

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

SUM-91-7.89

CITY OF MONROE FALLS  
SUMMIT COUNTY

PROJECT DESCRIPTION  
MINOR MAINTENANCE WORK TO STRUCTURE SUM-91-0789,  
INCLUDING AN ASPHALT OVERLAY, SIDEWALK REPLACEMENT,  
GUARDRAIL REPLACEMENT, AND OTHER MINOR WORK.

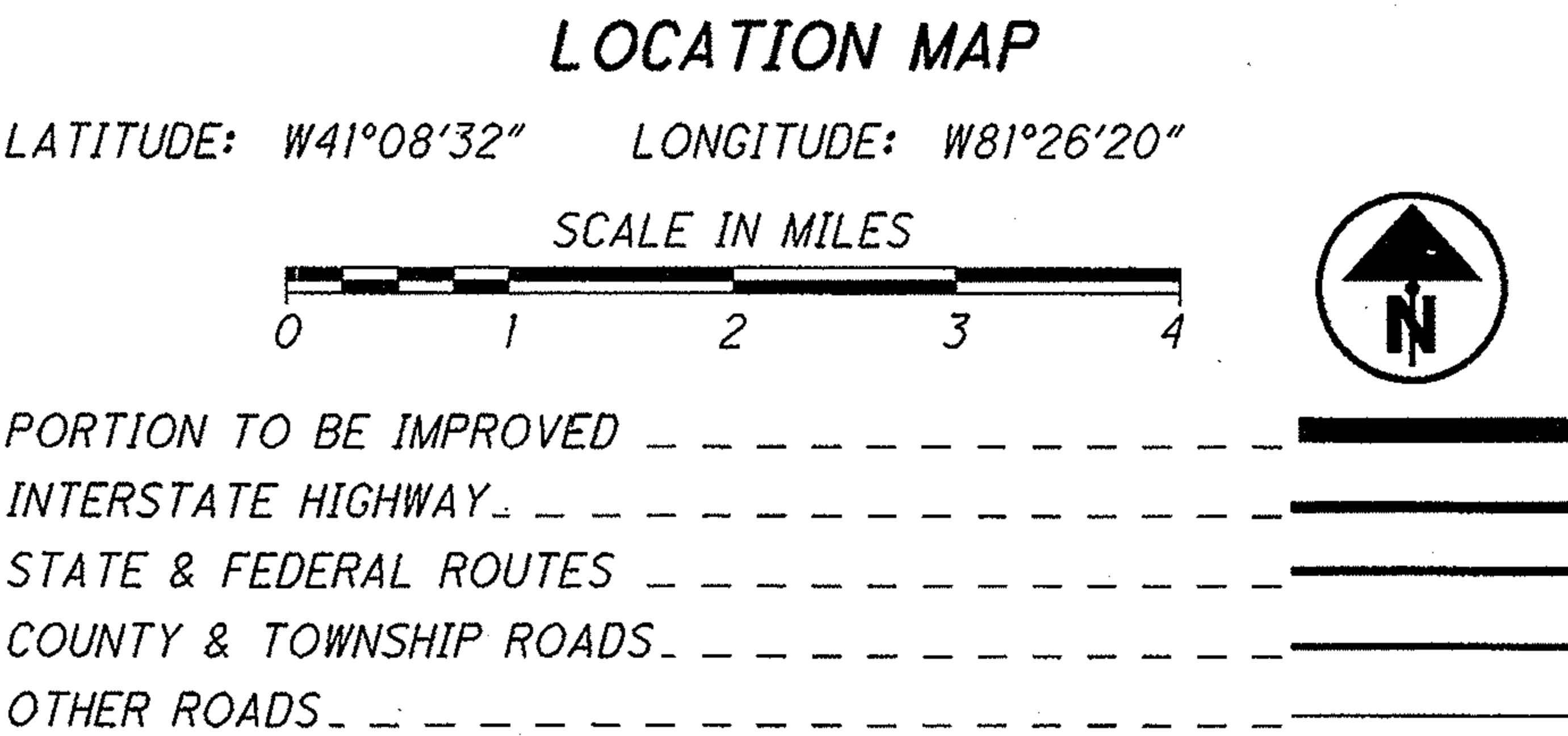
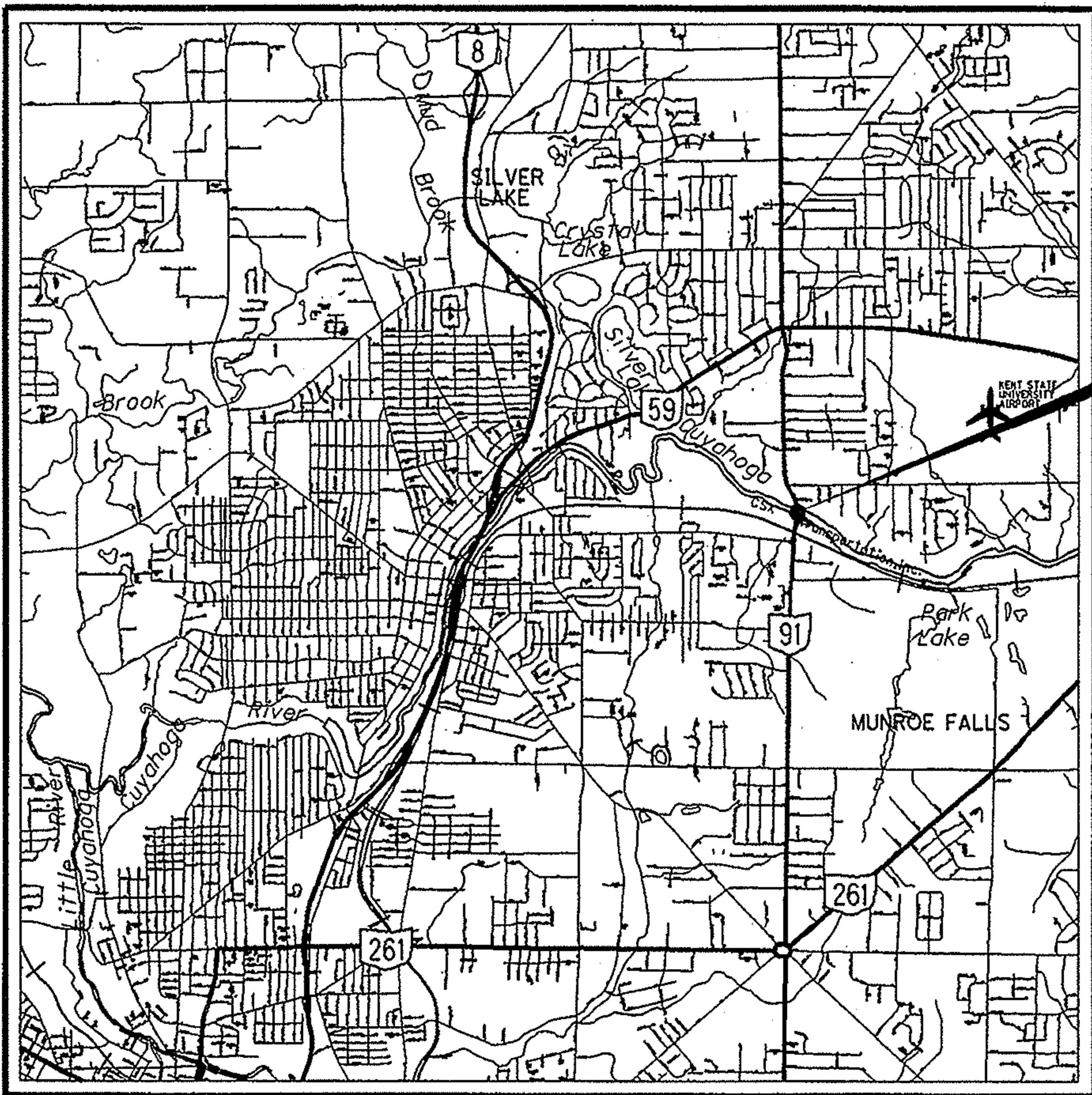
PROJECT EARTH DISTURBED AREA: 0 ACRES  
ESTIMATED CONTRACTOR EDA: N/A (MAINTENANCE PROJECT)  
NOTICE OF INTENT EDA: N/A (MAINTENANCE PROJECT)

2008 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 APPROVE THESE PLANS AND DECLARE THAT  
THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE  
CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DE-  
TOURS WILL BE PROVIDED AS INDICATED ON SHEET 4.

APPROVED *E. M. Gettle*  
DATE 1-9-09 DISTRICT DEPUTY DIRECTOR  
  
APPROVED *James J. Beasley, Jr.*  
DATE 1-16-09 DIRECTOR, DEPARTMENT OF  
TRANSPORTATION

PROJECT LOCATION  
SLM: 7.89



DESIGN DESIGNATION

DESIGN FUNCTIONAL CLASSIFICATION:

URBAN PRINCIPAL 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 PROTECTIVE  
SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:  
ODOT --- DISTRICT 4 PRODUCTION  
2088 SOUTH ARLINGTON ROAD  
AKRON, OHIO 44306

INDEX OF SHEETS:

TITLE SHEET	1
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GENERAL SUMMARY	7
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STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS
BP-3.1	10/19/07	MT-105.10	10/18/02			800-2008 1/16/09
BP-4.1	7/16/04	MT-105.11	10/18/02			832 4/25/06
						843 4/18/03
						848 4/15/05
DM-4.3	7/19/02	TC-41.20	1/19/01			
DM-4.4	7/19/02	TC-42.20	7/16/04			
		TC-52.10	1/19/07			
GR-1.1	7/16/04	TC-52.20	1/19/07			
GR-2.1	1/16/04					
GR-3.1	1/19/07					
GR-3.4	1/20/06					
GR-5.2	1/16/04					
GR-5.3	1/16/04					
GR-6.1	4/18/03					
MT-97.10	9/05/06					
MT-101.60	9/20/06					

ENGINEERS SEAL:

STATE OF OHIO  
THOMAS J. POWELL  
E-61151  
REGISTERED PROFESSIONAL ENGINEER

SIGNED *Thomas J. Powell*  
DATE: 1-8-09

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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 BIDIRECTIONAL LANE SHALL BE MAINTAINED ON THE EXISTING PAVEMENT OR COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK EXCEPT WHEN THE DETOUR IS IN EFFECT AND EXCEPT FOR THE RESTRICTIONS IN NOTE #2 BELOW.
2. A MINIMUM OF 2 LANES OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BETWEEN 6:00AM AND 9:00PM MONDAY THROUGH FRIDAY AND BETWEEN 6:00AM AND 6:00PM SATURDAY AND SUNDAY, EXCEPT WHEN THE DETOUR IS IN EFFECT.
3. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2211 AND THE CITY OF MUNROE FALLS (330)-688-7491, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.
4. CONES SHALL NOT BE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS OR LANE REDUCTIONS THAT ARE IN OPERATION ONE-HALF HOUR AFTER SUNSET OR ONE HALF-HOUR BEFORE SUNRISE. ALL NIGHTTIME LANE RESTRICTIONS SHALL REQUIRE DRUMS OR BARRICADES AT A MAXIMUM SPACING OF FIFTY (50) FEET. WEIGHTED CHANNELIZERS MAY BE USED IN ACCORDANCE WITH THE ADDITIONAL NOTE HEREIN.
5. 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.
6. A QUANTITY OF 15 CU. YDS. OF 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.
7. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

WORK REQUIRED WHILE THE DETOUR IS IN EFFECT

THE FOLLOWING ITEMS OF WORK ARE REQUIRED TO BE COMPLETED DURING THE TIME WHEN THE DETOUR IS IN EFFECT. (SEQUENCE TO BE DETERMINED BY THE CONTRACTOR):

- REMOVE AND REPLACE EXISTING ASPHALT CONCRETE OVERLAY
- REPAIR PORTIONS OF THE DECK WITH FULL DEPTH REPAIR
- REMOVE AND REPLACE GUARDRAIL
- APPLICATION OF TYPE 3 WATERPROOFING
- APPLICATION OF HOT APPLIED JOINT SEALER
- PATCHING OF CONCRETE BRIDGE DECK

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) AND THE CITY OF MUNROE FALLS (330-688-7491) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

DETOUR DURATION

THE MAXIMUM LENGTH OF TIME FOR THE DETOUR ROUTE TO BE IN EFFECT SHALL BE 1 (ONE) WEEKEND (9:00PM FRIDAY TO 6:00AM MONDAY). CONSTRUCTION WORK MAY BE PERFORMED BEFORE AND AFTER THE DETOUR LIMITATION DATES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM THE CONSTRUCTION WORK WITHIN THE DETOUR LIMITATION TIME. THE FAILURE OF THE CONTRACTOR TO MEET THE DETOUR LIMITATION DATES WILL CAUSE SEPARATE DISINCENTIVES OF \$750.00 PER CALENDAR DAY OF OVERRUN OF DETOUR LIMITATION TIME TO BE ASSESSED.

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

SR-91 WILL BE  
CLOSED (date)  
FOR 2 DAYS  
INFO: 330-786-2211

W20-H13-60

DESIGNATED LOCAL DETOUR ROUTE

IN ADDITION TO THE OFFICIAL, SIGNED DETOUR ROUTE, A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE SECONDARY, UNSIGNED DETOUR ROUTE OR "DESIGNATED LOCAL DETOUR ROUTE." THIS ROUTE IS SHOWN ON THE NEXT SHEET. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

PERMITTED DETOUR DATES

THE CONTRACTOR IS ONLY PERMITTED TO CLOSE SR-91 ON ONE OF THE FOLLOWING 2 WEEKENDS.

MAY 30-31, 2009  
JUNE 6-7, 2009

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.

HOLIDAY LANE CLOSURES

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPENED TO TRAFFIC AND ALL SIGNALS IN OPERATION DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	NEW YEARS
MEMORIAL DAY	FOURTH OF JULY
LABOR DAY	THANKSGIVING

DAY OF THE WEEK	TIMES ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 12:00N MONDAY
MONDAY	12:00N FRIDAY THROUGH 12:00N TUESDAY
TUESDAY	12:00N MONDAY THROUGH 12:00N WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 12:00N THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 12:00N MONDAY
FRIDAY	12:00N THURSDAY THROUGH 12:00N MONDAY
SATURDAY	12:00N FRIDAY THROUGH 12:00N MONDAY

THERE SHALL NOT BE ANY EXTENSIONS DUE TO WEATHER OR MATERIAL DELAYS WHATSOEVER.

SHALL THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, DISINCENTIVES OF \$750.00 SHALL BE ASSESSED TO THE CONTRACTOR FOR EACH CALENDAR DAY THAT THE LANES REMAIN CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

WEIGHTED CHANNELIZERS

THE WEIGHTED CHANNELIZER SHALL BE PREDOMINATELY ORANGE IN COLOR AND SHALL BE MADE OF A LIGHTWEIGHT, FLEXIBLE, AND DEFORMABLE MATERIAL. THEY SHALL BE AT LEAST 42 INCHES IN HEIGHT WITH A WEIGHTED BASE. THEY MAY HAVE A "HANDLE" OR LIFTING DEVICE WHICH EXTENDS ABOVE THE 42 INCH MINIMUM HEIGHT.

THE MARKINGS ON THE WEIGHTED CHANNELIZER SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES 6 INCHES WIDE. EACH WEIGHTED CHANNELIZER SHALL HAVE A MINIMUM OF TWO ORANGE AND TWO WHITE STRIPES. ANY NON-RETROREFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES SHALL NOT EXCEED 2 INCHES WIDE. THE WEIGHTED CHANNELIZER SHALL HAVE A 4-INCH MINIMUM WIDTH, REGARDLESS OF ORIENTATION.

ON FREEWAYS AND MULTILANE HIGHWAYS:  
USE OF WEIGHTED CHANNELIZERS ON FREEWAYS AND MULTILANE HIGHWAYS SHALL BE LIMITED TO SHORT-TERM OPERATION, GENERALLY TWELVE HOURS OR LESS, FOR EITHER DAY OR NIGHT. UPON COMPLETION OF WORK WITHIN THE ABOVE NOTED TIME PERIOD, THE WEIGHTED CHANNELIZERS SHALL BE REMOVED. THE WEIGHTED CHANNELIZERS MAY AGAIN BE PLACED ON THE HIGHWAY WHEN THE WORK IS TO RESUME ON THE FOLLOWING DAY OR NIGHT. ANY LANE CLOSURE USING CHANNELIZATION DEVICES, EXPECTED TO REMAIN FOR MORE THAN TWELVE HOURS, SHALL REQUIRE THE USE OF DRUMS OR BARRIERS.

WHEN USED AT NIGHT, WEIGHTED CHANNELIZERS SHALL ONLY BE PLACED IN THE "TANGENT AREA". THE "TANGENT AREA" IS DEFINED AS THE AREA AFTER THE TRANSITION TAPER WHERE THE WORK TAKES PLACE. DRUMS SHALL BE USED IN THE TRANSITION TAPERS FOR NIGHT OPERATIONS.

ON OTHER HIGHWAYS:  
THERE ARE NO DURATIONS OF WORK RESTRICTIONS FOR USE OF WEIGHTED CHANNELIZERS ON ALL OTHER TYPES OF HIGHWAYS, DAY OR NIGHT. ON THESE ROADWAYS THE WEIGHTED CHANNELIZER MAY BE USED IN THE TRANSITION TAPERS AS WELL AS IN THE TANGENT AREAS, DAY OR NIGHT.

MAXIMUM SPACING OF THE WEIGHTED CHANNELIZER SHALL BE 40 FEET.

STEPS SHOULD BE TAKEN TO ENSURE THAT THE WEIGHTED CHANNELIZERS WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. BALLASTS SHOULD NOT PRESENT A HAZARD IF THE WEIGHTED CHANNELIZERS ARE INADVERTENTLY STRUCK, NOR SHOULD THEY AFFECT THE VISIBILITY OF THE WEIGHTED CHANNELIZERS. ALL BALLASTS USED SHOULD BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

ALTERNATE MAINTENANCE OF TRAFFIC PLANS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE ODOT DISTRICT CONSTRUCTION ENGINEER.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

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MAINTENANCE OF CANOE TRAFFIC

CANOE TRAFFIC SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION OF THE PROJECT EITHER THROUGH EXISTING RIVER CHANNEL OR THROUGH PORTAGE TRAIL APPROVED BY THE ENGINEER.

ADEQUATE SIGNING BOTH UPSTREAM AND DOWNSTREAM SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR. THE FOLLOWING TYPE SIGNS ARE CONSIDERED TO BE MINIMUM TREATMENT.

1. APPROXIMATELY ONE-QUARTER MILE UPSTREAM, ADVANCED WARNING TYPE SIGNS ON BOTH BANKS;
2. APPROXIMATELY 300 FEET UPSTREAM, SIGNS SPECIFYING ACTIONS REQUIRED OF CANOEIST ON BOTH BANKS;
3. APPROXIMATELY ONE-QUARTER MILE DOWNSTREAM, ADVANCE WARNING TYPE SIGNS ON BOTH BANKS; AND
4. APPROXIMATELY 300 FEET DOWNSTREAM, SIGNS SPECIFYING ACTIONS REQUIRED OF CANOEIST OF BOTH BANKS.

THE ABOVE SIGNING SHALL BE MOUNTED IN SUCH A WAY AS TO BE A MINIMUM OF 4 FEET ABOVE THE WATER LEVEL, UNOBSTRUCTED BY TREE BRANCHES, AND PROPERLY ANGLED FOR MAXIMUM VISIBILITY FROM THE MAIN CLEAR CHANNEL. THE METHOD OF SUPPORTING THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. UPON COMPLETION OF THE PROJECT, THE SIGNS AND SUPPORT SYSTEMS SHALL BE COMPLETELY REMOVED FROM THE RIVER CHANNEL. THE CONTRACTOR SHALL NOTIFY LOCAL CANOE LIVERIES USING THIS PORTION OF THE RIVER AT LEAST 10 DAYS PRIOR TO ANY CHANGES AFFECTING CANOE TRAFFIC.

PORTAGE TRAILS IF USED SHALL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR WITH THE LEAST POSSIBLE DISTURBANCE TO THE SURROUNDING AREA. THE TRAIL SHALL BE ADEQUATELY MARKED IN BOTH DIRECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE RIGHT-OF-WAY FOR THE PORTAGE TRAILS IF REQUIRED.

IN THE EVENT PIPES ARE USED TO DIVERT OR CARRY RIVER WATER, BOTH THE INLET AND OUTLET ENDS SHALL BE ADEQUATELY PROTECTED BY GRATES OR FENCE SO THAT PEOPLE OR CANOES ARE NOT DRAWN THROUGH OR HELD BY THEM.

WORK ABOVE THE BIKE AND HIKE TRAIL

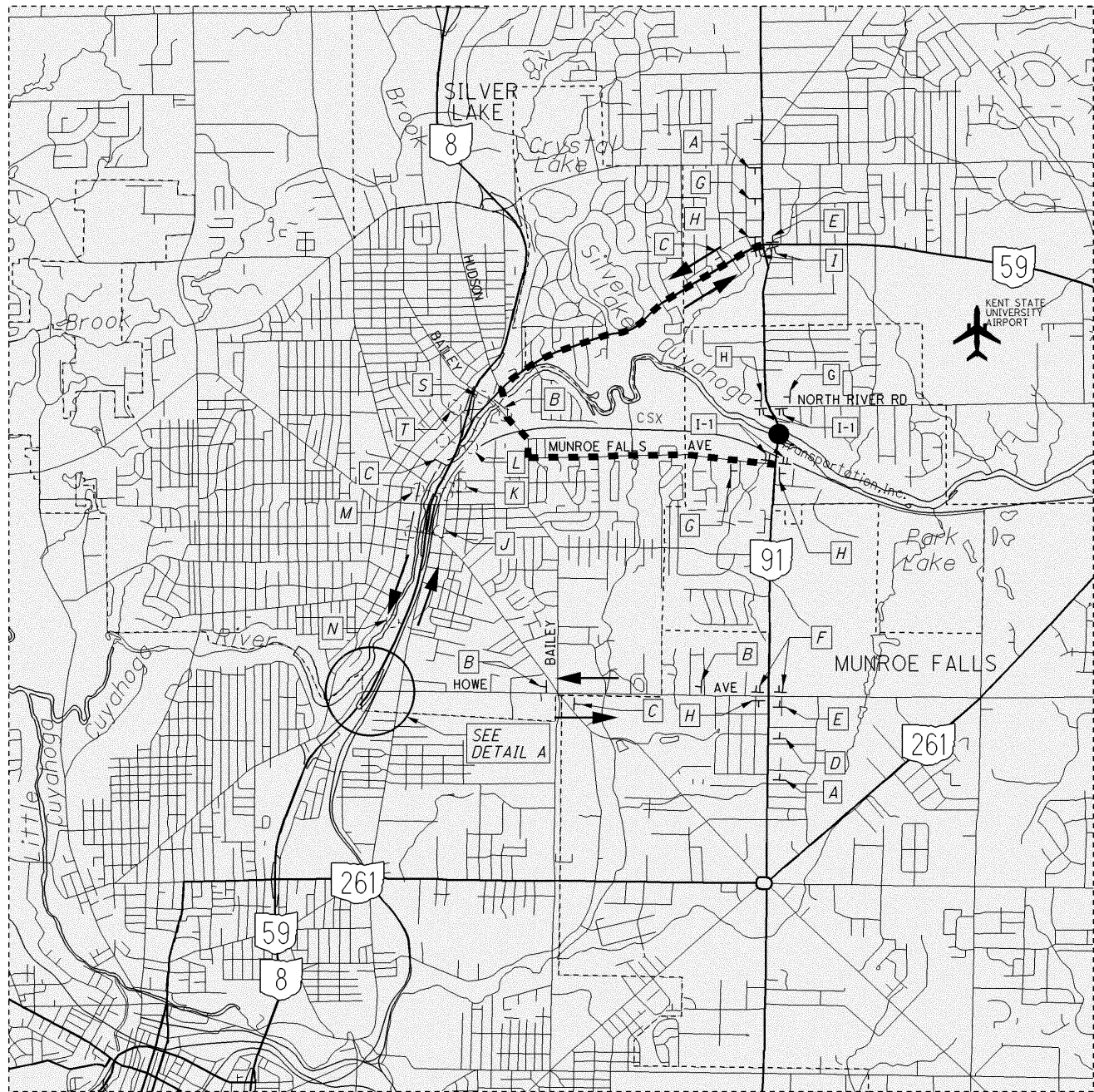
DURING CONSTRUCTION, BIKE AND HIKE TRAIL TRAFFIC WILL BE RE-ROUTED TO CROSS SR-91 INSTEAD OF CROSSING UNDER THE BRIDGE. WHEN WORKING AT NIGHT, THE FLAGGERS WILL ASSIST THE CROSSING TRAFFIC. ALL COSTS ASSOCIATED WITH RE-ROUTING THE TRAFFIC WILL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

PRIOR TO CLOSING THE BIKE AND HIKE TRAIL UNDER THE BRIDGE, THE CONTRACTOR WILL NOTIFY THE METROPARKS SERVING SUMMIT COUNTY, PAUL WILKERSON, 330-867-5511, AT LEAST 18 DAYS IN ADVANCE OF THE CLOSURE.

ITEM 642 - EDGE LINE  
ITEM 642 - CENTERLINE

THESE ITEMS WILL BE USED ON THE SURFACE COURSE OF STRUCTURE SUM-91-0789. PLACE PERMANENT STRIPING TO MATCH LOCATIONS OF EXISTING STRIPING.

CALCULATED	M/JH	MAINTENANCE OF TRAFFIC GENERAL NOTES		SUM-91-7.89	3 14
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DETOUR PLAN FOR SR-91

- CLOSE AS PER STD. DWG. MT-101.60
- ↑ OFFICIAL DETOUR ROUTE: HOWE AVE / SR-8 & SR-59 / SR-59
- LOCAL ALTERNATE ROUTE: MUNROE FALLS AVE / BAILEY RD / HUDSON DR / SR-59

LEGEND

<div>A</div> <div>DETOUR 1500 FT</div> <div>W20-2-36</div>	<div>D</div> <div>DETOUR</div> <div>M4-8-24</div> <div>91</div> <div>MI-5-24-2</div> <div>←</div> <div>M5-1L-21</div>	<div>G</div> <div>DETOUR</div> <div>M4-8-24</div> <div>91</div> <div>MI-5-24-2</div> <div>↱</div> <div>M5-1R-21</div>
<div>B</div> <div>DETOUR</div> <div>M4-8-24</div> <div>NORTH</div> <div>M3-1-24</div> <div>91</div> <div>MI-5-24-2</div>	<div>E</div> <div>DETOUR</div> <div>M4-8-24</div> <div>91</div> <div>MI-5-24-2</div> <div>←</div> <div>M6-1L-21</div>	<div>H</div> <div>DETOUR</div> <div>M4-8-24</div> <div>91</div> <div>MI-5-24-2</div> <div>→</div> <div>M6-1R-21</div>
<div>C</div> <div>DETOUR</div> <div>M4-8-24</div> <div>SOUTH</div> <div>M3-3-24</div> <div>91</div> <div>MI-5-24-2</div>	<div>ROAD CLOSED MILES AHEAD LOCAL TRAFFIC ONLY</div> <div>R11-3A-60</div> <div>← DETOUR</div> <div>M4-10L-48</div> <div>F #</div>	<div>ROAD CLOSED MILES AHEAD LOCAL TRAFFIC ONLY</div> <div>R11-3A-60</div> <div>DETOUR →</div> <div>M4-10R-48</div> <div>I #</div>
		<div>BRIDGE OUT MILES AHEAD LOCAL TRAFFIC ONLY</div> <div>R11-3B-60</div> <div>I-1 #</div>

# ON TYPE III BARRICADE

NOTE: REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.



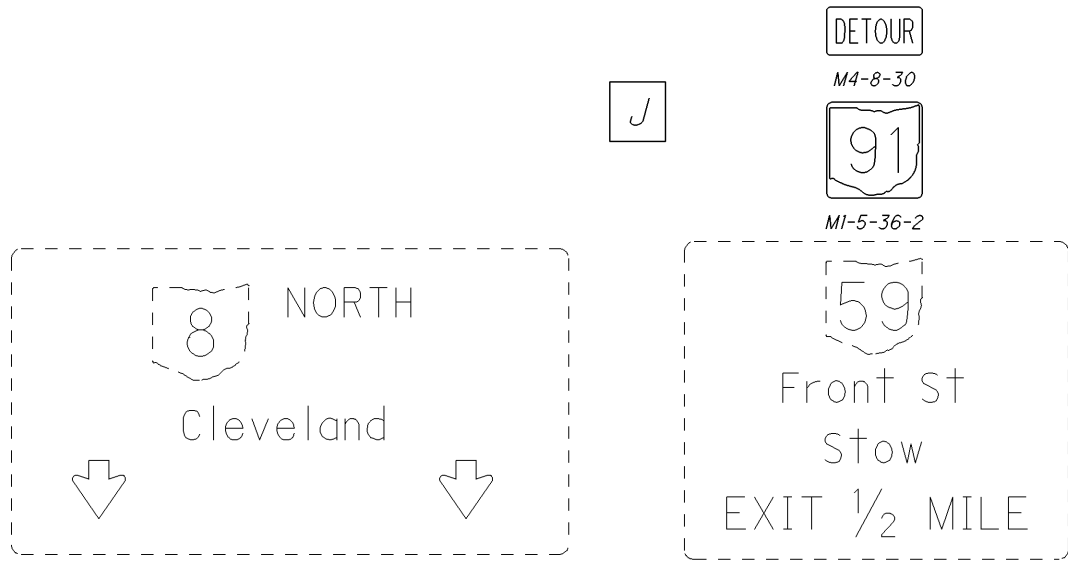
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SCALE IN FEET

DETOUR PLAN FOR SR-91

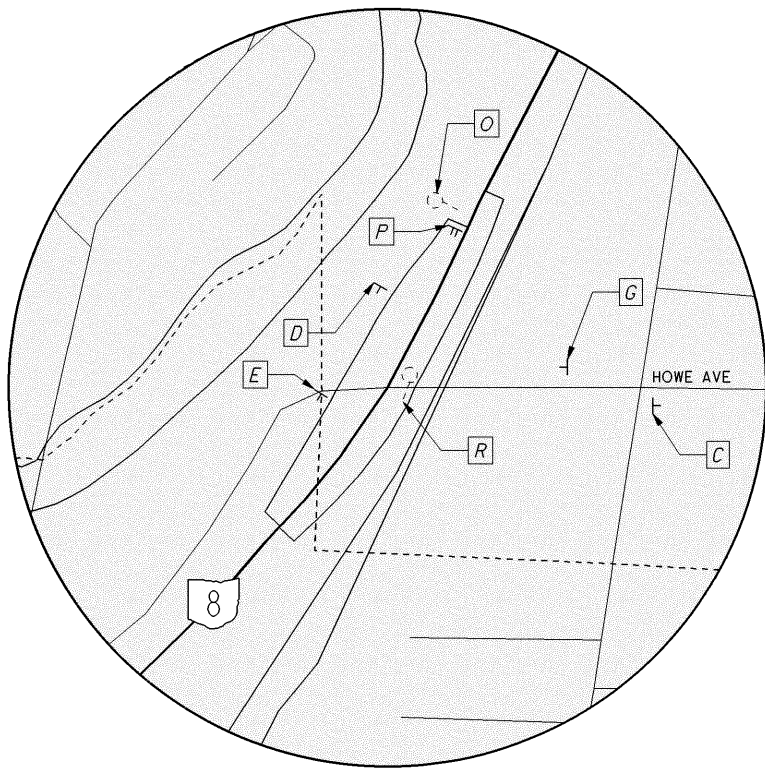
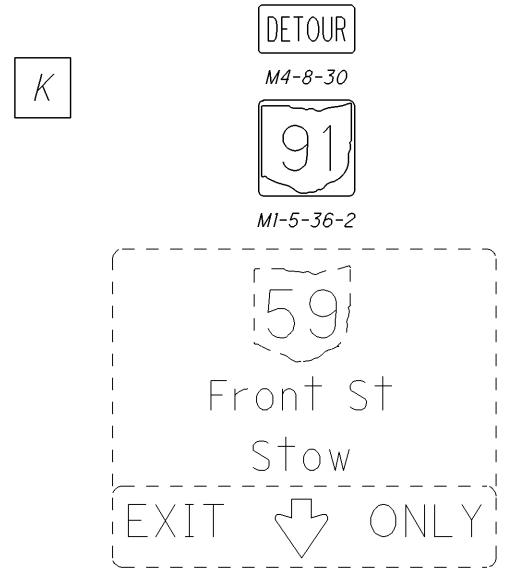
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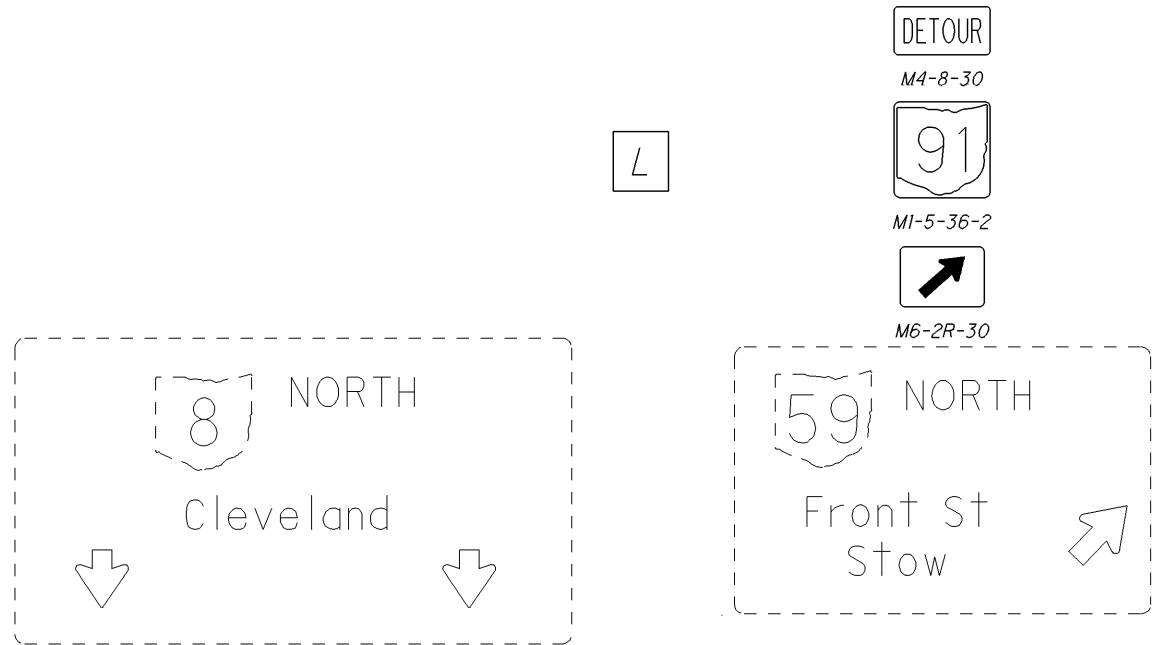




Portage  
Trail



DETAIL A



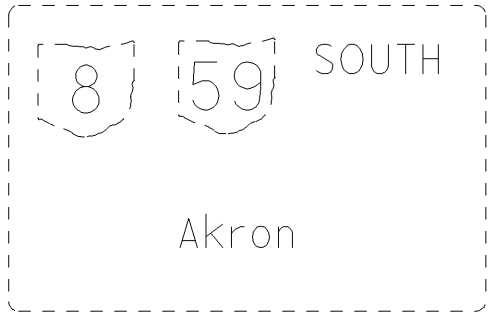
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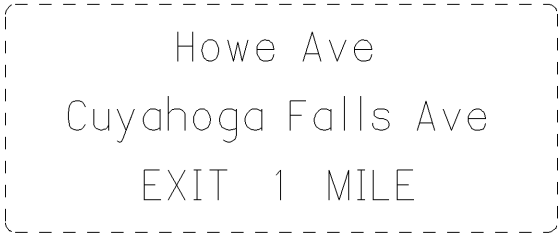
DETOUR PLAN FOR SR-91

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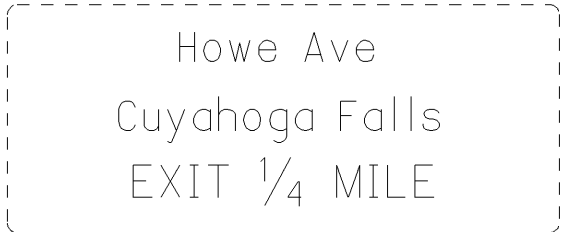
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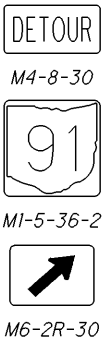
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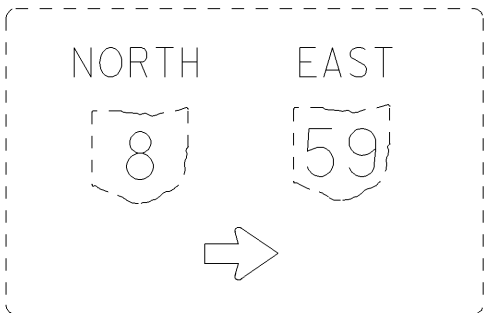
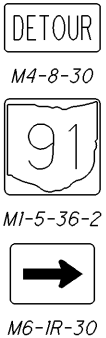
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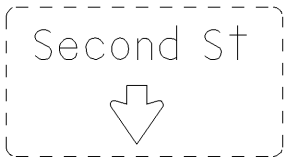
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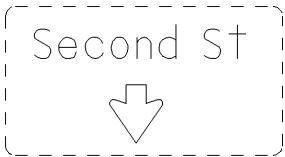
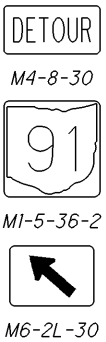
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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

- GR-1.1 DATED/REVISED 7-16-04
- GR-2.1 DATED/REVISED 1-16-04
- GR-3.1 DATED/REVISED 1-19-07
- GR-3.4 DATED/REVISED 1-20-06
- GR-5.2 DATED/REVISED 1-16-04
- GR-5.3 DATED/REVISED 1-16-04
- GR-6.1 DATED/REVISED 4-18-03

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

- 843 DATED 4-18-03
- 848 DATED 4-15-05

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 STRESSES

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I.  
MISCELLANEOUS STEEL - ASTM A709 GRADE 36 - MINIMUM  
YIELD STRENGTH 36,000 P.S.I.  
ALUMINUM PIPE RAIL - ASTM B241, ALLOY 6061

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.

EXISTING PLANS ARE AVAILABLE FROM ODOT DISTRICT 4 OFFICE.

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<br>ATTN: BEN MILLER<br>50 W. BOWERY ST.<br>6TH FLOOR<br>AKRON, OH 44308<br>330-384-2237<br>330-384-9866 FAX   | CITY OF MUNROE FALLS<br>(WATER DEPT.)<br>43 MUNROE FALLS AVENUE<br>MONROE FALLS, OH 44262<br>330-688-7491                         |
| DOMINION EAST OHIO GAS<br>ATTN: GEORGE TURNER, JR.<br>SPRINGSIDE PLACE<br>320 SPRINGSIDE DRIVE<br>SUITE 320<br>AKRON, OH 44333<br>330-664-2495<br>888-694-8299 FAX | OHIO EDISON<br>ATTN: STEVE VANCHOFF<br>1910 W. MARKET STREET<br>BUILDING 1<br>AKRON, OH 44313<br>330-384-4750<br>330-384-4723 FAX |
| SUMMIT COUNTY DEPT.<br>OF ENVIRONMENTAL SERVICES<br>ATTN: DAVID MARQUARD<br>2525 STATE ROAD<br>CUYAHOGA FALLS, OH 44223<br>330-926-2407<br>330-926-2471 FAX        | TIME WARNER CABLE<br>ATTN: JEFF ROLAND<br>530 SOUTH MAIN ST.<br>SUITE 1741<br>AKRON, OH 44311<br>330-630-7958                     |

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE DECK GRATING, RAILING, AND NON-SKID PLATE SHALL BE REMOVED IN SUCH A MANNER AS TO ALLOW RE-USE OF THE SIDEWALK SUPPORT BEAMS, INCLUDING THE 7" X 12" X 1/2" ANCHOR PLATE.

PROPOSED WORK

- REMOVE AND REPLACE SIDEWALK
- REMOVE AND REPLACE EXISTING ASPHAT CONCRETE OVERLAY
- PATCH ALL VISIBLY UNSOUND AREAS OF BRIDGE DECK
- REPAIR AREA OF THE DECK WITH FULL DEPTH REPAIR AT THE REAR ABUTMENT
- PATCH OUTSIDE FACE OF CURB
- PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
- PAINT RIGHT OUTSIDE FASCIA BEAM, SIDEWALK SUPPORTS, NEW STEEL BEARING PLATES FOR SIDEWALK, RIGHT SIDE UTILITY SUPPORTS, AND LEFT SIDE RAILING POSTS WITH OZEU PAINT SYSTEM
- SEAL THE EXISTING EXPANSION JOINT
- REMOVE AND REPLACE GUARDRAIL
- REPAIR SLOPE PROTECTION AT THE REAR ABUTMENT
- SEAL ALL CONCRETE SURFACES OF CONCRETE DECK EDGES, ABUTMENTS, WINGWALLS, AND PIERS WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 15' AROUND ABUTMENTS FOR SEALING OPERATIONS
- NEW STRUCTURE IDENTIFICATION SIGNS

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.

ITEM 601 - DUMP ROCK FILL, TYPE B

THIS ITEM WILL BE USED AS DIRECTED BY THE PROJECT ENGINEER TO REPAIR THE EROSION AT THE REAR RIGHT EMBANKMENT. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK WILL BE INCLUDED IN UNIT PRICE BID.

ITEM 202 - WALK REMOVED, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING CONCRETE SIDEWALK AT EITHER END OF THE BRIDGE TO THE SECOND CONTROL JOINT FROM THE BRIDGE TO PROVIDE ACCESS TO THE TOP OF THE WINGWALL AND TO PROVIDE SPACE TO CONSTRUCT THE RAILING END POST FOUNDATION.

ITEM 514 - SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL  
ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT  
ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT  
ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

THESE ITEMS WILL BE USED TO PAINT THE RIGHT OUTSIDE FACE AND BOTTOM OF THE FASCIA BEAM, SIDEWALK SUPPORTS, NEW STEEL BEARING PLATES FOR SIDEWALK, RIGHT SIDE UTILITY SUPPORTS, AND LEFT SIDE RAILING POSTS. THE SIDEWALK SUPPORTS WILL BE PAINTED AFTER SIDEWALK REMOVAL AND BEFORE NEW SIDEWALK IS PLACED. THE ENTIRE SIDEWALK SUPPORT BEAMS WILL BE PAINTED, INCLUDING THE TOP OF THE SUPPORTS. FEDERAL NO.: 14277

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER MISC.: HOT APPLIED JOINT SEALER

ALL EXISTING JOINT SEALER MATERIAL AND DEBRIS SHALL BE REMOVED PRIOR TO SEALING THE JOINTS. SEAL THE JOINTS AS PER CMS 705.04.

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.

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 BE 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:  
SUM-91-0789 (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

STRUCTURE GENERAL NOTES

BRIDGE NO.: SUM-91-0789  
S.R. 91 OVER CUYAHOGA RIVER

SUM-91-7.89  
PID No. 84809

1 / 7  
8  
14

DESIGN AGENCY  
ODOT --- DISTRICT 4  
PRODUCTION

DATE  
01-05-09  
REVIEWED  
TJP  
STRUCTURE FILE NUMBER  
7707142

DRAWN  
LMS  
REVISED

DESIGNED  
LMS  
CHECKED



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ITEM 848, FULL DEPTH REPAIR, AS PER PLAN

THE MATERIAL TO BE USED WILL BE MICRO-SILICA. THIS ITEM SHALL BE AS PER SUPPLEMENTAL SPECIFICATION 848 WITH THE FOLLOWING EXCEPTIONS: 1) SECTIONS 848.12, 848.23, 848.27, 848.29, 848.31, 848.32, AND 848.33 ARE THE ONLY SECTIONS THAT APPLY 2) SEE BELOW FOR MODIFICATIONS

(SEE 848.12) THE COMPONENTS OF THE MICRO-SILICA MODIFIED CONCRETE SHALL BE PROPORTIONED AS FOLLOWS.

CONCRETE TABLE  
QUANTITIES PER CUBIC YARD  
AGGREGATES (SSD)

AGGREGATE TYPE	FINE #6RRE (LB)	* # 8 COARSE AGGRE (LB)	AGGRE TOTAL (LB)	CEMENT CONTENT (LB)	MICRO-SILICA (LB)	WATER TO CEMENTITIOUS RATIO	AIR CONTENT ± 2%	**FIBER (1 1/4" POLYPROPYLENE) (LB)
GRAVEL	1410	1430	2840	600	50	0.4	8	1
LIMESTONE	1410	1450	2860	600	50	0.4	8	1
SLAG	1300	1350	2650	600	50	0.4	8	1

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

\*\* FIBER MESH SHALL BE 100% VIRGIN POLYPROPYLENE IN A FIBRILLATED-NETWORK FORM. AND SHALL BE 1/4" IN LENGTH.

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD): NATURAL SAND AND GRAVEL 2.62, LIMESTONE SAND 2.68, LIMESTONE 2.65, SLAG 2.30, MICRO-SILICA SOLIDS 2.20, AND PORTLAND CEMENT 3.15. FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED. (FIBER MESH WEIGHTS NOT INCLUDED IN MIX DESIGN)

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

ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

IN ADDITION TO THE ABOVE REQUIREMENTS, FOR STRUCTURE MAH-193-0072 (LEFT DECK) (STRUCTURE TO RECEIVE THE WEEK-END FULL DEPTH REPAIRS) THE FOLLOWING REVISIONS SHALL APPLY:

(SEE 848.29) THE WET CURE TIME APPLIES TO THE FULL DEPTH REPAIRS AND IS REDUCED FROM 72 HOURS TO 24 HOURS OR UNTIL A BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 24 HOUR WET CURE, THE FULL DEPTH SURFACE SHALL BE CURED BY SPRAYING A UNIFORM APPLICATION OF CURING MATERIAL OF 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD (B) MEMBRANE CURING. IF THE CURING COMPOUND CAN NOT BE PLACED WITHIN THE SAME SHORT TERM CLOSURE PERIOD AS THE FULL DEPTHS, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE STRUCTURE, AND SHALL, AT THE NEXT AVAILABLE SHORT TERM CLOSURE PERIOD, APPLY THE MEMBRANE CURING COMPOUND.

(SEE 848.29) TRAFFIC WILL NOT BE PERMITTED ON THE FINISHED FULL DEPTHS UNTIL AFTER THE COMPLETION OF THE 24 HOUR WET CURE, AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PST (4.2 Mpa).

(SEE 848.31) THE CONTRACTOR SHALL PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TESTS AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS, AND THE MODULUS OF RUPTURE FOR EACH BEAM UNTIL THE MODULUS OF RUPTURE OF THE TWO TESTS IS NOT LESS THAN 650 PSI (4.5 MPa). TRAFFIC IS ALLOWED ON THE LEFT DECK AT 600 PSI (4.5 Mpa).

ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN

INSTALL BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN AT THE FORWARD RIGHT AND REAR RIGHT SIDE OF THE STRUCTURE CONNECTING TO THE INSIDE SIDEWALK RAILING. PLACE THE BRIDGE TERMINAL ASSEMBLY, AS PER PLAN AS PER STANDARD CONSTRUCTION DRAWING GR-3.1 EXCEPT THE CONNECTION TO THE SIDEWALK RAILING WILL BE AS FOLLOWED. THE FOUR BLOCK POST AT THE SIDEWALK RAILING CONNECTION WILL REMAIN IN PLACE AND THE NEW BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN WILL BE ATTACHED TO THAT EXISTING FOUR BLOCK POST.

PAYMENT FOR THE ABOVE WORK WILL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN, EACH, AND WILL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK.

ITEM 606, GUARDRAIL, MISC.: REPLACE FACIA PANEL

THIS WORK WILL CONSIST OF REMOVING THE FACIA PANEL ON THE LEFT SIDE OF STRUCTURE SUM-91-7.89 AND REPLACING WITH A NEW TYPE 5 PANEL. THE NEW PANEL WILL BE ATTACHED TO THE EXISTING SUPPORTS.

PAYMENT FOR THIS ITEM WILL INCLUDE ALL LABOR, MATERIALS, AND EQUIPEMENT NECESSARY TO PERFORM THIS WORK. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER FOOT FOR ITEM 606, GUARDRAIL, MISC.: REPLACE FACIA PANEL.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS:

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

		DWG./ REV.	ODOT APPROVAL	
DWG. NO.	DRAWING NAME	DATE	DATE	
SSS265M	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98	
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00	
SS141	ET2000 PLUS PLAN, ELEVATION AND SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00	
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS AND HBA POSTS 1-4 PLAN, ELEVATION AND SECTION	5/22/00	7/31/00	

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224, (TELEPHONE: 330-346-0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

		DWG./ REV.	ODOT APPROVAL	
DWG. NO.	DRAWING NAME	DATE	DATE	
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98	

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18", OR 12" X 18" IF APPLIED TO A RECTANGULAR ET-2000 "PLUS" EXTRUDER HEAD.

REFER TO THE MANUFACTURER'S INSTRUCTION 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 27-3/4-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-98, 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.

ITEM 513 - STRUCTURAL STEEL, MISC.: ALUMINUM DECK GRATING

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING THE ALUMINUM SIDEWALK DECK GRATING "ALPLANK8" MANUFACTURED BY OHIO GRATINGS, 5299 SOUTHWAY S.W., CANTON, OHIO 44706. PHONE NUMBER: 800-321-9800. THE DECK GRATING SHALL BE FABRICATED PER THE EXISTING HORIZONTAL CURVE ALIGNMENT. THE CONNECTION DETAIL FOR THE DECK GRATING TO THE EXISTING W10X19 SIDEWALK SUPPORT BEAMS SHALL BE PER THE MANUFACTURER'S DETAILS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PER PLAN DETAILS, INCLUDING ALL REQUIRED HARDWARE TO ATTACH THE DECK GRATING TO THE EXISTING SUPPORT SYSTEM.

SIX WEEKS PRIOR TO INSTALLING THE SIDEWALK ALUMINUM DECK GRID, THE CONTRACTOR SHALL CONTACT THE MANUFACTURER TO INITIATE COORDINATION OF THE SHOP DRAWING PLANS OF THE DECK SYSTEM BASED ON EXISTING FIELD CONDITIONS AND DIMENSIONS.

THE CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL. THE REVIEW DURATION SHALL BE SEVEN DAYS FOR EACH SUBMISSION.

ODOT WILL ACCEPT AN ALTERNATIVE IF THE FOLLOWING CONDITIONS ARE MET:

1. THE SYSTEM MATCHES THE GEOMETRY OF THE EXISTING SIDEWALK SYSTEM AND CAN BE INSTALLED WITH THE EXISTING SIDEWALK SUPPORT BEAMS AND PROPOSED HAND RAIL SYSTEM.
2. THE HEIGHT OF THE GRATING SHALL NOT VARY BY MORE THAN 1/4" FROM THE EXISTING SYSTEM AND HEIGHT OF THE ADJACENT EXISTING CONCRETE CURB.
3. THE MATERIAL SHALL BE ALUMINUM OR A NON-CORROSIVE MATERIAL THAT CAN BE IN CONTACT WITH PAINTED STEEL AND CONCRETE.
4. SYSTEM SPECIFICATIONS AND CATALOG CUT INFORMATION SHALL BE SUBMITTED TO ODOT FOR REVIEW AND APPROVAL. REVIEW AND APPROVAL DURATION SHALL BE 20 DAYS.
5. PENDING ODOT APPROVAL OF THE SYSTEM SPECIFICATION SUBMITTAL, THE CONTRACTOR SHALL PREPARE CALCULATIONS STAMPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER THAT THE SYSTEM CAN ACCOMMODATE A LIVE LOAD OF 85 PSF AND A DEAD LOAD NOT TO EXCEED 30 PSF, GIVEN THE EXISTING SPACING OF THE SIDEWALK SUPPORT BEAMS. REVIEW AND APPROVAL DURATION OF THE CALCULATIONS SHALL BE 20 DAYS.

STRUCTURE GENERAL NOTES

BRIDGE NO.: SUM-91-0789  
S.R. 91 OVER CUYAHOGA RIVER

SUM-91-7.89  
PID No. 84809

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ITEM 513 - STRUCTURAL STEEL, MISC.: STEEL BEARING PLATES

THIS ITEM SHALL CONSIST OF PROVIDING A 1/2" ASTM A709, GR. 36 STEEL BEARING PLATE AT EACH WINGWALL TO PROVIDE AN EXPANSION SURFACE FOR THE DECK GRATING SYSTEM AND A CONNECTION POINT FOR THE WINGWALL RAILING POST. THE BEARING PLATE AND WINGWALL POST SLEEVE SHALL BE PAINTED PER ITEM 514.

THE BEARING PLATE SHALL BE SECURED TO THE WINGWALL BY (4) EXPANSION ANCHORS WITH A 6" (MIN.) EMBEDMENT LENGTH. THE WINGWALL RAILING SLEEVE POST SHALL BE WELDED TO THE BEARING PLATE. CONTRACTOR SHALL FIELD VERIFY BEARING PLATE SIZE.

ITEM 517 - RAILING, ALUMINUM, AS PER PLAN

THIS ITEM SHALL CONSIST OF PROVIDING AND INSTALLING SCHEDULE 80 ALUMINUM RAILING SYSTEM THAT MATCHES THE EXISTING FIELD DIMENSIONS AND PLAN DETAILS ON SHEET 6. THE HORIZONTAL RAIL DIMENSIONS SHALL BE KEPT CONSISTENT OVER THE BRIDGE PROFILE. THE RAILING POSTS SHALL BE PLUMB VERTICAL AND SHOP WELDED TO A 7"x12"x1/2" PL THAT SHALL BE BOLTED TO THE EXISTING RAILING POST ANCHOR PLATES. FIELD DRILLING THE ANCHOR BOLT HOLES INTO THE EXISTING ANCHOR PLATES; FURNISHING AND INSTALLING 1/2" DIAM. GALVANIZED, A325, TYPE 1 BOLTS AND NUTS; AND FURNISHING AND INSTALLING THE 10 GA. ALUMINUM COVER PL SHALL BE INCLUDED WITH THIS PAY ITEM.

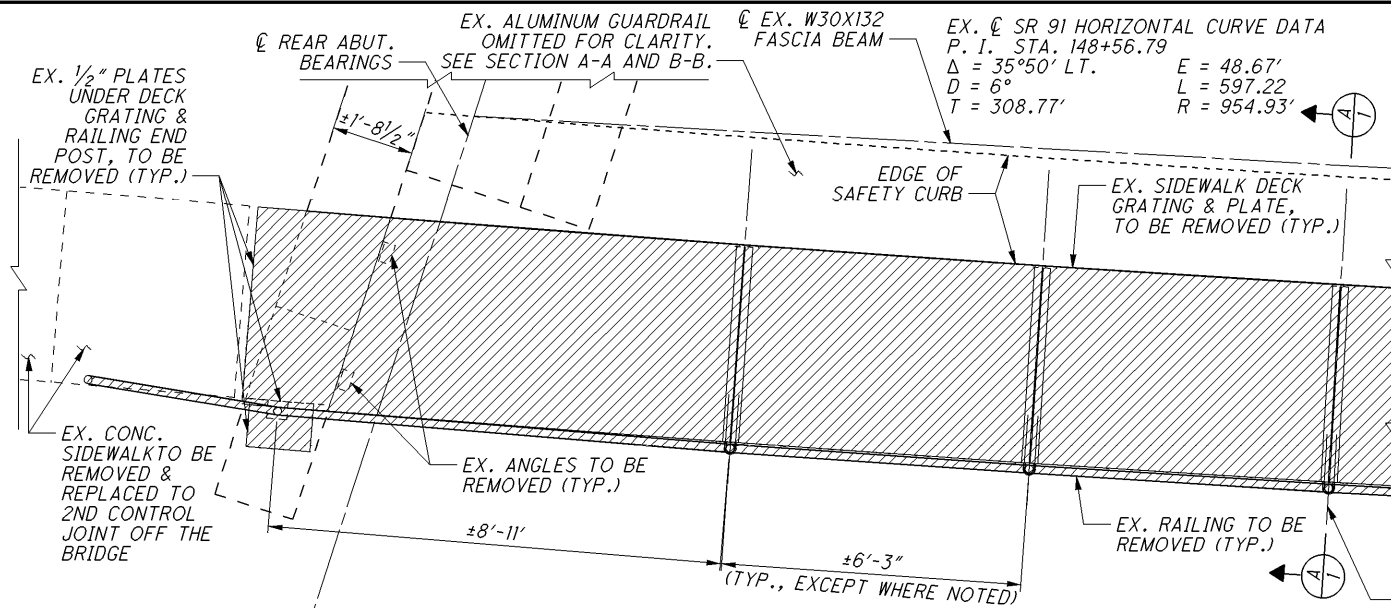
END POST FOUNDATION

THE LAST RAILING POST ON EACH END OF THE BRIDGE SHALL BE ENCASED IN AN 8 INCH DIAMETER BY 3 FOOT DEEP CLASS C CONCRETE FOOTING. ALL COSTS FOR THIS FOOTING, INCLUDING EXCAVATION OR AUGERING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 511 - CLASS C CONCRETE, FOOTING.

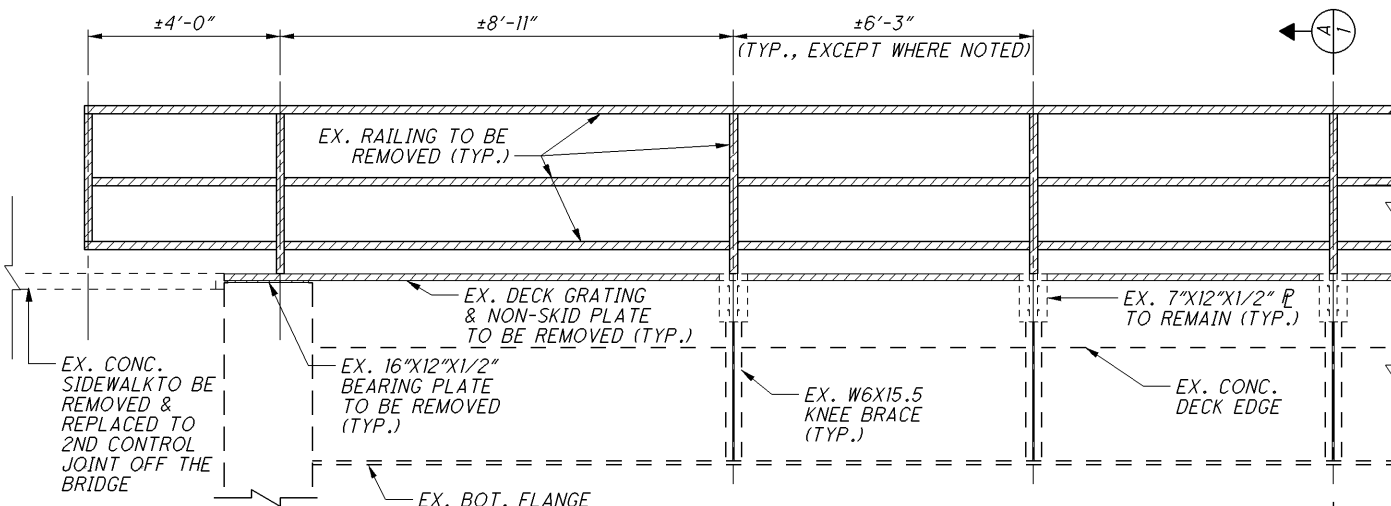
					CALC: LMS		DATE: 1/5/2009		
					CHECKED: TJP		DATE: 1/5/2009		
ESTIMATED QUANTITIES									
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
201	11000	LUMP		CLEARING AND GRUBBING					
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					1
202	23500	660	SQ YD	WEARING COURSE REMOVED			493	167	
202	30001	80	SQ FT	WALK REMOVED, AS PER PLAN				80	
202	38000	513	FT	GUARDRAIL REMOVED				513	
407	10000	25	GALLON	TACK COAT				25	
407	14000	27	GALLON	TACK COAT FOR INTERMEDIATE COURSE			20	7	
448	46050	24	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22			18	6	
448	47020	24	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22			18	6	
511	46500	1	CU YD	CLASS C CONCRETE, FOOTING				1	
512	10100	634	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	104	393	137		
512	33010	493	SQ YD	TYPE 3 WATERPROOFING			493		
513	95030	2	EACH	STRUCTURAL STEEL, MISC.: STEEL BEARING PLATES				2	3
513	95050	600	SQ FT	STRUCTURAL STEEL, MISC.: ALUMINUM DECK GRATING			600		3
514	00050	1695	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			1695		
514	00056	1695	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			1695		
514	00060	1695	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			1695		
514	00066	1695	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			1695		
514	00504	9	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			9		
514	10000	4	EACH	FINAL INSPECTION REPAIR			4		
516	13600	4	SQ FT	1" PREFORMED EXPANSION JOINT FILLER				4	
516	14600	60	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: HOT APPLIED JOINT SEALER			60		1
517	75001	160	FT	RAILING, ALUMINUM, AS PER PLAN			160		3
519	11101	150	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN				150	
SPEC	51912304	15	SQ YD	PATCHING CONCRETE BRIDGE DECK - TYPE C			15		
601	26000	6	CU YD	DUMPED ROCK FILL, TYPE B				6	
606	13000	325	FT	GUARDRAIL, TYPE 5				325	
606	22010	4	EACH	ANCHOR ASSEMBLY, TYPE E-98				4	
606	35001	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN				2	2
606	35140	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4				2	
606	98000	150	FT	GUARDRAIL, MISC.: REPLACE FACIA PANEL				150	2
608	10000	74	SQ FT	4" CONCRETE WALK				74	
630	02100	15	FT	GROUND MOUNTED SUPPORT, NO. 2 POST				15	
630	80100	2	SQ FT	SIGN, FLAT SHEET, 730.20				2	
630	84900	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL				2	
630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL				2	
843	50000	75	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR				75	
848	50201	1	CU YD	FULL DEPTH REPAIR, AS PER PLAN			1		2


$$\frac{5}{7} \div \frac{12}{14}$$

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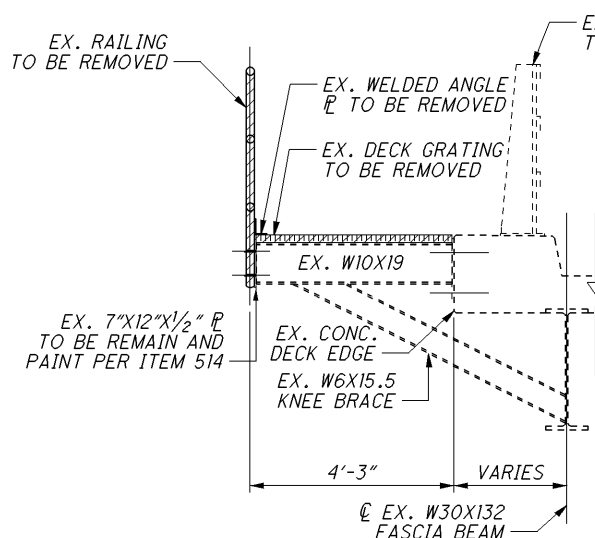


REMOVAL DETAIL  
(REAR PORTION OF SIDEWALK SHOWN, FORWARD PORTION SIMILAR)

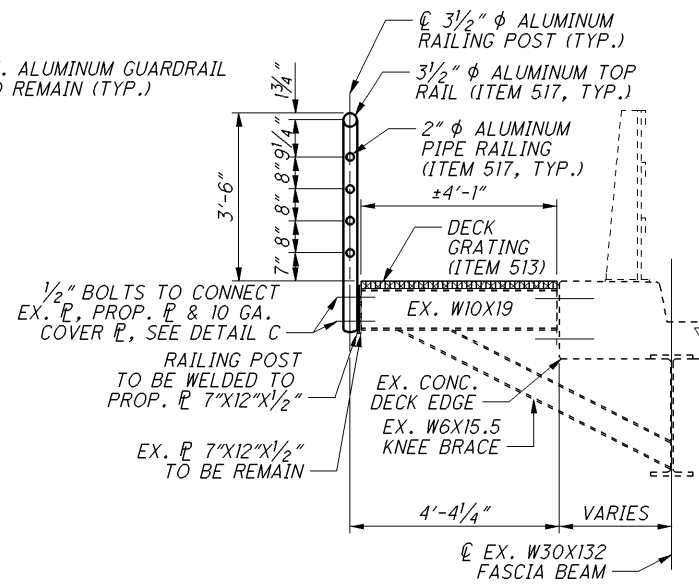


LEGEND

- TO BE REMOVED
- PROPOSED SIDEWALK DECK GRATING

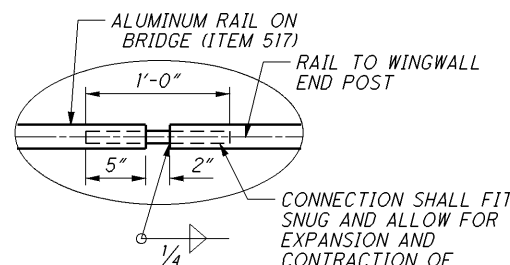


SECTION A-A

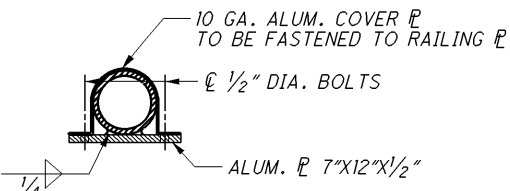


SECTION B-B

(FOR CLARITY PURPOSES, COVER PLATE NOT SHOWN)

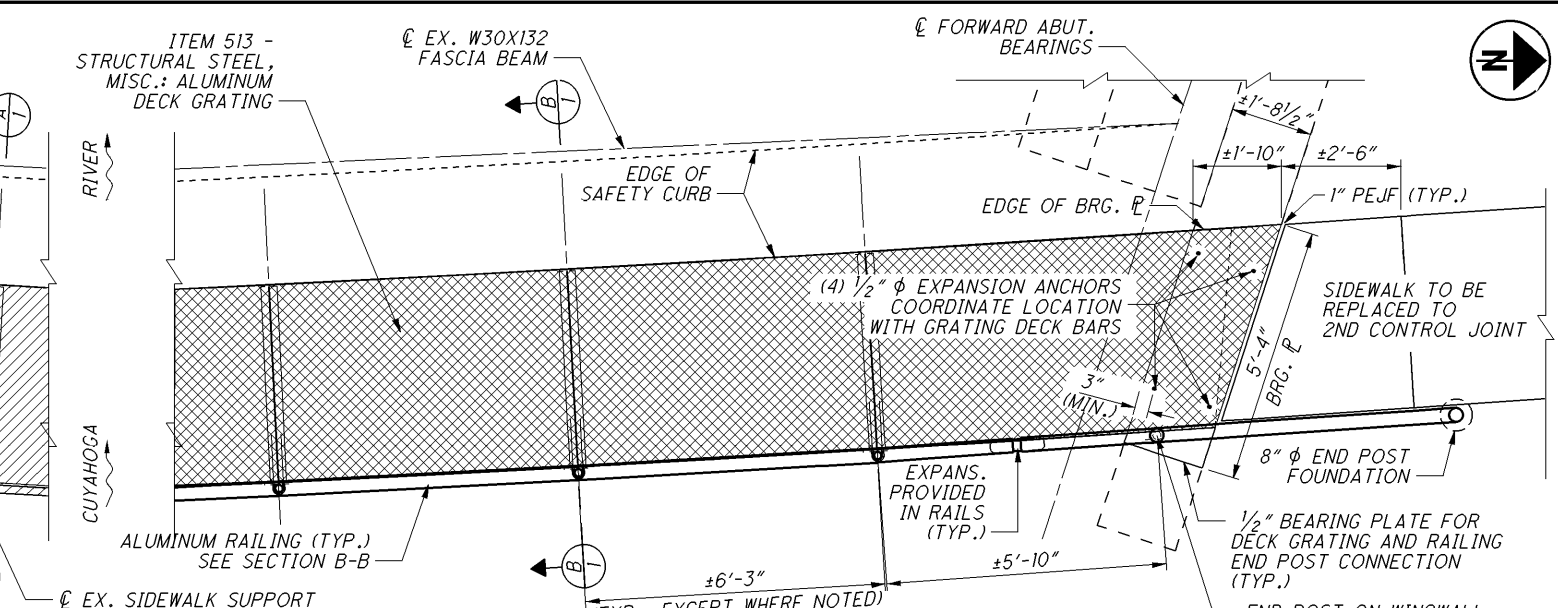


DETAIL A

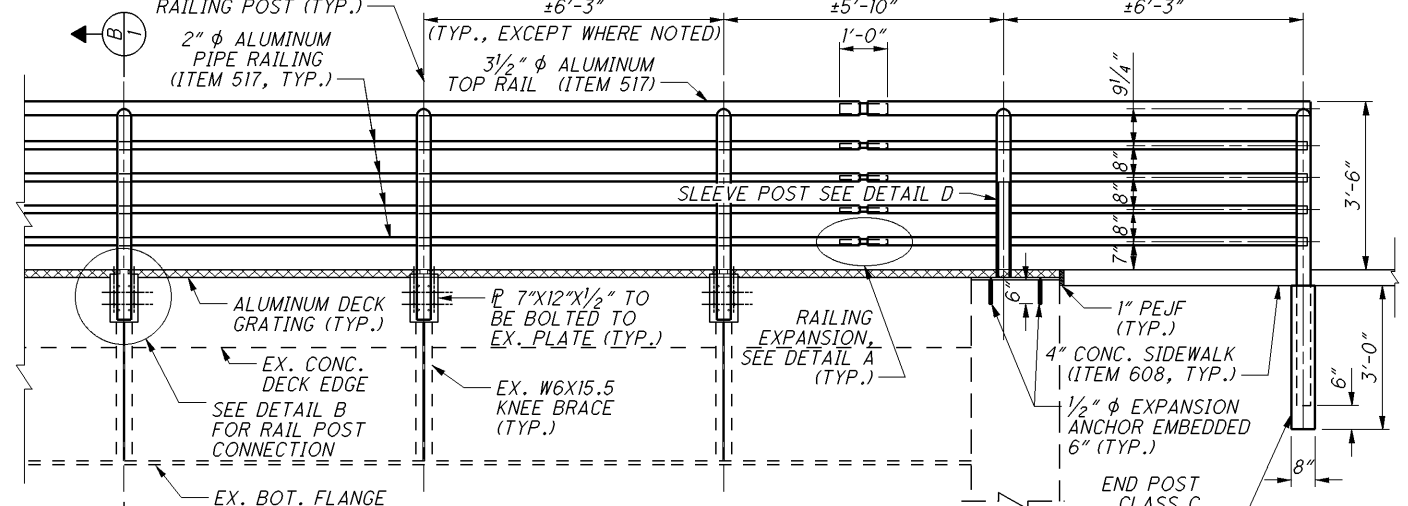


DETAIL C

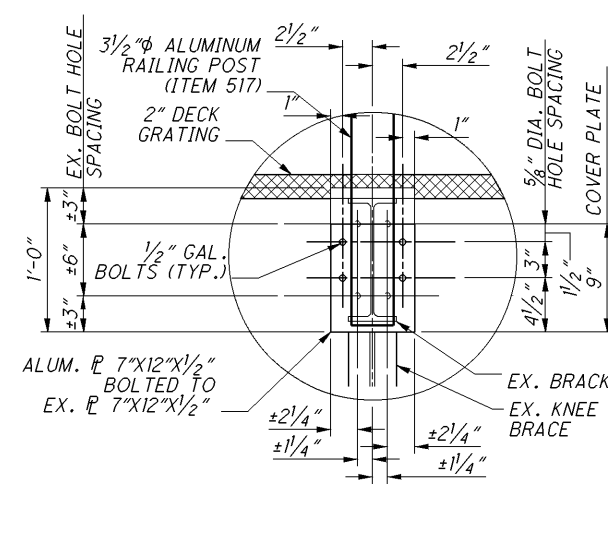
(ALUMINUM 10 GA. 9" COVER PLATE)



PROPOSED DETAIL  
(FORWARD PORTION OF SIDEWALK SHOWN, REAR PORTION SIMILAR)

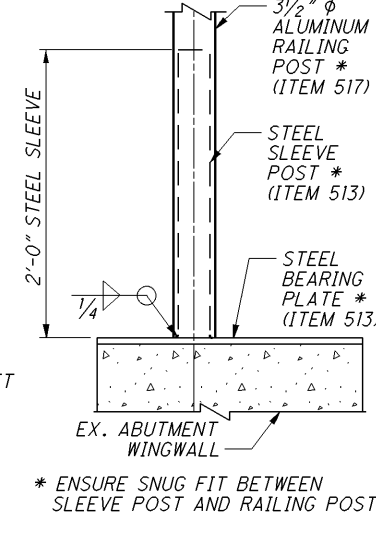


PROPOSED DETAIL  
(FORWARD PORTION OF SIDEWALK SHOWN, REAR PORTION SIMILAR)



DETAIL B

(FOR CLARITY PURPOSES, COVER PLATE NOT SHOWN)

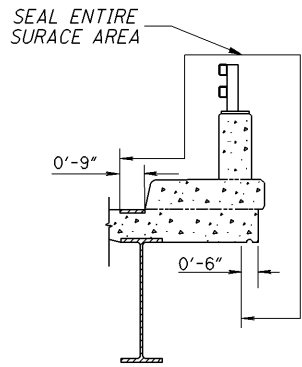


DETAIL D

(SLEEVE POST)  
(PIPE RAILINGS AND ANCHOR BOLTS OMITTED FOR CLARITY)

\* ENSURE SNUG FIT BETWEEN SLEEVE POST AND RAILING POST

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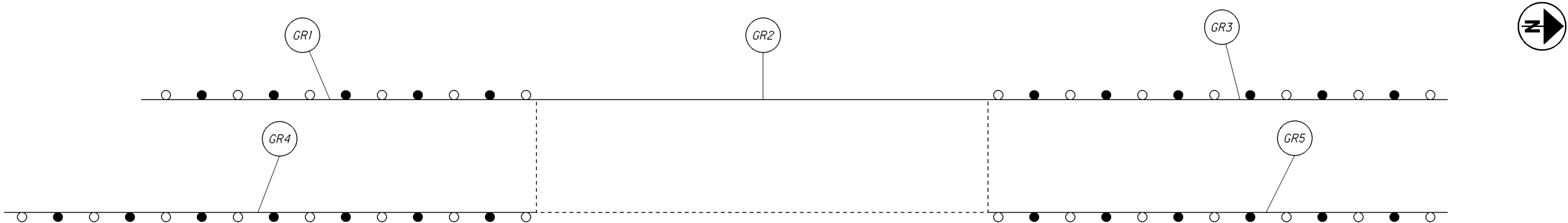
DETAIL F  
CONCRETE DECKS WITH CURBS,  
SIDEWALKS AND PARAPET

BRIDGE NO.	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES				
				ABUT SQ YD	PIER SQ YD	SUPER SQ YD	GEN SQ YD	TOTAL SQ YD
SUM-91-0789	3 SPAN CONTINUOUS STEEL BEAM	SEAL CURBS PER DETAIL A SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	104	393	137		634

- NOTES:
- EPOXY-URETHANE SEALER SHALL BE USED UNLESS SHOWN OTHERWISE
  - DETAILS E, F, G AND H ALSO APPLY TO CONCRETE SLAB BRIDGES

SEALING OF BEAM SEATS

SEALING OF BEAM SEATS: IF THE BEAMS SEATS ARE SEALED WITH AN EPOXY OR NON-EPOXY SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.



REF NO.	202		606	606		606	606		606														
	GUARDRAIL REMOVED		GUARDRAIL, TYPE 5	ANCHOR ASSEMBLY, TYPE E-98		BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	BRIDGE TERMINAL ASSEMBLY, TYPE 4		GUARDRAIL, MISC.: REPLACE FACIA PANEL														
	FT		FT	EACH		EACH	EACH		FT														
GR1	125		75.00	1.00			1.00																
GR2								150.00															
GR3	187.5		137.50	1.00			1.00																
GR4	106.25		62.50	1.00		1.00																	
GR5	93.75		50.00	1.00		1.00																	
SUBTOTALS	512.50		325.00	4.00		2.00	2.00	150.00															
TOTALS CARRIED TO GENERAL SUMMARY	513		325	4		2	2	150															

DESIGN AGENCY  
ODOT --- DISTRICT 4  
PRODUCTION

DATE  
01-05-09  
TJUP  
STRUCTURE FILE NUMBER  
7707142

DRAWN  
LMS  
REVIEWED

DESIGNED  
LMS  
CHECKED

CONCRETE SEALING DETAILS AND GUARDRAIL  
BRIDGE NO.: SUM-91-0789  
S.R. 91 OVER CUYAHOGA RIVER

SUM-91-7.89  
PID No. 84809

7 / 7

14  
14