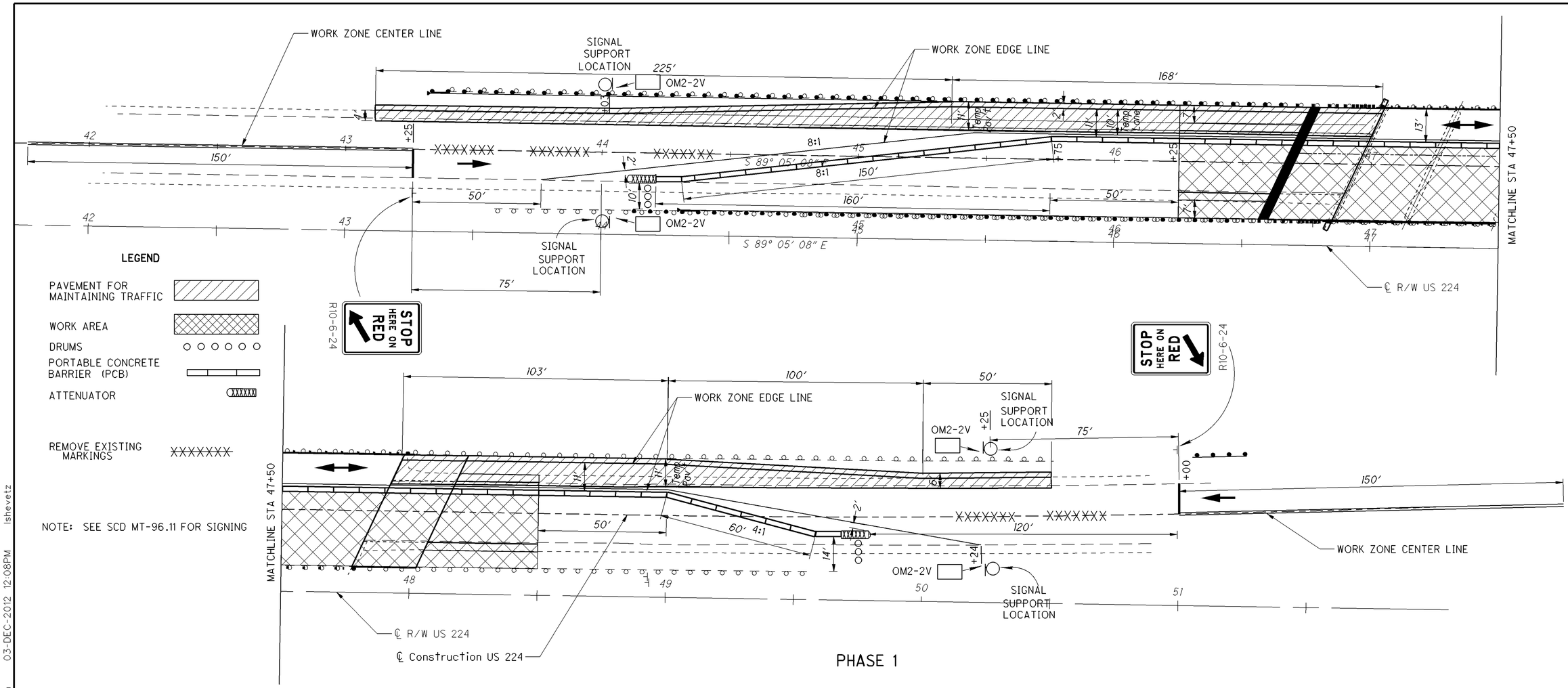

CALCULATED RMB
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HORIZONTAL SCALE IN FEET 0 10 20 40

MAINTENANCE OF TRAFFIC SIGNALIZED CLOSURE

POR-224-7.14

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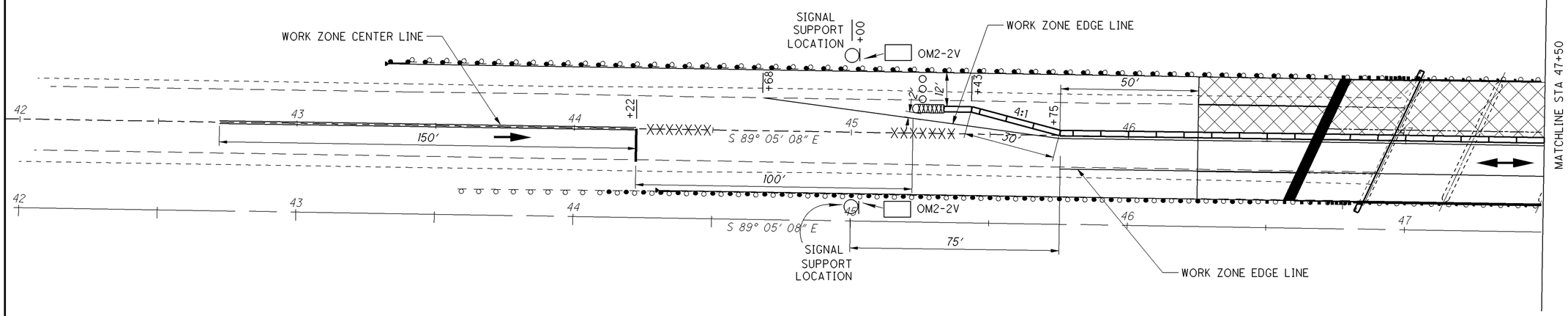

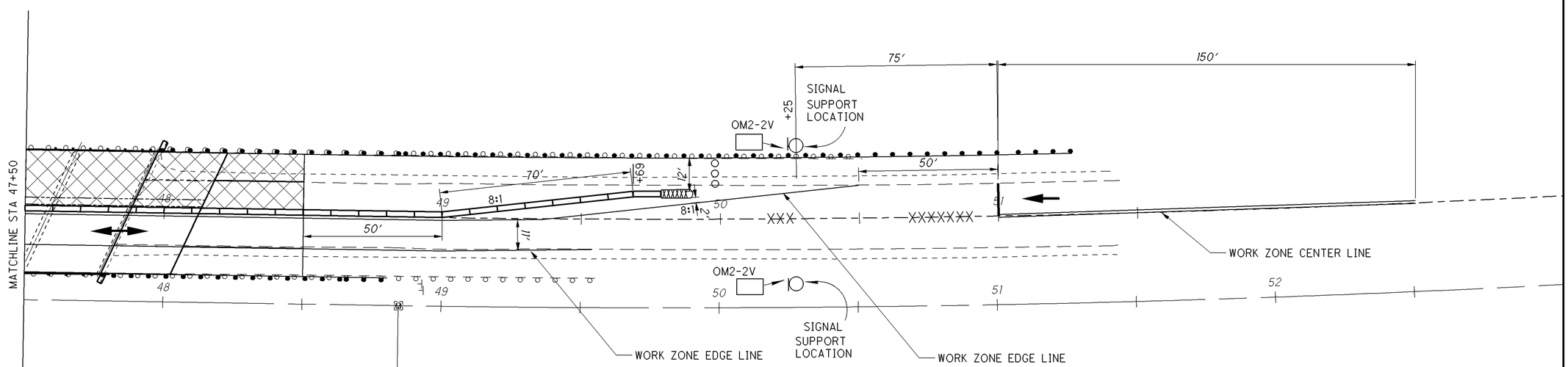

LEGEND

WORK AREA

DRUMS

PORTABLE CONCRETE BARRIER (PCB)

ATTENUATOR

REMOVE EXISTING MARKINGS

PHASE 2

NOTE: SEE SCD MT-96.11 FOR SIGNING

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED RMB

CHECKED

MAINTENANCE OF TRAFFIC SIGNALIZED CLOSURE

POR-224-7.14

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SHEET NUMBER												PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
4	5	6	7	11								06/BRO/BR/						
																	ROADWAY	
LUMP													201	11000	LUMP		CLEARING AND GRUBBING	
				1123								1123	202	38000	1123	FT	GUARDRAIL REMOVED	
459												459	203	10000	459	CU YD	EXCAVATION	
254												254	203	20000	254	CU YD	EMBANKMENT	
				545								545	204	10000	545	SQ YD	SUBGRADE COMPACTION	
				915								915	606	13000	915	FT	GUARDRAIL, TYPE 5	
				4								4	606	26100	4	EACH	ANCHOR ASSEMBLY, TYPE E	
				4								4	606	32160	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE TST	
																	EROSION CONTROL	
	1											1	601	32200	1	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
376												376	659	00300	376	CU YD	TOPSOIL	
3388												3388	659	10000	3388	SQ YD	SEEDING AND MULCHING	
170												170	659	14000	170	SQ YD	REPAIR SEEDING AND MULCHING	
0.46												0.46	659	20000	0.46	TON	COMMERCIAL FERTILIZER	
0.7												0.7	659	31000	0.7	ACRE	LIME	
19												19	659	35000	19	M GAL	WATER	
												5000	832	30000	5000	EACH	EROSION CONTROL	
																	DRAINAGE	
	20											20	603	00900	20	FT	6" CONDUIT, TYPE B	
	20											20	603	01400	20	FT	6" CONDUIT, TYPE E	
	20											20	603	01500	20	FT	6" CONDUIT, TYPE F	
																	PAVEMENT	
				53								53	301	46000	53	CU YD	ASPHALT CONCRETE BASE, PG64-22	
				92								92	304	20001	92	CU YD	AGGREGATE BASE, AS PER PLAN	4
				220								220	305	14000	220	SQ YD	10" CONCRETE BASE	
				97								97	SPEC	45130000	97	FT	PRESSURE RELIEF JOINT, TYPE A	
				2								2	617	10101	2	CU YD	COMPACTED AGGREGATE, AS PER PLAN	4
																	TRAFFIC CONTROL	
				16								16	626	00100	16	EACH	BARRIER REFLECTOR	
																	STRUCTURES	
																	FOR STRUCTURE POR-224-0714 ESTIMATED QUANTITIES	21
																	MAINTAINING OF TRAFFIC	
		20										20	614	11111	20	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE, AS PER PLAN	
			4									4	614	12348	4	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL), 24" WIDE HAZARDS	
			20									20	614	13302	20	EACH	BARRIER REFLECTOR, TYPE B2	
			20									20	614	13360	20.00	EACH	OBJECT MARKER, TWO WAY	
			0.07									0.07	614	21000	0.07	MILE	WORK ZONE CENTER LINE, CLASS I	
			0.50									0.50	614	22000	0.5	MILE	WORK ZONE EDGE LINE, CLASS I	
			48									48	614	26000	48	FT	WORK ZONE STOP LINE, CLASS I	
												LUMP	615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
			642									642	615	20000	642	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
			810									810	622	40020	810	FT	PORTABLE CONCRETE BARRIER, 32"	
			190									190	622	40040	190	FT	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED	
													614	11000	LUMP		MAINTAINING TRAFFIC	
												6	619	16010	6	MONTH	FIELD OFFICE, TYPE B	
													623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
													624	10000	LUMP		MOBILIZATION	

CALCULATED AAG
CHECKED LMP

GENERAL SUMMARY

POR-224-7.14

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REF NO.	SHEET NO.	STATION TO STATION					202 GUARDRAIL REMOVED (FT)	606 GUARDRAIL, TYPE 5 (FT)	606 ANCHOR ASSEMBLY, TYPE E (EACH)	606 BRIDGE TERMINAL ASSEMBLY, TYPE TST (EACH)	626 BARRIER REFLECTOR, TYPE A2 (EACH)		204 SUBGRADE COMPACTION (SQ YD)	301 ASPHALT CONCRETE BASE, PG64-22 (CU YD)	304 AGGREGATE BASE, AS PER PLAN (CU YD)	305 10" CONCRETE BASE (SQ YD)	SPEC PRESSURE RELIEF JOINT, TYPE A (FT)	617 COMPACTED AGGREGATE, AS PER PLAN (CU YD)
GR1	12	43+33.34	LT.	TO	47+02.09	LT.	366.25	318.75	1	1	5							
GR2	12	44+31.61	RT.	TO	46+81.61	RT.	326.50	200.00	1	1	4							
GR3	12	47+80.44	RT.	TO	49+37.24	RT.	177.75	233.00	1	1	4							
GR4	12	48+00.91	LT.	TO	50+62.50	LT.	252.50	162.50	1	1	3							
P1	12	46+25.00	LT/RT	TO	46+70.00	LT/RT							229	29	39	120	48.31	1
		46+70.00	LT/RT	TO	46+95.00	LT/RT							125		21			
P2	12	48+12.52	LT/RT	TO	48+50.00	LT/RT							191	24	32	100	48.31	1
		47+87.52	LT/RT	TO	48+12.52	LT/RT												
TOTALS CARRIED TO GENERAL SUMMARY							1123	915	4	4	16	0	545	53	92	220	97	2

CALCULATED AAG
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SUBSUMMARY

POR-224-7.14

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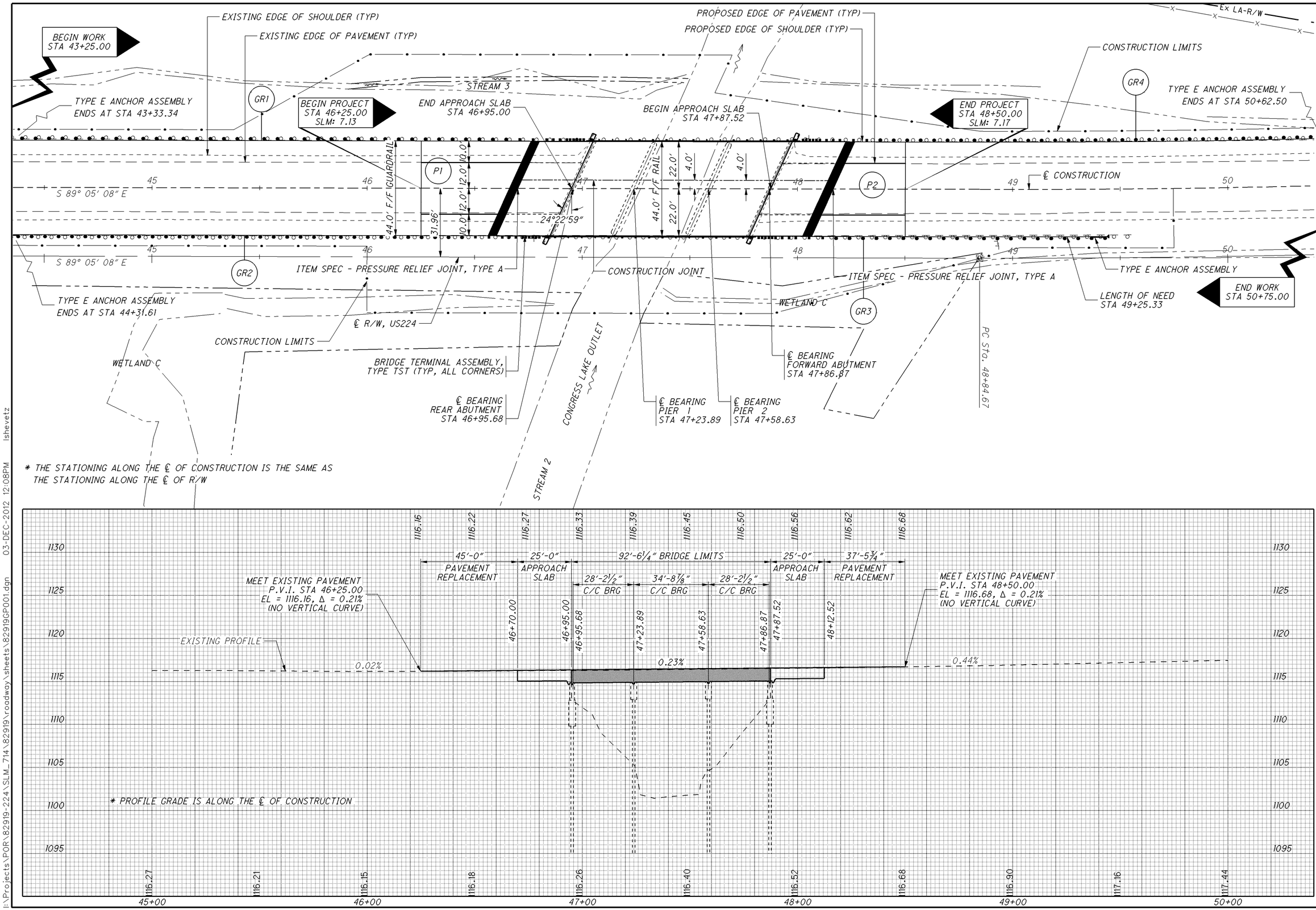

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LMP
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PLAN AND PROFILE
POR-224-0714

POR-224-7.14

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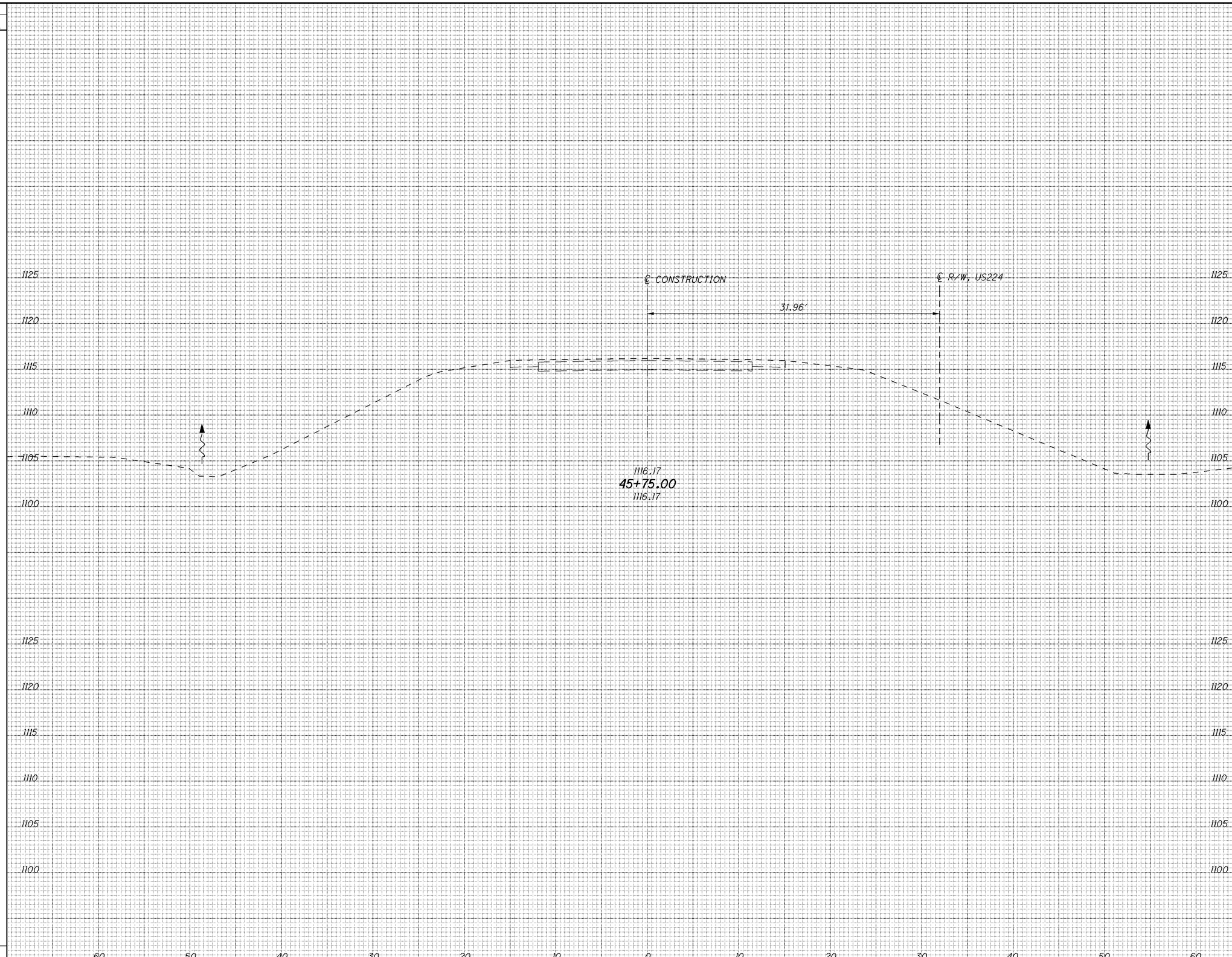
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		

CALCULATED LMP
CHECKED TJP

CROSS SECTIONS (US224)
STA. 45+75.00

POR-224-7.14

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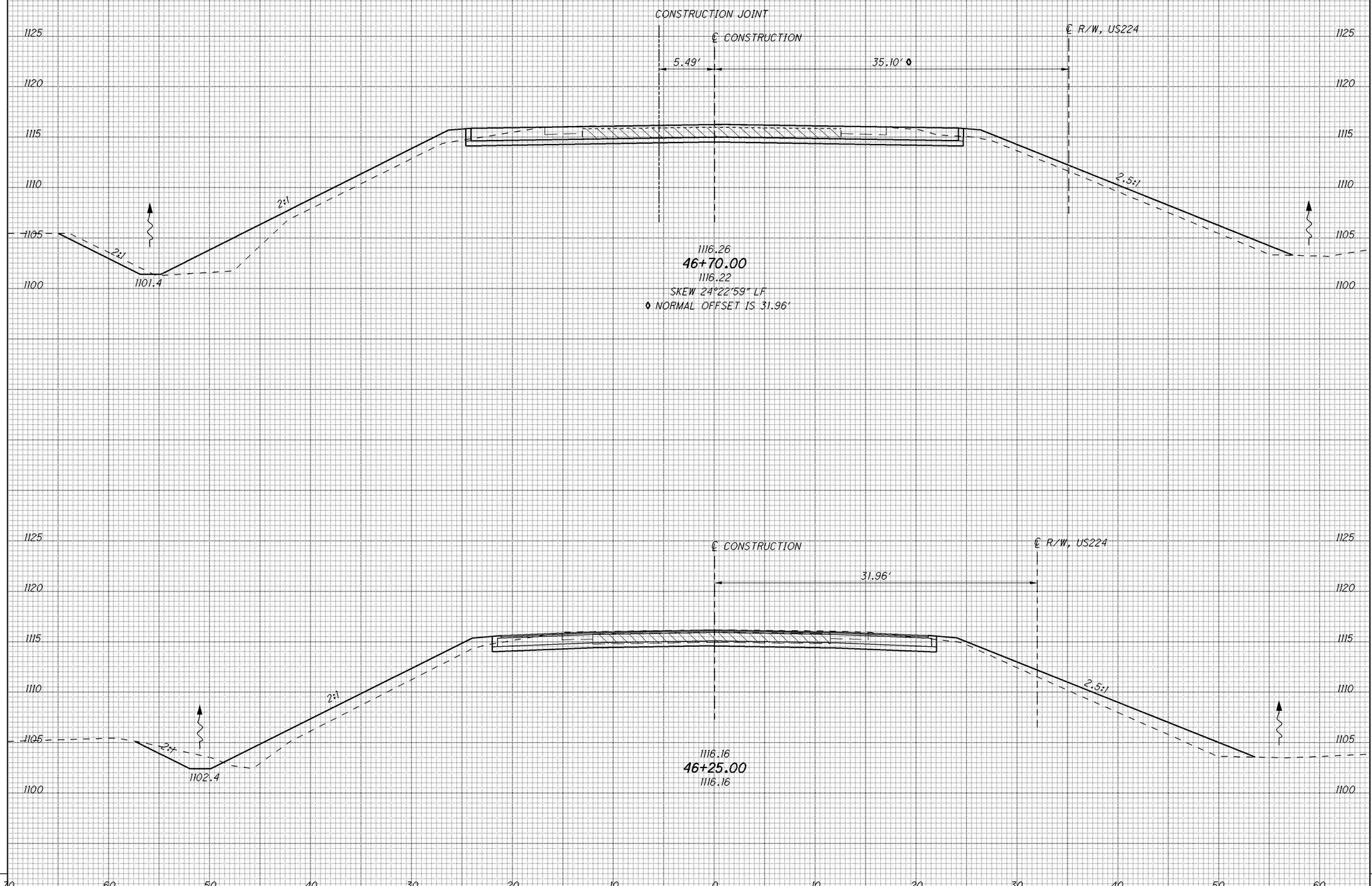
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
83	64		
		132	101
75	57		
		70	53
		202	154

CALCULATED LMP
CHECKED TJP

CROSS SECTIONS (US224)
STA. 46+25.00 TO STA. 46+55.51

POR-224-7.14

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SEEDING	
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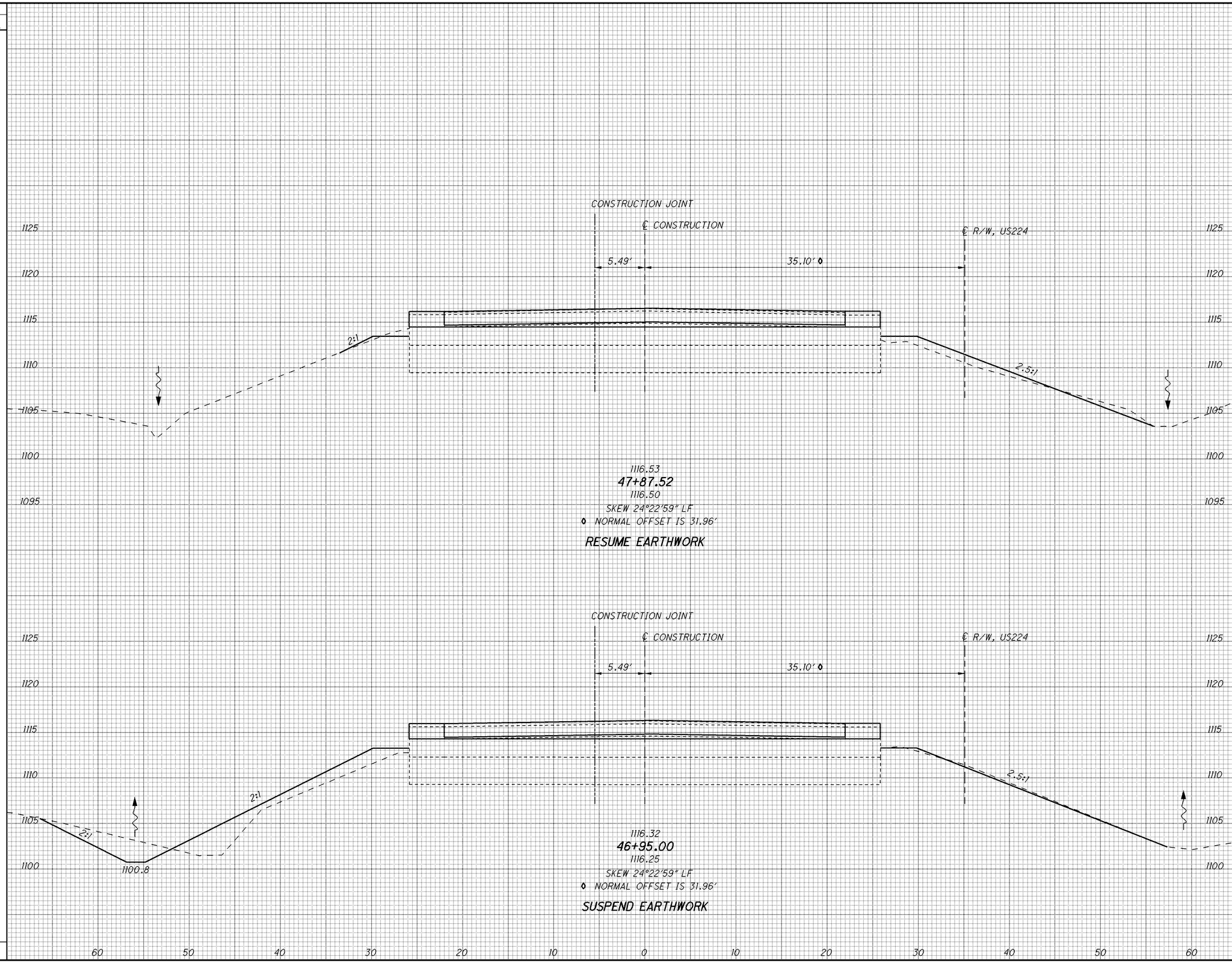

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6	14		
24	38		
		50	48
		50	48

CALCULATED LMP
CHECKED TJP

CROSS SECTIONS (US224)
STA. 46+80.51 TO STA. 47+73.04

POR-224-7.14

15
30

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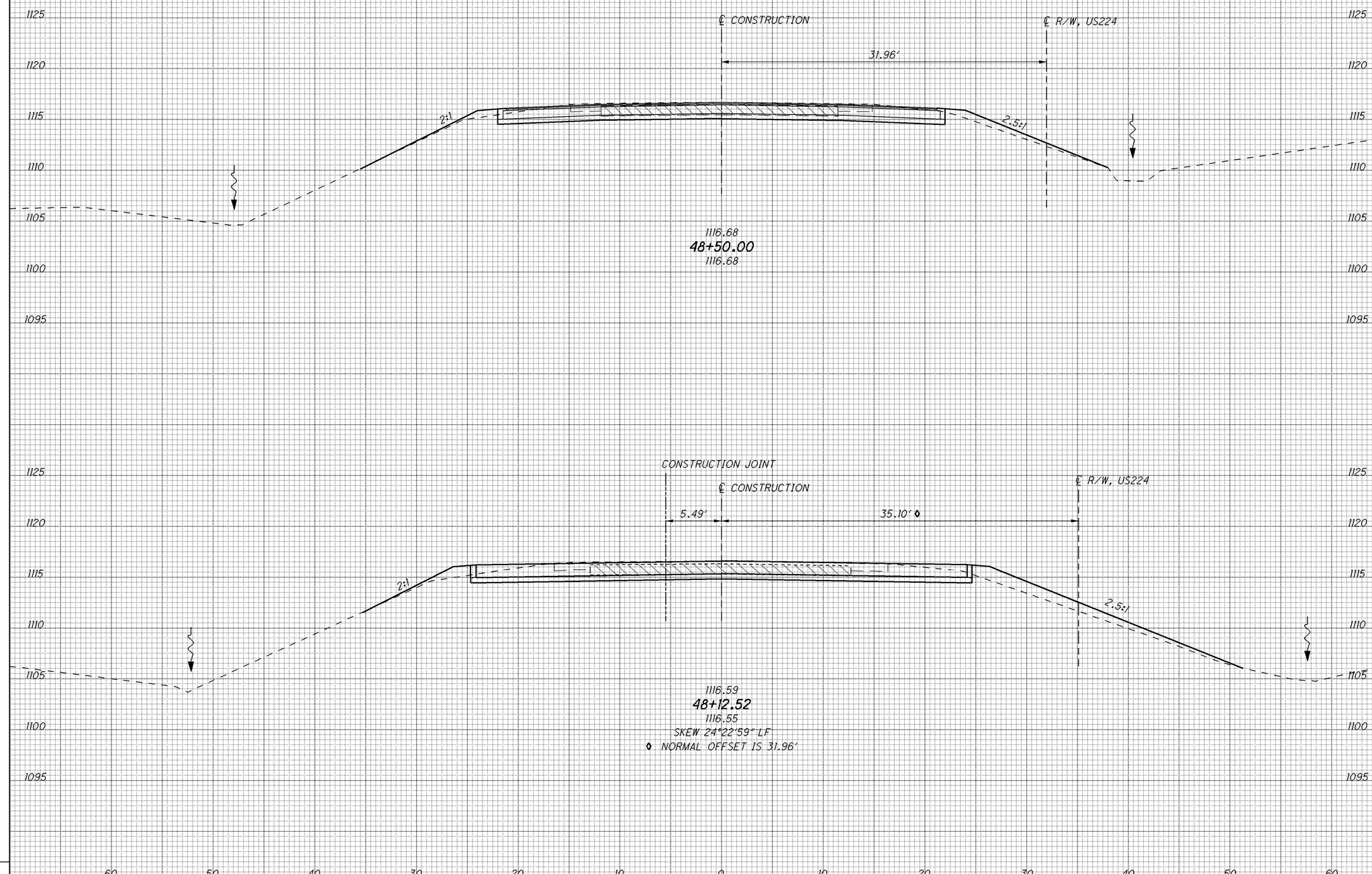
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
68	10		
		103	24
79	24		
		40	18
		143	42

CALCULATED LMP
CHECKED TJP

CROSS SECTIONS (US224)
STA. 47+98.04 TO STA. 48+50.00

POR-224-7.14

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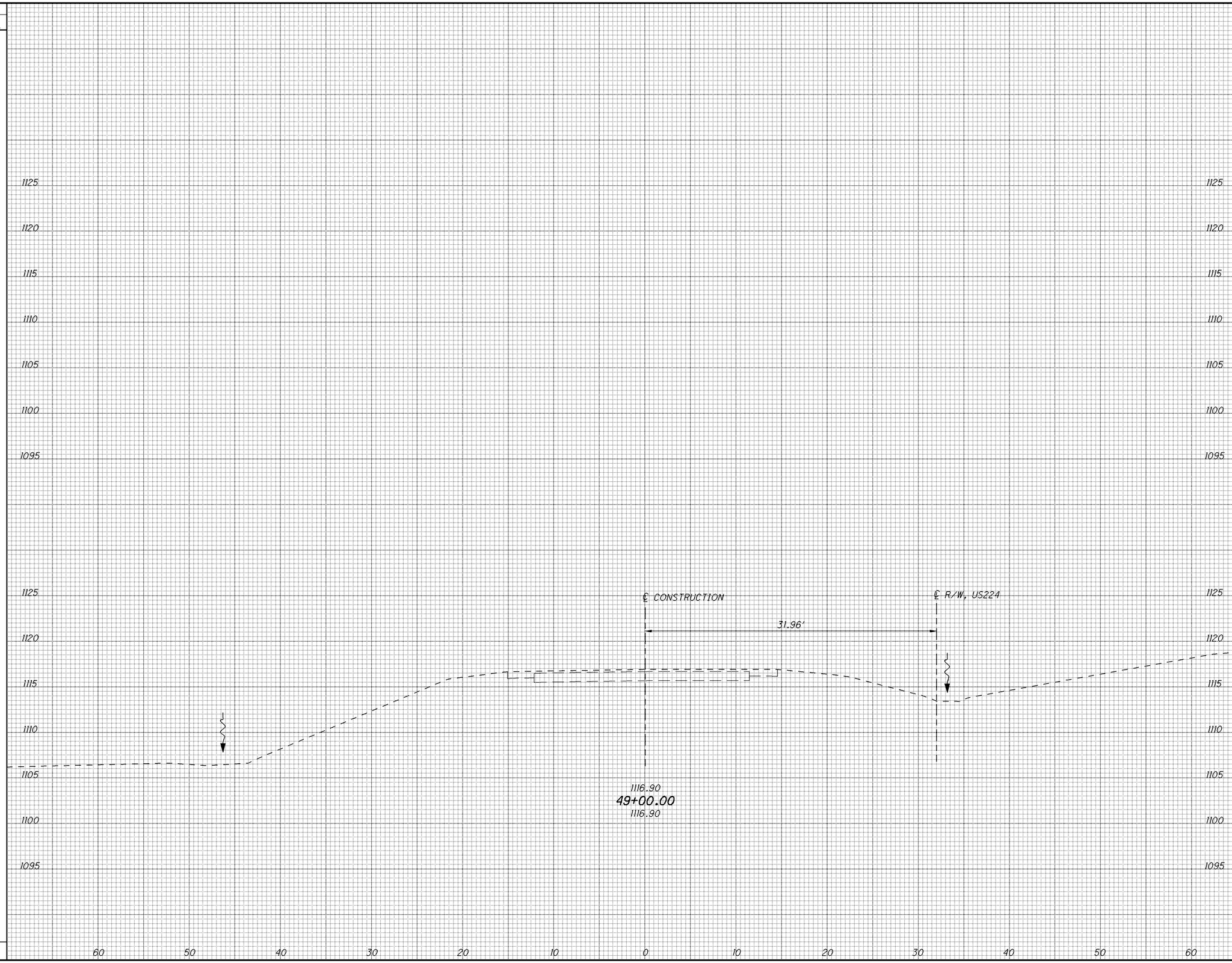
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		64	10
		64	10

CALCULATED LMP
CHECKED TJP

CROSS SECTIONS (US224)
STA. 49+00.00

POR-224-7.14

17
30

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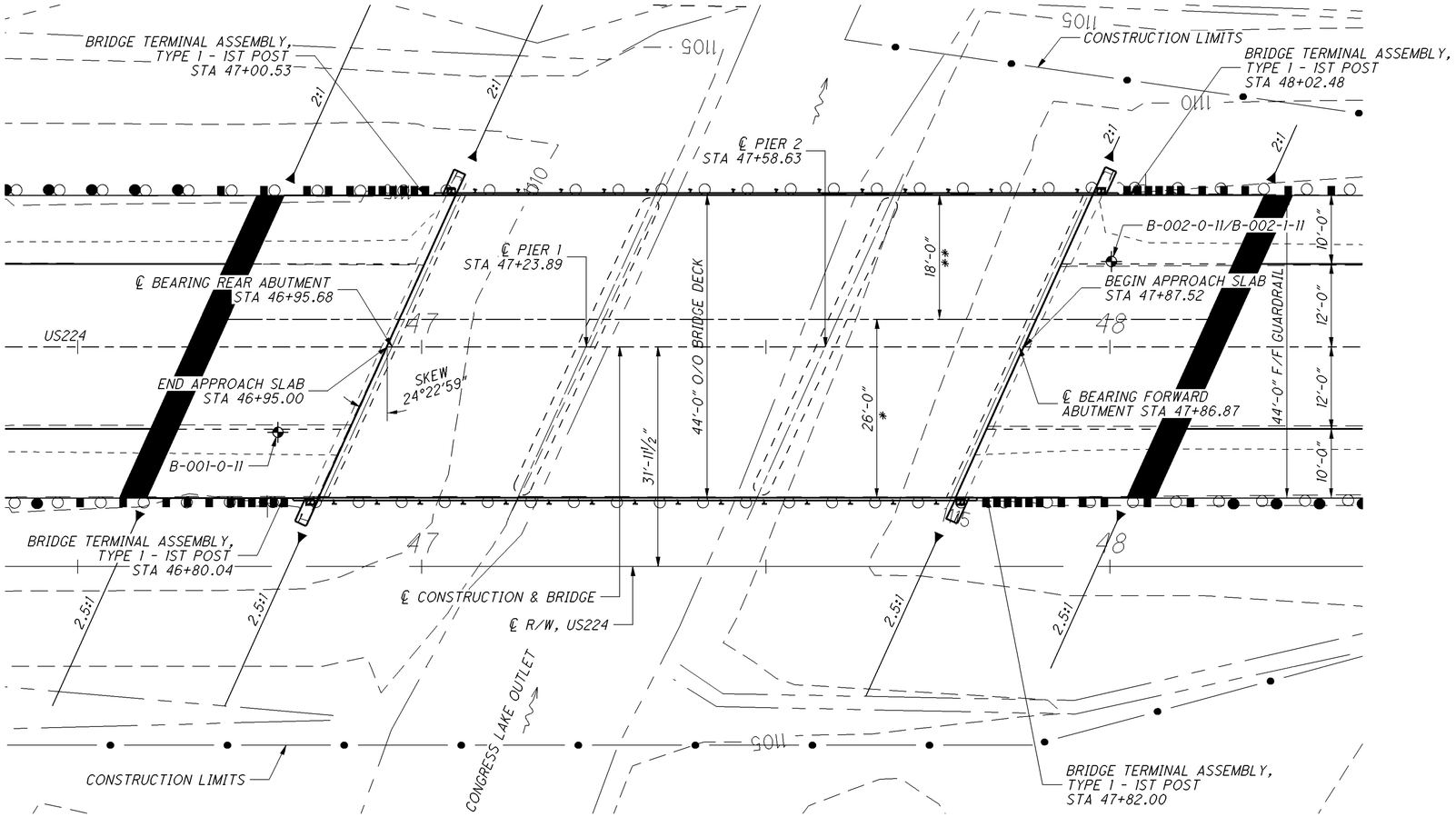
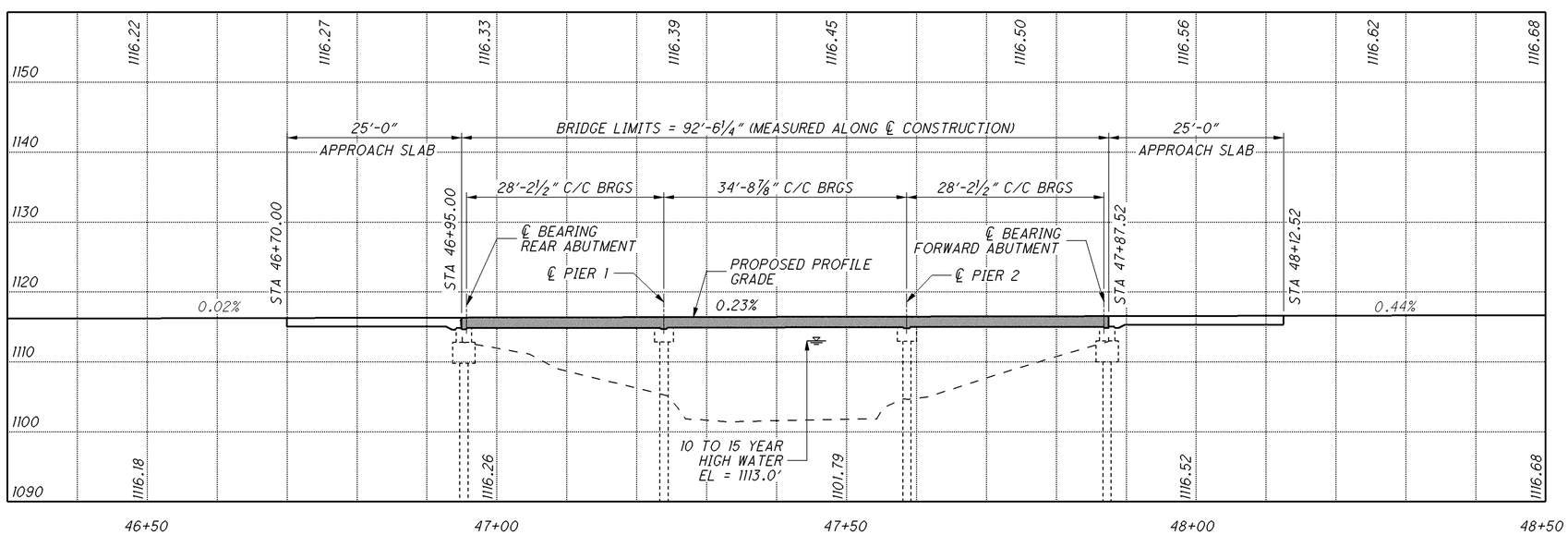


PLAN



PROFILE ALONG ℄ CONSTRUCTION

BENCHMARK DATA

BM #1 STA. 40+32.399,	ELEV. 1118.39,	OFFSET 55.52',	LEFT
BM #2 STA. 44+63.634,	ELEV. 1115.73,	OFFSET 50.14',	LEFT
BM #3 STA. 48+15.751,	ELEV. 1116.08,	OFFSET 50.26',	LEFT
BM #4 STA. 52+78.594,	ELEV. 1118.65	OFFSET 9.97',	LEFT

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC

2013 ADT = 6,700 2013 ADTT = 469
2033 ADT = 8,600 2033 ADTT = 602
DIRECTIONAL DISTRIBUTION = 0.60

LEGEND

BORING LOCATION
* - PHASE 1 CONSTRUCTION
** - PHASE 2 CONSTRUCTION

HYDRAULIC DATA (FROM EXISTING PLANS)

DRAINAGE AREA = 23.2 SQ. MILES
ASSUMED 10 TO 15 YEAR HIGHT WATER EL = 1113.0'

PROPOSED WORK

- NEW SUPERSTRUCTURE WITH EXISTING ABUTMENTS AND EXISTING PIERS TO REMAIN
- NEW APPROACH SLABS
- REPLACE BRIDGE RAILING
- PLACE NEW STEEL DRIP STRIP
- PATCH SUBSTRUCTURE CONCRETE
- SEAL CONCRETE SURFACES WITH EPOXY-URETHANE
- NEW STRUCTURE IDENTIFICATIONS SIGNS

EXISTING STRUCTURE

TYPE: THREE SPAN CONTINUOUS SLAB BRIDGE WITH CAPPED PILE SUBSTRUCTURE
SPANS: 28' - 35' - 28' C/C BEARINGS
ROADWAY: 44'-0" F/F BRIDGE RAILING
LOADING: CF = 2000 (51)
SKEW: 24°30' LEFT FORWARD
APPROACH SLABS: 25'-0" LONG
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
STRUCTURAL FILE NUMBER: 6703879
DATE BUILT: 1957
DISPOSITION: SUPERSTRUCTURE TO BE REPLACED

PROPOSED STRUCTURE

TYPE: THREE SPAN CONTINUOUS SLAB BRIDGE WITH CAPPED PILE SUBSTRUCTURE
SPANS: 28'-2 1/2" - 34'-8 7/8" - 28'-2 1/2" C/C BEARINGS
ROADWAY: 44'-0" F/F BRIDGE RAILING
LOADING: SUPERSTRUCTURE: HS25 AND THE ALTERNATE MILITARY LOADING PLUS FUTURE WEARING COURSE (60 PSF)
SUBSTRUCTURE: CF = 2000 (51)
SKEW: 24°22'59" LEFT FORWARD
APPROACH SLABS: 25'-0" LONG (AS-1-81)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
COORDINATES: LATITUDE N41°01'47"
LONGITUDE W81°15'33"

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
LMP	LMP	TJP	08-13-12
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AAG		6703879	

PORTAGE COUNTY
STA. 46+95.00
STA. 47+87.52

SITE PLAN
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-81	REVISED	07-19-02
CS-1-03	DATED	04-18-03
DS-1-92	REVISED	07-18-03
TST-1-99	REVISED	04-18-08

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843	DATED	04-18-03

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION , INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

EXISTING DECK:
CF2000(51)

NEW SUPERSTRUCTURE:
DESIGN LOADING: HS25, AND THE ALTERNATE MILITARY LOADING.

FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT.

DESIGN DATA

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2-1/2" CONCRETE COVER

STEEL DRIP STRIP

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

SUBSTRUCTURE CONCRETE REMOVAL

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CON- CRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (PRESTRESSED BOX BEAM, I-BEAM, STEEL BEAM STEEL GIRDER, ETC), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

REMOVAL OF DECK SHALL BE PERFORMED IN A MANNER NOT TO PLACE UNSYMMETRICAL LOADING TO THE EXISTING PIERS WHICH MAY OVERSTRESS THE EXISTING PIER COMPONENTS WHICH ARE TO REMAIN.

PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND REMOVE LOOSE AND DISINTEGRATED CONCRETE. THE JOINT SURFACE SHALL BE THROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS BEING PLACED.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 511 - CLASS HP CONCRETE, BRIDGE DECK, AS PER PLAN

THE PROVISIONS OF ITEM 511 SHALL APPLY EXCEPT AS NOTED BELOW.

MIX OPTIONS:
ALL SUPERSTRUCTURE, BRIDGE DECK, SIDEWALK, APPROACH SLABS AND PARAPET CONCRETE SHALL BE THIS MIX (HP4, AS PER PLAN). THE FOLLOWING PROPORTIONS WILL BE USED AS A STARTING MIX DESIGN.

CONCRETE TABLE
QUANTITIES PER CUBIC YARD
AGGREGATES (SSD)
MIX 4, AS PER PLAN (GGBF SLAG + MICROSILICA)

AGG TYPE	FINE AGG (LB)	#8 COARSE AGG (LB) *	#57 COARSE AGG (LB) *	TOTAL (LB)	CEMENT CONTENT (LB)	GGBF SLAG (LB)	MICRO SILICA (LB)	MAX WATER TO CEMENT-ITIOUS RATIO	AIR CONTENT +/- 2%
GRAVEL	1370	650	790	2810	440	190	30	0.42	6
LIME-STONE	1370	655	800	2820	440	190	30	0.42	6
SLAG	1370	570	695	2635	440	190	30	0.42	6

* ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127

BASIS OF PAYMENT:
PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN: PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN

THE PROVISIONS OF CMS 526 SHALL APPLY EXCEPT AS NOTED BELOW.

CLASS HP CONCRETE, MIX 4, AS PER PLAN, SHALL BE THE ONLY MIX DESIGN OPTION. THE PROPORTIONS FOR THE STARTING MIX DESIGN SHALL BE AS SHOWN FOR ITEM 511 - CLASS HP CONCRETE, AS PER PLAN.

STRUCTURE IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

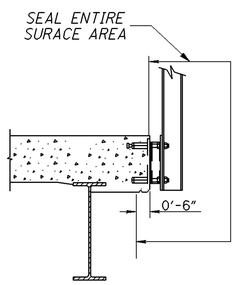
THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:
POR-224-0714 (2 APPROACHES)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) ESTIMATED QUANTITIES



DETAIL E
CONCRETE DECKS WITH OVER THE SIDE DRAINAGE

				ESTIMATED QUANTITIES				
BRIDGE NUMBER	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ABUT (SQ YD)	PIER (SQ YD)	SUPER (SQ YD)	GENERAL (SQ YD)	TOTAL (SQ YD)
POR-224-0714	3 SPAN CONTINUOUS SLAB BRIDGE	SEAL DECK EDGES PER DETAIL E SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	36	44	42		122

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED AAG | CHECKED TJP | DRAWN AAG | REVISED | REVIEWED LMP | DATE 08-13-12 | STRUCTURE FILE NUMBER 6703879

STRUCTURE GENERAL NOTES
BRIDGE_NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224- 7.14
PID No. 82919

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CALC:	AAG	DATE:	8/8/2012
CHECKED:	LMP	DATE:	8/13/2012

ESTIMATED QUANTITIES - POR-224-0714 - (SFN: 6703879) - 06/BRO/BR/

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					2 / 13
202	22900	134	SQ YD	APPROACH SLAB REMOVED				134	
202	23500	587	SQ YD	WEARING COURSE REMOVED				587	
202	38500	187.5	FT	BRIDGE RAILING REMOVED			187.5		
509	10000	52366	POUND	EPOXY COATED REINFORCING STEEL	1419	615	50332		
510	10000	236	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	84	152			
511	45700	2	CU YD	CLASS C CONCRETE, ABUTMENT	2				
511	50001	227	CU YD	CLASS HP CONCRETE, BRIDGE DECK, AS PER PLAN			227		2 / 13
511	52000	LUMP		CLASS HP CONCRETE, TEST SLAB					
512	10100	122	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	36	44	42		
516	13600	10	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	10				
517	70000	199	FT	RAILING (TWIN STEEL TUBE)			199		
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC					
SPEC	51822300	229	FT	STEEL DRIP STRIP			229		
519	11101	75	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN				75	2 / 13
526	25001	245	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN				245	2 / 13
630	02100	15	FT	GROUND MOUNTED SUPPORT, NO. 2 POST				15	
630	80100	2	SQ FT	SIGN, FLAT SHEET, 730.20				2	
630	84900	4	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL				4	
630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL				2	
843	50000	50	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR				50	

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

REVIEWED	DATE	STRUCTURE FILE NUMBER
LMP	08-13-12	6703879

DRAWN	REVISED
AAG	

DESIGNED	CHECKED
AAG	TJP

STRUCTURE ESTIMATED QUANTITIES
BRIDGE_NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224- 7.14
PID No. 82919

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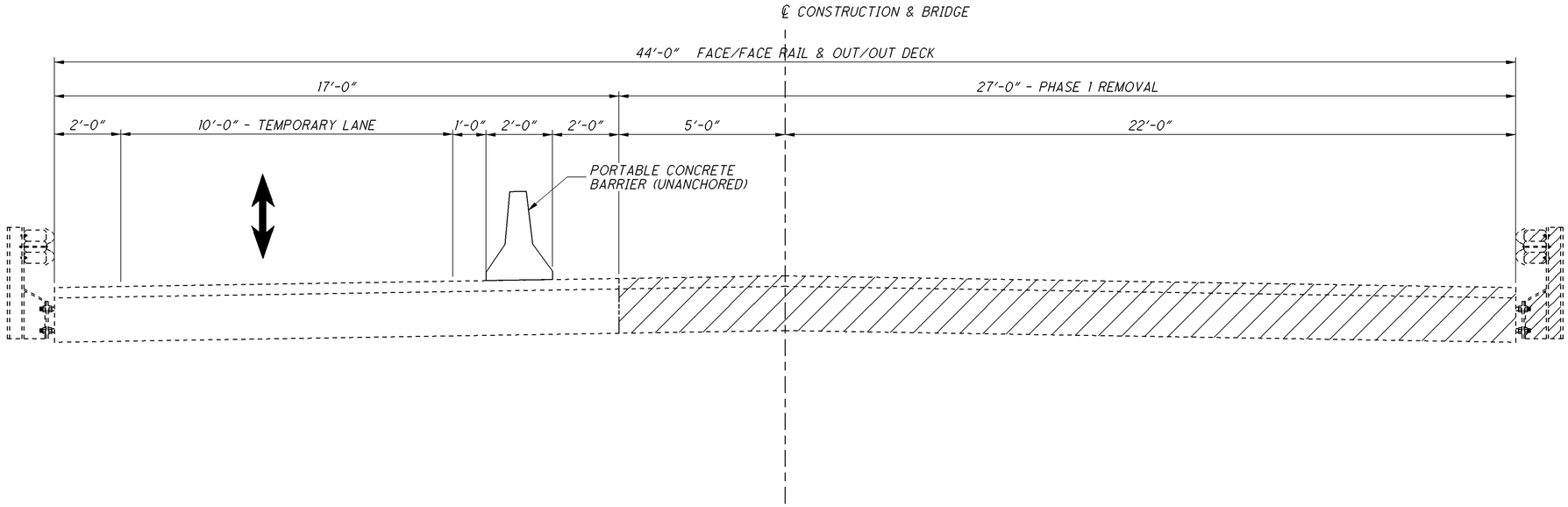
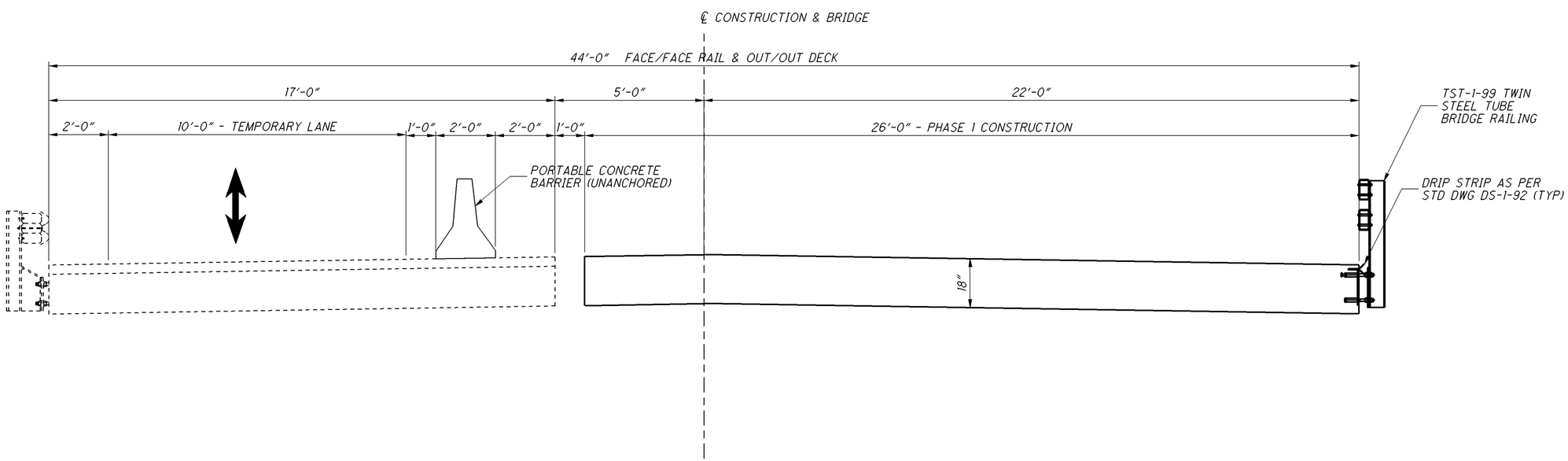


MAINTENANCE OF TRAFFIC - PHASE 1 REMOVAL



MAINTENANCE OF TRAFFIC - PHASE 1 CONSTRUCTION

INDICATES AREAS TO BE REMOVED

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
LMP	AAG	LMP	08-13-12
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TJP		6703879	

PHASE CONSTRUCTION - PHASE 1
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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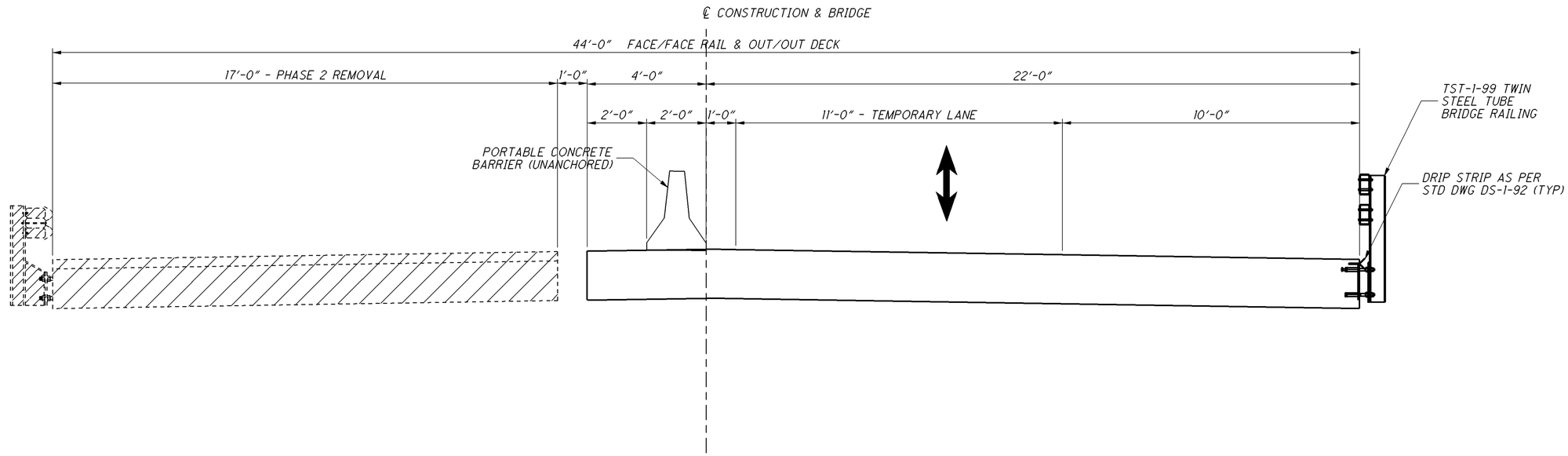
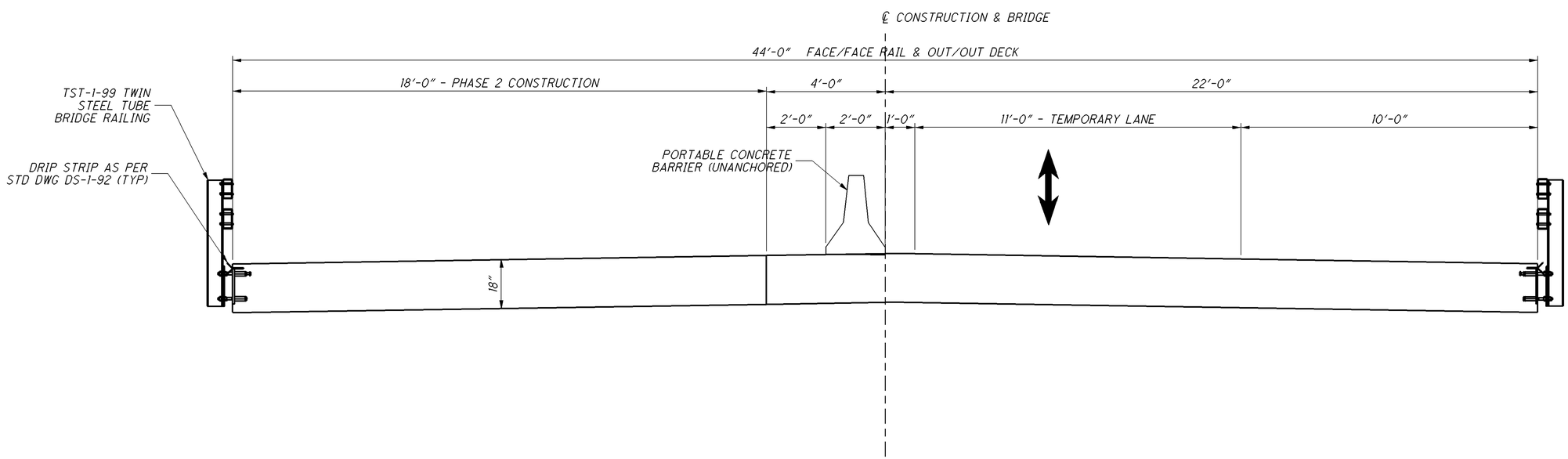


MAINTENANCE OF TRAFFIC - PHASE 2 REMOVAL



MAINTENANCE OF TRAFFIC - PHASE 2 CONSTRUCTION

INDICATES AREAS TO BE REMOVED

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
LMP	AAG	LMP	08-13-12
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TJP		6703879	

PHASE CONSTRUCTION - PHASE 2
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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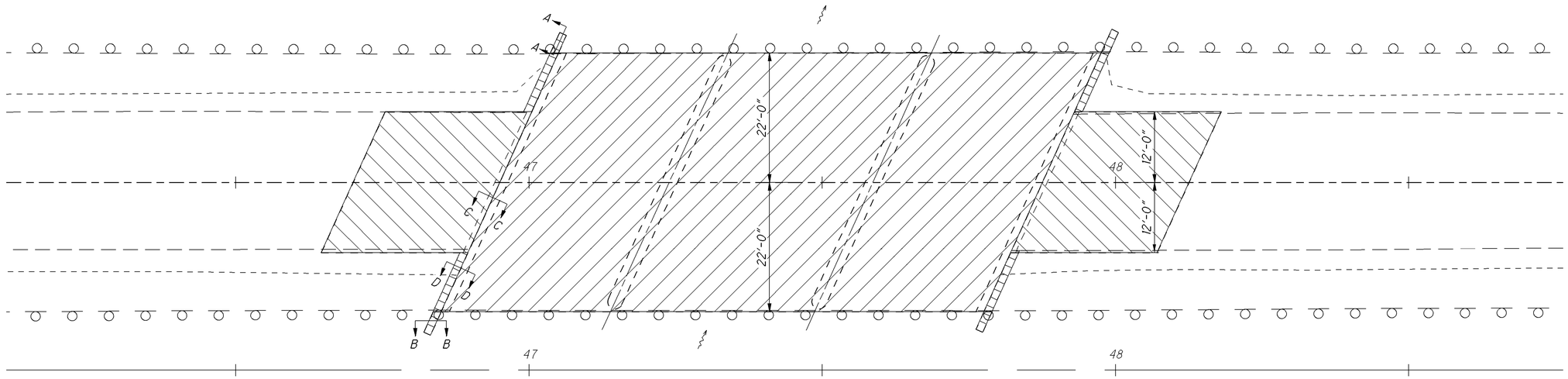
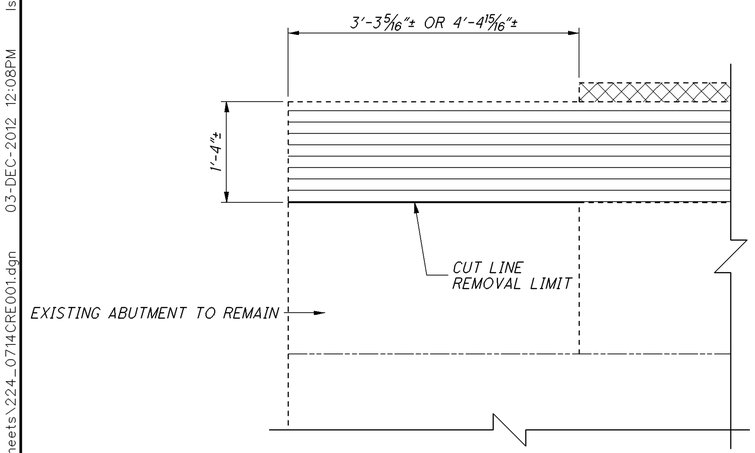


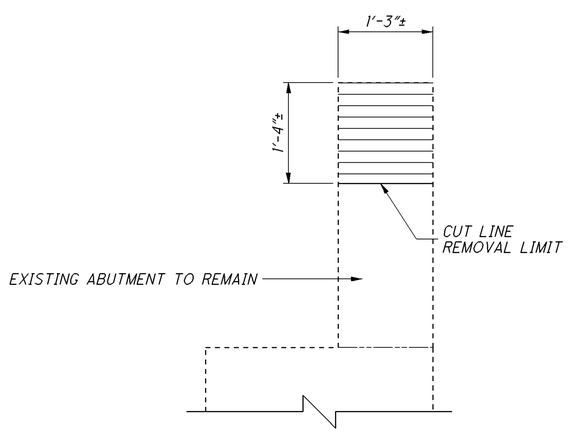
GENERAL REMOVAL PLAN

NOTES:

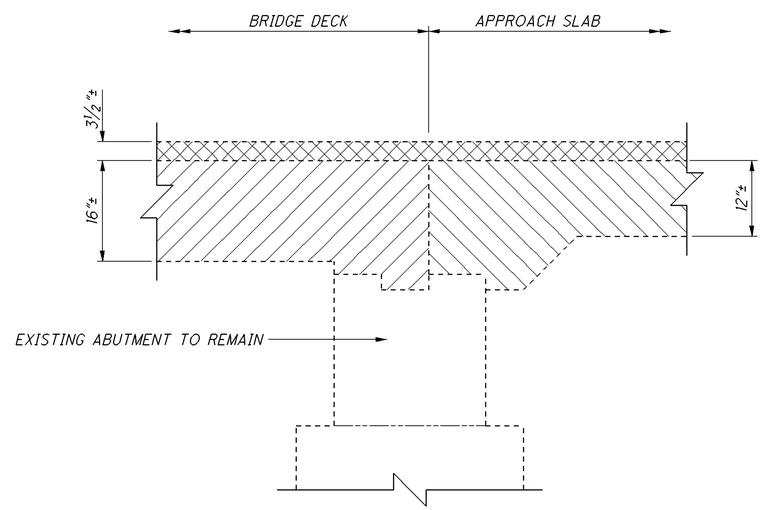
- EXISTING SUPERSTRUCTURE TO BE REMOVED UNDER ITEM 202, PORTION OF STRUCTURE REMOVED, AS PER PLAN
- EXISTING SUBSTRUCTURE TO BE REMOVED UNDER ITEM 202, PORTION OF STRUCTURE REMOVED, AS PER PLAN
- EXISTING APPROACH SLAB TO BE REMOVED UNDER ITEM 202, APPROACH SLAB REMOVED
- EXISTING ASPHALT CONCRETE SURFACE TO BE REMOVED UNDER ITEM 202, WEARING COURSE REMOVED



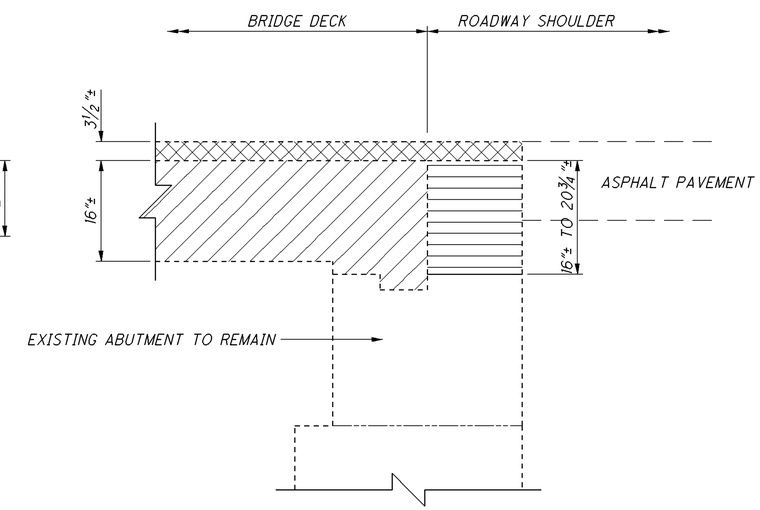
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
LMP	AAG	TJP	08-13-12
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6703879	

REMOVAL PLAN
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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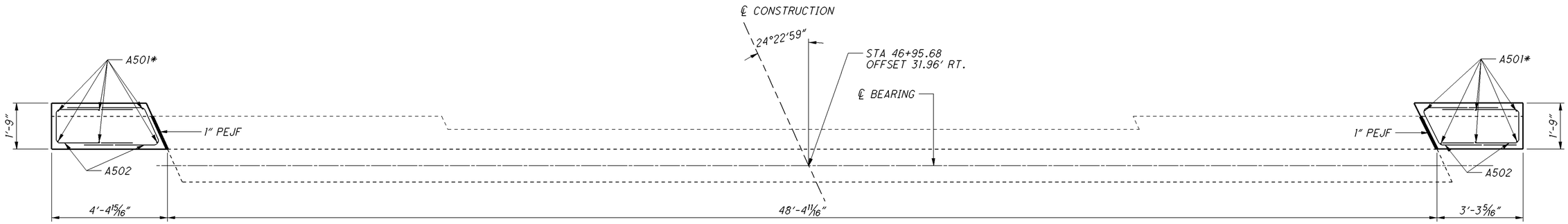
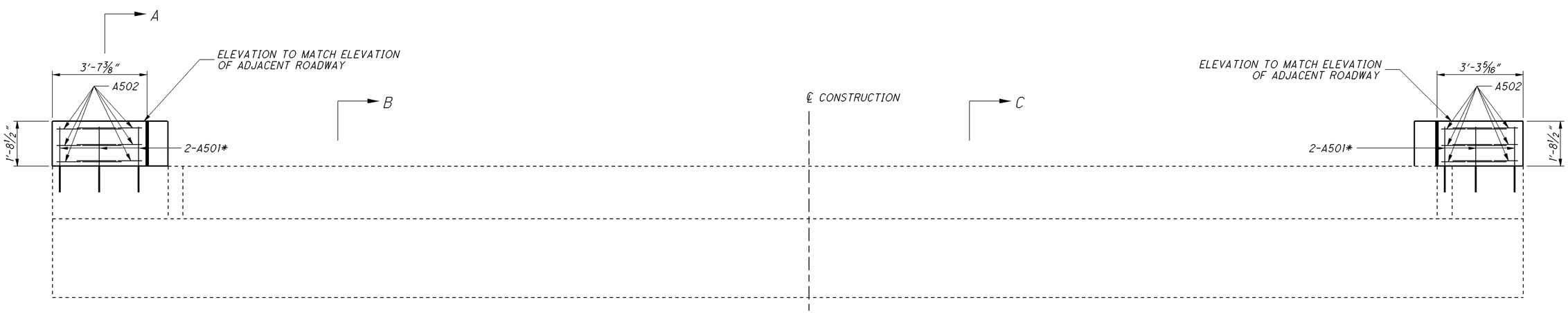
NOTES:

1. WINGWALL CAPS TO BE PLACED AFTER BRIDGE DECK IS PLACED
2. BARS DENOTED WITH * REQUIRE DOWEL HOLE WITH NONSHRINK NONMETALLIC GROUT.



ABUTMENT PLAN

REAR ABUTMENT SHOWN
FORWARD ABUTMENT SIMILAR
BRIDGE DECK NOT SHOWN



ABUTMENT ELEVATION

REAR ABUTMENT SHOWN
FORWARD ABUTMENT SIMILAR
BRIDGE DECK NOT SHOWN

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
LMP	AAG	TJP	08-13-12
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6703879	

ABUTMENT DETAILS
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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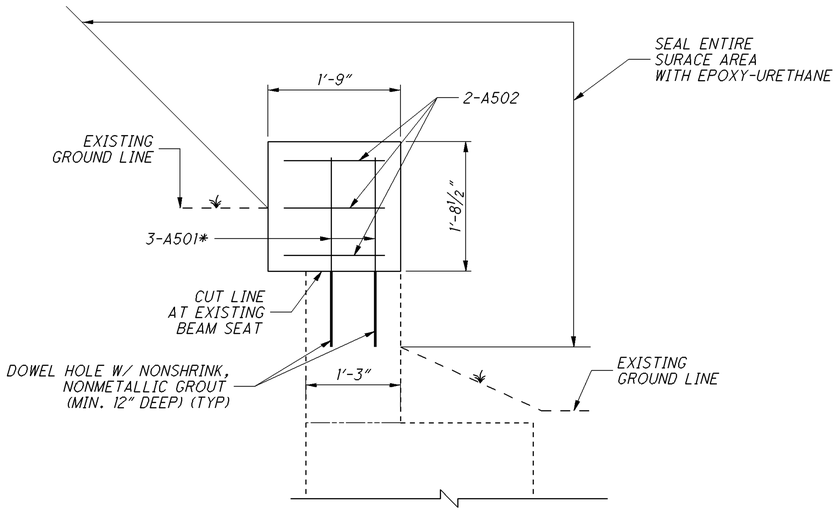
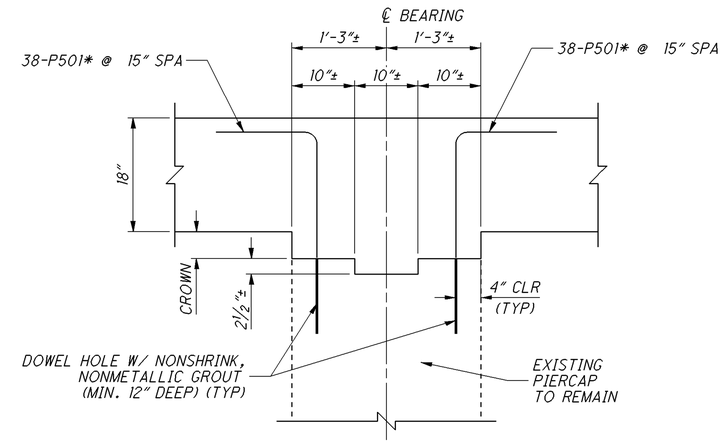
NOTES:

1. WINGWALL CAPS TO BE PLACED AFTER BRIDGE DECK IS PLACED
2. BARS DENOTED WITH * REQUIRE DOWEL HOLE WITH NONSHRINK NONMETALLIC GROUT.



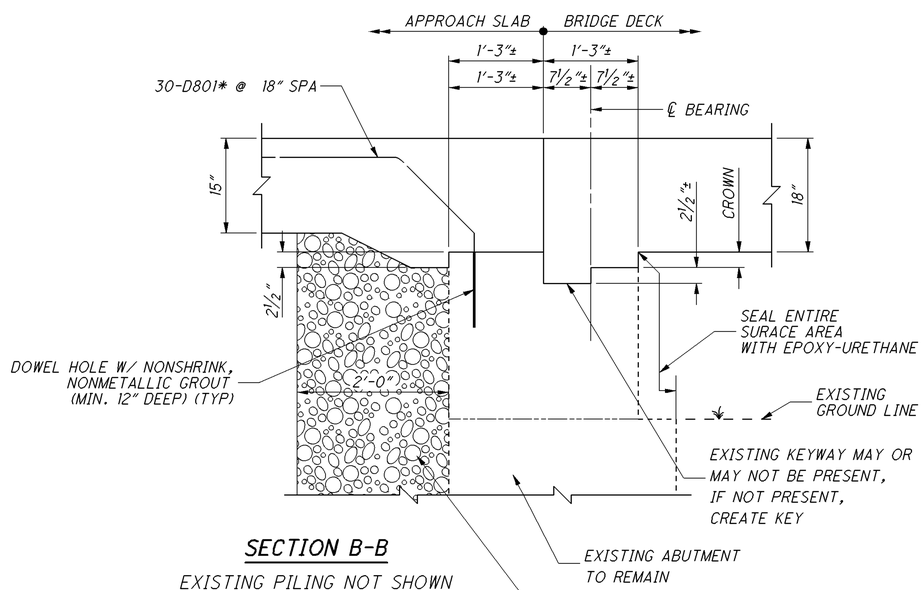
SECTION A-A

EXISTING PILING NOT SHOWN



SECTION THROUGH PIERCAP

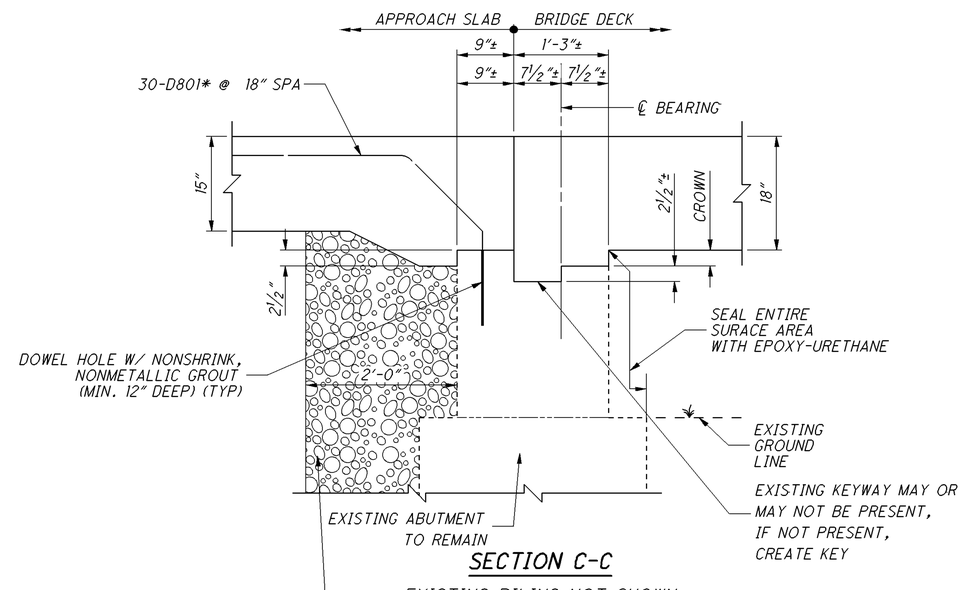
EXISTING PILING NOT SHOWN



SECTION B-B

EXISTING PILING NOT SHOWN

POROUS BACKFILL WITH FILTER FABRIC: 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS. PLACE TWO CUBIC FEET OF BAGGED NO. 3 AGGREGATE AT EACH WEEPHOLE. THE DEPARTMENT WILL INCLUDE BAGGED AGGREGATE WITH POROUS BACKFILL FOR PAYMENT.



SECTION C-C

EXISTING PILING NOT SHOWN

POROUS BACKFILL WITH FILTER FABRIC: 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS. PLACE TWO CUBIC FEET OF BAGGED NO. 3 AGGREGATE AT EACH WEEPHOLE. THE DEPARTMENT WILL INCLUDE BAGGED AGGREGATE WITH POROUS BACKFILL FOR PAYMENT.

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
LMP	AAG	TJP	08-13-12
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6703879	

ABUTMENT DETAILS
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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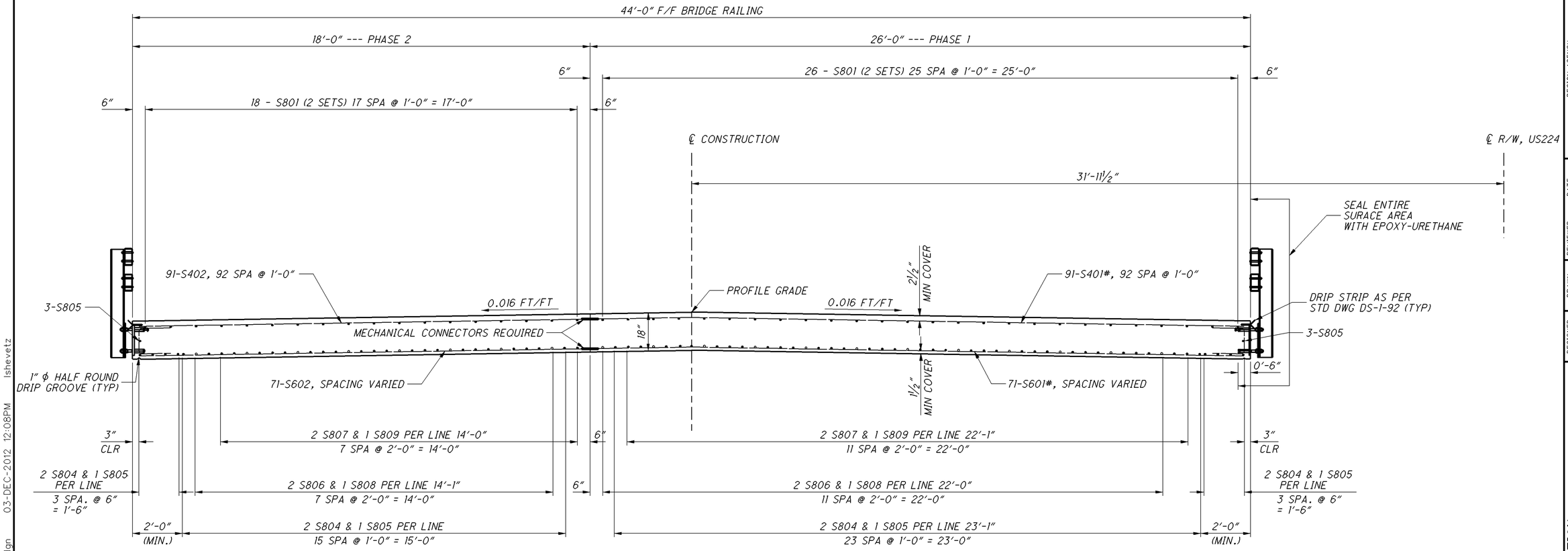

PROPOSED TRANSVERSE SECTION

FINISHED DECK SLAB ELEVATIONS

POINT	CL STATION	22.00' LT. DECK EDGE		4.00' LT. PHASE CONST JOINT		CL	22.00' RT. DECK EDGE	
END APPR SLAB	46+95.00	47+04.97 LT.	1115.99	46+93.18 LT.	1116.25	1116.32	46+85.02 RT.	1115.95
CL BRGS RA	46+95.68	47+05.65 LT.	1115.99	46+93.87 LT.	1116.25	1116.32	46+85.71 RT.	1115.95
MID POINT	47+09.79	47+19.76 LT.	1116.02	47+07.97 LT.	1116.29	1116.35	46+99.81 RT.	1115.98
CL BRGS PIER 1	47+23.89	47+33.86 LT.	1116.06	47+22.08 LT.	1116.32	1116.39	47+13.92 RT.	1116.01
MID POINT	47+41.26	47+51.23 LT.	1116.10	47+39.45 LT.	1116.36	1116.43	47+31.29 RT.	1116.05
CL BRGS PIER 2	47+58.63	47+68.60 LT.	1116.14	47+56.82 LT.	1116.40	1116.47	47+48.66 RT.	1116.09
MID POINT	47+72.73	47+82.71 LT.	1116.17	47+70.92 LT.	1116.43	1116.50	47+62.76 RT.	1116.12
CL BRGS FA	47+86.84	47+96.81 LT.	1116.20	47+85.03 LT.	1116.46	1116.53	47+76.87 RT.	1116.16
BEGIN APPR SLAB	47+87.52	47+97.50 LT.	1116.20	47+85.71 LT.	1116.46	1116.53	47+77.55 RT.	1116.16

LEGEND:

BARS DENOTED WITH # REQUIRE MECHANICAL CONNECTORS TO CONNECT TRANSVERSE BARS FROM PHASE 1 TO PHASE 2.

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
LMP	AAG	TJP	08-13-12
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6703879	

TRANSVERSE SECTION
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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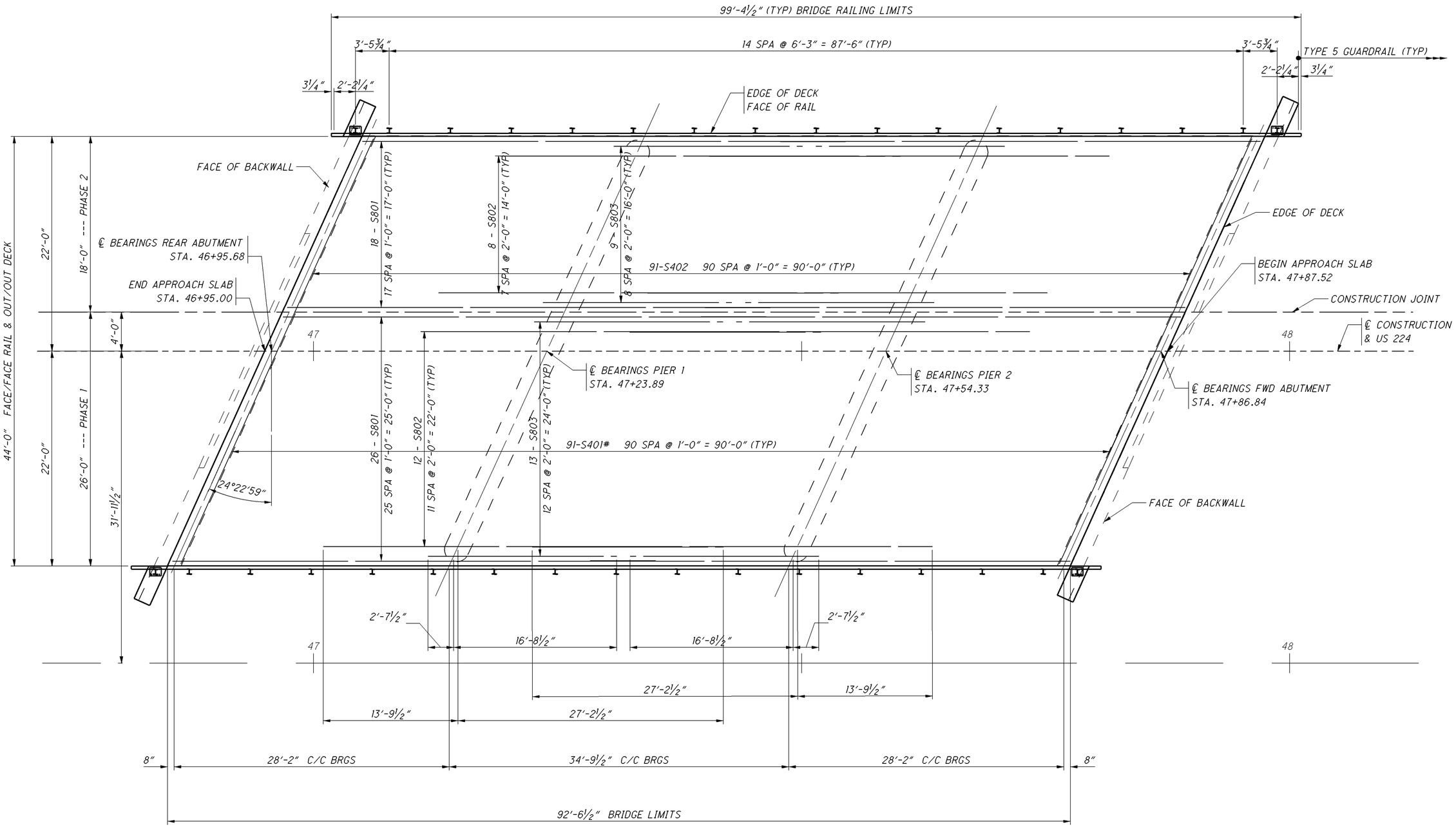

LEGEND:

BARS DENOTED WITH # REQUIRE MECHANICAL CONNECTORS TO CONNECT TRANSVERSE BARS FROM PHASE 1 TO PHASE 2.

DECK SLAB PLAN

TOP REINFORCING STEEL SHOWN

NOTES:

TRANSVERSE BARS
- PLACED PARALLEL TO THE ABUTMENTS
- SPACING MEASURED ALONG ℄ CONSTRUCTION & US 224

LONGITUDINAL BARS
- PLACED PARALLEL TO THE CENTERLINE
- SPACING MEASURED PERPENDICULAR TO ℄ CONSTRUCTION & US 224
- SPACE AS SHOWN ON TRANSVERSE SECTION

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
AAG	AAG	LMP	08-13-12
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TJP		6703879	

DECK SLAB PLAN
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224- 7.14
PID No. 82919

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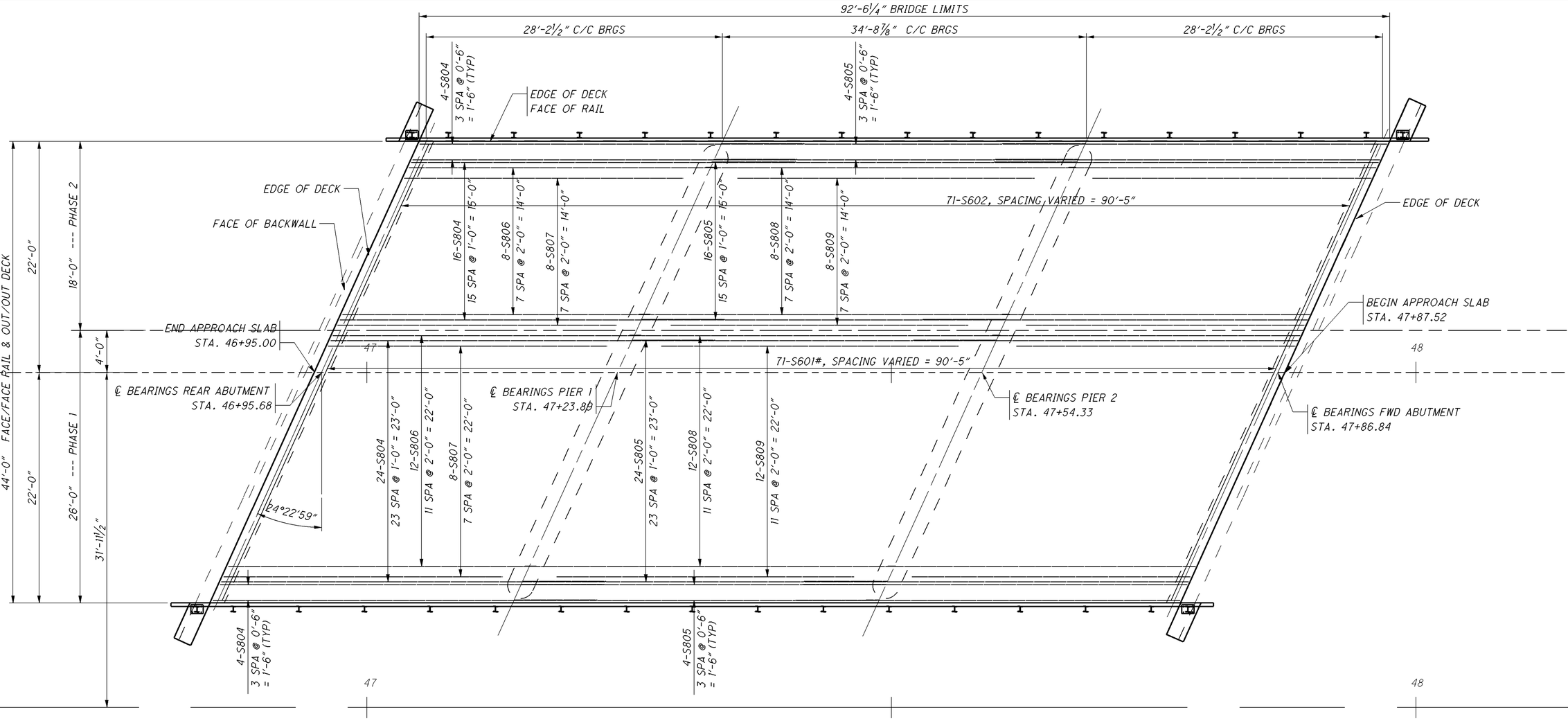
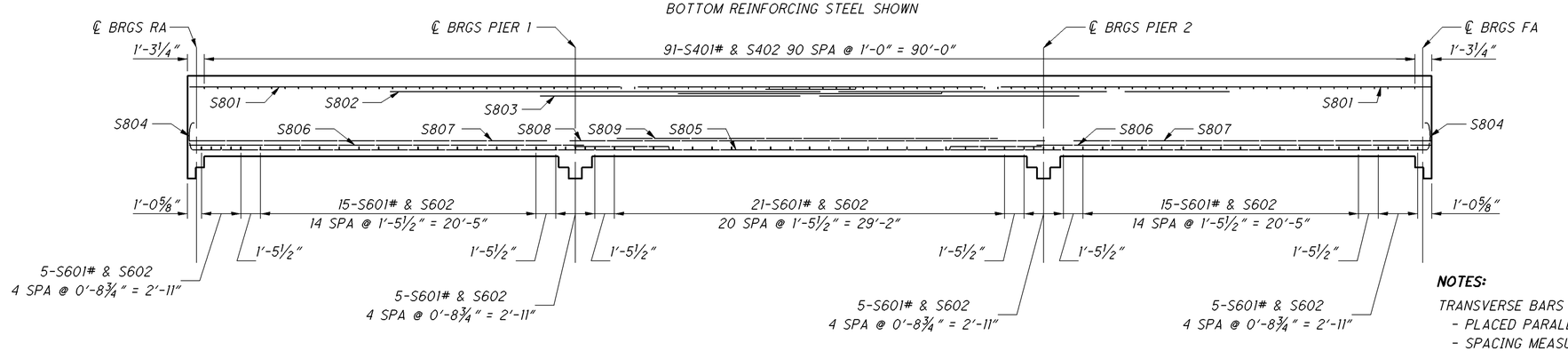


DECK SLAB PLAN

BOTTOM REINFORCING STEEL SHOWN



LEGEND:

BARS DENOTED WITH # REQUIRE MECHANICAL CONNECTORS TO CONNECT TRANSVERSE BARS FROM PHASE 1 TO PHASE 2.

SECTION ALONG ℄ ROADWAY

VERTICAL SCALE EXAGERATED FOR CLARITY

NOTES:

TRANSVERSE BARS
- PLACED PARALLEL TO THE ABUTMENTS
- SPACING MEASURED ALONG ℄ CONSTRUCTION & US 224

LONGITUDINAL BARS
- PLACED PARALLEL TO THE CENTERLINE
- SPACING MEASURED PERPENDICULAR TO ℄ CONSTRUCTION & US 224
- SPACE AS SHOWN ON TRANSVERSE SECTION

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
AAG	AAG	LMP	08-13-12
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TJP		6703879	

DECK SLAB PLAN
BRIDGE_NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224- 7.14
PID No. 82919

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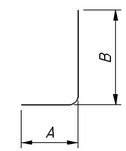
MARK	NUMBER						LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR ABUT	FWD ABUT	PIER 1	PIER 2	SUPER	TOTAL		(LBS)		A	B	C	D	E
S401 #					91	91	28'-3 3/4"	1722	STR					
S402					91	91	19'-6 1/4"	1187	STR					
S403					126	126	3'-4"	281	2	1'-3"	1'-0"	1'-3"		
S601 #					71	71	28'-3 1/2"	3018	STR					
S602					71	71	19'-6"	2080	STR					
S801					88	88	49'-6"	11631	STR					
S802					40	40	41'-0"	4379	STR					
S803					44	44	19'-4"	2272	STR					
S804					96	96	36'-7"	9378	16	35'-8"				
S805					54	54	34'-9"	5011	STR					
S806					40	40	29'-4"	3133	STR					
S807					40	40	26'-7"	2840	STR					
S808					20	20	35'-4"	1887	STR					
S809					20	20	28'-4"	1513	STR					
	SUPERSTRUCTURE SUB-TOTAL							50332						
A501*	12	12				24	2'-8 1/2"	68	STR					
A502	12	12				24	7'-0"	176	2	2'-11"	1'-5"	2'-11"		
D801*	30	30				60	5'-11"	1175	35	3'-3"	1'-0"	1'-0"	1'-3"	
	ABUTMENT SUB-TOTAL							1419						
P501*			76	76		152	3'-10 1/2"	615	1	1'-4"	2'-8"			
	PIER SUB-TOTAL							615						
	GRAND TOTAL							52366						

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TOOUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

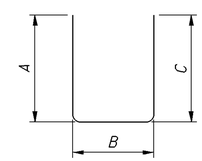
ALL REINFORNCING STEEL TO BE EPOXY COATED

*BARS DENOTED WITH * REQUIRE DOWEL HOLE WITH NONSHRINK NONMETALLIC*

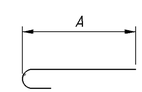
BARS DENOTED WITH # REQUIRE MECHANICAL CONNECTORS TO CONNECT TRANSVERSE BARS FROM PHASE 1 TO PHASE 2.



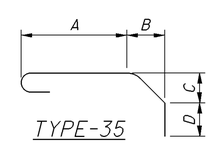
TYPE-1



TYPE-2



TYPE-16



TYPE-35

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

REVIEWED LMP DATE 08-13-12
STRUCTURE FILE NUMBER 6703879

DRAWN AAG REVISED

DESIGNED AAG CHECKED TJP

REINFORCING STEEL LIST
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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PROJECT: POR-224-0714	DRILLING FIRM / OPERATOR: TTL / CHRIS WHITE	DRILL RIG: CME 75 TRUCK 111	STATION / OFFSET:
TYPE: BRIDGE REPLACEMENT	SAMPLING FIRM / LOGGER: TTL / KKC	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: 82919 BR ID: POR-224-0714	DRILLING METHOD: 6.25" HSA&3-5/8" H20 ROTARY	CALIBRATION DATE: 12/28/09	ELEVATION: 0.0 (MSL) EOB: 110.0 ft.
START: 3/28/11 END: 3/29/11	SAMPLING METHOD: SPT / ST	ENERGY RATIO (%): 67.5	LAT / LONG: Not Recorded

EXPLORATION ID B-001-0-11

PAGE 1 OF 4

MATERIAL DESCRIPTION AND NOTES	ELEV. 0.0	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	INST.
CRUSHED STONE - 5 INCHES	-0.4																	
DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT AND TRACE GRAVEL, MOIST **EMBANKMENT FILL**		1 2	5 7 8	17	78	SS-1	NI	-	-	-	-	-	-	-	-	9	A-3a (V)	
-SOME CLAY	-4.0	3 4	2 5 10	17	67	SS-2	NI	-	-	-	-	-	-	-	-	12	A-3a (V)	
VERY STIFF, GRAY, **SILT AND CLAY**, SOME SAND AND SANDSTONE FRAGMENTS, MOIST	-6.0	5					2.25	-	-	-	-	-	-	-	-	14	A-6a (V)	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT AND TRACE GRAVEL, MOIST	-8.5	6 7 8	10 15 10	28	100	SS-3	NP	-	-	-	-	-	-	-	-	11	A-3a (V)	
STIFF, BROWN/GRAY, **SILT AND CLAY**, SOME SAND AND TRACE GRAVEL, MOIST		9 10	3 4 6	11	100	SS-4	1.50	2	5	23	27	43	27	16	11	20	A-6a (7)	
-BROWN		11 12	4 5 6	12	100	SS-5	NI	-	-	-	-	-	-	-	-	13	A-6a (V)	
-LITTLE SAND							2.00	-	-	-	-	-	-	-	-	16	A-6a (V)	
-BROWN/BLUE/GRAY		13 14	4 4 5	10	100	SS-6	1.50	-	-	-	-	-	-	-	-	29	A-6a (V)	
-BROWN SOME SAND	-15.5	15	4 6 6	14	39	SS-7	1.00	3	5	23	36	33	25	14	11	17	A-6a (7)	
LOOSE, BROWN/GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, WET (FREE WATER NOTED IN JAR)	-17.0	16 17	4 3 3	7	33	SS-8	NP	32	16	20	22	10	19	12	7	20	A-2-4 (0)	
MEDIUM STIFF, GRAY, **SILT AND CLAY**, TRACE SAND, MOIST		18	2 2 3	6	100	SS-9	0.80*	0	0	1	33	66	31	18	13	26	A-6a (9)	
		19 20	2 2 3	6	100	SS-10	0.25	-	-	-	-	-	-	-	-	30	A-6a (V)	
		21 22	2 2 3	6	100	SS-11	0.25	-	-	-	-	-	-	-	-	26	A-6a (V)	
		23 24 25			0	ST-12	-	-	-	-	-	-	-	-	-	-		
	-26.0	26																
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT AND TRACE GRAVEL, MOIST	-27.0	27	11 15 14	33	100	SS-13	NP	-	-	-	-	-	-	-	-	12	A-3a (V)	
STIFF TO VERY STIFF, GRAY, **SANDY SILT**, SOME CLAY, MOIST	-28.5						1.50	-	-	-	-	-	-	-	-	20	A-4a (V)	
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT AND TRACE GRAVEL, MOIST		29 30	5 6 8	16	56	SS-14	NP	-	-	-	-	-	-	-	-	15	A-3a (V)	

W

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 5/10/11 15:40 - S:\PROJECTS\7270.05.GPJ

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED | DRAWN | REVIEWED DATE | STRUCTURE FILE NUMBER 6703879
CHECKED | REVISED

SOIL PROFILES
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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PID: 82919	BR ID: POR-224-0714	PROJECT: POR-224-0714	STATION / OFFSET:	START: 3/28/11	END: 3/29/11	PG 2 OF 4	B-001-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	INST.
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT AND TRACE GRAVEL, MOIST *(continued)*	-33.5	32, 33																
MEDIUM STIFF, GRAY, **SILTY CLAY**, TRACE SAND, MOIST		34, 35	1 2 3	6	78	SS-15	0.24*	0	0	1	35	64	37	18	19	30	A-6b (12)	
		36, 37, 38			0	ST-16	-	-	-	-	-	-	-	-	-	-		
-MEDIUM STIFF TO STIFF		39, 40	0 4 4	9	100	SS-17	0.50	-	-	-	-	-	-	-	-	30	A-6a (V)	
		41, 42, 43																
-LITTLE SAND	-44.2	44	4 9 10	21	100	SS-18	0.50	-	-	-	-	-	-	-	-	24	A-6a (V)	
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT AND TRACE GRAVEL, MOIST		45, 46, 47, 48					NP	-	-	-	-	-	-	-	-	13	A-3a (V)	
MEDIUM DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT AND TRACE CLAY, WET -WET (FREE WATER NOTED IN JAR)	-48.5	49, 50	8 10 11	24	78	SS-19	NP	34	30	21	14	1	NP	NP	NP	14	A-1-b (0)	
		51, 52, 53																
-DENSE, MOIST		54, 55	11 13 15	32	100	SS-20	NP	-	-	-	-	-	-	-	-	9	A-1-b (V)	
		56, 57, 58																
-MEDIUM DENSE		59, 60	4 11 6	19	67	SS-21	NP	-	-	-	-	-	-	-	-	17	A-1-b (V)	
		61, 62, 63																
-SOME SILT, WET (FREE WATER NOTED IN JAR)		64	9															

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 5/10/11 15:40 - S:\PROJECTS\7270.05.GPJ

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DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED | CHECKED | DRAWN | REVISED | REVIEWED | DATE | STRUCTURE FILE NUMBER 6703879

SOIL PROFILES
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

PID: 82919	BR ID: POR-224-0714	PROJECT: POR-224-0714	STATION / OFFSET:	START: 3/28/11	END: 3/29/11	PG 3 OF 4	B-001-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	INST.
MEDIUM DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT AND TRACE CLAY, WET -WET (FREE WATER NOTED IN JAR) *(continued)*	-64.2	65	11 9	22	56	SS-22	NP	-	-	-	-	-	-	-	-	21	A-1-b (V)	
	-68.5	66, 67, 68																
VERY STIFF, GRAY, **SANDY SILT**, "AND" CLAY, TRACE SAND, MOIST		69	8 6 11	19	67	SS-23	NI	0	0	2	41	57	23	15	8	27	A-4a (8)	
		70, 71, 72, 73																
-WET (FREE WATER NOTED IN JAR)		74	3 8 9	19	100	SS-24	NI	-	-	-	-	-	-	-	-	30	A-4a (V)	
	-78.5	75, 76, 77, 78																
STIFF TO VERY STIFF, GRAY, **SILT AND CLAY**, TRACE SAND, MOIST		79	5 6 8	16	100	SS-25	0.75	0	0	1	36	63	28	17	11	23	A-6a (8)	
		80, 81, 82, 83																
		84	5 6 11	19	61	SS-26	1.00	-	-	-	-	-	-	-	-	22	A-6a (V)	
	-86.0	85, 86, 87, 88																
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT AND GRAVEL, WET (FREE WATER NOTED IN JAR)		89	13 15 9	27	83	SS-27	NP	-	-	-	-	-	-	-	-	10	A-3a (V)	
	-89.5	90					1.00	-	-	-	-	-	-	-	-	16	A-6a (V)	
VERY STIFF, GRAY, **SILT AND CLAY**, SOME SAND AND TRACE GRAVEL, MOIST		91, 92, 93																
-LITTLE SAND		94	6 8 11	21	67	SS-28	0.75	-	-	-	-	-	-	-	-	12	A-6a (V)	
		95, 96, 97																

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 5/10/11 15:40 - S:\PROJECTS\7270.05.GPJ

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DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED | DRAWN | REVIEWED | DATE
CHECKED | REVISED | STRUCTURE FILE NUMBER 6703879

SOIL PROFILES
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

PID: 82919	BR ID: POR-224-0714	PROJECT: POR-224-0714	STATION / OFFSET:	START: 3/28/11	END: 3/29/11	PG 4 OF 4	B-001-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV. -97.4	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	INST.
	-98.5	98																
HARD, GRAY, **SANDY SILT**, SOME CLAY, MOIST		99	14 17 25	47	100	SS-29	NI	-	-	-	-	-	-	-	-	20	A-4a (V)	
		100																
		101																
		102																
		103																
-LITTLE GRAVEL AND CLAY		104	25 23 34	64	78	SS-30	NI	12	14	35	28	11	NP	NP	NP	12	A-4a (1)	
		105																
		106																
		107																
		108																
		109	23 30 37	75	67	SS-31	NI	-	-	-	-	-	-	-	-	10	A-4a (V)	
	-110.0	EOB 110																

NOTES: WATER ROTARY ADVANCEMENT COMMENCED AT 25 FT. APPARENT METHANE GAS AT SS-13 SAMPLE INTERVAL. ADVANCED TO 60 FT. ON 3/28/11.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 22 CF CEMENT-BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 5/10/11 15:40 - S:\PROJECTS\7270.05.GPJ

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED | CHECKED | DRAWN | REVISED | REVIEWED | DATE | STRUCTURE FILE NUMBER 6703879

SOIL PROFILES
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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PROJECT: POR-224-0714	DRILLING FIRM / OPERATOR: TTL / CHRIS WHITE	DRILL RIG: CME 75 TRUCK 105	STATION / OFFSET:
TYPE: BRIDGE REPLACEMENT	SAMPLING FIRM / LOGGER: TTL / KKC	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: 82919 BR ID: POR-224-0714	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/28/09	ELEVATION: 0.0 (MSL) EOB: 43.5 ft.
START: 2/18/11 END: 2/18/11	SAMPLING METHOD: SPT / ST	ENERGY RATIO (%): 63	LAT / LONG: Not Recorded

EXPLORATION ID B-002-0-11

PAGE 1 OF 2

MATERIAL DESCRIPTION AND NOTES	ELEV. 0.0	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	INST.
ASPHALT GRINDINGS - 4 Inches	-0.3																	
CRUSHED STONE - 8 Inches	-1.0																	
STIFF, BROWN, **SILT AND CLAY**, SOME SAND AND LITTLE GRAVEL, MOIST **EMBANKMENT FILL** -3-INCH SAND SEAM AT 2.0 FT.	-3.5	1	6 10 5	16	100	SS-1	NI	-	-	-	-	-	-	-	-	25	A-6a (V)	
		2					4.00	-	-	-	-	-	-	-	-	14	A-6a (V)	
STIFF TO VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY AND TRACE GRAVEL, MOIST		3																
		4	6 5 5	10	100	SS-2	3.75	3	10	25	46	16	22	15	7	13	A-4a (5)	
		5																
		6	5 7 7	15	100	SS-3	2.75	-	-	-	-	-	-	-	-	13	A-4a (V)	
		7																
		8																
		9	4 5 6	12	100	SS-4	2.00	-	-	-	-	-	-	-	-	24	A-4a (V)	
		10																
		11																
	-12.5	12	5 7 6	14	100	SS-5	0.63*	-	-	-	-	-	-	-	-	18	A-4a (V)	
MEDIUM STIFF TO STIFF, BLACK, **SILT AND CLAY**, LITTLE SAND,GRAVEL,AND ORGANICS, HIGHLY ORGANIC, MOIST	-14.0	13	3 4 4	8	83	SS-6	1.50	-	-	-	-	-	-	-	-	66	A-6a (V)	
LOOSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT AND TRACE CLAY, MOIST		14																
		15	2 3 5	8	100	SS-7	NP	0	29	50	19	2	NP	NP	NP	31	A-3a (0)	
	-16.5	16	2 3 3	6	100	SS-8	NP	-	-	-	-	-	-	-	-	17	A-3a (V)	
MEDIUM STIFF, GRAY, **SANDY SILT**, "AND" CLAY, TRACE GRAVEL, MOIST		17					0.25	-	-	-	-	-	-	-	-	25	A-6a (V)	
	-18.5	18	3 3 3	6	83	SS-9	0.66*	2	3	10	44	41	25	18	7	18	A-4a (8)	
SOFT TO MEDIUM STIFF, GRAY, **SANDY SILT**, "AND" CLAY, MOIST		19	0 2 2	4	61	SS-10	0.75	-	-	-	-	-	-	-	-	20	A-4a (V)	
		20																
		21			83	ST-11	0.50*	0	0	1	49	50	26	21	5	24	A-4a (8)	
		22																
	-23.5	23																
SOFT TO MEDIUM STIFF, GRAY, **SILT**, "AND" CLAY, TRACE SAND AND GRAVEL, MOIST		24	2 3 3	6	22	SS-12	0.25	3	1	5	55	36	27	20	7	24	A-4b (8)	
		25																
-MEDIUM STIFF, LITTLE SAND		26																
		27	3 3 3	6	100	SS-13	0.50	-	-	-	-	-	-	-	-	33	A-4b (V)	
	-28.0	28																
MEDIUM DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE SILT AND CLAY, MOIST		29	4 3 9	13	100	SS-14	NP	36	31	24	8	1	NP	NP	NP	12	A-1-b (0)	
		30																

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DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED | CHECKED | DRAWN | REVISED | REVIEWED | DATE | STRUCTURE FILE NUMBER 6703879

SOIL PROFILES
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

PID: 82919	BR ID: POR-224-0714	PROJECT: POR-224-0714	STATION / OFFSET:	START: 2/18/11	END: 2/18/11	PG 2 OF 2	B-002-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	INST.
MEDIUM DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE SILT AND CLAY, MOIST *(continued)*	-33.5	32, 33																
DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT AND GRAVEL, MOIST	-38.5	34, 35, 36, 37, 38	17 15 17	34	100	SS-15	NP	-	-	-	-	-	-	-	-	9	A-3a (V)	
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT AND GRAVEL, MOIST	-43.5	39, 40, 41, 42, 43	6 9 9	19	100	SS-16	NP	-	-	-	-	-	-	-	-	8	A-3a (V)	
		EOB																

NOTES: POSTPONED AT 43.5 FT. & HOLE COVERED WITH 4X4'S & GRAVEL. ADVANCED THROUGH SAME BOREHOLE AS B-002-1-11 WITH DIFFERENT DRILL RIG ON 3/14/11.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 5/10/11 15:40 - S:\PROJECTS\7270.05.GPJ

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED | DRAWN | REVIEWED | DATE
CHECKED | REVISED | STRUCTURE FILE NUMBER 6703879

SOIL PROFILES
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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PROJECT: POR-224-0714	DRILLING FIRM / OPERATOR: TTL / CHRIS WHITE	DRILL RIG: CME 75 TRUCK 111	STATION / OFFSET:	EXPLORATION ID B-002-1-11
TYPE: BRIDGE REPLACEMENT	SAMPLING FIRM / LOGGER: TTL / KKC	HAMMER: CME AUTOMATIC	ALIGNMENT:	
PID: 82919 BR ID: POR-224-0714	DRILLING METHOD:4.25" HSA&3-5/8" H2O ROTARY	CALIBRATION DATE: 12/28/09	ELEVATION: 0.0 (MSL) EOB: 93.5 ft.	PAGE 1 OF 3
START: 3/14/11 END: 3/15/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 67.5	LAT / LONG: Not Recorded	

MATERIAL DESCRIPTION AND NOTES	ELEV. 0.0	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	INST.
SEE B-002-0-11		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30																

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 5/10/11 15:40 - S:\PROJECTS\7270.05.GPJ

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DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED | CHECKED | DRAWN | REVISED | REVIEWED | DATE | STRUCTURE FILE NUMBER 6703879

SOIL PROFILES
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

PID: 82919	BR ID: POR-224-0714	PROJECT: POR-224-0714	STATION / OFFSET:	START: 3/14/11	END: 3/15/11	PG 2 OF 3	B-002-1-11

MATERIAL DESCRIPTION AND NOTES	ELEV. -31.0	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	INST.
SEE B-002-0-11 *(continued)*		32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43																
MEDIUM DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT AND TRACE CLAY, WET (FREE WATER NOTED IN JAR)	-43.5	44, 45	5 10 16	29	67	SS-17	NP	34	19	34	12	1	NP	NP	NP	19	A-1-b (0)	
-MOIST		46, 47, 48, 49, 50	6 5 7	14	56	SS-18	NP	-	-	-	-	-	-	-	-	12	A-3a (V)	
VERY STIFF, GRAY, **SANDY SILT**, "AND" CLAY, WET (FREE WATER NOTED IN JAR)	-53.5	51, 52, 53, 54, 55	8 10 10	22	100	SS-19	NI	-	-	-	-	-	-	-	-	28	A-4a (V)	
-STIFF, MOIST		56, 57, 58, 59, 60	4 5 6	12	78	SS-20	NI	0	6	1	45	48	25	21	4	24	A-4a (8)	
		61, 62, 63, 64	4															

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 5/10/11 15:40 - S:\PROJECTS\7270.05.GPJ

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED | CHECKED | DRAWN | REVISED | REVIEWED | DATE | STRUCTURE FILE NUMBER 6703879

SOIL PROFILES
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

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PID: 82919	BR ID: POR-224-0714	PROJECT: POR-224-0714	STATION / OFFSET:	START: 3/14/11	END: 3/15/11	PG 3 OF 3	B-002-1-11

MATERIAL DESCRIPTION AND NOTES	ELEV. -64.2	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	INST.
VERY STIFF, GRAY, **SANDY SILT**, "AND" CLAY, WET (FREE WATER NOTED IN JAR) *(continued)*		65	6 6	14	44	SS-21	NI	-	-	-	-	-	-	-	-	34	A-6a (V)	
		66																
		67																
		68																
		69	4 7 8	17	56	SS-22	NI	-	-	-	-	-	-	-	-	30	A-6a (V)	
		70																
		71																
		72																
	-73.5	73																
MEDIUM STIFF, GRAY, **SILT**, "AND" CLAY, MOIST		74	3 3 4	8	100	SS-23	NI	0	0	0	52	48	27	21	6	28	A-4b (8)	
		75																
		76																
		77																
	-78.5	78																
STIFF TO VERY STIFF, GRAY, **SILT AND CLAY**, LITTLE SAND, MOIST	-79.7	79	4 8 16	27	100	SS-24	1.75	-	-	-	-	-	-	-	-	25	A-6a (V)	
		80					NP	-	-	-	-	-	-	-	-	22	A-3a (V)	
DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT, WET (FREE WATER NOTED IN JAR)		81																
		82																
	-83.5	83																
VERY STIFF, GRAY, **SILT AND CLAY**, SOME SAND AND LITTLE GRAVEL, MOIST		84	8 9 16	28	56	SS-25	3.75	-	-	-	-	-	-	-	-	13	A-6a (V)	
		85																
		86																
		87																
	-88.5	88																
DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT AND GRAVEL, MOIST		89	16 13 22	39	67	SS-26	NP	-	-	-	-	-	-	-	-	10	A-3a (V)	
		90																
		91																
-TERMINATED ON 3/14/11 AT 93.5 FT. DUE TO 8 FT. OF CAVED SOILS PRIOR TO PLANNED SS-27 SAMPLE. ABANDONED BOREHOLE ON 3/15/11.		92																
	-93.5	93																

EOB

NOTES: SEE B-002-0-11 FOR 0 FT. TO 43.5 FT. WATER ROTARY ADVANCEMENT COMMENCED AT 45 FT.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: USED 0.5 BAG ASPHALT PATCH; PUMPED 21 CF CEMENT-BENTONITE GROUT

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DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED | CHECKED | DRAWN | REVISED | REVIEWED | DATE | STRUCTURE FILE NUMBER 6703879

SOIL PROFILES
BRIDGE NO.: POR-224-0714
US224 OVER CONGRESS LAKE OUTLET

POR-224-7.14
PID No. 82919

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: POR-US 224-0.00

PID: 82919

Date: 12/06/2012

1. Waterway Permit Time Restrictions:

Complete all work in streams and wetlands depicted in the plans, Special Provisions, and/or working drawings for temporary fill by October 23, 2014.

For work on streams and wetlands, the Department will consider the Contractor's submission of an extension to the waterway permit end date based on project constraints. In order to be considered, the Contractor must submit a justification to the Engineer at least two months prior to the waterway permit end date.

The Engineer will submit the request for a time extension to ODOT-Office of Environmental Services-Waterway Permits Unit (614-466-7100) for consideration and coordination with the USACE and/or Ohio EPA.

2. Deviations from Permitted Construction Activities:

No deviation from the requirements for work in streams and wetlands depicted in the plans, Special Provisions, and/or working drawings may be made unless a modification has been submitted to ODOT and approved by the appropriate agencies (i.e., USACE, Ohio EPA, USCG, ODNR, and USFWS).

For emergency situations resulting in unanticipated impacts to streams or wetlands, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT- Office of Environmental Services-Waterway Permits Unit must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-Office of Environmental Services-Waterway Permits Unit (614-466-7100) for consideration and coordination with the appropriate agencies. Notification must be made at least two months prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

3. In-Stream Work Restrictions:

Work in the following sensitive streams is further restricted as follows:

Steam Name /Description	Location	Work restriction dates (No in-stream work permitted)
UNT of Wingfoot Lake Outlet (Stream 1)	SLM 2.81	none
UNT of Congress Lake Outlet (Stream 3)	SLM 7.14	none
Branch of Congress Lake Outlet (Stream 4)	SLM 8.31	none

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. Examples of "fill" include (but are not limited to) bridge piers, abutments, culverts, rock channel protection, scour protection, and temporary work pads.

Fills (such as temporary work pads) placed within a stream identified in the above table outside of the work restriction dates can continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

The Engineer will submit the request for a time extension to ODOT-Office of Environmental Services-Waterway Permits Unit (614-466-7100) for consideration and coordination with the USACE and/or Ohio

EPA.

4. Materials:

Materials utilized in or adjacent to streams and wetlands on this project for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Broken asphalt is specifically excluded.

Cadmium, chromium, arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in streams.

5. Cultural Resources:

If archeological sites or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the Office of Environmental Services–Cultural Resource Section (614-466-7100) and the Ohio Historic Preservation Office.

In the event of human remains are discovered the Engineer shall also contact the Portage County Sherriff's Office at (330) 678-7012.

6. Water Resource Demarcation:

All streams, wetlands, lakes, and ponds indicated on the plans shall be demarcated in the field as per SS 832 prior to site disturbance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

7. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:

- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1- 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours.

All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

8. Blasting:

State law requires notification to the Ohio Department of Natural Resources should blasting be required within or near stream channels (See ORC 1533.58 & CMS 107.09).

Notify Engineer, in writing, for submission to ODOT Office of Environmental Services–Waterway Permits Unit (614-466-7100) for coordination with the Ohio Department of Natural Resources.

9. Waterway Permits:

RGP Section B (Maintenance) and Section C (Temporary Construction, Access, and Dewatering) are authorized for POR-US 224-0.00, PID 82919. A copy of the RGP shall be kept at the work site at all times and made available to all contractors and subcontractors. The Permit is effective starting: 12-06-2012. The Permit expires: 10-23-2014.

10. Bridge Inspection:

Prior to the removal of bridge structures, the underside must be carefully examined for the presence of birds and bats. Should any birds or bats be found roosting on the underside of the bridge, the Contractor is required to notify the Engineer for coordination with ODOT-Office of Environmental Services (614-466-7100).

11. Project Inspection:

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer. Please forward a copy to ODOT Office of Environmental Services. Waterway Permits Unit (614-466-7100).

12. Temporary Access Fills (Stream and River Crossings and Fills):

Special Provisions Notes:
Regional General Permit (RGP) for the State of Ohio Department of Transportation

Definitions:

Hydraulic Opening
The cross sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM)*.

Standard Temporary Discharge
The hydraulic opening providing a capacity for a discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM shall be known as the Standard Temporary Discharge. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow Characteristics of Rural Unregulated Streams in Ohio" provides equations that estimate monthly flow for Ohio Waterways These flows are also available in a web application by USGS StreamStats, (http//water.usgs.gov/osw/streamstat/ohi.html).

Average Monthly Flow
The average monthly flow represents the estimated "normal" flow.

Temporary Access Fills (TAFs)
In Streams and Rivers may include, but are not limited to, causeways, cofferdams (as described by other items of work), access pads, temporary bridges, etc. The Contractor will make every attempt minimize disturbance to water bodies, stream banks, stream beds, and approach sections during the construction, maintenance, and removal of the TAFs. Fording of streams and rivers is prohibited. Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. ***TAFs shall be designed and constructed so that the***

hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM)*.

Do not exceed an overall length of 250 feet measured linearly upstream to downstream.

Requirements

21 calendar days prior to the initiation of any in-stream work, provide the Engineer with working drawings that include:

- Plan view drawing (200 scale or less) showing the location of all jurisdictional temporary fill proposed for use on the project
- Scaled Cross section and profile drawing showing the OHWM and the proposed compliant hydraulic opening.
- A description of the installation and staging of all temporary jurisdictional fill over the life of the contract.
- A description of the removal of all jurisdictional temporary fill and restoration of the channel and all areas impacted by the jurisdictional temporary fill.
- A schedule outlining the timing of the placement and removal of all TAF.
- Have an Ohio Registered Engineer prepare, sign, seal and date the working drawings. Have a second Ohio Registered Engineer check, sign, seal and date the working drawings. The preparer and checker are two different Engineers. Include the following statement on the working drawings:
  "These working drawings were prepared in compliance with the terms of the Regional General Permit and all contract documents."
- Include supporting hydraulic calculations developed by the engineer(s) who sealed the working drawings.
- Do not begin in-stream work until the Engineer has accepted the working drawings.

If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (as defined in SS 832) or the peak discharge from the 2 year event, using the method described in the most current version of the Department's Location and Design Manual Volume II.

If the Contractor proposes a TAF which does not provide for the Standard Temporary Discharge (discharge equal to twice the highest monthly flow without producing a rise in the backwater), the Contractor is required to coordinate the request for the contractor's proposed TAF with the Engineer and the ODOT Office of Environmental Services (OES). The Department makes no guarantee to grant the request. The contractor's proposed TAF request will be coordinated by OES with the U.S. Army Corps of Engineers and the Ohio Environmental Protection Agency, as appropriate.

In addition to the requirements described in SS 832, supply the Engineer/OES with the following:

1. A plan and Profile showing the temporary access fill(s) with the OHWM.
2. Cross section showing the hydraulic opening and the anticipated discharge flow.
3. A restoration plan for the area affected by the temporary access fill(s).
4. A schedule outlining the timing of the placement and removal of the temporary access fill(s)

The time frame allowed for the coordination of the contractor's proposed TAF will be a minimum of 60 days. Installation of any jurisdictional fill without a 404 Permit authorized by the USACE is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

Temporary Access Fills Construction and Payment

Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with 404/401 permits or other environmental commitments that have been included in the

construction plans.

Temporary Access Fills (TAFs) in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, temporary bridges, etc. Make every attempt minimize disturbance to water bodies, stream banks, stream beds, and approach sections during the construction, maintenance, and removal of the TAFs. Make every attempt to minimize disturbance to water bodies during construction, maintenance and removal of the causeway and access fills. Construct the causeway and access fills as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the causeway and access fills in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, bed, and approach sections. Construct the causeway and access fills as to not erode stream banks or allow sediment deposits in the channel.

Prior to the initiation of any in-stream work, establish a monument upstream of proposed temporary crossing or temporary construction access fill to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the OHWM. If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (SS 832.02) or the peak discharge from the 2 year event, using the method described in the most current version of the Department's Location and Design Manual Volume II.

Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor.

Temporary access fills placed by the contractor above the OHWM are not subject to the 404/401 permit constraints. All costs associated with furnishing and maintaining the above referenced monument is incidental to the work.

Should the water elevation of the waterway, exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the permitted temporary access fill up to the elevation of 1 foot above the OHWM, except as noted. Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of temporary access structures that are related to the construction access fill.

Should the water elevation of the waterway exceed the elevation shown on the monument, the Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 of the Construction & Materials Specifications.

Construct the causeway and fills, not including cofferdams and temporary bridges, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the causeway and access fills will not damage property or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used.

A. Furnish culverts on the existing stream bottom.
B. Avoid a drop in water elevation at the downstream end of the culvert.
C. Furnish a sufficient number of culverts in addition to stream openings to providing a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
D. Furnish culverts with a minimum diameter of 18 inches (0.5 m)...

For all fill and surface material placed in the channel, around the culverts, or on the surface of the causeway and access fills furnish clean, non-erodible, nontoxic dumped rock fill, Type B, C, or D, as specified in C&MS 703.19.B. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

When the work requiring the TAFs is complete all portions of the TAF (including all rock and culverts)

will be removed in its entirety. The material will not be disposed in other waters of the US or isolated wetland. The stream bottom affected by the causeway and access fills will be restored to its pre-construction elevations. The TAF will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

Unless specific Temporary Access Fill compensation is included in the plans, all environmental protection and control associated with the 404/401 permit activities, including but not limited to Temporary Access Fills, are incidental to the work within the boundaries of the 404/401 permit or as otherwise identified in the 404/401 permit application.

13. Excavation Activities:

Excavated material will be placed at the upland site and disposed of in such a manner that sediment and runoff to streams is controlled and minimized. If any changes to the proposed work are deemed necessary, you must notify and coordinate with the Office of Environmental Services-Waterway Permits Unit (614-466-7100).