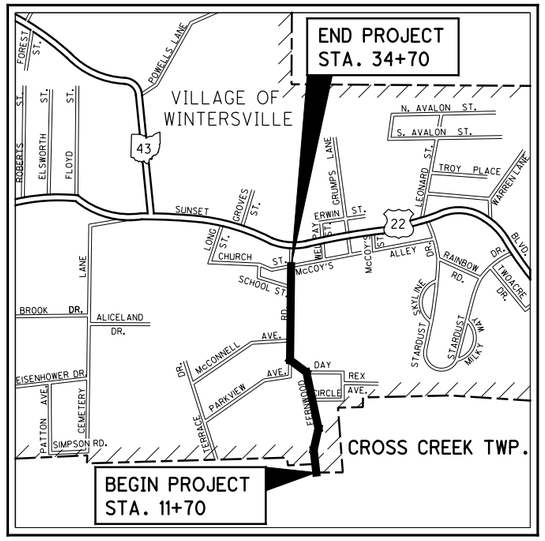
SAMPLE PLAN SHEETS

PURPOSE AND APPLICATION

THE SAMPLE PLAN SHEETS ARE CONSIDERED TO BE AN INTEGRAL PART OF THE LOCATION AND DESIGN MANUAL'S VOLUME 3. IT IS FOR INFORMATIONAL PURPOSES ONLY AND IS INTENDED TO BE USED AS A STANDARDIZED GUIDELINE FOR THE PREPARATION OF HIGHWAY CONSTRUCTION PLANS IN THE STATE OF OHIO. EXAMPLES CONTAINED HEREIN ILLUSTRATE PREFERRED TECHNIQUES TO ENSURE THE UNIFORMITY, QUALITY, AND CONTINUITY OF THE PLANS, BUT DO NOT NECESSARILY REPRESENT A PREFERRED DESIGN. EXAMPLES HAVE BEEN PROVIDED BASED UPON THE MOST COMMONLY OCCURRING SITUATIONS. HOWEVER, IT IS RECOGNIZED THAT SOME PROJECTS MAY HAVE UNUSUAL CIRCUMSTANCES THAT MAY REQUIRE VARIATIONS FROM THE STANDARDS CONTAINED HEREIN. PLEASE CONTACT THE APPROPRIATE ODOT TECHNICAL OFFICE WITH QUESTIONS.

THIS SET OF SAMPLE PLAN SHEETS IS A COLLECTION OF INDIVIDUAL SHEET TYPES. IT SHOULD NOT BE CONSIDERED, OR USED, AS A SINGLE, COORDINATED PLAN. ACTUAL PLAN SHEETS HAVE BEEN USED TO DEVELOP THE SHEETS CONTAINED HEREIN. IT IS IMPORTANT TO NOTE THAT MODIFICATIONS HAVE BEEN MADE TO THESE SHEETS IN ORDER TO DEVELOP AN APPROPRIATE SAMPLE SHEET, THEREFORE, THEY ARE NO LONGER TO BE CONSIDERED AN OFFICIAL RECORD OF THE PLANS FROM WHICH THEY WERE TAKEN.

IN CASES WHERE THE INFORMATION SHOWN ON A SAMPLE PLAN SHEET IS IN CONFLICT WITH, OR CONTRADICTORY TO, THE DESIGN POLICIES OR PRACTICES CONTAINED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, DESIGN MANUALS, OR STANDARD CONSTRUCTION DRAWINGS, THE POLICIES OR PRACTICES WILL SUPERSEDE THE CONFLICTING SAMPLE PLAN SHEET INFORMATION.



LOCATION MAP

LATITUDE: 40°22'20" LONGITUDE: 80°42'05"

SCALE IN FEET

0 800 1600 2400 3200

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2013)	*2940*
DESIGN YEAR ADT (2025)	*4494*
DESIGN HOURLY VOLUME (2025)	*449*
DIRECTIONAL DISTRIBUTION	*50%*
TRUCKS (24 HOUR B&C)	*3%*
DESIGN SPEED	*3R PROJECT*
LEGAL SPEED	*35 MPH*
DESIGN FUNCTIONAL CLASSIFICATION:	
06 MINOR COLLECTOR (URBAN)	
NHS PROJECT	*NO*

DESIGN EXCEPTIONS

DESIGN FEATURE	*APPROVAL DATES*	*SHEET NUMBER*
HORIZONTAL ALIGNMENT:		
SUPERELEVATION	*6-27-14*	*2*
VERTICAL ALIGNMENT:		
STOPPING SIGHT DISTANCE	*6-27-14*	*10, 12*

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES **TWO WORKING DAYS** BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

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

PLAN PREPARED BY:
JOHN J. DOE & ASSOC., INC.
CONSULTING ENGINEERS
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

ENGINEERS SEAL:

STATE OF OHIO · JOHN J. DOE · X-000000 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: John J. Doe
DATE: 11/11/14

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
JEF-FERNWOOD RD.
VILLAGE OF WINTERSVILLE
CROSS CREEK TOWNSHIP
JEFFERSON COUNTY

SP 1302-1
DATE: JUL. 2016

PROJECT DESCRIPTION

UPGRADING 0.44 MILE OF FERNWOOD ROAD BY WIDENING AND RESURFACING, INCLUDING NEW STORM SEWER SYSTEM, CURB AND GUTTER, SIDEWALK. TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	*3.1 ACRES*
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	*0.5 ACRES*
NOTICE OF INTENT EARTH DISTURBED AREA:	*4.9 ACRES*

2013 SPECIFICATIONS

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

INDEX OF SHEETS:

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	*7/28/00*	*MGS-1.1*	*7/19/13*	*MT-105.10*	*7/19/13*				
BP-2.1	*7/19/13*	*MGS-2.1*	*7/19/13*						
BP-2.2	*7/18/08*	*MGS-4.2*	*7/19/13*	*TC-41.20*	*10/18/13*				
BP-3.1	*7/18/14*	*MGS-5.3*	*7/19/13*	*TC-41.40*	*10/18/13*				
BP-4.1	*7/19/13*			*TC-42.20*	*10/18/13*				
BP-5.1	*7/19/13*	*HW-2.1*	*1/18/13*	*TC-52.10*	*10/18/13*				
BP-7.1	*7/18/14*	*HW-2.2*	*1/18/13*	*TC-52.20*	*7/18/14*				
				TC-71.10	*1/17/14*				
CB-2.1	*1/18/13*	*LA-1.1*	*10/15/10*						
CB-2.2	*1/17/14*	*LA-1.2*	*10/15/10*						
CB-2.3	*1/18/13*								
		MH-1.1	*1/18/13*						
DM-1.1	*1/18/13*	*MH-1.2*	*1/18/13*						
DM-4.4	*7/20/12*	*MH-1.3*	*1/18/13*						

SUPPLEMENTAL SPECIFICATIONS

800-2013	*1/21/15*
832	*1/17/14*

SPECIAL PROVISIONS

REINFORCED EARTH 5/27/14
WATERWAY PERMIT 1/23/15

I HEREBY APPROVE 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 _____ *MAYOR, VILLAGE OF WINTERSVILLE*

APPROVED _____
DATE _____ *DISTRICT DEPUTY DIRECTOR*

APPROVED _____
DATE _____ *DIRECTOR, DEPARTMENT OF TRANSPORTATION*

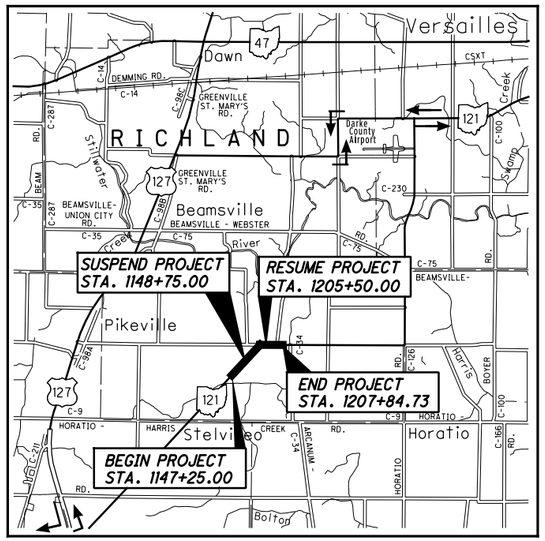
FEDERAL PROJECT NO. **E025 (762)**
PID NO. **15549**
CONSTRUCTION PROJECT NO
RAILROAD INVOLVEMENT **NONE**
JEF-FERNWOOD RD.
1 / 50

SP 1302-2
DATE: JUL. 2016

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

DAR-121-(21.73)(22.83)

RICHLAND TOWNSHIP
DARKE COUNTY



LOCATION MAP

LATITUDE: 40°09'30" LONGITUDE: 84°34'05"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS
DETOUR ROUTE

DESIGN DESIGNATION

CURRENT ADT (2013)	1460
DESIGN YEAR ADT (2033)	2040
DESIGN HOURLY VOLUME (2033)	204
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	2%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	05 MAJOR COLLECTOR (RURAL)
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES **TWO WORKING DAYS** BEFORE YOU DIG.

OHIO Utilities Protection SERVICE — *Call Before You Dig* **1-800-362-2764**

(Non-members must be called directly)

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

PLAN PREPARED BY:

JOHN J. DOE & ASSOC., INC.
CONSULTING ENGINEERS
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

INDEX OF SHEETS:

ENGINEERS SEAL

FOR STRUCTURES OVER 20' SPAN

STATE OF OHIO · JOHN J. DOE · X-000000 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: John J. Doe
DATE: 11-11-14

ENGINEERS SEAL

FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20' SPAN

STATE OF OHIO · JANE C. SMITH · X-000000 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: Jane C. Smith
DATE: 11-11-14

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	WQ-1.1	1/18/13				
BP-4.1	7/19/13	WQ-1.2	1/18/13				
DM-1.1	1/18/13	AS-1-81	1/18/13				
DM-4.1	7/19/13	EXJ-4-87	7/19/02				
		PSBD-2-07	1/21/11				
MGS-1.1	1/20/12	TST-1-99	1/17/14				
MGS-2.1	7/19/13						
MGS-4.2	7/19/13						
MGS-5.3	7/19/13						
LA-1.1	10/15/10						
LA-1.2	10/15/10						

SUPPLEMENTAL SPECIFICATIONS

800-2013	1/21/15
832	1/17/14

SPECIAL PROVISIONS

WATERWAY PERMIT 1/23/15

PROJECT DESCRIPTION

IMPROVEMENT OF 0.07 MILE OF STATE ROUTE 121 BY REPLACEMENT OF TWO STRUCTURES OVER A BRANCH OF THE STILLWATER RIVER, INCLUDING APPROACH RECONSTRUCTION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	5.4 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	2.1 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	7.5 ACRES

2013 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 1.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

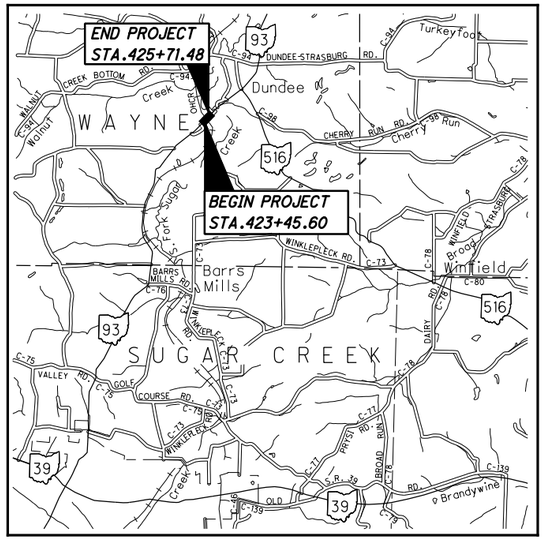
APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. NON-FEDERAL

PID NO. 14653

CONSTRUCTION PROJECT NO DAR-121-(21.73)(22.83)

RAILROAD INVOLVEMENT NONE



LOCATION MAP

LATITUDE: 40°34'20" LONGITUDE: 81°37'00"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2013)	1270
DESIGN YEAR ADT (2033)	2240
DESIGN HOURLY VOLUME (2033)	224
DIRECTIONAL DISTRIBUTION	60%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	06 MINOR COLLECTOR (RURAL)
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS
BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

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

PLAN PREPARED BY:

JOHN J. DOE & ASSOC., INC.
CONSULTING ENGINEERS
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

ENGINEERS SEAL

FOR STRUCTURES OVER 20 FOOT SPAN

STATE OF OHIO · JOHN J. DOE · X-000000 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: John J. Doe
DATE: 11/11/14

ENGINEERS SEAL

FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20 FOOT SPAN

STATE OF OHIO · JANE C. SMITH · X-000000 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: Jane C. Smith
DATE: 11/11/14

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

TUS-93-8.02

RECONSTRUCTION OF EXISTING SEPARATED CROSSING WITH THE OHIO CENTRAL RAILROAD

WAYNE TOWNSHIP
TUSCARAWAS COUNTY

INDEX OF SHEETS:

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	AS-1-81	1/18/13				
BP-4.1	7/19/13	CPA-1-08	7/18/08				
BP-5.1	7/19/13	CS-1-08	7/18/08				
		SBR-1-99	7/19/02				
DM-1.1	1/18/13						
DM-1.4	1/18/13	MT-96.11	7/18/14				
DM-4.4	7/20/12	MT-96.20	7/19/13				
		MT-96.26	7/19/13				
MGS-1.1	1/20/12						
MGS-2.1	7/19/13						
MGS-3.1	7/18/14						
MGS-4.2	7/19/13						
MGS-5.3	7/19/13						
RM-4.2	7/19/13						

SUPPLEMENTAL SPECIFICATIONS

800-2013	1/21/15
832	1/17/14

SPECIAL PROVISIONS

WATERWAY PERMIT 1/23/15

SP 1302-3
DATE: JUL. 2016

PROJECT DESCRIPTION

REHABILITATION OF THE EXISTING STRUCTURE OVER THE OHIO CENTRAL RAILROAD BY REPLACEMENT OF THE BRIDGE DECK AND APPROACH SLABS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	1.5 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	0.7 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.9 ACRES

2013 SPECIFICATIONS

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

I HEREBY APPROVE 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

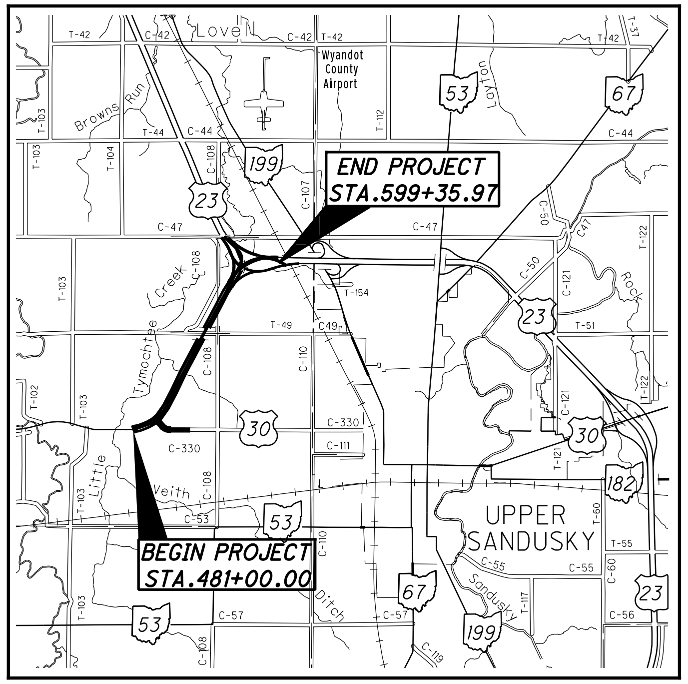
APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E073 (345)

PID NO. 22512

CONSTRUCTION PROJECT NO TUS-93-8.02

RAILROAD INVOLVEMENT OHIO CENTRAL R.R.



LOCATION MAP

LATITUDE: 40°50'50" LONGITUDE: 83°19'35"

SCALE IN MILES

0 1 2 3 4

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

WYA-30-9.11

SALEM TOWNSHIP
WYANDOT COUNTY

PROJECT DESCRIPTION

CONSTRUCTION OF A 2.24 MILE CONNECTION FROM U.S. 30 TO U.S. 23, WITH A CONNECTING ROAD AT U.S. 30 AND A LIGHTED INTERCHANGE AT U.S. 23. INCLUDING CONSTRUCTION OF STRUCTURES U.S. 30 UNDER T.R. 49, U.S. 30 WB OVER U.S.23 SB, RAMP B, AND U.S. 23 UNDER C.R. 47: REPLACEMENT OF STRUCTURES U.S. 23 NB AND SB OVER LITTLE TYMOCHTEE CREEK; RECONSTRUCTION OF VARIOUS LOCAL ROADS; AND INSTALLATION OF NECESSARY TRAFFIC CONTROL DEVICES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 20.6 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA: 5.4 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 26.0 ACRES

DESIGN DESIGNATION

CURRENT ADT (2013) — 3510
DESIGN YEAR ADT (2033) — 4880
DESIGN HOURLY VOLUME (2033) — 488
DIRECTIONAL DISTRIBUTION — 55%
TRUCKS (24 HOUR B&C) — 20%
DESIGN SPEED — 70 MPH
T_d — 20%
LEGAL SPEED — 55 MPH
DESIGN FUNCTIONAL CLASSIFICATION: — 06 FREEWAY (RURAL)
NHS PROJECT — NO

DESIGN EXCEPTIONS

NONE REQUIRED

INDEX OF SHEETS:

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.

2013 SPECIFICATIONS

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

FEDERAL PROJECT NO. **E043 (184)**
PID NO. **23436**
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT **NONE**

UNDERGROUND UTILITIES

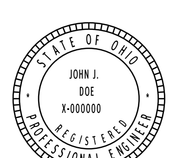
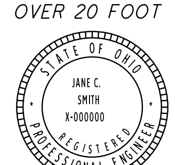
CONTACT BOTH SERVICES TWO WORKING DAYS **BEFORE YOU DIG.**

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

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

PLAN PREPARED BY:

JOHN J. DOE & ASSOC., INC.
CONSULTING ENGINEERS
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

ENGINEERS SEAL	ENGINEERS SEAL
FOR STRUCTURES OVER 20 FOOT	FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20 FOOT
	
SIGNED: John J. Doe	SIGNED: Jane C. Smith
DATE: 11/11/14	DATE: 11/11/14

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7/28/00	MGS-1.1	7/19/13	MH-1.1	1/18/13	HL-10.31	1/16/15	TC-07.65	10/18/13
		MGS-2.1	7/19/13	MH-1.2	1/18/13	HL-20.11	1/16/15	TC-12.30	10/18/13
CB-2.2	1/17/14	MGS-3.1	7/18/14	MH-3.1	1/18/13	HL-20.14	1/16/15	TC-21.10	10/18/13
CB-3.1	1/18/13	MGS-4.2	7/19/13			HL-20.21	1/17/14	TC-21.20	1/16/15
CB-3.2	1/18/13	MGS-5.3	7/19/13	RM-1.1	7/18/14	HL-30.11	1/16/15	TC-22.20	1/17/14
CB-3.4	1/18/13	MGS-6.1	7/19/13	RM-4.2	6/4/14	HL-30.21	1/17/14	TC-41.10	7/19/13
				RM-4.3	7/18/14	HL-30.22	1/17/14	TC-41.20	10/18/13
DM-1.1	1/18/13	HW-1.1	1/18/13			HL-30.31	1/17/14	TC-41.40	10/18/13
DM-4.4	7/20/12	HW-2.1	1/18/13	MT-95.30	7/18/14	HL-40.10	1/17/14	TC-41.50	10/18/13
		HW-2.2	1/18/13	MT-102.10	7/18/14	HL-50.11	1/16/15	TC-42.10	10/18/13
F-2.1	7/19/13					HL-60.21	1/16/15	TC-42.20	10/18/13
F-3.1	7/19/13	LA-1.1	10/15/10	AS-1-81	1/18/13	HL-60.31	1/16/15	TC-51.11	1/17/14
F-3.3	7/19/13	LA-1.2	10/15/10	ICD-1-82	7/19/02			TC-52.10	10/18/13
F-3.4	7/19/13							TC-52.20	7/18/14
		WQ-1.1	1/18/13						
		WQ-1.2	1/18/13						

SUPPLEMENTAL SPECIFICATIONS

800-2013	1/21/15
832	1/17/14

SPECIAL PROVISIONS

WATERWAY PERMIT 1/23/15
GEOTECHNICAL REPORT 6/02/14

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 25, 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

WYA-30-9.11

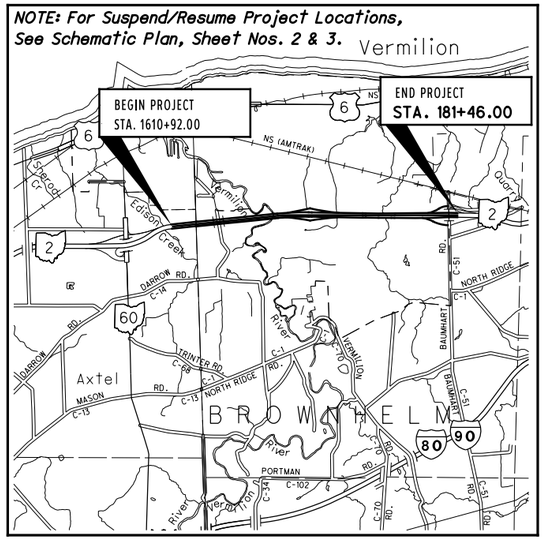
SP 1302-5
DATE: JUL. 2016

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

ERI-2-30.51 AND VARIOUS
LOR-2-0.00 AND VARIOUS

CITY OF VERMILION
BROWNHELM TOWNSHIP
VERMILION TOWNSHIP
ERIE AND LORAIN COUNTIES



LOCATION MAP

LATITUDE: 41°24'10" LONGITUDE: 82°18'40"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

FOR DESIGN DESIGNATION AND DESIGN EXCEPTIONS SEE SHEETS 2 AND 3

INDEX OF SHEETS:

PROJECT DESCRIPTION

REHABILITATION OF 1.72 MILES OF EXISTING PAVEMENT AND SHOULDERS FOR ONGOING RESEARCH PROJECTS INCLUDING THE INSTALLATION OF WEIGH-IN-MOTION INSTRUMENTATION AND THE REHABILITATION OF BRIDGES UNDER WEST REIVER ROAD, VERMILION ROAD, VERMILION INTERCHANGE ROAD, SUNNYSIDE ROAD AND CLAUS ROAD AND OVER THE VERMILION RIVER AND BAUMHART ROAD.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	*9.5 ACRES*
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	*2.6 ACRES*
NOTICE OF INTENT EARTH DISTURBED AREA:	*12.1 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.

2013 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE RAMPS AND SIDE ROADS AS DESCRIBED ON SHEETS 16 & 17 AND AS SHOWN ON SHEETS 19-22, 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*

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS **BEFORE YOU DIG.**

OHIO Utilities Protection SERVICE — *Call Before You Dig* **1-800-362-2764**

(Non-members must be called directly)

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

PLAN PREPARED BY:

JOHN J. DOE & ASSOC., INC.
CONSULTING ENGINEERS
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

ENGINEERS SEAL

FOR STRUCTURES 20' & UNDER

STATE OF OHIO · JOHN J. DOE · X-000000 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: John J. Doe
DATE: 11-11-14

ENGINEERS SEAL

FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20'

STATE OF OHIO · JANE C. SMITH · X-000000 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: Jane C. Smith
DATE: 11-11-14

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7/28/00	MGS-1.1	7/19/13	HL-10.13	1/16/15	TC-18.24	1/17/14				
BP-2.1	7/19/13	MGS-2.1	7/19/13	HL-20.14	1/16/15	TC-22.20	1/17/14				
BP-2.2	7/18/08	MGS-3.1	7/18/14	HL-30.11	1/16/15	TC-41.10	7/19/13				
BP-2.3	7/18/14	MGS-3.2	1/18/13	HL-30.21	1/17/14	TC-41.20	10/18/13				
BP-2.5	7/19/13	MGS-4.2	7/19/13	HL-30.31	1/17/14	TC-41.40	10/18/13				
BP-3.1	7/18/14	MGS-5.3	7/19/13	HL-30.32	1/17/14	TC-41.50	10/18/13				
BP-6.1	7/19/13	MGS-6.1	7/19/13	HL-40.10	1/17/14	TC-42.10	10/18/13				
						TC-42.20	10/18/13				
CB-1.1	1/18/13	RM-4.2	6/4/14	MT-95.30	7/18/14	TC-51.11	1/17/14				
CB-2.2	1/17/14	RM-4.3	7/18/14	MT-95.31	7/18/14	TC-52.10	10/18/13				
CB-3.1	1/18/13	RM-4.4	7/18/14	MT-96.11	7/18/14	TC-52.20	7/18/14				
CB-3.2	1/18/13			MT-96.20	7/19/13	TC-65.10	1/17/14				
		AS-1-81	1/18/13	MT-96.26	7/19/13	TC-65.11	7/18/14				
DM-1.1	1/18/13	EXJ-4-87	7/19/02	MT-99.20	7/19/13	TC-72.20	7/18/14				
DM-4.4	7/20/12	RB-1-55	7/19/13			TC-82.10	10/18/13				

SUPPLEMENTAL SPECIFICATIONS

800-2013	1/21/15
832	1/17/14

SPECIAL PROVISIONS

WATERWAY PERMIT 1/23/14

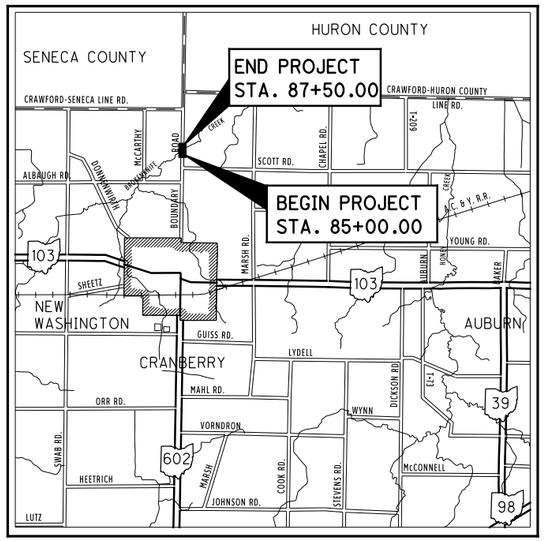
FEDERAL PROJECT NO. **E115 (218)**

PID NO. **20283**

CONSTRUCTION PROJECT NO

RAILROAD INVOLVEMENT **NONE**

ERI-2-30.51 AND VARIOUS
LOR-2-0.00 AND VARIOUS



LOCATION MAP

LATITUDE: 40°59'10" LONGITUDE: 82°51'10"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED _ _ _ _ _ _ _ _ _ _ _ _ _

INTERSTATE & DIVIDED HIGHWAY _ _ _ _ _ _ _ _ _ _

UNDIVIDED STATE & FEDERAL ROUTES _ _ _ _ _ _ _

OTHER ROADS _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

DESIGN DESIGNATION

CURRENT ADT (2013)	*1500*
DESIGN YEAR ADT (2033)	*2020*
DESIGN HOURLY VOLUME (2033)	*166*
DIRECTIONAL DISTRIBUTION	*50%*
TRUCKS (24 HOUR B&C)	*5%*
DESIGN SPEED	*55 MPH*
LEGAL SPEED	*55 MPH*

DESIGN FUNCTIONAL CLASSIFICATION: 05 MAJOR COLLECTOR (RURAL)

NHS PROJECT _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ *NO*

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS
BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

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

PLAN PREPARED BY:

JOHN J. DOE & ASSOC., INC.
CONSULTING ENGINEERS
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

CRA-C.R. 6-1.61

(BOUNDARY RD.) PART 1

CRANBERRY TOWNSHIP

CRAWFORD COUNTY

FOR PART 2, SEE CAR-C.R. 31 (SCOTT RD.)

SP 1302-6(a)
DATE: JUL. 2016

PROJECT DESCRIPTION

IMPROVEMENT OF 0.04 MILE OF C.R. 6 (BOUNDARY ROAD) BY REPLACEMENT OF AN EXISTING STEEL TRUSS STRUCTURE OVER BROKEN KNIFE CREEK WITH A PRECAST PRESTRESSED BOX BEAM TYPE STRUCTURE INCLUDING APPROACH RECONSTRUCTION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	*1.7 ACRES*
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	*0.6 ACRES*
NOTICE OF INTENT EARTH DISTURBED AREA:	*4.9 ACRES*

2013 SPECIFICATIONS

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

INDEX OF SHEETS:

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 7.

APPROVED _____
DATE _____ *CRAWFORD COUNTY COMMISSIONER*

APPROVED _____
DATE _____ *CRAWFORD COUNTY COMMISSIONER*

APPROVED _____
DATE _____ *CRAWFORD COUNTY COMMISSIONER*

APPROVED _____
DATE _____ *ENGINEER, CRAWFORD COUNTY*

APPROVED _____
DATE _____ *DISTRICT DEPUTY DIRECTOR*

APPROVED _____
DATE _____ *DIRECTOR, DEPARTMENT OF TRANSPORTATION*

ENGINEERS SEAL:

FOR DESIGN CHANGES NOTED ON SHEET 4

STATE OF OHIO · JOHN J. DOE · X-000000 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: John J. Doe
DATE: 11/11/14

ENGINEERS SEAL:

FOR ENTIRE PLAN EXCEPT STRUCTURES 20' & OVER

STATE OF OHIO · JANE C. SMITH · X-000000 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: Jane C. Smith
DATE: 11/11/14

PARTS 1 AND 2

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	RM-1.1	7/18/14				
CB-1.1	1/18/13	AS-1-81	1/18/13				
CB-1.2	1/18/13	TST-1-99	1/17/14				
DM-1.1	1/18/13	MT-105.10	7/19/13				
DM-4.4	7/20/12	MT-110.10	7/19/13				
MGS-1.1	7/19/13	TC-41.20	10/18/13				
MGS-2.1	7/19/13	TC-41.40	10/18/13				
MGS-4.2	7/19/13	TC-52.10	10/18/13				
MGS-5.3	7/19/13	TC-52.20	7/18/14				
HW-2.1	1/18/13						
HW-2.2	1/18/13						

SUPPLEMENTAL SPECIFICATIONS

800-2013	1/21/15
832	1/17/14

SPECIAL PROVISIONS

WATERWAY PERMIT 1/23/15

FEDERAL PROJECT NO. EO17 (212)

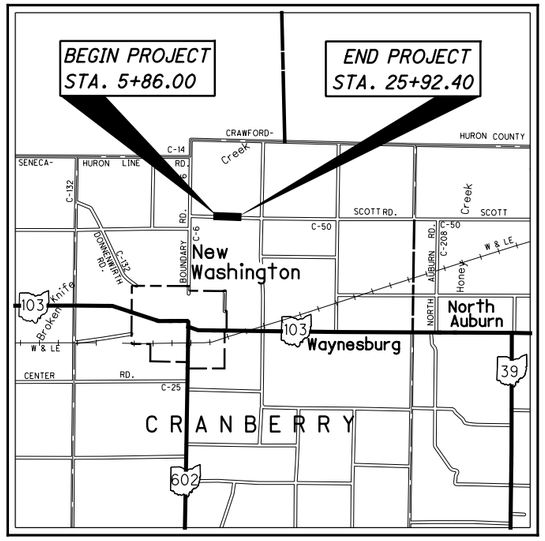
PID NO. 24988

CONSTRUCTION PROJECT NO

RAILROAD INVOLVEMENT NONE

CRA-C.R. 6-1.61 (BOUNDARY RD.) PART 1

1 / 27



LOCATION MAP

LATITUDE: 40°58'50" LONGITUDE: 82°50'40"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2013)	2300
DESIGN YEAR ADT (2033)	3150
DESIGN HOURLY VOLUME (2033)	315
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	3%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	07 LOCAL ROAD (RURAL)
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS
BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

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

PLAN PREPARED BY:

JOHN J. DOE & ASSOC., INC.
CONSULTING ENGINEERS
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

CRA-C.R.31 (SCOTT RD.) PART 2

CRANBERRY TOWNSHIP
CRAWFORD COUNTY

FOR PART 1, SEE CRA-C.R. 6-1.61 (BOUNDARY RD.)

SP 1302-6(b)
DATE: JUL. 2016

PROJECT DESCRIPTION

IMPROVEMENT OF 0.38 MILE OF C.R. 31 (SCOTT RD) BY RECONSTRUCTION OF EXISTING VERTICAL ALIGNMENT TO ELIMINATE HAZARDOUS VERTICAL CURVES INCLUDING UPGRADING OF GUARDRAIL, DRAINAGE, SIGNING AND PAVEMENT MARKINGS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	3.5 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	0.9 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.9 ACRES

2013 SPECIFICATIONS

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

INDEX OF SHEETS:

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 6.

APPROVED _____
DATE _____ *CRAWFORD COUNTY COMMISSIONER*

APPROVED _____
DATE _____ *CRAWFORD COUNTY COMMISSIONER*

APPROVED _____
DATE _____ *ENGINEER, CRAWFORD COUNTY*

APPROVED _____
DATE _____ *DISTRICT DEPUTY DIRECTOR*

APPROVED _____
DATE _____ *DIRECTOR, DEPARTMENT OF TRANSPORTATION*

ENGINEERS SEAL:

STATE OF OHIO
JOHN J. DOE
X-000000
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: John J. Doe
DATE: 11/11/14

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

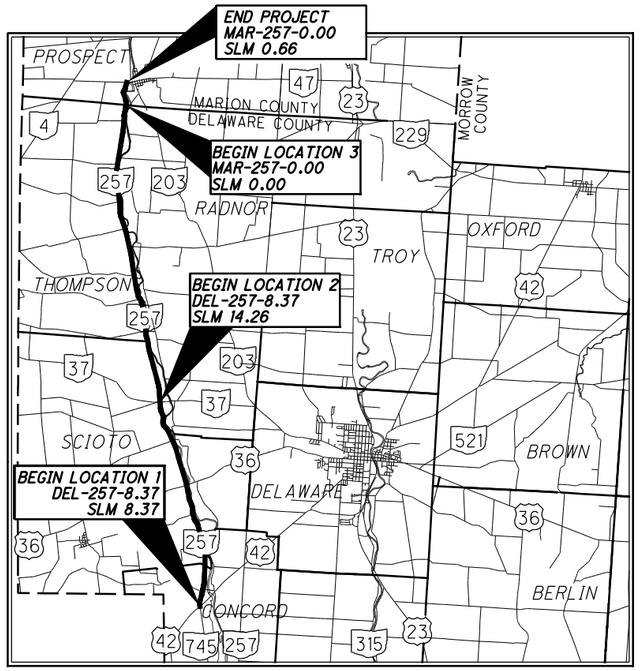
FEDERAL PROJECT NO. E025 (319)

PID NO. 24988

CONSTRUCTION PROJECT NO

RAILROAD INVOLVEMENT NONE

CRA-C.R. 31 (SCOTT RD.) PART 2



LOCATION MAP

LATITUDE: 40° 20′ 20″ LONGITUDE: 83° 10′ 47″

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

	DEL-257-8.37	MAR-257-0.00
CURRENT ADT (2012)	1,762	813
DESIGN YEAR ADT (2024)	1,869	862
DESIGN HOURLY VOLUME (2024)	78	36
DIRECTIONAL DISTRIBUTION	50%	50%
TRUCKS (24 HOUR B&C)	4%	9%
DESIGN SPEED	60	60
LEGAL SPEED	55	35/55

DESIGN FUNCTIONAL CLASSIFICATION:
DEL-257-8.37: 05 MAJOR COLLECTOR (RURAL)
MAR-257-0.00: 06 MINOR COLLECTOR (RURAL)

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS
BEFORE YOU DIG.

OHIO Utilities Protection Service
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

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

PLAN PREPARED BY:

JOHN J. DOE & ASSOC., INC.
CONSULTING ENGINEERS
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

DEL-257-8.37
MAR-257-0.00

VILLAGE OF PROSPECT
CONCORD AND SCIOTO TOWNSHIPS
THOMPSON AND PROSPECT TOWNSHIPS
DELAWARE AND MARION COUNTIES

SP 1302-7
DATE: JUL. 2016

PROJECT DESCRIPTION

SPOT PAVEMENT REPAIRS ON SR-257 IN DELAWARE COUNTY BETWEEN SLM 8.37 (US-42/SR-745) AND SLM 14.26 (SR-37).

6′ WIDE CONTINUOUS SLOT PAVING ON OUTSIDE EDGE OF SR-257 BEGINNING AT SLM 14.26 (SR-37) IN DELAWARE COUNTY AND ENDING AT SR-47 IN MARION COUNTY (SLM 0.66).

EARTH DISTURBED AREA:

PROJECT EARTH DISTURBED AREA	N/A*
EST. CONTRACTOR EARTH DISTURBED AREA	N/A*
NOTICE OF INTENT EARTH DISTURBED AREA	N/A*

* MAINTENANCE PROJECT

INDEX OF SHEETS:

2013 SPECIFICATIONS

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

ENGINEERS SEAL

STATE OF OHIO
JOHN J DOE
X-000000
REGISTERED PROFESSIONAL ENGINEER

SIGNED: John J. Doe
DATE: 01/21/11

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14		
MT-97.11	7/18/14		
MT-97.12	7/18/14		
MT-99.20	7/19/13		
MT-105.10	7/19/13		
TC-41.20	10/18/13		
TC-42.20	10/18/13		
TC-52.10	10/18/13		
TC-52.20	7/18/14		
TC-65.10	1/17/14		
TC-65.11	7/18/14		
TC-71.10	1/17/14		
TC-82.10	10/18/13		

SUPPLEMENTAL SPECIFICATIONS

800-2013	1/21/15
821	04/20/12
832	1/17/14

SPECIAL PROVISIONS

I HEREBY APPROVE 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

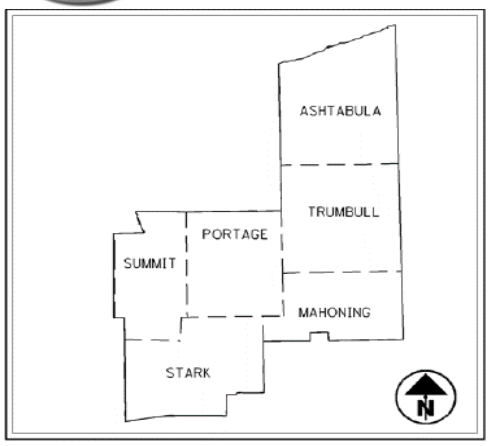
FEDERAL PROJECT NO. NONE

PID NO. 93708

CONSTRUCTION PROJECT NO. DEL-257-8.37 MAR-257-0.00

SP 1302–08
JULY 2016

STATE OF OHIO, DEPARTMENT OF TRANSPORTATION



LATITUDE: 40º 17' 52" LONGITUDE: 83º 02' 58"

D04-PMF-FY13

FAST DRY PAVEMENT MARKINGS

CONSTRUCTION PROJECT NUMBER: 13-_ _ _ _
PID NO: _ _ _ _ _
FEDERAL PROJECT NUMBER: 100% STATE

PROJECT DESCRIPTION
PLACEMENT OF PAVEMENT MARKING USING FAST DRY AT EXISTING LOCATIONS.

2013 SPECIFICATIONS
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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

I HEREBY APPROVE 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.

Project Earth Disturbed Area: N/A (Maintenance Project)

Est. Contractor Earth Disturbed Area: N/A (Maintenance Project)

Notice of Intent Earth Disturbed Area: N/A (Maintenance Project)

Railroad Involvement: None

DESIGN DESIGNATION: See Sheet _____

DESIGN EXCEPTIONS: None

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

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

APPROVED: _____
DISTRICT DEPUTY DIRECTOR

DATE: _____

PLANS PREPARED BY:

JOHN J. DOE & ASSOCIATES
CONSULTING ENGINEERS
999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

APPROVED: _____
DIRECTOR, DEPARTMENT OF TRANSPORTATION

DATE: _____

ENGINEERS SEAL:

STATE OF OHIO REGISTERED PROFESSIONAL ENGINEER

SIGNED: John Doe
DATE: 11-11-14

STANDARD CONSTRUCTION DRAWINGS

MT-95.30	07/18/14	MT-105.10	07/19/13	TC-41.20	10/18/13		
MT-95.31	07/18/14			TC-72.20	07/18/14		
MT-95.32	07/18/14						
MT-95.50	07/19/13						
MT-98.10	07/18/14						
MT-98.11	07/18/14						
MT-98.20	07/18/14						
MT-98.22	07/18/14						
MT-98.28	07/18/14						
MT-99.20	07/19/13						

SUPPLEMENTAL SPECIFICATIONS

800-2013	1/15/2015
832	1/17/2014

SPECIAL PROVISIONS
NONE

CHECKED BY: JKL

SP 1303-1
DATE: JULY 2011

CURVE DATA
P.I. Sta.= 367+51.56 ℄ Constr. S.R. 144
Δ = 30°00′00″ (LT)
D_C = 8°00′00″
R = 716.20′
L_S = 350.00′
θ_S = 14°00′00″
LT = 234.07′
ST = 117.33′
x = 347.92′
y = 28.39′
k = 174.65′
p = 7.11′
Δ_C = 2°00′00″ (LT)
L_C = 25.00′
T_S = 368.46′
E_S = 32.63′
e_{max} = 0.08

NOTE: REFER TO THE SURVEYING PARAMETERS NOTE IN THE GENERAL NOTES FOR PROJECT CONTROL INFORMATION.

HORIZONTAL SCALE IN FEET
0 25 50 100

Begin Work
Sta. 361+80
ROSE LANE
361
362
S 46° 25′ 45″ E
363
364
TS Sta. 363+83.10
Begin Project
Sta.. 365+50
S.L.M. 14.36
E014 (273)
365
366
367
SC Sta. 367+33.10
CS Sta. 367+58.10
2 Sty. Res.
2 Sty. Com.
1 Sty. Commercial
ST Sta. 371+08.10
End Project
Sta. 372+32
S.L.M. 14.49
E014 (273)
End Work
Sta. 373+50
368
369
370
371
372
373
374
375
376
S 76° 25′ 45″ E
℄ Construction S.R. 144
2 Sty. Res.

Sta. 369+60.00 S.R. ℄ 144 =
Sta. 10+00.00 ℄ S.R. 146
℄ Construction S.R. 144
RR Spike
369
370
95°45′00″
83°15′00″
Tangent From ST Sta. 371+08.10
S.R. 146
℄ Construction.
Sta. 9+95.15 S.R. 146
9

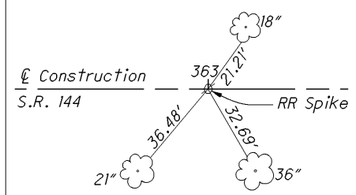
1 Sty. Commercial
1 Sty. Res.
1 Sty. Com.
℄ Construction S.R. 146
1 Sty. Res.

NOTE: There are no existing landscaped areas within the work limits.

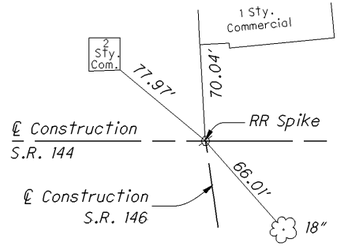
N 6° 49′ 15″ E
9
8
7
6
5
Gas Pumps
PT Sta. 8+14.44
1 Sty. Commercial
1 Sty. Commercial
PC Sta. 6+54.57
+00
Begin Work
STA. 5+07.00
N 4° 25′ 22″ E

CURVE DATA
P.I. Sta. 7+34.52= ℄ Constr. S.R. 146
Δ = 2°23′53″ (RT)
D_C= 1°30′00″
R = 3819.72′
T = 79.95′
L = 159.87′
E = 0.84′
emax= NC (NDC 0.025)

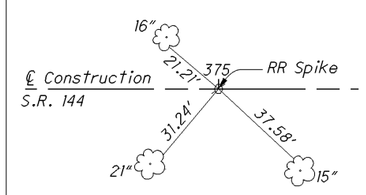
CENTERLINE REFERENCES (Not to Scale)



STA. 363+00, S.R. 144

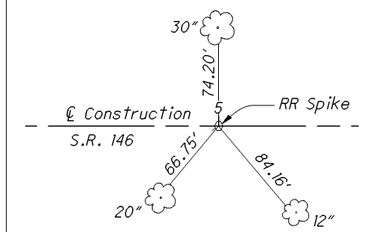


STA. 369+60, S.R. 144



STA. 375+00, S.R. 144

CENTERLINE REFERENCE (Not to Scale)



STA. 5+00, S.R. 146

SCHEMATIC PLAN
COS-144-14.36
2
72

I:\pr\V3Stds\SamplePlans\2011July\DGN\1303_DGN\1303_1.dgn 13-JUL-2011 12:17PM mwawszki

SP 1303-2
DATE: JULY 2006

Begin Work
Sta. 694+33

Begin Project
Sta. 694+48
S.L.M. = 26.15

E078 (316)

S 53° 04' 44" E

MAIN ST. - S.R. 39

Sta. 694+33 S.R. 43 =
Sta. 100+00 S.R. 39

Sta. 698+74.38 ℄ S.R. 43 =
Sta. 10+00.00 ℄ 2nd St. N.W.

℄ Construction S.R. 43

℄ Construction
2nd St. N.W.
S 52° 51' 29" E

End Work
Sta. 11+00

N 9° 48' 36" E

PI Sta. 702+00.00

N 9° 13' 16" E

15" Conc.

CURVE DATA
P.I. STA. = 702+00.00 ℄ CONSTR. S.R. 43
△= 0° 35' 20" (LT.)
NO CURVE

PC Sta. 705+23.52

Sta. 707+44.34 ℄ S.R. 43 =
Sta. 10+00.00 ℄ 5th St. N.W.

End Work
Sta. 10+88

℄ Construction
5th St. N.W.
S 63° 32' 39" E

CURVE DATA
P.I. STA.= 707+01.08 ℄ CONSTR. S.R. 43
△= 3° 33' 00" (LT.)
D_C= 1° 00' 00"
R = 5,729.58'
T = 177.56'
L = 355.00'
E = 2.75'
e_{max}= NC

P.T. Sta. 708+78.52

℄ Construction,
CREST ST.
N 84° 20'44" W

END WORK
STA. 10+85

Sta. 709+38.16 ℄ S.R. 43 =
Sta. 10+00.00 ℄ Crest St.

℄ Construction
6th St. N.W.
S 63° 28' 44" E

End Work
Sta. 10+82

VILLAGE OF TYLERSVILLE

Sta. 710+86.41 ℄ S.R. 43 =
Sta. 10+00.00 ℄ 6th St. N.W.

Sta. 717+57.35 ℄ S.R. 43 =
Sta. 10+00.00 ℄ 8th St. N.W.

21" Storm Outfall

MATCH LINE STA. 721+50

N 5° 40' 16" E

End Work
Sta. 10+80

℄ Construction,
8th St. N.W.
S 83° 48' 44" E

The coordinate values expressed herein are assumed and tied to project specific control monuments with no scale factor applied. They are ground values in English units.

HORIZONTAL SCALE IN FEET
0 50 100 200

DESIGN DESIGNATIONS

S.R. 43		RELOCATED TRUMP RD.	
CURRENT ADT (2005)	11,120	CURRENT ADT (2005)	1,420
DESIGN YEAR ADT (2025)	18,525	DESIGN YEAR ADT (2025)	1,990
DESIGN HOURLY VOLUME (2025)	2,574	DESIGN HOURLY VOLUME (2025)	199
DIRECTIONAL DISTRIBUTION	55%	DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	4%	TRUCKS (24 HOUR B&C)	4%
T_d	5%	DESIGN SPEED	25 MPH
DESIGN SPEED	35 MPH	LEGAL SPEED	25 MPH
LEGAL SPEED	35 MPH	DESIGN FUNCTIONAL CLASSIFICATION: URBAN LOCAL	
DESIGN FUNCTIONAL CLASSIFICATION - URBAN ARTERIAL		NHS Project	No
NHS Project	No	DESIGN EXCEPTIONS - NONE REQUIRED	
DESIGN EXCEPTIONS - NONE REQUIRED			

CURVE DATA
P.I. STA.= 744+49.29, ℄ CONSTR. S.R. 43
△= 25° 35' 20" (LT.)
D_C= 4° 00' 22"
R = 1,430.25'
T = 324.80'
L = 638.76'
E = 36.42'
e_{max}= NC (NDC 0.040)

E078 (316) 100% VILLAGE

STA. 49+00

℄ Construction
Relocated to Trump Rd.

CURVE DATA
P.I. STA.= 46+17.51 ℄ Constr. Trump Rd.
△= 89° 23' 07" (LT.)
D_C= 24° 54' 40"
R = 230.00'
T = 227.55'
L = 358.82'
E = 93.54'
e_{max}= 0.025

10'-0"x8'-0"
Type A

P.T. Sta. 42+55.74

P.C. Sta. 40+51.80

℄ R/W, Ex. Trump Rd.

RELOCATED TRUMP RD.

S 04° 43' 43" W

P.C. Sta. 43+89.96

DITCH

CURVE DATA
PI STA. 41+61.02, ℄ Constr. Trump Rd.
△= 50° 48' 16" RT.
D_C= 24° 54' 40"
R = 230.00'
T = 109.22'
L = 203.94'
E = 24.62'
e_{max}= 0.078

VILLAGE OF TYLERSVILLE

PT Sta. 747+63.26

120" CMP

Corporation Line
Meets ℄ SR 43@
Sta. 747+63.26

OLD TRUMP RD.

S 84° 39' 24" E

P.T. Sta. 47+48.78

End Work
Sta. 756+92

N 21° 00' 04" W

Begin Work
Sta. 38+50

S 46° 04' 33" E

CURVE DATA
P.I. STA. 727+61.39 ℄ CONSTR. S.R. 43
△= 1° 05' 00" (LT.)
D_C= 0° 29' 33"
R = 11,635.10'
T = 110.00'
L = 219.99'
E = 0.52'
e_{max}= NC

27" Storm Outfall

Sta. 732+78.31 ℄ S.R. 43 =
Sta. 10+00.00 ℄ 11th St. N.W.

VILLAGE OF TYLERSVILLE

Sta. 728+78.83 ℄ S.R. 43 =
Sta. 10+00.00 ℄ 10th St. N.W.

℄ Construction, S.R. 43

PC Sta. 726+51.39

PT Sta. 728+71.38

CREEK

P.C. Sta. 741+24.49

Longhorn St. ℄ Construction
S 84° 50' 54" E

End Work
Sta. 9+27.00

MATCH LINE STA. 721+50

N 5° 40' 16" E

Sta. 722+70.64 ℄ S.R. 43 =
Sta. 10+00.00 ℄ Longhorn St.

Str. No. MIA-43-2677

10'-0"x8'-0"
Conc. Box

MANNING

10th ST., N.W.
℄ Construction
S 84°52'04" E

End Work
Sta. 10+83

11th St. N.W.
℄ Construction
N 88°26'23" E

End Work
Sta. 10+75

Sta. 742+05.74 ℄ S.R. 43 =
Sta. 50+00.00 ℄ Relocated Trump Rd.
Sta. 10+00.00 ℄ 12th St. N.W.

VILLAGE OF TYLERSVILLE

End Work
Sta. 10+55

12th St. N.W.
℄ Construction
S 84°46'04" E

Sta. 743+71.09

End Project
Sta. 744+50
S.L.M. = 27.10

E078 (316)

CENTER TOWNSHIP
CORPORATION LINE

SEC3-T15N-R6W
N 4° 43' 43" E
SEC33-T14N-R5W

NOTE: There are no existing landscaped areas within the work limit.

SCHEMATIC PLAN & DESIGN DESIGNATIONS

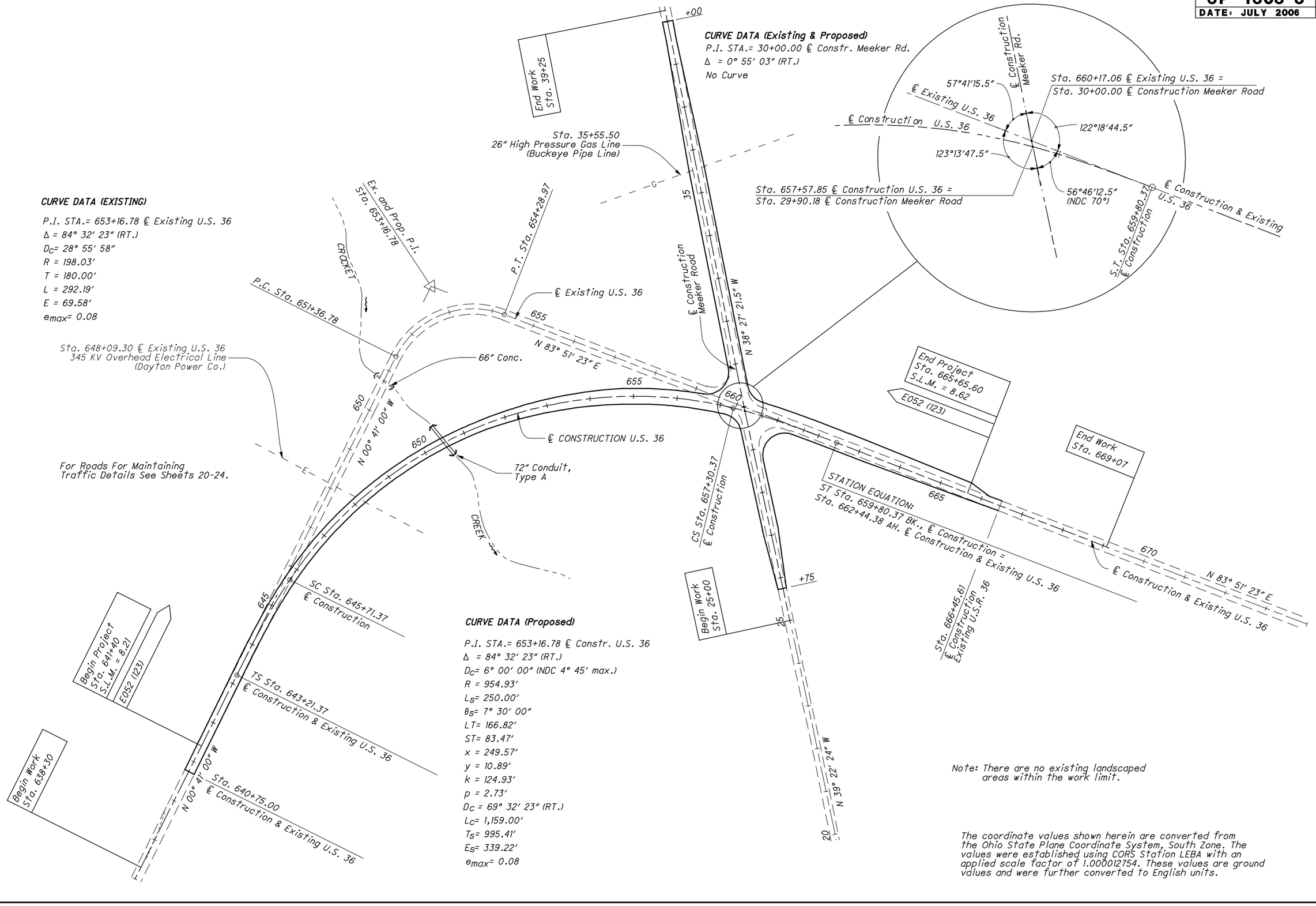
MIA-43-26.15

SP 1303-3
DATE: JULY 2006

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

HAS-36-8.21



Note: There are no existing landscaped areas within the work limit.

The coordinate values shown herein are converted from the Ohio State Plane Coordinate System, South Zone. The values were established using CORS Station LEBA with an applied scale factor of 1.000012754. These values are ground values and were further converted to English units.

SP 1303-4(a)
DATE: JULY 2006

HORIZONTAL SCALE IN FEET
0 250 500 1000

SCHEMATIC PLAN & DESIGN DESIGNATION

SUM/POR-21-30.51/0.00 AND VARIOUS

CITY OF VICTORY

NORFOLK & SOUTHERN R.R

CORPORATION LINE

EDSON

KNEISEL ROAD

S.R. 59

PC Sta. 1779+61.88

PT Sta. 1803+10.23

1760 1770 1780 1790 1800 1810 1820 1830

N 89° 47' 12" E

N 54° 53' 27" E

TS Sta. 1805+53.56

SC Sta. 1808+53.56

CREEK

(No Work)
Structure No.
SUM-21-2956 L&R

Begin Work
Sta. 1810+00

VICTORY TWP.

CURVE DATA
P.I. Sta. 1792+05.70, ℄ Constr. S.R. 21
Δ = 35° 19' 21" (LT)
D_C= 1° 28' 00"
R = 3,906.53'
T = 1,234.82'
L = 2,408.35'
E = 193.23'
e_{max}= 0.037

CURVE DATA
P.I. Sta. 1814+54.72, ℄ Constr. S.R. 21
Δ = 29° 22' 21" (RT)
D_C= 2° 00' 00"
L_S = 300.00'
L_S = 300.00'
θ_S = 3° 00' 00"
LT = 200.03'
ST = 100.03'
x = 299.22'
y = 5.23'
k = 149.99'
p = 1.31'
D_C= 23° 22' 21" (RT)
L_C= 1,168.62'
Ts = 901.15'
Es = 98.11'
e_{max}= 0.045

CURVE DATA
P.I. Sta. 26+02.47, ℄ Constr. Victory Road
Δ = 39° 03' 54" RT
D_C= 4° 04' 06"
R = 1408.30'
T = 499.61'
L = 960.20'
E = 85.99'
e_{max}= NC (NDC 0.057)

SUMMIT CO.
PORTAGE CO.

CS Sta. 1820+22.18
ST Sta 1823+22.18

Begin Project
Sta. 1835+10.00
S.L.M. 34.76

E085 (118)

Structure No.
SUM-21-3011 L&R

CORPORATION LINE
MEETS ℄ S.R. 21 @
STA. 1837+14.48

Station Equation:
Sta. 1838.29 Bk=
Sta. 0+00.00 AH

Suspend Project
Sta. 14+60.00
S.L.M. 0.28

N 84° 15' 48" E

Ex. 18" Conc
Sta. 15+99.40 ℄ S.R. 40 =
Sta. 25+00.00 ℄ W. River Rd.

Structure No.
POR-21-0030

WEST RIVER ROAD

S 81° 08' 58" E

End Work
Sta. 30+25

Begin Work
Sta. 19+75

REST AREA

RAMP "O"

RAMP "R"

RAMP "S"

RAMP "T"

RAMP "U"

RAMP "V"

REST AREA

BROWNHELM ROAD

VICTORY

VICTORY

CORP. LINE

Resume Project
Sta. 51+03.25
S.L.M. 0.97

End Work
Sta. 31+43.63

S56°22'08"E

STA 25+00 RELOCATED
VERMILION ROAD =
STA 56+39.39, S.R. 21

CORP. LINE
MEETS ℄ @
STA. 1837+14.48

S.R. 21
℄ Construction,

M 20+92.68

PC Sta. 59+38.68

STRUCTURE No.
POR-21-0097 L&R

STRUCTURE No.
POR-21-0107

Begin Work
Sta. 18+09.42

CORP. LINE

MATCH LINE STA 65+00, S.R. 21

DESIGN DESIGNATION (S.R. 21)
(S.R. 59 TO INTERCHANGE RD.)

CURRENT ADT (2005)	14,410
DESIGN YEAR ADT (2025)	21,620
DESIGN HOURLY VOLUME (2025)	2,162
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	22%
T_d	20%
DESIGN SPEED	60 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN FREEWAY/EXPRESSWAY	
NHS Project	No

CURVE DATA
P.I. Sta. 66+35.86 ℄ Constr. S.R. 21
Δ = 6° 30' 00" (RT.)
D_C= 0° 28' 00"
R = 12,277.67'
T = 697.18'
L = 1392.86'
E = 19.78'
e_{max}= NC

CITY OF VICTORY

DARROW ROAD

RIVER ROAD

VICTORY TWP.
BROWNHELM TWP.

BROWNHELM TWP.

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NOS.
HORIZONTAL CLEARANCE	1-03-05	231 & 237
GRADED SHOULDER WIDTH	5-09-05	5

The coordinate values shown herein are converted from the Ohio State Plane Coordinate System, South Zone. The values were established using CORS Station LEBA with an applied scale factor of 1.000012754. These values are ground values and were further converted to English units.

SP 1303-4(b)
DATE: JULY 2006

HORIZONTAL SCALE IN FEET
0 250 500 1000

SCHEMATIC PLAN & DESIGN DESIGNATION

SUM/POR-21-30.51-0.00 AND VARIOUS

The coordinate values shown herein are converted from the Ohio State Plane Coordinate System, South Zone. The values were established using CORS Station LEBA with an applied scale factor of 1.000012754. These values are ground values and were further converted to English units.

CITY OF VICTORY

CONRAIL R.R.

BENISH HILL DR.

BROWNHELM ROAD

CORP. LINE VICTORY LINNEN

CITY OF LINNEN

CURVE DATA
P.I. Sta. 150+59.03, ℄ Constr. S.R. 21
Δ = 2° 01′ 10″ LT
D_C = 0° 15′ 00″
R = 22,918.31′
T = 403.93′
L = 807.78′
E = 3.56′
e_{max} = NC

MATCH LINE STA 65+00 S.R. 21

Resume Project Sta. 98+00 S.L.M. 1.86

Suspend Project Sta. 90+23 S.L.M. 1.71

Suspend Project Sta. 99+82 S.L.M. 1.89

Resume Project Sta. 114+82 S.L.M. 2.18

Suspend Project Sta. 126+16 S.L.M. 2.39

KNAUS RD.

ROAD

End Work Sta. 28+14.06

End Work Sta. 30+80.88

End Work Sta. 32+65.46

Sta. 25+00, VICTORY INTERCHANGE ROAD = Sta. 80+00, S.R. 21

Sta. 25+00.00, SUNNYSIDE RD = Sta. 117+71.69, S.R. 21

Structure No. POR-21-0262

PC Sta. 146+55.10

PT Sta. 154+62.88

Resume Project Sta. 174+73 S.L.M. 3.31

Suspend Project Sta. 177+60.21 S.L.M. 3.36

End Work Sta. 220+33

Structure No. POR-21-0333 L&R

PC Sta. 185+05.96 BK

PC Sta. 185+00.00 AH

CORP. LINE

RAMP "Z"

RAMP "W"

RAMP "G"

RAMP "H"

RAMP "X"

RAMP "Y"

70 80 90 100 110 120 130 140 150 160 170 180 190 200 220

Ex. 24" S 89° 14′ 12" E Concrete

℄ Construction, S.R. 21

Ex. 36" Concrete

N 88° 44′ 38" E

Sta. 25+00, CLAUS RD. = Sta. 138+67, S.R. 21

Sta. 207+77.56, BAUMHART RD. = Sta. 176+55.96, S.R. 21

CORPORATION LINE MEETS ℄ @ Sta. 175+14.33

PARK

End Work Sta. 216+80

JERUSALEM ROAD

Structure No. POR-21-0151

PT Sta. 73+31.54

Begin Work Sta. 21+43.14

Structure No. POR-21-0223

Begin Work Sta. 19+28.77

Begin Work Sta. 20+13.78

Begin Work Sta. 193+00

CLAUS

SUNNYSIDE

FOSTER

COOPER

BAUMHART

CORP. LINE

BROWNHELM TWP.

Suspend Project Sta. 167+20 S.L.M. 3.17

Suspend Project Sta. 141+13 S.L.M. 2.67

Resume Project Sta. 153+12 S.L.M. 2.90

End Project Sta. 181+46 S.L.M. 3.44

E085 (118)

Resume Project Sta. 138+92 S.L.M. 2.63

Resume Project Sta. 180+00 S.L.M. 3.41

CITY OF VICTORY

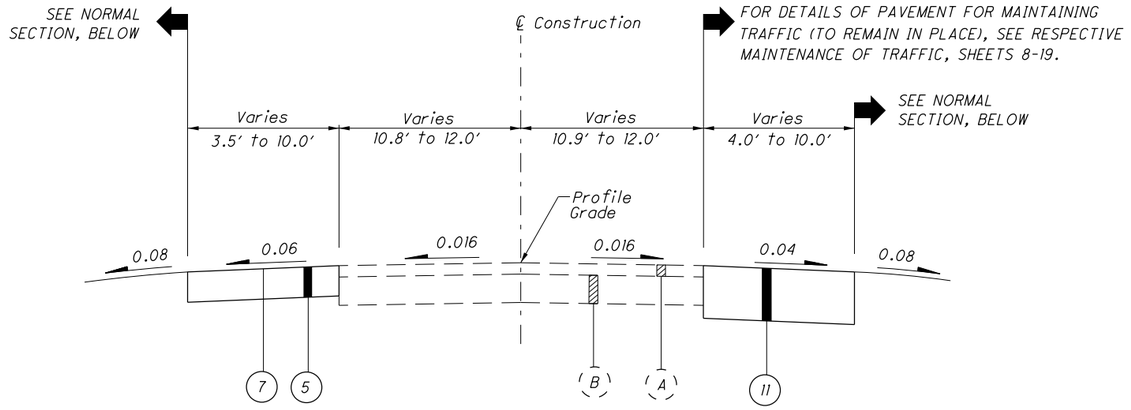
CURVE DATA
P.I. Sta. 66+35.86, ℄ Constr. S.R. 21
Δ = 6° 30′ 00″ RT
D_C = 0° 28′ 00″
R = 12,277.67′
T = 697.18′
L = 1392.86′
E = 19.78′
e_{max} = NC (NDC 0.08)

DESIGN DESIGNATION (S.R. 21) (INTERCHANGE RD. TO BAUMHART RD.):

CURRENT ADT (2005)	16,520
DESIGN YEAR ADT (2025)	24,815
DESIGN HOURLY VOLUME (2025)	2,482
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	22%
T_d	20%
DESIGN SPEED	60 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION - URBAN FREEWAY/EXPRESSWAY	
NHS Project	No

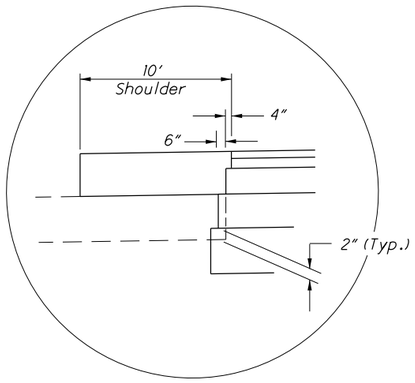
DESIGN EXCEPTIONS:

DESIGN FEATURE	APPROVAL DATE	SHEET NOS.
HORIZONTAL CLEARANCE	1-03-05	231 & 237
GRADED SHOULDER WIDTH	5-09-05	5



NORMAL SECTION - U.S. 46

Sta. 634+00.00 to Sta. 635+75.00



BASE AND SUBBASE STEP DETAIL

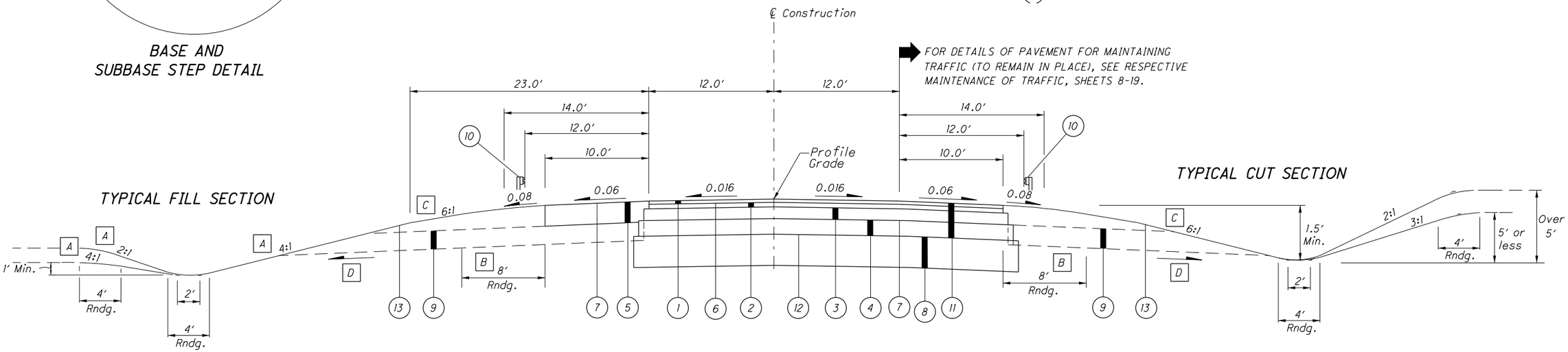
- [A] Unless otherwise shown on Cross Sections
- [B] No rounding is required when foreslope is 6:1 or flatter. 4' Rounding when guardrail is required.
- [C] Foreslope may vary in pavement transition areas at extreme ends of pavement work and adjacent to Structure PIC-46-1209; see cross sections.
- [D] 0.04 Min., 0.08 Desirable

LEGEND

1. ITEM 442 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (448)
2. ITEM 442 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, Type A (448)
3. ITEM 301 - 5" ASPHALT CONCRETE BASE, PG64-22
4. ITEM 304 - 6" AGGREGATE BASE
5. ITEM 304 - 8" AGGREGATE BASE
6. ITEM 407 - TACK COAT
7. ITEM 408 - PRIME COAT (APPLIED AT A RATE OF 0.40 GAL./SQ. YD.)
8. ITEM 206 - LIME STABILIZED SUBGRADE, 18 INCHES DEEP
9. ITEM 605 - AGGREGATE DRAINS
10. ITEM 606 - GUARDRAIL, TYPE 5
11. ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE RESPECTIVE MAINTENANCE OF TRAFFIC DETAILS)
12. ITEM 204 - SUBGRADE COMPACTION
13. ITEM 659 - SEEDING AND MULCHING
14. ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15")
15. NOT USED
16. ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS

(A) 3" ± ASPHALT CONCRETE

(B) 8" ± CONCRETE PAVEMENT

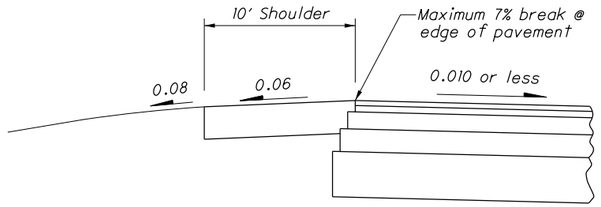


NORMAL SECTION - U.S. 46

Sta. 635+75.00 to Sta. 642+81.37
Sta. 638+22.44 to Sta. 640+48.86

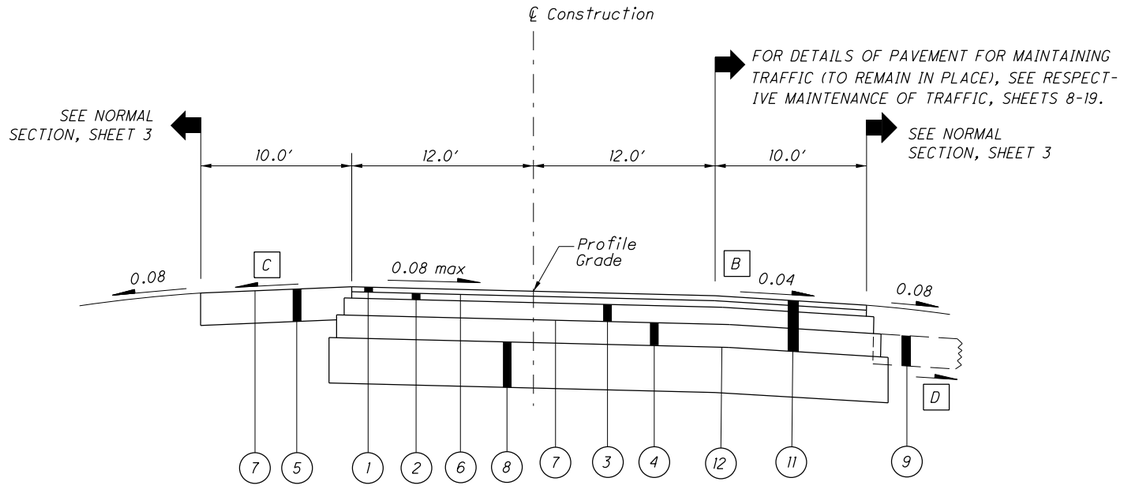
TYPICAL SECTIONS - U.S. 46

PIC-46-12.01



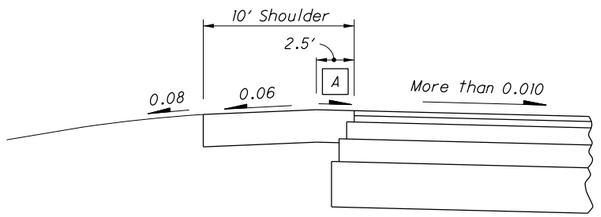
SHOULDER DETAIL

For pavement slopes of 0.010 or less



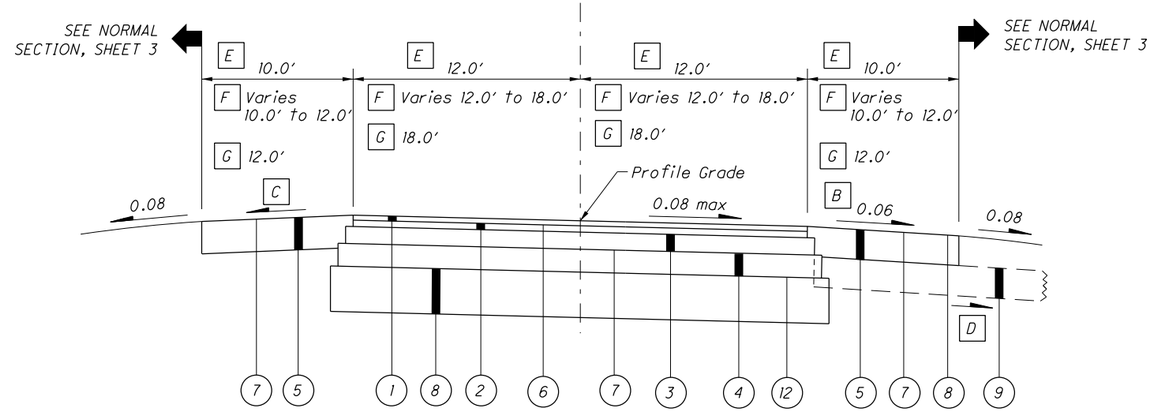
SUPERELEVATED SECTION - U.S. 46

Sta. 642+81.37 to Sta. 649+00.00



SHOULDER DETAIL

For pavement slopes of more than 0.010



SUPERELEVATED SECTION - U.S. 46

A *Same slope as pavement*

B *Or pavement slope whichever is greater*

C *For high side shoulder slopes on superelevated sections see shoulder details, this sheet.*

D *0.04 Min., 0.08 Desirable*

E *Sta. 649+00.00 to Sta. 651+45.03*

F *Sta. 651+45.03 to Sta. 654+75.03*

G *Sta. 654+75.03 to Sta. 658+77.85*

STA. 656+57.63 TO STA. 658+77.85, SEE INTERSECTION DETAIL ON SHEET 39.

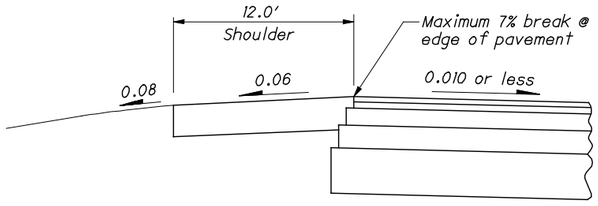
SEE INTERSECTION DETAIL, SHEET 39.

FOR PAVEMENT LEGEND, SEE SHEET 3.

FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 3.

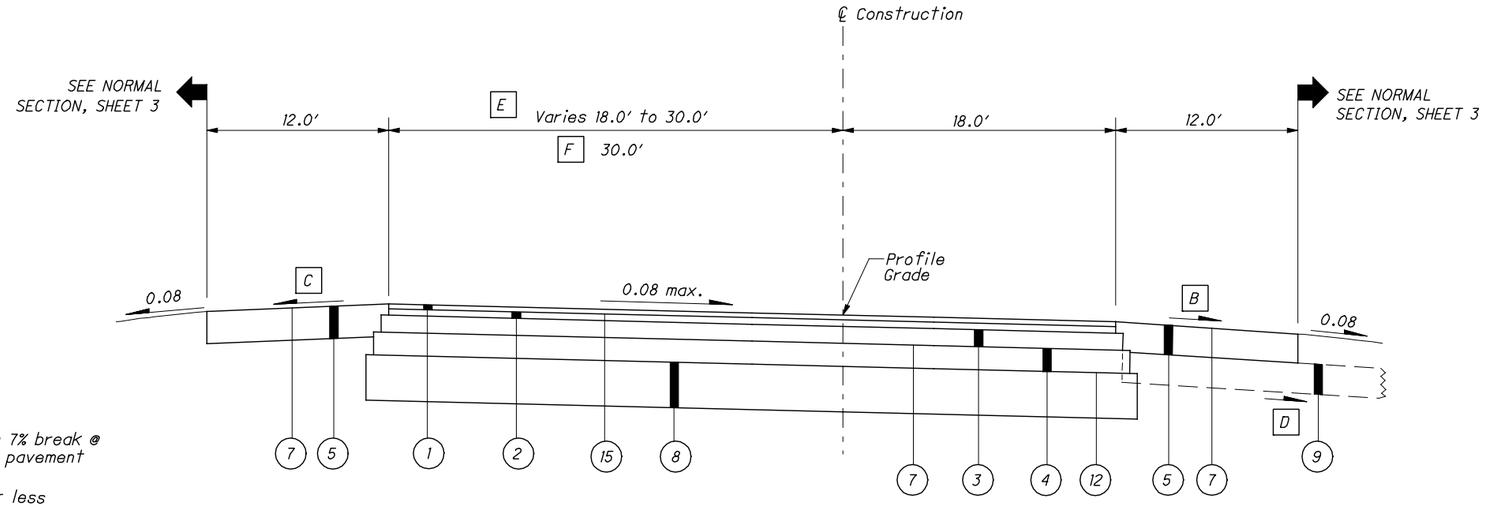
TYPICAL SECTIONS - U.S. 46

PIC-46-12.01



SHOULDER DETAIL

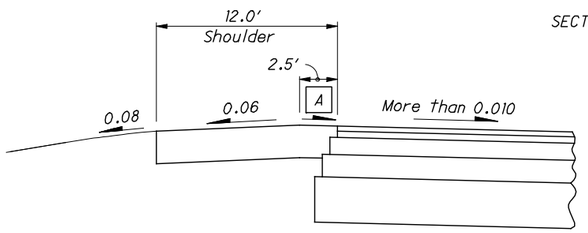
For pavement slopes of 0.010 or less



SUPERELEVATED SECTION - U.S. 46

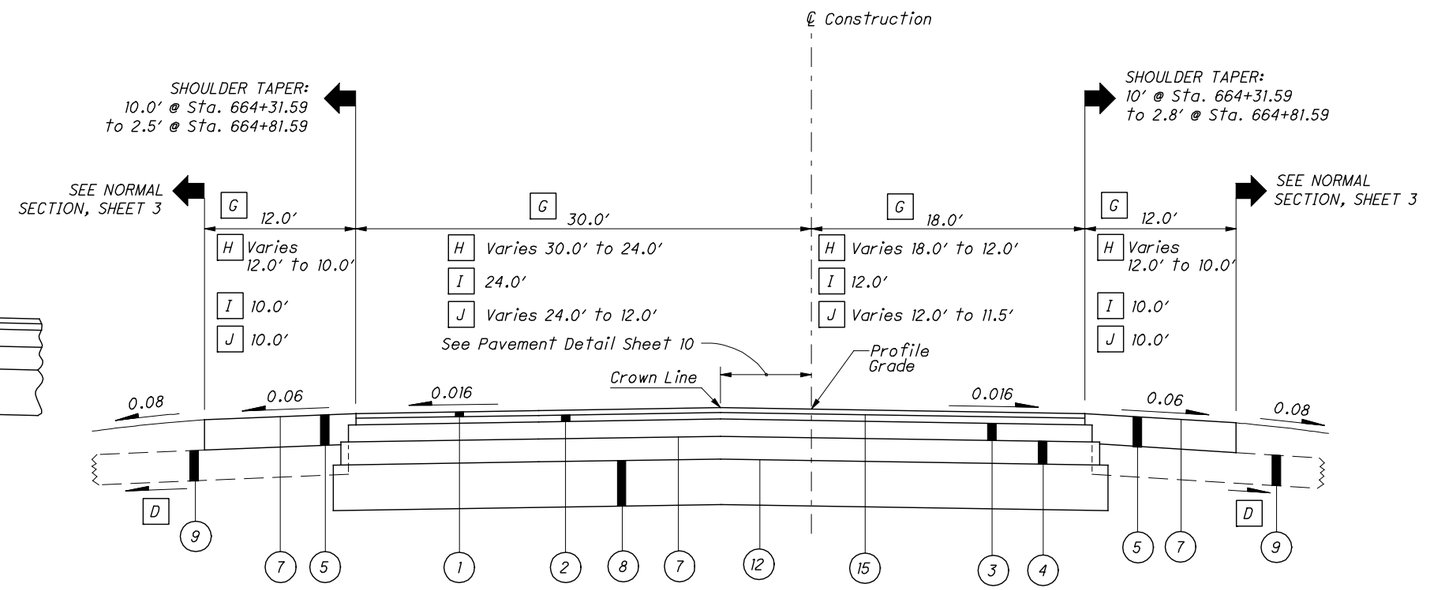
E Sta. 658+77.85 to Sta. 659+27.03

F Sta. 659+27.03 to Sta. 660+20.37



SHOULDER DETAIL

For pavement slopes of more than 0.010



NORMAL SECTION - U.S. 46

G Sta. 660+20.37 to Sta. 660+51.59

H Sta. 660+51.59 to Sta. 663+81.59

I Sta. 663+81.59 to Sta. 664+31.59

J Sta. 664+31.59 to Sta. 664+81.59

A Same slope as pavement

B 0.06 or same slope as pavement whichever is greater

C For high side shoulder slopes on superelevated sections see shoulder details, this Sheet.

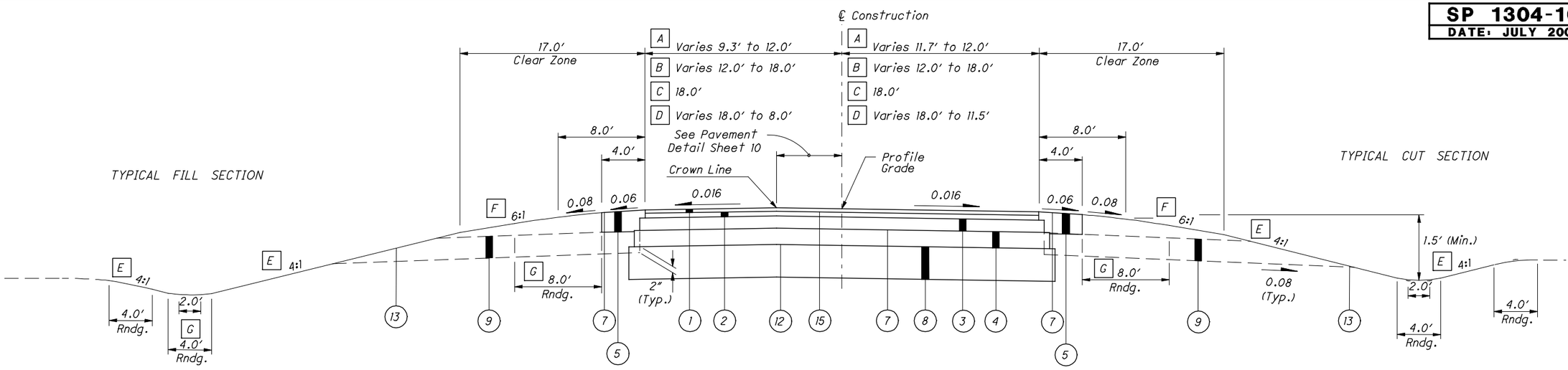
D 0.04 Min., 0.08 Desirable

FOR PAVEMENT LEGEND SEE SHEET 3.

FOR BASE AND SUBBASE STEP DETAIL SEE SHEET 3.

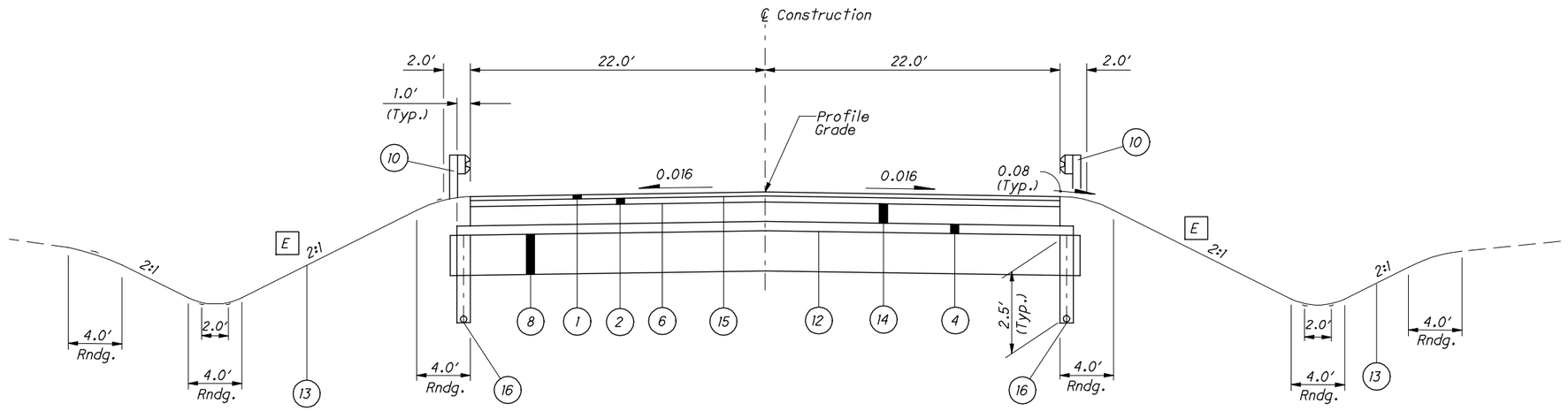
TYPICAL SECTIONS - U.S. 46

PIC-46-12.01



NORMAL SECTION - ARLINGTON ROAD

A Sta. 21+00.00 to Sta. 21+37.83
B Sta. 21+37.83 to Sta. 24+37.83
C Sta. 24+37.83 to Sta. 29+05.61
C Sta. 31+26.68 to Sta. 31+44.41
D Sta. 31+44.41 to Sta. 34+25.00



APPROACH SLAB TYPICAL SECTION - U.S. 46

STRUCTURE PIC-46-1209 = Sta. 638+22.44 to Sta. 640+48.86
Sta. 638+47.44 to Sta. 640+23.86

E Unless otherwise shown on Cross Sections

F Foreslope may vary in pavement transition areas at extreme ends of pavement work; See Cross Sections.

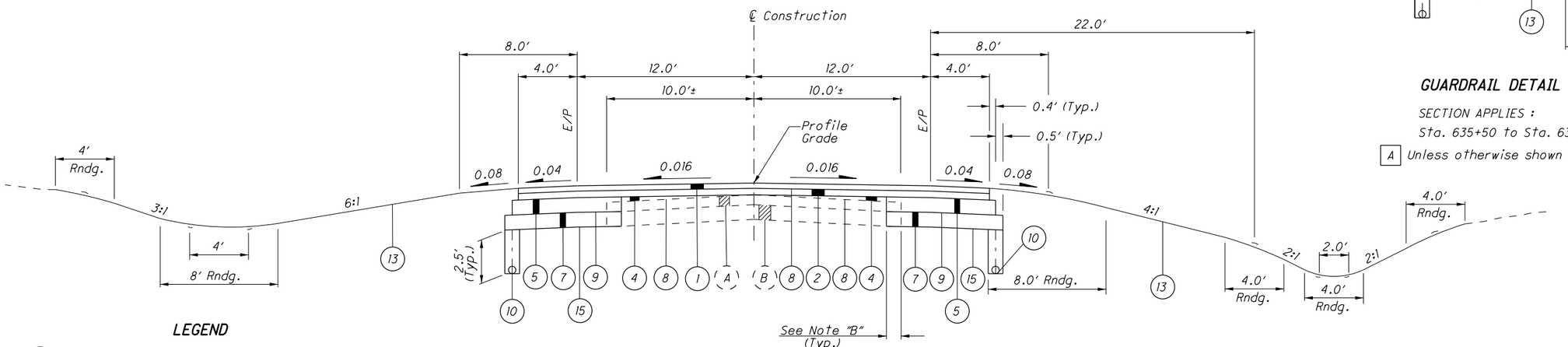
G No rounding is required when foreslope is 6:1 or flatter.

FOR PAVEMENT LEGEND SEE SHEET 3.

FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 3.

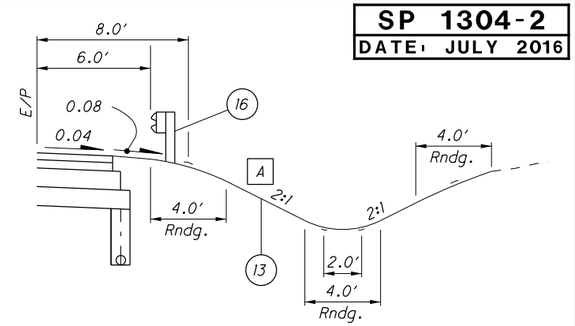
TYPICAL SECTIONS - U.S. 46 AND ARLINGTON ROAD

PIC-46-12.01



NORMAL SECTION - S.R. 106

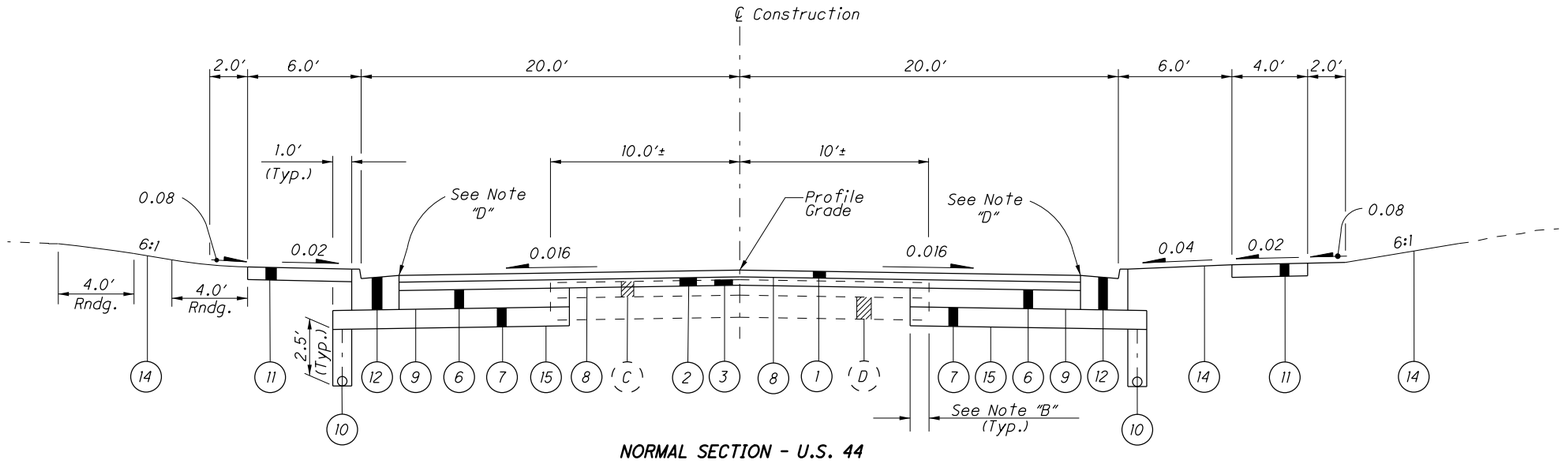
Sta. 621+35 to Sta. 640+50



GUARDRAIL DETAIL - S.R. 106

SECTION APPLIES :
Sta. 635+50 to Sta. 637+75 Rt.

[A] Unless otherwise shown on the cross sections



NORMAL SECTION - U.S. 44

Sta. 300+00 to Sta. 318+50

LEGEND

(1) ITEM 441 - 1¼" Asphalt Concrete Surface Course, Type 1, (448) PG64-22

(2) ITEM 441 - 1¾" Asphalt Concrete Intermediate Course, Type 2, (448)

(3) ITEM 254 - Pavement Planing, Asphalt Concrete (See Note "A")

(4) ITEM 441 - 0" Min. Asphalt Concrete Intermediate Course, Type 1, (448) (See Note "C")

(5) ITEM 301 - 5" Asphalt Concrete Base, PG64-22

(6) ITEM 301 - 6" Asphalt Concrete Base, PG64-22

(7) ITEM 304 - 6" Aggregate Base

(8) ITEM 407 - Tack Coat

(9) ITEM 408 - Prime Coat (Applied at the Rate of 0.4 gal/sq. yd.)

(10) ITEM 605 - 6" Shallow Pipe Underdrains

(11) ITEM 608 - 4" Concrete Walk

(12) ITEM 609 - Combination Curb and Gutter, Type 2

(13) ITEM 659 - Seeding and Mulching

(14) ITEM 660 - Sodding Unstaked

(15) ITEM 204 - Subgrade Compaction

(16) ITEM 606 - Guardrail, Type 5

(A) 5"± Asphalt Concrete

(B) 5"± Waterbound Macadam

(C) 4"± Asphalt Concrete

(D) 6"± Dense Asphalt Macadam Base

NOTE "A"
Pavement planing shall be a constant depth of 1" at the ℄ of construction with a uniform cross slope of 0.016 established. Maximum depth of planing at the outside edges of existing pavement has been calculated to be 2½".

NOTE "B"
The existing pavement edges shall be saw cut to locate a sound pavement edge per sec. 203.04(f) of the CMS. For estimating purposes, pavement calculations included in the plan indicate an average width of 1 ft. of existing pavement being replaced.

NOTE "C"
ITEM 441, Asphalt Concrete Intermediate Course, Type 1, (448), is to be used as a leveling course to establish a 0.016 cross slope. Estimated quantities have been calculated based on exaggerated cross-sections shown on sheets 51-58.

NOTE "D"
ITEM 441, Asphalt Concrete Surface Course, Type 1, (448) PG64-22, is to be ¼" above gutter plate.

TYPICAL SECTIONS - U.S. 44 AND S.R. 106

GRE-44-9.00

LEGEND

(1) ITEM 441 - 1¼" Asphalt Concrete Surface Course, Type 1, (448) PG64-22

(2) ITEM 441 - 1¾" Asphalt Concrete Intermediate Course, Type 2, (448)

(3) ITEM 305 - 9" Concrete Base, As Per Plan

(4) ITEM 304 - 6" Aggregate Base

(5) ITEM 254 - Pavement Planing, Asphalt Concrete (Max. Depth=3")

(6) ITEM 301 - 9" Asphalt Concrete Base, PG64-22

(7) ITEM 304 - 9" Aggregate Base

(8) ITEM 301 - 4" Asphalt Concrete Base, PG64-22

(9) ITEM 304 - Aggregate Base, Depth as shown

(10) ITEM 408 - Prime Coat (Applied At The Rate Of 0.4 Gal/Sq. Yd.)

(11) ITEM 407 - Tack Coat

(12) ITEM 609 - Curb, Type 6

(13) ITEM 660 - Sodding Unstaked

(14) ITEM 605 - 6" Shallow Pipe Underdrains

(15) ITEM 204 - Subgrade Compaction

(16) ITEM 609 - Curb, Type 2-B

(A) 12" ± Asphalt

(B) 8" ± Subbase

(C) Curb & Gutter

(D) 4" Concrete Sidewalk

(E) 3" ± Asphalt

(F) 9" ± Reinforced Concrete

(G) 6" ± Subbase

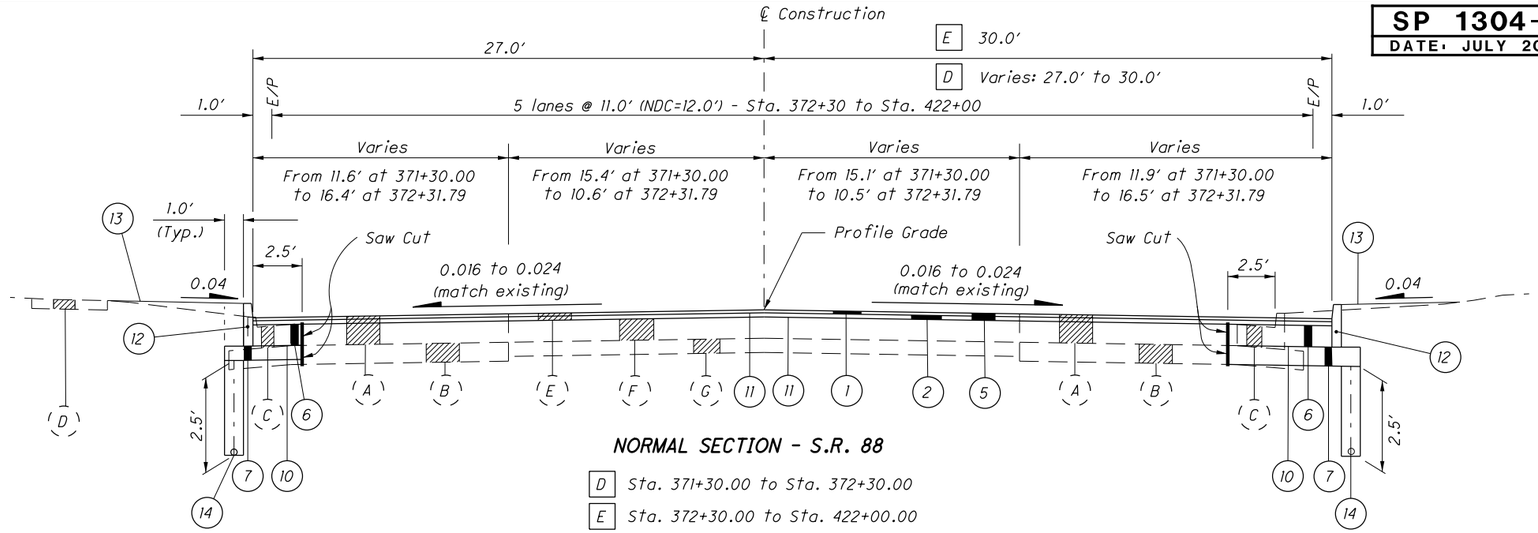
(H) 10" ± Asphalt

(J) 4" ± Subbase

[A] 25'-0" From Sta. 0+84 to Sta. 3+50
Varies: 25'-0" @ Sta. 3+50 to 12' @ Sta. 4+00

[B] 12'-0" From Sta. 0+84 to Sta. 3+50
Varies: 12'-0" @ Sta. 3+50 to 11'-0" @ Sta. 4+00

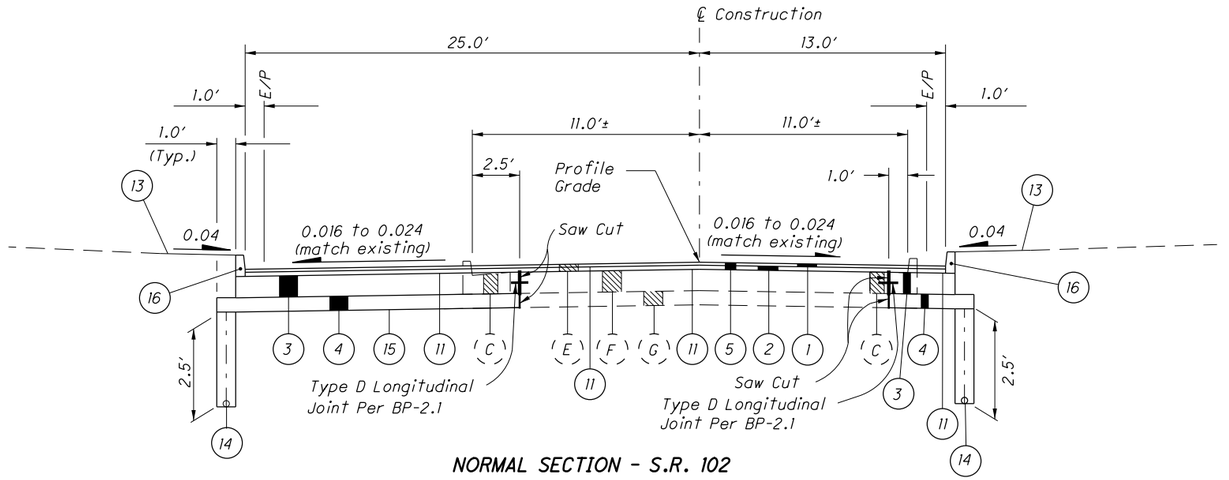
[C] Varies: 4' @ Sta. 3+50 to 2' @ Sta. 4+00



NORMAL SECTION - S.R. 88

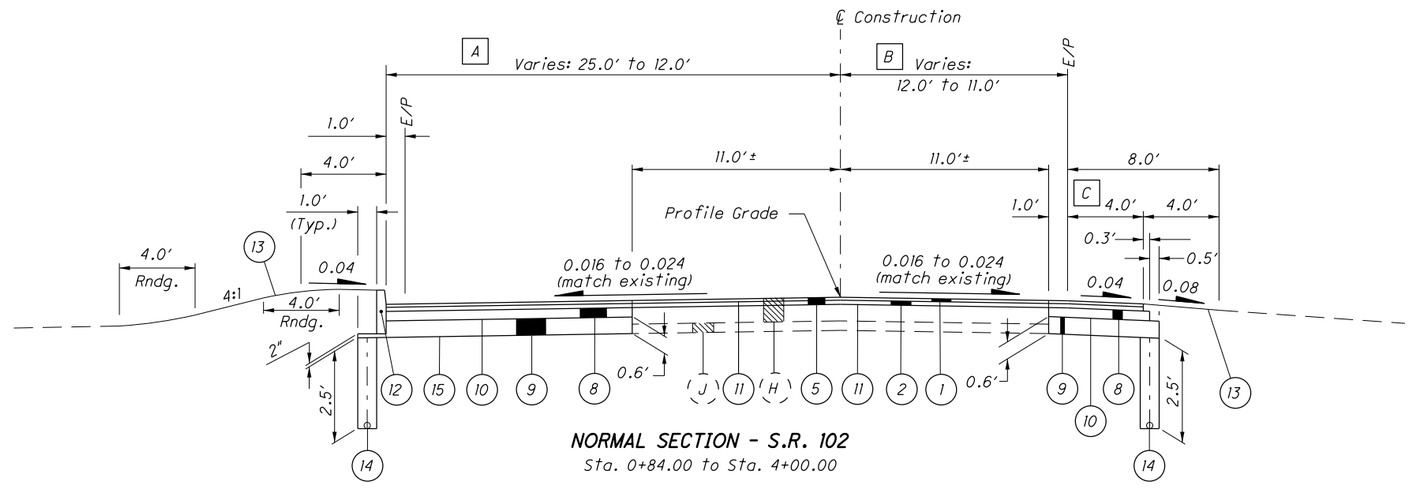
[D] Sta. 371+30.00 to Sta. 372+30.00

[E] Sta. 372+30.00 to Sta. 422+00.00



NORMAL SECTION - S.R. 102

Sta. 0+34.44 to Sta. 0+84.00

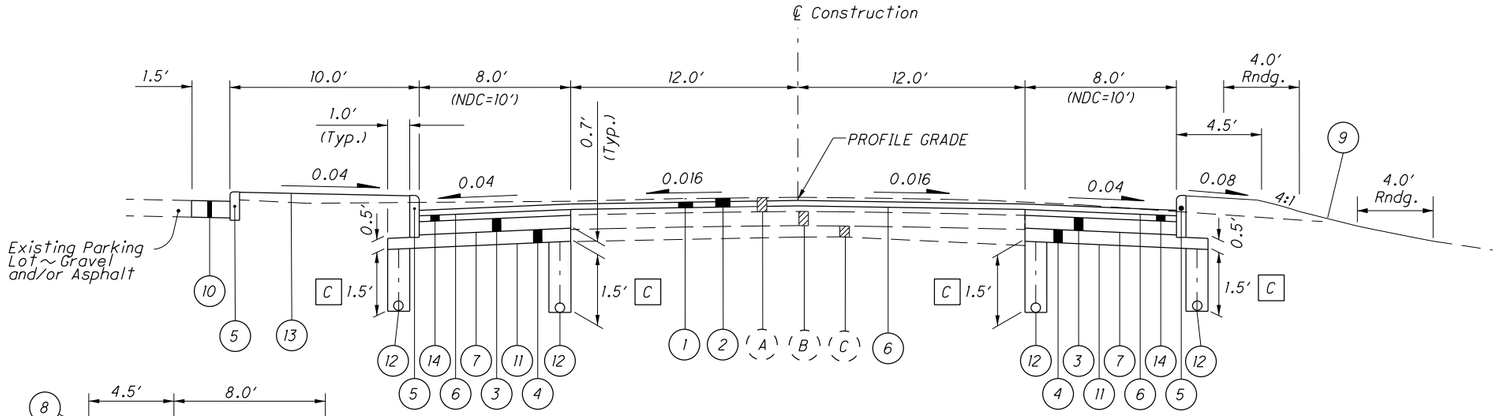


NORMAL SECTION - S.R. 102

Sta. 0+84.00 to Sta. 4+00.00

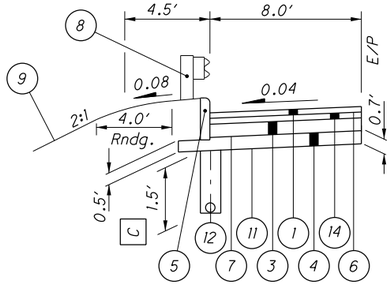
SEN-88-5.35

TYPICAL SECTIONS - S.R. 88 AND S.R. 102



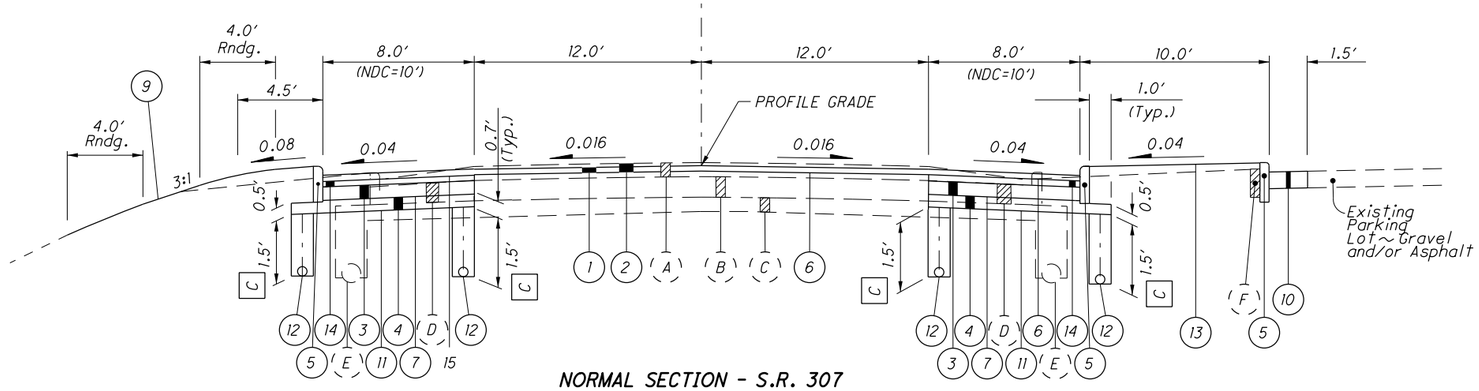
NORMAL SECTION - S.R. 307

STA. 88+75.00 TO STA. 90+15.00



GUARDRAIL SECTION

STA. 93+75 TO STA. 95+25 (Lt.)



NORMAL SECTION - S.R. 307

STA. 90+15.00 TO STA. 96+45.00

LEGEND

(1) ITEM 441 - 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG64-22

(2) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE [A]

(3) ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22

(4) ITEM 304 - AGGREGATE BASE, DEPTH AS SHOWN

(5) ITEM 609 - CURB, TYPE 6

(6) ITEM 407 - TACK COAT

(7) ITEM 408 - PRIME COAT (APPLIED AT THE RATE OF 0.4 GAL./SQ.YD.)

(8) ITEM 606 - GUARDRAIL, TYPE 5

(9) ITEM 659 - SEEDING AND MULCHING (SEE GENERAL NOTE)

(10) SEE PAVEMENT BUILDUP NOTE, THIS SHEET [B]

(11) ITEM 204 - SUBGRADE COMPACTION

(12) ITEM 605 - 6" BASE PIPE UNDERDRAINS

(13) ITEM 660 - SODDING UNSTAKED

(14) ITEM 441 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

(A) 6" ASPHALT SURFACE

(B) 9" REINFORCED CONCRETE BASE

(C) 6" MIN. CLASSIFIED EMBANKMENT BLANKET COURSE

S.R. 307 PAVEMENT PLANING TABLES

STATION	PROPOSED PROFILE ELEVATION	PLANING DEPTH (FEET) @ ℄	STATION	PROPOSED PROFILE ELEVATION	PLANING DEPTH (FEET) @ ℄
88+50	1094.08	0.17	92+75	1095.26	0.27
88+75	1094.17	0.15	93+00	1095.28	0.19
89+00	1094.26	0.16	93+25	1095.32	0.20
89+25	1094.34	0.19	93+50	1095.36	0.21
89+50	1094.43	0.20	93+75	1095.41	0.22
89+75	1094.52	0.19	94+00	1095.46	0.24
90+00	1094.61	0.21	94+25	1095.51	0.28
90+25	1094.69	0.20	94+50	1095.56	0.38
90+50	1094.78	0.18	94+75	1095.61	0.34
90+75	1094.87	0.18	95+00	1095.66	0.26
91+00	1094.96	0.18	95+25	1095.71	0.17
91+25	1095.04	0.17	95+50	1095.69	0.16
91+50	1095.13	0.17	95+75	1095.67	0.15
91+75	1095.16	0.18	96+00	1095.65	0.14
92+00	1095.18	0.20	96+25	1095.63	0.15
92+25	1095.21	0.23	96+50	1095.61	0.16
92+50	1095.23	0.28			

NOTES

S.R. 307 - THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT BETWEEN STA. 92+57.25 AND STA. 92+97.25.

- THE PAVEMENT BETWEEN STA. 92+97.25 AND STA. 94+02.25 SHALL BE BUILT WITHOUT CROWN.

- THE CROWN SHALL BE WORKED INTO THE PAVEMENT BETWEEN STA. 94+02.25 AND STA. 94+42.25.

[A] IN AN EFFORT TO REMOVE EXISTING PARABOLIC CROWN AND ESTABLISH A SMOOTH AND CONSISTENT PROFILE THROUGHOUT THE PROJECT, THE PAVEMENT SHALL BE PLANED TO A DEPTH INDICATED IN THE PAVEMENT PLANING TABLE ON THIS SHEET. A 0.016 NORMAL CROSS SLOPE SHALL BE ESTABLISHED FROM THE CENTERLINE TO THE EXISTING EDGE OF PAVEMENT.

[B] THE PAVEMENT BUILD-UP WHEN ADJOINING AN EXISTING ASPHALT PAVEMENT SHALL BE AS FOLLOWS:

ITEM 441 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG64-22

ITEM 441 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

ITEM 408 - PRIME COAT @ 0.4 GAL./SO. YD.

ITEM 304 - 8" AGGREGATE BASE

THE PAVEMENT BUILD-UP WHEN ADJOINING AN EXISTING GRAVEL OR SLAG PARKING AREA SHALL BE AS FOLLOWS:

ITEM 304 - 11" AGGREGATE BASE

[C] UNCLASSIFIED UNDERDRAIN LIMITS:

STA. 88+75 TO STA. 91+25 AND

STA. 95+25 TO STA. 96+27.25

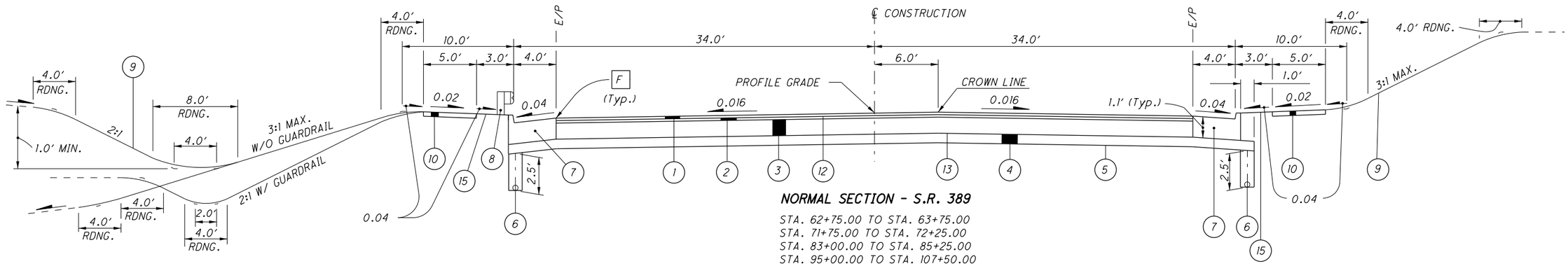
(D) CURB & GUTTER (TO BE REMOVED)

(E) ROADWAY DRAINAGE, 12" (TO BE REMOVED)

(F) CURB (TO BE REMOVED)

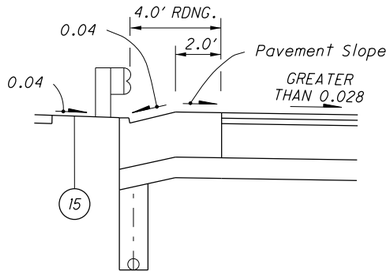
TYPICAL SECTIONS - S.R. 307

HOL-307-16.54

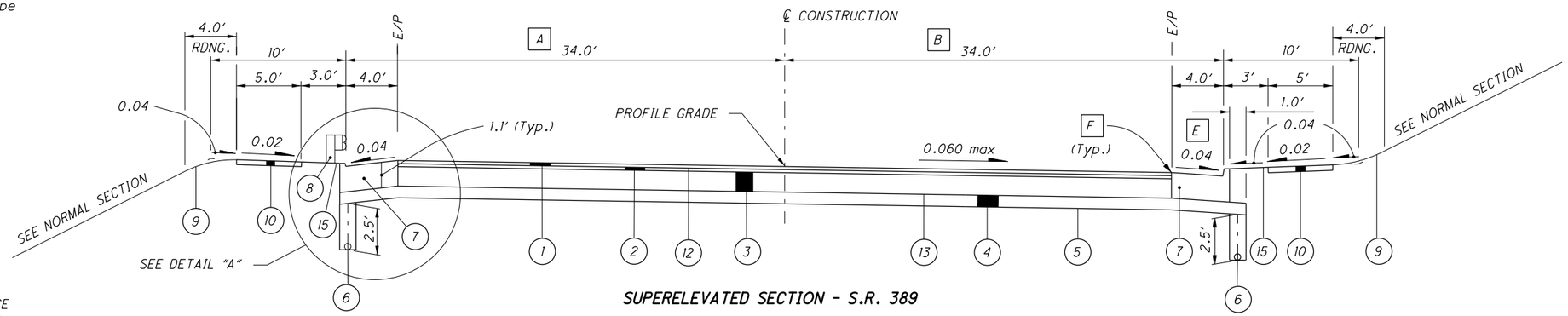


NORMAL SECTION - S.R. 389

STA. 62+75.00 TO STA. 63+75.00
STA. 71+75.00 TO STA. 72+25.00
STA. 83+00.00 TO STA. 85+25.00
STA. 95+00.00 TO STA. 107+50.00



HIGH-SIDE CURB DETAIL "A"



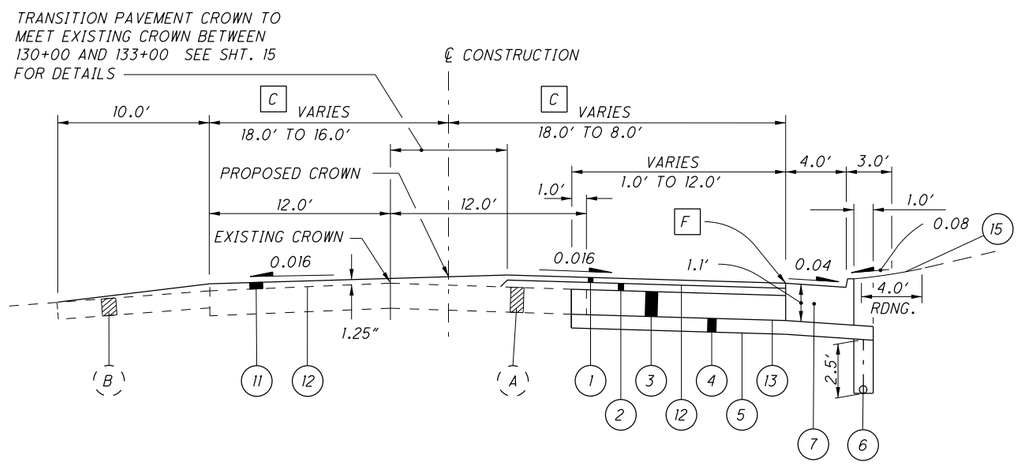
SUPERELEVATED SECTION - S.R. 389

STA. 55+60.00 TO STA. 62+75.00
STA. 63+75.00 TO STA. 71+75.00
STA. 72+25.00 TO STA. 78+13.66
STA. 78+13.66 TO STA. 83+00.00 (SUPERELEVATION DIRECTION REVERSED)
STA. 85+25.00 TO STA. 95+00.00
STA. 107+50.00 TO STA. 130+00.00 (SUPERELEVATION DIRECTION REVERSED)

LEGEND

1. ITEM 441 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446) PG64-22
2. ITEM 441 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
3. ITEM 301 - 10" ASPHALT CONCRETE BASE, PG64-22
4. ITEM 304 - 6" AGGREGATE BASE
5. ITEM 204 - SUBGRADE COMPACTION
6. ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS [D]
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN (SEE SHEET 9)
8. ITEM 606 - GUARDRAIL, TYPE 5
9. ITEM 659 - SEEDING AND MULCHING
10. ITEM 608 - 4" CONCRETE WALK
11. ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (446) PG64-22 (VARIABLE THICKNESS)
12. ITEM 407 - TACK COAT
13. ITEM 408 - PRIME COAT (APPLIED AT THE RATE OF 0.4 GAL./SQ. YD.)
14. NOT USED
15. ITEM 660 - SODDING UNSTAKED

(A) 3" ± ASPHALT PAVEMENT OVER 10" ± AGGREGATE SUBBASE
(B) 8" ± DENSE ASPHALT



WIDENING AND RESURFACING - S.R. 389

STA. 130+00.00 TO STA. 133+00.00

NOTES:

FOR VARIABLE PAVEMENT WIDTHS AND SIDEWALK LIMITS, SEE PAVEMENT DETAILS, SHEETS 15 - 18.

[A] WIDTH VARIES FROM 34'-0" @ STA. 129+50 TO 22'-0" @ STA. 130+00 DUE TO RIGHT TURN LANE TAPER FROM 12' TO 0'

[B] WIDTH VARIES FROM 34'-0" @ STA. 124+60 TO 22'-0" @ STA. 130+00 DUE TO RIGHT THRU LANE TAPER FROM 12' TO 0'

[C] PAVEMENT WIDTH VARIES FROM 18'-0", LT. & RT. @ STA. 130+00 TO 16'-0" LT. AND 8'-0", RT. @ STA. 133+00 DUE TO LEFT TURN LANE TRANSITION

[D] EXCEPT IN AREAS OF GUARDRAIL SECTIONS, PIPE UNDERDRAINS SHALL BE LOCATED IMMEDIATELY BEHIND THE CURB.

[E] OR PAVEMENT SLOPE, IF GREATER

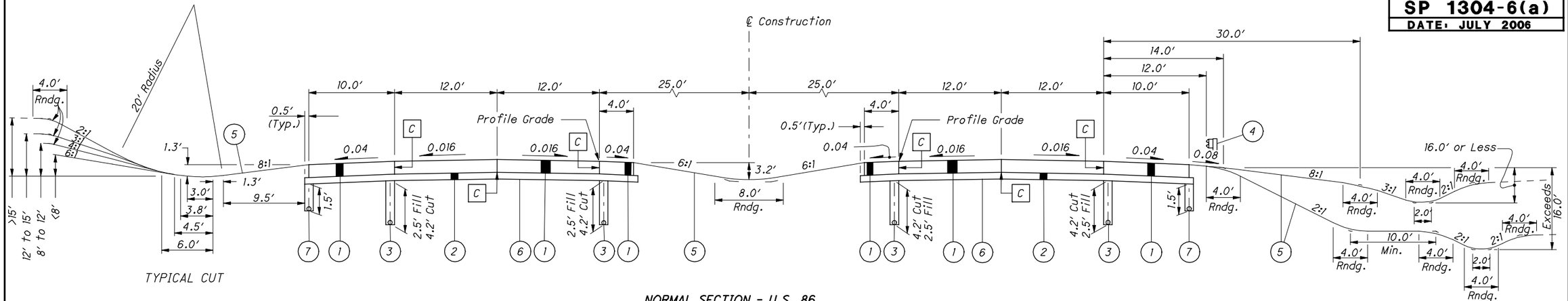
[F] ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446) PG64-22, IS TO BE ¼" ABOVE GUTTER PLATE.

TYPICAL SECTIONS - S.R. 389

GUE-389-17.63

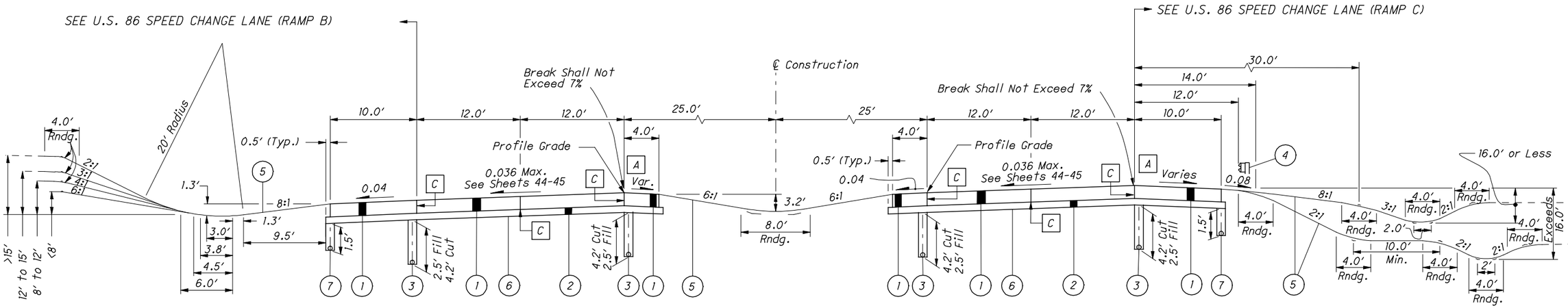
SP 1304-6(a)
DATE: JULY 2006

TYPICAL SECTIONS - U.S. 86



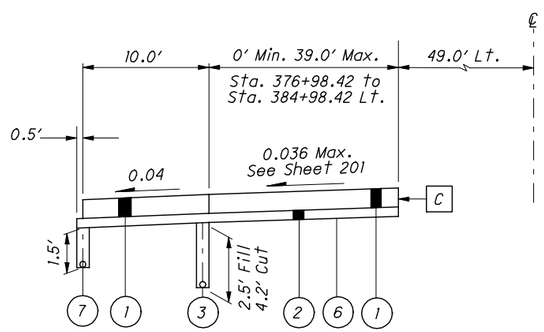
NORMAL SECTION - U.S. 86

Sta. 389+00 to Sta. 472+25
Sta. 501+75 to Sta. 559+00

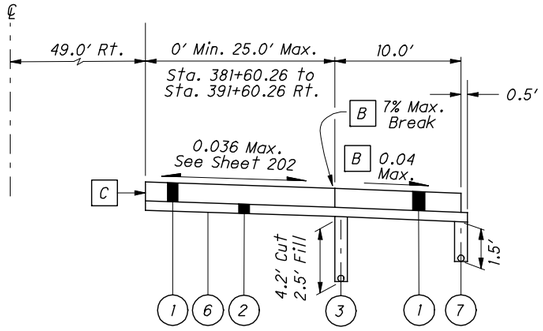


SUPERELEVATED SECTION - U.S. 86

Sta. 362+50 to Sta. 389+00
Sta. 472+25 to Sta. 501+75



U.S. 86 SPEED CHANGE LANE (RAMP B)



U.S. 86 SPEED CHANGE LANE (RAMP C)

A *0.04 Max. to 0.034 Min.*

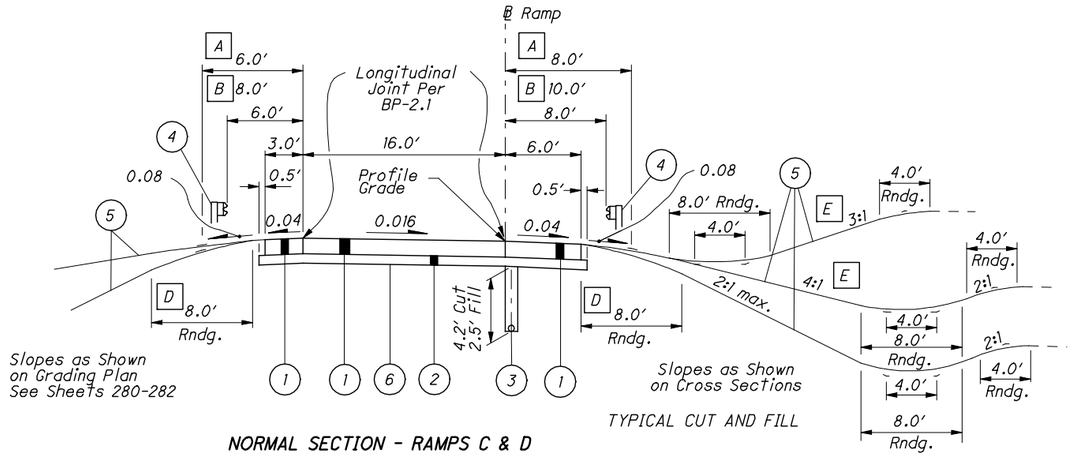
B *Slope conditions shown for high side shoulder adjacent to speed change lane pavement; For low side of shoulders adjacent to speed change lane pavement, shoulder slope shall be 0.04.*

C *Longitudinal Joint Per BP-2.1*

LEGEND

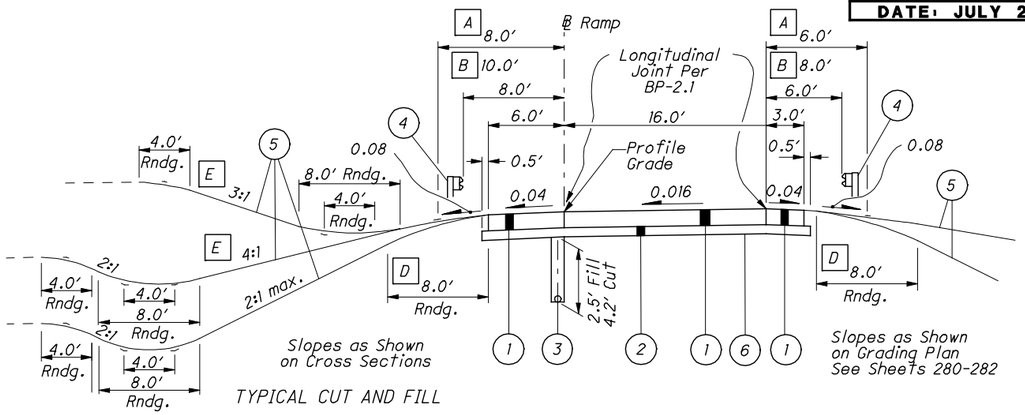
1. *ITEM 452 - 12" Non-Reinforced Concrete Pavement*
2. *ITEM 304 - 6" Aggregate Base*
3. *ITEM 605 - 6" Deep Pipe Underdrains*
4. *ITEM 606 - Guardrail, Type 5*
5. *ITEM 659 - Seeding and Mulching*
6. *ITEM 204 - Subgrade Compaction*
7. *ITEM 605 - 6" Base Pipe Underdrains*

MAD-86-10.64



NORMAL SECTION - RAMPS C & D

Sta. 465+49.13 to Sta. 477+25 Ramp C
Sta. 557+00 to Sta. 566+96.94 Ramp D



NORMAL SECTION - RAMPS A & B

Sta. 160+75 to Sta. 166+65.18 Ramp A
Sta. 266+17.10 to Sta. 271+50 Ramp B

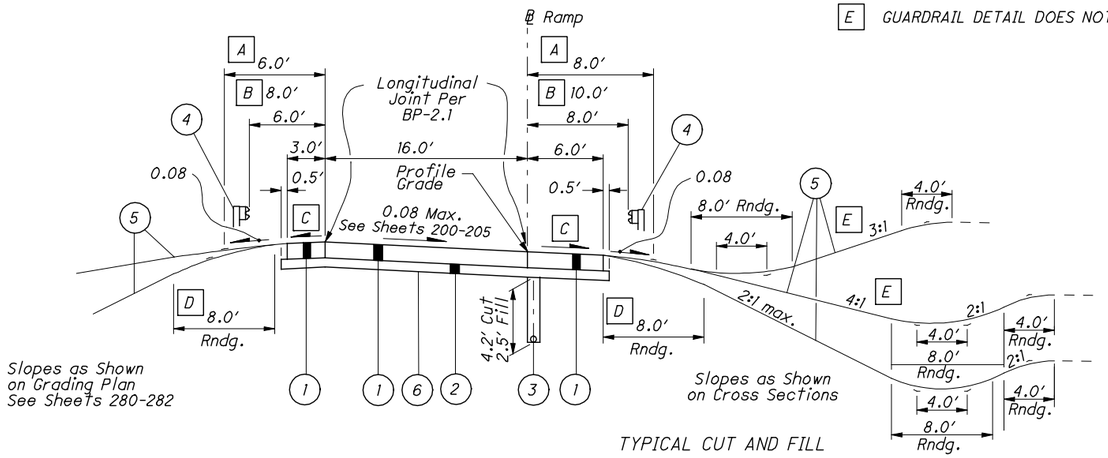
A WHEN FORESLOPE IS 6:1 OR FLATTER

B FOR GUARDRAIL SECTIONS AND NON-GUARDRAIL SECTIONS WITH FORESLOPE STEEPER THAN 6:1

C SEE DETAILS "A" AND "B"

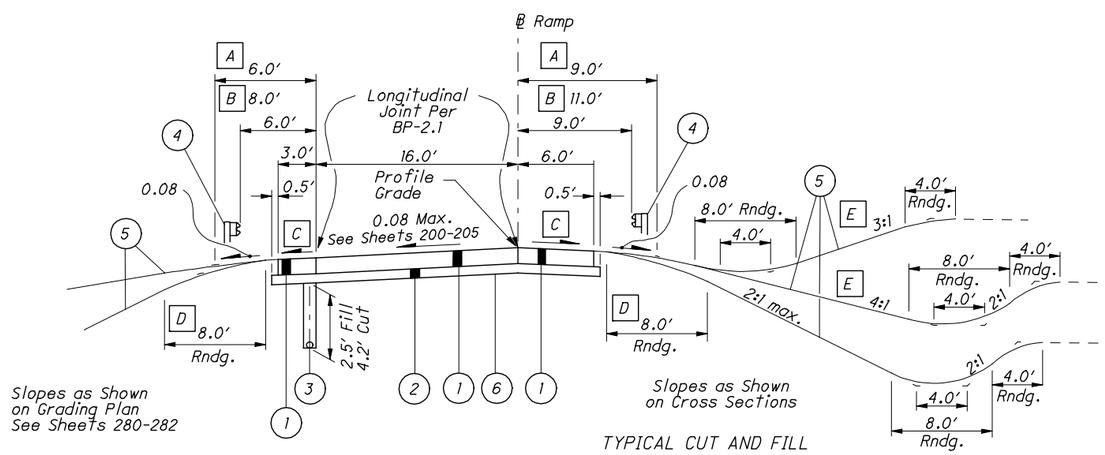
D 4′ ROUNDING ON GUARDRAIL SECTIONS; NO ROUNDING REQUIRED WHEN FORESLOPE IS 6:1 OR FLATTER.

E GUARDRAIL DETAIL DOES NOT APPLY



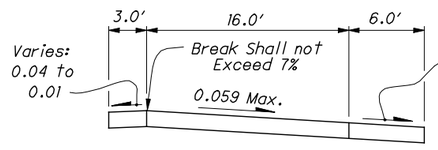
SUPERELEVATED SECTION (RIGHT) - RAMPS C & D

Sta. 477+25 to Sta. 481+60.26 Ramp C
Sta. 554+58.38 to Sta. 557+00 Ramp D

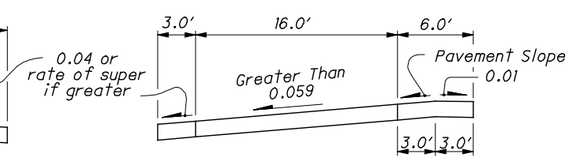


SUPERELEVATED SECTION (LEFT) - RAMPS E & F

Sta. 354+62.19 to Sta. 360+75 Ramp E
Sta. 571+50 to Sta. 577+03.57 Ramp F



DETAIL A



DETAIL B

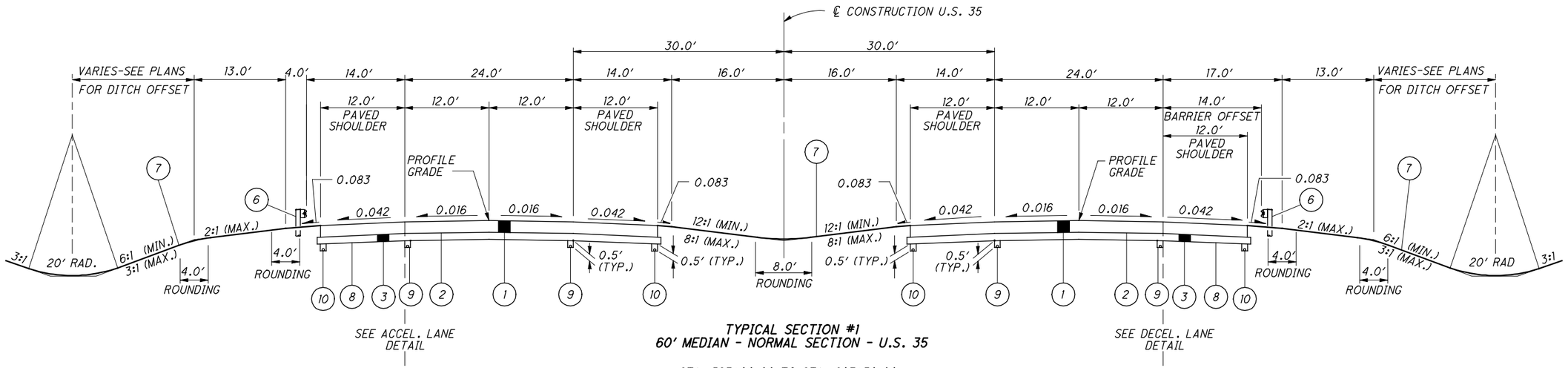
FOR LEGEND, SEE SHEET 9

TYPICAL SECTIONS - RAMPS A, B, C, D, E, & F

MAD-86-10.64

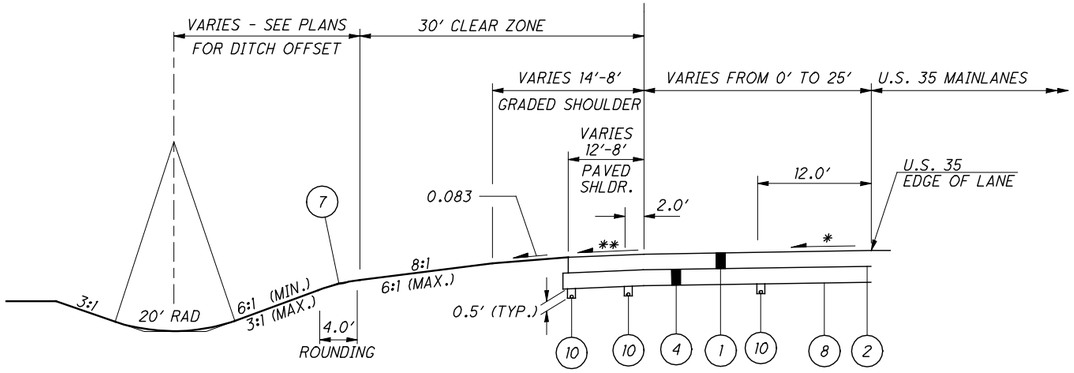
LEGEND

1. ITEM 880 - 10" ASPHALT CONCRETE (7 YEAR WARRANTY)
2. ITEM 408 - PRIME COAT (0.4 GAL/YD²)
3. ITEM 304 - 6" AGGREGATE BASE
4. ITEM 304 - 10" AGGREGATE BASE
5. ITEM 605 - 4" SHALLOW PIPE UNDERDRAINS, AS PER PLAN
6. ITEM 606 - GUARDRAIL, TYPE 5
7. ITEM 659 - SEEDING AND MULCHING
8. ITEM 204 - SUBGRADE COMPACTION
9. ITEM 605 - 6" BASE PIPE UNDERDRAINS
10. ITEM 605 - 4" BASE PIPE UNDERDRAINS

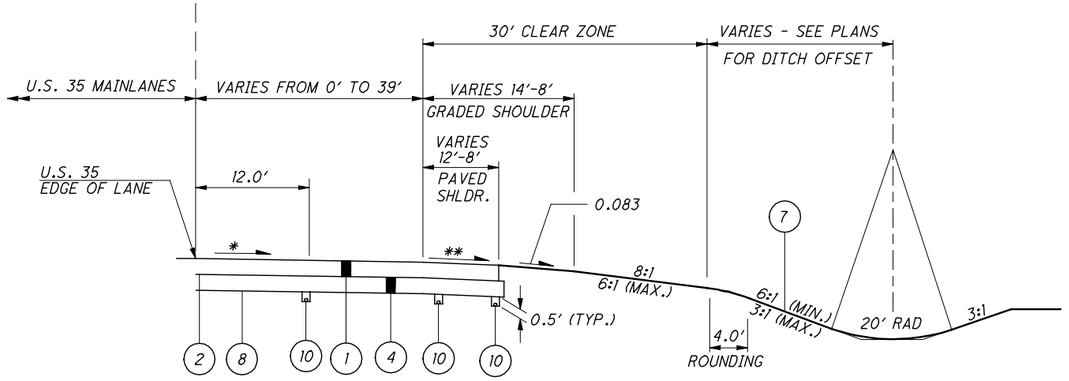


TYPICAL SECTION #1
60′ MEDIAN - NORMAL SECTION - U.S. 35

STA. 595+00.00 TO STA. 607+50.00



RAMP B ACCEL. LANE DETAIL



RAMP A DECEL. LANE DETAIL

* SLOPE MATCHES MAINLANE RATE (0.016) UNTIL SUPER TRANSITION FOR RAMP. TRANSITION FROM NORMAL CROSS SLOPE TO SUPERELEVATED SECTION BETWEEN STATIONS 598+75 AND 600+90.

** 0.042 OR RATE OF SUPER IF GREATER.

* SLOPE MATCHES MAINLANE RATE (0.016) UNTIL SUPER TRANSITION FOR RAMP. TRANSITION FROM NORMAL CROSS SLOPE TO SUPERELEVATED SECTION BETWEEN STATIONS 595+50 AND 596+25.

** 0.042 OR RATE OF SUPER IF GREATER.

TYPICAL SECTIONS - U.S. 35

GUE-35-8.36

ROUNDING

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

UTILITIES

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

ELECTRIC:
AMERICAN ELECTRIC POWER
215 NORTH FRONT STREET
COLUMBUS, OHIO 43215
(614) 464-7911

GAS:
COLUMBIA GAS OF OHIO
939 WEST GOODALE BOULEVARD
COLUMBUS, OHIO 43212
(614) 460-2240

TELEPHONE:
SBC AMERITECH
150 EAST GAY STREET
ROOM 6F
COLUMBUS, OHIO 43215
(614) 223-8535

CABLE:
TIME WARNER COMMUNICATIONS
1266 DUBLIN ROAD
COLUMBUS, OHIO 43212
(614) 481-5261

SANITARY, STORM:
CITY OF COLUMBUS
DIVISION OF SEWERAGE & DRAINAGE
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
(614) 645-7175

WATER:
CITY OF COLUMBUS
DIVISION OF WATER
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
(614) 645-7677

UTILITIES

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.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET FOR A TABLE CONTAINING PRIMARY PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PRIMARY PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PRIMARY PROJECT CONTROL

POSITIONING METHOD: STATIC GNSS
MONUMENT TYPE: A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID09

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83(CORS96)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE - SOUTH ZONE
COMBINED SCALE FACTOR: 1.000059007
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHOD AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 823.

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

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.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	8	2	10
30"	1	2	3
48"	0	1	1
60"	1	0	1

SEEDING AND MULCHING

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

659, SEEDING AND MULCHING 310 SQ. YD.

659, REPAIR SEEDING AND MULCHING 16 SQ. YD.
(310) X (0.05) = 15.5 SQ. YD.

659, SOIL ANALYSIS TEST 2 EACH

659, TOPSOIL 34 CU. YD.
(310) X (111 CY PER 1000 SY) = 34.4 SQ. YD.

659, COMMERCIAL FERTILIZER 0.05 TON
[(310) X (1 TON / 7410 SY)] + [(16 SY) X (1 TON / 11115 SY)] = 0.05 TON

659, LIME 0.1 ACRE
(310) X (1 ACRE / 4840 SY) = 0.06 ACRE

659, INTER-SEEDING 16 SQ. YD.
(310) X (0.05) = 15.5 SQ. YD.

659, WATER 2 M. GAL.
[(310) X (0.0054 M GAL / SY)] + [(16) x (.0027 GAL/SY)] = 2 M. GAL

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

RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE B	50 FT.
611, 6" CONDUIT, TYPE C	50 FT.
611, 6" CONDUIT, TYPE E	50 FT.
611, 6" CONDUIT, TYPE F	50 FT.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT SHOWN ON THE PLAN VIEW SHEETS. THE PROPOSED PROFILE SHALL FOLLOW THE PROPOSED ELEVATIONS SHOWN ON THE CROSS SECTION SHEETS. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL VARY TO PRODUCE THE PROPOSED ELEVATIONS SHOWN ON THE CROSS SECTIONS.

PRIMARY PROJECT CONTROL INFORMATION

POINT NUMBER	GRID COORDINATES U.S. SURVEY FEET		SCALED COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
	NORTHING	EASTING	NORTHING	EASTING		
CP1	648471.989	2085554.754	648510.253	2085677.816	634.80	PROJECT CONTROL - STEEL ROD SET IN CONCRETE
CP2	646970.005	2084508.912	647008.181	2084631.913	636.54	PROJECT CONTROL - STEEL ROD SET IN CONCRETE
CP3	647678.067	2084753.211	647716.285	2084876.226	655.38	AZIMUTH MARK- STEEL ROD SET IN CONCRETE
CP4	647186.714	2084974.770	647224.903	2084974.711	656.63	AZIMUTH MARK - STEEL ROD SET IN CONCRETE

ITEM 659, SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

SEE SHEET 18 FOR SEEDING AND MULCHING SUBSUMMARY.

WATERING AND MOWING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR PERMANENT SEEDED AREAS PER 659.09:

659, WATER	22 M.GAL.
659, MOWING	23 M SQ. FT.

EROSION CONTROL

ITEMS 601, 660 AND 670 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 660 OR 670. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

ITEM 604, CATCH BASIN NO. 2-3 AND 2-5 AS PER PLAN

CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 604 EXCEPT THAT THE GRATES SHALL BE NEENAH NO. R-4859-C OR EAST JORDAN NO. 5110 TYPE M2 OR APPROVED EQUALS.

ITEM 611 - CONDUIT BORED OR JACKED

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 10 FEET TO THE (EDGE OF PAVEMENT) NEAREST RAIL). PROVIDE A 0.50 INCH UNGALVANIZED CASING PIPE CONFORMING TO 748.06 THAT HAS JOINT WITH A CIRCUMFERENCIAL FULLY PENETRATING B-U4B WELD THAT IS PERFORMED BY AN ODOT APPROVED FIELD WELDER. THE INSTALLED CASING PIPE IN THE STORM WATER CONVEYANCE CARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

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

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

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

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

ITEM 605, AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

UNRECORDED UNTREATED NON-STORMWATER DRAINAGE

FURNISH NO CONTINUANCE FOR ANY UNRECORDED UNTREATED NON-STORMWATER DRAINAGE SUCH AS UNTREATED SEPTIC, UNTREATED WASTEWATER, UNTREATED CURTAIN/GRADIENT DRAINS, AND UNTREATED FOUNDATION FLOOR DRAINS DISTURBED BY THE WORK. PLUG ANY UNRECORDED, UNTREATED, NON-STORMWATER DRAINAGE WITH CLASS C CONCRETE AT THE RIGHT-OF-WAY LINE. PAYMENT FOR PLUGGING SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 OR 203 ITEM.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

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

UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS

FURNISH A CONTINUANCE FOR ALL UNRECORDED ACTIVE SANITARY SEWER CONNECTINOS SUCH AS SANITARY, WASTEWATER, CURTAIN/GRADIENT DRAINS, AND FOUNDATION FLOOR DRAINS DISTURBED BY THE WORK. FURNISH AN UNOBSTRUCTED CONTINUANCE OF THE UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS TO THE SATISFACTIN OF THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT-OF-WAY USE PERMIT. ALL SANITARY AND SANITARY WASTEWATER MAY ALSO REQUIRE A NPDES PERMIT FROM THE OHIO ENVIRONMENTAL PROTECTION AGENCY. REPORT ALL CONTINUANCE TO THE LOCAL HEALTH DEPARTMENT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.42, 707.43, 707.44, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35, 706.01, 706.02, OR 706.08 WITH JOINTS AS PER 706.11 OR 706.12.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 8" CONDUIT, TYPE B, FOR SANITARY 100 FT.

611, 6" CONDUIT, TYPE C, FOR SANITARY 100 FT.

ITEM 611 - 10' X 8' CONDUIT, TYPE A, 706.05, AS PER PLAN (DESIGN EARTH COVER = 6 FEET)

SEGMENTAL, PRECAST CONCRETE FOUR SIDED STRUCTURES WHICH ARE BELOW FINISHED GRADE AND WILL NOT BE PAVED DIRECTLY OVER SHALL HAVE ITEM SPECIAL, MEMBRANE WATERPROOFING, SHEET TYPE 2 (SEE PROPOSAL NOTE) APPLIED TO THE TOP SURFACE AND VERTICALLY DOWN THE ENTIRE SIDES FOR ALL PORTIONS OF THE STRUCTURE WHICH SHALL BE IN CONTACT WITH THE BACKFILL.

THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST STRUCTURE SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING. JOINT WRAP AS SPECIFIED IN 611.08 AND CONCRETE SEALING AS SPECIFIED IN 611.09 ARE NOT REQUIRED UNDER THE LIMITS OF THE MEMBRANE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR PERTINENT ITEM SPECIAL, MEMBRANE WATERPROOFING, SHEET TYPE (SEE PROPOSAL NOTE).

WHEN ITEM SPECIAL, SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE) IS SPECIFIED ON THE HEADWALLS OF A PRECAST CONCRETE STRUCTURE, ANY PRECAST STRUCTURE SECTIONS BEYOND THE LIMIT OF THE MEMBRANE WATERPROOFING SHALL ALSO BE SEALED WITH THE SAME SEALANT. PAYMENT FOR THE SEALING OF THE PRECAST CONCRETE STRUCTURE SURFACES SHALL BE MADE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL, SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE).

ITEM 614, MAINTAINING TRAFFIC

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND DIRECTOR OF PUBLIC WORKS, CITY OF PETERSBURG, AT LEAST 48 HOURS IN ADVANCE (EXCLUSIVE OF SATURDAY, SUNDAY OR HOLIDAYS) OF HIS INTENT TO DIVERT TRAFFIC AND TWO WEEKS IN ADVANCE OF A DETOUR.

NO CHANGE IN TRAFFIC PATTERNS SHALL TAKE PLACE DURING PEAK HOURS, 6:00 A.M. TO 9:00 A.M. AND 3:00 P.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY.

THE CONTRACTOR SHALL NOTIFY CONRAIL (PHONE: 215-596-2923) AND THE ENGINEER AT LEAST ONE WEEK IN ADVANCE OF HIS INTENT TO CLOSE CONRAIL TRACKS TO TRAFFIC FOR THE REMOVAL OF PORTIONS OF EXISTING BRIDGE OVER AND/OR NEAR THE TRACKS. THE TRACK CLOSURES SHALL BE LIMITED TO SATURDAY, SUNDAY AND/OR MONDAY.

ACCESS TO THE PARKING LOT ON BEECHMONT COURT (EAST OF CONRAIL TRACKS) SHALL BE MAINTAINED AT ALL TIMES AND OTHER LOCAL TRAFFIC SHALL BE MAINTAINED AS PER CMS 614.02(A).

S.R. 86 - TWO LANE, TWO WAY TRAFFIC SHALL BE MAINTAINED DURING PEAK HOURS AND AT ALL OTHER TIMES EXCEPT AS FOLLOWS:

ONE LANE, TWO WAY TRAFFIC (USING STANDARD DWG. MT-97.10) WILL BE PERMITTED FOR MINIMUM PERIODS CONSISTENT WITH REQUIREMENTS OF THE SPECIFICATIONS FOR COMPLETED ASPHALT COURSES AND WHEN NECESSARY FOR THE CONTRACTOR'S EQUIPMENT TO OCCUPY THE PAVEMENT FOR A SHORT TIME.

S.R. 86 MAY BE CLOSED TO TRAFFIC UNDER CONDITIONS STATED IN THE SEQUENCE OF CONSTRUCTION.

EASTERN AVENUE AND BEECHMONT CIRCLE MAY BE CLOSED FOR SHORT DURATIONS (15 MINUTES) DURING BRIDGE DEMOLITION OR BRIDGE BEAM ERECTION. TRAFFIC BACKUP SHALL BE CLEARED AFTER EACH CLOSURE AND ALLOWED TO PASS FREELY WITH NO RESTRICTION (ONE LANE IN EACH DIRECTION FOR 10 MINUTES BEFORE ANOTHER CLOSURE IS MADE. TWO LANE, TWO WAY TRAFFIC SHALL BE MAINTAINED DURING PEAK HOURS NOTED ABOVE.

RAMP C AND E MAY BE CLOSED AS PER THE SEQUENCE OF CONSTRUCTION; OTHERWISE, TRAFFIC SHALL BE MAINTAINED ON EXISTING, PAVEMENT FOR MAINTAINING TRAFFIC OR PROPOSED PAVEMENT BASE COURSES.

THE FINAL SURFACE AND INTERMEDIATE PAVEMENT COURSES SHALL BE COMPLETED TO THE EXTENT POSSIBLE DURING THE "FINAL DETOUR" PHASE. THE REMAINING WORK SHALL BE COMPLETED AFTER THE "FINAL DETOUR" PHASE WHILE MAINTAINING TRAFFIC.

BEECHMONT COURT SHALL BE OPEN AT ALL TIMES EXCEPT THAT ACCESS TO #3753 BEECHMONT COURT MAY BE CUT OFF CUT OFF WHEN THE DRIVE TO BEECHMONT CIRCLE IS COMPLETED. ACCESS TO #3755, #3711 BEECHMONT COURT AND #4747 EASTERN AVENUE SHALL BE MAINTAINED AT ALL TIMES.

THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN TRAFFIC THROUGHOUT THE PROJECT CONSTRUCTION FROM BEACHMONT AVENUE/CHURCH PLACE INTERSECTION TO EASTERN AVENUE BY KEEPING THE EXISTING STAIRS LOCATED IN THE NORTHEAST QUADRANT OF THE INTERSECTION OPEN FOR THE DURATION OF THE "INITIAL DETOUR PHASE" AND "PHASE I". THE EXISTING STAIRS SHALL REMAIN OPEN UNTIL PEDESTRIAN ACCESS IS PROVIDED BY OPENING THE PROPOSED STAIRS LOCATED IN THE SOUTHEAST QUADRANT AND CONSTRUCTED DURING PHASE I FOR PEDESTRIAN USE DURING "PHASE II" AND THE "FINAL DETOUR" PHASE.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

SEQUENCE OF CONSTRUCTION

INITIAL DETOUR PHASE

PREPARE TO CLOSE S.R. 86 TO TRAFFIC BY ERECTING TRAFFIC CONTROL (SEE SHEET 32 AND 33) AND COORDINATING THE DETOUR WITH THE CITY OF PETERSBURG. AT THE SAME TIME, SHORE OR BRACE PORTIONS OF THE EXISTING BRIDGE THAT WILL BE USED TO MAINTAIN TRAFFIC. PERFORM ANY OTHER WORK THAT CAN REDUCE THE TIME REQUIRED TO DETOUR TRAFFIC. SEE SHEET NO. 31 FOR DETOUR MAP.

WHEN CITY OF PETERSBURG FORCES HAVE COMPLETED THE DETOUR SIGNING OUTSIDE THE PROJECT AREA AND THE CONTRACTOR HAS COMPLETED ALL DETOUR SIGNING, CLOSURE SIGNING AND BARRIER PLACEMENT WITHIN THE PROJECT AREA, S.R. 86, RAMP C AND RAMP E SHALL BE CLOSED TO TRAFFIC. THIS CLOSURE SHALL BE LIMITED TO 60 CALENDAR DAYS.

WHILE THE HIGHWAY IS CLOSED PRIOR TO "PHASE I", THE FOLLOWING WORK SHALL BE COMPLETED.

- REMOVE THE PLATE GIRDER BRIDGES OVER EASTERN AVENUE AND CONRAIL.
- CONSTRUCT A TEMPORARY BRIDGE AT EACH LOCATION.
- COMPLETE SHORING AND BRACING.
- SAW CUT THE EXISTING CONCRETE BRIDGE SUPERSTRUCTURE AND PIERS AND BEGIN TO REMOVE THE SOUTH PORTION OF THE EXISTING BRIDGE.
- COMPLETE DRIVE TO #3753-55 BEECHMONT COURT.
- CONSTRUCT PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN, AT RAMP C AND E.
- INSTALL THE TEMPORARY TRAFFIC SIGNAL (INCLUDING THE "PREPARE TO STOP WHEN FLASHING" ADVANCE WARNING SIGN AT THE INTERSECTION OF RAMP F/CHURCH AND S.R. 86.
- ERECT TRAFFIC CONTROL AND PORTABLE CONCRETE BARRIER FOR "PHASE I" PRIOR TO OPENING RAMP C. THE SOLID, DOUBLE YELLOW CENTERLINE SHALL BE IN PLACE PRIOR TO PHASE I OPENING TO TRAFFIC.

PHASE I AND II

THE CONTRACTOR IS EXPECTED TO USE ALL MEANS POSSIBLE POSSIBLE INCLUDING, BUT NOT RESTRICTED TO, MULTIPLE SHIFTS, TWENTY-FOUR (24) HOURS PER DAY SCHEDULING SEVEN (7) DAYS A WEEK (SUBJECT TO THE RESTRICTIONS OF SECTION 910.8 OF THE CITY OF PETERSBURG MUNICIPAL CODE GOVERNING NIGHTTIME CONSTRUCTION BETWEEN THE HOURS OF 11:00 P.M. AND 7:00 A.M.), ADDITIONAL CREWS, LIGHTING FOR NIGHT WORK, MULTIPLE MATERIAL SOURCES, MULTIPLE SUBCONTRACTORS, ETC., IN ORDER TO COMPLETE PHASE I AND II WITHIN 120 CALENDAR DAYS. NO TIME EXTENSIONS (SEE PROPOSAL NOTE) OF THIS INTERIM COMPLETION PERIOD WILL BE CONSIDERED. FAILURE TO OPEN THE HIGHWAY TO FOUR LANE TRAFFIC WILL RESULT IN THE ASSESSMENT OF $15,000.00 LIQUIDATED DAMAGES FOR EACH CALENDAR DAY (INCLUDING WEEKENDS AND HOLIDAYS) BEYOND THE ALLOTTED TIME.

PHASE I

AFTER THE INITIAL PHASE DETOUR WORK IS COMPLETED, REOPEN S.R. 86 AND RAMPS C AND E TO TRAFFIC USING THE TEMPORARY BRIDGES AND A PORTION OF THE EXISTING BRIDGE TO MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION.

COVER DETOUR SIGNS FOR RE-USE DURING THE "FINAL DETOUR" PHASE.

COMPLETE CONSTRUCTION OF THE SOUTH ONE HALF OF THE PROPOSED BRIDGE, RETAINING WALLS, TEMPORARY RETAINING WALLS AND STAIRS IN THE SE QUADRANT OF S.R. 86 AND CHURCH PLACE/RAMP F INTERSECTION.

ERECT TRAFFIC CONTROL AND PORTABLE CONCRETE BARRIER, AND ADJUST TEMPORARY TRAFFIC SIGNAL FOR "PHASE II". THE SOLID, DOUBLE YELLOW CENTERLINE SHALL BE IN PLACE PRIOR TO "PHASE II" OPENING TO TRAFFIC.

PHASE II

AFTER PHASE I WORK IS COMPLETED, RELOCATE TRAFFIC ON S.R. 86 AND RAMPS C AND E FOR "PHASE II" USING THE COMPLETED PORTION OF THE NEW STRUCTURE (MAINTAINING ONE LANE OF TRAFFIC IN EACH DIRECTION) AND NEW FULL DEPTH BASE COURSES ON THE RAMPS.

REMOVE THE TEMPORARY BRIDGES AND THE BALANCE OF THE EXISTING BRIDGE. COMPLETE CONSTRUCTION (EXCEPT THE GAP (SECTION OF DECK).

COMPLETE WORK ON BEECHMONT COURT.

SOME ITEMS (I.E. SANITARY) ARE NOT INCLUDED IN THE SEQUENCE, BECAUSE THEY HAVE ONLY MINOR EFFECT ON MAINTAINING TRAFFIC. THE CONTRACTOR MAY COMPLETE THIS WORK WHEN CONVENIENT DURING THE SEQUENCE OF CONSTRUCTION.

FINAL DETOUR PHASE

UNCOVER DETOUR SIGNS, SET UP CLOSURE SIGNING AND PLACE BARRIER TO CLOSE S.R. 86 AND RAMP C TO TRAFFIC. COORDINATE THE CLOSURE WITH THE CITY OF PETERSBURG, AS BEFORE. SEE SHEET 31 FOR DETOUR MAP.

WHILE THE HIGHWAY IS CLOSED, THE FOLLOWING WORK SHALL BE CONSTRUCTED:

- CLOSE THE REMAINING GAP IN THE DECK NOT COMPLETED IN IN "PHASE I AND II".
- COMPLETE THE PLACEMENT OF FULL DEPTH PAVEMENT BASE COURSES.

REMOVE TRAFFIC SIGNAL FOR MAINTAINING TRAFFIC.

THIS CLOSURE WILL BE LIMITED TO FIVE DAYS, TWO OF WHICH SHALL BE SATURDAY AND SUNDAY.

FAILURE TO RE-OPEN ON TIME WILL RESULT IN THE ASSESSMENT OF $25,000.00 LIQUIDATED DAMAGES FOR EACH CALENDAR DAY (INCLUDING WEEKENDS AND HOLIDAYS) BEYOND THE ALLOTTED TIME.

PRIOR TO OPENING THE PROJECT TO TRAFFIC, THE SOLID, DOUBLE YELLOW CENTERLINE SHALL BE IN PLACE AND MAINTAINED DURING SURFACE AND INTERMEDIATE PAVEMENT COURSE PLACEMENT OPERATIONS NOT COMPLETED IN THE "FINAL DETOUR" PHASE.

AFTER THE "FINAL DETOUR" PHASE, IT MAY BE NECESSARY TO REDUCE THE NUMBER OF LANES TO LESS THAN FOUR IN ORDER TO COMPLETE THE PROJECT. THIS WILL BE ACCEPTABLE BUT ONLY DURING ACTUAL CONTRACTOR WORKING HOURS WITH TRAFFIC CONTROL PER APPROPRIATE STANDARD DRAWINGS. NO REDUCTION IN THE NUMBER OF THE LANES SHALL BE PERMITTED DURING PEAK HOURS, THAT BEING FROM 6:00 A.M. TO 9:00 A.M. AND FROM 3:00 P.M. TO 6:00 P.M.

SEQUENCE OF CONSTRUCTION

IT IS THE INTENT OF THE FOLLOWING SEQUENCE OF CONSTRUCTION TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC; THEREFORE, ALL PHASES SHALL HAVE STRICT ADHERENCE.

ALL TEMPORARY OR PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE ANY PAVEMENT IS OPENED TO TRAFFIC.

PHASE ONE

THE CONTRACTOR SHALL REPLACE THE OUTSIDE BERM WITH AN 8' SHOULDER IN THE DESIGNATED AREAS WITH TEMPORARY PAVEMENT USING A ONE LANE CLOSURE PER MT-95.30.
LANE CLOSURE PER MT-95.30.

AREAS OF SHOULDER REPLACEMENT:

EASTBOUND	WESTBOUND
50+49 to 51+28.25	1833+00 to 8+86
55+81.25 to 58+20	48+90 to 51+28.25
116+23 to 128+26	55+81.25 to 60+36
150+12 to 160+10	72+48 to 88+20.5
167+67 to 175+76.71	95+78 to 102+82
177+35.21 to 183+56	112+72 TO 126+26
	136+82 to 144+13
	172+63 to 175+76.71
	177+35.21 to 180+55

AFTER THE SHOULDER REPLACEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL THEN PERFORM THE JOINT REPAIRS IN THE FOLLOWING AREAS:

EASTBOUND AREA

A	STA. 147+97 TO STA. 150+05
B	STA. 113+12 TO STA. 115+94
C	STA. 58+26 TO STA. 63+00
D	STA. 1828+26 TO STA. 1832+61

WESTBOUND AREA

E	STA. 103+30 TO STA. 107+08
F	STA. 109+40 TO STA. 112+44
G	STA. 129+43 TO STA. 136+63
H	STA. 144+25 TO STA. 147+82

THE JOINT REPAIRS SHALL BE PERFORMED IN ALPHABETICAL ORDER ON EACH SIDE AND THE PAVEMENT WILL BE OPEN TO TRAFFIC AS SPECIFIED IN THE PLAN NOTE.

FOR ADDITIONAL PHASE I DETAILS AND QUANTITIES SEE SHEETS 22-23.

PHASE TWO

THE CONTRACTOR SHALL PERFORM THE WORK ON THE INSIDE LANES, WHICH SHALL INCLUDE THE JOINT REPAIR, FULL-DEPTH PAVEMENT, BERM REPLACEMENT, AND BRIDGE REHABILITATION. THE JOINT REPAIRS SHALL BE DONE PRIOR TO THE BERM REPLACEMENT. TRAFFIC SHALL BE MAINTAINED DURING THIS PHASE PER THE DETAILS SHOWN ON SHEETS 24 THRU 37, EXCEPT THAT

CORES WILL BE TAKEN DURING THIS PHASE WHICH WILL REQUIRE THE CLOSING OF BOTH LANES FOR A BRIEF PERIOD. ODOT WILL PROVIDE TRAFFIC MAINTENANCE FOR THE CORING PRO-

PHASE THREE

THE CONTRACTOR SHALL PERFORM THE WORK ON THE OUTSIDE LANES, WHICH SHALL INCLUDE THE JOINT REPAIR, FULL-DEPTH PAVEMENT, BERM REPLACEMENT, AND BRIDGE REHABILITATION. THE JOINT REPAIRS SHALL BE DONE PRIOR TO THE BERM REPLACEMENT. TRAFFIC MAINTENANCE DETAILS FOR THIS PHASE ARE SHOWN ON SHEETS 38 THRU 52.

PHASE FOUR

THE CONTRACTOR SHALL GRIND AND SEAL THE PAVEMENT MAINTAINING TRAFFIC BY USE OF A ONE-LANE CLOSURE PER STANDARD DRAWING MT-95.30. THIS WORK SHALL BE PERFORMED ON BOTH LANES AND IN BOTH DIRECTIONS.

BRIDGES

WEST RIVER ROAD AND VERMILION ROAD BRIDGES WILL BE CONSTRUCTED PART-WIDTH USING A TEMPORARY SIGNAL INSTALLATION TO MAINTAIN ONE LANE, TWO-WAY TRAFFIC. DETAILS FOR MAINTAINING TRAFFIC AT THESE BRIDGES ARE SHOWN ON SHEETS 53 AND 54. SUNNYSIDE ROAD AND CLAUS ROAD BRIDGES MAY BE CLOSED FOR A MAXIMUM OF 30 DAYS EACH. BUT THEY SHALL NOT BE CLOSED AT THE SAME TIME. THE DETOUR PLAN FOR THESE BRIDGES IS SHOWN ON SHEETS 19 AND 20. DETAILS FOR THE VERMILION INTERCHANGE BRIDGE CLOSSURE ARE SHOWN ON SHEET 21.

SIDE ROAD STRUCTURES OVER FREEWAY

FOUR LANE, TWO WAY TRAFFIC ON THE FREEWAY SHALL BE MAINTAINED AT ALL TIMES DURING THE REHABILITATION OF THE EXISTING STRUCTURES OVER THE FREEWAY, EXCEPT AS FOLLOWS:

1. DURING THE RETROFITTING OF THE EXISTING OVERHEAD PARAPETS.
2. UNLESS OTHERWISE SHOWN IN THE PLAN.

A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT TO THE TRAVEL LANES OF THE FREEWAY DURING RETROFITTING OF EXISTING CONCRETE PARAPETS. THE DESIGN OF THE NET OR PLATFORM SHALL CONFORM WITH OSHA REQUIREMENTS, SHALL HAVE APPROVAL FROM THE ODOT OFFICE OF STRUCTURAL ENGINEERING, AND SHALL REMAIN IN PLACE UNTIL WORK HAS BEEN COMPLETED. THE EXISTING VERTICAL CLEARANCE OVER THE FREEWAY SHALL BE MAINTAINED AT ALL TIMES.

IN THE EVENT A LANE RESTRICTION ON THE FREEWAY IS NECESSARY, THE METHOD OF INSTALLATION AND DESIGN OF TEMPORARY AND DESIGN OF TEMPORARY LANE CLOSURE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING MT-95.30. COST FOR THE ABOVE WORK SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN ITEM 614, MAINTAINING TRAFFIC.

FREEWAY STRUCTURES OVER SIDE ROADS

TWO LANE, TWO WAY TRAFFIC ON SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES DURING REPLACEMENT OF BEARINGS AND REHABILITATION OF MAINLINE BRIDGES, EXCEPT DURING THE FOLLOWING OPERATIONS:

1.) DEMOLITION OF THE EXISTING BRIDGE PARAPETS.

2.) CONSTRUCTION OF THE PROPOSED PARAPET OVER THE LOCAL ROAD OR STATE ROUTE WHERE THE ENGINEER BELIEVES TEMPORARY CLOSURE OF A TRAFFIC LANE IS WARRANTED.

A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT THE UNDERPASS ROADWAY DURING REMOVAL OF EXISTING AND CONSTRUCTION OF NEW CONCRETE PARAPETS. THE DESIGN OF THE NET OR PLATFORM SHALL CONFORM WITH OSHA REQUIRE-

MENTS, SHALL HAVE APPROVAL FROM THE ODOT OFFICE OF STRUCTURAL ENGINEERING, AND SHALL REMAIN IN PLACE UNTIL WORK HAS BEEN COMPLETED. THE EXISTING VERTICAL CLEARANCE

OVER THE UNDERPASS ROADWAY SHALL BE MAINTAINED AT ALL TIMES. IN THE EVENT A LANE RESTRICTION IS NECESSARY, THE METHOD OF INSTALLATION AND DESIGN OF THE TEMPORARY LANE CLOSURE SHALLCONFORM TO STANDARD DRAWINGS MT-95.30 OR MT-97.10. COST FOR THE ABOVE WORK SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

THE PAVEMENT BUILDUP SHALL BE:

6" - ITEM 301, ASPHALT CONCRETE BASE, PG64-22
4" - ITEM 304, AGGREGATE BASE

PAYMENT SHALL INCLUDE ANY ADDITIONAL COST OF ITEM 203, EXCAVATION TO PLACE THE ITEM 301 OR ITEM 304. THE PAVEMENT FOR MAINTAINING TRAFFIC SHALL BE REMOVED UNDER ITEM 203.

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN

THE PAVEMENT BUILDUP SHALL BE:

6" - ITEM 301, ASPHALT CONCRETE BASE, PG64-22
4" - ITEM 304, AGGREGATE BASE.

PAYMENT SHALL INCLUDE ANY ADDITIONAL COST OF ITEM 203, EXCAVATION TO PLACE THE ITEM 301 OR ITEM 304. THE SUBGRADE SHALL BE COMPACTED TO A DEPTH OF 12" ACCORDING TO THE CONSTRUCTION AND MATERIALS SPECIFICATION, SECTION 204.03 AND PAYMENT FOR SUCH WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 204, SUBGRADE COMPACTION (SEE SHEETS 148 THRU 151 FOR QUANTITIES). THIS PAVEMENT SHALL REMAIN IN PLACE.

NOTICE OF CLOSURE SIGNS

THESE SIGNS 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 BESIDE OF THE ROAD/RAMP FACING TRAFFIC AND SHALL BE LOCATED IN THE FIELD SO AS NOT TO INTERFERE WITH ANY

PERMANENT SIGNS. THE SIGNS SHOULD BE ERECTED ALONG ROADWAYS AT THE POINT OF CLOSURE. THE SIGNS MAY BE ANYWHERE ALONG RAMPS WHERE THEY ARE VISIBLE TO THE MOTORIST USING THE RAMP, EXCEPT THAT ON ENTRANCE RAMPS, THE SIGNS SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTION TO THE MOTORIST.

PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AND SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING AND REMOVING THE SIGNS, INCLUDING SUPPORTS.

W20-H14-60

MAINTENANCE OF TRAFFIC GENERAL NOTES

WOO-96-16.21

MAINTENANCE OF TRAFFIC
DETOUR MAP

(1)
DETOUR
M4-8-24
722
M1-5-30-3

(2)
DETOUR
M4-8-24
722
M1-5-30-3
M5-1R-21

(3)
DETOUR
M4-8-24
722
M1-5-30-3
M5-1L-21

(4)
DETOUR
M4-8-24
722
M1-5-30-3
M6-1-21

(5)
DETOUR
M4-8-24
722
M1-5-30-3
M6-1-21

(6)
ROAD CLOSED
LOCAL TRAFFIC ONLY
R11-3-60
DETOUR
M4-10L-48

(7)
ROAD CLOSED
4 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3A-60
DETOUR
M4-10R-48

(8)
ROAD
CLOSED
R11-2-48

(9)
DETOUR
AHEAD
W20-2-36

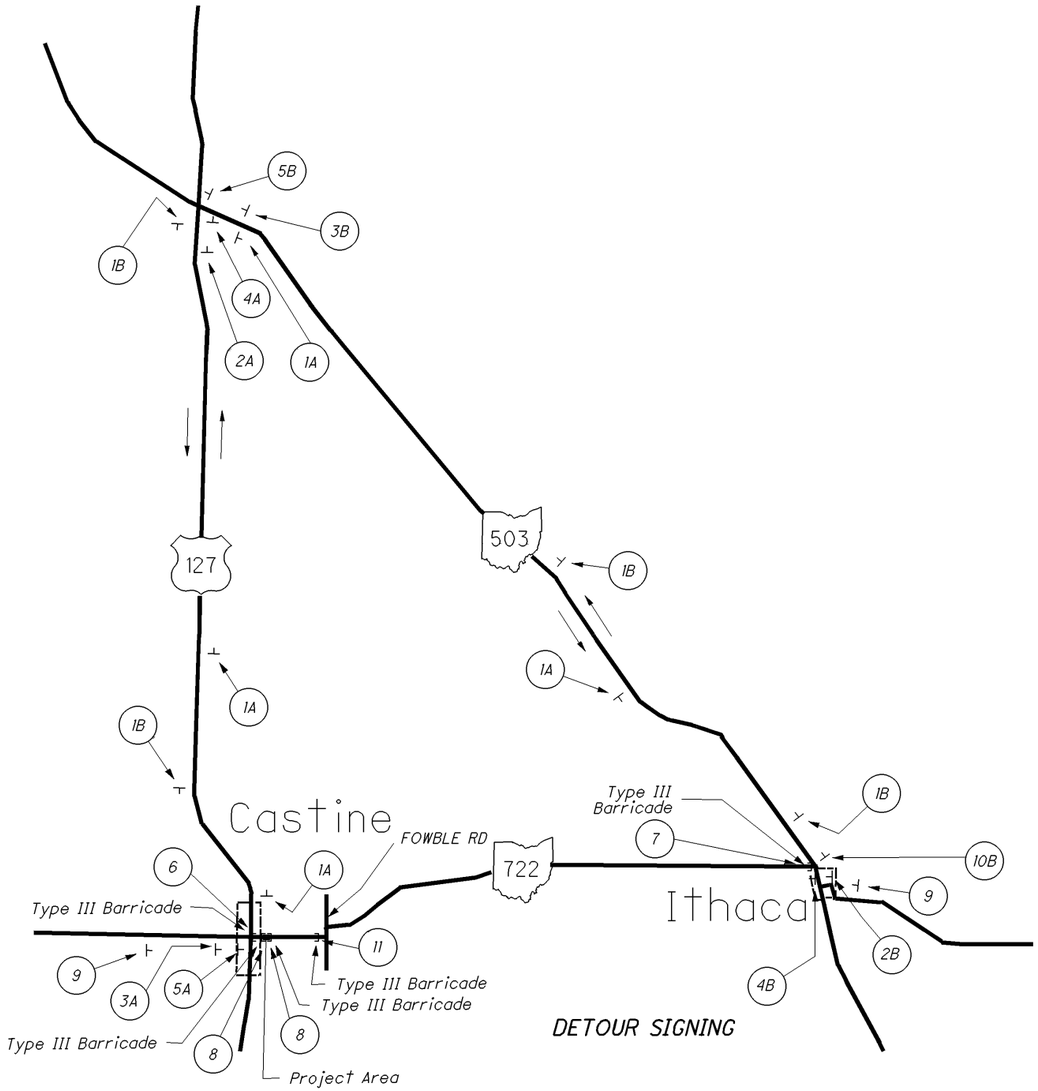
(10)
DETOUR
M4-8-24
722
M1-5-30-3
M6-3-21

(11)
ROAD CLOSED
0.5 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3A-60

(A)
EAST
M3-2-24

(B)
WEST
M3-4-24

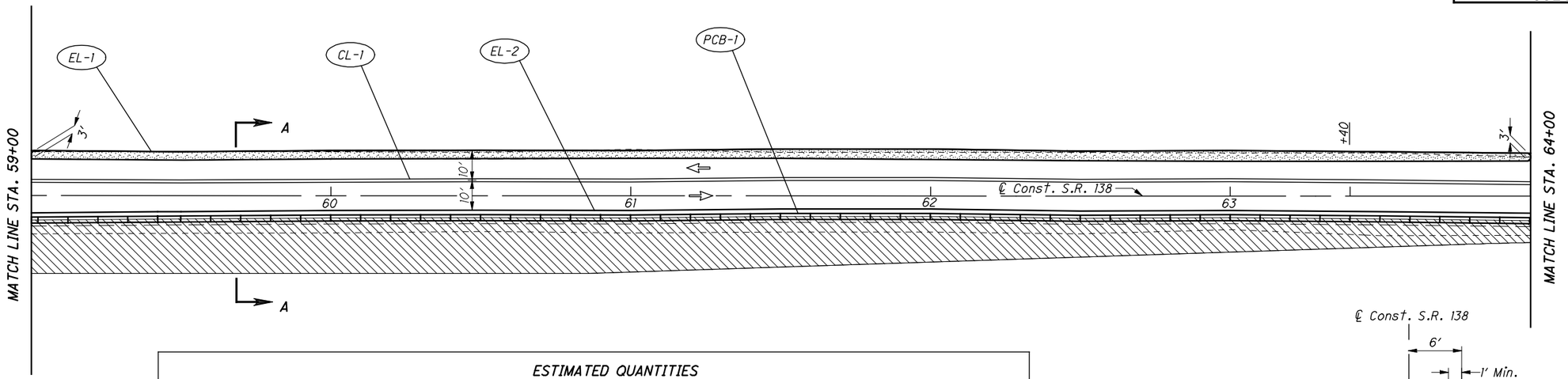
For Maintenance of Traffic Notes, see Sheet 7.



DETOUR SIGNING

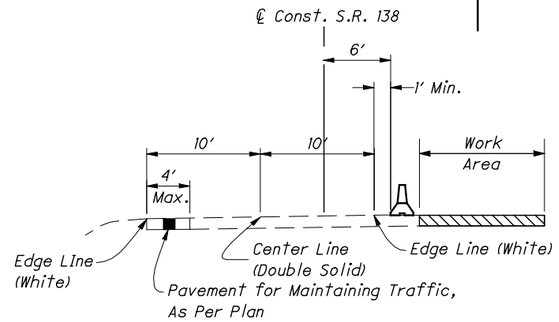
DAR-722-6.34

SP 1306-4(a)
DATE: JULY 2006

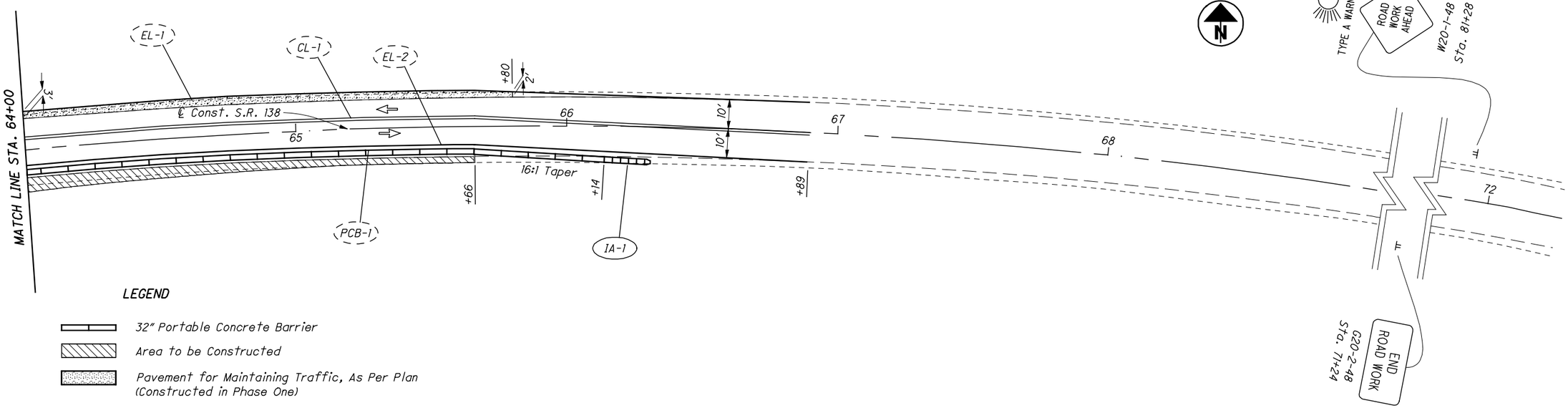


ESTIMATED QUANTITIES

REF No.	Station to Station	Side	614 WORK ZONE IMPACT ATTENUATOR (EACH)	614 BARRIER REFLECTOR, TYPE B2 (EACH)	614 OBJECT MARKER, TWO WAY (EACH)	614 WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID) (MILE)	614 WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE I (WHITE) (MILE)	622 PORTABLE CONCRETE BARRIER, 32" (FT)
CL-1	59+00 to 66+89	Lt.				0.15		
EL-1	59+00 to 66+89	Lt.					0.15	
EL-2	59+00 to 66+89	Rt.					0.15	
PCB-1	59+00 to 66+14	Lt.		15	15			714
IA-1	66+14 to 66+39	Lt.	1					
TOTALS CARRIED TO SUB-SUMMARY			1	15	15	0.15	0.30	714



SECTION A-A



LEGEND

- 32" Portable Concrete Barrier
- Area to be Constructed
- Pavement for Maintaining Traffic, As Per Plan (Constructed in Phase One)
- Direction of Traffic

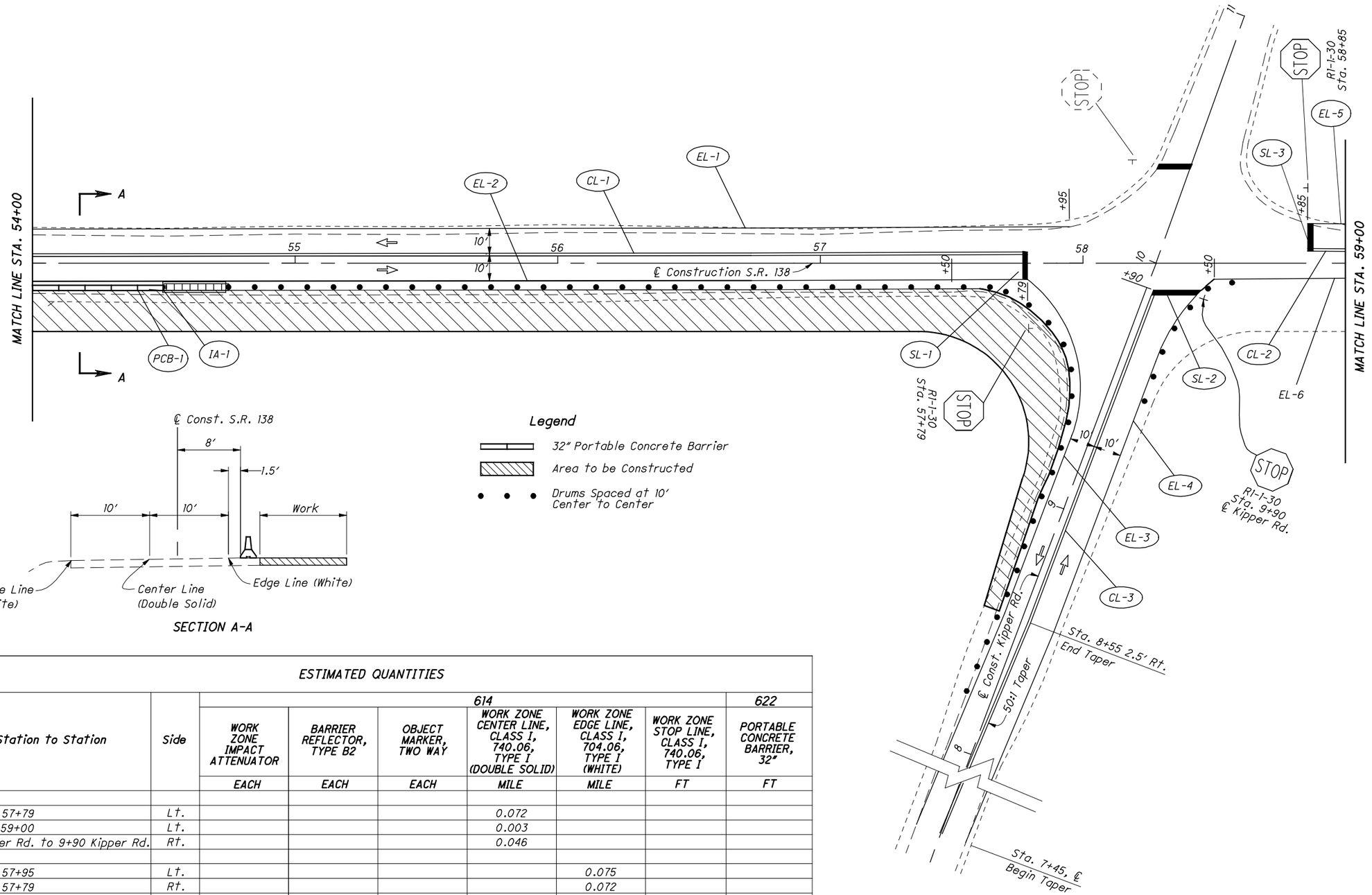
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DAN
CHECKED DEK

MAINTENANCE OF TRAFFIC PHASE TWO
STA. 59+00 TO STA. 72+25

SCI-138-11.44

SP. 1306-4(b)
DATE: JULY 2006



SECTION A-A

Legend

- 32″ Portable Concrete Barrier
- Area to be Constructed
- Drums Spaced at 10′ Center to Center

ESTIMATED QUANTITIES

REF No.	Station to Station	Side	614 WORK ZONE IMPACT ATTENUATOR	614 BARRIER REFLECTOR, TYPE B2	614 OBJECT MARKER, TWO WAY	614 WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	614 WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE I (WHITE)	614 WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	622 PORTABLE CONCRETE BARRIER, 32″
			EACH	EACH	EACH	MILE	MILE	FT	FT
CL-1	54+00 to 57+79	Lt.				0.072			
CL-2	58+85 to 59+00	Lt.				0.003			
CL-3	7+45 Kipper Rd. to 9+90 Kipper Rd.	Rt.				0.046			
EL-1	54+00 to 57+95	Lt.					0.075		
EL-2	54+00 to 57+79	Rt.					0.072		
EL-3	57+79 to 7+45 Kipper Rd.	Rt.					0.051		
EL-4	7+45 Kipper Rd. to 58+50	Rt.					0.049		
EL-5	58+85 to 59+00	Lt.					0.003		
EL-6	58+50 to 59+00	Rt.					0.009		
SL-1	57+79	Rt.						15	
SL-2	9+90 Kipper Rd.	Rt.						18	
SL-3	58+85	Rt.						10	50
PCB-1	54+00 to 54+50	Rt.		2	2				
IA-1	54+50 to 54+75	Rt.	1						
TOTALS CARRIED TO SUBSUMMARY			1	2	2	0.05	0.10	43	50

HORIZONTAL SCALE IN FEET
0 10 20 40

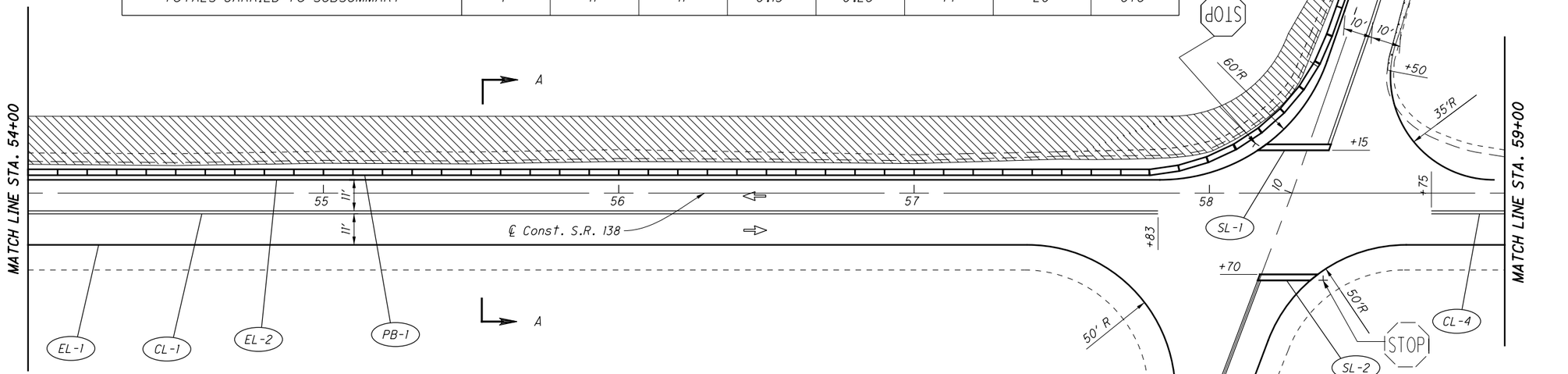
CALCULATED DAN
CHECKED DEK

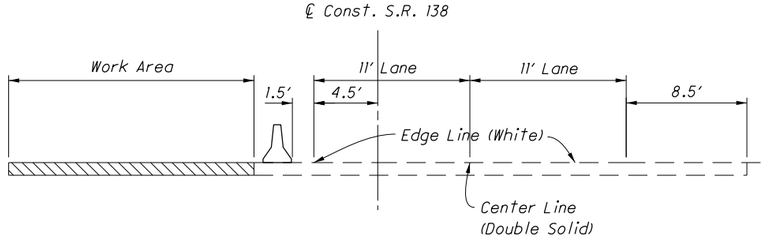
MAINTENANCE OF TRAFFIC PHASE THREE
STA. 54+00 TO STA. 59+00

SCI-138-11.44

ESTIMATED QUANTITIES

REF No.	Station to Station	SIDE	614 WORK ZONE IMPACT ATTENUATOR	614 BARRIER REFLECTOR, TYPE B2	614 OBJECT MARKER, TWO WAY	614 WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	614 WORK ZONE EDGE LINE CLASS I, 704.06, TYPE I (WHITE)	614 WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	622 PORTABLE BARRIER, 32"
			EACH	EACH	EACH	MILE	MILE	FT	SY	FT
CL-1	54+00 to 57+83	Rt.				0.07				
CL-2	8+55 Kipper Rd. to 9+70 Kipper Rd.	Rt.				0.02				
CL-3	10+15 Kipper Rd. to 11+45 Kipper Rd.	Lt.				0.03				
CL-4	58+75 to 59+00	Rt.				0.01				
EL-1	54+00 to 8+55 Kipper Rd	Rt.					0.09			
EL-2	54+00 to 12+00 Kipper Rd.	Lt.					0.12			
EL-3	8+55 Kipper Rd. to 59+00	Rt.					0.04			
EL-4	11+45 Kipper Rd. to 59+00	Lt.					0.03			
SL-1	10+15 Kipper Rd	Lt.						24		
SL-2	9+70 Kipper Rd.	Rt.						20		
PCB-1	54+00 to 11+48 Kipper Rd.	Lt.		11	11					578
IA-1	11+48 Kipper Rd. to 11+73 Kipper Rd.	Lt.	1							
TP-1	10+50 Kipper Rd. to 11+70 Kipper Rd.	Rt.							20	
TOTALS CARRIED TO SUBSUMMARY			1	11	11	0.13	0.28	44	20	578





SECTION A-A

LEGEND

- 32" Portable Barrier
- Area to be Constructed
- Pavement for Maintaining Traffic, Class A, As Per Plan
- Direction of Traffic

SP 1306-4(c)
DATE: JULY 2016

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CAN
CHECKED DEK

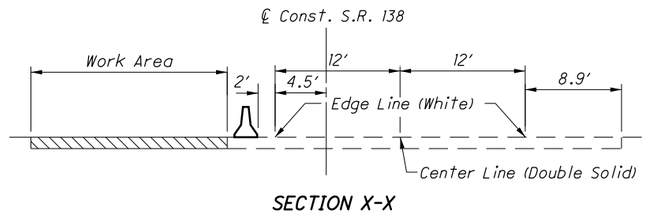
MAINTENANCE OF TRAFFIC PHASE FOUR
STA.54+00 TO STA.59+00

SCI-138-11.44

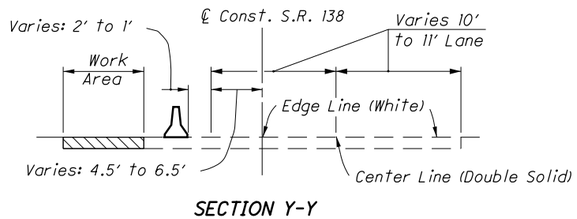
CALCULATED DAN
CHECKED DEK

HORIZONTAL SCALE IN FEET
0 10 20 40

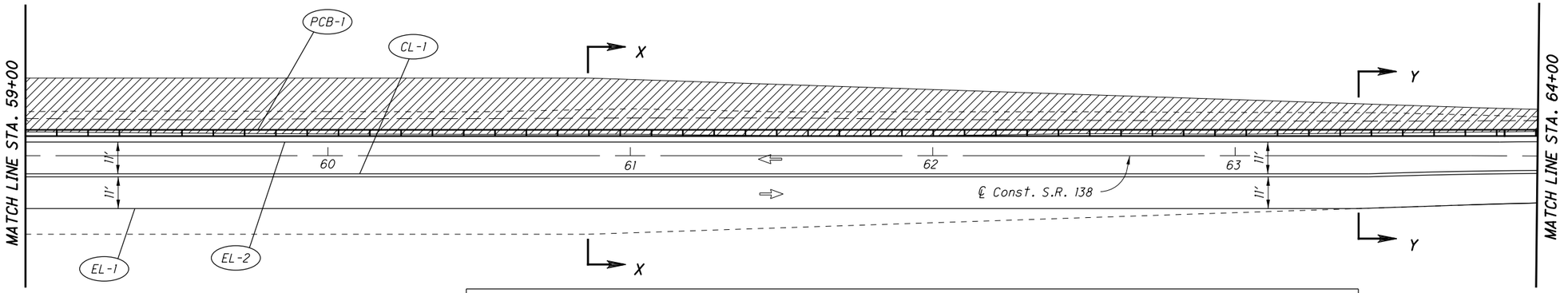
MAINTENANCE OF TRAFFIC PHASE FIVE
STA.59+00 TO STA.71+60



SECTION X-X

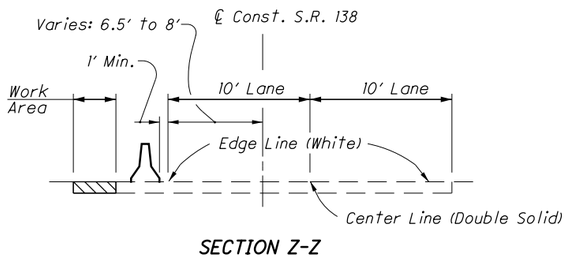


SECTION Y-Y



LEGEND

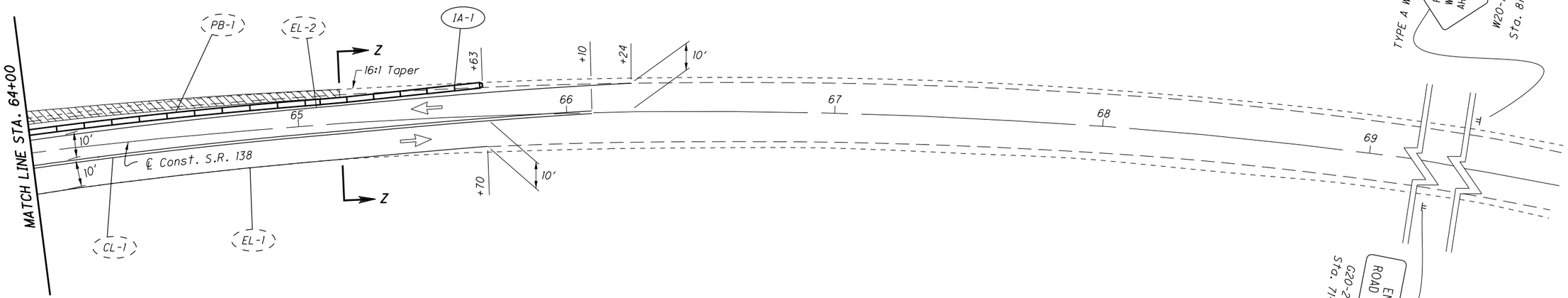
- 32″ Portable Barrier
- Area to be Constructed
- ⇨ Direction of Traffic



SECTION Z-Z

ESTIMATED QUANTITIES

REF No.	STATION TO STATION	SIDE	614 REMOVE AND REPLACE IMPACT ATTENUATOR	614 BARRIER REFLECTOR, TYPE B2	614 OBJECT MARKER, TWO WAY	614 WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	614 WORK ZONE EDGE LINE CLASS I, 704.06, TYPE I (WHITE)	622 PORTABLE BARRIER, 32″
			EACH	EACH	EACH	MILE	MILE	FT
CL-1	59+00 to 66+10	Rt.				0.13		
EL-1	59+00 to 65+70	Rt.					0.13	
EL-2	59+00 to 66+24	Lt.					0.14	
PB-1	59+00 to 65+38	Lt.		14	14			638
IA-1	65+38 to 65+63	Lt.	1					
TOTALS CARRIED TO SUBSUMMARY			1	14	14	0.13	0.27	638



SCI-138-11.44

SP 1306-5
DATE: APRIL 2013
CALCULATED DAN
CHECKED DEK

SHEET NO.	PHASE	614												615			622							
		WORK ZONE IMPACT ATTENUATOR	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, TWO-WAY	WORK ZONE CENTER LINE, CLASS I (DOUBLE SOLID)	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I (WHITE)	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE 1 (WHITE)	WORK ZONE CHANNELIZING LINE, CLASS I	WORK ZONE TRANSVERSE LINE, CLASS I (YELLOW)	WORK ZONE STOP LINE, CLASS I, 740.06 TYPE 1	WORK ZONE LANE ARROW, CLASS I		ROADS FOR MAINTAINING TRAFFIC	PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN		PORTABLE CONCRETE BARRIER, 32"						
		EACH	EACH	EACH	MILE	MILE	MILE	MILE	FT	FT	FT	EACH		LUMP	SQ. YD.		FT						
14														LUMP									
15	1														100								
16	1														188								
18	2				0.08		0.04																
19	2	1	15	15	0.15		0.03										714						
20	2	2	7	7	0.10		0.19										310						
21	2				0.02	0.14	0.03	0.16															
22	2					0.03		0.07															
25	3	1	2	2	0.05		0.10				43						50						
26	3	1	7	7	0.10		0.19										310						
27	3	1	6	6	0.07		0.16		49		45	2					298						
28	3				0.02	0.15	0.03	0.16															
29	3					0.03		0.07															
36	4				0.02		0.02																
37	4	1	11	11	0.13		0.28				44				20		578						
38	4	1	5	5	0.12		0.19										225						
39	4	1	8	8	0.10	0.03	0.17				33						365						
40	4				0.03	0.14	0.03	0.08															
41	4					0.04		0.04															
43	5				0.04		0.02																
44	5				0.19		0.13																
45	5				0.11		0.19																
46	5				0.15		0.15		53	350	72	4											
47	5				0.03	0.20	0.03	0.20		25													
TOTALS CARRIED TO GENERAL SUMMARY		9	61	61	1.51	0.76	1.98	0.78	102	375	237	6		LUMP	308		2,850						

MAINTENANCE OF TRAFFIC SUBSUMMARY

SCI-138-11.14

SP 1306-6
DATE: JULY 2006

CURVE DATA
P.I. Sta. 4+50.00, ℄ Temp. Rd.
Δ = 4° 42′ 00″ LT
D_C = 4° 42′ 00″
R = 1218.28′
T = 50.00′
L = 100.00′
E = 1.03′
e_{max} = 0.040

CURVE DATA
P.I. Sta. 5+83.56, ℄ Temp. Rd.
Δ = 27° 03′ 36″ LT
D_C = 16° 30′ 00″
R = 347.25′
T = 83.56′
L = 164.00′
E = 9.91′
e_{max} = 0.040

CURVE DATA
P.I. Sta. 7+48.31, ℄ Temp. Rd.
Δ = 27° 17′ 40″ RT
D_C = 16° 30′ 00″
R = 347.25′
T = 84.31′
L = 165.42′
E = 10.09
e_{max} = 0.040

CURVE DATA
P.I. Sta. 12+59.19, ℄ Temp. Rd.
Δ = 09° 16′ 18″ RT
D_C = 09° 15′ 00″
R = 619.41′
T = 50.23′
L = 100.23′
E = 2.03′
e_{max} = 0.040

P.O.C. STA. 4+00.00, TEMP. RD.= STA. 44+00.00, 22.40′ LT., S.R. 599

P.C.C. STA. 5+00.00, TEMP. RD.= STA. 45+00.00, 22.40′ LT. S.R. 599

P.C.C. STA. 6+64.00, TEMP. RD.= STA. 46+61.99, 49.28′ LT., S.R. 599

P.T. STA. 8+29.42, TEMP. RD.= STA. 48+24.03, 73.62′ LT., S.R. 599

P.C. STA. 12+08.96, TEMP. RD.= STA. 52+01.63, 39.93′ LT., S.R. 599

P.T. STA. 13+09.19, TEMP. RD.= STA. 52+97.99, 28.61′ LT., S.R. 599

STA. 18+10.24 ℄ Temp. Rd. STA. 57+95.78, ℄ Const. S.R. 599

MATCH LINE STA. 43+50

5+65 Begin Curve

℄ CONST. TEMP. RD

℄ CONST. S.R. 599

N75°10′22″

N84°26′40″

P.T. 45+83.91 ℄ Const. S.R. 599

P.C. 51+90.44 ℄ Const. S.R. 599

P.T. 54+03.79 ℄ Const. S.R. 599

REFER TO CROSS-SECTIONS FOR SHEET PILING REQUIRED BETWEEN PROPOSED AND EXISTING CULVERTS

48″ CONDUIT, TYPE B FOR DETAILS, SEE SHEET 118

48″ CONDUIT, TYPE C

NOTES:

FOR TEMPORARY ROAD TYPICAL SECTIONS AND PAVEMENT EDGE ELEVATIONS, SEE SHEET 100.

FOR DRIVEWAY AND DRAINAGE DETAILS, SEE S.R. 599 PLAN & PROFILE, SHEET 38.

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

PHASE IV CONSTRUCTION

DIRECTION OF TRAFFIC

847.86 845.93 844.71 843.64 842.72 841.93 841.29 840.78 840.42 840.20 840.13 840.19 840.40 840.75 841.24 841.88 842.66 843.57 844.63 845.84 847.18 848.67 850.25 851.71 853.01 854.15 855.12 855.93 856.58 857.07 857.39 857.60 857.80 858.00

580 VC

PVI STA = 8+21.92
PVI ELEV = 830.57
SSD MEETS 35 MPH DESIGN SPEED REQUIREMENTS

(-6.52% EX.)

℄ CONST. ROAD MAINT. TRAFFIC

MEET EXISTING STA. 5+65 ELEV. 847.86

EX. EMBANKMENT

-6.68%

48″ CONDUIT, TYPE B

+6.50%

+6.50%

+0.80%

PVI STA = 12+21.92
PVI ELEV = 856.57
SSD MEETS 35 MPH DESIGN SPEED REQUIREMENTS

220 VC

853.43 851.63 848.83 847.85 845.57 842.0 838.6 833.9 830.7 832.2 834.3 836.5 838.8 842.0 846.7 852.2 853.5 857.6 859.7 859.1 858.0 858.2 858.6 859.03 859.52 859.81 860.00 860.11 860.02

665 860 855 850 845 840 835 830

4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00

HORIZONTAL SCALE IN FEET
0 25 50 100

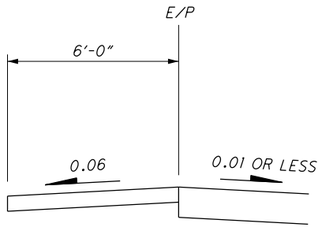
CALCULATED TD
CHECKED NEM

TEMPORARY ROAD PLAN AND PROFILE

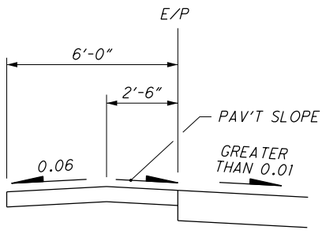
LIC-599-8.54

99
131

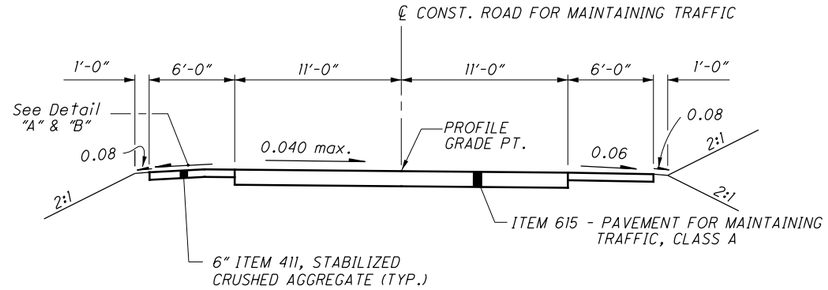
ROAD FOR MAINTAINING TRAFFIC PAVEMENT EDGE ELEVATIONS		
11' LEFT	STATION	11' RIGHT
MEET EXISTING	5+65	MEET EXISTING
846.84	5+75	847.72
845.60	6+00	846.23
844.52	6+25	844.90
843.57	6+50	843.71
842.75	6+75	842.67
842.06	7+00	841.78
841.51	7+25	841.05
841.10	7+50	840.45
840.84	7+75	839.99
840.54	8+00	839.85
840.36	8+25	839.88
840.32	8+50	840.02
840.42	8+75	840.23
840.66	9+00	840.58
841.07	9+25	841.07
841.70	9+50	841.70
842.48	9+75	842.48
843.40	10+00	843.40
844.46	10+25	844.46
845.66	10+50	845.66
847.01	10+75	847.01
848.49	11+00	848.49
850.08	11+25	850.08
851.58	11+50	851.54
852.99	11+75	852.84
854.21	12+00	853.98
855.25	12+25	854.95
856.10	12+50	855.76
856.75	12+75	856.41
857.13	13+00	857.01
857.33	13+25	857.45
MEET TAPER SECTION	13+50	MEET TAPER SECTION



DETAIL "A"

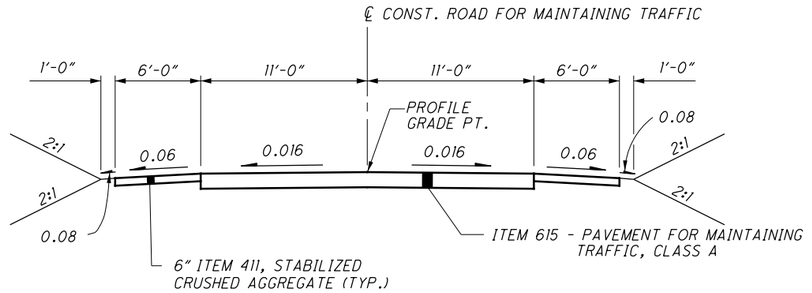


DETAIL "B"



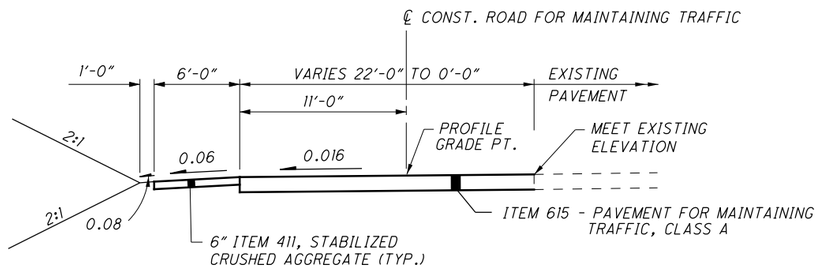
SUPERELEVATED SECTION

STA. 5+65.00 TO STA. 6+64.00
STA. 6+64.00 TO STA. 9+20.00 (OPPOSITE HAND)
STA. 11+40.00 TO STA. 13+50.00



NORMAL SECTION

STA. 9+20.00 TO STA. 11+40.00



TAPER SECTION

STA. 13+50.00 TO STA. 18+10.24

NOTE: FOR PLAN & PROFILE OF ROAD FOR MAINTAINING TRAFFIC, SEE SHEET 99.

TEMPORARY ROAD
TYPICAL SECTIONS AND ELEVATIONS

LIC-599-8.54

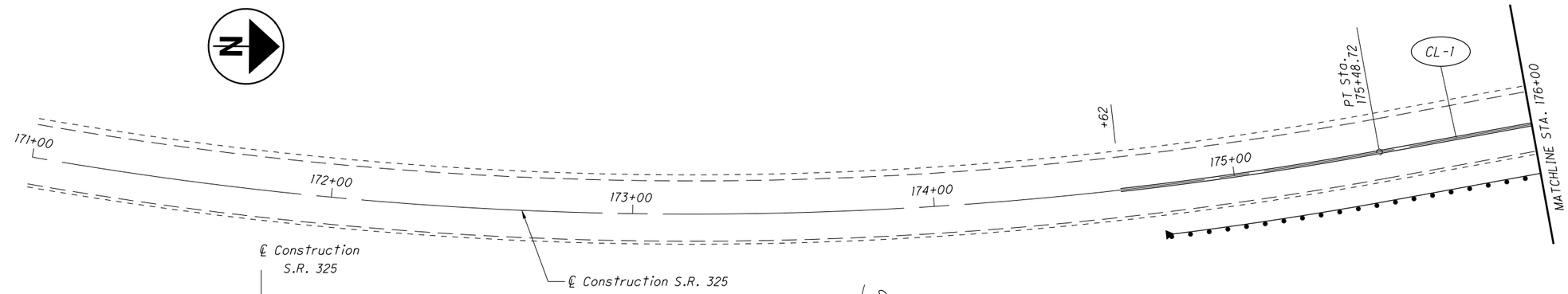
SP 1306-8	
DATE: JULY 2016	

CALCULATED ABC
CHECKED EFG

0 10 20 40
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC - PHASE 1
STRUCTURE 3.37 - STA. 171+00 TO STA. 181+00

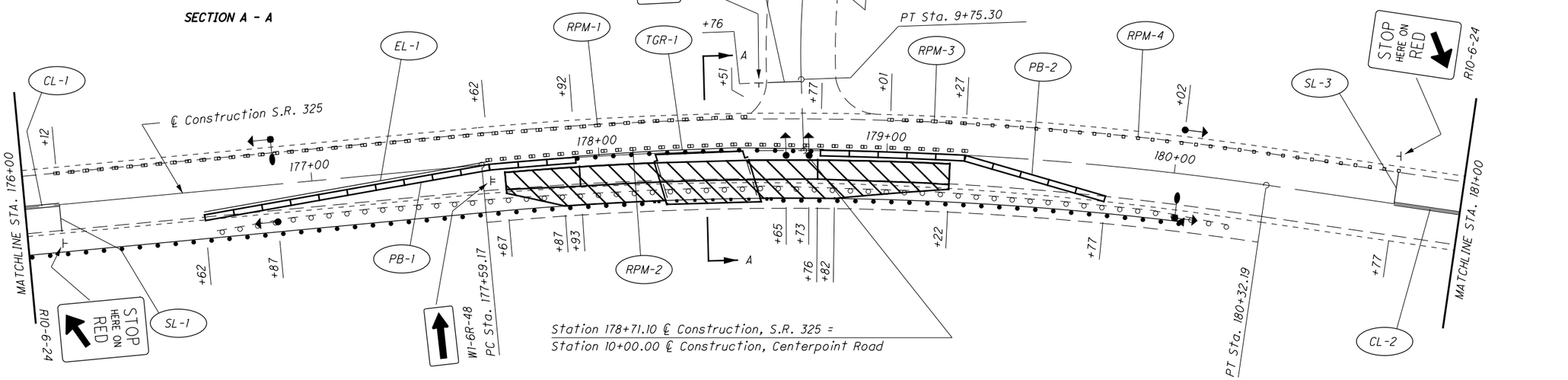
GAL-325-(3.37)(3.78)



SECTION A - A

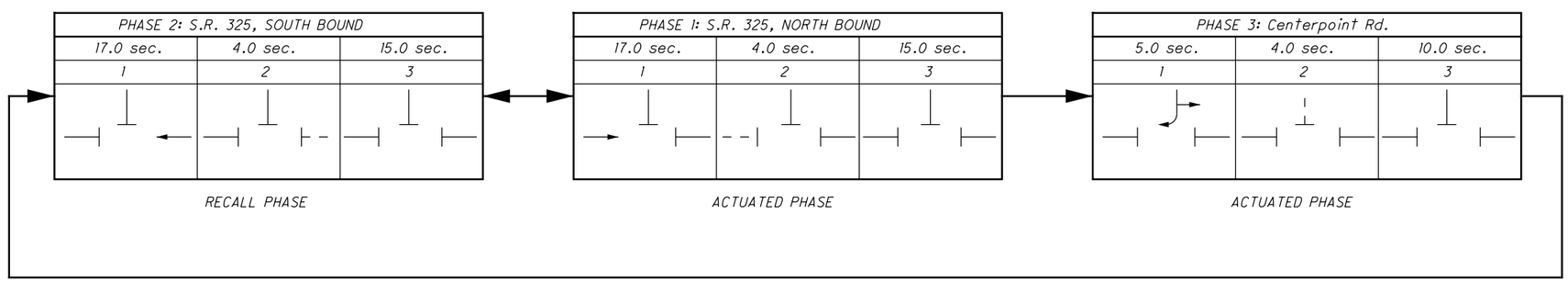
See sheet 18 for Guardrail and Portable Barrier (PB) Connection Details.
See sheet 19 for MOT quantities.
See sheet 67 for Stage Construction Details.

Note:
For placement of advance warning signs see Standard Construction Drawing MT-96.11.



Legend

32" Concrete Barrier
Area to be constructed



PHASE 1 - SIGNAL TIMING DIAGRAM

SP 1307-1

DATE: APRIL 2013

CALCULATED JKP

CHECKED FGW

DRAINAGE SUBSUMMARY

STA-6-18.84

SHEET NO.	202	601	611												605					BENDS AND BRANCHES FOR INFORMATION ONLY				
	CATCH BASIN ABANDONED	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	6" CONDUIT, TYPE B, 707.17 NON-PERFORATED, ASTM D-3034 SDR 35, SS931 OR SS944	12" CONDUIT, TYPE C	15" CONDUIT, TYPE C	21" CONDUIT, TYPE B	30" CONDUIT, TYPE B	CONDUIT, BORED OR JACKED: 6", TYPE B	6" CONDUIT, TYPE F	CATCH BASIN, NO. 4	CATCH BASIN, NO. 5, AS PER PLAN	CATCH BASIN ADJUSTED TO GRADE	CATCH BASIN RECONSTRUCTED TO GRADE	PRECAST REINFORCED CONCRETE OUTLET	4" SHALLOW PIPE UNDERDRAINS	4" UNCLASSIFIED PIPE UNDERDRAINS	4" SHALLOW PIPE UNDERDRAINS	4" UNCLASSIFIED PIPE UNDERDRAINS	4" ROCK CUT UNDERDRAINS	6"X45° BEND	6"X490° BEND	6"X6" TEE	6"X6" WYE	6"X6" CROSS
	EACH	CU YD	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH
117								35	222					3	2793					3	2	1		1
118									42					1	4000					6	2	2		2
119	1				105				260	1				4	3783				267	4	2	2		
120									26					1	50				3947		4		2	1
121		23				6	6	50	180		1	1	1						4000			3	3	2
														3										
122								51	213			1			1660				873	2				
123									112						1882					1			2	
124									90			1			3984					3	2	2		
125			25						98				1		3683	283				5			1	
126	1								160	1				2	4071					5	2	3		
				108																				
127									113					1	3650	350				4				
128									196					4	4000					4		3		
129	1			107					188	1				4	4000					4		2		
130			25						130					1	4000					4		2		
131									198					4	4000					2	2	2	1	1
132									123					2	4000					2			2	
133									144					3	4000					2	2	2		1
134								27	171			1		3	4577					4	2	3	1	
135															3160					2	3			
135A			50						156					1	2024					2	2	2		
136									60					3				928				2		
137									26					1				836	47		2			
138									24					1				542	50		1		1	
139									40			1		2				958			2			1
142									56					3				1122			3			
143									18					1				720	50	2		1		
144									38					2				814			2			
145									38					2				1218			4			
146									40					2				822			2	2	1	
147									34					2				720			2			1
TOTALS CARRIED TO GENERAL SUMMARY	3	23	100	215	105	6	6	163	3196	3	1	5	2	56	63317	633	8680	147	9087					

ESTIMATED QUANTITIES

SP 1307-2
DATE: JULY 2016
CALCULATED MTG
CHECKED CJM

REF NO.	STORM SEWER PROFILE SHEET NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 24" AND UNDER	202 CATCH BASIN REMOVED	601 ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	602 CONCRETE MASONRY	611 6" CONDUIT, TYPE F	611 12" CONDUIT, TYPE B	611 15" CONDUIT, TYPE C	611 18" CONDUIT, TYPE B	611 24" CONDUIT, TYPE B	611 42" CONDUIT, TYPE B, 706.02	611 CATCH BASIN, NO. 4	611 CATCH BASIN, NO. 4A	611 CATCH BASIN, NO. 5	611 CATCH BASIN, NO. 5A	605 4" SHALLOW PIPE UNDERDRAINS	670 DITCH EROSION PROTECTION	BENDS AND BRANCHES FOR INFORMATION ONLY 6"X6" TEE	6"X6" CROSS	6"X90° BEND
		FROM	TO		FT	EACH	CY	CY	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	FT	SY	EACH	EACH	EACH
D1	209 & 210	360+00	364+00	℄							400				1					125			
D2	210	364+00		RT							200						1			250			
D3	154	363+60		LT&RT						160													
D4	154	364+00		LT										69				1		125			
D5	154	364+00		℄										67		1							
D6	154	364+00		RT			6							4				1					
D7	154	364+00		LT										4									
D8	210	364+00	365+00	RT							100						1			197			
D9	210	364+00	365+35	℄							135				1					226			
D10	210	364+00	365+75	LT							175						1			259			
D11	157	368+20		℄									64		1								
D12	157	368+20		LT								68					1						
D13	157	368+20		RT			1	0.4					77				1						
D14	212	368+20	371+00	LT							280						1			125			
D15	212	368+20	371+00	℄							280				1					125			
D16	212	368+20	371+00	RT							280						1			125			
R1		368+00		RT	20	1																	
U1		359+90	363+97	RT					20										407				1
U2		359+90	363+97	LT					20										407				1
U3		359+90	363+97	LT					22										814		1		1
U4		359+90	363+97	RT					22										814		1		1
U5		364+03	368+18	RT					20										415		1		
U6		364+03	368+18	RT					22										830		1	1	
U7		364+03	368+18	LT					22										830		1	1	
U8		364+03	368+18	LT					20										415		1		
U9		368+22	371+00	LT					22										556		1		1
U10		368+22	371+00	RT					22										556		1		1
U11		368+22	371+00	RT					20										278				1
U12		368+22	371+00	LT					20										278				1
U13		371+00	373+50	LT															500		2		
U14		371+00	373+50	LT															250		1		
U15		371+00	373+50	RT															500		2		
U16		371+00	373+50	RT															250		1		
ALL QUANTITIES FROM PLAN & PROFILE SHEET 81																							
TOTALS CARRIED TO GENERAL SUMMARY					20	1	7	0.4	252	160	1850	68	141	144	4	1	7	2	8100	1557			

LUC-76-31.48

SHEET NUMBER															ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	11	82	83	84	85	86	87	88	89	91	105	157	255	259						
																			ROADWAY	
	LS														201	11000	LS		CLEARING AND GRUBBING	
32738															202	23000	32738	SY	PAVEMENT REMOVED	
1503															202	23500	1503	SY	WEARING COURSE REMOVED	
											1953				202	32000	1953	FT	CURB REMOVED	
											927				202	32001	927	FT	CURB REMOVED, AS PER PLAN	105
							12687.5								202	38000	12687.5	FT	GUARDRAIL REMOVED	
							34								202	38700	34	EACH	GUARDRAIL POST REMOVED	
						3									202	58500	3	EACH	CATCH BASIN ABANDONED	
	185	8423	20657	6224	169				188	479	153	331		2870	203	10000	39679	CY	EXCAVATION	
		1067	2189	7148	1069				225	1144	50	62			203	20000	12954	CY	EMBANKMENT	
71464															204	10000	71464	SY	SUBGRADE COMPACTION	
							11650								606	15050	11650	FT	GUARDRAIL, TYPE MGS	
							175								606	15150	175	FT	GUARDRAIL, TYPE MGS HALF POST SPACING	
							12								606	25550	12	EACH	ANCHOR ASSEMBLY, MGS TYPE A	
							12								606	26150	12	EACH	ANCHOR ASSEMBLY, MGS TYPE E-98	
							23								606	26550	23	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
							36								606	35002	36	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							4								606	35102	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
	10														623	38500	10	EACH	MONUMENT ASSEMBLY	
																			EROSION CONTROL	
													50		601	32200	50	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
	2														659	00100	2	EACH	SOIL ANALYSIS TEST	
	1773														659	00300	1773	CY	TOPSOIL	
	15970														659	10000	15970	SY	SEEDING AND MULCHING	
	799														659	14000	799	SY	REPAIR SEEDING AND MULCHING	
	799														659	15000	799	SY	INTER-SEEDING	
	2.23														659	20000	2.23	TON	COMMERCIAL FERTILIZER	
	3.30														659	31000	3.30	ACRE	LIME	
	86														659	35000	86	MGAL	WATER	
															832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
															832	30000	15000	EACH	EROSION CONTROL	
																			DRAINAGE	
						8680									605	05100	8680	FT	4" SHALLOW PIPE UNDERDRAINS	
						63317									605	05101	63317	FT	4" SHALLOW PIPE UNDERDRAINS, AS PER PLAN	116
						3196									611	01500	3196	FT	6" CONDUIT, TYPE F	
						215									611	04600	215	FT	12" CONDUIT, TYPE C	
						105									611	06100	105	FT	15" CONDUIT, TYPE C, 706.02	
						246									611	08900	246	FT	21" CONDUIT, TYPE B, 706.02	
						138									611	11700	138	FT	27" CONDUIT, TYPE A, 706.02; OR 30", 707.01	
						350									611	27001	350	FT	78" CONDUIT, TYPE A, AS PER PLAN, 706.02	11
						96									611	52500	96	FT	24" X 38" CONDUIT, TYPE A, 706.04	
						183									611	96600	183	FT	CONDUIT, BORED OR JACKED (6", TYPE B)	11
						3									611	98230	3	EACH	CATCH BASIN, NO. 4	
						1									611	98301	1	EACH	CATCH BASIN, NO. 5, AS PER PLAN	116
						4									611	98630	4	EACH	CATCH BASIN ADJUSTED TO GRADE	

SP 1307-3(a)
DATE: JANUARY 2017

CALCULATED JKP
CHECKED FGW

GENERAL SUMMARY

TRU-99-13.48

SHEET NUMBER															ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS														196						
																			PAVEMENT	
312															251	01000	312	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)	
4140															253	01000	4140	SY	PAVEMENT REPAIR	
9005															255	10011	9005	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC1, AS PER PLAN	16
2894															255	10161	2894	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC MS, AS PER PLAN	16
34828															255	20000	34828	FT	FULL DEPTH PAVEMENT SAWING	
17759															304	20000	17759	CY	AGGREGATE BASE	
3892															305	13010	3892	SY	9" CONCRETE BASE, CLASS QC1	
127															407	10000	127	GAL	TACK COAT	
5813															408	10000	5813	GAL	PRIME COAT	
1029															451	14011	1029	SY	9" REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN	12
31690															451	15011	31690	SY	10" REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN	12
6783															452	13011	6783	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN	12
50342															452	19001	50342	SY	VARIABLE THICKNESS NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12
																			WATER WORK	
														3649	638	02504	3649	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, MECHANICAL JOINTS AND FITTINGS	
														2481	638	02604	2481	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, BOLTLESS-RESTRAINED, JOINTS AND FITTINGS	
														2107	638	02700	2107	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 55, BALL AND SOCKET JOINTS AND FITTINGS	
														1142	638	02730	1142	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, AWWA C900, DR18	
														1608	638	02800	1608	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, ASTM SDR 26	
														438	638	04800	438	FT	¾" COPPER SERVICE BRANCH	
														464	638	05300	464	FT	¾" POLYETHYLENE SERVICE BRANCH	
														212	638	06704	212	FT	20" STEEL PIPE ENCASEMENT, OPEN CUT	
														310	638	07310	310	FT	24" STEEL PIPE ENCASEMENT, BORED OR JACKED	
														18	638	08100	18	EACH	12" GATE VALVE AND VALVE BOX	
														16	638	09200	16	EACH	12" CUTTING-IN SLEEVE, VALVE AND VALVE BOX	
														12	638	09700	12	EACH	12" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	
														36	638	10200	36	EACH	6" FIRE HYDRANT	
														10	638	10300	10	EACH	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE	
														8	638	10500	8	EACH	FIRE HYDRANT REMOVED AND RESET	
														8	638	10600	8	EACH	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET	
														12	638	10800	12	EACH	VALVE BOX ADJUSTED TO GRADE	
														6	638	10900	6	EACH	SERVICE BOX ADJUSTED TO GRADE	
														4	638	11100	4	EACH	METER AND CHAMBER REMOVED AND RESET	

CALCULATED JKP
CHECKED FGW

FIG. 1307-3(b)
DATE: JANUARY 2017

GENERAL SUMMARY

TRU-99-13.48

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
		16		18		23		55		192	262								
																		RETAINING WALLS OPTION A: REINFORCED EARTH WALL	
										1710				203	20000	1710	CY	EMBANKMENT	
										3474				203	35000	3474	CY	GRANULAR EMBANKMENT	
										LS				503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
										1124				503	21101	1124	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	108
										4766				SPECIAL	61050010	4766	SF	RETAINING WALL, MISC.: REINFORCED EARTH WALL SYSTEM	190
																		RETAINING WALLS OPTION B: RETAINED EARTH WALL	
										1636				203	20000	1636	CY	EMBANKMENT	
										3584				203	35000	3584	CY	GRANULAR EMBANKMENT	
										LS				503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
										1150				503	21101	1150	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	108
										4738				SPECIAL	61050010	4738	SF	RETAINING WALL, MISC.: RETAINED EARTH WALL SYSTEM	190
																		BUILDING DEMOLITION	
											LS			202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 11-WD-1, 1 STORY BRICK BUILDING	
											LS			202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 13-T, 1 STORY BLOCK BUILDING	
											LS			202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 13-WL, 2 STORY BRICK BUILDING	
											LS			202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 19-T, 1 STORY METAL BUILDING	
																		STRUCTURES OVER 20 FOOT SPAN	
																		STRUCTURE TRU-99-1924 GENERAL SUMMARY	229
																		STRUCTURE TRU-99-2056 GENERAL SUMMARY	236
										878				SPECIAL	51272000	878	SY	EPOXY WATERPROOFING OVERLAY (1/4" THICK)	190
																		MAINTENANCE OF TRAFFIC	
		10												614	11110	10	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		5												614	12460	5	EACH	WORK ZONE MARKING SIGN	
				38										614	12470	38	EACH	WORK ZONE SPEED LIMIT SIGN	
		100												614	12500	100	EACH	REPLACEMENT SIGN	
		200												614	12600	200	EACH	REPLACEMENT DRUM	
								1528						614	12800	1528	EACH	WORK ZONE RAISED PAVEMENT MARKER	
						1201								614	13100	1201	EACH	BARRIER REFLECTOR	
		14.00												614	20300	14.00	MILE	WORK ZONE LANE LINE, CLASS I, 740.06, TYPE II	
						0.11								614	21300	0.11	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE II	
		0.26												614	21700	0.26	MILE	WORK ZONE CENTER LINE, CLASS II, 740.06, TYPE II	
						4.33								614	22000	4.33	MILE	WORK ZONE EDGE LINE, CLASS I	
						7.34								614	22300	7.34	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE II	
						48								614	26600	48	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE II	
		5692												614	28600	5692	FT	WORK ZONE GORE MARKING, CLASS II, 740.06, TYPE II	
						LS								615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
						944								615	20001	944	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	17
		30												616	10000	30	M GAL	WATER	
		10												616	20000	10	TON	CALCIUM CHLORIDE	
						30280								622	41001	30280	FT	PORTABLE BARRIER, 32", AS PER PLAN	58
																		INCIDENTALS	
														614	11000	LS		MAINTAINING TRAFFIC	
														619	16020	8	MNTH	FIELD OFFICE, TYPE C	
														623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														624	10000	LS		MOBILIZATION	

SP. 1307-3(c)
DATE: JULY 2017

CALCULATED JKP
CHECKED FGW

GENERAL SUMMARY

TRU-99-13.48

SHEET NUMBER							PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS		64	68	97	165	175	01/NHS/PV/COLS	02/NHS/PV	03/STR/PV							
															ROADWAY	
1000								1000			202	23000	1000	SY	PAVEMENT REMOVED	
		12							12		202	58700	12	EACH	MANHOLE ABANDONED	
						225		225			202	75000	225	FT	FENCE REMOVED	
						1		1			202	75250	1	EACH	GATE REMOVED	
															ROADWAY ALTERNATES	
				500				500		X	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (BRIFEN) (ALTERNATE 1)	
				20				20		X	606	98100	20	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (BRIFEN) (ALTERNATE 1)	
				500				500		X	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (TRINITY) (ALTERNATE 2)	
				2				2		X	606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (TRINITY) (ALTERNATE 2)	
				500				500		X	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (MARION STEEL) (ALTERNATE 3)	
				2				2		X	606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (MARION STEEL) (ALTERNATE 3)	
															EROSION CONTROL	
					2				2		659	00100	2	EACH	SOIL ANALYSIS TEST	
					44				44		659	00300	44	CY	TOPSOIL	
					400				400		659	10000	400	SY	SEEDING AND MULCHING	
					20				20		659	14000	20	SY	REPAIR SEEDING AND MULCHING	
					20				20		659	15000	20	SY	INTER-SEEDING	
					0.05				0.05		659	20000	0.05	TON	COMMERCIAL FERTILIZER	
					0.08				0.08		659	31000	0.08	ACRE	LIME	
					2.2				2.2		659	35000	2.2	MGAL	WATER	
					0.9				0.9		659	40000	0.9	MSF	MOWING	
											832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
											832	30000	5000	EACH	EROSION CONTROL	
															PAVEMENT	
1844									1844		254	01000	1844	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1½)	
1265									1265		301	46000	1265	CY	ASPHALT CONCRETE BASE, PG64-22	
50									50		301	48000	50	CY	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	
2627								986	1641		304	20000	2627	CY	AGGREGATE BASE	
5333								5333			305	12000	5333	SY	8" CONCRETE BASE, CLASS QC1	
5695								3647	2048		407	10000	5695	GAL	TACK COAT	
18									18		441	50400	18	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)	
415								226	189		442	10000	415	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446)	
497								268	229		442	10100	497	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A, (446)	
4000								4000			609	12000	4000	FT	COMBINATION CURB AND GUTTER, TYPE 2	
															WATER WORK	
			896				896				SPECIAL	63820184	896	FT	12" WATER MAIN DIP CLASS 54 MECHANICAL JOINTS AND FITTINGS (COL. 801)	
			14				14				SPECIAL	63820538	14	EACH	6" GATE VALVE WITH VALVE BOX (COL. 802)	
			260				260				SPECIAL	63820750	260	EACH	6" FIRE HYDRANT FURNISHED (COL. 809)	
			8				8				SPECIAL	63820844	8	FT	INSTALL 1½ COPPER WATER SERVICE CONNECTION (COL. 805)	
			4				4				SPECIAL	63820902	4	EACH	SERVICE BOX ADJUSTED TO GRADE (COL. 807)	
															SANITARY SEWER	
		200							200		611	00900	200	FT	6" CONDUIT, TYPE B, 706.01 OR 706.08 WITH 706.11 OR 706.12 JOINTS	
		284							284		611	02000	284	FT	8" CONDUIT, TYPE C, 706.08 WITH 706.12 JOINTS	
		273							273		611	04400	273	FT	12" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS	
		28							28		611	05900	28	FT	15" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS	
		230							230		611	07400	230	FT	18" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS	
		5							5		611	99574	5	EACH	MANHOLE, NO. 3 WITH 706.11 JOINTS	
		8							8		611	99654	8	EACH	MANHOLE ADJUSTED TO GRADE	
			3						3		611	99660	3	EACH	MANHOLE RECONSTRUCTED TO GRADE	

SP 1307-4
DATE: JANUARY 2017

CALCULATED DMK
CHECKED CML

GENERAL SUMMARY

FRA-11-26.48

SHEET NUMBER								PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	87		96					01/NHS/PV	02/S<2/PV/ATB						
														TRAFFIC CONTROL	
	161							161		621	00100	161	EACH	RPM	
	146								146	630	02100	146	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
	229								229	630	03100	229	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
	4								4	630	79500	4	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
	96								96	630	80100	96	SF	SIGN, FLAT SHEET	
	11								11	630	85000	11	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
	14								14	630	86002	14	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
	3.29							2.49	0.80	644	00100	3.29	MILE	EDGE LINE, 4"	
	1.36							1.06	0.30	644	00200	1.36	MILE	LANE LINE, 4"	
	1.25							0.98	0.27	644	00300	1.25	MILE	CENTER LINE	
	1368							430	938	644	00400	1368	FT	CHANNELIZING LINE, 8"	
	146								146	644	00500	146	FT	STOP LINE	
	313								313	644	00600	313	FT	CROSSWALK LINE	
	450							180	270	644	00700	450	FT	TRANSVERSE/DIAGONAL LINE	
	24								24	644	00900	24	SF	ISLAND MARKING	
	9							2	7	644	01300	9	EACH	LANE ARROW	
	8							2	6	644	01410	8	EACH	WORD ON PAVEMENT, 96"	
														TRAFFIC SIGNALS	
			122					122		625	25400	122	FT	CONDUIT, 2", 725.04	
			180					180		625	25500	180	FT	CONDUIT, 3", 725.04	
			182					182		625	29000	182	FT	TRENCH	
			120					120		625	29600	120	FT	TRENCH IN PAVED AREA, TYPE B	
			2					2		625	30706	2	EACH	PULL BOX, 725.08, 24"	
			7					7		625	32000	7	EACH	GROUND ROD	
			4					4		632	04910	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 1-WAY, ALUMINUM	
			1					1		632	04916	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 2-WAY, ALUMINUM	
			2					2		632	05080	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 1-WAY, ALUMINUM	
			8					8		632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
			2					2		632	27004	2	EACH	LOOP DETECTOR UNIT	
			3					3		632	27008	3	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE	
			139					139		632	30200	139	FT	MESSENGER WIRE, 7 STRAND, 3/8 DIAMETER WITH ACCESSORIES	
			823					823		632	40300	823	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG	
			1168					1168		632	40500	1168	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
			100					100		632	62810	100	FT	INTERCONNECT CABLE, MISC.: INTEGRAL MESSENGER WIRE TYPE, 7 CONDUCTOR, NO. 12 AWG	
			1601					1601		632	65200	1601	FT	LOOP DETECTOR LEAD-IN CABLE	
			25					25		632	67200	25	FT	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG	
			1					1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN	95
			2					2		632	85000	2	EACH	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 10	
			5					5		632	89900	5	EACH	PEDESTAL, 8', TRANSFORMER BASE	
			1					1		632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
			1					1		633	01661	1	EACH	CONTROLLER UNIT, TYPE 2070E WITH SEPAC SOFTWARE, WITH CABINET, TYPE 332, AS PER PLAN	95
			1					1		633	67100	1	EACH	CABINET FOUNDATION	
			1					1		633	67200	1	EACH	CONTROLLER WORK PAD	

SP 1307-5
DATE: JANUARY 2017

CALCULATED JKP
CHECKED FGW

GENERAL SUMMARY

ATB-208-13.43

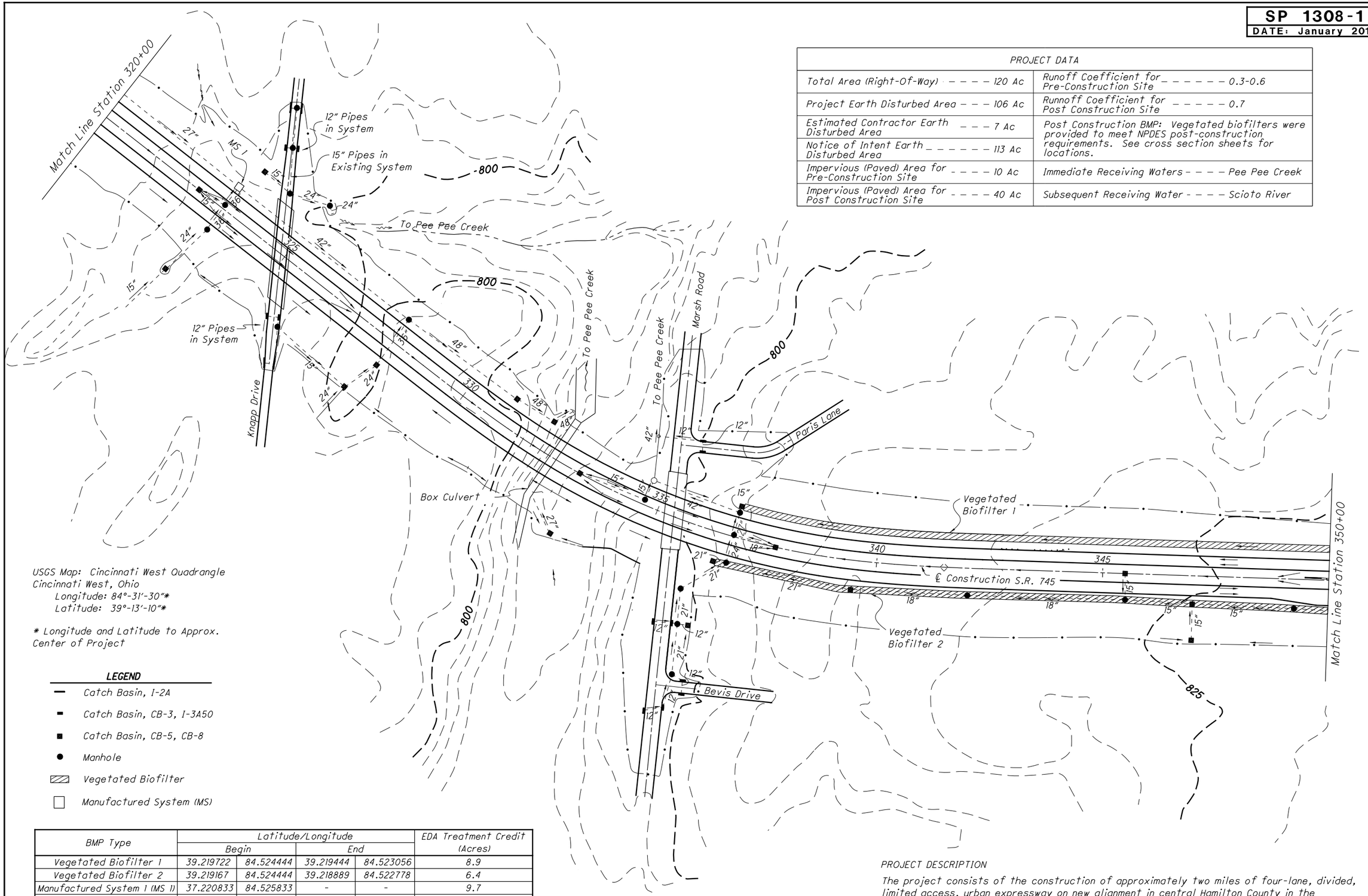
SHEET									ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
GEN	DEL	MRW	FRA1	FRA2	MAD	MRW	PIC	UNI						
5	15	16	17	18	19	20	21	22						
													TRAFFIC CONTROL	
	209.9	48.6	12.2	12.6	34.2	152.7	100.6	120.2	642	00090	691	MILE	EDGE LINE, 4"	
	113.0	33.3	369.9	298.0	29.9	59.8	94.3		642	00094	885.2	MILE	EDGE LINE, 6"	
	70.0	32.7	273.0	314.1	22.2	30.6	59.6		642	00194	732	MILE	LANE LINE, 6"	
	106.0	23.4	8.4	6.7	17.4	79.7	50.1		642	00290	185.7	MILE	CENTER LINE	
	9201.0	3171.0	8512.0	4512.0	528.0		7548.0		642	00394	24271	FT	CHANNELIZING LINE, 12"	
		106.0	7689.0	5459.0	897.0		950.0		642	01508	14995	FT	DOTTED LINE, 6"	
LS									642	20000	LS		TWO WAY RADIO EQUIPMENT	
													MAINTENANCE OF TRAFFIC	
240									611	11110	240	HOUR	LAW ENFORCEMENT WITH PATROL CAR FOR	
													ASSISTANCE	
													INCIDENTALS	
LS									614	11000	LS		MAINTAINING TRAFFIC	4
LS									614	11001	LS		MAINTAINING TRAFFIC, AS PER PLAN	4
LS									624	10001	LS		MOBILIZATION, AS PER PLAN	4

Calculated by: JJD

Checked by: DAC

SP 1308-1
DATE: January 2014

PROJECT DATA	
Total Area (Right-Of-Way) - - - - 120 Ac	Runoff Coefficient for Pre-Construction Site - - - - - - 0.3-0.6
Project Earth Disturbed Area - - - 106 Ac	Runnoff Coefficient for Post Construction Site - - - - - 0.7
Estimated Contractor Earth Disturbed Area - - - 7 Ac	Post Construction BMP: Vegetated biofilters were provided to meet NPDES post-construction requirements. See cross section sheets for locations.
Notice of Intent Earth Disturbed Area - - - - - - 113 Ac	
Impervious (Paved) Area for Pre-Construction Site - - - - 10 Ac	Immediate Receiving Waters - - - - Pee Pee Creek
Impervious (Paved) Area for Post Construction Site - - - - 40 Ac	Subsequent Receiving Water - - - - Scioto River



USGS Map: Cincinnati West Quadrangle
Cincinnati West, Ohio
Longitude: 84°-31'-30"*
Latitude: 39°-13'-10"*

* Longitude and Latitude to Approx. Center of Project

LEGEND

- Catch Basin, I-2A
- Catch Basin, CB-3, I-3A50
- Catch Basin, CB-5, CB-8
- Manhole
- Vegetated Biofilter
- Manufactured System (MS)

BMP Type	Latitude/Longitude Begin		End		EDA Treatment Credit (Acres)
Vegetated Biofilter 1	39.219722	84.524444	39.219444	84.523056	8.9
Vegetated Biofilter 2	39.219167	84.524444	39.218889	84.522778	6.4
Manufactured System 1 (MS 1)	37.220833	84.525833	-	-	9.7
			Treatment Provided		25.0
			Treatment Required*		24.4

* Calculated per L&D Vol. 2, Sec. 1115.7

PROJECT DESCRIPTION

The project consists of the construction of approximately two miles of four-lane, divided, limited access, urban expressway on new alignment in central Hamilton County in the Cincinnati Metropolition area. The highway has an east-west orientation beginning 300 feet west of Clovernoll Drive, ending 2,800 feet east of Sawmill Road. There is one interchange at Sawmill Road.

N

0 50 100 200 HORIZONTAL SCALE IN FEET

CALCULATED JDH CHECKED JDH

PROJECT SITE PLAN
STA. 320+00 TO STA. 350+00

HAM-745-18.36

SP 1309-1(a)
DATE: OCTOBER 2008

CROSS REFERENCES	
Sheet No.	Description
33	Estimated Quantites
79	Driveway Details & Quantities

2-Story Commercial
18"
63.48-59.22'
℄ Constr. S.R. 67
61.44-
21" 64.25'
R.R. Spike
1-Story Commercial
Sta. 359+00, S.R. 67

Ex CH
STA 362+00.00 END PAVEMENT TAPER
ROCK CHANNEL PROCTECTION 18"x4'-0"x8'-0" TYPE C, WITH FABRIC FILTER
DR-3
54" CMP
60" CMP
For Drive Details and Quantities See Sheet 79
For Estimated Quantities See Sheet 33
Ex R/W
TAPER CURB HEIGHT FROM 0" TO 6"
MC-4 COLLAR
+02 ℄ Residential Drive
11' Asphalt
C-2
U-2
8"
GAS VALVE
4"x400'-605
8'-0"
MATCH LINE STA 360+50
MATCH LINE STA 366+00
361
362
363
364
365
℄ Construction S.R. 67
N 53°-14'-00" E
95°
90°
16'
18'
22'
24" CONC.
6"x10'-F
6"x45°
U-3
84°
R-2
4"x120'-605
12" Concrete
C.B.
R-1
DR-1
DR-2
MC-4 COLLAR
S-1
U-1
D-1
DR-4
C-1
4"x305'-605
SEE SHEET NO. 56 FOR DETAILS
12"x22'-C
12" CMP
15"-C
15"-B
D-2
D-3
D-4
D-5
DR-5
DR-6
ASPHALT PARKING
+88 ℄ Commercial Drive
12' Asphalt
+21 ℄ Residential
14' Aggregate
2 STORY BRICK RESIDENTIAL
21"
16"
18"
REMOVE EXISTING ASPHALT PAVEMENT AND SEED
SEE SHEET NO. 55 FOR DETAILS
TAPER CURB HEIGHT FROM 0" TO 6"
+31 ℄ Commercial Drive
30' Asphalt
+33 ℄ Residential Drive
12' Aggregate
+36 ℄ Residential Drive
12' Aggregate
R.R. TIES
20"

P.T. STA. 360+65.00
+65 858.13
V.P.I. STA. 362+00.00
ELEV.= 857.17'
(NO VERTICAL CURVE)
Sta. 362+55, 30' Rt.
Reconstruct To Grade
See Sheet 55 For Details
-0.71%
-0.60%
35'-15"TYPE C @ 0.40%
30'-15" TYPE C @ 0.40%
70'-15" TYPE B @ 0.40%
STA 365+15.00 43' Rt.
STA 365+50.00 41' Rt.
STA 365+80.00 40' Rt.
C.B. NO. 2-2-B
℄ GRATE EL. 852.50
℄ 12" EL. 850.65
℄ 15" EL. 850.40'
C.B. NO. 2-3
℄ GRATE EL. 853.80
℄ 15" EL. 850.26'
C.B. NO. 2-3
℄ GRATE EL. 853.40'
℄ 15" EL. 850.14'
℄ 4" RT. EL. 852.58'
Tel Lt.
4" LT. & RT. EL. 854.50'
8" Water Lt.
8" Gas Rt.
PLUG EXIST. 12" CONDUIT AT STA 361+00; 23' RT AND ABANDON
8" San Rt.
24"
4" UNDERDRAIN LT. & RT.
8" Gas Lt.
860
855
850
845
840
361+00
362+00
363+00
364+00
365+00
366+00

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED MJG
CHECKED DSN

PLAN AND PROFILE-S.R. 67
STA. 360+50 to STA. 366+00

CLI-67-16.86

31
97

C:\pr\V3Stds\SamplePlans\Future Revision\Draft_0908\1309_DGN\1309_1(a).dgn 30-SEP-2008 1:08PM mwowszki

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 CATCH BASIN REMOVED	202 PIPE REMOVED 24" AND UNDER	601 ROCK CHANNEL PROTECTION TYPE C WITH FABRIC FILTER	602 CONCRETE MASONRY	611 24" CONDUIT, TYPE A, 706.02	611 15" CONDUIT, TYPE B	611 18" CONDUIT, TYPE B	611 12" CONDUIT, TYPE C	611 15" CONDUIT, TYPE C	611 6" CONDUIT, TYPE F	611 6" CONDUIT, TYPE F	611 MANHOLE ADJUSTED TO GRADE (SANITARY)	611 MANHOLE RECONSTRUCTED TO GRADE (SANITARY)	611 CATCH BASIN, NO. 2-2B	611 CATCH BASIN, NO. 2-3	611 CATCH BASIN, NO. 3A	605 4" SHALLOW PIPE UNDERDRAIN	609 COMBINATION CURB AND GUTTER TYPE 2	BENDS AND BRANCHES FOR INFO. ONLY 6"x45°
					EACH	FT	CY	CY	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	NO.
C-1	31-32,34	362+00	373+00	Rt																		1100	
C-2	31-32	362+00	366+93	Lt																		532	
C-3	32,34	367+37	371+67	Lt																		458	
R-1	31	360+97		Rt	1																		
R-2	31 & 32	365+16	366+30	Rt	1	114																	
R-3	32	366+89	367+33	Rt		44																	
R-4	32	367+28	367+35	Rt		28																	
R-5	32	367+56	368+03	Rt		47																	
R-6	32	368+65	369+13	Rt		48																	
R-7	32	369+46	370+50	Rt		104																	
R-8	32 & 34	370+83	372+00	Rt	1	117																	
D-1	31 & 55	362+35		Lt & Rt			2	0.9	24														
D-2	31	365+15		Rt								22								1			
D-3	31	365+15	365+50	Rt									35					1					
D-4	31	365+50	365+80	Rt									30						1				
D-5	31 & 32	365+80	366+50	Rt						70									1				
D-6	32	366+42	366+62	Lt								80								1			
D-7	32	366+50		Rt								15								1			
D-8	32	366+50	367+47	Rt							97								1				
D-9	32	367+27	367+47	Rt										25									1
D-10	32	367+47	368+50	Rt							103								1				
D-11	32	368+50		Rt								15								1			
D-12	32	368+50	369+32	Rt							82								1				
D-13	32	369+32	369+98	Rt							66								1				
D-14	32	369+98		Rt								15								1			
D-15	32	369+98	370+70	Rt							72								1				
D-16	32	370+70	371+45	Rt							75								1				
S-1	31 & 55	362+55		Rt													1						
S-2	32 & 57	366+36		Rt													1						
S-3	32 & 57	369+40		Rt												1							
U-1	31	362+00	365+15	Rt											10						305		1
U-2	31 & 32	362+00	366+42	Lt											10						432		1
U-3	31 & 32	365+20	366+50	Rt											10						120		1
U-4	32	366+55	368+50	Rt											10						185		1
U-5	32	368+55	369+98	Rt											10						133		1
U-6	32	367+55	371+45	Lt											10						382		1
U-7	32 & 34	370+03	372+00	Rt											10						187		1
TOTALS CARRIED TO GENERAL SUMMARY					3	502	2	0.9	24	70	495	147	65	25	70	1	2	1	8	5	1744	2090	

SP 1309-1(b)

DATE: JANUARY 2013

CALCULATED MJG

CHECKED DSN

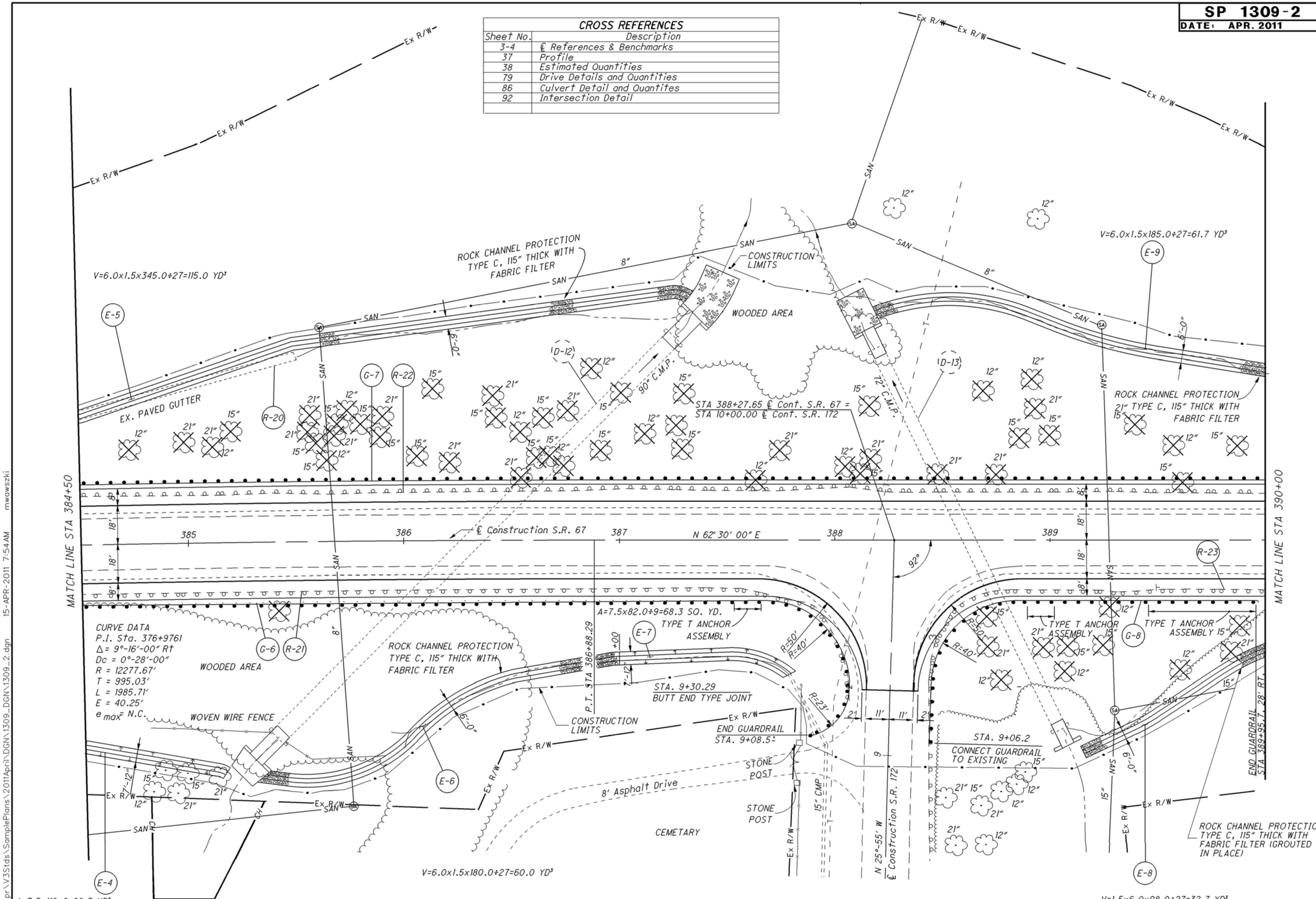
ESTIMATED QUANTITIES - STA. 360+50 TO STA 371+50

CLI-67-16.86

SP 1309-2
DATE: APR. 2011

CROSS REFERENCES

Sheet No.	Description
3-4	℄ References & Benchmarks
37	Profile
38	Estimated Quantities
79	Drive Details and Quantities
86	Culvert Detail and Quantites
92	Intersection Detail



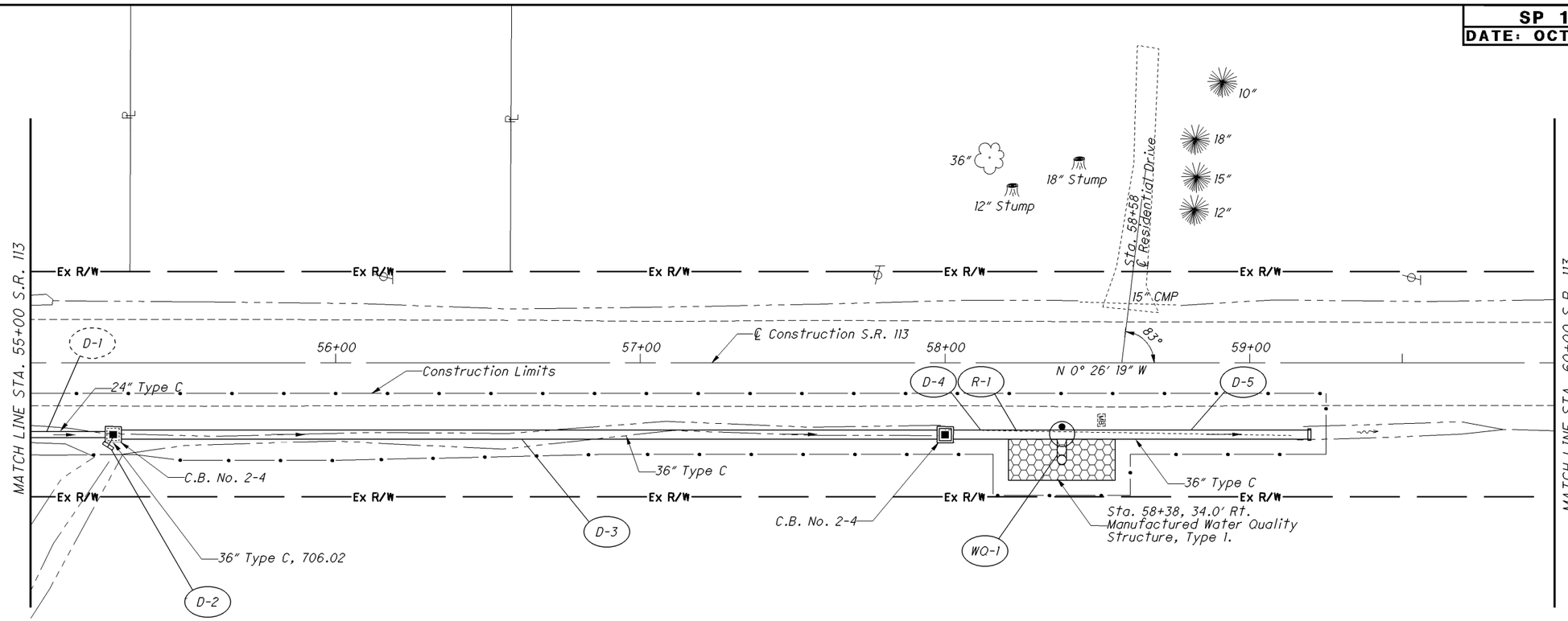
Ex R/W
V=6.0x1.5x345.0÷27=115.0 YD³
ROCK CHANNEL PROTECTION TYPE C, 115" THICK WITH FABRIC FILTER
CONSTRUCTION LIMITS
WOODED AREA
V=6.0x1.5x185.0÷27=61.7 YD³
E-5
E-9
EX. PAVED GUTTER
R-20
G-7
R-22
D-12
D-13
90" C.M.P.
72" C.M.P.
STA 388+27.65 ℄ Cont. S.R. 67 = STA 10+00.00 ℄ Cont. S.R. 172
ROCK CHANNEL PROTECTION 21" TYPE C, 115" THICK WITH FABRIC FILTER
MATCH LINE STA 384+50
MATCH LINE STA 390+00
℄ Construction S.R. 67
N 62° 30' 00" E
385
386
387
388
389
92°
R-23
A=7.5x82.0÷9=68.3 SQ. YD.
TYPE T ANCHOR ASSEMBLY
E-7
CURVE DATA
P.I. Sta. 376+9761
Δ = 9°-16'-00" Rt
Dc = 0°-28'-00"
R = 12277.67'
T = 995.03'
L = 1985.71'
E = 40.25'
e max = N.C.
G-6
R-21
WOODED AREA
ROCK CHANNEL PROTECTION TYPE C, 115" THICK WITH FABRIC FILTER
P.T. STA 386+88.29
STA. 9+30.29
BUTT END TYPE JOINT
R=50'
R=40'
R=23'
G-8
TYPE T ANCHOR ASSEMBLY
WOVEN WIRE FENCE
CONSTRUCTION LIMITS
END GUARDRAIL STA. 9+08.5
STA. 9+06.2
CONNECT GUARDRAIL TO EXISTING
STONE POST
E-6
8' Asphalt Drive
15" CMP
N 25°-55' W
℄ Construction S.R. 172
CEMETARY
END GUARDRAIL STA 389+95.7, 28' RT.
ROCK CHANNEL PROTECTION TYPE C, 115" THICK WITH FABRIC FILTER (GROUTED IN PLACE)
E-4
E-8
V=6.0x1.5x180.0÷27=60.0 YD³
A=7.5x118÷9=98.3 YD²
V=1.5x6.0x98.0÷27=32.7 YD³
HORIZONTAL SCALE IN FEET

CALCULATED MJG
CHECKED DSN

PLAN-S.R. 67
STA. 384+50 TO STA. 390+00

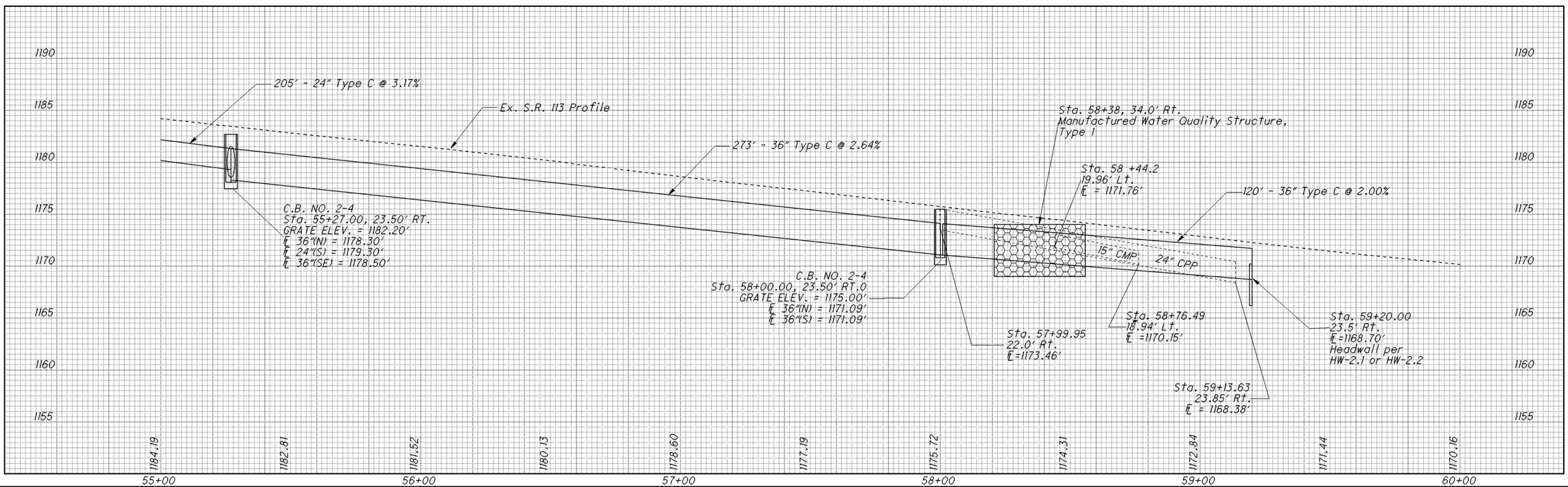
CLI-67-16.86

SP 1309-3
DATE: OCTOBER 2008



For Quantities, See Sheet 20.

AREA FOR MANUFACTURED SYSTEM



PLAN AND PROFILE
STA. 55+00 TO STA. 60+00 S.R. 113
NOB-113-0.58

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED DRT
CHECKED TGH

45
78

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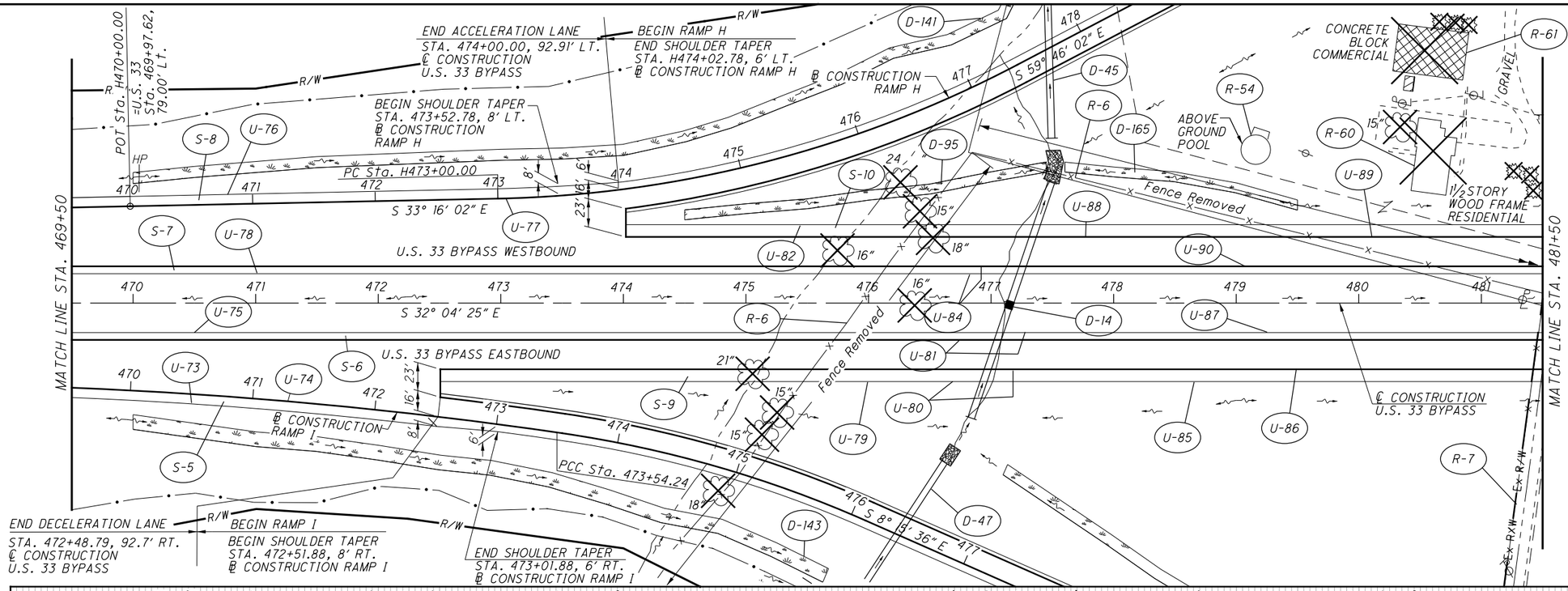
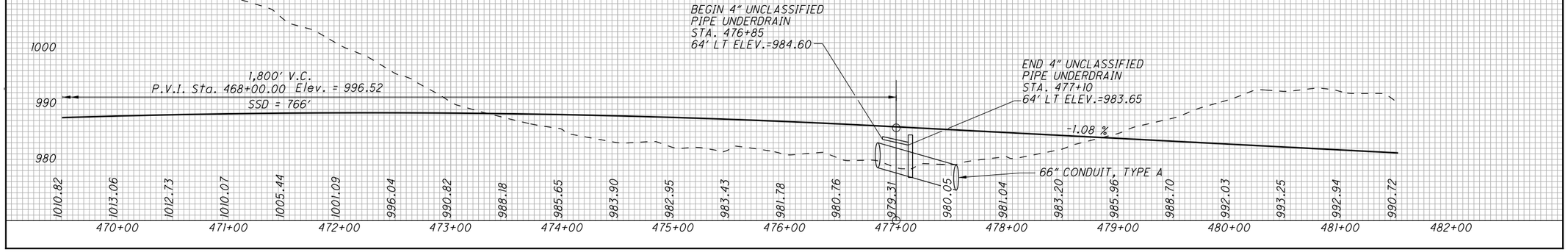
SP 1309-4
DATE: APR. 2011





CROSS REFERENCES

Sheet No.	Description
79	Ref. Monuments, ODOT #418 & #419
46-67	Estimated Quantities
360, 368	Ramps H & I
486, 487	Terminal Detail
503	Culvert Details
667	Fence Detail

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CHG
CHECKED LJS

PLAN AND PROFILE - U.S. 33 BYPASS STA. 469+50 TO STA. 481+50

FAI-33-13.25

93
739

SP 1309-5
DATE: JANUARY 2013

Existing Bunnell Hill Rd To Be Removed And Regraded, See Cross Sections. (Minimum Pavement Removal To Be 1.0 Foot. Quantities Included With Excavation/Embankment.)

Pavement Taper Rate 55:1 Rt. Side Only

Sta. 19+00, Begin Taper Pavement (Rt.) & Shoulders (Lt.& Rt.)

Sta. 19+84, Begin Taper Pavement (Rt.) & Shoulders (Lt. & Rt.)

4" UD 18+00 36' Lt. ℄ 911.0

4" UD 19+45, 24' Lt. ℄ 909.8

19"x30" Elliptical Pipe Culvert

Construction Limit

Woven Wire Fence

22" Fence Removal

8" CMP

2" Fiber Optic

12"

24" PVC

24" CMP

12" CMP

℄ Construction Bunnell Hill Rd. (Proposed)

℄ Ex. Bunnell Hill Rd N 5° 29' 21" E

Residential Drive Asphalt

MATCH LINE STA. 17+00 BUNNELL HILL RD

PT Sta. 17+82.30

Pond

Residential Drive (Asphalt)

R-16, F-1, UD-25, UD23, UD-26, R-14, R-15, UD-22, UD-24, R-17, DR-15, D-9

CURVE DATA
P.I. Sta = 16+21.33
D = 58° 55' 58" (RT)
Dc = 16° 30' 00"
R = 347.25'
T = 196.19'
L = 357.17'
E = 51.59'
e_{max} = 0.04

CROSS REFERENCES	
Sheet No.	**Description**
3-4	℄ References & Benchmarks
66	Driveway Profiles
87	Driveway Details & Estimated Quantities
89	Drive Pipe Profiles
94	Culvert Detail

REF NO.	STATION FROM	STATION TO	SIDE	BENDS & BRANCHES FOR INFO. ONLY 45° BEND	BENDS & BRANCHES FOR INFO. ONLY 90° BEND	202 PIPE REMOVED, 24" AND UNDER	202 FENCE REMOVED	605 4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	605 4" BASE PIPE UNDERDRAIN (18" DEEP)	607 FENCE, TYPE 47RA	611 12" CONDUIT, TYPE D	611 4" CONDUIT, TYPE B	611 PRECAST REINF. CONCRETE OUTLET
						FT	FT	FT	FT	FT	FT	FT	EACH
R-14	18+86	19+20	Rt.			26							
R-15	19+52	19+55	Center		1	31						52	1
R-16	16+60	20+20	Lt.				403					37	
R-17	19+70	20+19	Rt.		2		67						1
UD-22	17+00	18+00	Rt.					96					
UD-23	18+00		Center								33		
UD-24	18+05	19+45	Rt.						140	390			2
UD-25	18+05	19+45	Lt.						140				
UD-26	19+45		Center										
D-9	18+83	19+17	Rt.										
F-1	16+62	20+19	Lt.										
TOTALS CARRIED TO GENERAL SUMMARY						57	470	96	280	390	33	89	2

N

HORIZONTAL SCALE IN FEET
0 10 20 40

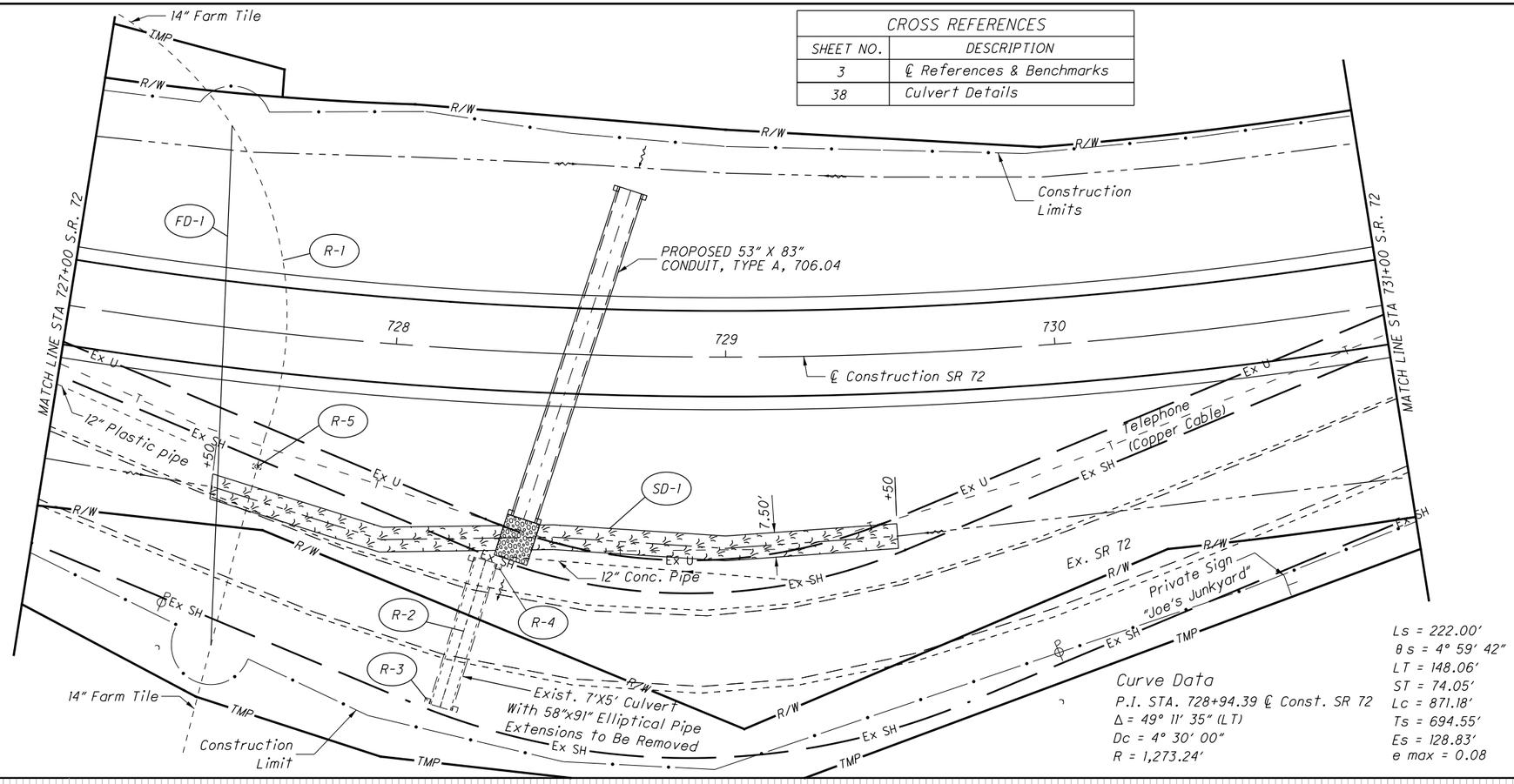
CALCULATED MSO
CHECKED JAD

PLAN AND PROFILE - BUNNELL HILL RD
STA. 17+00 TO STA 21+00

WAR-48.19.40

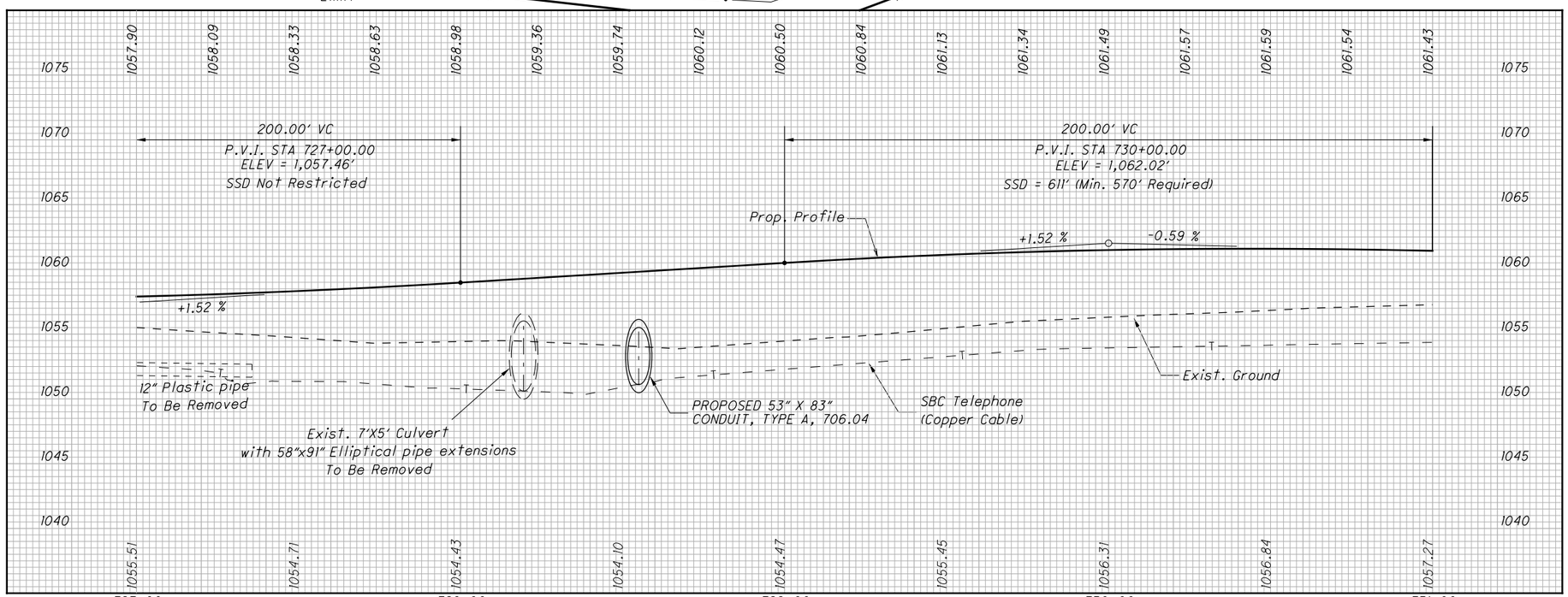
30
130

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3	℄ References & Benchmarks
38	Culvert Details



Curve Data
P.I. STA. 728+94.39 ℄ Const. SR 72
Δ = 49° 11' 35" (LT)
Dc = 4° 30' 00"
R = 1,273.24'

Ls = 222.00'
θs = 4° 59' 42"
LT = 148.06'
ST = 74.05'
Lc = 871.18'
Ts = 694.55'
Es = 128.83'
e max = 0.08



REF NO.	STATION FROM	STATION TO	SIDE	202 HEADWALL REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 REMOVAL MISC.: 7'X5' CONCRETE BOX CULVERT WITH 58" X 91" ELLIPTICAL PIPE EXTENSIONS	202 REMOVAL MISC.: 2'x2' FARM TILE JUNCTION BOX	611 15" CONDUIT, TYPE B	671 EROSION CONTROL MAT, TYPE A
				EACH	FT	EACH	EACH	FT	SY
R-1	727+43	727+56	RT & LT		184				
R-2	728+15	728+22	RT			1		158	
R-3	728+17	728+23	RT	1					167
R-4	728+27	728+35	RT	1			1		
R-5	728+51	728+53	RT						
FD-1	727+43	727+56	RT & LT						
SD-1	727+50	729+50	RT						
TOTALS CARRIED TO GENERAL SUMMARY				2	184	1	1	158	167

SP 1309-6
DATE: JANUARY 2013

HORIZONTAL SCALE IN FEET
0 10 20 40

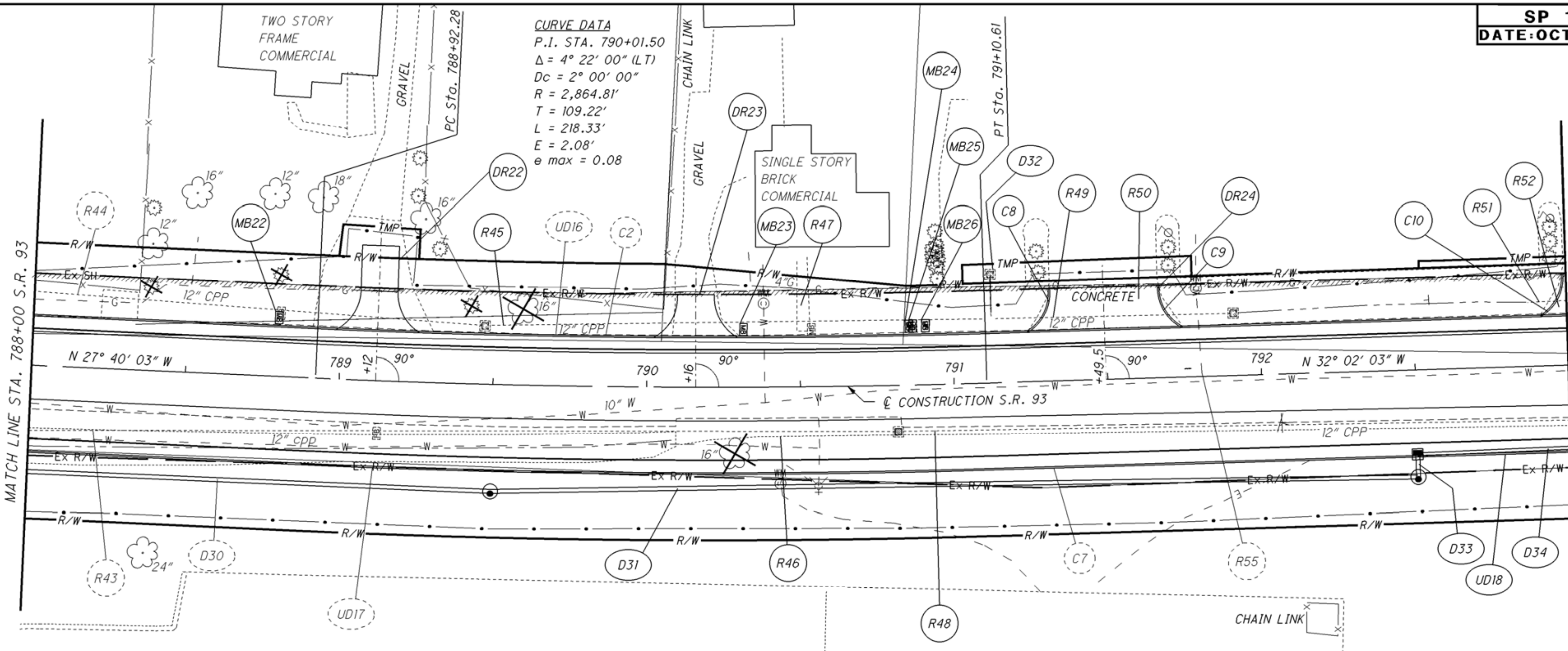
CALCULATED MSO
CHECKED JAD

PLAN AND PROFILE
STA 727+00 TO 731+00

GRE-72-13.67

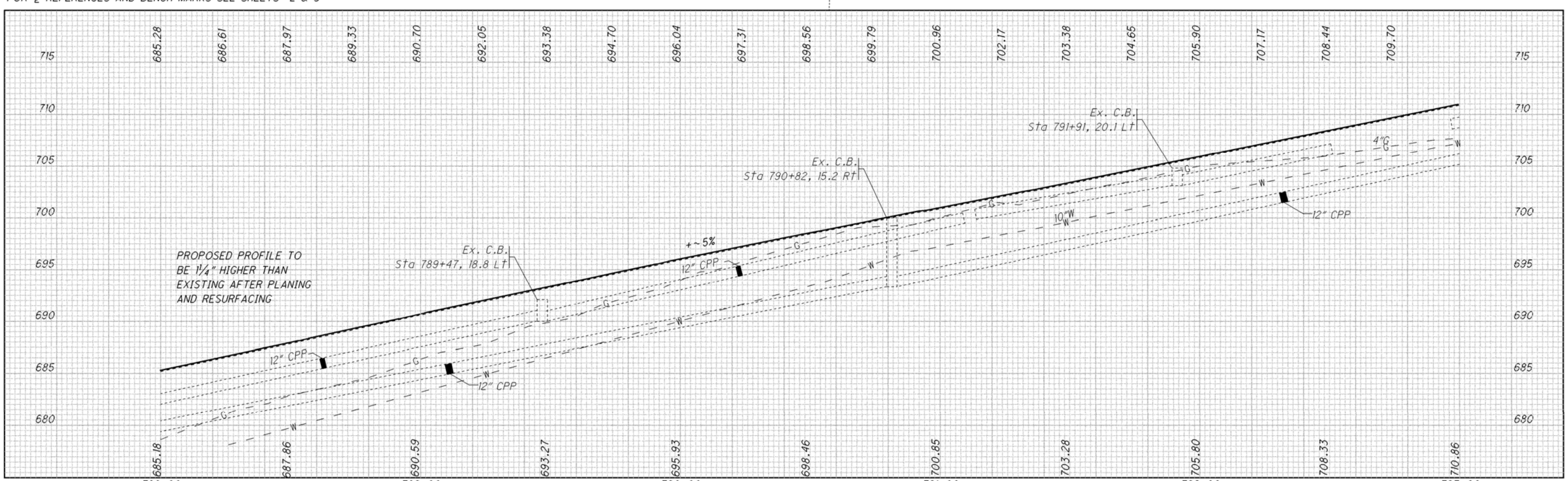
17
51

SP 1309-7(a)
DATE: OCTOBER 2006



TWO STORY FRAME COMMERCIAL
CURVE DATA
P.I. STA. 790+01.50
Δ = 4° 22′ 00″ (LT)
Dc = 2° 00′ 00″
R = 2,864.81′
T = 109.22′
L = 218.33′
E = 2.08′
e max = 0.08
CHAIN LINK
GRAVEL
PC Sta. 788+92.28
PT Sta. 791+10.61
SINGLE STORY BRICK COMMERCIAL
CONCRETE
MATCH LINE STA. 788+00 S.R. 93
MATCH LINE STA. 793+00 S.R. 93
N 27° 40′ 03″ W
N 32° 02′ 03″ W
℄ CONSTRUCTION S.R. 93
12″ CPP
10″ W
R/W
Ex R/W
TMP
789
790
791
792
R44
MB22
DR22
R45
UD16
C2
DR23
MB23
R47
MB24
MB25
MB26
D32
C8
R49
R50
DR24
C9
C10
R51
R52
R43
D30
UD17
D31
R46
R48
C7
R55
D33
UD18
D34
CHAIN LINK

FOR ESTIMATED QUANTITIES SEE SHEETS 20 - 24
FOR DRIVEWAY DETAILS AND QUANTITIES SEE SHEET 83
FOR STORM SEWER PROFILES SEE SHEETS 89 - 92
FOR ℄ REFERENCES AND BENCH MARKS SEE SHEETS 2 & 3



715
710
705
700
695
690
685
680
685.28
686.61
687.97
689.33
690.70
692.05
693.38
694.70
696.04
697.31
698.56
699.79
700.96
702.17
703.38
704.65
705.90
707.17
708.44
709.70
685.18
687.86
690.59
693.27
695.93
698.46
700.85
703.28
705.80
708.33
710.86
788+00
789+00
790+00
791+00
792+00
793+00
+~5%
PROPOSED PROFILE TO BE 1¼″ HIGHER THAN EXISTING AFTER PLANING AND RESURFACING
Ex. C.B. Sta 789+47, 18.8 Lt
Ex. C.B. Sta 790+82, 15.2 Rt
Ex. C.B. Sta 791+91, 20.1 Lt
12″ CPP
10″W
4″G

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MSQ
CHECKED JAD

PLAN AND PROFILE
STA. 788+00 TO STA. 793+00

MOE-93-22.35

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SINGLE STORY FRAME COMMERCIAL

SINGLE STORY FRAME COMMERCIAL

TWO STORY FRAME COMMERCIAL

Private Sign "Bud's Pizza"

BEGIN LANE SHIFT STA. 794+50.00

BUTT JOINT END LANE SHIFT STA. 795+90.00

MATCH LINE STA. 793+00 S.R. 93

R51 R52 R53 C12 DR26 C13 C2 UD16 DR25

TMP TMP

R/W Ex R/W

CONCRETE CONCRETE

12" CPP

SAN GV G W

+16.5 90° +86 90° 794 795 796 797

N 32° 02' 03" W

TAPER CURB HEIGHT (10')

4.0' 12.0' 24.0' 4.0' 14.4' 21.6' 2.1'

℄ CONSTRUCTION S.R. 93

C11 R46 D34 R48 UD18 R54 C7 R55

Private Sign "Joe's Diner"

PT Sta. 797+68.17

PC Sta. 796+38.18

FOR ESTIMATED QUANTITIES SEE SHEETS 20 - 24
FOR DRIVEWAY DETAILS AND QUANTITIES SEE SHEET 83
FOR STORM SEWER PROFILES SEE SHEETS 89 - 92
FOR ℄ REFERENCES AND BENCH MARKS SEE SHEETS 2 & 3

730 725 720 715 710 705 700 695

710.96 712.22 713.46 714.67 715.85 717.00 718.04 718.96 719.87 720.72 721.49 722.12 722.46

PROPOSED PROFILE TO BE 1¼" HIGHER THAN EXISTING AFTER PLANING AND RESURFACING

Ex. C.B. Sta 794+31, 19.7 Rt

+ ~5%

+ ~3.5%

12" CPP

Ex. C.B. Sta 796+33, 22.8 Rt

710.86 713.35 715.75 717.93 719.76 721.38 722.69 723.61 724.24 724.50 724.55

793+00 794+00 795+00 796+00 797+00 798+00

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED MSO CHECKED JAD

PLAN AND PROFILE
STA. 793+00 TO STA. 798+00

MOE-93-22.35

35
126

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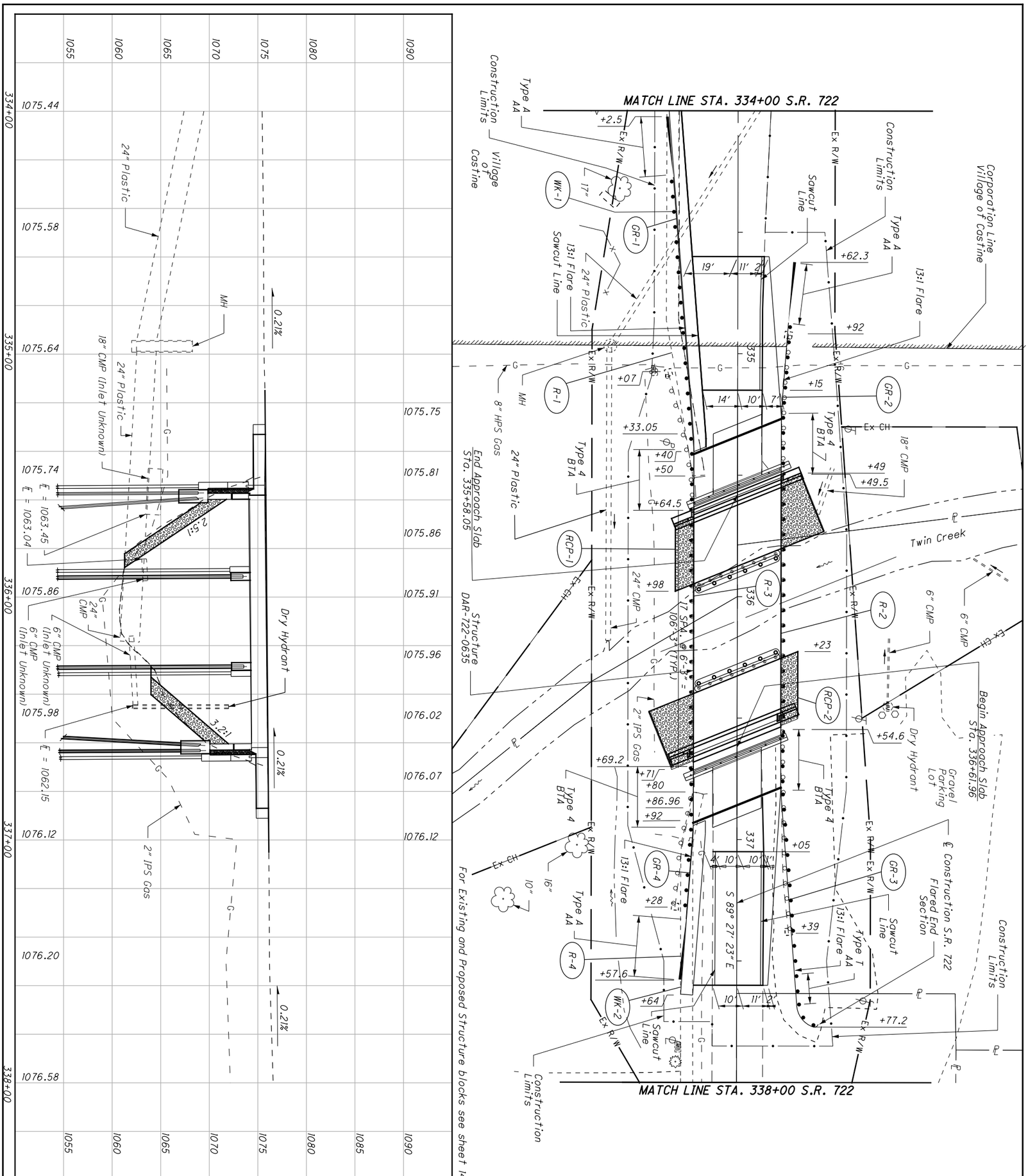


REF NO.	STATION FROM	STATION TO	SIDE	202 WALK REMOVED SF	202 GUARDRAIL REMOVED FT		606 GUARDRAIL, TYPE 5 FT	606 ANCHOR ASSEMBLY, TYPE A EACH	606 ANCHOR ASSEMBLY, TYPE T EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4 EACH		608 4" CONCRETE WALK SF		601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER CY	
GR-1	334+02.5	335+49.5	RT.				137.5	1		1					
GR-2	334+62.3	335+64.5	LT.				62.5	1		1					
GR-3	336+54.6	337+77.2	LT.				125		1	1					
GR-4	336+69.2	337+67.6	RT.				50.0	1		1					
R-2	334+92	337+39	LT.		250										
R-3	335+07	337+28	RT		225										
R-4	336+80	337+64	RT.	405											
RPC-1	335+49	335+98	LT/RT											120	
RPC-2	336+23	336+71	LT/RT											130	
WK-2	336+92	337+64	RT.									354			
TOTALS CARRIED TO GENERAL SUMMARY				405	475		387.5	3	1	4		354		250	

SP 1309-8
DATE: OCTOBER 2008

13
24

DAR-722-6.34

PLAN AND PROFILE - S.R. 722
STA. 334+00 TO STA. 338+00

CALCULATED JAR
CHECKED GFR

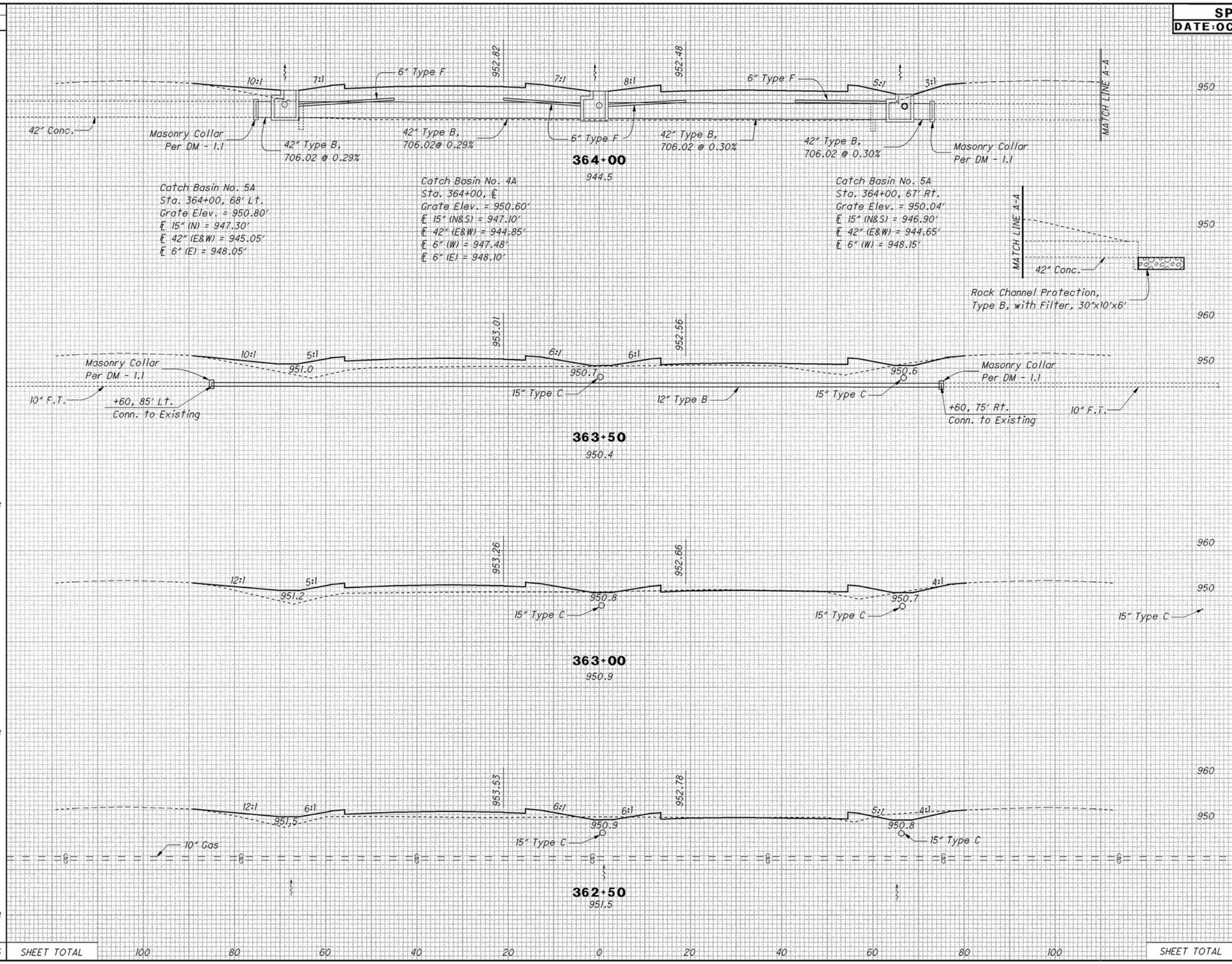
0 20
10 40
HORIZONTAL SCALE IN FEET

N

SP 1310-1
DATE: OCTOBER 2006

CALCULATED MTG
CHECKED CJM

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
96		0	919		
	531			7	1054
95		8	219		
	528	24	346		
95		18	155		
	528	40	250		
95		25	115		
	528	67	187		
	2115			138	1837



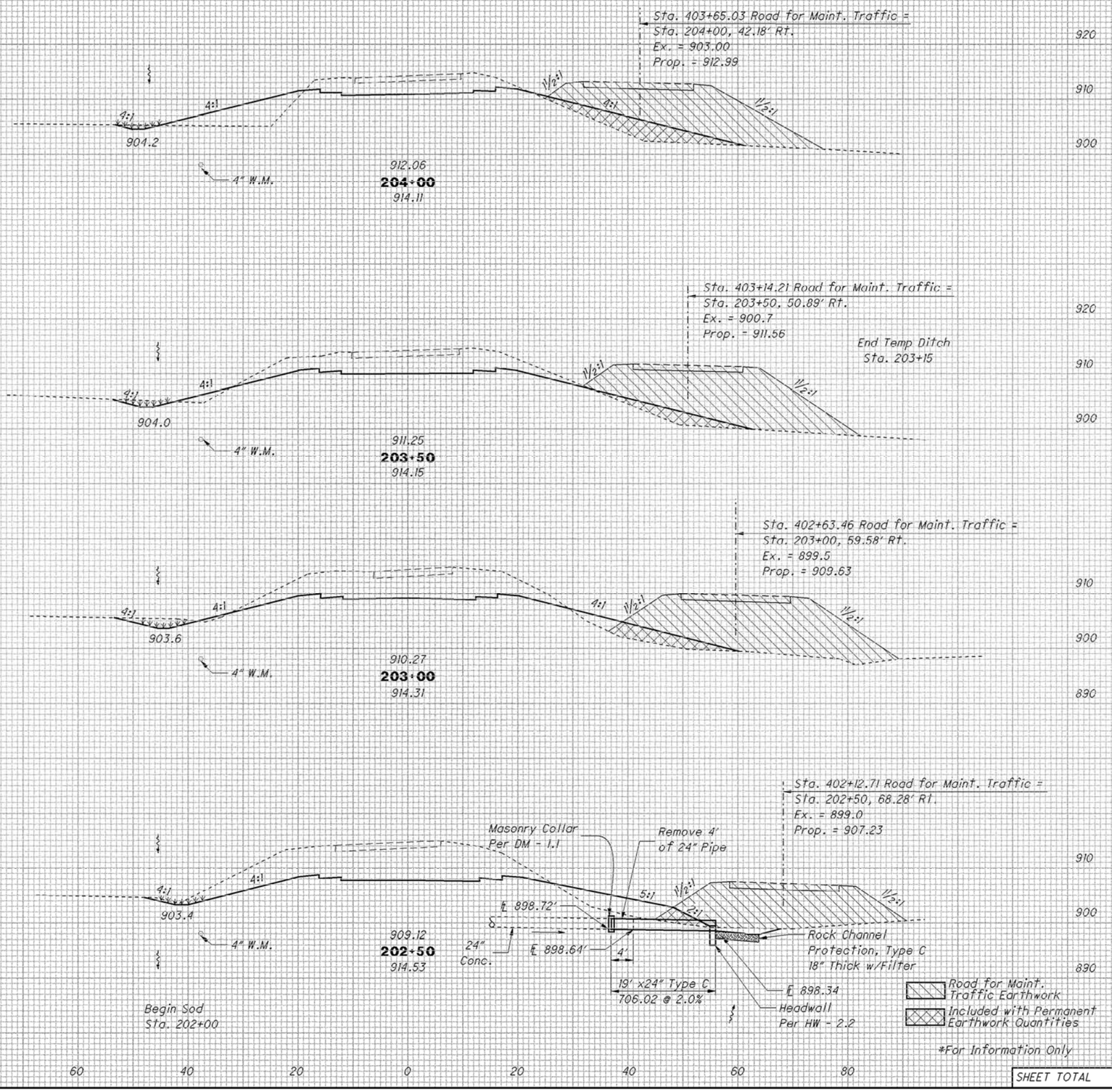
SHEET TOTAL 100 80 60 40 20 0 20 40 60 80 100 SHEET TOTAL

CROSS SECTIONS - S.R. 76
STA. 362+50 TO STA. 364+00

LUC-76-31.48

154
488

SEEDING END WIDTH	SEEDING SQ. YDS.
	517
104	
	583
106	
	586
105	
	581
104	
	2267



ROAD FOR MAINT. TRAFFIC

SP 1310-2

DATE: OCT. 2006

CALCULATED RDN

CHECKED PDG

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
						156	171
0	332			95	136		
		0	645			241	169
0	364			165	46		
		6	703			367	94
7	395			231	56		
		6	616			509	96
0	270			319	48		
		7	297				
SHEET TOTAL		*19	*2261			1273	530

CROSS SECTIONS - S.R. 130 STA. 202+50 TO STA. 204+00

MED-130-1.23

SP 1810-3
DATE: APR. 2011

CALCULATED MJG
CHECKED DSN

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
68		369+00	42	30		
	378				4	2
	-79	DRIVE 368+90 LT				
68		368+50	24	35	61	60
	378				57	55
68		368+00	38	24		
	347				79	40
	-137	DRIVE 367+63 RT	47	19		
36		367+40				
	-135	DRIVE 367+16 RT				
	200				69	31
36		366+90			2	3
	253				43	52
78		366+50	18	41		
	433				38	68
	-135	DRIVE 366+01 RT			2	3
78		366+00	23	32		
	1503	TOTAL			360	316

REMOVE PAV'T
12:1
TEL 8"W TEL 8"W 8"G
853.23 368+50 852.82
*PAV'T. FOR MAINT. TRAFFIC AS PER PLAN
Ex. SH
15'~12" TYPE C @ 3.87%
6:1
SH
CATCH BASIN NO.CB-3A
STA 368+50; 22.0' RT
℄ GRATE ELEV. 852.56
℄ 6" (W) ELEV. 850.56
℄ 12" (S) ELEV. 849.89
CATCH BASIN NO. 2-3
STA 368+50; 37.0' RT
℄ GRATE ELEV. 852.30
℄ 12" (N) ELEV. 849.31
℄ 18" (W&E) ELEV. 848.81
8"SAN
12"
18" TYPE B
853.55 368+00 853.14
25'~6" TYPE F @ 1.50%
4:1
45° BEND
6" DRAIN
MASONRY COLLAR Per DM - 1.1
SEE S.R. 172 CROSS-SECTIONS
853.86 367+50 853.41
CATCH BASIN NO. 2-3
STA 367+47; 37.0' RT
℄ GRATE ELEV. 853.10
℄ 18"(W&E) ELEV. 849.22
℄ 6" (S) ELEV. 851.80
18", TYPE B
854.17 367+00 853.79
854.47 366+50 854.16
CATCH BASIN NO.CB-3A
STA 366+42; 22.0' LT
℄ GRATE ELEV. 853.85
℄ 6" (W) ELEV. 851.85
℄ 12" (N) ELEV. 851.18
CATCH BASIN NO.CB-3A
STA 366+50; 22.0' RT
℄ GRATE ELEV. 853.80
℄ 6" (W) ELEV. 851.80
℄ 12" (S) ELEV. 851.13
5:1
CATCH BASIN NO. 2-3
STA 366+50; 37.0' RT
℄ GRATE ELEV. 853.50
℄ 12" (N) ELEV. 850.11
℄ 15" (W) ELEV. 849.86
℄ 18" (E) ELEV. 849.61
EXIST MANHOLE
STA 366+36.00; 26.00' RT
RECONSTRUCT TO GRADE
ELEV. TOP 854.60
80'~12" TYPE C @ 7.85%
℄ EXIST. C.B.
60" C.M.P.
℄ 12" ELEV. 844.90
*PAYMENT FOR EARTHWORK NECESSARY FOR PLACEMENT OF PAVE. FOR MAINT. TRAFFIC INCLUDE WITH ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN.
12"W
CATCH BASIN NO.2-3
STA 365+80; 40.0' RT
℄ GRATE ELEV. 853.40
℄ 15" (W&E) ELEV. 850.14
854.77 366+00 854.47

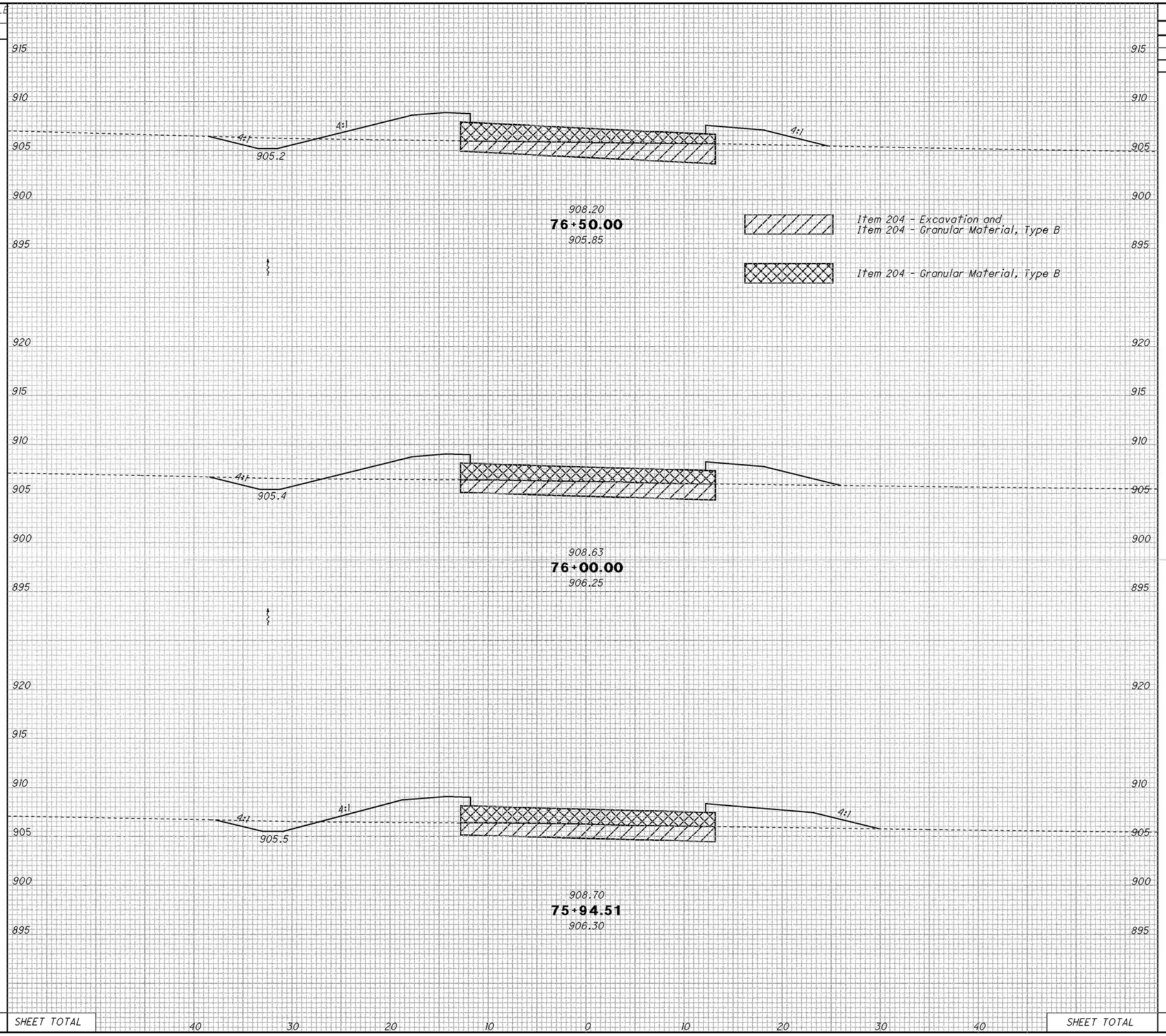
60 50 40 30 20 10 0 10 20 30 40 50

CROSS SECTIONS - S.R. 67
STA. 366+00 TO STA. 368+50

CLI-67-16.86

57
97

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SQ. YDS.	END WIDTH	SQ. YDS.
44		24	
	247		133
45		24	
	28		15
48		24	
	275		148
		SHEET TOTAL	



SP 1310-4

DATE:OCTOBER 2006

ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
7	41			40	78		
		14	77			72	144
8	42			38	78		
		2	9			8	16
7	51			37	78		
		16	86			80	160
SHEET TOTAL							

CALCULATED GFR

CHECKED JAD

CROSS SECTIONS - RELOCATED BOUNDARIES RD (C.R. 9) STA. 75+92.89 TO STA. 76+50

PER/LIC-13-28.73/0.00

210/310

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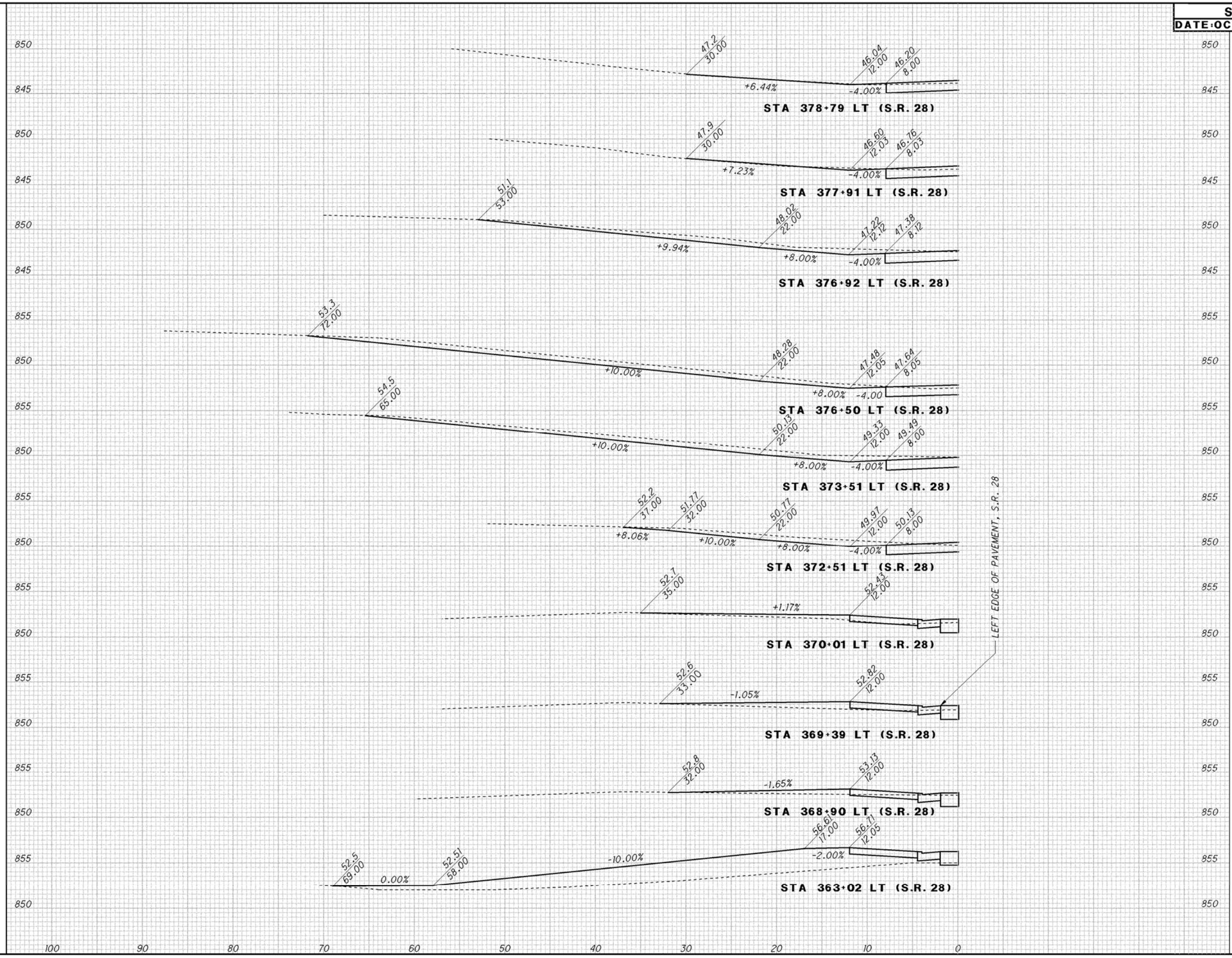
SP 1310-5
DATE: OCTOBER 2006

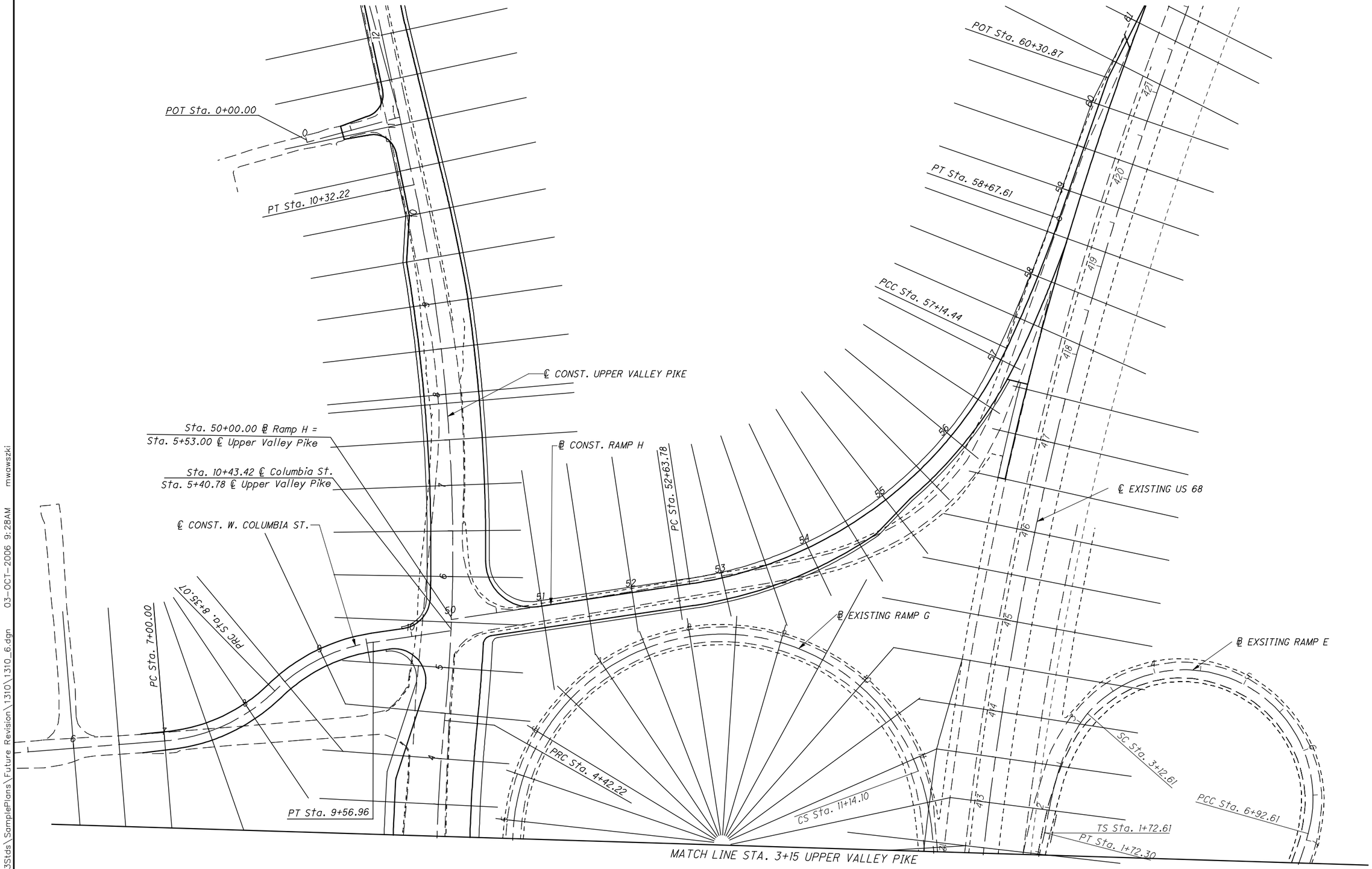
CALCULATED RDN
CHECKED PDG

DRIVEWAY PROFILES



HUR-28-6.86

SP 1310-6
DATE: OCTOBER 2006



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MSQ
CHECKED JAD

CROSS SECTION LAYOUT

CLA-40-10.18

25
140

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SEEDING	
END WIDTH	SQ. YDS.
	315
68	
	415
81	
	404
64	
	355
64	
	1489

Item 202 - Pavement Removed, Asphalt Concrete

Item 202 - Pavement Removed, Asphalt Concrete and Item 203 - Embankment

48"X76" conc

40:1

6" UD 6" UD

766.98
96+50.00
766.98

DEDUCT FOR PAVEMENT REMOVED

Sta. 96+05.80, 152.4 LT
CB-2-6 APP, GRATE ELEV 763.80
48"x76" (N/SE) 758.05

40:1

6" UD 6" UD

766.44
96+00.00
766.44

40' - 48"x76" CONDUIT TYPE C, 706.04 HE I @ 1.00%

DEDUCT FOR PAVEMENT REMOVED

Sta. 95+67, 140.9 LT
48"x76" ℄ = 757.65

8:1

6" UD 6" UD

766.07
95+50.00
766.07

48" steel (abandon)

757.65

HW-2.2, A.P.P.

See Ex. Ramp H, Sta. 186+50
Cross Section

See Ex. Ramp H, Sta. 186+00
Cross Section

8:1

6" UD 6" UD

765.68
95+00.00
765.68

757.6

780 770 760 750

180 160 140 120 100 80 60 40 20 0 20 40 60

SP 1310-7			
DATE: JULY 2010			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
81	26		
		224	32
		-157	0
160	9		
		459	3
		-124	0
335	4		
		602	8
315	5		
		605	16
		1609	59

CALCULATED TKB

CHECKED MDC

CROSS SECTIONS - S.R. 315
STA. 95+00 TO STA. 96+50

FRA-315-12.18

26
68

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SUPERELEVATION TABLE

P. I. Station 20+00.00 | Dc = 6° 00′

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
840.79		-0.17	-0.0156	11.01	14+95.00	840.96	11.01	-0.0156	-0.17		840.79	N.C.
840.81		-0.15	-0.0135	11.10	15+00.00	840.96	11.10	-0.0156	-0.17		840.79	
840.93		-0.03	-0.0026	11.55	15+25.00	840.96	11.55	-0.0156	-0.18		840.78	
840.96		0.00	0.0000	11.66	15+31.25	840.96	11.66	-0.0156	-0.18		840.78	½ LEVEL
841.05		+0.09	+0.0075	12.00	15+50.00	840.96	12.00	-0.0156	-0.19		840.77	
841.14		+0.19	+0.0156	12.00	15+68.80	840.96	12.00	-0.0156	-0.19		840.77	R.C.
841.17		+0.21	+0.0179	12.00	15+75.00	840.96	12.00	-0.0179	-0.21		840.75	
841.28	2|1:1	+0.33	+0.0278	12.00	16+00.00	840.95	12.00	-0.0278	-0.33		840.62	
841.40		+0.45	+0.0397	12.00	16+25.00	840.95	12.00	-0.0377	-0.45		840.50	
841.52		+0.57	+0.0476	12.00	16+50.00	840.95	12.00	-0.0476	-0.57		840.38	
841.61		+0.66	+0.0553	12.00	16+69.40	840.95	12.00	-0.0553	-0.66	2|1:1	840.29	P.C.
841.64		+0.69	+0.0575	12.00	16+75.00	840.95	12.00	-0.0575	-0.69		840.26	
841.76		+0.81	+0.0674	12.00	17+00.00	840.95	12.00	-0.0674	-0.81		840.14	
841.88		+0.93	+0.0773	12.00	17+25.00	840.95	12.00	-0.0773	-0.93		840.02	
841.95		+1.00	+0.0830	12.00	17+39.33	840.95	12.00	-0.0830	-1.00		839.95	
841.95		+1.00	+0.0830	12.00	17+50.00	840.95	12.00	-0.0830	-1.00		839.95	F.S.
842.00		+1.00	+0.0830	12.00	17+75.00	841.00	12.00	-0.0830	-1.00		840.00	
842.15		+1.00	+0.0830	12.00	18+00.00	841.25	12.00	-0.0830	-1.00		840.15	
842.42		+1.00	+0.0830	12.00	18+25.00	841.42	12.00	-0.0830	-1.00		840.42	
842.78		+1.00	+0.0830	12.00	18+50.00	841.78	12.00	-0.0830	-1.00		840.78	
843.26		+1.00	+0.0830	12.00	18+75.00	842.26	12.00	-0.0830	-1.00		841.26	
843.84		+1.00	+0.0830	12.00	19+00.00	842.84	12.00	-0.0830	-1.00		841.84	
844.52		+1.00	+0.0830	12.00	19+25.00	843.52	12.00	-0.0830	-1.00		842.52	
845.31		+1.00	+0.0830	12.00	19+50.00	844.31	12.00	-0.0830	-1.00		843.31	
846.21		+1.00	+0.0830	12.00	19+75.00	845.21	12.00	-0.0830	-1.00		844.21	
847.21		+1.00	+0.0830	12.00	20+00.00	846.21	12.00	-0.0830	-1.00		845.21	
848.32		+1.00	+0.0830	12.00	20+25.00	847.32	12.00	-0.0830	-1.00		846.32	
849.53		+1.00	+0.0830	12.00	20+50.00	848.53	12.00	-0.0830	-1.00		847.53	
850.85		+1.00	+0.0830	12.00	20+75.00	849.85	12.00	-0.0830	-1.00		848.85	
852.27		+1.00	+0.0830	12.00	21+00.00	851.27	12.00	-0.0830	-1.00		850.27	
853.80		+1.00	+0.0830	12.00	21+25.00	852.80	12.00	-0.0830	-1.00		851.80	
855.44		+1.00	+0.0830	12.00	21+50.00	854.44	12.00	-0.0830	-1.00		853.44	
857.18		+1.00	+0.0830	12.00	21+75.00	856.18	12.00	-0.0830	-1.00		855.18	
859.03		+1.00	+0.0830	12.00	22+00.00	858.03	12.00	-0.0830	-1.00		857.03	
860.98		+1.00	+0.0830	12.00	22+25.00	859.98	12.00	-0.0830	-1.00		858.98	
861.87		+1.00	+0.0830	12.00	22+35.95	860.87	12.00	-0.0830	-1.00		859.87	F.S.
862.96		+0.93	+0.0775	12.00	22+50.00	862.03	12.00	-0.0776	-0.93		861.10	
865.01		+0.81	+0.0677	12.00	22+75.00	864.20	12.00	-0.0677	-0.81		863.39	
867.16		+0.69	+0.0578	12.00	23+00.00	866.47	12.00	-0.0578	-0.69		865.78	
867.69		+0.67	+0.0554	12.00	23+05.94	867.02	12.00	-0.0554	-0.67		866.35	P.T.
869.41		+0.57	+0.0479	12.00	23+25.00	868.84	12.00	-0.0479	-0.57	2|1:1	868.27	
871.78		+0.46	+0.0380	12.00	23+50.00	871.32	12.00	-0.0380	-0.46		870.86	
874.19	2|1:1	+0.34	+0.0281	12.00	23+75.00	873.85	12.00	-0.0281	-0.34		873.51	
876.61		+0.22	+0.0182	12.00	24+00.00	876.39	12.00	-0.0182	-0.22		876.17	
877.24		+0.19	+0.0156	12.00	24+06.48	877.05	12.00	-0.0156	-0.19		876.86	R.C.
879.02		+0.10	+0.0083	12.00	24+25.00	878.92	12.00	-0.0156	-0.19		878.73	
881.03		0.00	0.0000	11.62	24+45.83	881.03	11.62	-0.0156	-0.18		880.85	½ LEVEL
881.43		-0.02	-0.0017	11.55	24+50.00	881.45	11.55	-0.0156	-0.18		881.27	
883.84		-0.14	-0.0126	11.10	24+75.00	883.98	11.10	-0.0156	-0.17		883.81	
884.47		-0.17	-.0.0156	10.98	24+81.50	884.64	10.98	-0.0156	-0.17		884.47	N.C.

* NEGATIVE CORRECTIONS MEANING BELOW PROFILE GRADE
POSITIVE CORRECTIONS MEANING ABOVE PROFILE GRADE.

SUPERELEVATION TABLE

P. I. Station 36+45.21 | Dc = 3° 00′

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
606.93		-0.19	-0.0156	12.00	33+92.16	607.12	12.00	-0.0156	-0.19		606.93	N.C.
607.13		-0.16	-0.0133	12.00	34+00.00	607.29	12.00	-0.0156	-0.19		607.10	
607.76		-0.05	-0.0042	12.00	34+25.00	607.81	12.00	-0.0156	-0.19		607.62	
608.04		0.00	0.0000	12.00	34+37.09	608.04	12.00	-0.0156	-0.19		607.85	T.S.
608.34		+0.05	+0.0042	12.00	34+50.00	608.29	12.00	-0.0156	-0.19		608.10	
608.88		+0.16	+0.0133	12.00	34+75.00	608.72	12.00	-0.0156	-0.19		608.53	
609.02	236.5:1	+0.19	+0.0156	12.00	34+82.02	608.83	12.00	-0.0156	-0.19		608.64	R.C.
609.38		+0.27	+0.0225	12.00	35+00.00	609.11	12.00	-0.0225	-0.27		608.84	
609.84		+0.37	+0.0308	12.00	35+25.00	609.47	12.00	-0.0308	-0.37	236.5:1	609.10	
610.26		+0.48	+0.0400	12.00	35+50.00	609.78	12.00	-0.0400	-0.48		609.30	
610.63		+0.58	+0.0483	12.00	35+75.00	610.05	12.00	-0.0483	-0.58		609.47	
610.97		+0.69	+0.0575	12.00	36+00.00	610.28	12.00	-0.0575	-0.69		609.59	
611.12		+0.74	+0.0620	12.00	36+12.09	610.38	12.00	-0.0620	-0.74		609.64	S.C.
611.21		+0.74	+0.0620	12.00	36+25.00	610.47	12.00	-0.0620	-0.74		609.73	
611.36		+0.74	+0.0620	12.00	36+50.00	610.62	12.00	-0.0620	-0.74		609.88	
611.47		+0.74	+0.0620	12.00	36+75.00	610.73	12.00	-0.0620	-0.74		609.99	
611.48		+0.74	+0.0620	12.00	36+77.94	610.74	12.00	-0.0620	-0.74		610.00	C.S.
611.44		+0.65	+0.0542	12.00	37+00.00	610.79	12.00	-0.0542	-0.65		610.14	
611.36		+0.54	+0.0450	12.00	37+25.00	610.82	12.00	-0.0450	-0.54		610.28	
611.25		+0.44	+0.0367	12.00	37+50.00	610.81	12.00	-0.0367	-0.44	236.5:1	610.37	
611.08		+0.33	+0.0275	12.00	37+75.00	610.75	12.00	-0.0275	-0.33		610.42	
610.87	236.5:1	+0.22	+0.0183	12.00	38+00.00	610.65	12.00	-0.0183	-0.22		610.43	
610.80		+0.19	+0.0156	12.00	38+08.01	610.61	12.00	-0.0156	-0.19		610.42	R.C.
610.64		+0.12	+0.0100	12.00	38+25.00	610.52	12.00	-0.0156	-0.19		610.33	
610.35		+0.01	+0.0008	12.00	38+50.00	610.34	12.00	-0.0156	-0.19		610.15	
610.31		0.00	0.0000	12.00	38+52.94	610.31	12.00	-0.0156	-0.19		610.12	S.T.
610.03		-0.09	-0.0075	12.00	38+75.00	610.12	12.00	-0.0156	-0.19		609.93	
609.69		-0.19	-0.0156	12.00	38+97.87	609.88	12.00	-0.0156	-0.19		609.69	N.C.

SP 1311-1
DATE: OCTOBER 2006
CALCULATED KAK
CHECKED LJS

SUPERELEVATION TABLE

BEL-148-11.48

SP 1311-2
DATE: OCTOBER 2006

CURVE DATA
P.I. Sta. 261+49.40, S.R. 757
Δ = 1°44'50" Lt
Dc = 0°30'00"
R = 11459.16'
T = 174.74'
L = 349.44'
E = 1.33'
e_{max} = 0.010

Sta. 260+86.52, 68' Lt. ℄ S.R. 757
Sta. 9+30.07, 62' Rt. ℄ Duck Rd.

Sta. 262+11.27, 68' Lt. ℄ S.R. 757
Sta. 9+30.93, 62' Lt. ℄ Duck Rd.

PC 259+74.66

PT 263+24.10

Δ = 90°-42'-36"
R = 50'
L = 78.16'

Δ = 89°-54'-49"
R = 50'
L = 78.46'

S85°35'03"E

N5°41'07"E

N3°56'17"E

℄ Construction S.R. 757

21"B

18"B

Gr. El. 814.73

Gr. El. 814.32

50' Shoulder Taper

Δ = 89°-40'-26"
R = 50'
L = 78.26

Δ = 89°-42'-35"
R = 50'
L = 78.29'

Sta. 260+87.76, 68' Rt. ℄ S.R. 757
Sta. 10+66.48, 62' Rt. ℄ Duck Rd.

Sta. 262+11.03, 68' Rt. ℄ S.R. 757
Sta. 10+66.52, 62' Lt. ℄ Duck Rd.

℄ Construction Duck Rd.

S85°12'23"E

Sta. 261+49.37 ℄ S.R. 757 =
Sta. 9+98.67 ℄ Duck Rd.

℄ Construction S.R. 757

Back Tangent

Ahead Tangent

Curve
Dc = 0°-30'-00"

88°-43'-50"

89°-31'-20"

90°-53'-30"

90°-51'-20"

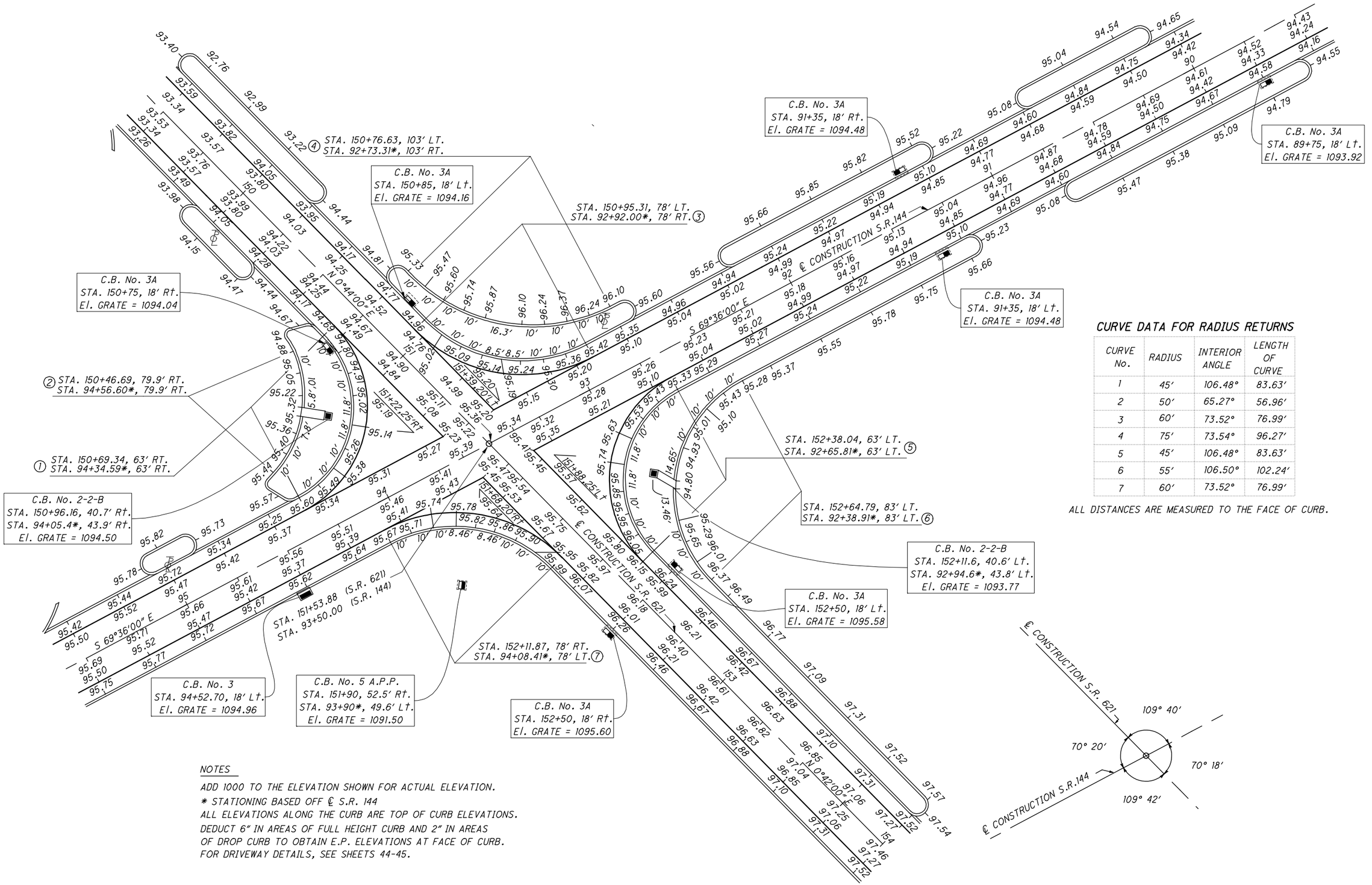
PI Sta. 261+49.40 S.R. 757 =
PI Sta. 10+00 Duck Rd.

DETAIL A

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED VHW
CHECKED TLH

MEG-757-1.23 INTERSECTION DETAIL - S.R. 757 & DUCK ROAD



CURVE DATA FOR RADIUS RETURNS

CURVE No.	RADIUS	INTERIOR ANGLE	LENGTH OF CURVE
1	45′	106.48°	83.63′
2	50′	65.27°	56.96′
3	60′	73.52°	76.99′
4	75′	73.54°	96.27′
5	45′	106.48°	83.63′
6	55′	106.50°	102.24′
7	60′	73.52°	76.99′

ALL DISTANCES ARE MEASURED TO THE FACE OF CURB.

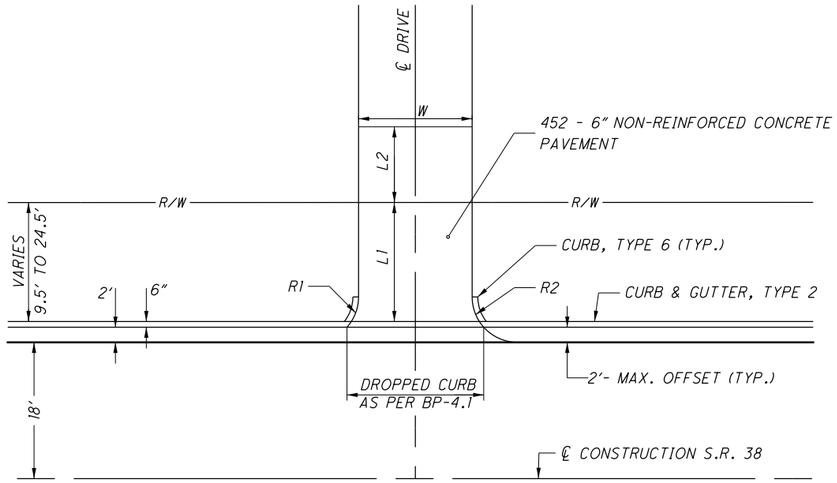
NOTES

ADD 1000 TO THE ELEVATION SHOWN FOR ACTUAL ELEVATION.
* STATIONING BASED OFF ℄ S.R. 144
ALL ELEVATIONS ALONG THE CURB ARE TOP OF CURB ELEVATIONS.
DEDUCT 6″ IN AREAS OF FULL HEIGHT CURB AND 2″ IN AREAS OF DROP CURB TO OBTAIN E.P. ELEVATIONS AT FACE OF CURB.
FOR DRIVEWAY DETAILS, SEE SHEETS 44-45.

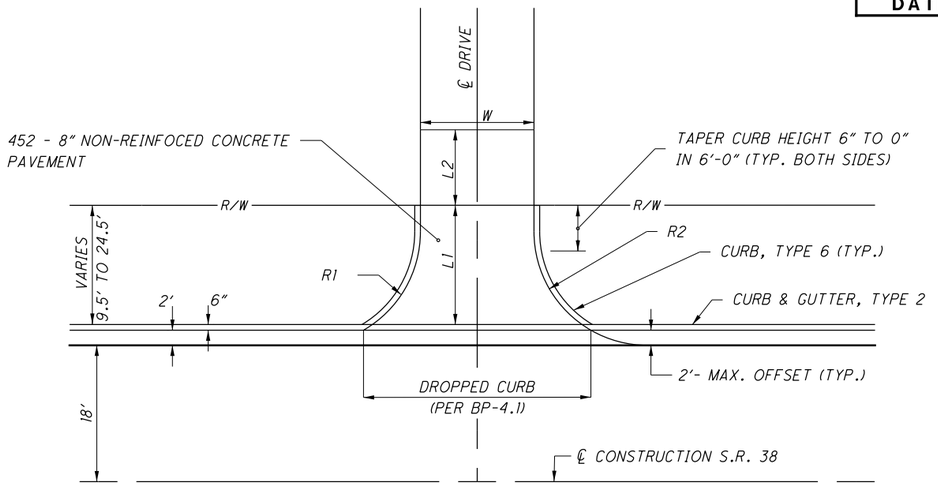
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED WSR
CHECKED SJB

INTERSECTION DETAIL & PAVEMENT ELEVATIONS
S.R. 621 AND S.R. 144

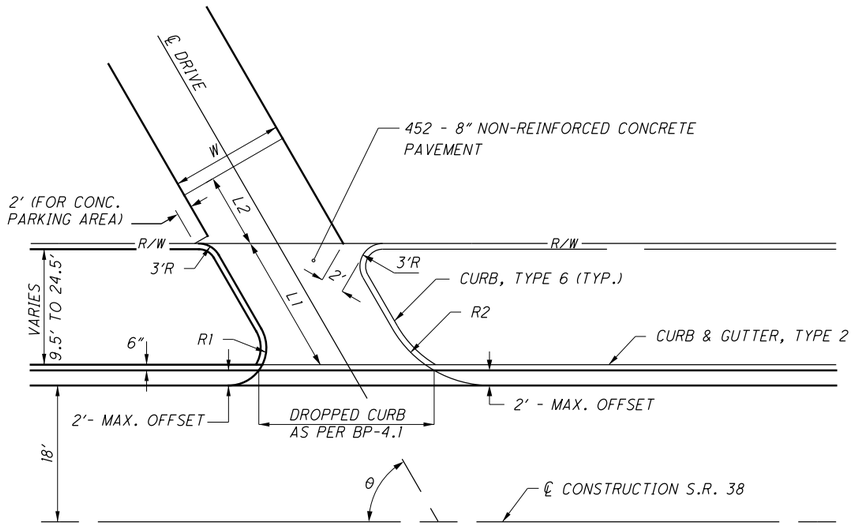
BEL-621-5.29



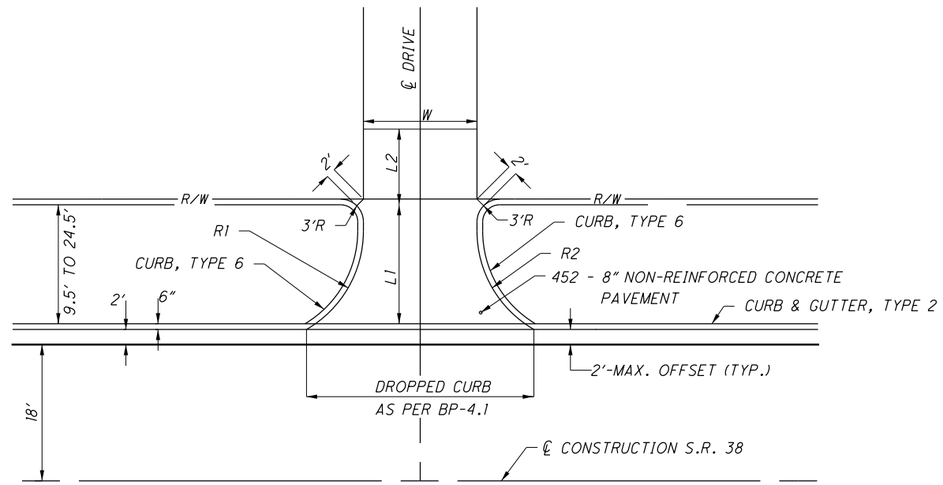
RESIDENTIAL DRIVES



COMMERCIAL DRIVES WITHOUT WRAP-AROUND CURB



SERVICE STATION DRIVES
FOR θ, SEE PLAN/PROFILE SHEETS.



COMMERCIAL DRIVES WITH WRAP-AROUND CURB

RESIDENTIAL DRIVES

EXISTING AGGREGATE DRIVES
- 452 - 6" NON-REINFORCED CONCRETE PAVEMENT (APRON)
- 301 - 8" ASPHALT CONCRETE BASE, PG64-22

EXISTING ASPHALT DRIVES
- 452 - 6" NON-REINFORCED CONCRETE PAVEMENT (APRON)
- 301 - 2" ASPHALT CONCRETE BASE, PG64-22
- 407 - TACK COAT
- 304 - 6" AGGREGATE BASE

EXISTING CONCRETE DRIVES
- 452 - 6" NON-REINFORCED CONCRETE PAVEMENT (APRON)

COMMERCIAL AND SERVICE STATION DRIVES

EXISTING AGGREGATE DRIVE
- 452 - 8" NON-REINFORCED CONCRETE PAVEMENT (APRON)
- 304 - 10" AGGREGATE BASE

EXISTING ASPHALT DRIVE
- 452 - 8" NON-REINFORCED CONCRETE PAVEMENT (APRON)
- 442 - 1¼" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (448)
- 442 - 1¾" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448)
- 407 - TACK COAT
- 304 - 8" AGGREGATE BASE

EXISTING CONCRETE DRIVE
- 452 - 8" NON-REINFORCED CONCRETE PAVEMENT (APRON)

SEE SHEET 41 FOR DRIVEWAY QUANTITIES.

HORIZONTAL SCALE IN FEET
0 5 10 20

DRIVEWAY DETAILS

CAR-38-22.56

SHEET NO.	REFERENCE NO.	STATION	SIDE	DRIVE TYPE	APRON LENGTH "L1"	DRIVEWAY LENGTH "L2"	WIDTH "W"	R1 (LEFT SIDE RADII OF DRIVE LOOKING FROM ℄)	R2 (RIGHT SIDE RADII OF DRIVE LOOKING FROM ℄)	202	203			301	304			407	442			452	
										PAVEMENT REMOVED	EMBANKMENT	EXCAVATION		8" ASPHALT CONCRETE BASE, PG64-22	6" AGGREGATE BASE	8" AGGREGATE BASE	10" AGGREGATE BASE		TACK COAT	1¾" ASPHALT CONCRETE, INTERMEDIATE COURSE, 19MM, TYPE A (446)	1¼" ASPHALT CONCRETE SURFACE COURSE, 4.5MM, TYPE A (446)		6" NON-REINFORCED CONCRETE PAVEMENT	8" NON-REINFORCED CONCRETE PAVEMENT	
					FT	FT	FT	FT	FT	SY	CY	CY		CY	CY	CY	CY		GAL	CY	CY		SY	SY	
71	DR-1	695+70	RT	COMM.	9.50	13.0	35.0	15.0	15.0	186.6		8												120.7	
71	DR-2	696+27.03	RT	COMM.	11.0	17.0	12.0	15.0	6.00			5		1.1		5.2			9.3		0.8			17.1	
71	DR-3	696+62	RT	COMM.	9.50	15.0	35.0	15.0	15.0	217.7		7												218.9	
		PARKING	RT							111.7		26		2.2		10.6			19.0		1.6				
71	DR-4	697+25	LT	COMM.	9.50	20.0	26.0	15.0	15.0			19		2.8		12.8			23.1		2.0			31.8	
71	DR-5	697+68	RT	COMM.	9.50	10.0	35.0	15.0	15.0	141.7		11												85.6	
71	PARKING TO 698+00		RT							26.1		12												26.1	
74	DR-1	10+75	RT	COMM.	17.5	--	35.0	15.0	3.00	67.7		4												66.2	
		2ND ST. N.W.																							
74	DR-2	10+36	LT	RES.	17.0	23.3	8.00	4.00	6.00			15			2.7				6.4	0.9			30.0		
		2ND ST. N.W.																							
74	DR-3	698+87	LT	COMM.	9.50	28.0	25.0	15.0	15.0		6	10		3.8	17.3				31.1		2.7			32.0	
74	DR-4	699+96	RT	RES.	10.0	9.50	15.0	6.00	6.00			13		3.9									7.8		
		PARKING								29.3		5		3.1									1.6		
74	DR-5	700+77	RT	COMM.	9.50	5.00	35.0	15.0	15.0			16					6.5							40.7	
		PARKING	RT									2					2.0								
74	DR-6	701+32	RT	COMM.	10.0	11.0	21.0	--	6.00			6					6.2							27.1	
76	DR-1	702+45	RT	COMM.	9.50	12.5	35.0	15.0	15.0	165.6	16													94.9	
		PARKING								53.7	3													53.7	
76	DR-2	703+60	RT	COMM.	10.0	26.5	35.0	15.0	15.0			29		5.5		24.8			44.7		3.9			51.8	
76	DR-3	706+69	LT	RES.	9.50	5.00	13.0	6.00	6.00			3		1.5									14.4		
76	DR-4	704+21	LT	RES.	9.50	5.00	21.0	6.00	6.00		1	1		1.5									14.4		
76	DR-5	705+14	LT	RES.	9.50	--	28.0	6.00	6.00		4												29.1		
77	DR-1	706+39	LT	RES.	9.50	5.00	8.00	6.00	6.00			2		1.0									8.7		
77	DR-2	707+44	LT	RES.	9.50	1.00	12.0	6.00	6.00			5			0.2				0.5	0.1			13.1		
77	DR-3	708+05	RT	COMM.	9.50	9.50	35.0	15.0	15.0			22		1.0		4.2			7.6		0.7			41.1	
		PARKING										11		1.8		8.0			14.4		1.3				
77	DR-4	709+01	RT	COMM.	9.50	5.00	19.0	15.0	15.0			5		0.6		2.8			5.1		0.4			24.0	
77	DR-5	709+81	LT	RES.	9.50	10.5	17.0	6.00	6.00			5			1.8				4.2	0.6			19.6		
		PARKING										3			3.7				8.9	1.2					
77	DR-6	10+51	LT	COMM.	17.0	17.5	16.0	15.0	2.30															35.6	
		5TH ST. N.W.																							
77	DR-7	10+67	LT	RES.	17.0	--	6.00	2.30	6.00	35.6													18.9		
		5TH ST. N.W.																							
78	DR-1	710+44	LT	COMM.	9.50	10.0	21.5	15.0	15.0			13		1.4		6.7			12.0		1.0			29.1	
		PARKING										17		3.1		13.7			24.7		2.2				
78	DR-2	711+08	LT	RES.	9.50	39.0	17.0	6.00	6.00		2	7			9.1				21.9	3.0			20.2		
78	DR-3	711+58	RT	COMM.	9.50	6.00	35.0	15.0	15.0			15		1.4		6.4			11.5		1.0			42.7	
		PARKING										16		2.8		12.8			23.1		2.0				
78	DR-4	711+96	LT	COMM.	9.50	16.5	35.0	15.0	5.00			16		3.9		17.9			32.3		2.8			40.9	
		PARKING										14		2.2		10.4			18.7		1.6				
78	DR-5	712+53	RT	COMM.	9.50	3.00	35.0	15.0	15.0			15					3.9							42.7	
		PARKING	RT									2					2.1								
78	DR-6	713+39	LT	COMM.	9.50	13.0	35.0	5.00	15.0			9		2.8		12.8			23.1		2.0			36.4	
		PARKING	LT									1		0.1		0.7			1.3		0.1				
78	DR-7	713+18	RT	COMM.	9.50	3.00	35.0	15.0	15.0			15					3.8							42.7	
		PARKING	RT									6		1.0		4.4			8.0		0.7				
78	DR-8	713+64	LT	RES.	9.50	20.0	14.0	6.00	6.00		1	2		6.4									16.2		
TOTALS CARRIED TO GENERAL SUMMARY										**1036**	**33**	**393**		**55**	**214**				**351**	**33**			**194**	**1202**	

SP 1311-5

DATE: JULY 2016

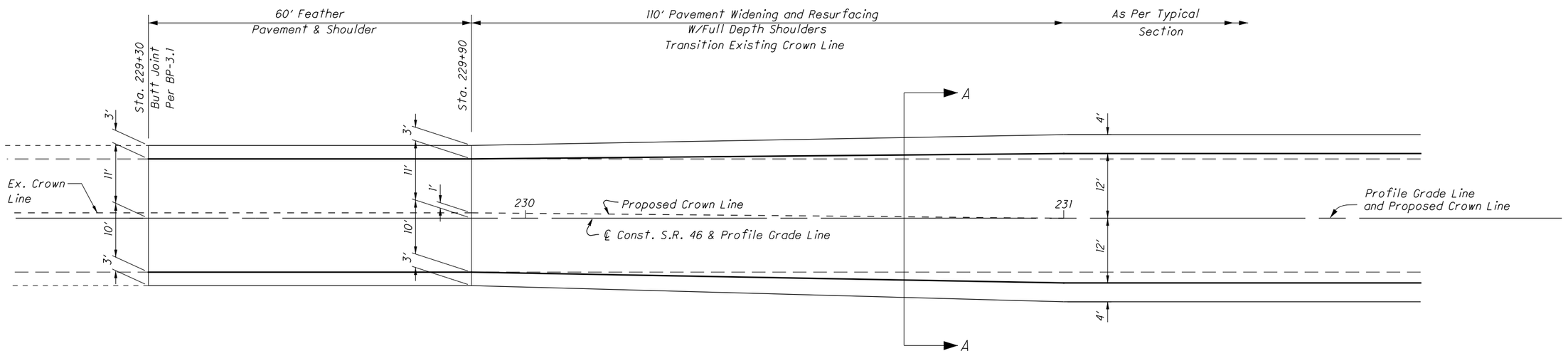
CALCULATED WSR

CHECKED SJB

DRIVEWAY SUBSUMMARY

CAR-38-22.56

SP 1311-6
DATE: JULY 2016



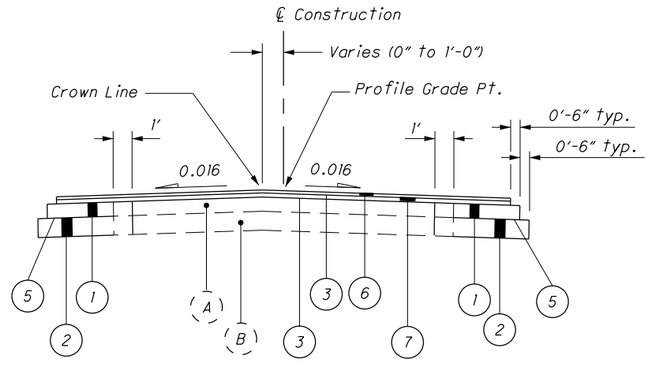
PAVEMENT TRANSITION DETAIL

LEGEND

1. ITEM 301 - 5" ASPHALT CONCRETE BASE, PG64-22
2. ITEM 304 - 6" AGGREGATE BASE
3. ITEM 407 - TACK COAT (Applied at a rate of 0.075 gal/yd²)
4. NOT USED
5. ITEM 408 - PRIME COAT
   (Applied at a rate of 0.4 gal/yd²)
6. ITEM 441 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446)
   PG64-22
7. ITEM 441 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)

(A) ± 5" Asphalt

(B) ± 8" Macadam Base



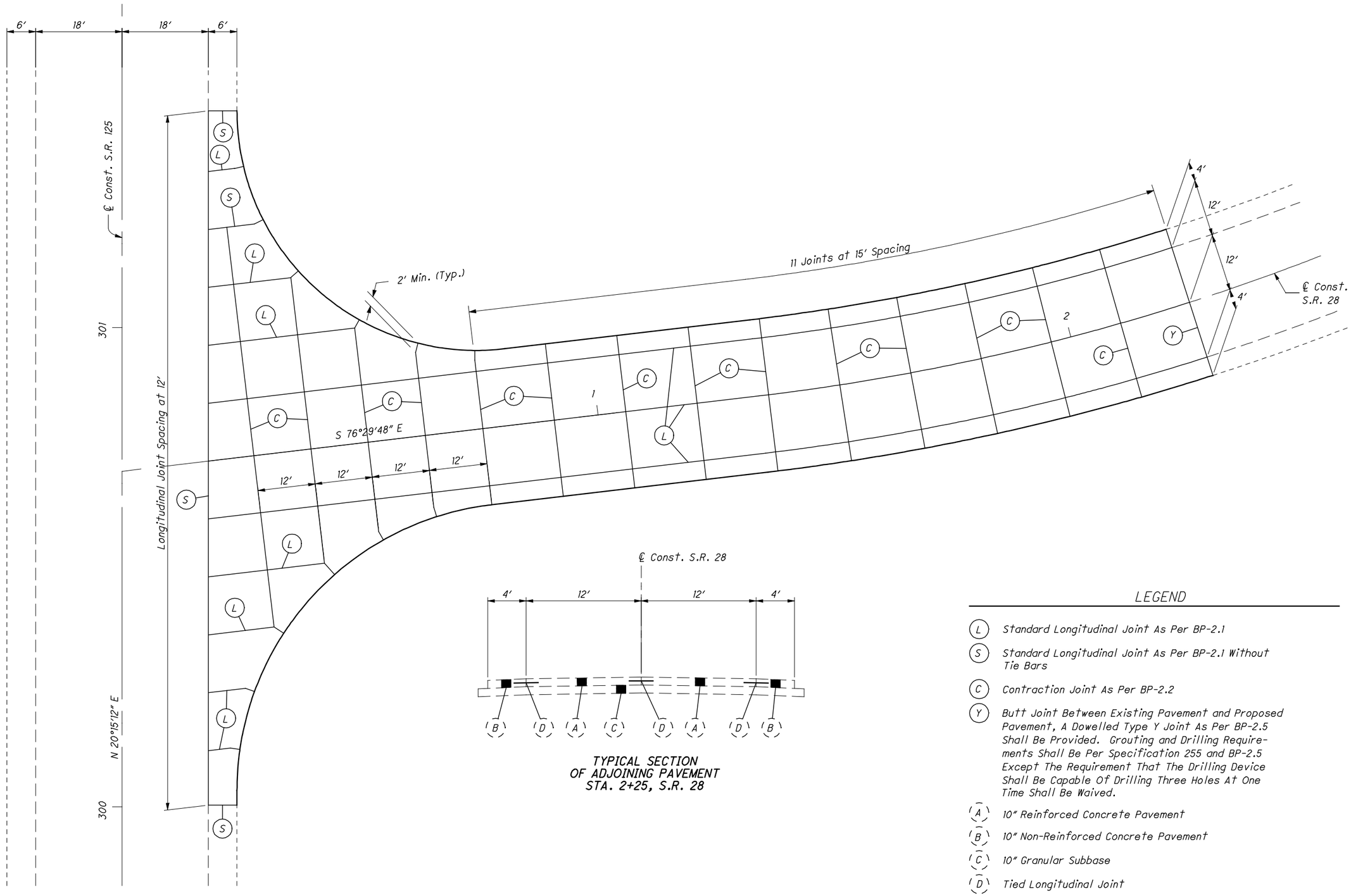
SECTION A-A

HORIZONTAL SCALE IN FEET
0 5 10 20

PAVEMENT TRANSITION DETAILS

PIC-46-27.22

SP 1311-7(a)
DATE: OCTOBER 2006



TYPICAL SECTION
OF ADJOINING PAVEMENT
STA. 2+25, S.R. 28

LEGEND

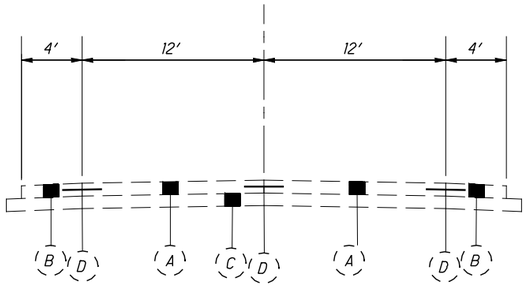
- (L) Standard Longitudinal Joint As Per BP-2.1
- (S) Standard Longitudinal Joint As Per BP-2.1 Without Tie Bars
- (C) Contraction Joint As Per BP-2.2
- (Y) Butt Joint Between Existing Pavement and Proposed Pavement, A Dowelled Type Y Joint As Per BP-2.5 Shall Be Provided. Grouting and Drilling Requirements Shall Be Per Specification 255 and BP-2.5 Except The Requirement That The Drilling Device Shall Be Capable Of Drilling Three Holes At One Time Shall Be Waived.
- (A) 10″ Reinforced Concrete Pavement
- (B) 10″ Non-Reinforced Concrete Pavement
- (C) 10″ Granular Subbase
- (D) Tied Longitudinal Joint

HORIZONTAL SCALE IN FEET
0 5 10 20

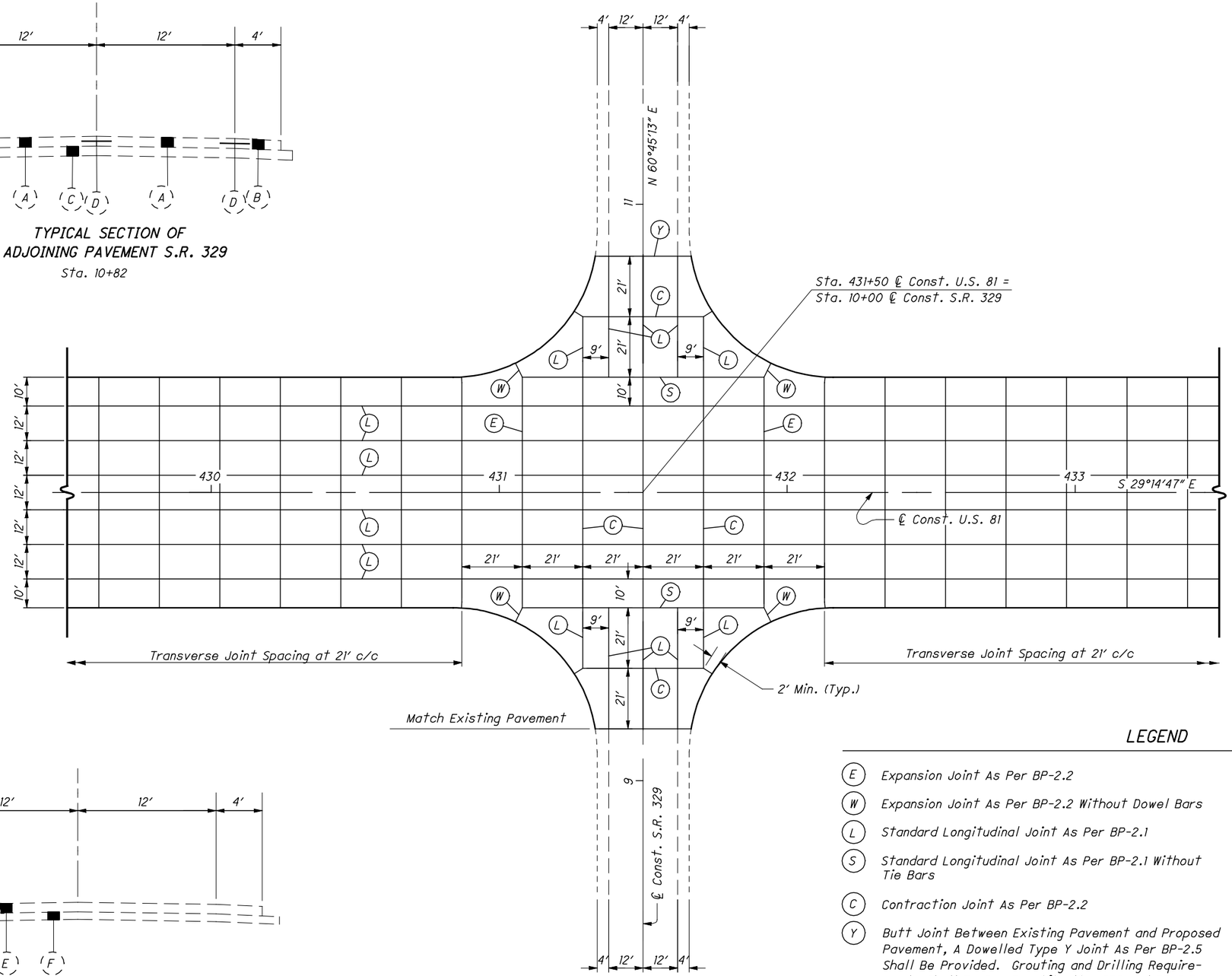
CALCULATED AAM
CHECKED DEM

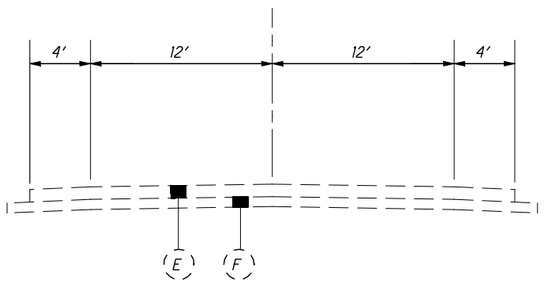
PAVEMENT JOINT DETAIL S.R. 28

LOR-28-0.00



TYPICAL SECTION OF
ADJOINING PAVEMENT S.R. 329
Sta. 10+82





TYPICAL SECTION OF
ADJOINING PAVEMENT S.R. 329
Sta. 9+18

LEGEND

- (E) Expansion Joint As Per BP-2.2
- (W) Expansion Joint As Per BP-2.2 Without Dowel Bars
- (L) Standard Longitudinal Joint As Per BP-2.1
- (S) Standard Longitudinal Joint As Per BP-2.1 Without Tie Bars
- (C) Contraction Joint As Per BP-2.2
- (Y) Butt Joint Between Existing Pavement and Proposed Pavement, A Dowelled Type Y Joint As Per BP-2.5 Shall Be Provided. Grouting and Drilling Requirements Shall Be Per Specification 255 and BP-2.5 Except The Requirement That The Drilling Device Shall Be Capable Of Drilling Three Holes At One Time Shall Be Waived.

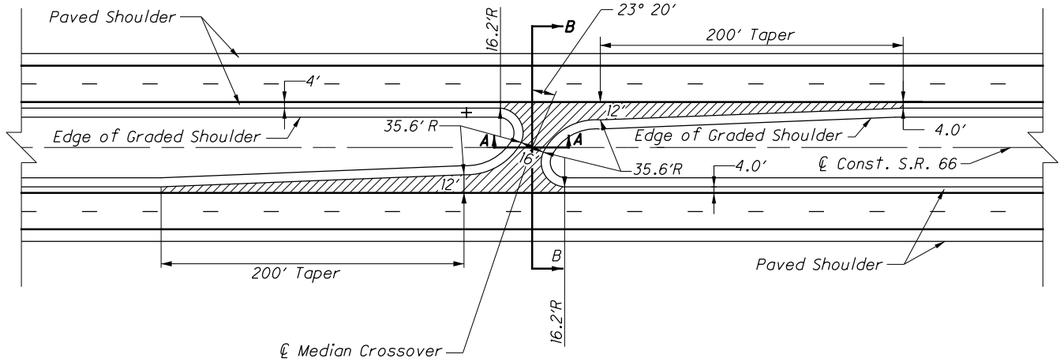
- (A) 10″ Reinforced Concrete Pavement
- (B) 10″ Non-Reinforced Concrete Pavement
- (C) 10″ Granular Subbase
- (D) Tied Longitudinal Joint
- (E) Asphalt Concrete Pavement, Depth Unknown
- (F) Aggregate Base, Depth Unknown

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED VHW
CHECKED TLH

PAVEMENT JOINT DETAIL
U.S.R. 81 AND S.R. 329

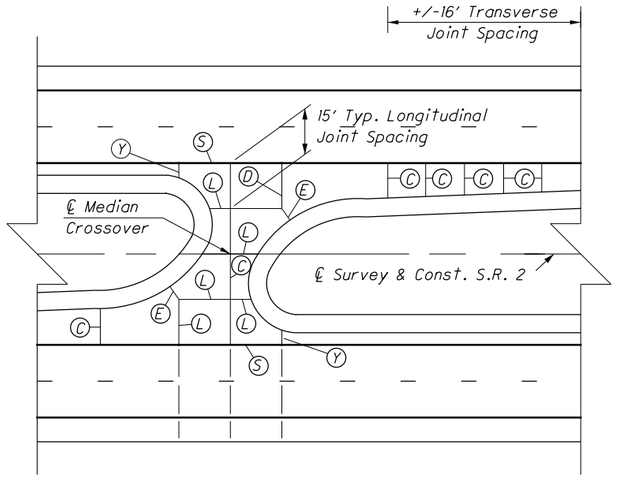
HOC-81-18.58



MEDIAN CROSSOVER PAVEMENT

TYPICAL MEDIAN CROSSOVER DETAIL

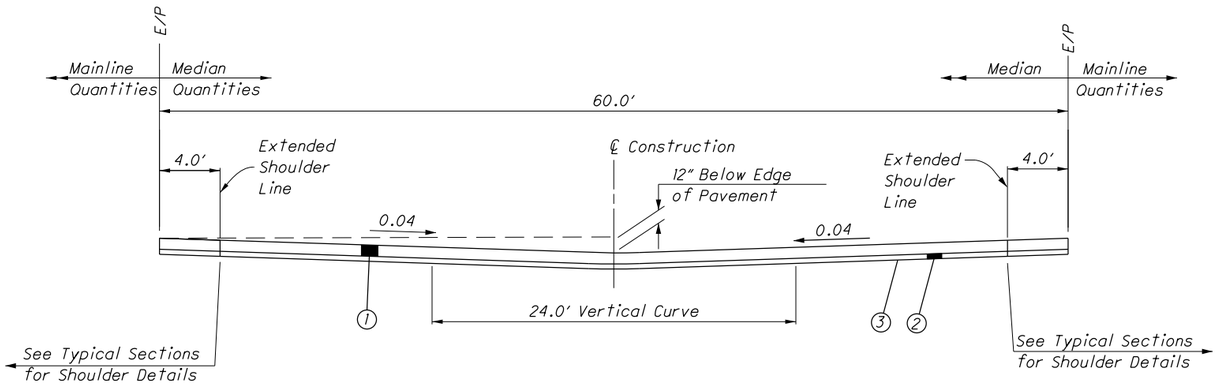
Applies: Sta. 5+00 and Sta. 124+00



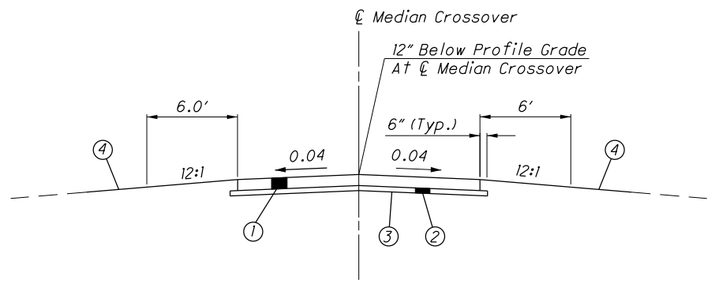
MEDIAN CROSSOVER JOINT DETAIL

*Align Transverse Joints in Median Crossover and Proposed Pavement.

Note: The Above is A Suggested Joint Diagram. The Contractor May Submit an Alternate Joint Diagram to the Engineer for Approval.



Section B-B



Section A-A

LEGEND

1. ITEM 452 - 9" Non-Reinforced Concrete Pavement, Class QC1, As Per Plan
2. ITEM 304 - 6" Aggregate Base
3. ITEM 204 - Subgrade Compaction
4. ITEM 659 - Seeding And Mulching

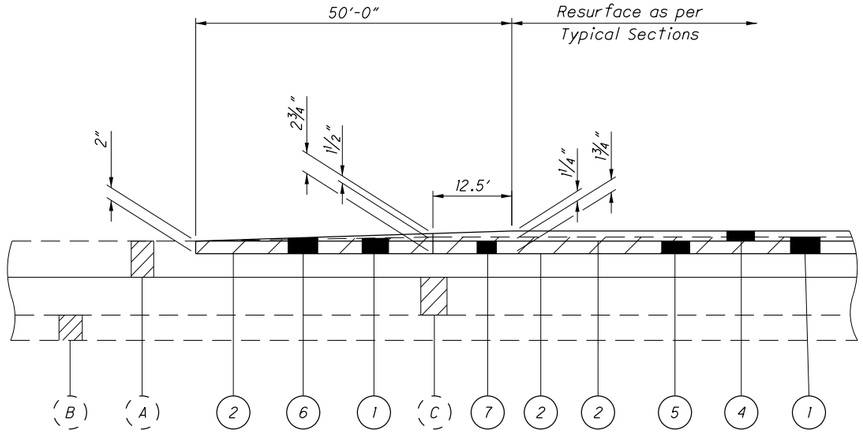
- (C) Contraction Joint As Per BP-2.2
- (D) Transverse Joint (With Dowels), As Per BP-2.2
- (E) Expansion Joint (Without Dowels), As Per BP-2.2
- (S) Standard Longitudinal Joint, As Per BP-2.1 without Tie Bar 3
- (L) Longitudinal Joint, As Per BP-2.1
- (Y) Contraction Joint (Type Y) As Per BP-2.5

MEDIAN CROSSOVER DETAILS

OTT-66-4.33

PROPOSED LEGEND

1. ITEM 254 Pavement Planing, Asphalt Concrete (Depth As Shown)
2. ITEM 407 Tack Coat
3. NOT USED
4. ITEM 441 1 ¼" Asphalt Concrete Surface Course, Type 1, (446) PG64-22
5. ITEM 441 1 ¾" Asphalt Concrete Intermediate Course, Type 1, (446)
6. ITEM 441 Var. Thickness Asphalt Concrete Surface Course, Type 1, (446) PG64-22
7. ITEM 441 Var. Thickness Asphalt Concrete Intermediate Course, Type 1, (446)
8. ITEM 848 1¾" Superplasticized Dense Concrete Overlay Using Hydrodemolition



PAVEMENT TRANSITION AT BEGIN/END PAVEMENT

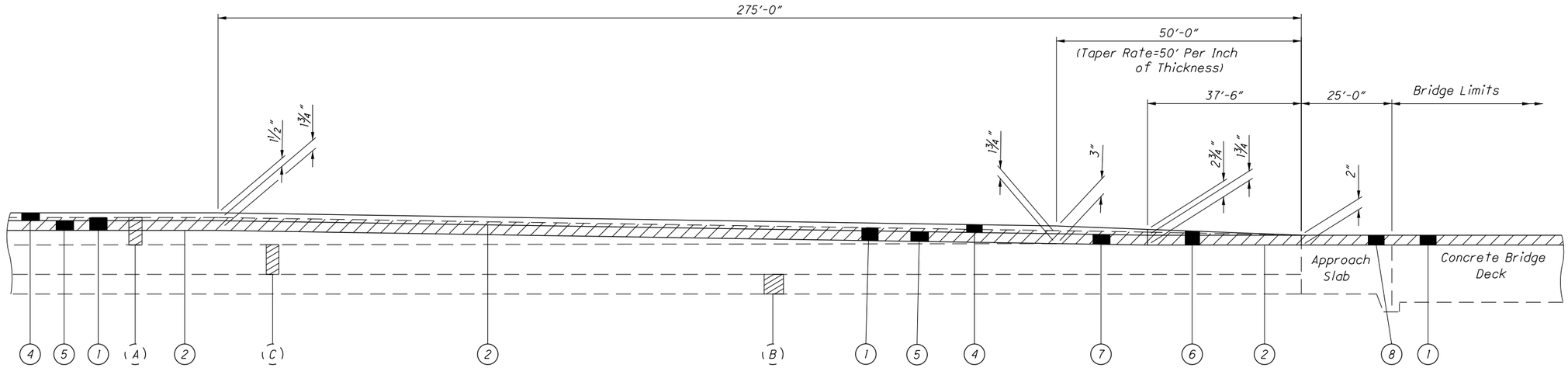
EXISTING LEGEND

(A) ± 6½" Asphalt Concrete

(B) ± 6" Subbase

(C) ± 9" Reinforced Portland Cement Concrete Pavement

= Item 254 Pavement Planing, Asphalt Concrete

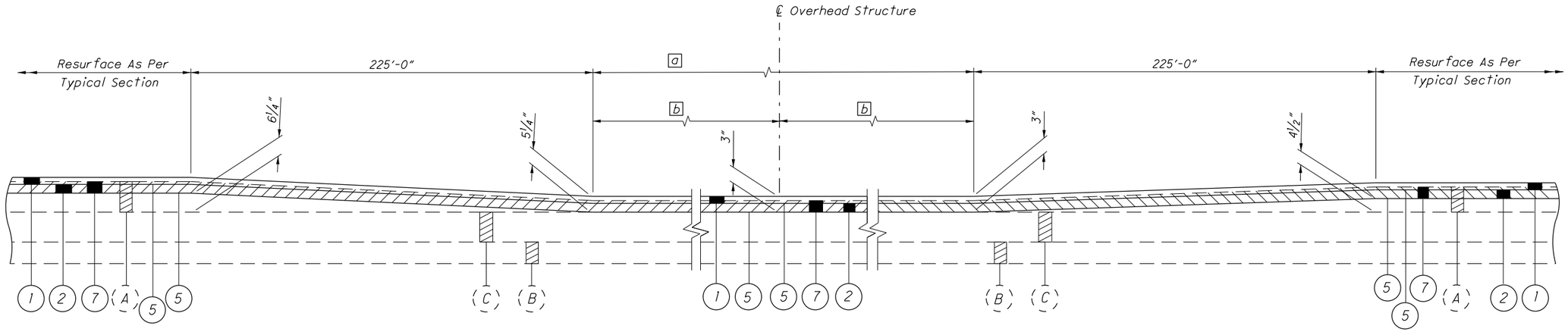


TRANSITION AT STRUCTURES

DETAIL APPLIES AT:
VAN-277-0585 Lt. & Rt. (North & South End)
VAN-277-1041 Lt. & Rt. (South Only)
VAN-277-1246 Lt. & Rt. (North Only)

PAVEMENT TRANSITION DETAILS

VAN-277-6.66

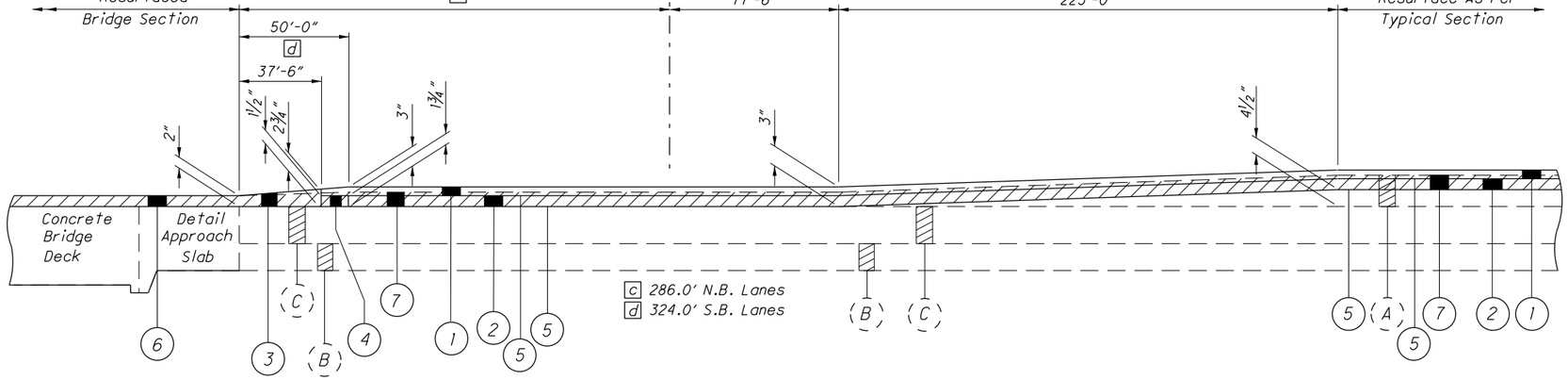


PAVEMENT TRANSITION AT OVERHEAD BRIDGE

DETAIL APPLIES AT STRUCTURES:

VAN-277-0378
VAN-277-1234
VAN-277-1303
VAN-277-0633
VAN-277-0776
VAN-277-0911
VAN-277-0493

STRUCTURE	a	b
VAN-277-0378	144.0'	72.0'
VAN-277-0493	160.0'	80.0'
VAN-277-0633	166.0'	83.0'
VAN-277-0776	165.0'	82.5'
VAN-277-0911	179.0'	89.5'
VAN-277-1234	155.0'	77.5'
VAN-277-1383	156.0'	78.0'



PAVEMENT TRANSITION AT OVERHEAD AND MAINLINE BRIDGES

DETAIL APPLIES AT STRUCTURES:

VAN-277-1047
VAN-277-1041 (North Side Only)

PROPOSED LEGEND

(1) ITEM 441 1 ¼" Asphalt Concrete Surface Course, Type 1, (446), PG 64-22

(2) ITEM 441 1 ¾" Asphalt Concrete Intermediate Course, Type 2, (446)

(3) ITEM 441 Var. Thickness Asphalt Concrete Surface Course, Type 2, (446), PG 64-22

(4) ITEM 441 Var. Thickness Asphalt Concrete Intermediate Course, Type 2, (446)

(5) ITEM 407 Tack Coat

(6) ITEM 848 Micro Silica Modified Concrete using Hydrodemolition (Thickness 1 ¼" Nominal)

(7) ITEM 254 Pavement Planing, Asphalt Concrete (Depth = 2")

EXISTING LEGEND

(A) ±6 ½" Asphalt Concrete

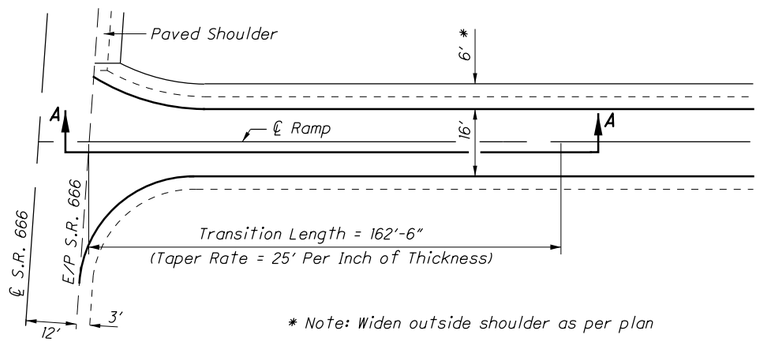
(B) ±6" Subbase

(C) ±9" Reinforced Portland Cement Concrete Pavement

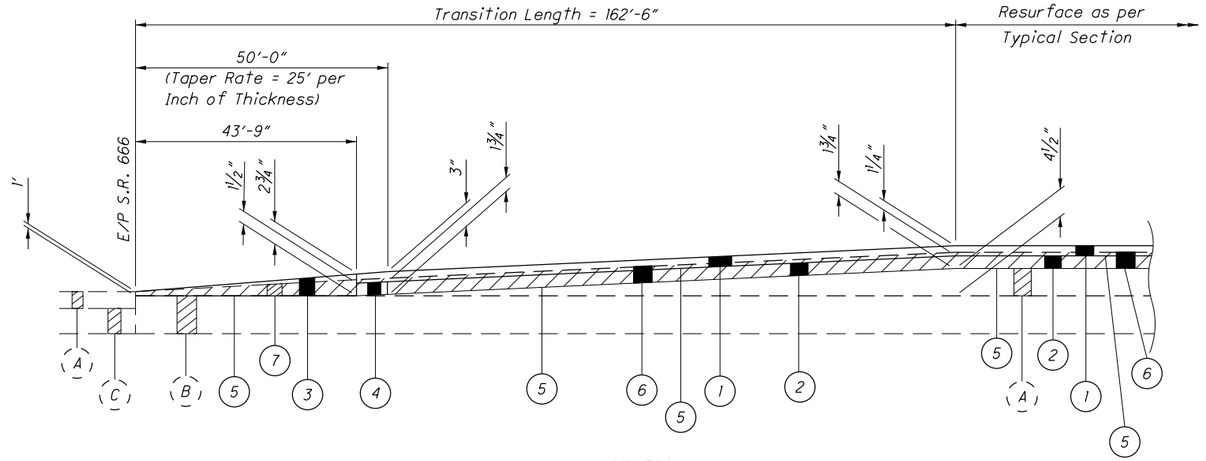
ITEM 254 - Pavement Planing, Asphalt Concrete

PAVEMENT TRANSITION DETAILS

VAN-277-6.66



PLAN VIEW

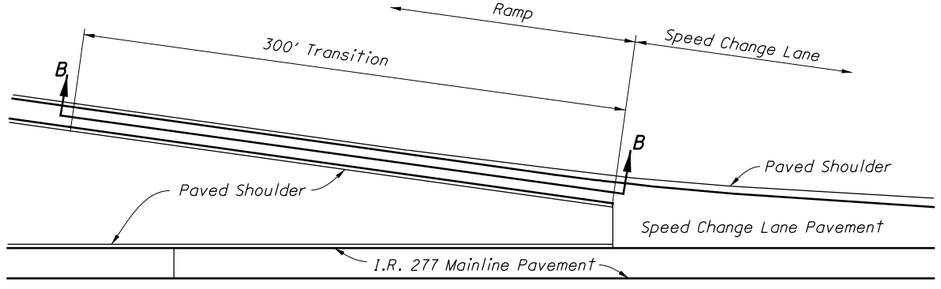


SECTION A-A

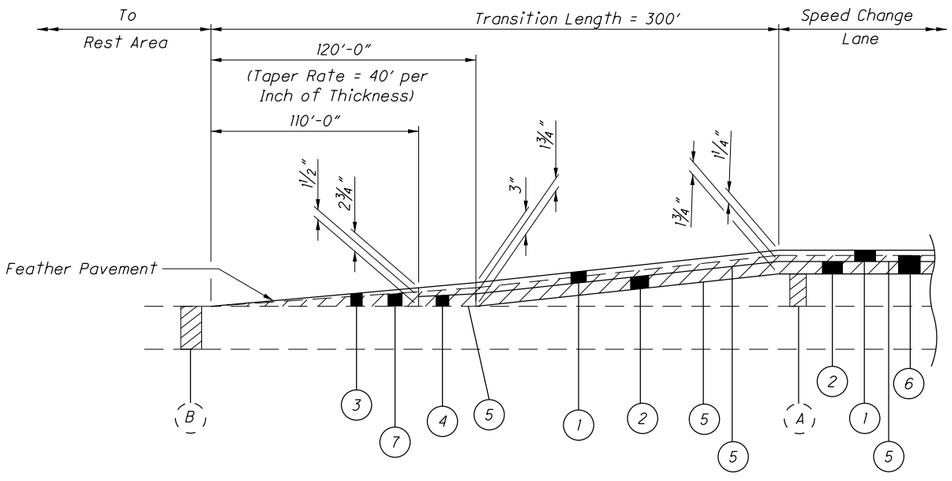
TRANSITION AT RAMP/CROSSROAD INTERSECTION

DETAIL APPLIES AT:

S.R. 666 Interchange



PLAN VIEW



SECTION B-B

TRANSITION AT REST AREA ENTRANCE/EXIT RAMP DETAIL

PROPOSED LEGEND

(1) ITEM 441 1 ¼" Asphalt Concrete Surface Course, Type 1, (446), PG 64-22

(2) ITEM 441 1 ¾" Asphalt Concrete Intermediate Course, Type 2, (446)

(3) ITEM 441 Var. Thickness Asphalt Concrete Surface Course, Type 1, (446), PG 64-22

(4) ITEM 441 Var. Thickness Asphalt Concrete Intermediate Course, Type 2, (446)

(5) ITEM 407 Tack Coat

(6) ITEM 254 Pavement Planing, Asphalt Concrete (Depth = 2")

(7) ITEM 254 Pavement Planing, Asphalt Concrete (Var. Thickness)

ITEM 254 Pavement Planing, Asphalt Concrete

EXISTING LEGEND

(A) ±6½" Asphalt Concrete

(B) ±9" Reinforced Portland Cement Concrete Pavement

(C) ±6" Aggregate Base

PAVEMENT TRANSITION DETAILS

VAN-277-6.66

SP 1311-12
DATE: OCTOBER 2006

MATCH LINE STA 596+00
RAMP "A"

MATCH LINE STA. 602+00
RAMP "B"

MATCH LINE STA. 587+00
RAMP "A" & I.R. 73 W.B.

MATCH LINE STA. 586+00
RAMP "B"

MATCH LINE STA. 586+00
I.R. 73 E.B.

MATCH LINE STA. 601+00
I.R. 73 W.B.

MATCH LINE STA. 600+00
I.R. 73 E.B.

Ramp "A"

Ramp "B"

I.R. 73 W.B.

I.R. 73 E.B.

U.S. 23 S.B.

Grade To Drain

24" B

72" A

27" A

HORIZONTAL SCALE IN FEET
0 25 50 100

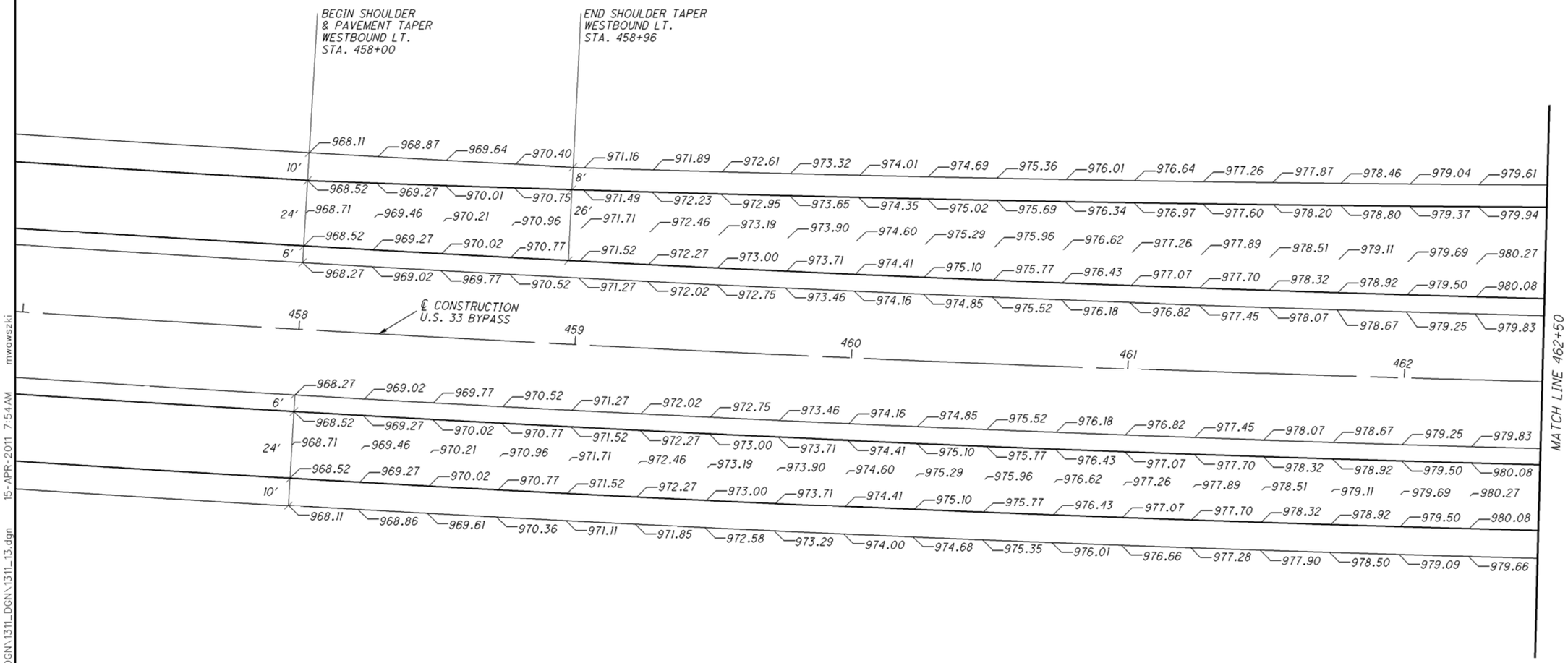
CALCULATED DMK
CHECKED CML

GRADING DETAILS
I.R. 73 INTERCHANGE

HAN-73-19.11

278
536

SP 1311-13
DATE: APR. 2011



NOTE: ELEVATIONS SHOWN AT 25′ INTERVALS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CHG
CHECKED LJS

WEST RAMP TERMINAL DETAILS
STA. 458+00 TO STA. 462+50

FAI-33-13.25

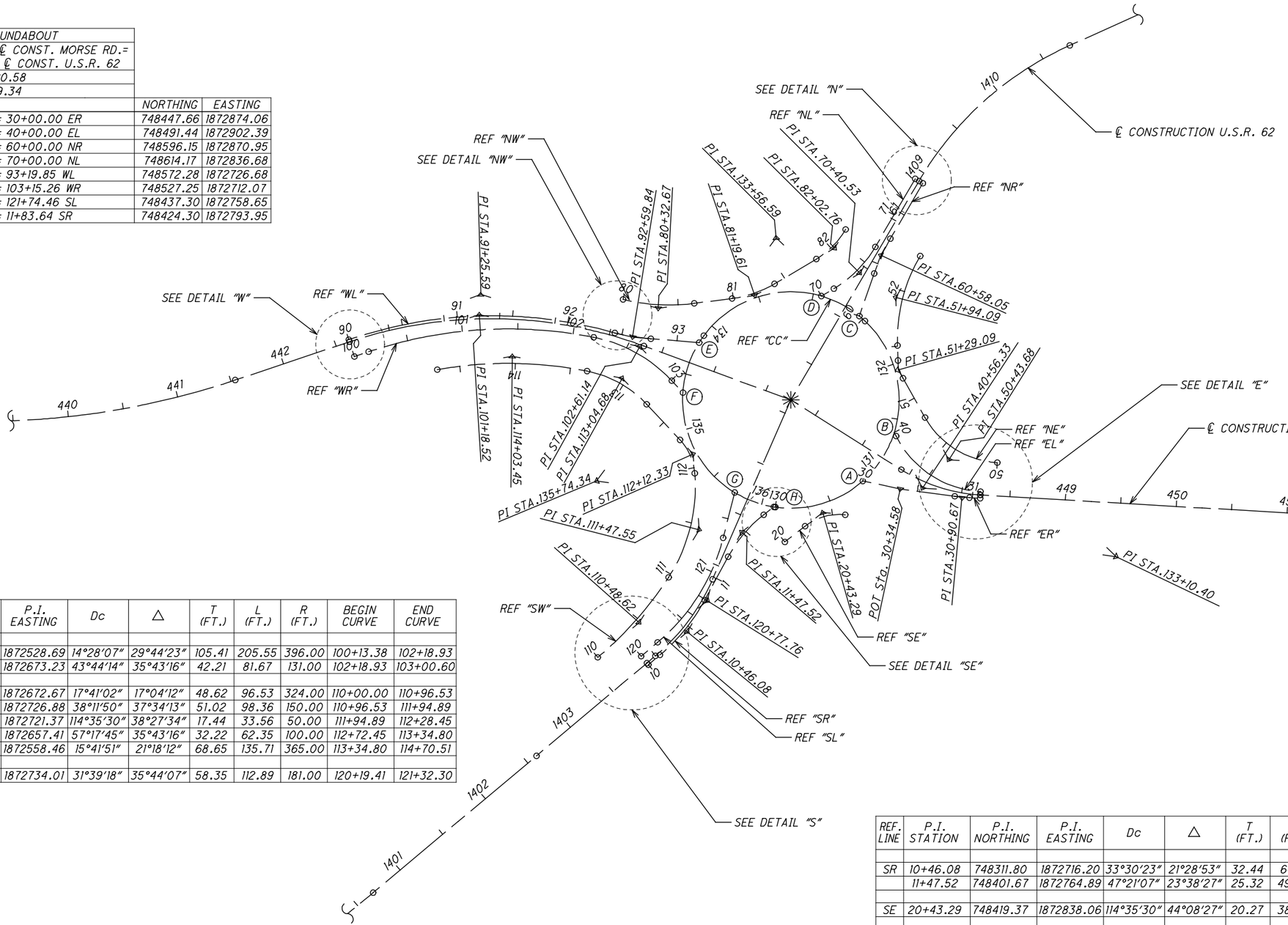
484
739

I:\pr\V3Stds\SamplePlans\2011April\DGN\1311_DGN\1311_13.dgn 15-APR-2011 7:54 AM mwawszki

REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	△	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
NL	70+40.53	748634.87	1872871.53	54°03'09"	28°58'34"	27.39	53.61	106.00	70+13.14	70+66.75
NW	80+32.67	748603.36	1872689.89	32°44'26"	21°09'05"	32.67	64.60	175.00	80+00.00	80+64.60
	81+19.61	748614.67	1872776.83	57°17'45"	23°17'51"	20.62	40.66	100.00	80+98.99	81+39.65
	82+02.76	748657.43	1872848.81	76°23'40"	28°58'32"	19.38	37.93	75.00	81+83.38	82+21.31
WL	91+25.59	748615.56	1872530.06	14°19'26"	34°51'45"	125.59	243.39	400.00	90+00.00	92+43.39
	92+59.84	748577.09	1872666.79	27°48'49"	09°07'57"	16.45	32.83	206.00	92+43.39	92+76.22

REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	△	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
EL	40+56.33	748441.10	1872927.68	62°57'45"	59°58'13"	52.51	95.25	91.00	40+03.82	40+99.07
NE	50+43.68	748466.75	1872951.54	71°37'11"	57°16'00"	43.68	79.96	80.00	50+00.00	50+79.96
	51+29.09	748547.62	1872906.01	163°42'08"	27°30'05"	8.56	16.80	35.00	51+20.52	51+37.32
	51+94.09	748612.92	1872903.87	38°11'50"	32°11'22"	43.28	84.27	150.00	51+50.81	52+35.08
NR	60+58.05	748650.93	1872890.18	31°39'18"	10°58'01"	17.38	34.64	181.00	60+40.68	60+75.32

✳ CENTER OF ROUNDABOUT		
STA. 446+23.93 ℄ CONST. MORSE RD.= STA. 1406+63.08 ℄ CONST. U.S.R. 62		
NORTHING= 748520.58		
EASTING= 1872809.34		
RADIUS= 97.50'	NORTHING	EASTING
Ⓐ 130+84.85 CC = 30+00.00 ER	748447.66	1872874.06
Ⓑ 131+37.64 CC = 40+00.00 EL	748491.44	1872902.39
Ⓒ 132+53.70 CC = 60+00.00 NR	748596.15	1872870.95
Ⓓ 132+92.67 CC = 70+00.00 NL	748614.17	1872836.68
Ⓔ 134+19.05 CC = 93+19.85 WL	748572.28	1872726.68
Ⓕ 134+66.86 CC = 103+15.26 WR	748527.25	1872712.07
Ⓖ 135+73.38 CC = 121+74.46 SL	748437.30	1872758.65
Ⓗ 136+11.23 CC = 11+83.64 SR	748424.30	1872793.95



REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	△	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
WR	101+18.52	748597.44	1872528.69	14°28'07"	29°44'23"	105.41	205.55	396.00	100+13.38	102+18.93
	102+61.14	748568.80	1872673.23	43°44'14"	35°43'16"	42.21	81.67	131.00	102+18.93	103+00.60
SW	110+48.62	748320.06	1872672.67	17°41'02"	17°04'12"	48.62	96.53	324.00	110+00.00	110+96.53
	111+47.55	748403.67	1872726.88	38°11'50"	37°34'13"	51.02	98.36	150.00	110+96.53	111+94.89
	112+12.33	748471.91	1872721.37	114°35'30"	38°27'34"	17.44	33.56	50.00	111+94.89	112+28.45
	113+04.68	748540.34	1872657.41	57°17'45"	35°43'16"	32.22	62.35	100.00	112+72.45	113+34.80
	114+03.45	748559.94	1872558.46	15°41'51"	21°18'12"	68.65	135.71	365.00	113+34.80	114+70.51
SL	120+77.76	748339.85	1872734.01	31°39'18"	35°44'07"	58.35	112.89	181.00	120+19.41	121+32.30

REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	△	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
SR	10+46.08	748311.80	1872716.20	33°30'23"	21°28'53"	32.44	64.11	171.00	10+13.64	10+77.75
	11+47.52	748401.67	1872764.89	47°21'07"	23°38'27"	25.32	49.93	121.00	11+22.20	11+72.12
SE	20+43.29	748419.37	1872838.06	114°35'30"	44°08'27"	20.27	38.52	50.00	20+23.01	20+61.53
ER	30+90.67	748433.00	1872963.47	32°00'32"	04°13'17"	6.60	13.19	179.00	30+84.08	30+97.26

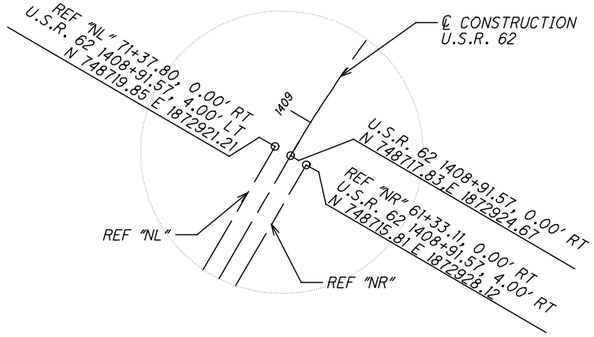
FOR DETAILS "N", "E", "S", "W", "SE" AND "NW" SEE SHEET 4
FOR U.S.R.62 AND MORSE ROAD DETAILS SEE SHEET 2

HORIZONTAL SCALE IN FEET
0 25 50 100

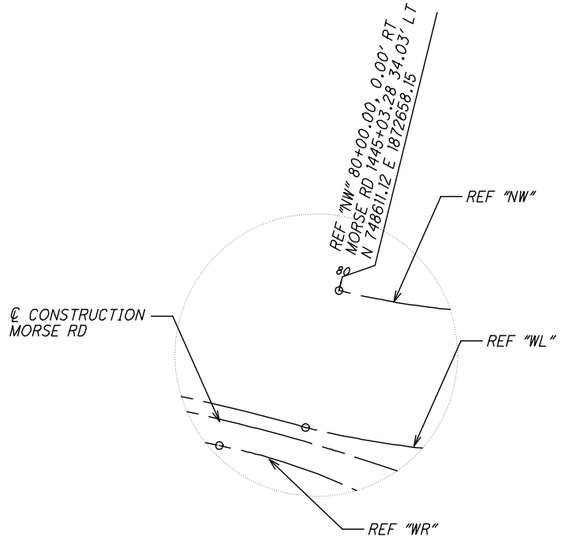
GEOMETRIC LAYOUT

ROUNDABOUT

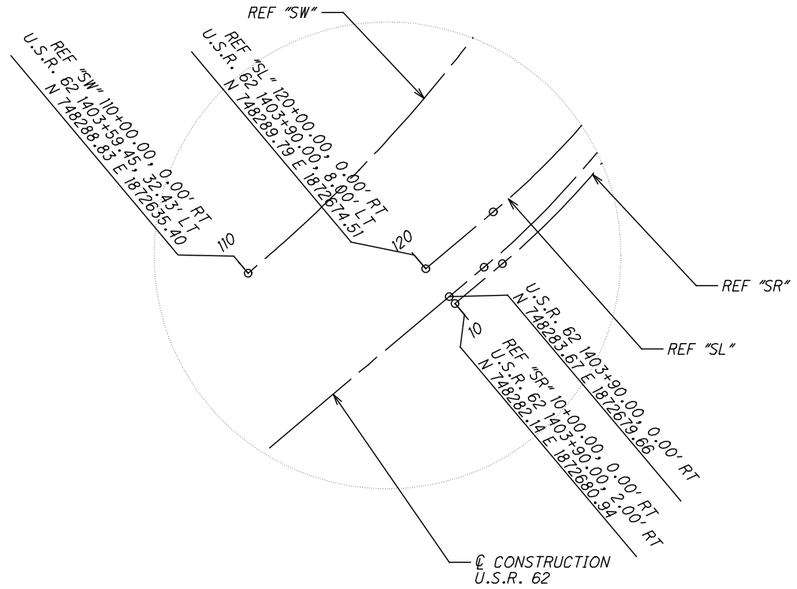
FRA-62-26.34



DETAIL "N"
NOT TO SCALE



DETAIL "NW"
NOT TO SCALE



DETAIL "S"
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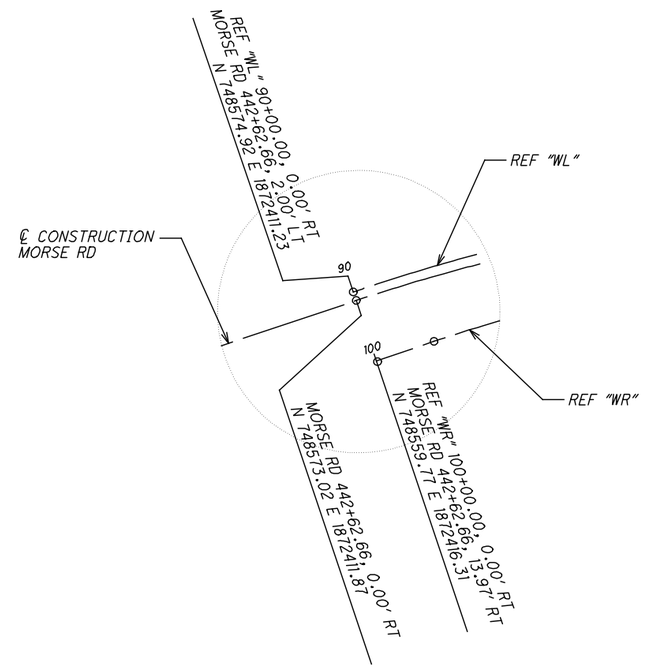

DETAIL "W"
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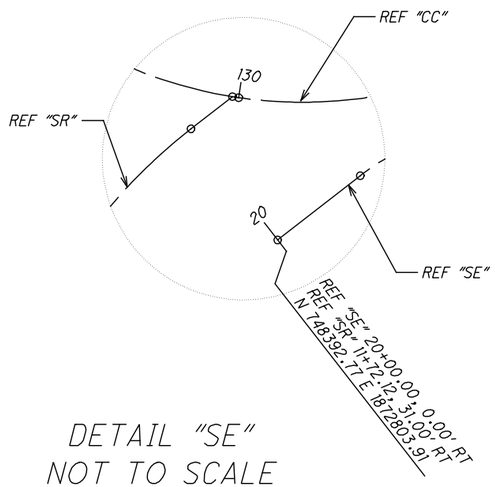
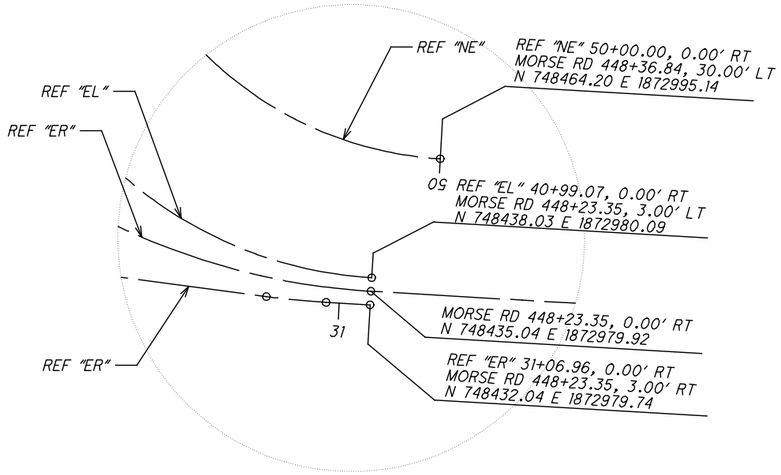


DETAIL "SE"
NOT TO SCALE

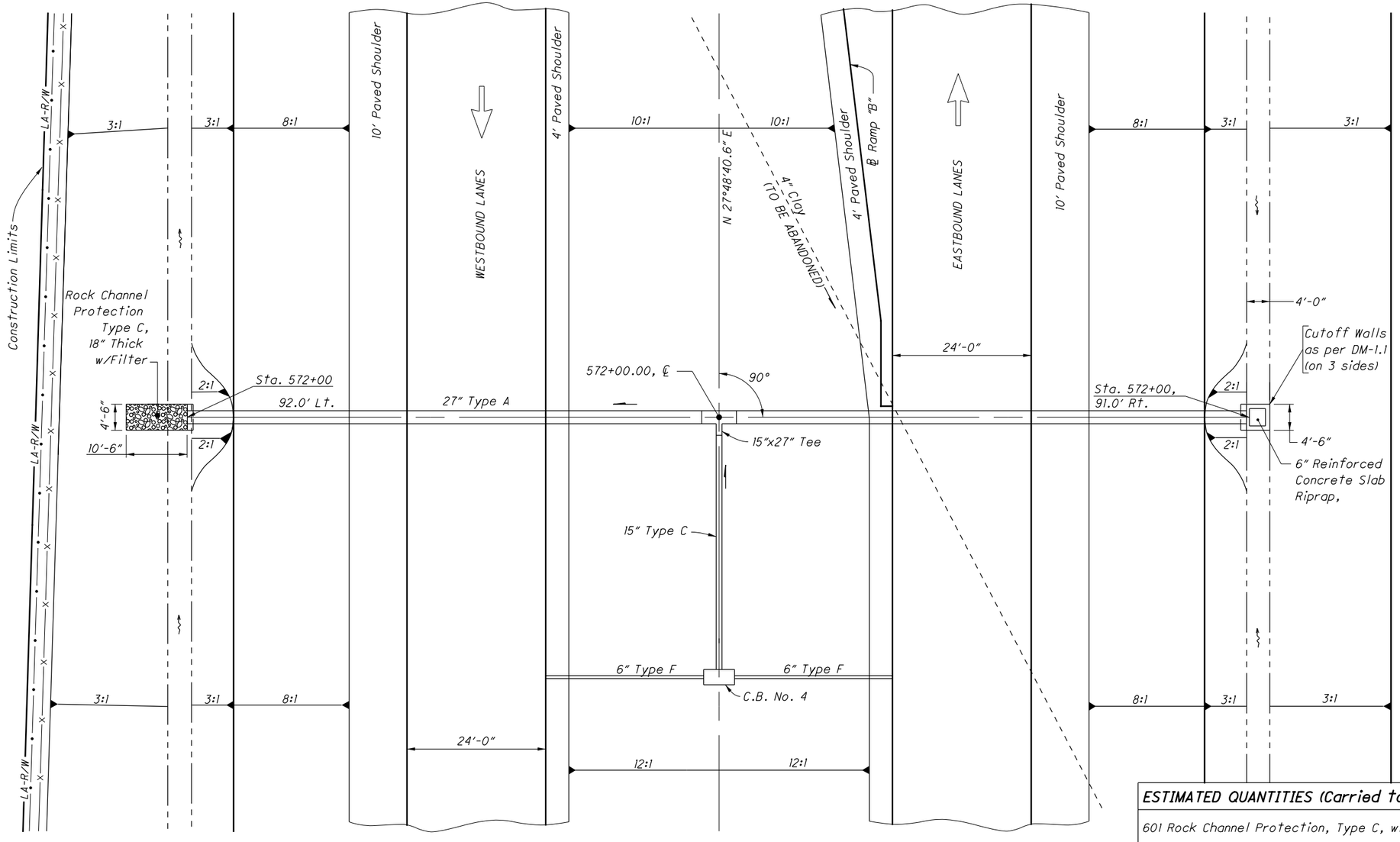


DETAIL "E"
NOT TO SCALE

ROUNDABOUT GEOMETRIC LAYOUT

FRA-62-26.34

SP 1312-1
DATE: JULY 2017

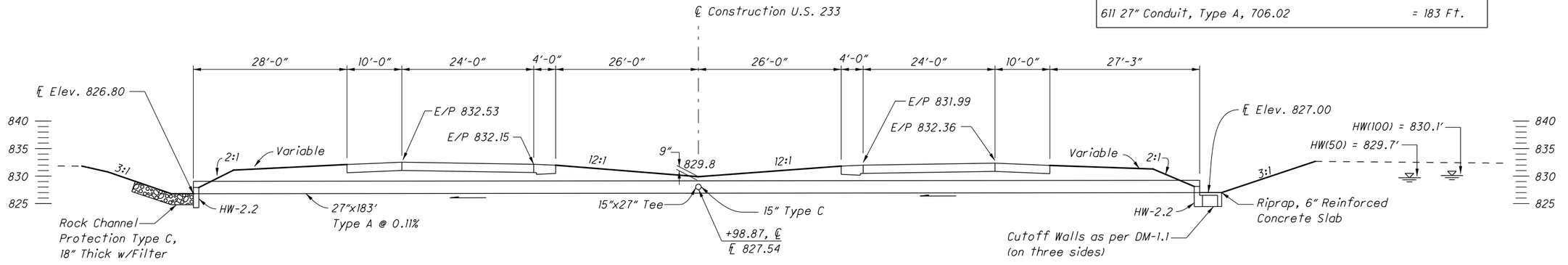


HYDRAULIC DESIGN DATA

Drainage Area	=	28 Ac.
Q_{50}	=	22 cfs
Q_{100}	=	25 cfs
HW_{50}	=	829.7'
HW_{100}	=	830.1'
V_{50}	=	5.6 fps
V_{100}	=	6.1 fps
Ordinary High Water Mark	=	827.3'
Design Service Life	=	75 Yr.
pH	=	7.8
Abrasion Level: 4		

ESTIMATED QUANTITIES (Carried to General Summary)

601 Rock Channel Protection, Type C, with Filter	= 2.8 Cu.Yd.
601 Riprap using 6" Reinforced	= 2.0 Sq.Yd.
602 Concrete Masonry	= 1.15 Cu.Yd.
611 27" Conduit, Type A, 706.02	= 183 Ft.



N

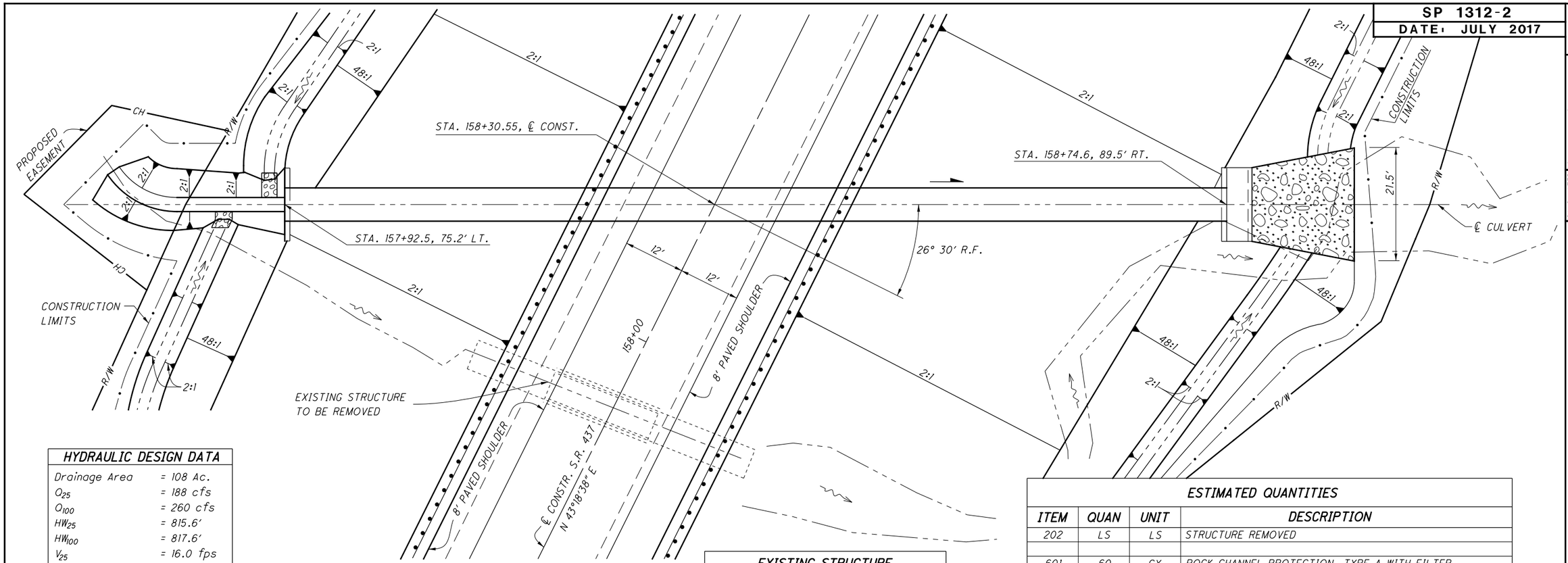
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED DMK
CHECKED CML

CULVERT DETAILS
U.S. 233 - STA. 572+00

ALL-233-22.69

283
586



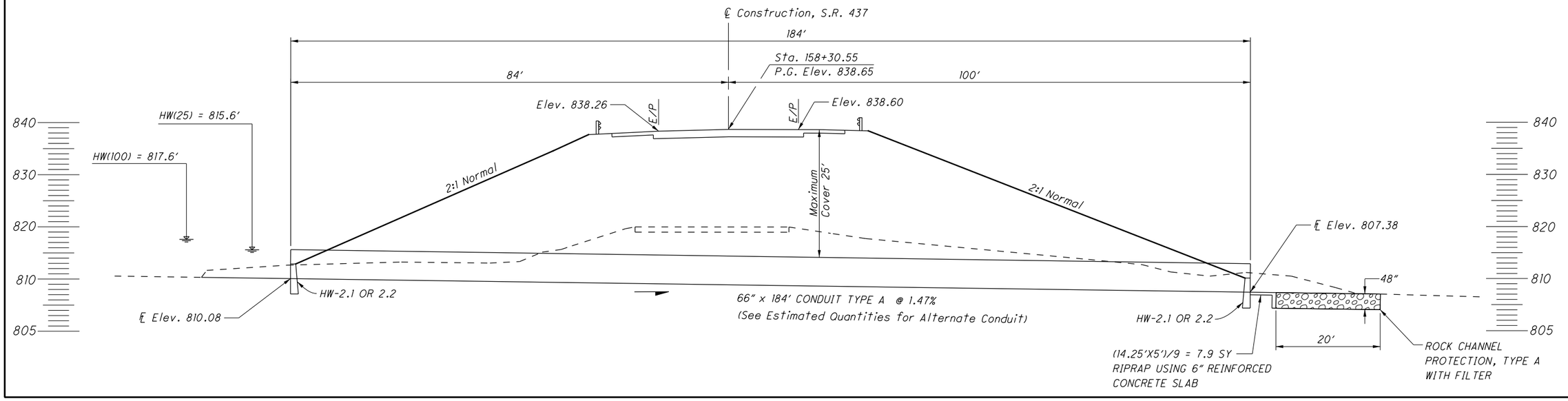
HYDRAULIC DESIGN DATA	
Drainage Area	= 108 Ac.
Q_{25}	= 188 cfs
Q_{100}	= 260 cfs
HW_{25}	= 815.6'
HW_{100}	= 817.6'
V_{25}	= 16.0 fps
V_{100}	= 18.5 fps
ORDINARY HIGH WATER MARK	= 810.3'
DESIGN SERVICE LIFE	= 75 YR
pH	= 7.5
Abrasion Level: 3	

EXISTING STRUCTURE
TYPE: STONE ARCH W/72" CMP EXTENSIONS
SIZE: 6'X5'X58' ARCH
SKEW: 26° 30' R.F.
ALIGNMENT: TANGENT
DATE BUILT: 1908
CONDITION: POOR

ESTIMATED QUANTITIES

ITEM	QUAN	UNIT	DESCRIPTION
202	LS	LS	STRUCTURE REMOVED
601	60	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
601	8	SY	RIPRAP
602	5.9	CY	CONCRETE MASONRY
611	184	FT	66" CONDUIT, TYPE A, 706.02; OR 78" 707.02 (0.28) GALVANIZED, 707.02 (0.064) ALUMINIZED, 707.03 (0.138) W/CFP, 707.04 (1") (0.064), 707.05 (0.064), 707.07 (0.109)
670	72	SY	DITCH EROSION PROTECTION MAT TYPE C

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 37



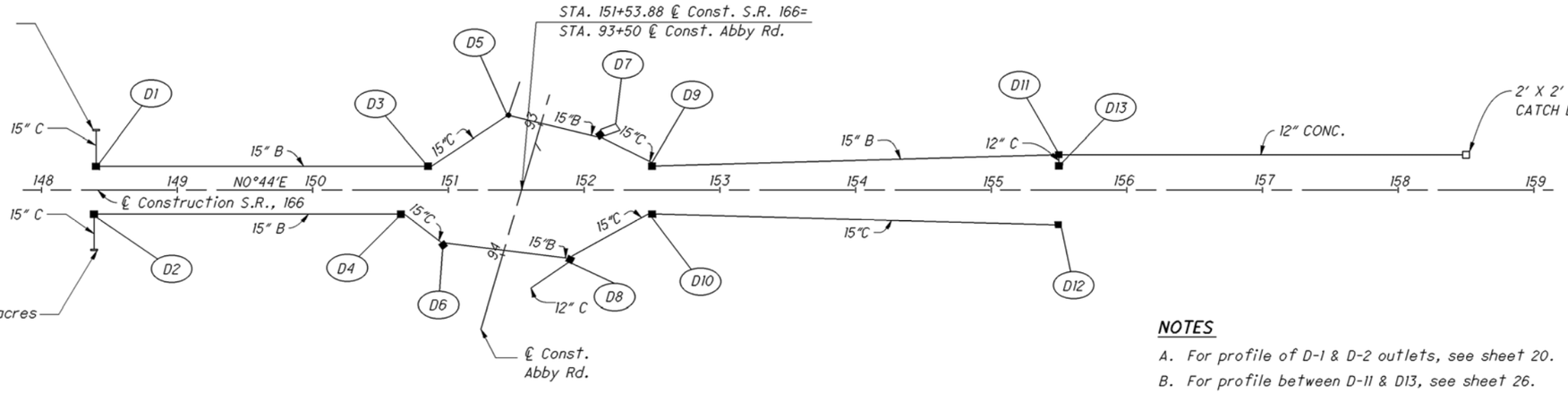
HORIZONTAL SCALE IN FEET: 0, 5, 10, 20

CALCULATED JOH
CHECKED JDH

CULVERT DETAIL
S.R. 437

PRE-437-2.65

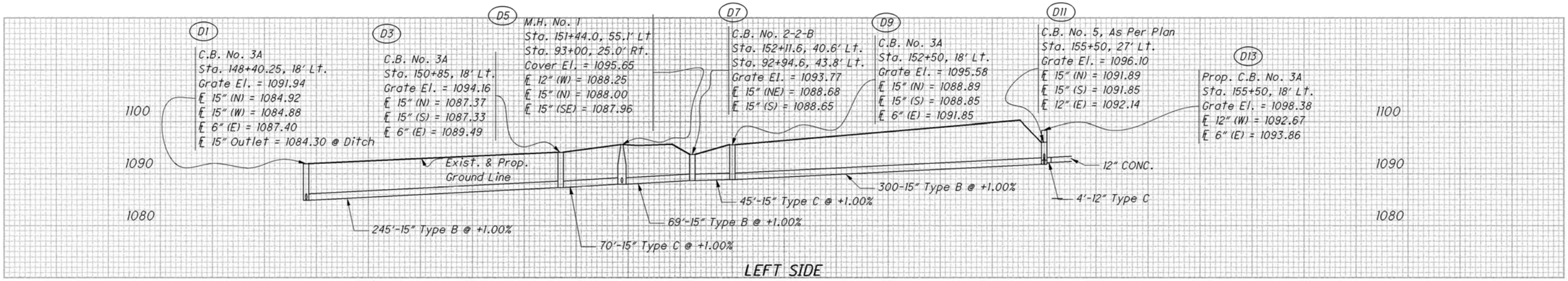
Outlet:
Drainage Area = 4.3 acres
Q_{10} = 7.3 cfs
Q_{25} = 8.9 cfs
HGL_{10} = 1087.1
HGL_{25} =1087.9

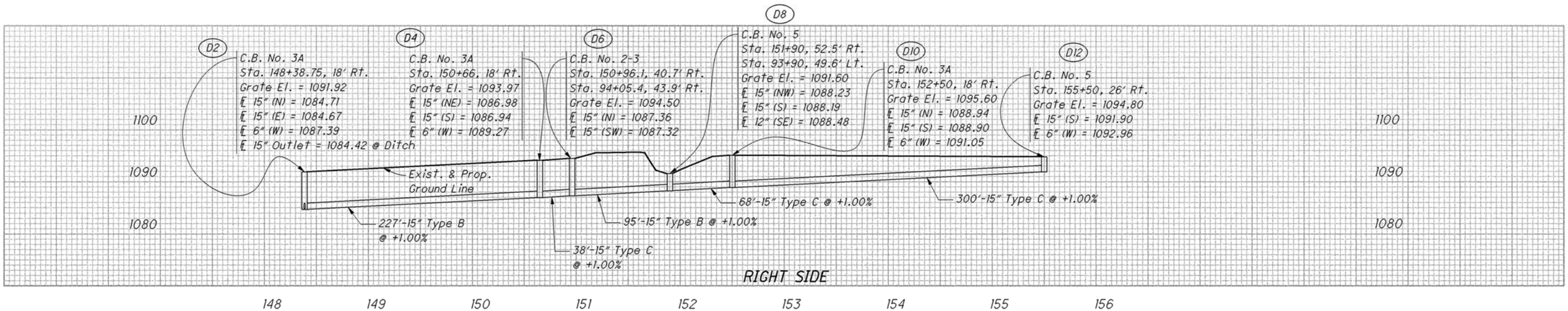


Outlet:
Drainage Area = 3.6 acres
Q_{10} = 5.8 cfs
Q_{25} = 6.7 cfs
HGL_{10} = 1086.8
HGL_{25} =1087.6

NOTES

A. For profile of D-1 & D-2 outlets, see sheet 20.
B. For profile between D-11 & D13, see sheet 26.
C. For Abby Rd. drainage profile, see sheet 41.
D. For drainage sub-summary, see sheets 14-16.
E. For S.R.166 plan & profile, see sheets 17-19.





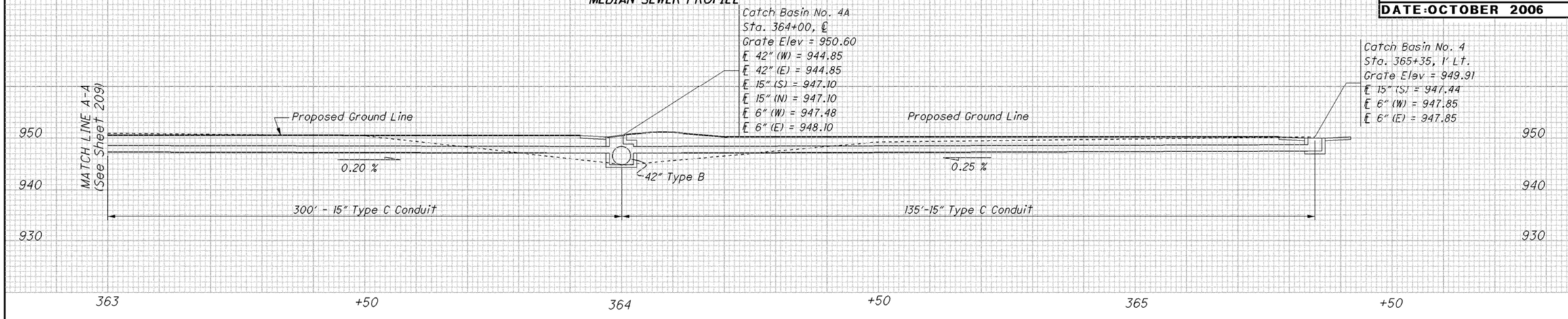
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED MSQ
CHECKED PDG

S.R. 166 DRAINAGE PROFILE

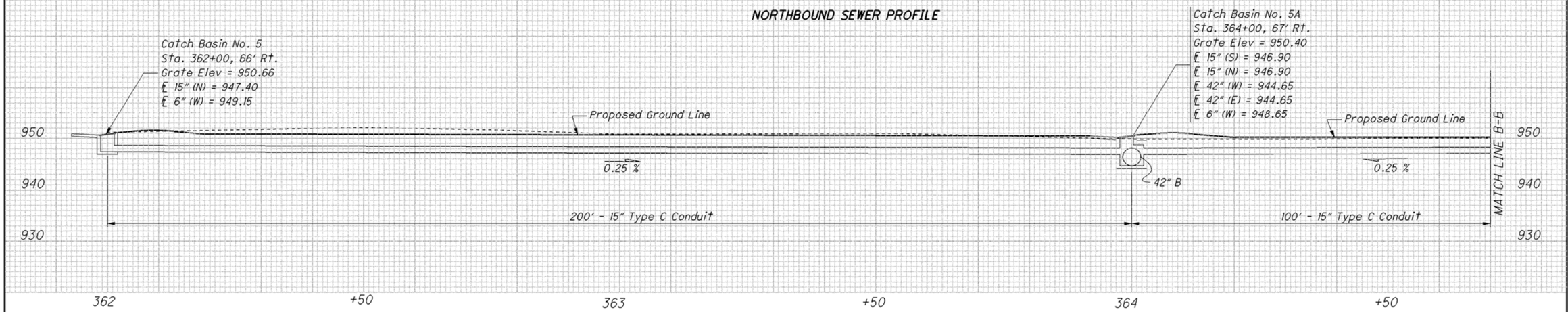
RIC-166-8.37

SP 1312-5
DATE:OCTOBER 2006
CALCULATED MTG
CHECKED CJM

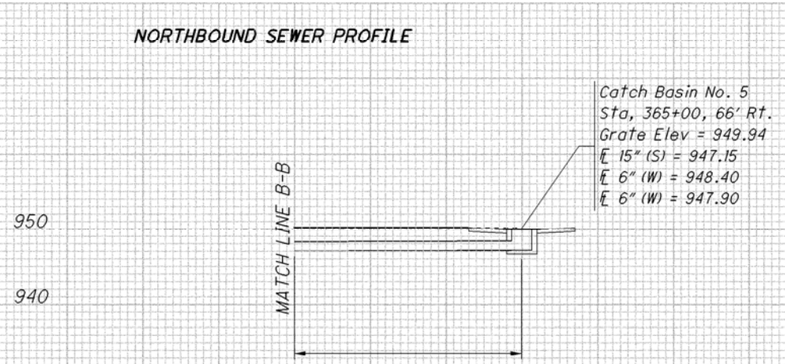
MEDIAN SEWER PROFILE



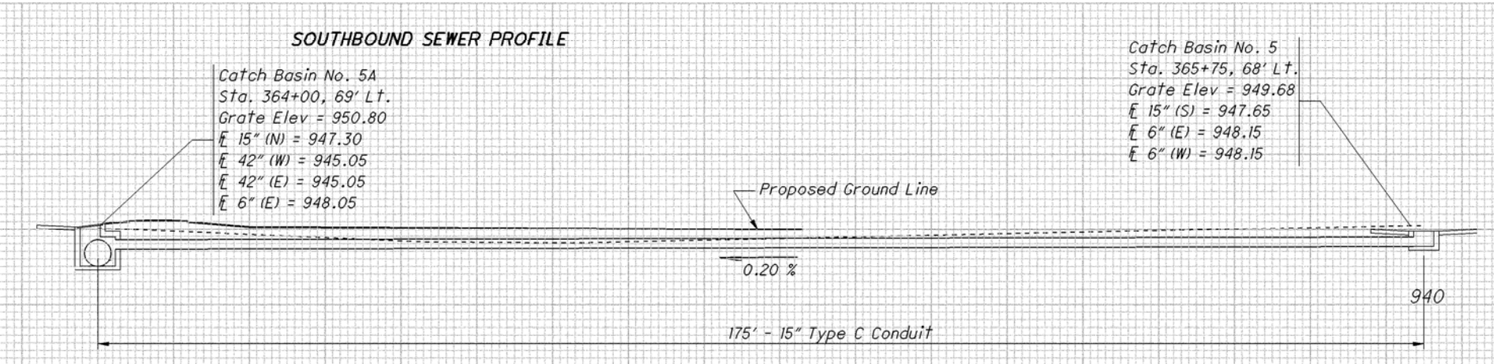
NORTHBOUND SEWER PROFILE



NORTHBOUND SEWER PROFILE

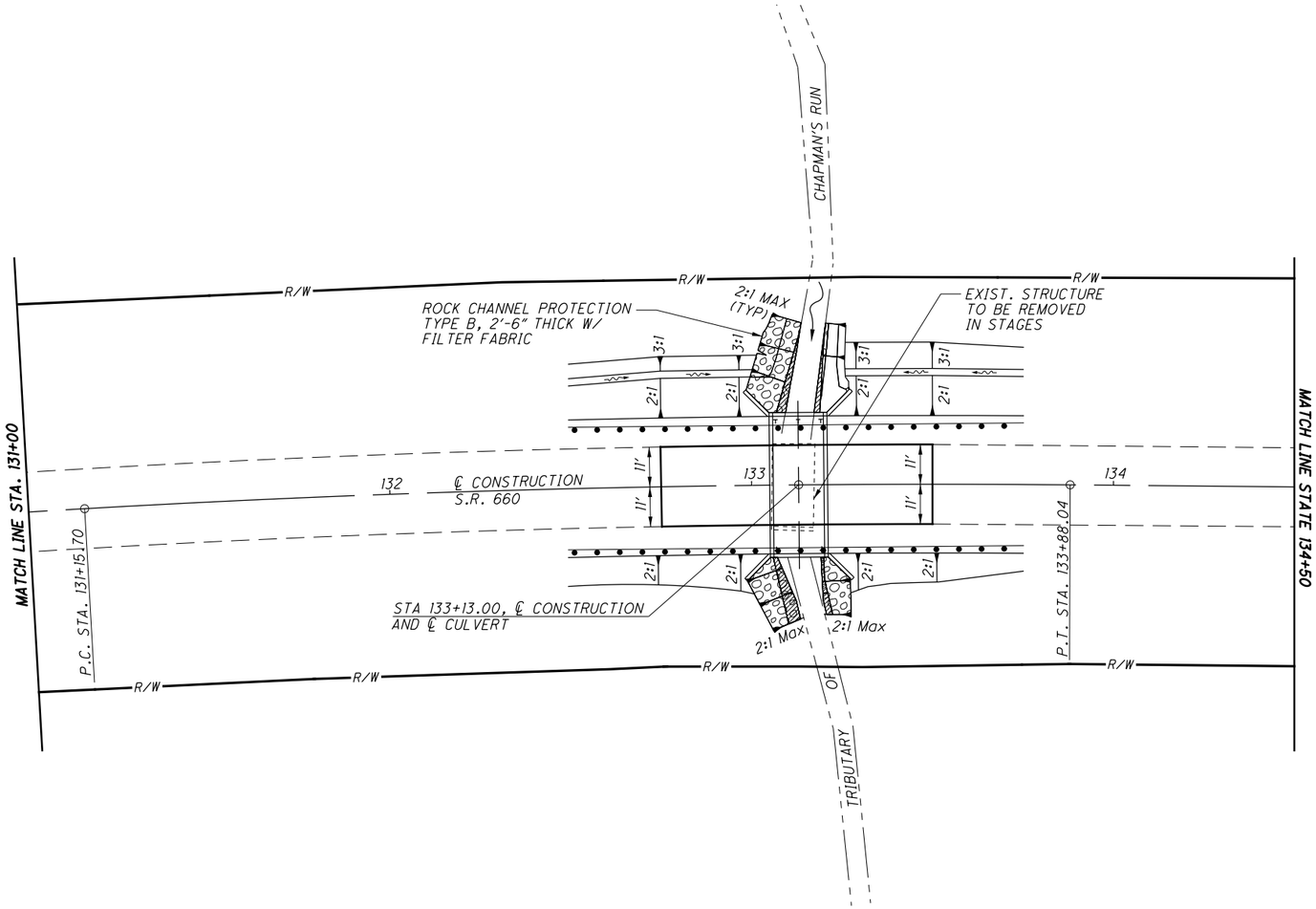


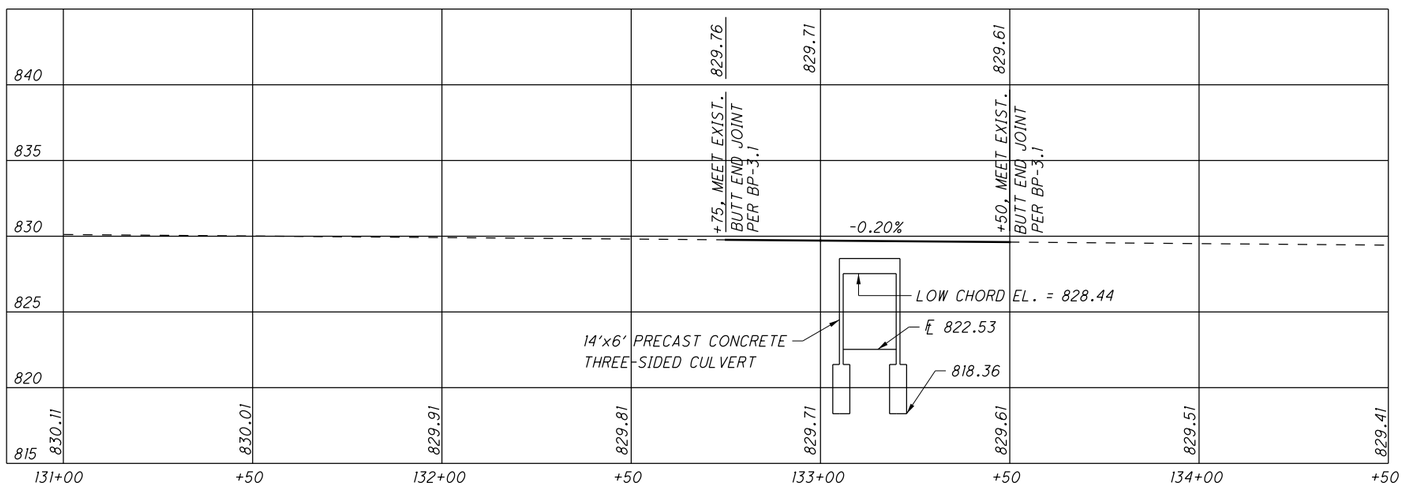
SOUTHBOUND SEWER PROFILE



LONGITUDINAL SEWER PROFILE

LUC-76-31.48





HYDRAULIC DATA

DRAINAGE AREA: 0.79 SQ.MI.
EXISTING WATERWAY OPENING: 60.0 SF
PROPOSED WATERWAY OPENING: 70.0 SF
ORDINARY HIGH WATER MARK: 822.9 FT
SFN: 3006914
DESIGN SERVICE LIFE: 75 YRS
pH: 7.4
Abrasion Level: 3

Q_{10} =	297 CFS	Q_{100} =	518 CFS
V_{10} =	6.9 FPS	V_{100} =	7.9 FPS
HW_{10} =	827.8	HW_{100} =	829.9

EXISTING STRUCTURE

TYPE: CONCRETE SLAB SUPPORTED ON GRAVITY WALL ABUTMENT
SPAN: 12'-0"
ROADWAY: 22'-5" F/F RAILS
ALIGNMENT: CURVE
APPROACH SLAB: NONE
SUPERELEVATION: VARIES
DATE BUILT: 1900
STRUCTURE FILE NO. 3006514
SKEW: 0° REFERENCE CHORD
DISPOSITION: TO BE REPLACED
LOADING: S-11.3(7)

PROPOSED STRUCTURE

TYPE: PRECAST REINFORCED CONCRETE FLAT-TOPPED THREE-SIDED CULVERT
SPAN: 14'-0" F/F CULVERT
ROADWAY: 34'-0" F/F RAILS
ALIGNMENT: 1°19'11" CURVED TO THE RIGHT
SUPERELEVATION: VARIES
APPROACH SLAB: NONE
SKEW: 0°
WEARING SURFACE: ASPHALT CONCRETE
LOADING: HL93
FUTURE WEARING SURFACE: 60 PSF
SFN: 3006914

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KEW
CHECKED JOH

CULVERT PLAN AND PROFILE STA. 133+13.00

GUE-660-2.52

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

DESIGN LOADING:
HS25 AND THE ALTERNATE MILITARY LOADING.

DESIGN STRESSES:
CAST-IN-PLACE STRUCTURES
CONCRETE CLASS "QC MISC." - f'c = 4,000 psi SUBSTRUCTURE
REINFORCING STEEL - ASTM A615, A616, OR A617
Fy = 60,000 psi.

PRECAST STRUCTURES: FOR THREE-SIDED STRUCTURES SEE CULVERT NOTES. FOR BOX AND PIPE CULVERT CMS 611.

REMOVAL OF EXISTING STRUCTURE:
PORTIONS OF THE EXISTING STRUCTURE SHALL BE REMOVED AS INDICATED.

FOUNDATION BEARING PRESSURE:
WINGWALL AND CULVERT FOOTINGS, AS DESIGNED PRODUCE A MAXIMUM BEARING PRESSURE OF 1.5 TONS PER SQUARE FOOT.

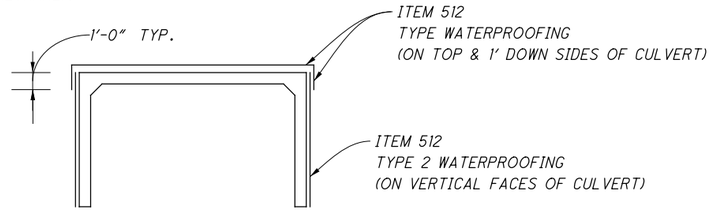
THREE-SIDED CULVERT WALL AND TOP SLAB THICKNESS
THE WALL AND TOP SLAB THICKNESSES SHOWN ON THE PLANS WERE OBTAINED FROM THE MANUFACTURERS AT THE TIME THE PLANS WERE PREPARED. IF THE WALL AND/OR TOP SLAB THICKNESS OF THE CULVERT PROPOSED ARE DIFFERENT FROM WHAT IS SHOWN IN THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT CULVERT DIMENSIONS, SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE.

ITEM 512, TYPE 2 WATERPROOFING
MEMBRANE WATERPROOFING (SHEET TYPE 2) SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND VERTICALLY DOWN ALL SIDES FORTH PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING. JOINT WRAP AS SPECIFIED IN 611.08 AND CONCRETE SEALING AS SPECIFIED IN 611.09 ARE NOT REQUIRED UNDER THE LIMITS OF THE MEMBRANE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512, TYPE 2 WATERPROOFING.

PRECAST WINGWALLS, HEADWALLS AND FOOTERS
AT THE OPTION OF THE CONTRACTOR, A PRECAST WINGWALL, HEADWALL, OR FOOTER MAY BE FURNISHED PER ITEM 602. THE PRECAST OPTION FURNISHED WILL MEET THE CAST-IN-PLACE STRUCTURAL DESIGN LOADINGS, DESIGN HEIGHT, AND DESIGN LENGTH DIMENSIONS.

FULL COMPENSATION FOR THE PRECAST WINGWALL, HEADWALL, OR FOOTER IS THE NUMBER OF CUBIC YARDS OF ITEM 511 AND POUNDS OF ITEM 509 FOR THE CORRESPONDING CAST-IN-PLACE STRUCTURE.

WHEN SEALING OF CONCRETE SURFACES (EPOXY) IS SPECIFIED ON THE HEADWALLS OF A PRECAST CONCRETE BOX CULVERT, ANY PRECAST CULVERT SECTIONS BEYOND THE LIMIT OF THE MEMBRANE WATERPROOFING SHALL BE SEALED USING EPOXY SEALER. PAYMENT FOR THE SEALING OF THE PRECAST CONCRETE BOX SURFACES SHALL BE MADE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY URETHANE).

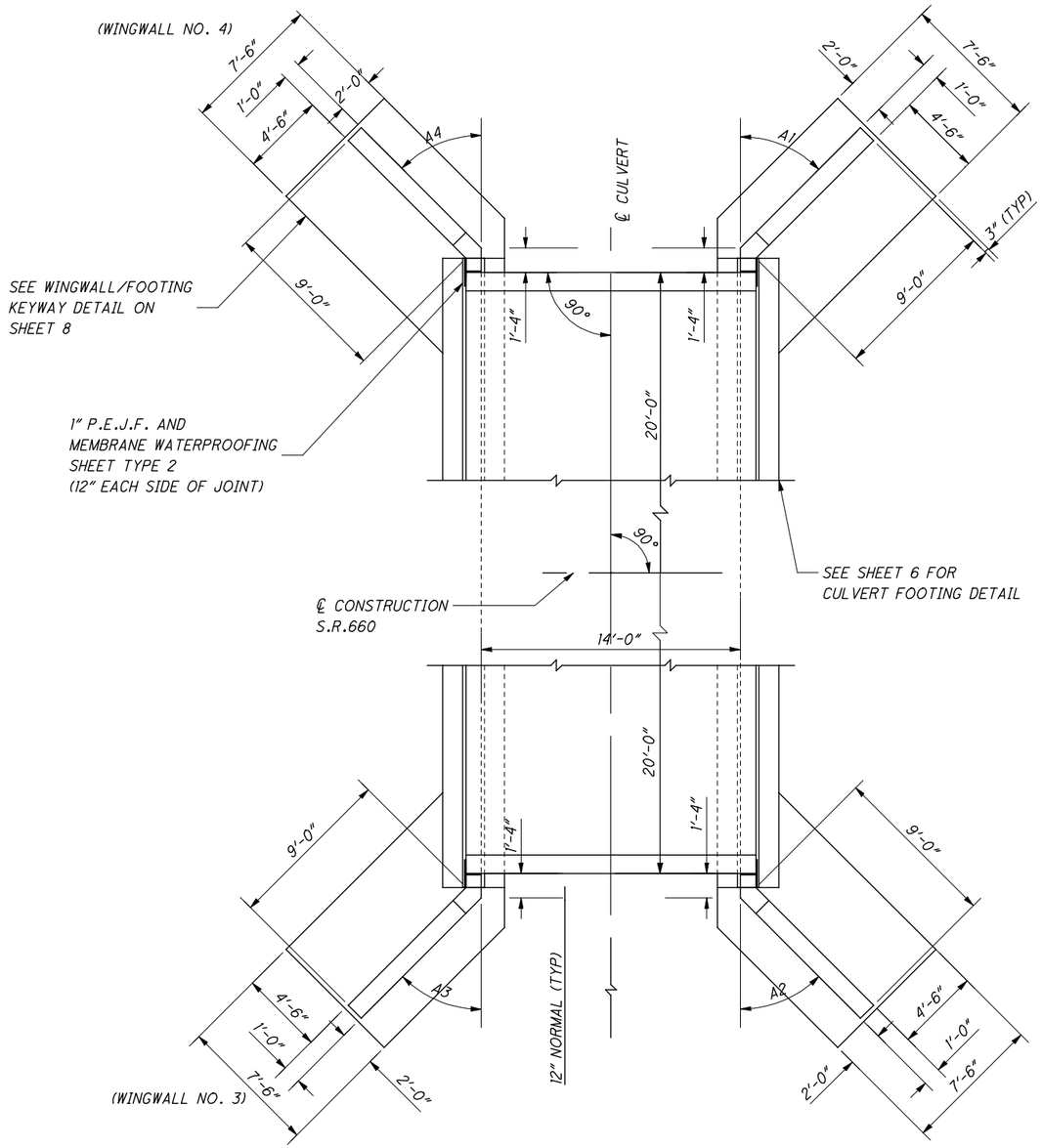


GENERAL SUMMARY (GUE - 660 - 2.52)

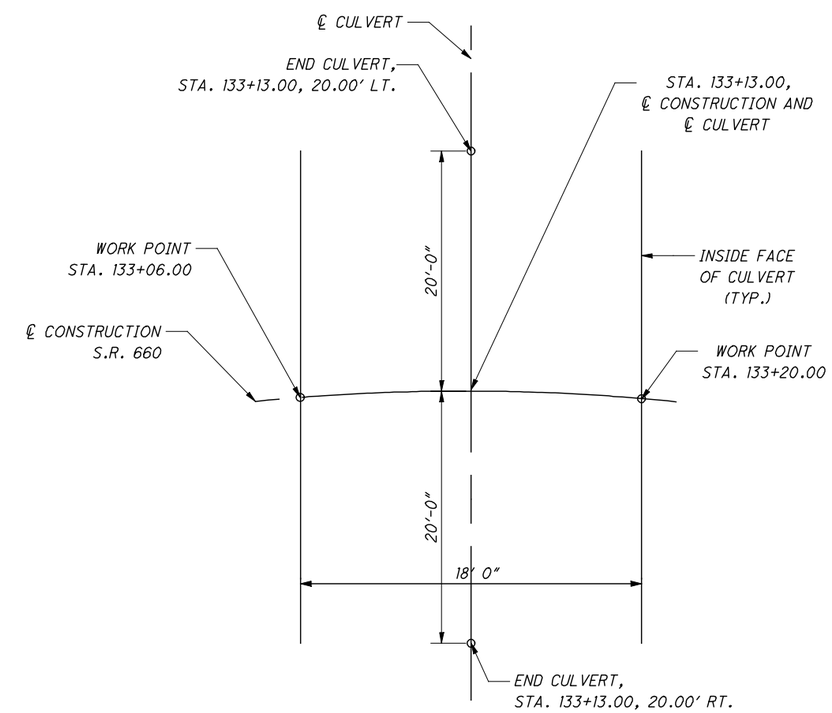
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
202	11000	LS		STRUCTURE REMOVED
503	21100	67	CY	UNCLASSIFIED EXCAVATION
509	10000	6015	LB	EPOXY COATED REINFORCING STEEL
511	46000	12	CY	CLASS QC MISC. CONCRETE, WINGWALL
511	46500	54	CY	CLASS QC MISC. CONCRETE, FOOTING
511	46600	1	CY	CLASS QC MISC. CONCRETE, MISC. : HEADWALLS
512	33000	128	SY	TYPE 2 WATERPROOFING
512	10100	34	SY	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)
516	13600	27	SF	1" PREFORMED EXPANSION JOINT FILLER
518	21200	16	CY	POROUS BACKFILL WITH FILTER FABRIC
601	32100	57	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
601	34200	43	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER
611	70000	40	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE FLAT TOPPED,
				THREE SIDED CULVERT (14'-0" SPAN X 6'-0" RISE)

CULVERT ESTIMATED QUANTITIES
STA. 133+13.00

GUE-660-2.52



(WINGWALL NO. 1)



REFERENCE DIAGRAM

WINGWALL ANGLES	
A1	45°0'0"
A2	45°0'0"
A3	45°0'0"
A4	45°0'0"

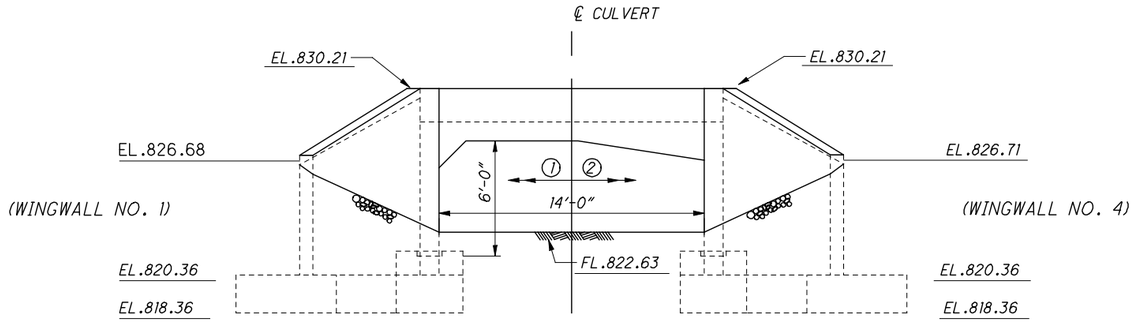
CULVERT & WINGWALL LAYOUT

NOTE: SEE TABLE THIS SHEET FOR VALUES OF A1,A2,A3,A4

CALCULATED KEW
CHECKED JOH

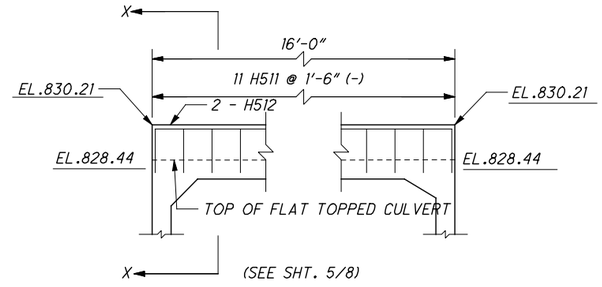
CULVERT LAYOUT STA. 133+13.00

GUE-660-2.52



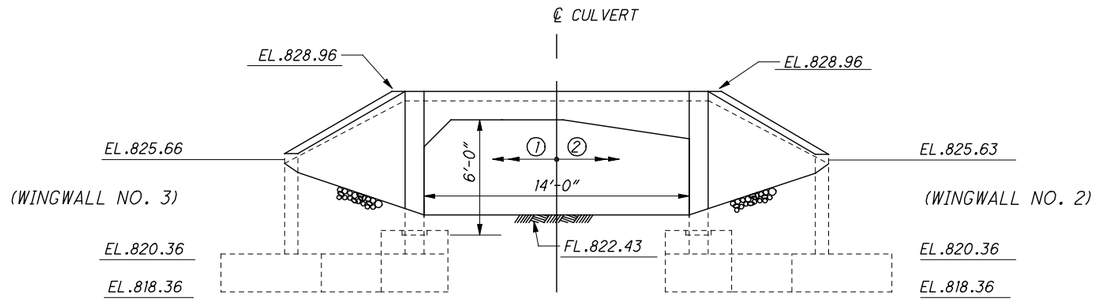
INLET ELEVATION

NOTE: ① - SHORT HAUNCH PRECAST UNIT
② - LONG HAUNCH PRECAST UNIT

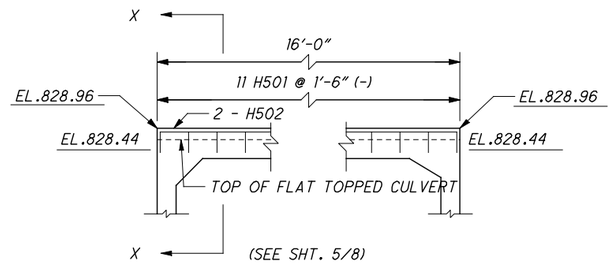


INLET HEADWALL REINFORCING DETAIL

(FOR FLAT-TOPPED CULVERTS ONLY)



OUTLET ELEVATION

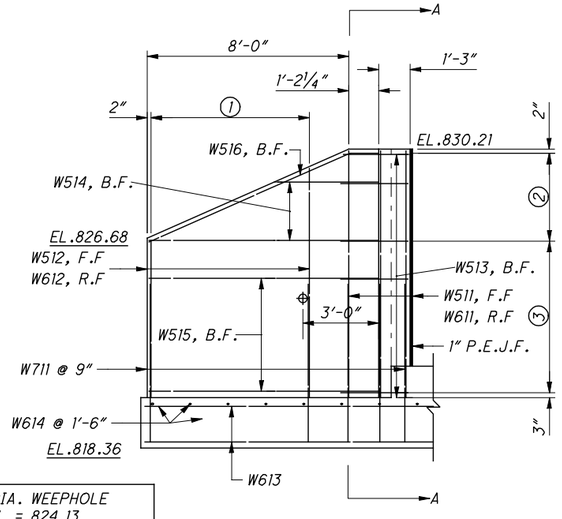


OUTLET HEADWALL REINFORCING DETAIL

(FOR FLAT-TOPPED CULVERTS ONLY)

CULVERT ELEVATION
STA. 133+13.00

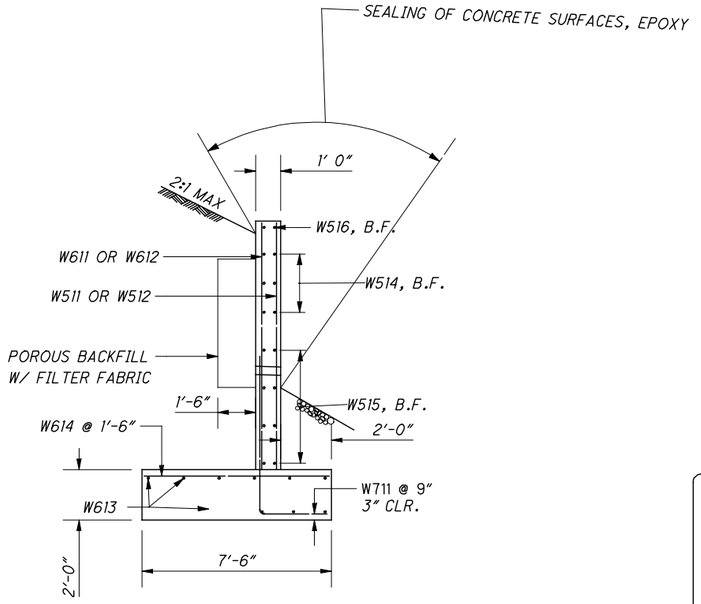
GUE-660-2.52



NOTE: 4" DIA. WEEPHOLE
ELEV. = 824.13

WINGWALL 1 ELEVATION

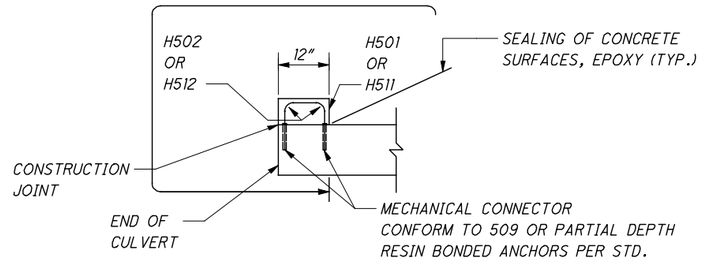
① SER. OF 5 @ 1'-6"
② 3 SPACES @ 1'-1¾"
③ 4 SPACES @ 1'-6"



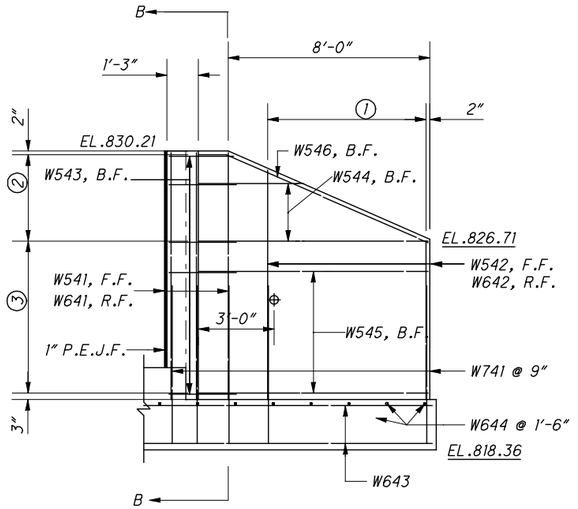
SECTION A-A

LEGEND

F.F. - FRONT FACE
R.F. - REAR FACE
B.F. - BOTH FACE

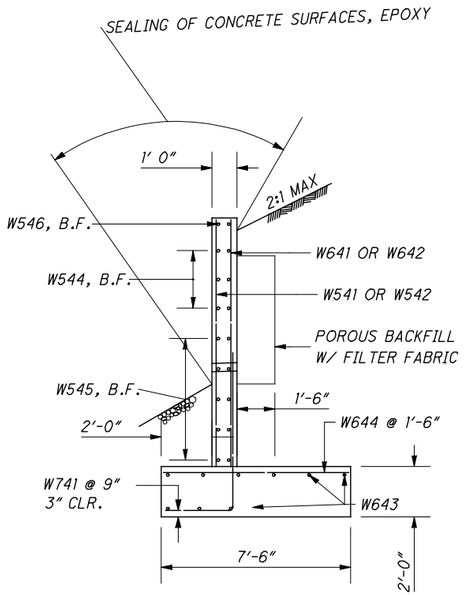


SECTION X-X



WINGWALL 4 ELEVATION

NOTE: 4" DIA. WEEPHOLE
ELEV. = 824.14



SECTION B-B

① SER. OF 5 @ 1'-6"
② 3 SPACES @ 1'-1¾"
③ 5 SPACES @ 1'-2½"

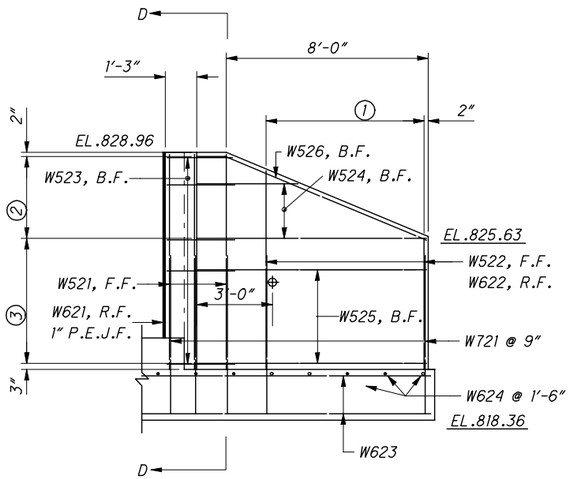
NOTES:

1. ITEM 518 - POROUS BACKFILL W/FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND 1' BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL, AND RETURN 6" ABOVE THE WEEPHOLE.

2. 1" PREFORMED EXPANSION JOINT FILLER SHALL BE EXTENDED FROM TOP OF FOOTING TO TOP OF WALL.

WINGWALL NO. 1 AND 4 DETAILS
STA. 133+13.00

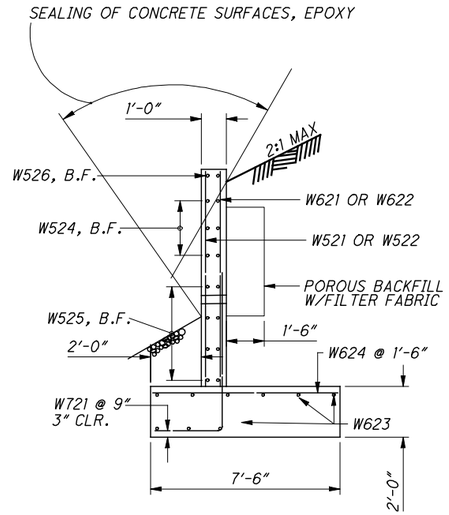
GUE-660-2.52



WINGWALL 2 ELEVATION

NOTE: 4" DIA. WEEPHOLE ELEV. = 823.65

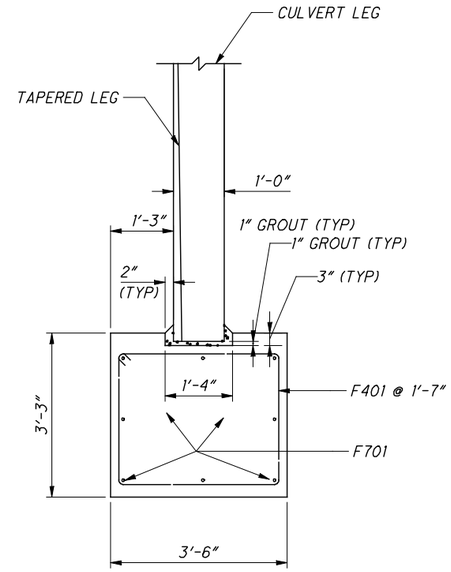
① SER. OF 5 @ 1'-6"
② 3 SPACES @ 1'-1"
③ 4 SPACES @ 1'-2¾"



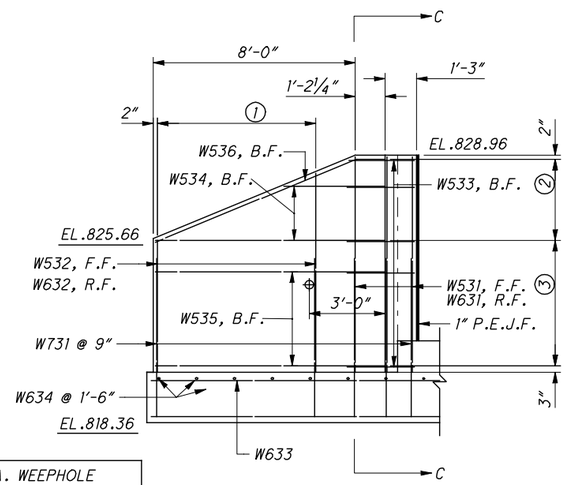
SECTION D-D

LEGEND

F.F. - FRONT FACE
R.F. - REAR FACE
B.F. - BOTH FACE



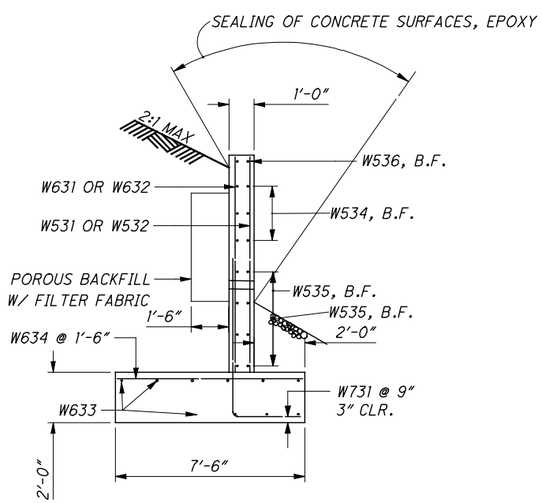
CULVERT FOOTING SECTION



NOTE: 4" DIA. WEEPHOLE ELEV. = 823.66

WINGWALL 3 ELEVATION

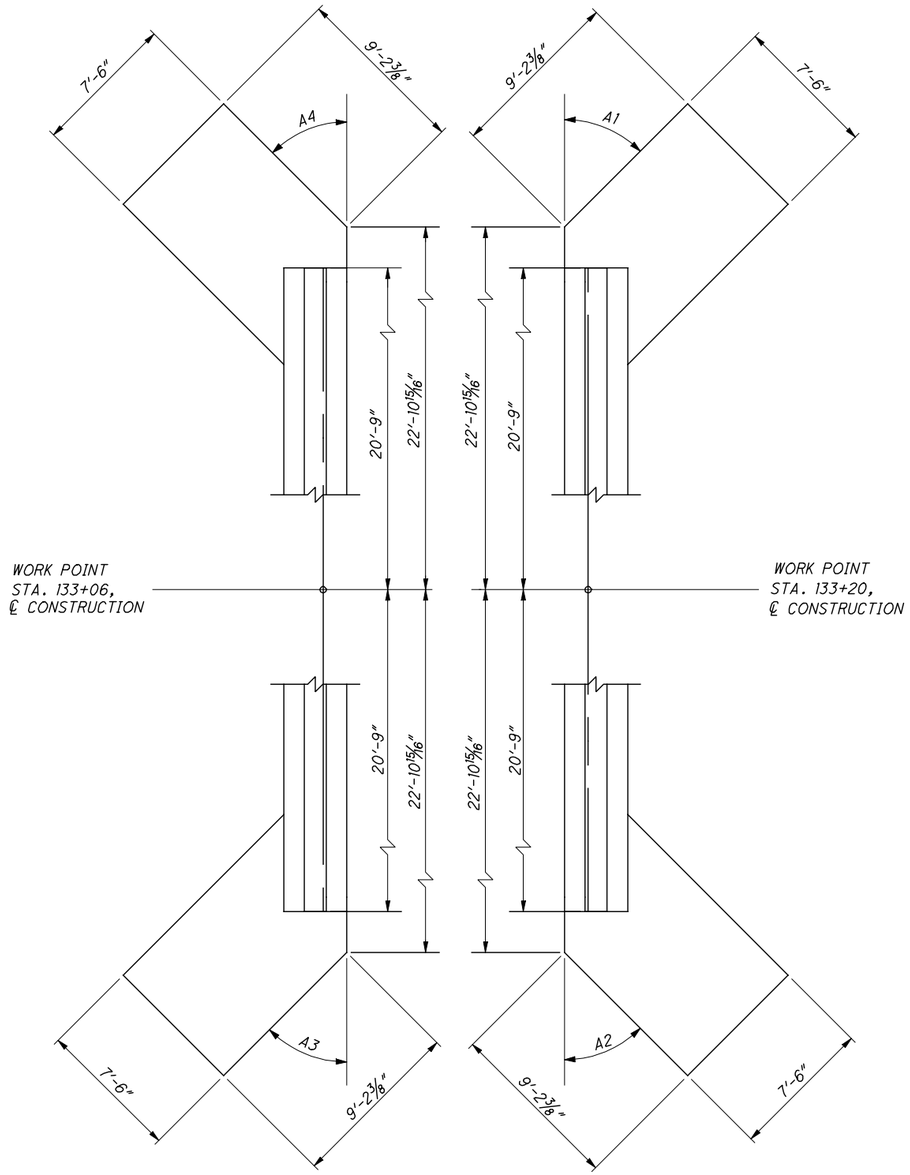
① SER. OF 5 @ 1'-6"
② 3 SPACES @ 1'-0¾"
③ 4 SPACES @ 1'-3"



SECTION C-C

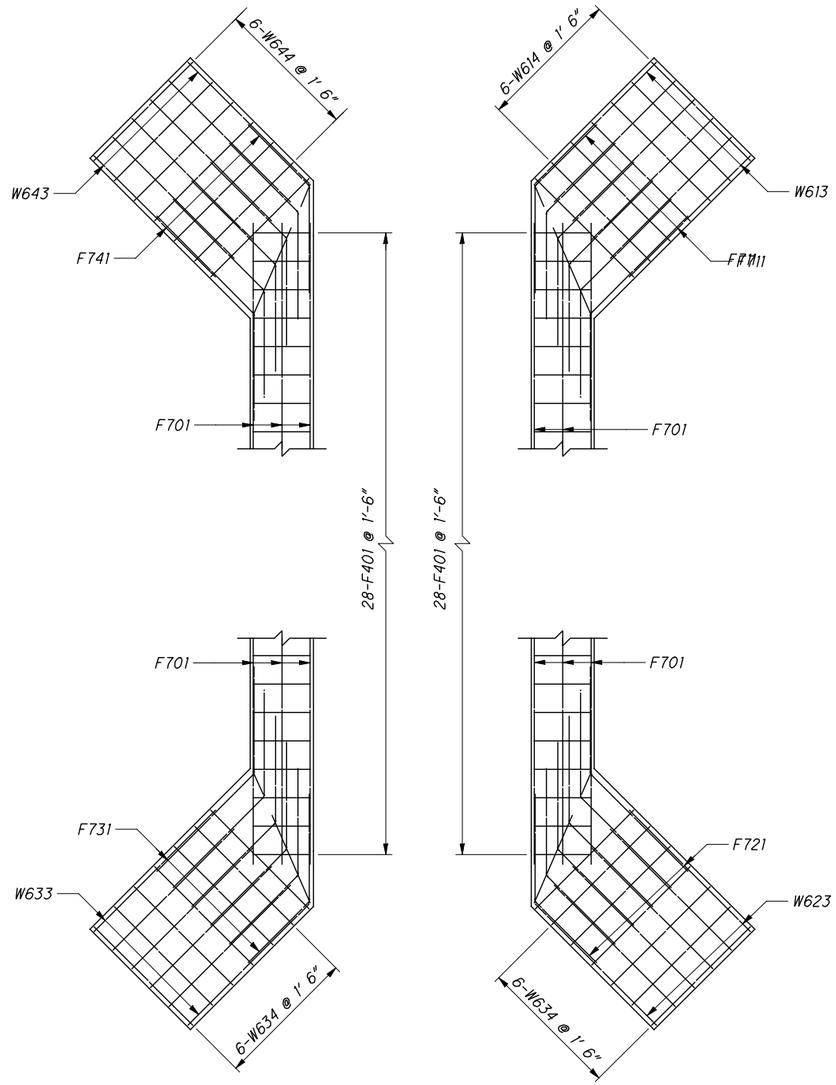
WINGWALL NO. 2 AND 3 DETAILS STA. 133+13.00

GUE-660-2.52



FOOTING LAYOUT

SEE TABLE ON SHEET 3 FOR VALUES OF A1 THRU A4

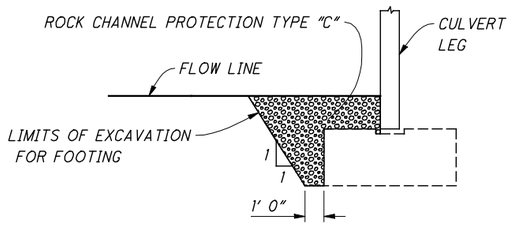


FOOTING REINFORCING PLAN

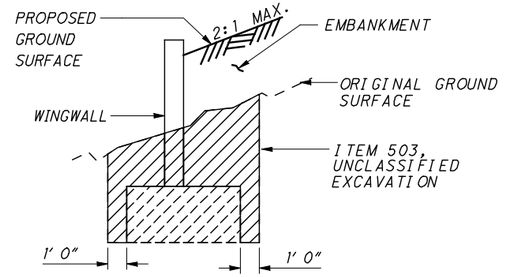
CALCULATED KEW
CHECKED JDH

FOOTING DETAILS
STA. 133+13.00

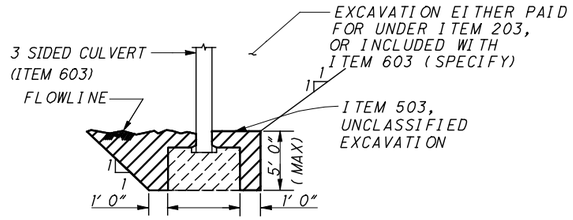
GUE-660-2.52



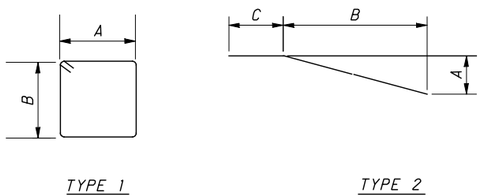
ROCK CHANNEL PROTECTION INSIDE CULVERT



LIMITS OF UNCLASSIFIED EXCAVATION (WINGWALL)



LIMITS OF UNCLASSIFIED EXCAVATION (CULVERT)



BENDING DIAGRAMS

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR	REMARKS
				WINGWALL 1					
W511	3	9'-9"	31	STR					
	1	6'-3"							
W512	S.O.	TO	40	STR				0'-9"	
	5	9'-1"							
W513	16	2'-4"	39	2	0'-10"	0'-10"	1'-2"		
	2	4'-0"							
W514	S.O.	TO	41	STR				2'-7"	
	3	9'-1"							
W515	8	9'-1"	76	STR					
W516	2	9'-9"	20	2	3'-4"	7'-11"	1'-2"		
W611	3	9'-9"	44	STR					
	1	6'-3"							
W612	S.O.	TO	58	STR				0'-9"	
	5	9'-1"							
W613	9	9'-0"	122	STR					
W614	6	7'-4"	66	STR					
W711	14	8'-9"	250	3	6'-3"	2'-8"			
				WINGWALL 2					
W521	3	8'-6"	27	STR					
	1	5'-2"							
W522	S.O.	TO	34	STR				0'-8"	
	5	7'-10"							
W523	16	2'-4"	39	2	0'-10"	0'-10"	1'-2"		
	2	4'-1"							
W524	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W525	8	9'-1"	76	STR					
W526	2	9'-8"	20	2	3'-2"	7'-11"	1'-2"		
W621	3	8'-6"	38	STR					
	1	5'-2"							
W622	S.O.	TO	49	STR				0'-8"	
	5	7'-10"							
W623	9	9'-0"	122	STR					
W624	6	7'-4"	66	STR					
W721	14	8'-9"	250	3	6'-3"	2'-8"			
				WINGWALL 3					
W531	3	8'-6"	27	STR					
	1	5'-3"							
W532	S.O.	TO	34	STR				0'-8"	
	5	7'-10"							
W533	16	2'-4"	39	2	0'-10"	0'-10"	1'-2"		
	2	4'-0"							
W534	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W535	8	9'-1"	76	STR					
W536	2	9'-8"	20	2	3'-2"	7'-11"	1'-2"		
SUBTOTAL			1768						

S.O. - SERIES OF

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR	REMARKS
W631	3	8'-6"	38	STR					
	1	5'-3"							
W632	S.O.	TO	49	STR				0'-8"	
	5	7'-10"							
W633	9	9'-0"	122	STR					
W634	6	7'-4"	66	STR					
W731	14	8'-9"	250	3	6'-3"	2'-8"			
				WINGWALL 4					
W541	3	9'-9"	31	STR					
	1	6'-3"							
W542	S.O.	TO	40	STR				0'-8"	
	5	9'-1"							
W543	18	2'-4"	44	2	0'-10"	0'-10"	1'-2"		
	2	4'-1"							
W544	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W545	10	9'-1"	95	STR					
W546	2	9'-9"	20	2	3'-4"	7'-11"	1'-2"		
W641	3	9'-9"	44	STR					
	1	6'-3"							
W642	S.O.	TO	58	STR				0'-8"	
	5	9'-1"							
W643	9	9'-0"	122	STR					
W644	6	7'-4"	66	STR					
W741	14	8'-9"	250	3	6'-3"	2'-8"			
				CULVERT FOOTING					
F401	56	12'-0"	449	1	3'-2"	2'-7"			
F701	32	21'-11"	1434	STR					
	1	10'-3"			3'-3"	3'-3"			
F711	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
	1	10'-3"			3'-3"	3'-3"			
F721	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
	1	10'-3"			3'-3"	3'-3"			
F731	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
	1	10'-3"			3'-3"	3'-3"			
F741	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
				HEADWALL					
H501	11	2'-7"	30	4	1'-1"	0'-8"	1'-1"		
H502	2	15'-10"	33	STR					
H511	11	5'-1"	58	4	2'-4"	0'-8"	2'-4"		
H512	2	15'-10"	33	STR					
SUBTOTAL			4229						

TOTAL CARRIED TO SHEET 2 OF 8

REINFORCING SCHEDULE
STA. 133+13.00

GUE-660-2.52

EXISTING STRUCTURE

TYPE: 48" AND 54" CORRUGATED METAL PIPES
SKEW: 16° L.F.
ALIGNMENT: TANGENT
CFN: 400930123

PROPOSED STRUCTURE

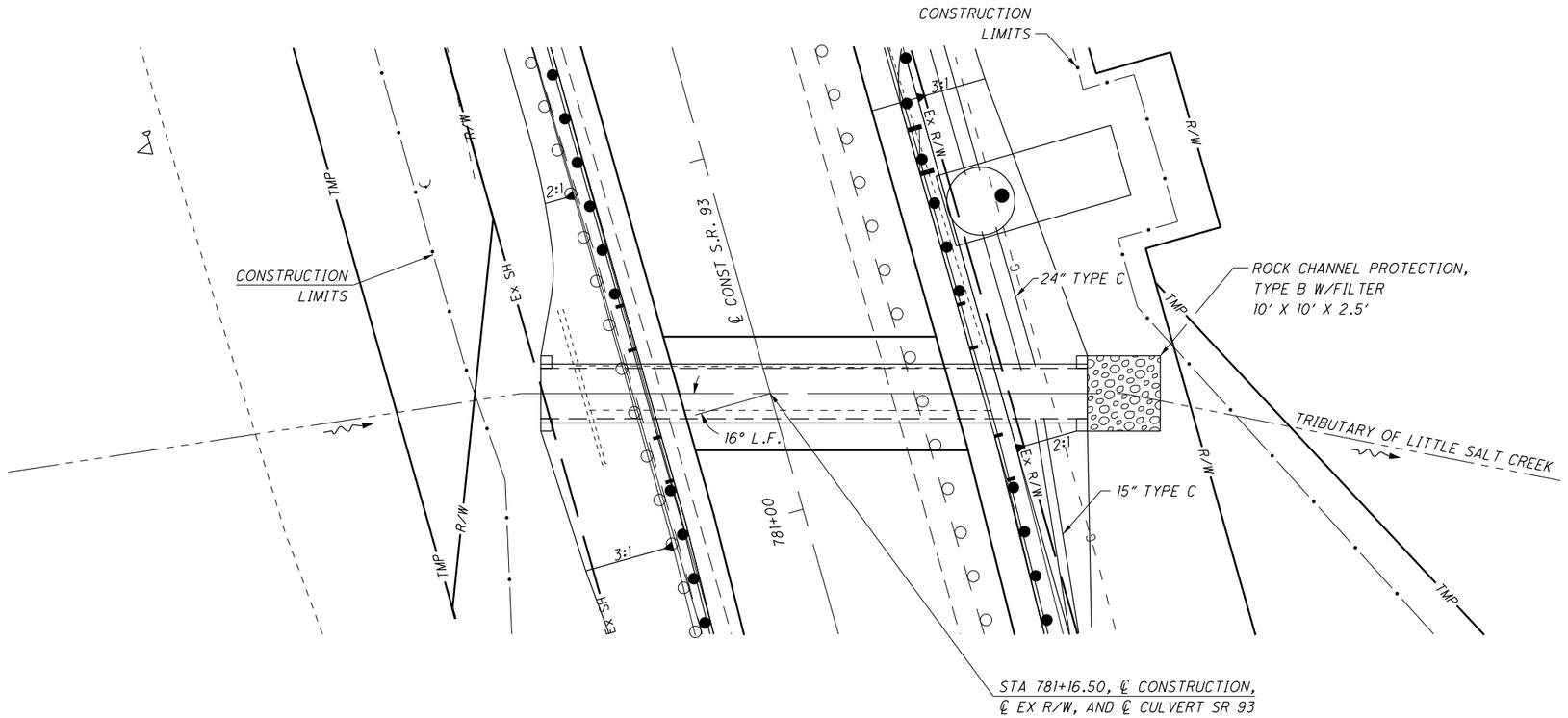
TYPE: 53"X83" ELLIPTICAL CONCRETE PIPE
SKEW: 16° L.F.
ALIGNMENT: TANGENT

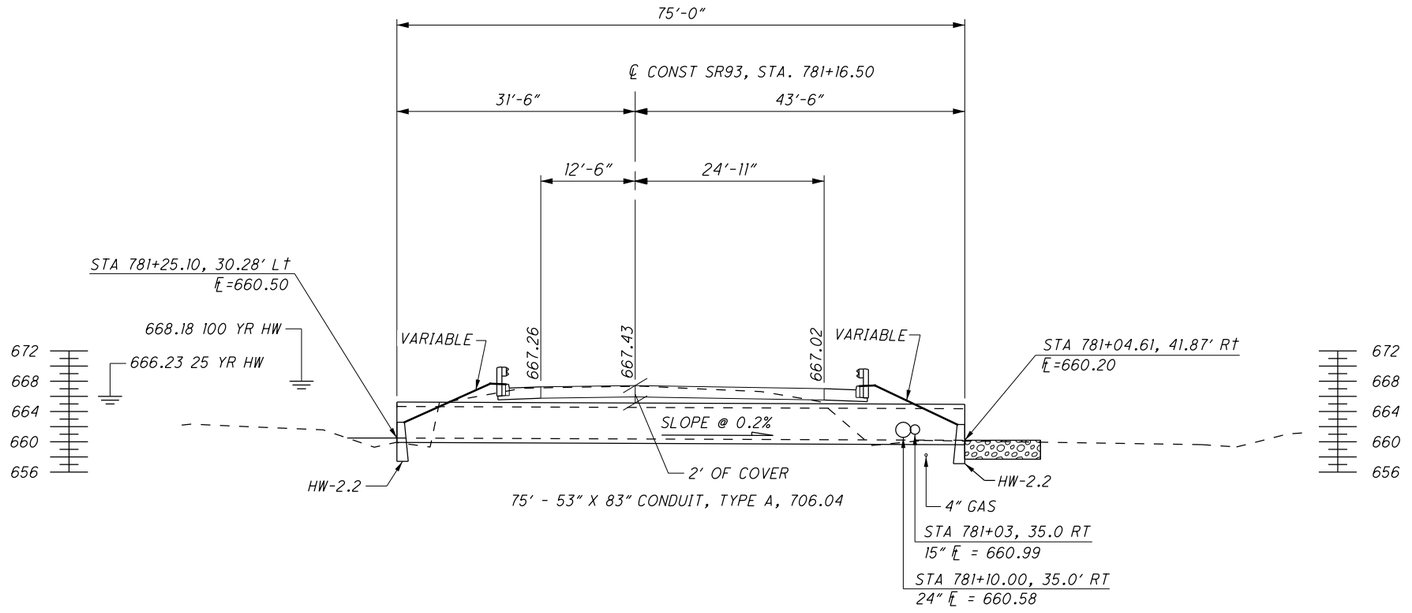
HYDRAULIC DESIGN DATA

DRAINAGE AREA: 344 ACRES
Q(25): 230 CFS
HW(25): 666.24 FT
V(25): 11 FT/S
Q(100): 325 CFS
HW(100): 668.81 FT
V(100): 13 FT/S
ORDINARY HIGH WATER MARK: 661.0'
DESIGN SERVICE LIFE: 50 YRS
pH: 6.8
Abrasion Level: 4

ESTIMATED QUANTITES CARRIED TO GENERAL SUMMARY

ITEM	QUANTITY	UNIT	DESCRIPTION
601	9	CY	ROCK CHANNEL PROTECTION, TYPE B, W/FILTER
602	3.3	CY	CONCRETE MASONRY
611	75	FT	53" X 83" CONDUIT, TYPE A, 706.04



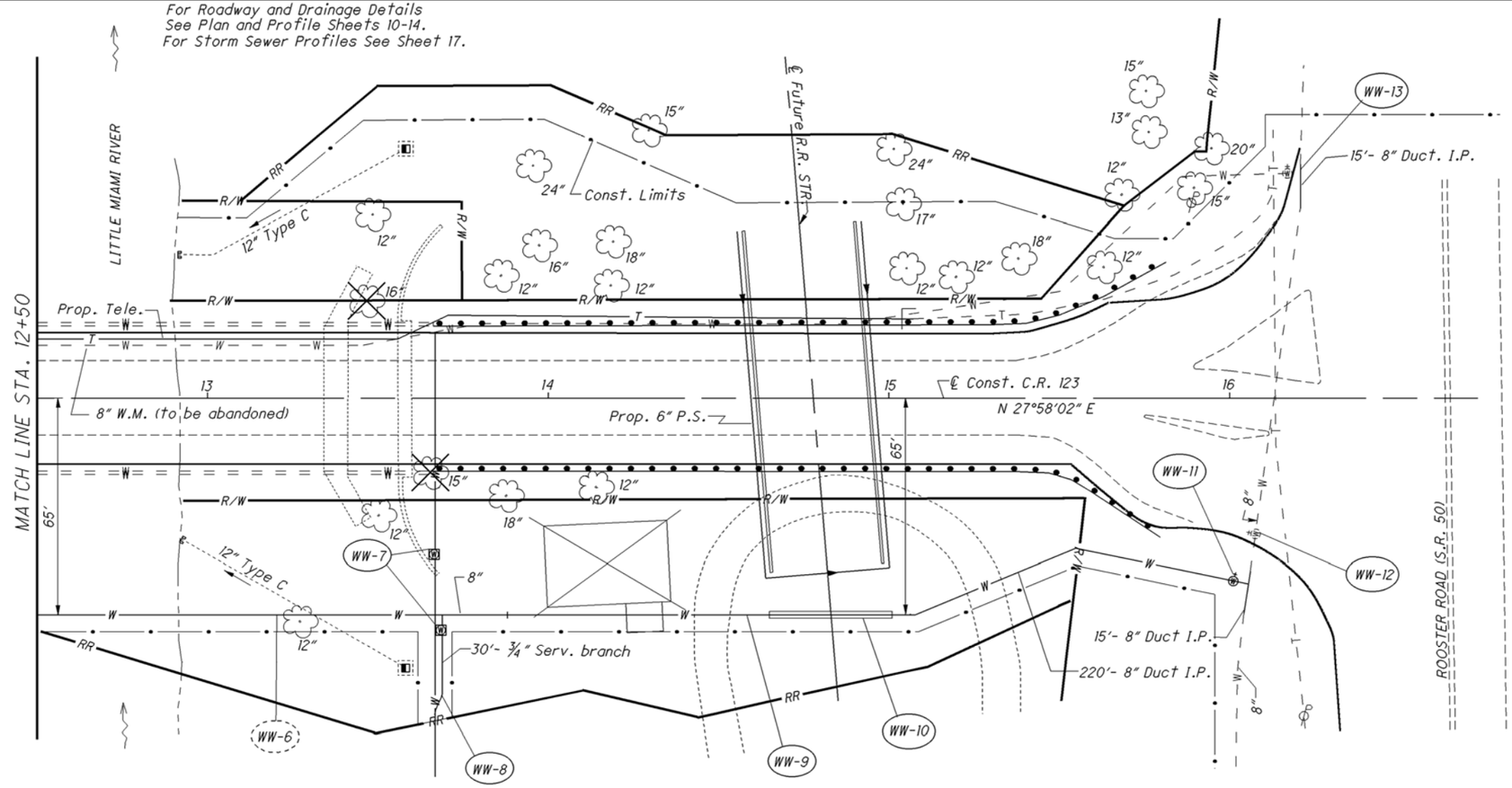


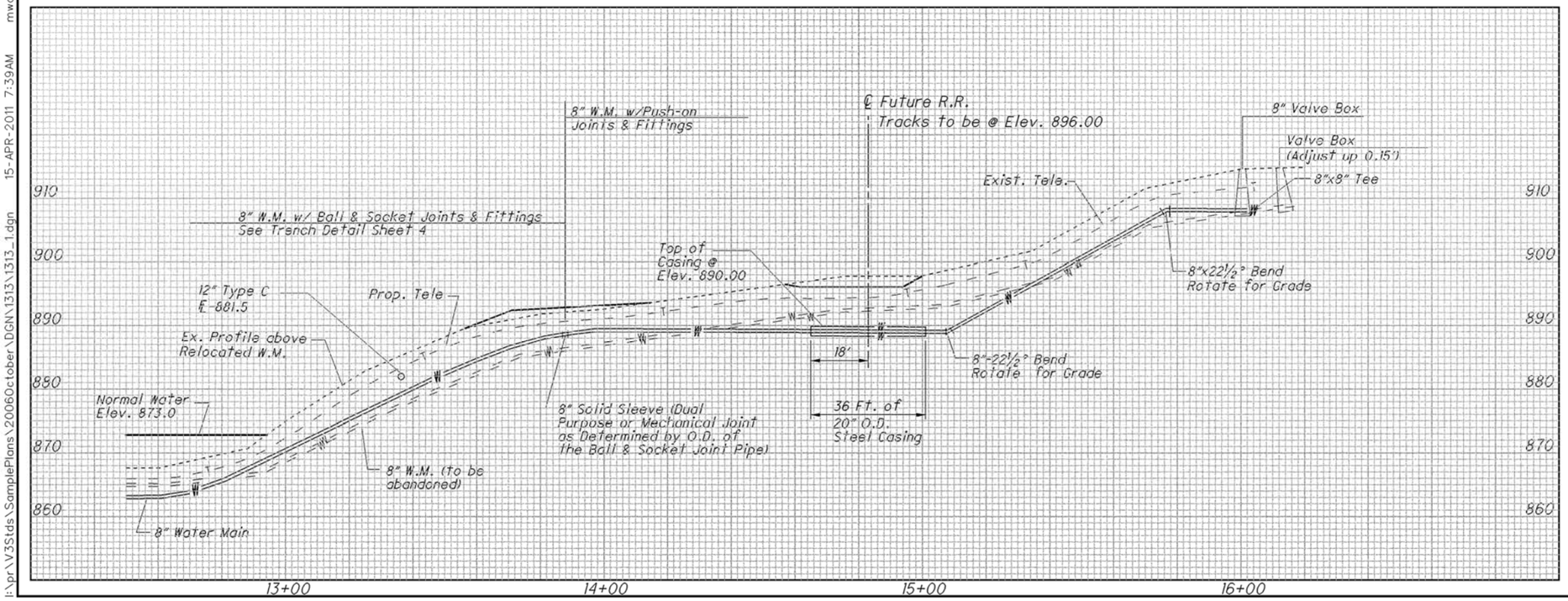
HORIZONTAL SCALE IN FEET
0 5 10 20
CALCULATED MRV
CHECKED MLC

CULVERT DETAIL
STA 781+16.50

JAC-93-14.35

For Roadway and Drainage Details
See Plan and Profile Sheets 10-14.
For Storm Sewer Profiles See Sheet 17.





REF NO.	STATION FROM	STATION TO	SIDE	8" Water Main Ductile Iron Pipe ANSI Class 53, Push-on Joints and Fittings FT	20" Steel Pipe Encasement Open Cut FT	Valve Box Adjusted to Grade EACH	¾" Copper Service Branch FT	Meter and Chamber Removed and Reset EACH	Sheeting and Bracing Ordered and Left in Place MBF	8" Gate Valve & Valve Box EACH
WW-7	13+66	13+70	RT					1		
WW-8	13+67	13+70	RT				30			
WW-9	13+88	16+07	RT	235		1			1	1
WW-10	14+65	15+01	RT		36					
WW-11	16+00		RT							
WW-12	16+08		RT							
WW-13	16+20		LT	15		1		1	1	1
TOTALS CARRIED TO GENERAL SUMMARY				250	36	1	30	1	1	1

638

SP. 1313-1
DATE: OCTOBER 2006

HORIZONTAL SCALE IN FEET
0 10 20 40

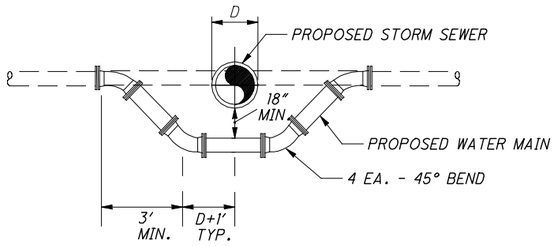
CALCULATED GJB
CHECKED DJK

WATER WORK PLAN
STA. 12+50 TO STA. 16+00

CUY-CR123-6.55

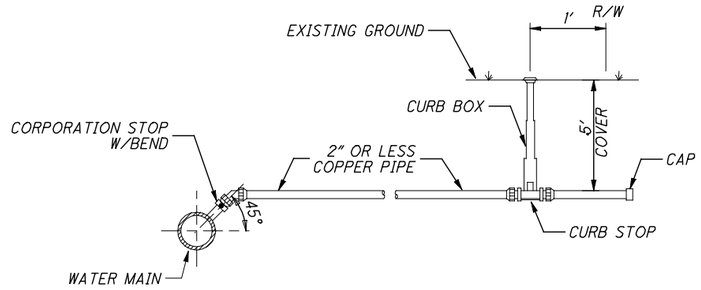
12
127

I:\pr V3Stds\SamplePlans\2006October\DGN\1313\1313_1.dgn 15-APR-2011 7:39AM mwawszki



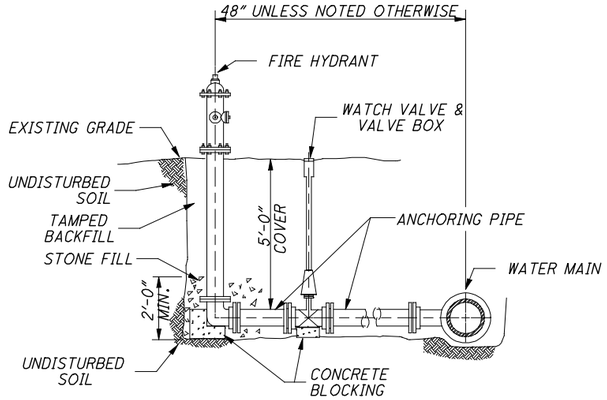
DETAIL "A"

EXISTING WATER MAIN RELOCATION UNDER PROPOSED UTILITY LINE (ELEVATION)



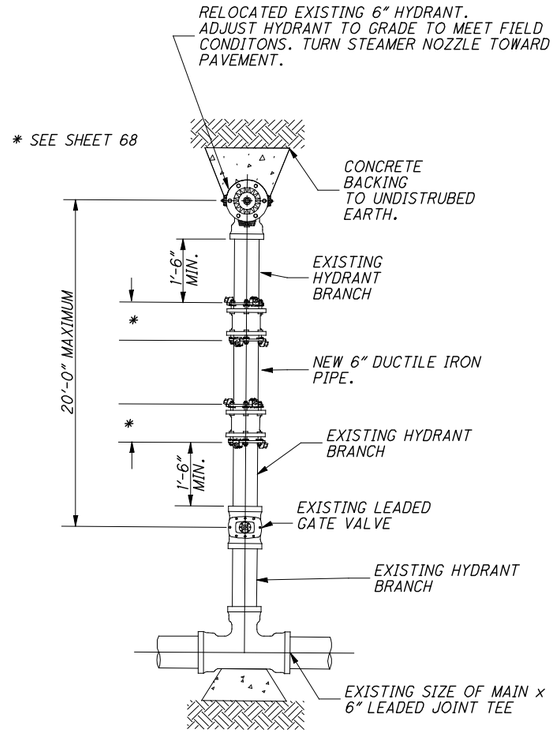
DETAIL "B"

TYPICAL 2" OR LESS SERVICE CONNECTION (ELEVATION)



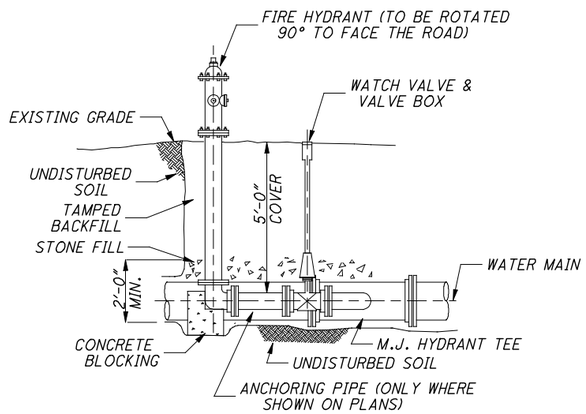
DETAIL "C"

HYDRANT ASSEMBLY PERPENDICULAR TO WATER (ELEVATION)



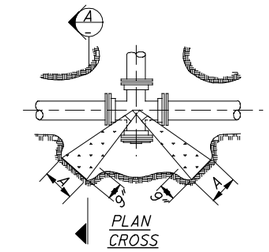
DETAIL "E"

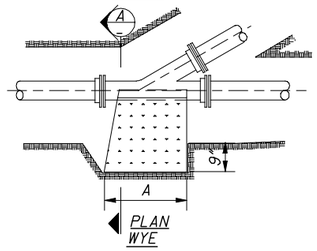
FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE (PLAN)

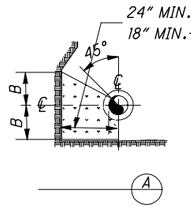


DETAIL "D"

HYDRANT ASSEMBLY PARALLEL TO WATER MAIN (ELEVATION)



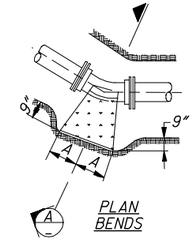


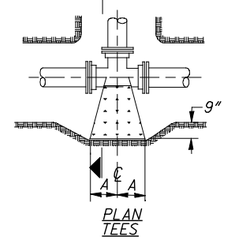


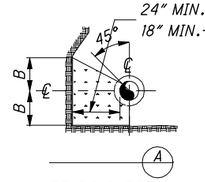
TYPE	SIZE	CROSS A	CROSS B	WYE A	WYE B
2000 P.S.F. SOIL	6"*	11"	13"	10"	12"
	8"	15"	17"	14"	14"
	10"	18"	22"	15"	20"
	12"	21"	26"	18"	23"
	14"	24"	30"	21"	27"
	16"	28"	33"	24"	30"
	20"	33"	42"	27"	43"
	24"	40"	49"	32"	50"

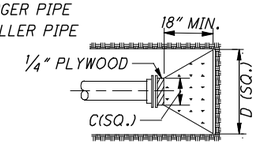
*6" OR LESS

NOTE: BASED ON 150 P.S.I. STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.









TYPE	SIZE	90° BENDS A	90° BENDS B	45° BENDS A	45° BENDS B	22-1/2° & 11-1/4° BENDS A	22-1/2° & 11-1/4° BENDS B	TEES A	TEES B	PLUGS C	PLUGS D
2000 P.S.F. SOIL	6"	18"	11"	10"	11"	6"	9"	11"	13"	10"	24"
	8"	25"	14"	14"	14"	9"	11"	15"	17"	12"	32"
	10"	27"	20"	16"	19"	10"	15"	18"	22"	14"	40"
	12"	33"	23"	18"	23"	12"	18"	21"	26"	16"	47"
	14"	39"	26"	22"	26"	13"	22"	24"	30"	18"	54"
	16"	43"	30"	24"	30"	14"	26"	28"	33"	20"	61"
	20"	50"	39"	27"	39"	17"	32"	33"	42"	24"	74"
	24"	60"	45"	33"	45"	20"	38"	40"	49"	28"	88"

*6" OR LESS

NOTE:
BASED ON 150 P.S.I. STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER.
ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.

WATER WORK DETAILS

TUS-10-13.15

PAVEMENT MARKING SUBSUMMARY

SP 1314-1
DATE: APRIL 2013
CALCULATED DAM CHECKED JAG

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	202 RAISED PAVEMENT MARKER REMOVED		621 RPM (2-way yellow)	621 RPM (1-way white)		642 EDGE LINE (White)	642 EDGE LINE, TYPE 1 (White)	642 CENTER LINE, TYPE 1 (Dashed-Solid)	642 CHANNELIZING LINE, TYPE 1	642 STOP LINE, TYPE 1	642 LANE ARROW, TYPE 1	642 WORD ON PAVEMENT, 96", TYPE 1	642 ISLAND MARKING, TYPE 1 (Yellow)				
						EACH		EACH	EACH		MILE	MILE	MILE	FT	FT	EACH	EACH	SQ FT				
56	CL-1	℄ Const. S.R. 17	46+73	48+00	RT.	7		7					0.024									
56	CL-2	℄ Const. S.R. 17	47+90	48+47	LT.			2					0.010									
56	CL-3	℄ Const. S.R. 17	48+00	48+47	RT.	2		11					0.009									
56	CL-4	℄ Const. S.R. 17	48+47	53+00	LT.			11					0.086									
56	CL-5	℄ Const. S.R. 17	48+47	53+00	RT.	11		6					0.086									
57	CL-6	℄ Const. S.R. 17	53+00	55+48	LT.	6		6					0.047									
57	CL-7	℄ Const. S.R. 17	53+00	55+48	RT.			12					0.047									
57	CL-8	℄ Const. S.R. 17	55+48	57+86	LT.	12							0.045									
57	CL-9	℄ Const. S.R. 17	55+48	56+00	RT.			3					0.011									
57	CL-10	℄ Const. S.R. 17	58+68	59+25	RT.	3		4					0.011									
57	CL-11	℄ Const. MEYERS RD.	10+40	11+15	℄	4		5					0.014									
57	CL-12	℄ Const. MEYERS RD.	8+55	9+41	℄	5		6					0.016									
58	CL-13	℄ Const. S.R. 17	59+25	60+39	RT.	6		1					0.022									
58	CL-14	℄ Const. S.R. 17	64+16	65+00	℄	1		1					0.016									
58	CL-15	℄ Const. S.R. 17	65+00	65+66	℄	2							0.013									
56	EL-1	℄ Const. RAMP A	10+25	10+65	RT.	2					0.009											
56	EL-2	℄ Const. S.R. 17	45+52	48+00	LT.	12			2			0.047										
56	EL-3	℄ Const. S.R. 17	45+30	48+00	RT.	14			12			0.051										
56	EL-4	℄ Const. RAMP B	9+18	9+75	RT.	3			14		0.011											
56	EL-5	℄ Const. S.R. 17	48+00	53+00	LT.	14			3			0.095										
56	EL-6	℄ Const. S.R. 17	48+00	53+00	RT.	14			14			0.095										
57	EL-7	℄ Const. MEYERS RD.	53+00	11+00	LT.	24			14			0.113										
57	EL-8	℄ Const. MEYERS RD.	53+00	8+55	RT.	23			24			0.111										
57	EL-9	℄ Const. MEYERS RD.	11+15	59+25	LT.	8			23			0.029										
57	EL-10	℄ Const. MEYERS RD.	8+55	59+25	RT.	11			8			0.041										
58	EL-11	℄ Const. S.R. 17	59+25	65+00	LT.	21			11			0.109										
58	EL-12	℄ Const. S.R. 17	59+25	65+00	RT.	16			22			0.109										
58	EL-13	℄ Const. S.R. 17	65+00	65+66	LT.	1			29			0.013										
58	EL-14	℄ Const. S.R. 17	65+00	65+66	RT.	1						0.013										
56	CH-1	℄ Const. S.R. 17	45+52	47+70	LT.									218								
57	CH-2	℄ Const. S.R. 17	56+20	57+86	RT.				11					166								
57	CH-3	℄ Const. S.R. 17	58+68	59+25	LT.				9					57								
58	CH-4	℄ Const. S.R. 17	59+25	60+20	LT.				3					95								
56	IM-1	℄ Const. S.R. 17	44+51	45+09	RT.				5				0.019	110								
56	IM-2	℄ Const. S.R. 17	45+52	46+73	RT.	6		6					0.046	10								
58	IM-3	℄ Const. S.R. 17	60+39	64+16	LT&RT	11		12					0.143									
56	SL-1	℄ Const. RAMP A	10+28		LT&RT			19							29							
56	SL-2	℄ Const. S.R. 17	50+07	50+27	LT.										20			108				
57	SL-3	℄ Const. MEYERS RD.	9+41		LT.										12			26				
57	SL-4	℄ Const. MEYERS RD.	10+40		RT.										14			255				
56		℄ Const. S.R. 17	45+62													2						
56		℄ Const. S.R. 17	46+62														2					
56		℄ Const. S.R. 17	47+60													2						
56		℄ Const. S.R. 17	52+11													1						
56		℄ Const. S.R. 17	52+25													1						
57		℄ Const. S.R. 17	56+98														1					
57		℄ Const. S.R. 17	56+20													1						
57		℄ Const. S.R. 17	57+76													1						
57		℄ Const. S.R. 17	58+78													1						
SUBTOTALS						240		112	204		0.020		0.663	656	75	9	3	389				
TOTALS CARRIED TO GENERAL SUMMARY						240		316			0.84		0.66	656	75	9	3	389				

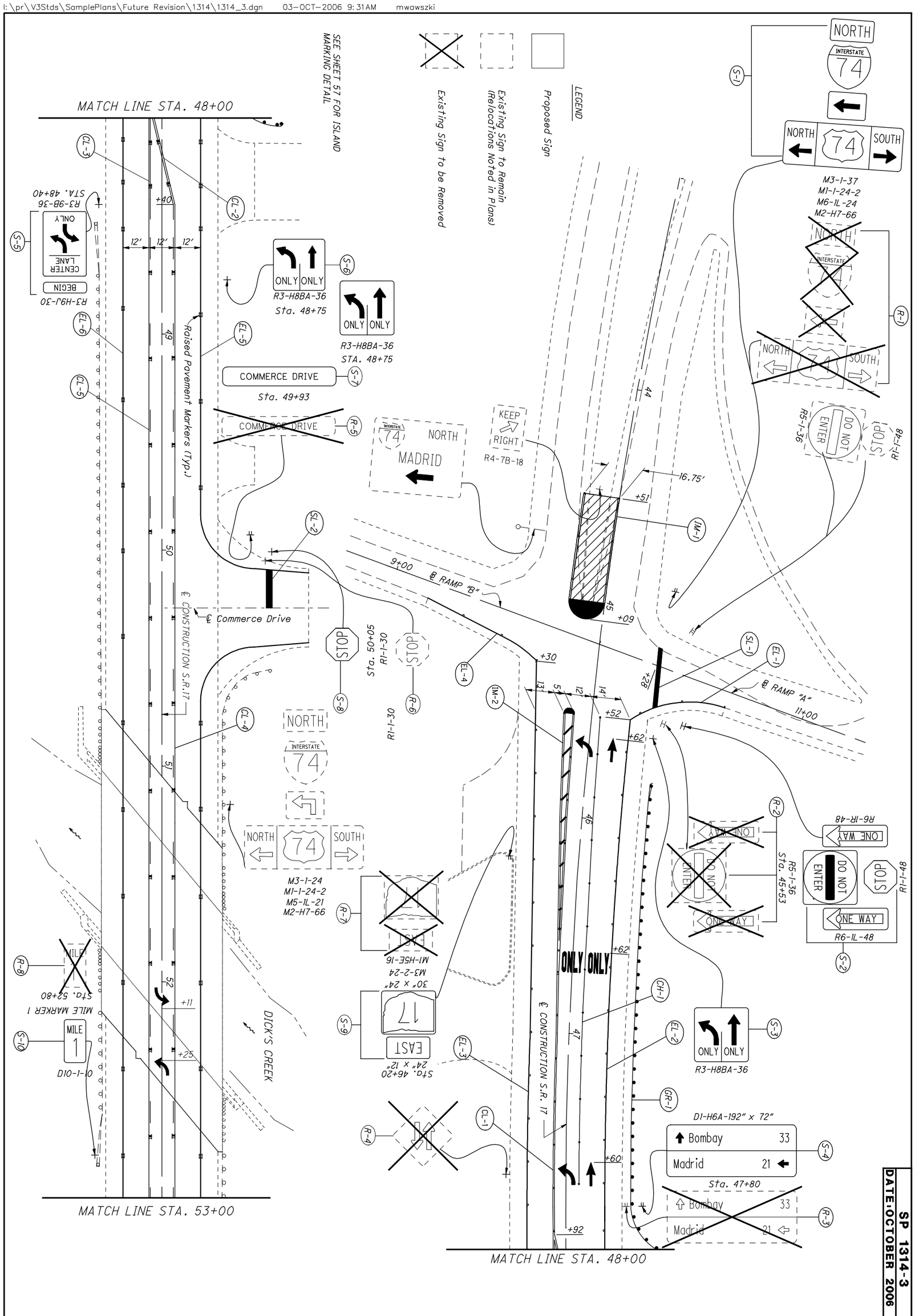
UNI-17-3.14

SP 1314-2
DATE: APRIL 2013
CALCULATED DAM
CHECKED JAG

SIGNING SUBSUMMARY

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 SIGN, FLAT SHEET SQ FT	630 ONE WAY SUPPORT, No. 3 POST FT	630 GROUND MOUNTED SUPPORT, No. 3 POST FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10x12 FT	630 REMOVAL OF GROUND MOUNTED SIGN & RE-ERECTION EACH	630 REMOVAL OF GROUND MOUNTED SIGN & DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT & DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN & DISPOSAL EACH	630 SIGN ERECTED, EXTRUSHEET SQ FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION EACH	630 BREAKAWAY STRUCTURAL BEAM CONNECTION EACH
56	S1	℄ Const. S.R. 17	44+91	LT.	M3-1-24	24" x 12"	2.0										
					M1-1-24-2	24" x 24"	4.0										
					M6-1-24	24" x 18"	3.0										
					M2-H7-66	66" x 24"	11.0										
56	S2		40+41	LT.	R1-1-48	48" x 48"	16.0	14.5	13.5								
					R6-1-48	48" x 18"	6.0										
					R5-1-36	36" x 36"	9.0										
					R6-1-48	48" x 18"	6.0										
56	S3		45+60	LT.	R3-H8ba-36	36" x 30"	7.5		12.5								
56	S4		47+80	LT.	D1-H6	192" x 72"				17.5-18.0					96	2	2
56	S5		48+40	RT.	R3-9b-24	24" x 36"	6.0		14								
					R3-H9j-24	24" x 6"	1.0										
56	S6		48+75	LT.	R3-H8dg-36	36" x 30"	7.5		12.5								
56	S7		49+93	LT.	D-3				10								
56	S8		50+05	LT.	R2-1-30	30" x 30"	6.25		12.5								
56	S9		46+20	RT.	M3-2-24	12" x 24"	2.0		14-14								
					M1-5-24-3	24" x 30"	5.0										
56	S10		54+36	RT.	R3-H8dg-36	36" x 30"			7.5								
57	S11		53+00	LT.	M2-1	24" x 12"	2.0		13								
					M1-1-24-2	24" x 24"	4.0										
57	S12		55+56	LT.	R3-H9j-24	24" x 6"	1.0										
					R3-9b-24	24" x 36"	6.0		14								
57	S13		55+56	RT.	R3-H8bh-36	36" x 30"	7.5		12.5								
57	S14		57+25	RT.	R3-H8bh-36	36" x 30"	7.5		12.5								
57	S15		56+89	LT.	M1-5-30-3	30" x 24"	5.0		11								
57	S16		57+72	RT.	D-3				10								
57	S17		58+31	LT.	R2-1-30	30" x 30"	6.25		13.5-13.5								
					R5-H2b-24												
57	S18		58+48	LT.	R2-1-30	30" x 30"	6.25		11								
57	S19		58+65	RT.	R2-1-30	30" x 30"	6.25		13.5-13.5								
					R5-H2b-24												
57	S20		59+47	RT.	R2-1-30	30" x 30"	6.25		13.5-13.5								
					R5-H2b-24												
58	S21		59+25	LT.	R3-H8bh-36	36" x 30"	7.5		12.5								
58	S22		59+38	RT.	M1-5-24-3	30" x 24"	5.0		11								
58	S23	℄ Const. S.R. 17	60+86	LT.	R3-H8bh-36	36" x 30"	7.5		12.5								
56	R1	℄ Const. S.R. 17	44+91	LT.								4	1				
56	R2		40+41	LT.								3	1				
56	R3		47+80	LT.							3			1			
56	R4		47+65	RT.	W6-3							1	1				
56	R5		49+93	LT.								1	1				
56	R6		50+05	LT.								1	1				
56	R7		46+20	RT.								2	1				
56	R8	℄ Const. S.R. 17	54+36	RT.								1	1				
SUBTOTALS							170.25	14.5	311.5	35.5	3	13	7	1	96	2	2
TOTALS CARRIED TO GENERAL SUMMARY							**170**	**15**	**312**	**36**	**3**	**13**	**7**	**1**	**96**	**2**	**2**

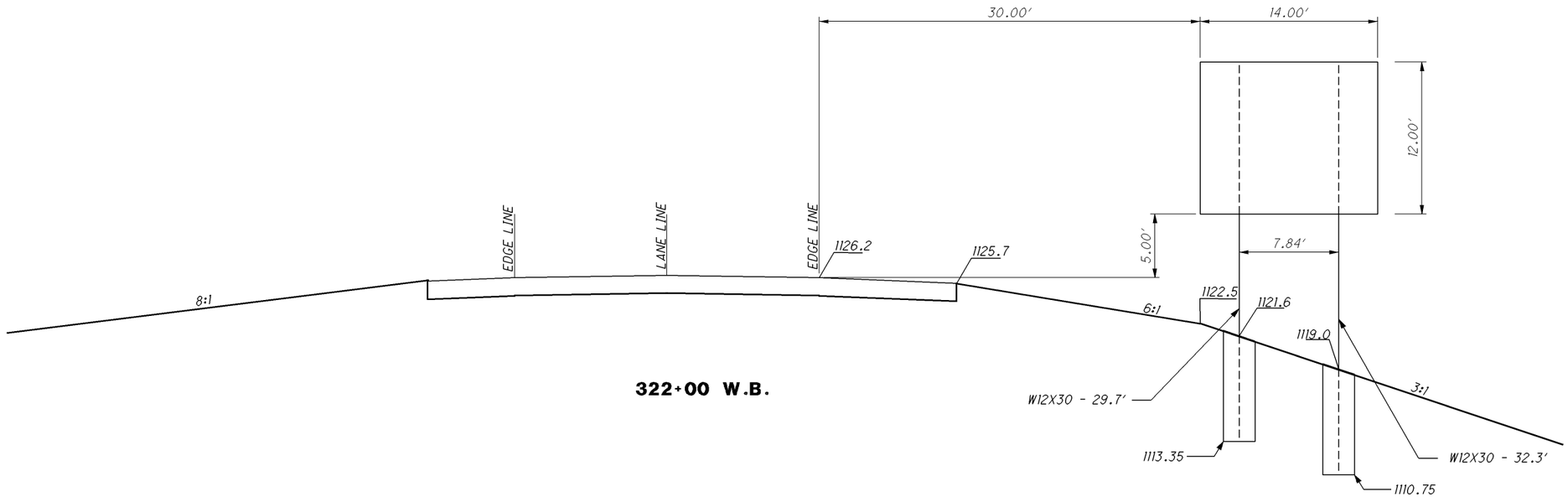
UNI-17-3.14



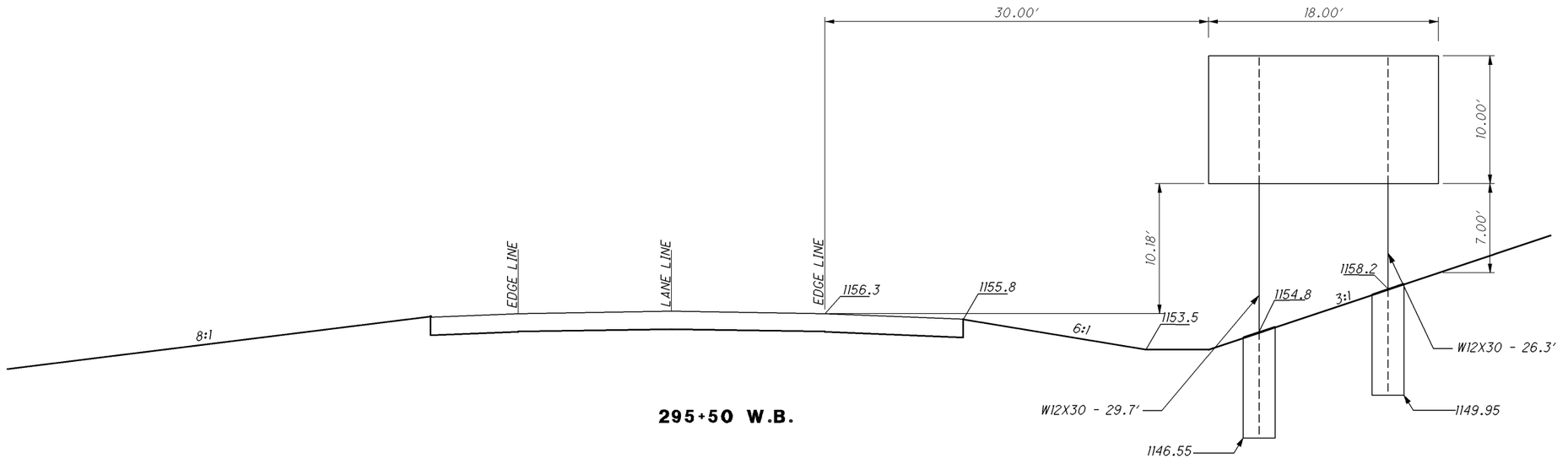
56/65	**UNI-17-3.14**	**SIGN AND PAVEMENT MARKING PLAN**	CALCULATED DAM CHECKED JAG	0 20 10 40 HORIZONTAL SCALE IN FEET	N

SP 1314-3
DATE: OCTOBER 2006

SP 1314-4	CALCULATED LME
DATE: OCTOBER 2008	CHECKED HS



322+00 W.B.



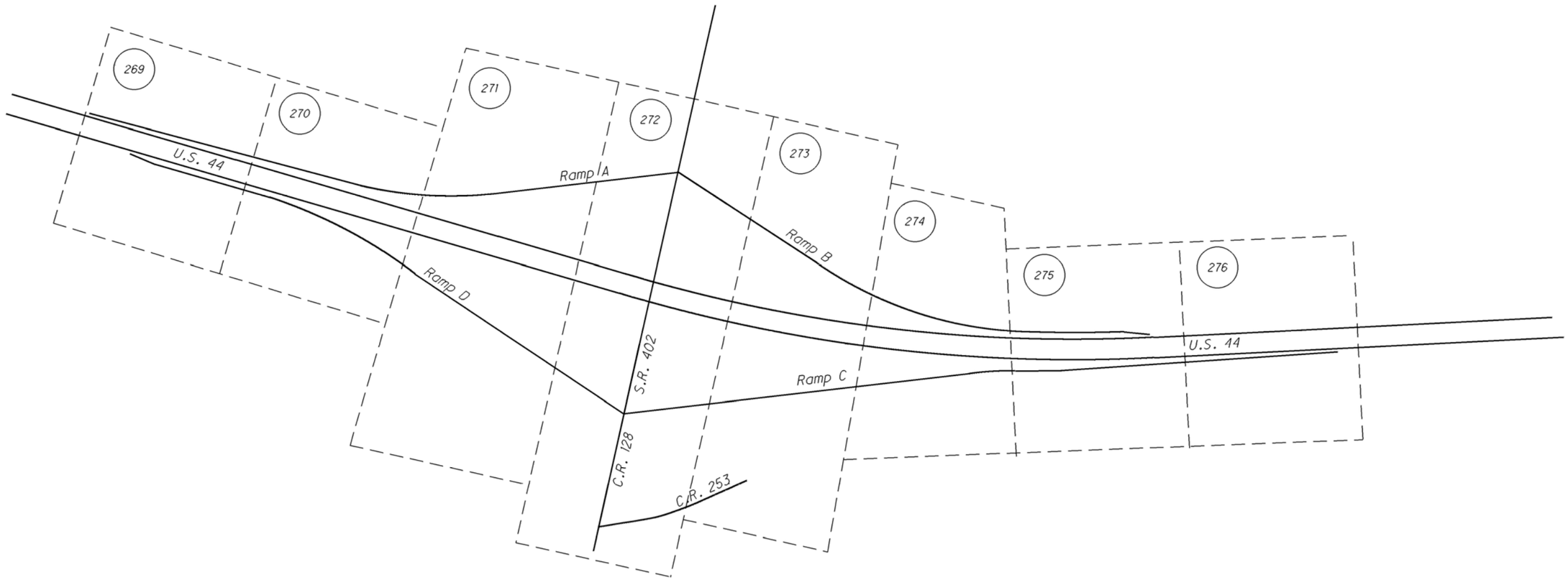
295+50 W.B.

GUIDE SIGN ELEVATION DETAILS

FRA-161-23.20
LIC-161-0.00

1686
2117

SP 1814-9
DATE:APRIL 2011



HORIZONTAL SCALE IN FEET
0 100 200 400

LIGHTING SCHEMATIC PLAN

CHP-44-11.29

264
306

LEGEND

- PROPOSED GUARDRAIL
- (1) SUB-SUMMARY REFERENCE NUMBER
- LIGHTING CIRCUIT
  CONDUIT OR DUCT CABLE (AS LABELED)
  WITH CONDUCTORS (AS INDICATED)
- CATCH BASIN, PIPE AND HEADWALL
- LIGHT POLE AND LUMINAIRE, INITIAL INSTALLATION
- CONTROL CENTER
- PULL BOX
- CIRCUIT STUB AND CAP

POLE LEGEND

STATION | OFFSET | CIRCUIT NUMBER — POLE NUMBER — POLE REF NO.

TYPE OF LUMINAIRE	WATTAGE OF LUMINAIRE	SUPPORT HEIGHT	BRACKET ARM LENGTH

SP 1314-10
DATE: APRIL 2011

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED RNM
CHECKED CWR

LIGHTING PLAN
STA. 345+50 TO STA. 360+00

CHP-44-11.29

1 STA. 346+82, U.S. 44, Lt. (A-12)
Type II 200 W, 40', 20'

2

3 STA. 349+44, U.S. 44, Lt.
PROP. PULL BOX NO. 1

4

29'-2" CONDUIT

5 STA. 349+73, U.S. 44, Lt.
PROP. PULL BOX NO. 2

6

7 STA. 350+12, U.S. 44, Lt. (A-10)
Type II 200 W, 40', 20'

8

CIRCUIT A
#4 AWG

9 STA. 353+17, U.S. 44, Lt. (A-8)
Type II 200 W, 40', 20'

10

11 STA. 347+89, U.S. 44, Rt. (A-6)
Type II 200 W, 40', 20'

12

13 STA. 348+51, U.S. 44, Rt.
PROP. PULL BOX NO. 3

14

15 STA. 348+80, U.S. 44, Rt.
PROP. PULL BOX NO. 4

16

STRUCTURE CHP-44-2163
U.S.R. 44 OVER PETERS DITCH

17 STA. 554+20, RAMP D, Rt. (A-2)
Type II 200 W, 40', 20'

18

19 STA. 556+15, RAMP D, RT. (A-1)
Type II 200 W, 40', 15'

20

21 STA. 355+62, U.S. 44, Rt. (A-7)
Type II 2000 W, 40', 20'

22

+27.27
+44.77
+60
+10
+59.63
+04.23
+59.63
+16.73
+58.5
+8.5
10'
8' SHOULDER
78'-3" CONDUIT
39'-3" CONDUIT
RAMP A
RAMP D
℄ Const. U.S. 44
MATCH LINE STA. 360+00
346 348 350 352 354 356 358
154 156 158 160
554 556 558 560
4

FOR LEGEND, SEE SHEET 264.
FOR QUANTITIES, SEE SHEET 267.

SP 1314-11
DATE: JULY 2016

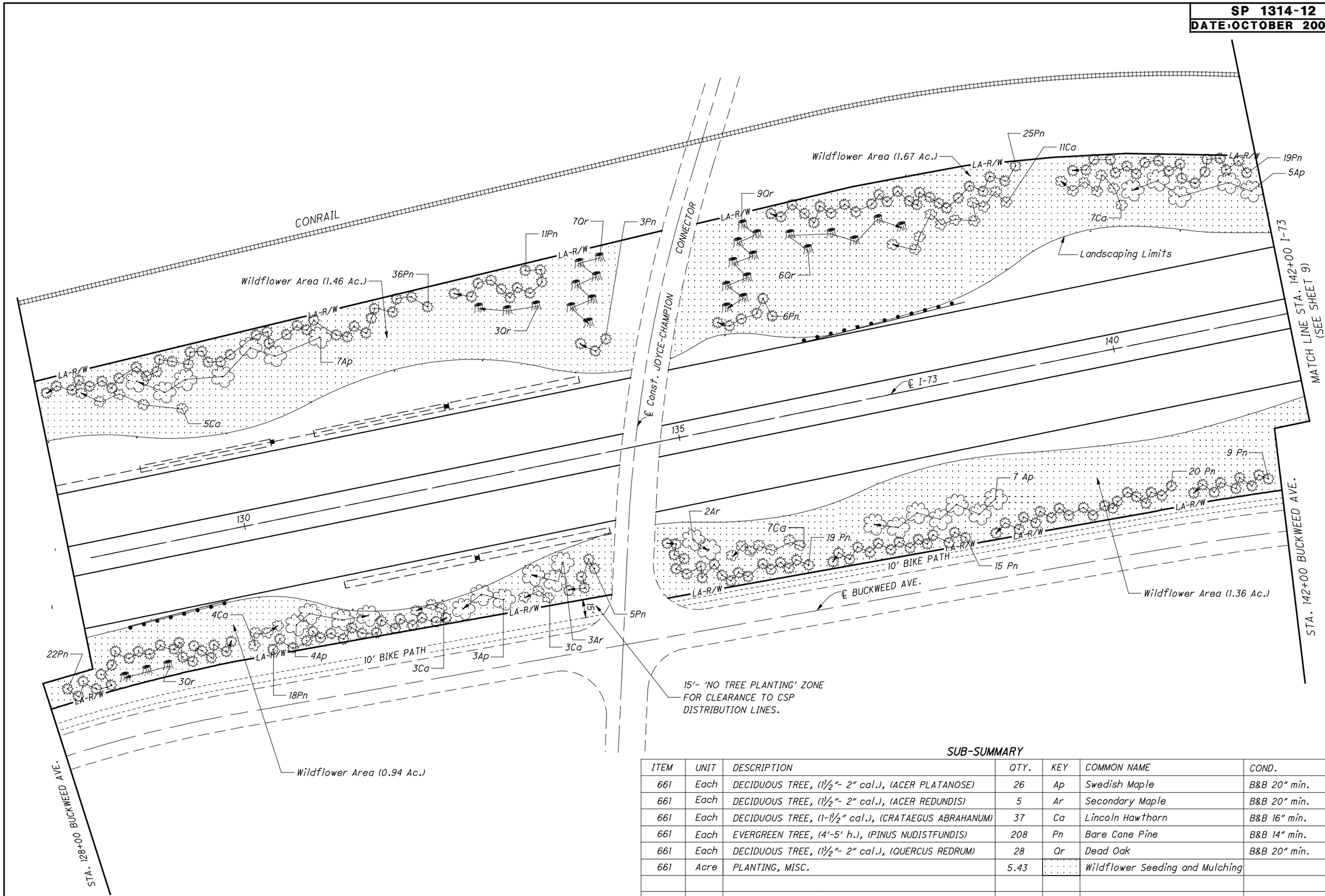
CALCULATED RNM CHECKED CWR

REFERENCE NUMBER	SHEET No.	SIDE	ROADWAY	STATION TO STATION	625																				
					Luminaire, Style B, Type II, 200 W H.P.S., 480V	Luminaire, Style B, Type III, 200 W H.P.S., 480V	Light Pole, Design AT15B40	Light Pole, Design AT20B40	Light Pole Foundation, 24" x 8' Deep	Pull Box, 725.08, 18"	Trench, 24"	Conduit, 2", 725.04	Conduit, 3", 725.04	No. 4 AWG 5000 V Distribution Cable	No. 10 AWG Pole & Bracket Cable	1½" Duct Cable W/3 No. 4 AWG 5000 V Cables	Connection, Fused Pull-Apart	Connection, Unfused Pull-Apart	Connection, Unfused Bolted	Connection, Unfused Permanent	Power Service, As Per Plan	Ground Rod	Structure Grounding System	Plastic Caution Tape	
					EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FOOT	
				SHEET 269																					
1	269	Lt	US-44	346+82		1		1	1						124		2								
2	269	Lt	US-44	346+82 to 349+44							262					272						1		262	
3	269	Lt	US-44	349+44						1										2					
4	269	Lt	US-44	349+44 to 349+73								29		117											
5	269	Lt	US-44	349+73						1										2					
6	269	Lt	US-44	349+73 to 350+12							39					49								39	
7	269	Lt	US-44	350+12		1		1	1						124		2								
8	269	Lt	US-44	350+12 to 353+17							305					315						1		305	
9	269	Lt	US-44	353+17		1		1	1						124		2								
10	269	L/R	44/D	353+17 to 554+20							212		146			222						1		212	
11	269	Rt	US-44	347+89		1		1	1						124		2								
12	269	Rt	US-44	347+89 to 348+51							62					72						1		62	
13	269	Rt	US-44	348+51						1										2					
14	269	Rt	US-44	348+51 to 348+80								29		117											
15	269	Rt	US-44	348+80						1										2					
16	269	Rt	44/D	348+80 to 554+20							540					550								540	
17	269	Rt	RAMP D	554+20		1		1	1						124		1	1	2						
18	269	Rt	RAMP D	554+20 to 556+15							195					205						1		195	
19	269	Rt	RAMP D	556+15	1		1		1						114		1	1	2						
20	269	Rt	44/D	355+62 to 556+15							85		39			95						1		85	
21	269	Rt	US-44	355+62		1		1	1						124		2								
22	269	Rt	RAMP D	556+15 to 560+30							415					425						1		415	
				SHEET 270																					
23	270	Rt	SR-402	54+90	1		1		1						114		2								
24	270	L/R	SR-402	53+88 to 54+90							188		97			198						1		188	
25	270	Lt	SR-402	53+88	1			1	1						124		2								
																						1			
26	270	Lt	SR-402	51+32 to 53+88							256					266								256	
27	270	Lt	SR-402	51+32						1										2					
28	270	Lt	SR-402	48+78 to 51+32							20	254		792									1	20	
29	270	Lt	SR-402	48+78						1										2					
30	270	Lt	128/402	45+10 to 48+78							368		80			378								368	
31	270	L/R	D/128	560+30 to 45+20							660					660								660	
32	270	Rt	SR-402	46+22	1		1		1						114		2								
33	270	L/R	128/402	45+10 to 46+22							170		115			180						1		170	
34	270	Rt	128/C	45+20 to 475+86							1030					1040								1030	
35	270	Lt	CR-128	45+10	1		1		1						114		1	1	2						
																						1			
36	270	Lt	CR-128	44+10 to 45+10							100					110								100	
37	270	Lt	CR-128	44+10																	1				
38	270	Lt	CR-128	44+10 to 45+20							110					110								110	
39	270	L/R	CR-128	44+10 to 45+20							159		49			169								159	
40	270	Lt	RAMP B	275+49	1		1		1						114		2								
																						1			
41	270	Lt	USR-44	357+98		1		1	1						124		2								
42	270	Lt	RAMP B	275+49 to 276+01							52					62						1		52	
43	270	L/R	B/44	275+49 to 357+98							83		83			93								83	
SUBTOTALS CARRIED TO GENERAL SUMMARY					6	7	5	8	13	6	5311	312	609	1026	1562	5471	23	3	6	12	1	13	1	5311	

LIGHTING PLAN SUB-SUMMARY

CHP-44-11.29

SP 1314-12
DATE: OCTOBER 2006



HORIZONTAL SCALE IN FEET
0 25 50 100

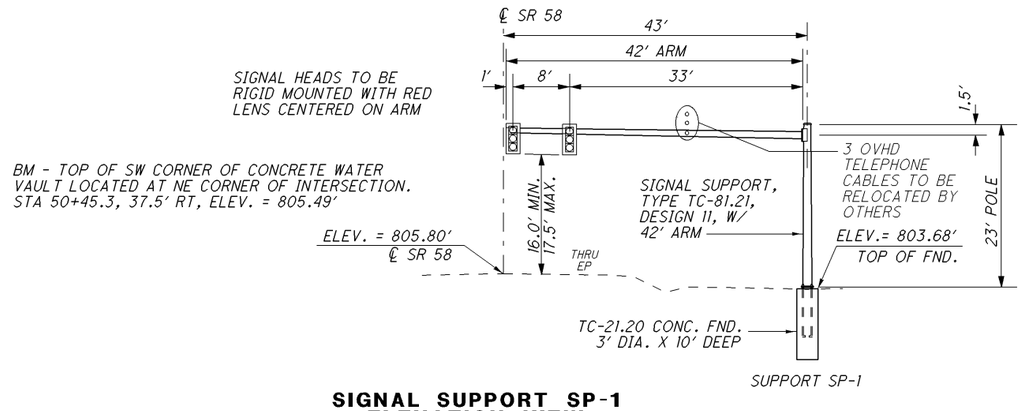
CALCULATED MTG
CHECKED CJM

LANDSCAPING PLAN

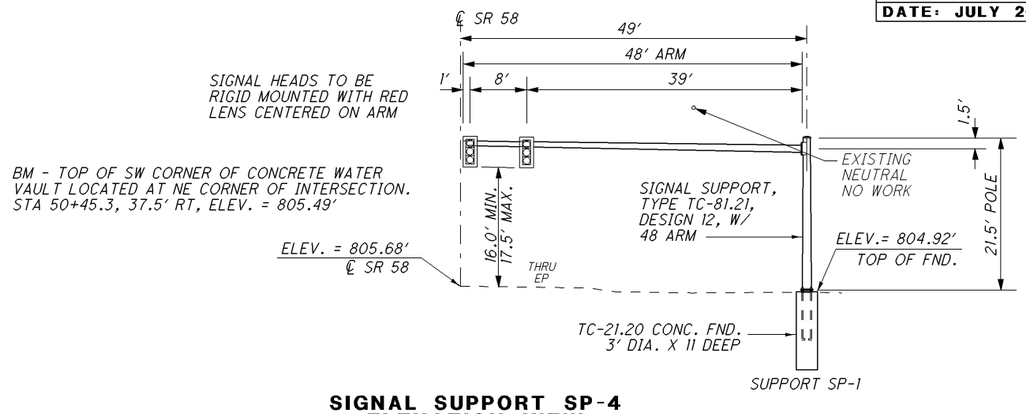
LUC-73-3.93

SUB-SUMMARY

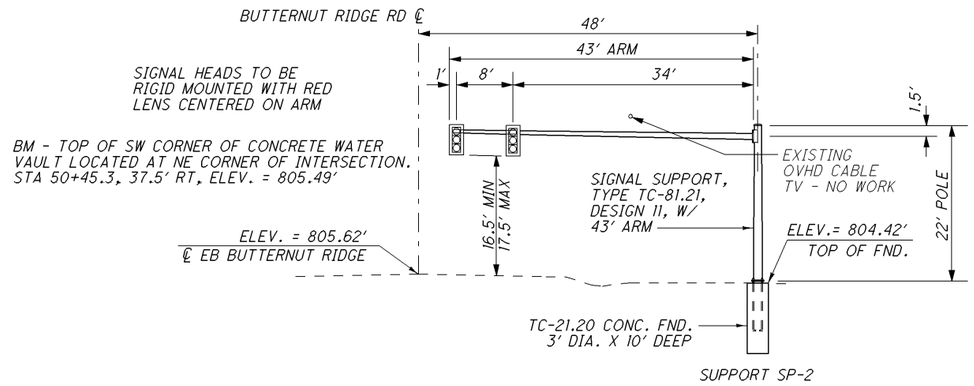
ITEM	UNIT	DESCRIPTION	QTY.	KEY	COMMON NAME	COND.
661	Each	DECIDUOUS TREE, (1½"- 2" cal.), (ACER PLATANOSE)	26	Ap	Swedish Maple	B&B 20" min.
661	Each	DECIDUOUS TREE, (1½"- 2" cal.), (ACER REDUNDIS)	5	Ar	Secondary Maple	B&B 20" min.
661	Each	DECIDUOUS TREE, (1-1½" cal.), (CRATAEGUS ABRAHANUM)	37	Ca	Lincoln Hawthorn	B&B 16" min.
661	Each	EVERGREEN TREE, (4'-5' h.), (PINUS NUDISTFUNDIS)	208	Pn	Bare Cone Pine	B&B 14" min.
661	Each	DECIDUOUS TREE, (1½"- 2" cal.), (QUERCUS REDRUM)	28	Qr	Dead Oak	B&B 20" min.
661	Acre	PLANTING, MISC.	5.43	·····	Wildflower Seeding and Mulching	



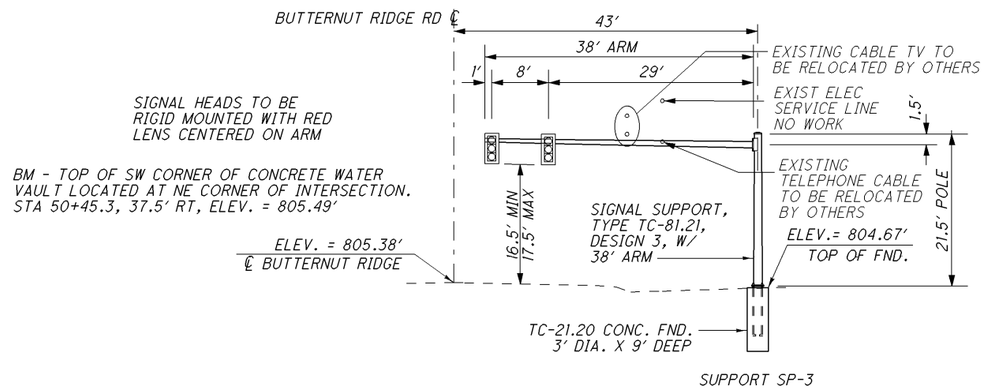
SIGNAL SUPPORT SP-1
ELEVATION VIEW
STA 898+69.9, 43′ LT
LOOKING SOUTH



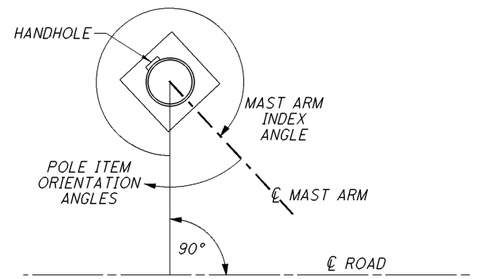
SIGNAL SUPPORT SP-4
ELEVATION VIEW
STA 899+60.6, 49′ RT
LOOKING NORTH



SIGNAL SUPPORT SP-2
ELEVATION VIEW
STA 550+43.4, 48′ RT
LOOKING EAST



SIGNAL SUPPORT SP-3
ELEVATION VIEW
STA 49+65.1, 43′ LT
LOOKING WEST



SUPPORT NO.	MAST ARM INDEX ANGLE	ORIENTATION ANGLES (DEG.) FROM MAST ARM							
		POWER SERVICE	CONTROLLER	HANDHOLE	3" CONDUIT	2" CONDUIT		2" CAPPED CONDUIT	
SP-1	0°			180°		270°		90°	
SP-2	0°			180°		283°		180°	
SP-3	0°			180°		240°		90°	
SP-4	0°	90°		180°		180°		90°	

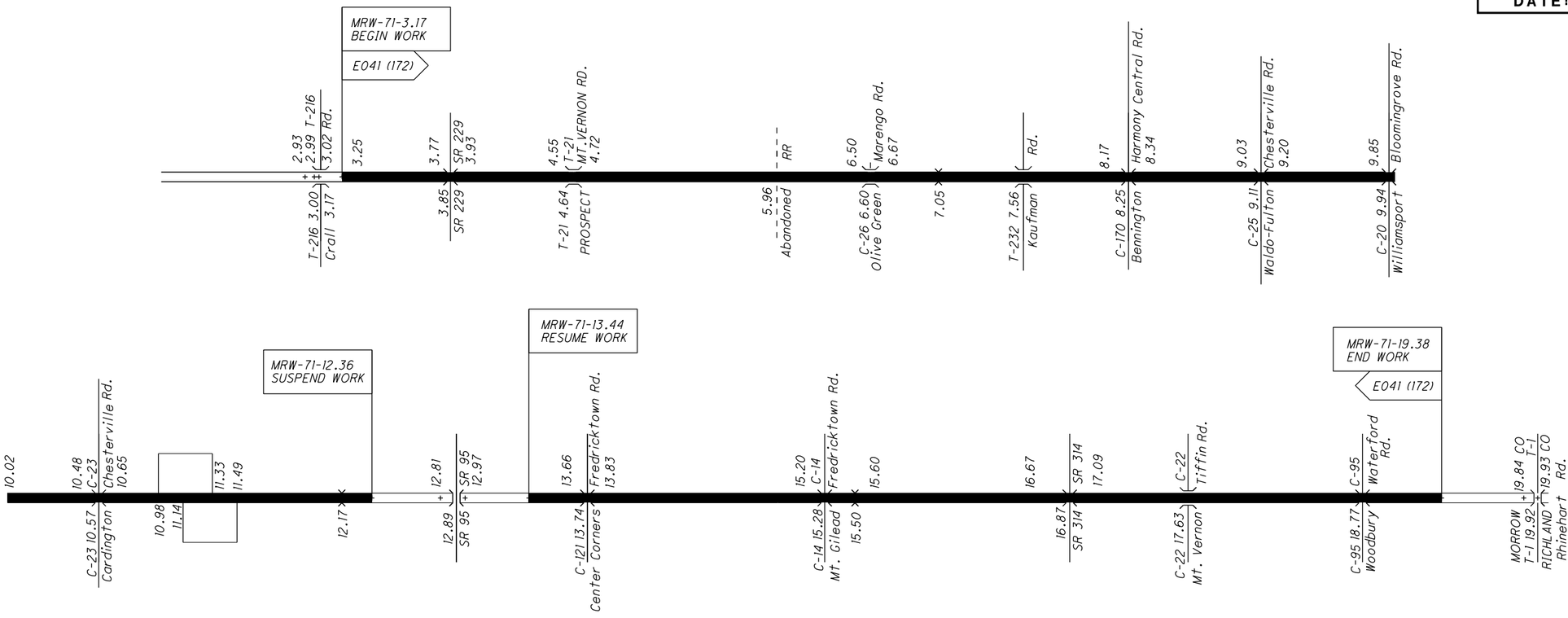
HORIZONTAL SCALE IN FEET
0 5 10 20

TRAFFIC SIGNAL DETAILS
SR 25 & BUTTERNUT RIDGE RD

LOR-25-17.03

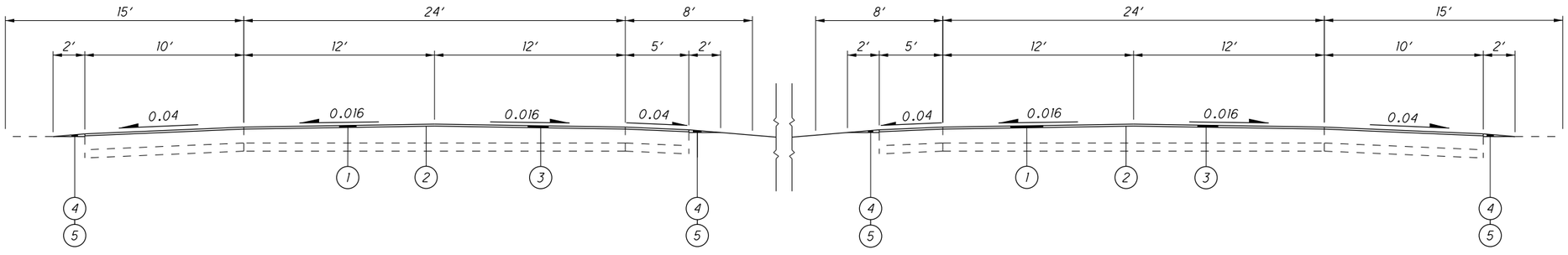
SP 1315-1
DATE: JULY 2016

CALCULATED RDK
CHECKED CLR



* NOTES

MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE. SHOULDER WIDTH MAY VARY NEAR EXISTING RAMPS AND CROSSOVERS.



LEGEND

(1) ITEM 254 - 1½" PAVEMENT PLANING, ASPHALT CONCRETE

(2) ITEM 407 - TACK COAT

(3) ITEM 441 - 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG 64-22

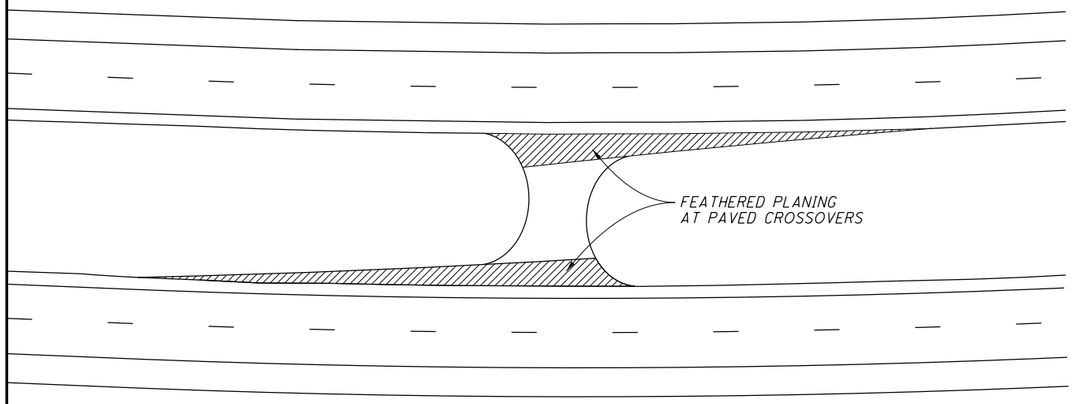
(4) ITEM 408 - PRIME COAT @ 0.4 GALLONS PER SQ. YD.

(5) ITEM 617 - COMPACTED AGGREGATE

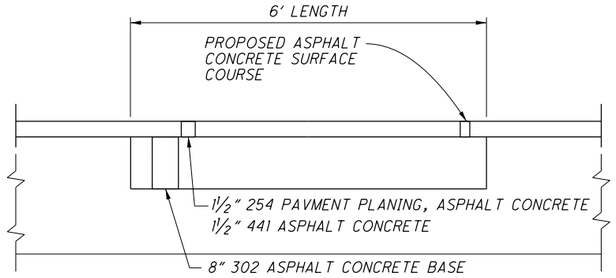
RESURFACING

MRW-71-3.17

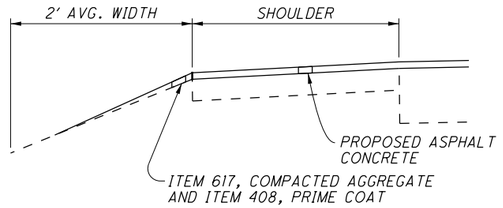
CROSSOVER DETAIL



PARTIAL DEPTH PAVEMENT REPAIR AS PER PLAN



SHOULDER DETAIL



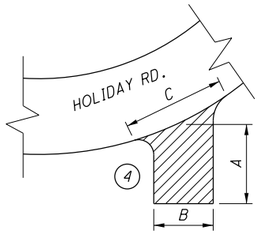
LOCATION						PAVEMENT WIDTH							QUANTITIES						REMARKS
						NORTHBOUND				SOUTHBOUND			254	407	408	441	617	618	
	COUNTY	ROUTE	SLM	SLM	TYPICAL	LENGTH	OUTSIDE SHOULDER	PAVEMENT	MEDIAN SHOULDER	MEDIAN SHOULDER	PAVEMENT	OUTSIDE SHOULDER	PAVEMENT PLANING, ASPHALT CONCRETE 1½" DEPTH	TACK COAT	PRIME COAT (0.4 GAL/YD²)	ASPHALT SURFACE COURSE, TYPE 1, (446), PG 64-22 1½" DEPTH	COMPACT AGGREGATE 2" DEPTH	RUMBLE STRIP (ASPHALT CONCRETE)	* 6' LENGTH X 12' LANE WIDTH
						FT	FT	FT	FT	FT	FT	FT	SY	GAL	GAL	CY	CY	FT	
	MRW	71	3.17	12.07	1	46,992'	10'	24'	5'				203,632	15,272	8,354	8,485	1,161	93,984	MAINLINE (SOUTH OF SR-95)
	MRW	71	3.17	12.36	1	48,523'				5'	24'	10'	210,267	15,770	8,626	8,761	1,198	97,046	MAINLINE (SOUTH OF SR-95)
	MRW	71	13.44	19.38	1	31,363'	10'	24'	5'				135,907	10,193	5,576	5,663	775	62,726	MAINLINE (NORTH OF SR-95)
	MRW	71	13.57	19.38	1	30,677'				5'	24'	10'	132,933	9,970	5,454	5,539	758	61,354	MAINLINE (NORTH OF SR-95)
	MRW	71	10.99	11.14	1	792'	10'	32'*					3,696	277		154			EXTRA AREA (RAMP TAPER)
	MRW	71	11.39	11.70	1	1,637'	10'	32'*					7,638	573		318			EXTRA AREA (RAMP TAPER)
	MRW	71	11.33	11.48	1	792'					32'*	10'	3,696	277		154			EXTRA AREA (RAMP TAPER)
	MRW	71	10.75	11.06	1	1,637'					32'*	10'	7,638	573		318			EXTRA AREA (RAMP TAPER)
	MRW	71	4.41										340	25		14			* AVERAGE PAVEMENT WIDTH
	MRW	71	6.67														10		EXTRA AREA (PAVED CROSSOVER)
	MRW	71	7.40										340	25		14			GRAVEL CROSSOVER
	MRW	71	10.37										340	25		14			EXTRA AREA (PAVED CROSSOVER)
	MRW	71	11.98										340	25		14			EXTRA AREA (PAVED CROSSOVER)
	MRW	71	13.63										340	25		14			EXTRA AREA (PAVED CROSSOVER)
	MRW	71	14.67														10		GRAVEL CROSSOVER
	MRW	71	15.06														10		GRAVEL CROSSOVER
	MRW	71	15.60														10		GRAVEL CROSSOVER
	MRW	71	16.75										340	25		14			EXTRA AREA (PAVED CROSSOVER)
	MRW	71	17.52														10		GRAVEL CROSSOVER
	MRW	71	18.03														10		GRAVEL CROSSOVER
	MRW	71	5.96	6.01		255'	10'	24'	5'	5'	24'	10'	-2,210	-2	-45	-92	-6	-510	DEDUCTIONS & EXTRA AREAS
	MRW	71	7.05	7.07		120'	10'	24'	5'	5'	24'	10'	-1,039	4	-21	2	-3	-240	DEDUCTIONS & EXTRA AREAS
	MRW	71	7.56	7.59		145'	10'	24'	5'	5'	24'	10'	-1,254	5	-26	3	-4	-289	DEDUCTIONS & EXTRA AREAS
	MRW	71	12.17	12.19		103'	10'	24'	5'	5'	24'	10'	-892	3	-18	2	-3	-206	DEDUCTIONS & EXTRA AREAS
	MRW	71	15.50	15.52		80'	10'	24'	5'	5'	24'	10'	-691	3	-14	1	-2	-159	DEDUCTIONS & EXTRA AREAS
	MRW	71	17.63	17.68		257'	10'	24'	5'	5'	24'	10'	-2,224	9	-46	5	-6	-513	DEDUCTIONS & EXTRA AREAS
	MRW	71	18.77	18.80		155'	10'	24'	5'	5'		10'	-1,341	5	-28	3	-4	-309	DEDUCTIONS & EXTRA AREAS
TOTALS CARRIED TO SUBSUMMARY													697,797	53,082	27,812	29,400	3,924	312,883	

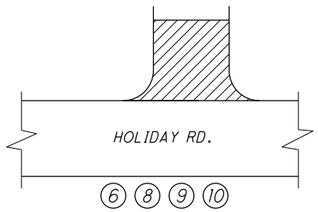
PAVEMENT SUBSUMMARY AND DETAILS

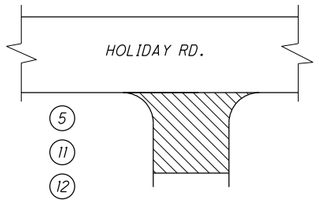
MRW-71-3.17

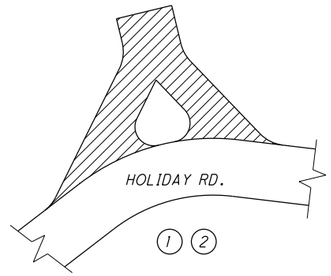
SP 1315-3
DATE: JULY 2016

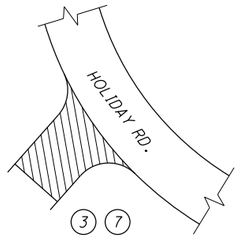
CALCULATED DKH
CHECKED CLH

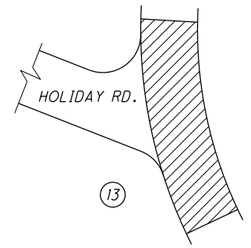










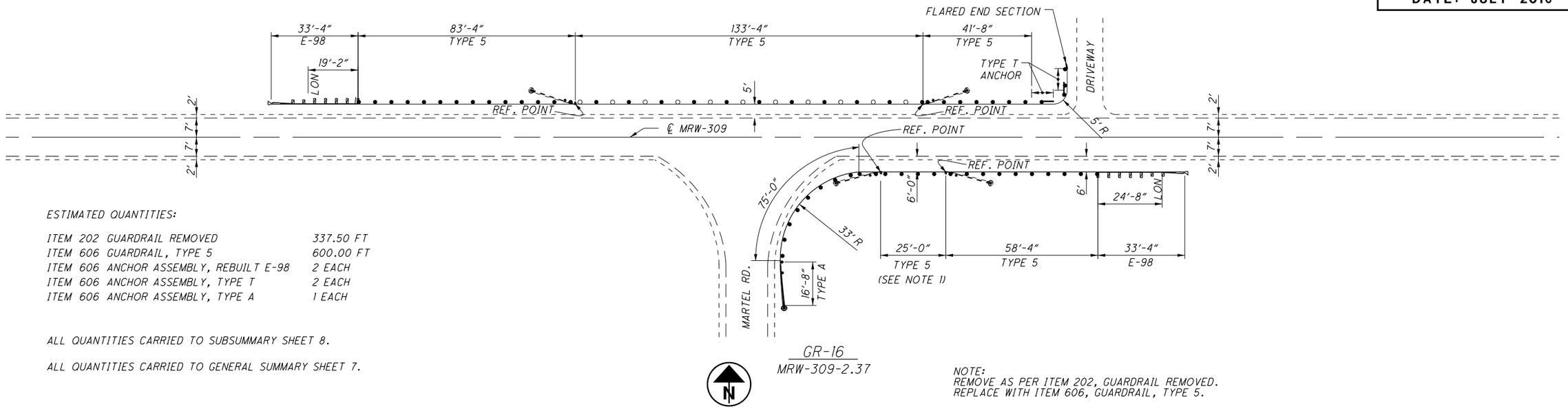


PART	ROUTE	SLM	SIDE	DESCRIPTION	INTERSECTIONS A	B	C	AREA	PROPOSED ITEMS 407 TACK COAT	ASPHALT CONCRETE THICKNESS	ITEM 441 TYPE 1	ITEM 441 TYPE 2	THICKNESS	EXISTING SURFACE	408 BITUMINOUS PRIME COAT (@ 0.40 GAL/YD²)	
					FT	FT	FT	YD²	GAL	INCHES	CY	CY	INCHES		GAL	
	CR-444	0.00 - 5.88	LT	(1) POOR RD. (T-304)	182	17	59	1,194		1.00	33	58	1.75	GRAVEL/TAR & CHIP	478	
			LT	(2) POOR RD. SPUR (T-304)	43	17	43	206		1.00	6	10	1.75	GRAVEL/TAR & CHIP	82	
			RT	(3) VISTA RD. (T-223)	39	20	85	369	28	1.00	10	18	1.75	ASPHALT		
			RT	(4) TURNER RD. (T-156)	35	17	65	253		1.00	7	12	1.75	GRAVEL	101	
			RT	(5) BASIL RD. (T-155/CR156)	70	18	120	934	70	1.00	26	45	1.75	ASPHALT		
			LT	(6) WOODY RD. (T-155)	30	16	54	180	14	1.00	5	9	1.75	ASPHALT		
			LT	(7) McCORD RD. SPUR (T-155A)	70	12	145	1,128		1.00	31	55	1.75	GRAVEL	451	
			LT	(8) BUMP RD. (T-215)	30	18	70	234	17	1.00	7	11	1.75	ASPHALT		
			LT	(9) ROUND CIRCLE	33	18	50	184	14	1.00	5	9	1.75	ASPHALT		
			LT	(10) GRAPE RD. (T-485)	30	18	95	317	24	1.00	9	15	1.75	ASPHALT		
			RT	(11) SOUTHERN DR.	24	18	40	107	8	1.00	3	5	1.75	ASPHALT		
			RT	(12) CHIP RD. (T-316)	60	18	96	640	48	1.00	18	31	1.75	ASPHALT		
			LT	(13) HOLIDAY RD./SR 32	60	26	112	747	56	1.00	21	36	1.75	ASPHALT		
				TOTAL				6,493								
TOTALS (CARRIED TO SHEET 10)									279		181	314			1,112	

CALCULATIONS

KNO-444-0.00

11
15



GR-16
MRW-309-2.37

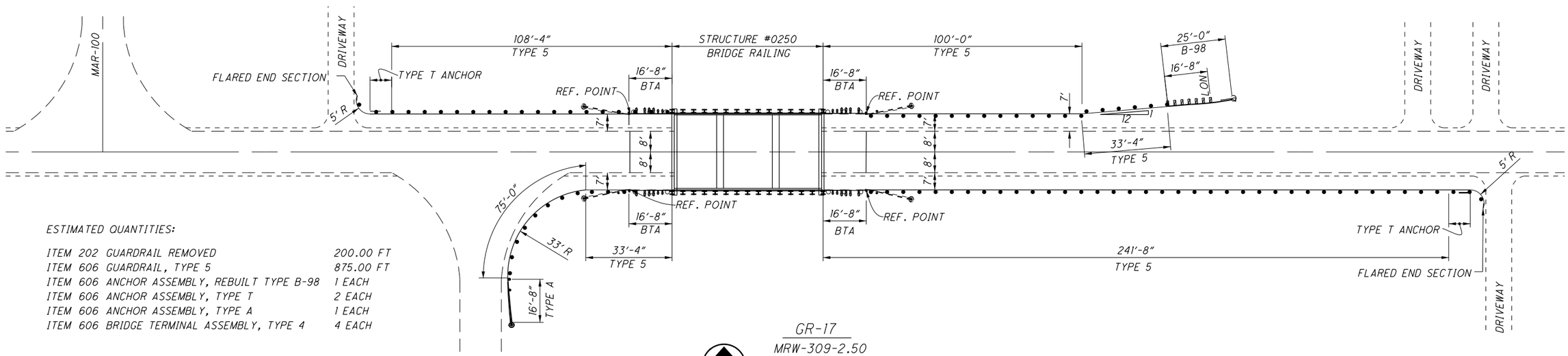
ESTIMATED QUANTITIES:

ITEM 202 GUARDRAIL REMOVED	337.50 FT
ITEM 606 GUARDRAIL, TYPE 5	600.00 FT
ITEM 606 ANCHOR ASSEMBLY, REBUILT E-98	2 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE T	2 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE A	1 EACH

ALL QUANTITIES CARRIED TO SUBSUMMARY SHEET 8.

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 7.

NOTE:
REMOVE AS PER ITEM 202, GUARDRAIL REMOVED.
REPLACE WITH ITEM 606, GUARDRAIL, TYPE 5.



GR-17
MRW-309-2.50

ESTIMATED QUANTITIES:

ITEM 202 GUARDRAIL REMOVED	200.00 FT
ITEM 606 GUARDRAIL, TYPE 5	875.00 FT
ITEM 606 ANCHOR ASSEMBLY, REBUILT TYPE B-98	1 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE T	2 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE A	1 EACH
ITEM 606 BRIDGE TERMINAL ASSEMBLY, TYPE 4	4 EACH

ALL QUANTITIES CARRIED TO SUBSUMMARY SHEET 8.

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 7.

GUARDRAIL PLAN
MRW-309

MRW-309-7.65