

ROADWAY (CONTINUED)

ITEM 204 - GEOGRID, AS PER PLAN

ALL REQUIREMENTS OF CMS ITEM 204 GEOGRID SHALL BE MET IN ADDITION TO THE FOLLOWING:

1. HIGH PERFORMANCE MULTI-AXIAL, MULTI-APERATURE GEOGRID (NX850 AND NX850-FG)
 - A. FURNISH MULTI-AXIAL, MULTI-APERTURE GEOGRID THAT IS INTEGRALLY FORMED WITH HEXAGONAL, TRAPEZOIDAL AND TRIANGULAR APERTURES AND HIGH-PROFILE RIBS EXHIBITING SIGNIFICANT DIMENSIONAL STABILITY THROUGH ALL RIBS AND JUNCTIONS OF THE GEOGRID STRUCTURE. THE FURNISHED GEOGRID SHALL MAINTAIN ITS STABILIZATION AND AGGREGATE CONFINEMENT CAPABILITIES UNDER REPEATED DYNAMIC LOADS WHILE IN SERVICE, AND SHALL ALSO BE RESISTANT TO ULTRAVIOLET DEGRADATION, DAMAGE UNDER NORMAL CONSTRUCTION PRACTICES AND ALL FORMS OF BIOLOGICAL AND CHEMICAL DEGRADATION ENCOUNTERED IN THE SOIL ON WHICH IT IS PLACED.
 - B. THE GEOGRID SHALL BE MANUFACTURED FROM A COEXTRUDED, COMPOSITE POLYMER SHEET, WHICH IS THEN PUNCHED AND ORIENTED. THE RESULTING STRUCTURE SHALL CONSIST OF CONTINUOUS AND NON-CONTINUOUS RIBS FORMING THREE DISTINCT APERTURE SHAPES (HEXAGON, TRAPEZOID, AND TRIANGLE) AND AN UNIMPEDED SUSPENDED HEXAGON.
 - C. THE GEOGRID STRUCTURE SHALL HAVE RIBS WITH DEPTH-TO-WIDTH ASPECT RATIOS GREATER THAN 1.0.
 - D. THE GEOGRID SHALL CONFORM TO THE PROPERTIES PRESENTED IN THE FOLLOWING TABLE:

REQUIRED GEOGRID PROPERTIES

NAME	VALUE (NX850)	VALUE (NX850-FG)	UNIT
APERTURE SHAPE	HEXAGONAL, TRAPEZOIDAL, & TRIANGULAR	HEXAGONAL, TRAPEZOIDAL, & TRIANGULAR	
STRUCTURE	COEXTRUDED & INTEGRALLY FORMED	COEXTRUDED & INTEGRALLY FORMED	
RIB SHAPE	RECTANGULAR	RECTANGULAR	
RIB ASPECT RATIO ³	> 1.0	> 1.0	
NODE THICKNESS	0.18	0.18	IN.
CONTINUOUS PARALLEL RIB PITCH	3.2	3.2	IN.
SPECIFIC DIMENSION OF THE FINISHED ROLLS ² (WIDTH X LENGTH)	12.5 X 197	12.5 X 197	FT.
GRAB TENSILE STRENGTH	-	160	LBS.
GRAB ELONGATION	-	50	%
TRAPEZOID TEAR STRENGTH	-	160	LBS.
CBR PUNCTURE RESISTANCE	-	410	LBS.
PEMITTIVITY	-	1.5	1 / SEC
WATER FLOW	-	110	GPM / SQ. FT
APPARENT OPENING SIZE	-	70	STD. US
UV RESISTANCE	-	70	% 500 HOURS
SPECIFIC DIMENSIONS ²	-	12.5 X 197	FT.

1. UNLESS INDICATED OTHERWISE, VALUES SHOWN ARE MINIMUM AVERAGE ROLL VALUES DETERMINED IN ACCORDANCE WITH ASTM D4759-02.
2. NOMINAL DIMENSIONS.
3. RATIO OF THE MID-RIB DEPTH TO THE MID-RIB WIDTH

ITEM 204 - GEOGRID, AS PER PLAN (CONT.)

- E. SUBMIT GEOGRID PRODUCT DATA SHEET AND CERTIFICATION FROM THE MANUFACTURER THAT THE GEOGRID PRODUCT SUPPLIED MEETS THE REQUIREMENTS LISTED. A MINIMUM OF ONE MATERIAL SAMPLE MAY BE SELECTED AT RANDOM BY THE ENGINEER FROM THE MATERIAL DELIVERED AND TESTED FOR COMPLIANCE WITH THESE REQUIREMENTS. EACH SAMPLE SIZE REQUIRED SHALL BE A MINIMUM OF THREE (3) FEET WIDE WITH A ONE (1) SQUARE YARD MINIMUM AREA.
- F. THE CONTRACTOR SHALL CHECK THE GEOGRID UPON DELIVERY TO VERIFY THE PROPER MATERIAL HAS BEEN RECEIVED. THE CONTRACTOR SHALL ALSO INSPECT THE GEOGRID TO DETERMINE THAT IT IS FREE OF FLAWS OR DAMAGE THAT MAY HAVE OCCURRED DURING MANUFACTURING, SHIPPING, OR HANDLING.
- G. STORAGE AND PROTECTION
 - (1) FOLLOW ASTM D 4873 FOR GEOGRID LABELING, SHIPMENT, AND STORAGE. FURNISH PRODUCT LABELS THAT CLEARLY SHOW THE MANUFACTURER'S OR SUPPLIER'S NAME, PRODUCT TYPE, LOT NUMBER, ROLL NUMBER, MANUFACTURED DATE, AND ROLL DIMENSION. FURNISH A NOTATION FOR EACH SHIPPING DOCUMENT CERTIFYING THAT THE MATERIAL IS IN ACCORDANCE WITH THE MANUFACTURER'S CERTIFICATE.
 - (2) PREVENT EXCESSIVE MUD, WET CONCRETE, EPOXY, OR OTHER DELETERIOUS MATERIALS FROM COMING IN CONTACT WITH AND AFFIXING TO THE GEOGRID MATERIALS.
 - (3) DURING SHIPPING AND STORAGE, PROTECT GEOGRID FROM DIRECT SUNLIGHT, UV DETERIORATION AND TEMPERATURES GREATER THAN 160 DEGREES F (71 DEGREES C) OR LESS THAN -20 DEGREES F (-29 DEGREES C).
 - (4) ROLLED MATERIALS SHALL BE LAID FLAT OR STOOD ON END. KEEP THE GEOGRID DRY AND DO NOT STORE DIRECTLY ON THE GROUND.
 - (5) GEOGRID MATERIALS SHOULD NOT BE LEFT DIRECTLY EXPOSED TO SUNLIGHT FOR MORE THAN 6 WEEKS.
- H. A MINIMUM LOOSE THICKNESS OF 6 INCHES OF GRANULAR EMBANKMENT MATERIAL IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOGRID.

ITEM 204 - GRANULAR EMBANKMENT, AS PER PLAN

ALL REQUIREMENTS OF CMS ITEM 204 GRANULAR EMBANKMENT MATERIAL SHALL BE MET, EXCEPT THE GRANULAR EMBANKMENT TO BE UTILIZED WITHIN THE GEOGRID-REINFORCED SOIL MAT SHALL CONSIST OF THE EXISTING ON-SITE EMBANKMENT MATERIALS MEETING THE DEPARTMENT GROUP CLASSIFICATIONS A-1-A AND A-1-B. THE MAXIMUM GRAIN SIZE SHALL BE LESS THAN 3 INCHES AND THE FINES CONTENTS (PASSING THE NO. 200 SIEVE) NO MORE THAN 15%. IF ADDITIONAL GRANULAR EMBANKMENT MATERIAL IS NECESSARY TO MEET THE PLANNED FILL THICKNESS, MATERIALS CONFORMING TO ODOT ITEM 703.16 TYPE B GRANULAR MATERIAL IS ACCEPTABLE PROVIDED THE FINES CONTENTS DOES NOT EXCEED 15%.

THE DEPARTMENT HAS PROVIDED AN ITEM 204 GRANULAR MATERIAL, TYPE B OF 2000 CY FOR ESTIMATING PURPOSES.

EROSION CONTROL

SEEDING AND MULCHING

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

ITEM 659 - SOIL ANALYSIS TEST	2 EACH
ITEM 659 - TOPSOIL	1302 CY
ITEM 659 - SEEDING AND MULCHING	11725 SY
ITEM 659 - REPAIR SEEDING AND MULCHING	587 SY
ITEM 659 - INTER-SEEDING	587 SY
ITEM 659 - COMMERCIAL FERTILIZER	1.64 TON
ITEM 659 - LIME	2.43 ACRE
ITEM 659 - WATER	65 MGAL

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

DRAINAGE

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, 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, NOTIFY THE ENGINEER 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, NOTIFY THE ENGINEER 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 IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

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

ITEM SPECIAL- MISCELLANEOUS METAL

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. FURNISH MATERIALS PER 611 WITH PRIOR APPROVAL OF THE ENGINEER.

REPLACE EXISTING CASTINGS DAMAGED BY CONTRACTOR NEGLIGENCE, AS DETERMINED BY THE ENGINEER, AT THE EXPENSE OF THE CONTRACTOR. QUANTITIES ARE PROVIDED ON THE DRAINAGE SUBSUMMARY.

ENVIRONMENTAL

MANAGEMENT OF LANDFILL WASTES

IF ENCOUNTERED, THE CONTRACTOR SHALL ENSURE ALL LANDFILL WASTES (INCLUDING SOLID WASTE, HAZARDOUS WASTE, AND ASSOCIATED SOILS) EXCAVATED DURING CONSTRUCTION ARE MANAGED IN ACCORDANCE WITH ALL APPLICABLE STATE AND FEDERAL LAWS AND REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION, INCLUDING ORC 3734.

IF LANDFILL WASTES ARE EXPOSED DURING CONSTRUCTION, THE CONTRACTOR SHALL COVER EXPOSED IN SITU WASTE WITH IMPERMEABLE MATERIAL DURING RAIN EVENTS, TO PREVENT DIRECT INFILTRATION OF RAIN WATER TO THE LANDFILL. THE CONTRACTOR SHALL STORE ALL LANDFILL WASTE EXCAVATED UNDER THIS PROJECT IN LEAKPROOF COVERED CONTAINERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER TESTING, TRANSPORTATION, AND DISPOSAL OF THE LANDFILL WASTES AT A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) FACILITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS AND TO TRANSPORT THE MATERIAL TO A LICENSED AND PERMITTED TREATMENT OR DISPOSAL FACILITY.

THE CONTRACTOR SHALL PROVIDE COPIES OF ALL WASTE MANIFESTS TO THE ODOT PROJECT ENGINEER. PRIOR TO REMOVAL OF ANY LANDFILL WASTES (INCLUDING SOLID WASTE, HAZARDOUS WASTE, AND ASSOCIATED SOILS), COPIES OF SAMPLE ANALYSIS RESULTS AND THE SELECTION OF THE APPROPRIATE TREATMENT OR DISPOSAL METHOD, ALONG WITH A COPY OF THE LETTER OF ACCEPTANCE FROM THE TREATMENT/DISPOSAL FACILITY, MUST BE SUBMITTED TO AND ACCEPTED BY OEPA.

ITEM 690 - WORK INVOLVING NON-REGULATED MATERIAL	315 TON
ITEM 690 - WORK INVOLVING SOLID WASTE	315 TON

MANAGEMENT OF LANDFILL LEACHATE

IF EXCAVATIONS WITHIN 300' OF THE LANDFILL LIMITS ENCOUNTERS LEACHATE, THE CONTRACTOR SHALL ENSURE THAT THE LEACHATE IS COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE STATE AND FEDERAL LAWS AND REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION, INCLUDING ORC 3734. THE CONTRACTOR SHALL ARRANGE FOR THE PROPER TESTING, TRANSPORTATION, AND DISPOSAL OF THE WATER AT A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) FACILITY.

COPIES OF ALL WASTE MANIFESTS ARE TO BE PROVIDED TO THE ODOT PROJECT ENGINEER. PRIOR TO REMOVAL OF ANY LANDFILL WASTES (INCLUDING SOLID WASTE, HAZARDOUS WASTE, AND ASSOCIATED SOILS), COPIES OF SAMPLE ANALYSIS RESULTS AND THE SELECTION OF THE APPROPRIATE TREATMENT OR DISPOSAL METHOD, ALONG WITH A COPY OF THE LETTER OF ACCEPTANCE FROM THE TREATMENT/DISPOSAL FACILITY, MUST BE SUBMITTED TO AND ACCEPTED BY OEPA.

ITEM 690 - WORK INVOLVING NON-REGULATED WATER	3,150 GAL
ITEM 690 - WORK INVOLVING REGULATED WATER	3,150 GAL

MONITORING FOR EXPLOSIVE GASES DURING CONSTRUCTION

THE CONTRACTOR SHALL ENSURE THAT AT LEAST ONE ON-SITE STAFF PERSON UTILIZES A LOWER EXPLOSIVE LIMIT (LEL) MONITOR DURING CONSTRUCTION ACTIVITIES. IF LEVELS EXCEED 10% OF THE LEL, WORK SHALL STOP AND RESUME WHEN LEVELS RETURN TO BELOW 1% OF THE LEL.

CERTIFICATION REPORT FOR WORK OVER LANDFILL

WITHIN ONE WEEK OF COMPLETION OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL PREPARE A CERTIFICATION REPORT TO DOCUMENT COMPLIANCE WITH THE LANDFILL AUTHORIZATION AND SHALL SUBMIT THE REPORT TO THE DISTRICT ENVIRONMENTAL OFFICE. THE DISTRICT ENVIRONMENTAL OFFICE SHALL SUBMIT THE DRAFT LANDFILL CERTIFICATION TO ODOT OFFICE OF ENVIRONMENTAL SERVICES FOR COORDINATION WITH THE OEPA.

MOT-4-19-30

MODEL: Sheet_SurvFI PAPER SIZE: 34x22 (in.) DATE: 2/11/2025 TIME: 8:31:03 PM USER: thomas P:\23125 MOT-4-19-30\117239\00-Engineering\Roadway\Sheets\117239_GN002.dgn

GENERAL NOTES

DESIGN AGENCY



CHAGRIN VALLEY ENGINEERING, LTD.

DESIGNER

CJD

REVIEWER

JTS 10/29/24

PROJECT ID

117239

SHEET TOTAL

P.09 | 161

SHEET NUMBER																		PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET	
8	9	10	11	12	13	14	71	72	73	91	98	106	113	120	121	122	129	01/S>2/04	02/S>2/04							
																								ROADWAY		
LS																		LS		201	11001	LS	-	CLEARING AND GRUBBING, AS PER PLAN	8	
							15926												15926		202	23000	15926	SY	PAVEMENT REMOVED	
								104											104		202	30700	104	FT	CONCRETE BARRIER REMOVED	
								3478											3478		202	38000	3478	FT	GUARDRAIL REMOVED	
								4											4		202	42010	4	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
								3											3		202	42040	3	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
								7											7		202	47000	7	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
5																			5		202	60010	5	EACH	MONUMENT ASSEMBLY REMOVED	
										1138	170	598	206						2112		203	20000	2112	CY	EMBANKMENT	
							20836												20836		204	10000	20836	SY	SUBGRADE COMPACTION	
										14774	1328	2869	2022						20994		204	13000	20994	CY	EXCAVATION OF SUBGRADE	
										14569	1545	2702	2173						20989		204	21001	20989	CY	GRANULAR EMBANKMENT, AS PER PLAN	9
	2000																		2000		204	30010	2000	CY	GRANULAR MATERIAL, TYPE B	9
9																			9		204	45000	9	hour	PROOF ROLLING	
										29122	3087	5404	4342						41955		204	51001	41955	SY	GEOGRID, AS PER PLAN, (NX850)	9
										14569	1545	2702	2173						20989		204	51001	20989	SY	GEOGRID, AS PER PLAN, (NX850-FG)	9
								2400											2400		606	15050	2400	FT	GUARDRAIL, TYPE MGS	
								3											3		606	26151	3	EACH	ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN, MASH 2016	8
								1											1		606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
								5											5		606	35002	5	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
								3											3		606	35102	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
								154											154		622	10160	154	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
							5328												5328		622	80000	5328	FT	GLARE SCREEN	
5																			5		623	40500	5	EACH	REFERENCE MONUMENT, TYPE A	
																								EROSION CONTROL		
									10										10		601	21050	10	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
	2																		2		659	00100	2	EACH	SOIL ANALYSIS TEST	
	1302																		1302		659	00300	1302	CY	TOPSOIL	
	11725																		11725		659	10000	11725	SY	SEEDING AND MULCHING	
	587																		587		659	14000	587	SY	REPAIR SEEDING AND MULCHING	
	587																		587		659	15000	587	SY	INTER-SEEDING	
	1.64																		1.64		659	20000	1.64	TON	COMMERCIAL FERTILIZER	
	2																		2		659	31000	2	ACRE	LIME	
	65																		65		659	35000	65	MGAL	WATER	
																			32276		832	30000	32276	EACH	EROSION CONTROL	
																								ENVIRONMENTAL		
	315																		315		SPECIAL	69065000	315	TON	WORK INVOLVING NON-REGULATED MATERIALS	9
	315																		315		SPECIAL	69065010	315	TON	WORK INVOLVING SOLID WASTE	9
	3150																		3150		SPECIAL	69065022	3150	GAL	WORK INVOLVING NON-REGULATED WATER	9
	3150																		3150		SPECIAL	69065024	3150	GAL	WORK INVOLVING REGULATED WATER	9
																								DRAINAGE		
										9738									9738		605	12210	9738	FT	6" DEEP PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
								261											261		611	00510	261	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
								115											115		611	01500	115	FT	6" CONDUIT, TYPE F	
								1											1		611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE	
								5											5		611	99710	5	EACH	PRECAST REINFORCED CONCRETE OUTLET	9
								120											120		SPECIAL	61199820	120	LB	MISCELLANEOUS METAL	9

GENERAL SUMMARY

DESIGN AGENCY

CHAGRIN VALLEY ENGINEERING, LTD.

DESIGNER
SHT


REVIEWER
JTS 10/29/24

PROJECT ID
117239

SHEET TOTAL
P.67 | 161

SHEET NUMBER																		PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET	
8	9	10	11	12	13	14	71	72	73	91	98	106	113	120	121	122	129	01/S>2/04	02/S>2/04							
		50																50		410	12000	50	CY	MAINTENANCE OF TRAFFIC		
		50																50		410	13000	50	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B		
																								TRAFFIC COMPACTED SURFACE, TYPE C		
						178												178		411	10000	178	CY	STABILIZED CRUSHED AGGREGATE		11
				100														100		614	11110	100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
		5328																5328		614	11630	5328	FT	INCREASED BARRIER DELINEATION		
						2												2		614	12381	2	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN		11
		LS																LS		614	12420	LS	-	DETOUR SIGNING		10
		4																4		614	12470	4	EACH	WORK ZONE SPEED LIMIT SIGN		
		4																4		614	12484	4	EACH	WORK ZONE INCREASED PENALTIES SIGN		
						2												2		614	12757	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM, AS PER PLAN		11
			368															368		614	12801	368	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN		11
		50																50		614	13000	50	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC		
			428			214												642		614	13310	642	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY		
			14															14		614	18601	14	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN		11
						6												6		614	22110	6	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT		
						609												609		614	23210	609	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT		
						925												925		614	24202	925	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT		
			LS															LS		615	10000	LS	-	ROADS FOR MAINTAINING TRAFFIC		
						4802												4802		615	20000	4802	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A		
		3	7															10		616	10000	10	MGAL	WATER		
						5328												5328		622	41011	5328	FT	PORTABLE BARRIER, 50", AS PER PLAN		10
		28																28		808	18700	28	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY		
					56													56		896	00010	56	SNMT	PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS I		
				14														14		896	00021	14	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN		11
																		LS		108	30000	LS	-	CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS		
																		LS		614	11000	LS	-	MAINTAINING TRAFFIC		
																		7		619	16010	7	MNTH	FIELD OFFICE, TYPE B		
																		LS		623	10000	LS	-	CONSTRUCTION LAYOUT STAKES AND SURVEYING		
																		LS		624	10000	LS	-	MOBILIZATION		

GENERAL SUMMARY

DESIGN AGENCY

CHAGRIN VALLEY ENGINEERING, LTD.

DESIGNER
SHT

REVIEWER
JTS 10/29/24

PROJECT ID
117239

SHEET TOTAL
P.69 | 161