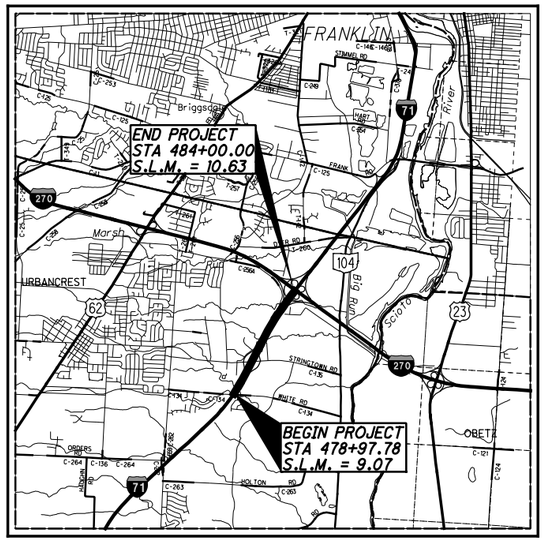

LOCATION MAP

LATITUDE: 39°53'06" LONGITUDE: 83°02'43"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

FEDERAL ROUTES

STATE ROUTES

COUNTY & TOWNSHIP ROADS

OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2019)	102,000
DESIGN YEAR ADT (2039)	112,000
DESIGN HOURLY VOLUME (2039)	11,000
DIRECTIONAL DISTRIBUTION	0.62
TRUCKS (24 HOUR B&C)	0.18
T_d	0.11
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN INTERSTATE
NHS PROJECT	YES

DESIGN EXCEPTIONS

DESIGN FEATURES	APPROVED	SHEET NUMBERS
LANE WIDTH	02/12/2019	13

UNDERGROUND UTILITIES

Contact Two Working Days Before You Dig

OHIO811.org Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764

(Non-members must be called directly)

ENGINEERS SEAL:

STATE OF OHIO
WALID A. ANTONIOS
E-63799
REGISTERED
PROFESSIONAL ENGINEER

SIGNED:

DATE: 05-31-2019

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

FRA-71-9.07

CITY OF COLUMBUS
CITY OF GROVE CITY
JACKSON TOWNSHIP
FRANKLIN COUNTY

INDEX OF SHEETS:

PLAN PREPARED BY:

TranSystems

400 W. NATIONWIDE BLVD.
SUITE 225, COLUMBUS, OH 43215

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE RESURFACING AND FULL DEPTH WIDENING OF IR-71 NORTHBOUND IN ORDER TO EXTEND THE EXPRESS LANE FROM IR-270 TO SOUTH OF STRINGTOWN ROAD AND REMOVE THE NORTHBOUND WEAVE BETWEEN THE TWO INTERCHANGES. WORK INCLUDES RECONSTRUCTION OF RAMPS, ROADWAY, MEDIAN BARRIERS, DRAINAGE, LIGHTING, AND NOISEWALLS.

PROJECT EARTH DISTURBED AREA: 15.55 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 2.96 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 18.51 ACRES

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.

2019 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.

MAINTENANCE OF TRAFFIC ENDORSEMENT

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

APPROVED _____

DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____

DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

3478-E

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7/28/00	MGS-1.1	1/19/18	HL-30.21	1/17/14	MT-102.10	1/18/19	TC-52.20	7/20/18	800	10/18/19
BP-2.1	7/17/15	MGS-2.1	1/19/18	HL-30.22	1/17/14	MT-102.30	10/16/15	TC-61.30	1/20/17	804	1/18/19
BP-2.2	7/18/08	MGS-3.1	1/19/18	HL-40.20	7/20/18	MT-103.10	1/19/18	TC-65.10	1/17/14	808	1/18/19
BP-2.5	7/19/13	MGS-3.2	1/18/13	HL-60.11	7/21/17	MT-104.10	10/16/15	TC-65.11	7/21/17	809	1/18/19
BP-3.1	7/18/14	MGS-4.2	7/19/13	HL-60.12	7/15/16	MT-105.10	7/19/13	TC-71.10	1/19/18	821	4/20/12
BP-5.1	7/20/18	MGS-4.3	1/18/13	HL-60.21	7/20/18	TC-7.65	7/20/18	TC-72.20	7/20/18	832	10/19/18
BP-6.1	7/19/13	MGS-5.3	7/15/16	HL-60.31	1/18/19	TC-12.30	1/19/18	ITS-14.11	1/18/19		
BP-9.1	1/18/19	RM-4.3	7/18/14	MT-95.30	4/19/19	TC-21.10	7/21/17	ITS-14.50	7/20/18	875	1/18/19
CB-2.3	1/15/16	RM-4.4	7/21/17	MT-95.45	4/19/19	TC-21.20	7/20/18	ITS-15.10	7/17/15	878	1/18/19
CB-3.1	1/15/16	RM-4.5	7/21/17	MT-98.10	1/20/17	TC-21.50	7/15/16	ITS-18.00	1/18/19	902	12/31/12
CB-3.3	1/15/16	RM-4.6	7/19/13	MT-98.11	4/19/19	TC-22.20	1/17/14	ITS-50.10	1/19/18	904	1/18/19
CB-3.4	1/15/16	NBS-1-09	1/19/18	MT-98.20	4/19/19	TC-41.10	7/19/13	ITS-60.10	7/15/16	908	10/20/17
HW-2.1	7/20/18	HL-10.11	7/20/18	MT-98.21	7/18/14	TC-41.15	10/18/13	ITS-76.10	1/18/19	921	4/20/12
HW-2.2	7/20/18	HL-10.12	1/20/17	MT-99.20	4/19/19	TC-41.20	10/18/13				
I-2.1	1/15/16	HL-10.13	7/20/18	MT-101.60	1/20/17	TC-41.30	10/18/13				
MH-1.2	1/15/16	HL-10.31	1/19/18	MT-101.70	7/20/18	TC-42.20	10/18/13				
DM-1.1	7/21/17	HL-20.11	4/21/17	MT-101.75	7/15/16	TC-51.11	1/15/16				
DM-1.2	1/18/13	HL-20.21	1/19/18	MT-101.90	7/21/17	TC-51.12	1/15/16				
DM-2.1	1/18/13	HL-30.11	1/18/19			TC-52.10	10/18/13				

FEDERAL PROJECT NO. E151(115)

PID NO. 92615

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

FRA-71-9.07

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TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.

2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.

3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.

4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:
   A. COLLABORATE WITH ODOT AND SAFETY FORCES;
   B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
   C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.

5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:
   A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
      I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
      II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
      III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
      IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
      V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
      VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT (CONT'D)

   B. FOLLOWING AN INCIDENT/CRASH:
      I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
      II. RECOMMEND ROADWAY REPAIR NEEDS.
      III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
      IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

WEEKLY MAINTENANCE OF TRAFFIC MEETING

AFTER THE INITIAL PRE-MAINTENANCE OF TRAFFIC MEETING, THE CONTRACTOR SHALL MEET WITH THE PROJECT ENGINEER ON A WEEKLY BASIS TO GO OVER A DETAILED MAINTENANCE OF TRAFFIC REPORT OF AT LEAST 7 CALENDAR DAYS. THIS MEETING SHOULD BE HELD ON THE SAME DAY AND TIME OF EACH WEEK.

THE CONTRACTOR WILL PROVIDE TO THE PROJECT ENGINEER A WRITTEN DETAIL OF THE INFORMATION REQUIRED BY THE NOTIFICATION OF TRAFFIC RESTRICTIONS NOTE PRIOR TO THE MEETING.

IN ADDITION TO THE DETAILED MAINTENANCE OF TRAFFIC REPORT THE CONTRACTOR SHALL GIVE A GENERAL LOOK AHEAD OF AN ADDITIONAL 2 WEEKS OF UPCOMING WORK ACTIVITES. THIS WILL INCLUDE ANY NOTIFICATION REQUIREMENTS FOR RESTRICTIONS THAT HAVE A DURATION GREATER THAN 12 HOURS.

PRE-MAINTENANCE OF TRAFFIC MEETING

A PRE-MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD (MINIMUM 14 WORK DAYS) PRIOR TO WORK BEGINNING OR ANY CHANGE OF PHASING. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER (D06.MOT@DOT.OHIO.GOV) AS WELL AS THE CONTRACTOR AND ANY OF HIS SUB-CONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL. FOR COLUMBUS SECTIONS OF ROADWAY, ALSO INCLUDE THE TEMPORARY CONTROL COORDINATOR (614-645-6269 OR 614-645-5845) FROM THE CITY OF COLUMBUS TRANSPORTATION DIVISION.

COORDINATION WITH ADJACENT PROJECTS

THE CONTRACTOR SHALL COORDINATE WORK WITH ODOT AND THE CONTRACTORS ON THE ADJACENT PROJECTS.

FRA-71-9.62/9.71 PID 104799
FRA-104-7.57 PID 99885
FRA SGNL PHASE D PID 82573

COORDINATION SHALL BE MADE TO PREVENT CONFLICTING ADVANCE WARNING SIGNS, CONFLICTING DETOUR ROUTES, OVERLAPING/CONFLICTING LANE CLOSURES, AND TO ENSURE THAT A MINIMUM DISTANCE OF 2 MILES BETWEEN ADJACENT LANE CLOSURES IS MAINTAINED. THIS IS NOT AN EXHAUSTIVE LIST OF COORDINATION ITEMS THAT MAY NEED TO BE RESOLVED BETWEEN PROJECTS. THE DEPARTMENT RESERVES THE RIGHT TO DECIDE WHICH PROJECT'S ACTIVITIES TAKE PRECEDENCE. PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WILL CONSIDER THIS AN EXCUSABLE, NON-COMPENSABLE DELAY PER 108.06.B. ON PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WHERE THE CONTRACTOR FAILED TO MEET THE NOTIFICATION REQUIREMENTS, THE DELAYS SHALL NOT BE CONSIDERED EXCUSABLE OR COMPENSABLE.

ATTENDANCE AT DEPARTMENT ORDERED TRAFFIC COORDINATION MEETINGS BETWEEN ADJACENT PROJECTS SHALL BE CONSIDERED MANDATORY FOR EACH PROJECT'S SUPERINTENDENT AND WORKSITE TRAFFIC SUPERVISOR (WTS), AND INCIDENTAL TO THE LUMP SUM MAINTENANCE OF TRAFFIC PAYMENT ITEM

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS)

NO WORK SHALL BE PERFORMED AND THE SAME NUMBER OF LANES AS WERE AVAILABLE AT THE START OF THE PROJECT SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS
NEW YEARS
MEMORIAL DAY
FOURTH OF JULY
LABOR DAY
THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY 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	12:00 NOON FRI. THROUGH 6:00 AM MON.
MONDAY	12:00 NOON FRI. THROUGH 6:00 AM TUE.
TUESDAY	12:00 NOON MON. THROUGH 6:00 AM WED.
WEDNESDAY	12:00 NOON TUE. THROUGH 6:00 AM THUR.
THURSDAY	12:00 NOON WED. THROUGH 6:00 AM FRI.
THANKSGIVING	5:00AM WED. THROUGH 6:00 AM MON.
FRIDAY	12:00 NOON THUR. THROUGH 6:00 AM MON.
SATURDAY	12:00 NOON FRI. THROUGH 6:00 AM MON.

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 PER THE LANE VALUE CONTRACT (PN 127).

ITEM 614 WORK ZONE ARROW, CLASS I, AS PER PLAN

IN ADDITION TO THE SPECIFICATIONS OF CMS 614 THE WORK ZONE ARROWS SHALL BE LANE REDUCTION ARROWS AND SHALL BE 642 PAINT.

PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID FOR EACH FUNISHED, INSTALLED, MAINTAINED AND REMOVED.

ITEM 618 RUMBLE STRIPS (ASPHALT CONCRETE), AS PER PLAN

THE CONTRACTOR SHALL MILL 2 INCHES BY 2 FEET WIDE OF THE EXISTING ASPHALT SHOULDER IN ORDER TO REMOVE THE EXISTING RUMBLE STRIPS ALONG I-71 NB IN THE AREA WHERE TRAFFIC IS SHIFTED. THE CONTRACTOR SHALL THEN COAT ALL MILLED SURFACES HORIZONTAL AND VERTICAL WITH APPROVED AC LIQUID. NEXT THE CONTRACTOR SHALL PLACE 2 INCHES OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-28.

ALL COST ASSOCIATED WITH THE REMOVAL OF THE EXISTING PAVEMENT AND PLACEMENT OF THE SURFACE COURSE SHALL BE INCLUDED IN UNIT PRICE BID PER FOOT OF ITEM 618 - RUMBLE STRIPS (ASPHALT CONCRETE), AS PER PLAN.

AN ESTIMATED QUANTITY OF 2800 FEET HAS BEEN CARRIED TO THE MAINTENANCE OF TRAFFIC SUBSUMMARY.

MAINTENANCE OF TRAFFIC FOR MARKING PAVEMENT REPAIRS

PROVIDE LANE CLOSURES AS PER THE MAINTENANCE OF TRAFFIC NOTES IN THESE PLANS A MINIMUM OF 24 HOURS PRIOR TO PERFORMING PAVEMENT REPAIRS TO ALLOW THE ENGINEER TO IDENTIFY AND MARK THE AREAS OF THE PAVEMENT IN NEED OF REPAIRS.

ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS TO COMPLETE ALL ITEMS DESCRIBED SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAING TRAFFIC.

CALCULATED BPT
CHECKED EMW

MAINTENANCE OF TRAFFIC NOTES

FRA-71-9.07

ITEM 614 - WORK ZONE PAVEMENT MARKING, CLASS I, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND APPLYING WET REFLECTIVE (WR) OPTICS (BEADS OR ELEMENTS), GLASS BEADS, AND TRAFFIC PAINT ACCORDING TO 640, 740, AND THE ADDITIONAL REQUIREMENTS SPECIFIED BELOW.

FURNISH MATERIALS CONFORMING TO:
TRAFFIC PAINT 740.02
GLASS BEADS 740.09

FURNISH ONE OF THE FOLLOWING WET REFLECTIVE OPTICS: 3M CONNECTED ROADS ALL WEATHER ELEMENTS SERIES 50/51, POTTERS INDUSTRIES VISI-ULTRA, SWARCO DURALUX, OR APPROVED EQUAL.

IN ADDITION TO THE REQUIREMENTS OF 614.11, FURNISH EQUIPMENT CAPABLE OF APPLYING WR OPTICS AT THE TIME OF LINE PLACEMENT.

ENSURE THE PAVEMENT SURFACE IS FREE OF LOOSE MATERIAL AND COMPLETELY DRY PRIOR TO THE APPLICATION OF THE PAVEMENT MARKINGS.

PLACE TRAFFIC PAINT AT A THICKNESS OF 20 MILS (508 M^2). DROP WR OPTICS FROM THE FORWARD-MOST BEAD APPLICATOR GUN AT A MINIMUM RATE OF 7 POUNDS PER 100 SQUARE FEET (3.4 KG PER 10 M). DROP GLASS BEADS AT A MINIMUM RATE OF 8 POUNDS PER 100 SQUARE FEET (3.9 KG PER 10 M^2) FROM THE REAR BEAD APPLICATOR GUN.

THE DEPARTMENT WILL MEASURE PAVEMENT MARKINGS COMPLETE IN PLACE IN THE UNITS DESIGNATED. THE DEPARTMENT WILL MEASURE LINE QUANTITIES AS THE LENGTH OF THE COMPLETED MARKING, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT CONTRACT PRICES, OR PRICES ADJUSTED ACCORDING TO 641.11, MEASURED ACCORDING TO 641.12, WITH THE PROVISIONS SPECIFIED IN 641.13.

ITEM 614 WORK ZONE PAVEMENT MARKINGS, SPRAY THERMOPLASTIC, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND APPLYING WET REFLECTIVE (WR) OPTICS (BEADS OR ELEMENTS), GLASS BEADS, AND SPRAY THERMOPLASTIC ACCORDING TO 640, 740, AND THE ADDITIONAL REQUIREMENTS SPECIFIED BELOW.

FURNISH MATERIALS CONFORMING TO:
GLASS BEADS 740.09
SPRAY THERMOPLASTIC.....740.10

FURNISH ONE OF THE FOLLOWING WET REFLECTIVE OPTICS: 3M CONNECTED ROADS ALL WEATHER ELEMENTS SERIES 50/51, POTTERS INDUSTRIES VISI-ULTRA, SWARCO DURALUX, OR APPROVED EQUAL.

IN ADDITION TO THE REQUIREMENTS OF 614.11, FURNISH EQUIPMENT CAPABLE OF APPLYING WR OPTICS AT THE TIME OF LINE PLACEMENT.

ENSURE THE PAVEMENT SURFACE IS FREE OF LOOSE MATERIAL AND COMPLETELY DRY PRIOR TO THE APPLICATION OF THE PAVEMENT MARKINGS.

PLACE SPRAY THERMOPLASTIC AT A THICKNESS OF 45 MILS (1.15 MM). DROP WET REFLECTIVE OPTICS FROM THE FORWARD-MOST BEAD APPLICATOR GUN AT A RATE OF 4 POUNDS PER 100 SQUARE FEET (1.9 KILOGRAM PER 10 M) OF LINE. DROP GLASS BEADS AT THE RATE SPECIFIED IN 648.05 FOR SPRAY THERMOPLASTIC FROM THE REAR BEAD APPLICATOR GUN.

THE CONTRACTOR SHALL PLACE THE WORK ZONE PAVEMENT MARKINGS, SPRAY THERMOPLASTIC, AS PER PLAN PER ODOT SPECIFICATION 614.11 AND ODOT SPECIFICATION 648 WITH THE EXCEPTION ODOT SPECIFICATION 648.05 SHALL BE MODIFIED TO ALLOW PLACEMENT OF THE MATERIAL AT A TEMPERATURE OF NOT LESS THAN 35 DEGREES FAHRENHEIT.

THE DEPARTMENT WILL MEASURE PAVEMENT MARKINGS COMPLETE IN PLACE IN THE UNITS DESIGNATED. THE DEPARTMENT WILL MEASURE LINE QUANTITIES AS THE LENGTH OF THE COMPLETED MARKING, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT CONTRACT PRICES, OR PRICES ADJUSTED ACCORDING TO 641.11, MEASURED ACCORDING TO 641.12, WITH THE PROVISIONS SPECIFIED IN 641.13.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS AND AT TIMES AS DIRECTED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.11.

ITEM 614 WORK ZONE LANE LINE, CLASS I SPRAY THERMOPLASTIC, AS PER PLAN 4.5 MILE
ITEM 614 WORK ZONE EDGE LINE, CLASS I SPRAY THERMOPLASTIC, AS PER PLAN7.8 MILE
ITEM 614 WORK ZONE CHANNELIZING LINE, CLASS I, SPRAY THERMOPLASTIC, AS PER PLAN19811 FEET
ITEM 614 WORK ZONE DOTTED LINE, CLASS I, SPRAY THERMOPLASTIC, AS PER PLAN6106 FEET

CALCULATED BPT
CHECKED EMW

MAINTENANCE OF TRAFFIC NOTES

FRA-71-9.07

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SHORT DURATION RAMP CLOSURES

FOR THE PURPOSE OF PERFORMING THE REQUIRED WORK OR WHEN REQUIRED BY THE INTERSTATE ENTRANCE RAMP CLOSURE NOTE, RAMPS MAY BE CLOSED FOR SHORT DURATIONS AND DETOURED IN ACCORDANCE WITH THE RAMP CLOSURE TABLE IF APPROVED BY THE ENGINEER. RAMP CLOSURES ARE SUBJECT TO DISINCENTIVES.

FOR ALL SERVICE RAMP CLOSURES LASTING MORE THAN 12 HOURS BUT LESS THAN 60 HOURS AND/OR,
FOR ALL SYSTEM RAMP CLOSURES LASTING MORE THAN 12 HOURS BUT LESS THAN 24 HOURS

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

- A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE.

- POSITIVE GUIDANCE ALONG THE DETOUR ROUTE WITH DETOUR SIGNS (M4-9 SERIES) IN ACCORDANCE WITH THE DETOUR SIGNS NOTE.

FOR ALL RAMP CLOSURES LASTING LESS THAN 12 HOURS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

- A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE.

WHEN CLOSING ENTRANCE RAMPS, CORRESPONDING LEAD-IN LANES AND TURN LANES SHALL ALSO BE CLOSED.

IF A DESIGNATED DETOUR ROUTE IS NOT PROVIDED IN THE PLANS, TRAFFIC SHALL BE DIRECTED TO THE NEXT INTERCHANGE, IF AVAILABLE, TO TURN AROUND. IF THE USE OF THE NEXT INTERCHANGE IS NOT POSSIBLE, AN ALTERNATIVE DETOUR ROUTE SHALL BE PROVIDED BY THE ENGINEER.

SERVICE RAMP: INTERCHANGE RAMPS BETWEEN FREEWAYS (OR EXPRESSWAYS) AND NON-FREEWAYS (OR NONEXPRESSWAYS). THESE RAMPS PROVIDE ACCESS (CONNECTIONS) BETWEEN FREEWAYS/EXPRESSWAYS AND OTHER PRINCIPAL/MINOR ARTERIALS, COLLECTORS OR LOCAL ROADS.

SYSTEM RAMP: INTERCHANGE RAMPS (OR CONNECTORS) BETWEEN FREEWAYS (OR EXPRESSWAYS) AND FREEWAYS (OR EXPRESSWAYS).

APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTION(S)

PORTIONS OF THE MOT PLANS AS DESCRIBED BELOW HAVE BEEN APPROVED BY THE MOT EXCEPTION COMMITTEE (MOTEC) OR THE PROJECT IMPACT ADVISORY COUNCIL (PIAC) PER TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)).

APPROVED MOT EXCEPTION(S) INCLUDE:
CLOSURE OF THE 71NB TO 270WB RAMP FOR A WEEKEND (8PM FRIDAY - 5AM MONDAY)

A MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD A MINIMUM OF 30 CALENDAR DAYS PRIOR TO IMPLEMENTATION OF EACH APPROVED MOT EXCEPTION. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER AS WELL AS THE CONTRACTOR, WORKSITE TRAFFIC SUPERVISOR (WTS) AND ANY SUBCONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL.

IN ADDITION TO ANY NOTIFICATIONS REQUIRED IN OTHER NOTES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 3 BUSINESS DAYS IN ADVANCE OF IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE SO THAT THE PROJECT ENGINEER CAN SEND EMAIL NOTIFICATION TO THE OFFICE OF ROADWAY ENGINEERING, STATEWIDE TMC, DWZTM AND SPECIAL HAULING PERMITS AT LEAST 2 BUSINESS DAYS IN ADVANCE OF THE IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE. REFERENCE "EXCEPTION REQUEST APPROVAL DATED 02/20/2020 FOR PID 92615" IN THE NOTIFICATION AND OTHER CORRESPONDENCE.

ANY CHANGES TO THE MOT THAT IMPACT THE PREVIOUSLY APPROVED MOT EXCEPTION(S) LISTED ABOVE SHALL BE APPROVED IN WRITING BY THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE (MOTEC OR PIAC). IN THE EVENT THAT SUCH CHANGES ARE PROPOSED, THE REQUEST SHALL BE COORDINATED THROUGH THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM) A MINIMUM OF 30 CALENDAR DAYS PRIOR TO THE DESIRED IMPLEMENTATION DATE. IF THE DISTRICT AGREES WITH THE PROPOSED CHANGES THE DWZTM SHALL SEEK APPROVAL FROM THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE. IN THE EVENT THE PROPOSED CHANGES ARE APPROVED IN WRITING, THE CLOSURES ARE STILL SUBJECT TO NOTIFICATION REQUIREMENTS WITHIN THIS NOTE PRIOR TO IMPLEMENTATION.

LANE VALUE CONTRACT TABLE

THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME A LANE/SHOULDER/RAMP IS CLOSED BY THE CONTRACTOR'S ACTION WHILE NOT OTHERWISE PERMITTED BY THE LANE VALUE CONTRACT TABLE.

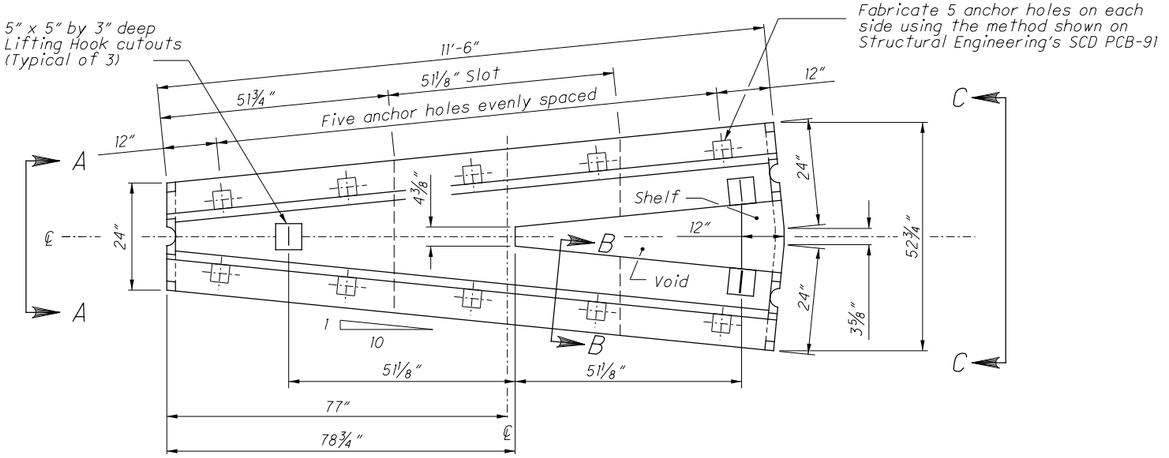
SECTION (SLM)	Existing Number of Lanes per Direction	Lane closures are NOT permitted:				Disincentive Amounts per minute per lane
		Lane Reduction	Mon to Fri	Sat	Sun	
FRA-71						
SR 665 (6.09) to Stringtown Road (9.53)	2	2 to 1	6AM-8PM	6AM-7PM	6AM-7PM	$100
Stringtown Road (9.53) to Dyer Road (11.52)	2	2 to 1	5AM-10PM	6AM-8PM	6AM-8PM	$200
Dyer Road (11.52) to Frank Road (12.79)	3	3 to 2	5AM-9AM & 2PM-7PM	No Restriction	No Restriction	$200
		3 to 1	5AM-10PM	6AM-8PM	6AM-8PM	$200
Frank Road (12.79) to I-70 (15.26)	3	3 to 2	5AM-7PM	7AM-9AM & 2PM-7PM	7AM-9AM & 2PM-7PM	$200
		3 to 1	5AM-10PM	6AM-8PM	6AM-10PM	$200
Short term shoulder closures are NOT permitted 5AM-9AM and 3PM-6PM Monday-Friday.						

SECTION (SLM)	Existing Number of Lanes per Direction	Lane closures are NOT permitted:				Disincentive Amounts per minute per lane
		Lane Reduction	Mon to Fri	Sat	Sun	
FRA-270						
US 23 (52.72) to I-71 southbound (0.00)	2	2 to 1	5AM-9PM	6AM-7PM	6AM-7PM	$100
I-71 Southbound (0.00) to 1/2 mile west of I-71 (0.60)	2	2 to 1	5AM-9PM	6AM-7PM	6AM-7PM	$100
1/ 2 mile west of I-71 (0.60) to US 40 - Broad Street (7.04)	3	3 to 2	5AM-9AM & 3PM-6PM	No Restriction	No Restriction	$100
		3 to 1	5AM-9PM	6AM-7PM	6AM-7PM	$100
Short term shoulder closures are NOT permitted 5AM-9AM and 3PM-6PM Monday-Friday.						

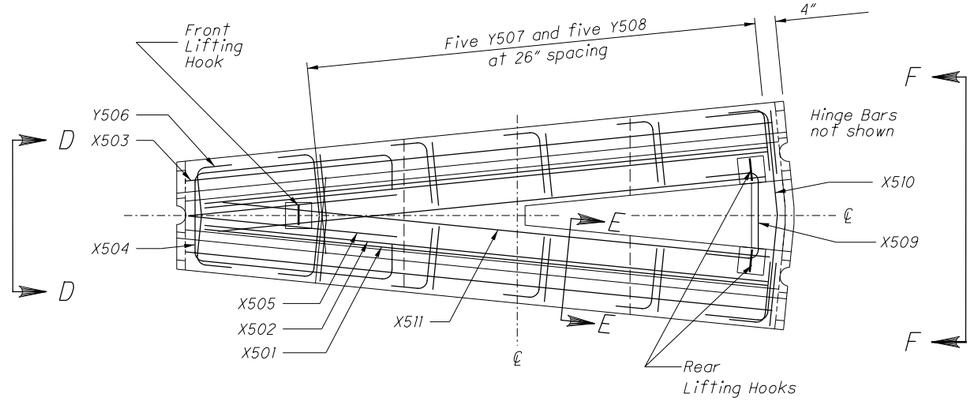
CALCULATED BPT
CHECKED EMW

MAINTENANCE OF TRAFFIC NOTES

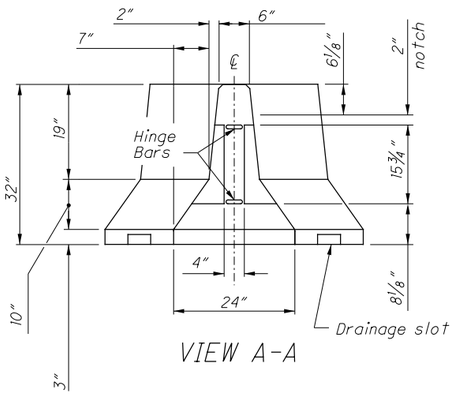
FRA-71-9.07



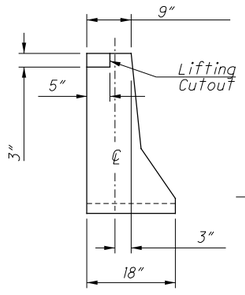
PLAN



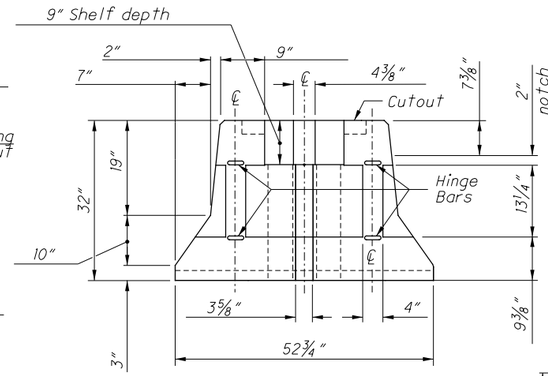
REINFORCING PLAN VIEW



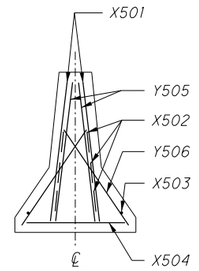
VIEW A-A



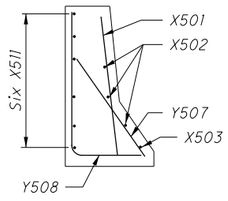
SECTION B-B



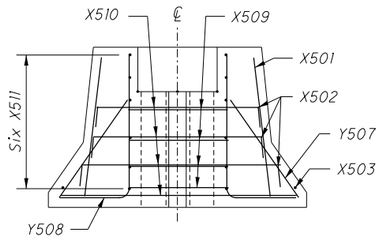
VIEW C-C



VIEW D-D



SECTION E-E



VIEW F-F

REINFORCING DETAILS

NOTES

GENERAL: This barrier segment is used to split one run of portable concrete barrier into dual runs. Attach directly to ODOT's 32" PCB; however, other approved barrier shapes may be connected to this segment by the use of an appropriate transition unit. Attach at least one standard PCB segment in between this "Y" and an Impact Attenuator. Its field application is shown in MOT plans and on MT standard drawings. Do not use this barrier in an unanchored configuration next to bridge deck edges or similiar dropoffs, anchor according to method shown on PCBDD or other approved method.

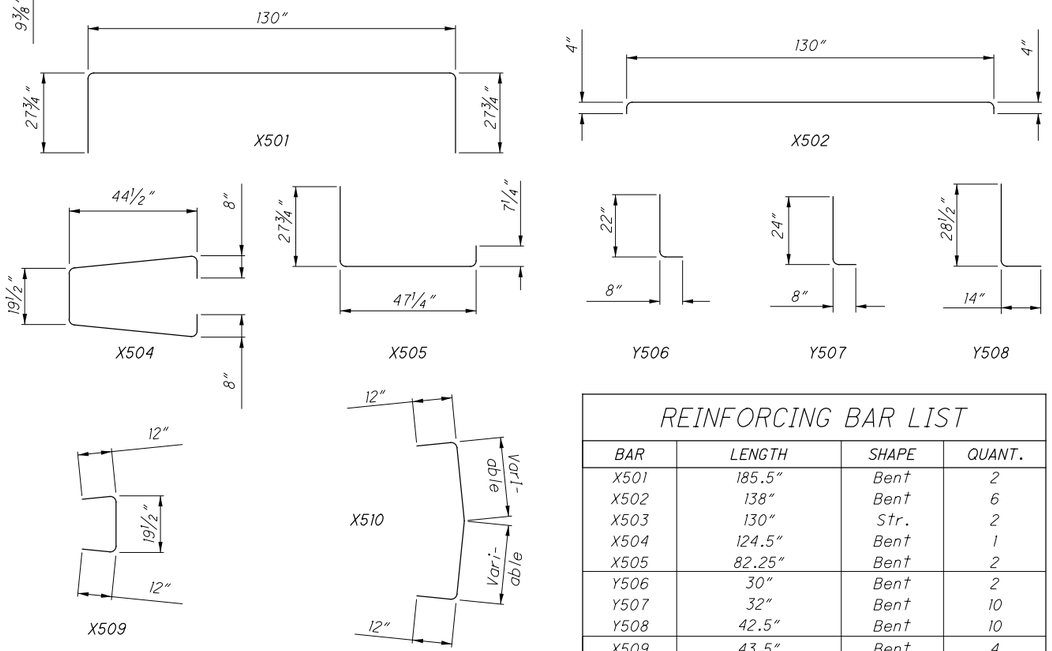
BARRIER DETAILS: Use SCD RM-4.2 for details not shown here, including the geometry of this pin and loop segment matches in every way the design of the end connections shown on the HINGED CONNECTION and JOINT CONNECTION Details (the alternate J-J Hooks connection design is permitted). Additionally, barrier edges may be radiused or chamfered as per the LEGEND Note, barrier is to be permanently marked as mentioned in the MARKINGS Note, and delineate as per the REFLECTORIZATION Note.

MATERIAL SPECIFICATIONS: The minimum design strength of the concrete is 4,000 psi and meets the requirements of CMS 499. For reinforcing steel, use ASTM A615 Grade 60 black steel and provide 2" min. rebar cover. Material specifications for the Hinge and Reinforcing Bars, as well as the Connecting Hardware may be found on SCD RM-4.2. For additional material specifications not shown here, see SCD RM-4.2 and CMS 622.

HANDLING: The fabricator is responsible for the design of a lifting system for handling segments. As a minimum, use three lifting points at the locations suggested in the Plan views, and design with a lifting factor of safety of 4. Any protrusions from the lifting hook design is not to affect the crash worthiness of the barrier. The calculations shall be signed, sealed and dated by a Registered Engineer and include these calculations with the Manufacturing Drawings required by Supplement 1073.12. Refer to Part 5 of the PCI Handbook. Approximate segment weight is 8,500 lbs [3850 kg].

PAYMENT: Payment will be made under Item 622 - Portable Barrier, "Y" Connector, Each, and will include all forms, materials and labor to cast this segment.

ALTERNATE METHOD: Contractors may choose to use a wide Impact Attenuator in lieu of the concrete "Y" alternate. The chosen unit will be a Type 2 or 3 Impact Attenuator matching the product previously called for on the project plans at the expected installation location.



BENDING DIAGRAMS

REINFORCING BAR LIST

BAR	LENGTH	SHAPE	QUANT.
X501	185.5"	Bent	2
X502	138"	Bent	6
X503	130"	Str.	2
X504	124.5"	Bent	1
X505	82.25"	Bent	2
Y506	30"	Bent	2
Y507	32"	Bent	10
Y508	42.5"	Bent	10
X509	43.5"	Bent	4
X510	Varies	Bent	4
X511	124"	Str.	12

THIS DRAWING REPLACES Y BARRIER PLAN INSERT SHEET DATED 11-30-07

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 4-16-10 | CHECKED

PLAN INSERT SHEET

PCB "Y" CONNECTOR SEGMENT

FRA-71-9.07

1 / 1

27A / 264

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ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	SEE SHEET
611	98631	1	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	22
611	98635	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	22
611	99661	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	22
611	99655	1	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	22
614	11001	LS		MAINTAINING TRAFFIC, AS PER PLAN	22
614	11110	800	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	25
614	12346	11	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL), 32"	23
614	12420	LS		DETOUR SIGNING	
614	12484	3	EACH	WORK ZONE INCREASED PENALTIES SIGN	23
614	12500	50	EACH	REPLACEMENT SIGN	22
614	12600	100	EACH	REPLACEMENT DRUM	23
614	12801	999	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	25
614	13310	1517	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	25
614	13312	74	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	25
614	13350	504	EACH	OBJECT MARKER, ONE WAY	25
614	11630	23790	FT	INCREASED BARRIER DELINEATION	25
614	18601	2	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	24
614	20011	7.00	MILE	WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN, TRAFFIC PAINT	26A
614	20011	4.50	MILE	WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN, SPRAY THERMOPLASTIC	26A
614	22011	14.40	MILE	WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, TRAFFIC PAINT	26A
614	22011	7.8	MILE	WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, SPRAY THERMOPLASTIC	26A
614	23011	34518	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN, TRAFFIC PAINT	26A
614	23011	19811	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN, SPRAY THERMOPLASTIC	26A
614	24001	1292	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 6", TRAFFIC PAINT	26A
614	24001	1292	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 6", SPRAY THERMOPLASTIC	26A
614	24001	6987	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 12", TRAFFIC PAINT	26A
614	24001	4814	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 12", SPRAY THERMOPLASTIC	26A
614	25200	833	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
614	30001	3	EACH	WORK ZONE ARROW, CLASS I, AS PER PLAN	26
614	98200	4	EACH	WORK ZONE PAVEMENT MARKING, MISC.: WORD ON PAVEMENT	22
614	98200	6	EACH	WORK ZONE PAVEMENT MARKING, MISC.: ROUTE SHIELD	22
615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
615	25000	454	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
616	10000	216	MGAL	WATER	22
618	40100	2800	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	26
622	41000	23790	FT	PORTABLE BARRIER, 32"	
622	41050	2	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
808	18700	165	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	23

CALCULATED BPT
CHECKED EMW

MAINTENANCE OF TRAFFIC SUBSUMMARY

FRA-71-9.07

28
264

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Phase	611 CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	611 CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN	614 MAINTAINING TRAFFIC, AS PER PLAN	614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL), 32"	614 DETOUR SIGNING	614 WORK ZONE INCREASED PENALTIES SIGN	614 REPLACEMENT SIGN	614 REPLACEMENT DRUM	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	614 BARRIER REFLECTOR, TYPE 1, ONE-WAY	614 BARRIER REFLECTOR, TYPE 2, ONE-WAY	614 OBJECT MARKER, ONE WAY	614 INCREASED BARRIER DELINEATION	614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	614 WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN, TRAFFIC PAINT	614 WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN, SPRAY THERMOPLASTIC	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, TRAFFIC PAINT	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, SPRAY THERMOPLASTIC	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN, TRAFFIC PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN, SPRAY THERMOPLASTIC	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 6", TRAFFIC PAINT	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 6", SPRAY THERMOPLASTIC	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 12", TRAFFIC PAINT	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 12", SPRAY THERMOPLASTIC	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	614 WORK ZONE ARROW, CLASS I, AS PER PLAN	614 WORK ZONE PAVEMENT MARKING, MISC.: WORD ON PAVEMENT	614 WORK ZONE PAVEMENT MARKING, MISC.: ROUTE SHIELD	615 ROADS FOR MAINTAINING TRAFFIC	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	616 WATER	618 RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	622 PORTABLE BARRIER, 32"	622 PORTABLE BARRIER, "Y" CONNECTOR	808 DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
	EACH	EACH	EACH	EACH	LS	HOUR		EACH	LS	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	SNMT	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	LS	SY	MGAL	FT	FT	EACH	SNMT
NOTES		1			1	800			1	3	50	100				26		2															1		216	2800				165
PHASE 1								4					238	391		129	6410		1.7		3.3		9017				999		191								6410		
PHASE 2	1	1		1				2					295	337	13	110	5460		2.2	2.2	4.4	4.4	8907	8907	247	247	2784	2784		1							5460		
PHASE 3								3					327	307	35	100	5000		2.3	2.3	3.4	3.4	10904	10904	1045	1045	2030	2030	642	2				454			5000	1	
PHASE 4			1					2					139	482	26	139	6920		0.8		3.3		5690				1174				4	6					6920	1	
TOTALS	1	2	1	1	1	800		11	1	3	50	100	999	1517	74	504	23790	2	7.00	4.50	14.40	7.80	34518	19811	1292	1292	6987	4814	833.00	3.00	4.00	6.00	1.00	454.00	216.00	2800	23790	2.00	165.00

CALCULATED BPT
CHECKED EMW

MAINTENANCE OF TRAFFIC SUBSUMMARY

FRA-71-9.07

29
264

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SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
20	21	28	81	85	242	249					01/IMS/PV	02/IMS/PV						
																	PAVEMENT	
				23,174							20,736	2,438	254	01000	23,174	SY	PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH VARIES)	
	103			11,572							10,447	1,228	302	46000	11,675	CY	ASPHALT CONCRETE BASE, PG64-22	
				7,506							7,506		304	20000	7,506	CY	AGGREGATE BASE	
				12,163							10,883	1,280	407	20000	12,163	GAL	NON-TRACKING TACK COAT	
				3,306							2,958	348	442	00100	3,306	CY	ANTI-SEGREGATION EQUIPMENT	
				248							248		442	10001	248	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M	21
				2,729							2,442	287	442	10100	2,729	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
				3,265							2,922	343	442	10301	3,265	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	21
				3,963							3,963		452	17010	3,963	SY	14" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
			18								18		609	24000	18	FT	CURB, TYPE 4-A	
		2,800									2,800		618	40101	2,800	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	26
2.33											2.33		618	40600	2.33	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
	10,830										10,830		875	10000	10,830	LB	LONGITUDINAL JOINT ADHESIVE	
																	LIGHTING	
						22					22		625	00450	22	EACH	CONNECTION, FUSED PULL APART	
						15					15		625	00480	15	EACH	CONNECTION, UNFUSED PERMANENT	
						11					11		625	10490	11	EACH	LIGHT POLE, CONVENTIONAL, TRUSS ARM HIGH RISE, AT20B40	
						11					11		625	14100	11	EACH	LIGHT POLE FOUNDATION, 24" X 8' DEEP	
						1					1		625	15200	1	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP	
						44					44		625	23200	44	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
						1,980					1,980		625	23400	1,980	FT	NO. 10 AWG POLE AND BRACKET CABLE	
						5,272					5,272		625	24320	5,272	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	
						44					44		625	25500	44	FT	CONDUIT, 3", 725.04	
						1,175					1,175		625	25902	1,175	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
						11					11		625	26253	11	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, ASYMMETRIC, 480V, HIGH OUTPUT	247
						5,316					5,316		625	29000	5,316	FT	TRENCH	
						5					5		625	30706	5	EACH	PULL BOX, 725.08, 24"	
						2					2		625	31510	2	EACH	PULL BOX REMOVED	
						13					13		625	32000	13	EACH	GROUND ROD	
						1					1		625	34001	1	EACH	POWER SERVICE, AS PER PLAN	247
						1					1		625	35021	1	EACH	RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN	247
						4,196					4,196		625	36000	4,196	FT	PLASTIC CAUTION TAPE	
						1					1		625	75510	1	EACH	POWER SERVICE REMOVED	
						1					1		625	75540	1	EACH	LIGHT TOWER FOUNDATION REMOVED	
																	TRAFFIC SURVEILLANCE	
					646						646		625	25408	646	FT	CONDUIT, 2", 725.051	
					166						166		625	25504	166	FT	CONDUIT, 3", 725.051	
					3,616						3,616		625	25750	3,616	FT	CONDUIT, 4", MULTICELL, 725.20 , EPC-40, SCHEDULE 40	241
					63						63		625	25900	63	FT	CONDUIT, JACKED OR DRILLED, 3", 725.04	
					373						373		625	25900	373	FT	CONDUIT, JACKED OR DRILLED, 4" MULTICELL, 725.20, EPC-80	
					57						57		625	25920	57	FT	CONDUIT, MISC.: CONDUIT DUCT BANK; (2) 4" MULTICELL, 725.20, EPC-40	241
					527						527		625	25920	527	FT	CONDUIT, MISC.: CONDUIT DUCT BANK; (2) 4" MULTICELL, 725.20, EPC-40, (1) 1-1/2" 725.051	241
					4,427						4,427		625	29010	4,427	FT	TRENCH, 30" DEEP	
					2						2		625	29931	2	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	241
					1						1		625	30700	1	EACH	PULL BOX, 725.08, 18"	
					8						8		625	30711	8	EACH	PULL BOX, 725.08, 32", AS PER PLAN, ROUND W/PAD	241
					12						12		625	31510	12	EACH	PULL BOX REMOVED	
					4						4		625	32000	4	EACH	GROUND ROD	
					1						1		625	34001	1	EACH	POWER SERVICE, AS PER PLAN	241
					4,427						4,427		625	36000	4,427	FT	PLASTIC CAUTION TAPE	
					6						6		632	26500	6	EACH	DETECTOR LOOP	
					549						549		632	40500	549	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
					1,450						1,450		632	65300	1,450	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	
					105						105		632	68200	105	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
					1						1		632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER	

CALCULATED MSW
CHECKED WAA

GENERAL SUMMARY

FRA-71-9.07

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264

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
215	217	220	242									01/IMS/PV	02/IMS/PV						
																		TRAFFIC SURVEILLANCE (CONT.)	
			2,150									2,150		804	15010	2,150	FT	FIBER OPTIC CABLE, 24 FIBER	
			6,388									6,388		804	15050	6,388	FT	FIBER OPTIC CABLE, 288 FIBER	
			1									1		809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF ITS ATR LOCATION ID=39625	241
			1									1		809	67000	1	EACH	RAMP METER SYSTEM	241
			1									1		809	68900	1	EACH	SIDE-FIRED RADAR DETECTOR	241
			LS									LS		809	70000	LS		MAINTAINING ITS DURING CONSTRUCTION	241
																		TRAFFIC CONTROL	
63												63		620	00500	63	EACH	DELINEATOR, POST GROUND MOUNTED	
4												4		620	11000	4	EACH	DELINEATOR, BRACKET MOUNTED	
		611										611		621	00100	611	EACH	RPM	
		400										400		621	54000	400	EACH	RAISED PAVEMENT MARKER REMOVED	
	12											12		625	32000	12	EACH	GROUND ROD	
		132										132		626	00102	132	EACH	BARRIER REFLECTOR, TYPE 1 (1 WAY)	
		77										77		626	00110	77	EACH	BARRIER REFLECTOR, TYPE 2 (1 WAY)	
	241.5											241.5		630	03100	241.5	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
	1											1		630	08210	1	FT	GROUND MOUNTED SUPPORT, PIPE	
	4											4		630	08600	4	EACH	SIGN POST REFLECTOR	
	1											1		630	09051	1	EACH	TRIANGULAR SLIP BASE CONNECTION, AS PER PLAN	214
	2											2		630	20500	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 5	
	1											1		630	20800	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 8	
	1											1		630	21000	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10	
	2											2		630	35500	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 6	
	2											2		630	45500	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8	
	5											5		630	75000	5	EACH	SIGN ATTACHMENT ASSEMBLY	
	3											3		630	79611	3	EACH	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN	214
	157.25											157.25		630	80100	157.25	SF	SIGN, FLAT SHEET	
	68											68		630	80200	68	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
	1,906											1,906		630	80224	1,906	SF	SIGN, OVERHEAD EXTRUSHEET	
	2											2		630	81021	2	EACH	CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN	214
	3											3		630	84010	3	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50	
	9											9		630	84510	9	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
	1											1		630	84600	1	EACH	GROUND MOUNTED PIPE SUPPORT FOUNDATION	
	15											15		630	84900	15	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
	18											18		630	86002	18	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
	1											1		630	86272	1	EACH	REMOVAL OF GROUND MOUNTED PIPE SUPPORT AND DISPOSAL	
	19											19		630	87400	19	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
	4											4		630	89706	4	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
	2											2		630	89802	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65	
		6.23										6.23		644	00104	6.23	MILE	EDGE LINE, 6"	
		2.53										2.53		644	00204	2.53	MILE	LANE LINE, 6"	
		11,676										11,676		644	00404	11,676	FT	CHANNELIZING LINE, 12"	
		657										657		644	00720	657	FT	CHEVRON MARKING	
		2										2		644	01350	2	EACH	LANE REDUCTION ARROW	
		3,517										3,517		644	01510	3,517	FT	DOTTED LINE, 6"	
		2,420										2,420		644	30000	2,420	FT	REMOVAL OF PAVEMENT MARKING	
		0.85										0.85		646	10010	0.85	MILE	EDGE LINE, 6"	
		0.26										0.26		646	10110	0.26	MILE	LANE LINE, 6"	
		186										186		646	10310	186	FT	CHANNELIZING LINE, 12"	
		24										24		646	10400	24	FT	STOP LINE	

CALCULATED MSW
CHECKED WAA

GENERAL SUMMARY

FRA-71-9.07

76
264

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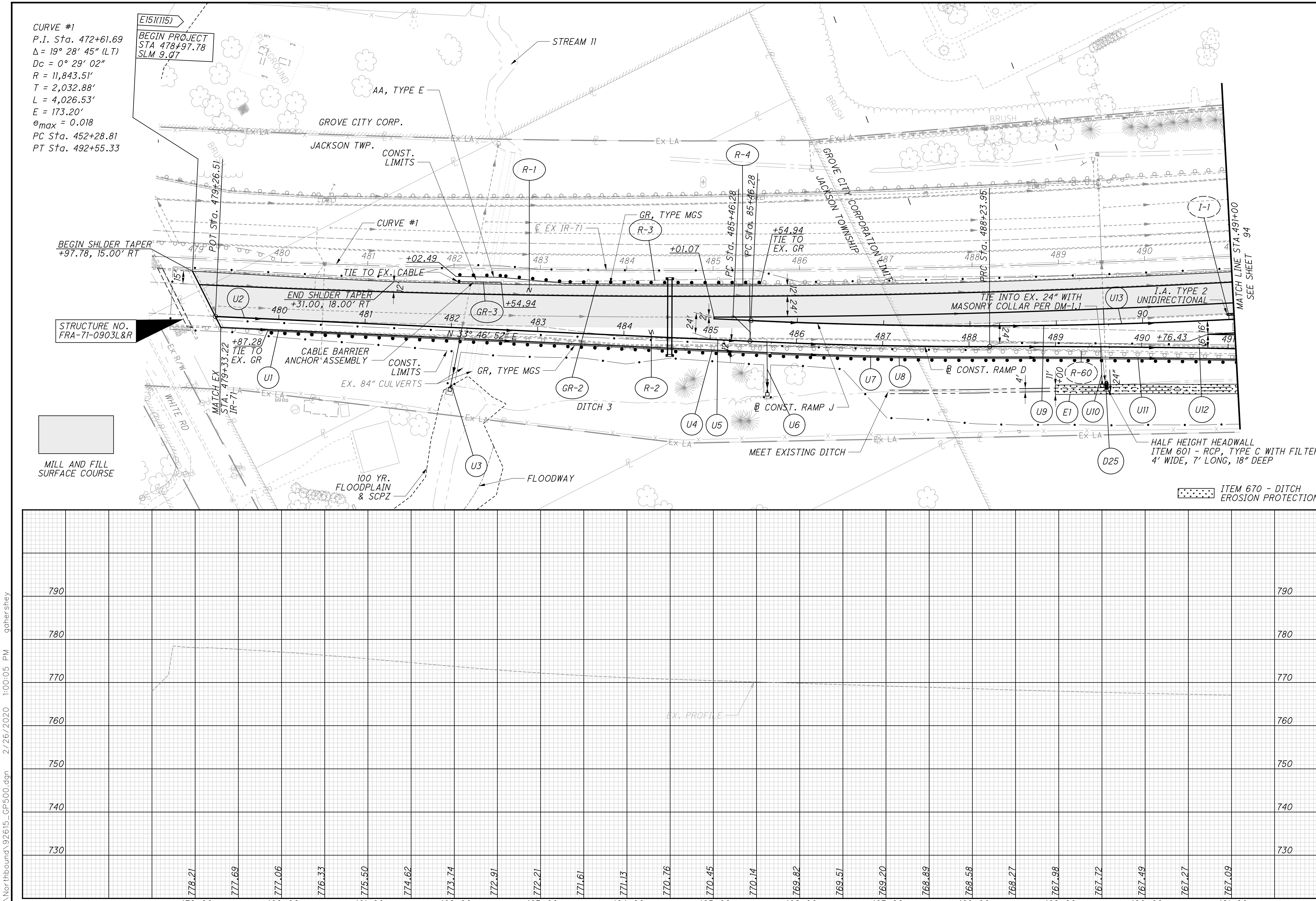
GENERAL SUMMARY

SHEET NUM. 28	PART. 01/IMS/PV	PART. 02/IMS/PV	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
							MAINTENANCE OF TRAFFIC	
800	800		614	11110	800	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	25
23,790	23,790		614	11630	23,790	FT	INCREASED BARRIER DELINEATION	25
11	11		614	12346	11	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL), 32"	23
LS	LS		614	12420	LS		DETOUR SIGNING	
3	3		614	12484	3	EACH	WORK ZONE INCREASED PENALTIES SIGN	23
50	50		614	12500	50	EACH	REPLACEMENT SIGN	22
100	100		614	12600	100	EACH	REPLACEMENT DRUM	23
999	999		614	12801	999	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	25
1,517	1,517		614	13310	1,517	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	25
74	74		614	13312	74	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	25
504	504		614	13350	504	EACH	OBJECT MARKER, ONE WAY	25
2	2		614	18601	2	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	24
7	7		614	20011	7	MILE	WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN, TRAFFIC PAINT	26A
4.5	4.5		614	20011	4.5	MILE	WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN, SPRAY THERMOPLASTIC	26A
14.4	14.4		614	22011	14.4	MILE	WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, TRAFFIC PAINT	26A
7.8	7.8		614	22011	7.8	MILE	WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, SPRAY THERMOPLASTIC	26A
34,518	34,518		614	23011	34,518	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN, TRAFFIC PAINT	26A
19,811	19,811		614	23011	19,811	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN, SPRAY THERMOPLASTIC	26A
1,292	1,292		614	24001	1,292	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 6", TRAFFIC PAINT	26A
6,987	6,987		614	24001	6,987	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 12", TRAFFIC PAINT	26A
1,292	1,292		614	24001	1,292	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 6", SPRAY THERMOPLASTIC	26A
4,814	4,814		614	24001	4,814	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN, 12", SPRAY THERMOPLASTIC	26A
833	833		614	25200	833	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
3	3		614	30001	3	EACH	WORK ZONE ARROW, CLASS I, AS PER PLAN	26
4	4		614	98200	4	EACH	WORK ZONE PAVEMENT MARKING, MISC.: WORD ON PAVEMENT	22
6	6		614	98200	6	EACH	WORK ZONE PAVEMENT MARKING, MISC.: ROUTE SHIELD	22
LS	LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
454	454		615	25000	454	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
216	216		616	10000	216	MGAL	WATER	22
23,790	23,790		622	41000	23,790	FT	PORTABLE BARRIER, 32"	
2	2		622	41050	2	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
165	165		808	18700	165	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	23
							INCIDENTALS	
	LS	LS	108	10000	LS		CPM PROGRESS SCHEDULE	
LS	LS	LS	614	11001	LS		MAINTAINING TRAFFIC, AS PER PLAN	22
	14	2	619	16021	16	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	21
	LS	LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
	LS	LS	624	10000	LS		MOBILIZATION	

CALCULATED MSW
CHECKED WAA

FRA-71-9.07


CURVE #1
P.I. Sta. 472+61.69
Δ = 19° 28′ 45″ (LT)
Dc = 0° 29′ 02″
R = 11,843.51′
T = 2,032.88′
L = 4,026.53′
E = 173.20′
emax = 0.018
PC Sta. 452+28.81
PT Sta. 492+55.33
E151(115)
BEGIN PROJECT
STA 478+97.78
SLM 9.07
STREAM 11
AA, TYPE E
GROVE CITY CORP.
JACKSON TWP.
CONST. LIMITS
R-1
R-4
GROVE CITY CORPORATION LIMIT
JACKSON TOWNSHIP
POT Sta. 479+26.51
CURVE #1
℄ EX IR-71
GR, TYPE MGS
R-3
+01.07
PC Sta. 485+46.28
+54.94
TIE TO
EX. GR
PRC Sta. 488+23.95
I-1
MATCH LINE STA. 491+00
SEE SHEET 94
BEGIN SHLDER TAPER
+97.78, 15.00′ RT
+02.49
TIE TO EX. CABLE
END SHLDER TAPER
+31.00, 18.00′ RT
GR-3
+54.94
TIE INTO EX. 24″ WITH
MASONRY COLLAR PER DM-1.1
I.A. TYPE 2
UNIDIRECTIONAL
U2
U13
STRUCTURE NO.
FRA-71-0903L&R
N 33° 46′ 52″ E
+87.28
TIE TO
EX. GR
+76.43
CABLE BARRIER
ANCHOR ASSEMBLY
CONST.
LIMITS
GR, TYPE MGS
EX. 84″ CULVERTS
℄ CONST. RAMP D
R-60
U1
GR-2
R-2
U7
U8
MATCH EX
STA. 479+33.22
IR-71
WHITE RD
DITCH 3
℄ CONST. RAMP J
U4
U5
U6
U9
E1
U10
U11
U12
MEET EXISTING DITCH
HALF HEIGHT HEADWALL
ITEM 601 - RCP, TYPE C WITH FILTER
4′ WIDE, 7′ LONG, 18″ DEEP
D25
MILL AND FILL
SURFACE COURSE
U3
100 YR.
FLOODPLAIN
& SCPZ
FLOODWAY
ITEM 670 - DITCH
EROSION PROTECTION
790
780
770
760
750
740
730
EX. PROFILE
778.21
777.69
777.06
776.33
775.50
774.62
773.74
772.91
772.21
771.61
771.13
770.76
770.45
770.14
769.82
769.51
769.20
768.89
768.58
768.27
767.98
767.72
767.49
767.27
767.09
479+00
480+00
481+00
482+00
483+00
484+00
485+00
486+00
487+00
488+00
489+00
490+00
491+00

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED MSW
CHECKED WAA

PLAN AND PROFILE - EX IR-71
BEGIN PROJECT TO STA. 491+00.00

FRA-71-9.07

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CURVE #1
P.I. Sta. 472+61.69
Δ = 19° 28′ 45″ (LT)
Dc = 0° 29′ 02″
R = 11,843.51′
T = 2,032.88′
L = 4,026.53′
E = 173.20′
e_{max} = 0.018
PC Sta. 452+28.81
PT Sta. 492+55.33

MATCH LINE STA.491+00.00 SEE SHEET 93

MATCH LINE STA.426+00.00 SEE SHEET 95

PT Sta. 492+55.33
PT Sta. 92+62.49
PC Sta. 91+16.5
CURVE #1
CONST. LIMITS
TIE INTO EX. 36″ WITH MASONRY COLLAR PER DM-1.1
BEGIN VEGETATED FILTER STRIP STA. 496+00.00, 95.00′ RT
POT Sta. 420+00.00
POT Sta. 497+42.66 BK
POT Sta. 420+00.00 AH
POT Sta. 420+00.00
℄ EX IR-71
℄ EX IR-71 SB
EX CABLE BARRIER
PROP CABLE BARRIER
Sta. 100+60.13
TIE TO EX. CABLE
℄ CONST. RAMP J
℄ CONST. IR-71 NB +00
℄ CONST. RAMP D
CONST. LIMITS
MEET EX. DITCH
VEGETATED FILTER STRIP, SEE SHEET 104
VEGETATED FILTER STRIP, SEE SHEET 103
DITCH 3
I.A. TYPE 2 UNIDIRECTIONAL
CONC. BARRIER SS, TYPE B
BEGIN SHOULDER TAPER STA. 491+99.23
GR, TYPE MGS MEET EXISTING DITCH +14.85
END SHOULDER TAPER STA. 493+49.00
AA, TYPE E
GR, TYPE MGS
N 27° 21′ 09″ E
N 27° 22′ 29″ E
N 26° 31′ 50″ E
N 27° 20′ 57″ E
N 85° 51′ 41″ E
+10.31
+70.16
+39.22
+48.25
+10.00
I-1
B-1
B-2
CB-1
R-5
R-6
R-7
R-8
R-9
R-60
D1
D2
D16
D21
E3
E4
E5
E6
E7
E8A
E8B
G-6
GR-4
U11
U12
U13
U14
U15
U16
U17
U18
U19
U20
U21
U22
U23
U24

MILL AND FILL SURFACE COURSE
PARTIAL DEPTH PLANING AND OVERLAY

FILTER STRIP ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION PROTECTION

STA 494+72.83, 63.23′ RT
MH-3, RIM ELEV 766.50
15″ (NE) 760.85
36″ (NW) 756.57
36″ (SE) 756.57

STA 494+90.00, 64.75′ RT
I-3-B, GRATE ELEV 766.21
15″ (SW) 760.96
6″ (SW) 764.00
6″ (NE) 764.00

4′-36″ TYPE B, MEET EXISTING SLOPE
17′-15″ TYPE B @ 0.63%
EX. PROFILE
GRAPHIC GRADE
PROP. PROFILE

766.88 766.95 767.02 767.09 767.15 767.22 767.29 767.36 767.42 767.49 767.56 767.63 767.70 767.76 767.82 767.88 767.94 768.01 768.07 768.13 768.19 768.25 768.32 768.38 768.44

767.09 766.93 766.79 766.68 766.59 766.53 766.49 766.47 766.49 766.52 766.58 766.67 766.78 766.88 767.02 767.15 767.29 767.42 767.56 767.70 767.81 767.92 768.02 768.13 768.24 768.34

790 780 770 760 750 740 730

491+00 492+00 493+00 494+00 495+00 496+00 497+00 420+00 421+00 422+00 423+00 424+00 425+00 426+00

CALCULATED MSW
CHECKED WAA

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - EX IR-71
STA. 491+00.00 TO STA.426+00.00

FRA-71-9.07

94
264

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MILL AND FILL SURFACE COURSE

MATCH LINE STA.480+00.00 SEE SHEET 100

MATCH LINE STA.485+00.00 SEE SHEET 102

℄ EX IR-71

CONST. LIMITS

END SHOULDER TAPER STA. 481+31.00

12'

N 33° 46' 52" E

℄ CONST RAMP D

R-1

R-2

U1

U2

U3

U4

U5

R-60

GR-6

GR, TYPE MGS

CONST. LIMITS

EX. 84" CULVERTS

100 YR. FLOODPLAIN & SCPZ

DITCH 3

Ex LA

GRAPHIC GRADE

PROP. PROFILE

EX. PROFILE

480+00	481+00	482+00	483+00	484+00	485+00
777.71	777.36	776.99	776.60	776.18	775.75
777.70	776.96	776.11	775.20	774.29	773.41
775.32	774.89	774.46	774.05	773.66	773.31
772.65	772.13	771.67	771.27	770.88	
772.98	772.68	772.41	772.17	771.96	771.78
771.63	771.49	771.36			

785 780 775 770 765 760 755 750

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED MSW CHECKED WAA

PLAN AND PROFILE - IR-71 RAMP D
STA. 480+00.00 TO STA. 485+00.00

FRA-71-9.07

101
264

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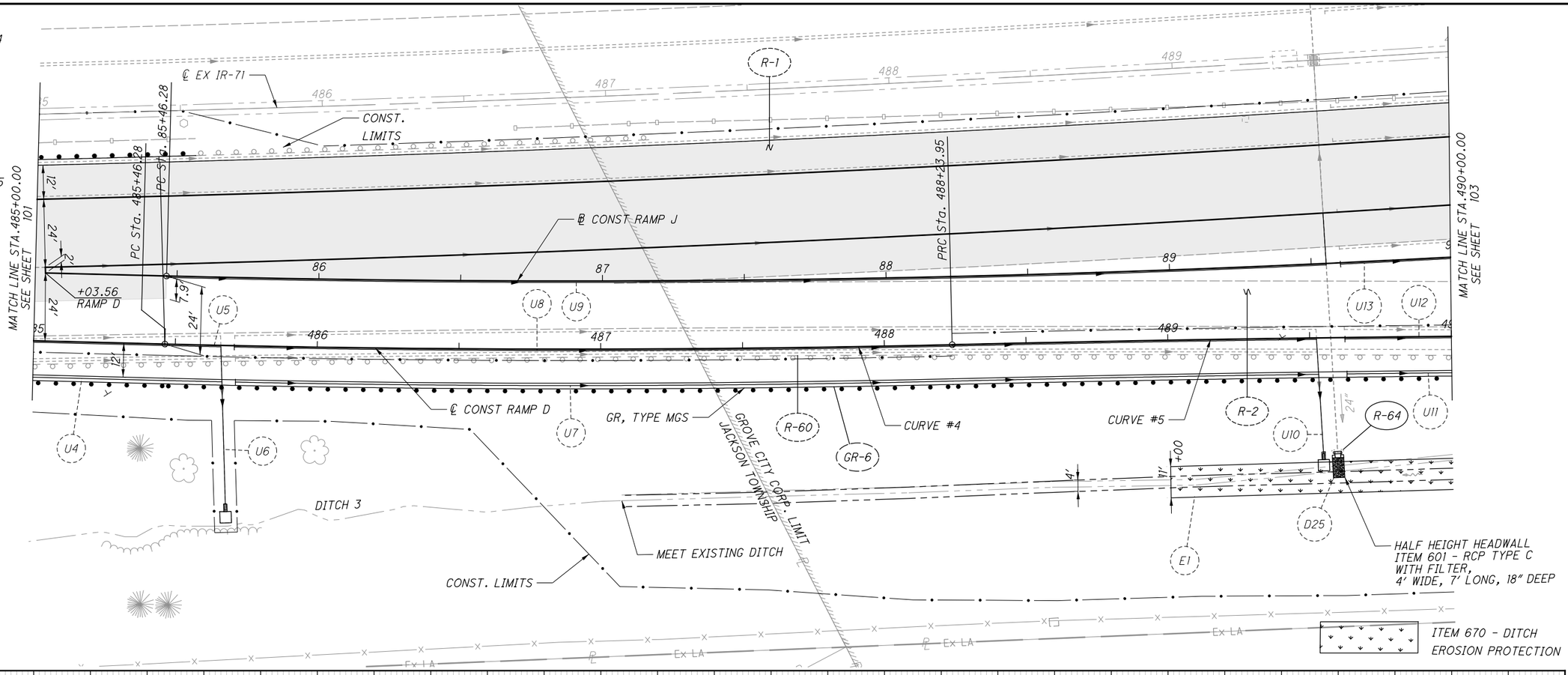
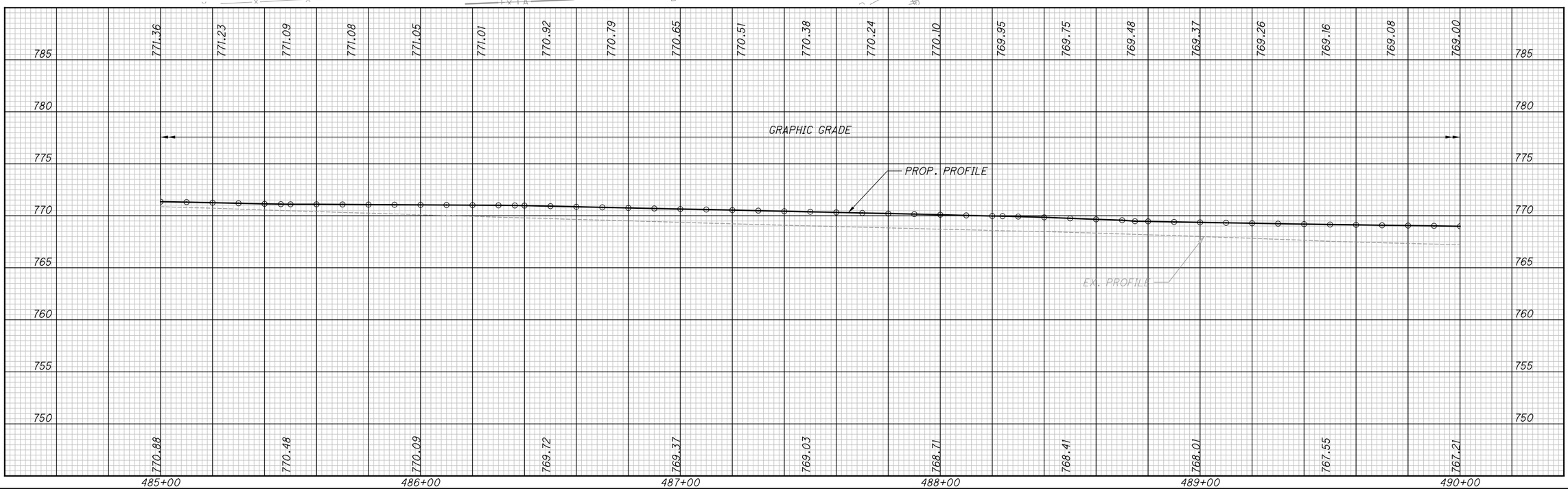
CURVE #4
P.I. Sta. 486+85.14
Δ = 2° 46′ 36″ (LT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 138.86′
L = 277.67′
E = 1.68′
e_{max} = 0.033
PC Sta. 485+46.28
PRC Sta. 488+23.95

MILL AND FILL SURFACE COURSE

CURVE #5
P.I. Sta. 490+86.62
Δ = 2° 16′ 34″ (RT)
Dc = 0° 26′ 00″
R = 13,222.11′
T = 262.68′
L = 525.29′
E = 2.61′
e_{max} = 0.016
PRC Sta. 488+23.95
PCC Sta. 493+49.23





HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MSW
CHECKED WAA

PLAN AND PROFILE - IR-71 RAMP D
STA. 485+00.00 TO STA. 490+00.00

FRA-71-9.07

102
264

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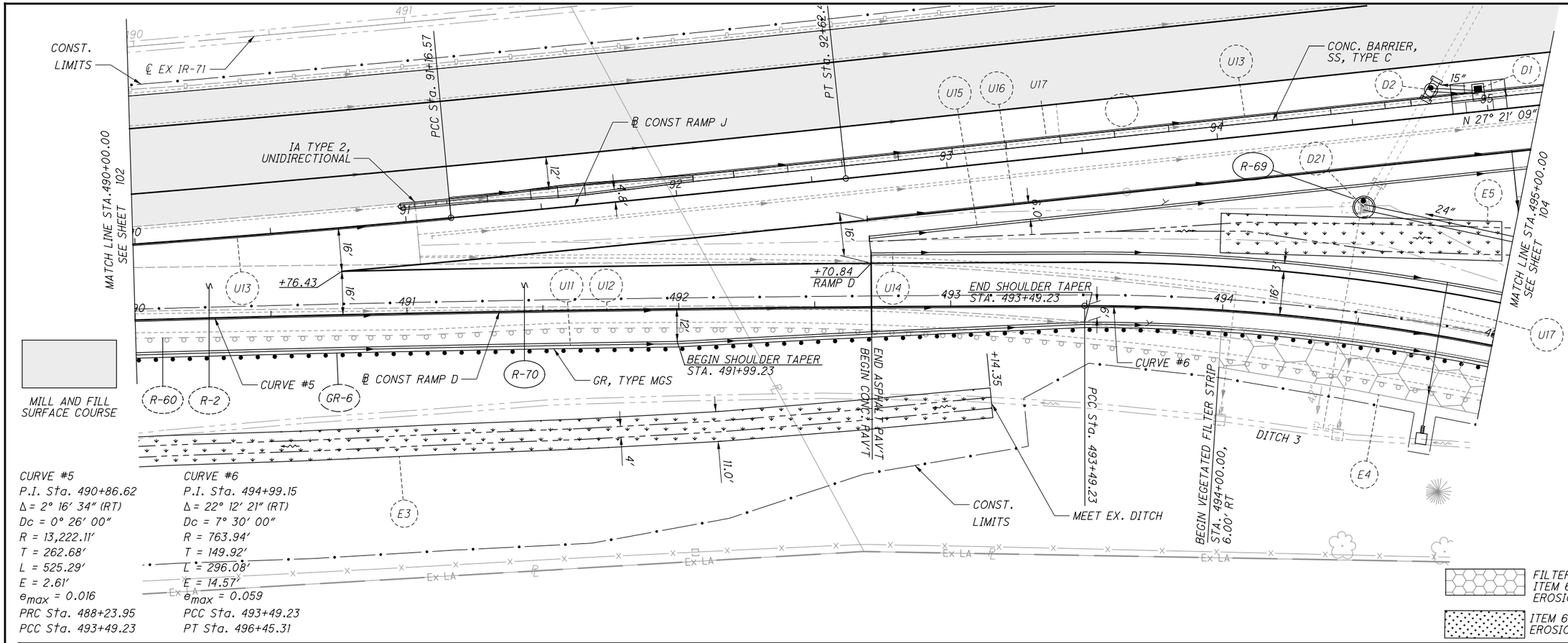
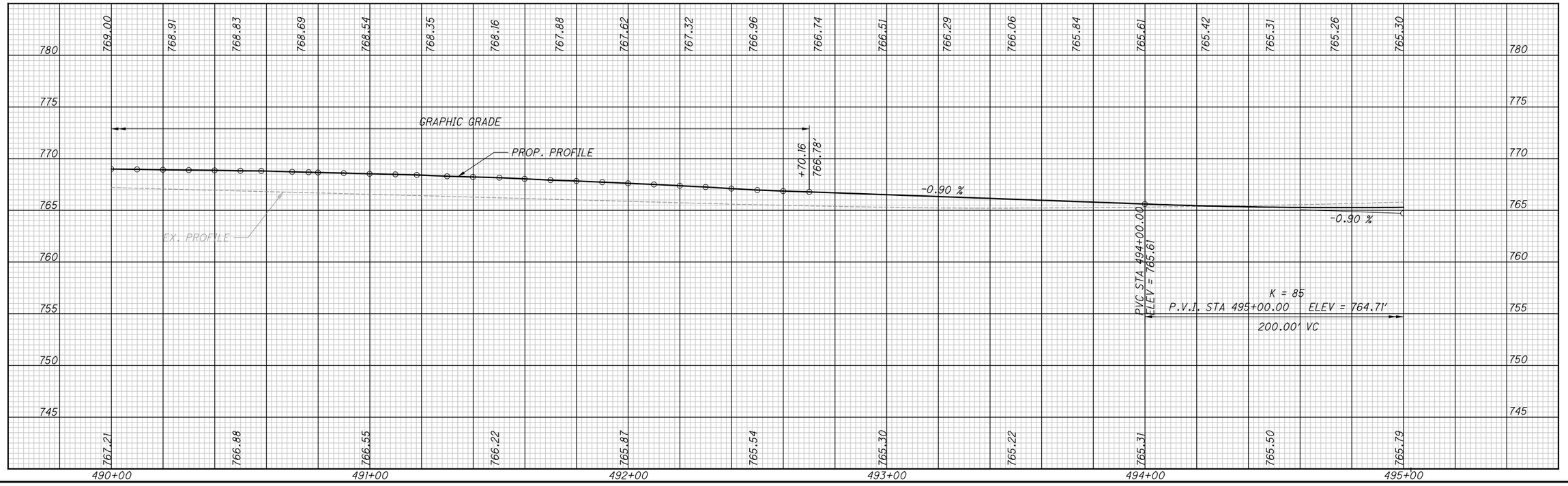


CURVE #5
P.I. Sta. 490+86.62
Δ = 2° 16' 34" (RT)
Dc = 0° 26' 00"
R = 13,222.11'
T = 262.68'
L = 525.29'
E = 2.61'
e_{max} = 0.016
PRC Sta. 488+23.95
PCC Sta. 493+49.23

CURVE #6
P.I. Sta. 494+99.15
Δ = 22° 12' 21" (RT)
Dc = 7° 30' 00"
R = 763.94'
T = 149.92'
L = 296.08'
E = 14.57'
e_{max} = 0.059
PCC Sta. 493+49.23
PT Sta. 496+45.31

FILTER STRIP ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION



PLAN AND PROFILE - IR-71 RAMP D
STA. 490+00.00 TO STA. 495+00.00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MSW
CHECKED WAA

FRA-71-9.07

103
264

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BEGIN VEGETATED FILTER STRIP
STA. 495+00.00, 19.00' LT

MATCH LINE STA. 495+00.00
SEE SHEET 103

℄ CONST. RAMP J

VEGETATED FILTER STRIP, SEE SHEET 94

CONST. LIMITS

END VEGETATED FILTER STRIP
STA. 497+80.00, 19.00' LT

MEET EX. DITCH

MATCH EX. STA. 497+80.00

℄ CONST. RAMP D

DITCH 3

N 55° 29' 12" E

CURVE #6

END VEGETATED FILTER STRIP
STA. 496+50.00, 6.00' RT

PT Sta. 496+45.31

GR, TYPE MGS

AA, TYPE T

D16 E4 E6 E7 E8A E8B U18 U19 U20 R-60 GR-6 R-76

+10.82 +64.67 +00

5' 8.4' 3' 19' 6'

495 496 497 498 499 500

CURVE #6
P.I. Sta. 494+99.15
Δ = 22° 12' 21" (RT)
Dc = 7° 30' 00"
R = 763.94'
T = 149.92'
L = 296.08'
E = 14.57'
e_{max} = 0.059
PCC Sta. 493+49.23
PT Sta. 496+45.31

FILTER STRIP
ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

765.30 765.40 765.58 765.83 766.15 766.51 766.87 767.23 767.59 767.95 768.31 768.67

765.79 766.18 766.66 767.17 767.70 768.32 769.03 769.75 770.47 771.19 771.91

785 780 775 770 765 760 755 750

EX. PROFILE

+1.44 %

+1.44 %

PROP. PROFILE

+80.00

768.75'

PVT STA 496+00.00
ELEV=766.15

K = 85

P.V.I. STA 495+00.00 ELEV = 764.71'

200.00' VC

495+00 496+00 497+00 498+00 499+00 500+00

CALCULATED MSW
CHECKED WAA

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE - IR-71 RAMP D
STA. 495+00.00 TO 500+00.00

FRA-71-9.07

104
264

...\Northbound\92615_GP554.dgn 2/26/2020 1:00:45 PM gathershey

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED SUPPORT, PIPE FT	630 SIGN POST REFLECTOR EACH	630 TRIANGULAR SLIP BASE CONNECTOR, AS PER PLAN EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 5 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 8 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 6 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8 EACH	630 SIGN ATTACHMENT ASSEMBLY EACH	630 SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN EACH	630 SIGN, FLAT SHEET SF	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF	630 CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN EACH	630 CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TC-21.50 EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	630 GROUND MOUNTED PIPE SUPPORT FOUNDATION EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED PIPE SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH
227	R-10	IR-71	445+45	RT																												
	S-7	IR-71	445+45	RT	I-H2C	36 X 24		26											6													
	OS-7	IR-71	448+00	RT	PULL THRU	144 X 84	2								1						84		1	1								
					ADV. OVHD.	156 X 108															117												
					R14-2	36 X 36													9														
					ADV. OVHD.	132 X 108															99												
	R-11	IR-71	448+00	RT																							1	2				
	R-12	IR-71	450+06	RT																							1	1				
	S-8	IR-71	450+06	RT	D10-3	12 X 48													4			1										
	R-13	IR-71	452+00	RT																							1	2				
	R-14	IR-71	456+29	RT	OVHD.																									3		1
228	OS-8	IR-71	460+00	RT	PULL THRU	144 X 84	2									1					84		1	1								
					ADV. OVHD.	144 X 108															108												
					EXIT GORE	192 X 108															144												
	S-9	RAMP H	461+15	RT	W4-2L	48 X 48		32											16													
	R-15	IR-71	462+00	RT																							1	1				
	S-10	IR-71	463+90	RT	W4-3R	48 X 48												1	16													
	S-11	IR-71	464+40	RT	M2-H3	48 X 60			1		1									20					1							
	R-16	IR-71	465+48	RT	OVHD.																									2		1
	R-17	IR-71	468+50	RT																							1		1			
229	OS-9	IR-71	470+00	RT	ADV. OVHD.	144 X 96	1					1									96			1								
	R-18	IR-71	470+25	RT	OVHD.																									1		1
	R-19	RAMP H	471+05	RT																							1	1				
	S-12	RAMP H	472+00	RT	D10-H5A	30 X 30		13											6.25													
	S-13	RAMP K	72+00	RT	D10-H5A	30 X 30		13											6.25													
	S-14	IR-71	474+85	RT	M2-H3	48 X 60												1		20												
	S-15	RAMP K	76+00	RT	W4-1R	48 X 48		32											16													
	R-20	RAMP K	75+96	RT																							1	2				
230	R-21	RAMP G	40+13	RT																							1	1				
231	NO ASSOCIATED SIGNING QUANTITIES																															
SUBTOTALS THIS SHEET							5	116	1	0	1	1	0	0	1	1	0	2	79.5	40	732	1	2	3	1	8	10	1	6	2	1
SUBTOTALS PREVIOUS SHEET							7	125.5	0	4	0	1	1	1	1	1	5	1	77.75	28	1174	1	1	6	0	7	8	0	13	2	1
TOTALS CARRIED TO GENERAL SUMMARY							12	241.5	1	4	1	2	1	1	2	2	5	3	157.25	68	1906	2	3	9	1	15	18	1	19	4	2

CALCULATED HJF
CHECKED DSS

SIGNING ESTIMATED QUANTITIES

FRA-71-9.07

ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
				TRAFFIC SURVEILLANCE	
625	25408	646	FT	CONDUIT, 2", 725.051	
625	25504	166	FT	CONDUIT, 3", 725.051	
625	25750	3,616	FT	CONDUIT, 4", MULTICELL, 725.20 , EPC-40, SCHEDULE 40	241
625	25900	63	FT	CONDUIT, JACKED OR DRILLED, 3", 725.04	
625	25900	373	FT	CONDUIT, JACKED OR DRILLED, 4" MULTICELL, 725.20, EPC-80	
625	25920	57	FT	CONDUIT, MISC.: CONDUIT DUCT BANK; (2) 4" MULTICELL, 725.20, EPC-40	241
625	25920	527	FT	CONDUIT, MISC.: CONDUIT DUCT BANK; (2) 4" MULTICELL, 725.20, EPC-40, (1) 1-1/2" 725.051	241
625	29010	4,427	FT	TRENCH, 30" DEEP	
625	29931	2	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	241
625	30700	1	EACH	PULL BOX, 725.08, 18"	
625	30711	8	EACH	PULL BOX, 725.08, 32", AS PER PLAN, ROUND W/PAD	241
625	31510	12	EACH	PULL BOX REMOVED	
625	32000	4	EACH	GROUND ROD	
625	34001	1	EACH	POWER SERVICE, AS PER PLAN	241
625	36000	4,427	FT	PLASTIC CAUTION TAPE	
632	26500	6	EACH	DETECTOR LOOP	
632	40500	549	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
632	65300	1,450	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	
632	68200	105	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER	
804	15010	2,150	FT	FIBER OPTIC CABLE, 24 FIBER	
804	15050	6,388	FT	FIBER OPTIC CABLE, 288 FIBER	
809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF ITS ATR LOCATION ID=39625	241
809	67000	1	EACH	RAMP METER SYSTEM	241
809	68900	1	EACH	SIDE-FIRED RADAR DETECTOR	241
809	70000	LS		MAINTAINING ITS DURING CONSTRUCTION	241
				TOTALS ON THIS SHEET ARE CARRIED TO GENERAL SUMMARY	

CALCULATED | CHECKED

ITS ESTIMATED QUANTITIES

FRA-71-9.07

UTILITY NOTIFICATION

THE OHIO DEPARTMENT OF TRANSPORTATION HAS UTILITY FACILITIES (HIGHWAY LIGHTING, TRAFFIC SIGNALS, ITS) WITHIN THE LIMITS OF THIS PROJECT.

IN ADDITION TO THE INFORMATION OUTLINED IN THE UTILITY NOTE OF THIS CONTRACT, AND EVEN THOUGH ODOT IS LISTED AS A MEMBER OF OHIO811, THE CONTRACTOR ON THIS PROJECT IS REQUIRED TO CONTACT ODOT, DISTRICT 6, TRAFFIC DEPARTMENT, AND ITS DIRECTLY SO THAT THE ODOT UTILITIES, LOCATED WITHIN THIS PROJECT, ARE MARKED.

THE CONTRACTOR SHALL NOTIFY DISTRICT 6, TRAFFIC AT 740-833-8198, ODOT ITS LAB AT 614-387-4113, AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO MARK ODOT OWNED UTILITIES.

THE ABOVE REQUIREMENTS ARE IN ADDITION TO SECTION 105.07 & 107.16 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE UTILITY NOTE.

THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OHIO811 OR DIRECTLY A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY WORK.

THE COST FOR THE ABOVE DESCRIBED WORK IS INCIDENTAL TO THE OVERALL BID PRICE OF THE PROJECT.

HIGH VOLTAGE TEST WAIVED

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON THE CIRCUITS CONSTRUCTED BY THIS PROJECT THAT TIE INTO AN EXISTING LIGHTING CIRCUIT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

LIGHT TOWER DECALS

NEW LIGHT TOWER DECALS SHALL BE PLACED ON ALL PROPOSED LIGHT TOWERS TO MATCH THE ALPHA NUMBERIC IDENTIFIER AS DETAILED WITHIN THE PLANS TO CONFORM WITH THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CONTRACTOR IS ALSO REQUIRED TO REMOVE AND DISPOSE OF EXISTING DECALS AND HAVE NEW ONES INSTALLED ON ALL EXISTING TOWERS TO REMAIN AND WHOSE IDENTIFICATION CALLOUTS ARE TO BE REASSIGNED PER THA PLANS. IDENTIFICATION OF THE LIGHT TOWERS AND THE REMOVAL OF ANY PREVIOUS IDENTIFIER SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

625, RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING AN EXISTING LIGHT TOWER REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT SITE. WHEN REQUIRED, ADDITIONAL LUMINAIRE BRACKET ARMS SHALL BE ADDED TO THE EXISTING LUMINAIRE BRACKETS RELOCATED ALONG WITH THE NECESSARY ADJUSTMENTS AND ADDITIONS TO THE LUMINAIRE WIRING TO ENABLE THE LUMINAIRES TO BE MOUNTED SYMMETRICALLY AROUND THE LUMINAIRE MOUNTING RING. WHERE THE TOWER WILL BE INSTALLED ON A NEW FOUNDATION, NEW ANCHOR BOLTS SHALL BE FURNISHED. THE TOWER AND LOWERING MECHANISM SHALL BE CLEANED AND LUBRICATED. ANY REPAIRS AND ADJUSTMENTS NECESSARY TO RETURN THE TOWER AND MECHANISM TO GOOD OPERATING CONDITION SHALL BE MADE. THE EXISTING LIGHT TOWER IDENTIFICATION DECAL SHALL BE REMOVED, AND A NEW DECAL FOR THE NEW IDENTIFICATION NUMBER FURNISHED AND INSTALLED. PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN FOR EACH TOWER RE-ERECTED WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625, POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:
AMERICAN ELECTRIC POWER (DISTRIBUTION)
850 TECH CENTER DRIVE
GAHANNA, OH 43230
CONTACT: PAUL PAXTON
PHONE: 614-883-6831
EMAIL: ptpaxton@aep.com

COORDINATION WITH ODOT DISTRICT 6:
HIGHWAY LIGHTING
400 E. WILLIAM ST.
DELWARE, OH 43015
PHONE: 740-833-8024

A UNIQUE POWER SERVICE ADDRESS IS ASSIGNED TO EACH LOCATION. THE CONTACT PERSON FOR THE OHIO DEPARTMENT OF TRANSPORTATION IS LISTED BELOW:

KEN GREEN
ODOT DISTRICT 6 TRAFFIC ENGINEER
614-833-8198

THE CONTRACTOR SHALL ENSURE THAT EACH POWER SERVICE ELECTRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE MAINTAINING AGENCY NOTED IN THE PLANS. THIS SHALL BE DONE NOT ONLY FOR EACH NEW POWER SERVICE ESTABLISHED BY THIS PROJECT BUT ALSO FOR EACH EXISTING POWER SERVICE, SINCE THERE MAY BE A REASSIGNMENT OF THE RESPONSIBILITY FOR AN EXISTING SERVICE AS A RESULT OF THE WORK PERFORMED BY THIS PROJECT.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM "625, POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, ASYMMETRIC, 480V, HIGH OUTPUT

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS, CONVENTIONAL LED LUMINAIRES SHALL BE AS FOLLOWS:

LUMINAIRES SHALL BE FROM ODOT'S QUALIFIED PRODUCT LIST OF MANUFACTURERS OR EQUAL AS APPROVED BY THE ENGINEER.

THE MANUFACTURER/MODEL PROPOSED SHALL BE INDICATED AT THE TIME OF BID.

IES DISTRIBUTION(S) OF THE LUMINAIRE SHALL BE AS SHOWN IN THE PLANS.

TYPICAL LUMEN OUTPUT SHALL BE 22,000 MINIMUM OR AS APPROVED BY THE ENGINEER.

LUMINAIRE LED DRIVER(S) SHALL BE COMPATIBLE WITH 480VAC INPUT AS SHOWN IN THE PLANS, MODULAR, HAVE THE MANUFACTURER NAME AND PART NUMBER CLEARLY MARKED ON THE DRIVER ENCLOSURE, AND SHALL CARRY A MINIMUM 5-YEAR REPLACEMENT WARRANTY.

THE LED EMITTER ASSEMBLY SHALL CARRY A MINIMUM 5-YEAR REPLACEMENT WARRANTY, 10-YEAR STANDARD MANUFACTURER LIMITED WARRANTY.

LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, ASYMMETRIC, 480V, HIGH OUTPUT (CONTINUED)

THE LUMINAIRE ENCLOSURE SHALL BE RATED IP65, MINIMUM, AS PER IEC 60529, AND SHALL CARRY THE MINIMUM 5-YEAR REPLACEMENT WARRANTY WITH 10-YEAR STANDARD MANUFACTURER LIMITED WARRANTY.

A WRITTEN WARRANTY STATEMENT, SPARE PARTS LIST, AND MANUAL FROM THE LED SUPPLIER SHALL BE SUPPLIED TO THE ENGINEER BEFORE LUMINAIRES SHALL BE ACCEPTED BY ODOT.

SURGE PROTECTION SHALL BE 10KV/4KA MINIMUM, PER ANSI C62.41.2, AND THE MODULAR PACKAGE SHALL BE CLEARLY MARKED WITH THE MANUFACTURER AND PART NUMBER.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE, UNDER CMS ITEM "625, LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, ASYMMETRIC, 480V, HIGH OUTPUT", FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIAL AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

SPECIAL, MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

SPECIAL, MAINTAIN EXISTING LIGHTING (CONTINUED)

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

WHEN THE PROJECT BEGINS AND THE CONTRACTOR HAS TAKEN OVER THE MAINTENANCE OF THE EXISTING SYSTEM, THE CONTRACTOR SHALL PROVIDE ALL REQUIRED LAYOUTS AND LOCATIONS OF THE EXISTING AND PROPOSED LIGHTING CIRCUITS WITHIN THE PROJECT LIMTS.

THE LUMP SUM PRICE BID FOR ITEM "SPECIAL, MAINTAIN EXISTING LIGHTING" HAS BEEN CARRIED TO THE LIGHTING SUMMARY AND SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM "SPECIAL, REPLACEMENT OF EXISTING LIGHTING UNIT" PER EACH HAS BEEN CARRIED TO THE LIGHTING SUMMARY AND SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

625, CONDUIT, 4", 725.05, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONDUIT, 4", 725.05, AS PER PLAN SHALL INCLUDE ALL EXPANSION FITTINGS AS INCIDENTAL TO THIS ITEM OF WORK.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR FEET FOR CMS ITEM "625, CONDUIT, 4", 725.05, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CALCULATED | CHECKED

LIGHTING GENERAL NOTES

FRA-71-9.07

REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION		625 CONNECTION, FUSED PULL APART EACH	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT POLE, CONVENTIONAL, TRUSS ARM HIGH RISE, AT20B40 EACH	625 LIGHT POLE FOUNDATION, 24" X 8' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 10 AWG POLE AND BRACKET CABLE FT	625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, ASYMMETRIC, 480V, HIGH OUTPUT EACH	625 TRENCH FT	625 PULL BOX, 725.08, 24" EACH	625 GROUND ROD EACH	625 POWER SERVICE, AS PER PLAN EACH	625 PLASTIC CAUTION TAPE FT		625 PULL BOX REMOVED EACH	625 RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN EACH	625 POWER SERVICE REMOVED EACH	625 LIGHT TOWER FOUNDATION REMOVED EACH	
1	251	LT	IR-71	493+12		2		1	1			180				1			1								
2		LT	IR-71	491+11	493+12								200				200				200						
3		LT	IR-71	491+11		2		1	1			180				1			1								
4		LT	IR-71	489+09	491+11								200				200				200						
5		LT	IR-71	489+09		2		1	1			180				1			1								
6		LT	IR-71	487+08	489+09								200				200				200						
7		LT	IR-71	487+08		2		1	1			180				1			1								
8		LT/RT	IR-71	487+07	487+08								204		204		204										
9		RT	IR-71	487+07			3											1									
10		RT	IR-71	484+31	487+07								279				279				279						
11		RT	IR-71	484+31		2		1	1			180				1			1								
12		RT	IR-71	487+07	492+23								521				521				521						
13		RT	IR-71	492+23		2		1	1			180				1			1								
14		RT	IR-71	492+23	493+64								143				143				143						
15		RT	IR-71	493+64			3											1									
16		RT	IR-71	493+64	494+13								48				48				48						
17		RT	IR-71	494+13		2		1	1			180				1			1								
18		RT	IR-71	493+64	493+67								47		47		47										
19		RT	IR-71	493+67		2		1	1			180				1			1								
20		RT	IR-71	493+67	497+00								333				333				333						
20	252		IR-71	497+00	429+24								967				967				967						
21			IR-71	429+24			3											1									
22			IR-71	429+23	429+24								23				23				23						
23			IR-71	428+80	429+23						44			44			44			1	44						
24			IR-71	429+62																				1			
25			IR-71	429+24	433+00								376				376				376						
25	253		IR-71	433+00	437+21								462		55		462				462						
26			IR-71	437+21		2		1	1			180				1			1								
27			IR-71	437+21	439+20								200				200				200						
28			IR-71	439+20		2		1	1			180				1			1								
29			IR-71	439+20	441+20								200				200				200						
30			IR-71	441+20		2		1	1			180				1			1								
31	254		IR-71	470+30			3											1									
32			IR-71	470+25																				1			
33			IR71/RMP H	470+30	16+29								118		118		118										
34			RAMP H	16+27																				1			
35			RAMP H	16+29			3											1									
36			RAMP H	16+29	18+76								247		247		247										
37			RAMP H	18+76						1									2					1		1	
38			RAMP H	18+76	23+80								504		504		504										
TOTALS TO GENERAL SUMMARY						22	15	11	11	1	44	1,980	5,272	44	1,175	11	5,316	5	13	1	4,196		2	1	1	1	

CALCULATED

CHECKED

LIGHTING ESTIMATED QUANTITIES

FRA-71-9.07