	CODE	SUMMARY OF QUANTITIES (CONSTRUCTION TYPE CODE: 0001)		TOTAL
	20200100	EARTH EXCAVATION	CU YD	2810
	20200200	ROCK EXCAVATION	CU YD	100
	20400800	FURNISHED EXCAVATION	CU YD	168
	20800150	TRENCH BACKFILL	CU YD	459
	21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	6025
	25000100	SEEDING CLASS 1	ACRE	0.92
	28000500	INLET AND PIPE PROTECTION	EA	9
	31102300	SUBBASE GRANULAR MATERIAL TYPE C, 6"	SQ YD	6025
	42300300	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT 7 INCH	SQ YD	377
	42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	1036
	42400800	DETECTABLE WARNINGS	SQ FT	55
	44000100	PAVEMENT REMOVAL	SQ YD	328
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	358
	550B2320	STORM SEWER, RUBBER GASKET, CLASS B, TYPE 1, 12"	FOOT	246
	55106025	STORM SEWER INSTALLATION 12"	FOOT	751
	55106045	STORM SEWER INSTALLATION 18"	FOOT	293
	60107600	PIPE UNDERDRAINS 4"	FOOT	2123
	60218300	MANHOLES, TYPE A, 4' – DIAMETER, TYPE 1 FRAME, OPEN LID	EA	4
	60234200	INLET TYPE A, TYPE 1 FRAME, OPEN LID	EA	3
	60266600	VALVE BOXES TO BE ADJUSTED	EA	1
	64000110	SIGHT SCREEN (CHAIN LINK FENCE) 6'	FOOT	3358
	67100100	MOBILIZATION	L SUM	1
Δ	78001100	PAINT PAVEMENT MARKING – LETTERS AND SYMBOLS	SQ FT	26.2
Δ	78001110	PAINT PAVEMENT MARKING – LINE 4"	FOOT	573
Δ	78001130	PAINT PAVEMENT MARKING – LINE 6"	FOOT	150
Δ	78001150	PAINT PAVEMENT MARKING – LINE 12"	FOOT	71
Δ	78001160	PAINT PAVEMENT MARKING – LINE 16"	FOOT	86
Δ	78001180	PAINT PAVEMENT MARKING – LINE 24"	FOOT	54
	LR420129	PORTLAND CEMENT CONCRETE PAVEMENT, 8" (SPECIAL) WITH INTEGRAL CURB	SQ YD	5616
	X0322916	PROPOSED STORM SEWER CONNECTION TO EXISTING STORM SEWER	EA	2
	X0322917	PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE	EA	1
	X7010216	TRAFFIC CONTROL AND PROTECTION SPECIAL	L SUM	1
	X6024242	INLET SPECIALS NO. 1	EA	6
Δ	XX002063	LIGHTING SYSTEM COMPLETE	L SUM	1

Δ SPECIALTY ITEMS

PAVEMENT DESIGN CALCULATIONS

GIVEN ASSUMPTIONS:

1) Reconstruct with jointed, P.C.C Concrete
2) ADT = 1200 (Design Year Traffic) PV = 1056, SU = 108, MU = 36
3) Subgrade Support Rating (SSR) = Poor
4) Class III, Two Lane Urban Collector
5) Non-reinforced Integral Curb & Gutter with 15 ft. transverse joint spacing
6) Stabilized subbase required for Class I roadway

SOLUTION:

1) Determine traffic factor using equation 37-2C allowing an 80,000 lb. Load limit.

$$TF = DP \left[\frac{(.073 \times PV) + (67.89 \times SU) + (283.605 \times MU)}{1 \times 10^6} \right]$$

Where DP = Design Period = 20 Years

$$TF = 20 \left[\frac{(.073 \times 1056) + (67.890 \times 108) + (283.605 \times 36)}{10^6} \right]$$

TF = 20 (.0176) = 0.3524

2) Determine rigid pavement thickness from figure 37-2E using:
   a. SSR = Fair
   b. TF = 0.3524
   c. Joint spacing = 15 feet

THICKNESS = 7.00" Thickness for 0.5 TF with 15' joint spacing fair subgrade
ADJUSTMENTS : -0.00 Integral curb and gutter are not reinforced (section 37-2.03c)
-0.00" Subbgrade adjustment (Figure 37-2K)
+0.50" Overload adjustment (Figure 37-2L) garbage trucks, buses, commercial vehicles
7.50" Jointed P.C.C Pavement

3) Since reinforcing will be used at expansion joints only, and the subgrade rating is poor, the designer has decided to use 8" P.C.C pavement over 6" drainable sub-base.

SYMBOL LEGEND

EXISTING	SYMBOL NAME	PROPOSED
	HAND HOLE	
	CONTROLLER	
	TRAFFIC LIGHT	
	PEDESTRIAN PUSH BUTTON	
	MAST ARM	
	POWER OR TELEPHONE POLE	
	GUY WIRE	
	EXISTING LUMINAIRE	
	EXISTING ELECTRIC MANHOLE	
	DECORATIVE LIGHT	
	STREET LIGHT	
	ELECTRICAL JUNCTION BOX	
	TELEPHONE JUNCTION BOX	
C.B.	INLET SPECIAL TY "A"	C.B.
	INLET SPECIAL NO. 1	
	STORM AND SANITARY MANHOLE	
	CATCHBASIN SINGLE	
	CATCHBASIN DOUBLE	
	EXISTING SANITARY CLEANOUT	
W	WATER VALVE	W
	EXISTING HYDRANT	

EXISTING	SYMBOL NAME	PROPOSED
	VALVE VAULT	
	WATER SERVICE	
	FLARED END SECTION	
	TREE	
	TREE REMOVAL	
	EVERGREEN TREE	
	STUMP	
	BUSH	
B.M. #	BENCH MARK	
	ROW MARKER	
I.P	PROPERTY PIN	
RAN. PT.	RANDOM POINT	
	STREET SIGN	
	MAIL BOX	
GAS VENT	GAS VENT PIPE	
GAS LINE	GAS MARKER	
	GAS VALVE	
	STREET SIGN	

G GASLINE	STORM SEWER
T TELEPHONE	SANITARY SEWER
UE UNDERGROUND ELECTRIC	WATER MAIN X" W
WATER SERVICE LINE	UNDERDRAIN
	SIGHT SCREEN

CITY OF MOLINE
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CITY ENGINEER – SCOTT HINTON, P.E.

RIVERTECH BOULEVARD

34TH STREET, SOUTH OF RIVER DRIVE
SUMMARY OF QUANTITIES

Date	Revision
3–31–12	IDOT COMMENTS
1–3–11	IDOT COMMENTS

Date 12–13–11	Sheet 3 OF 34
Scale N.T.S.	
Designer JC	Project # MFT239