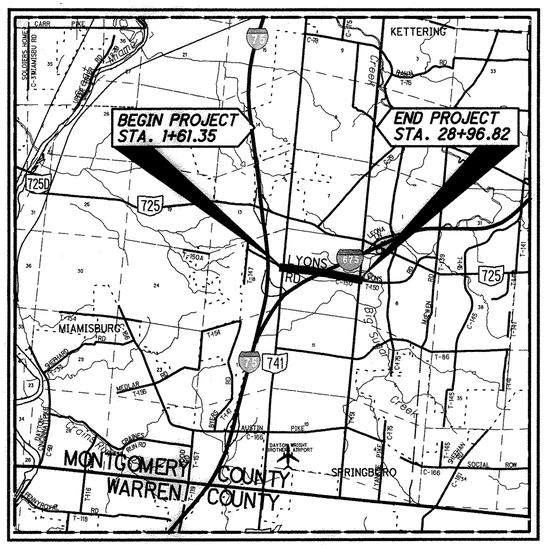


LOCATION MAP

LATITUDE: 39°37'47" LONGITUDE: 84°13'48"

SCALE IN MILES

0 1 2 3 4

N

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

DESIGN DESIGNATION

CURRENT ADT (2019)	23,500
DESIGN YEAR ADT (2039)	24,800
DESIGN HOURLY VOLUME (2039)	2232
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS (24 HOUR B&C)	0.03
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
URBAN MAJOR COLLECTOR

NHS PROJECT NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

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

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

(Non-members must be called directly)

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

PLAN PREPARED BY:

DESIGN AGENCY
LJB Inc. • 2500 Newmark Drive
Miamisburg, OH 45342
(937) 259-5000 tel • (937) 259-5100 fax • LJBinc.com

ENGINEERS SEAL:

STATE OF OHIO — ANGELA TREMBLAY 70248 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: Angela Tremblay
DATE: 5/11/18

ENGINEERS SEAL:

STATE OF OHIO — MATTHEW A. GARDNER E-72393 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: Matt Gardner
DATE: May 11, 2018

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

MOT LYONS RD

MIAMI TOWNSHIP

MONTGOMERY COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT WILL CONSIST OF NEW CURB AND GUTTER, STORM SEWER, AND 10' WALK ALONG THE SOUTH SIDE OF LYONS ROAD FOR 0.5 MILES. NEW WALK, STORM SEWER, CURB AND GUTTER WILL BE ADDED ALONG THE WEST SIDE OF SR 741 FOR 0.2 MILES.

PROJECT EARTH DISTURBED AREA:	2.09 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.125 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.90 ACRES

2016 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 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED
DATE July 19, 2018 ACTING MIAMI TOWNSHIP ADMINISTRATOR

APPROVED
DATE 7/19/18 MONTGOMERY COUNTY ENGINEER

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	DM-4.4	1/15/16	MT-95.30	7/21/17			800	4/19/19		
BP-4.1	7/19/13			MT-95.31	7/21/17			832	1/17/14		
BP-5.1	7/19/13	F-3.1	7/19/13	MT-101.70	1/17/14			895	4/18/14		
BP-7.1	7/18/14	F-3.3	7/19/13	MT-101.90	7/21/17			995	7/17/15		
				MT-110.10	7/19/13						
CB-1.1	1/15/16	MGS-1.1	1/19/18								
CB-2.1	1/15/16	MGS-2.1	1/19/18	TC-41.20	10/18/13						
CB-2.2	1/15/16	MGS-3.1	1/19/18	TC-41.40	10/18/13						
		MGS-3.2	1/18/13	TC-42.20	10/18/13						
HW-2.2	7/21/17	MGS-4.2	7/19/13	TC-52.20	1/19/18						
				TC-71.10	1/19/18						
MH-1.2	1/15/16	RM-4.5	7/21/17	TC-82.10	7/17/15						
		RM-4.6	7/19/13								
DM-1.1	7/21/17	RM-5.2	1/17/14								
DM-1.2	1/18/13										
DM-4.3	1/15/16	SBR-1-13	1/17/14								

SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS

FEDERAL PROJECT NO. E160(947)

PID NO. 100316

CONSTRUCTION PROJECT NO.

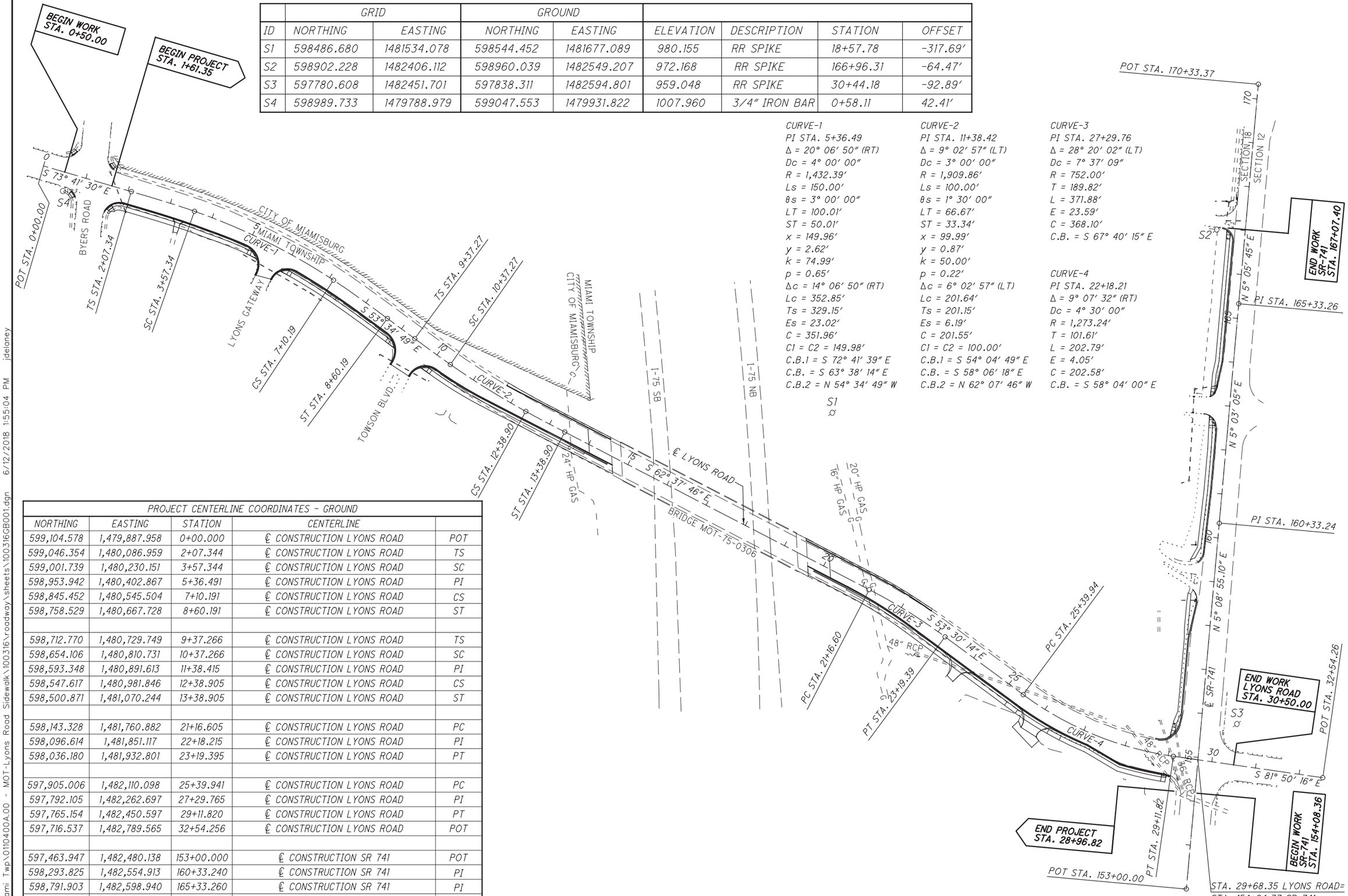
RAILROAD INVOLVEMENT NONE

MOT LYONS RD

1/72

Q:\Miami Twp\0110400A.00 - MOT-Lyons Road Sidewalk\100316\roadway\sheets\100316GT001.dgn 6/27/2018 2:45:29 PM jhensley

	GRID		GROUND					
ID	NORTHING	EASTING	NORTHING	EASTING	ELEVATION	DESCRIPTION	STATION	OFFSET
S1	598486.680	1481534.078	598544.452	1481677.089	980.155	RR SPIKE	18+57.78	-317.69'
S2	598902.228	1482406.112	598960.039	1482549.207	972.168	RR SPIKE	166+96.31	-64.47'
S3	597780.608	1482451.701	597838.311	1482594.801	959.048	RR SPIKE	30+44.18	-92.89'
S4	598989.733	1479788.979	599047.553	1479931.822	1007.960	3/4" IRON BAR	0+58.11	42.41'



CURVE-1
PI STA. 5+36.49
Δ = 20° 06' 50" (RT)
Dc = 4° 00' 00"
R = 1,432.39'
Ls = 150.00'
θs = 3° 00' 00"
LT = 100.01'
ST = 50.01'
x = 149.96'
y = 2.62'
k = 74.99'
p = 0.65'
Δc = 14° 06' 50" (RT)
Lc = 352.85'
Ts = 329.15'
Es = 23.02'
C = 351.96'
C1 = C2 = 149.98'
C.B.1 = S 72° 41' 39" E
C.B. = S 63° 38' 14" E
C.B.2 = N 54° 34' 49" W

CURVE-2
PI STA. 11+38.42
Δ = 9° 02' 57" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
Ls = 100.00'
θs = 1° 30' 00"
LT = 66.67'
ST = 33.34'
x = 99.99'
y = 0.87'
k = 50.00'
p = 0.22'
Δc = 6° 02' 57" (LT)
Lc = 201.64'
Ts = 201.15'
Es = 6.19'
C = 201.55'
C1 = C2 = 100.00'
C.B.1 = S 54° 04' 49" E
C.B. = S 58° 06' 18" E
C.B.2 = N 62° 07' 46" W

CURVE-3
PI STA. 27+29.76
Δ = 28° 20' 02" (LT)
Dc = 7° 37' 09"
R = 752.00'
T = 189.82'
L = 371.88'
E = 23.59'
C = 368.10'
C.B. = S 67° 40' 15" E

CURVE-4
PI STA. 22+18.21
Δ = 9° 07' 32" (RT)
Dc = 4° 30' 00"
R = 1,273.24'
T = 101.61'
L = 202.79'
E = 4.05'
C = 202.58'
C.B. = S 58° 04' 00" E

PROJECT CENTERLINE COORDINATES - GROUND

NORTHING	EASTING	STATION	CENTERLINE	
599,104.578	1,479,887.958	0+00.000	℄ CONSTRUCTION LYONS ROAD	POT
599,046.354	1,480,086.959	2+07.344	℄ CONSTRUCTION LYONS ROAD	TS
599,001.739	1,480,230.151	3+57.344	℄ CONSTRUCTION LYONS ROAD	SC
598,953.942	1,480,402.867	5+36.491	℄ CONSTRUCTION LYONS ROAD	PI
598,845.452	1,480,545.504	7+10.191	℄ CONSTRUCTION LYONS ROAD	CS
598,758.529	1,480,667.728	8+60.191	℄ CONSTRUCTION LYONS ROAD	ST
598,712.770	1,480,729.749	9+37.266	℄ CONSTRUCTION LYONS ROAD	TS
598,654.106	1,480,810.731	10+37.266	℄ CONSTRUCTION LYONS ROAD	SC
598,593.348	1,480,891.613	11+38.415	℄ CONSTRUCTION LYONS ROAD	PI
598,547.617	1,480,981.846	12+38.905	℄ CONSTRUCTION LYONS ROAD	CS
598,500.871	1,481,070.244	13+38.905	℄ CONSTRUCTION LYONS ROAD	ST
598,143.328	1,481,760.882	21+16.605	℄ CONSTRUCTION LYONS ROAD	PC
598,096.614	1,481,851.117	22+18.215	℄ CONSTRUCTION LYONS ROAD	PI
598,036.180	1,481,932.801	23+19.395	℄ CONSTRUCTION LYONS ROAD	PT
597,905.006	1,482,110.098	25+39.941	℄ CONSTRUCTION LYONS ROAD	PC
597,792.105	1,482,262.697	27+29.765	℄ CONSTRUCTION LYONS ROAD	PI
597,765.154	1,482,450.597	29+11.820	℄ CONSTRUCTION LYONS ROAD	PT
597,716.537	1,482,789.565	32+54.256	℄ CONSTRUCTION LYONS ROAD	POT
597,463.947	1,482,480.138	153+00.000	℄ CONSTRUCTION SR 741	POT
598,293.825	1,482,554.913	160+33.240	℄ CONSTRUCTION SR 741	PI
598,791.903	1,482,598.940	165+33.260	℄ CONSTRUCTION SR 741	PI
599,290.036	1,482,643.361	170+33.370	℄ CONSTRUCTION SR 741	POT

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

MOT LYONS RD

2/72

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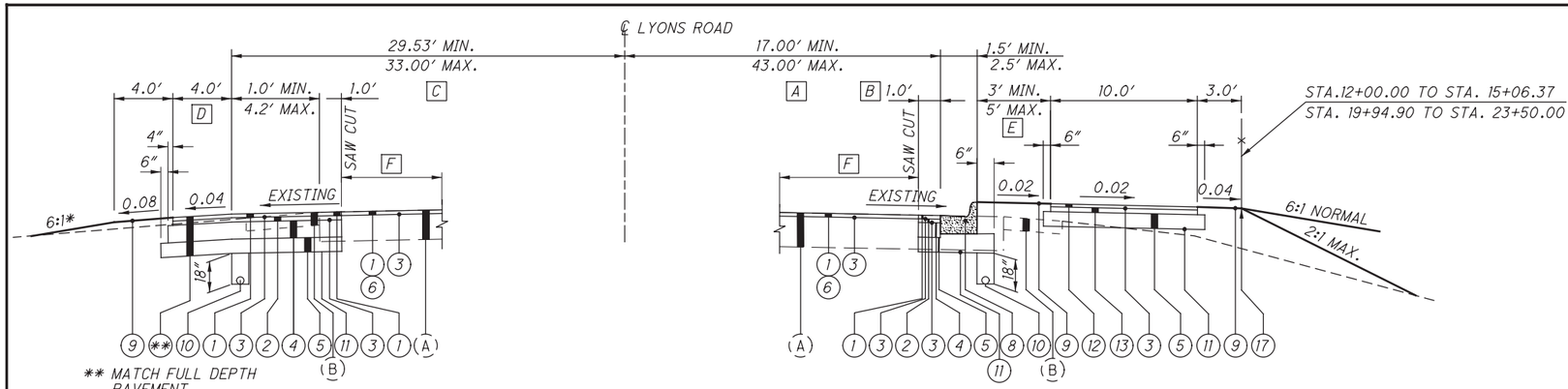


LYONS ROAD WIDENING SECTION (LT.)

STA. 11+72.12 TO STA. 14+39.03
STA. 19+38.77 TO STA. 22+60.26

LYONS ROAD NORMAL SECTION (RT.)

STA. 1+61.35 TO STA. 28+96.82
SEE BARRIER LIMTS STA. 14+57.35 TO STA. 19+85.58
SEE PAVED TREE LAWN DETAIL

[C] TAPERS FROM 29.53′ AT STA. 11+72.12 TO 30.55′ AT STA. 11+95.87

TAPERS FROM 30.55′ AT STA. 11+95.87 TO 33.00′ AT STA. 14+39.03

33.00′ FROM STA. 19+38.77 TO STA. 21+10.64

TAPERS FROM 33.00′ AT STA. 21+10.64 TO 30.20′ AT STA. 22+60.26

[D] TAPERS FROM 6.78′ AT STA. 11+72.12 TO 4.00′ AT STA. 12+55.82

TAPERS FROM 4.00′ AT STA. 22+43.40 TO 4.81′ AT STA. 22+60.26

[A] 29.68′ FROM STA. 1+99.19 TO STA. 4+00.00

TAPERS FROM 29.68′ AT STA. 4+00.00 TO 27.00′ AT STA. 4+90.45

27.00′ FROM STA. 4+90.45 TO STA. 8+78.06

TAPERS FROM 27.42′ AT STA. 10+17.27 TO 23.00′ AT STA. 11+41.09

TAPERS FROM 23.00′ AT STA. 11+41.09 TO 17.00′ AT STA. 13+38.90

[A] 17.00′ FROM STA. 19+94.00 TO STA. 20+70.65

TAPERS FROM 17.00′ AT STA. 20+70.65 TO 24.48′ AT STA. 22+38.43

TAPERS FROM 24.48′ AT STA. 22+38.43 TO 27.00′ AT STA. 23+19.39

27.00′ FROM STA. 23+19.39 TO STA. 27+20.00

TAPERS FROM 27.00′ AT STA. 27+20.00 TO 43.00′ AT STA. 28+00.00

43.00′ FROM STA. 28+00.00 TO STA. 28+96.82

[B] TAPERS FROM 1′ AT STA. 13+50.00 TO 3′ AT STA. 14+00.00

3′ FROM STA. 14+00.00 TO STA. 14+65.00

3′ FROM STA. 19+94.00 TO STA. 20+76.65

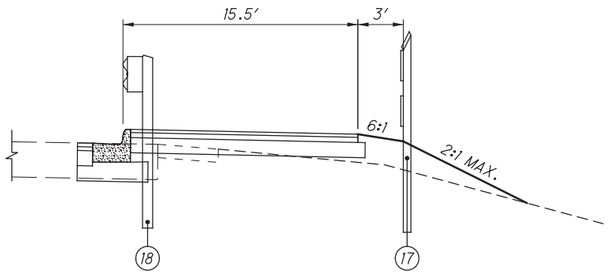
TAPERS FROM 3′ AT STA. 20+70.65 TO 1′ AT STA. 21+35.40

[E] TAPERS FROM 5.0′ AT STA. 13+50.00 TO 3.0′ AT STA. 14+00.00

TAPERS FROM 3.0′ AT STA. 20+70.65 TO 5.0′ AT STA. 21+35.40

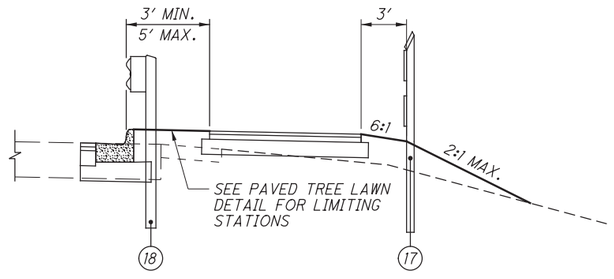
[F] LYONS ROAD MILL AND OVERLAY SECTION

STA. 14+00.54 TO STA. 14+58.58
STA. 19+58.27 TO STA. 20+16.34



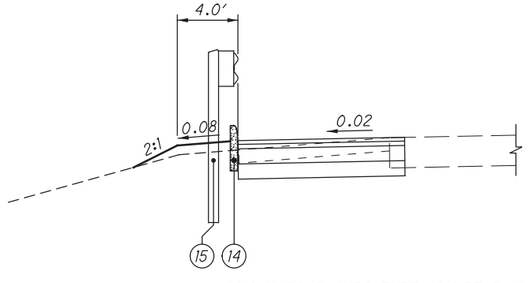
LYONS ROAD PAVED TREE LAWN DETAIL (RT.)

STA. 14+00.00 TO STA. 14+57.35
STA. 19+85.58 TO STA. 20+70.65



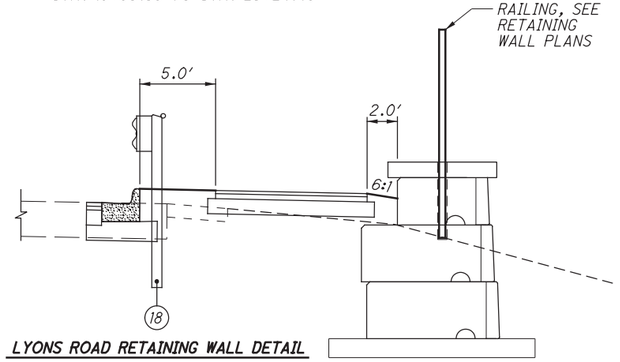
LYONS ROAD GUARDRAIL DETAIL (RT.)

STA. 12+55.83 TO STA. 14+57.35
STA. 19+85.58 TO STA. 23+24.40



LYONS ROAD CURB TYPE 4C DETAIL (LT.)

STA. 19+36.33 TO STA. 19+53.18



LYONS ROAD RETAINING WALL DETAIL

STA. 21+55.00 TO STA. 23+10.00

RETAINING WALL SEE PLANS FOR LOCATION

* UNLESS OTHERWISE SHOWN ON CROSS SECTIONS

LEGEND

1. ITEM 441 - 1 ½″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG64-22
2. ITEM 441 - 1 ½″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448)
3. ITEM 407 - TACK COAT (APPLIED AT 0.055 GAL/SY)
4. ITEM 301 - 6″ ASPHALT CONCRETE BASE, PG64-22
5. ITEM 304 - 6″ AGGREGATE BASE
6. ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1 1#2″ DEPTH)
7. ITEM 608 - 6″ CONCRETE WALK
8. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
9. ITEM 659 - SEEDING AND MULCHING
10. ITEM 605 - 6″ BASE PIPE UNDERDRAINS, 707.31
11. ITEM 204 - SUBGRADE COMPACTION
12. ITEM 441 - 1 ¼″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG 64-22
13. ITEM 441 - 2″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
14. ITEM 609 - CURB, TYPE 4C
15. ITEM 606 - GUARDRAIL, TYPE MGS
16. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN
17. ITEM 517 - RAILING, TIMBER (PER SCD RM 5-2)
18. ITEM 606 - GUARDRAIL, TYPE MGS, AS PER PLAN
19. ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET) (CONCRETE BARRIER PER SCD SBR-1-13)
20. ITEM 407 - TACK COAT (APPLIED AT 0.085 GAL/SY)

(A) 1 ¼″ ASPHALT CONCRETE SURFACE COURSE
1 ¾″ ASPHALT CONCRETE INTERMEDIATE COURSE
6″ ASPHALT CONCRETE BASE
6″ AGGREGATE BASE

(B) 1 ¼″ ASPHALT CONCRETE SURFACE COURSE
4″ ASPHALT CONCRETE BASE

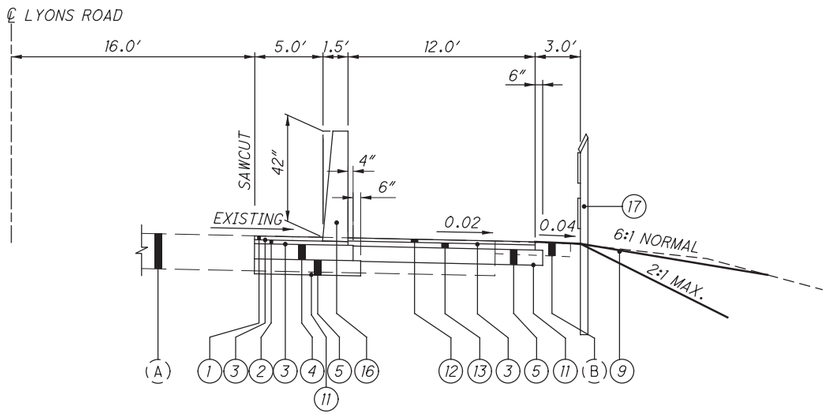
(C) 15″ REINFORCED CONCRETE APPROACH SLAB

(D) CURB TYPE 4C

(E) 12″ ASPHALT ON AGGREGATE

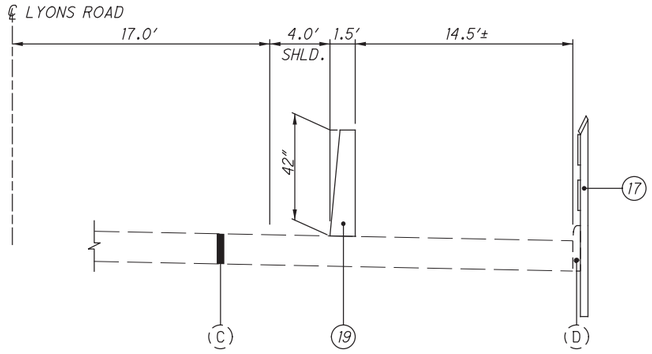
TYPICAL SECTIONS

MOT LYONS RD



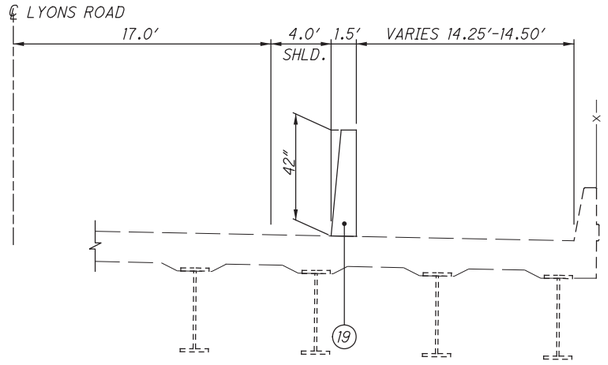
LYONS ROAD BARRIER SECTION (RT.)

STA. 14+57.35 TO STA. 14+71.35
STA. 19+71.58 TO STA. 19+85.58



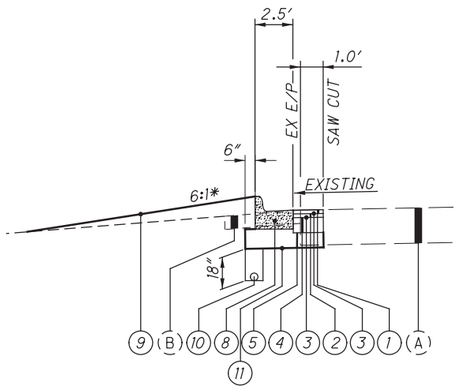
LYONS ROAD APPROACH SLAB SECTION (RT.)

STA. 14+71.04 TO STA. 14+96.58
STA. 19+45.15 TO STA. 19+70.67



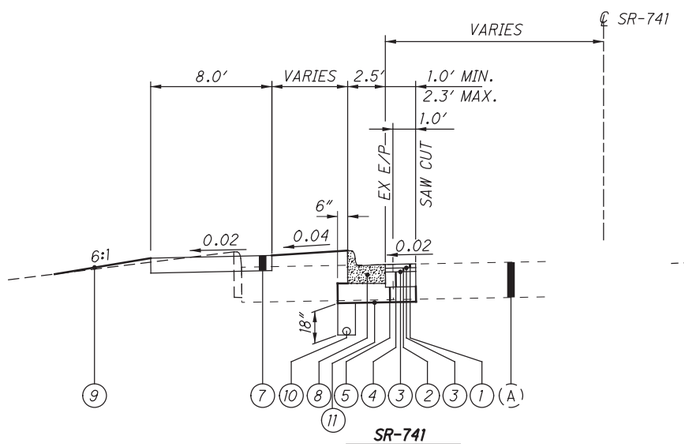
LYONS ROAD BRIDGE SECTION (RT.)

STA. 14+96.58 TO STA. 19+45.15



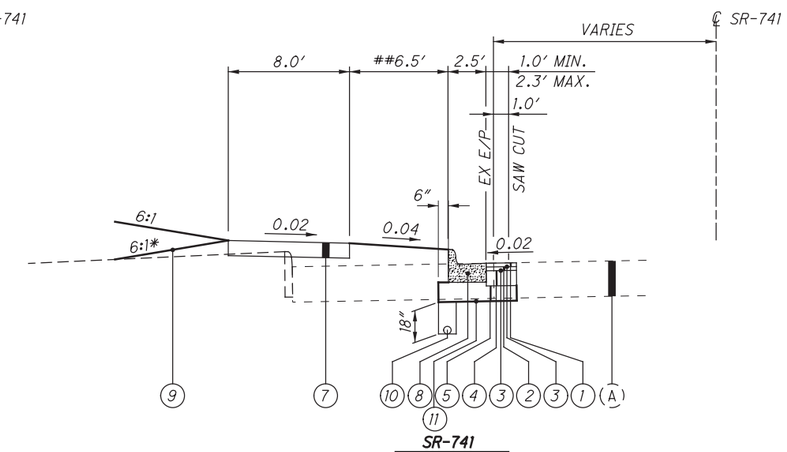
LYONS ROAD CURB SECTION (LT.)

STA. 28+64.34 TO STA. 29+17.03



SR-741

STA. 155+31.17 TO STA. 158+77.07



SR-741

STA. 159+39.67 TO STA. 167+02.26
VARIES STA. 162+00 TO STA. 163+69.11

FOR LEGEND SEE SHEET 3

TYPICAL SECTIONS

MOT LYONS RD

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

Storm		
City of Miamisburg 10 N. First St. Miamisburg, OH 45342	Robert Stanley, CE manager@cityofmiamisburg.org	Phone: 937.847.6456
Water/Sanitary		
Montgomery Co. Water/Sanitary 1850 Spaulding Rd. Dayton, OH 45432-3732	Edward Schlaack schlaacke@mcohio.org	Phone: 937.781.2632
Telephone		
AT&T Ohio (formerly SBC) 3233 Woodman Dr. Dayton, OH 45420	Jesse Wead Jw1291@att.com	Phone: 937.296.3894
Cincinnati Bell (underground) 221 East Fourth St. Building 121-900 Cincinnati, OH 45201	Mark Conner Mark.conner@cinbell.com	Phone: 513.565.7043
Communications		
Level 3 Communications 226 N. 5th St., Suite 100 Columbus, OH 43215	Terry Spaw Terry.Spaw@level3.com	Phone: 513.644.8933
Charter (Time Warner Cable) 3691 Turner Rd. Dayton, OH 45415	Tim Kuss Tim.kuss@charter.com	Phone: 937.425.8850
Electric		
Dayton Power & Light Co. 1900 Dryden Rd. Dayton, OH 45439	William Gourley William.gourley@aes.com	Phone: 937.331.4521
Gas		
Vectren Energy Delivery 6500 Clyo Rd. Centerville, OH 45459	Don Specht dspecht@vectren.com	Phone: 937.312.2533
Traffic		
ODOT D7 Traffic 1001 Saint Marys Rd Sidney, OH 45365	Justin Yoh, P.E Justin.Yoh@dot.state.oh.us	Phone: 937.497.6897

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

PROJECT CONTROL
POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: 3/4 " IRON BAR W/ 2" ALUMINUM CAP STAMPED "LJB" AND RAILROAD SPIKES

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: GEOID 2012A (CONUS)

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD 1983 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC TWO PARALLEL
COORDINATE SYSTEM: US STATE PLANE
COMBINED SCALE FACTOR: 0.99990248
PROJECT SCALE FACTOR: 1.0000965290
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

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

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

DRINKING WATER RESOURCES PROTECTION
THE PROJECT IS LOCATED WITHIN THE BOUNDARIES OF A DESIGNATED SOLE SOURCE AQUIFER. BEST CONSTRUCTION PRACTICES ARE TO BE IMPLEMENTED TO MINIMIZE WATER QUALITY IMPACTS. IDLE EQUIPMENT, PETROCHEMICALS, AND TOXIC/HAZARDOUS MATERIALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES OR STREAMS. REFUELING SHALL NOT BE UNDERTAKEN NEAR DRAINAGE WAYS, DITCHES OR STREAMS. A SPILL CONTAINMENT KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. SPILLS OF FUELS, OILS, CHEMICALS, OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GROUNDWATER SHALL BE CLEANED UP IMMEDIATELY. IF THE SPILL IS A REPORTABLE AMOUNT, THE MIAMI VALLEY FIRE DISTRICT (937-560-2152), LOCAL EMERGENCY COORDINATOR (937-901-5112) AND THE OEPA (1-800-282-9378) MUST BE CONTACTED WITHIN 30 MINUTES OF KNOWLEDGE OF THE RELEASE.

ITEM 606 - GUARDRAIL, TYPE MGS, AS PER PLAN
ONLY WOOD POSTS ARE PERMITTED BETWEEN 13+50 AND 21+50 RIGHT. WOOD POSTS SHALL CONFORM TO CMS 710.11.

CONSTRUCTION NOISE
ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 9 PM AND 7 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

WORK LIMITS
THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

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

FENCE AND RAILING LENGTHS
THE LENGTHS OF FENCE AND RAILING SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS.MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 517 AND ITEM 607.

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, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS 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 31 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, MGS TYPE E, 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.

PAVING UNDER GUARDRAIL
THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 209, LINEAR GRADING AS PER PLAN, AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING AS PER PLAN, SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADEAS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:
1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:
1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

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

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

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

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES
CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND RE-GALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

CALCULATED DJB
CHECKED MAG

GENERAL NOTES

MOT LYONS RD

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

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

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

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

UNRECORDED STORM WATER DRAINAGE
FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

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

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

611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	25 FT.
611, 12" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	25 FT.
611, 12" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	25 FT.

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

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

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

611, 6" CONDUIT, TYPE B, FOR SANITARY	30 FT.
611, 6" CONDUIT, TYPE C, FOR SANITARY	30 FT.

EXISTING UNDERDRAINS
PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIREDFOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDER-DRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611 6" CONDUIT, TYPE F	50 FT.
611, PRECAST REINFORCED CONCRETE OUTLET	3 EACH
605 6" UNCLASSIFIED PIPE UNDER-DRAINS	50 FT.

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

659, TOPSOIL	2951 CU. YD.
659, SEEDING AND MULCHING	26,583 SQ. YD.
659, REPAIR SEEDING AND MULCHING	1330 SQ. YD
659, INTER-SEEDING	1330 SQ. YD.
659, COMMERCIAL FERTILIZER	3.71 TON
659, LIME	5.50 ACRES
659, WATER	151 M. GAL.

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.

POST CONSTRUCTION STORM WATER TREATMENT
THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

MANUFACTURED WATER QUALITY STRUCTURE
THIS PLAN UTILIZES MANUFACTURED WATER QUALITY STRUCTURES FOR WATER QUALITY TREATMENT. AREAS HAVE BEEN SHOWN IN THE PLANS FOR PLACEMENT OF AN OFF-LINE SYSTEM. PAYMENT FOR THESE DEVICES SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 895, MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1.

ITEM 409, SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, AS PER PLAN
SAWCUT THE PAVEMENT ADJACENT TO THE ROADWAY END OF THE BRIDGE APPROACH SLABS AND SEAL THE FINISHED SURFACE PER ITEM 409 AND AS MODIFIED BELOW.

SAWCUT A 1" WIDE JOINT FOR THE FULL WIDTH OF THE APPROACH SLAB. CLEAN THE JOINT TO A DEPTH OF AT LEAST 15". AFTER CLEANING, PLACE A BACKER ROD AT A DEPTH OF 3" AND FILL WITH HOT APPLIED JOINT SEALER, 705.04.

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

409, SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, AS PER PLAN	107 FT.

EXISTING PRIVATELY OWNED LIGHTING
LIGHTING OWNED BY THE ADJACENT PROPERTY OWNER EXISTS ON THE SOUTH SIDE OF LYONS ROAD APPROXIMATELY BETWEEN STATION 24+50 AND 29+00. THESE LIGHTS ARE POWERED VIA UNDERGROUND ELECTRIC LINES AND THE LOCATION OF THE CABLE AND CONDUIT IS UNKNOWN. THE POLES ARE TO BE REMOVED AND RETURNED TO THE OWNER. ONLY THOSE LIGHTS WITHIN THE CONSTRUCTION LIMITS NEED TO BE REMOVED. OTHER ADJACENT LIGHT POLES MAY BE POWERED FROM THE REMOVED POLES. REESTABLISHING THE CIRCUIT IS NOT PART OF THIS CONTRACT.

THE FOLLOWING LIGHTS POLES HAVE BEEN IDENTIFIED FOR REMOVAL:

STA. 25+44.50 RT
STA. 27+21.80 RT
STA. 27+81.90 RT
STA. 28+42.20 RT

THE FOLLOWING QUANTITES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK DESCRIBED ABOVE:

625, PULLBOX REMOVED	2 EACH
625, DISCONNECT CIRCUIT	4 EACH
625, LIGHT POLE REMOVED FOR STORAGE	4 EACH
625, LUMINAIRE REMOVED FOR STORAGE	4 EACH
625, DISCONNECT CIRCUIT	4 EACH

PAVEMENT SAWCUT
WHERE EXISTING PAVEMENT SAWCUT OCCURS, THE CONTRACTOR SHALL LOCATE A SOUND EXISTING PAVEMENT EDGE PER SEC. 203.04 (E) OF THE CMS.

PAVEMENT RESTORATION FOR PIPE INSTALLATION
THE FOLLOWING QUANTITY HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF PIPES.

ITEM 441 - ASPHAT CONCRETE SURFACE COURSE, TYPE 1 (448) PG64-22	4 CU YDS
ITEM 441 - ASPHAT INTERMEDIATE SURFACE COURSE, TYPE 2 (448)	4 CU YDS
ITEM 301 - ASPHALT CONCRETE BASE, PG64-22	27 CU YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 12", A 411 INTERMEDIATE THICKNESS OF 1.5", AND A 441 SURFACE THICKNESS OF 1.5" AND A PAVEMENT RESTORATION TRENCH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

ADD ALTERNATE #1
AT THE DIRECTION OF THE ENGINEER, MILL AND OVERLAY THE EXISTING LYONS ROAD PAVEMENT FROM STA. 1+54.75 TO STA. 14+00.54 AND FROM STA. 19+58.27 TO STA. 29+12.37.

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

254, PAVEMENT PLANING, ASPHALT CONCRETE (T = 1½")	13,753 SQ. YD.
407, TACK COAT (APPLIED AT 0.085 GAL/SY)	1169 GAL.
441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22 (T = 1½")	574 CU. YD.

CALCULATED DJB
CHECKED MAG

GENERAL NOTES

MOT LYONS RD

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE(S) OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON LYONS ROAD AT ALL TIMES BY USE OF THE EXISTING AND THE COMPLETED PAVEMENT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS ON LYONS ROAD 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.

IN ADDITION TO THE REQUIREMENTS OF 107.07, MAINTAIN DRIVE ACCESS AT ALL TIMES. SEE SHEET 9 FOR STA. 25+95.10 DRIVE PHASING.

A MINIMUM OF TWO THROUGH LANES OF TRAFFIC SHALL BE MAINTAINED MONDAY THROUGH FRIDAY FROM 6:00 AM TO 7:00 PM, ON SOUTHBOUND SR-741.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE A OR B 50 CU. YD.
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 10 CU. YD.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES OF THE TYPE AND LOCATION AS FOLLOWS:

EB LYONS:
W20-1-48 ROAD WORK AHEAD 2300' WEST OF BYERS
G20-2-48 END ROAD WORK 500' EAST OF SR 741

WB LYONS
W20-1-48 ROAD WORK AHEAD 2400' EAST OF SR 741
G20-2-48 END ROAD WORK 1360'WEST OF BYERS

NB SR 741
W20-1-48 ROAD WORK AHEAD 1750' SOUTH OF LYONS
G20-2-48 END ROAD WORK 500' NORTH OF LYONS

SB SR 741
W20-1-48 ROAD WORK AHEAD 2100' NORTH OF LYONS
G20-2-48 END ROAD WORK 500' SOUTH OF LYONS

NB BYERS
W20-1-48 ROAD WORK AHEAD 500' SOUTH OF LYONS
G20-2-48 END ROAD WORK 500' NORTH OF LYONS

SB BYERS
W20-1-48 ROAD WORK AHEAD 500' NORTH OF LYONS
G20-2-48 END ROAD WORK 500' SOUTH OF LYONS

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON LYONS ROAD AT ALL TIMES CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

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 12 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. THIS IS BASED ON MT-101.90 CONDITION II AND AN OFFSET OF 4 TO 12 FEET. 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.

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 50 M. GAL.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11.

CONCRETE SURFACES TO RECEIVE ITEM 646 MARKINGS IN 30 DAYS

ITEM 614, WORK ZONE EDGE LINE, CLASS III, 4", 642 PAINT 0.20 MILE
ITEM 614, WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT 0.20 MILE
ITEM 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT 0.20 MILE

ASPHALT SURFACES-EAST OF STATE ROUTE 741

ITEM 614, WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I 0.12 MILE
ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I 140 FEET
ITEM 614, WORK ZONE ARROW, CLASS I, 740.06, TYPE I 3 EACH

ASPHALT SURFACES-WEST OF BYERS ROAD

ITEM 614, WORK ZONE EDGE LINE, CLASS I, 740.6, TYPE I 0.11 MILE

BARRIERS

NO BARRIER REFLECTORS REQUIRED ON EXISTING GUARDRAIL

ITEM 614, BARRIER REFLECTOR, TYPE 1, ONE-WAY 20 EACH

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.

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

REMOVAL OF PAVEMENT MARKINGS

IN ADDITION TO THE REQUIREMENTS OF ODOT 641.10, REMOVAL OF PAVEMENT MARKINGS SHALL BE BY WATER BLASTING ONLY.

ACTUATED OPERATION OF EXISTING TRAFFIC SIGNALS

THE LYONS ROAD APPROACHES TO THE STATE ROUTE 741 AND THE BYERS ROAD TRAFFIC SIGNALS SHALL BE MAINTAINED AS TRAFFIC-ACTUATED AND OPERATE IN A MANNER SIMILAR TO THE EXISTING OPERATION. THE LYONS ROAD AND STATE ROUTE 741 SIGNAL IS OPERATED BY THE OHIO DEPARTMENT OF TRANSPORTATION. THE LYONS ROAD AND BYERS ROAD SIGNAL IS OPERATED BY THE MONTGOMERY COUNTY ENGINEER.

THE CONTRACTOR SHALL ALSO DESIGN, FURNISH, INSTALL AND MAINTAIN A TRAFFIC DETECTOR ON THE EASTBOUND LYONS ROAD APPROACH OF THE STATE ROUTE 741 SIGNAL AND A TRAFFIC DETECTOR ON THE WESTBOUND LYONS ROAD APPROACH OF THE BYERS ROAD SIGNAL WHICH WILL RELIABLY DETECT ALL LEGAL TRAFFIC APPROACHING (BUT NOT LEAVING) THE SIGNAL AS IT PASSES OR WAITS IN THE DESIGNATED PERMANENT DETECTOR ZONES SHOWN IN THE TRAFFIC CONTROL PLANS. DETECTOR DESIGNS WHICH DO NOT PROVIDE RELIABLE DETECTION, FREE FROM FALSE CALLS, SHALL BE IMMEDIATELY REPLACED BY THE CONTRACTOR.

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

PEDESTRIAN ACCESS

PEDESTRIANS CURRENTLY USE THE SHOULDERS OF LYONS ROAD AND STATE ROUTE 741, DURING CONSTRUCTION MAINTAIN ACCESS PER STANDARD CONSTRUCTION DRAWING MT-110.10. ADDITIONAL DETAIL IS IN THE SEQUENCE OF CONSTRUCTION BELOW.

MAINTAIN PEDESTRIAN ACCESS TO THE EXISTING BUS STOP LOCATED ON THE SOUTHWEST CORNER OF LYONS GATE WAY (PRIVATE DRIVE OF LYONS GATE APARTMENTS). THIS STOP IS ONLY ON ONE SIDE OF LYONS ROAD; THE BUS ROUTE SERVICING THIS STOP IS A ONE-WAY LOOP.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

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

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

--DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
--DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

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

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

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

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

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

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

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 40 HOURS

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

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

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

CALCULATED GWA CHECKED LAS

MAINTENANCE OF TRAFFIC - GENERAL NOTES

MOT LYONS RD

2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE, MONTGOMERY COUNTY, MIAMI TOWNSHIP OR THE CITY OF MIAMISBURG FOR POLICE SERVICES AND MAINTENANCE SERVICES BY MONTGOMERY COUNTY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7 AM TO 9 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS, EXCEPT FOR THE FOLLOWING INTERSECTIONS WHICH SHALL BE PROTECTED BY OFF-DUTY MIAMI TOWNSHIP POLICE OR MONTGOMERY COUNTY SHERRIFF, HIRED BY THE CONTRACTOR:

1.BYERS ROAD AND LYONS ROAD
2. STATE ROUTE 741 AND LYONS ROAD

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

NOTIFICATION OF TRAFFIC RESTRICTIONS

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

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

NOTIFICATION TIME TABLE

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

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

SEQUENCE OF CONSTRUCTION

PHASE 1-CONSTRUCT FULL DEPTH SHOULDER ON NORTH SIDE

1. CLOSE THE NORTHERNMOST LANE (RIGHT-HAND, WESTBOUND LANE) OF LYONS ROAD USING MT-95.30 CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS BASED ON A DESIGN SPEED OF 45 MPH, FOR A FULL LANE CLOSURE BETWEEN STATION 11+72 AND 22+60. CLOSE THE WESTBOUND RIGHT-HAND LANE OF LYONS ROAD FROM EAST OF STATE ROUTE 741 TO STATION 11+00. REOPEN THE LANE AS A RIGHT-TURN ONLY LANE AT STATE ROUTE 741. SEE SHEET 9.
2. DETOUR PEDESTRIANS BETWEEN THE BYERS INTERSECTION AND SR 741 INTERSECTION TO THE SOUTH SIDE OF LYONS ROAD PER MT-110.10 PEDESTRIAN DETOUR METHODS.
3. CLOSE OFF WITH DRUMS THE RIGHT-HAND NORTHBOUND LEFT-TURN LANE ON STATE ROUTE 741.
4. CONSTRUCT THE FULL DEPTH SHOULDER ON THE NORTH SIDE OF LYONS ROAD BETWEEN STATIONS 11+72 AND 22+60.
5. AFTER CONSTRUCTION OF THE FULL DEPTH SHOULDER, MOVE TRAFFIC TO THE PERMANENT LOCATION.
6. AFTER CONSTRUCTION OF PHASE 1, OPEN TWO WESTBOUND LANES AND ONE EASTBOUND LANE ON LYONS ROAD LOCATED IN THE PERMANENT LOCATIONS. REOPEN BOTH NORTHBOUND LEFT TURN LANES ON SR 741. REOPEN THE NORTH SIDE TO PEDESTRIANS.

PHASE 2A-CONSTRUCT CURB, BARRIER AND RETAINING WALL

1. CLOSE THE SOUTHERNMOST LANE OF LYONS ROAD WEST OF BYERS ROAD USING MT-95.31 CLOSING RIGHT LANES OF A MULTI-LANE UNDIVIDED HIGHWAY WITH DRUMS FOR A FULL LANE CLOSURE BETWEEN STATION 1+75 AND 27+27 BASED ON A DESIGN SPEED OF 45 MPH. BEGIN THE CLOSURE WEST OF BYERS ROAD BY ELIMINATING THE EXISTING TRANSITION FROM ONE EASTBOUND LANE TO TWO LANES WITH AN 600-FOOT-LONG DRUM LINE. AT STATE ROUTE 741 CLOSE THE EXISTING EASTBOUND RIGHT-TURN LANE ON LYONS, MAINTAIN THE RIGHT-HAND THROUGH LANE AS A THROUGH-RIGHT MOVEMENT. DO NOT ALTER THE LANING OF LYONS EAST OF STATE ROUTE 741.
2. DETOUR PEDESTRIANS BETWEEN THE BYERS INTERSECTION AND SR 741 INTERSECTION TO THE NORTH SIDE OF LYONS ROAD PER MT-110.10 PEDESTRIAN DETOUR METHODS.
3. CONSTRUCT THE EMBANKMENT, WALL, STORM SEWER, CURB, BARRIER AND WALK ON THE SOUTH SIDE. PLACE PERMANENT TRAFFIC CONTROL DEVICES, REPLACE SIGNAL DETECTION.
4. AFTER CONSTRUCTION OF PHASE 2, OPEN THE WALK TO PEDESTRIANS, OPEN THE SOUTHERNMOST LANE TO TRAFFIC.

PHASE 2B-MILL AND OVERLAY LYONS ROAD BRIDGE APPROACHES

1. MILL AND OVERLAY LYONS ROAD FOR 50 FEET IN ADVANCE OF EACH APPROACH SLAB USING MT-95.31 CLOSING RIGHT LANES OF A MULTI-LANE UNDIVIDED HIGHWAY WITH DRUMS AND MT-95.32 CLOSING LEFT LANES OF A MULTI-LANE UNDIVIDED HIGHWAY WITH DRUMS ON A DESIGN SPEED OF 45 MPH.

PHASE 3-CONSTRUCT CURB AND WALK ON SR 741

1. CLOSE THE WESTERNMOST LANE (RIGHT-TURN LANE [FOR A FULL LANE CLOSURE BETWEEN STATION 155+25 TO 157+66] AND RIGHT HAND, SOUTHBOUND THROUGH LANE [FOR A FULL LANE CLOSURE BETWEEN STATION 157+66 TO 167+25]) OF STATE ROUTE 741 USING MT-95.31 CLOSING RIGHT LANES OF A MULTI-LANE UNDIVIDED HIGHWAY WITH DRUMS BASED ON A DESIGN SPEED OF 40 MPH. PERFORM CONSTRUCTION ON STATE ROUTE 741 MONDAY THROUGH FRIDAY FROM 7:00 PM TO 6:00 AM.
2. DETOUR PEDESTRIANS TO THE EAST SIDE OF STATE ROUTE 741 PER MT-110.10 PEDESTRIAN DETOUR METHODS. CROSS PEDESTRIANS AT MALL RING ROAD/PRESTIGE PLACE AND THE SOUTH CROSSING OF THE LYONS ROAD INTERSECTION.
3. REMOVE PAVEMENT AND CONSTRUCT STORM SEWER, CURB, AND WALK ON THE WEST SIDE. DURING THE INSTALLATION OF THE STORM SEWER BETWEEN STA. 159+50 LT AND STA. 159+50 LT, THE DRIVE IS PERMITTED TO BE CLOSED FOR 2 PERIODS NOT TO EXCEED 48 HOURS EACH.
4. AFTER CONSTRUCTION OF PHASE 3, OPEN THE COMPLETED WALK TO PEDESTRIANS.

CALCULATED GWA CHECKED LAS

MAINTENANCE OF TRAFFIC - GENERAL NOTES

MOT LYONS RD

CALCULATED GWA
CHECKED LAS

BYERS RD.

CONSTRUCT FULL DEPTH PAVEMENT SHOULDER STA. 11+72 TO STA. 22+60

SR 741

REMOVE CONFLICTING MARKINGS AND PROVIDE EDGE LINES IF USED FOR MORE THAN 3 DAY DURATION.

60′ MIN. 50′

160′ 50′ 50′ 540′

LYONS RD.

LYONS RD.

EXISTING MARKINGS

LT LANE CLOSURE

PHASE 1 DIAGRAM
N.T.S.

BYERS RD.

SR 741

ROAD WORK AHEAD

PROP. W20-1-24

500′

(RESTORE PERMANENT MARKINGS)

LYONS RD.

LYONS RD.

800′ LANE CLOSURE
(PROVIDE EDGE LINE)

50′ 120′

500′

PROPOSED MARKINGS

END ROAD WORK

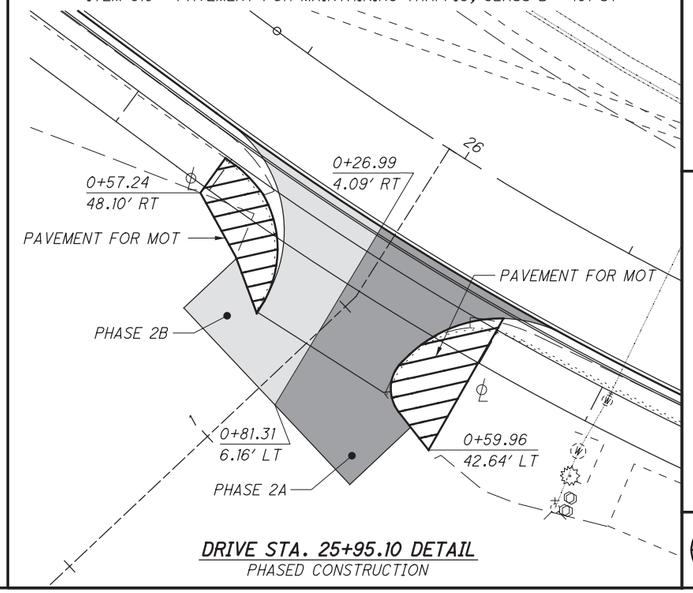
PROP. G20-2-48

ROAD WORK AHEAD

PROP. W20-1-24

PHASE 2A DIAGRAM
N.T.S.

THE FOLLOWING QUANTITY IS CARRIED TO THE GENERAL SUMMARY:
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B - 101 SY



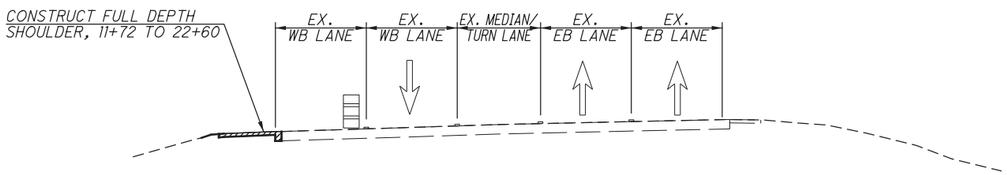
DRIVE STA. 25+95.10 DETAIL
PHASED CONSTRUCTION

MAINTENANCE OF TRAFFIC - GENERAL NOTES

MOT LYONS RD

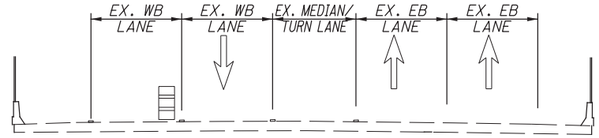
9
72

Q:\Miami Twp\0110400A.00 - MOT-Lyons Road Sidewalk\100316\mot\sheets\100316MN003.dgn 6/12/2018 1:55:29 PM jdelaney



LYONS - EAST AND WEST OF BRIDGE

(EXISTING PAVEMENT MARKINGS)

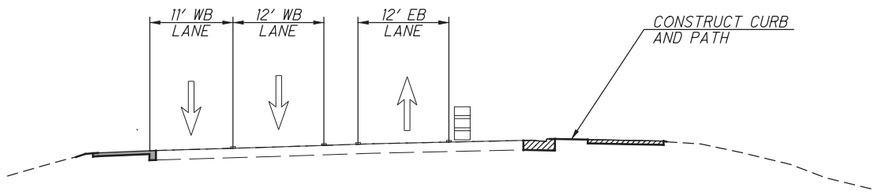


LYONS - BRIDGE

(EXISTING PAVEMENT MARKINGS)

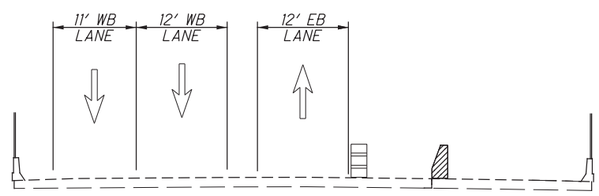
PHASE 1 CONSTRUCTION

(CONSTRUCT FULL DEPTH SHOULDER ON NORTH SIDE)



LYONS - WEST OF BRIDGE

(PERMANENT PAVEMENT MARKINGS)



LYONS - BRIDGE

(PERMANENT PAVEMENT MARKINGS)

PHASE 2 CONSTRUCTION

(CONSTRUCT CURB AND WALK ON SOUTH SIDE)

LEGEND

AREA UNDER CONSTRUCTION

AREA CONSTRUCTION COMPLETE

CALCULATED GWA
CHECKED LAS

MAINTENANCE OF TRAFFIC - TYPICAL SECTIONS

MOT LYONS RD

10
72

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	6		13	14	15	32	40					67	ODOT						
																		ROADWAY	
														201	11000	LS		CLEARING AND GRUBBING	
			2											202	20010	2	EACH	HEADWALL REMOVED	
			218											202	23000	218	SY	PAVEMENT REMOVED	
			5,038											202	23010	5,038	SY	PAVEMENT REMOVED, ASPHALT	
			908											202	30000	908	SF	WALK REMOVED	
			1,471											202	32000	1,471	FT	CURB REMOVED	
			144											202	32500	144	FT	CURB AND GUTTER REMOVED	
			10											202	32800	10	SY	CONCRETE SLOPE PROTECTION REMOVED	
			370											202	35100	370	FT	PIPE REMOVED, 24" AND UNDER	
			12											202	35200	12	FT	PIPE REMOVED, OVER 24"	
			1,024											202	38000	1,024	FT	GUARDRAIL REMOVED	
			6											202	58100	6	EACH	CATCH BASIN REMOVED	
						776	103							203	10000	879	CY	EXCAVATION	
						462	371							203	20000	833	CY	EMBANKMENT	
3,519														204	10000	3,519	SY	SUBGRADE COMPACTION	
579													579	254	01000	579	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
	107												107	409	30001	107	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, AS PER PLAN	6
				588										517	74000	588	FT	RAILING, TIMBER	
				456.25										606	15050	456.25	FT	GUARDRAIL, TYPE MGS	
				237.5										606	15051	237.5	FT	GUARDRAIL, TYPE MGS, AS PER PLAN	
				1										606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E	
				1										606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
				1										606	35002	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
				1										606	35102	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
				7,661										608	13000	7,661	SF	6" CONCRETE WALK	
				2,265										608	52000	2,265	SF	CURB RAMP	
												12		623	40520	12	EACH	RIGHT-OF-WAY MONUMENT	
																		EROSION CONTROL	
					4									601	11000	4	SY	RIPRAP, TYPE D	
					6									601	32200	6	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
	2,951													659	00300	2,951	CY	TOPSOIL	
	26,583													659	10000	26,583	SY	SEEDING AND MULCHING	
	1,330													659	14000	1,330	SY	REPAIR SEEDING AND MULCHING	
	1,330													659	15000	1,330	SY	INTER-SEEDING	
	3.71													659	20000	3.71	TON	COMMERCIAL FERTILIZER	
	5.5													659	31000	5.5	ACRE	LIME	
	151													659	35000	151	MGAL	WATER	
														832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
														832	30000	60,000	EACH	EROSION CONTROL	
																		DRAINAGE	
					3									602	20000	3	CY	CONCRETE MASONRY	
	50				57									605	13300	107	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
					3,372									605	14000	3,372	FT	6" BASE PIPE UNDERDRAINS, 707.31	
	50				213									611	00510	263	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
	25													611	01100	25	FT	6" CONDUIT, TYPE C, 706.02	
	25				147									611	04400	172	FT	12" CONDUIT, TYPE B, 706.02	
	25				270									611	04600	295	FT	12" CONDUIT, TYPE C, 706.02	
					139									611	05200	139	FT	12" CONDUIT, TYPE F, 707.05	
					59									611	07400	59	FT	18" CONDUIT, TYPE B, 706.02	
					174									611	07600	174	FT	18" CONDUIT, TYPE C, 706.02	
					39									611	16600	39	FT	36" CONDUIT, TYPE C, 706.02	
					7									611	98150	7	EACH	CATCH BASIN, NO. 3	
					10									611	98180	10	EACH	CATCH BASIN, NO. 3A	

CALCULATED JRW
CHECKED MAG

GENERAL SUMMARY

MOT LYONS RD

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	6			14	15			52	53	54	57	59	ODOT						
																		DRAINAGE	
					3									611	98470	3	EACH	CATCH BASIN, NO. 2-2B	
					1									611	98540	1	EACH	CATCH BASIN, NO. 2-4	
					1									611	99574	1	EACH	MANHOLE, NO. 3	
	3				3									611	99710	6	EACH	PRECAST REINFORCED CONCRETE OUTLET	
					1									895	10010	1	EACH	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1	
																		PAVEMENT	
192	27													301	46000	219	CY	ASPHALT CONCRETE BASE, PG64-22	
564														304	20000	564	CY	AGGREGATE BASE	
320													50	407	10000	320	GAL	TACK COAT	
27														408	10000	27	GAL	PRIME COAT	
123	4												25	441	50000	127	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
126	4													441	50300	130	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
46														452	10010	46	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	
187														452	12010	187	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	
				3,323										609	12000	3,323	FT	COMBINATION CURB AND GUTTER, TYPE 2	
				93										609	24510	93	FT	CURB, TYPE 4-C	
																		WATER WORK	
				2										638	10800	2	EACH	VALVE BOX ADJUSTED TO GRADE	
																		SANITARY SEWER	
	30													611	00900	30	FT	6" CONDUIT, TYPE B, FOR SANITARY	
	30													611	01100	30	FT	6" CONDUIT, TYPE C, FOR SANITARY	
																		LIGHTING	
				2										625	31510	2	EACH	PULL BOX REMOVED	
				4										625	75402	4	EACH	LIGHT POLE REMOVED FOR STORAGE	
				4										625	75500	4	EACH	LIGHT POLE FOUNDATION REMOVED	
				4										625	75504	4	EACH	LUMINAIRE REMOVED FOR STORAGE	
				4										625	75800	4	EACH	DISCONNECT CIRCUIT	
																		TRAFFIC CONTROL	
												2		625	31506	2	EACH	PULL BOX REMOVED AND REPLACED	
				6										626	00100	6	EACH	BARRIER REFLECTOR	
										332				630	03100	332	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
										14				630	08520	14	FT	STREET NAME SIGN SUPPORT, NO. 3 POST	
										2				630	79500	2	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
										18				630	80100	18	SF	SIGN, FLAT SHEET	
										1				630	80510	1	EACH	SIGN, STREET NAME	
										1				630	84900	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
										17				630	85100	17	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
										26				630	86002	26	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
										2				630	87520	2	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
												10		632	26500	10	EACH	DETECTOR LOOP	
												9		632	27200	9	EACH	LOOP DETECTOR TIE IN	
								0.45	0.36					644	00100	0.81	MILE	EDGE LINE, 4"	
									0.19					644	00104	0.19	MILE	EDGE LINE, 6"	
								0.43	0.36					644	00200	0.79	MILE	LANE LINE, 4"	
								0.46	0.16					644	00300	0.62	MILE	CENTER LINE	
								999						644	00400	999	FT	CHANNELIZING LINE, 8"	
								113						644	00500	113	FT	STOP LINE	
								450	425					644	00600	875	FT	CROSSWALK LINE	
								16						644	01300	16	EACH	LANE ARROW	
								99						644	01500	99	FT	DOTTED LINE, 4"	
											1,080			644	30000	1,080	FT	REMOVAL OF PAVEMENT MARKING	
											16			644	30020	16	EACH	REMOVAL OF PAVEMENT MARKING	

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GENERAL SUMMARY

MOT LYONS RD

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	6	7		9						53	57		ODOT						
											2.28			644	30030	2.28	MILE	REMOVAL OF PAVEMENT MARKING	
										0.2				646	10000	0.2	MILE	EDGE LINE, 4"	
										0.2				646	10100	0.2	MILE	LANE LINE, 4"	
										0.2				646	10200	0.2	MILE	CENTER LINE	
																		RETAINING WALLS	
																		FOR LYONS ROAD RETAINING WALL ESTIMATED QUANTITIES, SEE SHEET 48.	48
																		STRUCTURE OVER 20 FOOT SPAN (MOT-75-0306)	
																		FOR MOT-75-0306 ESTIMATED QUANTITIES, SEE SHEET 61.	61
																		MAINTENANCE OF TRAFFIC	
		50												410	12000	50	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
		40												614	11110	40	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		10												614	13000	10	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		20												614	13310	20	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	
		0.2												614	20550	0.2	MILE	WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT	
		0.2												614	21550	0.2	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
		0.23												614	22200	0.23	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I	
		0.2												614	22350	0.2	MILE	WORK ZONE EDGE LINE, CLASS III, 4", 642 PAINT	
		140												614	23400	140	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	
		3												614	30400	3	EACH	WORK ZONE ARROW, CLASS I, 740.06, TYPE I	
				101										615	25000	101	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
		50												616	10000	50	MGAL	WATER	
																		INCIDENTALS	
														614	11000	LS		MAINTAINING TRAFFIC	
														623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														624	10000	LS		MOBILIZATION	
																		PAVEMENT ALTERNATES	
	13,753													254	01000	13,753	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T = 1.5")	
	1,169													407	10000	1,169	GAL	TACK COAT	
	574													441	50000	574	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	

CALCULATED JRW
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GENERAL SUMMARY

MOT LYONS RD

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REF NO.	SHEET NO.	STATION TO STATION					202 HEADWALL REMOVED EACH		202 PAVEMENT REMOVED SY	202 PAVEMENT REMOVED, ASPHALT SY	202 WALK REMOVED SF	202 CURB REMOVED FT	202 CURB AND GUTTER REMOVED FT		202 CONCRETE SLOPE PROTECTION REMOVED SY	202 PIPE REMOVED, 24" AND UNDER FT	202 PIPE REMOVED, OVER 24" FT		202 GUARDRAIL REMOVED FT		202 CATCH BASIN REMOVED EACH
		REMOVALS																			
R-1	17	1+60.38	RT	TO	5+48.78	RT				324											
R-2	17	1+62.98	RT	TO	2+07.62	RT							57								
R-3	17	1+68.73	RT	TO	1+95.40	RT					214										
R-4	17	1+93.22	RT	TO	2+07.98	RT										25					1
R-5	17	4+99.14	RT	TO	7+13.88	RT										207					2
R-6	17	5+18.93	RT	TO	5+45.08	RT							51								
R-7	17	5+82.82	RT	TO	9+29.72	RT				368											
R-8	17	5+86.50	RT	TO	5+98.84	RT							36								
R-9	17-18	8+93.96	RT	TO	10+19.69	RT	2									128					
R-10		NOT USED																			
R-11	17-18	9+75.47	RT	TO	14+80.34	RT				858											
R-12	17	9+78.21	RT	TO	9+78.92	RT						5									
R-13	18	11+55.18	RT	TO	15+06.01	RT													354		
R-14	18	11+72.13	LT	TO	14+41.38	LT				226											
R-15	18	19+36.33	LT	TO	19+53.18	LT						17									
R-16	18-19	19+36.37	LT	TO	22+60.26	LT				234											
R-17	18-19	19+37.86	LT	TO	21+87.75	LT													250		
R-18	18-19	19+53.96	RT	TO	23+68.83	RT													420		
R-19	18-19	19+67.72	RT	TO	29+09.93	RT				1519											
R-20		NOT USED																			
R-21	19	25+49.08	RT	TO	25+76.46	RT						46									
R-22	19	26+14.17	RT	TO	27+99.20	RT						215									
R-23	19	26+66.66	RT	TO	27+19.00	RT			190												
R-24		NOT USED																			
R-25		NOT USED																			
R-26	33	155+31.17	LT	TO	158+78.56	LT				377											
R-27	33	155+61.11	LT	TO	155+81.53	LT									4		12				1
R-28	33	155+65.06	LT	TO	158+76.75	LT						315									
R-29	33	158+53.93	LT	TO	158+54.25	LT										4					1
R-30		NOT USED																			
R-31	33	159+38.90	LT	TO	162+78.79	LT				341											
R-32	33	159+41.54	LT	TO	162+77.17	LT						352									
R-33	33	159+77.17	LT	TO	159+84.97	LT									6						
R-34	33	162+47.09	LT	TO	162+73.53	LT					152										
R-35	33-34	163+15.85	LT	TO	167+03.26	LT				408											
R-36	33-34	163+17.94	LT	TO	166+99.65	LT						521									
R-37	33	163+18.48	LT	TO	163+31.63	LT					71										
R-38	33	163+42.24	LT	TO	163+43.42	LT										6					1
R-39	34	166+76.76	LT	TO	166+96.12	LT					97										
R-40		NOT USED																			
R-41	17	0+49.96	LT	TO	0+65.27	LT					119										
R-42	17	0+71.67	RT	TO	0+88.14	RT					134										
R-43	17	1+42.53	LT	TO	1+58.25	LT					121										
R-44	17	3+19.91	RT	TO	3+38.49	RT			28												
R-45	19	23+60.75	RT	TO	24+04.43	RT				98											
										285											
R-46	19	25+63.43	RT	TO	26+22.28	RT															
TOTALS CARRIED TO GENERAL SUMMARY							2		218	5038	908	1471	144		10	370	12		1024		6

CALCULATED JRW
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ROADWAY SUBSUMMARY

MOT LYONS RD

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REF NO.	SHEET NO.	STATION TO STATION					517		606						626	608			609		626	638	625	625	625	625	625
							RAILING, TIMBER		GUARDRAIL, TYPE MGS	GUARDRAIL, TYPE MGS, AS PER PLAN	ANCHOR ASSEMBLY, MGS TYPE E	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	BARRIER REFLECTOR	6" CONCRETE WALK	CURB RAMP		COMBINATION CURB AND GUTTER, TYPE 2	CURB, TYPE 4-C	BARRIER REFLECTOR	VALVE BOX ADJUSTED TO GRADE	PULL BOX REMOVED	LIGHT POLE REMOVED FOR STORAGE	LIGHT POLE FOUNDATION REMOVED	LUMINAIRE REMOVED FOR STORAGE	DISCONNECT CIRCUIT
							FT		FT	FT	EACH	EACH	EACH	EACH	EACH	SF	SF		FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH
C-1	17	1+62.98	RT	TO	2+07.62	RT													419								
C-2	17	5+86.50	RT	TO	9+26.24	RT													390								
C-3	17-18	9+78.87	RT	TO	14+57.35	RT													513								
C-4	18	19+36.33	LT	TO	19+53.18	LT														17							
C-5	18-19	19+85.58	RT	TO	29+08.67	RT													939								
C-6	33	155+34.64	LT	TO	158+76.70	LT													350								
C-7	33	158+50.62	LT	TO	158+76.70	LT														29							
C-8	33	159+41.60	LT	TO	162+47.79	LT													310								
C-9	33	162+47.79	LT	TO	162+77.29	LT														47							
C-10	33-34	163+17.76	LT	TO	166+99.77	LT													402								
F-1	18	11+83.60	RT	TO	15+06.37	RT	329																				
F-2	18-19	19+54.90	RT	TO	21+55.00	RT	199																				
F-3	19	23+10.00	RT	TO	23+67.32	RT	60																				
GR-1	18-19	19+40.01	LT	TO	21+87.75	LT			250						3												
GR-2	18-19	19+85.58	RT	TO	23+25.86	RT			162.5	156.25		1		1	2												
GR-3	18	12+55.83	RT	TO	14+57.35	RT			43.75	81.25	1		1		1												
W-1	17	0+49.96	LT	TO	0+65.27	LT											123										
W-2	17	0+71.67	RT	TO	0+88.14	RT											138										
W-3	17	1+42.53	LT	TO	1+58.25	LT											124										
W-4	17	1+68.73	RT	TO	3+23.59	RT										23	160										
W-5	17	5+06.11	RT	TO	5+34.43	RT											232										
W-6	17	5+94.24	RT	TO	6+19.74	RT											209										
W-7	17	8+87.66	RT	TO	9+14.28	RT											220										
W-8	17-18	9+85.43	RT	TO	10+10.69	RT											219										
W-9	19	28+92.53	RT	TO	29+03.46	RT											159										
W-10		NOT USED																									
W-11	33	155+40.40	LT	TO	158+70.12	LT										2458	167										
W-12	33	159+45.05	LT	TO	162+75.31	LT										2443	223										
W-13	33-34	163+18.11	LT	TO	166+97.68	LT										2737	291										
WW-1	19	26+62.61	RT																			1					
WW-2	33	156+94.38	LT																			1					
L-1	19	25+44.50	RT																					1	1	1	1
L-2	19	27+21.80	RT																				1	1	1	1	1
L-3	19	27+81.90	RT																				1	1	1	1	1
L-4	19	28+42.20	RT																					1	1	1	1
TOTALS CARRIED TO GENERAL SUMMARY							588		456.25	237.5	1	1	1	1	6	7661	2265		3323	93		2	2	4	4	4	4

CALCULATED JRW
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ROADWAY SUBSUMMARY

MOT LYONS RD

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REF NO.	SHEET NO.	STATION TO STATION					601 RIPRAP	601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	602 CONCRETE MASONRY	605 6" UNCLASSIFIED PIPE UNDERDRAINS, 707.31	605 6" BASE PIPE UNDERDRAINS, 707.31	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 12" CONDUIT, TYPE B, 706.02	611 12" CONDUIT, TYPE C, 706.02	611 12" CONDUIT, TYPE F, 707.05	611 18" CONDUIT, TYPE B, 706.02	611 18" CONDUIT, TYPE C, 706.02	611 36" CONDUIT, TYPE C, 706.02		611 CATCH BASIN, NO. 3	611 CATCH BASIN, NO. 3A	611 CATCH BASIN, NO. 2-2B	611 CATCH BASIN, NO. 2-4	611 MANHOLE, NO. 3 (48")	611 PRECAST REINFORCED CONCRETE OUTLET	895 MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1	
							SY	CY	CY	FT	FT	FT	FT	FT	FT	FT	FT	FT		EACH	EACH	EACH	EACH	EACH	EACH	EACH	
D-1	17	1+93.22	RT	TO	1+95.82	RT							5								1							
D-2	17	1+95.82	RT	TO	2+09.49	RT								23									1					
D-3	17	4+94.02	RT	TO	5+41.50	RT	1.6		0.20					40														
D-4	17	5+13.02	RT	TO	5+41.50	RT								37								1						
D-5	17	5+41.50	RT	TO	5+88.72	RT							45								1							
D-6	17	5+88.72	RT	TO	5+97.12	RT												8			1							
D-7	17	5+96.84	RT	TO	5+97.12	RT												81										1
D-8	17	6+81.66	RT	TO	7+25.00	RT			0.31									42					1					
D-9	17	7+15.10	RT	TO	7+28.13	RT		1.7	0.20					29								1						
D-10		NOT USED																										
D-11	17	7+80.00			RT			0.7	0.20					33								1						
D-12	17	8+37.50			RT			0.7	0.20					31								1						
D-13	17	8+94.68	RT	TO	9+20.54	RT	1.6		0.31									21										
D-14	17	9+20.54	RT	TO	9+79.15	RT											59				1							
D-15	17-18	9+79.15	RT	TO	10+06.21	RT		1	0.31									22			1							
D-16	18	14+53.00			RT			0.7	0.20					8	37							1						
D-17	19	20+45.41			RT			0.7	0.20					6	59							1						
D-18	19	23+35.00			RT			0.3	0.20						43							1						
D-19	19	28+82.20	LT	TO	28+91.88	LT								20							1							
D-20	19	28+91.88	LT	TO	29+04.76	LT								20									1					
D-21	33	155+61.11	LT	TO	155+66.36	LT													5						1			
D-22	33	155+66.36	LT	TO	155+70.78	LT								11								1						
D-23	33	155+66.36	LT	TO	156+00.00	LT													34					1				
D-24	33	158+53.93	LT	TO	158+54.57	LT								6								1						
D-25	33	159+51.63	LT	TO	158+54.57	LT							97								1							
D-26	33	163+42.11	LT	TO	163+43.44	LT								6							1							
UD-1	17	1+97.76	RT	TO	3+25.94	RT					117	10																
UD-2	17	3+28.82	RT	TO	5+10.87	RT					168	10																
UD-3	17	5+14.26	RT	TO	5+38.69	RT					23	10																
UD-4	17	5+91.25	RT	TO	7+13.31	RT					35	10																
UD-5	17	7+16.88	RT	TO	7+78.23	RT					74	10																
UD-6	17	7+81.77	RT	TO	8+34.33	RT					42	10																
UD-7	17	8+40.20	RT	TO	9+17.72	RT					76	10																
UD-8	17	9+81.39	RT	TO	9+99.89	RT					20	10																
UD-9	18	10+00.88	RT	TO	14+54.25	RT					449	10																
UD-10		NOT USED																										
UD-11	18	11+74.08	LT	TO	14+35.74	LT					260	9																1
UD-12	18-19	19+38.30	LT	TO	22+61.08	LT					326	27																1
UD-13	18-19	19+94.00	RT	TO	20+43.66	RT					40	10																
UD-14	19	20+47.16	RT	TO	23+33.25	RT					271	10																
UD-15	19	23+36.75	RT	TO	29+17.17	RT					594	27																1
UD-16	33	155+72.59	LT	TO	158+50.76	LT					270	10																
UD-17	33	158+56.31	LT	TO	158+73.87	LT					10	10																
UD-18	33	159+55.04	LT	TO	162+67.07	LT					305	10																
UD-19	33-34	163+46.89	LT	TO	166+96.99	LT				57	292	10																
TOTALS CARRIED TO GENERAL SUMMARY							4	6	3	57	3372	213	147	270	139	59	174	39			7	10	3	1	1	3	1	

CALCULATED JRW
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DRAINAGE SUBSUMMARY

MOT LYONS RD

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PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY) —— —— - 12.6 AC	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE —— —— —— 0.71
PROJECT EARTH DISTURBED AREA —— - 2.09 AC	
ESTIMATED CONTRACTOR EARTH DISTURBED AREA —— — 0.125 AC	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE —— —— —— 0.72
NOTICE OF INTENT EARTH DISTURBED AREA —— —— —— 4.90 AC	POST CONSTRUCTION BMP: MANUFACTURED SYSTEM
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE —— —— 6.6 AC	IMMEDIATE RECEIVING WATERS —— — TRIBUTARY OF CLEAR CREEK
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE —— —— 6.8 AC	SUBSEQUENT RECEIVING WATER —— — CLEAR CREEK

BMP TYPE	LATITUDE/LONGITUDE		EDA TREATMENT CREDIT (ACRES)
MANUFACTURED SYSTEM	39°37'44"	84°13'43"	2.10
	TREATMENT PROVIDED		0.75
	TREATMENT REQUIRED		0.42

USGS MAP: DAYTON SOUTH QUADRANGLE
DAYTON, OHIO
LONGITUDE: 84°13'48" *
LATITUDE: 39°37'47" *

* LONGITUDE AND LATITUDE TO APPROX. CENTER OF PROJECT

PROJECT DESCRIPTION

THIS PROJECT WILL CONSIST OF NEW CURB AND GUTTER, STORM SEWER, AND 10' WALK ALONG THE SOUTH SIDE OF LYONS ROAD FOR 0.5 MILES. NEW WALK, STORM SEWER, CURB AND GUTTER WILL BE ADDED ALONG THE WEST SIDE OF SR 741 FOR 0.2 MILES.

N

0 100 200 400 HORIZONTAL SCALE IN FEET

CALCULATED MAG
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PROJECT SITE PLAN

MOT LYONS RD

BEGIN WORK STA. 0+50.00

BEGIN PROJECT STA. 1+61.35

+54.75 MEET EXISTING BUTT JOINT PER BP-3.1

BYERS ROAD

TS STA. 2+07.34

SC STA. 3+57.34

CONSTRUCTION LIMITS

Ex R/W

℄ LYONS ROAD

12" STM

MASONRY COLLAR

+04.35 29.68'

+07.34 37.18' RT

SAW CUT

10' WALK

86°01'45"

29.68' +00.00 BEGIN TAPER

27.00' +90.50 END TAPER

MATCH LINE STA. 5+00 BELOW

CURVE-1
PI STA. 5+36.49
Δ = 20° 06' 50" (RT)
Dc = 4° 00' 00"
R = 1,432.39'
Ls = 150.00'
θs = 3° 00' 00"
LT = 100.01'
ST = 50.01'
x = 149.96'
y = 2.62'
k = 74.99'
p = 0.65'
Δc = 14° 06' 50" (RT)
Lc = 352.85'
Ts = 329.15'
E = 23.02'
C = 351.96'
C1 = C2 = 149.98'
C.B.1 = S 72° 41' 39" E
C.B. = S 63° 38' 14" E
C.B.2 = N 54° 34' 49" W

PAVEMENT LEGEND
- FULL DEPTH PAVEMENT
- PLANING AND OVERLAY
- ASPHALT WALK
- CONCRETE WALK
- CONCRETE DRIVE
- ASPHALT DRIVE

0+50.00 6.00' RT
0+60.00 5.00' RT
0+50.00 6.00' LT
0+60.00 4.66' LT
1+61.35 59.22' RT
CB 2-2B
CB-3A
RESIDENTIAL
CONCRETE
9.66'
26.71'

MATCH LINE STA. 5+00 ABOVE

CURVE-1

℄ LYONS ROAD

CONCRETE BUS PAD (CONCRETE DRIVE COMPOSITION)

+25.00

+38.00

SAW CUT

10' WALK

REMOVE

12" STM

HW-2.2

12" C

18" C

12" B

18" B

CB-3

CB-3A

MH-3

BMP WATER QUALITY STRUCTURE, TYPE 1

+47.73, 78.71' RT MEET EXISTING BUTT JOINT PER BP-3.1

LYONS GATEWAY SH

CONSTRUCTION LIMITS

CS STA. 7+10.19

ST STA. 8+60.19

+28.73, 79.37' RT MEET EXISTING BUTT JOINT PER BP-3.1

TS STA. 9+37.27

TOWNSON BLVD

MATCH LINE STA. 10+00 SEE SHEET 18

Ex SH

CALCULATED DJB
CHECKED MAG

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN - LYONS ROAD
STA. 0+50.00 TO STA. 10+00.00

MOT LYONS RD

17
72

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CURVE-2
PI STA. 11+38.42
Δ = 9° 02′ 57″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
Ls = 100.00′
θs = 1° 30′ 00″
LT = 66.67′
ST = 33.34′
x = 99.99′
y = 0.87′
k = 50.00′
p = 0.22′
Δc = 6° 02′ 57″ (LT)
Lc = 201.64′
Ts = 201.15′
E = 6.19′
C = 201.55′
C1 = C2 = 100.00′
C.B.1 = S 54° 04′ 49″ E
C.B.2 = N 62° 07′ 46″ W
C.B. = S 58° 06′ 18″ E

MATCH LINE STA. 10+00 SEE SHEET 17
SC STA. 10+37.27
CS STA. 12+38.90
ST STA. 13+38.90
CONSTRUCTION LIMITS
EX GUARDRAIL DND
SAW CUT
APPROACH SLAB
+35.74, 42.90′ LT
PRECAST REINFORCED CONCRETE OUTLET
6″ INV.=1002.00
MATCH LINE STA. 15+00 BELOW
℄ LYONS ROAD
CURVE-2
10′ WALK
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
REMOVE EX. GUARDRAIL
DND
CONSTRUCTION LIMITS
STA. 11+83.60
BEGIN RAILING PER RM-5.2
50′ ANCHOR ASSEMBLY, TYPE E
BEGIN CURB AND GUTTER TAPER
END CURB AND GUTTER TAPER
125′ GUARDRAIL, TYPE MGS
MGS BTA TYPE-1
CONCRETE BARRIER PER SCD SBR-1-13
CONCRETE BARRIER END SECTION TYPE D, AS PER PLAN, PER RM-4.6
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
12″ STM
CTV
Ex SH
EX LA
EX CURB
24″ HP CAS
16″ W
12″ SAN
15″ SAN
W-8
R-9
D-15
R-13
F-1
R-14
UD-11
UD-9
C-3
R-11
GR-3
D-16
CB-3
6.78′
104′ R
5.88′
4.0′
+55.82
29.53′ +72.12
30.55′ +95.87
27.42′ +17.27
R=842.00′
23.00′ +41.09
+55.83
+05.54
+50.00
17.00′
+00.00
15.00′
33.00′ +39.03
+68.68
17.00′
21.00′
+54.00
18.00′
+30.45
+57.35
+71.35
14.00′

BRIDGE MOT-75-0306
STA. 14+83.86 TO STA. 19+33.19
MATCH LINE STA. 15+00 ABOVE
MATCH LINE STA. 20+00 SEE SHEET 19
1-75 SB
1-75 NB
16
17
18
19
℄ LYONS ROAD
CONSTRUCTION LIMITS
CONCRETE BARRIER
14.5′±
STA. 15+06.37
END RAILING, TIMBER PER RM-5.2
500.23′ CONCRETE BARRIER PER SCD SBR-1-13
+40.01 ATTACH TO EXISTING BTA
250′ GUARDRAIL, TYPE MGS
16.85′
CURB TYPE 40
+36.33
+53.18
82.59′ R
GR-1
R-17
C-4
R-15
R-16
UD-12
33.00′ +38.77
135.18′ R
SAW CUT
APPROACH SLAB
R-19
UD-13
GR-2
C-5
17.00′
+68.31
STA. 19+54.90
BEGIN RAILING, TIMBER PER RM-5.2
R-18
F-2
+71.58±
+85.58
+90.60
W-9
14.00′
CONCRETE BARRIER END SECTION TYPE D, AS PER PLAN, PER RM-4.6
MGS BTA TYPE-2

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED DJB
CHECKED MAG

PLAN - LYONS ROAD
STA. 10+00.00 TO STA. 20+00.00

MOT LYONS RD

18
72

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250' GUARDRAIL, TYPE MGS
PC STA. 21+16.60
+87.75
MEET EX. GUARDRAIL
16" HP GAS
20" HP GAS
CONSTRUCTION LIMITS
AT&T FIBER AND COPPER
PT STA. 23+19.39
SAW CUT
4.00'
+43.40
30.28'
+60.26
+61.08, 58.00' LT
PRECAST REINFORCED CONCRETE OUTLET
6" INV.=976.40
33.00'
+10.64
1065' R
22
CURVE-3
23
℄ LYONS ROAD
24
AT&T FIBER
MATCH LINE STA. 25+00 BELOW
21
+70.65
BEGIN TAPER
17.00'
18.86'
+35.40
END TAPER
1042' R
24.48'
+38.43
27.00'
+19.39
81°51'50"
CONSTRUCTION LIMITS
CB-3A
48" RCP
10' WALK
B-001
B-002
+55.00
149.90' RETAINING WALL W/STEEL RAILING
318.75' GUARDRAIL, TYPE MGS
+10.00
+24.40
12"
35' R
35' R
HW
12.5'
HW-2.2
Ex SH
TMP
GATE
Ex R/W
SH
CURVE-3
PI STA. 22+18.21
Δ = 9° 07' 32" (RT)
Dc = 4° 30' 00"
R = 1,273.24'
T = 101.61'
L = 202.79'
E = 4.05'
C = 202.58'
C.B. = S 58° 04' 00" E
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
ANCH. ASSY. MGS, TYPE T
STA. 23+67.32
END RAILING, TIMBER PER RM-5.2
0+59.12
10.96' RT
0+60.02
10.96' RT
0+60.02
8.41' LT
0+46.35
8.41' LT
+93.46
ASPHALT
COMMERCIAL
Ex R/W
Ex SH
TMP
SH
MATCH LINE STA. 25+00 ABOVE
PC STA. 25+39.94
CONSTRUCTION LIMITS
AT&T FIBER AND COPPER
48" RCP
TRANSITION REVERSE WALK
+20
+50
90°
℄ LYONS ROAD
CURVE-4
TRANSITION REVERSE WALK
+30
+60
27.00'
+20.00
43.00'
+00.00
43.00'
+96.82
SAW CUT
10' WALK
35' R
10' R
PI STA. 0+46.14
Δ = 14°25'40", RT.
25+65.19
55.12' RT
25+76.56
63.77' RT
25+61.53
73.80' RT
26+13.96
51.74' RT
26+13.31
54.19' RT
26+23.19
68.14' RT
26+18.86
66.27' RT
26+17.57
89.30' RT
CURVE-4
PI STA. 27+29.76
Δ = 28° 20' 02" (LT)
Dc = 7° 37' 09"
R = 752.00'
T = 189.82'
L = 371.88'
E = 23.59'
C = 368.10'
C.B. = S 67° 40' 15" E
+95.10
ASPHALT AND CONCRETE
COMMERCIAL
CONSTRUCTION LIMITS
POLE REMOVED BY OTHERS
PT STA. 29+11.82
AT&T 10 DUCT CONDUIT
℄ SR-741
END WORK LYONS ROAD STA. 30+50.00
STA. 29+68.35 LYONS ROAD= STA. 154+94.37 SR-741
BEGIN WORK SR-741 STA. 154+18.50
END PROJECT STA. 28+96.82
8" SAN
NOTE: A PORTION OF THE SR-741 AND LYONS ROAD SOUTHWEST CORNER WILL BE CONSTRUCTED WITH THE ADJACENT PID 101034 PROJECT. SEE INTERSECTION DETAILS.

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED DJB
CHECKED MAG

PLAN - LYONS ROAD
STA. 20+00.00 TO STA. 30+50.00

MOT LYONS RD

19
72

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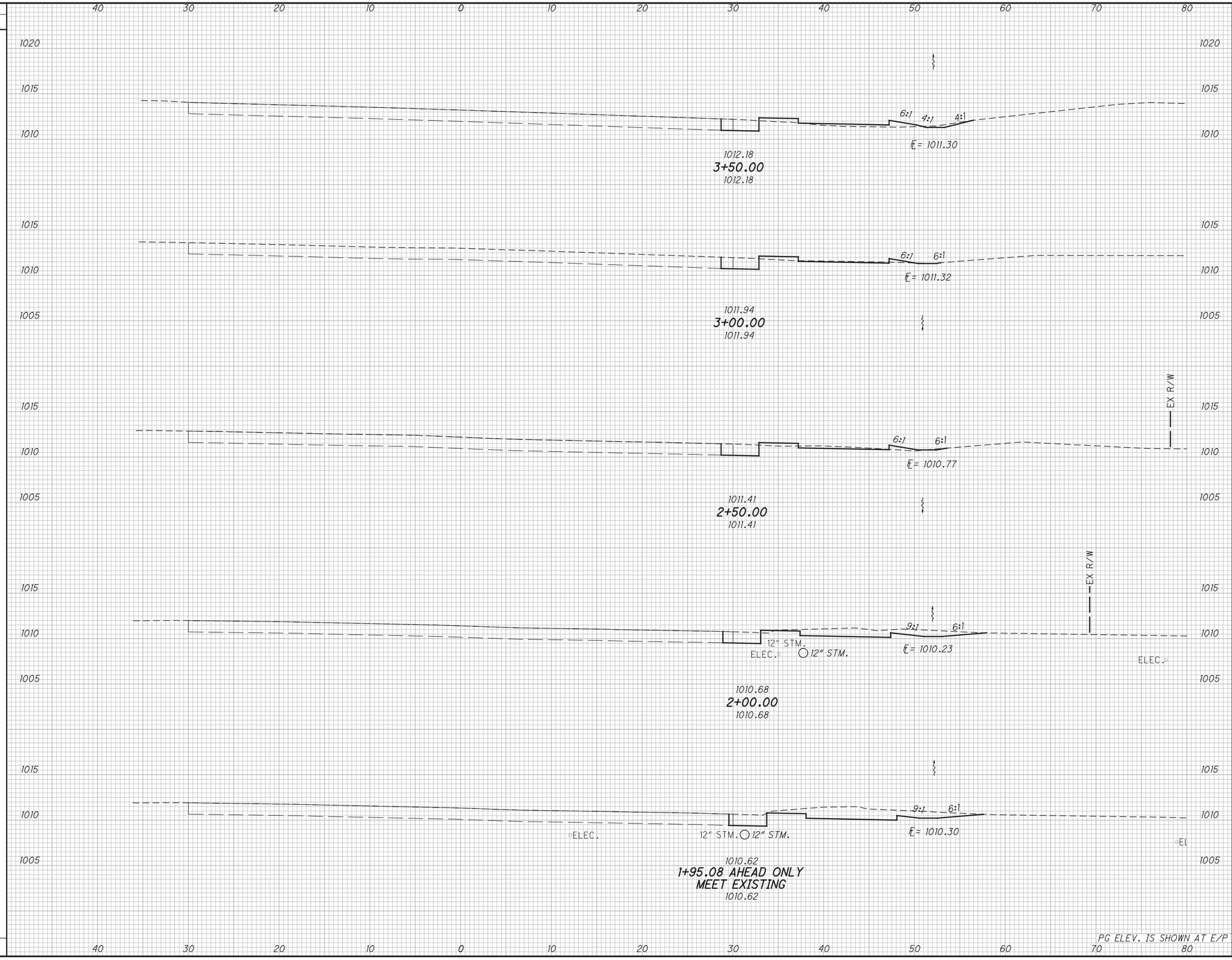
SEEDING	
END WIDTH	SQ. YDS.



END AREA	
CUT	FILL
4	5
5	2
6	2
17	0
23	0

VOLUME	
CUT	FILL
8	8
9	9
21	21
4	4
0	0
72	13

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - LYONS ROAD
STA. 1+54.75 TO STA. 3+50.00

MOT LYONS RD

20
72

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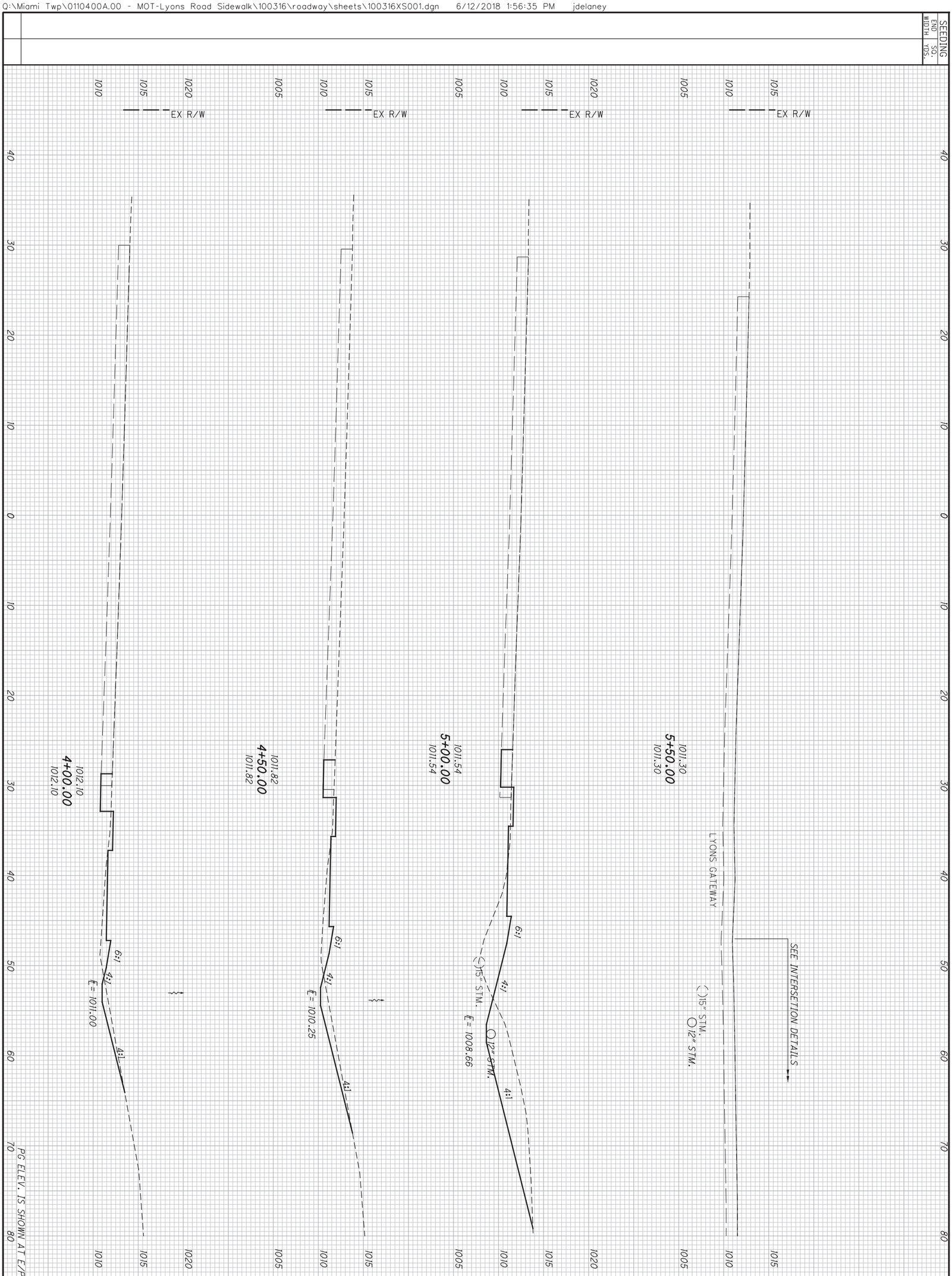


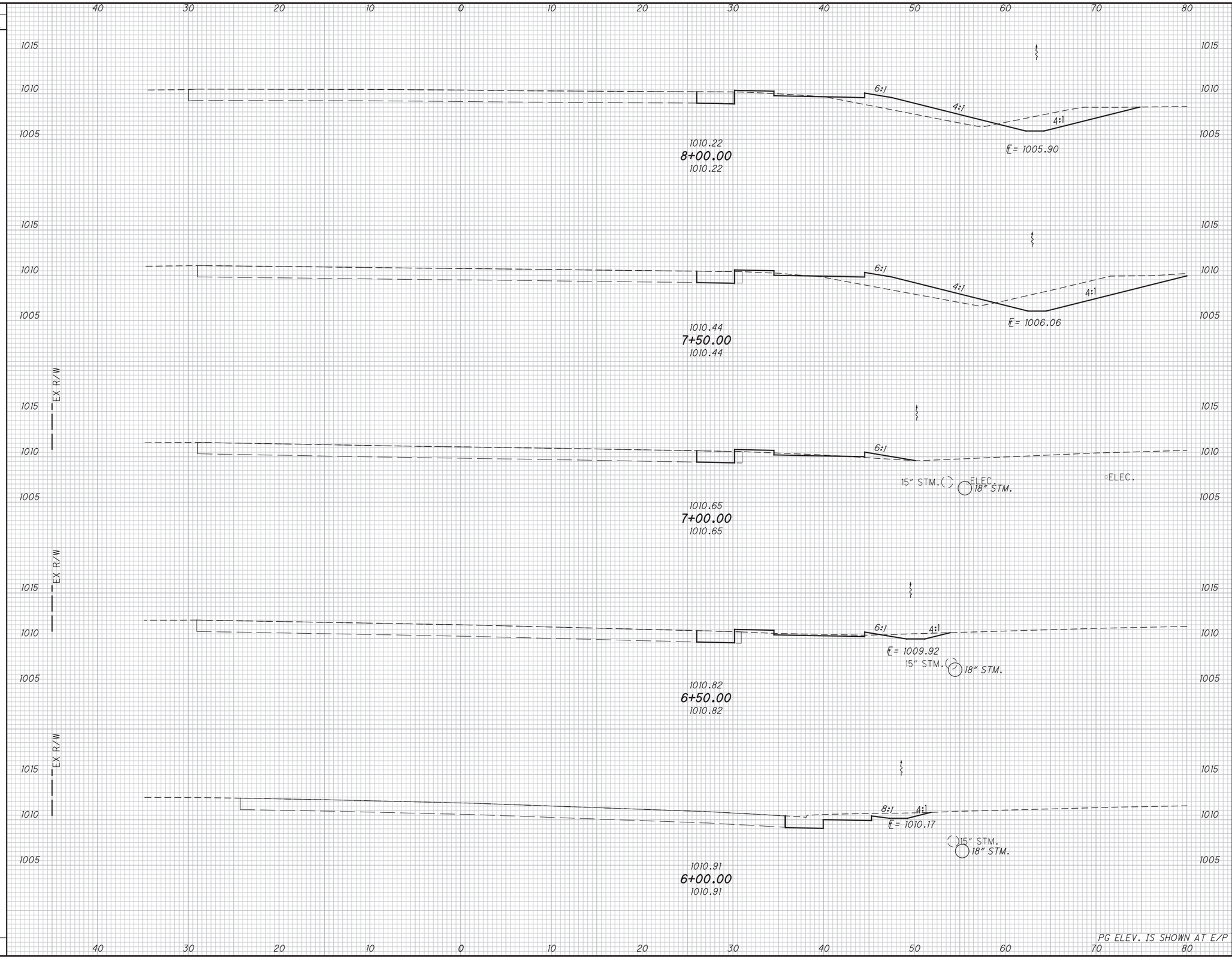
21/72

MOT LYONS RD

CROSS SECTIONS - LYONS ROAD
STA. 4+00.00 TO STA. 5+50.00

CALCULATED DJB
CHECKED GKB

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
32	19		
		31	29
1	3		
		5	3
4	2		
		15	14
12	0		
		11	0
		62	46

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - LYONS ROAD
STA. 6+00.00 TO STA. 8+00.00

MOT LYONS RD

22
72

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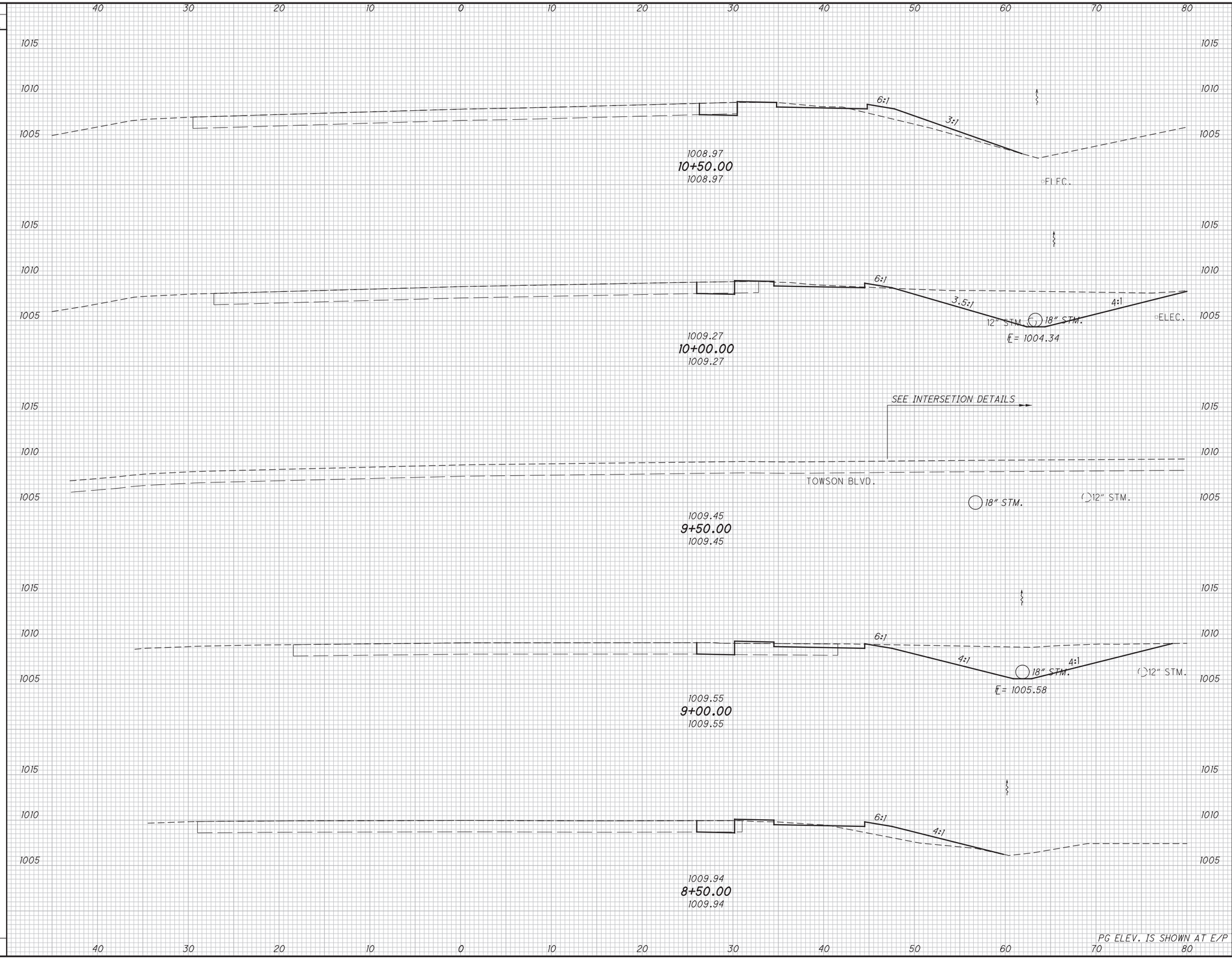
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2	11		
		65	62
68	1		
		63	1
0	0		
		58	1
63	1		
		60	48
1	13		
		18	17
		0	129

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - LYONS ROAD
STA. 8+50.00 TO STA. 10+50.00

MOT LYONS RD

23
72

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
11	0
8	0
5	0
6	0
5	6

VOLUME	
CUT	FILL
10	2
0	0
5	0
10	3
7	5
32	10

CALCULATED DJB

CHECKED GKB

CROSS SECTIONS - LYONS ROAD
STA. 11+00.00 TO STA. 12+00.00

MOT LYONS RD

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
7	1
7	1
10	1
12	1

VOLUME	
CUT	FILL
14	6
16	2
20	3
21	6
71	17

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - LYONS ROAD
STA. 12+50.00 TO STA. 14+00.00

MOT LYONS RD

25
72

1005.34
14+00.00
1005.34

1005.91
13+50.00
1005.91

1006.45
13+00.00
1006.45

1006.98
12+50.00
1006.98

EX LA
4:1
6:1
12:1
8" SAN.
16" WAT.
24" EX. GAS
TOP ELEV 985.8±
24" GAS
ELEC.
24" EX. GAS
TOP ELEV 984.1±

PG ELEV. IS SHOWN AT E/P

40 30 20 10 0 10 20 30 40 50 60 70 80

1010 1005 1000 995

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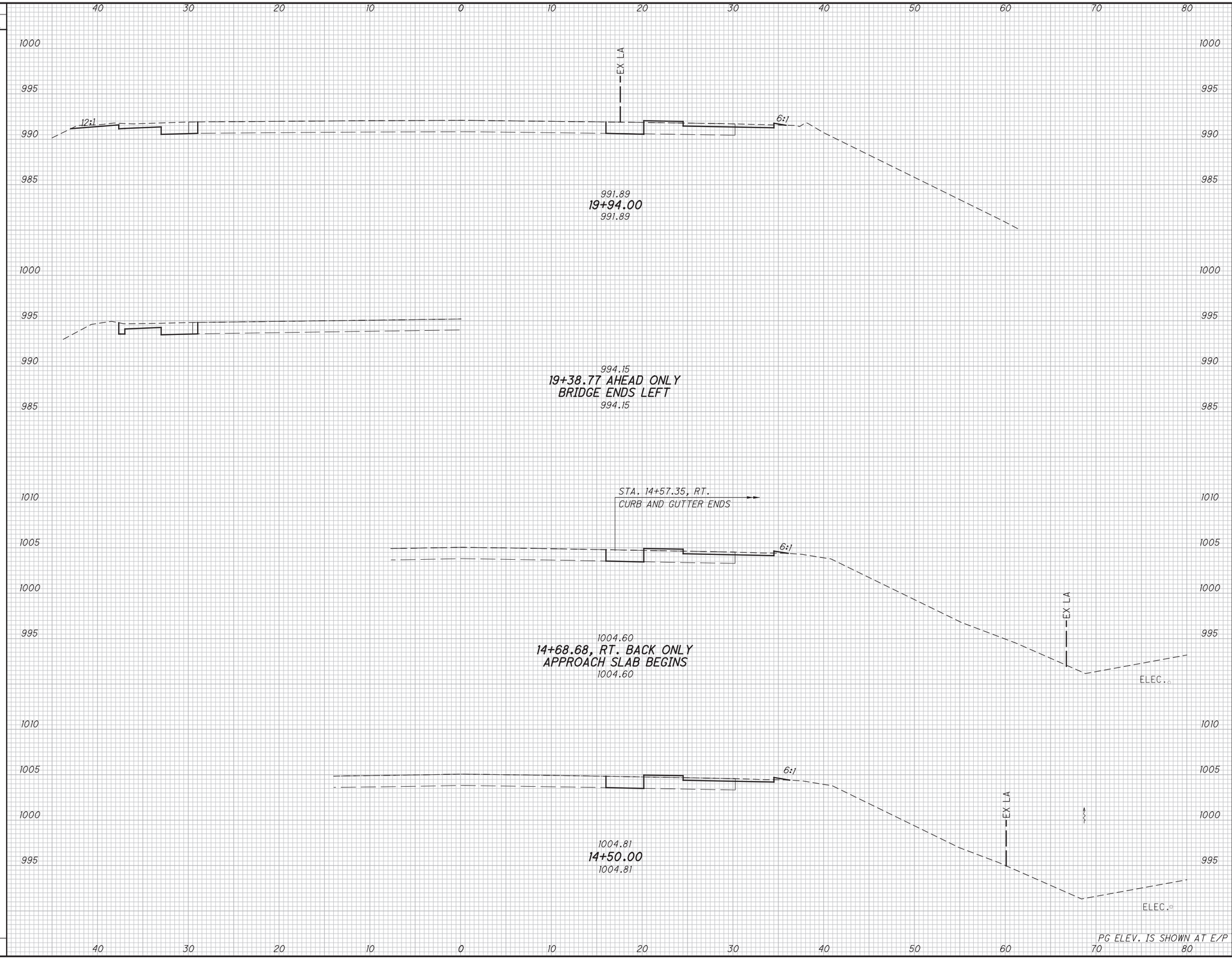
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
9	1		
		16	1
7	0		
		0	0
1	1		
		1	1
1	1		
		8	12
		25	14

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - LYONS ROAD
STA. 14+50.00 TO STA. 19+94.00

MOT LYONS RD

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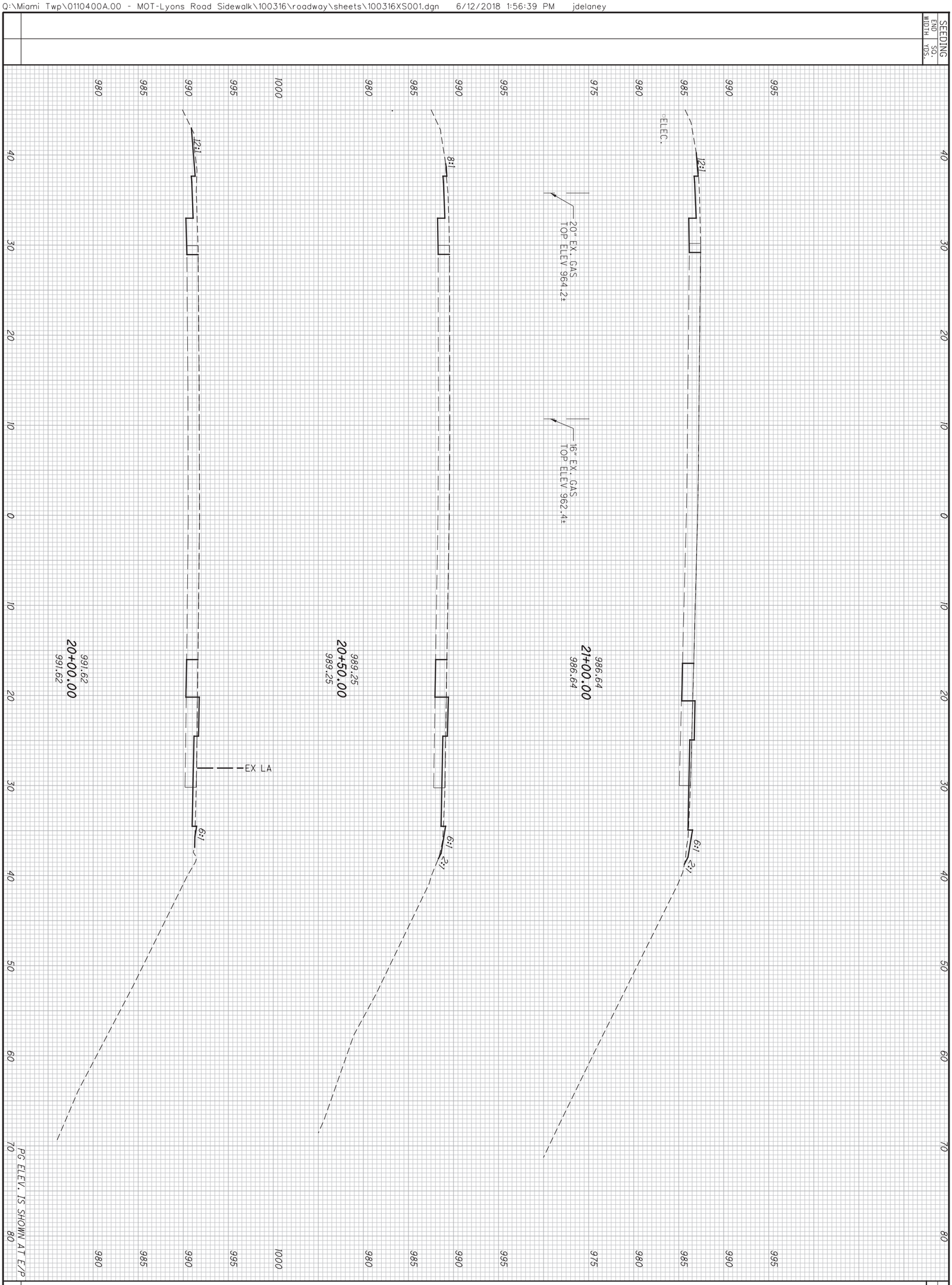


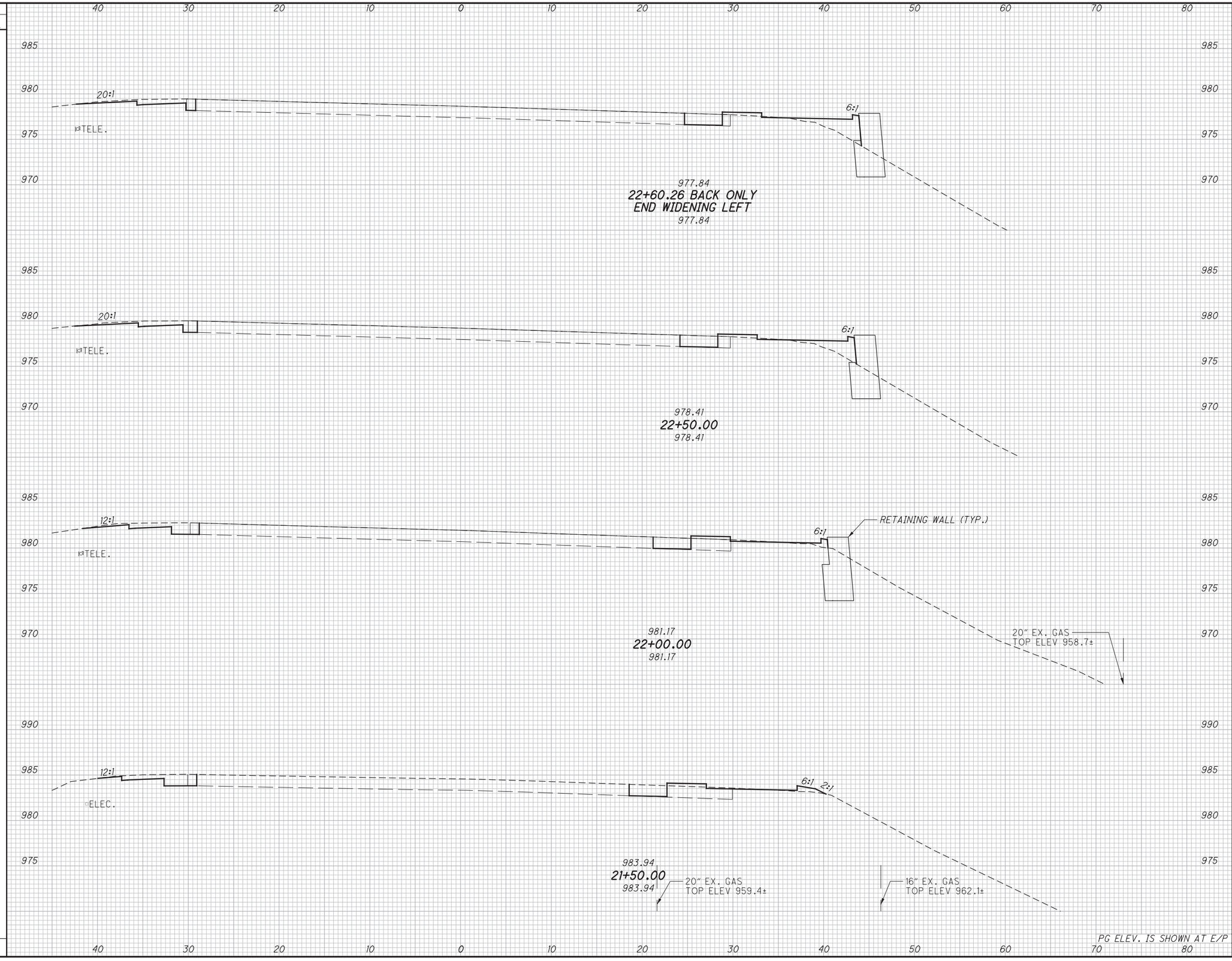
27/72

MOT LYONS RD

CROSS SECTIONS - LYONS ROAD
STA. 20+00.00 TO STA. 21+00.00

CALCULATED DJB
CHECKED GKB

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	10		
		2	1
5	8		
		10	3
6	3		
		11	2
6	3		
		11	7
		34	13

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - LYONS ROAD
STA. 21+50.00 TO STA. 22+60.26

MOT LYONS RD

28
72

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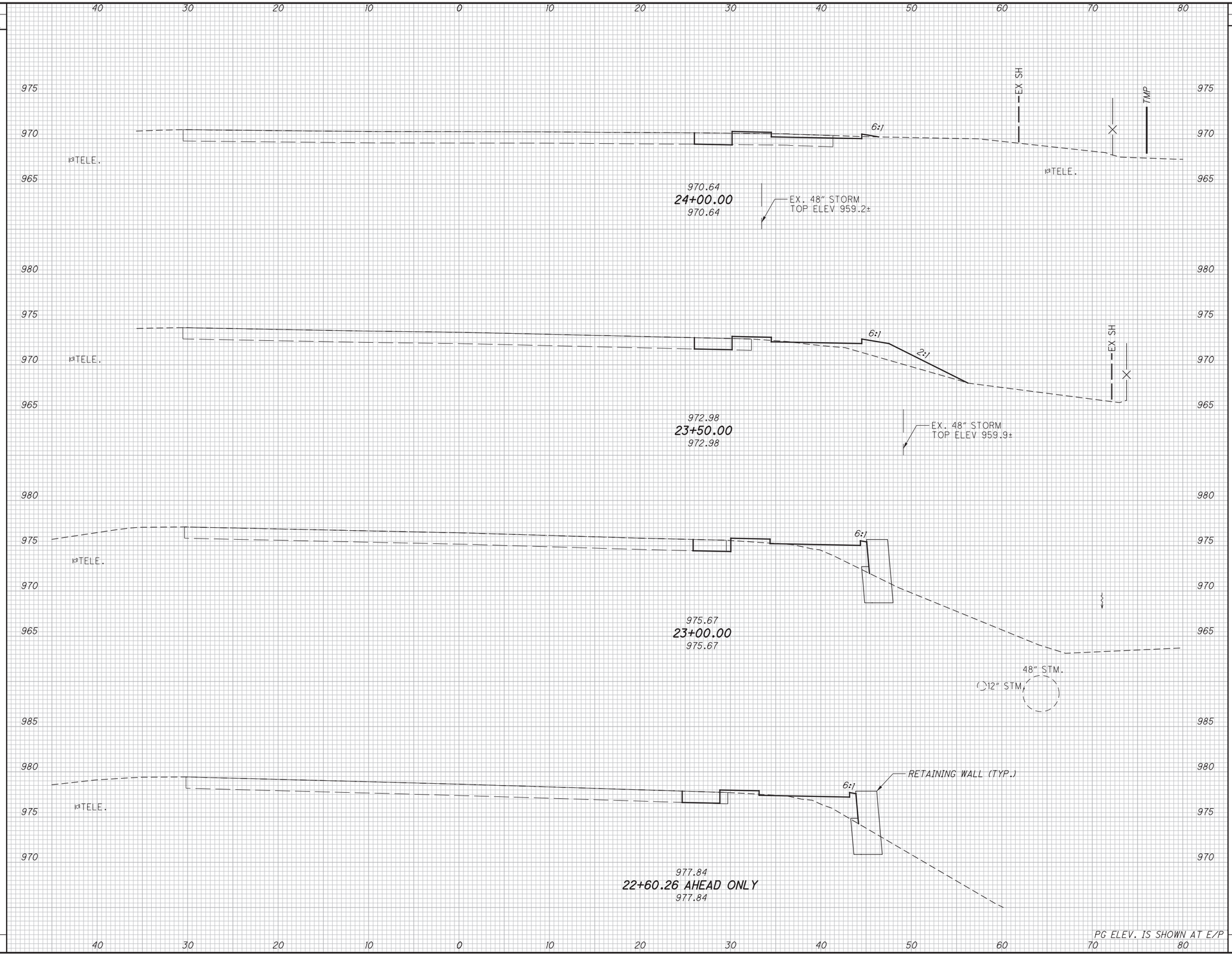
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	1		
		1	12
0	17		
		1	2
1	12		
		1	0
0	10		
		0	0
		3	14

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - LYONS ROAD
STA. 22+60.26 TO STA. 24+00.00

MOT LYONS RD

29
72

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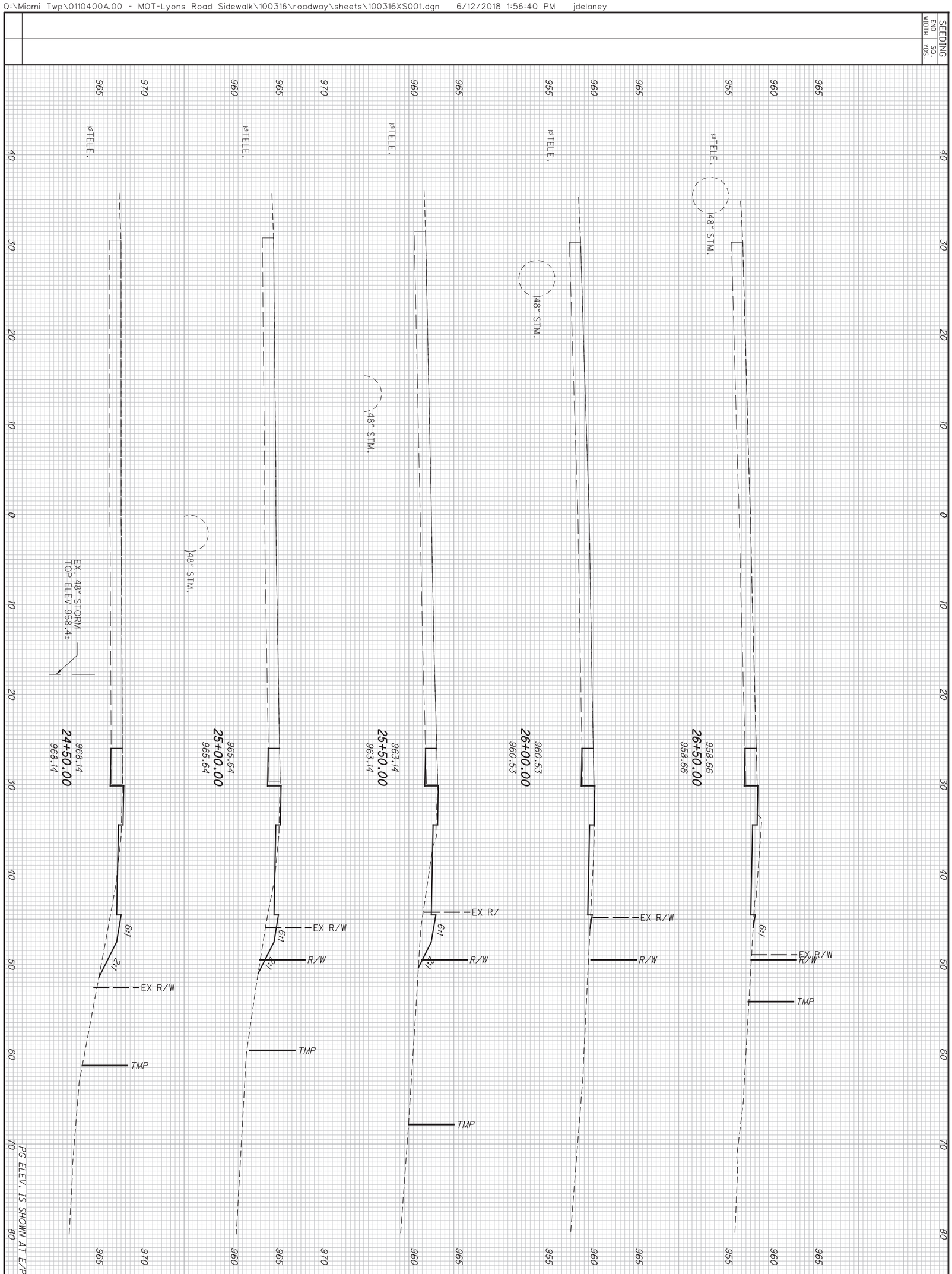

30/72

MOT LYONS RD

CROSS SECTIONS - LYONS ROAD
STA. 24+50.00 TO STA. 26+50.00

CALCULATED DJB
CHECKED GKB

SEEDING	
END WIDTH	SQ. YDS.

40 30 20 10 0 10 20 30 40 50 60 70 80

960 955 950

EX LA-R/W
EX LA-R/W
EX R/W
R/W
TMP
6:1
3:1
TELE.
48" STM.
954.84
28+50.00
954.84

EX R/W
R/W
TMP
6:1
3:1
TELE.
48" STM.
955.50
28+00.00
END TAPER RT
955.50

EX R/W
R/W
TMP
6:1
4:1
TELE.
956.22
27+50.00
956.22

EX R/W
R/W
TMP
6:1
48" STM.
TELE.
956.84
27+20.00
BEGIN TAPER RT
956.84

EX R/W
R/W
TMP
6:1
TELE
48" STM.
957.20
27+00.00
957.20

PG ELEV. IS SHOWN AT E/P

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6	10		
		11	11
6	20		
		13	13
8	4		
		9	9
9	1		
		7	7
10	0		
		16	16
		56	54

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - LYONS ROAD STA. 27+00.00 TO STA. 28+50.00

MOT LYONS RD

31
72

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
5	5
5	2

VOLUME	
CUT	FILL
1	1
10	9
11	10

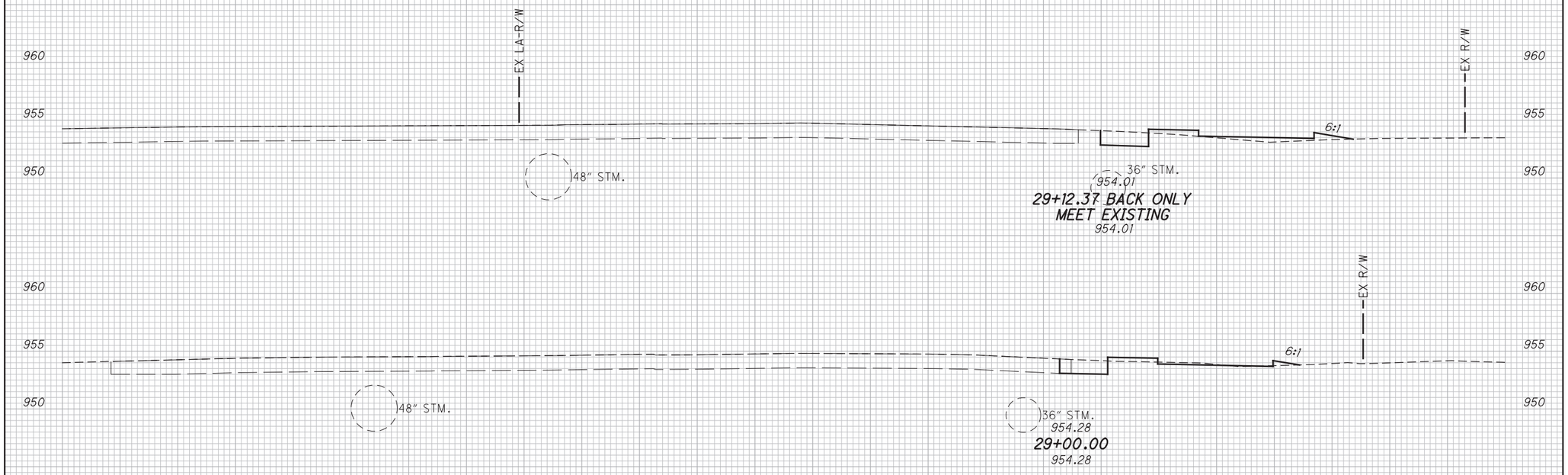
CALCULATED DJB

CHECKED GKB

ITEM 203 - EXCAVATION 776 CU YD

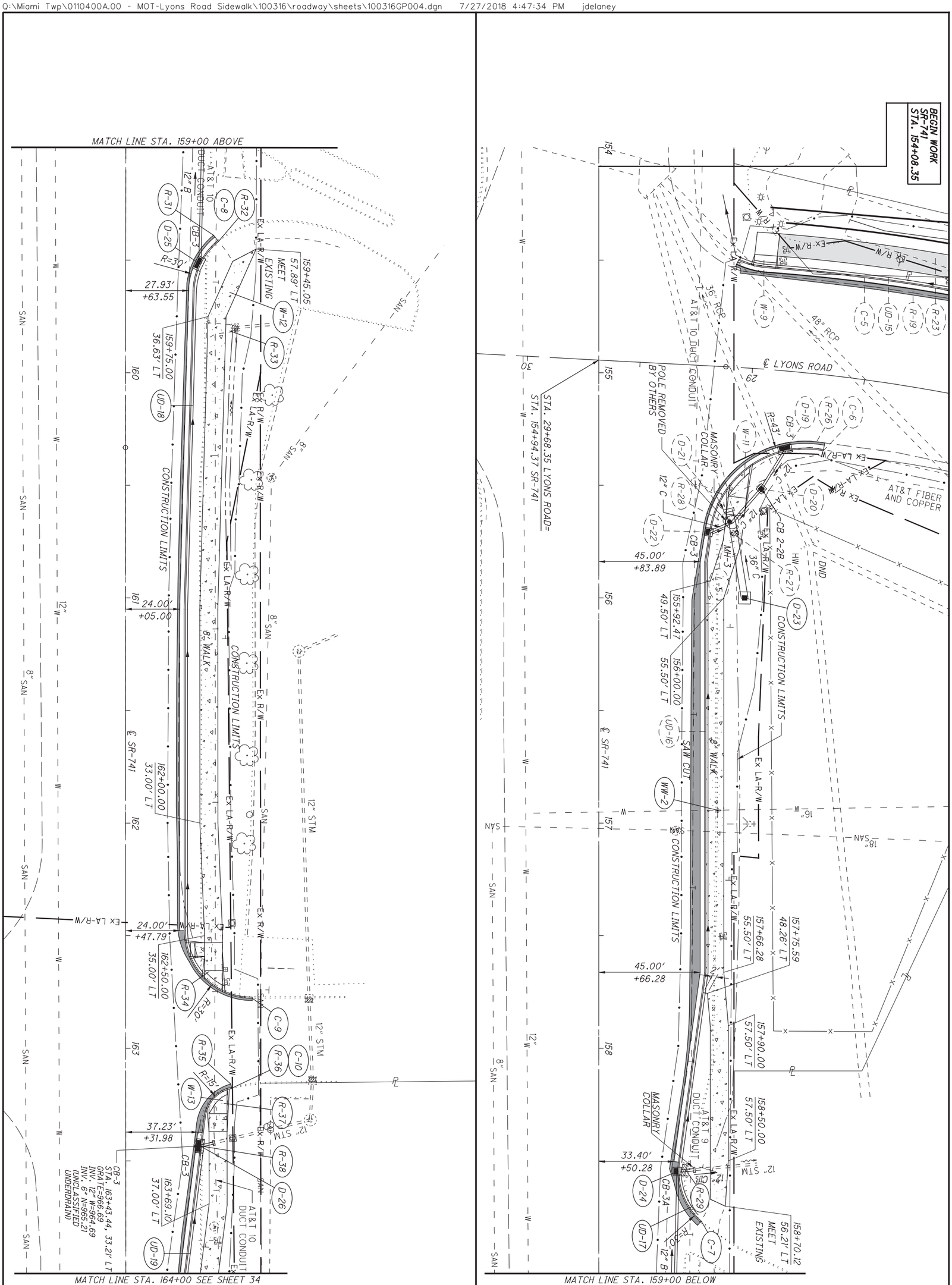
ITEM 203 - EMBANKMENT 462 CU YD

TOTALS CARRIED TO GENERAL SUMMARY



CROSS SECTIONS - LYONS ROAD
STA. 29+00.00 TO STA. 29+12.37

MOT LYONS RD

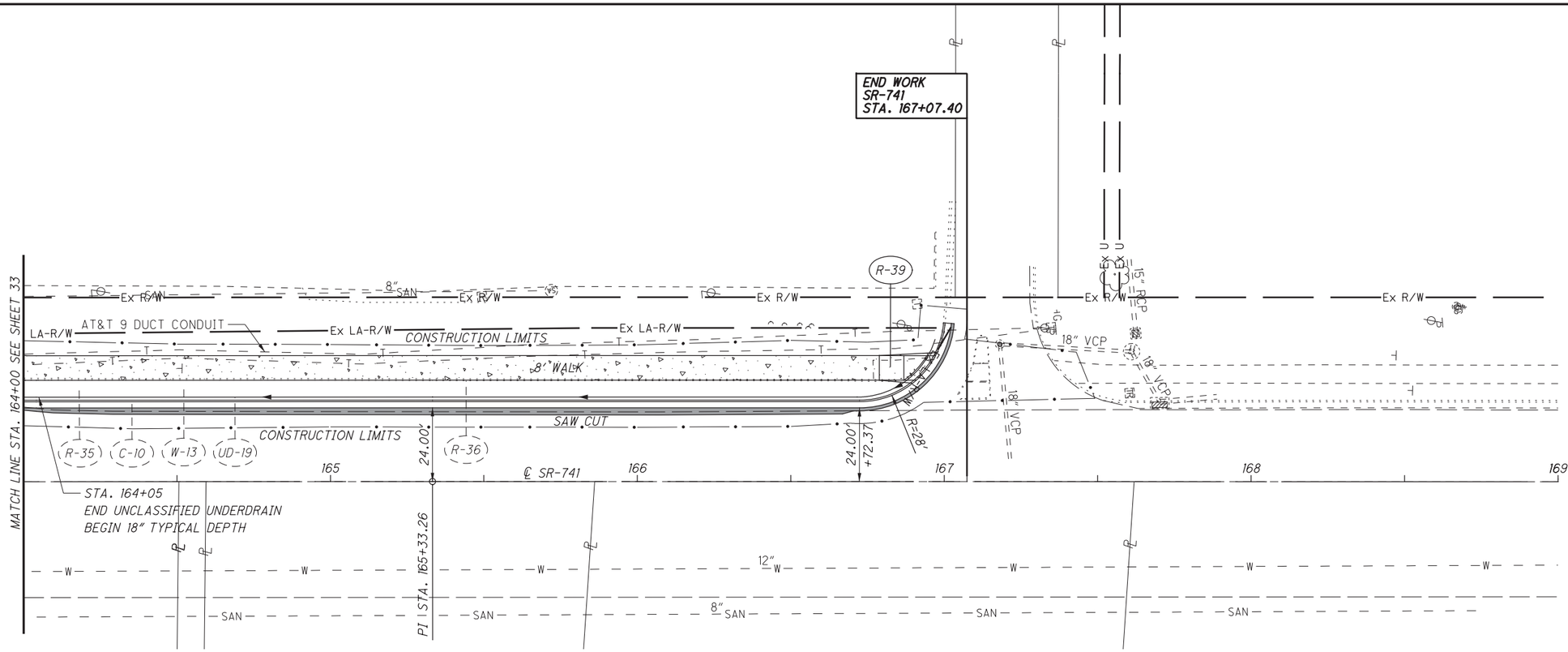


MOT LYONS RD

PLAN - SR-741
STA. 154+00 TO STA. 164+00

CALCULATED DJB
CHECKED MAG

0 20
10 40
HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJB
CHECKED MAG

PLAN - SR-741
STA. 164+00 TO STA. 167+07.40

MOT LYONS RD

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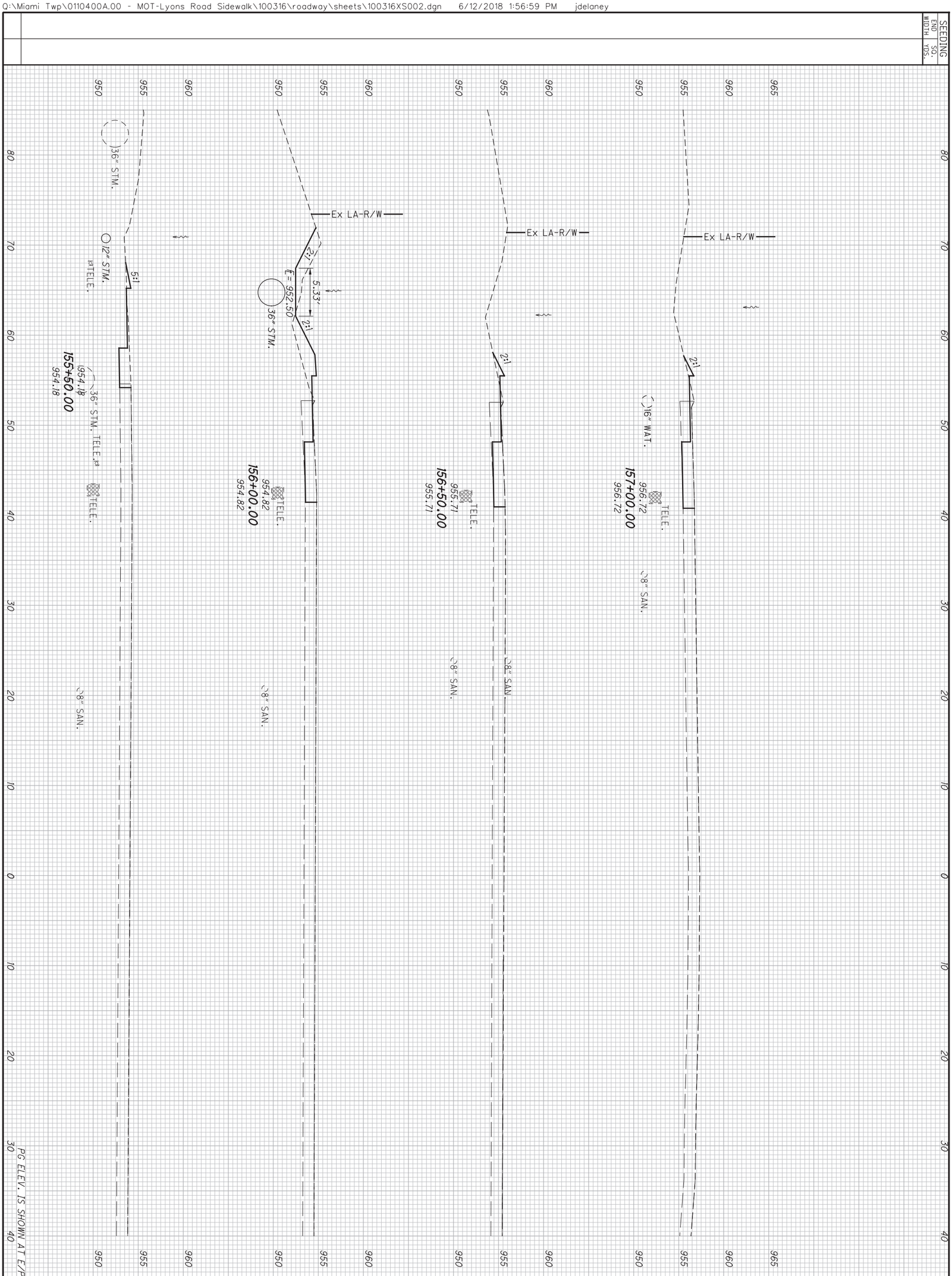

SEEDING		
	END AREA	VOLUME
	CUT	FILL
	0	0
	21	47
	1	0
	6	13
	7	15
	0	7
	8	20
	1	1
	6	12

35/72

MOT LYONS RD

CROSS SECTIONS - SR-741
STA. 155+50.00 TO STA. 157+00.00

CALCULATED DJB
CHECKED GKB

SEEDING	
END WIDTH	SQ. YDS.

80 70 60 50 40 30 20 10 0 10 20 30 40

970 965 960 955

EX LA-R/W

6:1

TELE.

962.74

159+50.00

962.74

Ex LA-R/W

TELE. 12" STM.

961.88

159+00.00

961.88

Ex LA-R/W

6:1 30.9:1

TELE.

960.36

158+50.00

960.36

Ex LA-R/W

2:1 4:1

TELE.

958.99

158+00.00

958.99

Ex LA-R/W

2:1

TELE.

957.74

157+50.00

957.74

PG ELEV. IS SHOWN AT E/P

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5	3		
		5	3
0	0		
		4	8
4	9		
		11	13
8	5		
		8	10
1	6		
		1	11
		29	45

CALCULATED DJB

CHECKED GKB

CROSS SECTIONS - SR-741
STA. 157+50.00 TO STA. 159+50.00

MOT LYONS RD

36
72

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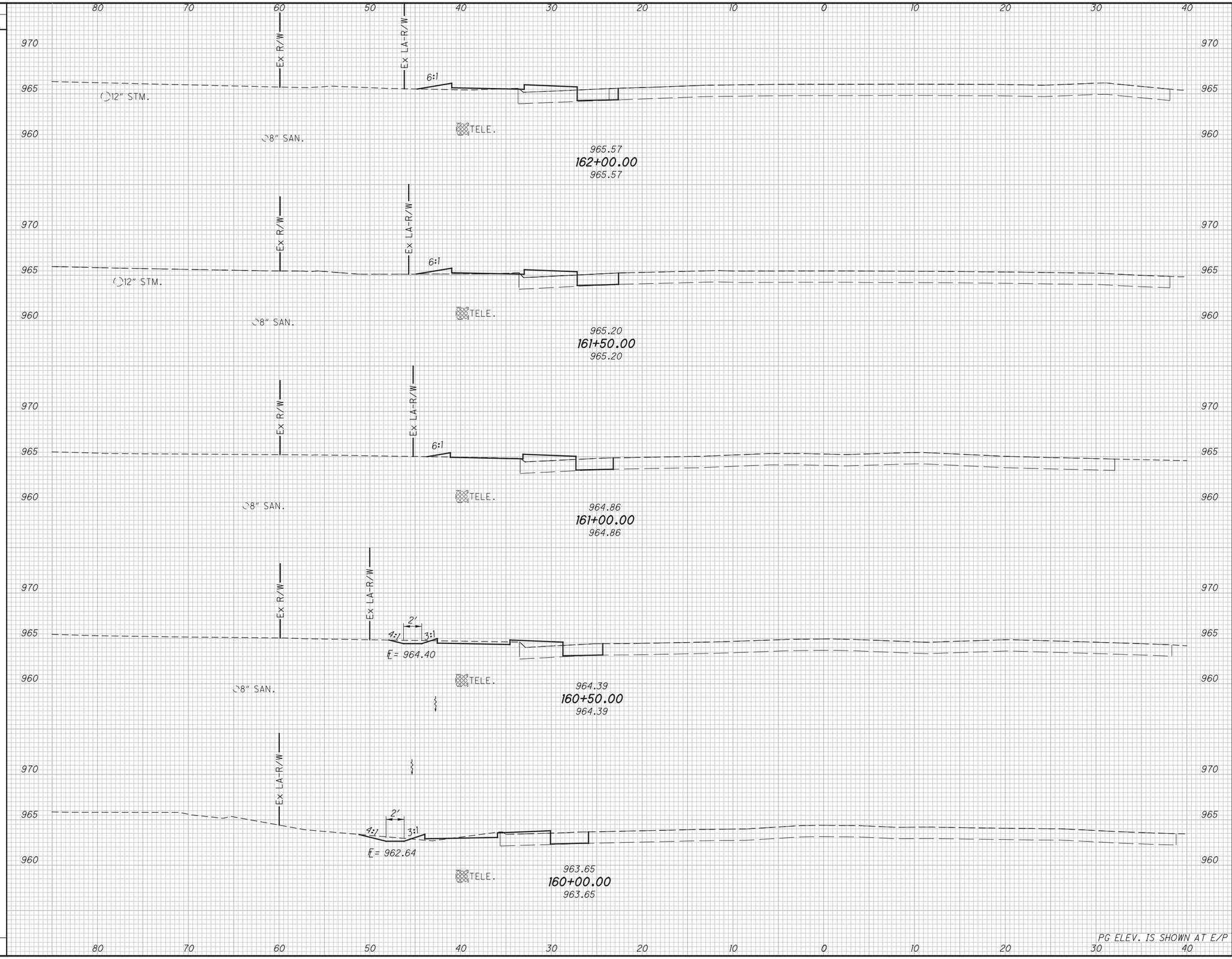
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	14		
		0	26
0	14		
		0	24
0	12		
		3	19
3	9		
		6	17
3	9		
		7	11
		15	97

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - SR-741
STA. 160+00.00 TO STA. 162+00.00

MOT LYONS RD

37
72

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SEEDING	
END WIDTH	SQ. YDS.

80 70 60 50 40 30 20 10 0 10 20 30 40

975 970 965

EX. R/W — EX LA-R/W — 6:1 — TELE. — 8" SAN.

968.57
164+50.00
968.57

975 970 965

EX. R/W — EX LA-R/W — 6:1 — TELE. — 8" SAN.

968.00
164+00.00
968.00

975 970 965

EX. R/W — EX LA-R/W — 6:1 — TELE. — 8" SAN.

967.04
163+50.00
967.04

970 965

EX. R/W — EX LA-R/W — 12" STM. — 8" SAN. — TELE.

966.89
163+00.00
966.89

970 965 960

EX. R/W — EX LA-R/W — 6:1 — 12" STM. — 8" SAN. — TELE.

966.17
162+50.00
966.17

PG ELEV. IS SHOWN AT E/P

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	12		
		1	22
0	12		
		5	23
5	1		
		5	1
0	0		
		0	14
0	15		
		0	27
		11	87

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - SR-741
STA. 162+50.00 TO STA. 164+50.00

MOT LYONS RD

38
72

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SEEDING	
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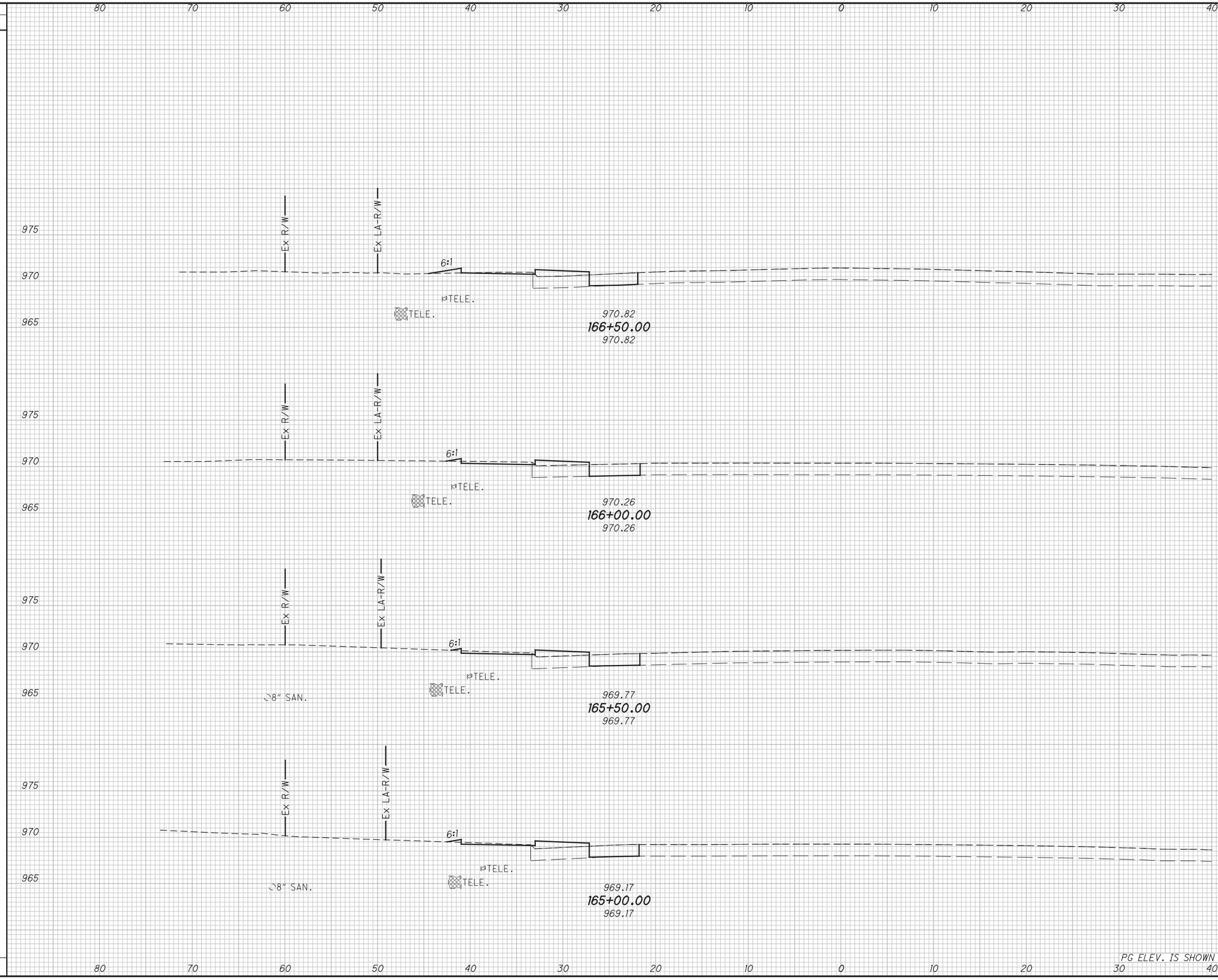

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	13		
		3	21
2	10		
		4	19
2	11		
		3	21
1	12		
		1	22
		11	83

CALCULATED DJB
CHECKED GKB

CROSS SECTIONS - SR-741
STA. 165+00.00 TO STA. 166+50.00

MOT LYONS RD

39
72

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SEEDING	
END WIDTH	SQ. YDS.

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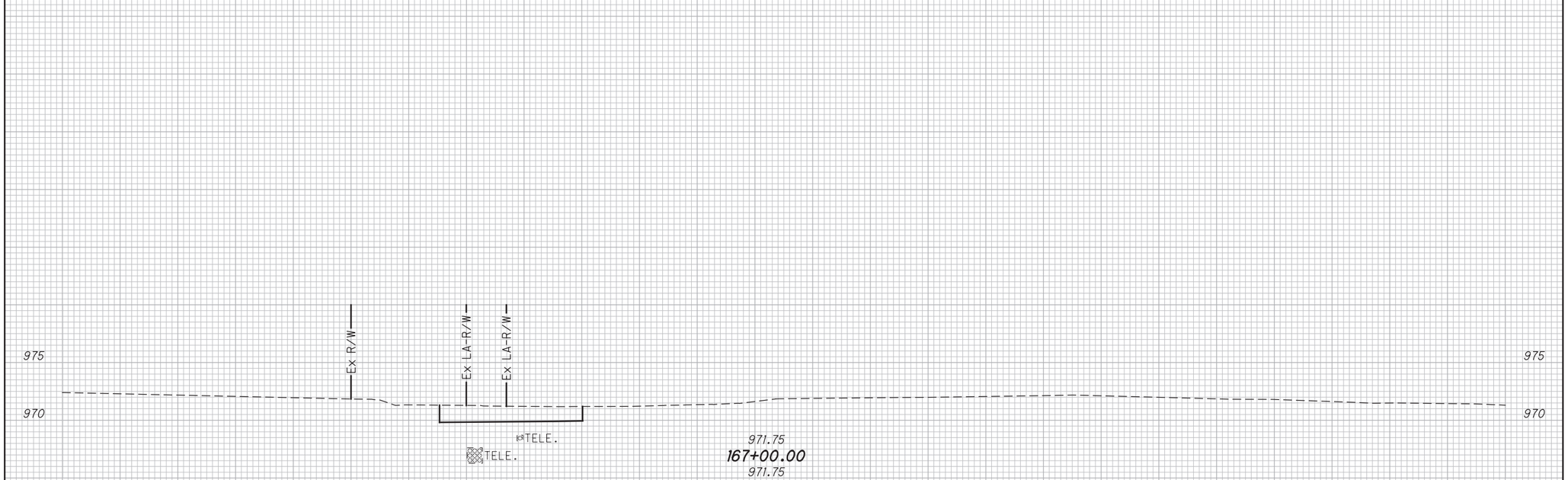
ITEM 203 - EXCAVATION 103 CU YD

ITEM 203 - EMBANKMENT 371 CU YD

TOTALS CARRIED TO GENERAL SUMMARY



END AREA	
CUT	FILL
17	0

VOLUME	
CUT	FILL
16	12
16	12

CALCULATED DJB

CHECKED GKB

CROSS SECTIONS - SR-741

STA. 167+00.00

MOT LYONS RD

40
72

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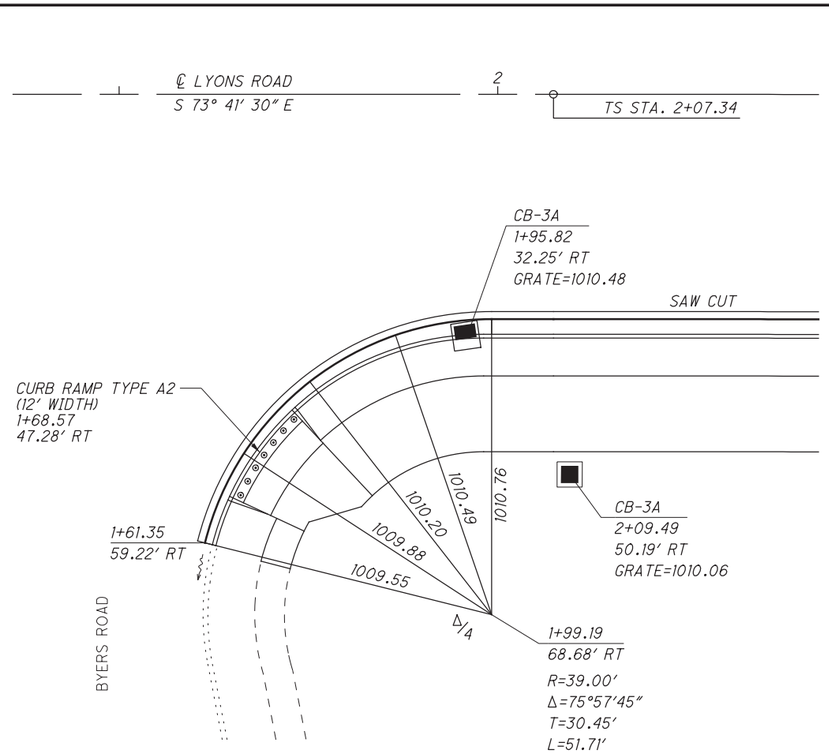
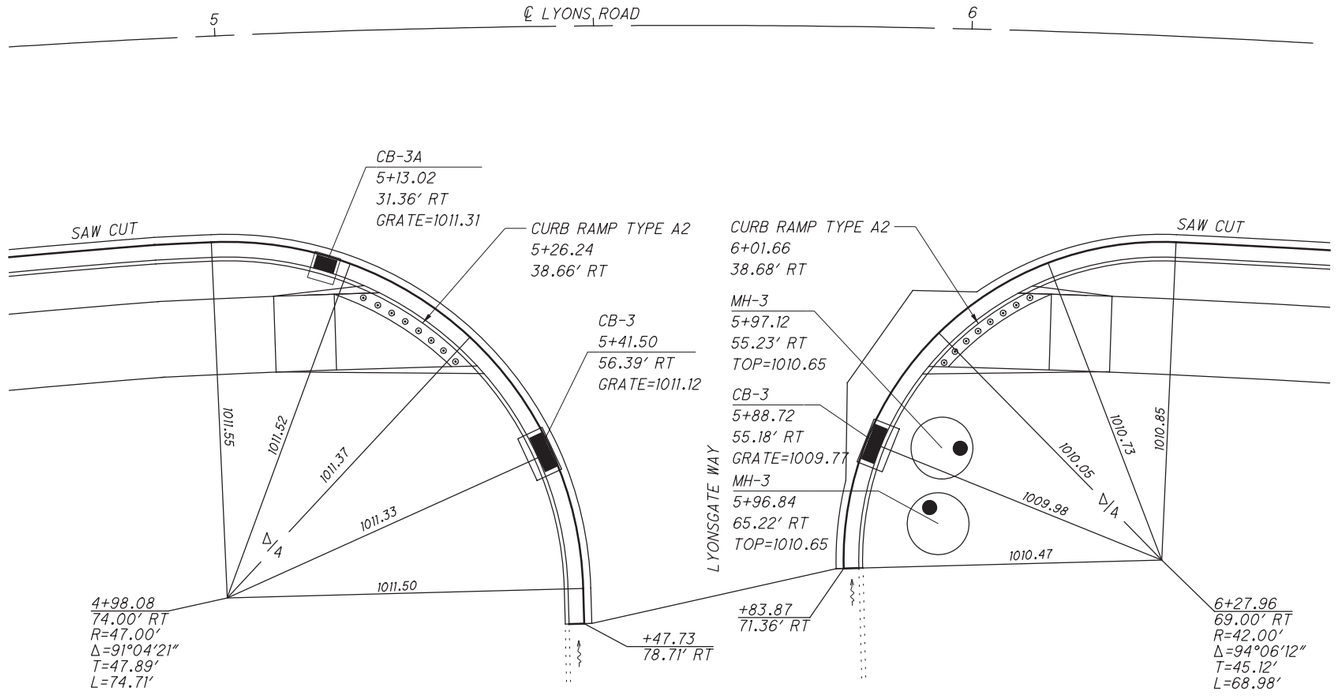
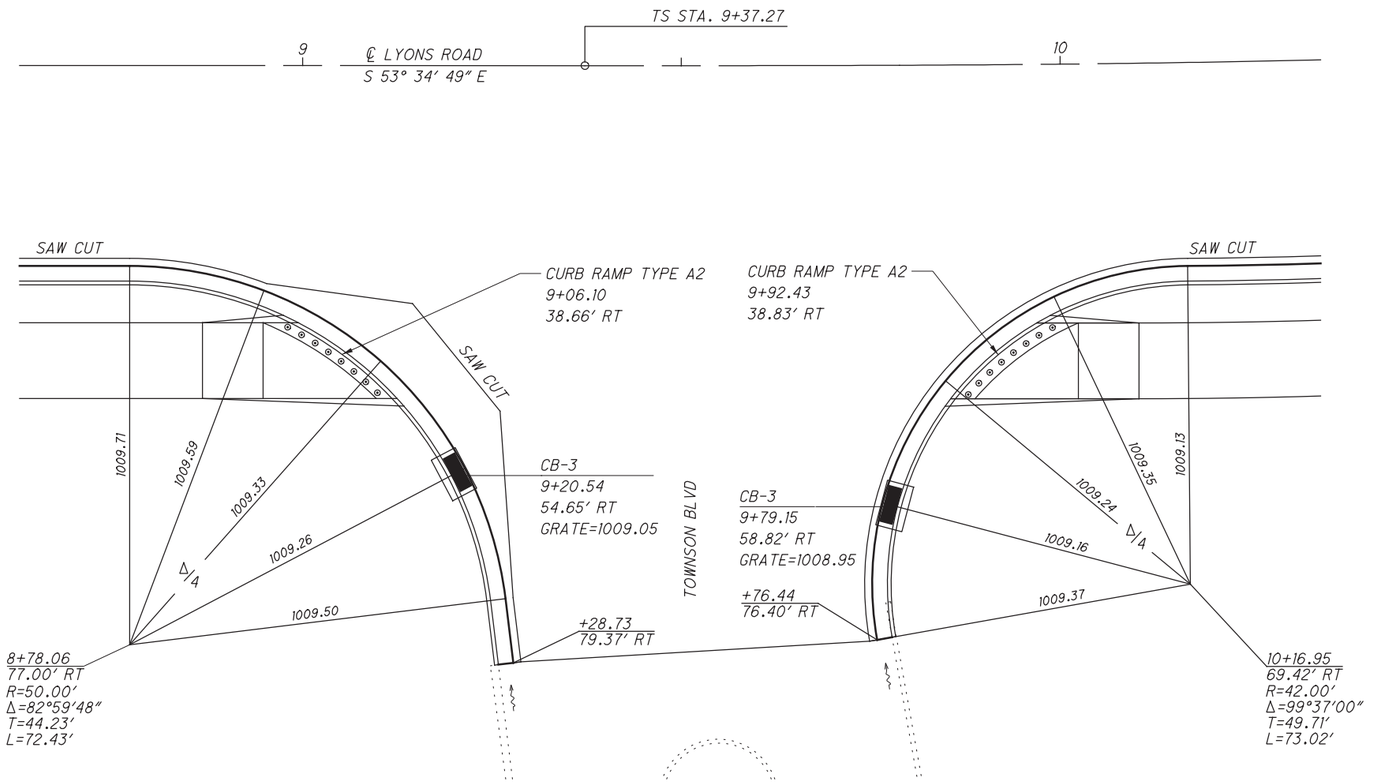


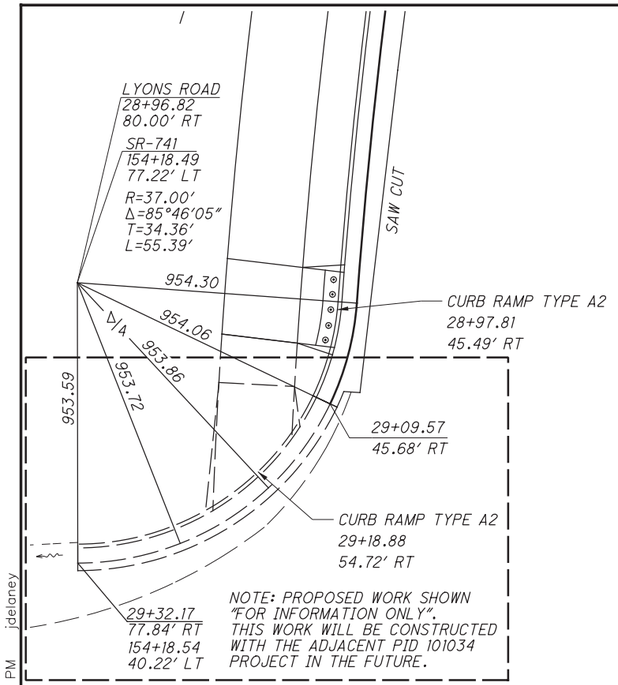


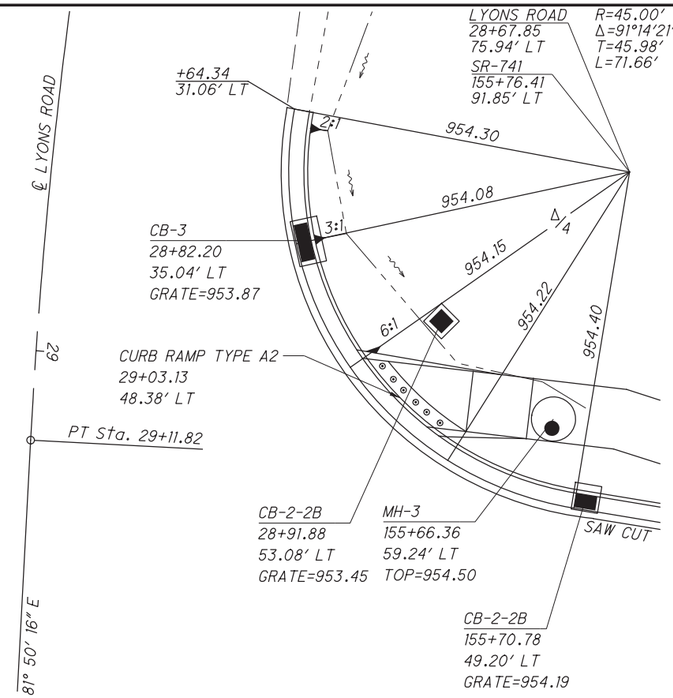


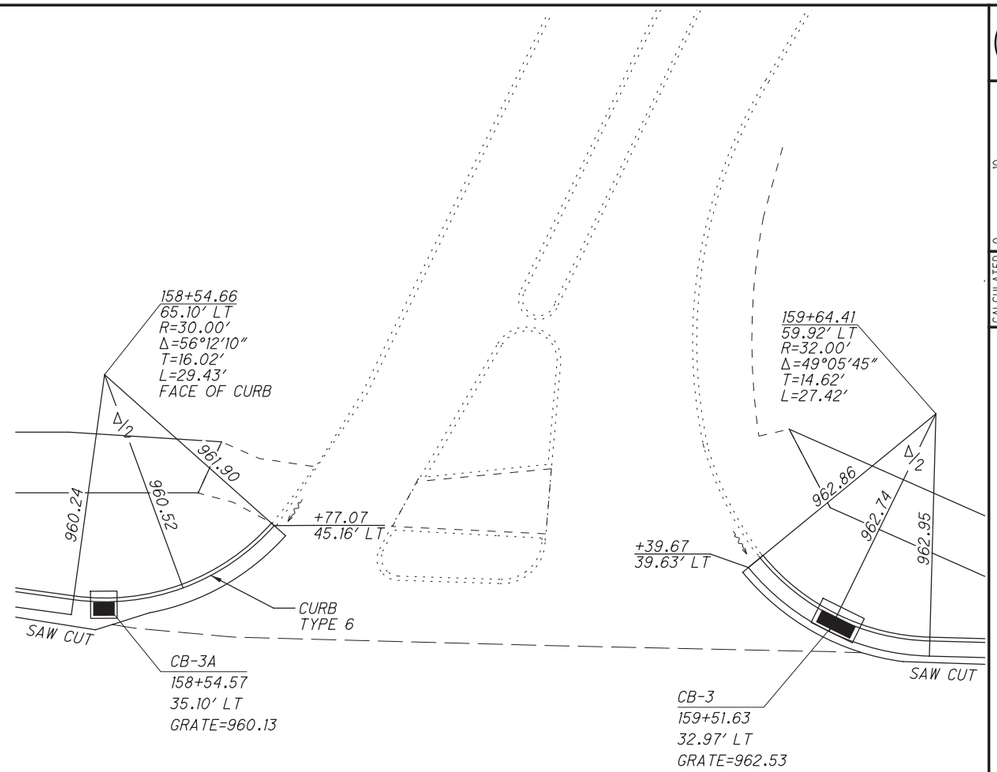
HORIZONTAL SCALE IN FEET
0 5 10 20

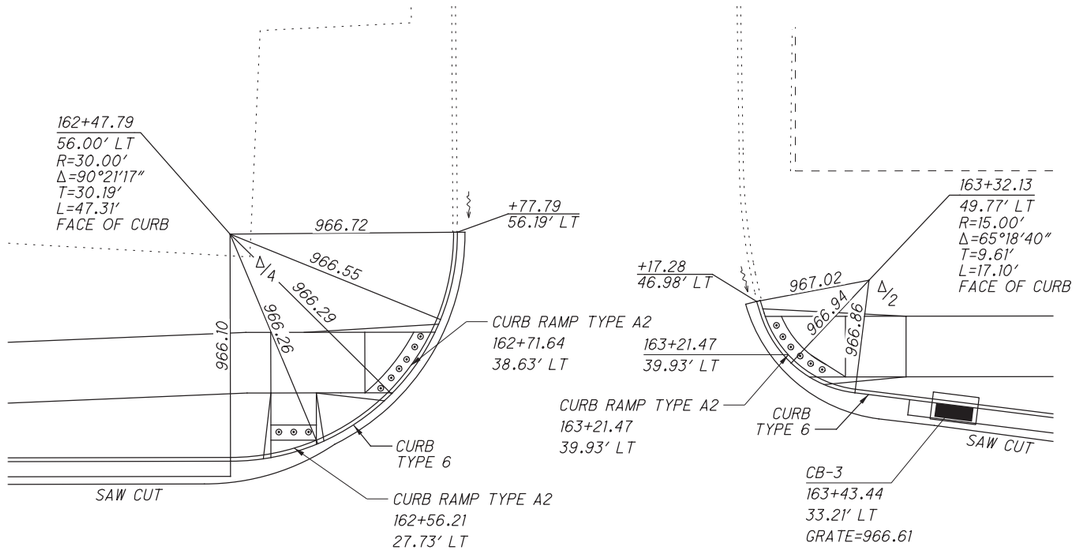
CALCULATED DJB
CHECKED MAG

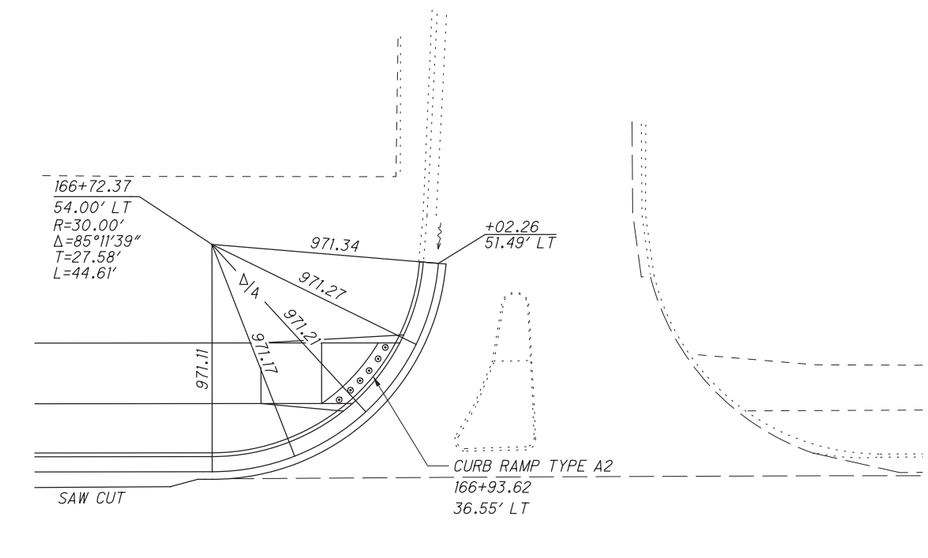
INTERSECTION DETAILS
MOT LYONS RD
LYONS ROAD











HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED DJB
CHECKED MAG

INTERSECTION DETAILS
SR-741

MOT LYONS RD

42
72

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DRIVE STA. 3+26.41 RT

DRIVE STA. 23+93.46 RT

DRIVE STA. 25+95.10 RT

DRIVEWAY PAVEMENT BUILDUP

RESIDENTIAL - CONCRETE
ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT

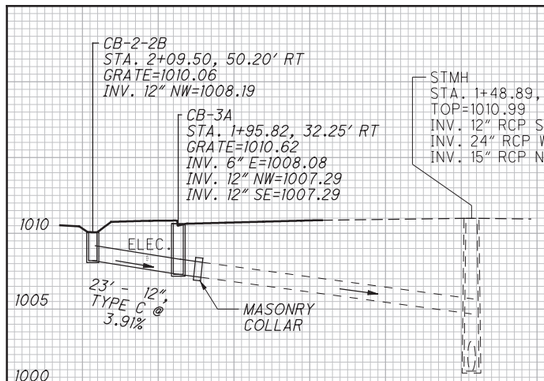
COMMERICAL - ASPHALT
ITEM 441 - 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG64-22
ITEM 407 - TACK COAT
ITEM 441 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) PG64-22
ITEM 408 - PRIME COAT
ITEM 304 - 8" AGGREGATE BASE

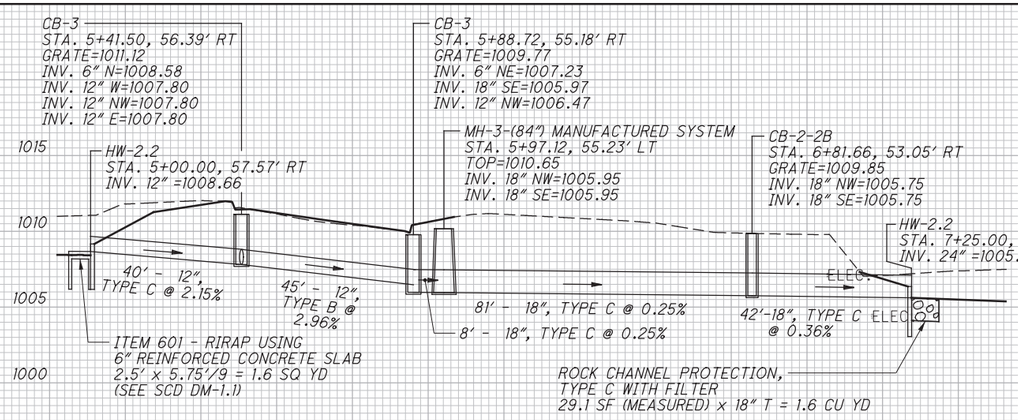
COMMERCIAL - CONCRETE
ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1

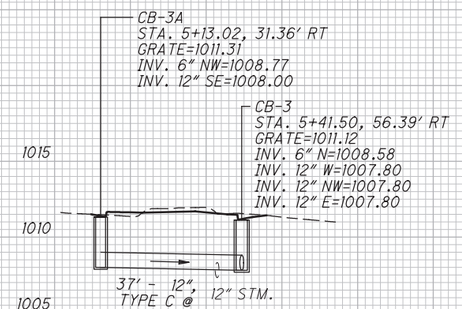
LYONS ROAD DRIVE PROFILES

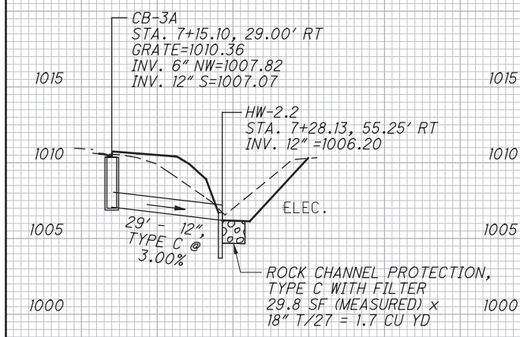
MOT LYONS RD

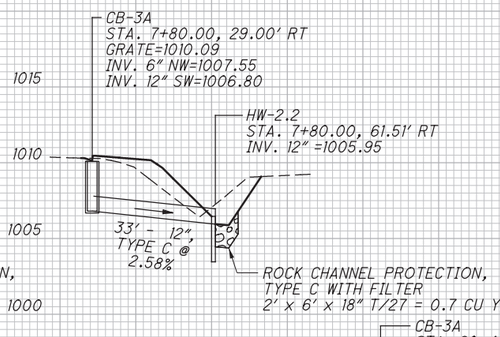
CALCULATED DJB
CHECKED MAG

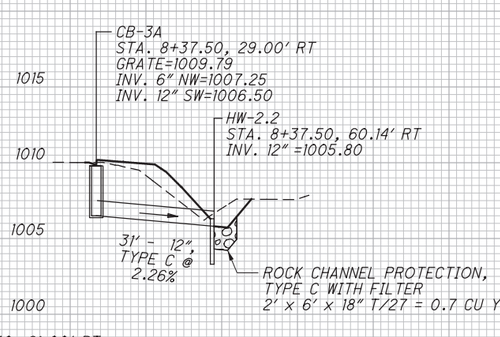


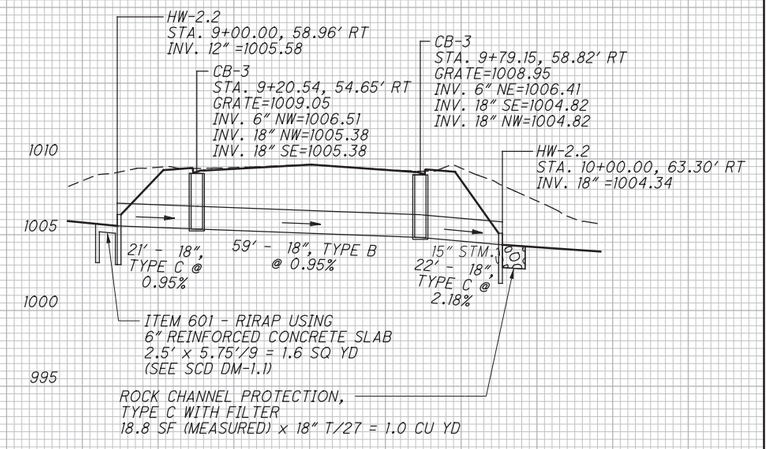


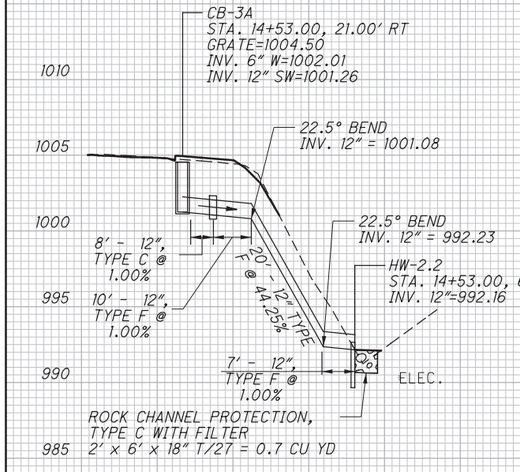


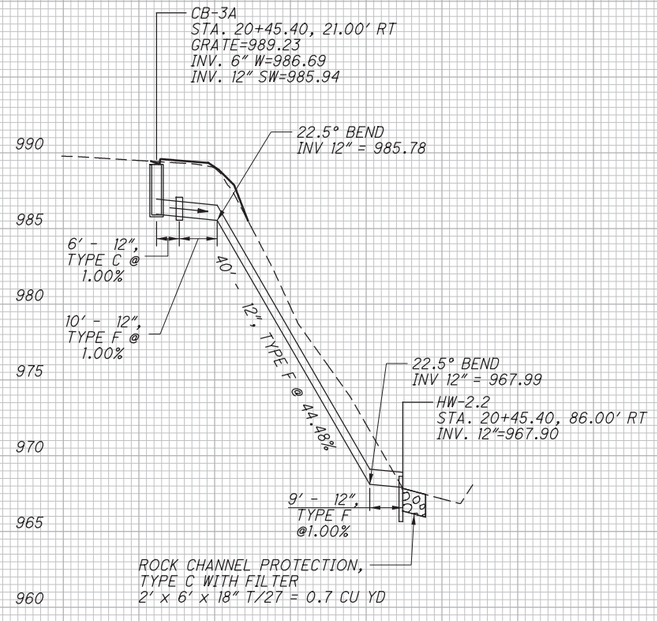


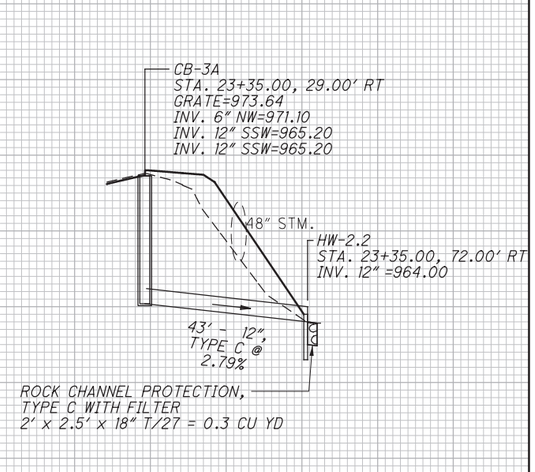








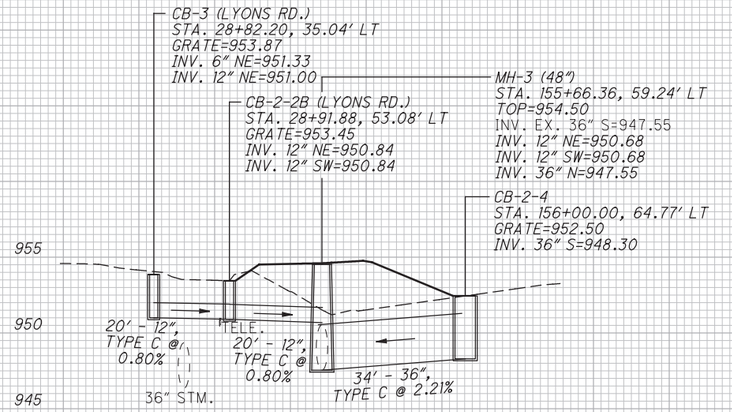


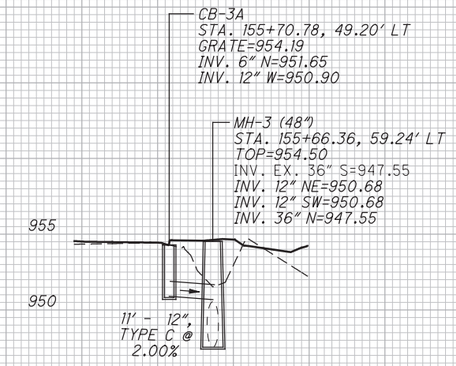


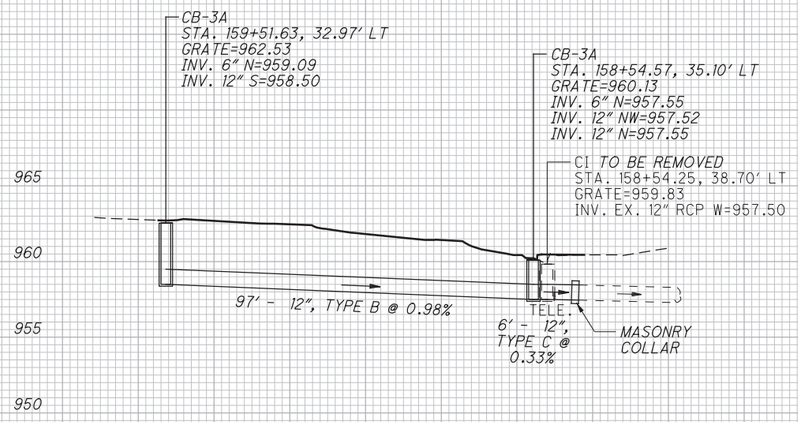
CALCULATED DMA
CHECKED GKB

STORM SEWER PROFILE
LYONS ROAD

MOT LYONS RD







STORM SEWER PROFILE
SR-741 AND LYONS ROAD

CALCULATED DMA
CHECKED GKB

MOT LYONS RD

GENERAL NOTES:

DESIGN SPECIFICATIONS
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2012, INCLUDING THE 2013 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN PARAMETERS
SELECT GRANULAR BACKFILL, ϕ = 34 DEGREES, SOIL UNIT WT. = 120 pcf
RETAINED BACKFILL, ϕ = 30 DEGREES, SOIL UNIT WT. = 120 pcf
FOUNDATION SOIL, ϕ = 28 DEGREES, SOIL UNIT WT. = 130 pcf

OPERATIONAL IMPORTANCE
A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

ITEM 610 - RETAINING WALL MISC.: SEGMENTAL CONCRETE BLOCK RETAINING WALL

1.0 DESCRIPTION
THIS WORK SHALL CONSIST OF FURNISHING DESIGN COMPUTATIONS, SHOP DRAWINGS, MATERIALS, EQUIPMENT AND LABOR TO CONSTRUCT A SEGMENTAL BLOCK RETAINING WALL TO THE LIMITS SHOWN IN THE PLANS.

THE WALL SYSTEM SHALL CONSIST OF A LEVELING PAD, PRECAST CONCRETE BLOCKS (WET-CAST UNITS ONLY), SELECT GRANULAR BACKFILL AND IF REQUIRED BY DESIGN, GEOGRID SOIL REINFORCEMENT.

WALLS SHALL BE GRAVITY TYPE OR GEOGRID REINFORCED DESIGNS. THE WALL MANUFACTURER SHALL BE RESPONSIBLE FOR INTERNAL STABILITY OF EACH WALL DESIGN IN ACCORDANCE WITH THESE SPECIFICATIONS. IF USED, GEOGRID REINFORCMENT MUST STAY WITHIN PROJECT RIGHT-OF-WAY AND BE COORDINATED WITH OTHER DESIGN ELEMENTS OF THE PROJECT TO AVOID CONFLICTS. ADDITIONAL COMPENSATION WILL NOT BE CONSIDERED IN THE EVENT THE WALL DESIGN CONFLICTS WITH OTHER PLAN ELEMENTS.

WALL BLOCK UNITS SHALL HAVE A MINIMUM BATTER AND BLOCK SPACING, TO PROHIBIT GROWTH OF VEGETATION THROUGH THE FACE OF THE WALL. THE MAXIMUM BATTER SHALL BE 20 DEGREES.

WALL COLOR SHALL BE 'BUFF' OR EQUAL AS APPROVED BY THE TOWNSHIP. WET-CAST SEGMENTAL BLOCK UNITS SHALL HAVE A ROCK PATTERN RELIEF.

2.0 DESIGN CRITERIA
THE SEGMENTAL WALL DESIGN SHALL BE ACCORDING TO THE MOST CURRENT EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND GEOTECHNICAL ENGINEERING CIRCULAR NO. 11 - DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SLOPES. (FHWA-NHI-10-024). THE WALL SUPPLIER SHALL BE RESPONSIBLE FOR ALL INTERNAL STABILITY ASPECTS OF THE WALL DESIGN.

INTERNAL STABILITY DESIGN SHALL INSURE THAT ADEQUATE CAPACITY-DEMAND RATIOS (OR FACTORS OF SAFETY) AGAINST OVERTURNING AND SLIDING ARE PRESENT AT EACH LEVEL OF BLOCK. IF REQUIRED BY DESIGN, GEOGRID REINFORCEMENT SHALL BE UTILIZED AND THE LOADING AT THE BLOCK/GEOGRID REINFORCEMENT CONNECTION AS WELL AS THE FAILURE SURFACE MUST BE INDICATED. THE CALCULATIONS TO DETERMINE THE ALLOWABLE LOAD OF THE GEOGRID REINFORCEMENT AND THE FACTOR OF SAFETY AGAINST PULLOUT SHALL ALSO BE INCLUDED. THE ANALYSIS OF SETTLEMENT, BEARING CAPACITY, AND OVERALL SLOPE STABILITY ARE THE RESPONSIBILITY OF THE DEPARTMENT. EXTERNAL LOADS SUCH AS THOSE APPLIED THROUGH STRUCTURE FOUNDATIONS, FROM TRAFFIC, SLOPING SURCHARGE, ETC., SHALL BE ACCOUNTED FOR IN THE INTERNAL STABILITY DESIGN. THE PRESENCE OF ALL APPURTENANCES BEHIND, IN FRONT OF, MOUNTED UPON, OR PASSING THROUGH THE WALL VOLUME SUCH AS DRAINAGE STRUCTURES, UTILITIES, STRUCTURE FOUNDATION ELEMENTS, OR OTHER ITEMS SHALL BE ACCOUNTED FOR IN THE INTERNAL STABILITY DESIGN OF THE WALL.

A. THE DESIGN SHALL MEET ALL PLAN REQUIREMENTS. THE RECOMMENDATIONS OF THE WALL SYSTEM SUPPLIERS SHALL NOT OVERRIDE THE MINIMUM PERFORMANCE REQUIREMENTS SHOWN HEREIN.
B. ONE HUNDRED PERCENT OF THE GEOGRID REINFORCEMENT DESIGNED AND PLACED IN THE REINFORCED SOIL ZONE SHALL EXTEND TO AND BE CONNECTED TO THE CONCRETE BLOCKS THROUGH THE USE OF CLEVIS CONNECTORS OR ANOTHER ACCEPTABLE METHOD.
C. THE CONTRACTOR SHALL INCORPORATE MEANS OF PLACING GEOGRID AROUND OBSTRUCTIONS IN THE REINFORCED SOIL ZONE. THE PROPOSED METHOD OF GEOGRID INSTALLATION AROUND OBSTRUCTIONS SHALL BE OUTLINED CLEARLY IN THE SHOP DRAWINGS.
D. THE COEFFICIENT OF LATERAL EARTH PRESSURE, KA, AND THE APPLICATION OF THE LATERAL FORCES TO THE REINFORCED SOIL ZONE FOR EXTERNAL STABILITY ANALYSIS SHALL BE COMPUTED USING THE RANKINE METHOD.
E. FOR SELECT GRANULAR BACKFILL, THE VALUE FOR THE ANGLE OF INTERNAL FRICTION FOR DESIGN PURPOSES SHALL BE AT LEAST 34 DEGREES. THE ANGLE OF INTERNAL FRICTION OF THE BACKFILL BEHIND MECHANICALLY STABILIZED EARTH MASS AND THE FOUNDATION SOILS, UNLESS OTHERWISE NOTED, SHALL ASSUME TO BE 30 DEGREES.
F. THE ALLOWABLE REINFORCEMENT TENSION FOR POLYMERIC (EXTENSIBLE) GEOGRID REINFORCEMENT SHALL BE BASED ON AASHTO SECTION 11.10 OR 11.11.
G. THE DESIGN LIFE OF THE WALL SHALL BE 75 YEARS.
H. THE MINIMUM DEPTH OF EMBEDMENT, MEASURED FROM THE FINISHED GROUND LINE TO THE TOP OF LEVELING PAD SHALL BE AT LEAST 1.0 FEET.
I. THE MINIMUM THICKNESS OF THE LEVELING PAD SHALL BE AT LEAST 6 INCHES.
J. GEOGRID REINFORCEMENT, IF UTILIZED, SHALL BE A MINIMUM OF 8 FT. IN LENGTH AS MEASURED FROM THE FACE OF THE SEGMENTAL BLOCK WALL FOR ALL WALLS GREATER THAN 5 FT IN HEIGHT. WALLS UNDER 5 FT. IN HEIGHT MAY UTILIZE A GEOGRID LENGTH OF 70% OF THE WALL HEIGHT IF SUPPORTED BY DESIGN CALCULATIONS.
K. THE WALL HEIGHT FOR DESIGN PURPOSES SHALL BE MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF THE WALL. WHEN THE WALL IS RETAINING A SLOPING SURCHARGE THEN THE WALL HEIGHT SHALL BE DEFINED AS THE EQUIVALENT DESIGN HEIGHT (H) AS SHOWN IN AASHTO 11.10.
L. THE WALL SYSTEM SHALL ACCOMMODATE UP TO ONE PERCENT DIFFERENTIAL SETTLEMENT IN THE LONGITUDINAL DIRECTION.

3.0 SUBMITTALS
THE WALL SUPPLIER SHALL SUBMIT DOUBLE STAMPED DESIGN COMPUTATIONS AND DOUBLE STAMPED SCALED SHOP DRAWINGS TO THE ENGINEER AT LEAST 30 DAYS PRIOR TO COMMENCEMENT OF WORK. NO WORK OR ORDERING OF MATERIALS FOR THE STRUCTURE SHALL BE DONE BY THE CONTRACTOR UNTIL THE SUBMITTAL HAS BEEN ACCEPTED IN WRITING BY THE ENGINEER. THE SHOP DRAWINGS SHALL BE DOUBLE STAMPED BY OHIO PROFESSIONAL ENGINEERS AND SHALL INCLUDE ALL DETAILS, DIMENSIONS, QUANTITIES, AND CROSS SECTIONS NECESSARY TO CONSTRUCT THE WALL AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS. THE SUBMITTAL TO THE ENGINEER SHALL INCLUDE TWO HARD COPIES AND ONE ELECTRONIC COPY IN PDF FORMAT. SCALED SHOP DRAWINGS SHALL BE 11 INCHES BY 17 INCHES IN DIMENSION, CONFORMING TO ODOT PLAN REQUIREMENTS.

A. PLAN, ELEVATION, AND CROSS SECTION SHEET(S) FOR EACH WALL SHOWING THE FOLLOWING:

1. A PLAN VIEW OF THE WALL INDICATING THE OFFSETS FROM THE CONSTRUCTION CENTERLINE TO THE FIRST COURSE OF BLOCKS AT ALL CHANGES IN HORIZONTAL ALIGNMENT. THESE SHALL BE CALCULATED USING THE OFFSETS TO THE FRONT FACE OF THE BLOCK SHOWN ON THE CONTRACT PLANS AND THE SUPPLIERS PROPOSED WALL BATTER. THE PLAN VIEW SHALL INDICATE BOTTOM (AND TOP COURSE OF BLOCK WHEN BATTERED), THE EXCAVATION AND SELECT GRANULAR BACKFILL LIMITS AS WELL AS ANY GEOGRID REINFORCMENT REQUIRED BY THE DESIGN. THE CENTERLINE OF ANY DRAINAGE STRUCTURE OR PIPE BEHIND OR PASSING THROUGH/UNDER THE WALL SHALL ALSO BE SHOWN.

2. AN ELEVATION VIEW OF THE WALL, INDICATING THE ELEVATION AND ALL STEPS IN THE TOP COURSE OF BLOCKS ALONG THE LENGTH OF THE WALL. THE TOP OF THESE BLOCKS SHALL BE AT OR ABOVE THE THEORETICAL TOP OF BLOCK LINE SHOWN ON THE CONTRACT PLANS. THIS VIEW SHALL ALSO SHOW THE STEPS AND PROPOSED TOP OF LEVELING PAD ELEVATIONS AS WELL AS THE FINISHED GRADE LINE AT THE WALL FACE SPECIFIED ON THE CONTRACT PLANS. THESE LEVELING PAD ELEVATIONS SHALL BE LOCATED AT OR BELOW THE THEORETICAL TOP OF LEVELING LINE SHOWN ON THE CONTRACT PLANS. THE LOCATION, SIZE, AND LENGTH OF ANY SOIL REINFORCING CONNECTED TO THE BLOCKS SHALL BE INDICATED.

3. TYPICAL CROSS SECTION(S) SHOWING THE LIMITS OF THE SELECT GRANULAR BACKFILL, GEOGRID REINFORCEMENT IF USED IN THE DESIGN. THE RIGHT-OF-WAY LIMITS SHALL BE INDICATED AS WELL AS THE PROPOSED EXCAVATION, TEMPORARY CUT SLOPES, AND THE ELEVATION RELATIONSHIP BETWEEN EXISTING GROUND CONDITIONS AND PROPOSED GRADES.

4. ALL GENERAL NOTES REQUIRED FOR CONSTRUCTING THE WALL.

B. ALL DETAILS FOR THE LEVELING PADS, INCLUDING THE STEPS, SHALL BE SHOWN. THE THEORETICAL TOP OF THE LEVELING PAD SHALL BE 1.0 FT. BELOW THE FINISHED GRADE LINE AT THE WALL FACE, UNLESS OTHERWISE SHOWN ON THE PLANS. THE MINIMUM LEVELING PAD THICKNESS SHALL BE 6 IN.

C. CAP BLOCKS SHALL BE USED TO COVER THE TOP OF THE STANDARD BLOCK UNITS. THE TOP COURSE OF BLOCKS AND CAP BLOCKS SHALL BE STEPPED TO SATISFY THE TOP OF BLOCK LINE SHOWN ON THE CONTRACT PLANS.

D. ALL DETAILS OF THE BLOCK AND/OR GEOGRID REINFORCEMENT PLACEMENT AROUND ALL APPURTENANCES LOCATED BEHIND, ON TOP OF, OR PASSING THROUGH THE WALL SHALL BE CLEARLY INDICATED. ANY MODIFICATIONS TO THE DESIGN OF THESE APPURTENANCES TO ACCOMMODATE A PARTICULAR DESIGN ARRANGEMENT SHALL ALSO BE SUBMITTED.

E. ALL BLOCK TYPES (STANDARD, CAP, CORNER, AND RADIUS TURNING BLOCKS) SHALL BE DETAILED SHOWING ALL DIMENSIONS.

F. ALL BLOCKS SHALL HAVE ALIGNMENT/CONNECTION DEVICES SUCH AS SHEAR KEYS, LEADING/TRAILING LIPS, OR PINS. THE DETAILS FOR THE CONNECTION DEVICES BETWEEN ADJACENT BLOCKS AND THE BLOCK TO SOIL REINFORCEMENT SHALL BE SHOWN. THE BLOCK SET BACK OR FACE BATTER SHALL BE LIMITED TO 20 DEGREES FROM VERTICAL, UNLESS OTHERWISE SHOWN BY THE PLANS.

G. ALL DETAILS OF THE DRAINAGE OUTLET, INCLUDING SLOPE PROTECTION SHALL BE SHOWN.

4.0 MATERIALS
THE MATERIALS SHALL MEET THE FOLLOWING REQUIREMENTS:

A. WET-CAST CONCRETE BLOCK:
WET-CAST CONCRETE BLOCK PROPOSED FOR USE SHALL BE PRE-CAST BY A ODOT CERTIFIED PRECASTER IN ACCORDANCE TO SUPPLEMENT 1073. DO NOT START FABRICATION OF THE SEGMENTAL BLOCK UNITS UNTIL THE SHOP DRAWINGS AND DESIGN CALCULATIONS HAVE BEEN ACCEPTED BY THE DEPARTMENT. PROPORTION THE CONCRETE MIX DESIGN THAT PROVIDES THE MINIMUM COMPRESSIVE STRENGTH OUTLINED IN THE SHOP DRAWINGS WITH THE MINIMUM REQUIREMENTS OF ACI 318. THE CONCRETE AIR CONTENT SHALL MEET THE REQUIREMENTS OF SUPPLEMENT 1073. PERFORM CONCRETE TESTING AS OUTLINED IN SUPPLEMENT 1073.

B. SELECT GRANULAR BACKFILL:
THE SELECT GRANULAR BACKFILL (SGB), DEFINED AS THE MATERIAL PLACED IN THE REINFORCED ZONE BEHIND THE WALL. FOR GRAVITY SEGMENTAL BLOCK WALLS, SGB SHALL BE UTILIZED TO BACKFILL TO GRADE WITHIN THE ZONE DEFINED BY THE EXCAVATION LIMITS ILLUSTRATED IN THE PROJECT PLANS. FURNISH SGB CONFORMING TO 703.17, AGGREGATE MATERIALS FOR ITEM 304, OR 703.11, STRUCTURAL BACKFILL, TYPE 2 AND THE REQUIREMENTS LISTED BELOW:

1. DO NOT USE SLAG MATERIALS OR RECYCLED PORTLAND CEMENT CONCRETE.
2. ENSURE THAT THE SGB MATERIAL HAS AN INTERNAL FRICTION ANGLE EQUAL TO OR GREATER THAN 34 DEGREES WHEN TESTING ACCORDING TO AASHTO T 236 AND THE FOLLOWING REQUIREMENTS:
   I. OBTAIN A TEST SAMPLE FROM THE PORTION OF THE SGB MATERIAL WHICH PASSES THE NO. 10 SIEVE.
   II. DETERMINE THE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT OF THE TEST SAMPLE ACCORDING TO AASHTO T99, METHOD A.
   III. COMPACT THE SAMPLE FOR DIRECT SHEAR TESTING TO 98 PERCENT OF THE MAXIMUM DRY DENSITY AND WITHIN ONE PERCENT OF THE OPTIMUM MOISTURE CONTENT.
   IV. PERFORM THE DIRECT SHEAR TEST THREE TIMES AT NORMAL STRESSES OF 10, 20 AND 40 POUNDS PER SQUARE INCH (70, 140 AND 280 KPA).
   V. PLOT THE MAXIMUM SHEAR STRESS VERSUS THE NORMAL STRESS FOR EACH TEST. DRAW A STRAIGHT LINE THAT IS BEST FIT TO THE THREE POINTS USING THE LEAST-SQUARES METHOD. DETERMINE THE FRICTION ANGLE BY MEASURING THE ANGLE OF THE BEST FIT LINE FROM THE HORIZONTAL. IF THE INTERNAL FRICTION ANGLE IS LESS THAN 34 DEGREES AND THE SGB HAS A SIGNIFICANT AMOUNT OF MATERIAL RETAINED ON THE NO. 10 SIEVE, THE CONTRACTOR MAY SUBMIT AN ALTERNATE SHEAR TEST PROCEDURE THAT INCLUDES MATERIAL LARGER THAN THE NO. 10 SIEVE IN THE TEST SAMPLE.
   VI. THE AASHTO T 296 TEST WITH PORE PRESSURE MEASUREMENT MAY BE USED IN LIEU OF AASHTO T 236. IF THE VENDOR'S DESIGN USES A FRICTION ANGLE HIGHER THAN 34 DEGREES, AS INDICATED ON THE APPROVED SHOP DRAWINGS, THIS HIGHER VALUE SHALL BE TAKEN AS THE MINIMUM REQUIRED.
   VII. WHEN GEOSYNTHETIC REINFORCING IS USED, THE SGB PH SHALL BE 4.5 TO 9.0 ACCORDING TO AASHTO T 289.
   VIII. AT LEAST 30 DAYS PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE INTERNAL FRICTION ANGLE AND PH TO SHOW THE SELECT FILL MATERIAL MEETS THE SPECIFICATION REQUIREMENTS. HOWEVER, THE PH WILL BE REQUIRED ONLY WHEN GEOSYNTHETIC REINFORCING IS USED. ALL TEST RESULTS SHALL NOT BE OLDER THAN 6 MONTHS. IN ADDITION, A SAMPLE OF SELECT FILL MATERIAL WILL BE OBTAINED FOR TESTING AND APPROVAL BY THE DEPARTMENT.
   IX. WHEN A FINE AGGREGATE IS SELECTED, THE REAR OF ALL SEGMENTAL BLOCK JOINTS SHALL BE COVERED BY A NONWOVEN NEEDLE PUNCH GEOTEXTILE FILTER MATERIAL ACCORDING TO ARTICLE 1080.05 OF THE CMS AND SHALL HAVE A MINIMUM PERMEABILITY ACCORDING TO ASTM D4491 OF 0.008 CM/SEC. ALL FABRIC OVERLAPS SHALL BE 6 IN. (150 MM) AND NON-SEWN. AS AN ALTERNATIVE TO THE GEOTEXTILE, A COARSE AGGREGATE SHALL BE PLACED AGAINST THE BACK FACE OF THE BLOCKS TO CREATE A MINIMUM 12 IN. (300 MM) WIDE CONTINUOUS GRADATION FILTER TO PREVENT THE FINE SGB MATERIAL FROM PASSING THROUGH THE BLOCK JOINTS.

C. UNIT FILL:
UNIT FILL WITHIN HOLLOW SEGMENTAL RETAINING WALL BLOCKS SHALL BE COMPRISED OF NO. 57 STONE. THE NO. 57 STONE SHALL BE NATURAL CRUSHED CARBONATE STONE. SLAG, RECYCLED ASPHALT PAVEMENT AND RECYCLED CONCRETE ARE PROHIBITED FOR USE AS UNIT FILL.

D. DRAINAGE MATERIAL:
FURNISH BEDDING AND BACKFILL FOR NON-PERFORATED PIPE CONSISTING OF NATURAL SAND, GRAVEL OR SAND MANUFACTURED FROM STONE CONFORMING TO 703.11, STRUCTURAL BACKFILL TYPE 2, EXCEPT 100 PERCENT OF THE MATERIAL SHALL PASS THROUGH A ¾ INCH (19.0 MM) SIEVE.

FOR PERFORATED PIPE INSTALLED WITHIN THE SGB, THE CONTRACTOR MAY FURNISH FABRIC-WRAPPED PERFORATED PIPE INSTEAD OF WRAPPING FILTER FABRIC AROUND THE PERFORATED PIPE IN THE FIELD. THE FABRIC WRAPPED PERFORATED PIPE MUST COME FROM THE SUPPLIER WITH THE FILTER FABRIC COMPLETELY SURROUNDING THE PIPE AND SECURELY ATTACHED TO THE PIPE. ENSURE THAT THE PIPE AND FILTER FABRIC MEET THE ABOVE REQUIREMENTS. THE DEPARTMENT WILL ACCEPT CERTIFIED TEST DATA FOR THE FILTER FABRIC ON FABRIC-WRAPPED PERFORATED PIPE IN PLACE OF NTPEP TEST DATA.

E. LEVELING PAD
THE LEVELING PAD SHALL BE CONSTRUCTED TO THE LINES AND GRADES ILLUSTRATED IN THE PLANS. THE LEVELING PAD SHALL CONSIST OF ODOT 304 MATERIAL AND SHALL CONSIST OF CRUSHED CARBONATE STONE. SLAG, RECYCLED ASPHALT PAVEMENT AND RECYCLED CONCRETE ARE PROHIBITED FOR USE IN THE LEVELING PAD.

F. NATURAL SOIL
FURNISH A-4A, A-6A, A-6B OR A-7-6 NATURAL SOIL CONFORMING TO THE REQUIREMENTS OF 203.021. PLACE A MINIMUM OF 12 INCHES OF NATURAL SOIL OVER THE SGB ONCE THE CAP BLOCKS HAVE BEEN INSTALLED. PLACE THE NATURAL SOIL IN A MAXIMUM 6 INCH LOOSE LIFT AND COMPACT TO 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY.

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AMT	MAS	DWS	5-18
CHECKED	REVISED		STRUCTURE FILE NUMBER
JLM			N/A

RETAINING WALL GENERAL NOTES (1 OF 2)
LYONS ROAD
RETAINING WALL

MOT LYONS RD

1 / 5

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GENERAL NOTES CONTINUED:

G. GEOGRID REINFORCEMENT
IF GEOGRID REINFORCEMENT IS REQUIRED BY THE ACCEPTED DESIGN, THE CONTRACTOR SHALL SUBMIT A MANUFACTURER'S CERTIFICATION FOR THE GEOGRID REINFORCEMENT PROPERTIES TO DEMONSTRATE THE REINFORCEMENT PROPERTIES MEET OR EXCEED THE VALUES UTILIZED IN THE DESIGN CALCULATIONS. THE GEOGRID REINFORCEMENT SHALL BE MANUFACTURED FROM HIGH DENSITY POLYETHYLENE (HDPE) UNIAXIAL OR POLYPROPYLENE BIAXIAL RESIGNS OR HIGH TENACITY POLYESTER FIBERS WITH A PVC COATING. THE GEOGRID SHALL BE STORED BETWEEN -20 AND 140 DEGREES FAHRENHEIT. THE FOLLOWING STANDARDS SHALL BE USED IN DETERMINING AND DEMONSTRATING THE GEOGRID REINFORCEMENT CAPACITIES.

1. ASTM D638 TEST METHOD FOR TENSILE PROPERTIES OF PLASTIC
2. ASTM D1248 SPECIFICATION FOR POLYETHYLENE PLASTICS MOLDING AND EXTRUSION MATERIALS
3. ASTM D4218 TEST METHOD FOR CARBON BLACK CONTENT IN POLYETHYLENE COMPOUNDS
4. ASTM D5262 TEST METHOD FOR EVALUATING THE UNCONFINED TENSION CREEP BEHAVIOR OF GEOSYNTHETICS
5. GG1-STANDARD TEST METHOD FOR GEOGRID RIB TENSILE STRENGTH
6. GG2-STANDARD TEST METHOD FOR GEOGRID JUNCTION STRENGTH
7. GG4-STANDARD PRACTICE FOR DETERMINATION OF THE LONG TERM DESIGN STRENGTH OF GEOGRID
8. GG5-STANDARD PRACTICE FOR EVALUATING GEOGRID PULLOUT BEHAVIOR

H. FURNISH ITEM 203, GRANULAR MATERIAL, TYPE C AS SHOWN IN THE PLANS.

5.0 CONSTRUCTION

5.1 BLOCK DAMAGE
BLOCKS MAY BE REJECTED FOR FAILURE TO MEET ANY OF THE REQUIREMENTS SPECIFIED ABOVE. IN ADDITION, ANY OR ALL OF THE FOLLOWING DEFECTS MAY BE SUFFICIENT CAUSE FOR REJECTIONS:

1. DEFECTS THAT INDICATE IMPERFECT MOLDING.
2. DEFECTS IN THE SPLITTING OPERATION, WHICH RESULT IN INCOMPLETE FRACTURE OF THE UNIT'S FACE.
3. CRACKS OR DEFECTS THAT WILL IMPAIR THE PLACEMENT OF THE UNIT.
4. DEFECTS IN THE PHYSICAL CHARACTERISTICS OF THE CONCRETE, SUCH AS BROKEN OR CHIPPED CONCRETE.
5. STAINED FORM FACE, DUE TO EXCESS FORM OIL OR OTHER CONTAMINATIONS.
6. SIGNS OF AGGREGATE SEGREGATION.
7. BROKEN OR CRACKED CORNERS.
8. INSUFFICIENT CONCRETE COMPRESSIVE STRENGTH.

THE ENGINEER WILL DETERMINE IF AN ATTEMPT CAN BE MADE TO REPAIR THE DEFECTIVE BLOCK. THE CONTRACTOR OR THE SUPPLIER SHALL MAKE THE REPAIR TO THE SATISFACTION OF THE ENGINEER.

5.2 HANDLING, STORAGE, AND SHIPPING
ALL BLOCKS SHALL BE HANDLED, STORED, AND SHIPPED IN SUCH A MANNER AS TO AVOID CRACKING AND CHIPPING. DO NOT PLACE CHIPPED OR CRACKED BLOCKS WITH THE RETAINING STRUCTURE. DAMAGED BLOCKS WILL BE REJECTED BY THE DEPARTMENT.

5.3 WALL EXCAVATION
UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH CMS 503 EXCEPT THAT THE LIMITS OF EXCAVATION SHALL BE AS SHOWN IN THE PLANS. EXCAVATION FOR THE RETAINING WALL IS UNCLASSIFIED AND MAY INCLUDE ROCK AND/OR SHALE.

5.4 FOUNDATION PREPARATION
THE FOUNDATION FOR THE STRUCTURE SHALL BE GRADED LEVEL FOR A WIDTH EQUAL TO OR EXCEEDING THE LENGTH OF REINFORCING GEOGRID OR AS SHOWN ON THE PLANS. PRIOR TO WALL CONSTRUCTION, THE FOUNDATION, IF NOT IN ROCK, SHALL BE LEVELED AND FINISHED WITH A VIBRATORY COMPACTOR. ANY FOUNDATION SOILS FOUND TO BE UNSUITABLE SHALL BE REMOVED AND REPLACED, AS DIRECTED BY THE ENGINEER. REMOVAL OF THE UNSUITABLE SOILS SHALL BE PAID AS ADDITIONAL WORK PER CMS 109, UNLESS SPECIFIED IN THE PLANS. PERFORM SUBGRADE COMPACTION PER 204.03 ACROSS THE ENTIRE WALL BASE, INCLUDING THE LEVELING PAD AREA AND THE ENTIRE REINFORCED ZONE.

5.5 LEVELING PAD CONSTRUCTION
THE LEVELING PAD SHALL BE PLACED TO ACHIEVE A 6" COMPACTED THICKNESS. THE LEVELING PAD SHALL BE COMPACTED USING A VIBRATORY PLATE COMPACTOR WITH A MINIMUM OF 4 PASSES. ADJUST THE PASSES OF THE COMPACTOR AS NEEDED TO PROVIDE A STABLE, NON-YIELDING SURFACE. THE LEVELING PAD MATERIAL SHALL BE PLACED WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT. DENSITY TESTING WILL NOT BE PERFORMED IN THE LEVELING PAD AREA.

5.5 WALL ERECTION
WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURER'S PROCEDURES AND SPECIFICATIONS. A COPY OF THE MANUFACTURER'S INSTALLATION PROCEDURES SHALL BE SUPPLIED TO THE DEPARTMENT WITH THE SHOP DRAWINGS.

5.6 SELECT GRANULAR BACKFILL MATERIAL PLACEMENT
SELECT GRANULAR BACKFILL (SGB) MATERIAL PLACEMENT SHALL CLOSELY FOLLOW THE PLACEMENT OF THE SEGMENTAL CONCRETE BLOCKS. AT NO TIME SHALL THERE BE MORE THAN TWO COURSES OF SEGMENTAL BLOCKS ABOVE THE LEVEL OF THE SGB MATERIAL. AT EACH GEOGRID LEVEL, THE SGB MATERIAL SHALL BE ROUGHLY LEVELED AND COMPACTED BEFORE PLACING THE GEOGRID. THE MAXIMUM SGB LIFT THICKNESS SHALL NOT EXCEED 8 INCHES (LOOSE). THE CONTRACTOR SHALL DECREASE THE SGB LIFT THICKNESS IF NECESSARY TO OBTAIN THE SPECIFIED DENSITY.

AT THE END OF EACH DAY'S OPERATIONS, THE CONTRACTOR SHALL SHAPE THE LAST LEVEL OF SGB TO RAPIDLY DIRECT RAINWATER RUNOFF AWAY FROM THE FACE OF THE WALL. THE CONTRACTOR SHALL NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION SITE.

COMPACT THE SGB TO A MINIMUM OF 98 PERCENT OF THE TEST SECTION MAXIMUM DRY DENSITY. THE MOISTURE CONTENT OF THE SGB MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL NOT BE LESS THAN 3.0 PERCENT DRY OF THE OPTIMUM MOISTURE CONTENT OR NOT GREATER THAN 2.0 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT, AS ESTABLISHED BY THE LABORATORY STANDARD PROCTOR TEST. SGB COMPACTION SHALL BE ACCOMPLISHED WITHOUT DISTURBANCE OR DISTORTION OF THE GEOGRID OR FACING BLOCKS. EACH LIFT OF THE SGB SHALL BE TESTED TO VERIFY DENSITY PRIOR TO PROCEEDING WITH ADDITIONAL WALL CONSTRUCTION.

COMPACTION WITHIN 2 FEET OF THE BACK OF THE BLOCKS SHALL BE ACCOMPLISHED BY REQUIRING AT LEAST 3 PASSES OF A LIGHT MECHANICAL TAMPER. THE MATERIAL PLACED WITHIN 2 FEET OF THE BACK OF THE BLOCK WILL NOT BE TESTED FOR DENSITY.

5.7 REINFORCEMENT PLACEMENT
PLACE THE GEOGRID REINFORCMENT LAYERS AT THE LOCATIONS AND ELEVATIONS INDICATED IN THE SHOP DRAWINGS. ATTACH THE GEOGRID TO THE SEGMENTAL BLOCK FACING AS INDICATED IN THE SHOP DRAWINGS. FOR GEOGRID REINFORCEMENT, THE ORIENTATION OF THE REINFORCING LAYER SHALL BE SUCH THAT THE MACHINE DIRECTION IS INSTALLED PERPENDICULAR TO THE WALL FACE. THE GEOGRID SHALL BE PULLED TAUT, WITH NO SLACK PRIOR TO THE PLACEMENT OF SELECT GRANULAR BACKFILL. THE GEOGRID SHALL BE KEPT TAUT BY THE USE OF PINS OR STAPLES.

THE GEOGRID ELEMENTS SHALL BE A SINGLE STRIP FROM THE BACK OF THE WALL TO THE DESIGN LENGTH. SPLICING OF THE GEOGRIDS TO OBTAIN THE DESIGN LENGTH IS PROHIBITED.

DAMAGED OR TORN GEOGRIDS ARE PROHIBITED FROM USE WITHIN THE SEGMENTAL RETAINING WALL. IF THE GEOGRID IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY STOP WORK AND REPLACE THE ENTIRE DAMAGED STRIP.

6.0 INSPECTION
WALL MANUFACTURER SHALL PROVIDE SUFFICIENT ON-SITE TECHNICAL ASSISTANCE BY A COMPANY REPRESENTATIVE TO ASSURE THAT THE CONTRACTOR AND THE ENGINEER FULLY UNDERSTAND THE CONSTRUCTION PROCEDURES.

THE CONTRACTOR SHALL PROVIDE A SOILS CONSULTANT WHO SHALL BE RESPONSIBLE FOR ENSURING THAT THE SELECT GRANULAR BACKFILL MATERIAL, PLACEMENT AND COMPACTION ARE IN COMPLIANCE WITH THIS NOTE. THE SOILS CONSULTANT MUST THROUGHLY DOCUMENT PLACEMENT OF ANY REINFORCEMENT UTILIZED TO CONSTRUCT THE SEGMENTAL RETAINING WALL SYSTEM.

THE SOILS CONSULTANT SHALL PROVIDE THE ENGINEER WITH TWO COPIES OF AN INSPECTION REPORT, WHICH CONTAINS THE TESTING RESULTS, DOCUMENTATION OF REINFORCEMENT PLACEMENT, ALL PERTINENT MEASUREMENTS AND THE SOILS CONSULTANT'S CONCLUSION.

THE SOILS CONSULTANT'S FIELD REPRESENTATIVE SHALL BE A REGISTERED PROFESSIONAL ENGINEER OR WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER. AN OHIO REGISTERED PROFESSIONAL ENGINEER SHALL SIGN THE FINAL INSPECTION REPORT.

7.0 COPING
A PRECAST COPING SHALL BE PROVIDED AT THE TOP OF THE WALL. THE COPING SHALL CONSIST OF SEGMENTAL CAP BLOCKS WITH AN APPROVED ADHESIVE TO FASTEN THE BLOCKS TO THE TOP WALL COURSE. APPLY ADHESIVE OVER 100% OF THE SOLID AREA OF THE WALL BLOCKS IMMEDIATELY BENEATH CAP BLOCKS. COST FOR THE PRECAST COPING, COMPLETE AND IN PLACE, SHALL BE INCLUDED WITH "ITEM SPECIAL -STRUCTURE, MISC.: SEGMENTAL CONCRETE BLOCK RETAINING WALL" FOR PAYMENT.

8.0 METHOD OF MEASUREMENT
THE WALL QUANTITY TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SQUARE FEET OF FACIAL AREA OF APPROVED SEGMENTAL CONCRETE BLOCK WALL IN PLACE.

8.1 BASIS OF PAYMENT
ITEM SPECIAL "SEGMENTAL CONCRETE BLOCK RETAINING WALL" WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT. THIS WORK SHALL INCLUDE THE INTERNAL STABILITY DESIGN SUBMITTAL, SHOP DRAWING DEVELOPMENT, MANUFACTURING, FURNISHING, AND THE INSTALLATION OF THE SEGMENTAL BLOCK WALL, INCLUDING THE SEGMENTAL CONCRETE BLOCKS, BLOCK CONNECTION PINS, GEOGRID REINFORCEMENT, CAPPING BLOCKS AND ADHESIVE, LEVELING PAD, SELECT GRANULAR BACKFILL, UNIT FILL, NATURAL SOIL AND ALL INCIDENTALS, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THIS ITEM.

FOUNDATION BEARING RESISTANCE:
THE SEGMENTAL CONCRETE BLOCK RETAINING WALL, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 1.8 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 2.5 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 10.2 KIPS PER SQUARE FOOT.

ITEM 517, RAILING MISC.: STEEL PIPE RAILING
CONTRACTOR IS RESPONSIBLE TO LIMIT A MAXIMUM OPENING OF 5 15/16" BETWEEN RAILING ELEMENTS. PICKETS AND POSTS SHOULD BE PLUMB. RAIL MEMBERS SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 KSI. THE RAILING SHALL BE BLAST CLEANED THEN PAINTED WITH ONE COAT EPOXY PRIMER AND TWO COATS URETHANE FINISH. PERTINENT PORTIONS OF CMS 514 SHALL APPLY.

ALL LABOR AND MATERIALS NEEDED TO INSTALL RAILING SHALL BE INCLUDED WITH THIS ITEM. RAIL POST CONCRETE ENCASEMENTS SHALL BE INCLUDED WITH THIS ITEM FOR PAYMENT. SHOP DRAWINGS FOR THE RAILINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.

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DESIGNED AMT | DRAWN MAS | REVIEWED DWS | DATE 5-18
CHECKED JLM | REVISED | STRUCTURE FILE NUMBER N/A

RETAINING WALL GENERAL NOTES (2 OF 2)
LYONS ROAD
RETAINING WALL

MOT LYONS RD

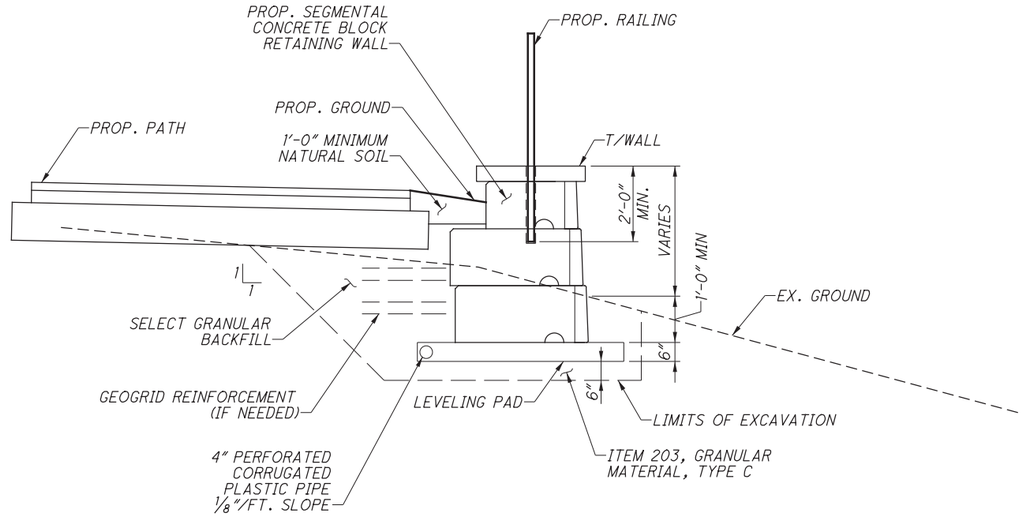
2 / 5

47 / 72

ESTIMATED QUANTITIES

ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION
203	35120	12	CU YD	GRANULAR MATERIAL, TYPE C
503	21100	300	CU YD	UNCLASSIFIED EXCAVATION
517	76300	150	FT	RAILING MISC.: STEEL PIPE RAILING
518	39800	160	FT	4" PERFORATED CORRUGATED PLASTIC PIPE
518	39900	15	FT	4" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS
610	50010	925	SQ FT	RETAINING WALL, MISC.: SEGMENTAL CONCRETE BLOCK RETAINING WALL

QUANTITIES COMPUTED BY: AMT 6-17
QUANTITIES CHECKED BY: SJM 6-17



TYPICAL WALL SECTION

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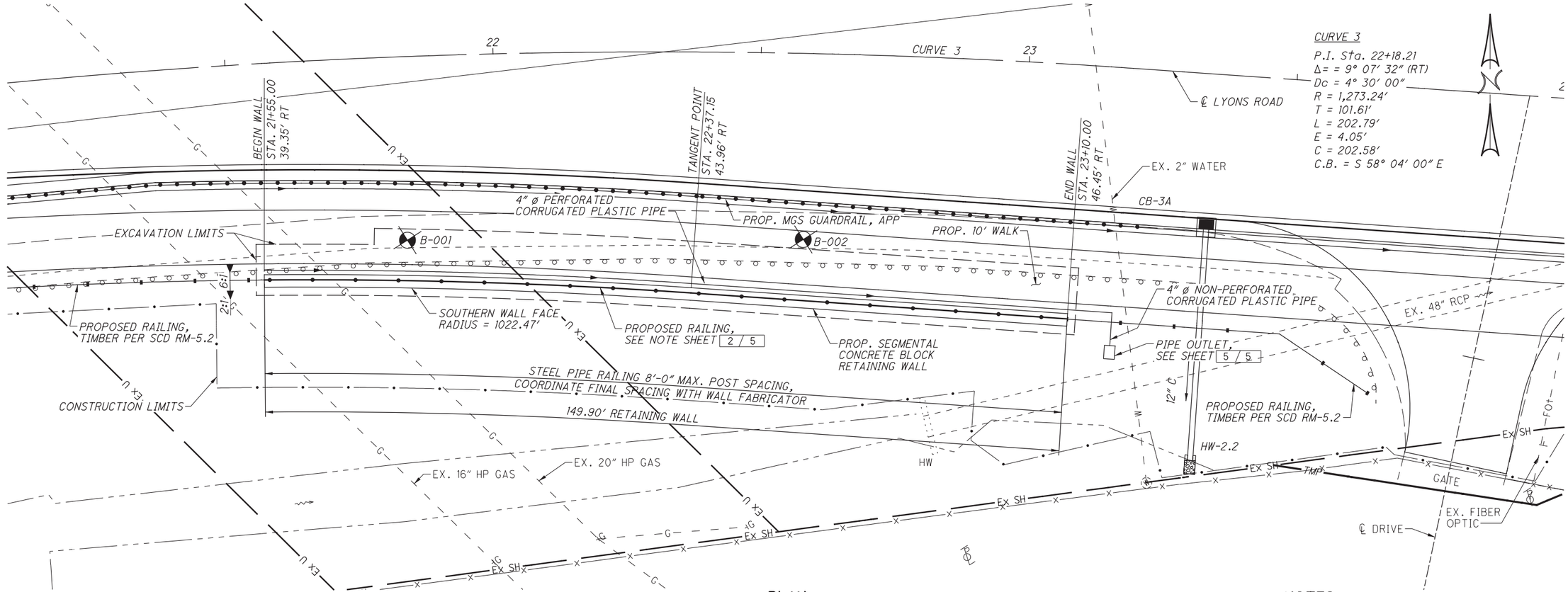
DESIGNED	DRAWN	REVIEWED	DATE
AMT	MAS	DWS	5-18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		N/A	

ESTIMATED QUANTITIES AND DETAILS
LYONS ROAD
RETAINING WALL

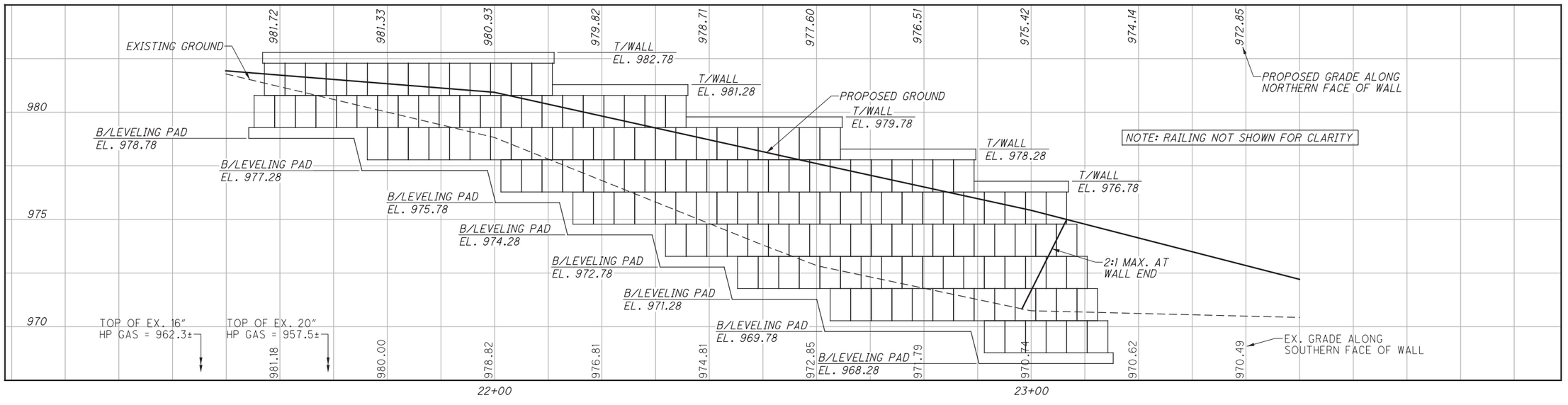
MOT LYONS RD



PLAN

NOTES:

1. WALL STATIONS ARE GIVEN AT INSIDE FACE.
2. FOR WALL SECTION, SEE SHEET 3 / 5 .
3. FOR RAIL ELEVATION, SEE SHEET 5 / 5 .



PROFILE

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AMT	MSD	DWS	5-18
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JLM			N/A

WALL PLAN AND PROFILE

LYONS ROAD
RETAINING WALL

MOT LYONS RD

4 / 5

49 / 72

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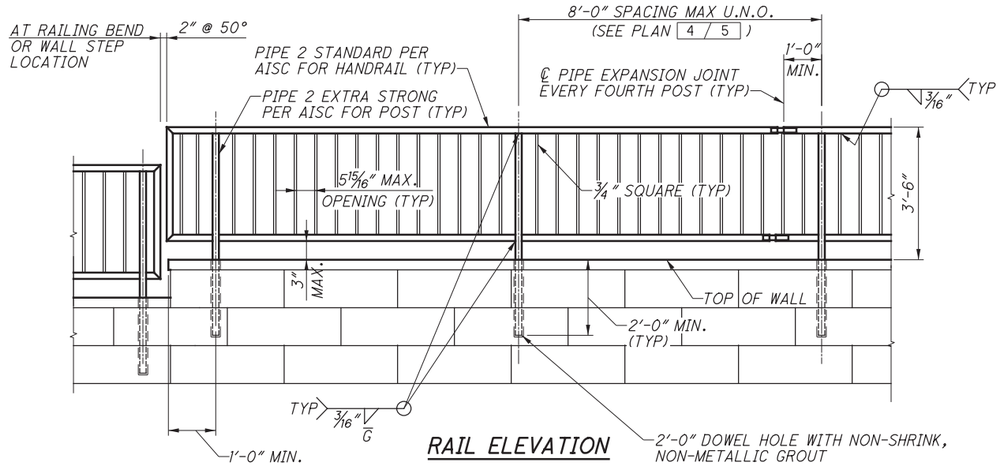

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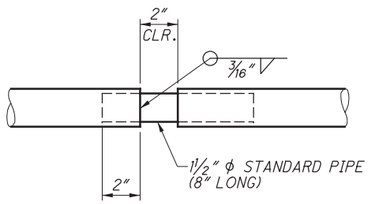
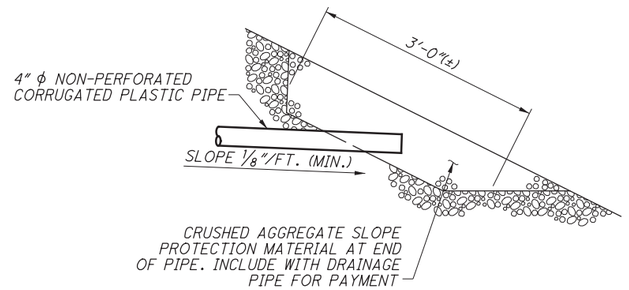


PIPE EXPANSION JOINT



PIPE OUTLET DETAIL

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DESIGNED	DRAWN	REVIEWED	DATE
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JLM		N/A	

MISCELLANEOUS DETAILS
LYONS ROAD
RETAINING WALL

MOT LYONS RD

5 / 5

50
72

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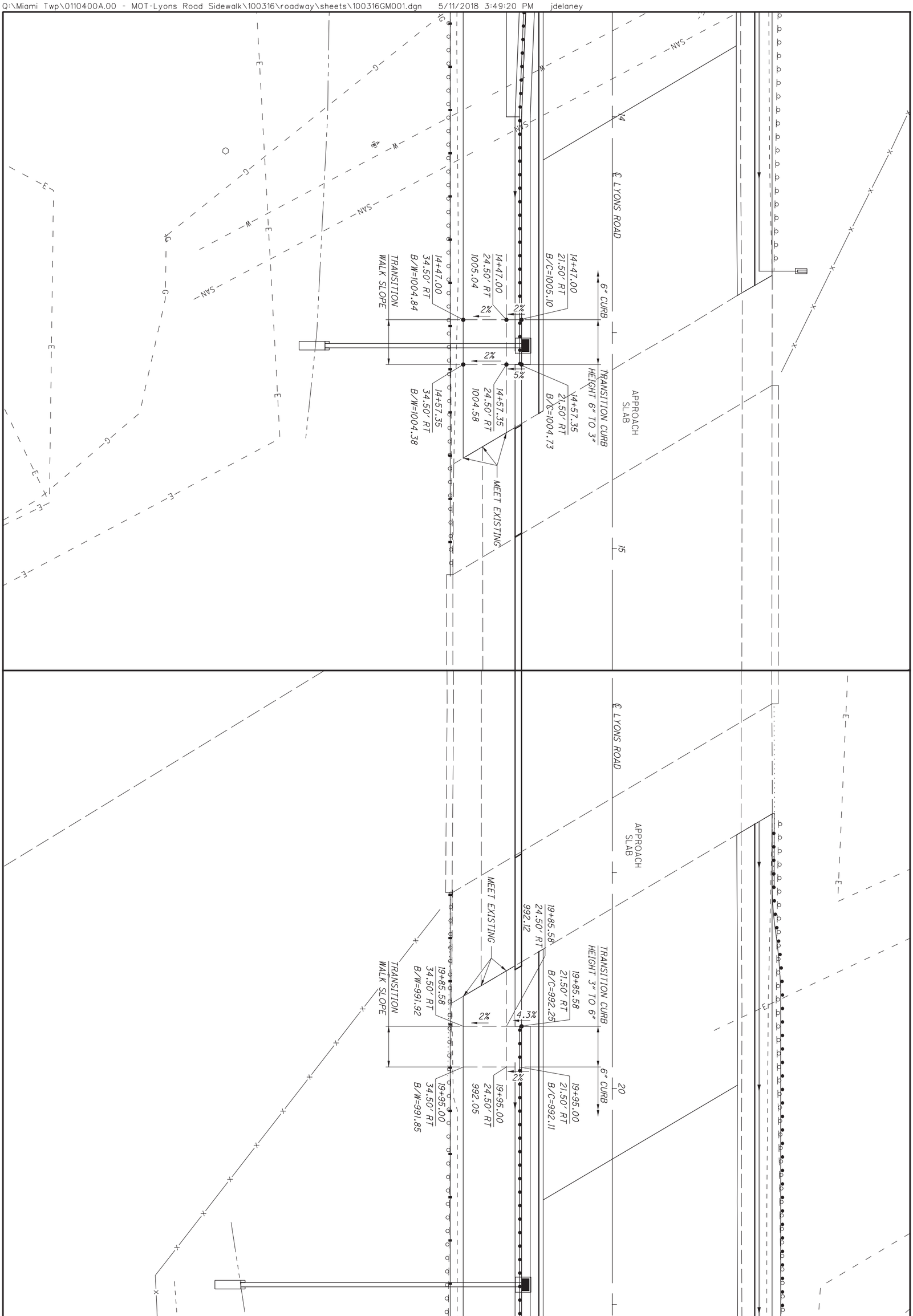

51/72	MOT LYONS RD	CURB AND SIDEWALK TRANSITION DETAILS	CALCULATED MAG / CHECKED GKB	0 5 10 20 HORIZONTAL SCALE IN FEET

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE		644 CENTER LINE(DOUBLE SOLID YELLOW) MILE		644 LANE LINE, 4" MILE	644 CHANNELIZING LINE, 8" FT	644 EDGE LINE, 4" MILE		644 STOP LINE FT	644 CROSSWALK LINE FT		644 LANE ARROW EA	644 DOTTED LINE, 4" (3' LINE, 9' GAP) FT					
55	X1	LYONS ROAD	1+54	1+73	L/R									160								
55	S1	LYONS ROAD	±1+59	1+69	L/R								38									
55	A1	LYONS ROAD	1+94		L											1						
55	A2	LYONS ROAD	1+94		L/R											1						
55-56	E1	LYONS ROAD	1+61	14+39	L						0.24											
55	C1	LYONS ROAD	1+64	3+59	L					195												
55	L1	LYONS ROAD	1+69	5+30	R				0.07													
55	D1	LYONS ROAD	1+69	5+30	R		0.07															
55	A3	LYONS ROAD	2+70		L											1						
55	A4	LYONS ROAD	2+85		L/R											1						
55	C2	LYONS ROAD	1+65	3+90	L					225												
55	A5	LYONS ROAD	3+46		L											1						
55	A6	LYONS ROAD	3+77		L/R											1						
55	E2	LYONS ROAD	1+99	5+02	R						0.06											
55-56	L2	LYONS ROAD	3+59	14+46	L				0.21													
55	D2	LYONS ROAD	4+10	5+30	L/R		0.02															
55	X2	LYONS ROAD	5+24	6+03	R									132								
55	C4	LYONS GATEWEAY	5+62		R					26												
55	A7	LYONS GATEWAY	5+68		R											1						
55	A8	LYONS GATEWAY	5+80		R											1						
55	D3	LYONS GATEWAY	5+24		R		0.01															
55	S2	LYONS GATEWAY	5+24		R								27									
55	C3	LYONS ROAD	6+02	6+66	L					64												
55	D4	LYONS ROAD	6+02	9+09	R		0.06															
55	E3	LYONS ROAD	6+03	9+04	R						0.06											
55	L3	LYONS ROAD	6+02	9+09	R				0.06													
55	A9	LYONS ROAD	6+30		L/R											1						
55	D5	LYONS ROAD	6+86	9+09	L/R		0.04															
55	X3	TOWNSON BOULEVARD	9+04	9+94	R									158								
55-56	C5	LYONS ROAD	9+66	10+10	L					44												
55-56	D6	LYONS ROAD	9+66	14+55	L/R		0.09															
55-56	L4	LYONS ROAD	9+66	14+63	R				0.09													
55	A10	LYONS ROAD	9+88		L/R											1						
55-56	E4	LYONS ROAD	9+94	14+69	R						0.09											
56	D7	LYONS ROAD	10+10	14+53	L/R		0.08															
57	C6	LYONS ROAD	24+05	24+55	L					50												
57	A11	LYONS ROAD	24+29		L/R											1						
57	D8	LYONS ROAD	24+05	28+85	L/R		0.09															
57	C7	LYONS ROAD	25+56	28+85						329												
57	A12	LYONS ROAD	25+73		L/R											1						
57	A13	LYONS ROAD	26+61		L/R											1						
57	A14	LYONS ROAD	27+49		L/R											1						
57	K1	LYONS ROAD	27+20	28+19	R												99					
57	C8	LYONS ROAD	28+19	28+85	R					66												
57	A15	LYONS ROAD	28+37		L/R											1						
57	A16	LYONS ROAD	28+57		R											1						
57	S3	LYONS ROAD	28+87		R								38									
57	S4	LYONS ROAD	28+67		L/R								10									
TOTALS CARRIED TO GENERAL SUMMARY							0.46		0.43	999	0.45		113	450		16	99					

CALCULATED VM
CHECKED LAS

TRAFFIC CONTROL SUBSUMMARY

MOT LYONS RD

52
72

jdelaney
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SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE		646 CENTER LINE(DOUBLE SOLID YELLOW)	646 LANE LINE, 4"	646 EDGE LINE, 4"		644 EDGE LINE, 4"	644 EDGE LINE, 6"	644 CROSSWALK LINE	644 CENTER LINE(DOUBLE SOLID YELLOW)	644 LANE LINE, 4"							
							MILE	MILE	MILE		MILE	MILE	FT	MILE	MILE							
57	X4	LYONS ROAD	28+93	28+95	LR								179									
58	G1	SR 741	155+45	158+80	L							0.06										
58	X5	SR 741	158+76	158+92	L								29									
58	X6	SR 741	159+13	159+39	L								47									
58	G2	SR 741	159+36	162+48	L							0.06										
58	X7	SR 741	162+69	163+26	LR								99									
58-59	G3	SR 741	163+21	166+89	L							0.07										
59	X8	SR 741	166+93	167+06	L								23									
59	X9	SR 741	167+15	167+43	L								48									
56	E10	LYONS ROAD	14+39	19+32	L				0.1													
56	D10	LYONS ROAD	14+53	19+45	L		0.1															
56	L5	LYONS ROAD	14+46	19+38	L			0.1														
56	D11	LYONS ROAD	14+55	19+47	R		0.1															
56	E11	LYONS ROAD	14+69	19+59	R				0.1													
56	L6	LYONS ROAD	14+63	19+53	R			0.1														
56-57	E12	LYONS ROAD	19+32	28+95	L						0.18											
56-57	L7	LYONS ROAD	19+38	28+87	L										0.18							
56-57	D12	LYONS ROAD	19+45	23+54	L									0.08								
56-57	D13	LYONS ROAD	19+47	23+54	R									0.08								
56-57	E13	LYONS ROAD	19+59	29+03	R						0.18											
56-57	L8	LYONS ROAD	19+53	28+87	R										0.18							
TOTALS CARRIED TO GENERAL SUMMARY							0.2	0.2	0.20		0.36	0.19	425	0.16	0.36							

CALCULATED VM
CHECKED LAS

TRAFFIC CONTROL SUBSUMMARY

MOT LYONS RD

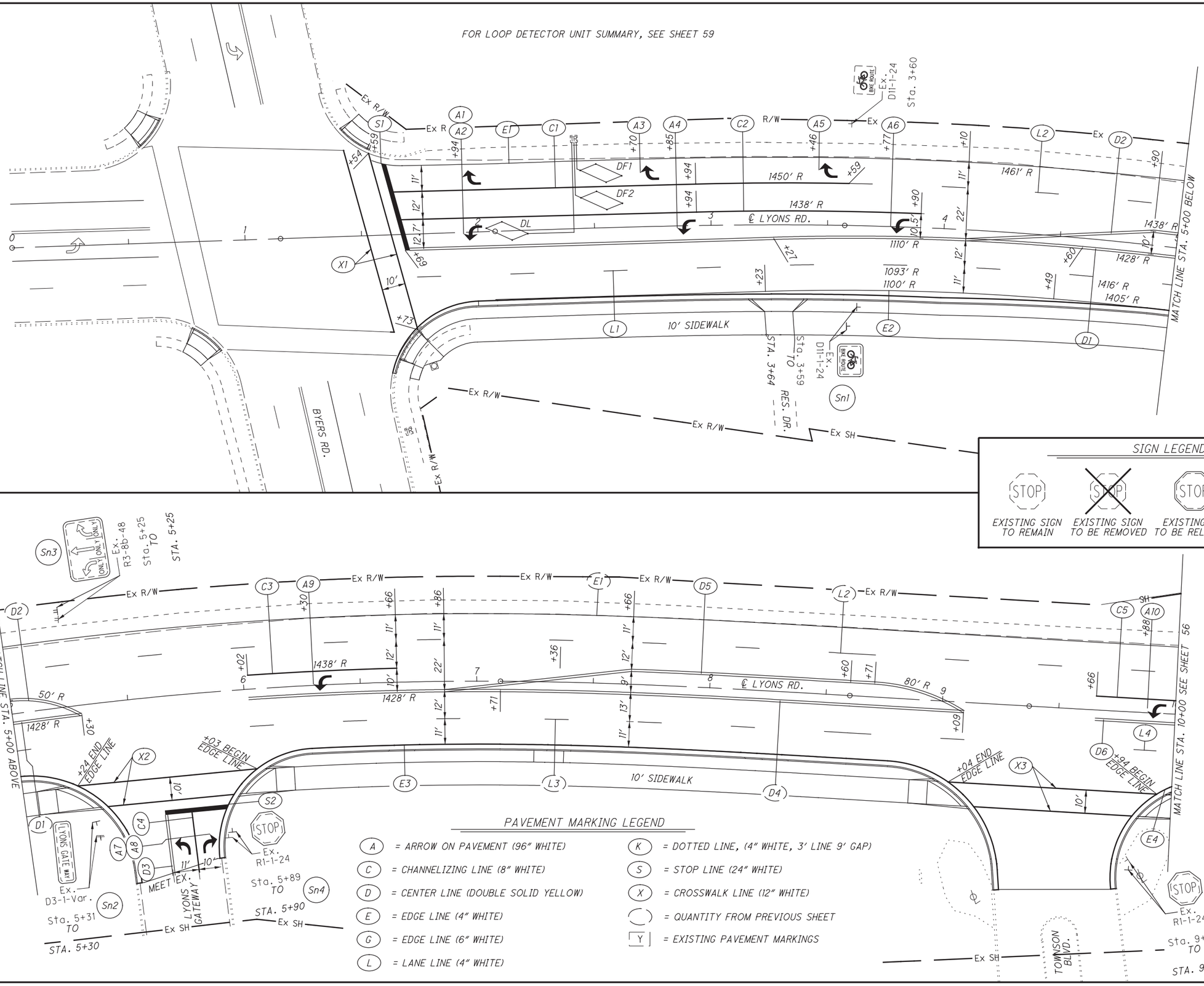
SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)		630 GROUND MOUNTED SUPPORT, NO. 3 POST	630 STREET NAME SIGN SUPPORT, NO. 3 POST	630 SIGN, FLAT SHEET	630 SIGN, STREET NAME			630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	630 REMOVAL OF POLE MOUNTED SIGN AND REERECTION			
								FT	FT	SQ FT	EACH			EACH	EACH	EACH	EACH			
55	Sn1	LYONS RD.	3+59 TO 3+64	RT	D11-1-24			14							1	1				
55	Sn2	LYONS RD.	5+31 TO 5+30	RT	D3-1-VAR.				14		1			1		1				
55	Sn3	LYONS RD.	5+25 TO 5+25	LT	R3-8b-48			28							1	2				
55	Sn4	LYONS RD.	5+89 TO 5+90	RT	R1-1-24			14							1	1				
55	Sn5	LYONS RD.	9+83 TO 9+83	RT	R1-1-24			14							1	1				
56	Sn6	LYONS RD.	11+00 TO 11+00	RT	R2-1-24			14							1	1				
56	Sn7	LYONS RD.	11+87 TO 11+90	RT	W8-13-36										1	1				
57	Sn8	LYONS RD.	24+52 TO 24+52	RT	R3-H8cg-48			28							1	2				
57	Sn9	LYONS RD.	25+50	RT	R3-2-36	36x36		14		9										
57	Sn10	LYONS RD.	26+50	LT	R3-2-36	36x36		14		9										
57	Sn11	LYONS RD.	27+49 TO 27+20	RT	R3-H8da-54			28							1	2				
58	Sn12	SR-741	155+66 TO 155+45	LT	D3-1-VAR				14								1			
					D3-1-VAR												1			
58	Sn13	SR-741	156+13 TO 156+10	LT	SPECIAL			28							1	2				
58	Sn14	SR-741	157+26 TO 157+12	LT	R3-H8eb-66			28							1	2				
58	Sn15	SR-741	158+53 TO 158+44	LT	R3-H8eb-66			28							1	2				
58	Sn16	SR-741	158+53 TO 158+53	LT	H10-H8-12			10							1	1				
58	Sn17	SR-741	161+18 TO 161+18	LT	D1-1c-VAR			14							1	1				
58	Sn18	SR-741	163+88 TO 165+25	LT	R3-17dp-30			14							1	1				
					R3-9b-24										1					
59	Sn19	SR-741	164+52 TO 164+50	LT	R3-H8cg-48			28							1	2				
59	Sn20	SR-741	166+95 TO 166+96	LT	R1-1-24			14							1	1				
TOTALS CARRIED TO GENERAL SUMMARY								332	28	18	1			1	17	24	2			

CALCULATED VM
CHECKED LAS

TRAFFIC CONTROL SUBSUMMARY

MOT LYONS RD

FOR LOOP DETECTOR UNIT SUMMARY, SEE SHEET 59



SIGN LEGEND

EXISTING SIGN TO REMAIN	EXISTING SIGN TO BE REMOVED	EXISTING SIGN TO BE RELOCATED	PROPOSED SIGN
STOP	STOP	STOP	STOP

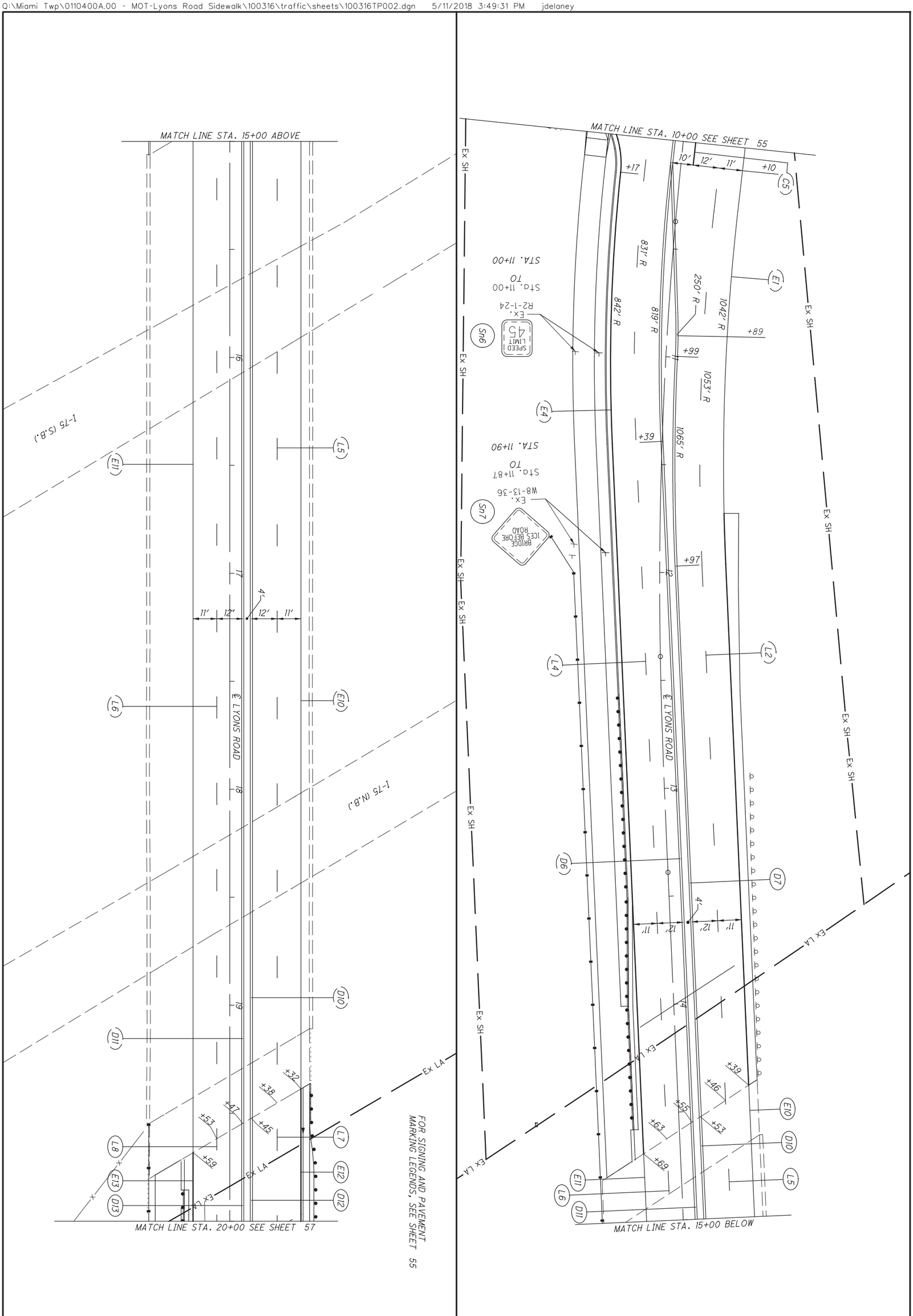
PAVEMENT MARKING LEGEND

- (A) = ARROW ON PAVEMENT (96" WHITE)
- (C) = CHANNELIZING LINE (8" WHITE)
- (D) = CENTER LINE (DOUBLE SOLID YELLOW)
- (E) = EDGE LINE (4" WHITE)
- (G) = EDGE LINE (6" WHITE)
- (L) = LANE LINE (4" WHITE)
- (K) = DOTTED LINE, (4" WHITE, 3' LINE 9' GAP)
- (S) = STOP LINE (24" WHITE)
- (X) = CROSSWALK LINE (12" WHITE)
- ( ) = QUANTITY FROM PREVIOUS SHEET
- [Y] = EXISTING PAVEMENT MARKINGS

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

CALCULATED VM | CHECKED LAS

TRAFFIC CONTROL PLAN
LYONS ROAD STA. 1+00 TO STA. 10+00
MOT LYONS RD



56 / 72	MOT LYONS RD	TRAFFIC CONTROL PLAN LYONS ROAD STA. 10+00 TO STA. 20+00	CALCULATED VM CHECKED LAS	0 10 20 40 HORIZONTAL SCALE IN FEET

REMOVAL OF PAVEMENT MARKINGS

ITEM	UNIT	QUANTITY
LANE ARROW	EACH	16
LANE LINE	MILE	0.98
CENTER LINE	MILE	0.78
CHANNELIZING LINE	FOOT	1080
EDGE LINE	MILE	0.52

QUANTITIES CARRIED TO GENERAL SUMMARY

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

CALCULATED VM

CHECKED LAS

TRAFFIC CONTROL PLAN
LYONS ROAD STA. 20+00 TO STA. 30+00
MOT LYONS RD

57
72

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* END / SUSPEND EDGE LINE MARKING AT PROP. / EX. CROSSWALK LINE.

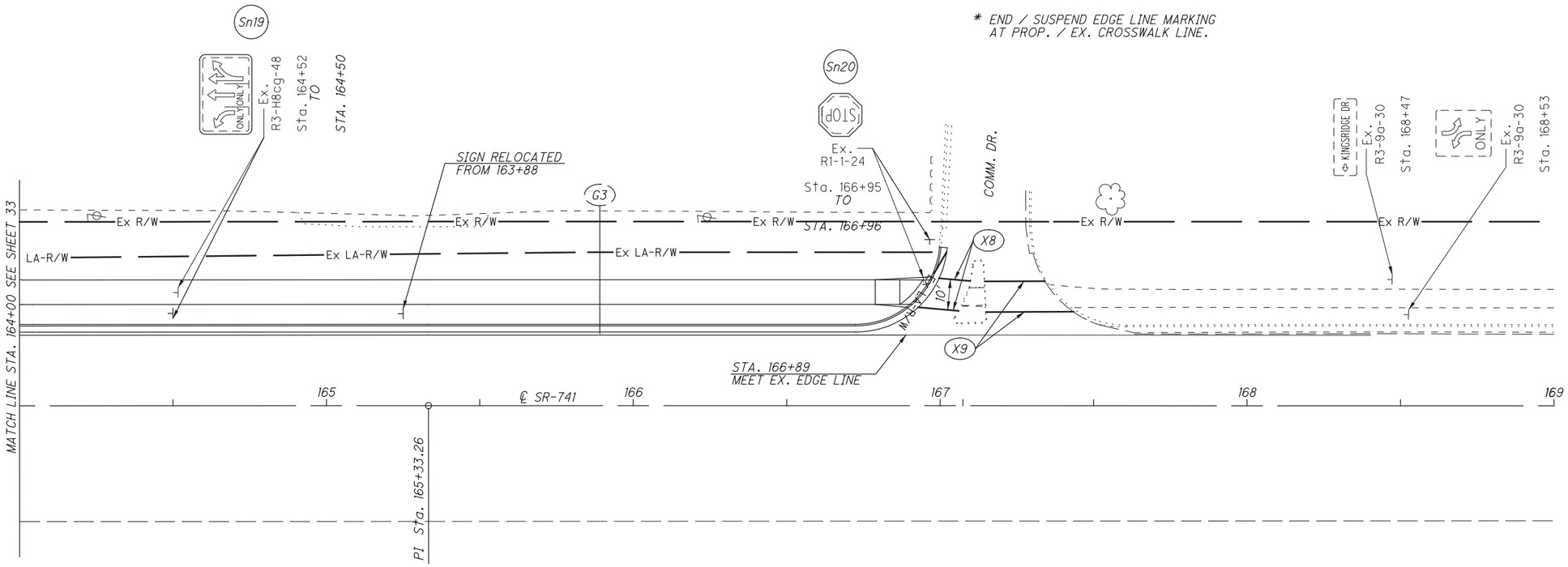
FOR SIGNING AND PAVEMENT MARKING LEGENDS, SEE SHEET 55

TRAFFIC CONTROL PLAN
SR-741 STA. 154+00 TO STA. 164+00

MOT LYONS RD

CALCULATED VM | CHECKED LAS

HORIZONTAL SCALE IN FEET (0, 10, 20, 40)



FOR SIGNING AND PAVEMENT MARKING LEGENDS, SEE SHEET 55

LOOP DETECTOR UNIT SUMMARY

INTERSECTION	LEG	DIRECTION	LOOP	SHAPE1	SIZE (FT)	DISTANCE FROM FRONT OF STOP LINE	632 DETECTOR LOOP	632 LOOP DETECTOR TIE IN	625 PULL BOX REMOVED AND REPLACED	NOTE
							EACH	EACH	EACH	
Byers & Lyons	EAST	WB THROUGH	DF1	ADD	A = 4.5′	80′	1	1		TC-82.10 SERIES CONNECTION
Byers & Lyons	EAST	WB THROUGH	DF2	ADD	A = 4.5′	80′	1			
Byers & Lyons	EAST	WB LEFT	DL	ADD	A = 4.5′	40′	1	1		
Lyons & SR 741	WEST	EB LEFT	L-26	P	6′ X 30′	0′	1	1		STOP LINE
Lyons & SR 741	WEST	EB LEFT	L-6	ADD	A = 4.5′	60′	1	1		EXTENSION
Lyons & SR 741	WEST	EB THROUGH	L-7	P	6′ X 30′	0′	1	1		STOP LINE
Lyons & SR 741	WEST	EB THROUGH	L-20	ADD	A = 4.5′	100′	1	1		EXTENSION
Lyons & SR 741	WEST	EB THROUGH	L-8	P	6′ X 30′	0′	1	1		STOP LINE
Lyons & SR 741	WEST	EB THROUGH	L-21	ADD	A = 4.5′	100′	1	1	1	EXTENSION
Lyons & SR 741	WEST	EB RIGHT	L-27	P	6′ X 30′	0′	1	1	1	STOP LINE
TOTAL TO GENERAL SUMMARY							10	9	2	

1 SHAPES: POWERHEAD (P), QUADRUPOLE (Q), ANGULAR DESIGN DETECTOR (ADD), RECTANGULAR (R), OR DIAMOND (D).

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED VM
CHECKED LAS

TRAFFIC CONTROL PLAN
SR-741 STA. 164+00 TO STA. 169+00

MOT LYONS RD

59
72

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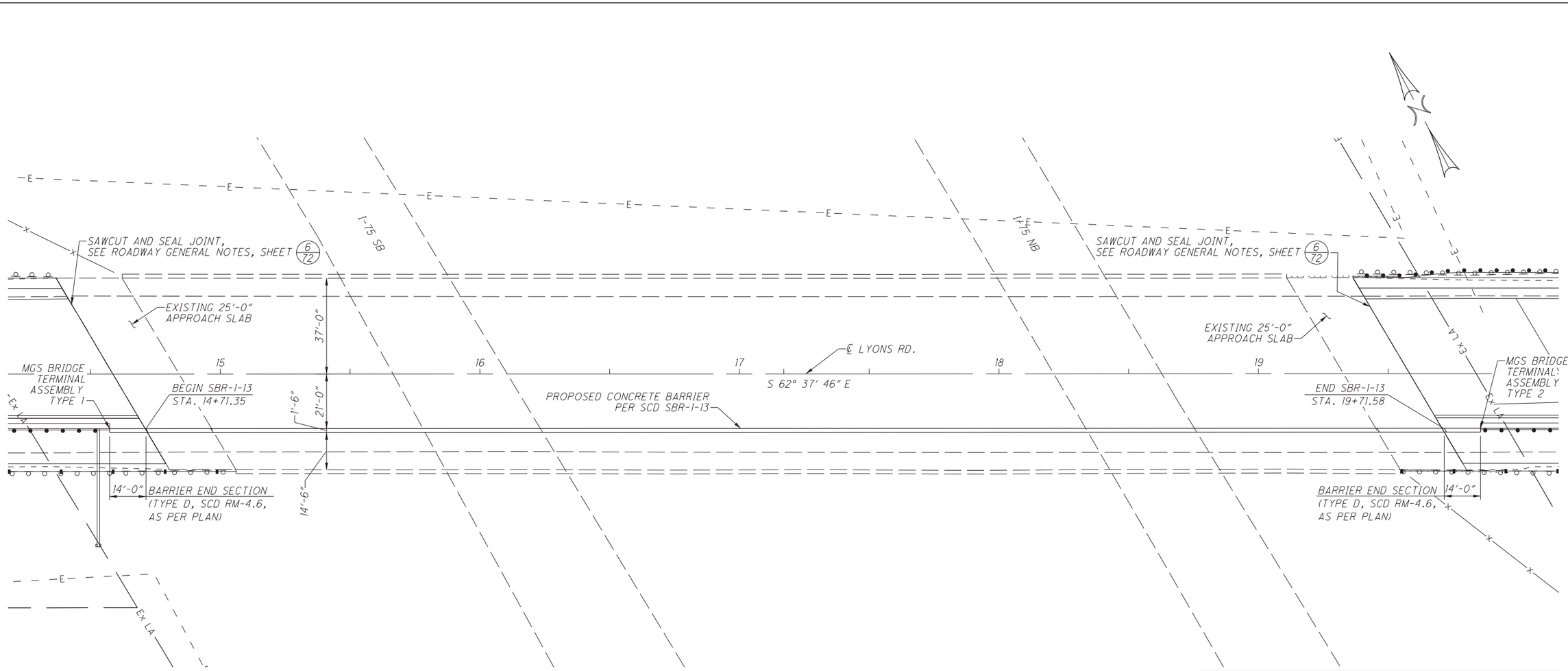


GENERAL PLAN

PROPOSED WORK

CONSTRUCT A CONCRETE BARRIER TO DELINEATE A NEW SIDEWALK THAT WILL PROVIDE PEDESTRIAN ACCESS ACROSS I-75 ON THE SOUTH SIDE OF LYONS ROAD

EXISTING STRUCTURE

TYPE: 6-SPAN CONTINUOUS, COMPOSITE WELDED PLATE GIRDERS (A-572, PAINTED) WITH REINFORCED CONC. DECK, CAP AND COLUMN PIERS, AND SEMI-INTEGRAL STUB ABUTMENTS

SPANS: 66'-8", 82'-8¾", 82'-7⅞", 82'-10", 82'-9⅞", AND 49'-3½" c/c BEARINGS

ROADWAY: 74'-0" (TOE TO TOE OF PARAPETS)

DESIGN LOADING: HS20-44 CASE II AND THE ALTERNATE MILITARY LOADING AND A FUTURE WEARING SURFACE OF 60 PSF

WEARING SURFACE: MONOLITHIC CONCRETE

SKEW: 30°45'00" RIGHT FORWARD

APPROACH SLABS: 25'-0" LONG (AS-1-81)

ALIGNMENT: TANGENT

CROWN: NORMAL CROWN (0.0156 FT./FT.)

COORDINATES: LATITUDE: N 39°37'48"
LONGITUDE: W 84°13'48"

DESIGN AGENCY
LJB Inc. - 2500 Newmark Drive
Miamisburg, OH 45342
(937) 259-5000 tel - (937) 259-5100 fax - LJBInc.com

DESIGNED	DRAWN	REVIEWED	DATE
AMT	MAS	DWS	5-18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		5706467	

MONTGOMERY COUNTY
STA. 14+83.86
STA. 19+33.19

GENERAL PLAN
BRIDGE NO. MOT-75-0306
LYONS ROAD OVER I-75 MAINLINE

MOT LYONS RD

1 / 5

60 / 72

GENERAL NOTES:

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS
REFER TO THE FOLLOWING STANDARD DRAWINGS:

RM-4.6 DATED 7-19-13
SBR-1-13 REVISED 1-17-14

DESIGN LOADING
HS20-44 CASE II AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE (FWS) OF 60 PSF.

DESIGN DATA
CONCRETE CLASS QC2 WITH QC/QA - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

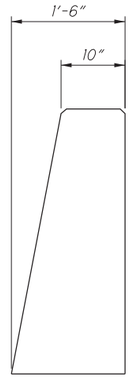
EXISTING STRUCTURE VERIFICATION
DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT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

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 THAT HAVE BEEN VERIFIED IN THE FIELD.

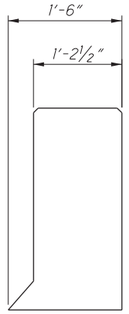
ITEM 510, DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN
DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NONSHRINK, NONMETALLIC GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

ITEM 511, CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)
THE BARRIER MAY BE CAST-IN-PLACE OR SLIPFORMED IN ACCORDANCE WITH CMS 511.

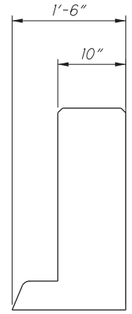
ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
THE COLOR OF THE EPOXY URETHANE SEALER SHALL MATCH THE COLOR OF THE SEALER ON THE EXISTING BRIDGE FASCIA PARAPETS, FEDERAL COLOR NO. 17778, LIGHT NEUTRAL.



SECTION M-M



SECTION N-N
(SECTIONS O-O SIMILAR)



SECTION P-P

CONCRETE BARRIER END SECTON, TYPE D, AS PER PLAN

BARRIER END SECTION SHALL BE PER SCD RM-4.6 EXCEPT THE BARRIER DIMENSIONS SHALL BE MODIFIED AS SHOWN TO COORDINATE WITH SCD SBR-1-13 DIMENSIONS. SKEWED END AND OPEN JOINT SHALL BE PROVIDED, SEE SHEET 5 / 5 .

REINFORCING STEEL LIST

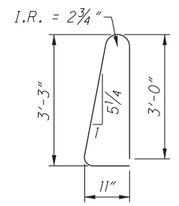
MARK	NUMBER	LENGTH	WEIGHT	TYPE
G401	144	4'-6"	*	STR
R501	479	7'-4"	3664	1
R502	22	14'-8"	337	STR
R503	64	30'-0"	2003	STR
R504	4	9'-0"	38	STR
R505	68	7'-2"	508	STR
R506	2	14'-4"	30	STR
R507	2	13'-11"	29	STR
R601	11	14'-8"	242	STR
R602	479	1'-8"	1199	2
R603	34	7'-2"	366	STR
R604	1	14'-6"	22	STR
R605	1	14'-0"	21	STR
R801	242	1'-0"	646	STR
T501	54	7'-4"	413	1
T502	2	11'-9"	25	STR
T503	16	14'-1"	235	STR
T504	2	11'-4"	24	STR
T505	2	12'-6"	26	STR
T506	2	12'-11"	27	STR
T601	2	11'-6"	35	STR
T602	54	1'-8"	135	2
T603	2	12'-9"	38	STR
T801	40	1'-0"	107	STR
		TOTAL =	10170	

NOTES:
1. ALL REINFORCING STEEL BARS SHALL BE EPOXY COATED.
2. ALL DIMENSIONS ARE OUT TO OUT OF BAR.
3. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER.
* 4. GLASS FIBER REINFORCING POLYMER BAR TO BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL, AS PER PLAN, FOR PAYMENT. SEE STD. DWG. SBR-1-13 FOR

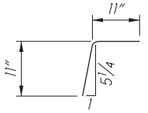
ESTIMATED QUANTITIES

ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	SHEET NO.
509	10001	10170	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	
510	10001	282	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	2 / 5
511	34448	76	CU YD	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)	2 / 5
512	10100	439	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13600	10	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	10	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	
622	25001	2	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN	2 / 5

QUANTITIES COMPUTED BY: AMT 5/17
QUANTITIES CHECKED BY: SJM 6/17



TYPE 1



TYPE 2

DESIGN AGENCY
LJB Inc. • 2500 Newmark Drive
Miamisburg, OH 45342
(937) 259-5000 tel • (937) 259-5100 fax • LJBinc.com

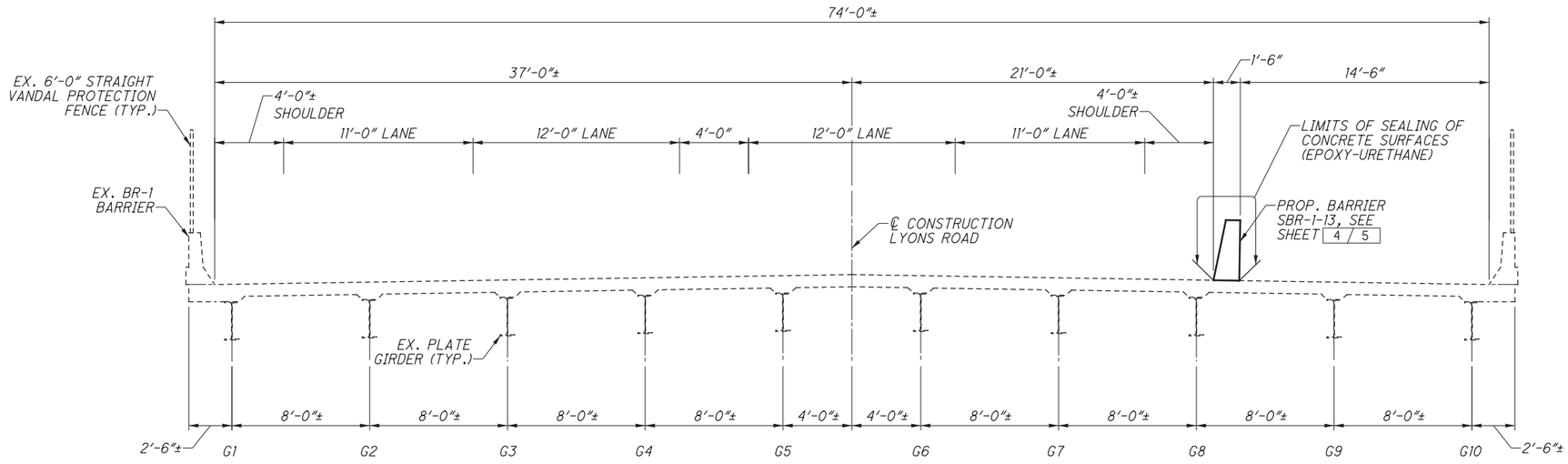
DESIGNED	DRAWN	REVIEWED	DATE
AMT	MAS	DWS	5-18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		5706467	

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. MOT-75-0306
LYONS ROAD OVER I-75 MAINLINE

MOT LYONS RD

2 / 5

61 / 72



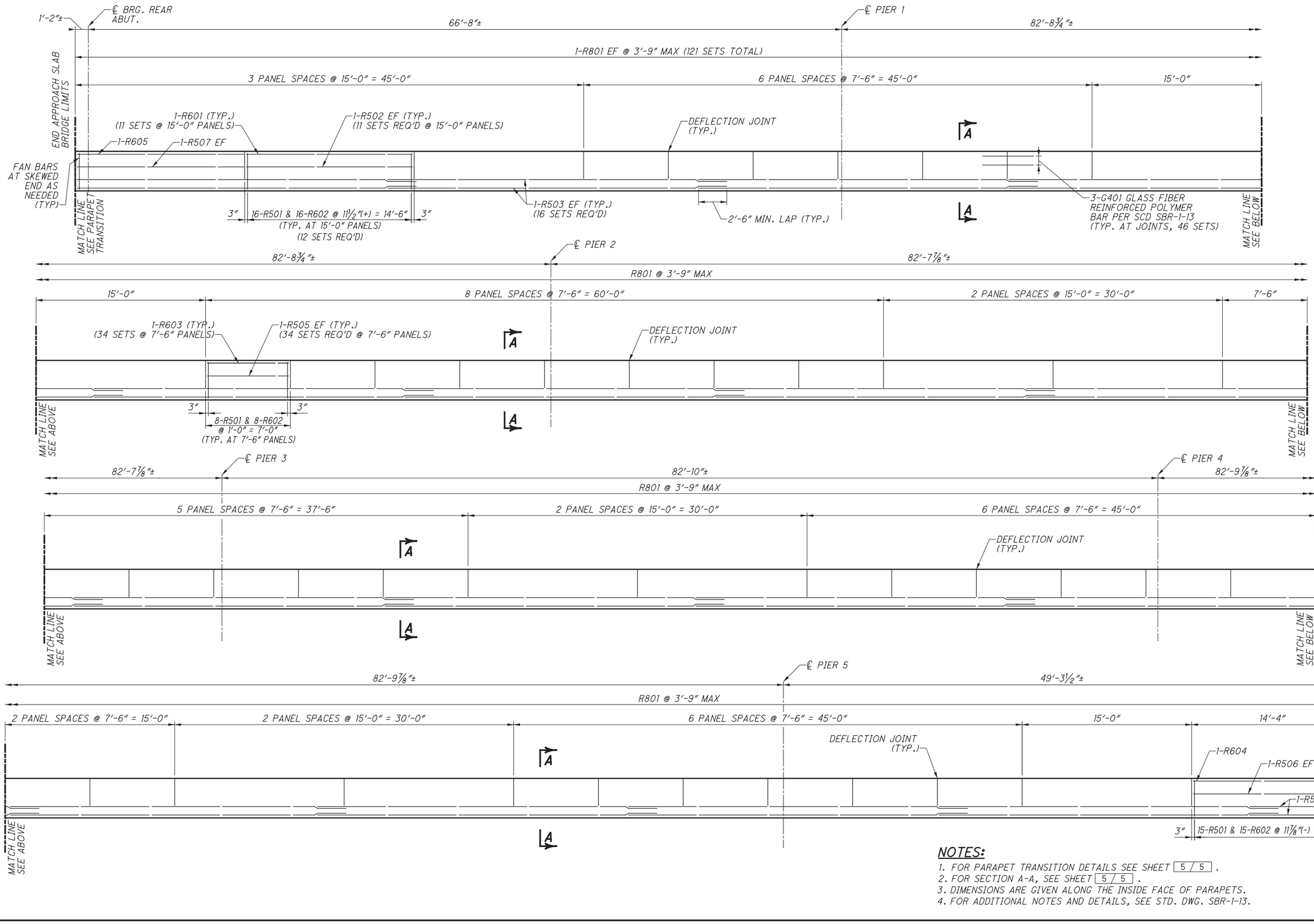
TYPICAL SECTION

DESIGN AGENCY
LJB Inc. - 2500 Newmark Drive
Miamisburg, OH 45342
(937) 259-5000 tel - (937) 259-5100 fax - LJBInc.com

DESIGNED	DRAWN	REVIEWED	DATE
AMT	MAS	DWS	5-18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		5706467	

MOT LYONS RD

TYPICAL SECTION
BRIDGE NO. MOT-75-0306
LYONS ROAD OVER I-75 MAINLINE



NOTES:

1. FOR PARAPET TRANSITION DETAILS SEE SHEET 5 / 5 .
2. FOR SECTION A-A, SEE SHEET 5 / 5 .
3. DIMENSIONS ARE GIVEN ALONG THE INSIDE FACE OF PARAPETS.
4. FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWG. SBR-1-13.

DESIGN AGENCY
LJB Inc. • 2500 Newmark Drive
Miamisburg, OH 45342
(937) 259-5000 tel • (937) 259-5100 fax • LJBInc.com

DESIGNED	DRAWN	REVIEWED	DATE
AMT	MSD	DWS	5-18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		5706467	

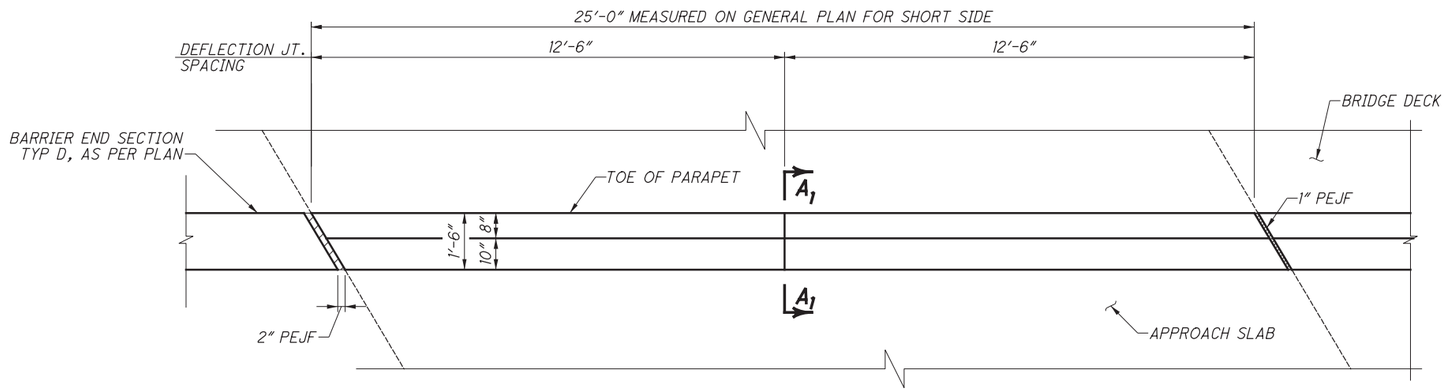
PARAPET DETAILS
BRIDGE NO. MOT-75-0306
LYONS ROAD OVER I-75 MAINLINE

MOT LYONS RD

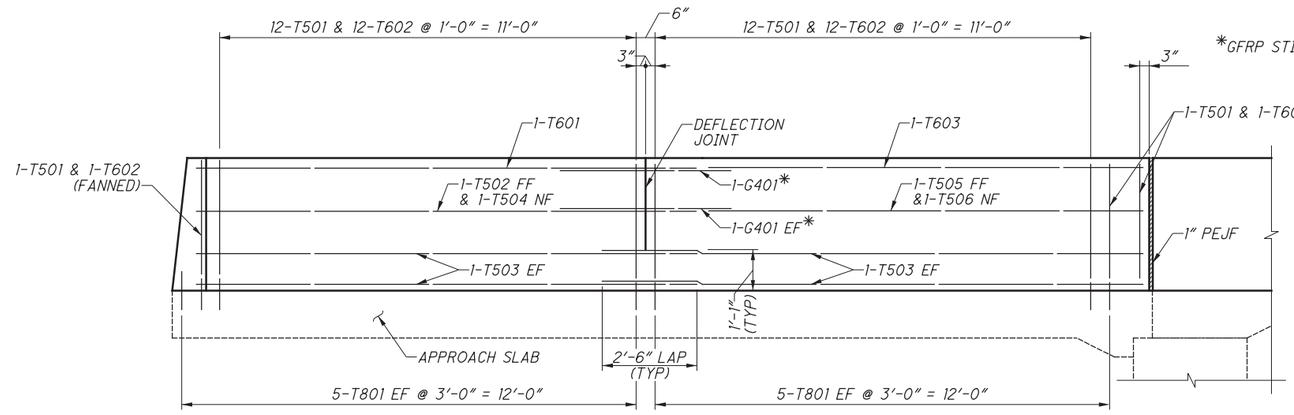
4 / 5

63 / 72

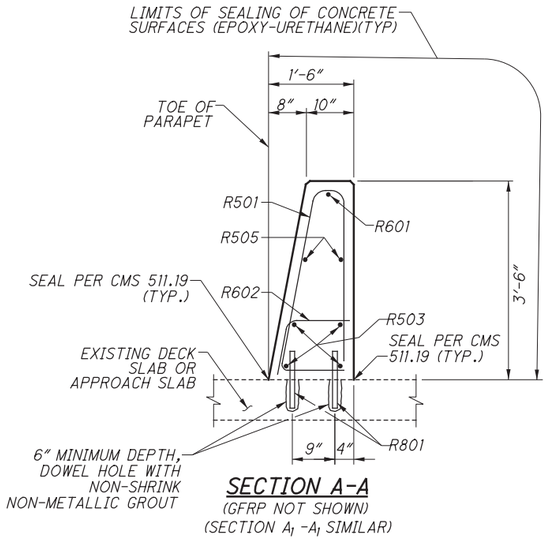
Q:\Miami Twp\0110400A.00 - MOT-Lyons Road Sidewalk\100316\structures\sheets\100316As0001.dgn 5/11/2018 9:48:17 AM sdillinger



PLAN
(REAR APPROACH SHOWN, FORWARD APPROACH SIMILAR)



ELEVATION
(TYPE D END SECTION NOT SHOWN FOR CLARITY)



SECTION A-A
(GFRP NOT SHOWN)
(SECTION A_1 -A_1 SIMILAR)

LEGEND
EF = EACH FACE
NF = NEAR FACE
FF = FAR FACE
GFRP = GLASS FIBER REINFORCED POLYMER
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:
1. FOR GENERAL NOTES, SEE SHEET 2 / 5 .
2. FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWG. SBR-1-13.

DESIGN AGENCY
LJB Inc. • 2500 Newmark Drive
Miamisburg, OH 45342
(937) 259-5000 tel • (937) 259-5100 fax • LJBInc.com

DESIGNED	DRAWN	REVIEWED	DATE
AMT	MSD	DWS	5-18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		5706467	

APPROACH PARAPET DETAILS
BRIDGE NO. MOT-75-0306
LYONS ROAD OVER I-75 MAINLINE

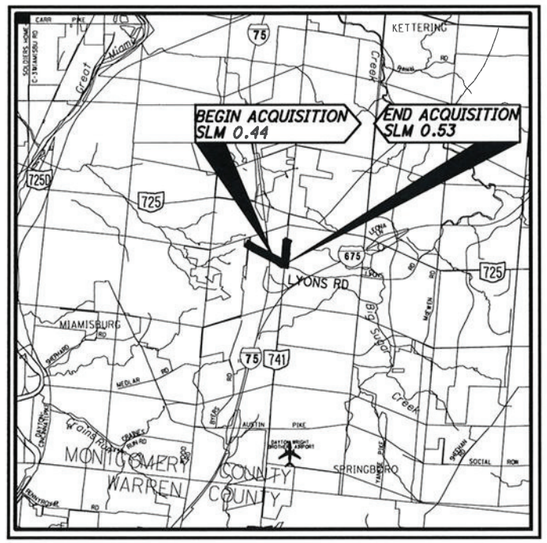
MOT LYONS RD

5 / 5

64 / 72

RIGHT OF WAY LEGEND SHEET MOT LYONS RD

MONTGOMERY COUNTY, OHIO
MIAMI TOWNSHIP
SEC. 12 & 18, T.2, R.5, M.Rs.



LOCATION MAP
LATITUDE: 39°37'47" LONGITUDE: 84°13'48"

SCALE IN MILES
0 1 2 3 4

N

PROJECT DESCRIPTION

THIS PROJECT WILL CONSIST OF NEW CURB AND GUTTER, STORM SEWER, AND 10' WALK ALONG THE SOUTH SIDE OF LYONS ROAD FOR 0.5 MILES. NEW WALK, STORM SEWER, CURB AND GUTTER WILL BE ADDED ALONG THE WEST SIDE OF SR 741 FOR 0.2 MILES.

PLANS PREPARED BY:

FIRM NAME : LJB, Inc.
R/W DESIGNER: Harry G. Herbst III
R/W REVIEWER: DANIEL J. HOYING
FIELD REVIEWER:
FINAL FIELD REVIEW DATE:
OWNERSHIP UPDATED BY:
DATE COMPLETED:
PLAN COMPLETION DATE: 5/11/2018

UTILITY OWNERS

Storm		
City of Miamisburg 10 N. First St. Miamisburg, OH 45342	Robert Stanley, CE manager@cityofmiamisburg.org	Phone: 937.847.6456
Water/Sanitary		
Montgomery Co. Water/Sanitary 1850 Spaulding Rd. Dayton, OH 45432-3732	Edward Schlaack schlaacke@mcohio.org	Phone: 937.781.2632
Telephone		
AT&T Ohio (formerly SBC) 3233 Woodman Dr. Dayton, OH 45420	Jesse Wead Jw1291@att.com	Phone: 937.296.3894
Cincinnati Bell (underground) 221 East Fourth St. Building 121-900 Cincinnati, OH 45201	Mark Conner Mark.conner@cinbell.com	Phone: 513.565.7043
Communications		
Level 3 Communications 226 N. 5th St., Suite 100 Columbus, OH 43215	Terry Spaw Terry.Spaw@level3.com	Phone: 513.644.8933
Charter (Time Warner Cable) 3691 Turner Rd. Dayton, OH 45415	Tim Kuss Tim.kuss@charter.com	Phone: 937.425.8850
Electric		
Dayton Power and Light 1900 Dryden Rd. Dayton, OH 45439	Bill Ward william.ward@dplinc.com	Phone: (937) 331-4521
Gas		
Vectren Energy Delivery 6500 Clyo Rd. Centerville, OH 45459	Don Specht dspecht@vectren.com	Phone: 937.312.2533
Traffic		
ODOT D7 Traffic 1001 Saint Marys Rd Sidney, OH 45365	Justin Yoh, P.E Justin.Yoh@dot.state.oh.us	Phone: 937.497.6897

INDEX OF SHEETS:

STRUCTURE KEY

RESIDENTIAL
COMMERCIAL
OUT-BUILDING

LEGEND:

SH = STANDARD HIGHWAY EASEMENT
T = TEMPORARY EASEMENT

NOTE:

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) (Pr)
Center Line
Right of Way (Ex) Ex R/W
Standard Highway Easement (Pr) SH
Standard Highway Ease.(Ex) Ex SH
Temporary Right of Way TMP
LEASE AGREEMENT. (Pr) LE
Utility Ease. (Ex) Ex U
Railroad or
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)
Edge of Shoulder (Ex)
Edge of Shoulder (Pr)
Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Ownership Hook Symbol , Example
Property Line Symbol , Example
Break Line Symbol , Example
Tree (Pr) , Tree (Ex) , Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) , Mailbox (Pr)
Light (Ex) , Telephone Marker (Ex)
Fire Hydrant (Ex) , Water Meter (Ex)
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

I, Harry G. Herbst III, P. S. have conducted a survey of the existing conditions for the Miami Township in May, 2016. The results of that survey are contained herein. Underground utility locations are shown for informational purposes only. Though they are believed to be accurate, their location is as marked on the ground by the utility company per OUPS and OGPUPS Confirmation Numbers B 608 300612-00B, B 608 300613-00B, B 608 300623-00B, B 608 300625-00B, B 608 300646-00B and B 608 300649-00B those markings subsequently being surveyed as a part of this project. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System, South Zone on NAD 83 (2011) datum. The Project Coordinates (US Survey Foot) are relative to State Plane Coordinates (US Survey Feet) by a Project Adjustment Factor of 1.000096529. As a part of this project I have reestablished the locations of the existing property lines and centerline of existing Right of Way for property takes contained herein. As a part of this project I have established the proposed property lines, calculated the Gross Take, Present Roadway Occupied (PRO), Net Take and Net Residue; as well as prepared the legal desciptions necessary to acquire the parcels as shown herein. As part of this work, there are right of way monuments set at property corners, property line intersections, points along the right of way and/or angle points on the right of way, Section Corners or other points as shown herein. All of my work contained herein was conducted in accordance with the Ohio Administrative Code Chapter 4733-37 Standards for Boundary Surveys unless so noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

Harry G. Herbst III
Harry G. Herbst III, Professional Land Surveyor No. 6596

5/08/2018
Date:

SURVEYORS SEAL

STATE OF OHIO
HARRY G. HERBST III
S-6596
REGISTERED PROFESSIONAL SURVEYOR

SIGNED: Harry G. Herbst
DATE: 5/8/2018

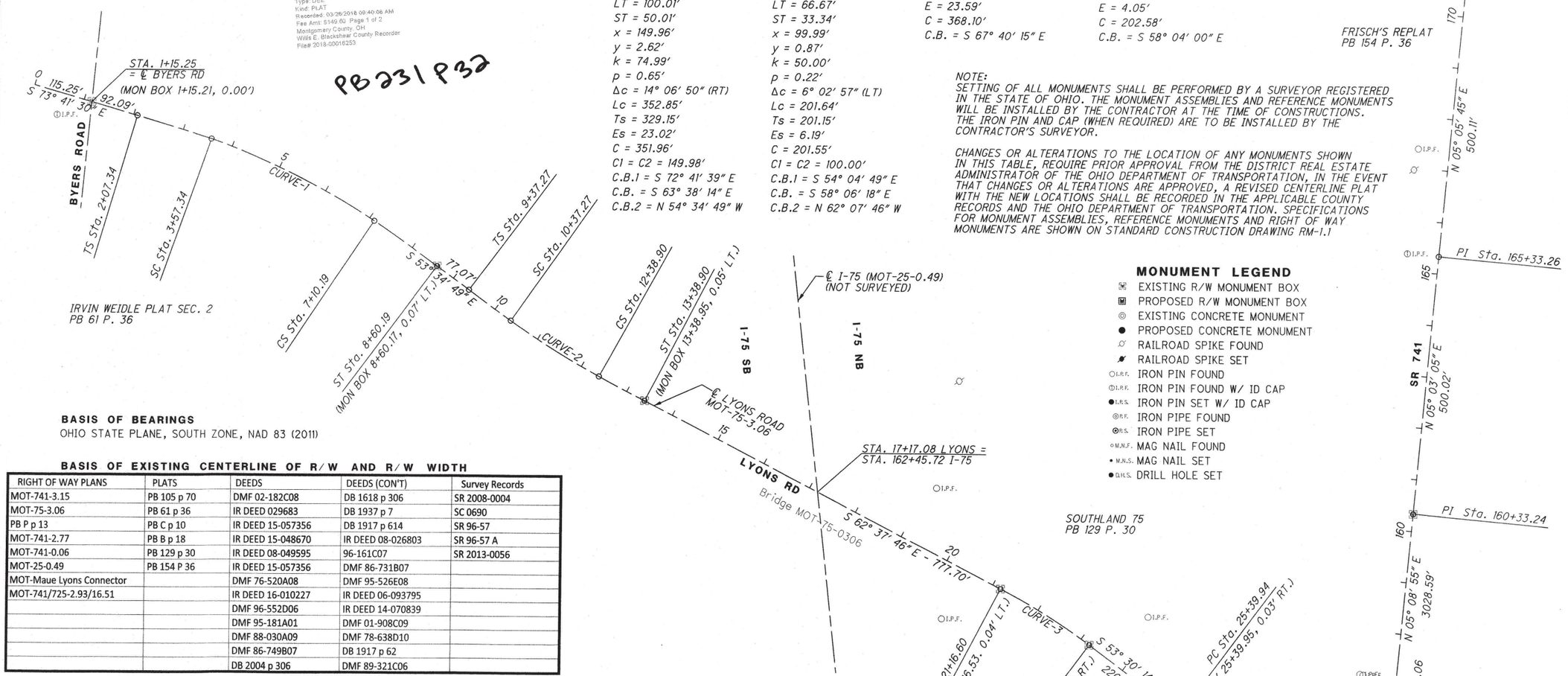
FEDERAL PROJECT NO. E160947
PID NO. 100316
CALCULATED HGH CHECKED DJH
RIGHT OF WAY LEGEND SHEET
MOT LYONS RD
1 / 8
65 / 72

Q:\Miami Twp\0110400A.00 - MOT-Lyons Road Sidewalk\100316\row\sheets\100316RL001.dgn 5/8/2018 3:45:24 PM jmoyes

MONTGOMERY COUNTY, OHIO
MIAMI TOWNSHIP
SEC. 12 & 18, T. 2, R.5 M.Rs.

Type: DEE
Kind: PLAT
Recorded: 03/26/2018 09:40:06 AM
Fee Amt: $149.60 Page 1 of 2
Montgomery County, OH
Willis E. Blackshear County Recorder
File# 2018-00016253

PB231P32



BASIS OF BEARINGS
OHIO STATE PLANE, SOUTH ZONE, NAD 83 (2011)

BASIS OF EXISTING CENTERLINE OF R/W AND R/W WIDTH

RIGHT OF WAY PLANS	PLATS	DEEDS	DEEDS (CON'T)	Survey Records
MOT-741-3.15	PB 105 p 70	DMF 02-182C08	DB 1618 p 306	SR 2008-0004
MOT-75-3.06	PB 61 p 36	IR DEED 029683	DB 1937 p 7	SC 0690
PB P p 13	PB C p 10	IR DEED 15-057356	DB 1917 p 614	SR 96-57
MOT-741-2.77	PB B p 18	IR DEED 15-048670	IR DEED 08-026803	SR 96-57 A
MOT-741-0.06	PB 129 p 30	IR DEED 08-049595	96-161C07	SR 2013-0056
MOT-25-0.49	PB 154 P 36	IR DEED 15-057356	DMF 86-731B07	
MOT-Maue Lyons Connector		DMF 76-520A08	DMF 95-526E08	
MOT-741/725-2.93/16.51		IR DEED 16-010227	IR DEED 06-093795	
		DMF 96-552D06	IR DEED 14-070839	
		DMF 95-181A01	DMF 01-908C09	
		DMF 88-030A09	DMF 78-638D10	
		DMF 86-749B07	DB 1917 p 62	
		DB 2004 p 306	DMF 89-321C06	

CURVE-1
P.I.Sta. 5+36.49
Δ = 20° 06' 50" (RT)
Dc = 4° 00' 00"
R = 1,432.39'
Ls = 150.00'
θs = 3° 00' 00"
LT = 100.01'
ST = 50.01'
x = 149.96'
y = 2.62'
k = 74.99'
p = 0.65'
Δc = 14° 06' 50" (RT)
Lc = 352.85'
Ts = 329.15'
Es = 23.02'
C = 351.96'
C1 = C2 = 149.98'
C.B.1 = S 72° 41' 39" E
C.B. = S 63° 38' 14" E
C.B.2 = N 54° 34' 49" W

CURVE-2
P.I.Sta. 11+38.42
Δ = 9° 02' 57" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
Ls = 100.00'
θs = 1° 30' 00"
LT = 66.67'
ST = 33.34'
x = 99.99'
y = 0.87'
k = 50.00'
p = 0.22'
Δc = 6° 02' 57" (LT)
Lc = 201.64'
Ts = 201.15'
Es = 6.19'
C = 201.55'
C1 = C2 = 100.00'
C.B.1 = S 54° 04' 49" E
C.B. = S 58° 06' 18" E
C.B.2 = N 62° 07' 46" W

CURVE-4
P.I.Sta. 27+29.76
Δ = 28° 20' 02" (LT)
Dc = 7° 37' 09"
R = 752.00'
T = 189.82'
L = 371.88'
E = 23.59'
C = 368.10'
C.B. = S 67° 40' 15" E

CURVE-3
P.I.Sta. 22+18.21
Δ = 9° 07' 32" (RT)
Dc = 4° 30' 00"
R = 1,273.24'
T = 101.61'
L = 202.79'
E = 4.05'
C = 202.58'
C.B. = S 58° 04' 00" E

NOTE:
SETTING OF ALL MONUMENTS SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTIONS. THE IRON PIN AND CAP (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION, IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1

MONUMENT LEGEND
- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- M.N.F. MAG NAIL FOUND
- M.N.S. MAG NAIL SET
- D.H.S. DRILL HOLE SET

I, HARRY G. HERBST III, P. S. 6596 HAVE CONDUCTED A SURVEY OF THE EXISTING CONDITIONS FOR THE MIAMI TOWNSHIP IN MAY, 2016 THE RESULTS OF THAT SURVEY ARE CONTAINED HEREIN. THE HORIZONTAL COORDINATES EXPRESSED HEREIN ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE ON NAD 83 (2011) DATUM. THE PROJECT COORDINATES (US SURVEY FEET) ARE RELATIVE TO STATE PLANE GRID COORDINATES (METERS OR US SURVEY FEET) BY A PROJECT ADJUSTMENT FACTOR MULTIPLIER OF 1.000096529. AS A PART OF THIS PROJECT I HAVE REESTABLISHED THE LOCATIONS OF THE EXISTING PROPERTY LINES AND CENTERLINE OF EXISTING RIGHT OF WAY FOR PROPERTY TAKES CONTAINED HEREIN. ALL OF MY WORK CONTAINED HEREIN WAS CONDUCTED IN ACCORDANCE WITH OHIO ADMINISTRATIVE CODE 4733-37 COMMONLY KNOWN AS "A MINIMUM STANDARDS FOR BOUNDARY SURVEYS IN THE STATE OF OHIO" UNLESS NOTED. THE WORDS I AND MY AS USED HEREIN ARE TO MEAN EITHER MYSELF OR SOMEONE WORKING UNDER MY DIRECT SUPERVISION. ALL COORDINATES AND DISTANCES ARE GROUND MEASUREMENTS EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

STATE OF OHIO
HARRY G. HERBST III
S-6596
REGISTERED PROFESSIONAL SURVEYOR

Harry G. Herbst III
HARRY G. HERBST III, PROFESSIONAL LAND SURVEYOR NO. 6596

DATE: 3/29/2018

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

PLANS PREPARED BY:
LJB Inc. • 2500 Newmark Drive
Miamisburg, OH 45342
(937) 259-5000 tel • (937) 259-5100 fax • LJBinc.com

ADJOINING PROJECT - SIGNAL UPGRADE
MOT-741/725-2.93/16.51 PID 101034

Approved for Centerline Data Only

Montgomery County Engineer — 2017-0144 File Number

Checked By — 03/26/18 Date

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER

ORIGINAL SCALE 1"=100'
HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 100316
R/W DESIGNER HGH
R/W REVIEWER DJH

CENTERLINE PLAT
MOT LYONS RD

2 / 8
66 / 72
1/2

Q:\Miami Twp\0110400A.00 - MOT-Lyons Road Sidewalk\100316\row\sheets\100316RC001.dgn 3/23/2018 2:01:36 PM abernhard

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER

MONTGOMERY COUNTY, OHIO
MIAMI TOWNSHIP
SEC. 12 & 18, T. 2, R.5 M.Rs.

Type: DEE
Kind: PLAT
Recorded: 03/26/2018 09:40:06 AM
Fee Amt: $149.60 Page 1 of 2
Montgomery County, OH
Willis E. Blackshear County Recorder
File# 2018-00016253

PB 231 P32A

MONUMENT TABLE

CL R/W AND CONSTRUCTION - LYONS ROAD			PROJECT COORDINATES SEE SURVEY CERTIFICATION		MONUMENTS TO BE SET DURING CONSTRUCTION		R/W MON EXPECTED TO BE DISTURBED	
STATION	OFFSET		NORTH(Y)	EAST(X)	MON. ASSY.	REF. MON	R/W MON	DESCRIPTION
1+15.21	0.00	RT	599072.22	1479998.53				MONBOX DND
8+60.17	0.07	LT	598758.60	1480667.75				MONBOX DND
13+38.95	0.05	LT	598500.89	1481070.31				MONBOX DND
21+16.53	0.04	RT	598143.33	1481760.80				MONBOX DND
23+19.37	0.06	RT	598036.15	1481932.74				MONBOX DND
24+15.12	59.35	RT	597932.64	1481975.63			1	5/8" IRON PIN
24+63.89	49.50	RT	597910.44	1482019.52			1	3/4" IRON PIN - AL CAP "LJB"
24+75.04	46.83	RT	597905.96	1482030.07			1	3/4" IRON PIN - AL CAP "LJB"
25+39.94	49.50	RT	597865.21	1482080.66			1	MAG nail
25+39.95	0.03	RT	597904.98	1482110.08				MONBOX DND
26+50.00	48.93	RT	597803.08	1482179.99			1	3/4" IRON PIN - AL CAP "LJB"
27+18.00	49.50	RT	597771.37	1482245.10			1	Drill Hole
27+97.00	65.50	RT	597727.38	1482319.57			1	Drill Hole
28+23.68	49.99	RT	597734.43	1482351.45			1	5/8" IRON PIN
28+65.79	60.21	RT	597714.12	1482393.09			1	5/8" IRON PIN - HCA LTD
28+87.52	54.68	RT	597715.15	1482417.10			1	5/8" IRON PIN
28+88.55	64.13	RT	597705.64	1482416.55			1	3/4" IRON PIN - AL CAP "LJB"
28+90.03	66.50	RT	597704.02	1482417.91			1	3/4" IRON PIN - AL CAP "LJB"
29+11.86	0.00	RT	597765.15	1482450.63				MONBOX DND
29+40.02	538.13	LT	598293.83	1482554.91				MONBOX DND
				TOTAL			12	

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

Approved for Centerline Data Only

Montgomery County Engineer — 2017-0144 File Number

Checked By — 03/26/18 Date

2/2

ORIGINAL SCALE 1"=100'
HORIZONTAL SCALE IN FEET (0, 50, 100, 200)

PID NO. 100316

R/W DESIGNER HGH
R/W REVIEWER DJH

CENTERLINE PLAT

MOT LYONS RD

3 / 8

67 / 72

Q:\Miami Twp\0110400A.00 - MOT-Lyons Road Sidewalk\100316\row\sheets\100316RC002.dgn 3/23/2018 2:02:54 PM abernhard

MONTGOMERY COUNTY, OHIO
MIAMI TOWNSHIP
SEC. 12 & 18, T.2, R.5, M.Rs.

POT Sta. 0+00.00
POT Sta. 1+15.25
115.25'
92.99'
S 73° 41' 30" E
Ex R/W
BYERS RD
IRVIN WEIDLE PLAT
PB 61, P 36
TS Sta. 2+07.34
SC Sta. 3+57.34
CS Sta. 7+10.19
ST Sta. 8+60.19
CITY OF MIAMISBURG
MIAMI TOWNSHIP
Ex SH
Ex LA
TS Sta. 9+37.27
SC Sta. 10+37.27
CS Sta. 12+38.90
ST Sta. 13+38.90
S 53° 34' 47" E
℄ R/W LYONS RD
LYONS RD
S 62° 37' 46" E- 787.70'
I-75
POT Sta. 170+33.37
FRISCH'S REPLAT
PB 154, P. 36
N 5° 05' 45" E- 500.11'
SOUTHLAND 75
PB 129, P. 30
PI Sta. 165+33.26
N 5° 03' 05" E- 500.02'
SR 741
KINGSRIDGE DR
K45 25812 0003
PI Sta. 160+33.24
BEGIN ACQUISITION
STA. 23+50.68
END ACQUISITION
STA. 28+96.84
PC Sta. 25+39.94
PT Sta. 23+19.39
PC Sta. 21+16.60
S 53° 50' 14" E
Salt Shed
Equipment Shed
Garage & Office
K45 25812 0004
K45 02607 0022
K45 02607 0083
K45 02607 0005
℄ R/W MOT-741-0.06
PB 105, P. 70
POT Sta. 29+68.28
POT Sta. 32+54.26
S 81° 50' 16" E
285.98'
PT Sta. 29+11.82
SEC. 18, T.2, R.5, M.Rs.
SEC. 12, T.2, R.5, M.Rs.

ADJACENT PROJECT:
PROJECT MOT-741/725-2.93/16.51
UPGRADE TO THE TRAFFIC SIGNAL
AT LYONS AND SR 741.

INSET
PARCEL 7
K45 02607 0022
K45 02607 0120
K45 02607 0121
K45 02607 0083
K45 02607 0004
K45 02607 0052
K45 02607 0005
K45 02607 0009
K45 02607 0111
Ex R/W
Ex LA-R/W

OWNERSHIP NAME AND NUMBER

1. HIERONYMUS LIMITED LIABILITY CO
2. CARL S CULL AND BRENDA K CULL
3. PEDCOR INVESTMENTS -1996- XXVI, L.P.
4. BRDA LLC, C/O CAPSTONE REALTY ADVISORS ATTN: JENNIFER FISCHER
5. RCG-SOUTHLAND LLC
6. STATE OF OHIO
7. AUTO LAND LTD
8. MIAMISBURG INVESTMENTS LLC
9. ATLANTA REAL ESTATE II LLC
10. LEO REALTY LLC AND MARILYN J COLE - MIAMISBURG LLC
11. PACIFIC DEVELOPMENTS LLC
12. HUNTER SAVINGS ASSOC.
13. FIVE SG LLC
14. ARCP RL PORTFOLIO VIII LLC
15. DAYTON RBS LLC
16. NATIONAL RETAIL PROPERTIES LP

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

ORIGINAL SCALE 1" = 100'
HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 100316

R/W DESIGNER HGH
R/W REVIEWER DJH

PROPERTY MAP
MOT LYONS RD

4 / 8
68 / 72

5/8/2018 3:41:56 PM jmayes
Q:\Miami Twp\0110400A.00 - MOT-Lyons Road Sidewalk\100316\row\sheets\100316RM001.dgn

TOTAL NUMBER OF:
2 OWNERSHIPS
3 PARCELS
0 TOTAL TAKES

0 OWNERSHIPS WITH STRUCTURES INVOLVED

ALL AREAS IN ACRES

GRANTEE: ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE BOARD OF COUNTY COMMISSIONERS OF MONTGOMERY COUNTY, OHIO, UNLESS OTHERWISE SHOWN.

* DENOTES RIGHT OF WAY ENCROACHMENT

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														LOCAL			
1	HIERONYMUS LIMITED LIABILITY CO	4	IR DEED 02-164711		K46 01004 0007	20.572									NO ADDITIONAL RIGHT OF WAY REQUIRED		
			DMF 99-538A01														
2	CARL S CULL AND	4	IR DEED 08-026803		K45 23009 0005	0.4277									NO ADDITIONAL RIGHT OF WAY REQUIRED		
	BRENDA K CULL																
3	PEDCOR INVESTMENTS-1996-XXVI, L.P.	4	DMF 96-522D06		K45 02607 0003	14.162									NO ADDITIONAL RIGHT OF WAY REQUIRED		
4	BRDA LLC, C/O CAPSTONE REALTY ADVISORS	4	DMF 01-908C09		K45 02607 0146	16.2440									NO ADDITIONAL RIGHT OF WAY REQUIRED		
5	RCG-SOUTHLAND LLC	4, 6, 7	IR DEED 15-057356		K45 25812 0003	10.968									NO ADDITIONAL RIGHT OF WAY REQUIRED		
					K45 25812 0004												
6-T	STATE OF OHIO	4, 6, 7, 8	2004	306	K45 02607 0077	3.838		0.012	0.000	0.012					PERFORM GRADING AND CONNECT DRIVE		
7-SH	AUTO LAND LTD	4, 6, 7, 8	DMF 95-526E08		K45 02607 0004	8.508	0.000	0.020	0.000	0.020							
					K45 02607 0022	**	0.000	0.009	0.000	0.009					** AREA INCLUDED IN K45 02607 0004		
					K45 02607 0083	**	0.000	0.023	0.000	0.023					LIGHT POLES (4), ELECTRIC PULL BOXES (3)		
					K45 02607 0121	**	0.000	0.003	0.000	0.003					28 PARKING SPACES (UNMARKED)		
					K45 02607 0120	**	0.000	0.008	0.000	0.008					NOTE: GROUND MOUNTED LIGHTS AND FLAG POLE ADDRESSED		
					TOTAL 7-SH :	8.508	0.000	0.063	0.000	0.063					WITH MOT 741/725 2.93/16.51 PARCEL 1-WD		
															28 PARKING SPACES (UNMARKED)		
					K45 02607 0005	**	0.000	0.000	0.000	0.000							
					K45 02607 0052	**	0.000	0.000	0.000	0.000							
			IR DEED 06-093795		K45 02607 0111	1.043	0.000	0.000	0.000	0.000							
			IR DEED 08-049595		K45 02607 0009	0.101	0.000	0.000	0.000	0.000					AREA FROM DEED		
					TOTAL :	9.652	0.000	0.063	0.000	0.063			9.589		- SHOWN AS PRO ON AUDITOR SITE INCORRECTLY		
7-T					K45 02607 0004			0.023	0.000	0.023					PERFORM GRADING AND CONNECT DRIVE		
					K45 02607 0022			0.038	0.000	0.038							
					K45 02607 0083			0.093	0.000	0.093							
					K45 02607 0121			0.001	0.000	0.001							
					K45 02607 0120			0.000	0.000	0.000							
					TOTAL 7-T :			0.156	0.000	0.156							
8	MIAMISBURG INVESTMENTS LLC	4	DMF 01-853C07		K45 02604 0017	6.379	0.000								NO ADDITIONAL RIGHT OF WAY REQUIRED		
9	ATLANTA REAL ESTATE II LLC	4	IR DEED 02-131889		K45 02604 0108	1.204	0.000								NO ADDITIONAL RIGHT OF WAY REQUIRED		
10	LEO REALTY LLC AND	4	IR DEED 10-079698		K45 02604 0086	0.991	0.000								NO ADDITIONAL RIGHT OF WAY REQUIRED		
	MARILYN J COLE-MIAMISBURG LLC		IR DEED 05-051836														
11	PACIFIC DEVELOPMENTS LLC	4	IR DEED 16-010227		K45 25812 0002	1.178	0.000								NO ADDITIONAL RIGHT OF WAY REQUIRED		
12	HUNTERS SAVINGS ASSOCIATION	4	DMF 76-106C10		K45 02604 0075	0.587	0.000								NO ADDITIONAL RIGHT OF WAY REQUIRED		
			DMF 76-106C08		K45 02604 0085	0.042	0.012										
13	FIVE SG, LLC	4	IR DEED 05-088005		K45 02604 0143	0.544	0.172								NO ADDITIONAL RIGHT OF WAY REQUIRED		
14	ARCP RL PORTFOLIO VIII LLC	4	IR DEED 14-041326		K45 02604 0074	1.636	1.245										
15	DAYTON RBS LLC	4	IR DEED 14-070839		K45 25812 0001	7.418	0.000								NO ADDITIONAL RIGHT OF WAY REQUIRED		
16	NATIONAL RETAIL PROPERTIES LP	4	IR DEED 15-048670		K45 25815 0003	1.322	0.000							LOCAL	NO ADDITIONAL RIGHT OF WAY REQUIRED		

PARCEL IDENTIFIER LEGEND

SH = STANDARD HIGHWAY EASEMENT
T = TEMPORARY EASEMENT

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTHS DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

FEDERAL PROJECT NO. E160947
PID NO. 100316
STATE JOB NO. 470401
R/W DESIGNER HGH
R/W REVIEWER DJH

SUMMARY OF ADDITIONAL RIGHT OF WAY

MOT LYONS RD

MONTGOMERY COUNTY, OHIO
MIAMI TOWNSHIP
SEC. 18, T.2, R.5, M.Rs.

5
RCG-SOUTHLAND LLC
IR DEED 15-057356
(11.777 ACRES)
LOT 3
K45 25812 0003
10.968 ACRES
8265 SPRINGBORO PIKE
SHOPPING CENTER

SOUTHLAND 75
PB. 127, P. 30

EASEMENT
OHIO FUEL GAS CO.
D.B. 1419, P. 161

BEGIN ACQUISITION
STA. 23+50.68

LYONS ROAD - VARIES

PC Sta. 21+16.60
(MON BOX 21+16.53, 0.04' LT.)

PT Sta. 23+19.39
(MON BOX 23+19.33, 0.06' RT)

CURVE-3

HIGHWAY EASEMENT
STATE OF OHIO
DB 1917, P 614
1.00 Ac

BCC OF MONTGOMERY COUNTY
DMF 02-182C08
0.415 Ac.

℄ LYONS ROAD
MOT-75-3.06

48" RCP

777.70'
S 62° 37' 46" E

+93.46
S 53° 30' 14" E
220.55'

81°51'50"

27.00'
+19.39

CONSTRUCTION LIMITS

CB-3A

12" B

10' WALK

Retaining Wall
Brush

Grass

6-T

7-T

7-SH

24+00.94
61.66' RT

24+63.89
49.50'RT

24+15.10
59.35'RT

24+75.04
46.83'RT

24+28.00
62.00'RT

24+13.95
69.02'RT

24+00.00
76.00'RT

23+50.68
72.00'RT

HW-2.2

345.44'
S 65° 07' 49" E
294.13'

N 30° 09' 09" W
0.61'

20+44.16
105.00'RT

BLANKET EASEMENT
OHIO FUEL GAS COMPANY
D.B. 1419, P. 162

DND ℄ Fence
DND 20' Gate
DND Sign

19' Asphalt Drive

Asphalt Parking

MATCH LINE STA. 25+00 SEE SHEET 7

STA. 20+00

16" HP Gas
20" HP Gas

CURVE-3
P.I. Sta. 22+18.21
Δ = 9° 07' 32" (RT)
Dc = 4° 30' 00"
R = 1,273.24'
T = 101.61'
L = 202.79'
E = 4.05'
C = 202.58'
C.B. = S 58° 04' 00" E

6
STATE OF OHIO
D.B. 2004, P. 306
(3.838 ACRES)
K45 02607 0077
3.838 ACRES
3100 LYONS RD
HIWAY GARAGE

7
AUTO LAND LTD
DMF 95-526E08
K45 02607 0022
8457 SPRINGBORO PIKE
CAR SALES

FOR PARCEL BOUNDARIES, SEE SHEET 8

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

ORIGINAL SCALE 1"=20'
HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 100316

R/W DESIGNER HGH
R/W REVIEWER DJH

RIGHT OF WAY TOPOGRAPHY SHEET
STA. 20+00 TO STA. 25+00

MOT LYONS RD

MONTGOMERY COUNTY, OHIO
MIAMI TOWNSHIP
SEC. 12 & 18, T.2, R.5, M.Rs.

RCG-SOUTHLAND LLC
IR DEED 15-057356
(11.777 ACRES)
LOT 3
K45 25812 0003
10.968 ACRES
8265 SPRINGBORO PIKE
SHOPPING CENTER

SOUTHLAND 75
PB. 129, P. 30

RCG-SOUTHLAND LLC
IR DEED 15-057356
(0.809 ACRES)
LOT RESERVE A
K45 25812 0004
0.809 ACRES
SPRINGBORO PIKE
SHOPPING CENTER

DND DRAINAGE FACILITIES
ON THIS PARCEL

ADJACENT PROJECT
SIGNAL UPGRADE
MOT-741/725-2.93/16.51
PID 101034

SR-741

℄ SR-741
N 05° 08' 55" E 3028.59'

LYONS ROAD - VARIES

℄ LYONS ROAD
CURVE-4

CONSTRUCTION LIMITS

END ACQUISITION
STA. 28+96.84

END WORK
LYONS ROAD
STA. 30+44.50

285.98'
S 81° 50' 16" E

STA. 29+68.35 LYONS ROAD=
STA. 154+94.37 SR-741

BEGIN WORK
SR-741
STA. 154+18.50

MATCH LINE STA. 25+00 SEE SHEET 6

PC Sta. 25+39.94
(MON BOX 25+39.95, 0.03' RT.)

220.55'
S 53° 30' 14" E
BCC OF MONTGOMERY COUNTY
DMF 02-182C08
0.415 Ac.

+95.10

℄ Asphalt Drive

PI Sta. 0+46.14

PT Sta. 29+11.82
(MON BOX 29+11.86, 0.00')

6 PARKING SPACES (UNMARKED)

22 PARKING SPACES (UNMARKED)
Asphalt
Parking

Conc.

CONC PAD DND

78.11'

43.00'

AUTO LAND LTD
DMF 95-526E08
K45 02607 0022
8457 SPRINGBORO PIKE
CAR SALES

AUTO LAND LTD
DMF 95-526E08
K45 02607 0083
8457 SPRINGBORO PIKE
CAR SALES

AUTO LAND LTD
DMF 95-526E08
K45 02607 0121
8457 SPRINGBORO PIKE
CAR SALES

AUTO LAND LTD
DMF 95-526E08
K45 02607 0120
8457 SPRINGBORO PIKE
CAR SALES

AUTO LAND LTD
DMF 95-526E08
(8.923 ACRES)
K45 02607 0004
8.508 ACRES
8457 SPRINGBORO PIKE
CAR SALES

AUTO LAND LTD
DMF 95-526E08
K45 02607 0005
8457 SPRINGBORO PIKE
CAR SALES

⚠ GROUND MOUNTED LIGHTS AND FLAG POLE REMOVED WITH MOT-741/725-2.93/16.51 PARCEL 1-WD

(1-WD) (3-WI) FROM MOT -741/725-2.93/16.51 PID 101034

FOR PARCEL BOUNDARIES, SEE SHEET 8

CURVE-4
P.I. Sta. 27+29.76
Δ = 28° 20' 02" (LT)
Dc = 7° 37' 09"
R = 752.00'
T = 189.82'
L = 371.88'
E = 23.59'
C = 368.10'
C.B. = S 67° 40' 15" E

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

ORIGINAL SCALE 1"=20'
HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 100316

R/W DESIGNER HGH
R/W REVIEWER DJH

RIGHT OF WAY TOPOGRAPHY SHEET
STA. 25+00 TO STA. 30+50

MOT LYONS RD

7 / 8

71 / 72

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MONTGOMERY COUNTY, OHIO
MIAMI TOWNSHIP
SEC. 18, T.2, R.5, M.Rs.

BEGIN ACQUISITION
STA. 23+50.68

1
R = 853.94'
L = 14.35'
Δ = 00° 57' 46" (LT)
CH = S 62° 45' 57" E
CH = 14.35'

2
R = 853.94'
L = 11.46'
Δ = 00° 46' 09" (LT)
CH = S 66° 58' 19" E
CH = 11.46'

SOUTHLAND 75
PB. 129, P. 30

CURVE-4
P.I. Sta. 27+29.76
Δ = 28° 20' 02" (LT)
Dc = 7° 37' 09"
R = 752.00'
T = 189.82'
L = 371.88'
E = 23.59'
C = 368.10'
C.B. = S 67° 40' 15" E

Ex R/W
Ex R/W
Ex R/W
Ex R/W
Ex R/W
Ex LA-R/W
Ex LA-R/W
Ex LA-R/W
Ex LA-R/W
PE-R/W
(3-WL)

SR-741

S 53° 30' 14" E
220.55'

NOTE: FOR LEADINS
SEE SHEET 6

24+00.94
61.66' RT

23+50.68
72.00' RT

345.44'
S 65° 07' 49" E
51.31'

Ex SH
TMP
6-T

N 47° 27' 59" E 1.62'

24+63.89
49.50' RT

24+75.04
46.83' RT

24+15.10
59.35' RT

9.74'
TMP
Ex R/W
24+28.00
62.00' RT
N 53° 30' 14" W 76.05'
S 55° 32' 27" E 181.82'
Ex R/W
SH
7-SH
4

24+00.00
76.00' RT
N 48° 52' 02" W
49.48'

N 80° 04' 08" W
- 15.71'

24+13.95
69.02' RT

N 55° 25' 31" W 120.69'

25+39.94
49.50' RT

25+48.00
58.00'RT

N 23° 21' 09" E 25.59'

25+53.00
83.00'RT

TMP
N 44° 31' 58" W 78.12'

26+21.00
100.00'RT

S 43° 16' 21" W
N 80° 04' 08" W
15.60'

PC Sta. 25+39.94
(MON BOX 25+39.95, 0.03' RT.)
DND

BCC OF MONTGOMERY COUNTY
DMF 02-182C08
0.415 Ac.

LYONS ROAD - VARIES
℄ LYONS ROAD
CURVE-4

26+50.00
48.93'RT

TMP
N 66° 05' 04" W 64.32'

26+40.00
55.00'RT

27+00.00
52.00'RT

27+18.00
49.50' RT

S 54° 34' 14" W 49.64'

S 67° 21' 21" E 230.80'
Ex R/W
SH
7-SH
3

N 59° 26' 03" W 86.49'
N 57° 02' 27" W 114.50'
TMP
N 79° 58' 07" W 103.19'

28+03.00
77.00'RT

27+97.00
65.50' RT

28+87.73
54.60' RT

S 69° 58' 55" E 25.07'

(1-WC)

28+65.69
60.12' RT

28+88.55
64.13' RT

S 39°51'08"E
2.11'

AS 39°51'08"E
9.78'

PE-R/W
Ex R/W
Ex R/W

28+90.03
65.50' RT

28+96.84
71.86' RT

END ACQUISITION
STA. 28+96.84

29
DND

6
STATE OF OHIO
D.B. 2004, P. 306
(3.838 ACRES)
K45 02607 0077
3.838 ACRES
3100 LYONS RD
HIWAY GARAGE

7
AUTO LAND LTD
DMF 95-526E08
K45 02607 0022
8457 SPRINGBORO PIKE
CAR SALES

7
AUTO LAND LTD
DMF 95-526E08
K45 02607 0083
8457 SPRINGBORO PIKE
CAR SALES

7
AUTO LAND LTD
DMF 95-526E08
K45 02607 0121
8457 SPRINGBORO PIKE
CAR SALES

7
AUTO LAND LTD
DMF 95-526E08
K45 02607 0120
8457 SPRINGBORO PIKE
CAR SALES

7
AUTO LAND LTD
DMF 95-526E08
(8.923 ACRES)
K45 02607 0004
8.508 ACRES
8457 SPRINGBORO PIKE
CAR SALES

7
AUTO LAND LTD
DMF 95-526E08
K45 02607 0005
8457 SPRINGBORO PIKE
CAR SALES

6
R = 853.94'
L = 49.78'
Δ = 03° 20' 25" (LT)
CH = S 64° 55' 03" E
CH = 49.78'

5
R = 853.94'
L = 64.13'
Δ = 04° 18' 10" (LT)
CH = S 64° 26' 10" E
CH = 64.12'

4
R = 801.50'
L = 189.78'
Δ = 13° 33' 59" (RT)
CH = N 60° 17' 14" W
CH = 189.34'

3
R = 817.50'
L = 101.14'
Δ = 07° 05' 18" (RT)
CH = N 76° 38' 01" W
CH = 101.07'

(1-WC) (3-WL) FROM MOT-741/725-2.93/16.51
PID 101034

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

ORIGINAL SCALE 1"=20'
HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 100316

R/W DESIGNER HGH
R/W REVIEWER DJH

RIGHT OF WAY BOUNDARY SHEET
STA. 23+50 TO STA. 29+25

MOT LYONS RD

8 / 8

72 / 72

Q:\Miami Twp\0110400A.00 - MOT-Lyons Road Sidewalk\100316\row\sheets\100316RB001.dgn 5/8/2018 3:42:05 PM jmoyes

PROJECT DESCRIPTION

THE PROJECT WILL INVOLVE CONSTRUCTION OF 155 LINEAR FEET OF SEGMENTAL BLOCK RETAINING WALL FOUNDED ON A LEVELING PAD SUPPORTED ON THE EXISTING EMBANKMENT FILL. THE TOP OF THE WALL WILL VARY FROM ABOUT 1.5 TO 7 FEET ABOVE EXISTING GRADE.

HISTORIC RECORDS

ONE HISTORIC BORING WAS FOUND IN THE VICINITY OF THE RETAINING WALL. BORING B-003-0-09 WAS DRILLED FOR THE MOT-75-3.06 BRIDGE ON MAY 19, 1999 AND IS SHOWN ON THE PLAN AND PROFILE.

GEOLOGY

THE SOILS IN THE AREA CONSIST OF GLACIAL MORAINE COMPRISED OF A GENERALLY UNSORTED MIX OF CLAY, SILT, SAND AND GRAVEL. BEDROCK IN THE AREA CONSISTS OF SHALE, LIMESTONE AND DOLOMITE AT DEPTHS OF APPROXIMATELY 30 TO 40 FEET, AS INDICATED BY BORINGS LOCATED AT THE I-670/I-75 INTERCHANGE AND THE BRIDGE AT LYONS ROAD OVER I-75, AND CONFIRMED BY THE PROJECT BORINGS.

RECONNAISSANCE

DURING THE SITE RECONNAISSANCE, WE OBSERVED THE SLOPE IN THE AREA OF THE PROPOSED RETAINING WALL WAS COVERED WITH WEEDS AND BRUSH. A DRAINAGE DITCH WAS PRESENT AT THE BOTTOM OF THE SLOPE. THE LYONS ROAD PAVEMENT AT THE TOP OF THE SLOPE WAS IN GOOD CONDITION.

SUBSURFACE EXPLORATION

THE STRUCTURE FOUNDATION EXPLORATION CONSISTED OF TWO BORINGS (NUMBERED B-001-0-17 AND B-002-0-17. THE BORING LOCATIONS WERE SELECTED AND THE LOCATIONS MARKED BY GEOTECHNOLOGY. THE BORING ELEVATIONS AND SURVEYED LOCATIONS WERE PROVIDED BY LJB.
THE BORINGS WERE DRILLED ON MARCH 21, 2017, WITH A TRACK- MOUNTED DRILL RIG ADVANCING HOLLOW-STEM AUGERS. SAMPLING OF THE OVERBURDEN SOILS WAS ACCOMPLISHED AHEAD OF THE AUGERS AT THE DEPTHS INDICATED ON THE BORING LOGS, WITH 2-INCH-OUTSIDE-DIAMETER (O.D.) SPLIT-SPOONS AND 3-INCH-O.D., THIN-WALLED SHELBY TUBE SAMPLERS IN GENERAL ACCORDANCE WITH THE PROCEDURES OUTLINED BY ASTM D1586 AND ASTM D1587, RESPECTIVELY. STANDARD PENETRATION TESTS (SPTS) WERE PERFORMED ON THE SPLIT-SPOON SAMPLES TO OBTAIN THE N-VALUES THE STANDARD PENETRATION TEST VALUE, OR N-VALUE, IS DEFINED AS THE NUMBER OF BLOWS REQUIRED TO DRIVE THE SPLIT-SPOON SAMPLER 12 INCHES WITH A 140-POUND HAMMER FALLING 30 INCHES. SINCE THE SPLIT SPOON SAMPLER IS DRIVEN 18 INCHES OR UNTIL REFUSAL, THE BLOWS FOR THE FIRST 6 INCHES ARE FOR SEATING THE SAMPLER, AND THE NUMBER OF BLOWS FOR THE FINAL 12 INCHES IS THE N-VALUE. ADDITIONALLY, REFUSAL OF THE SPLIT-SPOON SAMPLER OCCURS WHEN THE SAMPLER IS DRIVEN LESS THAN 6 INCHES WITH 50 BLOWS OF THE HAMMER. OF THE SAMPLED MATERIAL.
OBSERVATIONS FOR GROUNDWATER WERE MADE IN THE BORINGS DURING DRILLING AND AT THE COMPLETION OF DRILLING. AS EACH BORING WAS ADVANCED, A FIELD LOG OF THE SUBSURFACE PROFILE WAS PREPARED, NOTING THE SOIL AND BEDROCK TYPES AND STRATIFICATIONS, GROUNDWATER, SPT RESULTS, AND OTHER PERTINENT DATA.

EXPLORATION FINDINGS

THE BORINGS WERE DRILLED IN THE SHOULDER OF THE EXISTING PAVEMENT. TWO INCHES OF ASPHALT PAVEMENT AND APPROXIMATELY 3 INCHES OF AGGREGATE BASED WAS ENCOUNTERED OVER FILL. THE FILL WAS PRESENT TO A DEPTH OF 14 TO 14.5 FEET IN THE BORINGS AND CONSISTED OF VERY-STIFF TO HARD SILT AND CLAY (A-6A), SILTY CLAY (A-6B) AND CLAY (A-7-6). A THIN LAYER OF SOFT SILTY CLAY WAS PRESENT FROM 0.5 TO 1.8 FEET AT BORING B-002.
A DARK BROWN TO BLACK VERY-STIFF ELASTIC CLAY WAS PRESENT BELOW THE FILL AT BORING B-002 FROM 14.0 TO 17.0 FEET AND A VERY STIFF DARK BROWN TO BLACK CLAY WAS PRESENT FROM 14.5 TO 19.5 FEET AT BORING B-001.
BELOW THE DARK BROWN TO BLACK SOIL GLACIAL TILL COMPRISED OF VERY STIFF TO HARD SANDY SILT (A-4A) WAS ENCOUNTERED AT BOTH BORINGS. BORING B-001 ALSO ENCOUNTERED DENSE TO VERY DENSE GRAVEL WITH SAND (A-1-B) AND HARD CLAY (A-7-6).
BELOW THE GLACIAL TILL THE BORINGS ENCOUNTERED HIGHLY WEATHERED SHALE AT DEPTHS OF 39.0 AND 34.0 FEET AT BORINGS B-001 AND B-002, RESPECTIVELY.
GROUNDWATER DURING DRILLING AT A DEPTH OF 30.0 FEET IN BORING B-001 AND 25.0 FEET IN BORING B-002. THE BORINGS WERE OBSERVED TO BE DRY AT COMPLETION OF DRILLING. HOWEVER BORING B-001 CAVED AT A DEPTH OF 29.0 FEET.
GROUNDWATER LEVELS AND SEEPAGE AMOUNTS ARE EXPECTED TO VARY WITH TIME, LOCATION, SEASON OF THE YEAR, AND AMOUNTS OF PRECIPITATION. GROUNDWATER LEVELS ARE EXPECTED TO FLUCTUATE.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2016.

AVAILABLE INFORMATION

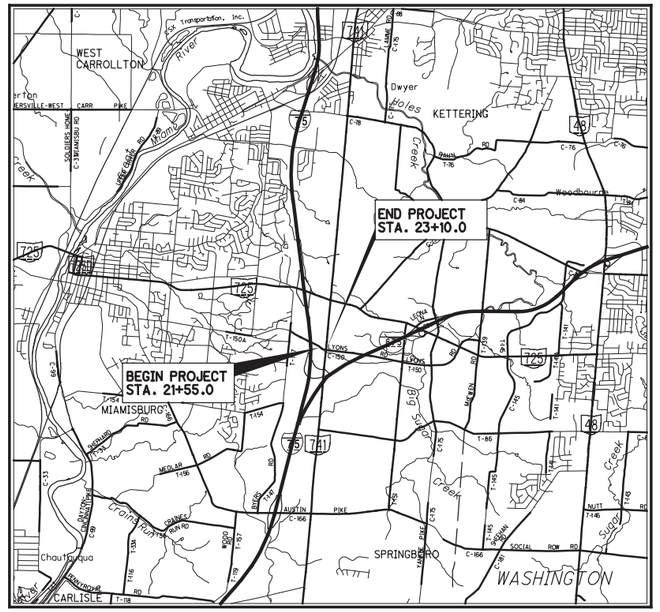
ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S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

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL/STONE FRAGMENTS W SAND	*A-1-b*	*1*	*1*
SANDY SILT	*A-4a*	*2*	*4*
SILT & CLAY	*A-6a*	*2*	*5*
SILTY CLAY	*A-6b*	*4*	*5*
ELASTIC CLAY	*A-7-5*	*1*	*0*
CLAY	*A-7-6*	*1*	*2*
	TOTAL	*11*	*17*

SHALE	*VISUAL*	
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	*VISUAL*	
HISTORIC BORING LOCATION - PLAN VIEW		
BORING LOCATION - PLAN VIEW		
DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.		
WC	INDICATES WATER CONTENT IN PERCENT.	
N_{60}	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.	
N	INDICATES STANDARD PENETRATION RESISTANCE (UNCORRECTED)	
SS	INDICATES A SPLIT SPOON SAMPLE, STANDARD PENETRATION TEST.	
TR	INDICATES TOP OF ROCK	
—W	INDICATES FREE WATER LEVEL	

HISTORIC BORING DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
SILT & CLAY	*A-6a*	*1*	*2*
	TOTAL	*1*	*2*



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

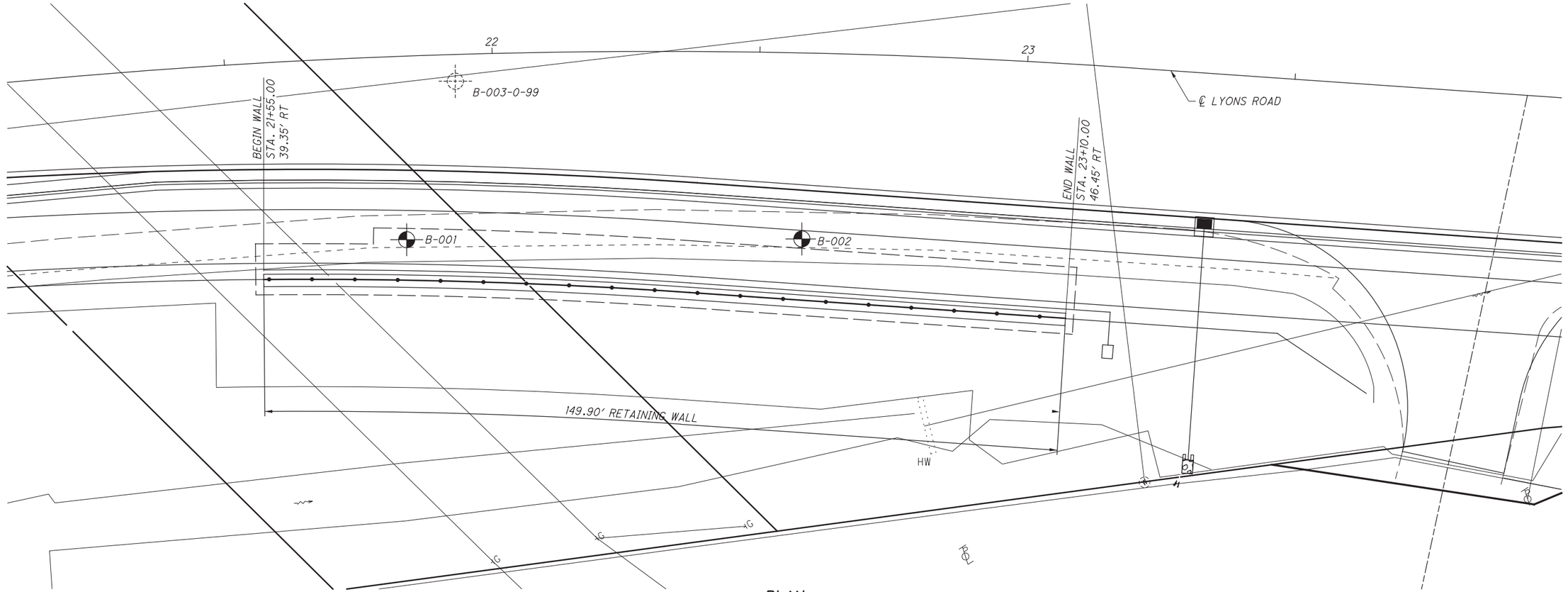
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm	
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE		

RECON. - CMD 03/13/2017
DRILLING - 3/21/2017
DRAWN - KPR 11/2017
REVIEWED - DAF 5/7/2018

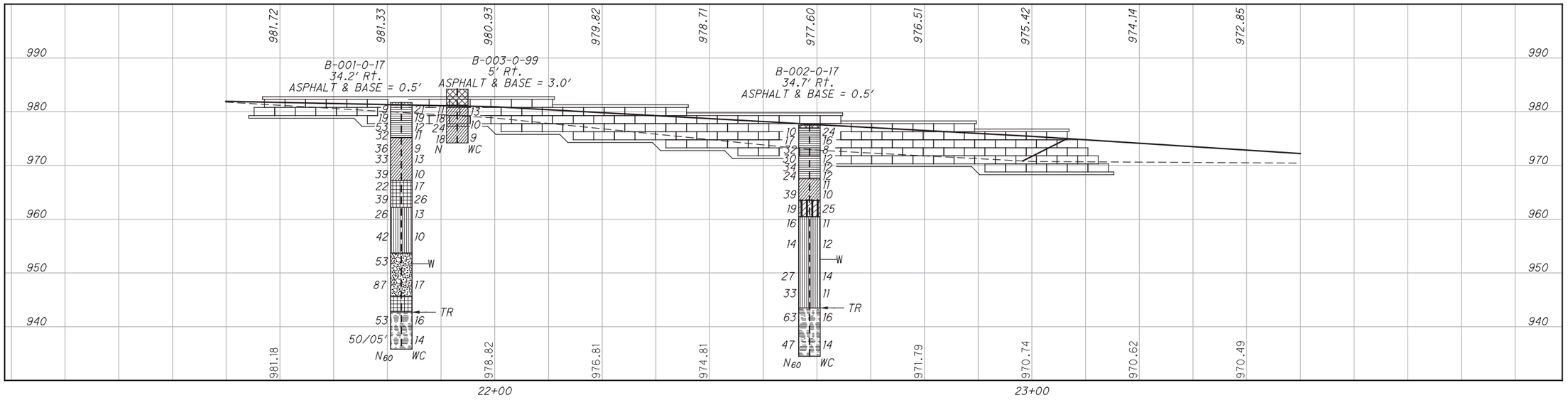
DESIGN AGENCY
GEOTECHNOLOGY INC
FROM THE GROUND UP

PID NO. 100316

MOT- LYONS ROAD STRUCTURE FOUNDATION EXPLORATION



PLAN



PROFILE

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED DAF
CHECKED KPR

STRUCTURE FOUNDATION EXPLORATION

MOT- LYONS ROAD

2 / 5

PROJECT: MOT-LYONS ROAD	DRILLING FIRM / OPERATOR: THELEN / J.F.	DRILL RIG: CME-55 TRACK TD-2	STATION / OFFSET: 21+83, 34' RT.	EXPLORATION ID B-001-0-17
TYPE: SIDEWALK	SAMPLING FIRM / LOGGER: THELEN / CMD	HAMMER: AUTOMATIC HAMMER	ALIGNMENT: LYONS ROAD	
PID: 100316 SFN:	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 9/3/15	ELEVATION: 981.7 (MSL) EOB: 45.9 ft.	PAGE 1 OF 1
START: 3/21/07 END: 3/21/17	SAMPLING METHOD: SPT	ENERGY RATIO (%): 86	LAT / LONG: 39.62916700, -84.22861000	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	ABAN-DONED
ASPHALT CONCRETE (2")	981.5																	
AGGREGATE BASE WITH SILTY CLAY.	981.2																	
VERY STIFF TO HARD, MIXED DARK BROWN, **SILTY CLAY**, SOME SAND, LITTLE GRAVEL, TRACE ASPHALT FRAGMENTS, MOIST (FILL).			2 3 3	9	83	SS-1	1.75	16	8	12	34	30	36	19	17	21	A-6b (9)	
			5 5 8	19	56	SS-2	4.00	15	8	13	35	29	35	18	17	19	A-6b (9)	
			12 19 18	53	100	SS-3	4.5+	-	-	-	-	-	-	-	-	12	A-6b (V)	
			6 10 12	32	100	SS-4	4.5+	-	-	-	-	-	-	-	-	11	A-6b (V)	
	975.2																	
HARD, MIXED BROWN, **SILT AND CLAY**, SOME SAND, SOME GRAVEL, MOIST (FILL).					83	ST-5	-	25	9	16	33	17	25	14	11	-	A-6a (3)	
			10 12 13	36	67	SS-6	4.5+	-	-	-	-	-	-	-	-	9	A-6a (V)	
			12 10 13	33	100	SS-7	4.5+	-	-	-	-	-	-	-	-	13	A-6a (V)	
			9 15 12	39	6	SS-8	-	-	-	-	-	-	-	-	-	10	A-6a (V)	
	967.2																	
VERY STIFF, DARK BROWN TO BLACK, **CLAY**, TRACE SAND, TRACE GRAVEL, MOIST.			3 6 9	22	100	SS-9	3.00	-	-	-	-	-	-	-	-	17	A-7-6 (V)	
			4 7 20	39	100	SS-10	3.00	2	1	4	47	46	58	27	31	26	A-7-6 (20)	
	962.2																	
HARD, BROWN, TRACE GRAY, SANDY **SILT**, SOME CLAY, LITTLE GRAVEL, MOIST (GLACIAL TILL).			6 9 9	26	100	SS-11	4.00	17	10	19	32	22	21	13	8	13	A-4a (4)	
			8 13 16	42	100	SS-12	4.25	-	-	-	-	-	-	-	-	10	A-4a (V)	
	953.7																	
DENSE TO VERY DENSE, GRAY, **GRAVEL** WITH SAND, WET.		W	11 17 20	53	100	SS-13	-	34	26	27	-	13 -	NP	NP	NP	-	A-1-b (0)	
	945.7		17 27 34	87	100	SS-14	4.5+	-	-	-	-	-	-	-	-	17	A-1-b (V)	
HARD, GRAY, **CLAY**, TRACE SAND, TRACE FINE GRAVEL (GLACIAL TILL).						SS-14	-	-	-	-	-	-	-	-	-	17	A-7-6 (V)	
	942.7	TR																
GRAY, EXTREMELY WEAK, HIGHLY WEATHERED **SHALE** (BEDROCK)			10 17 20	53	83	SS-15	-	-	-	-	-	-	-	-	-	16	Rock (V)	
	935.8	EOB	21 50/5"	-	109	SS-16	-	-	-	-	-	-	-	-	-	14	Rock (V)	

NOTES: HOLE CAVED AT 29.0 FEET ON COMPLETON OF DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: 15 BAGS BENTONITE CHIPS AND CUTTINGS

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 9/25/17 09:36 - O:\PROJECTS\J029397.01\LOGS\J029397.01 - ODOT LOGS.GPJ

PROJECT: MOT-LYONS ROAD	DRILLING FIRM / OPERATOR: THELEN / J.F.	DRILL RIG: CME-55 TRACK TD-2	STATION / OFFSET: 22+59, 35' RT.	EXPLORATION ID B-002-0-17
TYPE: SIDEWALK	SAMPLING FIRM / LOGGER: THELEN / CMD	HAMMER: AUTOMATIC HAMMER	ALIGNMENT: LYONS ROAD	
PID: 100316 SFN:	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 9/3/15	ELEVATION: 977.5 (MSL) EOB: 41.5 ft.	PAGE 1 OF 1
START: 3/21/17 END: 3/21/17	SAMPLING METHOD: SPT	ENERGY RATIO (%): 86	LAT / LONG: 39.62916700, -84.22833300	

MATERIAL DESCRIPTION AND NOTES	ELEV. 977.5	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	ABAN-DONED
ASPHALT CONCRETE (2")	977.3																	
AGGREGATE BASE (3")	977.0																	
SOFT, MIXED DARK GRAY, **SILTY CLAY**, SOME SAND AND GRAVEL, VERY MOIST (**FILL**).	975.7																	
HARD, BROWN, **SILTY CLAY**, SOME SAND AND GRAVEL, MOIST (FILL).	974.0		2 3 4	10	100	SS-1	0.50	30	17	10	23	20	34	16	18	24	A-6b (4)	
HARD, BROWN, **SILT AND CLAY**, SOME SAND AND GRAVEL, MOIST (FILL).	972.5		22 4 8	17	100	SS-2	4.5+	21	14	13	28	24	32	15	17	16	A-6b (6)	
HARD, MIXED BROWN, **SILTY CLAY**, SOME SAND ND GRAVEL, MOIST (FILL).	968.0		6 11 11	32	100	SS-3	4.5+	-	-	-	-	-	29	16	13	8	A-6a (V)	
HARD, MIXED BROWN, **SILT AND CLAY**, SOME SAND, LITTLE GRAVEL, MOIST (**FILL**).	963.5		10 10 11	30	100	SS-4	4.5+	-	-	-	-	-	-	-	-	12	A-6b (V)	
VERY STIFF, DARK BROWN TO BLACK, **ELASTIC CLAY**, LITTLE SAND, TRACE GRAVEL, MOIST.	960.5		10 11 13	34	22	SS-5	-	-	-	-	-	-	-	-	-	12	A-6b (V)	
VERY STIFF TO HARD, BROWN, TRACE GRAY, SANDY **SILT** , SOME GRAVEL, VERY MOIST TO WET (GLACIAL TILL).	943.5	W	8 8 9	24	50	SS-6	4.5+	-	-	-	-	-	-	-	-	12	A-6b (V)	
GRAY, EXTREMELY WEAK, HIGHLY WEATHERED **SHALE** (BEDROCK).	936.0	▼ TR EOB			100	ST-7	-	15	10	19	29	27	30	16	14	-	A-6a (6)	
			12 15 12	39	33	SS-8	4.5+	-	-	-	-	-	-	-	-	10	A-6a (V)	
			2 5 8	19	100	SS-9	3.75	6	3	9	36	46	55	30	25	25	A-7-5 (17)	
			5 5 6	16	100	SS-10	4.00	-	-	-	-	-	-	-	-	11	A-4a (V)	
			2 4 6	14	33	SS-11	4.5+	22	12	20	27	19	19	13	6	12	A-4a (2)	
			9 10 9	27	100	SS-12	-	-	-	-	-	-	-	-	-	14	A-4a (V)	
			6 8 15	33	100	SS-13	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	
			11 17 27	63	100	SS-14	-	-	-	-	-	-	-	-	-	16	Rock (V)	
			10 12 21	47	100	SS-15	-	-	-	-	-	-	-	-	-	14	Rock (V)	

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: 15 BAGS BENTONITE CHIPS AND CUTTINGS

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 9/25/17 09:36 - O:\PROJECTS\J029397.01\LOGS\J029397.01 - ODOT LOGS.GPJ

LOG OF BORING B-003-0-99

DATE STARTED 5/19/99 SAMPLER'S TYPE HSA DIA. 2.25 IN. WATER ELEV. N/A

DATE COMPLETED 5/19/99

BORING NO. PB-3 STATION & OFFSET 21+93, 5 FT. RT SURFACE ELEV. 984.2 FT

ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS								
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L	P.I.	W.C.	ODOT CLASS
984.2	Ø													
				7" - ASPHALT 0.6										
981.7		6/7/4	22	29" - SAND AND GRAVEL BASE 3.Ø	SS-1								.	VISUAL
979.2	5	6/10/8	89	BROWN SILTY CLAY, SOME SAND, TRACE GRAVEL	SS-2	9	9	19	30	33	29	15	13	A-6a
976.7		8/11/13	100		SS-3								10	VISUAL
974.2	10	8/9/9	89		SS-4								9	VISUAL

BOTTOM OF BORING = 10.Ø'