

# City of Lorain ROADWAY STANDARD DESIGNS



City of Lorain  
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**NOTE 1:** THIS DETAIL IS VALID ONLY WHEN USED AS PRESENTED HERE, WITHOUT CHANGES, AND IN CONJUNCTION WITH ANY GENERAL NOTES AND/OR OTHER DETAILS WHICH MAY APPLY. ANY CHANGES TO THIS DETAIL SHALL FIRST BE SUBMITTED TO AND APPROVED BY THE CITY ENGINEER.

**NOTE 2:** BEFORE ANY EXCAVATING, CALL THE FOLLOWING NUMBERS AT LEAST 48 HOURS IN ADVANCE: O.U.P.S. @ (800) 362-2764.

**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

**STANDARD DESIGNS  
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NO.	DATE	REVISION	NO.	DATE	REVISION
1	10/27/2015				
6	06/20/2017				
8	07/01/2018				
10	06/20/2019	UPDATED DATES ADDED			
11	02/21/2020	REMOVED SUB'D PAGES			
11	02/21/2020	UPDATED DATES ADDED			

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GN-1.0

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## GENERAL

1. ALL WORK AND MATERIALS FURNISHED SHALL BE IN ACCORDANCE WITH THE PLANS AND THE CURRENT EDITIONS OF THE "STATE OF OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS" AND THE "CITY OF LORAIN STANDARD DESIGNS", SHALL MEET AASHTO M306 STANDARDS AND SHALL BE MADE IN THE USA. **CITY PLANS SUPERCEDE ODOT SPECS.**
2. WHERE GROUND COVER IS DISTURBED DURING THE CONSTRUCTION, THE CONTRACTOR SHALL INSTALL ALL NECESSARY EROSION CONTROL AND DRAINAGE CONTROL DEVICES IN ACCORDANCE WITH REGULATIONS OF THE CITY OF LORAIN, AND THE OHIO EPA. THESE DEVICES SHALL BE ROUTINELY MONITORED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL SATISFACTORY GROUND COVER HAS BEEN RE-ESTABLISHED. NO WORK SHALL BEGIN UNTIL ALL SUCH DEVICES ARE IN PLACE.
3. ALL DEVELOPMENTS INVOLVING UTILITY IMPROVEMENTS SHALL HAVE DETAILED DESIGN DRAWINGS PREPARED AND SEALED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER OR SURVEYOR. DRAWINGS SHALL BE SIGNED AND DATED BY THE PREPARING ENGINEER OR SURVEYOR OR WILL NOT BE CONSIDERED VALID. ELECTRONIC AS-BUILTS OF ALL IMPROVEMENTS SHALL BE PROVIDED AND SEALED BY A PROFESSIONAL SURVEYOR. AS-BUILT COMPATIBILITY WITH GIS IS REQUIRED.
4. CITY OF LORAIN STANDARD DESIGNS CONSTITUTE A **MINIMUM** DESIGN STANDARD. SPECIFIC PROJECTS MAY INVOLVE SPECIAL CIRCUMSTANCES WHICH REQUIRE MODIFICATION OF STANDARDS AND ADDITIONAL ENGINEERING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL DESIGN AND FOR OBTAINING APPROVAL OF ANY STANDARD DESIGNS MODIFICATIONS.
5. PAVEMENT MARKINGS WHICH ARE DAMAGED OR DESTROYED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR IN ACCORDANCE WITH CITY OF LORAIN, ODOT, AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES REQUIREMENTS.
6. DOMESTIC IRON AND STEEL SHALL BE USED FOR ALL CASTINGS, FITTINGS AND STEEL PRODUCTS.
7. ALL CONSTRUCTION AND DEMOLITION DEBRIS (C&DD) WASTE MUST BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE 3714.
8. AT THE END OF EACH DAY THE CONTRACTOR SHALL CLEAN ALL PUBLIC WALKS AND STREETS USED IN CONJUNCTION WITH THE PROJECT TO THE SATISFACTION OF THE ENGINEER.
9. ALL MATERIAL, I.E., MANHOLE FRAMES OR LIDS, FIRE HYDRANTS, INLET FRAMES OR GRATES AND MONUMENT BOXES DIRECTED TO BE SALVAGED SHALL BE DELIVERED ON WOOD PALLETS BY THE CONTRACTOR TO THE CITY OF LORAIN SEWER DEPARTMENT AT 6301 WEST ERIE AVENUE (ACCESS FROM OAK POINT ROAD, BEAR LEFT AT DRIVEWAY SPLIT). FOR EACH ITEM THAT IS TO BE SALVAGED AND NOT DELIVERED TO THE SEWER DEPARTMENT, THERE WILL BE A REASONABLE MONETARY SUM WITHHELD FROM THE CONTRACT PAYMENTS AND CHARGED AGAINST THE CONTRACTOR. CALL (440) 204-2200 TO MAKE ARRANGEMENTS FOR THE MATERIAL DELIVERY.
10. WHEN, FOR ANY REASON, THE WORK IS LEFT UNFINISHED FOR AN EXTENDED PERIOD OF TIME, AS DEFINED BY THE ENGINEERING DEPARTMENT, ALL TRENCHES AND EXCAVATIONS SHALL BE FULLY PROTECTED OR FILLED TO LEAVE THE SITE IN A GOOD AND SAFE CONDITION.
11. A PRECONSTRUCTION CONFERENCE SCHEDULED BY THE ENGINEER SHALL BE HELD PRIOR TO THE START OF ANY WORK.
12. THE ENGINEER SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF THE START OF ANY WORK UNDER THE CONTRACT IN ORDER TO SCHEDULE THE ASSIGNMENT OF AN INSPECTOR FOR THE WORK.
13. ALL SHOP DRAWINGS AND OTHER SUBMITTALS MUST BE CHECKED, APPROVED, AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER FOR REVIEW.
14. THE CONTRACTOR SHALL PROVIDE A PRECONSTRUCTION VIDEO TAPE SURVEY OF THE ENTIRE PROJECT AREA. ANY DAMAGE DEEMED TO BE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT HIS OWN EXPENSE. ALL COSTS ASSOCIATED FOR THIS WORK, INCLUDING THE VIDEOTAPE SURVEY, SHALL BE INCLUDED IN ITEM 624-MOBILIZATION.
15. EXISTING STREET RIGHT-OF-WAYS SHALL BE CONSIDERED TO BE THE PROJECT LIMITS FOR ALL STREETS IN THE CONTRACT.
16. ALL EXCAVATED MATERIALS SHALL BE DEPOSITED AT AN APPROVED DUMP SITE IN ACCORDANCE WITH ODOT 105.16.
17. FURNISH THE ENGINEER A PROGRESS SCHEDULE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

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 Phone: (440) 204-2003

NO.	DATE	REVISION	NO.	DATE	REVISION
1	10/27/2015				
9	01/01/2019				
10	06/20/2019	NO. 10 & 15 CHANGED			
10	06/20/2019	PREVIOUS NO. 17 OMITTED			
11	02/04/2020	NO. 1 REVISED			

### STANDARD DESIGNS GENERAL GENERAL NOTES

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**GENERAL, CONT'D**

- 19. THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED "AS DIRECTED BY ENGINEER" (ADBE) UNLESS AUTHORIZED BY THE PROJECT ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE DOCUMENTED AND THE CONTRACTOR SHALL BE PAID IN ACCORDANCE WITH THE CONTRACT UNIT PRICE FOR EACH APPLICABLE BID ITEM.
- 20. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES SHALL BE PROHIBITED WITHOUT AUTHORIZATION BY THE ENGINEER.
- 21. OPERATIONS ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE OF THE HOURS OF 7:00 AM TO 7:00 PM IS PROHIBITED.
- 22. VIOLATION OF ANY CITY ORDINANCE MAY RESULT IN THE ISSUANCE OF A STOP WORK ORDER.
- 23. ALL BACKFILL SHALL BE PREMIUM BACKFILL: BACKFILL SHALL BE IN ACCORDANCE WITH THE TRENCH DETAILS SHOWN HEREIN. ALL BACKFILL IN SEWER TRENCHES SHALL BE PLACED IN LAYERS SUFFICIENT TO MEET THE COMPACTION REQUIREMENTS OF 100% MAXIMUM LABORATORY DRY DENSITY PER ASTM D-698 AND THOROUGHLY COMPACTED WITH MACHINE MOUNTED COMPACTION EQUIPMENT. THE PLACING OF BACKFILL MATERIAL SHALL BE CONTINUED UNTIL THE TRENCH IS ENTIRELY FILLED AND COMPACTED TO THE GRADE CALLED FOR ON THE CONTRACT DRAWINGS. COMPACTION TESTING OF THE BACKFILL MAY BE REQUIRED BY THE CITY. THE CONTRACTOR SHALL PAY FOR ALL LABORATORY TESTING COSTS OF BACKFILL MATERIAL. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS OF WORK. ALL BACKFILL SHALL BE PLACED IN MAXIMUM 12" LIFTS AND COMPACTED.

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7	01/01/2018				
9	01/01/2019				
11	02/04/2020	NO. 19 & 20 REMOVED			

**STANDARD DESIGNS  
 GENERAL  
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GN-2.1

## ITEM 614 - MAINTAINING TRAFFIC

1. MAINTAIN THROUGH TRAFFIC AT ALL TIMES IN ACCORDANCE WITH ODOT ITEM 614 AND THE DETAILS AND NOTES ON THE STANDARD CONSTRUCTION DRAWINGS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, LATEST REVISION.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN PEDESTRIAN, LOCAL ROADWAY AND DRIVEWAY ACCESS AT ALL TIMES. THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY STONE DRIVES/WALKS WITH A MATERIAL WHICH IS APPROVED BY THE ENGINEER. THESE TEMPORARY STONE DRIVES SHALL BE MAINTAINED TO THE SATISFACTION OF THE ENGINEER. COST FOR ALL MATERIALS, LABOR AND EQUIPMENT FOR CONSTRUCTION MAINTENANCE AND SUBSEQUENT REMOVAL SHALL BE INCLUDED IN 614 MAINTAINING TRAFFIC.
3. PROVIDE STEEL PLATES ACROSS TRENCHES AS DIRECTED TO PROVIDE TEMPORARY VEHICLE OR PEDESTRIAN ACCESS TO RESIDENCES. ADDITIONAL ACCOMMODATIONS MAY BE REQUIRED TO PROVIDE ACCESSIBILITY FOR VEHICLES OF HANDICAPPED OR OTHER IDENTIFIED RESIDENTS.
4. LANE CLOSURES AND RESTRICTIONS ARE PROHIBITED WITHOUT PRIOR APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A LANE CLOSURE/TRAFFIC RESTRICTION REQUEST 48 HOURS IN ADVANCE OF ANY PLANNED IMPLEMENTATION SPECIFYING THE LIMITS AND DURATION OF THE WORK. SAID REQUEST SHALL INCLUDE A MAP DEPICTING THE LOCATION OF ALL TRAFFIC CONTROL DEVICES (SIGNS, DRUMS, ETC.). IF PERMITTED, THE ENGINEER WILL APPROVE THE LENGTH AND DURATION OF LANE CLOSURES AND/OR TRAFFIC RESTRICTIONS, WITH THE INTENT OF MINIMIZING THE IMPACT TO THE TRAVELING PUBLIC. THE ENGINEER WILL NOT PERMIT LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME. THE CONTRACTOR IS RESPONSIBLE FOR ERECTING ALL NECESSARY DETOUR SIGNS AND TRAFFIC CONTROL DEVICES. COSTS SHALL BE INCLUDED IN ITEM 614, MAINTENANCE OF TRAFFIC.
5. THE CONTRACTOR SHALL POST SIGNS 24 HOURS IN ADVANCE TO NOTIFY CITIZENS OF THE NEED FOR NO PARKING ON THE STREET DURING CONSTRUCTION HOURS. FAILURE TO PERFORM THIS POSTING, OR NOT TO PERFORM WORK IN THE SPECIFIED TIME OF THE SIGN POSTING, WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ALL TOWING FEES AND FINES RESULTING FROM THE FAILURE TO EXECUTE THE WORK AS PER THE SIGN POSTING.
6. FURNISH, ERECT, MAINTAIN, AND SUBSEQUENTLY REMOVE WORK ZONE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD), ODOT ITEM 614, THE STANDARD CONSTRUCTION DRAWINGS AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC CONTROL DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.
7. FURNISH AND MAINTAIN ALL NECESSARY SAFEGUARDS SUCH AS TEMPORARY STRIPING, BARRICADES, LIGHTING, FLAGGERS, AND OTHER SUCH TRAFFIC CONTROL DEVICES IN THE WORK ZONE IN ACCORDANCE WITH ITEM 614-MAINTAINING TRAFFIC SO AS TO AVOID DAMAGE AND/OR INJURY TO VEHICLES AND PERSONS USING THE ROADWAY DURING CONSTRUCTION.
8. RELOCATE EXISTING TRAFFIC CONTROL DEVICES (SIGNS AND/OR TRAFFIC SIGNALS), LOCATED WITHIN THE WORK AREA, WHICH ARE REQUIRED FOR INTERIM OR PERMANENT TRAFFIC CONTROL, TO POINTS APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ERECTING ALL NECESSARY DETOUR SIGNS AND TRAFFIC CONTROL DEVICES. COSTS SHALL BE INCLUDED IN ITEM 614-MAINTENANCE OF TRAFFIC.
9. ALL STREET AND TRAFFIC SIGNS REMOVED DURING CONSTRUCTION SHALL BE REINSTALLED AS REQUIRED UPON COMPLETION OF THE PROJECT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST, DIRT AND MUD DUE TO CONSTRUCTION IN THE PROJECT AREA DURING THE LIFE OF THE PROJECT. DUST CONTROL OPERATIONS SHALL BE PERFORMED BY THE CONTRACTOR AT THE TIME, LOCATION AND IN THE AMOUNT ORDERED BY THE ENGINEER AND SHALL BE IN ACCORDANCE WITH ITEM 616 OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. ONLY WATER SHALL BE USED FOR DUST CONTROL NEAR SURFACE WATER AND CATCH BASINS. THE COST FOR THESE OPERATIONS SHALL BE INCLUDED IN ITEM 614-MAINTENANCE OF TRAFFIC.
11. THE PROVISIONS OF THIS SECTION SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF ANY OF HIS LEGAL RESPONSIBILITIES OR LIABILITIES FOR THE SAFETY OF THE PUBLIC. THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE CITY OF LORAIN FROM ANY EXPENSE WHATSOEVER DUE TO HIS OPERATION OVER SAID ROADWAYS.

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**City of Lorain**  
200 West Erie Avenue Lorain, Ohio 44052  
Phone: (440) 204-2003

NO.	DATE	REVISION	NO.	DATE	REVISION
1	10/27/2015				
9	01/01/2019				
10	06/20/2019	NO. 2 ADDED			
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## STANDARD DESIGNS GENERAL GENERAL NOTES

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GN-2.2.dwg

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# GN-2.2

## ITEM 614 - MAINTAINING TRAFFIC, CONT'D

12. THE CONTRACTOR SHALL CONTACT THE FOLLOWING ENTITIES PRIOR TO CHANGING THE CURRENT TRAFFIC CONFIGURATION:

LORAIN CITY SCHOOLS TRANSPORTATION  
 SHONTEEA FORD  
 CHARLESTON ADMINISTRATION CENTER  
 2601 POLE AVE.  
 LORAIN, OHIO 44052  
 PH: 440-830-4047  
 EMAIL: SFORD@LORAIN.CSD.ORG

FIRST STUDENT  
 BRAD SPRAGUE  
 1800 COLORADO AVE.  
 LORAIN, OHIO 44052  
 PH: 440-288-2222 EXT. 222  
 EMAIL: BRAD.SPRAGUE@FIRSTGROUP.COM

LORAIN COUNTY TRANSIT  
 PAMELA NOVAK  
 226 MIDDLE AVE.  
 ELYRIA, OHIO 44035  
 PH: 440-329-5525  
 EMAIL: PNOVAK@LORAINCOUNTY.US

UNITED STATES POST OFFICE  
 CHARLES HIRSCH  
 3190 COLOADO AVENUE  
 LORAIN, OH 44052  
 PH: 440-288-8593  
 EMAIL: CHARLES.E.HIRSCH@USPS.GOV

REPUBLIC WASTE SERVICES  
 CHUCK ALLOMONG & TJ ROSE  
 PH: 440-458-5191  
 EMAIL: CALLOMONG@REPUBLICSERVICES.COM  
 TROSE2@REPUBLICSERVICES.COM

LORAIN ENGINEERING DEPARTMENT  
 DALE VANDERSOMMEN, PE - CITY ENGINEER  
 200 WEST ERIE AVENUE  
 LORAIN, OHIO 44052  
 PH: 440-204-2003

LORAIN CITY FIRE DEPARTMENT  
 CENTRAL FIRE STATION  
 1350 BROADWAY AVE.  
 LORAIN, OHIO 44052  
 PH: 440-204-2220

LORAIN POLICE DEPARTMENT  
 JAMES MCCANN, CHIEF  
 200 WEST ERIE AVENUE  
 LORAIN, OHIO 44052  
 PH: 440-204-2103

13. CONTRACTOR SHALL PROVIDE ENGINEER WITH A PLAN ON HOW DRIVE ACCESS WILL BE RESTORED AFTER PAVEMENT HAS CURED AND ITS MAINTENANCE. THE COST FOR THIS SHALL BE INCIDENTAL TO ITEM 614-MAINTENANCE OF TRAFFIC.
14. THE CONTRACTOR SHALL NOTIFY EACH RESIDENT OF ANY RESTRICTED ACCESS TO THEIR PROPERTY NO LATER THAN ONE (1) WEEK IN ADVANCE.
15. THE CONTRACTOR SHALL PROVIDE PERSONNEL TO DELIVER CORRESPONDENCE TO THE HOMEOWNERS AS NEEDED TO UPDATE RESIDENTS ON THE PROGRESS OF THE WORK. THE CONTRACTOR WILL PREPARE THIS CORRESPONDENCE AND THE ENGINEER WILL REVIEW AND APPROVE, PRIOR TO DELIVERY.
16. TEMPORARY CARDBOARD NO PARKING IN STREET OR TREELAWN SIGNS SHALL BE UTILIZED DURING CONSTRUCTION, ANY RESIDENT CARS THAT ARE PARKED IN THE TREELAWN (THE AREA BETWEEN THE CURB AND SIDEWALK) OR IN THE STREET WHERE PROHIBITED SHALL BE REPORTED FOR REMOVAL TO THE CITY OF LORAIN POLICE, TRAFFIC DIVISION. ANY CONTRACTOR PARKING ON THE TREELAWN WILL BE DOCUMENTED AND FULL RESTORATION WILL BE REQUIRED AT THE COST OF THE CONTRACTOR.

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## STANDARD DESIGNS GENERAL GENERAL NOTES

CAD FILE:  
 GN-2.3.dwg

SHEET:

# GN-2.3

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1	10/27/2015		11	02/04/2020	POST OFFICE ADDED
7	01/01/2018		11	02/04/2020	PREV. NO. 12 & 14 RMV.
9	01/01/2019				
10	06/20/2019	NO. 17 ADDED			
11	02/04/2020	NO. 14 CHANGED			
11	02/04/2020	POLICE CHIEF UPDATED			

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**PAVEMENT MARKING**

1. FURNISH AND INSTALL PAVEMENT MARKINGS IN ACCORDANCE WITH ODOT ITEM 640, THE STANDARD CONSTRUCTION DRAWINGS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, LATEST REVISION.

**PROHIBITED CONSTRUCTION ACTIVITIES**

1. DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE OWNER.
2. LOCATING STOCKPILE STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS.
3. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.
4. DISPOSING OF TREES, BRUSH AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, OR ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS. THE USE OF EXPLOSIVES WITHIN CITY LIMITS, UNLESS A PERMIT IS ISSUED BY THE CITY.
5. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATIONS OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS OR OUTSIDE THE EASEMENT LIMITS.
6. PUMPING OF SEDIMENT LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS OR STORM SEWERS; ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE.
7. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, OR ANY OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS OR INTO NATURAL OR MANMADE CHANNELS LEADING THERETO; PERMANENT OR UNSPECIFIED ALTERATION OF THE LOW LINE OF ANY STREAM.

**RESTORATION**

1. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE REGRADED AND SEEDED AS PER CITY OF LORAIN CODIFIED ORDINANCE 1529, OHIO EPA STORMWATER REGULATIONS, AND ODOT ITEM 832.
2. HYDROSEEDING IS REQUIRED FROM MARCH 1ST THROUGH OCTOBER 30TH.
3. PAY LIMITS FOR TOPSOIL AND SEEDING AND MULCHING SHALL EXTEND FOUR (4) FEET BEHIND BACK OF CURB/EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE. ANY RESTORATION OUTSIDE OF THESE LIMITS IS THE RESPONSIBILITY OF THE CONTRACTOR.

**SIGNS**

1. FURNISH AND ERECT SIGNS IN ACCORDANCE WITH ODOT ITEM 630, THE STANDARD CONSTRUCTION DRAWINGS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, LATEST REVISION.
2. PROPOSED SIGNS SHALL MATCH THE CHARACTERISTICS OF AN EXISTING SIGN IF IT IS TO REMAIN WITHIN THE PROJECT LIMITS UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THIS COORDINATION.

**SURVEY**

1. THE CONTRACTOR SHALL PROTECT ALL SURVEY MONUMENTS AND BENCHMARKS, PER ODOT 623.
2. MONUMENTS SHALL BE LEFT UNDISTURBED UNTIL THE CITY OF LORAIN ENGINEERING DEPARTMENT HAS CHECKED/VERIFIED THE REFERENCES PROVIDED BY THE CONTRACTOR'S SURVEYOR. IN ALL CASES THE CONTRACTOR SHALL CONTACT THE CITY OF LORAIN ENGINEERING DEPARTMENT AT 440-204-2003 NO LESS THAN TWO (2) WEEKS PRIOR TO THE DISTURBANCE OF ANY EXISTING MONUMENTS.
3. DISTURBED PRIVATE RIGHT-OF-WAY MONUMENTS ON OR OUTSIDE THE PROJECT RIGHT-OF-WAY LIMITS AND NOT ENCLOSED WITHIN A TEMPORARY EASEMENT FOR THE PROJECT SHALL BE RESET OR REPLACED AT THE CONTRACTOR'S EXPENSE. PRIVATE RIGHT-OF-WAY MONUMENTS WITHIN THE PROJECT RIGHT-OF-WAY/TEMPORARY EASEMENTS WHICH ARE UNAVOIDABLY DISPLACED OR DAMAGED DURING THE CONTRACT WORK SHALL BE RESET OR REPLACED ALL AT THE DETERMINATION/DIRECTION OF THE ENGINEER.

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NO.	DATE	REVISION	NO.	DATE	REVISION
9	01/01/2019				
10	06/20/2019	NO. 2 ADDED IN RESTORATION			
11	02/04/2020	NO. 3 IN RESTORATION REV.			
11	02/04/2020	PREV. NO. 3 IN SIGNS DELETED			
11	02/04/2020	NO. 1 IN SURVEY REVISED			
11	03/04/2020	RENUMBERED SURVEY NOTES			

**STANDARD DESIGNS  
 GENERAL  
 GENERAL NOTES**

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DRWN BY: RS	APPRVD BY: DV	ISSUE DATE: 10/27/2015	SCALE: NONE	<b>GN-2.4</b>	

# UNDERGROUND

1. ALL NEW CONDUITS, INLET, CATCH BASINS, AND MANHOLES CONSTRUCTED AS PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY.
2. 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.
3. ALL BACKFILL UNDER OR WITHIN THE ZONE OF INFLUENCE OF ROADS, DRIVES, SIDEWALKS, AND PARKING LOTS SHALL BE GRANULAR BACKFILL PER SPECIFICATIONS.
4. PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.
5. THE COST FOR ALL ROCK EXCAVATION IS INCLUDED WITH THE PERTINENT BID ITEMS (PIPE, EXCAVATION FOR STRUCTURE, ETC). NO SEPARATE PAYMENT WILL BE MADE FOR ANY ROCK EXCAVATION. IF THE CONTRACTOR WANTS ADDITIONAL INFORMATION, THEY SHOULD COORDINATE WITH THE OWNER ANY BORINGS OR TEST PITS THEY INTEND TO COMPLETE.

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NOTE 2: BEFORE ANY EXCAVATING, CALL THE FOLLOWING NUMBERS AT LEAST 48 HOURS IN ADVANCE: O.U.P.S. @ (800) 362-2764.

**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

NO.	DATE	REVISION	NO.	DATE	REVISION
9	01/01/2019				
11	02/10/2020	REMOVED NO. 1-5, 10-11			

## STANDARD DESIGNS GENERAL GENERAL NOTES

CAD FILE: GN-2.5.dwg				SHEET:	
DRWN BY: RS	APPRVD BY: DV	ISSUE DATE: 10/272015	SCALE: NONE		

GN-2.5

# UTILITIES

- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

<p>OHIO EDISON CO.                  NATALIE CAMP                  6326 LAKE AVENUE                  ELYRIA, OH 44035                  PH: 440-326-3319                  EMAIL: NCAMP@FIRSTENERGYCORP.COM</p>	<p>COLUMBIA GAS CO.                  ADAM WOODIE                  3101 NORTH RIDGE ROAD, EAST                  LORAIN, OH 44055                  PH: 440-240-6144                  EMAIL: AWOODIE@NISOURCE.COM</p>
<p>CENTURY TELEPHONE                  GERONIMO SALES                  203 WEST NINTH STREET                  LORAIN, OH 44052                  PH: 440-244-8330                  EMAIL: GERONIMO.O.SALES@CENTURYLINK.COM</p>	<p>SPECTRUM                  MARTIN VAN KUREN                  1801 ELYRIA AVENUE                  LORAIN, OH 44052                  PHONE: 216-854-0755                  EMAIL: MARTY.VANKUREN@CHARTER.COM</p>
<p>CITY OF LORAIN                  DEPARTMENT OF UTILITIES                  1106 WEST 1ST STREET                  LORAIN, OH 44052                  SEWER - JACK MEYERS                  PH: 440-204-2726                  EMAIL: JACK_MEYERS@CITYOFLORAIN.ORG                  WATER DISTRIBUTION - JIM MALICK                  PH: 440-204-2285                  EMAIL: JIM_MALICK@CITYOFLORAIN.ORG</p>	<p>OHIO UTILITIES PROTECTION SERVICE                  PH: 800-362-2764 (OR 811)                  WWW.OUPS.ORG</p> <p>WOW CABLE                  BOB HAMMOND                  DIRECTOR, PLANT MAINTENANCE                  PH: 440-606-6262                  EMAIL: BOB.HAMMOND@WOWINC.COM</p>
- THE SIZE AND LOCATION, BOTH HORIZONTAL AND VERTICAL, OF THE UNDERGROUND UTILITIES SHOWN IN THE CONTRACT DOCUMENTS HAVE BEEN OBTAINED BY A SEARCH OF AVAILABLE RECORDS AS WELL AS FROM THE UTILITY OWNERS AS REQUIRED BY O.R.C. SECTION 153.64. THE CITY OF LORAIN DOES NOT GUARANTEE THE COMPLETENESS NOR ACCURACY THEREOF. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES WITH THE PERTINENT UTILITY OWNER PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN PROXIMITY OF UTILITIES.
- SERVICE LINES ARE NOT SHOWN ON THE DRAWINGS. CONTRACTOR SHOULD ASSUME ALL PROPERTIES HAVE WATER, SEWER, AND GAS SERVICE LINES. FIELD VERIFY THE LOCATION OF ALL SERVICES SHOWN AND NOT SHOWN.
- WHERE EXISTING POWER OR TELEPHONE POLES ARE IN CLOSE PROXIMITY TO WORK, THE CONTRACTOR SHALL COORDINATE THE WORK EFFORTS WITH THOSE OF THE UTILITY COMPANIES SUCH THAT THEIR EXISTING FACILITIES CAN BE MAINTAINED AND PROTECTED DURING THE TIME WORK IS OCCURRING ADJACENT TO THE POLE. THE COST AND COORDINATION FOR ANY REQUIRED PROTECTION, SUPPORT OR TEMPORARY RELOCATION OF EXISTING UTILITY POLES, STREET LIGHTS OR TRAFFIC LIGHTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE PROTECTION AND SUPPORT FOR ALL UTILITY POLES, STREET LIGHTS OR TRAFFIC POLES IN THE WORK AREA INCLUDING UTILITY POLES, STREET LIGHTS AND TRAFFIC POLES NOT SPECIFICALLY SHOWN ON THE PLANS TO REQUIRE TEMPORARY SUPPORT AND PROTECTION. DELAYS TO THE CONTRACTOR AS A RESULT OF TIMING OF POLE RELOCATION, SUPPORT OR PROTECTION SHALL NOT BE CONSIDERED COMPENSABLE DELAYS, AS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS WORK IN CONFORMANCE TO THE UTILITY COMPANY'S SCHEDULE.
- IN THE EVENT THAT IT IS NECESSARY, DURING CONSTRUCTION, TO REVISE THE ALIGNMENT OF A PROPOSED PIPE OR LOCATION OF APPURTENANCES DUE TO CONFLICTS WITH EXISTING UTILITIES, THE CONTRACT UNIT PRICE BID FOR THE ITEMS INVOLVED SHALL NOT BE CHANGED EXCEPT IN CASES OF UNUSUALLY LARGE OR EXTENSIVE REVISIONS WHEN IN THE OPINION OF THE ENGINEER, AND INCREASE OR DECREASE IN UNIT PRICE IS JUSTIFIED. ANY CHANGE IN THE UNIT PRICE BID MUST BE MUTUALLY AGREED UPON IN WRITING BEFORE THE WORK IS PERFORMED. OTHERWISE, THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST 24 HOURS IN ADVANCE OF INTERRUPTION OF EXISTING WATER OR SEWER SERVICES. EXISTING SERVICES SHALL NOT BE INTERRUPTED FOR MORE THAN 2 HOURS. THE CONTRACTOR WILL BE RESPONSIBLE FOR SHUTTING DOWN ANY EXISTING SERVICES AND FOR NOTIFYING PROPERTY OWNERS OF SERVICE DISRUPTIONS.

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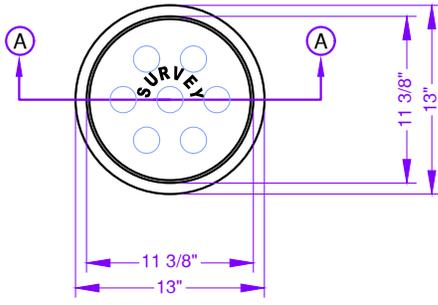
**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

## STANDARD DESIGNS GENERAL GENERAL NOTES

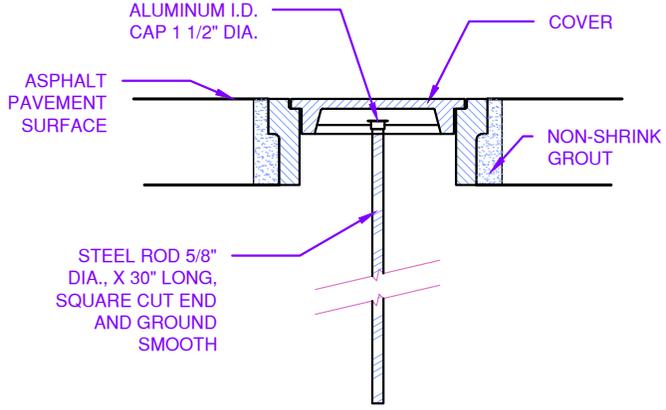
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DRWN BY: RS	APPRVD BY: DV	ISSUE DATE: 10/27/2015	SCALE: NONE		

# GN-2.6

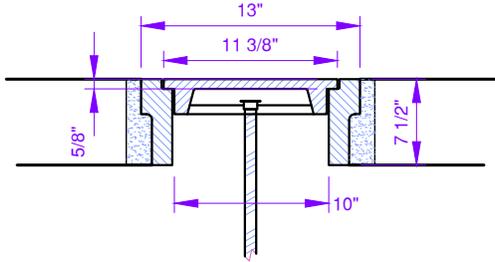
NO.	DATE	REVISION	NO.	DATE	REVISION
6	06/20/2017				
7	01/01/2018				
9	01/01/2019				
10	06/20/2019				
11	02/04/2020	UPDATED UTILITY CONTACTS			



**TOP VIEW**



**SIDE VIEW**



**SECTION A-A**

**NOTES:**

ACCEPTABLE MANUFACTURERS AND PRODUCTS ARE:

1. EJ CO.  
P.O. BOX 439-301  
EAST JORDAN, MI. 49727  
EJ 1578 11 1/4" DIA.
2. **NEENAH: R-1976**
3. ALTERNATE PRODUCTS MAY BE SUBMITTED FOR APPROVAL.

**INSTALLATION:**

1. CORE OPENING IN PAVEMENT.
2. REMOVE DEBRIS AND PREPARE PAVEMENT FOR GROUT PER MANUFACTURERS INSTRUCTIONS.
3. COAT PAVEMENT OPENING AND EXTERIOR OF CASTING WITH GROUT.
4. INSTALL CASTING AND FINISH FLUSH WITH EXISTING PAVEMENT.
5. ANNULAR SPACE BETWEEN CASTING AND PAVEMENT TO BE FILLED WITH NON-SHRINK GROUT PER ODOT 705.20.

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**STANDARD DESIGNS  
MISCELLANEOUS  
MONUMENT BOX ASSEMBLY**

CAD FILE: MS-3.0.dwg				SHEET: <b>MS-3.0</b>	
DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE		

**GENERAL**

1. COMPACTION OF TRENCHES IN THE RIGHT-OF-WAY IS REQUIRED FOR ALL UTILITIES. AREAS OF TIGHT EXCAVATION THAT DO NOT ALLOW FOR ODOT APPROVED COMPACTION DEVICES TO BE UTILIZED SHALL BE BACKFILLED WITH LOW STRENGTH MORTAR BACKFILL, TYPE 2 PER CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATION.
2. LIMESTONE SHALL BE USED FOR ALL AGGREGATE SUBBASE, FOR COARSE AGGREGATE IN ALL ASPHALT PAVEMENT SURFACE, AND FOR COARSE AGGREGATE IN CONCRETE.
3. NO VEHICULAR TRAFFIC SHALL BE PERMITTED ON A PREPARED AND APPROVED SUB-GRADE, SUB-BASE, OR PAVEMENT BASE.
4. ALL SAW CUTTING SHALL BE PERFORMED WITH A DIAMOND SAW BLADE AND INCLUDED FOR PAYMENT WITH THE COST OF THE PAVEMENT.
5. ANY ADJACENT FACILITIES DAMAGED AS RESULT OF THE CONTRACTOR'S NEGLIGENCE, AS DETERMINED BY THE ENGINEER, AND WHICH ARE NOT OTHERWISE DESIGNATED FOR REPLACEMENT, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
6. IT IS RECOMMENDED CONTRACTOR VERIFY EXISTING PAVEMENT THICKNESS AND SECTION MAKE-UP PRIOR TO BID.
7. **BASE PAVEMENT REPAIRS SHALL BE COMPLETED ONLY IF DIRECTED BY ENGINEER AFTER MILLING OPERATIONS HAVE BEEN COMPLETED. THE ENGINEERING DEPARTMENT WILL MARK BASE REPAIR AREAS WITHIN 72 HOURS, WEATHER DEPENDENT, AFTER THE THE STREET HAS BEEN SWEEP.**
8. CONTRACTOR IS RESPONSIBLE FOR THE DEWATERING OF ANY REPAIR AREAS PRIOR TO PLACEMENT OF NEW PAVEMENT (BASE PAVEMENT OR FINISHED PAVEMENT).
9. FURNISH ALL AGGREGATE DIRECTLY TO THE PROJECT FROM AN APPROVED SOURCE. ONLY LIMESTONE AGGREGATE SHALL BE PERMITTED FOR USE.
10. SUBGRADE COMPACTION SHALL BE INCIDENTAL TO AND INCLUDED FOR PAYMENT WITH ITEM 452-DRIVEWAY APRON AND ITEM 608-WALKS, CURB RAMPS, AND STEPS, RESPECTIVELY.
11. ALL BACKFILL UNDER OR WITHIN THE ZONE OF INFLUENCE OF ROADS, DRIVES, SIDEWALKS, AND PARKING LOTS SHALL BE GRANULAR BACKFILL PER SPECIFICATIONS.

**ASPHALT**

1. **GENERAL:** THE MECHANICAL SPREADING AND FINISHING EQUIPMENT SHALL CONSIST OF SELF-POWERED PAVERS, CAPABLE OF SPREADING AND FINISHING THE MIXTURE TO THE LINE, GRADE AND CROWN SET BY THE ENGINEER. THE THICKNESS OF THE COURSES SHALL BE VARIED BY THE CONTRACTOR, AS REQUIRED, SO THAT THE WORK WILL BE COMPLETED WITHIN THE QUANTITY OF MATERIAL SET UP ON THE PLANS AND PROPOSAL. THE ENGINEER, HOWEVER, RESERVES THE RIGHT TO REQUIRE CHANGES IN THE THICKNESS OF COURSES, WHERE, IN HIS OPINION, THE SAME IS REQUIRED TO CAUSE THE WORK TO BE COMPLETED WITHIN THE SAID QUANTITIES. THIS RESERVATION, ON PART OF THE ENGINEER, SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY OF PROPERLY REGULATING USE OF MATERIALS AS ABOVE SPECIFIED. OVER RUNS IN SAID QUANTITIES WILL ONLY BE CONSIDERED WHERE WRITTEN SUPPLEMENTARY CONTRACTS FOR ADDITIONAL AMOUNT HAVE BEEN AGREED UPON PRIOR TO EXECUTION OF THE WORK. THE GUTTER SHALL BE FINISHED TO THE TRUE GRADE. ANY IRREGULARITIES SHALL BE CORRECTED TO ENSURE PROPER DRAINAGE. A WATER TEST MAY BE USED TO LOCATE SPOTS IN GUTTER REQUIRING CORRECTION.
2. **SEALING GUTTERS AND EDGES:** THE WIDTH OF THE GUTTER OR EDGE SURFACE TO BE SEALED SHALL BE 4" WHERE THE SURFACE IS BOUNDED BY RAISED CURB OR EDGE SEALED WHERE A BERM EXISTS, IN ACCORDANCE WITH ODOT SPECIFICATIONS. THE EDGES OF ALL CASTINGS, FEATHERED EDGES AND WHERE NEW SURFACE MEETS OLD PAVEMENTS SHALL BE PAINTED WITH SUITABLE ASPHALT MATERIAL. THE GUTTER OR EDGE SHALL BE SEALED IMMEDIATELY AFTER THE SURFACE COURSE IS PLACED ON EACH STREET. THE EDGE SEAL IS INTENDED TO FILL ANY VOIDS.

(CONTINUED ON NEXT PAGE)

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 Phone: (440) 204-2003

NO.	DATE	REVISION	NO.	DATE	REVISION
1	10/27/2015				
4	04/18/2017				
9	01/01/2019				
11	02/05/2020	PREV. NO. 4 MOVED TO PV-5.1			
11	02/05/2020	NO. 7 REVISED			
11	02/05/2020	ASPHALT HEADING REV.			

<b>STANDARD DESIGNS PAVEMENT GENERAL NOTES</b>			
CAD FILE: PV-1.0.dwg			SHEET:
DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 02/06/2017	SCALE: NONE
			<b>PV-1.0</b>

## ASPHALT, CONT'D

3. CLEANING OF PAVEMENT: THE STREET MUST BE SWEEPED PRIOR TO BASE REPAIR MARK OUTS. CLEANING OF THE PAVEMENT PRIOR TO PAVING SHALL BE ACCOMPLISHED BY A SELF-CONTAINED VACUUM/SWEEPER WITH WATER SPRAYER FOR DUST CONTROL. THIS EQUIPMENT SHALL CLEAN THE PAVEMENT THE DAY OF PAVING TO THE SATISFACTION OF THE INSPECTOR.
4. ASPHALT BINDER PRICE ADJUSTMENT: THE PROVISIONS OF ODOT C&MS 401.20, ASPHALT BINDER PRICE ADJUSTMENT IS NOT PART OF THIS CONTRACT. THE CONTRACTOR SHALL BID ACCORDINGLY.
5. SUBMITTAL OF ASPHALT TICKETS IS REQUIRED FOR PAYMENT OF ASPHALT ITEMS.
6. WARM MIX ASPHALT IS NOT PERMITTED. ONLY HOT MIX SHALL BE USED FOR SURFACE, INTERMEDIATE AND BASE COURSES.
7. ASPHALT TESTING SHALL INCLUDE BATCH PLANT, EXTRACTION/GRADATION AND FIELD TESTING OF ASPHALT INTERMEDIATE AND SURFACE COURSES UNDER THE FOLLOWING AVERAGE DAILY TRAFFIC (ADT) CONDITIONS:  
ALL ADT CONDITIONS - CITY OF LORAIN PROJECT INSPECTOR SHALL PERFORM JMF REVIEW AND TEMPERATURE TESTING  
500>ADT<5000 - AN INDEPENDENT OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CERTIFIED ASPHALT TESTING LABORATORY SHALL PERFORM FIELD DENSITY TESTING  
ADT >5000 - AN INDEPENDENT OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CERTIFIED ASPHALT TESTING LABORATORY SHALL PERFORM FIELD DENSITY TESTING AND CORING.
8. RECLAIMED ASPHALT SHINGLES (RAS) ARE NOT PERMITTED IN ASPHALT PAVEMENT.
9. ITEM 441 - ASPHALT CONCRETE - ASPHALT CONCRETE SURFACE COURSE SHALL NOT EXCEED 10% RECLAIMED ASPHALT CONCRETE PAVEMENT (RAP) BY DRY WEIGHT. TOTAL VIRGIN ASPHALT BINDER CONTENT SHALL CONSIST OF A MINIMUM OF 6% FOR SURFACE COURSE. ALL AGGREGATE IN INTERMEDIATE AND SURFACE COURSE SHALL BE LIMESTONE.

## PORTLAND CEMENT CONCRETE

1. USE CONCRETE MIX CLASS QC-1P FOR ROADWAY PAVEMENT AND QC MS DRIVEWAY APRONS. QC FS SHALL NOT BE USED UNLESS AS DIRECTED BY ENGINEER.
2. SAWED AND HAND-FORMED JOINTS SHALL BE SEALED WITH CMS 705.04 JOINT SEALER.
3. PAVEMENT GUTTER REINFORCING STEEL (#5X30" TIE BAR) SHALL BE INSTALLED IN ACCORDANCE WITH ODOT SCD BP-2.1 AND INCLUDED FOR PAYMENT WITH THE CONCRETE PAVEMENT. CURB SHALL BE POURED INTEGRAL WITH HALF-LANE. CURB AND GUTTER SHALL NOT BE POURED SEPARATELY.
4. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
5. ALL DROPS FOR DRIVEWAY APRONS SHALL BE INCLUDED IN THE COST OF THE CURB.
6. KEYWAYS ARE NOT REQUIRED PER CITY OF LORAIN, ODOT ITEM 452.
7. EXISTING DRIVE APRON REMOVAL/REPLACEMENT- IT IS INTENDED THAT EXISTING DRIVE APRONS REMAIN UNDISTURBED DURING ANY ADJACENT INTEGRAL CONCRETE CURB AND PAVEMENT REMOVAL/REPLACEMENTS. REMOVAL OF ADJACENT INTEGRAL CONCRETE CURB AND PAVEMENT SHALL BE IN A MANNER THAT WILL NOT DISTURB, DAMAGE OR UNDERMINE THE ABUTTING DRIVE APRONS. SAW CUTS ALONG THE BACK OF CURB SHALL BE REQUIRED TO FACILITATE THE CURB AND PAVEMENT REMOVALS. DRIVE APRONS WHICH ARE UNAVOIDABLY DAMAGED DURING THE REMOVAL/REPLACEMENT OF ANY ADJACENT INTEGRAL CONCRETE CURB AND PAVEMENT SHALL BE REPLACED, IN KIND, TO THE NEAREST JOINT OR THE LIMITS ESTABLISHED/DIRECTED BY THE ENGINEER. EXCEPT AS OTHERWISE DIRECTED BY THE ENGINEER, THE CONFIGURATIONS OF ANY REPLACED DRIVE APRON AREAS SHALL CONFORM, AS NEARLY AS POSSIBLE, TO EXISTING CONFIGURATIONS. RESIDENTIAL DRIVES SHALL BE 6" THICK AND COMMERCIAL DRIVES AND ALLEYS SHALL BE 8" THICK. CONCRETE MIX CLASS "QC MS" SHALL BE USED FOR ITEM 452-DRIVEWAY APRON. THE CONTRACTOR SHALL NOTIFY EACH RESIDENT OF ANY RESTRICTED ACCESS TO THEIR PROPERTY NO LATER THAN ONE (1) WEEK IN ADVANCE. ACCESS TO ALL PROPERTY SHALL BE MAINTAINED AT ALL TIMES.

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**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

NO.	DATE	REVISION	NO.	DATE	REVISION
1	10/27/2015		11	02/05/2020	ASPHALT HEADING REV.
2	02/12/2016		11	02/05/2020	PREV. NO. 6 REMOVED
7	01/01/2018		11	02/19/2020	NO. 3 REVISED
8	07/01/2018		11	03/03/2020	ASPH. TESTING REV.
9	01/01/2019				
10	06/20/2019	NO. 3 REVISED			

## STANDARD DESIGNS PAVEMENT GENERAL NOTES

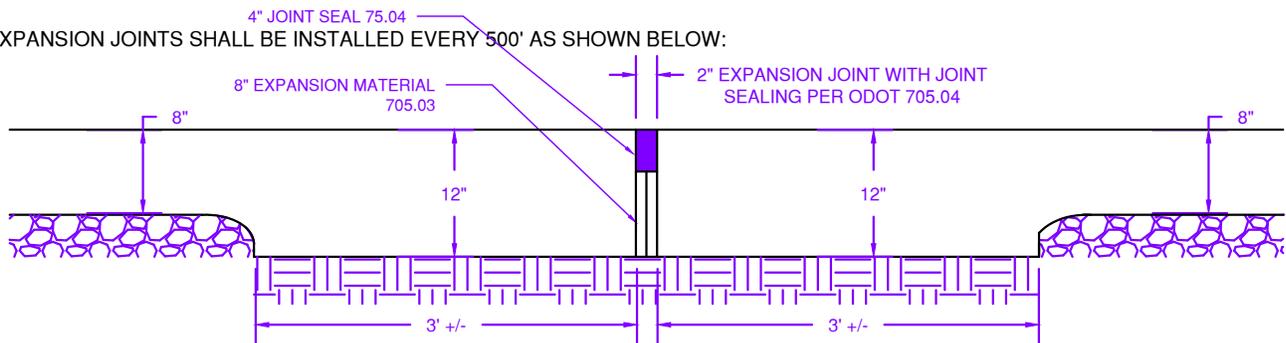
CAD FILE: PV-1.1.dwg				SHEET:	
DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE		

PV-1.1

# PORTLAND CEMENT CONCRETE, CONT'D

- 8. PARTIAL WIDTH CONSTRUCTION: POSITIVE DRAINAGE WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THE INTENT OF THE METHOD REQUIRED TO REPLACE THIS PAVEMENT IS TO UTILIZE THE EXISTING ONE HALF OF THE PAVEMENT TO PREVENT DAMAGE TO THE SUB-GRADE BY CONSTRUCTION TRAFFIC AND FOR RESIDENTS TO MAINTAIN REASONABLE PEDESTRIAN ACCESS TO THEIR RESIDENCE. THE CONTRACTOR IS REQUIRED TO KEEP OPEN ONE LANE OF TRAFFIC FOR USE BY RESIDENTS AND BUSINESSES AT ALL TIMES. THE EXISTING PAVEMENT WILL BE SAWED IN THE LONGITUDINAL DIRECTION TO ALLOW FOR HALF WIDTH REMOVAL. THE REMOVAL WIDTH WILL BE DETERMINED BY THE CONTRACTOR TO ALLOW FOR ACCESS FOR THEIR EQUIPMENT. THE REMOVAL AREA THEN IS TO BE EXCAVATED; SUB-GRADE COMPACTED BY APPROVED METHOD AND EQUIPMENT, AND ODOT #304 LIMESTONE PLACED AND COMPACTED, AS DIRECTED. CURB SHALL BE POURED INTEGRAL WITH HALF-LANE. CURB AND GUTTER SHALL NOT BE POURED SEPARATELY. ALL PERIMETER SAWING FOR REMOVAL AGAINST EXISTING PAVEMENT IS TO BE DIAMOND SAWED, OTHER TYPES OF SAWING IS PERMISSIBLE FOR REMOVAL OF INTERIOR MATERIAL TO BE REMOVED LATER. ALL SAWING IS INCIDENTAL TO THE PROJECT.
- 9. ITEM 499 CONCRETE - GENERAL: CONCRETE MIX DESIGNS SHALL BE LIMITED TO THE FOLLOWING CLASSES:  
QC 1, QC 1-P, QC MS, QC MISC.
- 10. ITEM 499 - MS CONCRETE FOR LARGE AREAS: THE PROJECT ENGINEER MAY ALLOW MS CONCRETE IN PLACE OF QC1O AS REQUIRED ON THE PROJECT. THE MIX DESIGN FOR THIS WELL GRADED QCMS IS AS FOLLOWS: (WEIGHTS ARE APPROXIMATE)  
 TYPE 1 - 800 LBS  
 WATER - 312 LBS  
 #57 - 1347 LBS  
 #8 - 165 LBS  
 SAND - 1190 LBS  
 AIR - 6%
- 11. CONCRETE STRENGTH: CLASS QC1 AND QC1P SHALL ATTAIN A MODULUS OF RUPTURE OF 600 POUNDS PER SQUARE INCH (2.8 MPa) WITHIN 5 DAYS. CITY OF LORAIN INSPECTORS WILL PREPARE TWO (2) BEAM SPECIMENS FOR EACH CONCRETE PLACEMENT. THE INSPECTOR WILL TEST ONE (1) BEAM SPECIMEN AFTER 5 DAYS OF CURE. IF THE TESTED BEAM SPECIMEN FAILS TO ATTAIN THE REQUIRED STRENGTH OF 600 PSI WITHIN 5 DAYS, THUS PROHIBITING THE CONCRETE PAVEMENT FROM BEING OPENED TO TRAFFIC, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN THE AMOUNT OF 10% OF THE CONTRACT BID ITEM AND ASSOCIATED QUANTITY THAT CONTAINED THE STRENGTH DEFICIENCY. LIQUIDATED DAMAGES WILL INCREASE 10% PER CALENDAR DAY THEREAFTER NOT TO EXCEED 50% OF THE CONTRACT BID ITEM AND ASSOCIATED QUANTITY CONTAINING THE DEFICIENCY. AFTER 5 DAYS, THE CONTRACTOR MAY TAKE POSSESSION OF THE SECOND BEAM SPECIMEN FOR ADDITIONAL TESTING BY AN ODOT PREQUALIFIED LABORATORY AT NO ADDITIONAL COST TO THE CITY. UPON USE OF THE SECOND BEAM SPECIMEN, IF FURTHER SPECIMENS ARE REQUIRED TO TEST CONCRETE STRENGTH THE CONTRACTOR MAY OBTAIN PAVEMENT CORES FROM THE PAVEMENT SECTION CONTAINING THE DEFICIENCY. ALL COSTS RELATED TO ACQUIRING THE PAVEMENT CORES, INCLUDING BUT NOT LIMITED TO REMOVAL, TESTING, REPLACEMENT AND RESTORATION, SHALL BE AT THE COST OF THE CONTRACTOR. IF THE DEFICIENCY REMAINS AFTER TWENTY EIGHT (28) DAYS, THE CONTRACTOR SHALL REMOVE AND REPLACE THE AFFECTED CONCRETE PAVEMENT AT NO ADDITIONAL COST TO THE CITY. THE AFOREMENTIONED CONCRETE STRENGTH REQUIREMENTS AND LIQUIDATED DAMAGES SHALL BE APPLICABLE TO ALL FUTURE REPLACEMENTS OF THE CONCRETE PAVEMENT SECTIONS CONTAINING THE ORIGINAL DEFICIENCIES. IF AT ANY TIME THE CONCRETE STRENGTH REQUIREMENTS ARE SATISFACTORILY MET AND THE CONTRACTOR FAILS TO OPEN THE CONCRETE PAVEMENT TO TRAFFIC BY THE END OF THE WORK DAY, THE CONTRACTOR SHALL INCUR LIQUIDATED DAMAGES AS STATED ABOVE.

13. EXPANSION JOINTS SHALL BE INSTALLED EVERY 500' AS SHOWN BELOW:



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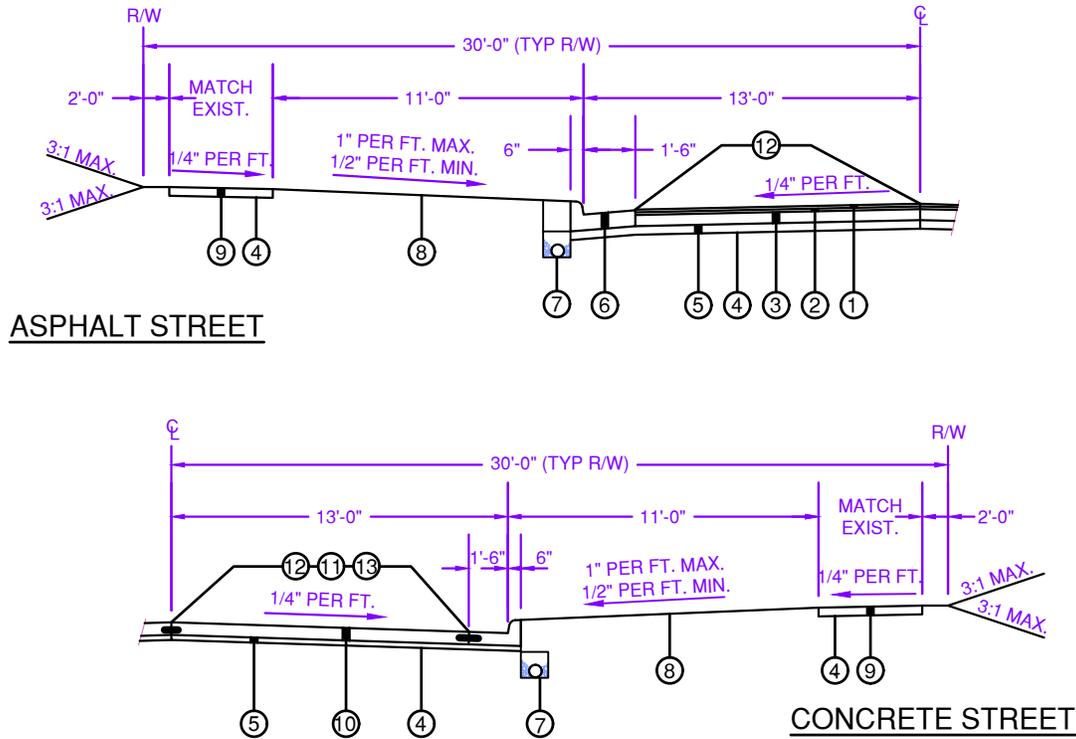
**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

**STANDARD DESIGNS  
 PAVEMENT  
 GENERAL NOTES**

CAD FILE: PV-1.2.dwg				SHEET:	
DRWN BY: RS	APPRVD BY: DV	ISSUE DATE: 10/27/2015	SCALE: NONE		

PV-1.2

NO.	DATE	REVISION	NO.	DATE	REVISION
7	01/01/2018		11	03/04/2020	NO. 10 REVISED
8	07/01/2018				
9	01/01/2019				
10	06/20/2019	NO. 11 ADDED			
11	02/19/2020	NO. 8 REVISED			
11	02/21/2020	EXP. JOINT DETAIL REV.			



**LEGEND**

- |   |          |        |   |   |                    |  |
|---|----------|--------|---|---|--------------------|--|
| ① | ITEM 441 | 1-1/4" | ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (10% RAP MAX)       | ⑧ | ITEM 659           | SEEDING AND MULCHING   |
| ② | ITEM 441 | 1-3/4" | ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22 (35% RAP MAX.) | ⑨ | ITEM 608           | 4" CONCRETE SIDEWALK 6" DRIVE APPROACH AND 6" SIDEWALK BEHIND APPROACH, 6" CURB RAMPS  |
| ③ | ITEM 301 | 9"     | ASPHALT CONCRETE BASE   | ⑩ | ITEM 452           | 8" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT WITH TYPE 2A INTEGRAL CURB, CLASS QC 1  |
| ④ | ITEM 204 | *      | SUBGRADE COMPACTION AND PROOF ROLLING                                 | ⑪ | ITEM 451.09        | LONGITUDINAL & TRANSVERSE JOINTS PER ODOT SCD BP-2.1 AND 2.2; SAW CUT TRANSVERSE JOINTS ON 15' CENTERS AND AT RE-ENTRY CORNERS; #5 X 30" TIE BAR @ 30" C/C FOR LONGITUDINAL JOINTS |
| ⑤ | SUBBASE: |        |   | ⑫ | ITEM 451.16/705.04 | JOINT SEALING; LONGITUDINAL, TRANSVERSE AND CURB & GUTTER JOINTS; 2" TO 4" BAND WHEN SEALING ASPHALT.  |
|   | ASPHALT  | 4"     | 304 LIMESTONE   | ⑬ | ITEM 451.09        | PAVEMENT GUTTER REINFORCING STEEL; SAW CUT; #5 X 30" TIE BAR @ 30" C/C PER ODOT SCD BP-2.1   |
|   | CONCRETE | 6"     | 304 LIMESTONE   |   |                    |  |
| ⑥ | ITEM 609 | 24"    | COMBINATION CURB & GUTTER; MODIFIED TYPE 2, CLASS QC 1                |   |                    |  |
| ⑦ | ITEM 605 | 4"     | UNDERDRAINS (SEE DETAIL PV-3.0)                                       |   |                    |  |

**NOTES**

\* WHERE GRANULAR FILL IS USED TO REPLACE SOFT SUBBASE AREAS, EXTEND CUT AND GRANULAR TO UNDERDRAIN.

- VERTICAL 6" CURB ROADWAY STANDARDS ARE AS FOLLOWS: TRAVEL LANE = 26' MINIMUM. BOC TO BOC 27' MINIMUM.
- ROLLED 4" CURB ROADWAY STANDARDS ARE AS FOLLOWS: TRAVEL LANE = 26" MINIMUM. BOC TO BOC 27' 4" MINIMUM.
- ADDITIONAL CURB DESIGNS CAN BE FOUND ON PV 5.0 AND PV 5.1.
- CONCRETE SPECIFICATIONS: QC1P: ROADWAY; QCMS: BOXOUTS, DRIVEWAYS, SIDEWALK WITHIN DRIVEWAY; QC1 OR QC MISC: WALK AND CURB RAMPS.

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**NOTE 2:** BEFORE ANY EXCAVATING, CALL THE FOLLOWING NUMBER AT LEAST 48 HOURS IN ADVANCE: O.U.P.S. @ (800) 362-2764

**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

**STANDARD DESIGNS  
 PAVEMENT  
 TYPICAL STREET-RESIDENTIAL**

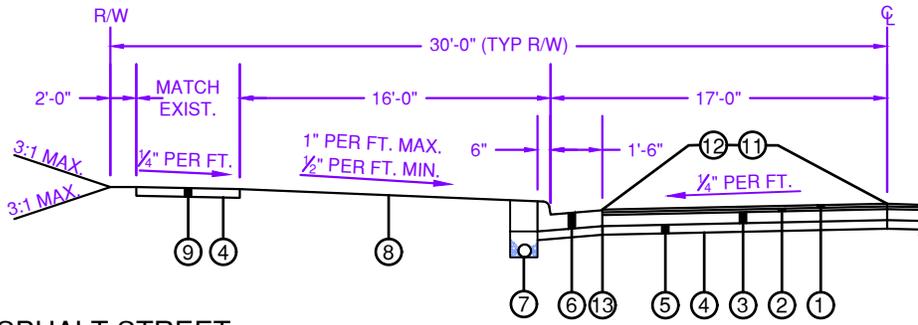
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SHEET:

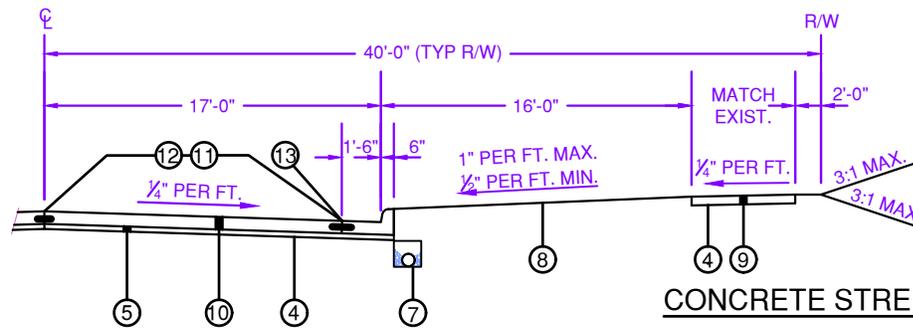
**PV-2.0**

DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE
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NO.	DATE	REVISION	NO.	DATE	REVISION
2	02/12/2016		11	03/04/2020	LEGEND NO. 12 REV.
4	04/18/2017				
7	01/01/2018				
10	06/20/2019	NO. 4 CHANGED			
11	02/05/2020	DETAIL NO. 12 REVISED			
11	02/12/2020	SIDEWALK WIDTH REV.			



**ASPHALT STREET**



**CONCRETE STREET**

**LEGEND**

①	ITEM 441	1-1/4"	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (10% RAP MAX)	⑧	ITEM 659	SEEDING AND MULCHING
②	ITEM 441	1-3/4"	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22 (35% RAP MAX.)	⑨	ITEM 608	4" CONCRETE SIDEWALK 6" DRIVE APPROACH AND 6" SIDEWALK BEHIND APPROACH, 6" CURB RAMPS
③	ITEM 301	9"	ASPHALT CONCRETE BASE	⑩	ITEM 451	10" REINFORCED CONCRETE PAVEMENT WITH INTEGRAL CURB; TYPE 2A, CLASS QC 1. MIN. REINFORCEMENT WWF 6X6 - W4 X W4 WELDED WIRE MESH OR APPROVED FIBER.
④	ITEM 204	*	SUBGRADE COMPACTION AND PROOF ROLLING	⑪	ITEM 451.09	LONGITUDINAL & TRANSVERSE JOINTS PER ODOT SCD BP-2.1 AND 2.2; SAW CUT TRANSVERSE JOINTS ON 15' CENTERS AND AT RE-ENTRY CORNERS; #5 X 30" TIE BAR @ 30" C/C FOR LONGITUDINAL JOINTS
⑤	SUBBASE:			⑫	ITEM 451.16/705.04	JOINT SEALING; LONGITUDINAL, TRANSVERSE AND CURB & GUTTER JOINTS; 2" TO 4" BAND WHEN SEALING ASPHALT.
	ASPHALT	4"	304 LIMESTONE	⑬	ITEM 451.09	PAVEMENT GUTTER REINFORCING STEEL; SAW CUT; #5 X 30" TIE BAR @ 30" C/C PER ODOT SCD BP-2.1
	CONCRETE	6"	304 LIMESTONE			
⑥	ITEM 609	24"	COMBINATION CURB & GUTTER; MODIFIED TYPE 2, CLASS QC 1			
⑦	ITEM 605	4"	UNDERDRAINS (SEE DETAIL PV-3.0)			

**NOTES**

\* WHERE GRANULAR FILL IS USED TO REPLACE SOFT SUBBASE AREAS, EXTEND CUT AND GRANULAR TO UNDERDRAIN.

- VERTICAL 6" CURB ROADWAY STANDARDS ARE AS FOLLOWS: TRAVEL LANE = 26' MINIMUM. BOC TO BOC 27' MINIMUM.
- ROLLED 4" CURB ROADWAY STANDARDS ARE AS FOLLOWS: TRAVEL LANE = 26' MINIMUM. BOC TO BOC 27' 4" MINIMUM.
- ADDITIONAL CURB DESIGNS CAN BE FOUND ON PV 5.0 AND PV 5.1.
- CONCRETE SPECIFICATIONS: QC1P: ROADWAY; QCMS: BOXOUTS, DRIVEWAYS, SIDEWALK WITHIN DRIVEWAY; QC1 OR QC MISC: WALK AND CURB RAMPS.

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**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

NO.		DATE		REVISION	
2	02/12/2016			11	03/04/2020
4	04/18/2017				LEGEND NO. 12 REV.
7	01/01/2018				
10	06/20/2019	NO. 4 CHANGED			
11	02/05/2020	DETAIL NO. 12 REVISED			
11	02/12/2020	SIDEWALK WIDTH REV.			

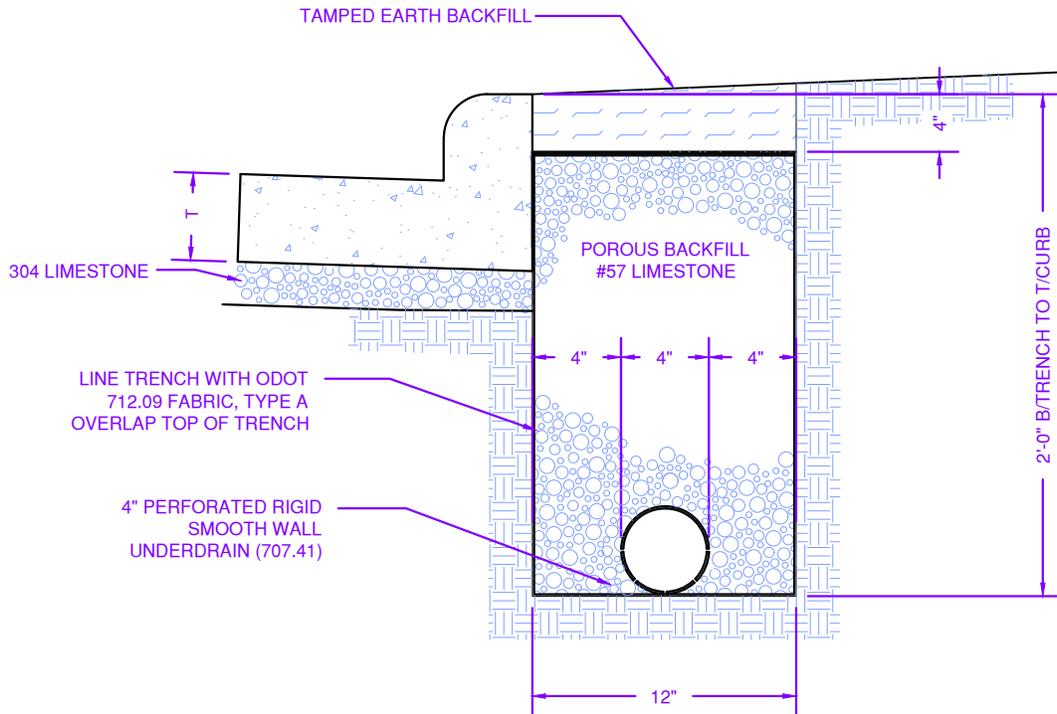
**STANDARD DESIGNS PAVEMENT TYPICAL STREET-INDUSTRIAL/COMMERCIAL**

CAD FILE: PV-2.1.dwg

DRWN BY: EA    APPRVD BY: DV    ISSUE DATE: 08/19/2015    SCALE: NONE

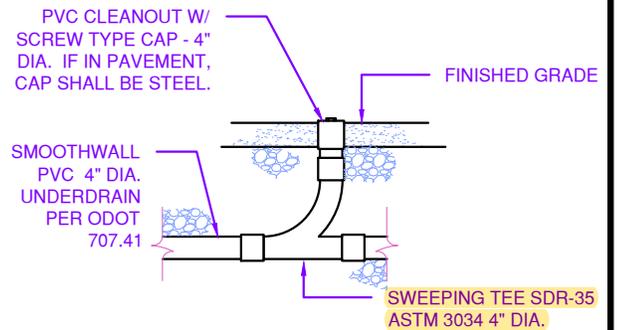
SHEET: **PV-2.1**

C:\Users\potter\appdata\local\temp\AcPublish\_8864\PV-3.0.dwg - PV-3.0 ~ Feb 12, 2020 - 2:57pm



**NOTES:**

1. UNDERDRAINS ARE REQUIRED FOR ALL **CONCRETE ROADWAY** CONSTRUCTION, UNLESS APPROVED OTHERWISE, OR MODIFIED, BY THE CITY ENGINEER.
2. UNDERDRAIN PIPING OR TUBING SHALL BE INSTALLED TRUE TO LINE AND GRADE SHOWN ON THE PLANS.
3. NO TRENCHING PERMITTED. COMPACT BOTTOM OF TRENCH.
4. UNDERDRAIN SHALL BE CONNECTED TO INLET/MH STRUCTURE.
5. UNDERDRAIN CLEANOUTS SHALL BE INSTALLED AT THREE HUNDRED (300) FEET INTERVALS, OR AS DIRECTED BY ENGINEER. CLEANOUTS SHALL BE INCLUDED FOR PAYMENT W/ 4" UNDERDRAIN.



**UNDERDRAIN CLEANOUT**

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**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

**STANDARD DESIGNS  
 PAVEMENT  
 UNDERDRAIN DETAIL**

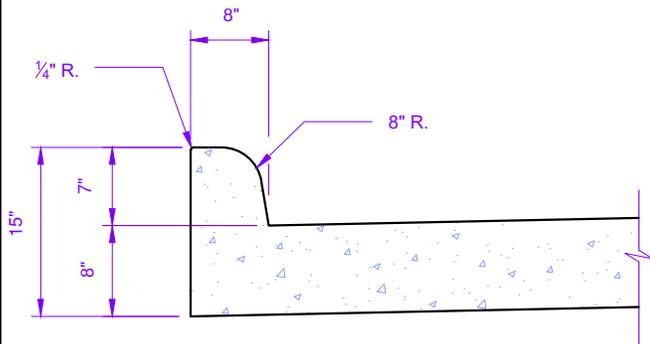
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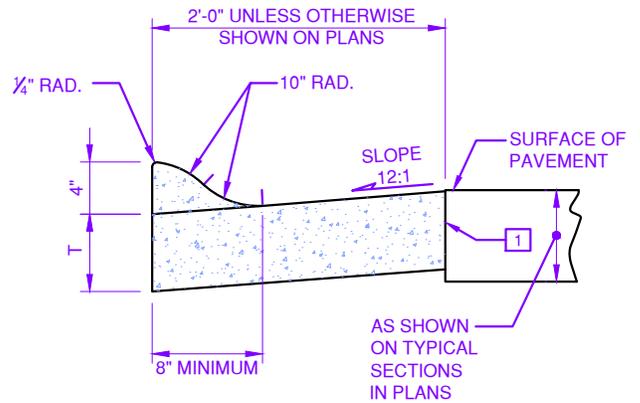
**PV-3.0**

DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE
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NO.	DATE	REVISION	NO.	DATE	REVISION
11	02/05/2020	CLEANOUT DETAIL REV.			
11	02/05/2020	NOTE NO. 1 REV.			
11	02/05/2020	CLEANOUT DETAIL REV.			



**MODIFIED TYPE 2-A  
INTEGRAL CURB**

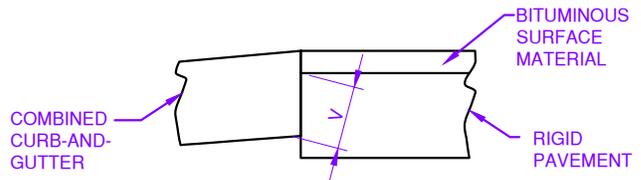


**MODIFIED TYPE 3**

FOR ADDITIONAL CURB DETAILS, SEE ODOT SCD BP-5.1.

**LEGEND**

- 1** BUTT JOINTS SHALL BE PROVIDED BETWEEN COMBINED CURB-AND-GUTTER AND NEW OR EXISTING RIGID PAVEMENTS, WITH TIE BARS OR HOOK BOLTS PROVIDED AT INTERVALS OF 5' [1.5 M]. SEE SCD BP-2.1 FOR DETAILS OF TIE BARS AND HOOK BOLTS. IF THE COMBINED CURB-AND-GUTTER ADJOINS A NEW RIGID BASE OR AN EXISTING RIGID BASE OR PAVEMENT THAT IS TO BE SURFACED WITH BITUMINOUS MATERIAL, A BUTT JOINT SHALL ALSO BE PROVIDED. HOWEVER, TIE BARS OR HOOK BOLTS SHALL BE OMITTED WHEN THE VERTICAL OVERLAP ("V" IN DETAIL RIGHT) BETWEEN THE CURB-AND-GUTTER AND RIGID PAVEMENT IS LESS THAN 7" [175].



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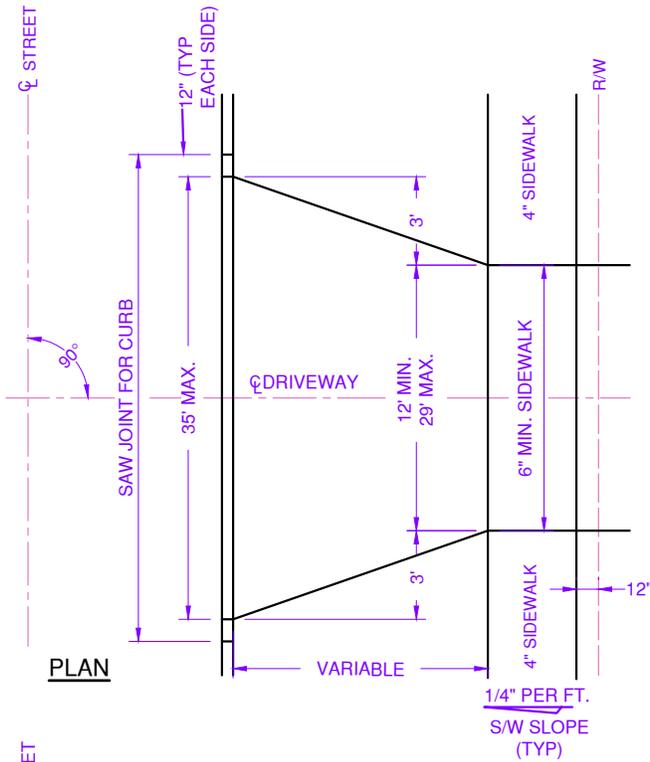
NO.	DATE	REVISION	NO.	DATE	REVISION
1	04/18/2017				
11	02/05/2020	ADDED CURB NOTE			

**STANDARD DESIGNS  
PAVEMENT  
CURB DETAILS**

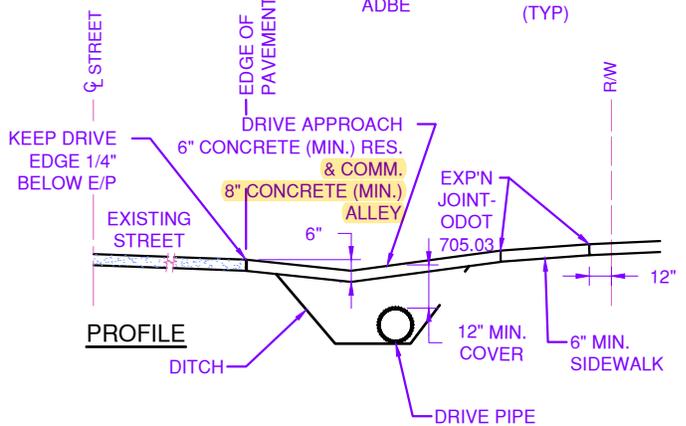
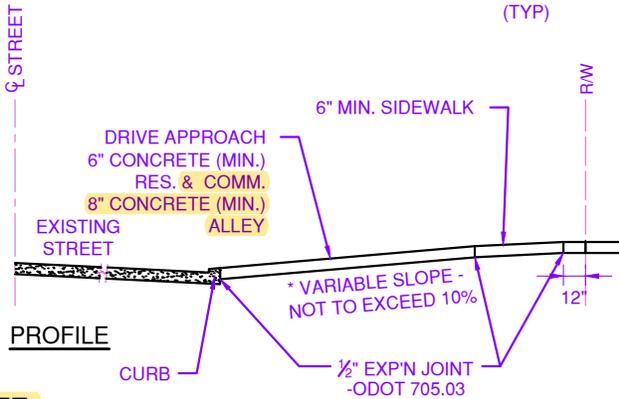
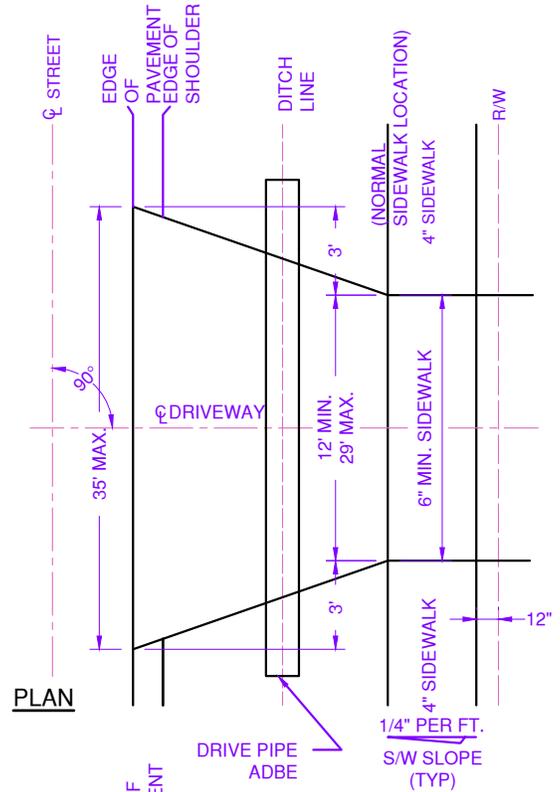
CAD FILE: PV-5.1.dwg				SHEET:	
DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE		

**PV-5.1**

### IMPROVED STREET

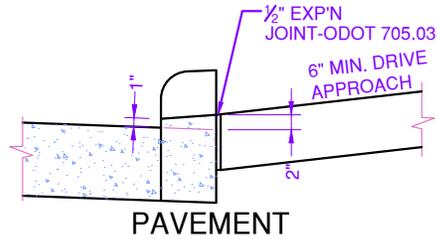
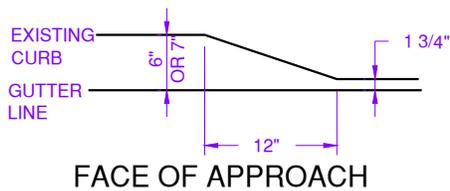


### UNIMPROVED STREET



**NOTE:**

FOR APRON FINISHING REFER TO PV-12.2 AND ODOT 608.03



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## STANDARD DESIGNS PAVEMENT DRIVE APPROACH DETAILS

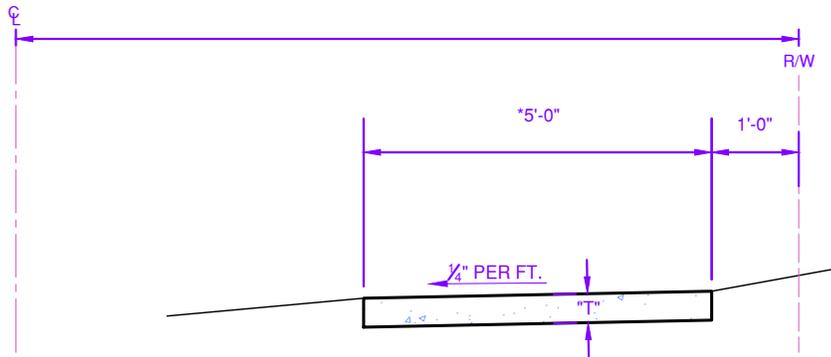
CAD FILE:  
 PV-6.0.dwg

SHEET:

**PV-6.0**

DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE
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NO.	DATE	REVISION	NO.	DATE	REVISION
11	02/05/2020	8" ALLEY NOTE ADDED			
11	02/21/2020	DETAILS REV.			



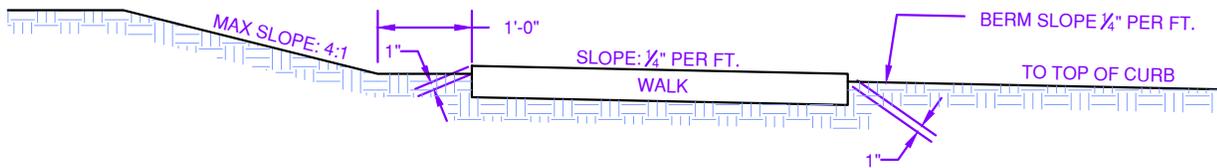
\* UNLESS DRIVE APRONS ARE LESS THAN 200' APART

**STANDARD SIDEWALK RESIDENTIAL/COMMERCIAL**

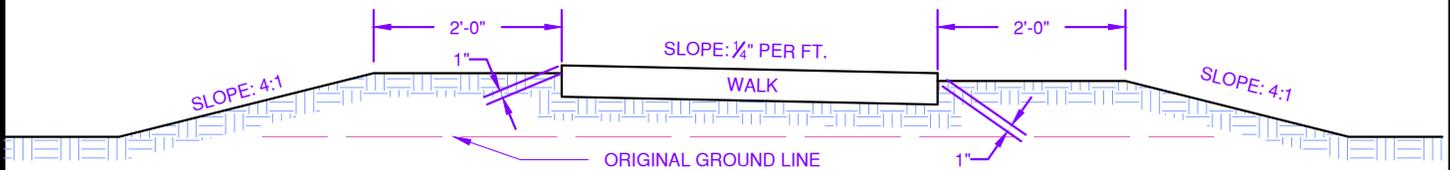
"T" = 4" MIN. FOR STANDARD WALKS  
 "T" = 6" MIN. FOR WALKS ACROSS RES. & COMM. DRIVES  
 "T" = 8" MIN. FOR WALKS ACROSS ALLEYS

**NOTES:**

1. ALL CONCRETE SHALL BE 4000 PSI ODOT CLASS QC MISC WITH AIR-ENTRAINING ADMIXTURE.
2. A "V" SHALL BE TOOLED INTO THE CONCRETE AT EACH WATER CURB BOX LOCATION.
3. SIDEWALK FINISHING - REFER TO PV-12.2
4. FOR ADA RAMPS; REFER TO ODOT B.P.-7.1 FOR PREFERRED CONSTRUCTION PLACEMENT OF PERPENDICULAR CURB RAMPS.



**TYPICAL GRADING SECTION IN CUT**



**TYPICAL GRADING SECTION IN FILL**

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 200 West Erie Avenue Lorain, Ohio 44052  
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NO.	DATE	REVISION	NO.	DATE	REVISION
10	06/20/2019	NO. 3 ADDED			
11	02/05/2020	ALLEY NOTE ADDED			
11	02/10/2020	ADA RAMP NOTE ADDED			
11	02/21/2020	WALK DETAIL REV.			

**STANDARD DESIGNS  
 PAVEMENT  
 SIDEWALK DETAIL**

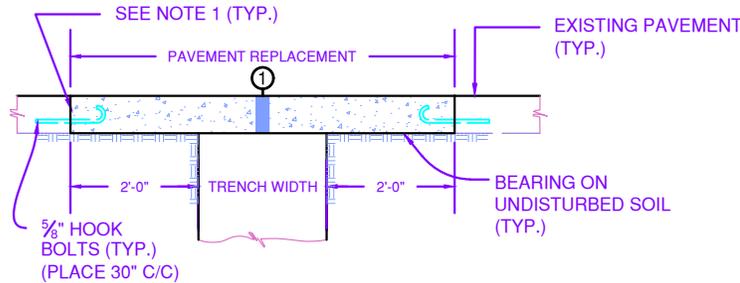
CAD FILE: PV-7.0.dwg				SHEET:	
DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE		

**PV-7.0**

## TYPICAL PAVEMENT REPLACEMENT DETAILS

### REPLACEMENT NOTES:

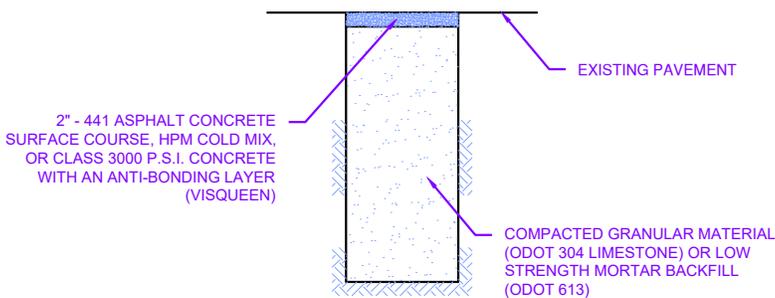
1. THE EXISTING PAVEMENT SHALL BE DIAMOND BLADE SAW CUT AT A DISTANCE OF 2' FROM THE UTILITY TRENCH TO PROVIDE A SUBSTANTIALLY VERTICAL AND STRAIGHT JOINT BETWEEN THE EXISTING AND REPLACEMENT PAVEMENT.
2. ALL PAVEMENT AND SIDEWALK REPLACEMENT DETAILS SHOWN REPRESENT THE MINIMUM ACCEPTABLE REPAIR. IF EXISTING SURFACES EXCEED THESE DETAILS, THEN REPAIRED SURFACES SHALL MATCH THE EXISTING.
3. ALL EDGES OF PATCHED AREAS TO BE SEALED USING ITEM 451.16/705.04.
4. ALL CURB REPLACEMENT TO BE INCLUDED W/ PAVEMENT REPLACEMENT.
5. HOOK BOLTS SHALL BE EPOXY COATED.
6. THE EXISTING LONGITUDINAL AND TRANSVERSE JOINTS SHALL DETERMINE THE AREA OF PAVEMENT REPLACEMENT REQUIRED. WHENEVER A PROPOSED SAW CUT IS DISTANT LESS THEN FIVE (5) FT. FROM A LONGITUDINAL AND/OR A TRANSVERSE JOINT, THE PAVEMENT SHALL BE REPLACED TO THE EXISTING JOINT AND LIMITS OF ALL DESIGNATED BY THE ENGINEER IN THE FIELD.
7. ALL CONCRETE FOR STREETS AND CURBS SHALL BE ODOT CLASS QC1P.



① 8" - ITEM 452 PLAIN PORTLAND CEMENT CONCRETE PAVEMENT (LIMESTONE AGGREGATE), CLASS QC 1

### REPLACEMENT DETAIL

### TEMPORARY PAVEMENT DETAIL



### TEMPORARY REPLACEMENT NOTES:

1. TEMPORARY PAVEMENT SHALL BE INSTALLED WHENEVER THE PERMANENT PAVEMENT WILL NOT BE INSTALLED WITHIN 14 DAYS OF PAVEMENT REMOVAL.
2. TEMPORARY PAVEMENT PATCHES SHALL BE MAINTAINED IN A DRIVABLE CONDITION.
3. TEMPORARY PAVEMENT PATCHES SHALL BE REPLACED WITH PERMANENT PAVEMENT RESTORATION AS SOON AS POSSIBLE.
4. TEMPORARY CONCRETE SHALL USE NO. 8 STONE.

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**City of Lorain**  
200 West Erie Avenue Lorain, Ohio 44052  
Phone: (440) 204-2003

## STANDARD DESIGNS PAVEMENT REPLACEMENT DETAIL

CAD FILE:  
PV-12.1.dwg

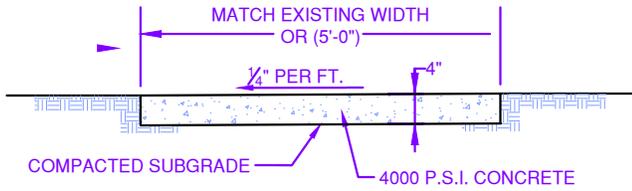
SHEET:

DRWN BY: EA    APPRVD BY: DV    ISSUE DATE: 08/19/2015    SCALE: NONE

PV-12.1

NO.	DATE	REVISION	NO.	DATE	REVISION
7	01/01/2018				
10	06/20/2019	NO. 7 CHANGED			
11	02/06/2020	REPL. DETAIL CHANGED			
11	02/06/2020	REPL. NOTE NO. 1 REV.			

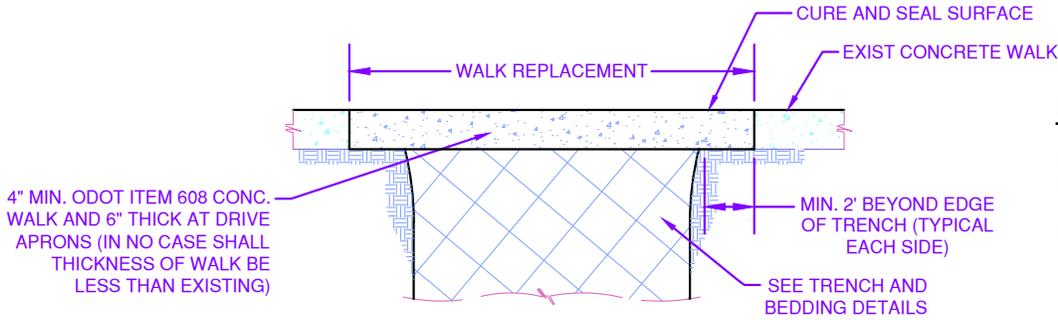
**TYPICAL SIDEWALK DETAIL**



**NOTE:**

WALK TO BE DIVIDED INTO EQUALLY SPACED BLOCKS AT APPROXIMATELY 5' INTERVALS. EXPANSION JOINT FILLER 1/2" THICK SHALL BE INSTALLED BETWEEN WALK AND ANY FIXED STRUCTURE EXTENDING FOR THE FULL DEPTH OF THE SIDEWALK. THE EXPANSION JOINT FILLER SHALL BE 1" THICK WHERE WALK IS INSTALLED AGAINST BACK OF CURB. SEE PV-7.

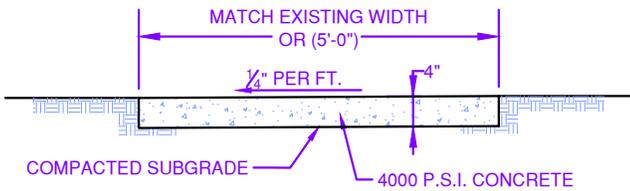
**SIDEWALK REPLACEMENT**



**NOTE:**

EXISTING WALK SHALL BE REMOVED IN FULL SLABS AND REPLACED TO MAINTAIN THE EXISTING JOINT PATTERN.

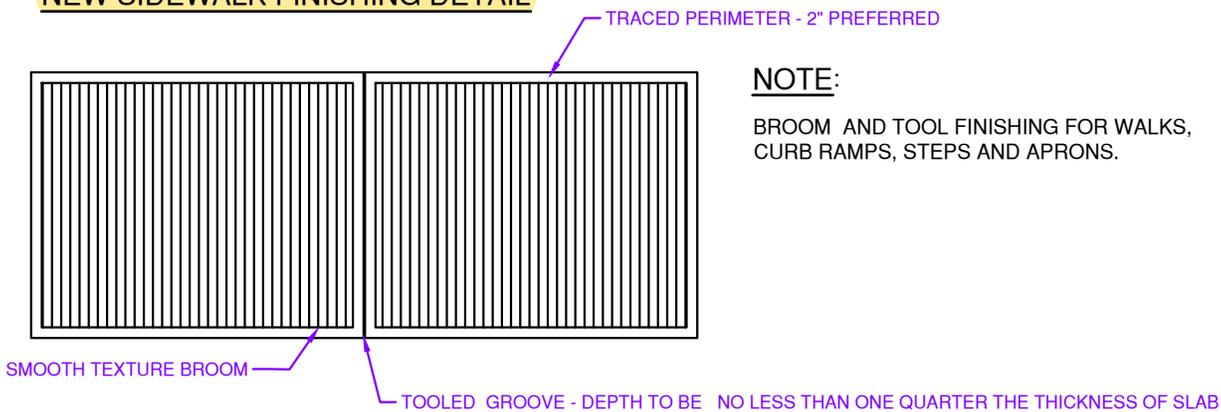
**NEW SIDEWALK DETAIL**



**NOTE:**

TOOL CONTROL JOINTS @ 5'-0" O.C. SURFACE FINISH WILL BE A SMOOTH TEXTURE BROOM PERPENDICULAR TO WALK FLOW WITH RE-TRACED PERIMETER USING AN APPROVED EDGING TOOL WITH A RADIUS OF ONE-QUARTER INCH AND INTERIOR JOINTS USING AN APPROVED GROOVING TOOL TO A DEPTH OF NOT LESS THAN ONE-QUARTER THE THICKNESS OF THE SLAB. REFER TO ODOT 608.03 C, PLACING AND FINISHING FOR WALKS, CURB RAMPS, STEPS AND APRONS.

**NEW SIDEWALK FINISHING DETAIL**



**NOTE:**

BROOM AND TOOL FINISHING FOR WALKS, CURB RAMPS, STEPS AND APRONS.

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**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

**STANDARD DESIGNS  
 SIDEWALK  
 REPLACEMENT DETAIL**

CAD FILE: PV-12.2.dwg			
DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE

SHEET:  
**PV-12.2**

NO.	DATE	REVISION	NO.	DATE	REVISION
9	01/01/2019				
11	02/06/2020	NEW WALK DETAIL REV.			
11	02/21/2020	NEW WALK NOTE REV.			
11	09/24/2020	NEW FINISHING DETAIL			

# STORM SEWER

1. STORM PIPE: THE MINIMUM SIZE STORM SEWER PIPE SHALL BE 12" DIAMETER. ALL STORM SEWER SHALL BE PLACED PER THE TYPICAL DETAILS. WHERE STORM AND SANITARY SEWERS CROSS, ALIGN JOINTS EQUIDISTANT FROM THE CROSS AND EXTEND PREMIUM, GASKETED JOINTS 10' IN EACH DIRECTION.
2. STORM PIPE MATERIAL: 12" AND 15" PIPE SHALL CONFORM TO ODOT 611, MATERIAL SPECS AS FOLLOWS: REINFORCED CONCRETE PIPE -ODOT 706.02, ASTM C14-2, W/ GASKETED JOINTS PER ASTM C361 OR C443. 18" AND LARGER PIPE SHALL CONFORM TO ODOT 611, MATERIAL SPECS AS FOLLOWS: REINFORCED CONCRETE SEWER PIPE - ODOT 706.02, ASTM C76, CLASS 3, 4 OR 5 BASED ON LOADING CONDITIONS, WITH GASKETED JOINTS PER ASTM C361 OR C443. COVER OVER STORM PIPES SHALL BE PER ODOT L&D VOLUME 2 SECTION 1104.2.
3. MANHOLE PIPE CONNECTIONS: STORM SEWER PIPE CONNECTIONS TO MANHOLES SHALL BE MADE WITH CLASS C CONCRETE COLLAR SEALS, A MIN. 6" THICK AROUND THE PIPE.
4. DRIVE PIPE: RCP UNDER DRIVES AT UNIMPROVED ROADS. MINIMUM 12" DIAMETER PIPE, OR AS APPROVED BY THE CITY ENGINEER. MINIMUM 12" COVER, OR AS APPROVED BY THE CITY ENGINEER.
5. HEADWALLS: POURED IN PLACE, REINFORCED CONCRETE OR PRECAST CONCRETE, PER ODOT SCD HW-2.2 OR HW-1.1 AND ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, ITEM 602.
6. ROCK CHANNEL PROTECTION: TYPE A, B, OR C ROCK OR STONE, WITH FILTER FABRIC, PER ODOT CONSTRUCTION & MATERIAL SPECS ITEM 601; OF THE SIZE, THICKNESS AND LENGTH AS SPECIFIED IN FIGURE 1107-1 "ROCK CHANNEL PROTECTION AT CULVERT AND STORM SEWER OUTLETS", ODOT LOCATION AND DESIGN MANUAL VOL. 2 - DRAINAGE DESIGN. ROCK CHANNEL PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER THE INSTALLATION OF THE PERTINENT STORM STRUCTURE OR HEADWALL.
7. ITEM 611 - PIPE CULVERTS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES - THE FOLLOWING SECTIONS SHALL BE EXCLUDED:
  - 611.04.B - INSTALLATION PLAN
  - 611.04.C - CONSTRUCTION INSPECTION FORMS
  - 611.04.D - PERFORMANCE REPORT
  - 611.12 - PERFORMANCE INSPECTION
  - 611.13 - CONDUIT EVALUATION
  - 611.14 - DRAINAGE STRUCTURE EVALUATION
8. REFER TO GN 2.1 - GENERAL NOTE #25 FOR ADDITIONAL BACKFILL GUIDANCE.

## NOTE:

LIFT HOLES IN REINFORCED CONCRETE PIPE SHALL BE PLUGGED WITH CEMENT/CONCRETE PLUGS PRIOR TO BACKFILL.

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NOTE 2: BEFORE ANY EXCAVATING, CALL THE FOLLOWING NUMBERS AT LEAST 48 HOURS IN ADVANCE: O.U.P.S. @ (800) 362-2764.

**City of Lorain**  
 200 West Erie Avenue Lorain, Ohio 44052  
 Phone: (440) 204-2003

NO.	DATE	REVISION	NO.	DATE	REVISION
1	10/27/2015				
7	01/01/2018				
10	06/20/2019	NO. 2 CHANGED			

## STANDARD DESIGNS STORM SEWER GENERAL NOTES

CAD FILE: ST-1.0.dwg				SHEET:	
DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE		

ST-1.0

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**A. CONSTRUCTION:**

1. CATCH BASINS SHALL BE IN ACCORDANCE WITH ODOT SCD CB-2.2 OR CB-2.1 AND SHALL BE INCLUDED FOR PAYMENT WITH ITEM 611.
2. INLETS AND CATCH BASINS MAY BE CAST-IN-PLACE OR PRE-CAST CONCRETE. CAST-IN-PLACE CONCRETE SHALL BE CLASS QC1. REINFORCED PRE-CAST CONCRETE SHALL BE AS SPECIFIED.
3. MINIMUM WALL THICKNESS OF CAST-IN-PLACE INLETS AND BASINS SHALL BE 8". MINIMUM WALL THICKNESS OF PRE-CAST INLETS AND BASINS SHALL BE 6".
4. MINIMUM THICKNESS FOR BASES OF INLETS AND BASINS SHALL BE 6", CAST-IN-PLACE AND PRE-CAST.
5. CATCH BASINS & INLETS WITH PRE-CAST CONCRETE BASES SHALL BE PLACED ON A COMPACTED GRAVEL BED OF NO. 57 AGGREGATE, HAVING A MINIMUM THICKNESS OF 3".
6. CONCRETE BLOCK IS NOT PERMITTED MATERIALS FOR THE CONSTRUCTION OR MODIFICATION OF INLETS AND CATCH BASINS; **ONLY MASONRY CLAY-SOLID BRICK (ASTM C-32, GRADE S. S.) SHALL BE USED.**
7. FRAMES SHALL BE SET EVEN AND FLUSH WITH THE INTERIOR WALLS OF THE INLETS AND BASINS.
8. DOUBLE INLETS SHALL BE LOCATED AT ALL SAG VERTICAL CURVES. UNDERDRAINS SHALL DRAIN TO THE SIDES, SOLID PIPE SHALL BE PROVIDED A MINIMUM OF 10' FROM THE WALLS, OR AS DIRECTED BY THE CITY ENGINEER.
9. INVERTS SHALL BE FORMED IN ALL INLET AND BASIN STRUCTURES TO PROVIDE POSITIVE FLOW. USE CLASS QC1 CONCRETE TO FORM INVERTS.
10. ALL PIPING THROUGH CATCH BASIN WALLS SHALL BE SEALED WITH A CLASS QC1 CONCRETE COLLAR A MIN. OF 6" THICK.

**B. CASTINGS:**

1. APPROVED FRAMES/GRATES FOR BASINS AND INLETS ARE SHOWN BELOW:

STRUCTURE TYPE	NEENAH		EJ		BACK
	FRAME	GRATE	FRAME	GRATE	
SINGLE CURB INLET (MOD. NO. 3A CB)	R-3246-CL	C	7035	M2	T1-BARRIER CURB T2-ROLL CURB OR DRIVE APRON
DOUBLE CURB INLET (MOD. NO. 3 CB)			7036	M2	T1-BARRIER CURB T2-ROLL CURB OR DRIVE APRON
SINGLE CURB INLET (< 3'X2'3")	R-3030	A	7010 7020	M1 M2	T1-BARRIER CURB T4-ROLL CURB

NOTE: 7010 ALTERNATE IS 7020, M2, T1-BARRIER

2. ALL GRATES WITHIN THE PAVEMENT SHALL BE BICYCLE-SAFE AND SET CORRECTLY WITH THE DIRECTION OF WATER FLOW.
3. THE FRAME AND GRATE SHALL BE FITTED AND FINISHED TO PROVIDE A FIRM AND EVEN SEAT IN THE FRAME.
4. BASINS AND INLETS SHALL BE PLACED TRUE TO LINE AND GRADE, PER PLAN.
5. THE FRAMES AND GRATES SHALL BE FITTED, MATCHED AND MARKED PRIOR TO DELIVERY TO THE PROJECT.
6. ANY SUBSTITUTIONS OF EQUAL QUALITY AND DIMENSIONS SHALL FIRST BE APPROVED BY THE CITY ENGINEER PRIOR TO PROCUREMENT.
7. **ALL FRAMES AND GRATES SHALL MEET OR EXCEED AASHTO M306.**
8. ALL CASTINGS SHALL HAVE THE WORDS "DUMP NO WASTE" AND "DRAINS TO WATERWAY" ALONG WITH A FISH LOGO CAST INTO THE GRATE AND/OR CURB BOX.

**C. PAYMENT:**

1. THE PAVEMENT BLOCK-OUT SHALL BE PLACED AFTER THE CASTING HAS BEEN SET, BUT WILL BE PAID FOR AS THOUGH PART OF THE CONCRETE PAVEMENT.
2. NO DEDUCTION SHALL BE MADE IN QUANTITIES OF PAVEMENT BECAUSE OF THE CASTING.

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Phone: (440) 204-2003

**STANDARD DESIGNS  
STORM SEWER  
GENERAL NOTES-CATCH BASINS & INLETS**

CAD FILE:  
ST-3.0.dwg

SHEET:

ST-3.0

DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE
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NO.	DATE	REVISION	NO.	DATE	REVISION
9	01/01/2019				
11	02/07/2020	CONST. NO. 6 REV.			
11	02/07/2020	CASTINGS CHART REV.			
11	02/07/2020	CASTINGS NO. 7 REV.			