PLAN DEVELOPMENT GUIDELINES

PREPARED BY:

LITTLE ROCK DEPARTMENT OF PUBLIC WORKS

CIVIL ENGINEERING

July, 2018

USE OF THESE GUIDELINES

The purpose of these guidelines is to provide a smooth design process, which will help the City of Little Rock and the Consulting Engineer. The Consultant shall be notified of the requirement to follow these guidelines prior to contract and fee negotiation. These guidelines are set to allow the Consulting Engineer prior knowledge of requirements and expectations before fee negotiation. The guidelines will instruct the Consultant in the basic requirements for project submittal and the expectations of the City of Little Rock. All aspects of these guidelines shall be followed unless Consultant obtains prior written approval from City of Little Rock.

The use of these guidelines is for City of Little Rock projects which are designed by Consulting Engineers and are not receiving Federal Funds and are not required to meet ArDOT plan format. Projects receiving Federal Funding will usually be required to meet ArDOT plan format and these guidelines may not apply. The Consultant will be notified if plans are required to meet ArDOT formatting prior to contract and fee negotiation.

If the Consultant has any questions in regards to these guidelines, they should contact Public Works at 371-4812 and ask for the Civil Engineer III – Design or the Civil Engineering Manager.

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SECTION 1
PROJECT PROCESS

1) Consultant Engineering Firms engaged by the City of Little Rock for the purpose of design and plan preparation shall follow these instructions unless they receive written notification from Public Works stating otherwise.
   a) Any work started prior to receiving an executed Agreement or written Notice to Proceed from City of Little Rock is at the sole risk of the consultant.
   b) The City will schedule a brief "Kick-off" meeting to provide an opportunity for the consultant to meet with staff to discuss the preliminary project scope as well as address any questions related to project delivery.
   c) Once authorized to proceed, Consultant prepares preliminary project submittal (15%) to be used to confirm the project scope and major design features. The typical content of the submittals are listed in SECTION 2. After receiving preliminary plans, Public Works will schedule a scope meeting & site walk-thru to review the preliminary design submittal with the consultant. Public Works will submit written comments to the consultant based on review of the 15% submittal and either request a re-submittal or instruct the consultant to proceed with the 60% submittal.
   d) Upon receipt of written notice to proceed to (60%) design, consultant shall prepare and submit a complete and detailed set of plans for review including itemized cost estimate and all calculations used. See SECTION 2, Plan Submittals.
   e) At the 60% submittal, the consultant shall prepare right of way and construction easement (TCE, PCE, PDE, etc.) documents for City of Little Rock to begin acquisition. Consultant shall obtain an example of right of way and temporary construction documents from City of Little Rock for use in preparation of documents.
   f) During the City's review of (60%) plans the consultant shall attend a public meeting to assist City personnel with explaining project features and answering questions.
   g) The City will provide review comments of the 60% submittal and either request a re-submittal or instruct the consultant to proceed with the 90% submittal.
   h) Upon receipt of written notice to proceed to (90%) design, consultant shall prepare and submit a complete and detailed set of semi-final plans, itemized cost estimate, and any job Special Provisions for final review. See SECTION 2, Plan Submittals.
   i) The City will provide review comments of the 90% submittal and either request a re-submittal or instruct the consultant to proceed with the 100% final submittal.
   j) The final submittal shall be reproducible signed and sealed set of plans in digital format (pdf) accompanied by the supporting CAD design and survey files. Itemized cost estimate in Excel and special provisions/conditions in Word shall also be submitted in digital format.

SECTION 2
PLAN SUBMITTALS

SUBMITTALS NOT FOLLOWING THESE GUIDELINES AND ADDRESSING ALL COMMENTS FROM PREVIOUS SUBMITTALS MAY BE REJECTED AND PROCESSING OF INVOICES DELAYED UNTIL A COMPLETE SUBMITTAL IS RECEIVED.

Submittals for 15% scope meeting shall consist of the following:

1. Electronic set of "Preliminary" Plan and Profile Sheets and Typical Section(s) representing the proposed project. Plans shall be formatted as indicated SECTION 5 and SECTION 6. Plans shall be presented as blacklines clearly marked 15% level. Plans to be delivered in electronic "pdf" format. Multiple sheets shall be combined into a single multi-page document.
   a) Plans should indicate existing site features and contours as determined by in-field topographic survey. Apparent right of way, existing easements, adjoining property lines, property ownership and utilities in the project area shall be shown as determined by available public records.
   b) Existing features should be overlaid by major proposed site features including alignment, curb & gutter, preliminary inlet and drain locations, sidewalk locations, driveways and any other significant proposed features.

2. Submit a preliminary drainage map utilizing PaGIS contours to show drainage area contributing stormwater flows to the project area, a schematic representation of the project location, and the location of any drainage outfalls.

3. Itemized cost estimate in digital (Excel) format.

4. Notify Public Works in writing when the 15% submittal has been posted to the department's FTP site. Request for Public Works to schedule 15% scope & walk-thru meeting.

Submittals for 60% shall consist of the following:

1. Electronic set of complete and detailed plans clearly marked 60% and addressing comments from the 15% review. All sheets must be dated consistent with latest revision. Plans to include: Cover Sheet (SECTION 3), Index, General Notes, Legend and Quantities, (SECTION 4), Typical Sections and any Special Details (SECTION 5), Plan and Profile (SECTION 6), Driveway Plans (SECTION 7), Cross Sections (SECTION 8), Field Ties / Layout Sheet (SECTION 9), and Erosion Control (SECTION 10). Depending on the scope of the project, the submittal may also require additional sheets as described in SECTIONS 11, 12 and 13. All sheets shall be on border supplied digitally in "dwg" format by Public Works. Consult Public Works – Engineering for any clarifications.

2. All calculations or reports used in the design including but not limited to: determination of plan quantities, earthwork volumes, drainage design, structural, alignment, geotechnical and pavement calculations. Drainage design shall be submitted as a comprehensive report addressing hydrology and

drainage system design as required in City of Little Rock Drainage Manual, latest edition.

3. One itemized cost estimate in digital (Excel) format.

4. An acquisition key map and exhibits. Acquisition exhibits are the 8-1/2 x 11 maps to be used for the acquisition of easements required for construction. Exhibits to identify the property address, owner(s) of record, owner(s) mailing address, and show the proposed acquisition & improvement features for that parcel as shown on the plans. Examples to be provided by Public Works. Title certificates and ownership names/addresses of adjacent property owners shall be provided for reference by City's acquisition personnel.

5. Digital project CAD files in "dwg" format with any referenced files such as ascii files for survey data.

6. Notify Public Works in writing when the 60% submittal has been posted to the department's FTP site. Request for Public Works to review 60% submittal.

7. Attend a public meeting scheduled by Public Works to assist City personnel with explaining project features and answering questions.

Submittals for 90% shall consist of the following:

1. Electronic set of complete and detailed plans (.pdf format) clearly marked 90% and addressing comments from the 60% review. All sheets must be dated consistent with latest revision.

2. One itemized cost estimate in digital (Excel, .xls) format.

3. Special provisions for items not in City specification book. Reference ArDOT Standard Specifications when appropriate.

4. Any supplemental or revised calculations based on 60% review comments.

5. Notify Public Works in writing when the 90% submittal has been posted to the department's FTP site. Request for Public Works to review 90% submittal.

Submittals for 100% shall consist of the following:

1. Electronic set of complete and detailed plans (.pdf format) signed & sealed by Engineer of Record, Bearing firms COA on cover and addressing comments from the 90% review. All sheets must be dated consistent with latest revision.

2. Final itemized cost estimate in digital (.xls) format.

3. Final Special Provisions for items not in City specification book. Reference ArDOT standards when appropriate.

4. Notify Public Works in writing when the 100% submittal has been posted to the department's FTP site.

Invoicing for Plan Development:

Consultant may request progress payments during plan development. Invoices shall be in a format approved by the City & detail progress on all projects listed in the approved Agreement. Invoices shall be directed to the Civil Engineer III for processing or as instructed by the City. Invoices should not be submitted more frequently than once a month without prior authorization from the City. Progress payments for basic design services on each project shall be limited as follows:

1. At 15% submittal – up to 50% of contract amount.
2. At 60% submittal – up to 75% of contract amount.
3. At 90% submittal – up to 90% of contract amount.
4. After final submittal ready to bid - 100% of contract amount.

Note: Roadway design shall be in accordance with current City of Little Rock Master Street Plan or as directed by Public Works. Hydrology/Hydraulic design shall be in accordance with current City of Little Rock Drainage and Detention Manual.

SECTION 3
COVER SHEET

The cover sheet should include the following information:

1. Public Works base cover sheet layout shall be used. (will be provided by City)
2. Site map showing project limits and location. Location shall be called out in a leader note with Lat/Lon coordinates. If project is in phases, indicate stationing or other relevant information for start & end location. Extents of map set to reference project location from a major street, etc. as necessary. Street names large enough to be easily read.
3. North Arrow for site map.
4. Scale for site map.
5. Consultant name, address & phone number & company logo in lower right corner.
6. Name of project as provided by Public Works.
7. On final plans, all plan sheets shall bear the signed & dated seal of the Professional Engineer that has reviewed and checked the final design plans. The cover sheet should also bear a COA seal, as applicable.
8. Ward Key Map with project Ward hatched.

SECTION 4
INDEX, GENERAL NOTES, LEGEND AND QUANTITIES

1. Page index shall match name on each sheet exactly.
2. Legend shall match drawing features on plan and profile sheets.
3. Summary of Quantities shall list pay items in specification book by name. Item #'s shall match specification number when possible (see SECTION 15). Any item not in City or ArDOT specifications shall be marked with "SP" beside item in quantity box and have a special provision written by consultant explaining material to use, how constructed and how to measure and paid.
4. Summary of Quantities box should be referenced from .xls cost estimate to assure no discrepancies. If project requires too many items to fit this sheet, a separate sheet may be used at discretion of consultant if needed for room. On complex projects (bridge, signalization, complicated drainage, etc.) consultant should create quantity boxes to detail any complex sub-items, location of components by station, type and unit with total quantity of each item in similar fashion used by ArDOT. Consult Public Works for any clarification.
5. Storm sewer drain pipe shall be measured separately between cross drain and side drain for each size of pipe used on project. A storm sewer pipe is defined as a cross drain pipe if any portion of the pipe is under street. Do not call out proposed pipe material unless there is a specific requirement due to tie-in to an existing pipe or similar restriction.
7. Quantities for sodding shall be separated between "Solid Sodding (Bermuda)" and "Solid Sodding (Special)" if any yards have special grass such as Zoysia or St. Augustine, etc.

SECTION 5
TYPICAL SECTIONS
SPECIAL DETAILS (WHERE REQUIRED)

1. Typical sections shall show all dimensions including sidewalk widths, paving thickness and right of way.
2. Typical sections shall show materials, compaction density and stations for typical section to be used.
3. Consultant shall supply typical section detailing each street section on project. For example, side streets may have a different classification or section than the main road and would require a different typical section. Another example would be where a portion of a roadway is to be widened using notch & widening methods as opposed to a full reconstruction.
4. Typical section shall identify the reference point (or points) for the design profile (as indicated on plan and profile sheets). For example, if profile on plan and profile sheets is the centerline of the typical section then the typical section should be noted with “profile” on a leader note pointing to the crown of the road centerline.
5. In a notch & widen section, consultant must address the existing crown of the street & provide for pavement shimming or alternate profile to enable the improved road to be constructed to a normal typical section.
6. Consultant should refer to City of Little Rock Master Street Plan for typical sections design features unless otherwise notified in writing by Public Works.
7. Typical sections shall show maximum slopes. 3:1 on graded slopes receiving sod is typical. Sidewalk maximum cross slope is to be shown as 2%. Sidewalks may slope away from street if sidewalk is buffered to minimize grading.
8. Special details for construction items may be placed on the Typical Sections sheet(s) if adequate room is available or additional sheets may be provided as necessary & called out in the sheet index.
9. Additional sheets such as detail sheets may need to be added to above listed sheet to clarify construction issues.
10. Any inlet, curb, special access ramp, reinforced concrete section, etc. not in standard detail book shall be fully detailed and dimensioned and contain a special pay item and special provision.

SECTION 6
PLAN AND PROFILE SHEETS

1. Horizontal stations shall increase from west to east or south to north as applicable and on sheets from left to right. In other words, the north arrow should be oriented toward the top of the sheet or to the right unless there is substantial justification for another orientation. Stations shall increase on successive plan sheets. (example – higher stations on sheet 5 than on sheet 4)
2. Where project includes more than one street, no two streets shall have the same stations. (example – side streets should not have a station 10+00 if main road has a station 10+00)

3. Features shown on the Plan and profile sheets shall match the Legend. A North arrow and graphic (scalable) shall be on each sheet.
4. Property owner name and address shall be shown on each parcel.
5. Proposed improvements shall be clearly identified by darker lines or hatching. Request an example drawing from Public Works, if desired.
6. Horizontal and vertical control (benchmark) shall be shown on each sheet. Construction benchmarks shall be set at a maximum interval of 500 foot intervals, and shown on the drawing. Benchmarks should be located outside the limits of construction.
7. All street names shall be labeled. Right of way and temporary construction easement lines must match documents for acquisition and be shown on plans along with existing right of way. Boundaries of proposed right of way and TCE's shall have station and offset labels at ends and angle points.
8. Profile elevations, existing and proposed, shall be labeled and be provided at intervals of 50 feet across bottom of profile, corresponding to the Station and +50 tics on the plan view.
9. Complete vertical and horizontal curve information shall be clearly shown on profile and plan drawings respectively.
10. Horizontal scale shall be 1"=20' and vertical scale shall be 1"=5' based on ANSI D size sheet (22" x 34"). Plan view shall have tic marks on 50' intervals along centerline and stations clearly labeled. Profile view vertical scale shall have light lines representing 1' elevation change and darker lines representing 5' intervals. Profile view horizontal scale shall have light lines at 25' maximum increments and dark lines at each station.
11. Where possible, station on plan view shall align with station in profile view.
12. Matchlines shall be shown where sheets overlap, along with station references.
13. Materials of existing items shall be labeled such as fence height and type, wall type, driveway material, etc.
14. All significant trees, particularly those that may be affected, shall be shown on plans.
15. Station references shall be provided for items to be removed or relocated. References shall also include "Lt" or "Rt" to indicate location relative to the profile line.
16. Stationing shall typically be no smaller than 10+00 and negative stationing shall not be used.
17. Station equations shall be used only with prior written approval.
18. Existing and proposed storm sewer lines should show beginning and ending station, length, slope, upstream and downstream elevations at structures and each line shall be clearly shown as cross drain or side drain. Existing storm sewer lines shall indicate material type.
19. Curb inlets and other storm sewer structures shall show inlet and all outlet flowline elevations, station reference, top rim elevation and type as applicable.
20. Street intersection spot elevations shall be called out in plan view as needed to facilitate drainage. (example – to show valley gutter across side street)
21. All non-standard (not on typical section) slopes (cut and fill) shall be clearly noted with correct slope information (2.5 to 1, etc) or distance from profile to tie in point.
22. All flared end sections shall be located a sufficient distance from street to allow a

maximum 1 to 1 slope from edge of street to flow line of flared end section. Slopes greater than 3:1 may require stabilization.

23. Show periodic dimensions on streets, grass buffers and sidewalks. Show all radius dimensions.
24. Label the existing driveway material.
25. Side streets shall be profiled from centerline of the main street to the tie point if any work is required on side street. Side streets are required by Code to be no steeper than 5% for the first 30 feet from main street curbline.
26. Vertical curve information shall include (L, K, E, and VPI, VPC and VPT elevations and stations).
27. Horizontal curve information shall include (T, R, L, I, and PC and PT stations).
28. When storm drain pipe systems change to a larger pipe, the top of the pipes shall be at the same elevation.
29. All structures are to be shown within the limits of disturbance or to the building line, whichever is greater in distance from the centerline of the roadway.
30. All buildings fronting the project shall be shown in outline if they lie within the plan view extent.
31. Show driveway tie-ins on the plan view. Driveways shall be dimensioned for width and extension length past right of way as well as with slope/distance or distance & spot elevations at endpoints of all breaklines. Alternately, see SECTION 7.
32. Limits of construction shall be shown in the plan view utilizing a dashed polyline. Edge of cuts shall be indicated by “C” in the limits line. Toe of fills shall be indicated by “F” in the limits line.

SECTION 7
DRIVEWAY PLANS

1. A detail plan for each driveway should be included that provides to the contractor sufficient detail to lay out the driveway apron and extension to the distance, line and grade provided. Driveway plans should show slope and distance from curb face to each grade break to the ultimate tie-in point.
2. Absolutely no grade changes exceeding 16% will be permitted. Percent grade of existing driveway at match point must be shown on driveway profile.
3. Driveways must be designed to prevent street drainage from entering driveway. Normally, this means a driveway apron must have a net rise at least equivalent to the curb height. See the Standard Details for maximum grades and grade changes. Driveway grades in detail book are maximum grades and percent slopes should be designed at lower percent grade changes where possible.
4. Whenever a sidewalk crosses a driveway, the driveway must meet ADA requirements and have a minimum 3 foot wide section with maximum slope of 2% where sidewalks cross the driveway. Showing 1% cross slope at sidewalk crossing of driveway is preferred to allow construction tolerances.

5. Do not allow ponding water behind curb or sidewalks at slope tie-in without provisions to drain the water.

SECTION 8
CROSS SECTIONS

1. ROW and TCE locations shown on each cross-section.
2. Cut and fill areas (SF) and volumes (CY) shall be provided at each section. Utilize average-end-area method to determine construction earthwork volumes.
3. Elevations shown for proposed profile and existing profile must be labeled and match plan and profile sheets. Call out design elevation at break points in section, top of curb, etc.
4. Schematically show significant structures or features on each cross section – inlets, walls, sidewalks and all drainage pipes, etc. at proper elevations within right of way or temporary construction easements.
5. Scales shall be vertical 1”=5’ with 1’ delineation and horizontal 1”=10’ with 10’ delineation.
6. Cross sections shall be given at maximum intervals of 50’ and at locations needed to detail significant project features.
7. Storm drain pipes both parallel and perpendicular shall be shown in cross sections at corresponding elevation & offset.

SECTION 9
FIELD TIES/LAYOUT SHEET

1. Every control point on centerline alignment (start, end, PI’s, PC’s and PT’s) must have State Plane/Pagis coordinates and field ties (offsets) for contractor to layout centerline and centerline shall include bearings and distance information.
2. Field ties (offsets) must be 3 dimensions to existing or set points, which will not be moved during utility relocations or construction. Dimensions are to be point to point including the vertical component of the distance not just the horizontal distance.
3. Consultant shall set centerline alignment and set each centerline station with nail and bottle cap at the time of the 60% submittal. Station identification shall be painted at each bottle cap for reference during field walk through with consultant.
4. This sheet should also show station, offset, elevation and description of construction benchmarks. Benchmarks should be set at no farther than 500 foot intervals. All projects shall have a minimum of two benchmarks. Do not use items such as power poles or fire hydrants for benchmarks if they may be moved during utility relocations.

SECTION 10
EROSION CONTROL SHEETS

1. The erosion control sheets may be the plan and profile sheets with erosion control devices shown, such as location of silt fences, inlet protection, etc. or shall be separate sheets.

2. Erosion control methods to be used shall reference proper detail in Public Works standard detail book.
3. All projects will require erosion control sheets and requirements unless written permission obtained from City of Little Rock to omit these requirements

SECTION 11
MAINTENANCE OF TRAFFIC (WHERE REQUIRED)

1. Maintenance of traffic plans should be provided when it is necessary to detour traffic for extended periods of time or when traffic patterns will change during construction. Written approval from City of Little Rock is required to omit maintenance of traffic plans from design.
2. Maintenance of traffic plans shall show advance-warning signage including type of signage and location of installation.
3. Plan should have notes showing each phase of barricading and areas to be constructed during each phase should be hatched.
4. Centerline stationing of streets shall be the same as plan and profile sheets.
5. North arrow and scale shown on plans.

SECTION 12
SIGNALIZATION PLAN (WHERE REQUIRED)

1. General notes related to signalization shall be provided.
2. Plan to scale with north arrow shown.
3. Legend, wiring diagram, phasing diagram, quantity breakdown and material specifications shall be shown on sheet.
4. Signalization plans will be reviewed by Traffic Division.

SECTION 13
STRIPING PLAN (WHERE REQUIRED)

1. General notes related to striping plan shall be shown on sheet or in general notes.
2. Plan to scale with north arrow shown.
3. Plan shall be dimensioned showing proposed striping and existing striping if it is to remain. Include stationing, location, type, size and color of stripe.
4. Removal of existing striping shall be shown where required.
5. Traffic Engineering determines striping materials to be used. Generally thermoplastic or 3-M permanent striping tape. (Supplied to engineer)
6. A note shall be included stating, “Contractor shall spot mark for striping layout and obtain approval from City of Little Rock Traffic Engineering prior to permanent installation.”

SECTION 14
SUBMITTAL REVIEW CHECKLIST

Project Name:_____ Consultant:_____

15% Submittal

____ Preliminary Plan & Profile & Typical Section(s) in .pdf format
____ Plans clearly show Design Intent
____ Existing Right of Way and Easements Shown on plans
____ Preliminary Drainage Map
____ Preliminary Cost Estimate in .xls format
____ Site Walk-Thru Meeting

60% Submittal

____ Complete set of Detailed Plans marked 60% in .pdf format
____ Plans address 15% comments & dated current to revisions.
____ DWG files with Survey file
____ 60% Cost Estimate in .xls format
____ Drainage Design Report
____ Geotechnical Report
____ Design Calculations
____ Title Work for the Affected Parcels
____ Right of Way Parcel Key Map (not to be included in the construction plans)
____ Acquisition Exhibits
____ Draft Special Provisions (if applicable) in .doc format
____ Public Meeting

90% Submittal

____ Complete set of Detailed Plans marked 90% in .pdf format
____ Plans address 60% comments & dated current to revisions.
____ 90% Cost Estimate in .xls format
____ Revised calculations to reflect revised design (as applicable)
____ Revised Special Provisions (if applicable) in .doc format

100% Submittal

____ Complete set of Detailed Plans .pdf format. PE Stamp; Signed & Dated.
____ Plans address 90% comments & dated current to revisions.
____ Final Cost Estimate in .xls format
____ Final Special Provisions (if applicable) in .doc format

SECTION 15
TYPICAL PROJECT ITEM NUMBERS

Item No.	Description of Work	Unit	Item No.	Description of Work	Unit
2.01	SITE PREPARATION (INCL. MOBILIZATION)	L.S.	18.06	STONE RETAINING WALL	C.Y.
3.01	UNCLASSIFIED EXCAVATION	C.Y.	18.07	HANDRAIL	L.F
3.07	COMPACTED EMBANKMENT	C.Y.	18.08	1' THICK RIP RAP (GROUTED)	S.Y.
4.01	AGGREGATE BASE COURSE (CLASS 7)	TON	18.09	HANDICAP RAMP	S.F.
5.01	TACK COAT	GAL.	18.10	WATER FOR DUST CONTROL	GAL
6.01	ASPHALT SURFACE COURSE	TON	19.01	FINAL CLEAN-UP	L.S.
6.02	ASPHALT BINDER COURSE	TON	20.01	PIPE EMBEDMENT	TON
7.04	CONCRETE DRIVE (PRI.), 4"	S.F.	21.05	PROCESSING LIME TREATED SUBGRADE	S.Y.
7.06	CONCRETE DRIVE & APRON, 6"	S.F.	21.06	HYDRATED LIME	TON
8.01	CONCRETE CURB & GUTTER	L.F.	22.01	MAILBOX RELOCATION	EA
9.01	CONCRETE SIDEWALK, 4"	S.F.	23.01	B STONE	TON
9.02	CONCRETE STEPS	S.F.	24.01	SILT FENCE	L.F.
10.01	JUNCTION BOX	EA	25.01	NEW GATE	EA
10.02	CURB INLET	EA	25.02	RELOCATE EXISTING GATE	EA
10.03	GRATE INLET	EA	26.01	TRENCH OR EXCAVATION SAFETY SYSTEMS	L.S.
11.01	CONCRETE, REINFORCED RETAINING WALL	C.Y.	27.07	COLD MILLING ASPHALT PAVEMENT	S.Y.
11.02	CONCRETE, REINFORCED FOR BOX CULVERT	C.Y.	28.01	GUARDRAIL	L.F.
13.12C	STORM DRAIN PIPES, 12" (CROSS DRAIN)	L.F.	30.00	PAVING, CONCRETE	S.F.
13.18S	STORM DRAIN PIPES, 18" (SIDE DRAIN)	L.F.	31.00	CONCRETE DITCH PAVING	S.Y.
13.21	STORM DRAIN PIPES, 21"	L.F.	32.15	FLARED END SECTIONS, 15"	EA
13.24	STORM DRAIN PIPES, 24"	L.F.	32.18	FLARED END SECTIONS, 18"	EA
13.30	STORM DRAIN PIPES, 30"	L.F.	32.21	FLARED END SECTIONS, 21"	EA
13.36	STORM DRAIN PIPES, 36"	L.F.	32.24	FLARED END SECTIONS, 24"	EA
13.42	STORM DRAIN PIPES, 42"	L.F.	32.30	FLARED END SECTIONS, 30"	EA
13.48	STORM DRAIN PIPES, 48"	L.F.	32.36	FLARED END SECTIONS, 36"	EA
13.54	STORM DRAIN PIPES, 54"	L.F.	32.42	FLARED END SECTIONS, 42"	EA
13.60	STORM DRAIN PIPES, 60"	L.F.	32.48	FLARED END SECTIONS, 48"	EA
13.66	STORM DRAIN PIPES, 66"	L.F.	32.54	FLARED END SECTIONS, 54"	EA
13.72	STORM DRAIN PIPES, 72"	L.F.	32.60	FLARED END SECTIONS, 60"	EA
13.84	STORM DRAIN PIPES, 84"	L.F.	32.66	FLARED END SECTIONS, 66"	EA
14.01	SOLID SODDING (BERMUDA)	S.Y.	32.72	FLARED END SECTIONS, 72"	EA
14.02	SOLID SODDING (ZOYSIA)	S.Y.	32.84	FLARED END SECTIONS, 84"	EA
14.03	SOLID SODDING (ST. AUGUSTINE)	S.Y.	45.00	PRECAST REINF CONCRETE BOX CULVERT	L.F.
15.01	SHRUB REPLACEMENT	EA	46.00	HYDROSEEDING	AC.
15.02	HEDGE REPLACEMENT	L.F.	47.00	GEOTEX MATERIAL	S.Y.
15.03	TREE REPLACEMENT	EA	48.00	EROSION CONTROL MATTING	S.Y.
16.01	MAINTENANCE OF TRAFFIC	L.S.	49.00	TOP SOIL	C.Y.
17.01	CUT AND REPAIR EXISTING STREET SURFACE	S.Y.	50.00	THERMOPLASTIC PAVEMENT MARKING	L.F.
18.01	FENCING	L.F.	51.00	BOX CULVERT	C.Y.
18.05	RELOCATION OF SANITARY SEWER LINES	L.F.	52.00	PROJECT INFORMATION KIOSK	L.S.

Above is an example of item descriptions and numbers used on City projects. Additional items shall be numbered in a similar manner referencing the sections in the Public Works Contract Conditions and Specifications, Latest Edition. The item number should match specification section and description should match the specification basis of payment name. For any items not in current Specifications, Consultant shall provide a Special Provision and use "SP" in the item number. Item numbers ans description are subject to change or modification as City Specifications are updated.
Storm Drainage should be called out as "Storm Drain Pipes, (size) (cross drain) or (side drain)".

SECTION 16
SAMPLE LAYERING SYSTEM

This layering system has been designed to work with the CLR.ctb to create drawings meeting the City's standards for lineweight, type and contrast. All layers do not have to be used and consultant may create layers as-needed for features that do not fit the provided list. In broad terms, "C" layers are Civil layers representing design elements and should print as bold, black features. "L" layers represent landscape design features and should also print as black. "V" layers represent existing conditions as might be derived from field survey. V layers should print as grey or faded-out to lie "under" the design features.

City of Little Rock Layering System	
Name	**Description**
C-ALGN-DATA	Alignment Data
C-ALGN-LINE	Alignment Line
C-ALGN-STAN	Alignment Station
C-ALGN-STAN-EQU	Alignment Station Equation
C-ALGN-STAN-LBL	Alignment Station Label
C-ALGN-STAN-PTS	Alignment Station Point
C-ANNO-MTCH	Annotation Match Line
C-ANNO-MTCH-TEXT	Annotation Match Line Text
C-ANNO-NOTE	Annotation Notes
C-ANNO-TABL	Annotation Table
C-ANNO-TABL-PATT	Annotation Table Hatch
C-ANNO-TABL-TEXT	Annotation Table Text
C-ANNO-TABL-TITL	Annotation Table Title
C-ANNO-TABL-TTBL	Annotation Table Borders
C-CORR	Roadways Corridor
C-CORR-BNDY	Roadways Corridor Boundary
C-CORR-PATT	Roadways Corridor Hatch
C-DEMO-AREA	Demolition Area
C-DEMO-AREA-TXT	Demolition Area Text
C-DEMO-NOTES	Demolition Notes
C-DEMO-STRC	Demolition Structure
C-DEMO-STRC-TXT	Demolition Structure Text
C-DOMW-ALIGN	Domestic Water Alignment
C-DOMW-ALIGN-TXT	Domestic Water Alignment Text
C-DOMW-HYDR	Domestic Water Hydrant
C-DOMW-MAIN	Domestic Water Main
C-DOMW-MAIN-FIRE	Domestic Water Fire
C-DOMW-MARKER	Domestic Water Marker
C-DOMW-METER	Domestic Water Meter
C-DOMW-SERVICE	Domestic Water Service
C-DOMW-TXT	Domestic Water Text
C-DOMW-VALVE	Domestic Water Valve
C-DOMW-VALVE-VAULT	Domestic Water Valve Vault
C-EROS-LOD	Erosion Control Limits of Disturbance
C-EROS-PH1-BMP	Erosion Control Phase 1 Best Management Practices
C-EROS-PH1-BMP-TXT	Erosion Control Phase 1 Best Management Practices Text

C-EROS-PH1-NOTES	Erosion Control Phase 1 Notes
C-EROS-PH1-SDAREA	Erosion Control Phase 1 Design Area
C-EROS-PH1-SDAREA-TXT	Erosion Control Phase 1 Design Area Text
C-EROS-PH1-STPAD	Erosion Control Phase 1 Structural Pad
C-EROS-PH1-STPAD-TXT	Erosion Control Phase 1 Structural Pad Text
C-EROS-PH1-TXT	Erosion Control Phase 1 Text
C-EROS-PH2-BMP	Erosion Control Phase 2 Best Management Practices
C-EROS-PH2-BMP-TXT	Erosion Control Phase 2 Best Management Practices Text
C-EROS-PH2-NOTES	Erosion Control Phase 2 Notes
C-EROS-PH2-SDAREA	Erosion Control Phase 2 Design Area
C-EROS-PH2-SDAREA-TXT	Erosion Control Phase 2 Design Area Text
C-EROS-PH2-TXT	Erosion Control Phase 2 Text
C-EROS-PH3-BMP	Erosion Control Phase 3 Best Management Practices
C-EROS-PH3-BMP-TXT	Erosion Control Phase 3 Best Management Practices Text
C-EROS-PH3-NOTES	Erosion Control Phase 3 Notes
C-EROS-PH3-SDAREA	Erosion Control Phase 3 Design Area
C-EROS-PH3-SDAREA-TXT	Erosion Control Phase 3 Design Area Text
C-EROS-PH3-TXT	Erosion Control Phase 3 Text
C-EROS-SF	Erosion Control Silt Fence
C-EROS-SF-TXT	Erosion Control Silt Fence Text
C-EROS-WQAREA	Erosion Control Water Quality Area
C-EROS-WQAREA-TXT	Erosion Control Water Quality Area Text
C-ESMT-ACCS	Easement Access
C-ESMT-CATV	Easement Cable TV
C-ESMT-CONS	Easement Construction
C-ESMT-ELEC	Easement Electric
C-ESMT-GAS	Easement Gas
C-ESMT-LSCP	Easement Landscape
C-ESMT-TELE	Easement Telephone
C-ESMT-ROAD	Easement Road
C-ESMT-ROAD-PERM	Easement Road Permanent
C-ESMT-ROAD-TEMP	Easement Road Temporary
C-ESMT-SGHT	Easement Sight Distance
C-ESMT-SSWR	Easement Sanitary Sewer
C-ESMT-STRM	Easement Storm Sewer
C-ESMT-UTIL	Easement General Utility
C-ESMT-WATR	Easement Water
C-HYDR-POST	Post Developed Hydrology Area
C-HYDR-POST-TC	Post Developed Hydrology Time of Concentration
C-HYDR-POST-TXT	Post Developed Hydrology Text
C-HYDR-PRE	Pre Developed Hydrology Area
C-HYDR-PRE-TC	Pre Developed Hydrology Time of Concentration
C-HYDR-PRE-TXT	Pre Developed Hydrology Text
C-HYDR-SOIL	Soil Data Area

C-HYDR-SOIL-TXT	Soil Data Text
C-INTERFERENCE	Pipe Interference
C-LEGEND	Sheet Legend
C-PRKG	Parking Block
C-PRKG-CURB-STOP	Parking Curb Stop
C-PRKG-MARK	Parking Marker
C-PRKG-NUMB	Parking Number
C-PRKG-NUMB-NPLT	Parking Number No Plot
C-PROF	Profile Block
C-PROF-DIAG	Profile Diagram
C-PROF-DOMW	Profile Water
C-PROF-DOMW-TXT	Profile Water Text
C-PROF-DOMW-XS	Profile Water Cross Section
C-PROF-GRID	Roadways: profile grid
C-PROF-GRID-GEOM	Roadways: profile gridline @ geometry points
C-PROF-GRID-MAJR	Roadways: profile gridline @ major stations
C-PROF-GRID-MINR	Roadways: profile gridline @ minor stations
C-PROF-LINE	Profile Line
C-PROF-LINE-EXTN	Profile Line Extension
C-PROF-LTOF	Profile Left Offset
C-PROF-PNTS	Profile Points
C-PROF-RTOF	Profile Right Offset
C-PROF-SSWR	Profile Sanitary Sewer
C-PROF-SSWR-TXT	Profile Sanitary Sewer Text
C-PROF-SSWR-XS	Profile Sanitary Sewer Cross Section
C-PROF-STAN-GEOM	Profile Station Geometry
C-PROF-STAN-MAJR	Profile Major Station
C-PROF-STAN-MINR	Profile Minor Station
C-PROF-STRM	Profile Storm Sewer
C-PROF-STRM-TXT	Profile Storm Sewer Text
C-PROF-STRM-XS	Profile Storm Sewer Cross Section
C-PROF-TEXT	Profile Text
C-PROF-TICK	Profile Tick
C-PROF-TITL	Profile Title
C-PROF-TTLB	Profile Title Block
C-PROF-VIEW	Profile View
C-PROP	Property Block
C-PROP-BNDY	Property Boundary
C-PROP-BRNG	Property Bearing
C-PROP-CALL	Property Call
C-PROP-LOTS	Property Lots
C-PROP-MON	Property Monument
C-PROP-MON-TXT	Property Monument Text
C-PROP-OWNR	Property Owner

C-PROP-SBCK	Property Setback
C-PROP-TEXT	Property Text
C-PROP_LLL	Property Land Lot
C-PVMT-ASPHT	Pavement Asphalt Area
C-PVMT-CONC	Pavement Concrete Area
C-PVMT-GRVL	Pavement Gravel Area
C-PVMT-MRKG	Pavement Markings
C-PVMT-TXT	Pavement Text
C-ROAD	Roadway Block
C-ROAD-ASSM	Roadway assemblies and subassemblies
C-ROAD-ASSM-BLIN	Roadways assembly baseline
C-ROAD-ASSM-OFFS	Roadways assembly offset
C-ROAD-ASSM-TEXT	Road Assembly Text
C-ROAD-BRNG	Roadways bearings
C-ROAD-CNTR	Roadways centerline
C-ROAD-CORR	Roadways corridor
C-ROAD-FEAT	Roadways feature line
C-ROAD-LABL	Roadways labels
C-ROAD-LINE	Roadways tangent lines
C-ROAD-LINE-EXTN	Roadways PVI extension lines
C-ROAD-LINK	Roadway Link
C-ROAD-LINK-TEXT	Roadway Link Text
C-ROAD-MARK	Roadway corridor and section marks
C-ROAD-PROF	Roadway profiles
C-ROAD-PROF-ASMC	Roadway profile asymmetrical curves
C-ROAD-PROF-CURV	Roadway profile vertical curves
C-ROAD-PROF-DIAG	Roadway profile band diagrams
C-ROAD-PROF-GRID	Roadway profile grid
C-ROAD-PROF-GRID-GEOM	Roadway profile gridline @ geometry points
C-ROAD-PROF-GRID-MAJR	Roadway profile gridline @ major stations
C-ROAD-PROF-GRID-MINR	Roadway profile gridline @ minor stations
C-ROAD-PROF-LINE	Roadway profile vertical lines
C-ROAD-PROF-LINE-EXTN	Roadway centerline extension
C-ROAD-PROF-LTOF	Roadway profile left offset sample lines
C-ROAD-PROF-PARB	Roadway profile parabolic curves
C-ROAD-PROF-PNTS	Roadway profile geometry points
C-ROAD-PROF-RTOF	Roadway profile right offset sample lines
C-ROAD-PROF-STAN-GEOM	Roadway profile geometry point labels
C-ROAD-PROF-TEXT	Roadway profile text
C-ROAD-PROF-TICK	Roadway profile tick marks
C-ROAD-PROF-TITL	Roadway profile label
C-ROAD-PROF-TTLB	Roadway profile label
C-ROAD-SHAP	Roadway Shape Area
C-ROAD-SHAP-PATT	Roadway Shape Area Hatch

C-ROAD-SPIR	Roadway spirals
C-ROAD-STAN	Roadway stationing
C-ROAD-STAN-MAJR	Roadway major stationing labels
C-ROAD-STAN-MINR	Roadway minor stationing labels
C-ROAD-TABL	Roadway Table
C-ROAD-TEXT	Roadway text
C-SCTN	Cross Section Block
C-SCTN-DIAG	Cross Section Diagram
C-SCTN-GRID-MAJR	Cross Section Major Grid
C-SCTN-LABL	Cross Section Label
C-SCTN-ROAD	Cross Section Road
C-SCTN-ROAD-TEXT	Cross Section Road Text
C-SCTN-ROAD-VIEW	Cross Section road View
C-SCTN-SHET	Cross Section Sheet
C-SCTN-TABL	Cross Section Table
C-SCTN-TEXT	Cross Section Text
C-SCTN-TICK	Cross Section Tick
C-SCTN-TITL	Cross Section Title
C-SCTN-TTLB	Cross Section Title Block
C-SCTN-VIEW	Cross Section View
C-SITE-BLDG	Site Building
C-SITE-BLDG-TXT	Site Building Text
C-SITE-BUFF	Site Buffer
C-SITE-BUFF-TXT	Site Buffer Text
C-SITE-CARS	Site Cars
C-SITE-CNTR	Site Centerline
C-SITE-CNTR-TABLE	Site Centerline Table
C-SITE-CNTR-TXT	Site Centerline Text
C-SITE-CURB	Site Curb
C-SITE-DIMS	Site Dimensions
C-SITE-EOP	Site Edge of Pavement
C-SITE-EOP-ALIGN	Site Edge of Pavement Alignment
C-SITE-EOP-ALIGN-TXT	Site Edge of Pavement Alignment Text
C-SITE-FENCE	Site Fence
C-SITE-FENCE-TXT	Site Fence Text
C-SITE-MOT	Site Maintenance of Traffic
C-SITE-SIGN	Site Signage
C-SITE-SIGN-TXT	Site Signage Text
C-SITE-STRC	Site Structures
C-SITE-STRC-TXT	Site Structures Text
C-SITE-STRIPE	Site Striping
C-SITE-TXT	Site Text
C-SITE-WALK	Site Sidewalk
C-SITE-WALK-TXT	Site Sidewalk Text

C-SITE-WALL-ALIGN-TOE	Site Bottom of Wall Alignment
C-SITE-WALL-ALIGN-TOE-TXT	Site Bottom of Wall Alignment Text
C-SITE-WALL-ALIGN-TOP	Site Top of Wall Alignment
C-SITE-WALL-ALIGN-TOP-TXT	Site Top of Wall Alignment Text
C-SSWR	Sanitary Sewer Block
C-SSWR-ALIGN	Sanitary Sewer Alignment
C-SSWR-ALIGN-TXT	Sanitary Sewer Alignment Text
C-SSWR-FM	Sanitary Sewer Force Main
C-SSWR-FM-STRC	Sanitary Sewer Force Main Structure
C-SSWR-FM-STRC-TXT	Sanitary Sewer Force Main Structure Text
C-SSWR-FM TXT	Sanitary Sewer Force Main Text
C-SSWR-GREASE-OIL	Sanitary Sewer Grease Interceptor
C-SSWR-PIPE	Sanitary Sewer Piping
C-SSWR-PIPE-TXT	Sanitary Sewer Piping Text
C-SSWR-SERVICE	Sanitary Sewer Service
C-SSWR-STRC	Sanitary Sewer Structure
C-SSWR-STRC-TXT	Sanitary Sewer Structure Text
C-SSWR-TEXT	Sanitary Sewer Text
C-STRM-ALIGN	Storm Sewer Alignment
C-STRM-ALIGN-TXT	Storm Sewer Alignment Text
C-STRM-PIPE	Storm Sewer Piping
C-STRM-PIPE-TXT	Storm Sewer Piping Text
C-STRM-STRC	Storm Sewer Structures
C-STRM-STRC-TXT	Storm Sewer Structures Text
C-STRM-TEXT	Storm Sewer: text
C-TIN	Triangulated irregular network
C-TIN-BNDY	Triangulated irregular network: boundary
C-TIN-VIEW	Triangulated irregular network: triangle view
C-TOPO	Topography Blocks
C-TOPO-FEAT	Topography Feature Lines
C-TOPO-GRAD	Topography: grading
C-TOPO-GRAD-CUT	Topography: grading cut material
C-TOPO-GRAD-FILL	Topography: grading fill material
C-TOPO-MAJR	Topography: major gridlines
C-TOPO-MAJR-TXT	Topography: major contours, NEW
C-TOPO-MINR	Topography: minor gridlines
C-TOPO-MINR-TXT	Topography: minor contours, NEW
C-TOPO-TEXT	Topography: text
C-TOPO-USER	Topography: user contours
C-TOPO-WSHD	Topography: watershed
C-UTIL	Utility Block
C-UTIL-CB	Utility Cable
C-UTIL-CB-STRC	Utility Cable Structure
C-UTIL-CB-STRC-TXT	Utility Cable Structure Text

C-UTIL-CB-TXT	Utility Cable Text
C-UTIL-E	Utility Electric
C-UTIL-E-STRC	Utility Electric Structure
C-UTIL-E-STRC-TXT	Utility Electric Structure Text
C-UTIL-E-TXT	Utility Electric Text
C-UTIL-GAS	Utility Gas
C-UTIL-GAS-STRC	Utility Gas Structure
C-UTIL-GAS-STRC-TXT	Utility Gas Structure Text
C-UTIL-GAS-TXT	Utility Gas Text
C-UTIL-TELE	Utility Telephone
C-UTIL-TELE-STRC	Utility Telephone Structure
C-UTIL-TELE-STRC-TXT	Utility Telephone Structure Text
C-UTIL-TELE-TXT	Utility Telephone Text
C-UTIL-TXT	Utility Text
C-VIEW	Viewport
C-WORKING	Working Layer
C-XREF	Xref Layer
L-ANNO-NOTE	Landscape Notes
L-ANNO-PATT	Landscape Hatching
L-ANNO-SYMB	Landscape Symbols
L-ANNO-TEXT	Landscape Text
L-IRRG-EQMP	Irrigation Equipment
L-IRRG-HEAD	Irrigation Heads
L-IRRG-PIPE	Irrigation Piping
L-IRRG-TEXT	Irrigation Text
L-PLNT-BEDS	Landscape Planting Beds
L-PLNT-BUSH	Landscape Planting Bush
L-PLNT-BUSH-LINE	Landscape Planting Bush Line
L-PLNT-CTNR	Landscape Planting Centerline
L-PLNT-GRND	Landscape Planting Ground Cover
L-PLNT-MLCH	Landscape Planting Mulch
L-PLNT-SOD	Landscape Planting Sod
L-PLNT-TEXT	Landscape Planting Text
L-PLNT-TREE	Landscape Planting Tree
L-PLNT-TREE-LINE	Landscape Planting Tree Line
V-ALGN-DATA	Survey Alignment coordinates and curve data
V-ALGN-LINE	Survey Alignment
V-BLDG	Survey Building
V-BLDG-DECK	Survey Building Deck
V-BLDG-OVHD	Survey Building Overhead
V-BNDY	Survey Boundary
V-BNDY-CALL	Survey Boundary Calls
V-BNDY-DEED	Survey Boundary Deed
V-BNDY-MONUMENT	Survey Boundary Monument

V-BNDY-MONUMENT-TEXT	Survey Boundary Monument Text
V-BRDG	Survey Bridge
V-BRDG-CNTR	Survey Bridge Centerline
V-BRDG-DECK	Survey Bridge Deck
V-BRDG-EXPJ	Survey Bridge Expansion Joint
V-CB	Survey Cable
V-CB-TEXT	Survey Cable Text
V-CHAN	Survey Open Channel
V-CHAN-TEXT	Survey Open Channel Text
V-CTRL	Survey Control
V-CTRL-BMRK	Survey Control Benchmark
V-CTRL-NODE	Survey Control points: known points
V-CTRL-NODE-SHOT	Survey Control points: shots
V-CTRL-NODE-UNKN	Survey Control points: unknown points
V-DOMW-MAIN	Survey Domestic Water Main piping
V-DOMW-METR	Survey Domestic Water Meter
V-DOMW-STRC	Survey Domestic Water Structures
V-DOMW-WELL	Survey Domestic Water well houses
V-DRIV-ASPH	Survey Drive Asphalt
V-DRIV-CNTR	Survey Drive Centerline
V-DRIV-CONC	Survey Drive Concrete
V-DRIV-CURB	Survey Drive Curb
V-DRIV-CURB-BACK	Survey Drive Back of Curb
V-DRIV-CURB-FACE	Survey Drive Face of Curb
V-DRIV-GRVL	Survey Drive Gravel
V-DRIV-MRKG	Survey Drive Markings
V-DRIV-SIGN	Survey Drive Signage
V-DRIV-TEXT	Survey Drive Text
V-DRIV-UPVD	Survey Drive Unpaved
V-ELEC	Survey Electric
V-ELEC-TEXT	Survey Electric Text
V-ESMT-ACCS	Survey Easement Access
V-ESMT-CATV	Survey Easement Cable TV
V-ESMT-CONS	Survey Easement Construction
V-ESMT-ELEC	Survey Easement Electric
V-ESMT-GAS	Survey Easement Gas
V-ESMT-LSCP	Survey Easement Landscape
V-ESMT-ROAD	Survey Roadway
V-ESMT-ROAD-PERM	Survey Roadway Permanent
V-ESMT-ROAD-TEMP	Survey Roadway Temporary
V-ESMT-ROW	Survey Easement Proposed ROW
V-ESMT-SGHT	Survey Easement Sight Distance
V-ESMT-SSWR	Survey Easement Sanitary Sewer
V-ESMT-STRM	Survey Easement Storm Sewer

V-ESMT-TELE	Survey Easement Telephone
V-ESMT-UTIL	Survey Easement General Utility
V-ESMT-WATR	Survey Easement Water
V-FENC-GNRL	Survey Fence General
V-FENC-GNRL-TXT	Survey Fence General Text
V-FENC-POST	Survey Fence Post
V-FIRE-HYDR	Survey Fire Hydrant
V-FIRE-PIPE	Survey Fire Line
V-FLHA-100Y	Survey Flood Hazard Area 100 year
V-FLHA-100Y-TXT	Survey Flood Hazard Area 100 year Text
V-FLHA-FWAY	Survey Flood Hazard Area Floodway
V-FLHA-FWAY-TEXT	Survey Flood Hazard Area Floodway Text
V-GAS-PIPE	Survey Gas Piping
V-GAS-STRC	Survey Gas Structures
V-GAS-TEXT	Survey Gas Text
V-LEGEND	Survey Legend
V-LNDSC-BUSH	Survey Landscaping Bush
V-LNDSC-TREE	Survey Landscaping Tree
V-LNDSC-TREE-LN	Survey Landscaping Tree Line
V-NODE	Survey Node
V-NODE-SPOT	Survey Node: spot elevations
V-NODE-TEXT	Survey Node: text
V-POND	Survey Pond
V-POND-EDGE	Survey Pond Edge
V-POND-TEXT	Survey Pond Text
V-POND-TOPB	Survey Pond Top of Bank
V-PROP-OWNR	Survey Property Owner
V-PROP-ROW	Survey Property: Right of ways
V-PROP-SBCK	Survey Property Setbacks
V-PROP-TXT	Survey Property Text
V-PROP_LL	Survey Property Land Lot
V-ROAD-CNTR	Survey Roadway Centerline
V-ROAD-CURB	Survey Roadway Curb
V-ROAD-CURB-BACK	Survey Roadway Back of Curb
V-ROAD-CURB-FACE	Survey Roadway Face of Curb
V-ROAD-EOP	Survey Roadway Edge of Pavement
V-ROAD-MARKING	Survey Roadway Markings
V-ROAD-MEDIAN	Survey Roadway Median
V-ROAD-MEDIAN-TXT	Survey Roadway Median Text
V-ROAD-NAME	Survey Roadway Name
V-ROAD-PROF	Survey Roadway Profile
V-ROAD-SIGN	Survey Roadway Signage
V-ROAD-STAN	Survey Roadway Stationing
V-SGHT	Survey Sight distance

V-SGHT-PROF	Survey Sight Distance Profile
V-SSWR	Survey Sanitary Sewer Block
V-SSWR-FORC	Survey Sanitary Sewer Force Main
V-SSWR-LATL	Survey Sanitary Sewer Lateral
V-SSWR-PIPE	Survey Sanitary Sewer Piping
V-SSWR-PUMP	Survey Sanitary Sewer pump stations
V-SSWR-STRC	Survey Sanitary Sewer Structures
V-SSWR-TEXT	Survey Sanitary Sewer Text
V-STRM	Survey Storm Sewer Block
V-STRM-PIPE	Survey Storm Sewer Piping
V-STRM-STRC	Survey Storm Sewer Structures
V-STRM-TEXT	Survey Storm Sewer Text
V-SURV-DATA	Survey data (benchmarks, and horizontal control points or monuments)
V-SURV-MISC	Miscellaneous survey data
V-SWLK	Survey Sidewalk
V-TELE	Survey Telephone
V-TELE-TEXT	Survey Telephone Text
V-TIN	Survey Triangulated Irregular Network
V-TIN-BNDY	Survey Triangulated Irregular Network Boundary
V-TIN-VIEW	Survey Triangulated Irregular Network View
V-TOPO	Survey Topographic Block
V-TOPO-FEAT	Survey Topographic Feature Lines
V-TOPO-FLOW	Survey Topographic Flow
V-TOPO-FLOW-TXT	Survey Topographic Flow Text
V-TOPO-MAJR	Survey Topographic Major Contours
V-TOPO-MAJR-TXT	Survey Topographic Major Contours Text
V-TOPO-MINR	Survey Topographic Minor Contours
V-TOPO-MINR-TXT	Survey Topographic Minor Contours Text
V-TOPO-SPOT	Survey Topographic Spots
V-TOPO-SPOT-TXT	Survey Topographic Spot Text
V-WALL	Survey Retaining Wall Block
V-WALL-BOT	Survey Bottom of Retaining Wall
V-WALL-BOT-TXT	Survey Bottom of Retaining Wall Text
V-WALL-TOP	Survey Top of Retaining Wall
V-WALL-TOP-TXT	Survey Top of Retaining Wall Text
V-WETL	Survey Wetland
V-WETL-TEXT	Survey Wetland Text
XX-TTLB	Paper Space Title Block and Sheet Layout

SECTION 17

SAMPLE DRAWING LEGEND

SAMPLE LEGEND

PROPOSED

CONTOUR	25
SPOT ELEVATION	25.00
SPOT CURB ELEVATION	25.50 25.00
STORM SEWER – PIPE	
STORM SEWER – MITERED END SECTION	
STORM SEWER – GRATE INLET	
STORM SEWER – JUNCTION BOX	D D
STORM SEWER – FLARED END SECTION	
STORM SEWER – HEADWALL	
STORM SEWER – INLET WITH SINGLE EXTENSION	D
STORM SEWER – INLET WITH DOUBLE EXTENSION	D
STORM SEWER – AREA INLET	D
GRADE BREAK LINE	
HIGH POINT	HP
LOW POINT	LP
CUT LINE	C
FILL LINE	F
SANITARY SEWER PIPE	
SANITARY SEWER MANHOLE	S
CURB	
CONCRETE	
CONSTRUCTION – ENTRANCE/EXIT	CO
CHECK DAM	CD
DIVERSION BERM	DI
DOWNDRAIN STRUCTURE – TEMPORARY	DN
ROCK DAM	RD
SEDIMENT BARRIER – SILT FENCE	SD1
SEDIMENT BARRIER – GRAVEL RING	SD2
SEDIMENT BARRIER – BLOCK & GRAVEL	SD3
SEDIMENT BARRIER – BLOCK	SD4
TEMPORARY SEDIMENT BASIN	SB1
SILT FENCE – TYPE A	SFA
SILT FENCE – TYPE B	SFB
SILT FENCE – TYPE C	SFC
STORM DRAIN OUTLET PROTECTION	ST
SURFACE ROUGHENING	SU
DISTURBED AREA STABILIZATION –TEMPORARY STABILIZATION	TS1
DISTURBED AREA STABILIZATION –TEMPORARY GRASSING	TS2
DISTURBED AREA STABILIZATION –PERMANENT GRASSING	TS3
MATTING/BLANKETS	Mb