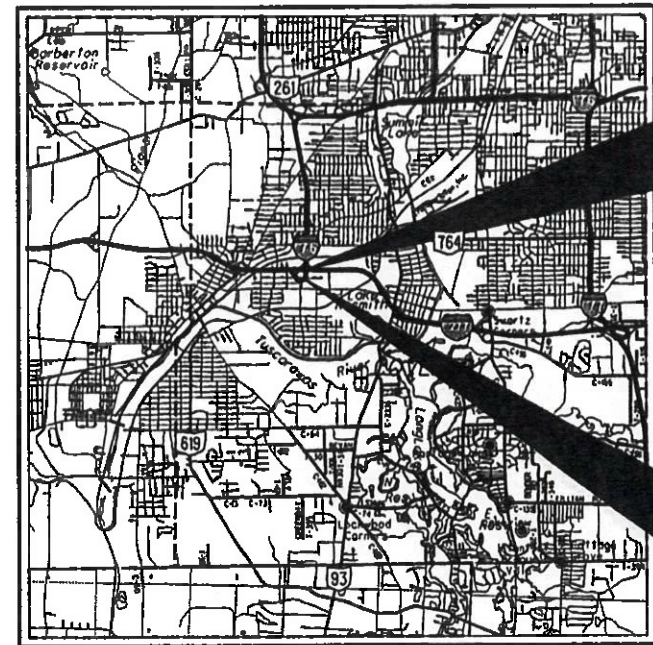


SUM - IR 76-06.40
 200357 PID - 111218
 Dist 4 6/18/2020

Contract Proposal Available @
 www.contracts.dot.state.oh.us/home

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LOCATION MAP

LATITUDE: 41°02'06.90" N LONGITUDE: 81°34'01.14" W



PORTION TO BE IMPROVED	_____
INTERSTATE HIGHWAY	_____
FEDERAL ROUTES	_____
STATE ROUTES	_____
COUNTY & TOWNSHIP ROADS	_____
OTHER ROADS	_____

DESIGN DESIGNATION

CURRENT ADT (2020)	10,650
DESIGN YEAR ADT (2040)	22,800
DESIGN HOURLY VOLUME (2040)	2,260
DIRECTIONAL DISTRIBUTION	N/A
TRUCKS (24 HOUR B&C)	0.05
DESIGN SPEED	30 MPH
LEGAL SPEED	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
01 INTERSTATES (URBAN)	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES
 Contact Two Working Days Before You Dig

 OHIO811, 8-1-1, or 1-800-362-2764 (Non-members must be called directly)

PLAN PREPARED BY:

 GPD GROUP
 Glenn, Pyle, Schenney, Burns & DeHaven, Inc.
 920 South Main Street
 Akron, OH 44311
 330.572.2100 Fax 330.572.2161

ENGINEERS SEAL:

 SIGNED: *Max R. Grossman*
 DATE: 03/11/20

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

SUM-76-6.40

CITY OF AKRON
 SUMMIT COUNTY

INDEX OF SHEETS:

TITLE SHEET	1
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PLAN AND PROFILES - RAMP B	31- 32
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CORE DETAIL - RAMP B	42
TRAFFIC CONTROL NOTES	43
SOIL PROFILES	

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/17/20	MT-101.70	1/17/20	800-2020	4/11/20
BP-9.1	1/18/19	MT-101.75	1/17/20	821	4/20/12
		MT-101.90	7/21/17	832	10/19/18
DM-1.1	7/21/17	MT-105.10	1/17/20	875	1/18/19
DM-1.2	1/18/13			921	4/20/12
DM-4.3	1/15/16	TC-41.20	10/18/13		
DM-4.4	1/15/16	TC-41.30	10/18/13		
		TC-42.20	10/18/13		
RM-4.2	1/11/20	TC-52.10	10/18/13		
		TC-52.20	7/20/18		
MT-95.30	7/19/19	TC-65.10	1/17/14		
MT-95.40	1/17/20	TC-65.11	7/21/17		
MT-98.29	1/17/20	TC-72.20	7/20/18		
MT-98.30	7/19/19				
MT-99.20	4/19/19				
MT-101.60	1/17/20				

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF FULL DEPTH RECONSTRUCTION OF RAMP B BETWEEN I-76 WB TO I-277 EB TO CORRECT THE SUB-STANDARD SUPERELEVATION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	1.005 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.125 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	1.130 ACRES

LIMITED ACCESS

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

2019 SPECIFICATIONS

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

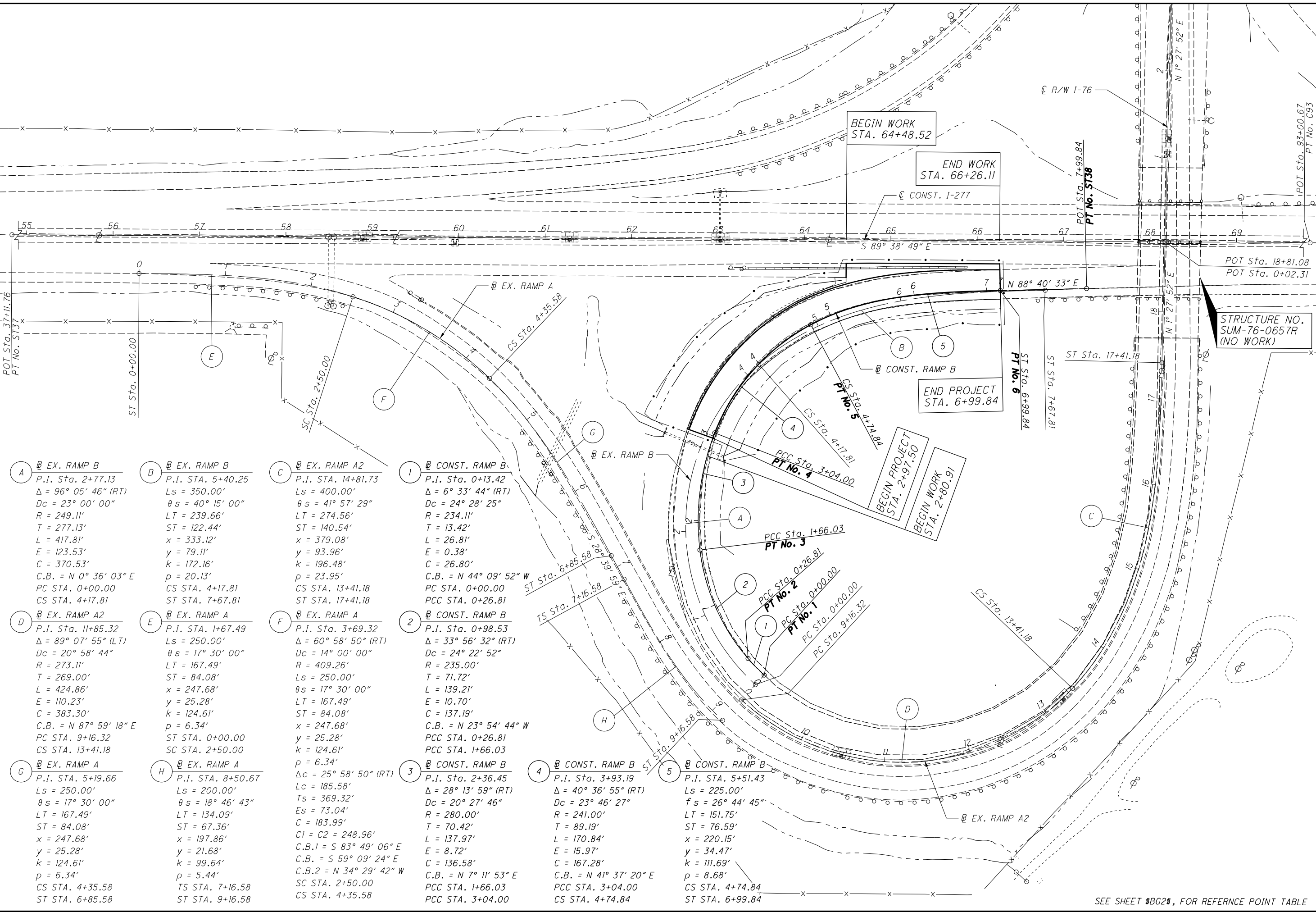
HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 11 - 16.

APPROVED: *[Signature]*
 DATE 3/16/20 DISTRICT DEPUTY DIRECTOR

APPROVED: *[Signature]*
 DATE 3/16/20 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E191605
 PID NO. 111218
 CONSTRUCTION PROJECT NO.
 RAILROAD INVOLVEMENT NONE
 SUM-76-6.40
 1/43

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A EX. RAMP B
P.I. Sta. 2+77.13
 $\Delta = 96^\circ 05' 46''$ (RT)
 $Dc = 23^\circ 00' 00''$
 $R = 249.11'$
 $T = 277.13'$
 $L = 417.81'$
 $E = 123.53'$
 $C = 370.53'$
C.B. = $N 0^\circ 36' 03'' E$
PC STA. 0+00.00
CS STA. 4+17.81

B EX. RAMP B
P.I. STA. 5+40.25
 $Ls = 350.00'$
 $\theta s = 40^\circ 15' 00''$
 $LT = 239.66'$
 $ST = 122.44'$
 $x = 333.12'$
 $y = 79.11'$
 $k = 172.16'$
 $p = 20.13'$
CS STA. 4+17.81
ST STA. 7+67.81

C EX. RAMP A2
P.I. STA. 14+81.73
 $Ls = 400.00'$
 $\theta s = 41^\circ 57' 29''$
 $LT = 274.56'$
 $ST = 140.54'$
 $x = 379.08'$
 $y = 93.96'$
 $k = 196.48'$
 $p = 23.95'$
CS STA. 13+41.18
ST STA. 17+41.18

1 CONST. RAMP B
P.I. Sta. 0+13.42
 $\Delta = 6^\circ 33' 44''$ (RT)
 $Dc = 24^\circ 28' 25''$
 $R = 234.11'$
 $T = 13.42'$
 $L = 26.81'$
 $E = 0.38'$
 $C = 26.80'$
C.B. = $N 44^\circ 09' 52'' W$
PC STA. 0+00.00
PCC STA. 0+26.81

D EX. RAMP A2
P.I. Sta. 11+85.32
 $\Delta = 89^\circ 07' 55''$ (LT)
 $Dc = 20^\circ 58' 44''$
 $R = 273.11'$
 $T = 269.00'$
 $L = 424.86'$
 $E = 110.23'$
 $C = 383.30'$
C.B. = $N 87^\circ 59' 18'' E$
PC STA. 9+16.32
CS STA. 13+41.18

E EX. RAMP A
P.I. STA. 1+67.49
 $Ls = 250.00'$
 $\theta s = 17^\circ 30' 00''$
 $LT = 167.49'$
 $ST = 84.08'$
 $x = 247.68'$
 $y = 25.28'$
 $k = 124.61'$
 $p = 6.34'$
ST STA. 0+00.00
SC STA. 2+50.00

F EX. RAMP A
P.I. STA. 3+69.32
 $\Delta = 60^\circ 58' 50''$ (RT)
 $Dc = 14^\circ 00' 00''$
 $R = 409.26'$
 $Ls = 250.00'$
 $\theta s = 17^\circ 30' 00''$
 $LT = 167.49'$
 $ST = 84.08'$
 $x = 247.68'$
 $y = 25.28'$
 $k = 124.61'$
 $p = 6.34'$

2 CONST. RAMP B
P.I. Sta. 0+98.53
 $\Delta = 33^\circ 56' 32''$ (RT)
 $Dc = 24^\circ 22' 52''$
 $R = 235.00'$
 $T = 71.72'$
 $L = 139.21'$
 $E = 10.70'$
 $C = 137.19'$
C.B. = $N 23^\circ 54' 44'' W$
PCC STA. 0+26.81
PCC STA. 1+66.03

G EX. RAMP A
P.I. STA. 5+19.66
 $Ls = 250.00'$
 $\theta s = 17^\circ 30' 00''$
 $LT = 167.49'$
 $ST = 84.08'$
 $x = 247.68'$
 $y = 25.28'$
 $k = 124.61'$
 $p = 6.34'$
CS STA. 4+35.58
ST STA. 6+85.58

H EX. RAMP A
P.I. STA. 8+50.67
 $Ls = 200.00'$
 $\theta s = 18^\circ 46' 43''$
 $LT = 134.09'$
 $ST = 67.36'$
 $x = 197.86'$
 $y = 21.68'$
 $k = 99.64'$
 $p = 5.44'$
TS STA. 7+16.58
ST STA. 9+16.58

3 CONST. RAMP B
P.I. Sta. 2+36.45
 $\Delta = 28^\circ 13' 59''$ (RT)
 $Dc = 20^\circ 27' 46''$
 $R = 280.00'$
 $T = 70.42'$
 $L = 137.97'$
 $E = 8.72'$
 $C1 = C2 = 248.96'$
C.B.1 = $S 83^\circ 49' 06'' E$
C.B. = $S 59^\circ 09' 24'' E$
C.B.2 = $N 34^\circ 29' 42'' W$
SC STA. 2+50.00
CS STA. 4+35.58

4 CONST. RAMP B
P.I. Sta. 3+93.19
 $\Delta = 40^\circ 36' 55''$ (RT)
 $Dc = 23^\circ 46' 27''$
 $R = 241.00'$
 $T = 89.19'$
 $L = 170.84'$
 $E = 15.97'$
 $C = 167.28'$
C.B. = $N 7^\circ 11' 53'' E$
PCC STA. 1+66.03
PCC STA. 3+04.00

5 CONST. RAMP B
P.I. STA. 5+51.43
 $Ls = 225.00'$
 $\theta s = 26^\circ 44' 45''$
 $LT = 151.75'$
 $ST = 76.59'$
 $x = 220.15'$
 $y = 34.47'$
 $k = 111.69'$
 $p = 8.68'$
CS STA. 4+74.84
ST STA. 6+99.84



CALCULATED
KRM
CHECKED
MRG

SCHEMATIC PLAN

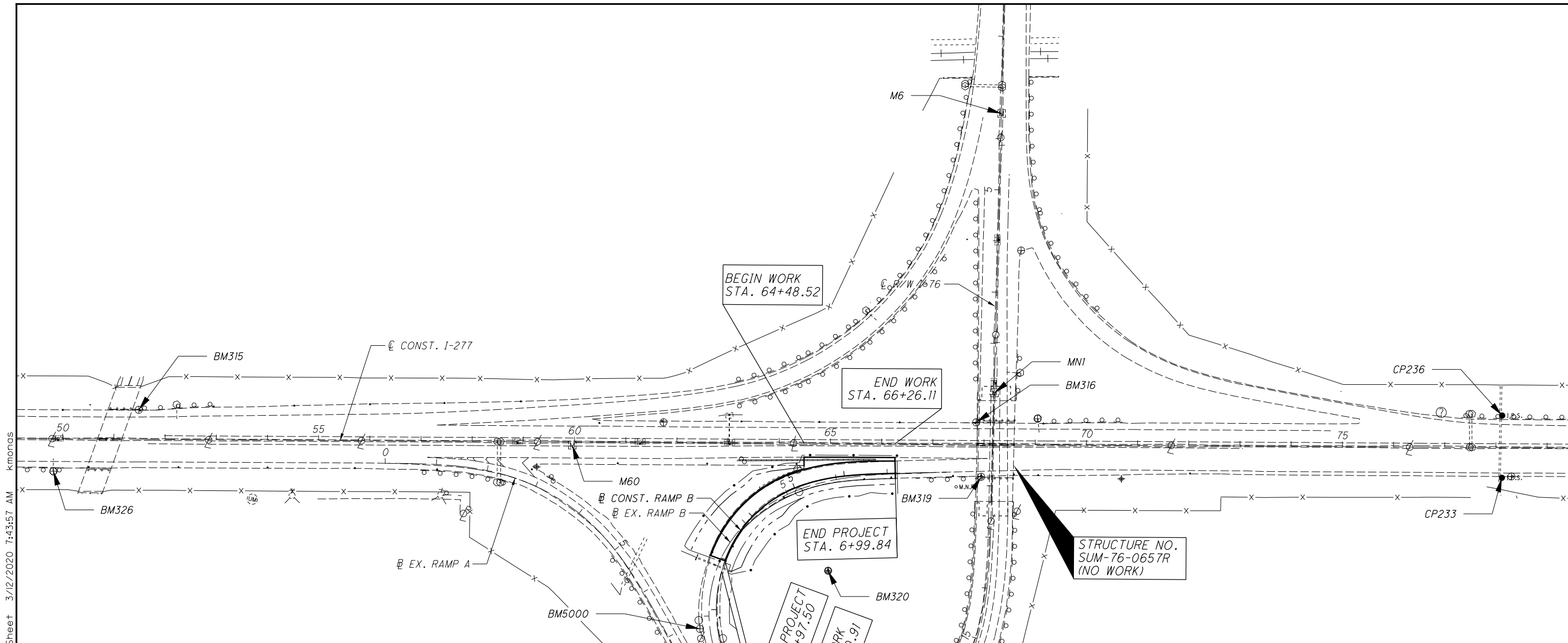
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SEE SHEET 8B28, FOR REFERENCE POINT TABLE

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CALCULATED
KRM
CHECKED
MRG

0 100 200
HORIZONTAL
SCALE IN FEET



REFERENCE POINT TABLE

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	499611.5334	2226059.7564		PC STA. 0+00.00; @ CONST. RAMP B
2	499630.7576	2226041.0849		PCC STA. 0+26.81; @ CONST. RAMP B
3	499756.1702	2225985.4778		PCC STA. 1+66.03; @ CONST. RAMP B
4	499891.6750	2226002.5915		PCC STA. 3+04.00; @ CONST. RAMP B
5	500016.7260	2226113.7040		CS STA. 4+74.84; @ CONST. RAMP B
6	500056.2730	2226332.9951		ST STA. 6+99.84; @ CONST. RAMP B
ST38	500058.5838	2226432.9683		POT STA. 7+99.84; @ CONST. RAMP B
ST37	500131.7898	2223418.1516		POT STA. 37+11.76; @ CONST. I-277
C93	500097.3630	2229006.9554		POT STA. 93+00.67; @ CONST. I-277
CP233	500047.7071	2227518.0997		IRON PIN SET
CP236	500169.2502	2227518.5795		IRON PIN SET
M6	500760.0367	2226545.1039		MONUMENT BOX 3/4" pin
M60	500112.5237	2225706.5018		MONUMENT BOX
MNI	500214.5052	2226531.2383		MONUMENT BOX 3/4" pin
BM315	500180.45	2224854.94	980.766	MAG NAIL SET IN ABUTMENT WALL NE @ 76/27TH
BM316	500156.00	2226491.10	976.400	MAG NAIL SET IN ABUTMENT WALL NW @ 76/77
BM319	500049.53	2226500.83	976.336	MAG NAIL SET IN ABUTMENT WALL SW @ 76/277
BM320	499866.07	2226201.72	971.954	CONCRETE MONUMENT IN CENTER @ 76S-OFF/277E
BM326	500060.49	2224688.36	983.601	ON S SIGN FOUNDATION OR BOLT @ 76/27TH
BM5000	499752.49	2225951.37	975.541	BM chiseled square on top of conc. Barrier

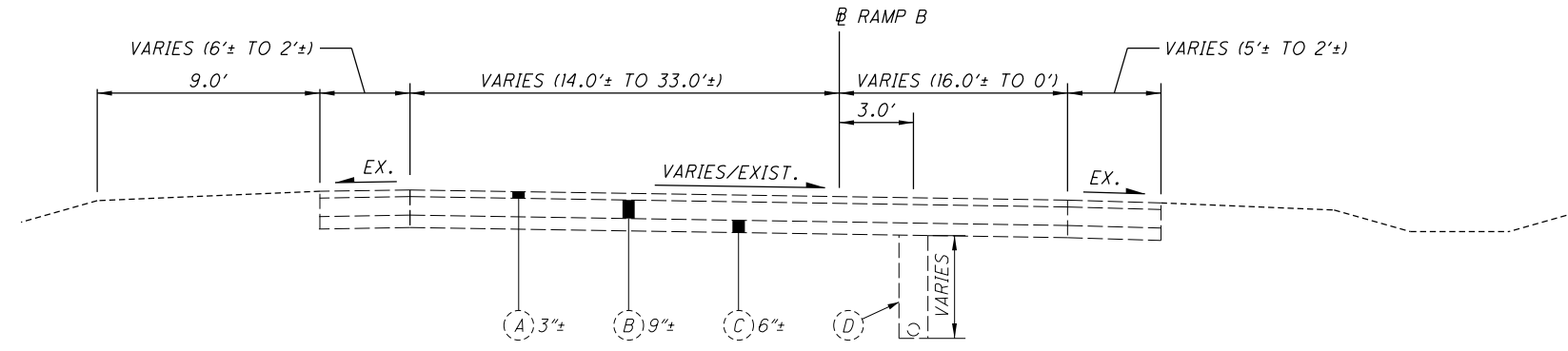
30
990.837

SCHEMATIC PLAN

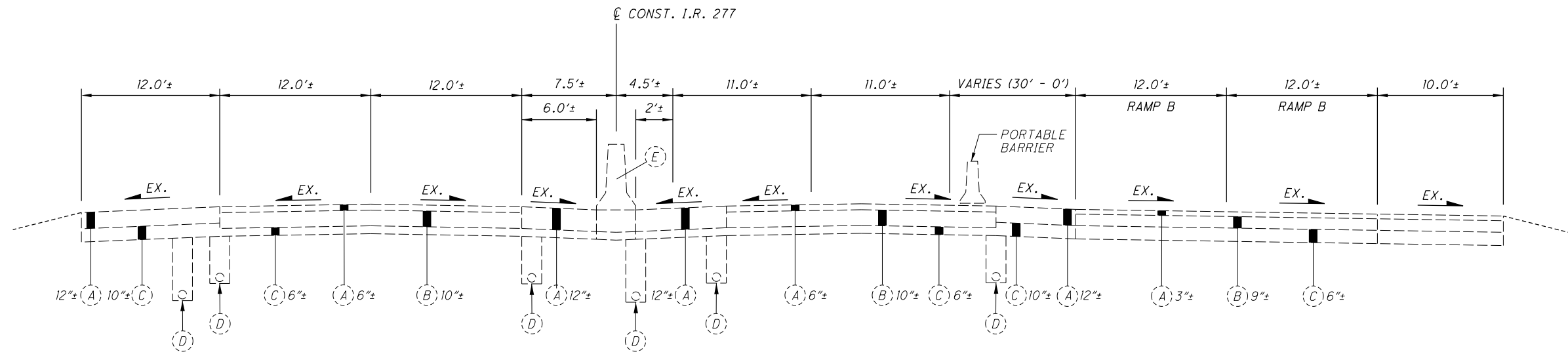
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SEE SHEET 2 , FOR CURVE DATA

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EXISTING SECTION - RAMP B
LIMITING STATIONS
STA. 1+91.55 TO STA. 7+67.81

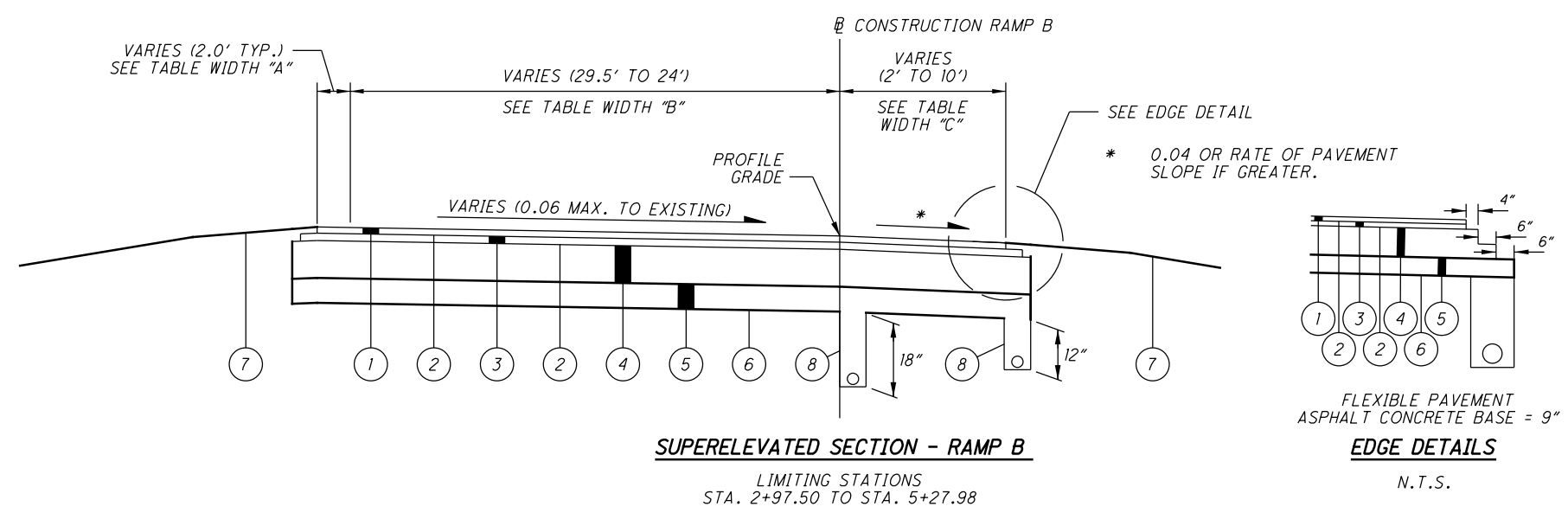


EXISTING NORMAL SECTION - I.R. 277/U.S. 224
LIMITING STATIONS
STA. 64+48.52 TO STA. 66+26.11

EXISTING LEGEND

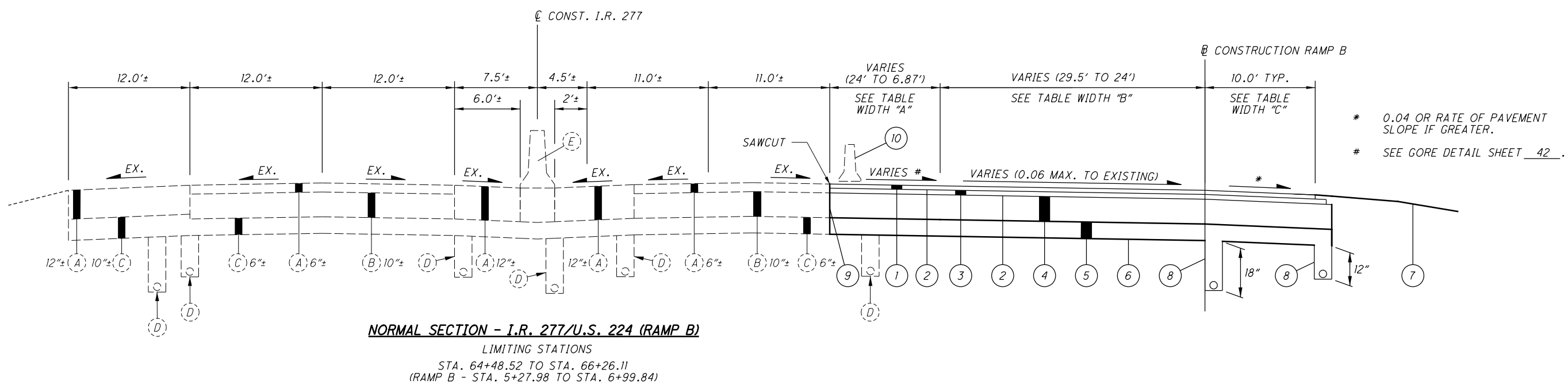
- (A) EXISTING ASPHALT CONCRETE SURFACE/INTERMEDIATE COURSE
- (B) EXISTING ASPHALT CONCRETE BASE
- (C) EXISTING AGGREGATE BASE
- (D) EXISTING UNDERDRAIN
- (E) EXISTING B-50 BARRIER

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- PROPOSED LEGEND
- ① ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M
 - ② ITEM 407 - NON-TRACKING TACK COAT
 - ③ ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
 - ④ ITEM 302 - 9" ASPHALT CONCRETE BASE, PG64-22
 - ⑤ ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN
 - ⑥ ITEM 204 - SUBGRADE COMPACTION
 - ⑦ ITEM 659 - SEEDING AND MULCHING
 - ⑧ ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
 - ⑨ ITEM 875 - LONGITUDINAL JOINT ADHESIVE
 - ⑩ ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN
ITEM 202 - IMPACT ATTENUATOR REMOVED, AS PER PLAN

RAMP B WIDTH TABLE												
RAMP B	WIDTH "A"				WIDTH "B"				WIDTH "C"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO
	2+97.50	5+27.98	2.0	2.0	2+97.50	4+74.84	29.5	29.5	2+97.50	3+70.00	2.0	2.0
	5+27.98	6+99.84	SEE GORE DETAIL		4+74.84	6+99.84	29.5	24.0	3+70.00	5+70.00	2.0	10.0
									5+70.00	6+99.84	10.0	10.0



FOR SUPERELEVATION TABLE, SEE SHEET 41 .
FOR GORE DETAILS, SEE SHEETS 42 .
FOR EXISTING LEGEND, SEE SHEETS 4 .

PROPOSED TYPICAL SECTIONS

SUM-76-6.40

GENERAL

UTILITIES

THERE ARE NO KNOWN UNDERGROUND, OR OVERHEAD UTILITIES, WITHIN THE PROJECT CONSTRUCTION LIMITS

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: GPS
MONUMENT TYPE: TYPE A & B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GE10D12a

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99989474882
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS 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.

UNITS ARE IN U.S. SURVEY FEET.

ROUNDING

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

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

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

UNSTABLE OR UNSUITABLE SOILS FOR PAVEMENT STABILIZATION

THE FOLLOWING ITEMS AND QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO ADDRESS UNSTABLE OR UNSUITABLE SOILS ENCOUNTERED IN THE AREAS OF PAVEMENT CONSTRUCTION:

ITEM 204 - EXCAVATION OF SUBGRADE, 67 CY
ITEM 204 - GRANULAR MATERIAL, TYPE B, 67 CY
ITEM 204 - GEOTEXTILE FABRIC, 100 SY

PAVEMENT

ITEM 304 - AGGREGATE BASE, AS PER PLAN

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIAL MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

DRAINAGE

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 THE CONTRACTOR, 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 APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING 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 611 CONDUIT ITEMS.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC.

EROSION CONTROL

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 SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

FOR SEEDING AND MULCHING QUANTITIES, SEE SHEET 29.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

**ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN
ITEM 202 - IMPACT ATTENUATOR REMOVED, AS PER PLAN**

THE CONTRACTOR SHALL CAREFULLY REMOVE, SALVAGE AND DELIVER THE EXISTING PORTABLE BARRIER AND THE EXISTING ATTENUATOR TO THE ODOT SR-21 INTERCHANGE OUTPOST. COORDINATION FOR DELIVERY SHALL BE MADE BY CONTACTING FRANK PHILLIPS AT 330-786-4907. THE ADDRESS FOR THE SR-21 OUTPOST IS:

3349 STATE ROUTE 21
NORTON, OHIO 44203

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN 254 FT
ITEM 202 - IMPACT ATTENUATOR REMOVED, AS PER PLAN 1 EACH

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS WORK, INCLUDING DELIVERY, SHALL BE INCLUDED IN THE PRICE BID.

CALCULATED
KRM
CHECKED
MRC

GENERAL NOTES

SUM - 76 - 6.40

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NOTIFICATION AND CONTACTS

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING ENTITIES IN WRITING AND VIA TELEPHONE AT LEAST TEN (10) DAYS PRIOR TO THE BEGINNING OF EACH PHASE OF THE CONSTRUCTION ACTIVITIES. INCLUDED IN THE NOTIFICATION SHALL BE THE PROJECTED DATES AND TIME FRAMES OF ANY ROAD CLOSURES.

- 1. OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 4
2088 SOUTH ARLINGTON ROAD
AKRON, OHIO 44306
(330)-786-2211
- 2. CITY OF AKRON ENGINEERING BUREAU
166 SOUTH HIGH STREET
AKRON, OHIO 44308
(330)-375-2355
- 3. CITY OF AKRON FIRE DEPARTMENT
146 SOUTH HIGH STREET
AKRON, OHIO 44308
(330)-375-2552
- 4. AKRON PUBLIC SCHOOLS
70 NORTH BROADWAY STREET
AKRON, OHIO 44308
(330)-761-1661
- 5. CITY OF AKRON POLICE DEPARTMENT
217 SOUTH HIGH STREET
AKRON, OHIO 44308
(330)-375-2552

SHOULD THE PROJECTED DATES AND TIME FRAMES OF THE START AND END OF THE ROAD CLOSURES CHANGE THROUGHOUT THE DURATION OF THE PROJECT, THE AGENCIES LISTED ABOVE MUST BE NOTIFIED IMMEDIATELY OF SUCH CHANGES.

OFF-PEAK TRAFFIC HOURS

OFF-PEAK TRAFFIC HOURS ARE DEFINED AS ANY TIME PERIOD OTHER THAN 6:00 AM - 9:00 AM AND 3:00 PM-6:00 PM MONDAY THROUGH FRIDAY.

DETOUR NOTIFICATION

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

ITEM 614 - MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

ALL TRAFFIC ON RAMP B (I-76W TO I-277E) SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR A PERIOD NOT TO EXCEED 21 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 11. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$30,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614 - MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

- 1. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330-786-2208), EIGHTEEN DAYS (18) DAYS PRIOR TO THE BEGINNING OF WORK.
- 2. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL FLAGS, FLAGGERS, BARRICADES, SIGNS, SIGN SUPPORTS AND INCIDENTALS RELATED TO TRAFFIC CONTROL.
- 3. TRUCK MOUNTED ATTENUATORS (TMAs) SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.
- 4. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS ONE (1) MILE.
- 5. PRIOR TO OPENING TRAFFIC, EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 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 SEPERATELY ITEMIZED IN THE PLAN.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 5 MGAL

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A PORTABLE CHANGEABLE MESSAGE SIGN, THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCE OF 800 FEET AND 650 FEET RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED.

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

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

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE LINE PRESENTATION FORMATS WITH UP TO OF SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

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

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

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (CONTINUED)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.07. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 6 SNMT

(ASSUMING 6 PCMS SIGNS FOR 1 MONTH)

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MAINTENANCE OF TRAFFIC NOTES

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ITEM 614 - LAW ENFORCEMENT OFFICE WITH PATROL CAR FOR ASSISTANCE

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

IN GENERAL LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONE.

THE LEOS WORK AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

ITEM 614 - LAW ENFORCEMENT OFFICE WITH PATROL CAR FOR ASSISTANCE (CONTINUED)

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 70 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614 - MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON THE RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTERANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURE	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	>12 HRS & <2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

ITEM 614 - WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 622 - PORTABLE BARRIER PLACEMENT

THE CONTRACTOR WILL SUBMIT A PLAN TO THE ENGINEER FOR APPROVAL SEVEN (7) DAYS IN ADVANCE OF THE PLANNED LANE CLOSURE. WORK WILL NOT BEGIN UNTIL APPROVAL OF THE PLANS HAS BEEN GRANTED.

ALL COSTS INVOLVED IN PLACING THE PORTABLE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - PORTABLE CONCRETE BARRIER.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE LINE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED". PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

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NOTIFICATIONS OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIMEFRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO CLOSURE

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL BE ADVISED THAT PROJECTS SUM-76-5.53 (PID 96670) AND SUM-18/VAR-13.19 (PID 98475) MAY BE ONGOING IN AN AREA IMMEDIATELY ADJACENT TO AND WITHIN THE PROJECT LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO CAUSE A MINIMUM DELAY OR CONFLICT WITH THE OTHER PROJECTS. IN ACCORDANCE WITH 105.08, THE CONTRACTOR SHALL ARRANGE WITH THE OTHER CONTRACTORS APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL RECEIVE DAILY APPROVALS FROM THE ENGINEER PRIOR TO COMMENCING ANY OPERATIONS. ANY CONFLICT BETWEEN CONTRACTORS INVOLVING WORK SCHEDULES, WORK AREA, OR COOPERATION SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS PROJECT.

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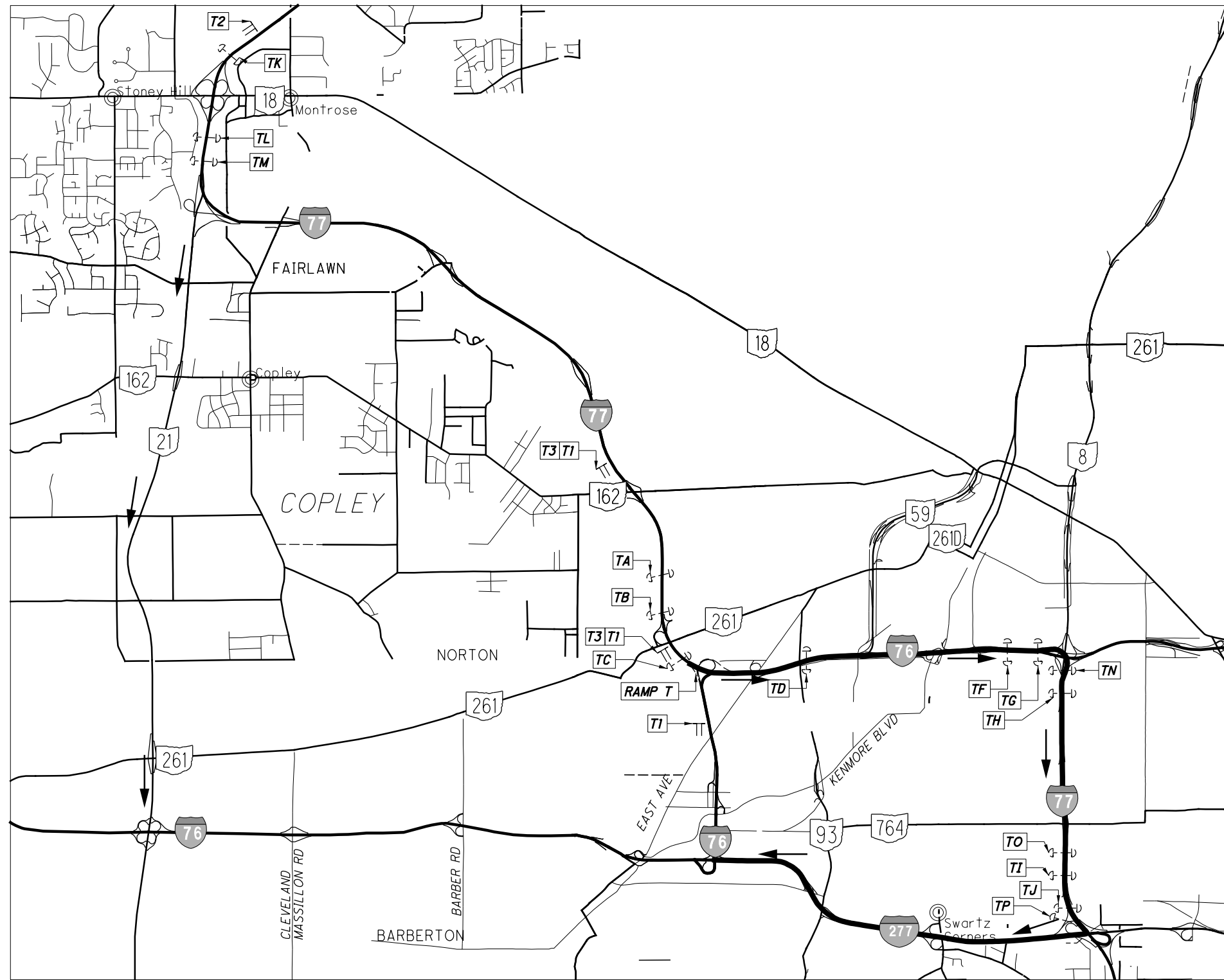
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SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	614	614	614	614	614	614	622																													
			INCREASED BARRIER DELINEATION	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)		BARRIER REFLECTOR, TYPE 1 (ONE WAY)	OBJECT MARKER, ONE WAY	WORK ZONE EDGE LINE, CLASS 1, 6"	WORK ZONE DOTTED LINE, CLASS 1	PORTABLE BARRIER, UNANCHORED	FT	EACH	EACH	EACH	FT	FT	FT																								
			FROM	TO		FT	EACH	EACH	EACH	FT	FT	FT																													
19	EW	I.R. 77 (SB)	194+77	202+00	RT					723																															
20	DW	I.R. 77 (SB)	202+12	208+72	RT						660																														
20	EW	I.R. 77 (SB)	202+00	213+67	RT					1167																															
21	EW	I.R. 76 (WB)	8+00	18+00	LT					1000																															
21	DW	I.R. 76 (WB)	12+95	18+00	LT						505																														
22	DW	I.R. 76 (WB)	18+00	19+55	LT						155																														
22	EW	I.R. 76 (WB)	18+00	31+00	LT					1300																															
23	EW	I.R. 76 (WB)	31+00	39+35	LT					835																															
23	DW	I.R. 76 (WB)	32+75	39+35	LT						660																														
24	EY	U.S. 224 (EB)	46+00	49+00	RT					300																															
25	EY	U.S. 224 (EB)	49+00	57+46	RT					846																															
26	EW	U.S. 224 (EB)	63+87	69+50	RT					563																															
26	PB	U.S. 224 (EB)	61+77	66+97	RT	47	1	12	12			520																													
TOTAL MILES										1.28																															
TOTALS CARRIED TO GENERAL SUMMARY						47	1	12	12	1.28	1980	520																													

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DETOUR PLAN FOR IR-76 WESTBOUND, RAMP T

- CLOSED RAMPS, RAMP T CLOSED PER STANDARD CONSTRUCTION DRAWING MT-98.29
- ← RAMP T DETOUR ROUTE: IR-76 EAST / IR-77 SOUTH / IR-277 WEST
ALTERNATIVE: SR-21 SOUTH



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

T1 PORTABLE CHANGEABLE MESSAGE SIGN
-PLACE 10 DAYS PRIOR TO CLOSURE AT 3 LOCATIONS

MESSAGE: 1) 76 WEST
TO 277 E
CLOSED

2) <DATES>

T2 PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGE: 1) 76 WEST
TO 277 E
CLOSED

2) USE
21 SOUTH

T3 PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGE: 1) 76 WEST
TO 277 E
CLOSED

2) USE
76 EAST

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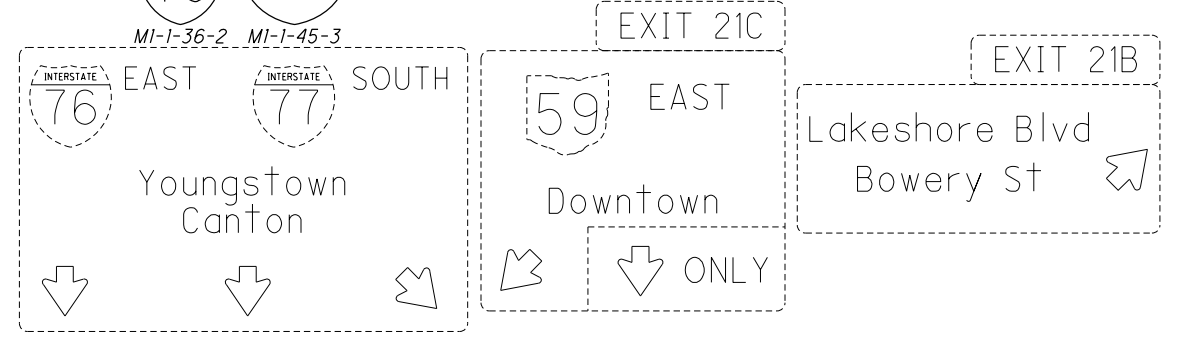
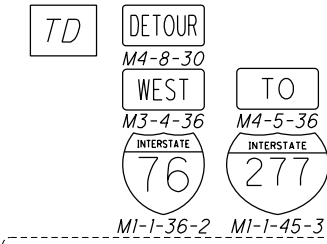
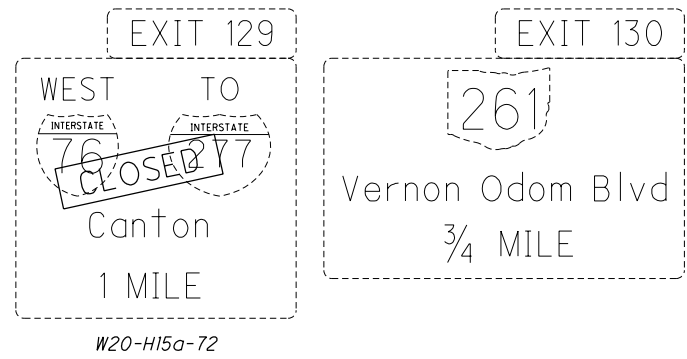
DETOUR PLAN - RAMP T

SUM-76-6.40

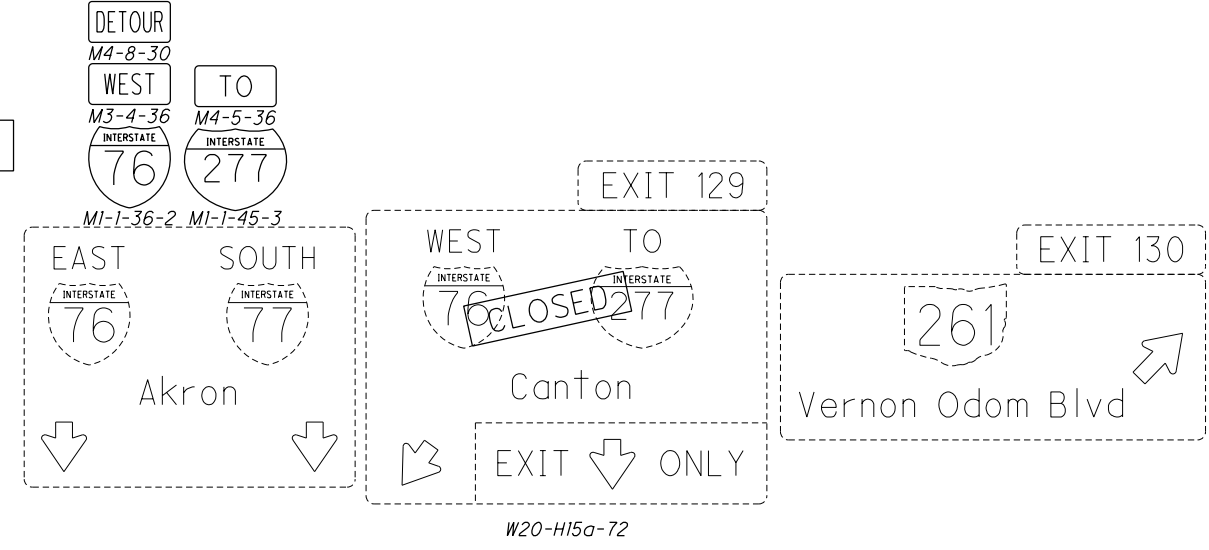
SEE SHEETS 12-14 FOR THE REST OF THE SIGN INDEX

o:\2020\2020018\ProjectData\SUM\11218\Design\MOT\Sheets\11218_MD001.dgn_Sheet 3/12/2020 7:44:04 AM kmonas

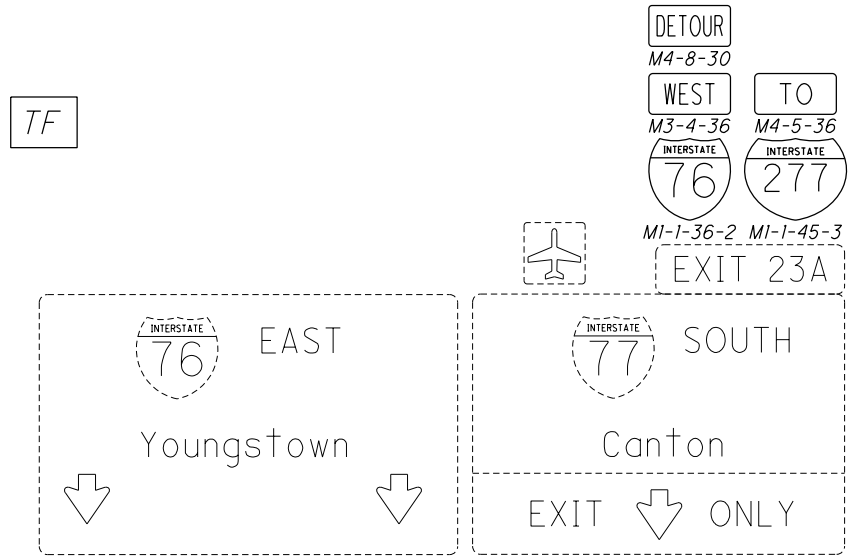
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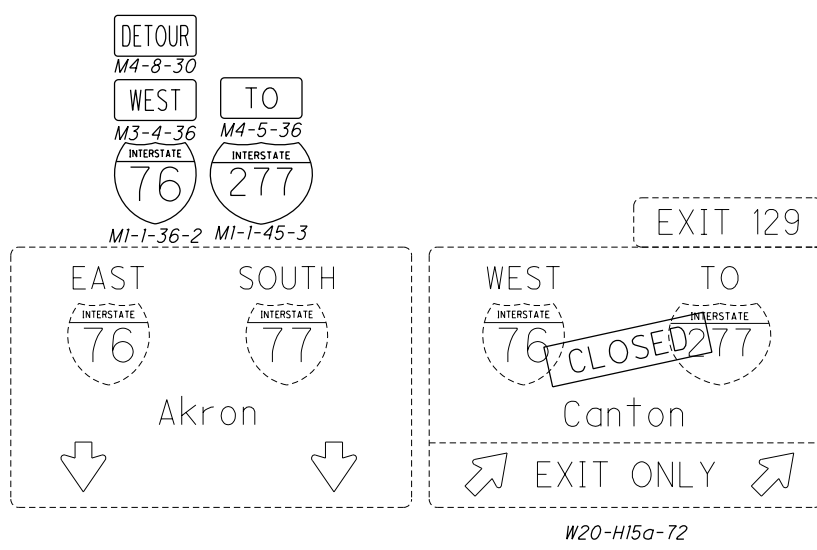
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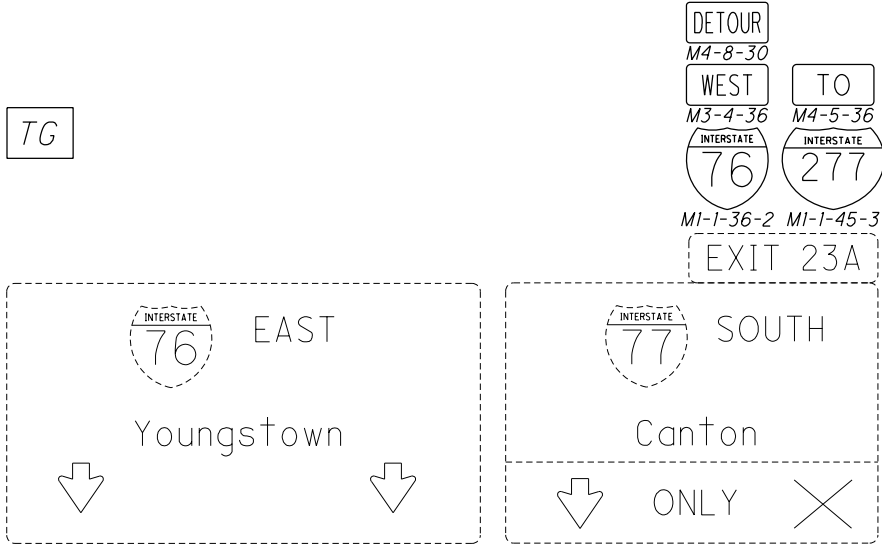
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TC



TG



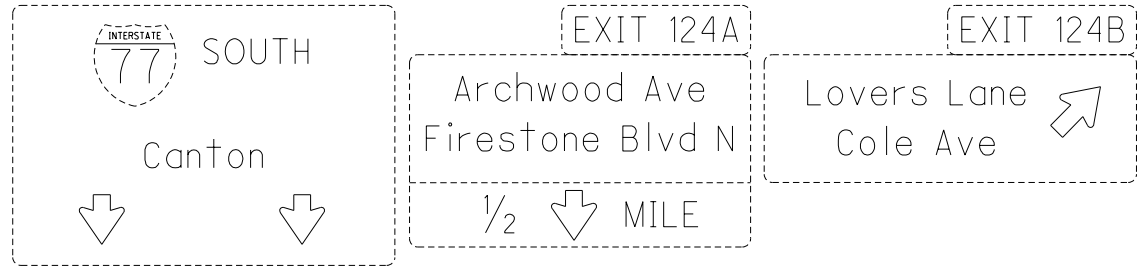
CALCULATED
BEB
CHECKED
AKF

DETOUR PLAN - RAMP T

SUM-76-6.40

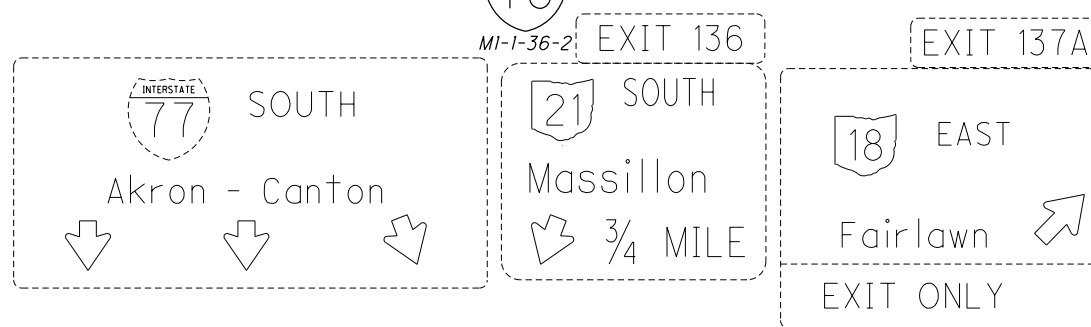
o:\2020\2020018\ProjectData\SUM\11218\Design\MOT\Sheets\11218_MD001.dgn_Sheet_3/12/2020 7:44:04 AM kmonas

TH
DETOUR
M4-8-30
WEST
M3-4-36
TO
M4-5-36
INTERSTATE
76
INTERSTATE
277
MI-1-36-2 MI-1-45-3



TK

DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE
76
MI-1-36-2



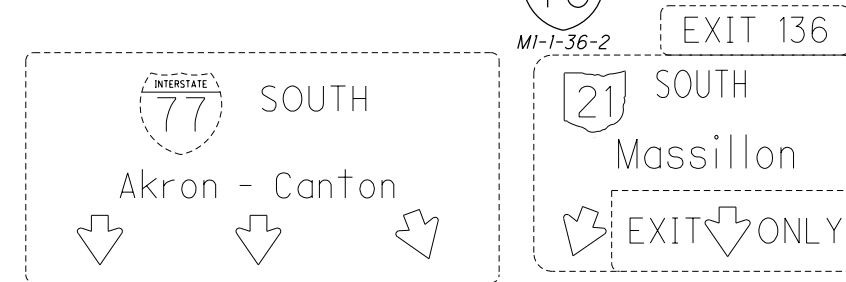
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DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE
76
MI-1-36-2



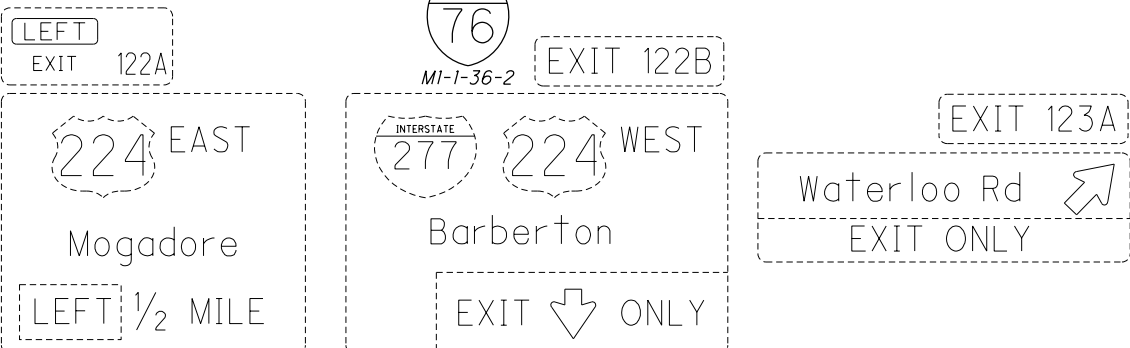
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DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE
76
MI-1-36-2



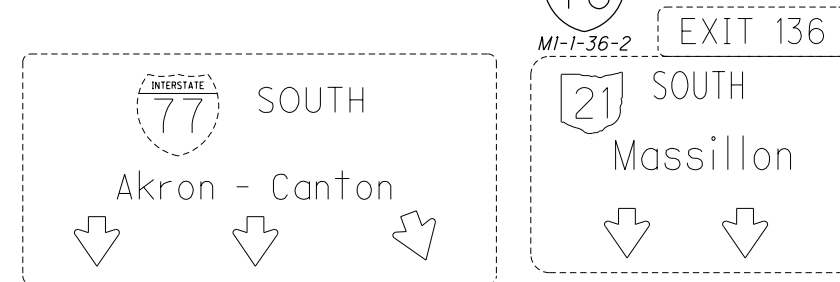
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DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE
76
MI-1-36-2



TM

DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE
76
MI-1-36-2



CALCULATED
BEB
CHECKED
AKF

DETOUR PLAN - RAMP T

SUM-76-6.40

O:\2020\2020018\ProjectData\SUM\11218\Design\MOT\Sheets\11218_MD001.dgn_Sheet 3/12/2020 7:44:05 AM kmonas

TN

DETOUR
M4-8-30
WEST TO
M3-4-36 M4-5-36
INTERSTATE INTERSTATE
76 277
MI-1-36-2 MI-1-45-3

EXIT 124B

INTERSTATE SOUTH
77
↓

Lovers Lane
Cole Ave
KEEP RIGHT

TO

DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE
76
MI-1-36-2

EXITS 122A-B

INTERSTATE INTERSTATE
277 224
Barberton
Mogadore
3/4 MILE

EXIT 123A

Waterloo Rd
1/2 MILE

TP

DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE
76
MI-1-36-2
M6-2R-30

EXIT 122B

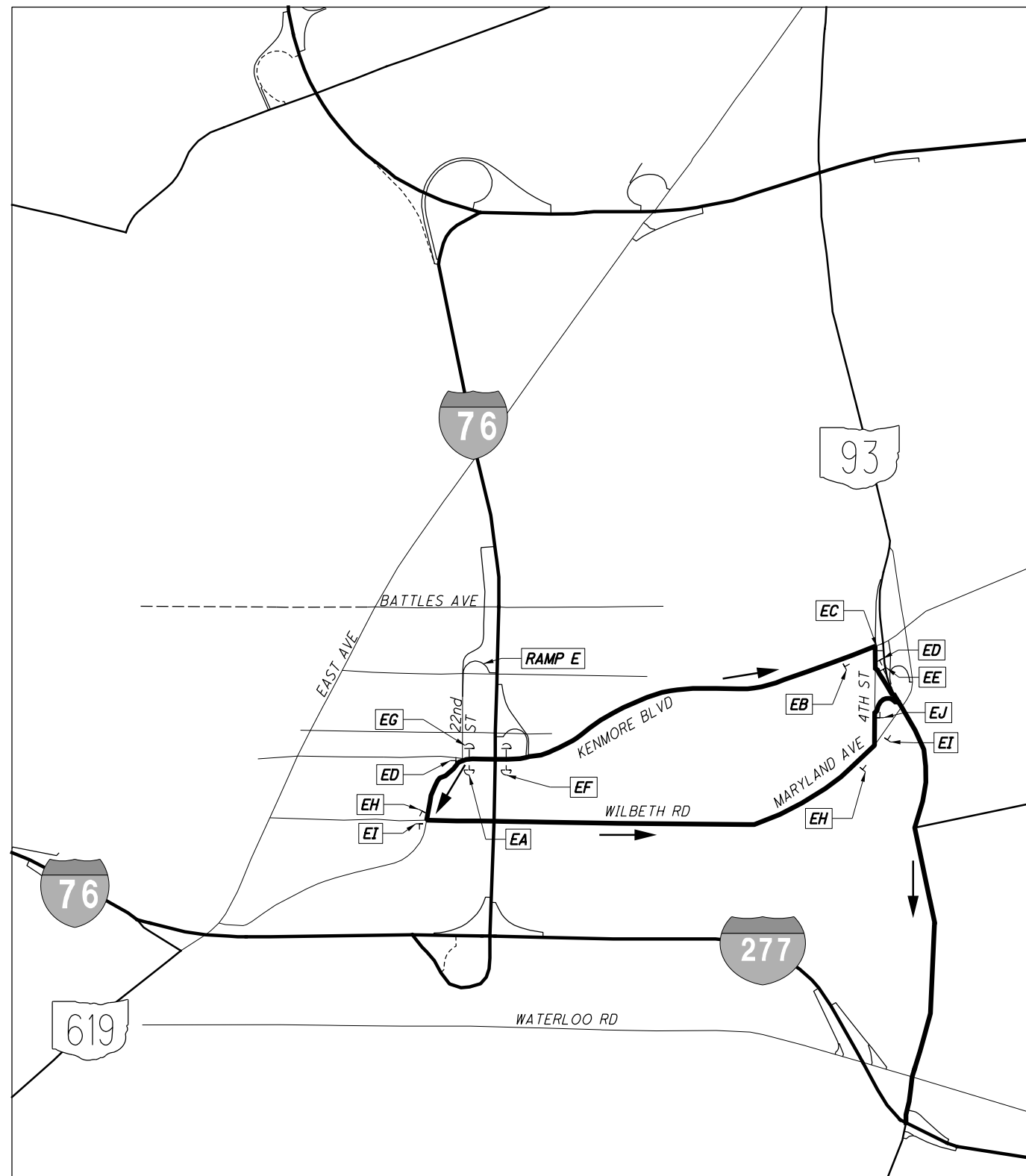
INTERSTATE INTERSTATE
277 224 WEST
Barberton

EXIT ↗ ONLY

CALCULATED
BEB
CHECKED
AKF

DETOUR PLAN - RAMP T

SUM-76-6.40



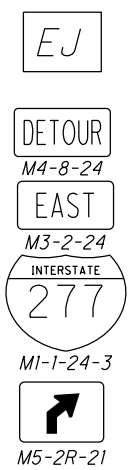
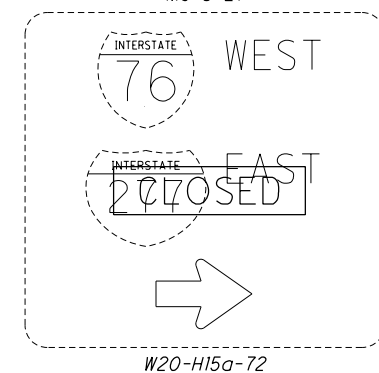
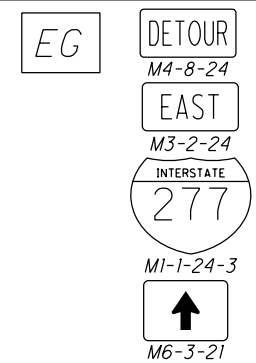
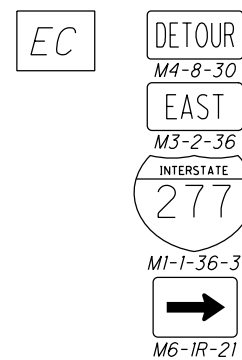
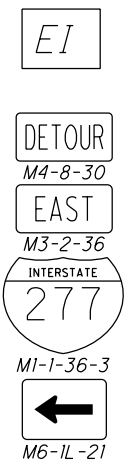
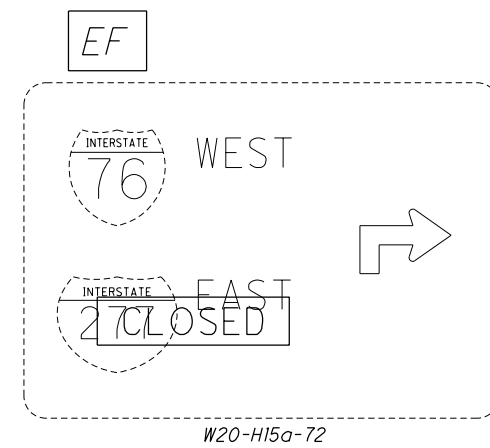
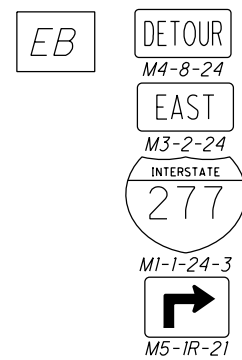
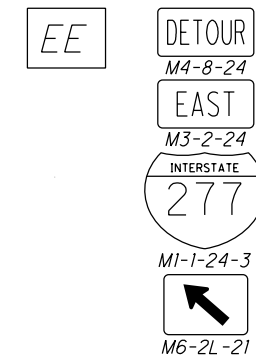
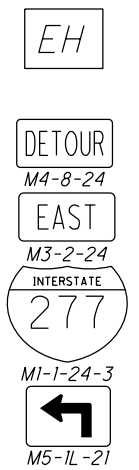
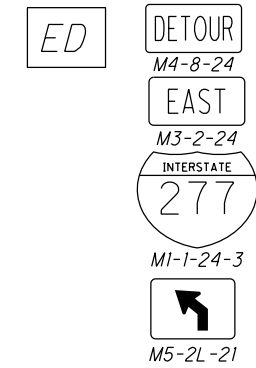
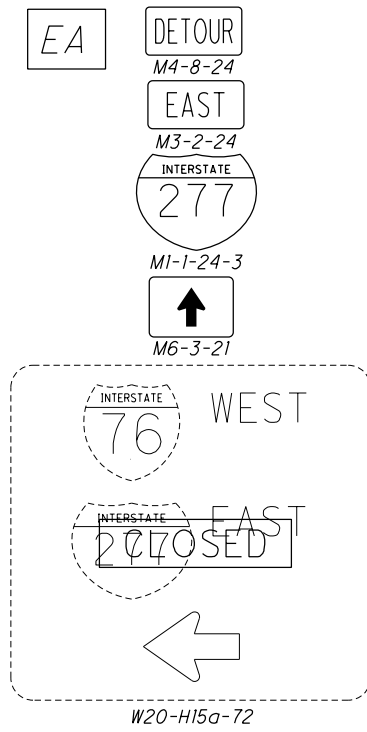
DETOUR PLAN FOR I.R.-277, EASTBOUND,
(22nd ST TO IR-76 WEST TO I.R.-277 EAST)

← OFFICIAL DETOUR ROUTE:
 EB KENMORE BLVD:
 IR-277 EAST: KENMORE BLVD / SR-93 SOUTH
 WB KENMORE BLVD:
 IR-277 EAST: KENMORE BLVD / WILBETH RD / MARYLAND AVE / 4TH ST / SR-93 SOUTH

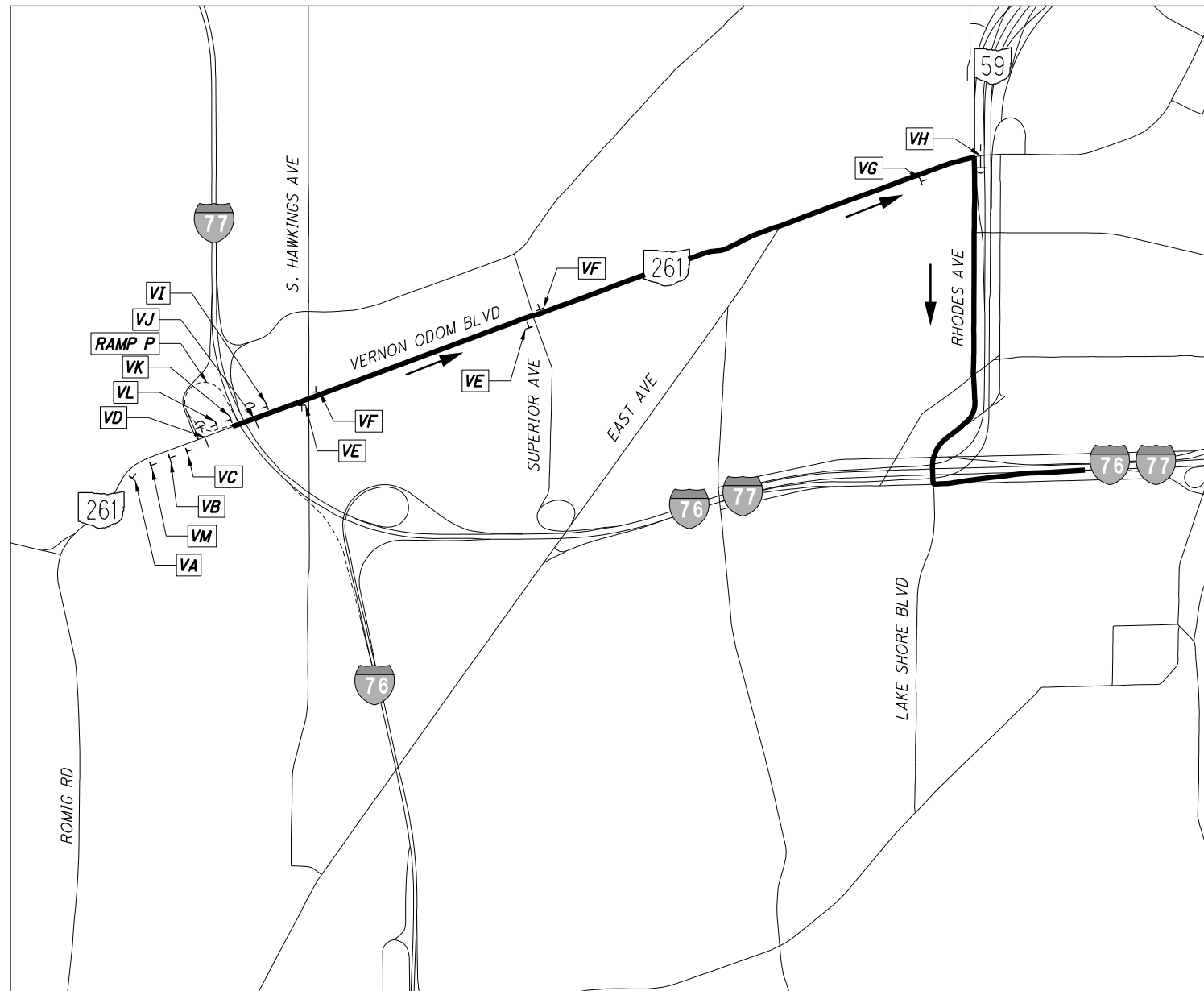


NOT TO SCALE

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



o:\2020\2020018\ProjectData\SUM\11218\Design\MOT\Sheets\11218_MD003.dgn Sheet 3/12/2020 7:44:07 AM kmonas



DETOUR PLAN FOR VERNON ODOM BLVD. ENTRANCE RAMP, RAMP P

--- CLOSED RAMPS, RAMP P CLOSED PER SCD MT-101.60

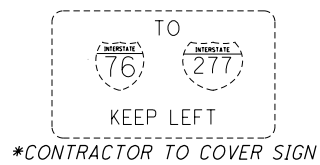
← VERNON ODOM ENTRANCE RAMP DETOUR ROUTE: VERNON ODOM BLVD / RHODES AVE / LAKE SHORE BLVD / IR-77



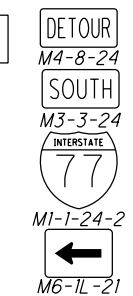
NOT TO SCALE

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

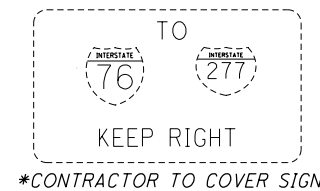
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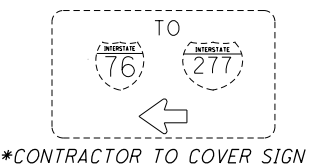
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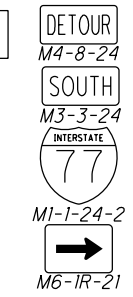
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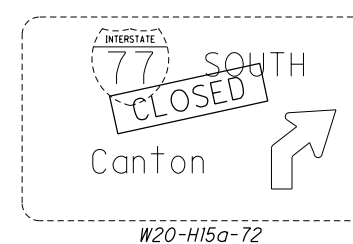
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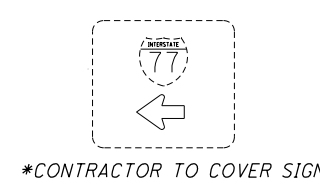
VF



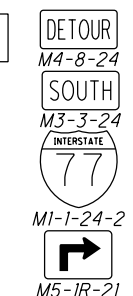
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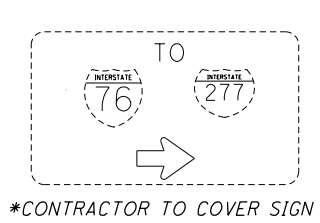
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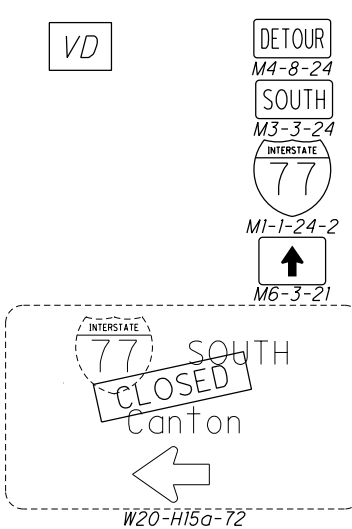
VG



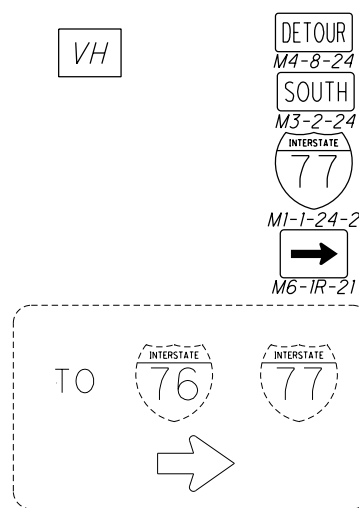
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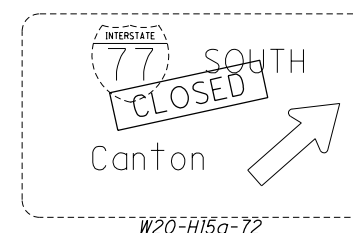
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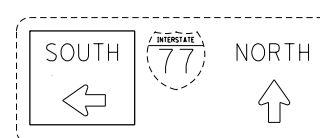
VH



VL

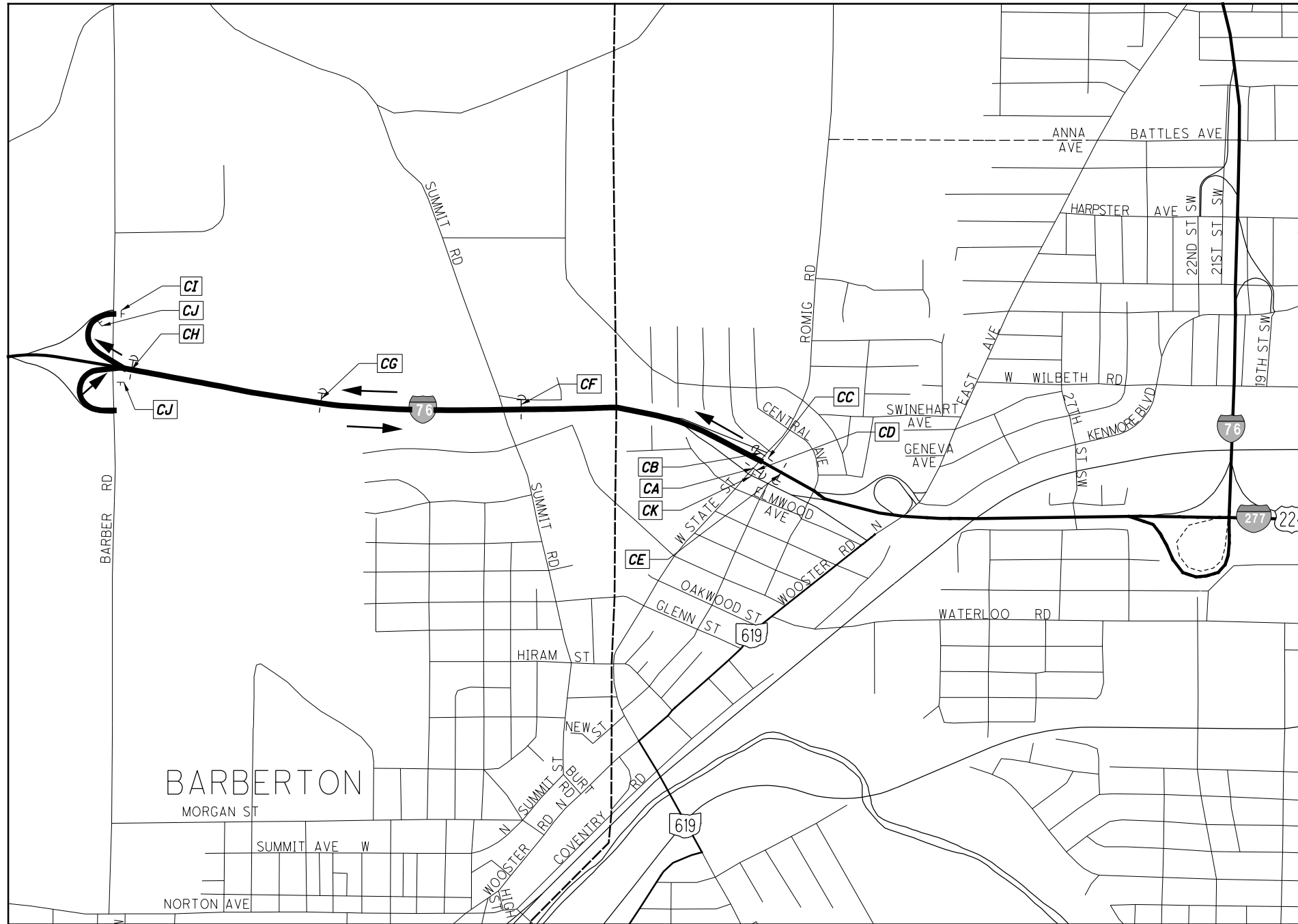


VM



PROPOSED TEMPORARY OVERLAY (24" X 24")

o:\2020\2020018\ProjectData\SUM\11218\Design\MOT\Sheets\11218_MD004.dgn Sheet 3/12/2020 7:44:08 AM kmonas



DETOUR FOR US-224 EASTBOUND AT W. STATE ST.



NOT TO SCALE

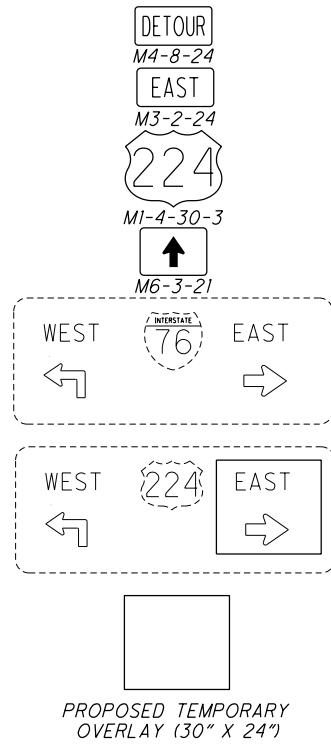
NOTES: 1. CONTRACTOR SHALL COORDINATE WITH SUM-76-5.53 (PID 96670) TO COVER ANY CONFLICTING SIGNING THAT IS NOT SHOWN IN THIS DETOUR PLAN.

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

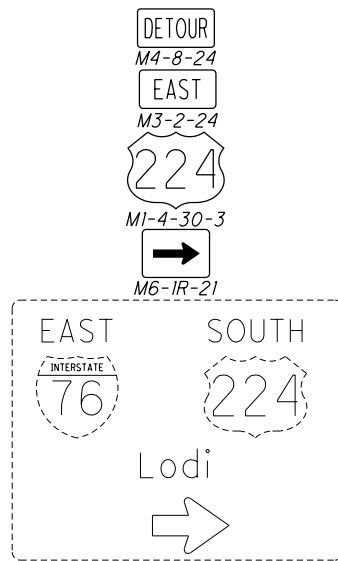
SEE SHEET 18 FOR SIGN INDEX.

O:\2020\2020018\ProjectData\SUM\11218\Design\MOT\Sheets\11218_MD004.dgn Sheet 3/12/2020 7:44:08 AM kmonas

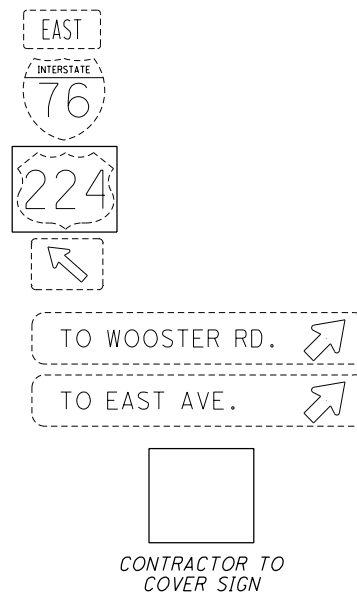
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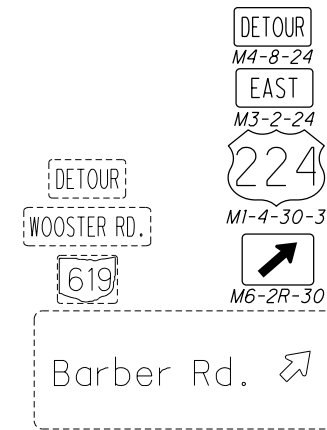
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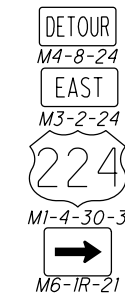
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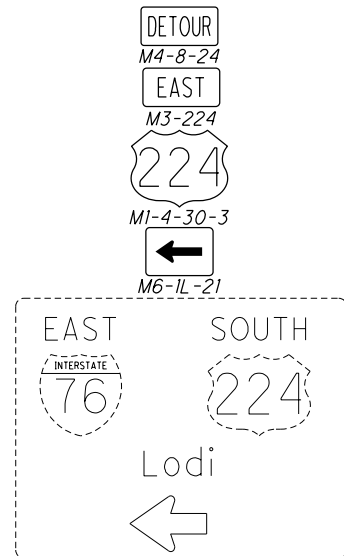
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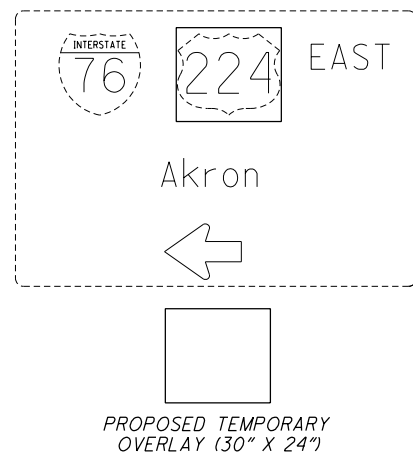
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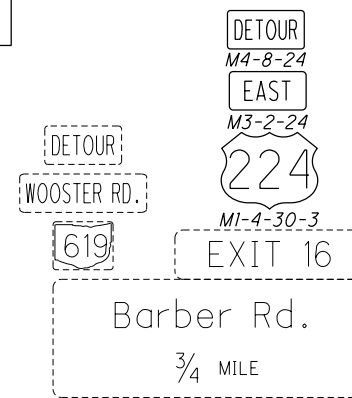
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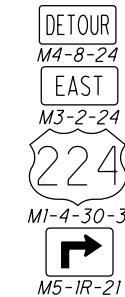
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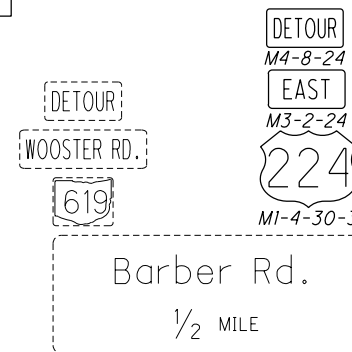
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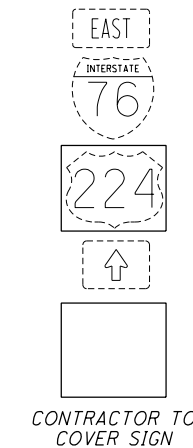
CJ



CG



CK



o:\2020\2020018\ProjectData\SUM\11218\Design\MOT\Sheets\11218_MPO01.dgn 86979MP108 3/12/2020 7:44:10 AM kmonas

NOTES:

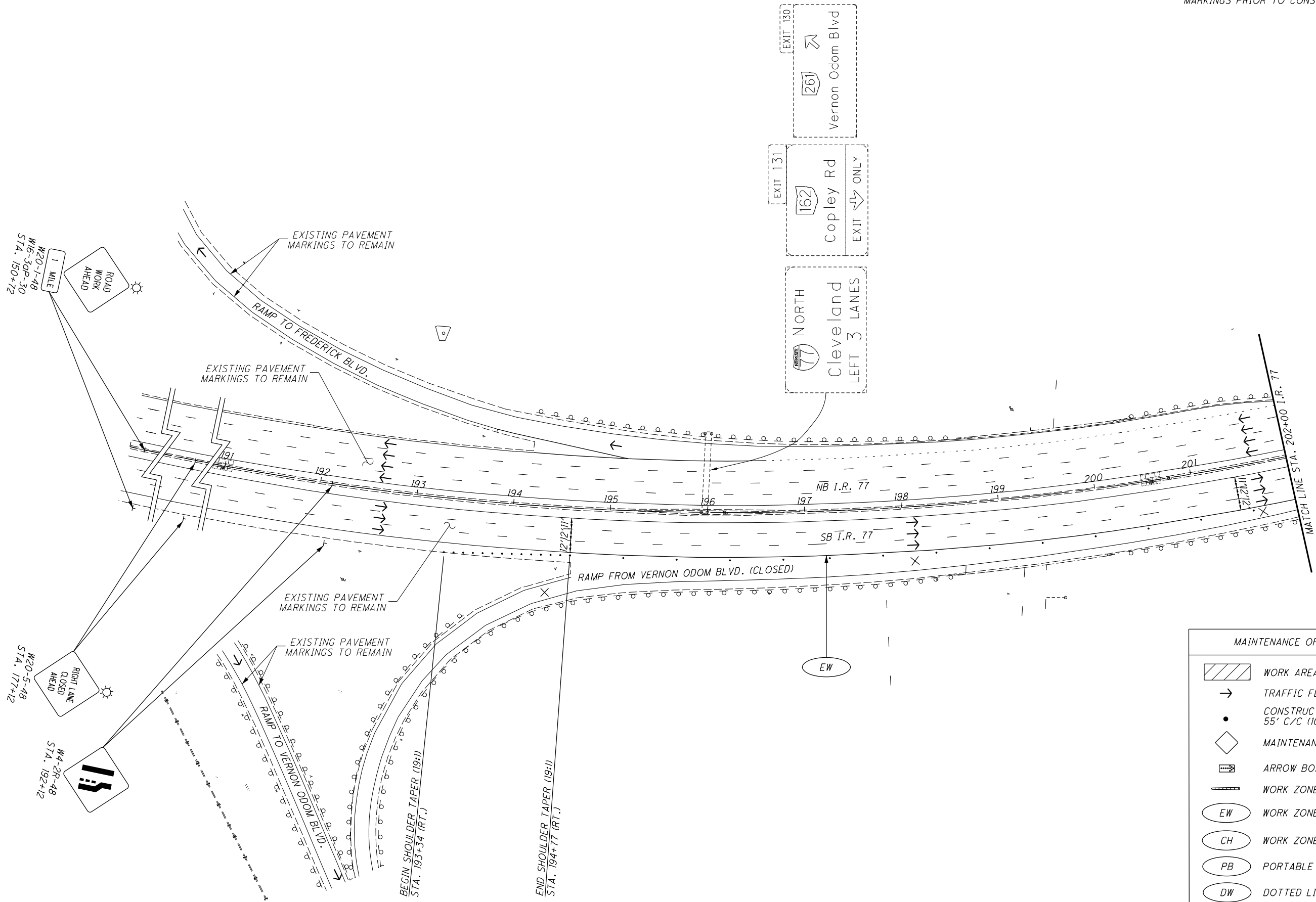
1. CENTERLINES SHOWN ON PLANS ARE FOR STATIONING REFERENCE ONLY. THE CONTRACTOR SHALL NOT USE THEM FOR RECORD PURPOSES.
2. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.

CALCULATED
BEB
CHECKED
AKF

0 25 50 100
HORIZONTAL
SCALE IN FEET

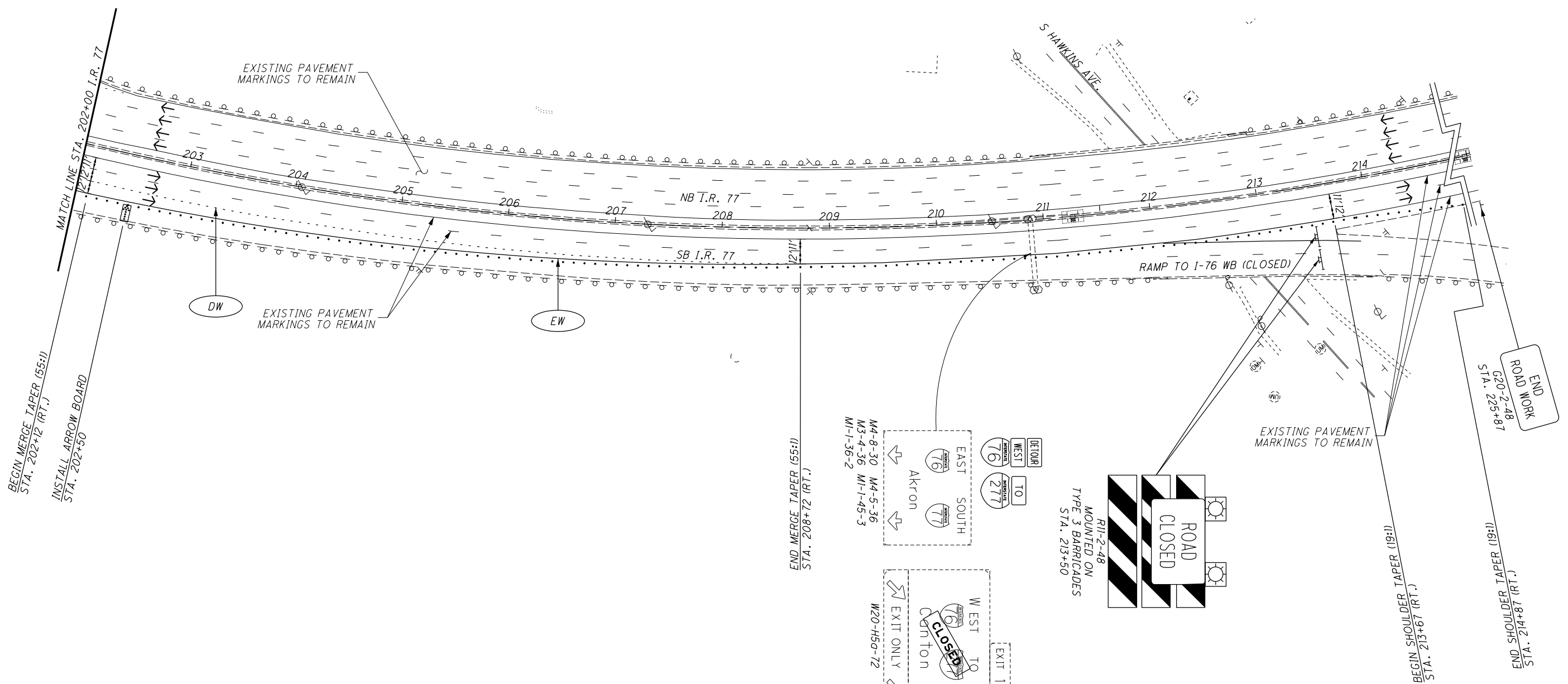
MAINTENANCE OF TRAFFIC PLAN - I.R. 77
BEGIN TO STA. 202+00

SUM-76-6.40



MAINTENANCE OF TRAFFIC LEGEND	
	WORK AREA
	TRAFFIC FLOW
	CONSTRUCTION DRUM SPACED AT 55' C/C (110' C/C AT TRANSITIONS)
	MAINTENANCE OF TRAFFIC SIGN
	ARROW BOARD
	WORK ZONE IMPACT ATTENUATOR
	WORK ZONE EDGE LINE, WHITE
	WORK ZONE CHANNELIZING LINE
	PORTABLE BARRIER
	DOTTED LINE, WHITE

o:\2020\2020018\ProjectData\SUM\11218\Design\MOT\Sheets\11218_MPO02.dgn 86979MP109 3/12/2020 7:44:11 AM kmonas



- NOTES:
- CENTERLINES SHOWN ON PLANS ARE FOR STATIONING REFERENCE ONLY. THE CONTRACTOR SHALL NOT USE THEM FOR RECORD PURPOSES.
 - THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
 - FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 19.

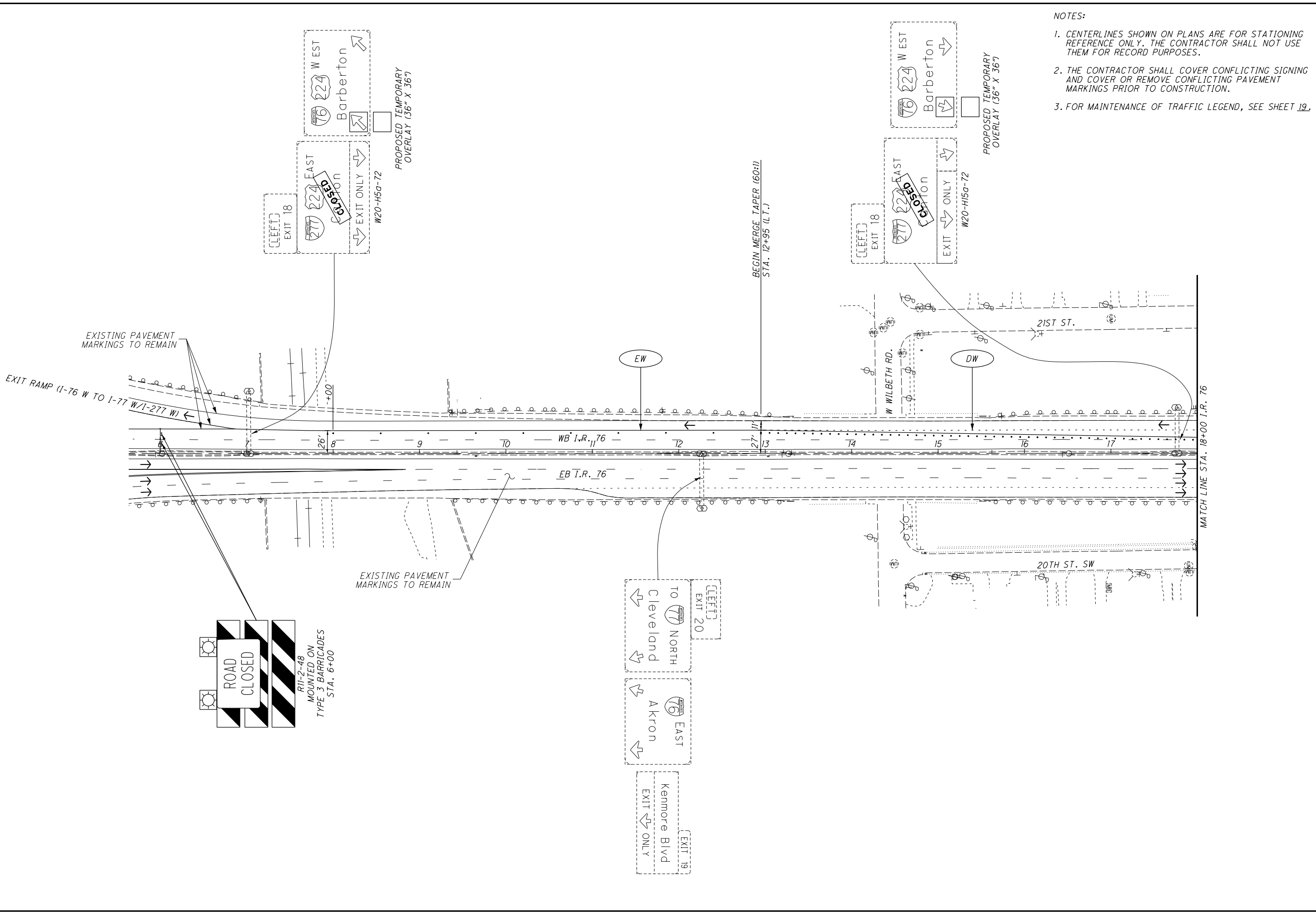
CALCULATED
BEB
CHECKED
AKF

0 25 50 100
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - I.R. 77
STA. 202+00 TO END**

SUM-76-6.40

O:\2020\2020018\ProjectData\SUM\11218\Design\MOT\Sheets\11218_MPO20.dgn 86979MP202 3/12/2020 7:44:12 AM kmonas



- NOTES:
1. CENTERLINES SHOWN ON PLANS ARE FOR STATIONING REFERENCE ONLY. THE CONTRACTOR SHALL NOT USE THEM FOR RECORD PURPOSES.
 2. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
 3. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 19.

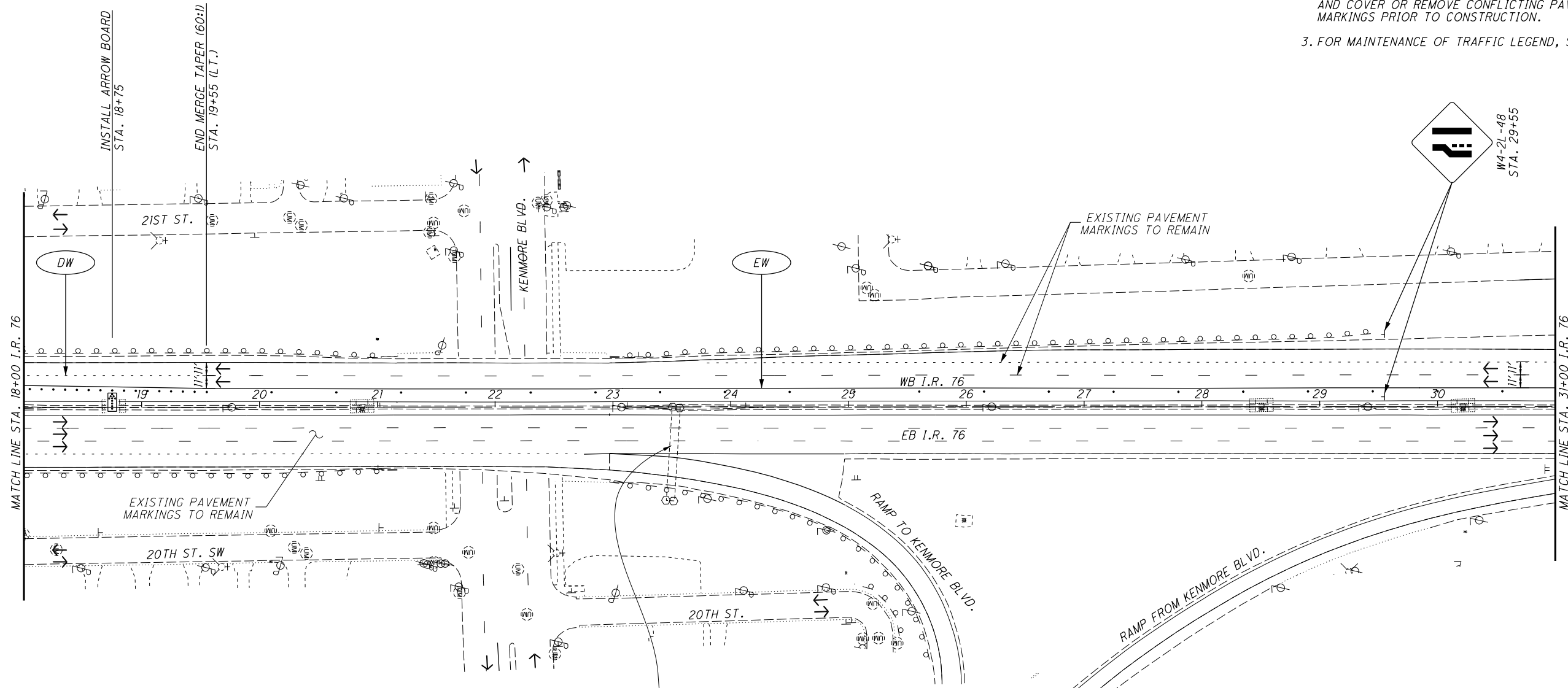
CALCULATED
CRW
CHECKED
AKF

0 50 100
HORIZONTAL
SCALE IN FEET

N

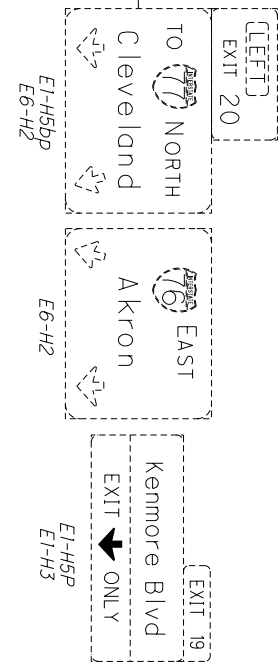
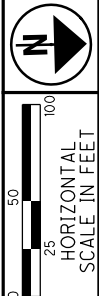
**MAINTENANCE OF TRAFFIC PLAN - I-76
BEGIN TO STA. 18+00**

SUM-76-6.40



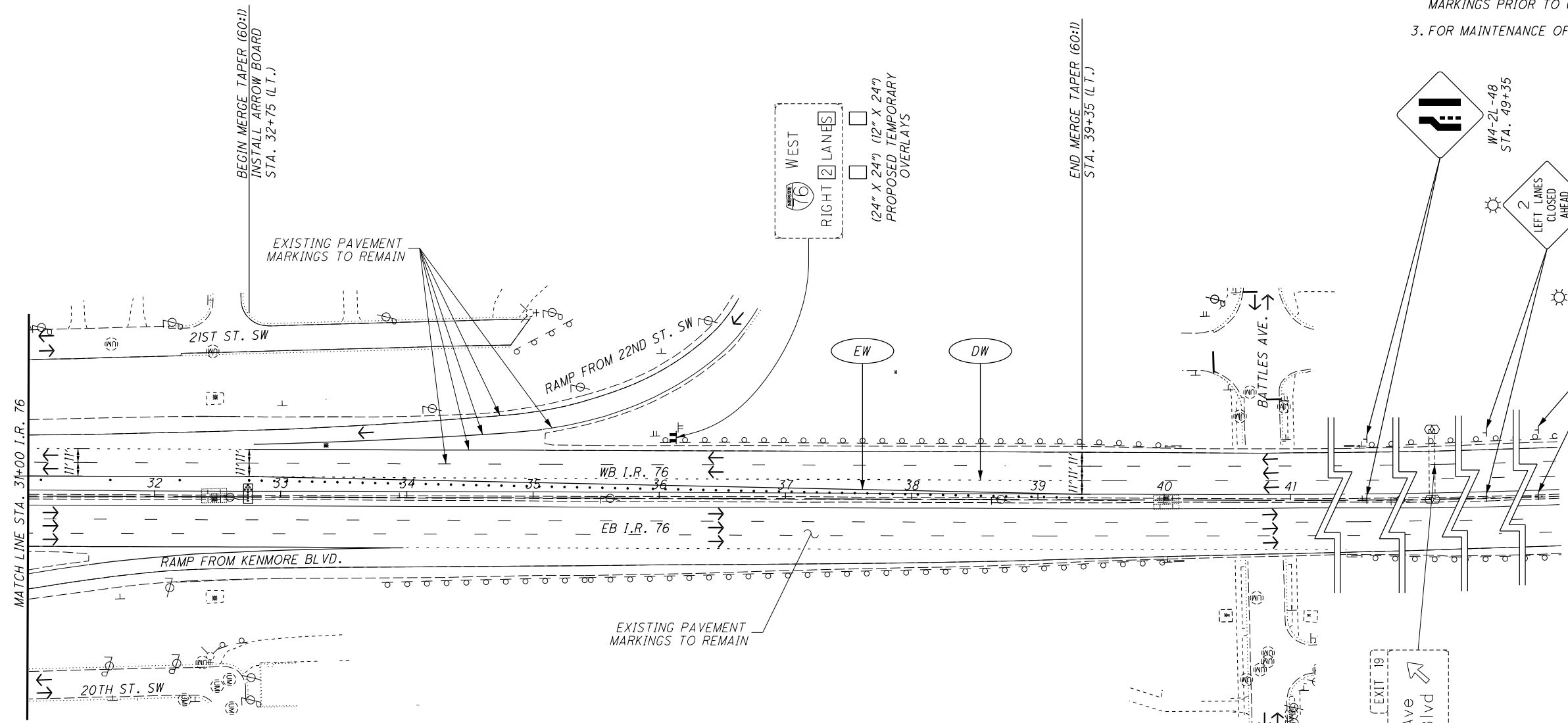
- NOTES:
1. CENTERLINES SHOWN ON PLANS ARE FOR STATIONING REFERENCE ONLY. THE CONTRACTOR SHALL NOT USE THEM FOR RECORD PURPOSES.
 2. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
 3. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 19.

CALCULATED	CRW
CHECKED	AKF



**MAINTENANCE OF TRAFFIC PLAN - I.R. 76
STA. 18+00 TO STA. 31+00**

SUM-76-6.40



- NOTES:
1. CENTERLINES SHOWN ON PLANS ARE FOR STATIONING REFERENCE ONLY. THE CONTRACTOR SHALL NOT USE THEM FOR RECORD PURPOSES.
 2. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
 3. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 19.

CALCULATED
CRW
CHECKED
AKF

0 25 50 100
HORIZONTAL
SCALE IN FEET

EXIT 18
EXIT 19
Battles Ave
Kenmore Blvd

WEST
Barborton

PROPOSED TEMPORARY
OVERLAY (36" X 36")

W20-H150-72
EXIT ONLY

W4-2L-48
STA. 49+35

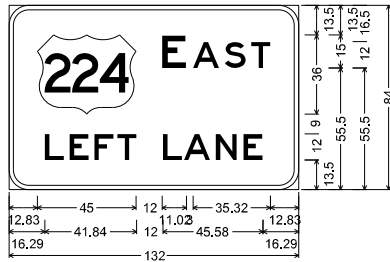
W20-50-48
STA. 64+35

ROAD WORK AHEAD
1 MILE
W20-1-48
W16-30P-30
STA. 90+75

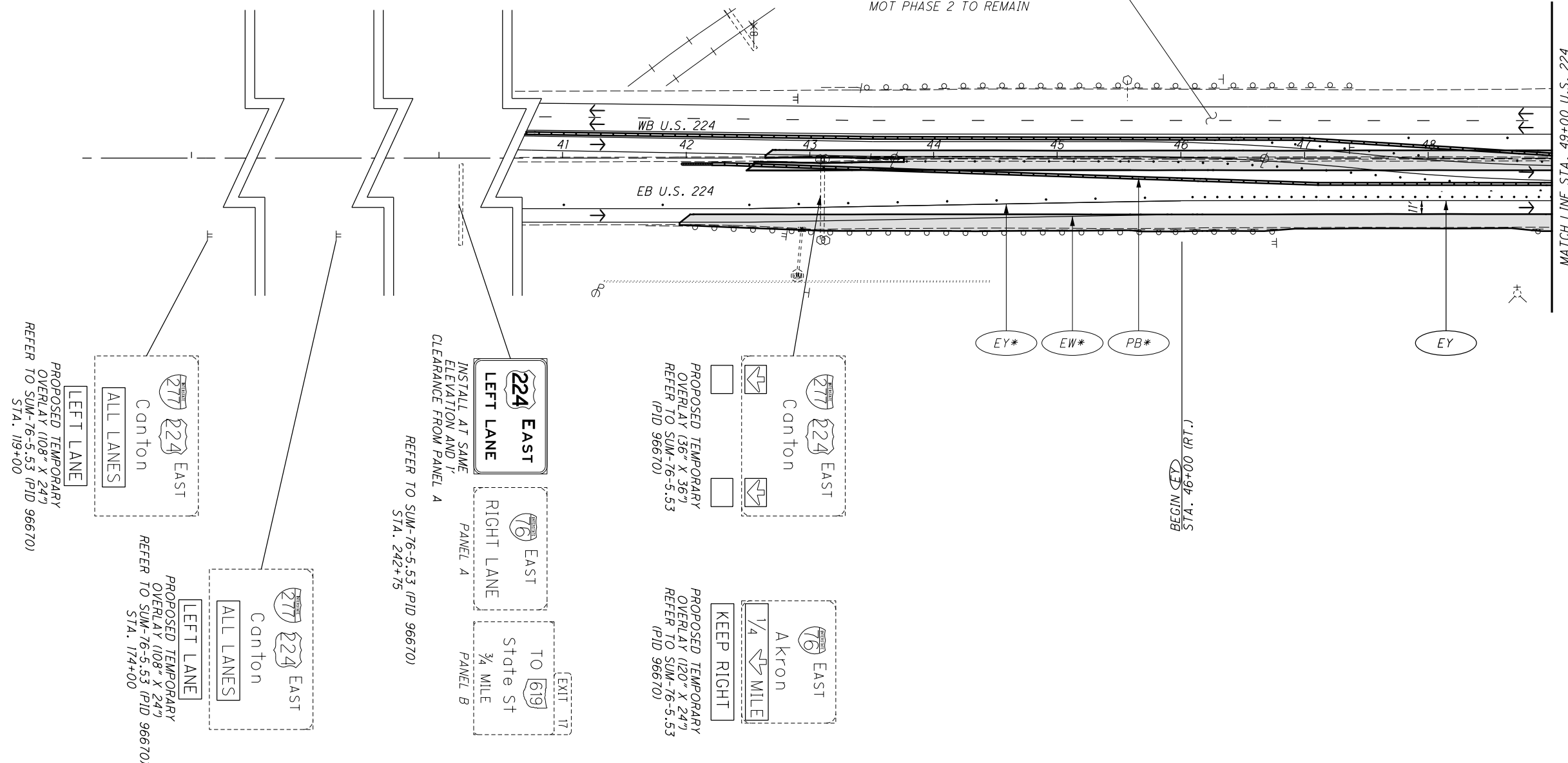
2 LEFT LANES CLOSED AHEAD

**MAINTENANCE OF TRAFFIC PLAN - I.R. 76
STA. 31+00 TO END**

O:\2020\2020018\ProjectData\SUM\111218\Design\MOT\Sheets\111218_MP030.dgn 86979MP306 3/12/2020 7:44:16 AM kmonas



SIGN CAD DETAIL



- NOTES:
1. CENTERLINES SHOWN ON PLANS ARE FOR STATIONING REFERENCE ONLY. THE CONTRACTOR SHALL NOT USE THEM FOR RECORD PURPOSES.
 2. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
 3. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 19.

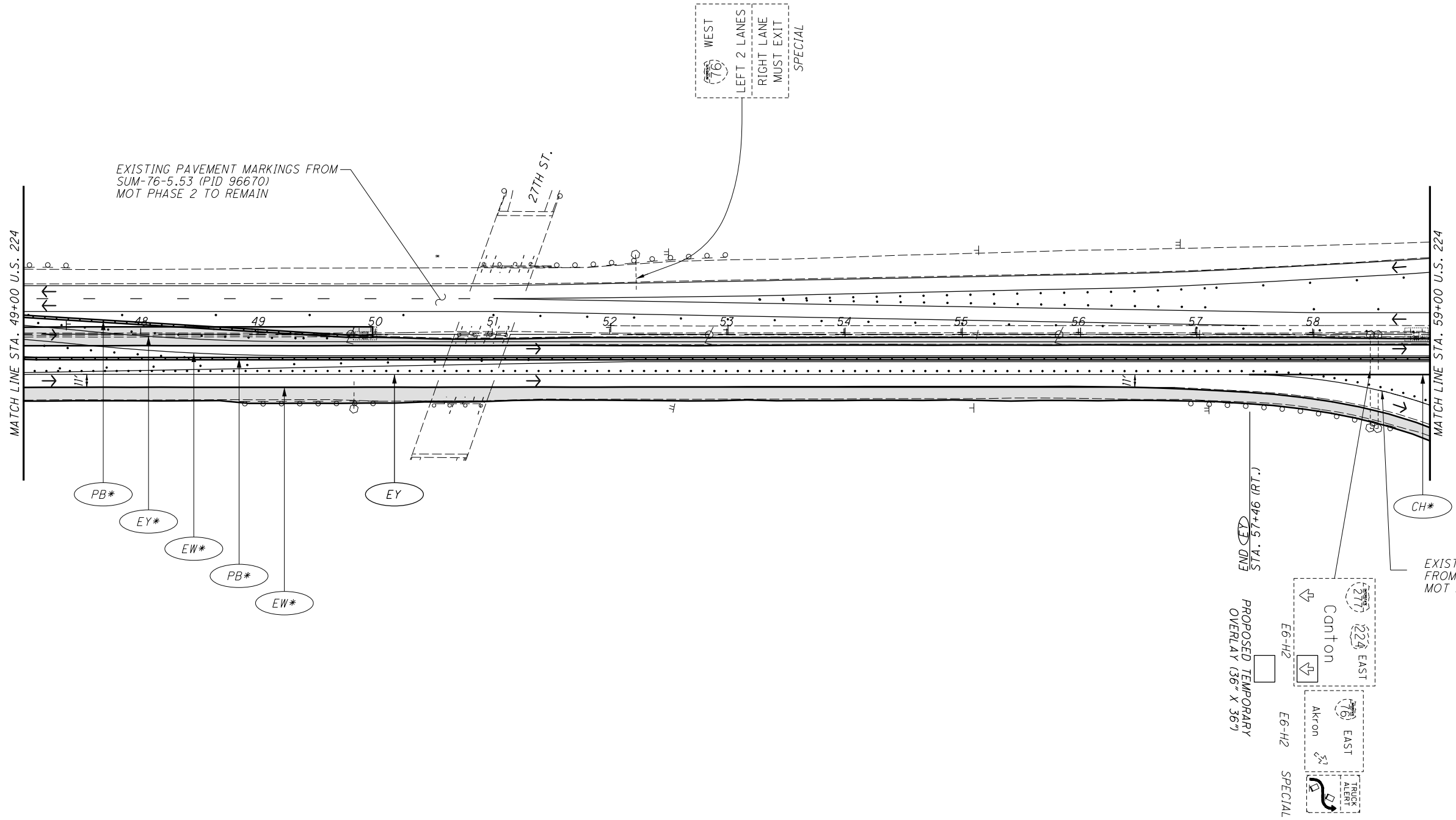
CALCULATED
BEB
CHECKED
AKF

0 50 100
25
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN
U.S. 224 / I.R. 277, BEGIN TO STA. 49+00

SUM-76-6.40

* EXISTING FROM SUM-76-5.53 (PID 96670) MOT PHASE 2 TO REMAIN



NOTES:

1. CENTERLINES SHOWN ON PLANS ARE FOR STATIONING REFERENCE ONLY. THE CONTRACTOR SHALL NOT USE THEM FOR RECORD PURPOSES.
2. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
3. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 19.

CALCULATED
BEB
CHECKED
AKF

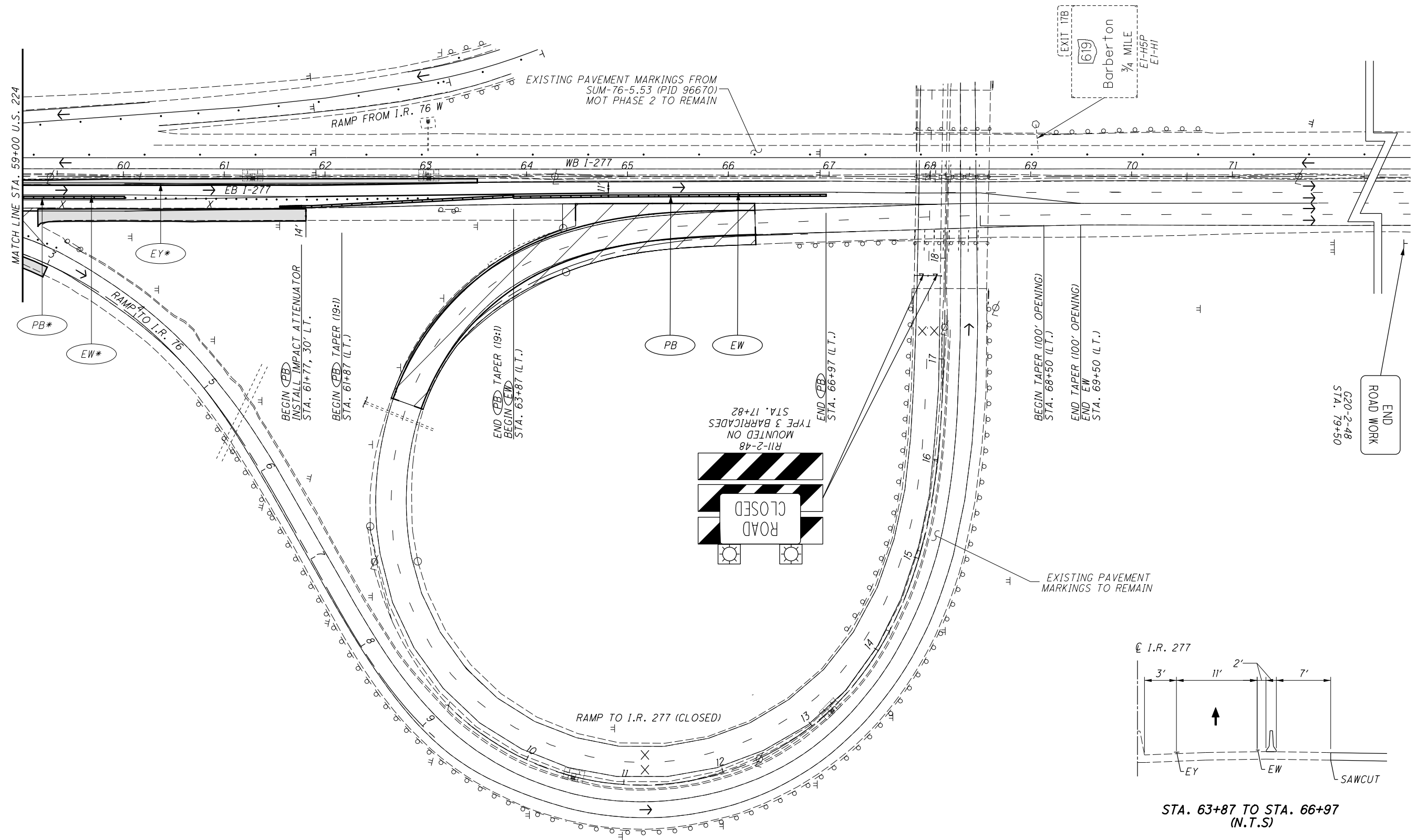
0 50 100
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN
U.S. 224 / I.R. 277, STA. 47+00 TO STA. 59+00

SUM-76-6.40

* EXISTING FROM SUM-76-5.53 (PID 96670) MOT PHASE 2 TO REMAIN

o:\2020\2020018\ProjectData\SUM\111218\Design\MOT\Sheets\111218_MP032.dgn 86979MP307 3/12/2020 7:44:19 AM kmonas



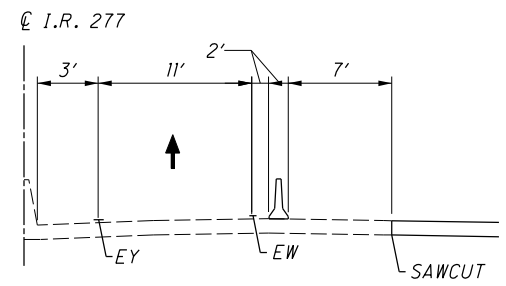
- NOTES:
- CENTERLINES SHOWN ON PLANS ARE FOR STATIONING REFERENCE ONLY. THE CONTRACTOR SHALL NOT USE THEM FOR RECORD PURPOSES.
 - THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
 - FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 19.

CALCULATED
 BEB
 CHECKED
 AKF

0 50 100
 HORIZONTAL SCALE IN FEET

26
 43

MAINTENANCE OF TRAFFIC PLAN
US 224 / I.R. 277, STA. 59+00 TO END



STA. 63+87 TO STA. 66+97 (N.T.S)

* EXISTING FROM SUM-76-5.53 (PID 96670) MOT PHASE 2 TO REMAIN

O:\2020\2020018\ProjectData\SUM\11218\Design\Roadway\Sheets\11218_G0002.dgn_Sheet_3/24/2020 11:18:54 AM kmonas

SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7	8	9								01/MS/PV								
			70								70	614	11110	70	HOUR	MAINTENANCE OF TRAFFIC LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
				47							47	614	11630	47	FT	INCREASED BARRIER DELINEATION		
				1							1	614	12336	1	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)		
	LS										LS	614	12420	LS		DETOUR SIGNING		
				12							12	614	13310	12	EACH	BARRIER REFLECTOR, TYPE 1 (ONE WAY)		
				12							12	614	13350	12	EACH	OBJECT MARKER, ONE WAY		
	6										6	614	18601	6	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	7	
				1.28							1.28	614	22010	1.28	MILE	WORK ZONE EDGE LINE, CLASS 1, 6"		
				1,980							1,980	614	24000	1,980	FT	WORK ZONE DOTTED LINE, CLASS 1		
	5										5	616	10000	5	MGAL	WATER		
											520	622	41100	520	FT	PORTABLE BARRIER, UNANCHORED		
											LS	614	11000	LS		INCIDENTALS MAINTAINING TRAFFIC		
											LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
											LS	624	10000	LS		MOBILIZATION		

GENERAL SUMMARY

SUM - 76 - 6.40

O:\2020\2020018\ProjectData\SUM\11218\Design\Roadway\Sheets\11218_G500.dgn Sheet 3/12/2020 7:44:21AM kmonas

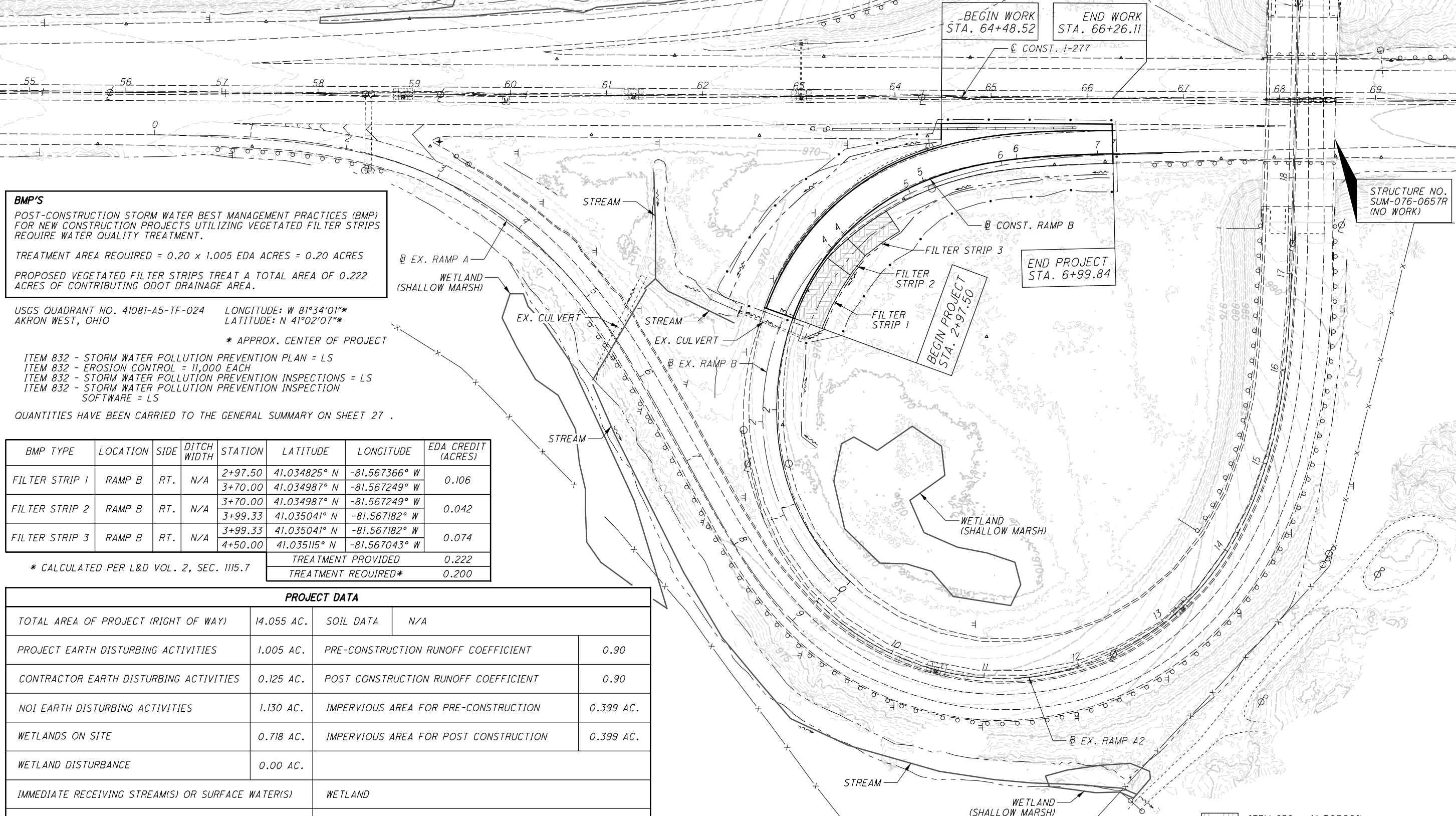
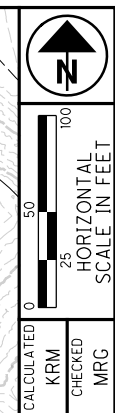
REF. NO.	SHEET NO.	STATION		SIDE	DEPTH						BENDS & BRANCHES - FOR INFORMATION ONLY					
		FROM	TO			TIED CONCRETE BLOCK MAT, TYPE 1	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	6" CONDUIT, TYPE B	PRECAST REINFORCED CONCRETE OUTLET	6" X 6" TEE	6" PLUG	6" X 6" CROSS			
						SY	FT	FT	FT	EACH				EACH	EACH	EACH
U-1	31	2+97.50	3+50.00	CL	18"		53									
U-2	31, 32	3+50.00	4+74.84	CL	18"		125								1	
U-3	31, 32	3+70.00	4+74.84	RT	12"		105								1	
U-4	32	4+74.84	6+99.84	CL/RT	18"		225	12	10	1				1		
U-5	32	4+74.84	6+99.84	RT	12"	2	225									1
TOTALS CARRIED TO GENERAL SUMMARY ON SHEET 24						2	733	12	10	1				1	3	1

SHEET NO.	STATION		203	203	659	659	659	659	659	670					
	FROM	TO	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING (SM)	COMMERCIAL FERTILIZER	TOPSOIL	LIME ((SM)*(9))/43560	WATER ((2*300*(SM))+(300*0.05*(SM)))/9	SLOPE EROSION PROTECTION	SY				
			CY	CY	SY	TON	CY	AC	MGAL	SY					
RAMP B															
33	2+50.00	2+97.50	23	9	84	0.011	3	0.017	0.5	26					
34	3+04.00	3+50.00	151	43	555	0.075	19	0.115	3.1	177					
35	3+75.00	4+25.00	250	21	716	0.097	24	0.148	4.0	226					
36	4+50.00	5+00.00	323	12	558	0.075	11	0.115	3.1	104					
37	5+25.00	5+75.00	191	2	273	0.037		0.056	1.5						
38	6+00.00	6+50.00	103		216	0.029		0.045	1.2						
39	6+75.00	7+25.00	46		171	0.023		0.035	0.9						
40	7+50.00														
SUBTOTALS CARRIED TO GENERAL SUMMARY ON SHEET 24			1087	87	2573	0.35	57	0.53	14	533					

CALCULATED KRM CHECKED MGR	ROADWAY SUBSUMMARY	SUM - 76 - 6.40
	29	43

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF FULL DEPTH RECONSTRUCTION OF RAMP B BETWEEN I-76 WB TO I-277 EB TO CORRECT THE SUB-STANDARD SUPERELEVATION.



BMP'S
 POST-CONSTRUCTION STORM WATER BEST MANAGEMENT PRACTICES (BMP) FOR NEW CONSTRUCTION PROJECTS UTILIZING VEGETATED FILTER STRIPS REQUIRE WATER QUALITY TREATMENT.
 TREATMENT AREA REQUIRED = 0.20 x 1.005 EDA ACRES = 0.20 ACRES
 PROPOSED VEGETATED FILTER STRIPS TREAT A TOTAL AREA OF 0.222 ACRES OF CONTRIBUTING ODOT DRAINAGE AREA.

USGS QUADRANT NO. 41081-A5-TF-024 LONGITUDE: W 81°34'01"*
 AKRON WEST, OHIO LATITUDE: N 41°02'07"*
 * APPROX. CENTER OF PROJECT

- ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN = LS
- ITEM 832 - EROSION CONTROL = 11,000 EACH
- ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS = LS
- ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE = LS

QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY ON SHEET 27 .

BMP TYPE	LOCATION	SIDE	DITCH WIDTH	STATION	LATITUDE	LONGITUDE	EDA CREDIT (ACRES)
FILTER STRIP 1	RAMP B	RT.	N/A	2+97.50	41.034825° N	-81.567366° W	0.106
				3+70.00	41.034987° N	-81.567249° W	
FILTER STRIP 2	RAMP B	RT.	N/A	3+70.00	41.034987° N	-81.567249° W	0.042
				3+99.33	41.035041° N	-81.567182° W	
FILTER STRIP 3	RAMP B	RT.	N/A	3+99.33	41.035041° N	-81.567182° W	0.074
				4+50.00	41.035115° N	-81.567043° W	
TREATMENT PROVIDED							0.222
TREATMENT REQUIRED*							0.200

* CALCULATED PER L&D VOL. 2, SEC. 1115.7

PROJECT DATA			
TOTAL AREA OF PROJECT (RIGHT OF WAY)	14.055 AC.	SOIL DATA	N/A
PROJECT EARTH DISTURBING ACTIVITIES	1.005 AC.	PRE-CONSTRUCTION RUNOFF COEFFICIENT	0.90
CONTRACTOR EARTH DISTURBING ACTIVITIES	0.125 AC.	POST CONSTRUCTION RUNOFF COEFFICIENT	0.90
NOI EARTH DISTURBING ACTIVITIES	1.130 AC.	IMPERVIOUS AREA FOR PRE-CONSTRUCTION	0.399 AC.
WETLANDS ON SITE	0.718 AC.	IMPERVIOUS AREA FOR POST CONSTRUCTION	0.399 AC.
WETLAND DISTURBANCE	0.00 AC.		
IMMEDIATE RECEIVING STREAM(S) OR SURFACE WATER(S)	WETLAND		
SUBSEQUENT RECEIVING STREAM(S) OR SURFACE WATER(S)	N/A		

ITEM 659 - 4" TOPSOIL
 ITEM 670 - SLOPE EROSION PROTECTION

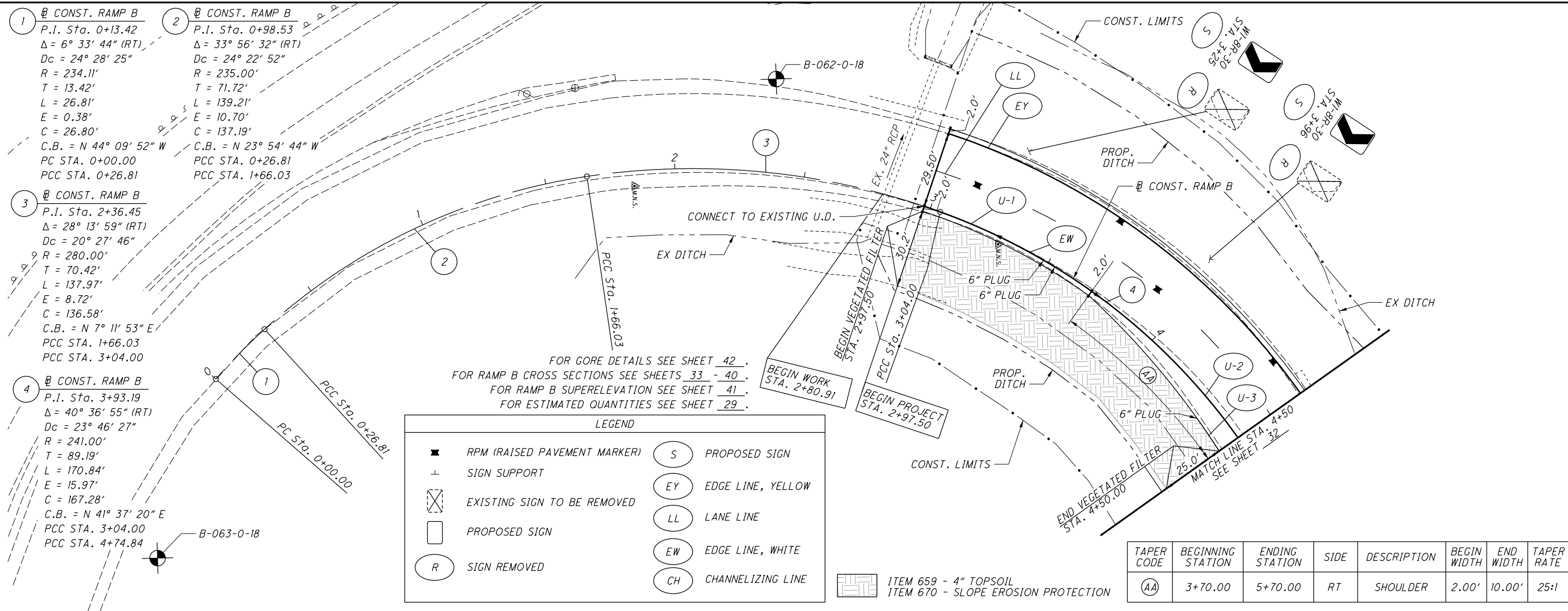
PROJECT SITE PLAN

SUM-76-6.40

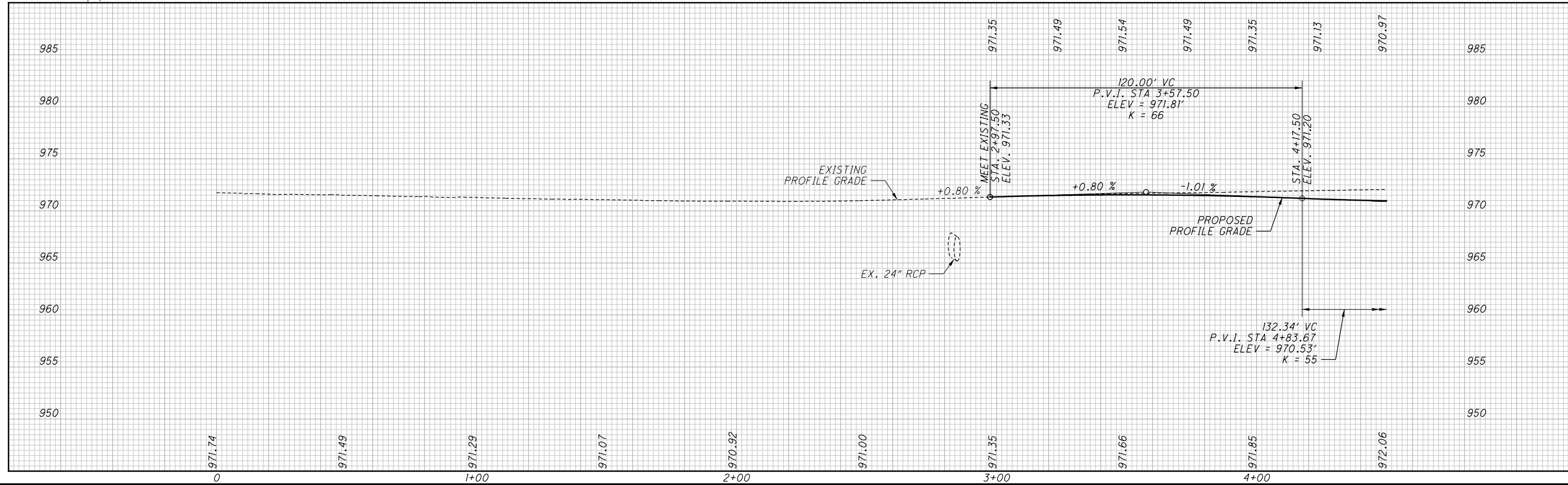
30
43

O:\2020\2020018\ProjectData\SUM\11218\Design\Drainage\Sheets\11218_DE001.dgn Sheet 3/12/2020 7:44:29 AM kmonas

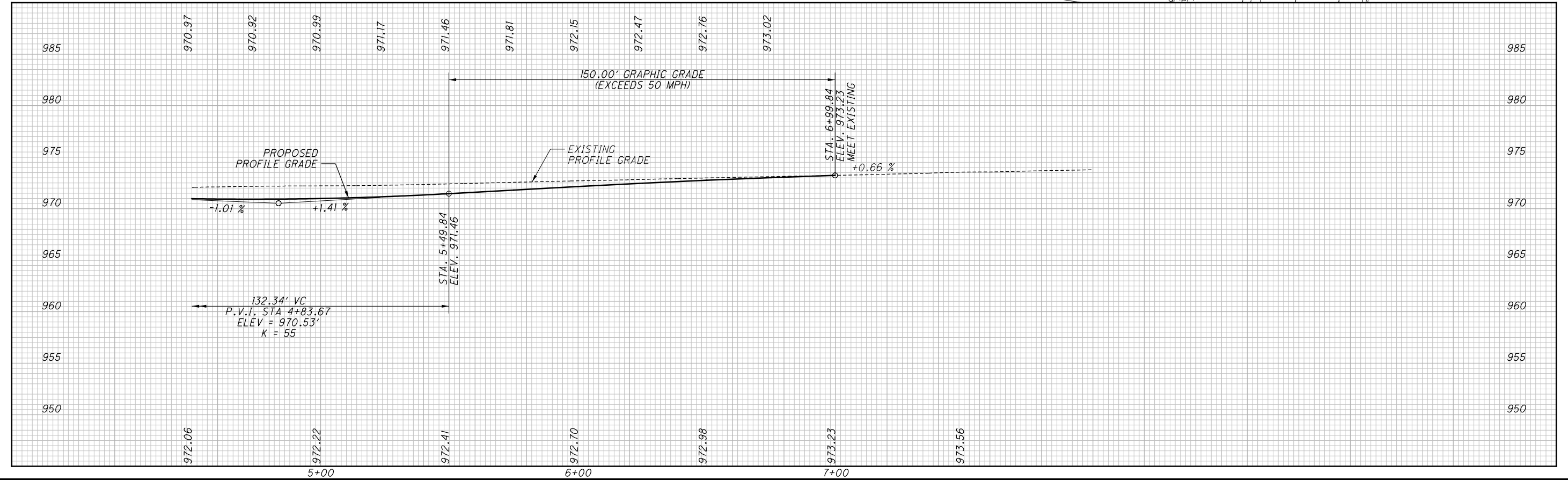
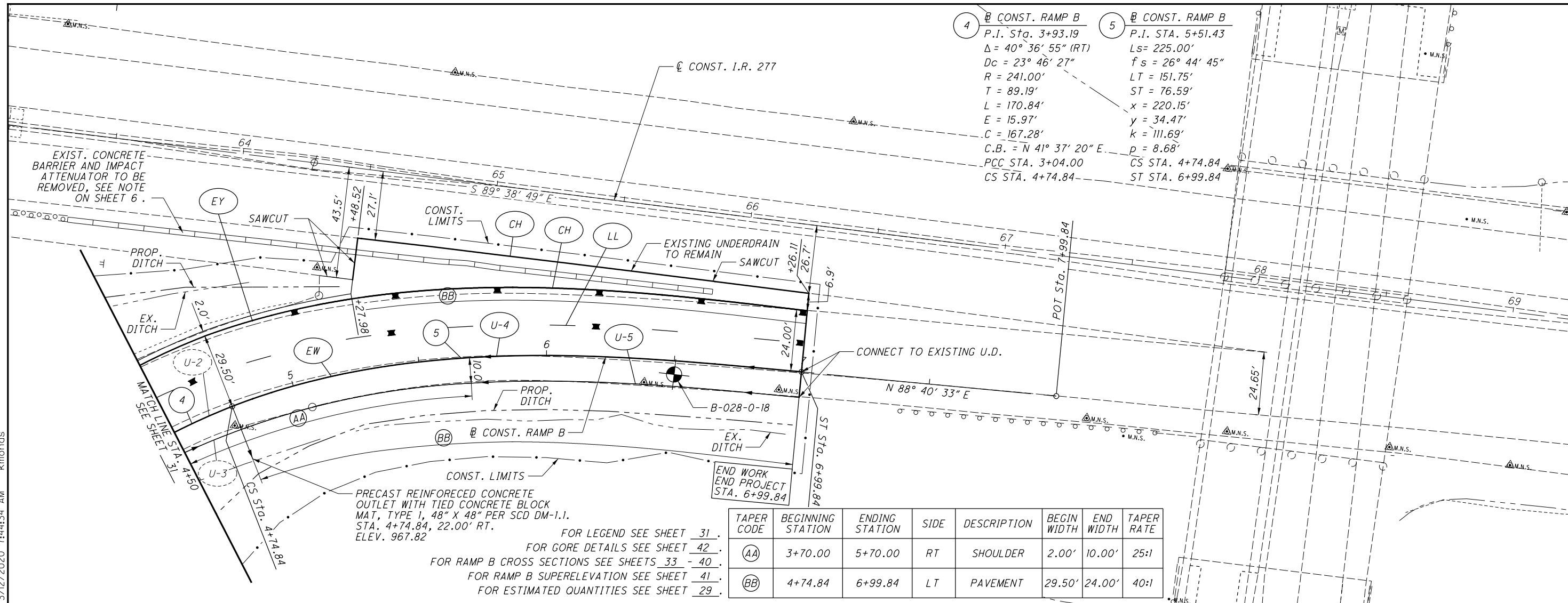
O:\2020\2020018\ProjectData\SUM\11218\Design\Roadway\Sheets\11218_GP001.dgn Sheet 3/12/2020 7:44:32 AM kmonas



TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
(AA)	3+70.00	5+70.00	RT	SHOULDER	2.00'	10.00'	25:1



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PLAN AND PROFILE - RAMP B
 STA. 4+50.00 TO END

SUM-76-6.40

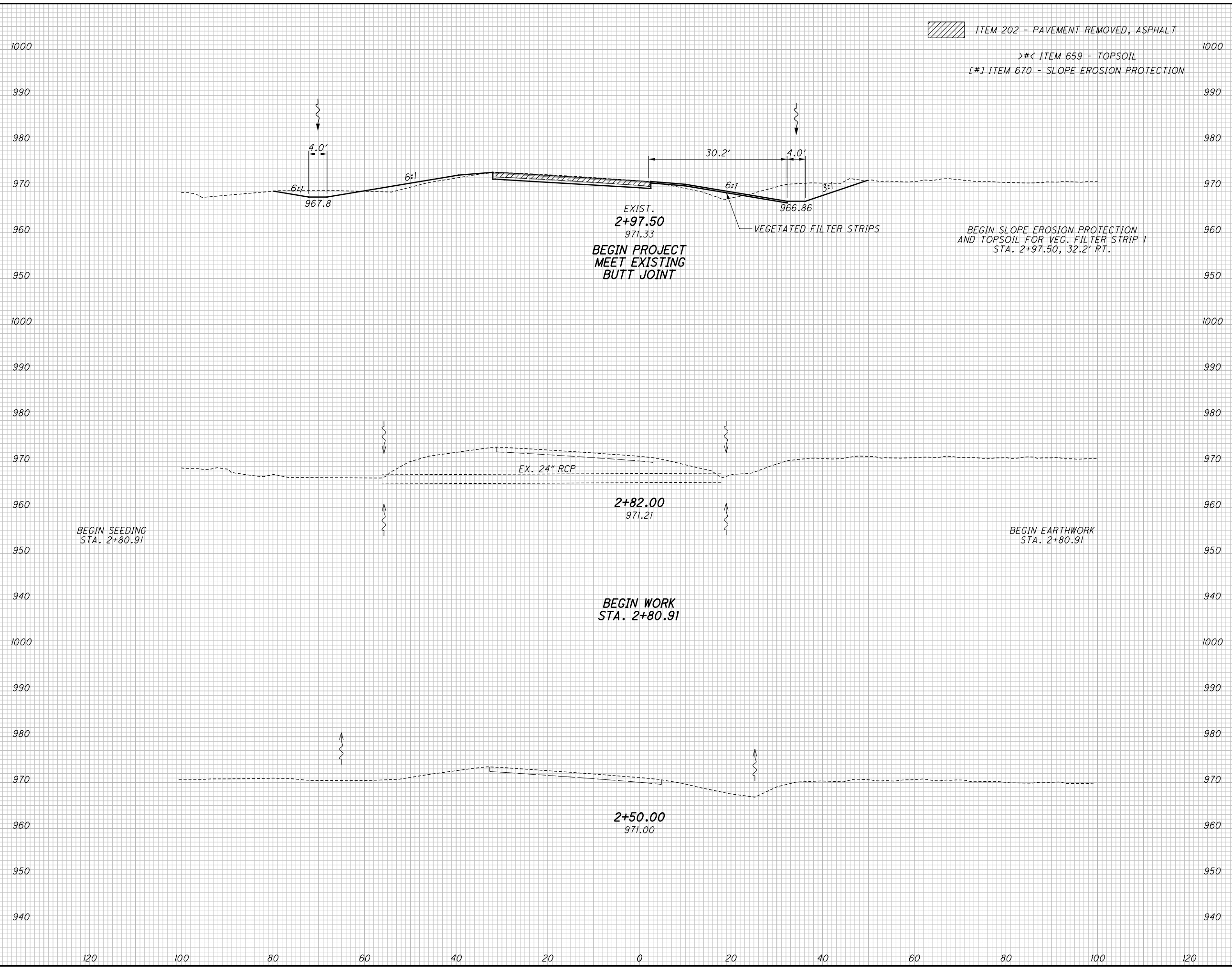
32
43

CALCULATED
KRM
CHECKED
MRG

10
HORIZONTAL
SCALE IN FEET

O:\2020\2020018\ProjectData\SUM\11218\Design\Roadway\Sheets\11218_X500.dgn Sheet 3/12/2020 7:44:35 AM kmonas

SEEDING	
END WIDTH	SO. YDS.
[30] 98	
[26] 84	
[26] 84	

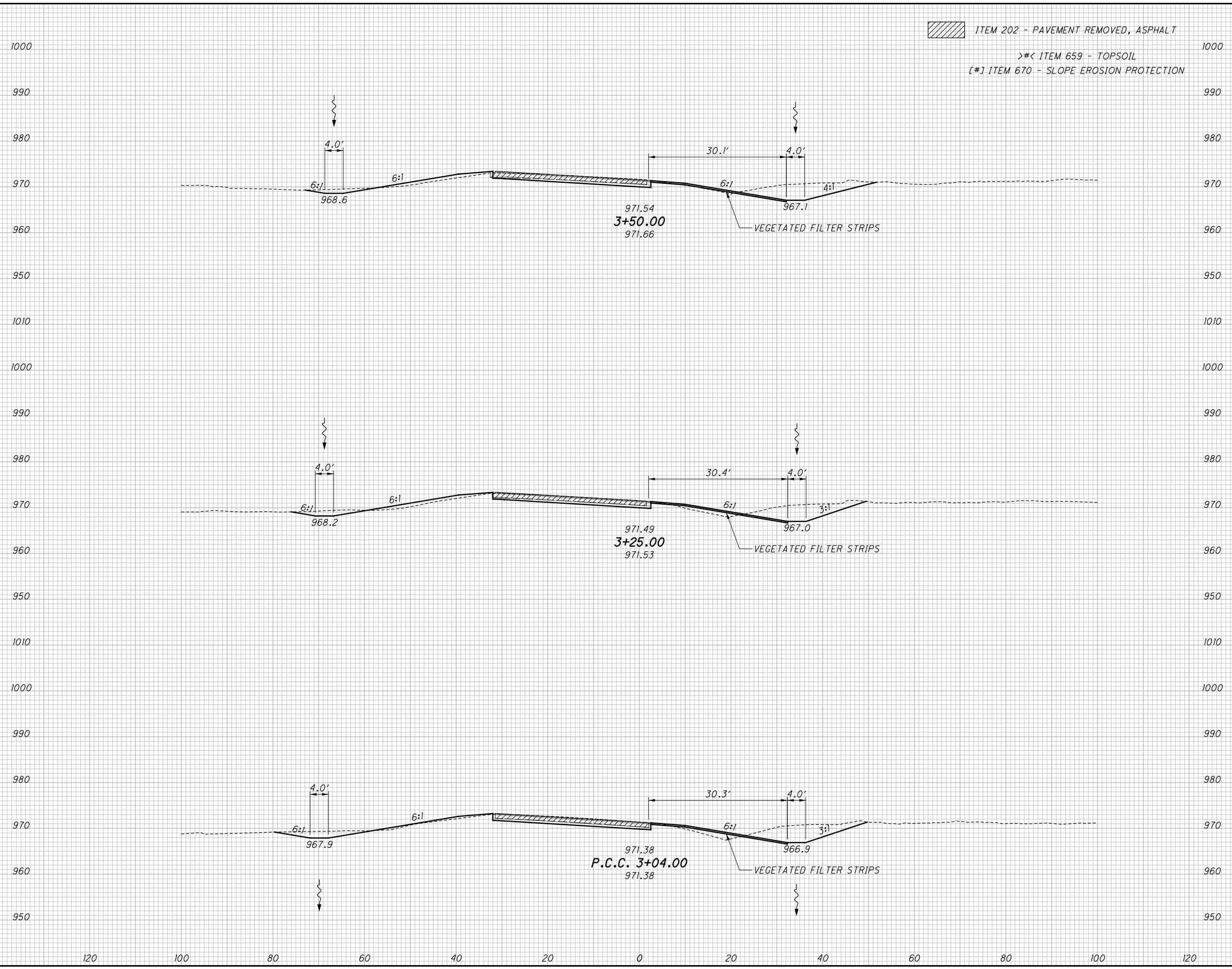


END AREA		VOLUME	
CUT	FILL	CUT	FILL
81	>10< 30	23	>3< 9
0	0	0	0
23	9	23	9

CALCULATED	CHECKED		
KRM	MRC		
CROSS SECTIONS - RAMP B			
STA. 2+50.00 TO STA. 2+97.50			
SUM - 76 - 6.40			
<table border="1"> <tr> <td>33</td> </tr> <tr> <td>43</td> </tr> </table>		33	43
33			
43			

O:\2020\2020018\ProjectData\SUM\11218\Design\Roadway\Sheets\11218_X500.dgn Sheet 3/12/2020 7:44:35 AM kmonas

SEEDING	
END WIDTH	SO. YDS.
[30] 93	
[84] 260	
[30] 94	
[71] 224	
[30] 98	
[22] 71	
[177] 555	



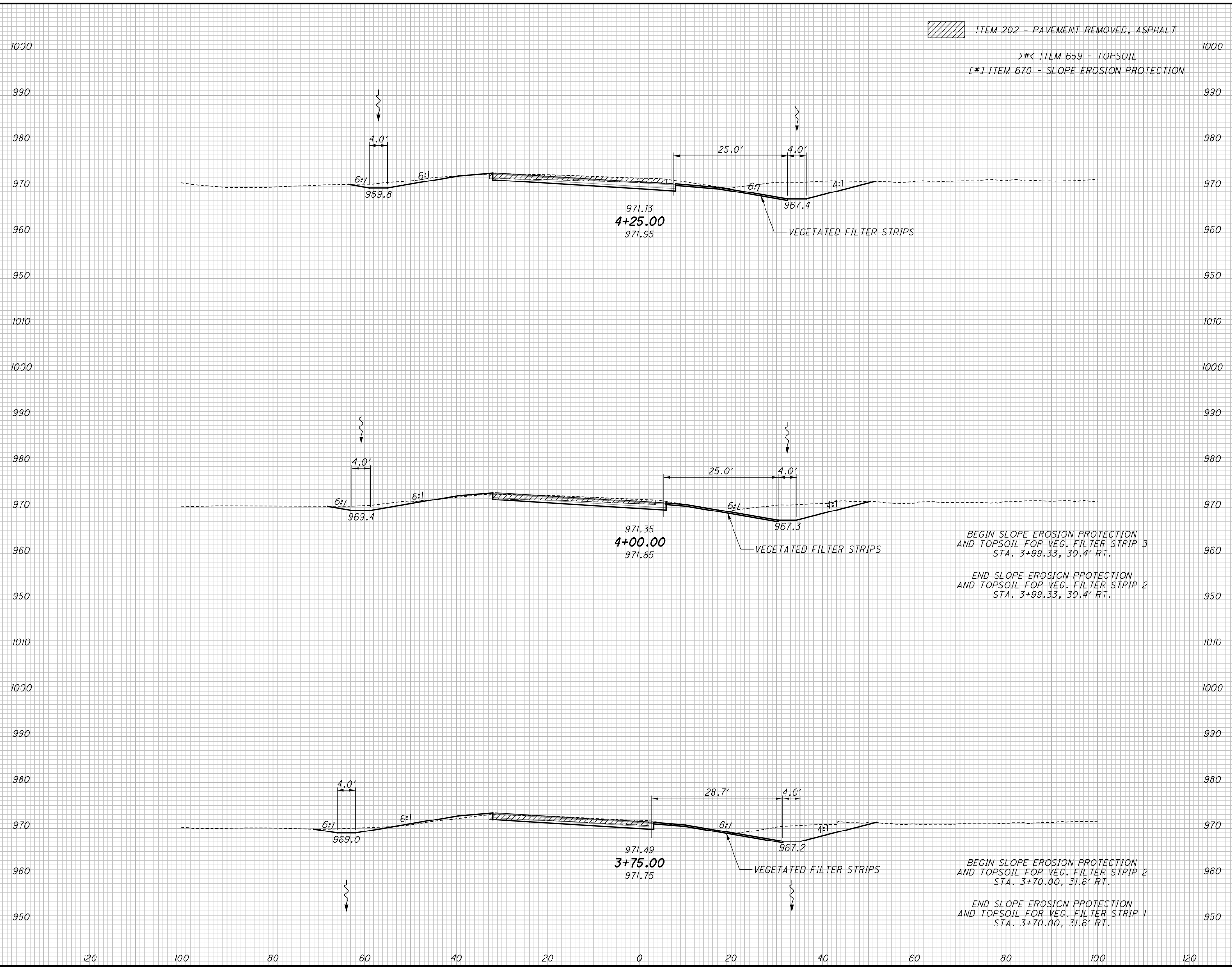
END AREA	VOLUME	CALCULATED	CHECKED		
				CUT	FILL
78	>10< 18				
70	>9< 20				
73	>10< 25				
61	>8< 17				
84	>10< 18				
20	>2< 6				
151	>19< 43				

CROSS SECTIONS - RAMP B
P.C.C. STA. 3+04.00 TO STA. 3+50.00
SUM - 76 - 6.40

34
 43

O:\2020\2020018\ProjectData\SUM\11218\Design\Roadway\Sheets\11218_X5001.dgn Sheet 3/12/2020 7:44:35 AM kmonas

SEEDING	
END WIDTH	SO. YDS.
[25] 77	
[69] 222	
[25] 83	
[75] 240	
[29] 90	
[82] 254	
[226] 716	



END AREA	VOLUME	CALCULATED	CHECKED		
				CUT	FILL
116	>8< 1				
97	>7< 2				
94	>8< 4				
80	>8< 6				
79	>9< 10				
73	>9< 13				
250	>24< 21				

CROSS SECTIONS - RAMP B

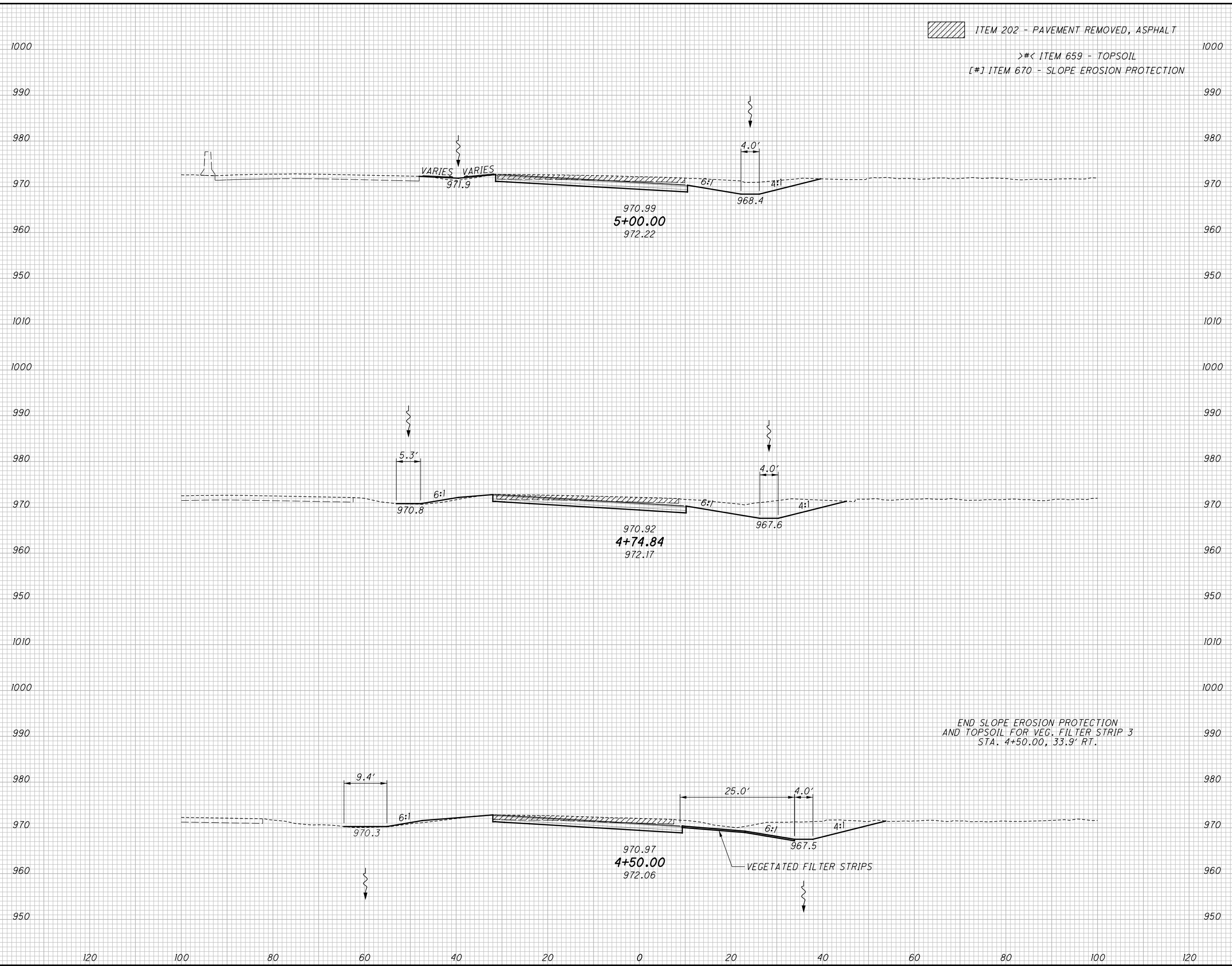
STA. 3+75.00 TO STA. 4+25.00

SUM - 76 - 6.40

(35 / 43)

O:\2020\2020018\ProjectData\SUM\11218\Design\Roadway\Sheets\11218_X500.dgn Sheet 3/12/2020 7:44:36 AM kmondas

SEEDING	
END WIDTH	SO. YDS.
47	1000
147	950
58	1010
[35] 192	1000
[25] 81	990
[69] 219	1010
[104] 558	950



ITEM 202 - PAVEMENT REMOVED, ASPHALT
 >#< ITEM 659 - TOPSOIL
 [#] ITEM 670 - SLOPE EROSION PROTECTION

END AREA	VOLUME	CALCULATED	CHECKED		
				CUT	FILL
91	4				
	97	4			
117	5				
	113	>4<	5		
128	>8<	6			
	113	>7<	3		
	323	>11<	12		

CROSS SECTIONS - RAMP B
STA. 4+50.00 TO STA. 5+00.00

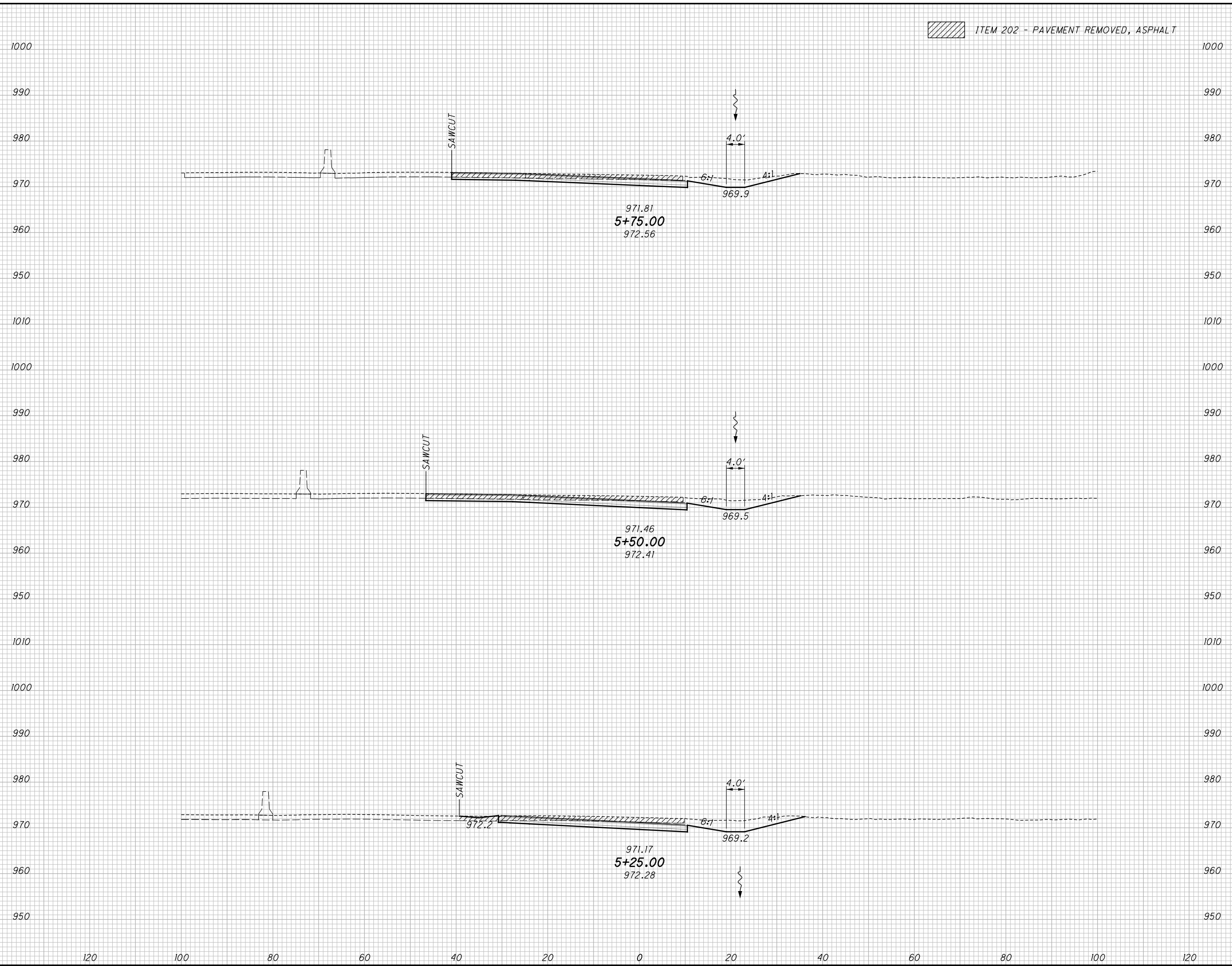
SUM - 76 - 6.40

36
43

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SEEDING	
END WIDTH	SO. YDS.
26	1000
72	950
26	1010
86	1000
36	990
115	950
273	

ITEM 202 - PAVEMENT REMOVED, ASPHALT

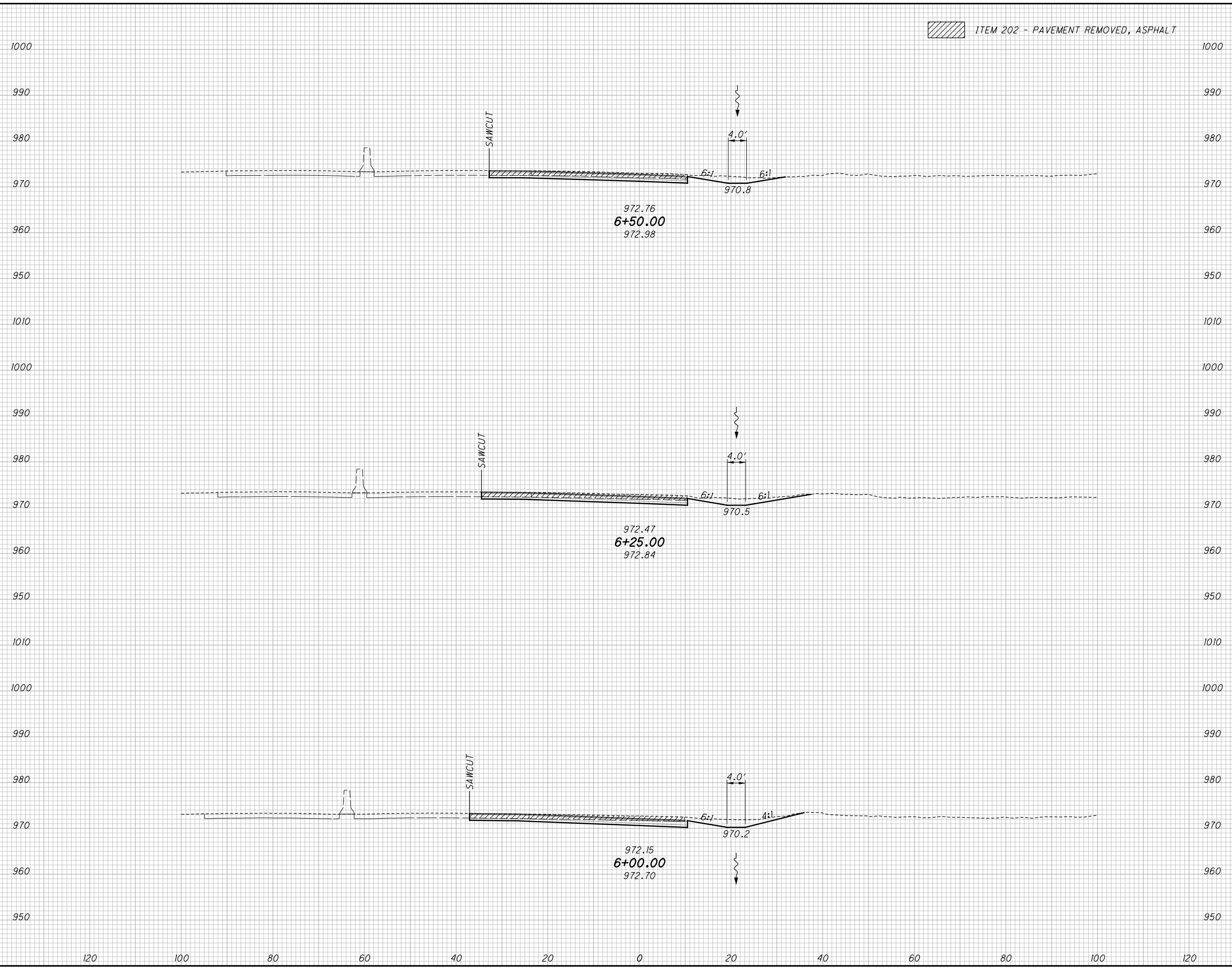


END CUT	AREA FILL	VOLUME	
		CUT	FILL
48	0	50	0
60	0	63	0
77	0	78	2
		191	2

CALCULATED	CHECKED		
KRM	MRC		
CROSS SECTIONS - RAMP B			
STA. 5+25.00 TO STA. 5+75.00			
SUM - 76 - 6.40			
<table border="1"> <tr> <td style="border: none;">37</td> </tr> <tr> <td style="border: none;">43</td> </tr> </table>		37	43
37			
43			

O:\2020\2020018\ProjectData\SUM\11218\Design\Roadway\Sheets\11218_XS001.dgn Sheet 3/12/2020 7:44:37 AM kmonas

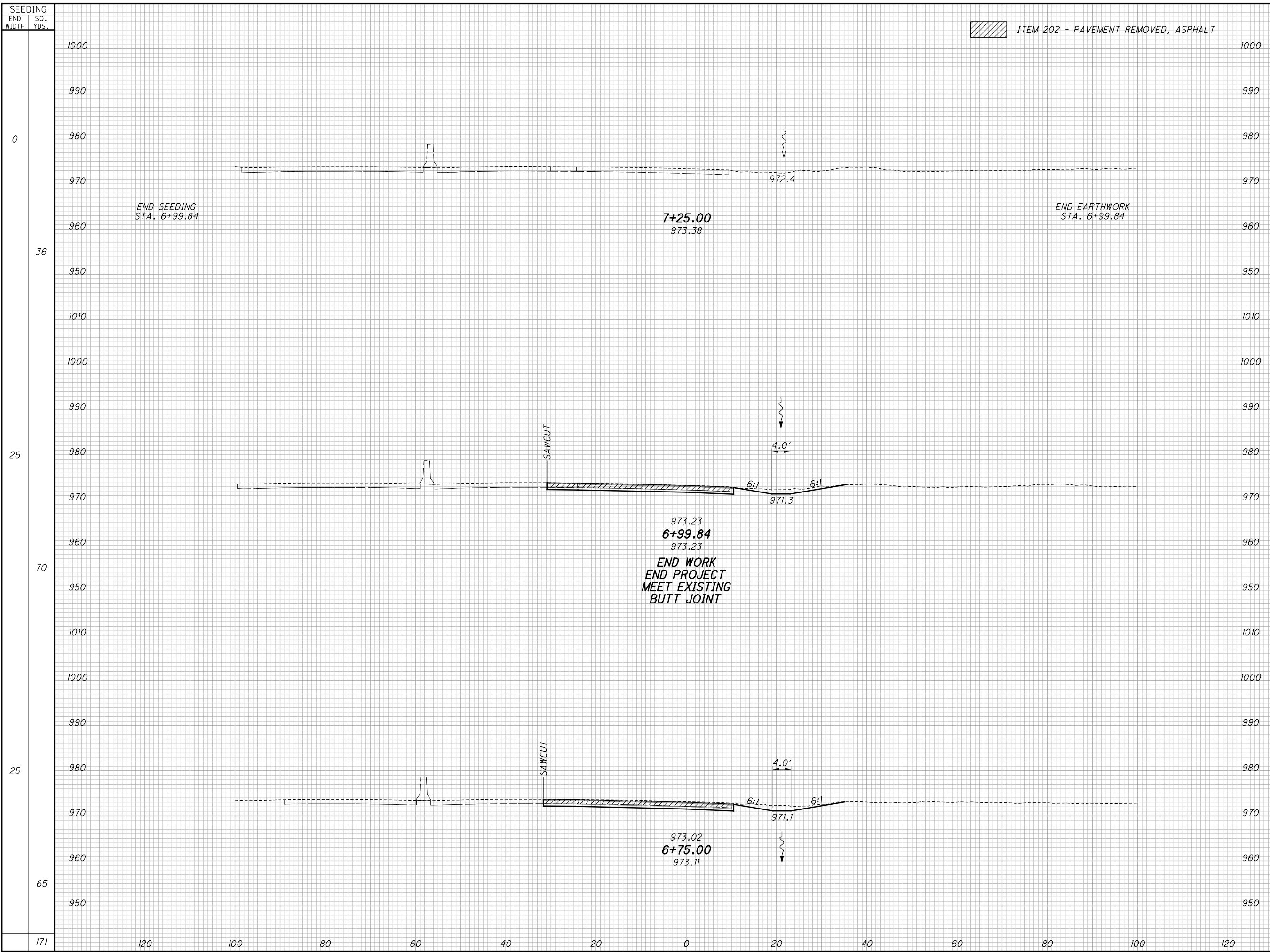
SEEDING	
END WIDTH	SO. YDS.
22	1000
69	950
28	1010
75	1000
26	950
72	950
216	120



END CUT	AREA FILL	VOLUME	
		CUT	FILL
26	0	28	0
34	0	34	0
40	0	41	0
		103	0

CALCULATED	CHECKED		
KRM	MRC		
CROSS SECTIONS - RAMP B			
STA. 6+00.00 TO STA. 6+50.00			
SUM - 76 - 6.40			
<table border="1"> <tr> <td>38</td> </tr> <tr> <td>43</td> </tr> </table>		38	43
38			
43			

O:\2020\2020018\ProjectData\SUM\11218\Design\Roadway\Sheets\11218_X500.dgn Sheet 3/12/2020 7:44:37 AM kmonas




END STA.	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1000				
990				
980	0	0		
970				
960			7	0
950				
1010				
1000				
990				
980	15	0		
970				
960				
950			17	0
1010				
1000				
990				
980	21	0		
970				
960				
950			22	0
46			46	0

CALCULATED KRM
 CHECKED MRG
CROSS SECTIONS - RAMP B
STA. 6+75.00 TO STA. 7+25.00
SUM - 76 - 6.40

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SEEDING	
END WIDTH	SO. YDS.
0	

 ITEM 202 - PAVEMENT REMOVED, ASPHALT

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	KRM	MRC
0	0	0	0		
		0	0		
SUM - 76 - 6.40					
CROSS SECTIONS - RAMP B					
STA. 7 + 50.00					



SUM - 76 - 6.40

CROSS SECTIONS - RAMP B
STA. 7 + 50.00

40
43

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CURVE 3 - SUPERELEVATION TABLE

P.I. Sta. 2+36.45

Dc = 20^27' 46"

LEFT SIDE					BASELINE 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	
		1.77	0.0600	29.50	2+97.50	971.33						EX. F.S.
		1.77	0.0600	29.50	3+00.00	971.35						
		1.77	0.0600	29.50	3+04.00	971.38						P.C.C.

CURVE 4 - SUPERELEVATION TABLE

P.I. Sta. 3+93.19

Dc = 23^46' 27"

LEFT SIDE					BASELINE 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	
		1.77	0.0600	29.50	3+04.00	971.38						P.C.C.
		1.77	0.0600	29.50	3+25.00	971.49						
		1.77	0.0600	29.50	3+50.00	971.54						
		1.77	0.0600	29.50	3+75.00	971.49						
		1.77	0.0600	29.50	4+00.00	971.35						
		1.77	0.0600	29.50	4+25.00	971.13						
		1.77	0.0600	29.50	4+50.00	970.97						
		1.77	0.0600	29.50	4+74.84	970.92						C.S./F.S.

SPIRAL 5 - SUPERELEVATION TABLE

P.I. Sta. 5+51.43

LEFT SIDE					BASELINE 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	
		1.77	0.0600	29.50	4+74.84	970.92						C.S./F.S.
		1.77	0.0600	29.50	4+75.00	970.92						
		1.61	0.0557	28.89	5+00.00	970.99						
		1.45	0.0513	28.27	5+25.00	971.17						
		1.30	0.0470	27.66	5+50.00	971.46						
	241	1.16	0.0427	27.05	5+75.00	971.81						
		1.02	0.0384	26.44	6+00.00	972.15						
		0.88	0.0340	25.83	6+25.00	972.47						
		0.75	0.0297	25.22	6+50.00	972.76						
		0.63	0.0254	24.61	6+75.00	973.02						
		0.51	0.0211	24.00	6+99.84	973.23						S.T./EXIST.

**SUPERELEVATION TABLE
RAMP B**

CALCULATED
KRM
CHECKED
MRC

SUM - 76 - 6.40

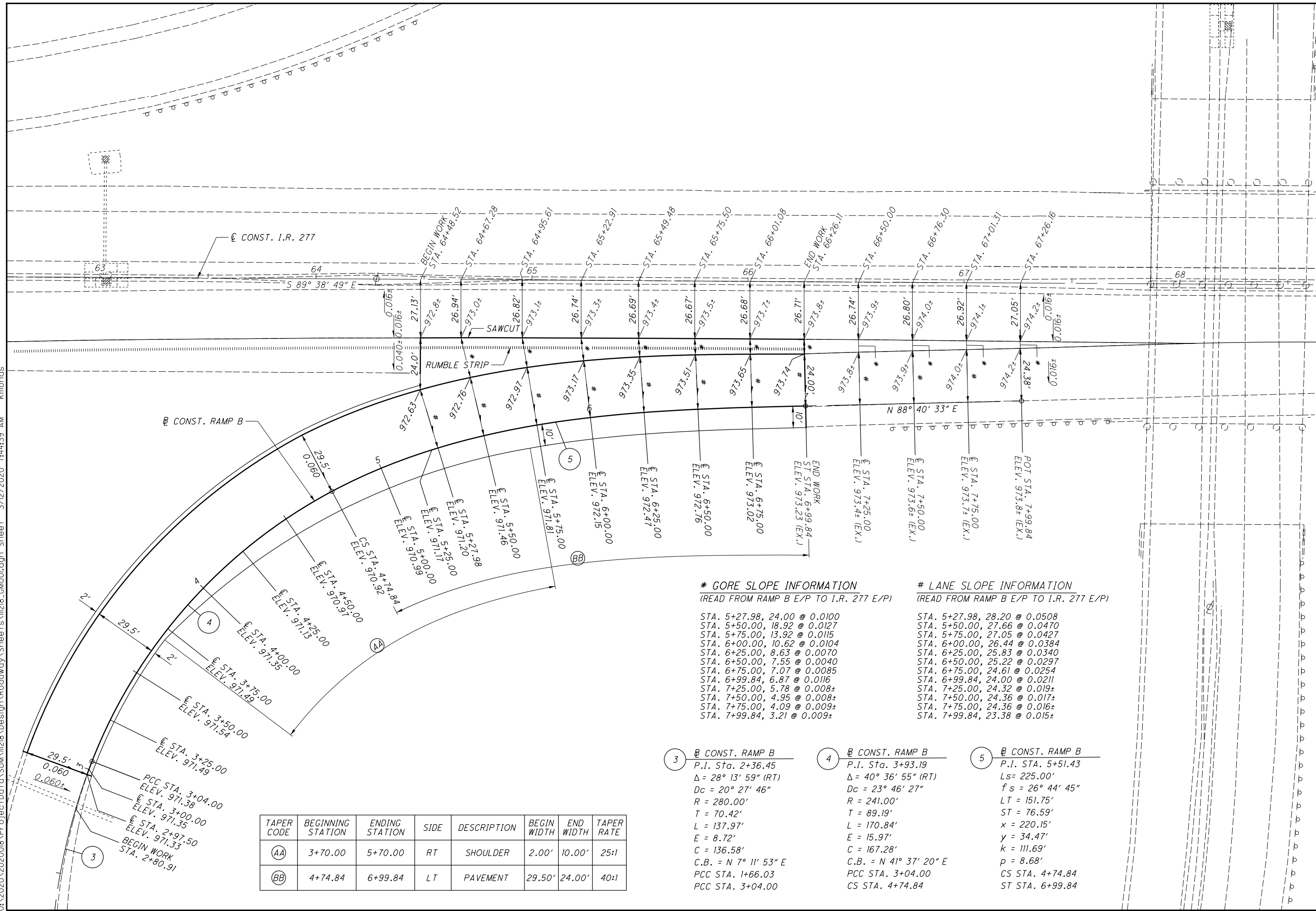
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CALCULATED
KRM
CHECKED
MRG

10
HORIZONTAL
SCALE IN FEET

GORE RAMP DETAILS
RAMP B AT I.R. 277 - BEGIN TO END

SUM-76-6.40



*** GORE SLOPE INFORMATION**
(READ FROM RAMP B E/P TO I.R. 277 E/P)

STA. 5+27.98, 24.00 @ 0.0100
STA. 5+50.00, 18.92 @ 0.0127
STA. 5+75.00, 13.92 @ 0.0115
STA. 6+00.00, 10.62 @ 0.0104
STA. 6+25.00, 8.63 @ 0.0070
STA. 6+50.00, 7.55 @ 0.0040
STA. 6+75.00, 7.07 @ 0.0085
STA. 6+99.84, 6.87 @ 0.0116
STA. 7+25.00, 5.78 @ 0.008±
STA. 7+50.00, 4.95 @ 0.008±
STA. 7+75.00, 4.09 @ 0.009±
STA. 7+99.84, 3.21 @ 0.009±

LANE SLOPE INFORMATION
(READ FROM RAMP B E/P TO I.R. 277 E/P)

STA. 5+27.98, 28.20 @ 0.0508
STA. 5+50.00, 27.66 @ 0.0470
STA. 5+75.00, 27.05 @ 0.0427
STA. 6+00.00, 26.44 @ 0.0384
STA. 6+25.00, 25.83 @ 0.0340
STA. 6+50.00, 25.22 @ 0.0297
STA. 6+75.00, 24.61 @ 0.0254
STA. 6+99.84, 24.00 @ 0.0211
STA. 7+25.00, 24.32 @ 0.019±
STA. 7+50.00, 24.36 @ 0.017±
STA. 7+75.00, 24.36 @ 0.016±
STA. 7+99.84, 23.38 @ 0.015±

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AA	3+70.00	5+70.00	RT	SHOULDER	2.00'	10.00'	25:1
BB	4+74.84	6+99.84	LT	PAVEMENT	29.50'	24.00'	40:1

- 3 **CONST. RAMP B**
P.I. Sta. 2+36.45
Δ = 28° 13' 59" (RT)
Dc = 20° 27' 46"
R = 280.00'
T = 70.42'
L = 137.97'
E = 8.72'
C = 136.58'
C.B. = N 7° 11' 53" E
PCC STA. 1+66.03
PCC STA. 3+04.00
- 4 **CONST. RAMP B**
P.I. Sta. 3+93.19
Δ = 40° 36' 55" (RT)
Dc = 23° 46' 27"
R = 241.00'
T = 89.19'
L = 170.84'
E = 15.97'
C = 167.28'
C.B. = N 41° 37' 20" E
PCC STA. 3+04.00
CS STA. 4+74.84
- 5 **CONST. RAMP B**
P.I. STA. 5+51.43
Ls = 225.00'
fs = 26° 44' 45"
LT = 151.75'
ST = 76.59'
x = 220.15'
y = 34.47'
k = 111.69'
p = 8.68'
CS STA. 4+74.84
ST STA. 6+99.84

ITEM 621 - RPM

THE CONTRACTOR SHALL FOLLOW ODOT STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11 FOR INSTALLATION AND PLACEMENT OF RAISED PAVEMENT MARKERS WITHIN THE PROPOSED WORK LIMITS. THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR INFORMATIONAL PURPOSES:

IR-76 LOOP RAMP

EDGE LINE, YELLOW STA. 2+98 TO STA. 5+28 (80' C/C)	<u>3</u> EACH
LANE LINE STA. 2+98 TO STA. 7+00 (80' C/C)	<u>6</u> EACH
CHANNELIZING LINE STA. 5+28 TO STA. 7+00 (40' C/C)	<u>5</u> EACH

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENNERAL SUMMARY:

ITEM 621 - RPM	<u>14</u> EACH
ITEM 621 - RAISED PAVEMENT MARKER REMOVED	<u>14</u> EACH

REMOVAL AND REPLACEMENT OF SIGNS

THE CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING SIGNS AT STA. 3+25 AND STA. 3+96 ON THE LOOP RAMP WITH THE SIGN PROVIDED BELOW. THE PROPOSED SIGN SHALL BE PLACED AT THE SAME STATION AS THE EXISTING. SIGN LOCATIONS ARE ALSO PROVIDED ON THE PLAN AND PROFILE SHEET.

30" X 36"



W1-8R-30

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENNERAL SUMMARY:

ITEM 630 - GROUND MOUNTED SUPPORT, NO. 3 POST	<u>21.0</u> FT
ITEM 630 - SIGN POST REFLECTOR	<u>2</u> EACH
ITEM 630 - SIGN, FLAT SHEET	<u>15.0</u> SF
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	<u>2</u> EACH
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	<u>2</u> EACH

EPOXY PAVEMENT MARKING

THE CONTRACTOR SHALL RESTORE THE EXISTING PAVEMENT MARKINGS DUE TO THE MAINTENANCE OF TRAFFIC LIMITS OF THE PROJECT PER CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 646. THE FOLLOWING LIMITS SHALL BE USED:

IR-77 SOUTHBOUND

CHANNELIZING LINE, 12" STA. 194+77 TO STA. 197+25 (RT)	<u>248</u> FT
STA. 211+47 TO STA. 213+67 (RT)	<u>220</u> FT
DOTTED LINE, 6" STA. 197+25 TO STA. 206+45 (RT)	<u>920</u> FT
LANE LINE, 6" STA. 202+12 TO STA. 209+50 (RT)	<u>738</u> FT

IR-76 WESTBOUND

LANE LINE, 6" STA. 8+00 TO STA. 19+55 (LT)	<u>1155</u> FT
STA. 19+55 TO STA. 39+35 (LT)	<u>1980</u> FT

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE TO MEASURE THE LOCATION OF THE EXISTING PAVEMENT MARKINGS ON THE LOOP RAMP. THE CONTRACTOR SHALL RESTORE THE PAVEMENT MARKINGS TO THE SAME TYPE AND LOCATION INCLUDING THE LANE WIDTHS. THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR THE IR-76 LOOP RAMP:

IR-76 LOOP RAMP

EDGE LINE, 6" STA. 2+98 TO STA. 5+28 (LT)	<u>230</u> FT
STA. 2+98 TO STA. 7+00 (CEN)	<u>402</u> FT
LANE LINE, 6" STA. 2+98 TO STA. 7+00 (LT)	<u>402</u> FT
CHANNELIZING LINE, 12" STA. 5+28 TO STA. 7+00 (LT)	<u>172</u> FT
STA. 64+48 TO STA. 66+26 (RT)	<u>178</u> FT

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENNERAL SUMMARY:

ITEM 646 - EDGE LINE, 6"	<u>0.12</u> MILE
ITEM 646 - LANE LINE, 6"	<u>0.81</u> MILE
ITEM 646 - CHANNELIZING LINE, 12"	<u>818</u> FT
ITEM 646 - DOTTED LINE, 6"	<u>920</u> FT

SPRAY THERMOPLASTIC PAVEMENT MARKING

THE CONTRACTOR SHALL RESTORE THE MAINTENANCE OF TRAFFIC PAVEMENT MARKINGS ON US 224 FROM THE SUM-76-5.53 (PID 99670) PROJECT DUE TO THE MAINTENANCE OF TRAFFIC LIMITS OF THE PROJECT PER CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THIS ITEM SHALL BE AS PER C&MS 614 EXCEPT THAT THE PAVEMENT MARKING MATERIAL AND INSTALLATION SHALL BE PER C&MS 648, SPRAY THERMOPLASTIC. THE DOTTED LINE WIDTH SHALL BE INCREASED TO 6".

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE LIMITS PROVIDED BELOW:

DOTTED LINE, 6" STA. 46+00 TO STA. 57+45	<u>1145</u> FT
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PROJECT DESCRIPTION

THE PROJECT INCLUDES THE RECONSTRUCTION AND WIDENING OF THE RAMP DESIGNATED AS RAMP B CARRYING IR-76 WB TO IR-277 EB.

HISTORIC RECORDS

THE FOLLOWING REPORT/PLANS WERE AVAILABLE FOR REVIEW AND EVALUATION FOR THE PROJECT:

- SOIL PROFILE SHEETS AS PART OF ODOT PROJECT SUM-224-5.85 SHEETS 1-12, PREPARED BY THE STATE HIGHWAY TESTING AND RESEARCH LABORATORY DATED MAY 9, 1960; AND,
- SOIL PROFILE SHEETS AS PART OF ODOT PROJECT SUM-5-9.33 SHEETS 1-27, PREPARED BY THE STATE HIGHWAY TESTING AND RESEARCH LABORATORY DATED OCT. 30, 1963;

HISTORICAL SOIL BORINGS ASSOCIATED WITH THE ABOVE PLANS WERE REVIEWED, HOWEVER, WERE NOT UTILIZED FOR OUR ANALYSIS, AND THEREFORE, ARE NOT REFERENCED OR PRESENTED WITHIN THE SOIL PROFILE SHEETS.

GEOLOGY

THE PROJECT SITE IS LOCATED WITHIN THE AKRON-CANTON INTERLOBATE PLATEAU PHYSIOGRAPHIC REGION, PART OF THE GLACIATED ALLEGHENY PLATEAUS. THIS IS A MODERATE RELIEF, HUMMOCKY AREA BETWEEN TWO CONVERGING GLACIAL LOBES DOMINATED BY KAMES, KAME TERRACES, ESKERS, KETTLES, KETTLE LAKES, AND BOGS/FENS. SOILS IN THIS REGION ARE CHARACTERISTICALLY WISCONSINAN-AGE SAND AND OLDER DRIFT OVER DEVONIAN TO PENNSYLVANIAN AGE SANDSTONES, CONGLOMERATES AND SHALES.

THE SOILS AT THE PROJECT SITE ARE MAPPED AS 160 FT OF WISCONSINAN-AGE ICE-CONTACT DEPOSITS, OVER 90 FEET OF WISCONSINAN-AGE SAND AND GRAVEL UNDERLAIN BY MISSISSIPPIAN-AGE SANDSTONE AND SHALE. SMALL AREAS OF ORGANIC DEPOSITS WERE NOTED ON THE SURFICIAL GEOLOGY MAPS SOUTHEAST OF THE PROJECT SITE. THE ICE-CONTACT DEPOSITS ARE DESCRIBED AS HIGHLY VARIABLE DEPOSITS OF POORLY SORTED GRAVEL AND SAND WITH INCLUSIONS OF SILT, CLAY AND TILL LENSES COMMON. THE SAND AND GRAVEL MAPPED AT THE PROJECT SITE IS DESCRIBED AS INTERBEDDED SAND AND GRAVEL COMMONLY CONTAINING THIN, DISCONTINUOUS LAYERS OF SILT AND CLAY.

BASED ON THE BEDROCK GEOLOGIC UNITS MAP OF OHIO, BEDROCK WITHIN THE PROJECT AREA CONSISTS OF SHALE, SILTSTONE AND SANDSTONE OF THE RUSHVILLE, LOGAN AND CUYHOGA FORMATIONS, WITH MINOR LITHOLOGIC CONSTITUENTS OF LIMESTONE OF THE MAXVILLE LIMESTONE FORMATION. THE SHALE IN THIS FORMATION IS DESCRIBED AS MEDIUM TO DARK GRAY IN COLOR, CLAYEY TO SILTY, LOCALLY FOSSILIFEROUS AND THIN TO THICK BEDDED WITH LIMESTONE, WHILE THE SANDSTONE IS DESCRIBED AS GRAY WEATHERING YELLOW TO BROWN, SILTY TO GRANULAR WITH LOCAL STRINGERS OF QUARTZ PEBBLES. THE LIMESTONE IN THE MAXVILLE LIMESTONE FORMATION IS DESCRIBED AS MEDIUM TO DARK GRAY IN COLOR AND THIN TO THICK BEDDED. BASED ON THE ODNR BEDROCK TOPOGRAPHY MAP OF OHIO, BEDROCK ELEVATIONS AT THE PROJECT SITE CAN BE EXPECTED TO BE AT AN ELEVATION OF ABOUT 850 FT AMSL, PUTTING BEDROCK AT A DEPTH OF ABOUT 125 FT BELOW GROUND SURFACE (BGS).

THE SOILS AT THE PROJECT SITE ARE GENERALLY MAPPED (WEB SOIL SURVEY) BY THE NATURAL RESOURCES CONSERVATION SERVICE AS UDORTHENTS. THESE SOILS CAN BE DESCRIBED AS SOILS THAT HAVE BEEN DISTURBED BY CUTTING AND FILLING. THESE SOILS ARE NOT CLASSIFIED ACCORDING TO THE AASHTO METHOD OF SOIL CLASSIFICATION, BUT IT CAN BE EXPECTED THAT THESE SOILS WILL LARGELY CONSIST OF FILL SOILS AND OFTEN VARY IN COMPOSITION. A PORTION OF THE SOILS WITHIN THE PROJECT AREA HAS BEEN MAPPED AS CHILI LOAM. SOILS IN THE CHILI SERIES ARE CHARACTERIZED AS VERY DEEP, WELL DRAINED SOILS ON OUTWASH PLAINS, TERRACES, KAMES, AND BEACH RIDGES. BASED ON THE WEB SOIL SURVEY THE CHILI SERIES SOILS ARE COMPRISED OF PREDOMINANTLY COARSE- AND FINEGRAINED NON-COHESIVE SOILS, CLASSIFYING AS A-1, A-2 AND A-4 TYPE SOILS ACCORDING TO THE AASHTO METHOD OF SOIL CLASSIFICATION.

RECONNAISSANCE

THE FIELD RECONNAISSANCE VISITS FOR THE PROJECT WERE CONDUCTED BETWEEN JANUARY 14, 2019 AND JANUARY 17, 2019, ALONG IR-76, IR-77, IR-277 AND CONNECTING RAMPS. SITE CONDITIONS, INCLUDING THE EXISTING PAVEMENT CONDITIONS, WERE NOTED AND PHOTOGRAPHED DURING THE VISIT. A SUMMARY OF THE LAND USE AND PAVEMENT CONDITIONS BY ROADWAY SEGMENT INCLUDING PHOTOGRAPHS OF NOTABLE PAVEMENT DISTRESS ARE PROVIDED AND IS PROVIDED BELOW.

THE LAND USE IN THE IMMEDIATE VICINITY OF THE PROJECT AREA CONSISTS OF INTERSTATE HIGHWAY WITHIN THE ODOT RIGHT-OF-WAY. FURTHER OUTSIDE THE ODOT RIGHT-OF-WAY LAND USE CONSISTS OF MOSTLY WOODLANDS AND WETLANDS WITH RESIDENTIAL PROPERTY TO THE SOUTHWEST AND INDUSTRIAL PROPERTY TO THE NORTHEAST. THE PAVEMENT CONDITION ALONG THE RAMP WAS GENERALLY OBSERVED TO BE GOOD WITH FEW LOW SEVERITY TRANSVERSE CRACKS ALONG THE RAMPS. PAVEMENT WAS OBSERVED TO BE WELL-DRAINED WITH NO SIGNS OF PONDING OR STANDING WATER OBSERVED AT THE TIME OF OUR RECONNAISSANCE VISIT.

SUBSURFACE EXPLORATION

THE SUBSURFACE EXPLORATION WAS CONDUCTED BY NEAS BETWEEN FEBRUARY 27, 2019 AND MARCH 20, 2019 AND INCLUDED 4 BORINGS DRILLED TO DEPTHS BETWEEN 11.5 AND 16.5 FT BELOW GROUND SURFACE.

BORINGS WERE DRILLED USING EITHER A CME 55T OR CME 55X, TRUCK-MOUNTED

LEGEND

- FINE SAND
- COARSE AND FINE SAND
- SANDY SILT

ODOT CLASS	CLASSIFIED MECH./VISUAL	
A-3	2	6
A-3a	5	9
A-4a	1	0
TOTAL	8	15

- EXPLORATION LOCATION - PLAN VIEW
- DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.
- WC* INDICATES WATER CONTENT IN PERCENT.
- W* INDICATES FREE WATER ELEVATION.
- N₆₀* INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.
- INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.
- SS* INDICATES A SPLIT-SPOON SAMPLE.
- NP* INDICATES A NON-PLASTIC SAMPLE.

SUBSURFACE EXPLORATION (CONTINUED)

OR TRACK-MOUNTED DRILLING RIG UTILIZING 3.25-INCH DIAMETER HOLLOW STEM AUGERS. STANDARD PENETRATION TESTS WERE CONDUCTED USING CME AUTO HAMMERS CALIBRATED NOVEMBER 21, 2017 AS 78.0% AND 85.0% EFFICIENT, RESPECTIVELY.

DISTURBED SOIL SAMPLE WERE OBTAINED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (SPT)(AASHTO T206). SOIL SAMPLES FOR PROJECT BORINGS WERE TYPICALLY RECOVERED AT 2.5-FT INTERVALS TO VARYING TERMINATION DEPTHS.

SPLIT SPOON SAMPLES COLLECTED AS PART OF THE SPT WERE PLACED IN SEALED GLASS CONTAINERS AND TRANSPORTED TO NEAS'S GEOTECHNICAL LABORATORY IN COLUMBUS, OH. AFTER COMPLETING THE BORINGS, THE BOREHOLES WERE BACKFILLED WITH EITHER AUGER CUTTINGS, BENTONITE CHIPS, OR A COMBINATION OF THESE MATERIALS. FIELD BORING LOGS WERE PREPARED BY DRILLING PERSONNEL AND INCLUDED PAVEMENT DESCRIPTION (WHERE PRESENT), LITHOLOGICAL DESCRIPTION, AND SPT RESULTS RECORDED AS BLOWS PER 6-INCH INCREMENT OF PENETRATION. GROUNDWATER RELATED OBSERVATIONS WERE RECORDED AS APPROPRIATE.

EXPLORATION FINDINGS

THE SUBSURFACE CONDITIONS IN THE PROJECT AREA ARE RELATIVELY CONSISTENT AND ARE GENERALLY COMPRISED OF EITHER FILL SOILS (I.E., EMBANKMENT FILL, HISTORICAL/URBAN FILL, ETC.) OR NATURAL SOILS CONSISTING OF NON-COHESIVE SAND, SILT AND GRAVEL COMBINATIONS. THE SOILS ENCOUNTERED AT THE SITE GENERALLY CLASSIFIED AS EITHER FINE SAND (A-3), COARSE AND FINE SAND (A-3A), OR NON-COHESIVE SANDY SILT (A-4A). WITH RESPECT TO SULFATE WITHIN THE SUBGRADE SOIL, BASED ON THE PROJECT LABORATORY TESTING PROGRAM, EACH SUBGRADE SOIL SAMPLE TESTED WAS DETERMINED TO HAVE A SULFATE CONTENT OF LESS THAN 5,000 PARTS PER MILLION (I.E., LOWER THAN THE LEVEL WHICH ODOT CONSIDERS HIGH AND MAY PREVENT THE USE OF CHEMICAL STABILIZATION).

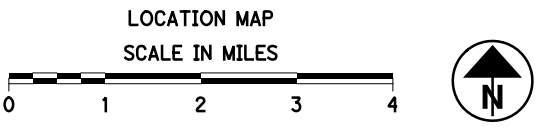
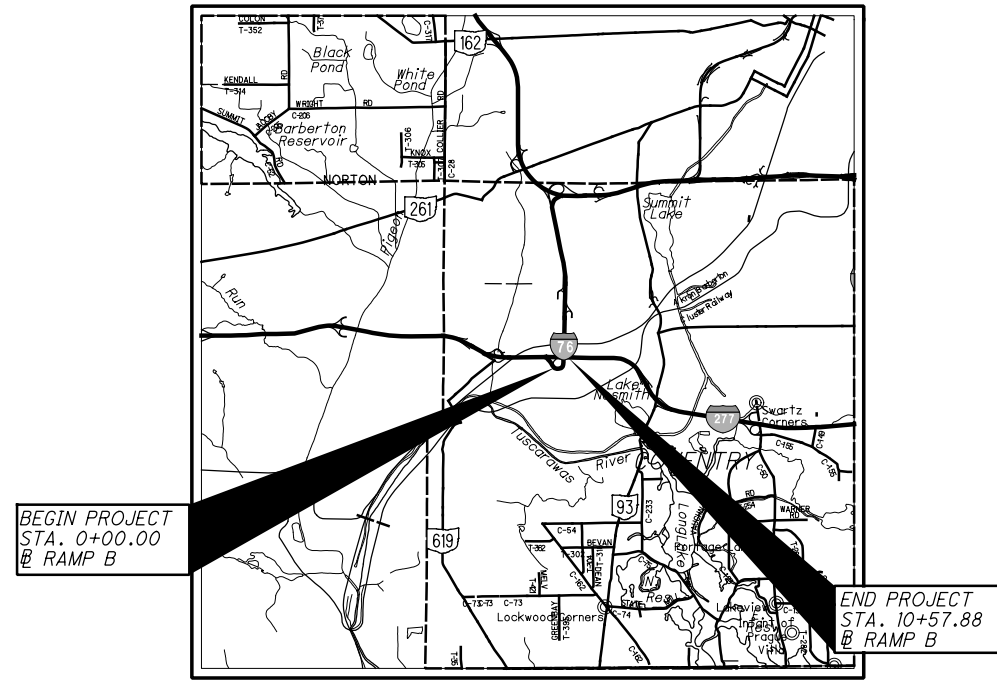
A BRIEF SUMMARY OF THE SUBSURFACE CONDITIONS ALONG THE RAMP B ALIGNMENT IS PRESENTED BELOW.

SUBGRADE CONDITIONS

ONE-HUNDRED PERCENT (100%) OF THE SAMPLES TAKEN ALONG THE RAMP WERE CLASSIFIED AS COARSE OR FINEGRAINED, NONCOHESIVE SOILS AND WERE COMPRISED OF: 1) FINE SAND (A-3, 33% OF SAMPLES); 2) COARSE AND FINE SAND (A-3A, 60% OF SAMPLES); AND, 3) SANDY SILT (A-4A, 7% OF SAMPLES). WITH RESPECT TO THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED, THE DESCRIPTIONS VARIED FROM VERY LOOSE TO MEDIUM DENSE CORRELATING TO *N₆₀* VALUES BETWEEN 0 AND 27 BPF. NATURAL MOISTURE CONTENTS RANGED FROM 8 TO 35 PERCENT.

GROUNDWATER

GROUNDWATER MEASUREMENTS WERE TAKEN DURING THE BORING DRILLING PROCEDURES AND/OR IMMEDIATELY FOLLOWING THE COMPLETION OF EACH BOREHOLE. GROUNDWATER WAS ENCOUNTERED IN 2 OF THE 4 PROJECT BORINGS. ACROSS THE RAMP B SITE GROUNDWATER WAS ENCOUNTERED AT DEPTHS RANGING FROM 6 TO 8 FT BGS OR FROM ELEVATIONS RANGING FROM 962.7 TO 966.9 FT AMSL. GROUNDWATER WAS ENCOUNTERED WITHIN 7.5 FT (WITHIN SUBGRADE PORTION) OF THE GROUND SURFACE IN 1 BORING (B-028-0-18). IT SHOULD BE NOTED THAT GROUNDWATER IS AFFECTED BY MANY HYDROLOGIC CHARACTERISTICS IN THE AREA AND MAY VARY FROM MEASUREMENTS TAKEN AT THE TIME OF THE EXPLORATION.



SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2019.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.

INDEX OF SHEETS				
LOCATION FROM STA.	TO STA.	PLAN VIEW SHEET	PROFILE SHEET	CUT MAX. FILL EMB. MAX.
RAMP B		3	3	<1 FT <1 FT

SUM-76-6.40		
BORING ID	PLAN VIEW	PROFILE VIEW SHEET
B-028-0-18	3	3
B-029-0-18	3	3
B-062-0-18	3	3
B-063-0-18	3	3



- RECON. - 01/14/2019 - 01/17/2019
- DRILLING - 02/19/2019 - 05/11/2019
- DRAWN - KA, 10/2019
- REVIEWED - BPA, 10/2019

DESIGN AGENCY
NEAS, INC.
2800 CORPORATE EXCHANGE DR., STE 240
COLUMBUS, OH 43231
(614) 714-0270 FAX (614) 714-0323

PID NO.
100713

SOIL PROFILE

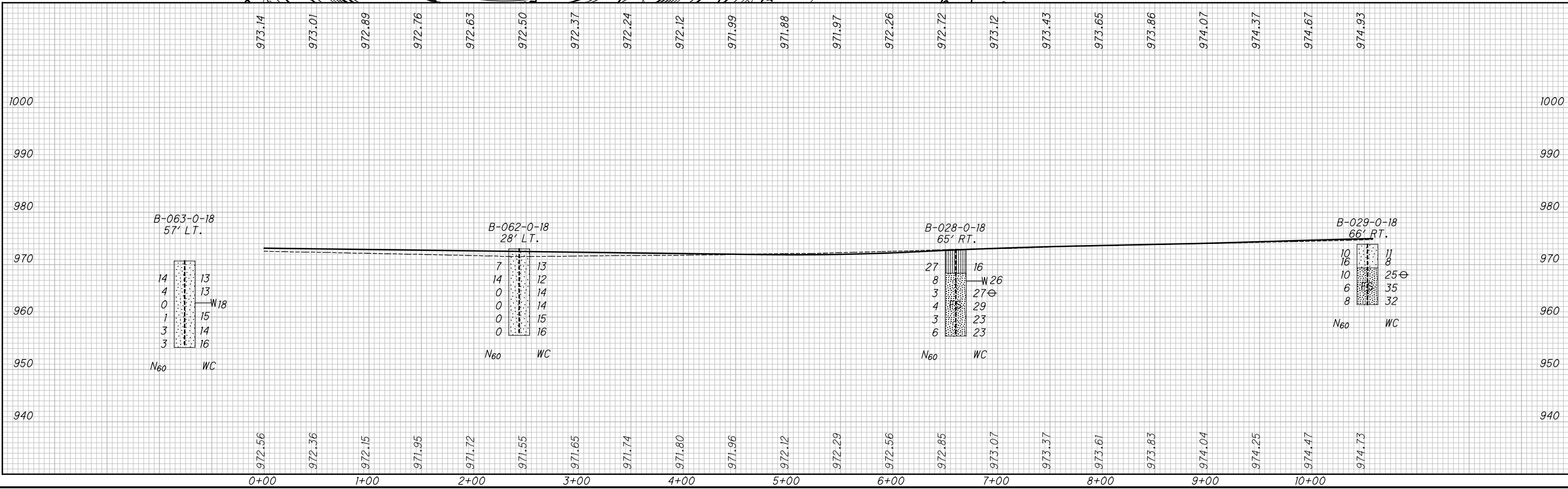
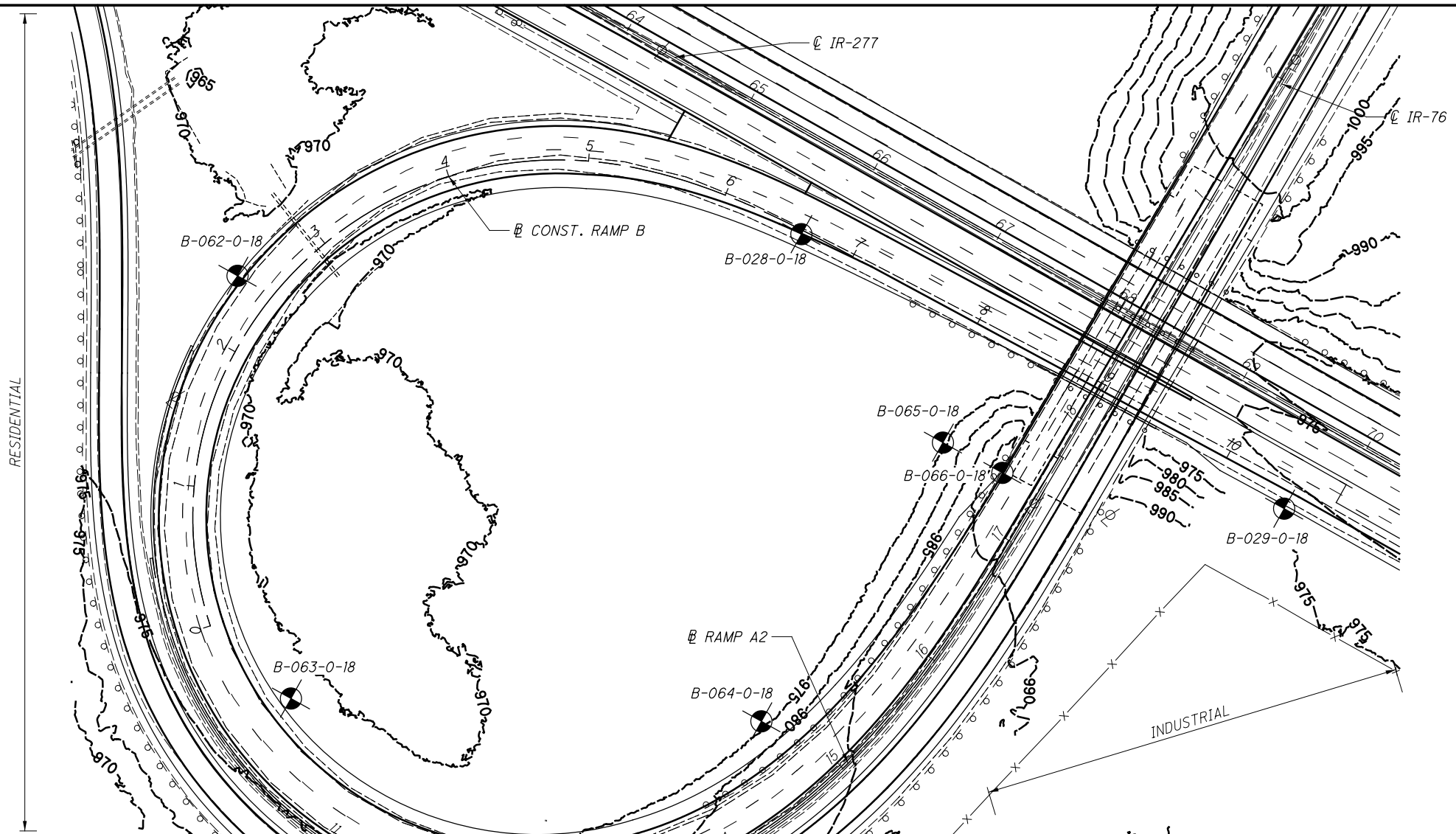
SUM - 76 - 6.40

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SUMMARY OF SOIL TEST DATA
PROJECT BORINGS

B-028-0-18	02.50 - 04.00	SS-1	27	100	-	2	3	53	35	7	NP	NP	16	A-4a (1)
STA. 10+53, 12' RT	05.00 - 06.50	SS-2	8	100	-	-	-	SAME AS SS-3	SAME AS SS-3	26	NP	NP	26	A-3 (VISUAL)
LATITUDE = 41.035283	07.50 - 09.00	SS-3	3	78	-	1	4	86	6	3	NP	NP	27	A-3 (0)
LONGITUDE = -81.566391	10.00 - 11.50	SS-4	4	78	-	-	-	SAME AS SS-3	SAME AS SS-3	29	NP	NP	29	A-3 (VISUAL)
	12.50 - 14.00	SS-5	3	100	-	-	-	SAME AS SS-3	SAME AS SS-3	23	NP	NP	23	A-3 (VISUAL)
	15.00 - 16.50	SS-6	6	100	-	-	-	SAME AS SS-3	SAME AS SS-3	23	NP	NP	23	A-3 (VISUAL)
B-029-0-18	00.00 - 01.50	SS-1	10	100	-	11	15	56	12	6	NP	NP	11	A-3a (0)
STA. 6+60, 2' RT	02.50 - 04.00	SS-2	16	67	-	-	-	SAME AS SS-1	SAME AS SS-1	8	NP	NP	8	A-3a (VISUAL)
LATITUDE = 41.035262	05.00 - 06.50	SS-3	10	100	-	0	0	93	3	4	NP	NP	25	A-3 (0)
LONGITUDE = -81.564969	07.50 - 09.00	SS-4	6	89	-	-	-	SAME AS SS-3	SAME AS SS-3	35	NP	NP	35	A-3 (VISUAL)
	10.00 - 11.50	SS-5	8	100	-	-	-	SAME AS SS-3	SAME AS SS-3	32	NP	NP	32	A-3 (VISUAL)
B-062-0-18	02.50 - 04.00	SS-1	7	100	-	14	17	43	18	8	NP	NP	13	A-3a (0)
STA. 2+43, 28' LT	05.00 - 06.50	SS-2	14	78	-	-	-	SAME AS SS-1	SAME AS SS-1	12	NP	NP	12	A-3a (VISUAL)
LATITUDE = 41.03469	07.50 - 09.00	SS-3	0	33	-	-	-	SAME AS SS-1	SAME AS SS-1	14	NP	NP	14	A-3a (VISUAL)
LONGITUDE = -81.567609	10.00 - 11.50	SS-4	0	100	-	10	20	35	25	10	NP	NP	14	A-3a (0)
	12.50 - 14.00	SS-5	0	100	-	-	-	SAME AS SS-3	SAME AS SS-3	15	NP	NP	15	A-3a (VISUAL)
	15.00 - 16.50	SS-6	0	100	-	-	-	SAME AS SS-3	SAME AS SS-3	16	NP	NP	16	A-3a (VISUAL)
B-063-0-18	02.50 - 04.00	SS-1	14	56	-	20	21	33	17	9	NP	NP	13	A-3a (0)
OFF CHAIN	05.00 - 06.50	SS-2	4	17	-	-	-	SAME AS SS-1	SAME AS SS-1	13	NP	NP	13	A-3a (VISUAL)
LATITUDE = 41.034019	07.50 - 09.00	SS-3	0	83	-	-	-	SAME AS SS-1	SAME AS SS-1	18	NP	NP	18	A-3a (VISUAL)
LONGITUDE = -81.566973	10.00 - 11.50	SS-4	1	28	-	13	17	36	24	10	NP	NP	15	A-3a (0)
	12.50 - 14.00	SS-5	3	78	-	-	-	SAME AS SS-4	SAME AS SS-4	14	NP	NP	14	A-3a (VISUAL)
	15.00 - 16.50	SS-6	3	78	-	-	-	SAME AS SS-4	SAME AS SS-4	16	NP	NP	16	A-3a (VISUAL)



0 50 100
HORIZONTAL SCALE IN FEET

DRAWN: KA
CHECKED: BPA

SOIL PROFILE RAMP B

SUM - 76 - 6.40

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