DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS

APPENDICES

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APPENDIX A – CONSTRUCTION PLAN REQUIREMENTS

ALTA SURVEY REQUIREMENTS

PURPOSE

All projects requiring an American Land Title Association (ALTA®) Survey shall be prepared in accordance with the Minimum Standard Detail Requirements for ALTA®/NSPS Land Surveys published by the American Land Title Association and National Society of Professional Surveys.

REQUIREMENTS

In addition to the general requirements/standards for an ALTA® Survey, the following TABLE A - Optional Survey Responsibilities and Specifications shall be included with the ALTA® survey:

A. Optional Item Numbers 1 through 5

B. Optional Item Numbers 8 and 9

C. Optional Item Number 11

D. Optional Item Numbers 13 and 14

E. Optional Item Numbers 18 and 19

All other optional items may be included however, the items listed above shall be considered the minimum requirements for an ALTA® surveys submitted to the City of Longmont.

The list of optional items is based on the Minimum Standard Detail Requirements for ALTA®/NSPS Land Title Survey, effective on February 23, 2021 published by the American Land Title Association (ALTA®) and the National Society of Professional Surveyors (NSPS).

LONGMONT POWER & COMMUNICATIONS (LPC)
BASIC REQUIREMENTS

GENERAL AND ADDITIONAL CONTACT INFORMATION

If any of the following items apply to the development application, include them with the submittal. Please contact the LPC staff member assigned to the project with any questions.

A. General Contact Information

Phone: (303) 651-8386
Fax: (303)651-8796
1100 S. Sherman St., Longmont, CO, 80501
www.longmontcolorado.gov/LPC

B. Additional Contact Information

FE Coordinator:
Jeremy Rachak, (303) 774-3632
Jeremy.Rachak@longmontcolorado.gov

Construction Coordinator:
Brad Kaufman, (303) 651-8842
Brad.Kaufman@longmontcolorado.gov

Meter Shop Supervisor:
Kari Spotts, (303) 651-8458
Kari.Spotts@longmontcolorado.gov

PLAT GUIDELINES

A. Provide easements for the purposes of:

(1) Surveying, locating, installing, constructing, using, operating, maintaining, inspecting, repairing, altering, removing and replacing cable, conduit and equipment in whole or in part, and all necessary subsurface and surface appurtenances; and

(2) Right of ingress and egress over and on the Easement Area that is necessary and appropriate.

PLAT COMMENTS

A. Identify the width and label all electrical easements as LPC easements.

B. Identify the width and label all combined electrical and water easements as LPC/Water Easement.

C. Place a note on the plat describing the use of the Out-lots and include the use for utilities.

D. Place the following note/s on the plat:

(1) Architectural features such as porches, overhangs, cantilevers, and window wells are not permitted in easements.

(2) Fences, landscaping with plant shrubs, woody plants, nursery stock or other crops may be located within easements provided they do not interfere with the use of, obstruct the operation of or access to said easement. Any fence, landscaping, or other improvement that obstructs the operation of or access to said easements may be removed by grantee without liability for damages arising there from.

(3) LPC and/or Water Easements are for the purpose of surveying, locating, installing, constructing, using, operating, maintaining, inspecting, repairing, altering, removing and replacing cable, conduit, equipment, and all necessary subsurface and surface appurtenances or other uses approved by LPC. Together with a perpetual right of ingress and egress for installation, operation, maintenance, repair and/or replacement of such.

SUBDIVISION GUIDELINES

A. Single Family Residential**:**

(1) Shall include a corridor seven feet in width adjacent to the right-of-way. The use of the specific easement will be shared with Water/Wastewater and labeled as "7' LPC/Water Easement."

B. Multi-family Residential**:**

(1) Shall have a minimum five-foot wide easement throughout the site with:

a. 10ft pocket easements around each 1ph transformer

b. 12.5ft pocket easements around each 3ph transformer

(2) Once the electrical design has been completed, this easement may be provided by choosing one of the following options:

a. Provide a specific easement on the Final Plat; or

b. Provide an easement over the entire lot or out-lot, exclusive of buildings, for LPC on the Final Plat; or

c. If a Re-plat or Final Plat is not available then provide an easement by separate document. This option must be completed before Final Approval.

C. Commercial

(1) Shall have a minimum five-foot wide easement throughout the site with:

a. 10ft pocket easements around each 1ph transformer

b. 12.5ft pocket easements around each 3ph transformer.

(2) A 12-foot wide easement will be required along any main feeder network path. Any deviations to this must be approved by LPC.

(3) Once the electrical design has been completed, this easement may be provided by choosing one of the following options:

a. Provide a specific easement on the Final Plat; or

b. Provide an easement over the entire lot or out-lot, exclusive of buildings, for LPC on the Final Plat; or

c. If a Re-plat or Final Plat is not available then provide an easement by separate document. This option must be completed before Final Approval.

D. Street Lighting

(1) LPC will place street lighting along the right-of-way only.

(2) Additional easements may be required for lighting in areas where primary electric facilities are not installed adjacent to the right-of-way.

E. Alleys

(1) Alley installations or areas not adjacent to the right-of-way will require a minimum 5' wide easement, as well as potential pocket easements for any equipment locations, in order to maintain the clearance requirements for electrical equipment from traveled roadways.

F. Ditches

(1) The Customer is responsible for negotiating, licensing and installing utility crossings of ditches.

PUBLIC IMPROVEMENT PLAN (PIP) OR SITE PLAN COMMENTS (THE CONSTRUCTION DOCUMENTS)

A. Create a section called "LPC CONSTRUCTION NOTES" and include all applicable notes:

(1) The Customer is responsible for obtaining utility locates. Call the Utility Notification Center of Colorado at 1-800-922-1987.

(2) The Customer shall organize the utility construction from deepest to shallowest; this includes private lighting and irrigation. Should LPC mobilize for construction efforts and find conflicts with shallow installations, the scope of the project may require extra charges.

(3) LPC shall not be held responsible for any delay in the project due to the Customer's failure to properly coordinate the installation of utilities as described in the item above.

(4) Longmont Power and Communications underground electric cable that exists near the project work area cannot be de-energized for crossing purposes. The Customer must take all precaution necessary to prevent damage to the cables or injury to the construction crew. Should the Customer damage these facilities, contact Longmont Power & Communications immediately at (303)651-8386. Longmont Power & Communications will repair the facilities and bill the Customer for all associated costs.

(5) Where Longmont Power & Communications overhead facilities exist in the development area, the Customer must keep all equipment operation a minimum of 10 feet from existing overhead electric lines. If this is not feasible, or conditions warrant additional protection or pole stabilization, the Customer must contact the LPC Operations Construction Coordinator at (303)651-8386. It is the Customer's responsibility to arrange protective covering and or pole stabilization, 48 hours in advance. Should the electric facilities be damaged, the Customer must contact LPC at (303)651-8386. Additionally, all costs associated with repairs will be the responsibility of the Customer.

(6) For cost effectiveness, streets, parking surfaces and sidewalks should not be paved or concrete placed until the conduit crossing for use by Longmont Power & Communications has been installed. The Customer is responsible for installing sleeves under roadways, culverts, ditches, sidewalks and existing utility facilities for the use of Longmont Power & Communication's facilities. Notification and coordination of the ditch crossings is a Customer responsibility. Refer to section 700 in the City of Longmont Design Standards and Construction specifications.

(7) An electric community investment fee will be charged for any new or upgraded services. The charge is calculated and based on the panel rating of the electric service and will be collected with the building permit fee.

(8) The cost to extend the electric utility system to the site and within the site, relocations or other changes is at the Customer's expense.

(9) Electric service lines and metering equipment are installed by the Customer. Refer to Detail 700-16 in the city of Longmont's metering standards and construction specifications for further details.

(10) The Customer is responsible for the preparation of their site to meet the specifications provided below. Engineering project designs and costs for the installation of LPC facilities are based on the Customer

meeting all site readiness requirements referenced in section 702.01. Additional charges may be incurred if the site is not properly prepared prior to the start of work by LPC. These charges may result from soil conditions, inadequate grading, surveying, road crossings, or construction phasing of other utilities.

(11) Customer installed street and sidewalk crossings shall be located and installed in accordance with City Standards. Reference detail 700-03 **(For All Development Types)**

(12) A ten (10) foot corridor along LPC's trench path must be graded to within 2 tenths of final grade at the time of LPC's installation. This path must be sloped relatively flat and smooth to facilitate trencher access and cable installation**. (For All Development Types)**

(13) LPC's trench path must be free of construction equipment, materials, scrap, concrete, or any object(s) that may inhibit trenching operation.

(14) The Customer is to coordinate the installation of facilities according to specifications, from deepest to shallowest, (i.e., sewer, water, electric, gas, communications, irrigation, landscaping). Facilities requiring an installation depth less than LPC utilities, which are installed prior to LPC facilities, will require a change order and may result in additional installation charges**. (For All Development Types)**

(15) Customer installed facilities shall be placed as shown on the master utility plan, back-filled, and compacted **(i.e., sewer, water, storm drainage, etc.) (For All Development Types)**

(16) The Customer shall provide utility locates for underground infrastructure installed but not currently owned and maintained by the City, i.e., sewer, water and storm drainage. Additionally, all empty conduits used as sleeves for irrigation and dry utilities must be located and clearly identified. LPC shall not be responsible for repairs to underground utility infrastructure that is not properly located and marked by using standard utility locating materials, paint, stakes, locating flags, per the typical locating procedure. Minimum accuracy of all locate marks must be within 18" either side of the underground infrastructure to be considered properly located**. (For All Development Types)**

(17) The Customer is responsible for accurate survey information, including elevations, for the center of LPC's trench path and five (5) foot offsets for two corners of each of LPC's equipment locations. **(All types of development; except for Single Family Residential)**

(18) Concrete sidewalks, curbs, gutters and pavement shall be installed. **(Single Family Residential only)**

(19) Concrete Driveways, landscaping and irrigation shall not be installed prior to LPC's facilities**. (Single Family Residential only)**

(20) Sidewalks shall be free of all debris with front property lines painted on the sidewalk and the rear property lines clearly staked. The Customer shall not place property pins within LPC's prepared path until the installation of LPC's infrastructure has been completed. **(Single Family Residential only)**

(21) The Customer is responsible for the cost to repair or replace any electric facilities damaged by the Customer or their agents during construction activities.

(22) LPC's warehouse can be accessed through the south gate at 1100 S. Sherman St, Longmont, CO 80501. Follow the instructions on the sign outside of the gate to gain access.

B. Landscape Plans

(1) Add the following notes to the Landscape Plans:

a. Installation of the landscaping within the ROW, electric easement and in the vicinity of the on-site electric distribution system cannot begin until the installation of Longmont Power &

communications facilities is complete. Expenses for any repairs of landscaping due to the electric installation will not be the responsibility of the City.

b. Landscaping is to maintain 3ft of clearance on the sides and back, and 10ft of clearance in the front of LPC's equipment (transformers/switches/vaults). In addition, any deep rooted trees must maintain 3 ft. of clearance from any of LPC's underground infrastructure (cables/conduits). Location of landscape material may be altered to provide adequate clearance from the final location of the electric distribution facilities to the satisfaction of Longmont Power & Communications. Refer to Details 700-01 Trench Clearances and **700-02** Equipment Clearances of the City of Longmont Design Standards and Construction Specifications.

C. Irrigation Plans

(1) Add the following notes to the "Irrigation Notes":

a. The electric services for the irrigation controllers are installed, owned and maintained by the owner or HOA.

b. The irrigation controller's metered electric service must be built to the National Electric Code (NEC), require a building permit and a one-line diagram. The one-line diagram must be shown as cold sequenced and labeled with the service size & voltage requirements.

(2) Show and label all irrigation controllers, lift station & pump locations that require electric service.

D. Electrical Details

(1) Please add a new sheet labeled Electrical Details and add the following details as the apply to the development (for any questions contact the LPC staff member assigned to the project):

a. (700-10) 3ph pad spec

b. (700-16) Metering single Family

c. (MTR-1) UG temp service

d. (MTR-2) post type temp service

e. (MTR-3) OH temp service

f. (MTR-4) Residential point of delivery

g. (MTR-8) clearance requirements

h. (MTR-9) gang metering

i. (MTR-10) CT cab specs

j. (MTR-11) installation specs

k. (MTR-13) meter house 1ph 150a & less

l. (MTR-14) meter house 1ph 200a

m. (MTR-16) wire configuration 3ph self-contained

n. (MTR-17) meter house 120/208 200a

E. One-Line Details

(1) Create a section called "LPC NOTES"

(2) Place the following notes under "LPC NOTES":

(3) The electric service lines and metering equipment are installed, owned and maintained by the Customer. **(Commercial)**

(4) The electric service lines and metering equipment are installed by the Customer and are required to maintain a direct line of site from the utility source to the meter. **(Residential)**

(5) Concrete transformer pads are to be installed, owned and maintained by the Customer. Refer to Detail **700-10** of the City of Longmont Design Standards and Construction Specifications. Timing for the construction of the transformer pad must be coordinated with LPC. **(Commercial 3ph, Multi-Family 3ph)**

(6) Meter housings for all types of services shall be located on the outside of the building or structure and accessible to meter readers as referenced in LPC Rates and Regulations Governing Electric Service.

(7) Badging of single, commercial and multiple meter sockets are the Customer's responsibility. Each meter of a multiple meter socket and all individual meter sockets will have a permanent phenolic badge showing which home, apartment, office, unit or room is metered by each meter.

(8) An additional 2" pvc conduit (provided by LPC) will be installed by the Customer in the service lateral trench from the Broadband J-Box located at the transformer to the telecom demarcation point on/in the building.

(9) Secondary cabinets are supplied/installed/owned and maintained by the Customer. Secondary cabinets can be installed a minimum of 5' and a maximum of 10' from the servicing LPC transformer.

(10) The Customer is responsible for the installation of (X)-4" PVC conduits with 90 degree, 48" radius sweep, in the secondary window of the transformer pad to a depth of 38" top of pipe and then brought into the Customer's secondary cabinet.

(11) LPC will be responsible for installing the cables between the transformer and secondary cabinet and terminating the cables in the transformer. The Customer is responsible for terminating the cables within the secondary cabinet.

NEXTLIGHT FIBER

A. Longmont's City owned broadband network will be installed to the point of service on the project.

B. The point of service will generally be adjacent to a buildings electrical source. Whether that is a transformer or electric junction box.

C. To complete the path to the unit reach out to the assigned LPC staff member or Ian Carmichael / Jonathan Keen with the Broadband Services department all of whom can be reached at (303) 651-8386.

DRC SUBMITTAL INFORMATION

A. Provide an Electric Service Request Form

B. PC will complete a design with the first submittal of the Public Improvement Plans or the first submittal of the Site Plan if no Public Improvement Plans are required.

C. Multi-phase developments may require LPC to complete an overall capacity design with the first phase submittal.

D. Charges for the development review and design effort are billable and collected with charges for the installation of the electric distribution system. If the project does not move forward to the construction phase, review and design charges will be invoiced to the Customer and are due upon receipt.

E. Provide an electric one-line diagram for all commercial and multi-family developments that shows the proposed service size/ampacity and voltage. All unit numbers, as well as house panels must be labeled on the one-line document.

F. The one-line diagram must be a part of the construction documents.

G. **With the initial submittal and all subsequent submittals the Owner/Customer shall provide LPC with:**

(1) An updated CAD file that shall include a minimum of the site, utilities, contours, landscaping and irrigation.

a. This file must be a single, compressed, 2D, unenhanced (dwg) or (dgn).

b. All drawings are to be spatially correct, to allow information to be transferred to the City's geographic information system.

c. The basis of bearing of the proposed development must be in the Colorado State Plane Coordinate System, based on the 1992 HARN adjustment of the 1982 North American Datum (HPGN NAD 83/92).

d. Upon submittal of the actual Preliminary Plat and/or Final Plat, the surveyor must include a location and a written description of coordinate values for monumentation on the plat. At least two (2) control points must be labeled on the plat using the state plane coordinate values.

e. The primary and secondary control points and other GIS land points, which may be used as initial starting values are provided free through the Boulder County web page. However, the information being provided by Boulder County does include a disclaimer. Please note that these GIS Land points cannot be used for determining legal boundaries. Please note that the GIS land points cannot be used for determining legal boundaries. Boulder County accepts no liability for the accuracy of these data points.

f. The primary and secondary control point data can be found at:

g. https://bouldercounty.gov/property-and-land/surveyor/control-networks/

h. Or by calling the Boulder County information line at: (303) 441-1700

(2) An updated One-Line diagram.

a. This must be a sheet within the site's construction documents.

(3) Updated pdf files (The pdf files and CAD file must match each other)

(4) The current submittal date must be incorporated at the end of each file name with the following scheme "_MM.DD.YYYY". This will help ensure we are always working with the most recent file.

(5) Attach LPC's CAD file to the design file (do not redraw it).

(6) LPC expects a clean CAD file from the applicant, if the CAD file from LPC isn't clean, notify LPC, and clean file will be provided.

(7) LPC's trench path, conduit crossings and equipment locations must be shown in all of the utility plan and profile views.

(8) Electrical equipment serving residential subdivisions adjacent to the right-of-way straddles property lines to provide service to two parcels. Refer to the Water Department standards for the installation of water service lines and fire hydrants. The locations and clearances from electric facilities are established to provide adequate clearances and access for the two utilities sharing an easement.

(9) Traffic signs shall not be installed on top of the electric distribution facilities. Maintain clearance requirements as outlined in the General Section and subject to utility locates.

(10) Electrical equipment requires clearance or setback on all sides from vehicular traffic. This includes driveways, alleys, parking lots, etc. Protection such as bollards will be installed at the Customer's expense, Refer to detail **700-18** in the City of Longmont Design Standards and Construction Specifications.

(11) Other than single family residential sites, LPC will allow for a joint trench operation with other telecommunication utilities. **This must be coordinated by the Customer.**

LPC CLEARANCES

A. Keep the LPC clearances in mind while designing other utilities as well as landscaping and irrigation.

B. 5' of clearance on sides and back, and 10' of clearance in front from structures, signs and any landscaping *(transformers)*

C. 5' of clearance from structures, signs and deep rooted landscaping *(trench)*

D. 5' from fire hydrants *(trench/transformers/junction facilities)*

E. 12" of clearance from storm inlets *(trench)*

F. 5' of horizontal & 12" of vertical clearance from Gas with 18" recommended

G. 5' of Horizontal & 12" of vertical clearance from Water with 18" recommended

H. 10' of Horizontal & 12" of Vertical clearance from Storm, SS and irrigation pipes/ditches with 18" recommended *(LPC understands that this isn't always possible and will allow our infrastructure to lay on top when crossing perpendicularly)*

I. The bottom of LPC' typical electric distribution trench will be at 42" deep with a 36" min and 48" maximum amount of cover.

J. 4" PVC standard LPC sleeves installed by the Customer **(These are to be used at road crossings and if the 36" min clearance from top of pipe to final grade can't be met)**

K. Typical Street light / fiber only trench will be at 24" deep

Additional specifications can be found online at: https://longmontcolorado.gov/planning-and-development-services/development-process/development-and-design-standards/

LONGMONT POWER & COMMUNICATIONS (LPC)
DRC SUBMITTAL CHECKLIST

REQUIREMENTS

A. General

Yes	No	N/A	Requirement
			1. Provide an Electric Service Request Form.
			2. LPC will complete a design with the first submittal of the Public Improvement Plans or the first submittal of the site plan if no Public Improvement Plans are required.
			3. Multi-phase developments may require LPC to complete an overall capacity design with the first phase submittal.
			4. Charges for the development review and design effort are billable and collected with charges for the installation of the electric distribution system. If the project does not move forward to the construction phase, review and design charges will be invoiced to the customer and are due upon receipt.
			5. Provide an electric one-line diagram for all commercial and multi-family developments that shows the proposed service size/ampacity and voltage. All unit numbers, as well as house panels, shall be labeled on the one-line document.
			6. The one-line diagram must be a part of the construction documents.

B. CAD File – Initial submittal and updated with each subsequent submittal

Yes	No	N/A	Requirement
			1. CAD file shall include a minimum of the site, utilities, contours, landscaping, and irrigation.
			2. CAD file shall be a single, compressed, 2D, unenhanced (.dwg) or (.dgn).
			3. All drawings are to be spatially correct, to allow information to be transferred to the City's geographic information system (GIS).
			4. The basis of bearing of the proposed development shall be in the Colorado state plane coordinate system, based on the 1992 Harn adjustment of the 1982 north American datum (hpgn nad 83/92).
			5. Upon submittal of the actual preliminary plat and/or final plat, the surveyor shall include a location and a written description of coordinate values for monumentation on the plat. At least two (2) control points shall be labeled on the plat using the state plane coordinate values.
			6. The primary and secondary control points and other GIS land points which may be used as initial starting values are provided for free through the Boulder County web page. However, the information being provided by Boulder County does include a disclaimer. Please note that GIS land points cannot be used for determining legal boundaries. Boulder County accepts no liability for the accuracy of the data points provided.
			7. The primary and secondary control point data can be found at: https://bouldercounty.gov/property-and-land/surveyor/control-networks/ - **OR** – Obtain each by calling the Boulder County Information Line at (303) 441-1700

C. One-Line Diagram - Initial submittal and updated with each subsequent submittal			
Yes	**No**	**N/A**	**Requirement**
			1. Diagram shall be a sheet within the site's construction documents.
			2. One-Line Diagram shall include updated pdf files (the pdf files and CAD file shall match each other).
			3. The current submittal date shall be incorporated at the end of each file name with the following scheme "mm.dd.yyyy". This will help ensure we are always working with the most recent file.
			4. LPC's trench path, conduit crossings, and equipment locations shall be shown in all of the utility plan and profile views.
			5. Electrical equipment serving residential subdivisions adjacent to the right-of-way straddles property lines to provide service to two parcels. Refer to Section 500 of the City Standards for the installation of water service lines and fire hydrants. The locations and clearances from electric facilities are established to provide adequate space and access for the two utilities sharing an easement.
			6. Traffic signs shall not be installed on top of the electric distribution facilities. Maintain clearance requirements as outlined in Section 100 of the City Standards.
			7. Electrical equipment requires clearance or setback on all sides from vehicular traffic. This includes driveways, alleys, parking lots, etc. Protection such as bollards will be installed at the customer's expense, refer to detail 700-18 in the City Standards.
			8. Other than single family residential sites, LPC will allow for a joint trench operation with other telecommunication utilities. This shall be coordinated by the Developer.

RESERVED (FIRE LINE DESIGN CHECKLIST)

RESERVED (CONCEPT LANDSCAPE PLAN CHECKLIST)

RESERVED (PRELIMINARY LANDSCAPE PLAN CHECKLIST)

RESERVED (FINAL LANDSCAPE PLAN CHECKLIST)

RESERVED (ARTERIAL ROW LANDSCAPING)

REQUIREMENTS

A. Formatting & General Requirements

Yes	No	N/A	Requirement
			1. Scale: Plan Sheet 1" = 50' horizontal or in greater detail (example: 1" = 30'). Bar scale.
			2. Scale: Profile 1" = 5' vertical or in greater detail (example: 1" = 1'). Grid scale.
			3. North Arrow
			4. Title Block: Including name of Engineer of Record, Owner/Developer, and revisions table.
			5. Size: 22"x34" on 24"x36" paper, such that it is scalable to 11"x17" (50%).
			6. Revision table: Submittal date and revision dates, as applicable.
			7. Professional Engineer's Certification in Title Block.
			8. Project boundaries and ownership information: Show project boundaries, property lines, adjacent property ownership information, lot and block numbers, section corners and rights-of-way (ROW) with dimensions. Provide recorded document reception numbers where available
			9. Easements: Show all existing and proposed easements, including type, width, and recordation information.
			10. Street Names: Show all adjacent street names and label ROW width on either side of centerline. All streets shall be clearly labeled Public or Private.
			11. Limits of Construction: Clearly demark the limits of construction.
			12. Existing & Proposed improvements: Show existing items screened back/lighter line type and proposed items in a darker line type.
			13. Key Map: Provide key map on each sheet of the plan set. Plan and profile shall provide a key map showing the area being detailed.
			14. Label the following for all proposed utility mains: size, material and type.
			15. Provide unique numbering system for manholes, cleanouts, and inlets and label each.
			16. All abbreviations used as callouts shall be defined.
			17. A legend defining all symbols used shall be included. As a minimum, the legend shall show different symbols and line types for all existing and proposed utility lines, fittings, and manholes, with the proposed items shown more prominently than the existing.
			18. Match lines and sheet numbers.

B. Cover Sheet

Yes	No	N/A	Requirement
			1. Project Name: Subdivision Name shall be placed in large letters at the top center of the page with the title "Public Improvement Plans" located below.
			2. Project Location: Legal description of the project shall be placed below the "Public Improvement Plans" title.
			3. Planning Annexation Number shall be centered below the Public Improvement Plans title.
			4. Provide names, addresses and phone numbers for the Developer(s), Owner(s), and Consultant Engineer.

Yes	No	N/A	Requirement
			5. Sheet Index: Number sheets consecutively and place sheet numbering in bottom right corner of each sheet to allow for indexing of multiple sheet plan sets.
			6. Vicinity Map: Adequately shows the project location including nearest two Arterial streets, existing street system, street names for major streets, City limits, and major public facilities.
			7. Vertical Survey Datum: Benchmark description and elevation conforming to NAVD88.
			8. Horizontal Control: Basis of bearings description shall be in the Colorado State Plane Coordinate System, based on the 1992 HARN adjustment of the 1982 North American Datum (HPGN NAD 83/92).
			9. All lineal units of measurement shall be defined in U.S. Survey Foot.
			10. Legend: Legend for all sheets with symbols pertaining to the sheet.
			11. Signature Block for City approval for Public Works, Natural Resources, LPC, and Fire.
			12. Signature Block for Professional Engineer's Certification: "These Public Improvement Plans were prepared by me or under my direct supervision in accordance with the requirements of the City of Longmont and State of Colorado Statutes. I am fully responsible for the accuracy of all design, revisions, and record conditions that I have noted on these plans."
			13. Floodplain statement and when applicable, delineation of the 100 year floodplain: "This property is located in ZONE AE (the based flood elevations determined) and Zone X (areas determined to be outside the 500-year floodplain) according to the Flood Insurance Rate Map (FIRM) for Boulder County, Colorado and incorporated areas, map number 08013CO268 K, effective October 24, 2024."

C. Construction Notes Plan Sheet

Yes	No	N/A	Requirement
			1. General Construction Notes.
			2. Landscape General Construction Notes.
			3. Longmont Power & Communications Construction Notes.
			4. Sanitary Sewer Construction Notes.
			5. Storm Sewer Construction Notes.
			7. Underdrain Construction Notes.
			8. Water Distribution Construction Notes.
			9. Wildlife Restrictions Construction Notes

D. Typical Section Sheet

Yes	No	N/A	Requirement
			1. Provide a typical section for each roadway type planned within the Project. Provide as either a separate sheet or as part of the roadway plan and profile sheets.
			2. Include dimensions for flow line to flow line; back of walk to back of walk; and ROW width.
			3. Label the type of curb, gutter, sidewalk, pavement section (or reference Pavement design report), and cross slopes.
			4. Provide any applicable horizontal or vertical dimensions in addition to providing a section of all improvements within the Right-of- Way.
			5. Include with each distinct section a list of streets to which the section applies.

E. Control Sheet

Yes	No	N/A	Requirement
			1. Project control shall be tied to a minimum of two points that are Sectional Corners used as Horizontal Control.
			2. If State Plane coordinates HPGN NAD 83/92 are used and converted to Project Coordinates (Ground), include the Grid Factor (Sea level factor combined with scale factor). Show the Grid Factor to nine decimal places. If the Project Coordinates (Ground) were truncated, note what number was subtracted from the north and east coordinates. Project coordinates are to be shown to four decimal places.
			3. Include a table titled "Control Points" listing the HPGN NAD 83/92 Coordinates (Grid) compared to the Project Coordinates (Ground) on the same section and/or quarter section corners. In the table include all control points used for the project and found or set property pins noting the point numbers, the coordinates, elevations, and description sufficiently detailed to allow others to locate and identify the monuments. Clearly identify whether the Project Coordinates are modified to Ground, were truncated, or are assumed.
			4. Use Benchmarks from the City of Longmont Interactive Surveying Vertical Benchmark Map. Elevations shall be shown to two decimal places. Include a note listing the benchmark name, a complete description, and elevation, and clearly identify NAVD 88 is the basis for all elevations.
			5. Any Public Land Survey System corner that was occupied and has been re-monumented shall be noted and a Colorado State Monument Record shall be filed with the State, per Colorado Revised Statutes.
			6. Right-of-way shall be shown with adjoining subdivision names. The right-of-way limits shall be used to establish the street centerline stationing for plan and profiles. Include centerline curve and line data by labeling on plan or in a table format.
			7. The survey control drawing shall be stamped and signed by a Professional Land Surveyor, licensed in the State of Colorado, under whose supervision the drawing was prepared. Signature and date shall be written over the PLS stamp.
			8. Uniquely identify project control on the construction plans to show the relationship of the project control to the construction site.

F. Demolition & Removal Plan Sheet

Yes	No	N/A	Requirement
			1. Clearly depict and label existing improvements that are being demolished or removed.
			2. Provide legend for material removals.
			3. Provide notes for removal including identifying areas to be sawcut.
			4. Provide existing contours.
			5. Identify protect in place items.
			6. Show existing infrastructure including utilities, meters, and service lines etc.
			7. Show abandonment of any existing utilities.

G. Overall Utility Plan			
Yes	**No**	**N/A**	**Requirement**
			1. Provide an overall utility layout for the site on one sheet and include a key map for any additional utility plan sheets required to show sufficient detail.
			2. Show existing and proposed public and private infrastructure including transportation components (e.g. traffic signals, handicap ramps, sidewalks,curbs, gutters, bike paths) and utility components (e.g. street lights, sanitary, storm, water supply.).
			3. Show locations of proposed structures, including walls, fences, trash enclosures, etc.
			4. Provide horizontal water distribution system alignment including valves, tees, connections to existing system, future stub outs, hydrants, services, water meters, irrigation meter(s) and POC's, backflow devices, and any other proposed appurtenances.
			5. Show and depict dimension to nearest valve at proposed connections to the existing water system.
			6. Provide horizontal sanitary sewer collection system alignment, connections to existing system, future stub outs, manholes, and services.
			7. Provide horizontal storm sewer system alignment, connections to existing system, manholes, inlets, swales, ditches, detention, and water quality facilities.
			8. Provide horizontal electric system alignment, connections to existing systems, electrical equipment locations, and trench alignment.
			9. Provide horizontal underdrain collection system alignment, connections to existing system, future stub outs, manholes, cleanouts, and services. For larger sites provide symbol/legend combining sewer and underdrain utility.
			10. Show abandonment of existing utility lines.
			11. Provide service layout detail for residential lots.

H. Grading Plan			
Yes	**No**	**N/A**	**Requirement**
			1. Provide an overall grading plan for the site on one sheet showing proposed and existing grades at five-foot contours and include a key map for any additional grading plan sheets required to show sufficient details.
			2. Show limits of construction and any required additional temporary construction easements.
			3. Show existing and proposed public and private infrastructure including transportation components (e.g. traffic signals, handicap ramps, sidewalks,curbs, gutters, bike paths, storm sewer system, and irrigation ditches).
			4. Show proposed and existing grades at one-foot contours at a scale of 1"=20', or in greater detail.
			5. Show existing site topography and contours on adjacent properties extending a minimum of 50 feet past property line.
			6. Label elevations of all lot corners, finished floors, grade breaks, high points, and low points.
			7. Label slopes of swales, gutters, pavement, driveways, sidewalks, sidepaths, ditches, and any other required facilities.
			8. Streets with separate plan and profile sheets do not need elevations and slopes.

Yes	No	N/A	Requirement
			9. If the plan does not warrant separate sheets for intersection details, grading plan shall include spot elevations and flowlines for crosspans, handicap ramps, and radius of curb returns. Include stationing and cross-sections for radius of curb returns.
			10. Label all catch and spill gutters.
			11. Show location of fences, retaining walls, and other physical site improvements impacting site drainage. Cross-sections may be necessary to detail these features.
			12. Show all retaining walls and label top of wall and bottom (bottom of footer) of wall elevations and setback to property lines. Walls greater than 4 feet from bottom of footing to top of wall require a separate submittal (with a structural design) for a building permit.
			13. Show stormwater conveyance features and the location of all stormwater facilities.
			14. Show boundary of the existing and proposed one-hundred-year floodplain limits and base flood elevations.
			15. Show drainage channels and other significant natural features and wetlands within the property boundary. Dashed lines shall be used to show any proposed modification to drainage channels and floodplains.
			16. Information on the Neighborhood Grading Plan (NGP) shall include lot elevations at all corners, finish floor or top of foundation grades with building envelope, grading pattern around the building with spot elevations and arrows indicating directions of flow, and lot designation as Type A or B. On the plan include a detail for typical lot grading for each of proposed Type A or B.
			17. For NGP concentrated flows shall be conveyed in drainage easements located on common property lines. Where more than 2 lots convey flows to the common property line of another lot, the drainage easement shall be located in a outlot owned by an HOA, district, or other responsible entity and no lot shall receive inflow from a tributary area exceeding 1.5 times the receiving lot area. A note shall be added to the Plat allowing only split rail fencing on these losts.
			18. For the NGP include the Neighborhood Grading & Drainage Notes.
I. Transportation Improvements			
Yes	**No**	**N/A**	**Requirement**
1. General			
			1. Plan and profile sheets shall include all existing and proposed utilities.All applicable transportation and utility information shall be shown on a single profile. However, if information is not able to be shown sufficiently, separate plan and profiles may be requested.
			2. Call out and include pertinent details related to the transportation improvements. Use City of Longmont Section 200 standard details, as applicable.
2. Roadway Plan View			
			1. Define the roadway horizontal alignment and show centerline stationing at 50-foot intervals.
			2. Annotate and dimension curves including point of curvature, horizontal curve radius and length, degree of curvature, and superelevation. Label PC, PT, and return radii at intersection connections and access locations as applicable.

Yes	No	N/A	Requirement
			3. Annotate and dimension each tangent with point of tangency (PT), tangent length and bearing.
			4. Annotate the PI stationing at intersections (Intersection equations).
			5. Label the flowline-flowline and right-of-way width dimensions.
			6. Include traffic calming elements.
			7. Label existing and proposed curb and gutter type and sidewalks on or adjacent to site. Label begin and end stations and offsets of roadway features such as pavement construction, curb and gutter, sidewalk, etc.
			8. Label existing and proposed sidewalk widths.
			9. If plan does not have separate intersection details; include spot elevations and flow lines for cross pans, handicap ramps and radius of curb returns and include stationing and cross-sections for radius of curb returns.
3. Roadway Profiles			
			1. Label the profile along the roadway centerline and label grade. Include curb and gutter flowline profiles as requested.
			2. Label roadway stationing and existing and proposed profile grade elevations.
			3. Show profile of connecting streets at a minimum of 50 feet beyond the proposed roadway connection or as requested by the City Engineer.
			4. Annotate vertical curve data, e.g. stationing at point of curvature (PVC), point of vertical intersection (PVI), curve length, k-value, beginning and ending grades.
			5. For crosspans identify stationing and elevations for edge of pan and flowline and start of transition from street crown to crosspan.
			6. Label beginning and end crown transition stations.
			7. Show plan and profiles for at least 100ft beyond the interim terminus for dead end streets slated for future extension.
			8. Provide flowline profiles at all intersecting streets (where flowlines are not symmetric with centerline profile.) This can also be shown on the Intersection Grading Details.
			9. Provide flowline profiles at cul-de-sacs.
			10. Show culverts or bridges.
4. Intersection Grading Details			
			1. Provide key map uniquely labeling each intersection location.
			2. Provide curb and gutter flowline match elevations, spot elevations, arrows, and percent grade in the plan view.
			3. Include return radii flowline profiles at all intersections and include stationing.
			4. Provide match elevations and spot elevations for all handicap ramps.
5. Roadway Cross Sections			
			1. Include cross-sections for all Principal/Minor Arterial and Collector streets at 50-foot intervals and extend 50-foot beyond the project limits and/or as determined by the City Engineer.
			2. Show existing and proposed surface grade, roadway, curb and gutter, sidewalk, catch slopes, roadside swales, ROW lines, and utilities. Label ROW lines and proposed slopes and grades.

Yes	No	N/A	Requirement
			3. Cross-section width shall extend a minimum of 25-foot beyond property lines or as required by the City Engineer.
6. Signage and Striping Plan			
			1. Provide permanent and temporary traffic signing and pavement markings.
			2. Show locations of signs and pavement markings. Each shall be indicated by station/offset or other specific dimensions indicating exact locations.
			3. Pavement marking and sign types shall be indicated on these plan sheet(s) (i.e., epoxy paint with x/x glass-to-bead ratio, R1-1 Stop Sign, etc.)
			4. This sheet shall also contain any construction or application notes (i.e., application temperatures, surface cleaning methods to be used prior to application, etc.).
			5. Include a note that relevant signage per paragraph 606.03 is to be provided per Longmont Parks & Greenways Signage Manual for all publicly owned park and greenway areas.
			6. Include a signage schedule with sign type, message, size of panel, type of post, and symbol key for all publicly owned park and greenway areas. Include Courtesy signs, Regulation Signs, Entry Identification signs and Temporary signs, Specialty signs, and MUTCD Bike Route signs.
			7. Include a site furnishings schedule with amenity type and symbol key for all publicly owned park and greenway areas.
7. Sight Distance Plan			
			1. The construction plan set shall have a sight distance sheet that indicates all criteria, assumptions, and calculations for the proposed sight distance triangles showing compliance to AASHTO sight distance criteria.
8. Traffic Signal Plan			
			1. These sheets(s) shall show all Plan views and details necessary to construct a traffic signal. Equipment, materials, and installation shall conform to the City of Longmont's Traffic Signal Adopted Standards and Technical Specifications and the National Electrical Code. Signal poles on state highways shall conform to CDOT Standard Specifications for Road and Bridge Construction but shall otherwise defer to City of Longmont standards. The traffic signal(s) shall also contain an emergency vehicle preemption device as specified by the TCR.
J. Storm Sewer Plans			
Yes	**No**	**N/A**	**Requirement**
1. General			
			1. Provide plan and profile, vertical and horizontal alignments, connections, manhole and inlet rim and invert elevations, manholes, inlets, culverts, and sizing (annotated with Hydraulic Grade Line) as identified.
			2. Include plan, profile, cross-sections, notes, and details of all minor and major drainageway improvements. Annotate with water surface elevations.
			3. Call out and include pertinent details related to the storm sewer improvements. Use City of Longmont Section 300 standard details, as applicable.
2. Storm Sewer Plan Views			
			1. Label station, offset, unique ID, size, and material type of existing and proposed utility lines, and horizontal clearance from existing and proposed utilities and edge of gutter.
			2. Show proposed tie-in/connection to existing improvements with stationing.

Yes	No	N/A	Requirement
			3. Show existing and proposed obstructions such as vaults, catch basins, traffic islands, street lights, walls, or other permanent structures on or adjacent to site.
3. Storm Sewer Profile			
			1. Provide existing and proposed grade lines.
			2. Label appurtenances (manholes and inlets) with unique ID, station, and elevation of manhole and inlet rims inverts (with direction), and sizes of all pipes coming into and going out of manholes and inlets.
			3. Provide length and slope of main between each manhole or inlet.
			4. Show all utility crossings – include types and sizes of mains, stationing, and vertical clearance dimension between mains.

K. Underdrain Plans

Yes	No	N/A	Requirement
1. General			
			1. Show on utility sheets as unique line symbology for sewer and underdrain in same trench, sewer only and underdrain only.
			2. Call out and include pertinent details related to the underdrain collection system improvements. Use City of Longmont Section 300 standard details, as applicable.
2. Underdrain Sewer Plan Views			
			1. Label station, offset, unique ID, size, and material type of existing and proposed utility lines, and horizontal clearance from existing and proposed utilities and edge of gutter.
			2. Show proposed tie-in/connection to existing improvements with stationing.
			3. Show existing and proposed obstructions, such as vaults, catch basins, traffic islands, street lights, walls, or other permanent structures on or adjacent to site.
1. Underdrain Profiles			
			1. Show existing and proposed grade lines.
			2. Label appurtenances (manholes and clean-outs) with unique ID, station, and elevation of manhole and clean-out rims; inverts (with direction) and sizes of all pipes coming into and going out of manholes and clean-outs.
			3. Label length and slope of main line between each manhole or cleanout.
			4. Show all utility crossings – include types and sizes of mains, stationing, and vertical clearance dimension between mains.

L. Sanitary Sewer Collection System Plan & Profiles

Yes	No	N/A	Requirement
1. General			
			1. Provide plan and profile, vertical and horizontal alignments, connections, manhole rim and invert elevations, and sizing.
			2. Call out and include pertinent details related to the sanitary sewer collection system improvements. Use City of Longmont Section 400 standard details, as applicable.
2. Sanitary Sewer Plan View			
			1. Label station, offset, unique ID, size, and materials of existing and proposed utility lines, casings, and appurtenances.

Yes	No	N/A	Requirement
			2. Show proposed tie-in/connection to existing improvements with stationing.
			3. Show existing and proposed obstructions such as vaults, catch basins, traffic islands, street lights, walls, or other permanent structures on or adjacent to site.
3. Sanitary Sewer Profiles			
			1. Show existing and proposed grade lines.
			2. Label appurtenances (manholes and clean-outs) with unique ID, station, elevation of manhole rims, inverts (with direction), and sizes of all pipes coming into and going out of manholes.
			3. Label length and slope of main line between each manhole.
			4. Show all utility crossings – include types and sizes of mains, stationing, vertical clearance between mains, and stationing for each end of pipe encasement (if applicable).
M. Water Distribution Plans			
Yes	**No**	**N/A**	**Requirement**
1. General			
			1. Provide plan and profile, vertical and horizontal alignments, connections, and graphically depict water distribution appurtenances on the main including valves, thrust blocks, restraints, tees, fittings, hydrants, services, and any other appurtenances that are part of the potable water system.
			2. Call out and include pertinent details related to the water distribution system improvements. Use City of Longmont Section 500 standard details, as applicable.
2. Water Distribution Plan Views			
			1. Label station, offset, size, and materials of existing and proposed utility lines, casings and appurtenances.
			2. Show proposed tie-ins to existing improvements with station, fittings, valves, and tapping or connection method.
			3. Show existing and proposed obstructions, such as vaults, catch basins, traffic islands, street lights, walls, or other permanent structures on or adjacent to site.
3. Water Distribution Profiles			
			1. Provide existing and proposed grade lines.
			2. Label valves and fittings with stations (with direction), elevations and sizes of all pipes and fittings. Label all vertical deflection station and elevations.
			3. Provide length of main between each fitting and/or deflection.
			4. Show all utility crossings – include types and sizes of mains, stationing, and vertical clearance dimension between mains, and stationing for each end of pipe encasement (if applicable).
			5. Depict water line lowering with stationing and elevations for all bends.
N. Landscape Plans			
Yes	**No**	**N/A**	**Requirement**
			1. On the first sheet of the landscape design include the Landscape Plan Notes located in Appendix B of the City Standards.

Yes	No	N/A	Requirement
			2. Landscape designs for City owned areas shall be separate plan sheets from the areas that are private or common areas within the PIP set that contain an individualize legend, notes and details.
			3. Separate landscape schedules shall be provided for each regulated area. Shall include quantity per species, botanical name, common name, size and condition purchased (e.g., balled & burlapped / B&B, mature height and spread, etc.).
			4. Individual plant layout at 2/3 mature size with specific plant species for each plant group as identified by a key that relates to a full landscape schedule.
			5. Provide soil test results and recommendations. Imported topsoil shall require soil testing.
			7. Existing topography at one (1) foot contour interval for all public areas including rights-of-way and greenways (primary and secondary).
			8. Proposed topography that ties to existing contours indicating cut and fill areas clearly.
			9. Slope arrows for sidewalks, sidepaths and landscaped areas indicating minimum and maximum slopes allowable labeled in ratio format.
			10. Location and general dimensions of sidewalks, sidepaths, and greenways with surface grades (vertical and horizontal), showing connections and curve radii.
			11. Logical demarcation of public vs. private lands for ownership and maintenance purposes utilizing fences, sidewalks, sidepaths, shrub beds, or other permanent objects.
			12 Existing and proposed utilities labeled with associated easements and graphically shown in correct alignment, underground or overhead, and easement width dimensions.
			13. Label 100-year floodplain boundary and 10% of 100-year floodplain boundary as required.
			14. Ultimate curbline alignment (horizontal and vertical) and existing edge of asphalt along arterial ROWs slated for future expansion.
			15. Show sight distance triangles and obstruction free zones at each intersections. These areas shall be free of obstructions taller than 30 inches.

O. Irrigation Plan

Yes	No	N/A	Requirement
			1. Include the Irrigation Plan Notes located in Appendix B of the City Standards on the first sheet of the irrigation design.
			2. Irrigation system designs for City owned areas shall be separate plan sheets within the PIP set from the areas that are private common areas and shall contain individualized legend, notes and details.
			3. Provide two separate irrigation schedules for City owned and private common areas that show a key for each piece of equipment that describes the manufacturer and provides model number and/or other designation.
			4. Provide an overall irrigation sheet that shows each irrigation tap and the areas (outlots, ROWs, etc.) that each tap will irrigate. The area being served by each irrigation tap should have a unique hatch pattern corresponding to that tap. This sheet will be similar to a phase map for the irrigation system.
			5. Show irrigation plan information including irrigation mains and laterals, heads, valves, tap, controller and other miscellaneous equipment layout.

Yes	No	N/A	Requirement
			6. Provide gpm, valve size, and valve number for each remote-control zone valve.
			7. Provide pipe sizes for each section of mains and lateral.
			8. Meter pits with taps larger than two (2) inches shall require approval by the City Engineer.
			9. Provide and label minimum design pressure.
			10. All irrigation taps and electric services shall have an address and building permit before installation.
			11. Drip irrigation shall be provided for all trees and shrubs located in shrub beds and in all native seeded areas (even those native seed areas approved for temporary irrigation). Trees located in irrigated turf areas shall not receive drip. Drain valves shall be included at the end of each drip lateral pipe.
			12 Denote the location of the electric meter for irrigation controllers.

P. General

Yes	No	N/A	Requirement
			1. Section 100 Details: General Requirements (Utility Trenching).
			2. Section 200 Details: Transportation.
			3. Section 300 Details: Storm Drainage Improvements.
			4. Section 400 Details: Sanitary Sewer.
			5. Section 500 Details: Water Distribution.
			6. Section 600 Details: Landscaping and Irrigation.
			7. Section 700 Details: Longmont Power & Communication.

Q. Phasing Plan Sheet (as applicable)

Yes	No	N/A	Requirement
			1. Depict the phase plan for the site on one sheet.
			2. Show property boundaries lot lines, rights-of-way, easements (e.g. street lights, sanitary, storm, water supply).
			3. Show existing and proposed public and private infrastructure including transportation components (e.g. traffic signals, handicap ramps, sidewalks,curbs, gutters, bike paths) and utility components (e.g. street lights, sanitary, storm, water supply).
			4. Show locations of proposed structures, including walls, fences, trash...etc.
			5. Show project phase boundaries using wide, dashed lines and annotateeach phase.
			6. Include notes for each phase specifying phase order.
			7. List temporary and permanent improvements required in each phase, i.e. interim turnarounds for dead end roads.

APPENDIX B – CONSTRUCTION PLAN NOTES

SUBDIVISION PLAT GENERAL NOTES

[*Note: All italicized notes in brackets are intended as instructions and are for reference only and shall be removed from the Final Plat.]*

1. BASIS OF BEARINGS: BEARINGS SHOWN ON THIS PLAT ARE BASED ON THE **[TO BE COMPLETED BY SURVEYOR]**.

2. DIMENSIONS SHOWN ON THIS PLAT ARE IN U.S. SURVEY FEET.

3. *[Note: Date of title commitment to be within 30 days of final plat recordation.]*
THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY **[SURVEYOR NAME]** TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD. FOR ALL TITLE INFORMATION OF RECORD, **[SURVEYOR NAME]** RELIED UPON COMMITMENT FOR TITLE INSURANCE NO. **[XXXXXXXXX]**, ISSUED BY **[TITLE COMPANY NAME]**, HAVING AN EFFECTIVE DATE OF AT **[TIME]**.

4. NOTICE: ACCORDING TO COLORADO LAW, C.R.S. 13-80-105, YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

5. ALL LAND USE APPROVALS AND BUILDING PERMITS FOR THE DEVELOPMENT DESCRIBED HEREIN SHALL BE SUBJECT TO LONGMONT MUNICIPAL CODE REQUIREMENTS INCLUDING BUT NOT LIMITED TO: COMPLIANCE WITH THE CITY OF LONGMONT RAW WATER REQUIREMENT POLICY, THE PAYMENT OF IMPACT FEES AND DEVELOPMENT CHARGES, CONCURRENCY MANAGEMENT REQUIREMENTS, MORATORIUMS, BUILDING PERMIT LIMITATIONS, DESIGN STANDARDS, AND ANY OTHER LAND USE AND DEVELOPMENT REQUIREMENTS IN EFFECT AT THE TIME THAT SUCH PROPOSED DEVELOPMENT APPLIES FOR A BUILDING PERMIT.

6. EASEMENT GENERAL NOTES (APPLICABLE TO ALL TYPES OF EASEMENTS)

   6.1 ALL EASEMENTS GRANTED TO THE CITY OF LONGMONT AND ALL NONEXCLUSIVE UTILITY EASEMENTS, AS SHOWN ON THIS PLAT, ARE FOR THE PURPOSES OF THE FOLLOWING:

      6.1.1 SURVEYING, LOCATING, INSTALLING, CONSTRUCTING, USING, OPERATING, MAINTAINING, INSPECTING, REPAIRING, ALTERING, REMOVING AND REPLACING THE FACILITY, E.G. WATER LINE, ELECTRIC LINE, ETC., IN WHOLE OR IN PART, AND ALL NECESSARY SUBSURFACE AND SURFACE APPURTENANCES RELATED THERETO ("IMPROVEMENTS") REQUIRED IN CONNECTION WITH THE DEVELOPMENT, OPERATION, USE, AND MAINTENANCE OF THE EASEMENT PROPERTY.

      6.1.2 MARKING THE LOCATION OF THE EASEMENT, AND ANY IMPROVEMENTS, BY SUITABLE MARKERS SET AND MAINTAINED IN THE GROUND AT LOCATIONS WHICH SHALL NOT INTERFERE WITH SUCH REASONABLE USE AS THE PROPERTY OWNER SHALL MAKE OF THE EASEMENT.

      6.1.3 RIGHT OF INGRESS AND EGRESS AND ANY OTHER ACCESS TO, FROM, OVER, ACROSS, AND ON THE PROPERTY, AS IS REASONABLY NECESSARY, FROM TIME-TO-TIME, TO PERFORM THE ACTIVITIES LISTED HEREIN IN CONNECTION WITH THE ONGOING DEVELOPMENT, OPERATION, USE, AND MAINTENANCE OF THE EASEMENT PROPERTY AND ANY IMPROVEMENTS, AND TO ENFORCE THE RIGHTS GIVEN BY THIS EASEMENT.

      6.1.4 THE CITY OF LONGMONT SHALL HAVE AND EXERCISE THE RIGHT OF LATERAL AND SUBJACENT SUPPORT TO WHATEVER EXTENT IS NECESSARY OR DESIRABLE FOR THE FULL, COMPLETE,

AND UNMOLESTED ENJOYMENT OF THE EASEMENT PROPERTY FOR THE RIGHTS HEREIN DESCRIBED.

6.1.5 THE PROPERTY OWNER SHALL NOT CONSTRUCT OR ALLOW THE CONSTRUCTION OF ANY BUILDING, STRUCTURE, OR OTHER IMPROVEMENTS, SUCH AS ANY FENCE, GATE, HARD SURFACE, OR GROUND UTILITY CONNECTIONS OR APPURTENANCES ON, OVER, UNDER, OR ACROSS THE EASEMENT, OR TAKE ANY ACTION WHICH WOULD IMPAIR OR IN ANY WAY MODIFY THE IMPROVEMENTS OR LATERAL OR SUBJACENT SUPPORT FOR THE IMPROVEMENTS, WITHOUT OBTAINING THE SPECIFIC WRITTEN PERMISSION OF THE CITY OF LONGMONT. IN THE EVENT THAT THE CITY OF LONGMONT'S SPECIFIC WRITTEN PERMISSION IS NOT OBTAINED, THE CITY OF LONGMONT SHALL BE PERMITTED TO IMMEDIATELY REMOVE OR RELOCATE, WITHOUT ANY LIABILITY FOR DAMAGES, ANY OBSTRUCTION THAT INTERFERES WITH OR IMPAIRS THE CITY OF LONGMONT'S RIGHTS HEREUNDER.

6.1.6 NO PORTION OF ANY BUILDING OR STRUCTURE OR OTHER PERMANENT IMPROVEMENT SHALL ENCROACH INTO OR OVER AN EASEMENT WITHOUT WRITTEN PERMISSION OF THE CITY.

6.1.7 TREES, SHRUBS, NURSERY STOCK, AND OTHER CROPS ARE ALLOWED WITHIN EASEMENTS PROVIDED THEY DO NOT INTERFERE WITH THE USE OF, OBSTRUCT THE OPERATION OF, OR IMPEDE ACCESS TO THE EASEMENT. THE CITY OF LONGMONT MAY REMOVE ANY LANDSCAPING, OR OTHER IMPROVEMENT THAT OBSTRUCTS THE OPERATION OF OR ACCESS TO SAID EASEMENT WITHOUT LIABILITY FOR DAMAGES ARISING THEREFROM.

6.1.8 THE UNDERLYING PROPERTY OWNER IS RESPONSIBLE FOR THE MAINTENANCE OF THE EASEMENT AREA.

6.1.9 THE PROPERTY OWNER SHALL NOT GRANT ANY OTHER EASEMENT, GROUND LEASE, LEASE, LICENSE, OR OTHER SIMILAR INTEREST UPON, WITHIN, OR ADJACENT TO THE EASEMENT, OR GRANT ANY OTHER EASEMENT, GROUND LEASE, LEASE, LICENSE, OR OTHER SIMILAR INTEREST THAT MAY AFFECT OR INTERFERE WITH THE CITY OF LONGMONT'S USE OF THE EASEMENT WITHOUT FIRST PROVIDING NOTICE TO AND RECEIVING APPROVAL FROM THE CITY OF LONGMONT OF SAID PROPOSED GRANT.

7. UTILITY EASEMENTS:

[Note: Choose only the appropriate utility easements for the subdivision, delete non-relevant sections.]

NONEXCLUSIVE UTILITY EASEMENTS (UE) ARE FOR UTILITIES AND DRAINAGE FACILITIES, INCLUDING, BUT NOT LIMITED TO: WATER AND SEWER FACILITIES, IRRIGATION LINES, ELECTRIC LINES, COMMUNICATION LINES, GAS LINES, AND CABLE TV; AND ARE HEREBY GRANTED TO THE PUBLIC, AS SHOWN ON THIS PLAT, FOR THE PURPOSES LISTED IN NOTE 6. EASEMENT GENERAL NOTES.

WATER AND SANITARY SEWER EASEMENTS ARE HEREBY GRANTED TO THE CITY OF LONGMONT, AS SHOWN ON THIS PLAT, FOR THE PURPOSES LISTED IN NOTE 6. EASEMENT GENERAL NOTES.

[*Note: Include any other utility easement notes.*]

8. LONGMONT POWER & COMMUNICATIONS (LPC)

8.1 LPC EASEMENTS ARE FOR SURVEYING, LOCATING, INSTALLING, CONSTRUCTING, USING, OPERATING, MAINTAINING, INSPECTING, REPAIRING, ALTERING, REMOVING, AND REPLACING CABLE, CONDUIT, EQUIPMENT, AND ALL NECESSARY SURFACE/SUBSURFACE APPURTENANCES OR OTHER USES APPROVED BY LPC. TOGETHER WITH A PERPETUAL RIGHT OF INGRESS AND EGRESS FOR INSTALLATION, OPERATION, MAINTENANCE, REPAIR, AND REPLACEMENT OF SUCH.

8.2 LPC/WATER EASEMENTS ARE LOCATED ON THE PRIVATE PROPERTY IMMEDIATELY ADJACENT TO THE RIGHT-OF-WAY. THESE EASEMENTS ARE FOR SURVEYING, LOCATING, INSTALLING, CONSTRUCTING, USING, OPERATING, MAINTAINING, INSPECTING, REPAIRING, ALTERING, REMOVING, AND REPLACING CABLE, CONDUIT, EQUIPMENT, VALVES, WATER METERS, FIRE HYDRANTS, AND ALL NECESSARY SUBSURFACE AND SURFACE APPURTENANCES OR OTHER USES APPROVED BY THE CITY OF LONGMONT. TOGETHER WITH A PERPETUAL RIGHT OF INGRESS AND EGRESS FOR INSTALLATION, OPERATION, MAINTENANCE, REPAIR, AND/OR REPLACEMENT OF SUCH.

9. DRAINAGE EASEMENT(S):

[Note: Choose appropriate easement(s) for the subdivision, delete non-relevant sections.]

[Note: Blanket easement typically utilized for developments that do not receive any runoff from public rights-of-way.]

A BLANKET DRAINAGE EASEMENT, EXCLUDING BUILDING FOOTPRINTS, IS HEREBY GRANTED TO AND BETWEEN ALL LOTS WITHIN THE SUBDIVISION FOR THE PURPOSES OF CONVEYING SURFACE AND SUBSURFACE STORM WATER. THE UNDERLYING PROPERTY OWNER OR ASSIGNS WILL BE RESPONSIBLE FOR MAINTENANCE OF THE EASEMENT AREA.

[Note: Specifically defined easement typically utilized for developments that do not receive any runoff from public rights-of-way.]

DRAINAGE EASEMENTS ARE HEREBY GRANTED AS SHOWN ON THE PLAT TO AND BETWEEN ALL LOTS WITHIN THE SUBDIVISION FOR THE PURPOSES OF CONVEYING SURFACE AND SUBSURFACE STORM WATER. THE UNDERLYING PROPERTY OWNER OR ASSIGNS WILL BE RESPONSIBLE FOR MAINTENANCE OF THE EASEMENT AREA.

[Note: Typically utilized for detention ponds that do not detain for public right-of-way.]

A STORM DRAINAGE EASEMENT IS HEREBY GRANTED TO THE CITY OF LONGMONT WITHIN [OUTLOT XX OF] THE SUBDIVISION, AS SHOWN ON THIS PLAT, FOR THE PURPOSES OF STORM WATER DETENTION AND WATER QUALITY FACILITIES. THE CITY HAS THE RIGHT TO ACCESS THE EASEMENT TO INSPECT THE IMPROVEMENTS AND/OR PERFORM MAINTENANCE IF NEEDED, IN THE CITY'S DETERMINATION. THE OWNER OF THE PROPERTY WILL BE RESPONSIBLE FOR REIMBURSING THE CITY FOR ANY EMERGENCY MAINTENANCE THAT MAY BE PERFORMED BY THE CITY. THE UNDERLYING PROPERTY OWNER OR ASSIGNS IS RESPONSIBLE FOR ALL MAINTENANCE OF THE EASEMENT AREA.

[Note: Typically utilized for areas that receives runoff from public rights-of-way, usually utilized for tracts of land that contain storm sewers, and for detention facilities.]

DRAINAGE EASEMENTS ARE HEREBY GRANTED TO THE CITY OF LONGMONT AS SHOWN ON THE PLAT FOR THE PURPOSES OF CONVEYING SURFACE AND SUBSURFACE STORM WATER, AND FOR CONSTRUCTION, MAINTENANCE, REPAIR AND ACCESS TO ALL NECESSARY FACILITIES AND STRUCTURES SUPPORTIVE THERETO. THE UNDERLYING PROPERTY OWNER OR ASSIGNS WILL BE RESPONSIBLE FOR ALL

MAINTENANCE (I.E. MOWING, GRAFFITI REMOVAL, CLEANING OF WATER QUALITY STRUCTURES, TRASH, DEBRIS REMOVAL, AND OTHER SIMILAR MAINTENANCE) OF THE EASEMENT AREA AND STRUCTURAL MAINTENANCE (I.E. REPAIR AND REPLACEMENT OF DROP STRUCTURES, OUTLET STRUCTURES, RIP-RAP AREAS AND SUPPORTING PIPING) OF THE FACILITIES. IF THE PROPERTY OWNER OR ASSIGN FAILS TO MEET THE MAINTENANCE AND OPERATION REQUIREMENTS THE CITY OF LONGMONT SHALL HAVE THE RIGHT TO COMPLETE THE WORK AND BACK CHARGE THE PROPERTY OWNER.

10. FLOODPLAIN NOTES:

[Note: Choose appropriate note per the floodplain map information for the subject property, delete non-relevant sections.]

[Note: Utilized when portions of the plat are not encumbered by the 100-year floodplain; the Final Plat and Site Plan do not need to show any floodplain delineation.]

THE SUBJECT PROPERTY IS NOT LOCATED WITHIN AN A ZONE, AREA OF THE 1% ANNUAL CHANCE FLOODPLAIN (100-YEAR FLOODPLAIN), AS SHOWN ON FIRM PANEL **[XXXX]**, WITH AN EFFECTIVE DATE OF **[XXX XX, XXXX]**.

[Note: Utilized when portions of the plat are encumbered by a 100-year floodplain; the Final Plat does not need to show a floodplain delineation, and the Site Plan shall include the floodplain delineation.]

THE SUBJECT PROPERTY IS LOCATED WITHIN AN A ZONE, AREA OF THE 1% ANNUAL CHANCE FLOODPLAIN (100-YEAR FLOODPLAIN), AS SHOWN ON FIRM PANEL **[XXXX]**, WITH AN EFFECTIVE DATE OF **[XXX XX, XXXX]**.

[Note: Utilized when portions of the plat are affected by a LOMR.]

A LETTER OF MAP REVISION (LOMR), **[FEMA CASE NO. XXXX]** AFFECTS THIS PROPERTY.

NO BUILDING PERMITS SHALL BE ISSUED FOR LOTS WITHIN THE DESIGNATED 100-YEAR FLOODPLAIN UNTIL A FLOODPLAIN DEVELOPMENT PERMIT HAS BEEN ISSUED FOR THE PROPERTY.

11. ACCESS EASEMENT:

[Note: Choose appropriate access easement(s), delete non-relevant sections.]

[Note: Typically utilized for multi-family and commercial subdivisions.]

AN ACCESS EASEMENT, EXCLUDING CURRENT AND FUTURE BUILDING FOOTPRINTS, AND LANDSCAPING, IS HEREBY GRANTED TO THE CITY OF LONGMONT, OVER ALL PAVED AREAS, OUTLOTS, AND OTHER ACCESS ROUTES, FOR THE PURPOSES LISTED IN NOTE 6. EASEMENT GENERAL NOTES.

[Note: Typically utilized for commercial subdivisions.]

A CROSS LOT ACCESS EASEMENT, EXCLUDING CURRENT AND FUTURE BUILDING FOOTPRINTS, AND LANDSCAPING, IS HEREBY GRANTED TO THE PUBLIC BETWEEN ALL LOTS WITHIN THE SUBDIVISION. THE UNDRELYING PROPERTY OWNER OR ASSIGNS IS RESPONSIBLE FOR THE MAINTENANCE OF THE EASEMETN AREA.

[Note: Utilize this note for all plats.]

AN ACCESS EASEMENT EXCLUDING CURRENT AND FUTURE BUILDING FOOTPRINTS IS HEREBY GRANTED TO THE CITY OF LONGMONT FOR EMERGENCY VEHICLES.

[Note: Typically utilized in instances where the Fire Department requires separate specifically defined easements that only emergency vehicles will utilize.]

EMERGENCY ACCESS EASEMENTS ARE HEREBY GRANTED TO THE CITY, AS SHOWN ON THIS PLAT, FOR THE PURPOSES OF INGRESS AND EGRESS OF EMERGENCY VEHICLES. THE UNDERLYING PROPERTY OWNER IS RESPONSIBLE FOR MAINTENANCE OF THE EASEMENT AREA.

12. LANDSCAPING:

    THE RIGHT-OF-WAY LANDSCAPING ALONG COLLECTOR AND ARTERIAL STREETS IS TO BE MAINTAINED BY THE ADJACENT PROPERTY OWNER OR ASSIGNS. THE ADJACENT PROPERTY OWNER OR ASSIGNS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE LANDSCAPE AND CONCRETE PORTION, INCLUDING THE REMOVAL OF GRAFFITI, SNOW, ICE, SLEET, DEBRIS OR OTHER OBSTRUCTION FROM ALL SIDEWALKS LOCATED IN ADJACENT RIGHT-OF-WAY AND INTERNAL TO THE DEVELOPMENT. THE ADJACENT PROPERTY OWNER SHALL MAINTAIN ARTERIAL MEDIANS, UNLESS OTHERWISE SPECIFICALLY STATED ON THE PLAT.

13. TRANSPORTATION EASEMENT:

    [Note: Typically utilized adjacent to right-of-way where public improvements do not fit within the standard right-of-way dedication.]

    TRANSPORTATION EASEMENTS ARE HEREBY GRANTED TO THE CITY AS SHOWN ON THIS PLAT FOR THE PURPOSES OF TRANSPORTATION IMPROVEMENTS (I.E. SIDEWALKS, AND APPURTENANCES INCLUDING BUT NOT LIMITED TO BENCHES, LIGHTING, SIGNAGE, BUS FACILITIES, ETC.).

14. AVIGATION EASEMENT:

    [Note: Use if the property is within the Airport Influence Overlay Zone.]

    DUE TO THE PROXIMITY OF THE PROPERTY TO THE VANCE BRAND AIRPORT, THERE WILL BE AIRCRAFT PASSING ABOVE THE PROPERTY. AIRCRAFT PASSAGE MAY RESULT IN NOISE AND OTHER IMPACTS ON THE PROPERTY. AIRCRAFT MAY CROSS ABOVE THE PROPERTY AT LOW ALTITUDE IN ACCORDANCE WITH FAA REGULATIONS. THE FREQUENCY OF AIRCRAFT PASSING OVER THE PROPERTY MAY INCREASE IN THE FUTURE. THE OWNERS, THEIR HEIRS, AND SUCCESSORS AND ASSIGNS, SPECIFICALLY ACKNOWLEDGE THE RIGHT OF PASSAGE OVER THE PROPERTY FOR AIRCRAFT AND AGREE TO HOLD HARMLESS THE CITY OF LONGMONT FOR AIRCRAFT OPERATIONS CONDUCTED IN ACCORDANCE WITH FAA REGULATIONS.

15. *[Note: The following note shall be utilized in instances where easements granted by the previous subdivision are still appropriate. All easements that can be depicted shall be shown on the plat.]*

    ALL EASEMENTS WITHIN THE BOUNDARY OF THIS SUBDIVISION THAT WERE PREVIOUSLY GRANTED BY THE **XXX** SUBDIVISION REMAIN.

GENERAL CONSTRUCTION NOTES

1. ALL WORK WITHIN AN EASEMENT OR THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE CITY OF LONGMONT PUBLIC IMPROVEMENT DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS, LATEST EDITION.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF ANY WORK ON THE PROJECT.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER / DEVELOPER, AND THE CITY, OF ANY PROBLEMS IN CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
4. IT IS THE RESPONSIBILITY OF THE OWNER / DEVELOPER TO RESOLVE CONSTRUCTION PROBLEMS DUE TO CHANGED CONDITIONS OR DESIGN ERRORS ENCOUNTERED BY THE CONTRACTOR DURING ANY PORTION OF THE PROJECT. IF, IN THE OPINION OF THE CITY, THE MODIFICATIONS TO THE APPROVED PLANS PROPOSED BY THE OWNER / DEVELOPER INVOLVE SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK OR TO THE FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE OWNER / DEVELOPER SHALL BE RESPONSIBLE FOR SUBMITTING THE REVISED PLANS TO THE CITY OF LONGMONT FOR APPROVAL, AND OBTAINING SAID APPROVAL, PRIOR TO CONTINUING CONSTRUCTION. ANY CONSTRUCTION WORK PERFORMED IN ACCORDANCE WITH UNAPPROVED PLANS, OR IN FURTHER ACCORD WITH PLANS THAT HAVE BEEN REVISED AND REPLACED, SHALL BE REMOVED AND RECONSTRUCTED ACCORDING TO THE APPROVED PLANS.
5. THE GRADING PLAN IS FOR ROUGH GRADING ONLY. CHANGES MAY BE NECESSARY TO BRING THE PLANS INTO CONFORMANCE WITH THE APPROVED FINAL DRAINAGE PLAN AND SITE PLAN.
6. IF CALLED FOR BY THE INSPECTOR, THE CONTRACTOR WILL PROVIDE A WATER TRUCK TO KEEP DUST IN CHECK.
7. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY SETTLEMENT OR SOIL ACCUMULATION BEYOND THE PROPERTY LIMITS DUE TO GRADING OR EROSION.
8. DELINEATED FLOOD HAZARD AREAS SHALL NOT BE GRADED IN ANY WAY UNTIL THE FINAL DRAINAGE PLAN HAS BEEN APPROVED AND ALL APPROPRIATE PERMITS HAVE BEEN OBTAINED.
9. THE CONTRACTOR SHALL IMMEDIATELY REMOVE ANY CONSTRUCTION DEBRIS, MUD TRACKING, SEDIMENT, AND / OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE FLOWLINES AND PUBLIC RIGHTS-OF-WAY OF THE CITY RESULTING FROM THE PROJECT. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATION OR EXCESSIVE PAVEMENT FAILURE CAUSED BY THE PROJECT AND SHALL PROPERLY BARRICADE THE SITE UNTIL CONSTRUCTION IS COMPLETE. THE CONTRACTOR'S FAILURE TO CORRECT ANY OF THE ABOVE WITHIN 48 HOURS OF WRITTEN NOTICE BY THE CITY SHALL CAUSE THE CITY TO ISSUE A STOP WORK ORDER (RED TAG) AND / OR PERFORM THE WORK ITSELF, MAKING A CLAIM AGAINST THE PROJECT'S LETTER OF CREDIT FOR ANY COSTS INCURRED BY THE CITY.
10. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS AT, AND ADJACENT TO, THE JOB SITE, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY, DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE CITY TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
12. ALL UTILITY POLES SHALL BE RELOCATED PRIOR TO THE PLACEMENT OF ANY CONCRETE.

13. THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS PRIOR TO ADJUSTING ALL CLEANOUTS, MANHOLES, VALVES, BOXES, SURVEY MONUMENTS, AND ANY OTHER FIXTURES TO FINISHED GRADE PRIOR TO FINAL PAVING.
14. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGPERSONS, AND / OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND THE LONGMONT SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15. THE CONTRACTOR SHALL PROVIDE INGRESS AND EGRESS TO PRIVATE PROPERTY ADJACENT TO THE PROJECT THROUGHOUT THE PERIOD OF CONSTRUCTION. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL OBTAIN A WRITTEN AGREEMENT FROM THE PROPERTY OWNERS IMPACTED BY THIS ACCESS. THE CONTRACTOR SHALL PROVIDE A COPY OF THESE WRITTEN AGREEMENTS TO THE CITY UPON REQUEST.
16. WHEN ALLOWED BY THE UTILITY, AND PRIOR TO FINAL PLACEMENT OF SURFACE PAVEMENT, ALL UNDERGROUND UTILITY MAINS SHALL BE INSTALLED AND SERVICE CONNECTIONS STUBBED OUT BEYOND CURB LINE. SERVICE FROM PUBLIC UTILITIES SHALL BE MADE AVAILABLE FOR EACH LOT IN SUCH A MANNER THAT IT WILL NOT BE NECESSARY TO DISTURB THE STREET PAVEMENT, CURB, GUTTER, AND SIDEWALK WHEN CONNECTIONS ARE MADE.
17. REPRODUCIBLE COPIES OF RECORD DRAWINGS SHALL BE SUBMITTED TO THE CITY OF LONGMONT PRIOR TO CONSTRUCTION ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
18. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR AT LEAST 24 HOURS PRIOR TO DESIRED INSPECTION.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF EROSION CONTROL DEVICES.
20. CONSTRUCTION STAGING AREAS WILL BE REQUIRED TO STAY WITHIN THE LIMITS OF CONSTRUCTION AND AS APPROVED IN THE STORMWATER MANAGEMENT PLAN.
21. THE APPROVED STORMWATER MANAGEMENT PLAN WILL BE REQUIRED ON SITE AT ALL TIMES.
22. ANY RETAINING WALLS OR TIERED WALLS MUST BE DESIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF COLORADO AND MUST RECEIVE A BUILDING PERMIT FROM THE CITY OF LONGMONT.
23. ALL SIGNING AND STRIPING SHALL COMPLY WITH CITY STANDARDS AND APPROVED MATERIALS.
24. PER COLORADO REVISED STATUTES TITLE 18, CRIMINAL CODE 18-4-508 – DEFACING, DESTROYING, OR REMOVING LANDMARKS, MONUMENTS, OR ACCESSORIES, ITEM 2: “ANY PERSON WHO KNOWINGLY REMOVES OR KNOWINGLY CAUSES TO BE REMOVED ANY PUBLIC LAND SURVEY MONUMENT, AS DEFINED BY SECTION 38-53-103(18), C.R.S., OR CONTROL CORNER, AS DEFINED IN SECTION 38-53-103(6), C.R.S., OR A RESTORATION OF ANY SUCH MONUMENT OR WHO KNOWINGLY REMOVES OR KNOWINGLY CAUSES TO BE REMOVED ANY BEARING TREE KNOWING SUCH IS A BEARING TREE OR OTHER ACCESSORY, AS DEFINED BY SECTION 38-53-103(1), C.R.S., EVEN IF SAID PERSON HAS TITLE TO THE LAND ON WHICH SAID MONUMENT OR ACCESSORY IS LOCATED, COMMITS A CLASS 2 MISDEMEANOR UNLESS, PRIOR TO SUCH REMOVAL, SAID PERSON HAS CAUSED A COLORADO PROFESSIONAL LAND SURVEYOR TO ESTABLISH AT LEAST TWO WITNESS CORNERS OR REFERENCE MARKS FOR EACH SUCH MONUMENT OR ACCESSORY REMOVED AND HAS FILED OR CAUSED TO BE FILED A MONUMENT RECORD PURSUANT TO ARTICLE 53 OF TITLE 38, C.R.S.”.
25. ANY SURVEY MONUMENTS WITHIN OR NEAR THE PROJECT SITE SHALL BE SHOWN UPON THE PLANS. IF THERE IS ANY ANTICIPATION THAT THE MONUMENT WILL BE DISTURBED AT ANY POINT IN THE COURSE OF THE PROJECT, THE PLANS SHALL ALSO SHOW AND CALL OUT A MINIMUM OF TWO (2) WITNESS CORNERS OR REFERENCE MARKS, AS NOTED IN C.R.S. 18-4-508, ITEM 2. KNOWN CITY MONUMENTS CAN BE RESEARCHED ON THE CITY’S PUBLIC WEBSITE, LONGMONTCOLORADO.GOV, BY SEARCHING “GIS MAPS AND WEBCAMS”,

AND ACCESSING THE "INTERACTIVE VERTICAL AND HORIZONTAL MONUMENT MAP" FOUND THERE. BLOCK INTERSECTION MONUMENT SURVEY AND DOCUMENTATION IS ONGOING: EXERCISE REASONABLE CAUTION WHEN PERFORMING WORK IN INTERSECTIONS.

RESERVED (IRRIGATION PLAN NOTES)

RESERVED (CONCEPT LANDSCAPE PLAN NOTES)

RESERVED (PRELIMINARY LANDSCAPE PLAN NOTES)

RESERVED (LANDSCAPE PLAN NOTES)

RESERVED (LANDSCAPE GENERAL CONSTRUCTION NOTES)

LONGMONT POWER & COMMUNICATIONS (LPC) CONSTRUCTION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING UTILITY LOCATES. CALL THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987.
2. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING THE SITE FOR LONGMONT POWER AND COMMUNICATIONS (LPC) PRIOR TO SCHEDULING LPC INFRASTRUCTURE INSTALLATION. ENGINEERING PROJECT DESIGNS AND COSTS FOR THE INSTALLATION OF LPC FACILITIES ARE BASED ON THE CONTRACTOR'S FULL AND COMPLETE COMPLIANCE WITH ALL OF THE FOLLOWING LISTED CONDITIONS. FAILURE TO COMPLY WITH ANY OF THESE SITE PREPARATION REQUIREMENTS MAY RESULT IN INSTALLATION DELAYS AND ADDITIONAL CHARGES. LPC IS NOT RESPONSIBLE FOR ANY DELAYS OR CHARGES INCURRED BY THE CONTRACTOR AS A RESULT OF FAILING TO ENSURE THE SITE IS PREPARED PROPERLY. A SITE SHALL BE CONSIDERED PROPERLY PREPARED WHEN IT MEETS ALL OF THE FOLLOWING CONDITIONS:
    a. A TEN (10) FOOT CORRIDOR ALONG LPC'S PATH MUST BE GRADED TO WITHIN TWO (2) TENTHS OF FINAL GRADE. THIS TRENCH PATH SHALL BE SUFFICIENTLY FLAT AND SMOOTH TO FACILITATE TRENCHER ACCESS AND CABLE INSTALLATION.
    b. LPC'S CORRIDOR SHALL BE FREE OF CONSTRUCTION EQUIPMENT, MATERIALS, SCRAP, CONCRETE, AND/OR ANY OTHER OBJECTS OR OBSTACLES THAT MAY INHIBIT TRENCHING.
    c. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCURATE SURVEY INFORMATION, INCLUDING ELEVATIONS, FOR THE CENTER OF LPC'S CORRIDOR. FIVE (5) FOOT OFFSETS FOR TWO CORNERS OF EACH OF LPC'S EQUIPMENT LOCATIONS SHALL ALSO BE PROVIDED.
    d. CONCRETE SIDEWALKS, CURBS, GUTTERS, AND PAVEMENT SHALL BE INSTALLED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL SLEEVES FOR LPC'S USE BENEATH ANY ROADWAYS, CULVERTS, DITCHES, SIDEWALKS, AND EXISTING UTILITIES THAT LPC MUST CROSS DURING SUBSURFACE INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND COORDINATION OF DITCH CROSSINGS. ALL SLEEVES SHALL BE INSTALLED PER SECTION 700 OF THE CITY OF LONGMONT DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS.
    e. SIDEWALKS SHALL BE FREE OF ALL DEBRIS, WITH THE FRONT PROPERTY LINES PAINTED ON SAID SIDEWALK, AND THE REAR PROPERTY LINES CLEARLY STAKED.
    f. CONCRETE DRIVEWAKS, LANDSCAPING, AND IRRIGATION EQUIPMENT SHALL NOT BE INSTALLED PRIOR TO LPC'S FACILITIES.
    g. THE CONTRACTOR SHALL COORDINATE ALL SUBSURFACE UTILITY INSTALLATION FROM DEEPEST TO SHALLOWEST. NO UTILITIES REQUIRING A SHALLOWER BURY DEPTH THAN LPC SHALL BE INSTALLED PRIOR TO LPC'S FACILITIES.
    h. PROPERTY PINS SHALL NOT BE INSTALLED IN LPC'S CORRIDOR PRIOR TO LPC'S FACILITIES.
    i. THE CONTRACTOR SHALL PROVIDE UTILITY LOCATES FOR UNDERGROUND INFRASTRUCTURE INSTALLED BUT NOT CURRENTLY OWNED AND MAINTAINED BY THE CITY, I.E., SEWER, WATER AND STORM DRAINAGE. ADDITIONALLY, ALL EMPTY CONDUITS USED AS SLEEVES FOR IRRIGATION AND DRY UTILITIES MUST BE LOCATED AND CLEARLY IDENTIFIED. THE MINIMUM REQUIRED ACCURACY OF LOCATE MARKS SHALL BE WITHIN 18" EITHER SIDE OF THE UNDERGROUND INFRASTRUCTURE TO BE CONSIDERED PROPERLY LOCATED. LPC SHALL NOT BE RESPONSIBLE FOR REPAIRS OR CHARGES RESULTING FROM DAMAGE TO UNDERGROUND UTILITY INFRASTRUCTURE THAT IS NOT PROPERLY LOCATED AND MARKED USING STANDARD UTILITY LOCATING MATERIALS PER TYPICAL LOCATING PROCEDURES, INCLUDING BUT NOT LIMITED TO PAINT, STAKES, AND LOCATING FLAGS.
    j. CONTRACTOR INSTALLED FACILITIES SHALL BE PLACED AS SHOWN ON THE MASTER UTILITY PLAN, BACKFILLED, AND COMPACTED (I.E., SEWER, WATER, STORM DRAINAGE, ETC.).
3. LPC UNDERGROUND ELECTRIC CABLE THAT EXISTS NEAR THE PROJECT WORK AREA CANNOT BE DE-ENERGIZED FOR CROSSING PURPOSES. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THE CABLES OR INJURY TO THE CONSTRUCTION CREW. SHOULD THE CONTRACTOR DAMAGE THESE

FACILITIES, CONTACT LPC IMMEDIATELY AT 1-303-651-8386. LPC WILL REPAIR THE FACILITIES AND BILL THE CONTRACTOR FOR ALL ASSOCIATED COSTS.

4. WHERE LPC OVERHEAD FACILITIES EXIST IN THE DEVELOPMENT AREA, THE CONTRACTOR MUST KEEP ALL EQUIPMENT OPERATION A MINIMUM OF 10 FEET FROM EXISTING OVERHEAD ELECTRIC LINES. IF THIS IS NOT FEASIBLE, OR CONDITIONS WARRANT ADDITIONAL PROTECTION OR POLE STABILIZATION, THE CONTRACTOR SHALL CONTACT THE LPC OPERATIONS CONSTRUCTION COORDINATOR AT 1-303-651-8386. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE PROTECTIVE COVERING AND OR POLE STABILIZATION, 48 HOURS IN ADVANCE. SHOULD THE CONTRACTOR DAMAGE THESE FACILITIES, CONTACT LPC IMMEDIATELY AT 1-303-651-8386. LONGMONT POWER & COMMUNICATIONS WILL REPAIR THE FACILITIES AND BILL THE CONTRACTOR FOR ALL ASSOCIATED COSTS.

5. AN ELECTRIC COMMUNITY INVESTMENT FEE WILL BE CHARGED FOR ANY NEW OR UPGRADED SERVICES. THE FEE IS CALCULATED AND BASED ON THE PANEL RATING OF THE ELECTRIC SERVICE AND WILL BE COLLECTED WITH THE BUILDING PERMIT FEE.

6. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF EXTENDING THE ELECTRIC UTILITY SYSTEM TO THE SITE, WITHIN THE SITE, RELOCATIONS, OR OTHER CHANGES.

7. ELECTRIC SERVICE LINES AND METERING EQUIPMENT ARE INSTALLED BY THE CONTRACTOR. REFER TO DETAIL 700-16 IN THE CITY OF LONGMONT’S METERING STANDARDS AND CONSTRUCTION SPECIFICATIONS FOR FURTHER DETAILS.
8. THE COST TO REPAIR AND/OR REPLACE ANY ELECTRIC FACILITIES DAMAGED BY THE CONTRACTOR OR THEIR AGENTS DURING CONSTRUCTION ACTIVITIES SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

LONGMONT POWER & COMMUNICATIONS (LPC)
ONE-LINE DIAGRAM NOTES

1. THE ELECTRIC SERVICE LINES AND METERING EQUIPMENT ARE INSTALLED, OWNED, AND MAINTAINED BY THE CUSTOMER. (COMMERCIAL)

2. THE ELECTRIC SERVICE LINES AND METERING EQUIPMENT ARE INSTALLED BY THE CUSTOMER AND ARE REQUIRED TO MAINTAIN A DIRECT LINE OF SIGHT FROM THE UTILITY SOURCE TO THE METER. (RESIDENTIAL)

3. CONCRETE TRANSFORMER PADS ARE TO BE INSTALLED, OWNED, AND MAINTAINED BY THE CUSTOMER. REFER TO DETAIL 700-10 IN THE CITY OF LONGMONT DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS. THE TIMING OF THE CONSTRUCTION OF THE TRANSFORMER PAD MUST BE COORDINATED WITH LPC. (COMMERCIAL 3PH, MULTI-FAMILY 3PH)

4. METER HOUSINGS FOR ALL TYPES OF SERVICES SHALL BE LOCATED ON THE OUTSIDE OF THE BUILDING OR STRUCTURE AND ACCESSIBLE TO METER READERS AS REFERENCED IN LPC RATES AND REGULATIONS GOVERNING ELECTRIC SERVICE.

5. BADGING OF SINGLE, COMMERCIAL, AND MULTIPLEMETER SOCKETS ARE THE CUSTOMER'S RESPONSIBILITY. EACH METER OF A MULTIPLE-METER SOCKET, AND ALL INDIVIDUAL METER SOCKETS, SHALL HAVE A PERMANENT PHENOLIC BADGE SHOWING WHICH HOME, APARTMENT, OFFICE, UNIT, OR ROOM IS TRACKED BY EACH METER.

6. AN ADDITIONAL 2" PVC CONDUIT (PROVIDED BY LPC) WILL BE INSTALLED BY THE CUSTOMER IN THE SERVICE LATERAL TRENCH FROM THE BROADBAND JBOX, LOCATED AT THE TRANSFORMER, TO THE TELECOM DEMARCATION POINT ON/IN THE BUILDING.
7. SECONDARY CABINETS ARE SUPPLIED, INSTALLED, OWNED, AND MAINTAINED BY THE CUSTOMER. SECONDARY CABINETS CAN BE INSTALLED A MINIMUM OF 5' AND A MAXIMUM OF 10' FROM THE SERVICING LPC TRANSFORMER.
8. THE CUSTOMER IS RESPONSIBLE FOR THE INSTALLATION OF (X)-4" PVC CONDUITS WITH 90 DEG, 48" RADIUS SWEEP, IN THE SECONDARY WINDOW OF THE TRANSFORMER PAD TO A DEPTH OF NO LESS THAN 36" TOP OF PIPE, AND THEN BROUGHT INTO THE CUSTOMERS SECONDARY CABINET.
9. LPC WILL INSTALL, OWN, AND MAINTAIN THE CABLE(S) FROM THE TRANSFORMER TO THE SECONDARY CABINET. LPC WILL TERMINATE ALL CABLES WITHIN THE UTILITY TRANSFORMER. THE CUSTOMER WILL TERMINATE ALL CABLES WITHIN THE SECONDARY CABINET.

RESERVED (NEIGHBORHOOD GRADING & DRAINAGE NOTES)

SANITARY SEWER CONSTRUCTION NOTES

1. SEWER PIPE SHALL BE RIGID POLYVINYL CHLORIDE (PVC) ASTM D3034 (< 15") OR ASTM 679 (> 15") WITH WALL THICKNESS SDR 35. ALL SANITARY SEWER PIPES SHALL BE GREEN.
2. ALL LENGTHS OF SEWER LINE SHOWN ON THE MASTER UTILITY PLAN ARE FROM THE CENTER OF MANHOLE TO THE CENTER OF MANHOLE.
3. ALL SANITARY SEWER MANHOLES SHALL RECEIVE A WATERPROOF COATING.
4. ALL SANITARY SEWER MANHOLES SHALL BE 4 FEET IN DIAMETER UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL INSTALL TEMPORARY PLUGS IN THE MANHOLES AT THE POINTS OF CONNECTION TO THE EXISTING SEWER SYSTEMS. PLUGS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACCEPTANCE IS ISSUED, AT WHICH TIME THE CONTRACTOR SHALL REMOVE THEM.
6. SEWER SERVICES SHALL BE EXTENDED 15 FEET INTO THE LOT AND MARKED WITH A 2X4. SERVICE LOCATIONS SHALL BE CHISELED INTO THE CONCRETE WALK.
7. ALL SANITARY SEWER INFRASTRUCTURE SHALL BE CLEANED PRIOR TO CONSTRUCTION ACCEPTANCE.
8. ALL SANITARY SEWER INFRASTRUCTURE SHALL BE INSPECTED VIA CAMERA PRIOR TO CONSTRUCTION ACCEPTANCE.

STORM SEWER CONSTRUCTION NOTES

1. ALL STORM SEWER REINFORCED CONCRETE PIPE SHALL MEET ASTM C-76, CLASS III STANDARDS.
2. ALL STORM SEWER PIPE JOINTS SHALL BE RUBBER O-RING TYPE PER ASTM C361.
3. STORM SEWER MANHOLES SHALL BE FOUR (4) FEET IN DIAMETER FOR PIPES 36 INCHES IN DIAMETER OR LESS; FIVE (5) FEET IN DIAMETER FOR PIPES GREATER THAN 36 INCHES TO 48 INCHES IN DIAMETER; AND SIX (6) FEET IN DIAMETER FOR PIPES GREATER THAN 48 INCHES TO 60 INCHES IN DIAMETER.
4. ALL STORM SEWER INLETS SHALL BE CDOT TYPE R CURB INLETS UNLESS OTHERWISE NOTED.
5. ALL STORM SEWER MANHOLE AND INLET LIDS SHALL HAVE THE FOLLOWING CONFINED SPACE INFORMATION: “STORM SEWER CAUTION CONFINED SPACE ENTRY PERMIT REQUIRED”.
6. MANHOLE AND INLET LID LOCATIONS SHALL BE COORDINATED WITH THE CITY OF LONGMONT CONSTRUCTION INSPECTOR.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM EROSION AND SEDIMENT CONTROL MEASURES, AND TO MAINTAIN CONSTRUCTED DRAINAGE FACILITIES, THROUGHOUT THE CONSTRUCTION PROCESS IN A MANNER THAT PRESERVES THE INTENDED FUNCTION AND LIFE OF THE DRAINAGE FACILITIES.
8. A TRASH RACK WITH A GALVANIZED COATING SHALL BE DESIGNED FOR ALL STORM SEWER OPENINGS THAT ARE: LARGER THAN 18 INCHES, SUBJECT TO AN UNAUTHORIZED ENTRANCE, OR TRASH ACCUMULATION. GRATES ARE NOT PERMITTED ON THE DOWNSTREAM END OF THE PIPE.
9. ALL STORM INFRASTRUCTURE SHALL BE CLEANED PRIOR TO CONSTRUCTION ACCEPTANCE.
10. ALL STORM INFRASTRUCTURE SHALL BE INSPECTED VIA CAMERA PRIOR TO CONSTRUCTION ACCEPTANCE.
11. OWNERSHIP AND MAINTENANCE RESPONSIBILITY:

    <OWNERSHIP AND MAINTENANCE RESPONSIBILITIES FOR ALL PROPOSED DRAINAGE AND WATER QUALITY FACILITIES SHALL BE CLEARLY DESIGNATED UNDER STORM SEWER CONSTRUCTION NOTE 11 PRIOR TO RECEIVING FINAL ACCEPTANCE. ALL PRIVATE AND PUBLIC FACILITIES APPLICABLE TO THE PROJECT SHALL BE LISTED.>

RESERVED
(STORMWATER POLLUTION CONTROL (SPC) GENERAL NOTES)

UNDERDRAIN CONSTRUCTION NOTES

1. THE UNDERDRAIN COLLECTION SYSTEM IS A PRIVATE SYSTEM OWNED AND MAINTAINED BY THE PROPERTY OWNER(S)/HOA/PROPERTY OWNERS ASSOCIATION.
2. ANY UNDERDRAIN COLLECTION SYSTEM MAIN LINE LOCATED WITHIN CITY ROW SHALL BE MINIMUM SIX (6)-INCH DIAMETER, SOLID, RIGID- WALLED PIPE. A SIX (6)-INCH UNDERDRAIN MAIN CAN BE INSTALLED IN THE SAME TRENCH WITH SANITARY SEWER MAIN. UNDERDRAIN MAIN LARGER THAN SIX (6)-INCH MUST BE PLACED IN A SEPARATE TRENCH FROM ALL OTHER UNDERGROUND UTILITIES.
3. UNDERDRAIN SERVICE LINES SHALL BE MINIMUM FOUR (4)-INCH DIAMETER SOLID PVC AND WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER(S)/HOA/PROPERTY OWNERS ASSOCIATION (REFERENCE UNDERDRAIN AND SANITARY SEWER SERVICE DETAIL).
4. FOUNDATION PERIMETER DRAIN FOR BUILDINGS SHALL BE FOUR (4)-INCH PERFORATED PIPE OWNED AND MAINTAINED BY THE PROPERTY OWNER(S)/HOA/PROPERTY OWNERS ASSOCIATION.
5. A MINIMUM SIX (6)-INCH DIAMETER CLEANOUT SHALL BE INSTALLED EVERY 200 FEET ON UNDERDRAIN MAIN LINE FOR STRAIGHT RUNS OF PIPE. UNDERDRAIN CLEANOUTS ARE REQUIRED AT EVERY CHANGE IN PIPE ALIGNMENT.
6. A 24-INCH INSIDE-DIAMETER UNDERDRAIN INSPECTION MANHOLE SHALL BE INSTALLED IN LOCATIONS WHERE THREE OR MORE UNDERDRAIN PIPES ARE CONNECTED (REFERENCE DETAIL).
7. THE DISTANCE BETWEEN ANY SANITARY SEWER MANHOLE AND UNDERDRAIN MANHOLE SHALL BE A MINIMUM OF THREE (3) FEET (AS MEASURED FROM THE EDGES OF THE MANHOLES) FOR UTILITIES AT A MAXIMUM DEPTH OF 10 FEET. FOR UTILITIES GREATER THAN 10 FEET DEEP, AN ENGINEERING DESIGN WILL BE REQUIRED.
8. THE LOWEST FLOOR ELEVATION (INCLUDING BASEMENTS) SHALL BE MINIMUM THREE (3) FEET ABOVE THE HIGHEST MEASURED GROUNDWATER LEVEL.
9. AN INFRASTRUCTURE PERMIT WILL BE REQUIRED FROM THE CITY TO INSTALL, OWN, MAINTAIN, AND OPERATE PRIVATE UTILITIES IN PUBLIC RIGHTS-OF-WAY.
10. UNDERDRAIN COLLECTION SYSTEM INSTALLATION (MAIN LINE AND SERVICE LINE) SHALL BE INSPECTED BY THE CITY.
11. THE UNDERDRAIN COLLECTION SYSTEM SHALL BE INSPECTED BY DYE TESTING AND VIDEO TESTING, AND THOSE RESULTS PROVIDED TO THE CITY, PRIOR TO CONSTRUCTION FINAL ACCEPTANCE.
12. AS-BUILT PLANS WILL BE REQUIRED FOR ALL UNDERDRAIN COLLECTION SYSTEMS.

WATER DISTRIBUTION CONSTRUCTION NOTES

1. WATER MAIN PIPE SHALL BE RIGID POLYVINYL CHLORIDE (PVC) CONFORMING TO AWWA C900 CL 150. J-M (J-M MANUFACTURING CO.) IS NOT ALLOWED TO BE USED IN THE CITY OF LONGMONT. ALL WATER DISTRIBUTION PIPES SHALL BE BLUE.

2. ALL LENGTHS OF WATER LINE SHOWN ON THE MASTER UTILITY PLAN ARE FROM THE CENTER TO THE CENTER OF ALL VALVES OR FITTINGS.

3. LONGITUDINAL BENDING OF PVC IS NOT ALLOWED. ALL DEFLECTIONS SHALL BE OBTAINED THROUGH FITTINGS OR, IF ALLOWED BY THE MANUFACTURER'S WRITTEN LITERATURE, AT THE JOINTS. IF JOINT DEFLECTION IS ALLOWED, THE DEFLECTION SHALL BE NO MORE THAN ONE-HALF OF THE MANUFACTURER'S ALLOWABLE MAXIMUM.

4. THE CONTRACTOR SHALL INSTALL TEMPORARY BLOW-OFFS FOR TESTING AND FLUSHING OF THE WATER MAINS.

5. A PERMANENT BLOW-OFF OR FIRE HYDRANT IS REQUIRED FOR EACH DEAD-END LINE.

6. FIRE HYDRANT LINES SHALL BE 6-INCH DIAMETER AND SHALL MATCH THE TYPE OF MATERIAL USED FOR THE MAINLINE.

RESERVED
(WILDLIFE RESTRICTIONS CONSTRUCTION NOTES)

TRACER WIRE NOTES

TRACER WIRE NOTES:

1. LOCATING MUST MEET REQUIREMENTS OF SENATE BILL 18-167 OR ANY UPDATE.
2. TRACER WIRE SHALL BE LOCATED ON TOP OF PIPE AND SHALL BE TAPED TO THE PIPE AT FROM THREE (3) TO NO GREATER THAN FOUR (4) FOOT INTERVALS AND AT EACH SIDE OF EVERY JOINT, FITTING, AND VALVE.
3. TRACER WIRE IS REQUIRED FOR ALL WATER SERVICE LATERALS, NON-POTABLE IRRIGATION SERVICE LATERALS, ALL SEWER LATERALS, ALL WATER MAINS, ALL SEWER MAINS, AND ALL NON-POTABLE IRRIGATION MAINS.
4. TWO UNDERGROUND WIRE SPLICES ARE ALLOWED PER SERVICE. SPLICES SHALL HAVE LOCKABLE CONNECTIONS SPECIFICALLY DESIGNED FOR DIRECT BURIAL AND DIELECTRIC SILICONE GEL FILLED OR APPROVED EQUIVALENT.
5. TRACER WIRE SYSTEMS SHALL BE INSTALLED AS A SINGLE CONTINUOUS WIRE, EXCEPT WHERE USING APPROVED CONNECTORS. NO LOOPING OR COILING OF WIRE AROUND THE PIPE SHALL BE ALLOWED.
6. ALL WATER SERVICE LATERAL TRACER WIRE SHALL BE CONNECTED TO MAINLINE TRACER WIRE USING AN APPROVED MAINLINE-TO-LATERAL LUG CONNECTOR WITHOUT CUTTING/SPLICING THE MAINLINE TRACER WIRE.
7. ALL MAINLINE TRACER WIRE BRANCHES SHALL BE MADE WITH AN APPROVED TO-MAINLINE LUG CONNECTOR.
8. REFER TO SECTION 100 AND THE APPROVED MATERIALS LIST FOR APPROVED MATERIALS AND ADDITIONAL REQUIREMENTS.

TEST STATIONS:

1. TRACER WIRE SHALL BE ACCESSIBLE AT LEAST ONCE EVERY 1,000 FT MAX.
2. TEST STATIONS SHALL NOT BE FURTHER THAN 1,000 FT FROM AN APPROVED “FAR-END” GROUNDING ROD.
3. TEST STATIONS MAY EITHER BE IN THE FORM OF A CATHODE WIRE LOOP ACCESSIBLE FROM FINAL GRADE SURFACE OR AN APPROVED TEST STATION ACCESS BOX (SEE APPROVED MATERIALS LIST). EITHER TEST STATION FORM SHALL BE WITHIN THE FAR-END GROUNDING INTERVAL REQUIREMENT, AND MEET CITY OF LONGMONT’S DESIGN STANDARDS AND CONSTUCTION SPECIFICATIONS.
4. THE GROUND SURROUNDING TEST STATION ACCESS BOXES SHALL SLOPE AWAY FROM THE LID AT 2% MINIMUM GRADE.

GROUNDING NOTES:

1. ALL SANITARY SEWER SERVICE LATERAL TRACER WIRES SHALL TERMINATE WITHIN TWO (2) FEET OF THE MAIN WITH AN APPROVED DRIVE-IN MAGNESIUM DRIVE-IN ROD. SINGLE GROUNDING ROD MAY BE UTILIZED FOR UP TO THREE (3) SEWER SERVICES MAX.
2. MAINLINE TRACER WIRE SHALL BE GROUNDED AT EVERY DEAD END/STUB, AND ALONG CONTINUOUS RUNS AT A MAXIMUM OF 2,000 FT INTERVALS WITH A ONE-AND-A-HALF (1.5) LB DRIVE-IN MAGNESIUM GROUNDING ROD PER MANUFACTURER REQUIREMENTS. PLACEMENT OF GROUNDING ROD SHALL BE INSTALLED IN SUCH A WAY THAT ALLOWS FOR PROPER WIRE LOCATING WITHOUT A LOSS OR DETERIORATION OF LOW FREQUENCY SIGNAL (512 HZ) FOR DISTANCES IN EXCESS OF 1,000 FT.

3. IF GROUNDING ROD IS TOO CLOSE TO A TEST STATION THAT IT INTERFERES WITH PROPER LOCATING, THE GROUNDING ROD SHALL BE SWITCHABLE IN ORDER TO TEMPORARILY DEACTIVATE THE INTERFERING GROUND SIGNAL IN THE VICINITY. SUCH A TEST STATION SHALL BE IN THE FORM OF A TEST STATION ACCESS BOX (SEE APPROVED MATERIALS LIST.)

APPENDIX C: REPORT TEMPLATE AND CHECKLISTS

DRAINAGE REPORT CHECKLIST

The listed requirements apply to all Final Drainage Reports. The column labeled "Prelim" identifies requirements for projects that involve a Preliminary Drainage Report to identify and define the conceptual solutions to drainage problems that will occur on-site and off-site.

REPORT REQUIREMENTS

A. Title Page

Yes	No	Prelim	Requirement
		X	1. Subdivision Name
		X	2. Address
		X	3. Property Owner & Property Jurisdiction
		X	4. Developer/Project Owner
		X	5. Engineer
		X	6. Submittal date and revision dates, as applicable
			7. Include Certification Statement from a Registered Professional Engineer in the State of Colorado and the project Developer

B. General Location and Description

Yes	No	Prelim	Requirement
1. Name of Project			
		X	1. Site Vicinity Map
		X	2. Township, Range, Section, and ¼ Section
		X	3. Streets, roadways, and highways adjacent to the proposed development, or within the area served by the proposed drainage improvements
		X	4. Names of adjacent developments and jurisdictions
2. Description of Property			
		X	1. Total developed area and disturbed area in acres
		X	2. Ground cover, vegetation, site topography and slopes
		X	3. NRCS Soils Classification Map and description
		X	4. Major and minor drainageways
		X	5. Floodplains delineated by FEMA FIRM Maps, City adopted floodplain, draft floodplains, or other City adopted documents.
		X	6. Existing irrigation ditches
		X	7. Existing and proposed land use
		X	8. Groundwater investigations and results (Geotech Report or Groundwater Report)
			9. Provide separate underdrain report (Refer to Section 300 of the City Standards and the underdrain report checklist)

C. Drainage Basins and Sub-Basins

		X	1. Major Drainage Basins On-site and off-site major drainage basin characteristics for historic/existing patterns and paths

Yes	No	Prelim	Requirement
			2. On-site and off-site minor drainage characteristics of each sub-basin including total area, imperviousness, flow patterns and paths, design points, and receiving Permanent Stormwater Control (PSC) facility
		X	3. Phase/Filing improvements
		X	4. Irrigation facilities that will influence or be impacted by the site drainage
		X	5. Impacts of the off-site flow patterns and paths, under fully developed conditions

D. Drainage Design Criteria

Yes	No	Prelim	Requirement
1. Regulations			
		X	1. City Standards Section 300 criteria, Urban Drainage & Flood Control District Criteria Manual, Volume 3, FEMA regulations, USACOE regulations, State of Colorado regulations and optional provisions selected when applicable.
3. Hydrology			
		X	1. UDFCD runoff calculations method(s) – runoff coefficients, % imperviousness, flow rate
		X	2. Design storm events including water quality capture volume
		X	3. Design rainfall
		X	4. Detention Pond calculation (Historical Release rate, storage calculation, hydrograph data, peak flow rate)
4. Hydraulics			
			1. Street & Inlet Capacity
			2. Ditch/Swale Capacity and Flow Calculations
		X	3. Open channel or swale capacities
			4. Weirs, Dams, Bridges, other specialized hydraulic structures

E. Stormwater Management Facility Design and Management

Yes	No	Prelim	Requirement
1. Stormwater Conveyance Facilities			
		X	1. Determining scope of stormwater quality infrastructure on project site
		X	2. General conveyance concepts and schematic for storm sewer system
		X	3. Methods used to determine conveyance facility capacities
			4. Maintenance aspects of the design and easements and outlots that are required for stormwater conveyance and storage purposes
			5. Responsibilities of the PSC Permittee upon conclusion of the construction phase of the development.
			6. Design of all permanent stormwater quality control measures including tributary areas, facility sizing, treatment volumes, design features, base design standards, site constraints, etc.
		X	7. Implementation and calculations for Low Impact Development (LID) strategies, including measures to "minimize directly connected impervious areas" (MDCIA).
			8. Stormwater control measure details (outlet structure, BMPs, etc)
		X	9. Permitting items (PSC, 404)
		X	10. Erosion Control (See erosion control checklist)

I. Overall Drainage Plan			
Yes	**No**	**Prelim**	**Requirement**
		X	1. Is an overall drainage plan sheet required?
		X	2. 24" x 36" in size, 22" x 34" also acceptable when half size sets will be produced
		X	3. Title block, legend, north arrow
		X	4. Scale 1"= 20' to 1"= 100', as required to show sufficient detail
		X	5. Property / Project Site boundary line
		X	6. Existing and proposed streets, roadways, or highways
		X	7. Basin delineations, including off-site basins when feasible
		X	8. Offsite flow entering project site
		X	9. Proposed and existing contours (1' increment)
		X	10. Callouts of existing stormwater management facilities and major water bodies
		X	11. Overlay or figure showing layout of Detailed Drainage Plan sheets (viewports)

J. Detailed Drainage Plan (Can be combined with overall drainage plan depending on complexity of project)			
Yes	**No**	**Prelim**	**Requirement**
		X	1. 24" x 36" in size, 22" x 34" also acceptable when half size sets will be produced
		X	2. Title block, legend, north arrow
		X	3. Scale 1"= 20' to 1"= 100', as required to show sufficient detail
		X	4. Proposed and existing contours (1' increment)
		X	5. General labels
		X	6. Road linework
		X	7. Basin delineation and flow arrows
		X	8. Callout existing stormwater management facilities and major water bodies
		X	9. Floodplain checks
		X	10. Quick Checks / required CAD object/lines
		X	11. Common items shown that should not be seen

Electric Service Request

Project Name or Address: _____

Primary Contact Name and Phone Number: _____

Submit this document with initial Site Plans or Public Improvement Plans into the City of Longmont's Design Review process or prior to applying for a Building Permit Application where electric utility service is required. This form initiates the engineering and design process for an electric service extension or revision of existing electric services within the City of Longmont.

Provide one paper copy and an electronic file to include the items listed below. Refer to the City of Longmont Design Standards for electronic file requirements and LPC submittal requirements.

	Residential Development		Commercial / Industrial	
	Single Family	Multi Family	Subdivision	Site Plan-Single Location
Utility Plan with Existing and Proposed Utilities; Sewer, Water, Storm Drainage, Electric, Gas, Communications	X	X	X	X
Landscape Plan	X	X	X	X
Electric Meter(s) Location	NA	X	When available	X
Electric Transformer(s) Location	NA	X	When available	X
New / Upgrading Electric One-Line Diagram	Square Footage Ranges Electric Heat *(yes or no)*	X	When available	X

Party responsible for payment of temporary electric facilities

Temporary Electric Facilities ❑ **NA**	**Temporary Metering** ❑ **NA**
Name:	Name:
Address:	Address:
Phone:	Phone:
Email:	Email:

Party responsible for payment of final electric facilities

Final Electric Facilities	**Final Metering** ❑ **NA**
Name:	Name:
Address:	Address:
Phone:	Phone:
Email:	Email:

Party responsible for payment of energy usage

Temporary Energy Usage ❑ **NA**	**Final/Permanent Energy Usage** ❑ **NA**
Name:	Name:
Address:	Address:
Phone:	Phone:
Email:	Email:

Applicant: _____ **Date:** _____

1100 South Sherman Street, Longmont, CO 80501
303-651-8386 ● FAX: 303-651-8796 ● www.longmontcolorado/lpc

REQUEST FOR AN EXCEPTION TO CITY STANDARDS

Project Name & Location _____

Date: _____

Developer: _____

Engineer of Record (EOR): _____

DIRECTIONS

All exceptions submitted must be on company letterhead and follow this format.

Attach supporting documentation and calculations for the requested design exception.

Unless otherwise approved by the City Engineer, design exceptions must be signed and sealed by a registered Professional Engineer licensed to do work in the State of Colorado.

See Section 100 of the Longmont Public Improvement Design Standards and Construction Specifications for more information.

EXCEPTION REQUEST

The applicant is requesting an exception to [list the section of the design standards the request is referencing].

JUSTIFICATION

Provide justification for the exception request. The applicant must include calculations, references to other industry standards, how the intent of the standards are being met, and any other information needed to justify the exception.

The applicant shall demonstrate compliance with the following three (3) criteria (per Section 100):

1. Special circumstances or conditions exist which are outside of the control of the applicant and which limit the ability of the design to meet the City Standards outlined in the document. Financial difficulties, loss of prospective profits and previously approved exceptions in other developments shall not be considered special circumstances.
2. The exception represents an alternative design that mitigates the special circumstances or conditions while meeting the intent of the City Standards set forth in this document.
3. The exception will not be detrimental to the public interest or other property, nor in conflict with Envision Longmont or applicable provision of the Longmont Municipal Code, and will not endanger public safety, health or welfare.

LIST OF ATTACHMENTS

Provide a list of the attachments and exhibits supporting the exception request.

SIGNATURE AND STAMP OF ENGINEER OF RECORD

Note: *Approval of construction plans by the City, which contain design elements not in compliance with the City Standards, and for which an exception request has not been specifically requested and approved, does not imply approval of an exception from these City Standards. Only those exceptions submitted in writing and approved by the City Engineer are granted exception.*

GEOTECHNICAL REPORT CHECKLIST

The City of Longmont requires a geotechnical report for all proposed construction within the City's Easements or Right-of-way. The reports are to include information necessary to determine the characteristics of soils encountered within the project limits, and make recommendations on how to deal with problem areas.

REPORT REQUIREMENTS

A. Investigation and Recommendation Requirements (by geotechnical engineer)

Yes	No	N/A	**Requirement:** The soils engineer shall investigate and recommend solutions to problems of**:**
			1. Expansion of cohesive soils
			2. Frost heave in silty soils
			3. Potential ground water problems
			4. Partially constructed streets
			5. Use of sub-base filter fabric
			6. Any other matter that may adversely affect the project design

B. Soil Sample Requirements

Yes	No	N/A	**Requirement**
			1. Soil samples shall be taken at the proposed subgrade elevation and shall represent the soil of the subgrade.
			2. All boring depths shall extend a minimum of three (3) feet below the proposed subgrade elevation.
			3. The boring locations shall not exceed a distance of 500 ft. between borings, with a minimum of two (2) borings per roadway.
			4. If more than one soil type is encountered in the boring, they shall be logged and tested separately.
			5. All design shall be based on the worst soil encountered from the standpoint of subgrade support.
			6. All subgrade shall have a minimum of ninety-five percent compaction at ± 2% of optimum moisture content to a depth of twelve inches.
			7. The geotechnical report must demonstrate the adequateness of the structural section.

D. Contact Information (Must be included on front page of report)			
Yes	**No**	**N/A**	**Requirement**
			1. Development/Project Name
			2. Location/Address
			3. Firm Name
			4. Submitted By
			5. Contact Person
			6. Contact Phone Number
			7. Submittal Date In Date order of 1st, 2nd, 3rd, etc. submittal
			8. Date Approved
C. Geotechnical Report Requirements and Format			
Yes	**No**	**N/A**	**Requirement**
			1. The geotechnical report must be prepared by a professional engineer, whose expertise is geotechnical engineering registered in the State of Colorado.
			2. The report must be submitted to the City Engineer for review and approval prior to the final approval of any construction drawings.
1. Report Format			
			1. Title page with project address
			2. 8 ½" x 11" report, bound or in a folder
			3. Dated, checked, signed and sealed by a professional engineer
			4. Original and revision dates
2. Soils Information			
			1. Boring locations on site plan
			2. Boring logs
			3. Gradation tests/Atterberg limits
			4. Compaction tests
			5. Percent swell (If percent swell exceeds 1.5%, the report shall include the proposed methods(s) to deal with swelling soil characteristics)
			6. Soil classification (AASHTO)
			7. Problem areas on the site
			8. Groundwater levels
			9. Trenching restrictions
3. Construction Methods			
			1. Retesting after rough grading
			2. Construction sequence
			3. Lift thickness
			4. Recommendations for planned construction

PAVEMENT DESIGN REPORT CHECKLIST

The City of Longmont requires a pavement design report for all proposed construction within City Easements or Rights-of-Way. The report is to include information necessary to determine the characteristics of soils encountered within project limits and make recommendations on how to deal with problem areas. The pavement design report may be included in the geotechnical report.

REPORT REQUIREMENTS

A. Contact Information (Must be included on front page of report)

Yes	No	N/A	Requirement
			1. Development/Project Name
			2. Location/Address
			3. Firm Name
			4. Submitted By
			5. Contact Person
			6. Contact Phone Number
			7. Submittal Date In Date order of 1st, 2nd, 3rd, etc. submittal
			8. Date Approved

B. General

Yes	No	N/A	Requirement
			1. The pavement design report must be prepared by a professional engineer, registered in the State of Colorado, whose expertise is geotechnical engineering.
			2. The report must be submitted to the City Engineer for review and approval prior to the final approval of any construction drawings.

C. Format

Yes	No	N/A	Requirement
			1. Title page with project address and approval block
			2. 8 ½" x 11" report, pdf
			3. Dated, checked, signed and sealed by a professional engineer
			4. Original and revision dates

D. Soils Information

Yes	No	N/A	Requirement
			1. Boring locations on site plan
			2. Boring logs
			3. Gradation tests/Atterberg limits
			4. Compaction tests
			5. Percent swell (If percent swell exceeds 1.5%, the report shall include the proposed methods(s) to deal with swelling soil characteristics)
			6. Soil classification (AASHTO)
			7. Problem areas on site
			8. Groundwater levels
			9. Trenching restriction

E. Design Criteria			
Yes	**No**	**N/A**	**Requirement**
			1. Roadway classification
			2. Forecast traffic volumes
			3. Construction traffic forecast
			4. 18 KIP EDLA or DTN (Proof roll criteria)
			5. Serviceability Index
			6. Regional factor

F. Pavement Criteria			
Yes	**No**	**N/A**	**Requirement**
			1. Weighted structural number
			3. Design R value
			4. Subgrade properties
			5. Base course
			6. Pavement
			7. Alternatives

G. Construction Methods			
Yes	**No**	**N/A**	**Requirement**
			1. Retesting after rough grading
			2. Paving sequence
			3. Lift thickness
			4. Recommendations for planned construction
			5. Construction traffic control plan

TRANSPORTATION IMPACT STUDIES

This document outlines the policies and requirements for the preparation of Transportation Impact Studies (TIS) for development proposals in the City of Longmont. These requirements exist to ensure consistent traffic analysis practices for developments being considered.

The responsibility for evaluating the traffic impacts associated with a proposed development rests with the applicant. The applicant is responsible for retaining a qualified transportation professional to provide an accurate and complete accounting of probable traffic impacts related to the proposed development. All transportation impact studies should be signed and stamped by a Professional Engineer.

The City of Longmont Planning and Public Works staff are responsible for review of transportation impact studies to ensure that the study is completed accurately and in accordance with these requirements.

1. WHEN IS A TRANSPORTATION IMPACT STUDY REQUIRED?

A. Unless waived by the City Engineer, the City requires a TIS for any new development proposal that could potentially have a significant impact (as determined by the City) on the transportation system. Any of the following may be considered significant impacts:

(1) Daily trip generation is projected to be 500 or more vehicles,

(2) Peak hour trip generation is projected to be 50 more vehicles,

(3) Traffic from a development will impact adjacent residential neighborhoods,

(4) Driveway impacts on public streets related to turning movements or signal timing/progression,

(5) Significant citizen concern due to expected traffic impacts.

B. TIS may also be required when a previously approved development changes or expands in such a way that the approved access to the site is affected or trip generation estimates increase by more than 20% over the original estimates.

C. A TIS may need to be updated or redone in its entirety for unapproved development applications with large time gaps between submittals as determined by the City Engineer. Field counts must be considered current (less than a year old) at the time of review or approval.

D. A TIS may also be required for each phase of a large phased development. In this situation, an overall TIS would be completed for the overall proposal followed by an addendum prior to the development of each phase.

2. TRANSPORTATION IMPACT STUDY PREPARATION AND REVIEW PROCESS

A. The Developer is responsible for contacting the Planning Division before a development application is submitted to determine if a TIS will be required. The need for a TIS will be determined as part of the pre-application conference with the DRC.

B. Prior to the commencement of the TIS, a pre-submittal meeting must be held between the City and the transportation professional retained by the developer to discuss the scope of the study and the requirements for the study content and format. The pre-submittal meeting is intended to provide a firm base of cooperation and communication between the City, the developer, and the transportation consultant. At a minimum, topics discussed at such meetings will include study area, proposed land uses, trip generation, trip distribution, traffic projection year(s), intersections requiring analysis, street sections requiring analysis, signal timing assumptions, and background traffic assumptions. The requirements for transportation study requirements are included in this document.

C. If the study fails to comply with the technical requirements and the scope of the study outlined in the pre-submittal meeting, the Developer will be advised in writing through the City's normal development review process. A study must be submitted and accepted by the City before the City Planning and Zoning Commission schedules the project for consideration.

D. The City will review the transportation impact study in conjunction with the Development Review Committee (DRC) schedule. The draft study and original SYNCHRO files must be submitted with the initial DRC material for review if the DRC schedule is to be maintained. If the study is required for a project that is not involved with the DRC review process, the City will review the draft study within 15 working days of the date of submittal. If study revisions are needed, the City will normally review the revised study within 10 working days of submittal. A longer review period will be necessary if the Colorado Department of Transportation (CDOT) or other agencies are involved in the review process.

3. REQUIREMENTS FOR TRANSPORTATION IMPACT STUDIES

A. Study Purpose and Site Description – The study shall include a brief description of the development application proposal (i.e. annexation, rezoning, subdivision, site plan application etc.) It shall also include a brief description of the development proposal including the site location, the size of the land parcel, general terrain features, the types of land uses being proposed and the proposed access points.

B. Study Area – The boundaries of the study area will be based on engineering judgment and an understanding of existing traffic conditions surrounding the site. The limits should be agreed upon at the pre-submittal meeting with staff. The boundaries of the study area shall be based on the size and extent of the proposed development and its relation to significant streets and intersections. Large developments may require a study area extending beyond one mile due to the magnitude of potential impacts. As a minimum, the study area will include:

(1) Adjacent streets

(2) Adjacent arterial/arterial or arterial/collector intersections, including, at minimum, all signalized intersections within a ½-mile radius of the site

(3) Site access points

(4) Internal roads

(5) A vicinity map that shows the site and the study area boundaries in relation to the surrounding transportation system must be included in the study. All arterial and collector streets in the study area and access points to the site should be shown on the map.

(6) Key intersections in the study area that will be analyzed in the study shall be identified at the pre-submittal meeting. The key intersections should be identified on the map.

C. Study Horizons – Three study horizons are required for analysis: The current conditions, short term and long term.

(1) The current (existing) conditions should be analyzed to establish a baseline of traffic conditions.

(2) The short-term horizon represents the planned opening year of the project. Both a background analysis and analysis with the project completed should be completed to assess the short-term impacts of the project. Assumptions about street improvements not associated with the study project in the short term should be based on the projects shown in the City's Capital Improvement Program or projects that have already been financially obligated to a developer.

(3) The long-term planning horizon represents conditions at 80% build out of the Longmont Planning Area as shown in the Longmont Area Comprehensive Plan (LACP). For Land uses in compliance with the LACP

this analysis should be completed using forecast volumes and roadway improvements as shown in the LACP. For land uses that are not in compliance with the LACP analyses for both the adopted land uses in the LACP and the proposed land uses should be completed so that the impact of the land use change can be evaluated.

(4) When an overall transportation impact study is completed for a phased development the study shall look at all three study horizons. Addenda for each phase of development should only look at the current conditions and the short-term horizons.

D. Analysis Time Periods – Normally, the analysis time periods will be the weekday a.m. and p.m. peak hours. Under some circumstances, the City may require analyses to occur at other times as appropriate.

E. Existing/Base Conditions

(1) Existing and Proposed Land Uses – A complete description (including a map) of the existing land uses in the study area as well as their current zoning, shall be included in the study. In addition, the future uses of all vacant land within the study area that may be developed within the projection year of the project must be identified. For the short-term horizon only land where development applications have been approved should be considered as developed within the projection year. For the long-term horizon, land uses shown in the LACP should be assumed as developed within the projection year.

(2) Existing and Proposed Transportation System – The study shall describe the existing roadways and intersections in the study area including the road geometry and intersection traffic control. For the short-term horizon, assumptions about road improvements not related to the development shall be based on the City's Capital Improvement Program and on improvements already financially obligated to a developer. For the long-term horizon, all improvements shown in the LACP within the study area should be assumed.

(3) Existing Traffic – Current a.m. and p.m. peak hour traffic volumes shall be obtained for the roadways and intersections within the study area. "Current" means counts less than a year old. A map or series of maps of the existing roadway network shall be prepared showing the existing conditions and volume counts including lane geometry, traffic control, access points, turning movement volumes and calculated peak hour factors.

(4) Background Traffic – For the short-term horizon, background traffic shall be the sum of existing traffic volumes plus the addition of traffic from any not yet built but approved developments in the study area plus background traffic growth. Background traffic growth should be calculated from historical 24-hour volume counts in the City of Longmont in the vicinity of the proposed development. Staff will provide this information when it is available. The annual percentage of background traffic growth should be agreed upon at the pre-submittal meeting.

a. For the long-term horizon, background traffic shall be based on the most recent traffic forecasts from the City's long-range transportation model.

b. Maps of both the short-term and long-term roadway network shall be prepared showing the projected conditions and projected volume counts including lane geometry, traffic control, access point, a.m. and p.m. peak hour turning **movement volumes and calculated peak hour factors.**

F. Site Related Traffic

(1) Trip Generation – A summary table listing each type of land use, the size or amount involved, the trip generation rates used and the resultant total trips must be provided. Trip generation rates shall be calculated using data contained in the latest edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual or from a local trip generation study following procedures prescribed in the ITE Trip Generation Manual. If a local trip generation study is used to determine the trip generation rate,

documentation of the trip generation study and the resulting rate should be included in an appendix of the transportation impact study.

(2) The ITE Trip Generation Manual presents data on trip generation rates in various formats. A weighted average trip generation rate is shown. Also, when possible, a regression equation is presented that defines the line representing "best fit" of the data. Trip generation rates should be determined as outlined below.

a. Use Regression Equation when:

- A regression equation is provided,
- The independent variable is within range of data and either the data plot has a least 20 points, or
- The R2 is greater than or equal to 0.75, equation falls within the data cluster in the plot and the standard deviation is greater than 110% of the weighted average rate.

b. Use the Weighted Average Rate when:

- At least three data points,
- Independent variable is within range of data,
- Standard deviation is less than or equal to 110% of the weighted average rate,
- R2 is less than 0.75 or no equation provided,
- Weighted average rate falls within data cluster plot.

c. Collect Local Data when:

- Study site is not compatible with ITE land use code definition,
- Only 1 or 2 data points; preferably when five or fewer data points,
- Independent variable does not fall within range of data,
- Neither weighted average rate line or fitted curve fall within data cluster at size of development.

(3) Trip making reduction factors may be used after first generating trips at full ITE rates. These factors fall into two categories: those that reassign some portion of generated trips to the background stream of traffic, and those that remove or move generated trips. In all cases, the underlying assumptions of the ITE Trip Generation rates must be recognized and considered before any reductions are claimed.

a. The first category is when trips to the proposed development currently exist as part of the background traffic stream, referred to as pass-by trips. Pass-by percentages identified by ITE or in other industry publications may typically be used. But, the source of the percentages must be identified and the City must approve use. Pass-by traffic must continue to be assigned to site driveways and access points, but is not additive to the background traffic stream. An appendix that illustrates the assignment of pass-by trips must be included in the report.

b. The second category for adjustments is for internal site trips, transit use, and transportation demand management (TDM) actions. Reductions of these types may be allowed if analytic support is provided to show how the figures were derived. The City must approve any reductions that are claimed. Optimistic assumptions regarding transit use and TDM actions will not be accepted unless accompanied by specific implementation proposals that will become a condition of development approval. Such implementation proposals must have a high expectation of realization within a 3-year period after project initiation.

(4) Trip Distribution – The percentage of trips to/from the proposed development to/from destinations in the region must be clearly shown graphically in the new report. The consultant shall be responsible for estimating trip distribution. Marketing studies, sub-area transportation studies, documented existing

traffic patterns and professional judgement may be used to make trip distribution assumptions. Whatever method(s) are used, the procedures and rationale used should be fully explained and documented in the study.

Different trip distribution assumptions can be used for different land uses in mixed-use developments. If more than one set of distribution assumptions are made they should be shown on separate graphics.

(5) Trip Assignment – Site generated traffic shall be assigned to the street system according to the trip distribution percentages determined in the previous step. The traffic assignment must be clearly shown graphically in the report.

G. Analysis and Identification of Impacts

(1) The project impacts shall be determined through an analysis procedure that follows the sequence of tasks outlined below:

a. Assessment of existing conditions,

b. Assessment of short term background conditions,

c. Assessment of short term conditions with the planned land use shown in the LACP for the land being proposed for development (this task is only needed when the proposed development is requesting a land use amendment),

d. Assessment of short term conditions with the proposed development,

e. Assessment of long term background conditions,

f. Assessment of the long-term conditions with the proposed development when a land use amendment is being requested.

(2) Highway Capacity Analysis – Assessment techniques for existing conditions, short-term background and short term with the development will include a capacity and level of service (LOS) analysis for the key intersections identified in the study area during the identified analysis time periods. For signalized intersections, the analyses shall be completed using the operational analysis methodology shown in the latest edition of the Highway Capacity Manual published by the Transportation Research Board. Both volume to capacity ratio (v/c) ration and level of service for each movement shall be reported in a table or diagram for each signalized intersection analyzed. The overall intersection level of service shall also be reported. The City of Longmont's benchmark for traffic congestion states that all signalized intersections should be maintained at overall LOS D or better. In addition, the benchmark requires that all movements that have 5% or more of the total entering intersection volume should be maintained at LOS D or better and have a volume to capacity ratio less than 1.0. Therefore, any signalized intersections or movements at signalized intersections that exceed these thresholds should be noted. The capacity and level of service analysis at signalized intersections shall be performed using the following assumptions:

a. Peak hour factors should be calculated on an approach-by-approach basis from the turning movement count data collected for the analysis,

b. Right turn on red should not be considered unless specific data documenting the percentage of turns on red is collected,

c. Unless approved by the City at the pre-submittal meeting all arrival types shall be assumed to be type 3 as defined in the Highway Capacity Manual,

d. Signal controller unit extension should be assumed to be 3.0 for through movements and 2.0 for left turn movements unless otherwise approved by the City,

e. Startup lost time should be assumed to be 2.0 seconds unless otherwise approved by the City,

f. Extension of effective green should be assumed to be 3.0 seconds unless otherwise approved by the City,

g. Traffic signal timing parameters for the existing conditions will be the actual signal timing in effect unless determined otherwise by the City. Traffic signal timing parameters for the short-term background conditions and the short-term conditions with the development will use signal cycle lengths between 80 and 120 seconds. Cycle lengths and individual green intervals will be calculated to provide the least overall intersections delay while maintaining all movements below benchmark thresholds whenever possible. Clearance intervals shall be the actual times currently in effect for all scenarios analyzed. Where different signal phasing from the existing is used for the analysis, this change shall be noted in the list of traffic impacts. Where traffic signals are part of a coordinated signal system or where proposed new signals are within a half mile of another signal the cycle lengths used for analysis should be the same at all intersections analyzed.

h. Saturation flow rate will be assumed to be 1900 pcphgpl.

i. Lane widths should be assumed to be 12 ft. wide unless other data shows otherwise.

j. 2% trucks should be assumed for all movements unless approved otherwise by the City.

k. Saturation flow adjustment factors should be as per the Highway Capacity Manual.

l. Where dual left turns exist or are proposed they shall be assumed to operate in a protected-only mode.

m. Free running right turns that are not affected by the signal timing should be excluded from the analysis.

(3) Level of service analysis for unsignalized intersections shall be done in accordance with the methodology for unsignalized intersections in the latest edition of the Highway Capacity Manual. The results of the unsignalized intersection analysis should be shown in the table or diagram used for signalized intersection results. The following assumptions should be used for the analysis of unsignalized intersections:

a. Duration of analysis period is assumed to be .25 hour,

b. Peak hour factors should be calculated on an approach-by-approach basis from the turning movement count data collected for the analysis,

c. 2% trucks should be assumed for all movements unless approved otherwise by the City,

d. Saturation flow rate will be assumed to be 1700 pcphgpl,

e. Critical gap and follow up time shall be in accordance with the values given in the Highway Capacity Manual.

(4) Assessment techniques for both long-term background and long term with the proposed development will require analysis using the planning methodology for signalized intersections and the unsignalized intersection methodology for unsignalized intersections as outlined in the latest edition of the Highway Capacity Manual. The condition (i.e. under capacity, near capacity, over capacity, etc.) for signalized intersections and the level of service for unsignalized intersections should be reported in a table or diagram.

a. The following assumptions shall be used for the long-range signalized intersection analysis:

b. A peak hour factor of 0.9 shall be used

c. Cycle lengths between 80 and 120 seconds shall be used

d. Assumptions for the long-range unsignalized intersection analysis shall be the same as for the short-term analysis.

(5) Access Evaluation – Assessment techniques for existing conditions, short-term background, short term with the development, long-term background and long term with the development will also include an evaluation of each proposed access point. Accesses should be considered intersections and included in the level of service/capacity analysis described above.

a. Safety is the top priority at access points. The City has developed standards for the spacing and design of access points to provide optimum safety. Accesses should be reviewed to ensure compliance with City (and CDOT if on a State Highway) standards. Proposed access points that do not meet the pertinent standards should be noted.

b. In addition, all access points should be evaluated to determine what auxiliary lanes are required in accordance with City standards and State Highway Access Code (where applicable).

(6) Evaluation of Signal Progression in Coordinated Signal Systems – According to City Standards, intersections with the potential for signalization should be spaced no closer than one half mile. If a development proposes an access or intersection that is projected to be signalized and is less than a half mile from other signals or other planned signals a progression analysis shall be conducted to demonstrate that a new signal can be installed without negatively impacting progression.

a. The analysis shall consider all existing signals or possible future signals within one mile in each direction from the proposed signal location. On existing coordinated arterials, it must be demonstrated that the existing bandwidth in each direction can be maintained with the new signal installed. Where a new coordinated system will occur as a result of the new signal it must be demonstrated that a bandwidth of at least 45% can be achieved in each direction unless otherwise directed by the City. The following assumptions shall be used for the progression analysis:

- A cycle length between 80 and 120 seconds should be used for analysis,
- Actual prevailing speeds on the arterial shall be used for travel speed in the analysis,
- Split assumptions shall be based on projected turning movement volumes and designed to maintain all movements with at least 5% or more of the total intersection traffic at LOS D or better and below v/c ratio of 1.0 in keeping with the City of Longmont Congestion Benchmark. Where pedestrian volumes are expected to be high (to be determined in the pre-submittal meeting), side street splits long enough to accommodate pedestrians shall be used assuming a 4.0 fps walking speed,

b. Where left turn arrows are anticipated, protected/permissive phasing should be assumed unless dual left turns are projected. Then, protected only left turn phasing should be assumed,

c. Lagging left turns will not be allowed for protected/permitted left turn phases,

d. Any access where the required bandwidth cannot be achieved should be noted. Any such access shall remain unsignalized and have turning movements limited by driveway design and/or median islands to prevent the need for signalization. Time-space diagrams shall be included in an appendix to the study.

(7) Other analysis required on a case-by-case basis – Where the City deems it appropriate, other types of analysis may be required in the transportation impact study. Other types of analysis may include by are not limited to: Sight distance evaluation, transit and TDM opportunities, pedestrian/bicycle needs, environmental evaluation and evaluation of neighborhood impacts.

4. IMPACT MITIGATION MEASURES

A. Summary of Analysis – A conclusions and recommendations chapter should be included in the transportation impact study.

(1) The results of the analysis should be summarized in this chapter. This summary should note all impacts to the transportation system and recommendations for site access, roadway improvements and travel demand strategies needed to maintain traffic flow safely and at a level of service in keeping with the City's congestion benchmark.

(2) In the event that the analysis indicates unsatisfactory levels of service or v/c ratio at any study intersection a description of proposed mitigation techniques or physical improvements to remedy deficiencies must be included.

(3) It should be noted if the recommended improvements are part of the City's Capital Improvement Program, are already financially obligated to another developer, or if there is currently no funding dedicated for the improvements.

(4) It is required that all improvements be presented in tabular format with information about which party is responsible for the improvement (applicant, City, CDOT, etc.) and when the improvement is anticipated to be completed.

B. Transportation Demand Management – If TCM measures are recommended to mitigate unsatisfactory traffic conditions a specific TDM Implementation Proposal shall be developed and presented to the City. If accepted, this Implementation Proposal will become a condition of approval of the land use action requested.

C. Evaluation of Proposed Improvements – If unsatisfactory levels of service or v/c ratios are predicted by the study and recommendations are made for mitigation. Additional analysis must be presented which demonstrates the effectiveness of the mitigation.

STATEMENT OF EXPECTED UTILITY NEEDS

Project Name & Location: _____

Date: _____

Developer: _____

Building Description _____

Code Section: International Plumbing Code, current edition as adopted by the City

DIRECTIONS

Attach fixture count and calculations for both the water and sewer demand. For developments with multiple buildings, complete one form for each building type with all applicable information filled in.

WATER DEMAND

Policy: Water meters and service lines shall be sized in accordance with the following table based on the current City adopted International Plumbing Code. If a combined domestic and irrigation meter are used, the higher water demand shall determine the water meter size.

Domestic Water Demand

Description	Existing Value (if any)	Proposed Value
Water Supply Fixture Units (wsfu)		
Flow Rate (gpm)		
Water Meter Size (in)		
Service Line Size (in)		
Velocity in Service Line (ft/s)		

Irrigation Water Demand

Description	Existing Value (if any)	Proposed Value
Irrigated Area (sf)		
Flow Rate (gpm)		
Water Meter Size (in)		
Service Line Size (in)		
Velocity in Service Line (ft/s)		

SANITARY SEWER DEMAND

Policy: Sanitary sewer service lines shall be sized in accordance with the following table based on the current City adopted International Plumbing Code.

Description	Existing Value (if any)	Proposed Value
Drainage Fixture Units		
Flow (gpm)[1]		
Sewer Service Pipe Diameter (in)		
Slope of Service Line (%) (2% min)		
Velocity (ft/s)		

[1] *Flow shall be calculated 70% of the estimated water demand based on IPC calculation for domestic water demand.*

ELECTRIC REQUIREMENTS

Policy: An (ECIF) Electric Community Investment Fee credit, will be given for an existing service and can be applied to an upgraded service at the same location.

Description	Existing Service (if any)	Proposed Service
Residential or Commercial (Res or Com)		
1 Phase or 3 Phase (1ph or 3ph)		
Voltage: (120/240v, 120/208v or 277/480v)		
Main Panel Rating (Amps)		
Main Buss Rating (Amps)		

CERTIFICATION STATEMENT

I hereby certify that the information provided in this Statement of Expected Utility Needs is accurate, meets the requirements of the _____ International Plumbing Code, and was prepared by myself or under my direct supervision.

Name	P.E. Number	Date	Stamp

UNDERDRAIN REPORT CHECKLIST

If an underdrain collection system is required for a project based on recommendations made in the geotechnical engineering report then an underdrain report shall be submitted for review and approval.

REPORT REQUIREMENTS

A. Title Page

Yes	No	N/A	Requirement
			1. Subdivision Name
			2. Address
			3. Property Owner & Property Jurisdiction
			4. Owner
			5. Engineer
			6. Submittal date and revision dates, as applicable

B. General Location and Description

Yes	No	N/A	Requirement
1. Name of Project			
			1. Site Vicinity Map
			2. Township, Range, Section, and ¼ Section
			3. Streets, roadways, and highways adjacent to the proposed project, or within the area served by the proposed underdrain collection system
			4. Names of adjacent developments and jurisdictions
2. Description of Property			
			1. Total developed area in acres
			2. Ground cover, vegetation, site topography and slopes
			3. NRCS Soils Classification Map and description
			4. Major and minor drainage ways

C. Existing Condition

Yes	No	N/A	Requirement
			1. Groundwater investigation results including test bores (data only valid btw Apr. and Oct)
			2. Recommendations for groundwater mitigation per the geotechnical engineering report
			3. Impacts on the groundwater based on the proposed underdrain design

D. Underdrain Design Criteria

Yes	No	N/A	Requirement
1. General			
			1. Proposed groundwater mitigation based on the geotechnical engineering report recommendations
			2. Information on any existing underdrain collection systems in the area
			3. Design concept for the proposed underdrain collection system including discharge location and access points
			4. Criteria selected to calculate and design the underdrain collection system
			5. Installation, size and materials for the proposed underdrain collection system

Yes	No	N/A	Requirement
			6. Underdrain exceptions, if required, ie: lift stations, and sump pumps with no underdrain collection system, etc.
			7. Underdrain main calculations, plans and details including engineered designs for exceptions
			8. Approval from existing underdrain collection system owner for connection of proposed system to the existing system is required
			9. All tables, figures, charts, drawings, etc. that were used in design of underdrain collection system that are included in the appendix of the report
2. Additional Permitting Requirements			
			1. General Purpose Water Well Permit from Colorado Department of Water Resources

E. Underdrain Maintenance

Yes	No	N/A	Requirement
			1. Ownership and maintenance responsibilities of all structures, underdrain main, sump pumps or lift stations, if any, and the underdrain service lines from the main to the buildings
			2. The Owner/Homeowners Association (HOA) will be responsible for maintenance and repairs for the underdrain collection system and outfall at discharge locations including erosion protection. Reference Underdrain Construction notes in Appendix B

F. Conclusion

Yes	No	N/A	Requirement
1. Drainage Concept			
			1. Overall effectiveness of the proposed underdrain design to control groundwater
2. Exceptions			
			1. Identify provisions by section number for which exceptions will be requested, or have been approved
			2. Provide justification for each exception requested
3. Certification Statement			
			1. Include Certification Statement from a Registered Professional Engineer in the State of Colorado.

G. References

Yes	No	N/A	Requirement
			1. Reference all criteria, master plans, reports, or other technical information used in development of the concepts discussed in the underdrain report

H. Appendices

Yes	No	N/A	Requirement
1. Calculations, Exhibits & Details			
			1. Underdrain pipe sizing calculations and flow calculations at the specific design points including any existing flows contributing to the system
			2. Erosion control measure sizing calculations at discharge location
			3. Calculations and details for any proposed underdrain system facilities such as lift station, etc.
			4. Overall underdrain collection system map

2. Reference Information			
Yes	**No**	**N/A**	**Requirement**
			1. Copy of Geotechnical Report
			2. Copy of General Purpose Water Well Permit from Colorado Department of Water Resources
			3. Copies of all referenced materials or reports where pertinent sections are highlighted

WATER AND WASTEWATER PROJECT INFORMATION REPORT CHECKLIST

On commercial, industrial or mixed use developments over five(5) acres and residential developments over 50 acres or areas of limited capacity, the City Engineer may request a project information report to be submitted with the preliminary construction plans to analyze the ability to provide water and wastewater service to the proposed site

REQUIREMENTS

A. Report Information

Yes	No	N/A	Requirement
			1. The initial and ultimate area, in acres, to be developed.
			2. The estimated population densities and total population to be served.
			3. The estimated quality and quantity of any industrial waste to be discharged into the sanitary sewer.
			4. Design flow rates, average, maximum, and infiltration allowances for the sanitary sewer.
			5. If alternate methods of providing utility services are possible, the report shall give an evaluation of the alternative method.
			6. Estimated average daily water usage including landscaping.
			7. Estimated amount of water to be used by industrial and commercial facilities.
			8. Any other information that would affect the City's ability to service the new area, or any other information requested by the City Engineer.

APPENDIX E: ACCEPTANCE FORMS

RESERVED (RECORD DRAWINGS CHECKLIST)

RESERVED
(PERMANENT STORMWATER CONTROL MEASURES CHECKLIST)

CONSTRUCTION ACCEPTANCE CHECKLIST

The following checklist is a non-exhaustive list of items that PWNR and other City Departments look for at the time of Construction Acceptance (CA) for Developer Projects. This list is to be used as a reference only. The items listed below may change on a case-by-case basis based on project specifics and requirements in the Public Improvement Agreement.

REQUIREMENTS

C = Complete **I** = Incomplete **N/A** = Not Applicable

A. Construction Acceptance General

C	I	N/A	Requirement
			1. Request from developer
			2. Punch List items / CA Denial Letter
			3. Issue CA
			4. Release security

B. Final Submittal – City of Longmont Planning

C	I	N/A	Requirement
			1. Common Area Landscaping
			2. Common Area Securities required prior to CA
			3. Homeowner Association Articles of Incorporation filed with State
			4. Recorded copy of covenants
			5. Copy of Design Guidelines
			6. Written verification of developer complies with private lot landscaping standards.
			7. Weed management for site area and landscaping
			8. Defects for all plant materials, landscape materials, workmanship and other appurtenances addressed per Section 605.08

C. Public Works Arterial ROW Landscaping

C	I	N/A	Requirement
			1. Concrete bike path
			2. Arterial ROW Landscaping - grading, plants, sod
			3. Arterial ROW Irrigation - pressure test, operation test
			4. Primary Greenway Landscape
			5. Primary Greenway Irrigation
			6. Irrigation Record Drawings: electronic and paper copy, any turn-over items

D. Public Works Water / Wastewater

C	I	N/A	Requirement
			1. Water mainline - looped & tested, valves, services, hydrants, trace wire (certified tested by Developer)
			2. Sewer mainline - services, manholes, testing, cleaning, camera
			3. Trench / repairs - compaction testing paving
			4. Irrigation Vaults set with meter and backflow

E. Public Works Streets and Drainage

C	I	N/A	Requirement
			1. Overlot Grading
			2. Paving, compaction testing
			3. Concrete sidewalk, curb &gutter, compaction, testing
			4. Storm Sewer Structures, mainline, laterals, manholes, testing
			5. Sand Filter (with detention) - grading, certification, restoration

C	I	N/A	Requirement
			6. Underground BMPs
			7. Signals, signs, striping and pavement marking
			8. Underdrain Certification
			9. Infrastructure Permit required for UD collection system in the public ROW
			10. Record drawings, electronic file and Mylar

F. LPC

C	I	N/A	Requirement
			1. Trench Repair, compaction testing
			2. Cable/conduit, routing, tracer wire
			3. Ground Sleeve, compaction, elevation, level
			4. Street Light Pole, compaction, plumb
			5. Payments, materials, close-out
			6. As-built drawings, trench line, equipment locations

FINAL ACCEPTANCE CHECKLIST

The following checklist is a non-exhaustive list of items that PW and other City Departments look for at the time of Final Construction Acceptance (FA) for Developer Projects. This list is to be used as reference only. The items listed below may change on a case-by-case basis based on project specifics and requirements in the Public Improvement Agreement.

REQUIREMENTS

C = Complete **I** = Incomplete **N/A** = Not Applicable

A. Final Acceptance – City Staff

C	I	N/A	Requirement
			1. Request from developer
			2. Punch List items / FA Denial Letter
			3. Coordinate Sewer camera inspection w/ Operations
			4. Concrete and asphalt inspection w/ Construction Inspection
			5. Drainage Certification and state infiltration information
			6. Coordinate Permanent Stormwater Control permitting with Stormwater Engineer
			7. Coordinate Private Improvements with Planning
			8. Issue FA
			9. Record FA

B. Final Acceptance – Developer / Contractor

C	I	N/A	Requirement
1. Storm Drainage			
			1. Check condition of inlets: no cracks, grout still in place, and cleaned out. Concrete adjacent to inlets not settled.
			2. Check pipes: clean and video, Infor link sent to City Project Manager.
			3. Check sewer manholes: cleaned and all grout in place or repaired.
			4. Check detention ponds: inlet and outlet structures must be clean, trickle channels must be clean and have no growth blocking the path to outlet.
			5. Check all trickle channels on site for condition and repair.
2. Concrete			
			1. Check all sidewalks curb and gutter, driveways, concrete alley ways, aprons and all other concrete in the right of way.
			2. Replace all concrete that is cracked, chipped, offset, settled, broken and replace or repair spall areas as needed.
3. Streets			
			1. Check all areas for patching. Prepare and edge mill for top lift paving.
			2. Manholes and valve boxes must be raised to final grade and top lift paving completed.
			3. Check striping on streets, parking stalls, stop bars and cross walks, or items called out on the project striping plan for completion.
			4. Check for visual obstructions to signs and remove obstruction if necessary.
			5. Check that all signs are installed according to the MUTCD and are in good condition.
4. Water			
			1. Fire hydrants need to be painted with City approved paint.
			2. Fire hydrants height needs to be adjusted to 20” from center of pumper nozzle to finished grade.
			3. Valve boxes need to be straight and centered on the valve nut.
			4. Valve boxes need to be adjusted to flush or 1/4 inch below finished asphalt grade.

C	I	N/A	Requirement
			5. Valve lids are required to be smooth concrete and knobby in asphalt.
			6. Tracer wire stations need to be in place and hooked up. Inspector to verify all utilities are traceable.
			7. All valve boxes need to be clean of dirt and debris.
			8. All curb stops need to be to grade.
			9. All water locations need a W placed at the back of concrete curb and gutter after replacement of broken curb and gutter or curbwalk.
5. Sewer			
			1. Contact the City of Longmont Water/Wastewater Division to have final video inspection of sewer main performed one month prior to requesting inspection for final acceptance.
			2. Adjust all manholes flush to 1/4 inch below final asphalt grade.
			3. Check that all manholes lids are centered over the opening in the manhole.
			4. Check that rubber-neck is trimmed flush with the inside of the manhole at all joints.
			5. Check for visible leakage in manholes and repair as needed.
			6. Check for missing steps in manholes and replace as needed.
			7. All sewer locations need an S placed at the back of concrete curb and gutter after replacement of broken curb and gutter or curbwalk.
6. Landscape & Irrigation			
			1. Weed management for site area and landscaping
			2. Completion of coverage for seeding areas per Section 603.08
			3. Full coverage for sodded areas per Section 604.08
			4. Defects for all plant materials, landscape materials, workmanship and other appurtenances addressed per Section 605.08

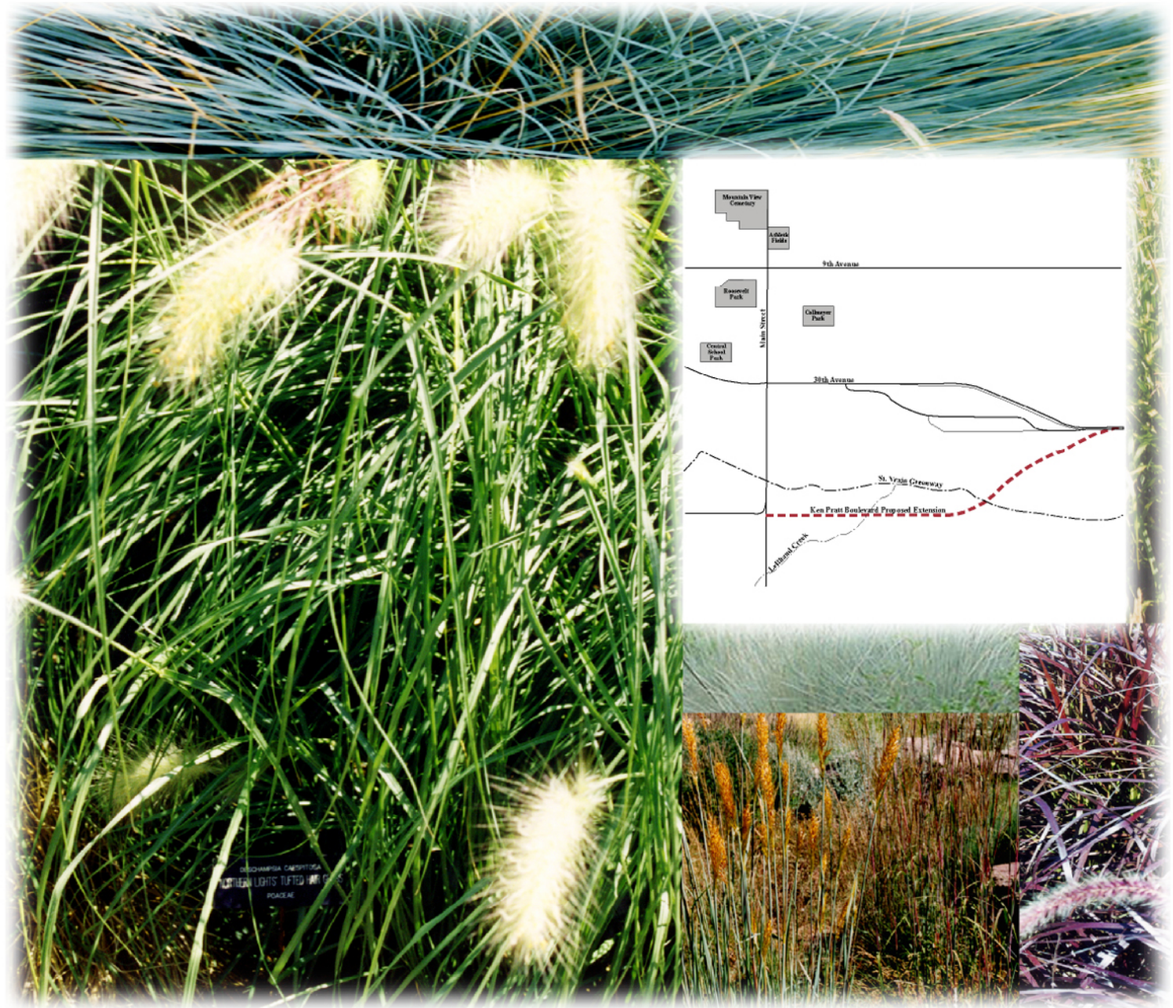
APPENDIX G: MISCELLANEOUS

G-1 RESERVED

RESERVED

APPENDIX H: KEN PRATT BOULEVARD LANDSCAPING GUIDELINES

KEN PRATT BOULEVARD
LANDSCAPING GUIDELINES
ARTERIAL RIGHT OF WAY AND SCENIC ENTRY CORRIDOR



CREATED BY LONGMONT DEPARTMENTS OF:
Parks and Recreation
Public Works
Planning
Forestry

AND:
Carter::Burgess

MAY, 2002

KEN PRATT BOULEVARD
LANDSCAPING CONCEPTUAL ZONES

Landscaping along the Ken Pratt corridor is intended to set the precedent for formal streetscapes that respond to the natural surrounding landscape by limiting irrigation and using native and well-adapted plant species. From West to East the streetscape treatment will move from a formal, to a more indigenous landscape. The corridor has been divided into three zones, responding to land-use, density and natural characteristics. Each zone's plant quantities, species and maintenance result in an equitable cost. Continuity among zones will appear in the use of ornamental grasses and hawthornes which will punctuate median noses. The walk will meander and take full advantage of the Right-of-Way. All treatments should meet the Longmont Landscape requirements including the area from flow line to Right of Way (medians are not to be used to calculate landscape requirements).

MAIN STREET TO LEFTHAND CREEK ZONE A

ZONE A:

CONCEPT: Expand on Longmont Streetscape Standards by employing native and well adapted plant species and exceeding required quantities.

TOOLS:
- Large canopy shade trees spaced in a formal, double row
- Plant massings used to mitigate parking views
- Even grading within tree lawn
- Automatic, clock-activated irrigation system (per Longmont Design Standards) to irrigate all plant material within medians and between back of curb and Right-of-Way.

LEFTHAND CREEK TO ST. VRAIN ZONE B

ZONE B:

CONCEPT: Establish a juxtaposition between the traditional streetscape and western, prairie landscape.

TOOLS:
- Large canopy, shade trees used in intervals according to adjacent land use
- Occasional berming within tree lawn
- Automatic, clock-activated irrigation system (per Longmont Design Standards) to irrigate all plant material within medians and between back of curb and Right-of-Way.
- Native tree clusters to mimic adjacent natural features
- Native and ornamental grasses

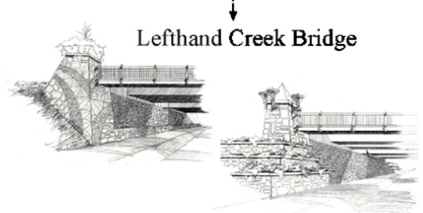
ST. VRAIN TO COUNTY LINE ROAD ZONE C

ZONE C:

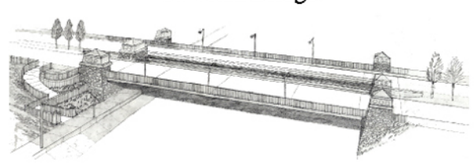
CONCEPT: Preserve fundamental aesthetic of wide, open, prairie-like landscape with tall grasses and occasional tree massings.

TOOLS:
- Cluster evergreen and native tree species
- Berming within tree lawn to highlight adjacent groundplane
- Automatic, clock-activated irrigation system (per Longmont Design Standards) to irrigate all plant material within medians and between back of curb and Right-of-Way. Irrigate less frequently as plantings are established.
- Large swaths of Colorado wildflowers
- Native and ornamental grasses

Lefthand Creek Bridge



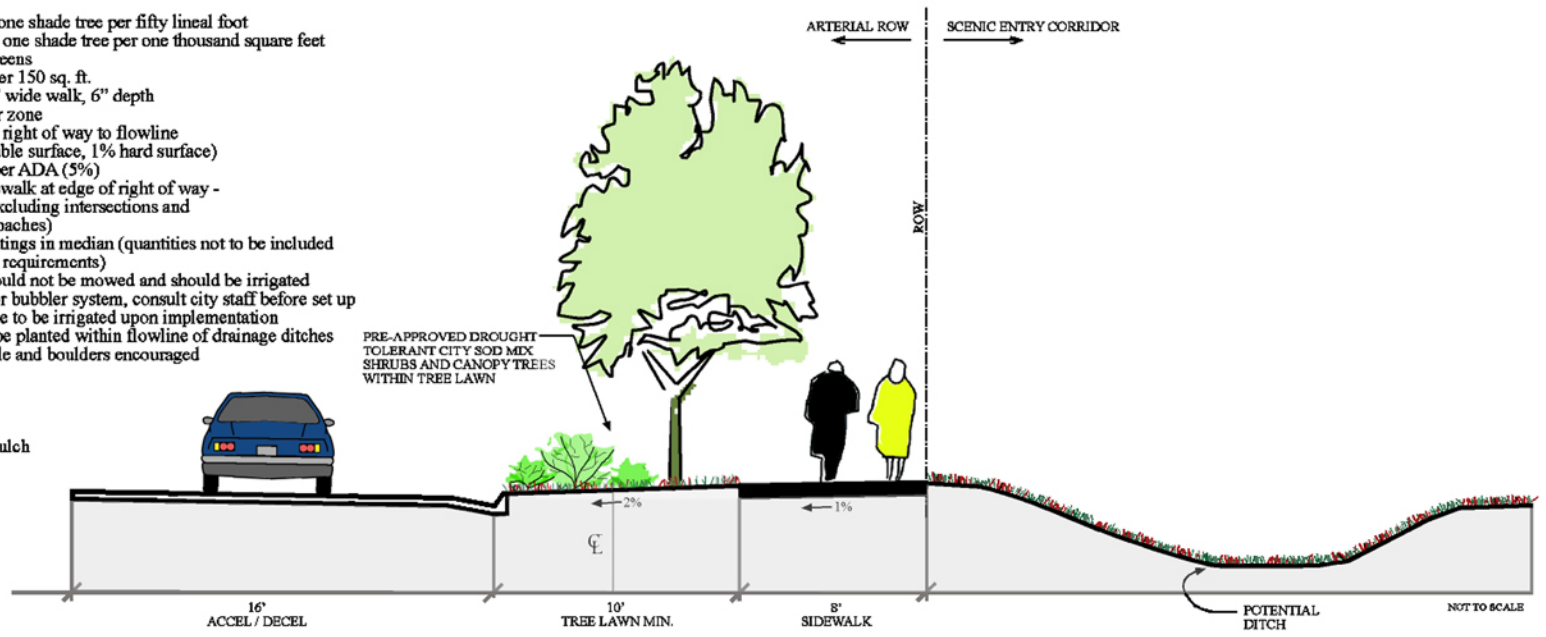
St. Vrain Bridge



KEN PRATT BOULEVARD
TYPICAL SECTIONS

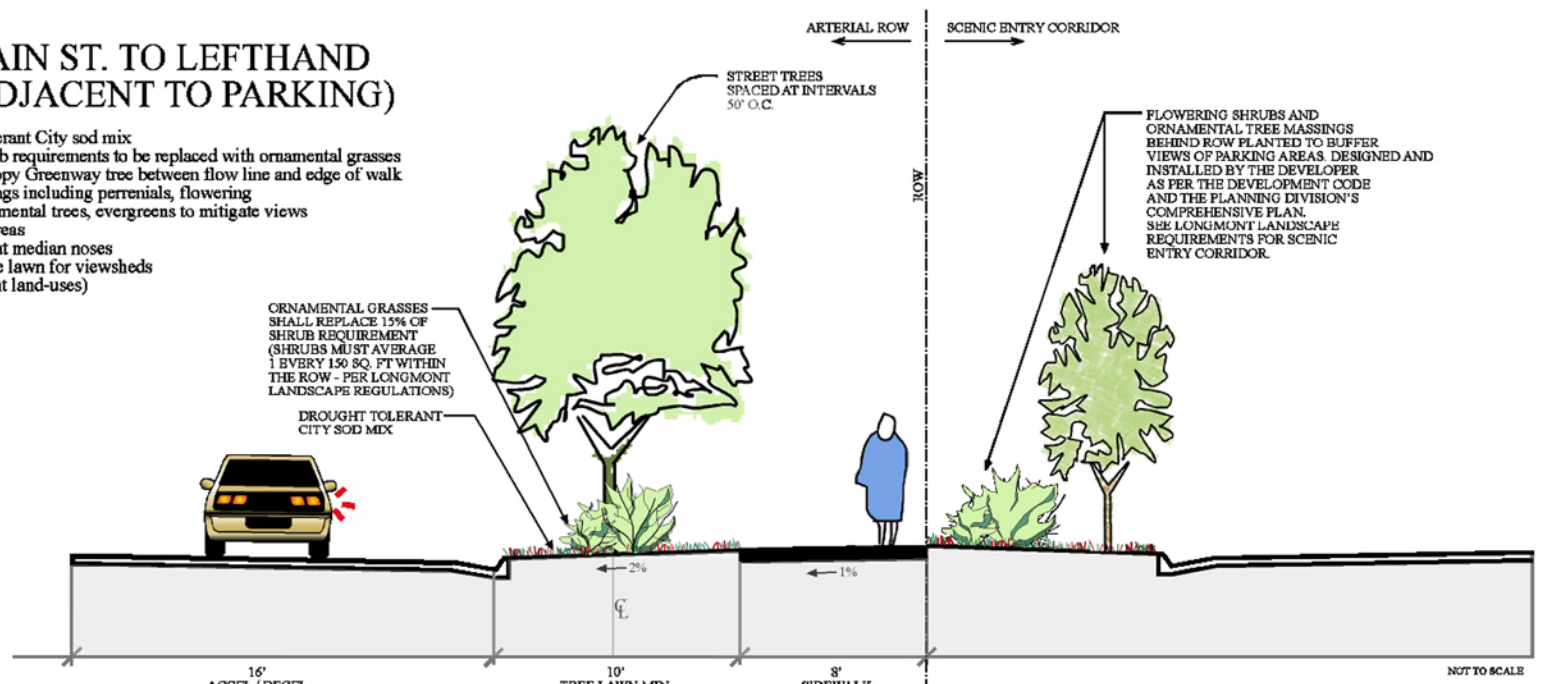
STANDARD ARTERIAL STREETSCAPE

- Minimum - one shade tree per fifty lineal foot
  Maximum - one shade tree per one thousand square feet
  25% Evergreens
- One shrub per 150 sq. ft.
- Minimum 8' wide walk, 6" depth
  with 2' clear zone
- Slopes from right of way to flowline
  (2% permeable surface, 1% hard surface)
- 1:20 grade per ADA (5%)
- Back of sidewalk at edge of right of way -
  detached (excluding intersections and
  bridge approaches)
- Include plantings in median (quantities not to be included
  in landscape requirements)
- Medians should not be mowed and should be irrigated
  with a drip or bubbler system, consult city staff before set up
- All landscape to be irrigated upon implementation
- No trees to be planted within flowline of drainage ditches
- Use of cobble and boulders encouraged
- Mulch:
  3" 50%
  4-6" 30%
  6-9" 20%
  No wood mulch



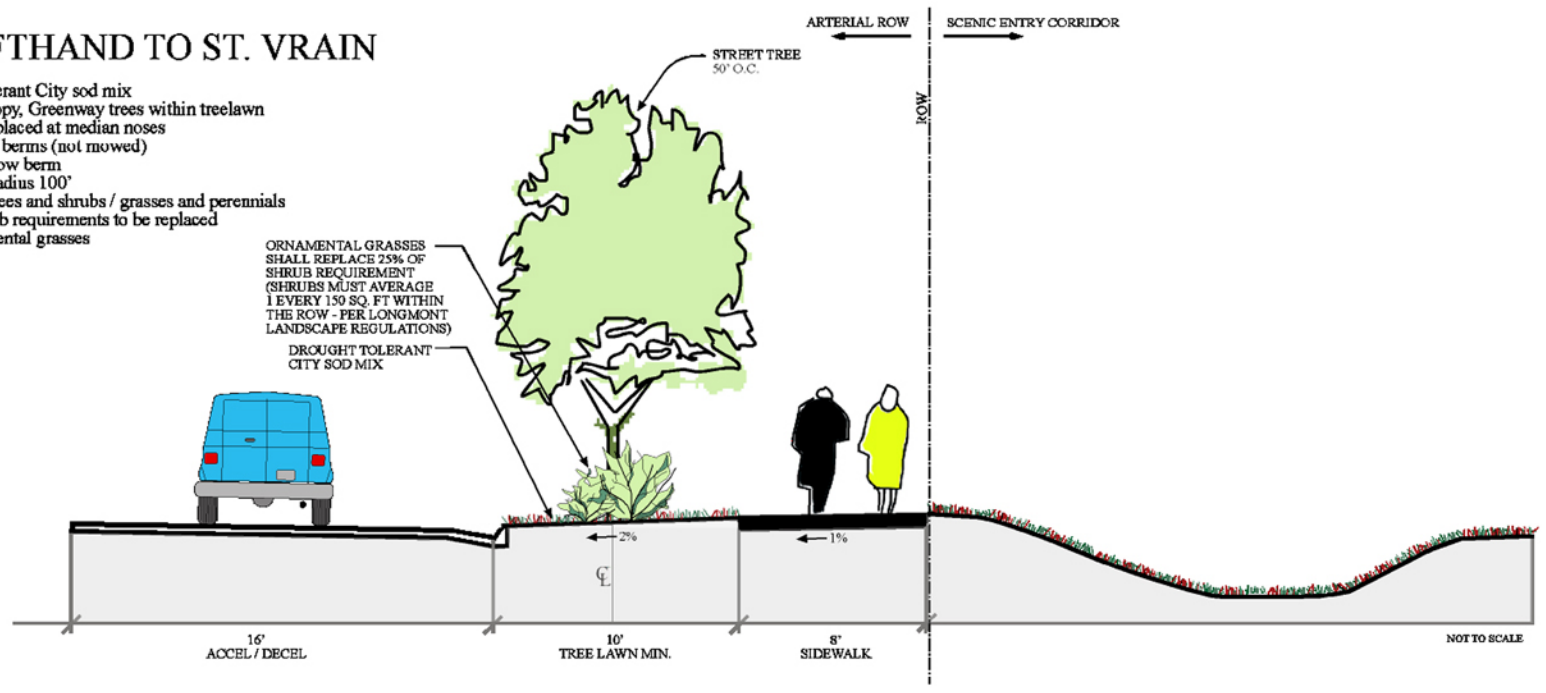
A. MAIN ST. TO LEFTHAND (ADJACENT TO PARKING)

- Drought tolerant City sod mix
- 15% of shrub requirements to be replaced with ornamental grasses
- Hardy, Canopy Greenway tree between flow line and edge of walk
- Plant massings including perrenials, flowering
  shrubs, ornamental trees, evergreens to mitigate views
  to parking areas
- Hawthorns at median noses
- Break in tree lawn for viewsheds
  (per adjacent land-uses)



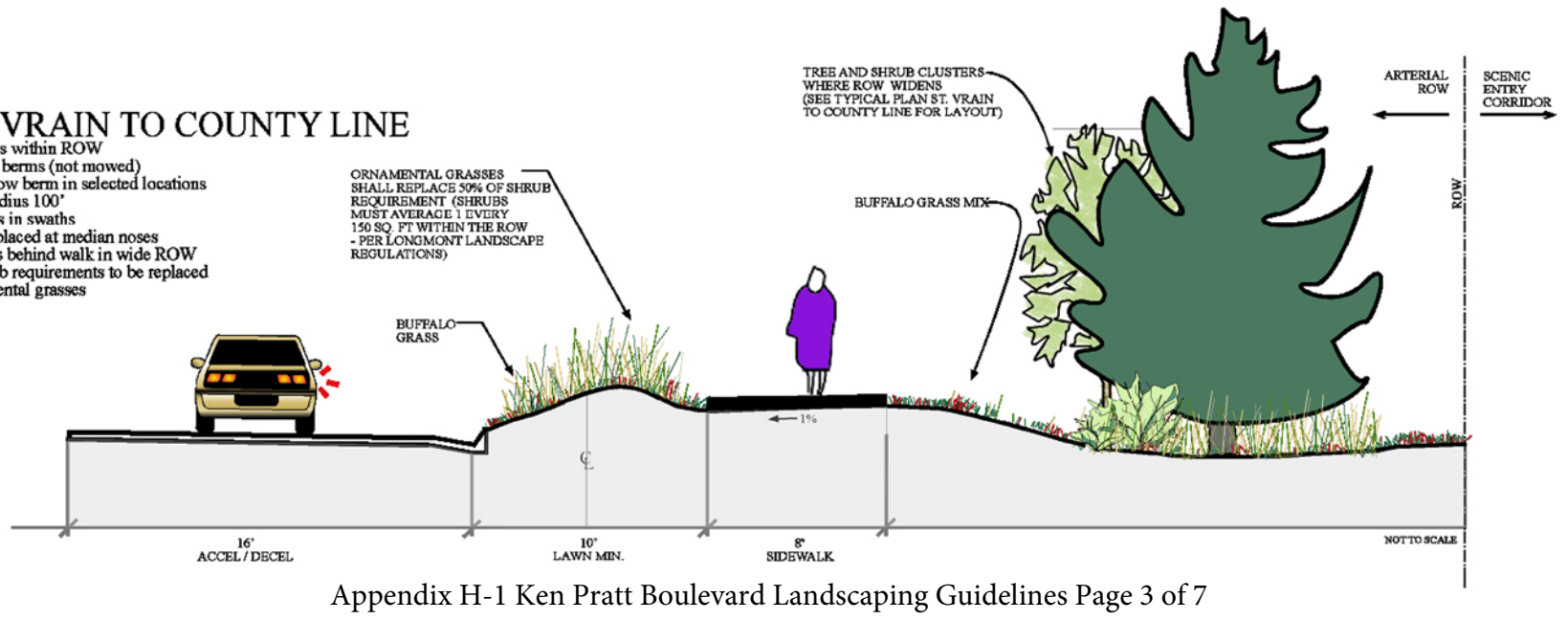
B. LEFTHAND TO ST. VRAIN

- Drought tolerant City sod mix
- Hardy, Canopy, Greenway trees within treelawn
- Hawthorns placed at median noses
- 3:1 periodic berms (not mowed)
- Walk to follow berm
- Min. walk radius 100'
- Swaths of trees and shrubs / grasses and perennials
- 25% of shrub requirements to be replaced
  with ornamental grasses



C. ST. VRAIN TO COUNTY LINE

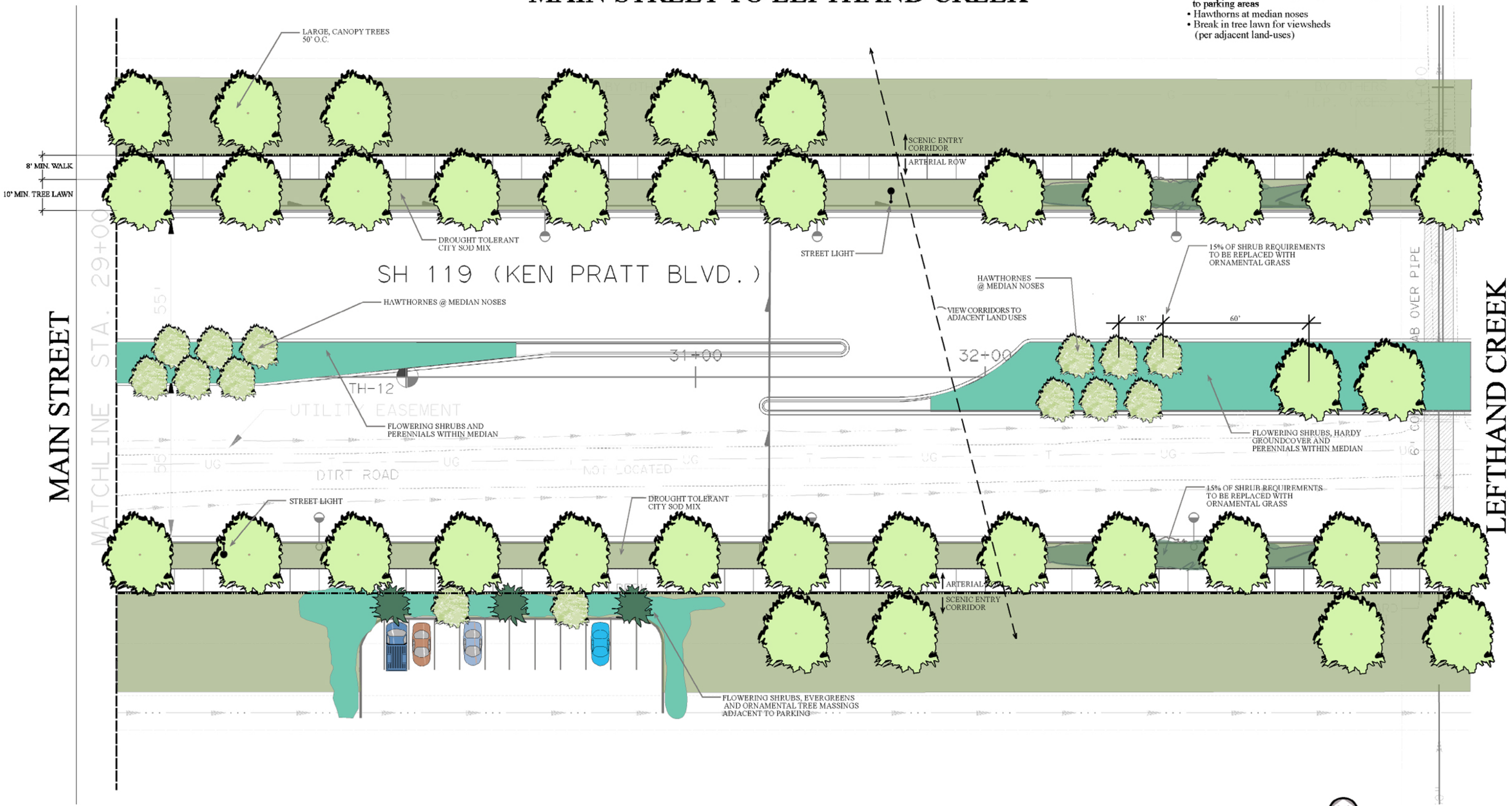
- Buffalo grass within ROW
- 3:1 periodic berms (not mowed)
- Walk to follow berm in selected locations
- Min walk radius 100'
- Wild flowers in swaths
- Hawthorns placed at median noses
- Tree clusters behind walk in wide ROW
- 50% of shrub requirements to be replaced
  with ornamental grasses



KEN PRATT BOULEVARD
TYPICAL PLAN
MAIN STREET TO LEFTHAND CREEK

A. MAIN ST. TO LEFTHAND

- Drought tolerant City sod mix
- 15% of shrub requirements to be replaced with ornamental grasses
- Hardy, Canopy Greenway tree between flow line and edge of walk
- Plant massings including perrenials, flowering shrubs, ornamental trees, evergreens to mitigate views to parking areas
- Hawthorns at median noses
- Break in tree lawn for viewsheds (per adjacent land-uses)



N NOT TO SCALE

KEN PRATT BOULEVARD
TYPICAL PLAN
LEFTHAND CREEK TO ST. VRAIN

B. LEFTHAND TO ST. VRAIN

- Drought tolerant City sod mix
- Hardy, Canopy, Greenway trees within treelawn
- Hawthorns placed at median noses
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- Walk to follow berm
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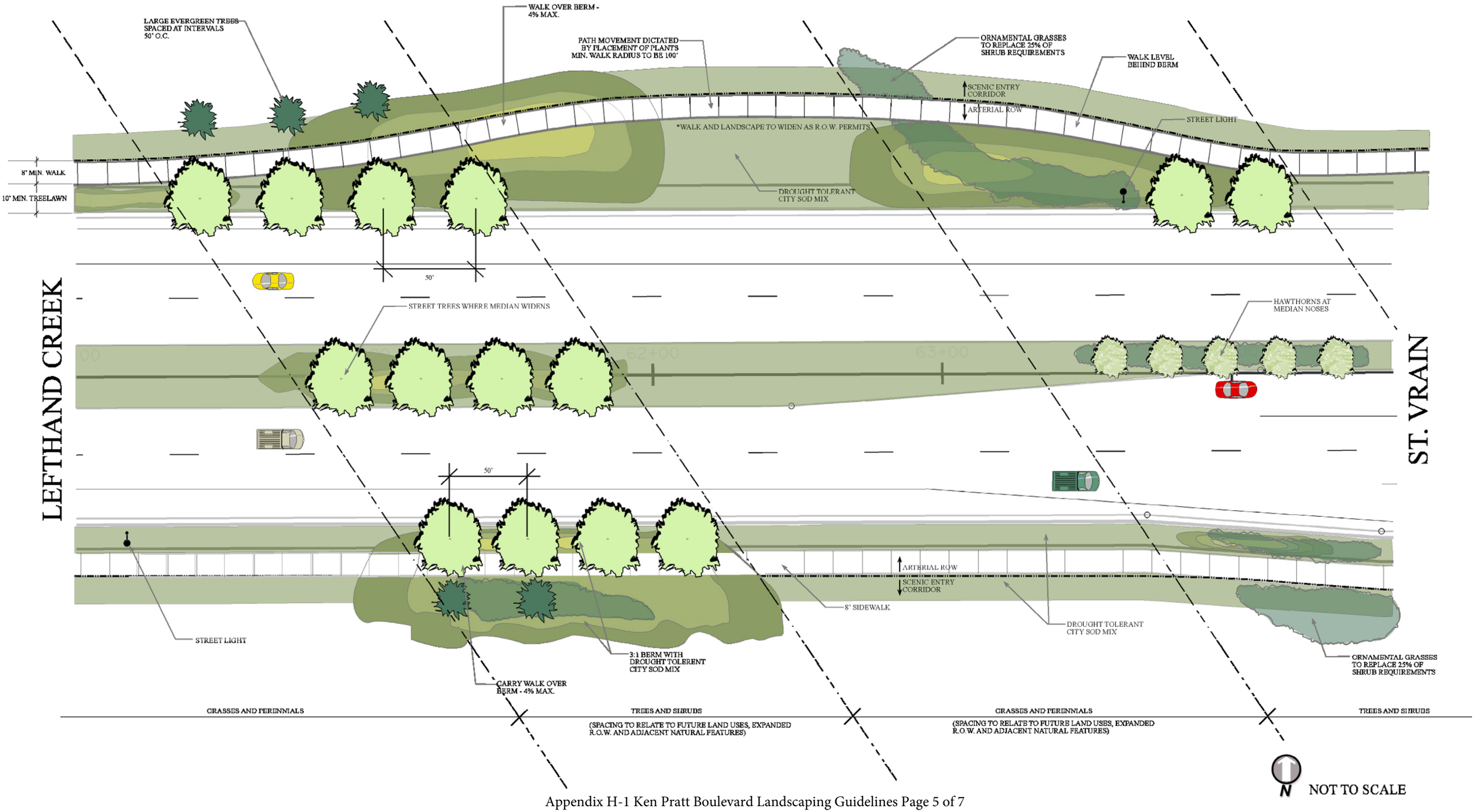
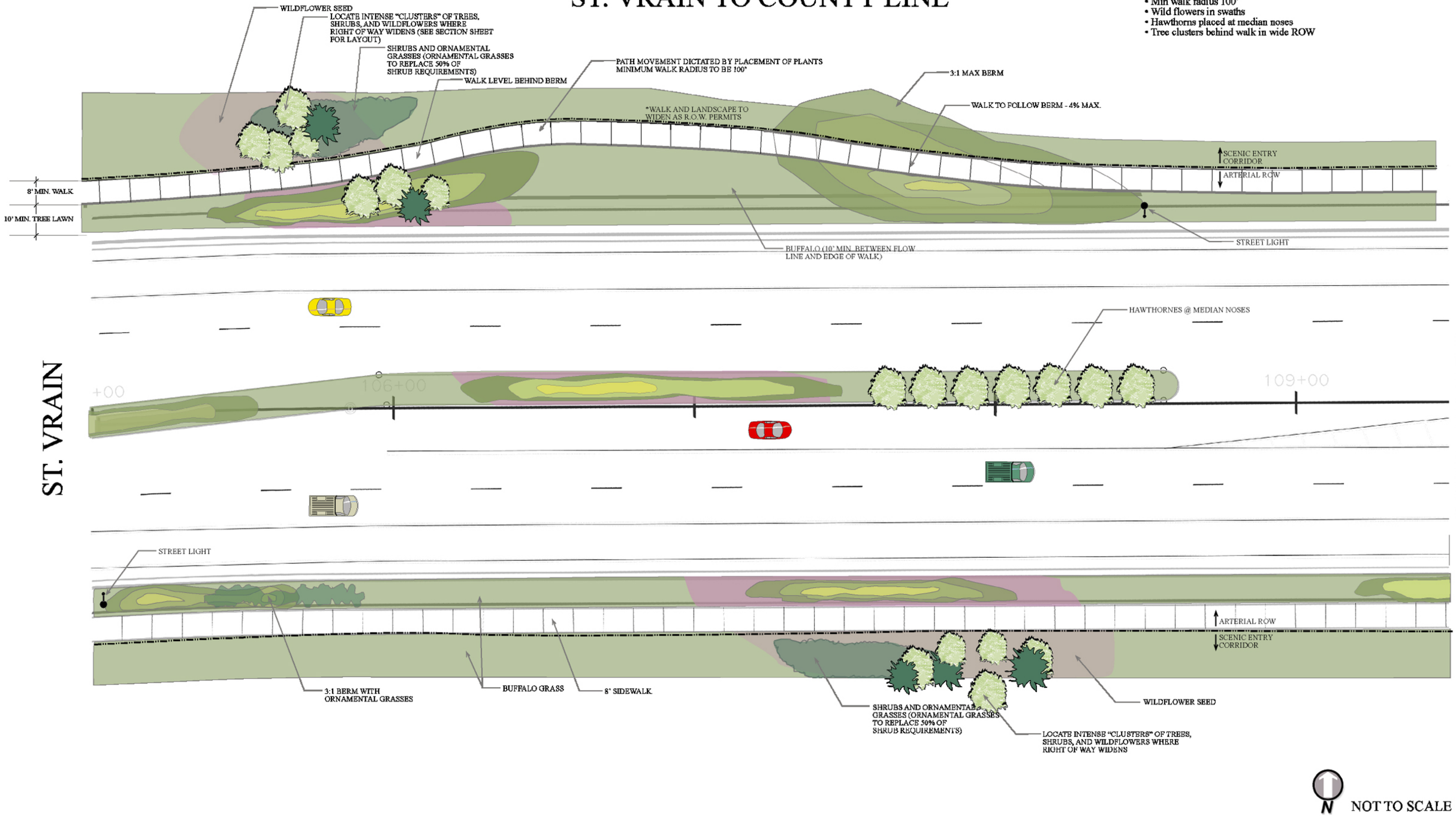


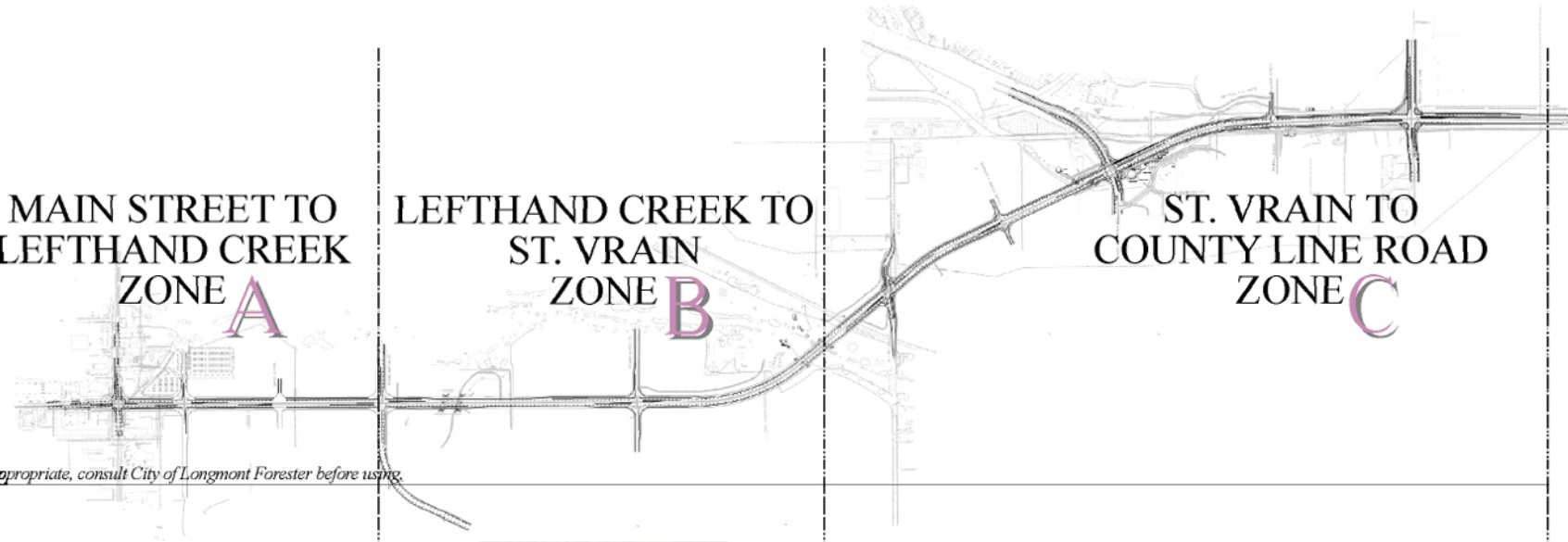
KEN PRATT BOULEVARD
TYPICAL PLAN
ST. VRAIN TO COUNTY LINE

C. ST. VRAIN TO COUNTY LINE

- Buffalo Grass
- 3:1 berms (not mowed)
- 50% of shrub requirements to be replaced withornamental grasses
- Walk to follow berm in selected locations
- Min walk radius 100'
- Wild flowers in swaths
- Hawthorns placed at median noses
- Tree clusters behind walk in wide ROW



KEN PRATT BOULEVARD
PLANT LIST



Plant species are recommendations, other species may be appropriate, consult City of Longmont Forester before using.

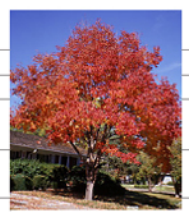
	MAIN STREET TO LEFTHAND CREEK ZONE A	LEFTHAND CREEK TO ST. VRAIN ZONE B	ST. VRAIN TO COUNTY LINE ROAD ZONE C
Median Plantings			
• Hawthorn - Cockspur *inermis*, toba (used at median noses)	•	•	•
▪ Canopy, Street trees - match tree used at treelawn (used in wide median areas)	▪	▪	
• Curl-leaf Mountain Mahogany	•	•	•
• Gray Rabbitbrush	•	•	•
▪ Fernbush	▪	▪	•
▪ Creeping Juniper	▪	▪	
• Blue Woolly Speedwell in from Main St. to St. Vrain	•	•	
• Pink Ice Plant from St. Vrain to County Line Rd.			•

Hawthorns punctuate the medians and offer continuity. Their leaf and berry color provide interest throughout the majority of the corridor.

Parking Mitigation Trees			
• Maple - tatarian	•	•	
• Buckthorn	•	•	
▪ Hawthorne - thornless Cockspur *inermis*	▪	▪	
▪ Pinon Pine	▪	▪	
• Bakeri Spruce	•	•	
• Spring Snowcrab	•	•	
• Linden - Redmond	•	•	
• Bradford Pear	▪	▪	

The parking area plantings are meant to screen views into the parking lot by layering plant material from perennials and grasses (2 ft. and under), to shrubs (between 2' and 6'), and to trees (varying height and canopy).

Canopy Street Trees			
• Chinkapin Oak	•		
• Shumard Oak	•		
▪ Oak - White Swamp Oak	▪	▪	
▪ Oak - burr		▪	
▪ Linden - Glenleven		▪	
• Pitmore Ash	•	•	



The majority of the streetscape trees, the canopy greenway trees, aim to provide shade and continuity along the bike path. Their scale and rythmic planting provide an element of formality.

Flowering Shrub			
• Blue Mist Spirea	•	•	
▪ Scotch Broom	▪	▪	
▪ Rose Locust	▪		•
▪ Common Lilac	▪		
• Compact Burning Bush	•		
• Cistena Plum	•	•	•
▪ Creeping Juniper	▪	▪	
▪ Fernbush	▪	▪	

Shrubs will be used thoughout the entire corridor in medians and between flow line and edge of walk. Shrubs will provide screening and interest at periodic intervals. A contrast between grasses and shrubs should be implied with the use of color, a variance in height and an assortment of soft and rough textures.

Perennials			
• Basket-of-Gold	•	•	
• Blanketflower	•		
• Daylily	•	•	
▪ Red Valerian	▪		
• Orange Milkweed	•	•	
• Bluebell	•	•	
• Blue Flax	•		
▪ Penstemon	▪		

Medians, treelawns, and parking lot screening will contain perennials. Their use will provide color, and intricacies to largerswathes of plant material.

Ornamental Grasses			
• Sideoats Grama Grass	•	•	•
▪ Karl Foerster Feather Reed Grass		▪	•
• Blue Oat Grass	•	•	•
▪ Purple Fountain Grass			•
• Miscanthus Grass			•
• Blue Avena		•	•

Ornamental grasses should be used as accents. Used en masse, these grasses should add a soft texture and movement to the corridor. Their modest hues of green should compliment the adjacent natural features.

Native Turf Grasses			
▪ Drought Tolerant City Sod Mix (see Longmont Streetscape Standards) - from Lefthand to St. Vrain	▪	▪	
• Buffalograss - from St. Vrain to County Line			•

Native turf grasses should provide texture and act as a backdrop for the other plants. They should be used as an example of ground cover which is durable, drought tolerant and attractive.

"Clusters"			
▪ Cottonwood (water source) - Plains and lanceleaf		▪	•
• Hawthorne (water source)			•
• Serviceberry - Autumn Brilliant (water source)		•	•
▪ Cherry - Montmorency (water source)			•
• Willow - Prairie Cascade (water source)			•
• Bristlecone Pine (dryland)			•
• Burr Oak (dryland)			•
• Hackberry (dryland)		▪	•
▪ Pinon Pine (dryland)		▪	•
• Gamble Oak (dryland)			•
• Ponderosa Pine (dryland)		•	•
• Austrian Pine (water source)		•	•

Areas where the ROW widens should incorporate planting areas to help reduce the feeling of vastness of an empty landscape. These areas will include both deciduous and evergreen trees and shrubs. When adjacent to existing water ways, plant groupings may mimic that aesthetic. Plants designated as dryland or water source should be planted accordingly.

Colorado Wildflowers			
▪ Showy Daisy			•
▪ Purple Dome Aster			•
• Lupine			•
• Fringed Gromwell			•
• Prince's Plume			•
• Phlox			•

Swaths of wildflowers will accent the zone from St. Vrain to County Line Road. These areas will provide bursts of color and contrast the texture of the smooth grasses.

APPENDIX I: APPROVED MATERIALS LISTS

RESERVED (TRAFFIC SIGNALS APPROVED MATERIALS LIST)

RESERVED
(APPROVED MATERIALS LIST SECTION 200 – TRANSPORTATION)

RESERVED
(APPROVED MATERIALS LIST SECTION 600 – PARKS)

All materials shall meet the requirements of the City of Longmont's Public Improvement Design Standards and Construction Specifications.

1. SPECIFICATION FOR METER HOUSINGS 200 AMPS OR LESS SINGLE-PHASE

A. General

(1) Description: Socket, Meter, 5 Terminal, 200 Amp, Continuous Duty Bypass required

(2) Unit of Measure: Each

(3) Use: Mounting watt-hour meters for residential and commercial revenue metering

(4) Recommended dimensions for individual meter sockets used in underground installations shall be: up to 200 amp – 19" height by 13" width

B. Standards

(1) All sockets shall have a lever-operated bypass and shall be constructed in accordance with and conform to the following ANSI (American National Standards Institute) publications.

(2) Meter socket bypass lever shall be constructed of metal.

(3) Two piece lids are not allowed unless combination meter main equipment is being used.

(4) Meter sockets shall have ringless style covers with latch capable of accommodating City seal and lock mechanism.

(5) Meter sockets shall be suitable for outdoor installation, i.e. weatherproof (NEMA 3R,IP,14, or equivalent)

C. Construction

(1) Meter sockets shall be constructed of galvanized steel, 16-gauge minimum. Non- metallic or aluminum enclosures are not acceptable

(2) Cover shall be of the one piece ringless type, equipped with a suitable devise for closing and sealing with padlock type seals.

(3) Finish shall be bonderized with light neutral gray baked enamel.

(4) Knockout for load carrying cable shall be concentric type.

(5) The general construction of the socket shall provide protection to personnel against accidental contact with energized elements of the meter and socket; and shall provide protection to the electrical components against adverse environmental weather conditions.

(6) All three wire sockets, both single-phase and network, shall have a fifth jaw installed at the 9 o'clock position.

D. Electrical

(1) The neutral terminal shall be electrically bonded to the enclosure by a bolted or riveted connection.

(2) A bonding jumper in the form of a separate screw, strap, or other means shall bond the enclosure to the grounded (neutral) conductor using a #4 AWG copper jumper.

(3) The following are pre-approved products:

a. Milbank part number: Z911531-AC

b. Durham part number: ARPO I074

c. Landis and Gyr #HQ Block, part number: 64 560-1

2. SPECIFICATIONS FOR 320 CLASS, NEMA 3R, IP, 14 OR EQUIVALENT METER HOUSING

A. 400 amp K-Base meter housings are not acceptable

B. General

(1) Socket, Meter, Self-Contained, 120/240 or 120/208 volt, single-phase, rated for up to 320 amps (continuous duty) shall have jaw-clamping, lever-operated bypass mechanism that can operate as a continuous duty bypass device.

(2) 320 class meter sockets shall be equipped with anti-inversion clips that prevent normal width terminal blades from being installed in a 320 class socket. All three wire sockets, both single-phase and network, shall have a fifth terminal installed at the 9 o'clock position.

(3) Two piece lids are not allowed, unless combination meter main equipment is being used. Recommended dimensions for individual meter sockets used in underground installations shall be:

320 amp – 26.5" height by 13" width

C. Standards

(1) Meter sockets should be constructed of galvanized steel, 16-gauge minimum. Non- metallic or aluminum enclosures are not acceptable.

(2) Meter sockets shall be suitable for outdoor installation, i.e. weatherproof (NEMA 3R, IP, 14, or equivalent).

(3) 320 class meter sockets shall be equipped with anti-inversion clips that prevent normal width terminal blades from being installed in a 320 socket.

(4) ANSI C12.7 American National Standard Requirements for Watt-hour Meter Sockets dated 1993 or latest revision.

D. Construction

(1) Sockets shall be constructed of 16 gauge (minimum) galvanized sheet steel.

(2) Cover shall be equipped with a suitable device for closing and sealing with padlock type seals.

(3) Finish shall be bonderized with light neutral gray baked enamel.

(4) Knockout for load carrying cable shall be concentric type.

(5) The general construction of the socket shall provide protection to personnel against accidental contact with energized elements of the meter and socket; and shall provide protection to the electrical components against adverse environmental weather conditions.

E. Electrical

(1) The neutral terminal shall be electrically bonded to the enclosure by means of a bolted or riveted connection.

APPENDIX C: REPORT TEMPLATE AND CHECKLISTS

C-1 RESERVED (DRAINAGE REPORT CHECKLIST)

C-2 ELECTRIC SERVICE REQUEST FORM

C-3 EXCEPTION REQUEST FORM

C-4 RESERVED (GEOTECHNICAL REPORT CHECKLIST)

C-5 RESERVED (PAVEMENT DESIGN REPORT CHECKLIST)

C-6 RESERVED (TRANSPORTATION IMPACT STUDY)

C-7 STATEMENT OF EXPECTED UTILITY NEEDS

C-8 RESERVED (UNDERDRAIN REPORT CHECKLIST)

C-9 RESERVED (WATER AND WASTEWATER PROJECT INFORMATION REPORT CHECKLIST)

APPENDIX D: STORMWATER QUALITY

SEE LONGMONT STORM DRAINAGE CRITERIA MANUAL

APPENDIX E: ACCEPTANCE FORMS

E-1 RESERVED (RECORD DRAWINGS CHECKLIST)

E-2 RESERVED (PERMANENT STORMWATER CONTROL MEASURES CHECKLIST)

E-3 CONSTRUCTION ACCEPTANCE CHECKLIST

E-4 FINAL CONSTRUCTION ACCEPTANCE CHECKLIST

APPENDIX F: FLOODPLAIN INFORMATION

SEE LONGMONT STORM DRAINAGE CRITERIA MANUAL

APPENDIX G: MISCELLANEOUS

G-1 RESERVED

APPENDIX H: KEN PRATT BOULEVARD LANDSCAPING GUIDELINES

H-1 KEN PRATT BOULEVARD LANDSCAPING GUIDELINES

APPENDIX I: APPROVED MATERIALS LISTS

I-1 RESERVED (TRAFFIC SIGNALS APPROVED MATERIALS LIST)

I-2 RESERVED (APPROVED MATERIALS LIST SECTION 200 – TRANSPORTATION)

I-3 RESERVED (APPROVED MATERIALS LIST SECTION 400 – WASTEWATER COLLECTION)

I-4 RESERVED (APPROVED MATERIALS LIST SECTION 500 – WATER DISTRIBUTION)

I-5 RESERVED (APPROVED MATERIALS LIST SECTION 600 – PARKS)

I-6 APPROVED MATERIALS LIST SECTION 700 – LPC