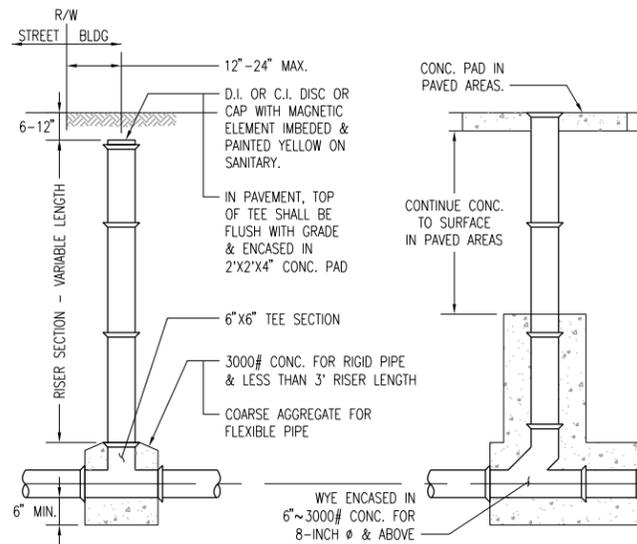


REPAIR OF STREET OPENINGS

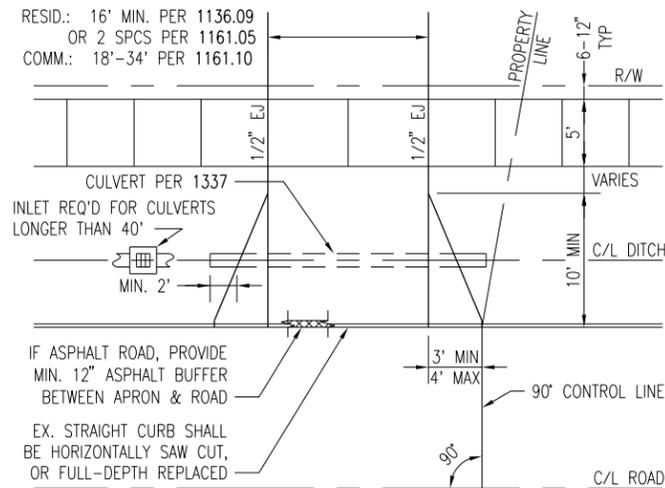
(CUY CNTY BP-2.5C, MD-3C & MD-4C)
 SCALE: NOT TO SCALE



- TEST TEE NOTES**
- TEST TEE RISER SHALL BE INSTALLED WHEN LATERAL IS EXTENDED TO BLDG.
- CLEANOUT NOTES**
- CLEANOUT SHALL BE PROVIDED AT HOUSE, END OF RUN, AND MAJOR BENDS.

SEWER LATERAL - TEST TEE & CLEANOUTS

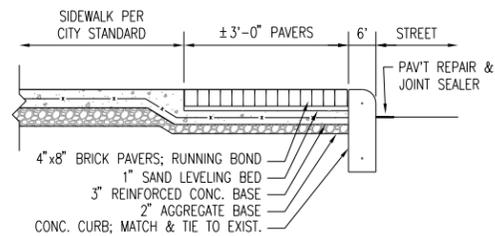
(SEE COD. ORD. 1101.10(b), UNIFORM STANDARDS, & CUY CNTY MD-6C)
 SCALE: NOT TO SCALE



- NOTES:**
- PROPERTY OWNERS ARE RESPONSIBLE FOR MAINTENANCE OF APRONS (PER 909), DRAIN PIPES (PER 1337), AND SIDEWALKS, CURBS, AND GUTTERS (PER 521.06 AND ORC 729.01). CURB AND DRAIN PIPE SHALL BE REPLACED WITH APRON REPLACEMENT PER CIT STANDARDS UNLESS OTHERWISE PRE-APPROVED BY THE CITY.

APRON, CULVERT, SIDEWALK, & DRIVE-PLAN

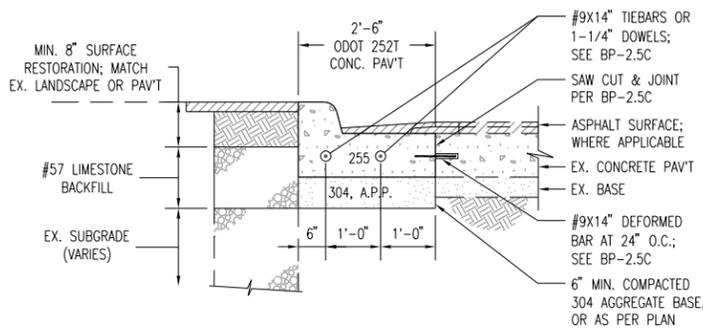
(SEE COD. ORD. 903, 909, 1101.10(d), 1136.09(c), 1337, & CUY CNTY MD-5C)
 SCALE: NOT TO SCALE



- PAVER NOTES**
- PAVERS SHALL BE UNILOCK HOLLANDSTONE (RUSTICK RED), BELDEN (PAWNEE RED), BELGARD HOLLANDSTONE (ANTIQUÉ), PAVERLOCK HALFMARK (TERRA COTTA RED), OR OTHER PRE-APPROVED EQUAL.

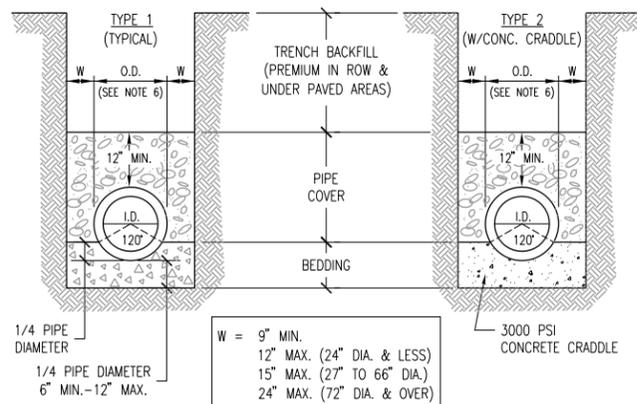
TREELAWN BRICK PAVER

(SEE COD. ORD. 901.07(b))
 SCALE: NOT TO SCALE



CURB REPAIR / REPLACEMENT

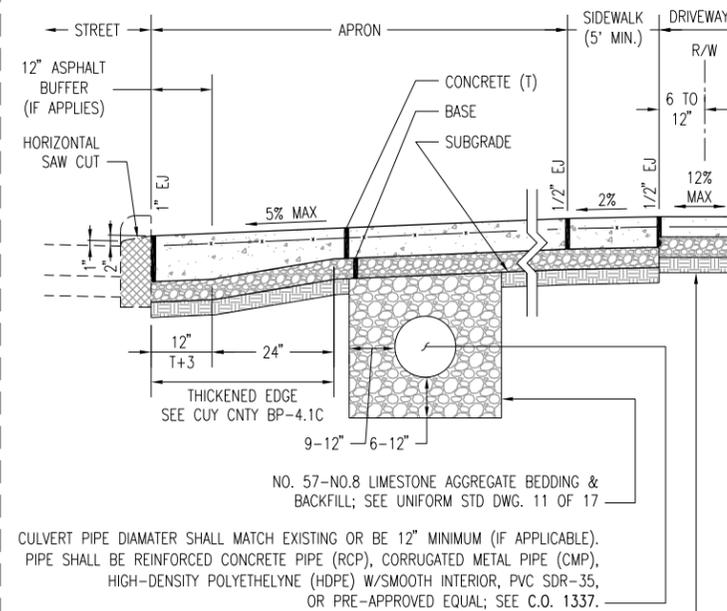
(SEE CUY CNTY BP-2.5C & MD-1C)
 SCALE: NOT TO SCALE



- TRENCH AND BEDDING NOTES**
- PREMIUM BACKFILL SHALL CONSIST OF ODOT 304 LIMESTONE.
 - PREMIUM BACKFILL SHALL BE USED WITH THE RIGHT-OF-WAY, AND UNDER OR WITHIN 3' OF ALL BUILDING OR PAVED AREAS.
 - PIPE COVER SHALL CONSIST OF COARSE INTERLOCKING AGGREGATE NO. 6, 67, 68, 7, 78, OR 8.
 - BEDDING SHALL CONSIST OF COARSE INTERLOCKING AGGREGATE NO. 57, 6, 67, 68, 7, 78, OR 8 FOR 60" OR SMALLER DIAMETER PIPE. FOR 66" OR LARGER DIAMETER PIPE, NO. 4 AGGREGATE MAY ALSO BE USED.
 - BACKFILL SHALL BE PLACED AND WELL COMPACTED IN 6" LIFTS.
 - MAXIMUM TRENCH WIDTH AT TOP OF PIPE SHALL BE O.D.+W.

SEWER TRENCH

(BASED ON UNIFORM STANDARDS)
 SCALE: NOT TO SCALE



- CULVERT PIPE DIAMETER SHALL MATCH EXISTING OR BE 12" MINIMUM (IF APPLICABLE). PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP), CORRUGATED METAL PIPE (CMP), HIGH-DENSITY POLYETHYLENE (HDPE) W/SMOOTH INTERIOR, PVC SDR-35, OR PRE-APPROVED EQUAL; SEE C.O. 1337.

- 1-FAMILY RES.: MIN. 4" REINF. CONCRETE OR 3" ASPHALT (INSTALLED IN 2 LIFTS), OVER 4" STABILIZED CRUSHED AGGREGATE (ODOT 411); SEE CUY CNTY BP-4.1C.
 MULTI-FAMILY & COMMERCIAL: PER C.O. 905.

APRON, CULVERT, SIDEWALK, & DRIVE-SECTION

(SEE COD. ORD. 903, 905, 909, 1337, UNIFORM STANDARDS, CUY CNTY MD-5C & BP-4.1C)
 SCALE: NOT TO SCALE

GENERAL

- PERMITS SHALL BE OBTAINED PRIOR TO STARTING WORK, OTHERWISE A LATE FEE MAY APPLY.
- THE CONTRACTOR COORDINATE REQUIRED INSPECTIONS WITH THE CITY, AND SHALL PROVIDE MINIMUM 24 HOURS NOTICE BEFORE BACKFILLING, INSTALLING PAVEMENT, OR AS OTHERWISE DIRECTED BY THE CITY.

SIDEWALKS & APRONS - C.O. 903, 909, & 1101.10

- SIDEWALKS SHALL BE MIN. 4" THICK CONCRETE & INCREASED TO APRON THICKNESS WHERE CROSSES DRIVEWAY.
- JOINTS - TOOLED OR CUT JOINTS SHALL BE LOCATED MAX. 5' APART IN SIDEWALKS AND 10' APART IN APRONS. EXPANSION JOINTS SHALL BE LOCATED MAX. 25' APART IN SIDEWALKS, BETWEEN APRON AND CURB, WITHIN SIDEWALK AT DRIVEWAY EDGES, AND ADJACENT TO FIXED OBJECTS.
- APRONS SHALL BE CONCRETE AS FOLLOWS:

SURFACE	APRON COMPOSITION	
	RESIDENTIAL	COMMERCIAL
6" ODOT CLASS 'C' CONCRETE	6" ODOT CLASS 'C' CONCRETE	8" ODOT CLASS 'C' CONCRETE
6"x6"-NO. 10 GAUGE WIRE MESH OR SYNTHETIC-MACRO FIBER REINFORCING	6"x6"-NO. 10 GAUGE WIRE MESH OR SYNTHETIC-MACRO FIBER REINFORCING	6"x6"-NO. 4 GAUGE WIRE MESH OR SYNTHETIC-MACRO FIBER REINFORCING
4" ODOT #304 LESTONE	4" ODOT #304 LESTONE	4" ODOT #304 LESTONE
COMPACTED ODOT 204	COMPACTED ODOT 204	COMPACTED ODOT 204

ASPHALT MAY ONLY BE USED IN RESIDENTIAL AREAS & WITH PRIOR APPROVAL OF CITY ENGINEER, WHERE DITCHES EXIST AND THERE IS LESS THAN 10 INCHES OF CLEARANCE BETWEEN CULVERT PIPE AND APRON SURFACE. A MIN. 4" ASPHALT INSTALLED IN 2 LIFTS, SHALL BE USED IN LIEU OF CONCRETE

- CONCRETE SHALL BE ODOT CLASS 'C' (4000 PSI) W/MIN. 6 SACKS (OR 600 LBS.) OF PORTLAND CEMENT PER CUBIC YARD, A MAX. 5.5 GALLONS OF WATER PER SACK OF CEMENT, AND 7±1% ENTRAINED AIR.
- CONCRETE SHALL BE SEALED WITH A LIQUID MEMBRANE SEALER WHICH IS AN EPOXY CHLORINATED POLYMER, CONTAINING A FUGITIVE DYE, PREFERABLY RED, SUCH AS SUPPLIED BY POLYSEAL, CLEARSEAL, CLEAR & SEAL, CLEAR BOND, EUCCO FLOOR COAT, CHEM MASTERS, INC., A.C. HORN COMPANY, SANABORN, GUARDIAN CHEMICAL COMPANY, & EUCLID CHEMICAL COMPANY.
- FIBER REINFORCING SHALL BE A MINIMUM 2-INCH LONG SYNTHETIC-MACRO FIBER, SUCH AS EUCLID CHEMICAL TUF-STRAND SF, GRACE STRUX 90/40, PROPEX FIBERMESH 650, OR PRE-APPROVED EQUAL, AND IN CONFORMANCE WITH ASTM C1116.
- FIBER DOSAGE SHALL BE AS RECOMMENDED BY THE MANUFACTURER, BUT NOT LESS THAN 3 LBS./CY.
- FIBER SHALL BE ADDED TO THE MIX AT THE PLANT DURING THE BATCH OR MIXING PROCESS, AND NOT AT THE JOB SITE, AND MIXED A MINIMUM OF 70 REVOLUTIONS TO ENSURE PROPER DISPERSION PER ASTM C94 AND ACI 304.
- ALL CONCRETE BATCH DELIVERY TICKETS SHALL BE PROVIDED TO THE CITY INSEPECTOR, INDICATING QUANTITY OF FIBER USED.
- SUBGRADE IS JUST BELOW THE BASE LAYER, AND ALSO THE BOTTOM OF EXCAVATION OR TOP OF FILL.
- ALL SOFT OR HARD MATERIAL WHICH WILL NOT COMPACT READILY WHEN ROLLED OR TAMPED, SHALL BE REMOVED AS DIRECTED AND REPLACED WITH SUITABLE MATERIAL COMPACTED AS SPECIFIED.
- FOUNDRY SAND, GROUND CINDERS, SLAG, OR SIMILAR MATERIALS SHALL NOT BE USED FOR SUBGRADE. THE SUBGRADE SHALL BE FINISHED IN AN ACCEPTABLE CONDITION FOR AT LEAST ONE DAY'S PROGRESS IN ADVANCE OF CONCRETE PLACEMENT.
- ALL UTILITY CASTINGS SHALL BE ADJUSTED TO GRADE AS NECESSARY.
- COLD WEATHER CONSTRUCTION - NO CONCRETE SHALL BE POURED AFTER NOVEMBER 15 OR BEFORE APRIL 15 WITHOUT WRITTEN PERMISSION OF THE CITY ENGINEER. WHEN PERMISSION IS GRANTED, THE FOLLOWING CONDITIONS APPLY:
 - PERMISSIONS TO POUR CONCRETE MUST BE OBTAINED TWENTY-FOUR (24) HOURS PRIOR TO POUR.
 - NO POUR CAN BE MADE WHEN TEMPERATURE IS BELOW 40 DEGREES FARENHEIT.

STORM & SANITARY SEWERS - C.O. 911, 933, & 1101.10

- STORM & SANITARY LATERALS SHALL BE MIN. 6-INCH SOLID WALL PVC ASTM D3034 SCHEDULE 35. CONNECTIONS TO THE MAIN SHALL BE MADE WITH PROPER ADAPTORS. NO PIPE SHALL BE INSERTED INTO THE MAIN WILL BE ACCEPTED. SCHEDULE 40 IS REQUIRED WHEN PIPE COVER IS LESS THAN 12 INCHES, OR PIPE IS SUBJECT TO VEHICLE LOADS.
- PIPES 12-INCH AND LARGER IN DIAMETER SHALL BE MIN. PVC SDR-35 W/BELL & SPIGOT JOINTS, HDPE W/WATER-TIGHT O-RING GASKETS, RCP CLASS IV W/BELL & SPIGOT JOINTS, OR PRE-APPROVED EQUAL.
- NO SANITARY SEWER CONNECTION SHALL BE LEFT OPEN OVERNIGHT. USE RUBBER OR PLASTIC CAP.

ADDITIONAL REFERENCES		
ITEM	DESCRIPTION	AVAILABLE FROM
STORM & SANITARY SEWERS	UNIFORM STANDARDS FOR SEWERAGE IMPROVEMENTS	CUYAHOGA COUNTY ENGINEER
PAVEMENT, CURBS, GUARDRAIL, & UTILITIES	STANDARD NOTES & DETAILS	CUYAHOGA COUNTY ENGINEER & ODOT
MAINTENANCE OF TRAFFIC	STANDARD NOTES & DETAILS	ODOT & ODMTCD
WATER LINES	STANDARD NOTES & DETAILS	CLEVELAND DIVISION OF WATER
STORMWATER POLUTION PREVENTION (SWP3)	STANDARD NOTES & DETAILS	OHIO RAINWATER & LAND DEVELOPMENT MANUAL

CITY OF NORTH OLMSTED STANDARD ENGINEERING DETAILS

BY: PIETRO DIFRANCO, CITY ENGINEER

DATE: 07/26/2019

