

## Shelbyville Construction Standards Apply To Public & Private Property

- 2) The Entire Set of Signed Standards Shall Be Attached To The Site Development Plans and Construction Documents. The Standards Shall Be Placed Adjacent To The Plans.
- 3) Details Prepared By Outside Sources Shall Not Be Included In Construction Drawings Unless Said Details Cover Work Which Is Covered By Shellbyville Standards.
- 3) Individual Shellbyville Standards That Do Not Apply May Be Crossed-Out By Design Engineer Through A Written Note. The Standards Shall Be Crossed-Out In A Manner That Does Not Place Adjacent To The Details. The Standards Shall Be Crossed-Out In A Manner That Does Not Place Adjacent To The Details.
- 4) Details Prepared By Outside Sources Covering Work Which Is Not Covered By Shellbyville Standards Shall Be The Sole Responsibility Of The Design Engineer And Shall Be Placed On Sheets Other Than The Standards Sheet.
- 5) For Details, Specifications, and Design Guidelines Not Covered in these Standards, Refer To The Standards Section Below. In The Event That These Standards Are Used, Referenced, Or Incorporated Into Other Documents, The Standards Shall Be Referenced, Not Repeated, Or Re-Specified. Examples of Standards That Shall Be Referenced, Not Repeated, Or Re-Specified Include:
  - 1) Shellbyville Construction Standards
  - 2) Shellbyville Standards for Roadway and Drainage
  - 3) City of Shellbyville Stormwater Design Manual
  - 4) Shellbyville Standards and Specifications for Public Works Manual On Uniform Traffic Control Devices / INDOT Work Zone Safety Manual
  - 5) Shellbyville Standards and Specifications for Public Works Manual On Uniform Traffic Control Devices / INDOT Work Zone Safety Manual
  - 6) Public Health and Environmental Managers and Sanitary Engineers
  - 7) MTD and HWMA Standards and Specifications
  - 8) Properly Written Specifications
  - 9) Other Plans
- 6) Design Professionals Certifying The Plans For The Project Acknowledges Their Professional Responsibility For Ensuring That All Work Is Correct, Accurate, And Complies With All Applicable Laws, Rules, Regulations, And Standards. The Design Professionals Shall Be Responsible For Ensuring That The Professional Assume Full Responsibility And Shall Determine A Solution That Complies With All Applicable Laws, Rules, Regulations, And Standards. The Design Professionals Shall Be Responsible For Ensuring That The Professional Assume Full Responsibility And Shall Determine A Solution That Complies With All Applicable Laws, Rules, Regulations, And Standards. The Design Professionals Shall Be Responsible For Ensuring That The Professional Assume Full Responsibility And Shall Determine A Solution That Complies With All Applicable Laws, Rules, Regulations, And Standards.
- 7) All Requests For Interpretations And / Or Clarification With The Standards Shall Be Done In Writing To The City Engineer. All Official Responses By The City Engineer Will Be Done In Writing.
- 8) Failure To Properly Execute The Above Directions For Use Will Not Effect The Applicability Nor Enforcement Of The Standards.
- 9) The City Of Shellbyville Shall Be Contacted When Required By Calling (337) 325-5102.



Sheet #	DESCRIPTION
1	DIRECTIONS FOR USE, GENERAL NOTES, AND REVISION LOG
2	RIGHT-OF-WAY, SITE DEVELOPMENT STANDARDS
3	PAVEMENT DETAILS AND NOTES
4	CURB AND DRIVEWAY DETAILS AND NOTES
5	SIDEWALK AND ADA RAMPS DETAILS AND NOTES
7	TRENCH BACKFILL AND STREET CUT DETAILS AND NOTES
8	STORM SEWER BEDDING AND PIPE DETAILS AND NOTES
9	STORM SEWER AND MANHOLE STRUCTURES DETAILS AND NOTES
10	STORM SEWER STRUCTURES DETAILS AND NOTES
11	SANITARY SEWER BEDDING AND PIPE DETAILS AND NOTES
12	SANITARY SEWER DETAILS AND NOTES
13	SANITARY SEWER DETAILS AND NOTES
14	SANITARY SEWER LIFT STATION STANDARDS AND GUIDELINES
15	FIRE DEPT. & WATER STANDARD DETAILS
16	BIGGS, MARSH, & MORGAN STANDARD DETAILS
17	ARTERIAL/COLLECTOR ROUNDABOUT STANDARDS AND DETAILS
18	LOCAL ROUNDABOUT STANDARDS AND DETAILS

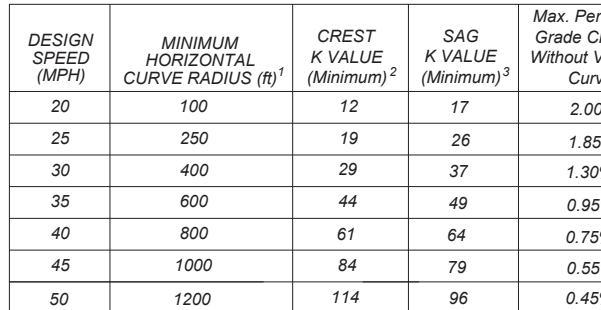
REVISIONS		
Rev. No.	Description	Date
1	Entire Set	07/26/2011
2	ADA Compliance Notes, References To New UDO	01/14/2012
3	Updated Entire Set	02/11/2020
4	Sanitary Dedicated Easement, H.P. Storm Pipe	05/11/2021

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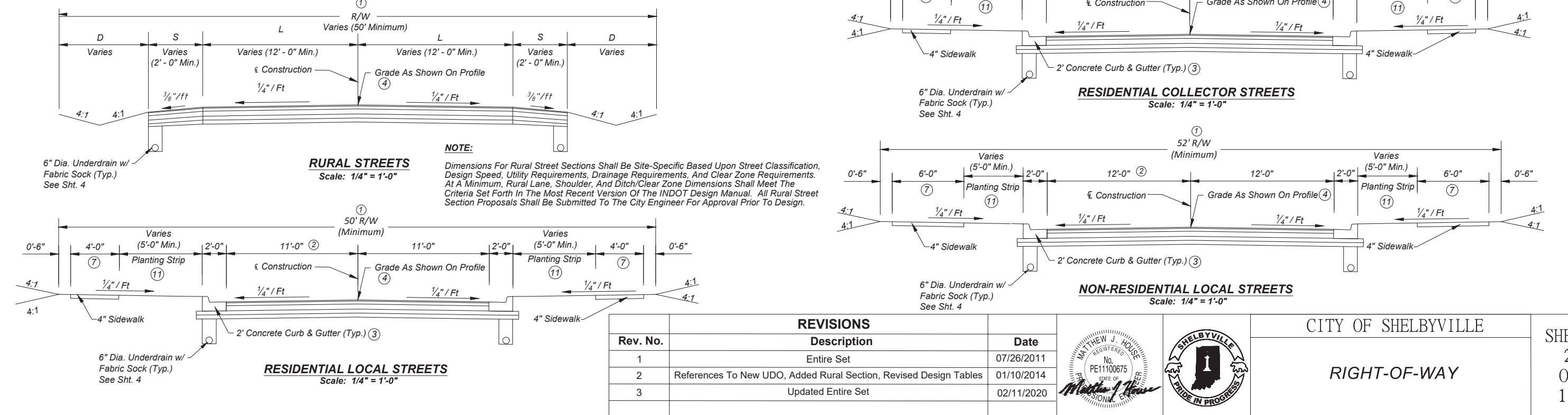
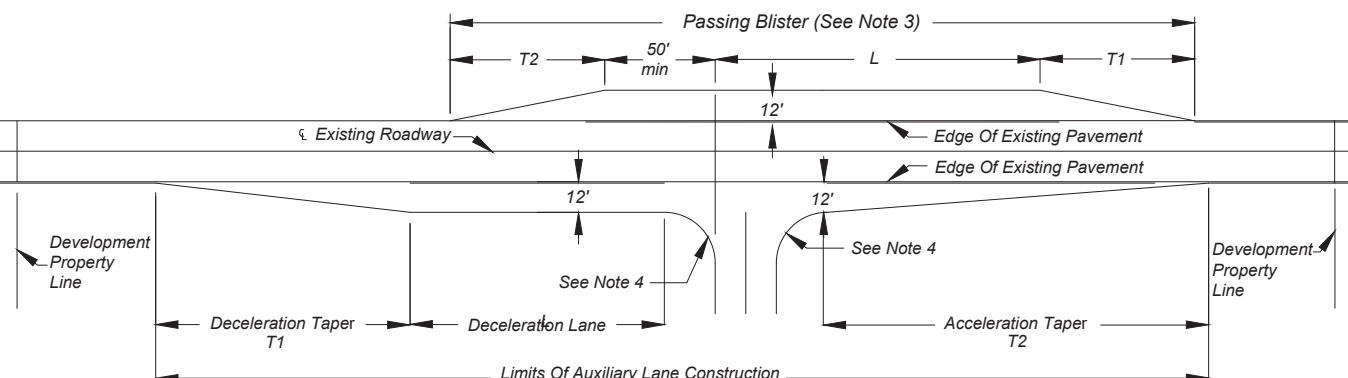
**DIRECTIONS FOR USE  
GENERAL NOTES, &  
REVISION LOG**

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1  
OF  
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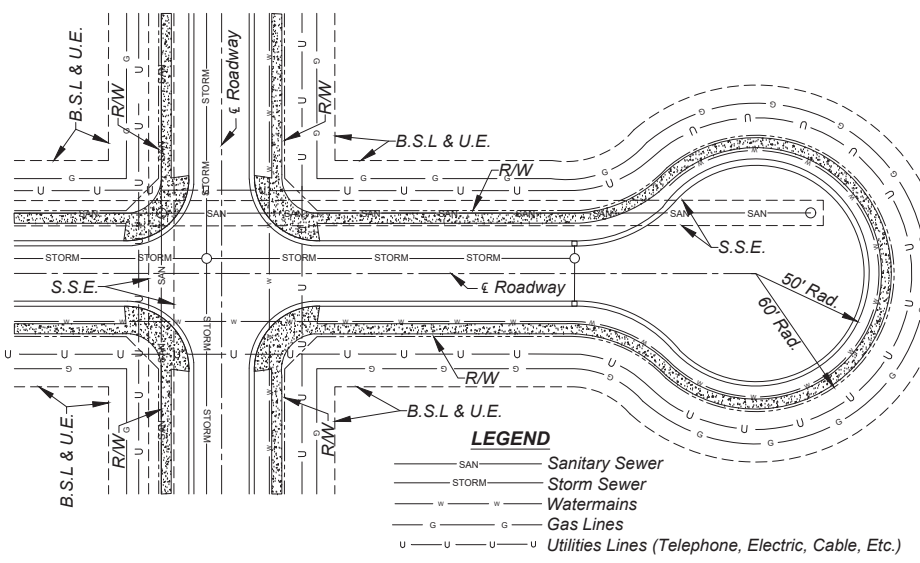
- 1) **Right-Of-Way Widths, Pavement Widths, and Easement Widths** indicated on This Sheet are Minimum Distances Required by the City of Shelbyville for the Proposed Project. The City of Shelbyville has the Authority to Amend These Minimum Distances by Ordinance. The City of Shelbyville has the Authority to Amend These Minimum Distances by Ordinance. Section 6.16 Provides for the City of Shelbyville to Amend These Minimum Distances by Ordinance. The City of Shelbyville has the Authority to Amend These Minimum Distances by Ordinance. The Various Widths Indicated on This Sheet and Shall Require Any Discrepancy To The City Engineer Prior To Proceeding With Construction.
- 2) **Local Street Pavement Width (Excluding Curb & Gutter)** May Be Required To Be Wider Than Specified Where Directed by the Shelbyville City Engineer. The City of Shelbyville has the Authority to Amend These Minimum Distances by Ordinance. The City of Shelbyville has the Authority to Amend These Minimum Distances by Ordinance. The Various Widths Indicated on This Sheet and Shall Require Any Discrepancy To The City Engineer Prior To Proceeding With Construction.
- 3) **Dimensions Shown on the Street Cross Section Details on This Sheet Are For Two-Lane Streets With No Parking.** See Note 2 in Table A for Street and Right-Of-Way Widths For Streets With Parking.
- 4) **If the Width of A New Sidewalk is Different Than The Width of A Connecting Existing Sidewalk, A 5' Sidewalk Pad or Pave Surface Shall Be Provided To Connect The New Sidewalk To The Existing Sidewalk As Shown On The Sheet.**
- 5) **At Permits And Easements Shall Be Obtained By The Owner With Any Required Insurance Or Bonds To Be Provided By The Owner Or Contractor Prior To The Start Of Work On The Project.**
- 6) **Minimum Profile Grade on Streets Shall Be 0.60% Minimum Length Grade Of Vertical Curves Shall Be 25 Feet. Vertical And Horizontal Design Shall Comply With State Design Standards.**

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- 1.) City Engineer And/Or Plan Commissioner May Require A Longer Curve Radius
- 2.) If Curbs Are Present, And  $K \geq 150$ , Proper Pavement Drainage Should Be Ensured Near The High Point Of The Curve.
- 3.) If Curbs Are Present, And  $K \geq 150$ , Proper Pavement Drainage Should Be Ensured Near The Low Point Of The Curve.
- 4.) Applies To Local Streets Only. Minimum Required Distance Between Consecutive Deflections Is 100 ft.

[illegible]

DESIGN SPEED (mph)	T1 (ft)	L (ft)	T2 (ft)
30 or Less	100	100	100
35	150	150	100
40	150	200	150
45	200	250	200
Greater Than 45	Refer To INDOT Standards. Shall Be Based On Design Speed.		



Scale: None

BSL UE 10' Dedicated Sanitary Easement Street Light 19' Roadway Street Tree 2' Concrete Curb & Gutter 5' Sidewalk Gas Main Sanitary Sewer Storm Catch Basin Storm Manhole Storm Sewer Watermain Storm Catch Basin Utility Location (Telephone, Electric, & Gas)

**TYPICAL UTILITY LOCATION SECTION**

any Utility Within The Right-Of-Way Shall Be Submited To Be As Shown In The Typical Details On This Sheet. The City Engineer Shall Review And Approve All Such Submissions. The City Engineer Shall Review And Approve The Proposed Utilities And Shall Submit Writings To The City Engineer And Planning Commission. Utilities Shall Be Installed In Accordance With And Approved As Directed By The City Engineer And Or Planning Commission At No Expense To The City.

Utility Street Cuts And Trenches Shall Be In Accordance With The City Standard Details Shown On Sheet 7.

Newly Installed Utilities Shall Be Placed Underground Except For Drops Or Laterals That Serve An Individual Structure Or Structure.

Underground Electric, Gas, Cable And Sewer In Joint Trenches. If Joint Trench Is Not Possible, Approval For Joint Trenches Must Be Granted By The City Engineer And Plan Commissioner in Writing.

Underground Utility Infrastructure Shall Be Completely Removed After Activating Newly Constructed, Upgraded, Or Relocated Infrastructure. All Existing Infrastructure To Be Removed Shall Be Completely Removed And Filled With Flowable Fill To Public Roadway. Trenches Shall Be Properly Backfilled As Noted In The City Standards.

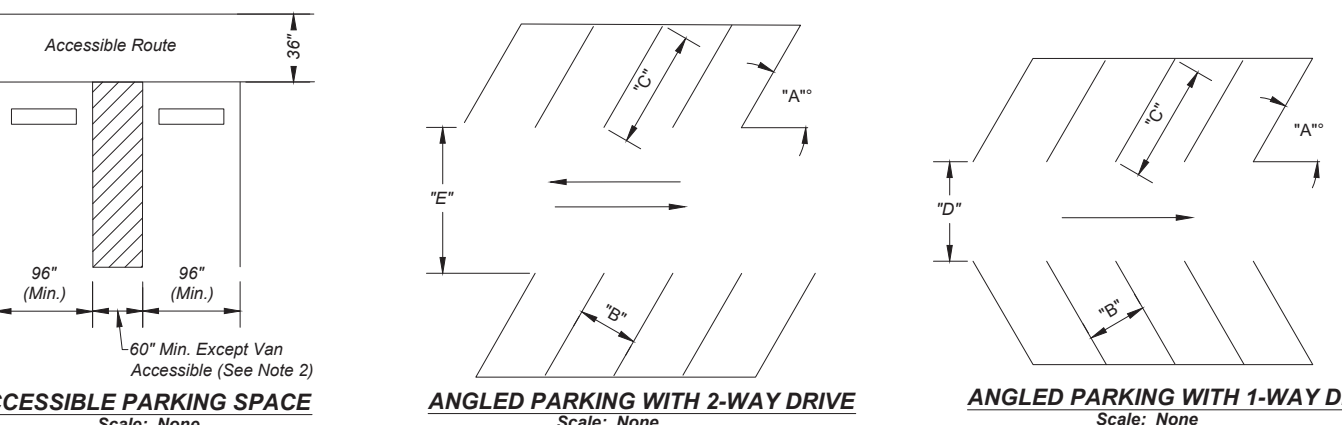
Storm Sewers, Fiber, Telephone, Cable, And/or Electric May Be Installed In Public Right-Of-Way Outside Of The Right-Of-Way To Facilitate Service Drops And General Utility Utilities. Unless Other Storm Sewers Shall Not Be Placed In Right-Of-Way Outside Of The Right-Of-Way.

Underground Sewer Shall Have A 10' Elevation Difference, Centered On The City Engineer's Casting Shall Be The Sideslack Elevation.

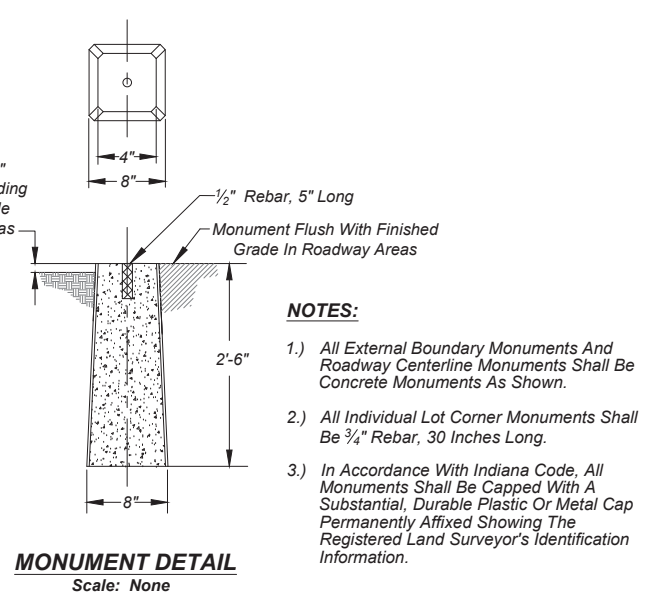
Underground Gas, Cable, And Aggregate Shall Be Produced And Installed In Accordance With A INDOT Approved Standard And Shall Be Installed In Accordance With The City Standards.

Street Light And Street Trees Shown Herein Are Conceptual Only And Based Upon The City Of Shelbyville Utility Elevation Ordinance. Street Lights And Street Trees Shall Be Located To Avoid Conflicts With All Utilities. Potential Conflicts Shall Be Identified And Resolved Prior To Construction. Street Lights And Street Trees Shall Be Located To Provide The Right-Of-Way To Remove Any Street Tree Or Street Light Placed Within The Right-Of-Way That Is Deemed By The City Engineer To Be A Conflict. Street Lights And Street Trees Shall Be Located To Provide The Right-Of-Way To Remove Any Street Light Or Street Tree That Is Removed From The Right-Of-Way, Whether Or Not Such Street Light Or Street Tree Is Located Within The Right-Of-Way.

City Is Not Responsible For Maintaining, Repairing, Or Replacing Non-Public Infrastructure Within Right-Of-Way. Non-Public Infrastructure Includes, But Is Not Limited To, The Following: Landscaping, In-Home Systems, Pet Containment Systems, And Other Infrastructure.



ANGLE OF PARKING "A"	STALL WIDTH "B"	STALL LENGTH "C"	DRIVE WIDTH ONE-WAY "D"
61° - 90°	9'	18'	18'
46° - 60°	9'	23.6'	15'
1° - 45°	9'	27.6'	12'
PARALLEL	9'	22'	12'



**PARALLEL PARKING WITH 1-WAY DRIVE**

For Purposes Of Measurements, Drives With Parking On One Side Only Shall Be Considered As One-Way Drives.

Dimensions Shown For Parking Spaces Are Minimums.

Pavement Sections For Parking Areas Shall Comply With The Standard Parking Lot Criteria Shown On Sheet 4 of 4.

Pavement Sections Shall Be Selected Based Upon Design Traffic Loading. A Modified Pavement Section May Be Used When Necessary By The City Engineer.

Parking Shall Comply With City's Unified Development Ordinance.

REVISIONS	
Rev. No.	Description
1	Entire Set
2	References To New UDO, Added Monument C
3	Updated Entire Set
4	Note On Sanitary Dedicated Easement

	REVISIONS	
Rev. No.	Description	Date
1	Entire Set	07/26/2011
2	References To New UDO, Added Monument Detail	01/10/2014
3	Updated Entire Set	02/11/2020
4	Note On Sanitary Dedicated Easement	05/11/2022

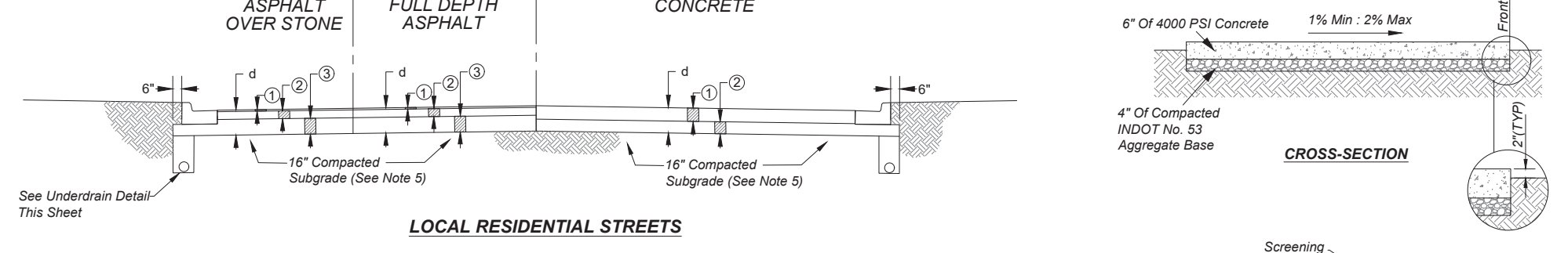
## RIGHT-OF-WAY, SITE DEVELOPMENT STANDARDS

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OF  
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- 1 The Pavement Construction Details shown On This Sheet Are Minimum Standards Required by the City of Shelbyville. The City Engineer May Require Additional Details To Be Installed On Any Street, Highway, Or Traffic Volume. Geotechnical Testing Shall Be Required For Arterial And Non-Residential Conditions.
- 2 The Roadway Pavement Cross Section Shall Be Completed Within 60 Calendar Days From The Start Of The Subgrade Construction. The Subgrade Construction Shall Be Completed Within 60 Calendar Days From The Start Of The Subgrade Construction. The Subgrade Construction Shall Be Completed Within 60 Calendar Days From The Start Of The Subgrade Construction. The Subgrade Construction Shall Be Completed Within 60 Calendar Days From The Start Of The Subgrade Construction.
- 3 All Concrete, Asphalt, And Aggregate Materials Shall Be Produced And/or Supplied From An IDOT Approved Source. The City Engineer May Require Additional Materials To Be Installed On Any Street, Highway, Or Traffic Volume. Geotechnical Testing Shall Be Required For Arterial And Non-Residential Conditions.
- 4 Previous Pavements May Be In Place In Parking Lots, Private Driveways, Private Local Streets, And Other Areas Not To Be Repaved. The City Engineer May Require Additional Materials To Be Installed On Any Street, Highway, Or Traffic Volume. Geotechnical Testing Shall Be Required For Arterial And Non-Residential Conditions.

**SUBBASE AND SUBGRADE REQUIREMENTS**

5) Subbase and Subgrade to Be Compacted To At Least 100 Percent of the Maximum Dry Density at Optimum Moisture Content in Accordance With AASHTO T 99 To a Minimum Depth of 16 Inches For All Local Streets and 24 Inches for All Arterial Streets. The Compaction Test Results Shall Be Determined by the Nuclear Method Performed By an Independent Laboratory. Test Results Shall Be Submitted to the Shelbyville City Engineer and Street Commissioner Prior to Placing any Material on the Subbase Subgrade. One in-Place Density Test Shall Be Performed on Each Side of Each Street at Each End of Each Street Segment. The Test Results Shall Be 6 inches in Thickness. At the Discretion of the City Engineer or the Street Commissioner, the Compaction Testing may be Waived and the Adequacy of Subbase and Subgrade Shall Be Determined Solely by Either the Shelbyville City Engineer or the Street Commissioner. The Subbase and Subgrade Shall Be Placed in a Single Lift in a Dump Truck. The Type of Compacted Crushed Aggregate Base or Subbase Shall Be in Accordance With the Most Recent Specifications for Aggregate (Section 900). Coarse Aggregate Shall Not Be Placed on Frozen Subbase or Subgrade.



<b>ASPHALT OVER STONE</b>  $d = 16\frac{1}{2}"$  ① 1½" HMA Surface Type B (165 W/SY)  ② 3" HMA Intermediate Type B (330 W/SY) Over 4" HMA Base Type B (440 W/SY)  ③ 8" Compacted INDOT No. 53 Crushed Aggregate Base (2.0%)	<b>CULL DEPTH ASPHALT</b>  $d = 12"$  ① 1½" HMA Surface Type B (165 W/SY)  ② 3" HMA Intermediate Type B (330 W/SY) Over 4" HMA Base Type B (440 W/SY)  ③ 3½" HMA Base Type B (385 W/SY) Over 4" HMA Base Type B (440 W/SY)	<b>CONCRETE</b>  $d = 11"$  ① 7" Concrete Pavement  ② 4" Compacted INDOT No. 8 Crushed Aggregate Base
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**PLAN**

**NOTES:**

- 1.) Sweeping Shall Meet All Requirements Set Forth in the Unified Development Ordinances.
- 2.) Concrete Pad Shall Be Reinforced With Endwall or #5 Bars @ 18" O.C. Permeted Maximum Run 8' City Ordinance.

ASPHALT OVER STONE	FULL DEPTH ASPHALT	CONCRETE	CONCRETE DUMPSTER PAD DETAIL
d = 17" ±	d = 13" ±	d = 12" ±	Scale: None
1" ± HMA Surface Type C (165 #/SY)	1" ± HMA Surface Type C (165 #/SY)	① 8" Concrete Pavement	
3" ± HMA Intermediate Type C (330 #/SY) Over 2" HMA Base Type C (260 #/SY)	② 3" HMA Intermediate Type C (330 #/SY)	② 4" Compacted (INDOT No. 8 Crushed Aggregate Base	
③ 8" Compacted (INDOT No. 53 Crushed Aggregate Base (2 Lifts)	④ 4" HMA Base Type C (440 #/SY) Over 4" ± HMA Base Type C (495 #/SY)		

14. Specifications for Portland Cement Concrete Pavement (PCCP) Fixing Operations, Placement Methods, and Finishing Operations shall be in accordance with the following: The Contractor shall be Responsible For All Aspects Of Process Control Of The Mixtures Insuring They Meet All Other Requirements Of The INDOT Standard Specifications. All Test Data Shall Be Submitted To The City Engineer And Street Department For Review And Approval.
15. All PCCP Pavement Shall Be Cured With An Approved White Pigmented Liquid Methylene Forming Compound In Accordance With INDOT Standard Specifications 501.20 and 504. Most Recent Version.
16. For Cold-Weather Concrete Placement, Contractor Shall Comply With ACI 308R For Protection From Physical Damage Or Reduced Strength. For Hot-Weather Concrete Placement, Contractor Shall Comply With ACI 308R For Protection From Physical Damage Or Reduced Strength, As Associated With Rapid Moisture Loss.

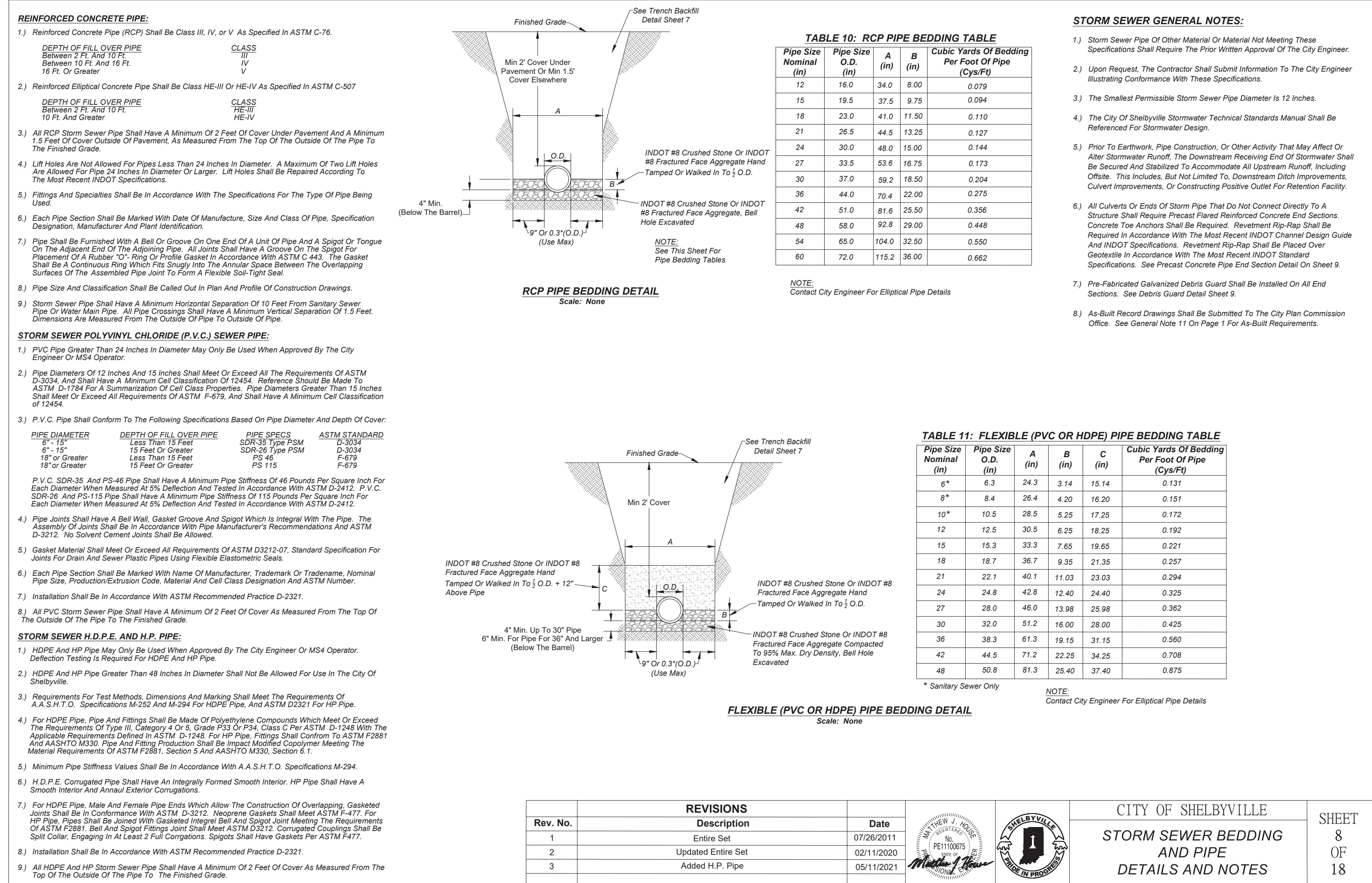
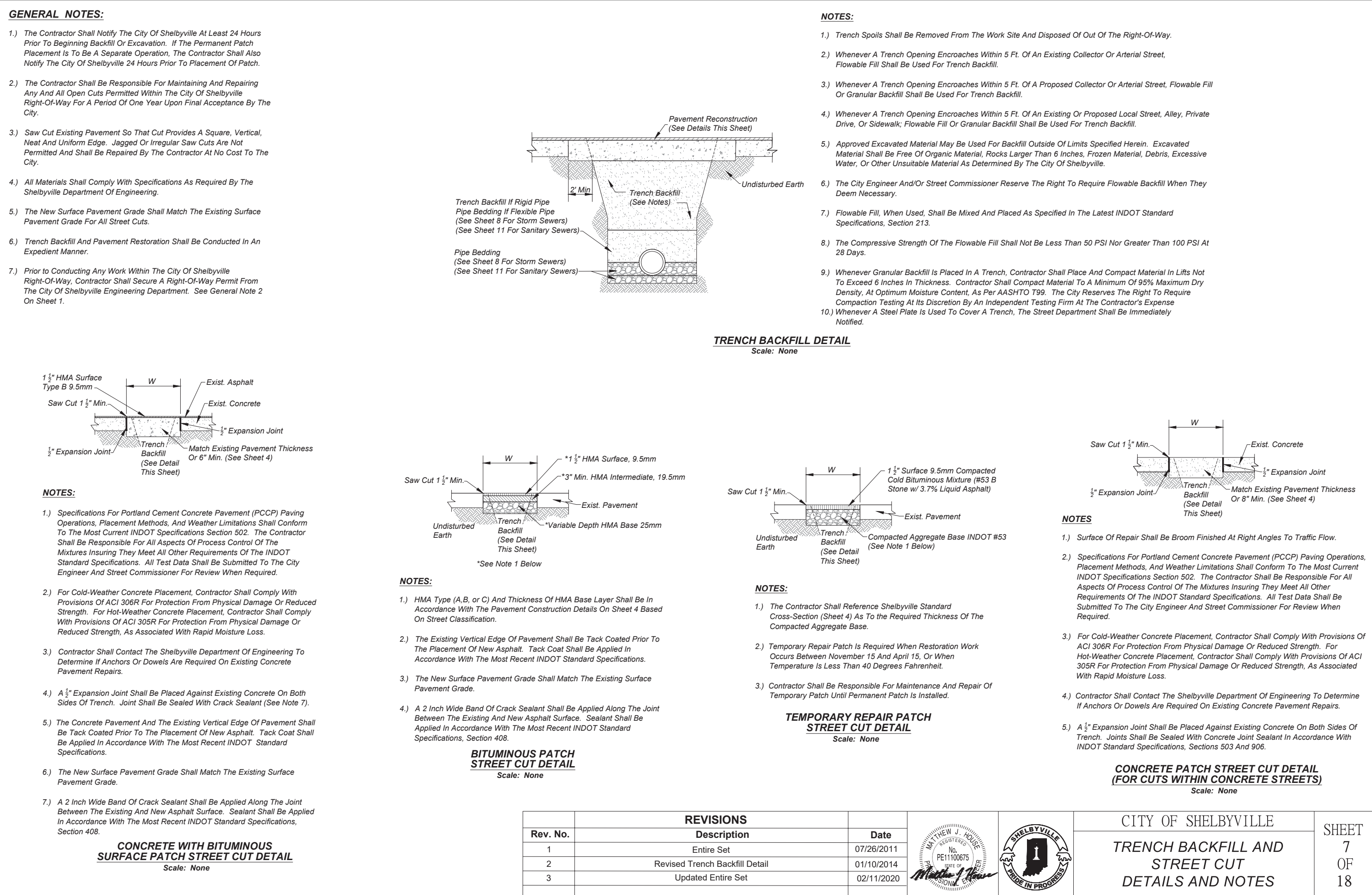
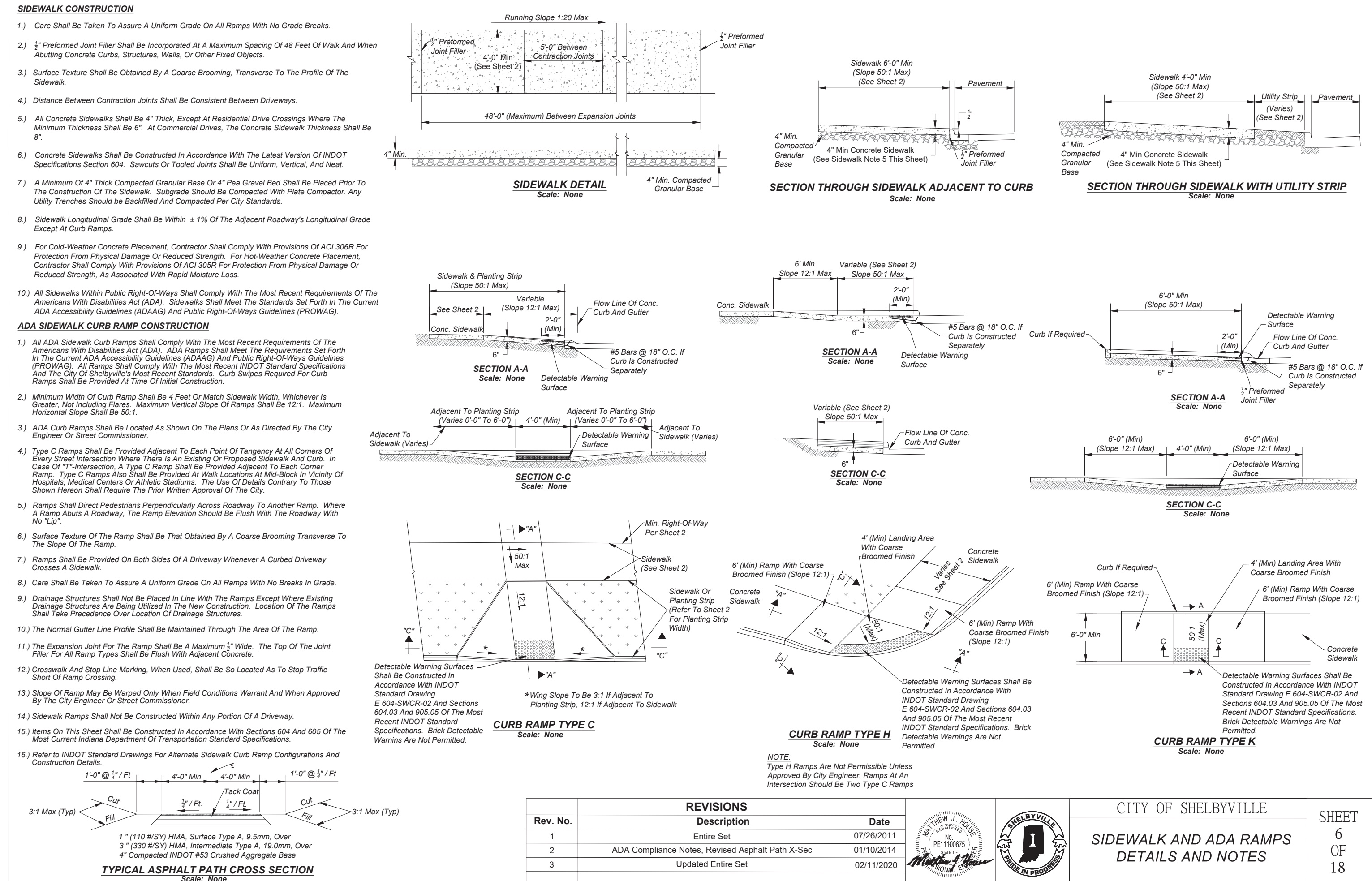
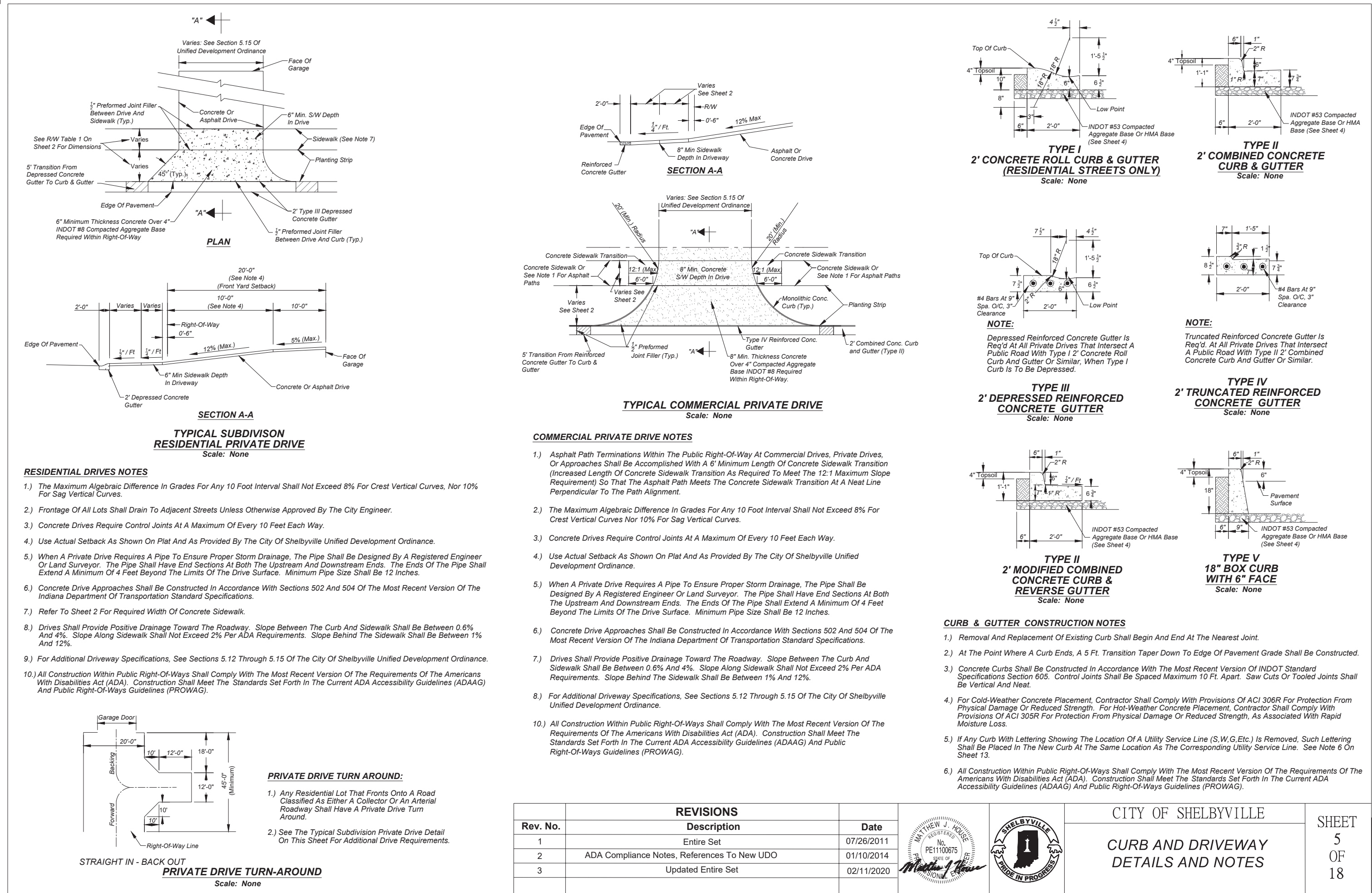
18) For Local Residential Streets And Parking Lots With Concrete Pavement, 4 Inch Compacted INDOT No.8 Aggregate Base May Be Waived By The City Engineer And/Or Street Commissioner If Adequate Subgrade Is Present. Adequacy Of Subgrade Shall Be Determined Solely By The City Engineer And/Or Street Commissioner Based On A Contractor Performed Proof-Roll With A Fully Loaded Tri-Axle Dump Truck.

REVISIONS		
Rev. No.	Description	Date
1	Entire Set	07/26/2011
2	References To New UDO, Revised Underdrain Detail, Added Rural Section	01/10/2014
3	Updated Entire Set	02/11/2020

PAVEMENT DETAILS  
AND NOTES

SHEET  
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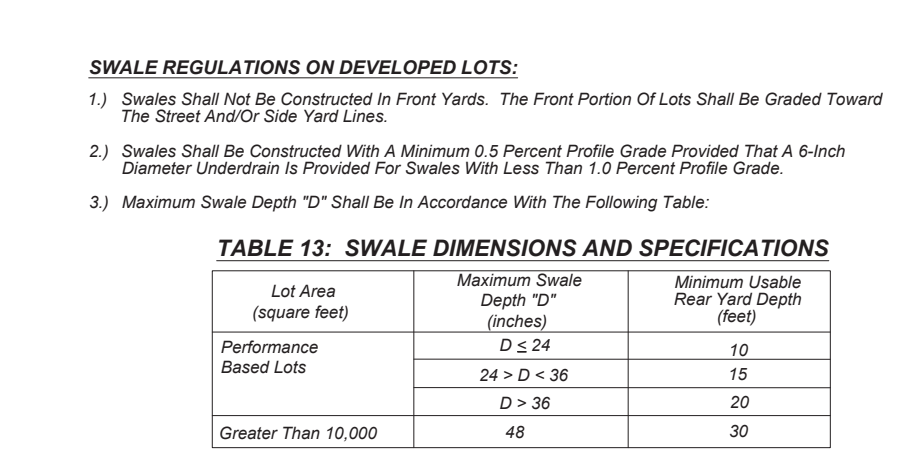
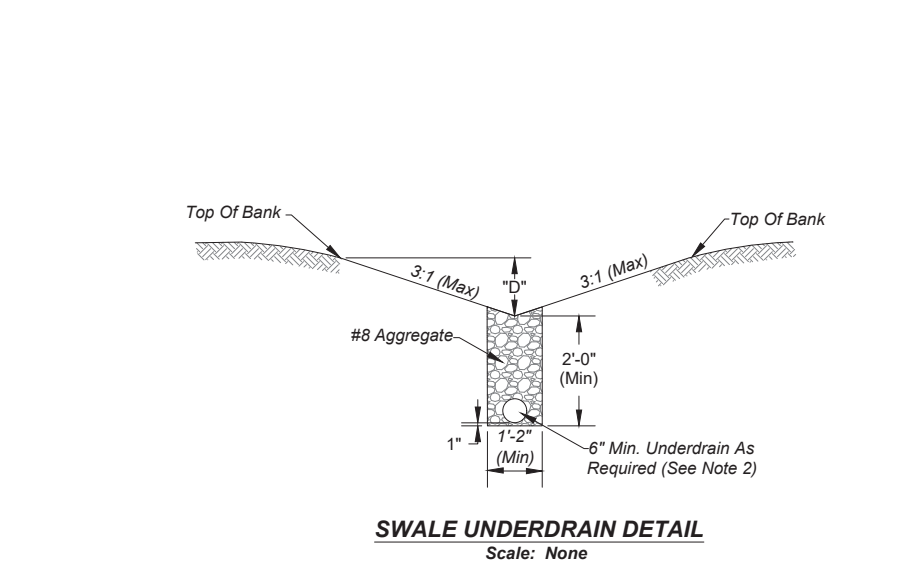
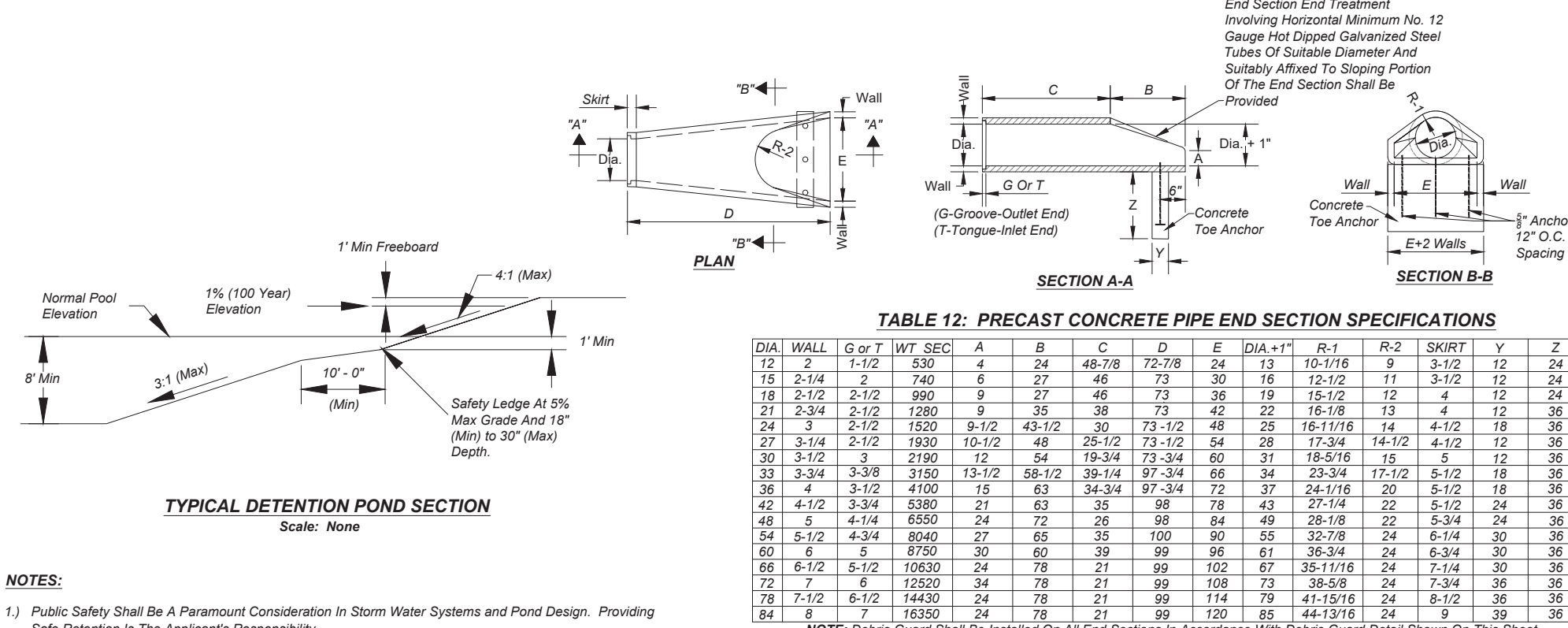






# **STORM SEWER DEFLECTION TESTING, TELEVISION AND AS-BUILT DRAWINGS:**

- 1) Deflection Testing is Required For All Mainline Flexible Storm Sewer Pipe Installed In The City Of Shelbyville. The City Engineer And MSA Operator Shall Be Given A Minimum Of 24 Hour Written Notice Of Deflection Testing. A Nine-Foot "Go-No-Go" Mandrel Shall Be Used For The Deflection Test. A Paving Ring Shall Be Provided For Each Mandrel. The "Go-No-Go" Mandrel Shall Be Manually Pulled Without The Use Of Any Mechanical Devices. An Allowable Deflection Of 5 Percent Of Inside Pipe Diameter Will Be Acceptable After All Backfilling Has Been In Place For 30 Days.
- 2) Contractor Shall Bear All Testing Costs.
- 3) All Pipe Exceeding The Allowable Deflection Shall Be Replaced Or Rerounded. The Replaced Or Rerounded Section Shall Be Retested 30 Days After Replacement Or Rerounding.
- 4) Closed Circuit Television (CCTV) Inspection May Be Required To Be Performed In Areas Of Concerned On Pipes Available Within The City Of Shelbyville For The Purposes Of Conveying Storm Water. Television Shall Be Done After Deflection Testing.
- 5) The Contractor Or Developer Responsible For Installing The Storm Sewer Pipe Shall Employ/The Contractor Responsible For The Television Inspection Services. The Contractor Or Developer Shall Contact The City Engineer To Schedule The CCTV Inspection.
- 6) All Pipe Segments Shall Be Thoroughly Cleaned Before The Start Of The CCTV Inspection.
- 7) A Camera Equipped With Remote Control Devices To Adjust The Light Intensity And 1,000 Linear Feet Of Sewer Cable Shall Be Provided. The Camera Shall Transmit A Continuous Image To The Television Monitor. It Is Being Pulled Through The Pipe. The Image Shall Be Clear Enough To Enable The City Of Shelbyville Representative And Others Viewing The Monitor To Easily Evaluate The Interior Condition Of The Pipe. The Camera Shall Stamp The Video / DVD With Linear Footage And Project Number. An Audio Voice-Over Shall Be Made During The Inspection Identifying Any Problems.
- 8) The Contractor Shall Bear All Costs Associated With Television, Line Clearing, And Debris Removal / Disposal.
- 9) If Any Pipe And/or Joint is Found To Be Faulty Or Leaking, The Contractor Shall Repair That Portion Of The Work To The Satisfaction And Approval Of The City Of Shelbyville.
- 10) 2) Digital Copies Of The Entire Sewer Line, Reproduction Map Indicating The Numbers Of All Pipes That Have Been Tested, And As-Built Drawings Shall Be Submitted To The City Of Shelbyville MSA Operator And City Engineer For Their Records.



- 1) Swales Shall Not Be Constructed In Front Yards. The Front Portion Of Lots Shall Be Graded Toward The Street And/or Side Yard Lines.
- 2) Swales Shall Be Constructed With A Minimum 0.5 Percent Profile Grade Provided That A 6-inch Diameter Underdrain Is Provided For Swales With Less Than 1.0 Percent Profile Grade.
- 3) Maximum Swale Depth "D" Shall Be In Accordance With The Following Table:

REVISIONS	Rev. No.	Description	Date
1	1	Entire Set	07/26/2011
2	2	Updated Entire Set	02/11/2020

# **SANITARY SEWER GENERAL NOTES:**

- 1) Sanitary Sewer Pipe Of Other Material Not Meeting These Specifications Shall Require The Prior Written Approval Of The City Engineer And Wastewater Superintendent.
- 2) The Contractor Is Responsible For Locating All Sanitary Manholes And Laterals Prior To Construction. Any Man Or Laterals Damaged During Construction Shall Be Replaced By The Contractor At His/Her Expense.
- 3) The Contractor Shall Submit Information To The City Engineer Showing Conformance With These Specifications Upon Request.
- 4) All Drawings Shall Be Submitted To The City Engineer And Wastewater Superintendent. See Note 11 On Sheet 1.
- 5) During Construction Of New Sanitary Sewer Lines, The Contractor Shall Install A Watertight Plug In The End Of The Existing Sewer That Is Being Replaced. The Plug Shall Be Installed In Accordance With ASTM D-1784 For The Communication Of Classifications. The Plug Shall Be Installed In Accordance With ASTM D-3212. No Solvent Cement Joints Shall Be Allowed.
- 6) Gasket Material Shall Meet Or Exceed All Requirements Of ASTM D-3212-07. Standard Specifications For Joints For Clean And Sewer Plastic Pipes Using Rubber Gaskets.
- 7) Pipe Fittings Shall Be SDR-26 Manufactured Filings Made Of P.V.C. Plastic Having A Call Classification Of 12454 As Defined In ASTM D-1784. Saddle Connections Shall NOT Be Allowed For New Construction.
- 8) Each Pipe Section Shall Be Marked With The Name Of Manufacturer, Trademark Or Tradename, Nominal Pipe Size, Production/Extension Code, Material And Call Class Designation, And ASTM Number.
- 9) Lateral Connections Shall Be Made With A SDR-26 Or PS 115 "Tee-Wee" Fitting Only.
- 10) Sanitary Sewer Pipe Shall Have A Minimum Horizontal Separation Of 10 Feet From Storm Sewer Pipe Or Water Main Pipe. All Pipe Crossings Shall Have A Minimum Vertical Separation Of 1' 6". Dimensions Are Measured From The Outside Of Pipe To Outside Of Pipe.
- 11) Installation Shall Be In Accordance With ASTM Recommended Practice D-3231.

# **SANITARY SEWER REINFORCED CONCRETE PIPE:**

- 1) Reinforced Concrete Pipe For Use As Sanitary Sewers Shall Be Class III, IV, Or V As Specified In ASTM C-76. LH Holes Shall Not Be Permitted.
- 2) Each Section Of Reinforced Concrete Pipe Shall Be Vacuum Tested By The Manufacturer Prior To Delivery To The Site. Only Pipe Sections Passing The Vacuum Test Shall Be Accepted For Installation. The Test Can Be Discontinued For The Accepted Material As Follows:
  - a. Each Section Of Pipe Shall Be Tested By Bringing The Internal Pressure Within The Pipe To 2.5 PSIG Below Atmospheric Pressure Within The Time Limit Indicated Below.
  - b. The Test Shall Be Completed Within The Time Limit Indicated Below.
- 3) Any Pipe Section Failing To Meet This Test Shall Not Be Permitted For Use As Sanitary Sewer In The City Of Shelbyville.
- 4) Lateral Connections Shall Be Made With Insert-A-Tee Connector Or City Approved Equal.
- 5) Each Pipe Section Shall Be Marked With The Name Of Manufacturer, Size And Class Of Pipe, Specification Designation, Manufacturer And Plant Identification.
- 6) Pipe Shall Be Furnished With A Bell Or Groove On One End Of A Liner Pipe And A Siglet Or Tongue On The Opposite End Of The Joining Pipe. All Pipe Shall Be In Accordance With ASTM C-443. The Gasket Shall Be A Continuous Ring Which Fits snugly into the Annular Space Between The Grooves Of The Assembled Pipe Joint To Form A Flexible Water-Tight Joint Under All Conditions Of Service. Joint Shall Be Adequate For Hydrostatic Pressure Up To 13 Pounds Per Square Inch Of Water Without Leakage.

- 1) Leakage Testing Shall Be Performed For All Mainline Segments. Testing For Leakage Shall Commence After Backfill Has Been In Place For 30 Days. The City Engineer And Wastewater Superintendent Shall Be Given 24 Hour Written Notice Of The Required Leakage Testing Procedure To Be Performed By The Contractor. Low Pressure Air Test Shall Be Done Using The Following Procedure:
  - a. The Test Shall Be Completed Within The Time Limit Indicated Below.
  - b. The Test Shall Be Completed Within The Time Limit Indicated Below.
- 2) The Design Engineer Or His/Her Representative Shall Attend That Each Mainline Segment Was Tested For Leakage With Successful Results. In Compliance With Stated Leakage Testing Requirements.
- 3) The Design Engineer Or His/Her Representative Shall Attend That Each Mainline Segment Was Tested For Leakage With Successful Results. In Compliance With Stated Leakage Testing Requirements.
- 4) Contractor Shall Bear All Testing Costs.

