

EROSION CONTROL WITH REVEGETATION MAT SHALL BE PLACED IN ACCORDANCE WITH 667.03, WITH THE FOLLOWING EXCEPTION:

1. BEGIN INSTALLATION AT THE DOWNSTREAM TERMINAL END TRENCH 300 MM DEEP BY 150 MM WIDE. PLACE MAT IN BOTTOM OF TRENCH WITH ROLL OF MATERIAL ON DOWNSTREAM SIDE OF THE TRENCH. AFTER PINNING MAT SECURELY IN BOTTOM OF TRENCH, BACKFILL THE TRENCH AND COMPACT FIRMLY. ROLL MAT ACROSS BACKFILL AND UPSTREAM.

2. UPSTREAM TERMINATION SHALL BE MADE BY ROLLING MAT THROUGH THE TERMINAL END

TRENCH, 300 MM BY 150 MM, BEING SURE TO ALLOW SUFFICIENT AMOUNT OF MAT TO COVER BACKFILLED TRENCH. AFTER PINNING MAT IN BOTTOM OF TRENCH, BACKFILL THE TRENCH AND COMPACT FIRMLY. ROLL REMAINING MAT BACK DOWNSTREAM ACROSS BACKFILL AND PIN IN PLACE.

3. TOP CHANNEL BANK TERMINATION SHALL BE MADE BY ROLLING MAT THROUGH THE TOP ANCHOR TRENCH, 300 MM BY 150 MM, BEING SURE TO ALLOW SUFFICIENT AMOUNT OF MAT TO COVER BACKFILLED TRENCH. AFTER PINNING MAT IN BOTTOM OF TRENCH, BACKFILL THE TRENCH AND COMPACT FIRMLY.

FOR TYPE 2 AND TYPE 3 TURF REINFORCING MATS, AFTER INSTALLATION OF THE MAT, THE AREA SHALL BE RE-SEEDING WITH THE MIXTURE AND AT THE RATE AS SPECIFIED IN 659.09 OR ON THE PLANS. THE MAT SHALL THEN BE SOIL FILLED BY RAKING AND SMOOTHING FINE TOPSOIL INTO THE TURF REINFORCING MAT TO COMPLETELY FILL ITS THICKNESS. EXCESSIVE SOIL ABOVE THE MATTING SHALL NOT BE PERMITTED.

MAINTENANCE. THE AREA COVERED BY SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT SHALL BE MAINTAINED IN ACCORDANCE WITH 667.04.

METHOD OF MEASUREMENT. MEASUREMENT OF THE SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT SHALL BE THE NUMBER OF SQUARE METERS (SQUARE YARDS) OF AREA, COMPLETED AND ACCEPTED.

BASIS OF PAYMENT. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM SPECIAL - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2.

THE LIMING AND FERTILIZING REQUIRED ON THE AREA COVERED BY SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT WILL BE PAID FOR UNDER 659.

A CONTINGENCY QUANTITY FOR ITEM SPECIAL - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT 1000 SQ.YDS.

**DRAINAGE**

ITEM 604 - CATCH BASIN, NO. 2-2B, AS PER PLAN AND INLET SIDE DITCH, AS PER PLAN

INLETS SHALL BE CONSTRUCTED AS REQUIRED BY FIELD CONDITIONS AND CONNECTED TO THE PROPOSED TRUNK SEWER, MANHOLE OR TO THE NEAREST CATCH BASINS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 603 - 8" CONDUIT, TYPE B, AS PER PLAN	200 LIN.FT.
ITEM 603 - 8" CONDUIT, TYPE C, AS PER PLAN	200 LIN.FT.
ITEM 603 - 12" CONDUIT, TYPE B, AS PER PLAN	100 LIN.FT.
ITEM 603 - 12" CONDUIT, TYPE C, AS PER PLAN	100 LIN.FT.
ITEM 604 - CATCH BASIN, NO. 2-2B, AS PER PLAN	4 EACH
ITEM 604 - INLET, SIDE DITCH, AS PER PLAN	10 LIN.FT.

THE CONTRACTOR SHALL BE CAREFUL DURING THE INSTALLATION OF PIPES TO AVOID EXISTING UTILITY CONFLICTS. THE PROPOSED 12" DRAIN PIPES SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 12" FROM THE NEAREST EXISTING UTILITY LINE.

ITEM 603 - CONDUIT, TYPE B, C, D & E

NO CORRUGATED METAL PIPE SHALL BE USED FOR THESE ITEMS ON S.R. 615 AND S.R. 84.

ITEMS 603 AND 604 AS PER PLAN

ALL BACKFILL FOR ITEMS 603 AND 604 SHALL EXCLUDE SLAG.

ITEM 603 - CONDUIT, AS PER PLAN, TYPE 1

CONDUIT SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 603 EXCEPT THAT THE TRENCH SHALL BE BACKFILLED WITH ITEM 613 LOW STRENGTH MORTAR BACKFILL IN ACCORDANCE WITH PLAN DETAILS. PAYMENT FOR ITEM 613 SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER FOOT OF PIPE.

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 603 CONDUIT ITEM.

SPRING DRAINS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR DRAINING ANY SPRINGS SHOWN IN THE PLAN OR ENCOUNTERED DURING CONSTRUCTION. THE FOLLOWING TYPES OF PIPES MAY BE USED: 707.41; ASTM D3034 SDR 35, 707.42 OR 707.33 PERFORATED PER 707.31.

SPRING DRAINS SHALL BE CONSTRUCTED AS SHOWN ON STANDARD CONSTRUCTION DRAWING MC-1 AND PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAIN, AS PER PLAN	100 LIN. FT.
ITEM 605 - AGGREGATE DRAIN, AS PER PLAN	100 LIN. FT.

UNTREATED SEPTIC CONNECTIONS

THIS PLAN MAKES NO PROVISIONS FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY UNTREATED SEPTIC DRAINAGE INTO THE HIGHWAY DRAINAGE SYSTEM. ANY PIPE CARRYING UNTREATED SEPTIC FLOW SHALL BE PLUGGED WITH CLASS C CONCRETE AT THE RIGHT OF WAY LINE. PAYMENT FOR PLUGGING SHALL BE INCLUDED IN THE CONTRACT PRICE FOR (ITEM 203 EXCAVATION) (THE PERTINENT 202 ITEM).

TREATED SEPTIC CONNECTIONS

TREATED SEPTIC FLOW MAY BE DISCHARGED INTO THE HIGHWAY DRAINAGE SYSTEM PROVIDED THE OWNER HAS ACQUIRED AN OFFICIAL PERMIT FROM THE LOCAL AUTHORITY.

IN EACH CASE WHERE A PERMIT HAS BEEN ISSUED FOR MAKING A TREATED SEPTIC CONNECTION INTO A HIGHWAY DRAINAGE CONDUIT, AN INSPECTION WELL SHALL BE PROVIDED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING DM-3.

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

ITEM 603 6" CONDUIT, TYPE B, AS PER PLAN,	100 LIN. FT.
ITEM 603 6" CONDUIT, TYPE C, AS PER PLAN,	100 LIN. FT.
ITEM 604 INSPECTION WELL	2 EACH

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 THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE, THE LOCATION, TYPE, SIZE AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER.

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 PS46 MIN.

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

ITEM 603 6" CONDUIT, TYPE B, AS PER PLAN	200 LIN. FT.
ITEM 603 6" CONDUIT, TYPE C, AS PER PLAN	600 LIN. FT.

ITEM 604 - CASTINGS ADJUSTED TO GRADE, AS PER PLAN

ALL MANHOLES, INLET BASINS, AND OTHER CASTINGS ENCOUNTERED WITHIN THE WORK LIMITS SHALL BE ADJUSTED TO GRADE. ADJUSTING RINGS SHALL NOT BE AN ACCEPTED MEANS OF ADJUSTING CASTINGS. BRICK USED FOR ADJUSTING TO GRADE SHALL BE CLAY OR SHALE BRICK MEETING THE REQUIREMENTS OF ASTM C 32 SEWER BRICK GRADE SM. CONCRETE BRICK OR MASONRY BLOCK SHALL NOT BE USED. OTHERWISE ALL WORK SHALL BE IN ACCORDANCE WITH ITEM 604.

ITEM 604 - CATCH BASIN NO. 3 AND 3A, AS PER PLAN

CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 604 EXCEPT THAT THE GRATES SHALL BE NEENAH NO. R-3246-A OR EAST JORDAN NO. 7510 OR APPROVED EQUAL FOR CB-3 AND CB-3A.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY CITY OF MENTOR FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM SPECIAL, MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL GRATES SHALL BE BICYCLE SAFE AND ALL MATERIALS SHALL MEET ITEM 604 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 1000 LBS.

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.