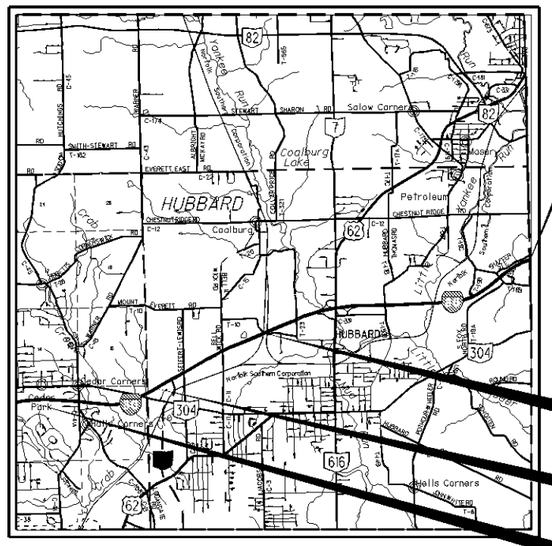
STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

TRU-80-(6.88)(8.56)

HUBBARD TOWNSHIP



LOCATION MAP

LATITUDE: 41°10'35" LONGITUDE: 80°34'8"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED _____

INTERSTATE HIGHWAY. _____

STATE & FEDERAL ROUTES _____

COUNTY & TOWNSHIP ROADS. _____

OTHER ROADS. _____

DESIGN DESIGNATION

	WEST OF US 62	EAST OF US 62
CURRENT ADT (2010)	41100	33730
DESIGN YEAR ADT (2030)	54940	49090
DESIGN HOURLY VOLUME (2030)	4945	4418
DIRECTIONAL DISTRIBUTION	0.54	0.53
TRUCKS (24 HOUR B&C)	19778	23563
DESIGN SPEED	65	65
LEGAL SPEED	65	65

DESIGN FUNCTIONAL CLASSIFICATION:
INTERSTATE

NHS PROJECT _____ YES

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
AKRON, OHIO

INDEX OF SHEETS:

PROJECT DESCRIPTION

IMPROVEMENT OF 3.77 MILES OF IR 80 BY PLANING AND RESURFACING, INCLUDING GUARDRAIL REPLACEMENT PAVEMENT REPAIR, REST AREA AND RAMP IMPROVEMENTS, AND STRUCTURE REPAIRS. RAMP IMPROVEMENT AT THE WEIGH STATION AT SLM 6.88. ADDITIONAL PLANING AND RESURFACING IN THE EASTBOUND DRIVING LANE STARTING AT SLM 4.74.

PROJECT EARTH DISTURBED AREA:	0.0 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	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.

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 APPROVED THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT THE RAMPS AS DESCRIBED ON SHEET 12-13 AND THAT PROVISIONS FOR THE MAINTENANCE OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

ENGINEERS SEAL:

STATE OF OHIO
DOUGLAS A. YARD
E-58044
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: _____

DATE: 12/14/09

STANDARD CONSTRUCTION DRAWINGS

BP-2.5	7/18/08	MT-95.50	4/17/09	TC-65.10	1/21/05						
BP-3.1	10/19/07	MT-98.10	7/17/09	TC-65.11	1/21/05						
BP-9.1	4/15/05	MT-98.11	7/17/09	TC-71.10	1/16/09						
DM-4.3	4/17/09	MT-98.20	7/17/09	TC-72.20	1/21/05						
DM-4.4	4/17/09	MT-98.22	7/17/09	TC-73.10	1/19/01						
		MT-98.28	7/17/09	TC-82.10	4/19/02						
GR-1.1	7/16/04	MT-98.29	7/17/09								
GR-2.1	1/16/04	MT-99.20	1/16/09								
GR-3.1	1/19/07	MT-101.90	1/16/09								
GR-3.2	1/19/07	MT-105.10	1/16/09								
GR-3.3	4/18/03										
GR-4.2	1/19/07	TC-22.10	1/19/01								
GR-6.1	4/18/03	TC-42.10	1/19/07								
		TC-42.20	7/16/04								
MT-35.10	4/20/01	TC-52.10	1/19/07								
MT-35.50	7/17/09	TC-52.20	1/19/07								

SUPPLEMENTAL SPECIFICATIONS	
800-2008	01/15/10
832	5/5/09
843	4/18/03
848	4/15/05

SPECIAL PROVISIONS

APPROVED _____

DATE 12-14-09 DISTRICT DEPUTY DIRECTOR

APPROVED _____

DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E090(326)

PID NO. 77873

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

TRU-80-(6.88)(8.56)

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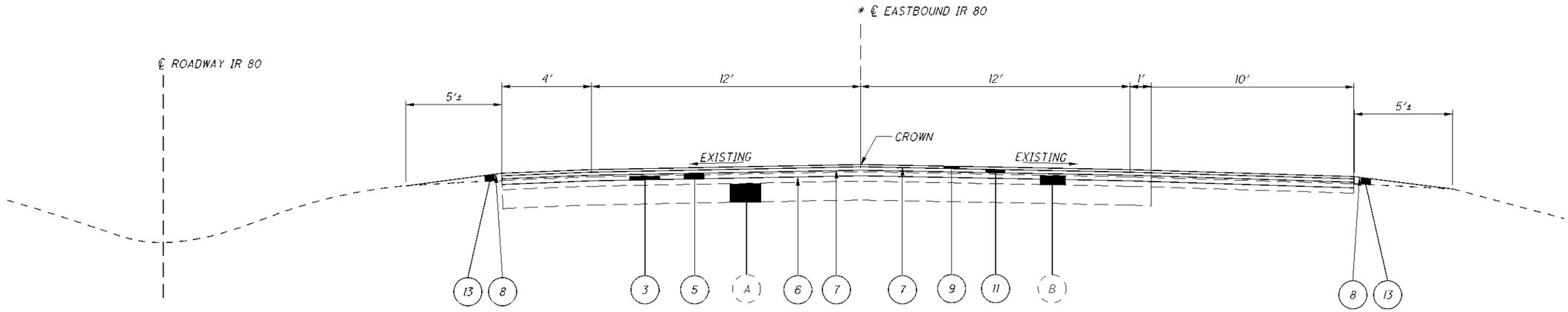
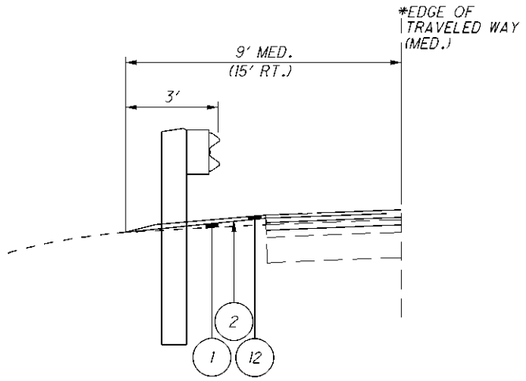
MAINLINE PAVEMENT



SECTION APPLIES:				
DIRECTION	S.L.M.		LENGTH (MILES)	WIDTH (FT)
EB/WB	8.66	9.42	0.76	38
EB/WB	9.45	9.56	0.11	38
EB/WB	9.61	10.85	1.24	38
EB/WB	10.92	12.33	1.41	38
TOTAL LENGTH			3.52	

*WESTBOUND IR 80 IS A MIRROR IMAGE OF THE EASTBOUND TYPICAL SECTION ABOVE

PAVING UNDER GUARDRAIL



GUARDRAIL LOCATIONS VARY SEE SHEET 21.

*RIGHT SIDE OF PAVEMENT IS A MIRROR IMAGE OF MEDIAN TYPICAL SECTION ABOVE

LEGEND

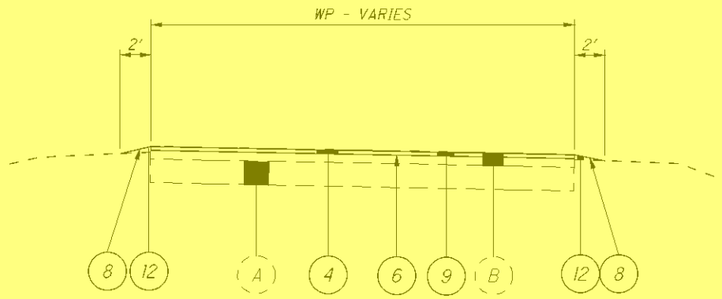
1. ITEM 203, BORROW (T=2 ½"±)
2. ITEM 209, LINEAR GRADING, AS PER PLAN
3. ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=2")
4. ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=1 ½")
5. ITEM 301, ASPHALT CONCRETE BASE, PG64-22 (T=3")
6. ITEM 407, TACK COAT @ 0.075 GAL/SY
7. ITEM 407, TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY
8. ITEM 408, PRIME COAT AS PER PLAN @ 0.4 GAL/SY
9. ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5mm TYPE B (446), AS PER PLAN (T=1 ½")
10. ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5mm TYPE B (446), AS PER PLAN (T=2")
11. ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm TYPE B (448) (T= 1 ¾")
12. ITEM 448, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE I, PG64-22, UNDER GUARDRAIL, AS PER PLAN (T=2"±)
13. ITEM 617, COMPACTED AGGREGATE, AS PER PLAN

- (A) EXISTING REINFORCED CONCRETE BASE (10"±)
- (B) EXISTING ASPHALT CONCRETE OVERLAY (5"±)
- (C) EXISTING REINFORCED CONCRETE BASE (9"±)
- (D) EXISTING ASPHALT OVERLAY (1 ½"±)
- (E) EXISTING SIDEWALK

TYPICAL SECTIONS

TRU-80-(6.88)(8.56)

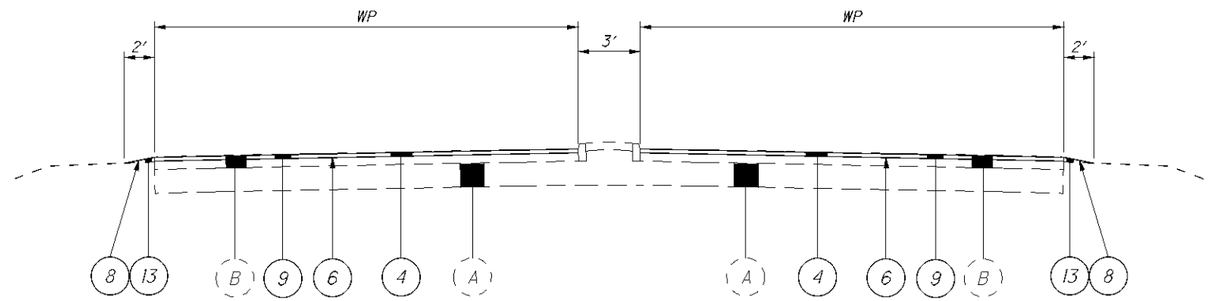
NORMAL RAMP SECTIONS



SECTION APPLIES:		
LOCATION	WP (FT)	LENGTH (FT)
RAMP A	27	689
RAMP B	24	1095
RAMP C	24	1380
RAMP D	28	1875
RAMP E	24	900
WEIGH STATION	VAR.	VAR.

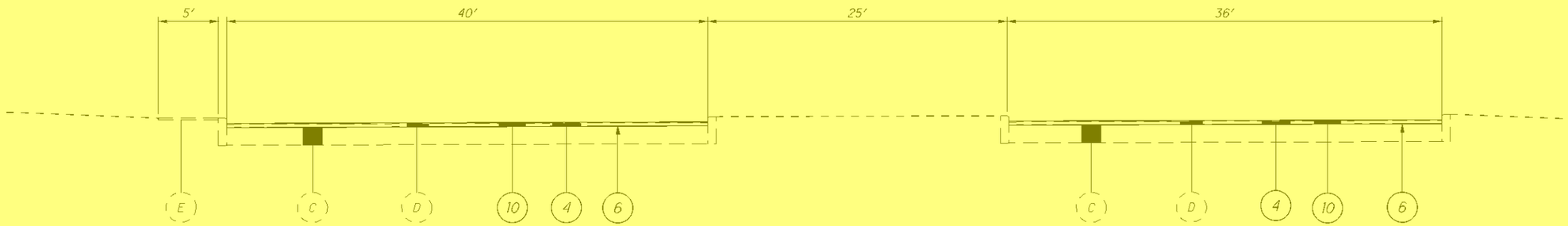
REFERENCE NO. 4 ABOVE SHALL BE PAID AS
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (T=1 ½")
FOR THE WEIGH STATION, SEE SHEET 6 FOR PLAN NOTES AND DETAILS.

SECTION THROUGH DOUBLE RAMP A/B



SECTION APPLIES:		
LOCATION	WP (FT)	LENGTH (FT)
RAMP A/B	35	711

REST AREA PARKING LOT



*SEE SHEET 2 FOR LEGEND

TYPICAL SECTIONS

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3
37

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 HEADQUARTERS 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: Jerry Smith
50 W. Bowery St.
4th Floor
Akron, OH 44308
330-384-8557
330-384-8879 Fax

City of Hubbard, Ohio - Water Dept.
Utility Building
ATTN: Patrick Camuso,
820 North Main Street
P.O. Box 307
Hubbard, Ohio 44425-0307
Phone: (330) 534-3636
Fax: (330) 534-6280

Dominion East Ohio Gas
ATTN: George Turner, Jr.
Springside Place
320 Springside Drive
Suite 320
Akron, OH 44333
216-736-6884

Eastern Natural Gas Company
ATTN: Stan Bell
P.O. Box 128
Burghill, OH 44404
330-772-3500
330-772-3502 Fax

Ohio Edison
ATTN: Bill Speece
730 South Avenue
Youngstown, OH 44502
330-740-7635
330-740-7655 Fax

Time Warner Cable
ATTN: Tim Harrold
4352 Youngstown Rd SE
Warren,Oh 44484
330-369-7140

Trumbull County Sanitary Engineer
ATTN: Scott Verner
842 Youngstown-Kingsville Road
Vienna, Ohio 44473
330-675-7753

PAVEMENT MARKING LANE WIDTHS

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS (AT LEAST 3 DAYS PRIOR TO PERFORMING THE WORK CONTACT THE TRAFFIC OFFICE AT 330-786-3147 TO CONFIRM THE WIDTHS):

ROUTE	S.L.M. TO S.L.M.	LANE WIDTH
80	8.56 TO 12.33	12'

PAVEMENT MARKING DETAILS

THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTUCTION MEETING.

ITEM 618 - RUMBLE STRIPS, (ASPHALT CONCRETE)

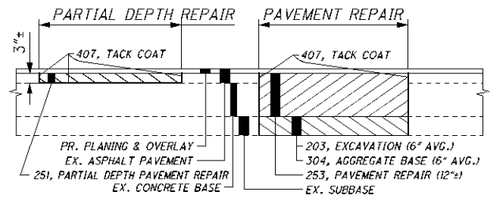
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE ALONG IR 80 WITHIN THE PROJECT LIMITS, FROM S.L.M. 8.56 TO S.L.M 12.33. OFFSET "A" AND "B" SHALL FOLLOW THE OFFSET DIMENSION TABLE AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-9.1 FOR THIS ITEM OF WORK.

ITEM 618 RUMBLE STRIPS, (ASPHALT CONCRETE), 7.54 MILES

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 448 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE 1 PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

251, PARTIAL DEPTH PAVEMENT REPAIR, 1000 SQ. YD.



ITEM 253 - PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12"± 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

252, FULL DEPTH PAVEMENT SAWING 3500 FT

253, PAVEMENT REPAIR, 400 SQ YD

ITEM 203 - EXCAVATION

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

203, EXCAVATION 67 CU YD

ITEM 304 - AGGREGATE BASE

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

304, AGGREGATE BASE 67 CU YD

ITEM 617 COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE 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 GRADATION, 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

ITEM 408 - PRIME COAT, AS PER PLAN

THE CONTRACTOR WILL APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID PRIME COAT MATERIAL ONTO THE EDGE OF THE PAVEMENT OR EDGELINE. CARE ALSO SHALL BE TAKEN TO AVOID SPRAYING LIQUID PRIME COAT MATERIAL ONTO DRIVEWAY APRONS, MAILBOX APPROACHES OR ANY PEDESTRIAN AREAS. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

ITEM 202 - REMOVAL MISC: CONCRETE CURBED BULL NOSE SECTIONS

THIS ITEM OF WORK SHALL CONSIST OF REMOVING THE CONCRETE CURBED BULL NOSE SECTIONS AT 3 LOCATIONS ALONG THE PROJECT. THE CURBED BULL NOSE SECTIONS SHALL BE REMOVED AS PER 202.05 OR AS DIRECTED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH EXCEPTION OF ITEM 203, BORROW AND ITEM 202, CURBED REMOVED SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202, REMOVAL MISC: CURBED BULL NOSE SECTIONS.

THE FOLLOWING ITEMS HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO COMPLETE THE WORK.

ITEM 202 - CURBED REMOVED 535 FT
ITEM 202 - REMOVAL MISC: CONCRETE CURBED BULL NOSE SECTION 3 EACH
ITEM 203 - BORROW 14 CU YD

AFTER REMOVAL THE AREAS SHOULD BE PAVED WITH THE MAINLINE.

REST AREA SHOULDER REPAIR

REPAIR THE DAMAGED SHOULDERS ON THE REST AREA ENTRANCE/ EXIT RAMPS AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - BORROW 12 CU YD
ITEM 203 - EXCAVATION 30 CU YD
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR 300 SQ YD
ITEM 253 - PAVEMENT REPAIR 180 SQ YD
ITEM 304 - AGGREGATE BASE 30 CU YD

ITEM SPECIAL - MISC.: VERTICAL CLEARANCE

AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LECENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURES: TRU-80-9.05 EB, TRU-80-9.05 WB, TRU-80-10.51 EB, TRU-80-10.51 WB, AND TRU-80-11.85 EB.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

SPECIAL - MISC.: VERTICAL CLEARANCE, 5 EACH

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE B (446), AS PER PLAN

THE REQUIREMENTS OF 442 AND 446 WILL APPLY; DEVIATIONS FROM THESE ARE AS FOLLOWS:

THE PERCENTAGE OF RECLAIMED MATERIAL PROPOSED FOR USE WILL BE INCLUDED IN THE MIX DESIGN PROCESS TO ESTABLISH THE JOB MIX FORMULA (JMF) IN ACCORDANCE WITH 401.04.

MATERIALS:	THE MATERIALS SHALL BE:
AGGREGATES	703.05*

*THE VIRGIN COARSE AGGREGATE PORTION OF THE MIXTURE WILL CONTAIN 50% AIR COOLED BLAST FURNACE SLAG (ACBFS) AND MEET THE REQUIREMENTS OF 703.05.

USE AN NDES OF 50, AN NMAX OF 75 AND THE COMBINATION OF NEW AGGREGATES, NEW ASPHALT BINDER, AND RECLAIMED MATERIAL SHALL BE AS REQUIRED TO PRODUCE A COMPOSITION CONTAINING A MINIMUM OF 6.0% NEW ASPHALT BINDER RESULTING IN A MINIMUM TOTAL BINDER OF 6.5%.

THE CONTRACTOR SHALL USE THE APPROPRIATE COUNTY, ROUTE AND SECTION TO OBTAIN TRAFFIC DATA, TO BE USED IN THE DESIGN OF THE JMF, AT THIS WEB SITE LOCATION:
http://www.odotonline.org/techservapps/traffmonit/countinformation/default.htm

STREAM AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN THE UNNAMED TRIBUTARY TO LITTLE YANKEE RUN AT TRU-80-8.56L/R, IN MUD RUN AT TRU-80-9.40L AND TRU-80-9.42L/R OR IN LITTLE YANKEE RUN AT TRU-80-10.86L/R, UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY STREAMS OR OTHER WATERS OF THE UNITED STATES.

WETLANDS AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN THE WETLANDS DIRECTLY BENEATH AND ADJACENT TO TRU-80-8.56L/R, UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS OR OTHER WATERS OF THE UNITED STATES.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY WITH A UNIFORM THICKNESS AS SHOWN ON THE TYPICAL SECTIONS.

CALCULATED LMB
CHECKED

GENERAL NOTES

TRU-80-(6.88)(8.56)

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 209, LINEAR GRADING, AND PAVING UNDER THE GUARDRAIL USING 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING, SHALL CONSIST OF EXCAVATING EXISTING MATERIAL, PLACING GRANULAR MATERIAL AND APPLYING HERBICIDE AS SPECIFIED IN THE PLANS AND IN ACCORDANCE WITH THE FOLLOWING:

ALL COLLECTED DEBRIS, ASPHALT AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

HERBICIDE SHALL BE EPA APPROVED FOR PAVING UNDER GUARDRAIL. IT SHALL BE APPLIED TO THE PREPARED AREA AFTER FINAL LEVELING AND GRADING HAS BEEN COMPLETED. THE APPLICATION SHALL BE JUST PRIOR TO PAVING AND SHALL STRICTLY ADHERE TO THE MANUFACTURER'S INSTRUCTIONS.

EACH SUCCESSFUL BIDDER MUST BE LICENSED BY THE OHIO DEPARTMENT OF AGRICULTURE AS A COMMERCIAL APPLICATOR AND ALL PERSONS INVOLVED IN THE ACTUAL SPRAYING SHALL BE LICENSED AS COMMERCIAL OPERATORS IN THE APPROPRIATE SPRAY CATEGORY.

HERBICIDE LABEL, MATERIAL SAFETY DATA SHEET AND COPY OF APPLICATORS LICENSES SHALL BE SUBMITTED TO THE ENGINEER FOR VERIFICATION PRIOR TO COMMENCING WORK.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED. PAVING MAY BE PLACED UNDER EXISTING OR PROPOSED GUARDRAIL USING ONE OF THE FOLLOWING METHODS:

METHOD A
1) SET GUARDRAIL POSTS
   [OMIT IF EXISTING GUARDRAIL IS TO REMAIN]
2) PLACE ITEM 448

METHOD B
1) PLACE ITEM 448
2) BORE ASPHALT AT POST LOCATIONS
   (MAY BE OMITTED IF STEEL POSTS ARE USED)
3) SET GUARDRAIL POSTS
4) PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN.

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. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL 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. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL 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 606 - IMPACT ATTENUATOR, TYPE 1-98 [BIDIRECTIONAL)]

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE FOLLOWING IMPACT ATTENUATORS, 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 IMPACT ATTENUATORS:

1) THE C-A-T MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE C-A-T SYSTEM IS CONSIDERED TO BE 31'-3" LONG. 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. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS245M	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS FOR USE AS A LONGITUDINAL MEDIAN BARRIER TERMINAL OR CRASH CUSHION ATTENUATOR	4/10/97 Rev. 4	3/6/98
SS224M	C-A-T TRANSITION TO MEDIAN BARRIER GUARDRAIL PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98
SS226M	C-A-T TRANSITION TO VERTICAL WALL OR PIER PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98

2) THE BRAKEMASTER MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

THE LENGTH OF THE BRAKEMASTER SYSTEM IS CONSIDERED TO BE 32'-8" LONG. 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. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
92-00-01	BRAKEMASTER GENERAL ASSEMBLY (UNIDIRECTIONAL SYSTEM)	3/6/97 Rev. K	3/6/98
92-00-81	BRAKEMASTER (UNIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
92-00-02	BRAKEMASTER GENERAL ASSEMBLY (BIDIRECTIONAL SYSTEM)	3/10/97 Rev. K	3/6/98
92-00-82	BRAKEMASTER (BIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
9202024	ANCHOR ASSEMBLY, FOUNDATION TUBE, 6½FT., BRS	6/12/97 Rev. D	3/6/98

3) THE FLEAT-MT MANUFACTURED BY ROAD SYSTEMS, INC. (RSI), 3616 OLD HOWARD COUNTY AIRPORT ROAD, BIG SPRINGS, TX, 79720 (TELEPHONE 915-263-2435) AND AVAILABLE FROM RSI'S LIST OF APPROVED DISTRIBUTORS.

THE LENGTH OF THE FLEAT-MT SYSTEM IS CONSIDERED TO BE 37'-6" LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS AND THE MANUFACTURERS INSTALLATION MANUAL.

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
MEDFLT-W-US	FLARED ENERGY ABSORBING TERMINAL - FLEAT-MT ASSEMBLY FOR WOOD BREAKAWAY POST SYSTEM	4/10/02 Rev. 5	1/6/03
MEDFLT-S-US	FLARED ENERGY ABSORBING TERMINAL - FLEAT-MT ASSEMBLY FOR STEEL BREAKAWAY POST SYSTEM	4/10/02 Rev. 6	1/6/03
MEDFLT-W-M	FLARED ENERGY ABSORBING TERMINAL - FLEAT-MT (Metric) ASSEMBLY FOR WOOD BREAKAWAY POST SYSTEM	4/10/02 Rev. 5	1/6/03
MEDFLT-S-M	FLARED ENERGY ABSORBING TERMINAL - FLEAT-MT (Metric) ASSEMBLY FOR STEEL BREAKAWAY POST SYSTEM	4/10/02 Rev. 6	1/6/03

THE FACE OF THE TYPE 1-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 36" X 12" (ONE 9" X 18" FOR EACH FLEAT-MT IMPACT HEAD). PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1-98 (UNIDIRECTIONAL OR BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

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.

CALCULATED LMB
CHECKED

GENERAL NOTES

TRU-80-(6.88)(8.56)

ASPHALT SURFACE REPAIR (EASTBOUND DRIVING LANE)

THE CONTRACTOR SHOULD MILL 2" BY 14' WIDE IN THE EASTBOUND DRIVING LANE AT THE FOLLOWING LOCATIONS:

IR 80, SLM 4.74 TO SLM 6.47
IR 80, SLM 7.03 TO SLM 7.49
IR 80, SLM 7.93 TO SLM 8.05

THE 14' SHOULD BEGIN 1' OUTSIDE THE EDGE LINE TO 1' OUTSIDE THE LANE LINE OR AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED AND CARRIED TO THE GENERAL SUMMARY TO COMPLETE THE WORK:

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 18973 SQ. YD.
ITEM 407 - TACK COAT, 1423 GAL
ITEM 442 - ASPHALT CONCRETE SURFACE COURSE 12.5mm TYPE B (446), AS PER PLAN, 1054 CU. YD.
ITEM 446 - LANE LINE, 2.31 MILE
ITEM 446 - EDGE LINE, 2.31 MILE

WEIGH STATION RAMP REPAIR

REPAIR THE WEIGH STATION RAMPS AND SHOULDERS AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - BORROW 8 CU YD
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (T = 1 ½") 6815 SQ YD
ITEM 407 - TACK COAT @ 0.075 GAL/SY 512 GAL
ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE B (446), AS PER PLAN (T = 1 ½") 284 CU YD

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN

THIS ITEM OF WORK SHALL BE PERFORMED IN CONFORMANCE WITH ITEM 254 IN THE CMS EXCEPT THE DEPTH SHALL VARY FROM 1 ½" TO THE TOP OF THE CONCRETE WHICHEVER IS FIRST. THIS WORK SHALL BE PERFORMED SO THAT THE CONCRETE BASE IS NOT DISTURBED. ALL EQUIPMENT, LABOR, TOOLS, AND OTHER INCIDENTALS REQUIRED TO PERFORM THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN.

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY. THE INTENT OF THIS ITEM IS TO REPAIR THE DETERIORATED AREAS ALONG THE WEIGH STATION RAMPS AS DIRECTED BY THE ENGINEER.

ITEM 255, FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT CLASS FS, 600 SQ YD

ITEM 255, FULL DEPTH PAVEMENT SAWING 700 FT

ITEM 256 - BONDED PATCHING OF PORTLAND CEMENT CONCRETE PAVEMENT, TYPE A, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 256, ALL REMOVALS ALONG JOINT AREAS ARE TO BE A MINIMUM OF 3 INCHES DEEP AND 2 FEET WIDE.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED ON SPALLING AND/OR SPALLED AREAS ALONG THE WEIGH STATION RAMPS AS DIRECTED BY THE ENGINEER.

ITEM 256, BONDED PATCHING OF PORTLAND CEMENT CONCRETE PAVEMENT, TYPE A, AS PER PLAN 1650 SQ FT

WEIGH STATION CLOSURE FOR PAVING

THE WEIGH STATION WILL BE CLOSED FROM 7PM FRIDAY TO 6AM MONDAY FOR 1 WEEKEND ONLY. THE REMAINING WORK SHALL BE COMPLETED FROM 12AM FRIDAY TO 12AM SUNDAY FOR 2 WEEK-ENDS. PRIOR TO CLOSING THE WEIGH STATION, THE CONTRACTOR WILL GIVE 7 DAYS NOTICE TO TOM FORD AT ODPS, PHONE (330) 728-6831.

ALL COSTS FOR THE ABOVE WORK WILL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 632 - DETECTOR LOOP, AS PER PLAN

THE CONTRACTOR SHALL CONTACT THE DISTRICT OFFICE (330-786-3146) THREE WORKING DAYS PRIOR TO ANY PLANING OR TRENCHING AT THE WEIGH STATION, LOOP DETECTORS DISTURBED BY PAVEMENT PLANING OR TRENCHING SHALL BE ABANDONED IN PLACE. THE LOOP DETECTOR WIRE WILL BE CUT INTO THE PAVEMENT AFTER THE PROPOSED SURFACE COURSE HAS BEEN PLACED. EACH DETECTOR SHALL BE REPLACED IN KIND, AT THE SAME LOCATION AS EXISTING. THE QUANTITIES LISTED BELOW HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE NEW LOOP DETECTOR WIRES SHALL BE RUN INTO THE EXISTING CONTROL BOX OR THE EXISTING PULLBOX. INCLUDED IN THIS ITEM IS THE POURED EPOXY TYPE CABLE SPLICE KIT (CONFORMING TO 725.15E) THAT MUST BE USED IN MAKING THESE CONNECTIONS.
ALL NECESSARY MATERIAL, LABOR, SPLICE KITS AND EQUIP-MENT SHALL BE INCIDENTAL TO PAYMENT OF THESE ITEMS.

632 DETECTOR LOOP, AS PER PLAN, 7 EACH
10' X 10' 3 EACH
8' X 6' 4 EACH

CALCULATED LMB CHECKED

EB DRIVING LANE AND WEIGH STATION NOTES

TRU-80-(6.88)(8.56)

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 ELEVEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT OR COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2211 AND PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, KEVIN DECHANT, (814) 678-7070 EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF THE WORK.

3. 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.

4. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

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. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES, OR CONES EXCEEDS TWO (2) MILES RURAL.

7. 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.

8. A QUANTITY OF 40 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.

9. THE FIRST COURSE OF ASPHALT MUST BE PLACED A MAXIMUM OF 7 DAYS AFTER THE MILLING IS COMPLETED ON ALL SURFACES WITHIN THE PROJECT LIMITS.

10. NO FULL DEPTH BRIDGE REPAIR SHALL BE PERFORMED OVER AN OPEN LANE. A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT THE ROADWAY, RAILROAD OR STREAM DURING THE REMOVAL OF THE EXISTING CONCRETE PARAPET AND DECK. THE CONTRACTOR SHALL PROVIDE A SAFETY NET OR PLATFORM OF SUITABLE STRENGTH ON THE UNDERSIDE OF THE DECK. THE DESIGN OF THE NET OR PLATFORM SHALL CONFORM WITH OSHA REQUIREMENTS AND THE APPROVAL OF THE ENGINEER AND SHALL REMAIN IN PLACE UNTIL THE WORK HAS BEEN COMPLETED AND ACCEPTED OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A DEMOLITION PLAN AND SAFETY NET OR PLATFORM DESIGN 10 DAYS PRIOR TO COMMENCING ANY DEMOLITION FOR APPROVAL BY THE ENGINEER. THE SUBMITTAL SHALL BE IN WRITING TO THE DISTRICT CONSTRUCTION ENGINEER WITH A COPY TO THE PROJECT ENGINEER.

11. ALL FULL DEPTH BRIDGE REPAIR SHALL BE PROTECTED WITH STEEL PLATES UNTIL REPAIR MATERIAL IS PLACED AS DIRECTED BY THE ENGINEER.

12. ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT AND FULL DEPTH BRIDGE REPAIR OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED OR PROTECTED AS DIRECTED BY THE ENGINEER.

13. 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.

14. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLAN. THIS QUANTITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: W8-1 (BUMP), W8-H13 (NO EDGE LINES), R4-1 (DO NOT PASS), R4-2, W8-11 (UNEVEN LANES). THESE QUANTITIES SHALL BE AS PER 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

PHASE I - PLANED SURFACE
- 614, WORK ZONE LANE LINE, CLASS II, 10.29 MILE
- 614, WORK ZONE STOP LINE, CLASS 1, 56 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS 1, 4301 FT
- 614, WORK ZONE MARKING SIGN (ALL PHASES), 64 EACH

PHASE II - BASE COURSE
- 614, WORK ZONE LANE LINE, CLASS II, 7.98 MILE
- 614, WORK ZONE STOP LINE, CLASS 1, 56 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS 1, 4301 FT

PHASE III - INTERMEDIATE COURSE
- 614, WORK ZONE LANE LINE, CLASS II, 7.98 MILE
- 614, WORK ZONE STOP LINE, CLASS 1, 56 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS 1, 4301 FT

PHASE IV - SURFACE COURSE
- 614, WORK ZONE LANE LINE, CLASS III, 642 PAINT, 10.29 MILE
- 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT, 56 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS III, 4301 FT

TO BE USED AS DIRECTED BY THE ENGINEER
- 614, WORK ZONE EDGE LINE, CLASS III, 642 PAINT, 21.18 MILE

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. PAVERS, ROLLERS AND OTHER EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN PAVING OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY. OTHERWISE THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE THE R/W. THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG THE HIGHWAY THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER 614.03. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER/ SUPERVISOR HAS BEEN GRANTED.

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 $2000 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.

WORK ZONES IN PENNSYLVANIA

FOR LANE CLOSURES IN PENNSYLVANIA PLEASE SEE SHEETS 14a, 14b, AND 14c FOR WORK ZONE DETAILS.

SURFACE CONDITION SIGNS

ERECT A GROOVED PAVEMENT (W8-H15) SIGN 250 FEET IN ADVANCE OF ANY SECTION OF ROADWAY WHERE TRAFFIC MUST TRAVEL ON A PLANED SURFACE. ENSURE THESE SIGNS ARE IN PLACE BEFORE OPENING THE ROADWAY TO TRAFFIC. ERECT THESE SIGNS ON EACH ENTRANCE RAMP AND AT INTERSECTIONS OF THROUGH ROUTES TO WARN TRAFFIC OF THIS SURFACE CONDITION. PAYMENT WILL BE MADE UNDER THE LUMP SUM PAID FOR ITEM 614 - MAINTAINING TRAFFIC.

SHOULDER WORK

WHEN WORKING IN THE SHOULDER ON IR 80 SIGNS MUST BE SET ACCORDING TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FIGURE 6H-5. NO SHOULDER WORK IS PERMITTED WITHOUT PROPER WARNING THAT THE SHOULDER IS CLOSED. SHOULDER WORK MUST HAVE THE APPROVAL FROM THE PROJECT ENGINEER BEFORE WORK CAN BEGIN.

CALCULATED LMB CHECKED

MAINTENANCE OF TRAFFIC

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ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, 4 PORTABLE CHANGEABLE MESSAGE SIGNS [PCMS], ON SITE, FOR THE DURATION OF TIME SPECIFIED IN THIS NOTE, EACH SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. THIS LIST IS AVAILABLE ON THE ODOT WEBSITE AT http://www.dot.state.oh.us/divisions/constructionmgt/materials/pages/portable-changeable.aspx
THE CLASS I UNITS SHALL HAVE A MINIMUM LEGIBILITY DISTANCE OF 1250' FEET.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHOULD BE LOCATED BEHIND GUARDRAIL WHEREVER POSSIBLE. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE TWO DIFFERENT MEMORIES [PROM AND RAM] AND CAPABILITY TO STORE UP TO 99 MESSAGES IN EACH MEMORY. MESSAGE MEMORY OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. IN ORDER TO CONVEY A MAXIMUM OF INFORMATION AT A SINGLE GLANCE, ONLY THREE LINE PRESENTATION FORMATS WITH A MAXIMUM OF SIX MESSAGE PHASES WILL BE PERMITTED. NORMALLY, ONLY A MAXIMUM OF THREE MESSAGE PHASES SHOULD BE EMPLOYED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL [IN ACTIVE CELLULAR AREAS] ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID FOR EACH DAY OF ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

614 PORTABLE CHANGEABLE MESSAGE SIGN,
AS PER PLAN, 360 DAY

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 A TRAFFIC SIGNAL INSTALLATION OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

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.

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

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.

FOR WORK ZONES IN PENNSYLVANIA PLEASE CONTACT:
PA STATE POLICE, GIRARD BARRACKS: 5950 MEADVILLE RD. GIRARD, PA 16417, (814) 774-9611. ATTN: Cpl. Reese Wetzel

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 600 HOUR

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, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $1300.00 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL BE ADVISED THAT OTHER PROJECTS MAY BE ONGOING IN AREAS IMMEDIATELY ADJACENT TO AND WITHIN THE PROJECT LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO CAUSE A MINIMUM OF DELAY OR CONFLICT WITH THE OTHER PROJECT(S). IN ACCORDANCE WITH 105.08, THE CONTRACTOR SHALL ARRANGE WITH THE OTHER CONTRACTORS APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL RECEIVE DAILY APPROVAL FROM THE ENGINEER PRIOR TO COMMENCING ANY OPERATIONS. ANY CONFLICT BETWEEN CONTRACTORS INVOLVING WORK SCHEDULES, WORK AREA OR COOPERATION SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS PROJECT.

CALCULATED LMB
CHECKED

MAINTENANCE OF TRAFFIC

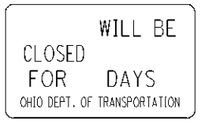
TRU-80-(6.88)(8.56)

DETOUR NOTIFICATION [ODOT/TOWNSHIP]

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) AND HUBBARD TOWNSHIP (330-534-9798) 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.

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 OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP 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. THE SIGNS MAY BE ERECTED ANY-WHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.



W20-H14-60

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) [RAMP B & D]

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR EACH RAMP DETOUR WHICH WILL OCCUR BETWEEN 7PM TO 6AM FOR A MAXIMUM OF 2 NIGHTS.

THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEETS 12-13, A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $2000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

IN ADDITION TO THE RAMP DETOURS DETAILED IN THESE PLANS, RAMPS B & D CANNOT BE CLOSED SIMULTANEOUSLY. ALL RAMP CLOSURES WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) [TRU-80-1027]

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR THE DETOUR WHICH WILL OCCUR ON A WEEKEND (7PM FRIDAY TO 6AM MONDAY) FOR 1 WEEKEND.

THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 14, A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $2000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ALL CLOSURES WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

REST AREA CLOSURES FOR PAVING

THE REST AREAS WILL BE PAVED DURING A 48 CONSECUTIVE HOUR CLOSURE OCCURRING BETWEEN 10:00AM ON A MONDAY AND NOON THURSDAY. PRIOR TO CLOSING THE REST AREA, THE CONTRACTOR WILL GIVE 7 DAYS NOTICE TO PAUL OBERDORFER AT THE DISTRICT OFFICE, PHONE (330) 715-3678 OR TOM WATHEN (300) 221-1740 AS AN ALTERNATE. IN ADDITION TO THE NOTICE OF CLOSURE SIGNS, THE CONTRACTOR WILL FURTHER NOTIFY THE PUBLIC OF THE CLOSURE 7 DAYS IN ADVANCE BY USING A PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) WHICH GIVES THE DATES OF THE CLOSURE; THE LOCATION OF THE PCMS WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AT ALL TIMES. WHILE THE REST AREA IS CLOSED, THE CONTRACTOR WILL PLACE "CLOSED" SIGNS (BLACK ON ORANGE, 96"W X 24"H MAX.) ON THE EXISTING REST AREA LEAD IN SIGNS FOR ±1 MILE PRIOR TO THE REST AREA. NO CLOSURES WILL BE PERMITTED BETWEEN JUNE 25-JULY 11, 2010 AND BETWEEN AUGUST 21-SEPTEMBER 11, 2010.

ALL COSTS FOR THE ABOVE WORK WILL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

LANE CLOSURES

DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. THE PERMIT-TED LANE CLOSURE CHART USED FOR THIS PROJECT SHALL BE THE MOST CURRENT CHART AVAILABLE ON THE DATE THIS PROJECT SELLS.

THE CHART CAN BE FOUND AT:
http://plcm.dot.state.oh.us

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIRE-MENTS IN THE CHART, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN THE AMOUNT OF $2000 PER HOUR OR PORTION THEREOF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE WORK ON THE MAINLINE STRUCTURES IS EXCLUDED FROM THE ABOVE REQUIREMENTS. THE FOLLOWING REQUIREMENTS MUST BE FOLLOWED TO COMPLETE THE MICRO-SILICA PATCHING ON THE MAINLINE STRUCTURES. THE FOLLOWING TIMES ARE PERMITTED FOR LANE CLOSURES:

TRU-80-0496R, TRU-80-0591R, & TRU-80-8.57R
SATURDAY/SUNDAY/MONDAY - ANYTIME
TUESDAY/WEDNESDAY/THURSDAY/FRIDAY -
ANYTIME BESIDES 3PM TO 6PM

TRU-80-0496L, TRU-80-0591R, & TRU-80-8.57L
SATURDAY/MONDAY - ANYTIME
SUNDAY/TUESDAY - ANYTIME BESIDES 3PM TO 5PM
WEDNESDAY/THURSDAY/FRIDAY -
ANYTIME BESIDES 2PM TO 6PM

TRU-80-9.42R & TRU-80-9.56R
EVERY DAY - ANYTIME

TRU-80-9.42L, TRU-80-9.56L, & TRU-80-10.56L
SUNDAY/THURSDAY/FRIDAY - ANYTIME BESIDES 2PM TO 6PM
MONDAY/TUESDAY/WEDNESDAY/SATURDAY - ANYTIME

TRU-80-10.86R
SUNDAY - ANYTIME BESIDES 11AM TO 5PM
MONDAY/TUESDAY/WEDNESDAY/SATURDAY - ANYTIME
THURSDAY - ANYTIME BESIDES 3PM TO 5PM
FRIDAY - ANYTIME BESIDES 1PM TO 3PM

ITEM 632 - DETECTOR LOOP, AS PER PLAN

THE CONTRACTOR SHALL CONTACT THE DISTRICT OFFICE (330-786-3146) THREE WORKING DAYS PRIOR TO ANY PLANING OR TRENCHING AT THE INTERSECTION OF IR 80 AND US62/SR7. ANY LOOP DETECTORS DISTURBED BY PAVEMENT PLANING OR TRENCHING SHALL BE ABANDONED IN PLACE.

ALL NECESSARY MATERIAL, LABOR, SPLICE KITS, AND EQUIPMENT SHALL BE INCIDENTAL TO PAYMENT OF THESE ITEMS.
ITEM 632 DECTECTOR LOOP, AS PER PLAN, 1 EACH
RAMP B 8' X 25' 1 EACH

CALCULATED LMB
CHECKED

MAINTENANCE OF TRAFFIC

TRU-80-(6.88)(8.56)

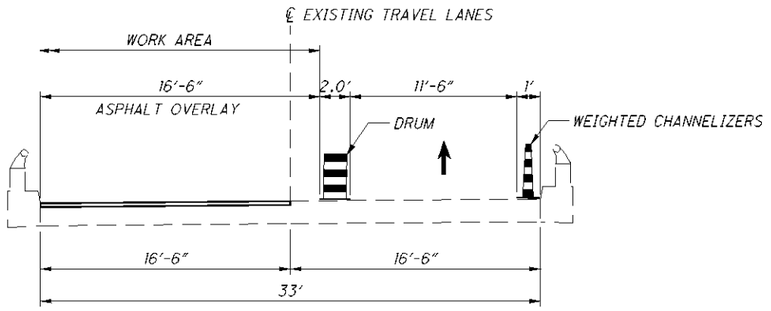
PHASE CONSTRUCTION DETAILS

1 LANE OF TRAFFIC MAINTAINED

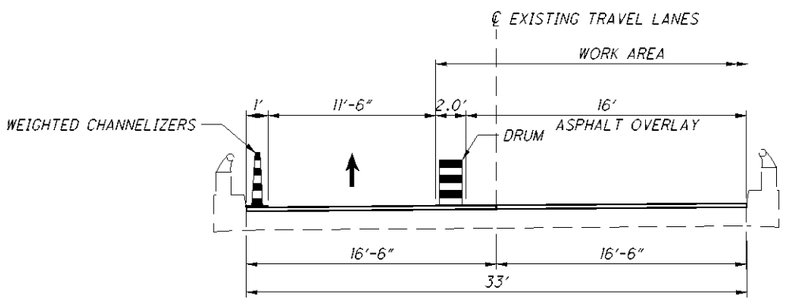
CLOSE ONE LANE USING ODOT STANDARD CONSTRUCTION DRAWING MT-95.30, PROVIDE A 300' BUFFER, THEN SHIFT TRAFFIC ONTO THE SHOULDERS ACCORDING TO OMUTCD FIGURE 6H-36. OMIT PAVEMENT MARKINGS.

STRUCTURE 0857L & 0857R

RIGHT BRIDGES LOOKING EAST
LEFT BRIDGES LOOKING WEST



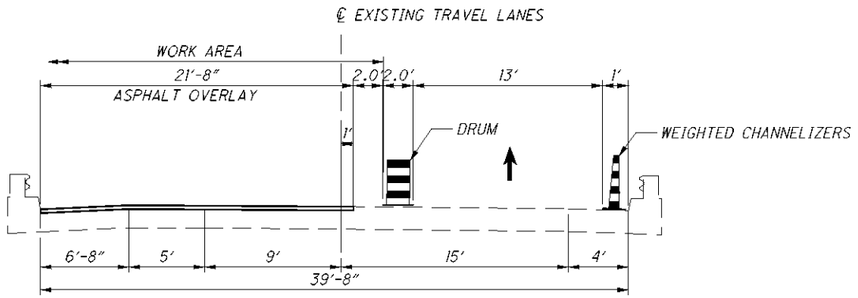
PHASE 1



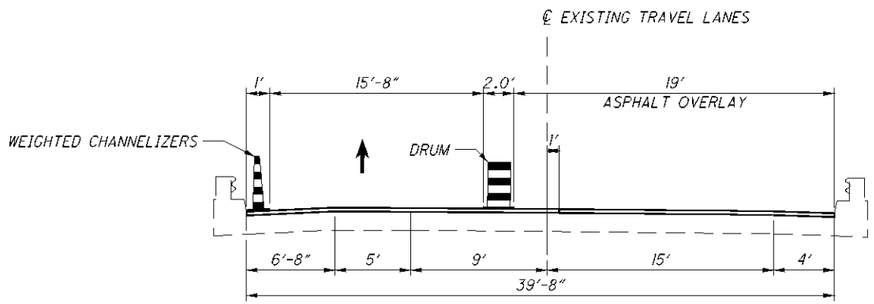
PHASE 2

STRUCTURE 0942L & 0942R

RIGHT BRIDGES LOOKING EAST
LEFT BRIDGES LOOKING WEST



PHASE 1



PHASE 2

***DETAILS HAVE BEEN PROVIDED TO VERIFY THAT WORK CAN BE DONE IN PHASES.

CALCULATED LMB CHECKED

PHASE CONSTRUCTION DETAILS

TRU-80-(6.88)(8.56)

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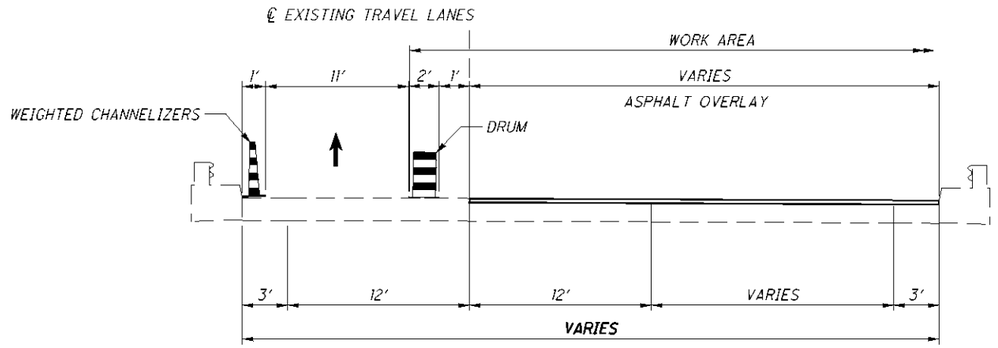
PHASE CONSTRUCTION DETAILS

1 LANE OF TRAFFIC MAINTAINED

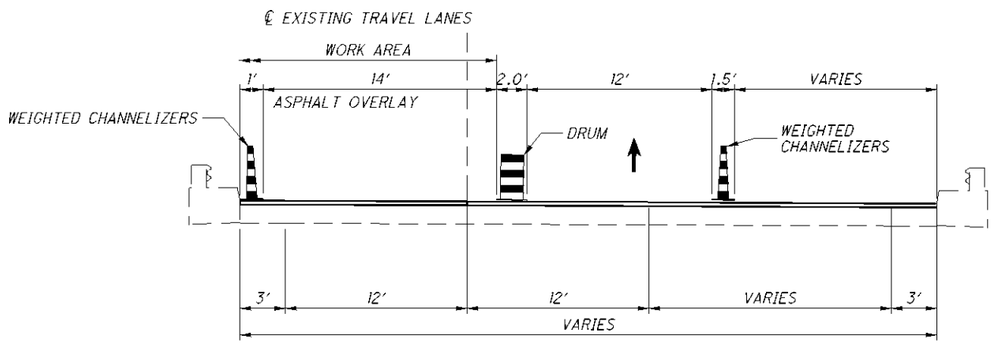
CLOSE ONE LANE USING ODOT STANDARD CONSTRUCTION DRAWING MT-95.30, PROVIDE A 300' BUFFER, THEN SHIFT TRAFFIC ONTO THE SHOULDERS ACCORDING TO OMUTCD FIGURE 6H-36. OMIT PAVEMENT MARKINGS.

STRUCTURE 0956L & 0956R

RIGHT BRIDGES LOOKING EAST
LEFT BRIDGES LOOKING WEST



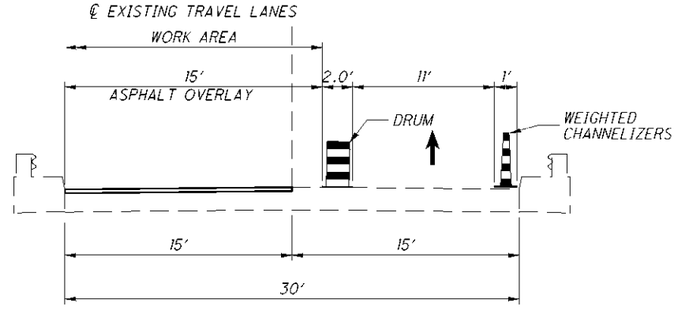
PHASE 1



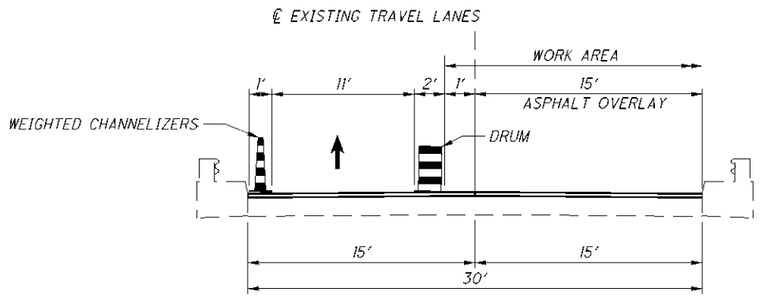
PHASE 2

STRUCTURE 1085R & 1085L

RIGHT BRIDGES LOOKING EAST
LEFT BRIDGES LOOKING WEST



PHASE 1



PHASE 2

***DETAILS HAVE BEEN PROVIDED TO VERIFY THAT WORK CAN BE DONE IN PHASES.

CALCULATED LMB CHECKED

PHASE CONSTRUCTION DETAILS

TRU-80-(6.88)(8.56)

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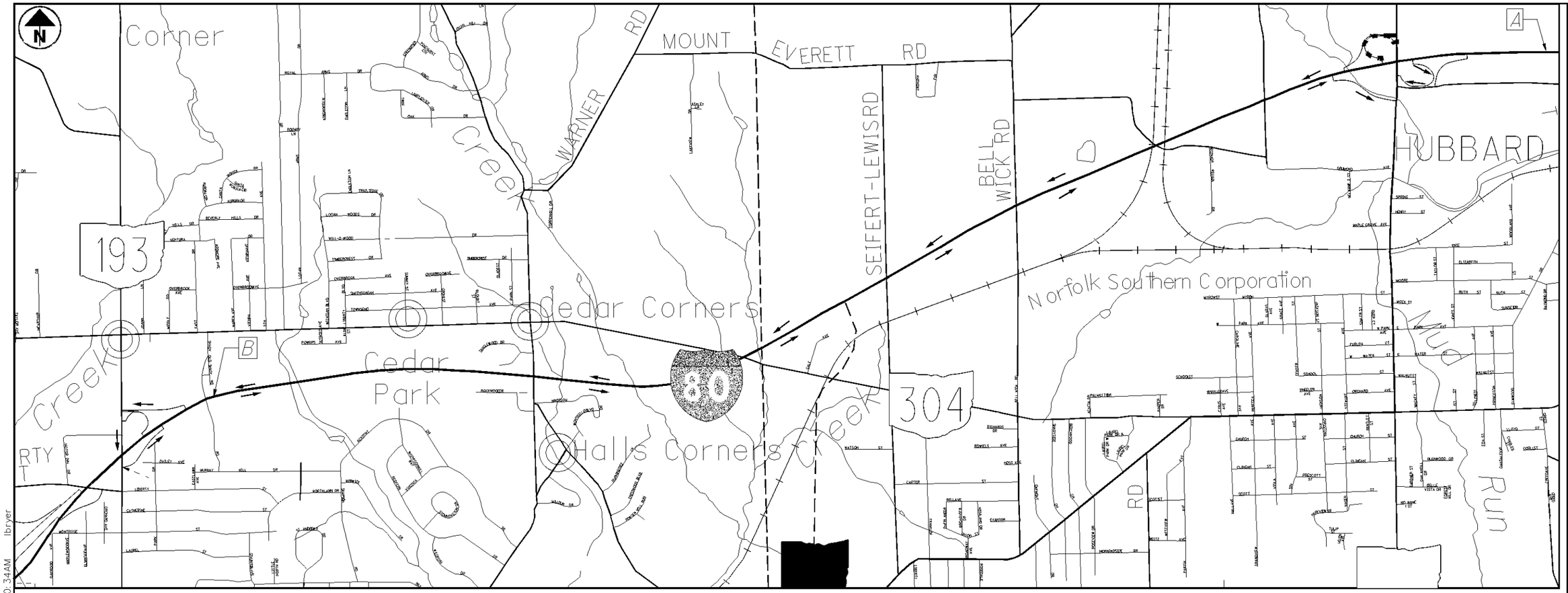

DETOUR PLAN FOR RAMP B (IR-80 WEST TO US 62 / SR 7)

CLOSE RAMP B ONLY, USE MT-98.29

OFFICIAL DETOUR ROUTE: IR-80 WEST / SR 193 SOUTH / IR-80 EAST

A — PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGES:

1 - 62 & 7
EXIT
CLOSED

2 - USE
80 WB
TO 193

B — PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGES:

1 - TO 62/7
EXIT
SR 193

2 - TO
80 EB

CALCULATED LMB
CHECKED

DETOUR PLAN RAMP B CLOSURE

TRU-80-(6.88)(8.56)

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37

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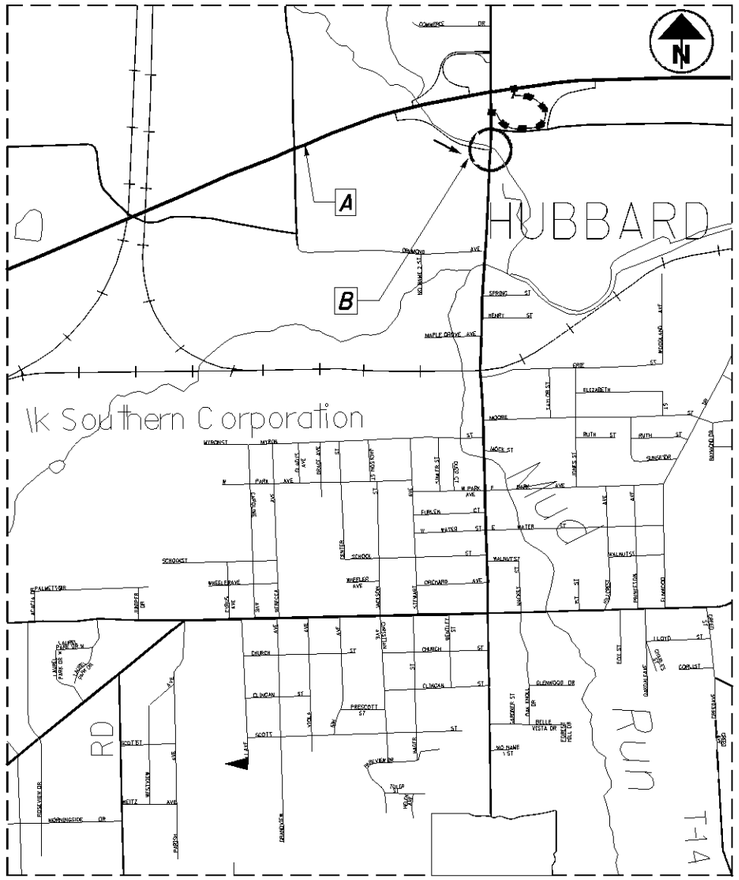

DETOUR PLAN FOR RAMP D (IR 80 EAST TO US62 EAST/SR 7 NORTH)

---- CLOSE RAMP D ONLY, USE MT-98.29

← OFFICIAL DETOUR ROUTE: US 62 WEST/SR 7 SOUTH EXIT RAMP C TO US 62 EAST/SR 7 NORTH

A

PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGES:

1 - 234B
EXIT
CLOSED

2 - USE
EXIT
234A

B

LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE:

USED TO CONTROL TRAFFIC AT THE BOTTOM OF THE RAMP.

CALCULATED LMB
CHECKED

DETOUR PLAN
RAMP D CLOSURE

TRU-80-(6.88)(8.56)

13
37

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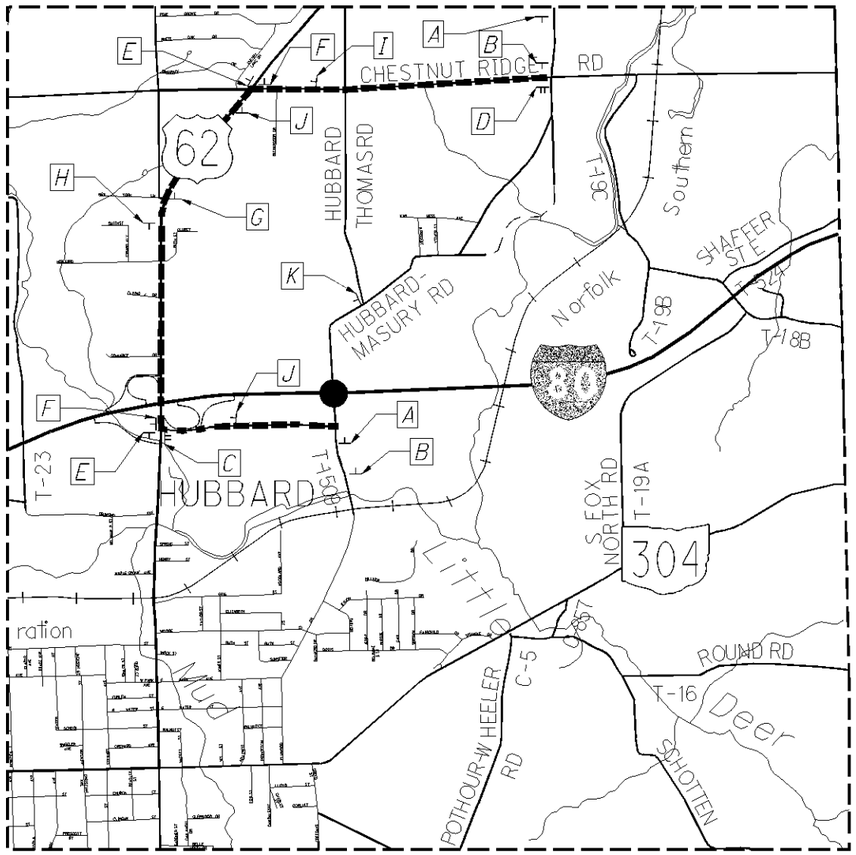


DETOUR PLAN FOR TRU-80-1027 (HUBBARD-MASURY RD)

● CLOSE TRU-80-1027, USE MT-101.60

▬ ▬ LOCAL DETOUR ROUTE: US 62&SR 7 NORTH/US 62 NORTH/CHESTNUT RIDGE RD

NOTE: REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, TYPICAL APPLICATION 20, FOR SIGN SPACING.

LEGEND

A

ROAD CLOSED AHEAD

W20-3-36

B

HUBBARD MASURY RD
D3-1-VAR.

DETOUR AHEAD

W20-2-36

C #

ROAD CLOSED
MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3A-60

DETOUR

M4-10L-48

ON TYPE III BARRICADE

D #

ROAD CLOSED
MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3A-60

DETOUR

M4-10R-48

ON TYPE III BARRICADE

E

HUBBARD MASURY RD
D3-1-VAR.

DETOUR

M4-9L-30

F

HUBBARD MASURY RD
D3-1-VAR.

DETOUR

M4-9R-30

G

HUBBARD MASURY RD
D3-1-VAR.

DETOUR

M4-9-30

H

HUBBARD MASURY RD
D3-1-VAR.

DETOUR

M4-H9T-30

I

HUBBARD MASURY RD
D3-1-VAR.

DETOUR

M4-9-30

J

HUBBARD MASURY RD
D3-1-VAR.

DETOUR

M4-9-30

K

ROAD CLOSED
MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3A-60

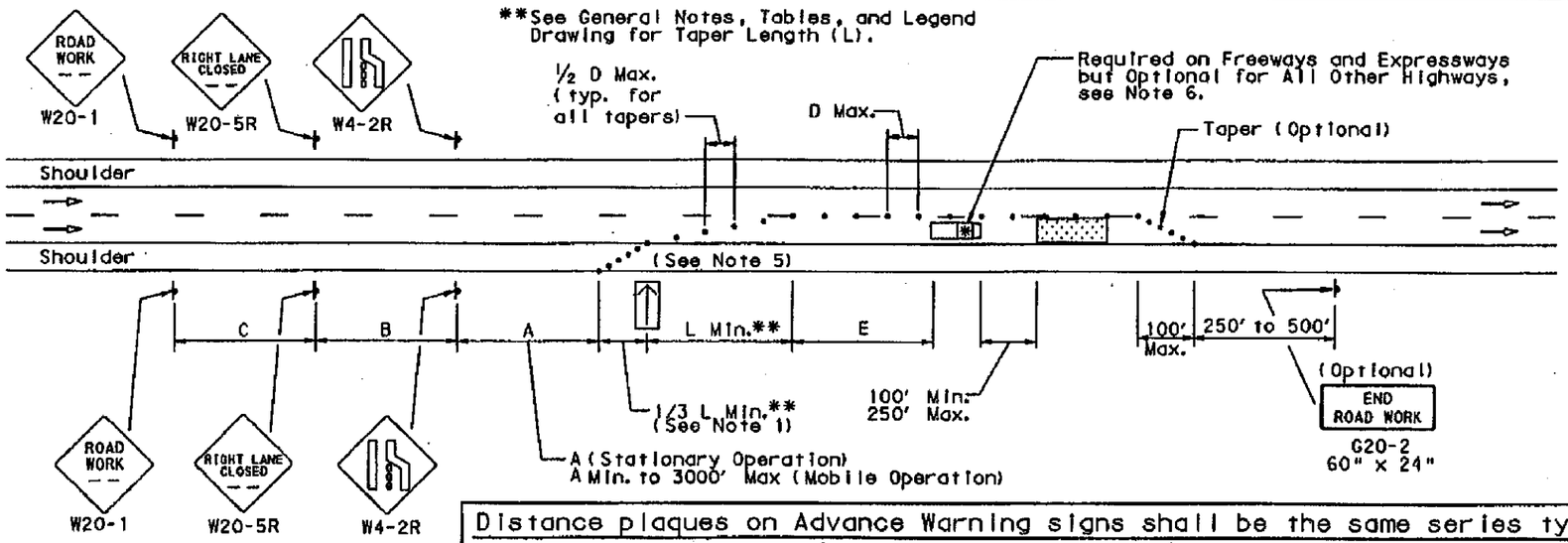
CALCULATED LMB
CHECKED

DETOUR PLAN
TRU-80-1027 (HUBBARD-MASURY RD)

TRU-80-(6.88)(8.56)

TRU-80-1027

PUBLICATION 213
SHORT-TERM STATIONARY OPERATION OR MOBILE OPERATION
DIVIDED OR ONE-WAY HIGHWAY - WORK AREA IN THE LEFT OR RIGHT LANE



Distance plaques on Advance Warning signs shall be the same series type.

Example: either all XXX ft. or all "AHEAD"

CONDITION 1: All Highways (except Freeways and Expressways)
- A = 500 ft.
- B = 500 ft., W20-5R sign distance plaque to read 1000 ft. or "AHEAD"
- C = 500 ft., W20-1 sign distance plaque to read 1500 ft. or "AHEAD"

CONDITION 2: For Urban Streets
- A, B and C = 200 ft. and sign distance plaque to read "AHEAD"

CONDITION 3: For Freeway and Expressway Highways
- A = 1000 ft.
- B = 1640 ft., W20-5R sign distance plaque to read ½ MILE or "AHEAD"
- C = 2640 ft., W20-1 sign distance plaque to read 1 MILE or "AHEAD"

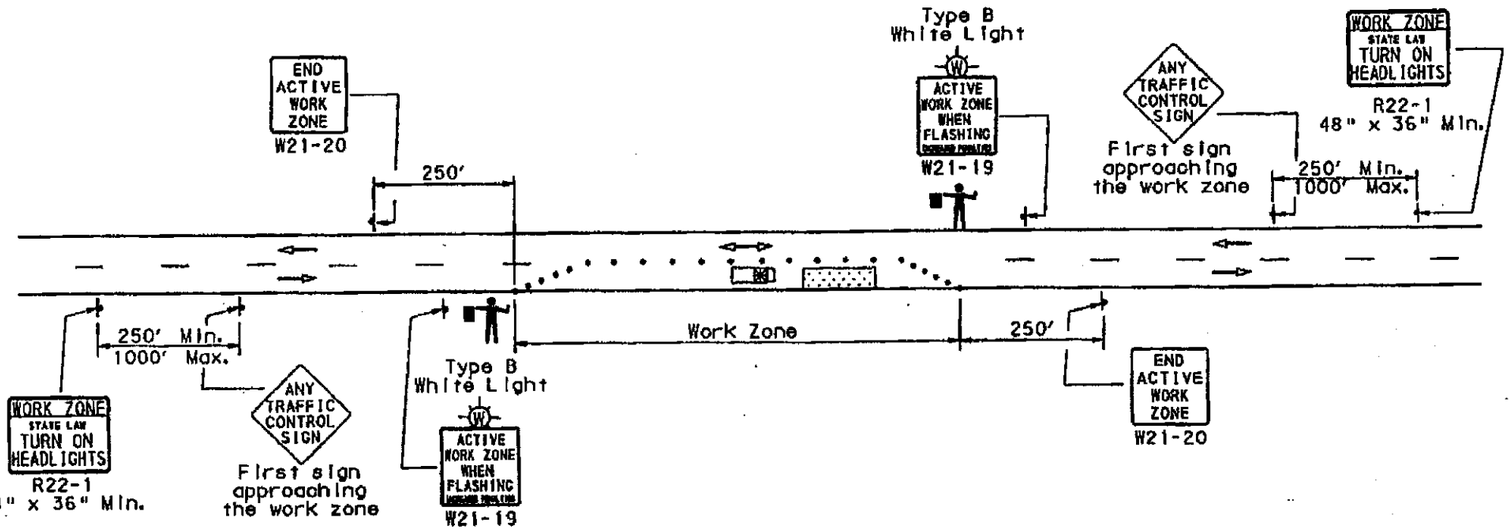
All Highways (except freeways and expressways)		
	D	E*
MPH	ft	ft
25	50	155
30	60	200
35	70	250
40	80	305
45	90	360
50	100	425
55	110	495
Freeways and Expressways		
50	100	425
55	110	495
60	120	570
65	130	645

*Distances may be increased for downgrades or other conditions that affect stopping sight distance.

NOTES
1. When paved shoulders having a width of 8 ft or more are closed, channelizing devices should be used to close the shoulder in advance of the merging taper.
2. For left lane closures, the W20-5L Sign shall be used instead of the W20-5R Sign.
3. When a highway-rail grade crossing exists within the work zone, or it is anticipated that queues resulting from the lane closure might extend through a highway-rail grade crossing, provisions shall be made to eliminate conflicts, which may require placing a flagger at the crossing. Coordination with the railroad is essential.
4. Where speed or volume is higher, signing such as additional Right Lane Closed XX ft Sign (W20-5R) or Be Prepared to Stop Sign (W3-4) should be used in advance of the W20-1 sign.
5. See PATA GENERAL, Table 5 for size of the Flashing Arrow Panel.
6. Shadow vehicle shall be equipped with a Truck Mounted Attenuator (TMA) on Expressways and Freeways. Use of a TMA is optional on all other Highways when a shadow vehicle is used.

PATA 18

PUBLICATION 213
ACT 229 GUIDELINES



ACT 229 GUIDELINES

1. The installation of the R22-1, W21-19 and W21-20 signs and the flashing white lights are not required for any of the following situations:
   a. Mobile operations.
   b. Operations 1 hour or less in duration.
   c. Stationary work where the daily duration of the construction, maintenance, or utility operation is less than 12 hours and all traffic-control devices are removed from the highway at the completion of the daily operation.
   d. The normal speed limit is 45 MPH or less.
   e. The work is in response to emergency work or conditions such as a major storm.
2. When used, erect the R22-1 Sign as the first sign on each primary approach to the work zone, generally at a distance of 250' to 1000' prior to the first warning sign.
3. When used, erect the W21-19 Sign as close as practical to the beginning of the active work zone.
4. When a construction, maintenance or utilility project has more than one active work zone and the active work zones are separated by a distance of more than 1 mile, signs for each active work zone shall be erected.
5. The W21-19 light shall be activated only when workers are present, and deactivated when workers are not anticipated during the next 60 minutes.
6. When the work zone is on an expressway or freeway, appropriate Act 229 signing and lights shall be installed at on-ramp approaches to the work zone.

ACT 229

CALCULATED LMB
CHECKED

MAINTENANCE OF TRAFFIC

TRU-80-(6.88)(8.56)

PUBLICATION 213
GENERAL NOTES, TABLES AND LEGEND

TABLE 1.
FORMULAS FOR DETERMINING TAPER LENGTHS

S	L
40 MPH or less	$L = \frac{WS^2}{60}$
45 MPH or more	L = WS

W = width of offset in feet

TABLE 2.
MERGING TAPER LENGTH

S	W	L
MPH	(ft)	(ft)
25	10	100
	11	110
	12	130
30	10	150
	11	170
	12	180
35	10	200
	11	220
	12	250
40	10	270
	11	290.
	12	320
45	10	450
	11	500
	12	540
50	10	500
	11	550
	12	600
55	10	550
	11	610
	12	660
60	10	600
	11	660
	12	720
65	10	650
	11	720
	12	780

W = width of offset in feet

TABLE 3.
OTHER TAPER LENGTHS

Type of Taper	L
Merging Taper	L Min.
Shifting Taper	0.5L Min.
Shoulder Taper	0.33L Min
One-Lane, Two-Way Traffic Taper	100' Max.
Downstream Taper	100' Max./Lane

TABLE 4.
ADVISORY SPEED FOR FREEWAYS AND EXPRESSWAYS

S	Work Area Speed Limit	Advisory Speed *** In Advance of the Work Area			
		Signs from Beginning of Work Area			
MPH	MPH	4th	3rd	2nd	1st
65	55		55	55	55
65	50*	55	55	50	50
65	45*	55	50	45	45
55	45	50	50	45	45
55	40*	50	45	40	40
55	35*	50	45	40	35
50	40	45	45	40	40
50	35*	45	40	35	35
50	30*	45	40	35	30
45	35	-	40	35	35
45	30*	-	40	35	30
45	25*	-	35	30	25
40	30	-	35	30	30
40	25*	-	35	30	25

*** The use of advisory speed plaques are optional.

* Work area speed limits less than 25 MPH or a reduction of more than 10 MPH below the normal speed limit should be used only when required by restrictive features in the work zone and require prior approval. See Publication 212 for further guidelines.

TABLE 5.
FLASHING ARROW PANEL GUIDELINES

Panel Type	Size (inches)	Application
A**	48x24	Low-speed urban Typically 25-30 MPH
B**	60x30	Intermediate-speed facility, typically 35-40 MPH and Mobile Operations
C**	96x48	Freeway and Expressway Other high-speed, high-volume roadways Typically 45 MPH or greater
D**	Length of Arrow=48 Width of Arrowhead=24	Low-speed urban, typically 25-30 MPH Short-term work not to exceed one daylight period For use on authorized vehicles only

**Type A, B and C arrow panels shall have solid rectangular appearances. The Type D arrow panel shall conform to the shape of the arrow.

SHEET NUMBER														ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
4	6	7	8	9	17	21	23	26	27										
																		ROADWAY	
535														202	32000	535	FT	CURB REMOVED	
						17732								202	38000	17732	FT	GUARDRAIL REMOVED	
3														202	98100	3	EACH	REMOVAL MISC.:CONCRETE CURBED BULL NOSE SECTIONS	4
97														203	10000	97	CU YD	EXCAVATION	
26	8					587								203	40000	621	CU YD	BORROW	
						3								209	60501	3	MILE	LINEAR GRADING, AS PER PLAN	5
						15600								606	13000	15600	FT	GUARDRAIL, TYPE 5	
						663								606	15500	663	FT	GUARDRAIL, BARRIER DESIGN, TYPE 5	
						1								606	22000	1	EACH	ANCHOR ASSEMBLY, TYPE B-98	
						20								606	22010	20	EACH	ANCHOR ASSEMBLY, TYPE E-98	
						14								606	26500	14	EACH	ANCHOR ASSEMBLY, TYPE T	
						4								606	32500	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE F	
						9								606	35000	9	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
						5								606	35100	5	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
						20								606	35120	20	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3	
						5								606	60010	5	EACH	IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL)	
5														SPEC	69098000	5	EACH	MISC.: VERTICAL CLEARANCE	4
							1							SPEC	69098000	1	EACH	MISC.: WEATHER INFORMATION SYSTEM [RWIS]	23
																		EROSION CONTROL	
						1057								659	10000	1057	SQ YD	SEEDING AND MULCHING	
						53								659	14000	53	SQ YD	REPAIR SEEDING AND MULCHING	
						53								659	15000	53	SQ YD	INTER-SEEDING	
						0.15								659	20000	0.15	TON	COMMERCIAL FERTILIZER	
						0.22								659	31000	0.22	ACRE	LIME	
						9								659	35000	9	M GAL	WATER	
														832	30000	1000	EACH	EROSION CONTROL	
																		PAVEMENT	
1300														251	01000	1300	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR	
3500														252	01500	3500	FT	FULL DEPTH PAVEMENT SAWING	
580														253	01000	580	SQ YD	PAVEMENT REPAIR	
	18973				163447									254	01000	182420	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, (T=2")	
					29699									254	01000	29699	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, (T=1 1/2")	
	6815													254	01001	6815	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	6
	600													255	10100	600	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS	
	700													255	20000	700	FT	FULL DEPTH PAVEMENT SAWING	
	1650													256	10001	1650	SQ FT	BONDED PATCHING OF PORTLAND CEMENT CONCRETE PAVEMENT, TYPE A, AS PER PLAN	6
					13621									301	46000	13621	CU YD	ASPHALT CONCRETE BASE, PG64-22	
97														304	20000	97	CU YD	AGGREGATE BASE	
	1935				14486									407	10000	16421	GALLON	TACK COAT	
					6538									407	14000	6538	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
					14348									408	10001	14348	GALLON	PRIME COAT, AS PER PLAN	4
	1338				8149									442	10051	9487	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN	4
					7946									442	20250	7946	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448)	
						479								448	46061	479	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN	5
					4053									617	10101	4053	CU YD	COMPACTED AGGREGATE, AS PER PLAN	4
7.54														618	40600	7.54	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)	

GENERAL SUMMARY

TRU-80-(6.88)(8.56)

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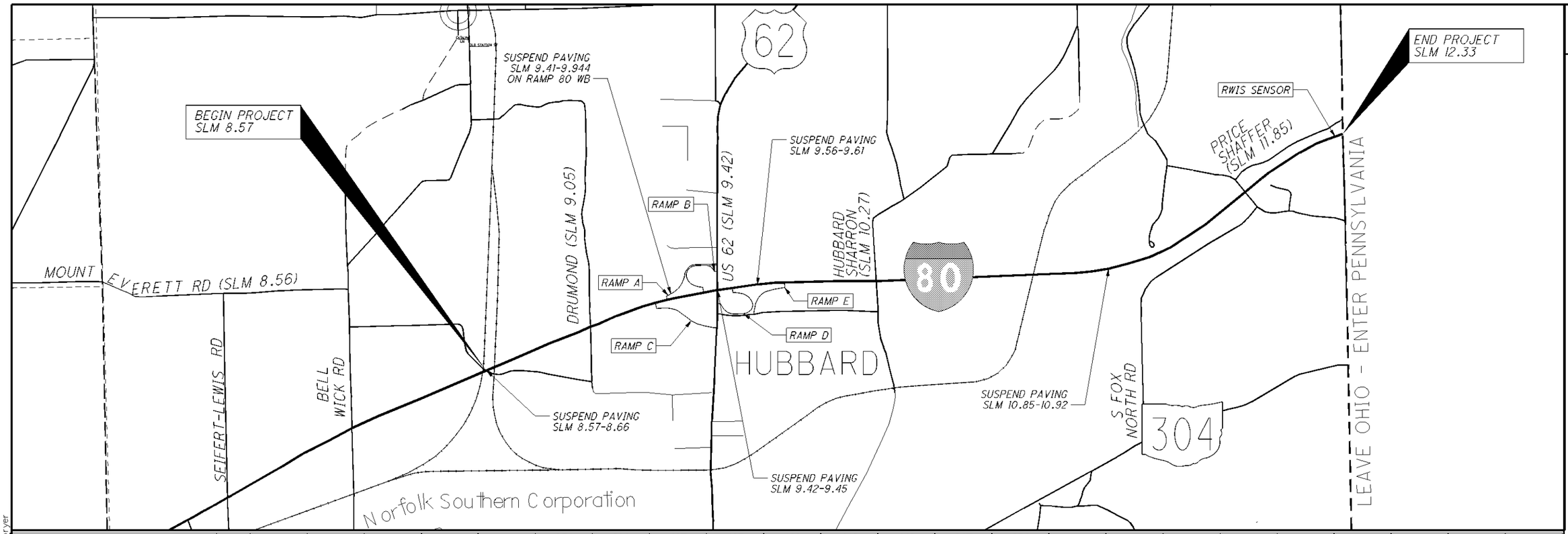
SHEET NUMBER														ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
4	6	7	8	9	17	21	23	26	27										
																		TRAFFIC SURVEILLANCE	
	7			1										632	26501	8	EACH	DETECTOR LOOP, AS PER PLAN	
							1							632	90104	1	EACH	REUSE OF TRAFFIC CONTROL ITEM, INSTALLATION OF RWIS SENSOR	
							1							632	90400	1	EACH	SIGNALIZATION, MISC.:REMOVAL AND STORAGE OF RWIS SENSOR	
																		TRAFFIC CONTROL	
								433						621	10020	433	EACH	RPM, LOW PROFILE WHITE/RED	
								423						621	54000	423	EACH	RAISED PAVEMENT MARKER REMOVED	
						216								626	00100	216	EACH	BARRIER REFLECTOR	
	2.31								21.75					646	10000	24.06	MILE	EDGE LINE	
	2.31								7.98					646	10100	10.29	MILE	LANE LINE	
									6030					646	10300	6030	FT	CHANNELIZING LINE	
									126					646	10400	126	FT	STOP LINE	
									1467					646	10600	1467	FT	TRANSVERSE/DIAGONAL LINE	
									202					646	10800	202	SQ FT	ISLAND MARKING	
									4					646	10900	4	EACH	HANDICAP SYMBOL MARKING	
									756					646	20200	756	FT	PARKING LOT STALL MARKING	
																		MAINTENANCE OF TRAFFIC	
			600											614	11110	600	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
														614	12420	LUMP		DETOUR SIGNING	
		64												614	12460	64	EACH	WORK ZONE MARKING SIGN	
		40												614	13000	40	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			360											614	18401	360	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	8
		26.25												614	20400	26.25	MILE	WORK ZONE LANE LINE, CLASS II	
		10.29												614	20550	10.29	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
		21.18												614	22350	21.18	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
		12903												614	23000	12903	FT	WORK ZONE CHANNELIZING LINE, CLASS I	
		4301												614	23680	4301	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
		168												614	26000	168	FT	WORK ZONE STOP LINE, CLASS I	
		56												614	26610	56	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
																		STRUCTURES 20' AND OVER	
																		FOR STRUCTURE TRU-80-0496L ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0496R ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0591L ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0591R ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0857L ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0857R ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0941L ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0942L ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0942R ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0956L ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-0956R ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-1027 ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-1085L ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-1085R ESTIMATED QUANTITIES	31
																		FOR STRUCTURE TRU-80-1185 ESTIMATED QUANTITIES	31
														614	11000	LUMP		MAINTAINING TRAFFIC	
														619	16010	6	MONTH	FIELD OFFICE, TYPE B	
														623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
														624	10000	LUMP		MOBILIZATION	

GENERAL SUMMARY

TRU-80-(6.88)(8.56)



SLM RANGE			SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	254 PAVEMENT PLANING, ASPHALT CONCRETE, (T=2")	301 ASPHALT CONCRETE BASE, PG64-22	407 TACK COAT	407 TACK COAT FOR INTERMEDIATE COURSE	408 PRIME COAT, AS PER PLAN	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448)	617 COMPACTED AGGREGATE, AS PER PLAN	254 PAVEMENT PLANING, ASPHALT CONCRETE, (T= 1 1/2")									
				FT	FT	SQ YD	SQ YD	SQ YD	CU YD	GALLON	GALLON	GALLON	CU YD	CU YD	CU YD	SQ YD									
8.66	TO	9.42	EB/WB	4012.80	76.00	33885.87		33885.87	2823.82	2541.44	1355.43	3566.93	1411.91	1647.23	1052.74										
9.45	TO	9.56	EB/WB	580.80	76.00	4904.53		4904.53	408.71	367.84	196.18	516.27	204.36	238.41	152.37										
9.61	TO	10.85	EB/WB	6547.20	76.00	55287.47		55287.47	4607.29	4146.56	2211.50	5819.73	2303.64	2687.59	1717.63										
10.92	TO	12.33	EB/WB	7444.80	76.00	62867.20		62867.20	5238.93	4715.04	2514.69	6617.60	2619.47	3056.04	1953.11										
RAMP A			WB	689.00	27.00	2067.00				155.03		122.49	86.13		17.35	2067.00									
RAMP B			WB	1095.00	24.00	2920.00				219.00		194.67	121.67		27.58	2920.00									
RAMP A/B			WB	711.00	70.00	5530.00				414.75		126.40	230.42		17.91	5530.00									
RAMP C			EB	1380.00	24.00	3680.00				276.00		245.33	153.33		34.76	3680.00									
RAMP D			EB	1875.00	28.00	5833.33				437.50		333.33	243.06		47.22	5833.33									
RAMP E			EB	900.00	24.00	2400.00				180.00		160.00	100.00		22.67	2400.00									
REST AREA							7267.87			545.09			403.77			7267.87									
GORE AREAS							1501.44	1501.44	125.12	112.61	60.06		62.56	72.99											
ACCEL/DECEL LANES							3004.44	3004.44	250.37	225.33	120.18		125.19	146.05											
TURNAROUNDS							1995.54	1995.54	166.30	149.67	79.82		83.15	97.01											
PAVE UNDER GR ADJUSTMENTS			EB/WB	15100.00			VAR.					-3355.56			-990.35										
						SUBTOTALS		163446.5	13620.54	14485.85	6537.86	14347.20	8148.64	7945.32	4052.98	29698.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
						TOTALS CARRIED TO GENERAL SUMMARY		163447	13621	14486	6538	14348	8149	7946	4053	29699	0	0	0	0	0	0	0	0	0

PAVEMENT CALCULATIONS

TRU-80-(6.88)(8.56)

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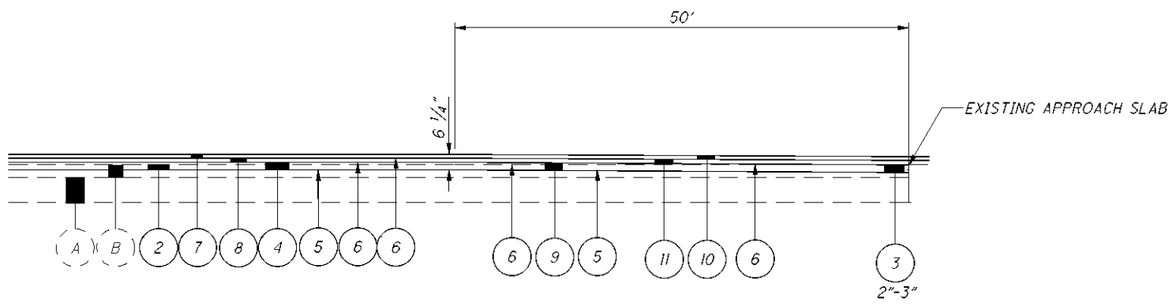
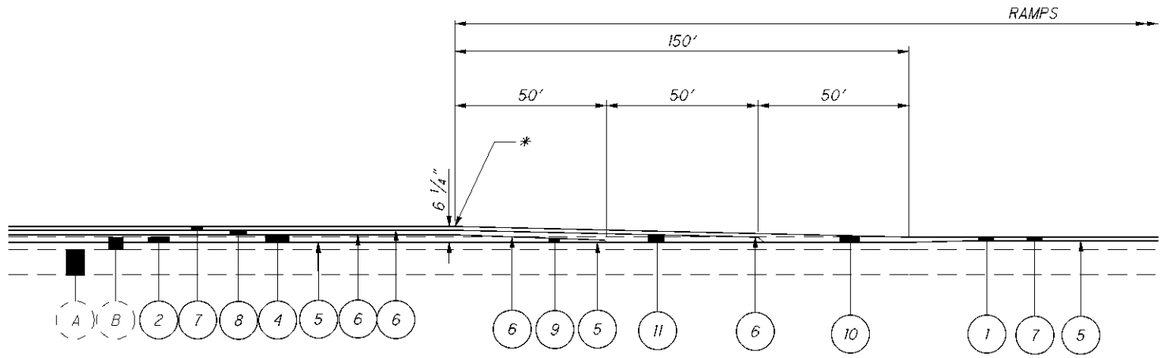
PROFILE VIEWS



TYPICAL FEATHER DETAIL AT MAINLINE STRUCTURES

TRU-80-0857L (APPROACH END ONLY-EAST OF STRUCTURE)
TRU-80-0857R (TRAILING END ONLY-EAST OF STRUCTURE)
TRU-80-0942L
TRU-80-0942R
TRU-80-0956L
TRU-80-0956R
TRU-80-1085L
TRU-80-1085R



TYPICAL FEATHER DETAIL AT RAMPS

ALL RAMPS AT US62/SR7
REST AREA RAMPS

* BEGIN FEATHER AT THE END OF THE GORE AREA. ACCEL/DECEL LANES SHALL BE PAVED WITH THE MAINLINE PAVEMENT BUILD-UP

LEGEND

1. ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=1 ½")
2. ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=2")
3. ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (VAR. T=2"-3" OR T=0"-1½")
4. ITEM 301, ASPHALT CONCRETE BASE, PG64-22 (T=3")
5. ITEM 407, TACK COAT @ 0.075 GAL/SY
6. ITEM 407, TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY
7. ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5mm TYPE B (446), AS PER PLAN (T=1 ½")
8. ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm TYPE B (448) (T= 1 ¾")
9. ITEM 301, ASPHALT CONCRETE BASE, PG64-22 (T=VAR.)
10. ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5mm TYPE B (446), AS PER PLAN (T=VAR.)
11. ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm TYPE B (446), AS PER PLAN (T=VAR.)

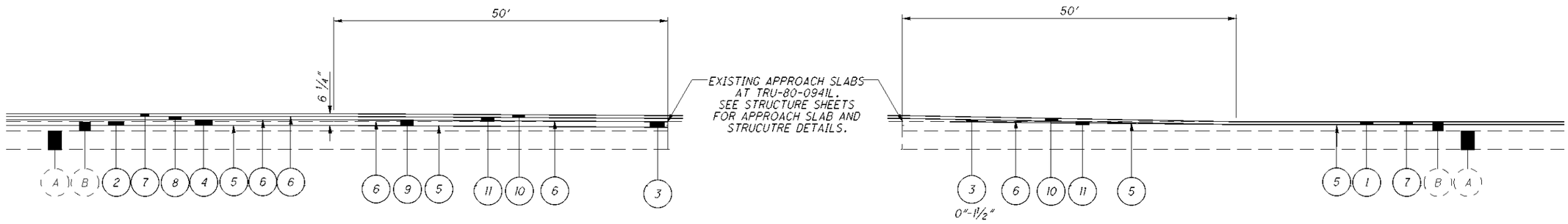
A. EXISTING REINFORCED CONCRETE BASE (10"±)
B. EXISTING ASPHALT OVERLAY (5"±)

NOT DRAWN TO SCALE

FEATHER DETAILS

TRU-80-(6.88)(8.56)

PROFILE VIEWS



TYPICAL FEATHER DETAIL AT RAMP STRUCTURE TRU-80-094IL

THE MAINLINE PAVEMENT TREATMENT SHALL BE APPLIED BACK INTO THE RAMP STRUCTURE AS DETAILED ABOVE.

SEE SHEET 19 FOR DETAILS
NOT DRAWN TO SCALE

FEATHER DETAILS

TRU-80-(6.88)(8.56)

19
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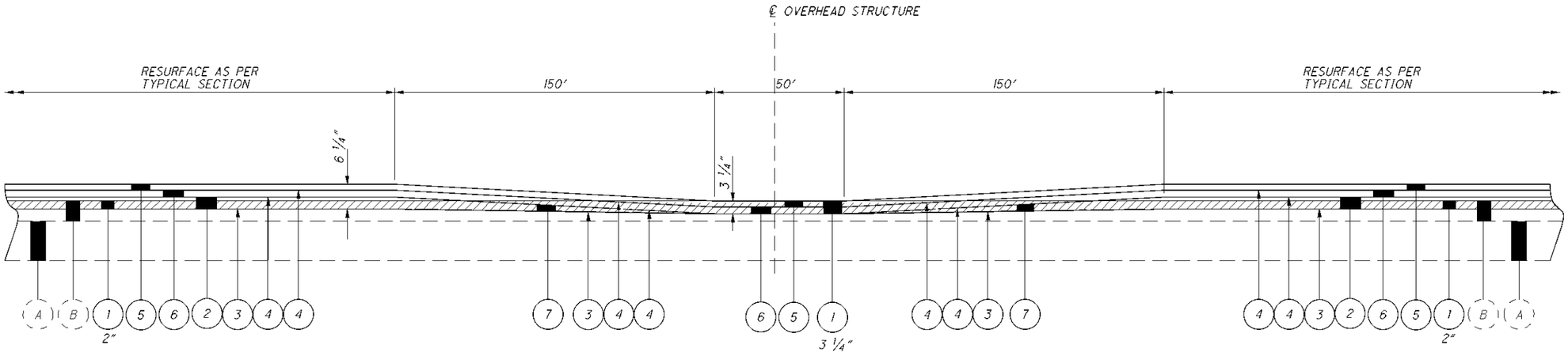


PAVEMENT TRANSITION AT OVERHEAD BRIDGES:

DETAIL APPLIES AT STRUCTURES:
TRU-80-0905 EB
TRU-80-0905 WB
TRU-80-1051 EB
TRU-80-1051 WB
TRU-80-1185 EB

LEGEND

1. ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE
2. ITEM 301, ASPHALT CONCRETE BASE, PG64-22 (T=3")
3. ITEM 407, TACK COAT @ 0.075 GAL/SY
4. ITEM 407, TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY
5. ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5mm TYPE B (446). AS PER PLAN (T=1 1/2")
6. ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm TYPE B (448) (T= 1 3/4")
7. ITEM 301, ASPHALT CONCRETE BASE, PG64-22 (T=VAR.)

254, PAVEMENT PLANING, ASPHALT CONCRETE (T=VAR.)

A. EXISTING REINFORCED CONCRETE BASE (10"±)
B. EXISTING ASPHALT CONCRETE OVERLAY (5"±)

NOT DRAWN TO SCALE

PAVEMENT TRANSITION DETAILS

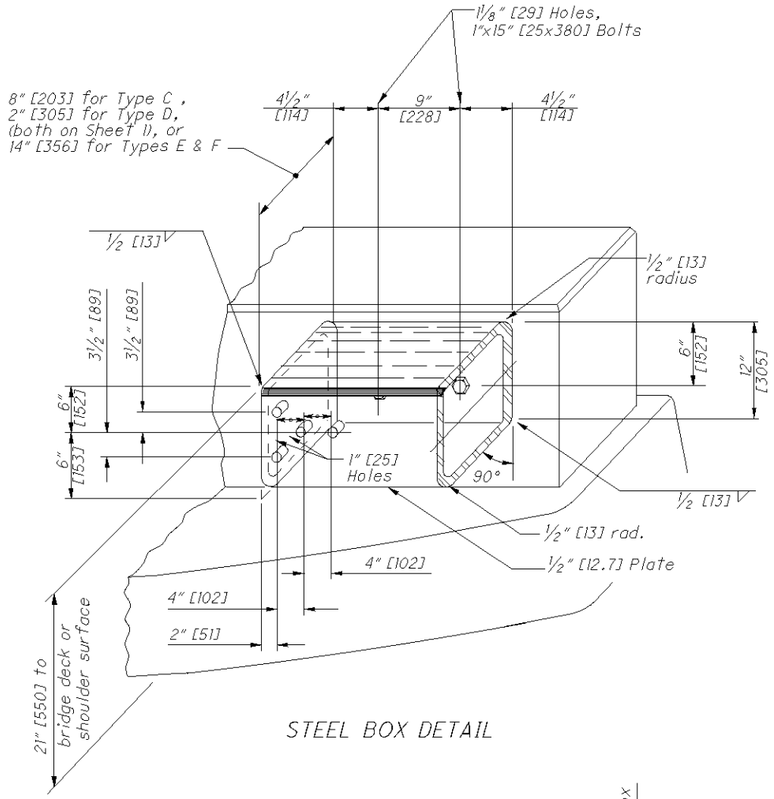
TRU-80-(6.88)(8.56)

GUARDRAIL SUB SUMMARY

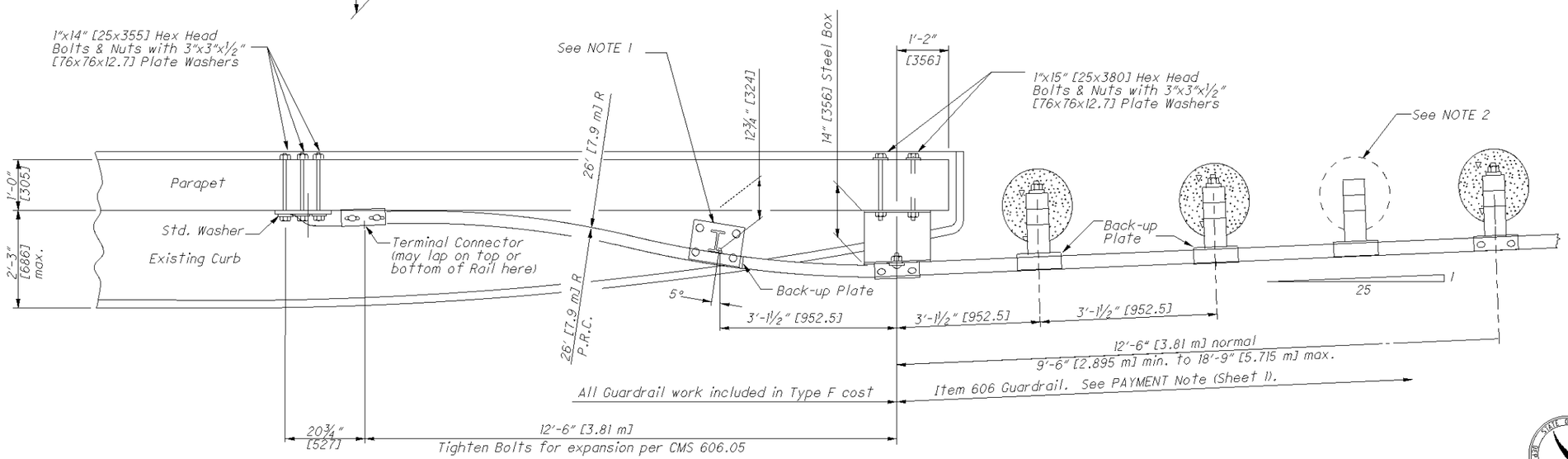
CALCULATED LMB
CHECKED

DIRECTION	SIDE	SLM TO SLM			202 GUARDRAIL REMOVED	203 BORROW	209 LINEAR GRADING, AS PER PLAN	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN	606 GUARDRAIL, TYPE 5	606 GUARDRAIL, BARRIER DESIGN, TYPE 5	606 ANCHOR ASSEMBLY, TYPE B-98	606 ANCHOR ASSEMBLY, TYPE E-98	606 ANCHOR ASSEMBLY, TYPE T	606 BRIDGE TERMINAL ASSEMBLY, TYPE F	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 BRIDGE TERMINAL ASSEMBLY, TYPE 3	606 IMPACT ATTENUATOR, TYPE 1, 98 (BIDIRECTIONAL)	626 BARRIER REFLECTOR	659 SEEDING AND MULCHING	659 REPAIR SEEDING AND MULCHING	659 INTER-SEEDING	659 COMMERCIAL FERTILIZER	659 LIME	659 WATER
					FT	CU YD	MILE	CU YD	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ YD	SQ YD	SQ YD	TON	ACRE	M GAL
EB	RT	8.66	TO	8.75	500.00	19.29	0.09	15.74	487.50				1			1			5						
EB	RT	9.01	TO	9.03	106.50	4.11	0.02	3.35	37.50			1			1				3						
EB	RT	9.25	TO	9.28	175.00	6.75	0.03	5.51	112.50			1	1						3						
EB	MED	9.26	TO	9.30	175.00	6.75	0.04	5.51	112.50			1	1						3						
EB	RT	9.35	TO	9.42	402.00	15.51	0.07	12.66	337.50			1					1		4						
EB	MED	9.37	TO	9.42	277.00				237.50	100.00							1	1	3	119.56	5.98	5.98	0.02	0.02	1.00
EB	RT	9.45	TO	9.58	679.50	26.21	0.13	21.39	625.00								2		7						
EB	MED	9.45	TO	9.58	490.00				250.00	212.50							1		5	205.56	10.28	10.28	0.03	0.04	1.00
EB	RT	10.23	TO	10.26	106.50	4.11	0.03	3.35	37.50			1			1				3						
EB	RT	10.47	TO	10.50	106.50	4.11	0.03	3.35	37.50			1			1				3						
EB	RT	10.77	TO	10.85	375.00	14.47	0.08	11.81	300.00			1					1		4						
EB	MED	10.79	TO	10.86	279.00				237.50	100.00							1	1	3	119.56	5.98	5.98	0.02	0.02	1.00
EB	RT	10.92	TO	11.01	503.00	19.41	0.09	15.84	475.00				1				1		5						
EB	RT	11.83	TO	11.85	106.50	4.11	0.02	3.35	37.50			1			1				3						
EB	RT	11.88	TO	12.17	1525.00	58.83	0.29	48.01	1512.50				1			1			15						
																			3						
WB	RT	8.66	TO	8.92	1444.00	55.71	0.26	45.46	1387.50			1				1			14						
WB	MED	8.66	TO	8.68	201.50				175.00	50.00						1		1	3	89.56	4.48	4.48	0.01	0.02	1.00
WB	RT	9.08	TO	9.10	107.50	4.15	0.02	3.38	37.50			1			1				3						
WB	MED	9.36	TO	9.38	125.00				112.50				1						3	50.00	2.50	2.50	0.01	0.01	1.00
WB	RT	9.45	TO	9.48	177.50	6.85	0.03	5.59	125.00			1					1		3						
WB	MED	9.45	TO	9.51	466.00				450.00								1		5	200.00	10.00	10.00	0.03	0.04	1.00
WB	MED	9.52	TO	9.56	87.50				75.00				1						3	33.33	1.67	1.67	0.00	0.01	1.00
WB	RT	9.55	TO	9.56	65.00	2.51	0.01	2.05	37.50				1				1		3						
WB	MED	9.61	TO	9.68	262.50				237.50	100.00							1	1	3	119.56	5.98	5.98	0.02	0.02	1.00
WB	RT	9.61	TO	10.09	2490.00	96.06	0.48	78.39	2450.00			1					1		25						
WB	RT	10.29	TO	10.31	106.50	4.11	0.02	3.35	37.50			1			1				3						
WB	RT	10.53	TO	10.55	106.50	4.11	0.02	3.35	37.50			1			1				3						
WB	RT	10.74	TO	10.85	565.00	21.80	0.11	17.79	537.50				1				1		6						
WB	MED	10.91	TO	10.97	279.00				237.50	100.00							1	1	3	119.56	5.98	5.98	0.02	0.02	1.00
WB	RT	10.92	TO	11.08	851.50	32.85	0.16	26.81	787.50			1					1		9						
WB	RT	11.86	TO	11.89	106.50	4.11	0.03	3.35	37.50			1			1				3						
WB	RT	12.10	TO	12.20	575.00	22.18	0.10	18.10	512.50			1	1						6						
WB	RT	12.27	TO	12.29	137.50	5.30	0.02	4.33	112.50				1			1			3						
WB	RT	12.31	TO	12.33	106.50	4.11	0.02	3.35	37.50			1			1				3						
																			0						
																			3						
WB	RT	RAMP A			1477.50	57.00	0.28	46.51	1237.50			2	1				3		15						
EB	RT	RAMP D			487.50	18.81	0.09	15.35	475.00				1				1		5						
EB	RT	RAMP E			1650.00	63.66	0.31	51.94	1600.00		1		1						17						
OVERHEAD		TRU-80-1185 (PRICE SHAFFER RD.)			50.00				25.00					4					3						
TOTALS CARRIED TO GENERAL SUMMARY					17732	587	3	479	15600	663	1	20	14	4	9	5	20	5	216	1057	53	53	0.15	0.22	9

TRU-80-(6.88)(8.56)



STEEL BOX DETAIL



TYPE F

(Two-Way Cross Road)

NOTES

PAYMENT: Payment for Item 606 - Bridge Terminal Assembly, Type F, Each, shall include the additional cost in excess of normal guardrail cost, such as: additional or heavier posts, concrete encasement, extra rail, steel box, curb, embankment, terminal connector, anchors and other hardware, etc.

DETAILS NOT SHOWN: See SCD GR-1.1 and other Drawings pertaining to the design of specific guardrail types.

GUARDRAIL TERMINATION: As directed by the Engineer. The 12'-6" [3.81 m] normal rail section may vary as shown to facilitate connection of or reconstruction of existing approach guardrail. The 1'-2" [356] terminal connector location dimension may be increased to avoid existing parapet steel.

STEEL BOX: Appropriate size steel box, galvanized after welding any two opposite corners, shall be mounted on the the parapet so the top of rail is 27¾" [706] above the bridge deck. See Detail Type F.

SPACER BLOCK: Block size may be increased if necessary to locate post beyond wide approach slab.

POSTS: Shall be 6"x8" [150x200] wood or W6x15 [W150 x22.5] steel (except Note 1 post) of the same material type as used on approach guardrail, with 4" [100] min. concrete encasement.

NOTE 1: Use the inlet mounted post detail as shown on SCD GR-1.1. Use a W6x9 [W150x13.5] post instead, with the length needed to mount top of rail at 27¾" [706] above bridge deck. See TYPE F.

NOTE 2: Place one additional encased post halfway between adjacent posts when the 12'-6" [3.81 m] normal rail section is increased.

SELF-DRILLING ANCHORS: Meeting requirements of CMS 712.01, or Group VIII Type 1 anchor per FF-S-325, with ⅞"x1½" [22x38] bolts with washers may be substituted for the ⅞"x14" [22x355] bolt shown in the parapet for Type F.

Anchor installations not satisfactory to the Engineer shall be replaced with bolts as shown extending through the parapet or as directed by the Engineer.

All metric dimensions (in brackets []) are in millimeters unless otherwise noted.

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 10-20-06 | CHECKED

PLAN INSERT SHEET

BRIDGE TERMINAL ASSEMBLIES (Type F)

STRUCTURE: TRU-80-1185

TRU-80-(6.88)(8.56)

1 / 1

22 / 37

ITEM 632- SIGNALIZATION, MISC.; REMOVAL AND STORAGE OF RWIS SENSOR
ITEM 632- REUSE OF TRAFFIC CONTROL ITEM: INSTALLATION OF RWIS SENSOR

THE CONTRACTOR WILL CONTACT THE SENSOR MANUFACTURER'S REPRESENTATIVE, WHO WILL BE PRESENT WHILE THE SENSORS ARE BEING REMOVED AND RE-INSTALLED.

SENSOR MANUFACTURER'S REPRESENTATIVE
M.H. CORBIN, INC.
9042 HERITAGE DRIVE
PLAIN CITY, OH 43064
PHONE: 614-873-5216

THE EXISTING SENSORS SHALL BE REMOVED PRIOR TO THE PLANING OF THE PAVEMENT.

THE CONTRACTOR SHALL REMOVE AND STORE THE SENSOR TOP AND THE INTERNAL ELECTRONICS FOR EACH EXISTING RWIS PAVEMENT SENSOR. THE ITEMS SHALL BE SEALED IN STATIC RESISTANT BAGS, KEPT SAFE FROM PHYSICAL DAMAGE, HIGH HUMIDITY CONDITIONS, AND OTHER ELEMENTS THAT COULD BE DEGRADING TO THE EQUIPMENT. ONCE THE SENSOR TOP AND INTERNAL ELECTRONICS ARE REMOVED, THE CANISTER/HOUSING THAT REMAINS EPOXIED IN THE PAVEMENT IS EXPENDABLE AND SHALL NOT BE SALVAGED. THE INTERNAL ELECTRONICS AND THE TOP FOR EACH SENSOR SHALL BE REINSTALLED IN A NEW CANISTER/HOUSING IN THE ROADWAY AFTER PAVEMENT WORK IS COMPLETED.

CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE COMPONENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY HIS OPERATIONS. DAMAGED COMPONENTS SHALL BE REPLACED AT NO COST TO THE STATE OF OHIO. THE CONTRACTOR SHALL ACQUIRE THE SPECIAL TOOLS NEEDED FOR REMOVAL AND REINSTALLATION OF THE SENSORS.

THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CANISTERS FOR THE SENSORS, IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. FOUR [4] SENSORS SHALL BE INSTALLED ON I-80, [ONE SENSOR IN EACH LANE], AT THE FOLLOWING APPROXIMATE LOCATIONS:
80 EB: SLM 12.2 [2 SENSORS, 1 CENTERED IN EACH LANE, APPROXIMATELY 400' WEST OF THE EXISTING RWIS TOWER]
80 WB: SLM 12.3 [2 SENSORS, 1 CENTERED IN EACH LANE, ADJACENT TO THE EXISTING RWIS TOWER]

THE REMOVAL AND STORAGE OF THE SENSORS WILL BE PAID FOR UNDER ITEM 632- SIGNALIZATION, MISC.; REMOVAL AND STORAGE OF RWIS SENSOR, 1 EACH. THE RE-INSTALLATION OF THE FOUR SENSORS WILL OCCUR AFTER COMPLETION OF THE PAVEMENT WORK AND WILL BE PAID FOR UNDER ITEM 632- REUSE OF TRAFFIC CONTROL ITEM: INSTALLATION OF RWIS SENSOR 1 EACH.

THE ABOVE SLM'S ARE NOT EXACT LOCATIONS FOR THE RE-INSTALLATION, BUT SHOULD BE ADJUSTED TO AVOID PLACING THE SENSORS DIRECTLY BENEATH HIGH POWER ELECTRICAL LINES, TO PROVIDE FOR INSTALLATION IN SOUND PAVEMENT, AND TO MAINTAIN LINE OF SIGHT COMMUNICATION FROM THE SENSOR TO THE EQUIPMENT ENCLOSURE CABINET.

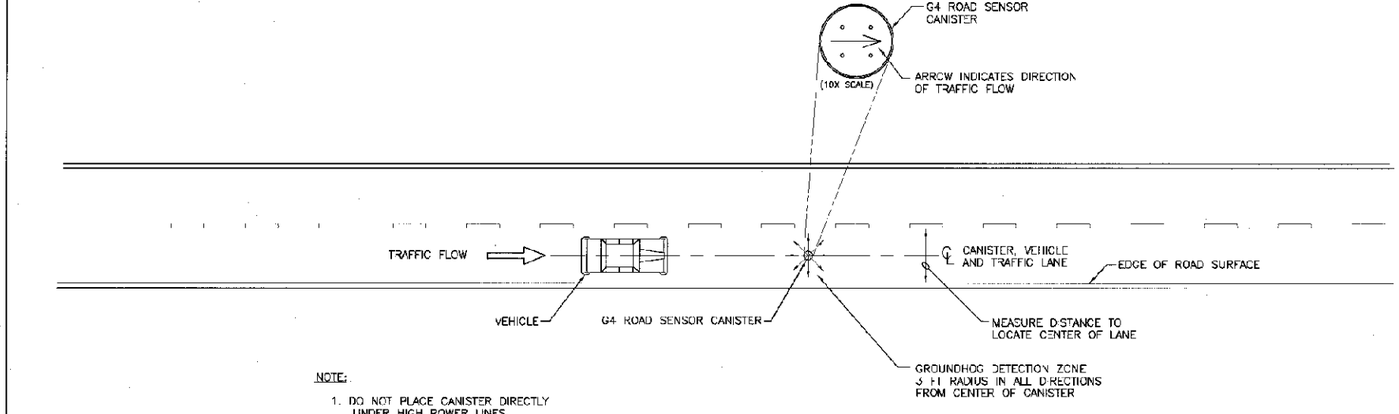
THE CANISTERS AND SENSORS SHALL BE INSTALLED ACCORDING TO THE DETAILS SHOWN ON SHEETS 23-25, USING THE PROPER SENSOR INSTALLATION TOOLS, AND SET 1/16" MINIMUM TO 1/8" MAXIMUM BELOW THE FINAL PAVEMENT GRADE. THE SENSORS SHALL BE INSTALLED CENTERED IN THE DESIGNATED LANES, ORIENTED PROPERLY WITH THE DIRECTION OF TRAFFIC FLOW, ACCORDING TO THE MARKINGS OF THE COMPONENTS. THE SENSORS IN ADJACENT LANES SHALL BE OFFSET LONGITUDINALLY FROM ONE ANOTHER, BY AT LEAST 5 FEET BUT NOT MORE THAN 10 FEET. ALL PAVEMENT SENSORS SHALL BE WITHIN 400' OF AND IN DIRECT VIEW OF THE EQUIPMENT ENCLOSURE CABINET.

THE SENSORS SHALL BE RE-INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS USING EPOXY AS RECOMMENDED BY THE SENSOR MANUFACTURER. THE PAVEMENT TEMPERATURE SHALL NOT BE LESS THAN FORTY [40] DEGREES FAHRENHEIT DURING SEALING, AND THE CONTRACTOR SHALL ENSURE THAT THE COMPLETE CURING OF THE SEALANT TAKES PLACE PRIOR TO OPENING THE LANE TO TRAFFIC.

THE ODOT DISTRICT 4 HIGHWAY MANAGEMENT OFFICE [PAUL ENSINGER, 330-786-3135] SHALL BE NOTIFIED WHEN THE SENSORS ARE REMOVED FROM THE PAVEMENT AND WHEN THE RE-INSTALLATION IS COMPLETE. THE DISTRICT WILL MONITOR THE SENSORS' PERFORMANCE FOR A MINIMUM OF FIVE WORKING DAYS TO VERIFY PROPER OPERATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF DAMAGED OR INOPERABLE SENSORS AT THEIR OWN COST, UNLESS FAULTY SENSOR OPERATION HAS BEEN DOCUMENTED AND ACKNOWLEDGED BY ODOT PRIOR TO THE START OF WORK.

A CONTINGENCY QUANTITY OF 1 EACH ITEM SPECIAL- ROAD WEATHER INFORMATION SYSTEM [RWIS] SENSOR IS INCLUDED IN THE GENERAL SUMMARY TO BE USED IF A SENSOR FAILS PRIOR TO REMOVAL. THE NEW SENSOR SHALL BE A GROUNDHOG WIRELESS PAVEMENT/TRAFFIC SENSOR, MODEL G4WX.



REV	DESCRIPTION	DATE	APP'D.
A	INITIAL RELEASE	2/03	

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DRAWN BY: KRM
DESIGNED BY: JV
CHECKED BY: JV
SCALE: NTS

nu-metrics
A QUIXOTE COMPANY
518 University Drive
Uniontown, PA 15401

PERMANENT COUNT STATION

DRAWING TITLE: G4 ROAD SENSOR CANISTER PLACEMENT

CONTRACT NO.
DRAWING NO. 20-00419
SHEET 8 OF 9
DATE 2/03
REVISION A

CALCULATED LMB
CHECKED TJP

MISCELLANEOUS DETAIL (RWIS SENSOR)

TRU-80-(6.88)(8.56)

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37

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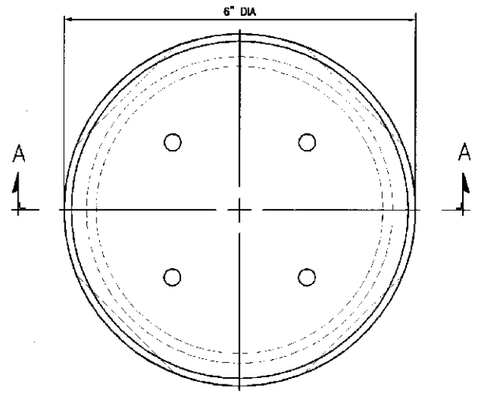
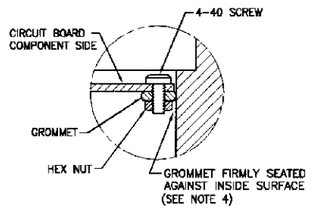
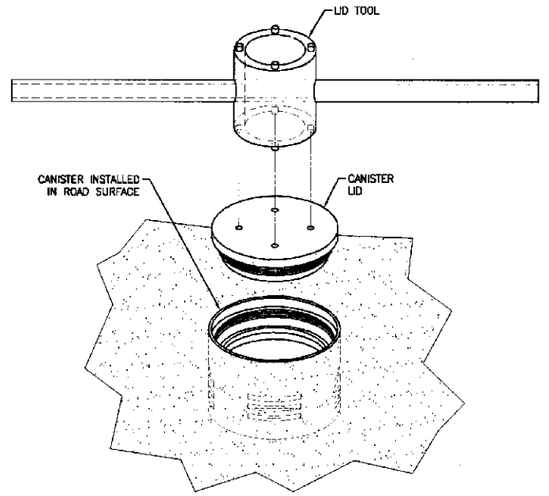


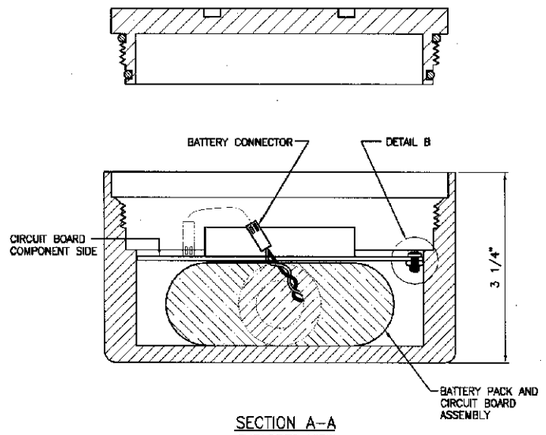
PLAN VIEW
CANISTER AND LID



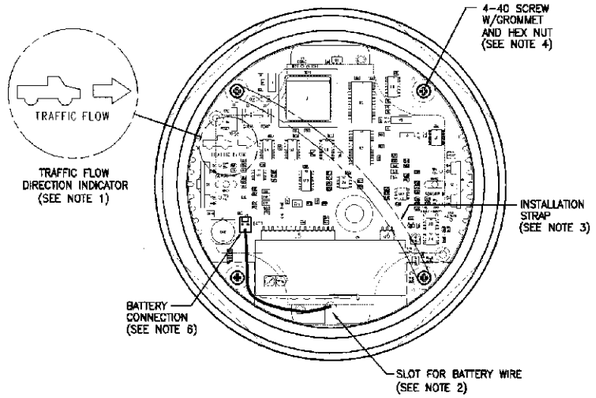
DETAIL B
2X SCALE



LID AND CANISTER ASSEMBLY



SECTION A-A
EXPLODED VIEW



VIEW INSIDE CANISTER

1. PRIOR TO INSTALLATION, LOCATE THE "TRAFFIC FLOW DIRECTION INDICATOR" THAT IS PRINTED ON THE CIRCUIT BOARD, AND ALIGN THE INDICATOR WITH THE ACTUAL DIRECTION OF TRAFFIC FLOW.
2. REMOVE THE LID FROM THE INSTALLED CANISTER AND REMOVE ANY DIRT OR DEBRIS FROM CANISTER AND LID THREADS.
3. USING THE INSTALLATION STRAP, PLACE THE CIRCUIT BOARD AND BATTERY PACK ASSEMBLY INTO THE CANISTER WITH THE "TRAFFIC FLOW DIRECTION INDICATOR" POINTED IN THE APPROPRIATE DIRECTION.
4. PRESS THE CIRCUIT BOARD FIRMLY INTO THE CANISTER TO SECURE RUBBER GROMMETS AGAINST INSIDE SURFACE OF CANISTER (DETAIL B).
5. PLACE LID IN CANISTER AND HAND TIGHTEN.
6. SECURE LID BY TURNING WITH LID TOOL.

REV	DESCRIPTION	DATE	APP'D.
A	INITIAL RELEASE	2/03	

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DESIGNED: JV
CHECKED BY: JV
SCALE: NTS

nu-metrics
A QUIXOTE COMPANY
518 University Drive
Uniontown, PA 15401

PERMANENT COUNT STATION

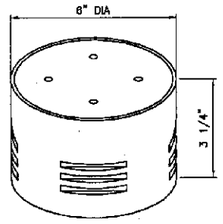
DRAWING TITLE
G4 ROAD SENSOR
PCB AND CANISTER LID INSTALLATION

CONTRACT NO.
DRAWING NO. 20-00420 SHEET 7 OF 9
DATE 2/03
REVISION A

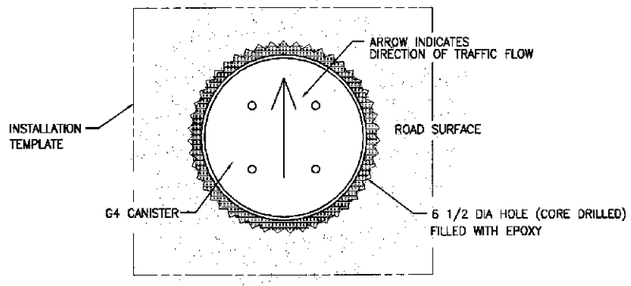
CALCULATED LMB
CHECKED TJP

MISCELLANEOUS DETAIL (RWIS SENSOR)

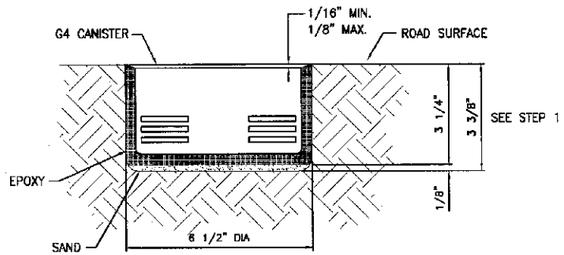
TRU-80-(6.88)(8.56)



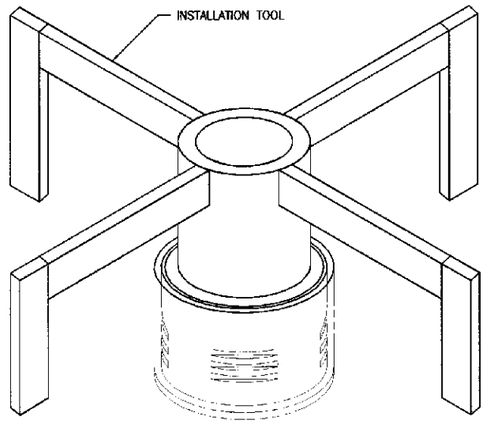
G4 CANISTER



PLAN VIEW
(CANISTER INSTALLATION)



CROSS SECTION OF ROAD SURFACE



CANISTER INSTALLATION
(STEP 5)

STEP 1. DRILL 6 1/2" DIA HOLE TO A DEPTH OF 3 3/8". CLEAN AND DRY AREA AROUND HOLE USING SHOP-VAC OR EQ. PLACE SAND IN BOTTOM OF HOLE TO LEVEL THE CANISTER. PLACE ENOUGH SAND IN THE BOTTOM OF THE HOLE SO THAT THE TOP OF THE CANISTER IS AT LEAST 1/16" (NO MORE THAN 1/8") BELOW THE ROAD SURFACE.

STEP 2. REMOVE PROTECTIVE BACKING FROM INSTALLATION TEMPLATE AND PLACE TEMPLATE AROUND HOLE.

STEP 3. USING GRADUATED MIXING BUCKET, THOROUGHLY MIX 1/4 QUART PART A WITH 1/4 QUART PART B AND IMMEDIATELY FILL THE CORE DRILLED HOLE TO 2" FROM THE TOP AND PROMPTLY PROCEED TO STEP 4.

STEP 4. PLACE THE G4 CANISTER IN THE EPOXY FILLED HOLE MAKING SURE THAT THE CANISTER IS IN THE CORRECT POSITION WITH REGARD TO THE DIRECTION OF TRAFFIC FLOW.

STEP 5. USE CANISTER INSTALLATION TOOL TO APPLY PRESSURE AS NEEDED TO POSITION THE CANISTER 1/16" BELOW THE ROAD SURFACE. IF NECESSARY, ADD ADDITIONAL EPOXY SO THAT THE PERIMETER AROUND CANISTER HAS NO SINK MARKS.

STEP 6. USING A PUTTY KNIFE, KEEP EXCESS EPOXY FROM DRYING OVER THE TOP OF THE CANISTER LID.

STEP 7. WHEN EPOXY BEGINS TO TACK (APPROX. 5 TO 10 MIN. DEPENDING ON AMBIENT TEMP.) REMOVE THE INSTALLATION TEMPLATE AND G4 COVER LABEL. REMOVE ANY EXCESS EPOXY FROM CANISTER WHILE EPOXY IS STILL TACKY.

NOTE: DO NOT ATTEMPT TO REMOVE LID UNTIL EPOXY HAS HARDENED.

REV	DESCRIPTION	DATE	APP'D.
A	INITIAL RELEASE	2/03	

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DRAWN BY: KRM
DESIGNED: JV
CHECKED BY: JV
SCALE: NTS

nu-metrics
A QUIXOTE COMPANY
518 University Drive
Uniontown, PA 15401

PERMANENT COUNT STATION

DRAWING TITLE: G4 ROAD SENSOR IN ROAD INSTALLATION

CONTRACT NO.
DRAWING NO. 20-00421 SHEET 8 OF 9
DATE 2/03
REVISION A

CALCULATED LMB
CHECKED TJP

MISCELLANEOUS DETAIL (RWIS SENSOR)

TRU-80-(6.88)(8.56)

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LOCATION								621	621	621	621		621	
COUNTY	ROUTE	SECTION (S.L.M.)						RPM, LOW PROFILE, YELLOW/YELLOW	RPM, LOW PROFILE WHITE/RED	RPM, LOW PROFILE, WHITE	RPM, LOW PROFILE YELLOW/RED		RAISED PAVEMENT MARKER REMOVED	REMARKS
		FROM	TO					EACH	EACH	EACH	EACH		EACH	
TRU	80	8.56	12.33						433				423	IR 80 EB/WB (LANE LINE , GORE MARKINGS)
TOTALS CARRIED TO GENERAL SUMMARY				0	0	0	0	0	433	0	0	0	423	

CALCULATED ALP CHECKED

RAISED PAVEMENT MARKING SUB-SUMMARY

TRU-80-(6.88)(8.56)

CENTER LINE

GENERAL SPEC: 640
MATERIAL TYPE: 646

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE	COMMENTS
TOTAL								

LANE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	4" LANE LINE		COMMENTS
							DASHED	SOLID	
TRU	80	8.56	MT. EVERETT RD.	12.33	PENNSYLVANIA STATE LINE	7.98			
TOTAL						7.98			

EDGE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	WHITE EDGE LINE			YELLOW EDGE LINE			COMMENTS
						TOTAL	HIGHWAY	RAMP	TOTAL	HIGHWAY	RAMP	
TRU	80	8.56	MT. EVERETT RD.	12.33	PENNSYLVANINA STATE LINE	11.53	7.54	3.99	9.65	7.54	2.11	
TRU	80		WEIGH STATION		WEIGH STATION	0.29		0.29	0.28		0.28	
TOTAL						11.82	7.54	4.28	9.93	7.54	2.39	

AUXILIARY

CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE	STOP LINE	TRANSVERSE DIAGONAL LINES		CROSS WALK LINES	WORD ON PVMT ONLY		LANE ARROWS				SYMBOL MARKINGS			ISLAND MARKING	PARK STALL	COMMENTS
					WHITE	YELLOW		72"	96"	TURN LEFT	TURN RIGHT	THRU	COMB.	H. SYM.	SCHOOL 72"	SCHOOL 96"			
			FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ FT	FT	
TRU	I-80WB OFF @ WEIGH STATION	7.250	520																
TRU	I-80 WB ON @ WEIGH STATION	7.240	235																
TRU	I-80 EB RAMP C	9.179	576	39															
TRU	I-80 EB RAMP D	9.500	540																
TRU	I-80 EB RAMP E	11.681	258																
TRU	I-80 WB RAMP A	9.257	238																
TRU	I-80 WB RAMP B	9.720	438	17															
TRU	I-80 WB ON @ REST AREA	11.231	222																
TRU	I-80 WB OFF @ REST AREA	11.863	574																
TRU	I-80 @ REST AREA	11.600	700		274									4				756	8" TRANSVERSE IN REST AREA
TRU	WEIGH STATION	7.245	1729	70	1193												202		
TOTAL			6030	126	1467									4			202	756	

PAVEMENT MARKING SUB SUMMARY

TRU-80-(6.88)(8.56)

27
37

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843 DATED 4/18/03
848 DATED 10/16/09

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.

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.

SPECIAL - STRUCTURE MISC.: UTILITY REMOVAL

THIS WORK WILL CONSIST OF REMOVING THE EXISTING WATER LINE ON STRUCTURE TRU-80-1027. WORK WILL INCLUDE REMOVING THE WATER LINE, CAPPING THE REMAINING ENDS, REMOVING ALL SUPPORT BRACKETS, AND GRINDING THE ALL REMOVAL AREAS SMOOTH. THIS WORK WILL BE DONE PRIOR TO STRUCTURAL STEEL OZEU PAINTING.

PAYMENT WILL BE MADE AT THE CONTRACT PRICE LUMP SUM FOR ITEM SPECIAL, STRUCTURE MISC.: UTILITY REMOVAL, WHICH WILL INCLUDE ALL MATERIAL, EQUIPMENT, LABOR, AND INCIDENTIALS REQUIRED TO COMPLETE THIS WORK.

ITEM 201 - 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 203, BORROW

THIS WORK WILL CONSIST OF PLACING BORROW BEHIND THE FORWARD RIGHT WINGWALL OF STRUCTURE TRU-80-0942R TO REPAIR EROSION.

BORROW WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 203, BORROW. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

PROPOSED WORK

TRU-80-0496L (I80 OVER SAMPSON ROAD)
-REMOVE EXISTING ASPHALT CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA OR TYPE C
-PLACE AN ASPHALT CONCRETE OVERLAY AND A PLATE OVER THE EXISTING EXPANSION JOINT
-REMOVE LOOSE CONCRETE FROM THE EXISTING CURBS AND RAILING

TRU-80-0496R (I80 OVER SAMPSON ROAD)
-REMOVE EXISTING ASPHALT CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA OR TYPE C
-PLACE AN ASPHALT CONCRETE OVERLAY
-REMOVE EXISTING RISER BARS AND PLACE A PLATE OVER
-REMOVE LOOSE CONCRETE FROM THE EXISTING CURBS AND RAILING

TRU-80-0591L (I80 OVER LOGAN ROAD)
-REMOVE EXISTING ASPHALT CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA OR TYPE C
-PLACE AN ASPHALT CONCRETE OVERLAY AND A PLATE OVER THE EXISTING EXPANSION JOINT
-REMOVE LOOSE CONCRETE FROM THE EXISTING CURBS AND RAILING

TRU-80-0591R (I80 OVER LOGAN ROAD)
-REMOVE EXISTING ASPHALT CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA OR TYPE C
-PLACE AN ASPHALT CONCRETE OVERLAY
-REMOVE EXISTING RISER BARS AND PLACE A PLATE OVER
-REMOVE LOOSE CONCRETE FROM THE EXISTING CURBS AND RAILING

TRU-80-0857L (I80 OVER MT. EVERETT ROAD & RAILROAD)
-REMOVE EXISTING ASPHALT CONCRETE OVERLAY ON DECK AND APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA OR TYPE C
-FULL DEPTH REPAIR
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-REMOVE EXISTING RISER BARS AND PLACE A PLATE OVER
-REMOVE LOOSE CONCRETE FROM THE EXISTING CURBS AND RAILING
-NEW STRUCTURE IDENTIFICATION SIGN AND OBJECT MARKERS

TRU-80-0857R (I80 OVER MT. EVERETT ROAD & RAILROAD)
-REMOVE EXISTING ASPHALT CONCRETE OVERLAY ON APPR. SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA OR TYPE C
-FULL DEPTH REPAIR
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY AND A PLATE OVER THE EXISTING EXPANSION JOINT
-REMOVE LOOSE CONCRETE FROM THE EXISTING CURBS AND RAILING
-REPAIR TOP OF EXISTING BACKWALL
-NEW STRUCTURE IDENTIFICATION SIGN AND OBJECT MARKERS

TRU-80-0941L (I80 RAMP OVER LITTLE YANKEE RUN)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA MODIFIED CONCRETE
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-RAISE EXISTING SCUPPERS
-PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
-EXTEND EXISTING SCUPPERS BELOW BEAM FLANGES
-REPAIR PAINT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REPAIR TOP OF EXISTING BACKWALL
-SEAL ALL CONCRETE SURFACES OF THE PARAPETS, PIERS, AND ABUTMENTS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15' AROUND ABUTMENTS
-NEW STRUCTURE IDENTIFICATION SIGN AND OBJECT MARKERS

TRU-80-0942L (I80 OVER LITTLE YANKEE RUN)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA MODIFIED CONCRETE
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-RAISE EXISTING SCUPPERS
-PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
-EXTEND EXISTING SCUPPERS BELOW BEAM FLANGES
-REPAIR PAINT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REPAIR TOP OF EXISTING BACKWALL
-SEAL ALL CONCRETE SURFACES OF THE PARAPETS, PIERS, AND ABUTMENTS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15' AROUND ABUTMENTS
-NEW STRUCTURE IDENTIFICATION SIGN

TRU-80-0942R (I80 OVER LITTLE YANKEE RUN)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA MODIFIED CONCRETE
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-RAISE EXISTING SCUPPERS
-PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
-EXTEND EXISTING SCUPPERS BELOW BEAM FLANGES
-REPAIR PAINT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REPAIR TOP OF EXISTING BACKWALL
-REPAIR EROSION BEHIND THE FORWARD RIGHT WINGWALL
-SEAL ALL CONCRETE SURFACES OF THE PARAPETS, PIERS, AND ABUTMENTS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15' AROUND ABUTMENTS
-NEW STRUCTURE IDENTIFICATION SIGN

TRU-80-0956L (I80 OVER US62 AND SR7)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS DRIVING AND PASSING LANES WITH MICRO SILICA MODIFIED CONCRETE AND TYPE C FOR THE RAMP LANE
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-RAISE EXISTING SCUPPERS
-PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
-EXTEND EXISTING SCUPPERS BELOW BEAM FLANGES
-REPAIR PAINT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REMOVE ALL SPALLED AREAS OF THE DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-REPAIR TOP OF EXISTING BACKWALL
-SEAL ALL CONCRETE SURFACES OF THE PARAPETS, PIERS, AND ABUTMENTS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15' AROUND ABUTMENTS
-NEW STRUCTURE IDENTIFICATION SIGN AND OBJECT MARKERS

TRU-80-0956R (I80 OVER US62 AND SR7)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS DRIVING AND PASSING LANES WITH MICRO SILICA MODIFIED CONCRETE AND TYPE C FOR THE RAMP LANE
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-RAISE EXISTING SCUPPERS
-PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
-EXTEND EXISTING SCUPPER BELOW BEAM FLANGES
-REPAIR PAINT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REMOVE ALL SPALLED AREAS OF THE DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-REPAIR TOP OF EXISTING BACKWALL
-SEAL ALL CONCRETE SURFACES OF THE PARAPETS, PIERS, AND ABUTMENTS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15' AROUND ABUTMENTS
-NEW STRUCTURE IDENTIFICATION SIGN AND OBJECT MARKERS

TRU-80-1027 (HUBBARD MASURY ROAD OVER I80)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA MODIFIED CONCRETE
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-RAISE EXISTING SCUPPERS
-PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
-REFURBISH BEARING AT EACH ABUTMENT
-EXTEND EXISTING SCUPPERS BELOW BEAM FLANGES
-REMOVE UTILITY & PAINT STRUCTURAL STEEL WITH OZEU PAINT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REPAIR TOP OF EXISTING BACKWALL
-REPLACE 2 EXISTING BENT CROSSFRAMES
-REPAIR SLOPE PROTECTION AT THE FORWARD ABUTMENT
-SEAL ALL CONCRETE SURFACES OF THE PARAPETS, PIERS, AND ABUTMENTS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15' AROUND ABUTMENTS
-NEW STRUCTURE IDENTIFICATION SIGNS

TRU-80-1085L (I80 OVER LITTLE YANKEE RUN & RAILROAD)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA MODIFIED CONCRETE
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-RAISE EXISTING SCUPPERS
-PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
-REPAIR PAINT
-REPAIR TOP OF EXISTING BACKWALL
-REFURBISH BEARINGS AT EACH ABUTMENT
-EXTEND EXISTING SCUPPERS BELOW BEAM FLANGES
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND PARAPETS
-SEAL ALL CONCRETE SURFACES OF THE PARAPETS, PIERS, AND ABUTMENTS WITH EPOXY-URETHANE
-REPAIR EMBANKMENT AT THE REAR RIGHT BETWEEN STRUCTURES
-CLEARING AND GRUBBING 15' AROUND ABUTMENTS
-NEW STRUCTURE IDENTIFICATION SIGN AND OBJECT MARKERS

TRU-80-1085R (I80 OVER LITTLE YANKEE RUN & RAILROAD)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH MICRO SILICA MODIFIED CONCRETE
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-RAISE EXISTING SCUPPERS
-PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
-REPAIR PAINT
-REPAIR TOP OF EXISTING BACKWALL
-REFURBISH BEARINGS AT EACH ABUTMENT
-EXTEND EXISTING SCUPPERS BELOW BEAM FLANGES
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-SEAL ALL CONCRETE SURFACES OF THE PARAPETS, PIERS, AND ABUTMENTS WITH EPOXY-URETHANE
-REPAIR EMBANKMENT AT THE REAR LEFT BETWEEN STRUCTURES
-CLEARING AND GRUBBING 15' AROUND ABUTMENTS
-NEW STRUCTURE IDENTIFICATION SIGN AND OBJECT MARKERS

TRU-80-1185 (PRICE SHAFFER ROAD OVER I80)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS WITH TYPE C CONCRETE
-PLACE WATERPROOFING AND A ASPHALT CONCRETE OVERLAY
-RAISE EXISTING SCUPPERS
-PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
-REPAIR PAINT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REPAIR TOP OF EXISTING BACKWALL
-REPLACE BROKEN RAILING SUPPORTS ON THE LEFT SIDE EXTEND EXISTING SCUPPERS BELOW BEAM FLANGE
-SEAL ALL CONCRETE SURFACES OF THE PARAPETS, PIERS, AND ABUTMENTS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15' AROUND ABUTMENTS
-NEW STRUCTURE IDENTIFICATION SIGNS

DESIGN AGENCY
ODOT --- DISTRICT 4
PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
LMS	LMS	TJP	10-15-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	

STRUCTURE GENERAL NOTES
TRU-80-0496L/R, TRU-80-0591L/R, TRU-80-0857L/R, TRU-80-0941L, TRU-80-0942L/R, TRU-80-0956L/R, TRU-80-1027, TRU-80-1085L/R, & TRU-80-1185

TRU-80-(6.88)(8.56)
PID No. 77873

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, EXCEPT FOR WEARING COURSE REMOVAL. 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 USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

ALL EXISTING REINFORCING STEEL BARS TO BE REPLACED WILL BE REMOVED AND REPLACED WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AND CONNECTED WITH THE EXISTING REINFORCING STEEL BY MECHANICAL CONNECTORS.

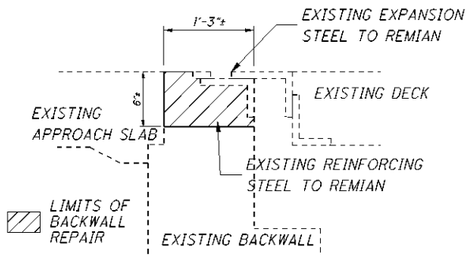
THIS PRICE WILL INCLUDE THE COST FOR MATERIALS, LABOR, EQUIPMENT, AND ALL INCIDENTIALS INCLUDING THE MECHANICAL CONNECTORS REQUIRED TO COMPLETE THIS WORK.

ITEM 511, CONCRETE MISC.: BACKWALL REPAIR

THIS ITEM CONSISTS OF THE REMOVAL OF ALL UNSOUND CONCRETE AT OF THE BACKWALLS TO THE LIMITS SHOWN BELOW OR AS DIRECTED BY THE ENGINEER, THE PREPARATION OF THE SURFACE, FORMS, TEMPORARY SUPPORTS OF THE EXPANSION JOINT, AND PROVIDING AND PLACING OF CLASS FS (PER CMS 499) CONCRETE WITH NO. 8 AGGREGATE.

TEMPORARY SUPPORT OF THE EXPANSION JOINT WILL BE USED TO MAINTAIN THE PROPER ALIGNMENT AND GRADE OF THE JOINT DURING REMOVAL AND REPLACEMENT OF THE BACKWALL CONCRETE. THE COST OF THIS TEMPORARY SUPPORT WILL BE INCIDENTAL TO THIS ITEM.

PAYMENT WILL BE MADE AT THE CONTRACT PRICE PER CU.YD. FOR ITEM 511, CONCRETE MISC.: BACKWALL REPAIR WHICH WILL INCLUDE ALL MATERIALS AND LABOR INCLUDING REMOVAL AND DISPOSAL OF THE EXISTING CONCRETE REQUIRED TO MAKE THIS ITEM COMPLETE.



ITEM 513 - STRUCTUREAL STEEL. MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES

THIS WORK CONSISTS OF REPLACING DAMAGED CROSSFRAMES. THIS ITEM WILL INCLUDE SUPPLYING NEW CROSSFRAMES AND WELDING THEM BACK TO THE ORIGINAL POSITIONS OF THE CROSSFRAMES THAT ARE BEING REPLACED. AFTER REMOVAL, ALL WELDS WILL BE GROUND SMOOTH IN PREPARATION OF WELDING THE NEW CROSSFRAMES IN PLACE. ALL CROSSFRAMES TO BE REPLACED WILL BE FIELD MEASURED TO VERIFY SIZE AND LENGTHS PRIOR TO ORDERING MATERIAL. THE NEW CROSSFRAMES WILL BE WELDED TO THE GIRDERS OR BEAMS ON BOTH SIDES OF THE VERTICAL LEG AND ON THE TOP SIDE OF THE HORIZONTAL LEG. THE ANGLE WILL BE WELDED USING A ¼" CONTINUOUS FILLET WELD. STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. AISC CERTIFICATION IS NOT REQUIRED. THE CONTRACTOR WILL TAKE THE NECESSARY FIELD MEASUREMENTS TO VERIFY MEASUREMENTS BEFORE ORDERING MATERIALS. THE ENGINEER WILL HAVE THE AUTHORITY AND THE RESPONSIBILITY FOR ENSURING THAT THE STEEL IS ACCEPTABLE. AFTER FABRICATION THE PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH ITEM 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.

ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM EXCEPT FOR PAINT WILL BE INCLUDED FOR PAYMENT UNDER ITEM 513 - STRUCTURAL STEEL MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES.

ITEM 514 - FIELD PAINTING, MISC.; REPAIR PAINTING

PAINTED AREAS THAT ARE DAMAGED OR RUSTED WILL BE DESIGNATED BY THE PROJECT ENGINEER. THE CMS 514.22 PROCESS WILL BE USED TO REPAIR THESE AREAS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH ALL NECESSARY EQUIPMENT TO INSPECT THIS WORK.

THE MAJORITY OF THE AREAS TO BE REPAIR PAINTED ARE:
TRU-80-0941L - BOTTOM FASCIA BEAM FLANGES
TRU-80-0942L - BOTTOM FASCIA BEAM FLANGES
TRU-80-0942R - BOTTOM FASCIA BEAM FLANGES
TRU-80-0956L - BOTTOM FLANGES OVER TRAFFIC
- NORTH SIDE 3 BEAMS OVER THE CENTER PIER
TRU-80-0956R - BOTTOM FLANGES OVER TRAFFIC
TRU-80-1085L - AT REAR AND FORWARD ABUTMENTS
TRU-80-1085R - AT REAR AND FORWARD ABUTMENTS
TRU-80-1185 - BOTTOM FLANGES OVER TRAFFIC

AREAS TO BE REPAIR PAINTED ARE NOT LIMITED TO THESE AREAS. THE AREAS DESIGNATED BY THE PROJECT ENGINEER WILL BE PAINTED.

ITEM 514 - PAINTING OF STRUCTURAL STEEL

THE COLOR FOR THE FINISHED COAT OF STRUCTURE TRU-80-1027 WILL CONFORM TO FEDERAL COLOR NUMBER 15526 (LIGHT BLUE).

ITEM 516, STRUCTURAL JOINT OR JOINT SEALER, MISC.: BRIDGING PLATE

INSTALL A ¼" THICK X 8" WIDE MILD STEEL BRIDGING PLATE OVER THE EXISTING EXPANSION JOINT OF STRUCTURES TRU-80-0496L/R, TRU-80-0591L/R, AND TRU-80-0857L/R PER SHEET 8/10 PRIOR TO THE ASPHALT CONCRETE OVERLAY. THE EXISTING RISER BARS ON STRUCTURE TRU-80-0496R, TRU-80-0591R, AND TRU-80-0587L WILL BE REMOVED UNDER ITEM 202, PORTION OF STRUCTURE REMOVED.

ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTIALS REQUIRED TO COMPLETE THIS WORK EXCEPT THE REMOVAL OF THE RISER BARS WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 516, STRUCTURAL JOINT OR JOINT SEALER, MISC.: BRIDGING PLATE.

ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 517 - RAILING, MISC.: SUPPORT BRACKET REPLACEMENT

THIS WORK WILL CONSIST OF REMOVING THE DAMAGED SUPPORT BRACKETS AT THE REAR LEFT AND REPLACING WITH 2 NEW SUPPORTS SPACED AT EXISTING SPACING ON STRUCTURE TRU-80-1185. SUPPORT BRACKET REPLACEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 517 RAILING, MISC.; SUPPORT BRACKET REPLACEMENT. THIS PRICE WILL INCLUDE THE COST FOR MATERIALS, LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE REPLACEMENT OF THE SUPPORT BRACKETS.

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.

SPECIAL - STRUCTURE MISC.: CONCRETE REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY LOOSE CONCRETE FROM THE EXISTING CURBS AND RAILINGS OF STRUCTURES TRU-80-0496L, TRU-80-0496R, TRU-80-0591L, TRU-80-0591R, TRU-80-0857L, AND TRU-80-0857R WITHOUT SOUNDING. THIS WORK WILL BE PREFORMED PRIOR TO THE ASPHALT CONCRETE OVERLAY OPERATIONS.

CONCRETE REMOVAL WILL BE PAID FOR AT THE LUMP SUM BID FOR SPECIAL - STRUCTURE MISC.: CONCRETE REMOVAL. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE DECK FLOOR BOTTOM OF STRUCTURES TRU-80-0956L AND TRU-80-0956R WITHOUT SOUNDING. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED SEAL WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE LUMP SUM BID FOR SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

SPECIAL - STRUCTURE MISC.: STRUCTURE CLEANING

THIS WORK WILL CONSIST OF POWER WASHING WITH SOAP TO REMOVE ALL DIRT AND SALT FROM THE BEAMS/GIRDERS, ABUTMENTS, BEAM SEATS, AND BEARINGS OF STRUCTURES TRU-80-0941L, TRU-80-0942L, TRU-80-0942R, TRU-80-0956L, TRU-80-0956R, TRU-80-1085L, TRU-80-1085R, & TRU-80-1185. THIS WORK SHALL BE COMPLETED PRIOR TO REPAIR PAINTING OPERATIONS.

STRUCTURE CLEANING WILL BE PAID FOR AT THE LUMP SUM BID FOR SPECIAL - STRUCTURE MISC.: STRUCTURE CLEANING. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 601, DUMP ROCK FILL, TYPE C

THIS WORK WILL CONSIST OF PLACING ROCK ALONG THE FORWARD ABUTMENT OF STRUCTURE TRU-80-1027 TO REPAIR EROSION THAT HAS EXPOSED THE FOOTER.

DUMP ROCK FILL, TYPE C WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 601, DUMP ROCK FILL, TYPE C. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 601, DUMP ROCK FILL, TYPE C

THIS WORK WILL CONSIST OF PLACING ROCK AT THE REAR EMBANKMENT BETWEEN STRUCTURES TRU-80-1085L/R TO REPAIR EROSION AND RUTS.

DUMP ROCK FILL, TYPE C WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 601, DUMP ROCK FILL, TYPE C. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

OBJECT MARKERS AND STRUCTURE IDENTIFICATION SIGNS

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE OM-3L AND ONE OM-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 10.5 FT IN LENGTH.

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:
TRU-80-0857L (1 APPROACH), TRU-80-0857R (1 APPROACH), TRU-80-0941L (1 APPROACH), TRU-80-0956L (1 APPROACH), TRU-80-0956R (1 APPROACH), TRU-80-1085L (1 APPROACH), AND TRU-80-1085R (1 APPROACH)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - SIGN, FLAT SHEET, 6 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 3 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EACH

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:
TRU-80-0942L (1 APPROACH), TRU-80-0942R (1 APPROACH), TRU-80-1027 (2 APPROACHES), & TRU-80-1185 (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

CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATIONS SIGNS.

STRUCTURE TRU-80-0857L (SFN:7804148) THE EXISTING SIGN SHOWS 0856. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0857L.

STRUCTURE TRU-80-0857R (SFN:7804172) THE EXISTING SIGN SHOWS 0856. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0857R.

STRUCTURE TRU-80-0941L (SFN:7804237) THE EXISTING SIGN SHOWS 0940. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0941L.

STRUCTURE TRU-80-0956L (SFN:7804326) THE EXISTING SIGN SHOWS 0958. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0956L.

STRUCTURE TRU-80-0956R (SFN:7804350) THE EXISTING SIGN SHOWS 0958. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0956R.

STRUCTURE TRU-80-1027 (SFN:7804385) THE EXISTING SIGN SHOWS 1028. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1027.

STRUCTURE TRU-80-1085L (SFN:7804474) THE EXISTING SIGN SHOWS 1086. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1085L.

STRUCTURE TRU-80-1085R (SFN:7804504) THE EXISTING SIGN SHOWS 1086. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1085R.

WETLANDS AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN THE WETLANDS DIRECTLY BENEATH AND ADJACENT TO TRU-80-0857L/R, UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS OR OTHER WATERS OF THE UNITED STATES.

STREAM AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN THE UNNAMED TRIBUTARY TO LITTLE YANKEE RUN AT TRU-80-0857L/R, IN MUD RUN AT TRU-80-0941L AND TRU-80-0942L/R OR IN LITTLE YANKEE RUN AT TRU-80-1085L/R, UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY STREAMS OR OTHER WATERS OF THE UNITED STATES.

ASBESTOS INSPECTION

AN ASBESTOS SURVEY OF STRUCTURE NO. TRU-80-0857L (SFN 7804148), STRUCTURE NO. TRU-80-0857R (SFN 7804172), STRUCTURE NO. TRU-80-0941L (SFN 7804237), STRUCTURE NO. TRU-80-0942L (SFN 7804261), STRUCTURE NO. TRU-80-0942R (SFN 7804296), STRUCTURE NO. TRU-80-0956L (SFN 7804326), STRUCTURE NO. TRU-80-0956R (SFN 7804350), STRUCTURE NO. TRU-80-1085L (SFN 7804474), STRUCTURE NO. TRU-80-1085R (SFN 7804504), AND STRUCTURE NO. TRU-80-1185 (SFN 7804539) SCHEDULED FOR MAINTENANCE WORK WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE INSPECTIONS DETERMINED THAT NO ASBESTOS IS PRESENT ON ANY OF THE ABOVE REFERENCED BRIDGE STRUCTURES. A COPY OF THE ASBESTOS SURVEY INFORMATION IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306.

ASBESTOS INSPECTION - REGULATED ASBESTOS CONTAINING MATERIAL PRESENT AT STRUCTURE NO. TRU-80-1027, SFN 7804385

AN ASBESTOS SURVEY OF THE I-80 BRIDGE UNDER HUBBARD SHARON ROAD (STRUCTURE NO. TRU-80-1027, SFN 7804385), SCHEDULED FOR MAINTENANCE WORK WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT APPROXIMATELY 45 SQUARE FEET OF REGULATED ASBESTOS CONTAINING MATERIAL (RACM) WAS IDENTIFIED IN GASKET MATERIAL ASSOCIATED WITH THE PARAPET RAILING. THE REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL MUST COMPLY WITH THE OHIO ADMINISTRATIVE CODE, THE OCCUPATION SAFETY & HEALTH ADMINISTRATIVE (OSHA) REGULATIONS AND THE NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHAP) STANDARD FOR ASBESTOS. THIS ASBESTOS CONTAINING MATERIAL WILL NOT BE REMOVED BY THE CONTRACTOR DURING CONSTRUCTION. A COPY OF THE ASBESTOS SURVEY INFORMATION IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306.

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 AGGRE. (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	660	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 1¼" 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 STRUCTURES TRU-80-0857L/R 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 DECK AT 600 PSI (4.5 Mpa).

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

DESIGN AGENCY: ODOT --- DISTRICT 4 PRODUCTION
DATE: 10-15-09
REVIEWED: TJP
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DESIGNED: LMS
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STRUCTURE GENERAL NOTES
TRU-80-0496L/R, TRU-80-0591L/R, TRU-80-0857L/R, TRU-80-0941L, TRU-80-0942L/R, TRU-80-0956L/R, TRU-80-1027, TRU-80-1085L/R, & TRU-80-1185

TRU-80-(6.88)(8.56)
PID No. 77873

3 / 10

30 / 37

CALC:	LMS	DATE:	6/18/2009
CHECKED:	TJP	DATE:	10/15/2009

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.															ITEM	EXTENSION	UNIT	DESCRIPTION	** 100% CITY COST	SEE SHEET
TRU-80-0496L SFN 7803931	TRU-80-0496R SFN 7803966	TRU-80-0591L SFN 7803990	TRU-80-0591R SFN 7804024	TRU-80-0857L SFN 7804148	TRU-80-0857R SFN 7804172	TRU-80-0941L SFN 7804237	TRU-80-0942L SFN 7804261	TRU-80-0942R SFN 7804296	TRU-80-0956L SFN 7804326	TRU-80-0956R SFN 7804350	TRU-80-1027 SFN 7804385	TRU-80-1085L SFN 7804474	TRU-80-1085R SFN 7804504	TRU-80-1185 SFN 7804539						
						LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	201	11000		CLEARING AND GRUBBING		
	LUMP		LUMP	LUMP											202	11201		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN		2/10
896	896	710	710	1846	587	143	221	221	275	278	300	167	167	240	202	23500	SQ YD	WEARING COURSE REMOVED		
								5							203	40000	CU YD	BORROW		
135	135	107	107	28	88	22	33	33	42	42	70	25	25	56	407	10000	GALLON	TACK COAT		
36	36	29	29	74	90	19	31	31	66	67	57	50	50	45	407	14000	GALLON	TACK COAT FOR INTERMEDIATE COURSE		
38	38	30	30	77	94	19	32	32	69	70		52	52		442	10051	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN		
44	44	36	36	95	115	22	37	37	80	81		60	60		442	20250	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448)		
											59			47	448	46050	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2. PG64-22		
											59			47	448	47020	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1. PG64-22		
				50	50										509	20001	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN		2/10
					1	1	1	1	1	1	1	1	1	1	511	71100	CU YD	CONCRETE. MISC.: BACKWALL REPAIR		2/10
						582	775	775	1176	1171	987	1272	1272	964	512	10100	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
				1663	1663	310	537	537	1373	1385	939	1066	1066	751	512	33010	SQ YD	TYPE 3 WATERPROOFING		
											2				513	95030	EACH	STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES		2/10
											15606				514	00050	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		
											15606				514	00056	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		
											15606				514	00060	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT		
											15606				514	00066	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT		
											24				514	00504	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		
											10				514	10000	EACH	FINAL INSPECTION REPAIR		
						390	445	445	650	385		250	250	285	514	27700	SQ FT	FIELD PAINTING, MISC.: REPAIR PAINTING		2/10
76	76	76	76	66	66										516	14600	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: BRIDGING PLATE		2/10
						52	82	82	102	102	60	64	64	48	SPEC	51631300	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM		8/10
											10	10	10		516	45305	EACH	REFURBISH BEARING DEVICE, AS PER PLAN		2/10
											LUMP	LUMP	LUMP		516	47001		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN		2/10
														2	517	76302	EACH	RAILING, MISC.: SUPPORT BRACKET REPLACEMENT		2/10
						4	8	8	8	8	16	10	10	16	518	12701	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN		9/10
						4	8	8	8	8	16	10	10	16	518	12901	EACH	SCUPPER, LENGTHENING, AS PER PLAN		9/10
120	120	100	100	200	200	91	152	152	150	150	111	124	124	45	SPEC	51910000	SQ YD	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO- SILICA MODIFIED CONCRETE		
						100	100	100	100	100	150	150	100	100	519	11101	SQ FT	PATCHING CONCRETE STRUCTURE. AS PER PLAN		2/10
30	30	30	30	50	50				130	95				45	SPEC	51912304	SQ YD	PATCHING CONCRETE BRIDGE DECK - TYPE C		
											LUMP				SPEC	53000200	**	STRUCTURE, MISC.: UTILITY REMOVAL		1/10
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP										SPEC	53000200		STRUCTURE, MISC.: CONCRETE REMOVAL		2/10
									LUMP	LUMP					SPEC	53000200		STRUCTURE, MISC.: CONCRETE SPALL REMOVAL		2/10
						LUMP	LUMP	LUMP	LUMP	LUMP		LUMP	LUMP	LUMP	SPEC	53000200		STRUCTURE, MISC.: STRUCTURE CLEANING		2/10
											10	100	100		601	27000	CU YD	DUMPED ROCK FILL, TYPE C		
				21	21	21	7.5	7.5	21	21	15	21	21	15	630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
				6	6	6			6	6		6	6		630	80100	SQ FT	SIGN, FLAT SHEET		
				1	1	1	1	1	1	1	2	1	1	2	630	80100	SQ FT	SIGN, FLAT SHEET, 730.20		
				3	3	3	1	1	3	3	2	3	3	2	630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL		
				2	2	2	1	1	2	2	2	2	2	2	630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
						75	75	75	75	75	100	100	75	75	843	50000	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR		
				3	3										848	50201	CU YD	FULL DEPTH REPAIR. AS PER PLAN		3/10

DESIGN AGENCY: ODOT --- DISTRICT 4 PRODUCTION

DESIGNED: LMS | DRAWN: LMS | REVIEWED: TJP | DATE: 10-15-09

CHECKED | REVISED | STRUCTURE FILE NUMBER

STRUCTURE ESTIMATED QUANTITIES

BRIDGE NO.: TRU-80-0857L, TRU-80-0857R, TRU-80-0941L, TRU-80-0942L, TRU-80-0942R, TRU-80-0956L, TRU-80-0956R, TRU-80-1027, TRU-80-1085L, TRU-80-1085R, & TRU-80-1185

TRU-80-(6.88)(8.56) PID No. 77873

4 / 10

31 / 37

07-APR-2010 10:54AM lshevetz

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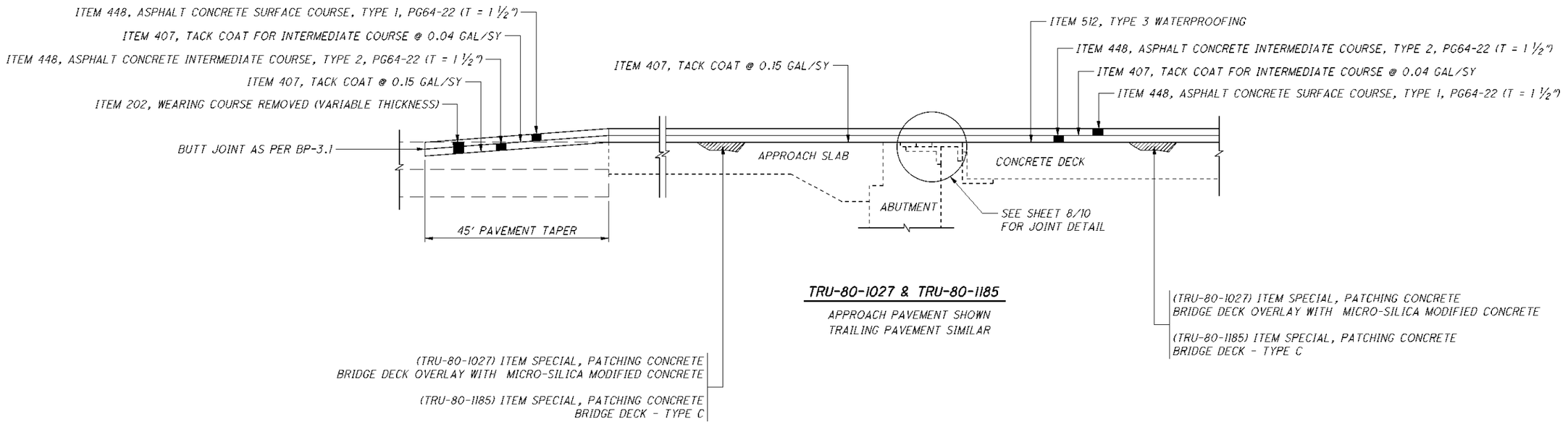

BRIDGE NUMBER	BRIDGE DECK										APPROACH SLABS										APPROACH PAVEMENT									
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (T = 1 1/2")	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (T = 1 1/2")	512 TYPE 3 WATERPROOFING	SPEC POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	SPEC PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	SPEC PATCHING CONCRETE BRIDGE DECK - TYPE C	LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (T = 1 1/2")	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (T = 1 1/2")	SPEC PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	SPEC PATCHING CONCRETE BRIDGE DECK - TYPE C	LENGTH (APPROACH PAVEMENT)	APPROACH PAVEMENT WIDTH	APPROACH PAVEMENT AREA	APPROACH (FORWARD / REAR)	202 WEARING COURSE REMOVED (T = 0" TO 3")	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (T = 1 1/2")	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (T = 1 1/2")
	FT	FT	SQ YD	GALLON	CU YD	CU YD	SQ YD	FT	SQ YD	SQ YD	FT	FT	SQ YD		GALLON	GALLON	CU YD	CU YD	SQ YD	SQ YD	FT	FT	SQ YD		SQ YD	GALLON	GALLON	CU YD	CU YD
TRU-80-1027	281.50	30.00	938.33	37.53	39.10	39.10	938.33	60.00	93.83		25.00	30.00	83.33	REAR	12.50	3.33	3.47	3.47	8.33		45.00	30.00	150.00	REAR	150.00	22.50	6.00	6.25	6.25
											25.00	30.00	83.33	FWD	12.50	3.33	3.47	3.47	8.33		45.00	30.00	150.00	FWD	150.00	22.50	6.00	6.25	6.25
TRU-80-1185	281.50	24.00	750.67	30.03	31.28	31.28	750.67	48.00		37.53	25.00	24.00	66.67	REAR	10.00	2.67	2.78	2.78		3.33	45.00	24.00	120.00	REAR	120.00	18.00	4.80	5.00	5.00
											25.00	24.00	66.67	FWD	10.00	2.67	2.78	2.78		3.33	45.00	24.00	120.00	FWD	120.00	18.00	4.80	5.00	5.00

DESIGN AGENCY
ODOT --- DISTRICT 4
PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
LMS	LMS	TJP	10-15-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	

SUPERSTRUCTURE DETAILS

BRIDGE NO.: TRU-80-0857L, TRU-80-0857R, TRU-80-0941L, TRU-80-0942L, TRU-80-0942R, TRU-80-1085L, TRU-80-1085R, & TRU-80-1185
TRU-80-0956L, TRU-80-0956R, TRU-80-1027, TRU-80-1085L, TRU-80-1085R, & TRU-80-1185

TRU-80-(6.88)(8.56)
PID No. 77873

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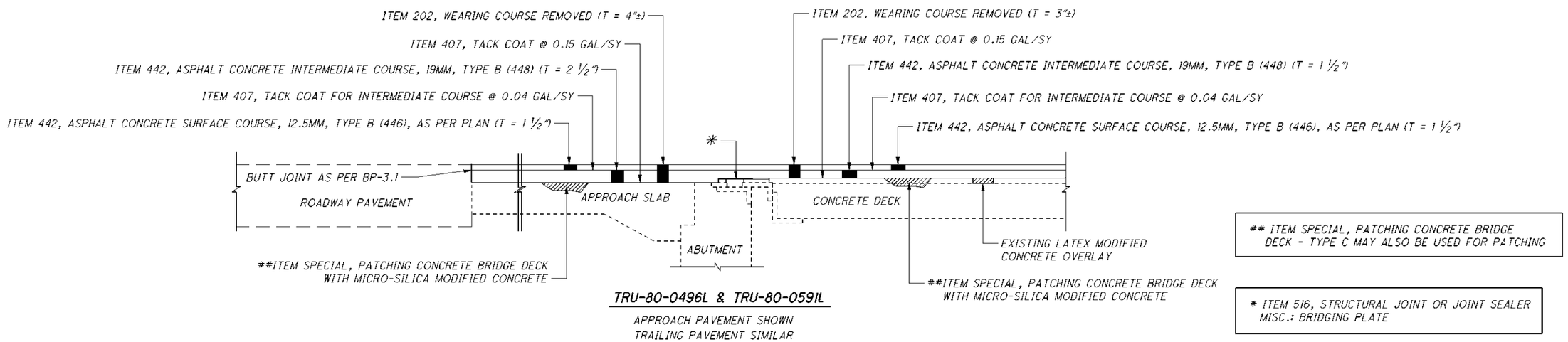

BRIDGE NUMBER	BRIDGE DECK										APPROACH SLABS										
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA	202 WEARING COURSE REMOVED (T = 3"±)	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (T = 1 1/2")	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T = 1 1/2")	SPEC PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	SPEC PATCHING CONCRETE BRIDGE DECK - TYPE C	LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)	202 WEARING COURSE REMOVED (T = 4"±)	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (T = 1 1/2")	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T = 2 1/2")	516 STRUCTURAL JOINT OR JOINT SEALER, MISC.: BRIDGING PLATE	SPEC PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	SPEC PATCHING CONCRETE BRIDGE DECK - TYPE C	
	FT	FT	SQ YD	SQ YD	GALLON	GALLON	CU YD	CU YD	SQ YD	SQ YD	FT	FT	SQ YD		SQ YD	GALLON	GALLON	CU YD	CU YD	FT	SQ YD	SQ YD	
TRU-80-0496L	162.16	38.00	684.68	684.68	102.70	27.39	28.53	28.53	100.00	20.00	25.00	38.00	105.56		105.56	15.83	4.22	4.40	7.33	38.00	10.00	5.00	
											25.00	38.00	105.56		105.56	15.83	4.22	4.40	7.33	38.00	10.00	5.00	
TRU-80-0496R	162.16	38.00	684.68	684.68	102.70	27.39	28.53	28.53	100.00	20.00	25.00	38.00	105.56		105.56	15.83	4.22	4.40	7.33	38.00	10.00	5.00	
											25.00	38.00	105.56		105.56	15.83	4.22	4.40	7.33	38.00	10.00	5.00	
TRU-80-0591L	118.04	38.00	498.39	498.39	74.76	19.94	20.77	20.77	80.00	20.00	25.00	38.00	105.56		105.56	15.83	4.22	4.40	7.33	38.00	10.00	5.00	
											25.00	38.00	105.56		105.56	15.83	4.22	4.40	7.33	38.00	10.00	5.00	
TRU-80-0591R	118.04	38.00	498.39	498.39	74.76	19.94	20.77	20.77	80.00	20.00	25.00	38.00	105.56		105.56	15.83	4.22	4.40	7.33	38.00	10.00	5.00	
											25.00	38.00	105.56		105.56	15.83	4.22	4.40	7.33	38.00	10.00	5.00	

DESIGN AGENCY
ODOT --- DISTRICT 4
PRODUCTION

DESIGNED LMS | DRAWN LMS | REVIEWED TJP | DATE 10-15-09
CHECKED | REVISED | STRUCTURE FILE NUMBER

SUPERSTRUCTURE DETAILS
TRU-80-0496L/R, TRU-80-0591L/R, TRU-80-0941L, TRU-80-0857L/R, TRU-80-0591L/R, TRU-80-1027, TRU-80-0942L/R, TRU-80-0956L/R, & TRU-80-1185

TRU-80-(6.88)(8.56)
PID No. 77873

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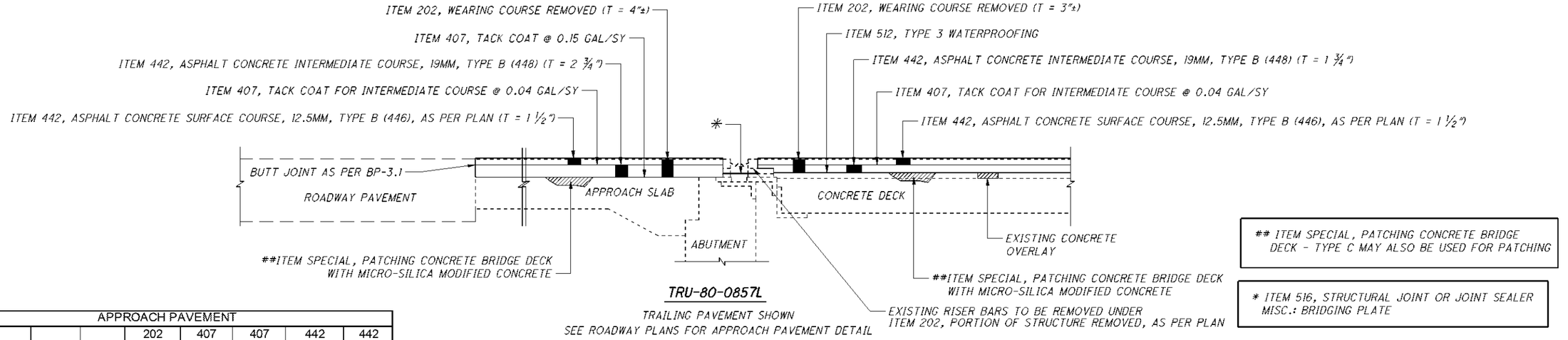
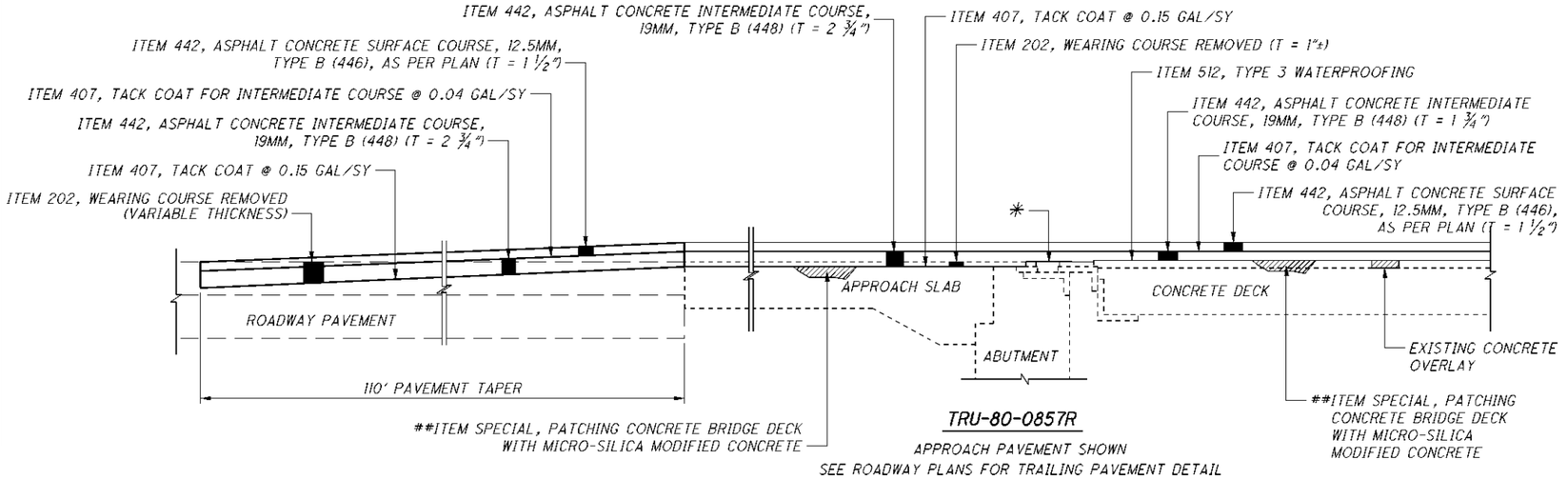


TRU-80-0857L

TRAILING PAVEMENT SHOWN
SEE ROADWAY PLANS FOR APPROACH PAVEMENT DETAIL

ITEM SPECIAL, PATCHING CONCRETE BRIDGE DECK - TYPE C MAY ALSO BE USED FOR PATCHING

* ITEM 516, STRUCTURAL JOINT OR JOINT SEALER MISC.: BRIDGING PLATE



TRU-80-0857R

APPROACH PAVEMENT SHOWN
SEE ROADWAY PLANS FOR TRAILING PAVEMENT DETAIL

APPROACH PAVEMENT								
LENGTH (APPROACH PAVEMENT)	APPROACH PAVEMENT WIDTH	APPROACH PAVEMENT AREA	APPROACH (FORWARD / REAR)	202 WEARING COURSE REMOVED (T = 4 1/4" TO 1")	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (T = 1 1/2")	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T = 1 3/4")
FT	FT	SQ YD		SQ YD	GALLON	GALLON	CU YD	CU YD
110.00	33.00	403.33	REAR	403.33	60.50	16.13	16.81	19.61

BRIDGE NUMBER	BRIDGE DECK										APPROACH SLABS										
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA	202 WEARING COURSE REMOVED (T = 3"±)	512 TYPE 3 WATERPROOFING	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (T = 1 1/2")	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T = 1 3/4")	SPEC PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	SPEC PATCHING CONCRETE BRIDGE DECK - TYPE C	LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)	202 WEARING COURSE REMOVED (T = 4"±)	202 WEARING COURSE REMOVED (T = 1"±)	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (T = 1 1/2")	516 STRUCTURAL JOINT OR JOINT SEALER, MISC.: BRIDGING PLATE	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T = 2 3/4")	SPEC PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	SPEC PATCHING CONCRETE BRIDGE DECK - TYPE C
	FT	FT	SQ YD	SQ YD	SQ YD	GALLON	CU YD	CU YD	SQ YD	SQ YD	FT	FT	SQ YD		SQ YD	SQ YD	GALLON	GALLON	CU YD	FT	CU YD	SQ YD	SQ YD
TRU-80-0857L	453.40	33.00	1662.47	1662.47	1662.47	66.50	69.27	80.81	180.00	40.00	25.00	33.00	91.67	REAR	91.67		13.75	3.67	3.82	33.00	7.00	10.00	5.00
											25.00	33.00	91.67	FWD	91.67		13.75	3.67	3.82	33.00	7.00	10.00	5.00
TRU-80-0857R	453.40	33.00	1662.47		1662.47	66.50	69.27	80.81	180.00	40.00	25.00	33.00	91.67	REAR		91.67	13.75	3.67	3.82	33.00	7.00	10.00	5.00
											25.00	33.00	91.67	FWD		91.67	13.75	3.67	3.82	33.00	7.00	10.00	5.00

DESIGN AGENCY: ODOT --- DISTRICT 4 PRODUCTION

DESIGNED LMS | DRAWN LMS | REVIEWED TJP | DATE 10-15-09 | CHECKED | REVISED | STRUCTURE FILE NUMBER

SUPERSTRUCTURE DETAILS

TRU-80-0496L/R, TRU-80-0531L/R, TRU-80-0941L, TRU-80-1027, TRU-80-1085L/R, & TRU-80-1185
TRU-80-0942L/R, TRU-80-0956L/R,

TRU-80-(6.88)(8.56) PID No. 77873

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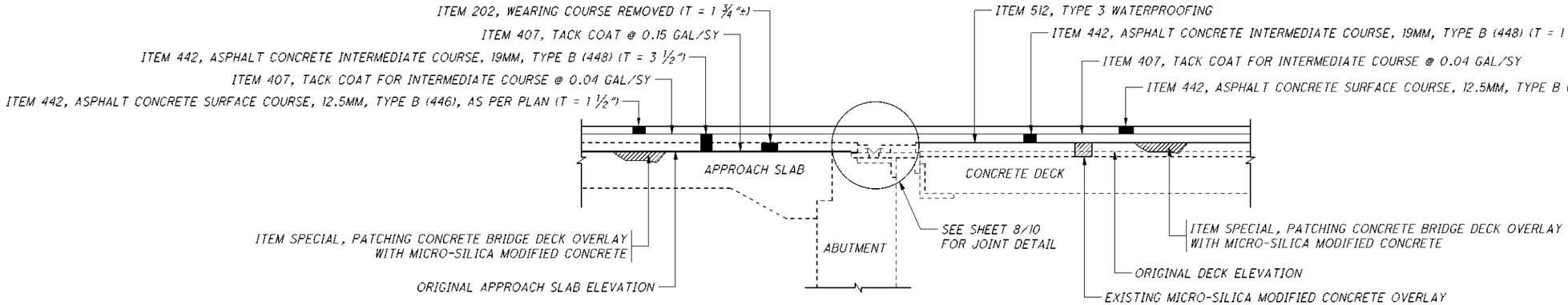
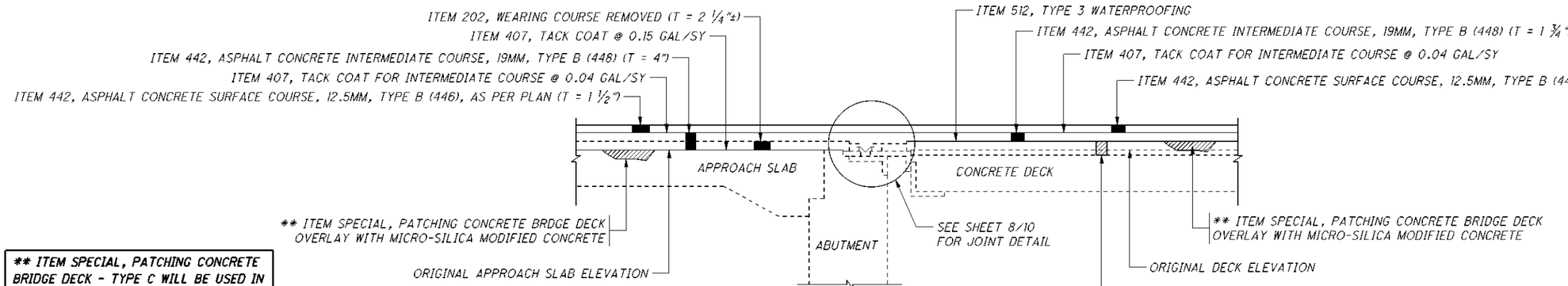


TRU-80-0941L

APPROACH PAVEMENT SHOWN
TRAILING PAVEMENT SIMILAR



TRU-80-0942L/R, TRU-80-0956L/R, & TRU-80-1085L/R

APPROACH PAVEMENT SHOWN
TRAILING PAVEMENT SIMILAR

***** ITEM SPECIAL, PATCHING CONCRETE BRIDGE DECK - TYPE C WILL BE USED IN THE RAMP LANES ONLY OF STRUCTURES TRU-80-0956L & TRU-80-0956R.***

	BRIDGE DECK											APPROACH SLABS												
				407	442	442	512	SPEC		SPEC	SPEC					202	202	407	407	442	442	442	SPEC	SPEC
BRIDGE NUMBER	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA	TACK COAT FOR INTERMEDIATE COURSE @ 0.15 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (T = 1 1/2")	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T = 1 3/4")	TYPE 3 WATERPROOFING	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM		PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	PATCHING CONCRETE BRIDGE DECK - TYPE C		LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)	WEARING COURSE REMOVED (T = 1 3/4"±)	WEARING COURSE REMOVED (T = 2 1/4"±)	TACK COAT @ 0.15 GAL/SY	TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (T = 1 1/2")	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T = 3 1/2")	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T = 4")	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	PATCHING CONCRETE BRIDGE DECK - TYPE C
	FT	FT	SQ YD	GALLON	CU YD	CU YD	SQ YD	FT		SQ YD	SQ YD		FT	FT	SQ YD		SQ YD	SQ YD	GALLON	GALLON	CU YD	CU YD	CU YD	SQ YD	SQ YD
TRU-80-0941L	108.65	25.67	309.89	12.40	12.91	15.06	309.89	52.00		61.98			25.00	25.67	71.31	REAR	71.31		10.70	2.85	2.97	3.47		14.26	
													25.00	25.67	71.31	FWD	71.31		10.70	2.85	2.97	3.47		14.26	
TRU-80-0942L	121.64	39.67	536.16	21.45	22.34	26.06	536.16	82.00		107.23			25.00	39.67	110.19	REAR		110.19	16.53	4.41	4.59		5.36	22.04	
													25.00	39.67	110.19	FWD		110.19	16.53	4.41	4.59		5.36	22.04	
TRU-80-0942R	121.64	39.67	536.16	21.45	22.34	26.06	536.16	82.00		107.23			25.00	39.67	110.19	REAR		110.19	16.53	4.41	4.59		5.36	22.04	
													25.00	39.67	110.19	FWD		110.19	16.53	4.41	4.59		5.36	22.04	
TRU-80-0956L	249.56	VARIES	1372.58	54.90	57.19	66.72	1372.58	102.00		140.00	100.00		25.00	56.58	157.17	REAR		157.17	23.58	6.29	6.55		7.64	5.00	15.00
													25.00	42.42	117.83	FWD		117.83	17.68	4.71	4.91		5.73	5.00	15.00
TRU-80-0956R	249.56	VARIES	1384.23	55.37	57.68	67.29	1384.23	102.00		140.00	75.00		25.00	44.17	122.69	REAR		122.69	18.40	4.91	5.11		5.96	5.00	10.00
													25.00	55.67	154.64	FWD		154.64	23.20	6.19	6.44		7.52	5.00	10.00
TRU-80-1085L	319.68	30.00	1065.60	42.62	44.40	51.80	1065.60	64.00		106.56			25.00	30.00	83.33	REAR		83.33	12.50	3.33	3.47		4.05	8.33	
													25.00	30.00	83.33	FWD		83.33	12.50	3.33	3.47		4.05	8.33	
TRU-80-1085R	319.68	30.00	1065.60	42.62	44.40	51.80	1065.60	64.00		106.56			25.00	30.00	83.33	REAR		83.33	12.50	3.33	3.47		4.05	8.33	
													25.00	30.00	83.33	FWD		83.33	12.50	3.33	3.47		4.05	8.33	

DESIGN AGENCY: ODOT --- DISTRICT 4 PRODUCTION
DESIGNED: LMS | DRAWN: LMS | REVIEWED: TJP | DATE: 10-15-09
CHECKED | REVISED | STRUCTURE FILE NUMBER

SUPERSTRUCTURE DETAILS

TRU-80-0496L/R, TRU-80-0591L/R, TRU-80-0857L/R, TRU-80-1027, TRU-80-1085L/R,
TRU-80-0942L/R, TRU-80-0956L/R, TRU-80-1027, TRU-80-1085L/R, & TRU-80-1185

TRU-80-(6.88)(8.56) PID No. 77873

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GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

PRODUCT NAME	SUPPLIER	ADDRESS	PHONE NO.
THORMA-JOINT	DYNAMIC SURFACE APPLICATIONS, LTD	373 VILLAGE RD. PENNSDALE, PA 17756	(570)546-6041
MATRIX 502	CRAFCO INC.	420 N. ROOSEVELT AVE. CHANDLER, AZ 85226	(800)528-8242
EXPANDEX JOINT SYSTEM	WATSON-BOWMAN ACME	95 PINEVIEW DR. AMHERST, NY 14228	(716)691-7566
APJ ASPHALTIC PLUG EXPANSION JOINT	WYOMING EQUIPMENT SALES	281 SIXTH STREET P.O. BOX 287 WEST WYOMING, PA 18644	(570)693-2810

MATERIALS:

BRIDGING PLATE:

MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE:	POLYMER MODIFIED ASPHALT
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 mm. MAX. AT 140 DEGREES F.
PENETRATION:	9 mm. MAX. AT 77 DEGREES F. 1 mm. MIN AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 cm. MIN. ASTM D 113
RESILIENCE:	60% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 ± 0.05
POURING TEMP:	350 - 390 DEGREES F.

AGGREGATE:

TYPE:	CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT
GRADATION:	THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1 1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1/32" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

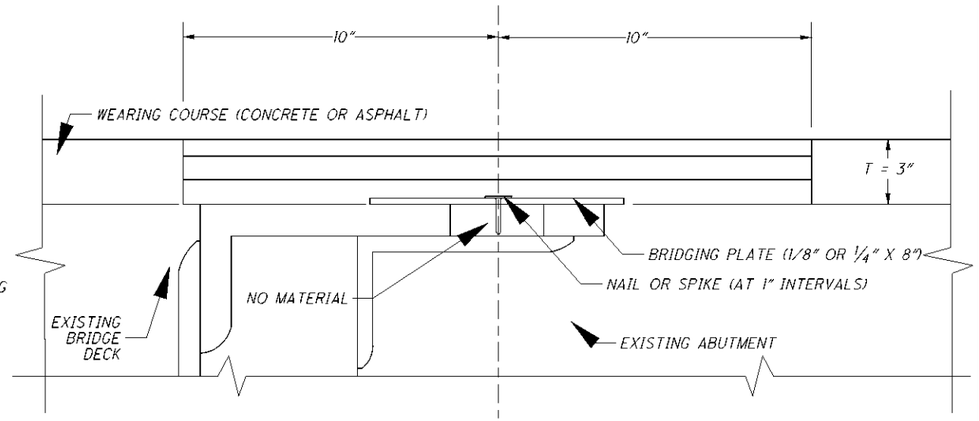
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T OFFICE OF MATERIALS MANAGEMENT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF FEET AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM SPECIAL, FEET, POLYMER MODIFIED ASPHALT EXPANSION JONT SYSTEM.



TYPICAL STEEL BEAM EXPANSION JOINT

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURE FILE NUMBER	

POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

BRIDGE NO.: TRU-80-0857L, TRU-80-0857R, TRU-80-0941L, TRU-80-0942L, TRU-80-0942R, TRU-80-0956L, TRU-80-0956R, TRU-80-1027, TRU-80-1085L, TRU-80-1085R, & TRU-80-1185

TRU-80-(6.88)(8.56) PID No. 77873

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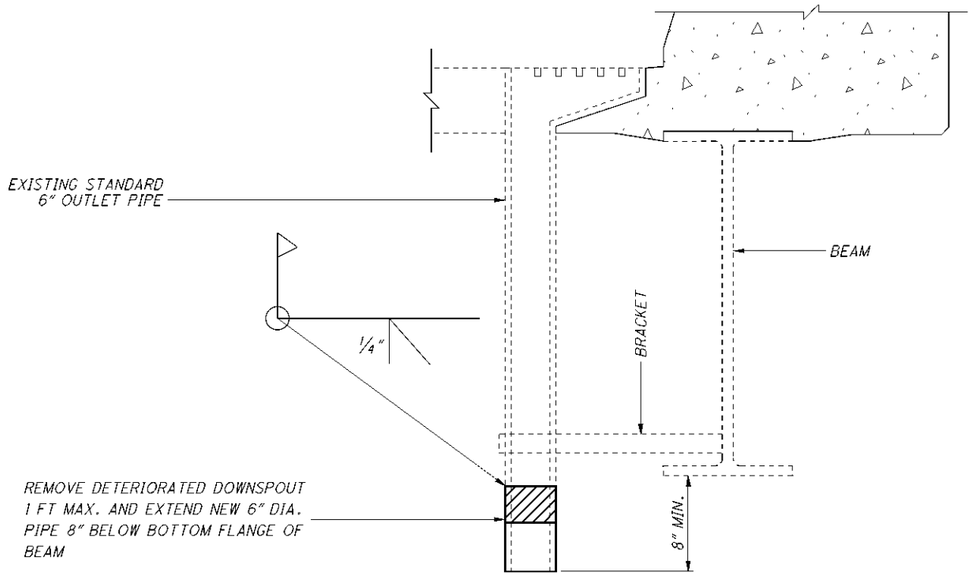
SCUPPER LENGTHENING DETAIL



SCUPPER AREA TO BE REMOVED

NOTES:

1. THE PIPE EXTENSIONS WILL BE WELDED IN PLACE AFTER THE EXISTING SURFACE HAS BEEN ABRASIVE BLASTED TO A SA-1.

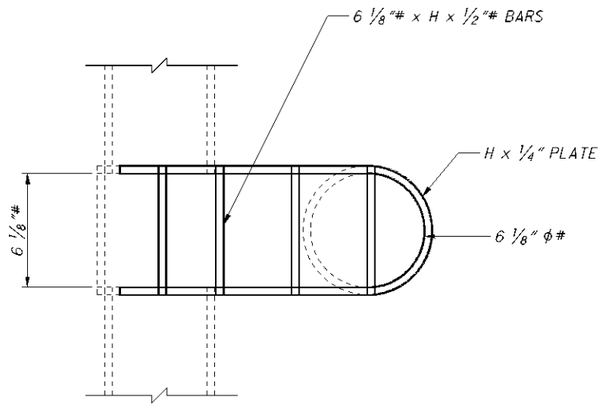
2. ADDITIONAL LENGTH OF SCUPPER PIPE TO BE REPLACED IS TO BE DETERMINED BY THE PROJECT ENGINEER.

3. ALL NEW SCUPPER EXTENSIONS MUST BE COMPLETE AND IN PLACE BEFORE COMMENCING WITH PAINT OPERATIONS FOR STRUCTURE TRU-80-1027.

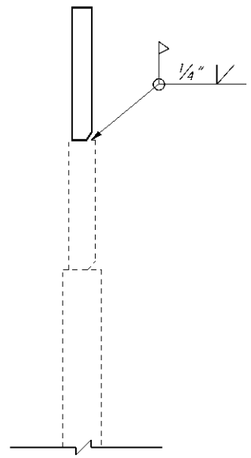
4. AFTER SCUPPER EXTENSION IS COMPLETE PAINT NEW SCUPPER EXTENSIONS PER ITEM 514, FIELD PAINTING, MISC.; REPAIR PAINTING FOR STRUCTURES TRU-80-0941L, TRU-80-0942L, TRU-80-0942R, TRU-80-0956L, TRU-80-0956R, TRU-80-1085L, TRU-80-1085R, AND TRU-80-1185.

5. IF ADDITIONAL INFORMATION IS REQUIRED, EXPIRED STD. DWG. SD-1-69 IS AVAILABLE UPON REQUEST.

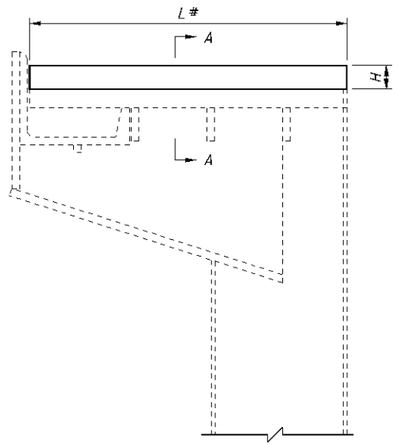
SCUPPER EXTENSION DETAIL



SCUPPER EXTENSION PLAN



SECTION A-A



SCUPPER EXTENSION ELEVATION

SEE TABLE FOR L DIMENSION

SCUPPER EXTENSION			
BRIDGE NO.	QTY	L#	H
TRU-80-0941L	4	1'-2"	3 1/4"
TRU-80-0942L/R	16	1'-2"	3 1/4"
TRU-80-0956L/R	16	1'-2"	3 1/4"
TRU-80-1027	16	1'-2"	3"
TRU-80-1085L/R	20	1'-4 3/8"	3 1/4"
TRU-80-1185	16	1'-2"	3"

FIELD VERIFY DIMENSION

DESIGN AGENCY
ODOT --- DISTRICT 4
PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
LMS	LMS	TJP	10-15-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	

SCUPPER DETAILS

BRIDGE NO.: TRU-80-0857L, TRU-80-0857R, TRU-80-0941L, TRU-80-0942L, TRU-80-0942R, TRU-80-0956L, TRU-80-0956R, TRU-80-1027, TRU-80-1085L, TRU-80-1085R, & TRU-80-1185

TRU-80-(6.88)(8.56)
PID No. 77873

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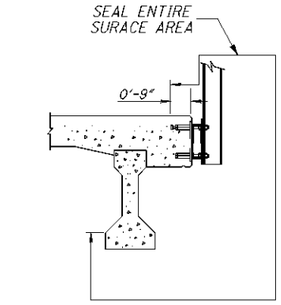
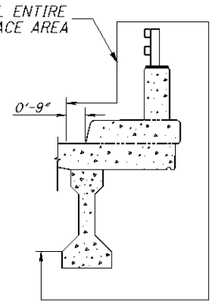
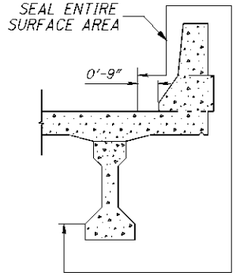


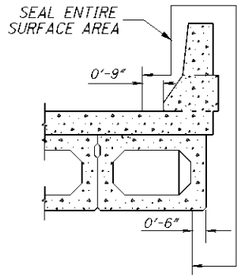
DETAIL A
CONCRETE DECKS WITH
OVER THE SIDE DRAINAGE



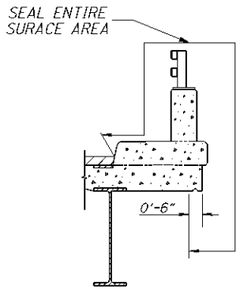
DETAIL B
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



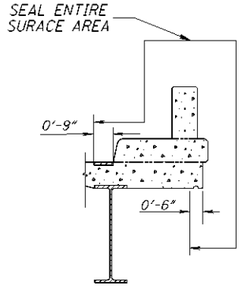
DETAIL C
CONCRETE DECK WITH
DEFLECTOR PARAPET



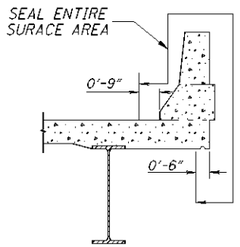
DETAIL D
PRESTRESSED BOX BEAM DECK
WITH DEFLECTOR PARAPET



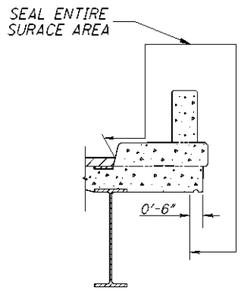
DETAIL E
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



DETAIL F
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



DETAIL G
CONCRETE DECK WITH
DEFLECTOR PARAPET



DETAIL H
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
TRU-80-0941L	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL F SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	97	260	225		582
TRU-80-0942L	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL F SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	121	407	247		775
TRU-80-0942R	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL F SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	121	407	247		775
TRU-80-0956L	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL F SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	168	423	535	50	1176
TRU-80-0956R	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL F SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	164	422	535	50	1171
TRU-80-1027	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL H SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	126	282	579		987
TRU-80-1085L	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL F SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	69	483	720		1272
TRU-80-1085R	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL F SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	69	483	720		1272
TRU-80-1185	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL E SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	114	273	577		964

NOTES:
- EPOXY-URETHANE SEALER SHALL BE USED UNLESS SHOWN OTHERWISE
- DETAILS E, F, G AND H ALSO APPLY TO CONCRETE SLAB BRIDGES
- 50SY GIVEN FOR STRUCTURES TRU-80-0956L/R FOR CONCRETE SPALL REMOVAL

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.

DESIGN AGENCY
ODOT --- DISTRICT 4
PRODUCTION

DESIGNED LMS | DRAWN LMS | REVIEWED TJP | DATE 10-15-09
CHECKED | REVISED | STRUCTURE FILE NUMBER

CONCRETE SEALING DETAILS

BRIDGE NO.: TRU-80-0857L, TRU-80-0857R, TRU-80-0941L, TRU-80-0942L, TRU-80-0942R, TRU-80-0956L, TRU-80-0956R, TRU-80-1027, TRU-80-1085L, TRU-80-1085R, & TRU-80-1185

TRU-80-(6.88)(8.56)
PID No. 77873

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