

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

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

**CITY OF VERMILION  
BROWHELM TOWNSHIP  
VERMILION TOWNSHIP  
ERIE AND LORAIN COUNTIES**

**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 RIVER ROAD, VERMILION ROAD, VERMILION INTERCHANGE ROAD, SUNNYSIDE ROAD AND CLAUS ROAD AND OVER THE VERMILION RIVER AND BAUMART 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.

**2010 SPECIFICATIONS**

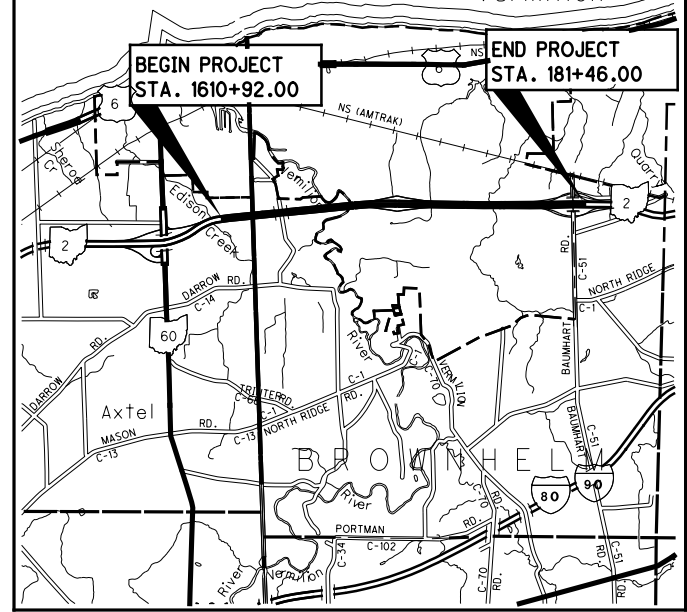
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE RAMP 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

NOTE: For Suspend/Resume Project Locations, See Schematic Plan, Sheets 2 & 3.



LOCATION MAP

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



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:

TITLE SHEET	1	VERMILION INTERCHANGE ROAD	139
SCHEMATIC PLAN	2-3	SUNNYSIDE ROAD	140-141
TYPICAL SECTIONS	4-9	CLAUS ROAD	142-143
GENERAL NOTES	10-15	DETAILS:	
MAINTENANCE OF TRAFFIC	16-59, 59A	PAVEMENT JOINT REPAIR	144-146
GENERAL SUMMARY	60-62	SHRP PAVEMENT REPAIR	147-154, 154A
SUBSUMMARIES:		PIER PROTECTION	155-156
GUARDRAIL	63	APPROACH SLABS	157-158
SEEDING	64	CURB REMOVAL & SHOULDER REPLACEMENT	159-166
DRAINAGE	65-66	CONCRETE SHOULDER	167
CALCULATIONS:		MEDIAN CROSSOVER	168
JOINT REPAIR	74-80	DRAINAGE	169, 169A
PAVEMENT GRINDING	81	SUPERELEVATION TABLES	170-171
JOINT SEALING	82-83	PREFABRICATED STRUCTURES	172-179
SEEDING	84-85	WEIGH-IN-MOTION DETAILS	180-185
PROJECT SITE PLAN	89-90	TRAFFIC CONTROL	186-205
PLAN AND PROFILE - S.R.2	91-108	STRUCTURES 20' AND OVER:	
CROSS SECTIONS - S.R.2	109-122	LOR-2-3001	206-214
SIDE APPROACHES:		LOR-2-9806	215-223
RAMPS - REST AREA	123-128	LOR-2-1070	224-233
RAMPS - VERMILION INTERCHANGE	129-132	LOR-2-1511	234-242
RAMPS - BAUMHART INTERCHANGE	133-134	LOR-2-2231	243-251
WEST RIVER ROAD	135-136	LOR-2-2621	252-261
VERMILION ROAD	137-138	LOR-2-3331	262-267
		SOIL PROFILES	
		TRAFFIC CONTROL	186-205
		SHEETS NOT USED	67-73, 86-88

**UNDERGROUND UTILITIES**

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

CALL  
**1-800-362-2764**  
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

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

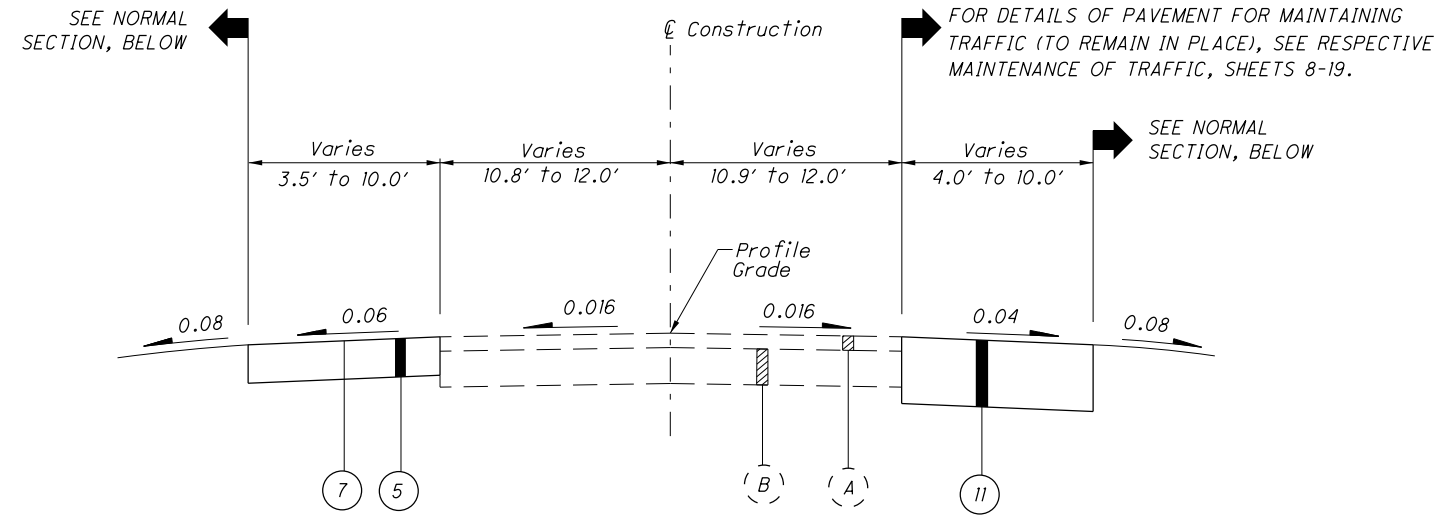
ENGINEERS SEAL:	ENGINEERS SEAL:
FOR STRUCTURES 20' & OVER	FOR ENTIRE PLAN EXCEPT STRUCTURES 20' & OVER
SIGNED: <u>John J. Doe</u>	SIGNED: <u>Jane C. Smith</u>
DATE: <u>8-22-08</u>	DATE: <u>8-2-08</u>

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS
BP-1.1	7/28/00	GR-1.1	7/16/04	SBR-1-99	7/19/02	TC-18.24	1/18/02	800-2010 4/16/10
BP-2.1	7/18/08	GR-2.1	1/16/04	HL-10.13	10/16/09	TC-22.20	1/19/01	802 4/16/10
BP-2.2	7/18/08	GR-3.1	10/16/09	HL-20.14	10/16/09	TC-41.10	1/19/07	832 5/5/09
BP-2.3	7/16/04	GR-3.2	10/16/09	HL-30.11	10/16/09	TC-41.20	1/19/01	
BP-2.5	7/18/08	GR-4.2	1/19/07	HL-30.21	1/19/07	TC-41.40	7/16/04	
BP-3.1	10/19/07	GR-5.1	4/16/10	HL-30.31	4/17/09	TC-41.50	1/19/07	
BP-6.1	7/28/00	GR-5.3	4/16/10	HL-30.32	4/17/09	TC-42.10	1/19/07	
		GR-6.1	10/17/03	HL-40.10	1/19/07	TC-42.20	7/16/04	
CB-1.1	7/15/05					TC-51.11	4/20/01	
CB-2.2	7/15/05	RM-4.2	10/19/07			TC-52.10	1/19/07	
CB-3.1	7/15/05	RM-4.3	10/16/09	MT-95.30	7/17/09	TC-52.20	1/19/07	
CB-3.2	7/15/05	RM-4.4	10/16/09	MT-95.31	7/17/09	TC-65.10	1/21/05	
				MT-96.11	1/16/09	TC-65.11	1/21/05	
DM-1.1	4/21/06	AS-1-81	7/19/02	MT-96.20	1/16/09	TC-72.20	10/16/09	
DM-1.4	4/21/06	EXJ-4-87	7/19/02	MT-96.26	1/16/09	TC-82.10	10/16/09	
DM-4.4	4/17/09	RB-1-55	2/2/59	MT-99.20	1/16/09			

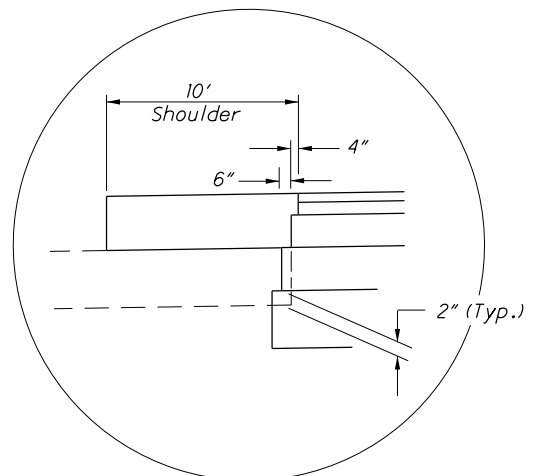
**SPECIAL PROVISIONS**

WATERWAY PERMIT 4/23/10

FEDERAL PROJECT NO. **E115 (218)**  
CONSTRUCTION PROJECT NO. **20283**  
RAILROAD INVOLVEMENT **NONE**  
**ERI-2-30.51 AND VARIOUS  
LOR-2-0.00 AND VARIOUS**  
1  
267



**NORMAL SECTION - U.S. 46**  
Sta. 634+00.00 to Sta. 635+75.00

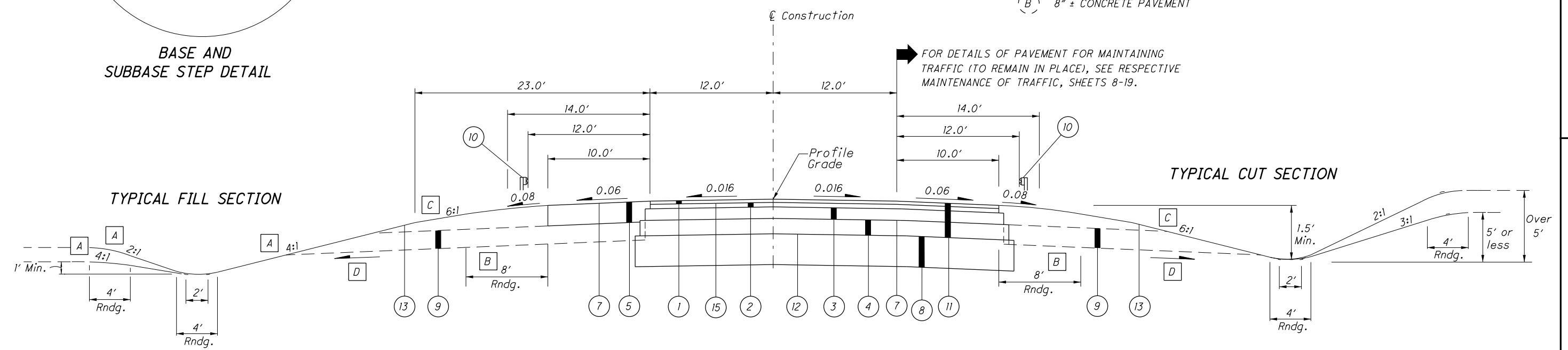


**BASE AND SUBBASE STEP DETAIL**

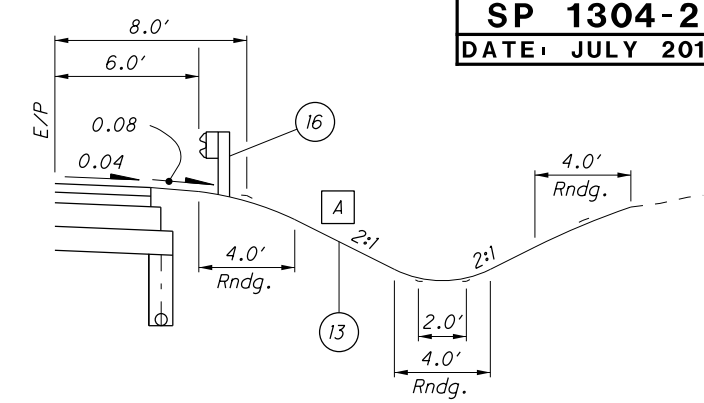
- A** Unless otherwise shown on Cross Sections
- B** No rounding is required when foreslope is 6:1 or flatter. 4' Rounding when guardrail is required.
- C** Foreslope may vary in pavement transition areas at extreme ends of pavement work and adjacent to Structure PIC-46-1209; see cross sections.
- D**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

**LEGEND**

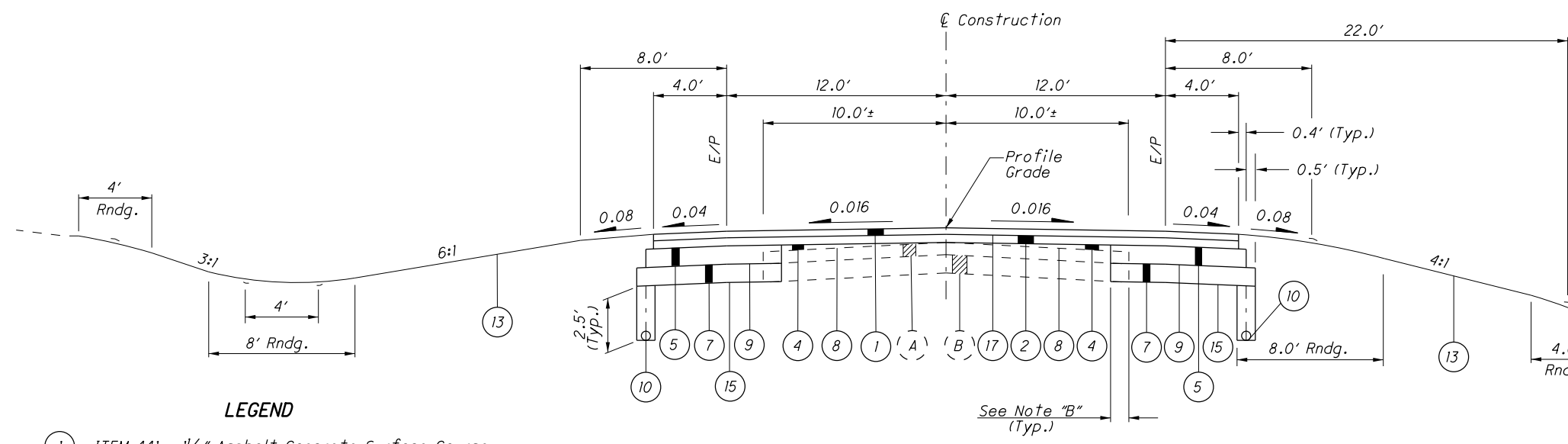
- ① ITEM 442 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (448)
- ② ITEM 442 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, Type A (448)
- ③ ITEM 301 - 5" ASPHALT CONCRETE BASE, PG64-22
- ④ ITEM 304 - 6" AGGREGATE BASE
- ⑤ ITEM 304 - 8" AGGREGATE BASE
- ⑥ ITEM 407 - TACK COAT (0.075 GAL./SQ. YD.)
- 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, 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 ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (APPLIED AT A RATE OF 0.05 GAL./SQ. YD.)
- ⑯ ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS
- (A) 3" ± ASPHALT CONCRETE
- (B) 8" ± CONCRETE PAVEMENT



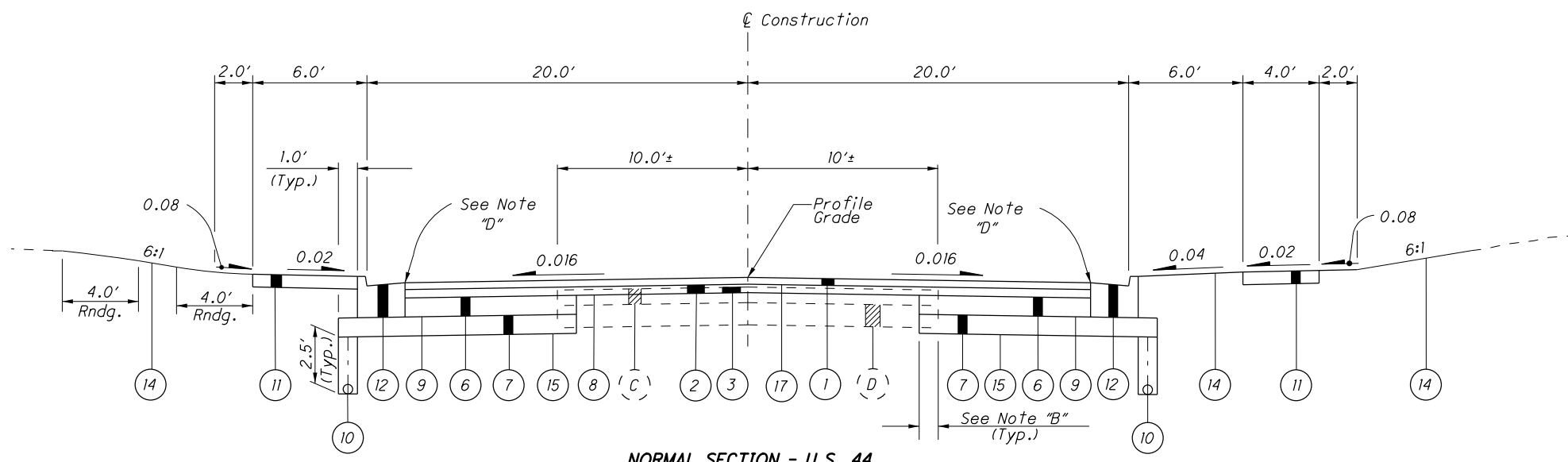
**NORMAL SECTION - U.S. 46**  
Sta. 635+75.00 to Sta. 642+81.37  
Sta. 638+22.44 to Sta. 640+48.86



**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 - S.R. 106**  
Sta. 621+35 to Sta. 640+50



**NORMAL SECTION - U.S. 44**  
Sta. 300+00 to Sta. 318+50

**LEGEND**

- 1 ITEM 441 - 1/4" Asphalt Concrete Surface Course, Type 1, (448) PG64-22
- 2 ITEM 441 - 1 3/4" 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 (0.075 gal./sq. yd.)
- 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
- 17 ITEM 407 - Tack Coat for Intermediate Course (Applied at a Rate of 0.075 gal./sq. yd.)
- (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  $\text{\textcircled{C}}$  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 2 1/2".

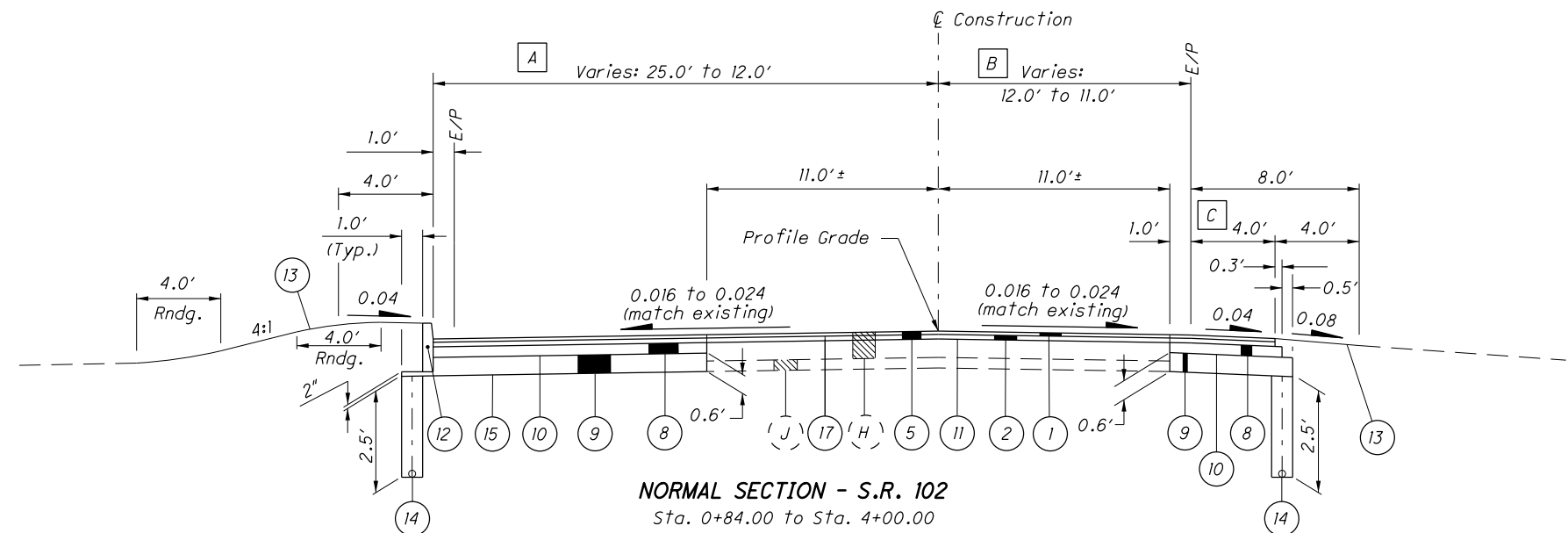
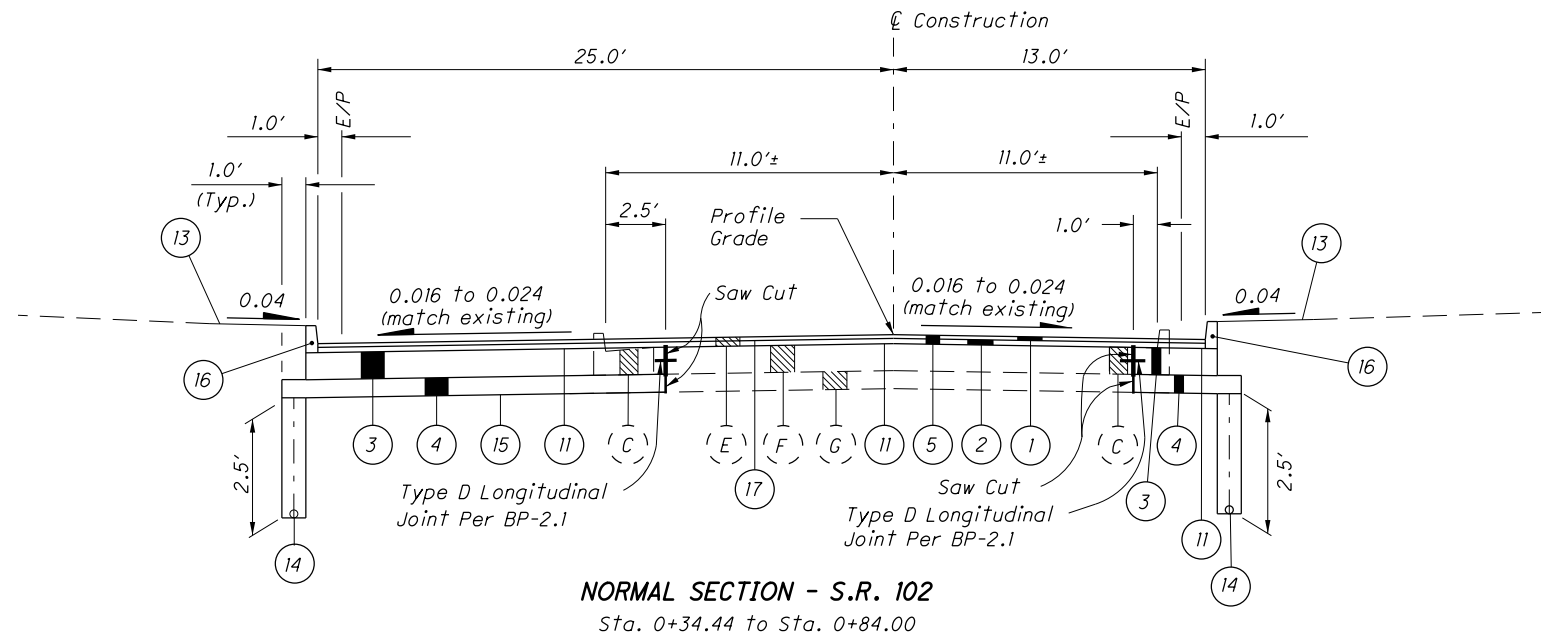
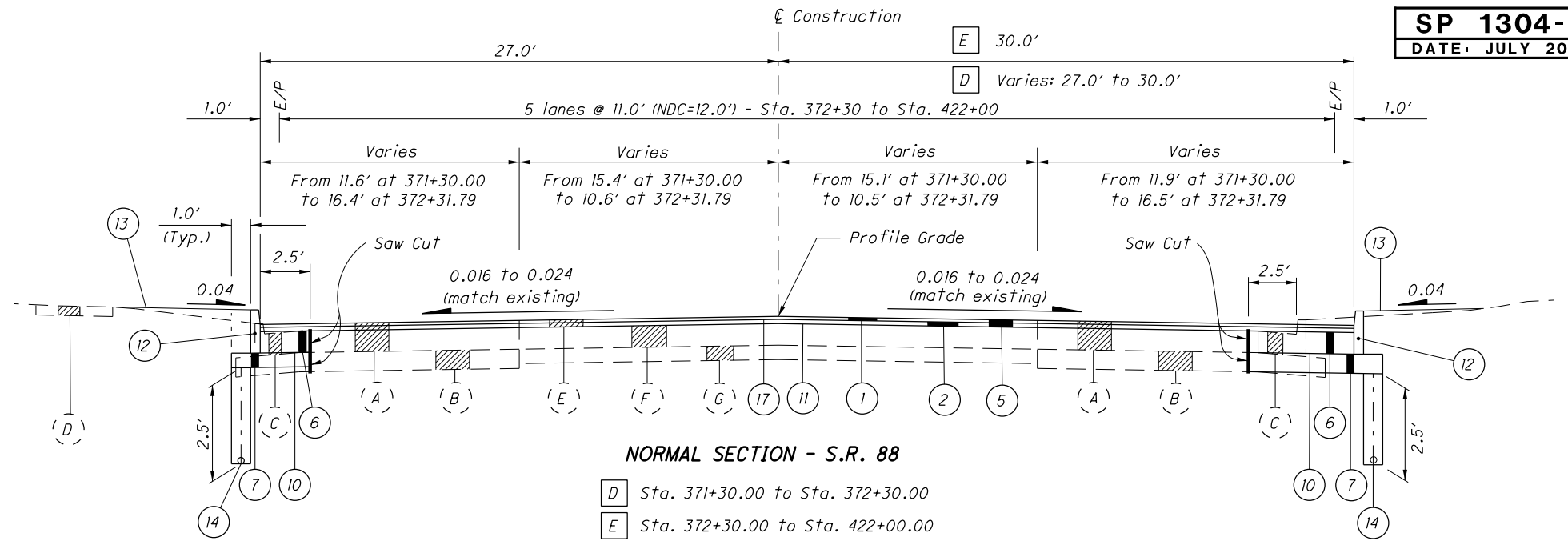
**NOTE "B"**  
The existing pavement edges shall be saw cut to locate a sound pavement edge per sec. 203.04(f) of the CMS. For estimating purposes, pavement calculations included in the plan indicate an average width of 1 ft. of existing pavement being replaced.

**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 1/4" above gutter plate.

**LEGEND**

- ① ITEM 441 - 1 1/4" Asphalt Concrete Surface Course, Type 1, (448) PG64-22
- ② ITEM 441 - 1 3/4" 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 (0.075 Gal./Sq. Yd.)
- 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
- ⑰ ITEM 407 - Tack Coat for Intermediate Course (Applied at a Rate of 0.075 Gal./Sq. Yd.)
- (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



S.R. 307 PAVEMENT PLANING TABLES

STATION	PROPOSED PROFILE ELEVATION	PLANING DEPTH (FEET) @ $\epsilon$	STATION	PROPOSED PROFILE ELEVATION	PLANING DEPTH (FEET) @ $\epsilon$
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 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG64-22

ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

ITEM 408 - PRIME COAT @ 0.4 GAL./SQ. 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:

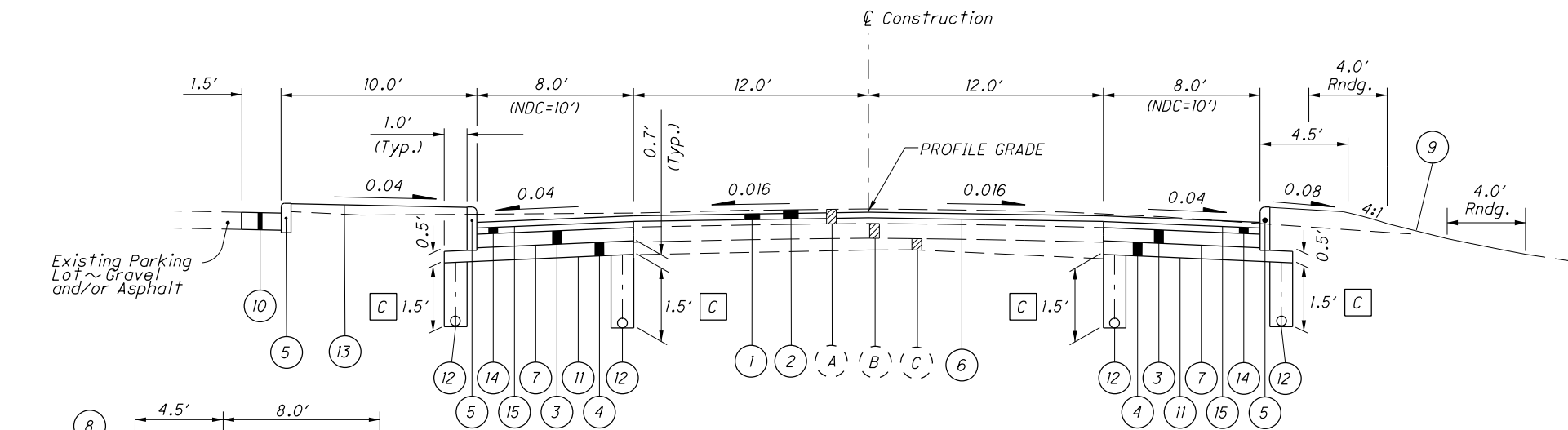
STA. 88+75 TO STA. 91+25 AND

STA. 95+25 TO STA. 96+27.25

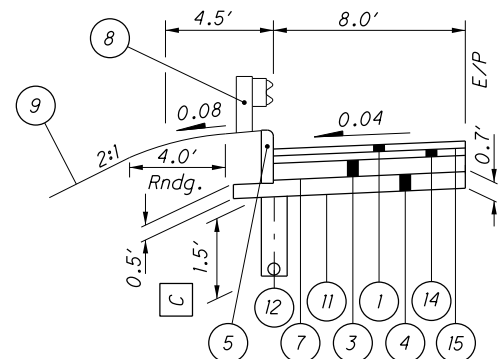
**(D)** CURB & GUTTER (TO BE REMOVED)

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

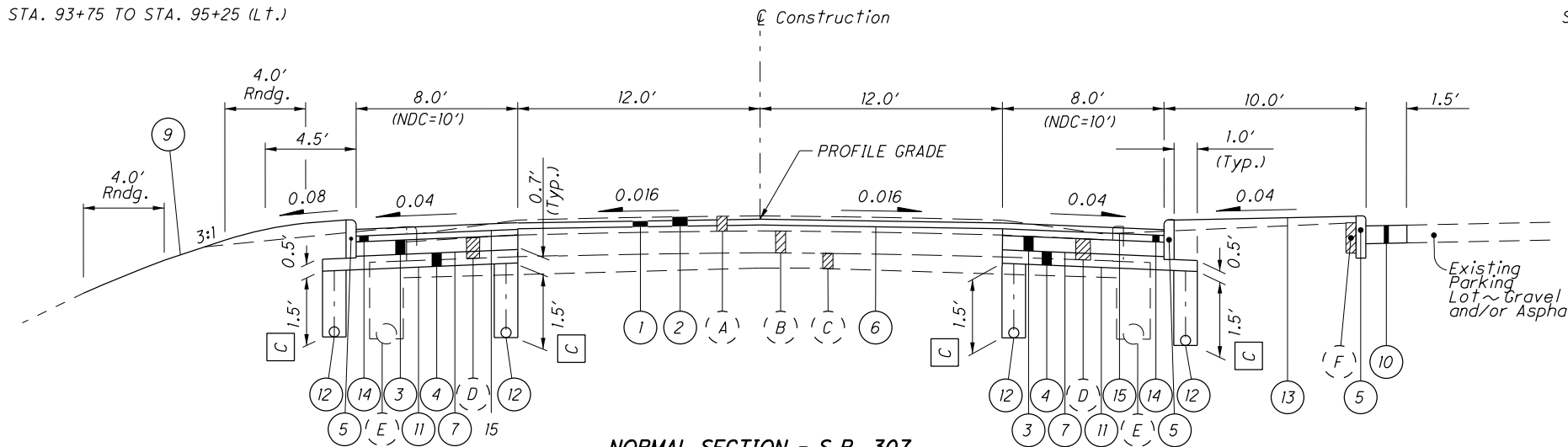
**(F)** CURB (TO BE REMOVED)



**NORMAL SECTION - S.R. 307**  
STA. 88+75.00 TO STA. 90+15.00



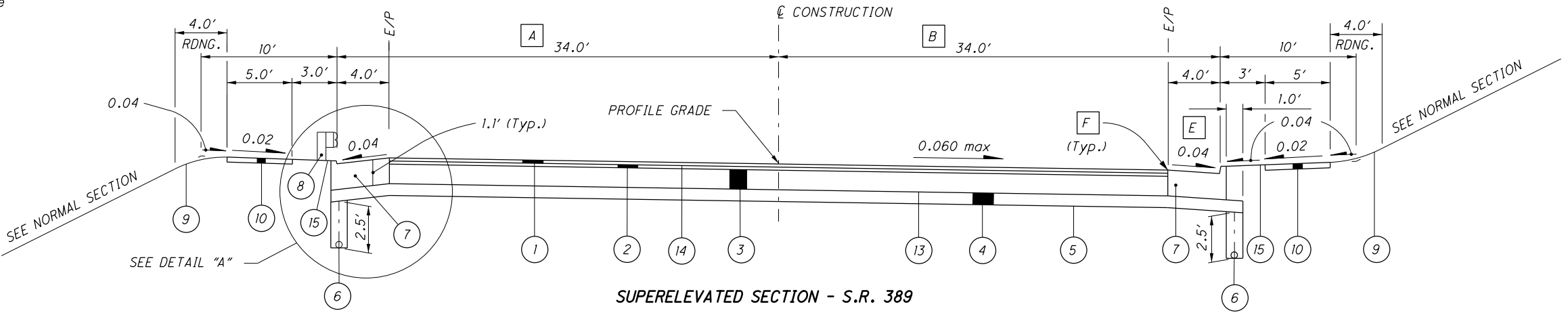
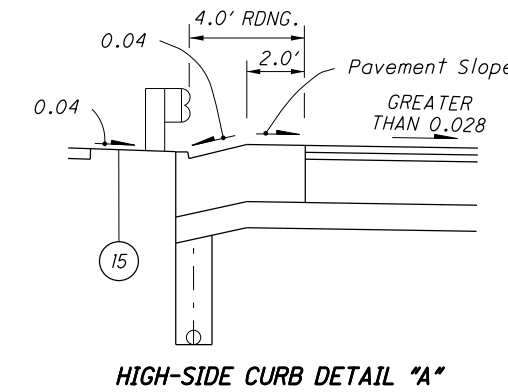
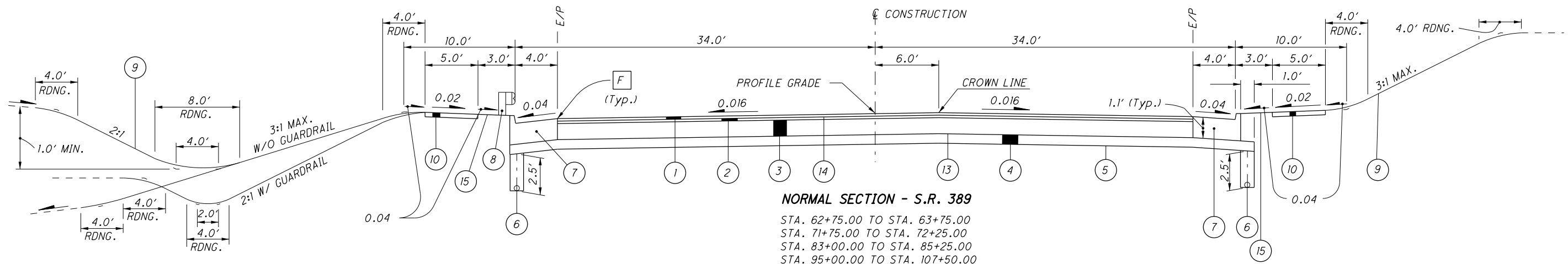
**GUARDRAIL SECTION**  
STA. 93+75 TO STA. 95+25 (L.T.)



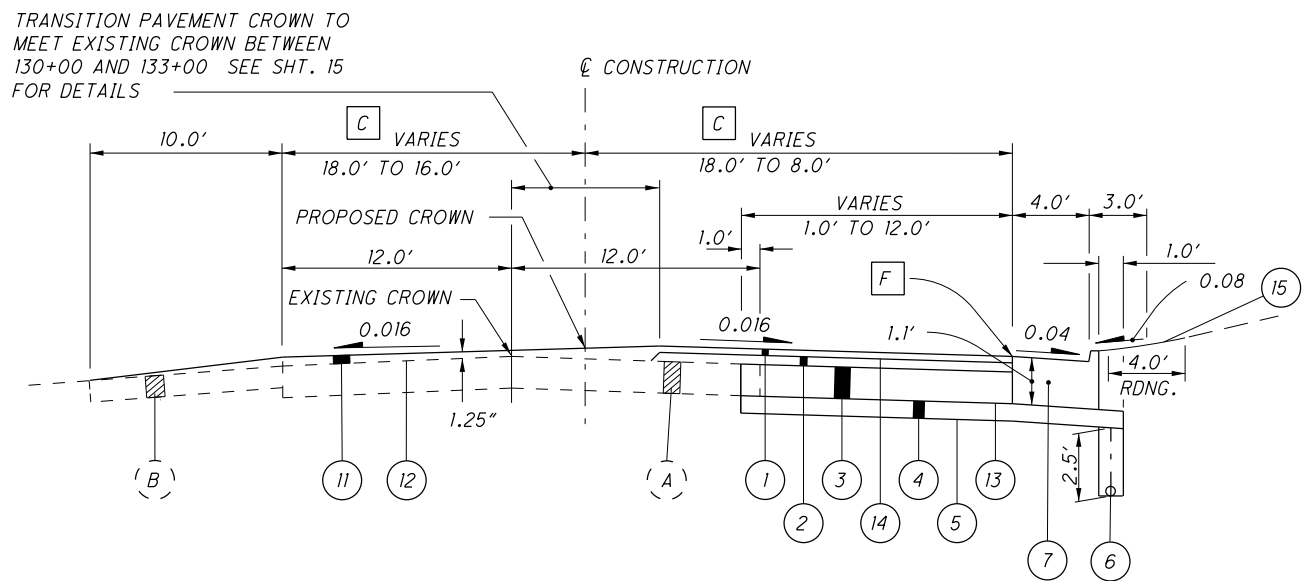
**NORMAL SECTION - S.R. 307**  
STA. 90+15.00 TO STA. 96+45.00

LEGEND

- 1** ITEM 441 - 1/2" 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 (0.075 GAL./SQ. YD.)
- 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 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- 15** ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (APPLIED AT A RATE OF 0.075 GAL./SQ. YD.)
- (A)** 6" ASPHALT SURFACE
- (B)** 9" REINFORCED CONCRETE BASE
- (C)** 6" MIN. CLASSIFIED EMBANKMENT BLANKET COURSE



- LEGEND**
- ① ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446) PG64-22
  - ② ITEM 441 - 1 3/4" 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 (0.075 GAL./SQ. YD.)
  - ⑬ ITEM 408 - PRIME COAT (APPLIED AT THE RATE OF 0.4 GAL./SQ. YD.)
  - ⑭ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (APPLIED AT A RATE OF 0.075 GAL./SQ. YD.)
  - ⑮ ITEM 660 - SODDING UNSTAKED
  - (A) 3" ± ASPHALT PAVEMENT OVER 10" ± AGGREGATE SUBBASE
  - (B) 8" ± DENSE ASPHALT



- 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 1/4" ABOVE GUTTER PLATE.

**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 CMS 623 - CONSTRUCTION LAYOUT STAKES AND SURVEY MONUMENTS.

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 SY

659, REPAIR SEEDING AND MULCHING 16 SY  
 (310) X (0.05) = 15.5 SY

659, SOIL ANALYSIS TEST 2 EACH

659, TOPSOIL 34 CY  
 (310) X (111 CY PER 1000 SY) = 34.4 CY

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 SY  
 (310) X (0.05) = 15.5 SY

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

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 AND 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

GENERAL NOTES

FRA - 40 - 13.67

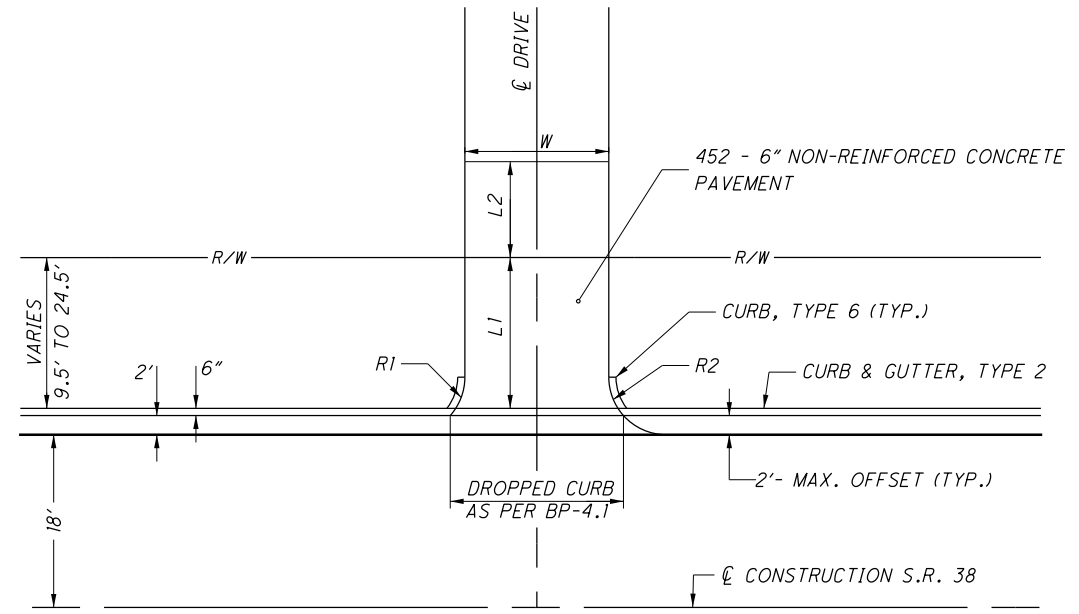
OFFICE CALCS	SHEET NUMBER						PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	64	68	97	165	175	100% CITY	NH	STP							
														<b>SP 1307-4</b> DATE: JULY 2014	
													<b>ROADWAY</b>		
1000								1000	202	23000	1000	SY	PAVEMENT REMOVED		
		12							202	58700	12	EACH	MANHOLE ABANDONED		
									202	75403	2	EACH	LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN	130	
									202	75500	2	EACH	LIGHT POLE FOUNDATION REMOVED		
									202	75505	2	EACH	LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN	130	
								500	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (BRIFEN) (ALTERNATE 1)		
								20	606	98100	20	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (BRIFEN) (ALTERNATE 1)		
								500	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (TRINITY) (ALTERNATE 2)		
								2	606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (TRINITY) (ALTERNATE 2)		
								500	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (MARION STEEL) (ALTERNATE 3)		
								2	606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (MARION STEEL) (ALTERNATE 3)		
													<b>EROSION CONTROL</b>		
									659	00100	2	EACH	SOIL ANALYSIS		
									44	00300	44	CY	TOPSOIL		
									400	10000	400	SY	SEEDING AND MULCHING		
									20	14000	20	SY	REPAIR SEEDING AND MULCHING		
									20	15000	20	SY	INTER-SEEDING		
									0.05	20000	0.05	TON	COMMERCIAL FERTILIZER		
									0.08	0.08	31000	ACRE	LIME		
									2.2	35000	2.2	MGAL	WATER		
									0.9	40000	0.9	MSF	MOWING		
									832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN		
									832	30000	5000	EACH	EROSION CONTROL		
													<b>PAVEMENT</b>		
1844									1844	254	01000	1844	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
1265									1265	301	46000	1265	CY	ASPHALT CONCRETE BASE, PG64-22	
2627								986	1641	304	20000	2627	CY	AGGREGATE BASE	
5333									5333	305	12000	5333	SY	8" CONCRETE BASE	
533									533	407	10000	533	GAL	TACK COAT	
3114								1066	2048	407	14000	3114	GAL	TACK COAT FOR INTERMEDIATE COURSE	
10									10	442	20000	10	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448)	
497								268	229	441	46040	497	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)	
38									38	441	46040	38	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (DRIVEWAYS)	
415								226	189	442	50000	415	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A, (446)	
18									18	442	50000	18	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A, (448), (DRIVEWAYS)	
4000								4000	609	12000	4000	FT	COMBINATION CURB AND GUTTER, TYPE 2		
													<b>WATER WORK</b>		
				896			896		SPECIAL	63860400	896	FT	12" DUCTILE IRON WATER PIPE AND FITTINGS (COL. 801)		
				14			14		SPECIAL	63861900	14	EACH	6" VALVE AND APPURTENANCES (COL. 802)		
				10			10		SPECIAL	63863800	10	EACH	1-1/2" WATER SERVICE TAP, COMPLETE (COL. 805)		
				8			8		SPECIAL	63865502	8	EACH	SERVICE BOX REMOVED AND RESET (COL. 807)		
				4			4		SPECIAL	63866602	4	EACH	FIRE HYDRANT, TYPE A (COL. 809)		
													<b>SANITARY SEWER</b>		
		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	31500	5	EACH	MANHOLE, NO. 3 WITH 706.11 JOINTS		
		8						8	611	34500	8	EACH	MANHOLE ADJUSTED TO GRADE		
		3						3	611	35500	3	EACH	MANHOLE RECONSTRUCTED TO GRADE		

**GENERAL SUMMARY**

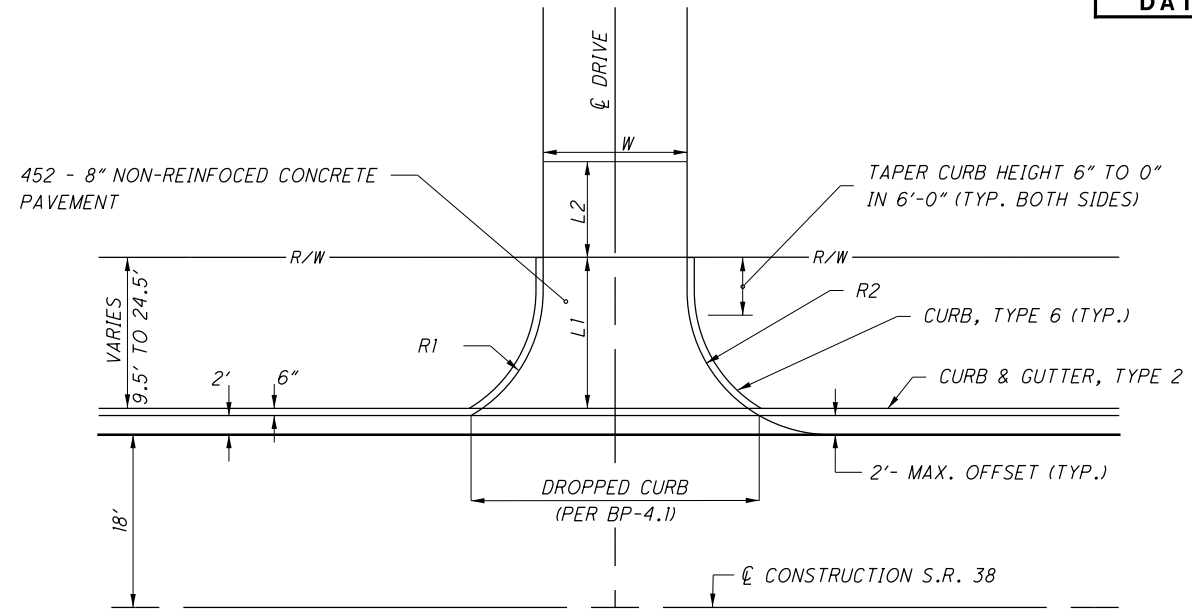
**FRA-11-26.48**

CALCULATED	DMK	CHECKED	CML
------------	-----	---------	-----

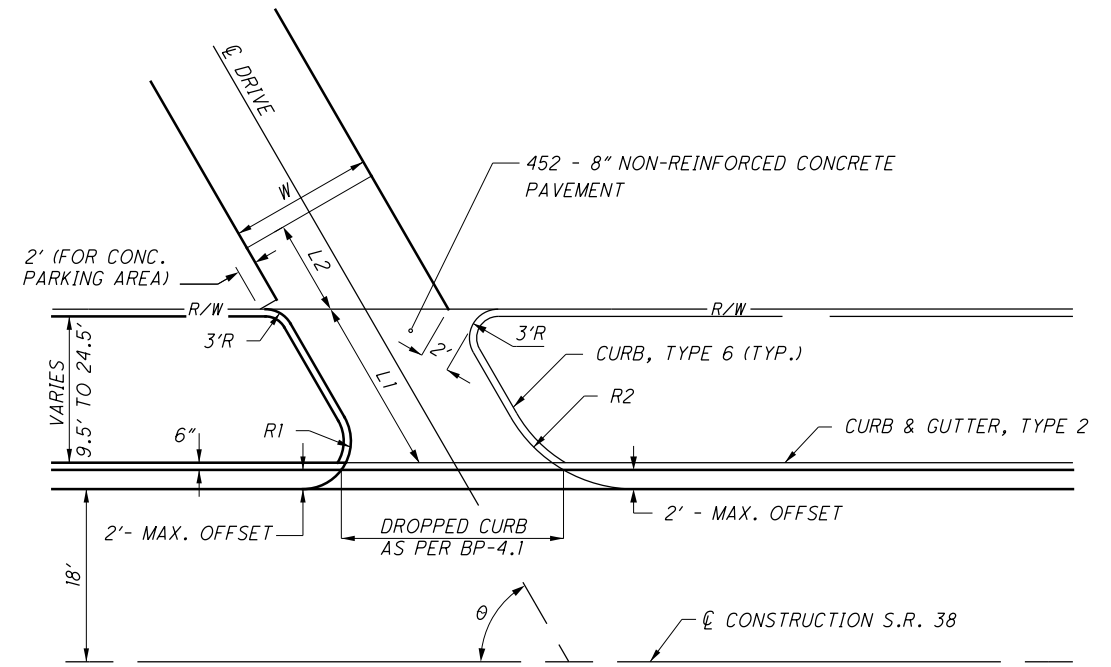




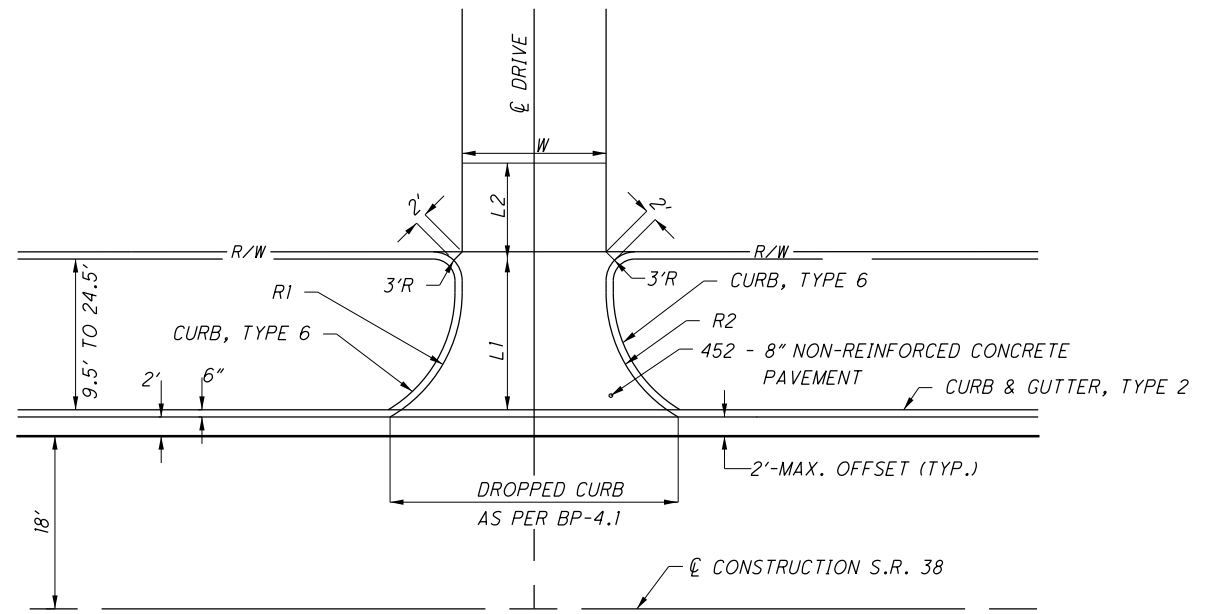
**RESIDENTIAL DRIVES**



**COMMERCIAL DRIVES WITHOUT WRAP-AROUND CURB**



**SERVICE STATION DRIVES**  
FOR  $\theta$ , 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 FOR INTERMEDIATE COURSE (0.075 GAL./SQ. YD.)
  - 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 - 1/4" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (448)
  - 442 - 3/4" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448)
  - 407 - TACK COAT FOR INTERMEDIATE COURSE (0.075 GAL./SQ. YD.)
  - 304 - 8" AGGREGATE BASE
- EXISTING CONCRETE DRIVE
  - 452 - 8" NON-REINFORCED CONCRETE PAVEMENT (APRON)

SEE SHEET 41 FOR DRIVEWAY QUANTITIES.

DRIVEWAY DETAILS

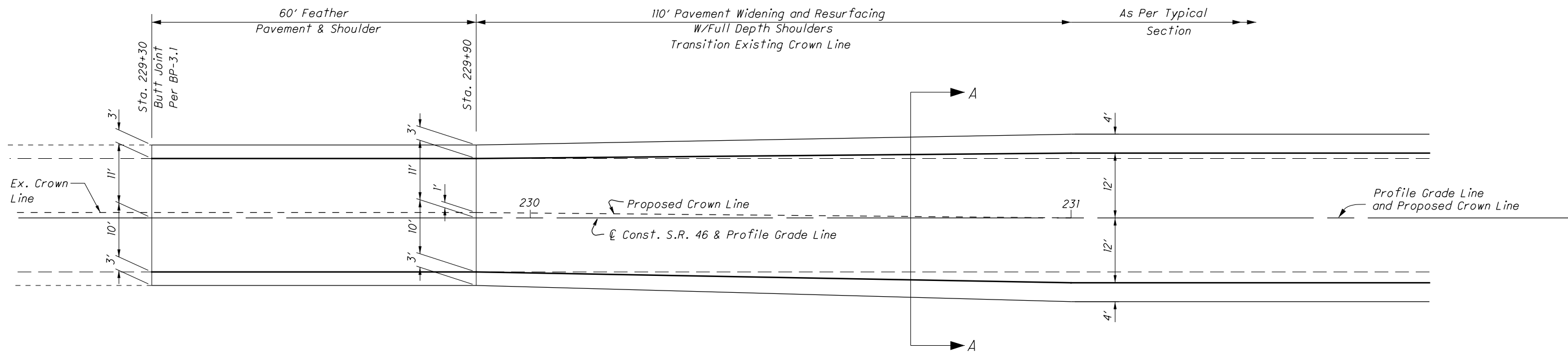
CAR-38-22.56

SHEET NO.	REFERENCE NO.	STATION	SIDE	DRIVE TYPE	APRON LENGTH "L1"	DRIVEWAY LENGTH "L2"	WIDTH "W"	R1 (LEFT SIDE RADIUS OF DRIVE LOOKING FROM ☺)	R2 (RIGHT SIDE RADIUS OF DRIVE LOOKING FROM ☺)	202	203		301	304			407	442		452		SP 1311-5				
										PAVEMENT REMOVED	EMBANKMENT	EXCAVATION	8" ASPHALT CONCRETE BASE, PG64-22	6" AGGREGATE BASE	8" AGGREGATE BASE	10" AGGREGATE BASE	TACK COAT FOR INTERMEDIATE COURSE (0.075 GAL./SQ. YD.)	1 1/2" ASPHALT CONCRETE, INTERMEDIATE COURSE, 19mm, TYPE A (446)	1/4" ASPHALT CONCRETE SURFACE COURSE, 4.5mm, TYPE A (446)	6" NON-REINFORCED CONCRETE PAVEMENT	8" NON-REINFORCED CONCRETE PAVEMENT	DATE: JULY 2014	CALCULATED			
										SO. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	GAL.	CU. YD.	CU. YD.	SO. YD.	SO. YD.	WSR					
71	DR-1	695+70	RT	COMM.	9.50	13.0	35.0	15.0	15.0	186.6		8														
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					120.7		
71	DR-3	696+62	RT	COMM.	9.50	15.0	35.0	15.0	15.0	217.7		7													17.1	
		PARKING	RT							111.7		26	2.2		10.6		19.0		1.6						218.9	
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			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													40.7	
		PARKING	RT									2														2.0
74	DR-6	701+32	RT	COMM.	10.0	11.0	21.0	--	6.00			6													27.1	
																										6.5
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	1.5												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			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													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													42.7	
		PARKING	RT									6														
78	DR-8	713+64	LT	RES.	9.50	20.0	14.0	6.00	6.00			2	1.0		4.4		8.0		0.7						16.2	
												1														
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>										<b>1036</b>	<b>33</b>	<b>393</b>		<b>55</b>	<b>214</b>				<b>351</b>	<b>33</b>			<b>194</b>	<b>1202</b>		

**DRIVEWAY SUBSUMMARY**

**CAR - 38 - 22.56**

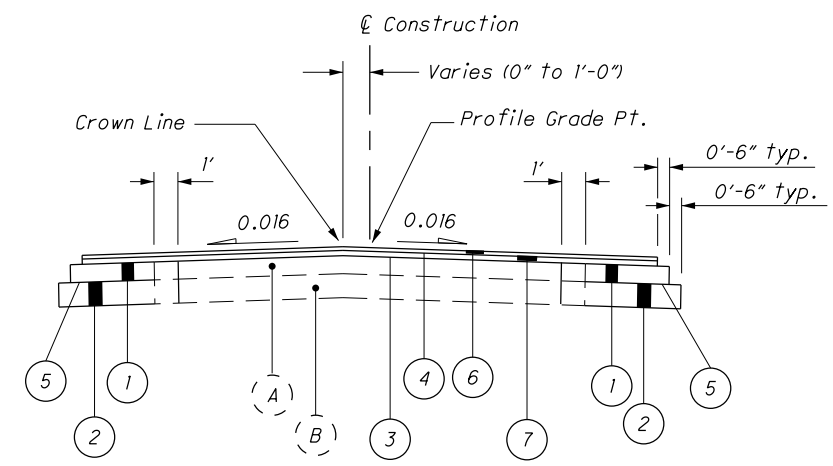
CALCULATED  
WSR  
CHECKED  
SJB



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/yd<sup>2</sup>)
- ④ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (Applied at a rate of 0.075 gal/yd<sup>2</sup>)
- ⑤ ITEM 408 - PRIME COAT (Applied at a rate of 0.4 gal/yd<sup>2</sup>)
- ⑥ ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446) PG64-22
- ⑦ ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
- (A) ± 5" Asphalt
- (B) ± 8" Macadam Base



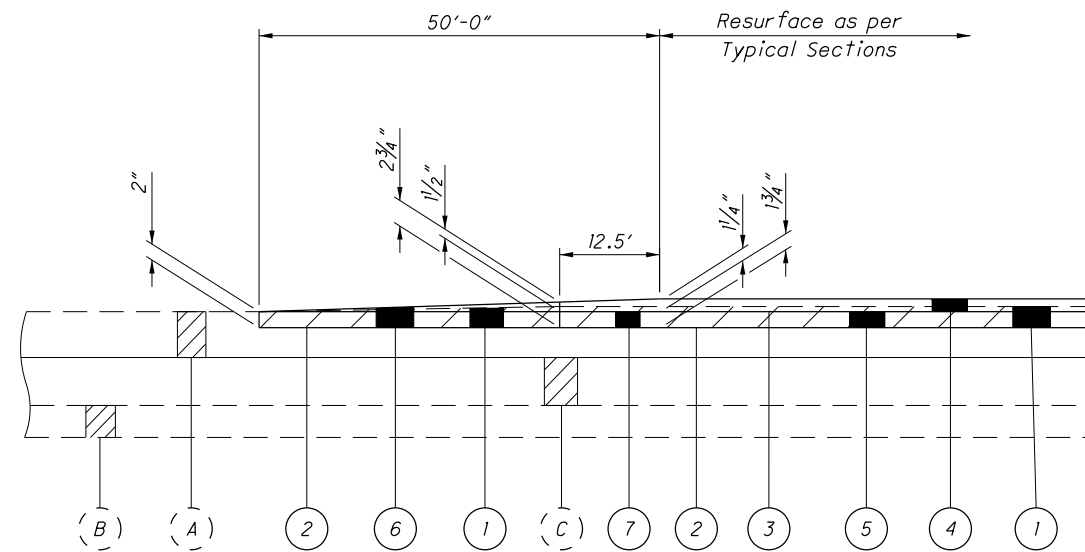
SECTION A-A

PAVEMENT TRANSITION DETAILS

PIC-46-27.22

**PROPOSED LEGEND**

- ① ITEM 254 Pavement Planing, Asphalt Concrete (Depth As Shown)
- ② ITEM 407 Tack Coat (Applied at a rate of 0.075 gal/yd<sup>2</sup>)
- ③ ITEM 407 Tack Coat for Intermediate Course (Applied at a rate of 0.075 gal/yd)
- ④ ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446) PG64-22
- ⑤ ITEM 441 1 3/4" 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 1 3/4" Superplasticized Dense Concrete Overlay

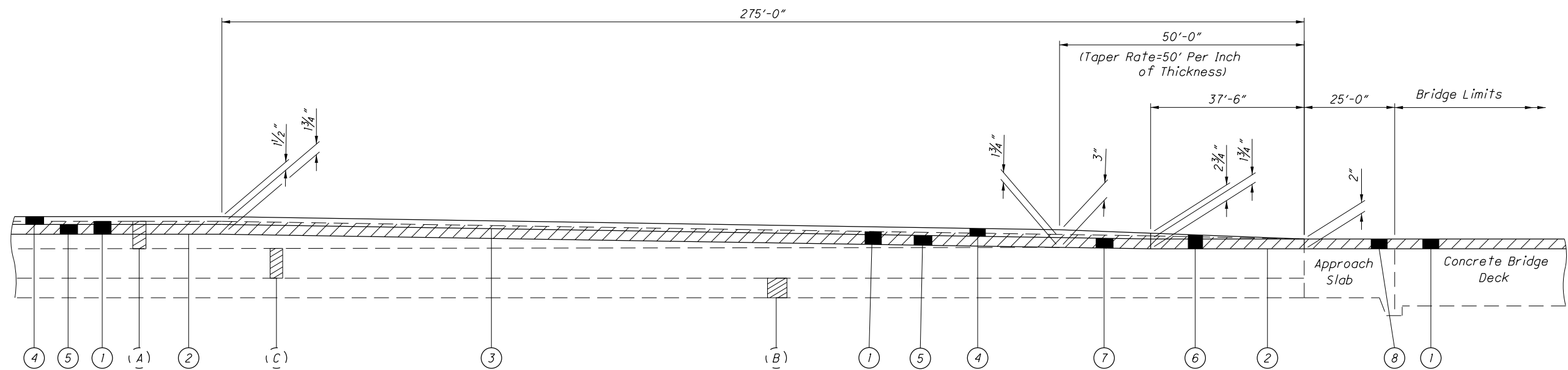


**EXISTING LEGEND**

- (A) ± 6 1/2" Asphalt Concrete
- (B) ± 6" Subbase
- (C) ± 9" Reinforced Portland Cement Concrete Pavement

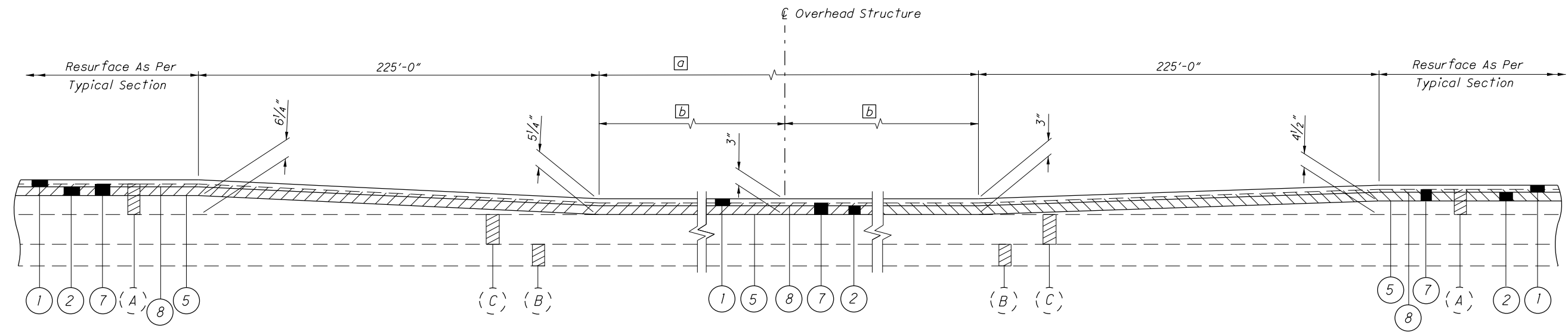
= Item 254 Pavement Planing, Asphalt Concrete

**PAVEMENT TRANSITION AT BEGIN/END PAVEMENT**



**TRANSITION AT STRUCTURES**

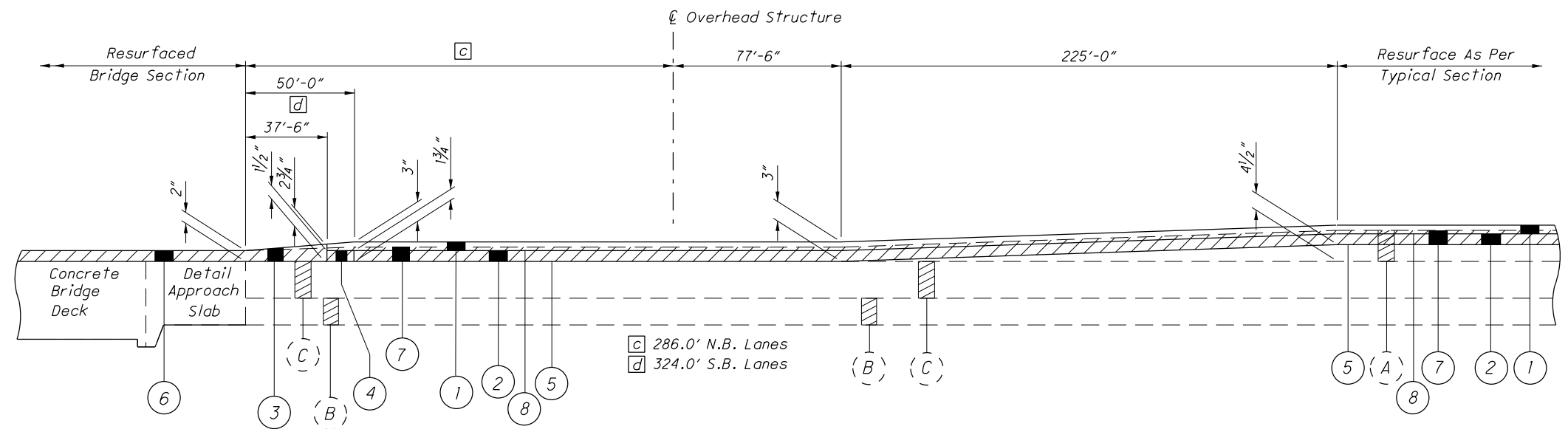
DETAIL APPLIES AT:  
VAN-277-0585 Lt. & Rt. (North & South End)  
VAN-277-1041 Lt. & Rt. (South Only)  
VAN-277-1246 Lt. & Rt. (North Only)



**PAVEMENT TRANSITION AT OVERHEAD BRIDGE**

DETAIL APPLIES AT STRUCTURES:  
 VAN-277-0378      VAN-277-0776  
 VAN-277-1234      VAN-277-0911  
 VAN-277-1303      VAN-277-0493  
 VAN-277-0633

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)

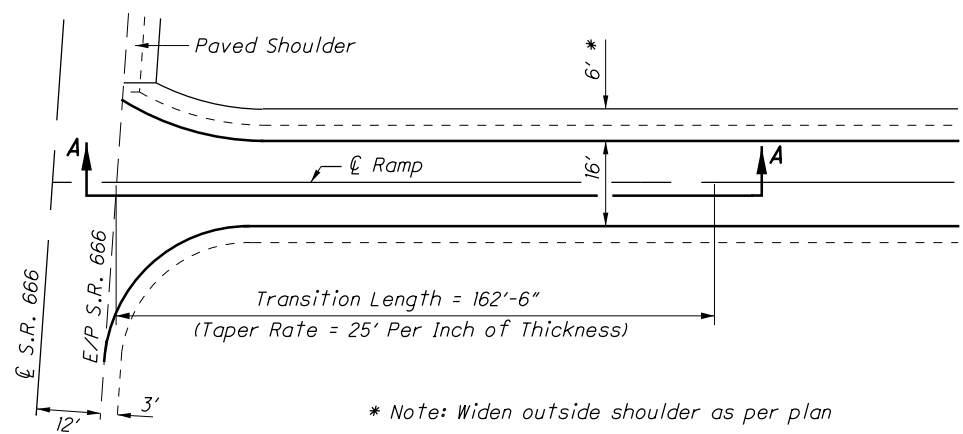
c 286.0' N.B. Lanes  
 d 324.0' S.B. Lanes

**PROPOSED LEGEND**

- 1 ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446), PG 64-22
- 2 ITEM 441 1 3/4" 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 (Applied at a rate of 0.075 gal/yd<sup>2</sup>)
- 6 ITEM 848 Micro Silica Modified Concrete (Thickness 1 1/4" Nominal)
- 7 ITEM 254 Pavement Planing, Asphalt Concrete (Depth = 2")
- 8 ITEM 407 Tack Coat for Intermediate Course (Applied at a rate of 0.075 gal/yd<sup>2</sup>)

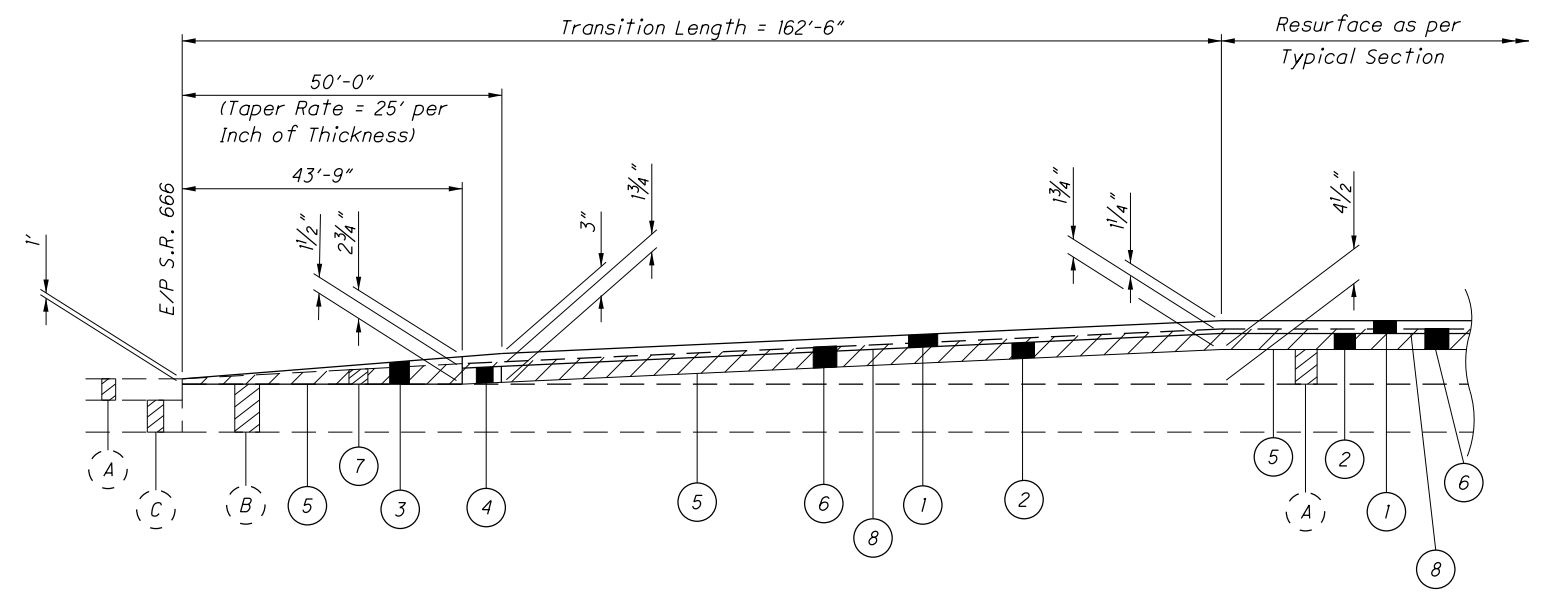
**EXISTING LEGEND**

- (A) ±6 1/2" Asphalt Concrete
- (B) ±6" Subbase
- (C) ±9" Reinforced Portland Cement Concrete Pavement
- [Hatched Box] = ITEM 254 Pavement Planing, Asphalt Concrete



\* Note: Widen outside shoulder as per plan

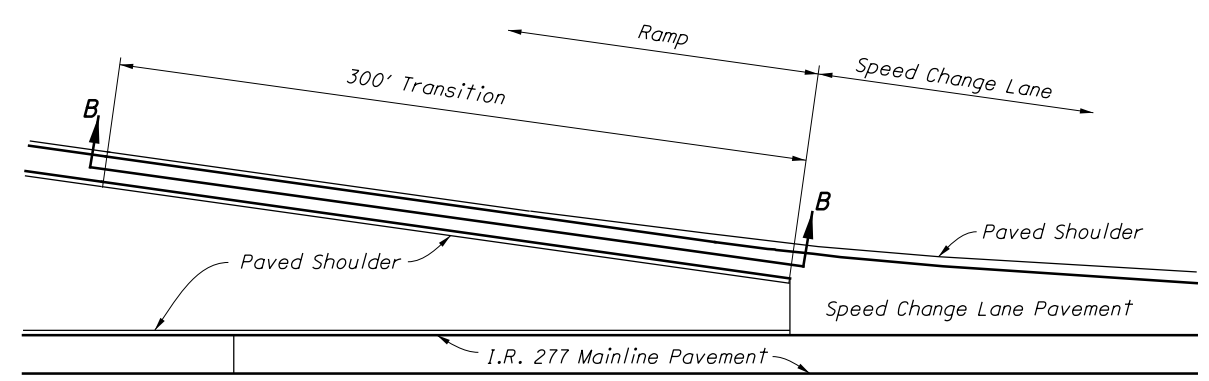
PLAN VIEW



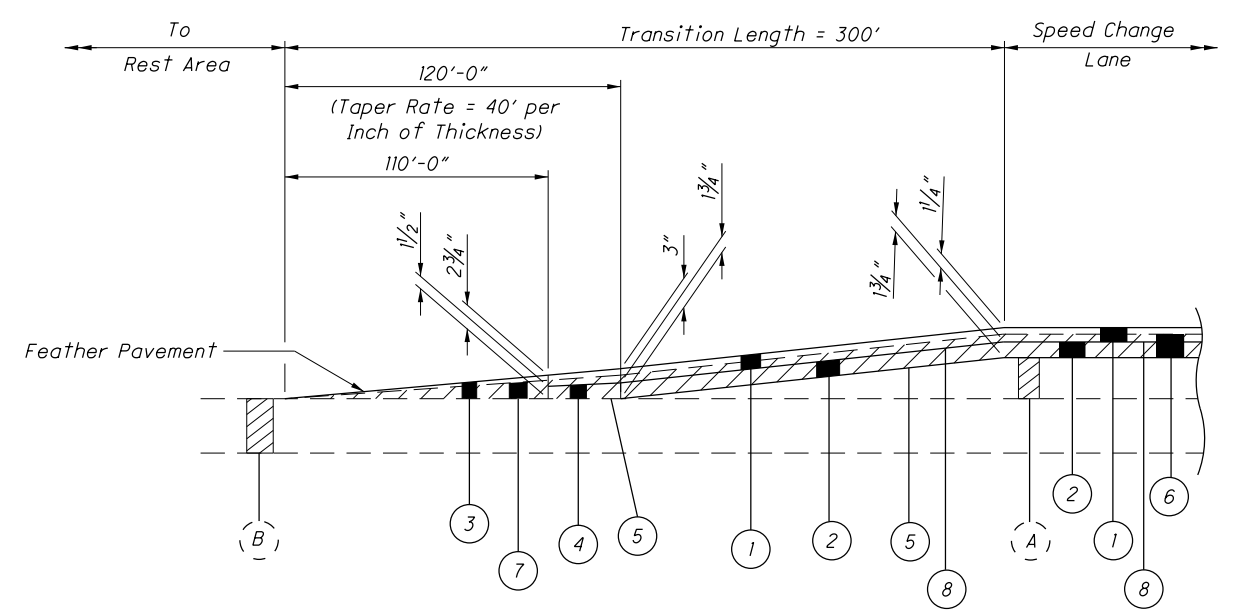
SECTION A-A

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

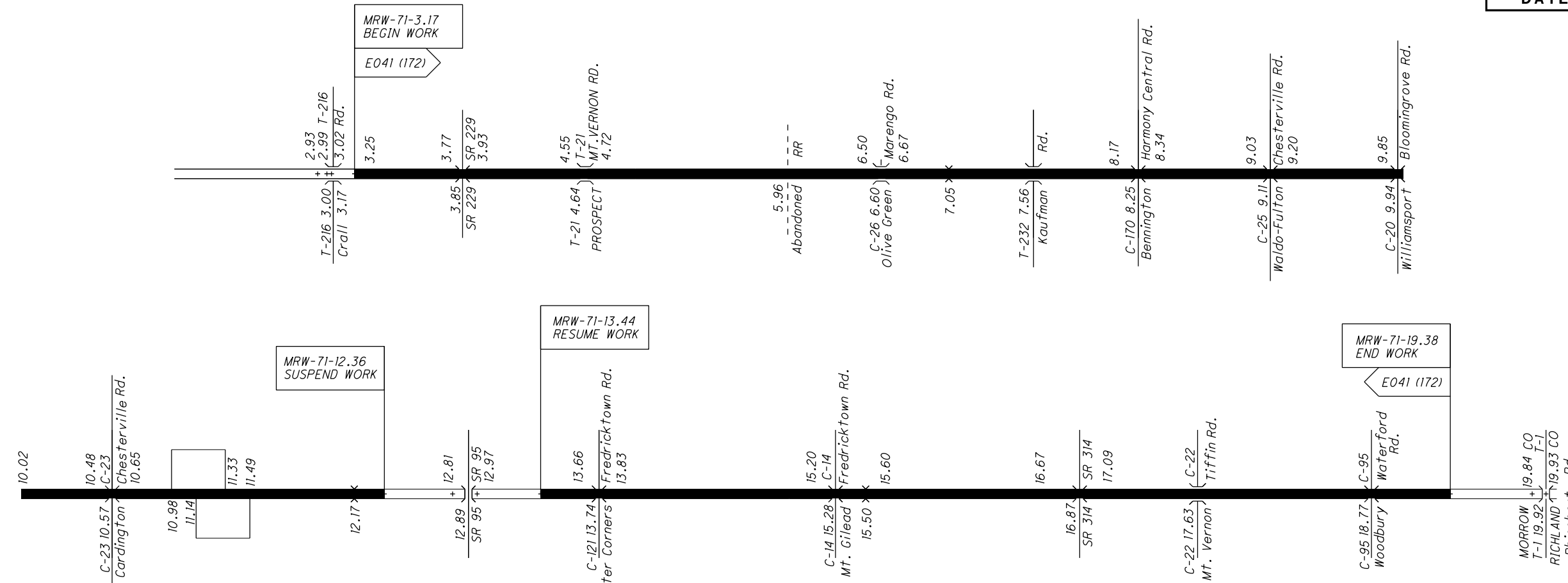
PROPOSED LEGEND

- |  |  |
|--|--|
| ① ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446), PG 64-22         | ⑤ ITEM 407 Tack Coat (Applied at a rate of 0.075 gal/yd <sup>2</sup> )                         |
| ② ITEM 441 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (446)              | ⑥ ITEM 254 Pavement Planing, Asphalt Concrete (Depth = 2")                                     |
| ③ ITEM 441 Var. Thickness Asphalt Concrete Surface Course, Type 1, (446), PG 64-22 | ⑦ ITEM 254 Pavement Planing, Asphalt Concrete (Var. Thickness)                                 |
| ④ ITEM 441 Var. Thickness Asphalt Concrete Intermediate Course, Type 2, (446)      | ⑧ ITEM 407 Tack Coat for Intermediate Course (Applied at a rate of 0.075 gal/yd <sup>2</sup> ) |

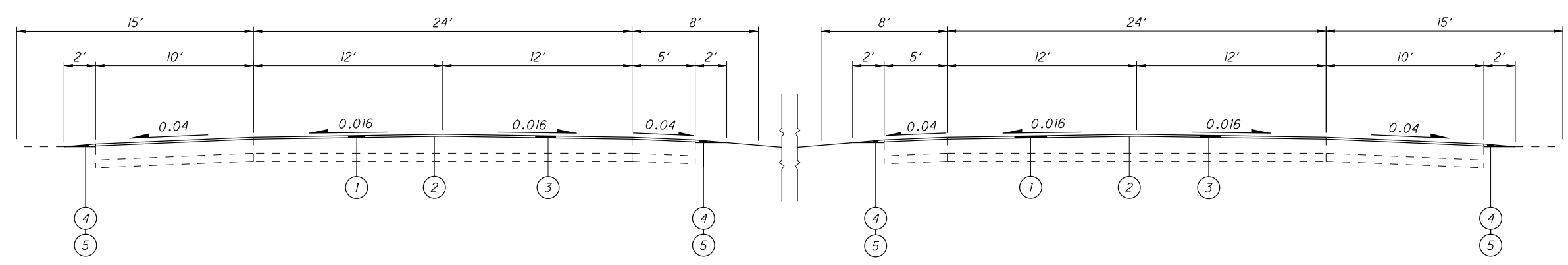
ITEM 254 Pavement Planing, Asphalt Concrete

EXISTING LEGEND

- (A) ±6 1/2" Asphalt Concrete  
(B) ±9" Reinforced Portland Cement Concrete Pavement  
(C) ±6" Aggregate Base



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



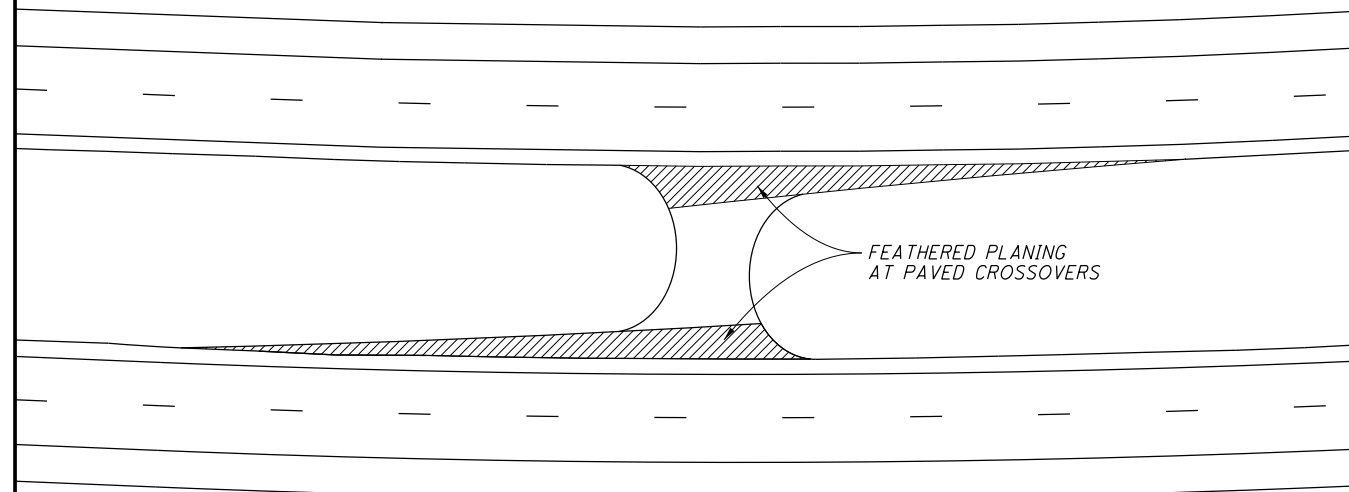
**LEGEND**

- ① ITEM 254 - 1/2" PAVEMENT PLANING, ASPHALT CONCRETE
- ② ITEM 407 - TACK COAT @ 0.075 GALLONS PER SQ. YD.
- ③ ITEM 441 - 1/2" 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

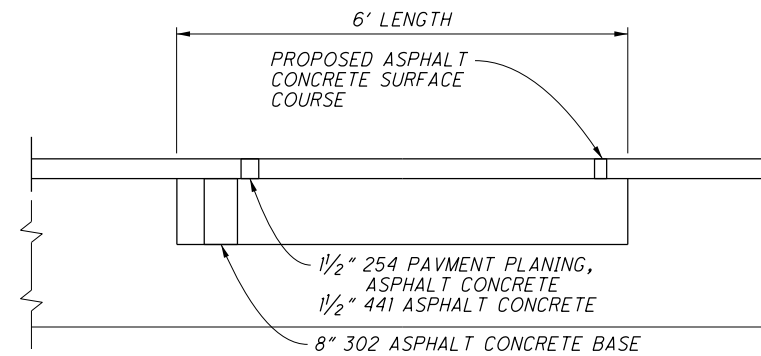
**RESURFACING**

**MRW - 71 - 3.17**

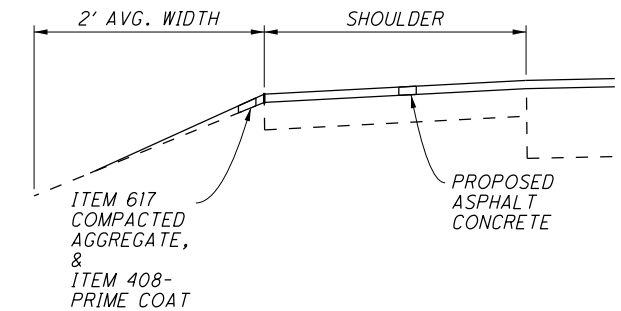
CROSSOVER DETAIL



PARTIAL DEPTH PAVEMENT REPAIR AS PER PLAN



SHOULDER DETAIL



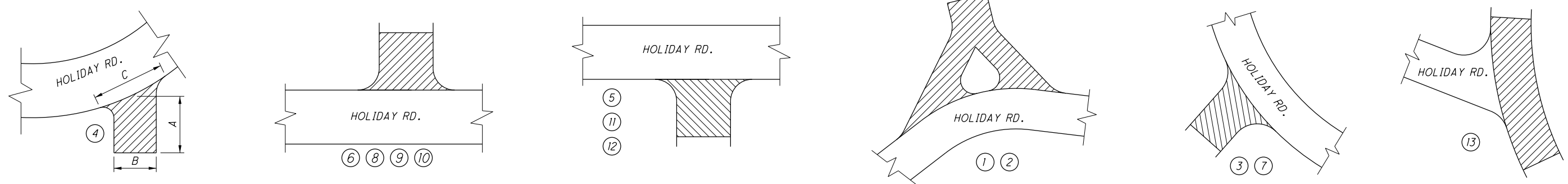
\* 6' LENGTH X 12' LANE WIDTH

LOCATION					PAVEMENT WIDTH							QUANTITIES						REMARKS
COUNTY	ROUTE	S L M	S L M	TYPICAL	NORTHBOUND				SOUTHBOUND			254	407	408	441	617	618	
					LENGTH	OUTSIDE SHOULDER	PAVEMENT	MEDIAN SHOULDER	MEDIAN SHOULDER	PAVEMENT	OUTSIDE SHOULDER	PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT (0.075 GAL./YD <sup>2</sup> )	PRIME COAT (0.4 GAL./YD <sup>2</sup> )	ASPHALT SURFACE COURSE, TYPE 1, (446), PG 64-22	COMPACT AGGREGATE	RUMBLE STRIP (ASPHALT CONCRETE)	
					FT.	FT.	FT.	FT.	FT.	FT.	FT.	1/2" DEPTH YD <sup>2</sup>	GAL.	GAL.	1/2" DEPTH YD <sup>2</sup>	2" DEPTH YD <sup>2</sup>	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'	24'	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





PART	ROUTE	SLM	SIDE	DESCRIPTION	INTERSECTIONS				PROPOSED ITEMS						
					A	B	C	AREA	407	ASPHALT CONCRETE			EXISTING SURFACE	408	
									TACK COAT (@ 0.075 GAL/YD <sup>2</sup> )	THICKNESS	ITEM 441 TYPE 1	ITEM 441 TYPE 2		THICKNESS	BITUMINOUS PRIME COAT (@ 0.40 GAL/YD <sup>2</sup> )
FT	FT	FT	YD <sup>2</sup>	GAL	INCHES	YD <sup>3</sup>	YD <sup>3</sup>	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/CRI56)	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	
TOTALS (CARRIED TO SHEET 10)								6,493	279		181	314			1,112

CALCULATIONS

KNO - 444 - 0.00