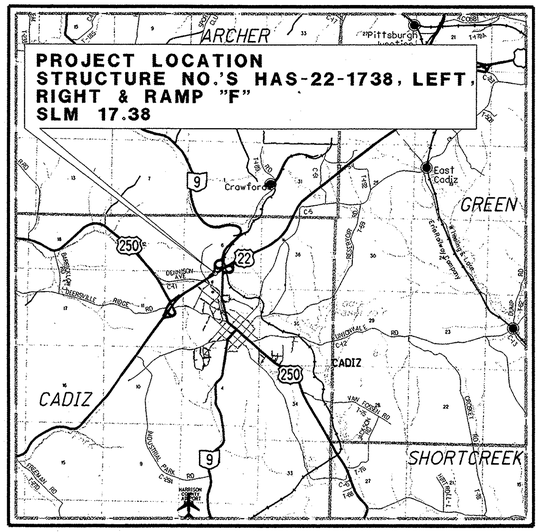

LOCATION MAP

LATITUDE: N40°17'00" LONGITUDE: W81°00'05"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2009)	5800
DESIGN YEAR ADT (2029)	6900
DESIGN HOURLY VOLUME (2029)	690
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	31%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL PRINCIPAL ARTERIAL

NHS PROJECT YES

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

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

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: **1-800-929-0988**

PLAN PREPARED BY:
O.D.O.T.
DISTRICT 11
NEW PHILADELPHIA, OHIO

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

HAS-22-17.38

CADIZ TOWNSHIP

HARRISON COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

IMPROVEMENT OF 300 FEET (0.06 MILES) OF U.S. 22 AND 475 FEET (0.09 MILES) OF RAMP "F" IN CADIZ TOWNSHIP OF HARRISON COUNTY BY REMOVING THREE STRUCTURES, HAS-22-1738, RIGHT (EASTBOUND), HAS-22-1738, LEFT (WESTBOUND), AND HAS-22-1738, RAMP "F" AND FILLING IN AREA WITH EARTH AND CONSTRUCTING NEW PAVEMENT IN PLACE OF THE STRUCTURES AND APPROACH SLABS.

PROJECT EARTH DISTURBED AREA:	2.04 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	2.02 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.9 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.

2008 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY, EXCEPT FOR RAMP "F" AS DESCRIBED ON SHEET 8, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

APPROVED Richard A. Bibbee P.E.
DATE 3/16/09 DISTRICT DEPUTY DIRECTOR

APPROVED John M. Mastoris Jr.
DATE 3-11-09 DIRECTOR, DEPARTMENT OF TRANSPORTATION

ENGINEER'S SEAL:

STATE OF OHIO
RAYMOND PAUL TRIVOLI
E-63963
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Raymond P. Trivoli
DATE: March 5th, 2009

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7-28-00	GR-6.1	4-18-03	TC-72.20	1-21-05		
BP-2.1	7-18-08			TC-73.10	1-19-01		
BP-2.2	7-18-08	RM-4.2	10-19-07				
BP-3.1	10-19-07						
BP-9.1	4-15-05						
				MT-35.10	4-20-01		
F-2.1	7-28-00			MT-95.30	9-05-06		
F-3.4	7-28-00			MT-95.40	10-20-06		
DM-4.3	7-19-02			MT-98.20	10-19-07		
DM-4.4	7-19-02			MT-99.20	1-16-09		
		TC-41.20	1-19-01	MT-101.60	9-05-06		
GR-1.1	7-16-04	TC-42.20	7-16-04	MT-101.70	1-16-09		
GR-2.1	1-16-04	TC-52.10	1-19-07	MT-101.90	1-16-09		
GR-3.1	1-19-07	TC-52.20	1-19-07	MT-105.10	1-16-09		
GR-4.2	1-19-07	TC-65.10	1-21-05				
GR-5.1	4-18-03	TC-65.11	1-21-05				

SUPPLEMENTAL SPECIFICATIONS

800-2008	1-16-09
832	4-25-06

SPECIAL PROVISIONS

SP 832	5-20-08
NWP'S 3	12.1.08

FEDERAL PROJECT NO. E034(831)

PID NO. 24870

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

HAS-22-17.38

1/45

HAS-22-17.38
098016 PID 24870
DIST 11 4/29/2009

I:\PROJECTS\24870\Prod\Dgn\GT100.dgn 05-MAR-2009 1:02PM rtrivoli

Ramp 'F' CURVE DATA
P.I. STA. 2+33.90
Δ = 19° 00' (LT)
Dc = 18° 00'
R = 318.31'
T = 53.27'
L = 105.55'
E = 4.42'

Ramp 'F' CURVE DATA
P.I. STA. 4+87.67
Δ = 38° 45' (LT)
Dc = 10° 00'
R = 572.96'
T = 201.49'
L = 387.50'
E = 34.40'

Ramp 'E' CURVE DATA
Δ = 209° 56' (LT)
Dc = 19° 30'
L = 1076.58'
R = 293.82'

E034(831)
BEGIN PROJECT
STA. 920+00.00
S.L.M. 17.38

BRIDGE NO.
HAS-22-1738 F
TO BE REMOVED

E034(831)
END PROJECT
STA. 923+00.00
S.L.M. 17.43

Sta. 9+30.28 , 18.5' Rt. ℄ Ramp 'F' =
Sta. 6+82.09, 18.5' Rt. ℄ Ramp 'E'

Ramp 'E'
Sta. 0+39.14
PC Sta. 2+32.43
Intersects with S.R. 9
Sta. 0+00 ℄ Ramp 'E'

PT Sta. 6+73.68
N 0° 28' 28" W
Ramp 'F'
PCC Sta. 2+86.18
PC Sta. 1+80.63 ℄ Ramp 'F'
Sta. 918+30.63, 56' Rt. ℄ U.S. 22
Sta. 00+00 ℄ Ramp 'F' =
Sta. 916+50, 56' Lt. ℄ U.S. 22
End Acceleration Lane
Sta. 914+25, 44' Lt. ℄ U.S. 22
N 57° 16' 32" E
Ramp Nose
Sta. 2+43.72 ℄ Ramp 'F' =
Sta. 918+96 ℄ U.S. 22

Ramp Nose
Sta. 11+98.52 ℄ Ramp 'E' =
Sta. 925+33 ℄ U.S. 22
PT Sta. 13+09.01
S.R. 9
Sta. 16+16.01 ℄ Ramp 'E'
Sta. 930+00, 56' Lt. ℄ U.S. 22 =
Begin Deceleration Lane
Mainline Sta. 931+00, 44' Lt.
PC Sta. 931+79.53

BRIDGE NO.'S
HAS-22-1749 L&R

℄ U.S. 22
Sta. 6+70.01 ℄ Ramp 'H' =
Sta. 937+75, 56' Rt. ℄ U.S. 22
N 63° 58' 05" E

915 920 925 930 935 940

BRIDGE NO.'S
HAS-22-1738 L&R
TO BE REMOVED

Begin Deceleration Lane
Sta. 924+75, 44' Rt. ℄ U.S. 22
Sta. 0+00 ℄ Ramp 'G'
Sta. 925+75, 56' Rt. ℄ U.S. 22

BRIDGE NO.'S
HAS-22-1753 L&R

Intersects with S.R. 9
Sta. 18+00.89 ℄ Ramp 'G'

TS Sta. 3+90.00 ℄ Ramp 'G' =
= Sta. 929+65, 56' Rt. ℄ U.S. 22
SC Sta. 5+90.00
Ramp Nose
Sta. 5+69.28 ℄ Ramp 'G' =
Sta. 931+49.67 ℄ U.S. 22
Ramp 'H'
PC Sta. 3+58.49
PCC Sta. 5+83.67 ℄ Ramp 'H'
= Sta. 936+88.24 ℄ U.S. 22
End Acceleration Lane
Sta. 940+00, 44' Rt. ℄ U.S. 22
PT Sta. 943+19.53
Ramp Nose
Sta. 5+30.05 ℄ Ramp 'H' =
Sta. 936+31.52 ℄ U.S. 22

Sta. 17+61.96
PT Sta. 13+23.80
Ramp 'G'
Sta. 0+00, 17.4' Lt. ℄ Ramp 'H' =
Sta. 9+95, 18.5' Lt. ℄ Ramp 'G'

BRIDGE NO.
HAS-250-19.12

Ramp 'G' CURVE DATA
Ls = 200.00'
θs = 25°00'
LT = 134.69'
ST = 67.90'
Δc= 183° 27' (RT)
Dc = 25° 00'
Lc = 733.80'
R = 229.18'

Ramp 'H' CURVE DATA
P.I. STA. 4+81.11
Δ = 56° 17' 45" (RT)
Dc = 25° 00'
R = 229.18'
T = 122.62'
L = 225.18'
E = 30.74'

U.S. 22 CURVE DATA
P.I. STA. 937+50.00
Δ = 5° 42' 00" (RT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 570.47'
L = 1,140.00'
E = 14.19'

0 50 100 200
HORIZONTAL SCALE IN FEET

CALCULATED TKB
CHECKED RPT

SCHEMATIC PLAN
U.S. 22 AND S.R. 9 INTERCHANGE

HAS-22-17.38

2
45

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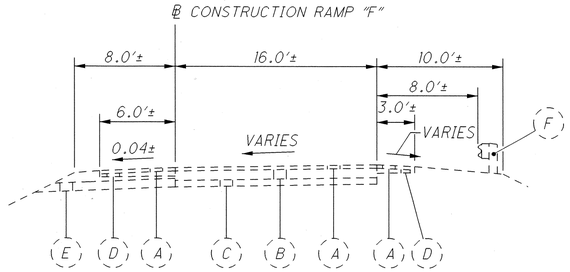
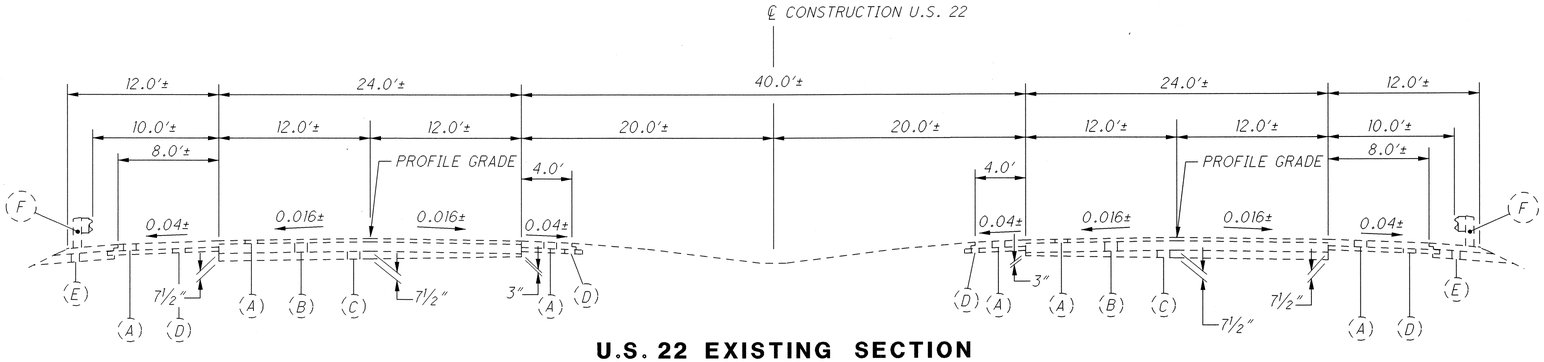
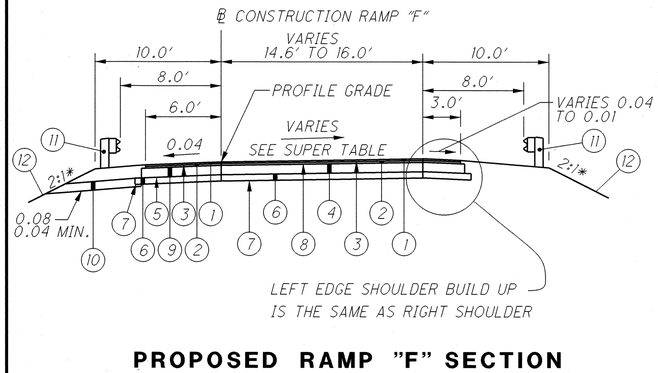


EXISTING RAMP "F" SECTION

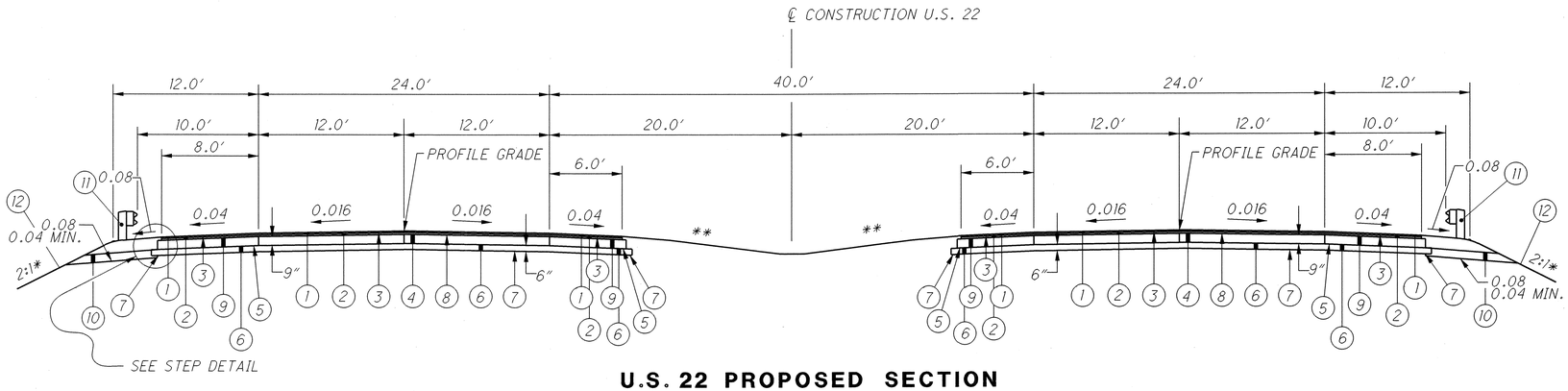


U.S. 22 EXISTING SECTION



PROPOSED RAMP "F" SECTION

SECTION APPLIES:
STA. 3+00.00 TO STA. 6+73.69



U.S. 22 PROPOSED SECTION

SECTION APPLIES:
STA. 920+40.00 TO STA. 923+00.00 RT. (EASTBOUND)
STA. 920+00.00 TO STA. 922+20.00 LT. (WESTBOUND)

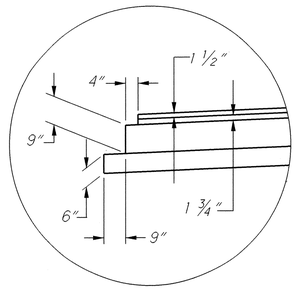
PAVEMENT TRANSITION AND SUPERELEVATION TABLE FOR RAMP "F"

CENTERLINE CONTROL		RIGHT SIDE				
STATION	PROFILE GRADE	WIDTH (ft.)	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	REMARKS
3+00.00	1258.92	14.60	+0.038	+0.55	1259.47	MEET EXISTING
3+25.00	1258.43	15.06	+0.038	+0.57	1259.00	
3+50.00	1257.90	15.51	+0.038	+0.59	1258.49	
3+75.00	1257.31	15.96	+0.038	+0.61	1257.92	
4+00.00	1256.68	16.00	+0.038	+0.61	1257.29	
4+25.00	1255.99	16.00	+0.038	+0.61	1256.60	
4+50.00	1255.26	16.00	+0.038	+0.61	1255.87	
4+75.00	1254.48	16.00	+0.038	+0.61	1255.09	
5+00.00	1253.66	16.00	+0.038	+0.61	1254.27	
5+25.00	1252.81	16.00	+0.038	+0.61	1253.42	
5+50.00	1251.96	16.00	+0.038	+0.61	1252.57	
5+75.00	1251.11	16.00	+0.038	+0.61	1251.72	
6+00.00	1250.26	16.00	+0.038	+0.64	1250.90	
6+25.00	1249.41	16.00	+0.038	+0.61	1250.02	
6+50.00	1248.55	16.00	+0.038	+0.61	1249.16	
6+73.69	1247.75	16.00	+0.035	+0.56	1248.31	MEET EXISTING

LEGEND

1. ITEM 442 - 1 ½" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE B (448), AS PER PLAN
2. ITEM 448 - 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28
3. ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (APPLIED @ 0.04 GAL./S.Y.)
4. ITEM 451 - 9" REINFORCED CONCRETE PAVEMENT
5. ITEM 408 - PRIME COAT (APPLIED @ 0.4 GAL./S.Y.
6. ITEM 304 - 6" AGGREGATE BASE
7. ITEM 204 - SUBGRADE COMPACTION
8. ITEM 407 - TACK COAT, 702.13, (APPLIED @ 0.075 GAL/S.Y.)
9. ITEM 302 - 9" ASPHALT CONCRETE BASE, PG64-22
10. ITEM 605 - AGGREGATE DRAINS, AS PER PLAN
11. ITEM 606 - GUARDRAIL, TYPE 5
12. ITEM 659 - SEEDING AND MULCHING

A. 3 ¼"± EXISTING ASPHALT CONCRETE
B. 9"± REINFORCED CONCRETE
C. EXISTING SUBBASE
D. 4"± BITUMINOUS AGGREGATE BASE
E. EXISTING AGGREGATE DRAINS
F. EXISTING GUARDRAIL



STEP & PAVEMENT DETAIL

** FOR MEDIAN GRADING, SEE CROSS SECTION SHEETS NO.'S 23-30.
* OR AS SHOWN ON CROSS SECTIONS

CALCULATED TKB
CHECKED RPT

TYPICAL SECTIONS

HAS-22-17.38

CALCULATED TKB CHECKED RPT

GENERAL NOTES

UTILITIES

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

EXISTING PLANS

EXISTING PLANS ENTITLED HAS-22-15.09 AND HAS-22-15.25 MAY BE INSPECTED IN THE ODOT DISTRICT 11 OFFICE IN NEW PHILADELPHIA, OHIO.

ROUNDING

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

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.

ELEVATION DATUM/HORIZONTAL DATUM

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND THE GEOID03 GEOID. HORIZONTAL POSITIONS ARE BASED ON THE OHIO STATE PLANE NORTH ZONE, A LAMBERT CONFORMAL CONIC MAP PROJECTION, THE NORTH AMERICAN DATUM OF 1983 ADJUSTED TO THE NATIONAL SPATIAL REFERENCE SYSTEM OF 2007 (NAD 83 (NSRS 2007)), AND THE GRS80 ELLIPSOID.

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.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING _____ 2 HOUR.

ITEM 605 - AGGREGATE DRAINS, AS PER PLAN

AGGREGATE DRAINS SHALL BE PLACED ON THE OUTSIDE SHOULDERS OF THE EASTBOUND AND WESTBOUND LANES AND ON THE LOW SIDE OF RAMP "F". THE AGGREGATE DRAINS SHALL BE PLACED AT THE LOCATIONS OF THE TRANSVERSE PAVEMENT JOINTS WHICH ARE PLACED IN ACCORDANCE WITH STANDARD DRAWING BP-2.2. AGGREGATE SHALL BE NO. 57 SIZE GRAVEL, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

ITEM 605, AGGREGATE DRAINS, AS PER PLAN ..... 384 FT.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL, AS PER PLAN

THE COST OF FURNISHING AND INSTALLING THE FORMS FOR THE LOW STRENGTH MORTAR BACKFILL SHALL BE INCLUDED IN THE ITEM 613, LOW STRENGTH MORTAR BACKFILL, AS PER PLAN.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

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

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 451, REINFORCED CONCRETE PAVEMENT

ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE B, (448), AS PER PLAN

MATERIALS FURNISHED FOR FINE AND COARSE AGGREGATES USED IN THESE ITEMS SHALL EXCLUDE ALL STONE AND CRUSHED CARBONATE STONE.

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.

ITEM 503 - COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

INSPECTION OF BRIDGE FOR BATS:

PRIOR TO ANY DEMOLITION/REMOVAL OF THE EXISTING BRIDGES, THE CONTRACTOR SHALL CAREFULLY EXAMINE THE UNDERSIDE OF ALL THREE STRUCTURES FOR THE PRESENCE OF BATS. IF ANY BATS ARE FOUND, THE ODOT DISTRICT 11 ENVIRONMENTAL COORDINATOR SHOULD BE CONTACTED AT 330-339-6633 BEFORE COMMENCING WITH THE BRIDGE'S DEMOLITION.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS:

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SSS265M	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET2000 PLUS PLAN, ELEVATION AND SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS AND HBA POSTS 1-4 PLAN, ELEVATION AND SECTION	5/22/00	7/31/00

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224, (TELEPHONE: 330-346-0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18", OR 12" X 18" IF APPLIED TO A RECTANGULAR ET-2000 "PLUS" EXTRUDER HEAD.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4-INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27-3/4-INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4-INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - IMPACT ATTENUATOR, TYPE I-98 (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE FOLLOWING IMPACT ATTENUATORS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED IMPACT ATTENUATORS:

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

THE LENGTH OF THE C-A-T SYSTEM IS CONSIDERED TO BE 31'-3" LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS245M	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS FOR USE AS A LONGITUDINAL MEDIAN BARRIER TERMINAL OR CRASH CUSHION ATTENUATOR	4/10/97 Rev. 4	3/6/98
SS224M	C-A-T TRANSITION TO MEDIAN BARRIER GUARDRAIL PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98
SS226M	C-A-T TRANSITION TO VERTICAL WALL OR PIER PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98

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

THE LENGTH OF THE BRAKEMASTER SYSTEM IS CONSIDERED TO BE 32'-8" LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
92-00-01	BRAKEMASTER GENERAL ASSEMBLY (UNIDIRECTIONAL SYSTEM)	3/6/97 Rev. K	3/6/98
92-00-81	BRAKEMASTER (UNIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
92-00-02	BRAKEMASTER GENERAL ASSEMBLY (BIDIRECTIONAL SYSTEM)	3/10/97 Rev. K	3/6/98
92-00-82	BRAKEMASTER (BIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
9202024	ANCHOR ASSEMBLY, FOUNDATION TUBE, 6½FT., BRS	6/12/97 Rev. D	3/6/98

ITEM 606 - IMPACT ATTENUATOR, TYPE I-98 (BIDIRECTIONAL) CONT.

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

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

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

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

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESCRIPTION:

THIS WORK FOR STRUCTURES HAS-22-1738 L&R AND HAS-22-1738 F CONSISTS OF THE FOLLOWING:

1. REMOVAL OF THE ENTIRE SUPERSTRUCTURE, INCLUDING PARAPETS AND WEARING SURFACES.
2. PORTIONS OF THE ABUTMENTS, INCLUDING WINGWALLS AND PARAPETS, TO THE TOP OF FOOTING.
3. PORTIONS OF THE PIERS AS DETAILED IN THE PLANS.
4. ANY PORTIONS NOT SPECIFIED BUT NECESSARY TO COMPLETE THE PROPOSED WORK.

REMOVAL METHODS: (HAS-22-1738 L&R)

THE WEIGHT OF HAMMERS SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF THE PORTIONS TO BE RETAINED FOR MAINTENANCE OF TRAFFIC DURING PHASE 1. OUTSIDE THE 18 INCH LIMIT, HAMMERS NOT EXCEEDING 90 POUNDS MAY BE USED UPON THE APPROVAL OF THE ENGINEER. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED DURING PHASE 1 REMOVALS.

LOADING LIMITATIONS:

THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT UNBALANCED LOADING ON THE PIERS AND PREVENT TILTING OF THE PIERS DURING DECK SLAB REMOVAL OPERATIONS.

MEASUREMENT AND PAYMENT:

THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

CALCULATED TKB CHECKED RPT

GENERAL NOTES

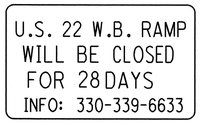
HAS-22-17.38

ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES FOR THE EASTBOUND AND WESTBOUND LANES OF U.S. 22 IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 614 AND THE CONSTRUCTION PHASING DESCRIBED ON SHEET NO.'S 9 THRU 15. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, PAVEMENT FOR MAINTAINING TRAFFIC, PORTIONS OF THE EXISTING BRIDGE AND PROPOSED PAVEMENT.

RAMP "F" OF HAS-22-17.38 SHALL BE DETOURED DURING PHASE 1 AS INDICATED ON THE CONSTRUCTION PHASING DESCRIBED ON SHEET 9. THE CLOSURE PERIOD SHALL NOT EXCEED 28 CONSECUTIVE DAYS. LIQUIDATED DAMAGES SHALL BE ASSESSED ACCORDING TO SECTION 108.07 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST TWO WEEKS IN ADVANCE OF THE SCHEDULED RAMP F CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.



W20-H13-60

IN ADDITION TO OTHER SIGNS REFERENCED IN THE PLANS, THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES, AS PER DETAIL A, SHOWN ON SHEET _9_ FOR THE CLOSURE OF THE RAMP.

ODOT WILL FURNISH, INSTALL, MAINTAIN, AND REMOVE DETOUR SIGNING.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION THAT WILL REQUIRE THE CLOSURE OF EXISTING LANES TO TRAFFIC, ALL SIGNS, LIGHTS, PORTABLE CONCRETE BARRIER, WORK ZONE IMPACT ATTENUATOR AND WORK ZONE PAVEMENT MARKINGS SHALL BE FURNISHED AND INSTALLED AS SHOWN ON SHEETS 12-15. WORK ZONE PAVEMENT MARKINGS, RAISED PAVEMENT MARKERS, WORK ZONE IMPACT ATTENUATOR AND PORTABLE CONCRETE BARRIER INSTALLATION SHALL BE ACCOMPLISHED IN ONE DAY, WITH FLAGGERS BEING UTILIZED FOR THE PROTECTION OF TRAFFIC DURING THE INSTALLATION OF THESE ITEMS.

ANY REMAINING WORK NOT COVERED PREVIOUSLY FOR U.S. 22 OR RAMP "F" SHALL BE PERFORMED WITH THE ADEQUATE PROTECTION OF TRAFFIC COMMENSURATE WITH THESE PLANS AND THE APPPROPRIATE STANDARD DRAWINGS.

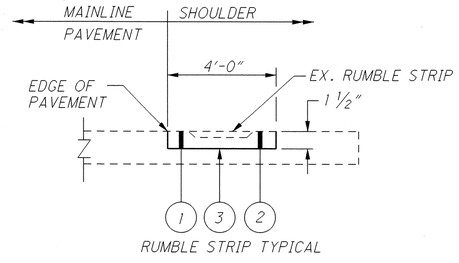
ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN (CONTINUED)

EQUIPMENT, VEHICLES AND MATERIAL SHALL NOT BE STORED OR PARKED ON THE PROJECT WITHIN 30 FEET OF THE EDGE OF THE TRAVELED PAVEMENT, UNLESS A MINIMUM SPACING OF SIX (6) FEET BEHIND GUARDRAIL OR PROTECTIVE BARRIER IS OBTAINED.

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

EXISTING RUMBLE STRIPS

DURING THOSE PHASES OF MAINTENANCE OF TRAFFIC THAT REQUIRE THE CONTRACTOR TO MOVE TRAFFIC ONTO THE SHOULDER, THE EXISTING RUMBLE STRIPS MUST BE REMOVED, AS SHOWN BY THE RUMBLE STRIP REMOVAL TYPICAL BELOW. THE METHOD FOR REMOVING THE RUMBLE STRIPS WILL BE TO PLANE THE SHOULDER PAVEMENT, TACK COAT THE PLANED AREA, AND BACKFILL WITH 442 ASPHALT AND ROLL SMOOTH TO MATCH THE ADJACENT PAVEMENT ELEVATION. THE RUMBLE STRIP REMOVAL LIMITS SHALL BE THE POINT OF TRANSITION ONTO THE SHOULDER CONTINUOUS TO THE TRANSITION BACK ONTO MAINLINE. THE MATERIALS, EQUIPMENT, AND LABOR TO PERFORM THIS WORK SHALL BE PAID FOR UNDER THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.



RUMBLE STRIP TYPICAL

(1) - 254, PAVEMENT PLANING, ASPHALT CONCRETE

(2) - 442, 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE B (448), AS PER PLAN

(3) - 407, TACK COAT (APPLIED AT 0.075 GAL/S.Y.)

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN

ITEM 614, BARRIER REFLECTORS AND OBJECT MARKERS

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 50 FEET.

IN ADDITION TO THE QUANTITIES ON SHEET NO. 9, THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE DURING PHASE ONE AND IS TO BE APPLIED TO THE EXISTING BRIDGE RAILING:

ITEM 614, BARRIER REFLECTOR, TYPE A 6 EACH

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 __93__ M. GAL

DESIGNATED LOCAL DETOUR ROUTE

IN ADDITION TO THE OFFICIAL, SIGNED DETOUR ROUTE, A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE SECONDARY, UNSIGNED DETOUR ROUTE OR "DESIGNATED LOCAL DETOUR ROUTE." THIS ROUTE IS SHOWN ON SHEET NO. 8. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED LOCAL DETOUR ROUTE.

ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN .... 20 CU. YD.

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE...480 SQ. YD.

ITEM 407, TACK COAT (APPLIED AT 0.075 GAL/S.Y.)...36 GAL.

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE ENGINEER AT LEAST EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ODOT SHALL PROVIDE SIGNS, SUPPORTS AND HARDWARE REQUIRED FOR THE DETOUR ROUTE. ODOT SHALL THEN INSTALL, MAINTAIN, REMOVE AND SALVAGE SIGNS THROUGHOUT THE DURATION OF THE DETOUR.

THE ENGINEER SHALL IMMEDIATELY NOTIFY THE DISTRICT ROADWAY SERVICES MANAGER TO ADVISE THE OFFICE OF HIGHWAY MANAGEMENT OF THE DETOUR.

NOTIFICATION OF WORK ZONE RESTRICTIONS

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST EIGHTEEN (18) DAYS PRIOR TO IMPLEMENTING ANY WORK ZONE RESTRICTIONS WHICH WILL REDUCE THE WIDTH OR VERTICAL CLEARANCE OF ANY LANE ON WHICH TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION.

NOTIFICATION OF WORK ZONE RESTRICTIONS (CONTINUED)

THE ENGINEER SHALL IMMEDIATELY NOTIFY THE DISTRICT ROADWAY SERVICES MANAGER TO ADVISE THE OFFICE OF HIGHWAY MANAGEMENT OF THE RESTRICTION.

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

THE PAVEMENT TYPE OF THE TEMPORARY PAVEMENT SHALL BE FLEXIBLE AND SHALL REMAIN IN PLACE UPON COMPLETION OF THE PROJECT.

ITEM 622 - PORTABLE CONCRETE BARRIER

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUTDOWNS.

THE SIGNS ON THE MAINLINE SHALL BE DUAL MOUNTED UNLESS NOT PHYSICALLY POSSIBLE. THE FIRST SIGN SHALL BE PLACED BETWEEN THE ROAD WORK AHEAD (W20-1)SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY 2 MILES THROUGH THE CONSTRUCTION WORK LIMITS. SIGNS ON THE MAINLINE SHALL BE R11-H5A-48. SIGNS USED ON THE RAMPS SHALL BE R11-H5A-24.

SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE INCREASED PENALITIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALITIES SIGN _4_ EACH

CALCULATED TKB CHECKED RPT

MAINTENANCE OF TRAFFIC NOTES

HAS-22-17.38

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

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

1. THE QUADGUARD CZ, (24 INCHES WIDE SIX BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., 35 EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

   THE LENGTH OF THE SIX-BAY QUADGUARD CZ IS 20'-9". INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS.

DWG.#	DRAWING NAME	DWG. /REV. DATE	ODOT APPROVAL DATE
QSCZCVR-T4	QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES	5/13/99 REV. J	8/27/99
35-40-10	QUADGUARD SYSTEM CONCRETE PAD, CZ, OG	11/19/97 REV. D	8/27/99
35-40-16	QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, OG	7/30/99 REV. F	8/27/99
354051Z	QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, OG, 24, 30, 36	5/17/99	8/27/99
35-40-18	TRANSITION ASSEMBLY, 4 OFFSET, OG	6/25/99 REV. F	8/27/99
35400260	QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY	11/19/97 REV. C	8/27/99

2. THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

   THE TRACC IS 21'-0" LONG AND 2'-7" WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PREAPPROVED SHOP DRAWINGS:

DWG.#	DRAWING NAME	DWG. /REV. DATE	ODOT APPROVAL DATE
SS450	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS	3/12/99 REV. 1	8/27/99
SS455	TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS	2/18/99	8/27/99
SS461	TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS	6/30/99 REV. 1	8/27/99
SS462	TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS	6/30/99	8/27/99

3. THE BARRIER SYSTEMS, INC. TAU-II IMPACT ATTENUATOR, DISTRIBUTED BY ROAD SYSTEMS, INC.,SALES SUPPORT, 2183 ELM TRACE, AUSTINTOWN, OH 44515 (TELEPHONE: 330-799-9291).

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

THE TAU-II FOR THIS NOTE IS A PARALLEL 8-BAY UNIT 24' LONG AND 35" WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG.#	DRAWING NAME	DWG. /REV. DATE	ODOT APPROVAL DATE
A040416	UNIVERSAL TAU-II PARTS LIST	4/22/04	10/16/04
A040420	UNIVERSAL TAU-II FOUNDATION, FLUSH MOUNT BACKSTOP	4/28/04	10/16/04
A040105	UNIVERSAL TAU-II FOUNDATION, PCB BACKSTOP (REFERENCED ON A04020)	1/07/04	10/16/04
B040239	APPLICATION, FLUSH MOUNT BACKSTOP (TYPICAL FOR PARALLEL 60 MPH UNIT)	4/21/04	10/16/04

THE CONTRACTOR SHALL PROVIDE A REPLACEMENT UNIT WHEN AN IMPACT IS SEVERE ENOUGH TO REQUIRE COMPLETE REPLACEMENT OF THE ATTENUATOR. THE CONTRACTOR SHALL HAVE A SPARE PARTS PACKAGE AVAILABLE ON THE PROJECT SITE AT ALL TIMES WHEN AN ATTENUATOR IS IN PLACE. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE COMPLETE SPARE PARTS PACKAGE FOR EVERY ONE TO SIX UNITS INSTALLED ON THE PROJECT SITE. FOR EXAMPLE, FIVE INSTALLED UNITS REQUIRE ONE SPARE PARTS PACKAGE AND SEVEN INSTALLED UNITS REQUIRE TWO SPARE PARTS PACKAGES.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. 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, MAINTAIN, REPAIR, REPLACE OR RELOCATE 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.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 1 1/4" INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

ITEM 614, WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT (R2-1) (45 SPEED LIMIT) SIGNS AND SUPPORTS WITHIN THE WORK LIMITS ON THE U.S. 22 MAINLINE IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE DAYS, SUCH AS DURING WINTER SHUT-DOWNS. CLEANUP WORK AND OTHER WORK BEYOND THE SHOULDER SUCH AS SEEDING, TO BE PERFORMED AFTER RESTORATION OF ALL FULL-WIDTH LANES AND SHOULDERS TO TRAFFIC, DOES NOT CONSTITUTE A CONDITION WARRANTING A SPEED REDUCTION. THEREFORE, WHEN ACTIVITY IS LIMITED TO SUCH WORK, THE SPEED LIMIT IN EFFECT SHALL BE THE NORMAL SPEED LIMIT FOR THE SITE.

CONSTRUCTION AND MATERIALS SPECIFICATIONS, ITEM 614, PARAGRAPH 614.02(B) INDICATES THAT THE TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, SPEED REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE SPEED REDUCTION IN THE OPPOSITE DIRECTION. SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION, IN SUCH CASE, IS APPROPRIATE ONLY IF CONDITIONS ARE EXPECTED TO HAVE AN IMPACT ON THE DIRECTIONAL TRAFFIC FLOW, AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN AT THE LOCATIONS DESCRIBED BELOW, OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF A DIRECTIONAL ROADWAY OF DIVIDED HIGHWAYS.

THE 45 MPH SPEED LIMIT ON U.S. 22 WESTBOUND SHALL START AT STATION 914+00 AND CONTINUE TO STATION 940+60. PLACE AN ADDITIONAL SIGN AT STATION 924+50. THE 45 MPH SPEED LIMIT ON U.S. 22 EASTBOUND SHALL START AT STATION 901+49 AND CONTINUE TO STATION 934+00. PLACE AN ADDITIONAL SIGN AT STATION 916+50.

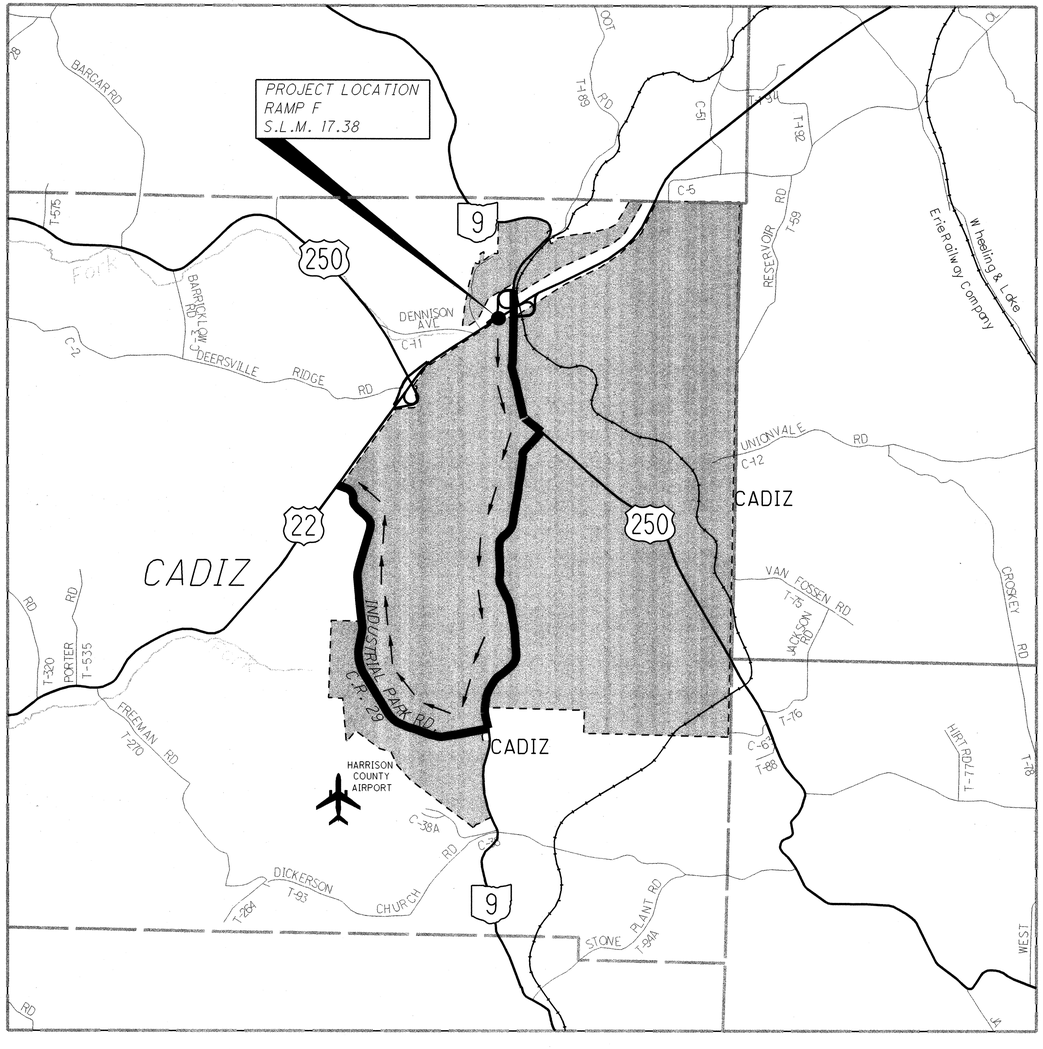
SPEED REDUCTION SIGNS (W3-5) SHALL BE DUAL MOUNTED APPROXIMATELY 500 FEET IN ADVANCE OF THE SPEED REDUCTION. A SIGN(S) TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE, TYPICALLY AT THE POINT WHERE ROADWAY AND SHOULDER WIDTHS RETURN TO NORMAL. ON UNDIVIDED ROADWAYS, THE R2-1 (SPEED LIMIT) SIGN SHALL BE USED. ON DIVIDED HIGHWAYS WHERE THE SPEED LIMIT VARIES BY VEHICLE TYPE, THE R2-1 (SPEED LIMIT) SIGN AND THE R2-H2A (TRUCK SPEED LIMIT) SIGNS SHALL BE MOUNTED SIDE-BY-SIDE ON SEPARATE SUPPORTS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO ITEM 630, GROUND MOUNTED SUPPORTS, NO. 3 POSTS.

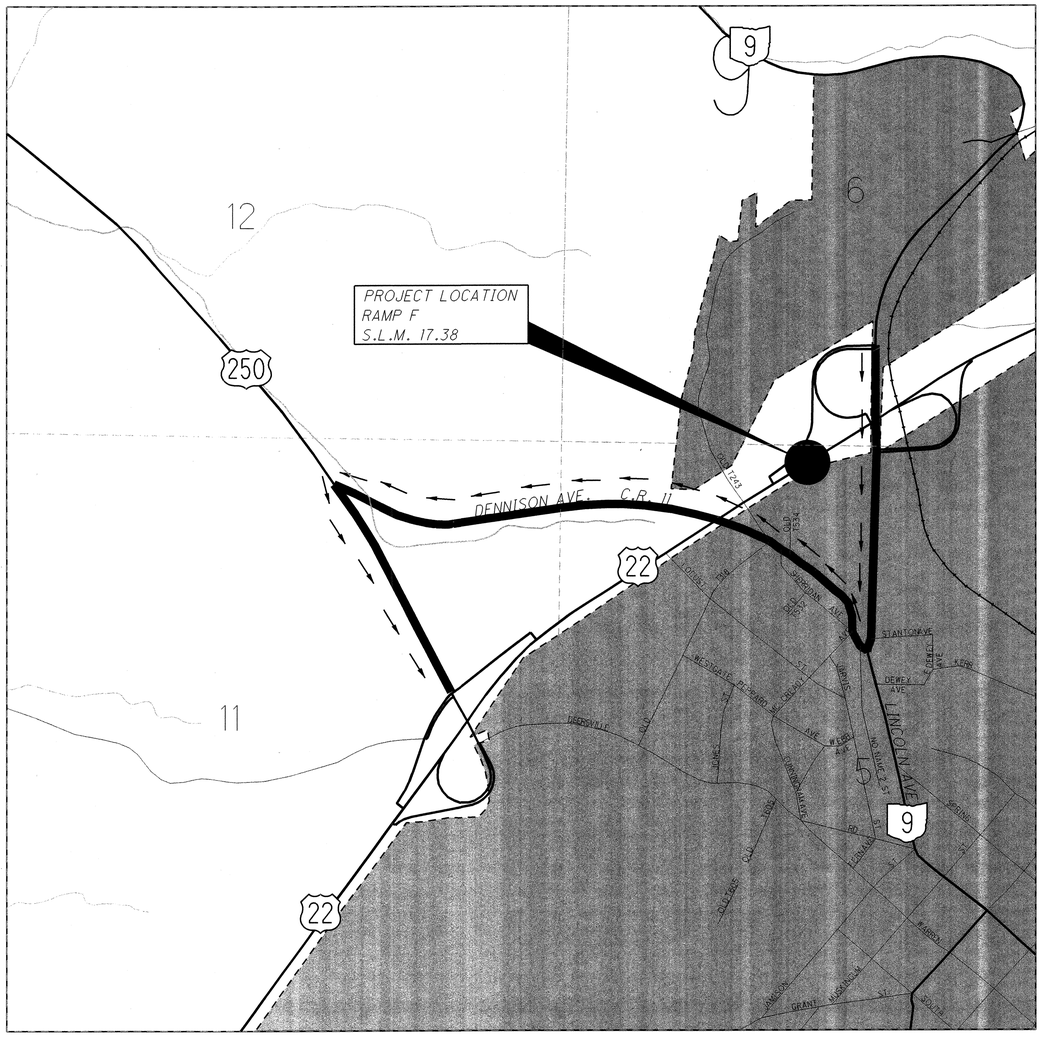
WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING THE SIGNS AND SUPPORTS. SPEED LIMIT SIGNING FOR THE POINT OF RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE PAID FOR AS WORK ZONE SPEED LIMIT SIGNS. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, WORK ZONE SPEED LIMIT SIGN 8 EACH
ITEM 614, SPEED ZONE AHEAD SYMBOL SIGN 4 EACH



U.S. 22 OFFICIAL DETOUR MAP
(RAMP F CLOSURE)



DESIGNATED LOCAL U.S. 22

DETOUR MAP
(RAMP F CLOSURE)

MAINTENANCE OF TRAFFIC - DETOUR MAP

HAS-22-17.38

8
45

CALCULATED TKB
CHECKED RPT

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MAINTENANCE OF TRAFFIC QUANTITIES

	SHEET NO.	REFERENCE	614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	614 BARRIER REFLECTOR, TYPE B	614 OBJECT MARKER, ONE WAY	614	614 WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1 (WHITE)	614 WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1 (YELLOW)	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	622 PORTABLE CONCRETE BARRIER, 32"	622 PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED
			EACH	EACH	EACH		MILE	MILE	SQ. YD.	FEET	FEET
PHASE 1	12	MT-1						0.31			
	12	MT-2					0.22				
	12	MT-3	1								
	12	MT-4					0.22				
	12	MT-5	1								
	12	MT-6						0.30			
	12	PCB-1		12	12					650	140
	12	PCB-2		11	11					320	140
	12	PCB-3		3	3					140	
PHASE 1 SUB-TOTAL			2	26	26		0.44	0.61		1110	280
PHASE 2	14	MT-7					0.32				
	14	MT-8						0.25			
	14	MT-9	1								
	14	MT-10					0.11				
	14	MT-11						0.17			
	14	MT-12					0.11				
	14	MT-13	1								
	15	MT-14					0.31				
	14	PCB-4		12	12					520	
	14	PCB-5		11	11					470	
	14	PCB-6		3	3					60	
	14	PMT-1							131.1		
	14	PMT-2							22.2		
	14	PMT-3							90		
	14	PMT-4							22.2		
PHASE 2 SUB-TOTAL			2	26	26		0.85	0.42	265.5	1050	
TOTALS CARRIED TO GENERAL SUMMARY			4	52	52		2.32		266	2160	280

CALCULATIONS:
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, TYPE A, AS PER PLAN

PMT-1 — STA. 914+50.00 TO STA. 920+40.00
590 FT. x 2 FT. = 1180 SQ. FT. ÷ 9 = 131.1 SQ. YD.

PMT-2 — STA. 923+00.00 TO STA. 924+00.00
100 FT. x 2 FT. = 200 SQ. FT. ÷ 9 = 22.2 SQ. YD.

PMT-3 — STA. 922+20.00 TO STA. 926+25.00
405 FT. x 2 FT. = 810 SQ. FT. ÷ 9 = 90 SQ. YD.

PMT-4 — STA. 919+00.00 TO STA. 920+00.00
100 FT. x 2 FT. = 200 SQ. FT. ÷ 9 = 22.2 SQ. YD.

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

WORK PRIOR TO PHASED CONSTRUCTION:
THE CONTRACTOR SHALL BEGIN THE EARTH FILL OPERATIONS BENEATH STRUCTURES: HAS-22-1738 L&R AND HAS-22-1738F PRIOR TO PHASED CONSTRUCTION. THE FILL UNDER EACH STRUCTURE SHALL BE CONSTRUCTED TO A MINIMUM HEIGHT OF 12 FEET BELOW THE LOWEST DECK ELEVATION OF THAT STRUCTURE. THE TEMPORARY SHEETING DESIGN LISTED IN THE GENERAL NOTE FOR ITEM 503 ON SHEET 4 IS BASED ON THIS REQUIREMENT. DEVIATIONS TO THIS MINIMUM PRE-PHASE CONSTRUCTION REQUIREMENT SHALL NOT BE GRANTED.

CONSTRUCT THE SHOULDER PAVEMENT NECESSARY FOR MAINTAINING TRAFFIC IN THE LATER PHASES. THIS WORK IS PERFORMED ON THE RIGHT AND LEFT SIDES OF US 22. THIS WORK SHALL BE CONSTRUCTED UNDER FLAGGERS AND SUBJECT TO THE "TRENCH FOR WIDENING" AND "OVERNIGHT TRENCH CLOSING" NOTES AND STANDARD CONSTRUCTION DRAWINGS MT-95.30 AND MT-101.90.

PHASE 1 AND RAMP "F" DETOUR
INSTALL AND MAINTAIN CONSTRUCTION ADVANCE WARNING SIGNS, BARRICADES, PORTABLE CONCRETE BARRIER, PORTABLE CONCRETE BARRIER, BRIDGE MOUNTED (ANCHORED), AND WORK ZONE PAVEMENT MARKINGS. DETOUR ROUTE SIGNING SHALL BE INSTALLED AND MAINTAINED BY THE STATE.

THE CONTRACTOR SHALL PERFORM THE WORK IN THE MEDIAN OF US 22 MAINLINE AND RAMP F. TRAFFIC SHALL BE MAINTAINED DURING THIS PHASE AS PER THE DETAILS SHOWN ON SHEETS 12-13, THE APPLICABLE STANDARD CONSTRUCTION DRAWINGS AND THE OMUTCD.

RAMP F SHALL BE DETOURED AS SHOWN ON SHEET 8.

US 22
THE CONTRACTOR SHALL PERFORM THE PARTIAL STRUCTURE REMOVAL, EMBANKMENT, SUBGRADE PREPARATION, GUARDRAIL, AND PAVEMENT UP TO AND INCLUDING THE INTERMEDIATE COURSE OF ASPHALT. THE CONTRACTOR SHALL ENSURE THAT ALL PAVEMENT DROPOFFS ARE IN ACCORDANCE WITH SCD MT-101.90.

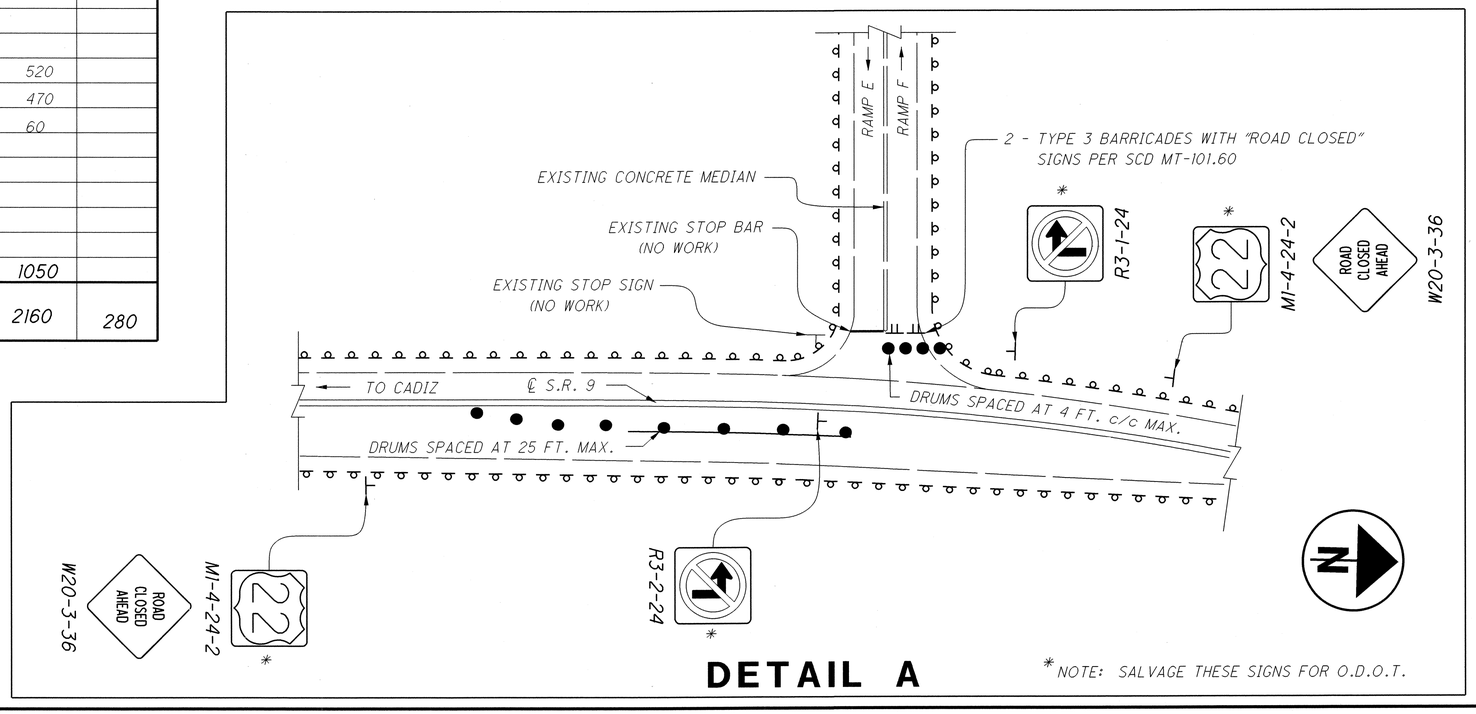
RAMP F
THE CONTRACTOR SHALL PERFORM THE PARTIAL STRUCTURE REMOVAL, EMBANKMENT, SUBGRADE PREPARATION, GUARDRAIL AND ALL PAVEMENT WORK DURING THE DETOUR PERIOD.

PHASE 2
INSTALL AND MAINTAIN CONSTRUCTION ADVANCE WARNING SIGNS, BARRICADES, PORTABLE CONCRETE BARRIER, AND WORK ZONE PAVEMENT MARKINGS. DETOUR ROUTE SIGNING SHALL BE REMOVED BY THE STATE.

THE CONTRACTOR SHALL PERFORM THE WORK ON THE RIGHT SIDE OF US 22 AND THE INFIELD BETWEEN MAINLINE US 22 AND RAMP F. TRAFFIC SHALL BE MAINTAINED DURING THIS PHASE AS PER THE DETAILS SHOWN ON SHEETS 14-15.

THE CONTRACTOR SHALL PERFORM THE PARTIAL STRUCTURE REMOVAL, EMBANKMENT, SUBGRADE PREPARATION, GUARDRAIL, AND PAVEMENT UP TO AND INCLUDING THE INTERMEDIATE COURSE OF ASPHALT. THE CONTRACTOR SHALL ENSURE THAT ALL PAVEMENT DROPOFFS ARE IN ACCORDANCE WITH SCD MT-101.90.

WORK POST PHASE CONSTRUCTION
THE CONTRACTOR SHALL CONSTRUCT THE SURFACE COURSE OF ASPHALT ON US 22 UTILIZING STANDARD CONSTRUCTION DRAWING MT-95.30. ALL CONFLICTING TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED. APPLY PERMANENT PAVEMENT MARKINGS IN ACCORDANCE WITH MT-99.20.



DETAIL A

*NOTE: SALVAGE THESE SIGNS FOR O.D.O.T.

CALCULATED TKB
CHECKED RPT

MAINTENANCE OF TRAFFIC

HAS-22-17.38

9
45

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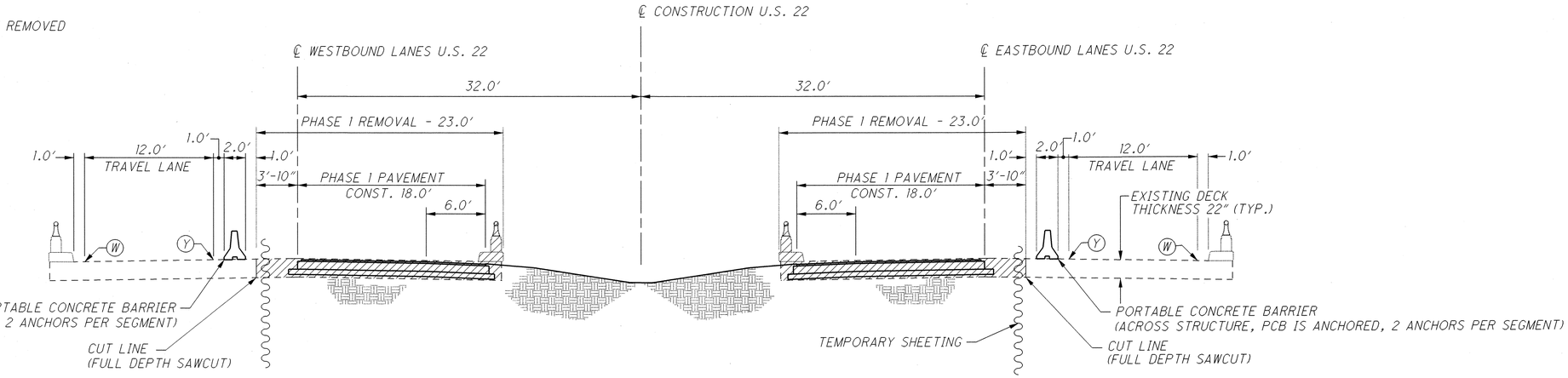
PORTIONS OF STRUCTURE REMOVED

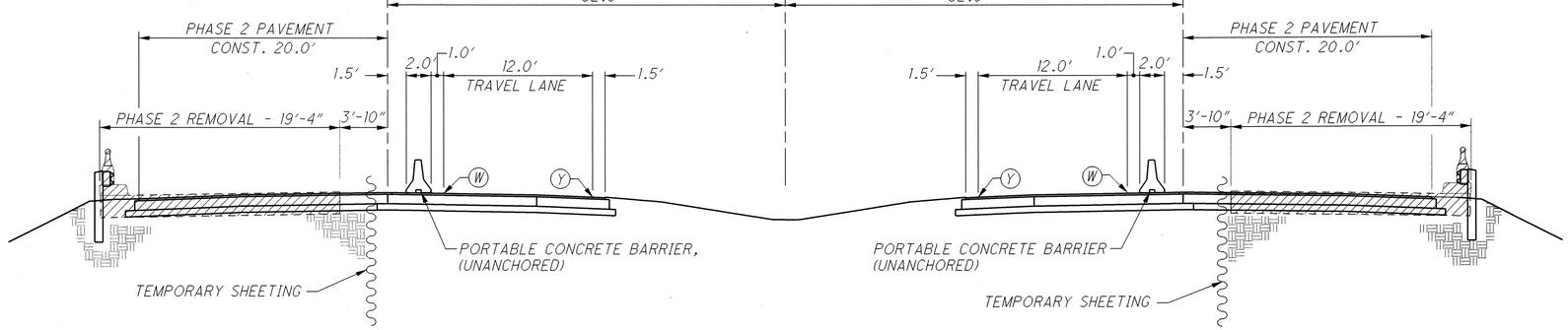
(Y) YELLOW EDGE LINE

(W) WHITE EDGE LINE



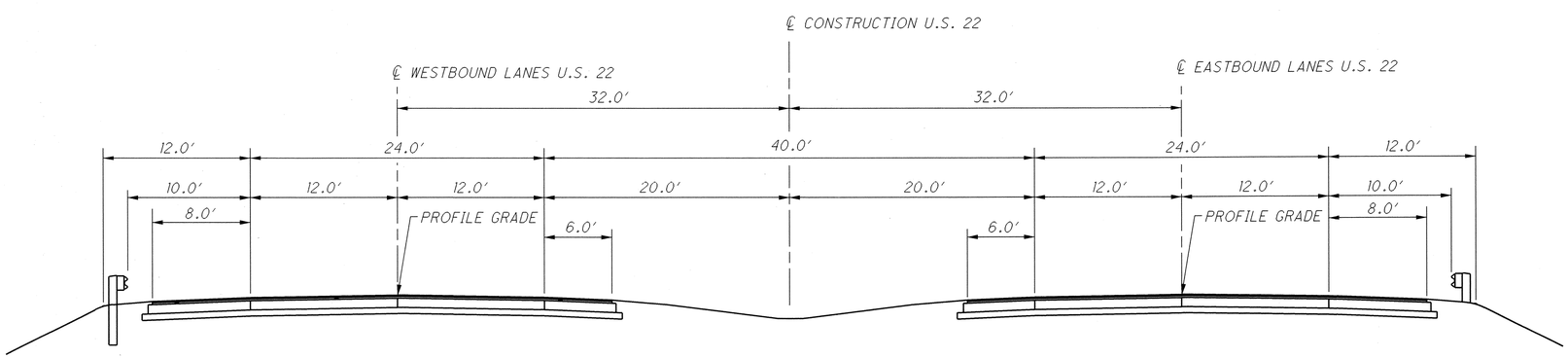
WESTBOUND - PHASE 1 REMOVAL AND PAVEMENT CONSTRUCTION

EASTBOUND - PHASE 1 REMOVAL AND PAVEMENT CONSTRUCTION



WESTBOUND - PHASE 2 REMOVAL AND PAVEMENT CONSTRUCTION

EASTBOUND - PHASE 2 REMOVAL AND PAVEMENT CONSTRUCTION



WESTBOUND - PAVEMENT CONSTRUCTION (SURFACE COURSE)

EASTBOUND - PAVEMENT CONSTRUCTION (SURFACE COURSE)

CALCULATED TKB
CHECKED RPT

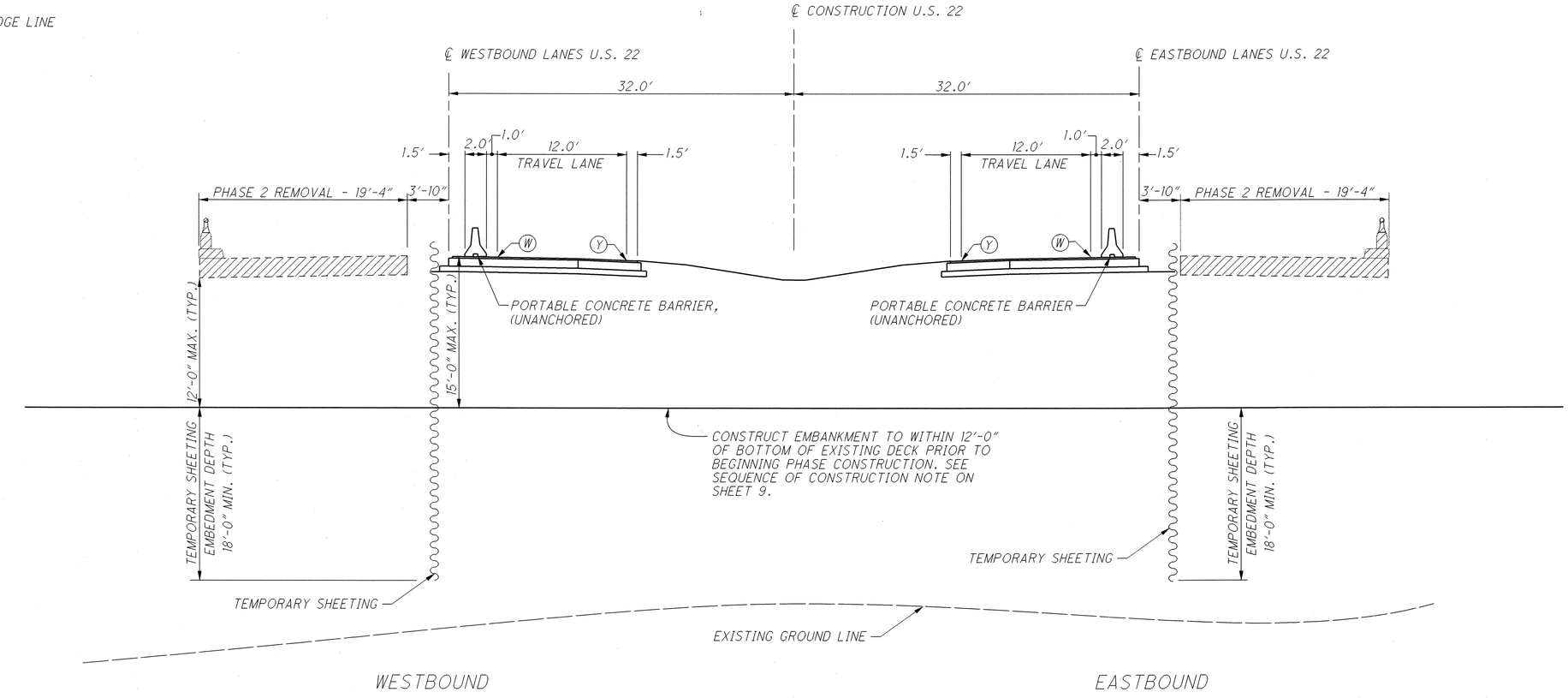
PHASE CONSTRUCTION DETAILS

HAS-22-17.38

PORTIONS OF STRUCTURE REMOVED

(Y) YELLOW EDGE LINE

(W) WHITE EDGE LINE



TEMPORARY SHEETING TYPICAL DETAILS

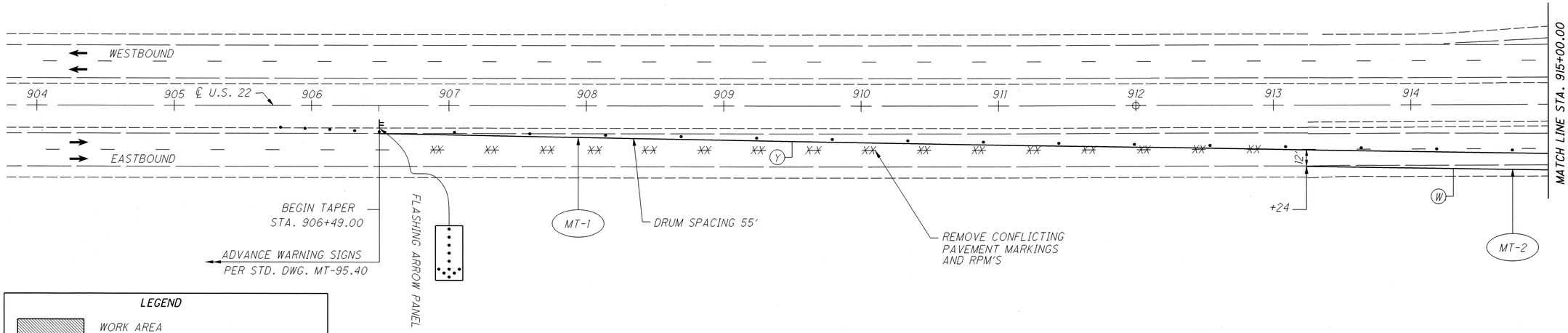
MINIMUM SHEETING SECTION MODULUS FOR ASTM A328 STEEL (Fy=36 ksi) = 27.6 $IN^3/FT.$

CALCULATED TKB
CHECKED RPT

PHASE CONSTRUCTION DETAILS

HAS-22-17.38

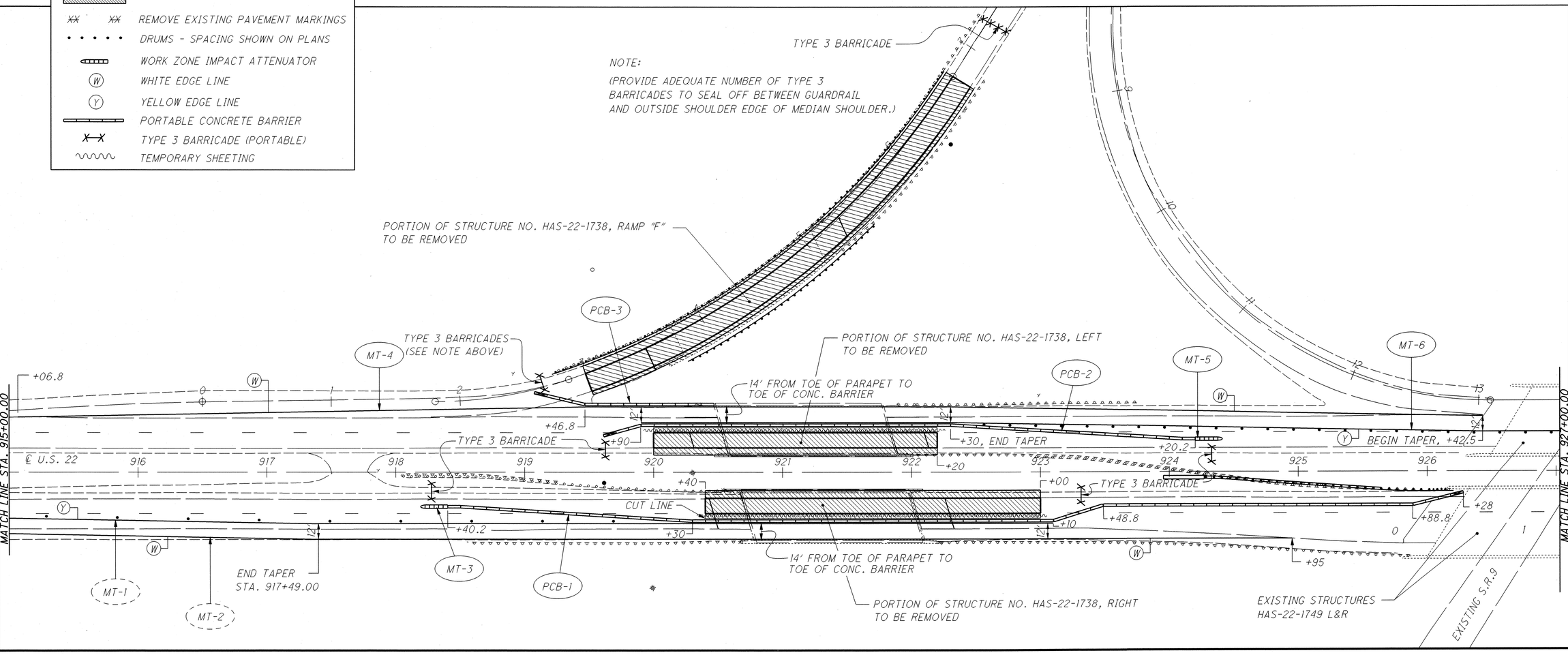
FOR ESTIMATED QUANTITIES, SEE SHEET NO. 9.
FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS NO. 10-11.
FOR DETAILS NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWINGS MT-35.10, MT-95.30, MT-95.40, MT-98.20, MT-99.20, MT-101.60, MT-101.70 AND MT-101.90.



LEGEND

- WORK AREA
- XX XX REMOVE EXISTING PAVEMENT MARKINGS
- DRUMS - SPACING SHOWN ON PLANS
- WORK ZONE IMPACT ATTENUATOR
- (W) WHITE EDGE LINE
- (Y) YELLOW EDGE LINE
- PORTABLE CONCRETE BARRIER
- TYPE 3 BARRICADE (PORTABLE)
- TEMPORARY SHEETING

NOTE:
(PROVIDE ADEQUATE NUMBER OF TYPE 3 BARRICADES TO SEAL OFF BETWEEN GUARDRAIL AND OUTSIDE SHOULDER EDGE OF MEDIAN SHOULDER.)



CALCULATED TKB
CHECKED RPT

MAINTENANCE OF TRAFFIC - PHASE 1

HAS-22-17.38

12
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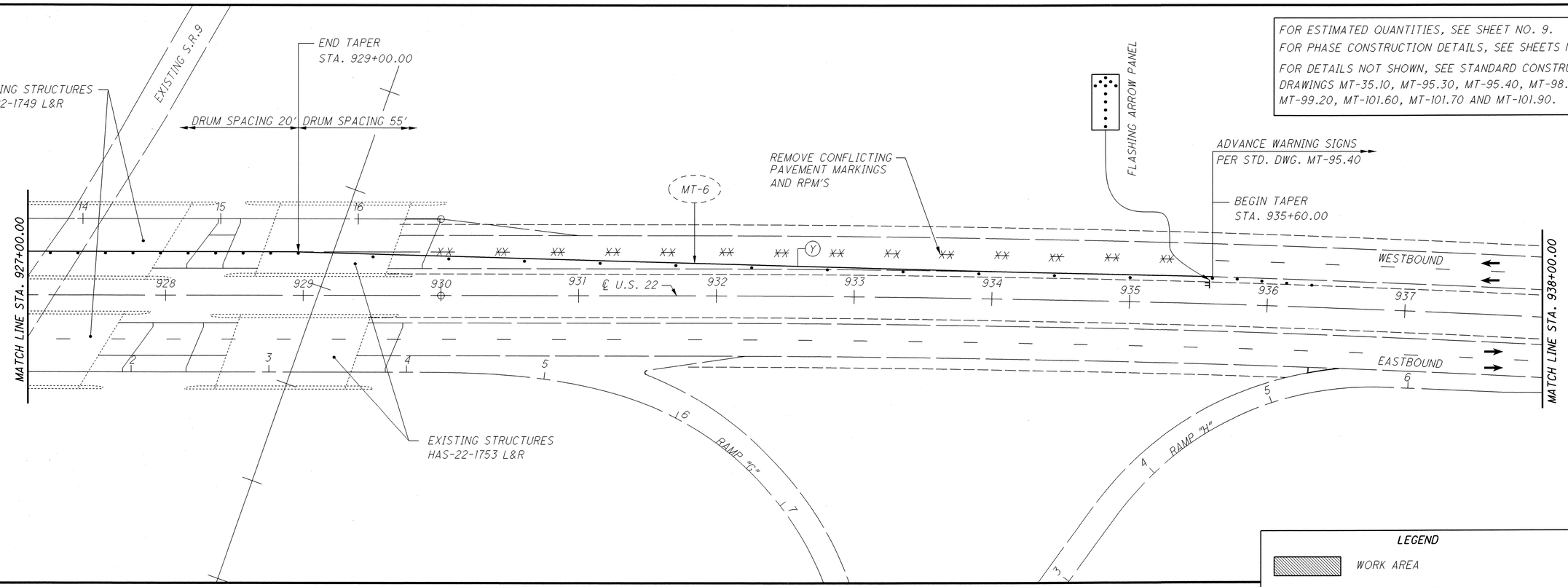
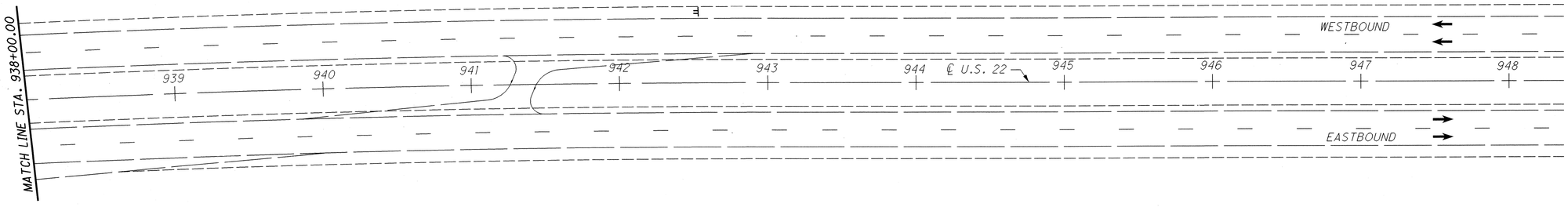
FOR ESTIMATED QUANTITIES, SEE SHEET NO. 9.
FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS NO. 10-11.
FOR DETAILS NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWINGS MT-35.10, MT-95.30, MT-95.40, MT-98.20, MT-99.20, MT-101.60, MT-101.70 AND MT-101.90.



LEGEND

- WORK AREA
- XX XX REMOVE EXISTING PAVEMENT MARKINGS
- DRUMS - SPACING SHOWN ON PLANS
- WORK ZONE IMPACT ATTENUATOR
- (W) WHITE EDGE LINE
- (Y) YELLOW EDGE LINE
- PORTABLE CONCRETE BARRIER
- TYPE 3 BARRICADE (PORTABLE)
- TEMPORARY SHEETING



CALCULATED TKB
CHECKED RPT

OFFICE OF TRAFFIC PLAN - PHASE 1

MAINTENANCE

HAS-22-17.38

13
45

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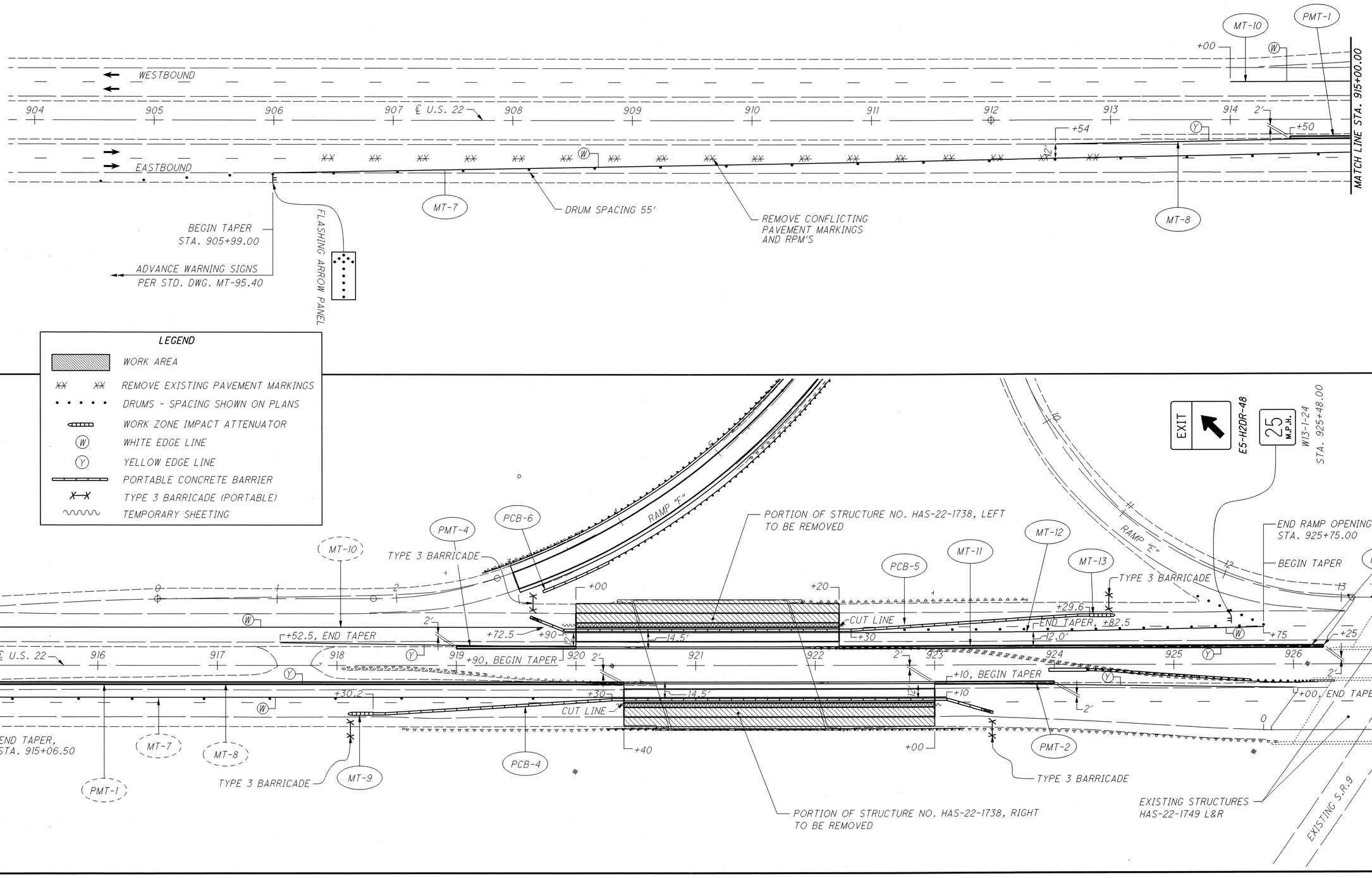
FOR ESTIMATED QUANTITIES, SEE SHEET NO. 9.
FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS NO. 10-11.
FOR DETAILS NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWINGS MT-35.10, MT-95.30, MT-95.40, MT-98.20, MT-99.20, MT-101.60, MT-101.70 AND MT-101.90.



CALCULATED TKB
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MAINTENANCE OF TRAFFIC PLAN - PHASE 2

HAS-22-17.38

FOR ESTIMATED QUANTITIES, SEE SHEET NO. 9.
FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS NO. 10-11.
FOR DETAILS NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWINGS MT-35.10, MT-95.30, MT-95.40, MT-98.20, MT-99.20, MT-101.60, MT-101.70 AND MT-101.90.

EXISTING S.R.9

EXISTING STRUCTURES
HAS-22-1749 L&R

EXIT OPEN
E5-2-48
STA. 929+00.00

BEGIN RAMP OPENING TAPER
STA. 929+65.00

DRUM SPACING 20' DRUM SPACING 55'
AS PER MT-98.20

MT-14

MATCH LINE STA. 927+00.00

928 929 930 931 932 933 934 ℄ U.S. 22 935 936 937

WESTBOUND

EASTBOUND

MATCH LINE 938+00.00

EXISTING STRUCTURES
HAS-22-1753 L&R

RAMP "G"

RAMP "H"

LEGEND

- WORK AREA
- XX XX REMOVE EXISTING PAVEMENT MARKINGS
- DRUMS - SPACING SHOWN ON PLANS
- WORK ZONE IMPACT ATTENUATOR
- (W) WHITE EDGE LINE
- (Y) YELLOW EDGE LINE
- PORTABLE CONCRETE BARRIER
- TYPE 3 BARRICADE (PORTABLE)
- TEMPORARY SHEETING

EXIT OPEN AHEAD
E5-H2b-48

25 M.P.H.
W13-1-24
STA. 939+65.00

END TAPER
STA. 939+65.00

MT-14

DRUM SPACING 55'

REMOVE CONFLICTING PAVEMENT MARKINGS AND RPM'S

FLASHING ARROW PANEL

ADVANCE WARNING SIGNS
PER STD. DWG. MT-95.40

BEGIN TAPER
STA. 946+25.00±

MATCH LINE 938+00.00

939 940 941 942 943 944 ℄ U.S. 22 945 946 947 948

WESTBOUND

EASTBOUND

CALCULATED TKB
CHECKED RPT

MAINTENANCE OF TRAFFIC PLAN - PHASE 2

HAS-22-17.38

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45

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SHEET NUMBER	OFFICE CALCS.	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
						ROADWAY	
LUMP		201	11000	LUMP		CLEARING AND GRUBBING	
1001		202	23000	1001	SQ YD	PAVEMENT REMOVED	
1238		202	38000	1238	FT	GUARDRAIL REMOVED	
352		202	38300	352	FT	GUARDRAIL REMOVED, BARRIER DESIGN	
517		202	75000	517	FT	FENCE REMOVED	
1317		203	10000	1317	CU YD	EXCAVATION	
21,789		203	20000	21,789	CU YD	EMBANKMENT	
	3343	204	10000	3343	SQ YD	SUBGRADE COMPACTION	
2		204	45000	2	HOUR	PROOF ROLLING	
766.25		606	13000	766.25	FT	GUARDRAIL, TYPE 5	
137.5		606	15500	137.5	FT	GUARDRAIL, BARRIER DESIGN, TYPE 5	
1		606	22010	1	EACH	ANCHOR ASSEMBLY, TYPE E-98	
2		606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T	
1		606	35000	1	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
1		606	60010	1	EACH	IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL)	
258		607	15000	258	FT	FENCE, TYPE 47	
						EROSION CONTROL	
10		601	32100	10	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
2		659	00100	2	EACH	SOIL ANALYSIS TEST	
799		659	00300	799	CU YD	TOPSOIL	
7199		659	10000	7199	SQ YD	SEEDING AND MULCHING	
1.0		659	20000	1.0	TON	COMMERCIAL FERTILIZER	
1.49		659	31000	1.49	ACRE	LIME	
39		659	35000	39	M GAL	WATER	
90		660	20000	90	SQ YD	SODDING REINFORCED	
		832	15000	LUMP		STORM WATER POLLUTION PREVENTION PLAN	
		832	30000	11000	EACH	EROSION CONTROL	
						DRAINAGE	
384		605	31101	384	FT	AGGREGATE DRAINS, AS PER PLAN	4
						PAVEMENT	
480		254	01000	480	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
	296	302	46000	296	CU YD	ASPHALT CONCRETE BASE, PG64-22	
	544	304	20000	544	CU YD	AGGREGATE BASE	
36		407	10000	36	GALLON	TACK COAT	
	145	407	13900	145	GALLON	TACK COAT, 702.13	
	122	407	14000	122	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
	473	408	10000	473	GALLON	PRIME COAT	
	106	442	20051	106	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448), AS PER PLAN	4
	149	448	46040	149	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28	
20		448	47021	20	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN	
	1938	451	14000	1938	SQ YD	9" REINFORCED CONCRETE PAVEMENT	
4090		618	40100	4090	FT	RUMBLE STRIPS, (ASPHALT CONCRETE)	

CALCULATED TKB
CHECKED RPT

GENERAL SUMMARY

HAS-22-17.38

SHEET NUMBER													OFFICE CALCS.	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	4		5		6	7	9		18		40								
																		TRAFFIC CONTROL	
									12					621	00100	12	EACH	RPM	
									7					621	54000	7	EACH	RAISED PAVEMENT MARKER REMOVED	
									19					626	00100	19	EACH	BARRIER REFLECTOR	
									2					630	84900	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
									1					630	85000	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
									3					630	86002	3	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
									0.32					642	00100	0.32	MILE	EDGE LINE, TYPE 1	
									0.09					642	00200	0.09	MILE	LANE LINE, TYPE 1	
																		STRUCTURES OVER 20' SPAN	
																		HAS-22-1738 R	
			LUMP											202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	5
									133					202	22900	133	SQ YD	APPROACH SLAB REMOVED	
	LUMP													503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN	4
											13			613	41201	13	CU YD	LOW STRENGTH MORTAR BACKFILL, AS PER PLAN	4
																		HAS-22-1738 L	
			LUMP											202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	5
									133					202	22900	133	SQ YD	APPROACH SLAB REMOVED	
	LUMP													503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN	4
											13			613	41201	13	CU YD	LOW STRENGTH MORTAR BACKFILL, AS PER PLAN	4
																		HAS-22-1738 F	
			LUMP											202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	5
									112					202	22900	112	SQ YD	APPROACH SLAB REMOVED	
																		MAINTENANCE OF TRAFFIC	4
							4							614	12336	4	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	7
						4								614	12410	4	EACH	SPEED ZONE AHEAD SYMBOL SIGN	
						8								614	12470	8	EACH	WORK ZONE SPEED LIMIT SIGN	
					4									614	12484	4	EACH	WORK ZONE INCREASED PENALTIES SIGN	
					6									614	13200	6	EACH	BARRIER REFLECTOR, TYPE A	
							52							614	13300	52	EACH	BARRIER REFLECTOR, TYPE B	
							52							614	13350	52	EACH	OBJECT MARKER, ONE WAY	
							2.32							614	22200	2.32	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I	
							266							615	20001	266	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	6
					93									616	10000	93	M GAL	WATER	
							2160							622	40020	2160	FT	PORTABLE CONCRETE BARRIER, 32"	
							280							622	40040	280	FT	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED	
																			6
					LUMP									614	11001	LUMP		MAINTAINING TRAFFIC, AS PER PLAN	
														619	16010	6	MONTH	FIELD OFFICE, TYPE B	
														623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
														624	10000	LUMP		MOBILIZATION	

CALCULATED TKB

CHECKED RPT

GENERAL SUMMARY

HAS-22-17.38

17
45

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REFERENCE NUMBER	SHEET NUMBER	STATION FROM	STATION TO	SIDE	202 GUARDRAIL REMOVED	202 GUARDRAIL, REMOVED, BARRIER DESIGN	202 FENCE REMOVED	606 GUARDRAIL, TYPE 5	606 GUARDRAIL, BARRIER DESIGN, TYPE 5	606 ANCHOR ASSEMBLY, TYPE E-98	606 ANCHOR ASSEMBLY, TYPE T	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL)	607 FENCE TYPE 47	607 POST ASSEMBLY C	607 POST ASSEMBLY I	607 LINE POST	607 STREAM CROSSING	601 ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	626 BARRIER REFLECTOR TYPE A
					FT.	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	FT.	EACH	EACH	EACH	EACH	CU. YD.	EACH
GR-1	22	918+03±	920+57±	℄-RT.	130	122														
GR-2	22	920+25±	923+25±	RT.	300			300												3
GR-3	22	922+00±	926+18.5±	LT.-RT.	193	230		56.25	137.5			1	1							5
GR-4	22	921+88±	923+77.5±	LT.	189.5															
GR-5	22	3+75 RAMP F	6+87.5 RAMP F	RT.	178			262.5		1	1									5
GR-6	22	2+75 RAMP F	6+80.5 RAMP F	LT.	247.5			387.5			1									6
R-1	22	920+57.35±	920+65.26±	LT.-RT.			27													
R-2	22	920+76.19±	921+09.78±	RT.			84													
R-3	22	921+87.43±	922+12.27±	RT.			60													
R-4	22	921+98.29±	921+93.37±	LT.-RT.			25													
R-5	22	921+82.96±	921+38.57±	LT.			118													
R-6	22	921+27.08±	920+86.54±	LT.			77													
R-7	22	919+47.96±	920+07.32±	LT.			70													
R-8	22	920+23.75±	920+42.14±	LT.			38													
R-9	22	921+46.76±	921+64.13±	RT.			18													
F-1	22	921+09.78	921+87.43	RT.										81		1	1			
F-2	22	919+47.96	920+86.54	LT.										177	1	2		1	10	
TOTALS (CARRIED TO GENERAL SUMMARY)					1238	352	517	766.25	137.5	1	2	1	1	258	1	3	1	1	10	19

FOR INFORMATION ONLY

EARTHWORK SUMMARY TABLE

FROM SHEET NO.	203 EXCAVATION CU. YD.	203 EMBANKMENT CU. YD.	659 SEEDING & MULCHING SQ. YD.
23	0	1	28
24	169	293	291
25	410	6713	1075
26	60	7374	1388
27	69	17	591
28	13	4	344
29	24	1	344
30	5	2	129
32	17	3	84
33	278	808	412
34	0	5128	858
35	196	1431	871
36	46	14	495
37	30	0	289
TOTALS	1317	21,789	7199

ITEM 642

STATION FROM	STATION TO	EDGE LINE, TYPE 1 (WHITE) MILE	EDGE LINE, TYPE 1 (YELLOW) MILE	LANE LINE, TYPE 1 MILE	REMARKS
920+40.00	923+00.00	0.05	0.05	0.05	EASTBOUND
920+00.00	922+20.00	0.04	0.04	0.04	WESTBOUND
3+00.00	6+73.69	0.07	0.07		RAMP "F"
SUB-TOTALS		0.16	0.16	0.09	
TOTALS		0.32		0.09	

(CARRIED TO GENERAL SUMMARY)

ITEM 659 - COMMERCIAL FERTILIZER

7199 S.Y. x 9 x (20 LBS. + 10 LBS.)/1000 S.F. ÷ 2000 = 0.97 TON

(USE 1.0 TON)

ITEM 659 - LIME

7199 S.Y. x 9 ÷ 43,560 S.F./ACRE = 1.49 ACRES

(USE 1.49 ACRES)

ITEM 659 - WATER

7199 S.Y. x 9 x 300 GAL./1000 S.F. x 2 APP./1000 S.F. = 38.9 M GAL.

(USE 39 M GAL.)

ITEM 659 - TOPSOIL

7199 S.Y. x 111 C.Y./1000 S.Y. = 799.09 C.Y.

(USE 799 C.Y.)

ITEM 659 - SOIL ANALYSIS TEST = 2 EACH

ITEM 202 - APPROACH SLABS REMOVED

HAS-22-1738R

STA. 920+37.22± TO STA. 920+62.22± (REAR)
25 FT. x 24 FT. = 600 SQ. FT. ÷ 9 = 66.67 SQ. YD.

STA. 921+93.78± TO STA. 922+18.78± (FORWARD)
25 FT. x 24 FT. = 600 SQ. FT. ÷ 9 = 66.67 SQ. YD.

USE 133 SQ. YD.

HAS-22-1738L

STA. 920+37.22± TO STA. 920+62.22± (REAR)
25 FT. x 24 FT. = 600 SQ. FT. ÷ 9 = 66.67 SQ. YD.

STA. 921+93.78± TO STA. 922+18.78± (FORWARD)
25 FT. x 24 FT. = 600 SQ. FT. ÷ 9 = 66.67 SQ. YD.

USE 133 SQ. YD.

HAS-22-1738F

STA. 3+50.76± TO STA. 3+75.76± (REAR)
25 FT. x 20 FT. = 500 SQ. FT. ÷ 9 = 55.56 SQ. YD.

STA. 5+07.58± TO STA. 5+32.58± (FORWAR)
25 FT. x 20 FT. = 500 SQ. FT. ÷ 9 = 55.56 SQ. YD.

USE = 112 SQ. YD.

ITEM 621 - RAISED PAVEMENT MARKER REMOVED

STA. 920+40.00 TO STA. 923+00.00 (EASTBOUND) OMIT STRUCTURE
USE 2 EACH

STA. 920+00.00 TO STA. 922+20.00 (WESTBOUND) OMIT STRUCTURE
USE 2 EACH

STA. 3+00.00 TO STA. 6+73.69 (RAMP "F" YELLOW EDGELINE) OMIT STRUCTURE
USE 3 EACH

TOTAL = 7 EACH

ITEM 202 - PAVEMENT REMOVED

MAINLINE - (EASTBOUND)
STA. 920+40.00 TO STA. 923+00.00
OMIT STRUCTURE AND APPROACH SLABS
260 FT. - 181.56 x 36 FT. = 2823.84 SQ. FT. ÷ 9 = 313.76 SQ. YD.

MAINLINE - (WESTBOUND)
STA. 920+00.00 TO STA. 922+20.00
OMIT STRUCTURE AND APPROACH SLABS
220 FT. - 181.56' x 36 FT. = 1383.84 SQ. FT. ÷ 9 = 153.76 SQ. YD.

RAMP "F"
STA. 3+00.00 TO STA. 3+50.76
OMIT STRUCTURE AND APPROACH SLABS
51 FT. x 25 FT. = 1275 SQ. FT. ÷ = 141.67 SQ. YD.
STA. 5+32.58 TO STA. 6+73.69
141 FT. x 25 FT. = 3525 SQ. FT. ÷ 9 = 391.67 SQ. YD.

TOTAL = 1001 SQ. YD.

ITEM 618 - RUMBLE STRIPS, (ASPHALT CONCRETE)

MAINLINE - (EASTBOUND MEDIAN)
STA. 912+54.00 TO STA. 926+00.00
1346 FT.

MAINLINE - (EASTBOUND OUTSIDE)
STA. 913+24.00 TO STA. 924+95.00
1171 FT.

MAINLINE - (WESTBOUND MEDIAN)
STA. 917+52.5 TO STA. 926+25.00
872.5 FT.

MAINLINE - (WESTBOUND OUTSIDE)
STA. 918+85.00 TO STA. 925+85.00
700 FT.

TOTAL = 4090 FT.

ITEM 621 - RPM

STA. 920+40.00 TO STA. 923+00.00 (EASTBOUND) 2 WAY (WHITE/RED)
260' ÷ 80 = 3.25 USE 4

STA. 920+00.00 TO STA. 922+20.00 (WESTBOUND) 2 WAY (WHITE/RED)
220' ÷ 80 = 2.75 USE 3

STA. 3+00.00 TO STA. 6+73.69 (RAMP "F" YELLOW EDGELINE) 2 WAY (YELLOW/RED)
373.69' ÷ 80 = 4.67 USE 5

TOTAL = 12 EACH

E-1 — ITEM 660 - SODDING REINFORCED
STA. 920+12 TO STA. 921+41
135' x 6' ± 9 = 90 SQ. YD.

USE 90 SQ. YD.

S-1 — STA. 920+66.69± RT.
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
1 EACH

ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
1 EACH

S-2 — STA. 920+53.77± RT.
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
1 EACH

ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
1 EACH

S-3 — STA. 920+24.01± RT.
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND STORAGE
1 EACH

ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
1 EACH

TOTALS CARRIED TO THE GENERAL SUMMARY.

CALCULATED TKB CHECKED RPT

ESTIMATED QUANTITIES

HAS-22-17.38

PROJECT DATA

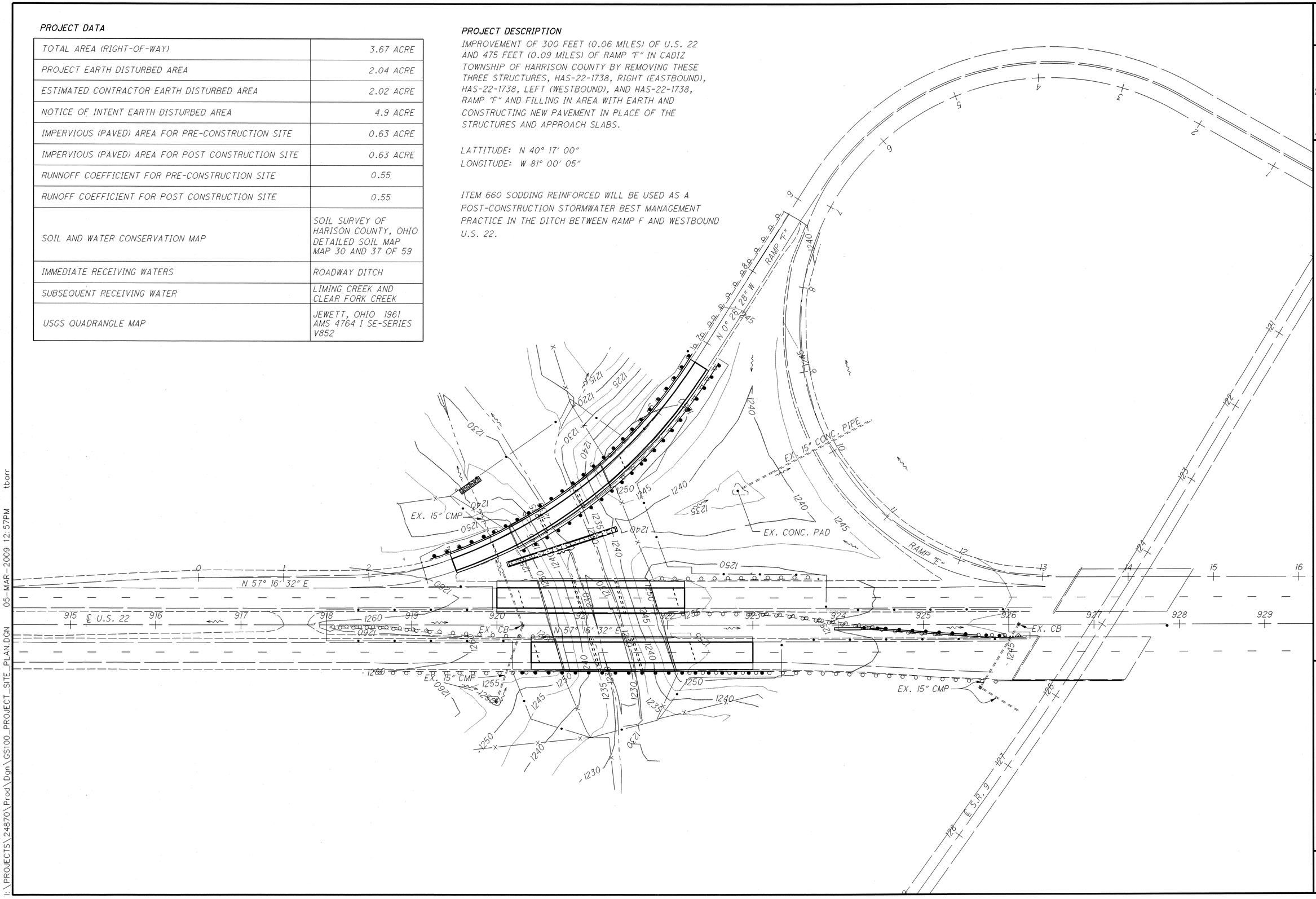
TOTAL AREA (RIGHT-OF-WAY)	3.67 ACRE
PROJECT EARTH DISTURBED AREA	2.04 ACRE
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	2.02 ACRE
NOTICE OF INTENT EARTH DISTURBED AREA	4.9 ACRE
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	0.63 ACRE
IMPERVIOUS (PAVED) AREA FOR POST CONSTRUCTION SITE	0.63 ACRE
RUNNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.55
RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	0.55
SOIL AND WATER CONSERVATION MAP	SOIL SURVEY OF HARISON COUNTY, OHIO DETAILED SOIL MAP MAP 30 AND 37 OF 59
IMMEDIATE RECEIVING WATERS	ROADWAY DITCH
SUBSEQUENT RECEIVING WATER	LIMING CREEK AND CLEAR FORK CREEK
USGS QUADRANGLE MAP	JEWETT, OHIO 1961 AMS 4764 I SE-SERIES V852

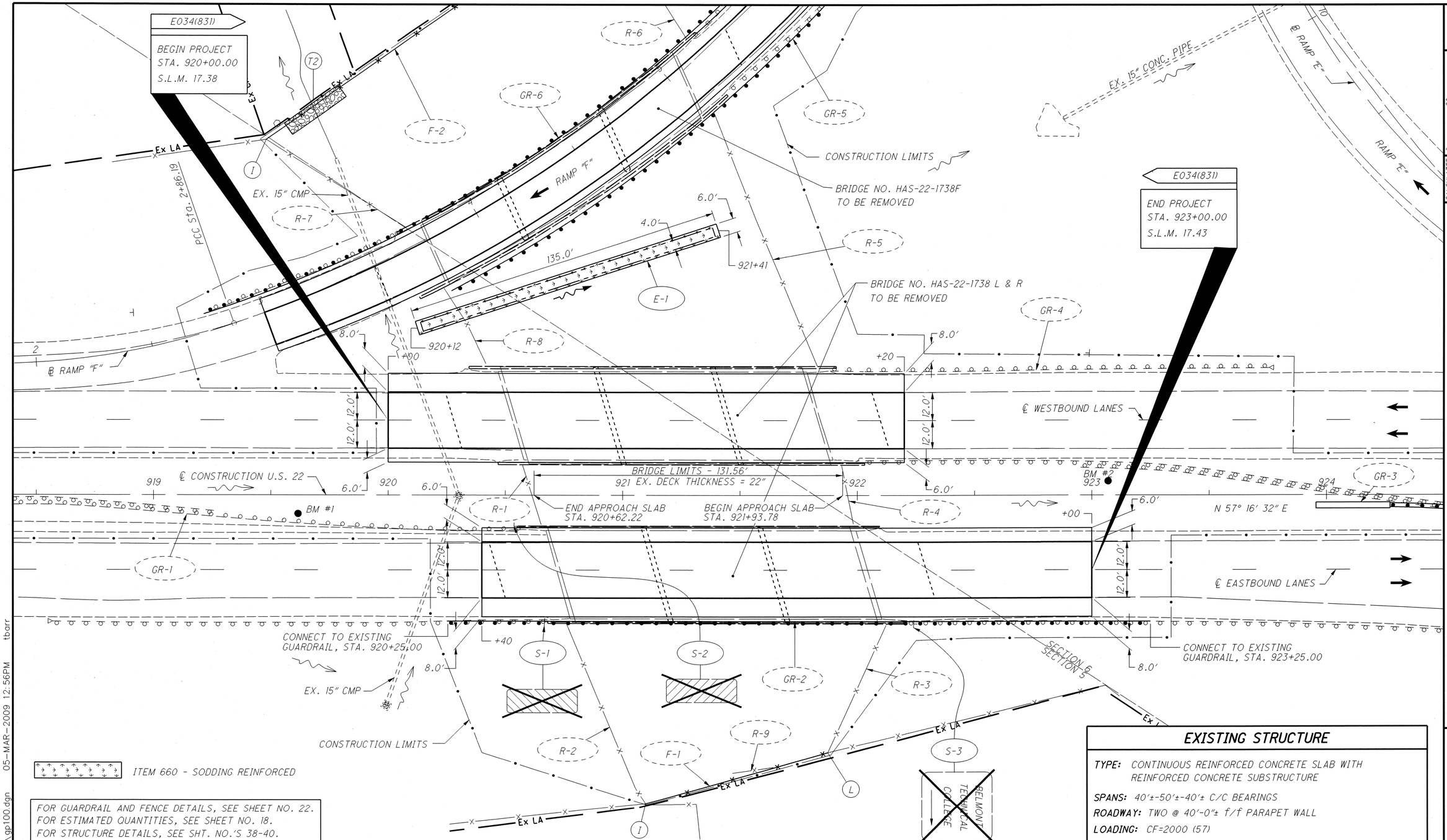
PROJECT DESCRIPTION

IMPROVEMENT OF 300 FEET (0.06 MILES) OF U.S. 22 AND 475 FEET (0.09 MILES) OF RAMP "F" IN CADIZ TOWNSHIP OF HARRISON COUNTY BY REMOVING THESE THREE STRUCTURES, HAS-22-1738, RIGHT (EASTBOUND), HAS-22-1738, LEFT (WESTBOUND), AND HAS-22-1738, RAMP "F" AND FILLING IN AREA WITH EARTH AND CONSTRUCTING NEW PAVEMENT IN PLACE OF THE STRUCTURES AND APPROACH SLABS.

LATTITUDE: N 40° 17' 00"
LONGITUDE: W 81° 00' 05"

ITEM 660 SODDING REINFORCED WILL BE USED AS A POST-CONSTRUCTION STORMWATER BEST MANAGEMENT PRACTICE IN THE DITCH BETWEEN RAMP F AND WESTBOUND U.S. 22.



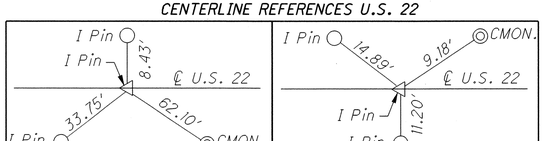


FOR GUARDRAIL AND FENCE DETAILS, SEE SHEET NO. 22.
FOR ESTIMATED QUANTITIES, SEE SHEET NO. 18.
FOR STRUCTURE DETAILS, SEE SHT. NO.'S 38-40.
FOR HAS-22-1738F DETAILS, SEE SHEET NO. 31.

HORIZONTAL CONTROL POINTS FOR U.S. 22

STATION	OFFSET	NORTH	EAST	ELEVATION	REMARKS
919+61.58	8.01' RT.	228,434.610	2,386,309.312	1,258.71	BENCH MARK #1
923+06.93	6.02' LT.	228,633.107	2,386,592.259	1,252.29	BENCH MARK #2
919+00.00	℄	228,408.055	2,386,253.175	-------	℄ Reference
923+00.00	℄	228,624.295	2,386,589.687	-------	℄ Reference

CENTERLINE REFERENCES U.S. 22



EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS: 40'±-50'±-40'± C/C BEARINGS
ROADWAY: TWO @ 40'-0"± f/f PARAPET WALL
LOADING: CF=2000 (57)
SKEW: 16°30' R.F.
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: TANGENT
CROWN: 0.0156
STRUCTURAL FILE NUMBER: 1738L - 3401022, 1738R - 3401057
DATE BUILT: 1960
DISPOSITION: TO BE REMOVED

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED TKB
CHECKED RPT

PLAN SHEET
BRIDGE NO. HAS-22-1738, LEFT & RIGHT
HAS-22-17.38

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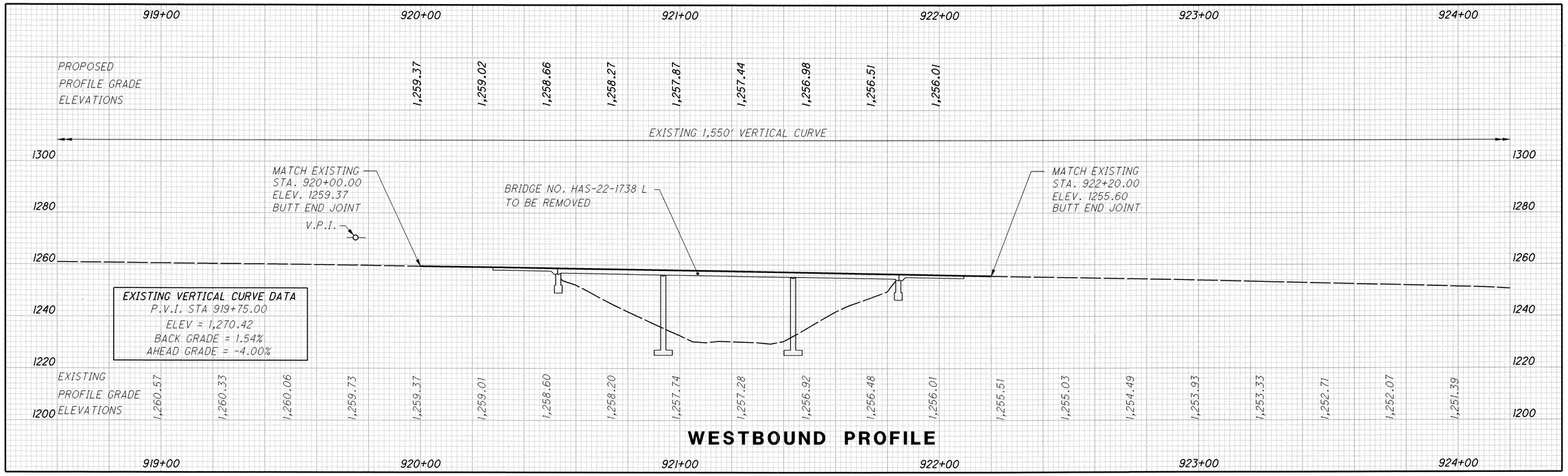
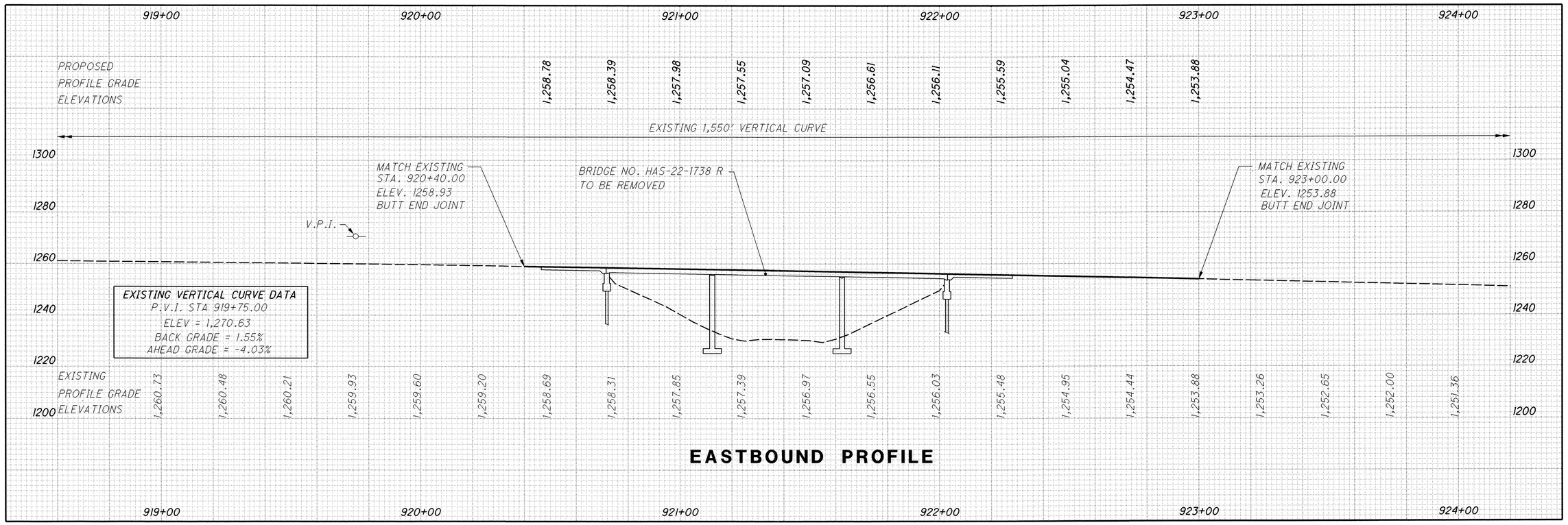


WESTBOUND PROFILE



EASTBOUND PROFILE

CALCULATED TKB
CHECKED RPT

PROFILE
EASTBOUND AND WESTBOUND - U.S. 22

HAS-22-17.38

℄ CONST. US 22, RAMP "F", CURVE 1
P.I. = STA. 2+33.90
Δ = 19° 00′ 00″ (LT)
Dc = 18° 00′ 00″
R = 318.31′
T = 53.27′
L = 105.56′
E = 4.42′

℄ CONST. US 22, RAMP "F", CURVE 2
P.I. = STA. 4+87.68
Δ = 38° 45′ 00″ (LT)
Dc = 10° 00′ 00″
R = 572.96′
T = 201.49
L = 387.50
E = 34.40′

BEGIN WORK
STA. 918+00.00

END WORK
STA. 926+25.00

(I) STA. 920+75.83, ℄ U.S. 22
242.37′ LT.

(C) STA. 920+86.54, ℄ U.S. 22
260.58′ LT.

(I) STA. 919+47.96, ℄ U.S. 22
151.97′ LT.

(I) STA. 921+09.78, ℄ U.S. 22
132.08′ RT.

(L) STA. 921+87.43, ℄ U.S. 22
109.98′ RT.

CONNECT TO EXISTING GUARDRAIL, +80.7

CONNECT TO EXISTING GUARDRAIL, STA. 920+25.00

CONNECT TO EXISTING GUARDRAIL, STA. 923+25.00

TYPE "E-98" ANCHOR ASSEMBLY, +87.5

TYPE "T" ANCHOR ASSEMBLY, +75

TYPE "T" ANCHOR ASSEMBLY, +75

CONSTRUCTION LIMITS

CONSTRUCTION LIMITS

IMPACT ATTENUATOR, TYPE I-98 (BIDIRECTIONAL)

BRIDGE TERMINAL ASSEMBLY, TYPE I
STA. 926+20.43±

EXISTING STRUCTURES
HAS-22-1749 L&R

Ex LA
Ex CH
RAMP "E"
RAMP "F"
℄ S.R. 9
WESTBOUND
EASTBOUND
℄ U.S. 22
N 57° 16′ 32″ E
N 0° 28′ 28″ W
+64.5
+95.5
+27.0
31′-6″
25.0′
31.25′

GR-1 GR-2 GR-3 GR-4 GR-5 GR-6
R-1 R-2 R-3 R-4 R-5 R-6 R-7 R-8 R-9
F-1 E-1 T2

FENCE LEGEND

(C) - CORNER POST ASSEMBLY
(I) - INTERMEDIATE ANCHOR POST ASSEMBLY
(L) - WOOD POST OR CONCRETE ENCASED STEEL LINE POST
(T2) - CROSSING, TYPE 2 (SCD F-3.4)
- ITEM 601 - ROCK CHANNEL PROTECTION, TYPE B WITH FILTER

CALCULATION:

ITEM 601, ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
28′ x 6′ x 1.5′ ± 27 = 9.33 CU. YD.
USE 10 CU. YD.

FOR ESTIMATED QUANTITIES, SEE SHEET NO. 18.

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED TKB
CHECKED RPT

MISC. DETAILS - GUARDRAIL AND FENCE

HAS-22-17.38

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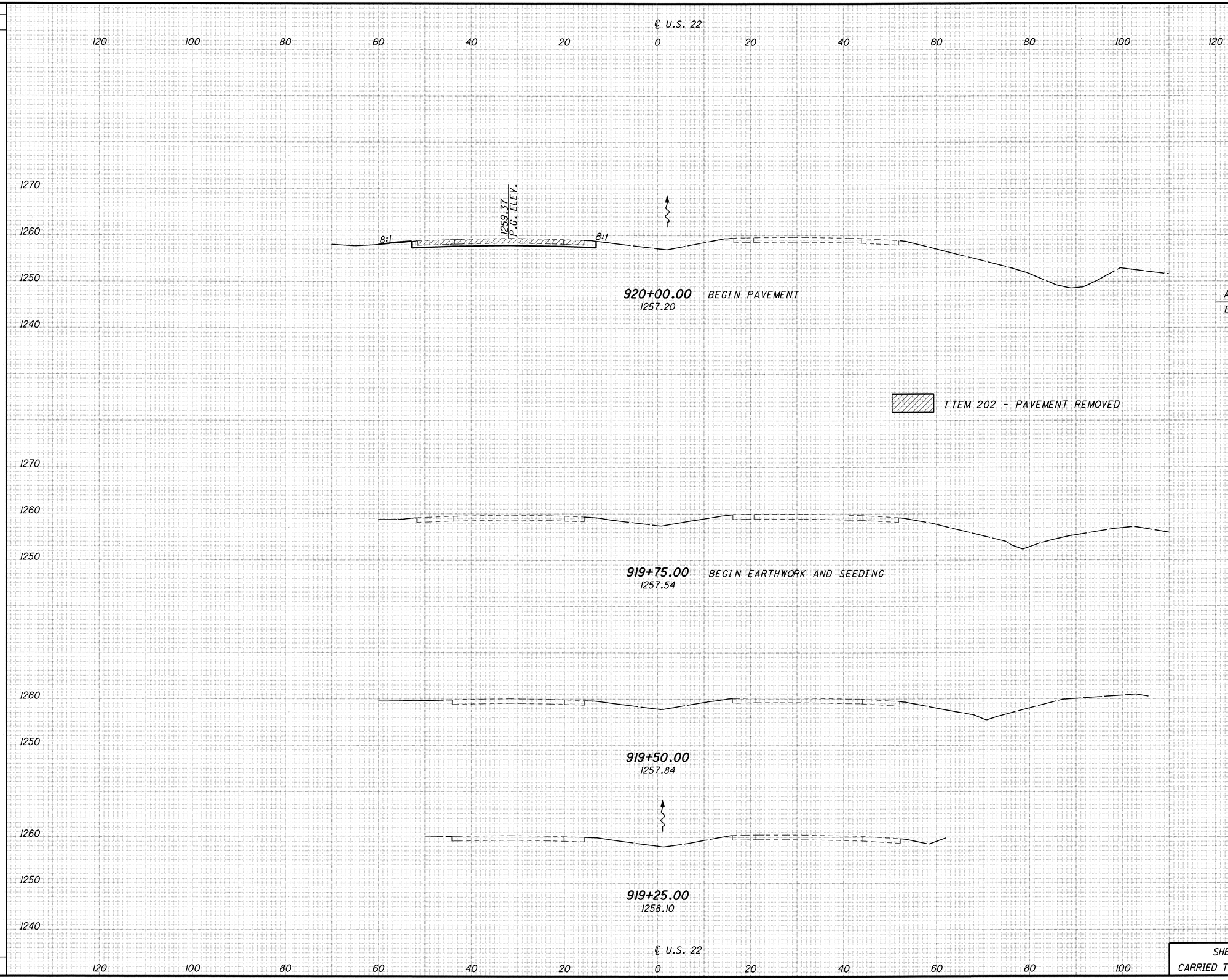
SEEDING	
END WIDTH	SQ. YDS.
20	
	28
0	
	28



END AREA		VOLUME	
CUT	FILL	CUT	FILL
AHEAD 22	1		
BACK 0	1		
		0	1
0	0		
SHEET TOTALS CARRIED TO SHEET NO. 18.		0	1

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS
STA. 919+25.00 TO STA. 920+00.00

HAS-22-17.38

23
45

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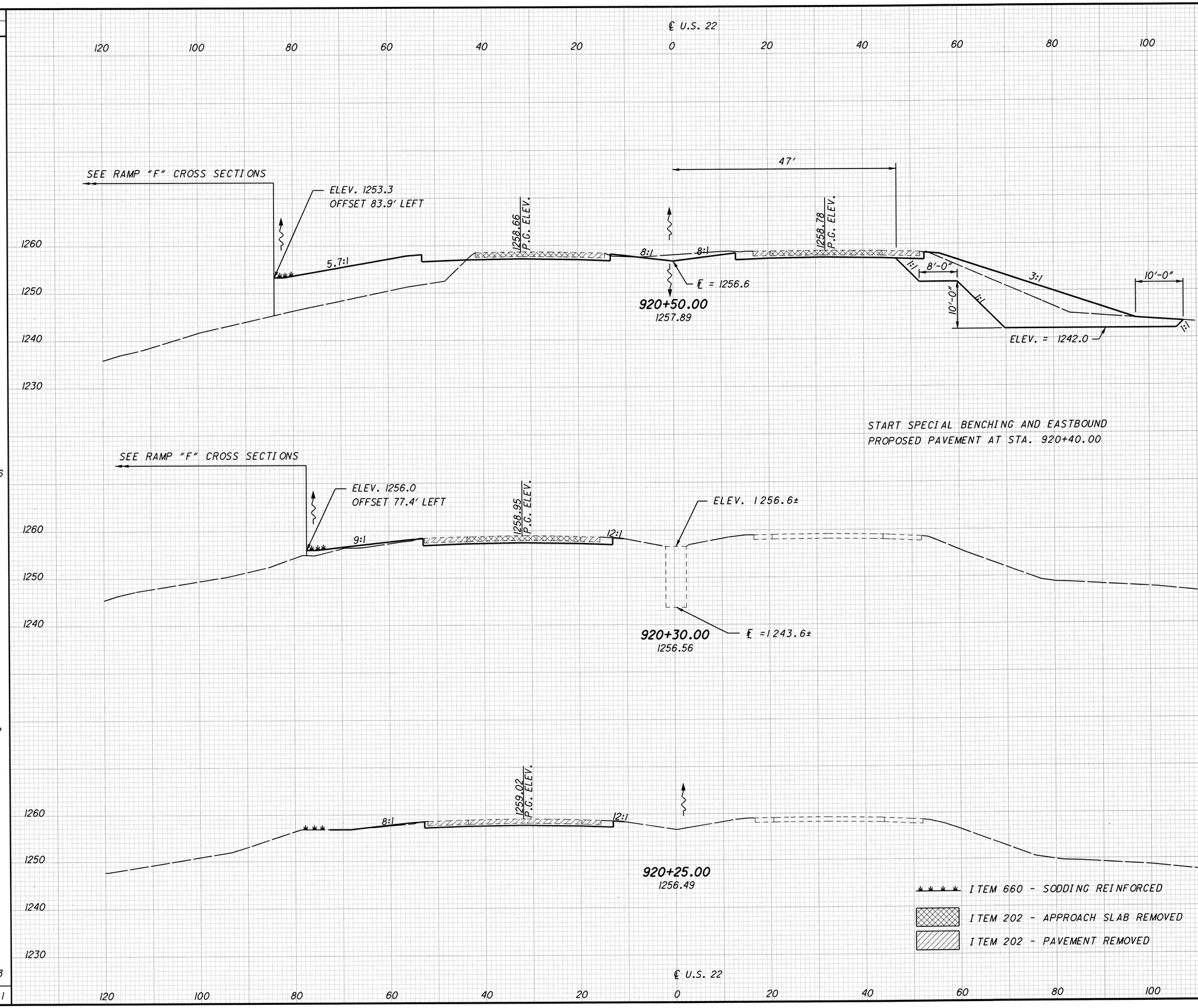
SEEDING	
END WIDTH	SQ. YDS.
128	
	186
39	
	22
40	
	83
	291



END AREA		VOLUME	
CUT	FILL	CUT	FILL
337	602		
		125	223
AHEAD	337	602	
BACK	84	349	
		20	67
22	14		
		4	2
22	2		
		20	1
SHEET TOTALS CARRIED TO SHEET NO. 18.		169	293

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS

STA. 920+25.00 TO STA. 920+50.00

HAS-22-17.38

24
45

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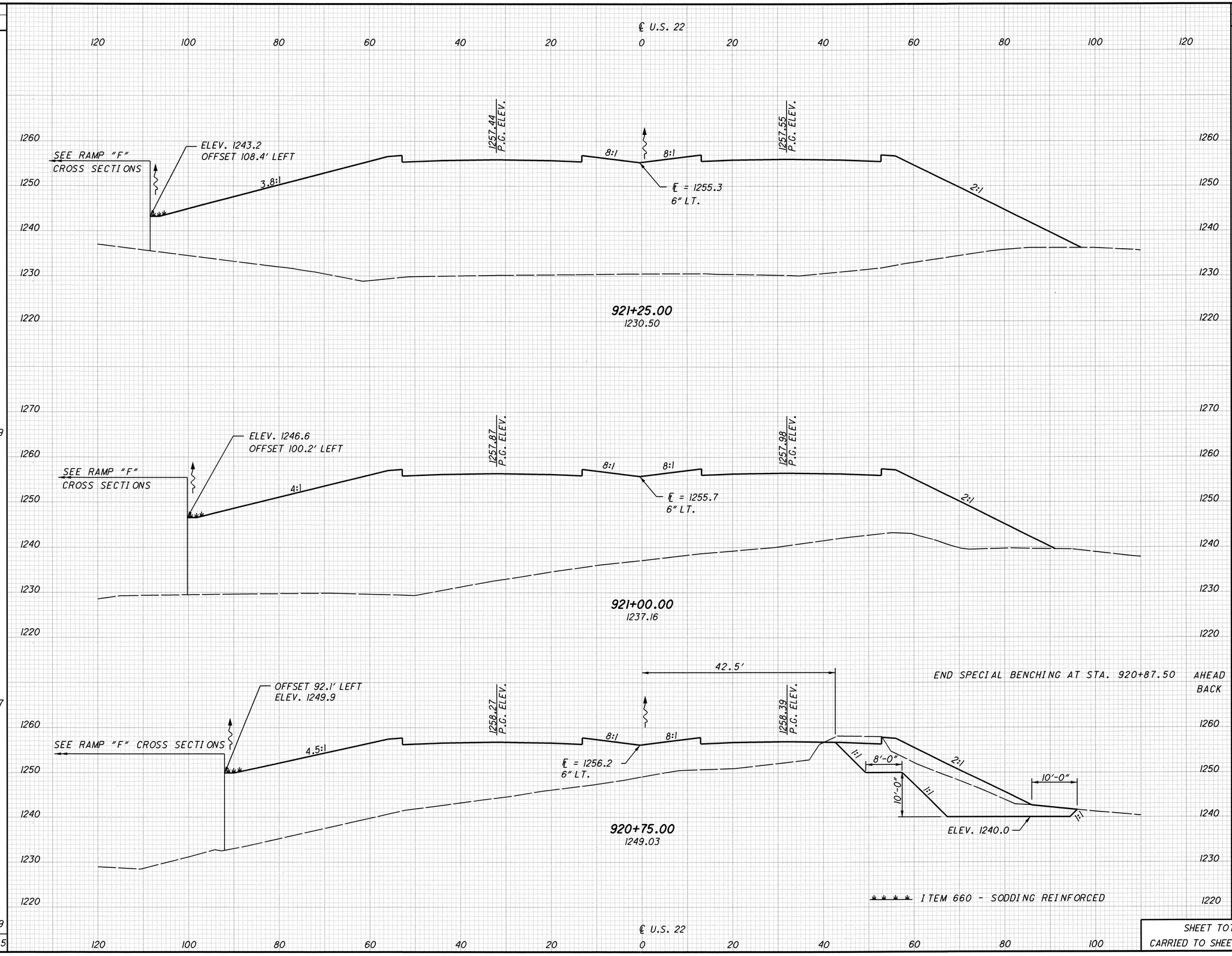
SEEDING	
END WIDTH	SQ. YDS.
146	
	379
127	
	347
123	
	349
	1075



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	4261		
		0	3576
0	3463		
		4	1166
	17	1575	
	270	1828	
		125	846
	270	1828	
		281	1125
	410	6713	

SHEET TOTALS CARRIED TO SHEET NO. 18.

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS
STA. 920+75.00 TO STA. 921+25.00

HAS-22-17.38

SEEDING	
END WIDTH	SQ. YDS.
47	210
104	338
139	415
160	425
	1388

℄ U.S. 22

120 100 80 60 40 20 0 20 40 60 80 100 120

1255.59 P.G. ELEV.

8:1 8:1 4:1

℄ = 1253.3
6" LT.

922+25.00
1254.58

EX LA

WESTBOUND PROPOSED PAVEMENT ENDS AT STA. 922+20.00

1256.01 P.G. ELEV.

1256.11 P.G. ELEV.

4:1 8:1 8:1 2:1

℄ = 1253.9
6" LT.

922+00.00
1254.57

EX LA

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - APPROACH SLAB REMOVED

1256.51 P.G. ELEV.

1256.61 P.G. ELEV.

3:1 8:1 8:1 2:1

℄ = 1254.4
6" LT.

921+75.00
1244.03

1256.98 P.G. ELEV.

1257.09 P.G. ELEV.

3:1 8:1 8:1 2:1

℄ = 1254.9
6" LT.

921+50.00
1230.74

℄ U.S. 22

120 100 80 60 40 20 0 20 40 60 80 100

1250 1240 1230 1260 1220

END AREA		VOLUME	
CUT	FILL	CUT	FILL
17	20	3	4
17	20		
AHEAD BACK			
47	329	35	244
47	329		
		22	1023
0	1881		
		0	2501
0	3520		
		0	3602
SHEET TOTALS CARRIED TO SHEET NO. 18.		60	7374

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS
STA. 921+50.00 TO STA. 922+25.00

HAS-22-17.38

26
45

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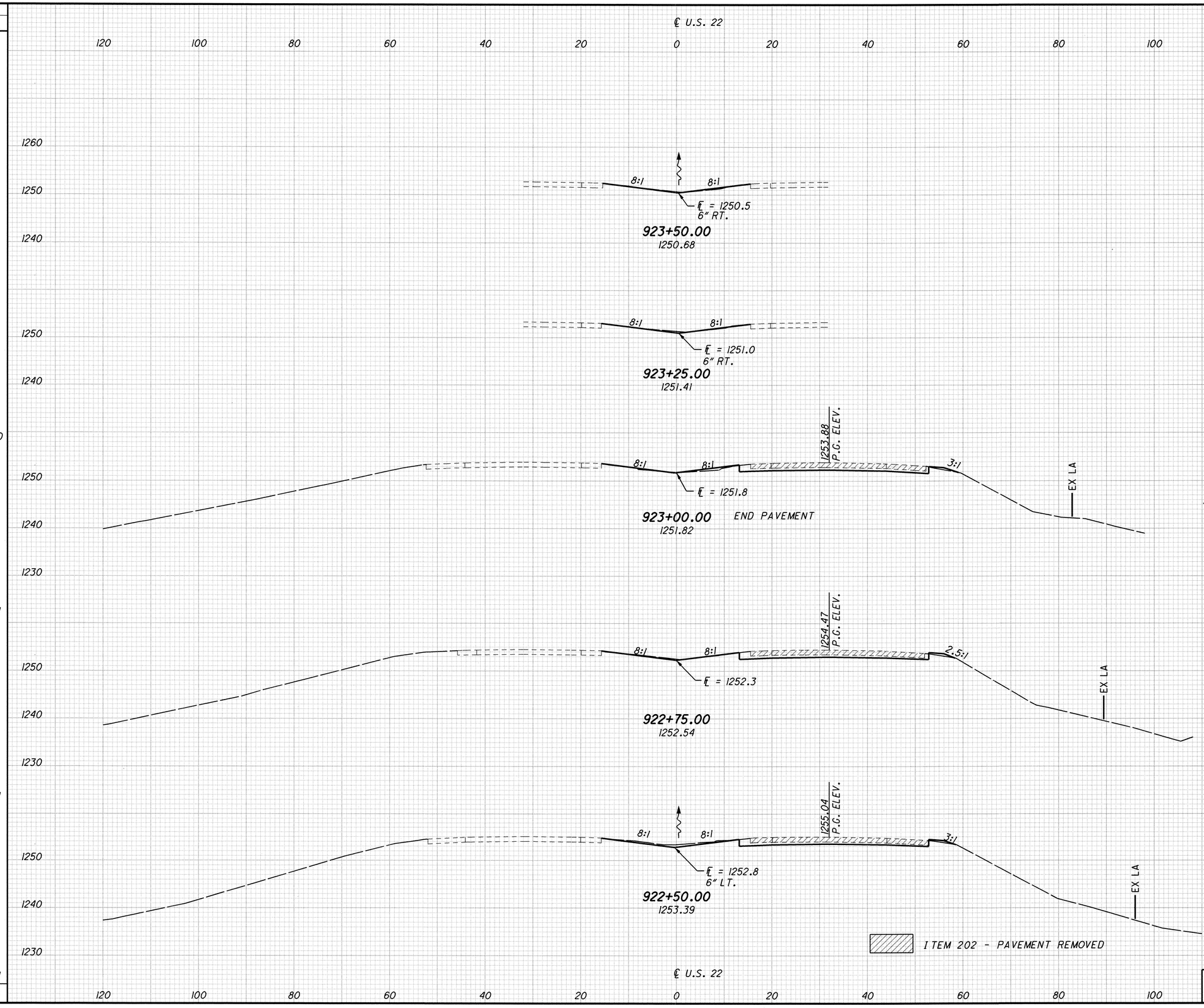
SEEDING	
END WIDTH	SQ. YDS.
31	88
32	110
47	131
47	131
47	131
	591



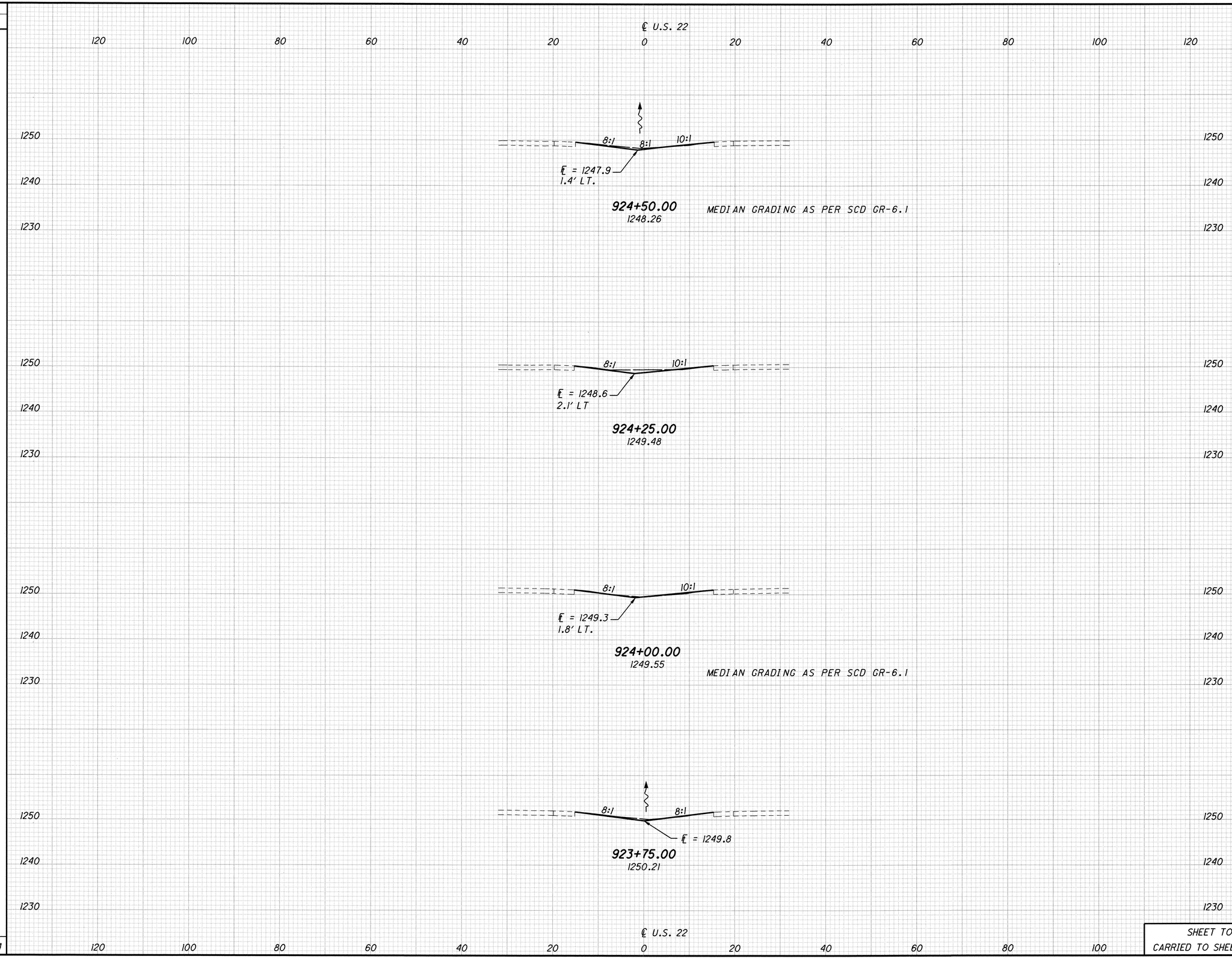
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	1		
		1	1
2	1		
		2	1
2	1		
23	7		
		22	4
24	2		
		24	1
27	1		
		20	10
SHEET TOTALS CARRIED TO SHEET NO. 18.		69	17

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS
STA. 922+50.00 TO STA. 923+50.00

HAS-22-17.38

SEEDING	
END WIDTH	SQ. YDS.
31	86
31	86
31	86
31	86
	344



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	1		
		5	1
7	1		
1	2		
3	0		
		4	1
		2	1
		2	1
SHEET TOTALS CARRIED TO SHEET NO. 18.		13	4

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS
STA. 923+75.00 TO STA. 924+50.00

HAS-22-17.38

28
45

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SEEDING		END AREA		VOLUME		CALCULATED TKB	CHECKED RPT
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL		

℄ U.S. 22

120 100 80 60 40 20 0 20 40 60 80 100 120

1250
1240
1230

8:1 8:1 10:1

℄ = 1244.7
1.2′ LT.

925+50.00
1245.12

MEDIAN GRADING AS PER SCD GR-6.1

31		5	0		
	86			5	0

8:1 8:1 10:1

℄ = 1245.5
1.0′ LT.

925+25.00
1246.08

31		6	0		
	86			6	0

8:1 8:1 10:1

℄ = 1246.3
1.0′ LT.

925+00.00
1246.86

31		6	0		
	86			7	0

8:1 8:1 10:1

℄ = 1247.1
1.1′ LT.

924+75.00
1247.66

MEDIAN GRADING AS PER SCD GR-6.1

31		8	0		
	86			6	1
	344	SHEET TOTALS CARRIED TO SHEET NO. 18.		24	1

℄ U.S. 22

120 100 80 60 40 20 0 20 40 60 80 100

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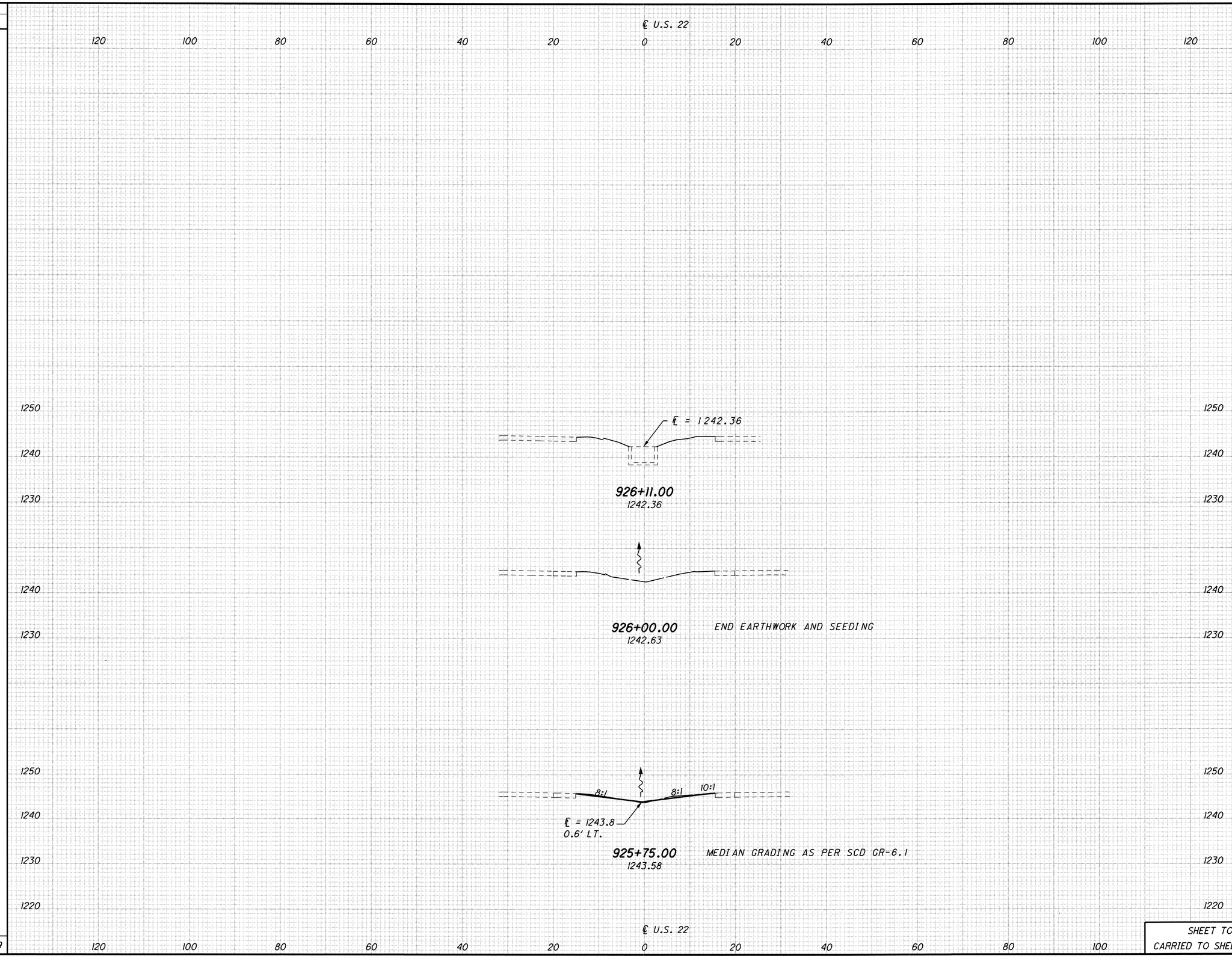
CROSS SECTIONS
STA. 924+75.00 TO STA. 925+50.00

HAS-22-17.38

SEEDING	
END WIDTH	SQ. YDS.
0	
	43
31	
	86
	129



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		1	1
3	1		
		4	1
SHEET TOTALS CARRIED TO SHEET NO. 18.		5	2

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS
STA. 925+75.00 TO STA. 926+11.00

HAS-22-17.38

30
45

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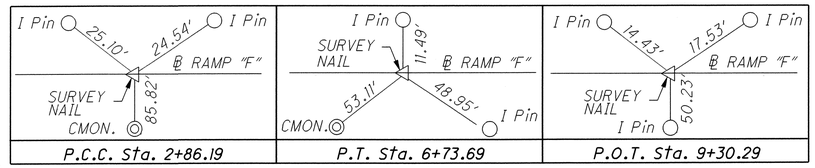
ITEM 660 - SODDING REINFORCED

FOR ESTIMATED QUANTITIES, SEE SHEET NO. 18.
FOR STRUCTURE DETAILS, SEE SHT. NO.'S 41-45.
FOR U.S. 22 PLAN SHEET, SEE SHEET NO. 20.

℄ CONST. US 22, RAMP "F", CURVE 1
P.I. = STA. 2+33.90
Δ = 19° 00′ 00″ (LT)
Dc = 18° 00′ 00″
R = 318.31′
T = 53.27′
L = 105.56′
E = 4.42′

℄ CONST. US 22, RAMP "F", CURVE 2
P.I. = STA. 4+87.68
Δ = 38° 45′ 00″ (LT)
Dc = 10° 00′ 00″
R = 572.96′
T = 201.49
L = 387.50
E = 34.40′

BASELINE REFERENCES RAMP "F"



PC Sta. 1+80.63
PCC Sta. 2+86.19
PT Sta. 6+73.69
N 57° 16′ 32″ E
WESTBOUND
℄ CONSTRUCTION U.S. 22
Ex LA
Ex CH
CONSTRUCTION LIMITS
TYPE "T" ANCHOR ASSEMBLY +75
+00
6.0′
6.24′
14.60′
3.0′
BRIDGE LIMITS - 131.82′
EXISTING DECK THICKNESS = 22″
END APPROACH SLAB STA. 3+75.76
℄ CONSTRUCTION RAMP "F"
BEGIN APPROACH SLAB STA. 5+07.58
STRUCTURE NO. HAS-22-1738F TO BE REMOVED
CONNECT TO EXISTING GUARDRAIL, +80.7
N 0° 28′ 28″ W
RAMP "F"
16.0′
BM #3
TYPE "E-98" ANCHOR ASSEMBLY, +87.5
CONSTRUCTION LIMITS
RAMP "E"
920
T2
C
I
F-2
R-6
R-7
R-8
R-5
E-1
GR-1
GR-6
GR-5

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS: 40′±-50′±-40′± C/C BEARINGS
ROADWAY: 28′-0″± f/f PARAPETS
LOADING: CF=400 (57)
SKEW: 10° L.F.
WEARING SURFACE: 1″ MONOLITHIC CONCRETE
APPROACH SLABS: AS-1-54 (25′ LONG) MODIFIED
ALIGNMENT: 10°-00′ CURVE, LEFT
SUPERELEVATION: 0.038
STRUCTURAL FILE NUMBER: 1738F - 3400999
DATE BUILT: 1960
DISPOSITION: TO BE REMOVED

HORIZONTAL CONTROL POINTS FOR U.S. 22, RAMP "F"

STATION	OFFSET	NORTH	EAST	ELEVATION	REMARKS
2+85.67	85.81′ RT.	228,434.610	2,386,309.312	1,258.71	BENCH MARK #1
6+30.05	28.66′ RT.	228,802.382	2,386,392.796	1,252.29	BENCH MARK #3
2+86.19	℄	228,488.280	2,386,242.352	-------	℄ Reference
6+73.69	℄	228,847.942	2,386,365.498	-------	℄ Reference
9+30.29	℄	229,104.534	2,386,363.373	-------	℄ Reference

PROPOSED PROFILE GRADE ELEVATIONS
1258.92 1258.43 1257.90 1257.31 1256.68 1255.99 1255.26 1254.48 1253.66 1252.81 1251.96 1251.11 1250.26 1249.41 1248.55
EXISTING 250′ VERTICAL CURVE
P.V.I. STA. 3+75
ELEV. 1257.91′
MATCH EXISTING
STA. 3+00.00
ELEV. 1258.92
BUTT END JOINT
STRUCTURE NO. HAS-22-1738F
TO BE REMOVED
P.V.T. STA. 5+00
ELEV. 1253.66
MATCH EXISTING
P.V.I. STA. 6+73.69
ELEV. 1247.75
BUTT END JOINT
GRADE BREAK = 0.17%
NO CURVE
-1.48 %
-3.40 %
-3.57 %
1290
1270
1250
1230
1210
1190
EXISTING PROFILE GRADE ELEVATIONS
1260.43 1260.08 1259.76 1259.37 1258.92 1258.44 1257.89 1257.34 1256.65 1255.94 1255.17 1254.44 1253.55 1252.83 1251.97 1251.15 1250.29 1249.46 1248.59 1247.70 1246.81
2+00 3+00 4+00 5+00 6+00 7+00

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED TKB
CHECKED RPT

PLAN AND PROFILE - RAMP "F"
STA. 2+00.00 TO STA. 7+00.00
HAS-22-17.38

31
45

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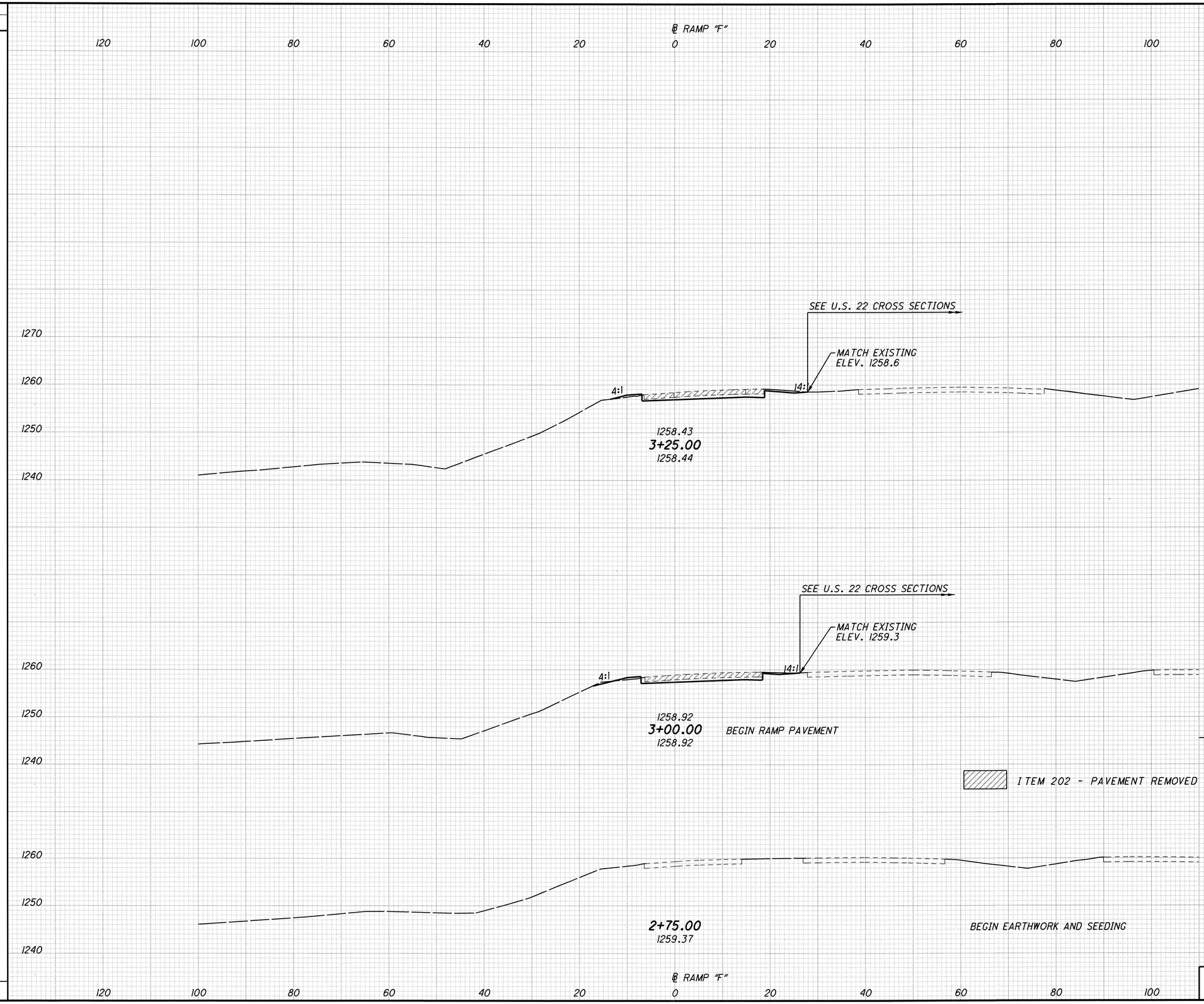
SEEDING	
END WIDTH	SQ. YDS.
20	
	56
20	
	28
0	
	84



END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	2		
		16	2
AHEAD 17	2		
BACK 3	2		
		1	1
0	0		
SHEET TOTALS CARRIED TO SHEET NO. 18.		17	3

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS - RAMP "F"
STA. 2+75.00 TO STA. 3+25.00

HAS-22-17.38

32
45

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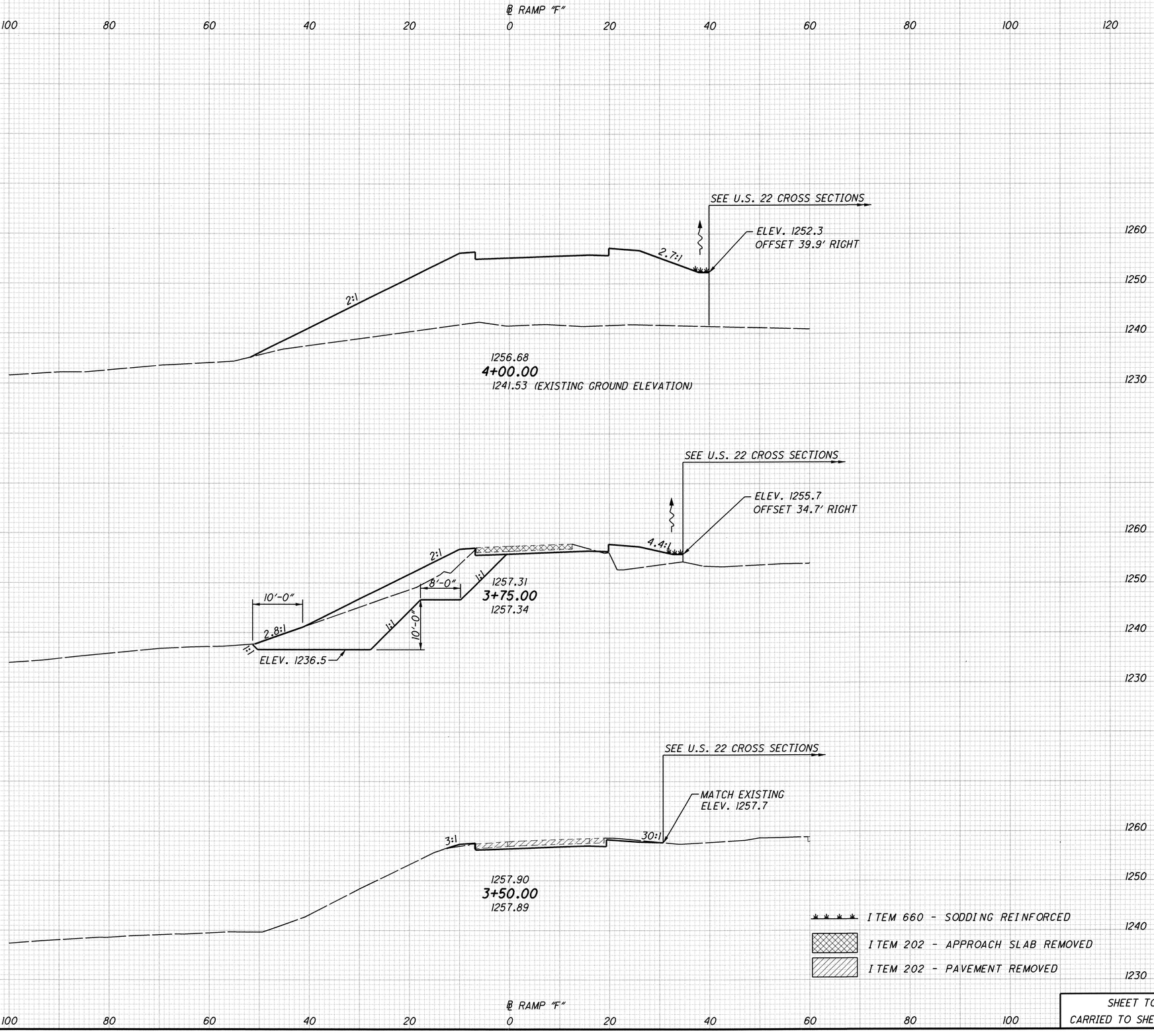

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
82	217	0	970	127	627
74	135	274	384	135	179
23	60	17	2	16	2
	412			278	808

SHEET TOTALS CARRIED TO SHEET NO. 18.

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS - RAMP "F"
STA. 3+50.00 TO STA. 4+00.00

HAS-22-17.38

33
45

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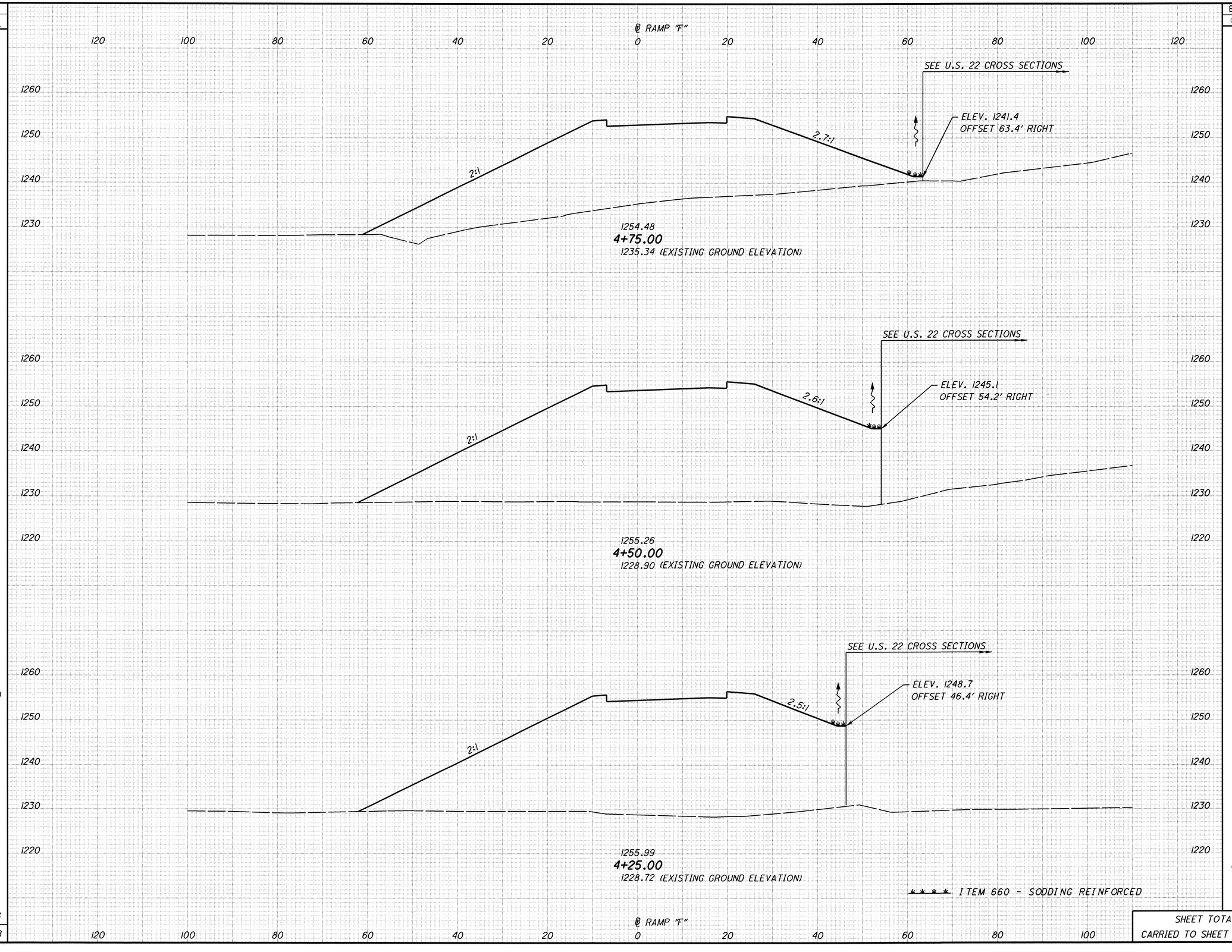

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
118		0	1545		
	315			0	1732
109		0	2195		
	290			0	1982
100		0	2085		
	253				1414
	858	SHEET TOTALS CARRIED TO SHEET NO. 18.		0	5128

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS - RAMP "F"
STA. 4+25.00 TO STA. 4+75.00

HAS-22-17.38

34
45

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SEEDING	
END WIDTH	SQ. YDS.
50	
	208
100	
	319
130	
	344
	871

℄ RAMP "F"

120 100 80 60 40 20 0 20 40 60 80 100 120

1250 1240 1230 1220 1210

4:1 4:1

1251.96
5+50.00
1251.97

1250 1240 1230 1220 1210

2:1 4:1

1252.81
5+25.00
1252.83

ITEM 202 - APPROACH SLAB REMOVED
ITEM 202 - PAVEMENT REMOVED

1250 1240 1230 1220

17′

2:1 3:1

8′-0″ 1:1 1:1 10′-0″ 1:1

1253.66
5+00.00
1246.27 (EXISTING GROUND ELEVATION)

ELEV. 1226.0

1250 1240 1230 1220

℄ RAMP "F"

120 100 80 60 40 20 0 20 40 60 80 100

END AREA		VOLUME	
CUT	FILL	CUT	FILL
9	16		
12	38		
195	727		
		10	25
		96	354
		90	1052
SHEET TOTALS CARRIED TO SHEET NO. 18.		196	1431

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS - RAMP "F"
STA. 5+00.00 TO STA. 5+50.00

HAS-22-17.38

35
45

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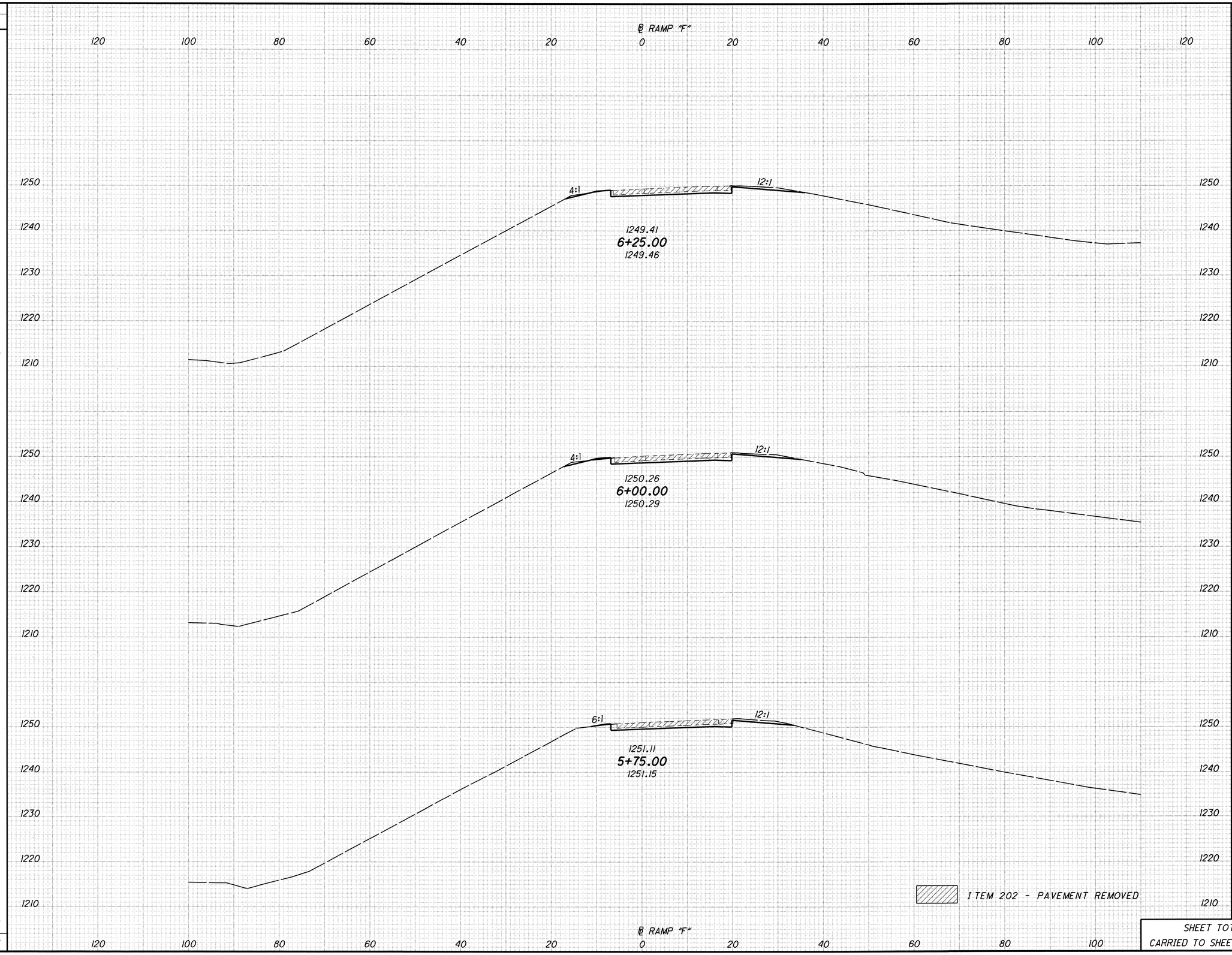
SEEDING	
END WIDTH	SQ. YDS.
50	192
88	178
40	125
	495



END AREA		VOLUME	
CUT	FILL	CUT	FILL
20	0		
		19	1
20	1		
		16	3
14	6		
		11	10
SHEET TOTALS CARRIED TO SHEET NO. 18.		46	14

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS - RAMP "F"
STA. 5+75.00 TO STA. 6+25.00

HAS-22-17.38

36
45

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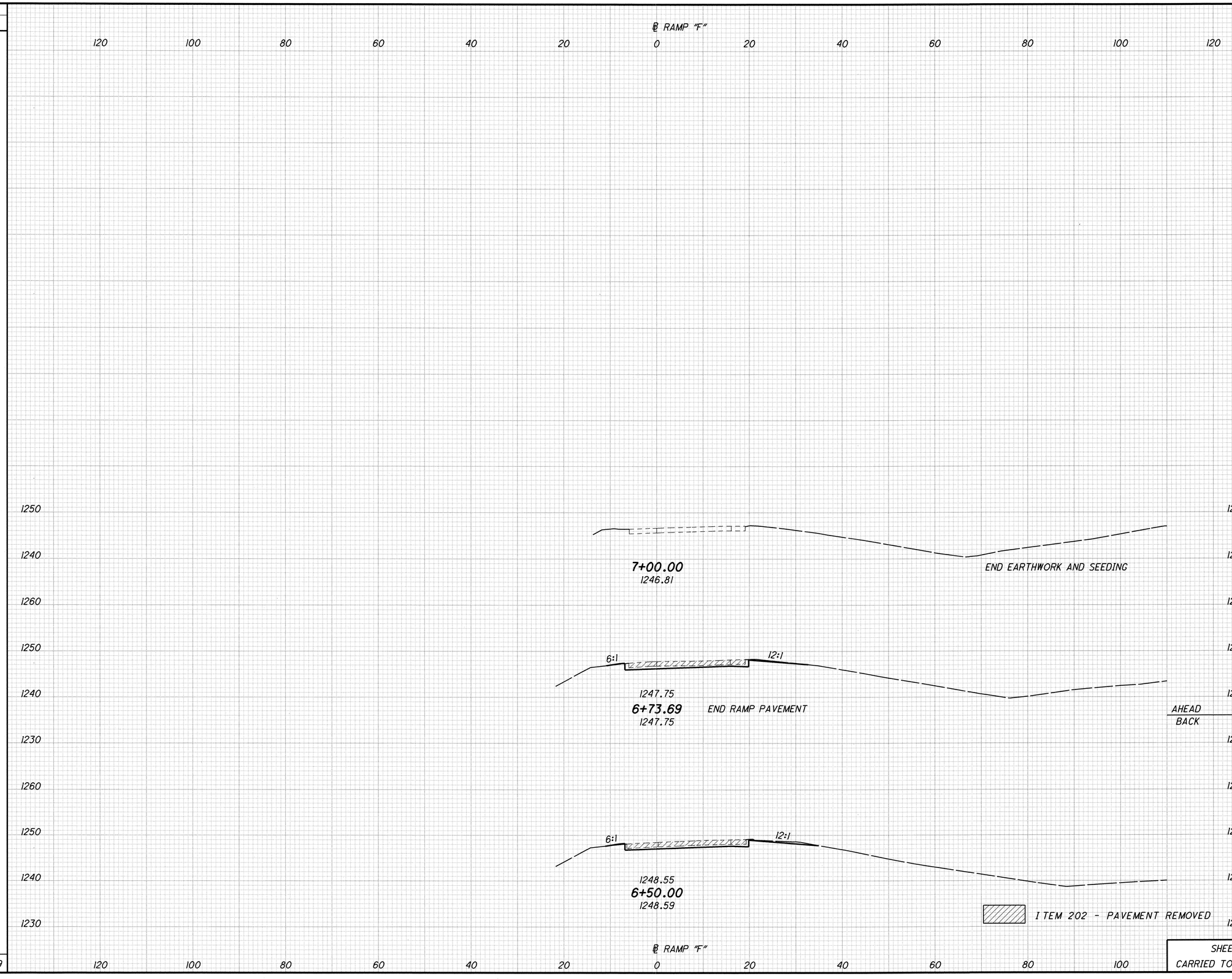
SEEDING	
END WIDTH	SQ. YDS.
0	54
39	110
40	125
	289



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		1	0
2	0		
AHEAD			
BACK			
15	0		
		13	0
14	0		
		16	0
SHEET TOTALS CARRIED TO SHEET NO. 18.		30	0

CALCULATED TKB
CHECKED RPT

CROSS SECTIONS - RAMP "F"
STA. 6+50.00 TO STA. 7+00.00

HAS-22-17.38

37
45

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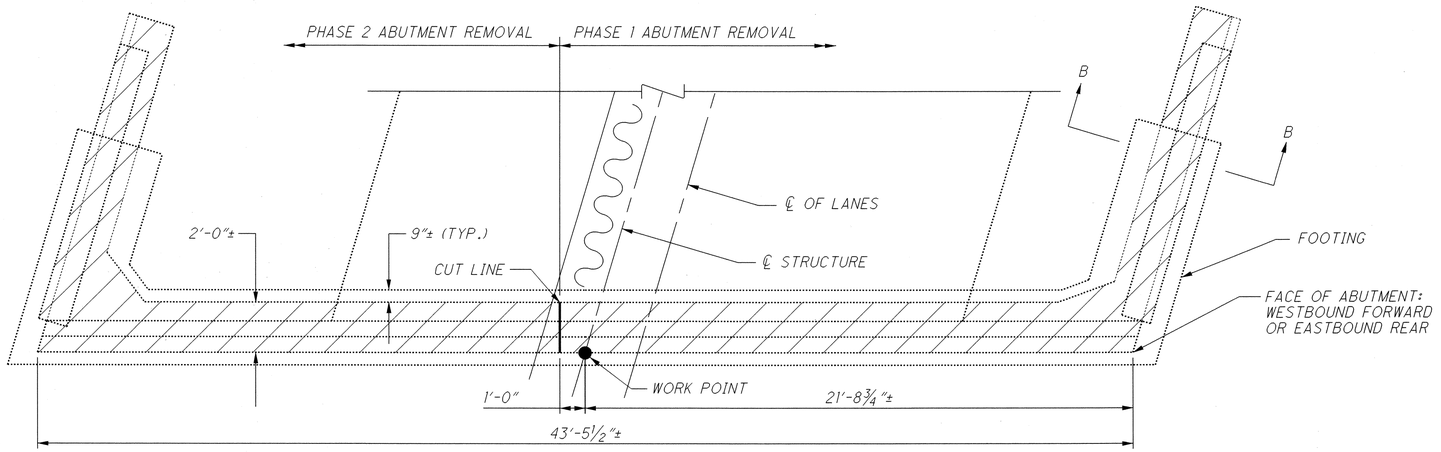
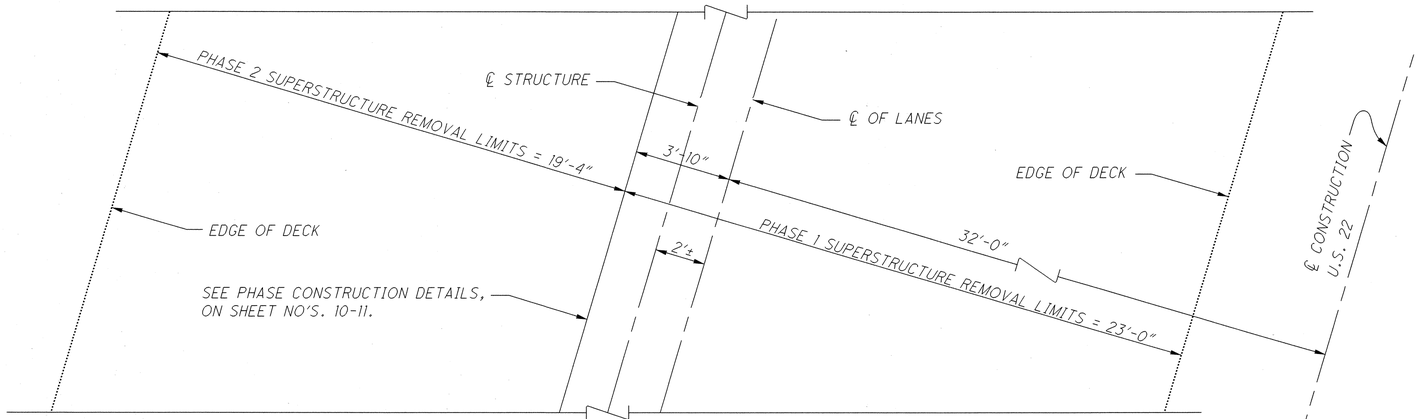
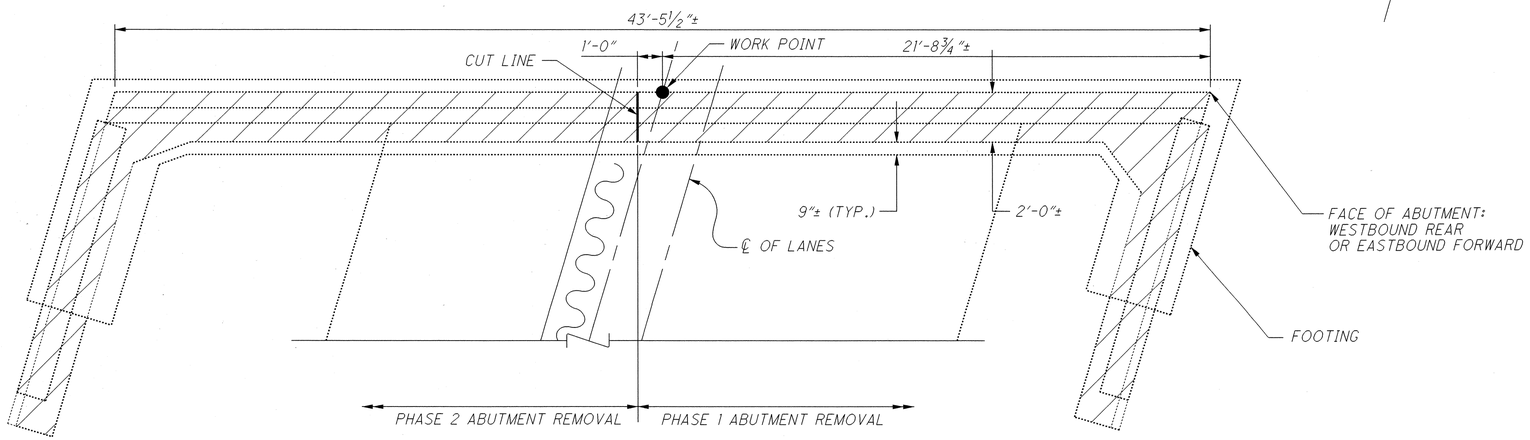






PLAN

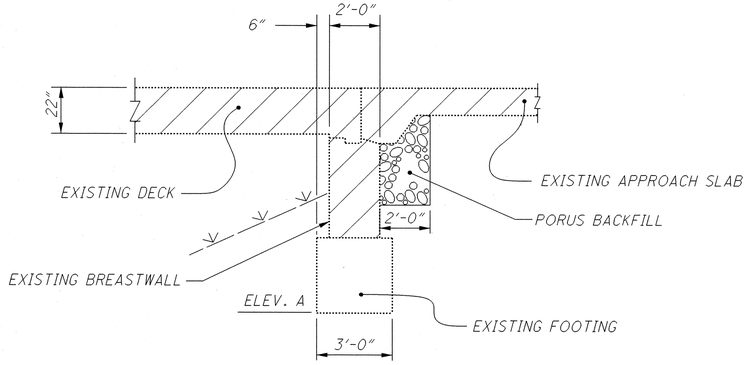
NOTES:

1. FOR ELEVATION VIEW AND SECTION B-B, SEE SHEET NO. 39
2. WESTBOUND SHOWN, EASTBOUND SIMILAR.
3. PORTIONS OF ABUTMENT REMOVED TO TOP OF FOOTING.

CALCULATED TKB
CHECKED RPT

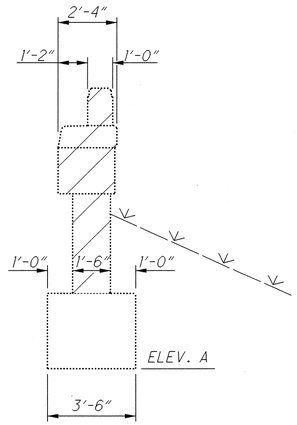
STRUCTURE HAS-22-1738 L&R ABUTMENT REMOVAL DETAILS

HAS-22-17.38



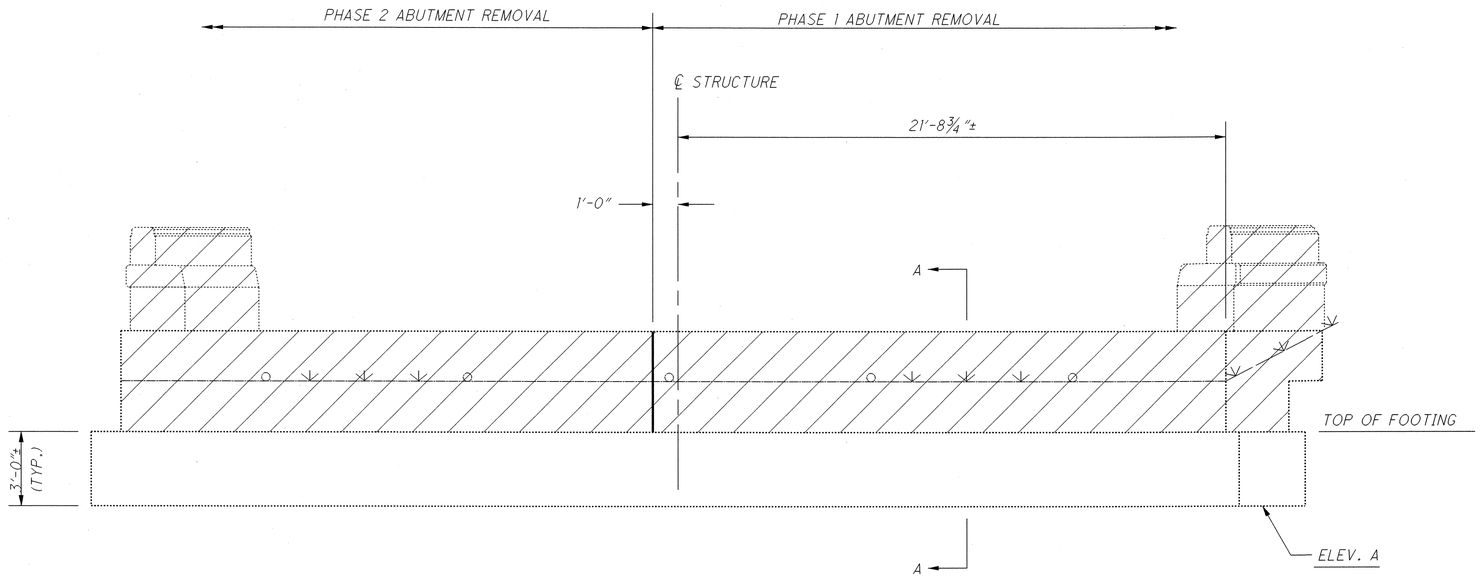
SECTION A-A

PILING NOT SHOWN



SECTION B-B

PORTIONS OF STRUCTURE REMOVED



ELEVATION

WESTBOUND FORWARD SHOWN
SUPERSTRUCTURE AND PILING NOT SHOWN

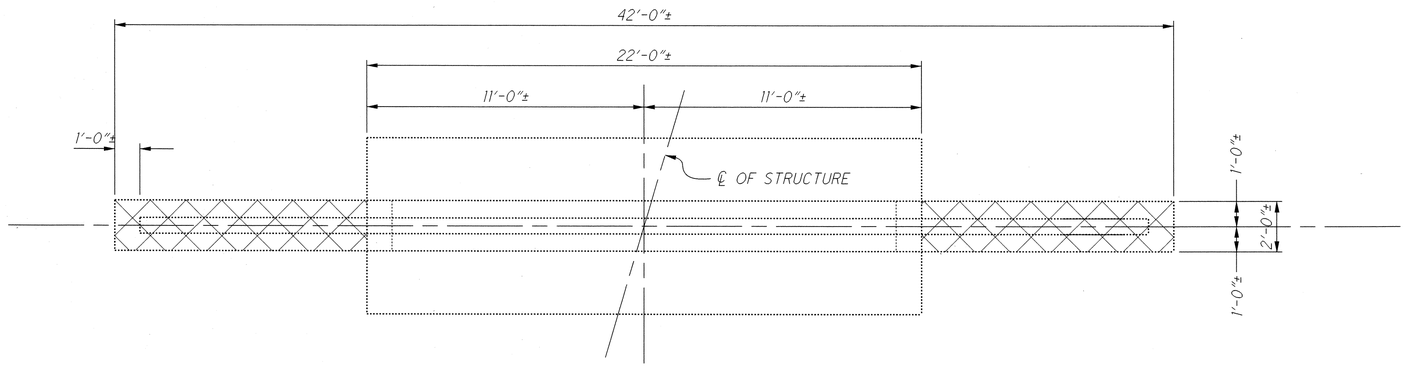
ELEVATION TABLE

	EASTBOUND REAR	EASTBOUND FORWARD	WESTBOUND REAR	WESTBOUND FORWARD
ELEV. A	1248.82±	1246.41±	1248.81±	1246.39±

CALCULATED TKB
CHECKED RPT

STRUCTURE HAS-22-1738 L&R ABUTMENT REMOVAL DETAILS

HAS-22-17.38



PIER PLAN

(TYPICAL FOR ALL PIERS)

PORTIONS OF STRUCTURES REMOVED

ITEM 613 - LOW STRENGTH MORTAR BACKFILL, AS PER PLAN

HAS-22-1738R

2 (11' x 2') + [½ (11' x 3.67') x 2] ÷27 = 3.12 CU. YD. x 4 PIERS = 12.5 CU. YD.

USE 13 CU. YD.

TOTAL CARRIED TO GENERAL SUMMARY

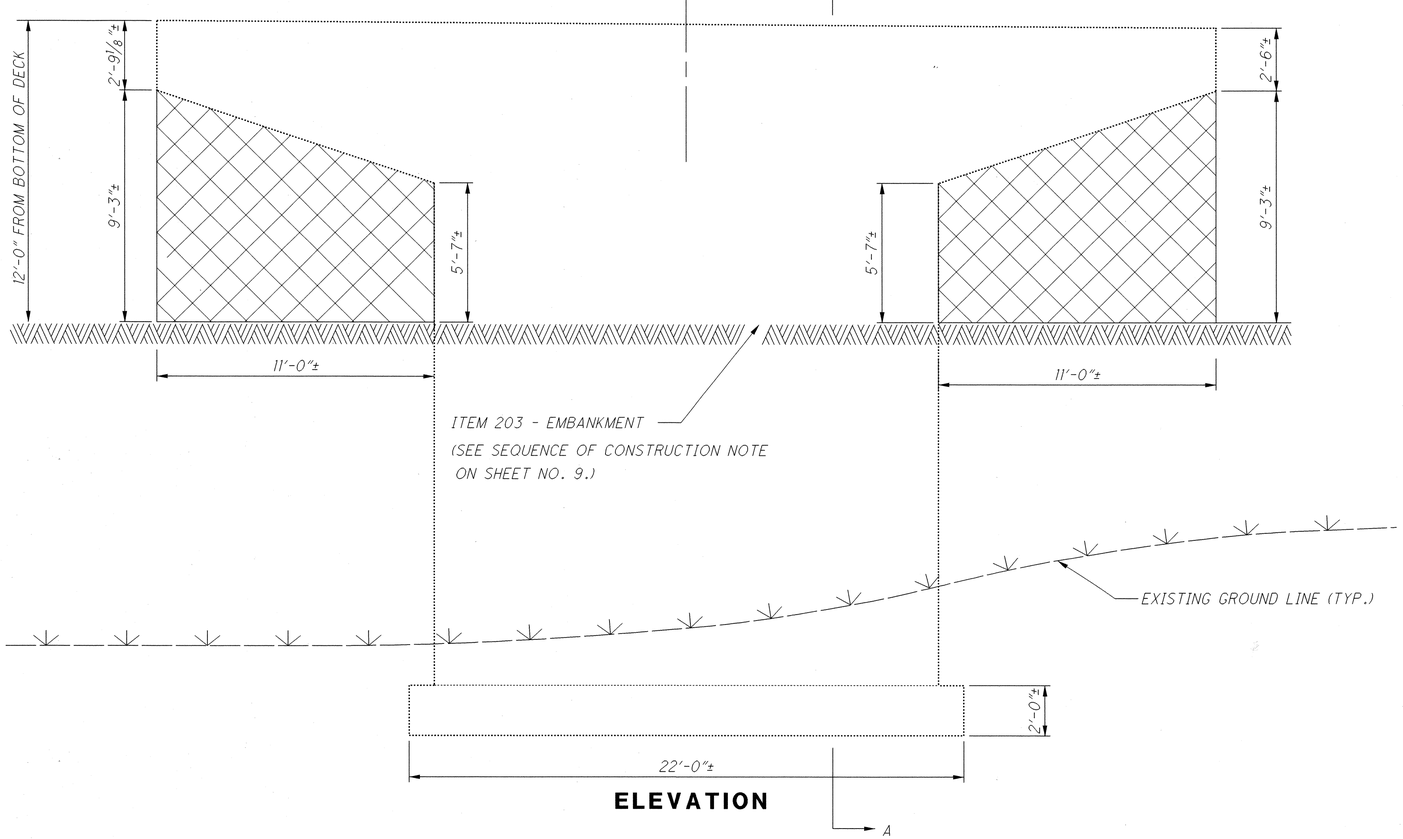
HAS-22-1738L

2 (11' x 2') + [½ (11' x 3.67') x 2] ÷27 = 3.12 CU. YD. x 4 PIERS = 12.5 CU. YD.

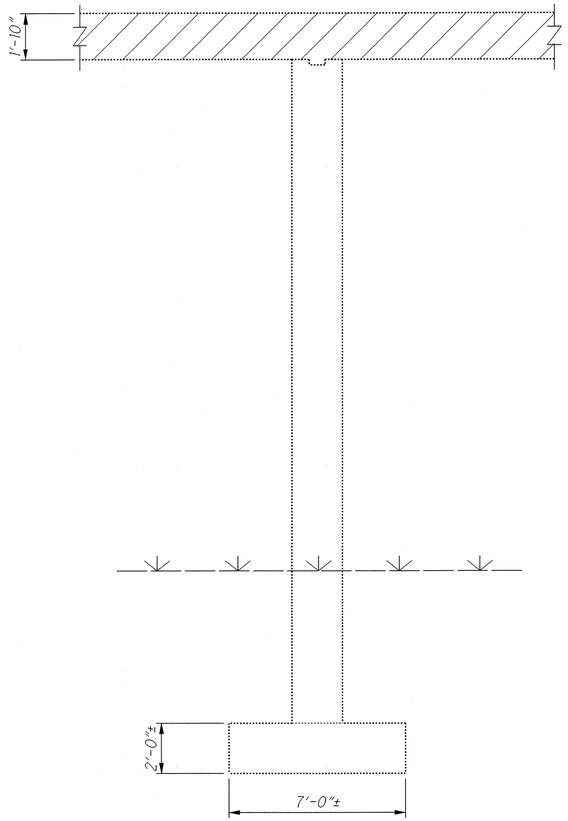
USE 13 CU. YD.

TOTAL CARRIED TO GENERAL SUMMARY

AN ESTIMATED QUANTITY OF LSM HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE UNDER THE CANTILEVERED PORTION OF THE PIERS. THE LSM IS BEING USED TO PREVENT COMPACTION PROBLEMS THAT MAY ARISE UNDER THE PIER CANTILEVERS. THE CONTRACTOR MAY PLACE THE LSM IN LIFTS TO COINCIDE WITH THE EMBANKMENT PLACEMENT OR USE FORMS TO PLACE THE LSM PRIOR TO EMBANKMENT PLACEMENT. INCLUDE ALL COST ASSOCIATED WITH THIS WORK IN ITEM 613 - LOW STRENGTH MORTAR BACKFILL, AS PER PLAN.



ELEVATION



SECTION A-A

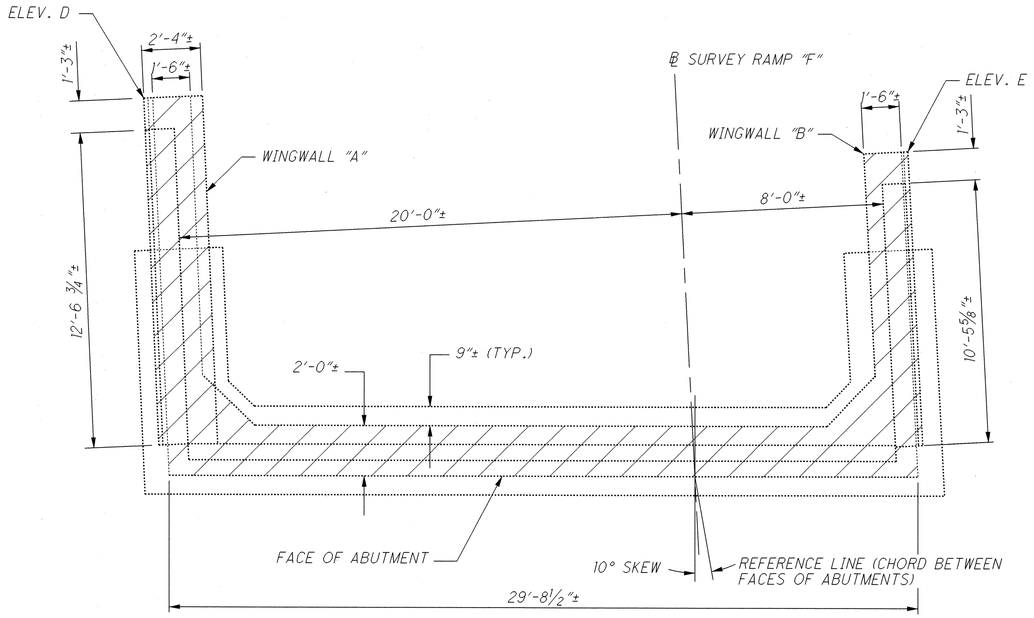
CALCULATED TKB CHECKED RPT

STRUCTURE HAS-22-1738 L&R PIER DETAILS

HAS-22-17.38

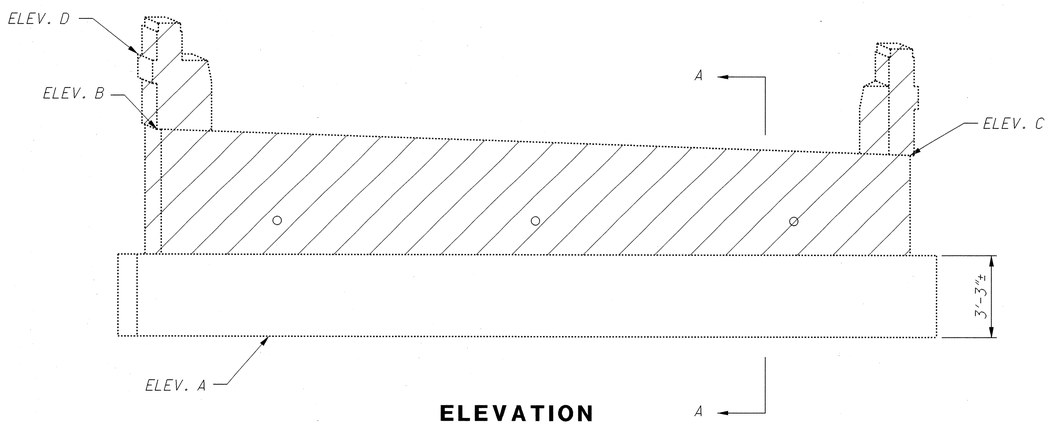
PORTIONS OF STRUCTURE REMOVED

FOR REAR ABUTMENT WINGWALL A & B DETAILS, SEE SHEET NO. 43.



PLAN
(PILING NOT SHOWN)

TABLE OF ELEVATIONS				
A	B	C	D	E
1247.80±	1256.05±	1254.98±	1259.02±	1258.04±



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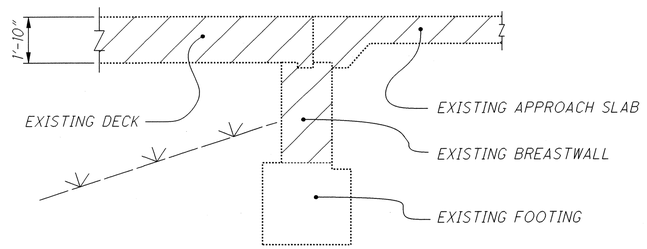

SECTION A-A

CALCULATED TKB
CHECKED RPT

REAR ABUTMENT REMOVAL DETAIL
STRUCTURE HAS-22-1738F

HAS-22-17.38

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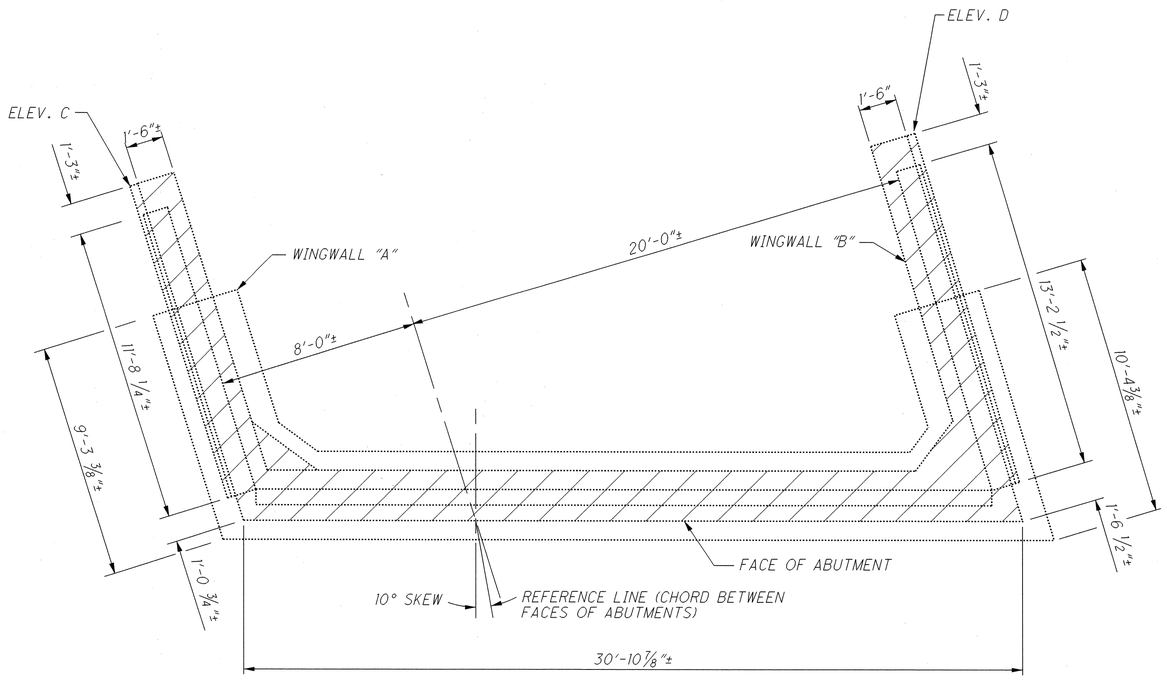
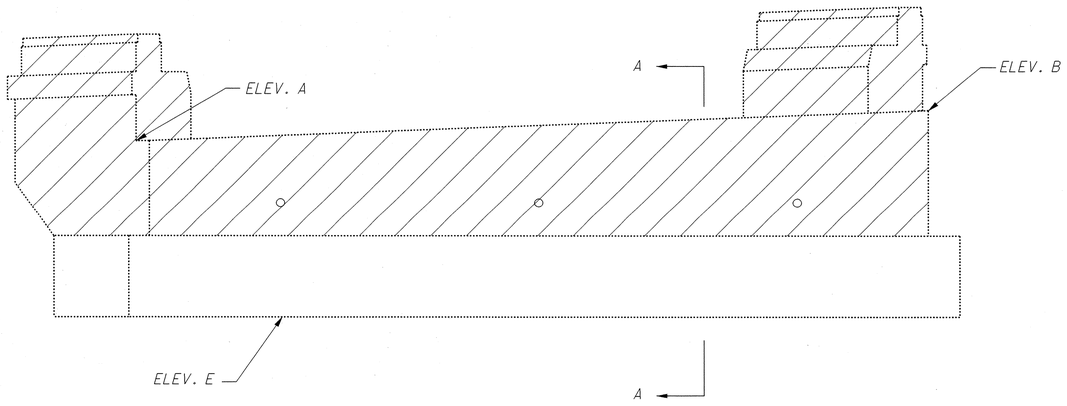
PORTIONS OF STRUCTURE REMOVED

FOR REAR ABUTMENT WINGWALL A & B DETAILS, SEE SHEET NO. 44.



PLAN
(PILING NOT SHOWN)

TABLE OF ELEVATIONS				
A	B	C	D	E
1251.13±	1252.30±	1253.38±	1254.40±	1244.08±



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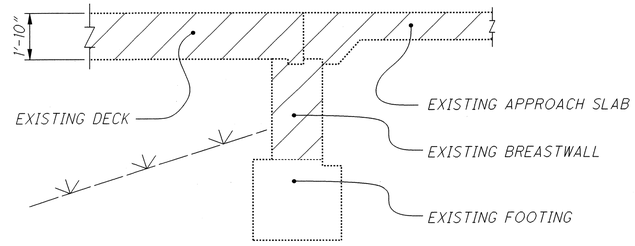

SECTION A-A

CALCULATED TKB
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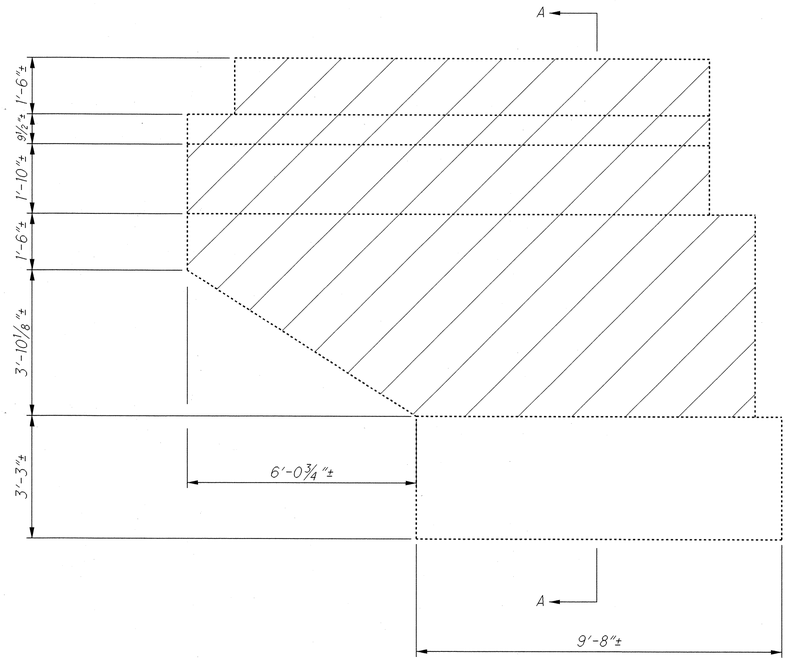
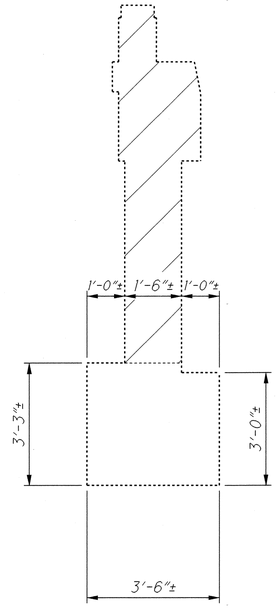
FORWARD ABUTMENT REMOVAL DETAIL
STRUCTURE HAS-22-1738F

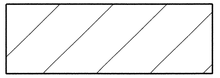
HAS-22-17.38



REAR ABUTMENT WINGWALL "A"



SECTION A-A



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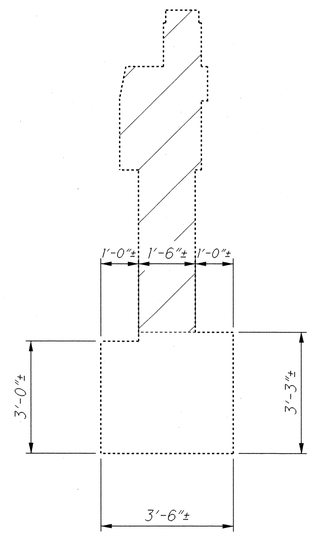
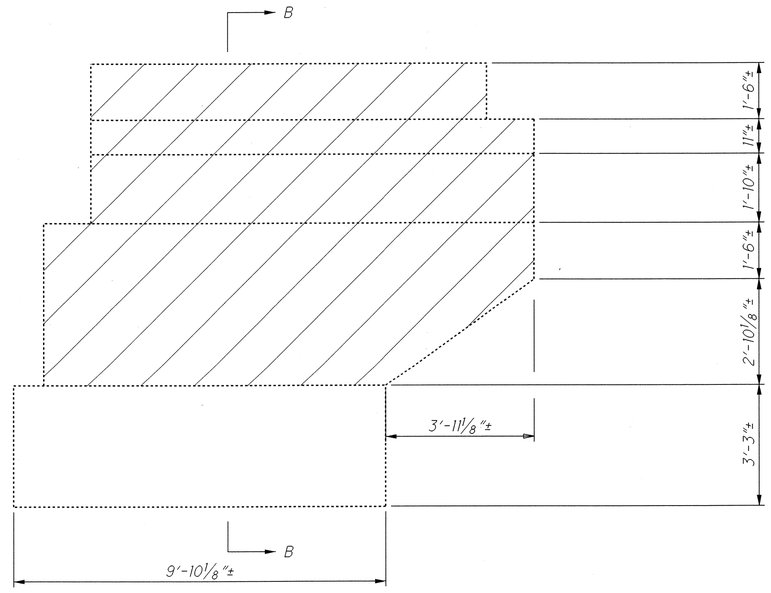


SECTION B-B



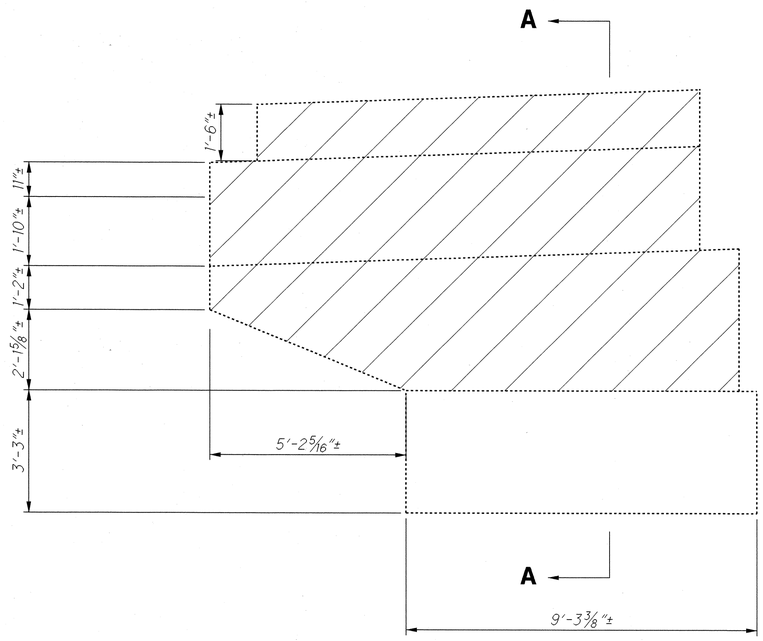
REAR ABUTMENT WINGWALL "B"

CALCULATED TKB
CHECKED RPT

ABUTMENT WINGWALL REMOVAL DETAILS
STRUCTURE HAS-22-1738F

EXISTING REAR ABUTMENT

HAS-22-17.38



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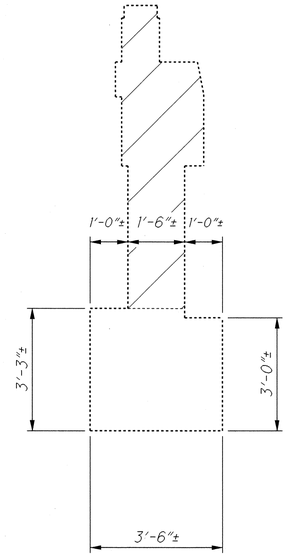
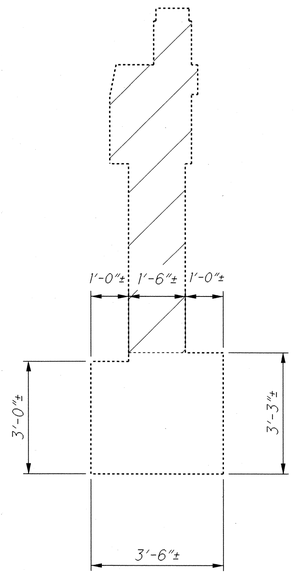
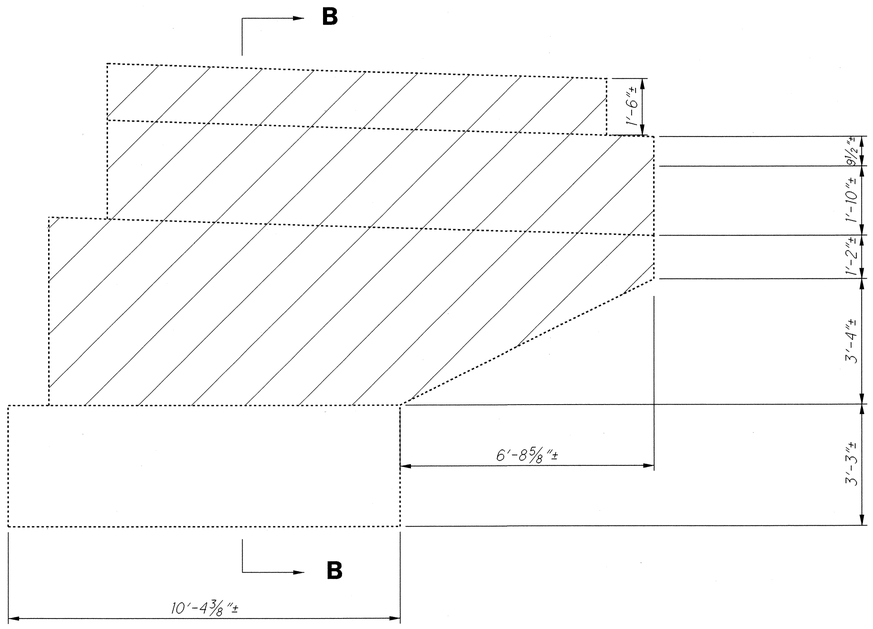


SECTION A-A



SECTION B-B



FORWARD ABUTMENT WINGWALL "B"

PORTIONS OF STRUCTURE REMOVED

CALCULATED TKB
CHECKED RPT

ABUTMENT WINGWALL REMOVAL DETAILS

EXISTING FORWARD ABUTMENT STRUCTURE HAS-22-1738F

HAS-22-17.38

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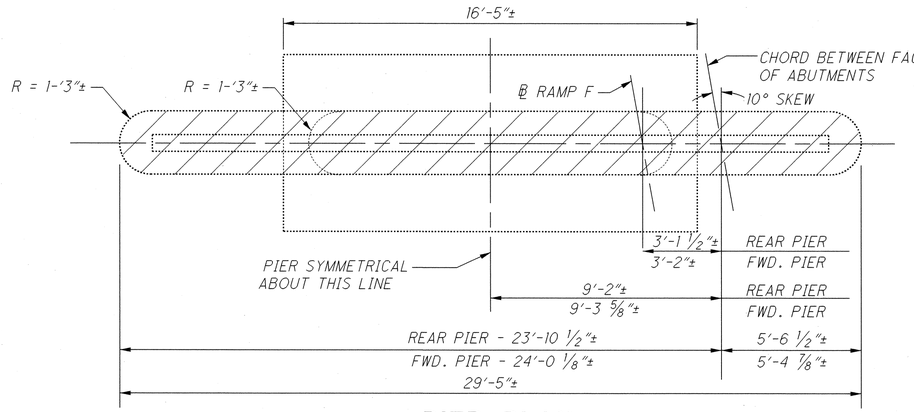
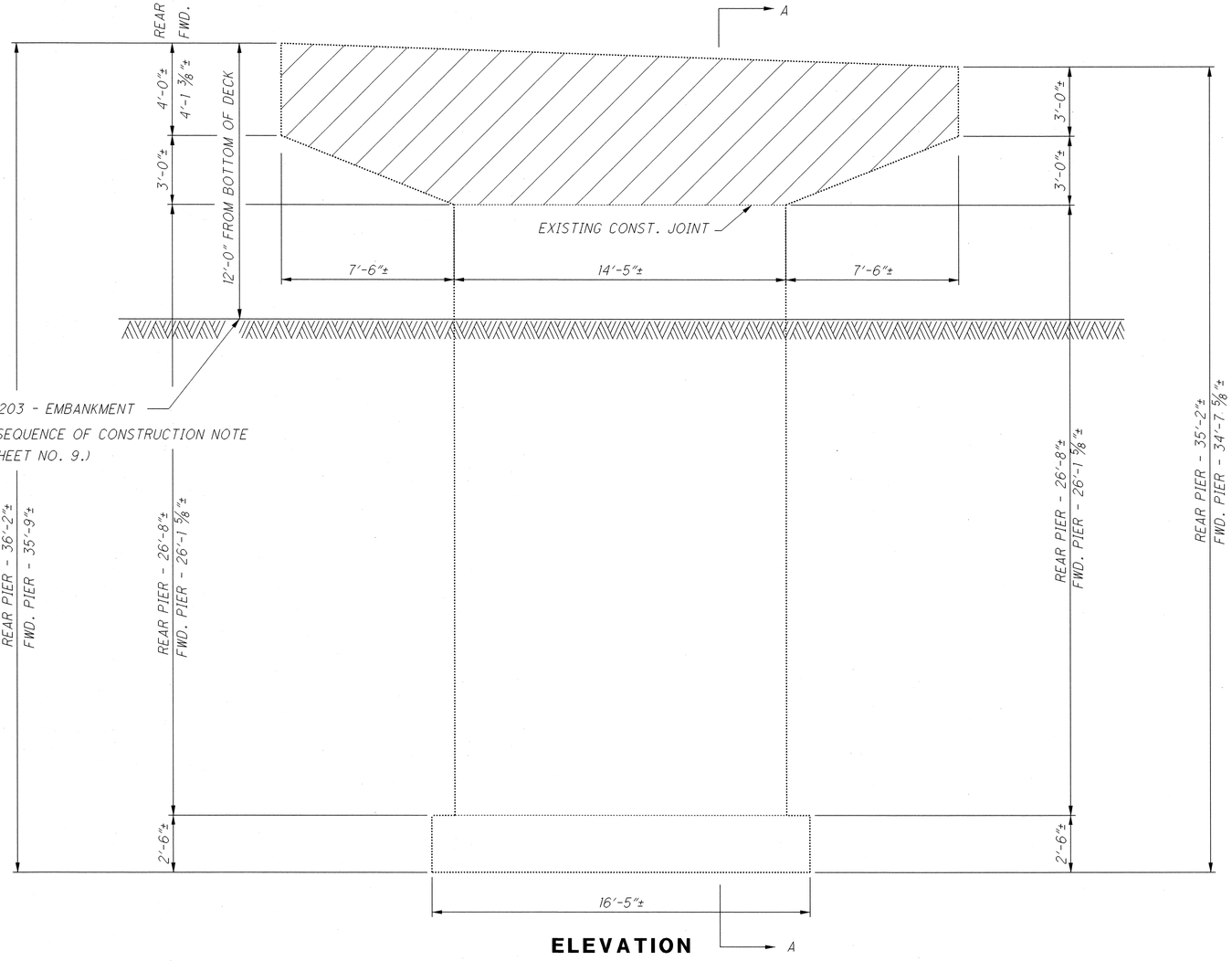
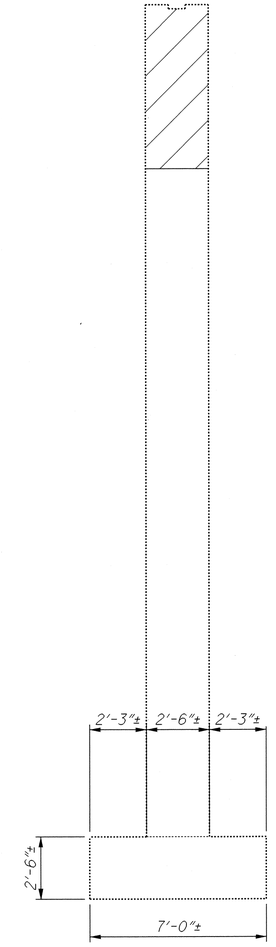


PIER PLAN



ELEVATION



SECTION A-B

PORTIONS OF STRUCTURE REMOVED

CALCULATED TKB
CHECKED RPT

REAR AND FORWARD PIER REMOVAL DETAILS
STRUCTURE HAS-22-1738F

HAS-22-17.38

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45

SPECIAL PROVISIONS

Supplemental Specification 832

CO-RT-SEC: HAS-22-17.38

PID: 24870

DATE: 5-20-08

SUPPLEMENTAL SPECIFICATION 832 UPDATE FOR COVERAGE UNDER OHIO EPA PERMIT NO. OHC000003

ALL REFERENCES TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION EFFLUENT GUIDELINES PERMIT NO. OHC000002 IN SUPPLEMENTAL SPECIFICATION 832 (SS832) AND APPENDIX E WILL BE REPLACED WITH THE OEPA GENERAL PERMIT NO. OHC000003, AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM ("THE OHC000003 PERMIT"). A COPY OF THE OHC000003 PERMIT IS ATTACHED.

THE CONTRACTOR NEEDS TO FULLY UNDERSTAND ALL REQUIREMENTS OF THE OHC000003 PERMIT BEFORE BEGINNING ANY WORK. FOR ANY DISCREPENCIES BETWEEN SS832 AND THIS SPECIAL PROVISION, RESOLUTION SHOULD BE BASED ON THE OHC000003 PERMIT.

ALL ITEMS COVERED IN SS832 WILL APPLY WITH THE EXCEPTION OF THE ITEMS NOTED BELOW:

A. SECTION 832.06 - EARTH DISTURBING ACTIVITY (EDA) REQUIREMENTS

1. DELETE THE SECOND SENTENCE IN THE FIRST PARAGRAPH, "COMPLY WITH C&MS 105.16 WHEN EDA (INCLUDING BORROW AND WASTE AREAS) ARE INVOLVED, UNLESS THE AREAS IN QUESTION HAVE BEEN CLEARED THROUGH PRIOR ENVIRONMENTAL STUDIES".

B. SECTION 832.08(I) - LOCATE AND FURNISH BMP (SEDIMENT BASINS AND DAMS

1. CONSTRUCT BASINS ACCORDING TO THE CONDITIONS AND VOLUME REQUIREMENTS INDICATED IN THE OHC000003 PERMIT.

C. SECTION 832.13 – SWPPP ACCEPTANCE

1. ADD THE FOLLOWING TO THE EXISTING LIST OF ITEMS THAT MAY BE CRITICALLY ASSESED BY THE DEPARTMENT:

    a. THE VOLUME, GEOMETRY AND LOCATION OF SEDIMENT BASINS.
    b. IF REQUIRED BY THE OHC000003 PERMIT, CALCULATIONS VERIFYING THE DRAIN TIME OF SEDIMENT PONDS MEETS THE REQUIREMENTS OF THE OHC000003 PERMIT.

May 20, 2008

Effective Date: April 21, 2008
Expiration Date: April 20, 2013

OHIO ENVIRONMENTAL PROTECTION AGENCY

AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the State identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the State associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-06.

Laura H. Powell
Assistant Director

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

By: _____ Date: 4-21-08

TABLE OF CONTENTS

PART I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit covers the entire State of Ohio.

B. Eligibility.

1. Construction activities covered. Except for storm water discharges identified under Part I.B.2, this permit may cover all new and existing discharges composed entirely of storm water discharges associated with construction activity that enter surface waters of the State or a storm drain leading to surface waters of the State.

   For the purposes of this permit, construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb one or more acres of land. Discharges from trench dewatering are also covered by this permit as long as the dewatering activity is carried out in accordance with the practices outlined in Part III.G.2.g.iv of this permit. The threshold acreage includes the entire area disturbed in the larger common plan of development or sale.

   This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:

   a. The support activity is directly related to a construction site that is required to have NPDES permit coverage for discharges of storm water associated with construction activity;

   b. The support activity is not a commercial operation serving multiple unrelated construction projects and does not operate beyond the completion of the construction activity at the site it supports;

   c. Appropriate controls and measures are identified in a storm water pollution prevention plan (SWP3) covering the discharges from the support activity; and

   d. The support activity is on or contiguous with the property defined in the NOI (off-site borrow pits and soil disposal areas, which serve only one project, do not have to be contiguous with the construction site);

Part I.B

2. Limitations on coverage. The following storm water discharges associated with construction activity are not covered by this permit:

   a. Storm water discharges that originate from the site after construction activities have been completed, including any temporary support activity, and the site has achieved final stabilization. Industrial post-construction storm water discharges may need to be covered by an NPDES permit;

   b. Storm water discharges associated with construction activity that the director has shown to be or may reasonably expect to be contributing to a violation of a water quality standard; and

   c. Storm water discharges authorized by an individual NPDES permit or an alternative NPDES general permit;

3. Waivers. After March 10, 2003, sites whose larger common plan of development or sale have at least one, but less than five acres of land disturbance, which would otherwise require permit coverage for storm water discharges associated with construction activities, may request that the director waive their permit requirement. Entities wishing to request such a waiver must certify in writing that the construction activity meets one of the two waiver conditions:

   a. **Rainfall erosivity waiver.** For a construction site to qualify for the rainfall erosivity waiver, the cumulative rainfall erosivity over the project duration must be five or less and the site must be stabilized with at least a 70 percent vegetative cover or other permanent, non-erosive cover. The rainfall erosivity must be calculated according to the method in U.S. EPA Fact Sheet 3.1 Construction Rainfall Erosivity Waiver dated January 2001. If it is determined that a construction activity will take place during a time period where the rainfall erosivity factor is less than five, a written waiver certification must be submitted to Ohio EPA at least 21 days before construction activity is scheduled to begin. If the construction activity will extend beyond the dates specified in the waiver certification, the operator must either: (a) recalculate the waiver using the original start date with the new ending date (if the R factor is still less than five, a new waiver certification must be submitted) or (b) submit an NOI application form and fee for coverage under this general permit at least seven days prior to the end of the waiver period (see Attachment A); or

Part I.B.3

b. **TMDL (Total Maximum Daily Load) waiver.** Storm water controls are not needed based on a TMDL approved or established by U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the director of Ohio EPA that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis. A written waiver certification must be submitted to Ohio EPA at least 21 days before the construction activity is scheduled to begin.

4. Prohibition on non-storm water discharges. All discharges covered by this permit must be composed entirely of storm water with the exception of the following: discharges from fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated ground water from trench or well point dewatering and foundation or footing drains where flows are not contaminated with process materials such as solvents. Dewatering activities must be done in compliance with Part III.G.2.g.iv of this permit. Discharges of material other than storm water or the authorized non-storm water discharges listed above must comply with an individual NPDES permit or an alternative NPDES general permit issued for the discharge.

Except for flows from fire fighting activities, sources of non-storm water listed above that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

Part I.B

5. Spills and unintended releases (Releases in excess of Reportable Quantities). This permit does not relieve the permittee of the reporting requirements of 40 CFR Part 117 and 40 CFR Part 302. In the event of a spill or other unintended release, the discharge of hazardous substances in the storm water discharge(s) from a construction site must be minimized in accordance with the applicable storm water pollution prevention plan for the construction activity and in no case, during any 24-hour period, may the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

   40 CFR Part 117 sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR Part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged to surface waters of the State. 40 CFR Part 302 designates under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, those substances in the statutes referred to in section 101(14), identifies reportable quantities for these substances and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act (CWA).

C. Requiring an individual NPDES permit or an alternative NPDES general permit.

1. The director may require an alternative permit. The director may require any operator eligible for this permit to apply for and obtain either an individual NPDES permit or coverage under an alternative NPDES general permit in accordance with OAC Rule 3745-38-04. Any interested person may petition the director to take action under this paragraph.

   The director will send written notification that an alternative NPDES permit is required. This notice shall include a brief statement of the reasons for this decision, an application form and a statement setting a deadline for the operator to file the application. If an operator fails to submit an application in a timely manner as required by the director under this paragraph, then coverage, if in effect, under this permit is automatically terminated at the end of the day specified for application submittal.

Part I.C

2. Operators may request an individual NPDES permit. Any owner or operator eligible for this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request to the director in accordance with the requirements of 40 CFR 122.26. If the reasons adequately support the request, the director shall grant it by issuing an individual NPDES permit.

3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

D. Permit requirements when portions of a site are sold

If an operator obtains a permit for a development, and then the operator (permittee) sells off lots or parcels within that development, permit coverage must be continued on those lots until a Notice of Termination (NOT) in accordance with Part IV.B is submitted. For developments which require the use of centralized sediment and erosion controls (i.e., controls that address storm water runoff from one or more lots) for which the conveyance of permit coverage for a portion of the development will either prevent or impair the implementation of the controls and therefore jeopardize compliance with the terms and conditions of this permit, the permittee will be required to maintain responsibility for the implementation of those controls. For developments where this is not the case, it is the permittee's responsibility to temporarily stabilize all lots sold to individual lot owners unless an exception is approved in accordance with Part III.G.4. In cases where permit coverage for individual lot(s) will be conveyed, the permittee shall inform, in writing, the individual lot owner of the obligations under this permit and ensure that the Individual Lot NOI application is submitted to Ohio EPA.

E. Authorization

1. Obtaining authorization to discharge. Operators that discharge storm water associated with construction activity must submit an NOI application form in accordance with the requirements of Part II of this permit to obtain authorization to discharge under this general permit. As required under OAC Rule 3745-38-06(E), the director, in response to the NOI submission, shall notify the applicant in writing that he/she has been granted general permit coverage to discharge storm water associated with construction activity under the terms and conditions of this permit or that the applicant must apply for an individual NPDES permit or coverage under an alternate general NPDES permit as described in Part I.C.1.

Part I.E

2. No release from other requirements. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations. Other permit requirements commonly associated with construction activities include, but are not limited to, section 401 water quality certifications, isolated wetland permits, permits to install sanitary sewers or other devices that discharge or convey polluted water, permits to install drinking water lines, single lot sanitary system permits and disturbance of land which was used to operate a solid or hazardous waste facility (i.e., coverage under this NPDES general permit does not satisfy the requirements of OAC Rule 3745-27-13 or ORC Section 3734.02(H)). This permit does not relieve the permittee of other responsibilities associated with construction activities such as contacting the Ohio Department of Natural Resources, Division of Water, to ensure proper well installation and abandonment of wells.

Part II. NOTICE OF INTENT REQUIREMENTS

A. Deadlines for notification.

Initial coverage: Operators who intend to obtain initial coverage for a storm water discharge associated with construction activity under this general permit must submit a complete and accurate NOI application form and appropriate fee at least 21 days prior to the commencement of construction activity. If more than one operator, as defined in Part VII of this general permit, will be engaged at a site, each operator shall seek coverage under this general permit. Where one operator has already submitted an NOI prior to other operator(s) being identified, the additional operator shall request modification of coverage to become a co-permittee. In such instances, the co-permittees shall be covered under the same facility permit number. No additional permit fee is required.

Individual lot transfer of coverage: Operators must each submit an individual lot notice of intent (Individual Lot NOI) application form (no fee required) to Ohio EPA at least seven days prior to the date that they intend to accept responsibility for permit requirements for their portion of the original permitted development from the previous permittee. The original permittee may submit an Individual Lot NOT at the time the Individual Lot NOI is submitted. Transfer of permit coverage is not granted until an approval letter from the director of Ohio EPA is received by the applicant.

B. Failure to notify.

Operators who fail to notify the director of their intent to be covered and who discharge pollutants to surface waters of the State without an NPDES permit are in violation of ORC Chapter 6111. In such instances, Ohio EPA may bring an enforcement action for any discharges of storm water associated with construction activity.

Part II

C. Where to submit an NOI.

Operators seeking coverage under this permit must submit a signed NOI form, provided by Ohio EPA, to the address found in the associated instructions.

D. Additional notification.

The permittee shall make NOIs and SWP3s available upon request of the director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or storm water management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator that discharges to an NPDES permitted MS4 shall provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.

E. Renotification.

Upon renewal of this general permit, the permittee is required to notify the director of his intent to be covered by the general permit renewal. Permittees covered under the previous NPDES general permits for storm water discharges associated with construction activity (NPDES permit numbers OHR100000 and OHC000002) shall have continuing coverage under this permit. The permittees covered under OHR100000 or OHC000002 shall submit a letter within 90 days of receipt of written notification by Ohio EPA expressing their intent that coverage be continued. There is no fee associated with these letters of intent for continued coverage. Permit coverage will be terminated after the 90-day period if the letter is not received by Ohio EPA. Ohio EPA will provide instructions on the contents of the letter and where it is to be sent within the notification letter.

PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)

A. Storm Water Pollution Prevention Plans.

A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for subsequent phases. SWP3s shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants in storm water discharges during construction and pollutants associated with post-construction activities to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

B. Timing

A SWP3 shall be completed prior to the timely submittal of an NOI and updated in accordance with Part III.D. Upon request and good cause shown, the director may waive the requirement to have a SWP3 completed at the time of NOI submission. If a waiver has been granted, the SWP3 must be completed prior to the initiation of construction activities. The SWP3 must be implemented upon initiation of construction activities.

Permittees continuing coverage from the previous generations of this permit (OHR100000 and OHC000002) that have initiated construction activity prior to the receipt of the first written notification from Ohio EPA to submit a letter of intent to continue coverage, as required in Part II.E, are not required to update their SWP3 as a result of this renewal (OHC000003). Permittees continuing coverage from the previous generations of this permit (OHR100000 and OHC000002) that have not initiated construction activity prior to the receipt of the first written notification from Ohio EPA to submit a letter of intent to continue coverage, as required in Part II.E, are required to update their SWP3 as a result of this renewal (OHC000003).

C. SWP3 Signature and Review.

1. Plan Signature and Retention On Site. The SWP3 shall include the certification in Part V.H., be signed in accordance with Part V.G., and be retained on site during working hours.

Part III.C

2. Plan Availability

   a. On-site: The plan shall be made available immediately upon request of the director or his authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit also shall be made available at the site.

   b. By written request: The permittee must provide a copy of the SWP3 within 10 days upon written request by any of the following:

      i. The director or the director's authorized representative;

      ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or

      iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.

   c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.

3. Plan Revision. The director or authorized representative, may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director (or as otherwise provided in the notification) or authorized representative, the permittee shall make the required changes to the SWP3 and, if requested, shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

D. Amendments

The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the State or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

Part III

E. Duty to inform contractors and subcontractors

The permittee shall inform all contractors and subcontractors not otherwise defined as "operators" in Part VII of this general permit, who will be involved in the implementation of the SWP3, of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created and signatures of each individual contractor shall be obtained prior to their commencement of work on the construction site.

F. Total Maximum Daily Load (TMDL) allocations

If a TMDL is approved for any waterbody into which the permittee's site discharges and requires specific BMPs for construction sites, the director may require the permittee to revise his/her SWP3.

G. SWP3 Requirements

Operations that discharge storm water from construction activities are subject to the following requirements and the SWP3 shall include the following items:

1. Site description. Each SWP3 shall provide:

   a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);

   b. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);

   c. An estimate of the impervious area and percent imperviousness created by the construction activity;

   d. A calculation of the runoff coefficients for both the pre-construction and post construction site conditions;

   e. Existing data describing the soil and, if available, the quality of any discharge from the site;

   f. A description of prior land uses at the site;

Part III.G.1

g. An implementation schedule which describes the sequence of major construction operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;

h. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the State must be indicated;

i. For subdivided developments where the SWP3 does not call for a centralized sediment control capable of controlling multiple individual lots, a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices.

This does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones.

j. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;

k. A copy of the permit requirements (attaching a copy of this permit is acceptable);

l. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated dates that construction will start and be complete;

m. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and

n. Site map showing:

Part III.G.1.n

i. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;

ii. Soils types should be depicted for all areas of the site, including locations of unstable or highly erodible soils;

iii. Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;

iv. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;

v. Existing and planned locations of buildings, roads, parking facilities and utilities;

vi. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development;

vii. Sediment and storm water management basins noting their sediment settling volume and contributing drainage area;

viii. Permanent storm water management practices to be used to control pollutants in storm water after construction operations have been completed.

ix. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;

x. The location of designated construction entrances where the vehicles will access the construction site;

xi. The location of any in-stream activities including stream crossings;

Part III.G

2. Controls. The SWP3 must contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) must implement such controls. The SWP3 must clearly describe for each major construction activity identified in Part III.G.1.g: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontactors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. Ohio EPA recommends that the primary site operator review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

Ohio EPA recommends that the erosion, sediment, and storm water management practices used to satisfy the conditions of this permit should meet the standards and specifications in the current edition of Ohio's Rainwater and Land Development (see definitions) manual or other standards acceptable to Ohio EPA. The controls shall include the following minimum components:

a. **Non-Structural Preservation Methods.** The SWP3 must make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving riparian areas adjacent to surface waters of the State, preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time and designation of tree preservation areas or other protective clearing or grubbing practices. The recommended buffer that operators should leave undisturbed along a surface water of the State is 25 feet as measured from the ordinary high water mark of the surface water.

b. **Erosion Control Practices.** The SWP3 must make use of erosion controls that are capable of providing cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to restabilize disturbed areas after grading or construction shall be included in the SWP3. The SWP3 must provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.

Part III.G.2.b

i. **Stabilization.** Disturbed areas must be stabilized as specified in the following tables below. Permanent and temporary stabilization are defined in Part VII.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the State and at final grade	Within two days of reaching final grade
Any other areas at final grade	Within seven days of reaching final grade within that area

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the State and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 21 days
For all construction activities, any disturbed areas that will be dormant for more than 21 days but less than one year, and not within 50 feet of a surface water of the State	Within seven days of the most recent disturbance within the area For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed.

ii. **Permanent stabilization of conveyance channels.** Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the current edition of the Rainwater and Land Development manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

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c. **Runoff Control Practices.** The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.

d. **Sediment Control Practices.** The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, silt fences, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

The SWP3 must contain detail drawings for all structural practices.

i. Timing. Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the up slope development area is restabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns.

ii. Sediment settling ponds. A sediment settling pond is required for any one of the following conditions:
- concentrated storm water runoff (e.g., storm sewer or ditch);
- runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers;
- runoff from drainage areas that exceed the design capacity of inlet protection; or
- runoff from common drainage locations with 10 or more acres of disturbed land.

Part III.G.2.d.ii

The permittee may request approval from Ohio EPA to use alternative controls if the permittee can demonstrate the alternative controls are equivalent in effectiveness to a sediment settling pond.

The sediment settling pond volume consists of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall be a minimum of 1800 cubic feet (ft^3) per acre of drainage (67 yd^3/acre) with a minimum 48-hour drain time for sediment basins serving a drainage area over 5 acres. The volume of the sediment storage zone shall be calculated by one of the following methods: Method 1: The volume of the sediment storage zone shall be 1000 ft^3 per disturbed acre within the watershed of the basin. OR Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model. The accumulated sediment shall be removed from the sediment storage zone once it's full. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity must be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone must be less than or equal to five feet. The configuration between inlets and the outlet of the basin must provide at least two units of length for each one unit of width (> 2:1 length:width ratio), however, a length to width ratio of 4:1 is recommended. When designing sediment settling ponds, the permittee must consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls must be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

iii. Silt Fence and Diversions. Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area. This permit does not preclude the use of other sediment barriers designed to control sheet flow runoff. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in the table below.

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Maximum drainage area (in acres) to 100 linear feet of silt fence	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	≥ 2% but < 20%
0.125	≥ 20% but < 50%

Placing silt fence in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Such devices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

iv. Inlet Protection. Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems, unless the storm drain system drains to a sediment settling pond. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.

v. Surface Waters of the State Protection. If construction activities disturb areas adjacent to surface waters of the State, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the State from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the State. For all construction activities immediately adjacent to surface waters of the State, it is recommended that a setback of at least 25-feet, as measured from the ordinary high water mark of the surface water, be maintained in its natural state as a permanent buffer. Where impacts within this setback area are unavoidable due to the nature of the construction activity (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the setback area are minimized.

vi. Modifying Controls. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee must replace or modify the control for site conditions.

Part III.G.2

e. **Post-Construction Storm Water Management Requirements.** So that the receiving stream's physical, chemical, and biological characteristics are protected and stream functions are maintained, post-construction storm water practices shall provide perpetual management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 must contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale must address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality. Post-construction BMPs cannot be installed within a surface water of the State (e.g., wetland or stream) unless it's authorized by a CWA 401 water quality certification, CWA 404 permit, or Ohio EPA non-jurisdictional wetland/stream program approval. Note: localities may have more stringent post-construction requirements.

Detail drawings and maintenance plans must be provided for all post-construction BMPs. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). For sites located within a community with a regulated municipal separate storm sewer system (MS4), the permittee, land owner, or other entity with legal control of the property may be required to develop and implement a maintenance plan to comply with the requirements of the MS4. Maintenance plans must ensure that pollutants collected within structural post-construction practices, be disposed of in accordance with local, state, and federal regulations. To ensure that storm water management systems function as they were designed and constructed, the post construction operation and maintenance plan must be a stand-alone document, which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and non-routine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance; (4) any necessary legally binding maintenance easements and agreements; and (5) a map showing all access and maintenance easements. Permittees are not responsible under this permit for operation and maintenance of post-construction practices once coverage under this permit is terminated.

Post-construction storm water BMPs that discharge pollutants from point sources once construction is completed, may in themselves, need authorization under a separate NPDES permit (one example is storm water discharges from regulated industrial sites).

Part III.G.2.e

Construction activities that do not include the installation of any impervious surface (e.g., soccer fields), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects, (e.g., pipeline or utility line installation), which do not result in the installation of additional impervious surface, are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects must be designed to minimize the number of stream crossings and the width of disturbance and achieve final stabilization of the disturbed area as defined in Part VII.H.1.

Large Construction Activities. For all large construction activities (involving the disturbance of five or more acres of land or will disturb less than five acres, but is a part of a larger common plan of development or sale which will disturb five or more acres of land), the post construction BMP(s) chosen must be able to detain storm water runoff for protection of the stream channels, stream erosion control, and improved water quality. The BMP(s) chosen must be compatible with site and soil conditions. Structural (designed) post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQv) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQv shall be equivalent to the volume of runoff from a 0.75-inch rainfall and shall be determined according to the following equation:

$WQv = C * P * A / 12$
where:
WQv = water quality volume in acre-feet
C = runoff coefficient appropriate for storms less than 1 inch
(Either use the following formula: $C = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$, where i = fraction of post-construction impervious surface or use Table 1)
P = 0.75 inch precipitation depth
A = area draining into the BMP in acres

Part III.G.2.e

Table 1
Runoff Coefficients Based on the Type of Land Use

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>8 dwellings/acre)	0.5
Medium Density Residential (4 to 8 dwellings/acre)	0.4
Low Density Residential (<4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2

Where the land use will be mixed, the runoff coefficient should be calculated using a weighted average. For example, if 60% of the contributing drainage area to the storm water treatment structure is Low Density Residential, 30% is High Density Residential, and 10% is Open Space, the runoff coefficient is calculated as follows (0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = 0.35.

An additional volume equal to 20 percent of the WQv shall be incorporated into the BMP for sediment storage. Ohio EPA recommends that BMPs be designed according to the methodology included in the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

The BMPs listed in Table 2 below shall be considered standard BMPs approved for general use. However communities with a regulated MS4 may limit the use of some of these BMPs. BMPs shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP must not discharge more than the first half of the WQv or extended detention volume (EDv) in less than one-third of the drain time. The EDv is the volume of storm water runoff that must be detained by a structural post-construction BMP. The EDv is equal to 75 percent of the WQv for wet extended detention basins, but is equal to the WQv for all other BMPs listed in Table 2.

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Table 2
Structural Post-Construction BMPs & Associated Drain (Drawdown) Times

Best Management Practice	Drain Time of WQv
Infiltration Basin^	24 - 48 hours
Enhanced Water Quality Swale	24 hours
Dry Extended Detention Basin*	48 hours
Wet Extended Detention Basin**	24 hours
Constructed Wetland (above permanent pool)*	24 hours
Sand & Other Media Filtration	40 hours
Bioretention Cell^	40 hours
Pocket Wetland#	24 hours
Vegetated Filter Strip	24 hours

* Dry basins must include forebay and micropool each sized at 10% of the WQv
** Provide both a permanent pool and an EDv above the permanent pool, each sized at 0.75 * WQv
* Extended detention shall be provided for the full WQv above the permanent water pool.
^ The WQv shall completely infiltrate within 48 hours so there is no standing or residual water in the BMP.
# Pocket wetlands must have a wet pool equal to the WQv, with 25% of the WQv in a pool and 75% in marshes. The EDv above the permanent pool must be equal to the WQv.

The permittee may request approval from Ohio EPA to use alternative post-construction BMPs if the permittee can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 2 above. Construction activities shall be exempt from this condition if it can be demonstrated that the WQv is provided within an existing structural post-construction BMP that is part of a larger common plan of development or if structural post-construction BMPs are addressed in a regional or local storm water management plan. A municipally operated regional storm water BMP can be used as a post-construction BMP provided that the BMP can detain the WQv from its entire drainage area and release it over a 24 hour period.

Transportation Projects The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of this permit.

Part III.G.2.e

Offsite Mitigation of Post-Construction Ohio EPA may authorize the offsite mitigation of the post-construction requirements of Part III.G.2.e of this permit on a case by case basis provided the permittee clearly demonstrates the BMPs listed in Table 2 are not feasible and the following criteria is met: (1) a maintenance agreement or policy is established to ensure operations and treatment in perpetuity; (2) the offsite location discharges to the same HUC-14 watershed unit; and (3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater. Requests for offsite mitigation must be received prior to receipt of the NOI applications.

Redevelopment Projects Sites that have been previously developed where no post-construction BMPs were installed shall either ensure a 20 percent net reduction of the site impervious area, provide for treatment of at least 20 percent of the WQ_v, or a combination of the two. A one-for-one credit towards the 20 percent net reduction of impervious area can be obtained through the use of pervious pavement and/or green roofs. Where projects are a combination of new development and redevelopment, the total WQv that must be treated shall be calculated by a weighted average based on acreage, with the new development at 100 percent WQv and redevelopment at 20 percent WQv.

Non-Structural Post-Construction BMPs The size of the structural post-construction can be reduced by incorporating non-structural post-construction BMPs into the design. Practices such as preserving open space will reduce the runoff coefficient and, thus, the WQv. Ohio EPA encourages the implementation of riparian and wetland setbacks. Practices which reduce storm water runoff include permeable pavements, green roofs, rain barrels, conservation development, smart growth, low-impact development, and other site design techniques contained in the Ohio Lake Commission's Balanced Growth Program (see http://www.epa.state.oh.us/oleo/bg1/index.html). In order to promote the implementation of such practices, the Director may consider the use of non-structural practices to demonstrate compliance with Part III.G.2.e of this permit for areas of the site not draining into a common drainage system of the site, i.e., sheet flow from perimeter areas such as the rear yards of residential lots, for low density development scenarios, or where the permittee can demonstrate that the intent of pollutant removal and stream protection, as required in Part III.G.2.e of this permit is being addressed through non-structural post-construction BMPs based upon review and approval by Ohio EPA.

Part III.G.2.e

Use of Alternative Post-Construction BMPs This permit does not preclude the use of innovative or experimental post-construction storm water management technologies. However, the Director may require these practices to be tested using the protocol outlined in the Technology Acceptance Reciprocity Partnership's (TARP) Protocol for Stormwater Best Management Practice Demonstrations (see http://www.dep.state.pa.us/dep/deputate/pollprev/techservices/tarp).

The Director may require discharges from such structures to be monitored to ensure compliance with Part III.G.2.e of this permit. Permittees must request approval from Ohio EPA to use alternative post-construction BMPs if the permittee can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 2 above. To demonstrate this equivalency, the permittee must show that the alternative BMP has a minimum total suspended solids (TSS) removal efficiency of 80 percent. Also, the WQv discharge rate from the practice must be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the State. The discharges will have a negligible impact if the permittee can demonstrate that one of the following four conditions exist:

i. The entire WQv is recharged to groundwater;

ii. The larger common plan of development or sale will create less than one acre of impervious surface;

iii. The project is a redevelopment project within an ultra-urban setting (i.e., a downtown area or on a site where 100 percent of the project area is already impervious surface and the storm water discharge is directed into an existing storm sewer system); or

iv. The storm water drainage system of the development discharges directly into a large river (fourth order or greater) or to a lake and where the development area is less than 5 percent of the watershed area upstream of the development site, unless a TMDL identified water quality problems in the receiving surface waters of the State.

Part III.G.2.e

The Director shall only consider the use of alternative BMPs on projects where the permittee can demonstrate that the implementation of the BMPs listed in Table 2 is infeasible due to physical site constraints that prevent the ability to provide functional BMP design. Alternative practices may include, but are not limited to, underground detention structures, vegetated swales and vegetated filter strips designed using water quality flow, natural depressions, rain barrels, permeable pavements green roofs, rain gardens, catch basin inserts, and hydrodynamics separators. The Director may also consider non-structural post-construction approaches where no local requirement for such practices exist.

Small Construction Activities. For all small land disturbance activities (which disturb one or more, but less than five acres of land and is not a part of a larger common plan of development or sale which will disturb five or more acres of land), a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed must be included in the SWP3. Structural measures should be placed on upland soils to the degree attainable. Such practices may include, but are not limited to: storm water detention structures (including wet basins); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). The SWP3 shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

f. **Surface Water Protection.** If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state non-jurisdictional stream and wetland requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee must contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

Part III.G.2.f

U.S. Army Corps of Engineers (Section 404 regulation):
Huntington, WV District (304) 399-5210 (Muskingum River, Hocking River, Scioto River, Little Miami River, and Great Miami River Basins)
Buffalo, NY District (716) 879-4191 (Lake Erie Basin)
Pittsburgh, PA District (412) 395-7154 (Mahoning River Basin)
Louisville, KY District (502) 315-6733 (Ohio River)

Ohio EPA 401/404 and non-jurisdictional stream/wetland coordinator can be contacted at (614) 644-2001 (all of Ohio)

Concentrated storm water runoff from BMPs to natural wetlands shall be converted to diffuse flow before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series, particularly on steep sloped sites, to ensure non-erosive velocities. Other structural BMPs may be used between storm water features and natural wetlands, in order to protect the natural hydrology, hydroperiod, and wetland flora. If the applicant proposes to discharge to natural wetlands, a hydrologic analysis shall be performed. The applicant shall attempt to match the pre-development hydroperiods and hydrodynamics that support the wetland. The applicant shall assess whether their construction activity will adversely impact the hydrologic flora and fauna of the wetland. Practices such as vegetative buffers, infiltration basins, conservation of forest cover, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain wetland hydrology.

g. **Other controls.** The SWP3 must also provide BMPs for pollutant sources other than sediment. Non-sediment pollutant sources, which may be present on a construction site, include paving operations, concrete washout, structure painting, structure cleaning, demolition debris disposal, drilling and blasting operations, material storage, slag, solid waste, hazardous waste, contaminated soils, sanitary and septic wastes, vehicle fueling and maintenance activities, and landscaping operations.

   i. **Non-Sediment Pollutant Controls.** No solid or liquid waste, including building materials, shall be discharged in storm water runoff. The permittee must implement all necessary BMPs to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the State. Under no circumstance shall concrete trucks wash out directly into a drainage channel, storm sewer or surface waters of the State. No exposure of storm water to waste materials is recommended.

   ii. **Off-site traffic.** Off-site vehicle tracking of sediments and dust generation shall be minimized.

Part III.G.2.g

   iii. **Compliance with other requirements.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations, including provisions prohibiting waste disposal by open burning and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.

   iv. **Trench and ground water control.** There shall be no turbid discharges to surface waters of the State resulting from dewatering activities. If trench or ground water contains sediment, it must pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.

   v. **Contaminated Sediment.** Where construction activities are to occur on sites with contamination from previous activities, operators must be aware that concentrations of materials that meet other criteria (is not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in storm water discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this permit. Appropriate BMPs include, but are not limited to:
      - The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges;
      - Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility; and
      - Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material.

   Operators should consult with Ohio EPA Division of Surface Water prior to seeking permit coverage.

h. **Maintenance.** All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.

Part III.G.2

i. **Inspections.** At a minimum, procedures in an SWP3 shall provide that all controls on the site are inspected at least once every seven calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period. The inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized or runoff is unlikely due to weather conditions (e.g., site is covered with snow, ice, or the ground is frozen). A waiver of inspection requirements is available until one month before thawing conditions are expected to result in a discharge if all of the following conditions are met: the project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month); land disturbance activities have been suspended; and the beginning and ending dates of the waiver period are documented in the SWP3. Once a definable area has been finally stabilized, you may mark this on your SWP3 and no further inspection requirements apply to that portion of the site. The permittee shall assign "qualified inspection personnel" to conduct these inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III.G.1.g of this permit or whether additional control measures are required.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report must include:

i. the inspection date;
ii. names, titles, and qualifications of personnel making the inspection;
iii. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
iv. weather information and a description of any discharges occurring at the time of the inspection;
v. location(s) of discharges of sediment or other pollutants from the site;
vi. location(s) of BMPs that need to be maintained;
vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

Part III.G.2.i

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of this permit.

i. **When practices require repair or maintenance.** If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it must be repaired or maintained within three days of the inspection. Sediment settling ponds must be repaired or maintained within 10 days of the inspection.

ii. **When practices fail to provide their intended function.** If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 must be amended and the new control practice must be installed within 10 days of the inspection.

iii. **When practices depicted on the SWP3 are not installed.** If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.g of this permit, the control practice must be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.

Part III.G

3. **Approved State or local plans.** All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee must certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.

4. **Exceptions.** If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this permit or site specific conditions are such that implementation of any erosion and sediment control practices contained in this permit will result in no environmental benefit, then the permittee shall provide justification for rejecting each practice based on site conditions. Exceptions from implementing the erosion and sediment control standards contained in this permit will be approved or denied on a case-by-case basis.

   The permittee may request approval from Ohio EPA to use alternative methods to satisfy conditions in this permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

PART IV. NOTICE OF TERMINATION REQUIREMENTS

A. Failure to notify.

The terms and conditions of this permit shall remain in effect until a signed Notice of Termination (NOT) form is submitted. Failure to submit an NOT constitutes a violation of this permit and may affect the ability of the permittee to obtain general permit coverage in the future.

B. When to submit an NOT

1. Permittees wishing to terminate coverage under this permit must submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is

Part IV.B

submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance agreement is in place to ensure all post-construction BMPs will be maintained in perpetuity.

2. All permittees must submit an NOT form within 45 days of completing all permitted land disturbance activities. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:

   a. Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);

   b. Another operator(s) has assumed control over all areas of the site that have not been finally stabilized;

   c. For residential construction only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner. (Note: individual lots without housing which are sold by the developer must undergo final stabilization prior to termination of permit coverage.); or

   d. An exception has been granted under Part III.G.4.

C. How to submit an NOT

Permittees must use Ohio EPA's approved NOT form. The form must be completed and mailed according to the instructions and signed in accordance with Part V.G of this permit.

PART V. STANDARD PERMIT CONDITIONS.

A. Duty to comply.

1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ORC Chapter 6111. and is grounds for enforcement action.

2. Ohio law imposes penalties and fines for persons who knowingly make false statements or knowingly swear or affirm the truth of a false statement previously made.

B. Continuation of an expired general permit.

An expired general permit continues in force and effect until a new general permit is issued.

Part V

C. Need to halt or reduce activity not a defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to provide information.

The permittee shall furnish to the director, within 10 days of written request, any information which the director may request to determine compliance with this permit. The permittee shall also furnish to the director upon request copies of records required to be kept by this permit.

F. Other information.

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, SWP3, NOT or in any other report to the director, he or she shall promptly submit such facts or information.

G. Signatory requirements.

All NOIs, NOTs, SWP3s, reports, certifications or information either submitted to the director or that this permit requires to be maintained by the permittee, shall be signed.

1. These items shall be signed as follows:

   a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

      i. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or

Part V.G.1.a

      ii. The manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

   c. For a municipality, State, Federal or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

2. All reports required by the permits and other information requested by the director shall be signed by a person described in Part V.G.1 of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part V.G.1 of this permit and submitted to the director;

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

   c. The written authorization is submitted to the director.

Part V.G

3. Changes to authorization. If an authorization under Part V.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.G.2 of this permit must be submitted to the director prior to or together with any reports, information or applications to be signed by an authorized representative.

H. Certification.

Any person signing documents under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. Oil and hazardous substance liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the CWA or 40 CFR Part 112. 40 CFR Part 112 establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable surface waters of the State or adjoining shorelines.

J. Property rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. Severability.

The provisions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

Part V

L. Transfers.

Ohio NPDES general permit coverage is transferable. Ohio EPA must be notified in writing sixty days prior to any proposed transfer of coverage under an Ohio NPDES general permit. The transferee must inform Ohio EPA it will assume the responsibilities of the original permittee transferor.

M. Environmental laws.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

N. Proper operation and maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWP3s. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

O. Inspection and entry.

The permittee shall allow the director or an authorized representative of Ohio EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

PART VI. REOPENER CLAUSE

A. If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the permittee of such discharge may be required to obtain coverage under an individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.

B. Permit modification or revocation will be conducted according to ORC Chapter 6111.

PART VII. DEFINITIONS

A. "Act" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117 and Pub. L. 100-4, 33 U.S.C. 1251 et. seq.

B. "Best management practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the State. BMP's also include treatment requirements, operating procedures and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.

C. "Commencement of construction" means the initial disturbance of soils associated with clearing, grubbing, grading, placement of fill or excavating activities or other construction activities.

D. "Concentrated storm water runoff" means any storm water runoff which flows through a drainage pipe, ditch, diversion or other discrete conveyance channel.

E. "Director" means the director of the Ohio Environmental Protection Agency.

F. "Discharge" means the addition of any pollutant to the surface waters of the State from a point source.

G. "Disturbance" means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.

H. "Final stabilization" means that either:

1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of landscape mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or

2. For individual lots in residential construction by either:

   a. The homebuilder completing final stabilization as specified above or

Part VII.H.2

   b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or

3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the State and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria in (1) or (2) above.

I. "Individual Lot NOI" means a Notice of Intent for an individual lot to be covered by this permit (see parts I and II of this permit).

J. "Larger common plan of development or sale"- means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.

K. "MS4" means municipal separate storm sewer system which means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are:

1. Owned or operated by the federal government, state, municipality, township, county, district(s) or other public body (created by or pursuant to state or federal law) including special district under state law such as a sewer district, flood control district or drainage districts or similar entity or a designated and approved management agency under section 208 of the act that discharges into surface waters of the State; and

2. Designed or used for collecting or conveying solely storm water,

3. Which is not a combined sewer and

4. Which is not a part of a publicly owned treatment works.

L. "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the CWA. The term includes an "approved program."

Part VII

M. "NOI" means notice of intent to be covered by this permit.

N. "NOT" means notice of termination.

O. "Operator" means any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

2. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with an SWP3 for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

As set forth in Part II.A, there can be more than one operator at a site and under these circumstances, the operators shall be co-permittees.

P. "Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

Q. "Permanent stabilization" means the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.

R. "Percent imperviousness" means the impervious area created divided by the total area of the project site.

S. "Point source" means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

T. "Qualified inspection personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

Part VII

U. "Rainwater and Land Development" is a manual describing construction and post-construction best management practices and associated specifications. A copy of the manual may be obtained by contacting the Ohio Department of Natural Resources, Division of Soil & Water Conservation.

V. "Riparian area" means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.

W. "Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.

X. "Sediment settling pond" means a sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development manual.

Y. "State isolated wetland permit requirements" means the requirements set forth in Sections 6111.02 through 6111.029 of the ORC.

Z. "Storm water" means storm water runoff, snow melt and surface runoff and drainage.

AA. "Surface waters of the State" or "water bodies" means all streams, lakes, reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the state, except those private waters which do not combine or effect a junction with natural surface or underground waters. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the ORC are not included.

BB. "SWP3" means storm water pollution prevention plan.

CC. "Temporary stabilization" means the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.

DD. "Water Quality Volume (WQ_w)" means the volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQ_v is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.

SPECIAL PROVISIONS

WATERWAY PERMITS FOR

CRS: HAS-22-17.38 (PID: 24870)

U.S. ARMY CORPS OF ENGINEERS
PERMIT NUMBER: NWP #3

OHIO EPA
PERMIT NUMBER: N/A

EFFECTIVE DATE: 12-01-2008

EXPIRATION DATE: 03-18-2012

NATIONWIDE PERMIT #3 – MAINTENANCE

(a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris in the vicinity of and within existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and the placement of new or additional riprap to protect the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the district engineer under separate authorization. The placement of riprap must be the minimum necessary to protect the structure or to ensure the safety of the structure. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the district engineer.

(c) This NWP also authorizes temporary structures, fills, and work necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation or beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 27). Where maintenance dredging is proposed, the pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. **(Sections 10 and 404)**

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

WATER QUALITY CERTIFICATION

Pursuant to Section 401 of the Federal Water Pollution Control Act, 33 U.S.C. Section 1341; Ohio Revised Code Chapters 119 and 6111; Ohio `Admtnistrati e'Ge e. (QAG) Chapters 3745-1, 3745-32, and 3745-47; and, Corps regional conditions public noticed on October 20, 2006, the director of the Ohio Environmental Protection Agency hereby certifies that the above referenced replacement Nationwide Permits (NWPs) I - as proposed in the March 12, 2007, *Federal Register* will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act. These Certifications are specifically limited to 401 Certifications with respect to water pollution and do not relieve the applicant of further certifications or permits as may be necessary under applicable state and federal laws and/or local ordinances. Corps of Engineers Civil Works Projects in the State of Ohio are subject to the general and special limitations and conditions of this certification.

Water Quality Certification - Special Conditions:
The Ohio State Certification General Limitations and Conditions apply to this nationwide permit except as modified below:

Ohio State Certification Special Limitations and Conditions:

1 Bridge Replacement:

a. This Certification shall only authorize minor deviations from the existing structure's centerline, unless these deviations are necessary to follow current safety standards.

b. Bridge replacements shall not result in additional lanes unless necessary to follow current safety standards.

2. Maintenance or repair of existing fills (stabilization projects):

a. Minor Deviations from the original filled area are authorized provided these minor deviations are necessary to accommodate safety standards and/or new construction practices/methods/techniques and/or new materials available which are necessary for the rehabilitationlreplacementlrepair; and,

b. This nationwide shall not authorize the replacement of existing structures that are open to the flow of water with structures that are not open to the flow of water.

3. Replacement vertical bulkheads:

a. For ship channels and harbors adjacent to federal navigation channels within the following harbors: Sandusky Harbor, Huron Harbor, Vermilion Harbor, Lorain Harbor, *Conneaut Harbor, Port Clinton Harbor, Rocky River Harbor,* Cleveland Harbor, Fairport Harbor, Ashtabula Harbor, and Toledo Harbor, 1,000 feet of existing vertical bulkheads may be replaced if recessed areas for aquatic habitat, or other aquatic habitat improvements, are incorporated within the design and construction of the replacement vertical bulkhead;

b. For all other areas, except Lake Erie, Lake Erie Islands, or Sandusky Bay, up to 1,000 feet of existing vertical bulkheads may be replaced. Toe stone shall be placed at the base of these replacement vertical bulkheads except in areas where the shoreline is composed of bedrock and slopes are predominately greater than 75 percent;

c. Replacement vertical bulkheads are not to be placed more than an average of one foot waterward of the intersection of the ordinary high water level of the waterbody and the existing shoreline;

d. Minor dredging necessary for the installation of the replacement vertical bulkhead is authorized;

e. Placement of fill between the replacement vertical bulkhead and existing shoreline is authorized; and

f. Toe stone shall be placed at the base of these replacement vertical bulkheads except in areas where the original shoreline is composed of bedrock and slopes are predominately greater than 75 percent or where the placement of toe stone would interfere with shipping activity. When required, *toe stone* shall be placed *at an average rate of* one-third *the total height of* the replacement vertical bulkhead at a 2:1 slope.

4. Removal of accumulated sediment:

a. Removal of accumulated sediment shall occur only once per year, except in cases of emergency situations that threaten life or property.

b. Removal of accumulated sediments shall be limited to low-flow conditions whenever practicable, except in cases of emergency situations that threaten life or property.

NATIONWIDE PERMIT CONDITIONS

GENERAL CONDITIONS:

The following general conditions must be followed in order for any authorization by a NWP to be valid:

1. Navigation.

(a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water,

adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species.

(a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.

18. Historic Properties.

(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees

must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

22. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States

authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature: "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) Forty-five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from

the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be inwriting and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose;

direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the

vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at

33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP. If the district engineer determines that the adverse effects of the proposed work aremore than minimal, then the district engineer will notify the applicant either:

(1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit;

(2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or

(3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment,

the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

FURTHER INFORMATION

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project

DEFINITIONS

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration, establishment (creation), enhancement, or preservation of aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Discharge: The term "discharge" means any discharge of dredged or fill material.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall

is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an

ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects waterbodies with their adjacent uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 20.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete project: The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete project must have independent utility (see definition). For linear projects, a "single and complete project" is all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders.

Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States that, during a year with normal patterns of precipitation, has water flowing or standing above ground to the extent that an ordinary high water mark (OHWM) or other indicators of jurisdiction can be determined, as well as any wetland area (see 33 CFR 328.3(b)). If a jurisdictional wetland is adjacent--meaning bordering, contiguous, or neighboring--to a jurisdictional waterbody displaying an OHWM or other indicators of jurisdiction, that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.

OHIO STATE CERTIFICATION GENERAL LIMITATIONS AND CONDITIONS (WATER QUALITY CERTIFICATION)

A. STREAMS

1) Temporary or permanent impacts to streams are limited to 500 linear feet, of which no more than 200 linear feet can be impacts to intermittent or perennial streams [except for NWPs 3, 12, 13, 20, 21, 27, 32, 37, 38, 41, 45 and 47]. Impacts shall be measured linearly from upstream to downstream, including the length of permanent or temporary stream impoundments, when calculating the total length of stream impacts [except for NWP 12,

for which impacts shall be measured bank-to-bank];

2) Temporary or permanent impacts to water bodies meeting any of the criteria set forth in a through d below, are prohibited [except for NWP 3, 20, 27, 32, 37, 38, 45, and 47 or maintenance activities covered under NWP 7 and12]:

a. Exceptional Warmwater Habitat, Cold Water Habitat, Seasonal Salmonid, or any equivalent designation;

b. Waters bodies with an antidegradation category of Superior High Quality Water, Outstanding National Resource Waters or Outstanding High Quality Waters; and,

c. General high quality water bodies, such as Killbuck Creek in Coshocton County and Pymatuning Creek in Ashtabula County, which harbor federally listed threatened andlor endangered species.

For an alphabetical listing of the Superior High Quality Waters, go to

http://www.epa.state.oh. usfdsw/rules/antidegHQiistJulyO3.pdf

3) Stream reconstruction activities shall maintain or enhance the habitat values of the stream as determined by an appropriate habitat assessment method and adhere to "natural channel design" principles. Natural channel design means a technique that integrates knowledge of natural stream processes to create a stable stream that maintains its form and function over time and achieves a targeted habitat or biological endpoint.

4) Stream or buffer improvements and/or mitigative measures required by the Corps shall address the following:

a. In order of priority, these measures shall focus on the following:

i. the stream segment being impacted;
ii. upstream segments and tributaries; the receiving stream

The measures should, to the extent practicable, consider the causes and sources of impairment of the stream where the measures would be undertaken if the stream is listed as impaired in the most recent final report submitted to the United States Environmental Protection Agency by the director of Ohio EPA to fulfill the requirements of Section 303(d) of the Clean Water Act. The current list of impaired streams, as of the date of this certification, can be found at on Ohio EPA's web site at:

http://www.epa.state.oh.usldsw/tmdl/20041ntReportlfinal_20041R_appB_2.pdf

b. If the applicant cannot find appropriate mitigation on streams listed in Section "a" above, mitigation shall be in the Ohio EPA 8-digit watershed.

c. Vegetative buffers on both stream banks shall be of an appropriate length (at least the length of the impacted stream segment), and, if practicable,

   i. Provide a minimum width of 25 feet for preservation of existing vegetative buffers; or,

   ii. Provide a minimum width of 50 feet for re-vegetating buffers cleared during construction.

   iii. Buffer width is measured from the top of bank or level of bankfull discharge.

d. Vegetated buffers shall be planted, or restored, as soon as practicable after in-stream work is complete and shall extend to the top of both stream banks, or beyond as stipulated by the Corps or Ohio EPA, using native tree and shrub species with rapid growth characteristics,

e. Impacts to existing vegetative buffers shall be minimized to the *maximum extent* practicable. *Entry* to *surface waters* shall be through a single point of access on each side of the stream whenever practicable to minimize disturbance to buffer vegetation;

5) In-stream activities shall not result in the permanent destabilization of the stream banks or stream bed. The stream bed and substrates shall be restored to conditions that existed prior to work.

6) In-stream work shall be conducted during low-flow conditions whenever practicable in order to minimize adverse impacts to water quality away from the project site, except in emergency situations that threaten human life or property.

7) Culverts

a. For an individual stream, the combined length of an existing culvert and culvert extension shall not exceed 500 linear feet, and the individual culvert extension shall not exceed 200 linear feet if installed on an intermittent or perennial stream, or 500 linear feet if installed on an ephemeral stream.

b. For new road construction, flood plain culverts shall be installed where the flood prone area is greater than twice the width of the stream at Ordinary High Water Mark (OHWM).

c. New Culverts on Low Gradient Streams (<3% slope)

   i. Culverts shall be installed at the existing streambed slope, not exceeding three percent, to allow for the natural movement of bedload and aquatic organisms.

   ii. The culvert base or invert for intermittent and perennial streams with bottom substrate shall be installed below the sediment to allow natural channel bottom to develop and to be retained. The channel bottom substrate shall be similar to and contiguous with the immediate upstream and downstream reaches of the stream. The culvert shall be designed and sized to accommodate bankfull discharge and match the existing depth of flow to facilitate the passage of aquatic organisms.

   iii. *For* perennial *and* intermittent *streams,* culverts with *less than* three percent grade or not installed on bedrock shall have the lower 10 percent of all culvert bottoms buried below the existing stream grade. Hydraulic design shall be based upon the remaining open portion of the culvert.

8) Compensatory mitigation for linear projects (e.g., highways) in streams may be mitigated for by the following, in descending order of practicability:

a. Stream impacts associated with a linear project may be mitigated on-site, defined as within one mile of the linear project, and within the samel4-digit watershed as shown in OAC 3745-1-54(F)(2); or,

b. Stream impacts associated with a linear project may be mitigated at a single stream mitigation location or stream mitigation bank acceptable to the director, within each Ohio EPA 8-digit watershed in which such impacts occur; or,

c. If no stream mitigation bank, acceptable to the director, is located within one or more of the Ohio EPA 8-digit watersheds in which the impact occurs, then mitigation may occur in another Ohio EPA 8-digit watershed impacted by the linear project; at a single stream mitigation location, or a stream mitigation bank, acceptable to the director; or,

d. If no stream mitigation bank exists within any of the watersheds connected with the linear project, then mitigation should occur within the watershed in which the largest impacts (in terms of area) occur.

B. WETLANDS

1) Temporary or permanent impacts to Category 3 wetlands are prohibited [except for NWP 27].

2) Temporary or permanent impacts to Category 1 and 2 wetlands are limited to a maximum total of one-half acre [except for NWP 20, 21, 27, 32, 37, 38, 45, and 47].

3) Wetland Mitigation

a. Ohio state certification for the use of any NWP to authorize the activities associated with the construction and or development of new mitigation banks is denied. Banks that have been approved for operation by the director of Ohio EPA may utilize NWPs for approved activities.
b. Wetland mitigation shall adhere to the requirements set forth in Ohio EPA's Wetland Water Quality Standards [OAC Chapter 3745-1].

c. When it is determined that use of a mitigation bank is the best option, mitigation shall only be authorized at those mitigation banks having an active instrument signed by the director of Ohio EPA.

4) Discharges or diversions of storm water into wetlands shall not negatively alter the wetland's natural hydrologic regime as required by OAC Rule 3745-1-51 (Wetland Narrative Criteria) and shall meet warmwater habitat chemical criteria as required by OAC Rule 3745-1-52 (Numeric Chemical Criteria for Waste Water Discharges to Wetlands) unless the applicant has obtained alternate criteria from the director.

C. LAKE ERIE

1) No nationwide permit may be used to divert water from outside of the Lake Erie drainage basin.

2) Temporary or permanent impacts to Lake Erie coastal wetlands, including coastal wetlands located on Lake Erie Islands and Sandusky Bay are prohibited [except for NWP 3 and 27].

3) Disposal of Dredge Material from Lake Erie, Lake Erie Islands, and Sandusky Bay.

a. Dredged material that is greater than 60 percent sand (0.063 mm grain size), as determined by grain size analysis, shall be disposed of in the littoral drift, downdrift of the project site.

b. Dredged material that is less than 60 percent sand and is below the *75th percentile of the surficial* background *sediment contamination* concentrations of the basin proposed for disposal (as identified in "Surficial Sediment Contamination in Lakes Erie and Ontario, (Table 1) 2002, Journal of Great Lakes Research Volume 28(3) pages 437-450 by Christopher H. Marvin et al) may be disposed of in the open lake.

c. Sand and gravel suitable for nearshore disposal shall not be entombed by any structure, but should be removed prior to construction, and placed in the littoral system, downdrift of the project site.

D. GENERAL

1) NWPs cannot be combined to increase any of the aforementioned limitations.

2) Ohio state certification for the use of any NWP to authorize the activities associated with the construction and or development of new mitigation banks that do not possess a mitigation banking agreement signed by the director of Ohio EPA is denied. Banks that have been approved for operation by the director of Ohio EPA may utilize NWPs for approved activities.

3) Authorization under this Certification does not relieve the permittee from the responsibility of obtaining any other federal, state or local permits, approvals or authorizations required by law, including without limitation, National Pollutant Discharge Elimination System (NPDES) permits including general or individual stormwater permits, or Permits to Install (PTIs).

4) In nationwide permits where the district engineer has been granted authority to waive certain requirements, the corresponding limitations and conditions of this certification shall apply unless written authorization from the director of Ohio EPA is obtained to authorize additional impacts.

5) To the extent that this condition does not conflict with the Construction General Storm Water Permit in effect at the time of application, peak rates of runoff from an area after development may be no greater than the peak rates of runoff from the same area before development for all twenty-four-hour storms from one to one-hundred-year frequency.

6) To the extent that this condition does not conflict with the Construction General Storm Water Permit in effect at the time of application, locally required post development stormwater ponds shall incorporate specific design features for water quality such as those listed in Ohio's Rainwater and Land Development, Ohio's Standards for Storm Water Management, Land Development *and Urban Stream Protection, 3"d Edition (2006), available at* http://www.dnr.state.oh.us/soilandwater/Rainwater.htm, to the extent allowed by local stormwater requirements. These features include, but are not limited to, infiltration trenches, extended detention, wet pools, forebays, aquatic benches and vegetated shallows, optimum flow length, reverse flow pipe, optimum pool depth, shading and buffer plants, and runoff reuse.

7) To the extent that this condition does not conflict with the Construction General Storm Water Permit in effect at the time of application, the Best Management Practices (BMPs) listed below shall be utilized with all NWPs when applicable.

a. Only suitable material, free of toxic contaminants in other than trace quantities, shall be used as fill material;

b. The use of asphalt and rubber tires as fill is prohibited under this permit;

c. Upon the cessation of temporary impacts authorized under a NWP, any hydric topsoil removed from a trench shall be separated and saved for later placement as the topmost back fill layer when the trench is refilled;

d. The stockpiling of side-cast dredged material in wetlands in excess of three months is not authorized;

e. The applicant shall comply with all final stabilization requirements contained in applicable NPDES construction stormwater permits for the site;

f. Construction equipment shall not be placed below the Ordinary High Water Mark (OHWM) of any surface water, except when no other alternative is practicable;

g. All dredged material placed at an upland site shall be controlled so *that sediment runoff to* adjacent *surface waters is* minimized to *the* maximum extent practicable; and,

h. BMPs shall be installed and maintained to minimize sediment runoff to adjacent surface waters.

8) Representatives from Ohio EPA, Division of Surface Water will be allowed to inspect the authorized activity at any time deemed necessary to insure that it is being or has been accomplished in accordance with the terms and conditions of this water quality certification. This includes, but is not limited to, access to and copies of any records any records that must be kept under the conditions of this certification; and, authorization to sample and/or monitor any discharge activity or mitigation site. Ohio EPA will make a reasonable attempt to notify the applicant of its intention to inspect the site in advance of that inspection.